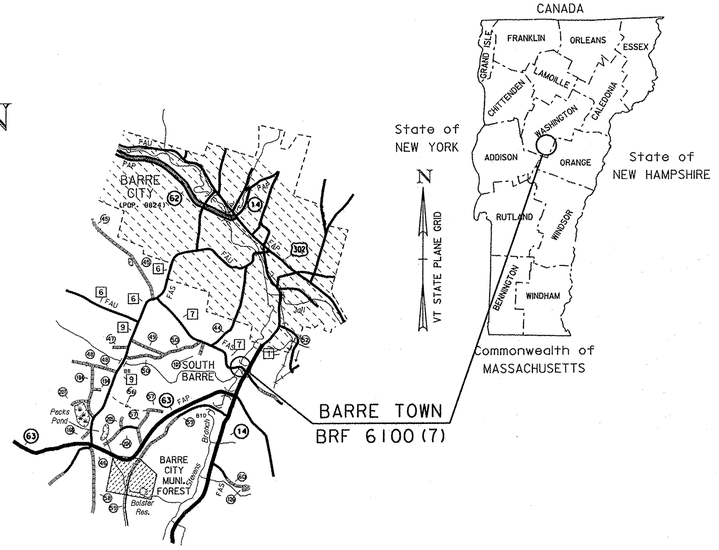
STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF BARRE

COUNTY OF WASHINGTON

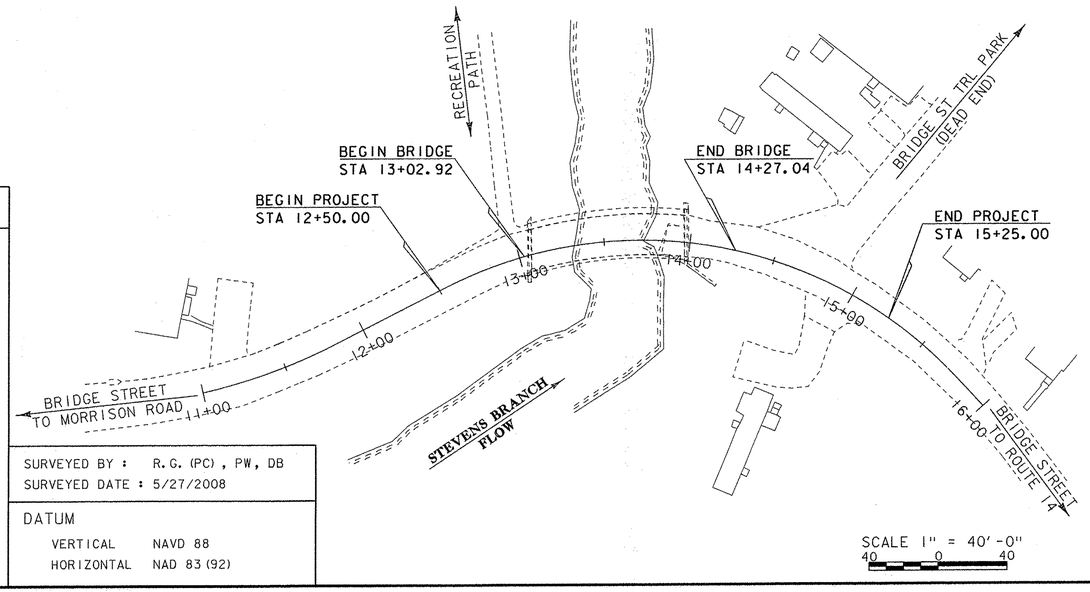
ROUTE NO : TH 7 (BRIDGE STREET) MAJOR COLLECTOR BRIDGE NO : 11



PROJECT LOCATION : BRIDGE NO 11 IS LOCATED ON TH 7 (BRIDGE STREET), APPROXIMATELY 0.10 MILES WEST OF THE INTERSECTION WITH ROUTE 14

PROJECT DESCRIPTION : REPLACEMENT OF BRIDGE NO 11 ON EXISTING ALIGNMENT, INCLUDING RELATED CHANNEL AND APPROACH WORK.

LENGTH OF STRUCTURE : 124.12 FEET.
LENGTH OF ROADWAY : 150.88 FEET.
LENGTH OF PROJECT : 275.00 FEET.





SCALE 1" = 40'-0"
40 0 40

RECORD PLANS

CONTRACTOR: MILLER CONSTRUCTION, INC – WINDSOR, VT

RESIDENT ENGINEER: PETE HODGSON

CONSTRUCTION BEGAN: APRIL 1, 2013

CONSTRUCTION COMPLETE: OCTOBER 30, 2013

RECORD PLANS BY: PETE HODGSON & C. PIERCE

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY _____ RESIDENT ENGINEER

DATE 3/14/16

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

QUALITY ASSURANCE PROGRAM: LEVEL 2

CONVENTIONAL SYMBOLS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
FENCE LINE
STONE WALL
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
CONTROL OF ACCESS
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS
TOP OF CUT
TOE OF SLOPE

SURVEYED BY : R.G. (PC), PW, DB
SURVEYED DATE : 5/27/2008

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED _____ DATE 3-26-12

PROJECT MANAGER : J. LACROIX

PROJECT NAME : BARRE TOWN
PROJECT NUMBER : BRF 6100(7)

SHEET 1 OF 70 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version 11.08.15

LRFD

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TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2013	3400	380	53	3	180
2033	4100	460	53	3.6	260

20 year ESAL for flexible pavement from 2013 to 2033 : 594000

40 year ESAL for flexible pavement from 2013 to 2053 : 1323000

Design Speed : 25 mph

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: vised October 2010

DRAINAGE AREA : 34.0 sq. mi.
CHARACTER OF TERRAIN : Hilly to mountainous, mostly rural, mostly forested
STREAM CHARACTERISTICS : Sinuous, incised, gorge at bridge site
NATURE OF STREAMBED : Mixed upstream, ledge at bridge

PEAK FLOW DATA

Q 2.33 =	1600 cfs	Q 50 =	5950 cfs
Q 10 =	3325 cfs	Q 100 =	7225 cfs
Q 25 =	4750 cfs	Q 500 =	10,850 cfs

DATE OF FLOOD OF RECORD : 1927
ESTIMATED DISCHARGE: unknown
WATER SURFACE ELEV.: unknown
NATURAL STREAM VELOCITY : @ Q25 = 25.2 fps
ICE CONDITIONS : moderate
DEBRIS: moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? no
IS ORDINARY RISE RAPID? no
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? no
IF YES, DESCRIBE:

WATERSHED STORAGE: < 1%
HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span steel beam bridge
YEAR BUILT: 1949
CLEAR SPAN(NORMAL TO STREAM): 89'
VERTICAL CLEARANCE ABOVE STREAMBED: 36' +/-
WATERWAY OF FULL OPENING: 1965 sq. ft.
DISPOSITION OF STRUCTURE: Replace
TYPE OF MATERIAL UNDER SUBSTRUCTURE: See borings

WATER SURFACE ELEVATIONS AT:

Q2.33 =	707.9'	VELOCITY =	21.2 fps
Q10 =	710.1'	"	24.1 fps
Q25 =	711.5'	"	25.8 fps
Q50 =	712.6'	"	26.8 fps
Q100 =	713.7'	"	27.7 fps

LONG TERM STREAMBED CHANGES: None noted

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: N/A
RELIEF ELEVATION: 732.6'
DISCHARGE OVER ROAD @Q100: N/A

UPSTREAM STRUCTURE

TOWN: Barre Town — DISTANCE: 2000'
HIGHWAY # : VT 63 — STRUCTURE #: BR 5
CLEAR SPAN: 15' + 15' = 30' — CLEAR HEIGHT: 12'
YEAR BUILT: 1970 — FULL WATERWAY: 360 sf
STRUCTURE TYPE: Twin cell RC Box

DOWNSTRUCTURE STRUCTURE

TOWN: Barre Town — DISTANCE: 3200'
HIGHWAY # : Parkside Terrace — STRUCTURE #: BR 13
CLEAR SPAN: 82' — CLEAR HEIGHT: 26'
YEAR BUILT: 1997 — FULL WATERWAY: 1750 sf
STRUCTURE TYPE: Welded plate girder

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A. STR	4A. STR.	5A. SEMI
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY	2.47	1.1					
POSTING							
OPERATING	3.2	1.42	2.11	1.46	2.2	2.11	2.15
COMMENTS:							

PILE DRIVING AND TESTING REQUIREMENTS

1. NOMINAL PILE DRIVING CAPACITY — R_{ndr}: 627.00 KIP
2. PILE TEST RESISTANCE FACTOR — ϕ: 0.65
3. MAXIMUM PILE TIP ELEVATION — VARIES
4. THREE DYNAMIC PILES TESTS REQUIRED

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span curved steel girder

CLEAR SPAN(NORMAL TO STREAM): 116'
VERTICAL CLEARANCE ABOVE STREAMBED: 38'
WATERWAY OF FULL OPENING: 2145 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	#REF!	VELOCITY=	21.2 fps
Q10 =	#REF!	"	24.1 fps
Q25 =	#REF!	"	25.8 fps
Q50 =	#REF!	"	26.8 fps
Q100 =	#REF!	"	27.7 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: N/A
RELIEF ELEVATION: 734.3'
DISCHARGE OVER ROAD @Q100: N/A

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 732.3'
VERTICAL CLEARANCE: @ Q25 = 20.8'

SCOUR: Abutments to be founded on ledge

REQUIRED CHANNEL PROTECTION: Stone Fill, Type II

PERMIT INFORMATION

AVERAGE DAILY FLOW:	70 cfs	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	30 cfs	1.5'
ORDINARY HIGH WATER:	700 cfs	4.0'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: None required
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY

DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_p:	3.0 INCH
3. DESIGN SPAN	L:	120.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	--- INCH
5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	f_y:	270 KSI
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	6.0 KSI
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	5.0 KSI
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'_c:	---
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	3.5 KSI
11. CONCRETE, CLASS C	f'_c:	3.0 KSI
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270 (WEATHERING)	f_y:	50 KSI
14. SOIL UNIT WEIGHT	γ:	0.140 KCF
15. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	---
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
17. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	22.2 KSF
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	0.45
19. NOMINAL AXIAL PILE RESISTANCE	q_p:	
20. PILE YIELD STRENGTH ASTM A572	f_y:	50 KSI
21. PILE SIZE		HP 14X117
22. EST. AVG. PILE LENGTH	L_p:	25 FT
23. PILE RESISTANCE FACTOR	ϕ:	0.65
24. LATERAL PILE DEFLECTION	Δ:	---
25. BASIC WIND SPEED	V_{3s}:	---
26. MINIMUM GROUND SNOW LOAD	p_g:	---
27. SEISMIC DATA — PGA: ---	S_s:	---
	S_1:	---

PROJECT NAME: **BARRE TOWN**
PROJECT NUMBER: **BRF 6100(7)**

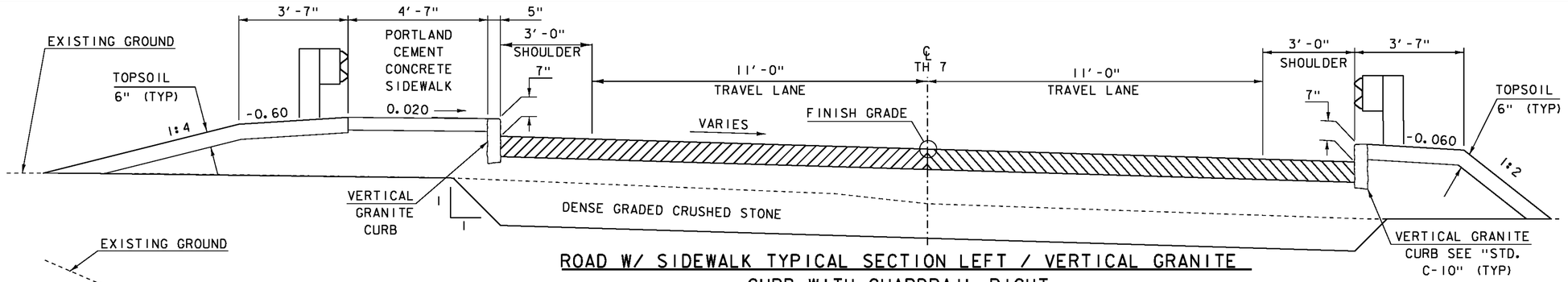
FILE NAME: **s06j002pi.xls**
PROJECT LEADER: **J. LACROIX**
DESIGNED BY: **T. FILLBACH**
PRELIMINARY INFORMATION SHEET 1

PLOT DATE: 3/19/2012
DRAWN BY: **R. PELLETT**
CHECKED BY: **T. FILLBACH**

MATERIAL TOLERANCES

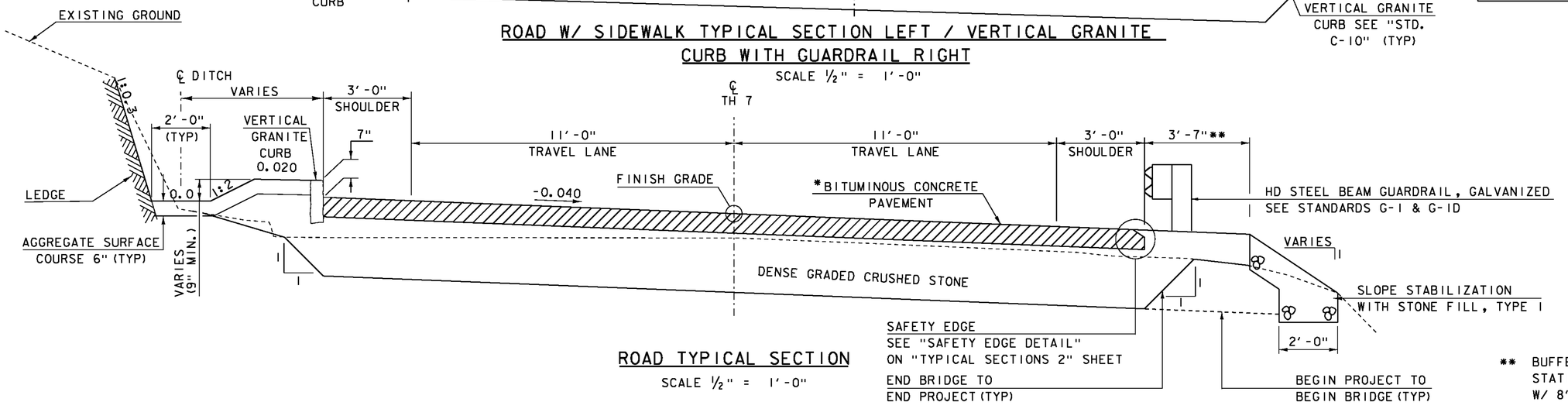
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"



ROAD W/ SIDEWALK TYPICAL SECTION LEFT / VERTICAL GRANITE CURB WITH GUARDRAIL RIGHT

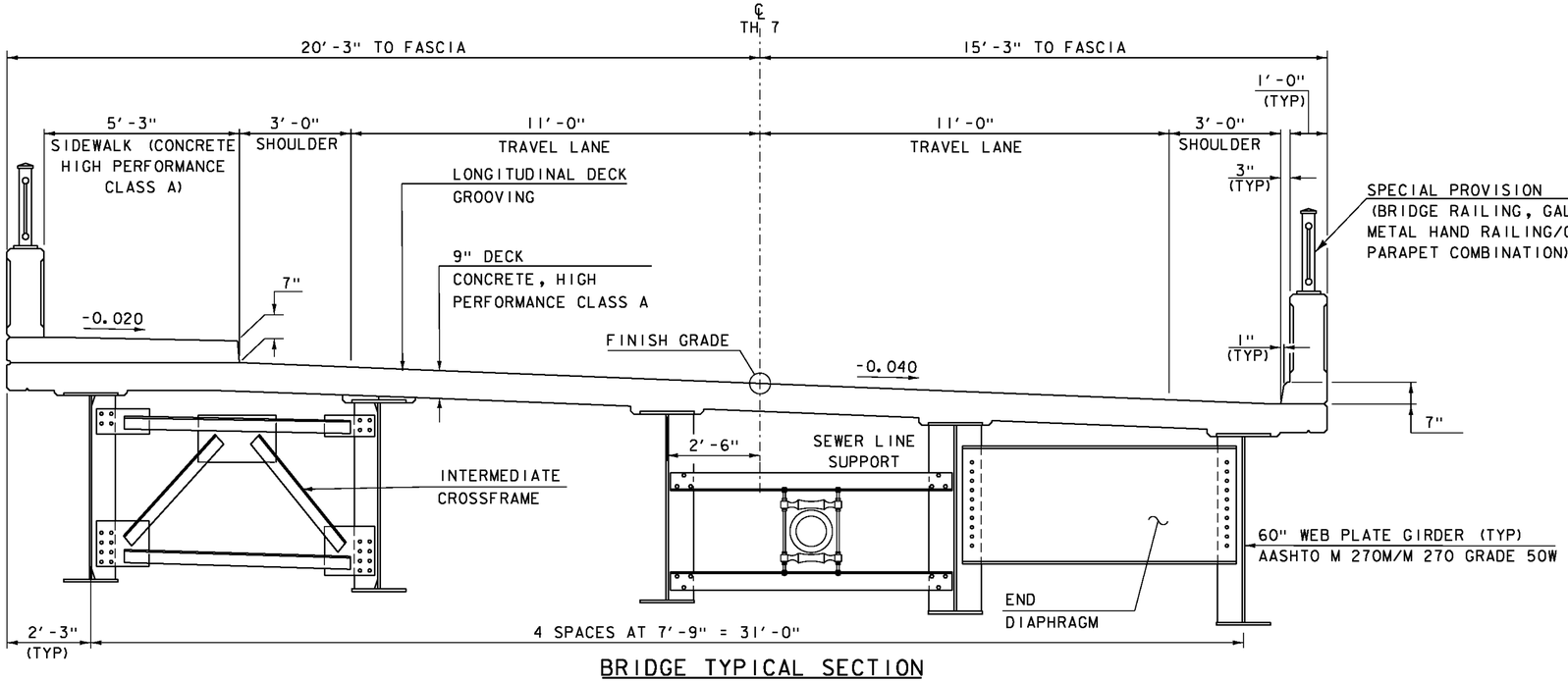
SCALE 1/2" = 1'-0"



ROAD TYPICAL SECTION

SCALE 1/2" = 1'-0"

** BUFFER SHALL BE 2'-7" BETWEEN STATIONS 12+45.50 AND 12+98.50 W/ 8' STEEL POSTS



BRIDGE TYPICAL SECTION

SCALE 1/2" = 1'-0"

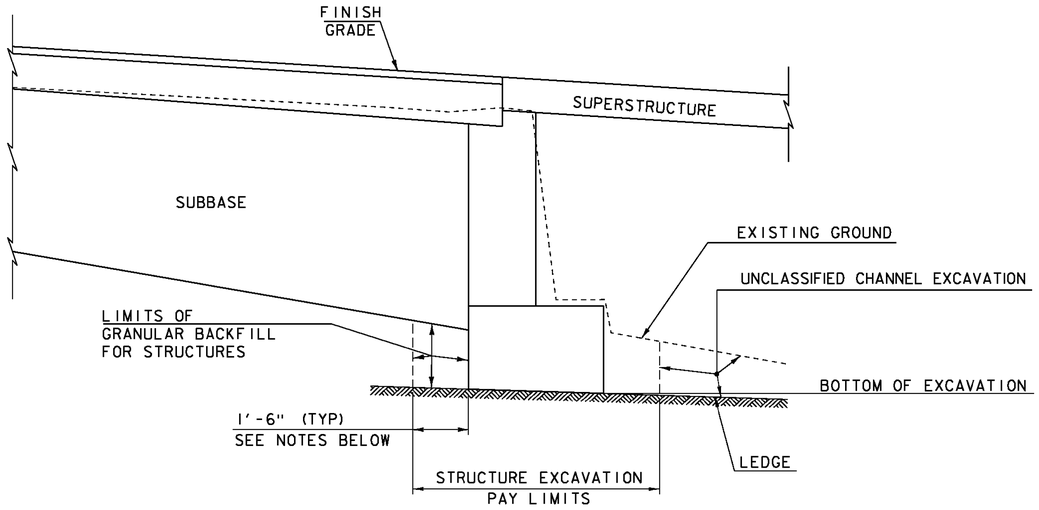
* 1 1/2" BITUMINOUS CONCRETE PAVEMENT (TYPE III S)
1 1/2" BITUMINOUS CONCRETE PAVEMENT (TYPE III S)
2 1/2" BITUMINOUS CONCRETE PAVEMENT (TYPE II S)
2 1/2" BITUMINOUS CONCRETE PAVEMENT (TYPE II S)

2'-0" SUBBASE OF DENSE GRADED CRUSHED STONE

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

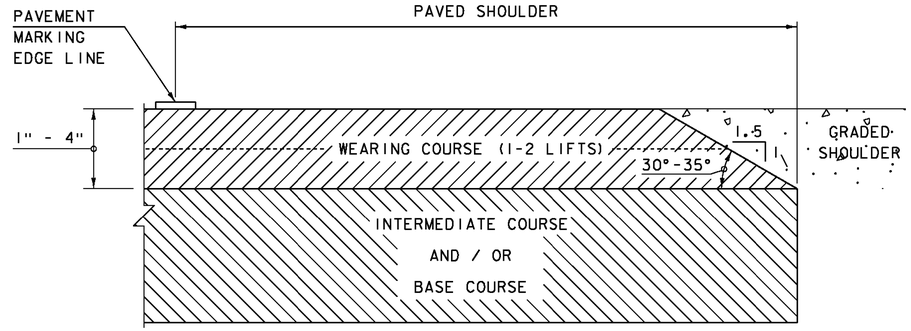
FILE NAME: s06j002typ.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
TYPICAL SECTIONS 1

PLOT DATE: 27-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: T. FILLBACH
SHEET 3 OF 70



EARTHWORK SECTION @ ABUT #1

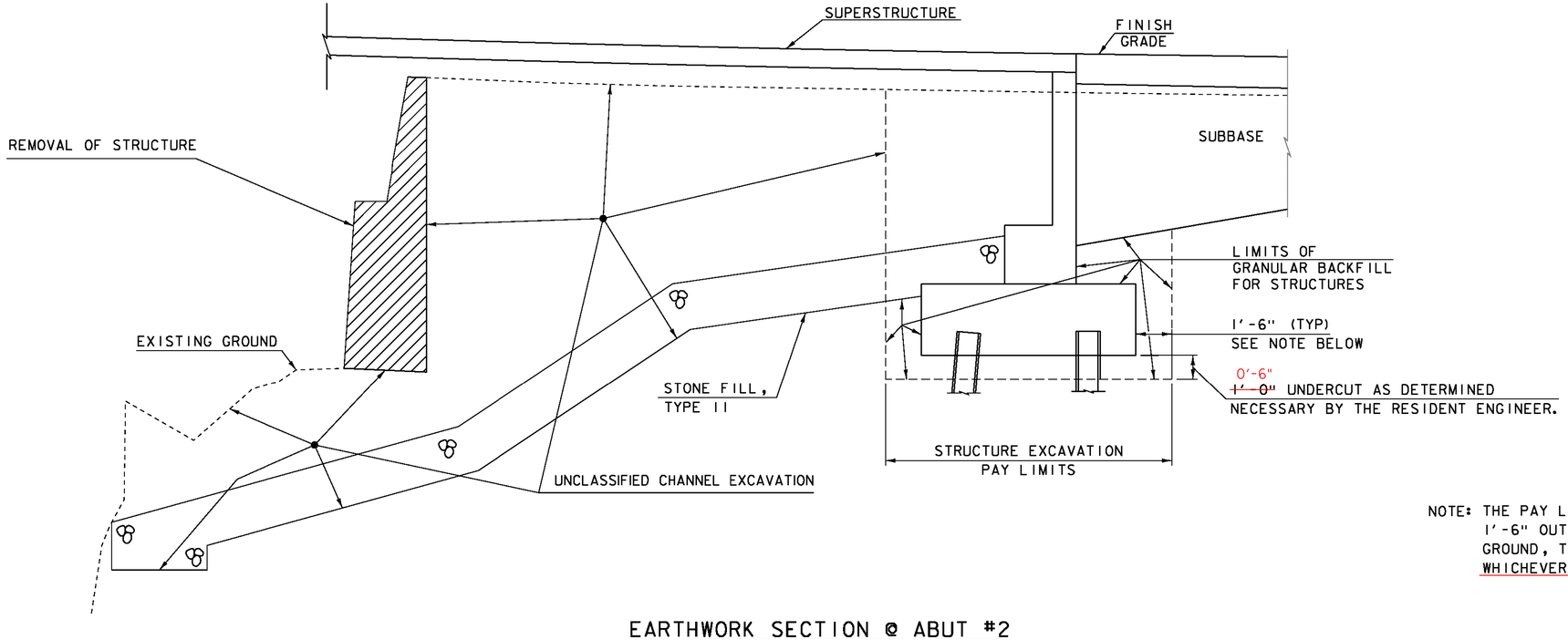
(NOT TO SCALE)



SAFETY EDGE DETAIL

NOT TO SCALE

NOTE: LEVELING COURSE MAY INCLUDE THE "SAFETY EDGE" AT THE CONTRACTOR'S CHOICE.



EARTHWORK SECTION @ ABUT #2

(NOT TO SCALE)

NOTE: THE PAY LIMITS OF "STRUCTURE EXCAVATION" SHALL BE NO MORE THAN 1'-6" OUTSIDE THE PERIMETER OF THE FOOTING ,UP TO EXISTING GROUND, THE BOTTOM OF SUBBASE, OR OTHER EXACAVTION LIMIT, WHICHEVER IS LOWEST. CONTRADICTS SECTION LIMITS

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

FILE NAME: s06j002typ.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: T. FILLBACH	CHECKED BY: T. FILLBACH
TYPICAL SECTIONS 2	SHEET 4 OF 70

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATION FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION, AND ITS LATEST REVISIONS.

2. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT UNLESS OTHERWISE NOTED.

3. ITEM 529.15 REMOVAL OF STRUCTURE IS FOR THE COMPLETE REMOVAL OF THE EXISTING BRIDGE, INCLUDING COMPLETE REMOVAL OF THE EXISTING SUPERSTRUCTURE AND ALL PORTIONS OF THE EXISTING ABUTMENTS NOT REMOVED UNDER STRUCTURE EXCAVATION.

4. THE EXISTING STRUCTURAL STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE REMOVED EXISTING STRUCTURAL STEEL.

5. FOR INFORMATION REGARDING THE SEWER MAIN CHANGES AND RELOCATIONS, REFER TO SPECIAL PROVISIONS AND CONSULTANT SEWER MAIN DRAWINGS, INCLUDED IN THIS PLAN SET.

6. THE DETAILS AND DIMENSIONS SHOWN ON THE PROJECT SPECIFIC PLAN AND DETAIL SHEETS TAKE PRECEDENCE OVER THE MORE GENERAL "STRUCTURES DETAIL SHEETS" PROVIDED AFTER THE PLAN SHEETS IN THE INDEX.

7. PAYMENT FOR REMOVAL OF THE EXISTING SEWER MANHOLE WILL BE PAID UNDER ITEM 204.21, TRENCH EXCAVATION OF ROCK.

TRAFFIC CONTROL

8. DURING CONSTRUCTION, BRIDGE STREET WILL BE CLOSED TO THROUGH TRAFFIC. THE TOWN OF BARRE WILL PURCHASE AND INSTALL THE DETOUR SIGNS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ON PROJECT SIGNS, BARRICADES AND TRAFFIC CONTROL FOR THE CLOSING OF THE BRIDGE AND MAINTAINING LOCAL TRAFFIC. THE CONTRACTOR SHALL NOT CLOSE THE BRIDGE PRIOR TO THE PLACEMENT OF THE DETOUR SIGNS.

9. ACCESS TO ALL DRIVES, INCLUDING PEDESTRIAN ACCESS TO THE RECREATION PATH, SHALL BE MAINTAINED DURING CONSTRUCTION. PEDESTRIAN ACCESS ACROSS STEVENS BRANCH IS NOT REQUIRED. PAYMENT WILL BE INCLUDED UNDER CONTRACT ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE). FLAGGERS WILL BE PAID FOR SEPARATELY UNDER ITEM 630.15 "FLAGGERS".

10. FOR ADDITIONAL CONSTRUCTION SIGNING INSTRUCTIONS SEE E-100 SERIES STANDARDS AND THE LATEST EDITION OF THE MUTCD. WHERE CONFLICTS EXIST, THE MUTCD SHALL GOVERN.

EARTHWORK

11. THE STONE FILL, TYPE II SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE THE STRUCTURAL STEEL HAS BEEN SET.

12. THE HEIGHT OF THE FILL BEHIND THE NEW ABUTMENTS SHALL BE LIMITED TO THE BRIDGE SEAT ELEVATION UNTIL THE DECK HAS BEEN POURED AND CURED.

CONCRETE

13. NO TRAFFIC SHALL BE ALLOWED ON THE NEW DECK UNTIL THE CURE PERIOD IS UP AND THE 28 DAY DESIGN STRENGTH IS ATTAINED, AS EVIDENCED BY TEST CYLINDERS CURED UNDER FIELD CONDITIONS.

14. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL; OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 4.0% TOWARDS MID-SPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTHED WITH A MAGNESIUM FLOAT.

15. WATER REPELLENT SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE DECK BETWEEN THE DRIP NOTCHES.

16. NO CONCRETE IN THE ABUTMENTS OR WINGWALLS SHALL BE PLACED ABOVE THE BRIDGE SEAT ELEVATIONS UNTIL THE GIRDERS HAVE BEEN PROFILED AND THE FINISHED GRADE OF THE DECK HAS BEEN DETERMINED.

17. ALL APPROACH SLAB AND SUBSTRUCTURE CONCRETE SHALL BE CONCRETE, HIGH PERFORMANCE CLASS B UNLESS OTHERWISE NOTED AND SHALL BE PAID FOR UNDER ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B". THE DECK AND BRIDGE SIDEWALK CONCRETE SHALL BE CONCRETE, HIGH PERFORMANCE CLASS A AND SHALL BE PAID FOR UNDER ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A". ANY CONCRETE REQUIRED FOR SUBFOOTINGS SHALL BE CONCRETE, CLASS C AND SHALL BE PAID FOR UNDER ITEM 541.30 "CONCRETE, CLASS C. THE RAIL CONCRETE WILL BE CONCRETE, HIGH PERFORMANCE CLASS A AND SHALL BE PAID FOR UNDER ITEM 900.640 SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION)

18. RAIL REINFORCING STEEL SHOWN IN THE PLANS WITH THE DESIGNATION "ER" SHALL BE PAID FOR UNDER ITEM 900.640 SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION).

19. IN ACCORDANCE WITH SUBSECTION 506.23(A) AND AS DIRECTED BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL TAKE MEASURES NECESSARY TO PROTECT ALL SUBSTRUCTURE CONCRETE FROM STAINING DUE TO OXIDE FORMATION ON THE STRUCTURAL STEEL PRIOR TO PLACEMENT OF THE DECK. THESE MEASURES WILL NOT BE PAID FOR SEPARATELY BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B". ANY SUCH STAINING THAT OCCURS PRIOR TO DECK PLACEMENT SHALL BE REMOVED AT NO ADDITIONAL COST TO THE STATE.

20. THE ABANDONED PIPE ON THE ABUTMENT 2 SIDE WILL BE FILLED WITH FLOWABLE CONCRETE AND WILL BE PAID UNDER CONTRACT ITEM 541.45.

STRUCTURAL STEEL

21. SITE CONDITIONS AND GEOMETRY OF THE BRIDGE MAY CONTRIBUTE TO DIFFICULTIES IN ERECTING THE STRUCTURAL STEEL. THE CONTRACTOR IS ENCOURAGED TO VISIT THE SITE PRIOR TO BIDDING TO DETERMINE ANY COMPLICATIONS THAT MAY ARISE WHEN SETTING THE STEEL. ALL COSTS ASSOCIATED WITH ERECTION OF THE STRUCTURAL STEEL SHALL BE INCIDENTAL TO ITEM 506.56 "STRUCTURAL STEEL, CURVED PLATE GIRDER".

22. ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.

23. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.10.

24. ANY HOLES IN THE WEBS OF THE FASCIA GIRDERS THAT ARE NOT OTHERWISE FILLED, SHALL BE FILLED WITH BUTTON HEAD BOLTS. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTIONS 506.19.

25. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH STRENGTH BOLTS IN 15/16" DIAMETER HOLES, PER SECTION 506 UNLESS OTHERWISE NOTED.

26. FLEMING BRACKETS OR SIMILAR FALSE WORK SHALL BE PLACED AT A MAXIMUM SPACING OF 4 FEET. THE BRACKETS SHALL BEAR NEAR THE BOTTOM FLANGE AND IN NO CASE SHALL THEY BEAR ABOVE THE BOTTOM QUARTER OF THE WEB.

27. AFTER THE GIRDERS HAVE BEEN ERECTED, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF THE GIRDERS, AS DIRECTED BY THE RESIDENT ENGINEER, FOR USE IN DETERMINING THE FINISHED GRADE.

28. STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.01.

29. GIRDER WEBS AND CROSS FRAMES SHALL BE PLUMB IN THE FINAL POSITION.

30. CONNECTION PLATES FOR SEWER MAIN SUPPORTS AND ASSOCIATED ATTACHMENT HARDWARE FOR SEWER MAIN SHALL BE PAID FOR UNDER ITEM 900.645 SPECIAL PROVISION (SEWER MAIN ON BRIDGE).

PILES

31. THE PILES SHALL BE HP 14 x 117.

32. A MINIMUM OF THREE DYNAMIC PILE TESTS SHALL BE CONDUCTED.

33. THE PILES SHALL BE DRIVEN TO A NOMINAL RESISTANCE OF 627 KIPS. TO PREVENT DAMAGE TO THE PILES, PILE SHOES ARE REQUIRED AND SHALL BE SUITABLE FOR EMBEDMENT ON BEDROCK SLOPES GREATER THAN 25°.

34. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. ACTUAL IN PLACE LENGTHS MAY VARY.

SUBSTRUCTURES ON BEDROCK

35. IT IS ANTICIPATED THAT THE BEDROCK WILL BE SEVERELY SLOPED AND VARIABLE AT ABUTMENT #2.

36. FOOTINGS OR SUBFOOTINGS FOR SUBSTRUCTURES FOUNDED ON BEDROCK SHALL BE PLACED ON CLEAN COMPETENT ROCK. ALL LOOSE ROCK AND DEBRIS SHALL BE REMOVED.

37. UPON COMPLETION OF THE EXCAVATION FOR SUBSTRUCTURES FOUNDED ON BEDROCK AND PRIOR TO PLACING FORMWORK, THE RESIDENT ENGINEER SHALL NOTIFY THE PROJECT MANAGER AND THE VTRANS SOILS AND FOUNDATION ENGINEER. THE SOILS AND FOUNDATION ENGINEER WILL DETERMINE IF THE BEDROCK IS COMPETENT TO OBTAIN THE NOMINAL BEARING RESISTANCE AS SHOWN ON THE PLANS. FIVE (5) WORKING DAYS FROM NOTIFICATION SHALL BE ALLOWED TO MAKE THE INSPECTION AND THE DETERMINATION FOR THE COMPETENCY OF THE BEDROCK.

38. ONCE THE ELEVATION OF COMPETENT BEDROCK HAS BEEN DETERMINED, THE CONTRACTOR SHALL PROVIDE A BEDROCK PROFILE TO THE PROJECT MANAGER TO DETERMINE WHETHER THE DESIGN BOTTOM OF FOOTING ELEVATION SHALL BE RAISED OR LOWERED AND WHETHER A SUBFOOTING SHALL BE REQUIRED. FOOTING ELEVATIONS SHALL NOT BE ADJUSTED WITHOUT APPROVAL OF THE PROJECT MANAGER. THREE (3) WORKING DAYS FROM RECEIPT OF THE BEDROCK PROFILE SHALL BE ALLOWED TO MAKE THIS DETERMINATION. NO WORK SHALL BE DONE ON THE FOOTINGS UNTIL A REPLY IS RECEIVED.

39. THE LIMITS OF SUBFOOTINGS SHALL BE 6" OUTSIDE OF THE HORIZONTAL LIMITS OF THE FOOTING. THE TOP SURFACE OF ALL SUBFOOTINGS SHALL BE INTENTIONALLY ROUGHENED TO 1/4" AMPLITUDE.

40. ANY BEDROCK THAT NEEDS TO BE REMOVED SHALL BE PAID FOR WITH THE CORRESPONDING EXCAVATION ITEM INCLUDED IN THE CONTRACT.

41. OVERBREAKAGE BEYOND THE AVERAGE MAXIMUM ALLOWANCE SPECIFIED IN SUBSECTIONS 204.09(B) (1) AND 208.11(C) SHALL BE AT THE CONTRACTOR'S EXPENSE.

42. DOWELS SHALL BE DRILLED AND GROUTED INTO BEDROCK WHEN SHOWN ON THE PLANS OR AS ORDERED BY THE ENGINEER. THE DOWELS SHALL HAVE A 4'-0" MINIMUM EMBEDMENT IN THE BEDROCK AND SHALL EXTEND IN THE FOOTING OR SUBFOOTING A MINIMUM OF 1'-6", UNLESS NOTED OTHERWISE.

BEARING NOTES

43. BEARINGS SHALL BE PAID FOR UNDER CONTRACT ITEM 531.18 AND SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.

44. THE FIELD WELD CONNECTING THE BOTTOM FLANGE WITH THE BEARING DEVICE SHALL BE MADE WITH E7018 RODS. AREAS OF METALIZING DAMAGED BY WELDING AND OR HANDLING SHALL BE REPAIRED IN ACCORDANCE WITH SUBSECTION 726.09.

45. ALL STEEL COMPONENTS SHALL BE METALIZED AS PER SUBSECTIONS 531.04 (b) AND 506.14.

46. DESIGN CRITERIA, LOADS GIVEN AS PER BEARING:

DESIGN LOAD EFFECTS (KIP)	SERVICE LIMIT STATE	VERTICAL	MAX	296.4
			PERM.	-------
			MIN.	185.5
		TRANSVERSE		16.33
		LONGITUDINAL		78.40
ROTATION (RAD)	SERVICE LIMIT STATE	IRREVERSIBLE	TRANSVERSE	0.000
			LONGITUDINAL	0.013
		REVERSIBLE	TRANSVERSE	0.002
			LONGITUDINAL	0.005
TRANSLATIONS (in)	SERVICE LIMIT STATE	IRREVERSIBLE	TRANSVERSE	*
			LONGITUDINAL	*
		REVERSIBLE	TRANSVERSE	0.144
			LONGITUDINAL	0.576

a. * BEARINGS SHALL BE REMOVED AND RESET ONCE THE FULL DEAD LOAD HAS BEEN APPLIED TO THE STRUCTURAL SYSTEM. THE CONTRACTOR SHALL MEET ALL OF THE REQUIREMENTS OF SECTION 502, INCLUDING THE SUBMITTAL OF CONSTRUCTION DRAWINGS. ALL MATERIALS AND WORK REQUIRED IN ORDER TO RESET BEARINGS SHALL BE INCIDENTAL TO THE STRUCTURAL STEEL ITEM IN THE CONTRACT.

b. THE ANCHORAGE WILL BE DESIGNED TO RESIST 80 KIPS OF LATERAL FORCE PER BEARING (RESULTANT OF TRANSVERSE+LONGITUDINAL).

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002gennotes.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
GENERAL NOTES 2

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 6 OF 70

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS
1				
300				
			30	
			650	
10				
48				
109				
79				
1				
5			275	
84			160	
430				
430				
9				
6				
1				
			147	
			249	
			1	
			350	
			3	
			210886	
			17200	
			40600	
			70	
			1	
			386	
			40	
			36	
			6	
			1	
			10	
			50	
2				
30				
30				
30				

TOTALS

GRAND TOTAL	FINAL
1	
300	
30	
650	
10	
48	
109	
79	
1	
280	
244	
430	
430	
9	
6	
1	
147	
249	
1	
350	
3	
210886	
17200	
40600	
70	
1	
386	
40	
36	
6	
1	
10	
50	
2	
30	
30	
30	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
CY	COMMON EXCAVATION	203.15	
CY	SOLID ROCK EXCAVATION	203.16	
CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	
CY	SAND BORROW	203.31	
CY	GRANULAR BORROW	203.32	
CY	TRENCH EXCAVATION OF EARTH	204.20	
CY	TRENCH EXCAVATION OF ROCK	204.21	
CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
CY	STRUCTURE EXCAVATION	204.25	
CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
CY	AGGREGATE SURFACE COURSE	401.10	
CWT	EMULSIFIED ASPHALT	404.65	
LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
CY	CONCRETE, HIGH PERFORMANCE CLASS A (FPQ)	501.33	
CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	
LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10	
LF	STEEL PILING, HP 14 X 117	505.20	
EACH	DYNAMIC PILE LOADING TEST	505.45	
LB	STRUCTURAL STEEL, CURVED PLATE GIRDER	506.56	
LB	REINFORCING STEEL, LEVEL I	507.11	
LB	REINFORCING STEEL, LEVEL II	507.12	
LF	DRILLING AND GROUTING DOWELS	507.16	
LS	SHEAR CONNECTORS (1450 - 7/8" X 7")	508.15	
SY	LONGITUDINAL DECK GROOVING	509.10	
GAL	WATER REPELLENT, SILANE	514.10	
LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
LF	JOINT SEALER, HOT POURED	524.11	
EACH	REMOVAL OF STRUCTURE (2726 SF - EST.)	529.15	
EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD W/ EXT. LOAD PLATES	531.18	
CY	CONCRETE, CLASS C	541.30	
CY	CONTROLLED DENSITY (FLOWABLE) FILL	541.45	
	BEGIN OPTION AA		
LF	15" CAAP .075 (2-2/3 X 1/2)	601.0211	
LF	15" PCCSP .064 (2-2/3 X 1/2)	601.0410	
LF	15" CPEP	601.0910	
	END OPTION AA		

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		EARTHWORKS SUMMARY
300	CY	COMMON EXCAVATION (300 x 1.0)
23	CY	SOLID ROCK EXCAVATION (30x 0.75)
488	CY	UNCLASSIFIED CHANNEL EXCAVATION (650 x 0.75)
206	CY	STRUCTURE EXCAVATION (275 x 0.75)
1017	CY	SUBTOTAL
10	CY	ROUND
1027	CY	TOTAL FILL AVAILABLE
58	CY	FILL REQUIRED (48 x 1.2)
969	CY	TOTAL WASTE

PROJECT NAME: BARRE TOWN
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FILE NAME: s06j002excel.dgn
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DESIGNED BY: T. FILLBACH
QUANTITY 1

PLOT DATE: 09-OCT-2012
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 7 OF 70

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
					ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
													BEGIN OPTION BB					
					100					100		LF	18" CAAP .075 (2-2/3 X 1/2)	601.0216				
					100					100		LF	18" PCCSP .079 (2-2/3 X 1/2)	601.0416				
					100					100		LF	18" CPEP	601.0915				
													END OPTION BB					
								15		15		CY	REBUILT STONE MASONRY	602.35				
					3					3		EACH	SANITARY SEWER MANHOLE	604.22				
					1					1		EACH	PRECAST REINFORCED CONCRETE PIPE DI WITH CAST IRON GRATE (4 FT. DIA.)	604.25				
					1					1		EACH	PRECAST REINFORCED CONCRETE PIPE DI WITH CAST IRON GRATE (5 FT. DIA WITH 2 GRATES)	604.25				
					1					1		EACH	CHANGING ELEVATION OF SEWER MANHOLES	604.42				
							1			1		MGAL	DUST CONTROL WITH WATER	609.10				
					20					20		CY	STONE FILL, TYPE I	613.10				
					205					205		CY	STONE FILL, TYPE II	613.11				
					160					160		LF	VERTICAL GRANITE CURB	616.21				
					114					114		LF	REMOVAL OF EXISTING CURB	616.41				
					24					24		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10				
					32					32		SF	DETECTABLE WARNING SURFACE	618.30				
					3					3		EACH	BOLLARDS	619.14				
					48					48		LF	CHAIN-LINK FENCE, 4 FEET	620.11				
					1					1		EACH	BRACING ASSEMBLY FOR CHAIN-LINK FENCE, 4 FEET	620.20				
					70					70		LF	REMOVING AND RESETTING FENCE	620.50				
					30					30		LF	REMOVAL OF EXISTING FENCE	620.55				
					190					190		LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21				
					50					50		LF	HD STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS	621.215				
					3					3		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60				
					220					220		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
					85					85		LF	PVC SEWER PIPE (10" DIA.)	628.35				
					25					25		LF	PVC SEWER PIPE (8" DIA.)	628.35				
					1					1		LS	TRANSFER TO NEW SYSTEM, SANITARY SEWER	628.42				
					2					2		EACH	ADJUST ELEVATION OF VALVE BOX	629.20				
					5					5		TON	CRUSHED STONE BEDDING	629.54				
					500					500		HR	FLAGGERS	630.15				
									1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
									1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
									1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
									3000	3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26				
						520				520		HR	EMPLOYEE TRAINEESHIP	634.10				
					1					1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
					850					850		LF	4 INCH WHITE LINE	646.20				
					850					850		LF	4 INCH YELLOW LINE	646.21				

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QUANTITY 2

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 8 OF 70

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
					ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
					20					20		LF	24 INCH STOP BAR	646.26				
							310			310		SY	GEOTEXTILE UNDER STONE FILL	649.31				
							60			60		SY	GEOTEXTILE FOR SILT FENCE	649.51				
							112			112		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515				
							30			30		LB	SEED	651.15				
							10			10		LB	SEED, WINTER RYE	651.17				
							150			150		LB	FERTILIZER	651.18				
							0.5			0.5		TON	AGRICULTURAL LIMESTONE	651.20				
							0.5			0.5		TON	HAY MULCH	651.25				
							50			50		CY	TOPSOIL	651.35				
							120			120		SY	GRUBBING MATERIAL	651.40				
							1			1		LS	EPSC PLAN	652.10				
							40			40		HR	MONITORING EPSC PLAN	652.20				
							1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
							40			40		SY	TEMPORARY EROSION MATTING	653.20				
							15			15		CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25				
							30			30		CY	VEHICLE TRACKING PAD	653.35				
							2			2		EACH	INLET PROTECTION DEVICE, TYPE I	653.40				
							250			250		LF	BARRIER FENCE	653.50				
							450			450		LF	PROJECT DEMARCATION FENCE	653.55				
					12.5					12.5		SF	TRAFFIC SIGNS, TYPE A	675.20				
					70					70		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
					5					5		EACH	REMOVING SIGNS	675.50				
					5					5		EACH	ERECTING SALVAGED SIGNS	675.60				
								249		249		LF	SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION)	900.640				
					1					1		LS	SPECIAL PROVISION (MAINTENANCE OF EXISTING WASTEWATER FLOWS)	900.645				
								1		1		LS	SPECIAL PROVISION (SEWER MAIN ON BRIDGE 10")	900.645				
					1					1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)	900.645				
					1					1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650				
					1					1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT)(N.A.B.I.)	900.650				
					30					30		SF	SPECIAL PROVISION (RETAINING WALL)	900.670				
					290					290		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

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QUANTITY 3

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 9 OF 70

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES					TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
ABUT. 1	ABUT. 2	SUPER STRUCTURE	APR. SLAB 1	APR. SLAB 2	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
30					30	CY	SOLID ROCK EXCAVATION	203.16			
216	434				650	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27			
90	185				275	CY	STRUCTURE EXCAVATION	204.25			
	160				160	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30			
		147			147	CY	CONCRETE, HIGH PERFORMANCE CLASS A (FPQ)	501.33			
90	100		30	29	249	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34			
	1				1	LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10			
	350				350	LF	STEEL PILING, HP 14 X 117	505.20			
	3				3	EACH	DYNAMIC PILE LOADING TEST	505.45			
		210886			210886	LB	STRUCTURAL STEEL, CURVED PLATE GIRDER	506.56			
8670	8530				17200	LB	REINFORCING STEEL, LEVEL I	507.11			
		34453	3045	3102	40600	LB	REINFORCING STEEL, LEVEL II	507.12			
70					70	LF	DRILLING AND GROUTING DOWELS	507.16			
		1			1	LS	SHEAR CONNECTORS (1450 - 7/8" X 7")	508.15			
		386			386	SY	LONGITUDINAL DECK GROOVING	509.10			
10	10	20			40	GAL	WATER REPELLENT, SILANE	514.10			
	36				36	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10			
		6			6	LF	JOINT SEALER, HOT POURED	524.11			
		1			1	EACH	REMOVAL OF STRUCTURE (2726 SF - EST.)	529.15			
5	5				10	EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD W/ EXT. LOAD PLATES	531.18			
50					50	CY	CONCRETE, CLASS C	541.30			
	15				15	CY	REBUILT STONE MASONRY	602.35			
		249			249	LF	SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION)	900.640			
		1			1	LS	SPECIAL PROVISION (SEWER MAIN ON BRIDGE 10")	900.645			

PROJECT NAME: BARRE TOWN
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BRIDGE QUANTITY

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 10 OF 70

GPS CONTROL POINTS

HVCTRL #1#

So. Barre Az MK

N = 608573.40
E = 1634218.22
ELEV. = 838.29

TO REACH FROM THE JUNCTION OF VERMONT ROUTE 63 AND VERMONT ROUTE 14 IN SOUTH BARRE PROCEED WESTERLY ALONG ROUTE 63 FOR 0.9 MI (1.4 KM) TO THE MARK ON THE LEFT. TO REACH FROM THE JUNCTION OF VERMONT ROUTE 63 AND MILLER ROAD (EXT) PROCEED EASTERLY ALONG ROUTE 63 FOR 1.1 MI (1.8 KM) TO THE MARK ON THE RIGHT. THE MARK IS SET IN A 5 FT (1.5 M) WIDE X 3 FT (0.9 M) HIGH ROCK OUTCROP. THE MARK IS LOCATED 59 FT (18.0 M) SOUTHWEST OF A 2 FOOT (0.6 M) SQUARE DI, 31 FT (9.4 M) SOUTH OF AND 6 FT (1.8 M) HIGHER THAN THE SOUTH EDGE OF VERMONT ROUTE 63.

HVCTRL #2

So. Barre

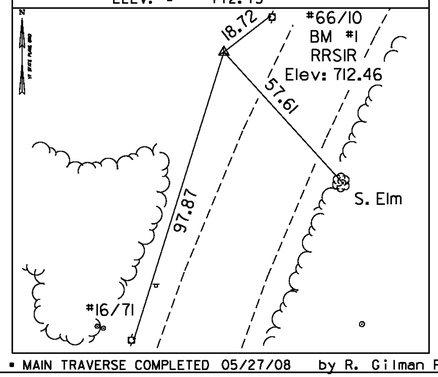
N = 610161.99
E = 1637191.18
ELEV. = 655.67

TO REACH FROM THE JUNCTION OF VERMONT ROUTE 63 AND VERMONT ROUTE 14 IN SOUTH BARRE PROCEED WESTERLY ALONG ROUTE 63 FOR 0.25 MI (0.40 KM) TO THE MARK ON THE RIGHT. TO REACH FROM THE JUNCTION OF VERMONT ROUTE 63 AND MILLER ROAD (EXT) PROCEED EASTERLY ALONG ROUTE 63 FOR 1.75 MI (2.82 KM) TO THE MARK ON THE LEFT. THE MARK IS A 4 INCH SQUARE RIGHT OF WAY MONUMENT WITH A SURVEY DISK SET IN THE TOP AND IS LOCATED 0.7 FT (21.3 CM) BELOW THE ROAD. THE MARK IS LOCATED 119.4 FT (36.4 M) EAST OF AN 18 INCH CGMP CULVERT WITH CONCRETE HEADWALL, 74.9 FT (22.8 M) NORTHWEST OF A TRAFFIC SIGNAL SIGN, 71.5 FT (21.8 M) NORTHEAST OF A DIVIDED HIGHWAY SIGN AND 2.3 FT (0.7 M) NORTH OF THE EDGE OF VERMONT ROUTE 63.

TRAVERSE TIES

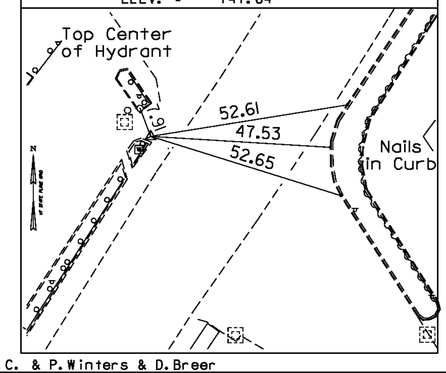
HVCTRL #5

NORTH = 612010.98
EAST = 1639435.38
ELEV. = 712.15



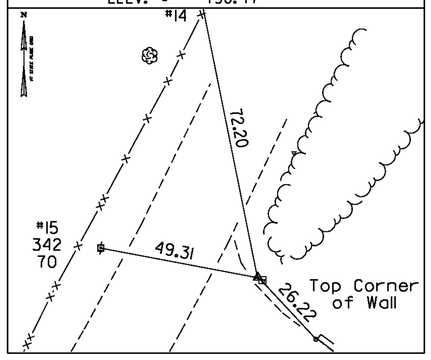
HVCTRL #11

NORTH = 611286.65
EAST = 1639112.68
ELEV. = 741.64



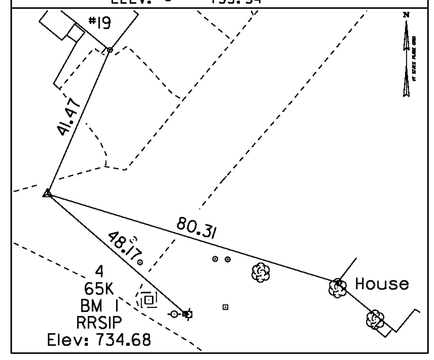
HVCTRL #12

NORTH = 611535.62
EAST = 1639321.85
ELEV. = 750.17



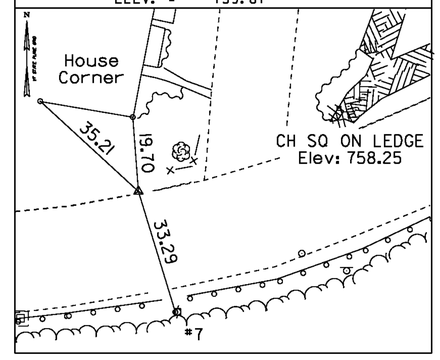
HVCTRL#20

NORTH = 611713.80
EAST = 1638808.60
ELEV. = 733.54



HVCTRL #21

NORTH = 611625.77
EAST = 1638441.69
ELEV. = 759.67



• MAIN TRAVERSE COMPLETED 05/27/08 by R. Gilman P.C. & P.Winters & D.Breer

ALIGNMENT TIES

NORTH =	NORTH =	NORTH =	NORTH =	NORTH =
EAST =	EAST =	EAST =	EAST =	EAST =
ELEV. =	ELEV. =	ELEV. =	ELEV. =	ELEV. =

DATUM

VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)
ADJUSTMENT Compass

PROJECT NAME: BARRE TOWN

PROJECT NUMBER: BRF 6100 (7)

FILE NAME: 06J002\survey\x06J002t1.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: SURVEY
TIE SHEET

PLOT DATE: 27-SEP-2012
DRAWN BY: R. BULLOCK
CHECKED BY:
SHEET 11 OF 70

CURVE (1)
DELTA = 23°13'00"
D = 14°19'26"
R = 400.00'
T = 82.17'
L = 162.08'
E = 8.35'

CURVE (2)
DELTA = 72°41'00"
D = 22°55'06"
R = 250.00'
T = 183.92'
L = 317.14'
E = 60.37'

CURVE (3)
DELTA = 8°58'00"
NO CURVE RUN

POE CHANNEL
52+00.00

PI#2 MAINLINE
STA 14+35.75 BK =
STA 13+85.04 AHD

RECREATION PATH

BEGIN BRIDGE
STA 13+02.92

END BRIDGE
STA 14+27.04

N0°20'02.74"E

N62°50'00.00"E

S44°29'00.00"E

BRIDGE ST. TRL PARK
(DEAD END)

BEGIN PROJECT
STA 12+50.00

BEGIN APPROACH
STA 11+75.00

END PROJECT
STA 15+25.00

END APPROACH
STA 16+00.00

BRIDGE STREET (TH 7)

℄ BEARING
STA 13+05.00

℄ BEARING
STA 14+25.00

PC#2 MAINLINE
STA 12+51.82

ML STA 13+50.00 =
CHANNEL STA 51+00.00
Δ = 85°

POB CHANNEL
50+00.00

TO MORRISON ROAD

N86°03'00.00"E

PT#1 MAINLINE
STA 11+96.41

PC#1 MAINLINE
STA 10+34.33

PI#1 MAINLINE
STA 11+16.50 BK =
STA 11+14.24 AHD

STEVENS BRANCH
FLOW

PT#2 MAINLINE
STA 15+68.96

PI#3 MAINLINE
STA 16+19.54
NO CURVE RUN

TO VT ROUTE 14

S3E

SHED
SHED
SHED
BIRCH
EXISTING DWELLING
M MAPLE
EXISTING DWELLING
EXISTING DWELLING
EXISTING DWELLING
EXISTING WELL
S ELM
M SPRUCE
BND
LILAC
S POP
S POP
S POP
IP
IP
IP
LI

N

VT STATE PLANE GRID

ALIGNMENT SHEET

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002bdr.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
ALIGNMENT

PLOT DATE: 27-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: T. FILLBACH
SHEET 12 OF 70

HD STEEL BEAM GUARDRAIL, GALVANIZED
(8 FT) POSTS
STA 11+75.00 (MATCH INTO EXISTING) - STA 12+98.50 RT

HD STEEL BEAM GUARDRAIL, GALVANIZED
STA 13+04.30 - STA 13+08.00 LT
STA 14+24.00 - STA 14+56.39 LT
STA 14+29.50 - STA 14+67.89 RT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 11+75.00 - STA 13+00.40 RT
STA 12+96.10 - STA 13+00.20 RT
STA 13+07.90 - STA 13+11.30 LT
STA 13+96.90 - STA 14+21.00 LT
STA 14+00.90 - STA 14+39.60 RT

CONSTRUCT PAVED APRONS
STA 12+98.69 LT - RECREATION PATH - APRON 43'-0"
STA 14+79.77 LT - TRAILER PARK - APRON 32'-0"
STA 14+92.06 RT - DRIVE - APRON 5'-0"
STA 15+73.89 LT - DRIVE - APRON 5'-0"
STA 11+15 LT - DRIVE - APRON 7'-0"

REMOVAL OF EXISTING CURB (GRANITE)
STA 11+75.00 - STA 12+88.90 LT

VERTICAL GRANITE CURB
72STA 11+~~75.~~00 - STA 12+88.15 LT
STA 14+29.50 - STA 14+75.00 RT
STA 14+24 - STA 14+62 LT

ANCHOR FOR STEEL BEAM RAIL
~~STA 13+04.00 OFFSET 34.54 LT (REC. PATH)~~
STA 14+49.00 LT
STA 14+59.73 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
STA 14+23.70 - STA 14+66.85 LT
STA 12+93.93 - STA 13+02.93 LT
(3' X 9' PAD RECREATION PATH
DETECTABLE WARNING SURFACE)

REMOVAL OF EXISTING FENCE
STA 12+95.70 - STA 13+02.20 - 44' LT
STA 12+99.80 - STA 13+05.30 - 35' LT

REMOVING AND RESETTING FENCE
STA 14+25.17 - STA 14+45.45 - 40' LT
STA 15+04.68 - STA 15+32.85 - 30' RT

SLOPE STABLIZATION W/
STONE FILL TYPE ~~I~~ II
STA 12+00.00 - STA 13+00.00 RT

SPECIAL PROVISION (RETAINING WALL)
STA 14+01.50 - STA 14+22.20 LT

REBUILD STONE MASONRY
STA 14+00.50 LT (OFFSET 30.5 - 40.5)

CHAIN-LINK FENCE (4 FEET)
STA 14+01.50 - STA 14+22.20 LT
RECREATION PATH 38'-0" RT ?

DETECTABLE WARNING SURFACE
STA 12+98.69 LT (RECREATION PATH)
STA 13+09.00 LT
STA 14+62.00 LT

SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED STEEL TUBING CONCRETE COMBINATION)
STA 12+98.50 - STA 14+29.50 RT
STA 13+08.00 - STA 14+24.00 LT

TREATED TIMBER CURB
12+11 ~ 12+99 RT

NOTES:

1. FOR ADDITIONAL INFORMATION ON DRAINAGE, SEE DRAINAGE LAYOUT SHEET, DRAINAGE PROFILE AND DRAINAGE DETAILS.

2. FOR ADDITIONAL INFORMATION ON UTILITIES, SEE EXISTING UTILITY LAYOUT.

EXISTING BRIDGE INFORMATION

BUILT 1949
STEEL GIRDER, CONCRETE DECK
STEELWORK & PAINTING 2002
1 SPAN @ 90', 94' OVERALL
NO SIDEWALKS
26.9' ROADWAY (CURB TO CURB)
STEEL RAILING

LAYOUT SHEET
SCALE 1" = 20'-0"
20 0 20

BENCHMARK
CH SQ ON LEDGE
ELEV. 758.25

BENCHMARK
RRSIP
ELEV. 734.68

BM 1
SIP #4
734.94

BM 2
SIP #5
732.50

GONE
BM 3
SIP 5-30
742.08

POE CHANNEL
52+00.00

POB CHANNEL
50+00.00

BEGIN PROJECT
STA 12+50.00

BEGIN APPROACH
STA 11+~~75.00~~ 00.00

BEGIN BRIDGE
STA 13+02.92

END BRIDGE
STA 14+27.04

END PROJECT
STA 15+25.00

END APPROACH
STA 16+00.00

℄ BEARING
STA 13+05.00

℄ BEARING
STA 14+25.00

STONE FILL, TYPE I

STONE FILL, TYPE II

N 00° 20' 02.74" E

BRIDGE STREET (TH 7)

TO MORRISON ROAD

TO VT ROUTE 14

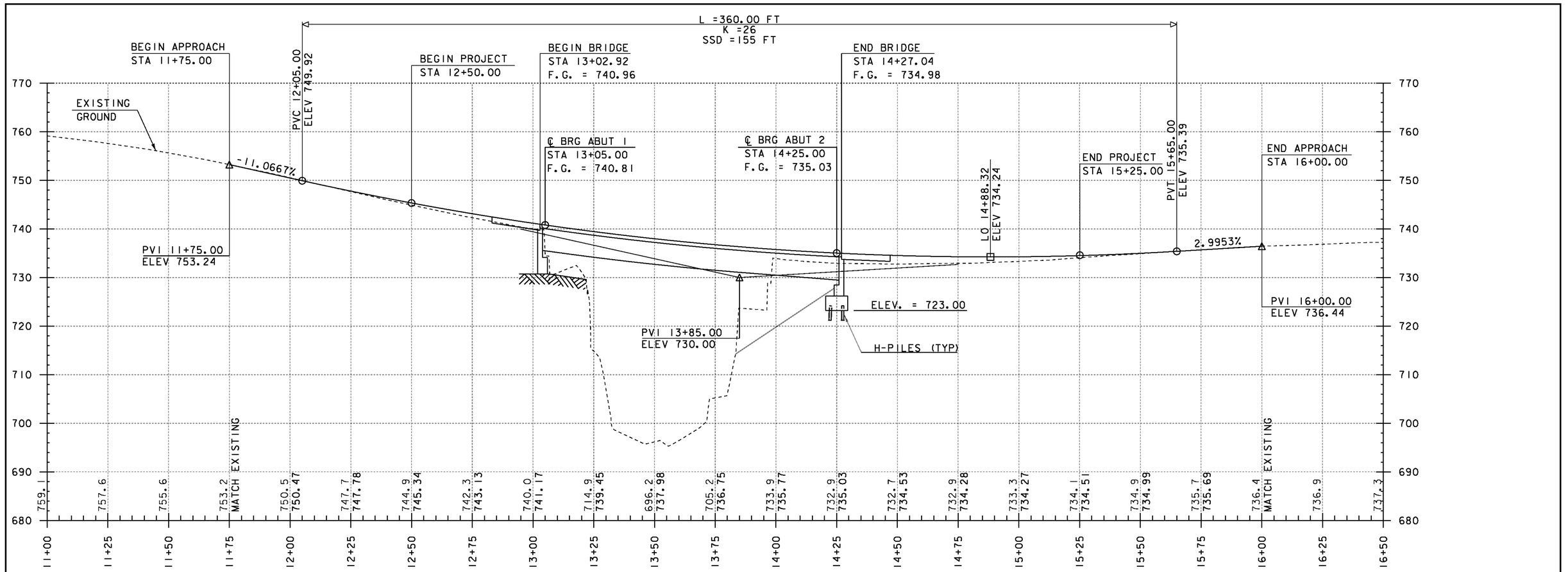
BRIDGE ST TRL PARK (DEAD END)

RECREATION PATH

STEVENS BRANCH FLOW

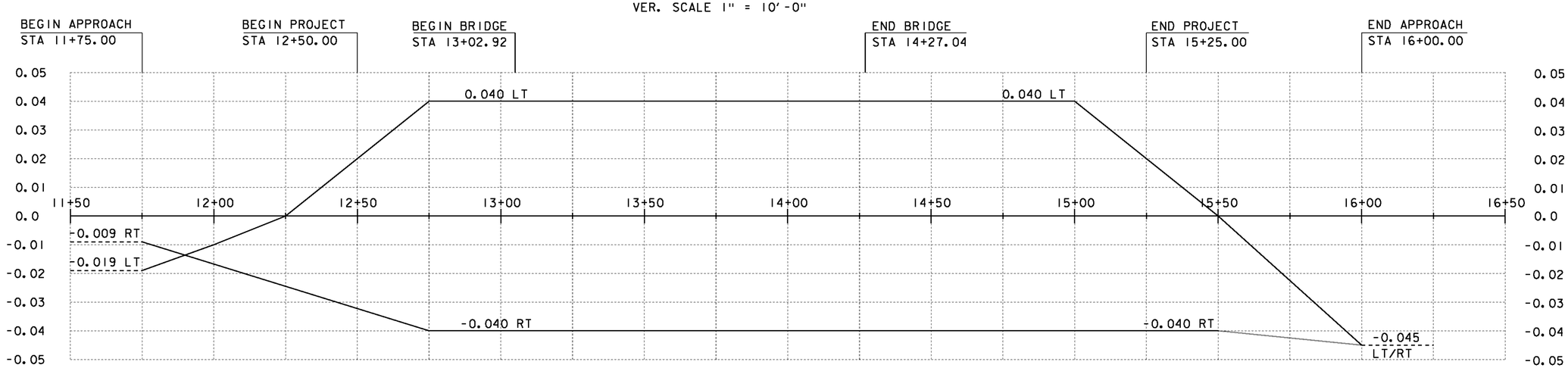
VT STATE PLANE GRID

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)
FILE NAME: s06j002bdr.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: J. SALVATORI
DESIGNED BY: T. FILLBACH	CHECKED BY: T. FILLBACH
LAYOUT	SHEET 13 OF 70



MAINLINE PROFILE

HOR. SCALE 1" = 20'-0"
VER. SCALE 1" = 10'-0"



BANKING DIAGRAM

HOR. SCALE 1" = 20'-0"
NO VER. SCALE

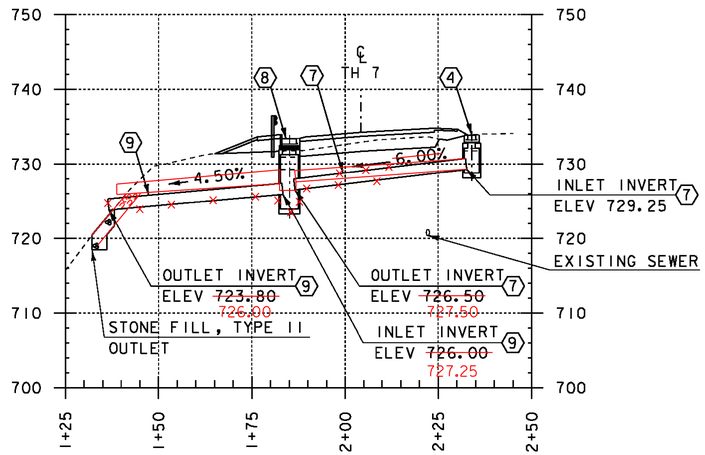
THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT.

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE PROPOSED GRADES FOR THE NEW ALIGNMENT.

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002pro.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: J. SALVATORI
MAINLINE PROFILE

PLOT DATE: 27-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: T. FILLBACH
SHEET 14 OF 70

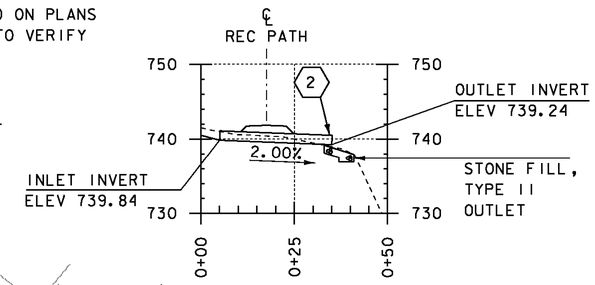


PIPE #9 & #7 PROFILE

HOR SCALE 1" = 20'-0"
VER SCALE 1" = 10'-0"

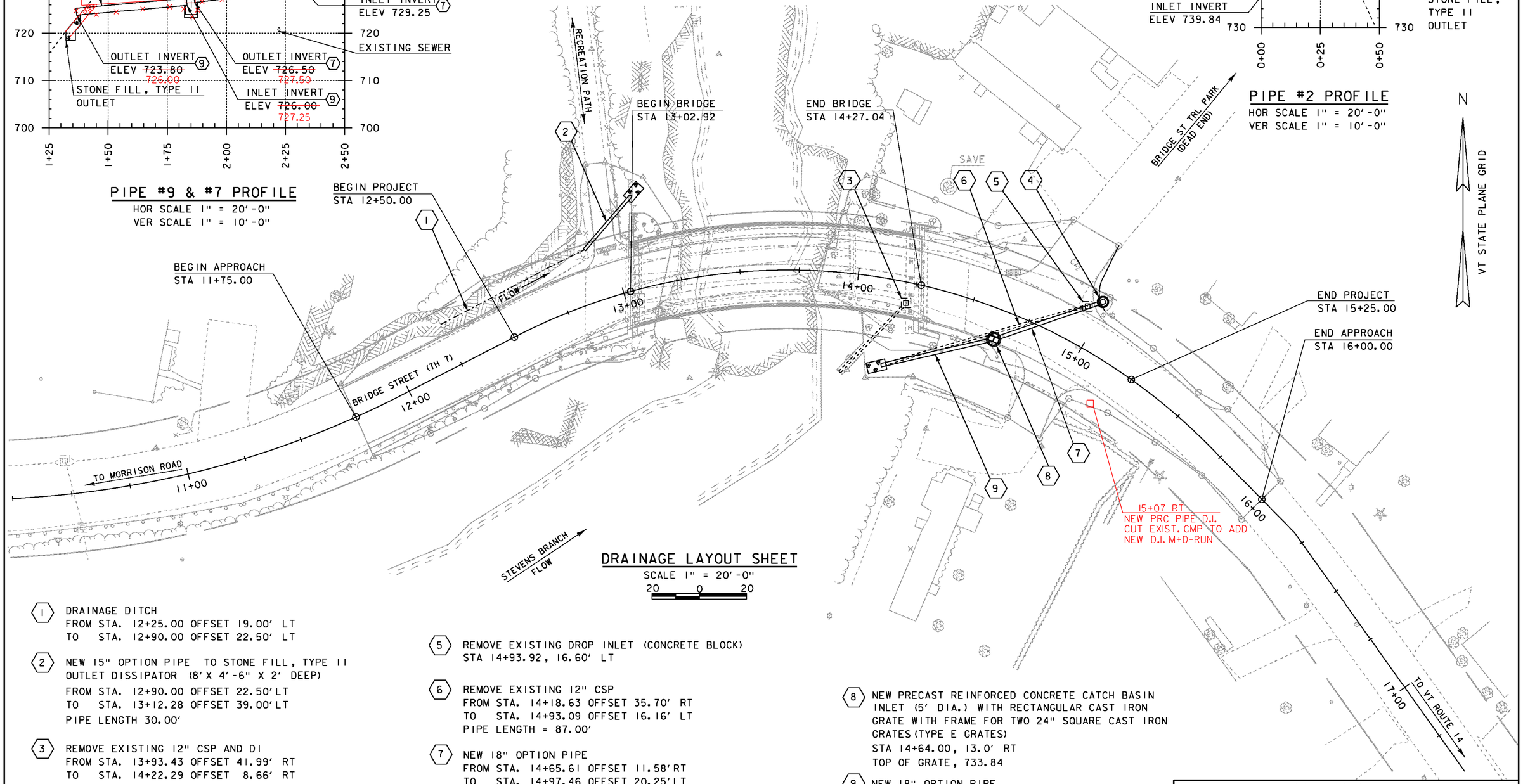
NOTES:

1. ALL ELEVATIONS ARE GIVEN AT INVERT OF PROPOSED PIPES
2. THERE MAY BE ADDITIONAL DRAINAGE PIPES WITHIN THE PROJECT AREA. THE CONTRACTOR WILL BE PAID CONTRACT UNIT PRICE(S) FOR ANY REMOVAL OR REPLACEMENT.
3. EXISTING INLET ELEVATIONS ARE BASED ON PLANS PROVIDED BY THE TOWN. CONTRACTOR TO VERIFY ELEVATIONS IN THE FIELD.
4. LOCATIONS AND ELEVATIONS MAY BE SUBJECT TO CHANGE UPON THE APPROVAL OF THE RESIDENT ENGINEER.



PIPE #2 PROFILE

HOR SCALE 1" = 20'-0"
VER SCALE 1" = 10'-0"



N

VT STATE PLANE GRID

DRAINAGE LAYOUT SHEET

SCALE 1" = 20'-0"
20 0 20

1. DRAINAGE DITCH
   FROM STA. 12+25.00 OFFSET 19.00' LT
   TO STA. 12+90.00 OFFSET 22.50' LT
2. NEW 15" OPTION PIPE TO STONE FILL, TYPE II OUTLET DISSIPATOR (8' X 4'-6" X 2' DEEP)
   FROM STA. 12+90.00 OFFSET 22.50' LT
   TO STA. 13+12.28 OFFSET 39.00' LT
   PIPE LENGTH 30.00'
3. REMOVE EXISTING 12" CSP AND DI
   FROM STA. 13+93.43 OFFSET 41.99' RT
   TO STA. 14+22.29 OFFSET 8.66' RT
4. NEW PRECAST REINFORCED CONCRETE DROP INLET (4' DIA.) WITH CAST IRON GRATE WITH FRAME (TYPE B GRATE)
   STA 14+98.37, 21.4' LT
   TOP OF GRATE, 733.90
5. REMOVE EXISTING DROP INLET (CONCRETE BLOCK)
   STA 14+93.92, 16.60' LT
6. REMOVE EXISTING 12" CSP
   FROM STA. 14+18.63 OFFSET 35.70' RT
   TO STA. 14+93.09 OFFSET 16.16' LT
   PIPE LENGTH = 87.00'
7. NEW 18" OPTION PIPE
   FROM STA. 14+65.61 OFFSET 11.58' RT
   TO STA. 14+97.46 OFFSET 20.25' LT
   PIPE LENGTH = ~~48.00'~~ 46'
8. NEW PRECAST REINFORCED CONCRETE CATCH BASIN INLET (5' DIA.) WITH RECTANGULAR CAST IRON GRATE WITH FRAME FOR TWO 24" SQUARE CAST IRON GRATES (TYPE E GRATES)
   STA 14+64.00, 13.0' RT
   TOP OF GRATE, 733.84
9. NEW 18" OPTION PIPE
   FROM STA. 14+18.63 OFFSET 35.70' RT
   TO STA. 14+93.09 OFFSET 16.16' RT
   STONE FILL, TYPE II OUTLET (8' X 4'-6" X 2' DEEP)
   PIPE LENGTH = ~~49.00'~~ 44'

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)
FILE NAME: s06j002drain.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: J. GRIFFIN
DESIGNED BY: J. GRIFFIN	CHECKED BY: T. FILLBACH
DRAINAGE LAYOUT	SHEET 15 OF 70

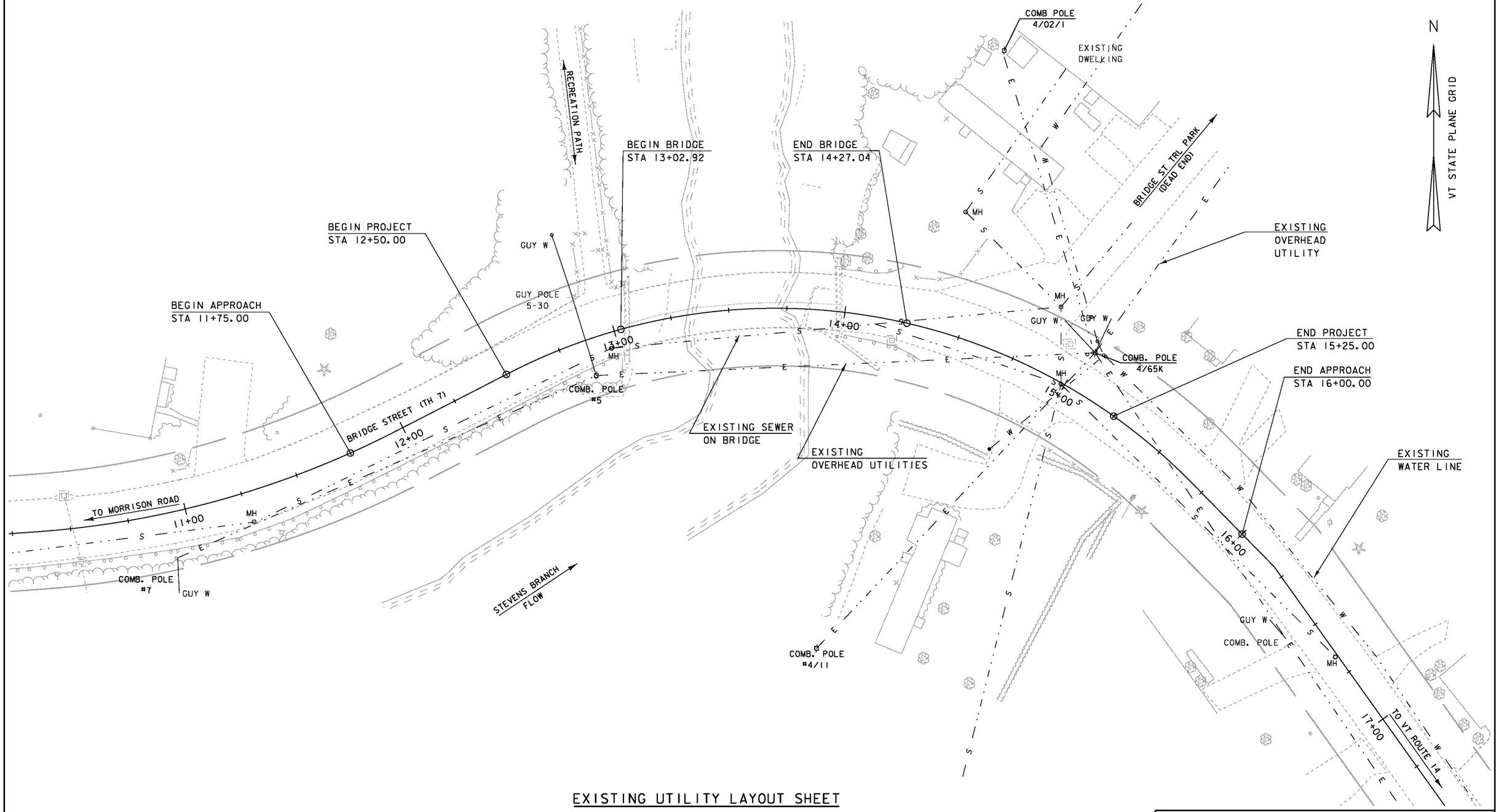
STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

STATION	STATION	POS.	ASKEW	INLET/OUTLET TYPE		DITCH		PIPE ARCH			PIPE		ALLOWABLE OPTIONS						PIPE ELBOW	ES	CB		DEPTH DI	CONC CLASS B	REINF STEEL	DI GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS				REMARKS
				INLET	OUTLET	IN	OUT	SPAN	RISE	L	D	L	PCCSP	CAAP	RCP	CSP	CPEP	PCCSP PI										EARTH	ROCK									LT	RT			
			NO. DEG.					IN	IN	FT	IN	FT	TH	TH	CL	TH	SL	TH	NO. DEG.	EA	EA	'	FT	CY	LBS	TYPE	EA	CY	CY	CY	CY	CY	CY	CY	SY	CY	TYPE	EA	EA			
12+25.00	12+90.00	LT																											65													1	DRAINAGE DITCH
12+90.00	13+12.28	LT			SF-II	X					15	30	X	X			X											9					8			3	II				2	NEW 15' PIPE TO STONE FILL, TYPE II OUTLET DISSIPATOR
13+93.43	14+22.29	RT		DI	CHANL																							13	3												3	REMOVE EXISTING 12" CSP AND DI
14+98.37		LT			PIPE																	X	6.12			B		12					7								4	NEW PRECAST REINFORCED CONCRETE DROP INLET (4FT DIA.) WITH CAST IRON GRATE WITH FRAME
14+93.92		LT			CSP																							2					2								5	REMOVE EXISTING DROP INLET (CONCRETE BLOCK)
14+18.63	14+93.09	RT/LT		DI	CHANL																							45	3					48							6	REMOVE EXISTING 12" CSP
14+65.61	14+97.46	RT/LT		DI	DI						18	48	X	X			X											5	3				29								7	NEW 18' PIPE
14+64.00		RT		PIPE	PIPE																	X	8.0			E		15	3				7								8	NEW PRECAST REINFORCED CONCRETE DROP INLET (5FT DIA) WITH RECTANGULAR CAST IRON GRATE FRAME FOR TWO 24" SQUARE CAST IRON GRATES
14+18.63	14+93.09	RT/RT		DI	SF-II						18	49	X	X			X											8	2				31			3	II				9	NEW 18' PIPE TO STONE FILL, TYPE II OUTLET DISSIPATOR
								TOTALS			30'	15" PIPE										1EA	4' DIA			3EA		109	79				84	48		6					
											97'	18 "PIPE										1EA	5' DIA																		

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

FILE NAME: s06j002drain.details.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: J. GRIFFIN
DESIGNED BY: J. GRIFFIN	CHECKED BY: T. FILLBACH
DRAINAGE DETAIL	SHEET 16 OF 70



EXISTING UTILITY LAYOUT SHEET

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

FILE NAME: S06J002 utilities.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: T. FILLBACH	CHECKED BY: T. FILLBACH
EXISTING UTILITY LAYOUT	SHEET 17 OF 70

CHANGING ELEVATION OF SEWER MANHOLES
STA 14+83.92 - 28'-11" LT
STA 14+98.51 - 0'- 6" RT

N

VT STATE PLANE GRID

BEGIN BRIDGE
STA 13+02.92

END BRIDGE
STA 14+27.04

BEGIN PROJECT
STA 12+50.00

NEW STUB POLE
STA 12+40.00
OFFSET 25.00' LT +/-

BEGIN APPROACH
STA 11+75.00

NEW UTILITY POLE
STA 15+02.00
OFFSET 18.5' RT

END PROJECT
STA 15+25.00

END APPROACH
STA 16+00.00

PROPOSED SEWER
ON BRIDGE

PROPOSED
OVERHEAD UTILITIES

NEW UTILITY POLE
STA 12+40
OFFSET 17.25' RT

NEW UTILITY POLE
STA 14+50.00
OFFSET 25' RT

RECREATION PATH

BRIDGE ST. TRL PARK
(DEAD END)

BRIDGE STREET (TH 7)

TO MORRISON ROAD

TO VT ROUTE 14

STEVENS BRANCH
FLOW

COMB POLE
4/02/1

EXISTING
DWELLING

SAVE
MH

GUY POLE
5-30

COMB. POLE
4/65K

COMB. POLE
#4/11

COMB. POLE
#7

GUY W

MH#1A

MH#1B

MH#1C

11+00

12+00

13+00

14+00

15+00

16+00

17+00

NOTES:

1. SEE PLANS BY ALDRICH + ELLIOTT (SHEETS 19-21) FOR FURTHER INFORMATION ON PROPOSED SEWER ON BRIDGE

(MH#1A) STA 12+37.00 OFFSET 8'-8" RT

(MH#1B) STA 12+78.00 OFFSET 0'-0"

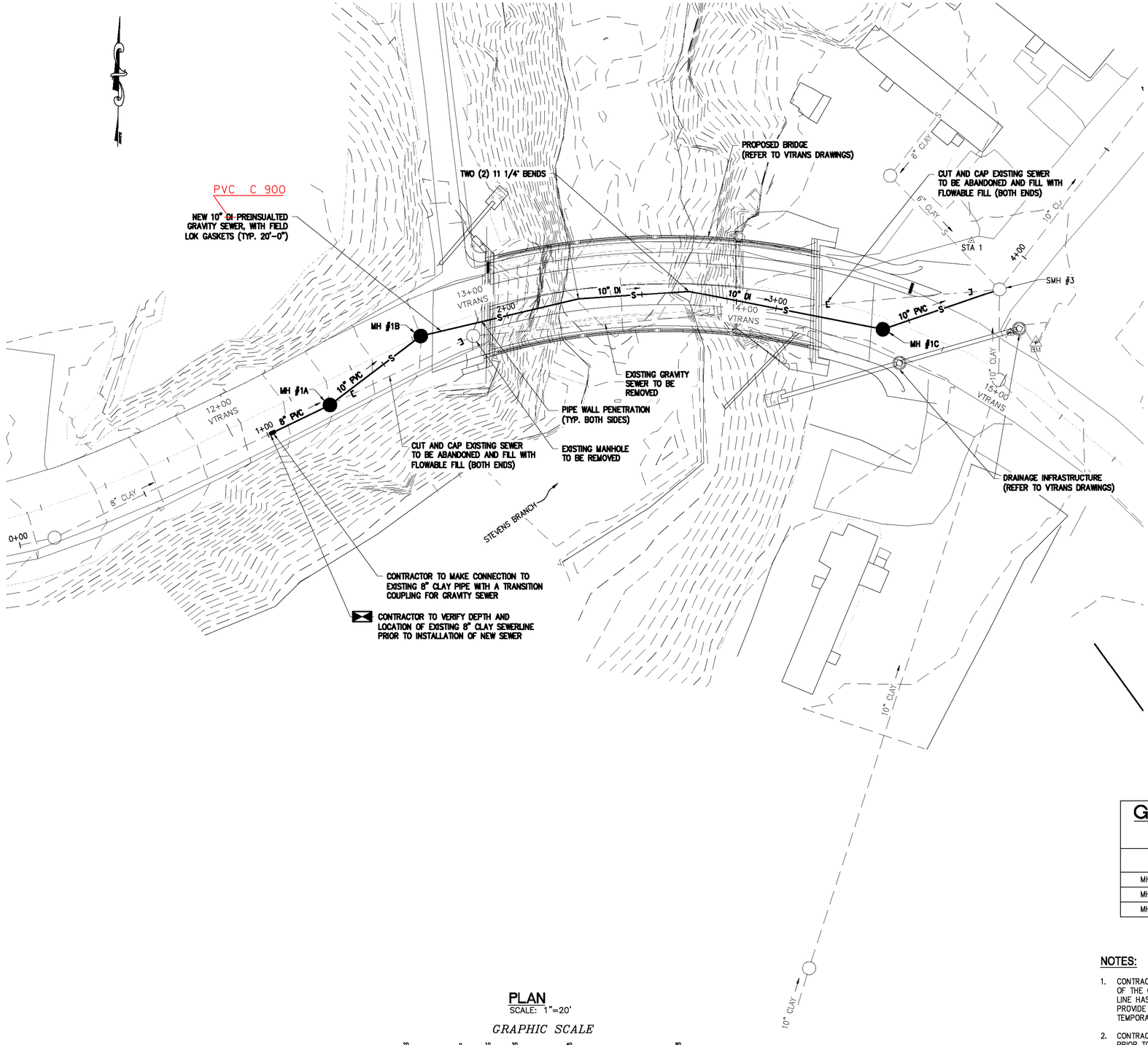
(MH#1C) STA 14+52.00 OFFSET 0'-0" RT

PROPOSED UTILITY LAYOUT SHEET

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

FILE NAME: S06J002 utilities.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: T. FILLBACH	CHECKED BY: T. FILLBACH
PROPOSED UTILITY LAYOUT	SHEET 18 OF 70



PLAN
SCALE: 1"=20'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

GRAVITY SEWER MANHOLE SCHEDULE

	A+E STATIONING	VTRANS STATIONING	VTRANS STATION OFFSET
MH #1A	1+25	12+37	8.6'
MH #1B	1+67	12+78	0'
MH #1C	3+40	14+52	1.2'

NOTES:

1. CONTRACTOR SHALL PROVIDE TEMPORARY PROVISIONS TO MAINTAIN OPERATION OF THE GRAVITY SEWER UNTIL SUCH A TIME THAT THE NEW GRAVITY SEWER LINE HAS BEEN TESTED AND ACCEPTED BY THE OWNER. CONTRACTOR SHALL PROVIDE A WORK PLAN FOR REVIEW AND APPROVAL, DETAILING HOW TEMPORARY OPERATION OF THE GRAVITY SEWER WILL BE PERFORMED.
2. CONTRACTOR SHALL TEST NEW PIPING AND MANHOLES PER THE SPECIFICATIONS PRIOR TO COMMISSIONING THE SEWER. ALL TESTING MUST BE WITNESSED BY A REPRESENTATIVE OF THE OWNER.
3. ALL FITTINGS FOR BENDS SHALL BE MECHANICAL JOINT FITTINGS WITH RETAINER GLANDS.

