

# 05 - STRUCTURES INDEX OF DRAWINGS

DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE
STR-01	STRUCTURES DRAWINGS INDEX	S2-13	FRAMING PLAN
S1-01	GENERAL PLAN BRIDGE NO. 01185	S2-14	STEEL DETAILS
S1-02	BORING LOGS I	S2-15	SLAB PLAN
S1-03	BORING LOGS II	S2-16	SLAB DETAILS
S1-04	TPCBC (STRUCTURE)	S2-17	DECK PATCHING DETAILS
S1-05	STAGE CONSTRUCTION	S2-18	RAIL ATTACHMENT DETAILS
S1-06	ABUTMENT NO. 1	S2-19	EXPANSION FITTINGS
S1-07	ABUTMENT NO. 2	S2-20	ELECTRICAL DETAILS
S1-08	ABUTMENT DETAILS	S3-01	GENERAL PLAN WALL 101 (1 OF 2)
S1-09	WINGWALLS	S3-02	GENERAL PLAN WALL 101 (2 OF 2)
S1-10	WINGWALL DETAILS	S3-03	BORING LOGS WALL 101
S1-11	FRAMING PLAN	S3-04	WALL 101 - DETAILS
S1-12	STEEL DETAILS	S3-05	METAL BRIDGE RAIL (TRAFFIC) WALL 101
S1-13	SLAB PLAN	S4-01	GENERAL PLAN WALL 102
S1-14	SLAB DETAILS	S4-02	BORING LOGS WALL 102
S1-15	DECK PATCHING DETAILS	S4-03	WALL 102 DETAILS
S1-16	RAIL ATTACHMENT DETAILS	S4-04	METAL BRIDGE RAIL (TRAFFIC)
S1-17	EXPANSION FITTINGS	S5-01	OUTLET WALL 103
S1-18	ELECTRICAL DETAILS	S5-02	PROTECTIVE FENCE
S2-01	GENERAL PLAN BRIDGE NO. 01190	SMSS-001	SIGN SUPPORT STRUCTURE PLAN
S2-02	BORING LOGS I	SMSS-002	SIGN SUPPORT STRUCTURE DETAILS
S2-03	BORING LOGS II	BSM-1	BREAKAWAY SIGN SUPPORT GENERAL/NOTES
S2-04	TPCBC (STRUCTURE)	BSM-2	BREAKAWAY SIGN SUPPORT FOUNDATION DETAILS
S2-05	STAGE CONSTRUCTION	BSM-3	BREAKAWAY SIGN SUPPORT BRACKET DETAILS
S2-06	PILE LAYOUT PLAN	BSM-4	BREAKAWAY SIGN SUPPORT HINGE DETAILS
S2-07	ABUTMENT NO. 1	OCS-01	4 CHORD CANTILEVER TRUSS SIGN STRUCTURE
S2-08	ABUTMENT NO. 2	OCS-02	TRUSS CANTILEVER SIGN STRUCTURE DETAILS - 1
S2-09	ABUTMENT DETAILS	OCS-03	TRUSS CANTILEVER SIGN STRUCTURE DETAILS - 2
S2-10	WINGWALLS	OCS-04	TRUSS CANTILEVER SIGN STRUCTURE DETAILS - 3
S2-11	WINGWALL DETAILS I	OCS-05	DRILLED SHAFT TRAFFIC STRUCTURE FOUNDATION
S2-12	WINGWALL DETAILS II		

DESIGNED BY:  
AECOM

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
CHECKED BY:  
**J. HAPKIEWICZ**

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION

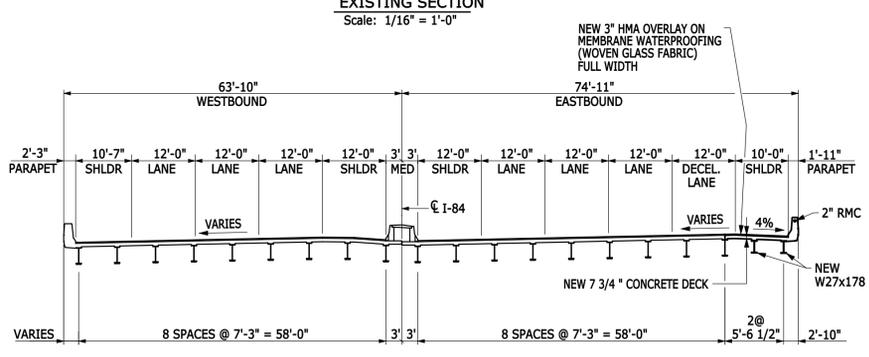
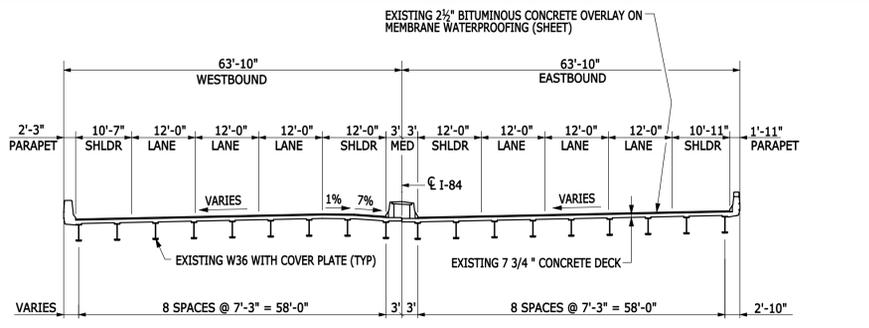
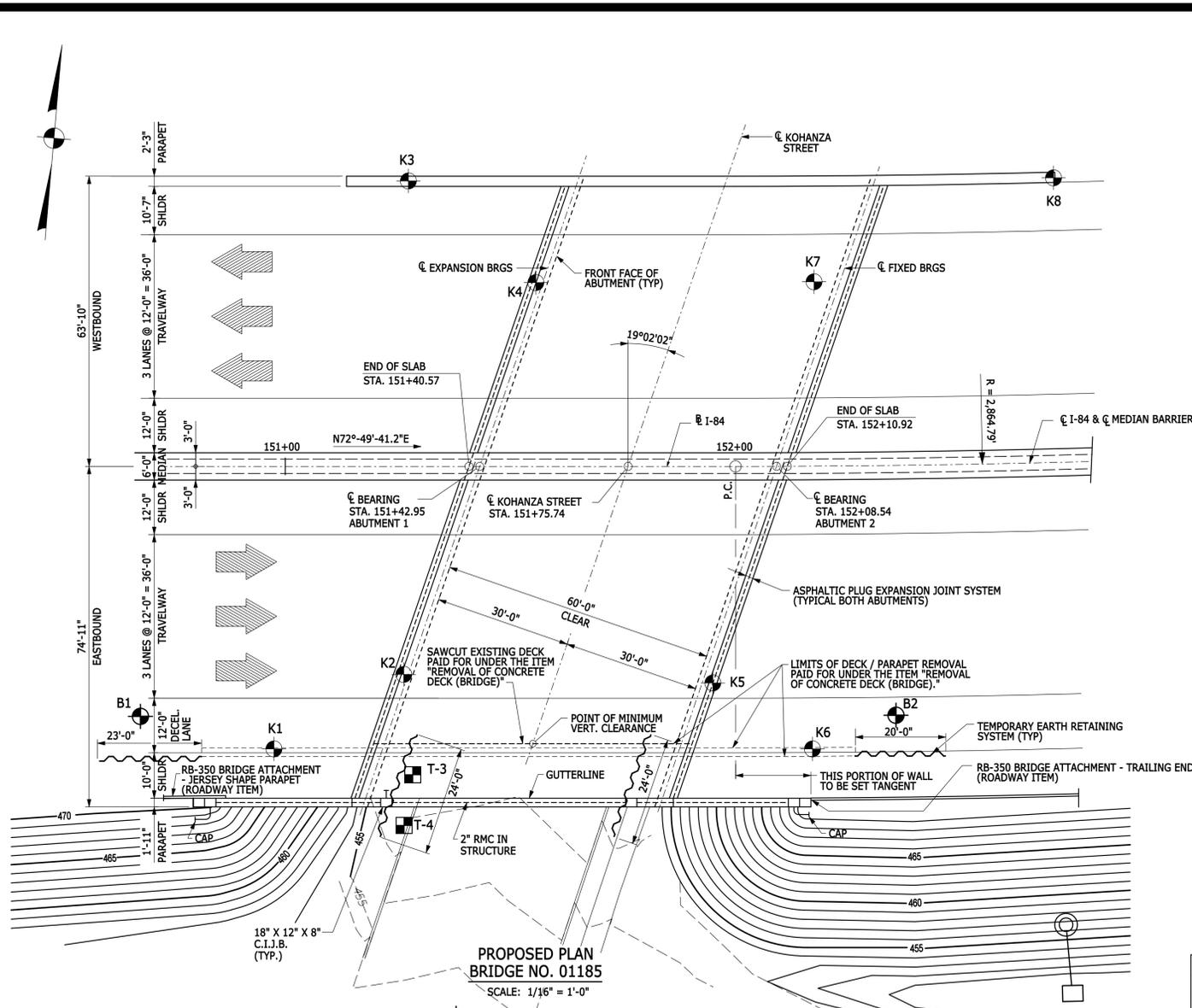
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.**      DATE: 06/11/2014

PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN: **DANBURY**

DRAWING TITLE:  
**STRUCTURES DRAWINGS INDEX**

PROJECT NO.: **34-313**  
DRAWING NO.: **STR-01**  
SHEET NO.: **05.01**



NOTE: AFTER SAWCUTTING DECK, TOP OF CONCRETE ELEVATIONS SHALL BE GIVEN TO THE ENGINEER TO CONFIRM ELEVATIONS FOR TOP OF PROPOSED ABUTMENT BEARING PADS.

MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	SHIPPING MASS
G19	66'-9"	27"	12"	11,882 lbs.
G20	66'-9"	27"	12"	11,882 lbs.

QUANTITIES		
ITEM DESCRIPTION	UNIT	QUANTITY
Removal of HMA Wearing Surface	S.Y.	930
Structure Excavation - Earth (Complete)	C.Y.	625
Granular Fill	C.Y.	85
Pervious Structure Backfill	C.Y.	450
HMA S0.5	ton	106
HMA S0.25	ton	53
Removal of Concrete Deck (Bridge)	S.Y.	23
Shear Connectors	L.S.	L.S.
1-1/2" Polyvinyl Chloride Plastic Pipe	L.F.	5
Asphaltic Plug Expansion Joint System	C.F.	115
Partial Depth Patch	C.F.	20
Class "A" Concrete	C.Y.	315
Class "F" Concrete	C.Y.	38
Deformed Steel Bars	LB	27,000
Deformed Steel Bars - Epoxy Coated	LB	9,850
Drilling Holes and Grouting Dowels	Ea.	230
Structural Steel (Site No. 1)	L.S.	L.S.
Field Touch-up Painting	S.F.	15
Localized Paint Removal	S.F.	10
Membrane Waterproofing (Woven Glass Fabric)	S.Y.	1,010
Dampproofing	S.Y.	220
Temporary Earth Retaining System	S.F.	730
Temporary Precast Concrete Barrier Curb (Structure)	L.F.	71
Removal of Existing Masonry	C.Y.	75
2" Rigid Metal Conduit in Structure	L.F.	170
18"x12"x8" Cast Iron Junction Box	EA.	4

LIST OF DRAWINGS	
DRAWING NO.	TITLE
S1-01	GENERAL PLAN BRIDGE NO. 01185
S1-02	BORING LOGS I
S1-03	BORING LOGS II
S1-04	TEMPORARY PRECAST CONCRETE BARRIER CURB (STR.)
S1-05	STAGE CONSTRUCTION
S1-06	ABUTMENT NO. 1
S1-07	ABUTMENT NO. 2
S1-08	ABUTMENT DETAILS
S1-09	WINGWALLS
S1-10	WINGWALL DETAILS
S1-11	FRAMING PLAN
S1-12	STEEL DETAILS
S1-13	SLAB PLAN
S1-14	SLAB DETAILS
S1-15	DECK PATCHING DETAILS
S1-16	RAIL ATTACHMENT DETAILS
S1-17	EXPANSION FITTINGS
S1-18	ELECTRICAL DETAILS

**GENERAL NOTES:**

**SPECIFICATIONS:** Connecticut Department of Transportation Form 816, Supplemental Specification dated January 2014 and Special Provisions.

**DESIGN SPECIFICATIONS:** AASHTO LRFD Bridge Design Specifications 6th Edition (2012) with 2013 Interims, as supplemented by the Connecticut Department of Transportation Bridge Design Manual (2003).

**ALLOWABLE DESIGN STRESSES:**  
 Class "A" Concrete: Based on  $f_c = 3,000$  psi  
 Class "F" Concrete: Based on  $f_c = 4,000$  psi  
 Reinforcement (ASTM A615 Grade 60):  $f_y = 60,000$  psi  
 Structural Steel (AASHTO M270, Grade 50):  $F_y = 50,000$  psi

The specified concrete strength used in design,  $f_c$ , of the concrete components is noted above. The minimum compressive strength of the concrete in the constructed components shall conform to the requirements of the special provision "Section 6.01 Concrete for Structures."

**LIVE LOAD:** HL-93

**FUTURE PAVING ALLOWANCE:** None

**STRUCTURAL STEEL:** See Structure Sheet Notes for designations and requirements.

**PAINT:** Paint shall conform to the requirements of the special provision, "Structural Steel (Site No. 1)." The item "Field Touch-up Painting" shall be used for painting existing structural steel.

**BITUMINOUS CONCRETE OVERLAY:** This shall consist of two lifts. The first shall be HMA S0.25 (1" thick) and the second shall be HMA S0.5 (2" thick).

**FOUNDATION PRESSURES:** The various Group Loadings noted on the substructure plan sheets refer to the Group Loads as given in the AASHTO LRFD Bridge Design Specifications.

**DIMENSIONS:** When decimal dimensions are given to less than three decimal places, the omitted digits shall be assumed to be zeros.

**EXISTING DIMENSIONS:** Dimensions of the existing structure shown on these plans are for general reference only. They have been taken from the original design drawings and are not guaranteed. The Contractor shall take all field measurements necessary to assure proper fit of the finished work and shall assume full responsibility for their accuracy.

**REMAIN-IN-PLACE FORMS:** The use of remain-in-place forms on this structure is not allowed.

**COMPOSITE CONSTRUCTION:** No temporary intermediate supports shall be used during the placing and setting of the concrete deck slab. Temporary supports may be used for structural steel erection only. Construction loads and dead loads will be permitted when directed by the Engineer, but only when the concrete has reached a strength of  $f_c = 3,500$  psi. Live loads (traffic) will be permitted on the structure after the concrete has reached a strength of  $f_c = 4,000$  psi.

**CLASS "A" CONCRETE:** Class "A" Concrete shall be used for the entire substructure and the parapets of U-type Wings.

**CLASS "F" CONCRETE:** Class "F" Concrete shall be used for the bridge decks including parapets.

**JOINT SEAL:** See Special Provisions.

**EXPOSED EDGES:** Exposed edges of concrete shall be beveled 1" x 1" unless dimensioned otherwise.

**CONCRETE COVER:** All reinforcement shall have two inches cover unless dimensioned otherwise.

**REINFORCEMENT:** All reinforcement shall be ASTM A615 Grade 60.

**EPOXY COATED REINFORCING BARS:** All reinforcement in the superstructure including the concrete deck slab and the parapets shall be epoxy coated unless otherwise noted. These bars shall be included in the pay item for "Deformed Steel Bars (Epoxy Coated)".

**PREFORMED EXPANSION JOINT FILLER:** The cost of furnishing and installing Preformed Expansion Joint Filler shall be included in the cost of the item "Class 'A' Concrete".

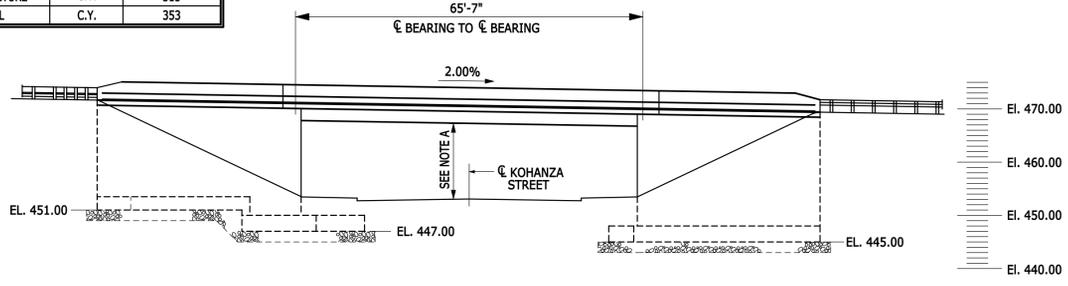
**CLOSED CELL ELASTOMER:** The cost of furnishing and installing Closed Cell Elastomer shall be included in the cost of the item "Class 'A' Concrete".

**CONSTRUCTION JOINTS:** Construction joints, other than those shown on the plans, will not be permitted without prior approval of the Engineer.

CONCRETE DISTRIBUTION		
LOCATION	UNIT	QUANTITY
SUPERSTRUCTURE	C.Y.	38
SUBSTRUCTURE	C.Y.	315
TOTAL	C.Y.	353

**PROPOSED PLAN BRIDGE NO. 01185**  
SCALE: 1/16" = 1'-0"

- LOCATION OF NEW BORING
- LOCATION OF EXISTING BORING
- LOCATION OF UTILITY TEST PIT, SEE CIVIL DRAWINGS



**PROPOSED ELEVATION BRIDGE NO. 01185**  
SCALE: 1/16" = 1'-0"

NOTE A: MINIMUM VERTICAL CLEARANCE FOR THE WIDENED STRUCTURE IS EQUAL TO THE EXISTING MINIMUM VERTICAL CLEARANCE OF 14'-2".

INSPECTION OF FIELD WELDS		
METHODS	UNIT	QUANTITY
Ultrasonic	inch	0
Magnetic Particle	feet	0

**GENERAL DESCRIPTION OF WORK**

- INSTALL TEMPORARY EARTH RETAINING SYSTEM.
- REMOVE BRIDGE DECK AT SOUTH SIDE OF BRIDGE.
- EXTEND ABUTMENTS AND CONSTRUCT NEW SOUTH WINGWALLS.
- INSTALL NEW GIRDERS AND CONSTRUCT NEW DECK AND PARAPET.
- MILL EXISTING BITUMINOUS OVERLAY, PATCH DECK AS NECESSARY, INSTALL BITUMINOUS CONCRETE OVERLAY AND INSTALL ASPHALTIC PLUG EXPANSION JOINTS FULL WIDTH OF BRIDGE.

**NOTICE TO BRIDGE INSPECTORS**

The Department's Bridge Safety procedures require this bridge to be inspected for, but not limited to, all appropriate components indicated in the governing manuals for bridge inspection. Attention must be given to inspecting the following special components and details. (The listing for components for specific attention shall not be construed to reduce the importance of inspection of any other component of the structure.) The frequency of inspection of this structure shall be in accordance with the governing manuals for bridge inspection, unless otherwise directed by the Manager of Bridge Safety and Evaluation.

COMPONENT OR DETAIL	STRUCTURE SHEET REFERENCE
Follow Normal Inspection Procedures	

Driller: J. Doner	Connecticut DOT Boring Report		Hole No.: B-1				
Inspector: G. Chhabra	Town: DANBURY	Stat./Offset: 505+33, 4' Rt					
Engineer: CDOT	Project No.: 0034-0308	Northing: 707771					
Start Date: 6/5/2008	Route No.: I-84	Easting: 803167					
Finish Date: 6/5/2008	Bridge No.:	Surface Elevation: 471.1					
Project Description: Improvements to Interchange Nos. 5 & 11							
Casing Size/Type: HSA3-1/4"	Sampler Type/Size: SS/1.375 in	Core Barrel Type:					
Hammer Wt.: Fall	Hammer Wt.: 140 lbs	Fall: 30 in					
Groundwater Observations @ DRY after 0 hours @ after hours @ after hours							
Depth (ft)	SAMPLES					Material Description and Notes	Elevation (ft)
	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %		
0						6" Bituminous Concrete	470
5	S-1	4 3 6 2	24	8		Gray f-c SAND, some Silt, little f-m Gravel	465
10	S-2	9 18 34 23	24	12		Gray f-c SAND, some Silt, little f-m Gravel	460
15	S-3	28 33 32 32	24	2		Brown f-c SAND, some f-c Gravel, trace Silt	455
20	S-4	27 18 22 18	24	12		Brown f-c SAND, some c-f Gravel, trace Silt	450
25	S-5	43 54 66 55	24	14		Brown f-c SAND, some f-c Gravel, trace Silt	445
						Bottom of Boring	
Sample Type: S=Split Spoon C=Core UP=Undisturbed Piston V=Vane Shear Test Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%							
Total Penetration in Earth: 27		Rock:		NOTES:		Sheet 1 of 1	
No. of Samples: 5						SM-001-M REV. 1.02	

Driller: J. Doner	Connecticut DOT Boring Report		Hole No.: B-2				
Inspector: G. Chhabra	Town: DANBURY	Stat./Offset: 507+00, 4' Rt					
Engineer: CDOT	Project No.: 0034-0308	Northing: 707818					
Start Date: 6/5/2008	Route No.: I-84	Easting: 803327					
Finish Date: 6/5/2008	Bridge No.:	Surface Elevation: 468.7					
Project Description: Improvements to Interchange Nos. 5 & 11							
Casing Size/Type: HSA3-1/4"	Sampler Type/Size: SS/1.375 in	Core Barrel Type:					
Hammer Wt.: Fall	Hammer Wt.: 140 lbs	Fall: 30 in					
Groundwater Observations @ DRY after 0 hours @ after hours @ after hours							
Depth (ft)	SAMPLES					Material Description and Notes	Elevation (ft)
	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %		
0						6" Bituminous Concrete	465
5	S-1	5 5 7 7	24	9		Gray f-c SAND and SILT, little f-m Gravel	460
10	S-2	12 8 6 9	24	12		Gray F-C SAND, some Silt, little f-c Gravel	455
15	S-3	10 10 31 30	24	16		Gray/Brown F-C SAND, little f-m Gravel, Silt	450
						Bottom of Boring	
Sample Type: S=Split Spoon C=Core UP=Undisturbed Piston V=Vane Shear Test Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%							
Total Penetration in Earth: 17		Rock:		NOTES:		Sheet 1 of 1	
No. of Samples: 3						SM-001-M REV. 1.02	

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
Filename: 08458_MSH_B034_0308_BOR-1.dwg			6/10/2014
			Revised Version: 6/10/14

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. ESTRADA/P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION

ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014

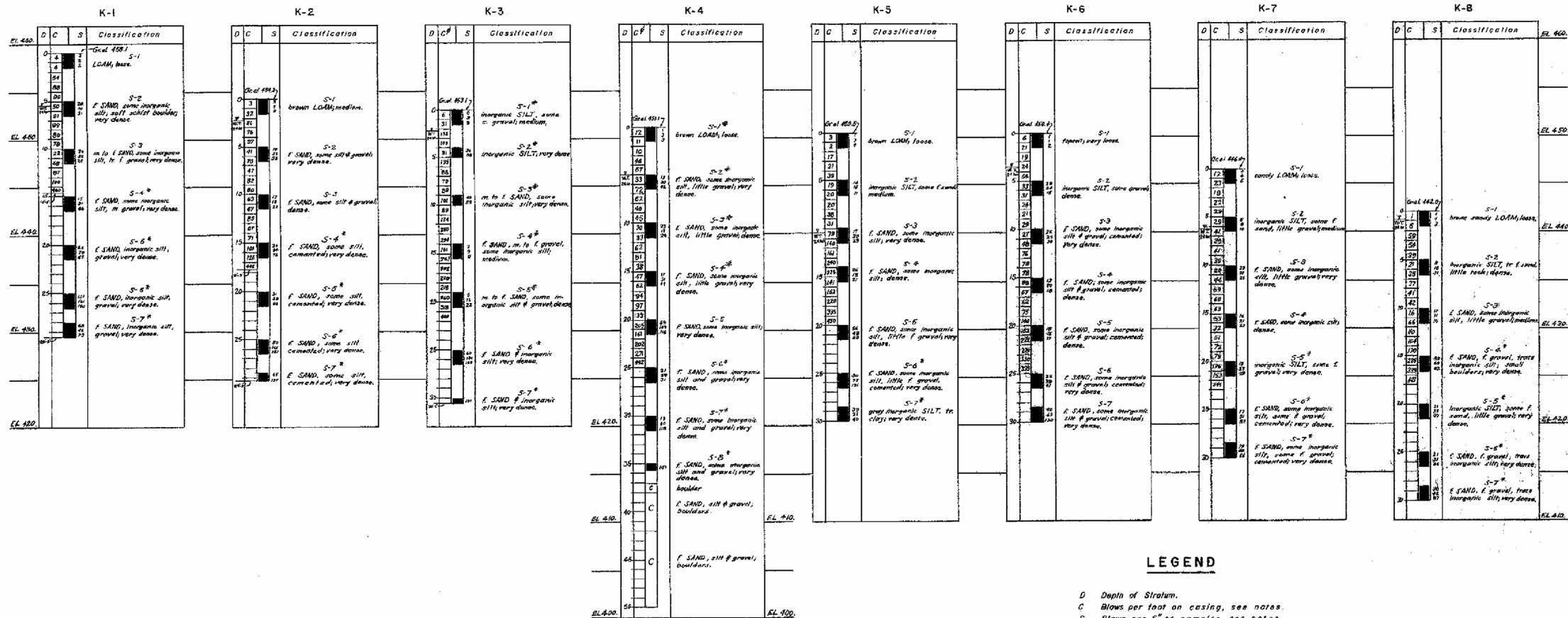


PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**

DRAWING TITLE:  
**BORING LOGS B-1 AND B-2 BRIDGE NO. 01185**

PROJECT NO.: **34-313**  
DRAWING NO.: **S1-02**  
SHEET NO.: **05.03**



**LEGEND**

- D Depth of Stratum.
- C Blows per foot on casing, see notes.
- S Blows per 6" on sampler, see notes.
- S- Drive sample number.
- █ Drive sample.
- Cored sample.
- ⊕ Water Table with time of observation.

**NOTES**

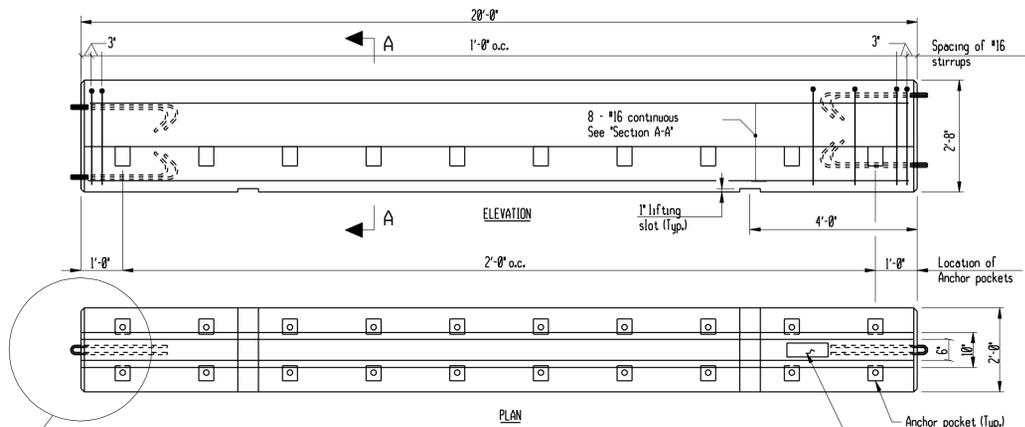
Casing = 3 1/4" I.D. casing driven with 300-lb. hammer falling 2'-0", unless noted by (†).  
 (†) = 3 1/4" I.D. casing driven with 300-lb. hammer falling 2'-6".  
 Sampler = 2 1/2" I.D. split spoon sampler driven with 300-lb. hammer falling 1'-5", unless noted by (\*) or (†).  
 (†) = 2 1/2" I.D. split spoon sampler driven with 140-lb. hammer falling 2'-6".  
 (†) = Open A-Rod.  
 Core barrel = 2 1/2" I.D. Double Tube core barrel with diamond bit.

**BORING NOTES:**

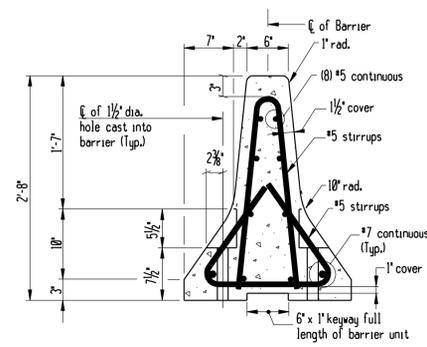
BORINGS ARE TAKEN FROM ORIGINAL DRAWINGS FOR CONNDOT PROJECT NO. 34-84 DATED 1958 (BY PARSONS, BRINKERHOFF, HALL & MACDONALD).

THESE BORINGS ARE SHOWN FOR INFORMATION ONLY.

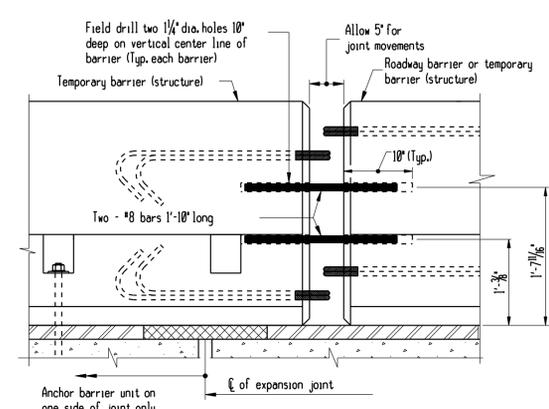
THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.		DESIGNER/DRAWER: <b>Y. ESTRADA/P. ARZENO</b> CHECKED BY: <b>J. HAPKIEWICZ</b> SCALE AS NOTED	<b>STATE OF CONNECTICUT</b> DEPARTMENT OF TRANSPORTATION ENGINEER: <b>AECOM Technical Services, Inc.</b> APPROVED BY: <b>J.T. HAPKIEWICZ, P.E.</b>	PROJECT TITLE: <b>I-84 INTERCHANGES 5 &amp; 6 IMPROVEMENTS</b> 	TOWN: <b>DANBURY</b> DRAWING TITLE: <b>BORING LOGS 1958 BORINGS BRIDGE NO. 01185</b>	PROJECT NO. <b>34-313</b> DRAWING NO. <b>S1-03</b> SHEET NO. <b>05.04</b>
REV. DATE REVISION DESCRIPTION SHEET NO. 06-58 MSH B034 0308 BOR-2.dwg 6/10/2014 Borlog Version 01/05						



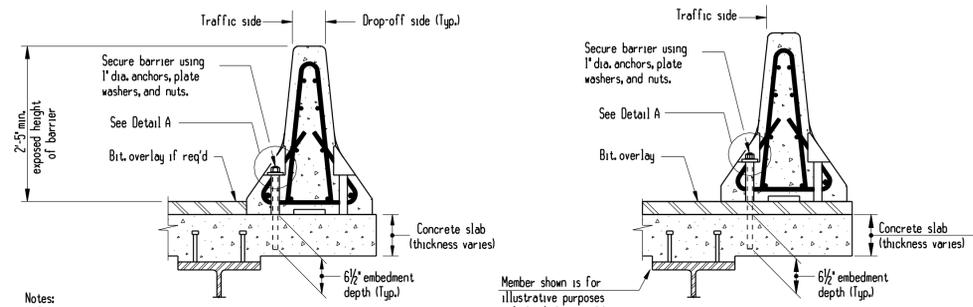
TEMPORARY BARRIER (STRUCTURE)  
Scale: 1/2" = 1'-0"



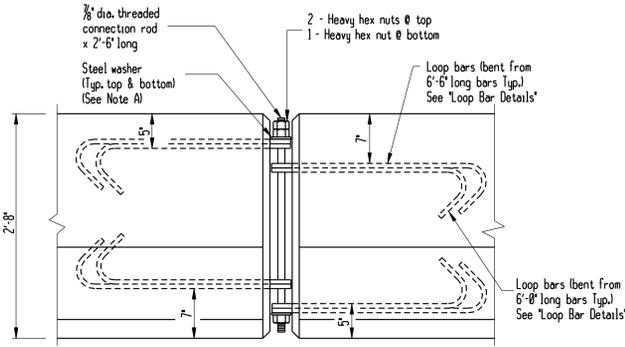
SECTION A-A  
Scale: 1" = 1'-0"



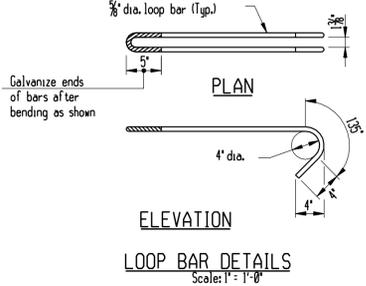
BARRIER CONNECTION DETAILS  
AT EXPANSION JOINTS (CASE II SHOWN)  
Scale: 1" = 1'-0"



CHEMICAL ANCHORING OPTION  
(See Note 1b)



BARRIER CONNECTION DETAILS  
Scale: 1" = 1'-0"



LOOP BAR DETAILS  
Scale: 1" = 1'-0"

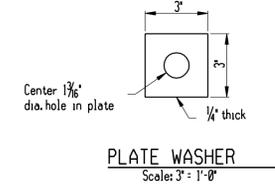
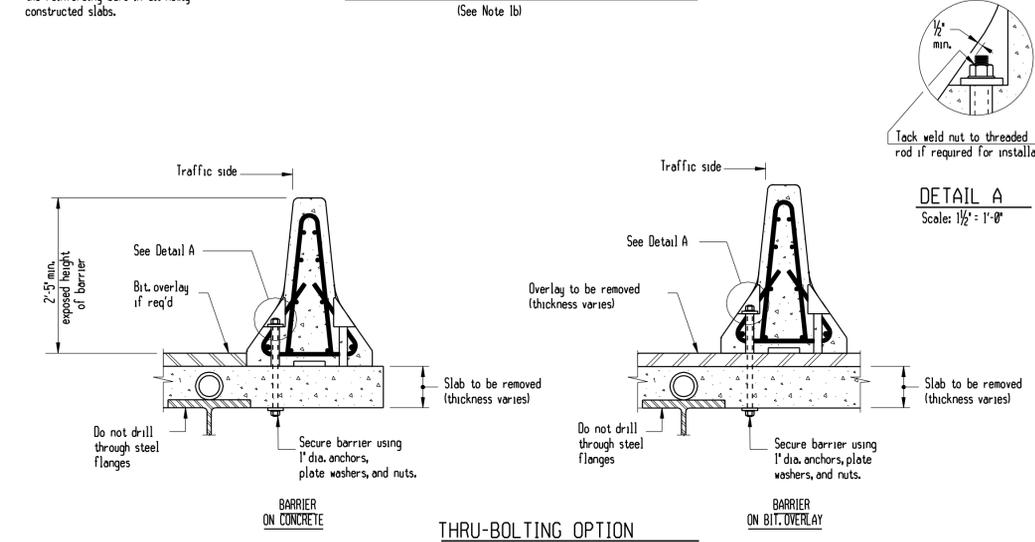


PLATE WASHER  
Scale: 3" = 1'-0"



THRU-BOLTING OPTION  
(See Note 1c)  
TEMPORARY ANCHORAGE SYSTEM  
Scale: 3/4" = 1'-0"



DETAIL A  
Scale: 1 1/2" = 1'-0"

Encapsulated lens reflective sheeting to conform to Article M16.09

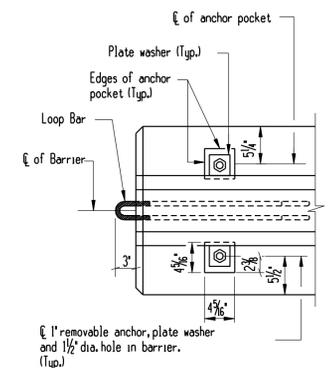
**COLOR APPLICATION:**  
Left side of all roadways and ramps - YELLOW  
Right side of all roadways and ramps - SILVER

**COLOR OF DELINEATORS:**  
DE-7A One Way Yellow  
DE-7 One Way Silver  
DE-7B Two Way Yellow  
DE-7C Silver/Yellow Back to Back

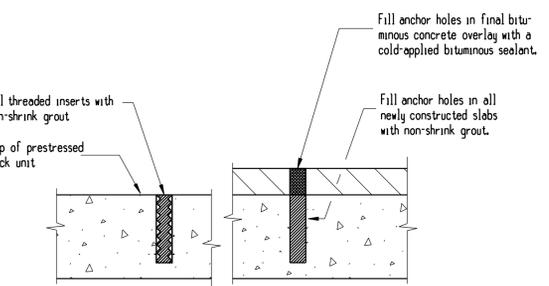
Delineators shall be mounted in the center of temporary barriers as required.

**SPACING OF DELINEATORS**  
On leading tapered sections - every unit (20'-0").  
On the first 100'-0" of parallel sections - every unit (20'-0")  
Minimum of 2 if less than 100'-0"  
On the remaining length - every fifth (5th) unit (100'-0").  
Alternating one way traffic - every unit (20'-0").  
All other roadways shall be delineated in accordance with M.U.T.C.D.  
Paid for under Item 'Delineators'

DELINEATORS  
Scale: 1" = 1'-0"



PLAN END OF BARRIER  
Scale: 1" = 1'-0"



FILLING OF ANCHOR HOLES  
Scale: 1 1/2" = 1'-0"

NOTES

- The temporary barrier shown on this sheet shall be anchored onto bridge decks (see 'Temporary Anchorage System') when it is used to protect a vertical drop-off. The temporary anchorage system shall conform to the following:
  - Prestressed Deck Units: Threaded inserts shall be used for securing temporary barrier (structure) to prestressed deck units. The threaded inserts shall be cast into the deck units during fabrication, and shall be located as required to accommodate the stage construction. See special provisions for additional information.
  - Chemical Anchoring: This consists of drilling holes in new or existing concrete, placing removable anchors in the holes, and securing the anchors with a pre-approved chemical anchor material which conforms to M8.01-15 of the Standard Specifications. Hole diameter shall be determined by the manufacturer of the chemical anchoring material.
  - Through-Bolting: This consists of drilling through deck slabs and securing removable anchors on the underside with plate washers and nuts. Through-bolting is not permitted on new construction or prestressed concrete. Maximum hole size in slab = 1 1/2".
- Number of Anchors: On the traffic side of a typical barrier, anchors shall be installed in all pockets. At barrier units which straddle bridge expansion joints the anchor and connection details shall conform to Table 'A'.

TABLE "A": BARRIER UNITS AT EXP. JOINTS			
Case	Span Length Contributing to Movement at the Expansion Joint	Method of End Connection to Abutting Barrier Unit. (Where movement will occur)	Anchor Requirements for the Barrier Unit which Straddles the Bridge Joint
I.	Up to 100 feet	Use 3/8" connection rod but do not over tighten the nuts and allow 'slop' around the rod and loops.	On one side of the joint only, install as many anchors as possible on the traffic side of the barrier. On the other side of the joint do not install anchors.
II.	100 to 420 feet	Field drill holes in ends of both units and connect with 2-#25 bars. For details see 'Barrier Connection Details'.	On one side of the joint only, install a total of 10 anchors. Fill the pockets on the traffic side before filling the pockets on the drop-off side. If this cannot be achieved see III below.
III.	Over 420 feet and barrier layouts which do not satisfy II.	To be designed by Contractor and reviewed by Engineer. Cost of designing and furnishing special barrier units or attachments paid for under 'TPCBC (Structure)'.	To be designed by Contractor and reviewed by Engineer. Cost of designing and furnishing special barrier units or attachments paid for under 'TPCBC (Structure)'.

- The work done on this sheet, with the exception of the delineators, shall be paid for under the item 'Temporary Precast Concrete Barrier Curb (Structure)'
- NOTES FOR CONNECTION ROD DETAILS**  
(SEE 'ELEVATION-BARRIER CONNECTION DETAILS')
- Plain steel washers shall be manufactured with the following dimensions:  
Outside diameter = 2 3/4" (+1/4", -0")  
Inside diameter = 1 1/4" (+1/16")
  - The nuts on the connection rod shall be turned until the bottom washer is drawn up against the loop bar. The loop bars shall not be bent due to the tightening process.
  - For ease of removal of the nuts, the threads shall be waxed.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
065-SB	MSH	06/04/0308	TPCBC.dgn
		6/10/2014	Barrier Version: 01/05

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**Y. ESTRADA/P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION

ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

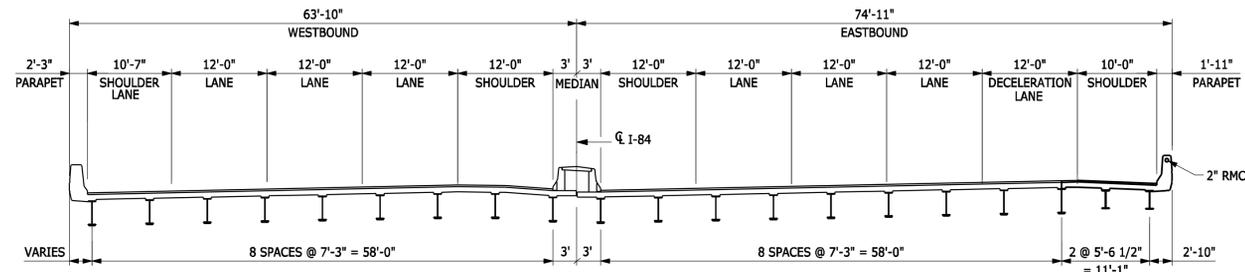
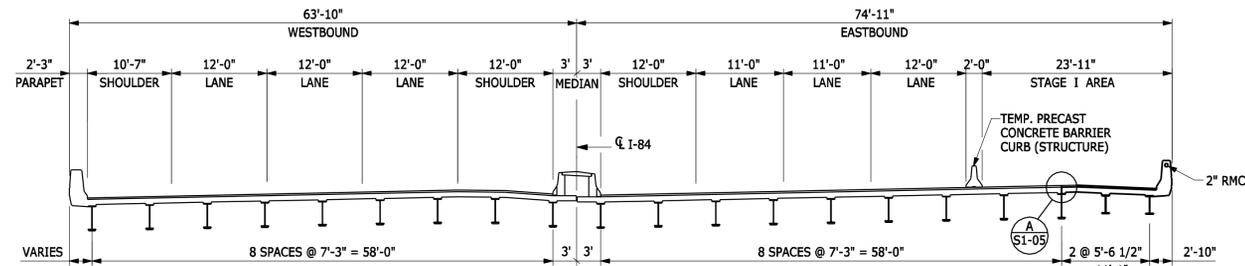
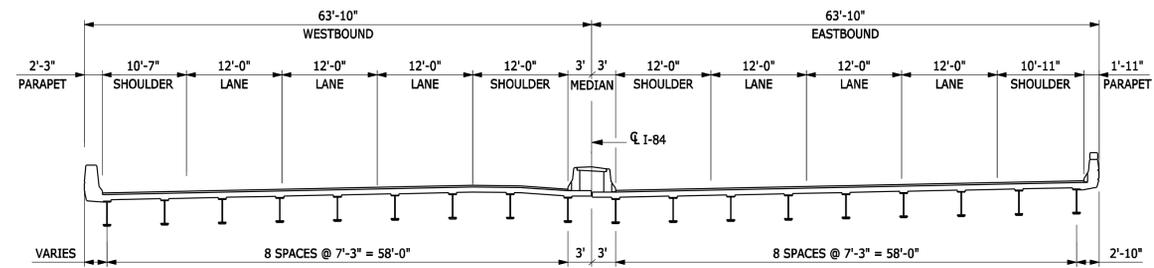
TOWN:  
**DANBURY**

DRAWING TITLE:  
**TPCBC (STR.) BRIDGE NO. 01185**

PROJECT NO.  
**34-313**

DRAWING NO.  
**S1-04**

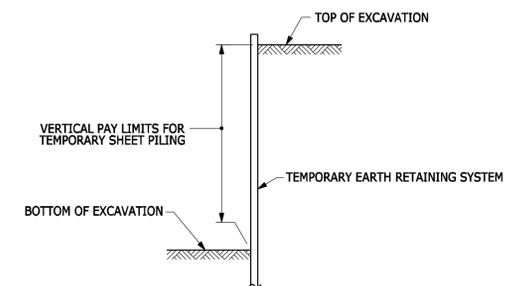
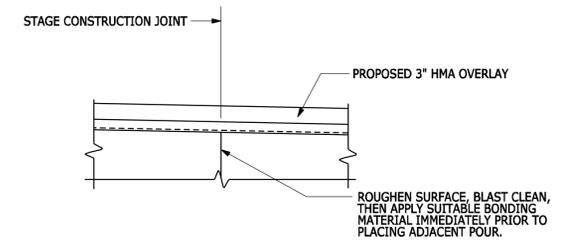
SHEET NO.  
**05.05**



STAGE CONSTRUCTION NOTES

STAGE I:

1. INSTALL TEMPORARY PRECAST CONCRETE BARRIER (STRUCTURE) CURB AND SHIFT TRAFFIC.
2. INSTALL TEMPORARY EARTH RETAINING SYSTEM AT ENDS OF EXISTING SOUTH WINGWALLS.
3. REMOVE EXISTING CONCRETE DECK AND PARAPET FROM STAGE I CONSTRUCTION AREA.
4. EXTEND ABUTMENTS AND CONSTRUCT NEW WINGWALLS. THE PROPOSED WINGWALL FOOTINGS WILL BE EXTENSIONS OF THE EXISTING FOOTINGS.
5. INSTALL ROLLED BEAMS AND POUR CONCRETE DECK AND PARAPETS WITHIN STAGE I CONSTRUCTION AREA.
6. REMOVE TEMPORARY PRECAST CONCRETE BARRIER CURB (STRUCTURE).
7. MILL EXISTING OVERLAY AND PATCH CONCRETE DECK (AS REQUIRED) FOR FULL WIDTH OF BRIDGE.
8. APPLY MEMBRANE WATERPROOFING AND INSTALL HMA OVERLAY.
9. INSTALL ASPHALTIC PLUG EXPANSION JOINTS ACROSS FULL WIDTH OF BRIDGE.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.
067-58	MSH	R1034_0308_STG.dwg	8/10/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. ESTRADA/P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

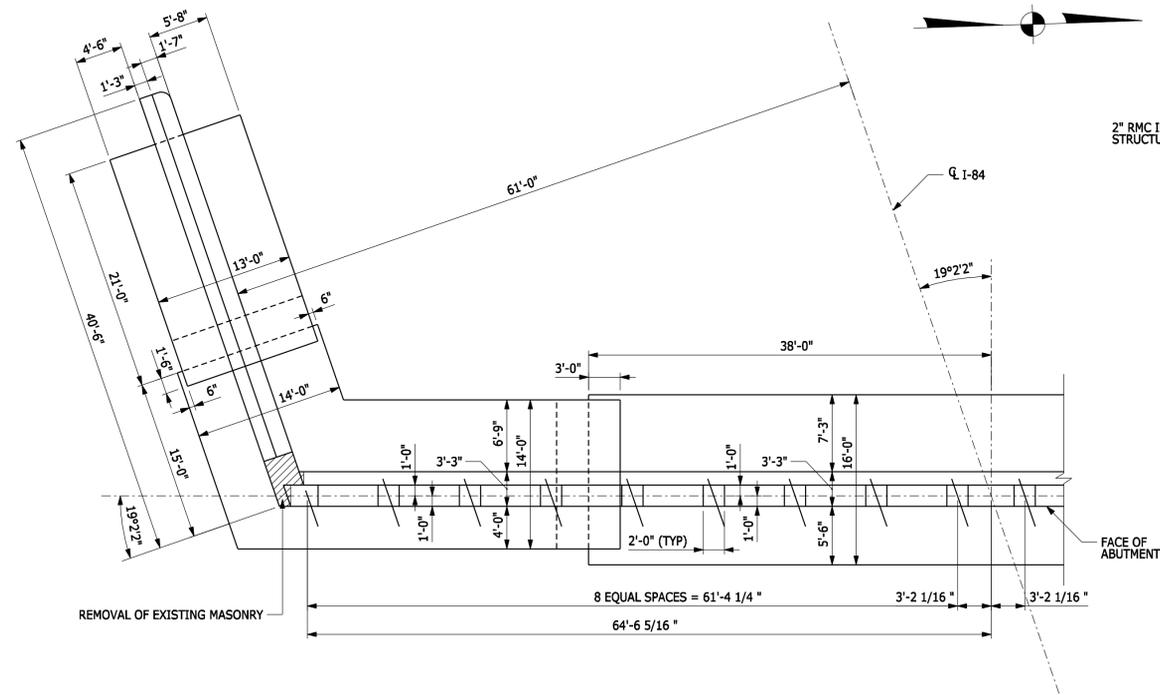
**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



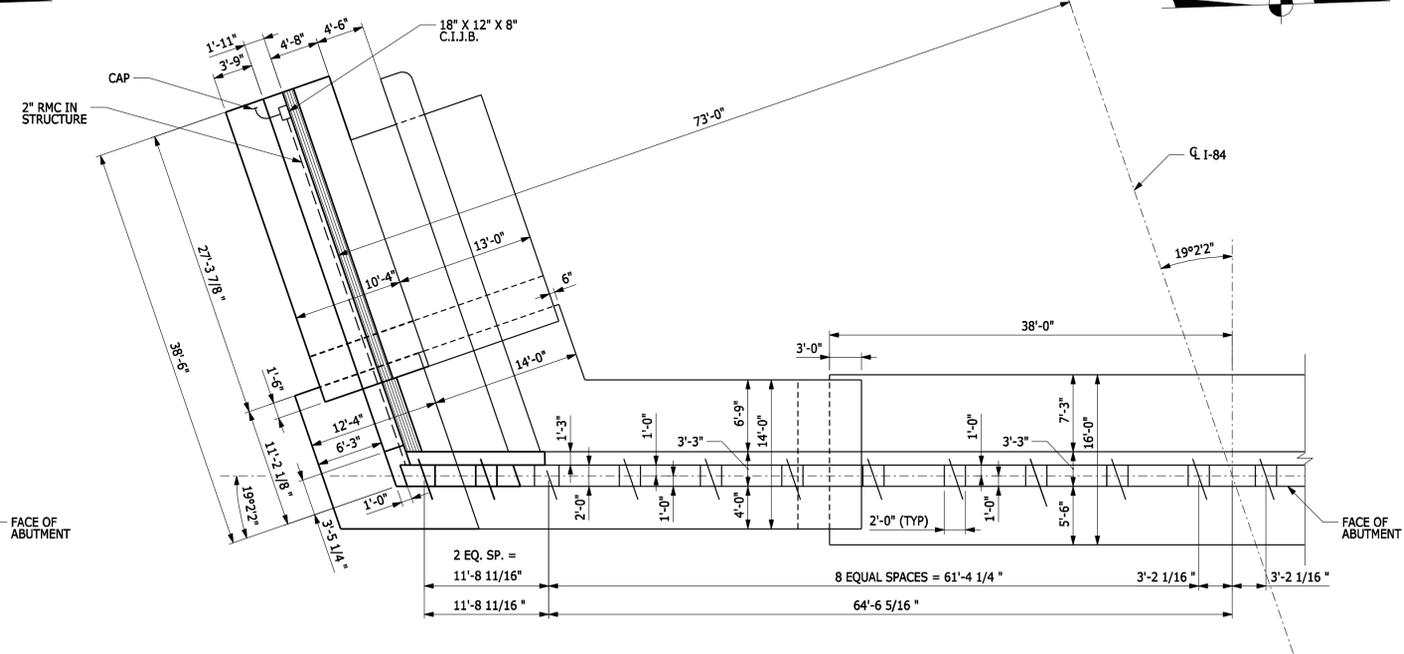
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**STAGE CONSTRUCTION BRIDGE NO. 01185**

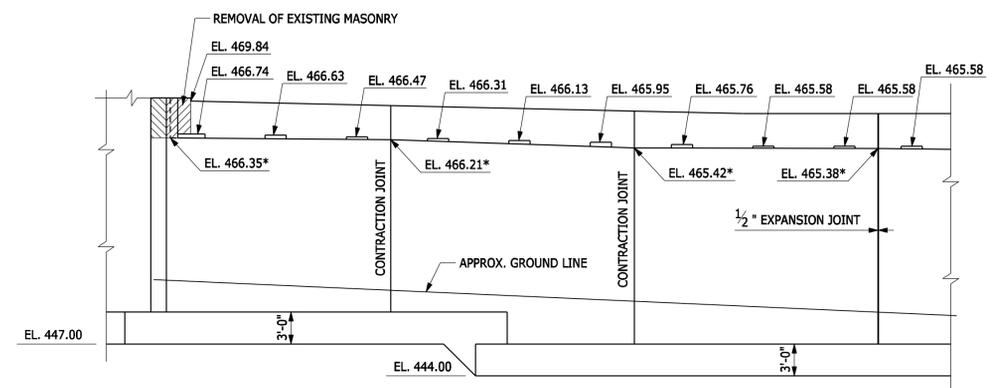
PROJECT NO.  
**34-313**  
DRAWING NO.  
**S1-05**  
SHEET NO.  
**05.06**



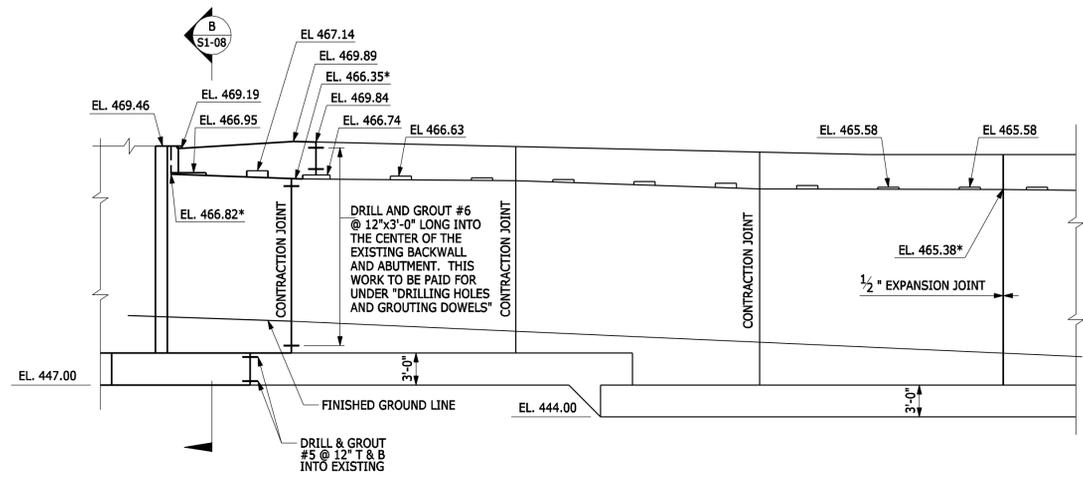
**EXISTING ABUTMENT 1 PLAN**  
SCALE: 1/8" = 1'-0"



**PROPOSED ABUTMENT 1 PLAN**  
SCALE: 1/8" = 1'-0"



**EXISTING ABUTMENT 1 ELEVATION**  
SCALE: 1/8" = 1'-0"



**PROPOSED ABUTMENT 1 ELEVATION**  
SCALE: 1/8" = 1'-0"

NOTE: ELEVATIONS MARKED \* ARE AT FACE OF BACKWALL

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
088-58	MSH	R034_0308_ABT1.dwg	6/10/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**A. HAWKSLEY**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

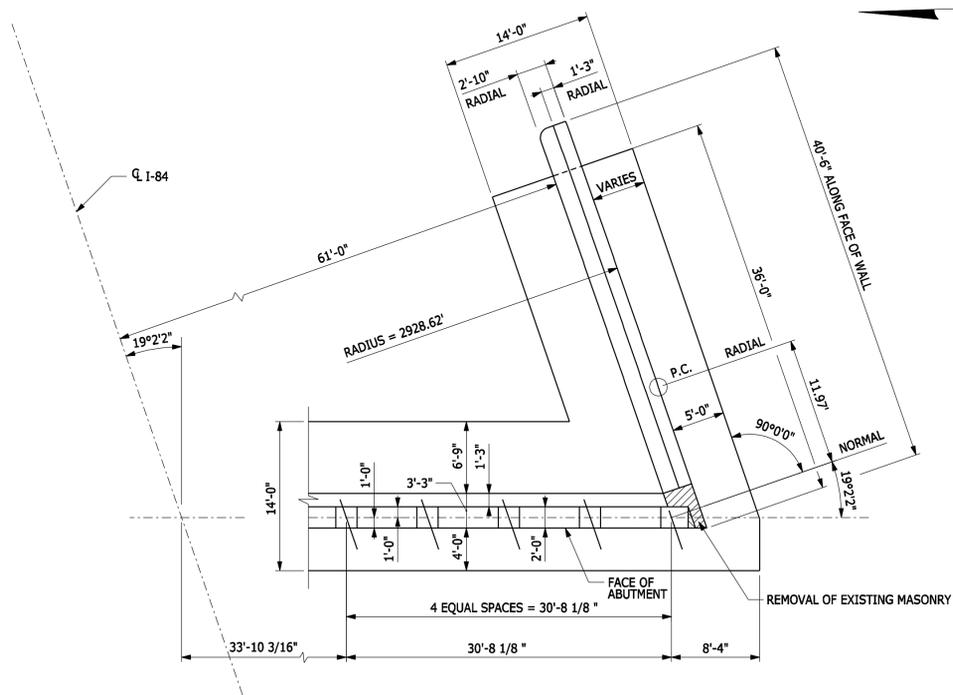

**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  
 ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.**



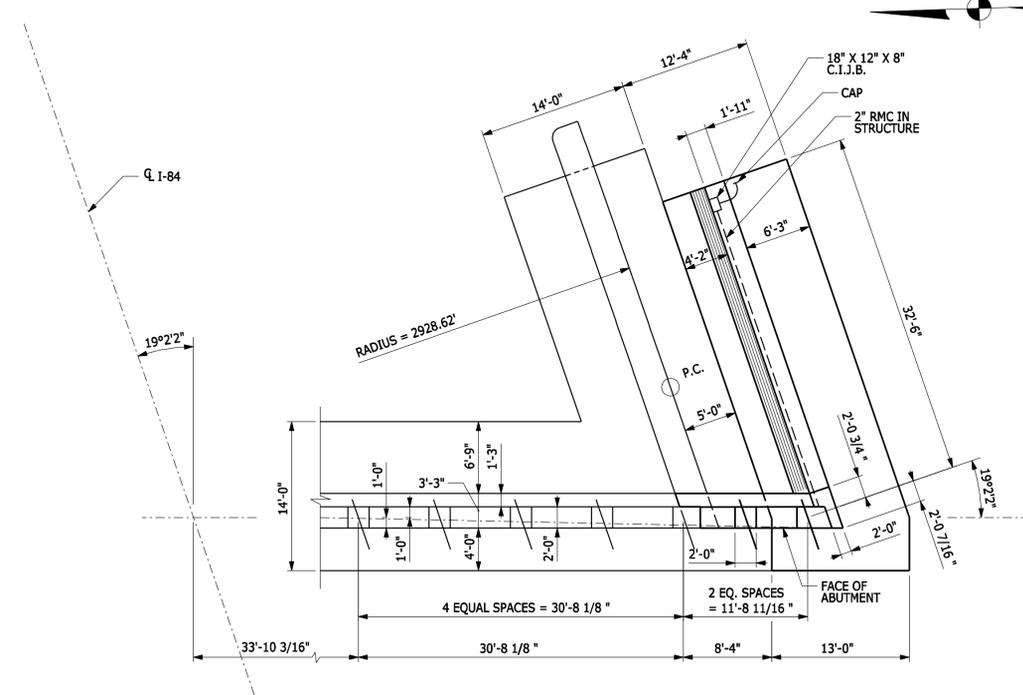
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**ABUTMENT 1 BRIDGE NO. 01185**

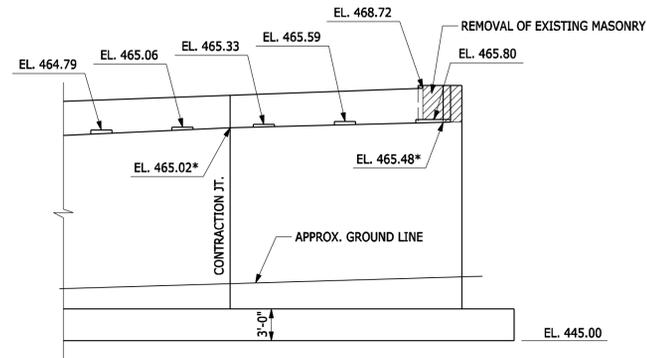
PROJECT NO.  
**34-313**  
DRAWING NO.  
**S1-06**  
SHEET NO.  
**05.07**



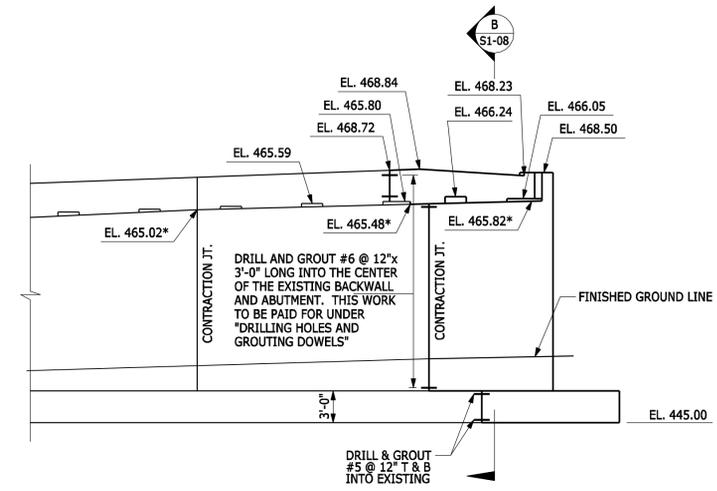
EXISTING ABUTMENT 2 PARTIAL PLAN  
SCALE: 1/8" = 1'-0"



PROPOSED ABUTMENT 2 PARTIAL PLAN  
SCALE: 1/8" = 1'-0"



EXISTING ABUTMENT 2 PARTIAL ELEVATION  
SCALE: 1/8" = 1'-0"



PROPOSED ABUTMENT 2 PARTIAL ELEVATION  
SCALE: 1/8" = 1'-0"

NOTE: ELEVATIONS MARKED \* ARE AT FACE OF BACKWALL.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
001	06/11/2014	ISSUE FOR PERMIT	1 OF 1

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**A. HAWKSLEY**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

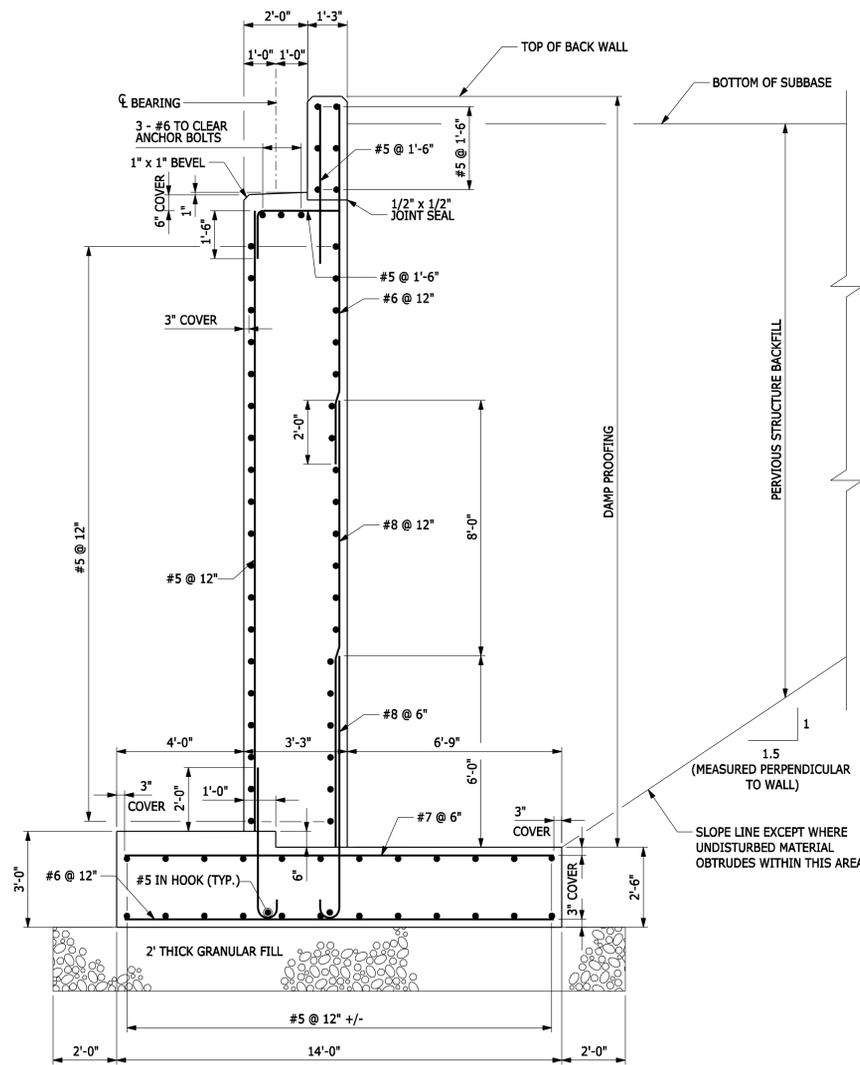
STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



