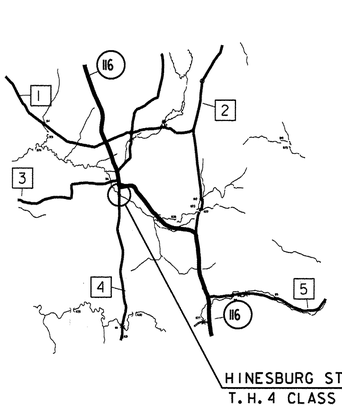
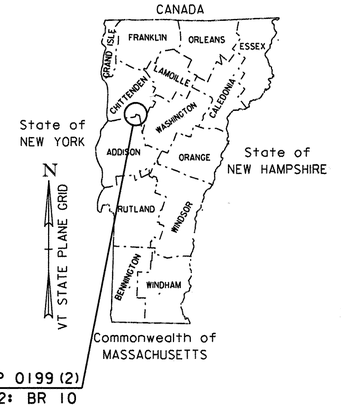
SEE SHEET 2 FOR INDEX OF SHEETS AND LIST OF STANDARDS

STATE OF VERMONT
AGENCY OF TRANSPORTATION





PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF HINESBURG
COUNTY OF CHITTENDEN

RECORD PLANS

CONTRACTOR: A.L. ST. ONGE CONTRACTOR INC. – MONTGOMERY, VT
RESIDENT ENGINEER: VICK DWIRE
CONSTRUCTION BEGAN: MAY 26, 2011
CONSTRUCTION COMPLETE: SEPTEMBER 19, 2012
RECORD PLANS BY: VICK DWIRE & STEPHEN KENT

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

BY _____ RESIDENT ENGINEER

DATE 1-9-2014

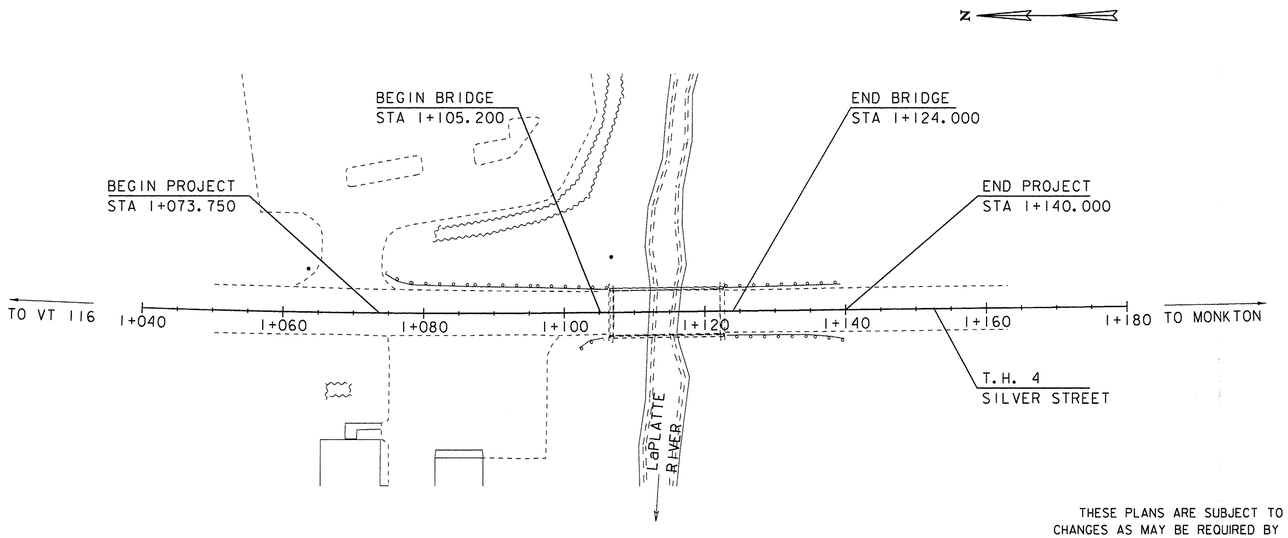
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

ROUTE NO: TOWN HIGHWAY 4 (MAJOR COLLECTOR), CLASS 2 BRIDGE NO: 10

PROJECT LOCATION: BEGINNING AT A POINT ON TH #4 (SILVER STREET) APPROXIMATELY 120 METERS SOUTHERLY OF THE INTERSECTION OF TH #4 AND VT 116 AND PROCEEDING APPROXIMATELY 70 METERS ALONG TH #4.