Aldrich + Elliott
WATER RESOURCE ENGINEERS
6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com

BARRE TOWN
COUNTY OF WASHINGTON

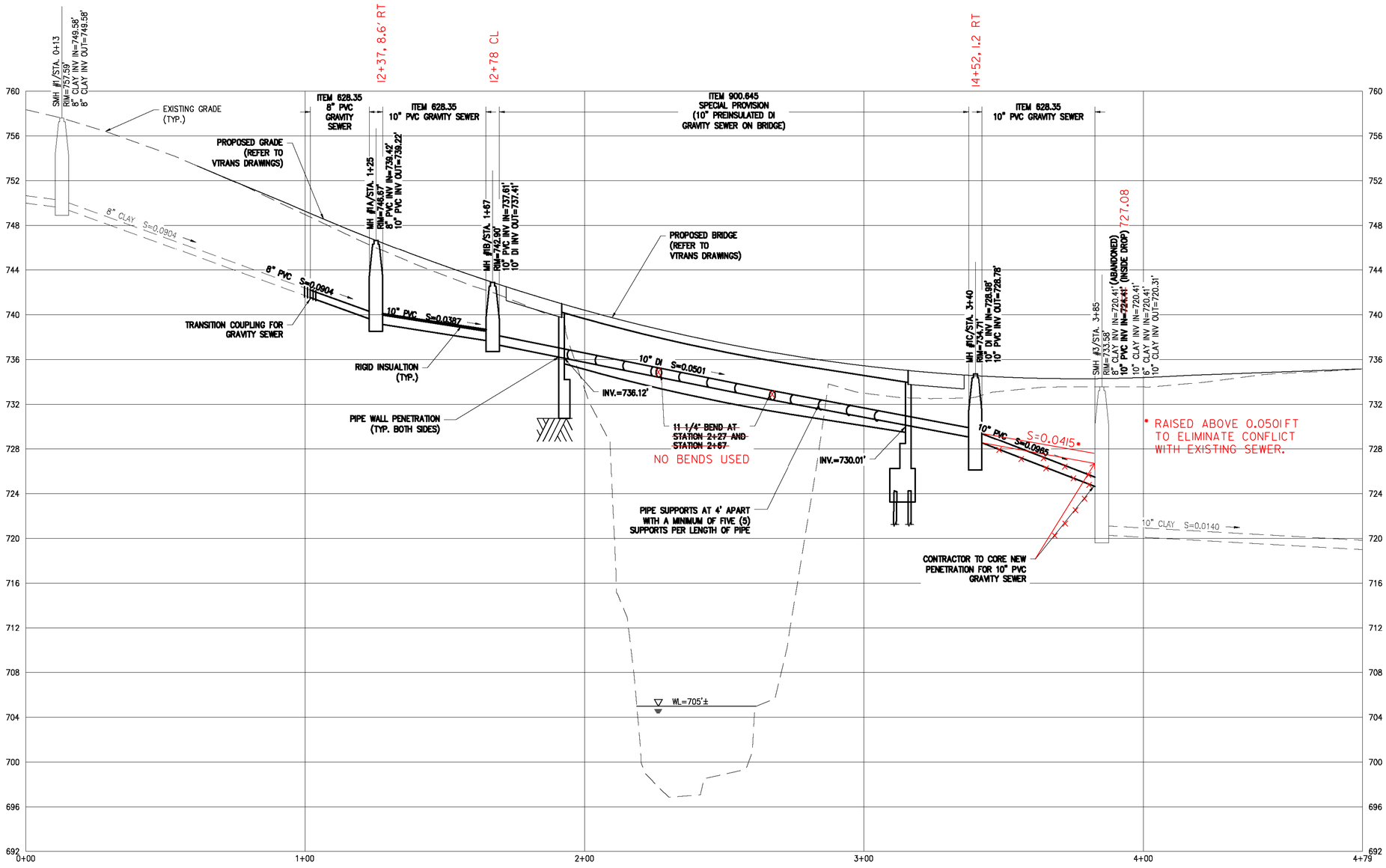
BARRE TOWN
BRF 6100 (7)

BRIDGE STREET
GRAVITY SEWER
BRIDGE CROSSING PLAN

DESIGNED JAB
DRAWN JEN
CHECKED WAE
DATE DEC. 2010

PROJECT NO. 09092

Y:\09092-BARRE\09092-EX-SITE.dwg, 4/2/2012 6:53:32 PM, DWG To PDF.pc3



PROFILE

SCALE: H: 1"=20'
V: 1"=5'

STATION EQUATION

SEWERLINE STATION 1+13 = VTRANS STATION 12+14
SEWERLINE STATION 3+85 = VTRANS STATION 14+84

NOTES:

1. CONTRACTOR SHALL PROVIDE TEMPORARY PROVISIONS TO MAINTAIN OPERATION OF THE GRAVITY SEWER UNTIL SUCH A TIME THAT THE NEW GRAVITY SEWER LINE HAS BEEN TESTED AND ACCEPTED BY THE OWNER. CONTRACTOR SHALL PROVIDE A WORK PLAN FOR REVIEW AND APPROVAL, DETAILING HOW TEMPORARY OPERATION OF THE GRAVITY SEWER WILL BE PERFORMED.
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Aldrich + Elliott
WATER RESOURCE ENGINEERS

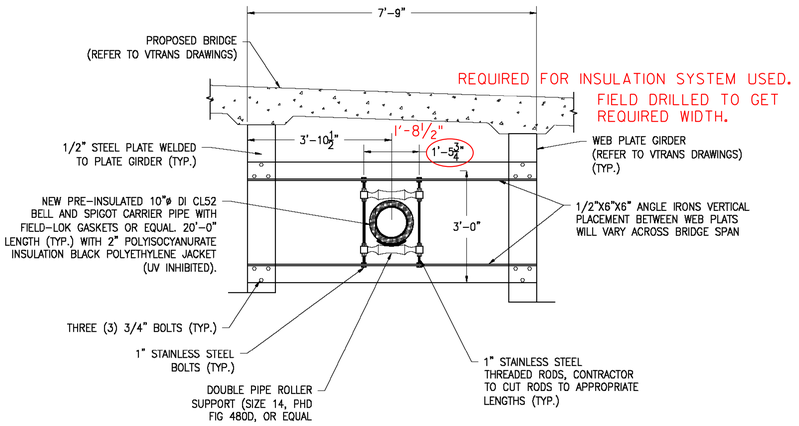
BARRE TOWN
COUNTY OF WASHINGTON

BARRE TOWN
BRF 6100 (7)

BRIDGE STREET GRAVITY SEWER BRIDGE CROSSING PROFILE

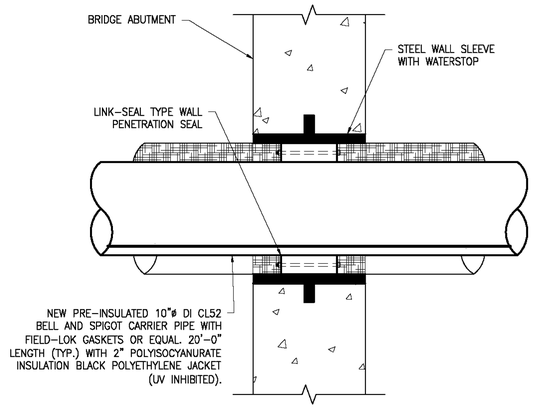
DESIGNED	JAB
DRAWN	JEN
CHECKED	WAE
DATE	DEC. 2010
PROJECT NO.	09092

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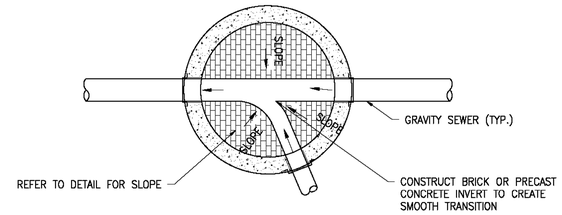
TYPICAL DOUBLE ROLLER PIPE SUPPORT DETAILS

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



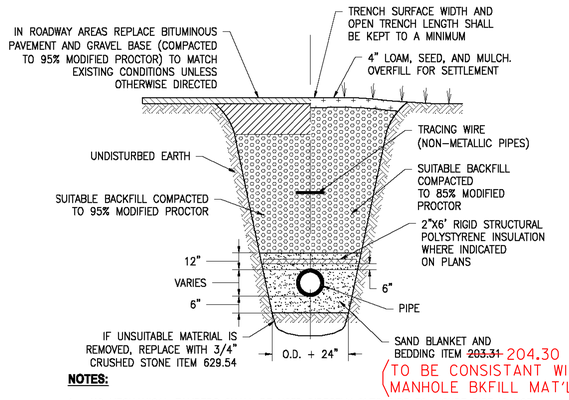
BRIDGE ABUTMENT PIPE PENETRATION DETAIL

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



TYPICAL SANITARY MANHOLE PLAN

SCALE: NONE

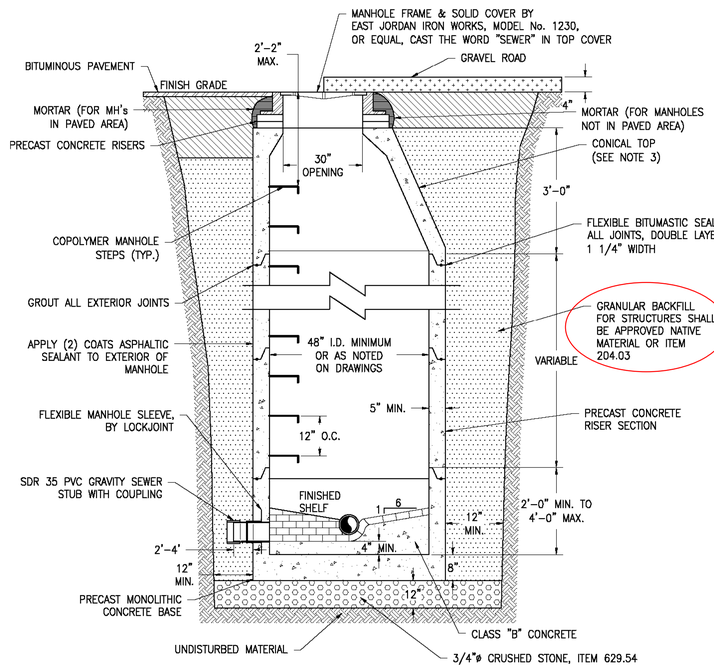


NOTES:

1. NO MECHANICAL TAMPERS SHALL BE USED DIRECTLY OVER PIPE TO INSURE PIPE IS NOT DAMAGED.
2. COMPACTION OF BACKFILL SHALL MEET A MINIMUM 95% STANDARD PROCTOR.
3. BEDDING TO PROVIDE A FIRM, STABLE, CONTINUOUS AND UNIFORM SUPPORT FOR THE FULL LENGTH OF PIPE.

TYPICAL SEWERLINE TRENCH DETAIL

SCALE: NONE

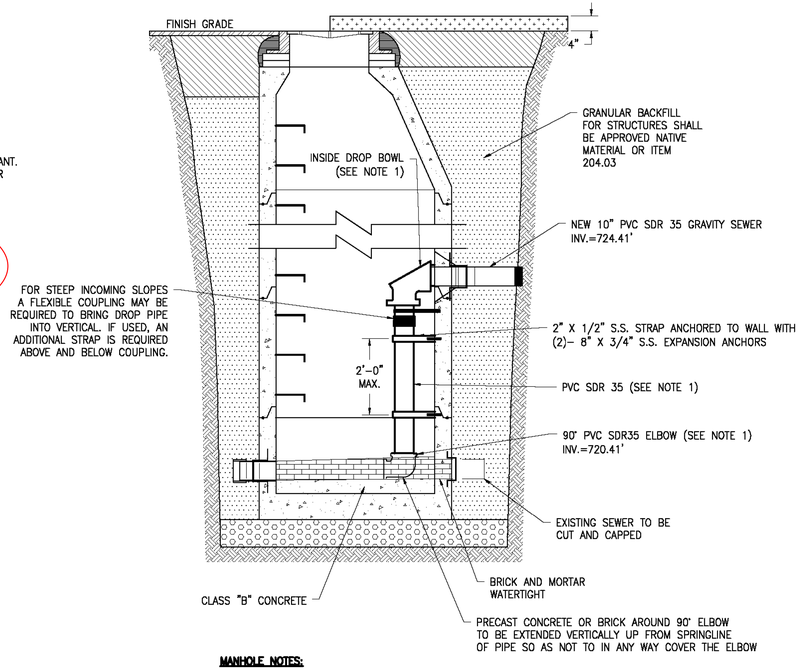


MANHOLE NOTES:

1. INVERTS OF MANHOLE SHALL BE LINED WITH HARD SEWER BRICK OR PRECAST CONCRETE
2. PROVIDE SMOOTH SWEEPING TRANSITIONS BETWEEN INVERTS OF INTERSECTING PIPE. REFER TO DETAIL C/___.
3. IF DEPTH OF MANHOLE IS 7 FEET OR LESS FROM RIM TO CENTERLINE INVERT THEN A FLAT TOP SHALL BE INSTALLED IF DEPTH OF MANHOLE FROM RIM TO CENTERLINE INVERT IS MORE THAN 7 FEET THEN A CONICAL TOP SHALL BE INSTALLED.
4. FOR GRAVEL AREAS, PROVIDE A MAXIMUM OF 4" GRAVEL OVER FRAME AND COVER.

TYPICAL SANITARY SEWER CONICAL MANHOLE DETAIL

SCALE: NONE



MANHOLE NOTES:

1. DROP BOWL SHALL BE AS MANUFACTURED BY RELINER-DURAN, INC. OR APPROVED EQUAL. THE SIZE OF THE BOWL, PVC RISER, AND PVC ELBOW SHALL BE BASED ON THE FOLLOWING SCHEDULE

INLET DIAMETER	DROP BOWL MODEL No.	PVC RISER DIAMETER	ELBOW DIAMETER
10"	B8	8"	8"

TYPICAL SANITARY SEWER INSIDE DROP MANHOLE DETAIL

SCALE: NONE

6 Market Place, Suite 2
Essex Jct., VT 05452
P: 802.879.7733
AEengineers.com
Aldrich + Elliott
WATER RESOURCE ENGINEERS

BARRE TOWN
COUNTY OF WASHINGTON

BARRE TOWN
BRF 6100 (7)

BRIDGE STREET GRAVITY SEWER BRIDGE CROSSING SEWER DETAILS

DESIGNED	JAB
DRAWN	JEN
CHECKED	WAE
DATE	DEC. 2010
PROJECT NO.	09092

Y:\09092-BARRE\09092-SEWER-DETAILS.dwg 4/2/2012 6:50:48 PM, DWG To PDF.pc3

24" STOP BAR
STA. 12+94.80 - 12+98.80 LT
STA. 14+66.40 - STA. 14+81.00 RT

TRAFFIC SIGN, TYPE A
STA. 12+93.00 LT
STA. 14+63.00 LT

REMOVING SIGNS
STA. 12+78.00 RT
STA. 13+09.00 LT
STA. 15+05.00 LT

ERECTING SALVAGED SIGNS
STA. 12+78.00 RT
STA. 13+06.00 LT
STA. 14+63.00 LT

BOLLARDS
STA. 12+~~93.97~~ LT 95.00
STA. ~~12+99.15~~ LT 13+01.00
STA. 13+~~04.26~~ LT 06.00

4" WHITE LINE
STA. 11+75.00 - STA. 16+00.00 RT
STA. 11+75.00 - STA. ~~16+00.00~~ LT
14+66 LT
15+00 - 16+00 LT

4" DOUBLE YELLOW LINE
STA. 11+75.00 - STA. ~~16+00.00~~ LT/RT
14+60
15+00 - 16+00 LT/RT

N
VT STATE PLANE GRID

13+06.00 LT
TO SCHOOL S S N

13+09.00 LT
TO SCHOOL R&S R&S R

14+63.00 LT
BRIDGE ST WH PARK S
STOP N N

12+78.00 RT
TO SCHOOL S S N
TO SCHOOL R&S R&S R

12+93.00 LT
(ON BIKE PATH)
STOP N N
RI-1

BEGIN BRIDGE
STA 13+02.92

END BRIDGE
STA 14+27.04

15+05.00 LT
BRIDGE ST WH PARK R&S R

BEGIN PROJECT
STA 12+50.00

BEGIN APPROACH
STA 11+75.00

END PROJECT
STA 15+25.00

END APPROACH
STA 16+00.00

11+00
12+00
13+00
14+00
15+00
16+00
17+00

SHARE THE ROAD
RETAIN EXISTING
11+75.00.00 RT
APPROX.

NO MOTOR VEHICLES N N
R5-3
13+04.50 LT
(ON BIKE PATH)

SHARE THE ROAD
15+60.00 LT
APPROX.
DO NOT REMOVE

RETAIN EXISTING
MAIL BOX
15+60.00 LT
APPROX.

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS WIDTH (In)	SIGN DIMENSIONS HEIGHT (In)	NEW SIGN "A"	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	NEW SIGN POSTS SQUARE STEEL (In) 2.0 lb/ft 2.16	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLEEVE	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STD. SHEET NUMBER
12+78.00 RT	TO SCHOOL					S	1		15		X		SALVAGED SIGNS		
12+93.00 LT	STOP	18	18	2.25			1		10		X		RI-1		SHSM
13+04.50 LT	NO MOTOR VEHICLES	24	24	4.00			1		15		X		R5-3		SHSM
13+06.00 LT	TO SCHOOL					S	1		15		X		SALVAGED SIGNS		
14+63.00 LT	STOP	30	30	6.25			1		15		X		RI-1		SHSM
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."			TOTALS	SF 12.50				FT	FT 70	FT		EA	SHSM = FHWA STANDARD HIGHWAY SIGNS & MARKINGS BOOK		
								FT 70							

SIGN LAYOUT SHEET
SCALE 1" = 20'-0"
20 0 20

SIGN LEGEND

N = NEW
R = REMOVE
S = SALVAGE
R&S = REMOVE AND SALVAGE
• = BOLLARDS

NOTE:
ADJUST NEW EDGE LINE TO MATCH EXISTING EDGE LINE AT BEGIN/END APPROACH

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002sign.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: J. SALVATORI
SIGNS AND PAVEMENT MARKINGS
PLOT DATE: 09-OCT-2012
DRAWN BY: R. PELLETT
CHECKED BY: J. SALVATORI
SHEET 22 OF 70

SOIL CLASSIFICATION

AASHTO

A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS) N	DESCRIPTIVE TERM	CONSISTENCY (COHESIVE SOILS) N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

▼	Water Elevation
⊗	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	Top of Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)
VTSPG	NAD83 - See Note 7

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 12 inches.

COBBLE - Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

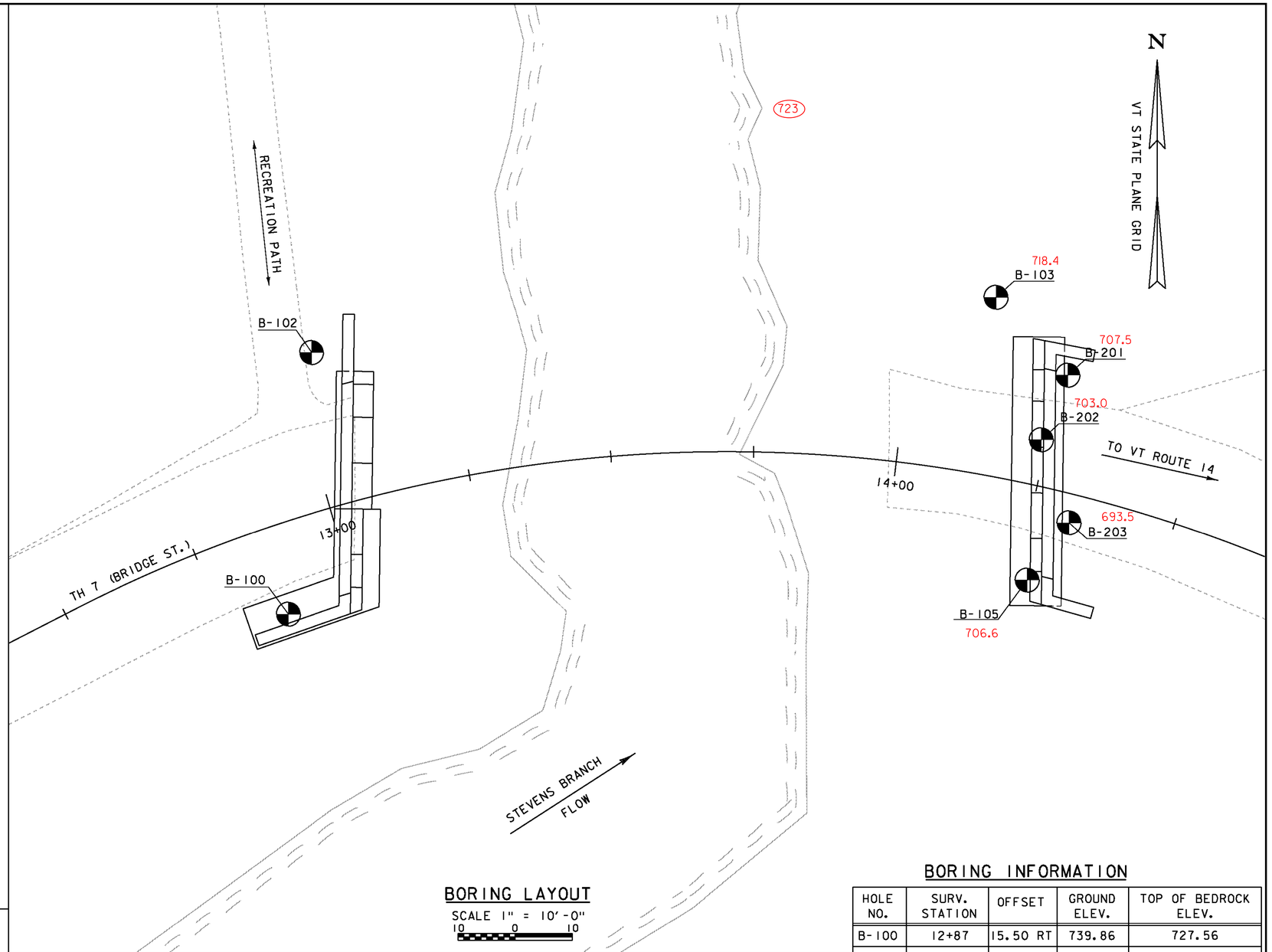
MUCK - Soft organic soil (containing > 10% organic material.

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.



BORING LAYOUT

SCALE 1" = 10'-0"

10 0 10

GENERAL NOTES

1. The subsurface explorations shown herein were made between 12/15/09 and 06/08/11 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.
7. Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.

BORING INFORMATION

HOLE NO.	SURV. STATION	OFFSET	GROUND ELEV.	TOP OF BEDROCK ELEV.
B-100	12+87	15.50 RT	739.86	727.56
B-102	13+04	27.00 LT	740.05	738.35
B-103	14+14	31.00 LT	732.45	718.35
B-105	14+27	16.50 RT	730.44	693.44
B-201	14+26	20.00 LT	732.00	707.50
B-202	14+24	8.00 LT	731.50	703.00
B-203	14+32	5.00 RT	731.00	693.50

PROJECT NAME: BARRE TOWN

PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002bor.dgn PLOT DATE: 27-SEP-2012

PROJECT LEADER: J. LACROIX DRAWN BY: R. PELLETT

DESIGNED BY: T. FILLBACH CHECKED BY: T. FILLBACH

BORING INFORMATION SHEET 23 OF 70

ABUTMENT NO. 1
BOTTOM OF FOOTING
ELEV. 727.00

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-100
SHEET 1 of 1
DATE STARTED: 2/12/10
DATE COMPLETED: 2/26/10

PROJECT NAME: BARRE TOWN
SITE NAME: TH-7
STATION: 12+87
OFFSET: 15.50
VTSPG NAD83: N 611672.44 ft E 1638631.28 ft

PROJECT NUMBER: BRF 6100(7)
SITE NUMBER: BR-11
GROUND ELEVATION: 739.86 ft
GROUNDWATER DEPTH: NO WATER TO DEPTH
PROJECT PIN NUMBER: 06J002

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: SMALL SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		A-2-4, SiGrSa, brn, Moist, Rec. = 1.6 ft	48	19.1	27.9	46.0	26.1
5		A-1-b, SlSaGr, brn, Moist, Rec. = 0.6 ft	17	22.5	48.0	27.4	24.6
		Field Note:, Granite boulder or block, Advanced casing to 11.3 feet. Cleaned out casing. No Recovery					
10		Field Note:, Possible Broken Rock, Cored for 26 minutes. No Recovery.		Top of Bedrock @ 12.3 ft			
		Dark gray, Meta-Limestone, with closely spaced stained jointing. Good Rock, Hard, Fresh Weathering, NXMDC, 12.3 ft - 17.3 ft, Rec. = 4.5 ft	1	90	78	40	16 18 18 18 18
15		Gray to Light Gray, Meta-Limestone, with thin Quartz veins. Closely spaced stained jointing. (Moderately weathered at 20.8 feet) Good Rock, Hard, Fresh Weathering, NXMDC, 17.3 ft - 22.3 ft, Rec. = 5.0 ft	2	100	56	50	22 18 18 27 35
20		Hole stopped @ 22.3 ft					
25							
30							
35							
40							
45							

LOG OF BORING BARRE TOWN BRF 6100(7).GPJ VT ADT.GDT 4/5/10

ABUTMENT NO. 1
BOTTOM OF FOOTING
ELEV. 731.98

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-102
SHEET 1 of 1
DATE STARTED: 2/04/10
DATE COMPLETED: 2/10/10

PROJECT NAME: BARRE TOWN
SITE NAME: TH-7
STATION: 13+04
OFFSET: -27.00
VTSPG NAD83: N 611718.46 ft E 1638636.14 ft

PROJECT NUMBER: BRF 6100(7)
SITE NUMBER: BR-11
GROUND ELEVATION: 740.05 ft
GROUNDWATER DEPTH: NO WATER TO DEPTH
PROJECT PIN NUMBER: 06J002

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: SMALL SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		A-2-4, GrSlSa, brn, Moist, Rec. = 1.1 ft	6	25.6	24.6	42.8	32.6
				Top of Bedrock @ 1.7 ft			
		Gray, Meta-Limestone, with closely spaced stained jointing. Fair Rock, Hard, Fresh Weathering, NXMDC, 1.7 ft - 2.7 ft, Rec. = 0.9 ft	1	90	40	?	39
		Gray, Meta-Limestone, with thin quartz veins and closely spaced stained jointing. Fair Rock, Hard, Fresh Weathering, NXMDC, 2.7 ft - 4.7 ft, Rec. = 1.5 ft	2	75	50	65	17 16
5		Gray, Meta-Limestone, with thin quartz veins and very closely spaced stained jointing. Fair Rock, Hard, Slightly weathered, NXMDC, 4.7 ft - 6.7 ft, Rec. = 1.6 ft	3	80	0	65	14 24
		Gray, Meta-Limestone, with thin quartz veins and very closely spaced stained jointing. Fair Rock, Hard, Slightly weathered, NXMDC, 6.7 ft - 9.2 ft, Rec. = 2.2 ft	4	88	0	40	13 19 8
10		Gray, Meta-Limestone, with closely spaced stained jointing. A stained joint dipping 70 degrees was at the bottom of Run. Fair Rock, Hard, Slightly weathered, NXMDC, 9.2 ft - 11.7 ft, Rec. = 2.4 ft	5	96	30	45	7 18 20
		Gray, Meta-Limestone, with closely spaced stained jointing. Stained near vertical joint (contiuation of 70 degree joint in Run #5). Fair Rock, Hard, Slightly weathered, NXMDC, 11.7 ft - 12.7 ft, Rec. = 0.8 ft	6	80	0	45	11
15		Gray, Meta-Limestone, with closely spaced stained jointing. Stained near vertical joint (contiuation of jointing in Runs #5 & #6). Fair Rock, Hard, Fresh Weathering, NXMDC, 12.7 ft - 16.7 ft, Rec. = 3.9 ft	7	98	55	40	13 19 16 25
		Hole stopped @ 16.7 ft					
20		GEOLOGIST'S NOTES: 1. The Dip on Run #1 could not be determined.					
25							

LOG OF BORING BARRE TOWN BRF 6100(7).GPJ VT ADT.GDT 4/5/10

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002bor.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
BORING LOGS 1

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 24 OF 70

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-103
SHEET 1 of 1
DATE STARTED: 12/15/09
DATE COMPLETED: 1/05/10

PROJECT NAME: BARRE TOWN
SITE NAME: TH-7
STATION: 14+14
OFFSET: -31.00
VTSPG NAD83: N 611727.69 ft E 1638756.09 ft

PROJECT NUMBER: BRF 6100(7)
SITE NUMBER: BR-11
GROUND ELEVATION: 732.45 ft
GROUNDWATER DEPTH: NO WATER TO DEPTH
PROJECT PIN NUMBER: 06J002

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: SEE NOTES
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		Field Note:, 0.3'-1.5', Granite Block					
		Cleaned out casing, 3.8 ft - 5.0 ft					
5		A-4, SaSl, brn, Moist, Rec. = 1.0 ft	4	34.0	7.3	25.5	67.2
10		A-2-4, SlSa, brn, Moist, Rec. = 0.7 ft	7	13.1	0.3	78.5	21.2
		Top of Bedrock @ 14.1 ft					
15		Gray, Meta-Limestone, Closely spaced stained jointing. Fair Rock, Hard, Fresh Weathering, NXMDC, 14.1 ft - 15.6 ft, Rec. = 1.3 ft	1	87	27	?	20 20
		Gray, Meta-Limestone, Closely spaced stained jointing. Fair Rock, Hard, Fresh Weathering, NXMDC, 15.6 ft - 19.1 ft, Rec. = 3.5 ft	2	100	0	60	15 14 15 15
20		Gray, Meta-Limestone, Closely spaced stained jointing. Fair Rock, Hard, Fresh Weathering, NXMDC, 19.1 ft - 24.1 ft, Rec. = 5.0 ft	3	100	52	65	7 8 8 7 8
25		Hole stopped @ 24.1 ft					

DRILLER'S NOTES:
1. Before breaking down, the small skid rig was used until the drillers hit bedrock.
2. The large track rig #10 was used for coring rock.

GEOLOGIST'S NOTES:
1. The Dip on Run #1 could not be determined.

ABUTMENT NO. 2
BOTTOM OF FOOTING
ELEV. 723.00

ESTIMATED
PILE TIP
ELEV. ASSUMED

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING NUMBER: B-105
SHEET 1 of 1
DATE STARTED: 1/07/10
DATE COMPLETED: 1/21/10

PROJECT NAME: BARRE TOWN
SITE NAME: TH-7
STATION: 14+27
OFFSET: 16.50
VTSPG NAD83: N 611678.60 ft E 1638762.30 ft

PROJECT NUMBER: BRF 6100(7)
SITE NUMBER: BR-11
GROUND ELEVATION: 730.44 ft
GROUNDWATER DEPTH: 25.2 ft 1/21/10
PROJECT PIN NUMBER: 06J002

BORING CREW
CREW CHIEF: PORTER
DRILLER: PORTER
LOGGER: WERNER

BORING RIG: LAG TRACK RIG #10 w/AUTO HAMMER
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT / RUN	M.C. (%) / REC (%)	GRAVEL (%) / RQD (%)	SAND (%) / Dip (deg)	FINES (%) / Drill Rate (min/ft)
		A-1-b, SaGr, brn, Wet, Rec. = 0.9 ft	8	23.2	46.3	39.8	13.9
5		Field Note:, No Recovery, NXDC, Cleaned out casing., Granite pieces in end of sampler.	9				
10		A-4, SaSi, brn, Wet, Rec. = 1.1 ft	1	27.1	14.3	30.7	55.0
15		A-4, SlSa, brn, Wet, Rec. = 0.9 ft, Small amounts of Wood were within sample.	1	35.0	16.4	46.2	37.4
20		Field Note:, Wood pieces, Cored ahead					
		A-2-4, SlSa, gry, Wet, Rec. = 0.8 ft, Lots of Wood was within sample and was removed before gradation.	7	48.3	5.5	68.3	26.2
25		A-4, SlSa, gry, Wet, Rec. = 1.6 ft, Small amounts of Wood were within sample.	3	42.9	0.0	61.6	38.4
30		A-4, SlSa, gry, Wet, Rec. = 0.4 ft, Small amounts of Wood were within sample.	4	46.4	7.8	53.3	38.9
35		Field Note:, Cobbles & Broken rock					
		Top of Bedrock @ 37.0 ft					
		Gray, Meta-Limestone, with closely spaced stained jointing. Fair Rock, Hard, Slightly weathered, NXMDC, 37.0 ft - 39.0 ft, Rec. = 2.0 ft	1	100	0	70	10 10
40		Gray, Meta-Limestone, with closely spaced stained jointing. Fair Rock, Hard, Slightly weathered, NXMDC, 39.0 ft - 44.0 ft, Rec. = 4.5 ft	2	90	40	70	11 11 11 12 15
45		Gray, Meta-Limestone, with closely spaced stained jointing. Fair Rock, Hard, Fresh Weathering, NXMDC, 44.0 ft - 49.0 ft, Rec. = 5.0 ft	3	100	72	70	10 12 11 10 9
		Hole stopped @ 49.0 ft					

LOG OF BORING BARRE TOWN BRF 6100(7).GPJ VT ADT.GDT 4/5/10

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002bor.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
BORING LOGS 2

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 25 OF 70

ABUTMENT NO. 2
BOTTOM OF FOOTING
ELEV. 723.00

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

BARRE TOWN
BRF 6100(7)

Boring No.: B-201
Page No.: 1 of 2
Pin No.: 06J002
Checked By: LJD

Boring Crew: GEOSEARCH – FITCHBURG, MA, SMC
Date Started: 5/20/11 Date Finished: 5/20/11
VTSPG NAD83: N 611717.98 ft E 1638755.16 ft
Station: 14+26 Offset: –20.00
Ground Elevation: 732.0 ft

	Casing	Sampler
Type:	WB	SS
I.D.:		1.38 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/N
Rig:	CME 75 Truck	CE =

Groundwater Observations

Date	Depth (ft)	Notes
05/20/11		None observed

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0		Grass mat/topsoil., Rec. = 0.8 ft, 0.0 ft – 0.2 ft				2-3-3-4 (6)	7.5	35.4	47.5	17.1
		A-1-b, SISa, gry-brn, Moist, Fill Material								
2.5		SILT, little fine sand, trace fine gravel, gray-brown, loose, moist, Rec. = 0.6 ft, 3.0 ft – 5.0 ft				7-3-2-2 (5)				
5.0										
7.5		A-4, SISa, gry-brn, Moist, Rec. = 0.6 ft				1-2-1-2 (3)	27.1	4.3	50.0	45.7
10.0										
12.5		A-2-4, SISa, brn, Moist, Rec. = 0.6 ft				8-7-7-5 (14)	17.2		77.8	22.2
15.0										
17.5		Fine SAND, little silt, brown, medium dense, moist., Rec. = 0.3 ft, 18.0 ft – 20.0 ft				7-8-8-8 (16)				

Notes:
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STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

BARRE TOWN
BRF 6100(7)

Boring No.: B-201
Page No.: 2 of 2
Pin No.: 06J002
Checked By: LJD

Boring Crew: GEOSEARCH – FITCHBURG, MA, SMC
Date Started: 5/20/11 Date Finished: 5/20/11
VTSPG NAD83: N 611717.98 ft E 1638755.16 ft
Station: 14+26 Offset: –20.00
Ground Elevation: 732.0 ft

	Casing	Sampler
Type:	WB	SS
I.D.:		1.38 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/N
Rig:	CME 75 Truck	CE =

Groundwater Observations

Date	Depth (ft)	Notes
05/20/11		None observed

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
22.5		A-2-4, SISa, brn, Wet				18-60/3" (R)	16.4	2.6	74.8	22.6
		Note:, Set casing and began core at 24.5 feet.								
25.0		24.5 ft – 29.5 ft, Dark gray & white, Meta-Limestone, aphanitic. Hard, Moderately weathered, NXMDC, Joints, low angle to moderately dipping, disintegrated to clayey silt 25 to 26 feet, discolored, close spacing 26 to 29. 5 feet,rough, stepped, tight to open.	1	88 (38)	1.5 4 4.5 3 10.5					
27.5										
30.0		29.5 ft – 34.5 ft, Gray-white, Meta-Limestone, aphanitic. Very hard, NXMDC, Primary joint set low, angle to moderately dipping, close to moderate spacing, rough, stepped, discolored to fresh, tight. Secondary joint set, high angle, wide spacing (36") rough to smooth, planar to undulating, discolored to fresh, tight.	2	100 (93)	4 6 7 6 8					
32.5										
35.0		34.5 ft – 35.5 ft, Meta-Limestone, aphanitic. Very hard, NXMDC	3	100 (100)	6					
37.5		35.5 ft – 39.5 ft, Meta-Limestone, aphanitic. Very hard, NXMDC, Joint, moderately dipping to high angle, very close, intersecting from 36.3 to 37.5 feet, moderately dipping, wide spacing, rough, planar, discolored to fresh.	4	98 (67)	8.5 6 7.5 8.5					
		Hole stopped @ 39.5 ft								

ESTIMATED
PILE TIP
ELEV. ASSUMED

Notes:
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2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 BARRE TOWN BRF 6100(7) JET FIXED.GPJ VERMONT AOT.GDT 7/15/11

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002bor.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
BORING LOGS 3

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 26 OF 70

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

BARRE TOWN
BRF 6100(7)

Boring No.: B-202
Page No.: 1 of 2
Pin No.: 06J002
Checked By: LJD

Boring Crew: GEOSEARCH – FITCHBURG, MA, SMC
Date Started: 5/18/11 Date Finished: 5/19/11
VTSPG NAD83: N 611710.35 ft E 1638751.79 ft
Station: 14+24 Offset: –8.00
Ground Elevation: 731.5 ft

	Casing	Sampler
Type:	WB	SS
I.D.:		1.38 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/MWJ
Rig:	CME 75 Truck	CE =

Groundwater Observations

Date	Depth (ft)	Notes
05/18/11		None observed
05/18/11	27.65	10 hours later

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt, 0.0 ft – 0.85 ft							
2.5		A-1-b, SlSaGr, Dark brown, Moist., Rec. = 1.5 ft, 1.0 ft – 3.0 ft, Fill Material			15–16–14–10 (30)	4.1	53.2	31.6	15.2
		Visual Classification, Fine SAND and silt, trace coarse gravel, moist, loose, brown., Rec. = 1.5 ft			5–3–5–4 (8)				
5.0		A-4, SaSi, brown, Moist., Rec. = 1.3 ft, 5.0 ft – 7.0 ft			4–3–3–4 (6)	17.8	8.2	21.9	69.9
7.5		Visual Classification, Similar to S-3., Rec. = 1.3 ft			2–2–5–6 (7)				
		No recovery., 9.0 ft – 11.0 ft			3–3–2–2 (5)				
10.0		A-4, SaSi, brown, Moist., Rec. = 1.5 ft, 11.0 ft – 13.0 ft			2–2–3–3 (5)	20.9	3.6	41.6	54.8
12.5		Visual Classification, Similar to S-6., Rec. = 1.8 ft			2–2–2–2 (4)				
15.0		A-4, SaSi, brown, Moist., Rec. = 1.3 ft, 15.0 ft – 17.0 ft			1–1–1–1 (2)	32.0	4.7	47.1	48.2
17.5		Visual Classification, Fine SAND and silt, loose brown, moist., Rec. = 1.2 ft			3–3–2–2 (5)				
		Visual Classification, Medium to fine SAND, some silt, trace coarse to fine gravel, loose, brown, moist., Rec. = 1.5 ft			2–2–3–3 (5)				

Notes:
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2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

ABUTMENT NO. 2
BOTTOM OF FOOTING
ELEV. 723.00

BORING LOG 2 BARRE TOWN BRF 6100(7) JET FIXED.GPJ VERMONT AOT.GDT 7/15/11

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

BARRE TOWN
BRF 6100(7)

Boring No.: B-202
Page No.: 2 of 2
Pin No.: 06J002
Checked By: LJD

Boring Crew: GEOSEARCH – FITCHBURG, MA, SMC
Date Started: 5/18/11 Date Finished: 5/19/11
VTSPG NAD83: N 611710.35 ft E 1638751.79 ft
Station: 14+24 Offset: –8.00
Ground Elevation: 731.5 ft

	Casing	Sampler
Type:	WB	SS
I.D.:		1.38 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/MWJ
Rig:	CME 75 Truck	CE =

Groundwater Observations

Date	Depth (ft)	Notes
05/18/11		None observed
05/18/11	27.65	10 hours later

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
22.5		A-2-4, SaSi, tan, Moist., Rec. = 1.5 ft, 21.0 ft – 23.0 ft			2–3–2–2 (5)	8.1	3.2	76.5	20.3
		Visual Classification, Fine sand, little silt, loose tan, moist., Rec. = 1.5 ft			2–2–2–2 (4)				
25.0		Visual Classification, Fine SAND, little silt, loose tan/orange, moist, mottling/iron staining observed, weathered rock at tip of sampler., Rec. = 1.3 ft			5–4–6–6 (10)				
27.5		Note:, Drill action suggests cobbles/bedrock at 27 feet. Auger refusal at 28 feet. Advanced NX roller bit to 28.5 feet to seat casing.							
		28.5 ft – 33.5 ft, Gray, Meta-Limestone, NXMDC, Joint sets high angle, close, rough, undulating, fresh, moderately open.	1	100 (88)					
30.0									
32.5		33.5 ft – 38.5 ft, Gray, Meta-Limestone, NXMDC, Joint sets high angle, close, rough, undulating, fresh, moderately open.	2	100 (69)					
35.0									
37.5		Hole stopped @ 38.5 ft							

Notes:
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2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

ESTIMATED
PILE TIP
ELEV. ASSUMED

BORING LOG 2 BARRE TOWN BRF 6100(7) JET FIXED.GPJ VERMONT AOT.GDT 7/15/11

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002bor.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
BORING LOGS 4

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 27 OF 70

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

BARRE TOWN
BRF 6100(7)

Boring No.: B-203
Page No.: 1 of 2
Pin No.: 06J002
Checked By: LJD

Boring Crew: GEOSEARCH – FITCHBURG, MA, SMC
Date Started: 6/08/11 Date Finished: 6/08/11
VTSPG NAD83: N 611692.35 ft E 1638759.06 ft
Station: 14+32 Offset: -5.00
Ground Elevation: 731.0 ft

	Casing	Sampler
Type:	WB	SS
I.D.:		1.38 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/MWJ
Rig:	CME 55	CE =

Groundwater Observations

Date	Depth (ft)	Notes
06/08/11	30.0	

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt, 0.0 ft – 0.5 ft							
		A-1-a, SlGrSa, Dark brown, Moist., Rec. = 1.5 ft, 0.5 ft – 2.5 ft, Fill Material.			18-9-5-3 (14)	5.0	43.0	42.6	14.4
2.5									
5.0		A-4, SaSi, brown, Moist., Rec. = 1.5 ft, 5.0 ft – 7.0 ft			3-2-1-2 (3)	22.8	0.7	12.0	87.3
7.5									
10.0		A-4, SaSi, brown, Moist., Rec. = 1.3 ft, 10.0 ft – 12.0 ft			2-1-2-2 (3)	20.5	7.2	23.9	68.9
12.5									
15.0		Similar to S-3., Rec. = 1.3 ft, 15.0 ft – 17.0 ft			2-1-1-3 (2)	30.5	2.1	43.0	54.9
17.5									
20.0		A-4, SlSa., 20.0 ft – 22.0 ft			2-3-2-3 (5)	25.8	6.6	57.3	36.1
22.5		A-4, SlSaGr, brown, Moist., 22.0 ft, Drill action suggest possible wood fragments 22 to 23 feet.							
		Visual Classification, Similar to S-6, with piece of wood in sampler., Rec. = 1.0 ft			22-20-12-12 (32)				

Notes:
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2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 BARRE TOWN BRF 6100(7) JET FIXED.GPJ VERMONT AOT.GDT 7/15/11

ABUTMENT NO. 2
BOTTOM OF FOOTING
ELEV. 723.00

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

BARRE TOWN
BRF 6100(7)

Boring No.: B-203
Page No.: 2 of 2
Pin No.: 06J002
Checked By: LJD

Boring Crew: GEOSEARCH – FITCHBURG, MA, SMC
Date Started: 6/08/11 Date Finished: 6/08/11
VTSPG NAD83: N 611692.35 ft E 1638759.06 ft
Station: 14+32 Offset: -5.00
Ground Elevation: 731.0 ft

	Casing	Sampler
Type:	WB	SS
I.D.:		1.38 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/MWJ
Rig:	CME 55	CE =

Groundwater Observations

Date	Depth (ft)	Notes
06/08/11	30.0	

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Wood fragments., Rec. = 0.2 ft, 25.0 ft – 27.0 ft			5-4-5-3 (9)				
27.5									
30.0		A3, SlSa, brown, Moist., Rec. = 1.2 ft, 30.0 ft – 32.0 ft			4-3-4-2 (7)	27.5	0.1	90.0	9.9
32.5									
35.0		Visual Classification, Fine SAND, some silt, trace fine gravel, loose, medium dense, brown, wet., Rec. = 1.0 ft			6-10-11-25/0" (21)				
37.5		Note:, Possible bedrock at 37.5 feet. Began rock core at 38.0 feet.							
		38.0 ft – 42.3 ft, Gray, Meta-Limestone, Hard, aphanitic. NXMDC, Primary joint sets horizontal to low angle, close to moderate spacing, rough, stepped, discolored to fresh. Secondary joints, high angle, close to moderately close, rough, planar to undulating, fresh to discolored, tight.	1	92 (29)					
40.0									
42.5		42.3 ft – 46.8 ft, NXMDC, Similar to C-1.	2	98 (44)					
45.0									
47.5		Hole stopped @ 46.8 ft							

ESTIMATED
PILE TIP
ELEV. ASSUMED

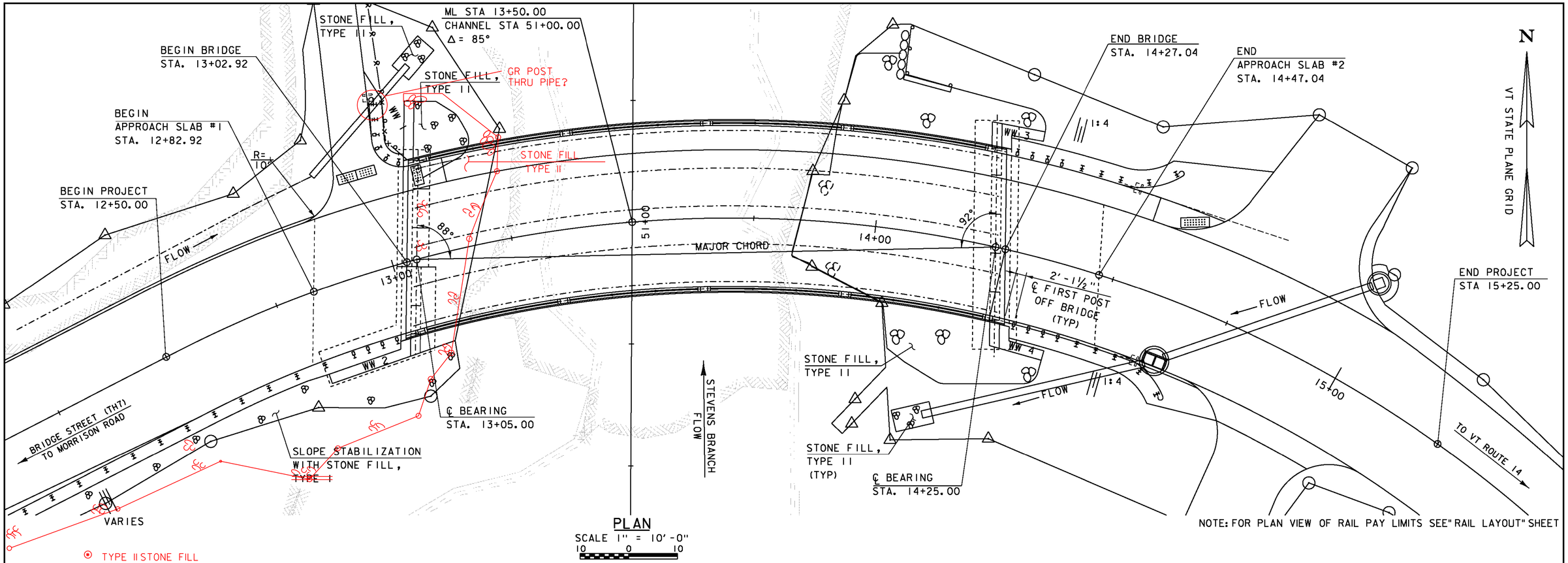
Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 BARRE TOWN BRF 6100(7) JET FIXED.GPJ VERMONT AOT.GDT 7/15/11

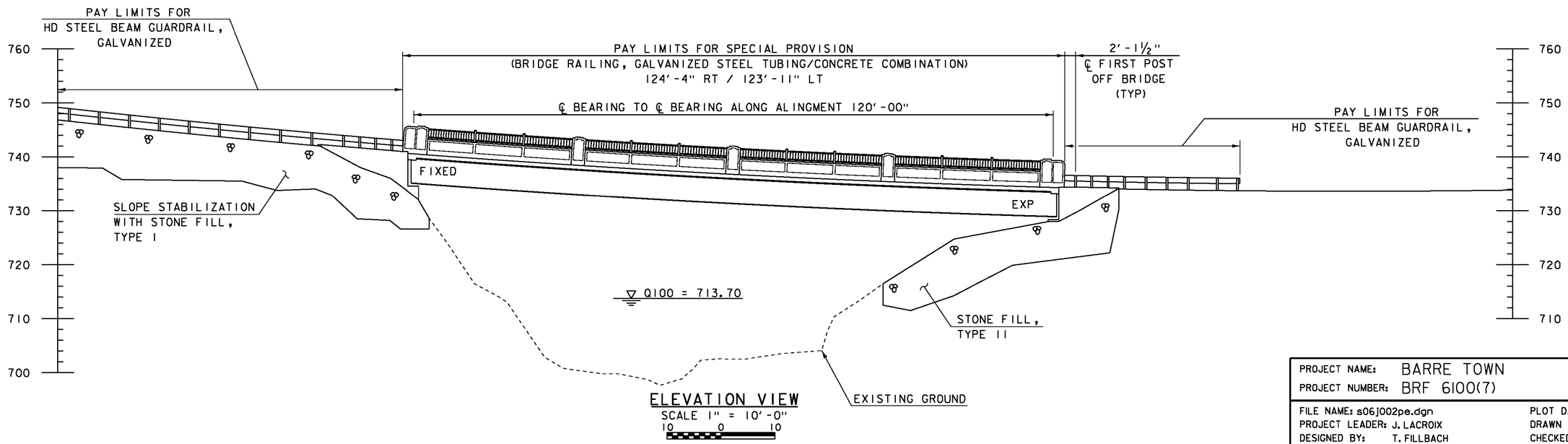
PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002bor.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
BORING LOGS 5

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 28 OF 70

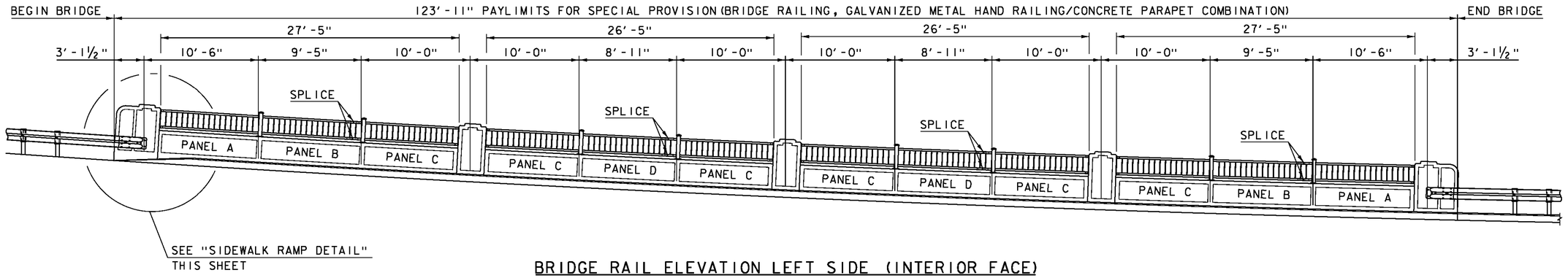


PLAN
SCALE 1" = 10'-0"
10 0 10



ELEVATION VIEW
SCALE 1" = 10'-0"
10 0 10

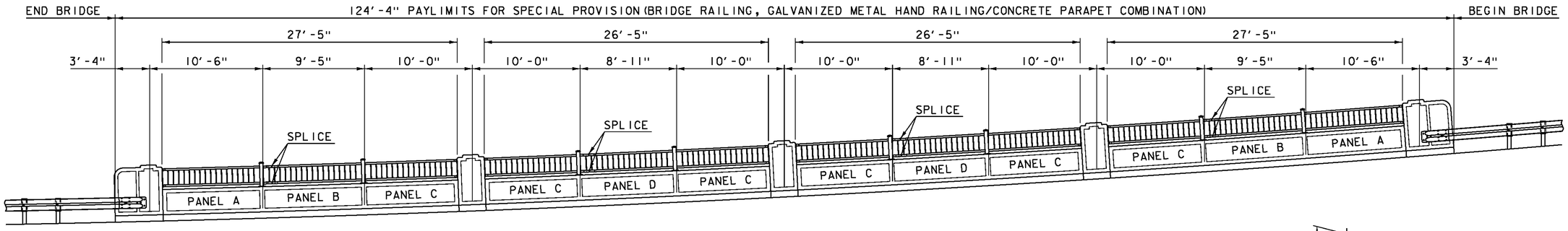
PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)
FILE NAME: s06j002pe.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: T. FILLBACH	CHECKED BY: T. FILLBACH
PLAN AND ELEVATION	SHEET 29 OF 70



BRIDGE RAIL ELEVATION LEFT SIDE (INTERIOR FACE)

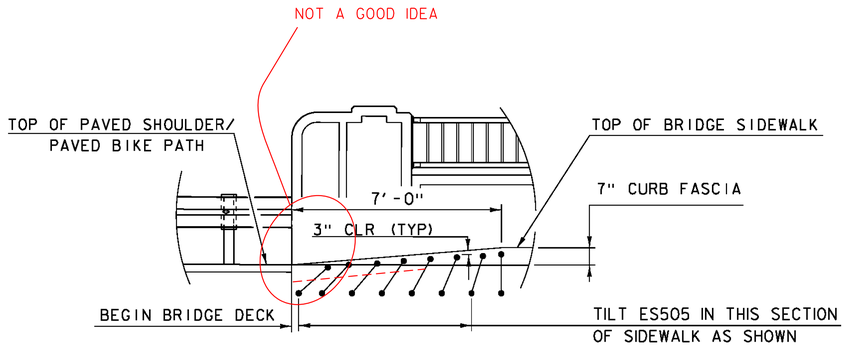
SCALE: 1" = 5'-0"

NOTE: MEASUREMENTS GIVEN ALONG CENTERLINE OF RAIL AND HORIZONTALLY FROM TOP OF SIDEWALK/CURB.



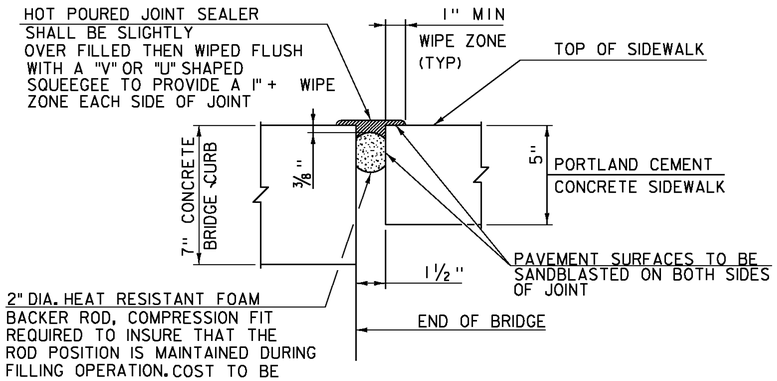
BRIDGE RAIL ELEVATION RIGHT SIDE (INTERIOR FACE)

SCALE: 1" = 5'-0"



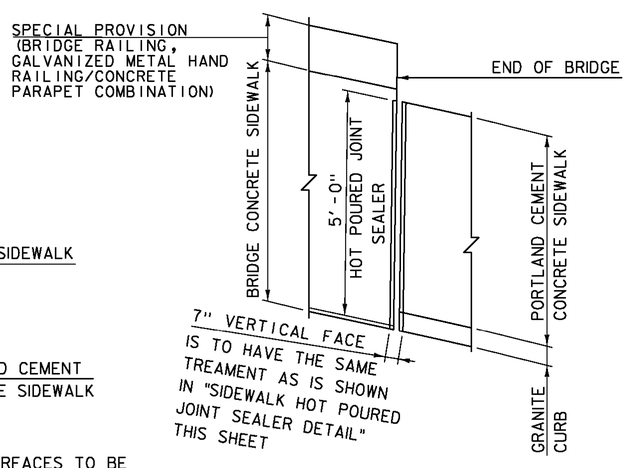
SIDEWALK RAMP DETAIL

NTS



SIDEWALK HOT POURED JOINT SEALER DETAIL

NTS

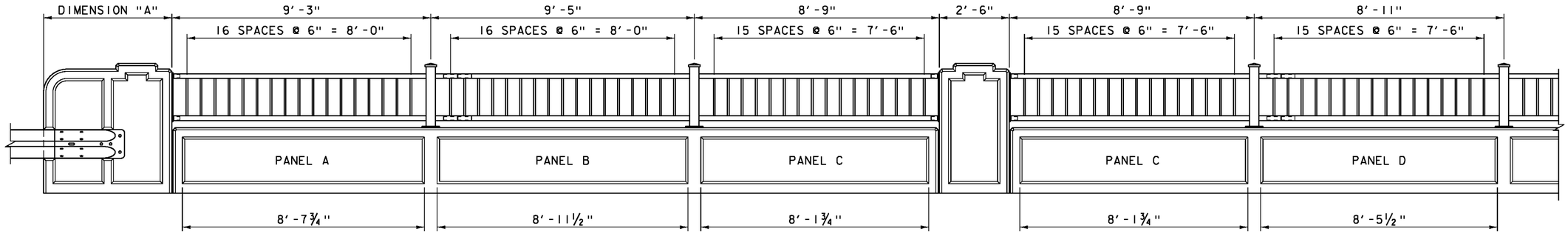


SIDEWALK HOT POURED JOINT SEALER PLAN

NTS

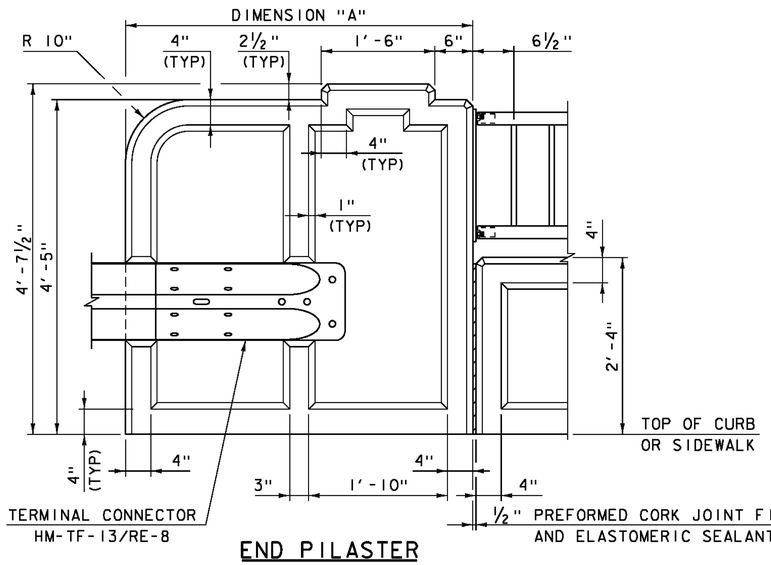
PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

FILE NAME: s06j002raildet.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: G. ROY
DESIGNED BY: G. ROY	CHECKED BY: J. SALVATORI
BRIDGE RAIL ELEVATIONS	SHEET 30 OF 70

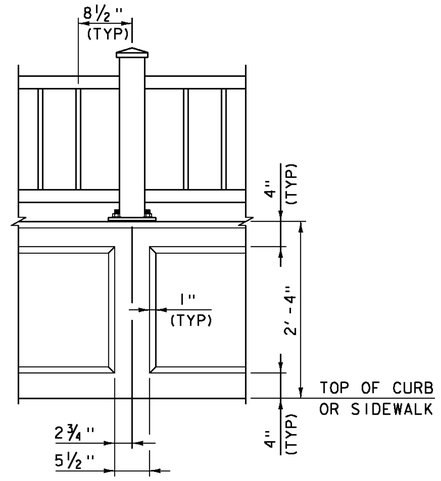


BRIDGE RAIL ELEVATION (INTERIOR FACE)

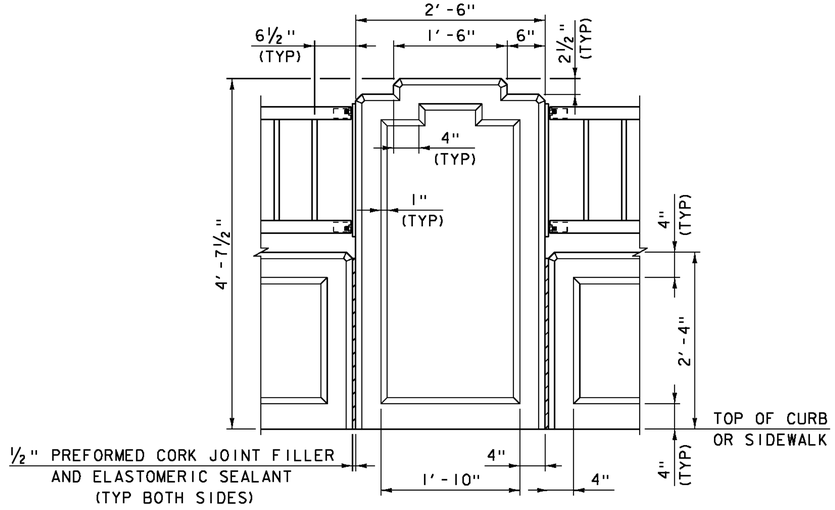
SCALE: ½" = 1'-0"



END PILASTER



POST



INTERMEDIATE PILASTER

BRIDGE RAIL CONCRETE DETAILS

SCALE: 1" = 1'-0"

DIMENSION "A"

WINGWALL NO.	EXTERIOR FACE	INTERIOR FACE
1	4'-2⅞"	4'-5⅞"
2	4'-8⅞"	4'-5¼"
3	4'-3⅝"	4'-5⅞"
4	4'-7⅞"	4'-5¼"

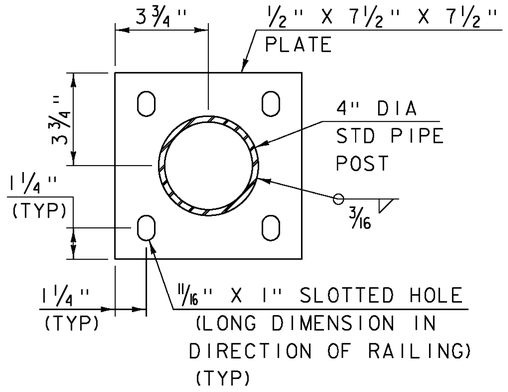
BRIDGE RAIL NOTES

1. ALL DIMENSIONS TO FACE OF CONCRETE UNLESS NOTED OTHERWISE.
2. RAIL POSTS SHALL BE SET NORMAL TO GRADE.
3. PAYMENT SHALL BE MADE UNDER PAY ITEM 900.640 SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION).
4. REINFORCING STEEL SHALL CONFORM TO SECTION 507 FOR LEVEL II REINFORCMENT. PAYMENT SHALL BE MADE UNDER PAY ITEM SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION).
5. METAL HAND RAILING, TO INCLUDE STEEL PIPES, PLATES AND HARDWARE, SHALL BE PAID FOR UNDER ITEM SPECIAL PROVISION(BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION).
6. STEEL PIPES FOR POSTS, TOP AND BOTTOM RAIL AND PALINGS SHALL BE SEAMLESS, CONFORMING TO SUBSECTION 732.01.
7. STEEL FOR BASE AND ANCHORAGE PLATES SHALL CONFORM TO SUBSECTION 732.03(b).
8. HARDWARE FOR ANCHOR BOLT ASSEMBLIES SHALL CONFORM TO SUBSECTION 732.03(d).
9. ⅛" PAD SHALL CONFORM TO SUBSECTION 731.01 OR 731.02.
10. ALL EXPOSED CUT OR SHEARED EDGES OF STEEL COMPONENTS SHALL BE ROUNDED TO A 1/16" RADIUS AND BE FREE OF BURRS.
11. ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M 111M/M 111, EXCEPT HARDWARE, WHICH SHALL MEET THE REQUIREMENTS OF AASHTO M 232M/M 232.
12. ALL PARTS EXCEPT HARDWARE AND ANCHORAGE PLATES SHALL BE PAINTED BLACK (COLOR CHIP #27038).
13. RAIL POST ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
14. THE FABRICATOR SHALL SUBMIT FABRICATION DRAWINGS INCLUDING WELDING PROCEDURES FOR METAL HAND RAILING IN ACCORDANCE WITH SECTION 105.

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

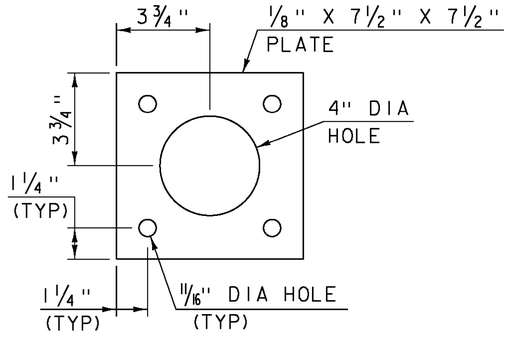
FILE NAME: s06j002raildet.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: G. ROY
BRIDGE RAIL CONCRETE DETAILS

PLOT DATE: 27-SEP-2012
DRAWN BY: G. ROY
CHECKED BY: J. SALVATORI



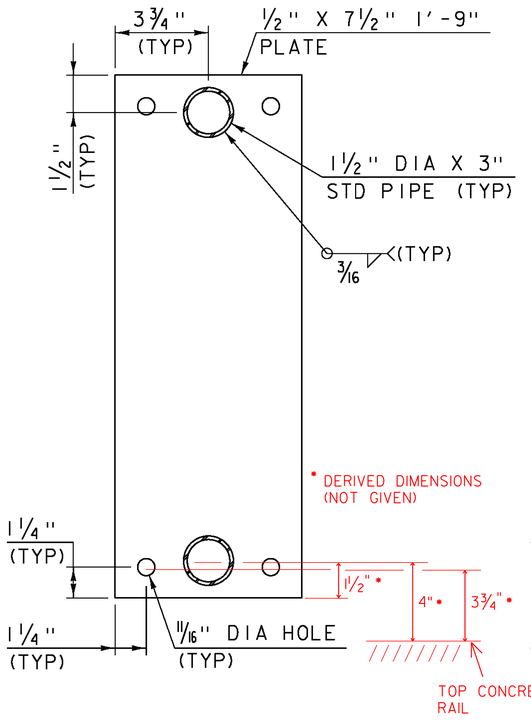
POST BASE PLATE

SCALE: 3" = 1'-0"



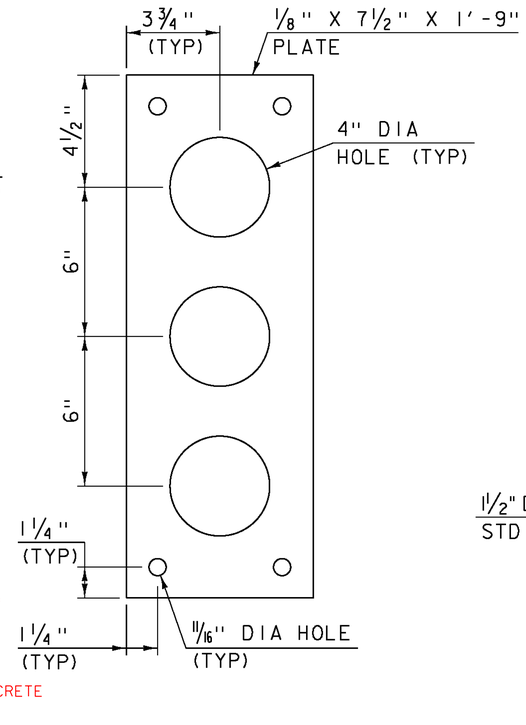
POST ANCHORAGE PLATE

SCALE: 3" = 1'-0"



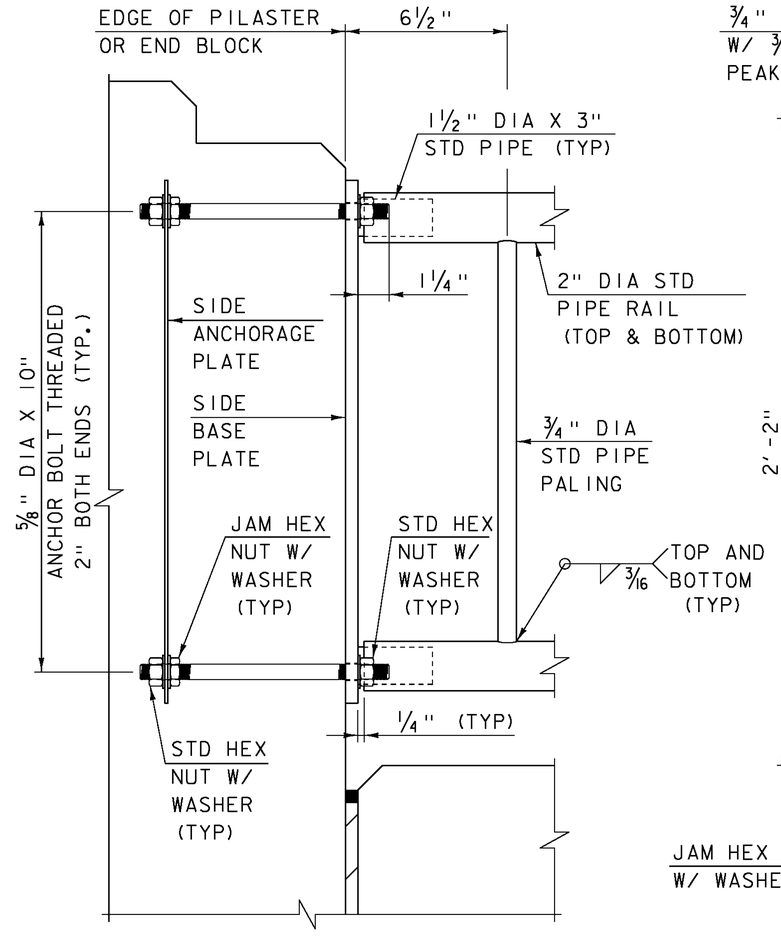
SIDE BASE PLATE

SCALE: 3" = 1'-0"



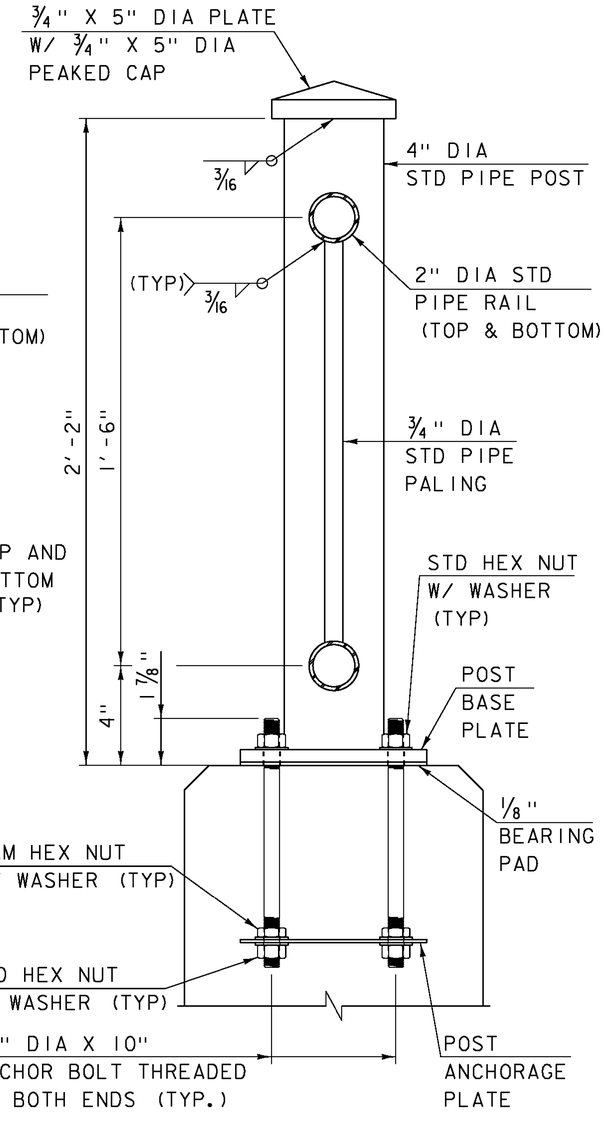
SIDE ANCHORAGE PLATE

SCALE: 3" = 1'-0"



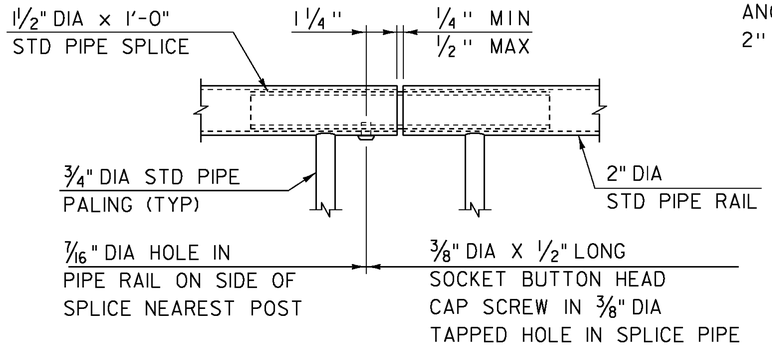
SIDE PLATE CONNECTION DETAIL

SCALE: 3" = 1'-0"



METAL RAILING DETAIL

SCALE: 3" = 1'-0"

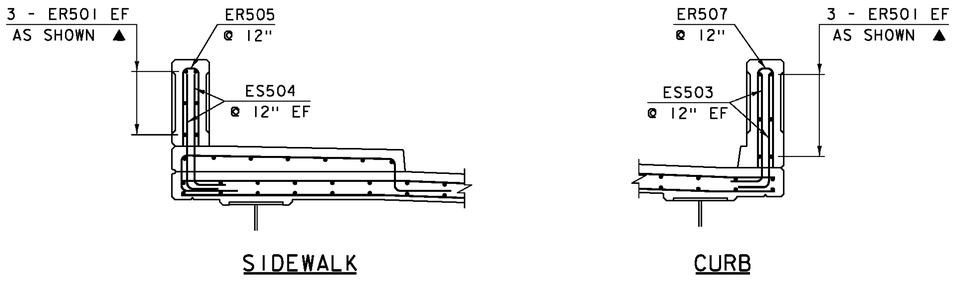


RAIL SPLICE DETAIL

SCALE: 3" = 1'-0"

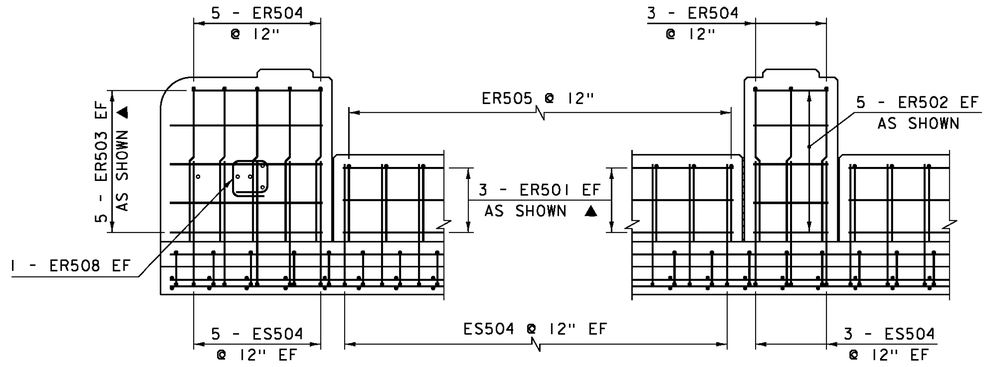
PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

FILE NAME: s06j002raildet.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: G. ROY
DESIGNED BY: G. ROY	CHECKED BY: J. SALVATORI
METAL HAND RAILING DETAILS	SHEET 32 OF 70



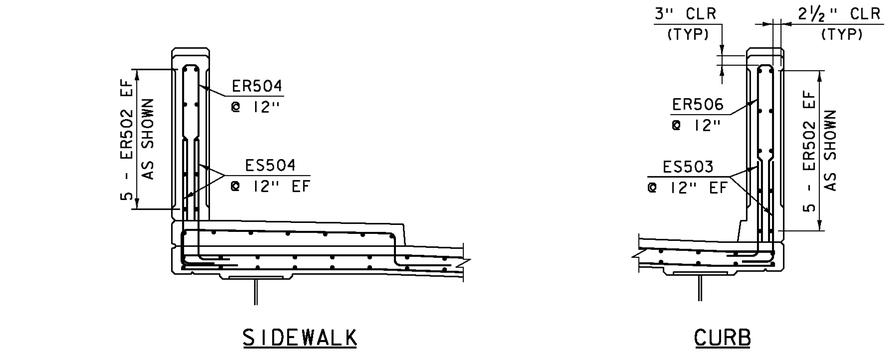
TYPICAL CONCRETE BASE PARAPET SECTIONS

SCALE: ½" = 1'-0"



TYPICAL REINFORCING SIDEWALK SIDE

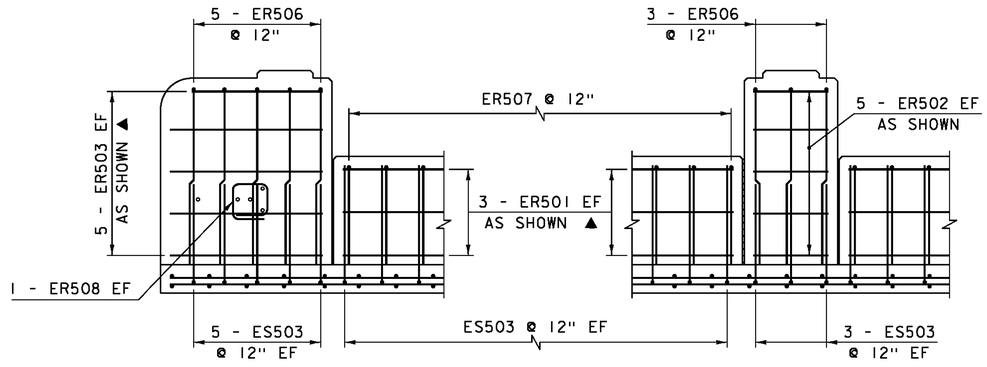
SCALE: ½" = 1'-0"



TYPICAL INTERMEDIATE PILASTER SECTIONS

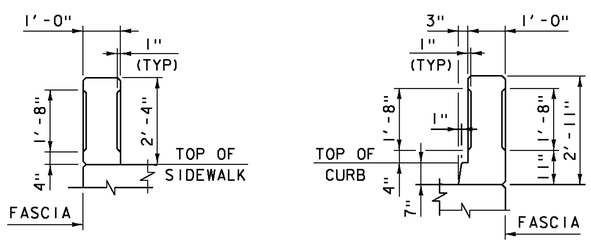
SCALE: ½" = 1'-0"

(END PILASTERS ARE SIMILAR)



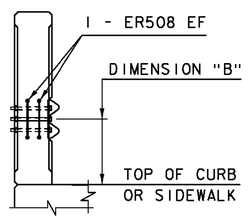
TYPICAL REINFORCING CURB SIDE

SCALE: ½" = 1'-0"



CONCRETE INSERT DETAILS

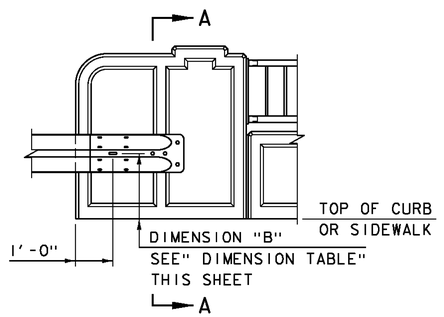
SCALE: ½" = 1'-0"



SECTION "A-A"

SCALE: ½" = 1'-0"

NOTE: REINFORCING BARS DENOTED AS ES5XX CAST INTO THE SUPERSTRUCTURE HAVE BEEN INCLUDED AND SCHEDULED WITH SUPERSTRUCTURE REINFORCING STEEL.



TERMINAL CONNECTOR LOCATION

SCALE: ½" = 1'-0"

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
E = LEVEL 2 REINFORCING STEEL
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

WINGWALL NO.	DIMENSION "B"
1	1'-9"*
2	1'-9"
3	~~1'-2"~~** 1'-9"
4	1'-9"

DIMENSION TABLE

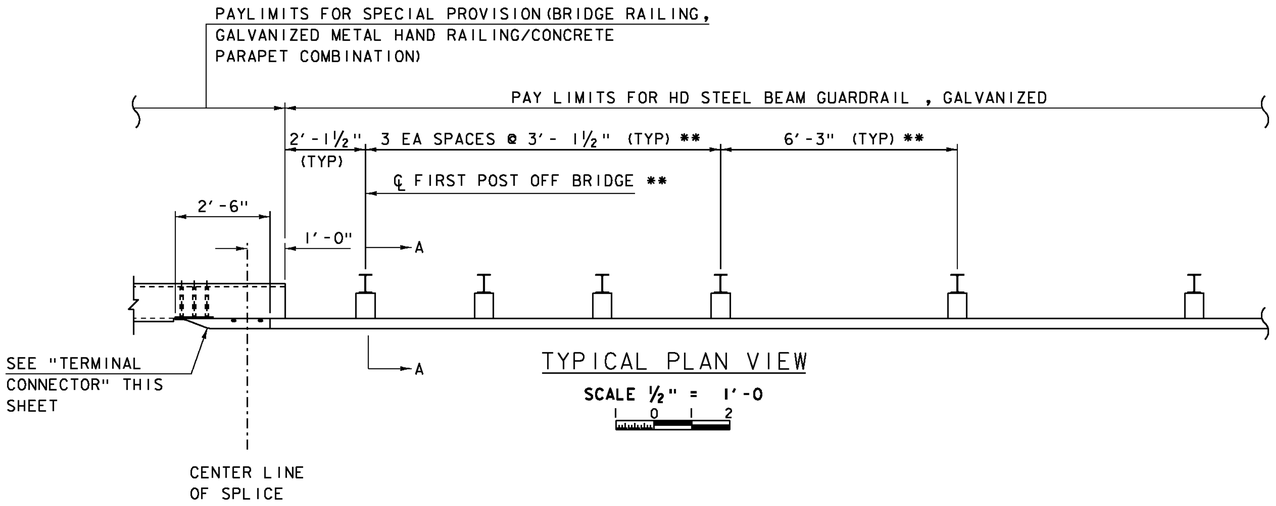
* DIMENSION TO BE MEASURED FROM TOP OF PAVEMENT AT BEGIN BRIDGE AT THIS LOCATION.

** DIMENSION TO BE MEASURED FROM TOP OF BRIDGE CONCRETE SIDEWALK THIS LOCATION.

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002raildet.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: G. ROY
BRIDGE RAIL REINFORCING

PLOT DATE: 27-SEP-2012
DRAWN BY: G. ROY
CHECKED BY: J. SALVATORI
SHEET 33 OF 70



TYPICAL PLAN VIEW

SCALE ½" = 1'-0

GENERAL NOTES

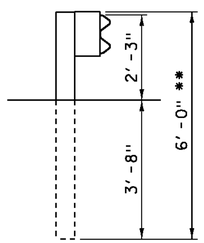
1. A COMPOSITE MATERIAL POST AND/OR BLOCKOUT FROM THE APPROVED PRODUCTS LIST MAY BE SUBSTITUTED FOR A POST AND/OR BLOCKOUT OF SIMILAR DIMENSIONS.
2. REFER TO STANDARD DRAWINGS G-1 AND G-1D FOR ADDITIONAL DETAILS.
3. THE TERMINAL CONNECTOR AND THE CONNECTION PLATE SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 900.620 "SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION)".