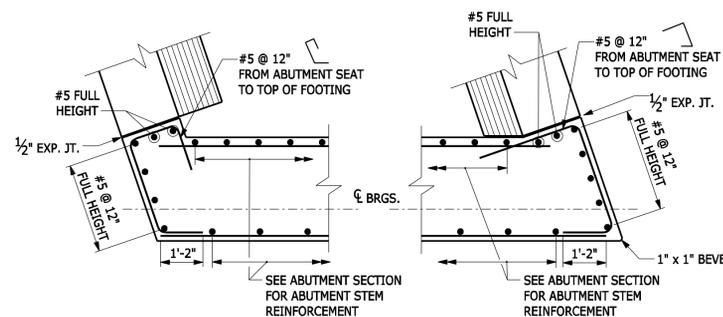
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**ABUTMENT 2 BRIDGE NO. 01185**

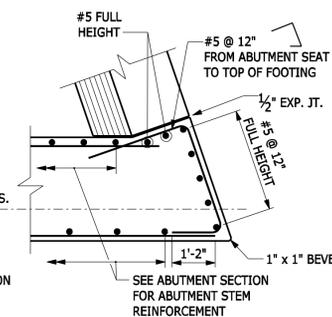
PROJECT NO.  
**34-313**  
DRAWING NO.  
**S1-07**  
SHEET NO.  
**05.08**



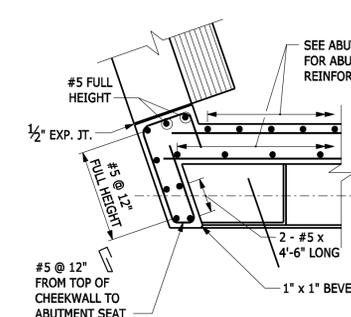
**SECTION B-B**  
SCALE: 3/8" = 1'-0"  
MAXIMUM DESIGN FOUNDATION PRESSURE = 3.57 TSF (STRENGTH IA)



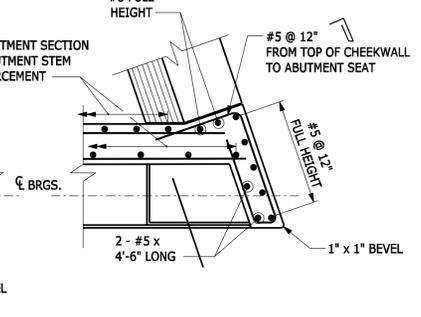
**CORNER REINFORCEMENT  
ABUTMENT 1 STEM**  
SCALE: 3/8" = 1'-0"



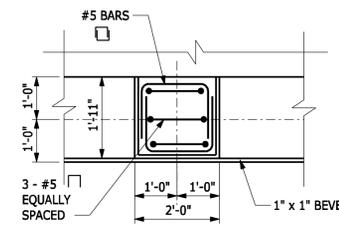
**CORNER REINFORCEMENT  
ABUTMENT 2 STEM**  
SCALE: 3/8" = 1'-0"



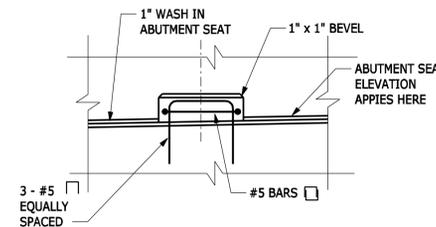
**CORNER REINFORCEMENT  
ABUTMENT 1 BACKWALL**  
SCALE: 3/8" = 1'-0"



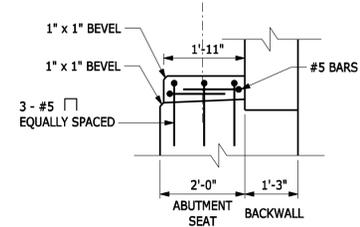
**CORNER REINFORCEMENT  
ABUTMENT 2 BACKWALL**  
SCALE: 3/8" = 1'-0"



**PLAN**



**ELEVATION**



**SECTION**

**CONCRETE BEARING PAD DETAILS**  
SCALE: 1/2" = 1'-0"  
NOTE: THESE DETAILS APPLY TO PAD HEIGHTS GREATER THAN 3".

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
076-SR	MSH	BIG04_0308_ABT_DTL.dwg	6/10/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**A. HAWKSLEY**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

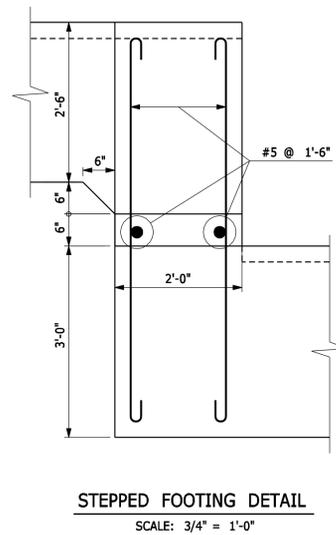
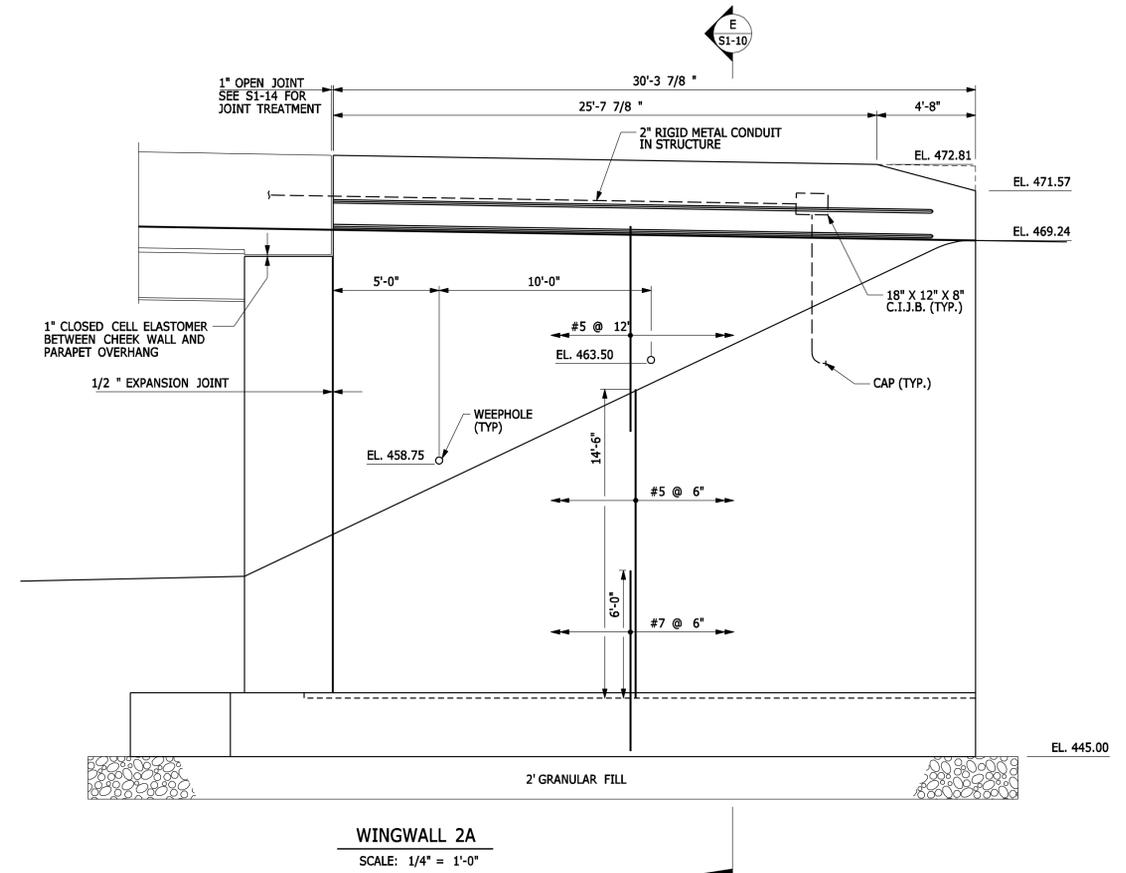
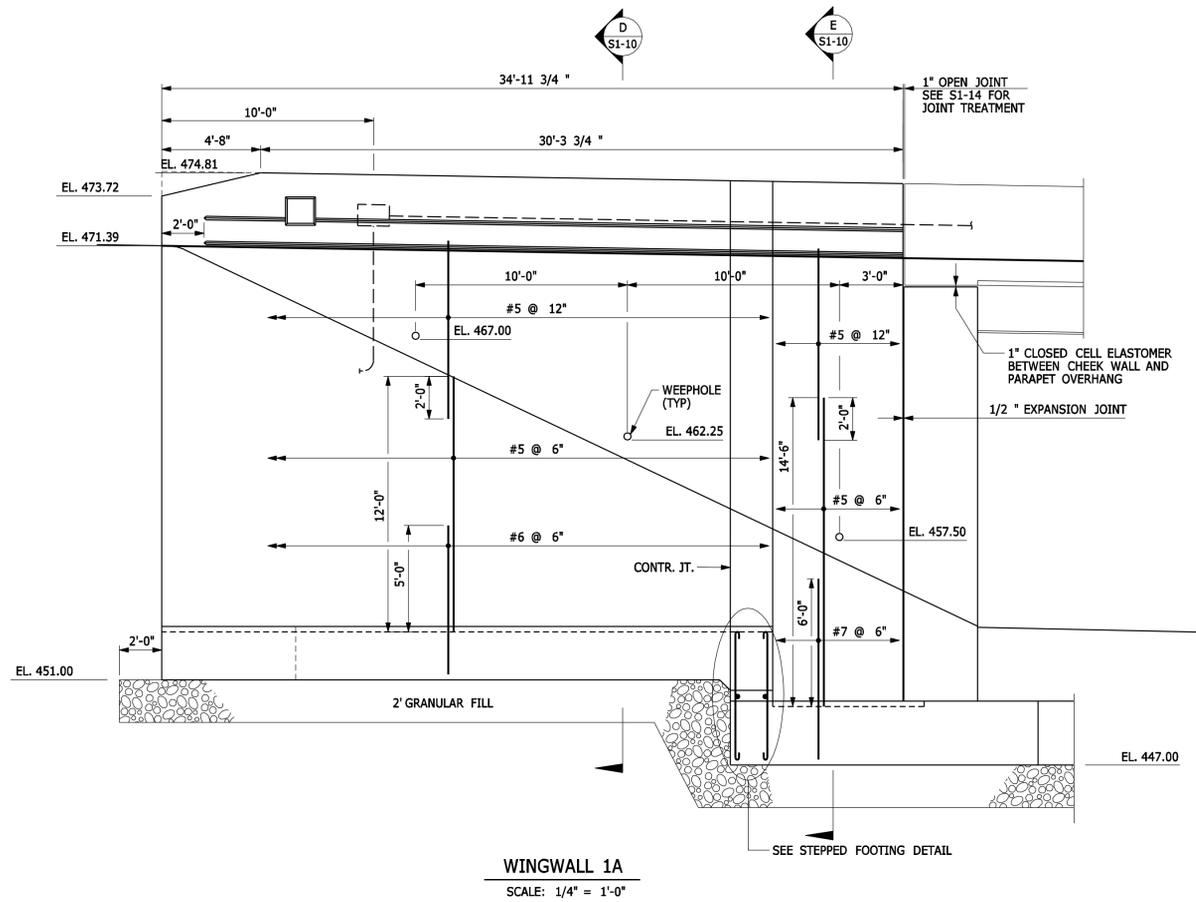
STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014

**AECOM**

PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**ABUTMENT DETAILS  
BRIDGE NO. 01185**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**S1-08**  
SHEET NO.  
**05.09**



REV.	DATE	REVISION DESCRIPTION	SHEET NO.
071-SB	MSH	R034_0308_WW1A.dwg	6/10/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**ESTRADA/HAWKSLEY**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



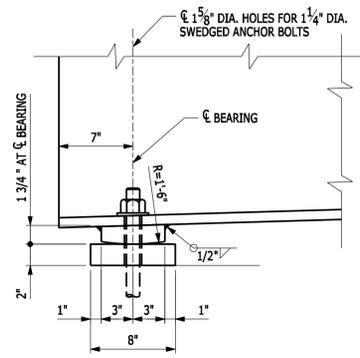
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**WINGWALLS BRIDGE NO. 01185**

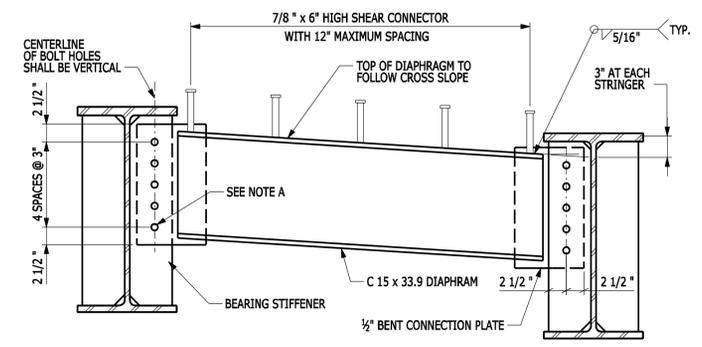
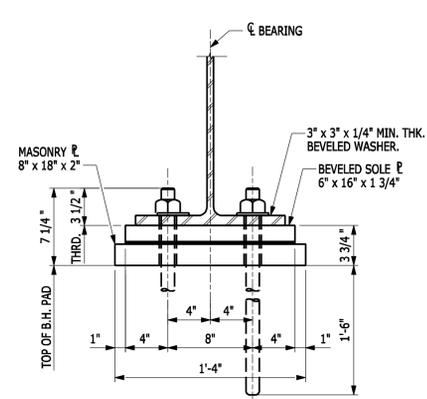
PROJECT NO.  
**34-313**  
DRAWING NO.  
**S1-09**  
SHEET NO.  
**05.10**



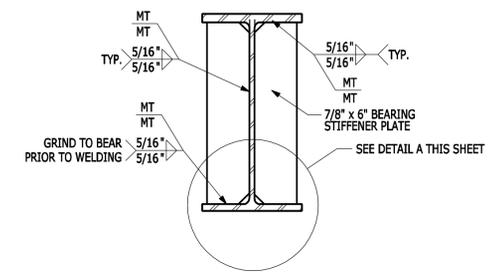




**FIXED BEARING DETAILS**  
SCALE: 1 1/2" = 1'-0"

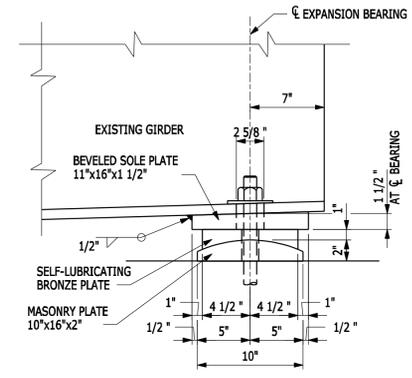


**END BEARING DIAPHRAGM**  
SCALE: 1" = 1'-0"  
NOTE A:  
BOLT HOLES IN CONNECTION PLATE SHALL BE 15/16" DIAMETER (STANDARD) FOR 7/8" DIAMETER BOLTS. BOLT HOLES IN STIFFENER PLATES SHALL BE 1 1/16" DIAMETER (OVERSIZED).

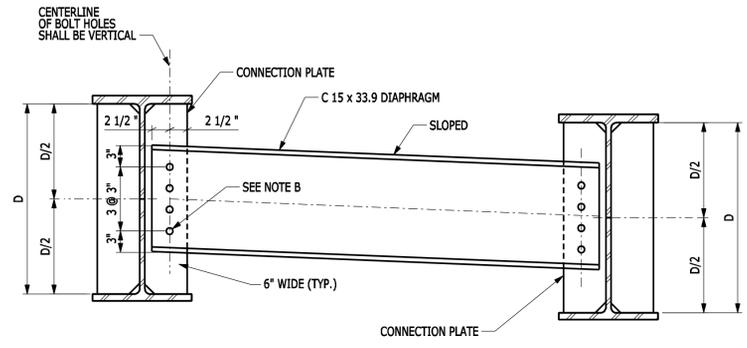
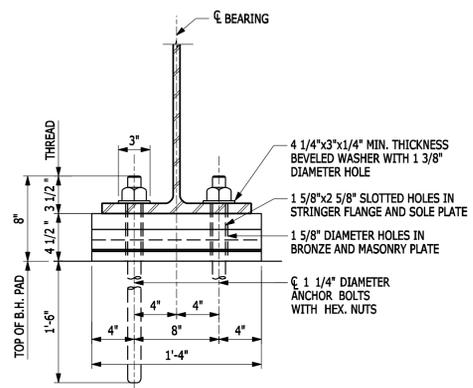


**END BEARING STIFFENER DETAIL**  
SCALE: 1" = 1'-0"

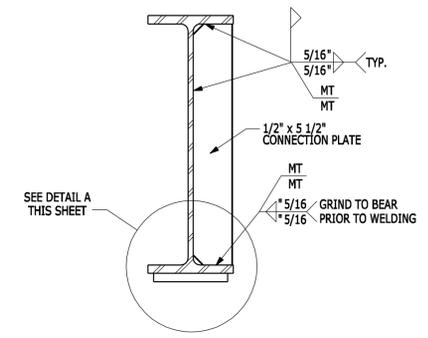
- NOTES:**
1. NUT TO BE DRAWN UP FINGER TIGHT THEN BACKED OFF 1/8TH TURN AND THREADS OF ANCHOR BOLT BURNED OFF AT FACE OF NUT WITH A POINTED TOOL.
  2. ALL STEEL BEARINGS SHALL CONFORM TO AASHTO M270, GRADE 50. BRONZE FOR EXPANSION BEARINGS SHALL CONFORM TO ASTM B-22.
  3. STEEL BEARINGS AND SELF-LUBRICATING BRONZE EXPANSION BEARINGS SHALL BE PAID FOR UNDER "STRUCTURAL STEEL".



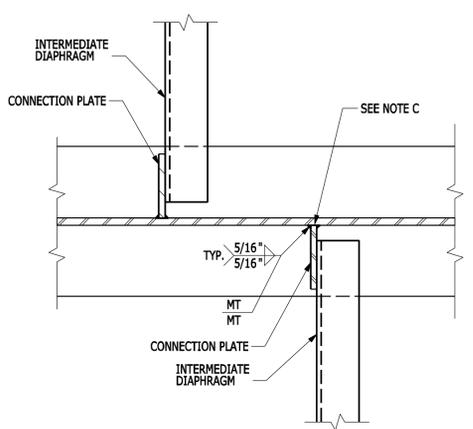
**EXPANSION BEARING DETAILS**  
SCALE: 1 1/2" = 1'-0"



**INTERMEDIATE DIAPHRAGM**  
SCALE: 1" = 1'-0"  
NOTE B:  
BOLT HOLES IN CHANNELS SHALL BE 15/16" DIAMETER (STANDARD) FOR 7/8" DIA. BOLTS. BOLT HOLES IN CONNECTION PLATES SHALL BE 1 1/16" DIAMETER (OVERSIZED).



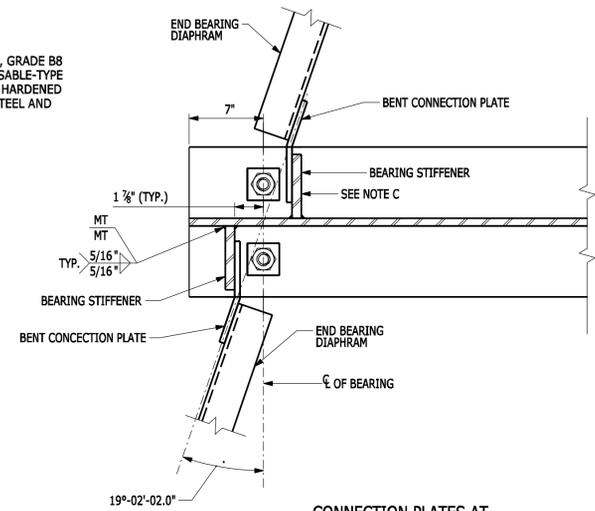
**INTERMEDIATE DIAPHRAGM CONNECTION PLATE DETAIL**  
SCALE: 1" = 1'-0"



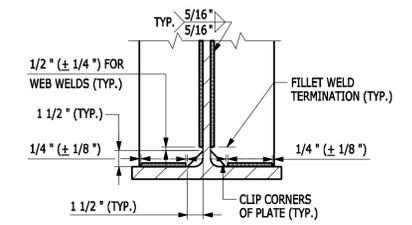
**CONNECTION PLATES AT INTERMEDIATE DIAPHRAGMS**  
SCALE: 1 1/2" = 1'-0"

NOTE C:  
CONNECTION AND STIFFENER PLATES SHALL BE INSTALLED ON THE EXISTING SOUTH FASCIA GIRDER. THE EXISTING PAINT SHALL BE REMOVED 6" BEYOND WELD LOCATION PRIOR TO WELDING THE PLATES. THE COST OF THIS WORK TO BE PAID UNDER THE ITEM "LOCALIZED PAINT REMOVAL". FIELD TOUCH-UP PAINT AFTER INSTALLATION TO BE PAID FOR UNDER THE ITEM "FIELD TOUCH-UP PAINTING". WELD TESTING IS NOT REQUIRED FOR FIELD WELDS.

**ANCHOR BOLT NOTES:**  
ANCHOR BOLTS SHALL BE STAINLESS STEEL AND CONFORM TO ASTM A193, CLASS 2, GRADE B8 (UNS DESIGNATION S 30400 (304)). THE NUTS SHALL BE PREVAILING-TORQUE REUSABLE-TYPE (WITH NYLON INSERT) LOCK NUTS AND CONFORM TO ASTM A194, GRADE 8, STRAIN HARDENED (UNS DESIGNATION S 30400 (304)). WASHERS SHALL BE 5/16" THICK STAINLESS STEEL AND CONFORM TO ASTM A276, TYPE 304, ANNEALED.



**CONNECTION PLATES AT END BEARING DIAPHRAGMS**  
SCALE: 1 1/2" = 1'-0"



**DETAIL "A"**  
SCALE: 1 1/2" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
074-SB	MSH	Ric04_0308 STD.dwg	6/10/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**A. HAWKLEY**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.**  
DATE: 06/11/2014

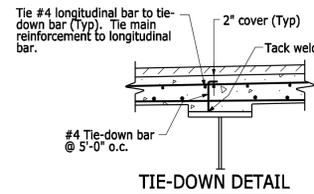


PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

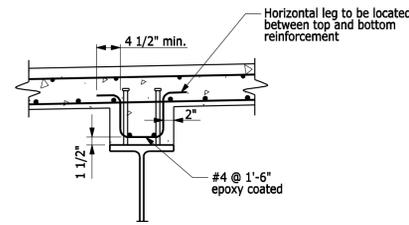
TOWN:  
**DANBURY**  
DRAWING TITLE:  
**STEEL DETAILS BRIDGE NO. 01185**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**S1-12**  
SHEET NO.  
**05.13**

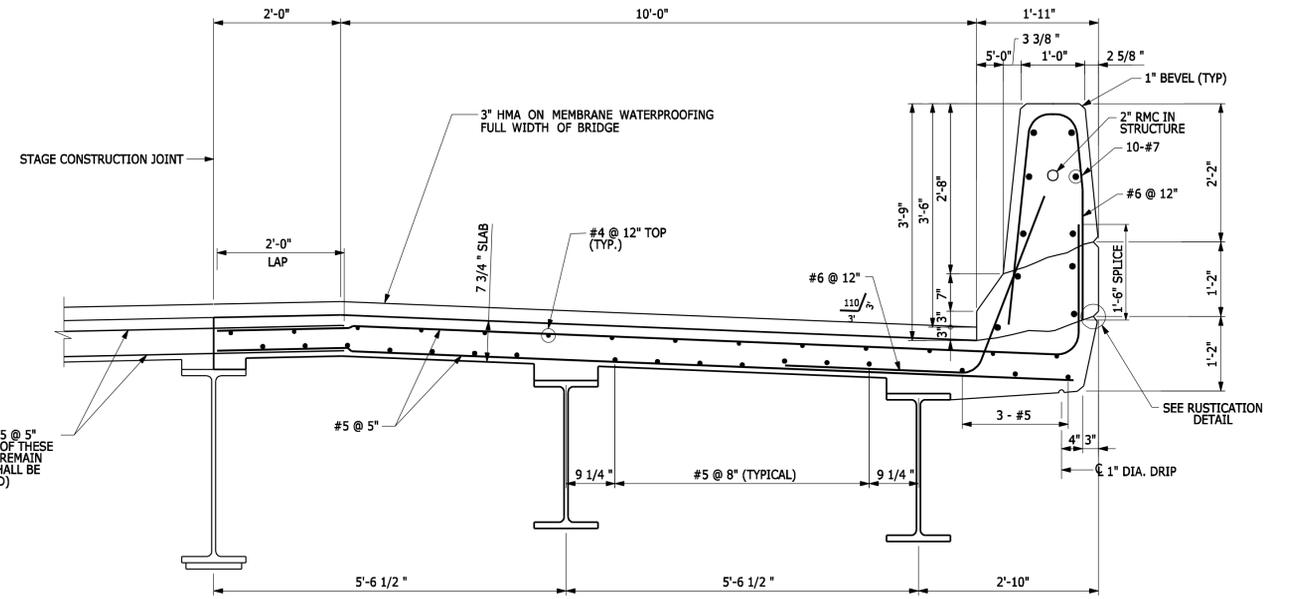
BRIDGE PARAPET CONDUIT EXPANSION FITTING SCHEDULE	
LOCATION	EXPANSION FITTING TYPE
Abutment 1	Type 2
Abutment 2	Type 2



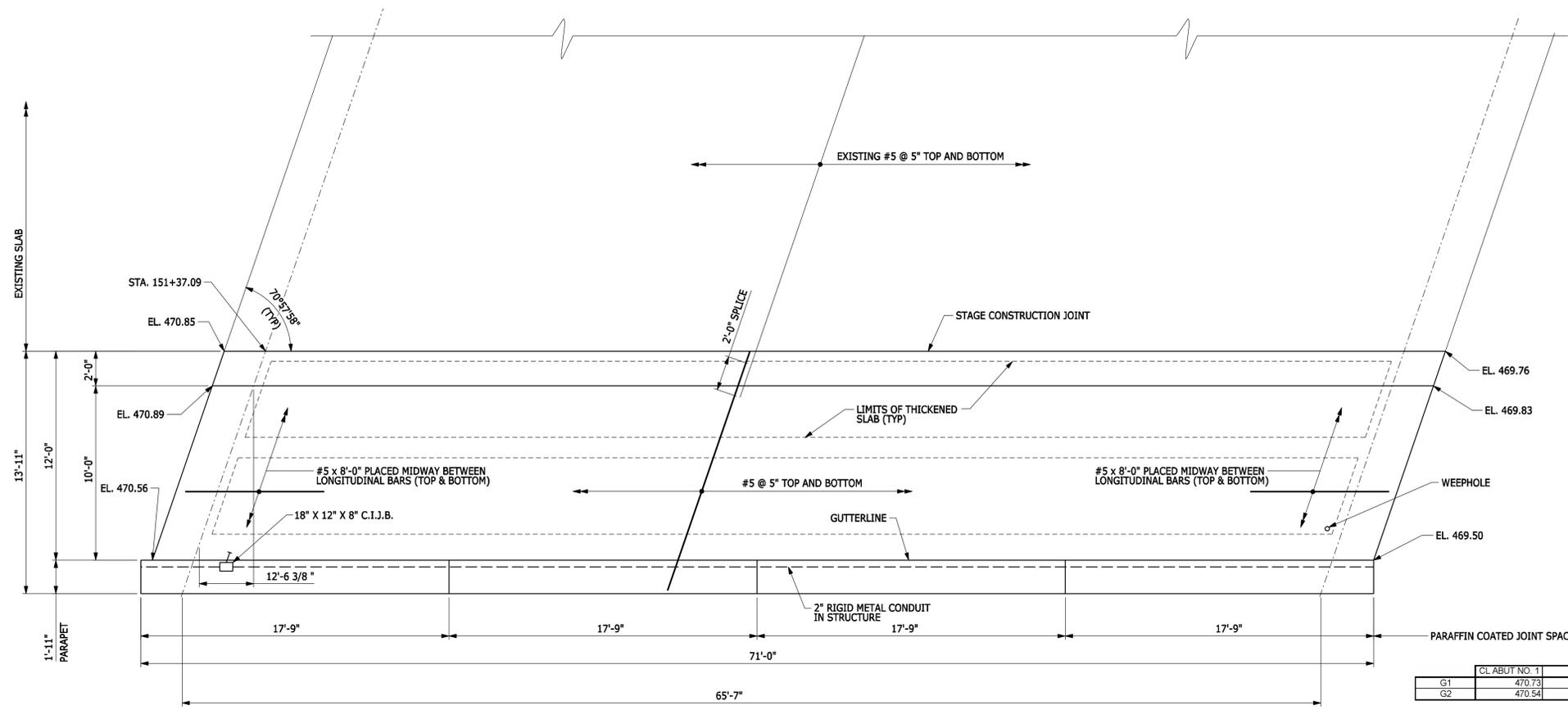
NOTES: Tie-down bars do not exclude the use of chairs for supporting the reinforcing mat. The cost of furnishing and placing tie-down bars to be included in the contract item "Deformed Steel Bars". Tie-down bars and longitudinal bars shall clear shear connectors.



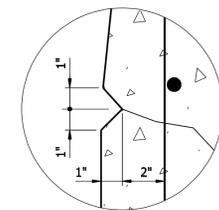
NOTE: Haunch reinforcement required for haunch depth > 4"



**TYPICAL SLAB SECTION**  
Scale: 3/4" = 1'-0"



**PARTIAL SLAB PLAN**  
Scale: 1/4" = 1'-0"



**RUSTICATION DETAIL**

	CL ABUT NO. 1	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	CL ABUT NO. 2
G1	470.73	470.63	470.53	470.44	470.34	470.25	470.15	470.05	469.96	469.86	469.76
G2	470.54	470.45	470.35	470.25	470.16	470.06	469.97	469.87	469.77	469.68	469.58

**TOP OF CONCRETE SLAB ELEVATIONS**

**NOTES:**

Elevations shown are taken at top of finished deck slab and DO NOT include the thickness of overlay.

L = Span Length measured horizontally along centerline of beam from Centerline of Bearings to Centerline of Bearings

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
075-SB	MSH	R034 0308 SLP.dgn	6/10/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**Y. ESTRADA/P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION

ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**

DRAWING TITLE:  
**SLAB PLAN BRIDGE NO. 01185**

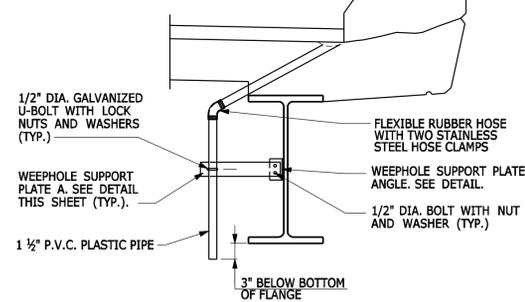
PROJECT NO.  
**34-313**

DRAWING NO.  
**S1-13**

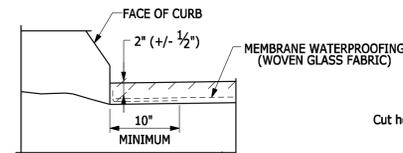
SHEET NO.  
**05.14**

**WEEPHOLE NOTES**

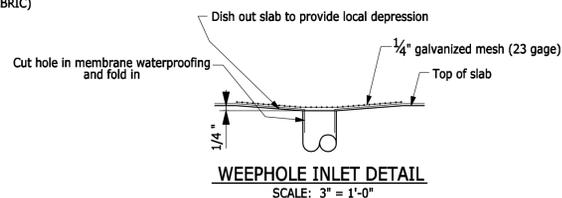
- For weephole locations, see S1-13.
- All piping for weepholes shall be installed prior to the slab pour.
- All Polyvinyl Chloride Plastic Pipe shall be joined using an approved solvent cement.
- The cost for installing weepholes shall be included in the cost for "1 1/2" Polyvinyl Chloride Plastic Pipe".
- The cost of furnishing and installing 1/4" square galvanized mesh shall be included in the contract unit price per ton for "HMA 50.25".
- Weepholes shall be installed on the inside of the fascia beams as shown on the plans.
- The cost of Weephole support plates and hardware shall be included in the Item "Structural Steel (Site No.1)".



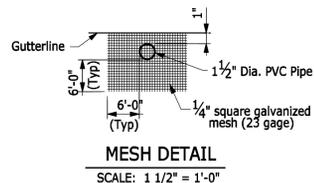
**DECK WEEPHOLE DETAIL**  
SCALE: 3/4" = 1'-0"



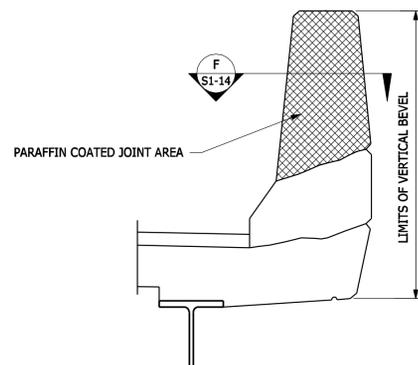
**TREATMENT OF MEMBRANE WATERPROOFING AT GUTTER**  
Scale: 1" = 1'-0"



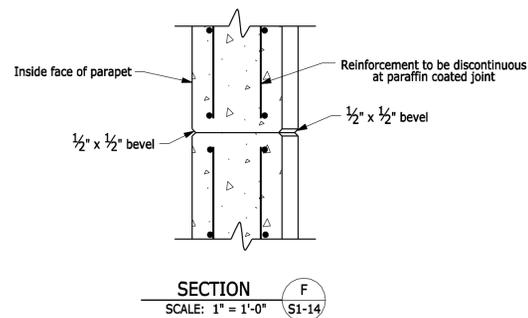
**WEEPHOLE INLET DETAIL**  
SCALE: 3" = 1'-0"



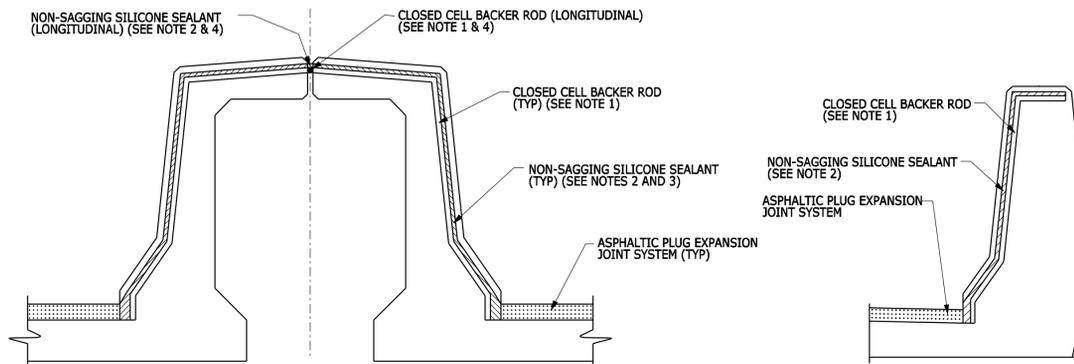
**MESH DETAIL**  
SCALE: 1 1/2" = 1'-0"



**PARAFFIN COATED JOINT DETAIL**  
SCALE: 1" = 1'-0"



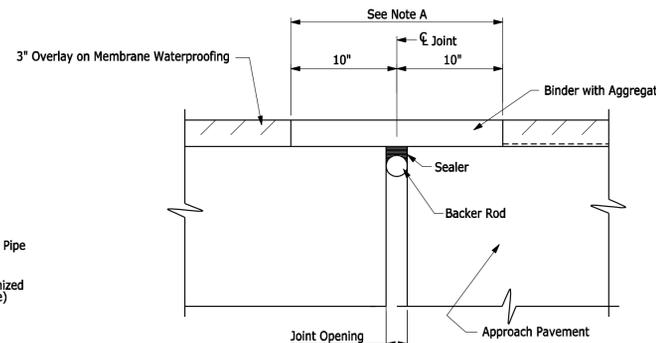
**SECTION**  
SCALE: 1" = 1'-0"



**ASPHERIC PLUG EXPANSION JOINT TREATMENT AT PARAPETS AND MEDIAN BARRIER**  
Scale: 3/4" = 1'-0"

**ASPHERIC PLUG EXPANSION JOINT NOTES:**

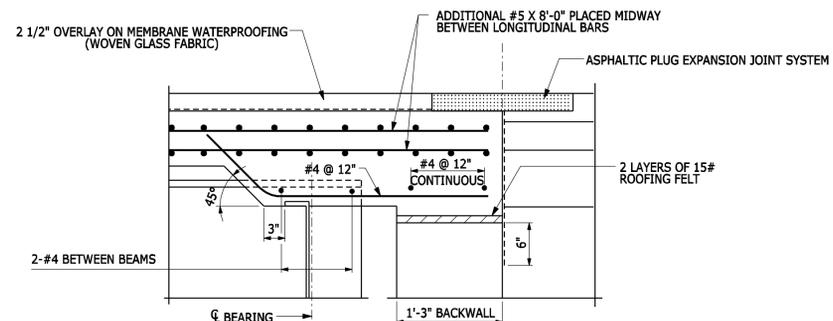
- THE CLOSED CELL BACKER ROD SHALL BE PLACED A MINIMUM OF 2" FROM THE OUTSIDE FACE OF PARAPETS AND MEDIAN BARRIERS.
- THE NON-SAGGING SILICONE SEALANT SHALL BE PLACED ON THE BACKER ROD 1/2" THICK. AT THE GUTTER, THE SILICONE SEALANT SHALL BE PLACED FLUSH WITH THE OUTSIDE FACE OF CONCRETE.
- PRIOR TO INSTALLING THE SILICONE SEALANT, CLEAN JOINT SIDES BY SANDBLASTING. DUST SHALL BE REMOVED BY THE METHOD APPROVED BY THE ENGINEER. THIS WORK SHALL BE PAID FOR UNDER THE ITEM "ASPHERIC PLUG EXPANSION JOINT SYSTEM." (SEE SPECIAL PROVISIONS)
- BACKER ROD AND SILICONE SEALANT SHALL BE PLACED BETWEEN THE OPEN JOINTS BETWEEN MEDIAN PARAPETS WITHIN THE LIMITS OF THE BRIDGE DECK. THE COST OF THIS WORK SHALL BE INCLUDED IN THE ITEM "ASPHERIC PLUG EXPANSION JOINT SYSTEM." (SEE SPECIAL PROVISIONS)



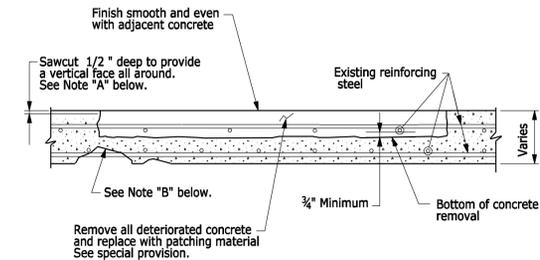
**ASPHERIC PLUG EXPANSION JOINT SYSTEM**  
Scale: 1 1/2" = 1'-0"

NOTE A: Remove new bituminous overlay and membrane waterproofing. Replace with Asphaltic Plug Expansion Joint System. To be paid for under the item "Asphaltic Plug Expansion Joint System". See Special Provision.

Design thermal movement range = 0" to 1"

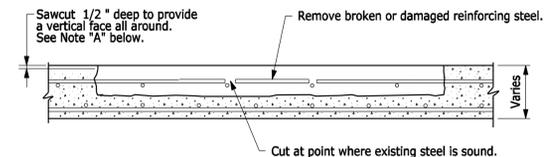


**END OF SLAB DETAIL**  
SCALE: 1" = 1'-0"

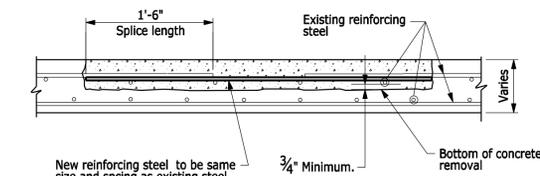


**PARTIAL DEPTH PATCH**  
NOT TO SCALE

Note "A": The cost of 1/2" sawcut shall be included in the contract bid price for "Partial Depth Patch".  
Note "B": Areas of pop-outs caused by the removal of deteriorated concrete to be coated with epoxy resin system where ordered by the Engineer. See special provisions.

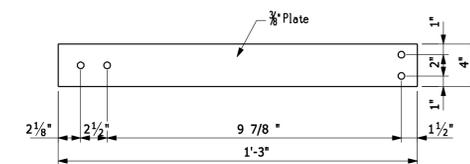


**SECTION SHOWING CONCRETE REMOVAL AREA**



**SPlicing REINFORCING STEEL**

**REPAIR OF DAMAGED REINFORCING STEEL**  
NOT TO SCALE



**WEEPHOLE SUPPORT PLATE A**  
Scale: 1 1/2" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
078-SB	MSH	Bldg34_0308_SLD.dwg	8/10/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. ESTRADA/P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.**  
DATE: 06/11/2014

**AECOM**

PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**SLAB DETAILS BRIDGE NO. 01185**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**S1-14**  
SHEET NO.  
**05.15**

THIS SHEET IS FOR INFORMATION ONLY AND IS TO BE COMPLETED BY THE ENGINEER ON A FULL SIZE PAPER COPY OF THIS DRAWING. THE COMPLETED DRAWING SHALL BE FORWARDED TO THE MANAGER OF BRIDGE SAFETY AND EVALUATION.

- The Engineer shall indicate the following:
- the beginning and completion dates of repairs
  - the limits of existing and finished patched deck areas on the plan using the patterns shown in the Deck Patching Legend (See example plan)
  - the approximate percentage of total deck area repaired with partial and full-depth patches
  - the final quantities of partial and full-depth patching material used in the deck repairs
  - the method and limits of removal of the deteriorated concrete, i.e. pneumatic hammer or hydro-demolition as indicated on the deck plan. (See example below)
  - the brand of patching material used at each location on the deck (Duracal, Class "F" Concrete, etc.) as shown in the example plan

**DECK PATCHING LEGEND**

- Existing Patched Area (Full-Depth and Partial-Depth) - Approximate % of total deck area = %
- Denotes the limits of removal by hydro-demolition, replace with Partial-Depth Patch
- Denotes the limits of removal by pneumatic hammer, replace with Partial-Depth Patch
- Denotes the limits of removal by hydro-demolition, replace with Full-Depth Patch
- Denotes the limits of removal by pneumatic hammer, replace with Full-Depth Patch

**DECK PATCHING NOTES**

1. The patching material shall be a concrete composed of a quick-setting portland cement, coarse aggregate, fine aggregate and water.
2. The reinforcement shall be uncoated and conform to ASTM A615, Grade 60.
3. The cost of removal of the deteriorated concrete, including the 1" saw cut, and the furnishing and placing the patching material shall be paid for under the items "Partial Depth Patch".
4. The cost of furnishing and placing the reinforcement shall be paid for under the item "Deformed Steel Bars".

Bar Size	Splice Length
#4	1'-9"
#5	1'-9"
#6	2'-3"

**SPLICING OF DAMAGED REINFORCING STEEL**

PERCENTAGES AND QUANTITIES			
Dates:	Start of repairs:		
	Completion of repairs:		
PARTIAL DEPTH PATCH	%	QTY.	
HYDRO-DEMOLITION			
PNEUMATIC HAMMER			
TOTALS			
FULL DEPTH PATCH	%	QTY.	
HYDRO-DEMOLITION			
PNEUMATIC HAMMER			
TOTALS			

**INSPECTOR COMMENTS**

---



---



---



---



---



---



---



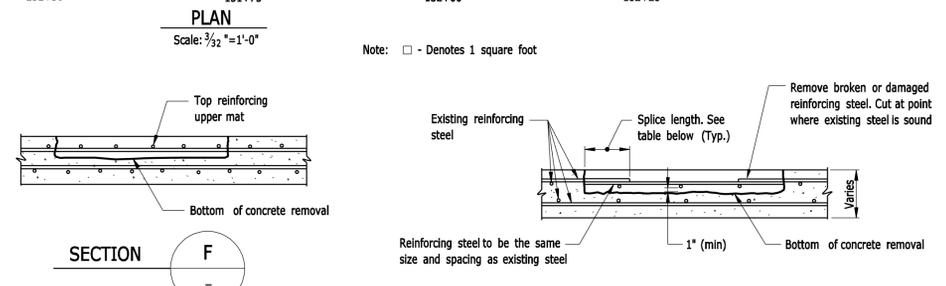
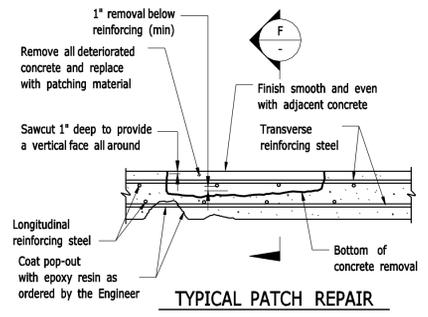
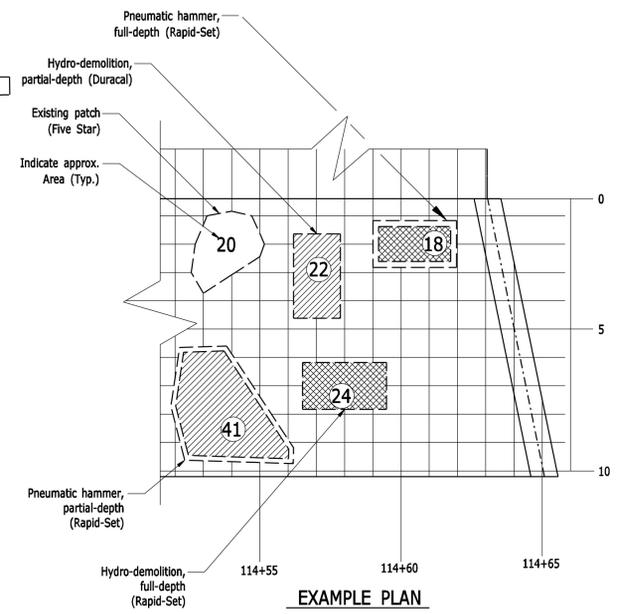
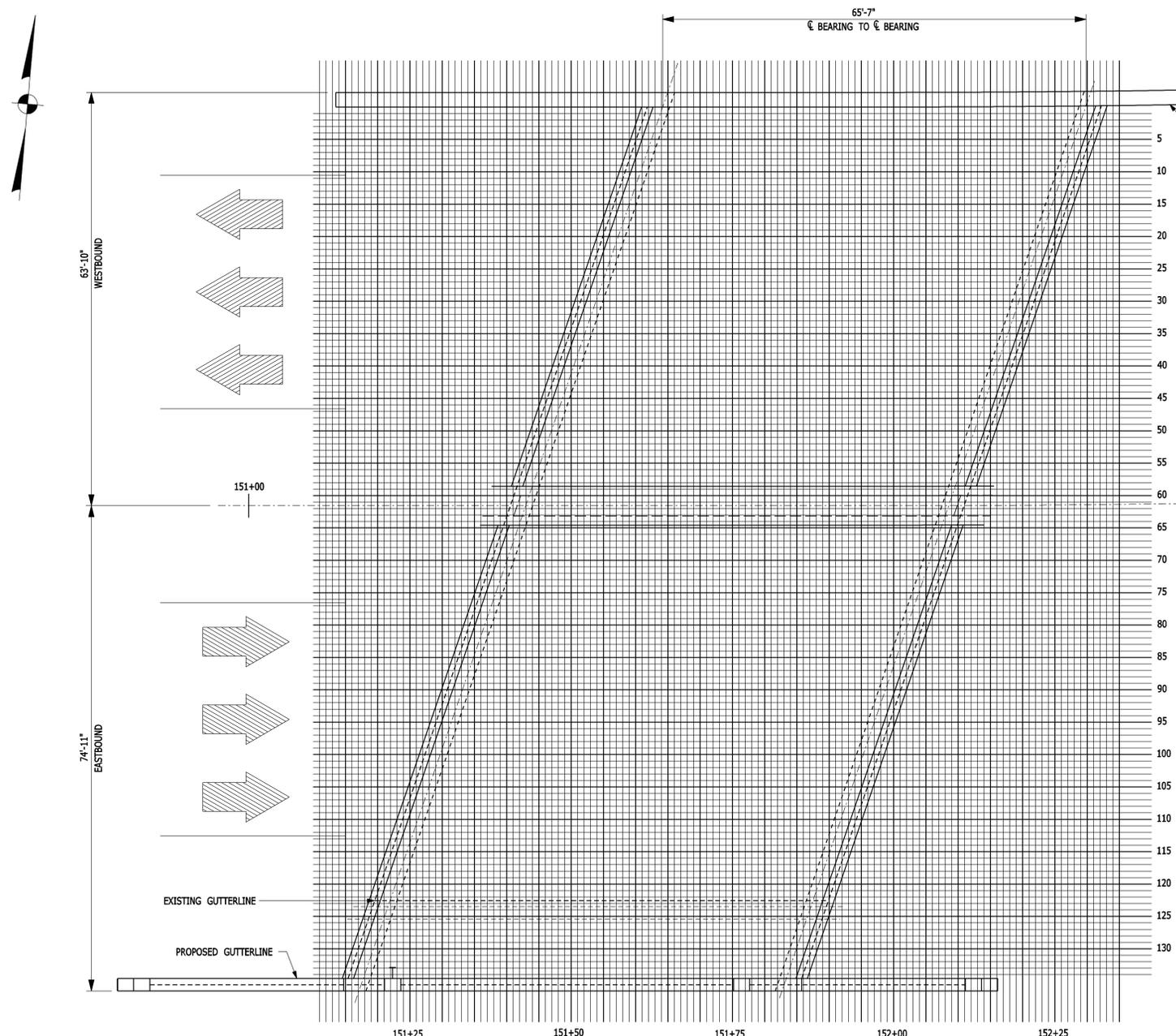
---



---



---



REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**A. ST. GERMAIN**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION

ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

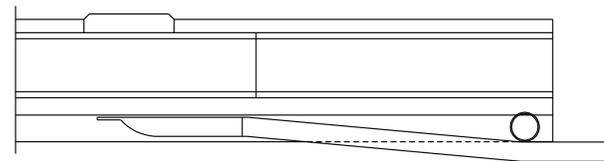
TOWN:  
**DANBURY**

DRAWING TITLE:  
**DECK PATCHING DETAILS BRIDGE NO. 01185**

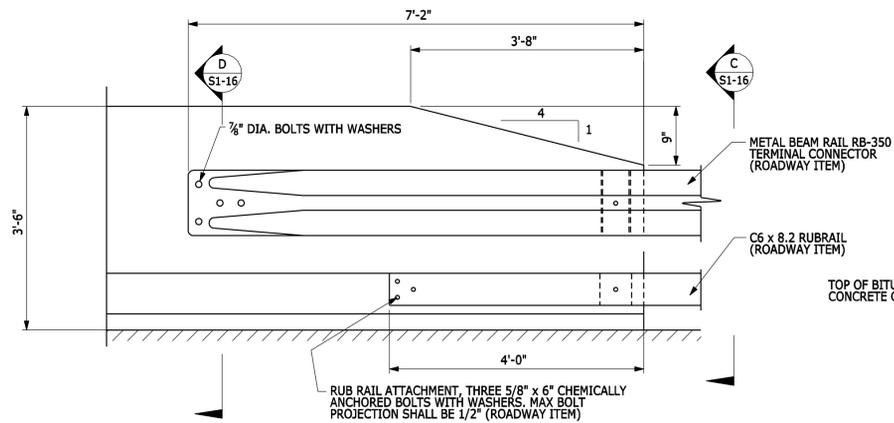
PROJECT NO.  
**34-313**

DRAWING NO.  
**S1-15**

SHEET NO.  
**05.16**



PLAN



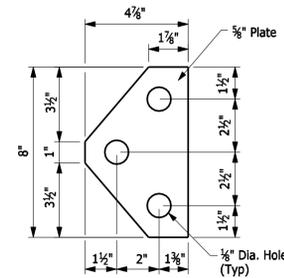
ELEVATION

LEADING END RB-350 ATTACHMENT

SCALE: 3/4" = 1'-0"

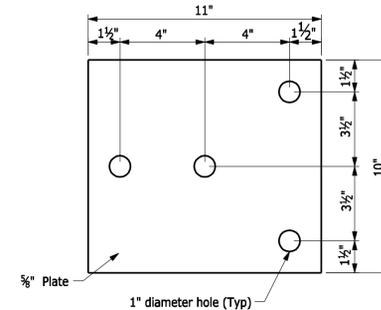
BEAM RAIL ATTACHMENT NOTES

1. Steel plates shall conform to the requirements of ASTM A36. The steel plates shall be hot-dip galvanized in accordance with the requirements of ASTM A123.
2. Anchor bolts shall conform to the requirements of ASTM A325, mechanically galvanized.
3. 1" diameter pipe shall conform to ASTM A53, Grade B or ASTM A501 and shall be galvanized in accordance with the requirements of ASTM A123.
4. Roadway items shown shall be paid for under the appropriate bridge attachment item (Roadway item).
5. All rail anchorage material required for end attachments shall be paid for under the applicable Roadway items.



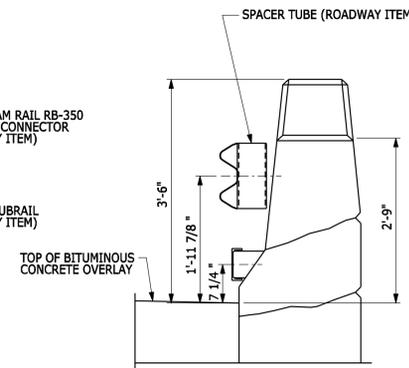
ANCHOR PLATE B DETAIL

Scale: 3" = 1'-0"



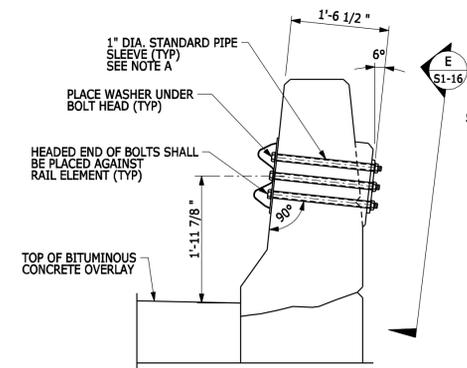
ANCHOR PLATE A DETAIL

Scale: 3" = 1'-0"



END VIEW C

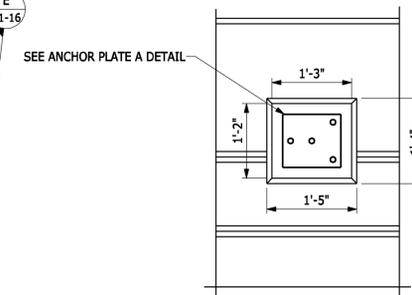
SCALE: 3/4" = 1'-0"



END VIEW D

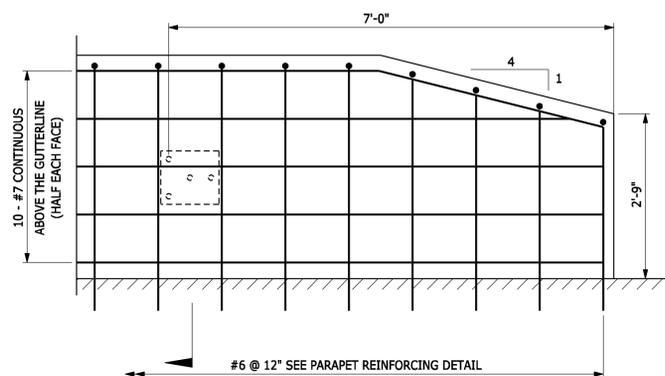
SCALE: 3/4" = 1'-0"

NOTE A: 1" DIA. PIPE SHALL CONFORM TO ASTM A53 GR. B OR ASTM A501 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.



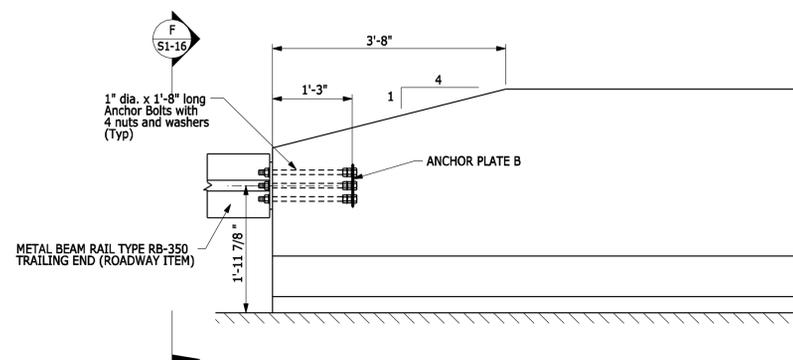
BACK VIEW E

SCALE: 3/4" = 1'-0"



PARAPET REINFORCING AT LEADING END

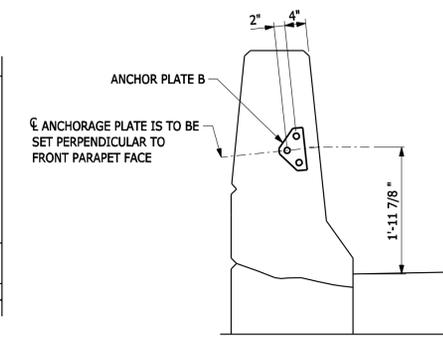
SCALE: 3/4" = 1'-0"



TRAILING END RB-350 ATTACHMENT

SCALE: 3/4" = 1'-0"

NOTE: TRAILING END REINFORCEMENT SIMILAR TO LEADING END.



END VIEW F

SCALE: 3/4" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
077-58	MSH	R034 0308 RLD.dwg	6/10/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**Y. ESTRADA/P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

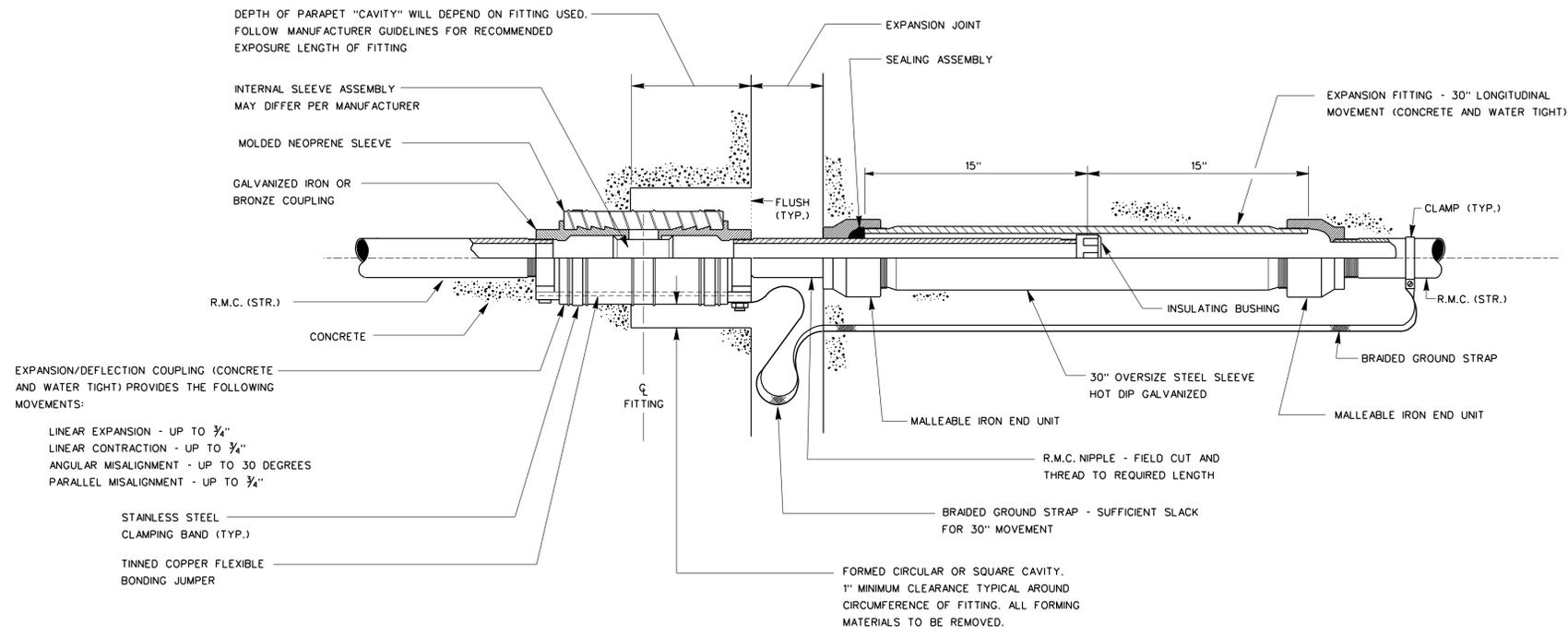
STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014

**AECOM**

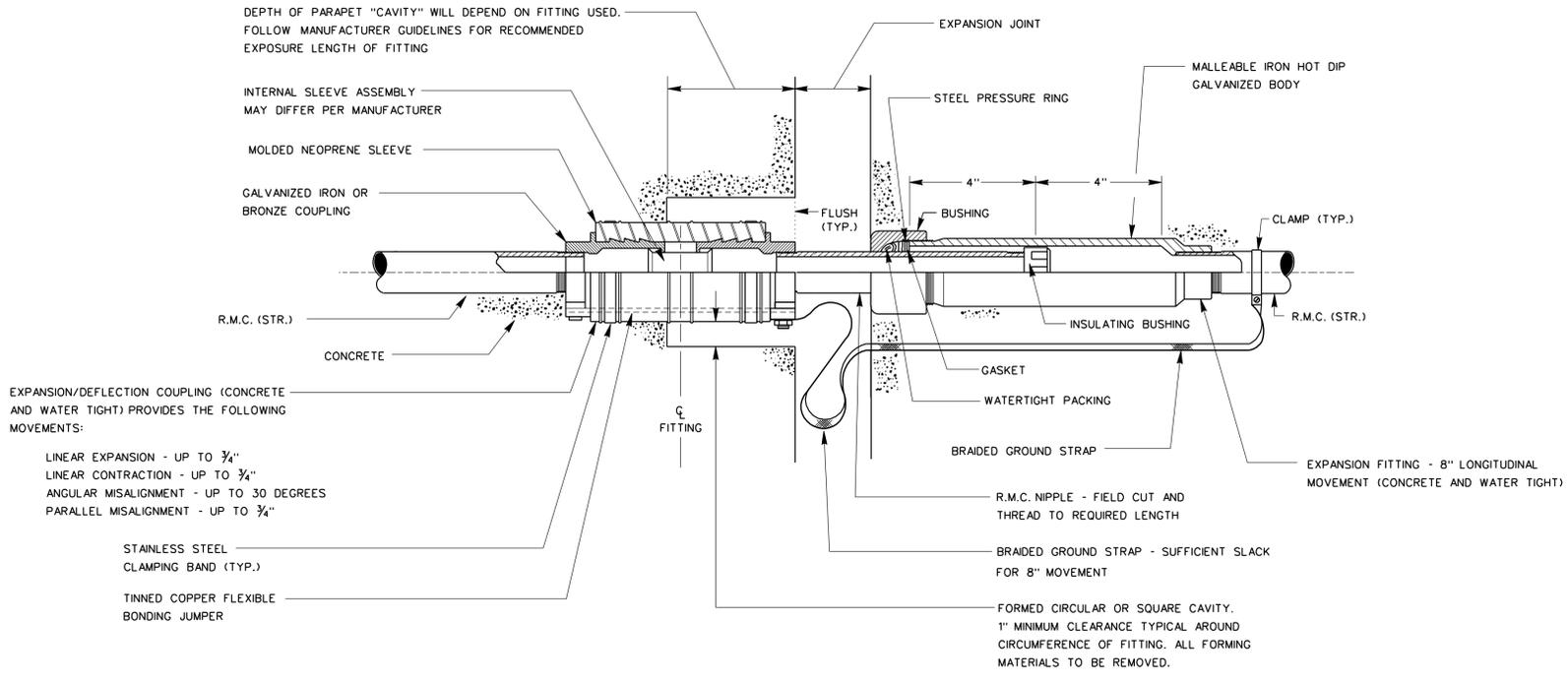
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**RAIL ATTACHMENT DETAILS BRIDGE NO. 01185**

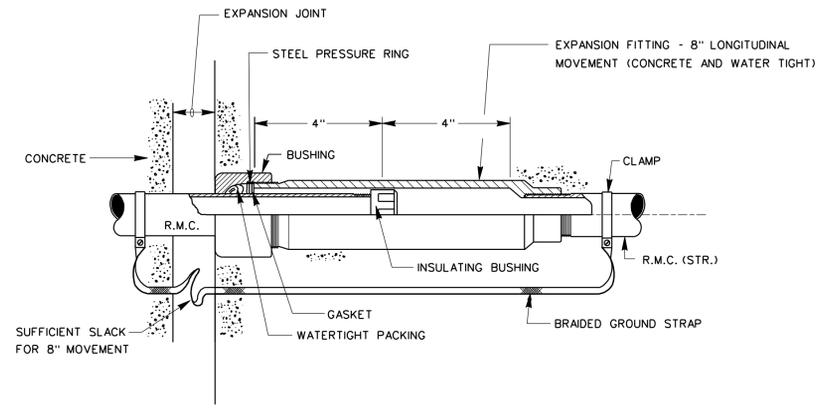
PROJECT NO.  
**34-313**  
DRAWING NO.  
**S1-16**  
SHEET NO.  
**05.17**



EXPANSION FITTING TYPE 3



EXPANSION FITTING TYPE 2



EXPANSION FITTING TYPE 1

NOTES:  
 SEE BRIDGE PLANS FOR SPECIFIC FITTING TYPE TO BE USED AT EACH BRIDGE EXPANSION JOINT.  
 ORIENTATION OF FITTING TO BE FIELD DETERMINED.