PROJECT DESCRIPTION: REPLACEMENT OF THE EXISTING BRIDGE WITH A NEW BRIDGE ON THE EXISTING ALIGNMENT WITH NECESSARY ROADWAY AND CHANNEL WORK.

LENGTH OF NEW STRUCTURE:	18.800 METERS
LENGTH OF ROADWAY:	47.450 METERS
LENGTH OF PROJECT:	66.250 METERS



0 10 20 30 40
SCALE = 1:400

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 (SR SR SR)
TOP OF CUT
TOE OF SLOPE

SURVEYED BY : R.D. GILMAN
SURVEYED DATE : 9-17-97

DATUM
VERTICAL ASSUMED
HORIZONTAL NAD-83

VTrans Metric
UNLESS NOTED OTHERWISE
STATIONS ARE IN KILOMETERS
ELEVATIONS ARE IN METERS
DIMENSIONS ARE IN MILLIMETERS

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 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 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 3/6/14

PROJECT MANAGER : C. CARLSON

PROJECT NAME : HINESBURG
PROJECT NUMBER : STP 0199(2)

SHEET 1 OF 56 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET

Metric

SHEET NO.	SHEET TITLE
1.	TITLE SHEET
2.	PRELIMINARY INFORMATION SHEET
3.	GENERAL NOTES
4.-6.	QUANTITY SHEETS
7.	BRIDGE QUANTITY SHEET #1
8.	TYPICAL SECTIONS
9.	TIE SHEET
10.	LAYOUT PLAN
11-12.	MAINLINE PROFILE SHEETS
13.	DRAINAGE PROFILE SHEET
14-15.	TRAFFIC CONTROL SHEETS
16.	BORING LAYOUT
17.	BORING LOG
18.	PLAN & ELEVATION
19.	DECK LAYOUT
20.	DECK DETAILS
21.	FRAMING PLAN
22.	BEAM PROFILE
23.	APPROACH SLAB LAYOUT
24.	APPROACH SLAB DETAILS
25.	ABUTMENT TYPICAL AND BEARING DETAILS
26.	ABUTMENT NO. 1 DETAILS
27.	ABUTMENT NO. 2 DETAILS
28.	WINGWALL DETAILS
29.	REINFORCING STEEL SCHEDULE
30-31.	BRIDGE RAILING DETAIL SHEETS
32.	APPROACH RAILING DETAILS
33-34.	APPROACH RAILING LAYOUT SHEETS
35-44.	MAINLINE SECTIONS SHEETS
45.	CHANNEL SECTIONS
46.	EROSION CONTROL NOTES
47.	EXISTING CONDITIONS SITE PLAN
48.	EPSC PLAN
49.	FINAL CONDITIONS SITE PLAN
50-53.	EPSC DETAIL SHEETS
54.	ROW DETAIL SHEET
55-56	ROW LAYOUT SHEETS

VTRANS STANDARDS

Standard	Description	DATE	DATE
B-5	EMBANKMENT ON EARTH SLOPE: EMBANKMENT ON ROCK SLOPE: I EXCAVATION: TYPICAL SLOPE ROUNDING	34486	01-Jun-94
B-71	RESIDENTIAL AND COMMERCIAL DRIVES	38541	08-Jul-05
C-10	CURBING	39489	11-Feb-08
D-1	PRECAST REINFORCED CONCRETE PIPE DROP INLET WITH CAST IR	34486	01-Jun-94
	PRECAST REINFORCED CONCRETE PIPE DROP INLET WITH CONCRETE COVER		
E-100	CONSTRUCTION APPROACH SIGNS	37988	02-Jan-04
E-100A	SIDE ROAD CONSTRUCTION - APPROACH SIGNS	37988	02-Jan-04
E-101	CONSTRUCTION SIGN DETAILS	37771	30-May-03
E-102	CONSTRUCTION SIGN DETAILS	37802	30-Jun-03
E-102A	CONSTRUCTION SIGN DETAILS	38108	01-May-04
E-106	TRAFFIC CONTROL - MISCELLANEOUS DETAILS	38047	01-Mar-04
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AI	37802	30-Jun-03
E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	39972	08-Jun-09
E-108A	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS FOR PAVING	39972	08-Jun-09
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	34919	08-Aug-95
E-191	PAVEMENT MARKING DETAILS	36192	01-Feb-99
E-193	PAVEMENT MARKING DETAILS	34929	18-Aug-95
J-3	MAIL BOX SUPPORT DETAILS	34918	07-Aug-95

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: July 2009

DRAINAGE AREA : 22.7 sq. km
CHARACTER OF TERRAIN : Hilly to mountainous
STREAM CHARACTERISTICS : Sinuous, alluvial, probably incised
NATURE OF STREAMBED : A mixture of silt, sand, gravel, cobbles and some stones.