HD STEEL BEAM GUARDRAIL GALVANIZED PAY FACTORS

DESCRIPTION	POST SPACING	PAY FACTOR
STANDARD PANEL	6'-3"	1.0
STANDARD PANEL	4'-2"	1.2
STANDARD PANEL	3'-1½"	1.4
NESTED PANEL	3'-1½"	1.8

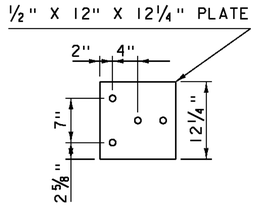
** 6'-0" POSTS USED ON APPROACH RAILS ATTACHED TO BRIDGE RAILING, (BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION) AT WING WALL LOCATIONS 1,3 AND 4.

8'-0" POSTS ARE USED ON APPROACH RAIL TO BRIDGE RAILING, (BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION) LOCATED AT WING WALL 2



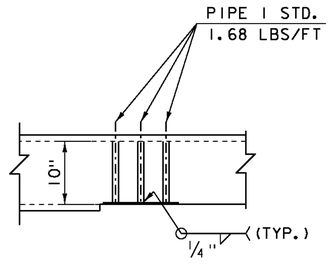
SECTION A-A

SCALE ½" = 1'-0



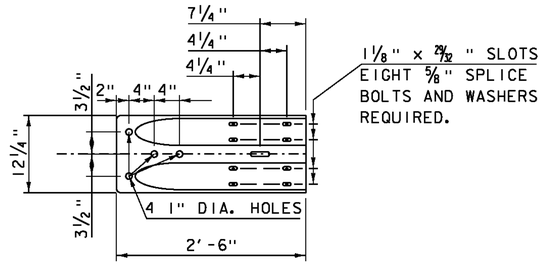
CONNECTION PLATE DETAIL- ELEVATION

SCALE 1" = 1'-0"



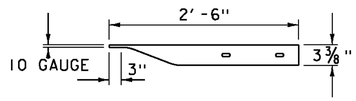
CONNECTION PLATE DETAIL -PLAN

SCALE 1" = 1'-0"



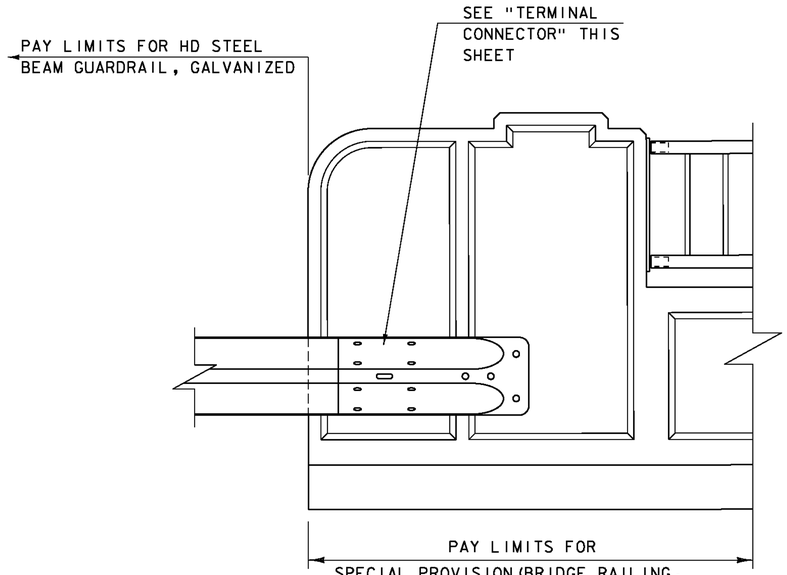
TERMINAL CONNECTOR ELEVATION

SCALE 1" = 1'-0"



TERMINAL CONNECTOR PLAN

SCALE 1" = 1'-0"



RAIL END DETAIL

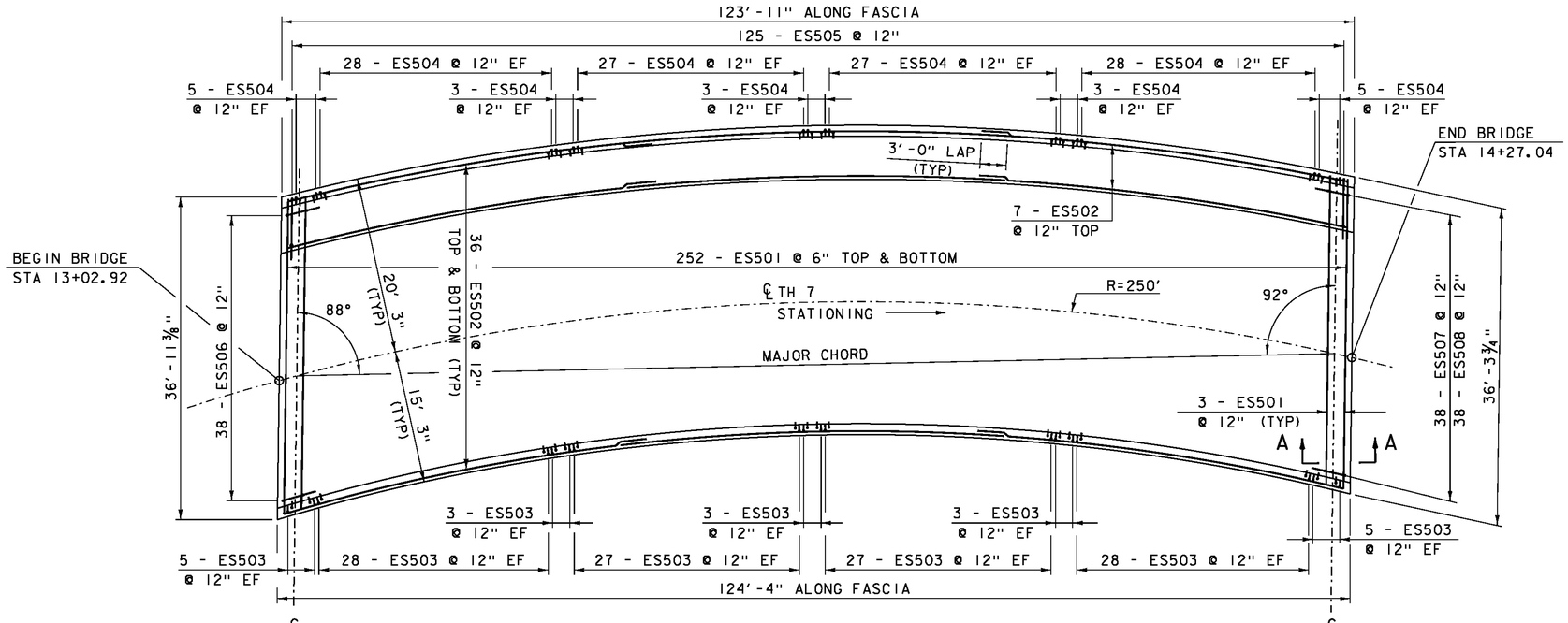
NTS

THE USE OF THIS RAILING IS RESTRICTED TO DESIGN SPEEDS OF 45 MPH OR LESS.

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

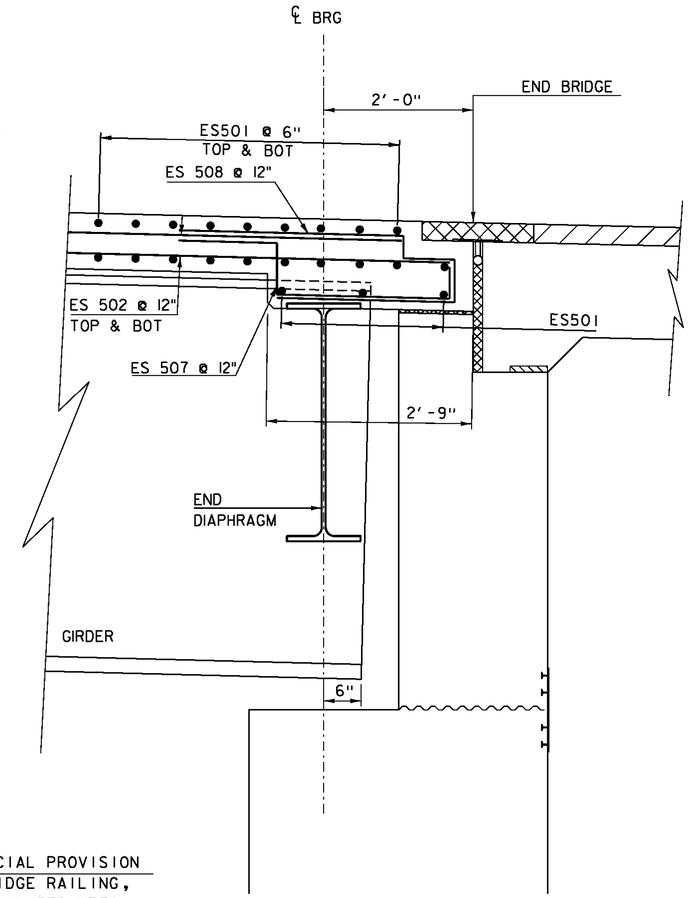
FILE NAME: s06j002raildet.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: G. ROY
APPROACH RAIL DETAILS

PLOT DATE: 09-OCT-2012
DRAWN BY: G. ROY
CHECKED BY: J. SALVATORI



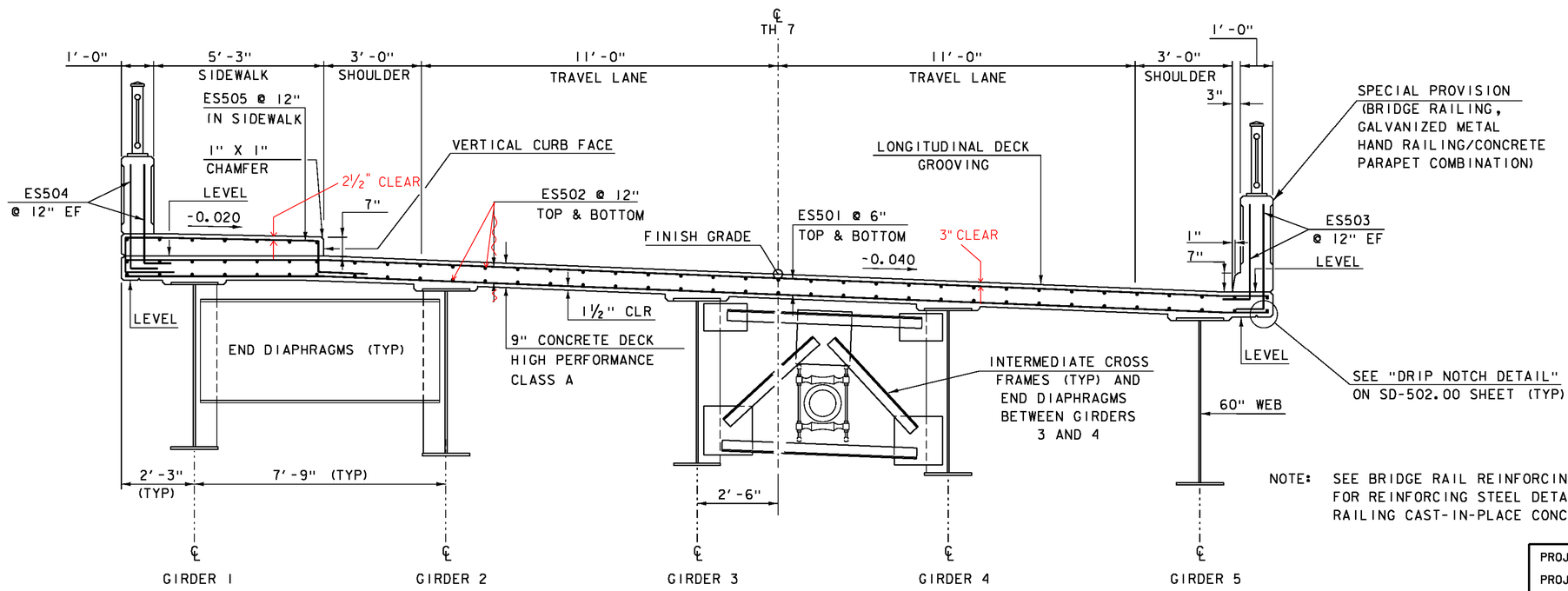
DECK REINFORCING

SCALE ⅛" = 1'-0"



SECTION A-A
END BRIDGE DETAIL

SCALE 1" = 1'-0"



BRIDGE TYPICAL

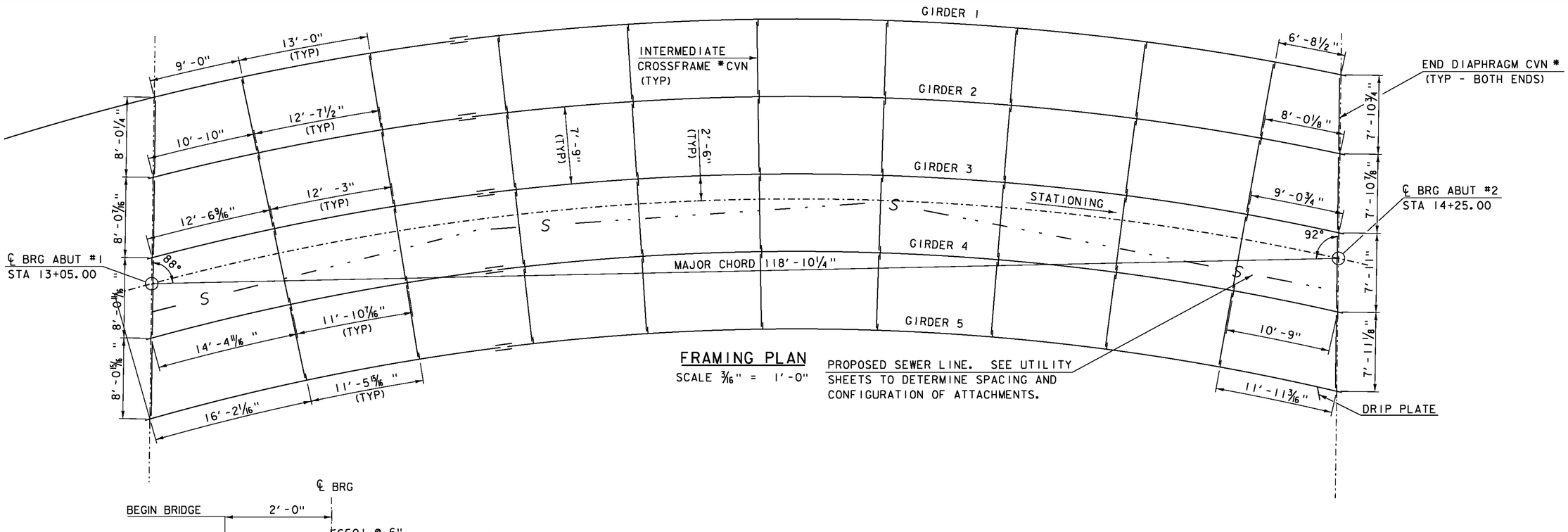
SCALE ½" = 1'-0"

NOTE: SEE BRIDGE RAIL REINFORCING SHEET FOR REINFORCING STEEL DETAILS IN BRIDGE RAILING CAST-IN-PLACE CONCRETE.

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
E = LEVEL 2 REINFORCING STEEL
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
3'-0" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

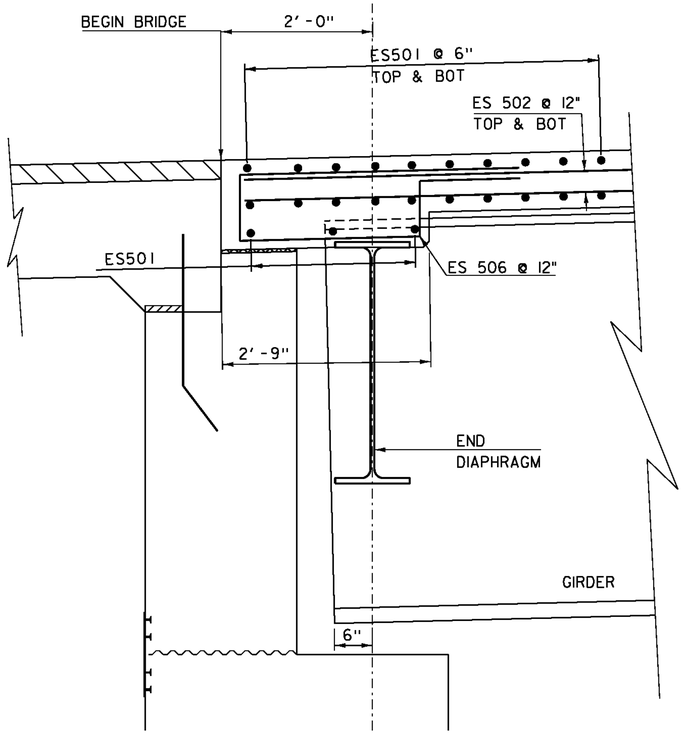
PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)
FILE NAME: s06j0022sup.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: J. LACROIX	CHECKED BY: G. LAROCHE
DECK PLAN	SHEET 35 OF 70



FRAMING PLAN

SCALE 3/16" = 1'-0"

PROPOSED SEWER LINE. SEE UTILITY SHEETS TO DETERMINE SPACING AND CONFIGURATION OF ATTACHMENTS.



ABUTMENT 1 END BRIDGE DETAIL

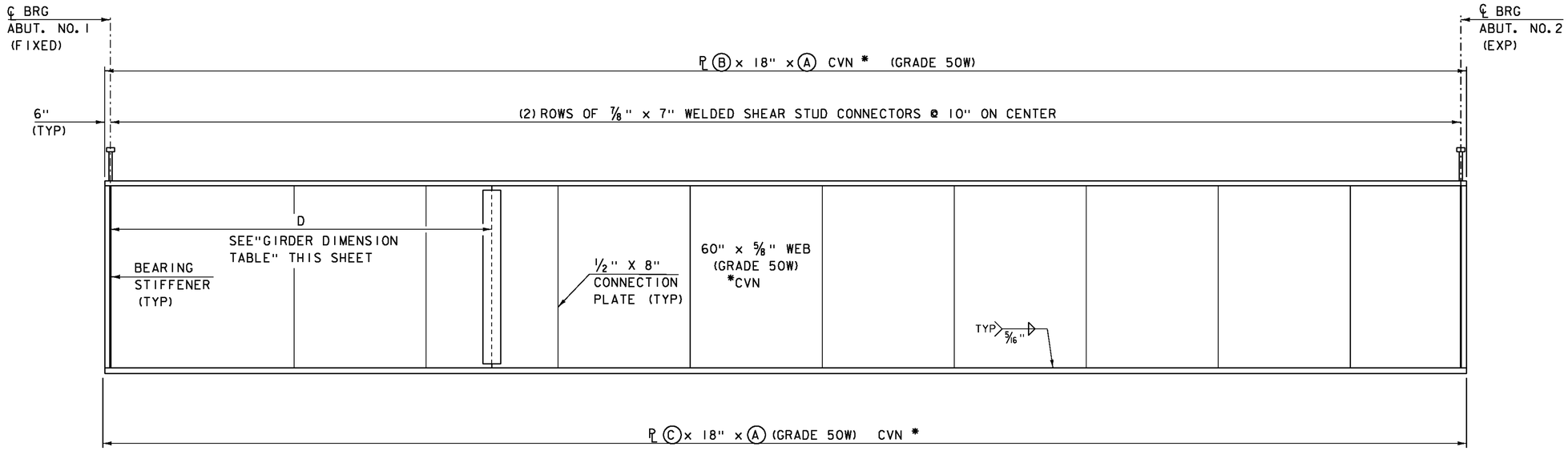
SCALE 1" = 1'-0"

SEE UTILITY SHEETS TO DETERMINE SPACING AND CONFIGURATION OF CONNECTION PLATES FOR SEWER MAIN. PAYMENT FOR THESE PLATES WILL BE INCIDENTAL TO SPECIAL PROVISION (SEWER MAIN ON BRIDGE).

*CVN DENOTES THAT CHARPY V-NOTCH TEST IS REQUIRED

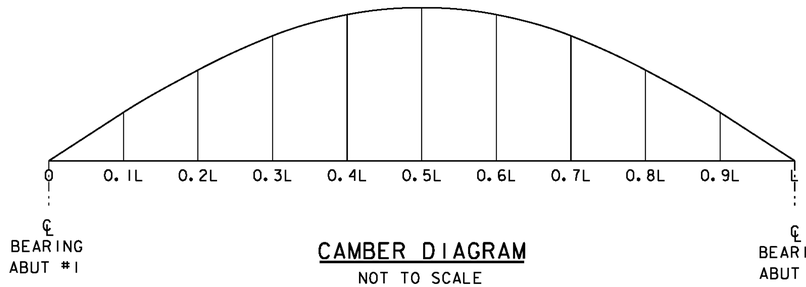
PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

FILE NAME: s06j002sup.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: J. LACROIX	CHECKED BY: T. FILLBACH
FRAMING & CROSS FRAME DETAILS	SHEET 36 OF 70



TYPICAL GIRDER ELEVATION

HORIZONTAL SCALE 3/16" = 1'-0"
VERTICAL SCALE 3/4" = 1'-0"



CAMBER DIAGRAM

NOT TO SCALE

NOTES:

1. DIMENSIONS SHOWN ARE ALONG THE ARC OF THE ℄ OF THE GIRDER.
2. GIRDERS AND CROSSFRAMES SHALL BE WEB-PLUMB AT FULL DEAD LOAD CONDITION.
3. REFER TO SHEETS 19-21 FOR PLACEMENT OF SEWER LINE CONNECTION PLATES TO THE GIRDER.
4. DEFLECTION MEASUREMENTS ARE GIVEN IN INCHES TO THE NEAREST SIXTEENTH. MEASUREMENTS INCLUDE GIRDER SELF-WEIGHT.

* CVN DENOTES THAT CHARPY V-NOTCH TEST IS REQUIRED

CAMBER (INCHES)									
GIRDER	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L
#1	-1	-1 9/16	-1 12/16	-1 13/16	-1 14/16	-1 13/16	-1 12/16	-1 9/16	-1
#2	-1 3/16	-1 14/16	-2 4/16	-2 6/16	-2 7/16	-2 6/16	-2 3/16	-1 14/16	-1 3/16
#3	-1 5/16	-2 2/16	-2 10/16	-2 14/16	-2 15/16	-2 13/16	-2 9/16	-2 2/16	-1 5/16
#4	-1 7/16	-2 6/16	-2 15/16	-3 4/16	-3 6/16	-3 4/16	-2 15/16	-2 6/16	-1 7/16
#5	-1 12/16	-3	-3 13/16	-4 5/16	-4 8/16	-4 5/16	-3 13/16	-3	-1 12/16

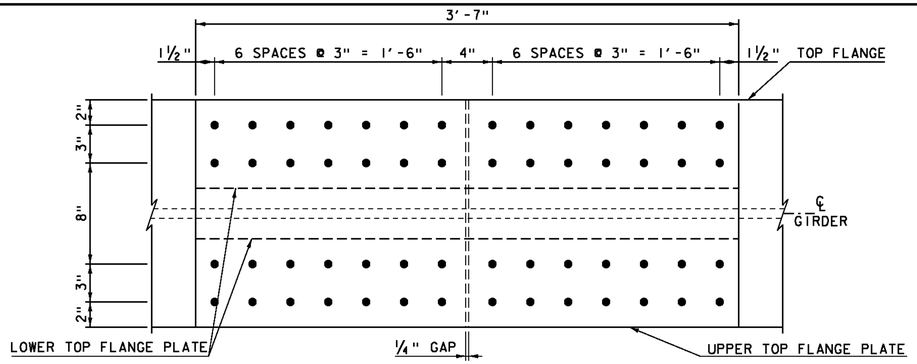
DEAD LOAD DEFLECTION INCLUDING GIRDER SELF WEIGHT (INCHES)									
GIRDER	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L
#1	-1 13/16	-3 7/16	-4 11/16	-5 8/16	-5 13/16	-5 8/16	-4 11/16	-3 7/16	-1 13/16
#2	-1 9/16	-2 15/16	-4	-4 12/16	-4 15/16	-4 12/16	-4 1/16	-2 15/16	-1 9/16
#3	-1 5/16	-2 8/16	-3 7/16	-4	-4 4/16	-4 1/16	-3 7/16	-2 8/16	-1 5/16
#4	-1 2/16	-2 2/16	-2 14/16	-3 6/16	-3 9/16	-3 6/16	-2 14/16	-2 2/16	-1 2/16
#5	- 15/16	-1 12/16	-2 6/16	-2 12/16	-2 14/16	-2 12/16	-2 6/16	-1 12/16	- 15/16

GIRDER DIMENSION TABLE					
GIRDER	RADIUS	A (LENGTH)	B TOP FLANGE PLATE THICKNESS	C BOTTOM FLANGE PLATE THICKNESS	D SPLICE LOCATION
#1	268.000'	120'-10 1/16"	1 3/8"	2 3/8"	31'-0"
#2	260.250'	120'-10 13/16"	1 3/8"	2 3/8"	32'-0"
#3	252.500'	120'-11 11/16"	7/8"	7/8"	34'-0"
#4	244.750'	121' - 0 5/8"	7/8"	7/8"	35'-0"
#5	237.000'	121' - 1 11/16"	7/8"	7/8"	36'-0"

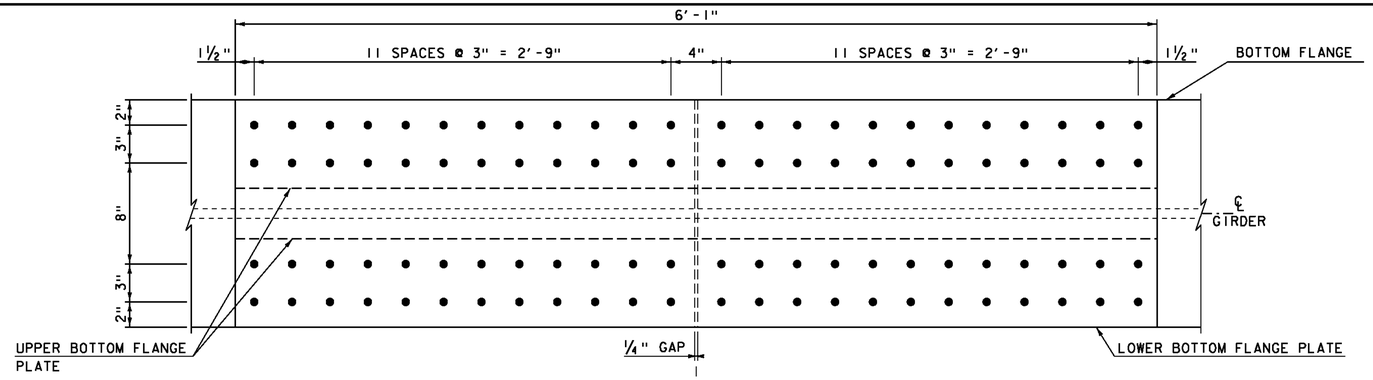
PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002sup.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: J. LACROIX
GIRDER DETAILS

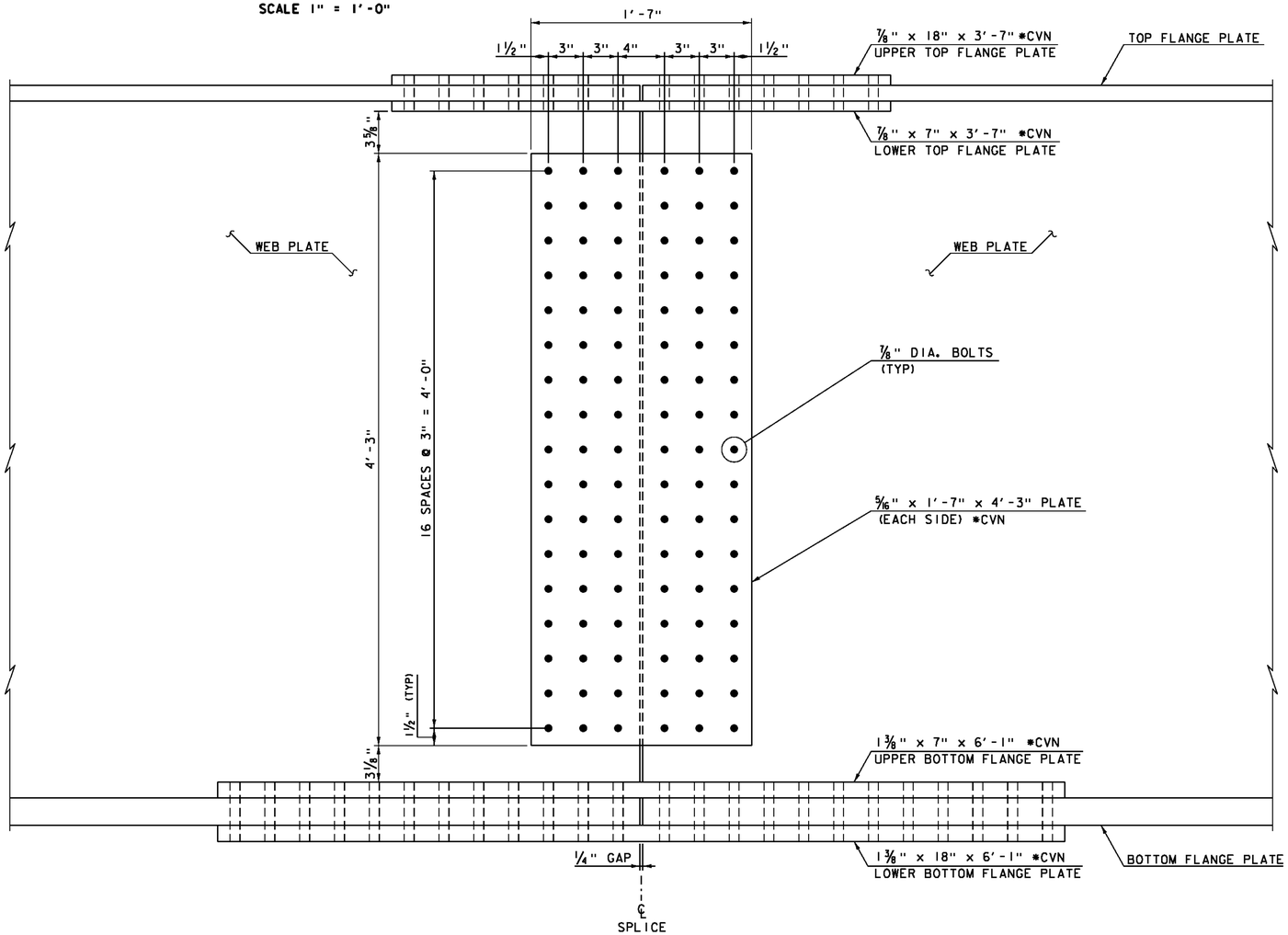
PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: J. GRIFFIN
SHEET 37 OF 70



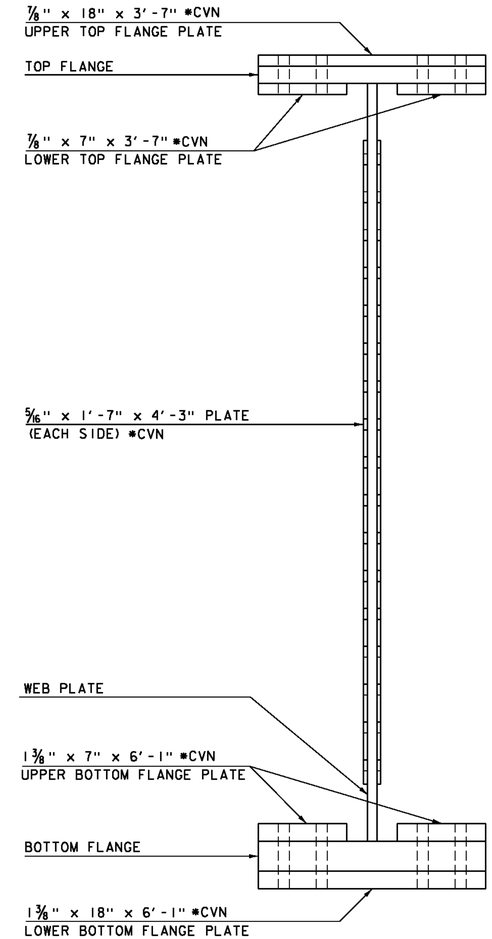
TOP FLANGE PLAN
GIRDERS 1 & 2
SCALE 1" = 1'-0"



BOTTOM FLANGE PLAN
GIRDERS 1 & 2
SCALE 1" = 1'-0"



SPLICE ELEVATION
GIRDERS 1 & 2
SCALE 1" = 1'-0"

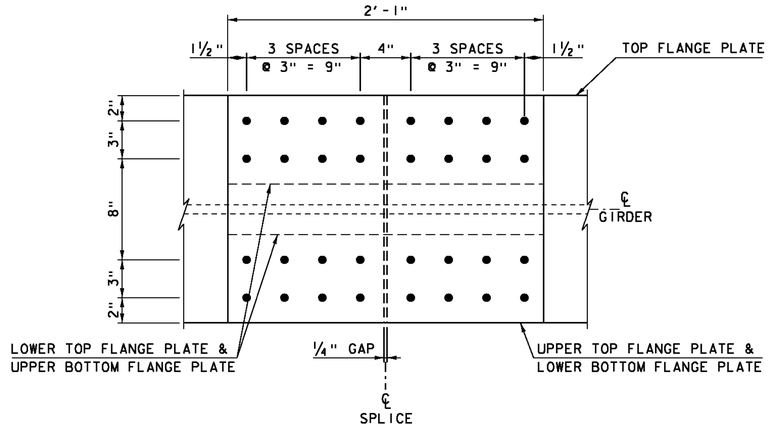


SPLICE SECTION
GIRDERS 1 & 2
SCALE 1" = 1'-0"

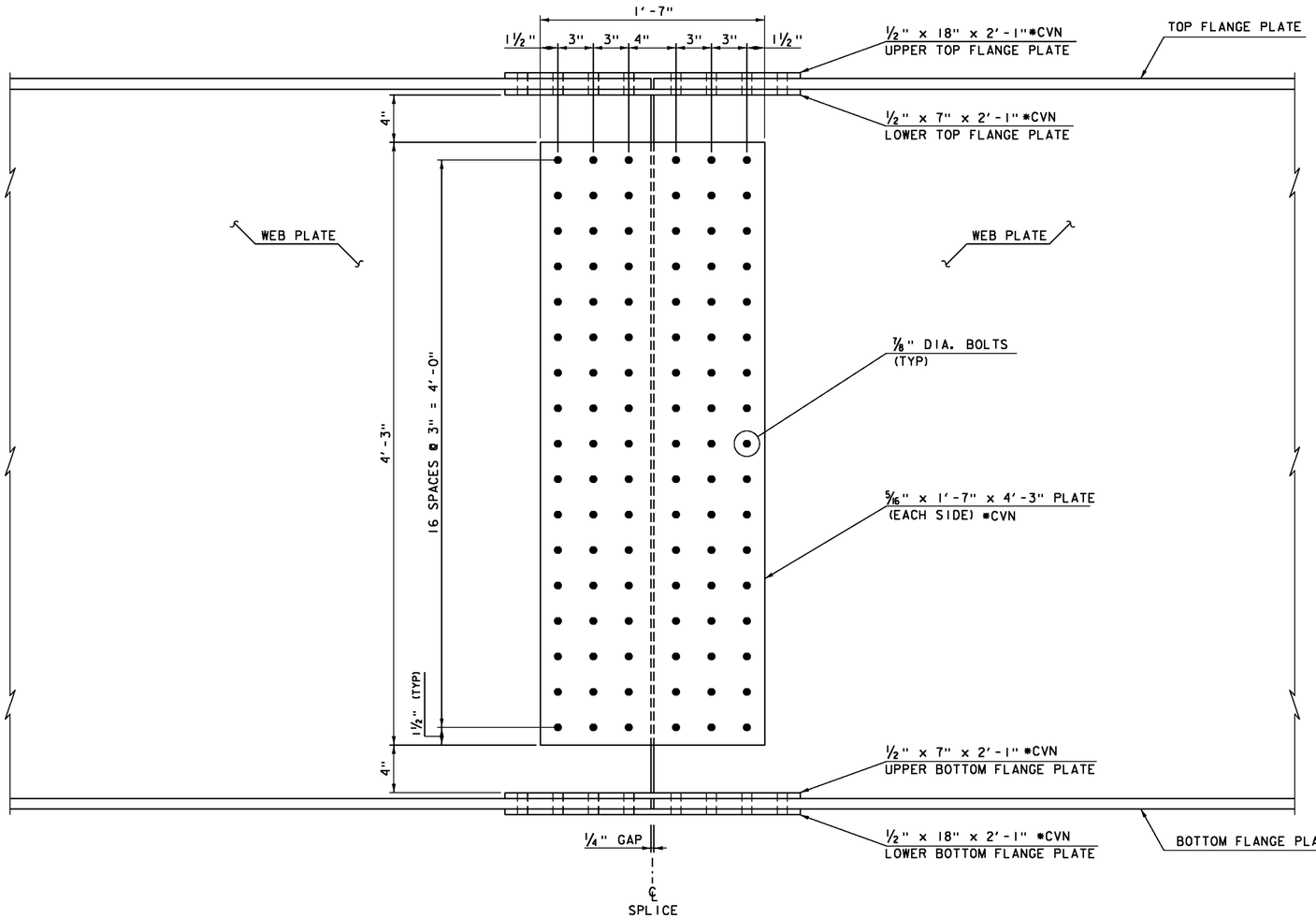
*CVN DENOTES THAT CHARPY V-NOTCH TEST IS REQUIRED

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

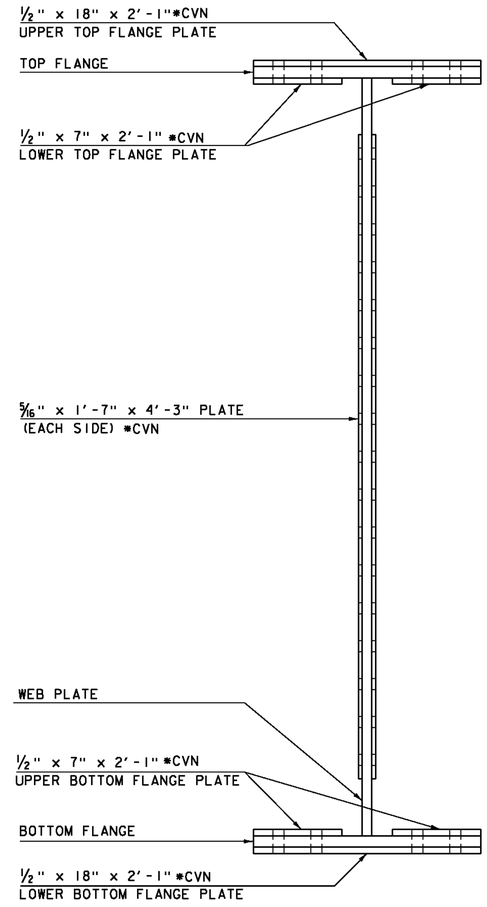
FILE NAME: s06j002sup.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: J. LACROIX	CHECKED BY: T. FILLBACH
SPLICE DETAIL 1	SHEET 38 OF 70



TOP & BOTTOM FLANGE PLAN
GIRDERS 3, 4 & 5
SCALE 1" = 1'-0"



SPLICE ELEVATION
GIRDERS 3, 4 & 5
SCALE 1" = 1'-0"

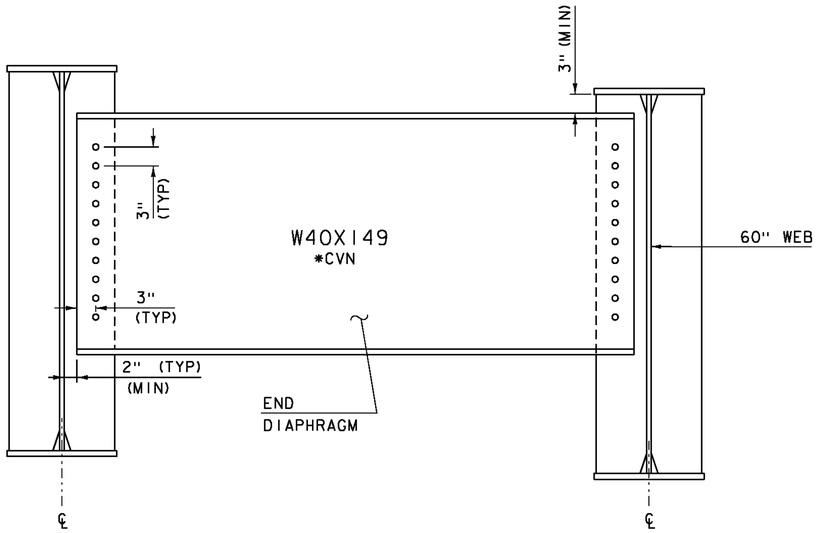


SPLICE SECTION
GIRDERS 3, 4 & 5
SCALE 1" = 1'-0"

*CVN DENOTES THAT CHARPY V-NOTCH TEST IS REQUIRED

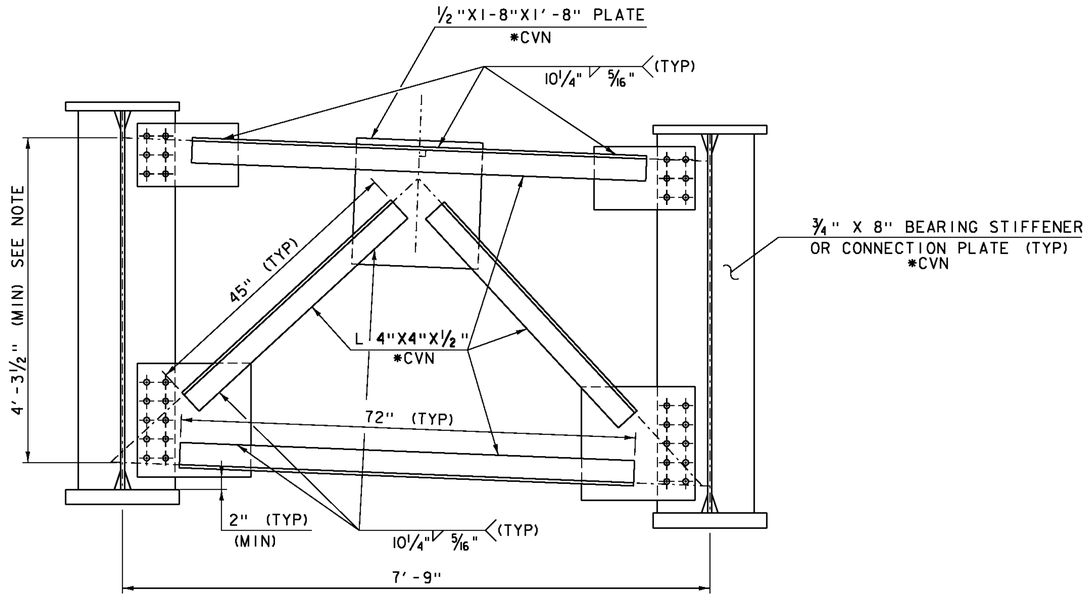
PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

FILE NAME: s06j002sup.dgn		PLOT DATE:	27-SEP-2012
PROJECT LEADER:	J. LACROIX	DRAWN BY:	R. PELLETT
DESIGNED BY:	J. LACROIX	CHECKED BY:	T. FILLBACH
SPLICE DETAIL 2		SHEET	39 OF 70



TYPICAL END DIAPHRAGM

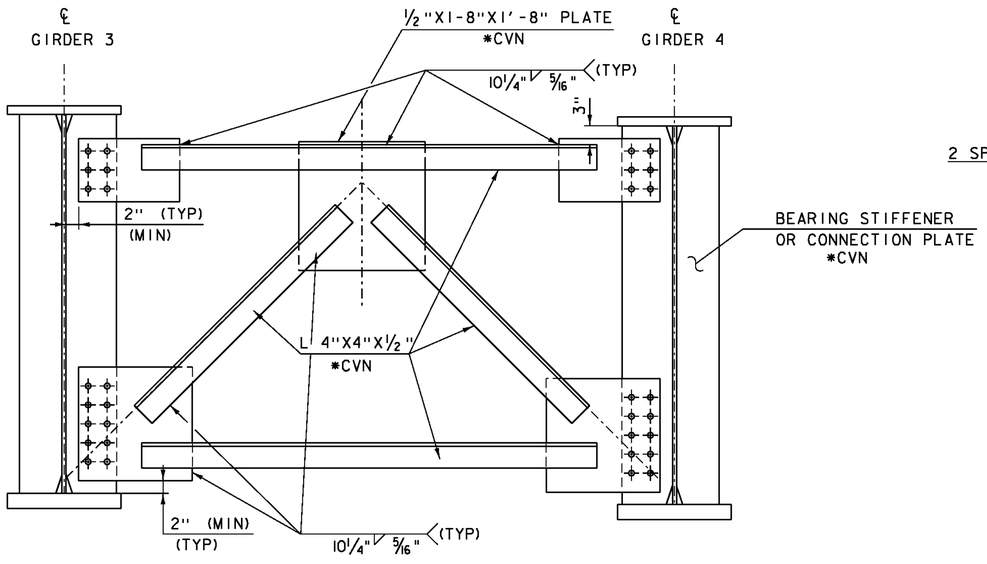
SCALE 1" = 1'-0"



CROSSFRAME

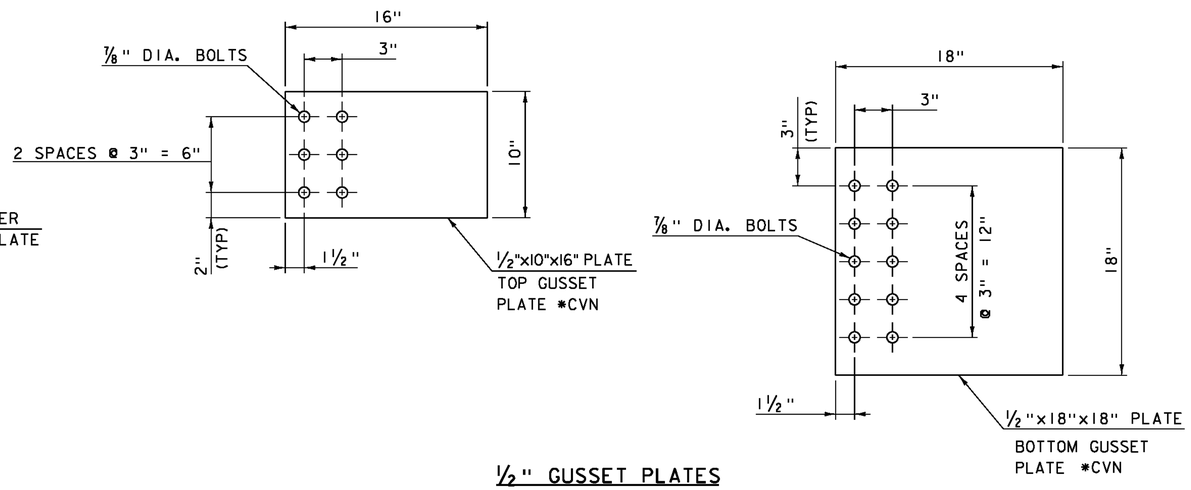
SCALE 1" = 1'-0"

NOTE:
PLASTIC NEUTRAL AXIS OF THE TOP CHORD AND BOTTOM CHORD SHALL BE A MINIMUM OF 4'-3 1/2" APART



END DIAPHRAGM FOR UTILITY BAY

SCALE 1" = 1'-0"



1/2" GUSSET PLATES

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

*CVN DENOTES THAT CHARPY V-NOTCH TEST IS REQUIRED

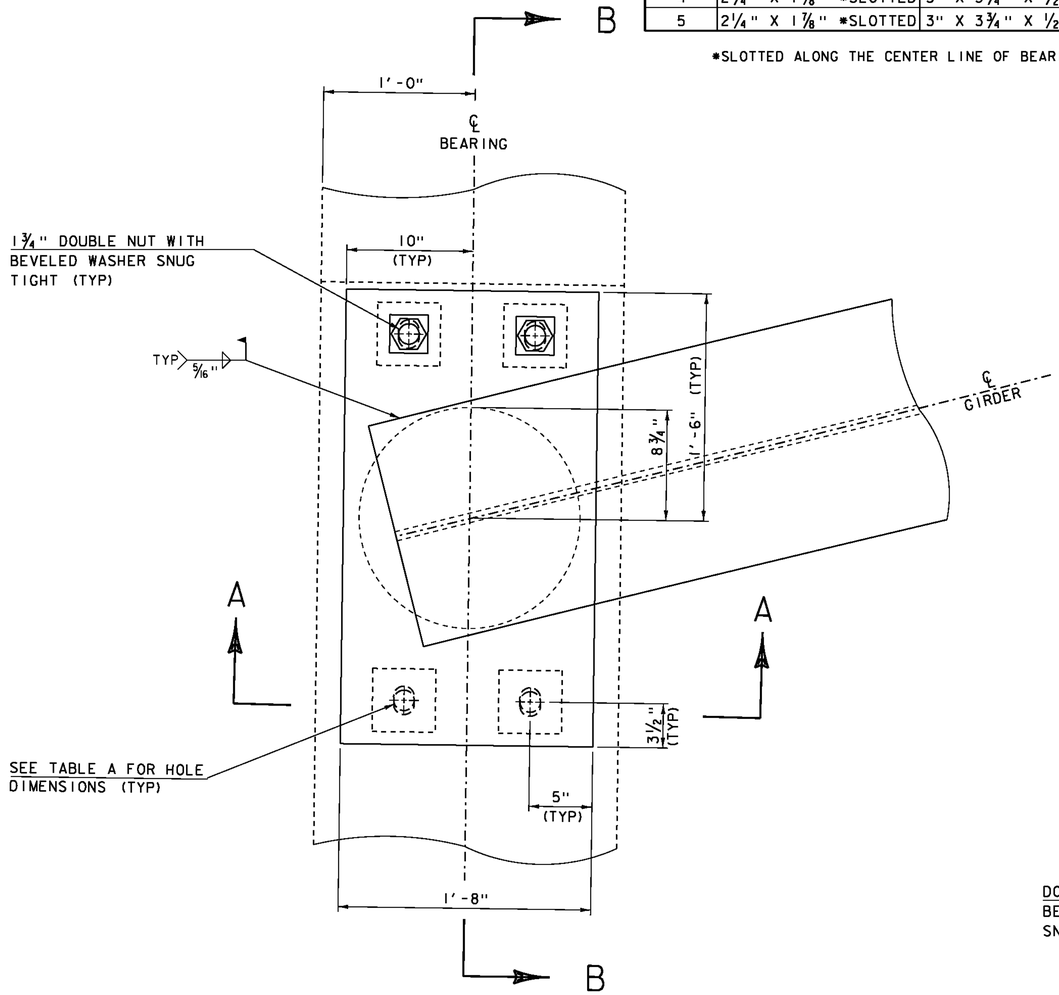
PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002sup.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: J. GRIFFIN
BRACING DETAILS

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: J. GRIFFIN
SHEET 40 OF 70

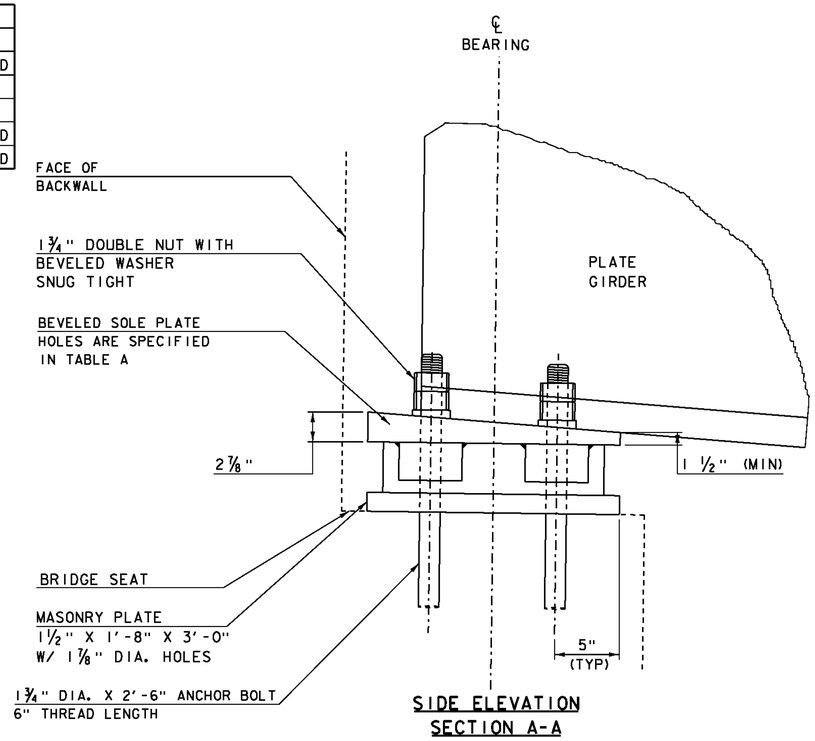
TABLE A		
GIRDER	HOLE DIMENSIONS	BEVELED WASHER
1	2¼" X 1⅞" *SLOTTED	3" X 3¾" X ½" *SLOTTED
2	1⅞"	3" X 3" X ½"
3	1⅞"	3" X 3" X ½"
4	2¼" X 1⅞" *SLOTTED	3" X 3¾" X ½" *SLOTTED
5	2¼" X 1⅞" *SLOTTED	3" X 3¾" X ½" *SLOTTED

*SLOTTED ALONG THE CENTER LINE OF BEARING

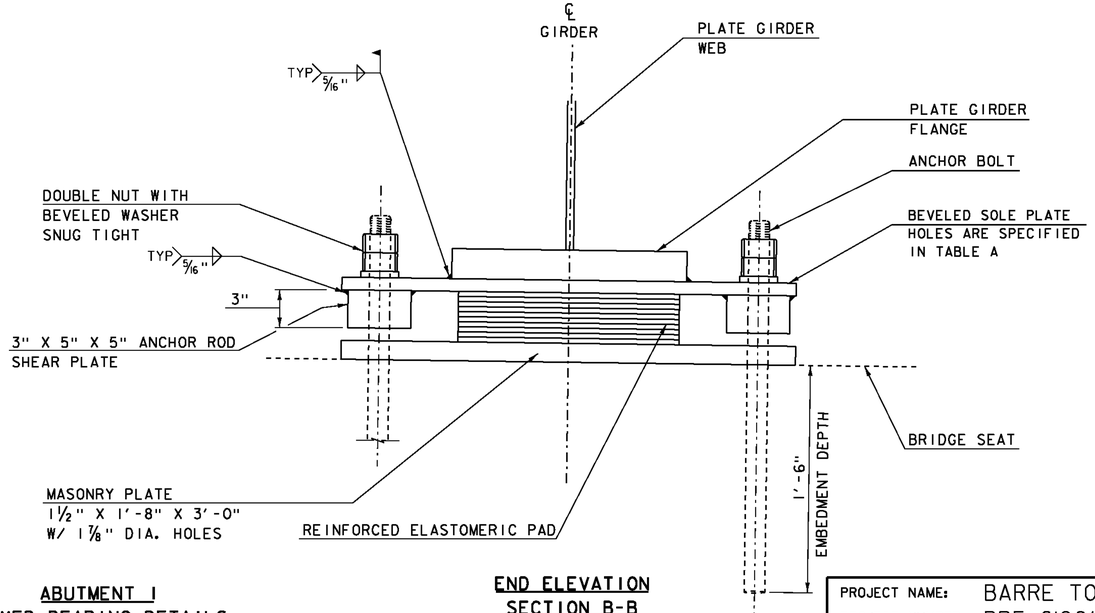


PLAN VIEW

GIRDER 1 SHOWN, OTHERS SIMILAR



SIDE ELEVATION
SECTION A-A



ABUTMENT 1
FIXED BEARING DETAILS

NOT TO SCALE

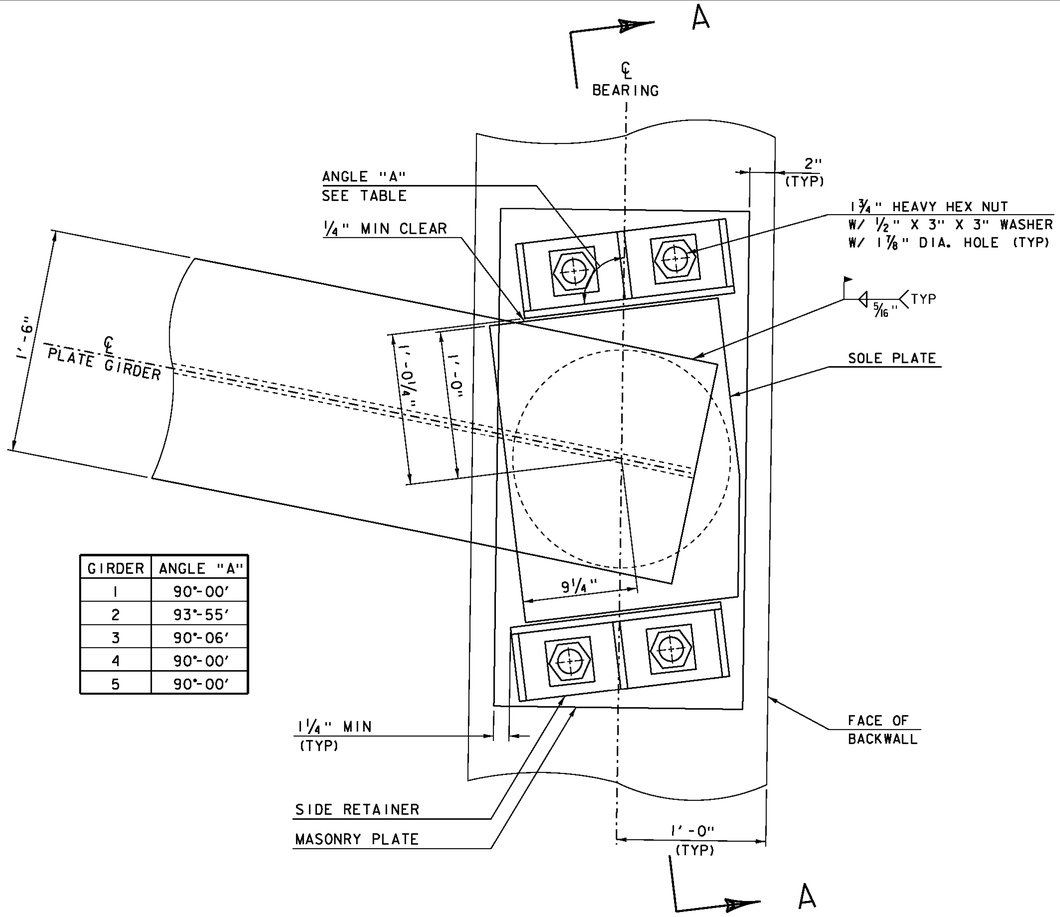
END ELEVATION
SECTION B-B

NOTE:
THE BOTTOM FLANGE SHALL BE WELDED TO THE SOLE PLATE A MIN OF 6" ON THE SIDES ONLY

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

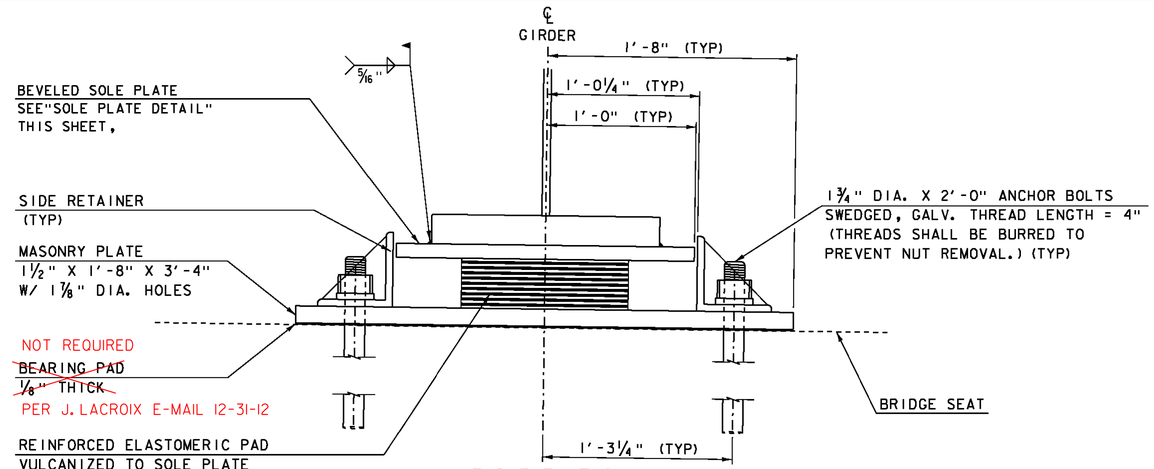
FILE NAME: s06j002sup.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: J. LACROIX
FIXED BEARING DETAILS

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: J. GRIFFIN
SHEET 41 OF 70

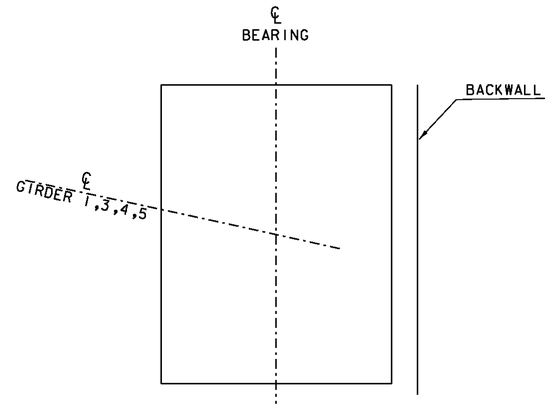


GIRDER	ANGLE "A"
1	90°-00'
2	93°-55'
3	90°-06'
4	90°-00'
5	90°-00'

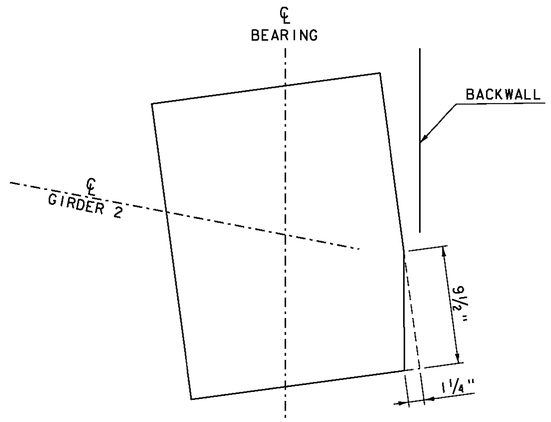
PLAN VIEW



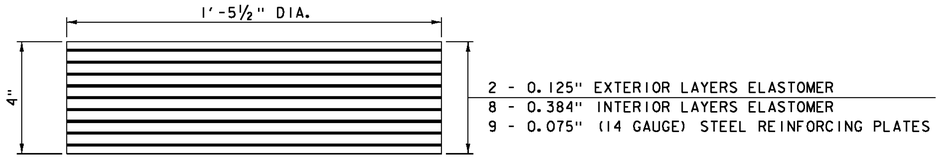
END ELEVATION
SECTION A-A



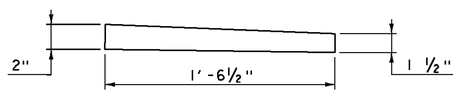
SOLE PLATE GIRDERS 1,3,4,5



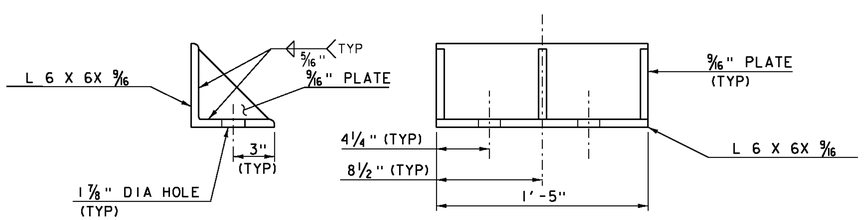
SOLE PLATE CLIP DETAIL GIRDERS 2



ELASTOMERIC BEARING MAKEUP



SOLE PLATE DETAIL
1" TO 1 1/2" X 1'-6 1/2" X 2'-0"

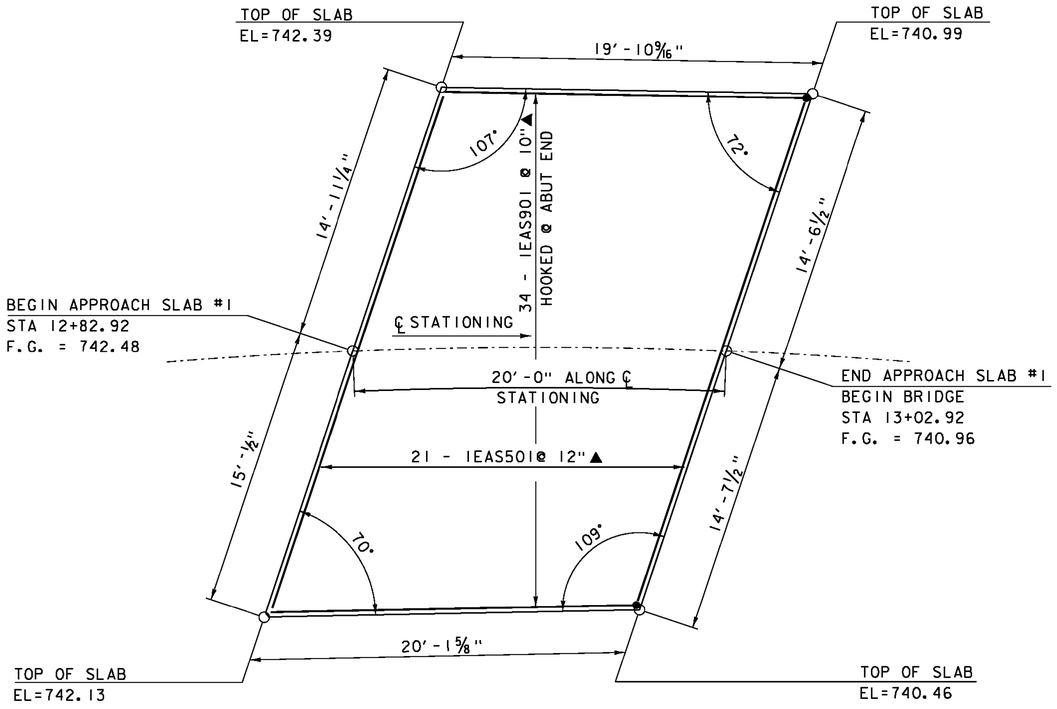


SIDE RETAINER

ABUTMENT 2
EXPANSION BEARING DETAILS
NOT TO SCALE

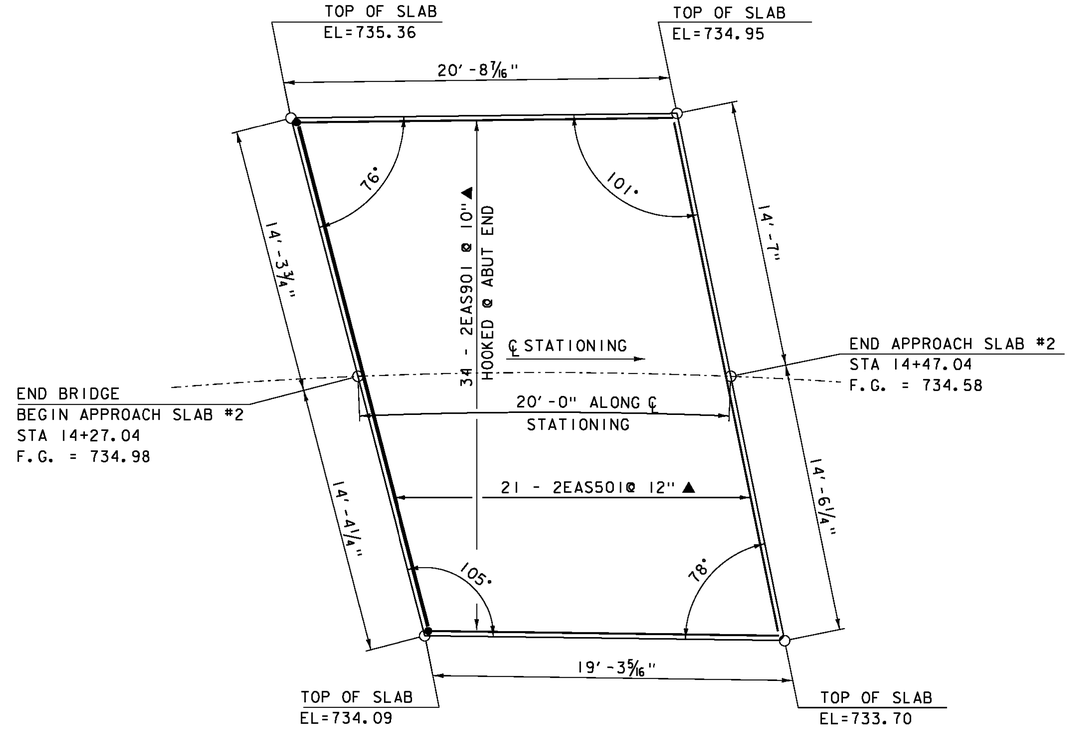
NOTE:
THE BOTTOM FLANGE SHALL BE WELDED TO THE SOLE PLATE AFTER THE GIRDERS HAVE BEEN JACKED AND THE BEARINGS ARE RESET UPON COMPLETE DEADLOAD.
A WELD MIN OF 6" WILL BE USED ON THE SIDES ONLY

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)
FILE NAME: s06j002sup.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: J. LACROIX	CHECKED BY: J. GRIFFIN
EXPANSION BEARING DETAILS	SHEET 42 OF 70



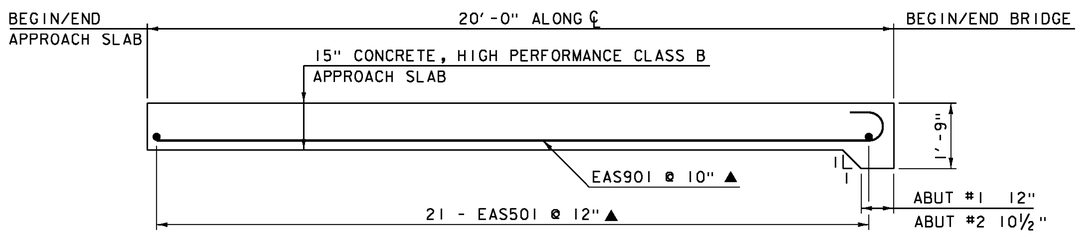
APPROACH SLAB #1 PLAN

SCALE 1/4" = 1'-0"



APPROACH SLAB #2 PLAN

SCALE 1/4" = 1'-0"



APPROACH SLAB 1 TYPICAL SECTION

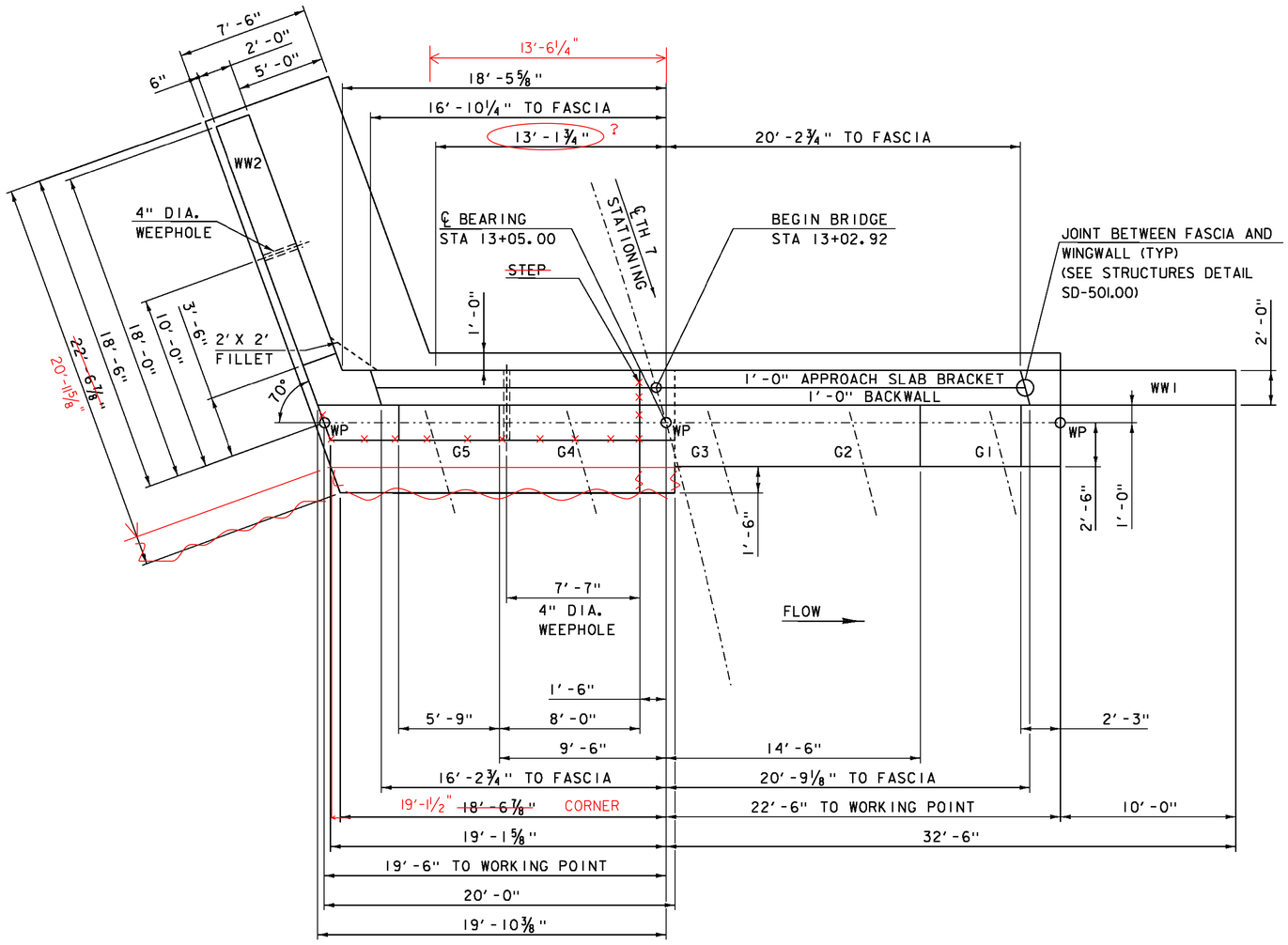
(APPROACH SLAB 2 ~~SIMILAR~~ SIMILAR)

SCALE 1/2" = 1'-0"

NOTE:

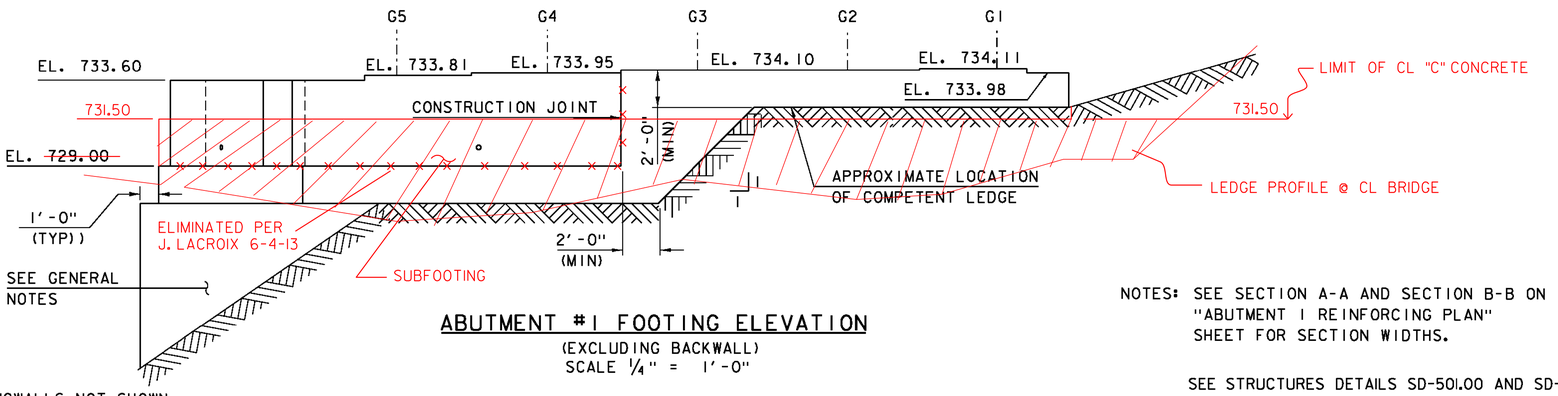
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
E = LEVEL 2 REINFORCING STEEL
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
3'-0" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)
FILE NAME: s06j002sup.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: J. LACROIX	CHECKED BY: G. LAROCHE
APPROACH SLAB DETAILS	SHEET 43 OF 70



ABUTMENT #1 FOOTING PLAN

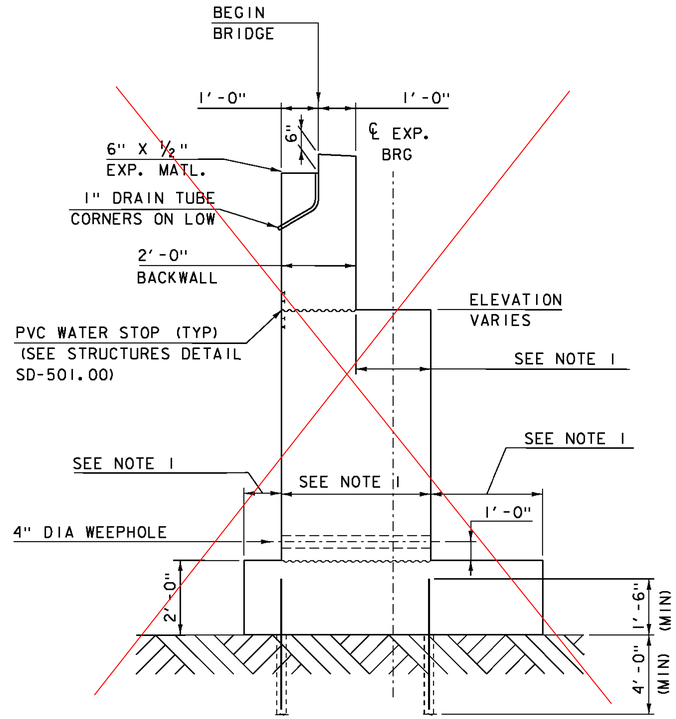
SCALE ¼" = 1'-0"



ABUTMENT #1 FOOTING ELEVATION

(EXCLUDING BACKWALL)
SCALE ¼" = 1'-0"

NOTE:
BACKWALL AND WINGWALLS NOT SHOWN



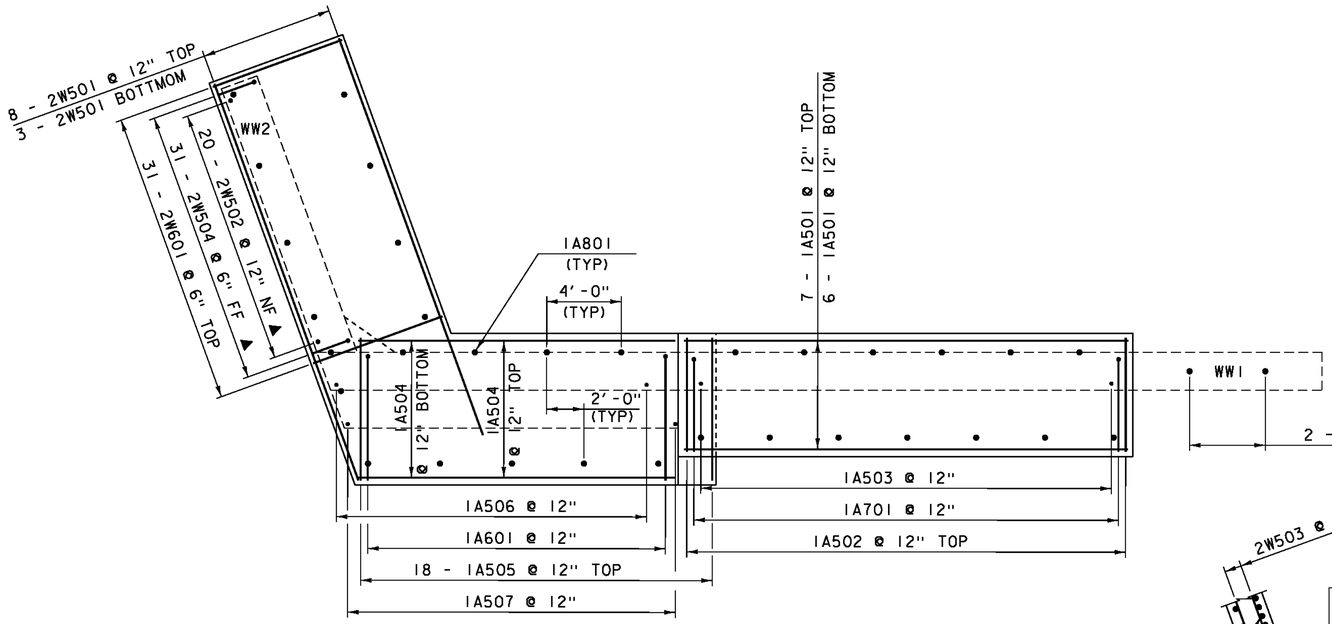
ABUTMENT #1
BRIDGE END DETAIL

SCALE ½"= 1' - 0"

NOTES: SEE SECTION A-A AND SECTION B-B ON "ABUTMENT 1 REINFORCING PLAN" SHEET FOR SECTION WIDTHS.