USER: JHAPKIEWICZ

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
078-SB	MSH	BIG04_0308_Ex_Elt.dwg	6/10/2014
			Border Version: 6/1/05

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**Y. ESTRADA/P. ARZENO**  
 CHECKED BY:  
**J. HAPKIEWICZ**  
 SCALE AS NOTED

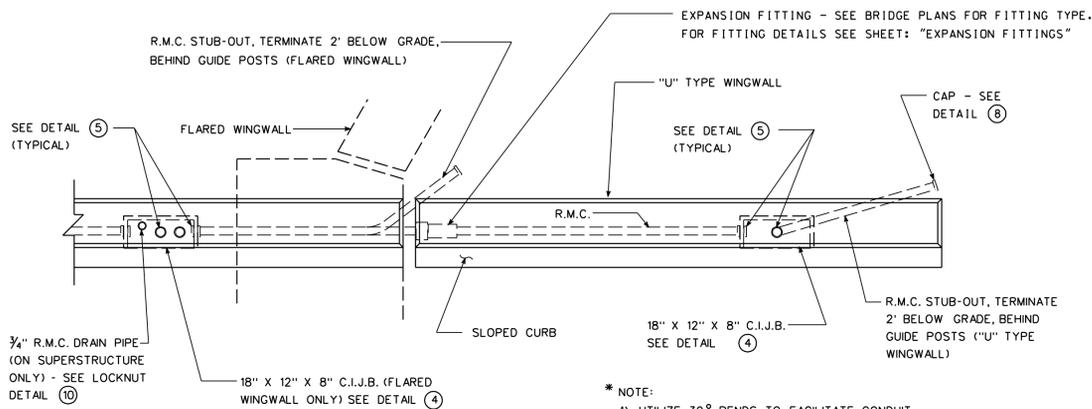

**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  


ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014

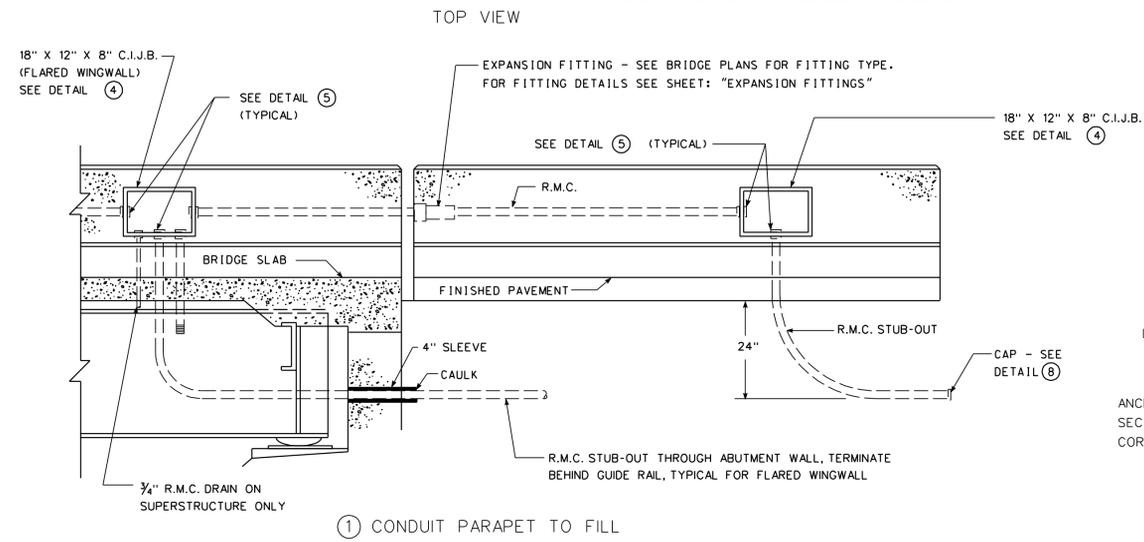
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
 DRAWING TITLE:  
**EXPANSION FITTINGS BRIDGE NO. 01185**

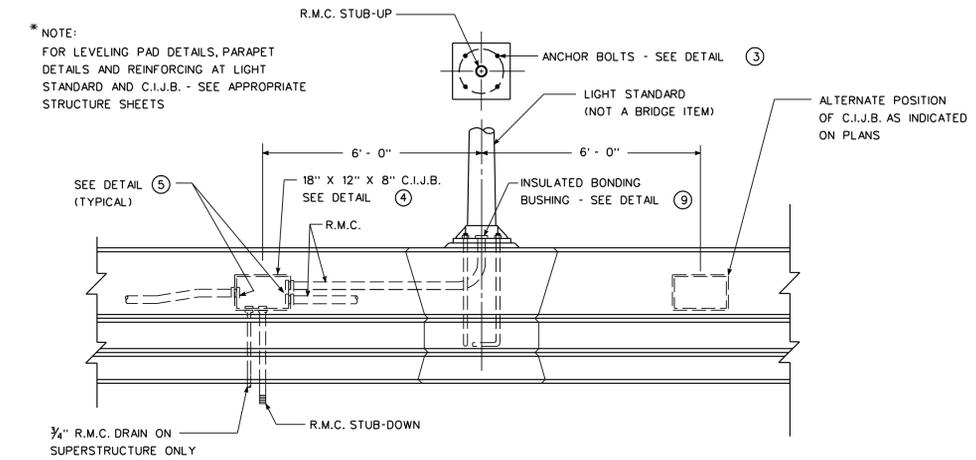
PROJECT NO.  
**34-313**  
 DRAWING NO.  
**S1-17**  
 SHEET NO.  
**05.18**



\* NOTE:  
 1) UTILIZE 30° BENDS TO FACILITATE CONDUIT LEAVING WINGWALL AT 24" BELOW GRADE  
 2) CONDUIT BENDS SHALL HAVE A RADIUS OF NOT LESS THAN 6 TIMES THE TRADE SIZE OF THE CONDUIT

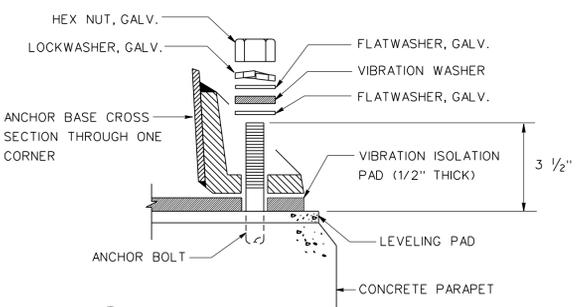


\* NOTE:  
 FOR LEVELING PAD DETAILS, PARAPET DETAILS AND REINFORCING AT LIGHT STANDARD AND C.I.J.B. - SEE APPROPRIATE STRUCTURE SHEETS

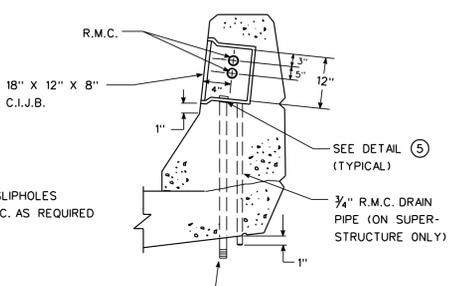


BOLT Ø	A	B
3/4"	29"	0"
1"	36"	4"
1 1/4"	42"	6"

NOTE: THE ANCHOR BOLT SIZE AND LENGTH SHALL BE CONFIRMED WITH THE LIGHT STANDARD SUPPLIER PRIOR TO SETTING THE ANCHOR BOLTS.

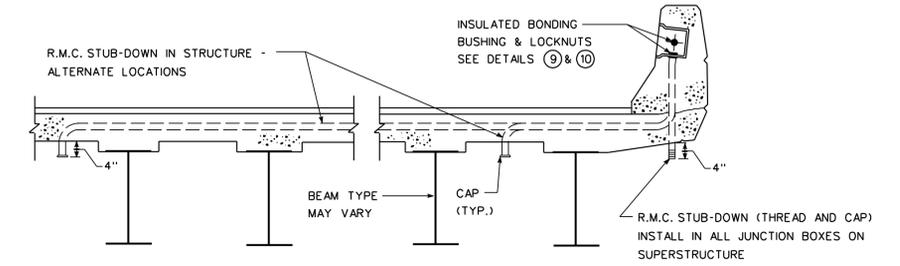


NOTE: THE MOUNTING HARDWARE SHALL BE CONFIRMED WITH THE LIGHT STANDARD SUPPLIER.

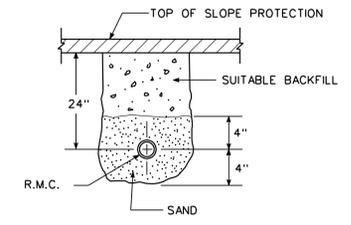


NOTE: PROVIDE DRILLED SLIPHOLES IN C.I.J.B. FOR R.M.C. AS REQUIRED

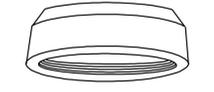
INSTALL R.M.C. STUB-DOWN IN ALL JUNCTION BOXES ON SUPERSTRUCTURE. SIZE OF STUB-DOWN TO EQUAL SIZE OF CONDUIT IN PARAPET WALL



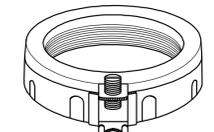
6 SERVICE TO LUMINAIRE UNDER STRUCTURE



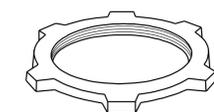
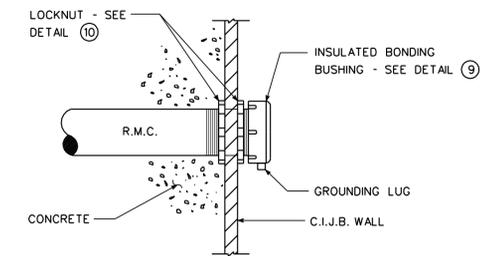
7 RIGID METAL CONDUIT UNDER SLOPE PROTECTION



8 MALLEABLE IRON CAP



9 INSULATED BONDING BUSHING WITH GROUND LUG



10 LOCKNUT

NOTES:

- 1) SEE BRIDGE PLANS FOR SPECIFIC CONSTRUCTION DETAILS AND LOCATIONS.
- 2) DIAMETER OF RIGID METAL CONDUIT SHALL BE AS CALLED FOR ON BRIDGE PLANS.
- 3) R.M.C. STUB-UPS TO LIGHT STANDARDS, STUB-OUTS TO FILL, AND STUB-DOWNS TO UNDERBRIDGE LUMINAIRES, SHALL BE OF THE SAME DIAMETER AS THE R.M.C. CAST IN THE PARAPET WALL.
- 4) INSTALL ONE R.M.C. STUB-DOWN IN ALL JUNCTION BOXES ON SUPERSTRUCTURE. ADDITIONAL STUB-DOWNS SHALL BE INSTALLED WHERE INDICATED ON THE PLANS.
- 5) USE APPLICABLE DETAILS.

USER: JHAPKIEWICZ

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**YESTRADA/P. ARZENO**  
 CHECKED BY:  
**J. HAPKIEWICZ**  
 SCALE AS NOTED

**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  
 ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
 DRAWING TITLE:  
**ELECTRICAL DETAILS BRIDGE NO. 01185**

PROJECT NO.  
**34-313**  
 DRAWING NO.  
**S1-18**  
 SHEET NO.  
**05.19**

**GENERAL NOTES:**

SPECIFICATIONS: Connecticut Department of Transportation Form 816, Supplemental Specification dated January 2014 and Special Provisions.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications 6th Edition (2012) with 2013 Interims, as supplemented by the Connecticut Department of Transportation Bridge Design Manual (2003).

ALLOWABLE DESIGN STRESSES:  
 Class "A" Concrete: Based on  $f_c = 3,000$  psi  
 Class "F" Concrete: Based on  $f_c = 4,000$  psi  
 Reinforcement (ASTM A615 Grade 60):  $f_y = 60,000$  psi  
 Structural Steel (AASHTO M270, Grade 50):  $f_y = 50,000$  psi

The specified concrete strength used in design,  $f_c$ , of the concrete components is noted above. The minimum compressive strength of the concrete in the constructed components shall conform to the requirements of the special provision "Section 6.01 Concrete for Structures."

LIVE LOAD: HL-93

FUTURE PAVING ALLOWANCE: None

STRUCTURAL STEEL: See Structure Sheet Notes for designations and requirements.

PAINT: Paint shall conform to the requirements of the special provision, "Structural Steel (Site No. 1)." The color of the topcoat material on the structural steel shall match the existing steel.

BITUMINOUS CONCRETE OVERLAY: This shall consist of two lifts. The first shall be HMA S0.25 (1" thick) and the second shall be HMA S0.5 (2" thick).

FOUNDATION PRESSURES: The various Group Loadings noted on the substructure plan sheets refer to the Group Loads as given in the AASHTO LRFD Bridge Design Specifications.

DIMENSIONS: When decimal dimensions are given to less than three decimal places, the omitted digits shall be assumed to be zeros.

EXISTING DIMENSIONS: Dimensions of the existing structure shown on these plans are for general reference only. They have been taken from the original design drawings and are not guaranteed. The Contractor shall take all field measurements necessary to assure proper fit of the finished work and shall assume full responsibility for their accuracy.

REMAIN-IN-PLACE FORMS: The use of remain-in-place forms on this structure is not allowed.

COMPOSITE CONSTRUCTION: No temporary intermediate supports shall be used during the placing and setting of the concrete deck slab. Temporary supports may be used for structural steel erection only. Construction loads and dead loads will be permitted when directed by the Engineer, but only when the concrete has reached a strength of  $f_c = 3,500$  psi. Live loads (traffic) will be permitted on the structure after the concrete has reached a strength of  $f_c = 4,000$  psi.

CLASS "A" CONCRETE: Class "A" Concrete shall be used for the entire substructure and the parapets of U-Type Wings.

CLASS "F" CONCRETE: Class "F" Concrete shall be used for the bridge deck including parapets.

JOINT SEAL: See Special Provisions.

EXPOSED EDGES: Exposed edges of concrete shall be beveled 1" x 1" unless dimensioned otherwise.

CONCRETE COVER: All reinforcement shall have two inches cover unless dimensioned otherwise.

REINFORCEMENT: All reinforcement shall be ASTM A615 Grade 60.

EPOXY COATED REINFORCING BARS: All reinforcement in the superstructure including the concrete deck slab and the parapets shall be epoxy coated unless otherwise noted. These bars shall be included in the pay item for "Deformed Steel Bars (Epoxy Coated)".

PREFORMED EXPANSION JOINT FILLER: The cost of furnishing and installing Preformed Expansion Joint Filler shall be included in the cost of the item "Class 'A' Concrete".

CLOSED CELL ELASTOMER: The cost of furnishing and installing Closed Cell Elastomer shall be included in the cost of the item "Class 'A' Concrete".

CONSTRUCTION JOINTS: Construction joints, other than those shown on the plans, will not be permitted without prior approval of the Engineer.

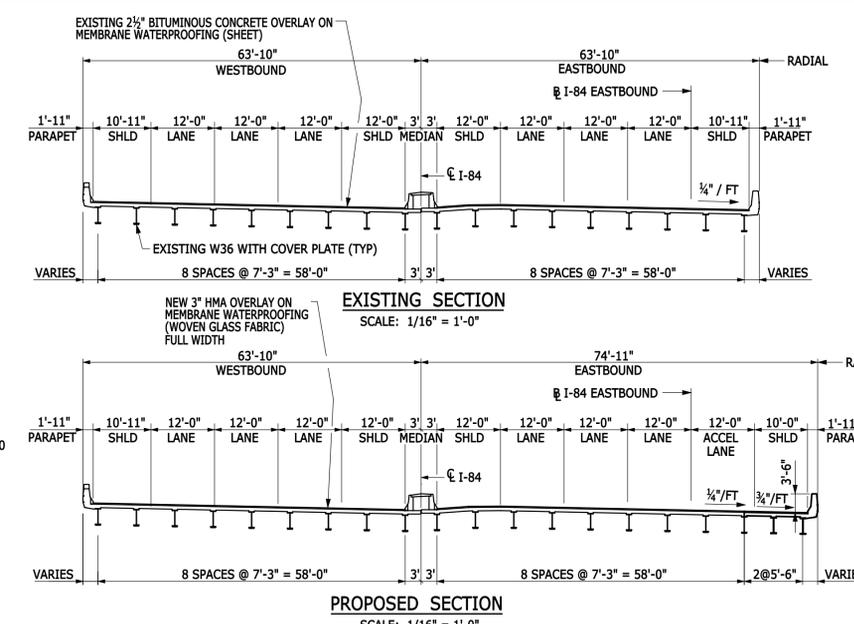
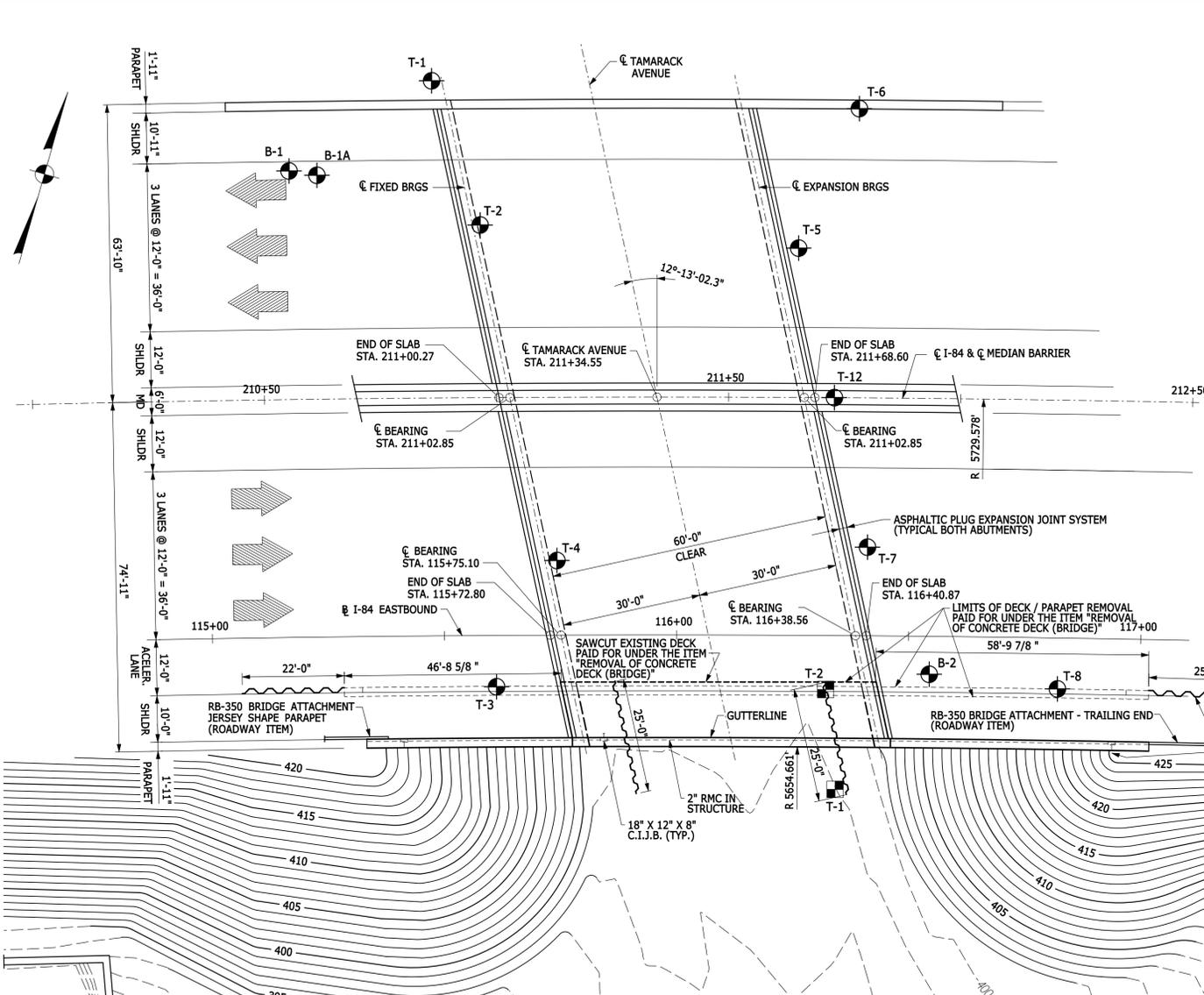
**GENERAL DESCRIPTION OF WORK**

1. INSTALL TEMPORARY EARTH RETAINING SYSTEM.
2. REMOVE BRIDGE DECK AT SOUTH SIDE OF BRIDGE.
3. EXTEND ABUTMENTS AND CONSTRUCT NEW SOUTH WINGWALLS.
4. INSTALL NEW GIRDERS AND CONSTRUCT NEW DECK AND PARAPET.
5. MILL EXISTING BITUMINOUS OVERLAY, PATCH DECK AS NECESSARY, INSTALL BITUMINOUS CONCRETE OVERLAY AND INSTALL ASPHALTIC PLUG EXPANSION JOINTS FULL WIDTH OF BRIDGE.

**NOTICE TO BRIDGE INSPECTORS**

The Department's Bridge Safety procedures require this bridge to be inspected for, but not limited to, all appropriate components indicated in the governing manuals for bridge inspection. Attention must be given to inspecting the following special components and details. (The listing for components for specific attention shall not be construed to reduce the importance of inspection of any other component of the structure.) The frequency of inspection of this structure shall be in accordance with the governing manuals for bridge inspection, unless otherwise directed by the Manager of Bridge Safety and Evaluation.

COMPONENT OR DETAIL	STRUCTURE SHEET REFERENCE
Follow Normal Inspection Procedures	



**CONCRETE DISTRIBUTION - BRIDGE NO. 01190**

LOCATION	UNIT	QUANTITY
SUPERSTRUCTURE	C.Y.	40
SUBSTRUCTURE	C.Y.	555
TOTAL	C.Y.	595

**LIST OF DRAWINGS**

DRAWING NO.	TITLE
S2-01	GENERAL PLAN BRIDGE NO. 01190
S2-02	BORING LOGS I
S2-03	BORING LOGS II
S2-04	TEMPORARY PRECAST CONCRETE BARRIER CURB (STR.)
S2-05	STAGE CONSTRUCTION
S2-06	PILE LAYOUT PLAN
S2-07	ABUTMENT NO. 1
S2-08	ABUTMENT NO. 2
S2-09	ABUTMENT DETAILS I
S2-10	WINGWALLS
S2-11	WINGWALL DETAILS I
S2-12	WINGWALL DETAILS II
S2-13	FRAMING PLAN
S2-14	STEEL DETAILS
S2-15	SLAB PLAN
S2-16	SLAB DETAILS
S2-17	DECK PATCHING DETAILS
S2-18	RAIL ATTACHMENT DETAILS
S2-19	EXPANSION FITTINGS
S2-20	ELECTRICAL DETAILS

**INSPECTION OF FIELD WELDS**

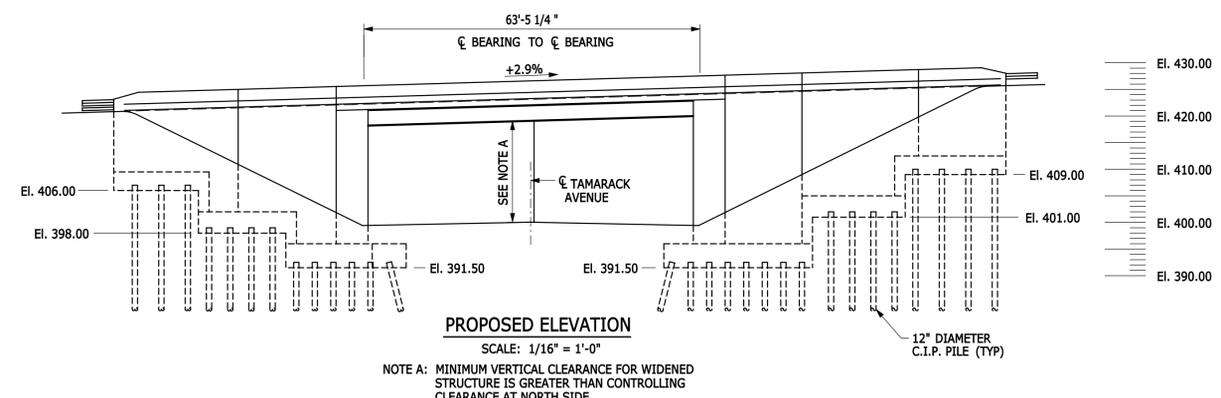
METHODS	UNIT	QUANTITY
Ultrasonic	inch	000
Magnetic Particle	feet	000

**QUANTITIES**

ITEM DESCRIPTION	UNIT	BRIDGE
Removal of HMA Wearing Surface	S.Y.	905
Structure Excavation - Earth (Complete)	C.Y.	980
Pervious Structure Backfill	C.Y.	575
HMA S0.5	ton	105
HMA S0.25	ton	52
Removal of Concrete Deck (Bridge)	S.Y.	23
Shear Connectors	L.S.	L.S.
1-1/2" Polyvinyl Chloride Plastic Pipe	L.F.	10
Asphaltic Plug Expansion Joint System	C.F.	110
Partial Depth Patch	C.F.	40
Class "A" Concrete	C.Y.	555
Class "F" Concrete	C.Y.	40
Deformed Steel Bars	LB	52,000
Deformed Steel Bars - Epoxy Coated	LB	9,750
Drilling Holes and Grouting Dowels	Ea.	286
Structural Steel (Site No. 2)	L.S.	L.S.
Field Touch-up Painting	S.F.	15
Localized Paint Removal	S.F.	12
Pre-Augering of Piles	L.F.	138
Cast-in-Place Concrete Piles	L.F.	4,982
Test Pile (Cast-In-Place Concrete 50' Long)	Ea.	2
Test Pile (Cast-In-Place Concrete 65' Long)	Ea.	2
Dynamic Pile Driving Analysis (P.D.A.) Test	Ea.	4
Membrane Waterproofing (Woven Glass Fabric)	S.Y.	980
Dampproofing	S.Y.	260
Temporary Earth Retaining System	S.F.	1,080
Monitoring Structures	L.S.	L.S.
6" Structure Underdrain	L.F.	40
Temporary Precast Concrete Barrier Curb (Structure)	L.F.	70
Removal of Existing Masonry	C.Y.	95
2" Rigid Metal Conduit in Structure	L.F.	170
18"x12"x8" Cast Iron Junction Box	Ea.	3

**TRANSPORTATION DIMENSIONS AND MASS**

MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	SHIPPING MASS
G19	64'-7 1/4"	36"	12"	9691 lbs.
G20	64'-7 1/4"	36"	12"	9691 lbs.



REV.	DATE	REVISION DESCRIPTION	SHEET NO.
004	03/13	BRDG. GP.dwg	8/10/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWN BY: **Y. ESTRADA**  
 CHECKED BY: **J. HAPKIEWICZ**  
 SCALE AS NOTED

**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION

ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014

PROJECT TITLE: **I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

**AECOM**

TOWN: **DANBURY**

DRAWING TITLE: **GENERAL PLAN BRIDGE NO. 01190**

PROJECT NO.: **34-1313**  
 DRAWING NO.: **S2-01**  
 SHEET NO.: **05.20**

Driller: M McDonough	Connecticut DOT Boring Report		Hole No: B-1
Inspector: G Chhabra	Town: DANBURY	Stat. Offset: 210+56.49 ft Lt	
Engineer: G Chhabra	Project No: 0034-0313	Nothing: 711590	
Start Date: 1/29/2007	Route No: L84	Easting: 807691	
Finish Date: 1/29/2007	Bridge No: 1190	Surface Elevation: 422.2	
Project Description: Improvements to Interchange 6			
Casing Size/Type: Hammer Wt. Fall	Sampler Type/Size: SS/2 in	Core Barrel Type	
Hammer Wt. Fall: 140 lbs	Hammer Wt. Fall: 30 in		
Groundwater Observations @ DRY after 0 hours, @ after hours, @ after hours			
Depth (ft)	Sample Type/No	Blows on Sampler per 6 inches	Material Description and Notes
0			
5	S-1	8 6 6 6	Gray f.c. SAND, little Silt, little c-f Gravel with Cobbles and Boulders
10			Bottom of Boring
Sample Type: S=Split Spoon C=Core UP=Undisturbed Piston V=Vane Shear Test Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%			
Total Penetration in Earth: 7	Rock	NOTES: Refusal @ 7 ft	Sheet 1 of 1
No. of Samples: 1			SM-001-M REV. 1.02

Driller: M McDonough	Connecticut DOT Boring Report		Hole No: B-1A
Inspector: G Chhabra	Town: DANBURY	Stat. Offset: 210+62.48 ft Lt	
Engineer: G Chhabra	Project No: 0034-0313	Nothing: 711591	
Start Date: 1/29/2007	Route No: L84	Easting: 807697	
Finish Date: 1/29/2007	Bridge No: 1190	Surface Elevation: 422.3	
Project Description: Improvements to Interchange 6			
Casing Size/Type: Hammer Wt. Fall	Sampler Type/Size: SS/2 in	Core Barrel Type	
Hammer Wt. Fall: 140 lbs	Hammer Wt. Fall: 30 in		
Groundwater Observations @ DRY after 0 hours, @ after hours, @ after hours			
Depth (ft)	Sample Type/No	Blows on Sampler per 6 inches	Material Description and Notes
0			MISC FILL
5			Nested COBBLES and BOULDERS, with c-f GRAVEL, and c-f SAND, trace silt
10	S-1	10 8 6 4	Brown f.c. SAND, some f.c. Gravel, little Silt, with cobbles
15	S-2	11 3 6 16	Brown f.c. SAND, little c-f Gravel, trace Silt, with cobbles
20			Bottom of Boring
Sample Type: S=Split Spoon C=Core UP=Undisturbed Piston V=Vane Shear Test Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%			
Total Penetration in Earth: 17	Rock	NOTES: Nested cobbles and boulders from 0 to 8 ft. Refusal at 17 ft	Sheet 1 of 1
No. of Samples: 2			SM-001-M REV. 1.02

Driller: M McDonough	Connecticut DOT Boring Report		Hole No: B-2
Inspector: G Chhabra	Town: DANBURY	Stat. Offset: 116+54.7 ft Rt	
Engineer: G Chhabra	Project No: 0034-0313	Nothing: 711541	
Start Date: 1/31/2007	Route No: L84	Easting: 807880	
Finish Date: 1/31/2007	Bridge No: 1190	Surface Elevation: 424.6	
Project Description: Improvements to Interchange 6			
Casing Size/Type: Hammer Wt. Fall	Sampler Type/Size: SS/2 in	Core Barrel Type	
Hammer Wt. Fall: 140 lbs	Hammer Wt. Fall: 30 in		
Groundwater Observations @ DRY after 0 hours, @ after hours, @ after hours			
Depth (ft)	Sample Type/No	Blows on Sampler per 6 inches	Material Description and Notes
0			MISC FILL
5	S-1	16 15 12 9	Gray SILT, some f.c. sand, trace f.c. Gravel w/ cobbles
10	S-2	10 7 7 5	Brown f.c. SAND, little f.c. Gravel, trace Silt, with cobbles
15	S-3	13 9 20 18	Gray to brown f.c. SAND, some c-f Gravel, little Silt, with cobbles
20	S-4	15 25 85	Brown c-f SAND, some f.c. Gravel, little Silt with cobbles
25	S-5	7 5 5 4	Brown f.c. SAND, trace Silt
30	S-6	14 15 15 16	Brown f.c. SAND, trace Silt
35	S-7	6 10 12 13	Brown SILT, and f.c. SAND
40	S-8	8 7 8 16	Brown f.c. SAND, trace Silt
45	S-9	6 7 9 12	Brown f.c. Sand, little Silt
50			Bottom of Boring
Sample Type: S=Split Spoon C=Core UP=Undisturbed Piston V=Vane Shear Test Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%			
Total Penetration in Earth: 47	Rock	NOTES:	Sheet 1 of 1
No. of Samples: 9			SM-001-M REV. 1.02

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
Filename: 034_0313_BOR1.dwg			6/10/2014
Revision Description			Border Version: 6/10/5

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION

ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

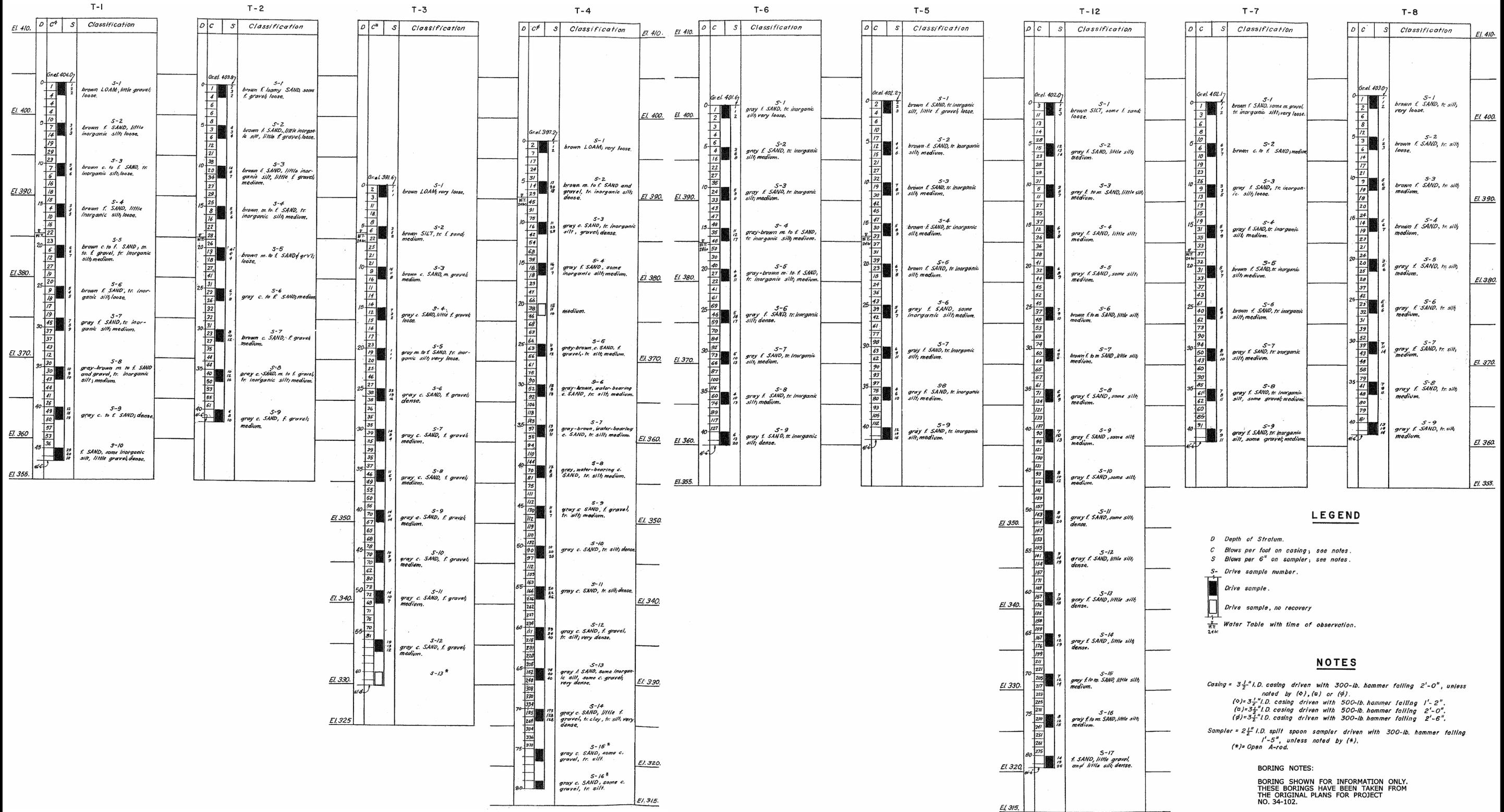
TOWN:  
**DANBURY**

DRAWING TITLE:  
**BORING LOGS I  
BRIDGE NO. 01190**

PROJECT NO:  
**34-313**

DRAWING NO:  
**S2-02**

SHEET NO:  
**05.21**



**LEGEND**

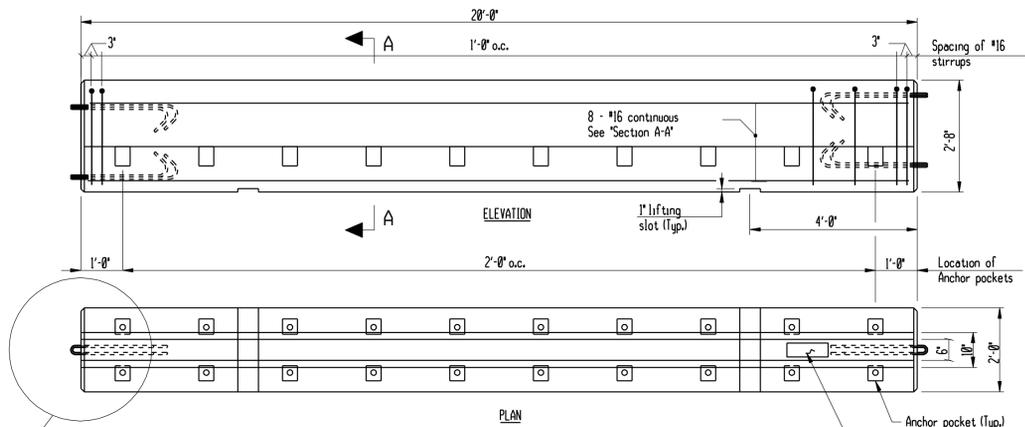
- D Depth of Stratum.
- C Blows per foot on casing; see notes.
- S Blows per 6" on sampler; see notes.
- S- Drive sample number.
- Drive sample.
- Drive sample, no recovery
- Water Table with time of observation.

**NOTES**

Casing = 3 1/2" I.D. casing driven with 300-lb. hammer falling 2'-0", unless noted by (a), (b) or (c).  
 (a) = 3 1/2" I.D. casing driven with 500-lb. hammer falling 1'-2".  
 (b) = 3 1/2" I.D. casing driven with 500-lb. hammer falling 2'-0".  
 (c) = 3 1/2" I.D. casing driven with 300-lb. hammer falling 2'-6".  
 Sampler = 2 1/2" I.D. split spoon sampler driven with 300-lb. hammer falling 1'-5", unless noted by (\*).  
 (\*) = Open A-rod.

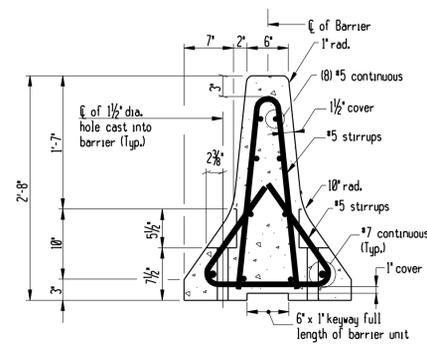
**BORING NOTES:**

BORING SHOWN FOR INFORMATION ONLY. THESE BORINGS HAVE BEEN TAKEN FROM THE ORIGINAL PLANS FOR PROJECT NO. 34-102.



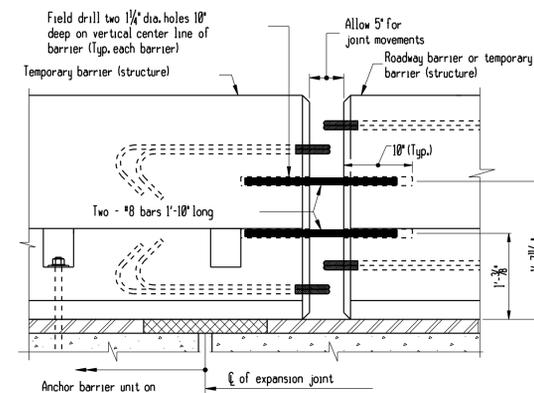
**TEMPORARY BARRIER (STRUCTURE)**

Scale: 1/2" = 1'-0"



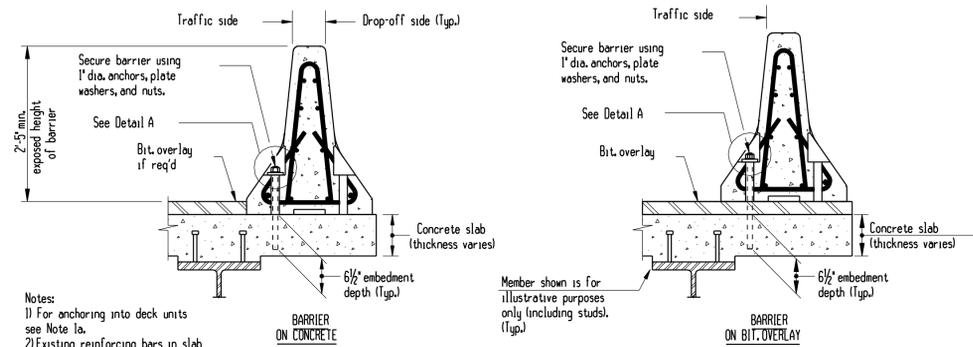
**SECTION A-A**

Scale: 1" = 1'-0"



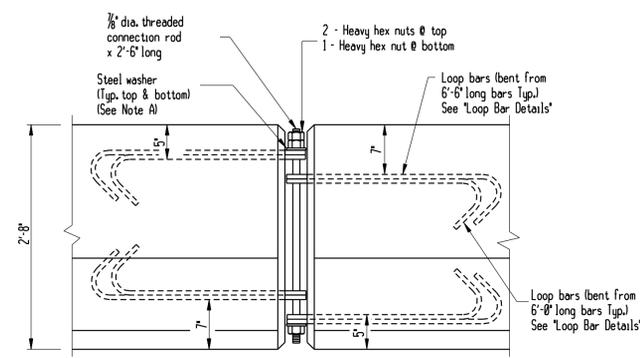
**BARRIER CONNECTION DETAILS AT EXPANSION JOINTS (CASE II SHOWN)**

Scale: 1" = 1'-0"



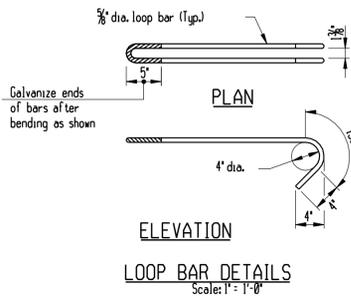
**CHEMICAL ANCHORING OPTION**

(See Note 1b)



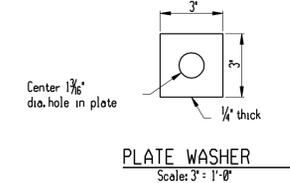
**BARRIER CONNECTION DETAILS**

Scale: 1" = 1'-0"



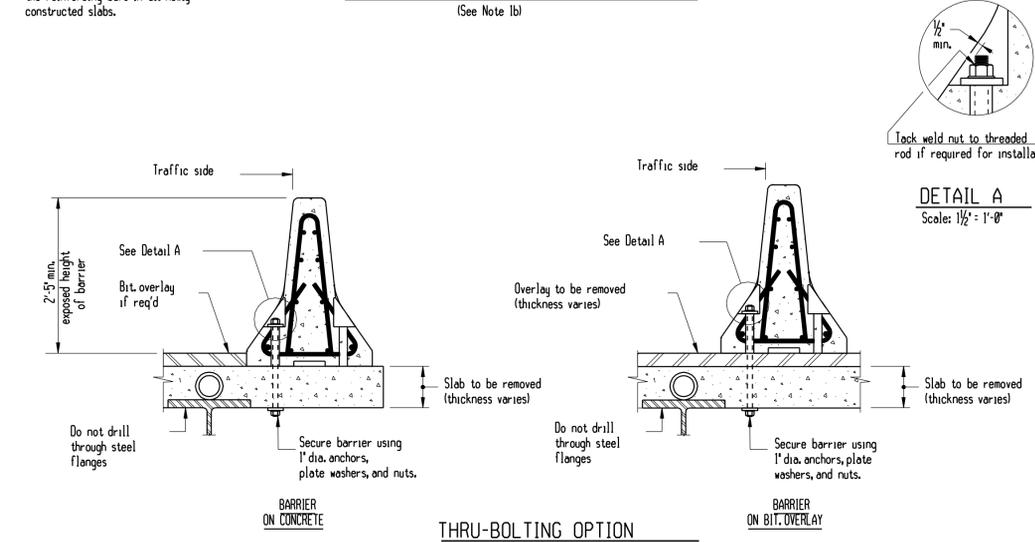
**LOOP BAR DETAILS**

Scale: 1" = 1'-0"



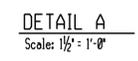
**PLATE WASHER**

Scale: 3" = 1'-0"



**THRU-BOLTING OPTION**

(See Note 1c)



**DETAIL A**

Scale: 1/2" = 1'-0"

**COLOR APPLICATION:**  
Left side of all roadways and ramps - YELLOW  
Right side of all roadways and ramps - SILVER

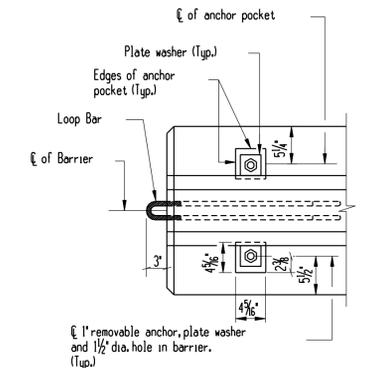
**COLOR OF DELINEATORS:**  
DE-7A One Way Yellow  
DE-7 One Way Silver  
DE-7B Two Way Yellow  
DE-7C Silver/Yellow Back to Back

Delineators shall be mounted in the center of temporary barriers as required.

**SPACING OF DELINEATORS**  
On leading tapered sections - every unit (20'-0").  
On the first 100'-0" of parallel sections - every unit (20'-0")  
Minimum of 2 if less than 100'-0"  
On the remaining length - every fifth (5th) unit (100'-0").  
Alternating one way traffic - every unit (20'-0").  
All other roadways shall be delineated in accordance with M.U.T.C.D.  
Paid for under Item 'Delineators'

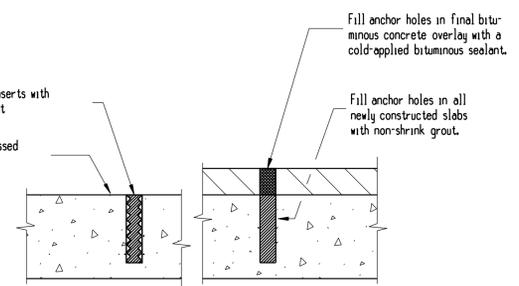
**DELINEATORS**

Scale: 1" = 1'-0"



**PLAN END OF BARRIER**

Scale: 1" = 1'-0"



**FILLING OF ANCHOR HOLES**

Scale: 1/2" = 1'-0"

**NOTES**

- The temporary barrier shown on this sheet shall be anchored onto bridge decks (see 'Temporary Anchorage System') when it is used to protect a vertical drop-off. The temporary anchorage system shall conform to the following:
  - Prestressed Deck Units: Threaded inserts shall be used for securing temporary barrier (structure) to prestressed deck units. The threaded inserts shall be cast into the deck units during fabrication, and shall be located as required to accommodate the stage construction. See special provisions for additional information.
  - Chemical Anchoring: This consists of drilling holes in new or existing concrete, placing removable anchors in the holes, and securing the anchors with a pre-approved chemical anchor material which conforms to M83.01-15 of the Standard Specifications. Hole diameter shall be determined by the manufacturer of the chemical anchoring material.
  - Through-Bolting: This consists of drilling through deck slabs and securing removable anchors on the underside with plate washers and nuts. Through-bolting is not permitted on new construction or prestressed concrete. Maximum hole size in slab: 1 1/2".
- Number of Anchors: On the traffic side of a typical barrier, anchors shall be installed in all pockets. At barrier units which straddle bridge expansion joints the anchor and connection details shall conform to Table 'A'.

**TABLE "A": BARRIER UNITS AT EXP. JOINTS**

Case	Span Length Contributing to Movement at the Expansion Joint	Method of End Connection to Abutting Barrier Unit. (Where movement will occur)	Anchor Requirements for the Barrier Unit which Straddles the Bridge Joint
I.	Up to 100 feet	Use 3/8" connection rod but do not over tighten the nuts and allow 'slop' around the rod and loops.	On one side of the joint only, install as many anchors as possible on the traffic side of the joint. On the other side of the joint do not install anchors.
II.	100 to 420 feet	Field drill holes in ends of both units and connect with 2-#25 bars. For details see 'Barrier Connection Details'.	On one side of the joint only, install a total of 10 anchors. Fill the pockets on the traffic side before filling the pockets on the drop-off side. If this cannot be achieved see III below.
III.	Over 420 feet and barrier layouts which do not satisfy II.	To be designed by Contractor and reviewed by Engineer. Cost of designing and furnishing special barrier units or attachments paid for under 'TPCBC (Structure)'.	To be designed by Contractor and reviewed by Engineer. Cost of designing and furnishing special barrier units or attachments paid for under 'TPCBC (Structure)'.

- The work done on this sheet, with the exception of the delineators, shall be paid for under the item 'Temporary Precast Concrete Barrier Curb (Structure)'

**NOTES FOR CONNECTION ROD DETAILS (SEE 'ELEVATION-BARRIER CONNECTION DETAILS')**

- Plain steel washers shall be manufactured with the following dimensions:  
Outside diameter = 2 3/4" (+1/4", -0")  
Inside diameter = 1 1/4" (+1/8", -0")
- The nuts on the connection rod shall be turned until the bottom washer is drawn up against the loop bar. The loop bars shall not be bent due to the tightening process.
- For ease of removal of the nuts, the threads shall be waxed.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**Y. STRADA/P. ARZENO**

CHECKED BY:  
**J. HAPKIEWICZ**

SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION

ENGINEER: **AECOM Technical Services, Inc.**

APPROVED BY: **J.T. HAPKIEWICZ, P.E.**

DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

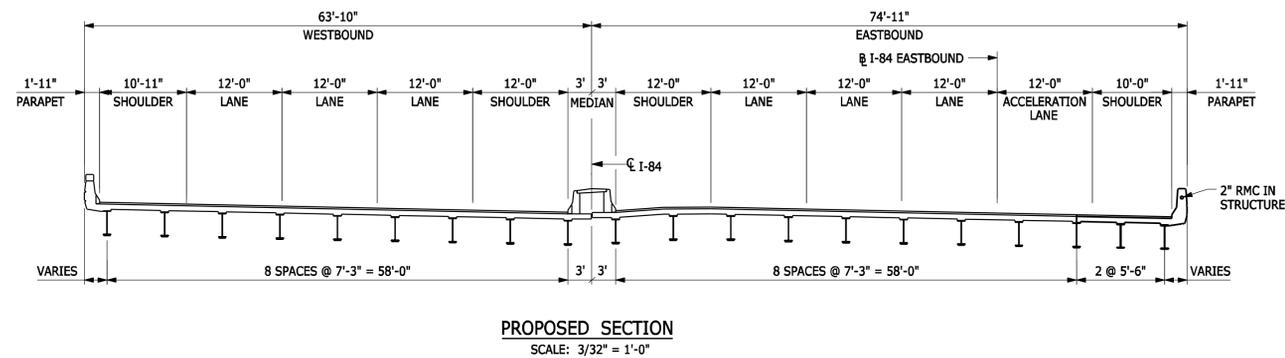
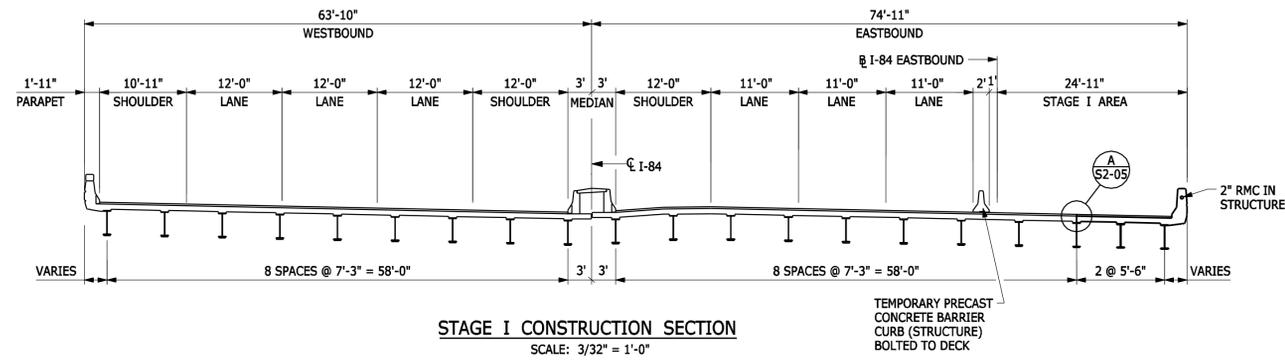
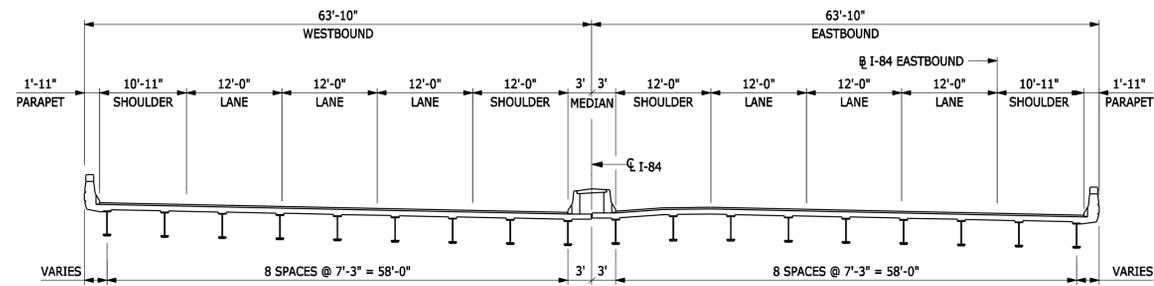
TOWN:  
**DANBURY**

DRAWING TITLE:  
**TEMPORARY PRECAST CONCRETE BARRIER CURB (STRUCTURE) BRIDGE NO. 01190**

PROJECT NO.  
**34-313**

DRAWING NO.  
**S2-04**

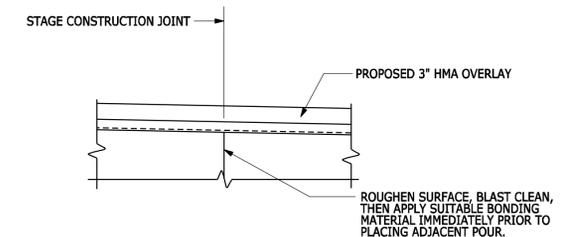
SHEET NO.  
**05.23**



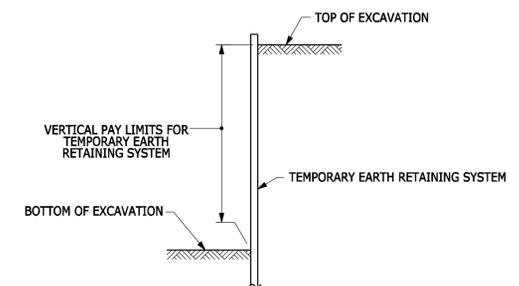
**STAGE CONSTRUCTION NOTES**

**STAGE I:**

1. INSTALL TEMPORARY PRECAST CONCRETE BARRIER (STRUCTURE) CURB AND SHIFT TRAFFIC.
2. INSTALL TEMPORARY SHEET PILING AT ENDS OF EXISTING SOUTH RETAINING WALLS.
3. REMOVE EXISTING CONCRETE DECK AND PARAPET FROM STAGE I CONSTRUCTION AREA.
4. EXCAVATE AND INSTALL NEW CAST IN PLACE PILES FOR WIDENED ABUTMENTS AND WINGWALLS.
5. EXTEND ABUTMENTS AND CONSTRUCT NEW WINGWALLS. THE PROPOSED WINGWALL FOOTINGS WILL BE EXTENSIONS OF THE EXISTING FOOTINGS.
6. INSTALL ROLLED BEAMS AND POUR CONCRETE DECK AND PARAPETS WITHIN STAGE I CONSTRUCTION AREA.
7. REMOVE TEMPORARY PRECAST CONCRETE BARRIER CURB (STRUCTURE).
8. MILL EXISTING OVERLAY AND PATCH CONCRETE DECK (AS REQUIRED) FOR FULL WIDTH OF BRIDGE.
9. APPLY MEMBRANE WATERPROOFING AND INSTALL OVERLAY.
10. INSTALL ASPHALTIC PLUG EXPANSION JOINTS.



**DETAIL A**  
SCALE: 1 1/2" = 1'-0" (S2-05)



**TEMPORARY EARTH RETAINING SYSTEM**  
VERTICAL PAY LIMITS  
NOT TO SCALE

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
034	03/13	STAGE.dwg	6/10/2014
			Border Version: 6/10/15

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWN BY:  
**Y. STRADA/P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION

ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

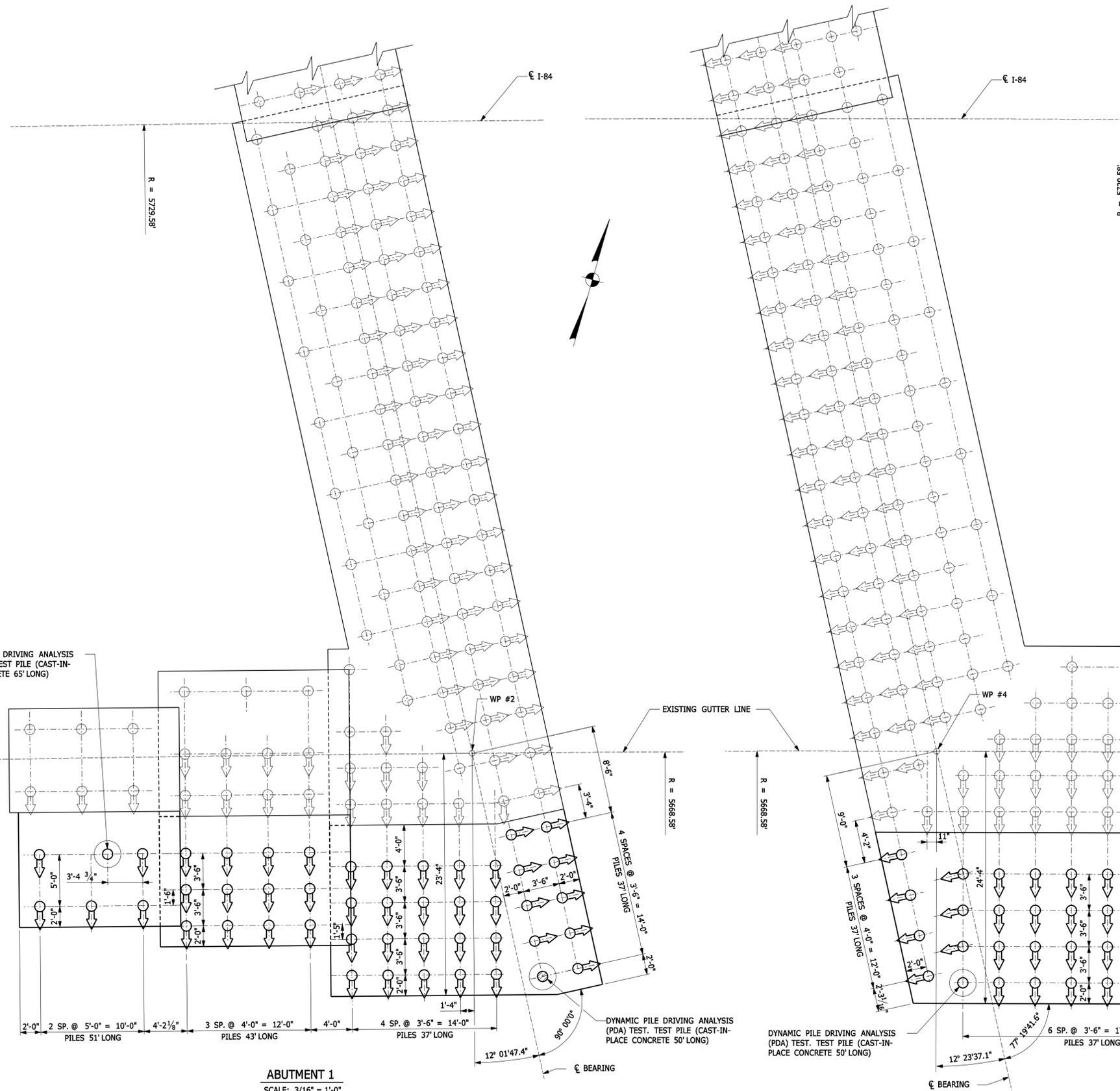
TOWN:  
**DANBURY**

DRAWING TITLE:  
**STAGE CONSTRUCTION BRIDGE NO. 01190**

PROJECT NO.  
**34-313**

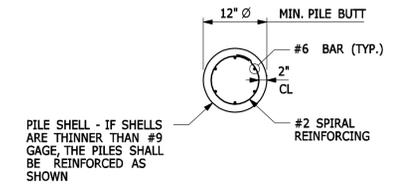
DRAWING NO.  
**S2-05**

SHEET NO.  
**05.24**

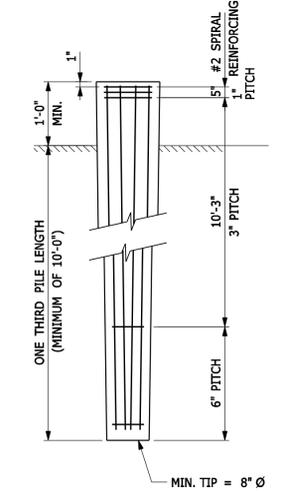


- PILE NOTES:**
1. PILES SHALL BE 12 INCHES CAST-IN-PLACE CONCRETE PILES.
  2. PILES SHALL BE DRIVEN TO AN ESTIMATED TIP ELEVATION OF 356.5
  3. PRIOR TO DRIVING PILES THE CONTRACTOR SHALL SUBMIT THE PILE DRIVING/CONCRETE PAVEMENT EQUIPMENT, METHOD AND SEQUENCE TO THE ENGINEER FOR REVIEW AND APPROVAL.
  4. PILES SHALL BE PREAUGERED TO ELEVATION 400.00.
  5. AFTER INITIAL DRIVE OF THE TEST PILE THE CONTRACTOR SHALL WAIT A MINIMUM OF 72 HOURS FROM THE END OF INITIAL PILE DRIVING TO BEGINNING RESTRIKE ON THE DYNAMIC PILE DRIVING ANALYSIS (PDA) AND NO OTHER PILE DRIVING WILL BE ALLOWED DURING THAT 72 HOUR WAITING PERIOD.