PEAK FLOW DATA

Q 2.33 =	10 cms	Q 50 =	35 cms
Q 10 =	21 cms	Q 100 =	42 cms
Q 25 =	28 cms	Q 500 =	59 cms

DATE OF FLOOD OF RECORD: Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY: @ Q25 = 0.6 mps
ICE CONDITIONS : Moderate
DEBRIS: Moderate to heavy
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes
IS ORDINARY RISE RAPID? Yes
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? Maybe
IF YES, DESCRIBE: A downstream structure, T.H. 3 Br. 6, may back water up to this site during flood flows.

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

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span steel beam bridge with concrete deck
YEAR BUILT: 1936
CLEAR SPAN(NORMAL TO STREAM): 15.0 m
VERTICAL CLEARANCE ABOVE STREAMBED: 2.7 m
WATERWAY OF FULL OPENING: 30.6 sq. m
DISPOSITION OF STRUCTURE: Remove and replace with a new bridge
TYPE OF MATERIAL UNDER SUBSTRUCTURE: See boring logs

WATER SURFACE ELEVATIONS AT:

Q2.33 =	101.5 m	VELOCITY =	1.0 mps
Q10 =	101.9 m	"	1.4 mps
Q25 =	102.1 m	"	1.6 mps
Q50 =	102.2 m	"	1.8 mps
Q100 =	102.4 m	"	1.9 mps

LONG TERM STREAMBED CHANGES: Exposed log mat under abutment may indicate scour and/or stream degradation. Not enough information to make an accurate determination.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 103.0 m within the limits of the project survey
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: N.A. - The river divides upstream. DISTANCE:
HIGHWAY # : STRUCTURE #:
CLEAR SPAN: CLEAR HEIGHT:
YEAR BUILT: FULL WATERWAY:
STRUCTURE TYPE:

DOWNSTREAM STRUCTURE

TOWN: Hinesburg DISTANCE: 550 m
HIGHWAY # : T.H. 3 STRUCTURE #: 6
CLEAR SPAN: 6.1 m CLEAR HEIGHT: 3.0 m
YEAR BUILT: 1948 FULL WATERWAY: Unknown
STRUCTURE TYPE: Corrugated steel multi-plate arch

LOAD FACTOR - LOAD RATING (METRIC TONS)

LOADING LEVELS	TRUCK						
	M	MS	3S2	6 AXLE	3A STR.	4A STR.	5A SEMI
INVENTORY	38	47					
POSTED	53	66	85		58	60	75
OPERATING		78	101	117	69	71	

COMMENTS:

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2003	4876	585	0.6	0.05	232
2023	6973	837	0.6	0.05	331

20 year ESAL for flexible pavement from 2003 to 2023 : 1,929,000
40 year ESAL for flexible pavement from 2003 to 2023 : 4,794,650
Design Speed : 65 km/h

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span steel beam bridge with concrete deck

CLEAR SPAN(NORMAL TO STREAM): 17.0 m
VERTICAL CLEARANCE ABOVE STREAMBED: 2.5 m
WATERWAY OF FULL OPENING: 31.1 sq. m

WATER SURFACE ELEVATIONS AT:

Q2.33 =	101.5 m	VELOCITY=	0.8 mps
Q10 =	101.9 m	"	1.2 mps
Q25 =	102.1 m	"	1.4 mps
Q50 =	102.2 m	"	1.5 mps
Q100 =	102.4 m	"	1.7 mps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 103.0 m within the limits of the project survey
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 102.6 m
VERTICAL CLEARANCE: @ Q25 = 0.5 m

SCOUR: Calculated contraction scour is 1.0 m at Q100 and 1.5 m at Q500.