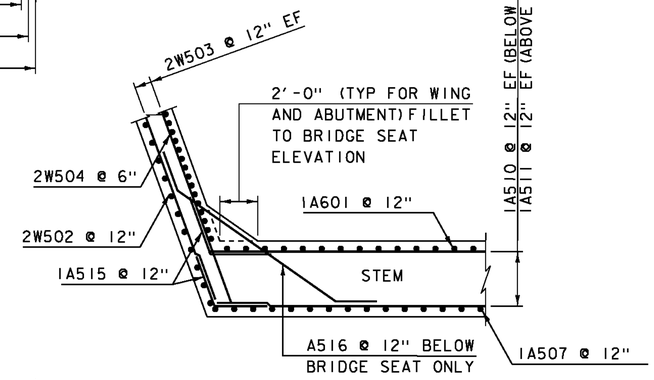
SEE STRUCTURES DETAILS SD-501.00 AND SD-502.00 FOR ADDITIONAL INFORMATION

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)
FILE NAME: s06J002sub.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: J. LACROIX	CHECKED BY: J. SALVATORI
ABUTMENT 1	SHEET 44 OF 70



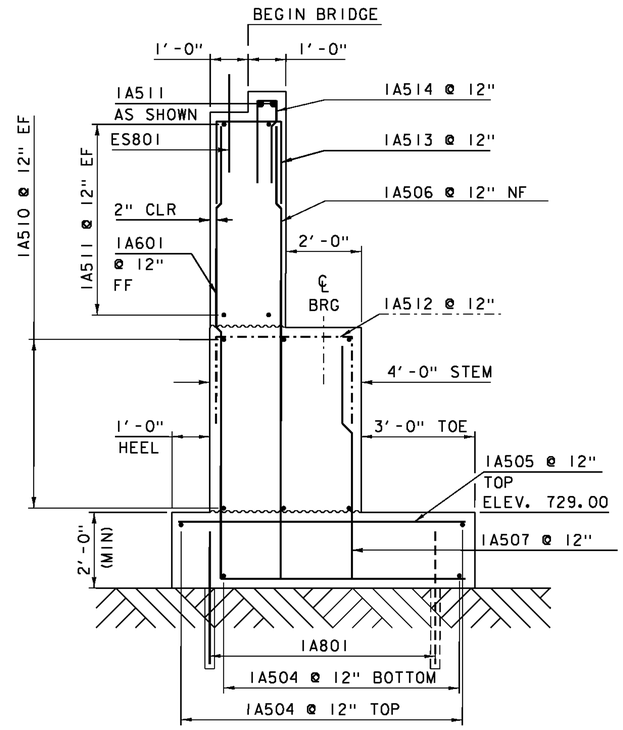
ABUTMENT #1 FOOTING REINFORCING PLAN

SCALE 1/4" = 1'-0"



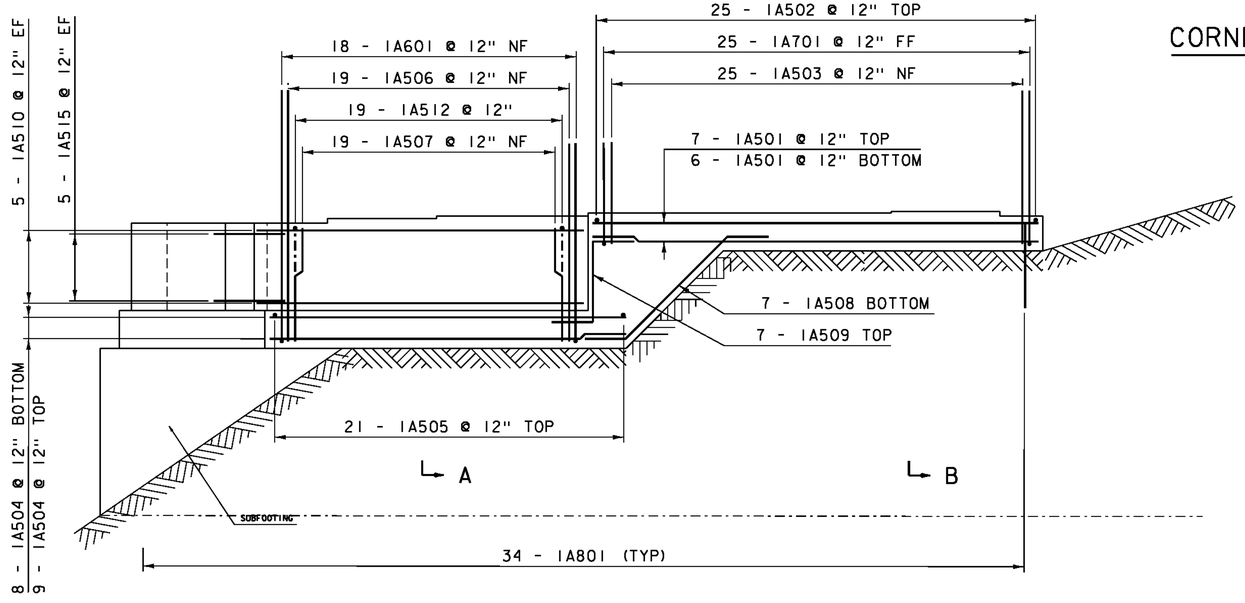
CORNER DETAIL @ WW #2

SCALE 1/4" = 1'-0"



SECTION A-A

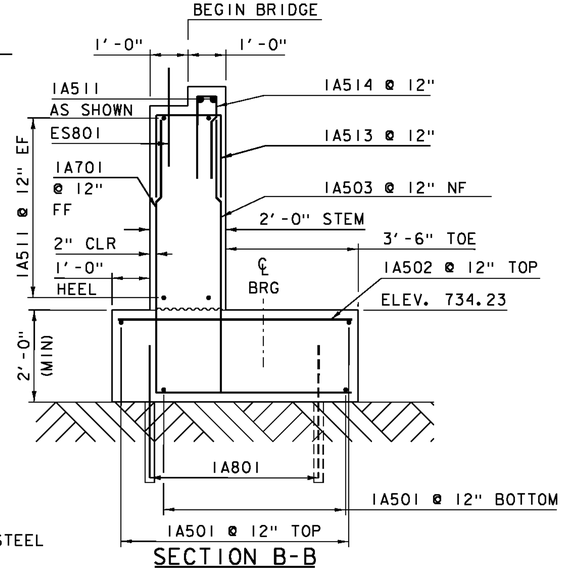
SCALE 1/2" = 1'-0"



ABUTMENT #1 FOOTING REINFORCING ELEVATION

SCALE 1/4" = 1'-0"

NOTE:
BACKWALL AND WINGWALLS NOT SHOWN



SECTION B-B

SCALE 1/2" = 1'-0"

NOTE:

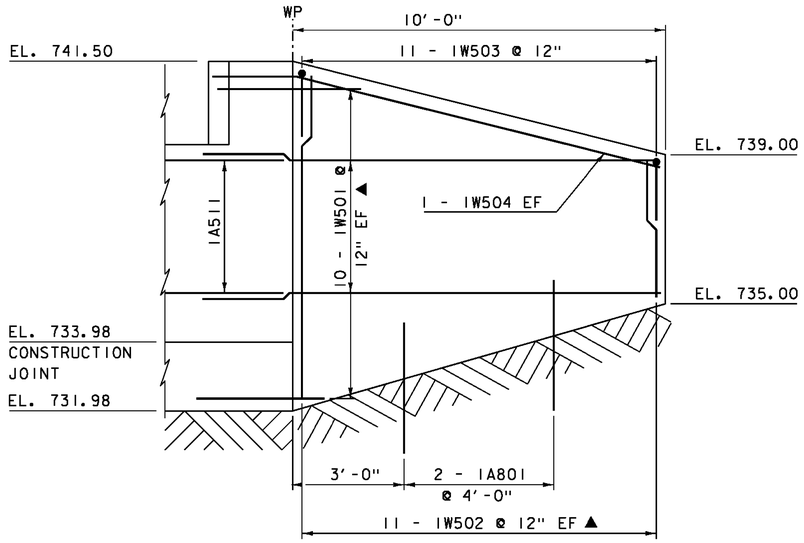
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
E = LEVEL 2 REINFORCING STEEL
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

SEE STRUCTURES DETAILS SD-501.00 AND SD-502.00 FOR ADDITIONAL INFORMATION

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

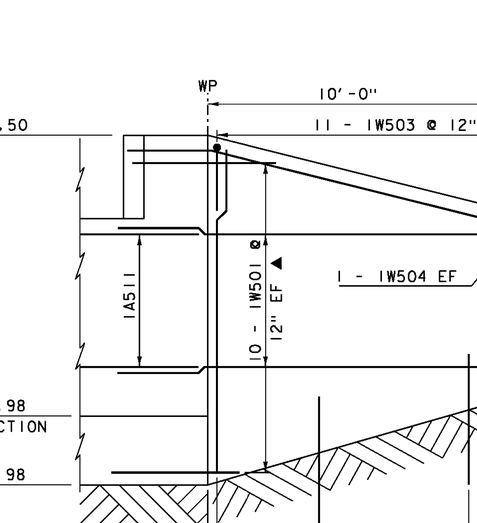
FILE NAME: s06J002sub.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: J. LACROIX
ABUTMENT 1REINFORCING PLAN

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: J. SALVATORI



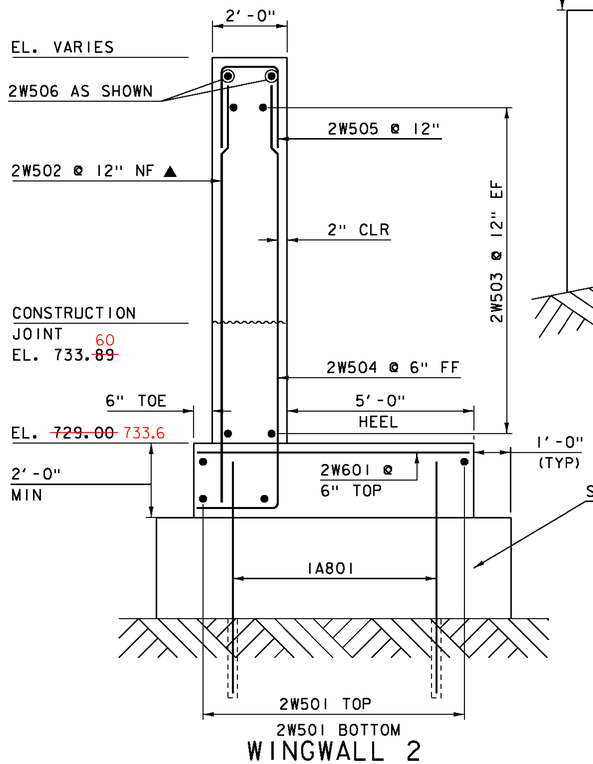
WINGWALL 1 ELEVATION

SCALE ½" = 1' - 0"



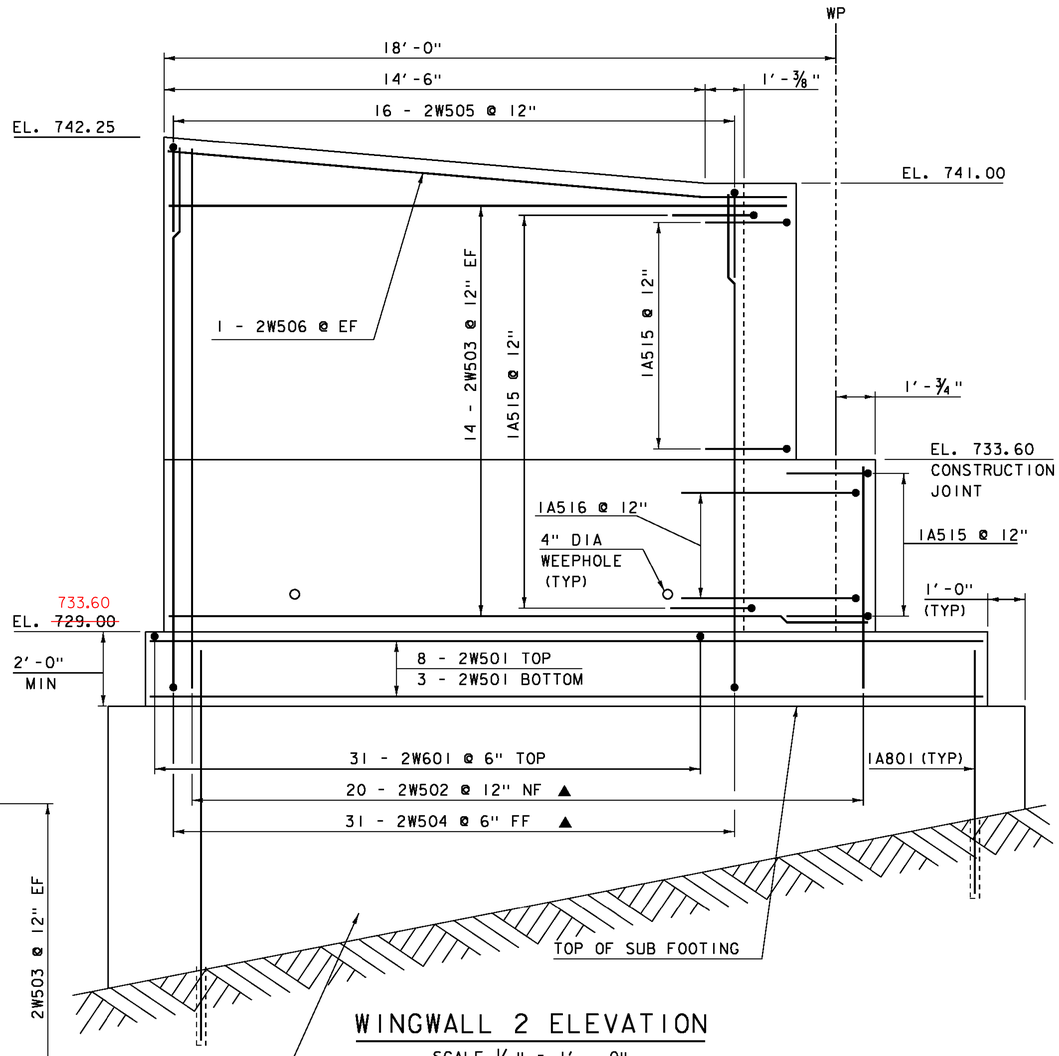
WINGWALL 1 TYPICAL SECTION

SCALE ½" = 1' - 0"



WINGWALL 2 TYPICAL SECTION

SCALE ½" = 1' - 0"



WINGWALL 2 ELEVATION

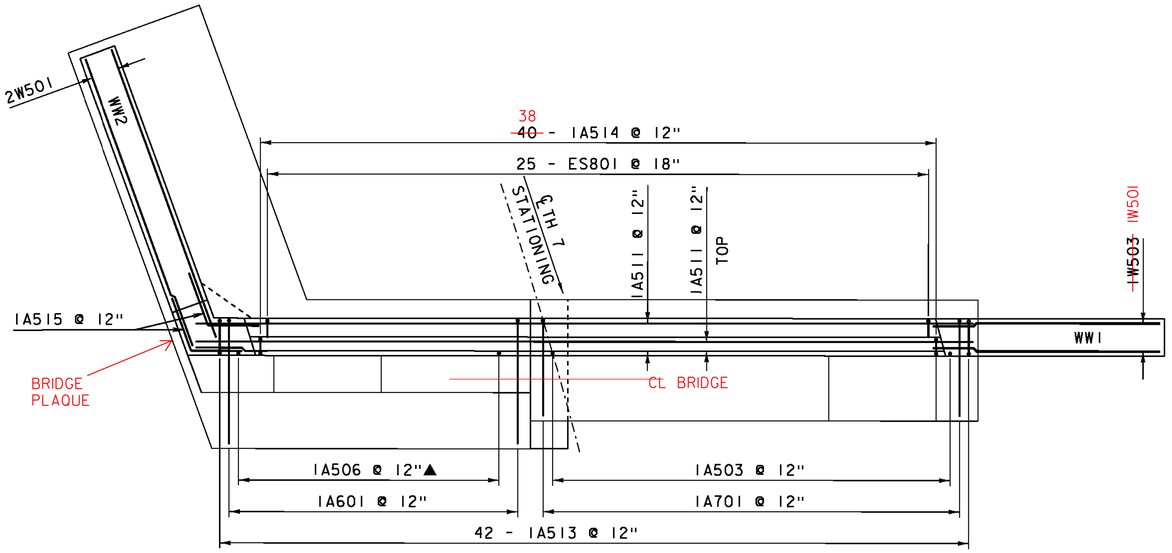
SCALE ½" = 1' - 0"

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
E = LEVEL 2 REINFORCING STEEL
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

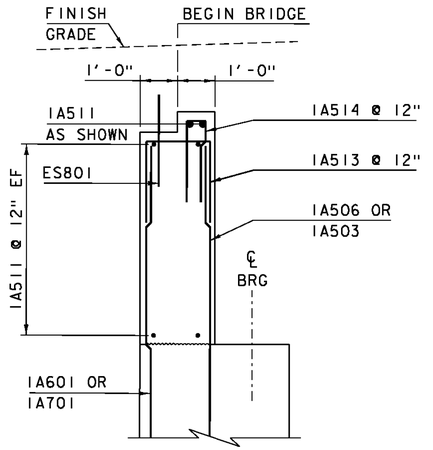
PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

FILE NAME: s06J002sub.dgn		PLOT DATE:	27-SEP-2012
PROJECT LEADER:	J. LACROIX	DRAWN BY:	R. PELLETT
DESIGNED BY:	J. LACROIX	CHECKED BY:	J. SALVATORI
WING WALL 1&2		SHEET	46 OF 70



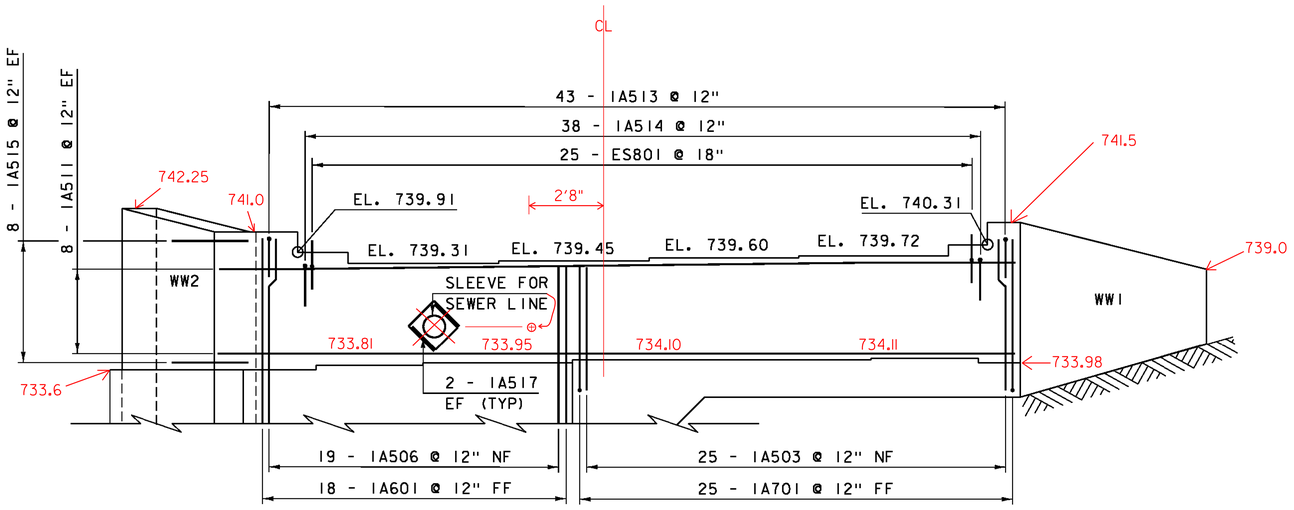
ABUTMENT 1 BACKWALL REINFORCING PLAN

SCALE 1/4" = 1'-0"



ABUTMENT 1 BACKWALL TYPICAL SECTION

SCALE 1/2" = 1'-0"



ABUTMENT 1 BACKWALL REINFORCING ELEVATION

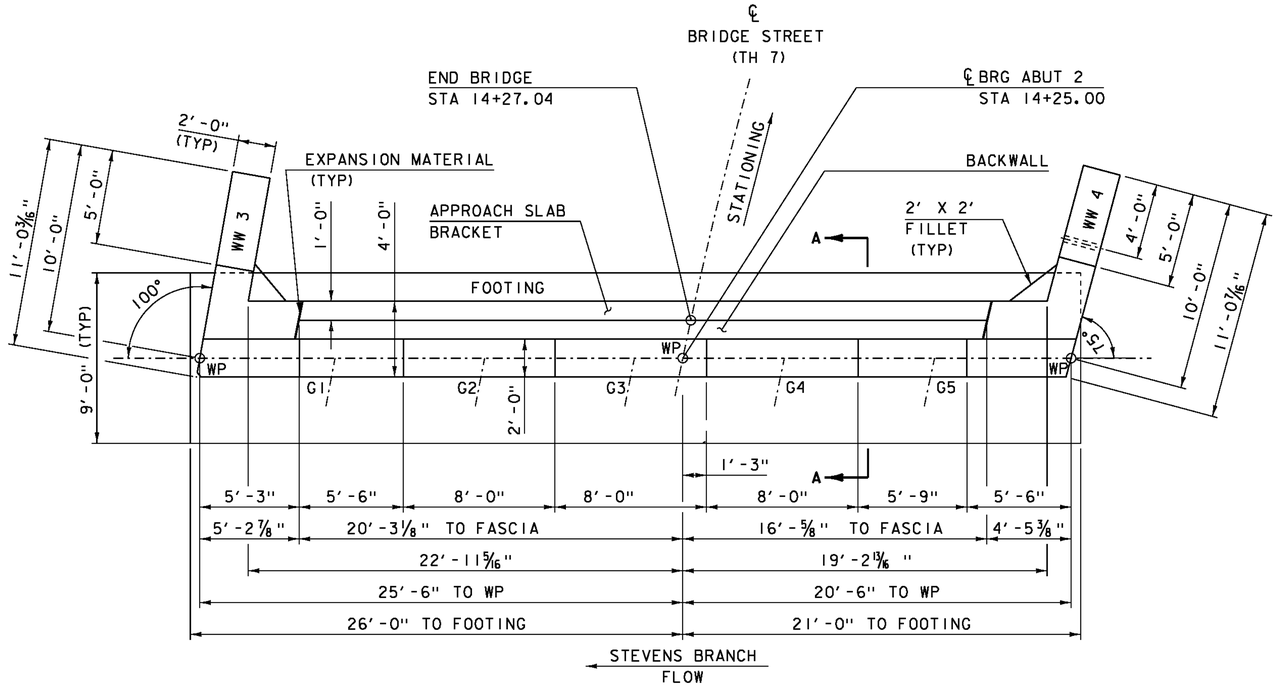
SCALE 1/4" = 1'-0"

NOTE:

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FF = FAR FACE
EF = EACH FACE
E = LEVEL 2 REINFORCING STEEL
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

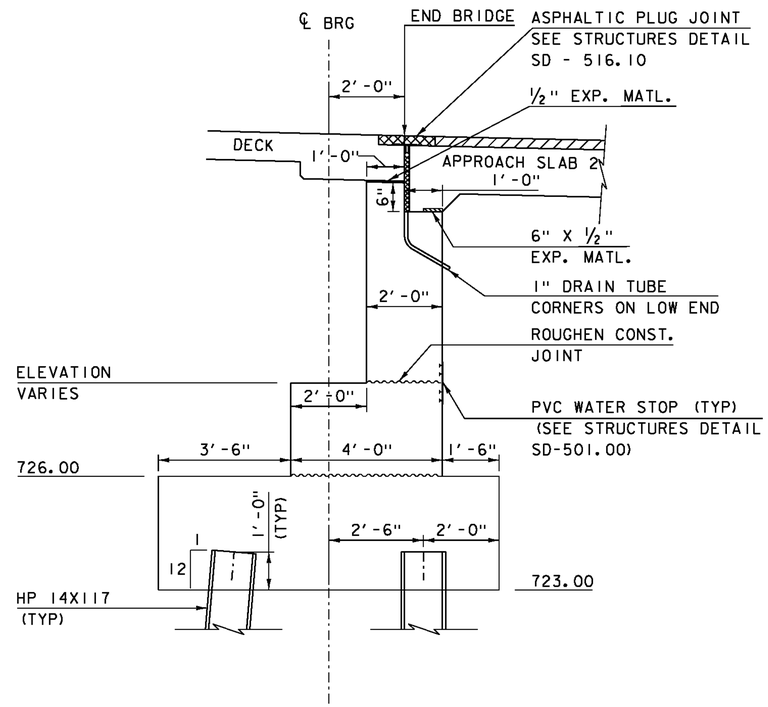
PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

FILE NAME: s06J002sub.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: J. LACROIX	CHECKED BY: J. SALVATORI
BACKWALL ABUTMENT 1	SHEET 47 OF 70



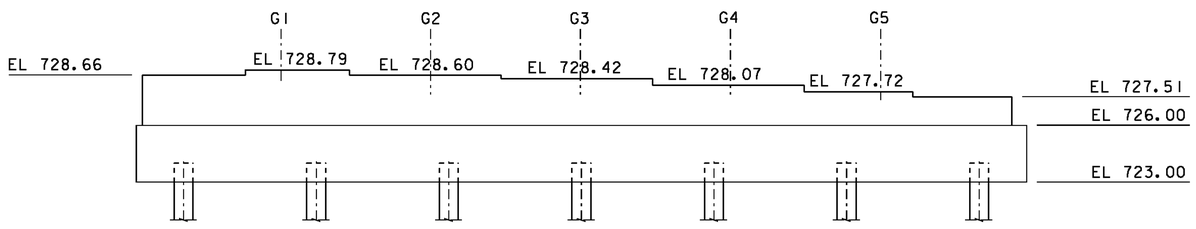
ABUTMENT 2 PLAN

SCALE 1/4" = 1' - 0"



ABUTMENT 2
BRIDGE END DETAIL SECTION A-A

SCALE 1/2" = 1' - 0"



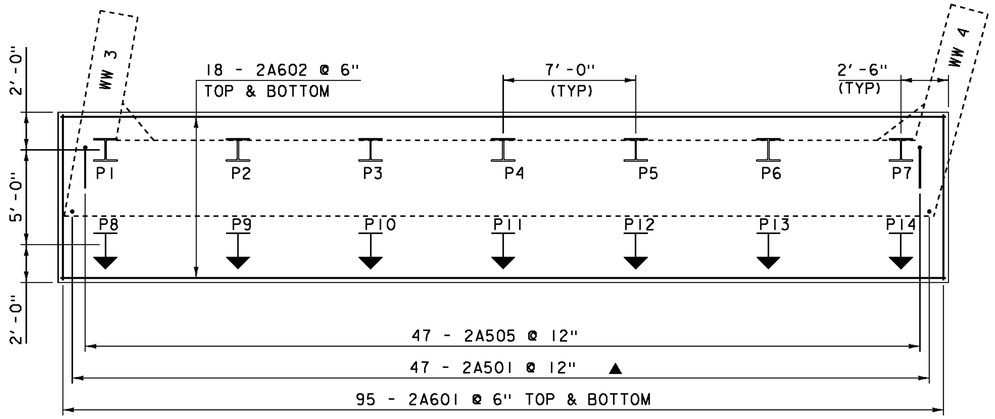
ABUTMENT 2 ELEVATION

SCALE 1/4" = 1' - 0"

NOTE: BACKWALL NOT SHOWN. FOR BACKWALL INFORMATION SEE "ABUTMENT 2 BACKWALL DETAILS"

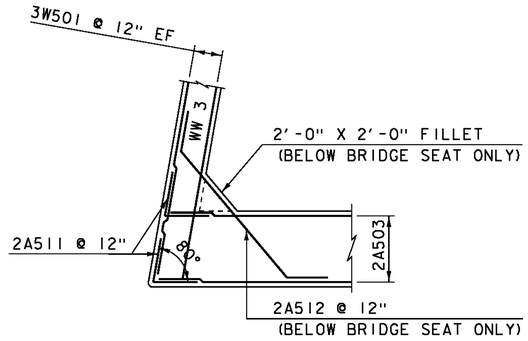
NOTE: SEE STRUCTURE DETAILS "SD-501.00" AND "SD-502.00".

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100 (7)
FILE NAME: s06j002sub2.dgn	PLOT DATE: 09-OCT-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: K.FRIEDLAND
DESIGNED BY: T.FILLBACH	CHECKED BY: J.SALVATORI
ABUTMENT 2	SHEET 48 OF 70



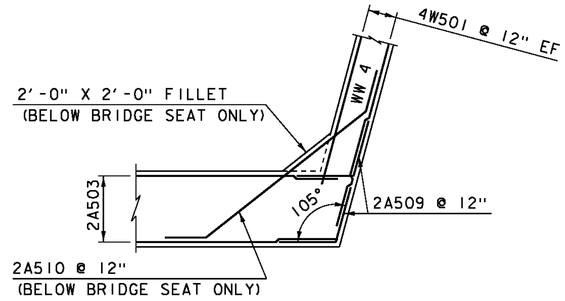
ABUTMENT 2 FOOTING REINFORCING PLAN

SCALE 1/4" = 1' - 0"



CORNER DETAIL @ WW3

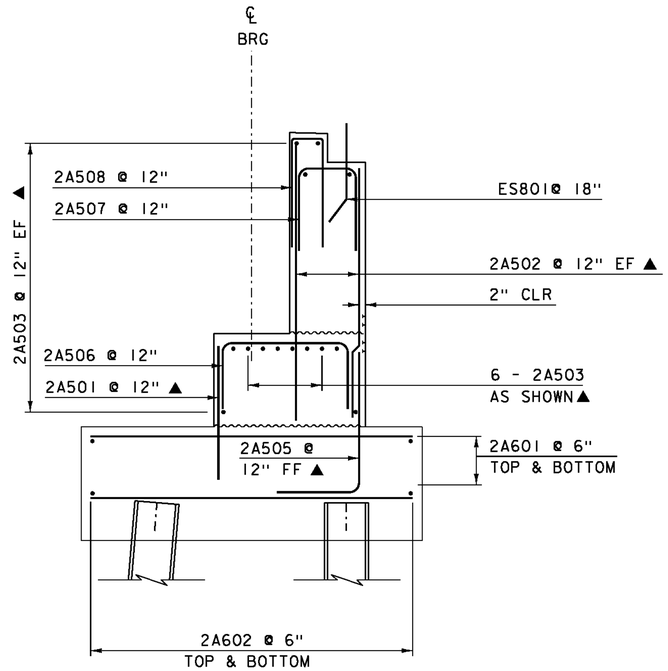
SCALE 1/4" = 1' - 0"



CORNER DETAIL @ WW4

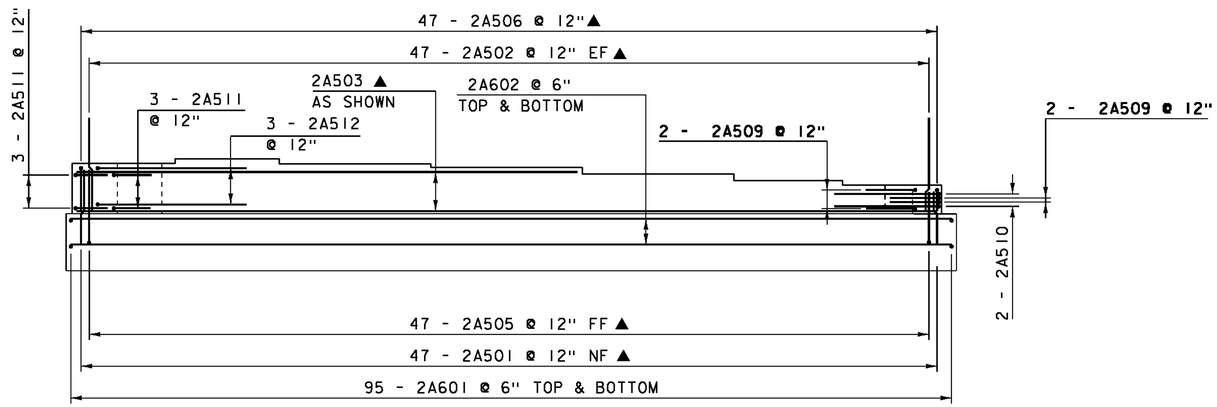
SCALE 1/4" = 1' - 0"

NOTE: SEE STRUCTURE DETAILS "SD-501.00" AND "SD-502.00".



ABUTMENT 2 SECTION REINFORCING TYPICAL

SCALE 1/2" = 1' - 0"



ABUTMENT 2 REINFORCING ELEVATION

SCALE 1/4" = 1' - 0"

NOTE: BACKWALL AND WING WALLS ARE NOT SHOWN, FOR INFORMATION SEE SHEETS "ABUTMENT 2 BACKWALL DETAILS" AND "WING WALLS 3 & 4"

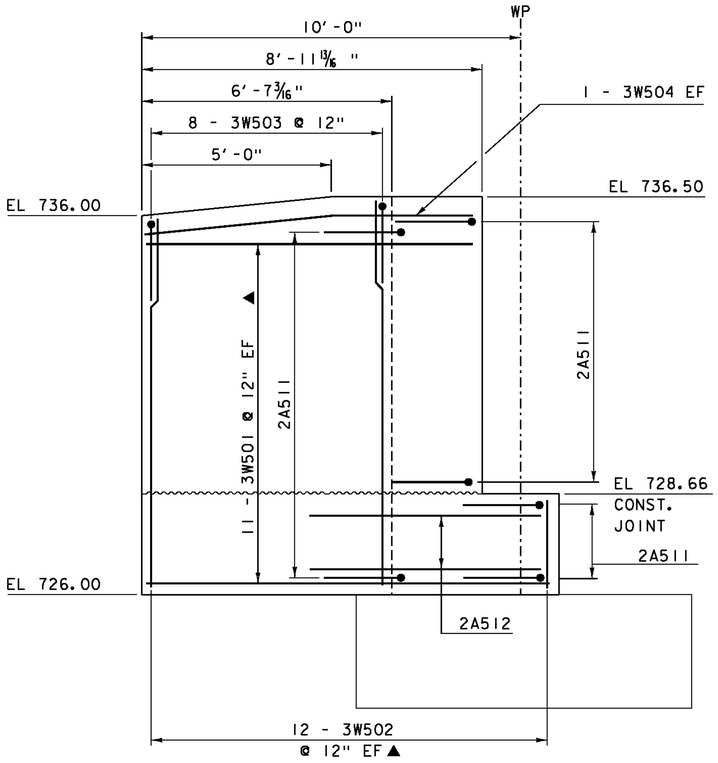
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3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100 (7)

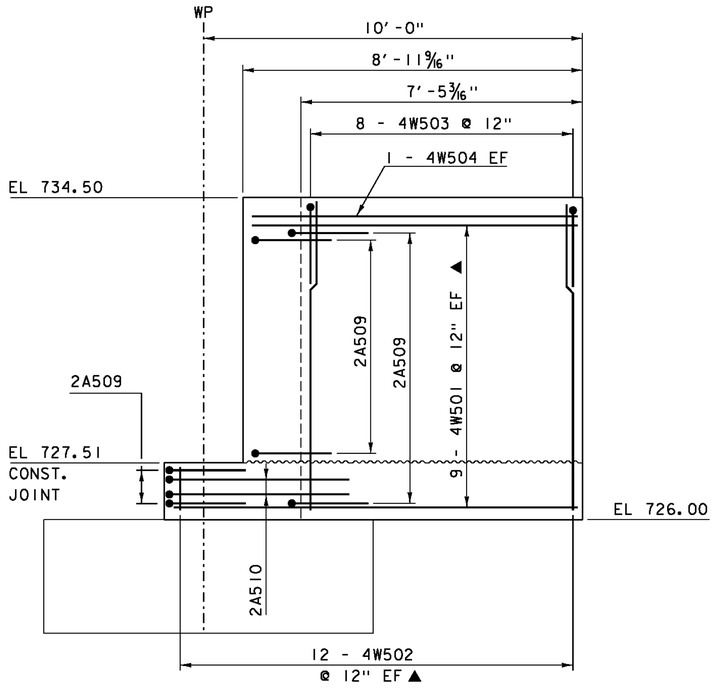
FILE NAME: s06j002sub2.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T.FILLBACH
ABUTMENT 2 REINFORCING AND PILE LAYOUT

PLOT DATE: 27-SEP-2012
DRAWN BY: K.FRIEDLAND
CHECKED BY: J.SALVATORI
SHEET 49 OF 70



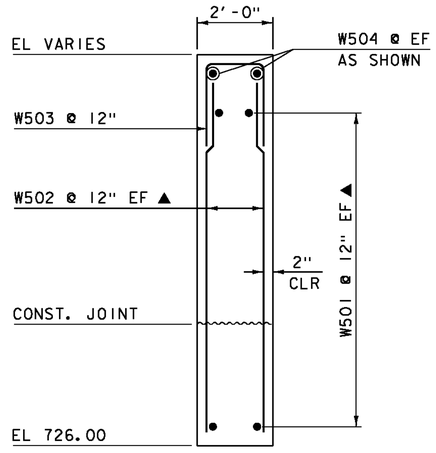
WINGWALL 3 ELEVATION

SCALE ½" = 1' - 0"



WINGWALL 4 ELEVATION

SCALE ½" = 1' - 0"



WINGWALL 3 & 4 TYPICAL SECTION

SCALE ½" = 1' - 0"

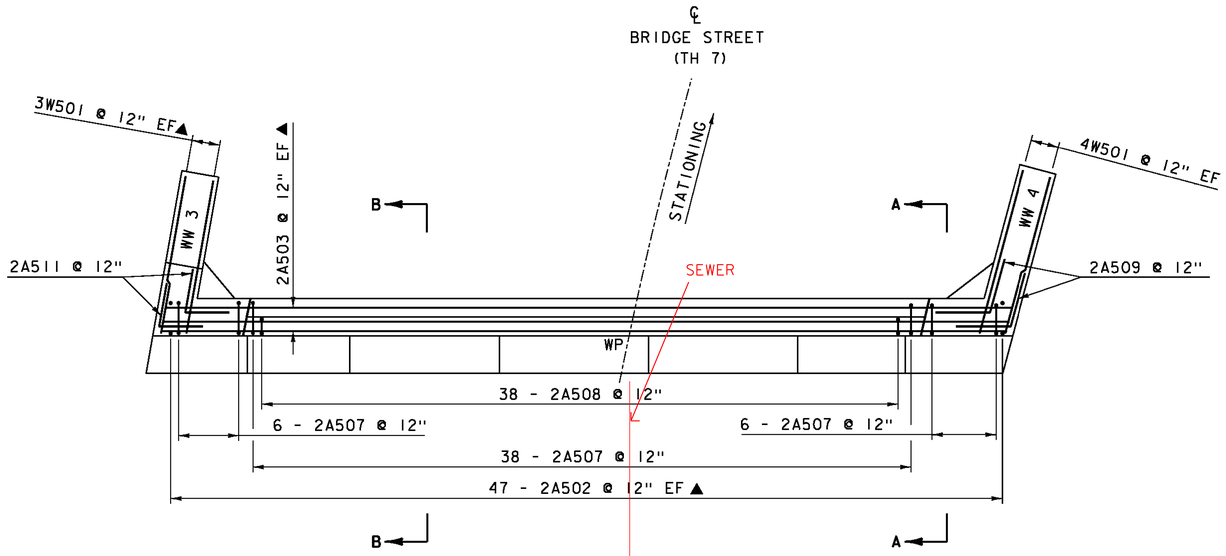
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PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

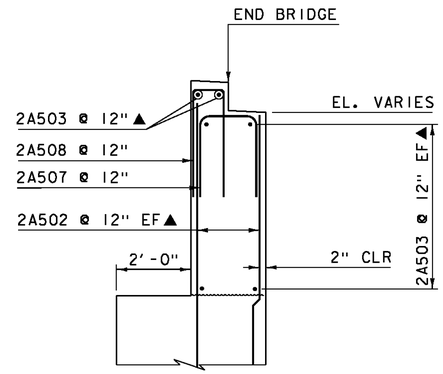
FILE NAME: s06j002sub2.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T.FILLBACH
WING WALLS 3 & 4

PLOT DATE: 27-SEP-2012
DRAWN BY: K.FRIEDLAND
CHECKED BY: J.SALVATORI
SHEET 50 OF 70



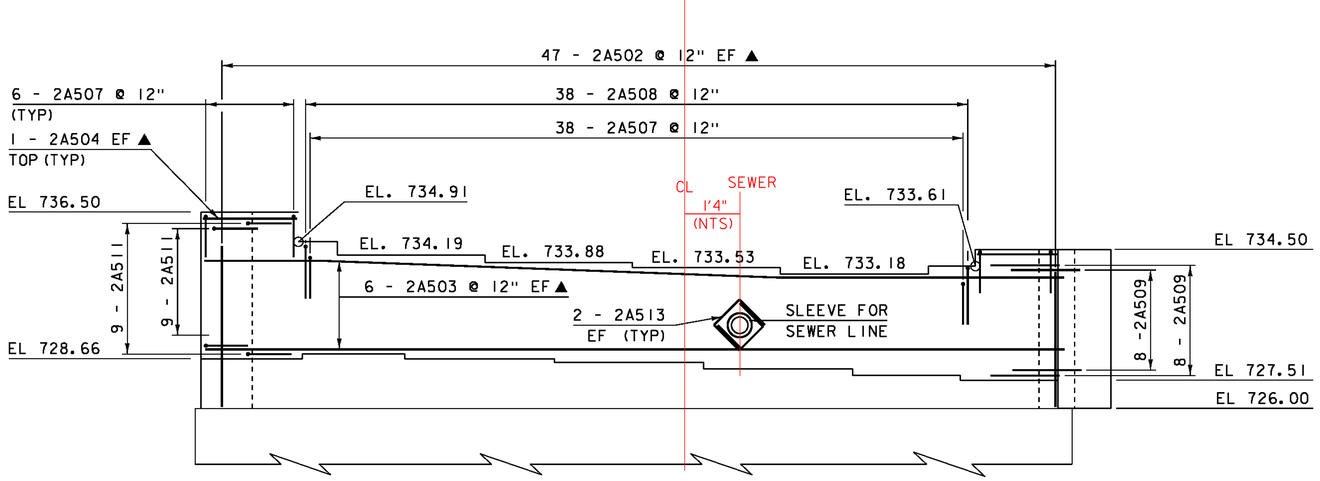
ABUTMENT 2 BACKWALL REINFORCING PLAN VIEW

SCALE 1/4" = 1' - 0"



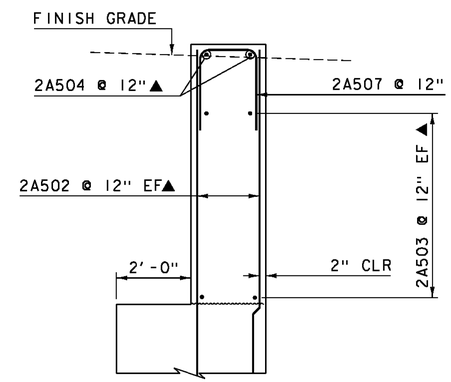
ABUTMENT 2 BACKWALL SECTION B-B

SCALE 1/2" = 1' - 0"



ABUTMENT 2 BACKWALL REINFORCING ELEVATION VIEW

SCALE 1/4" = 1' - 0"



ABUTMENT 2 BACKWALL SECTION A-A

SCALE 1/2" = 1' - 0"

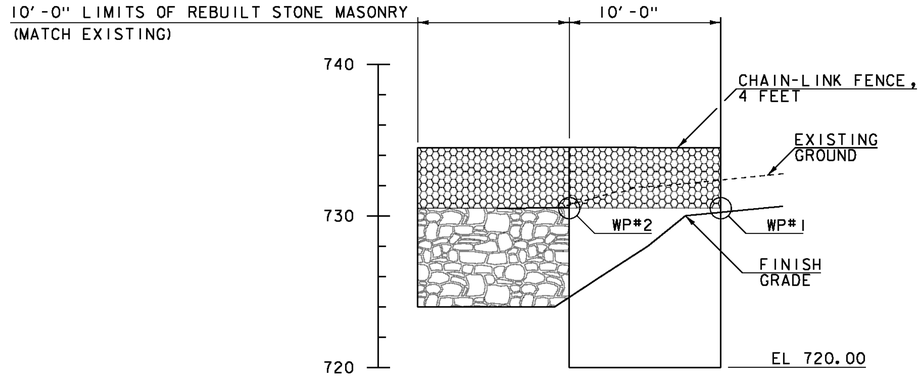
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3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100 (7)

FILE NAME: s06j002sub2.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T.FILLBACH
ABUTMENT 2 BACKWALL DETAILS

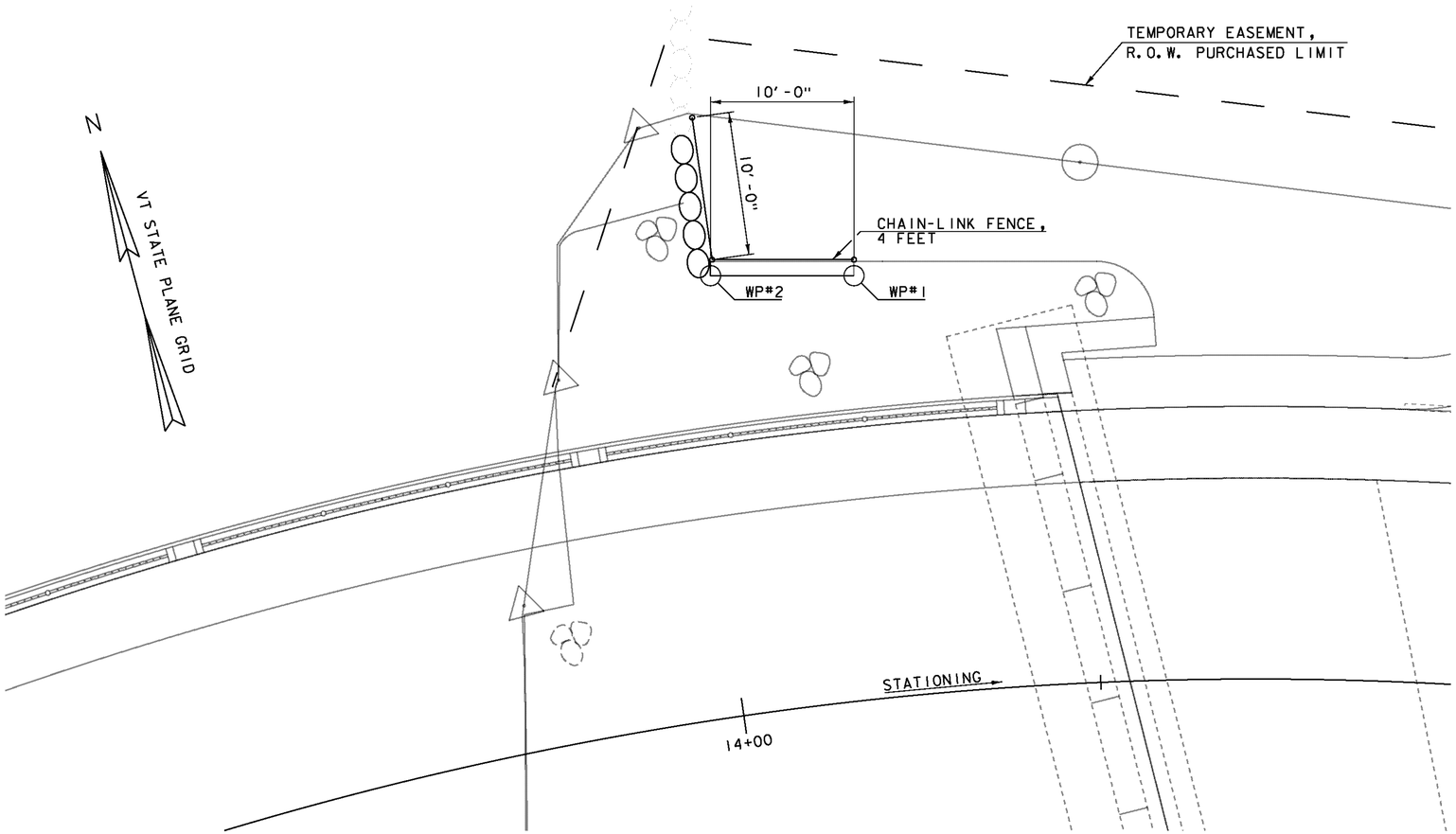
PLOT DATE: 27-SEP-2012
DRAWN BY: K.FRIEDLAND
CHECKED BY: J.SALVATORI
SHEET 51 OF 70



RETAINING WALL ELEVATION

SCALE 1" = 5'-0"

5 0 5



RETAINING WALL PLAN

SCALE 1" = 5'-0"

5 0 5

WORKING POINTS

WP#	STA.	OFFSET	TOP OF WALL ELEV.
#1	14+10.72	29.35 LT	731.00
#2	14+01.85	30.70 LT	731.00

NOTES:

1. WP INDICATES WORKING POINTS ALONG FRONT FACE OF WALL. ABUTMENT WORKING POINTS ARE NOT SHOWN ON THIS SHEET.
2. THE ELEVATIONS SHOWN AT THE BOTTOM OF THE WALL ARE MAXIMUM ELEVATIONS TO ACCOUNT FOR FROST DEPTH.
3. GRADE TO DRAIN THE FINISH GROUND BEHIND RETAINING WALL.
4. THE WALL SHALL CONFORM TO ITEM 900.670 SPECIAL PROVISION (RETAINING WALL)
5. ALL CONSTRUCTION ASSOCIATED WITH ITEM 900.670 (SPECIAL PROVISION RETAINING WALL) SHALL REMAIN INSIDE THE LIMITS AS MARKED ON THE PLANS

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002wall.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: J. SALVATORI
RETAINING WALL

PLOT DATE: 27-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: T. FILLBACH
SHEET 52 OF 70

STATE OF VERMONT
AGENCY OF TRANSPORTATION

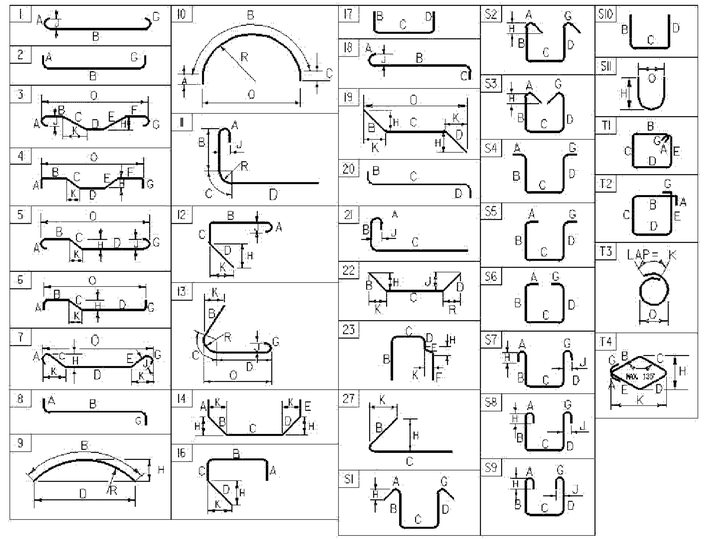
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
DECK																	
✳ ▲	504	5	35'- 0"	ES501	STR	35'- 0"											
	237	5	43'- 5"	ES502	STR	43'- 5"											
	25	8	6'- 0"	ES801	STR	6'- 0"											
	258	5	4'- 8"	ES503	2	2'- 0"	2'- 8"					---					
	258	5	4'- 8"	ES504	2	2'- 0"	2'- 8"					---					
	125	5	12'- 1"	ES505	S5	2'- 2"	1'- 0"	5'- 9"	1'- 0"			2'- 2"					
	38	5	8'- 2"	ES506	S5	2'- 2"	0'- 9"	2'- 4"	0'- 9"			2'- 2"					
	38	5	5'- 9"	ES507	S5	---	0'- ~~9"~~6"	2'- 4"	0'- ~~6"~~ 9"			2'- 2"					
	38	5	6'- 11"	ES508	23		2'- 4"	0'- 6"	0'- 9"	0'- 4"	3'- 0"		0'- 3"		0'- 3"		
APPROACH SLAB #1																	
▲	21	5	29'- 6"	1EAS501	STR	29'- 6"											
▲	34	9	20'- 9"	1EAS901	1	1'- 3"	19'- 6"					---		1'- 0"			
APPROACH SLAB #2																	
▲	21	5	28'- 7"	2EAS501	STR	28'- 7"											
▲	34	9	21'- 5"	2EAS901	1	1'- 3"	20'- 2"					---		1'- 0"			
ABUTMENT #1																	
	13	5	23'- 6"	1A501	STR	23'- 6"											
△	27	5	6'- 0"	1A502	STR	6'- 0"											
▲	25	5	8'- 10"	1A503	STR	8'- 10"											
	17	5	18'- 10"	1A504	STR	18'- 10"											
	21	5	7'- 6"	1A505	STR	7'- 6"											
▲	19	5	13'- 6"	1A506	STR	13'- 6"											
▲	19	5	6'- 6"	1A507	STR	6'- 6"											
	18	5	17'- 1"	1A510	STR	17'- 1"											
	16	5	41'- 10"	1A511	STR	41'- 10"											
△ ▲	36	8	10'- 0"	1A801	STR	10'- 0"											
△ ▲	20	6	19'- 6"	1A601	2		6'- 6"	13'- 0"				---					
△ ▲	27	7	14'- 1"	1A701	2		5'- 1"	9'- 0"				---					
	19	5	7'- 11"	1A512	17		2'- 2"	3'- 7"	2'- 2"								
	43	5	5'- 11"	1A513	17		2'- 2"	1'- 7"	2'- 2"								
	38	5	5'- 11"	1A514	17		2'- 8"	0'- 7"	2'- 8"								
	4	5	5'- 0"	1A517	17		1'- 8"	1'- 8"	1'- 8"								
	26	5	4'- 4"	1A515	19		2'- 2"	2'- 2"	---				2'- 0"		0'- 9"		
	7	5	11'- 7"	1A508	19		2'- 2"	7'- 3"	2'- 2"				1'- 6"		1'- 6"		
	7	5	8'- 0"	1A509	20		2'- 2"	3'- 8"	2'- 2"								
	7	5	16'- 6"	1A516	22		2'- 2"	12'- 2"	2'- 2"				1'- 3"		1'- 9"		
WINGWALL #1																	
▲	20	5	12'- 0"	1W501	STR	12'- 0"											
▲	22	5	9'- 0"	1W502	STR	9'- 0"											
	11	5	5'- 11"	1W503	17		2'- 2"	1'- 7"	2'- 2"								
▲	2	5	12'- 0"	1W504	19		2'- 0"	10'- 0"					0'- 6"		1'- 11"		
WINGWALL #2																	
	11	5	22'- 1"	2W501	STR	22'- 1"											
▲	20	5	14'- 9"	2W502	STR	14'- 9"											
▲	28	5	18'- 6"	2W503	STR	18'- 6"											
	31	5	16'- 10"	2W504	2	2'- 1"	14'- 9"					---					
	16	5	5'- 11"	2W505	17		2'- 2"	1'- 7"	2'- 2"								
	2	5	16'- 6"	2W506	19		2'- 2"	14'- 4"					0'- 2"		2'- 2"		
	31	6	7'- 0"	2W601	STR	7'- 0"											

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
ABUTMENT #2																	
▲	47	5	4'- 7"	2A501	STR	4'- 7"											
△ ▲	96	5	8'- 5"	2A502	STR	8'- 5"											
▲	26	5	46'- 0"	2A503	STR	46'- 0"											
▲	4	5	4'- 9"	2A504	STR	4'- 9"											
▲	47	5	6'- 9"	2A505	2	2'- 2"	4'- 7"					---					
	47	5	7'- 11"	2A506	17		2'- 2"	3'- 7"	2'- 2"								
	50	5	5'- 11"	2A507	17		2'- 2"	1'- 7"	2'- 2"								
	38	5	6'- 5"	2A508	17		2'- 11"	0'- 7"	2'- 11"								
	22	5	4'- 4"	2A511	22		2'- 2"	2'- 2"	---						2'- 2"		0'- 5"
	20	5	4'- 4"	2A509	22		2'- 2"	2'- 2"	---						2'- 1"		0'- 7"
	2	5	15'- 11"	2A510	22		2'- 2"	11'- 7"	2'- 2"						1'- 4"		1'- 8"
	3	5	13'- 8"	2A512	22		2'- 2"	9'- 4"	2'- 2"						1'- 8"		1'- 5"
	4	5	5'- 0"	2A513	17		1'- 8"	1'- 8"	1'- 8"								
△	190	6	~~7'- 11"~~ 8'-6"	2A601	STR		7'- 11"										
~~72~~	~~36~~	6	24'- 4"	2A602	STR		24'- 4"										
WINGWALL #3																	
▲	22	5	10'- 6"	3W501	STR	10'- 6"											
▲	24	5	10'- 0"	3W502	STR	10'- 0"											
	2	5	8'- 6"	3W504	22		3'- 9"	4'- 9"	---						0'- 4"		3'- 9"
	8	5	5'- 11"	3W503	S10		2'- 2"	1'- 7"	2'- 2"								
WINGWALL #4																	
▲	18	5	10'- 6"	4W501	STR	10'- 6"											
▲	24	5	8'- 0"	4W502	STR	8'- 0"											
	2	5	8'- 6"	4W504	STR	8'- 6"											
	8	5	5'- 11"	4W503	S10		2'- 2"	1'- 7"	2'- 2"								

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. E DENOTES LEVEL 2 REINFORCING STEEL.



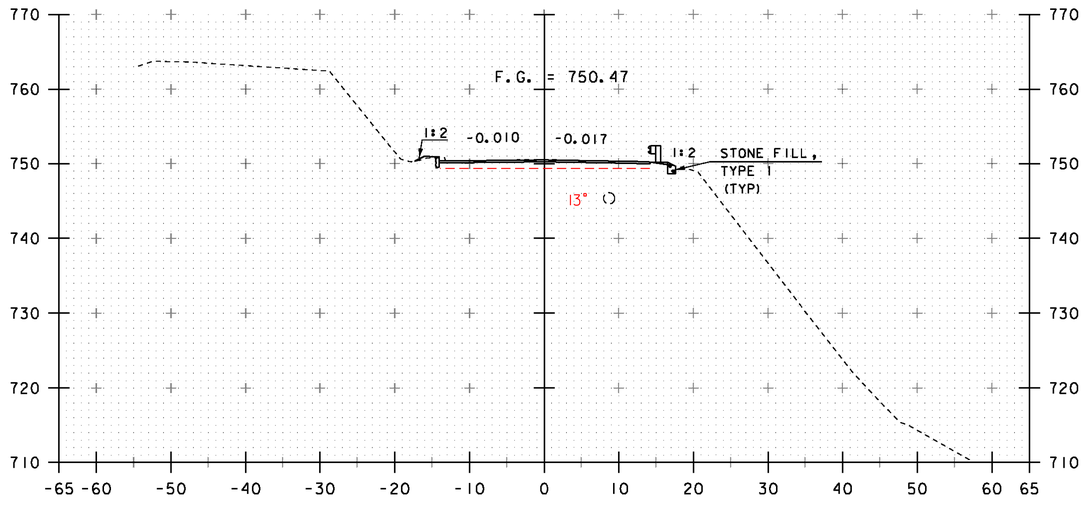
ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION DIAMETER INCHES	AREA INCHES²	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

PROJECT NAME: **BARRE TOWN**
PROJECT NUMBER: **BRF 6100(7)**

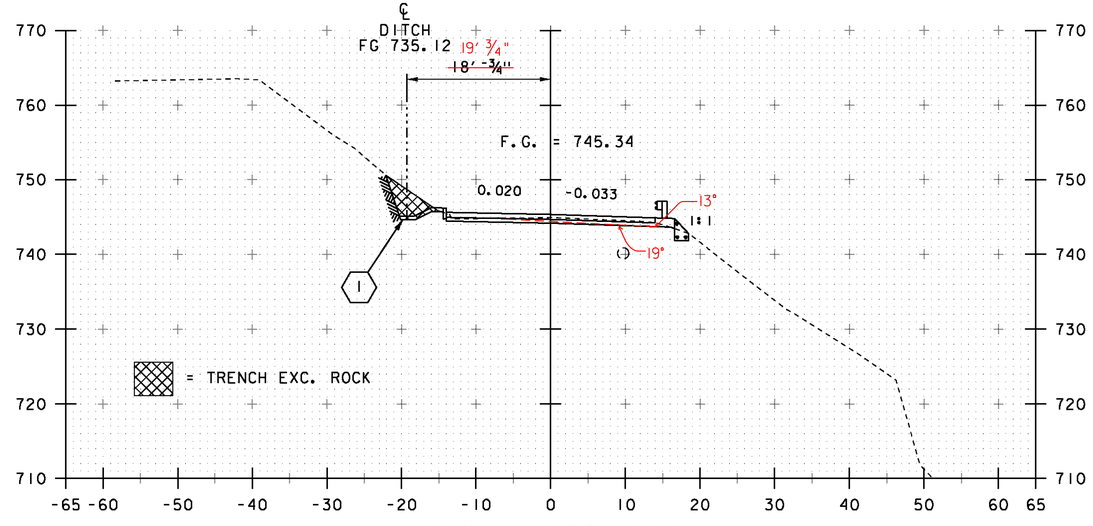
FILE NAME: **s06j002_rss.xls**
PROJECT MANAGER: **J. LACROIX**
DESIGNED BY: **T. FILLBACH**
REINFORCING STEEL SCHEDULE

PLOT DATE: **9/11/2012**
DRAWN BY: **R. PELLETT**
CHECKED BY: **T. FILLBACH**
SHEET **53** OF **70**

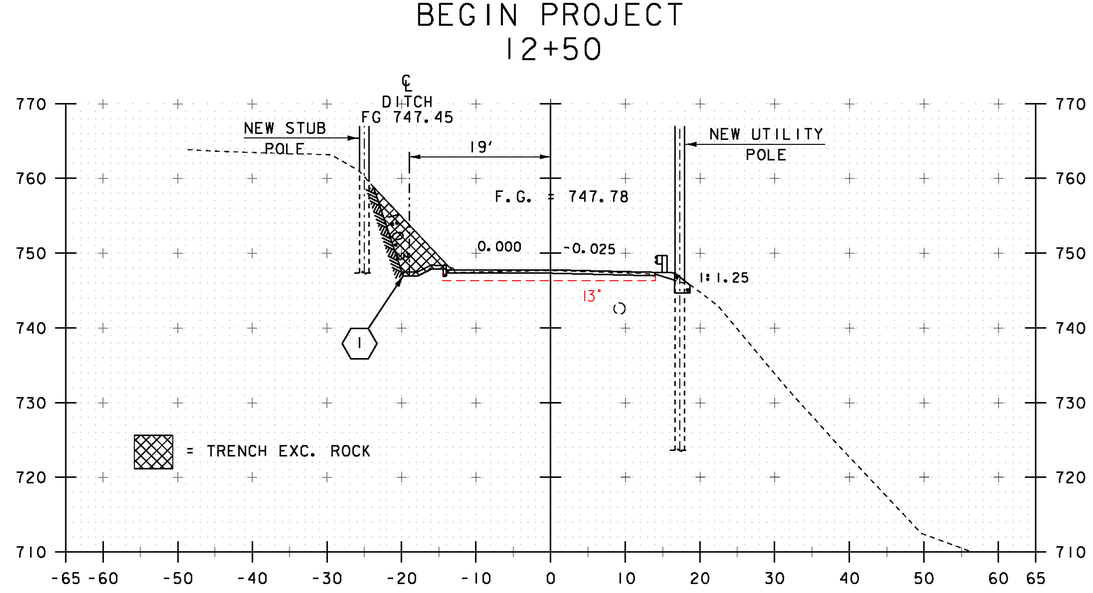


12+00

BEGIN APPROACH
11+75



BEGIN PROJECT
12+50



1 DRAINAGE DITCH

12+25

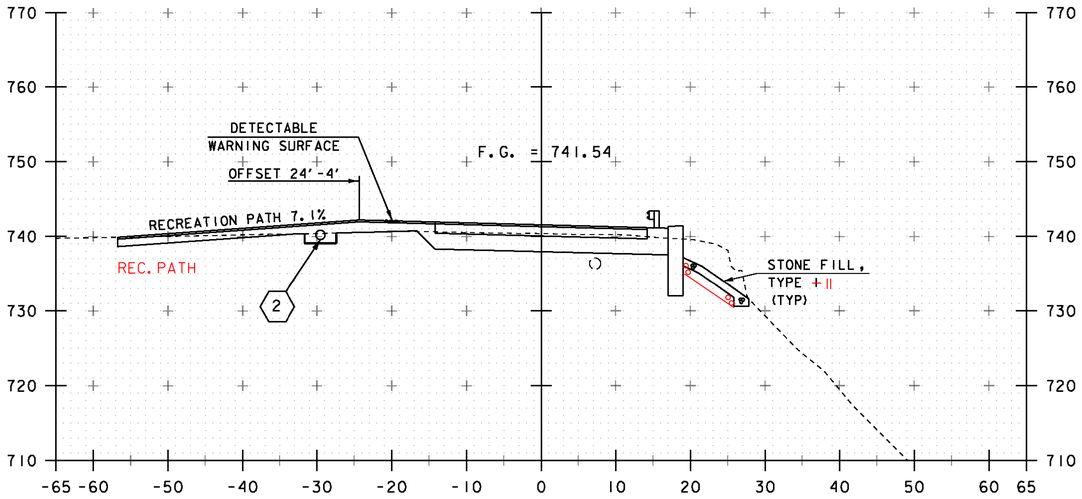
STA. 11+75 TO STA. 12+50

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

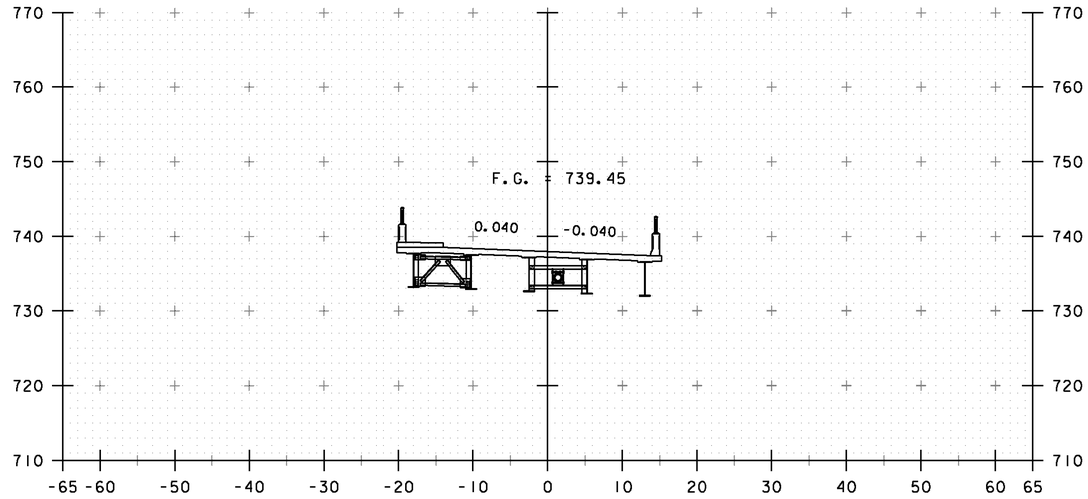
FILE NAME: s06j002xsl.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
MAINLINE CROSS SECTIONS 1

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 54 OF 70

RECREATION PATH
3" BITUMINOUS CONCRETE PAVEMENT
12" SUBBASE

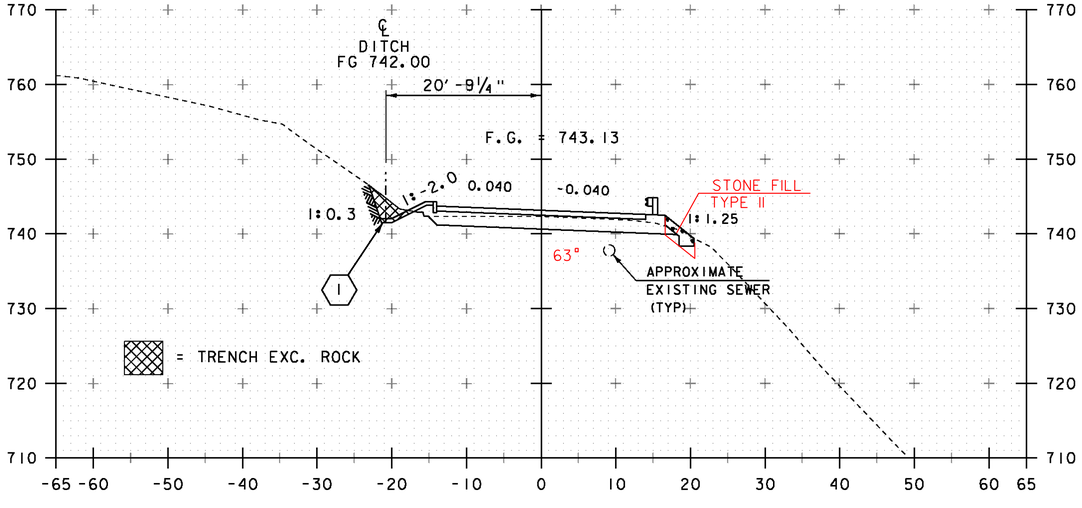


RECREATION PATH SKEWED @ ~~10°~~ 80° LT
12+95

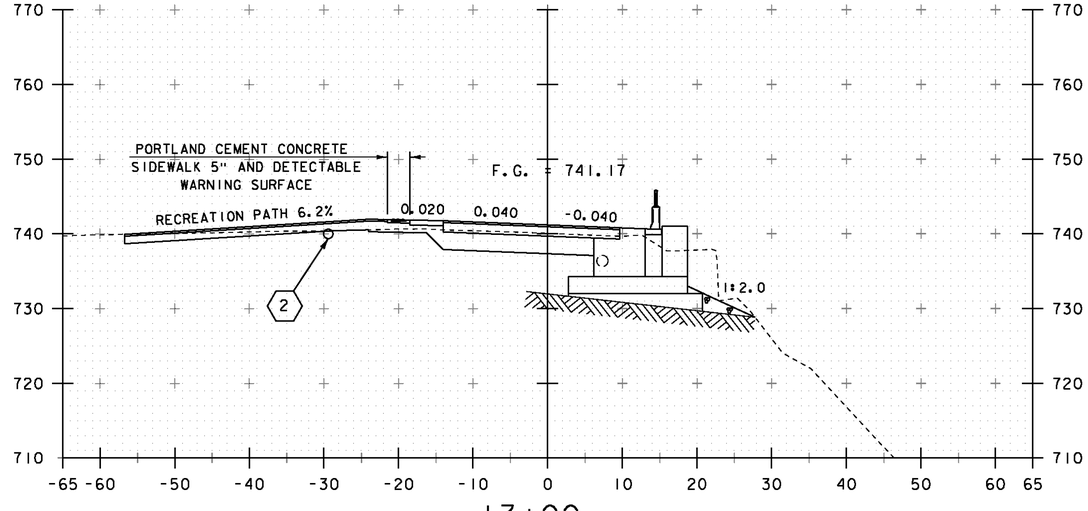


13+25
BEGIN BRIDGE @ 13+02.92

2 PROPOSED 15" PIPE OPTION
29'-6" LEFT
INVERT ELEV = 739.58



12+75



13+00

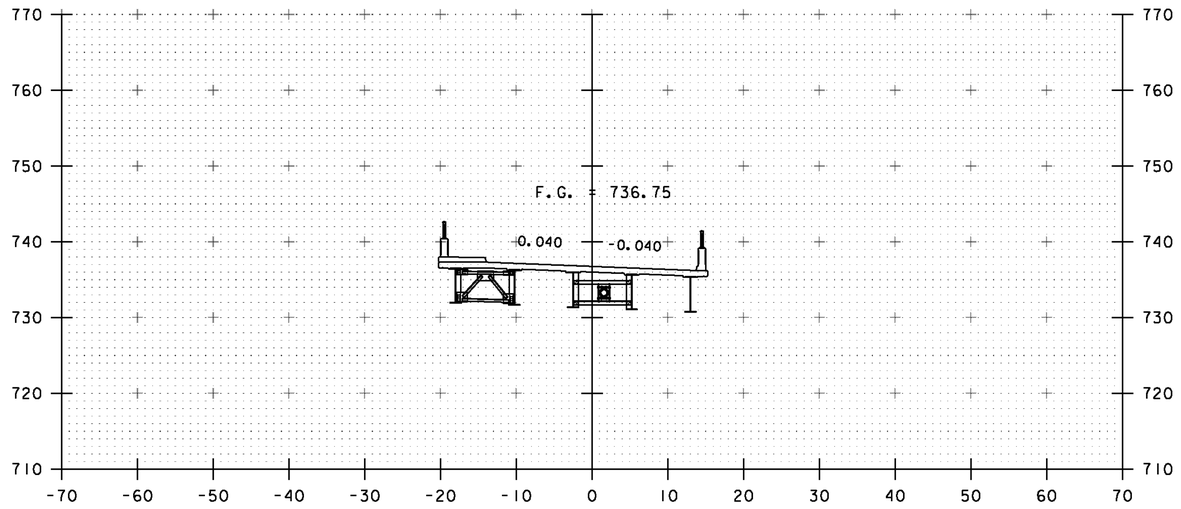
1 DRAINAGE DITCH

2 PROPOSED 15" PIPE OPTION
29'-5" LEFT
INVERT ELEV = 739.34

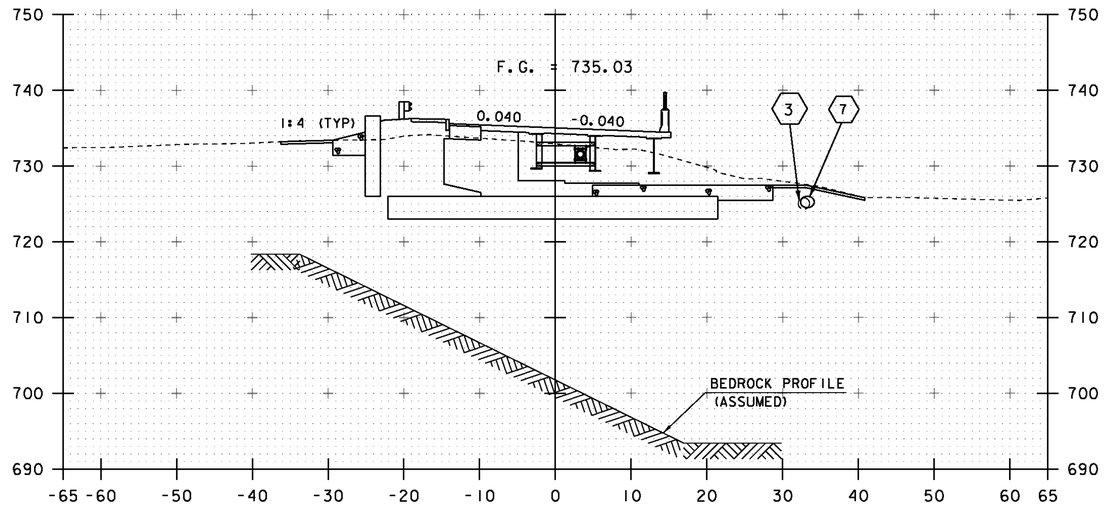
STA. 12+75 TO STA. 13+25

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

FILE NAME: s06j002xsl.dgn		PLOT DATE:	27-SEP-2012
PROJECT LEADER:	J. LACROIX	DRAWN BY:	R. PELLETT
DESIGNED BY:	T. FILLBACH	CHECKED BY:	T. FILLBACH
MAINLINE CROSS SECTIONS 2		SHEET	55 OF 70



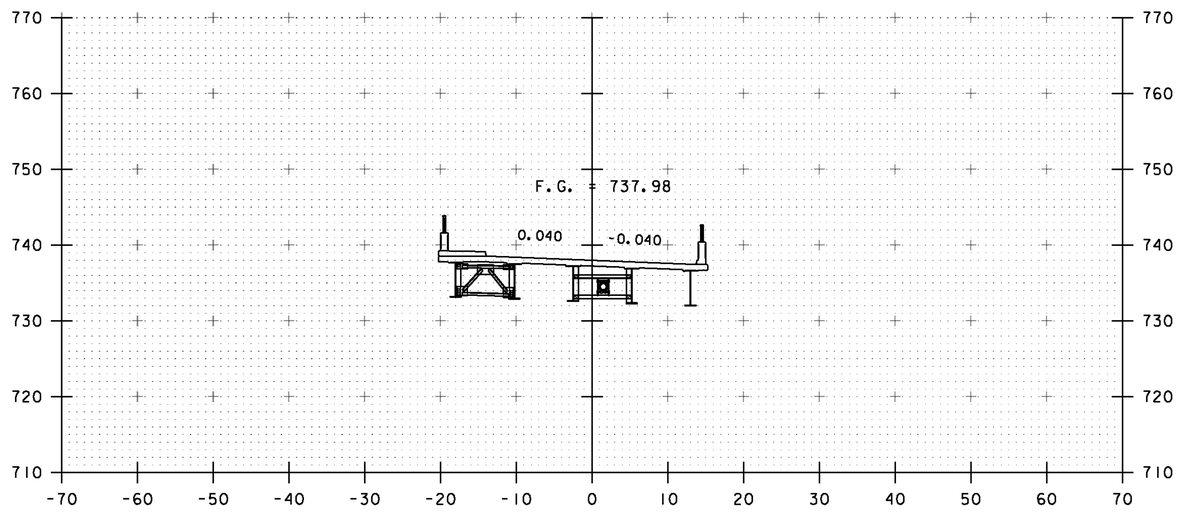
13+75



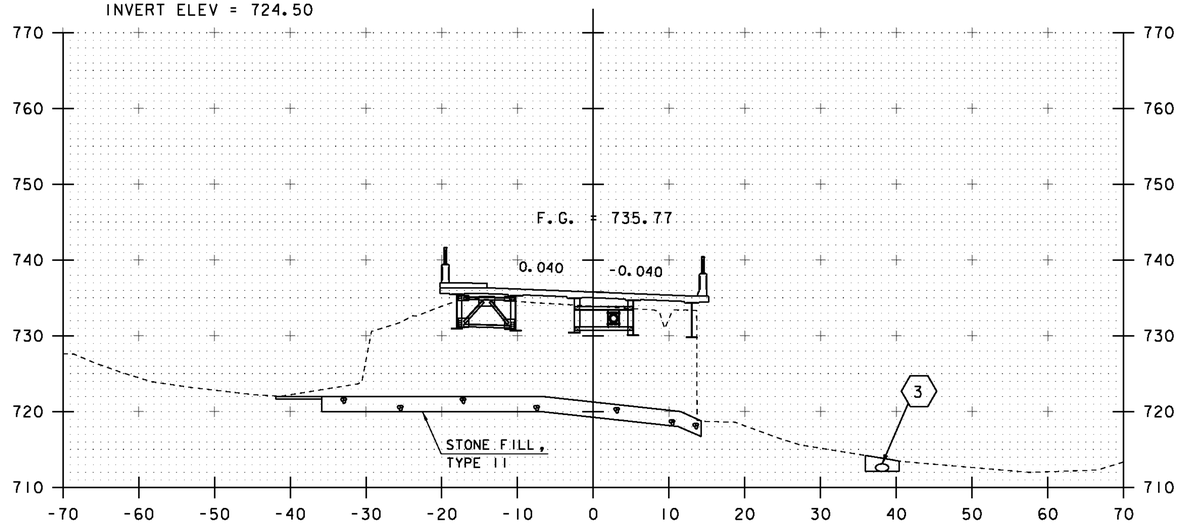
14+25

7 PROPOSED 18" PIPE OPTION
33'-3" RIGHT
INVERT ELEV = 724.50

3 REMOVE EXISTING 12" PIPE



13+50

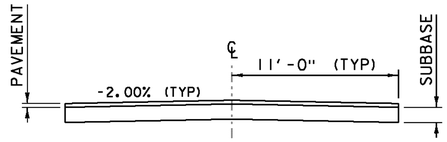


14+00

3 REMOVE EXISTING 12" PIPE

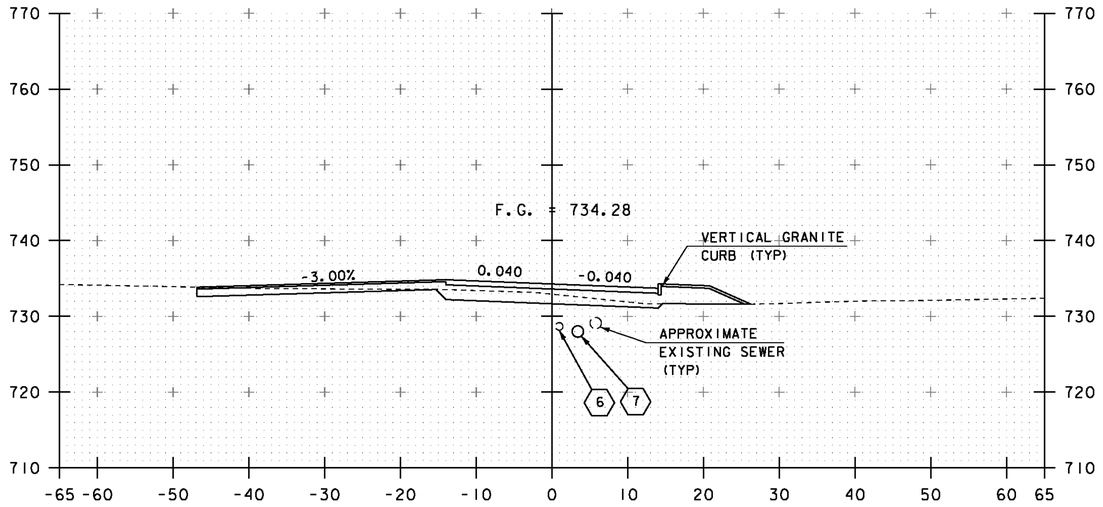
STA. 13+50 TO STA. 14+25

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)
FILE NAME: s06j002bdr.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: G. LAROCHE
DESIGNED BY: T. FILLBACH	CHECKED BY: T. FILLBACH
MAINLINE CROSS SECTIONS 3	SHEET 56 OF 70



3" BITUMINOUS CONCRETE PAVEMENT (TYPE III S)
12" SUBBASE OF DENSE GRADED CRUSHED STONE

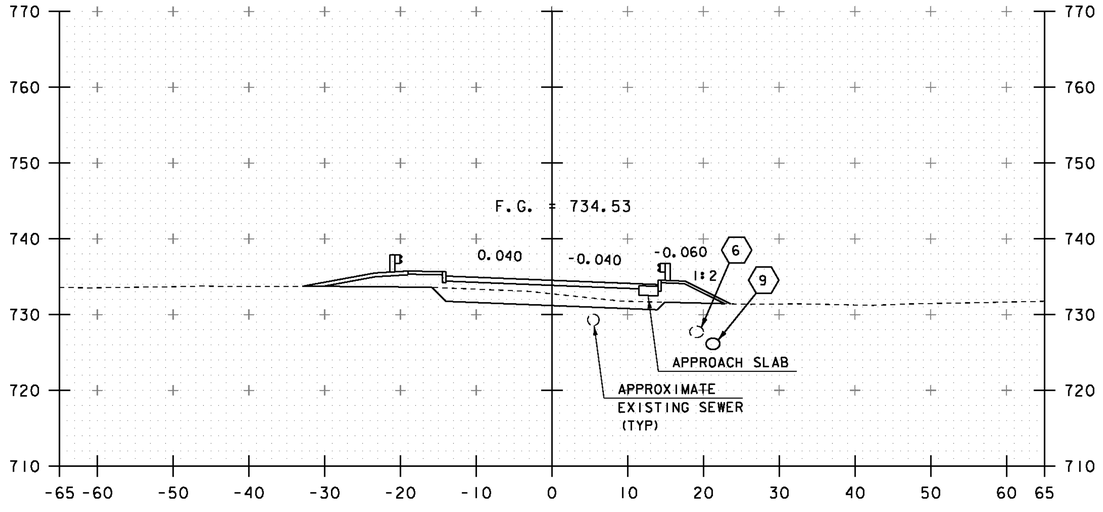
BRIDGE STREET TRAILER PARK
TYPICAL SECTION
NOT TO SCALE



14+75

(7) PROPOSED 18" PIPE OPTION
3'-5" RIGHT
INVERT ELEV = 727.26

(6) REMOVE EXISTING 12" CSP
1'-0" RIGHT

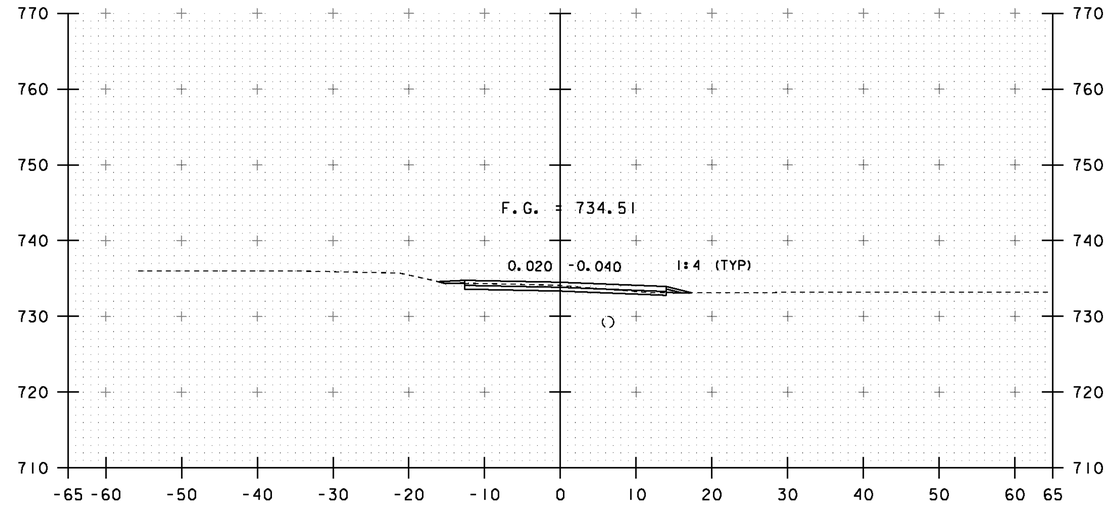


14+50

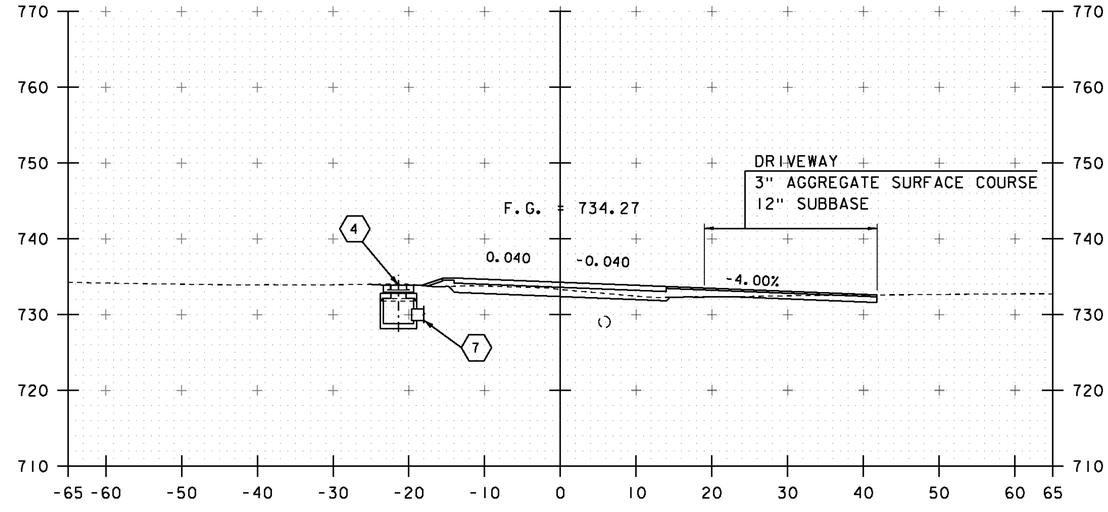
(5) REMOVE EXISTING 12" CSP
19'-2" RIGHT

(9) PROPOSED 18" PIPE OPTION
21'-3" RT
INVERT ELEV = 725.40

END BRIDGE @ 14+27.04



END PROJECT
15+25



15+00

(7) PROPOSED 18" PIPE OPTION
19'-7" LT
INVERT ELEV = 729.25

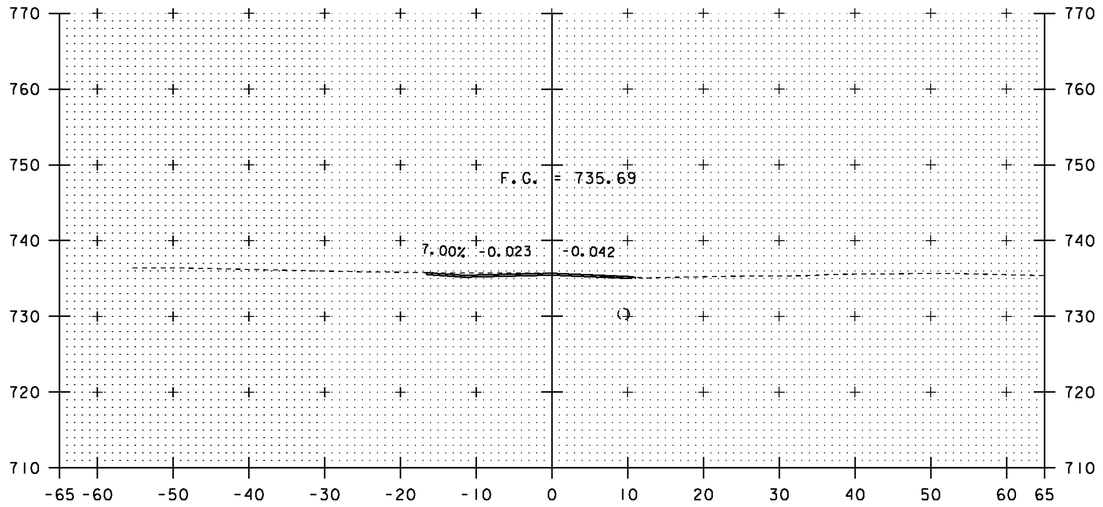
(4) NEW PRECAST REINFORCED CONCRETE DROP INLET (4' DIA.)
WITH CAST IRON GRATE WITH FRAME (TYPE B GRATE)
STA 14+98.37, 21.4' LT
TOP OF GRATE, 733.90

STA. 14+25 TO STA. 15+00

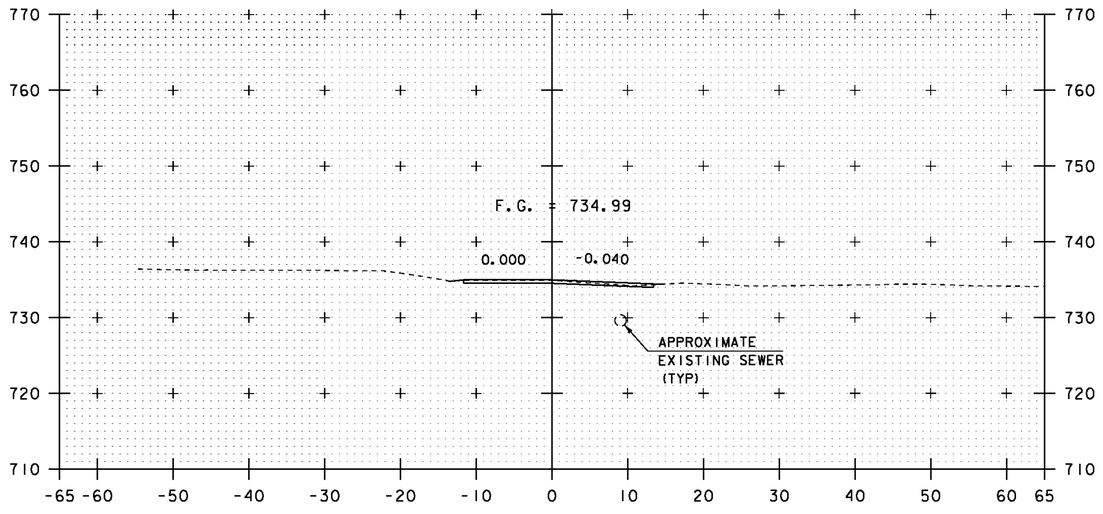
PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002bdr.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
MAINLINE CROSS SECTIONS 4