LOCATION	ELEVATIONS	PILE LENGTH	
		PLUMB	BATTER
ABUTMENT NO. 1	EL. 391.50	36'	37'
ABUTMENT NO. 2	EL. 391.50	36'	37'
WINGWALL NO. 1A	EL. 391.50	36'	37'
	EL. 398.00	43'	45'
	EL. 406.00	51'	53'
WINGWALL NO. 2A	EL. 391.50	36'	37'
	EL. 401.00	46'	48'
	EL. 409.00	54'	56'

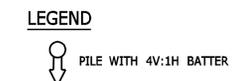


PILE SHELL - IF SHELLS ARE THINNER THAN #9 GAGE, THE PILES SHALL BE REINFORCED AS SHOWN



**CAST IN PLACE CONCRETE PILES  
DETAIL  
(TAPERED)**  
SCALE: 1" = 1'-0"

NOTE:  
APPROVED METAL SPACERS SHALL BE ATTACHED TO THE TOP & BOTTOM HOOPS TO INSURE THAT THE MIN. REQUIRED DISTANCE TO SHELL BE MAINTAINED.



DYNAMIC PILE DRIVING ANALYSIS (PDA) TEST. TEST PILE (CAST-IN-PLACE CONCRETE 65' LONG)

DYNAMIC PILE DRIVING ANALYSIS (PDA) TEST. TEST PILE (CAST-IN-PLACE CONCRETE 65' LONG)

**ABUTMENT 1**  
SCALE: 3/16" = 1'-0"

**ABUTMENT 2**  
SCALE: 3/16" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. STRADA/A. HAWKSLEY**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

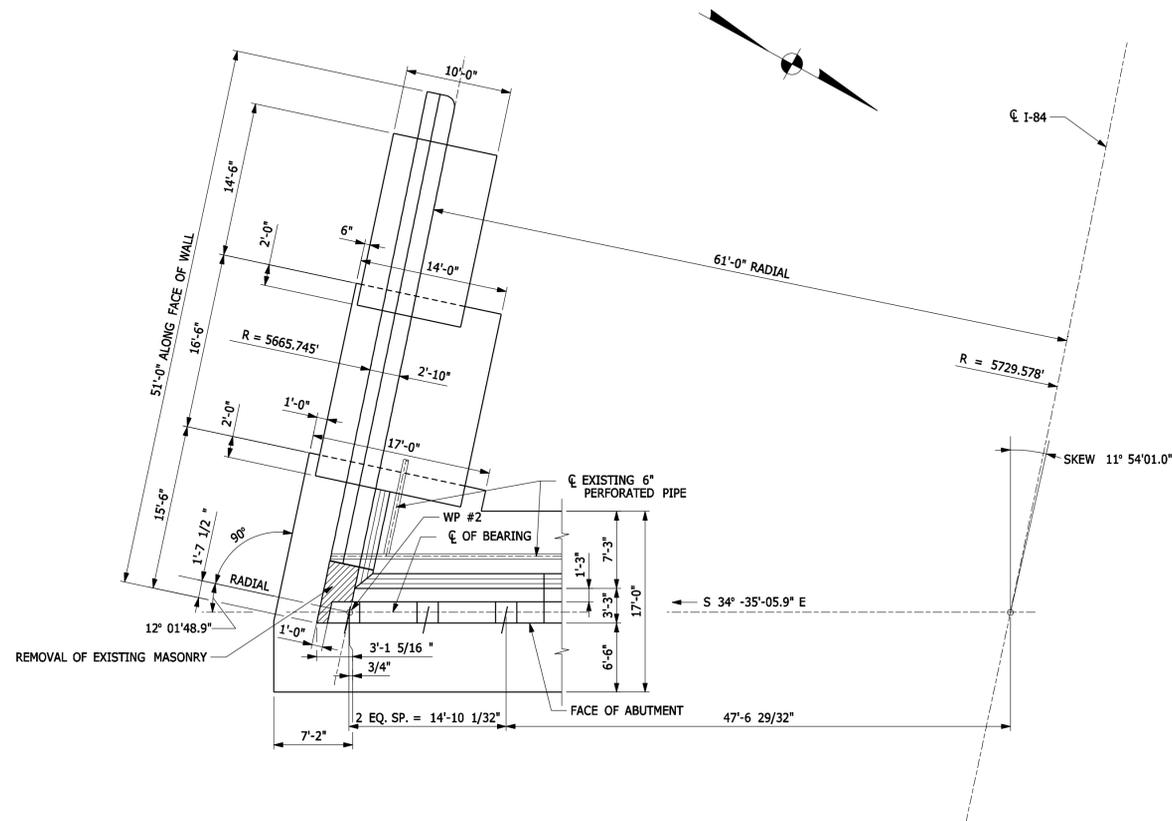
**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  
 ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.**      DATE: 06/11/2014



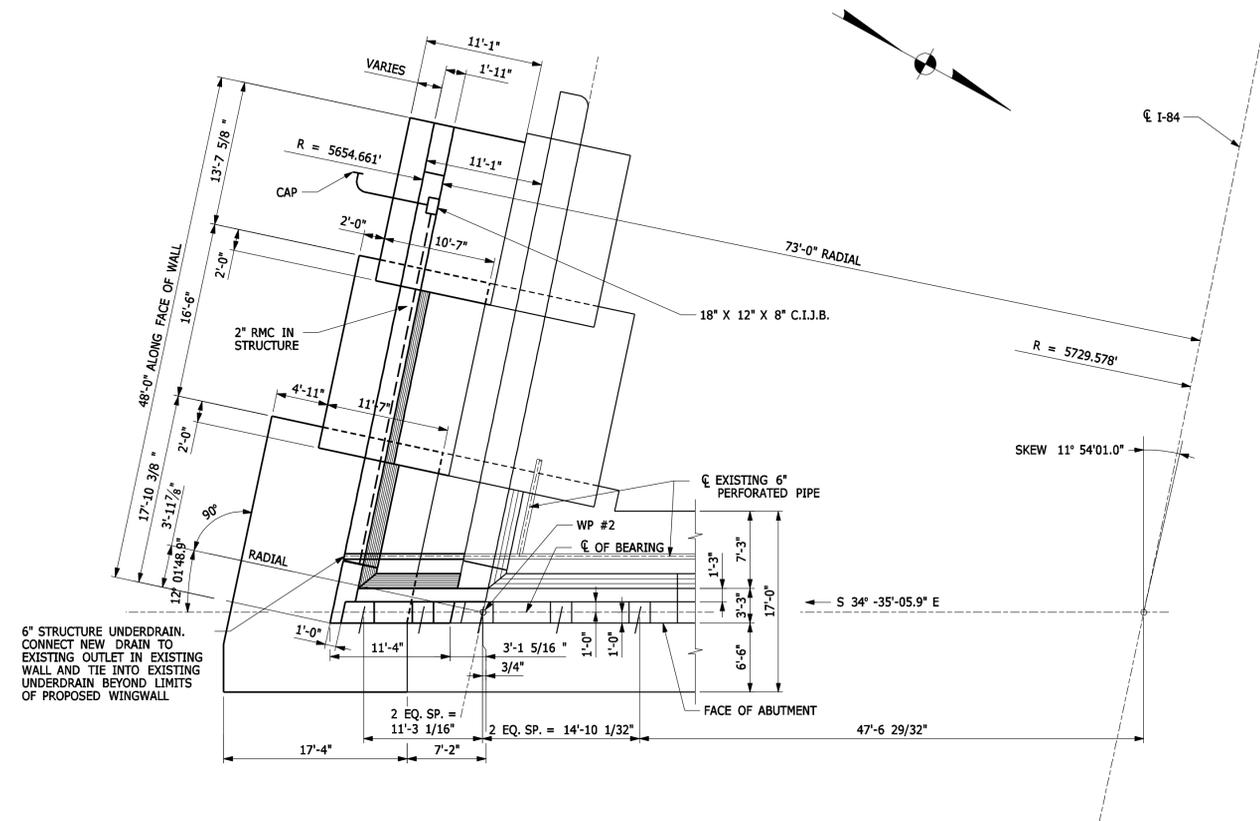
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**PILE LAYOUT PLAN  
BRIDGE NO. 01190**

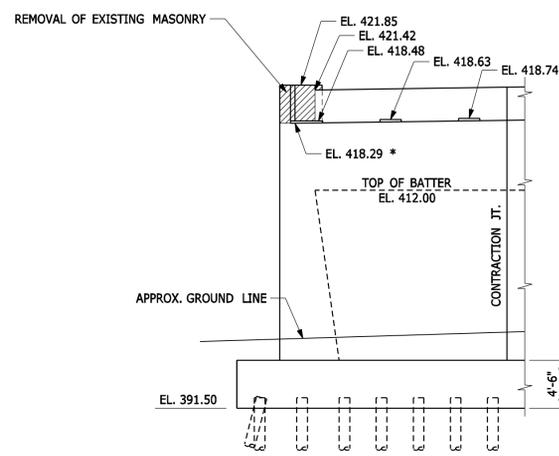
PROJECT NO.  
**34-313**  
DRAWING NO.  
**S2-06**  
SHEET NO.  
**05.25**



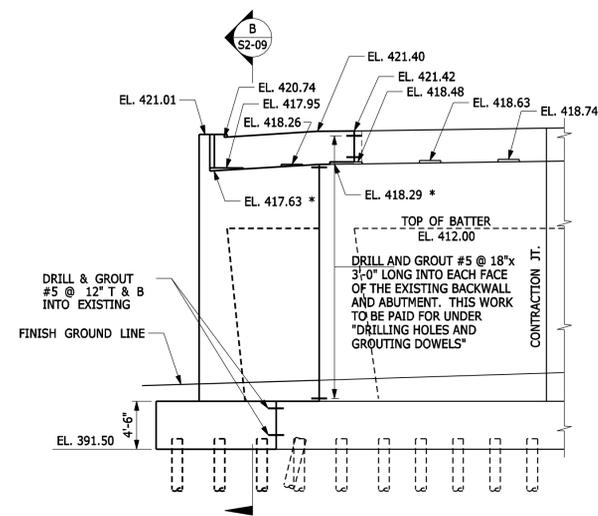
EXISTING ABUTMENT 1 PLAN  
SCALE: 1/8" = 1'-0"



PROPOSED ABUTMENT 1 PLAN  
SCALE: 1/8" = 1'-0"



EXISTING ABUTMENT 1 ELEVATION  
SCALE: 1/8" = 1'-0"



PROPOSED ABUTMENT 1 ELEVATION  
SCALE: 1/8" = 1'-0"

NOTE: ELEVATIONS MARKED \* ARE AT FACE OF BACKWALL.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. STRADA/A. HAWKSLEY**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED


**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  


ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.**      DATE: 06/11/2014

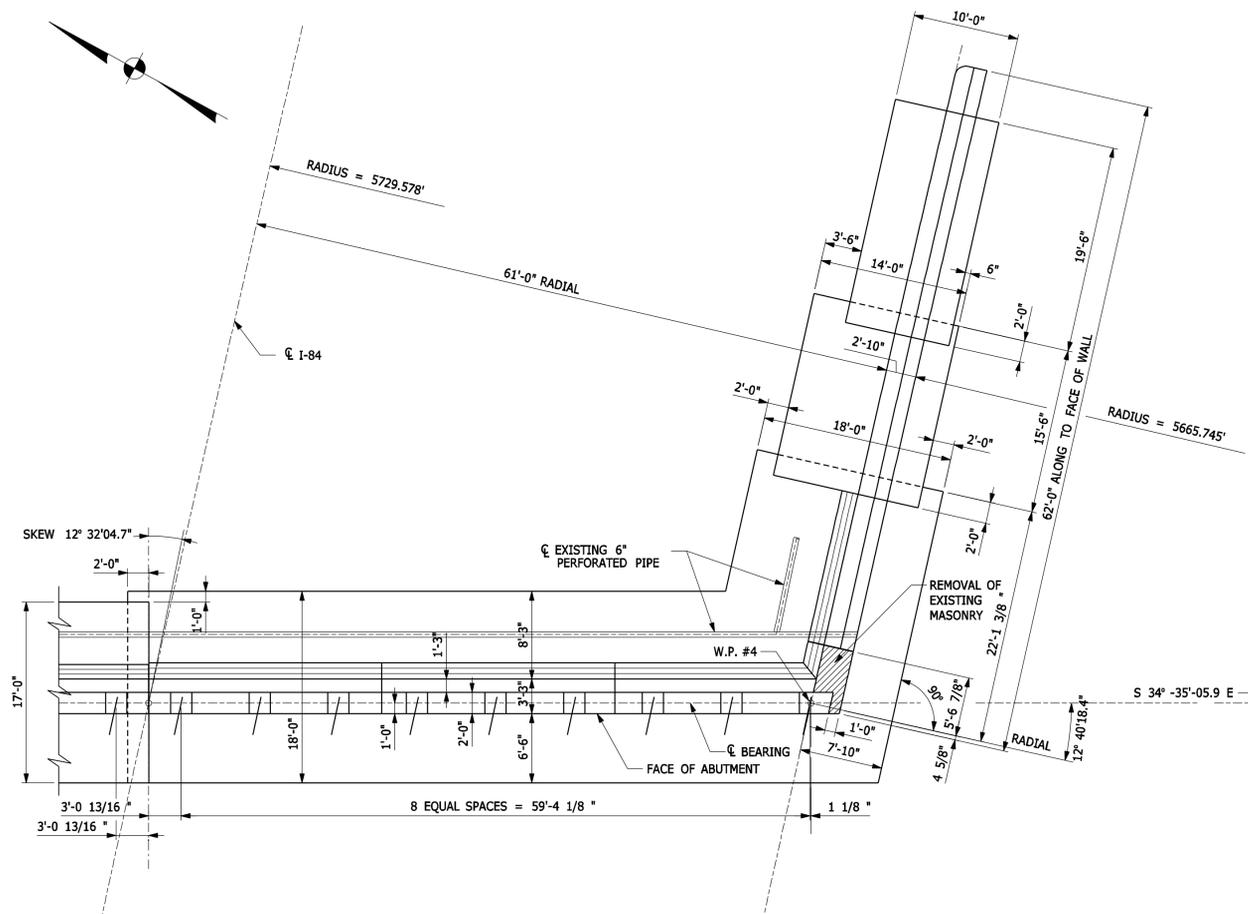
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

**AECOM**

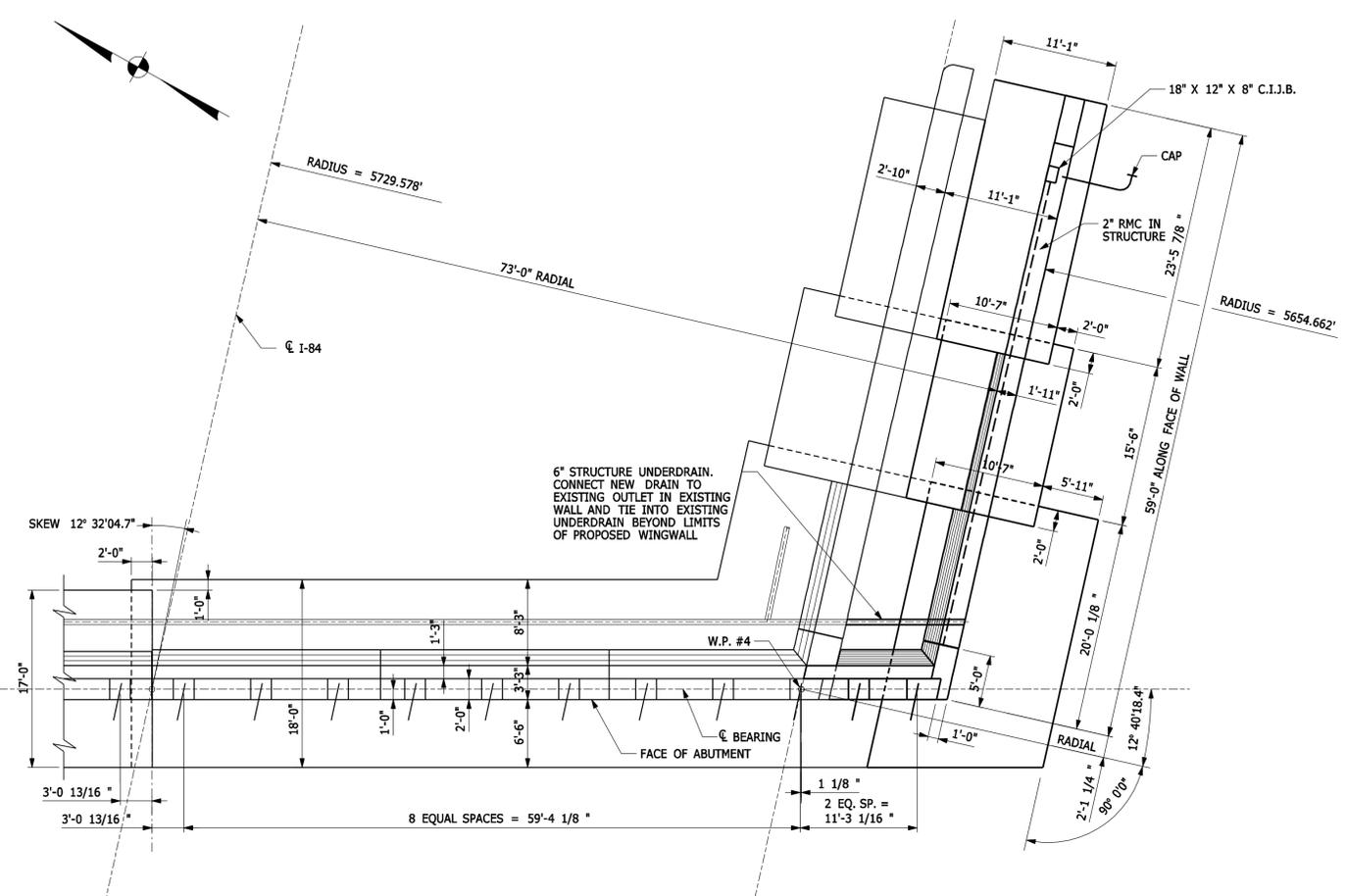
TOWN: **DANBURY**

DRAWING TITLE: **ABUTMENT NO. 1 BRIDGE NO. 01190**

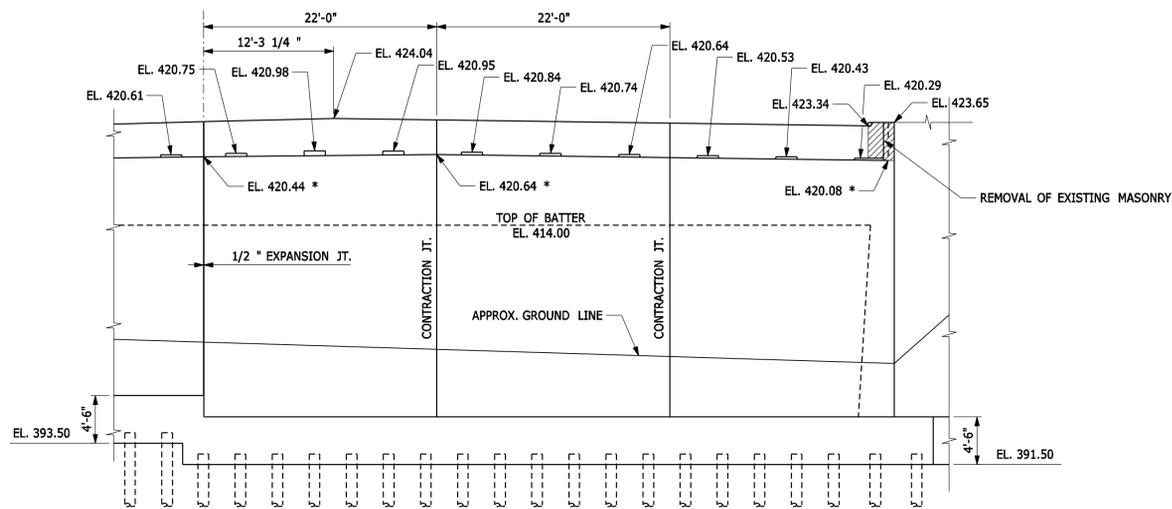
PROJECT NO.: **34-313**  
 DRAWING NO.: **S2-07**  
 SHEET NO.: **05.26**



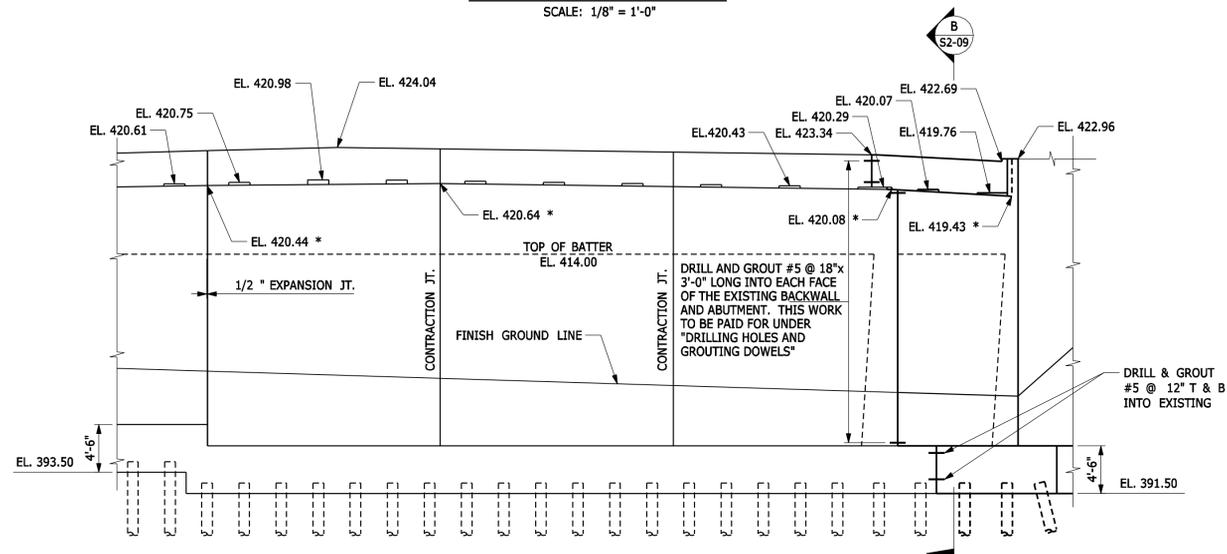
**EXISTING ABUTMENT 2 PLAN**  
SCALE: 1/8" = 1'-0"



**PROPOSED ABUTMENT 2 PLAN**  
SCALE: 1/8" = 1'-0"



**EXISTING ABUTMENT 2 ELEVATION**  
SCALE: 1/8" = 1'-0"



**PROPOSED ABUTMENT 2 ELEVATION**  
SCALE: 1/8" = 1'-0"

NOTE: ELEVATIONS MARKED \* ARE AT FACE OF BACKWALL.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. STRADA/A. HAWKSLEY**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

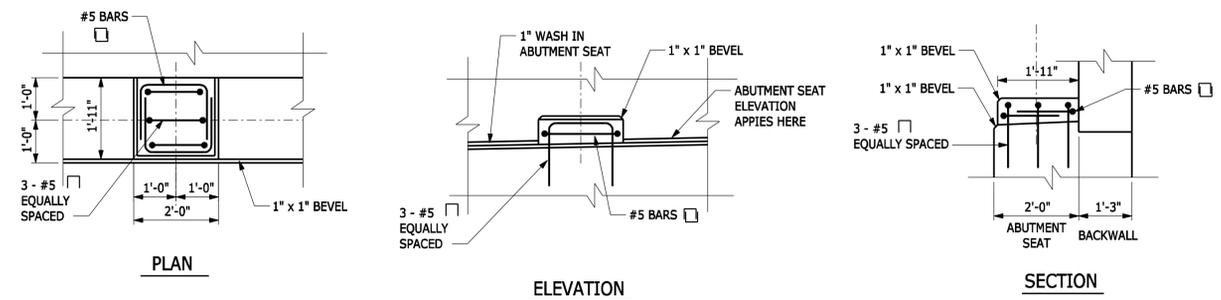
**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**ABUTMENT NO. 2 BRIDGE NO. 01190**

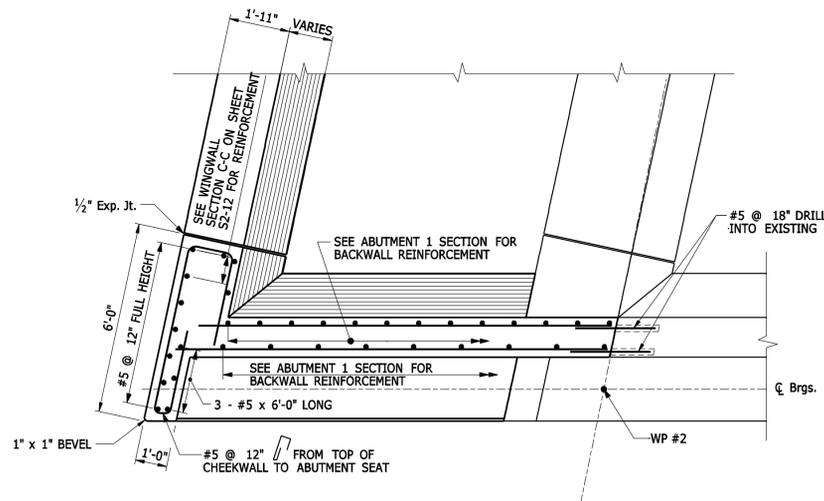
PROJECT NO.  
**34-313**  
DRAWING NO.  
**S2-08**  
SHEET NO.  
**05.27**



**CONCRETE BEARING PAD DETAILS**

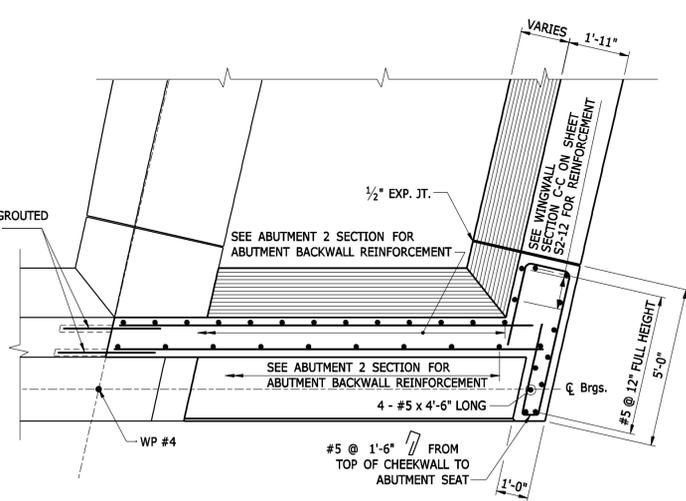
SCALE: 1/2" = 1'-0"

NOTE: THESE DETAILS APPLY TO PAD HEIGHTS GREATER THAN 3".



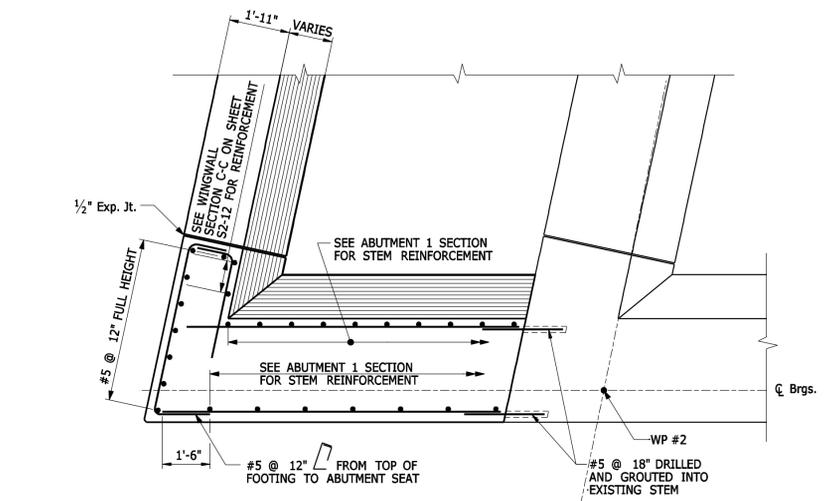
**ACUTE CORNER REINFORCEMENT ABUTMENT BACKWALL**

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



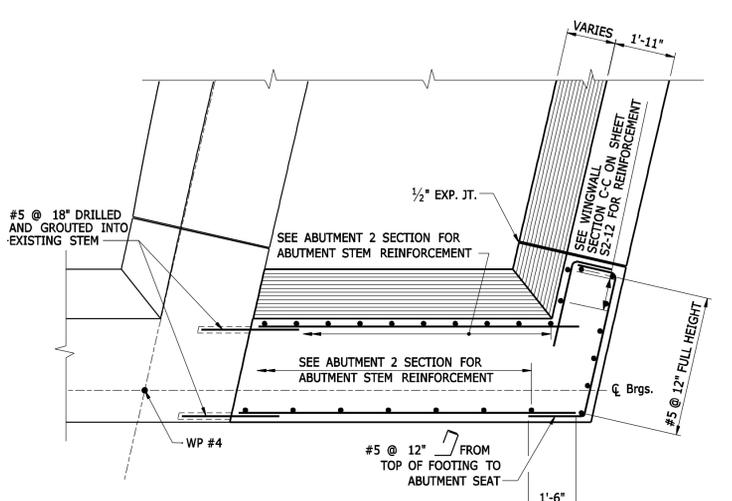
**OBTUSE CORNER REINFORCEMENT ABUTMENT BACKWALL**

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



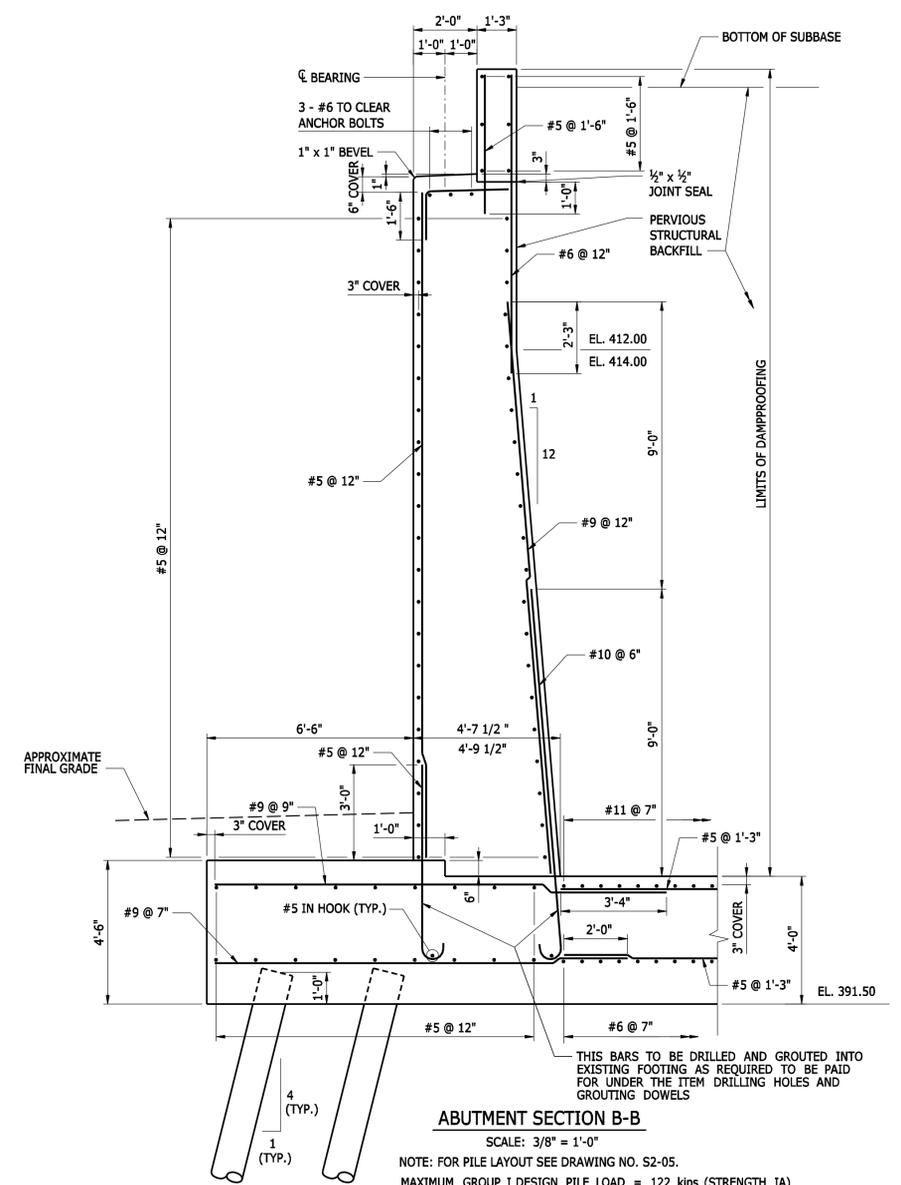
**ACUTE CORNER REINFORCEMENT ABUTMENT STEM**

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



**OBTUSE CORNER REINFORCEMENT ABUTMENT STEM**

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



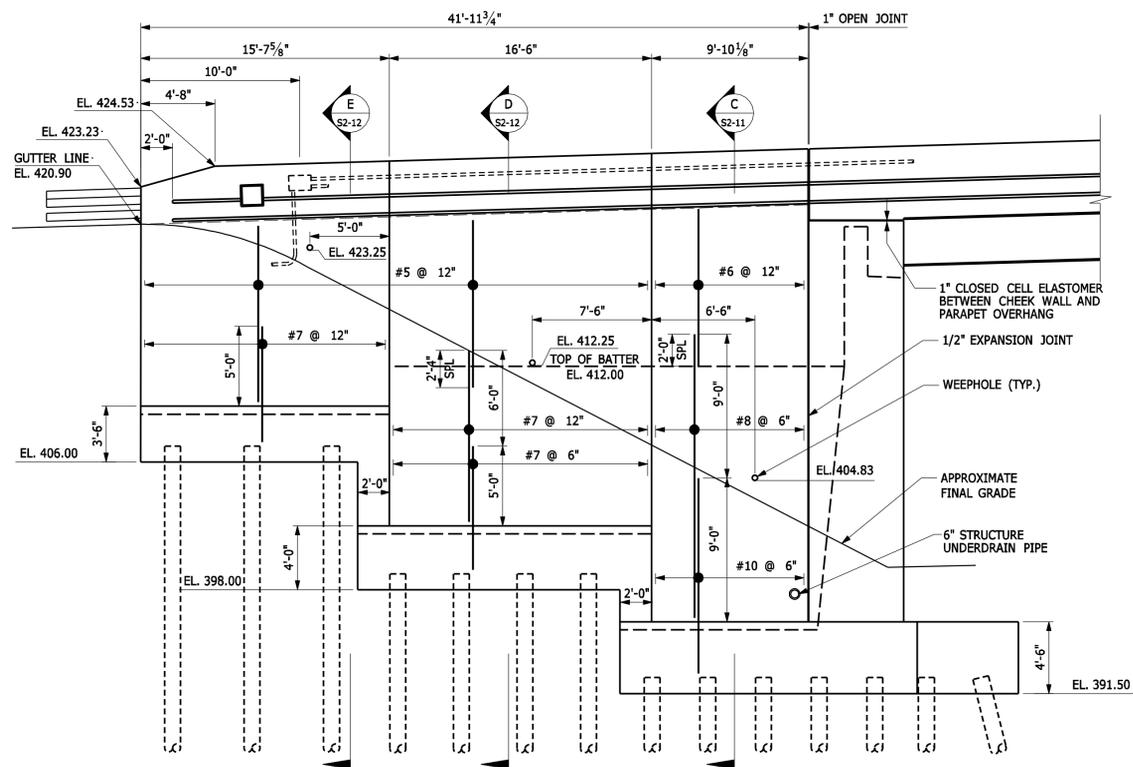
**ABUTMENT SECTION B-B**

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

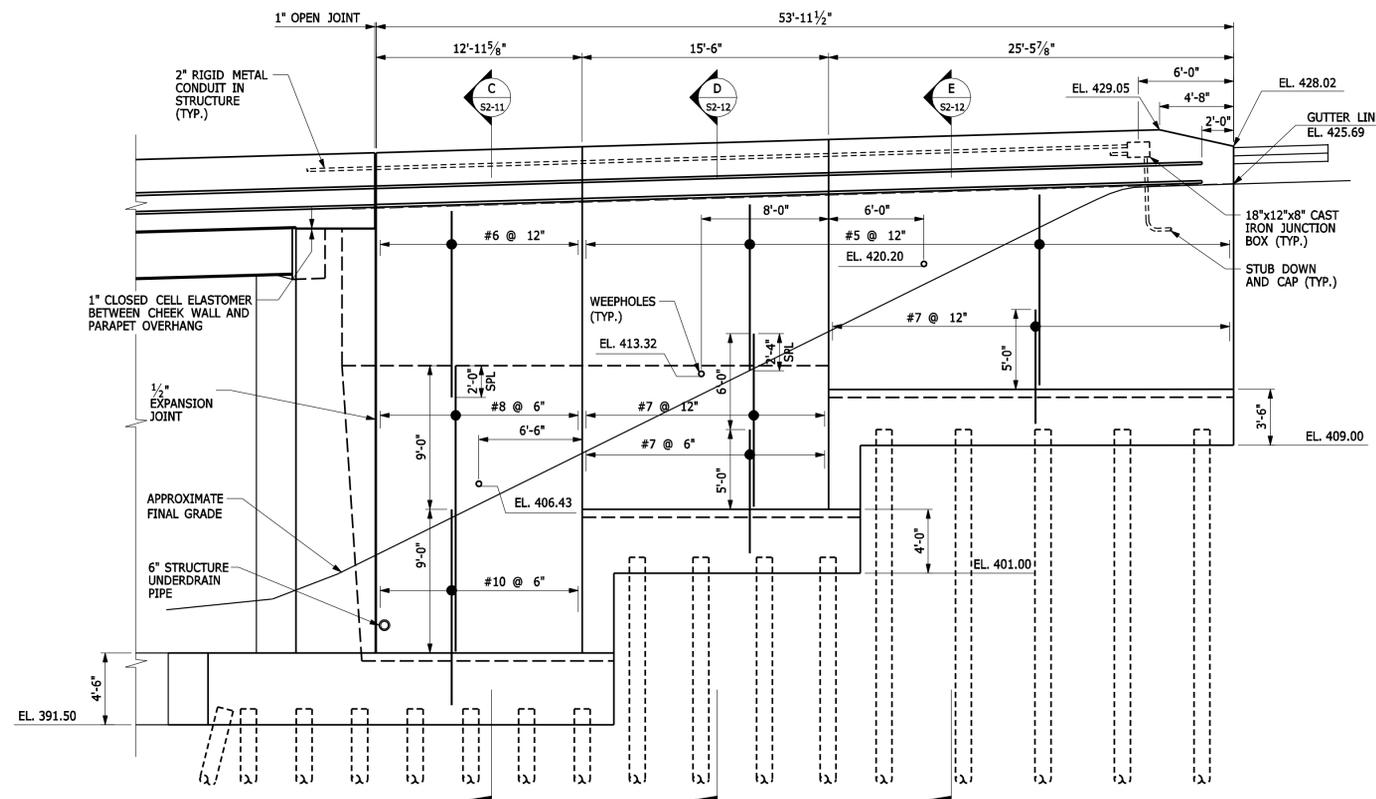
NOTE: FOR PILE LAYOUT SEE DRAWING NO. S2-05.  
MAXIMUM GROUP I DESIGN PILE LOAD = 122 kips (STRENGTH IA)  
ULTIMATE PILE CAPACITY = 130 kips

**LEGEND:**  
ABUTMENT 1  
ABUTMENT 2

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.		DESIGNER/DRAFTER: <b>Y. STRADA</b> CHECKED BY: <b>J. HAPKIEWICZ</b> SCALE AS NOTED	<b>STATE OF CONNECTICUT</b> DEPARTMENT OF TRANSPORTATION ENGINEER: <b>AECOM Technical Services, Inc.</b> APPROVED BY: <b>J.T. HAPKIEWICZ, P.E.</b> DATE: 06/11/2014	PROJECT TITLE: <b>I-84 INTERCHANGES 5 &amp; 6 IMPROVEMENTS</b>	TOWN: <b>DANBURY</b> DRAWING TITLE: <b>ABUTMENT DETAILS 1 BRIDGE NO. 01190</b>	PROJECT NO. <b>34-313</b> DRAWING NO. <b>S2-09</b> SHEET NO. <b>05.28</b>
REV. DATE REVISION DESCRIPTION SHEET NO. 034 0313 Abutment Dts 1.dgn 6/10/2014 Border Version 6/10/15						



**WINGWALL 1A**  
SCALE: 3/16" = 1'-0"



**WINGWALL 2A**  
SCALE: 3/16" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. STRADA/HAWKSLEY**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

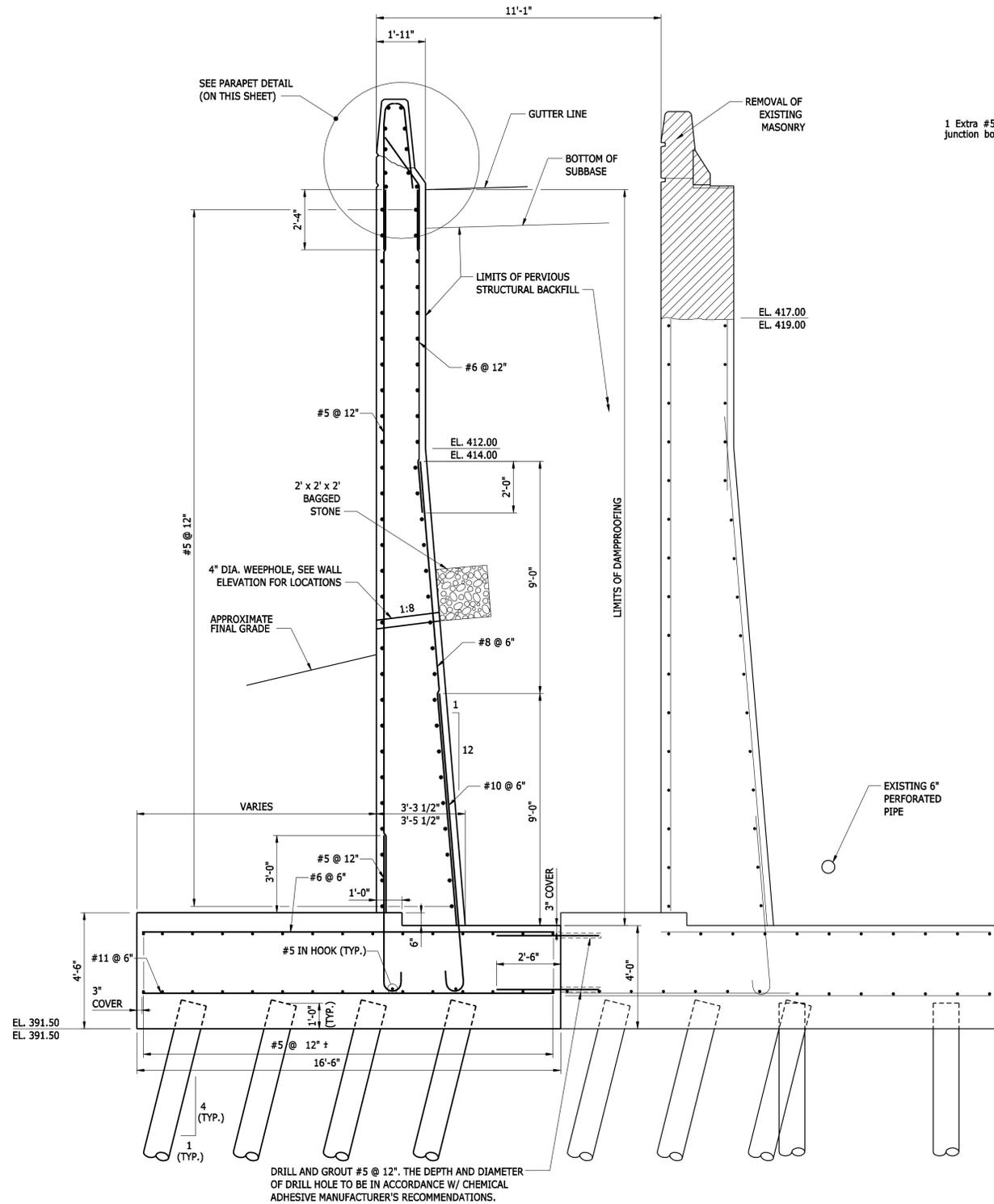
**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

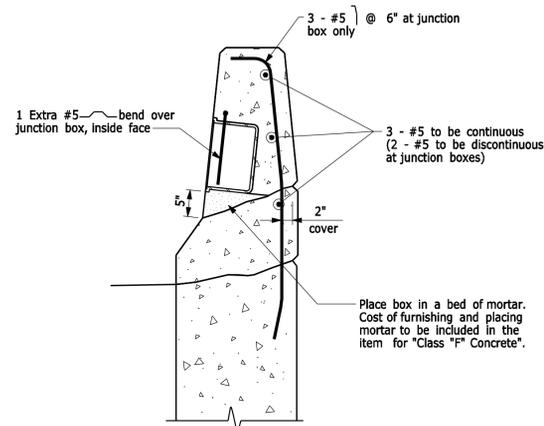
TOWN:  
**DANBURY**  
DRAWING TITLE:  
**WINGWALLS BRIDGE NO. 01190**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**S2-10**  
SHEET NO.  
**05.29**

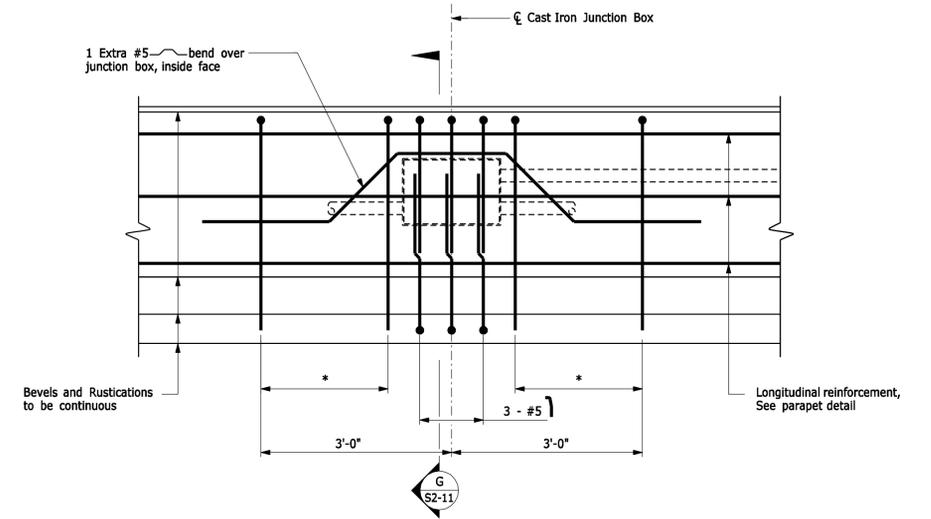


**WINGWALL SECTION C-C**  
SCALE: 3/8" = 1'-0"

NOTE: FOR PILE LAYOUT SEE DRAWING NO. S2-05.  
MAXIMUM GROUP I DESIGN PILE LOAD = 83 kips (STRENGTH 1A)  
ULTIMATE PILE CAPACITY = 130 kips

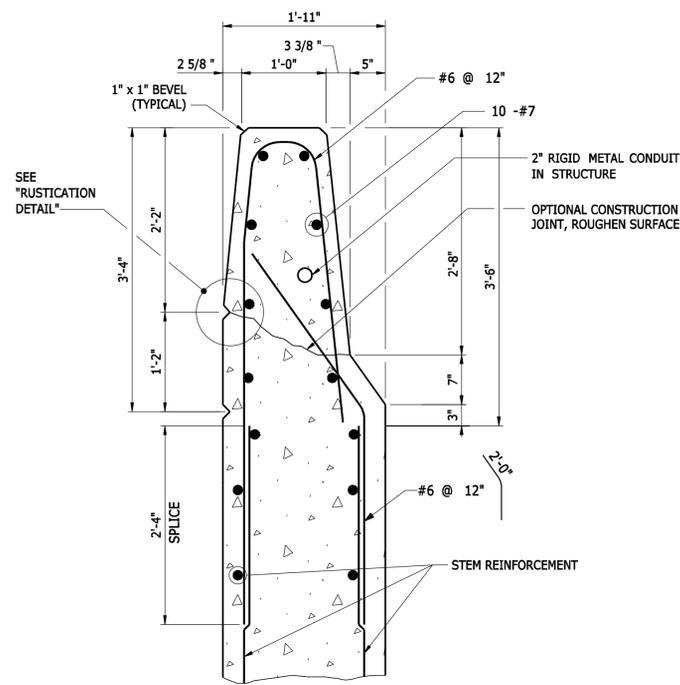


**SECTION G**  
Scale: 3/4" = 1'-0"

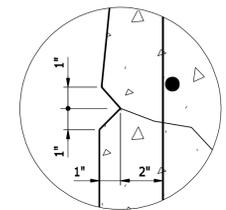


**JUNCTION BOX ELEVATION**

Scale: 3/4" = 1'-0"  
\* - The vertical parapet reinforcement is to be doubled (#5 @ 6") within these limits.



**PARAPET DETAIL**  
SCALE: 1" = 1'-0"



**RUSTICATION DETAIL**

**LEGEND:**  
WINGWALL 1A  
WINGWALL 2A

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. STRADA/HAWKSLEY**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

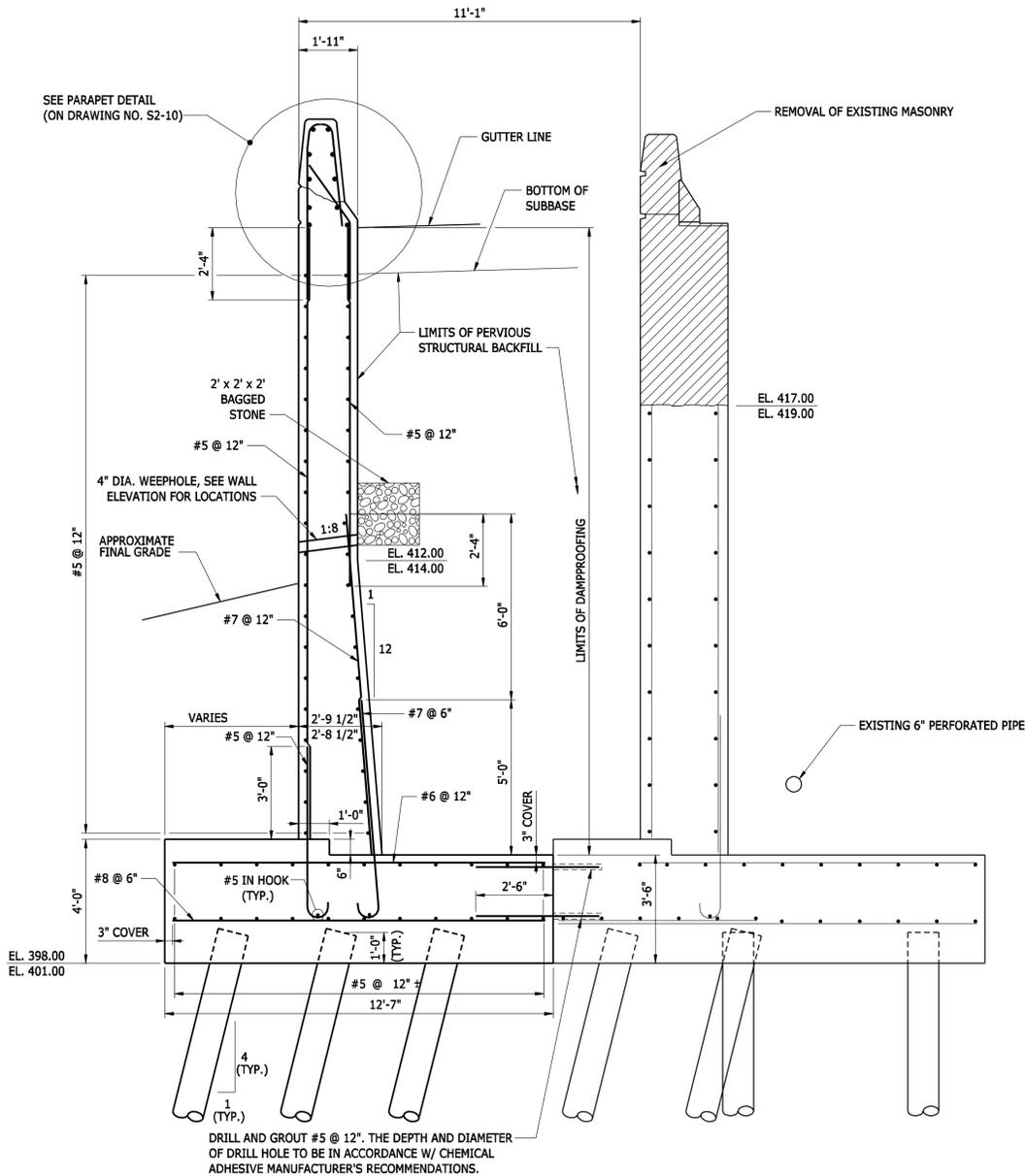
**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014

**AECOM**

PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**WINGWALL DETAILS I BRIDGE NO. 01190**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**S2-11**  
SHEET NO.  
**05.30**



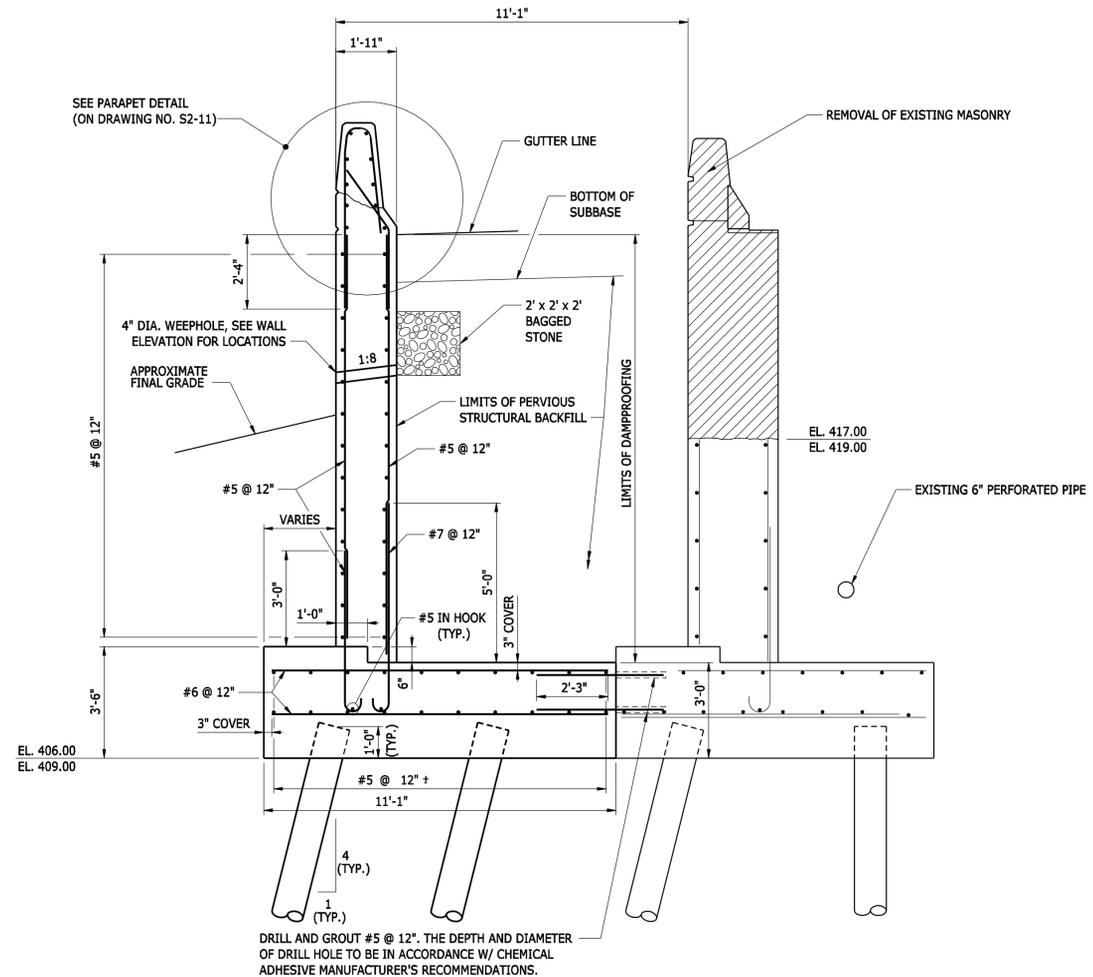
**WINGWALL SECTION D-D**

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

NOTE: FOR PILE LAYOUT SEE DRAWING NO. S2-06.  
 MAXIMUM GROUP I DESIGN PILE LOAD = 98 kips (STRENGTH IA)  
 ULTIMATE PILE CAPACITY = 130 kips

**LEGEND:**

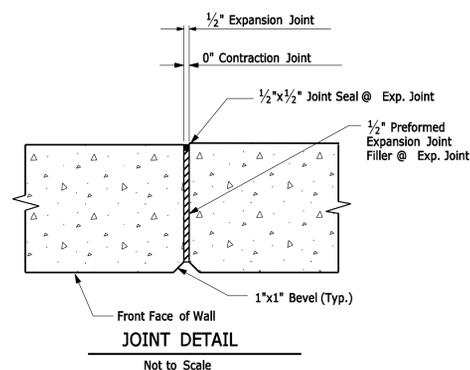
- WINGWALL 1A
- WINGWALL 2A



**WINGWALL SECTION E-E**

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

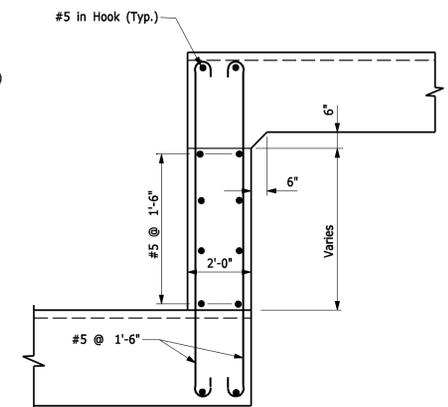
NOTE: FOR PILE LAYOUT SEE DRAWING NO. S2-06.  
 MAXIMUM GROUP I DESIGN PILE LOAD = 68 kips (STRENGTH IA)  
 ULTIMATE PILE CAPACITY = 130 kips



**NOTES:**

**Joints:**  
 Joint seal to extend from top of footing to top of parapet and horizontally along this joint to the outside face of the wall.

**Reinforcement:**  
 No reinforcement shall pass through expansion or contraction joints.  
 Reinforcement shall pass through construction joints.