REQUIRED CHANNEL PROTECTION: Stone Fill, Type III

PERMIT INFORMATION

AVERAGE DAILY FLOW:	0.5 cms	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	0.2 cms	Elev. 100.3 m
ORDINARY HIGH WATER:	4.3 cms	Elev. 101.0 m

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Single span bridge
CLEAR SPAN (NORMAL TO STREAM): 17 m, minimum
VERTICAL CLEARANCE ABOVE STREAMBED: Elev. 102.4 m, minimum
WATERWAY AREA OF FULL OPENING: 25.3 sq. m, minimum

ADDITIONAL INFORMATION

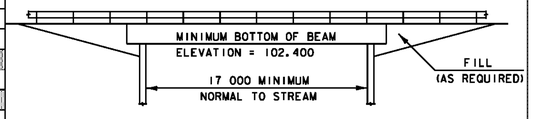
Note: The project survey is based on an assumed vertical datum. This final hydraulics report is based on the same assumed vertical datum as the plans.
There is a beaver dam under the bridge. That dam affects hydraulics at the site, but it was not considered in the above final hydraulics, as it is not a permanent feature and changes over time.

DESIGN CRITERIA

1. DESIGN LIVE LOAD AASHTO MS22.5
2. DESIGN SPAN 18.200 m
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A
   ON LEDGE N/A
4. ALLOWABLE LOAD FOR PILING 841 kN
   TYPE HP 250 X 62 GRADE 345
   ESTIMATED LENGTH ABT. 1 = 27m ABT. 2 = 30m (Including 1.000 embedded)
5. STRUCTURAL STEEL AASHTO M270M/M270 GRADE 250 (Painted)
6. REINFORCING STEEL GRADE 420
7. CONCRETE, HIGH PERFORMANCE CLASS A f'c: 30 Mpa
   CONCRETE, HIGH PERFORMANCE CLASS B f'c: 25 Mpa
8. DESIGN SOIL UNIT WEIGHT 22kN/m3
9. DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL N/A

TRAFFIC MAINTENANCE

1. IS TRAFFIC TO BE MAINTAINED? YES
   IF YES, ON EXISTING STRUCTURE? NO
   OR ON TEMPORARY BRIDGE? YES
   ONE OR TWO-WAY TRAVEL? TWO WAY
2. TRAFFIC CONTROL SIGNALS REQUIRED? NO
3. ARE SIDEWALKS REQUIRED? NO
   IF SO, ON WHAT SIDE? N/A



TEMPORARY BRIDGE DETOUR DETAIL
(NOT TO SCALE)

PROJECT NAME: **HINESBURG**
PROJECT NUMBER: **STP 0199(2)**

FILE NAME: **01j282\structures\s01j282pi.dgn**
PROJECT MANAGER: **C. CARLSON**
DESIGNED BY: **W. LAMMER**
PRELIMINARY INFORMATION SHEET

PLOT DATE: **3/2/2011**
DRAWN BY: **C. MOONEY**
CHECKED BY: **C. CARLSON**
SHEET **2** OF **56**

Metric

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS; AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.

2. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 20 DEGREES CELSIUS, UNLESS NOTED OTHERWISE.

3. DURING CONSTRUCTION, TRAFFIC SHALL BE MAINTAINED ON A TWO-WAY TEMPORARY BRIDGE CONSTRUCTED UPSTREAM OF THE EXISTING STRUCTURE. THE TEMPORARY BRIDGE AND THE APPROACHES TO THE TEMPORARY BRIDGE SHALL BE PAVED WITH 2 INCHES OF PAVEMENT. THIS WORK SHALL BE PAID FOR UNDER ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE".

4. A TIMBER CRIBBING IS PRESENT BELOW THE EXISTING ABUTMENTS. THE TIMBER WILL REMAIN IN PLACE AFTER THE REMOVAL OF THE ABUTMENTS. IF THE TIMBER IS WITHIN THE CONSTRUCTION LIMITS FOR THE NEW ABUTMENT IT SHALL BE SAWN OFF AND REMOVED TO THE LIMITS NECESSARY FOR THE NEW ABUTMENT. THIS WORK SHALL BE INCIDENTAL TO ITEM 204.25, "STRUCTURE EXCAVATION".

EARTHWORK

5. REMOVAL OF THE EXISTING SUPERSTRUCTURE SHALL BE UNDER ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE". THIS WORK SHALL INCLUDE REMOVAL OF THE SUPERSTRUCTURE AND ANY PORTIONS OF THE EXISTING ABUTMENTS THAT FALL OUTSIDE THE LIMITS OF STRUCTURE EXCAVATION OR UNCLASSIFIED CHANNEL EXCAVATION.