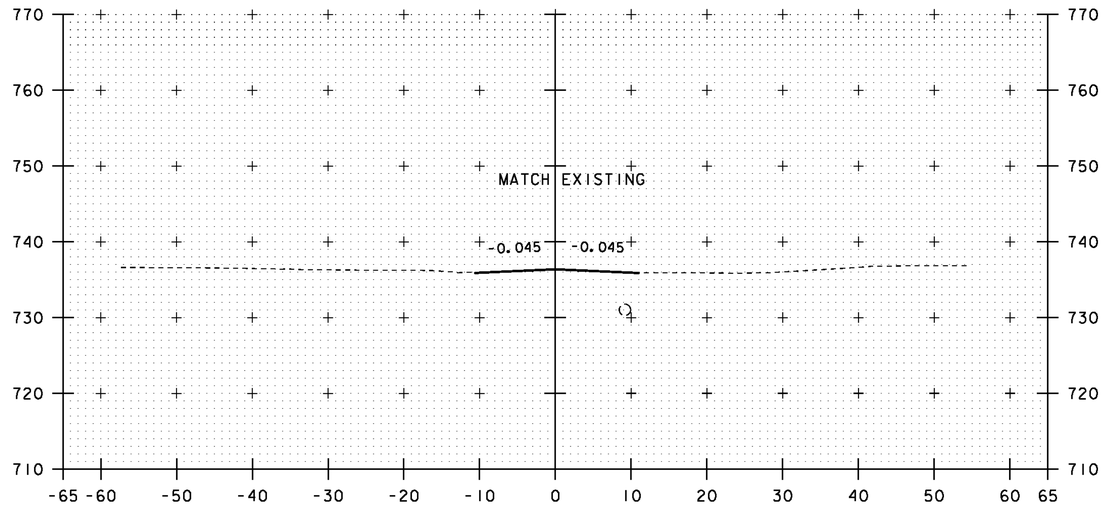
PLOT DATE: 27-SEP-2012
DRAWN BY: G. LAROCHE
CHECKED BY: T. FILLBACH
SHEET 57 OF 70



15+75



15+50



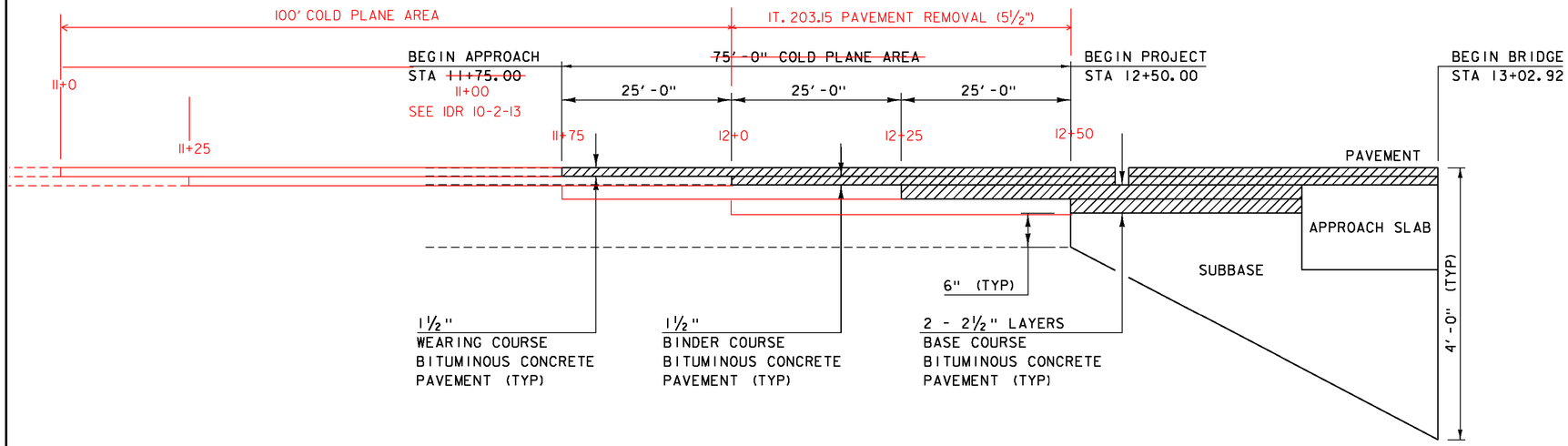
END APPROACH
16+00

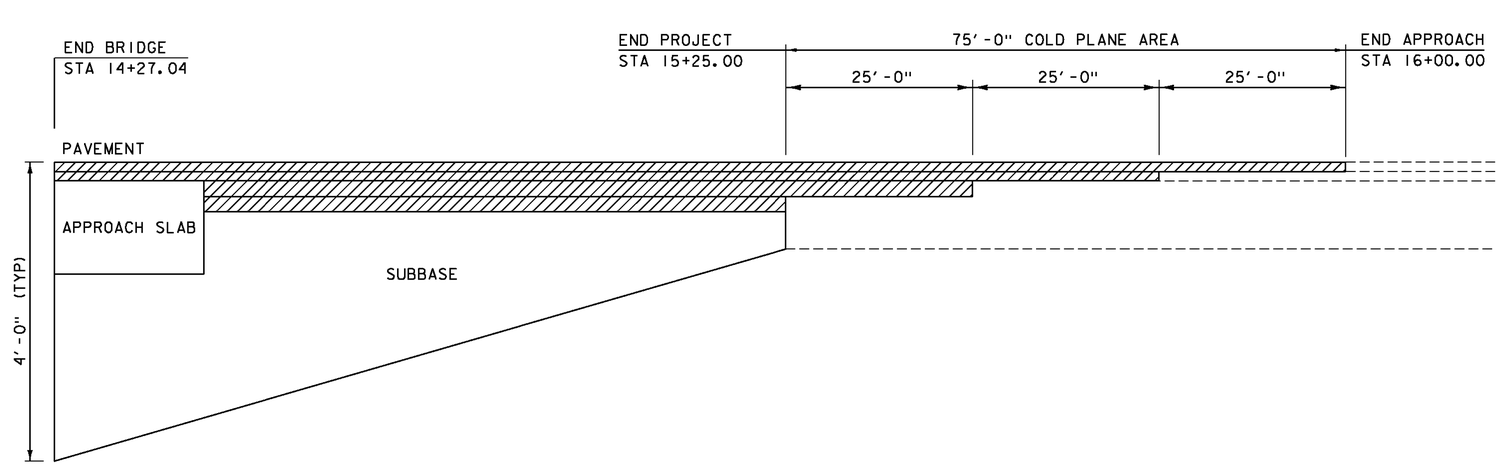
STA. 15+25 TO STA. 16+00

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002xsl.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
MAINLINE CROSS SECTIONS 5

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 58 OF 70





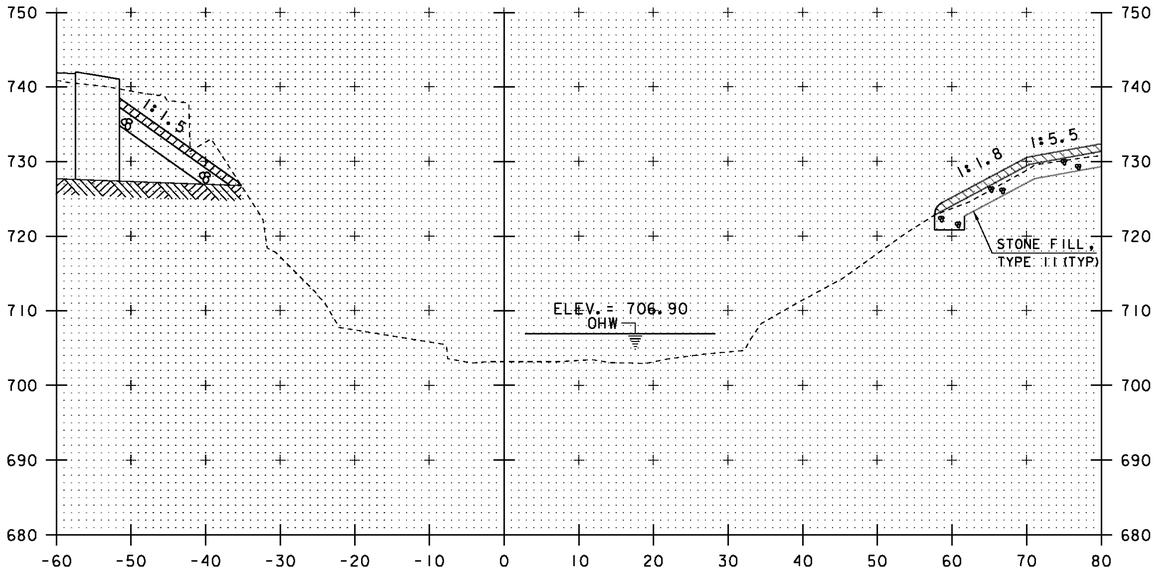
MATERIAL TRANSITION

HOR. SCALE 1" = 10'-0"
NO VERT. SCALE

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

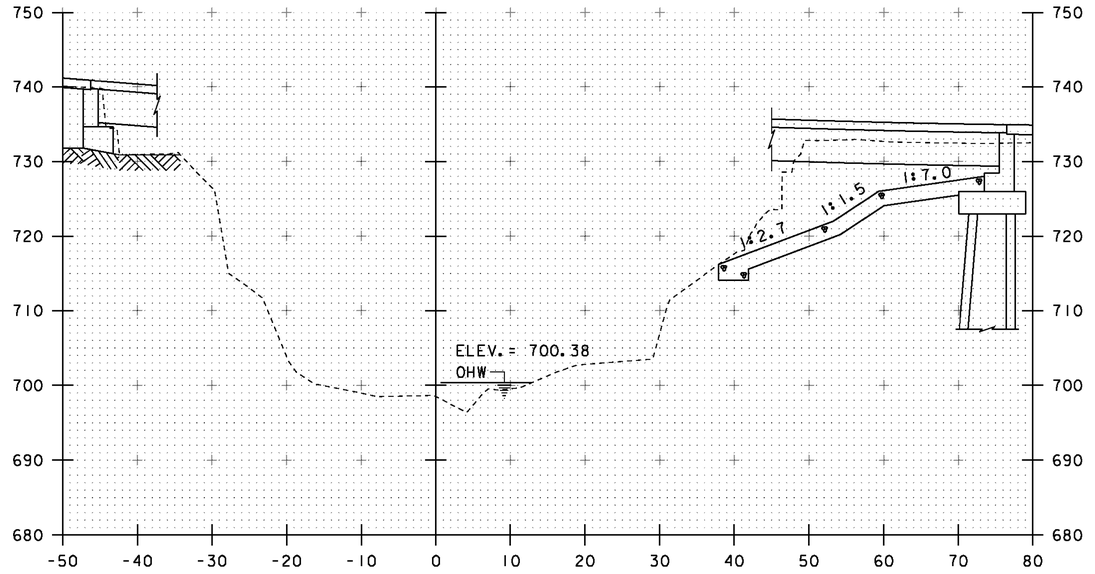
FILE NAME: s061002xsl.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: J. GRIFFIN
DESIGNED BY: T. FILLBACH	CHECKED BY: T. FILLBACH
MATERIAL TRANSITION DIAGRAM	SHEET 59 OF 70

STA 50+61.64 LT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN STONE FILL TYPE II
BEGIN GRUBBING MATERIAL

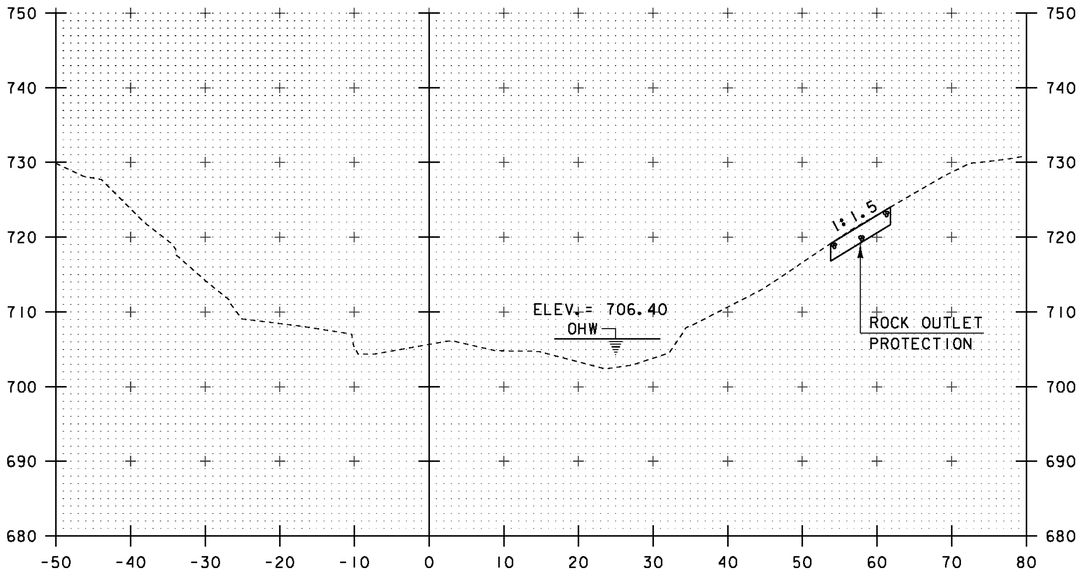


50+70

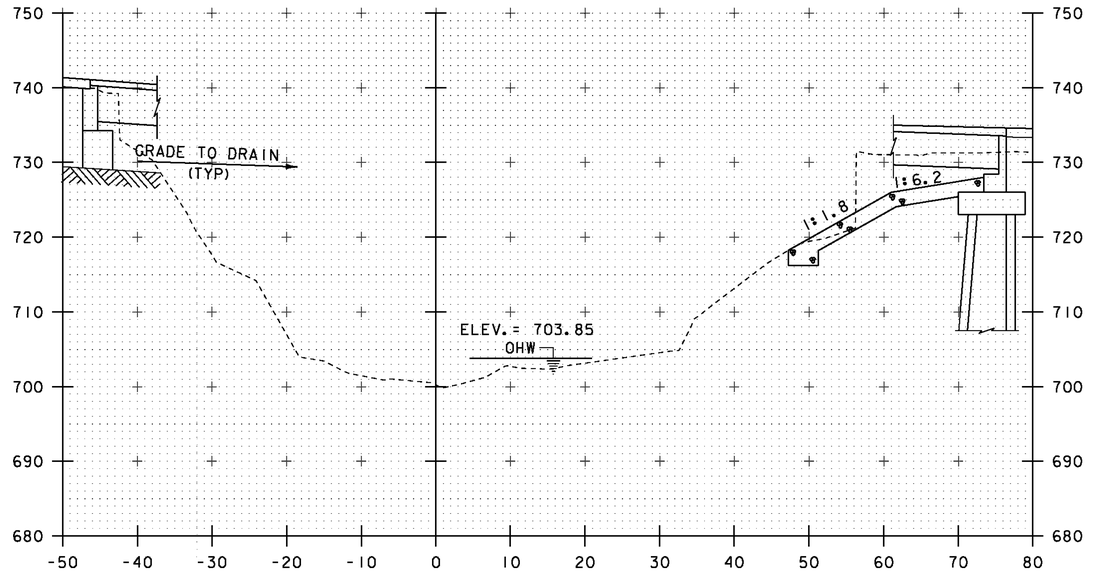
STA 50+67.36 RT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN STONE FILL TYPE II
BEGIN GRUBBING MATERIAL



50+90



50+60



50+80

⊛ SEE SHEET 4 & 29 OF 70 FOR EXCAVATION LIMITS

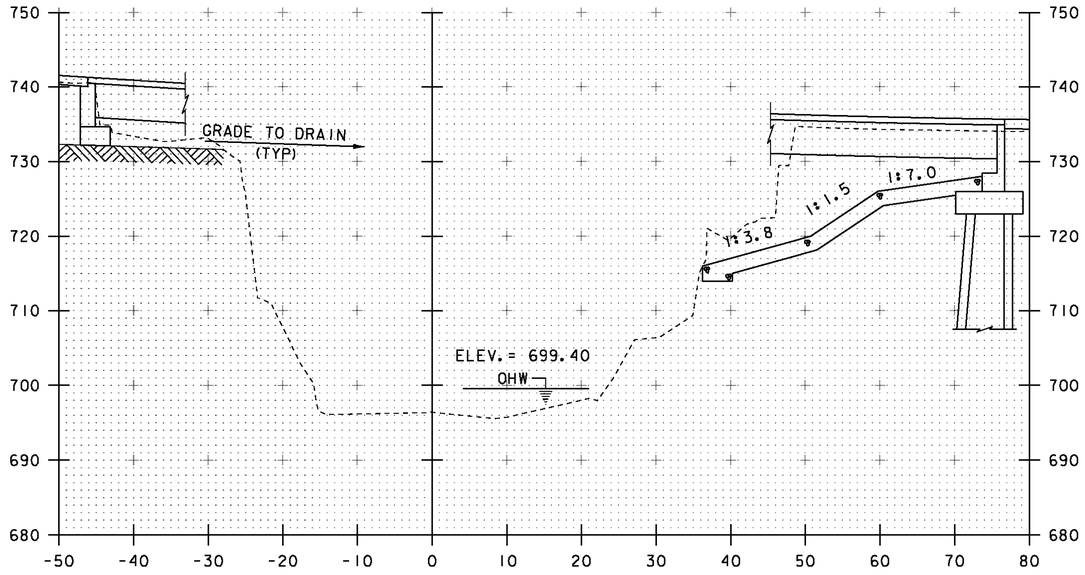
STA 50+78.65 LT
STA 50+80.00 RT
END GRUBBING MATERIAL

STA. 50+60 TO STA. 50+90

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002xsl.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
CHANNEL CROSS SECTIONS I

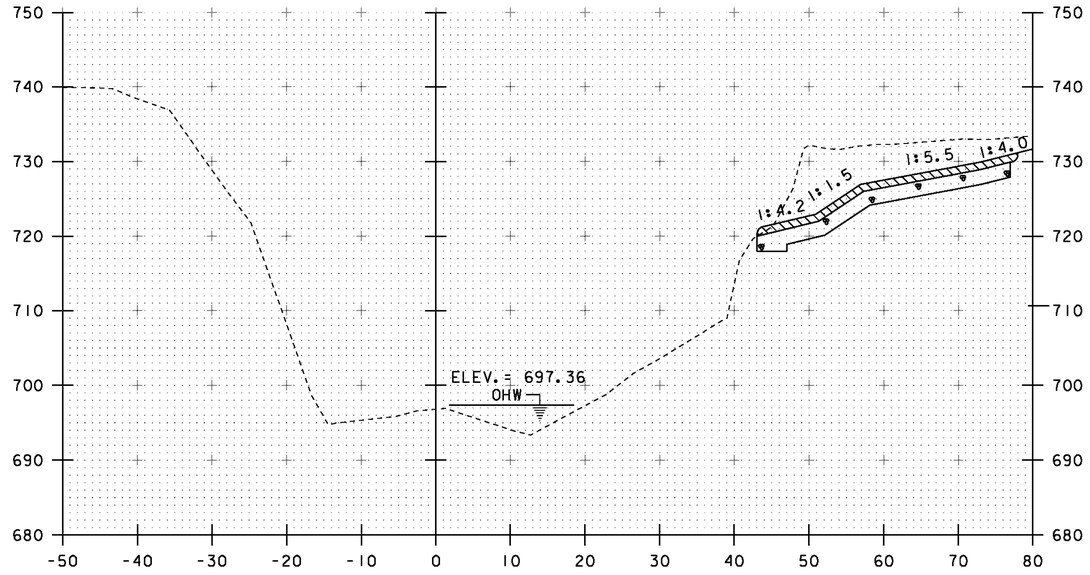
PLOT DATE: 27-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: T. FILLBACH
SHEET 60 OF 70



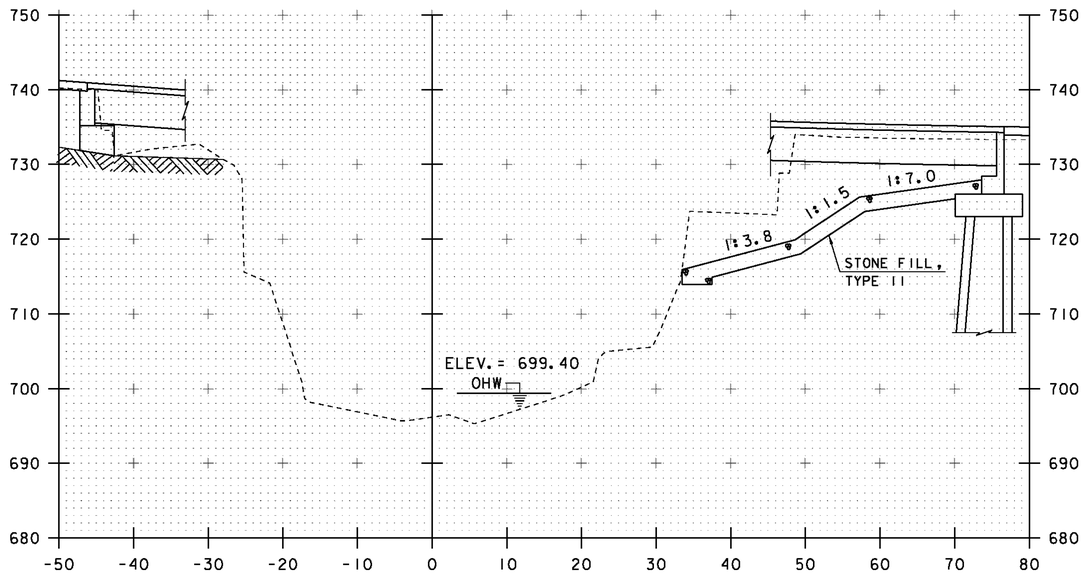
51+10

~~STA 51+24.58 LT~~
END CHANNEL EXCAVATION
END GEOTEXTILE
END STONE FILL
END GRUBBING MATERIAL

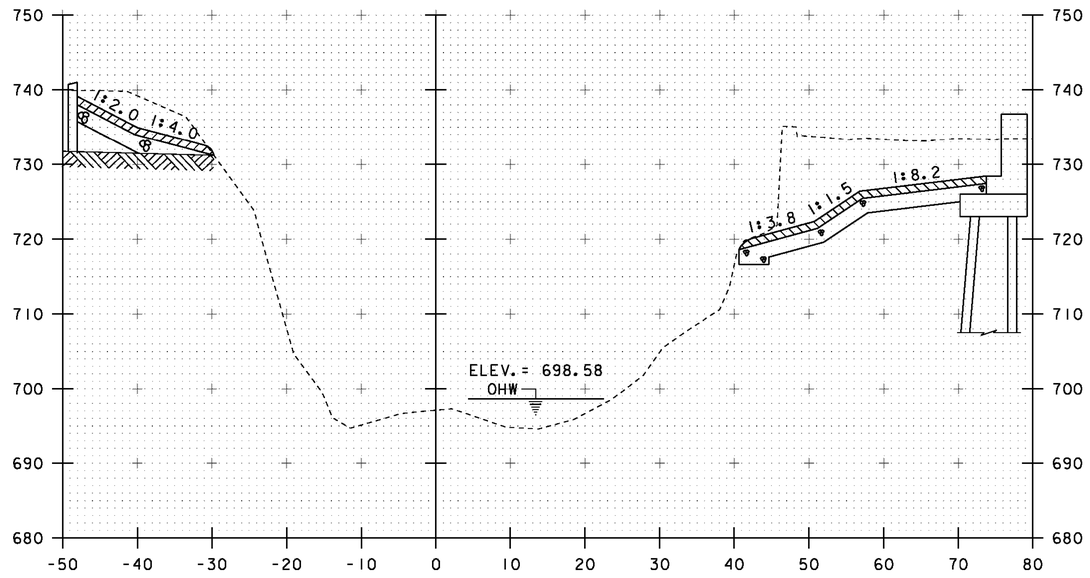
~~STA 51+40.97 RT~~
END CHANNEL EXCAVATION
END GEOTEXTILE
END STONE FILL
END GRUBBING MATERIAL



51+25



51+00



51+20

STA 51+13.75 LT
STA 51+16.80 RT
BEGIN GRUBBING MATERIAL

STA. 51+00 TO STA. 51+25

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)
FILE NAME: s06j002xsl.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: J. SALVATORI
DESIGNED BY: T. FILLBACH	CHECKED BY: T. FILLBACH
CHANNEL CROSS SECTIONS 2	SHEET 61 OF 70

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF BRIDGE 11 ON TH 7 (BRIDGE STREET), APPROXIMATELY 0.10 MILES WEST OF THE INTERSECTION WITH ROUTE 14 IN BARRE TOWN, VERMONT. REPLACEMENT OF BRIDGE NO 11 ON EXISTING ALIGNMENT, INCLUDING RELATED CHANNEL AND APPROACH WORK. THE NEW STRUCTURE WILL BE 124 FEET IN LENGTH AND BE SET AT ABUTMENT #1 ON A SPREAD FOOTING ON BEDROCK AND AT ABUTMENT #2 ON STEEL H-PILES OVER STEVENS BRANCH.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.40 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS MOSTLY A RESIDENTIAL AREA WITH SOME FORESTED AREAS AND STEEP SLOPES DOWN TO THE RIVER. BRIDGE STREET IS IN THE PROJECT SITE. THERE ARE RESIDENCES ON THE BOTH THE EAST AND WEST SIDES OF THE PROJECT INCLUDING A RECREATION PATH ON THE WEST SIDE.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE STEVENS BRANCH AND STORM DRAINS ARE THE ONLY WATER SOURCES ON THE PROJECT SITE. THE RIVER IS CLASSIFIED AS INCISED WITH STEEP UNSTABLE STREAM BANKS. THE STREAM BEDS ARE ROCK, SAND AND COBBLES.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES AND UNDERGROWTH TO THE WEST AND EAST WITH RESIDENCES ON ALL SIDES. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE BRIDGE. DISTURBED VEGETATION WILL BE RE-ESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WASHINGTON, VERMONT. SOILS ON THE PROJECT SITE ARE THE FOLLOWING:

SUNNY SILT LOAM, 0% TO 2% SLOPES

ADAMS LOAMY FINE SAND WITH 3% TO 8% SLOPES

SALMON-ADAMANT COMPLEX WITH 15% TO 25% SLOPES, VERY ROCKY

VERSHIRE-DUMMERSTON COMPLEX WITH 15% TO 25% SLOPES, ROCKY

VERSHIRE-DUMMERSTON COMPLEX WITH 25% TO 60% SLOPES, ROCKY.

THE “K FACTOR” FOR:

SUNNY SILT LOAM IS 0.32
ADAMS LOAMY FINE SAND IS 0.17
VERSHIRE-DUMMERSTON COMPLEX 15% TO 25% AND 25% TO 60% SLOPES ARE BOTH 0.37

THE SOIL IS CONSIDERED MODERATELY TO HIGHLY ERODIBLE DUE TO SLOPES.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: YES
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: STEVENS BRANCH
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MNIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTORS PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

INSTALL SILT FENCE AS PROPOSED ON THE EPSC PLAN.

INSTALL FILTER FABRIC DROP INLET PROTECTION AS PROPOSED ON THE EPSC PLAN.

INSTALL PIPE INLET PROTECTION AS PROPOSED ON THE EPSC PLAN.

1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCITON SITE.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN, AT A MINIMUM.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH PERMIT CONDITIONS.

INSTALL DROP INLET(S), STONE PAD(S) AND DRAINAGE PIPES AS PROPOSED ON THE DRAINAGE LAYOUT SHEET.

INSTALL STONE FILL AS PROPOSED ON THE EPSC PLAN.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)

FILE NAME: s06j002narrative.dgn		PLOT DATE:	27-SEP-2012
PROJECT LEADER:	J. LACROIX	DRAWN BY:	R. PELLETT
DESIGNED BY:	J. SALVATORI	CHECKED BY:	J. SALVATORI
EPSC NARRATIVE		SHEET	62 OF 70

64D- SALMON-ADAMANT COMPLEX, 15% TO 25% SLOPES, VERY ROCKY.

66E- VERSHIRE-DUMMERSTON COMPLEX, 25% TO 60% SLOPES, ROCKY. K FACTOR = 0.37

66D- VERSHIRE-DUMMERSTON COMPLEX, 15% TO 25% SLOPES, ROCKY. K FACTOR = 0.37

N

VT STATE PLANE GRID

26B- ADAMS LOAMY FINE SAND, 3% TO 8% SLOPES. K FACTOR = 0.17

4A- SUNNY SILT LOAM, 0% TO 2% SLOPES. K FACTOR = 0.32

RECREATION PATH

BRIDGE STREET (TH 7)

BRIDGE STREET TRAILER PARK (DEAD END)

EXISTING ROW

TO MORRISON ROAD

TO VT ROUTE 14

STEVENS BRANCH FLOW

HISTORIC

ARCH

11+00

12+00

13+00

14+00

15+00

16+00

17+00

COMB. POLE #4/11

COMB. POLE #4/65K

COMB. POLE #4/02/1

COMB. POLE #7

EXISTING DWELLING

SHED

M MAPLE

S ELM

M SPRUCE

S POP

LILAC

ORANGE

GUY W

MH

HVCTRL #10

HVCTRL #20

HVCTRL #21

HVCTRL #50

HVCTRL #51

HVCTRL #52

HVCTRL #100

HVCTRL #113

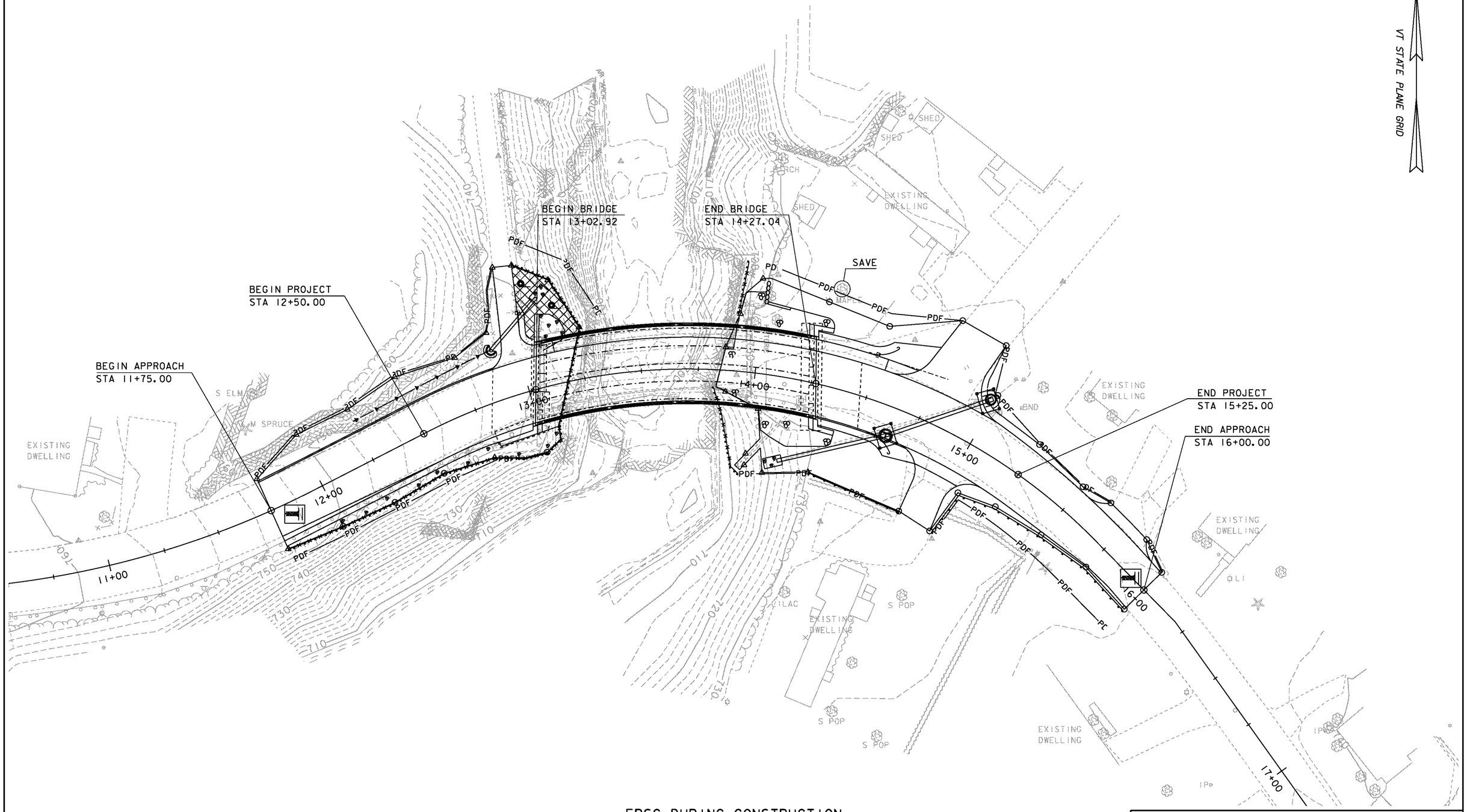
EPSC EXISTING CONDITIONS

SCALE 1" = 20'-0"

20 0 20

SEE "EPSC DETAILS 1" SHEET FOR LEGEND

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)
FILE NAME: s06j002epsc_existing.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: J. SALVATORI	CHECKED BY: J. SALVATORI
EPSC EXISTING CONDITIONS	SHEET 63 OF 70



EPSC DURING CONSTRUCTION

SCALE 1" = 20'-0"

20 0 20

SEE "EPSC DETAIL 1" SHEET FOR LEGEND

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)
FILE NAME: s06j002epsc_dur.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: J. SALVATORI	CHECKED BY: J. SALVATORI
EPSC DURING CONSTRUCTION	SHEET 64 OF 70

N

VT STATE PLANE GRID

BEGIN PROJECT
STA 12+50.00

BEGIN APPROACH
STA 11+75.00

BEGIN BRIDGE
STA 13+02.92

END BRIDGE
STA 14+27.04

END PROJECT
STA 15+25.00

END APPROACH
STA 16+00.00

RECREATION PATH

BRIDGE ST TRL PARK
(DEAD END)

BRIDGE STREET (TH 7)

STEVENS BRANCH
FLOW

SAVE

COMB POLE
4/02/1

COMB. POLE
#7

COMB. POLE
#4/11

COMB. POLE
4/65K

EXISTING
DWELLING

SHED

GUY W

MAPLE

S ELM

W SPRUCE

LILAC

S POP

GRANITE

MH

11+00

12+00

13+00

14+00

15+00

16+00

17+00

EPSC FINAL CONDITIONS

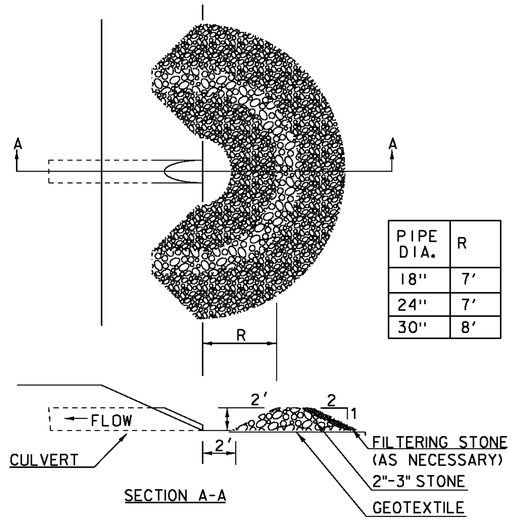
SCALE 1" = 20'-0"
20 0 20

SEE "EPSC DETAIL 1" SHEET FOR LEGEND

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	BRF 6100(7)
FILE NAME: s06j002epsc_fin.dgn	PLOT DATE: 27-SEP-2012
PROJECT LEADER: J. LACROIX	DRAWN BY: R. PELLETT
DESIGNED BY: J. SALVATORI	CHECKED BY: J. SALVATORI
EPSC FINAL CONDITIONS	SHEET 65 OF 70

SYMBOL

NOT TO SCALE



PIPE DIA.	R
18"	7'
24"	7'
30"	8'

CONSTRUCTION SPECIFICATIONS

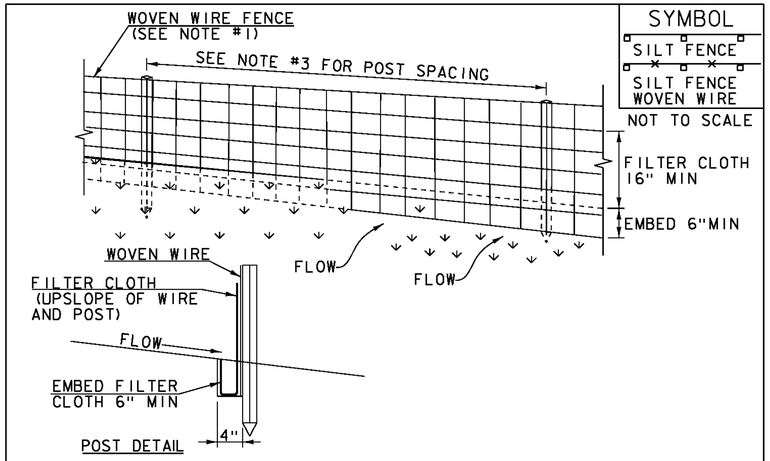
1. USE 2" TO 3" STONE. FILTERING STONE SHALL BE 3/4".
2. PLACE STONE OVER GEOTEXTILE.
3. ONCE THE AREAS UPSTREAM FROM THE CHECK DAM ARE STABILIZED WITH VEGETATION, THE SEDIMENT TRAPPED BEHIND THE DAM SHALL BE DISPOSED OF IN AN APPROVED WASTE AREA.
4. THE CHECK DAM(S) SHALL BE FLATTENED AND GRADED IN A MANNER WHICH PROTECTS THE AREA FROM EROSION AND CHANNEL BLOCKAGE . (GEOTEXTILE MUST BE REMOVED).
5. THE GEOTEXTILE MUST BE DISPOSED OF APPROPRIATELY.
6. THE AREA CONTRIBUTING TO THE CHECK DAM SHALL NOT EXCEED 4 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
ORIGINALLY DEVELOPED BY USDA-NRCS

PIPE INLET PROTECTION

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF



SYMBOL

SILT FENCE

SILT FENCE WOVEN WIRE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

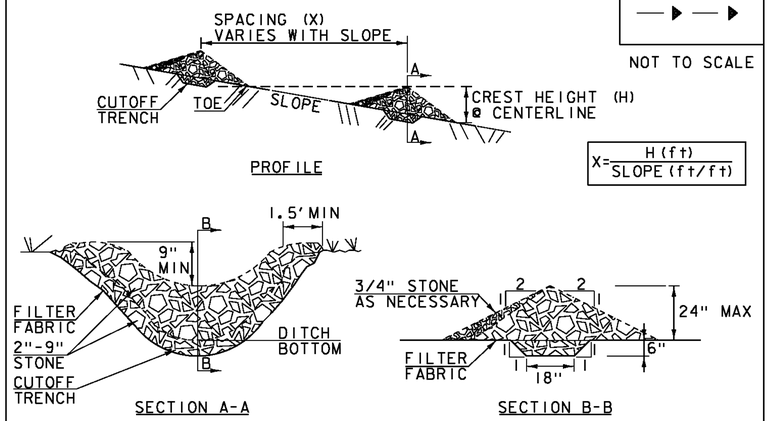
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
7. MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CHECK DAM

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF

EPSC LAYOUT PLAN SYMBOLOGY LEGEND

PROJECT BOUNDARY FENCE
- PDF — PD PROJECT DEMARCATION FENCE
- BF — B BARRIER FENCE

EPSC MEASURES
- FILTER CURTAIN
- SILT FENCE
- SILT FENCE WOVEN WIRE
- CHECK DAM
- DISTURBED AREAS REQUIRING RE-VEGETATION
- EROSION MATTING

ENVIRONMENTAL RESOURCES
- WETLAND BOUNDARY
- RIPARIAN BUFFER ZONE
- SOIL TYPE BOUNDARY
- T&E — THREATENED & ENDANGERED SPECIES
- HAZ — HAZ — HAZARDOUS WASTE AREA
- AG — AGRICULTURAL LAND
- HABITAT — FISH & WILDLIFE HABITAT
- FLOOD PLAIN — FLOOD PLAIN
- STORM WATER
- USDA FOREST SERVICE LANDS
- WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC
- ARCH — ARCHEOLOGICAL BOUNDARY
- HISTORIC DIST. — HISTORIC DISTRICT BOUNDARY
- HISTORIC — HISTORIC AREA
- (H) HISTORIC STRUCTURE

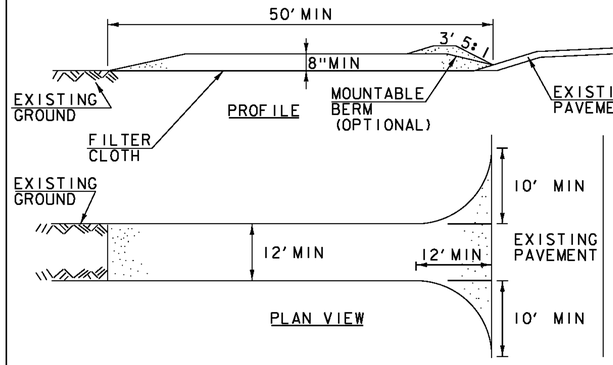
UTILITY SYMBOLOGY
- AER E&T — AREAL ELECTRIC & TELEPHONE
- E — AREAL ELECTRIC
- UE — UNDERGROUND ELECTRIC
- UT — UNDERGROUND TELEPHONE
- UC — UNDER GROUND TV
- G — GAS LINE
- W — WATER LINE

CONSTRUCTION FEATURES
- TOE OF SLOPE CUT OR FILL
- STONE FILL, TYPE II
- STONE FILL, TYPE I

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002epsc_details.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: J. SALVATORI
EPSC DETAILS I

PLOT DATE: 09-OCT-2012
DRAWN BY: R. PELLETT
CHECKED BY: J. SALVATORI
SHEET 66 OF 70



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

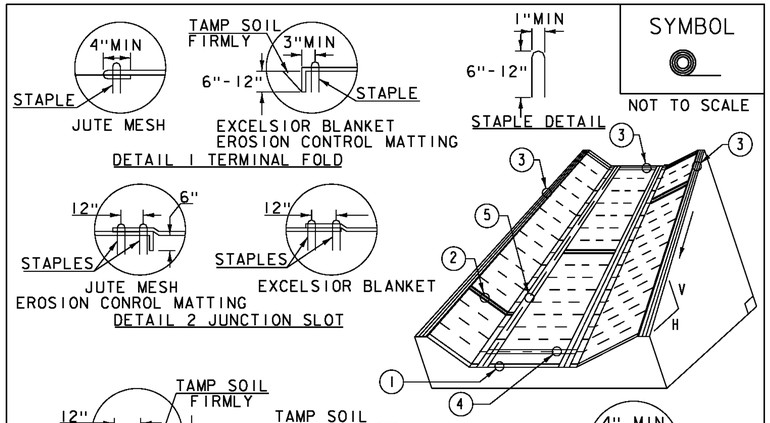
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

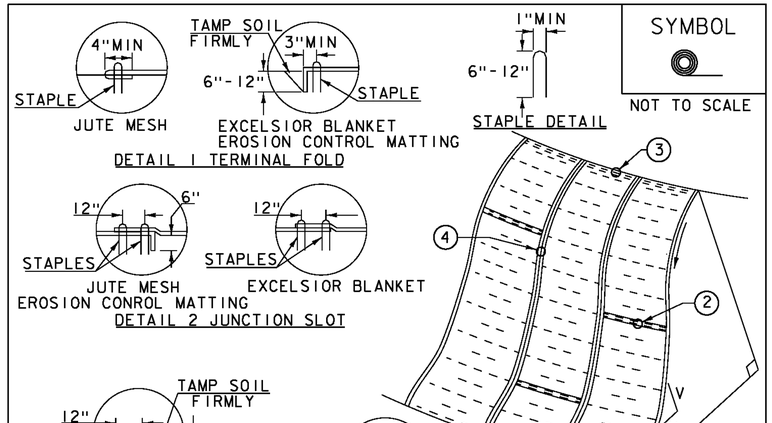
1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR PERMANENT EROSION MATTING (PAY ITEM 653.21).

REVISIONS	
MARCH 8, 2007	JMF
APRIL 16, 2007	WHF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

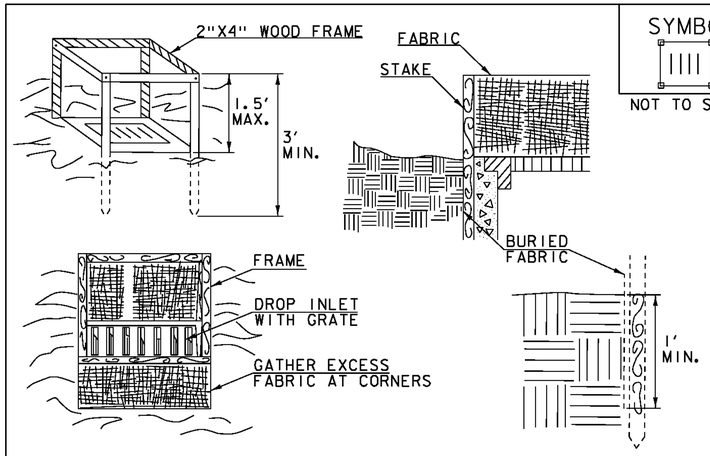
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR PERMANENT EROSION MATTING (PAY ITEM 653.21).

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002epsc_details.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: J. SALVATORI
EPSC DETAILS 2

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: J. SALVATORI



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN APPARENT OPENING SIZE OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2"x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3'.
4. SPACE STAKES EVENLY AROUND INLET 3' APART AND DRIVE A MINIMUM 18" DEEP. SPANS GREATER THAN 3' MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1' MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
7. MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FILTER FABRIC DROP INLET PROTECTION

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS	
MARCH 7, 2008	WHF
JANUARY 13, 2009	WHF

VAOT RURAL AREA MIX

	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
37.5%	22.5	45	CREEPING RED FESCUE	85%	98%
37.5%	22.5	45	TALL FESCUE	90%	95%
5.0%	3	6	RED TOP	90%	95%
15.0%	9	18	BIRDSFOOT TREFOIL	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	85%	95%
100%	60	120			

VAOT URBAN AREA MIX

	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
42.5%	34	68	CREEPING RED FESCUE	85%	98%
10.0%	8	16	PERENNIAL RYE GRASS	90%	95%
42.5%	34	68	KENTUCKY BLUE GRASS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	85%	95%
100%	80	160			

SOIL AMENDMENT GUIDANCE

FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	*FOLLOW*	PELLETIZED	*FOLLOW*
500 LBS/AC	*MANUFACTURER*	2 TONS/AC	*MANUFACTURER*

CONSTRUCTION GUIDANCE

1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF
FEBRUARY 16, 2011	WHF

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002epsc_details.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: J. SALVATORI
EPSC DETAILS 3

PLOT DATE: 27-SEP-2012
DRAWN BY: R. PELLETT
CHECKED BY: J. SALVATORI
SHEET 68 OF 70

BEGIN R.O.W. PROJECT
STA. 11+97.54 LT

LAVIGNE, NORMA R.

BEGIN PROJECT
STA 12+50.00

BENCHMARK
CH SQ ON LEDGE
ELEV. 758.25

BEGIN APPROACH
STA 11+75.00

1

S ELM

M SPRUCE

EXISTING WELL

EXISTING DWELLING

BRIDGE STREET (TH 7)

12+00 S

HVCTRL #21

TO MORRISON ROAD

11+00 S

MH

HVCTRL #141

COMB. POLE #7

GUY W

2

MADELINE R. BOOTH REVOCABLE TRUST

POE CHANNEL
52+00.00

HVCTRL #101

RECREATION PATH

HVCTRL #113

CITY OF BARRE

BEGIN BRIDGE
STA 13+02.92

3

ACCESS(T)

R&R(T)

CONST.(T)

SLOPE(P)

CHANNEL(P)

INSTALL(T)

GUY W

CONST.(T)

SLOPE(P)

PDF

HVCTRL #100

CUL.V., DITCH, & DRAIN (P)

HVCTRL #112

51+00

13+00 S

HVCTRL #150

COMB. POLE #5

SLOPE(P)

INSTALL(T)

HVCTRL #111

HVCTRL #140

PDF

ML STA 13+50.00 =
CHANNEL STA 51+00.00
Δ = 85°

POB CHANNEL
50+00.00

50+00

STEVENS BRANCH FLOW

BENCHMARK
CHISEL SQUARE ON ABUT
ELEV. 733.47

4

COMB. POLE #4/11

HOWARD, REGAN J.

N 20° 02' 74"E

END BRIDGE
STA 14+27.04

CENTRAL VERMONT COMMUNITY LAND TRUST
SAVE

5

MH

R&R(T)

SLOPE(T)

PDF

DRIVE(T)

INSTALL(T)

HVCTRL #20

CHANNEL(P)

CUL.V., DITCH, & DRAIN (P)

HVCTRL #52

HVCTRL #51

COMB POLE 4/02/1

SHED

EXISTING DWELLING

BIRCH

BRIDGE ST. TRL PARK (DEAD END)

HVCTRL #50

BENCHMARK
RRSIP
ELEV. 734.68

NF OWEN, BERTHA

EXISTING DWELLING

END PROJECT
STA 15+25.00

END COMB. POLE 4/65K

END APPROACH
STA 16+00.00

15+00 S

NF YNSUELA, JOSEPH & MARY

EXISTING DWELLING

16+00 S

LILAC

S POP

EXISTING DWELLING

NF ROBBINS, RICHARD & JUDITH A.

EXISTING DWELLING

GUY W

COMB. POLE #2

MH

NF SABENS

IPe

17+00

TO VT ROUTE 14

END R.O.W. PROJECT
STA. 15+06.69 RT

N

VT STATE PLANE GRID

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: BRF 6100(7)

FILE NAME: s06j002bdr.dgn
PROJECT LEADER: J. LACROIX
DESIGNED BY: T. FILLBACH
ROW SHEET 16 OF 16 SHEETS

PLOT DATE: 27-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: T. FILLBACH
SHEET 69 OF 70

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
1	LAVIGNE, NORMA		11+97.54 LT	12+52.97 LT			CONST.	(T)	28 SF	WDOE	08/26/11	BARRE TOWN	255	87-88	INCLUDES P.D.F AND E.C.
			11+98.82 LT	12+52.82 LT			SLOPE	(P)	55 SF						
2	BOOTH, MADELINE E. REVOCABLE TRUST		12+76.55 RT	13+07.45 RT			INSTALL	(T)		WDOE	09/14/11	BARRE TOWN	255	303-	P.D.F
			12+81.33 RT	13+05.85 RT			SLOPE	(P)	45 SF					305	
3	CITY OF BARRE		12+52.82 LT	12+74.45 LT			SLOPE	(P)	30 SF			BARRE TOWN			
			12+52.97 LT	12+99.12 LT			CONST.	(T)	35 SF						INCLUDES P.D.F. AND E.C.
			12+92.28 LT	13+17.52 LT			CULV., DITCH & DRAIN	(P)							
			12+93.09 LT				INSTALL	(P)							SIGN
			12+98.62 LT				ACCESS	(T)							RECREATION PATH
			13+04.10 LT				REMOVE & RESET	(T)							CHAIN LINK FENCE
			13+04.50 LT				INSTALL	(P)							SIGN
			13+06.46 LT	13+24+42 LT			SLOPE	(P)	409 SF						
			13+06.76 LT	13+10.33 LT			INSTALL	(P)							WING WALL
			13+07.61 LT	13+36.08 LT			CONST.	(T)	508 SF						INCLUDES PD.F. & E.C.
			13+08.47 LT	13+20.42 LT			CHANNEL	(P)	74 SF						
4	HOWARD, REGAN J.		13+93.10 RT	14+84.98 RT			INSTALL	(T)		WDOE	09/07/11	BARRE TOWN	255	228-	P.D.F
			13+93.10 RT	14+84.98 RT			SLOPE	(T)	1, 276 SF					229	
			13+95.96 RT	14+11.72 RT			REMOVE	(T)							CULVERT
			14+06.45 RT	14+35.59 RT			CHANNEL	(P)	74 SF						
			14+08.95 RT	14+42.12 RT			CULV., DITCH & DRAIN	(P)							CULVERT, DITCH AND DRAINAGE
			14+94.54 RT				DRIVE	(T)							DRIVE
			15+04.48 RT	15+06.69 RT			INSTALL	(T)							P.D.F.
5	CENTRAL VERMONT COMMUNITY		13+90.95 LT	14+75.00 LT			INSTALL	(T)		WDOE	11/03/11	BARRE TOWN	256	526-	P.D.F. AND E.C.
	LAND TRUST, INC.		13+90.95 LT	14+21.23 LT			CHANNEL	(P)	167 SF					528	
			13+90.95 LT	14+36.20 LT			SLOPE	(P)	411 SF						
			13+98.79 LT	14+33.85 LT			CONST.	(T)	120 SF						
			14+00.51 LT	14+22.21 LT			INSTALL & MAINTIAN	(P)							RETAINING/WING WALL
			14+01.37 LT	14+22.21 LT			INSTALL	(T)							CHAIN LINK FENCE
			14+33.85 LT	14+75.00 LT			SLOPE	(T)	503 SF						
			14+42.80 LT	14+48.72 LT			REMOVE & RESET	(T)							SPLIT RAIL FENCE
			14+84.24 LT				DRIVE	(T)							
			14+93.94 LT	14+98.87 LT			INSTALL	(T)							P.D.F.
6	GREEN MOUNTAIN POWER		11+97.54 LT	15+06.69											UTILITY
7	COMCAST		11+97.54 LT	15+06.69											UTILITY

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE

PLAN LEGEND

- EXISTING RIGHT-OF-WAY
- TAKING WITH ACCESS
- TAKING WITHOUT ACCESS
- CLEAR ZONE (CZ)
- PROPERTY LINE (P / L)
- TOE OF SLOPE
- TOP OF CUT
- SLOPE RIGHT (SR (P))
- CONSTRUCTION RIGHT (CONST. (T))
- PROJECT DEMARCATION FENCE (PDF)

EC -EROSION CONTROL
(P) -PERMANENT
(T) -TEMPORARY
DR. -DRAINAGE RIGHT
DIT. -DITCHING RIGHT
CH. -CHANNEL RIGHT
DRIVE -DRIVE RIGHT
CUL. -CULVERT RIGHT
C&T -CLEARING & TRIMMING RIGHT
SR -SLOPE RIGHT
UE -UTILITY EASEMENT

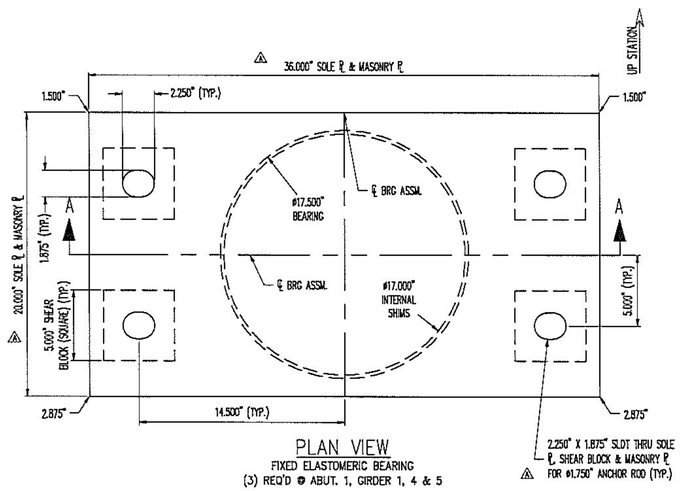
APPROVED: HARRY PETROVS DATE: 06-13-11
CHIEF, PLANS & TITLES

PLOT DATE 11/17/11

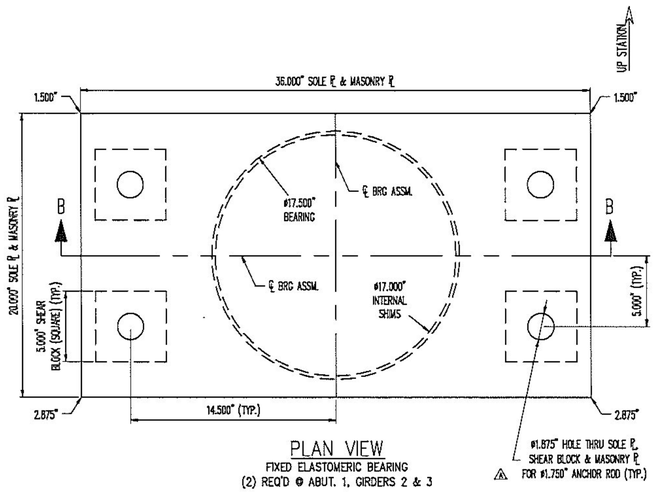
PROJECT NAME: **BARRE TOWN**
PROJECT NUMBER: **BRF 6100 (7)**

FILE NAME: **06j002/detail sheet.xls**
PROJECT LEADER: **K. Higgins**
DESIGNED BY: **J. Lacroix**
R.O.W. SHEET 15 OF 16 SHEETS

PLOT DATE:
DRAWN BY: **MR**
CHECKED BY: **JB**
SHEET **70** OF **70**

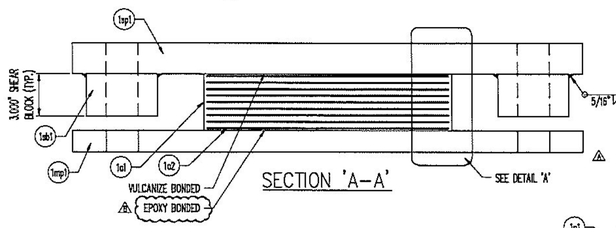


PLAN VIEW
FIXED ELASTOMERIC BEARING
(3) REQ'D @ ABUT. 1, GIRDER 1, 4 & 5

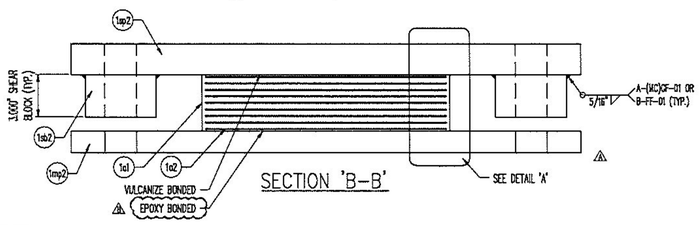


PLAN VIEW
FIXED ELASTOMERIC BEARING
(2) REQ'D @ ABUT. 1, GIRDERS 2 & 3

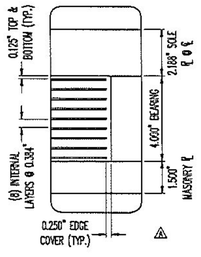
MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
1A	3	FIXED ELASTOMERIC BEARING				
1a1	3	4.000" X ø17.500"	NATURAL RUBBER		SHEAR MODULUS; 110 PSI +/- 15% GR.4	
1a2	27	14 GA. X ø17.000"	A1011 GR 36		PLAIN	
1mp1	3	1.500" X 36.000"	A709 GR 50W	20.000"	SLOTS; METALIZE, SEAL	
1sb1	12	3.000" X 5.000"	A709 GR 50W OR A588	5.000"	SLOTS; METALIZE, SEAL	
1sp1	3	2.875" X 36.000"	A709 GR 50W	20.000"	SLOTS; METALIZE, SEAL	
1C	2	FIXED ELASTOMERIC BEARING				
1a1	2	4.000" X ø17.500"	NATURAL RUBBER		SHEAR MODULUS; 110 PSI +/- 15% GR.4	
1a2	18	14 GA. X ø17.000"	A1011 GR 36		PLAIN	
1mp2	2	1.500" X 36.000"	A709 GR 50W	20.000"	HOLES; METALIZE, SEAL	
1sb2	8	3.000" X 5.000"	A709 GR 50W OR A588	5.000"	HOLES; METALIZE, SEAL	
1sp2	2	2.875" X 36.000"	A709 GR 50W	20.000"	HOLES; METALIZE, SEAL	
1F	20	ANCHOR ROD				A
1f1	20	ø1.750" X 31.000" SWEDGED ROD	F1554 GR 36		7" THREADS, 17" SWEDGE; A153-HDG	A
1G	40	HEAVY HEX NUT				
1g1	40	ø1.750" HEX NUT	A563-DH OR A194-2H		A153-HDG, DRY LUBE & DYE	
1H	20	PLATE WASHER				
1h1	20	0.603" X 3.000"	A36	3.750"	ø1.813" HOLE @ CTR; A123-HDG	
					1/3/2013 4:42:06 PM	



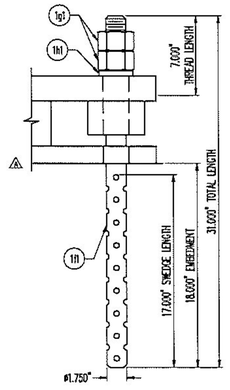
SECTION 'A-A'



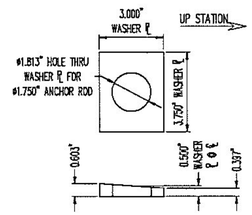
SECTION 'B-B'



DETAIL 'A'



ANCHOR ROD DETAIL
(20) REQ'D @ ABUT. 1, GIRDERS 1–5



WASHER PLATE DETAIL

LOAD TABLE	
MAX DESIGN LOAD (KIPS)	296.4

SEE SHEET GN1 FOR GENERAL NOTES AND COATING LIMITS.

REV.	DESCRIPTION	DATE	DET.	CKD.
B	MASONRY ℄ TO BEARING PAD REVISED TO EPOXY BOND	02/18/13	KTG	–
A	REMOVED FABRIC PAD & REVISED ANCHOR ROD MATERIAL	01/03/13	ANO	KTG

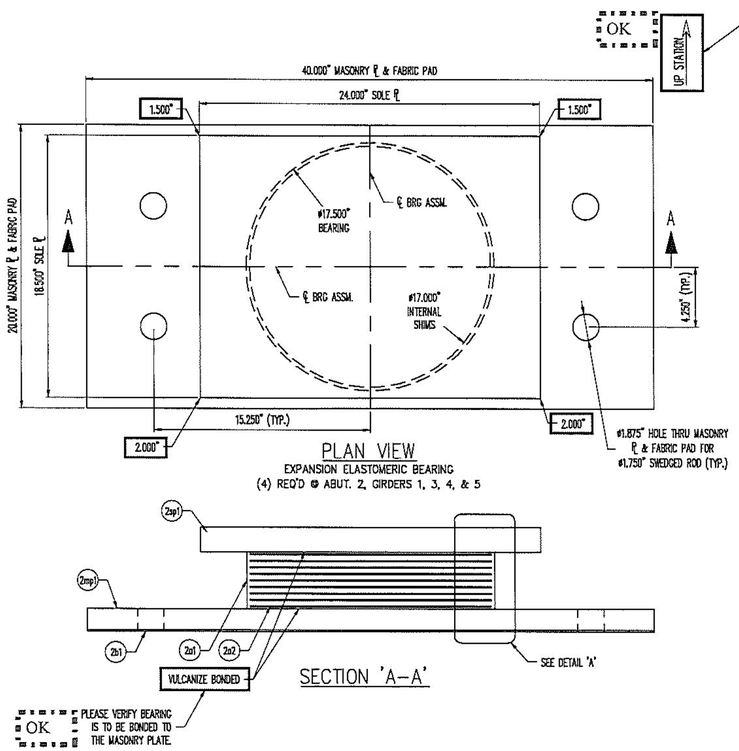
D.S. BROWN
A GERALTA INDUSTRIES COMPANY
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3581
FAX: 419.257.0332
WWW.DSBROWN.COM

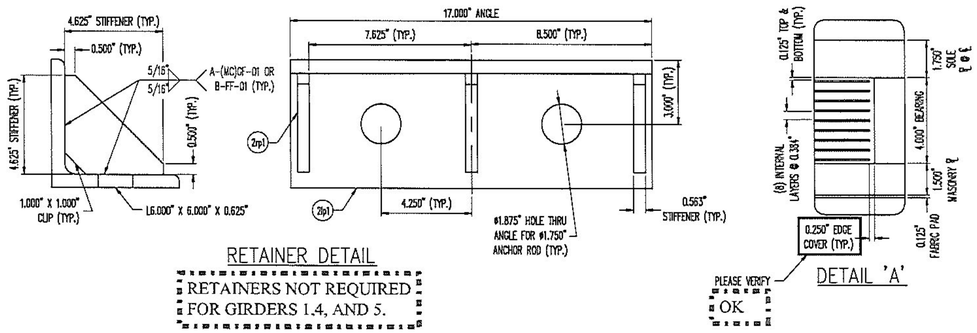
	ITEM	QUANTITY
LOCATION — TH 7 (BRIDGE ST.), 0.10 MI WEST OF RTE. 14	38782-1104-1	5 OF 5
BRIDGE — 11	–	–
PROJECT — BRF 6100(7)	–	–
PROJECT NAME — BARRE TOWN	–	–
—	–	–
DESIGNER — VTDOT	–	–
CUSTOMER — MILLER CONSTRUCTION	–	–
	–	–

DESCRIPTION: VERSIFLEX ELASTOMERIC BEARING
WASHINGTON CO., VT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	ANO	KTG	12/4/12	–
PROJECT NUMBER: 38782	PRODUCT CODE: 1104	RELEASE: 1	SHEET: 01	

Vermont Agency of Transportation
RECEIVED
CK'D BY J.E.L. OK'D BY J.E.L.
May 15, 2013
RESUBMIT Approved
BY J.E.L. DATE 03.18.2013





MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
2A	4	EXP. ELASTOMERIC BEARING				
2a1	4	4.000" X ø17.500"	NATURAL RUBBER		SHEAR MODULUS; 110 PSI +/- 15%; GR.4	
2a2	36	14 GA. X ø17.000"	A1011 GR 36		PLAIN	
2mp1	4	1.500" X 40.000"	A709 GR 50W	20.000"	HOLES; METALIZE, SEAL	
2sp1	4	2.000" X 24.000"	A709 GR 50W	18.500"	METALIZE, SEAL	
2B	4	FABRIC PAD				
2b1	4	0.125" X 40.000"	VT 731.01	20.000"	HOLES	
2C	8	SIDE RETAINER				
2p1	8	L6 X 6 X 5/8	A588	17.000"	HOLES; METALIZE, SEAL	
2rp1	24	0.563" X 4.625"	A709 GR 50W OR A588	4.625"	METALIZE, SEAL	
2F	16	ANCHOR ROD				
2n1	16	ø1.750" X 24.000" SWEDGED ROD	F1554		5" THREADS, 17" SWEDGE; A153-HDG	
2G	16	HEAVY HEX NUT				
2g1	16	ø1.750" HEX NUT	A563-DH OR A194-2H		A153-HDG, DRY LUBE & DYE	
2H	16	PLATE WASHER				
2n1	16	0.500" X 3.000"	F436	3.000"	ø1.813" HOLE @ CTR; A123-HDG	
					12/4/2012 2:13:07 PM	

LOAD TABLE	
MAX DESIGN LOAD (KIPS)	296.4

Vermont Agency of Transportation
RECEIVED
CK'D BY J.E.L.
OK'D BY J.E.L.
May 15, 2013
Approved
DATE 03.18.2013

RESUBMIT
BY J.E.L.

Vermont Agency of Transportation
RECEIVED
CK'D BY C.A.M. OK'D BY J.A.G.
Dec. 06, 2012
RESUBMIT APPROVED AS NOTED ✓
BY J. LACROIX DATE 12-18-2012

SEE SHEET GN1 FOR GENERAL NOTES AND COATING LIMITS.

REV.	DESCRIPTION	DATE	DET.	CKD.

D.S. BROWN
A WABTEC INDUSTRIES COMPANY
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3581
FAX: 419.257.0332
WWW.DSBROWN.COM

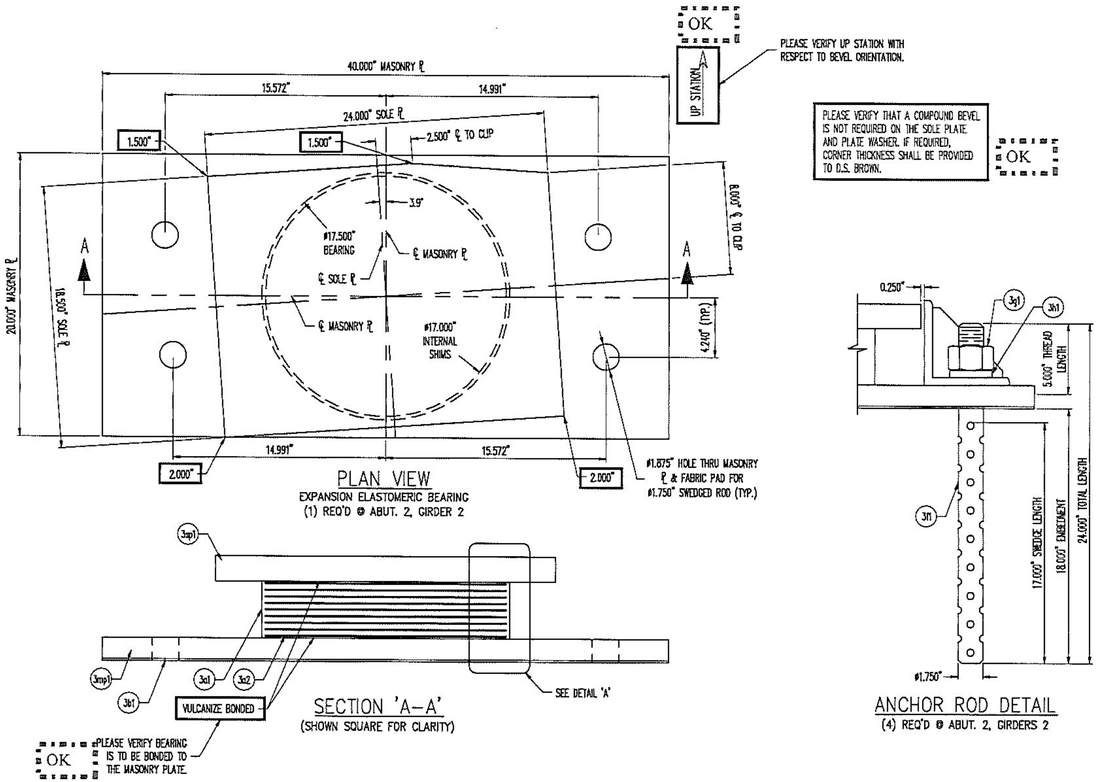
	ITEM	QUANTITY
LOCATION — TH 7 (BRIDGE ST.), 0.10 MI WEST OF RTE. 14	38782-1104-2	4 OF 5
BRIDGE — 11	–	–
PROJECT — BRF 6100(7)	–	–
PROJECT NAME — BARRE TOWN	–	–
—	–	–
DESIGNER — VTDOT	–	–
CUSTOMER — MILLER CONSTRUCTION	–	–
	–	–

DESCRIPTION: VERSIFLEX ELASTOMERIC BEARING
WASHINGTON CO., VT

SCALE	DRAWN BY	CHECKED BY	DATE
N.T.S.	ANO	KTG	12/4/12

PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
38782	1104	1	02

MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
3A	1	EXP. ELASTOMERIC BEARING				
3a1	1	4.000" X 817.500"	NATURAL RUBBER		SHEAR MODULUS; 110 PSI +/- 15% GR.4	
3a2	9	14 GA. X 817.000"	A1011 GR 36		PLAIN	
3mp1	1	1.500" X 40.000"	A709 GR 50W	20.000"	HOLES; METALIZE, SEAL	
3sp1	1	2.000" X 24.000"	A709 GR 50W	18.500"	CUP; METALIZE, SEAL	
3B	1	FABRIC PAD				
3b1	1	0.125" X 40.000"	VT 731.01	20.000"	HOLES	
3C	2	SIDE RETAINER				
3p1	2	L6 X 6 X 5/8	A588	17.000"	HOLES; METALIZE, SEAL	
3rp1	6	0.563" X 4.625"	A709 GR 50W OR A588	4.625"	METALIZE, SEAL	
3F	4	ANCHOR ROD				
3f1	4	Ø1.750" X 24.000" SWEDGED ROD	F1554		5" THREADS, 17" SWEDGE; A153-HDG	
3G	4	HEAVY HEX NUT				
3g1	4	Ø1.750" HEX NUT	A563-DH OR A194-2H		A153-HDG, DRY LUBE & DYE	
3H	4	PLATE WASHER				
3h1	4	0.500" X 3.000"	F436	3.000"	Ø1.813" HOLE @ CTR; A123-HDG	
					12/4/2012 2:13:07 PM	



PLAN VIEW
EXPANSION ELASTOMERIC BEARING
(1) REQ'D @ ABUT. 2, GIRDER 2

OK — UP STATION

PLEASE VERIFY UP STATION WITH RESPECT TO BEVEL ORIENTATION.

PLEASE VERIFY THAT A COMPOUND BEVEL IS NOT REQUIRED ON THE SOLE PLATE AND PLATE WASHER IF REQUIRED, CORNER THICKNESS SHALL BE PROVIDED TO D.S. BROWN.

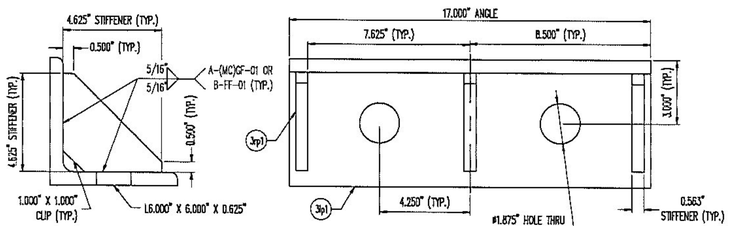
OK

ANCHOR ROD DETAIL
(4) REQ'D @ ABUT. 2, GIRDERS 2

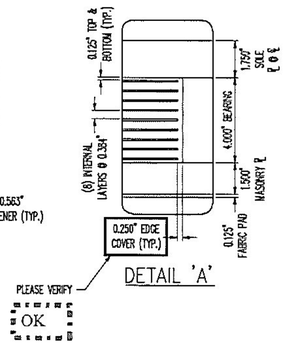
SECTION 'A-A'
(SHOWN SQUARE FOR CLARITY)

OK — PLEASE VERIFY BEARING IS TO BE BONDED TO THE MASONRY PLATE.

LOAD TABLE	
MAX DESIGN LOAD (KIPS)	296.4



RETAINER DETAIL



DETAIL 'A'

SEE SHEET GN1 FOR GENERAL NOTES AND COATING LIMITS.

REV.	DESCRIPTION	DATE	DET.	CK'D.

ITEM	QUANTITY
38782-1104-2	1 OF 5

LOCATION — TH 7 (BRIDGE ST.), 0.10 MI WEST OF RTE. 14
BRIDGE — 11
PROJECT — BRF 6100(7)
PROJECT NAME — BARRE TOWN
—
DESIGNER — VTDOT
CUSTOMER — MILLER CONSTRUCTION

DESCRIPTION: VERSIFLEX ELASTOMERIC BEARING
WASHINGTON CO., VT

SCALE:	DRAWN BY:	DESIGNED BY:	DATE:
N.T.S.	AND	KTG	12/4/12

PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
38782	1104	1	03

D.S. BROWN
A QUALITY ARCHITECTURAL COMPANY
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3581
FAX: 419.257.0332
WWW.DSBROWN.COM

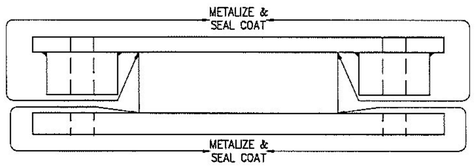
Vermont Agency of Transportation
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Dec. 06, 2012
RESUBMIT ____ APPROVED AS NOTED ✓
BY J. LACROIX DATE 12-18-2012

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May 15, 2013
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DATE 03.18.2013
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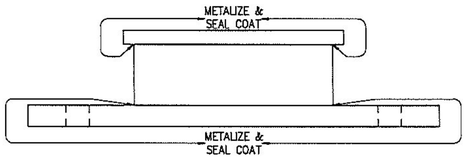
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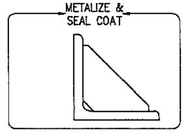
EPOXY BONDING PROCEDURE:

1. BLAST CLEAN MATING SURFACE OF STEEL PLATE PER SSPC-SP10.
2. ROUGHEN MATING SURFACE OF ELASTOMERIC PAD WITH SANDING DISC.
3. SOLVENT CLEAN MATING SURFACES PER SSPC-SP1.
4. APPLY 3 COATS OF 7701 PRIMER TO MATING SURFACES, ALLOWING TO DRY BEFORE APPLYING SUBSEQUENT COATS.
5. MIX 310A & B AS PER MANUFACTURER'S INSTRUCTIONS.
6. APPLY 310 ADHESIVE TO MATING SURFACES AND ASSEMBLE PIECES.
7. CURE UNDER PRESSURE. FULL STRENGTH ATTAINED IN 24 HOURS.



FIXED BEARING COATING LIMITS





EXPANSION BEARING COATING LIMITS

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BY J.E.L. DATE 03.18.2013

GENERAL NOTES:

1. PAD AND MATERIALS SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011 AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION AND ITS LATEST REVISIONS, THE CONTRACT PLANS, AND THE SPECIAL PROVISIONS. GENERAL SHOP PRACTICES, STRUCTURAL FABRICATION, WELDING AND ASSEMBLY SHALL BE GOVERNED BY ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.

2. THESE SHOP DRAWINGS ARE PREPARED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE D.S. BROWN COMPANY DOES NOT ACCEPT LIABILITY FOR THE DESIGN OF THE PRODUCTS DETAILED IN THESE SHOP DRAWINGS.

3. THE D.S. BROWN COMPANY TO SUPPLY ONLY THE PARTS SHOWN ON THESE DRAWINGS.

4. ALL STEEL SHALL BE PRODUCED IN THE UNITED STATES OF AMERICA.

5. THE BEARING SHALL BE SUBJECT TO RANDOM IN-HOUSE ELASTOMER TESTING AND IN-HOUSE PROOF LOAD TESTING IN ACCORDANCE WITH AASHTO DIVISION I, SECTION 14 (METHOD "A") AND AASHTO DIVISION II, SECTION 18.

6. THE TEMPERATURE OF THE STEEL ADJACENT TO THE ELASTOMER SHALL NOT EXCEED 93°C (200°F). TEMPERATURE SHALL BE CONTROLLED BY THE USE OF A TEMPERATURE INDICATING CRAYON OR OTHER DEVICES APPROVED BY THE ENGINEERS.

7. ALL CORNERS AND EDGES OF STEEL PLATES SHALL BE GROUND TO A 0.063" RADIUS.

8. ALL STRUCTURAL STEEL SURFACES TO BE METALIZED SHALL BE CLEANED IN ACCORDANCE WITH SSPC-SP5.

9. ALL SPECIFIED STEEL TO BE ZINC METALIZED IN ACCORDANCE WITH AWS C 2.18 SPECIFICATIONS TO A MINIMUMM THICKNESS OF 6 MILS. THE COATING SHALL CONSIST OF 99.9% PURE ZINC (MINIMUM PURITY). THE METALIZATION SHALL OCCUR AFTER THE VULCANIZATION PROCESS. THE FIRST COATING SHALL BE APPLIED WITHIN ONE HOUR OF BLAST CLEANING AND THE SURFACE MUST BE COMPLETELY COATED TO THE SPECIFIC THICKNESS WITHIN TWO HOURS OF BLASTING. EXTERIOR SURFACES SHALL BE SEALED WITH CARBOLINE SEALER "RUSTABOND" WITH A MINIMUM DRY FILM THICKNESS 2 MILS. SEE COATING LIMITS FOR LOCATIONS. REPAIR DAMAGED METALIZATION PER ASTM A780.

10. TESTING SHALL BE IN ACCORDANCE WITH SPECIAL PROVISION TABLE 731.03A-REQUIRED TESTS.

⚠ 11. FIXED ELASTOMERIC BEARING MASONRY PLATES SHALL BE EPOXY BONDED TO THE ELASTOMER BEARING USING LORD 310 ADHESIVE. SURFACE PRIMER SHALL BE CHEMLOK 7701. SEE EPOXY BONDING PROCEDURE THIS SHEET.

MARKING NOTES:

1. EACH BEARING SHALL BE MARKED IN INDELIBLE INK OR FLEXILE PAINT. THE MARKING SHALL CONSIST OF THE ORDER NUMBER, LOT NUMBER, BEARING IDENTIFICATION NUMBER, LOCATION, UP STATION ARROW, AND ELASTOMER TYPE AND GRADE. THE MARKING SHALL BE ON A FACE THAT IS VISIBLE AFTER ERECTION OF THE BRIDGE.

TOLERANCE TABLE

DESCRIPTION (ELASTOMER)	TOLERANCE
ELASTOMERIC BEARING DESIGN THICKNESS > 1.250"	+ 1/4", -0
ELASTOMERIC BEARING PLAN ≤ 36"	+ 1/4", -0
ELASTOMERIC COVER TOP & BOTTOM	+ 1/8", -0
ELASTOMERIC COVER SIDES	+ 1/8", -0
THICKNESS OF INDIVIDUAL LAYERS OF ELASTOMER (LAMINATED BEARINGS	
ONLY) AT ANY POINT WITHIN THE BEARING	± 1/8"
VARIATION FROM A PLANE PARALLEL TO THE THEORETICAL SURFACE	
(AS DETERMINED BY MEASUREMENTS AT THE EDGE OF THE BEARINGS)	
TOP	0.005 RAD
SIDES	± 1/4"
POSITION OF EXPOSED CONNECTION MEMBERS	± 1/8"
EDGE COVER OF EMBEDDED LAMINATES OF CONNECTION MEMBERS	+ 1/8", -0
SIZE OF HOLES, SLOTS, OR INSERTS	± 1/8"
POSITION OF HOLES, SLOTS, OR INSERTS	± 1/8"
MASONRY PL. PLAN DIMENSIONS	±1/4"
MASONRY PL. UNDERSIDE SURFACE FLATNESS	CLASS C
MASONRY PL. UPPERSIDE SURFACE FLATNESS	CLASS A
MASONRY PL. THICKNESS	±1/16"
HOLE LOCATION	±1/16"
SOLE PL. PLAN DIMENSIONS	±1/4"
SOLE PL. UNDERSIDE SURFACE FLATNESS	CLASS A
SOLE PL. UPPERSIDE SURFACE FLATNESS	CLASS C
SOLE PL. BEVEL SLOPE	± 0.002 RAD
SOLE PL. THICKNESS	±1/16"
MASONRY & SOLE PLATE SURFACE FINISH (BEARING SIDE)	125 RMS

FLATNESS TOLERANCE

CLASS	X NOM. DIM.
A	0.001
B	0.002
C	0.005

REV.	DESCRIPTION	DATE	DET.	CKD.
⚠	ADDED EPOXY BOND PROCEDURE NOTES.	02/18/13	KTG	–

D.S. BROWN
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

	ITEM	QUANTITY
LOCATION — TH 7 (BRIDGE ST.), 0.10 MI WEST OF RTE. 14	–	–
BRIDGE — 11	–	–
PROJECT — BRF 6100(7)	–	–
PROJECT NAME — BARRE TOWN	–	–
—	–	–
DESIGNER — VTDOT	–	–
CUSTOMER — MILLER CONSTRUCTION	–	–
	–	–

DESCRIPTION: GENERAL NOTES & COATING LIMITS
WASHINGTON CO., VT

SCALE:	DRAWN BY:	DESIGNED BY:	DATE:	
N.T.S.	AND	KTG	12/4/12	–

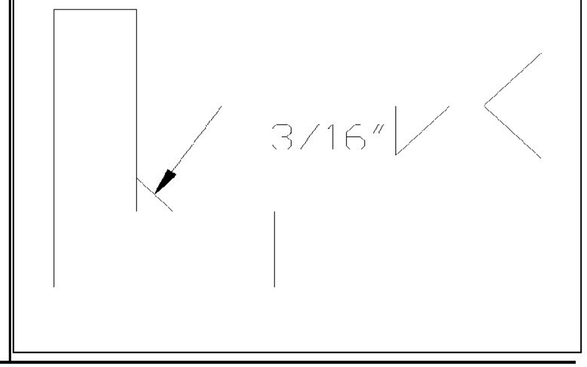
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
38782	1104	1	GN1

WELDING PROCEDURE SPECIFICATION

Material Specification	ASTM-A500-A53-GRADE B TO A36			
Welding Process	FCAW			
Manual or Machine	SEMAUTOMATIC			
Position of Welding	5G			
Filler Metal Specification	A5.20			
Filler Metal Classification	E71T-1/T-1M ESAB DUAL SHIELD 7000			
Flux	N/A			
Shielding Gas	CO 2	Dew Point	-40DEG F	FLOW RATE 50 CFH
Single or Multiple Pass	SINGLE			
Single or Multiple Arc	SINGLE			
Welding Current	DC			
Polarity	REVERSE ELECTRODE POSITIVE			
Welding Progression	STRINGER			
Root Treatment	PER D1.1			
Preheat and Interpass Temperature	PER D1.1			
Postheat Temperature	NONE			
Heat Input	Min		Max	

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed	Joint detail
1	.035	110	21	6IPM	
Variable	LIMITS	121 TO 99	23 TO 19	7 TO 5	



This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3013

Revision No.

Contractor Elderlee, Inc.

Authorized By RANDY SCOTT

Date 6/21/2012

Form III-2

Vermont Agency of Transportation

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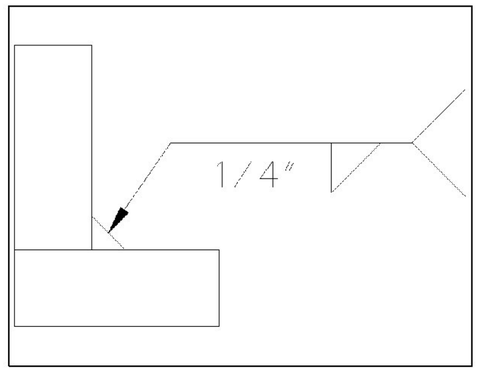
RESUBMIT NO Approved

BY J. LACROIX DATE 02/01/13

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This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

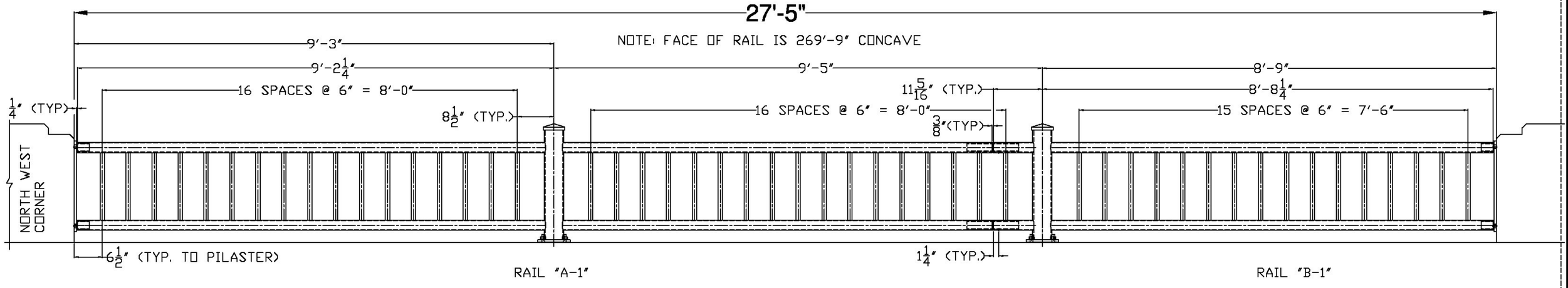
Procedure No. 3015
Revision No.