**FOOTING STEP DETAIL**

Scale: 3/8" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**Y. STRADA/HAWKSLEY**  
 CHECKED BY:  
**J. HAPKIEWICZ**  
 SCALE AS NOTED

**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION

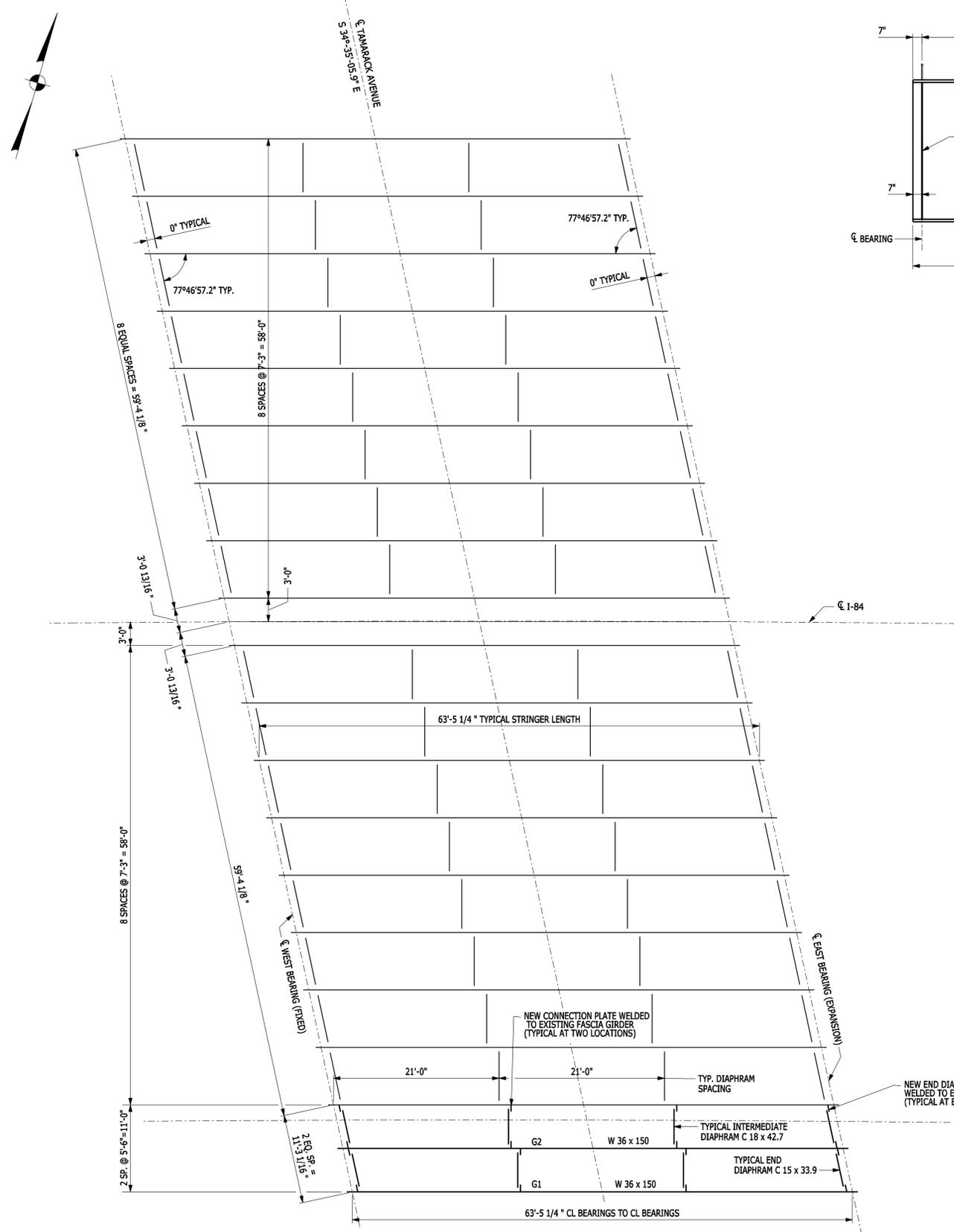
ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.**      DATE: 06/11/2014



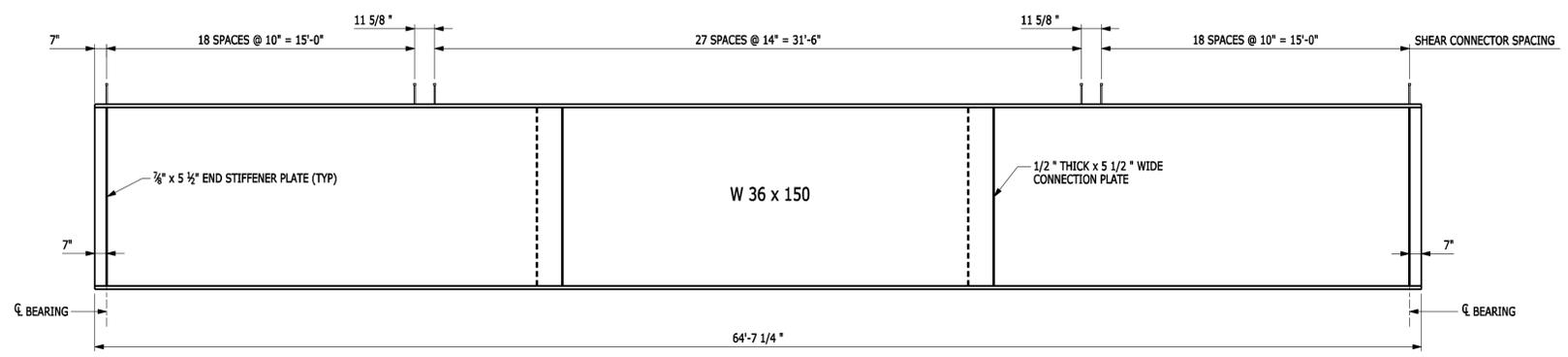
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
 DRAWING TITLE:  
**WINGWALL DETAILS II BRIDGE NO. 01190**

PROJECT NO.  
**34-313**  
 DRAWING NO.  
**S2-12**  
 SHEET NO.  
**05.31**



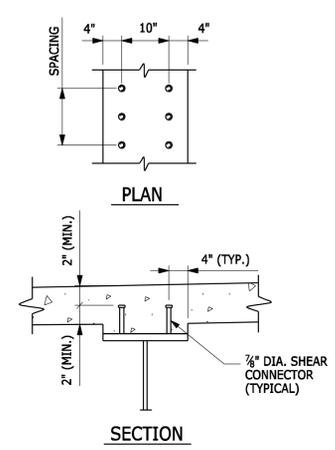
**FRAMING PLAN**  
SCALE: 1/8" = 1'-0"



**BEAM ELEVATION**  
SCALE: HORIZONTAL: 1/4" = 1'-0"  
VERTICAL: 3/4" = 1'-0"

	G1	G2
STRUCTURAL STEEL DEFLECTION	1/4"	1/4"
ADDITIONAL DL DEFLECTION	13/16"	13/16"
COMPOSITE DL DEFLECTION	5/16"	5/16"
TOTAL DEAD LOAD CAMBER	1 3/8"	1 3/8"
EXTRA CAMBER	5/8"	5/8"
TOTAL CAMBER	2"	2"

**DEAD LOAD DEFLECTION AND CAMBER TABLE**  
AT MIDSPAN (INCHES)



**SHEAR CONNECTOR DETAILS**  
NOT TO SCALE

**STRUCTURAL STEEL NOTES:**

- Structural Steel (Low Alloy) shall conform to AASHTO M270, Grade 50 T2.
- Welding details, procedures and testing methods shall conform to the ANSI/AASHTO/AWS D1.5 - Bridge Welding Code, unless otherwise noted on the plans.
- Bolted field splices, other than those indicated on the plans, will not be allowed except with written permission of the Engineer prior to the submission of shop plans. If allowed, these splices shall be designed by the Contractor and approved by the Engineer. The cost of these splices, including the cost of design, shall be at no extra expense to the State. Welded field splices will not be allowed.
- All web to flange, web to bearing stiffener and bearing stiffener to flange fillet welds shall be inspected by the magnetic particle method.
- Multiple pass welds, inspected by the magnetic particle method shall have each pass or layer inspected and accepted before proceeding to the next pass or layer, as determined by the Engineer.
- Shop web splices shall be located within the middle third of the span.
- Shop flange splices shall be located a minimum of six inches from web splices.
- Flange or web splices shall be located a minimum of six inches from stiffeners and connection plates.
- Bearing stiffeners and the ends of girders shall be vertical after the application of full dead loads.
- The structural steel fabricators shall be certified under the AISC Quality Control Program as noted below:  
Category MBr - Major Steel Bridges
- The Contractor shall take the proper precautions to ensure the stability of all structural elements until the total structure is erected in place.
- Unless otherwise noted, all high strength bolts shall be + diameter and 7/8" diameter and conform to ASTM A325, Type 1. The nuts shall conform to ASTM A563, Grade DH3, or ASTM A194, Grade 2H. The washers shall conform to ASTM F436 and shall have atmospheric corrosion protection.
- The high strength bolts may be installed and tightened using compressible washer-type direct tension indicator washers conforming to ASTM F959. The washers shall be galvanized in accordance with ASTM B695, Class 50 and shall be coated with epoxy.
- All bolt holes shall be standard holes (1/16" larger than the bolt diameter), unless otherwise noted.
- The bolted connections are designed as slip-critical connections with Class 'B' surface conditions.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. STRADA/A. HAWKSLEY**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION

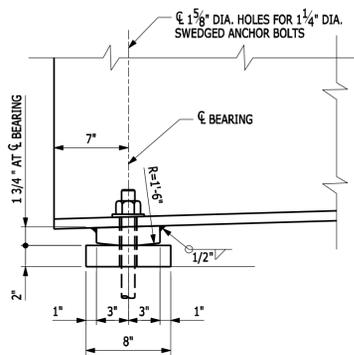
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



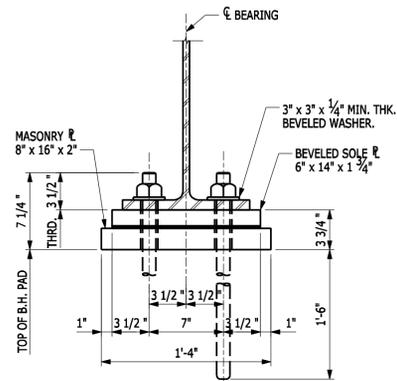
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN: **DANBURY**  
DRAWING TITLE: **FRAMING PLAN BRIDGE NO. 01190**

PROJECT NO.: **34-313**  
DRAWING NO.: **S2-13**  
SHEET NO.: **05.32**

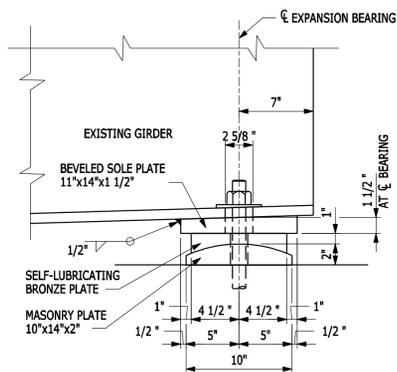


**FIXED BEARING DETAILS**  
SCALE: 1 1/2" = 1'-0"



**NOTES:**

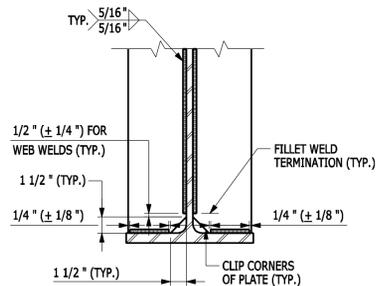
1. NUT TO BE DRAWN UP FINGER TIGHT THEN BACKED OFF 1/8TH TURN AND THREADS OF ANCHOR BOLT BURNED OFF AT FACE OF NUT WITH A POINTED TOOL.
2. ALL STEEL BEARINGS SHALL CONFORM TO AASHTO M270, GRADE 50. BRONZE FOR EXPANSION BEARINGS SHALL CONFORM TO ASTM B-22.
3. STEEL BEARINGS AND SELF-LUBRICATING BRONZE EXPANSION BEARINGS SHALL BE PAID FOR UNDER "STRUCTURAL STEEL".



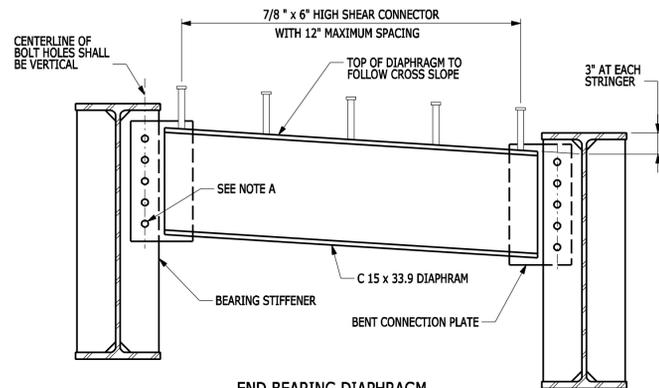
**EXPANSION BEARING DETAILS**  
SCALE: 1 1/2" = 1'-0"

**ANCHOR BOLT NOTES:**

ANCHOR BOLTS SHALL BE STAINLESS STEEL AND CONFORM TO ASTM A193, CLASS 2, GRADE B8 (UNS DESIGNATION S 30400 (304)). THE NUTS SHALL BE PREVAILING-TORQUE REUSABLE-TYPE (WITH NYLON INSERT) LOCK NUTS AND CONFORM TO ASTM A194, GRADE 8, STRAIN HARDENED (UNS DESIGNATION S 30400 (304)). WASHERS SHALL BE 5/16" THICK STAINLESS STEEL AND CONFORM TO ASTM A276, TYPE 304, ANNEALED.



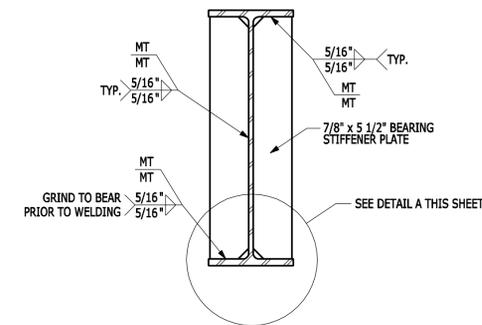
**DETAIL "A"**  
SCALE: 1 1/2" = 1'-0"



**END BEARING DIAPHRAGM**  
SCALE: 1" = 1'-0"

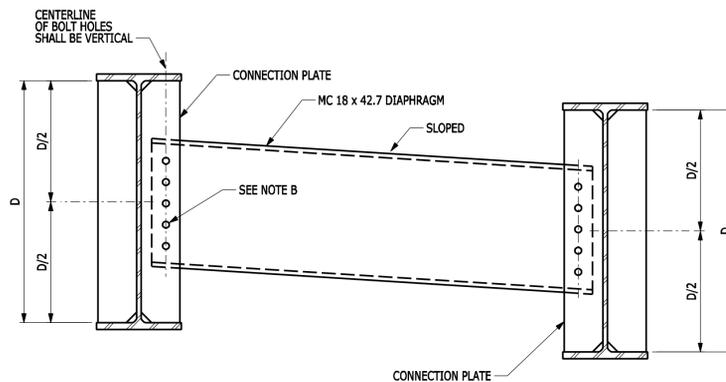
**NOTE A:**

BOLT HOLES IN CONNECTION PLATE SHALL BE 15/16" DIAMETER (STANDARD) FOR 7/8" DIAMETER BOLTS. BOLT HOLES IN STIFFENER PLATES SHALL BE 1 1/16" DIAMETER (OVERSIZED).



**END BEARING STIFFENER DETAIL**  
SCALE: 1" = 1'-0"

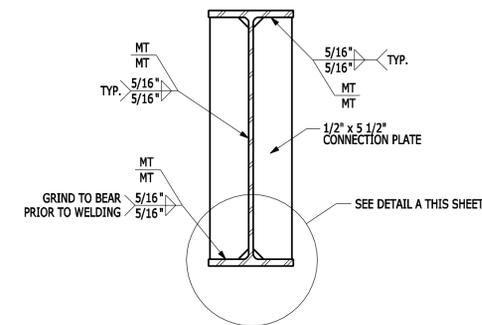
NOTE: TESTING OF FIELD WELDS IS NOT REQUIRED.



**INTERMEDIATE DIAPHRAGM**  
SCALE: 1" = 1'-0"

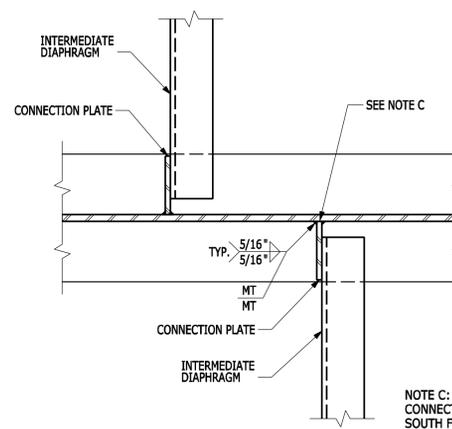
**NOTE B:**

BOLT HOLES IN CHANNELS SHALL BE 15/16" DIAMETER (STANDARD) FOR 7/8" DIA. BOLTS. BOLT HOLES IN CONNECTION PLATES SHALL BE 1 1/16" DIAMETER (OVERSIZED).



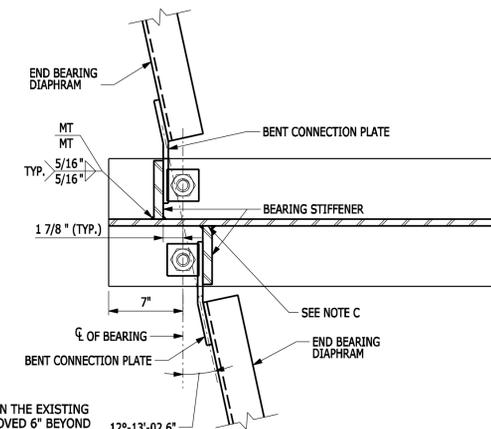
**INTERMEDIATE DIAPHRAGM CONNECTION PLATE DETAIL**  
SCALE: 1" = 1'-0"

NOTE: TESTING OF FIELD WELDS IS NOT REQUIRED.



**CONNECTION PLATES AT INTERMEDIATE DIAPHRAGMS**  
SCALE: 1 1/2" = 1'-0"

**NOTE C:** CONNECTION AND STIFFENER PLATES SHALL BE INSTALLED ON THE EXISTING SOUTH FASCIA GIRDER. THE EXISTING PAINT SHALL BE REMOVED 6" BEYOND WELD LOCATION PRIOR TO WELDING THE PLATES. THE COST OF THIS WORK TO BE PAID UNDER THE ITEM "LOCALIZED PAINT REMOVAL". FIELD TOUCH-UP PAINT AFTER INSTALLATION TO BE PAID FOR UNDER THE ITEM "FIELD TOUCH-UP PAINTING". WELD TESTING IS NOT REQUIRED FOR FIELD WELDS.



**CONNECTION PLATES AT END BEARING DIAPHRAGMS**  
SCALE: 1 1/2" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER: **ALH**  
CHECKED BY: **ALH**  
SCALE AS NOTED

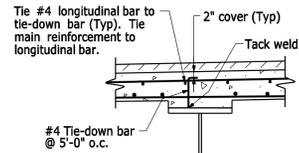
**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  
 ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.**

PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN: **DANBURY**  
DRAWING TITLE: **STEEL DETAILS BRIDGE NO. 01190**

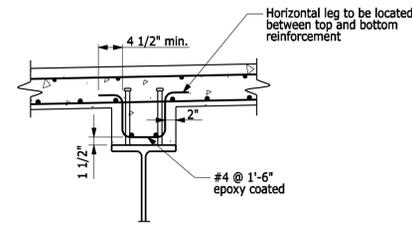
PROJECT NO.: **34-313**  
DRAWING NO.: **S2-14**  
SHEET NO.: **05.33**

BRIDGE PARAPET CONDUIT EXPANSION FITTING SCHEDULE	
LOCATION	EXPANSION FITTING TYPE
Abutment 1	Type 2
Abutment 2	Type 2



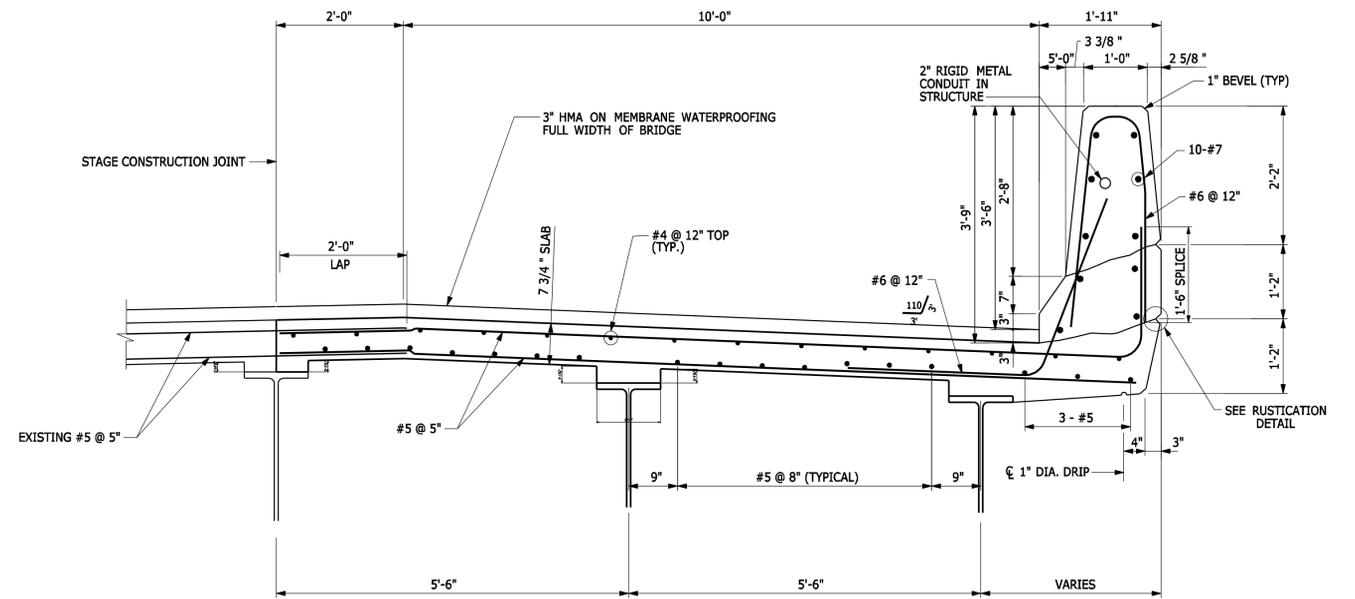
**TIE-DOWN DETAIL**  
Scale: 1/2" = 1'-0"

NOTES: Tie-down bars do not exclude the use of chairs for supporting the reinforcing mat. The cost of furnishing and placing tie-down bars to be included in the contract item "Deformed Steel Bars". Tie-down bars and longitudinal bars shall clear shear connectors.

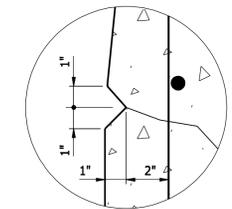


**HAUNCH REINFORCEMENT DETAIL**  
SCALE: 3/4" = 1'-0"

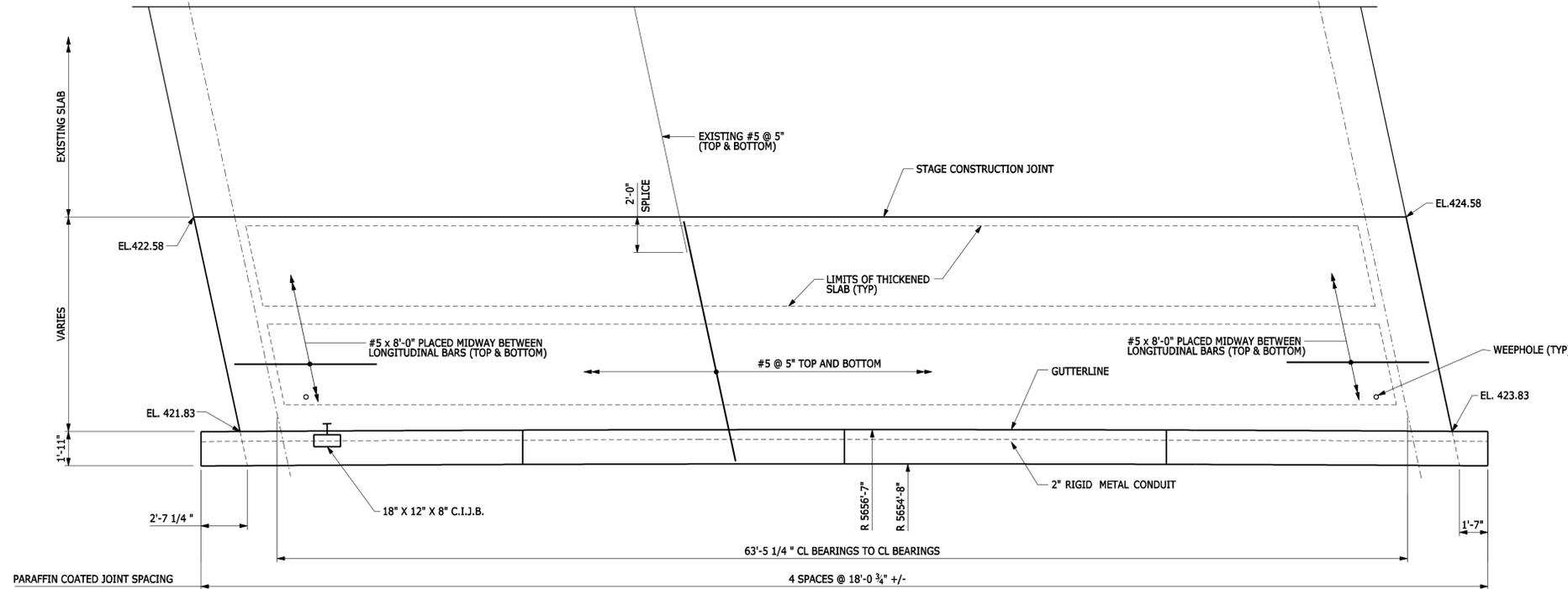
NOTE: Haunch reinforcement required for haunch depth > 4"



**TYPICAL SLAB SECTION**  
SCALE: 3/4" = 1'-0"



**RUSTICATION DETAIL**



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

	CL ABUT NO. 1	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	CL ABUT NO. 2
G1	421.95	422.14	422.33	422.51	422.70	422.89	423.08	423.27	423.45	423.64	423.83
G2	422.33	422.52	422.71	422.89	423.08	423.27	423.46	423.65	423.83	424.02	424.21

**TOP OF CONCRETE SLAB ELEVATIONS**

NOTES:

Elevations shown are taken at top of finished deck slab and DO NOT include the thickness of overlay.

L = Span Length measured horizontally along centerline of beam from Centerline of Bearings to Centerline of Bearings

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. STRADA/P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION

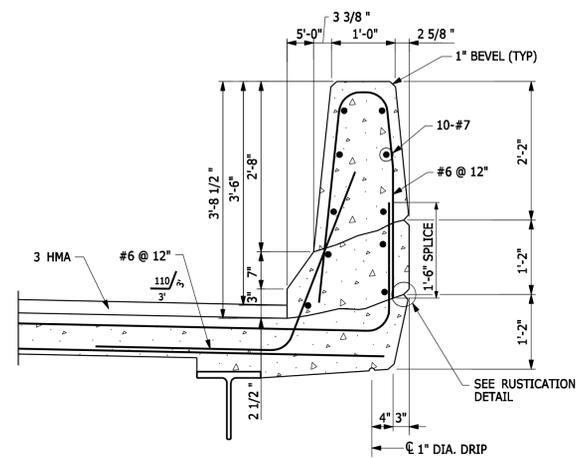
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



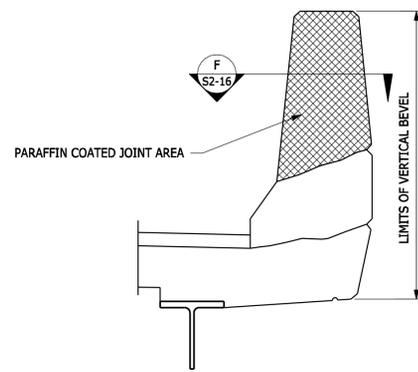
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**SLAB PLAN BRIDGE NO. 01190**

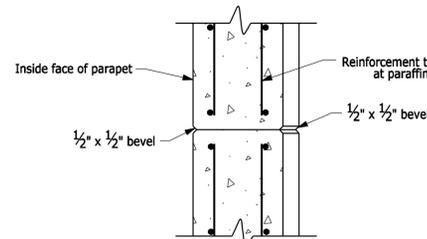
PROJECT NO.  
**34-313**  
DRAWING NO.  
**S2-15**  
SHEET NO.  
**05.34**



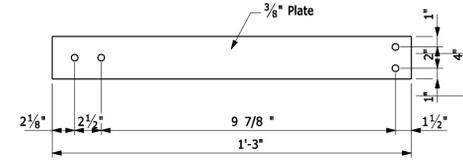
**PARAPET SECTION**  
SCALE: 3/4" = 1'-0"



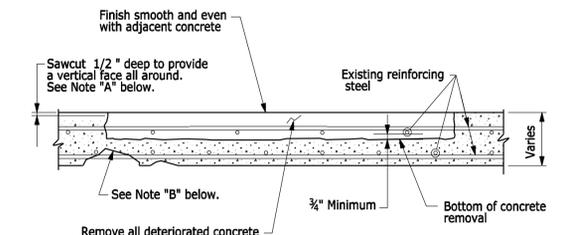
**PARAFFIN COATED JOINT DETAIL**  
SCALE: 1" = 1'-0"



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

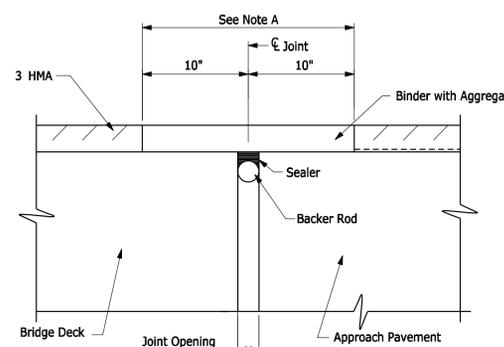


**WEEPHOLE SUPPORT PLATE A**  
SCALE: 1 1/2" = 1'-0"



**PARTIAL DEPTH PATCH**  
NOT TO SCALE

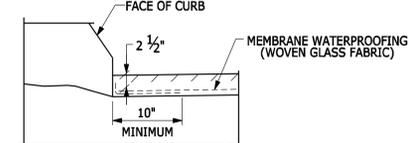
Note "A": The cost of 1/2" sawcut shall be included in the contract bid price for "Partial Depth Patch".  
Note "B": Areas of pop-outs caused by the removal of deteriorated concrete to be coated with epoxy resin system where ordered by the Engineer. See special provisions.



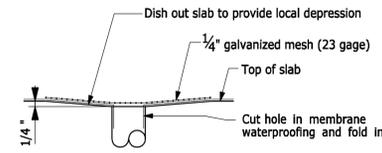
**ASPHALTIC PLUG EXPANSION JOINT SYSTEM**  
Scale: 1 1/2" = 1'-0"

NOTE A: Remove new bituminous overlay and membrane waterproofing. Replace with Asphaltic Plug Expansion Joint System. To be paid for under the item "Asphaltic Plug Expansion Joint System". See Special Provision.

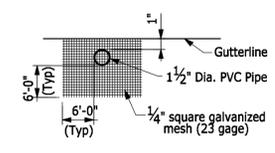
Designed thermal movement range = 0" to 1"



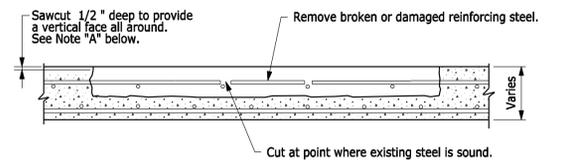
**TREATMENT OF MEMBRANE WATERPROOFING AT GUTTER**  
Scale: 1" = 1'-0"



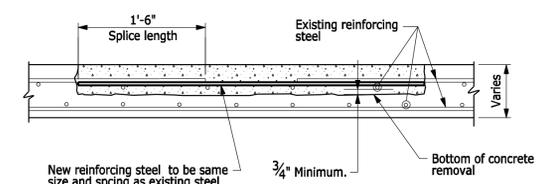
**WEEPHOLE INLET DETAIL**  
SCALE: 3" = 1'-0"



**MESH DETAIL**  
SCALE: 1 1/2" = 1'-0"

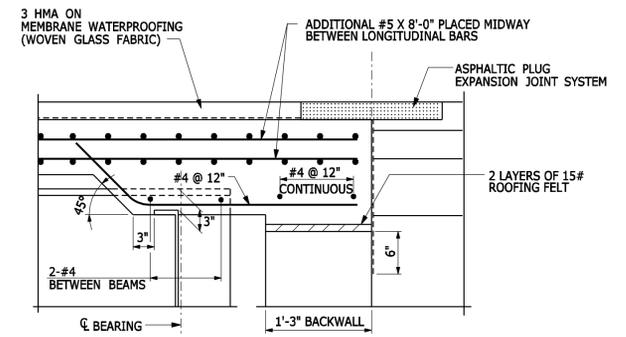


**SECTION SHOWING CONCRETE REMOVAL AREA**



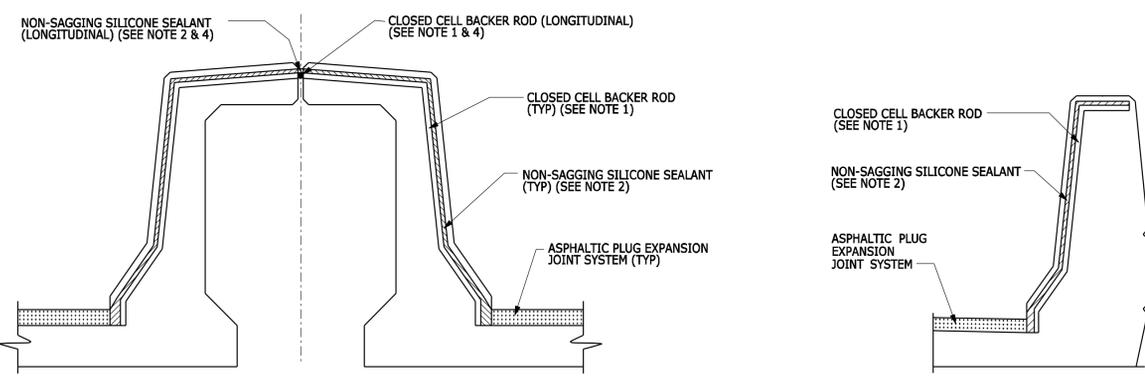
**SPlicing REINFORCING STEEL**

**REPAIR OF DAMAGED REINFORCING STEEL**  
NOT TO SCALE

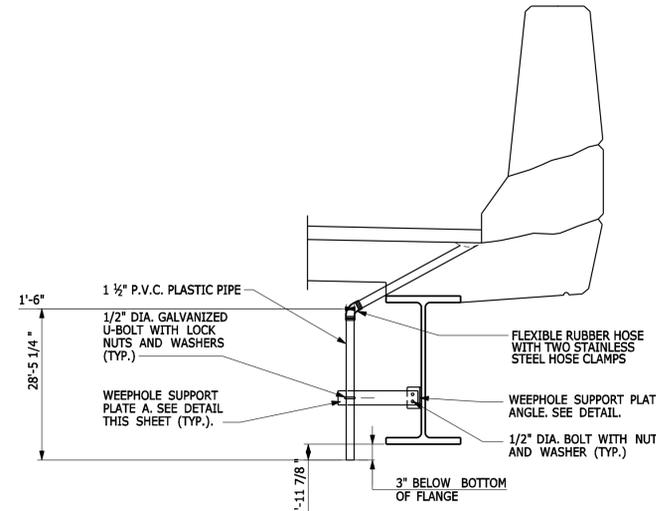


**END OF SLAB DETAIL**  
SCALE: 1" = 1'-0"

- ASPHALTIC PLUG EXPANSION JOINT NOTES:**
1. THE CLOSED CELL BACKER ROD SHALL BE PLACED A MINIMUM OF 2" FROM THE OUTSIDE FACE OF PARAPETS AND MEDIAN BARRIERS.
  2. THE NON-SAGGING SILICONE SEALANT SHALL BE PLACED ON THE BACKER ROD 1/2" THICK. AT THE GUTTER, THE SILICONE SEALANT SHALL BE PLACED FLUSH WITH THE OUTSIDE FACE OF CONCRETE.
  3. PRIOR TO INSTALLING THE SILICONE SEALANT, CLEAN JOINT SIDES BY SANDBLASTING. DUST SHALL BE REMOVED BY THE METHOD APPROVED BY THE ENGINEER. THIS WORK SHALL BE PAID FOR UNDER THE ITEM "ASPHALTIC PLUG EXPANSION JOINT SYSTEM". (SEE SPECIAL PROVISIONS)
  4. BACKER ROD AND SILICONE SEALANT SHALL BE PLACED BETWEEN THE OPEN JOINTS BETWEEN MEDIAN PARAPETS WITHIN THE LIMITS OF THE BRIDGE DECK. THE COST OF THIS WORK SHALL BE INCLUDED IN THE ITEM "ASPHALTIC PLUG EXPANSION JOINT SYSTEM". (SEE SPECIAL PROVISIONS)



**ASPHALTIC PLUG EXPANSION JOINT TREATMENT AT PARAPETS AND MEDIAN BARRIER**  
Scale: 3/4" = 1'-0"



**DECK WEEPHOLE DETAIL**  
SCALE: 3/4" = 1'-0"

- WEEPHOLE NOTES**
1. For weep hole locations, see S2-16.
  2. All piping for weep holes shall be installed prior to the slab pour.
  3. All Polyvinyl Chloride Plastic Pipe shall be joined using an approved solvent cement.
  5. The cost for installing weep holes shall be included in the cost for "1 1/2" Polyvinyl Chloride Plastic Pipe".
  6. The cost of furnishing and installing 1/4" square galvanized mesh shall be included in the contract unit price per ton for "HMA S0.25".
  7. Weep holes shall be installed on the inside of the fascia beams as shown on the plans.
  8. The cost of Weep hole support plate and associated hardware shall be paid for under the item "STRUCTURAL STEEL (SITE NO. 1)".

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. STRADA**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014

**AECOM**

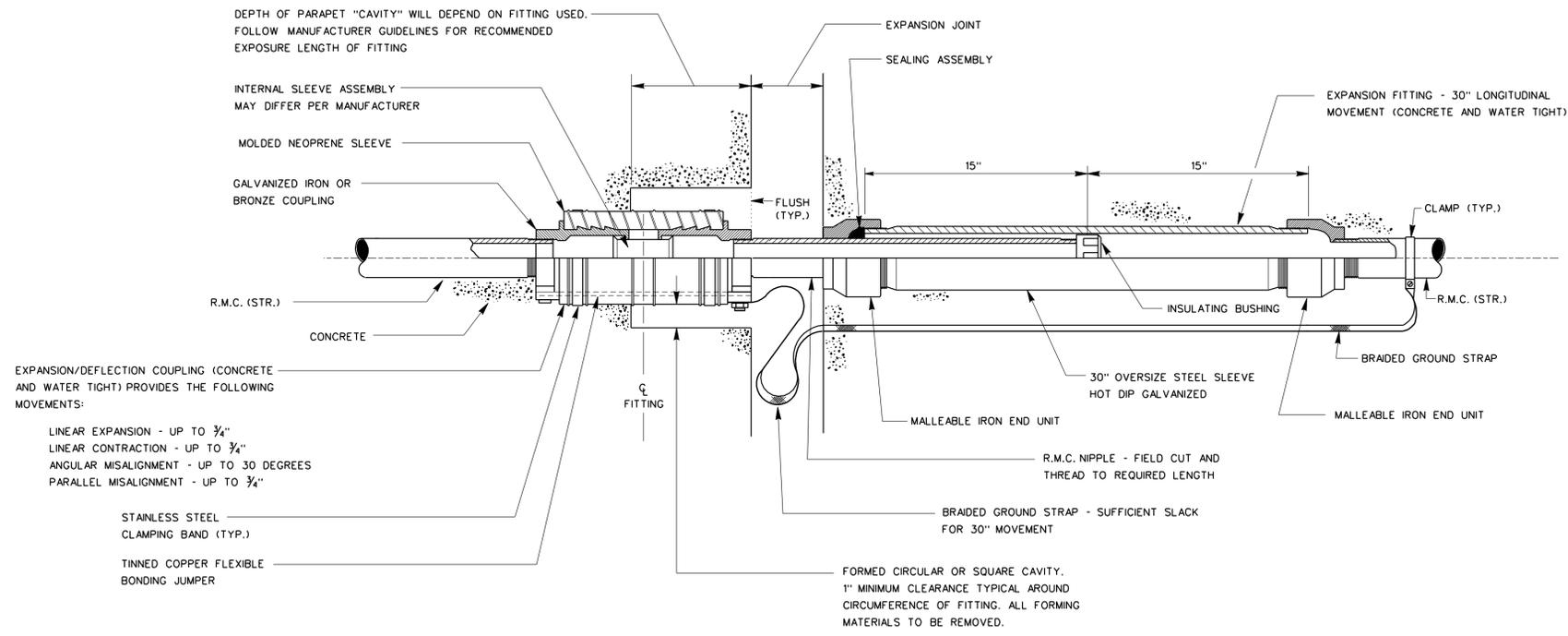
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**SLAB DETAILS BRIDGE NO. 01190**

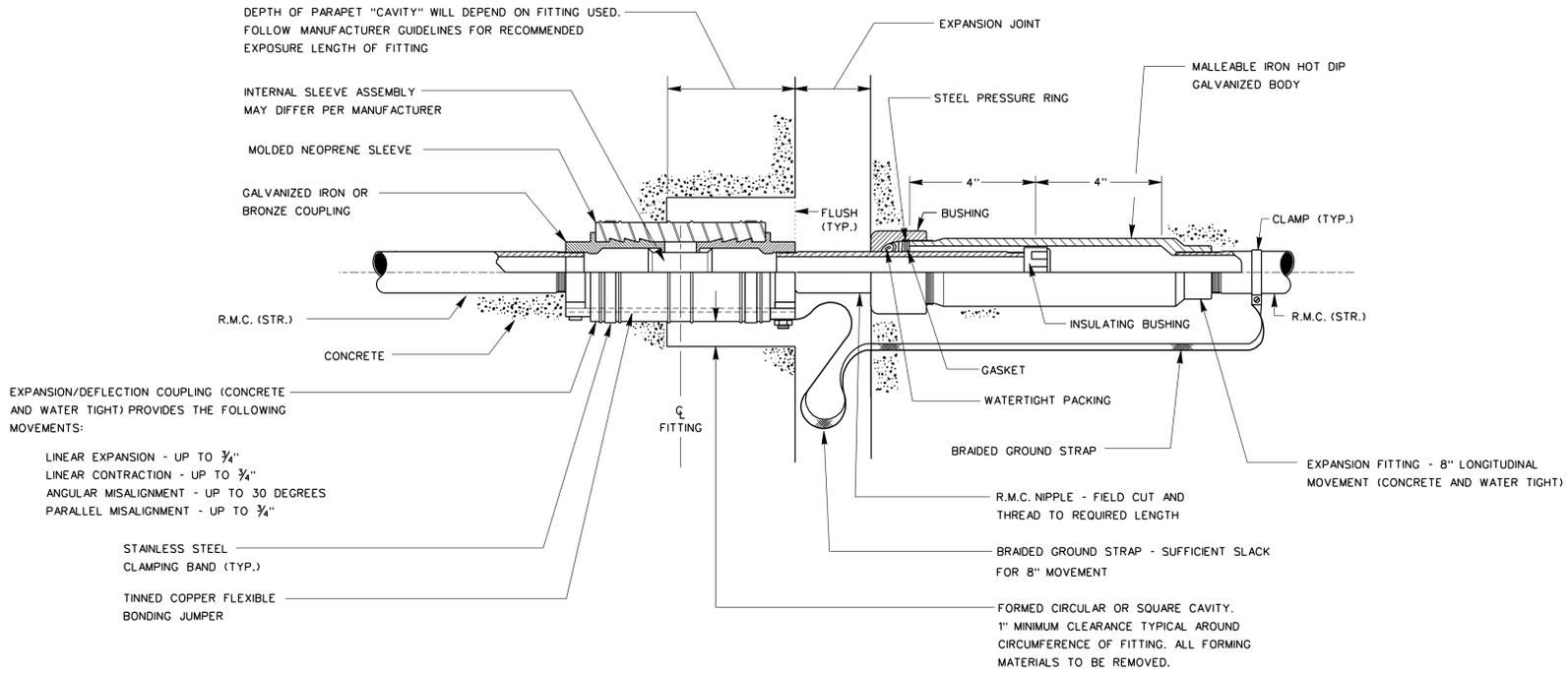
PROJECT NO.  
**34-313**  
DRAWING NO.  
**S2-16**  
SHEET NO.  
**05.35**



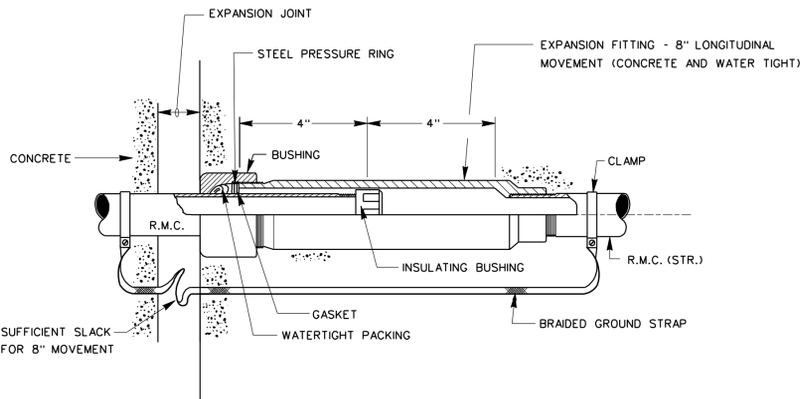




EXPANSION FITTING TYPE 3



EXPANSION FITTING TYPE 2



EXPANSION FITTING TYPE 1

NOTES:  
 SEE BRIDGE PLANS FOR SPECIFIC FITTING TYPE TO BE USED AT EACH BRIDGE EXPANSION JOINT.  
 ORIENTATION OF FITTING TO BE FIELD DETERMINED.

USER: JHAPKIEWICZ

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
034	03/13	Ex-FI.dwg	8/10/2014
			Border Version: 8/1/05

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

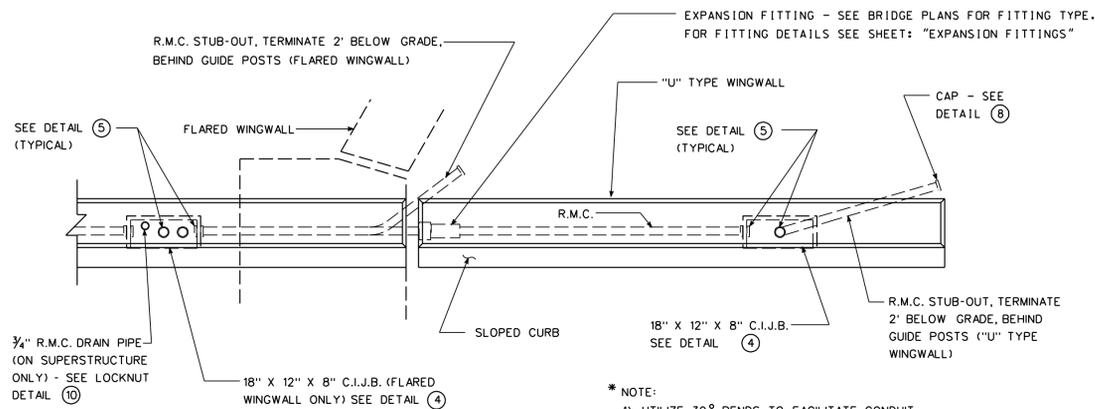
DESIGNER/DRAFTER:  
**Y. STRADA**  
 CHECKED BY:  
**J. HAPKIEWICZ**  
 SCALE IN FEET  
  
 SCALE 1"=40'

**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  
**AECOM** Technical Services, Inc.  
 ENGINEER: **AECOM** Technical Services, Inc.  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014

PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

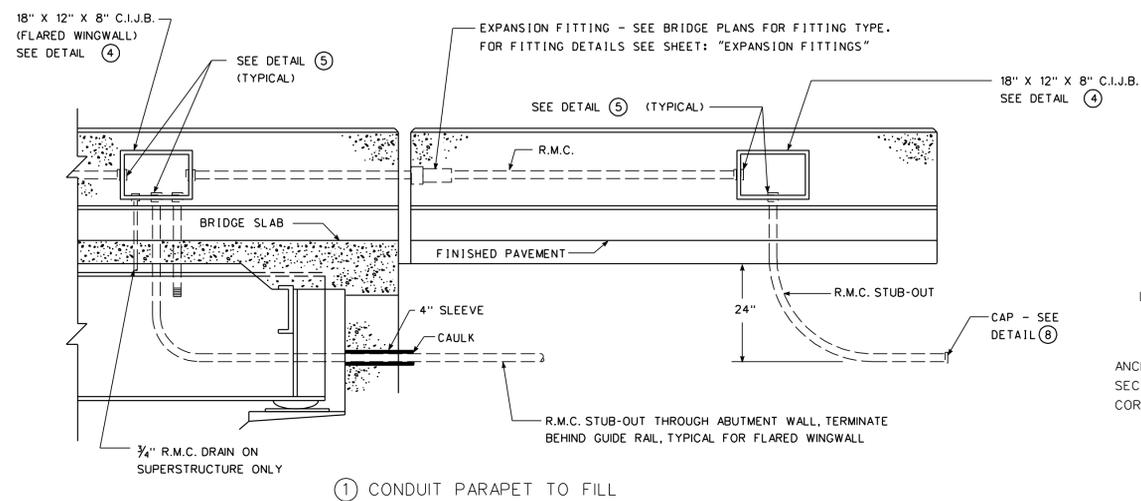
TOWN:  
**DANBURY**  
 DRAWING TITLE:  
**EXPANSION FITTINGS BRIDGE NO. 01190**

PROJECT NO.  
**34-313**  
 DRAWING NO.  
**S2-19**  
 SHEET NO.  
**05.38**

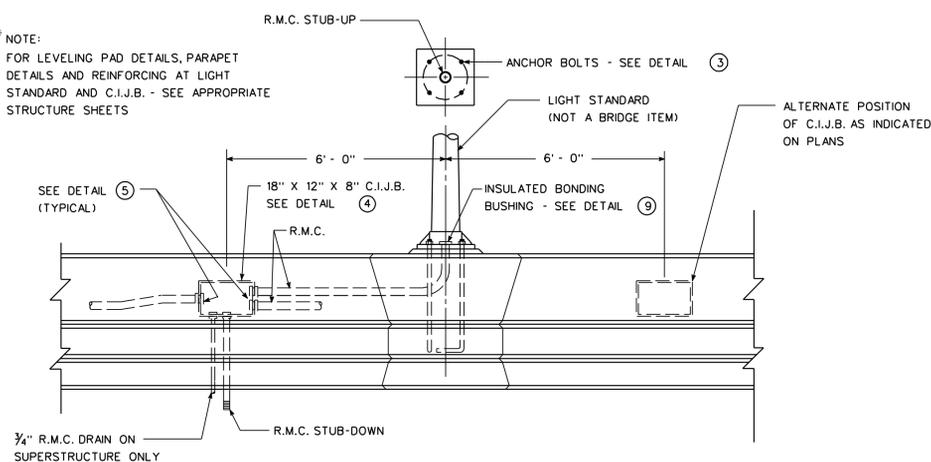


\* NOTE:  
 1) UTILIZE 30° BENDS TO FACILITATE CONDUIT LEAVING WINGWALL AT 24" BELOW GRADE  
 2) CONDUIT BENDS SHALL HAVE A RADIUS OF NOT LESS THAN 6 TIMES THE TRADE SIZE OF THE CONDUIT

TOP VIEW

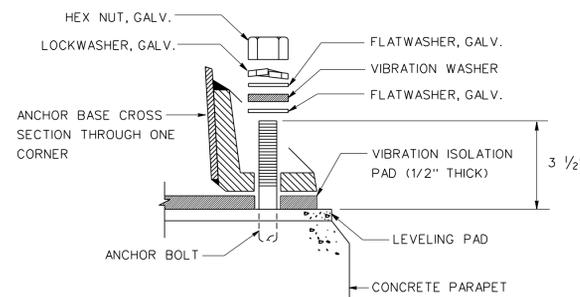


\* NOTE:  
 FOR LEVELING PAD DETAILS, PARAPET DETAILS AND REINFORCING AT LIGHT STANDARD AND C.I.J.B. - SEE APPROPRIATE STRUCTURE SHEETS

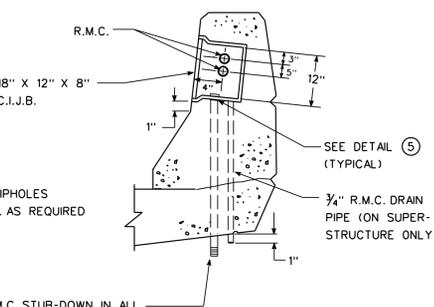


BOLT Ø	A	B
3/4"	29"	0"
1"	36"	4"
1 1/4"	42"	6"

③ PARAPET TREATMENT AT LIGHT STANDARD  
 NOTE: THE ANCHOR BOLT SIZE AND LENGTH SHALL BE CONFIRMED WITH THE LIGHT STANDARD SUPPLIER PRIOR TO SETTING THE ANCHOR BOLTS.



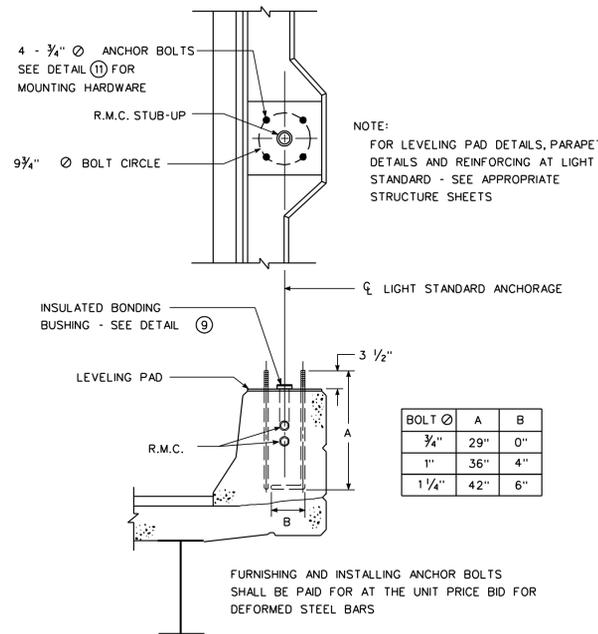
⑪ ANCHOR BASE LIGHT STANDARD MOUNTING HARDWARE  
 NOTE: THE MOUNTING HARDWARE SHALL BE CONFIRMED WITH THE LIGHT STANDARD SUPPLIER.



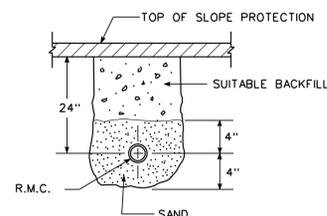
NOTE:  
 PROVIDE DRILLED SLIPHOLE IN C.I.J.B. FOR R.M.C. AS REQUIRED

INSTALL R.M.C. STUB-DOWN IN ALL JUNCTION BOXES ON SUPERSTRUCTURE. SIZE OF STUB-DOWN TO EQUAL SIZE OF CONDUIT IN PARAPET WALL

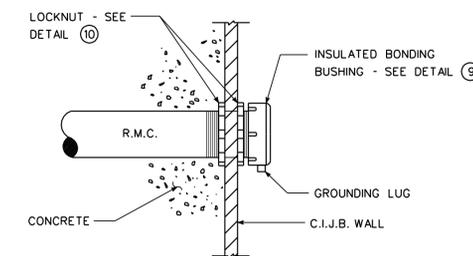
④ JUNCTION BOX INSTALLATION



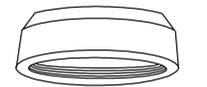
⑥ SERVICE TO LUMINAIRE UNDER STRUCTURE



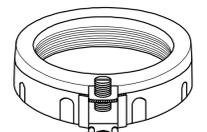
⑦ RIGID METAL CONDUIT UNDER SLOPE PROTECTION



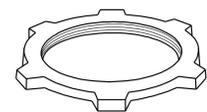
⑤ CONDUIT ENTRY INTO CAST IRON JUNCTION BOX



⑧ MALLEABLE IRON CAP



⑨ INSULATED BONDING BUSHING WITH GROUND LUG



⑩ LOCKNUT

NOTES:

- 1) SEE BRIDGE PLANS FOR SPECIFIC CONSTRUCTION DETAILS AND LOCATIONS.
- 2) DIAMETER OF RIGID METAL CONDUIT SHALL BE AS CALLED FOR ON BRIDGE PLANS.
- 3) R.M.C. STUB-UPS TO LIGHT STANDARDS, STUB-OUTS TO FILL, AND STUB-DOWNS TO UNDERBRIDGE LUMINAIRES, SHALL BE OF THE SAME DIAMETER AS THE R.M.C. CAST IN THE PARAPET WALL.
- 4) INSTALL ONE R.M.C. STUB-DOWN IN ALL JUNCTION BOXES ON SUPERSTRUCTURE. ADDITIONAL STUB-DOWNS SHALL BE INSTALLED WHERE INDICATED ON THE PLANS.
- 5) USE APPLICABLE DETAILS.

USER: JHAPKIEWICZ

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. STRADA**  
 CHECKED BY:  
**J. HAPKIEWICZ**  
 SCALE IN FEET  
 0 40 80  
 SCALE 1"=40'

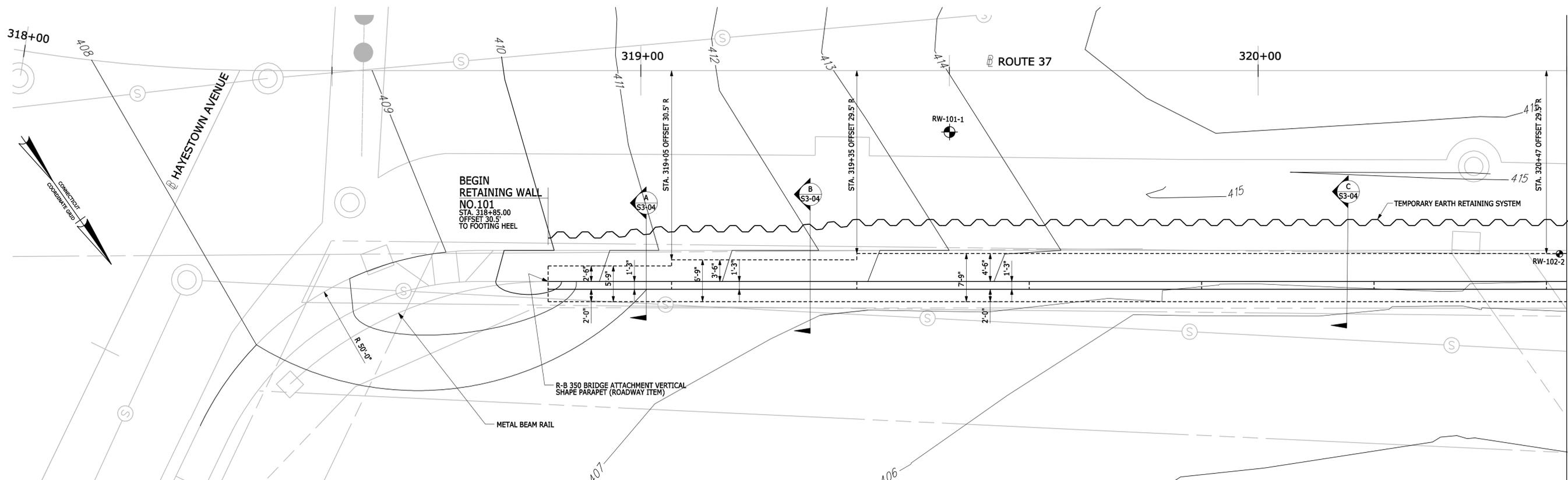
STATE OF CONNECTICUT  
 DEPARTMENT OF TRANSPORTATION  
 ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.**  
 DATE: 06/11/2014

**AECOM**

PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
 DRAWING TITLE:  
**ELECTRICAL DETAILS  
 BRIDGE NO. 01190**

PROJECT NO.  
**34-313**  
 DRAWING NO.  
**S2-20**  
 SHEET NO.  
**05.39**



**GENERAL NOTES:**

SPECIFICATIONS: Connecticut Department of Transportation Form 816, Supplemental Specification dated January 2014 and Special Provisions.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications 6th Edition (2012) with 2013 Interims, as supplemented by the Connecticut Department of Transportation Bridge Design Manual (2003).

ALLOWABLE DESIGN STRESSES:  
 Class "A" Concrete: Based on  $f_c = 3,000$  psi  
 Reinforcement (ASTM A615 Grade 60):  $f_y = 60,000$  psi

The specified concrete strength used in design,  $f_c$ , of the concrete components is noted above. The minimum compressive strength of the concrete in the constructed components shall conform to the requirements of the special provision "Section 6.01 Concrete for Structures."

LIVE LOAD: HL-93

FOUNDATION PRESSURES: The various Group Loadings noted on the substructure plan sheets refer to the Group Loads as given in the AASHTO LRFD Bridge Design Specifications.

DIMENSIONS: When decimal dimensions are given to less than three decimal places, the omitted digits shall be assumed to be zeros.

CLASS "A" CONCRETE: Class "A" Concrete shall be used for the entire Wall.

EXISTING DIMENSIONS: Dimensions of the existing structure shown on these plans are for general reference only. They have been taken from the original design drawings and are not guaranteed. The Contractor shall take all field measurements necessary to assure proper fit of the finished work and shall assume full responsibility for their accuracy.

JOINT SEAL: See Special Provisions.

EXPOSED EDGES: Exposed edges of concrete shall be beveled 1" x 1" unless dimensioned otherwise.

CONCRETE COVER: All reinforcement shall have two inches cover unless dimensioned otherwise.

REINFORCEMENT: All reinforcement shall be ASTM A615 Grade 60.

PREFORMED EXPANSION JOINT FILLER: The cost of furnishing and installing Preformed Expansion Joint Filler shall be included in the cost of the item "Class 'A' Concrete".

CONSTRUCTION JOINTS: Construction joints, other than those shown on the plans, will not be permitted without prior approval of the Engineer.

QUANTITIES		
ITEM DESCRIPTION	UNIT	RW 101
Structure Excavation - Earth (Complete)	C.Y.	1,650
Granular Fill	C.Y.	160
Pervious Structure Backfill	C.Y.	945
Class "A" Concrete	C.Y.	160
Simulated Stone Masonry	S.Y.	415
Class "F" Concrete	C.Y.	245
Deformed Steel Bars	LB	28,000
Dampproofing	S.Y.	510
Temporary Earth Retaining System	S.F.	4,950
Metal Bridge Rail (Traffic) (EXTRUDED POST ALUMINUM)	L.F.	381

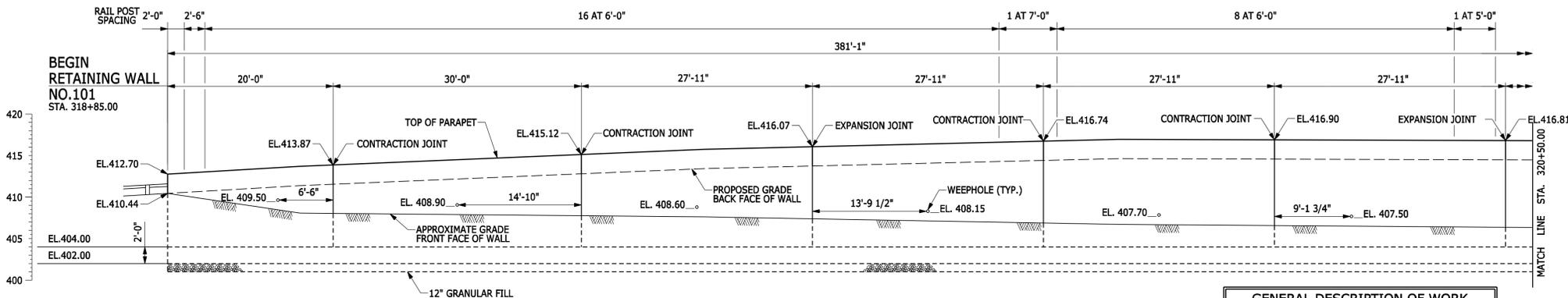
**PROPOSED PLAN  
RETAINING WALL NO. 101**

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

○ - BORING LOCATION

NOTE: Contractor shall provide means and methods to install temporary earth retaining system. Care shall be taken to avoid conflicts with proposed structures.