6. EXCAVATION OF SOILS TO THE LIMITS SHOWN ON THE TYPICAL ABUTMENT SECTION SHALL BE PAID FOR UNDER ITEM 204.25, "STRUCTURE EXCAVATION". ALL NECESSARY EXCAVATION OUTSIDE OF THESE LIMITS SHALL BE PAID FOR UNDER ITEM 203.27, "UNCLASSIFIED CHANNEL EXCAVATION".

7. THE CONTRACTOR MAY SUBSTITUTE SUBBASE MATERIAL FOR THE SAND BORROW SHOWN ON THE PLANS. THE SUBBASE MATERIAL SHALL MEET THE TYPE SPECIFIED IN THE CONTRACT AND BE PLACED TO MEET THE SUBBASE SPECIFICATIONS. IF PLACEMENT OF SUBBASE IS IN LIEU OF SAND BORROW, PLACE A GEOTEXTILE MEETING THE REQUIREMENTS OF SECTION 649 FOR "GEOTEXTILE FOR ROADBED SEPARATOR" BETWEEN THE SUBGRADE AND THE SUBBASE MATERIAL. ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING THE GEOTEXTILE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203.31, "SAND BORROW".

8. PLACE STONE FILL UNDER THE BRIDGE BEFORE POURING THE DECK.

CONCRETE

9. ITEM 514.10, "WATER REPELLENT, SILANE", SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE, WITH THE EXCEPTION OF THE BOTTOM OF THE DECK BETWEEN THE DRIP NOTCHES.

10. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 BY 25, UNLESS OTHERWISE NOTED. A 12 RADIUS SHALL BE USED ON THE TOP INSIDE CORNER OF THE CURBS.

11. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

12. ALL SUPERSTRUCTURE CONCRETE AND CONCRETE PLACED INTEGRALLY WITH THE SUPERSTRUCTURE SHALL BE ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)". ALL SUBSTRUCTURE AND APPROACH SLAB CONCRETE SHALL BE ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B".

13. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".

14. ALL REINFORCING STEEL SHALL BE EPOXY COATED GRADE 420. CUTTING AND REPAIRING DAMAGED AREAS OF COATED REINFORCING STEEL SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 507.04 FO THE STANDARD SPECIFICATIONS.

15. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

ALONG BACK FACES OF WALLS AGAINST EARTH	50
ALONG TOP SURFACE OF DECK SLAB:	60
ALONG BOTTOM SURFACE OF DECK SLAB:	40
ELSEWHERE UNLESS OTHERWISE INDICATED:	80

REINFORCEMENT STEEL PLACEMENT TOLERANCES SHALL BE:

SPACING = +/- 25
CLEARANCE = +/- 6

STRUCTURAL STEEL

16. THE EXISTING STRUCTURAL STEEL ON THIS PROJECT WAS PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. THE REMOVED STRUCTURAL STEEL IS TO BECOME 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 STRUCTURAL STEEL.

17. CHARPY V-NOTCH TEST: TEST STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS IN ACCORDANCE WITH SUBSECTION 714.01 OF THE STANDARD SPECIFICATIONS.

18. BOLTS FOR ALL BOLTED FIELD CONNECTIONS SHALL BE 22 DIAMETER HIGH STRENGTH BOLTS IN 24 DIAMETER HOLES UNLESS OTHERWISE NOTED.

19. CONNECTIONS NOT SHOWN IN THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL.

20. AFTER THE SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF BEAMS SHALL BE TAKEN UNDER DIRECTION OF THE RESIDENT ENGINEER FOR USE IN DETERMINING THE FINAL GRADE AND HAUNCH DEPTHS.

21. FLEMING BRACKETS OR SIMILAR FALSE WORK SHALL BE SPACED AS REQUIRED BY DESIGN WITH A MAXIMUM SPACING OF 1200 MM. THE DESIGN OF FALSE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

22. FILL ANY BOLT HOLES IN THE WEBS OF THE BEAMS NOT OTHERWISE FILLED WITH BUTTON HEAD OR HEX HEAD BOLTS MEETING AASHTO M164M TYPE I. TIGHTEN THE BOLTS IN ACCORDANCE WITH SUBSECTION 506.19 OF THE STANDARD SPECIFICATIONS.