Contractor Elderlee, Inc.
Authorized By RANDY SCOTT
Date 12/5/2012

Form III-2

Form III-2-Sample Welding Procedure Specification

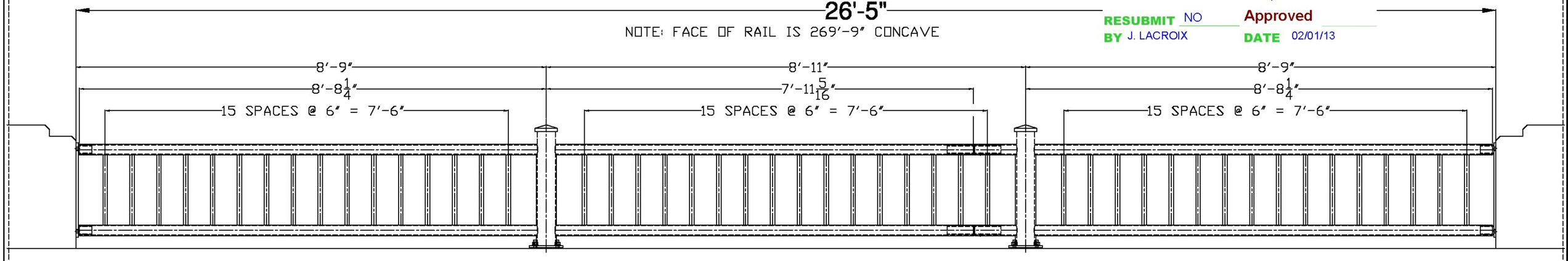
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NORTH RAILING, FACING NORTH

BREAK LINE "A"

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BY J. LACROIX DATE 02/01/13



NORTH RAILING, FACING NORTH

BREAK LINE "A"

BREAK LINE "B"

BRIDGE RAIL NOTES

1. ALL DIMENSIONS TO FACE OF CONCRETE UNLESS NOTED OTHERWISE.
2. RAIL POSTS SHALL BE SET NORMAL TO GRADE.
3. PAYMENT SHALL BE MADE UNDER PAY ITEM 900.640 SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION).
4. REINFORCING STEEL SHALL CONFORM TO SECTION 507 FOR LEVEL II REINFORCMENT. PAYMENT SHALL BE MADE UNDER PAY ITEM SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION).
5. METAL HAND RAILING, TO INCLUDE STEEL PIPES, PLATES AND HARDWARE, SHALL BE PAID FOR UNDER ITEM SPECIAL PROVISION(BRIDGE RAILING, GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION).
6. STEEL PIPES FOR POSTS, TOP AND BOTTOM RAIL AND PALINGS SHALL BE SEAMLESS, CONFORMING TO SUBSECTION 732.01.
7. STEEL FOR BASE AND ANCHORAGE PLATES SHALL CONFORM TO SUBSECTION 732.03(b).
8. HARDWARE FOR ANCHOR BOLT ASSEMBLIES SHALL CONFORM TO SUBSECTION 732.03(d).
9. 1/8" PAD SHALL CONFORM TO SUBSECTION 731.01 OR 731.02.
10. ALL EXPOSED CUT OR SHEARED EDGES OF STEEL COMPONENTS SHALL BE ROUNDED TO A 1/16" RADIUS AND BE FREE OF BURRS.
11. ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M 111M/M 111 (ASTM A123), EXCEPT HARDWARE, WHICH SHALL MEET THE REQUIREMENTS OF AASHTO M 232M/M 232(ASTM A153).
12. ALL PARTS EXCEPT HARDWARE AND ANCHORAGE PLATES SHALL BE PAINTED BLACK (COLOR CHIP #27038).
13. RAIL POST ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
14. THE FABRICATOR SHALL SUBMIT FABRICATION DRAWINGS INCLUDING WELDING PROCEDURES FOR METAL HAND RAILING IN ACCORDANCE WITH SECTION 105.

ITEM #: 900.640 GEN CONTR: F.R. LAFAYETTE

SHEET 1 OF 6

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BRIDGE RAIL DETAILS SHEET

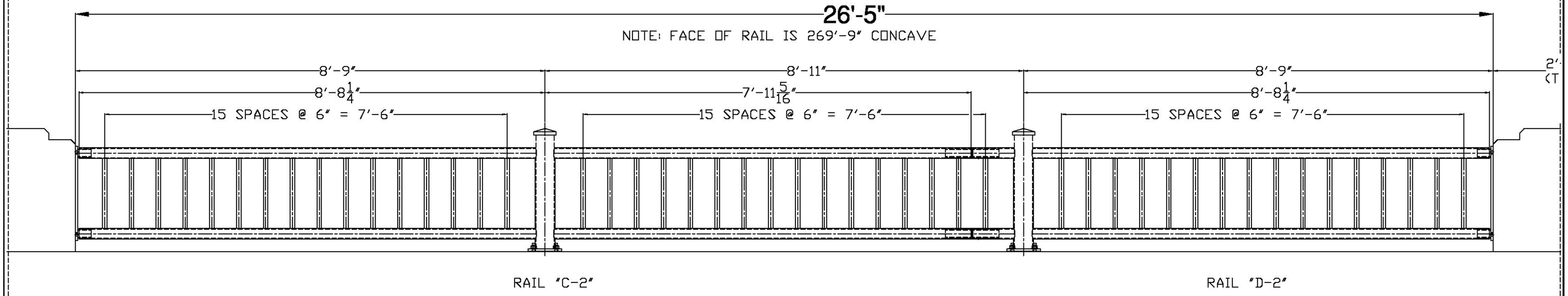
BARRE TOWN BRF 6100 (7)
TOWN OF BARRE, WASHINGTON COUNTY, VT.

R E V	NO.	DATE	DESCRIPTION	BY	R E V	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail:dlong@elderlee.com
Tel:315-789-6670 Fax:315-789-6615

AISC CERTIFIED FABRICATOR

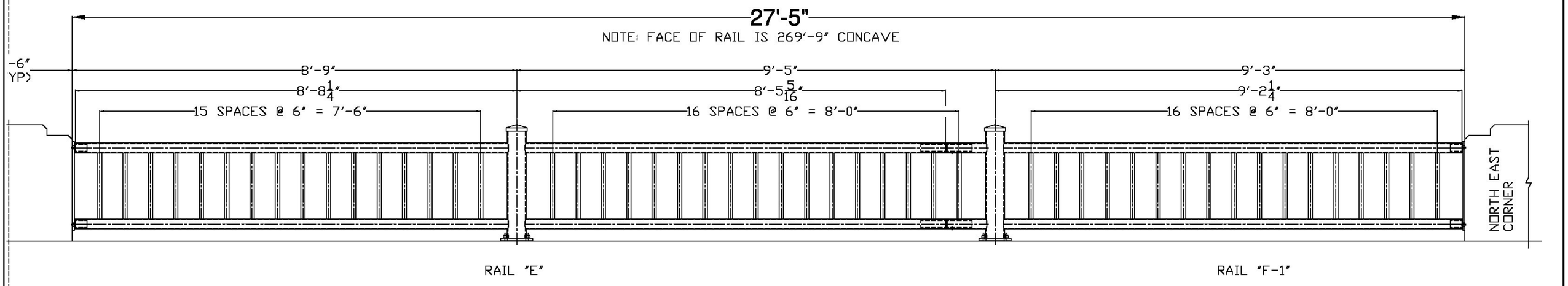
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SCALE	SCHEMATIC	
DRAWING NO.	F.R. LAFAYETTE-BARRE	



BREAK LINE "B"

NORTH RAILING, FACING NORTH

BREAK LINE "C"



BREAK LINE "C"

NORTH RAILING, FACING NORTH

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ITEM #: 900.640 GEN CONTR: F.R. LAFAYETTE

SHEET 2 OF 6

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BRIDGE RAIL DETAILS SHEET

BARRE TOWN BRF 6100 (7)

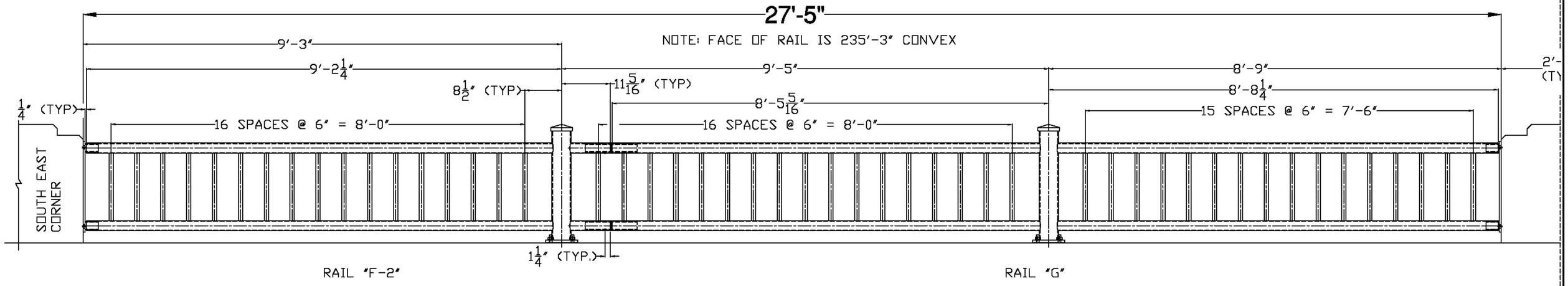
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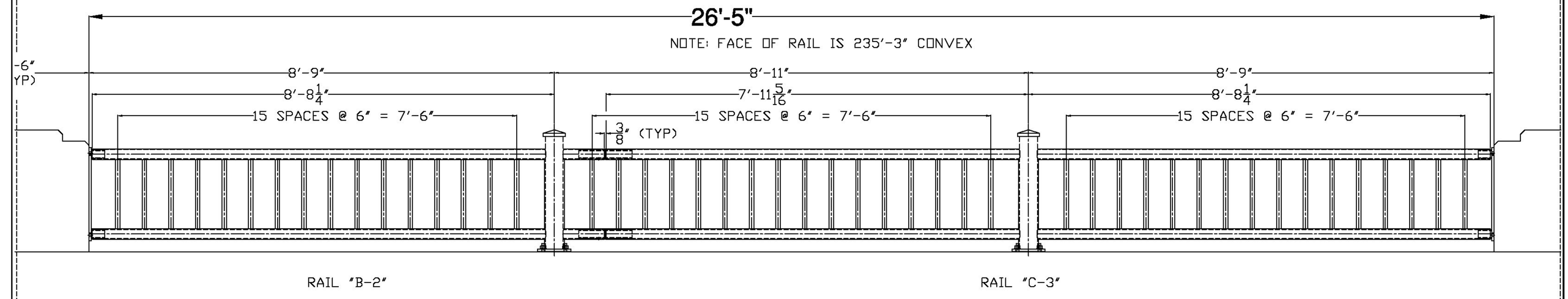
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SOUTH RAILING, FACING SOUTH

BREAK LINE "A"



SOUTH RAILING, FACING SOUTH

BREAK LINE "A"

BREAK LINE "B"

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ITEM #: 900.640 GEN CONTR: F.R. LAFAYETTE

SHEET 3 OF 6

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BRIDGE RAIL DETAILS SHEET

BARRE TOWN BRF 6100 (7)

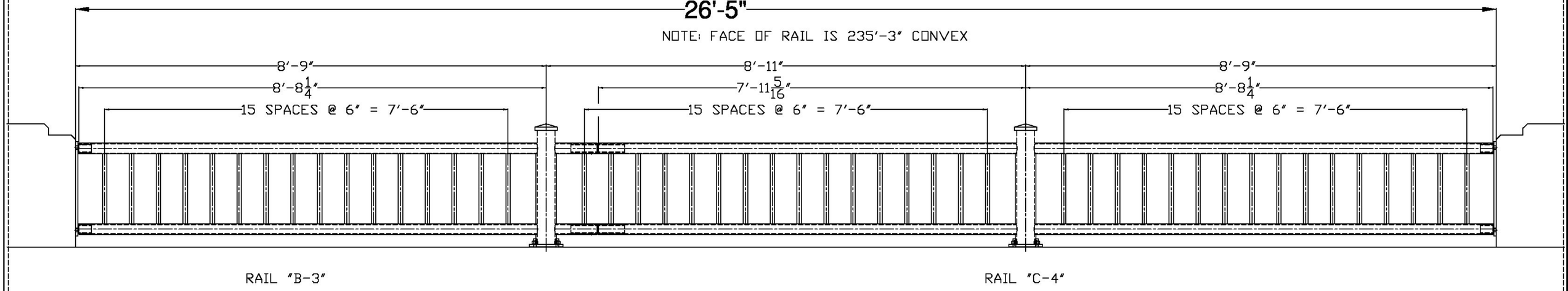
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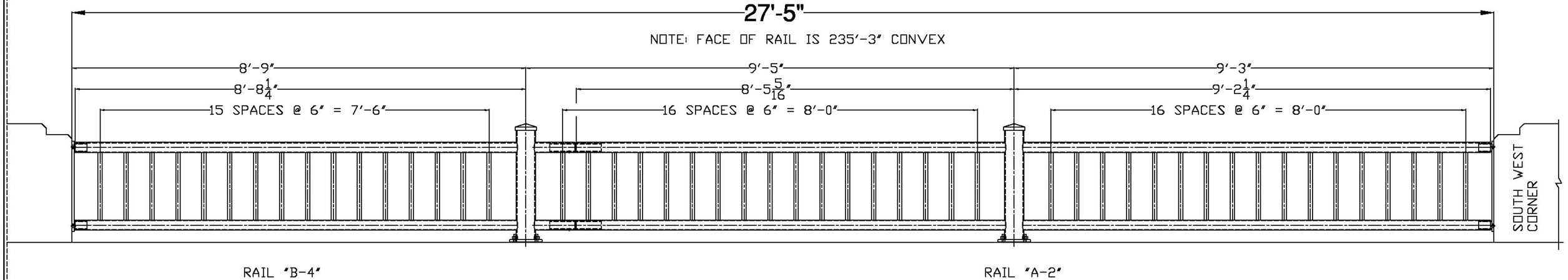
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BREAK LINE "B"

SOUTH RAILING, FACING SOUTH

BREAK LINE "C"



BREAK LINE "C"

SOUTH RAILING, FACING SOUTH

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ITEM #: 900.640 GEN CONTR: F.R. LAFAYETTE

SHEET 4 OF 6

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BRIDGE RAIL DETAILS SHEET

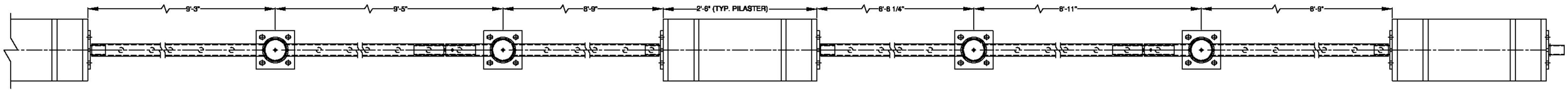
BARRE TOWN BRF 6100 (7)

TOWN OF BARRE, WASHINGTON COUNTY, VT.

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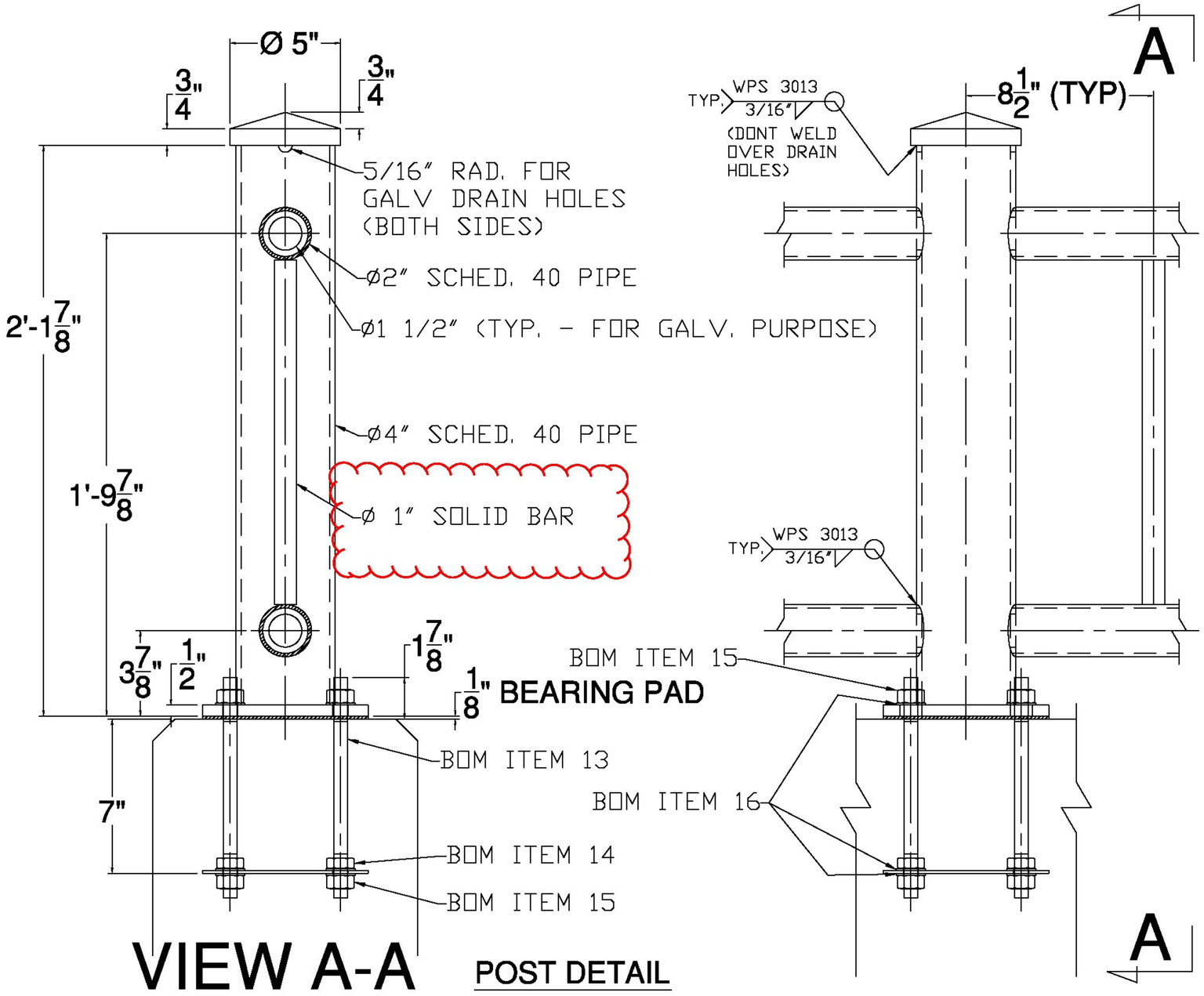
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SCALE	SCHEMATIC	
DRAWING NO.	F.R. LAFAYETTE-BARRE	



NORTH WEST CORNER

PLAN VIEW OF A SECTION OF THE NORTH RAIL



BILL OF MATERIAL			
ITEM	QTY	DESCRIPTION	ASTM DESIGNATION
1	2	RAIL SECTION "A"	A500/A53 Grade B/A36
2	4	RAIL SECTION "B"	A500/A53 Grade B/A36
3	4	RAIL SECTION "C"	A500/A53 Grade B/A36
4	2	RAIL SECTION "D"	A500/A53 Grade B/A36
5	1	RAIL SECTION "E"	A500/A53 Grade B/A36
6	2	RAIL SECTION "F"	A500/A53 Grade B/A36
7	1	RAIL SECTION "G"	A500/A53 Grade B/A36
8	16	RAIL SPLICE (1 1/2" SCHEDULE 40)	A500/A53 Grade B
9	16	Ø3/8" X 1/2" SOCKET, BUTTON HEAD CAP SCREW	A307 (ZINC PLATED - IMPORTS)
10	16	POST ANCHOR PLATES, 1/8" X 7 1/2" X 7 1/2"	A36
11	16	SIDE ANCHOR PLATES, 1/8" X 7 1/2" X 1'-9"	A36
12	16	SIDE BASE PLATES, 1/2" X 7 1/2" X 1'-9"	A36
13	128	Ø 5/8" X 10" ANCHOR STUDS W/ 2" THREAD EACH END	A449
14	128	Ø 5/8" HEX JAM NUTS	A563
15	256	Ø 5/8" HEAVY HEX NUTS	A563
16	384	Ø 5/8" FLAT WASHERS	F436
17	16	1/8" X 7 1/2" X 7 1/2" POST BEARING PAD	AASHTO M251
18	4	"W" PANEL TERMINAL CONNECTOR, 12 Ga.	AASHTO M180
19	4	CONNECTION PLATE W/ 1" SCHED. 40 PIPE	A500/A53 Grade B/A36
20	32	Ø 5/8" PANEL BOLTS, NUTS	A307
21	16	Ø 7/8" X 12" BOLTS, NUTS, & WASHERS	A325, A563, & F436

Vermont Agency of Transportation

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BY J. LACROIX DATE 02/01/13

NOTES:

1. DUE TO THE SMALL RISE (EX: SOUTH RAIL W/ THE TIGHTER RADIUS [235'-3"] HAS A 9/16" RISE OVER 9'5"), ALL RAIL WILL BE FABRICATED WITHOUT A SHOP FORMED RADIUS.

ITEM #: 900.640 GEN CONTR: F.R. LAFAYETTE

SHEET 5 OF 6

APPROVED BY:

BRIDGE RAIL DETAILS SHEET

BARRE TOWN BRF 6100 (7)

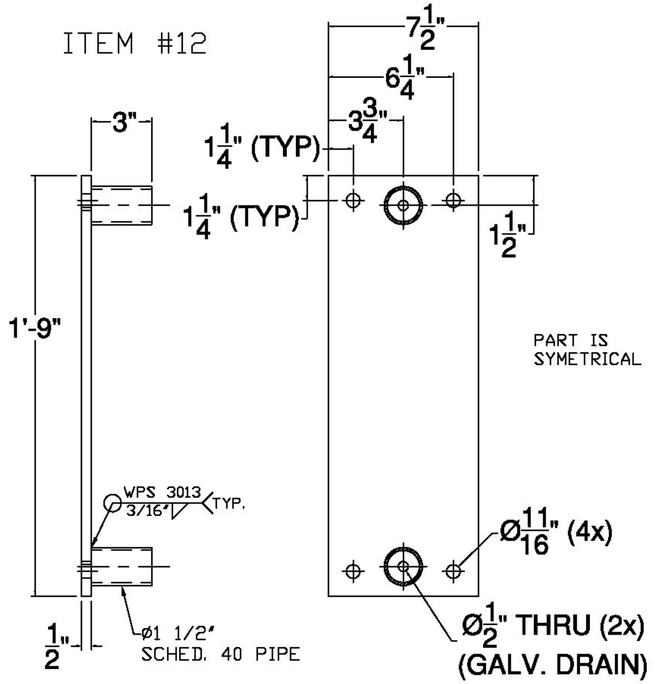
TOWN OF BARRE, WASHINGTON COUNTY, VT.

REV	NO.	DATE	DESCRIPTION	BY	REV	NO.	DATE	DESCRIPTION	BY

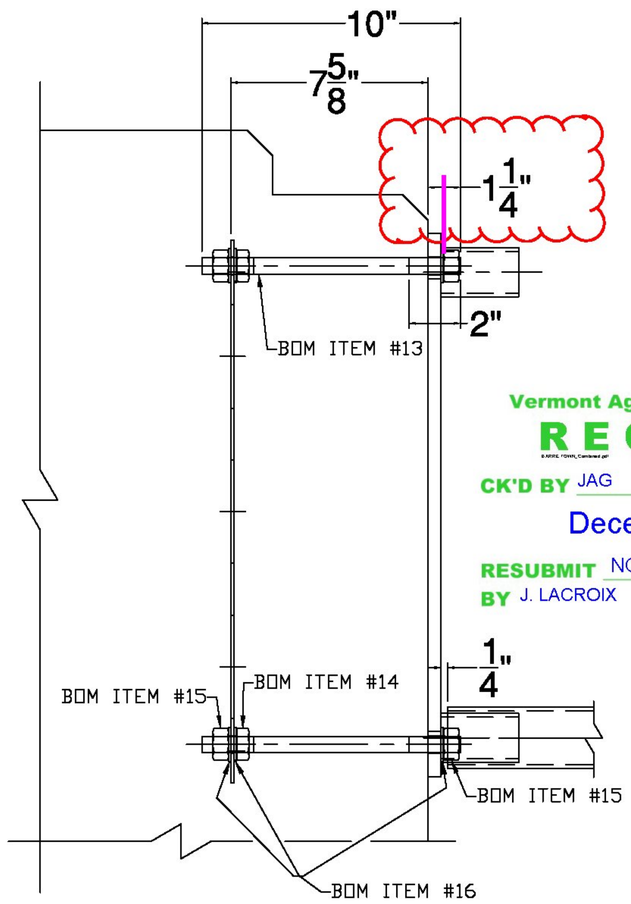
ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

AISC CERTIFIED FABRICATOR

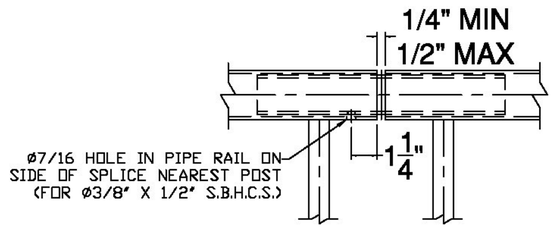
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CHECKED	D.L.	12/04/12
APPROVED	.	.
SCALE	SCHEMATIC	
DRAWING NO.	F.R. LAFAYETTE-BARRE	



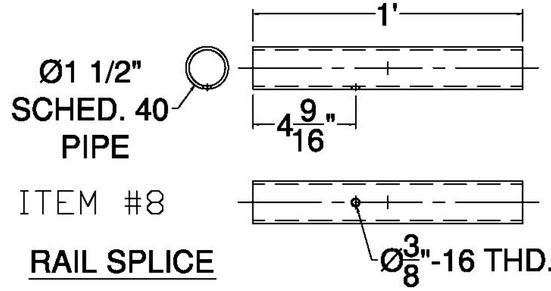
SIDE BASE PLATE



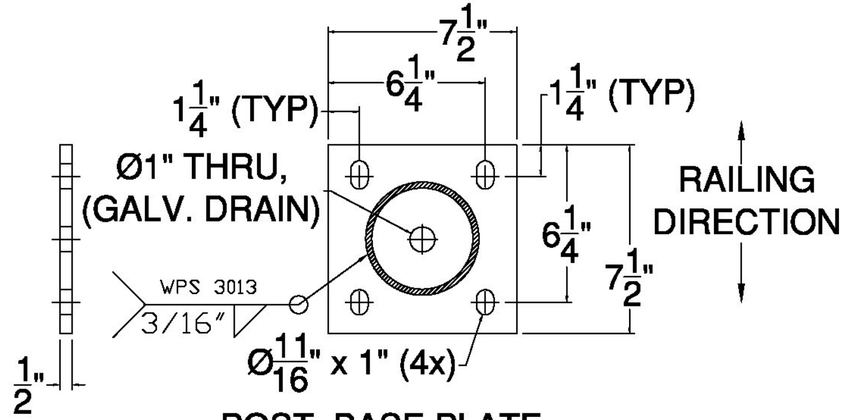
SIDE PLATE CONNECTION DETAIL



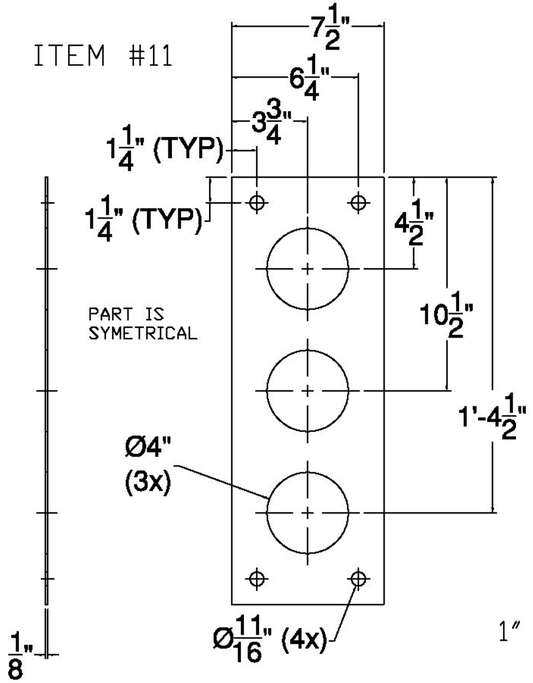
RAIL SPLICE DETAIL



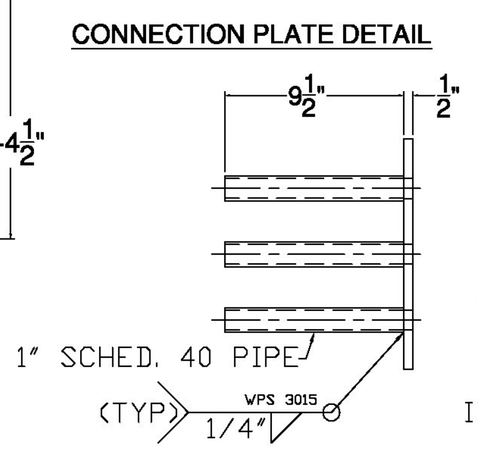
RAIL SPLICE

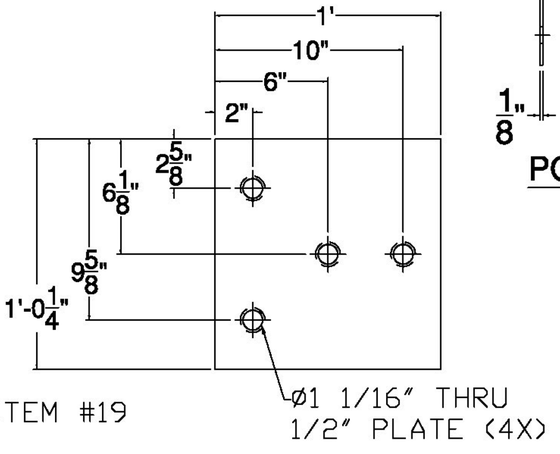


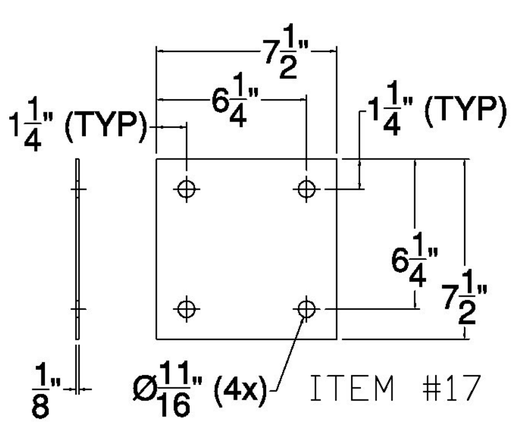
POST BASE PLATE



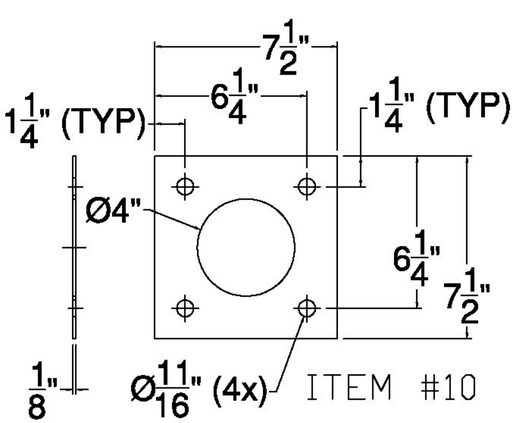
SIDE ANCHORAGE PLATE







POST BEARING PAD



POST ANCHORAGE PLATE

Vermont Agency of Transportation

RECEIVED

CK'D BY JAG OK'D BY JEL

December 12, 2012

RESUBMIT NO Approved

BY J. LACROIX DATE 02/01/13

ITEM #: 900.640 GEN CONTR: F.R. LAFAYETTE

SHEET 6 OF 6

APPROVED BY:

BRIDGE RAIL DETAILS SHEET

BARRE TOWN BRF 6100 (7)

TOWN OF BARRE, WASHINGTON COUNTY, VT.

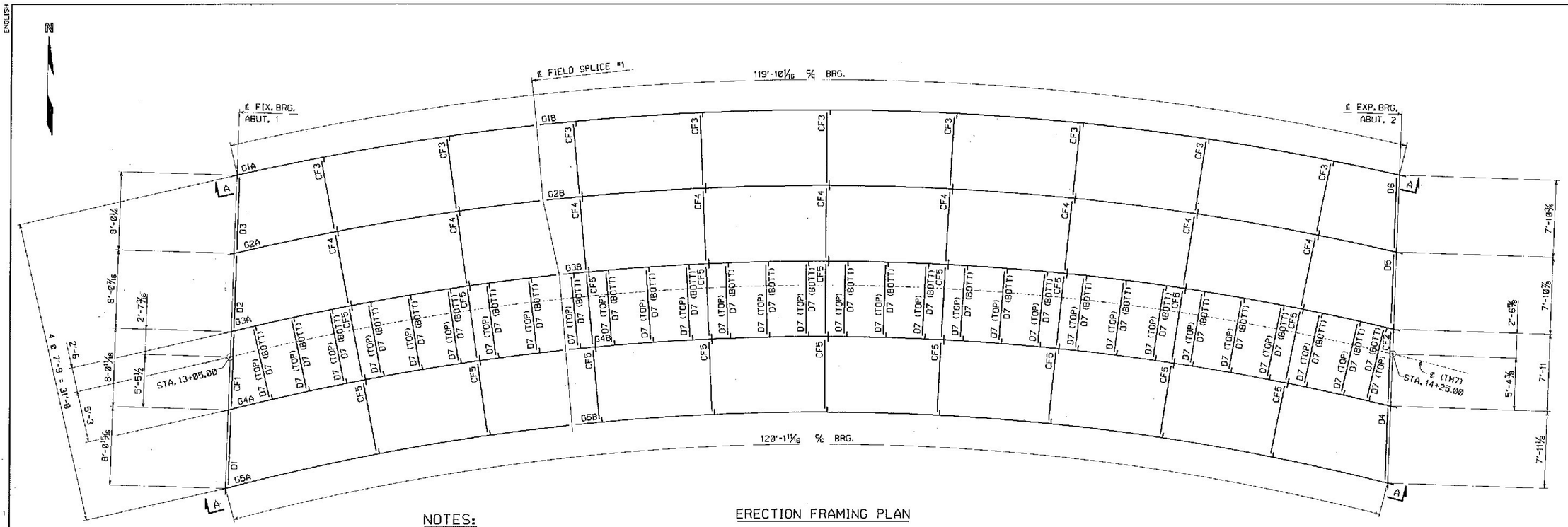
R E V	NO.	DATE	DESCRIPTION	BY

R E V	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

AISC CERTIFIED FABRICATOR

DRAWN	E.P.	12/04/12
CHECKED	D.L.	12/04/12
APPROVED	.	.
SCALE	SCHEMATIC	
DRAWING NO.	F.R. LAFAYETTE-BARRE	



ERECTION FRAMING PLAN

NOTES:

NO CREDIT WILL BE ALLOWED FOR WORK PERFORMED BY OTHERS IN REPLACING OR CORRECTING MATERIALS OR WORKMANSHIP COVERED BY THIS DRAWING UNLESS EXPRESSLY AUTHORIZED BY HIGH STEEL STRUCTURES, INC.

HIGH STEEL STRUCTURES, INC. DOES NOT SUPPLY STUD SHEAR CONNECTORS, ROD HANGERS, HARDWARE AT SEWER MAIN, BEARINGS, BEARING PADS, OR ANCHOR BOLTS.

ERECTOR NOTE: ELEVATIONS, CAMBER CHECKS AND HORIZONTAL ALIGNMENT OF FIELD SPLICES MUST BE COMPLETED PRIOR TO FINAL BOLTING. HIGH STEEL STRUCTURES IS TO BE NOTIFIED AND CONSULTED, PRIOR TO FINAL BOLTING, IF SPLICE LOCATIONS ARE NOT WITHIN ACCEPTABLE TOLERANCE. BOTH VERTICAL & HORIZONTAL CORRECTION OF ANY UNACCEPTABLE SPLICES AFTER FINAL BOLTING WILL BE AT NO COST TO HIGH STEEL STRUCTURES.

NOTICE: WEIGHTS OF MEMBERS LISTED ON THESE DRAWINGS ARE ESTIMATED WEIGHTS AND ACTUAL WEIGHTS WILL VARY. HIGH STEEL STRUCTURES, INC. WILL NOT BE RESPONSIBLE FOR ANY ERECTION PROCEDURES, SHIPPING PROCEDURES, ETC. DEVELOPED USING ESTIMATED WEIGHTS AS SHOWN.

ALL DIMENSIONS ARE GIVEN HORIZONTALLY (U.N.O.).

ERECTOR NOTE: ALL BOLTS MUST BE LOCATED IN ACCORDANCE WITH THE LIST OF FIELD CONNECTIONS. HIGH STEEL STRUCTURES WILL NOT BE RESPONSIBLE FOR FURNISHING ADDITIONAL BOLTS OR FOR ANY OTHER RELATED COSTS OR DAMAGES RESULTING FROM IMPROPER LOCATION OF BOLTS.

ALL FIELD BOLTS THRU WEB OF FASCIA GIRDERS ARE TO HAVE HEADS ON OUTSIDE OF WEB.

ALL FIELD BOLTS THRU BOTTOM FLANGE ARE TO HAVE HEADS UP.

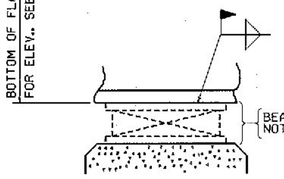
(RCT) INDICATES ROTATIONAL CAPACITY TESTED BOLTS. DO NOT MIX NUTS, BOLTS AND WASHERS FROM DIFFERENT CONTAINERS UNLESS ALL NUTS, BOLTS AND WASHERS HAVE THE SAME LOT NUMBER.

ANCHOR BOLTS MUST BE SET BEFORE DIAPHRAGMS/CROSSFRAMES AT BEARINGS ARE ERECTED.

SEE DRAWING SA1 FOR SHOP ASSEMBLY DIAGRAM.

CONTRACTOR NOTE:

ELEVATIONS ARE GIVEN TO BOTTOM OF FLANGE - DO NOT POUR CONCRETE PAD TO FINAL ELEVATIONS WITHOUT VERIFICATION OF BEARING HEIGHT AND BRIDGE SEATS.



SECTION A

ELEVATIONS AT BEARING POINTS (in Feet)		
LINE NO.	BOTTOM OF BOT. FLG. ELEV.	
	ABUT. 1	ABUT. 2
G1	734.76	729.40
G2	734.75	729.21
G3	734.75	729.03
G4	734.60	728.88
G5	734.46	728.33

FIELD BOLT SUMMARY - SHIP. #1

(2% ADDITIONAL BOLTS ADDED + 3 EA. FOR TESTING)

AASHTO M164 TYPE 3 (RCT); W/HVY HEX HD

199	-	7/8"ø HIGH STRENGTH BOLTS x 0'-6 1/2
117	-	7/8"ø HIGH STRENGTH BOLTS x 0'-4 1/2
199	-	7/8"ø HIGH STRENGTH BOLTS x 0'-3 1/4
125	-	7/8"ø HIGH STRENGTH BOLTS x 0'-2 3/4
588	-	7/8"ø HIGH STRENGTH BOLTS x 0'-2 1/2
1,178	-	7/8"ø HIGH STRENGTH BOLTS x 0'-2 1/4
370	-	3/4"ø HIGH STRENGTH BOLTS x 0'-2 1/4

AASHTO M291 GRADE DH3 (RCT); HVY HEX

2,406	-	NUTS FOR 7/8"ø BOLT
370	-	NUTS FOR 3/4"ø BOLT

AASHTO M293 TYPE 3 (RCT); ROUND & FLAT

2,406	-	STD WASHERS FOR 7/8"ø BOLT
370	-	STD WASHERS FOR 3/4"ø BOLT

LIST OF FIELD CONNECTIONS — ONE WASHER PER BOLT UNLESS NOTED OTHERWISE

LINE	ACTUAL NUMBER REQ'D	BOLT DIAM.	BOLT LENGTH	BOLTS PER CONN.	NO. OF CONN	GRIP	THICKNESS OF PIECES JOINED					PIECES CONNECTED AND REMARKS
1	510	7/8	2 1/2	102	5	1 1/4	5/16	5/8	5/16			WEB SPL @ FS1 G1-G5
2	96	7/8	3 1/4	32	3	1 7/8	1/2	7/8	1/2			TOP FLG SPL @ FS1 G3-G5
3	112	7/8	4 1/2	56	2	3 1/8	7/8	1 3/8	7/8			TOP FLG SPL @ FS1 G1-G2
4	96	7/8	3 1/4	32	3	1 7/8	1/2	7/8	1/2			BOT FLG SPL @ FS1 G3-G5
5	192	7/8	6 1/2	96	2	5 1/8	1 3/8	2 3/8	1 3/8			BOT FLG SPL @ FS1 G1-G2
6	120	7/8	2 3/4	10	12	1 3/8	5/8	3/4				ABUT. DIAPH. TO BRG. STIFF.
7	64	7/8	2 1/2	16	4	1 1/4	1/2	3/4				ABUT. CF. GUSS. PL. TO BRG. STIFF.
8	1152	7/8	2 1/4	16	72	1	1/2	1/2				INTERM. CF. GUSS. PL. TO CONN. PL.
9	360	3/4	2 1/4	6	60	1	1/2	1/2				UTILITY SUPP. TO CONN. PL.

SHIPPING GROUP A1	
SHIPPING PIECE MARK	QUANTITY
G1A	1
G2A	1
G3A	1
G4A	1
G5A	1
D1	1
D2	1
D3	1
D7	16
CF1	1
CF3	2
CF4	2
CF5	4

SHIPPING GROUP B1	
SHIPPING PIECE MARK	QUANTITY
G1B	1
G2B	1
G3B	1
G4B	1
G5B	1
D4	1
D5	1
D6	1
D7	44
CF2	1
CF3	7
CF4	7
CF5	14

SHIPPING PIECES		
SHIPPING PIECE MARK	WEIGHT EA. (LBS)	DWG NO.
G1A	13,114	1
G2A	13,611	2
G3A	9,604	3
G4A	9,842	4
G5A	9,400	5
G1B	32,593	6
G2B	32,733	7
G3B	22,955	8
G4B	22,740	9
G5B	20,553	10
D1	1,111	11
D2	1,104	11
D3	1,102	11
D4	1,088	11
D5	1,085	11
D6	1,083	11
D7	144	11
CF1	456	12
CF2	447	12
CF3	447	13
CF4	447	13
CF5	448	14

Vermont Agency of Transportation

RECEIVED

CK'D BY J. CLARK OK'D BY J. GRIFFIN

February 12, 2013

RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE

HOLES / BOLTS / COATING / CODE(S) / SCALE: N.T.S.

HIGH STEEL STRUCTURES INC.
An AISC 9001:2000 Certified Company
An Affiliate of High Industries Inc.
Lancaster Facility
135 Old Philadelphia Pike
Lancaster, PA 17602-9003
Phone: (717) 299-5201
Williamsport Facility
3500 N. 4th Street
Montoursville, PA 17754
Phone: (570) 326-3051
www.higsteel.com

ERECTION FRAMING PLAN

ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH

ROUTE NO. TH7 STA. 13+85.00 TO STA. 14+25.00

BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON

STATE OF VERMONT

AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO. | FED. AID PROJ. NO.

GENERAL CONTRACTOR: MILLER CONSTRUCTION, INC. | HSSI PROJ. MGR: KEN GLIDDEN

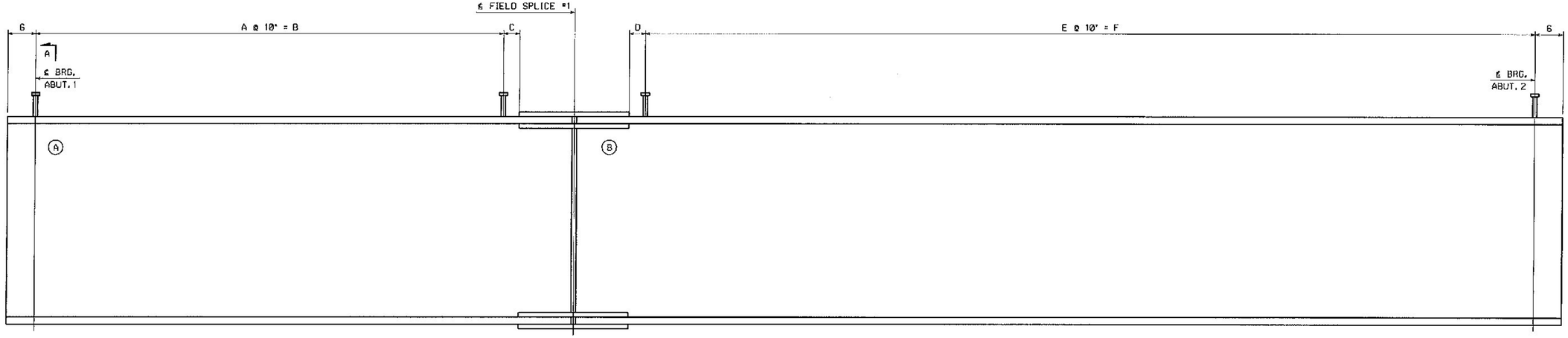
DRAWING MANAGER: JOSH MURRY (IH) | MADE BY: CDS | CHK'D BY: MGK | DATE: 12/31/12

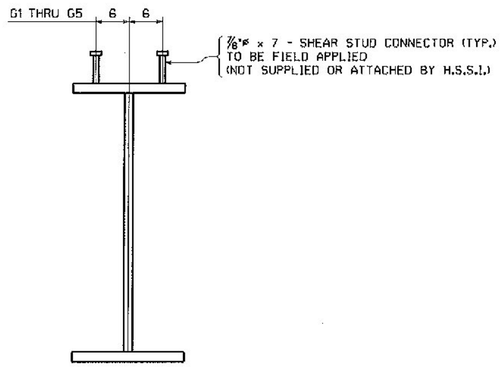
HSSI PROJECT NUMBER: S-1120266A-1 | DRAWING NUMBER: E1 OF E2

VT

ENGLISH
SHOPMENT 01 PM&ENG 5225750 PRO 5225752 SHP&ERECT = 5225753
BY JSpicer
PLOTTED: 12/7/2012 08:27:04 AM

ENGLISH





SECTION A

SHEAR STUD CONNECTOR LOCATION LAYOUT

DIMENSIONS GIVEN ALONG TOP OF GIRDER

MARK	A	B	C	D	E	F
G1	35	29'-2	4⅜	2½	104	86'-8
G2	36	30'-0	6½	1⅛	103	85'-10
G3	39	32'-6	9 1/16	6 3/16	101	84'-2
G4	41	34'-2	1 3/16	5⅝	100	83'-4
G5	42	35'-0	4 1/16	4½	99	82'-6

NOTES:
FOR NOTES, SEE DRAWING E1.
WORK THIS DRAWING WITH DRAWING E1.
(A) INDICATES SUFFIX MARK OF SHIPPING PIECE.

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE

HOLES
BOLTS
COATING
CODE(S)
SCALE N.T.S.

HIGH STEEL STRUCTURES INC.
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.
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175 Old Philadelphia Pike
Lancaster, PA 17602-2008
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www.highsteel.com

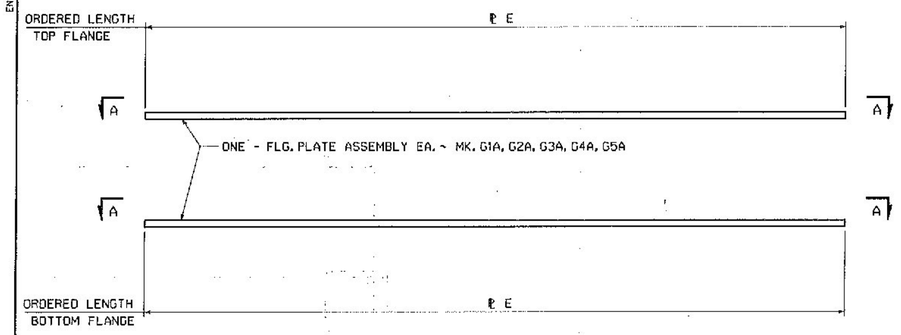
ERECTION PLAN ~ STUD LAYOUTS
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

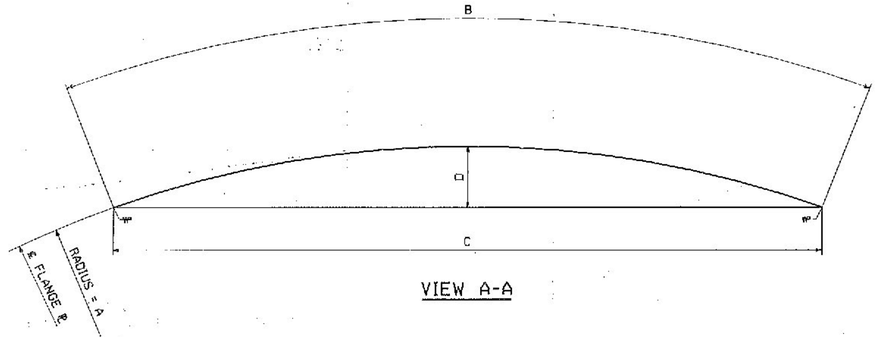
STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (JH)	MADE BY	SSJ.
CHK'D. BY	MGK	DATE	1-2-13
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	E2 OF E2

VT

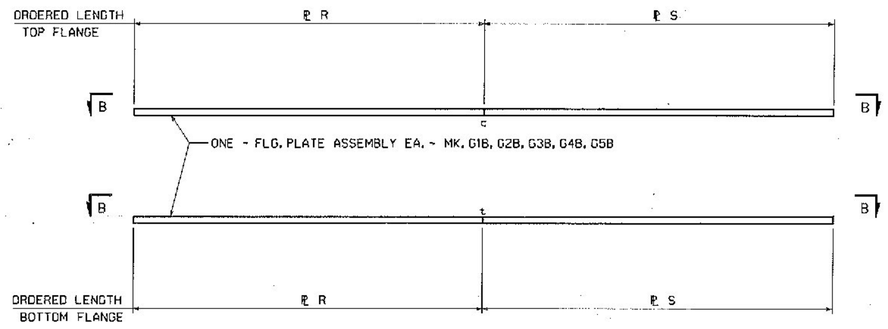
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10:27:13 AM
BY: JSpicker
SHIPMENT #1
PM BEAM: 5282753 PROJ: S82R2562 SHIPMENT: 5282753

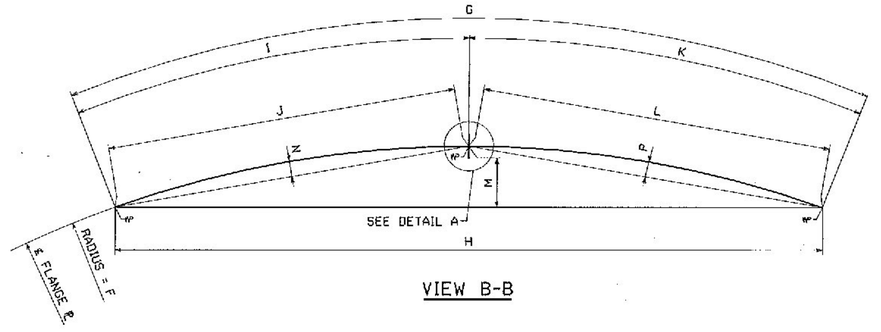
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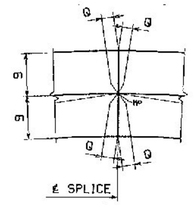


VIEW A-A



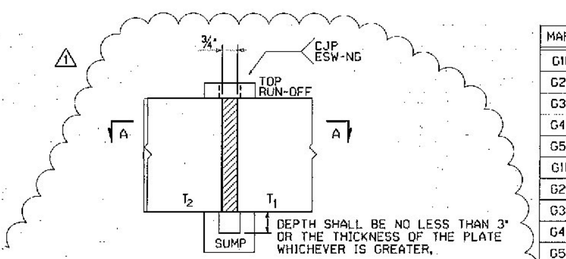


VIEW B-B



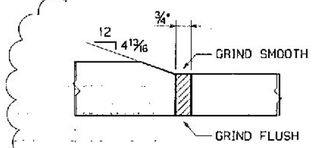
DETAIL A

MARK	FLG.	A	B	C	D	E
G1A	TOP	264'-1½	31'-10	31'-9¾	0'-5¾	1⅜ x 18 x 32'-0 (Ø4006)
G2A	TOP	264'-1½	32'-10⅛	32'-9⅞	0'-6⅛	1⅜ x 18 x 33'-0 (Ø4007)
G3A	TOP	244'-9	34'-10⅝	34'-9¹⅝	0'-7⅞	⅞ x 18 x 35'-1 (Ø4015)
G4A	TOP	244'-9	35'-10⅞	35'-10⅛	0'-7⅞	⅞ x 18 x 36'-1 (Ø4014)
G5A	TOP	244'-9	36'-10¹⅛	36'-10¼	0'-8⅝	⅞ x 18 x 37'-1 (Ø4013)
G1A	BOTT.	264'-1½	31'-6⅞	31'-6⅜	0'-5⅝	2⅜ x 18 x 31'-9 (Ø4004)
G2A	BOTT.	264'-1½	32'-6½	32'-6¼	0'-6	2⅜ x 18 x 32'-9 (Ø4003)
G3A	BOTT.	244'-9	34'-6⅝	34'-6⅝	0'-7⅝	⅞ x 18 x 35'-1 (Ø4015)
G4A	BOTT.	244'-9	35'-6¹⅛	35'-6⅝	0'-7¾	⅞ x 18 x 36'-1 (Ø4014)
G5A	BOTT.	244'-9	36'-6¹³⁄₁₆	36'-6⅞	0'-8⅜	⅞ x 18 x 37'-1 (Ø4013)



OPTIONAL ESW-NG FLANGE PLATE SPLICE
ELECTROSLAG NARROW GAP WELD PER AWS D1.5-10
(ESW-2 PROCEDURE)

SHOP NOTE: WHEN UTILIZING THIS OPTION, DELETE SUBMERGED ARC WELDING PREPARATION AND ADJUST MATERIAL LENGTH AS REQUIRED.



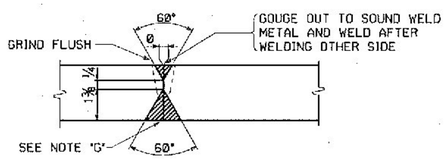
SECTION A-A

NOTE "G"
ALL SPLICES MAY HAVE A MAXIMUM REINFORCEMENT OF ⅛". GRIND SMOOTH AT SPLICES THAT ARE TO BE TESTED AND ALL BOTTOM FLANGE SPLICES.

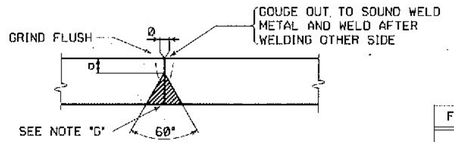
MARK	FLG.	F	G	H	I	J	K	L	M	N	P	Q	R	S
G1B	TOP	264'-1½	89'-2⅛	88'-9¹⁵⁄₁₆	44'-7⅞	44'-7¼	44'-6¼	44'-5⅝	3'-9¹⁶⁄₁₆	0'-11⁵⁄₁₆	0'-11¼	¾	1⅜ x 18 x 44'-10 (Ø4005)	1⅜ x 18 x 44'-10 (Ø4005)
G2B	TOP	264'-1½	88'-2¾	87'-9¹³⁄₁₆	44'-2⅜	44'-1¾	44'-0⅜	43'-11¾	3'-8⅛	0'-11⅛	0'-11	¾	1⅜ x 18 x 44'-5 (Ø4006)	1⅜ x 18 x 44'-5 (Ø4006)
G3B	TOP	244'-9	86'-3⅞	85'-10⅛	43'-2⅞	43'-2³⁄₁₆	43'-0⅜	42'-11¹⁵⁄₁₆	3'-9½	0'-11⅞	0'-11⅜	25⁄32	⅞ x 18 x 43'-6 (Ø4009)	⅞ x 18 x 43'-3 (Ø4010)
G4B	TOP	244'-9	86'-4¼	84'-11¹⁄₁₆	42'-8⅞	42'-8¼	42'-7⅜	42'-6¾	3'-8⅝	0'-11⅜	0'-11⅛	25⁄32	⅞ x 18 x 42'-11 (Ø4011)	⅞ x 18 x 42'-11 (Ø4011)
G5B	TOP	244'-9	84'-5½	84'-0⅛	42'-3⅞	42'-3¼	42'-1¼	42'-0⅝	3'-7⅝	0'-11	0'-10⅞	25⁄32	⅞ x 18 x 42'-7 (Ø4012)	⅞ x 18 x 42'-7 (Ø4012)
G1B	BOTT.	264'-1½	89'-4⅛	88'-11	44'-7⅞	44'-7¼	44'-6¼	44'-7⅝	3'-9¼	0'-11⅝	0'-11⅝	¾	2⅜ x 18 x 44'-11 (Ø4001)	2⅜ x 18 x 44'-11 (Ø4001)
G2B	BOTT.	264'-1½	88'-5	88'-0⅛	44'-2⅜	44'-1¾	44'-2⅝	44'-2	3'-8⅝	0'-11⅛	0'-11⅛	¾	2⅜ x 18 x 44'-5 (Ø4002)	2⅜ x 18 x 44'-5 (Ø4002)
G3B	BOTT.	244'-9	86'-6	86'-0⅝	43'-2⅞	43'-2⅜	43'-3½	43'-2⅛	3'-9¾	0'-11⅛	0'-11⅝	25⁄32	⅞ x 18 x 43'-5 (Ø4009)	⅞ x 18 x 43'-6 (Ø4009)
G4B	BOTT.	244'-9	85'-7⅛	85'-1⅞	42'-8⅞	42'-8¼	42'-10⅞	42'-9⅛	3'-8¹³⁄₁₆	0'-11³⁄₁₆	0'-11¼	25⁄32	⅞ x 18 x 42'-11 (Ø4011)	⅞ x 18 x 43'-3 (Ø4010)
G5B	BOTT.	244'-9	84'-8⅜	84'-3⅛	42'-3⅞	42'-3¼	42'-4⅝	42'-3¹⁵⁄₁₆	3'-7¹³⁄₁₆	0'-11	0'-11	25⁄32	⅞ x 18 x 42'-7 (Ø4012)	⅞ x 18 x 42'-7 (Ø4012)

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

NOTES:
FOR GENERAL SHOP NOTES, SEE DRAWING GN1.
ALL FLANGE PLATES REQUIRE CHARPY V-NOTCH TEST.
DIMENSIONS SHOWN THUS: [44'-6¼] ARE THE ACTUAL DIMENSIONS THAT WILL APPEAR ON THE GIRDER DETAIL DRAWINGS.
THE LETTERS 't' & 'c' AT FLANGE SPLICES INDICATE TENSION AND COMPRESSION SPLICES RESPECTIVELY.
ALL SPLICES MARKED 't' TO BE RADIOGRAPHICALLY TESTED 100%.
ALL SPLICES MARKED 'c' TO BE RADIOGRAPHICALLY TESTED 25%.
ARC DIMENSIONS ARE GIVEN TO ENDS OF PLATES AS DETAILED ON GIRDER DRAWINGS.
ALL FLANGE PLATES FOR GIRDERS ON LINES G1 THRU G5 ARE CUT TO A COMMON RADIUS AND WILL REQUIRE ADDITIONAL HEAT ADJUSTMENT. REFER TO HC DRAWINGS FOR FINAL CURVE REQUIREMENTS.
1 ALL ELECTRO-SLAG SPLICES MARKED 't' TO BE ULTRASONICALLY TESTED 100%.
ALL ELECTRO-SLAG SPLICES MARKED 'c' TO BE ULTRASONICALLY TESTED 25%.



TYPICAL FLANGE PLATE SPLICE
FOR FLANGE PLATES THICKER THAN 2" (B-U3c-S)
1 (W72X-2 SERIES)



TYPICAL FLANGE PLATE SPLICE
FOR FLANGE PLATES 2" THICK AND UNDER (B-L2c-S)
1 (W71X-2 SERIES)

FLG. THK.	a
⅞	¼
1⅜	⅜

NO.	REVISION	BY	CHK'D	DATE
1	APPROVAL CHANGE: ADDED ELECTRO-SLAG WELD DETAIL & WELD DESIGNATIONS	MGK	KGM	2/5/13

HIGH STEEL STRUCTURES
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.
Lancaster Facility: 915 Old Peachtree Pike, Lancaster, PA 17605-3308, Phone: (717) 299-5201
Williamsport Facility: 350 E. 4th Street, Williamsport, PA 17701, Phone: (570) 326-9351
www.highsteel.com

HOLES
BOLTS
COATING
CODE(S): 30
SCALE: N.T.S.

FLANGE SPLICE DETAILS
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (JH)	MADE BY	JAS
CHK'D. BY	MGK	DATE	12/26/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	FS1 OF FS1

VT

PLOTTED: 2/5/2013 4:15:11 PM
SHIPMENT 01
PW_EVG_SDGDESC_FBG_SDGDSC_SHIPRECT4_SDGDSC
3in model

ENGLISH

GENERAL SHOP NOTES

SPECIFICATIONS:
ALL MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE STATE OF VERMONT, AGENCY OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, WITH ITS LATEST REVISIONS AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION, AND ITS LATEST REVISIONS ALL AS MODIFIED BY CONTRACT SPECIFICATIONS.

MATERIAL:
UNLESS NOTED OTHERWISE, ALL STEEL TO BE AASHTO M270 GRADE 50W.
(T) INDICATES ZONE 2 CHARPY V-NOTCH TESTING REQUIRED.
UNLESS NOTED OTHERWISE, ALL STEEL ON THESE DETAILS SHALL BE FURNISHED UNDER BID ITEM 506.56.

SHOP PROCEDURE:
ALL FLANGE AND WEB PLATE SPLICES TO BE MADE BEFORE FINAL FITTING AND WELDING INTO GIRDER.
CAMBER TOLERANCE: -0" TO +¾"
ALL RE-ENTRANT CUTS TO HAVE 2" MIN. RADIUS.
BEARING AREA, AS NOTED ON GIRDER DETAILS, INDICATES AREA THAT MUST BE FLAT AND TRUE TO RECEIVE SOLE PLATE.
DOR INDICATES DIRECTION OF MILL ROLLING.

INSPECTION:
SHOP INSPECTION BY TO BE DETERMINED.

WELDING:
ALL WELDING IS TO CONFORM TO AWS D1.5-10.
WELDING METHODS, PROCEDURES, AND MATERIALS SHALL COMPLY WITH THE SPECIFIC PROCEDURE DESIGNATED IN THE WELD SYMBOL TAIL.
FOR WELDING STIFFENERS AND CONNECTION PLATES TO GIRDERS, SEE TYPICAL WELDING DETAIL.
FOR WELDING CROSSFRAMES, SEE SECONDARY MEMBER WELDING DETAIL.

NON-DESTRUCTIVE TESTING:
FLANGE AND WEB PLATE SPLICES TO BE RADIOGRAPHICALLY TESTED, AS CALLED FOR ON DRAWINGS PREFIXED "FS" AND "WC", BY H.S.S.I.

MAGNETIC PARTICLE INSPECTION IS REQUIRED ON AT LEAST 1'-0 OF EVERY 10'-0 LENGTH OF FILLET WELDS AND 1'-0 OF SUCH WELDS LESS THAN 10'-0 IN LENGTH ON GIRDER WEB TO FLANGE, CONNECTION PLATES TO WEB AND FLANGE AND CROSSFRAME WELDS. TESTING PER THE YOKE METHOD, USING DC.

DRILLING, PUNCHING, AND REAMING HOLE PROCEDURES:
RA REAMED ASSEMBLY
INDICATES CONNECTING PIECES PUNCHED OR DRILLED ¼" UNDERSIZED, REAMED TO FULL SIZE WHILE ASSEMBLED, THEN MATCH MARKED.
UNLESS NOTED OTHERWISE, BOLT HOLES IN MATERIAL ⅝" OR LESS IN THICKNESS MAY BE CNC (COMPUTER NUMERICALLY CONTROLLED) PUNCHED OR CNC DRILLED FULL SIZE UNASSEMBLED. ALL MATERIAL THICKER THAN ⅝" IS TO BE DRILLED FOR UTILITY SUPPORTS.
ALL HOLES IN CROSSFRAMES & DIAPHRAGMS MUST BE DRILLED.

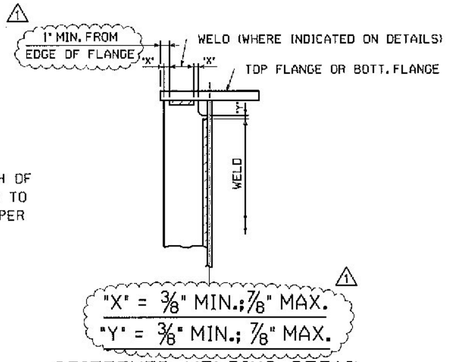
CLEANING:
ALL STEEL: SSPC-SP1, AS NECESSARY
ALL STEEL: SSPC-SP10, AFTER FABRICATION (1)

PAINTING:
NO PAINT

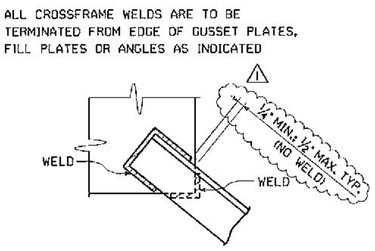
DRAWING REFERENCE:

FLANGE SPLICES	-PREFIXED "FS"
WEB CAMBERS	-PREFIXED "WC"
GIRDER JOB STANDARDS	-PREFIXED "X"
CROSSFRAME JOB STDS.	-PREFIXED "M"
SHOP ASSEMBLY	-PREFIXED "SA"
HORIZONTAL CURVE	-PREFIXED "HC"
WELDING PROCEDURE	-PREFIXED "WP"

(1)



STIFFENER WELDING DETAIL



SECONDARY MEMBER WELDING DETAIL

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
1	APPROVAL CHANGE: REVISED NOTE & WELDING DETAILS	MJD	MGK	2/5/13

HIGH STEEL STRUCTURES
An ISO 9001:2000 Certified Company
Lancaster Facility: 75 Old Philadelphia Pike, Lancaster, PA 17603-0008, Phone (717) 295-5211
Bridgeport Facility: 3531 N. 44th Street, Bridgeport, PA 19701, Phone (570) 326-1691
An Affiliate of High Industries Inc. www.Highsteel.com

HOLES / BOLTS / COATING / CODES(S) / SCALE N.T.S.

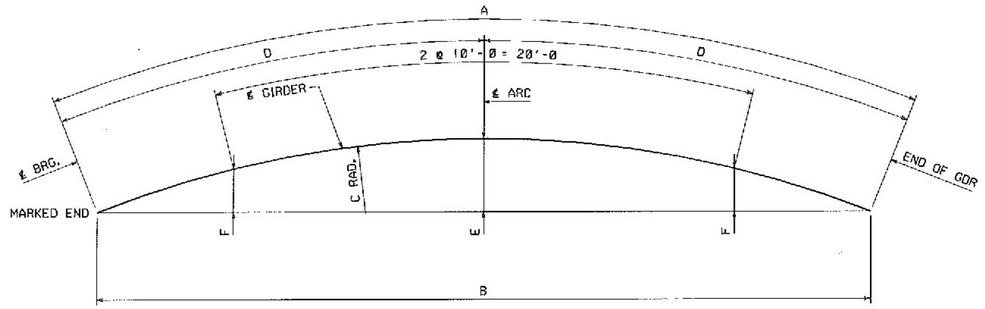
GENERAL SHOP NOTES
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (IH)	MADE BY KCL	CHK'D. BY SJA
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	GN1 OF GN1

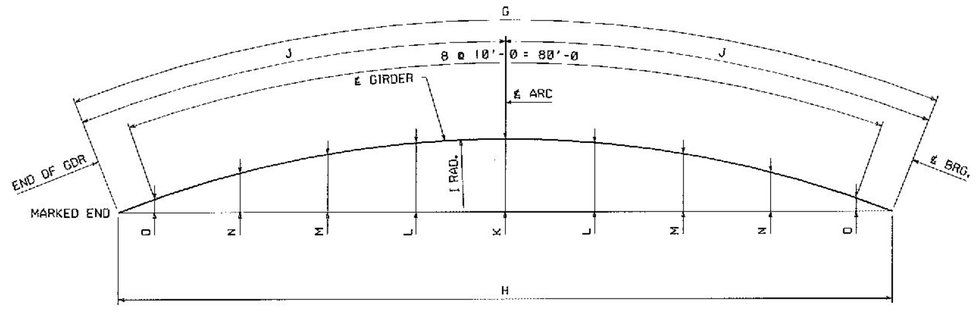
DATE 12/04/12

VT

PLOTTED: 2/5/2013 12:43:58 PM BY: mkramer
SHIPMENT: 01 PW&L No: 25625/26 PRES: 3225752 SHIP&ERECT.: 4225753



MARK	A	B	C	D	E	F
G1A	31'-4	31'-3 13/16	268'-0	15'-8	5 1/2	3 1/4
G2A	32'-4 1/8	32'-3 3/8	260'-3	16'-2 1/16	6	3 3/4
G3A	34'-4 5/16	34'-4	252'-6	17'-2 5/32	7	4 5/16
G4A	35'-4 7/16	35'-4 1/16	244'-9	17'-8 1/32	7 1/16	5 3/16
G5A	36'-4 1/16	36'-4 1/4	237'-0	18'-2 1/32	8 3/8	5 7/8



MARK	G	H	I	J	K	L	M	N	O
G1B	88'-8 1/16	88'-3 1/4	268'-0	44'-4 1/16	3'-7 15/16	3'-5 1/16	2'-10 15/16	1'-11 3/16	8 3/16
G2B	87'-8 3/4	87'-3 3/4	260'-3	43'-10 3/8	3'-8 1/4	3'-5 15/16	2'-11 1/16	1'-11 1/2	7 7/16
G3B	85'-9 7/16	85'-4 1/2	252'-6	42'-10 23/32	3'-7 5/8	3'-5 1/4	2'-10 1/8	1'-10 1/4	5 11/16
G4B	84'-10 1/4	84'-5 7/16	244'-9	42'-5 1/8	3'-8	3'-5 5/16	2'-10 3/16	1'-10	4 7/8
G5B	83'-11 1/8	83'-5 7/8	237'-0	41'-11 7/16	3'-8 7/16	3'-5 5/16	2'-10 3/8	1'-9 11/16	4 1/16

NOTES:

ALL DIMENSIONS APPLY AT THE TOP OF WEB PLATE FOR GIRDERS.

Vermont Agency of Transportation

RECEIVED

CK'D BY J. CLARK OK'D BY J. GRIFFIN

February 12, 2013

RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
△				
△				
△				

HOLES

BOLTS

COATING

CODE(S)
30

SCALE
N.T.S.

VT

HIGH STEEL STRUCTURES INC.
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.
Lancaster Facility
826 Old Philadelphia Pike
Lancaster, PA 17602-3308
Phone (717) 293-7241
Williamsport Facility
3501 E. 4th Street
Williamsport, PA 17701
Phone (570) 326-9351
www.highsteel.com

HORIZONTAL CURVE DIAGRAMS

ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH

ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00

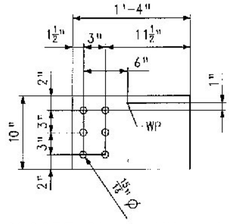
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON

STATE OF VERMONT

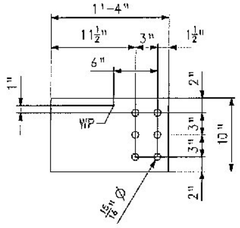
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR.	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (JH)	MADE BY KMA	CHK'D. BY DH	DATE 12/7/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	HC1 OF HC1

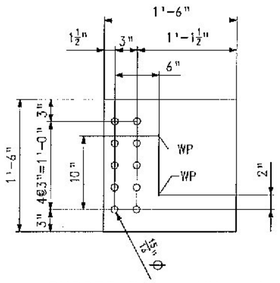
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BY: JSpiker
SHIPMENT 6
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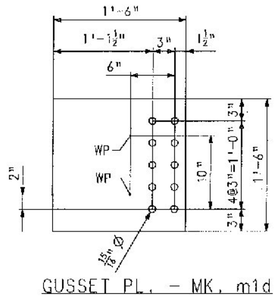
GUSSET PL. - MK. m1a



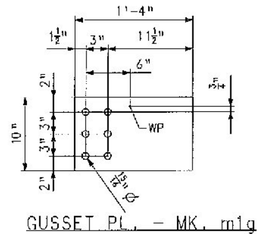
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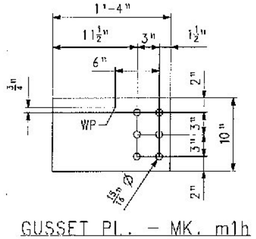
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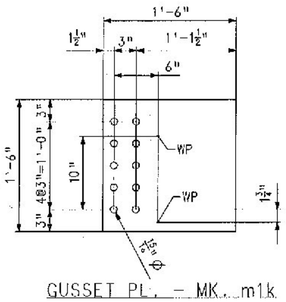
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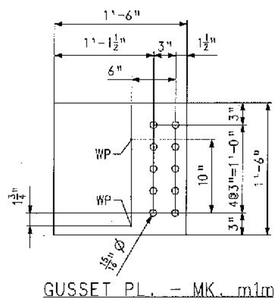
GUSSET PL. - MK. m1g



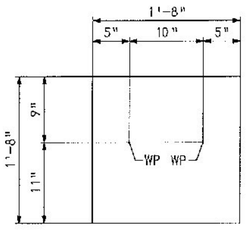
GUSSET PL. - MK. m1h



GUSSET PL. - MK. m1k



GUSSET PL. - MK. m1m



GUSSET PL. - MK. m1f

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.

BILL OF MATERIAL

QTY	MARK	COMM.	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	WEIGHT EA. (LBS)
2	m1a	PL	1/2 x 10	1 4	M270	50W	T		11002	23
2	m1b	PL	1/2 x 10	1 4	M270	50W	T		11002	23
2	m1c	PL	1/2 x 18	1 6	M270	50W	T		11002	46
2	m1d	PL	1/2 x 18	1 6	M270	50W	T		11002	46
38	m1f	PL	1/2 x 20	1 8	M270	50W	T		11002	57
36	m1g	PL	1/2 x 10	1 4	M270	50W	T		11002	23
36	m1h	PL	1/2 x 10	1 4	M270	50W	T		11002	23
36	m1k	PL	1/2 x 18	1 6	M270	50W	T		11002	46
36	m1m	PL	1/2 x 18	1 6	M270	50W	T		11002	46

Vermont Agency of Transportation

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CK'D BY J. CLARK OK'D BY J. GRIFFIN

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△				
△				
△				

HOLES 15/16" Ø

BOLTS NONE

COATING NONE

CODE(S) 63

SCALE N.T.S.

VT

HIGH STEEL STRUCTURES INC.
1815 Old Philadelphia Pike
Lancaster, PA 17602-3003
Phone (717) 299-5211
www.highsteel.com
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CROSSFRAME JOB STANDARDS

ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH

ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00

BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON

STATE OF VERMONT

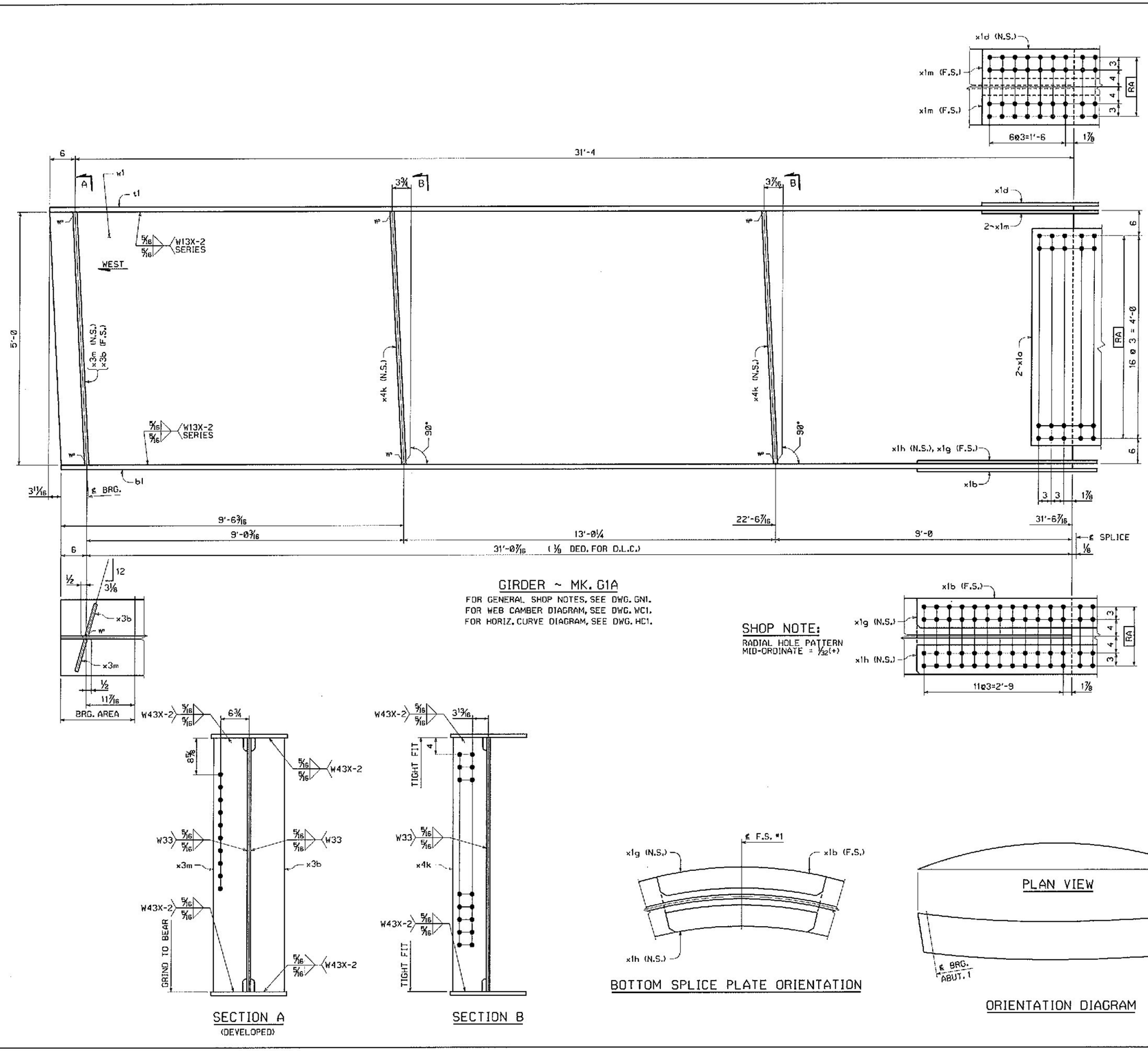
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. NUM.	
DRAWING MANAGER	JOSH MURRY (IH)	MADE BY	CDS
CK'D. BY	MGK	DATE	12/27/12
HSSI PROJECT NUMBER	S-1120.266A-1	DRAWING NUMBER	M1 OF M1

SHIPMENT : SHIPMENT: 5025871 PRO: 5025872 SHIPAREC#: 5025873
PLOTTED: MM/DD/YY hh:mm:ss BY: XXXXXXX

ENGLISH

PLOTTED: 1/4/2013 10:25:19 AM BY: JSpiker SHIPMENT 01 MKALN04 26254.fol PROD: 50252.252 SHIP&ERECT= 50252.253



GIRDER ~ MK. G1A

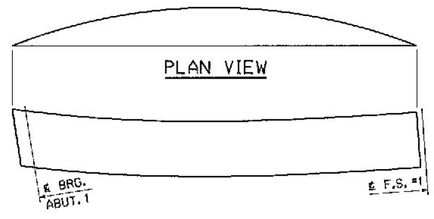
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

SHOP NOTE:
RADIAL HOLE PATTERN
MID-ORDINATE = 1/32(+)

SECTION A
(DEVELOPED)

SECTION B

BOTTOM SPLICE PLATE ORIENTATION



ORIENTATION DIAGRAM

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	SHP WT. EA (LBS)
1	G1A		GIRDER							13114
1	w1	PL	5/8 x 60	31 10 1/8	M270	50W	T		03008	
1	t1	PL	1 3/8 x 18	31 10	M270	50W	T		04008	
1	b1	PL	2 3/8 x 18	31 6 7/16	M270	50W	T		04004	
2	x1a	PL	5/16 x 51 1/2	1 7 1/2	M270	50W	T		06001	
1	x1b	PL	1 3/8 x 18	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06002	
1	x1d	PL	7/8 x 18	3 7 1/2	M270	50W	T		06004	
1	x1g	PL	1 3/8 x 7	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06006	
1	x1h	PL	1 3/8 x 7	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06006	
2	x1m	PL	7/8 x 7	3 7 1/2	M270	50W	T		06008	
1	x3b	PL	3/4 x 8	5 0 9/32	M270	50W			07001	
1	x3m	PL	3/4 x 8	5 0 9/32	M270	50W	T		07001	
2	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE

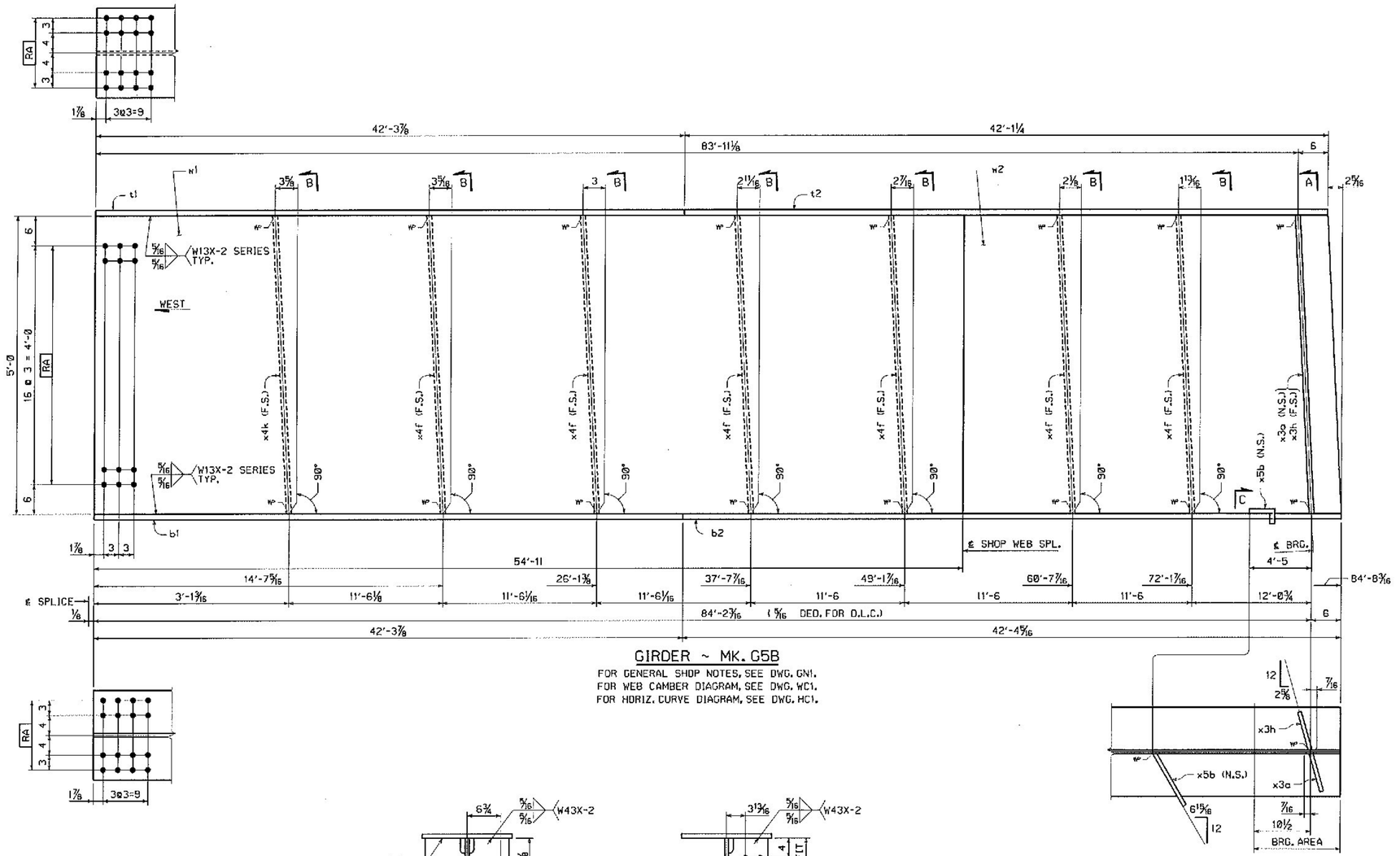
HOLES 15/16"ø (D.N.)
BOLTS NONE
COATING NONE
CODE(S) 30
SCALE N.T.S.