CONCRETE DISTRIBUTION		
LOCATION	UNIT	QUANTITY
SUBSTRUCTURE RW 101	C.Y.	400



**PROPOSED ELEVATION  
RETAINING WALL NO. 101**

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

LIST OF DRAWINGS	
DRAWING NO.	TITLE
S3-01	GENERAL PLAN - ROUTE 37 RETAINING WALL 101 (1 of 2)
S3-02	GENERAL PLAN - ROUTE 37 RETAINING WALL 101 (2 of 2)
S3-03	BORING LOGS - RETAINING WALL 101
S3-04	RETAINING WALL DETAILS
S3-05	METAL BRIDGE RAIL (TRAFFIC)

GENERAL DESCRIPTION OF WORK	
1.	INSTALL TEMPORARY EARTH RETAINING SYSTEM.
2.	EXCAVATE TO BOTTOM OF GRANULAR FILL ELEVATION
3.	CONSTRUCT CAST IN PLACE RETAINING WALL
4.	BACKFILL AND REMOVE SHEETING AS NECESSARY

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
034	03/13	GP - RW-101A.dwg	8/10/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

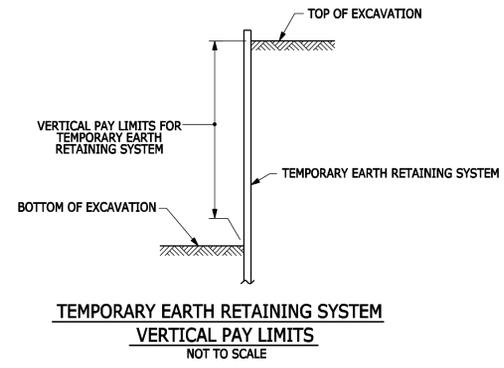
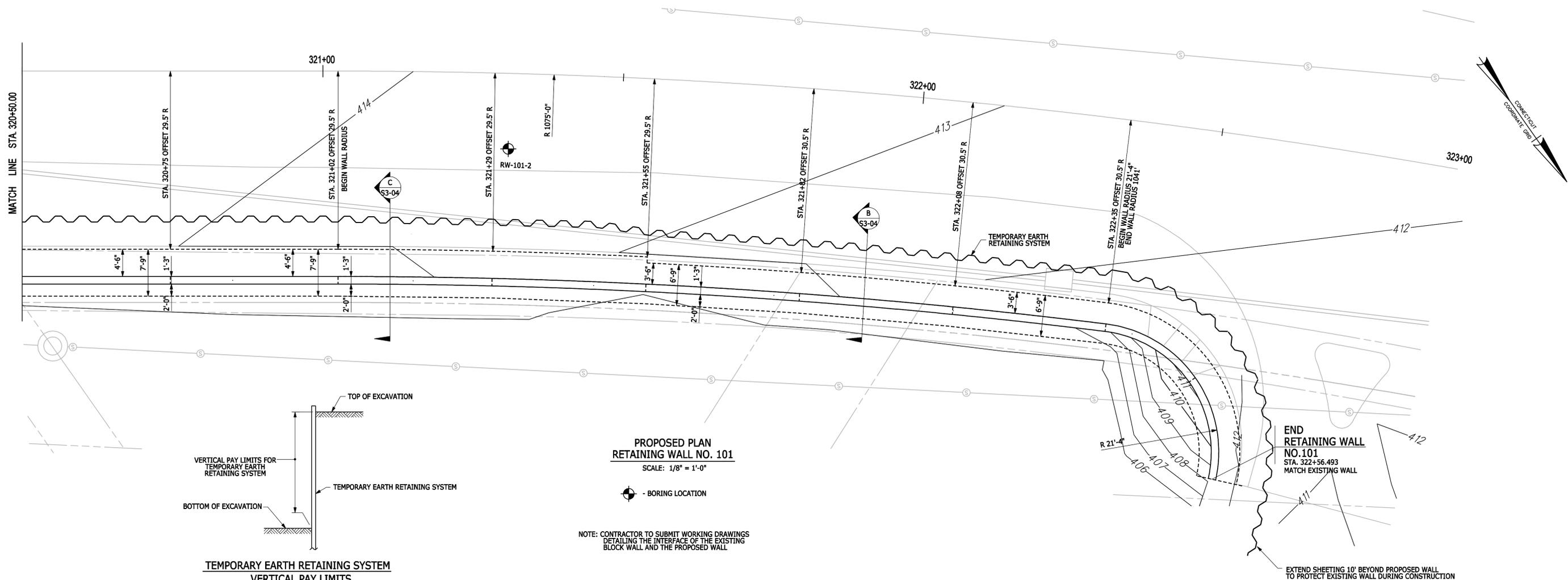
DESIGNER/DRAFTER: <b>B. SABEAN</b>
CHECKED BY: <b>J. HAPKIEWICZ</b>
SCALE AS NOTED

**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  
 ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.**      DATE: 06/11/2014

PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

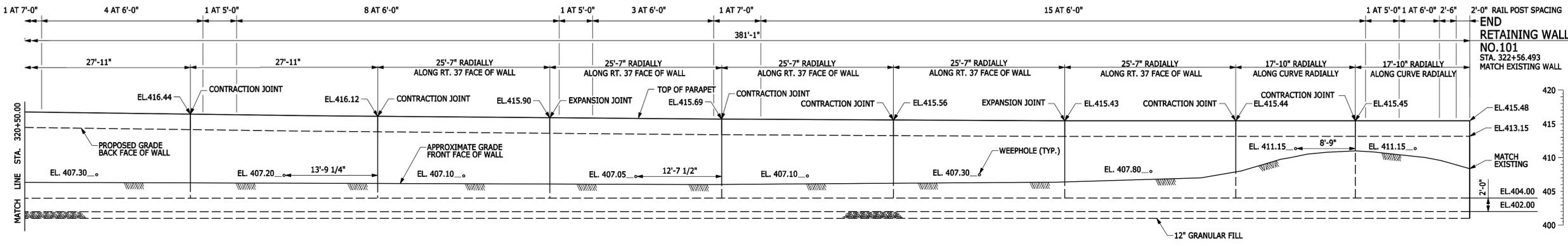
TOWN:  
**DANBURY**  
 DRAWING TITLE:  
**GENERAL PLAN  
WALL 101 (1 of 2)**

PROJECT NO.  
**34-313**  
 DRAWING NO.  
**S3-01**  
 SHEET NO.  
**05.40**



**PROPOSED PLAN  
RETAINING WALL NO. 101**  
SCALE: 1/8" = 1'-0"

NOTE: CONTRACTOR TO SUBMIT WORKING DRAWINGS  
DETAILING THE INTERFACE OF THE EXISTING  
BLOCK WALL AND THE PROPOSED WALL



**PROPOSED ELEVATION  
RETAINING WALL NO. 101**  
SCALE: 1/8" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**B. SABEAN**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED


**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  


ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.**      DATE: 06/11/2014

PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6  
IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**GENERAL PLAN  
WALL 101 (2 of 2)**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**S3-02**  
SHEET NO.  
**05.41**

Driller: M. McDonough	<b>Connecticut DOT Boring Report</b>		Hole No.: RW-101-2				
Inspector: G. Chhabra	Town: DANBURY	Stat./Offset: 321+32 14 ft Rt					
Engineer: G. Chhabra	Project No.: 0034-0313	Northing: 711558					
Start Date: 1/24/2007	Route No.: I-84	Easting: 806120					
Finish Date: 1/24/2007	Bridge No.:	Surface Elevation: 414.5					
Project Description: Improvements to Interchange 6							
Casing Size/Type:	Sampler Type/Size: SS/ 2 in	Core Barrel Type: NV					
Hammer Wt.: 300 lbs Fall: 24	Hammer Wt.: 140 lbs Fall: 30 in						
Groundwater Observations @ 12 after 0 hours @ after hours @ after hours							
Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)				
			Rec. (in.)				
			RQD %				
			Casing Blows per ft				
			Generalized Strata Description				
			Material Description and Notes				
			Elevation (ft)				
0				410			
	S-1	14 12 26 29	24 13	115	MISC. FILL	Gray f-c SAND, little Silt, little f-c Gravel	
				82			
				90			
				124			
10	S-2	20 19 17 20	24 10			Brown f-c SAND, little c-f Gravel, trace Silt, w/ brck pieces	
	S-3	10 5 15 47	24 8			Brown f-c GRAVEL, some f-c SAND, trace Silt, w/ roots	
20	C-1		60 8	0		WEATHERED BEDROCK	
						BEDROCK	Gray medium to coarse grained, thickly bedded, moderately to highly fractured, slightly weathered GNEISS. Core times in min per ft: 3.5-6.5-5
							Bottom of Boring
Sample Type: S=Split Spoon C=Core UP=Undisturbed Piston V=Vane Shear Test							
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%							
Total Penetration in Earth: 21	Rock: 5	NOTES:	Sheet 1 of 1				
No. of Samples: 3			SM-001-M REV. 1/02				

Driller: M. McDonough	<b>Connecticut DOT Boring Report</b>		Hole No.: RW-101-1				
Inspector: G. Chhabra	Town: DANBURY	Stat./Offset: 319+50 10 ft Rt					
Engineer: Soils	Project No.: 0034-0313	Northing: 711459					
Start Date: 1/23/2007	Route No.: I-84	Easting: 806253					
Finish Date: 1/23/2007	Bridge No.:	Surface Elevation: 413.5					
Project Description: Improvements to Interchange 6							
Casing Size/Type: 4 in HW	Sampler Type/Size: SS/ 2 in	Core Barrel Type: NQ					
Hammer Wt.: 300 lbs Fall: 24 in	Hammer Wt.: 140 lbs Fall: 30 in						
Groundwater Observations @ 15.5 after 0 hours @ after hours @ after hours							
Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)				
			Rec. (in.)				
			RQD %				
			Casing Blows per ft				
			Generalized Strata Description				
			Material Description and Notes				
			Elevation (ft)				
0				410			
	S-1	10 8 5 7	24 10	11	MISC. FILL	Brown f-c SAND, some Silt, little f-c Gravel	
				19			
				35			
				90			
10	S-2	31 29 27 35	24 13		GLACIAL TILL	Brown c-f GRAVEL, some f-c Sand, trace Silt	
	S-3		3 0		WEATHERED BEDROCK		
	C-1		60 24	0	BEDROCK	Gray medium to coarse grained, thickly bedded, moderately to highly fractured, slightly weathered GNEISS. Core times in min per foot: 6-7-10-10-8	
							Bottom of Boring
Sample Type: S=Split Spoon C=Core UP=Undisturbed Piston V=Vane Shear Test							
Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%							
Total Penetration in Earth: 16.5	Rock: 5	NOTES:	Sheet 1 of 1				
No. of Samples: 3			SM-001-M REV. 1/02				

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
Filename: 034_0313 BOR-RW101.dwg			6/10/2014 Boring Version 6/10/05

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED


**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION

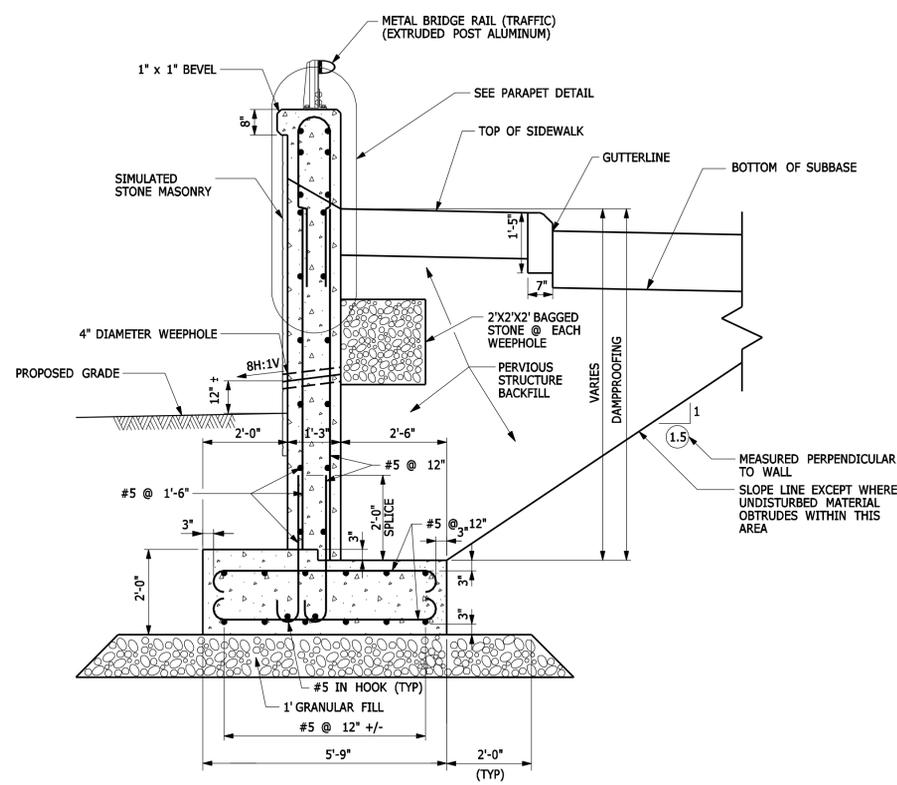
ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

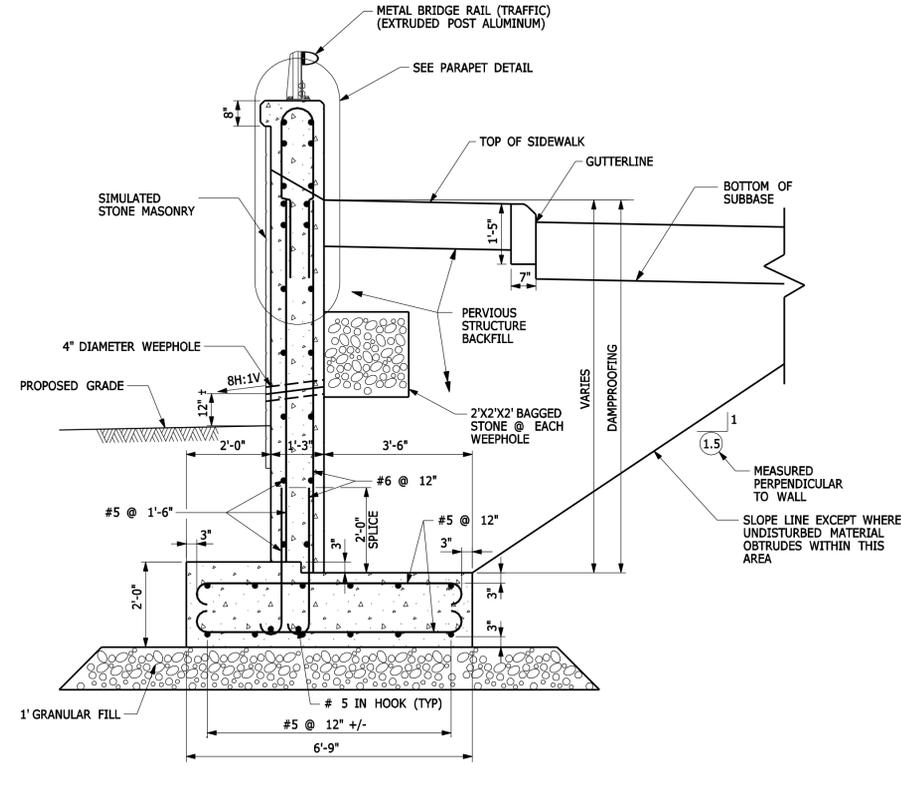
TOWN: **DANBURY**  
 DRAWING TITLE: **BORING LOGS WALL 101**

PROJECT NO.: **34-313**  
 DRAWING NO.: **S3-03**  
 SHEET NO.: **05.42**



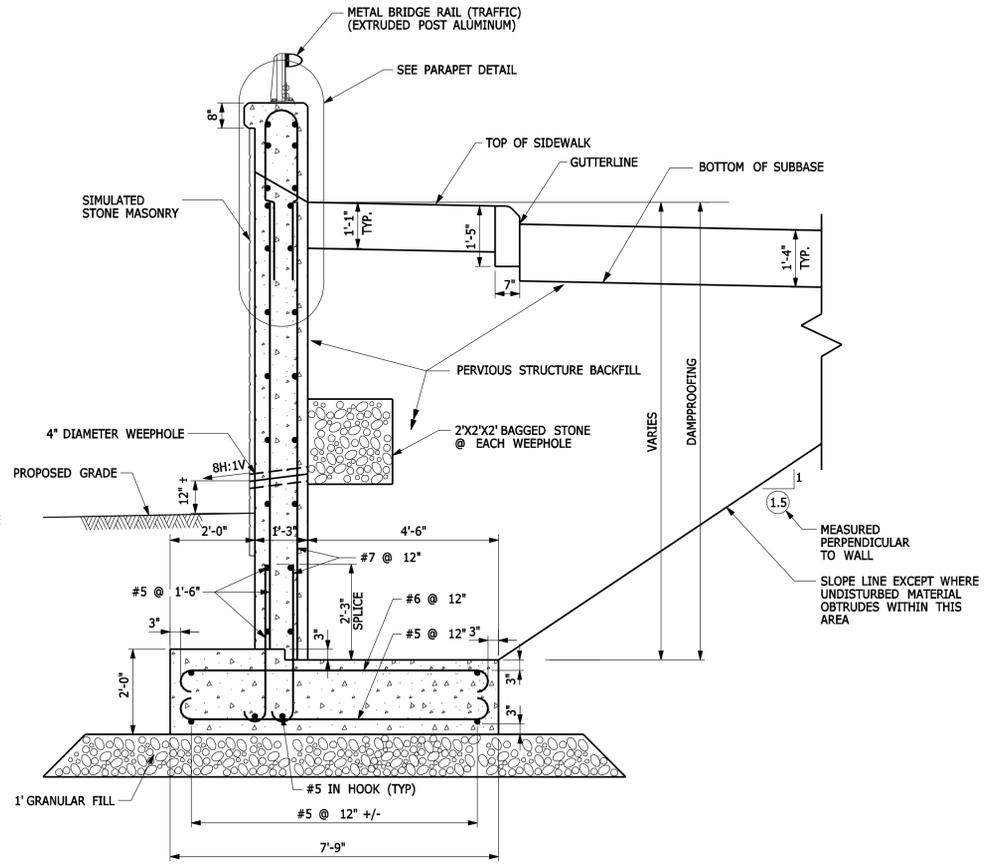
**SECTION A**  
SCALE: 1/2" = 1'-0"  
S3-01

MAXIMUM DESIGN PRESSURE = 1.36 ksf (STRENGTH 1B)



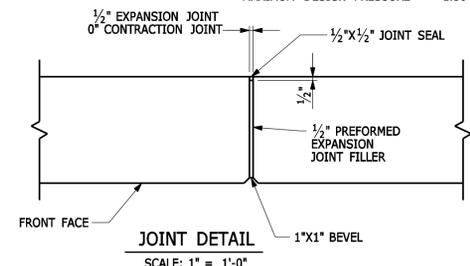
**SECTION B**  
SCALE: 1/2" = 1'-0"  
S3-01 S3-02

MAXIMUM DESIGN PRESSURE = 1.48 ksf (STRENGTH 1A)

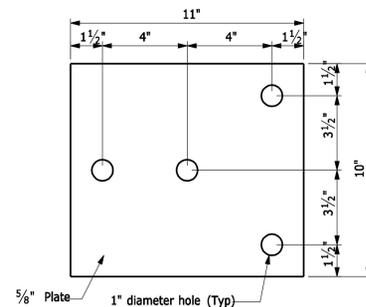


**SECTION C**  
SCALE: 1/2" = 1'-0"  
S3-01 S3-02

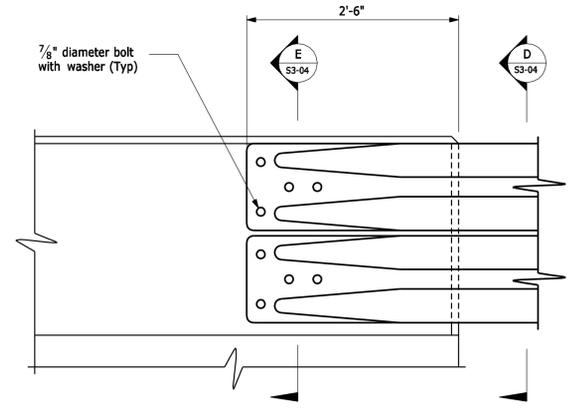
MAXIMUM DESIGN PRESSURE = 1.52 ksf (STRENGTH 1A)



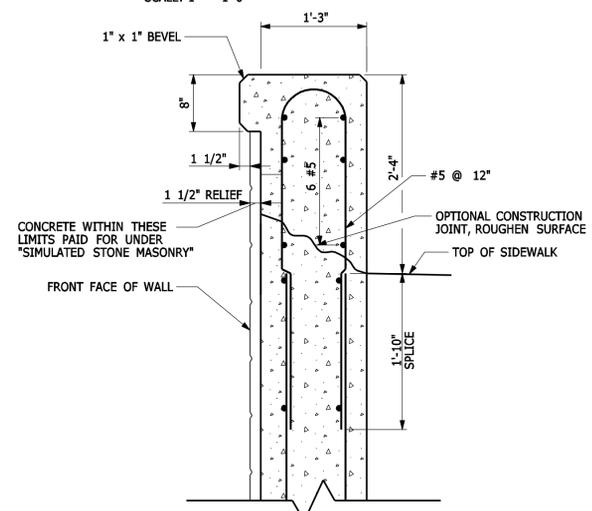
**JOINT DETAIL**  
SCALE: 1" = 1'-0"



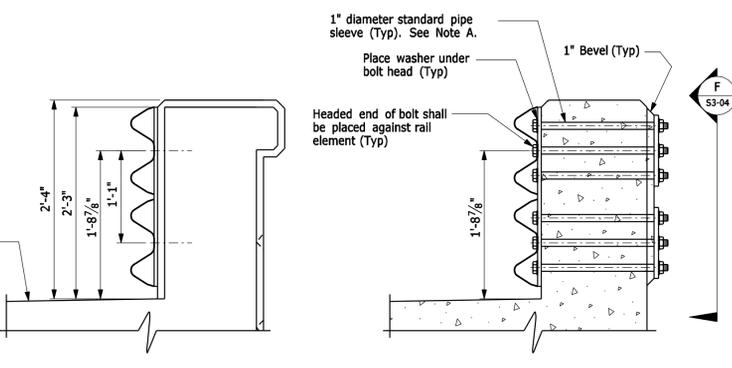
**ANCHOR PLATE DETAIL**  
Scale: 3" = 1'-0"



**R-B 350 RAIL ATTACHMENT**  
VERTICAL SHAPED PARAPET  
Scale: 1" = 1'-0"

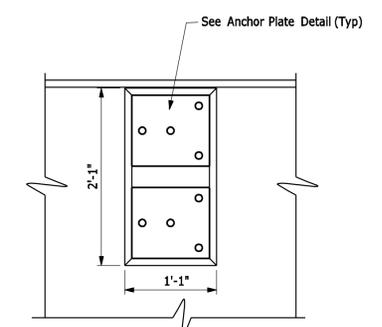


**PARAPET DETAIL**  
SCALE: 1" = 1'-0"



**VIEW D**  
Scale: 1" = 1'-0"  
S3-04

**SECTION E**  
Scale: 1" = 1'-0"  
S3-04



**VIEW F**  
Scale: 1" = 1'-0"  
S3-04

**BEAM RAIL ATTACHMENT NOTES**

- Steel plates shall conform to the requirements of ASTM A36. The steel plates shall be hot-dip galvanized in accordance with the requirements of ASTM A123.
- Anchor bolts shall conform to the requirements of ASTM A325, galvanized in accordance with ASTM A153.
- 1" diameter pipe shall conform to ASTM A53, Grade B or ASTM A501 and shall be galvanized in accordance with the requirements of ASTM A123.
- Railway elements shall be paid for under the applicable Roadway items.
- All rail anchorage material required for end attachments shall be paid for under the applicable Roadway items.

NOTE A: 1" diameter pipe shall conform to ASTM A53, Grade B or ASTM A501 and shall be galvanized in accordance with the requirements of ASTM A123.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
B. SABEAN  
CHECKED BY:  
J. HAPKIEWICZ  
SCALE AS NOTED

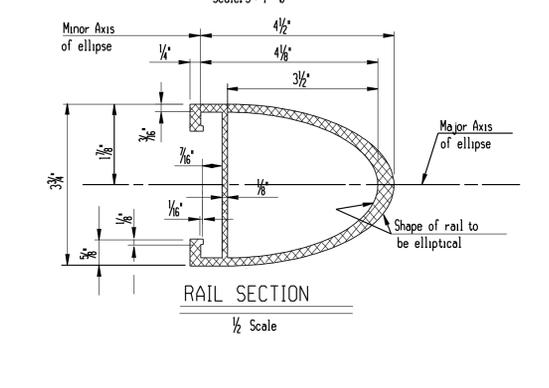
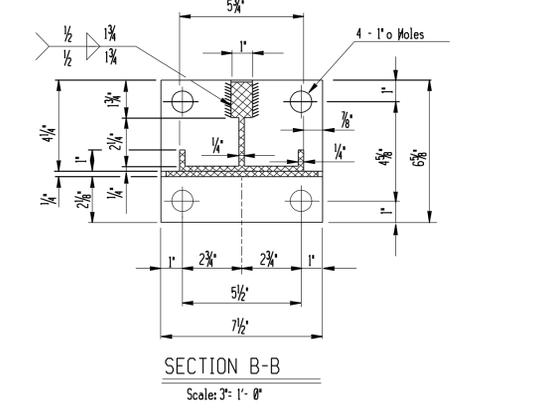
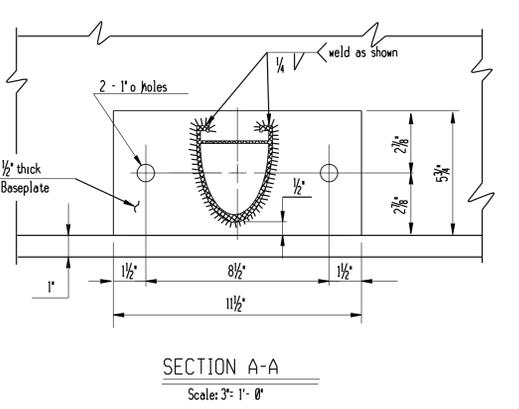
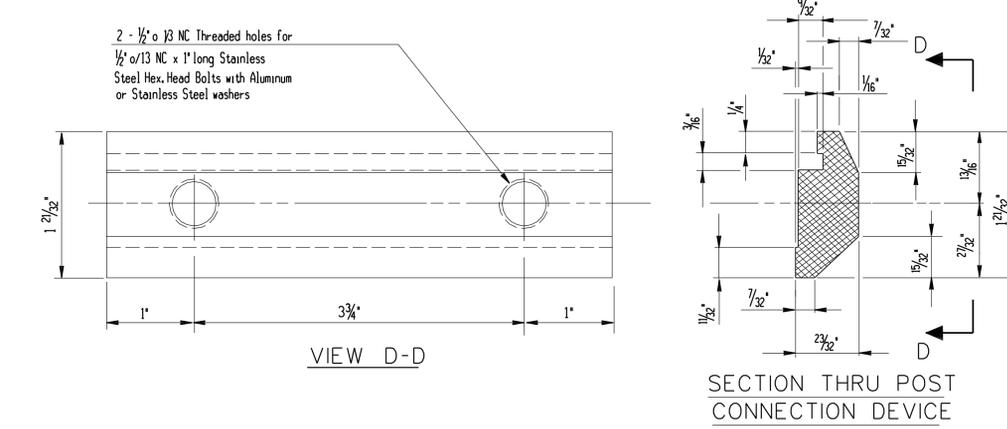
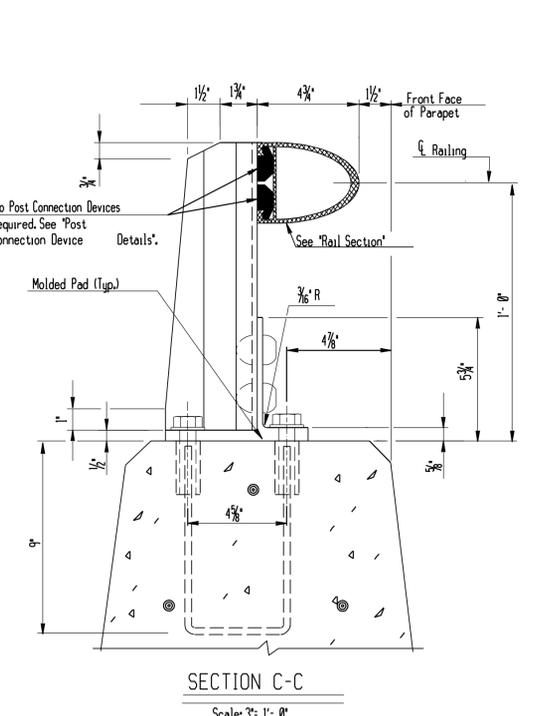
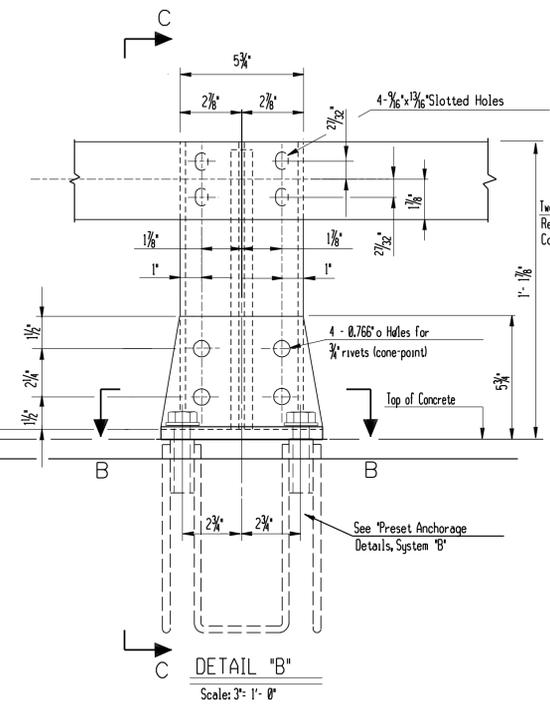
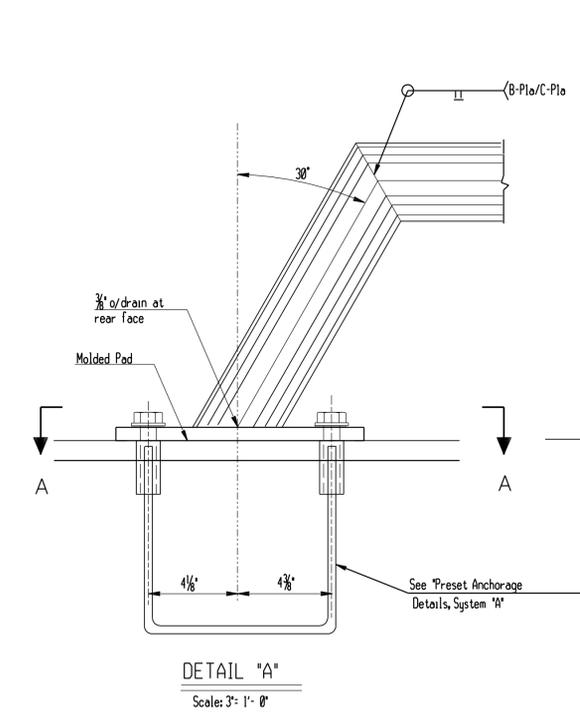
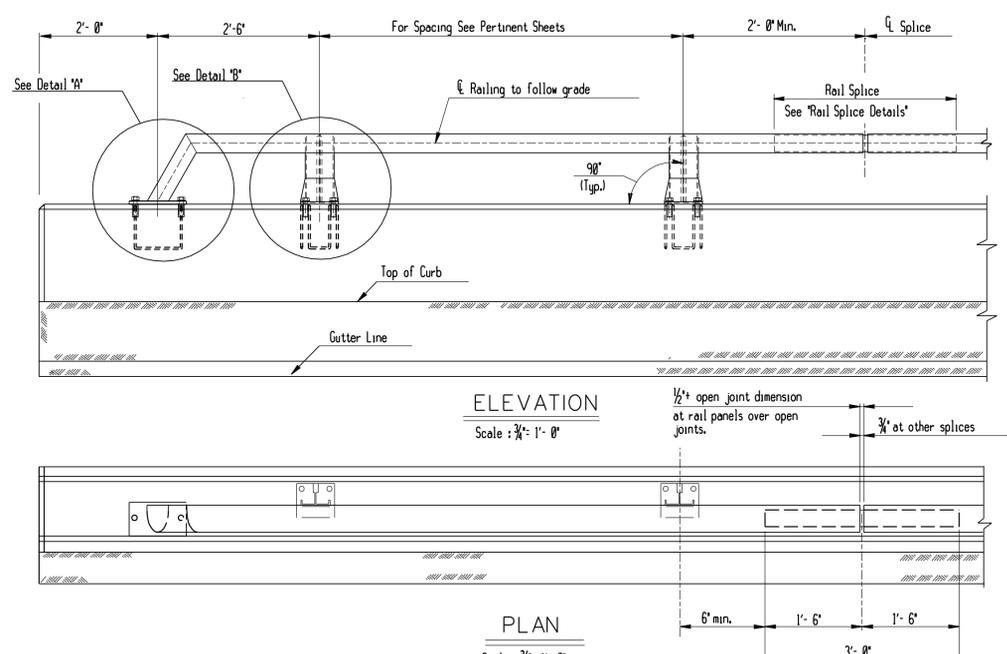
**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  
 ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



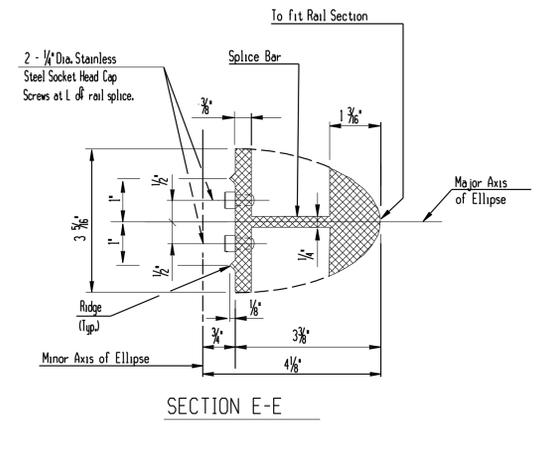
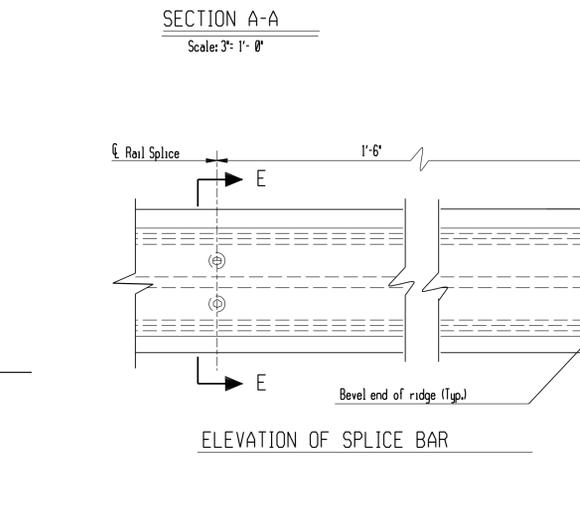
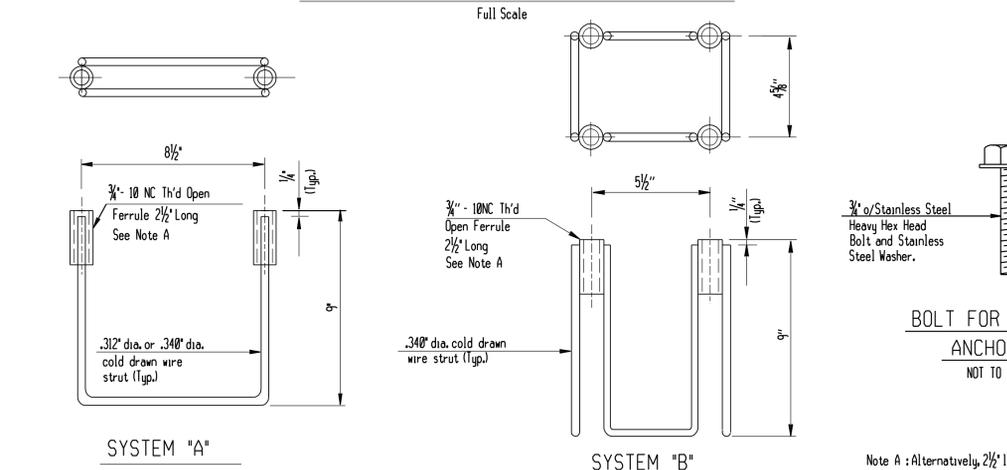
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**WALL 101 - DETAILS**

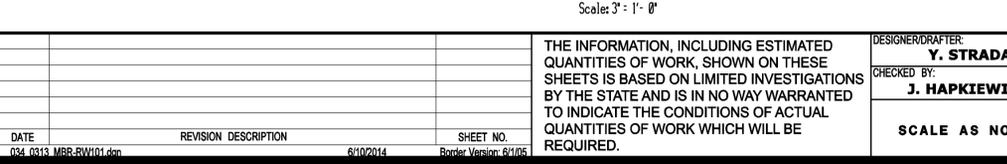
PROJECT NO.  
**34-313**  
DRAWING NO.  
**S3-04**  
SHEET NO.  
**05.43**



**POST CONNECTION DEVICE DETAILS**



**PRESET ANCHORAGE DETAILS**



**NOTES**

The posts, bases, post connection devices, splice bars and rails shall be extruded aluminum conforming to ASTM B221, aluminum alloy 6061-T6.

All bolts shall be stainless steel and conform to the requirements of ASTM A193, Class 1 or 2, Grade B8 (AISI Type 304). Stainless steel washers shall conform to ASTM A167, Types 302 - 305.

Lengths of rail elements shall be continuous over a minimum of four rail posts wherever possible and in no case less than two. Welding of two or more rails to form an element will not be allowed. In addition, rail splices are required in rail panels over open joints in parapets.

All preset anchorages shall be fabricated and installed perpendicular to the grade. Preset anchorages shall be hot-dip galvanized in accordance with ASTM A153.

The splice bar shall have a sliding fit in the rail sections.

All rails and posts shall be free of burrs, irregularities and sharp edges.

REV. DATE REVISION DESCRIPTION SHEET NO. 034 0313 MBR-RW101.dwg 6/10/2014 Border Version 6/10/5	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	DESIGNER/DRAWER: <b>Y. STRADA</b> CHECKED BY: <b>J. HAPKIEWICZ</b> SCALE AS NOTED	<b>STATE OF CONNECTICUT</b> DEPARTMENT OF TRANSPORTATION ENGINEER: <b>AECOM Technical Services, Inc.</b> APPROVED BY: <b>J.T. HAPKIEWICZ, P.E.</b> DATE: 06/11/2014	PROJECT TITLE: <b>I-84 INTERCHANGES 5 &amp; 6 IMPROVEMENTS</b>	TOWN: <b>DANBURY</b>	PROJECT NO.: <b>34-313</b> DRAWING NO.: <b>S3-05</b> SHEET NO.: <b>05.44</b>
--	---	---	--	---	-------------------------	--

**GENERAL NOTES:**

SPECIFICATIONS: Connecticut Department of Transportation Form 816, Supplemental Specification dated January 2014 and Special Provisions.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications 6th Edition (2012), with 2013 Interims, as supplemented by the Connecticut Department of Transportation Bridge Design Manual (2003).

ALLOWABLE DESIGN STRESSES:  
 Class "A" Concrete: Based on  $f'_c = 3,000$  psi  
 Reinforcement (ASTM A615 Grade 60):  $f_y = 60,000$  psi

The specified concrete strength used in design,  $f'_c$ , of the concrete components is noted above. The minimum compressive strength of the concrete in the constructed components shall conform to the requirements of the special provision "Section 6.01 Concrete for Structures."

LIVE LOAD: HL-93

FOUNDATION PRESSURES: The various Group Loadings noted on the substructure plan sheets refer to the Group Loads as given in the AASHTO LRFD Bridge Design Specifications.

DIMENSIONS: When decimal dimensions are given to less than three decimal places, the omitted digits shall be assumed to be zeros.

CLASS "A" CONCRETE: Class "A" Concrete shall be used for the entire Wall.

EXISTING DIMENSIONS: Dimensions of the existing structure shown on these plans are for general reference only. They have been taken from the original design drawings and are not guaranteed. The Contractor shall take all field measurements necessary to assure proper fit of the finished work and shall assume full responsibility for their accuracy.

JOINT SEAL: See Special Provisions.

EXPOSED EDGES: Exposed edges of concrete shall be beveled 1" x 1" unless dimensioned otherwise.

CONCRETE COVER: All reinforcement shall have two inches cover unless dimensioned otherwise.

REINFORCEMENT: All reinforcement shall be ASTM A615 Grade 60.

PERFORMED EXPANSION JOINT FILLER: The cost of furnishing and installing Preformed Expansion Joint Filler shall be included in the cost of the item "Class 'A' Concrete".

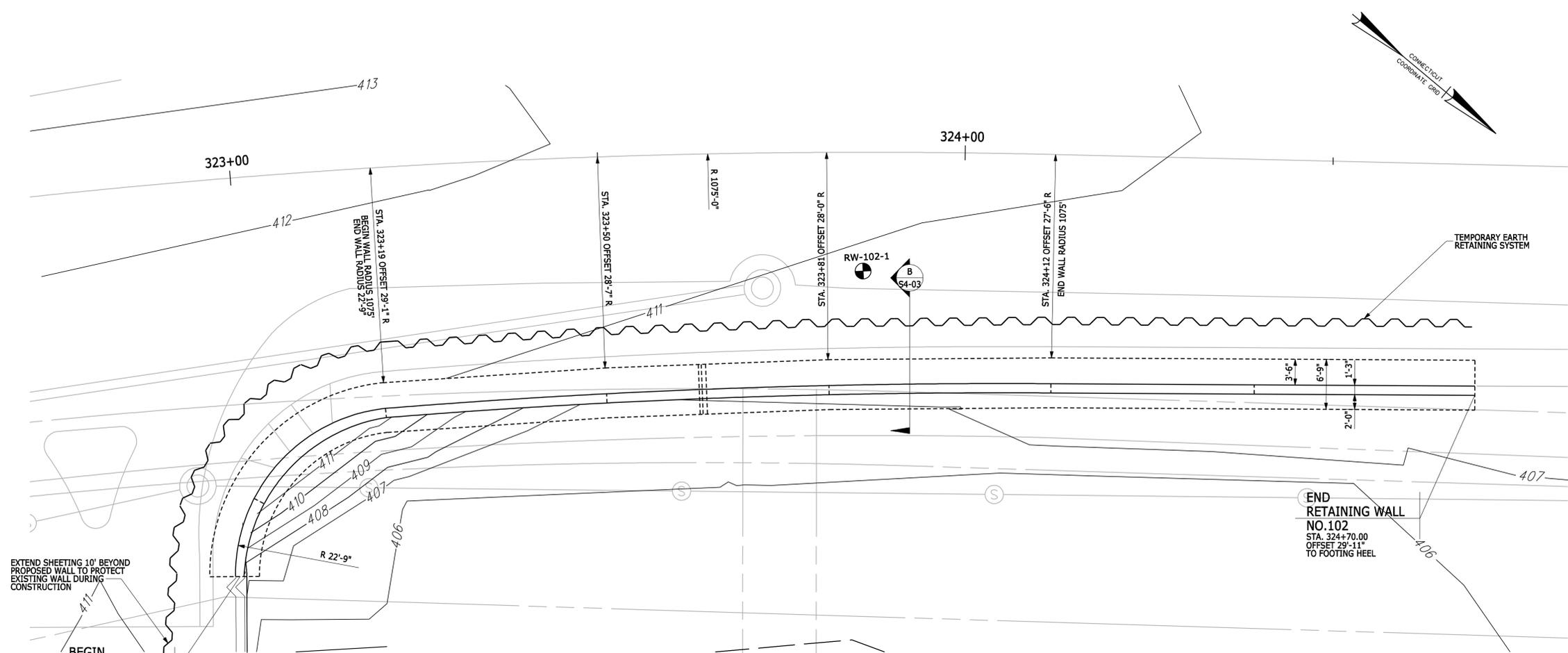
CONSTRUCTION JOINTS: Construction joints, other than those shown on the plans, will not be permitted without prior approval of the Engineer.

QUANTITIES		
ITEM DESCRIPTION	UNIT	RW 102
Structure Excavation - Earth (Complete)	C.Y.	630
Granular Fill	C.Y.	75
Pervious Structure Backfill	C.Y.	290
Class "A" Concrete	C.Y.	70
Simulated Stone Masonry	S.Y.	130
Class "F" Concrete	C.Y.	95
Deformed Steel Bars	LB	10,500
Dampproofing	S.Y.	190
Temporary Earth Retaining System	S.F.	1,800
Metal Bridge Rail (Traffic)	L.F.	184

CONCRETE DISTRIBUTION		
LOCATION	UNIT	QUANTITY
SUBSTRUCTURE RW 102	C.Y.	165

GENERAL DESCRIPTION OF WORK	
1.	INSTALL TEMPORARY EARTH RETAINING SYSTEM.
2.	EXCAVATE TO BOTTOM OF GRANULAR FILL ELEVATION
3.	CONSTRUCT CAST IN PLACE RETAINING WALL
4.	BACKFILL AND REMOVE SHEETING AS NECESSARY

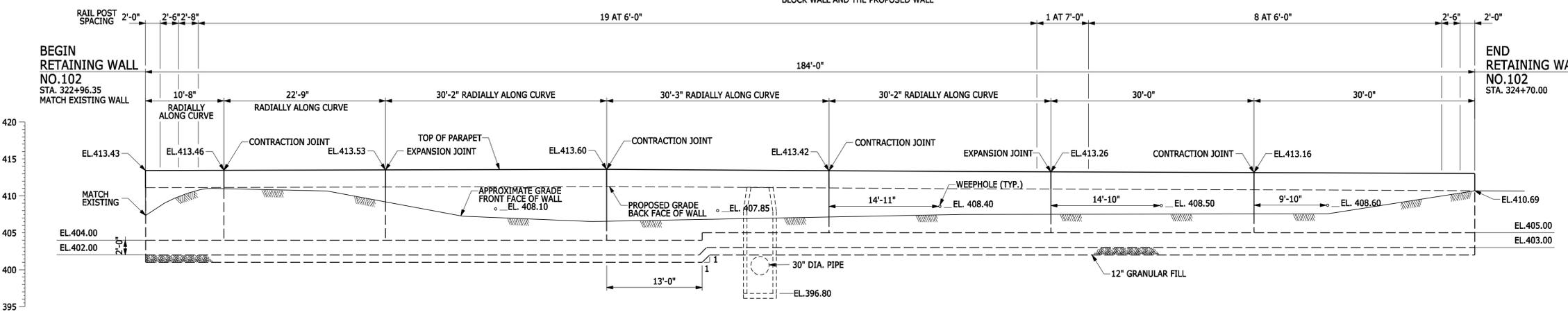
LIST OF DRAWINGS	
DRAWING NO.	TITLE
S4-01	GENERAL PLAN - ROUTE 37 RETAINING WALL 102
S4-02	BORING LOG - RETAINING WALL 102
S4-03	RETAINING WALL DETAILS
S4-04	METAL BRIDGE RAIL (TRAFFIC)



**PROPOSED PLAN  
 RETAINING WALL NO. 102**  
 SCALE: 1/8" = 1'-0"

NOTE: Contractor shall provide means and methods to install temporary earth retaining system. Care shall be taken to avoid conflicts with proposed structures.

NOTE: CONTRACTOR TO SUBMIT WORKING DRAWINGS DETAILING THE INTERFACE OF THE EXISTING BLOCK WALL AND THE PROPOSED WALL



**PROPOSED ELEVATION  
 RETAINING WALL NO. 102**  
 SCALE: 1/8" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
034	03/13	GP - RW-102.dwg	01/05

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**B. SABEAN**  
 CHECKED BY:  
**J. HAPKIEWICZ**  
 SCALE AS NOTED

**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  
 ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014

**AECOM**  
 PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
 DRAWING TITLE:  
**GENERAL PLAN WALL 102**

PROJECT NO.  
**34-313**  
 DRAWING NO.  
**S4-01**  
 SHEET NO.  
**05.45**

Driller: M McDonough	Connecticut DOT Boring Report		Hole No: RW-102-1				
Inspector: G Chhabra	Town: DANBURY	Stat./Offset: 323+86 16 ft Rt					
Engineer: G Chhabra	Project No: 0034-0313	Northing: 711540					
Start Date: 1/25/2007	Route No: I-84	Easting: 805927					
Finish Date: 1/25/2007	Bridge No:	Surface Elevation: 411					
Project Description: Improvements to Interchange 6							
Casing Size/Type: 4 in HW	Sampler Type/Size: SS/ 2 in	Core Barrel Type:					
Hammer Wt: 300 lbs Fall: 24 in	Hammer Wt: 140 lbs Fall: 30 in						
Groundwater Observations @ 16.5 after 0 hours @ after hours @ after hours							
Depth (ft)	SAMPLES				Blows per ft Casing Strata Description	Material Description and Notes	Elevation (ft)
	Sample Type/No	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)			
0					MISC. FILL		410
					70 155		
	S-1	7 7 11 9	24	13	31 48 84 125	Brown f-c SAND, some Silt, trace f-Gravel	
10	S-2	120	5	5	BOULDER MISC. FILL	Brown c-f SAND, and c-f GRAVEL, trace Silt	400
	S-3	3 2 2 9	24	20	47 58 110 140	Gray f-c SAND, some Silt, trace f-c Gravel	
					GLACIAL TILL		
20	S-4	20 41 31 12	24	18	115 73 75 120	Brown f-c SAND, some c-f Gravel, some Silt	390
	S-5	26 21 20 16	24	16		Brown f-c SAND, some Silt, trace f-Gravel	
30	S-6	17 120	12	3		Gray c-f SAND, little c-f Gravel, trace silt	380
						Bottom of Boring	
Sample Type: S=Split Spoon C=Core UP=Undisturbed Piston V=Vane Shear Test Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%							
Total Penetration in Earth: 31 Rock		NOTES:				Sheet 1 of 1	
No. of Samples: 6						SM-001-M REV. 1/02	

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
Filename: 034_0313 BOR-RW102.dwg			6/10/2014 Boring Version: 01/05

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

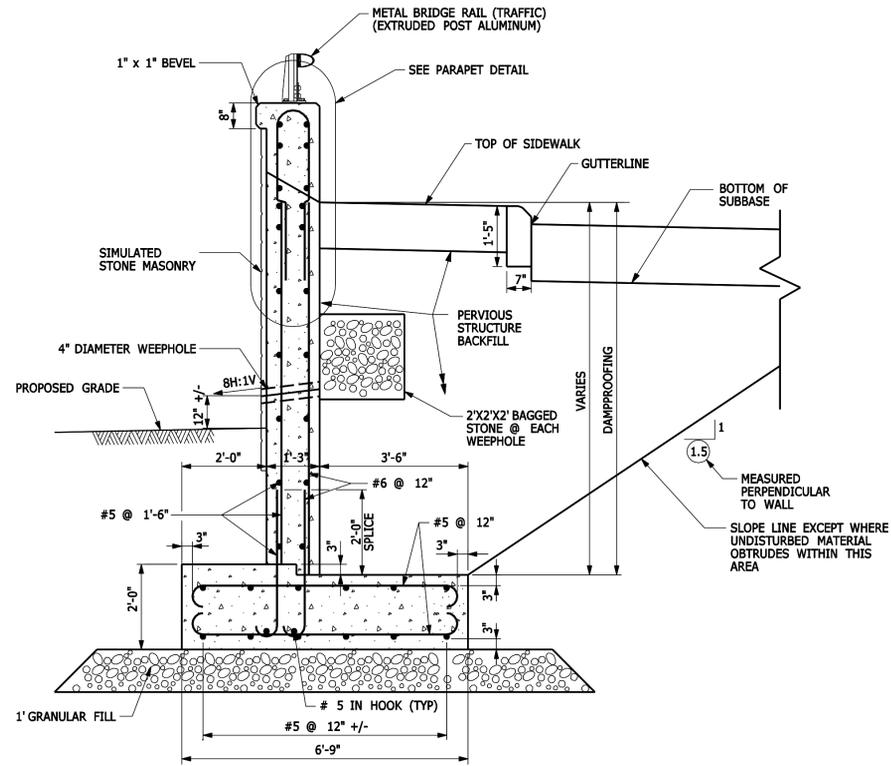
STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

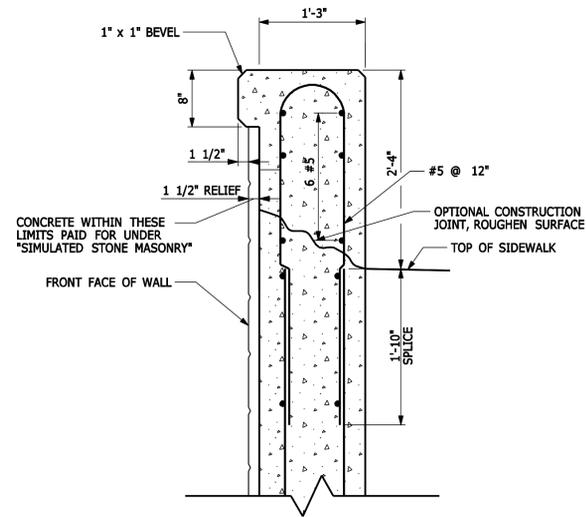
TOWN:  
**DANBURY**  
DRAWING TITLE:  
**BORING LOGS WALL 102**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**S4-02**  
SHEET NO.  
**05.46**

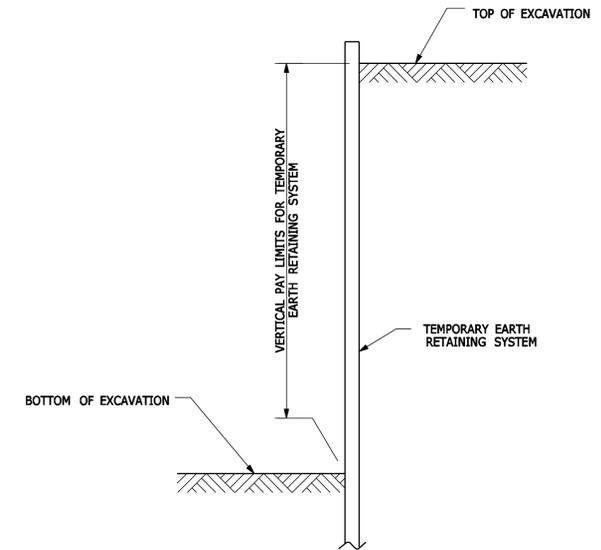


**SECTION B**  
SCALE: 1/2" = 1'-0"  
**B**  
S4-01

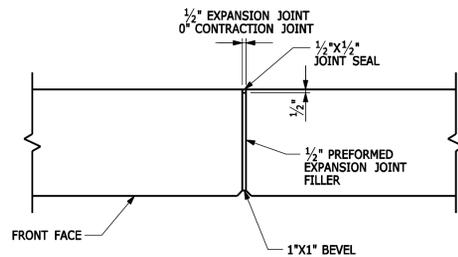
MAXIMUM DESIGN FOUNDATION PRESSURE = 0.94 ksf (STRENGTH 1A)



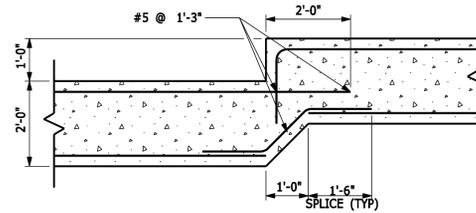
**PARAPET DETAIL**  
SCALE: 1" = 1'-0"



**TEMPORARY EARTH RETAINING SYSTEM**  
**VERTICAL PAY LIMITS**  
NOT TO SCALE



**JOINT DETAIL**  
SCALE: 1" = 1'-0"



**1'-0" STEP FOOTING DETAIL**  
SCALE: 1/2" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**B. SABEAN**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION

ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.**      DATE: 06/11/2014

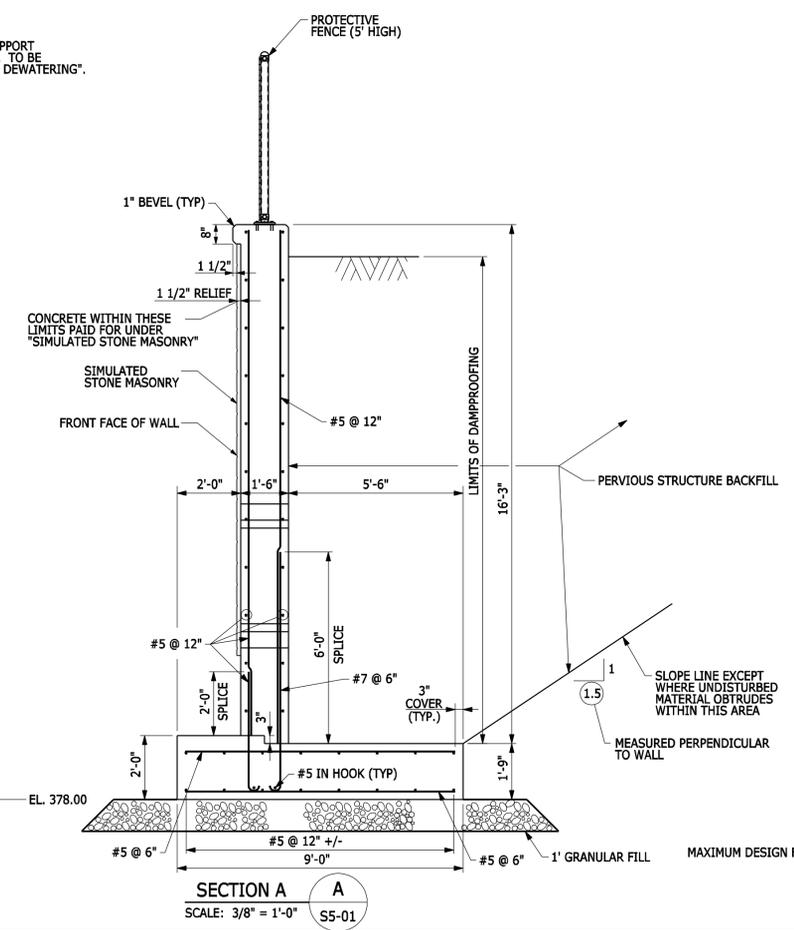
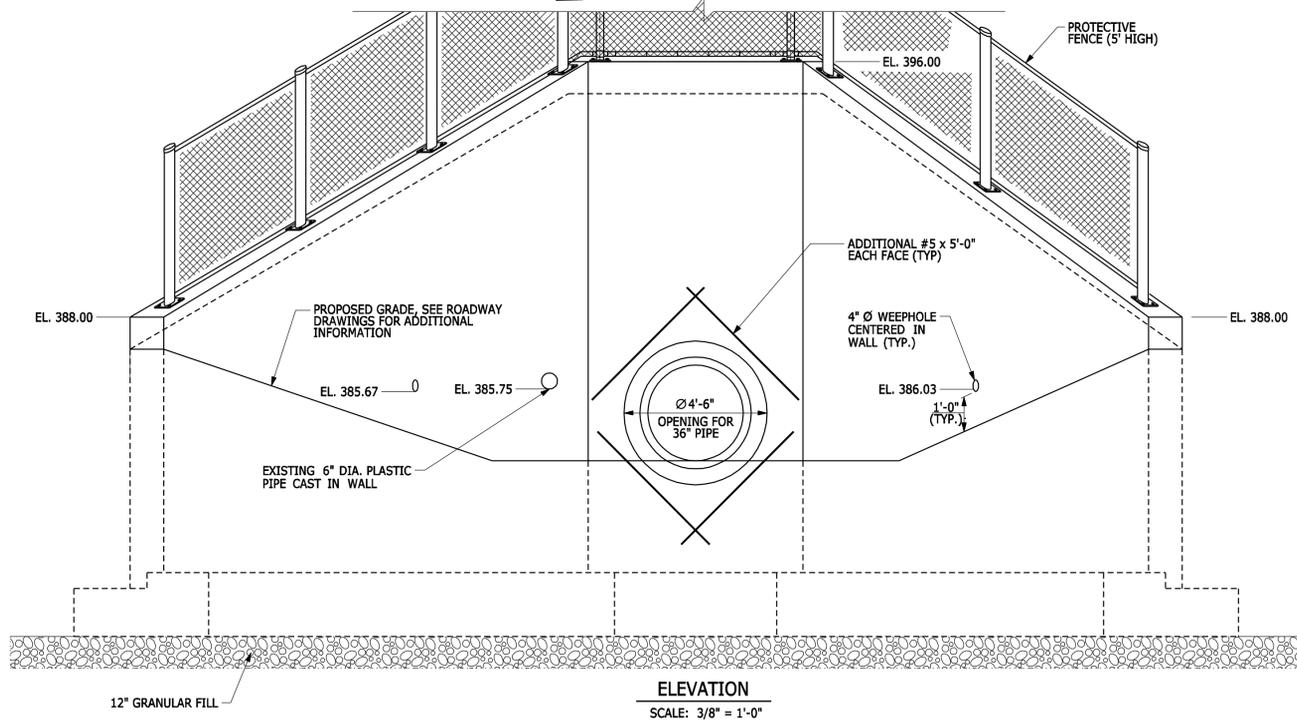
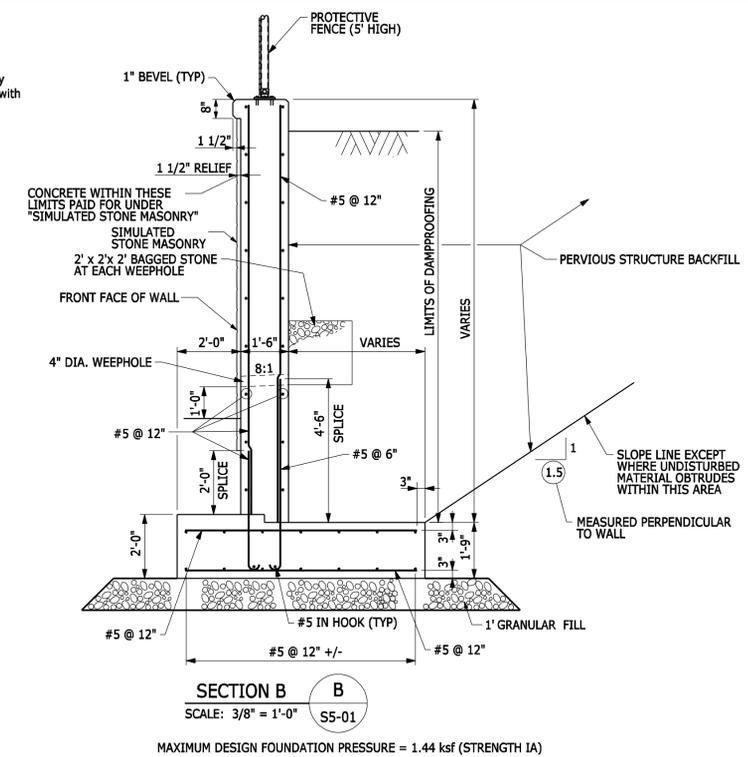
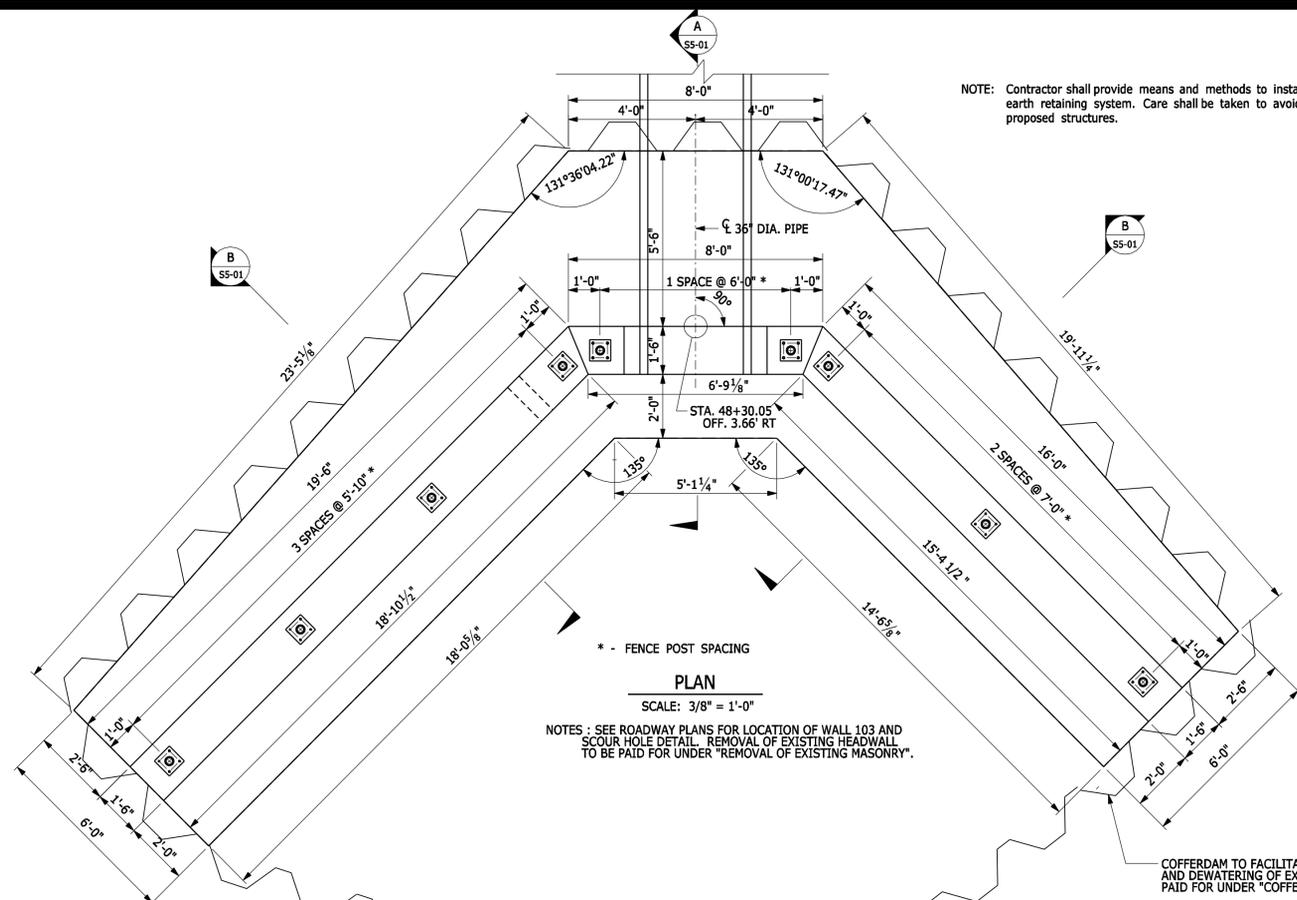


PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**WALL 102 - DETAILS**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**S4-03**  
SHEET NO.  
**05.47**





**GENERAL NOTES:**

SPECIFICATIONS: Connecticut Department of Transportation Form 816, Supplemental Specification dated January 2014 and Special Provisions.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications 6th Edition (2012) with 2013 Interims, as supplemented by the Connecticut Department of Transportation Bridge Design Manual (2003).

ALLOWABLE DESIGN STRESSES:  
Class "A" Concrete: Based on  $f_c = 3,000$  psi  
Reinforcement (ASTM A615 Grade 60):  $f_y = 60,000$  psi

The specified concrete strength used in design,  $f_c$ , of the concrete components is noted above. The minimum compressive strength of the concrete in the constructed components shall conform to the requirements of the special provision "Section 6.01 Concrete for Structures."

LIVE LOAD: HL-93

FOUNDATION PRESSURES: The various Group Loadings noted on the substructure plan sheets refer to the Group Loads as given in the AASHTO LRFD Bridge Design Specifications.