23. THE COLOR OF THE FINAL COAT OF PAINT SHALL BE BROWN (COLOR CHIP 20059).

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

H-PILES

25. TO PREVENT DAMAGE TO THE PILES, PILE SHOES ARE REQUIRED AND SHALL CONFORM TO SECTION 505.04 (e).

26. THE PILES SHALL BE DRIVEN TO AN ULTIMATE AXIAL PILE CAPACITY OF 2105 KN OR REFUSAL, PROVIDED A MINIMUM TIP ELEVATION OF 92.5 HAS BEEN ACHIEVED.

27. A MINIMUM OF ONE DYNAMIC PILE TEST SHALL BE CONDUCTED ON ONE PILE AT EACH ABUTMENT. PAYMENT IS ITEM 505.45, "DYNAMIC PILE LOADING TEST".

MISCELLANEOUS

28. FOUR (4) SUGAR MAPLE TREES ARE TO REPLACE THE EXISTING TREES THAT WILL BE REMOVED FROM THE SCHOOL PARKING LOT IN ORDER TO CONSTRUCT THE TEMPORARY BRIDGE. THE EXACT LOCATION OF THE NEW TREES SHALL BE DETERMINED BY THE RESIDENT ENGINEER AND THE PROPERTY OWNER. THIS WORK WILL BE PAID FOR UNDER THE ITEM 656.30, "DECIDUOUS TREES (ACER SACCHARUM) (B&B) (100 mm CAL)".

29. IN 2009, A CONSTRUCTION PROJECT WAS COMPLETED WHICH INVOLVED SILVER STREET FROM THE BRIDGE TO THE INTERSECTION OF VT 116. THE INTERSECTION WAS REDESIGNED AND THE ROADWAY GRADES CHANGED. PRIOR TO ANY EXCAVATION ON SILVER STREET; THE CONTRACTOR AND RESIDENT ENGINEER SHALL SURVEY THE CENTERLINE OF THE ROAD AND OBTAIN THE EXISTING GRADES OF SILVER STREET TO THE BEGINNING OF THE BRIDGE. THIS WORK WILL BE CONSIDERED INCIDENTAL TO THE ITEM 635.10, "MOBILIZATION/DEMOBILIZATION".

30. ANY TEMPORARY PIPE EXTENSION AT THE SCHOOL ENTRANCE REQUIRED FOR THE CONSTRUCTION OF THE TEMPORARY DETOUR SHALL BE INCIDENTAL TO PAY ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE".

31. THE CONTRACTOR SHALL USE EXTREME CARE WHILE WORKING IN AND AROUND THE DRY HYDRANT LOCATED AT STA 1+102. 91 RT. ANY DAMAGE TO THE DRY HYDRANT AND THE INTAKE PIPE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

32. UNDERDRAIN WAS PLACED IN THE DITCH AT APPROXIMATELY STA 1+050 LT DURING THE 2009 INTERSECTION PROJECT. THE CONTRACTOR SHALL LOCATE THE UNDERDRAIN PRIOR TO CONSTRUCTION OF THE TEMPORARY DETOUR. ONCE LOCATED, THE CONTRACTOR AND RESIDENT ENGINEER SHALL DETERMINE IF THE UNDERDRAIN WILL NEED TO BE EXTENDED OR REPLACED WHEN THE TEMPORARY IS CONSTRUCTED. ALSO, WHEN THE NEW BRIDGE AND ROADWAY IS CONSTRUCTED, THE CONTRACTOR AND RESIDENT ENGINEER WILL NEED TO MAKE A DETERMINATION IF THE UNDERDRAIN HAS TO BE MOVED OR REPLACED IN THE FINAL CONDITION. AN ESTIMATED QUANTITY OF ITEM 605.10, "150 MM UNDERDRAIN PIPE" IS INCLUDED IN THE ESTIMATE FOR THE EXTENSION OR REPLACEMENT OF UNDERDRAIN FOR EITHER TEMPORARY OR FINAL ROADWAY CONDITIONS.