HIGH STEEL STRUCTURES INC.
An ISO 9001:2000 Certified Company
Lancaster Facility: 915 Old Philadelphia Pike, Lancaster, PA 17602-3006, Phone (717) 293-521
Williamsport Facility: 5001 E. 4th Street, Williamsport, PA 17701, Phone (570) 326-9051
An Affiliate of High Industries Inc. www.highsteel.com

GIRDER G1A
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

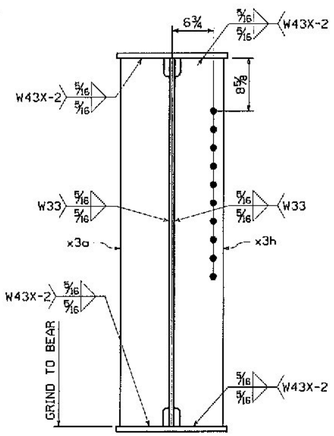
STATE CONT. OR REF. NO.: FED. AID PROJ. NO.:
GENERAL CONTRACTOR: MILLER CONSTRUCTION, INC. HSSI PROJ. MGR: KEN GLIDDEN
DRAWING MANAGER: JOSH MURRY (JH) MADE BY: CDS CHK'D BY: MGK DATE: 12/28/12
HSSI PROJECT NUMBER: S-1120266A-1 DRAWING NUMBER: 1 OF 14

VT

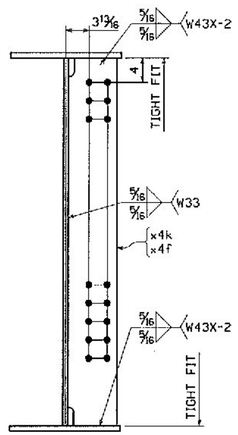


GIRDER ~ MK. G5B

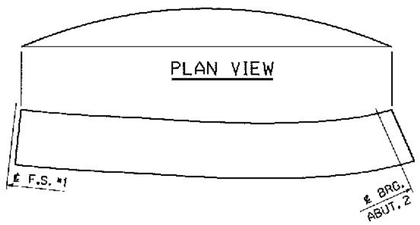
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.



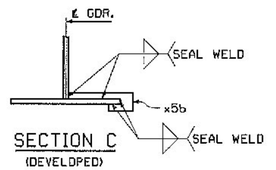
SECTION A
(DEVELOPED)



SECTION B



ORIENTATION DIAGRAM



SECTION C
(DEVELOPED)

BILL OF MATERIAL

QTY EA.	MARK	COMB	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	SHP WT. EA. (LBS)
1	G5B		GIRDER							20553
1	w1	PL	5/8 x 60	54 11	M270	50W	T		03001	
1	w2	PL	5/8 x 60	29 9 3/16	M270	50W	T		03009	
1	t1	PL	7/8 x 18	42 3 7/8	M270	50W	T		04012	
1	t2	PL	7/8 x 18	42 1 1/4	M270	50W	T		04012	
1	b1	PL	7/8 x 18	42 3 7/8	M270	50W	T		04012	
1	b2	PL	7/8 x 18	42 4 5/16	M270	50W	T		04012	
1	x3a	PL	3/4 x 8	5 0 1/32	M270	50W			07001	
1	x3h	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	
6	x4f	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	
1	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	
1	x5b	PL	1/4 x 2 7/8	1 0 1/16	M270	50W			07003	

Vermont Agency of Transportation

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CK'D BY J. CLARK OK'D BY J. GRIFFIN

February 12, 2013

RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE

HOLES 15/16"ø (U.N.)

BOLTS NONE

COATING NONE

CODE(S) 30

SCALE N.T.S.

HIGH STEEL STRUCTURES INC.
An AFAHigh of High Industries Inc.
An ISO 9001:2000 Certified Company
Lancaster Facility
915 Old Philadelphia Pike
Lancaster, PA 17602-3004
Phone: (717) 299-5211
Williamsport Facility
350 W. 4th Street
Williamsport, PA 17701
Phone: (570) 326-9351
www.highsteel.com

GIRDER G5B

ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH

ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00

BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON

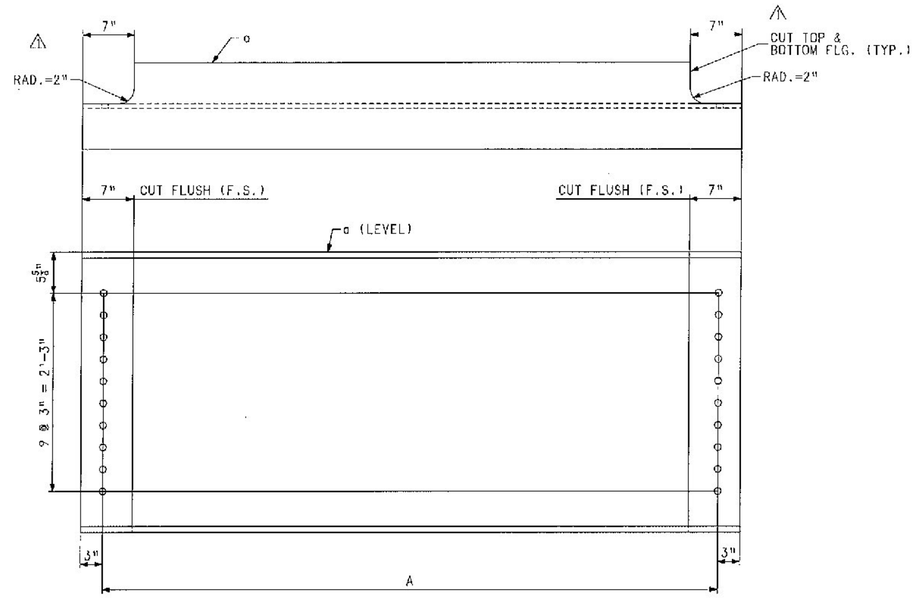
STATE OF VERMONT

AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (JH)	MADE BY	CDS
CHK'D. BY	MGK	DATE	12/29/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	10 OF 14

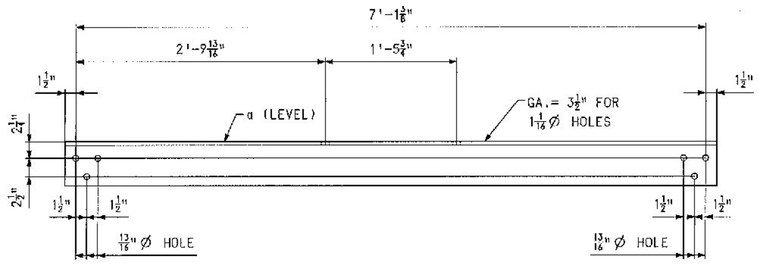
VT

ENGLISH
SHIPMENT 01 PHASING SEQUENCE PROJ 2012/13/0 SHEETS/SHEET 1 SHEETS
PLOTTED 1/4/2013 10:25:30 AM By: JSalker



DIAPHRAGM

MARK	A
D1	6'-11 7/16
D2	6'-10 15/16
D3	6'-10 3/4
D4	6'-9 5/8
D5	6'-9 3/8
D6	6'-9 1/4



DIAPHRAGM – MK. D7
(BID ITEM 900.645)

BILL OF MATERIAL

QTY	MARK	CONV.	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	WEIGHT EA. (LBS)
1	D1		DIAPHRAGM							1111
1	a	W	40 x 149	7 5 7/16	M270	50W	T		10001	
1	D2		DIAPHRAGM							1104
1	a	W	40 x 149	7 4 15/16	M270	50W	T		10001	
1	D3		DIAPHRAGM							1102
1	a	W	40 x 149	7 4 3/4	M270	50W	T		10001	
1	D4		DIAPHRAGM							1098
1	a	W	40 x 149	7 4 5/8	M270	50W	T		10001	
1	D5		DIAPHRAGM							1085
1	a	W	40 x 149	7 3 3/8	M270	50W	T		10001	
1	D6		DIAPHRAGM							1083
1	a	W	40 x 149	7 3 1/4	M270	50W	T		10001	
60	D7		DIAPHRAGM							144
1	a	L	6 x 6 x 1/2	7 4 5/8	M270	50W	T		10002	

Vermont Agency of Transportation

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BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
1	DETAIL ERROR: REVISED CUT FLUSH DIM. CONT. REQUEST: ADDED CUT FLUSH VIEW	SSL	MGK	2-5-13

HOLES 15/16" Ø (U.N.O.)

BOLTS NONE

COATING NONE

CODE(S) 56

SCALE N.T.S.

HIGH STEEL STRUCTURES INC.
1615 Old Hillsville Pike
Lancaster, PA 17602-9069
Phone: (717) 299-5211
www.highsteel.com
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.

DIAPHRAGMS D1 THRU D7

ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH

ROUTE NO. TH7 STA. 13405.00 TO STA. 14+25.00

BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON

STATE OF VERMONT

AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO. | FED. AID PROJ. NO.

GENERAL CONTRACTOR: MILLER CONSTRUCTION, INC. | HSSI PROJ. MGR.

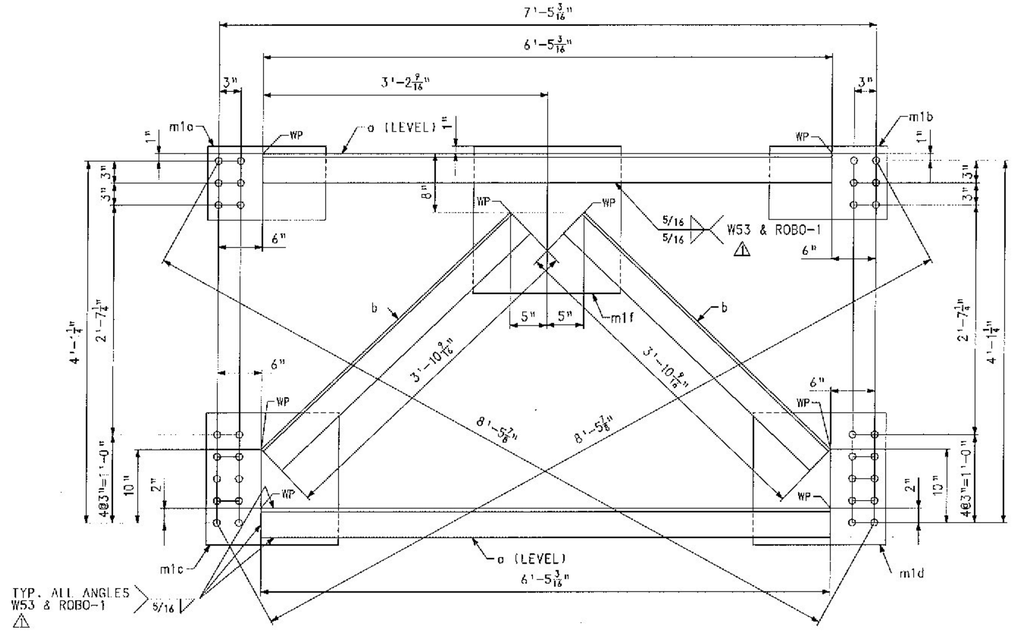
VT

DRAWING MANAGER: JOSH MURRY (IH) | MADE BY: CDS | CHK'D. BY: MGK | DATE: 12/27/12

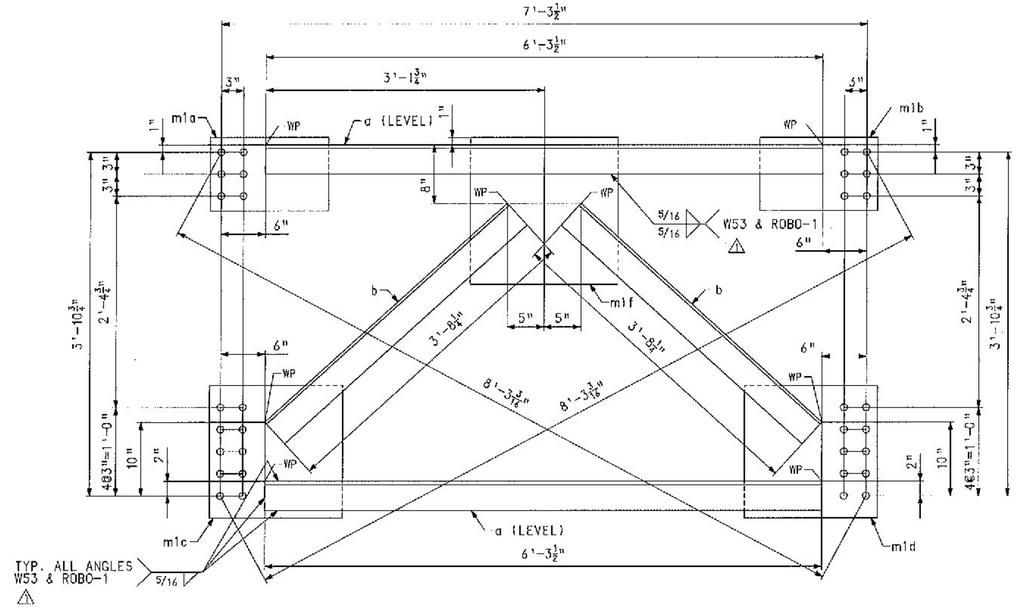
HSSI PROJECT NUMBER: S-1120.266A-1 | DRAWING NUMBER: 11 OF 14

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.

SHIPMENT 1 PMENG: 5025871 PRD: 5025872 SH:PAEREC1: 5025873
PLOTTED: MM/DD/YY hh:mm:ss BY: XXXXXXX



CROSSFRAME MK. CF1



CROSSFRAME MK. CF2

BILL OF MATERIAL

QTY	MARK	COMM.	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	WEIGHT EA. (LBS)
1	CF1		CROSSFRAME							456
2	a	L	4 x 4 x 1/2	6 5 3/16	M270	50W	T		11001	
2	b	L	4 x 4 x 1/2	3 10 9/16	M270	50W	T		11001	
1	m1a	PL	1/2 x 10	1 4	M270	50W	T		11002	
1	m1b	PL	1/2 x 10	1 4	M270	50W	T		11002	
1	m1c	PL	1/2 x 18	1 6	M270	50W	T		11002	
1	m1d	PL	1/2 x 18	1 6	M270	50W	T		11002	
1	m1f	PL	1/2 x 20	1 8	M270	50W	T		11002	
1	CF2		CROSSFRAME							447
2	a	L	4 x 4 x 1/2	6 3 1/2	M270	50W	T		11001	
2	b	L	4 x 4 x 1/2	3 8 1/4	M270	50W	T		11001	
1	m1a	PL	1/2 x 10	1 4	M270	50W	T		11002	
1	m1b	PL	1/2 x 10	1 4	M270	50W	T		11002	
1	m1c	PL	1/2 x 18	1 6	M270	50W	T		11002	
1	m1d	PL	1/2 x 18	1 6	M270	50W	T		11002	
1	m1f	PL	1/2 x 20	1 8	M270	50W	T		11002	

Vermont Agency of Transportation

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NO.	REVISION	BY	CHK'D	DATE
1	DETAIL ERROR: REV. WELD DESIGNATION	SSI	MGK	2-5-13

HOLES 15/16" Ø

BOLTS NONE

COATING NONE

DESIGN 63

SCALE N.T.S.

HIGH STEEL STRUCTURES INC.
1835 Old Philadelphia Pike
Lancaster, PA 17602-2808
Phone 17171 293-5211
www.highsteel.com
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.

CROSSFRAMES CF1 & CF2

ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH

ROUTE NO. TH7 STA. 13405.00 TO STA. 14+25.00

BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON

STATE OF VERMONT

AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.: FED. AID PROJ. NO.:

GENERAL CONTRACTOR: MILLER CONSTRUCTION, INC. HSS PROJ. MGR:

DRAWING MANAGER: JOSH MURRY (IH) MADE BY: CDS CHK'D. BY: MGK DATE: 12/27/12

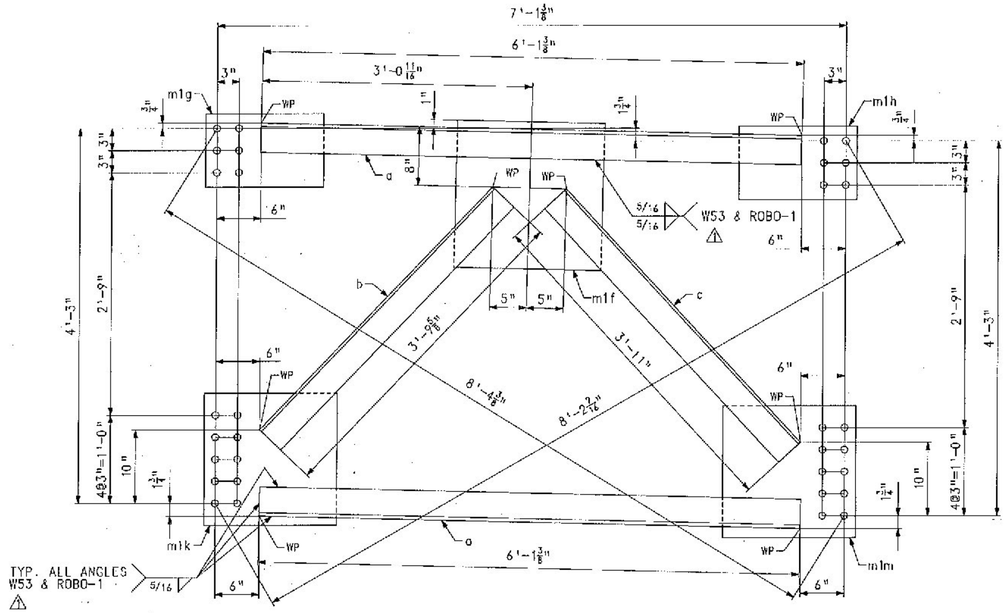
HSS PROJECT NUMBER: S-1120266A-1 DRAWING NUMBER: 12 OF 14

VT

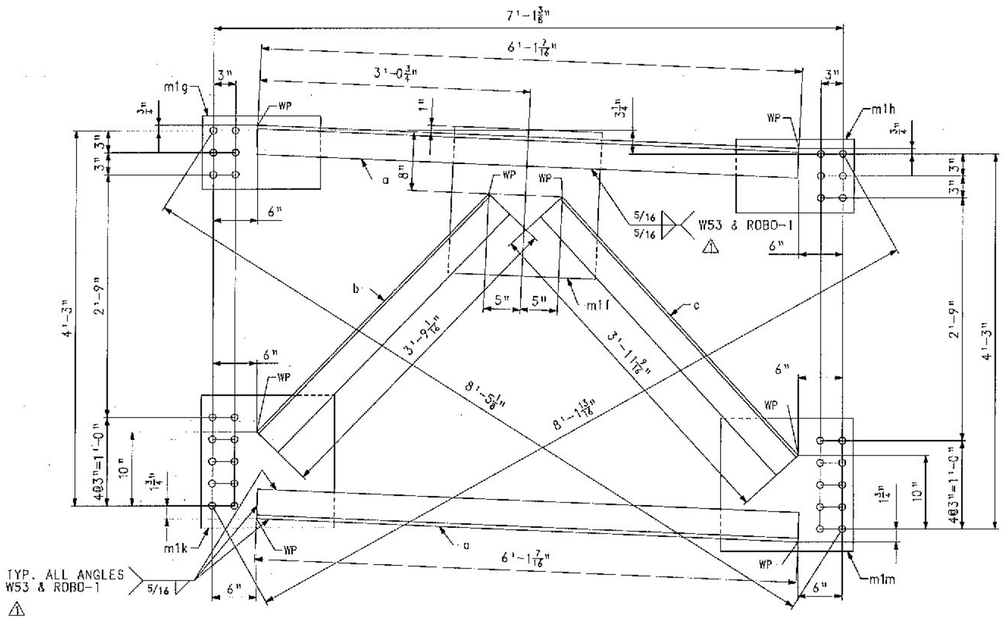
FOR GENERAL SHOP NOTES, SEE DRAWING GN1.

SHIPMENT | PMARKS: 5025872 PO: 5025872 SHIPAREC': 5025872

PLOTTED: MM/DD/YY HH:MM:SS BY: XXXXXXX



CROSSFRAME MK. CF3



CROSSFRAME MK. CF4

BILL OF MATERIAL

QTY	MARK	COMM.	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	WEIGHT EA. (LBS)
9	CF3		CROSSFRAME							447
2	a	L	4 x 4 x 1/2	6 1 3/8	M270	50W	T		11001	
1	b	L	4 x 4 x 1/2	3 9 5/8	M270	50W	T		11001	
1	c	L	4 x 4 x 1/2	3 11	M270	50W	T		11001	
1	m1g	PL	1/2 x 10	1 4	M270	50W	T		11002	
1	m1h	PL	1/2 x 10	1 4	M270	50W	T		11002	
1	m1k	PL	1/2 x 18	1 6	M270	50W	T		11002	
1	m1m	PL	1/2 x 18	1 6	M270	50W	T		11002	
1	m1f	PL	1/2 x 20	1 8	M270	50W	T		11002	
9	CF4		CROSSFRAME							447
2	a	L	4 x 4 x 1/2	6 1 7/16	M270	50W	T		11001	
1	b	L	4 x 4 x 1/2	3 9 1/16	M270	50W	T		11001	
1	c	L	4 x 4 x 1/2	3 11 9/16	M270	50W	T		11001	
1	m1g	PL	1/2 x 10	1 4	M270	50W	T		11002	
1	m1h	PL	1/2 x 10	1 4	M270	50W	T		11002	
1	m1k	PL	1/2 x 18	1 6	M270	50W	T		11002	
1	m1m	PL	1/2 x 18	1 6	M270	50W	T		11002	
1	m1f	PL	1/2 x 20	1 8	M270	50W	T		11002	

Vermont Agency of Transportation

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BY J. LACROIX DATE 02/25/2013

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1	DETAIL ERROR: REV.: WELD DESIGNATION	SSL	MGK	2-5-13

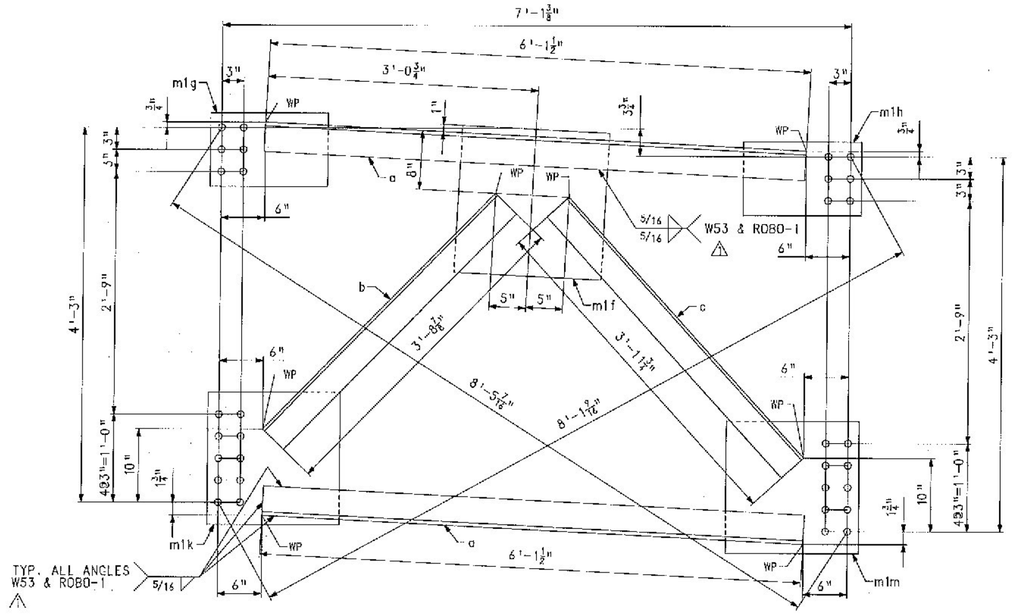
HIGH STEEL STRUCTURES INC.
1915 Old Philadelphia Pike
Lancaster, PA 17602-2808
Phone (717) 299 5211
www.highsteel.com
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.

BOLTS	15/16" Ø
	NONE
COATING	NONE
CODE(S)	63
SCALE	N.T.S.
	CROSSFRAMES CF3 & CF4
	ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
	ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
	BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
	STATE OF VERMONT
	AGENCY OF TRANSPORTATION
STATE CONT. OR REF. NO.	FED. AID PROJ. NO.
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC. HSS PROJ. NO.
DRAWING MANAGER	JOSH MURRY (JM) MADE BY CDS CHK'D. BY MGK DATE 12/27/12
HSS PROJECT NUMBER	S-1120.266A-1 DRAWING NUMBER 13 OF 14

VT

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.

SHIPMENT : PMDWG: 5025872 PRO: 5025872 S:\PROJECT: 5025872
PLOTTED: XM/DD/YY hh:mmAM BY: XXXXXXX



CROSSFRAME MK. CF5

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.

BILL OF MATERIAL

QTY	MARK	COMM.	DESCRIPTION	LENGTH	SPEC.	GRADE	TEST	REMARKS	ITEM	WEIGHT EA. (LBS)
18	CF5		CROSSFRAME							415
2	a	L	4 x 4 x 1/2	6 1 1/2	M270	50W	T	-	11001	
1	b	L	4 x 4 x 1/2	3 8 7/8	M270	50W	T		11001	
1	c	L	4 x 4 x 1/2	3 11 3/4	M270	50W	T		11001	
1	m1g	PL	1/2 x 10	1 4	M270	50W	T		11002	
1	m1h	PL	1/2 x 10	1 4	M270	50W	T		11002	
1	m1k	PL	1/2 x 18	1 6	M270	50W	T		11002	
1	m1m	PL	1/2 x 18	1 6	M270	50W	T		11002	
1	m1f	PL	1/2 x 20	1 8	M270	50W	T		11002	

Vermont Agency of Transportation

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RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
1	DETAIL ERROR: REV. WELD DESIGNATION	SSL	MGK	2-5-13

HOLES 15/16" Ø
BOLTS NONE
COATING NONE
CODE(S) 63
SCALE N.T.S.

HIGH STEEL STRUCTURES INC.
185 Old Phillips Mills Road, Lancaster, PA 17601-0009
Phone (717) 290-5211
www.highsteel.com
An ISO 9001:2000 Certified Company — An Affiliate of High Industries Inc.

CROSSFRAMES CF5
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.
FED. AID PROJ. NO.
GENERAL CONTRACTOR: MILLER CONSTRUCTION, INC.
HSSI PROJ. NO.

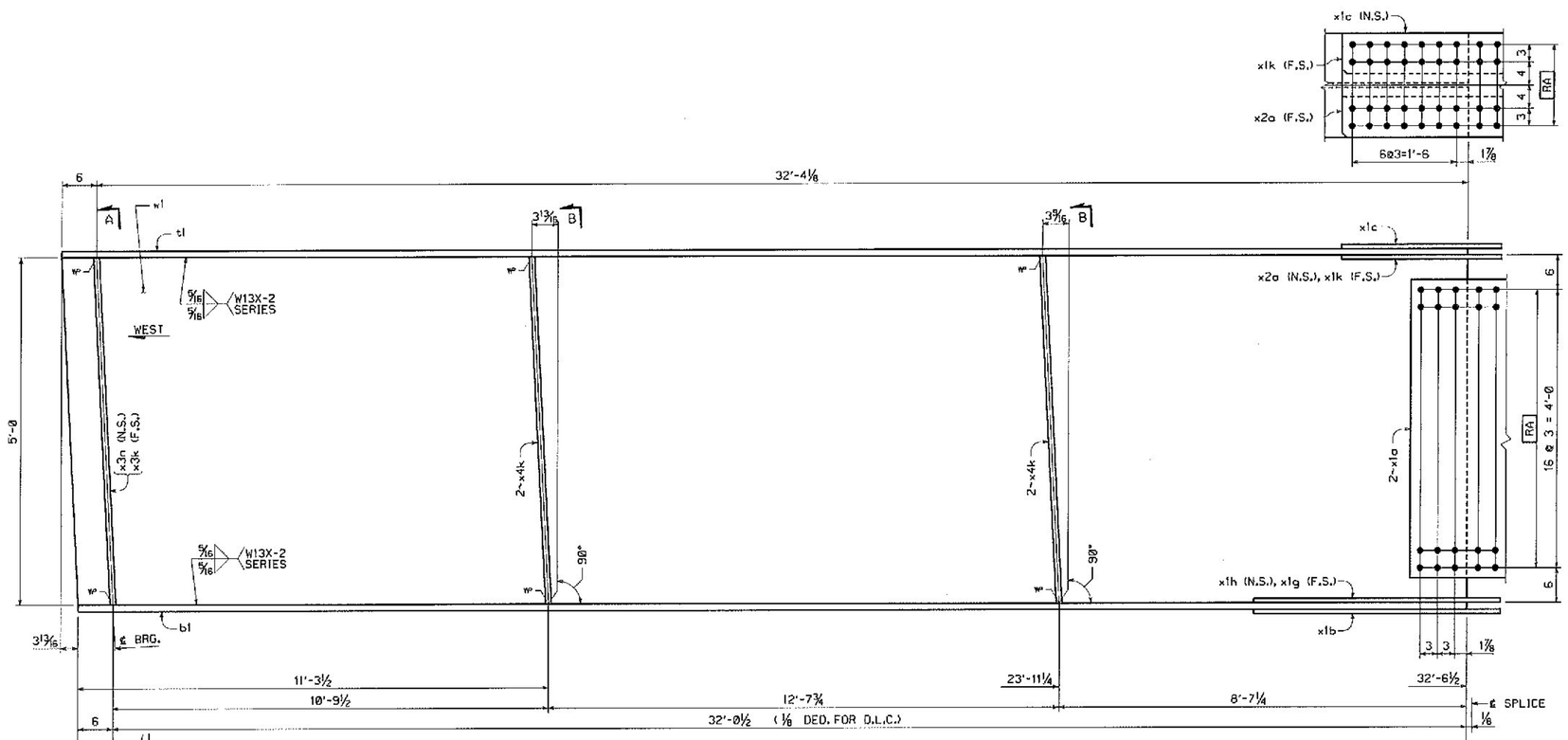
VT

DRAWING MANAGER	JOSH MURRY (JH)	MADE BY	CDS	CHK'D BY	MGK	DATE	12/27/12
HSSI PROJECT MANAGER	S-1120266A-1	DRAWING NUMBER	14 OF 14				

SHIPMENT : PMENG: 5025672 PRO: 5025822 S-1PROJECT: 5025822

PLOTTED: MM/DD/YY H:mm:ss BY: XXXXXXXX

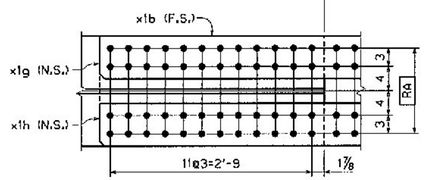
ENGLISH

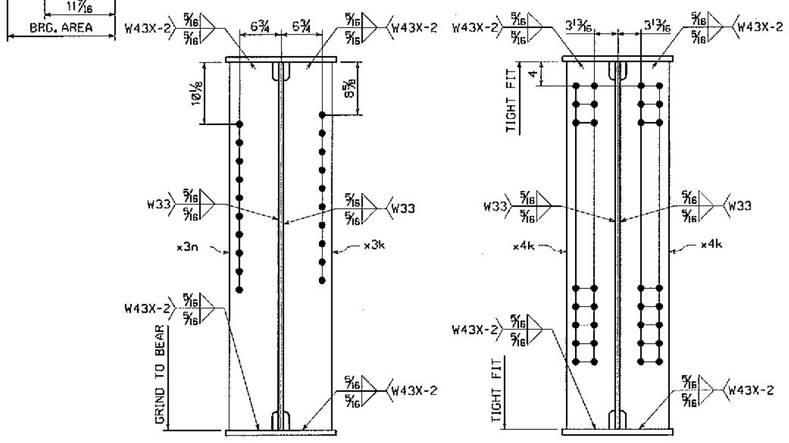


GIRDER ~ MK. G2A

FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

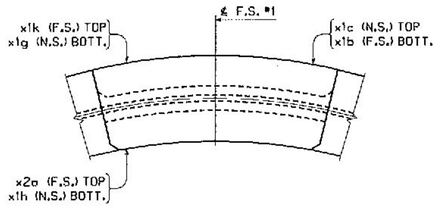
SHOP NOTE:
RADIAL HOLE PATTERN
MID-ORDINATE = 1/32(+)



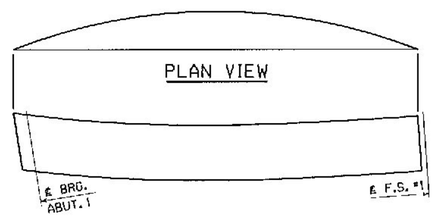


SECTION A
(DEVELOPED)

SECTION B



SPLICE PLATE ORIENTATION



ORIENTATION DIAGRAM

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	SHP WT. EA. (LBS)
1	G2A		GIRDER							13611
1	w1	PL	5/8 x 60	32 10 5/16	M270	50W	T		03007	
1	t1	PL	1 3/8 x 18	32 10 1/8	M270	50W	T		04007	
1	b1	PL	2 3/8 x 18	32 6 1/2	M270	50W	T		04003	
2	x1a	PL	5/16 x 51 1/2	1 7 1/2	M270	50W	T		06001	
1	x1b	PL	1 3/8 x 18	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06002	
1	x1c	PL	7/8 x 18	3 7 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06003	
1	x1g	PL	1 3/8 x 7	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06006	
1	x1h	PL	1 3/8 x 7	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06006	
1	x1k	PL	7/8 x 7	3 7 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06007	
1	x2a	PL	7/8 x 7	3 7 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06007	
1	x3k	PL	3/4 x 8	5 0 5/16	M270	50W	T		07001	
1	x3n	PL	3/4 x 8	5 0 5/16	M270	50W	T		07001	
4	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
△				
△				
△				

HOLES 15/16"ø (U.N.)
BOLTS NONE
COATING NONE
CODE(S) 30
SCALE N.T.S.

HIGH STEEL STRUCTURES INC.
Lancaster Facility: 195 Old Philadelphia Pike, Lancaster, PA 17602-2008, Phone (717) 299-5201
Hagerstown Facility: 1520 E. 9th Street, Williamsport, PA 17701, Phone (570) 326-9651
An ISO 9001:2000 Certified Company — An Affiliate of High Industries Inc. — www.Highsteel.com

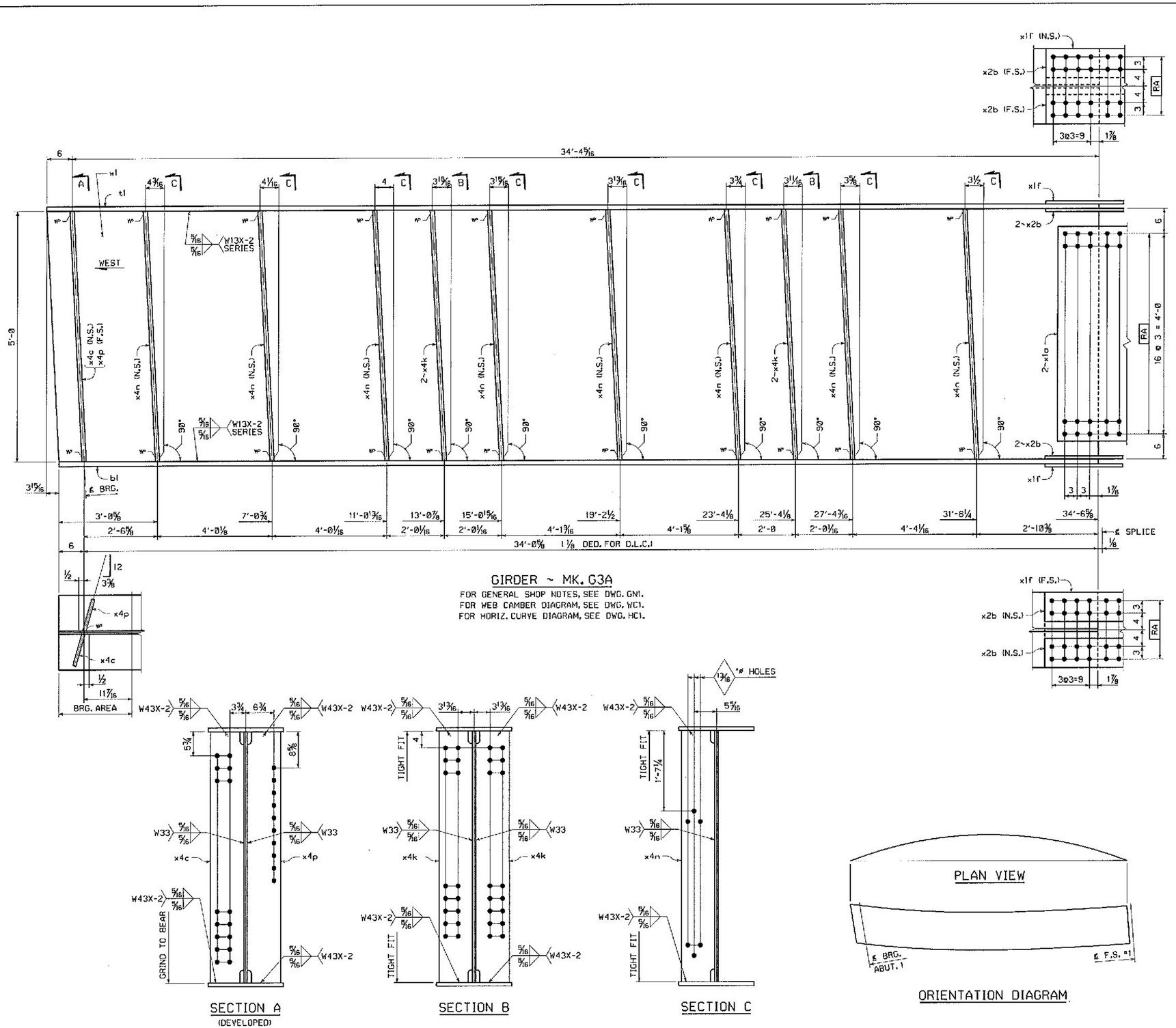
GIRDER G2A
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+85.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.
FED. AID PROJ. NO.
GENERAL CONTRACTOR: MILLER CONSTRUCTION, INC.
HSSI PROJ. MGR.: KEN GLIDDEN
DRAWING MANAGER: JOSH MURRY (IH) MADE BY: CDS CHK'D. BY: MGK DATE: 12/28/12
HSSI PROJECT NUMBER: S-1120266A-1 DRAWING NUMBER: 2 OF 14

VT

PLOTTED: 1/4/2013 10:25:38 AM BY: JSpaker SHIPMENT 01 PM#ENG: 50025751 PRD: 50025752 SHIP/ERECT.: 50025753

ENGLISH



GIRDER ~ MK. G3A

FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

SECTION A
(DEVELOPED)

SECTION B

SECTION C

ORIENTATION DIAGRAM

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	SHIP WT. EA. (LBS)
1	G3A		GIRDER							9604
1	w1	PL	5/8 x 60	34 10 9/16	M270	50W	T		03008	
1	t1	PL	7/8 x 18	34 10 5/16	M270	50W	T		04015	
1	b1	PL	7/8 x 18	34 6 5/8	M270	50W	T		04015	
2	x1a	PL	5/16 x 51 1/2	1 7 1/2	M270	50W	T		06001	
2	x1f	PL	1/2 x 18	2 1 1/2	M270	50W	T		06005	
4	x2b	PL	1/2 x 7	2 1 1/2	M270	50W	T		06008	
1	x4p	PL	3/4 x 8	5 0 5/16	M270	50W	T		07001	
1	x4c	PL	3/4 x 8	5 0 5/16	M270	50W	T		07001	
4	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	
8	x4n	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	

Vermont Agency of Transportation
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NO.	REVISION	BY	CHK'D	DATE

HOLES 15⁄₁₆"ø (U.N.)
BOLTS NONE
COATING NONE
CODE(S) 30
SCALE N.T.S.

HIGH STEEL STRUCTURES INC.
Lancaster Facility
175 Old Philadelphia Pike
Lancaster, PA 17602-2008
Phone (717) 295-521
Bridgeport Facility
2301 N. 4th Street
Bridgeport, PA 19405
Phone (610) 525-4651
www.Highsteel.com
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.

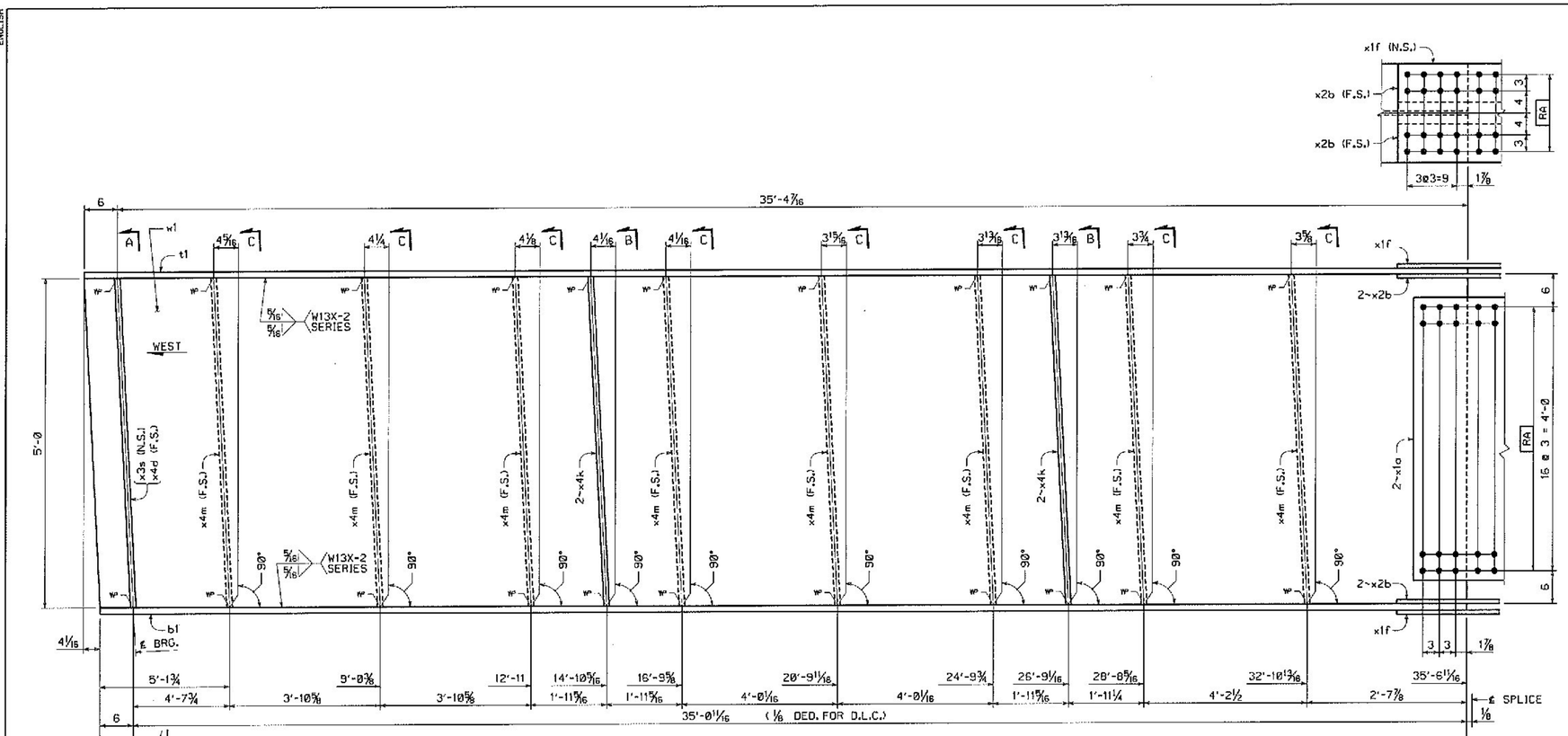
GIRDER G3A
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (IH)	MADE BY CDS	CHK'D. BY MGK DATE 12/28/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	3 OF 14

VT

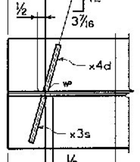
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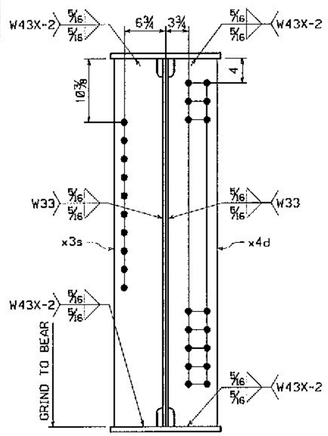
ENGLISH



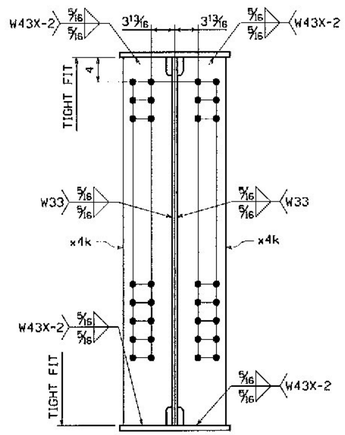
GIRDER ~ MK. G4A

FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

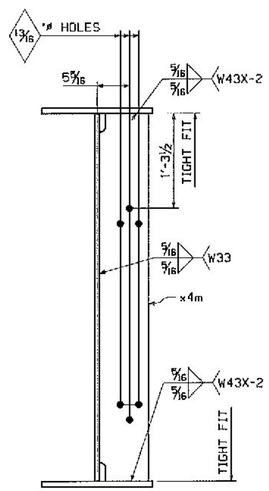




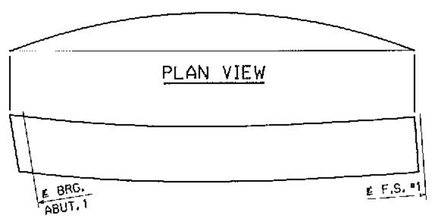
SECTION A
(DEVELOPED)



SECTION B



SECTION C



ORIENTATION DIAGRAM

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	SHIP WT. EA. (LBS)
1	G4A		GIRDER							9842
1	w1	PL	5/8 x 60	35 10 3/4	M270	50W	T		03005	
1	t1	PL	7/8 x 18	35 10 7/16	M270	50W	T		04014	
1	b1	PL	7/8 x 18	35 6 11/16	M270	50W	T		04014	
2	x1a	PL	5/16 x 51 1/2	1 7 1/2	M270	50W	T		06001	
2	x1f	PL	1/2 x 18	2 1 1/2	M270	50W	T		06005	
4	x2b	PL	1/2 x 7	2 1 1/2	M270	50W	T		06009	
1	x3s	PL	3/4 x 8	5 0 3/8	M270	50W	T		07001	
1	x4d	PL	3/4 x 8	5 0 3/8	M270	50W	T		07001	
4	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	
8	x4m	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
△				
△				
△				

HOLES 15⁄16" ⌀ (U.N.)
BOLTS NONE
COATING NONE
CODE(S) 30
SCALE N.T.S.
VT

HIGH STEEL STRUCTURES INC.
An AFFiliate of High Industries Inc.
An ISO 9001:2000 Certified Company
Lancaster Facility
915 So. Prince Street, Rte. 30
Lancaster, PA 17603-3308
Phone (717) 299-5201
Williamsport Facility
3500 E. 4th Street
Williamsport, PA 17701
Phone (570) 326-5251
www.highsteel.com

GIRDER G4A
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

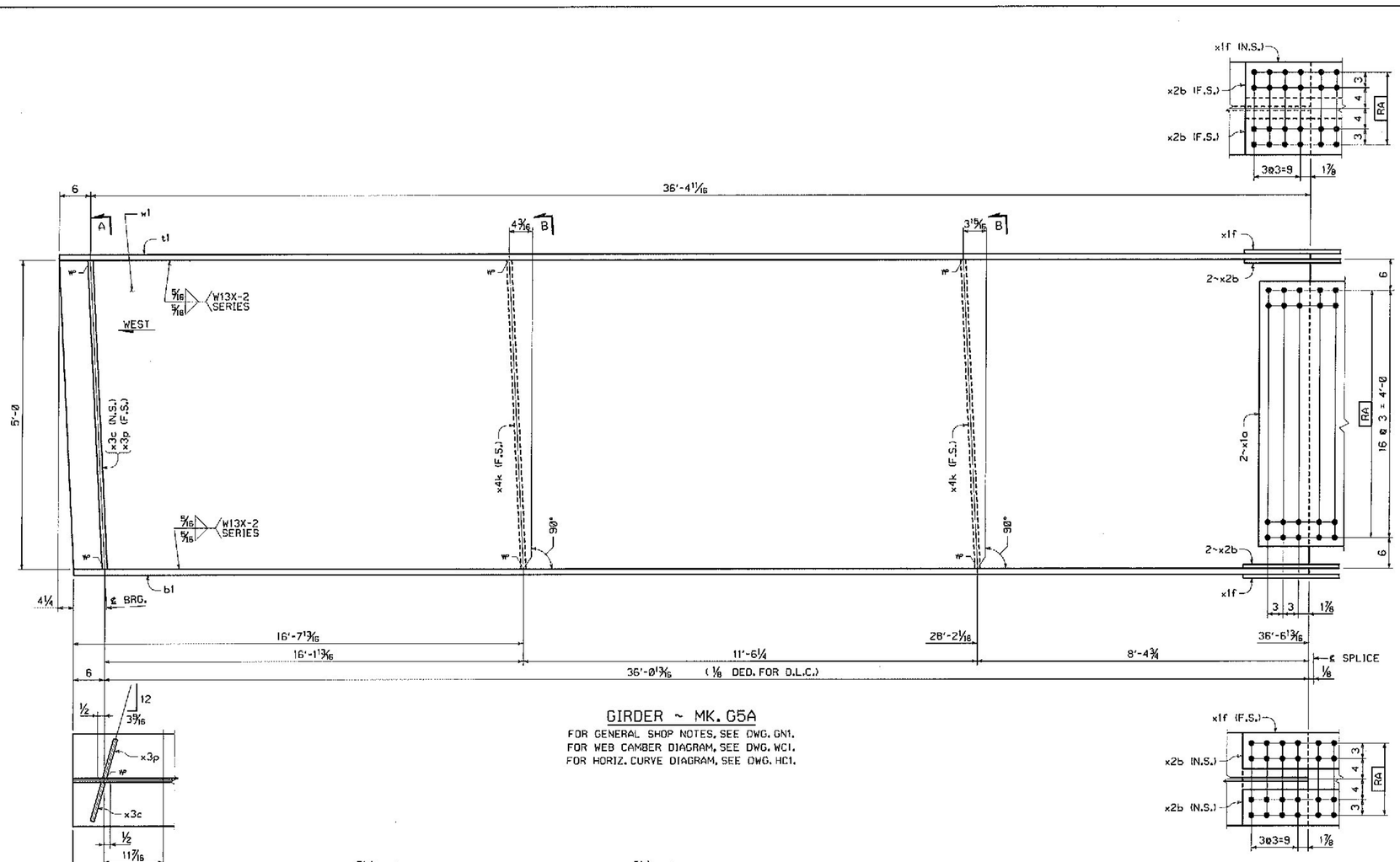
STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (IH)	MADE BY CDS	CHK'D. BY MGK DATE 12/28/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	4 OF 14

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BY: JSpiker
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ENGLISH

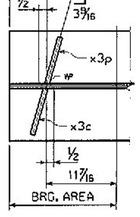
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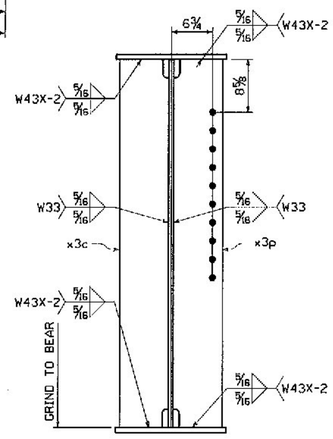
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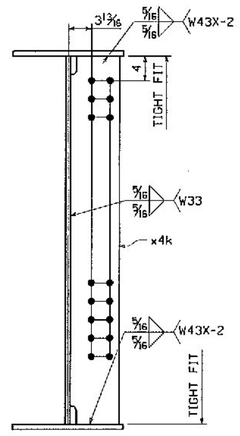
GIRDER ~ MK. G5A

FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

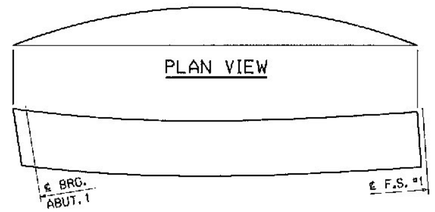




SECTION A
(DEVELOPED)



SECTION B



ORIENTATION DIAGRAM

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	SHP WT. EA. (LBS)
1	G5A		GIRDER							9400
1	w1	PL	5/8 x 60	36 11 1/16	M270	50W	T		03003	
1	t1	PL	7/8 x 18	36 10 11/16	M270	50W	T		04013	
1	b1	PL	7/8 x 18	36 6 13/16	M270	50W	T		04013	
2	x1a	PL	5/16 x 51 1/2	1 7 1/2	M270	50W	T		06001	
2	x1f	PL	1/2 x 18	2 1 1/2	M270	50W	T		06005	
4	x2b	PL	1/2 x 7	2 1 1/2	M270	50W	T		06009	
1	x3c	PL	3/4 x 8	5 0 3/8	M270	50W			07001	
1	x3p	PL	3/4 x 8	5 0 3/8	M270	50W	T		07001	
2	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	

Vermont Agency of Transportation

RECEIVED

CK'D BY J. CLARK OK'D BY J. GRIFFIN

February 12, 2013

RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
△				
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△				

HOLES 15/16"ø (U.N.)

BOLTS NONE

COATING NONE

CODE(S) 30

SCALE N.T.S.

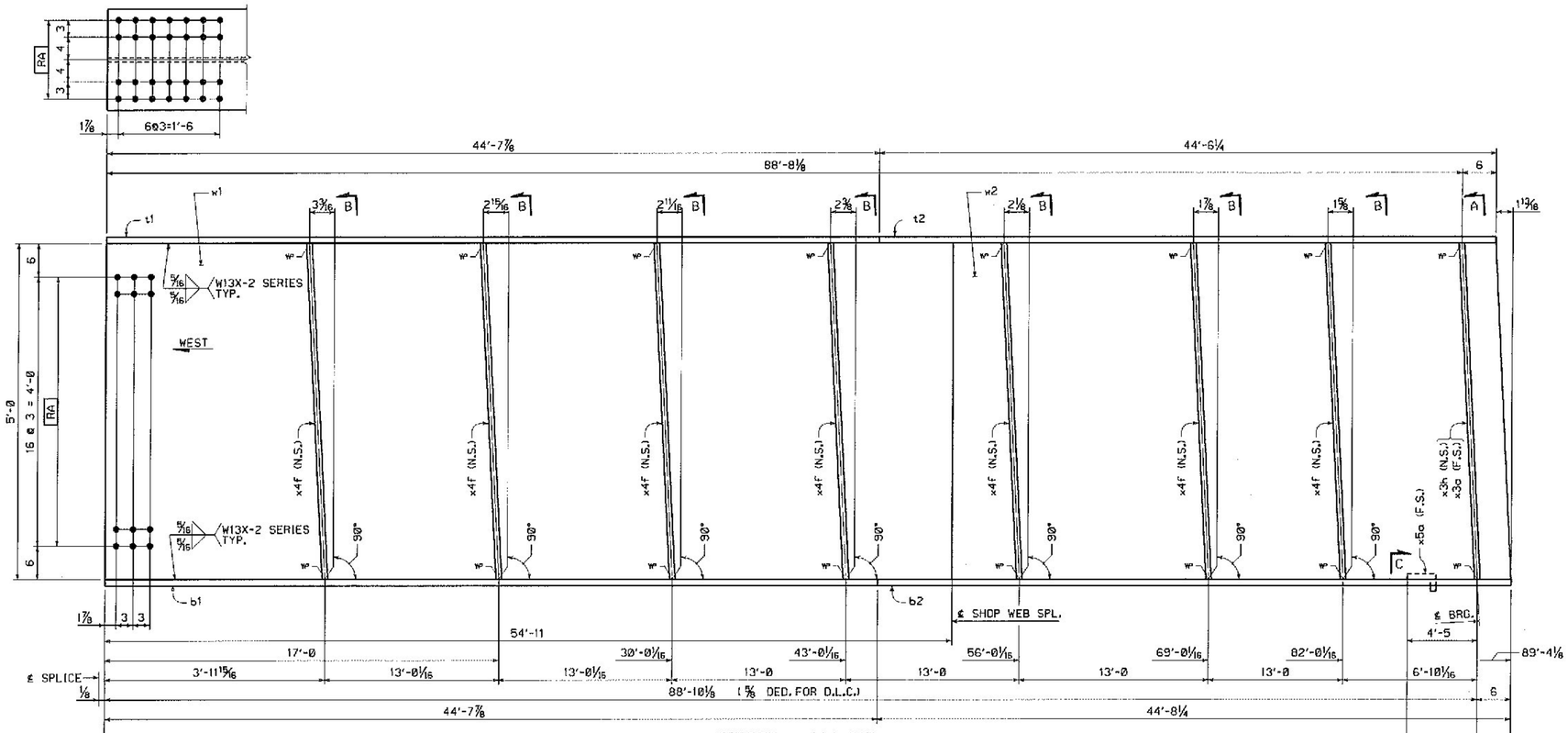
VT

HIGH STEEL STRUCTURES INC.
An Affiliate of High Industries Inc.
An ISO 9001:2000 Certified Company
Lancaster Facility
795 Old Philadelphia Pike
Lancaster, PA 17602-0006
Phone (717) 293-3011
Williamsport Facility
2501 W. 4th Street
Williamsport, PA 17701
Phone (570) 326-9004
www.highsteel.com

GIRDER G5A

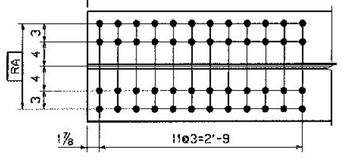
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+85.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR.	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (IH)	MADE BY	CDS
CHK'D BY	MGK	DATE	12/28/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	5 OF 14



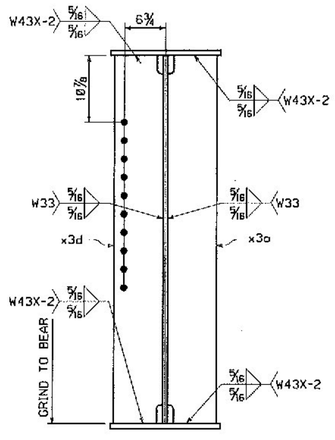
GIRDER ~ MK. G1B

FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.



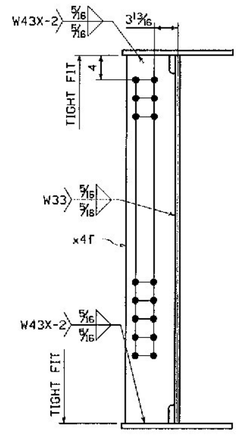
SHOP NOTE:

RADIAL HOLE PATTERN
MID-ORDINATE = ½₂(+)

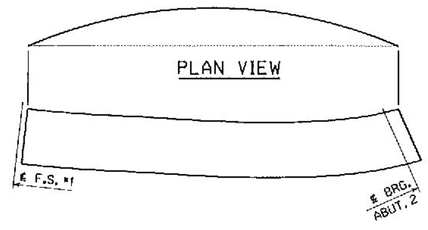


SECTION A

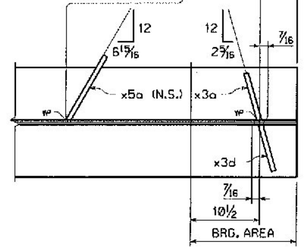
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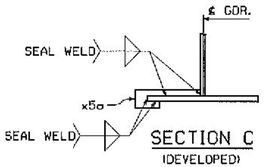


SECTION B



ORIENTATION DIAGRAM





SECTION C

(DEVELOPED)

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	SHIP WT. EA. (LBS)
1	G1B		GIRDER							32593
1	w1	PL	5/8 x 60	54 11	M270	50W	T		03010	
1	w2	PL	5/8 x 60	34 5 1/8	M270	50W	T		03006	
1	t1	PL	1 3/8 x 18	44 7 7/8	M270	50W	T		04005	
1	t2	PL	1 3/8 x 18	44 8 1/4	M270	50W	T		04005	
1	b1	PL	2 3/8 x 18	44 7 7/8	M270	50W	T		04001	
1	b2	PL	2 3/8 x 18	44 8 1/4	M270	50W	T		04001	
1	x3a	PL	3/4 x 8	5 0 1/32	M270	50W			07001	
1	x3d	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	
7	x4f	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	
1	x5a	PL	1/4 x 4 3/8	1 0 1/16	M270	50W			07003	

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
△				
△				
△				

HOLES 15/16"ø (U.N.)
BOLTS NONE
COATING NONE
CODE(S) 30
SCALE N.T.S.

HIGH STEEL STRUCTURES INC. An Affiliate of High Industries Inc. An ISO 9001:2000 Certified Company
Lancaster Facility 745 Old Philadelphia Pike Lancaster, PA 17602-2008 Phone: (717) 299-5581
Williamsport Facility 3501 E. 4th Street Williamsport, PA 17701 Phone: (570) 326-0651 www.highsteel.com

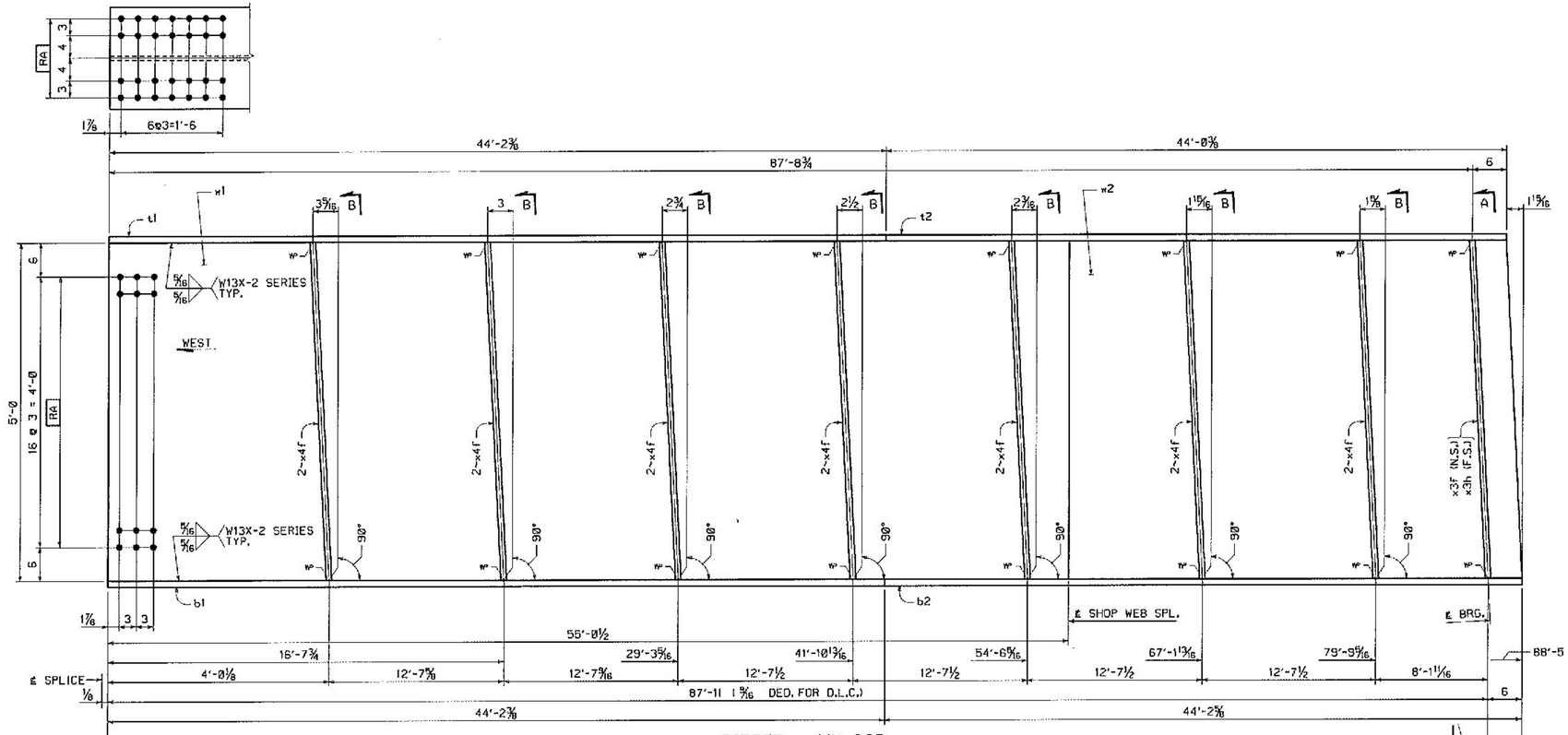
GIRDER G1B
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO. | FED. AID PROJ. NO.
GENERAL CONTRACTOR: MILLER CONSTRUCTION, INC. | HSSI PROJ. MGR: KEN GLIDDEN
DRAWING MANAGER: JOSH MURRY (DH) | MADE BY: CDS | CHK'D. BY: MDK | DATE: 12/29/12
HSSI PROJECT NUMBER: S-1120266A-1 | DRAWING NUMBER: 6 OF 14

VT

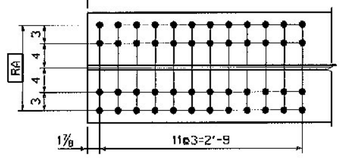
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ENGLISH

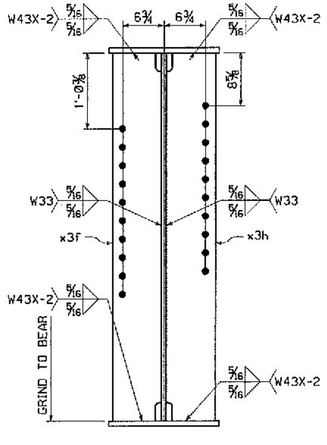


GIRDER ~ MK. G2B

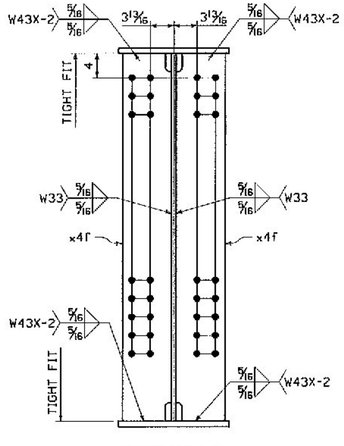
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.



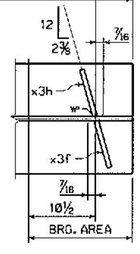
SHOP NOTE:
RADIAL HOLE PATTERN
MID-ORDINATE = 1/32(+)

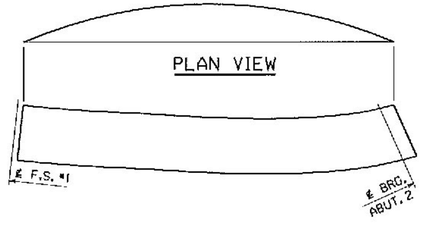


SECTION A
(DEVELOPED)



SECTION B





ORIENTATION DIAGRAM

BILL OF MATERIAL

QTY EA.	MARK	COAT	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	SHIP WT. EA. (LBS)
1	G2B		GIRDER							32733
1	w1	PL	5/8 x 60	55 0 1/2	M270	50W	T		03004	
1	w2	PL	5/8 x 60	33 4 1/2	M270	50W	T		03007	
1	t1	PL	1 3/8 x 18	44 2 3/8	M270	50W	T		04006	
1	t2	PL	1 3/8 x 18	44 0 3/8	M270	50W	T		04006	
1	b1	PL	2 3/8 x 18	44 2 3/8	M270	50W	T		04002	
1	b2	PL	2 3/8 x 18	44 2 5/8	M270	50W	T		04002	
1	x3f	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	
1	x3h	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	
14	x4f	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE

HOLES: 15/16" (U.N.)
BOLTS: NONE
COATING: NONE
CODE(S): 30
SCALE: N.T.S.

HIGH STEEL STRUCTURES INC.
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.
Lancaster Facility: 455 Old Philadelphia Pike, Lancaster, PA 17602-6004, Phone (717) 299-5711
Williamsport Facility: 3501 N. 4th Street, Williamsport, PA 17701, Phone (570) 326-0561, www.highsteel.com

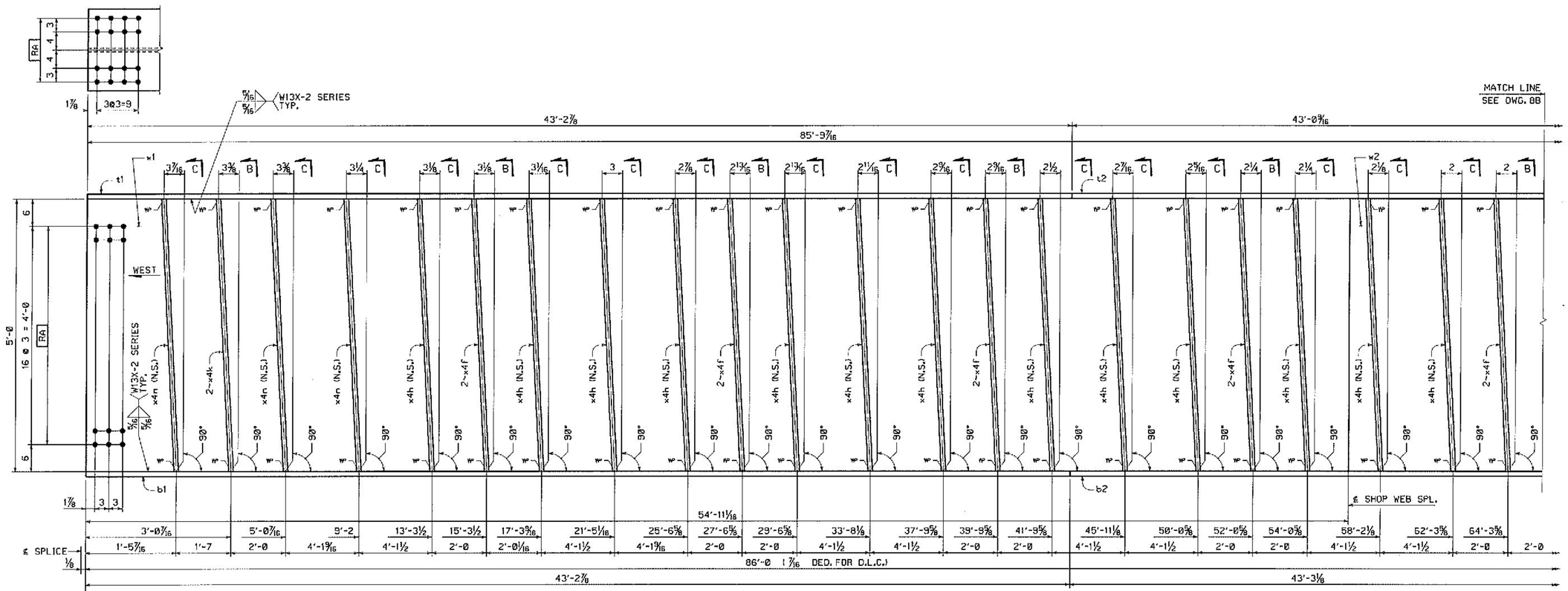
GIRDER G2B
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.: FED. AID PROJ. NO.:
GENERAL CONTRACTOR: MILLER CONSTRUCTION, INC. HSSI PROJ. MGR: KEN GLIDDEN
DRAWING MANAGER: JOSH MURRY (IH) MADE BY: CDS CHK'D BY: MGK DATE: 12/29/12
HSSI PROJECT NUMBER: S-11120266A-1 DRAWING NUMBER: 7 OF 14

VT

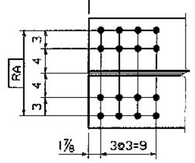
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SHIPMENT 01
PM&ENG: 5825751 PROJ: 5825752 S-HPS&ERECT: 5825753

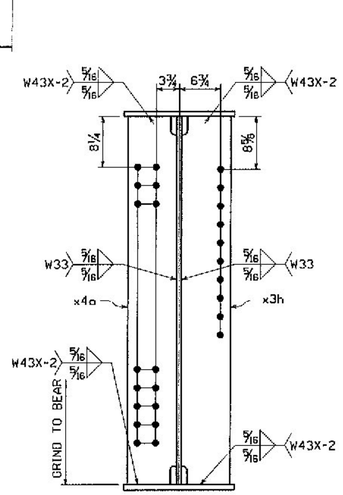
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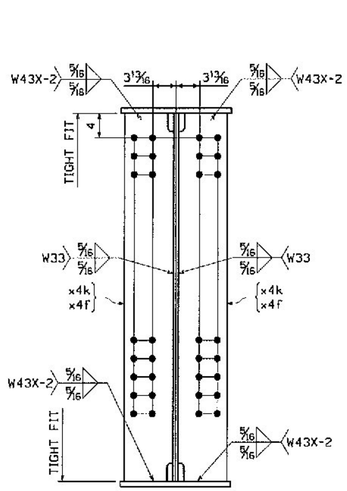
GIRDER ~ MK. G3B

FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

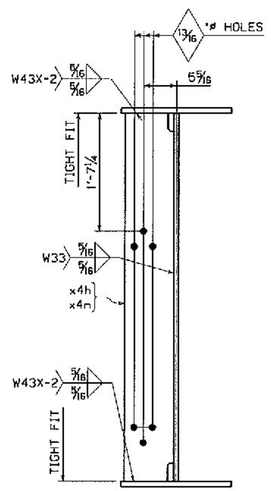




SECTION A
(DEVELOPED)

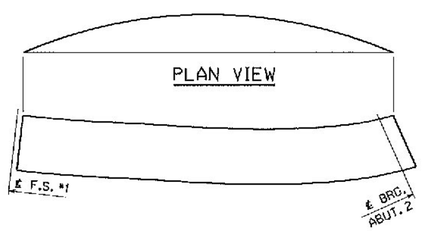


SECTION B



SECTION C

NOTES:
WORK THIS DRAWING WITH DRAWING 8B.



ORIENTATION DIAGRAM

Vermont Agency of Transportation

RECEIVED

CK'D BY J. CLARK OK'D BY J. GRIFFIN

February 12, 2013

RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
△				
△				
△				

HOLES 15⁄16 "ø (U.N.)
BOLTS NONE
COATING NONE
CODE(S) 30
SCALE N.T.S.

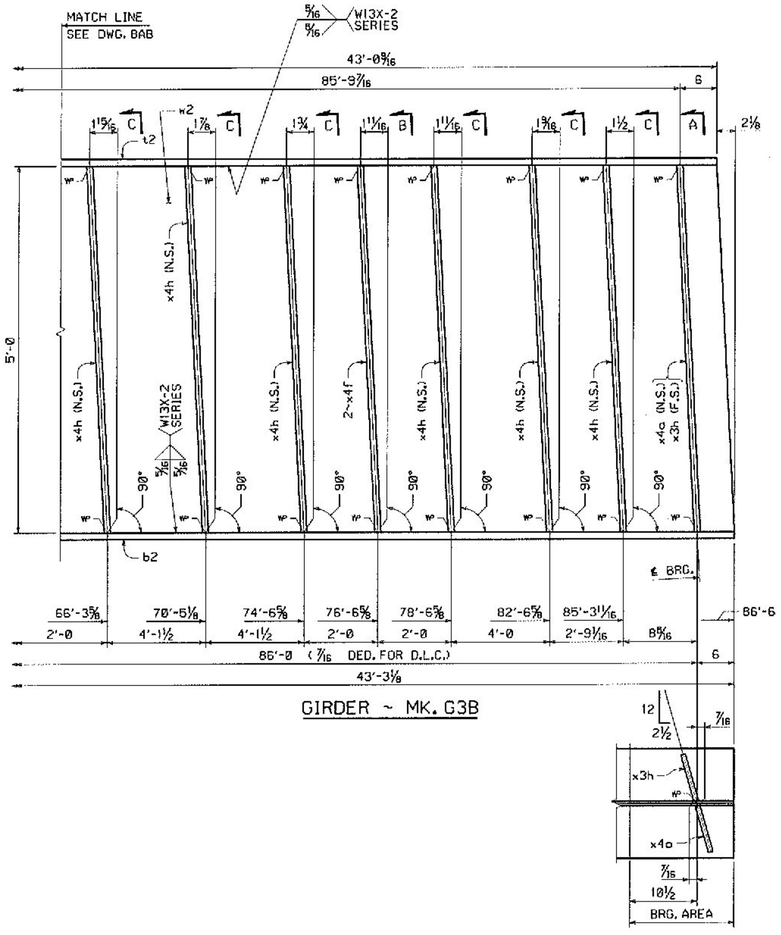
HIGH STEEL STRUCTURES IND.
An AISC Certified Company
An Affiliate of High Industries Inc.
Lancaster Facility
715 Old Philadelphia Pike
Lancaster, PA 17602-2886
Phone (717) 299-5201
Williamsport Facility
Susan Rd. Street
Williamsport, PA 17701
Phone (570) 326-9631
www.highsteel.com

GIRDER G3B
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (IH)	MADE BY CDS	CHK'D. BY MGK DATE 12/29/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	8AB OF 14

VT

PLOTTED: 1/4/2013 10:26:28 AM By: JSpicer
SHIPMENT 31 PHASING: 2025753 PROJ: 2025753 SHIP/ERECT.: 2025753



GIRDER ~ MK. G3B

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	SHIP WT. EA.(LBS)
1	G3B		GIRDER							22955
1	w1	PL	5/8 x 60	54 11 1/16	M270	50W	T		03002	
1	w2	PL	5/8 x 60	31 6 15/16	M270	50W	T		03008	
1	t1	PL	7/8 x 18	43 2 7/8	M270	50W	T		04009	
1	t2	PL	7/8 x 18	43 0 9/16	M270	50W	T		04010	
1	b1	PL	7/8 x 18	43 2 7/8	M270	50W	T		04009	
1	b2	PL	7/8 x 18	43 3 1/8	M270	50W	T		04009	
1	x3h	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	
1	x4a	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	
12	x4f	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	
19	x4h	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	
2	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	
3	x4n	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	

NOTES:
WORK THIS DRAWING WITH DRAWING 8AB.

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE

HOLES 15/16ø (U.N.)
BOLTS NONE
COATING NONE
CODE(S) 30
SCALE N.T.S.

HIGH STEEL STRUCTURES LTD. An Affiliate of High Industries Inc. An ISO 9001:2000 Certified Company
Lancaster Facility: 505 2nd Street Pike, Lancaster, PA 17603-3003, Phone (717) 945-5201
Williamsport Facility: 350 W. 4th Street, Williamsport, PA 17701, Phone (570) 326-5051, www.highsteel.com

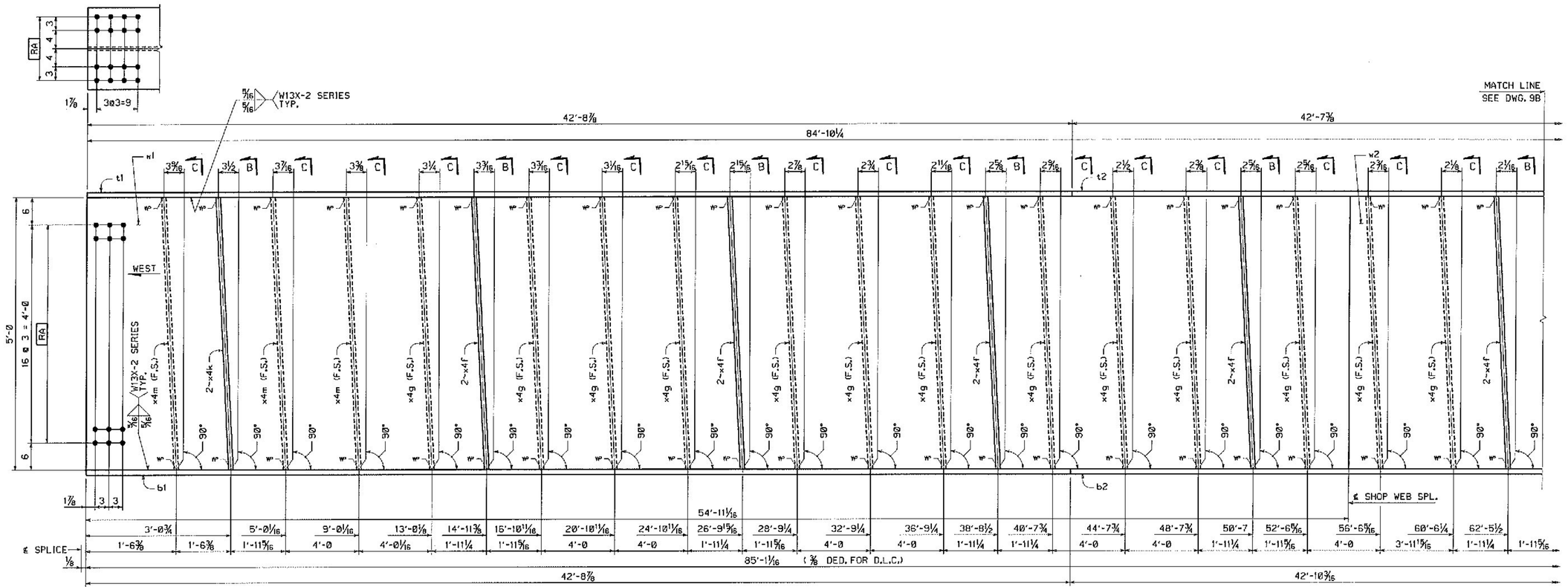
GIRDER G3B
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR.	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (JH)	MADE BY CDS	CHK'D. BY MGK DATE 12/29/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	8B OF 14

VT

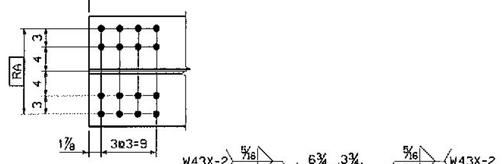
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BY: JSpicer
SHIPMENT 01
PM&ENG: 5825251 PRJ: 5825252 S-HIP&ERECT.: 5825253
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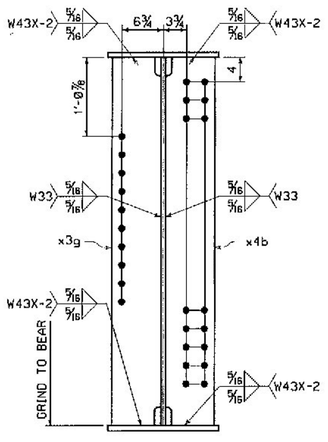
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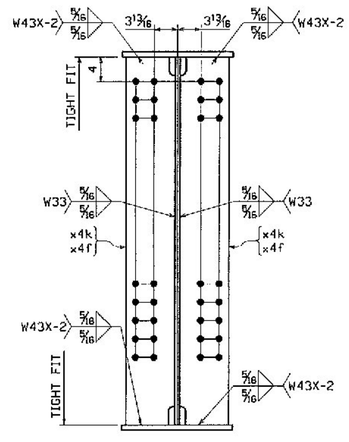
GIRDER ~ MK. G4B

FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

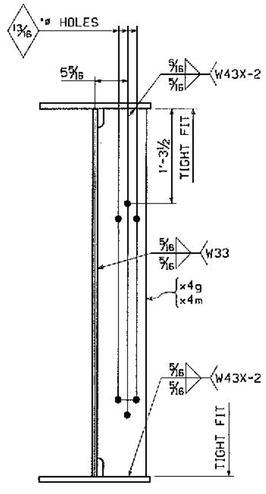




SECTION A
(DEVELOPED)

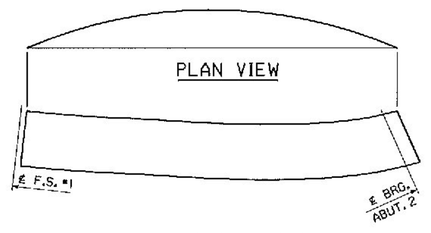


SECTION B



SECTION C

NOTES:
WORK THIS DRAWING WITH DRAWING 9B.



ORIENTATION DIAGRAM

Vermont Agency of Transportation

RECEIVED

CK'D BY J. CLARK OK'D BY J. GRIFFIN

February 12, 2013

RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE

HOLES: 15/16"ø (U.N.)
BOLTS: NONE
COATING: NONE
CODE(S): 30
SCALE: N.T.S.

HIGH STEEL STRUCTURES INC.
An AISC, AISI, NSBA Certified Company
An Affiliate of High Industries Inc.
Lancaster Factory: 145 Old Tucquan Rd, Lancaster, PA 17603-6009, Phone: (717) 299-4711
Whitehall Factory: 3500 E. 48th Street, Whitehall, PA 18052, Phone: (610) 264-3061
www.highsteel.com

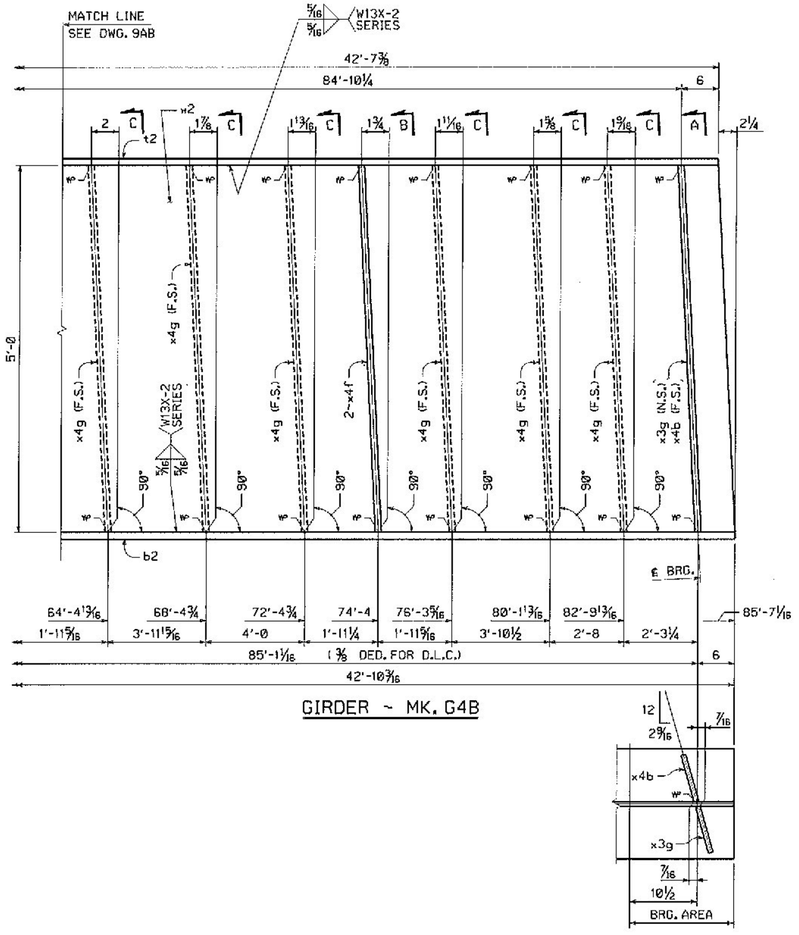
GIRDER G4B

ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+85.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR.	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (IH)	MADE BY CDS	CHK'D. BY MGK DATE 12/29/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	9AB OF 14

VT

PLOTTED: 1/4/2013 10:26:42 PM BY: JSpokor SCHEMATIC 01 PMSENG: 50257SS PROD: 50257SS SHIPSERECT: 50257SS



GIRDER ~ MK. G4B

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	SHIP WT. EA. (LBS)
1	G4B		GIRDER							22740
1	w1	PL	5/8 x 60	54 11 1/16	M270	50W	T		03002	
1	w2	PL	5/8 x 60	30 8	M270	50W	T		03009	
1	t1	PL	7/8 x 18	42 8 7/8	M270	50W	T		04011	
1	t2	PL	7/8 x 18	42 7 3/8	M270	50W	T		04011	
1	b1	PL	7/8 x 18	42 8 7/8	M270	50W	T		04011	
1	b2	PL	7/8 x 18	42 10 3/16	M270	50W	T		04010	
1	x3g	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	
1	x4b	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	
12	x4f	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	
19	x4g	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	
2	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	
3	x4m	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	

NOTES:
WORK THIS DRAWING WITH DRAWING 9AB.