DIMENSIONS: When decimal dimensions are given to less than three decimal places, the omitted digits shall be assumed to be zeros.

CLASS "A" CONCRETE: Class "A" Concrete shall be used for the entire Wall.

EXISTING DIMENSIONS: Dimensions of the existing structure shown on these plans are for general reference only. They have been taken from the original design drawings and are not guaranteed. The Contractor shall take all field measurements necessary to assure proper fit of the finished work and shall assume full responsibility for their accuracy.

JOINT SEAL: See Special Provisions.

EXPOSED EDGES: Exposed edges of concrete shall be beveled 1" x 1" unless dimensioned otherwise.

CONCRETE COVER: All reinforcement shall have two inches cover unless dimensioned otherwise.

REINFORCEMENT: All reinforcement shall be ASTM A615 Grade 60.

PREFORMED EXPANSION JOINT FILLER: The cost of furnishing and installing Preformed Expansion Joint Filler shall be included in the cost of the item "Class 'A' Concrete".

CONSTRUCTION JOINTS: Construction joints, other than those shown on the plans, will not be permitted without prior approval of the Engineer.

CONCRETE DISTRIBUTION		
LOCATION	UNIT	QUANTITY
SUPERSTRUCTURE	C.Y.	0
SUBSTRUCTURE	C.Y.	55
TOTAL	C.Y.	55

QUANTITIES		
ITEM DESCRIPTION	UNIT	RW 103
Structure Excavation - Earth (Excluding Cofferdam and Dewatering)	C.Y.	355
Cofferdam and Dewatering	L.F.	105
Granular Fill	C.Y.	20
Pervious Structure Backfill	C.Y.	225
Class "A" Concrete	C.Y.	25
Simulated Stone Masonry	S.Y.	40
Class "F" Concrete	C.Y.	35
Deformed Steel Bars	LB	3,000
Dampproofing	S.Y.	65
Temporary Earth Retaining System	S.F.	350
Protective Fence (5' High)	L.F.	44
Removal of Existing Masonry	C.Y.	3

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: D84\_0313\_CP\_Wall 103.dwg 6/10/2014 Border Version: 6/10/5

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**Y. ESTRADA/P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION

ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014

PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

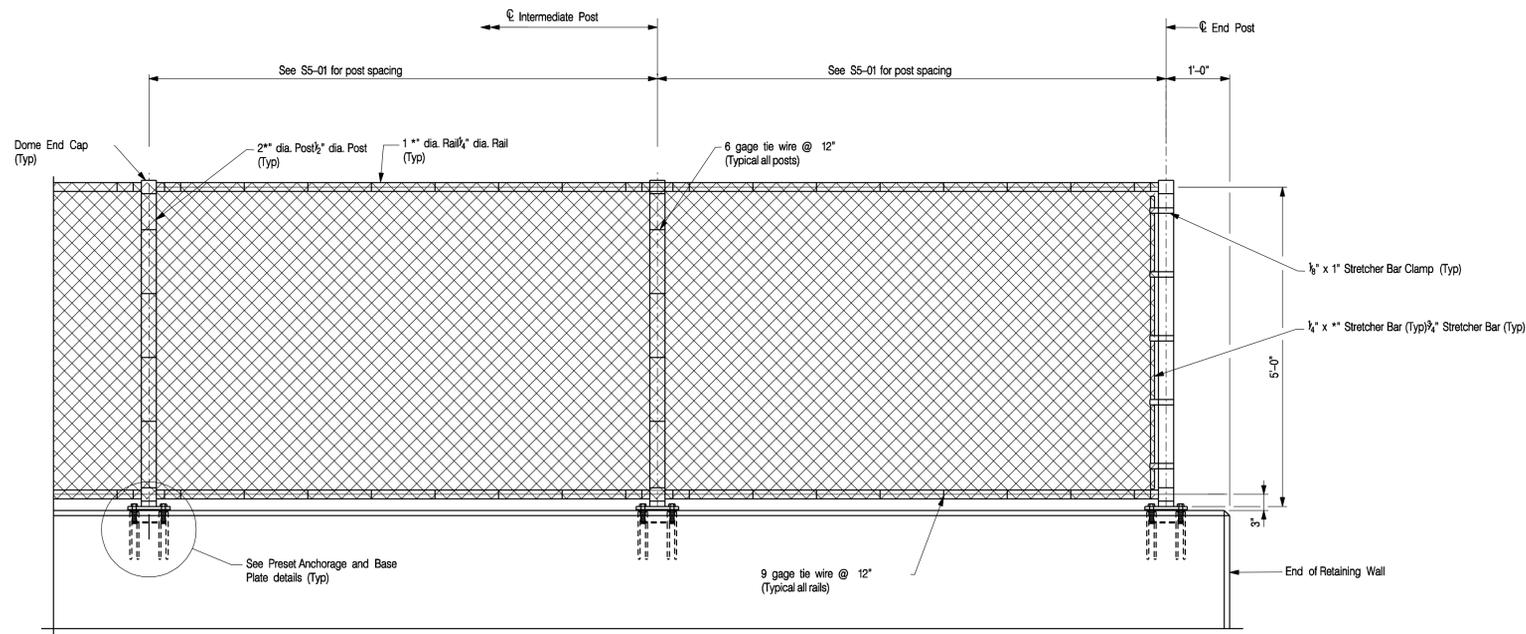
TOWN:  
**DANBURY**

DRAWING TITLE:  
**GENERAL PLAN WALL 103**

PROJECT NO.  
**34-313**

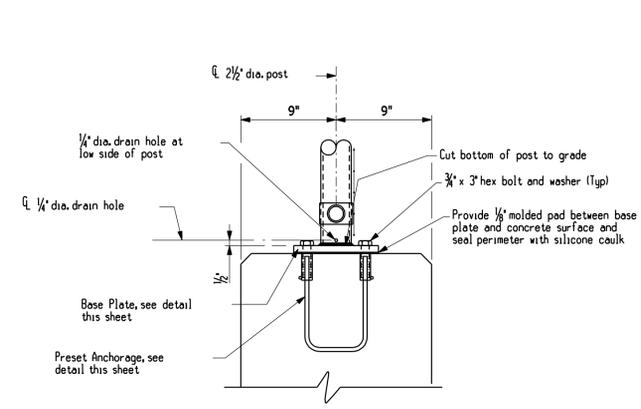
DRAWING NO.  
**S5-01**

SHEET NO.  
**05.49**

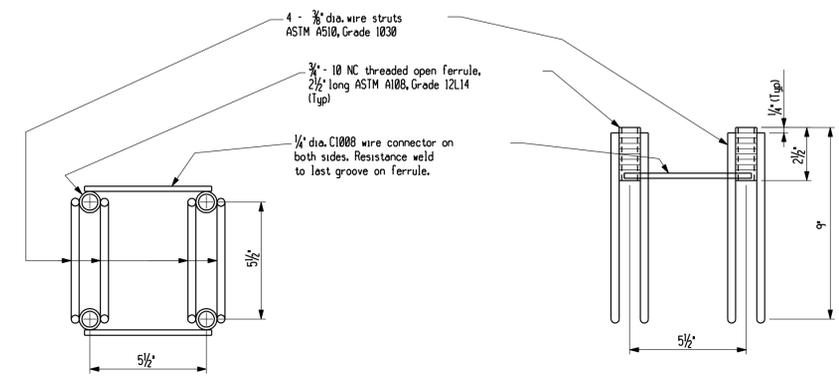


TYPICAL ELEVATION - PROTECTIVE FENCE (5' HIGH)  
Scale: 3/4" = 1'-0"

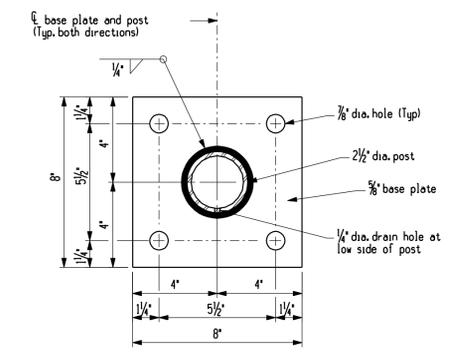
- PROTECTIVE FENCE NOTES**
1. The fence fabric shall be aluminum-coated steel fabric conforming to M.10.05.1.a - Chain Link Fence.
  2. Metal posts and rails shall be standard steel pipe conforming to the requirements of ASTM A53, Type E or S, Grade B or with AASHTO M181, Grade 2.
  3. Base plates shall conform to ASTM A36.
  4. Bolts for the preset anchorage shall be stainless steel and conform to the requirements of ASTM A193, Class 2 Grade B8 (AISI Type 316). All washers shall be standard size and conform to ASTM A167, Type 316.
  5. All posts shall be installed vertically. All rails shall be installed parallel to the top of the parapet.
  6. The fabrication and installation of protective fence, including preset anchorages and grounding pads, shall be paid for under the item "Protective Fence (5' High)".



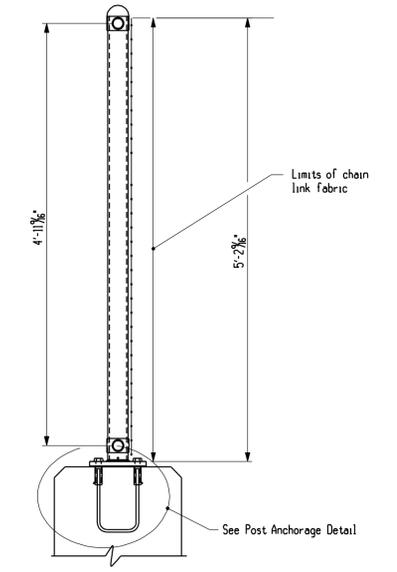
POST ANCHORAGE DETAIL  
Scale: 1 1/2" = 1'-0"



PRESET ANCHORAGE  
Scale: 3" = 1'-0"



BASE PLATE



TYPICAL SECTION  
Scale: 1" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Filename: 034\_0313\_Wall 103\_Fence.dwg 6/10/2014 Border Version: 6/10/5

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**Y. STRADA/P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

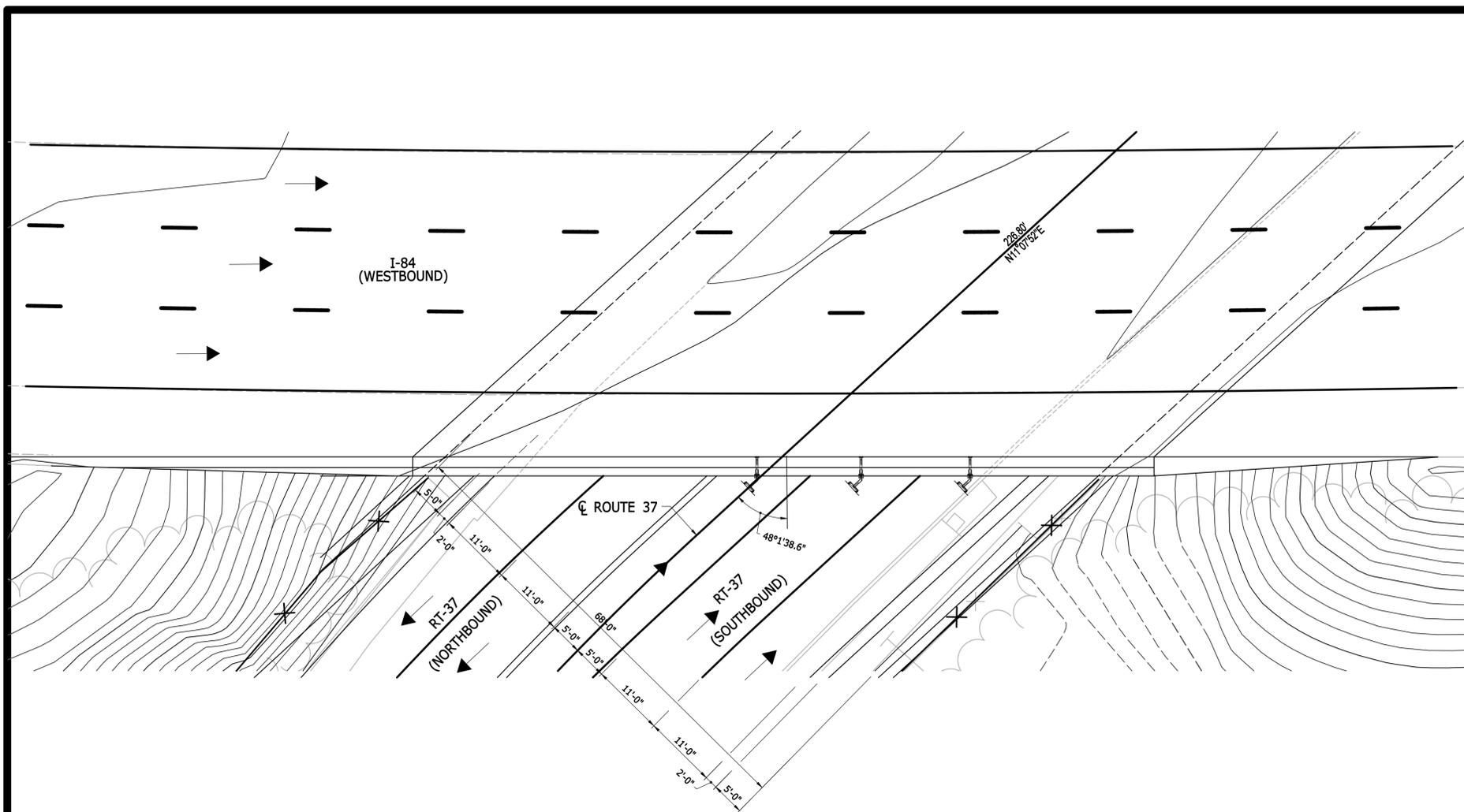
**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



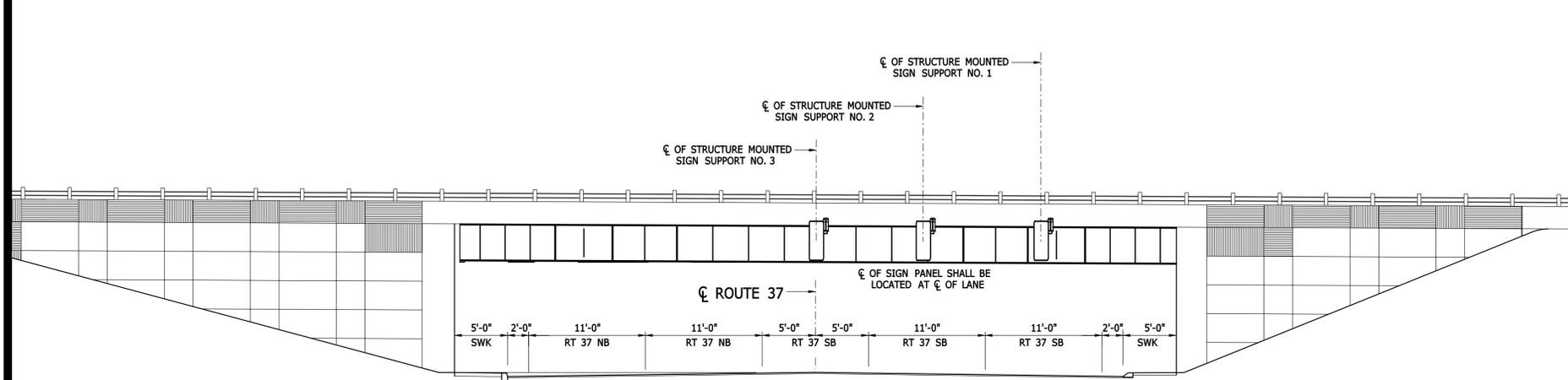
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**PROTECTIVE FENCE WALL 103**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**S5-02**  
SHEET NO.  
**05.50**

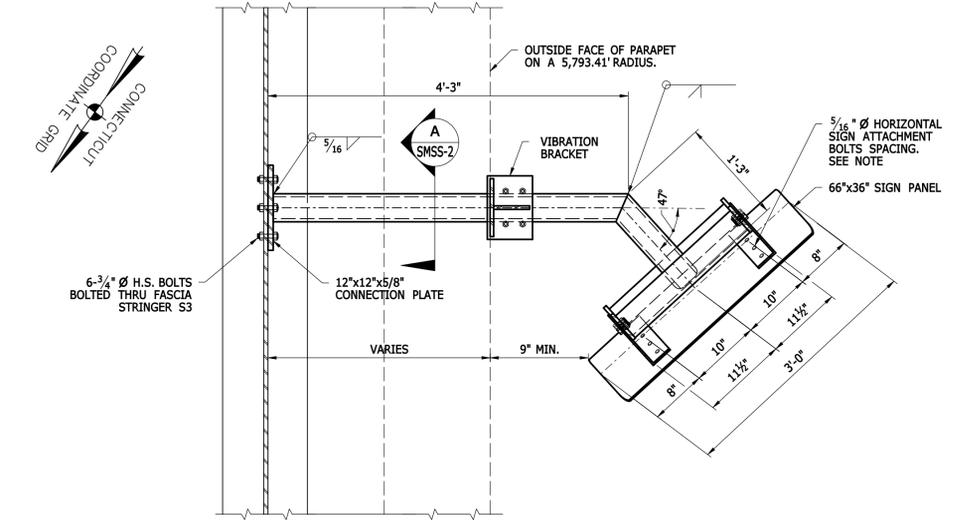


PLAN  
SCALE: 1" = 10'-0"

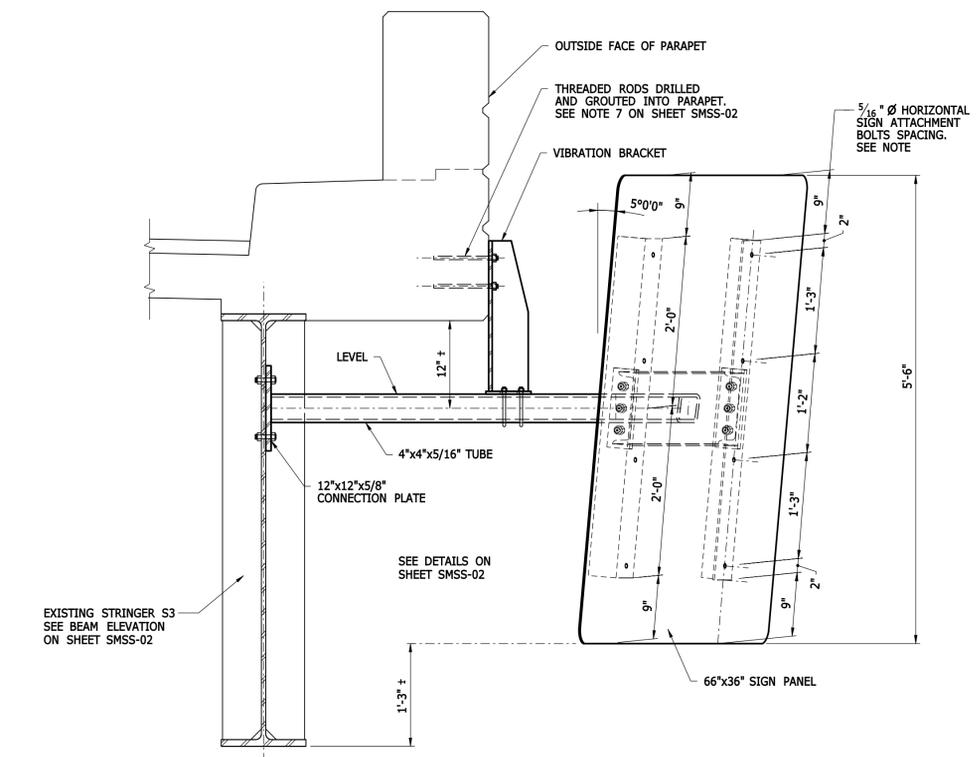


NORTH ELEVATION  
SCALE: 1" = 10'-0"

I-84 OVER ROUTE 37, BRIDGE NO. 00956



PLAN  
SCALE: 1" = 1'-0"



ELEVATION  
SCALE: 1" = 1'-0"

NOTE:  
FOR ADDITIONAL DETAILS OF BRIDGE NO. 00956  
SEE PLANS FOR PROJECT NO. 34-102 DATED 1958.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
034	03/13	SIGN-CP.dwg	06/2014
			Border Version: 01/05

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE IN FEET  
0 10 20  
SCALE 1"=10'

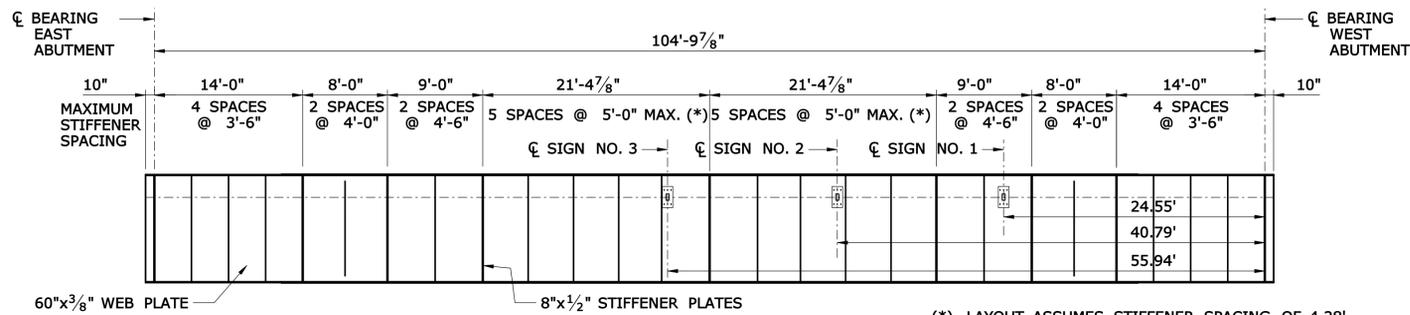
STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**SIGN SUPPORT STRUCTURE PLAN, ELEVATION & DETAILS**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**SMSS-01**  
SHEET NO.  
**05.51**



**STRINGER S3  
NORTH FASCIA BEAM ELEVATION**

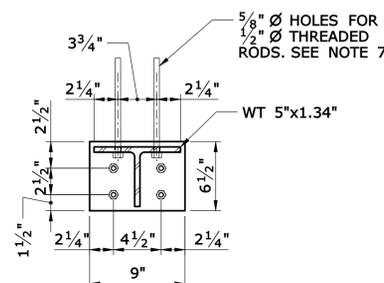
SCALE: 1/8" = 1'-0"

(\* ) LAYOUT ASSUMES STIFFENER SPACING OF 4.28'. CONTRACTOR SHALL CONFIRM STIFFENER SPACING IN FIELD PRIOR TO PREPARATION OF SHOP DRAWINGS. SHOP PLANS TO INDICATE LOCATION OF CONNECTION ON STRINGER S3 AND VERIFY CL OF SIGN PANEL OVER INDICATED LANE.

**GENERAL NOTES:**

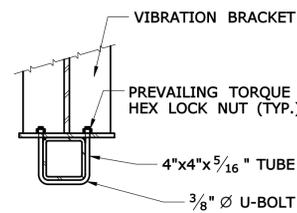
- 1.) STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50.
- 2.) STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B.
- 3.) THE COMPLETE ASSEMBLY SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A123.
- 4.) ALL BOLTS, HEAVY HEX NUTS AND WASHERS SHALL CONFORM TO ASTM A325 TYPE 1. ALL BOLTS, NUTS, AND WASHERS SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 50.
- 5.) SIGN ATTACHMENT BOLTS SHALL BE STAINLESS STEEL AND CONFORM TO ASTM F738, CLASS A4-50. NUTS SHALL BE STAINLESS STEEL PREVAILING TORQUE HEX LOCKING NUTS AND CONFORM TO THE REQUIREMENTS OF ASTM F836, CLASS A1-50. WASHERS SHALL BE STAINLESS STEEL AND CONFORM TO THE REQUIREMENTS OF ASTM A167, TYPES 302 THROUGH 305.
- 6.) U-BOLTS SHALL CONFORM TO ASTM A36 WITH REGULAR THICKNESS WASHER AND PREVAILING TORQUE HEX LOCK NUT. ALL U-BOLTS, NUTS, AND WASHER SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 50.
- 7.) THREADED RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F1554, GRADE 36 WITH REGULAR THICKNESS WASHER AND PREVAILING TORQUE HEX LOCK NUT AND SHALL BE DRILLED AND GROUTED INTO OUTSIDE FACE OF PARAPET. THE DEPTH AND DIAMETER OF THE HOLE SHALL BE AS PER MANUFACTURER OF THE ADHESIVE BONDING MATERIAL. DRILLING AND GROUTING THREADED RODS TO BE PAID FOR UNDER THE ITEM "STRUCTURE MOUNTED SIGN SUPPORT". THREADED RODS SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 50.

QUANTITIES		
ITEM	UNIT	QUANTITY
STRUCTURE MOUNTED SIGN SUPPORT	EA.	3



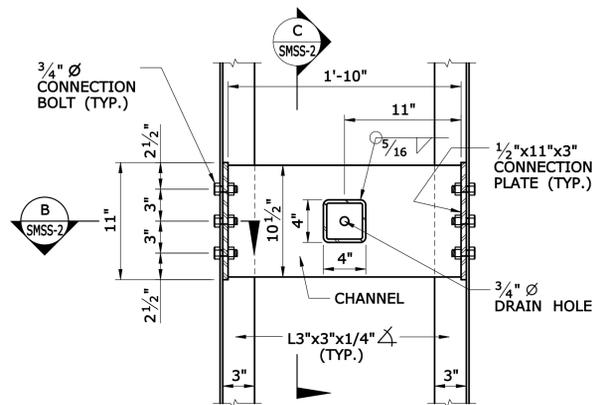
**PLAN**

SCALE: 1 1/2" = 1'-0"



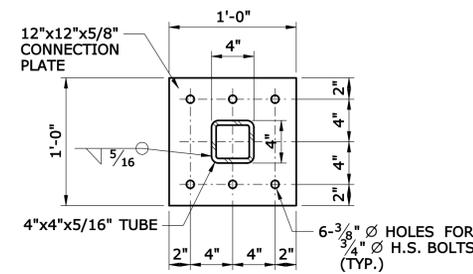
**U-BOLT SECTION**

SCALE: 1 1/2" = 1'-0"



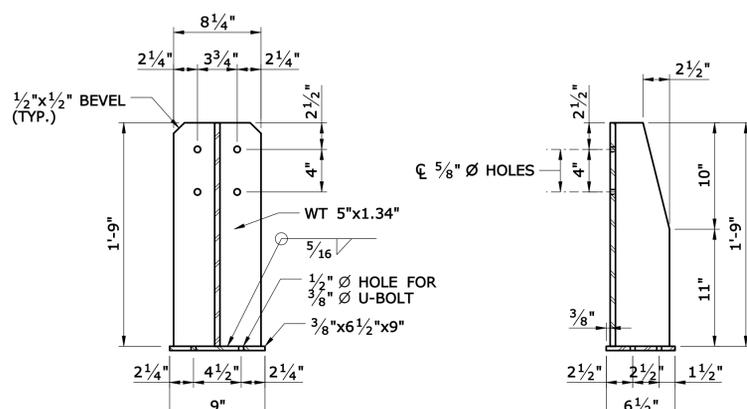
**ELEVATION**

SCALE: 1 1/2" = 1'-0"



**CONNECTION PLATE**

SCALE: 1 1/2" = 1'-0"

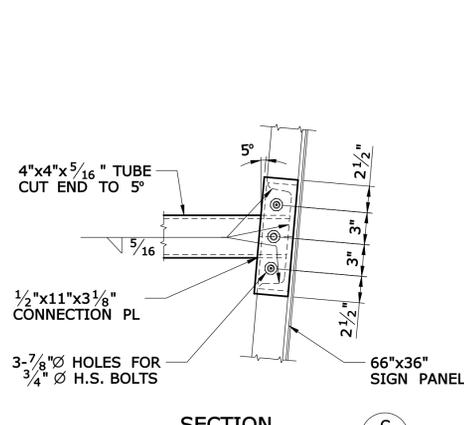


**ELEVATION**

SCALE: 1 1/2" = 1'-0"

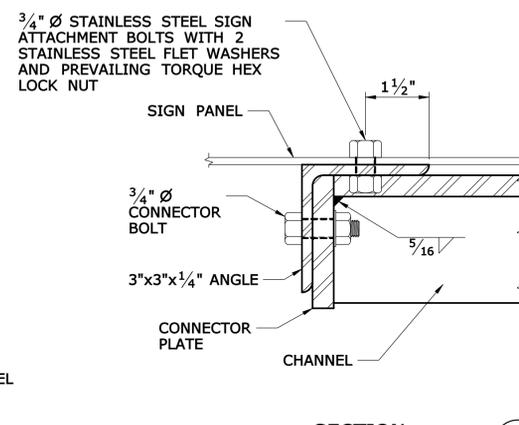
**SIDE VIEW**

SCALE: 1 1/2" = 1'-0"



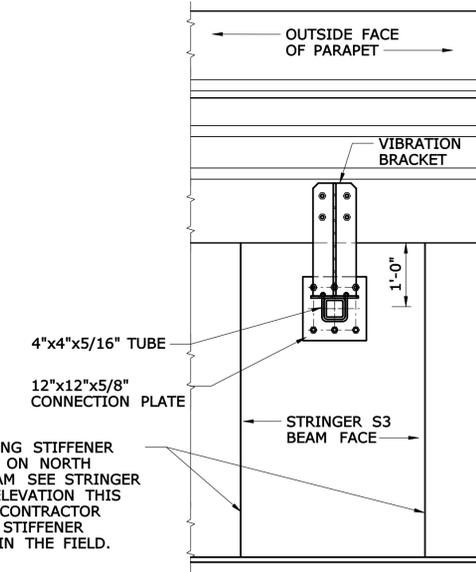
**SECTION C**

SCALE: 1 1/2" = 1'-0"



**SECTION B**

SCALE: 6" = 1'-0"



**SECTION A**

SCALE: 3/4" = 1'-0"

**VIBRATION BRACKET**

**CHANNEL TO ARM CONNECTION**

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

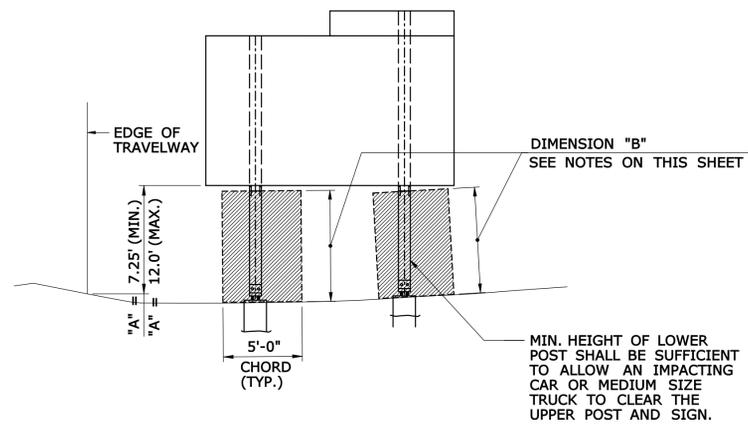
**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  
 ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



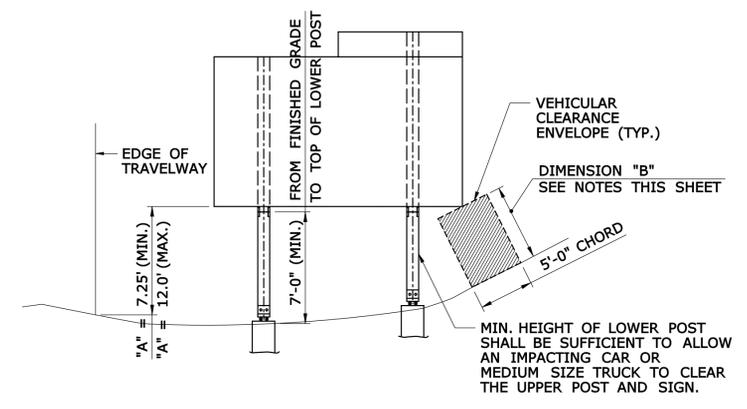
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**SIGN SUPPORT STRUCTURE DETAILS**

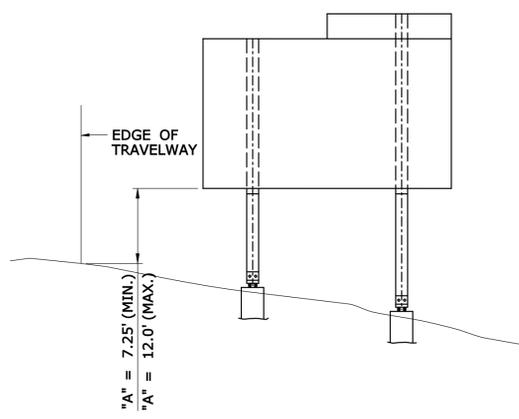
PROJECT NO.  
**34-313**  
DRAWING NO.  
**SMSS-02**  
SHEET NO.  
**05.52**



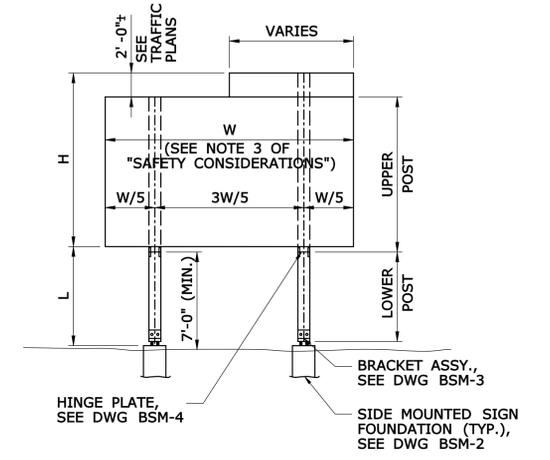
**LEVEL TO SHALLOW SLOPES**



**STEEPER SLOPES**



**SIGN LOCATION - FILL**



**TYPICAL POST MOUNTED SIGN**

**SIGN LOCATION - CUT**

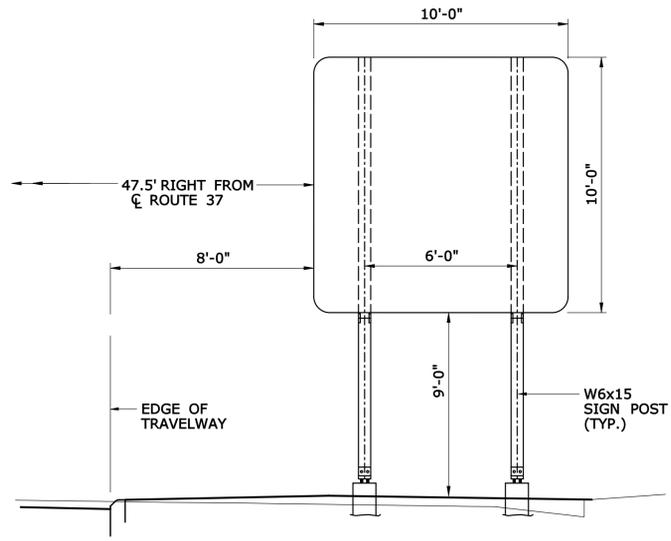
**SAFETY CONSIDERATIONS**

1. THE HINGE BETWEEN THE UPPER AND LOWER POSTS SHALL BE AT LEAST 7 FT. ABOVE THE GROUND.
2. NO SUPPLEMENTARY SIGNS SHALL BE ATTACHED BELOW THE HINGES.
3. THE POST SPACING SHALL BE 3/5 W EXCEPT AS NOTED BELOW:
 

UNIT WEIGHT OF POST	POST SPACING REQUIREMENTS
LESS THAN 17 PLF	NO RESTRICTIONS ON POST SPACING **
FROM 17 PLF TO 44 PLF	PROVIDE AT LEAST 7 FT. CLEAR DISTANCE BETWEEN POSTS ***
EXCEEDS 44 PLF	RELOCATE SIGN OUTSIDE OF CLEAR ZONE OR SHIELD SIGN FROM VEHICULAR IMPACT AS DIRECTED BY THE ENGINEER
- \*\* IF THE TOTAL COMBINED WEIGHT OF ONE LOWER POST AND TWO BRACKETS EXCEEDS 600 LBS OR THE COMBINED WEIGHT OF TWO POSTS AND FOUR BRACKETS LOCATED WITHIN A CLEAR DISTANCE OF 7 FT OF EACH OTHER EXCEEDS 600 LBS, THE SIGN SHALL BE RELOCATED OUTSIDE OF THE CLEAR ZONE OR SHALL BE PROPERLY SHIELDED FROM VEHICULAR IMPACT AS DIRECTED BY THE ENGINEER. SEE "TABLE 1 - BRACKET DATA" ON BSM-5 FOR BRACKET WEIGHT.
- \*\*\* IF THE REQUIRED CLEAR DISTANCE CANNOT BE ATTAINED, THE ENGINEER MAY DIRECT THAT THE SIGN BE RELOCATED OUTSIDE THE CLEAR ZONE OR THAT IT BE PROPERLY SHIELDED FROM VEHICULAR IMPACT.

**NOTES FOR DETERMINING DIMENSION "B"**

1. DIMENSION "B" IS THE SMALLER OF:
  - A. THE CLEAR DISTANCE BETWEEN THE BOTTOM OF SIGN AND THE FINISHED GRADE.
  - B. THE CLEAR DISTANCE BETWEEN THE BOTTOM OF UPPER POST AND THE FINISHED GRADE.
2. DIMENSION "B" SHALL TYPICALLY BE A MINIMUM OF 7'-0" TO CLEAR AN IMPACTING CAR OR MEDIUM SIZE TRUCK.
3. WHEN DIMENSION "A" WOULD EXCEED 12'-0", CONSIDERATION MAY BE GIVEN TO REDUCING DIMENSION "B" IN ACCORDANCE WITH PROVISIONS OF NOTE 3.
4. DIMENSION "B" MAY BE LESS THAN 7'-0":
  - A. IF THE POST IS OUT OF THE CLEAR ZONE.
  - B. IF THE POST IS WITHIN THE CLEAR ZONE BUT SHIELDED BY AN APPROPRIATE BARRIER SYSTEM.
  - C. IN NO CASE SHALL DIMENSION "B" BE LESS THAN 2'-6".
5. IF FIELD CONDITIONS EXCEED THESE REQUIREMENTS, CONTACT THE ENGINEER FOR DIRECTION.



**CROSS SECTION OF SIGN SUPPORT FOR SIGN NO.84-034-375-A & B**

STATION 308+26 (ROUTE 37)  
47.5' RIGHT TO EDGE OF SIGN

**NOTES ON TOTAL HEIGHT OF SIGN POSTS**

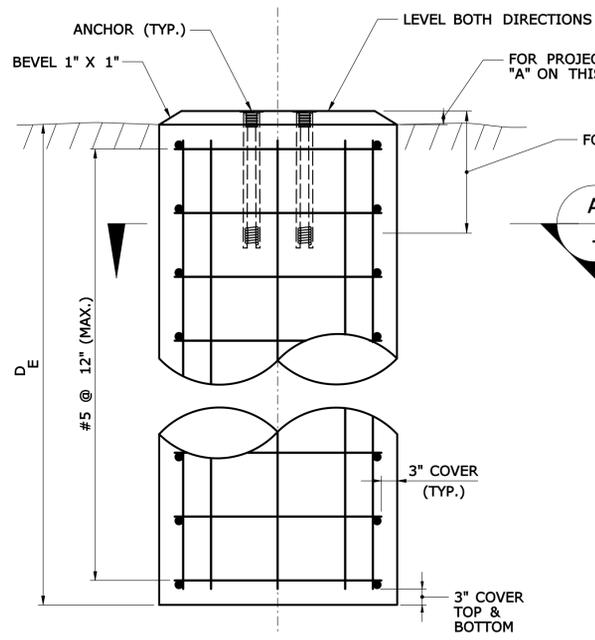
1. UPPER SIGN POSTS SHALL EXTEND TO THE TOP OF FULL WIDTH SIGN PANEL OR THE TOP OF CROWN, WHICHEVER IS HIGHER.
2. FOR SIGN OR CROWN PANEL RETROFIT, THE EXISTING SIGN POSTS SHALL BE REPLACED WITH NEW POSTS OR EXTENDED WITH ADDITIONAL SECTIONS USING HINGE ASSEMBLIES. REFER TO TRAFFIC TYPICAL SHEETS "EXTRUDED SIGN PANEL - RETROFIT DETAIL".

QUANTITIES		
ITEM	UNIT	QUANTITY
STRUCTURAL STEEL - SIGN SUPPORT	CWT	6
SIDE MOUNTED SIGN FOUNDATION	EA.	2

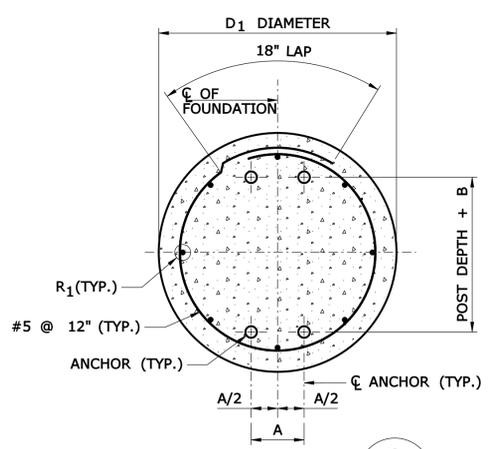
NOTE THAT SIGN PANELS 84-034-375A AND B ARE MOUNTED ON EITHER SIDE OF THE SIGN POSTS

TABLE OF CONTENT	
DWG. NO.	DESCRIPTION
BSM-1	GENERAL NOTES
BSM-2	FOUNDATION DETAILS
BSM-3	BRACKET DETAILS
BSM-4	HINGE DETAILS

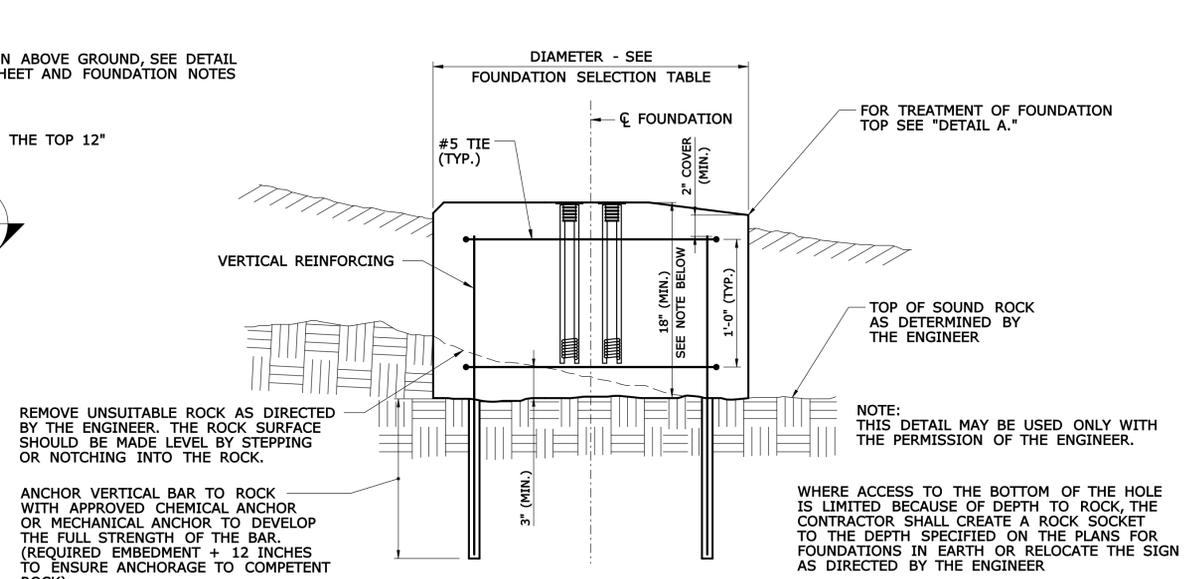
REV. DATE REVISION DESCRIPTION SHEET NO. 034-0313-BSM1-General Note.dgn 06/2014 BSM-1	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	DESIGNER/DRAWER: P. ARZENO CHECKED BY: J. HAPKIEWICZ NOT TO SCALE	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION ENGINEER: AECOM Technical Services, Inc. APPROVED BY: J.T. HAPKIEWICZ, P.E. DATE: 06/11/2014	PROJECT TITLE: <b>I-84 INTERCHANGES 5 &amp; 6 IMPROVEMENTS</b>	TOWN: <b>DANBURY</b>	PROJECT NO.: <b>34-313</b> DRAWING NO.: <b>BSM-1</b> SHEET NO.: <b>05.53</b>
--	---	---	---	---	-------------------------	--



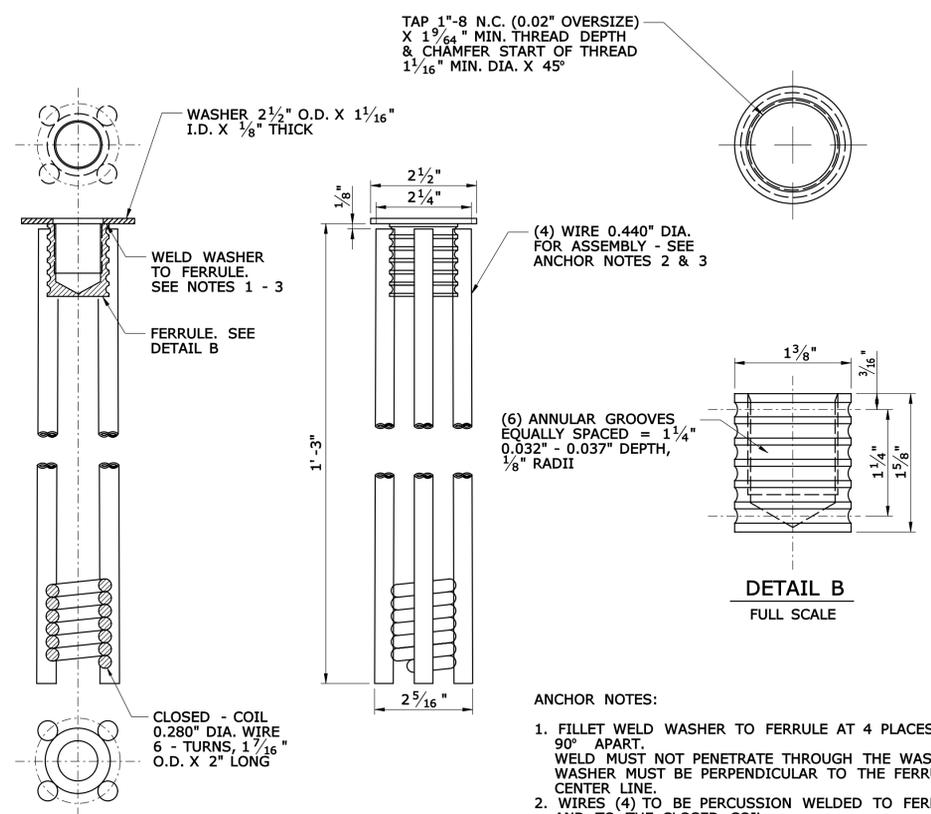
**TYPICAL SECTION SIGN SUPPORT FOUNDATION IN EARTH**  
SCALE: 3/4" = 1'-0"



**SECTION DRILLED FOUNDATION**  
SCALE: 3/4" = 1'-0"

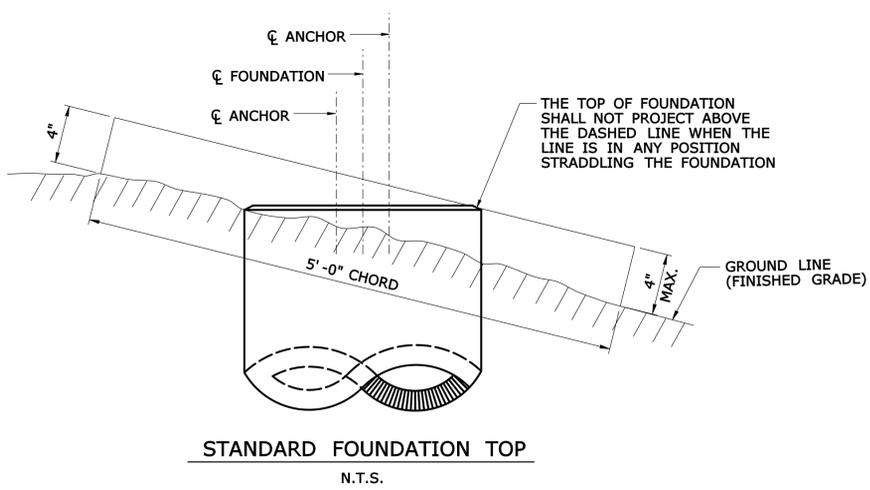


**TYPICAL SECTION SIGN SUPPORT FOUNDATION IN ROCK**  
SCALE: 1 1/2" = 1'-0"

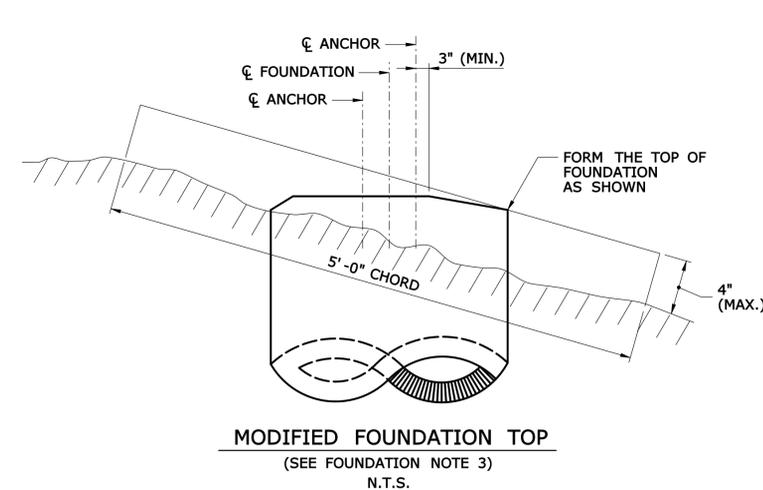


**ANCHOR DETAILS**  
SCALE: 3" = 1'-0"

- ANCHOR NOTES:**
1. FILLET WELD WASHER TO FERRULE AT 4 PLACES 90° APART. WELD MUST NOT PENETRATE THROUGH THE WASHER. WASHER MUST BE PERPENDICULAR TO THE FERRULE CENTER LINE.
  2. WIRES (4) TO BE PERCUSSION WELDED TO FERRULE AND TO THE CLOSED COIL.
  3. WELD MUST NOT PENETRATE TO FERRULE INTERIOR THREADS.
  4. WIRE TO BE DRAWN PER ASTM A510.
  5. CHEMICAL & PHYSICAL CERTIFICATION SHOULD ACCOMPANY THE MATERIAL.
  6. CERTIFICATION SHOULD EXPLICITLY INDICATE THE MATERIAL TO BE DOMESTIC.
  7. TOLERANCES ON DECIMAL DIMENSIONS SHALL BE ± 0.004". ALL OTHER TOLERANCES SHALL BE ± 0.04", EXCEPT AS NOTED.



**STANDARD FOUNDATION TOP**  
N.T.S.

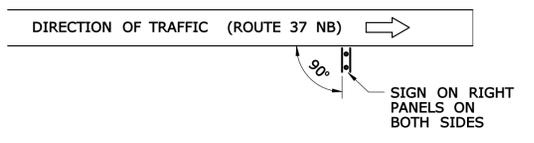


**MODIFIED FOUNDATION TOP**  
(SEE FOUNDATION NOTE 3)  
N.T.S.

**DETAIL A - PROJECTION OF FOUNDATION ABOVE GROUND**

- FOUNDATION NOTES**
1. DETAIL A ILLUSTRATES THE METHOD USED TO MEASURE THE PROJECTION OF THE FOUNDATION ABOVE FINISHED GRADE. IT IS IMPORTANT THAT THE TOP OF THE FOUNDATION BE PLACED IN ACCORDANCE WITH THIS DETAIL.
  2. THE TOP OF FOUNDATION SHALL BE CONSTRUCTED AS CLOSE TO THE FINISHED GRADE AS POSSIBLE, BUT SHOULD NOT BE COVERED BY SOIL.
  3. USE A MODIFIED TOP WHERE PROJECTION LIMITS CANNOT BE MET WITH THE STANDARD TOP.
  4. FOUNDATIONS SHALL BE PLACED AGAINST UNDISTURBED SOIL. WHERE ROCK IS ENCOUNTERED, THE CONTRACTOR MAY USE THE "SIGN SUPPORT FOUNDATION IN ROCK" DETAIL SHOWN ON THIS SHEET WITH THE PERMISSION OF THE ENGINEER.
  5. IF UNSUITABLE SOIL IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER SHALL BE NOTIFIED. AN ALTERNATE FOUNDATION DESIGN MAY BE SUPPLIED BY THE ENGINEER, OR THE SIGN MAY BE RELOCATED.
  6. PLACEMENT OF FOUNDATIONS SHALL BE IN ACCORDANCE WITH "SIGN SUPPORT PLACEMENT DETAILS" ON THIS SHEET.
  7. WHERE FOUNDATIONS ARE PLACED ON SLOPES STEEPER THAN 1V : 6H, GRADE AROUND THE FOUNDATIONS IN CONFORMANCE WITH DETAIL A.

POST SIZE	FOUNDATION TABLE FOR BREAKAWAY SIGN 84-034-375A + B						
	DIAMETER D1 (FT.)	DEPTH DE (FT.)	REINF. STEEL R1	ANCHOR SPACING A (IN.)	B (IN.)		
					BRACKET NO.		
W6-W12	2.5	8	8 - #5	4	7 15/16	8 1/16	8 1/8

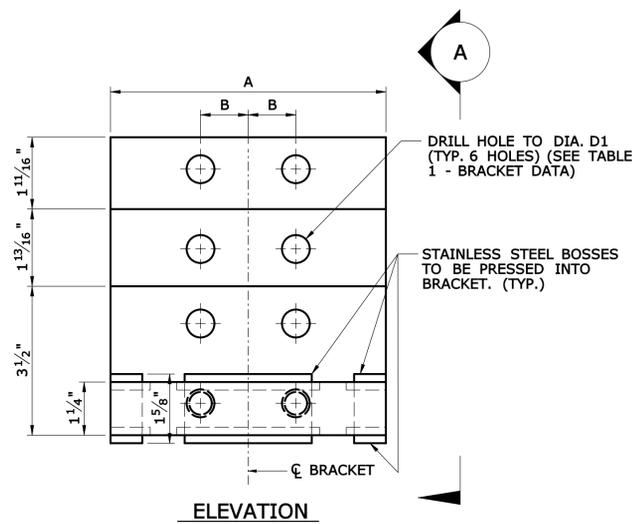
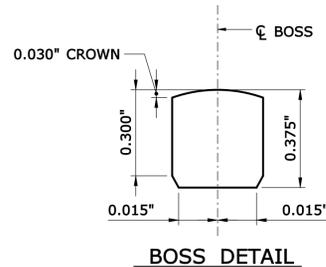
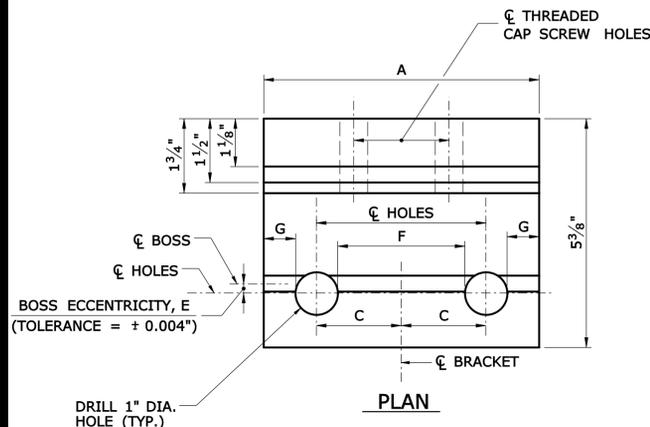


**SIGN SUPPORT PLACEMENT DETAILS**

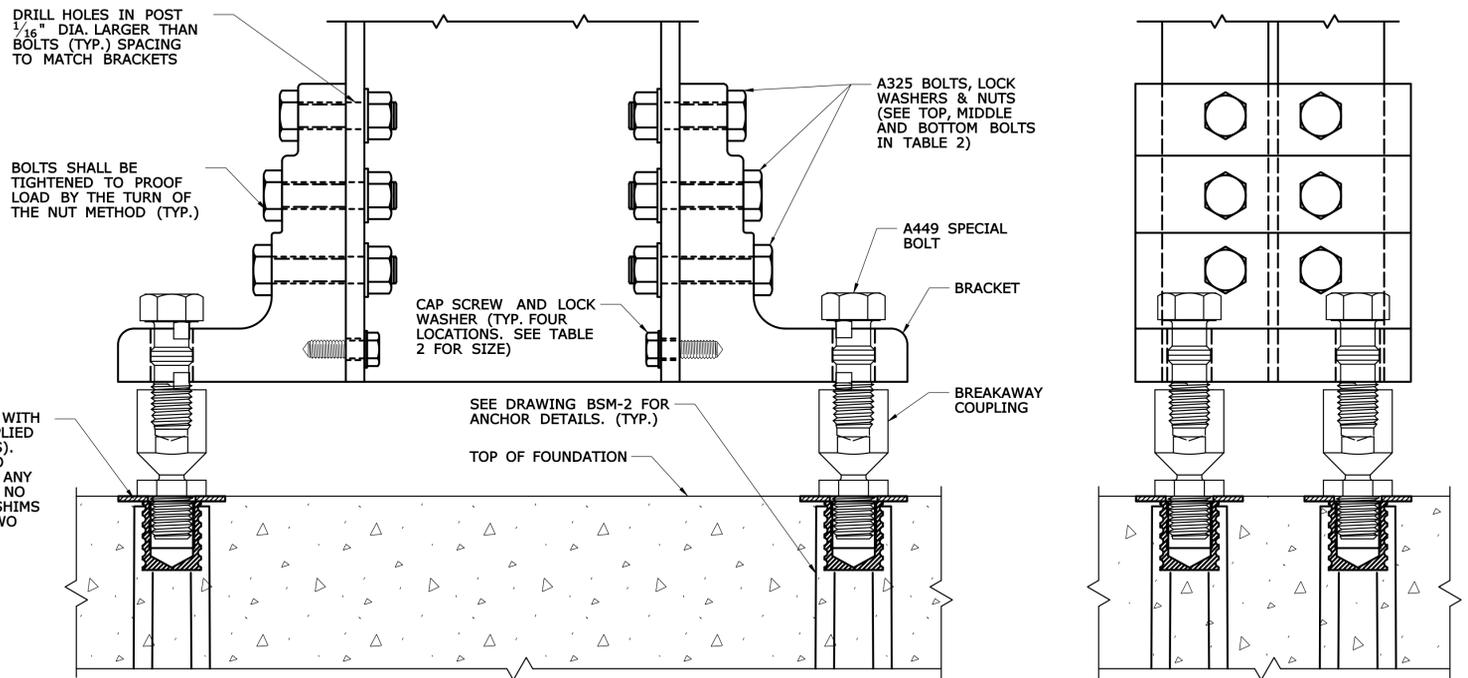
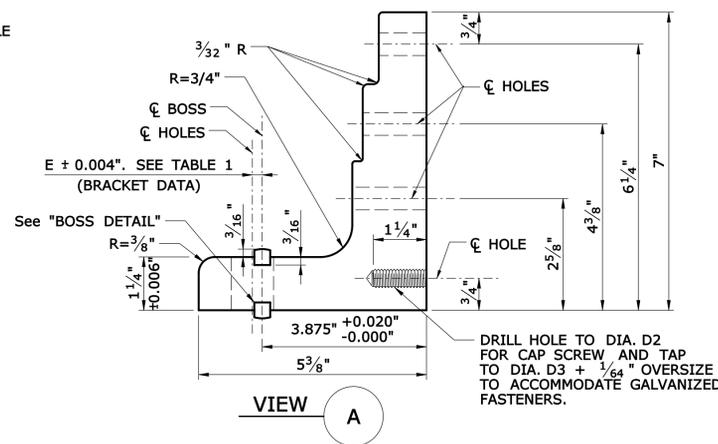
- ERECTION NOTE:**
- FOR MAXIMUM EFFECTIVENESS WITH SIGN PANELS ON BOTH SIDES OF SIGN, POSITION SIDE MOUNTED SIGNS AS FOLLOWS:
- A. ON TANGENT SECTION, POSITION THE SIGN SUCH THAT THE VERTICAL AXIS IS PLUMB AND THE HORIZONTAL AXIS IS AT AN ANGLE OF 90° WITH THE TRAFFIC LANE WHICH THE SIGN SERVES (SEE DIAGRAM).

POST SIZE	BRACKET TYPE	BRACKET WEIGHT (LBS)	DIMENSIONS (IN.)			HOLE DIAMETERS (IN.)			DIMENSIONS (IN.)			F	G
			A	B	C	D1	D2	D3	BRACKET NO.				
									1	2	3		
ALL	B650	9½	6½	1⅞	2	2⅜		5/8"-11 UNC 1A	0.100	0.150	0.200	2⅞	½

POST SIZE	BRACKET TYPE	BOLT AND CAP SCREW DIAMETER	BOLT LENGTH			CAP SCREW LENGTH	THREAD DESIGNATION (U.S. CUSTOMARY UNITS)	
			TOP	MIDDLE	BOTTOM		BOLT	CAP SCREW
ALL	B650	5/8	2¾	3	3¼	1¼	11 UNC	11 UNC



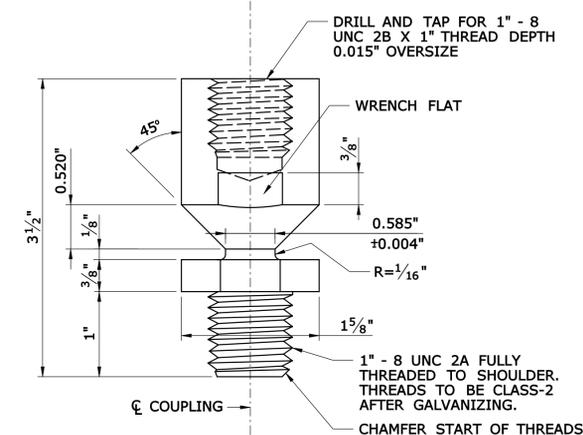
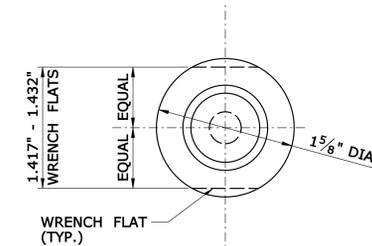
**BRACKET DETAILS**  
HALF SCALE



**SIDE ELEVATION**

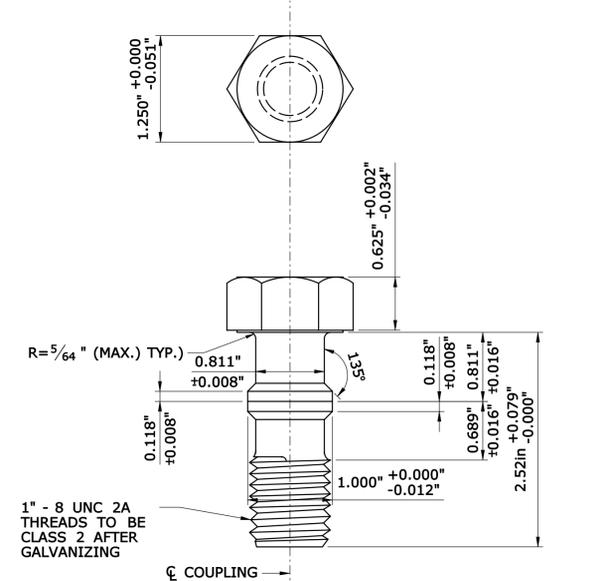
**FRONT ELEVATION**

**BRACKET ASSEMBLY DETAILS**  
HALF SCALE



NOTE:  
TOLERANCES TO 1/32" EXCEPT AS NOTED

**BREAKAWAY COUPLING**  
FULL SCALE



**SPECIAL BOLT**  
FULL SCALE

NOTE:  
CHEMICAL & PHYSICAL PROPERTIES OF "SPECIAL BOLT" SHALL CONFORM TO ASTM A449.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:  
**P. ARZENO**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION  
 ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.**

DATE: 06/11/2014

PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**BREAKAWAY SIGN SUPPORT BRACKET DETAILS**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**BSM-3**  
SHEET NO.  
**05.55**

**GENERAL NOTES**

**SPECIFICATIONS:** CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 816, SUPPLEMENTAL SPECIFICATION DATED JULY 2013, AND SPECIAL PROVISIONS DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES 17TH EDITION DATED 2002, AND AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS 5th EDITION (2009). DESIGN LOADS: THE DESIGN WIND SPEED IS 100 MPH, BASED ON A 10-YEAR MEAN RECURRENCE INTERVAL.

**FOUNDATIONS:** CONCRETE FOR FOUNDATIONS SHALL BE CLASS "A" CONCRETE.

**REINFORCEMENT:** REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615, GRADE 60.  
**SIGN POSTS:** STEEL FOR SIGN POSTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709, GRADE 36, AND SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. THE POST SHALL BE PERMANENTLY LABELED WITH THE POST SIZE ON THE WEB AT THE BOTTOM OF THE LOWER POST.  
**ANCHORS:** THREADED FERRULES SHALL BE FABRICATED FROM TYPE 304 STAINLESS STEEL. RODS SHALL BE FABRICATED FROM STEEL CONFORMING TO AISI 1038. STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AISI 1008. MINIMUM TENSILE STRENGTH OF 60,000 LBS.  
**SHIMS:** 1" HORSESHOE SHIMS SHALL BE FABRICATED FROM 14 OR 18 GAUGE SHEET STEEL.

**BREAKAWAY COUPLINGS:** BREAKAWAY COUPLINGS SHALL BE MADE FROM ALLOY STEEL CONFORMING TO AMS 6378D WITH EXCEPTIONS TO DECARBURIZATION AND MACROSTRUCTURE CLAUSES OR AN EQUIVALENT MATERIAL, AND SHALL HAVE A MINIMUM TENSILE YIELD STRENGTH OF 130,000 PSI. THE COUPLING SHALL HAVE A MINIMUM TENSILE ULTIMATE STRENGTH OF 40,400 LBS. THE ROCKWELL HARDNESS SHALL BE C32 MINIMUM. COUPLINGS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A153, CLEANED AND PHOSPHATED PER FEDERAL SPECIFICATION TT-C-490C, COATED, 0.002" - 0.004" THICK, USING MORTON POWDER COATINGS' 20-7037 BLACK POLYESTER POWDER OR EQUIVALENT. CHIPPED AREAS OF THE COATED SURFACE SHALL BE REPAIRED. ALL THREADED SURFACES, AFTER COATING, SHALL BE CLEANED TO ALLOW THEM TO FUNCTION PROPERLY.

**BRACKETS:** BRACKETS SHALL BE MADE FROM ALUMINUM ALLOY 6061-T6 OR AN EQUIVALENT MATERIAL. THE LOAD CONCENTRATING MEMBER (BOSS) SHALL BE MADE FROM STAINLESS STEEL CONFORMING TO ASTM A582, TYPE 416 WITH ROCKWELL HARDNESS OF C33 - C45. LOCATION HOLES FOR THE BREAKAWAY COUPLING SHALL BE ACCURATELY POSITIONED RELATIVE TO THE LOAD CONCENTRATING MEMBER AND BRACKETS SHALL BE PERMANENTLY LABELED WITH THE BRACKET NUMBER TO REFLECT THE HOLE POSITIONING. SEE DWG. NO. BSM-5 FOR IDENTIFICATION OF BRACKETS BY NUMBER.

**HINGE PLATES:** HINGE PLATES SHALL BE MADE FROM ALLOY STEEL CONFORMING TO AISI 4130 OR AN EQUIVALENT MATERIAL AND SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. THE HINGE PLATE SHALL HAVE A MINIMUM TENSILE YIELD STRENGTH OF 90,000 PSI AND MINIMUM TENSILE ULTIMATE STRENGTH AS FOLLOWS:

HI-1	7,100 LBS
HI-2	11,300 LBS
HI-3	17,000 LBS

**BOLTS, NUTS AND WASHERS:** UNLESS NOTED OTHERWISE, ALL BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325. SPECIAL BOLTS SHALL CONFORM TO ASTM A449. NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A563, GRADE DH. LOCKWASHERS SHALL CONFORM TO THE REQUIREMENTS OF ANSI B18-21-1. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A153. SPECIAL BOLTS MAY BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM B695, CLASS 50.

**CAP SCREWS:** CAP SCREWS ATTACHING BRACKETS TO POSTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A153.

**BREAKAWAY HARDWARE:** BREAKAWAY HARDWARE SHALL BE SUPPLIED AS COMPONENTS OF A CRASH-TESTED SYSTEM COMPLYING WITH THE GUIDELINES OF NCHRP REPORT 350 (RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES) OR THE AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH). THE MANUFACTURER SHALL SUBMIT TEST REPORTS TO FHWA FOR APPROVAL.

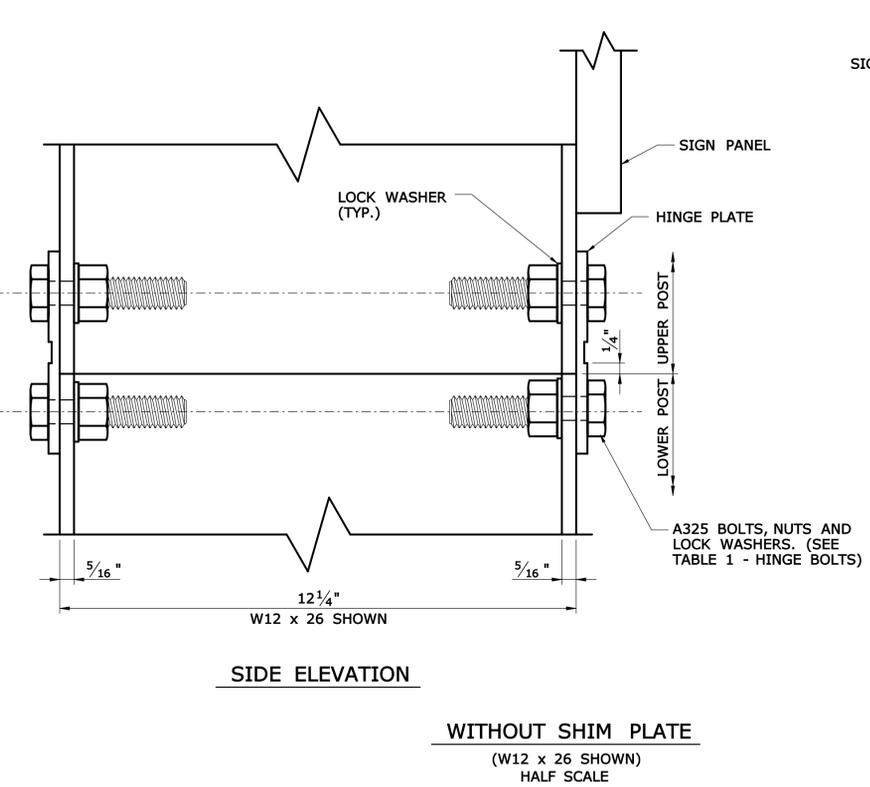
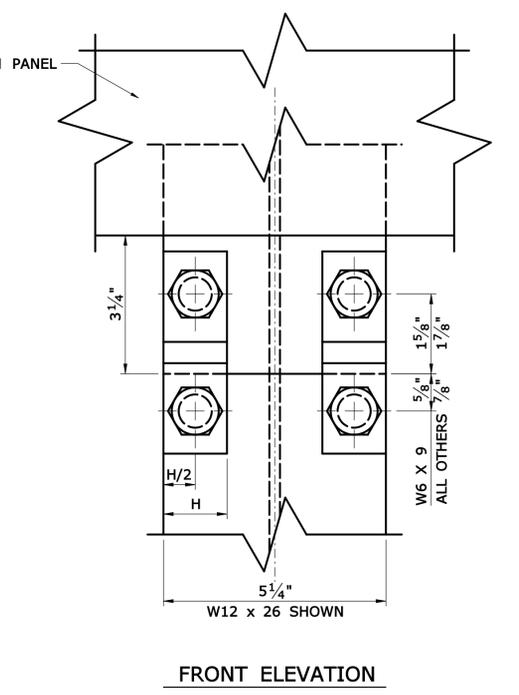
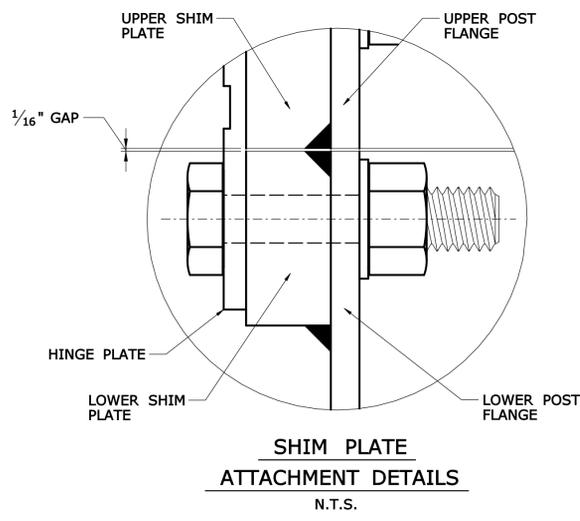
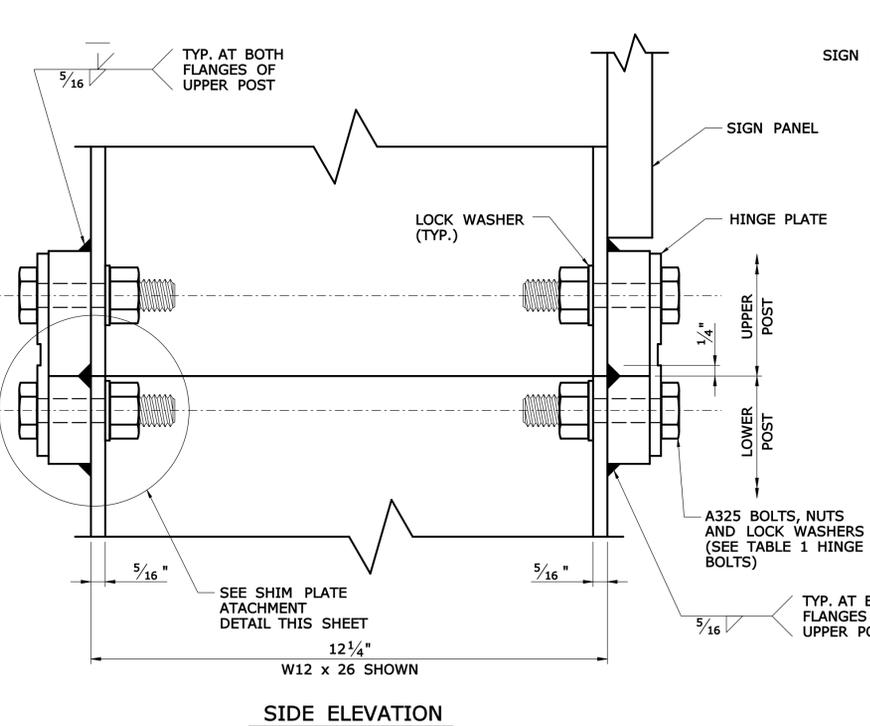
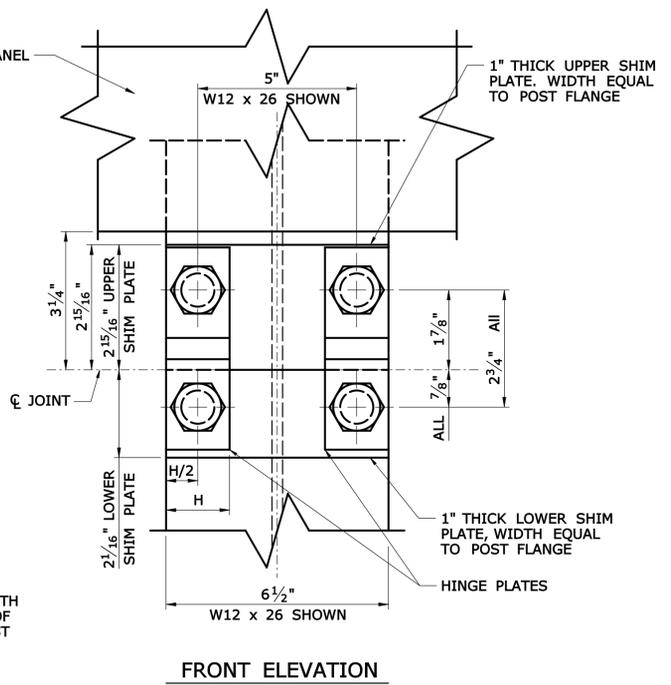
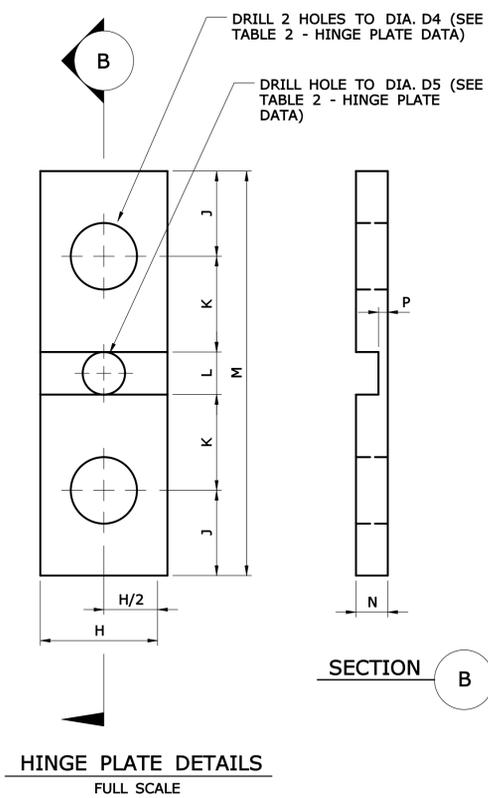
**CERTIFICATION:** THE CONTRACTOR SHALL PROVIDE A MATERIALS CERTIFICATE TO CERTIFY THAT THE MATERIAL AND COMPONENTS CONFORM TO THOSE SHOWN ON THE PLANS AND SPECIFICATIONS.

**CHANGES:** NO CHANGE IN DESIGN MATERIALS OR DETAIL ALTERATIONS WILL BE PERMITTED WITHOUT PRIOR APPROVAL BY THE ENGINEER.

**INSTALLATION:** INSTALLATION OF THE BREAKAWAY ASSEMBLY SHALL BE IN ACCORDANCE WITH THE RECOMMENDED PRACTICES OF THE SUPPLIER.

**BASIS OF PAYMENT:** THE COST OF FURNISHING AND INSTALLING THE BREAKAWAY HINGE PLATE ASSEMBLY WILL BE INCLUDED IN THE PAY ITEM "STRUCTURAL STEEL SIGN SUPPORTS." THE COST OF FURNISHING AND INSTALLING THE BREAKAWAY COUPLING SYSTEM, CONSISTING OF BRACKET, BREAKAWAY COUPLINGS, SPECIAL BOLTS, AND SHIMS WILL BE INCLUDED IN THE PAY ITEM "SIDE MOUNTED SIGN FOUNDATION." THE COST OF FURNISHING AND INSTALLING FOUNDATIONS, INCLUDING EXCAVATING, CLASS "A" CONCRETE, REINFORCING STEEL AND ANCHOR FERRULES, WILL BE INCLUDED IN THE PAY ITEM "SIDE MOUNTED SIGN FOUNDATION."

POST SIZE	HINGE ASSEMBLY		THREAD DESIGNATION (U.S. CUSTOMARY UNITS)
	BOLT DIAMETER	BOLT LENGTH	
ALL	2 1/4"		10 UNC



POST SIZE	PLATE NO.	DIMENSIONS (IN.)							HOLE DIA. (IN.)	
		H	J	K	L	M	N	P	D4	D5
ALL	3	1 1/2	1	1 1/8	1/2	4 3/4	3/8	0.113 + 0.004	25/32	NONE

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	DESIGNER/DRAFTER: <b>P. ARZENO</b>	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	PROJECT TITLE: <b>I-84 INTERCHANGES 5 &amp; 6 IMPROVEMENTS</b>	TOWN: <b>DANBURY</b>	PROJECT NO. <b>34-313</b>
	CHECKED BY: <b>J. HAPKIEWICZ</b>		ENGINEER: <b>AECOM Technical Services, Inc.</b>	DRAWING TITLE: <b>BREAKAWAY SIGN SUPPORT HINGE DETAILS</b>	SHEET NO. <b>05.56</b>
SCALE AS NOTED	APPROVED BY: <b>J.T. HAPKIEWICZ, P.E.</b>	DATE: 06/11/2014			

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
			06/2014

**NOTES**

THE 4 CHORD TRUSS CANTILEVER SIGN STRUCTURE, INCLUDING THE ANCHORAGE TO THE FOUNDATION AND THE HARDWARE AND STRUCTURAL MEMBERS REQUIRED TO SUPPORT THE TRAFFIC APPURTENANCES, SHALL BE DESIGNED, FABRICATED, ERECTED, ASSEMBLED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIAL PROVISION "4 CHORD TRUSS CANTILEVER SIGN STRUCTURE".

THE 4 CHORD TRUSS CANTILEVER SIGN STRUCTURE SHALL BE COMPOSED OF A 4 CHORD TRUSS HORIZONTAL OVERHEAD SPAN MEMBER SUPPORTED ON A SINGLE LINEAR TUBULAR POLE MEMBER.

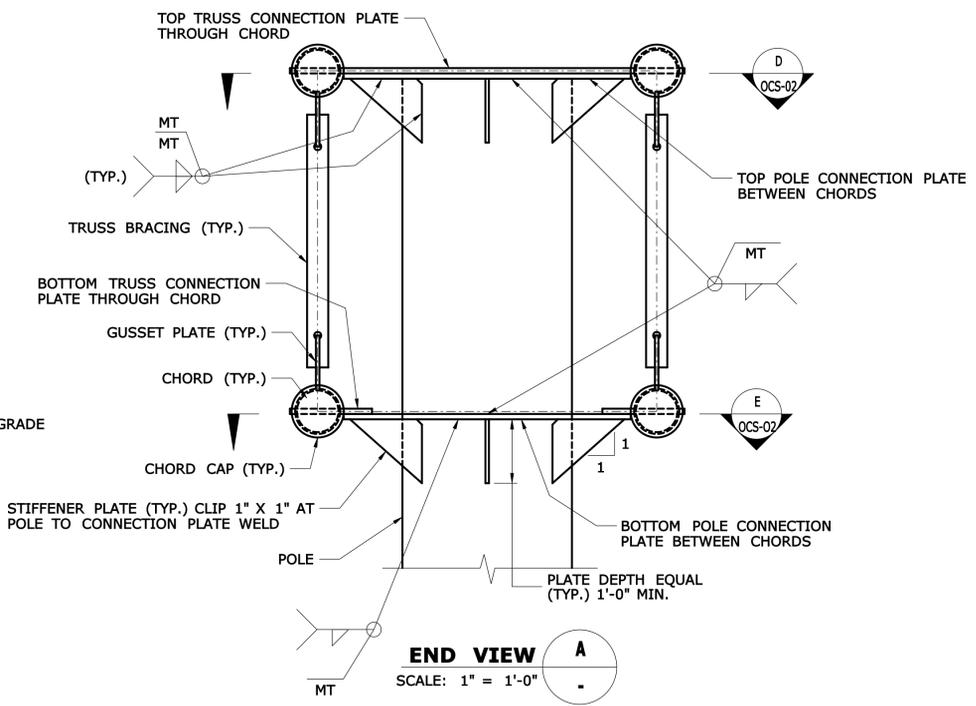
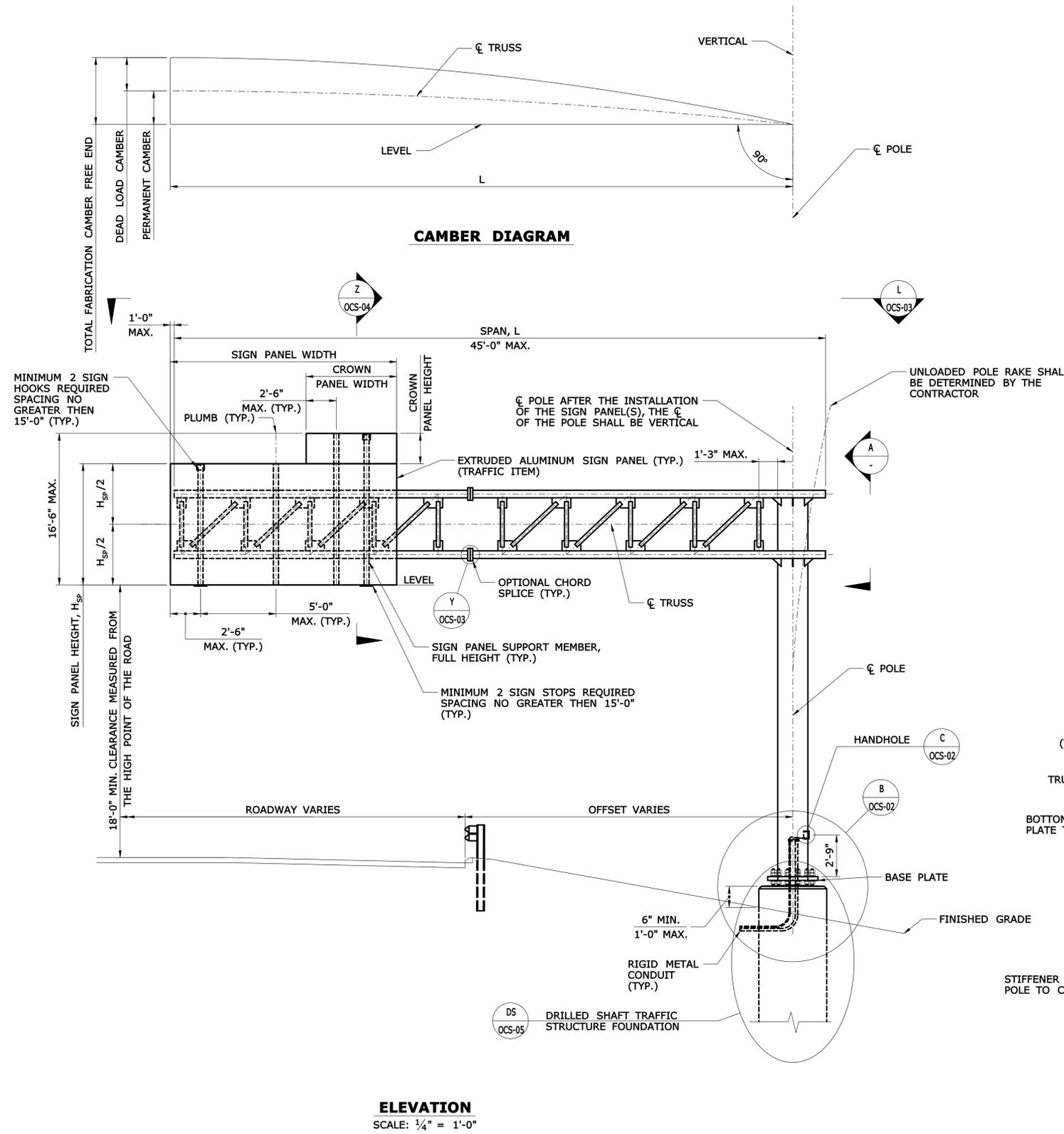
THE DETAILS PRESENTED AND REFERRED TO ON THIS SHEET REPRESENT CONCEPTUAL DETAILS OF A SIGN SUPPORT CONSISTENT WITH THE REQUIREMENTS IN THE SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALL DETAILS AND DIMENSIONS.

THE APPROXIMATE DIMENSIONS OF THE HORIZONTAL TRUSS AND THE POLE HEIGHTS ARE SHOWN IN PLAN AND ELEVATION ON THE TRAFFIC SHEETS. THE ACTUAL SIGN SUPPORT DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR BASED ON THE HORIZONTAL AND VERTICAL CLEARANCES SHOWN ON THE TRAFFIC SHEETS, A FIELD SURVEY OF THE FINISHED GRADE AT THE SITE, THE ELEVATION OF THE TOP OF THE FINISHED FOUNDATION, THE LOCATIONS OF OVERHEAD AND SUBSURFACE UTILITIES, THE LOCATION OF THE DRAINAGE FACILITIES AND NOISE BARRIER WALL LOCATIONS.

THE SIGN PANELS, INCLUDING CROWN PANELS AS APPLICABLE, SHALL BE LOCATED ON THE HORIZONTAL TRUSS BASED ON THE DIMENSIONS SHOWN ON THE TRAFFIC SHEETS AND THE ACTUAL SIGN SUPPORT DIMENSIONS. THE SIGN PANELS SHALL BE INSTALLED SYMMETRICALLY ABOUT THE CENTERLINE OF THE TRUSS. THE NUMBER AND SPACING OF PANEL SUPPORT MEMBERS SHALL BE DETERMINED BY THE CONTRACTOR BASED ON THE WIDTH OF THE SIGN AND CROWN PANELS AND THE SUPPORT MEMBER SPACING PARAMETERS. SIGN PANELS SHALL BE SUPPORTED BY NO LESS THAN 3 SUPPORT MEMBERS. CROWN PANELS SHALL BE SUPPORTED BY NO LESS THAN 2 SUPPORT MEMBERS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FIT OF THE SIGN SUPPORT STRUCTURES ON THE CONSTRUCTED FOUNDATIONS. PRIOR TO FABRICATION THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS TO VERIFY ALL SIGN SUPPORT DIMENSIONS DEPENDANT UPON THE CONSTRUCTED FOUNDATIONS. THE OVERHEAD MEMBER SHALL BE TEMPORARILY SUPPORTED, IN ORDER TO BRING ALL PLATES OF THE CONNECTIONS INTO FIRM CONTACT, WHILE THE HIGH STRENGTH BOLTS ARE INSTALLED AND TENSIONED. THE CONTRACTOR SHALL TAKE THE PROPER PRECAUTIONS TO ENSURE THE STABILITY OF ALL STRUCTURAL ELEMENTS UNTIL THE TOTAL STRUCTURE IS ERECTED.

THE COST OF THE TUBULAR STEEL MEMBERS, STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS, HIGH-STRENGTH BOLTS AND ANCHORAGE MATERIALS, INCLUDING THE DESIGN, FABRICATION, COATING AND ERECTION, SHALL BE PAID FOR UNDER THE ITEM "4 CHORD TRUSS CANTILEVER SIGN STRUCTURE". THE COST OF FOUNDATION EXCAVATION, REINFORCEMENT AND CONCRETE, INCLUDING THE DESIGN AND FABRICATION, SHALL BE PAID FOR UNDER THE ITEM "DRILLED SHAFT TRAFFIC STRUCTURE FOUNDATION".



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

**END VIEW**  
SCALE: 1" = 1'-0"

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**A. ST. GERMAIN/C.B.**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

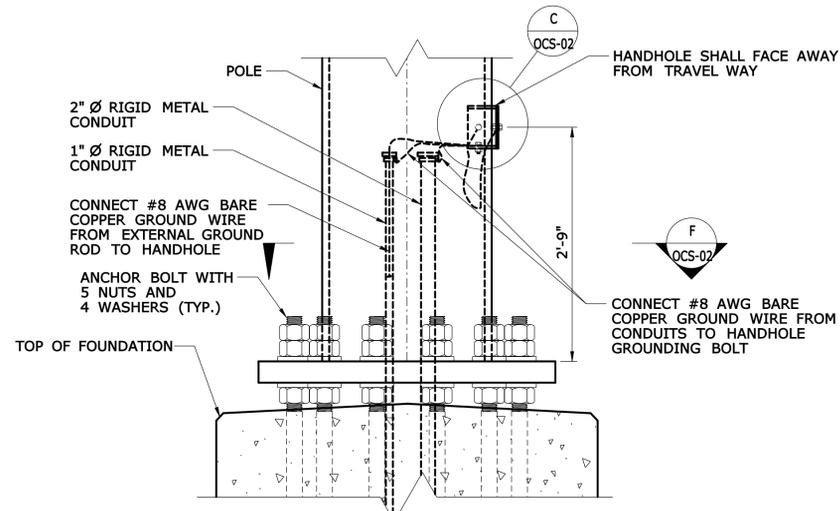
**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



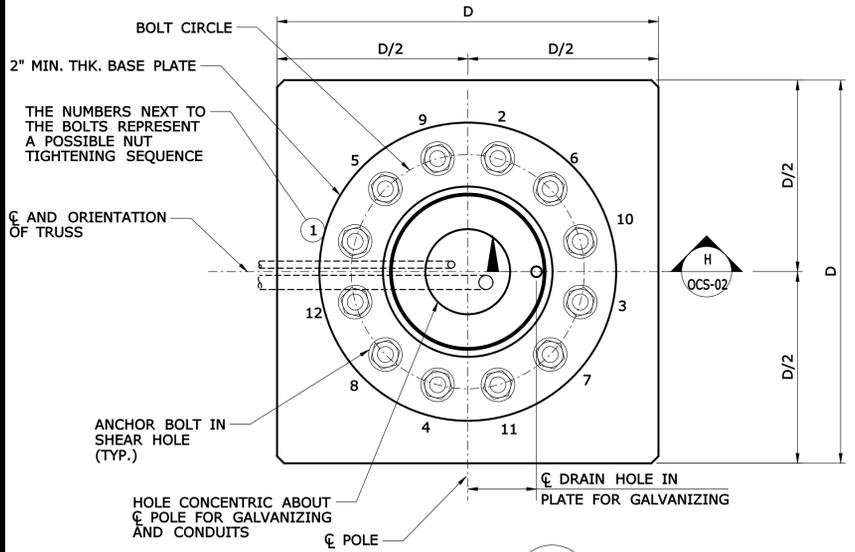
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**4 CHORD CANTILEVER TRUSS SIGN STRUCTURE**

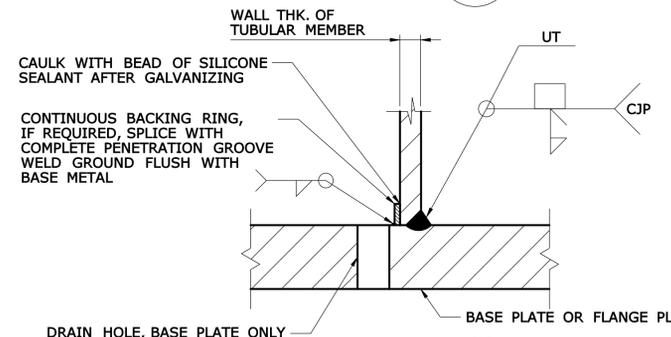
PROJECT NO.  
**34-313**  
DRAWING NO.  
**OCS-01**  
SHEET NO.  
**05.57**



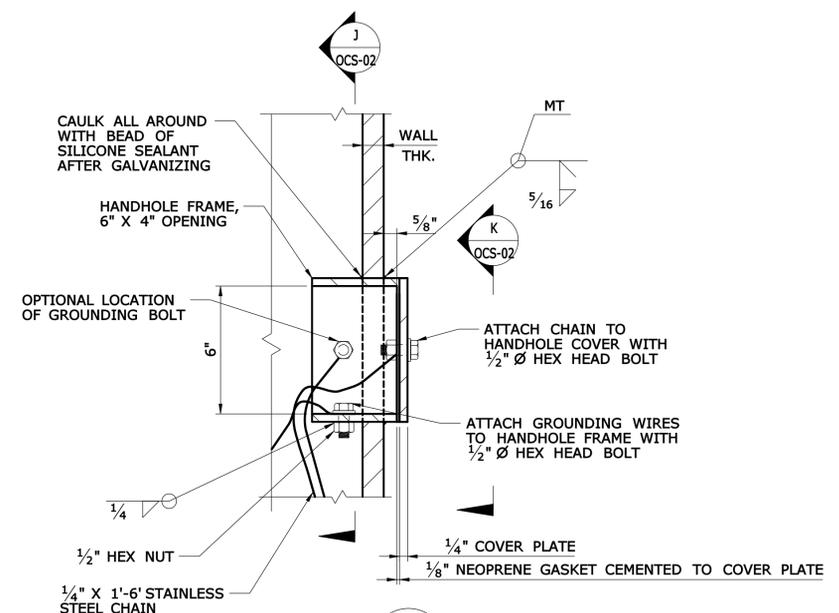
**DETAIL B**  
SCALE: 1" = 1'-0"  
OCS-02



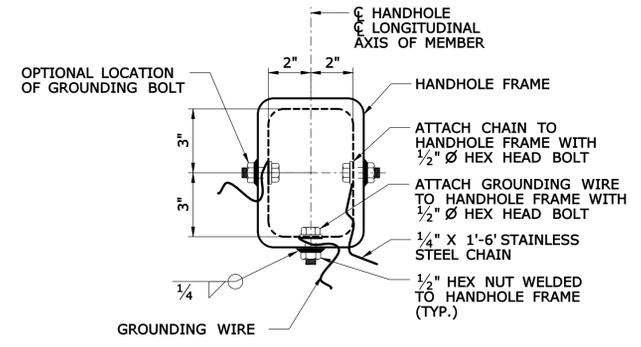
**SECTION F**  
SCALE: 1" = 1'-0"  
OCS-02



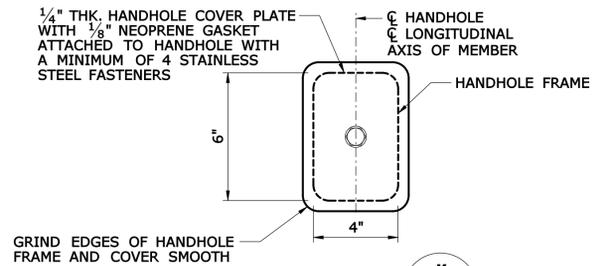
**DETAIL H**  
SCALE: 3" = 1'-0"  
OCS-02



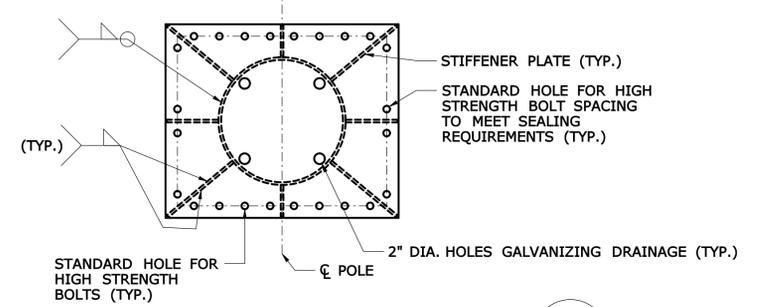
**DETAIL C**  
SCALE: 3" = 1'-0"  
OCS-02



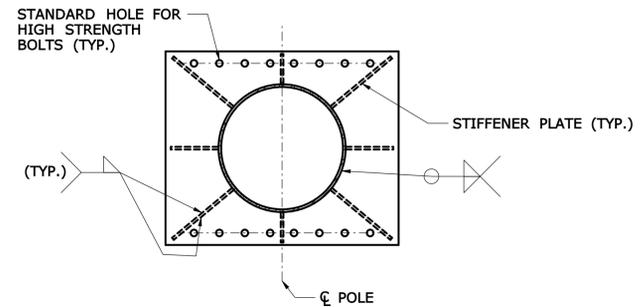
**SECTION J**  
SCALE: 3" = 1'-0"  
OCS-02



**DETAIL K**  
SCALE: 3" = 1'-0"  
OCS-02



**SECTION - TOP CONNECTION PLATE D**  
SCALE: 3/4" = 1'-0"  
OCS-02



**SECTION - BOTTOM CONNECTION PLATE E**  
SCALE: 3/4" = 1'-0"  
OCS-02

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
034	03/18	OCS-02.dwg	06/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**A. ST. GERMAIN/C.B.**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

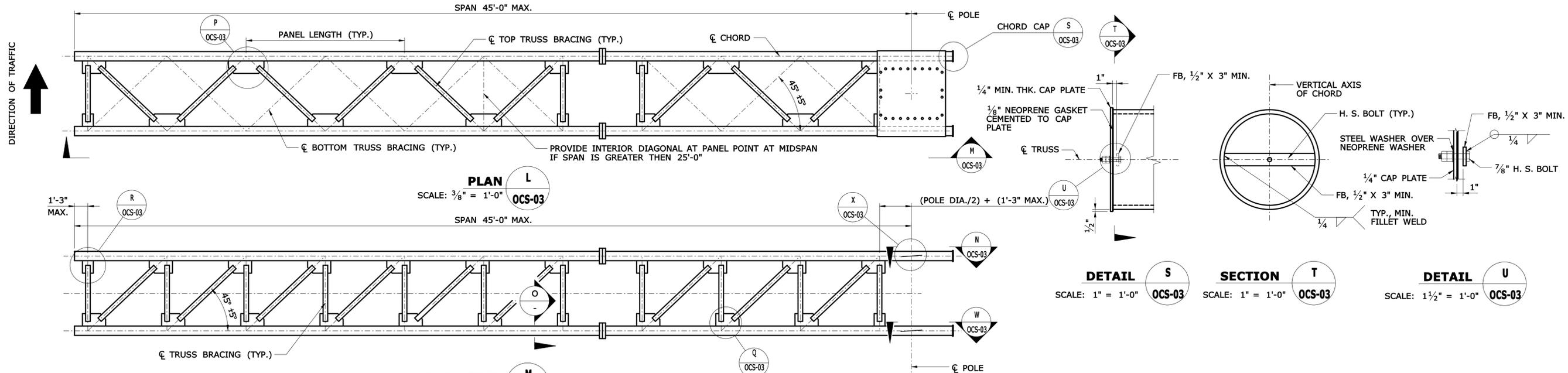
**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

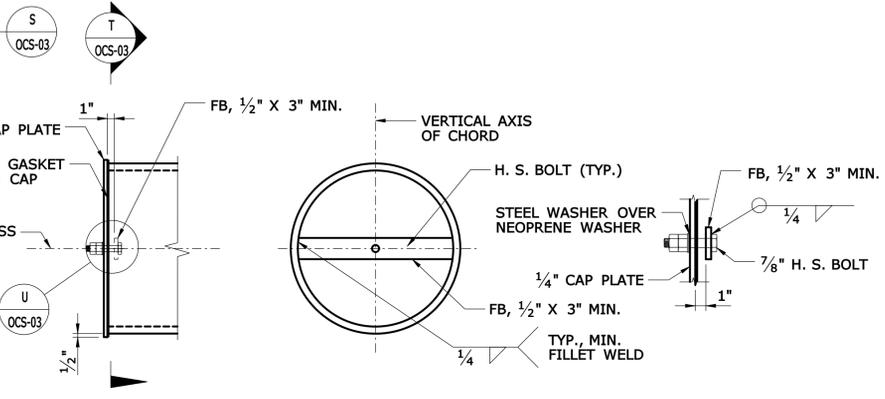
TOWN:  
**DANBURY**  
DRAWING TITLE:  
**TRUSS CANTILEVER SIGN STRUCTURE DETAILS - 1**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**OCS-02**  
SHEET NO.  
**05.58**



**PLAN L**  
SCALE: 3/8" = 1'-0"  
OCS-03

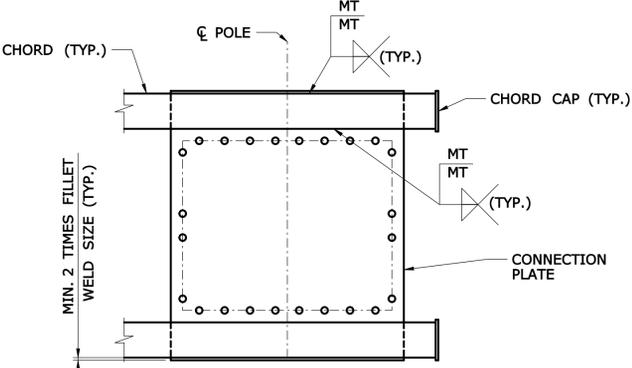
**ELEVATION M**  
SCALE: 3/8" = 1'-0"  
OCS-03



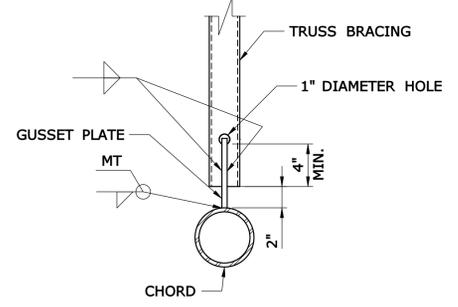
**DETAIL S**  
SCALE: 1" = 1'-0"  
OCS-03

**SECTION T**  
SCALE: 1" = 1'-0"  
OCS-03

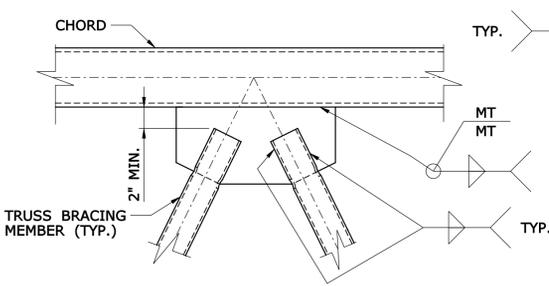
**DETAIL U**  
SCALE: 1 1/2" = 1'-0"  
OCS-03



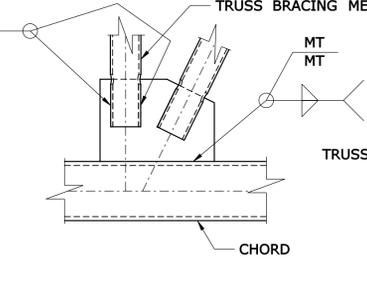
**VIEW - TOP TRUSS CONNECTION PLATE N**  
SCALE: 3/4" = 1'-0"  
OCS-03



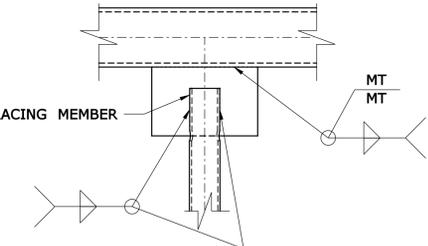
**SECTION O**  
SCALE: 1 1/2" = 1'-0"  
OCS-03



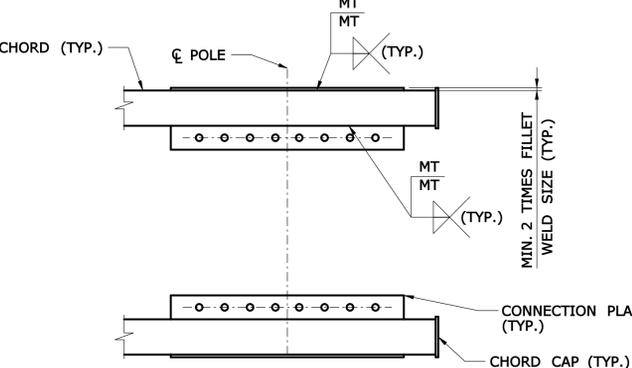
**GUSSET PLATE DETAIL P**  
SCALE: 1 1/2" = 1'-0"  
OCS-03



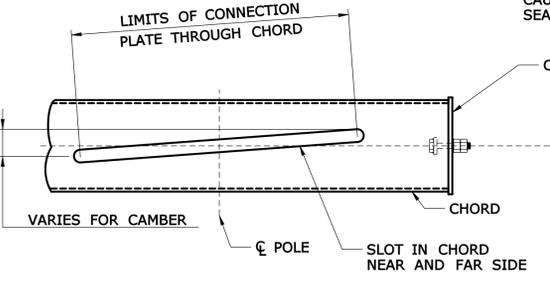
**GUSSET PLATE DETAIL Q**  
SCALE: 1 1/2" = 1'-0"  
OCS-03



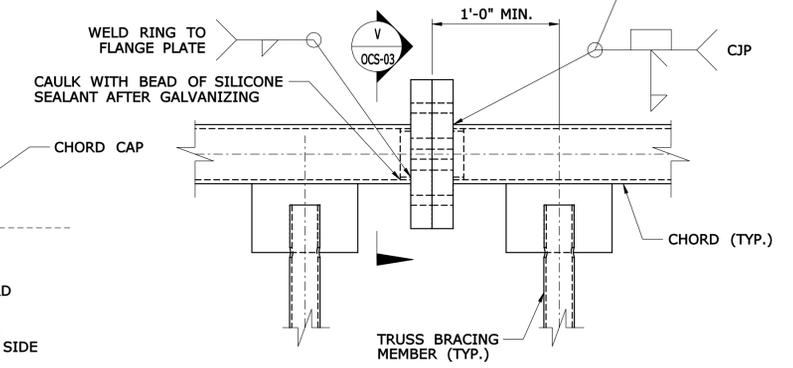
**GUSSET PLATE DETAIL R**  
SCALE: 1 1/2" = 1'-0"  
OCS-03



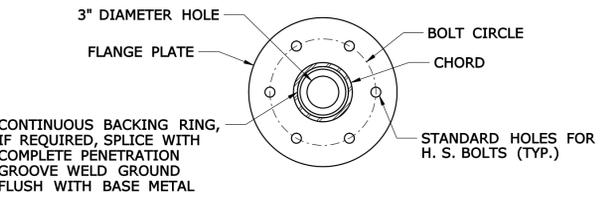
**VIEW - BOTTOM TRUSS CONNECTION PLATE W**  
SCALE: 3/4" = 1'-0"  
OCS-03



**SLOTTED CHORD DETAIL X**  
SCALE: 1 1/2" = 1'-0"  
OCS-03



**CHORD SPLICE Y**  
SCALE: 1 1/2" = 1'-0"  
OCS-03



**SECTION V**  
SCALE: 1 1/2" = 1'-0"  
OCS-03

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
004	03/13	OCS-03.dwg	06/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**A. ST. GERMAIN/C.B.**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED

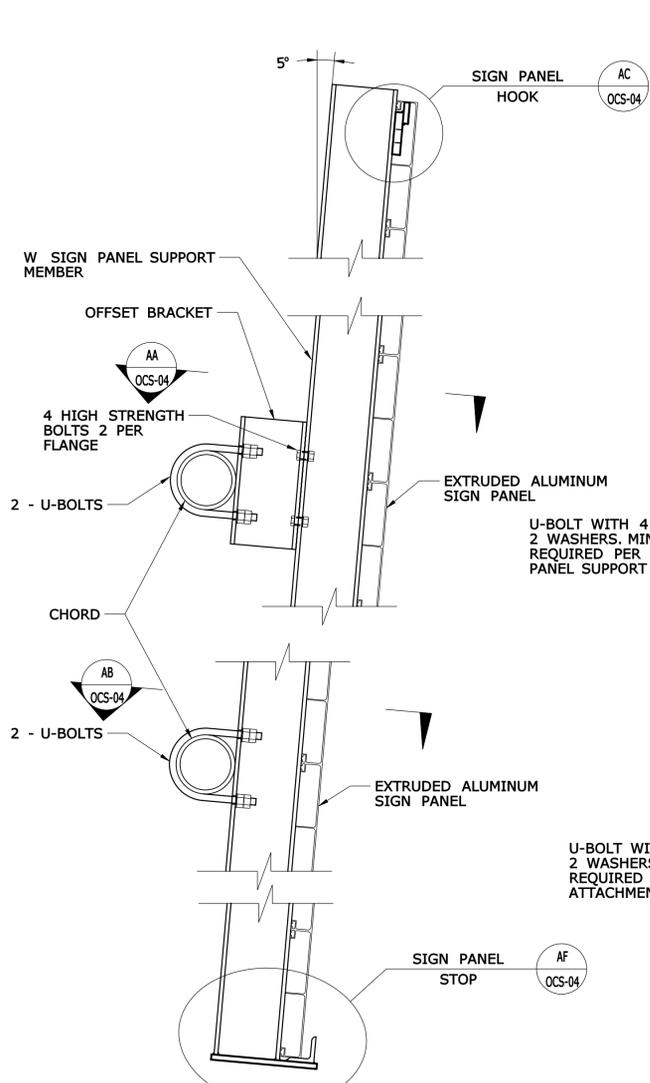
**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



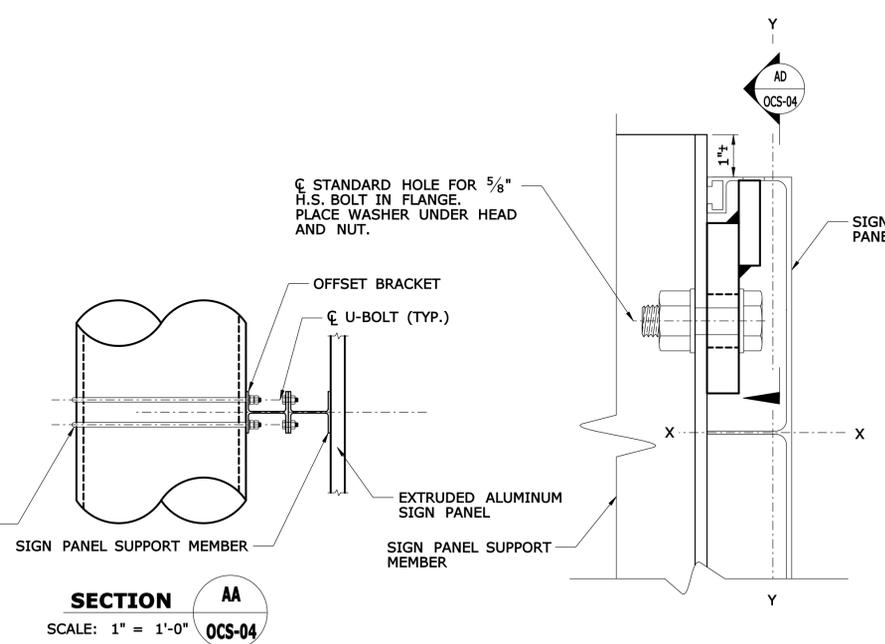
PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**TRUSS CANTILEVER SIGN STRUCTURE DETAILS - 2**

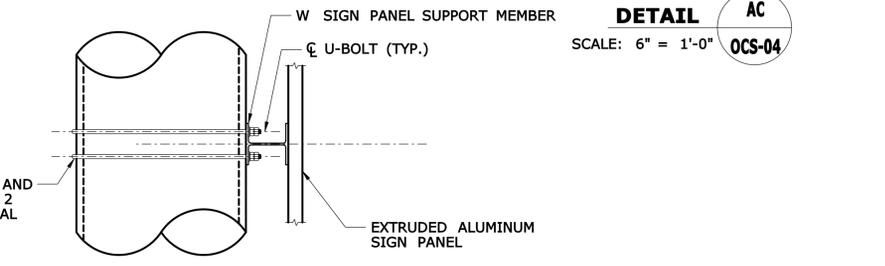
PROJECT NO.  
**34-313**  
DRAWING NO.  
**OCS-03**  
SHEET NO.  
**05.59**



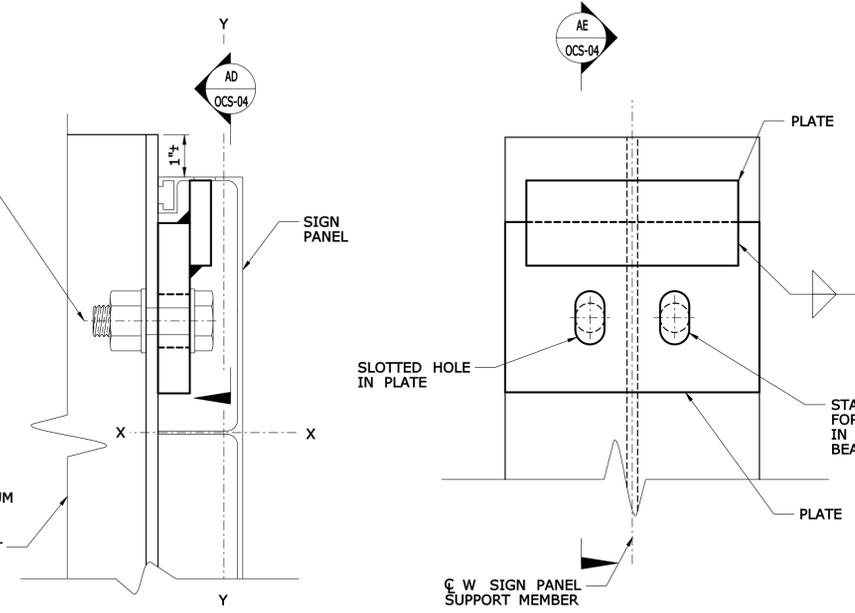
**VERTICAL ATTACHMENT DETAIL**  
SCALE: 1 1/2" = 1'-0"  
Z OCS-04



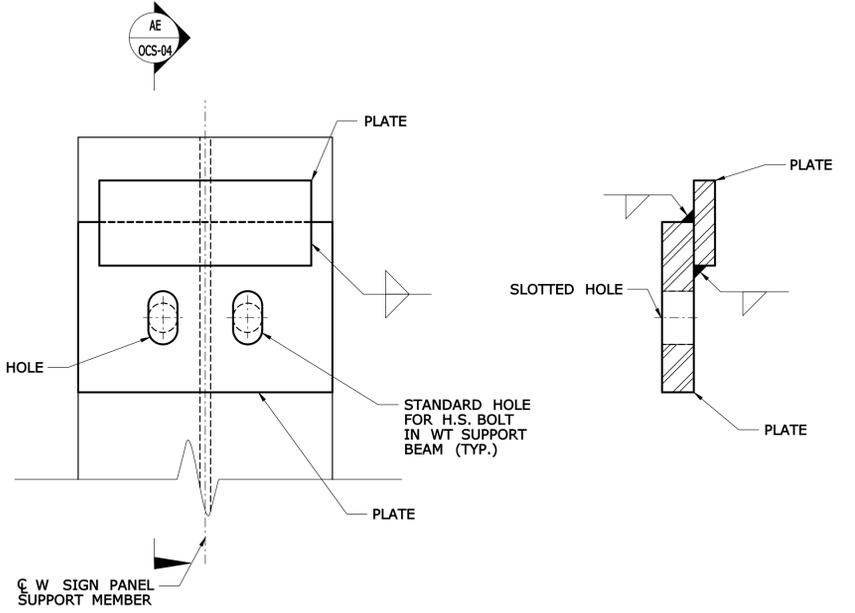
**SECTION AA**  
SCALE: 1" = 1'-0"  
OCS-04



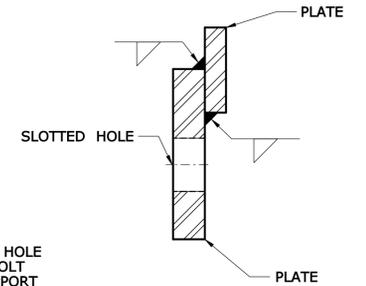
**SECTION AB**  
SCALE: 1" = 1'-0"  
OCS-04



**DETAIL AC**  
SCALE: 6" = 1'-0"  
OCS-04

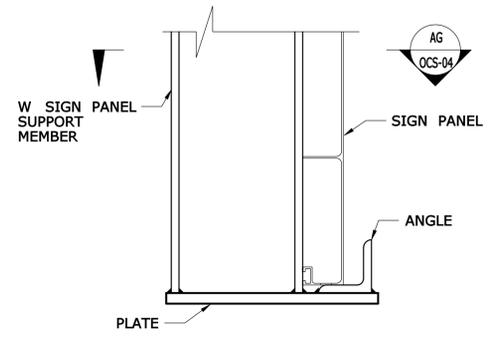


**SECTION AD**  
SCALE: 6" = 1'-0"  
OCS-04

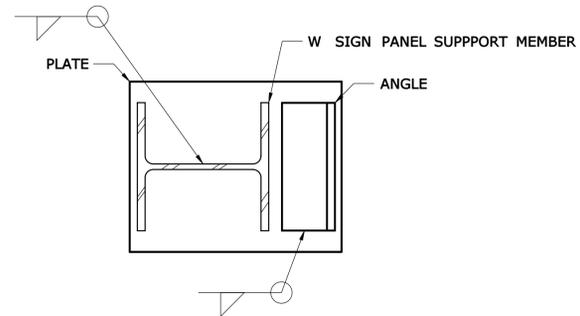


**SECTION AE**  
SCALE: 6" = 1'-0"  
OCS-04

**TYPICAL SIGN HOOK DETAILS**



**DETAIL AF**  
SCALE: 3" = 1'-0"  
OCS-04



**DETAIL AG**  
SCALE: 3" = 1'-0"  
OCS-04

**TYPICAL SIGN STOP DETAILS**

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
034	0318	OCS-04.dwg	06/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**A. ST. GERMAIN/C.B.**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE IN FEET  
0 40 80  
SCALE 1"=40'

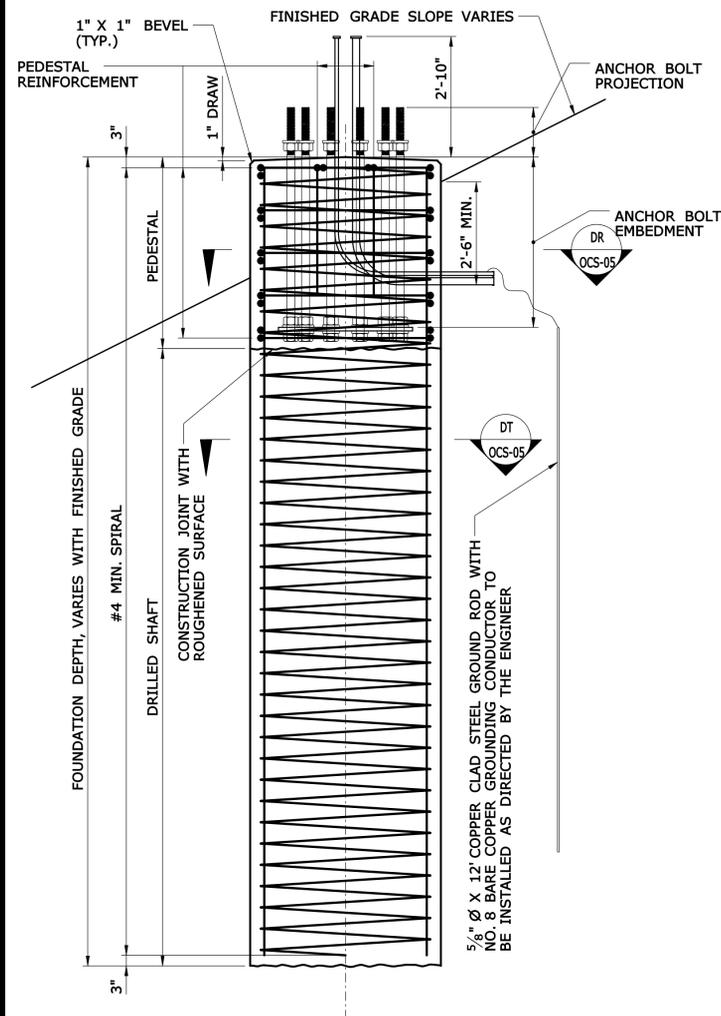
**STATE OF CONNECTICUT**  
DEPARTMENT OF TRANSPORTATION  
ENGINEER: **AECOM Technical Services, Inc.**  
APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**  
DRAWING TITLE:  
**TRUSS CANTILEVER SIGN STRUCTURE DETAILS - 3**

PROJECT NO.  
**34-313**  
DRAWING NO.  
**OCS-04**  
SHEET NO.  
**05.60**



**FOUNDATION NOTES**

THE DRILLED SHAFT TRAFFIC STRUCTURE FOUNDATION SHALL BE DESIGNED, FABRICATED, AND CONSTRUCTED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIAL PROVISION "DRILLED SHAFT TRAFFIC STRUCTURE FOUNDATION".

FOR THE DESIGN OF THE DRILLED SHAFT TRAFFIC STRUCTURE FOUNDATION, THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE SUBSURFACE CONDITIONS (CHARACTER OF THE SOIL AND ROCK, PRESENCE OF GROUND WATER, ETC.) IN THE LOCATION OF, ADJACENT TO AND BELOW THE SHAFT EXCAVATION. SOIL BORINGS, IF AVAILABLE, ARE INCLUDED WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR MAY OBTAIN SUBSURFACE INFORMATION AT HIS OWN EXPENSE.

THE DESIGN OF THE FOUNDATION SHALL BE COORDINATED WITH THE SIGN SUPPORT AND THE SUPPORT ANCHORAGE TO ENSURE THAT THE FOUNDATION IS ADEQUATE FOR THE SUPPORT REACTIONS AND TO AVOID CONFLICTS BETWEEN THE EMBEDDED SUPPORT ANCHORAGE AND THE FOUNDATION REINFORCEMENT.

THE SIGN SUPPORT SHALL NOT BE INSTALLED UNTIL BOTH THE PEDESTAL CONCRETE AND SHAFT CONCRETE HAVE REACHED THE DESIGN COMPRESSIVE STRENGTH,  $f'_c$ , OF 4,000 PSI AT 28 DAYS.

ADDITIONAL RIGID METAL CONDUITS SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.

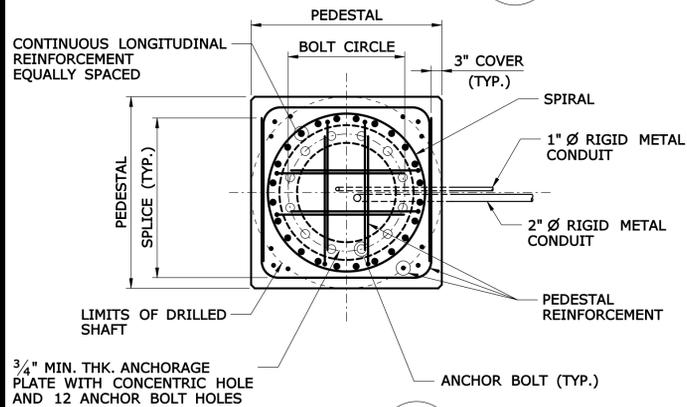
ALL EMPTY RIGID METAL CONDUITS SHALL BE CAPPED.

THE RIGID METAL CONDUIT SWEEPS SHALL EXTEND A MINIMUM 2'-0" FROM THE SIDE OF THE FOUNDATION.

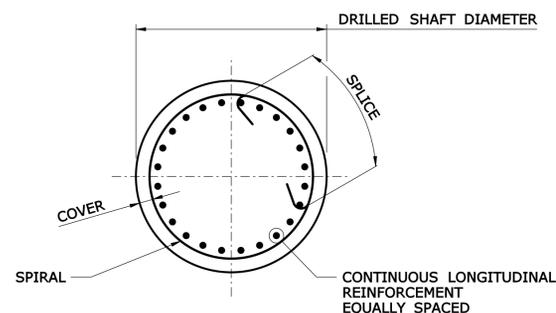
THE NO. 8 AWG BARE COPPER CONDUCTOR SHALL BE CONNECTED TO THE EXTERNAL GROUND ROD USING A GROUNDING CLAMP APPROVED FOR DIRECT BURIAL.

THE COST OF FOUNDATION EXCAVATION, REINFORCEMENT, RIGID METAL CONDUIT AND CONCRETE, INCLUDING THE DESIGN AND FABRICATION, SHALL BE PAID FOR UNDER THE ITEM "DRILLED SHAFT TRAFFIC STRUCTURE FOUNDATION".

**FOUNDATION IN EARTH DS**  
SCALE: 1/2" = 1'-0"  
OCS-05



**SECTION DR**  
SCALE: 1/2" = 1'-0"  
OCS-05



**SECTION DT**  
SCALE: 1/2" = 1'-0"  
OCS-05

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
004	03/18	OCS-05.dgn	06/2014

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAWER:  
**A. ST. GERMAIN/C.B.**  
CHECKED BY:  
**J. HAPKIEWICZ**  
SCALE AS NOTED


**STATE OF CONNECTICUT**  
 DEPARTMENT OF TRANSPORTATION

ENGINEER: **AECOM Technical Services, Inc.**  
 APPROVED BY: **J.T. HAPKIEWICZ, P.E.** DATE: 06/11/2014



PROJECT TITLE:  
**I-84 INTERCHANGES 5 & 6 IMPROVEMENTS**

TOWN:  
**DANBURY**

DRAWING TITLE:  
**DRILLED SHAFT TRAFFIC STRUCTURE FOUNDATION**

PROJECT NO.  
**34-313**

DRAWING NO.  
**OCS-05**

SHEET NO.  
**05.61**