Vermont Agency of Transportation
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△				
△				
△				

HOLES: 15/16 (U.N.)
BOLTS: NONE
COATING: NONE
CODE(S): 30
SCALE: N.T.S.

Lancaster Facility
715 Old Philadelphia Pike
Lancaster, PA 17602-6008
Phone (717) 299-5211
Williamsport Facility
3501 E. 4th Street
Williamsport, PA 17701
Phone (570) 326-1651
www.Highsteel.com
HIGH STEEL STRUCTURES INC.
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.

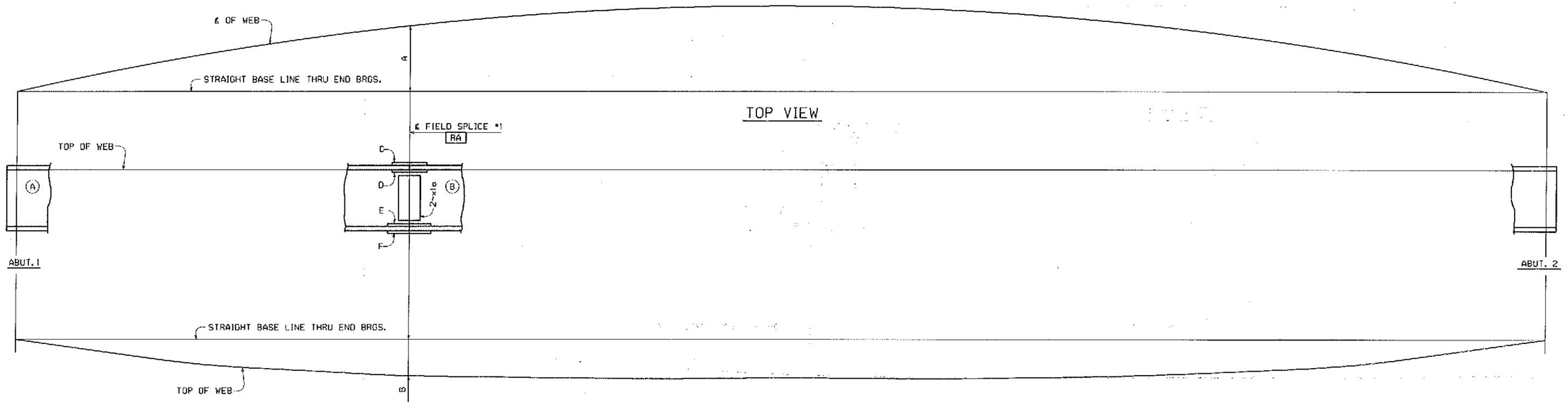
GIRDER G4B
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
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STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (IH)	MADE BY	CDS
CHK'D. BY	MGK	DATE	12/29/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	9B OF 14

VT

ENGLISH
PLOTTED: 1/4/2013 10:26:49 AM
BY: JSpiker
SHIPMENT 01
PROJECT NO. S0025(52) PROJ. 2025252 SHIPMENT 1 4062743
59

ENGLISH



LINE ASSEMBLY DIAGRAM

GDR. LINE	A	B	C	D	E	F
G1	5'-1¾	-0'-1 7/16	x1d	2~x1m	x1h (NS), x1g (FS)	x1b
G2	5'-4 15/16	-0'-2 7/16	x1c	x2o (NS), x1k (FS)	x1h (NS), x1g (FS)	x1b
G3	5'-9½	-0'-3 15/16	x1f	2~x2b	2~x2b	x1f
G4	6'-0 15/16	-0'-4½	x1f	2~x2b	2~x2b	x1f
G5	6'-4⅞	-0'-5 15/16	x1f	2~x2b	2~x2b	x1f

NOTES:

ALL SPLICE PLATES ARE MATCH MARKED AFTER REAMING.
THE MATCH MARKS ON THE SPLICE MATERIAL CONSIST OF THE MARK OF THE GIRDER THEY ARE SHIPPED WITH AND A SUFFIX. THE MARKINGS ARE LOCATED ON THE STEEL AT THE END OF THE SPLICE MATERIAL WHICH IS ON THE GIRDER IT IS SHIPPED WITH. MATCH MARKING MARKS WILL APPEAR ON EDGES OF PLATES.
THE CORRESPONDING SUFFIX (A, B, C, ETC.) IS MARKED NEAR THE SPLICE PLATE ON THE GIRDER.
FOR GIRDER MARKS, SEE THE ERECTION FRAMING PLAN DRAWINGS.
HOLES MARKED [RA] ARE TO BE SUB-PUNCHED/SUB-DRILLED ¼" UNDER SIZE AND REAMED TO FULL SIZE OR DRILLED FROM SOLID WITH CONNECTING PARTS ASSEMBLED AND MATCH MARKED. HOLES TO BE 15/16".
(A) INDICATES SUFFIX MARK OF SHIPPING PIECE.
FIELD SPLICE PLATES TO BE SHIPPED WITH (A) GIRDERS.
NEGATIVE CAMBER ORDINATES INDICATE THAT TOP OF WEB IS BELOW BASE LINE.

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE

HOLES
BOLTS
COATING
CODE(S)
SCALE N.T.S.

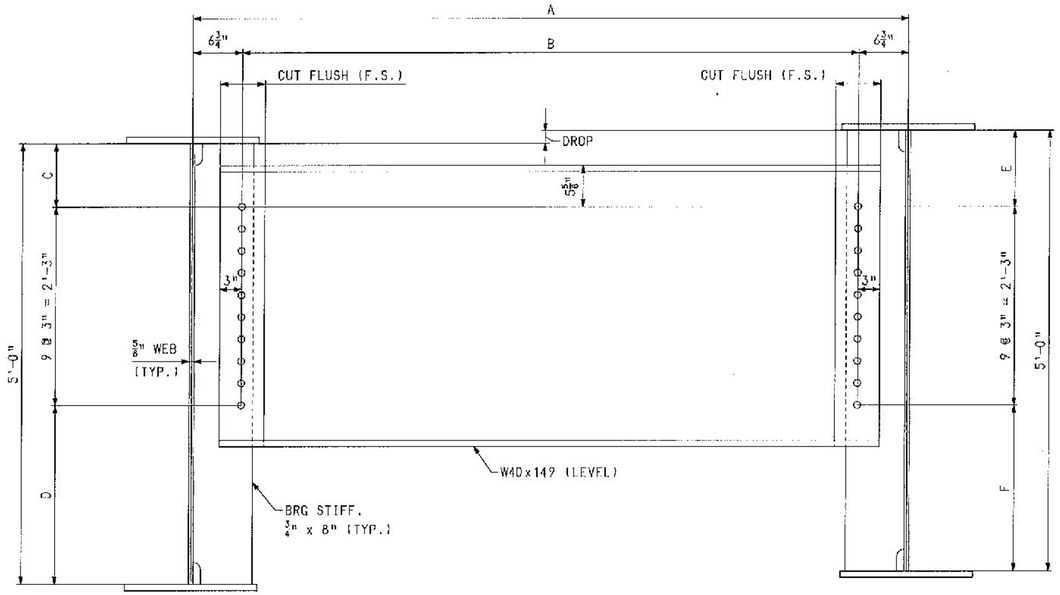
HIGH STEEL STRUCTURES INC.
Lancaster Facility 795 Old Hillsborough Pike Lancaster, PA 17603-6008 Phone (717) 293-5211
Hillsboro Facility 3531 N. 4th Street Hillsboro, PA 17701 Phone (570) 326-9651
www.Highsteel.com
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.

SHOP ASSEMBLY DIAGRAM
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
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GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (IH)	MADE BY	CDS
CHK'D. BY	MGK	DATE	12/14/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	SA1 OF SA1

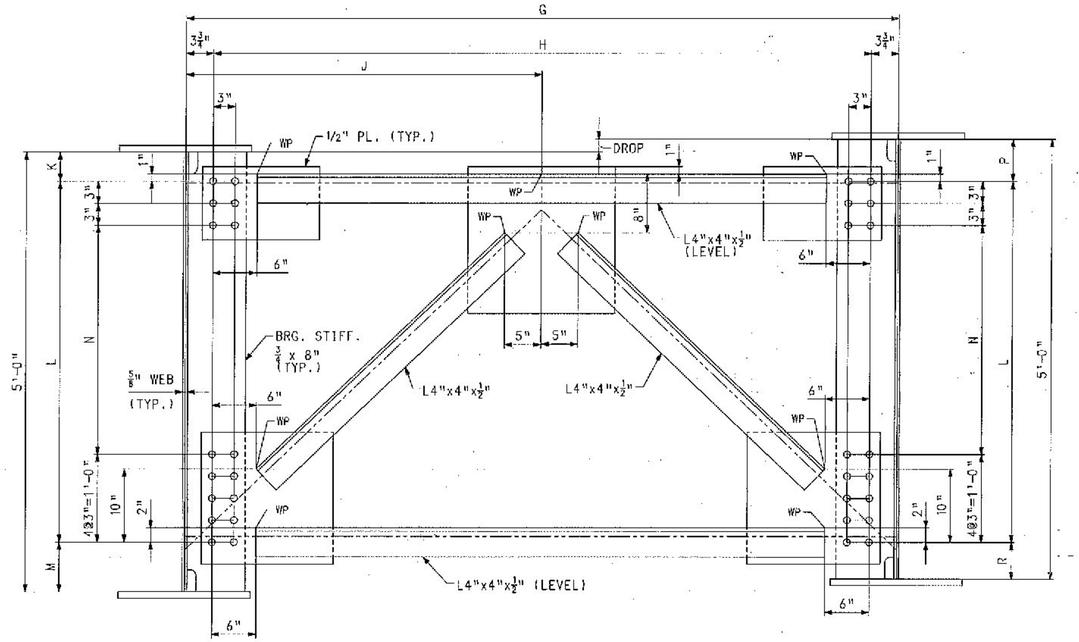
VT

PLOTTED: 12/7/2015 10:27:27 AM
By: JSpeiser
SHIPMENT 01 PW&ENG 5825758 PRJ: 5825758 SHP&ERECT: 5825758
52



END DIAPHRAGM LAYOUT (U.N.)
(LOOKING TOWARDS ABUT. FROM CENTER OF SPAN)

DROP	A	B	C	D	E	F
1 3/4	8'-0 15/16	6'-11 7/16	8 5/8	2'-0 3/8	10 3/8	1'-10 5/8
1 1/2	8'-0 7/16	6'-10 15/16	8 5/8	2'-0 3/8	10 1/8	1'-10 7/8
0	8'-0 1/4	6'-10 3/4	8 5/8	2'-0 3/8	8 5/8	2'-0 3/8
(-) 4 1/4	7'-11 1/8	6'-9 5/8	1'-0 7/8	1'-8 1/8	8 5/8	2'-0 3/8
(-) 3 3/4	7'-10 7/8	6'-9 3/8	1'-0 3/8	1'-8 5/8	8 5/8	2'-0 3/8
(-) 2 1/4	7'-10 3/4	6'-9 1/4	10 7/8	1'-10 1/8	8 5/8	2'-0 3/8



END DIAPHRAGM LAYOUT FOR UTILITY BAY
(LOOKING TOWARDS ABUT. FROM CENTER OF SPAN.)

DROP	G	H	J	K	L	M	N	P	R
1 3/4	8'-0 11/16	7'-5 3/16	4'-0 5/16	4	4'-1 1/4	6 3/4	2'-7 1/4	5 3/4	5
(-) 4 1/4	7'-11	7'-3 1/2	3'-11 1/2	8 1/4	3'-10 3/4	5	2'-4 3/4	4	9 1/4

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.

NOTE
THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION. THIS DRAWING IS SUBMITTED FOR INFORMATION ONLY AND IS NOT INTENDED FOR SHOP FABRICATION. THIS DRAWING IS FOR REFERENCE ONLY. APPROVAL IS NOT REQUIRED.

NO.	REVISION	BY	CH'K'D	DATE

HOLES 15/16" Ø
BC. ST.
COATING
CODE(S)
SCALE N.T.S.

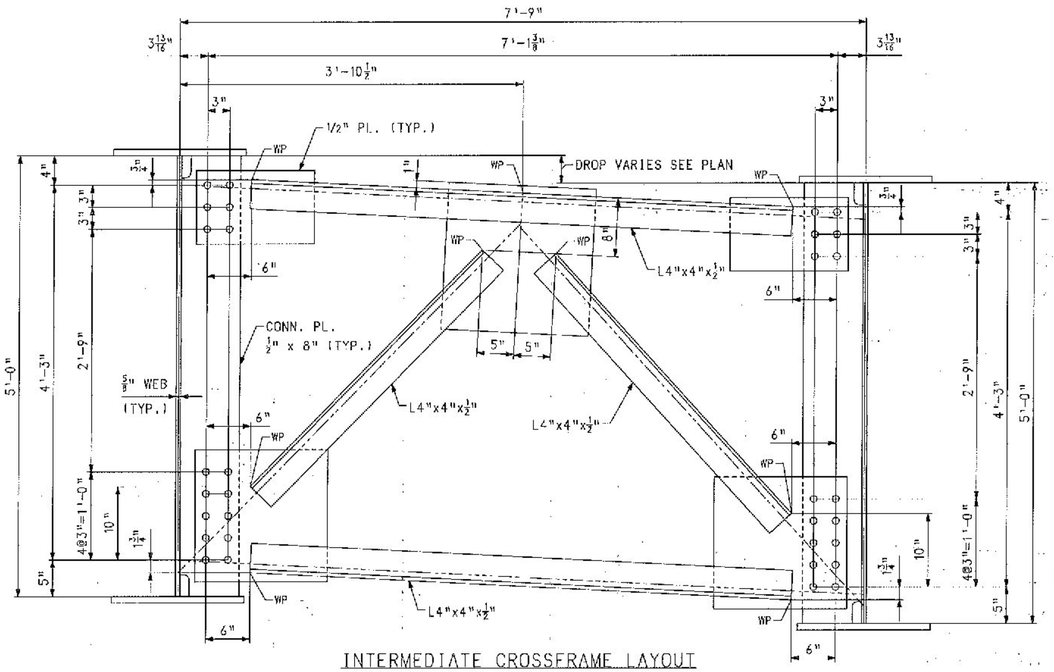
HIGH STEEL STRUCTURES INC.
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.
1915 Old Philadelphia Pike
Lancaster, PA 17602-2616
Phone (717) 299-5211
www.highsteel.com

TYPICAL DETAILS – DIAPHRAGM LAYOUTS
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT., OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. NO.	
DRAWING MANAGER	JOSH MURRY (JH)	MADE BY	CDS
CH'K'D. BY	MGK	DATE	12/14/12
HSSI PROJECT NUMBER	S-1120.266A-1	DRAWING NUMBER	TD1 OF TD2

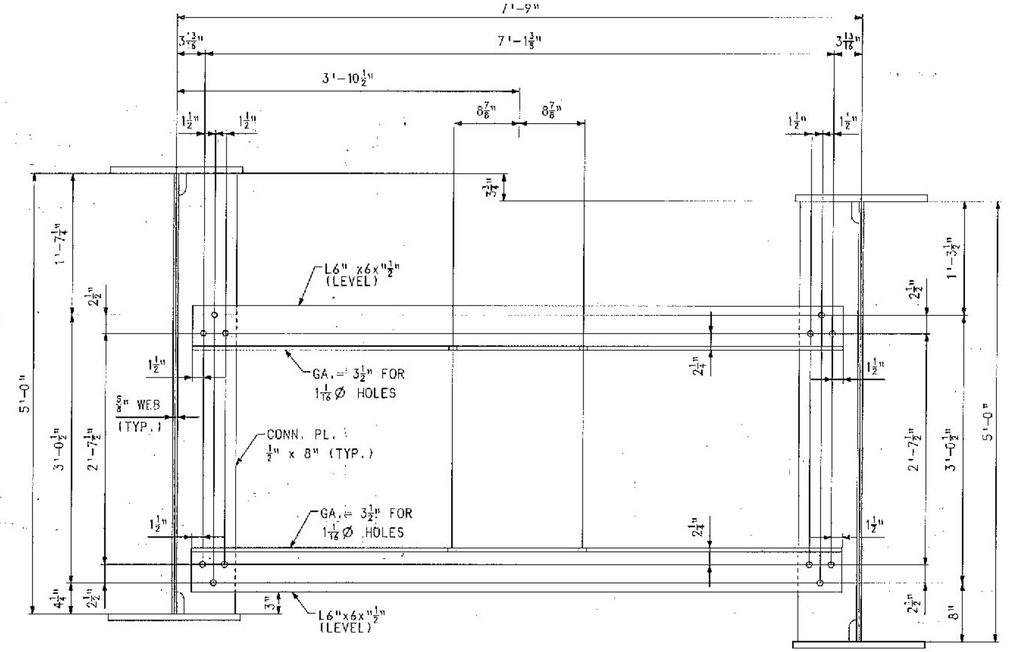
VT

SHIPMENT : FNAENG: 5025572 PRO: 5025872 S-1PROJECT: 5025872
PLOTTED: MM/DD/YY HH:mmss BY: XXXXXXXX



INTERMEDIATE CROSSFRAME LAYOUT

(LOOKING STATIONS AHEAD.)



UTILITY SUPPORT LAYOUT

(LOOKING STATIONS AHEAD.)

(ALL HOLES TO BE $\frac{13}{16}$" Ø IN CONN. PL. AND ANGLES U.N.)

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.

NOTE
THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION. THIS DRAWING IS SUBMITTED FOR INFORMATION ONLY AND IS NOT INTENDED FOR SHOP FABRICATION. THIS DRAWING IS FOR REFERENCE ONLY. APPROVAL IS NOT REQUIRED.

Vermont Agency of Transportation

RECEIVED

CK'D BY J. CLARK OK'D BY J. GRIFFIN

February 12, 2013

RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
△				
△				
△				

HIGH STEEL STRUCTURES INC.
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Lancaster, PA 17602-4008
Phone (717) 299-5211
www.highsteel.com
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An Affiliate of High Industries Inc.

HOLES 15/16" Ø U.N.

BOLTS

COATING

CODE(S)

SCALE N.T.S.

TYPICAL DETAILS - CROSSFRAME & UTILITY SUPPORT LAYOUTS

ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH

ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00

BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON

STATE OF VERMONT

AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSS PROJ. NBR	

DRAWING MANAGER	JOSH VURRY (IR)	MADE BY	CDS	CHK'D. BY	MGK	DATE	12/13/12
HSS PROJECT NUMBER	S-1120.266A-1	DRAWING NUMBER	TD2 OF TD2				

VT

PLOTTED: MM/DD/YY hh:mmss BY: XXXXXXX

S:\PW\ENT | PW&ENG: 5025821 HND: 5025822 SHP&ERECT: 5025823

ENGLISH

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
1	G1A		GIRDER							13113.86	20.27	13,093.59
1	w1	PL	5/8 x 60	31 10 1/8	M270	50W	T		03008	4063.40	20.27	4,043.12
1	t1	PL	1 3/8 x 18	31 10	M270	50W	T		04008	2680.96	0.00	2,680.96
1	b1	PL	2 3/8 x 18	31 6 7/16	M270	50W	T		04004	4587.57	0.00	4,587.57
2	x1a	PL	5/16 x 51 1/2	1 7 1/2	M270	50W	T		06001	88.99	0.00	88.99
1	x1b	PL	1 3/8 x 18	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06002	515.84	0.00	515.84
1	x1d	PL	7/8 x 18	3 7 1/2	M270	50W	T		06004	194.28	0.00	194.28
1	x1g	PL	1 3/8 x 7	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06006	200.60	0.00	200.60
1	x1h	PL	1 3/8 x 7	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06006	200.60	0.00	200.60
2	x1m	PL	7/8 x 7	3 7 1/2	M270	50W	T		06008	75.55	0.00	75.55
1	x3b	PL	3/4 x 8	5 0 9/32	M270	50W			07001	102.56	0.00	102.56
1	x3m	PL	3/4 x 8	5 0 9/32	M270	50W	T		07001	102.56	0.00	102.56
2	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	68.20	0.00	68.20
								TOTAL WEIGHT THIS SHEET:				13,093.59 lbs.

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
1	G4A		GIRDER							9841.68	23.26	9,818.42
1	w1	PL	5/8 x 60	35 10 3/4	M270	50W	T		03005	4580.46	23.26	4,557.20
1	t1	PL	7/8 x 18	35 10 7/16	M270	50W	T		04014	1922.40	0.00	1,922.40
1	b1	PL	7/8 x 18	35 6 11/16	M270	50W	T		04014	1905.85	0.00	1,905.85
2	x1a	PL	5/16 x 51 1/2	1 7 1/2	M270	50W	T		06001	88.99	0.00	88.99
2	x1f	PL	1/2 x 18	2 1 1/2	M270	50W	T		06005	65.08	0.00	65.08
4	x2b	PL	1/2 x 7	2 1 1/2	M270	50W	T		06009	25.31	0.00	25.31
1	x3s	PL	3/4 x 8	5 0 3/8	M270	50W	T		07001	102.72	0.00	102.72
1	x4d	PL	3/4 x 8	5 0 3/8	M270	50W	T		07001	102.72	0.00	102.72
4	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	68.20	0.00	68.20
8	x4m	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	68.20	0.00	68.20
								TOTAL WEIGHT THIS SHEET:				9,818.42 lbs.

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
1	G2B		GIRDER							32732.79	11.96	32,720.83
1	w1	PL	5/8 x 60	55 0 1/2	M270	50W	T		03004	7023.55	11.96	7,011.58
1	w2	PL	5/8 x 60	33 4 1/2	M270	50W	T		03007	4258.79	0.00	4,258.79
1	t1	PL	1 3/8 x 18	44 2 3/8	M270	50W	T		04006	3722.29	0.00	3,722.29
1	t2	PL	1 3/8 x 18	44 0 3/8	M270	50W	T		04006	3708.26	0.00	3,708.26
1	b1	PL	2 3/8 x 18	44 2 3/8	M270	50W	T		04002	6429.42	0.00	6,429.42
1	b2	PL	2 3/8 x 18	44 2 5/8	M270	50W	T		04002	6432.45	0.00	6,432.45
1	x3f	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	102.14	0.00	102.14
1	x3h	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	102.14	0.00	102.14
14	x4f	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	68.13	0.00	68.13
								TOTAL WEIGHT THIS SHEET:				32,720.83 lbs.

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
1	G2A		GIRDER							13611.28	21.27	13,590.01
1	w1	PL	5/8 x 60	32 10 5/16	M270	50W	T		03007	4192.99	21.27	4,171.73
1	t1	PL	1 3/8 x 18	32 10 1/8	M270	50W	T		04007	2766.06	0.00	2,766.06
1	b1	PL	2 3/8 x 18	32 6 1/2	M270	50W	T		04003	4733.80	0.00	4,733.80
2	x1a	PL	5/16 x 51 1/2	1 7 1/2	M270	50W	T		06001	88.99	0.00	88.99
1	x1b	PL	1 3/8 x 18	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06002	515.84	0.00	515.84
1	x1c	PL	7/8 x 18	3 7 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06003	194.28	0.00	194.28
1	x1g	PL	1 3/8 x 7	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06006	200.60	0.00	200.60
1	x1h	PL	1 3/8 x 7	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06006	200.60	0.00	200.60
1	x1k	PL	7/8 x 7	3 7 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06007	75.55	0.00	75.55
1	x2a	PL	7/8 x 7	3 7 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	06007	75.55	0.00	75.55
1	x3k	PL	3/4 x 8	5 0 5/16	M270	50W	T		07001	102.62	0.00	102.62
1	x3n	PL	3/4 x 8	5 0 5/16	M270	50W	T		07001	102.62	0.00	102.62
4	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	68.20	0.00	68.20
								TOTAL WEIGHT THIS SHEET:				13,590.01 lbs.

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
1	G5A		GIRDER							9399.50	24.59	9,374.91
1	w1	PL	5/8 x 60	38 11 1/16	M270	50W	T		03003	4711.39	24.59	4,686.79
1	t1	PL	7/8 x 18	38 10 11/16	M270	50W	T		04013	1977.11	0.00	1,977.11
1	b1	PL	7/8 x 18	38 6 13/16	M270	50W	T		04013	1959.80	0.00	1,959.80
2	x1a	PL	5/16 x 51 1/2	1 7 1/2	M270	50W	T		06001	88.99	0.00	88.99
2	x1f	PL	1/2 x 18	2 1 1/2	M270	50W	T		06005	65.08	0.00	65.08
4	x2b	PL	1/2 x 7	2 1 1/2	M270	50W	T		06009	25.31	0.00	25.31
1	x3c	PL	3/4 x 8	5 0 3/8	M270	50W			07001	102.72	0.00	102.72
1	x3p	PL	3/4 x 8	5 0 3/8	M270	50W	T		07001	102.72	0.00	102.72
2	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	68.20	0.00	68.20
								TOTAL WEIGHT THIS SHEET:				9,374.91 lbs.

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
1	G3B		GIRDER							22955.21	13.62	22,941.59
1	w1	PL	5/8 x 60	54 11 1/16	M270	50W	T		03002	7008.26	13.62	6,994.64
1	w2	PL	5/8 x 60	31 6 15/16	M270	50W	T		03008	4029.50	0.00	4,029.50
1	t1	PL	7/8 x 18	43 2 7/8	M270	50W	T		04009	2317.37	0.00	2,317.37
1	t2	PL	7/8 x 18	43 0 9/16	M270	50W	T		04010	2307.04	0.00	2,307.04
1	b1	PL	7/8 x 18	43 2 7/8	M270	50W	T		04009	2317.37	0.00	2,317.37
1	b2	PL	7/8 x 18	43 3 1/8	M270	50W	T		04009	2318.49	0.00	2,318.49
1	x3h	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	102.14	0.00	102.14
1	x4a	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	102.14	0.00	102.14
12	x4f	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	68.13	0.00	68.13
19	x4h	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	68.13	0.00	68.13
2	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	68.20	0.00	68.20
3	x4n	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	68.20	0.00	68.20
								TOTAL WEIGHT THIS SHEET:				22,941.59 lbs.

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
1	G3A		GIRDER							9603.85	22.26	9,581.58
1	w1	PL	5/8 x 60	34 10 9/16	M270	50W	T		03006	4450.86	22.26	4,428.60
1	t1	PL	7/8 x 18	34 10 5/16	M270	50W	T		04015	1868.24	0.00	1,868.24
1	b1	PL	7/8 x 18	34 6 5/8	M270	50W	T		04015	1851.78	0.00	1,851.78
2	x1a	PL	5/16 x 51 1/2	1 7 1/2	M270	50W	T		06001	88.99	0.00	88.99
2	x1f	PL	1/2 x 18	2 1 1/2	M270	50W	T		06005	65.08	0.00	65.08
4	x2b	PL	1/2 x 7	2 1 1/2	M270	50W	T		06009	25.31	0.00	25.31
1	x4p	PL	3/4 x 8	5 0 5/16	M270	50W	T		07001	102.62	0.00	102.62
1	x4c	PL	3/4 x 8	5 0 5/16	M270	50W	T		07001	102.62	0.00	102.62
4	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	68.20	0.00	68.20
8	x4n	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	68.20	0.00	68.20
								TOTAL WEIGHT THIS SHEET:				9,581.58 lbs.

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
1	G1B		GIRDER							32592.64	10.63	32,582.01
1	w1	PL	5/8 x 60	54 11	M270	50W	T		03010	7007.60	10.63	6,996.96
1	w2	PL	5/8 x 60	34 5 1/8	M270	50W	T		03006	4393.04	0.00	4,393.04
1	t1	PL	1 3/8 x 18	44 7 7/8	M270	50W	T		04005	3760.89	0.00	3,760.89
1	t2	PL	1 3/8 x 18	44 6 1/4	M270	50W	T		04005	3749.49	0.00	3,749.49
1	b1	PL	2 3/8 x 18	44 7 7/8	M270	50W	T		04001	6496.09	0.00	6,496.09
1	b2	PL	2 3/8 x 18	44 8 1/4	M270	50W	T		04001	6500.63	0.00	6,500.63
1	x3a	PL	3/4 x 8	5 0 1/32	M270	50W			07001	102.14	0.00	102.14
1	x3d	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	102.14	0.00	102.14
7	x4f	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	68.13	0.00	68.13
1	x5a	PL	1/4 x 4 3/8	1 0 1/16	M270	50W			07003	3.74	0.00	3.74
								TOTAL WEIGHT THIS SHEET:				32,582.01 lbs.

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE

HOLES
BOLTS
COATING
CODE(S)
SCALE N.T.S.

HIGH STEEL STRUCTURES INC.
An AISC Member
An ISO 9001:2000 Certified Company
An MTMode of High Industries Inc.
Lancaster Facility
105 Gap Philadelphia Pike
Lancaster, PA 17603-0006
Phone (717) 299-521
Williamsport Facility
3400 E. 4th Street
Williamsport, PA 17701
Phone (570) 326-4051
www.highsteel.com

ITEMIZED WEIGHTS
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT., OR REF. NO.
FED. AID PROJ. NO.
GENERAL CONTRACTOR: MILLER CONSTRUCTION, INC.
HSSI PROJ. MGR: KEN GLIDDEN
DRAWING MANAGER: JOSH MURRY (JM) MADE BY: SSL CHK'D. BY: JAS DATE: 1-4-13
HSSI PROJECT NUMBER: S-1120266A-1
DRAWING NUMBER: W1 OF W2

VT

SHIPMENT #1 PMBLNG: 58252752 PTD: 58252752 SHIPDIRECT: 58252752
BY: JSpicker
PRINTED: 1/4/2013 1:06:27 PM

ENGLISH

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
1	G4B		GIRDER							22740.09	14.95	22,725.14
1	w1	PL	5/8 x 60	54 11 1/16	M270	50W	T		03002	7008.26	14.95	6,993.31
1	w2	PL	5/8 x 60	30 8	M270	50W	T		03009	3913.19	0.00	3,913.19
1	t1	PL	7/8 x 18	42 8 7/8	M270	50W	T		04011	2290.57	0.00	2,290.57
1	t2	PL	7/8 x 18	42 7 3/8	M270	50W	T		04011	2283.88	0.00	2,283.88
1	b1	PL	7/8 x 18	42 8 7/8	M270	50W	T		04011	2290.57	0.00	2,290.57
1	b2	PL	7/8 x 18	42 10 3/16	M270	50W	T		04010	2296.44	0.00	2,296.44
1	x3g	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	102.14	0.00	102.14
1	x4b	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	102.14	0.00	102.14
12	x4f	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	68.13	0.00	68.13
19	x4g	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	68.13	0.00	68.13
2	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	68.20	0.00	68.20
3	x4m	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	68.20	0.00	68.20
								TOTAL WEIGHT THIS SHEET:				22,725.14 lbs.

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
1	G5B		GIRDER							20552.71	16.28	20,536.42
1	w1	PL	5/8 x 60	54 11	M270	50W	T		03001	7007.60	16.28	6,991.31
1	w2	PL	5/8 x 60	29 9 3/16	M270	50W	T		03009	3798.22	0.00	3,798.22
1	t1	PL	7/8 x 18	42 3 7/8	M270	50W	T		04012	2268.24	0.00	2,268.24
1	t2	PL	7/8 x 18	42 1 1/4	M270	50W	T		04012	2256.52	0.00	2,256.52
1	b1	PL	7/8 x 18	42 3 7/8	M270	50W	T		04012	2268.24	0.00	2,268.24
1	b2	PL	7/8 x 18	42 4 5/16	M270	50W	T		04012	2270.20	0.00	2,270.20
1	x3a	PL	3/4 x 8	5 0 1/32	M270	50W			07001	102.14	0.00	102.14
1	x3h	PL	3/4 x 8	5 0 1/32	M270	50W	T		07001	102.14	0.00	102.14
6	x4f	PL	1/2 x 8	5 0 1/16	M270	50W	T		07002	68.13	0.00	68.13
1	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		07002	68.20	0.00	68.20
1	x5b	PL	1/4 x 2 7/8	1 0 1/16	M270	50W			07003	2.46	0.00	2.46
								TOTAL WEIGHT THIS SHEET:				20,536.42 lbs.

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
1	D1		DIAPHRAGM							1110.52	0.00	1110.52
1	a	W	40 x 149	7 5 7/16	M270	50W	T		10001			
1	D2		DIAPHRAGM							1104.31	0.00	1104.31
1	a	W	40 x 149	7 4 15/16	M270	50W	T		10001			
1	D3		DIAPHRAGM							1101.98	0.00	1101.98
1	a	W	40 x 149	7 4 3/4	M270	50W	T		10001			
1	D4		DIAPHRAGM							1088.01	0.00	1088.01
1	a	W	40 x 149	7 3 5/8	M270	50W	T		10001			
1	D5		DIAPHRAGM							1084.91	0.00	1084.91
1	a	W	40 x 149	7 3 3/8	M270	50W	T		10001			
1	D6		DIAPHRAGM							1083.35	0.00	1083.35
1	a	W	40 x 149	7 3 1/4	M270	50W	T		10001			
								TOTAL WEIGHT D1-D6:				6,573.07 LBS.
60	D7		DIAPHRAGM							144.35	0.00	144.35
60	1 a	L	6 x 6 x 1/2	7 4 3/8	M270	50W	T		10002			
								PART D7 - BID ITEM 900.645:				LUMP SUM

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
1	CF1		CROSSFRAME							455.90	0.00	455.90
2	a	L	4 x 4 x 1/2	6 5 3/16	M270	50W	T		11001	81.69	0.00	81.69
2	b	L	4 x 4 x 1/2	3 10 9/16	M270	50W	T		11001	49.28	0.00	49.28
1	m1a	PL	1/2 x 10	1 4	M270	50W	T		11002	22.69	0.00	22.69
1	m1b	PL	1/2 x 10	1 4	M270	50W	T		11002	22.69	0.00	22.69
1	m1c	PL	1/2 x 18	1 6	M270	50W	T		11002	45.94	0.00	45.94
1	m1d	PL	1/2 x 18	1 6	M270	50W	T		11002	45.94	0.00	45.94
1	m1f	PL	1/2 x 20	1 8	M270	50W	T		11002	56.71	0.00	56.71
1	CF2		CROSSFRAME							447.43	0.00	447.43
2	a	L	4 x 4 x 1/2	6 3 1/2	M270	50W	T		11001	79.90	0.00	79.90
2	b	L	4 x 4 x 1/2	3 8 1/4	M270	50W	T		11001	46.83	0.00	46.83
1	m1a	PL	1/2 x 10	1 4	M270	50W	T		11002	22.69	0.00	22.69
1	m1b	PL	1/2 x 10	1 4	M270	50W	T		11002	22.69	0.00	22.69
1	m1c	PL	1/2 x 18	1 6	M270	50W	T		11002	45.94	0.00	45.94
1	m1d	PL	1/2 x 18	1 6	M270	50W	T		11002	45.94	0.00	45.94
1	m1f	PL	1/2 x 20	1 8	M270	50W	T		11002	56.71	0.00	56.71
								TOTAL WEIGHT THIS SHEET:				903.32 LBS.

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
9	CF3		CROSSFRAME							447.30	0.00	447.30
2	a	L	4 x 4 x 1/2	6 1 3/8	M270	50W	T		11001	77.66	0.00	77.66
1	b	L	4 x 4 x 1/2	3 9 5/8	M270	50W	T		11001	48.29	0.00	48.29
1	c	L	4 x 4 x 1/2	3 11	M270	50W	T		11001	49.74	0.00	49.74
1	m1g	PL	1/2 x 10	1 4	M270	50W	T		11002	22.69	0.00	22.69
1	m1h	PL	1/2 x 10	1 4	M270	50W	T		11002	22.69	0.00	22.69
1	m1k	PL	1/2 x 18	1 6	M270	50W	T		11002	45.94	0.00	45.94
1	m1m	PL	1/2 x 18	1 6	M270	50W	T		11002	45.94	0.00	45.94
1	m1f	PL	1/2 x 20	1 8	M270	50W	T		11002	56.71	0.00	56.71
9	CF4		CROSSFRAME							447.43	0.00	447.43
2	a	L	4 x 4 x 1/2	6 1 7/16	M270	50W	T		11001	77.72	0.00	77.72
1	b	L	4 x 4 x 1/2	3 9 1/16	M270	50W	T		11001	47.69	0.00	47.69
1	c	L	4 x 4 x 1/2	3 11 9/16	M270	50W	T		11001	50.34	0.00	50.34
1	m1g	PL	1/2 x 10	1 4	M270	50W	T		11002	22.69	0.00	22.69
1	m1h	PL	1/2 x 10	1 4	M270	50W	T		11002	22.69	0.00	22.69
1	m1k	PL	1/2 x 18	1 6	M270	50W	T		11002	45.94	0.00	45.94
1	m1m	PL	1/2 x 18	1 6	M270	50W	T		11002	45.94	0.00	45.94
1	m1f	PL	1/2 x 20	1 8	M270	50W	T		11002	56.71	0.00	56.71
								TOTAL WEIGHT THIS SHEET:				8,052.53 LBS.

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	GROSS WEIGHT EACH	DEDUCTED WEIGHT EACH	NET WEIGHT EACH (LBS)
18	CF5		CROSSFRAME							447.56	0.00	447.56
2	a	L	4 x 4 x 1/2	6 1 1/2	M270	50W	T		11001	77.79	0.00	77.79
1	b	L	4 x 4 x 1/2	3 8 7/8	M270	50W	T		11001	47.49	0.00	47.49
1	c	L	4 x 4 x 1/2	3 11 3/4	M270	50W	T		11001	50.54	0.00	50.54
1	m1g	PL	1/2 x 10	1 4	M270	50W	T		11002	22.69	0.00	22.69
1	m1h	PL	1/2 x 10	1 4	M270	50W	T		11002	22.69	0.00	22.69
1	m1k	PL	1/2 x 18	1 6	M270	50W	T		11002	45.94	0.00	45.94
1	m1m	PL	1/2 x 18	1 6	M270	50W	T		11002	45.94	0.00	45.94
1	m1f	PL	1/2 x 20	1 8	M270	50W	T		11002	56.71	0.00	56.71
								TOTAL WEIGHT THIS SHEET:				8,056.11 LBS.
								TOTAL WEIGHT BID ITEM 506.56:				210,549.54 LBS.

Vermont Agency of Transportation

RECEIVED

CK'D BY J. CLARK OK'D BY J. GRIFFIN

February 12, 2013

RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE

HOLES

BOLTS

COATING

CODES!

SCALE N.T.S.

VT

HIGH STEEL STRUCTURES INC.

An AISC Member of High Industries Inc.

An ISO 9001:2000 Certified Company

Lancaster Facility
175 Old Philadelphia Pike
Lancaster, PA 17525-9008
Phone (717) 299-5521

Williamsport Facility
3501 N. 4th Street
Williamsport, PA 17701
Phone (570) 326-4554
www.Highsteel.com

ITEMIZED WEIGHTS

ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH

ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00

BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON

STATE OF VERMONT

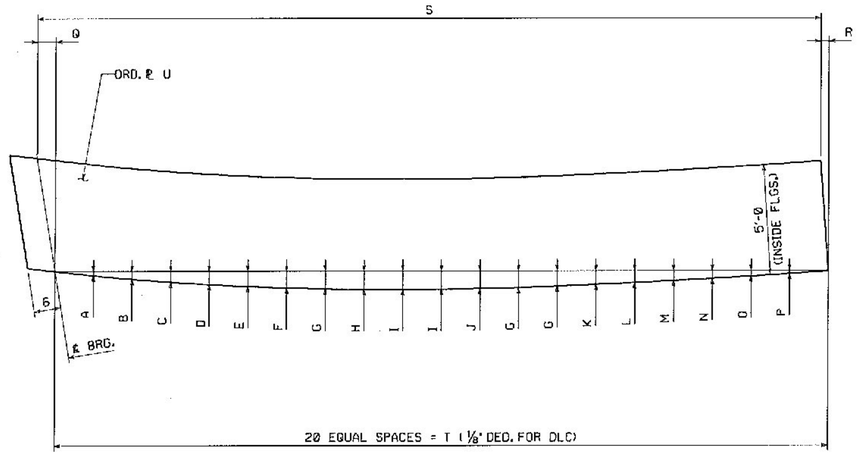
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (JH)	MADE BY	SSL
CHK'D. BY	JAS	DATE	1-4-13
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	W2 OF W2

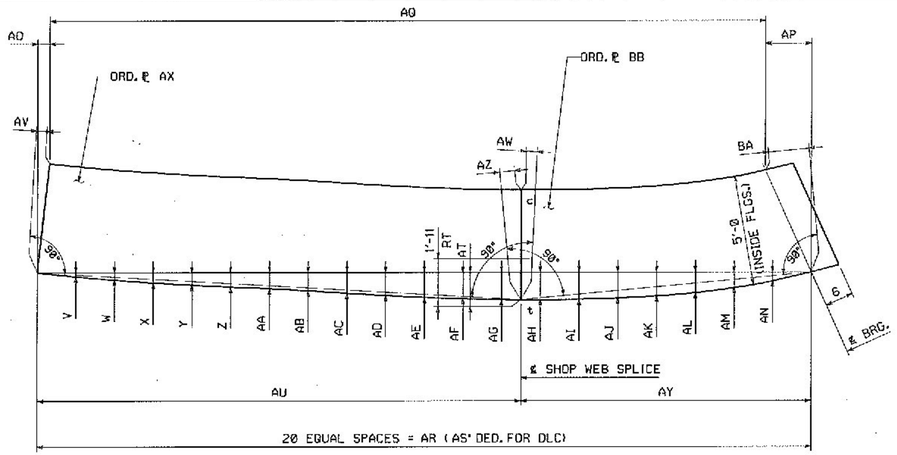
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By: JSpicer

SHIPMENT: 31 PIECES: 5925758 PCS: 5925758 SHIP&ERECT.: 5925758

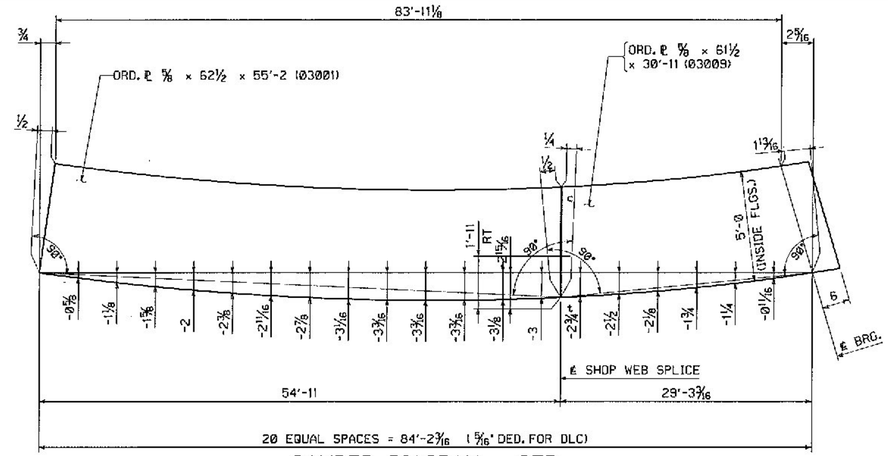


MARK	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
G1A	-0 1/16	-0 1/8	-0 3/16	-0 3/16	-0 1/4	-0 1/4	-0 1/4	-0 5/16	-0 5/16	-0 1/4	-0 3/16	-0 3/16	-0 1/8	-0 1/8	-0 1/16	-0 1/16	3 1/16	1/8	31'-4	31'-0 7/16	5/8 x 6 1/2 x 32'-1 (03008)
G2A	-0 1/16	-0 1/8	-0 3/16	-0 1/4	-0 1/4	-0 5/16	-0 5/16	-0 5/16	-0 3/8	-0 5/16	-0 1/4	-0 1/4	-0 3/16	-0 3/16	-0 1/8	-0 1/16	3 1/16	3/16	32'-4 1/8	32'-0 1/2	5/8 x 6 1/2 x 33'-7 (03007)
G3A	-0 1/8	-0 3/16	-0 1/4	-0 5/16	-0 3/8	-0 7/16	-0 7/16	-0 1/2	-0 1/2	-0 1/2	-0 3/4	-0 3/8	-0 5/16	-0 1/4	-0 3/16	-0 1/16	3 5/16	1/4	34'-4 3/16	34'-0 5/8	5/8 x 6 1/2 x 35'-1 (03006)
G4A	-0 1/8	-0 3/16	-0 3/16	-0 3/8	-0 7/16	-0 1/2	-0 1/2	-0 7/16	-0 9/16	-0 9/16	-0 7/16	-0 3/8	-0 5/16	-0 1/4	-0 3/16	-0 1/8	4 1/16	5/16	35'-4 7/16	35'-0 1/16	5/8 x 6 1/2 x 36'-1 (03005)
G5A	-0 1/8	-0 1/4	-0 3/8	-0 7/16	-0 1/2	-0 9/16	-0 5/8	-0 5/8	-0 11/16	-0 11/16	-0 9/16	-0 1/2	-0 7/16	-0 5/16	-0 1/4	-0 1/8	4 1/4	3/8	36'-4 1/16	36'-0 3/16	5/8 x 62 x 37'-2 (03003)

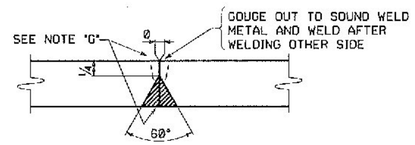


MARK	AW	AX	AY	AZ	BA	BB
G1B	1/16	5/8 x 61 x 55'-2 (03010)	33'-11 1/8	1/8	1 1/16	5/8 x 6 1/2 x 35'-1 (03006)
G2B	1/8	5/8 x 6 1/2 x 55'-3 (03004)	32'-10 1/2	1/4	1 1/16	5/8 x 6 1/2 x 33'-7 (03007)
G3B	3/16	5/8 x 62 x 55'-2 (03002)	31'-0 15/16	5/16	1 3/16	5/8 x 6 1/2 x 32'-1 (03008)
G4B	1/4	5/8 x 62 x 55'-2 (03002)	30'-2	3/8	1 3/16	5/8 x 6 1/2 x 30'-11 (03009)

MARK	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV
G1B	-0 1/8	-0 1/4	-0 5/16	-0 7/16	-0 1/2	-0 9/16	-0 5/8	-0 11/16	-0 3/4	-0 13/16	-0 7/8	-0 7/8	-0 15/16	-0 7/8	-0 7/8	-0 13/16	-0 11/16	-0 1/2	-0 5/16	3/16	1 13/16	88'-8 1/8	88'-10 1/8	5/8	-0 7/8	54'-11	1/8
G2B	-0 1/4	-0 7/16	-0 5/8	-0 13/16	-1	-1 1/8	-1 1/4	-1 5/16	-1 3/8	-1 7/16	-1 1/2	-1 1/2	-1 1/2	-1 7/16	-1 5/16	-1 3/16	-1	-0 11/16	-0 3/8	5/16	1 15/16	87'-8 3/4	87'-11	3/16	-1 1/2	55'-0 1/2	3/16
G3B	-0 3/8	-0 11/16	-1	-1 1/4	-1 7/16	-1 5/8	-1 3/4	-1 7/8	-2	-2 1/16	-2 1/16	-2 1/16	-2	-1 7/8	-1 3/4	-1 1/2	-1 1/4	-0 15/16	-0 1/2	7/16	2 1/8	85'-9 7/16	86'-0	7/16	-2	54'-11 1/16	1/4
G4B	-0 1/2	-0 15/16	-1 5/16	-1 5/8	-1 7/8	-2 1/8	-2 5/16	-2 1/2	-2 3/16	-2 5/8	-2 11/16	-2 5/8	-2 1/2	-2 5/16	-2 1/8	-1 13/16	-1 1/2	-1 1/16	-0 3/16	3/16	2 1/4	84'-10 1/4	85'-1 1/16	1/8	-2 1/2	54'-11 1/16	5/16



CAMBER DIAGRAM - G5B

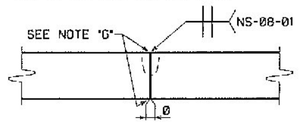


TYPICAL WEB PLATE SPLICE

FOR WEB PLATES 5/16" TO 2" THICK (B-L2c-S)
⚠ (W71X-2 SERIES)

NOTE "G"

ALL WELDS MAY HAVE A MAXIMUM REINFORCEMENT OF 1/8". GRIND THE WELDS SMOOTH IN THE AREAS TO BE TESTED AND FOR THE FULL DEPTH OF WEB ON GIB (F.S.) AND G5B (N.S.).



TYPICAL ALTERNATE WEB PLATE SPLICE

FOR ASTM A709 GR. 50 OR GR. 50W WEB PLATES 1/2" TO 5/8" THICK
(NS-1X PROCEDURE) ⚠

NOTE "G"

ALL WELDS MAY HAVE A MAXIMUM REINFORCEMENT OF 1/8". GRIND THE WELDS SMOOTH IN THE AREAS TO BE TESTED AND FOR THE FULL DEPTH OF WEB ON GIB (F.S.) AND G5B (N.S.).

SHOP NOTE:

PLEASE NOTE THAT FOR ASTM A709 GR. 50 OR 50W WEB PLATES 1/2" TO 5/8" THICK, EITHER TYPICAL WEB PLATE SPLICE JOINT MAY BE USED AT THE DISCRETION OF THE SHOP.

NOTES:

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.
ALL WEB PLATES REQUIRE CHARPY V-NOTCH TEST.
NEGATIVE CAMBER ORDINATES INDICATE CURVE IS BELOW BASELINE.
THE LETTERS 't' & 'c' AT WEB SPLICES INDICATE TENSION AND COMPRESSION EDGES AT SPLICES.
RT INDICATES RADIOGRAPHIC TESTING.

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
1	APPROVAL CHANGE: ADDED WELD DESIGNATIONS	MGK	KGM	2/5/13

HIGH STEEL STRUCTURES, INC.
An Affiliate of High Industries Inc.
An ISO 9001:2008 Certified Company
Lancaster Facility
Phone (717) 293-9311
Williamsport Facility
Phone (570) 326-9091
www.highsteel.com

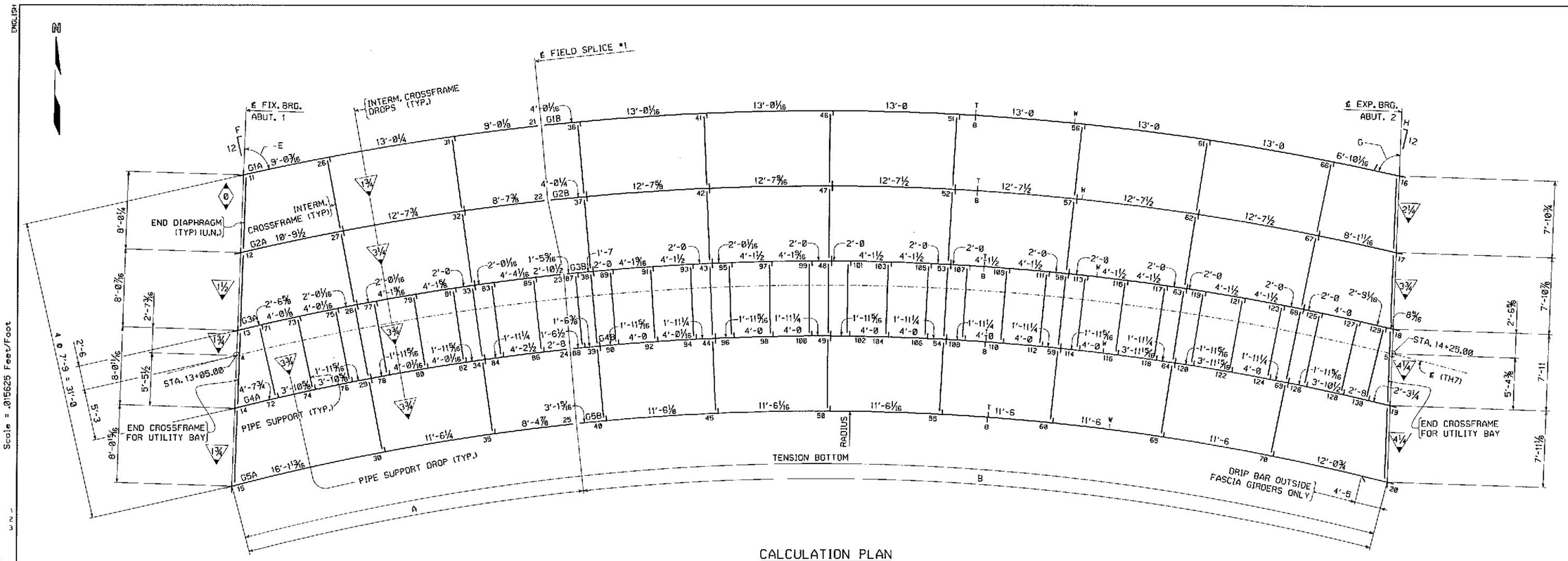
WEB CAMBER DIAGRAMS
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

HOLES
BOLTS
COATING
CODE(S): 30
SCALE: N.T.S.

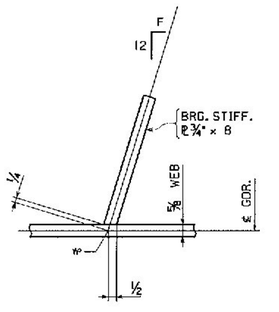
STATE CONT. OR REF. NO.:
FED. AID PROJ. NO.:
GENERAL CONTRACTOR: MILLER CONSTRUCTION, INC.
HSSI PROJ. MGR: KEN GLIDDEN
DRAWING MANAGER: JOSH MURRY (JH) MADE BY: KMA CHK'D. BY: DH DATE: 12/07/12
HSSI PROJECT NUMBER: S-1120266A-1
DRAWING NUMBER: WC1 OF WC1

VT

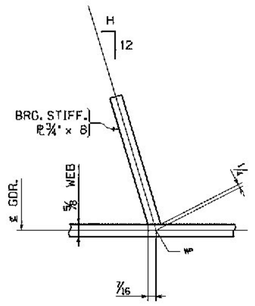
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BY: mcastel
PWAC WG MBE.DGN PRG: 3202202 SHIPSHEET: SS2202
SHIPMENT #:



CALCULATION PLAN



SKEWED STIFF. LAYOUT @ ABUT. 1



SKEWED STIFF. LAYOUT @ ABUT. 2

LINE	A	B	C	D	E	F	G	H	RADIUS
G1	31'-0 9/16"	88'-10 1/4"	.0652	.0244	75°-19'-53.760"	3 1/8	79°-2'-54.240"	2 5/16	268'-0
G2	32'-0 5/8"	87'-11 1/8"	.0679	.0247	74°-53'-4.200"	3 1/4	78°-43'-4.800"	2 3/8	260'-3
G3	34'-0 3/4"	86'-0 1/2"	.0707	.0248	74°-24'-32.400"	3 3/8	78°-22'-1.200"	2 1/2	252'-6
G4	35'-0 13/16"	85'-1 13/16"	.0738	.0249	73°-54'-7.560"	3 7/16	77°-59'-35.520"	2 5/16	244'-9
G5	36'-0 15/16"	84'-2 5/16"	.0772	.0250	73°-21'-38.160"	3 9/16	77°-35'-40.200"	2 5/8	237'-0

NOTES:

DIMENSIONS ON PLAN ALONG GIRDERS ARE GIVEN TO THE CHORD AT THE BOTTOM OF WEB IN FULLY CAMBERED POSITION. ALL OTHER DIMENSIONS ARE GIVEN HORIZONTALLY.
DIMENSIONS PLACED ON THE GIRDER LINES REPRESENT CROSSFRAME SPACING.
FIGURES GIVEN THUS: .8652 ARE THE GRADES OF THE GIRDERS AT THE BEARINGS IN FINAL POSITION; ARROW POINTS DOWNGRADE.
ALL STIFFENER AND CONNECTION PLATE SPACINGS ARE GIVEN TO ℄ PLATE.
ENDS OF GIRDERS AND ALL BEARING STIFFENERS/CONNECTION PLATES TO BE VERTICAL IN FINAL POSITION.
ALL STEEL TO BE ASSHTO M270 GRADE 50W (U.N.).
ALL FIELD CONNECTIONS TO BE MADE WITH ⅞"ø H.S. (M164 TYPE 3) BOLTS IN 15/16"ø HOLES. (U.N.).
FIGURES GIVEN THUS: ▽ ARE THE DIFFERENCES IN ELEVATIONS OF GIRDERS (IN THE PLANE OF THE CROSSFRAME IN FINAL POSITION) AT CROSSFRAMES; ARROW POINTS TOWARD LOW GIRDER.
FOR TYPICAL DETAIL LAYOUTS, SEE DRAWINGS PREFIXED "TD".
MARKS GIVEN THUS: W T I / I B REPRESENT WEB & FLANGE SHOP SPLICE LOCATIONS.

NOTE
THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION. THIS DRAWING IS SUBMITTED FOR INFORMATION ONLY AND IS NOT INTENDED FOR SHOP FABRICATION. THIS DRAWING IS FOR REFERENCE ONLY, APPROVAL IS NOT REQUIRED.

Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

CROSSMEMBER DROPS AND POINT TO POINT DIMENSIONS
MADE BY: CDS
CHECKED BY: MGK

NO.	REVISION	BY	CHK'D	DATE
△				
△				
△				

HOLES
BOLTS
COATING
CODE(S)
SCALE N.T.S.

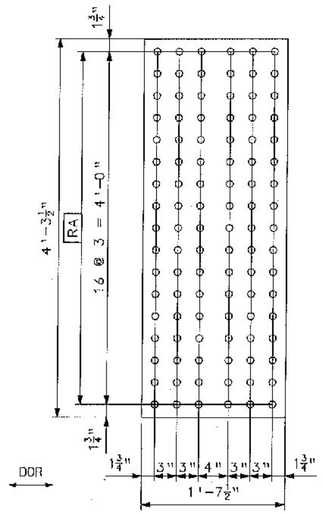
HIGH STEEL STRUCTURES INC.
An AISC Certified Company
An Affiliate of High Industries Inc.
Lancaster Facility
215 Old Philadelphia Pike
Lancaster, PA 17602-2008
Phone (717) 293-3121
Williamsport Facility
3300 E. 4th Street
Williamsport, PA 17701
Phone (570) 326-9051
www.highsteel.com

CALCULATION PLAN
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

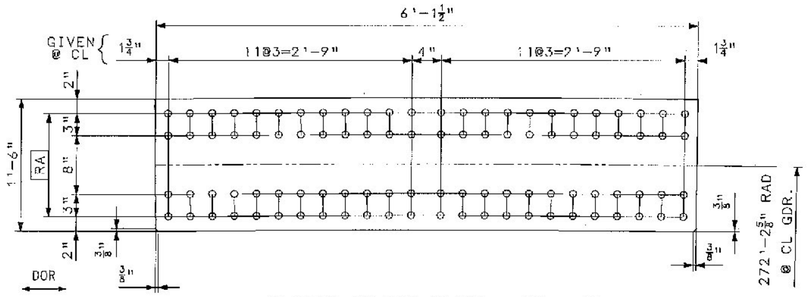
STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (JH)	MADE BY	DH
CHK'D. BY	KLW	DATE	12/11/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	WS1 OF WS1

VT

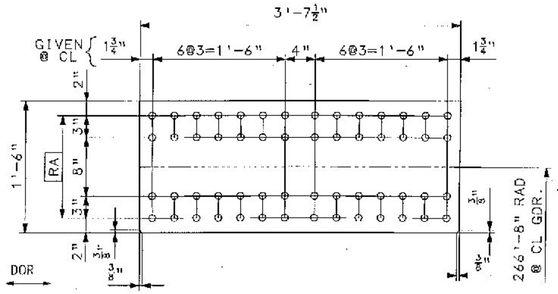
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Scale = .015625 Feet/Foot
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PLOTTED: 1/4/2013 7:42:23 AM
BY: MSpicher



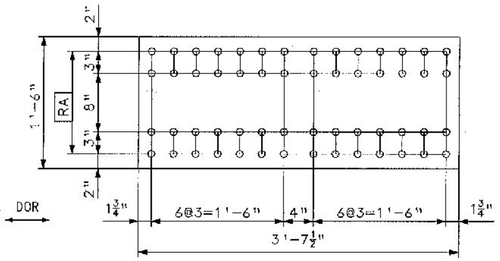
WEB SPLICE PLATE – MK. x1a



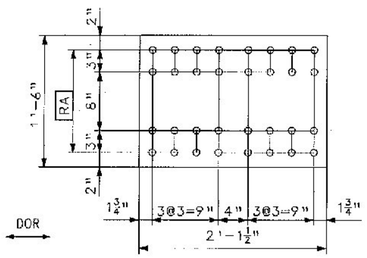
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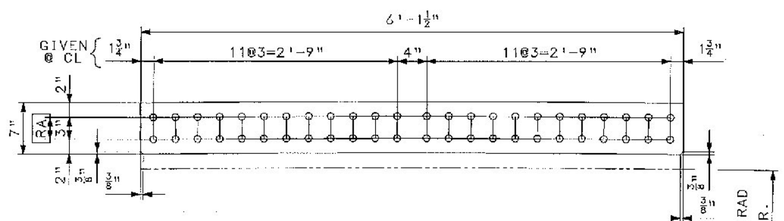
FLANGE SPLICE PLATE – MK. x1c



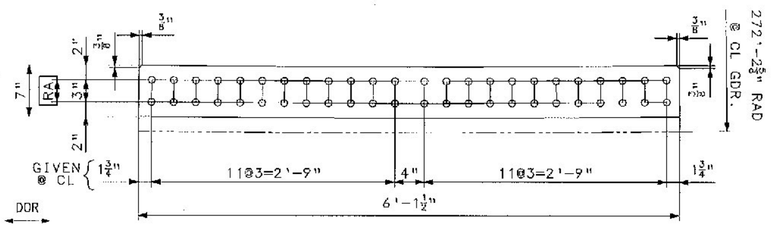
FLANGE SPLICE PLATE – MK. x1d



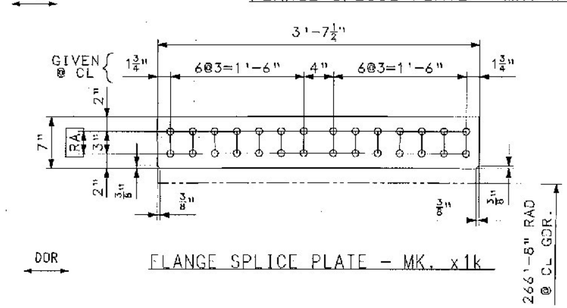
FLANGE SPLICE PLATE – MK. x1f



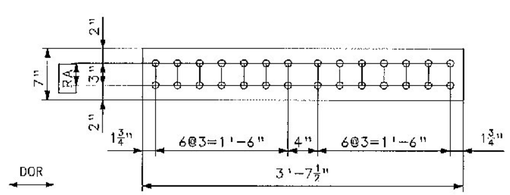
FLANGE SPLICE PLATE – MK. x1g



FLANGE SPLICE PLATE – MK. x1h



FLANGE SPLICE PLATE – MK. x1k



FLANGE SPLICE PLATE – MK. x1m

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.
CORNER CLIPS ARE FOR ORIENTATION PURPOSES.

BILL OF MATERIAL

QTY	MARK	COMM.	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	WEIGHT EA. (LBS)
10	x1a	PL	5/16 x 51 1/2	1 7 1/2	M270	50W	T		0.6001	89
2	x1b	PL	1 3/8 x 18	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	0.6002	516
1	x1c	PL	7/8 x 18	3 7 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	0.6003	194
1	x1d	PL	7/8 x 18	3 7 1/2	M270	50W	T		0.6004	194
6	x1f	PL	1/2 x 18	2 1 1/2	M270	50W	T		0.6005	65
2	x1g	PL	1 3/8 x 7	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	0.6006	201
2	x1h	PL	1 3/8 x 7	6 1 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	0.6006	201
1	x1k	PL	7/8 x 7	3 7 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	0.6007	76
2	x1m	PL	7/8 x 7	3 7 1/2	M270	50W	T		0.6006	76

Vermont Agency of Transportation

RECEIVED

CK'D BY J. CLARK OK'D BY J. GRIFFIN

February 12, 2013

RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
△				
△				
△				

HOLES: 15/16" Ø (U.N.)
BOLTS: NONE
COATING: NONE
CODE(S): 30
SCALE: N.T.S.

HIGH STEEL STRUCTURES INC.
1915 Old Philadelphia Pike
Lancaster, PA 17605-5905
Phone (717) 299-5211
www.highsteel.com
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.

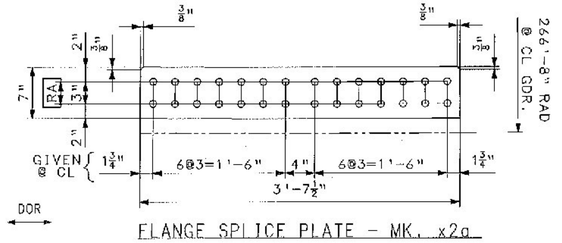
GIRDER JOB STANDARDS
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13405.00 TO STA. 14425.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.: FED. AID PROJ. NO.:
GENERAL CONTRACTOR: MILLER CONSTRUCTION, INC. HSS PROJ. MGR.:

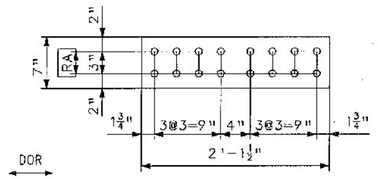
VT

DRAWING MANAGER: JOSH MURRY (IH) MADE BY: CDS CHK'D. BY: MGK DATE: 12/14/12
HSS PROJECT NUMBER: S-1120266A-1 DRAWING NUMBER: X1 OF X5

PLOTTED: MM/DD/YY hh:mm:ss BY: XXXXXXX
SHIPMENT 1 PHASING: 50257S1, PRD: 50257S2 S-1P&CNO: 50257S3



FLANGE SPLICE PLATE – MK. x2a



FLANGE SPLICE PLATE – MK. x2b

BILL OF MATERIAL

QTY	MARK	COMM.	DESCRIPTION				LENGTH		SPEC	GRADE	TEST	REMARKS	ITEM	WEIGHT EA. (LBS)
1	x2a	PL	7/8	x	7		3	7 1/2	M270	50W	T	WIDTH & LENGTH AROUND CURVE	0.6007	76
12	x2b	PL	1/2	x	7		2	1 1/2	M270	50W	T		0.6009	25

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.
CORNER CLIPS ARE FOR ORIENTATION PURPOSES.

Vermont Agency of Transportation

RECEIVED

CK'D BY J. CLARK OK'D BY J. GRIFFIN

February 12, 2013

RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
△				
△				
△				

ICIFS	15/16" Ø (U.N.)
BOLTS	NONE
COATING	NONE
CODE(S)	30
SCALE	N.T.S.

HIGH STEEL STRUCTURES INC.
An Affiliate of High Industries Inc.
An ISO 9001:2000 Certified Company
1915 Old Philadelphia Pike
Lancaster, PA 17602-4004
Phone 17171 299-5211
www.highsteel.com

GIRDER JOB STANDARDS

ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH

ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00

BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON

STATE OF VERMONT

AGENCY OF TRANSPORTATION

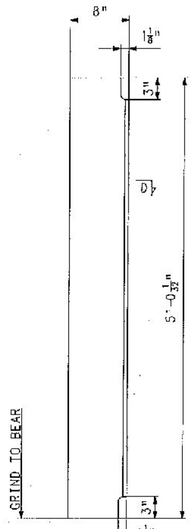
STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR.	

DRAWING MANAGER	JOSH MURRY (IH)	MADE BY	CDS	CHK'D. BY	MGK	DATE	12/14/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	X2 OF X5				

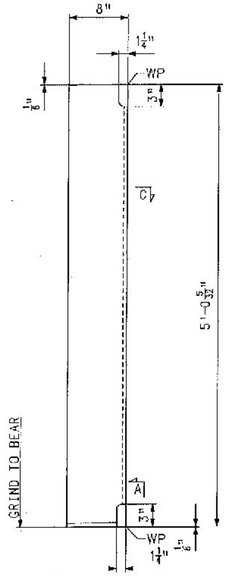
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PLOTTED: MM/DD/YY hr:mm:ss BY: XXXXXXX

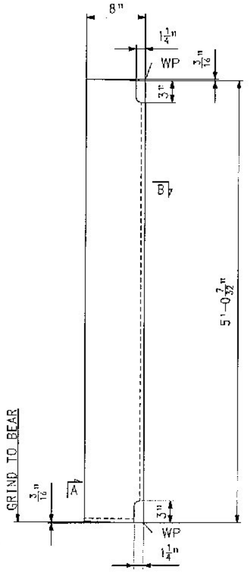
SHIPMENT | PMASNO: 50025751 PRJ: 50025752 SHIPASPRJCT: 50025753



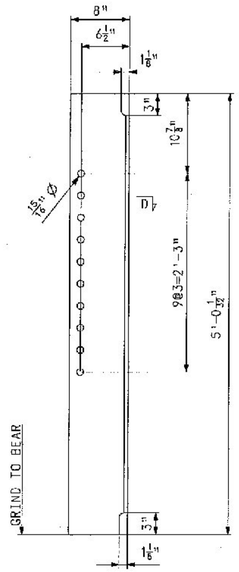
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MK. x3a



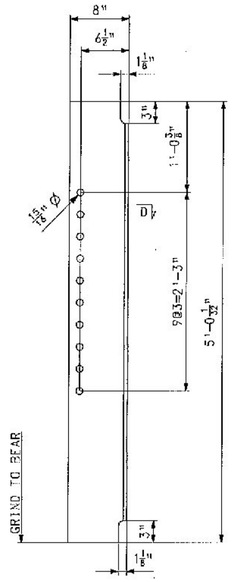
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MK. x3b



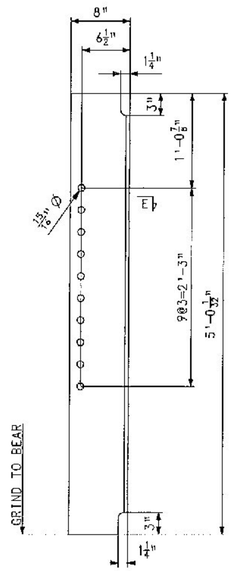
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MK. x3c



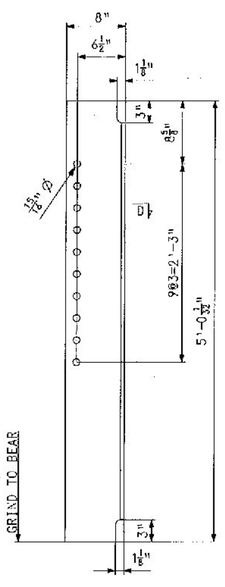
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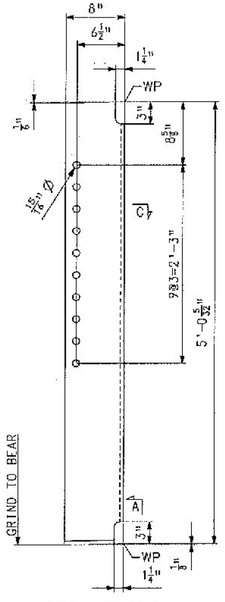
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MK. x3f



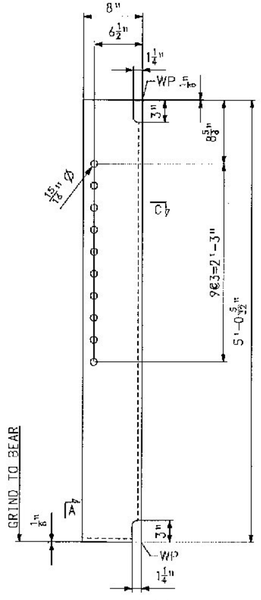
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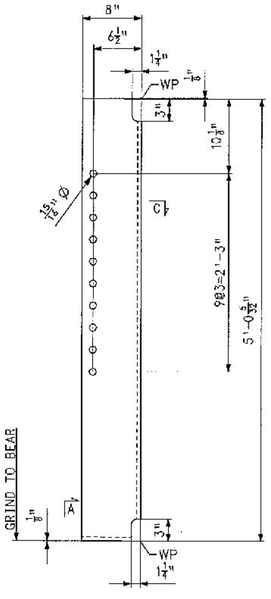
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MK. x3h



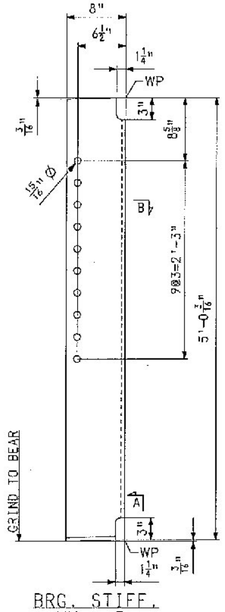
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MK. x3k



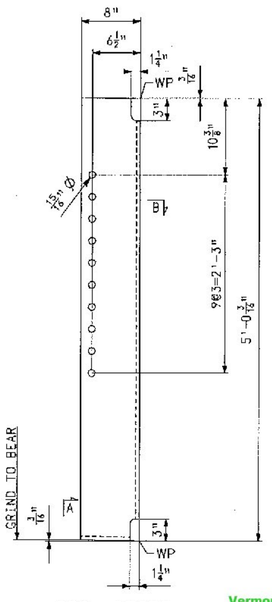
BRG. STIFF.
MK. x3m



BRG. STIFF.
MK. x3n



BRG. STIFF.
MK. x3p



BRG. STIFF.
MK. x3s

BILL OF MATERIAL

QTY	MARK	COMM.	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	WEIGHT EA. (LBS)
2	x3a	PL	3/4 x 8	5 0 1/32	M270	50W			0700.1	10.2
1	x3b	PL	3/4 x 8	5 0 9/32	M270	50W			0700.1	10.3
1	x3c	PL	3/4 x 8	5 0 3/8	M270	50W			0700.1	10.3
1	x3d	PL	3/4 x 8	5 0 1/32	M270	50W	T		0700.1	10.2
1	x3f	PL	3/4 x 8	5 0 1/32	M270	50W	T		0700.1	10.2
1	x3g	PL	3/4 x 8	5 0 1/32	M270	50W	T		0700.1	10.2
3	x3h	PL	3/4 x 8	5 0 1/32	M270	50W	T		0700.1	10.2
1	x3k	PL	3/4 x 8	5 0 5/16	M270	50W	T		0700.1	10.3
1	x3m	PL	3/4 x 8	5 0 9/32	M270	50W	T		0700.1	10.3
1	x3n	PL	3/4 x 8	5 0 5/16	M270	50W	T		0700.1	10.3
1	x3p	PL	3/4 x 8	5 0 3/8	M270	50W	T		0700.1	10.3
1	x3s	PL	3/4 x 8	5 0 3/8	M270	50W	T		0700.1	10.3



SECTION A



SECTION B



SECTION C



SECTION D



SECTION E

NO.	REVISION	BY	CHK'D	DATE

HOLES: 15/16" Ø

HOLES: NONE

COATING: NONE

CODE(S): 30

SCALE: N.T.S.

VT

HIGH STEEL STRUCTURES INC.
1015 Old Philadelphia Pike
Lancaster, PA 17602-2008
Phone (717) 290 5211
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GIRDER JOB STANDARDS

ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH

ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00

BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON

STATE OF VERMONT

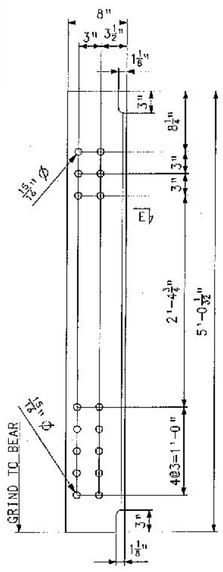
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR.	KEN GLIDDEN
DRAWING MANAGER	JOSH MURRY (IH)	MADE BY	CDS
CHK'D. BY	SSL	DATE	12/27/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	X3 OF X5

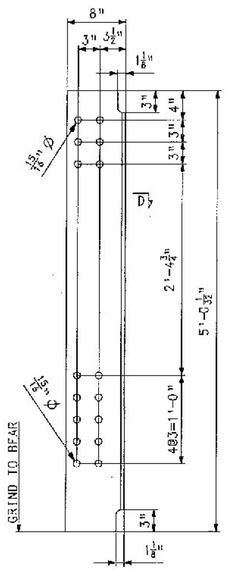
Vermont Agency of Transportation
RECEIVED
CK'D BY J. CLARK OK'D BY J. GRIFFIN
February 12, 2013
RESUBMIT NO Approved
BY J. LACROIX DATE 02/25/2013

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.

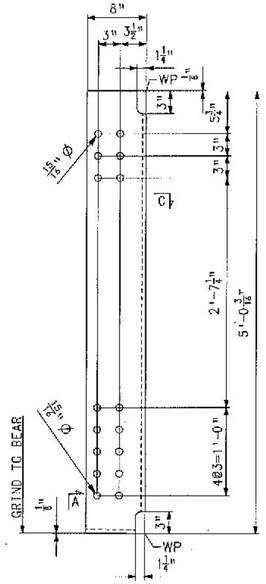
SHIPMENT 1 PMAENG: 5025751 PRO: 5025752 SM:PAPERJET: 5025753
PLOTTED: MM/DD/YY hhmmss BY: XXXXXXX



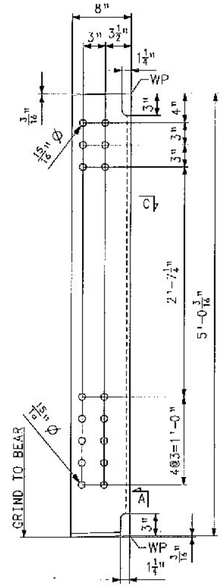
BRG. STIFF.
MK. x4a



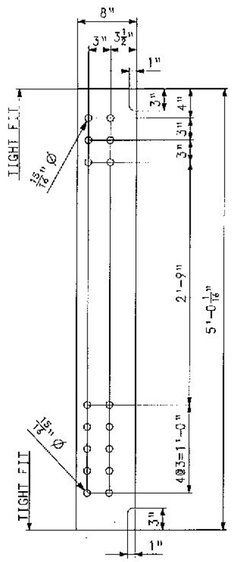
BRG. STIFF.
MK. x4b



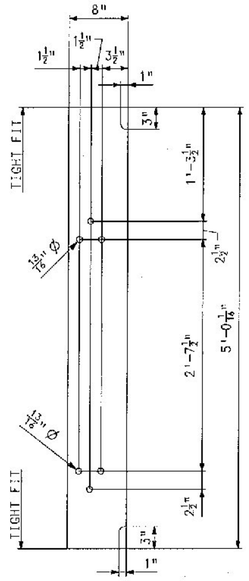
BRG. STIFF.
MK. x4c



BRG. STIFF.
MK. x4d



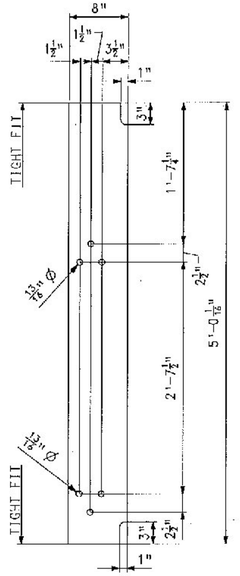
CONN. PLATE
MK. x4f



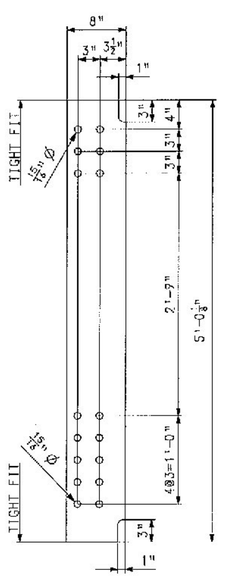
CONN. PLATE
MK. x4g

BILL OF MATERIAL

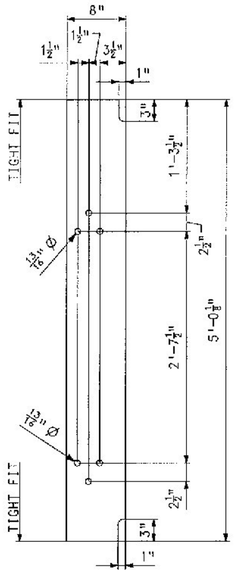
QTY	MARK	COMM.	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	WEIGHT EA. (LBS)
1	x4a	PL	3/4 x 8	5 0 1/32	M270	50W	T		0700.1	10.2
1	x4b	PL	3/4 x 8	5 0 1/32	M270	50W	T		0700.1	10.2
1	x4c	PL	3/4 x 8	5 0 5/16	M270	50W	T		0700.1	10.3
1	x4d	PL	3/4 x 8	5 0 3/8	M270	50W	T		0700.1	10.3
51	x4f	PL	1/2 x 8	5 0 1/16	M270	50W	T		0700.2	6.8
19	x4g	PL	1/2 x 8	5 0 1/16	M270	50W	T		0700.2	6.8
19	x4h	PL	1/2 x 8	5 0 1/16	M270	50W	T		0700.2	6.8
21	x4k	PL	1/2 x 8	5 0 1/8	M270	50W	T		0700.2	6.8
11	x4m	PL	1/2 x 8	5 0 1/8	M270	50W	T		0700.2	6.8
11	x4n	PL	1/2 x 8	5 0 1/8	M270	50W	T		0700.2	6.8
1	x4p	PL	3/4 x 8	5 0 5/16	M270	50W	T		0700.1	10.3



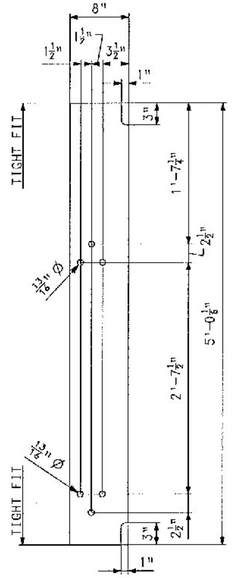
CONN. PLATE
MK. x4h



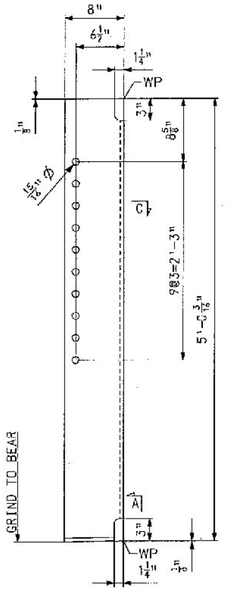
CONN. PLATE
MK. x4k



CONN. PLATE
MK. x4m



CONN. PLATE
MK. x4n



BRG. STIFF.
MK. x4p



SECTION A



SECTION C



SECTION D



SECTION E

Vermont Agency of Transportation

RECEIVED

Any Widely Reproduced Drawing is Not to Be Accepted Unauthorized

CK'D BY J. CLARK OK'D BY J. GRIFFIN

February 12, 2013

RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.

NO.	REVISION	BY	CHK'D	DATE

HOLES 15/16" Ø (U.N.T.)
BOLTS NONE
COATING NONE
CODE(S) 30
SCALE N.T.S.

1515 Old Philadelphia Pike
Lancaster, PA 17602-1039
Phone (717) 299-5211
www.highsteel.com
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.

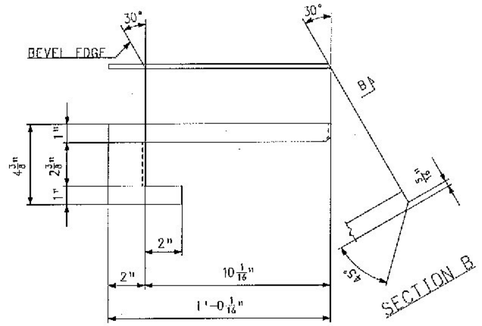
GIRDER JOB STANDARDS
ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH
ROUTE NO. TH7 STA. 13405.00 TO STA. 14425.00
BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.
FED. AID PROJ. NO.
GENERAL CONTRACTOR: MILLER CONSTRUCTION, INC.
HSSI PROJ. MGR: KEN OLIDOEN
DRAWING MANAGER: JOSH MURRY (IH)
MADE BY
CHK'D BY: GDS
SSL
DATE: 12/27/12
HSSI PROJECT NUMBER: S-1120266A-1
DRAWING NUMBER: X4 OF X5

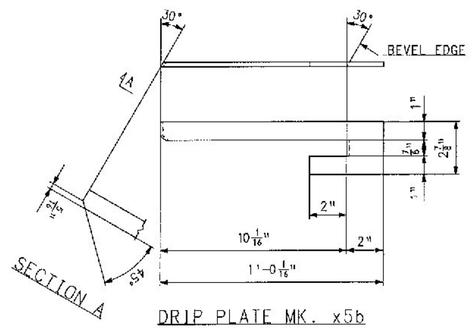
VT

SHIPMENT 1 PMSENG: 5025752 PRO: 5025752 S:\PSERECT: 5025752

PLOTTED: MM/DD/YY hh:mm:ss BY: XXXXXXXX



DRIP PLATE MK. x5a



DRIP PLATE MK. x5b

BILL OF MATERIAL

QTY	MARK	COMM.	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	ITEM	WEIGHT EA. (LBS)
1	x5a	PL	1/4 x 4 3/8	1 0 1/16	M270	50W			07003	4
1	x5b	PL	1/4 x 2 7/8	1 0 1/16	M270	50W			07003	2

Vermont Agency of Transportation

RECEIVED

CK'D BY J. CLARK OK'D BY J. GRIFFIN

February 12, 2013

RESUBMIT NO Approved

BY J. LACROIX DATE 02/25/2013

NO.	REVISION	BY	CHK'D	DATE
△				
△				
△				

HOLES: NONE

BOLTS: NONE

COATING: NONE

CODE(S): 30

SCALE: N.T.S.

HIGH STEEL STRUCTURES INC.
19/5 Old Philadelphia Pike
Lancaster, PA 17505-0008
Phone (717) 299-5211
www.highsteel.com
An ISO 9001:2000 Certified Company
An AFCO Unit of High Industries Inc.

GIRDER JOB STANDARDS

ROUTE NO. TH7 (BRIDGE ST.) OVER STEVENS BRANCH

ROUTE NO. TH7 STA. 13+05.00 TO STA. 14+25.00

BRIDGE NO. 11, TOWN OF BARRE, COUNTY OF WASHINGTON

STATE OF VERMONT

AGENCY OF TRANSPORTATION

STATE CONT. OR REF. NO.		FED. AID PROJ. NO.	
GENERAL CONTRACTOR	MILLER CONSTRUCTION, INC.	HSSI PROJ. MGR.	KEN GLIDDEN
DRAWING MANAGER	JOSH VURRY (IH)	MADE BY	CDS
CHK'D. BY	SSL	DATE	12/27/12
HSSI PROJECT NUMBER	S-1120266A-1	DRAWING NUMBER	X5 OF X5

VT

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.

SHIPMENT 1 PMARK#3: SO25753 PROJ: SO25752 SHIPREF#: SO25753

PLOTTED: WW/DJ/YY Hrs=xxx DY: XXXXXXX