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)

FILE NAME: 01J282/str/s01J282gen.dgn	PLOT DATE: 10-MAR-2011
PROJECT MANAGER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: W. LAMMER
GENERAL NOTES	SHEET 3 OF 56

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

Metric

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
1					1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
810					810		CM	COMMON EXCAVATION	203.15	
50			120		170		CM	UNCLASSIFIED CHANNEL EXCAVATION	203.27	
120					120		CM	SAND BORROW	203.31	
10		10			20		CM	TRENCH EXCAVATION OF EARTH	204.20	
1					1		CM	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
			240		240		CM	STRUCTURE EXCAVATION	204.25	
			180		180		CM	GRANULAR BACKFILL FOR STRUCTURES	204.30	
250					250		SM	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
500					500		CM	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
10					10		CM	AGGREGATE SURFACE COURSE	401.10	
380					380		KG	EMULSIFIED ASPHALT	404.65	
1					1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
			90		90		CM	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	
			1		1		LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10	
			270		270		M	STEEL PILING FOR INTEGRAL ABUTMENTS, HP 250 X 62 (HP 10 X 42)	505.205	
			2		2		EACH	DYNAMIC PILE LOADING TEST	505.45	
			19500		19500		KG	STRUCTURAL STEEL, ROLLED BEAM	506.50	
			20370		20370		KG	EPOXY COATED REINFORCING STEEL	507.17	
			1		1		LS	SHEAR CONNECTORS (920 - 22 x 178)	508.15	
			1		1		LS	STRUCTURAL PAINTING, SHOP APPLIED	513.25	
			1		1		LS	SURFACE PREPARATION, SHOP	513.40	
			25		25		L	WATER REPELLENT, SILANE	514.10	
			18		18		M	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
			300		300		SM	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20	
			18		18		M	JOINT SEALER, HOT POURED	524.11	
			39		39		M	BRIDGE RAILING, ANODIZED 3 RAIL ALUMINUM	525.225	
1					1		LS	TWO-WAY TEMPORARY BRIDGE (130 SM - EST.)	528.11	
			1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20	
								BEGIN OPTION AA		
44					44		M	450 CAAP 1.52 (68 X 12)	601.0215	
44					44		M	450 CPEP(SL)	601.2615	
44					44		M	450 PCCSP 1.63 (68 X 12)	601.0415	
								END OPTION AA		
1					1		EACH	PRECAST REINFORCED CONCRETE PIPE DI WITH CAST IRON GRATE	604.25	
5					5		M	150 MM UNDERDRAIN PIPE	605.10	
40					40		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	
100					100		CM	DUST CONTROL WITH WATER	609.10	
255					255		CM	STONE FILL, TYPE II	613.11	
			190		190		CM	STONE FILL, TYPE III	613.12	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		EARTHWORKS SUMMARY
		FILL AVAILABLE
405	CM	ITEM 203.15 COMMON EXCAVATION (0.5 * 810 CM)
51	CM	ITEM 203.27 UNCLASSIFIED CHANNEL EXCAVATION (0.3 * 170 CM)
6	CM	ITEM 204.20 TRENCH EXCAVATION OF EARTH (0.3 * 20 CM)
72	CM	ITEM 204.25 STRUCTURE EXCAVATION (0.3 * 240 CM)
534	CM	TOTAL FILL AVAILABLE
		FILL REQUIRED
150	CM	COMMON FILL (1.15 * 130 CM)
384	**CM**	**WASTE**

N.A.B.I. = NOT A BID ITEM

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01j282/str/s01j282qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
QUANTITY SHEET #1

PLOT DATE: 03/02/2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 4 OF 66

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

Metric

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
130					130		CM	STONE FILL, TYPE IV	613.13				
1					1		EACH	RELOCATE MAILBOX, SINGLE SUPPORT	617.10				
2					2		EACH	YIELDING MARKER POSTS	619.17				
60					60		M	ALUMINUM APPROACH RAILING, ANODIZED	621.745				
69					69		M	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
200					200		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
1000					1000		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				
1					1		LS	TRAFFIC CONTROL	641.10				
350					350		M	100 MM WHITE LINE	646.20				
350					350		M	100 MM YELLOW LINE	646.21				
560			220		780		SM	GEOTEXTILE UNDER STONE FILL	649.31				
		100			100		SM	GEOTEXTILE FOR SILT FENCE	649.51				
		275			275		SM	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515				
		100			100		SM	GEOTEXTILE FOR FILTER CURTAIN	649.61				
		10			10		KG	SEED	651.15				
		40			40		KG	FERTILIZER	651.18				
		1			1		T	AGRICULTURAL LIMESTONE	651.20				
		1			1		T	HAY MULCH	651.25				
		100			100		CM	TOPSOIL	651.35				
420			110		530		SM	GRUBBING MATERIAL	651.40				
		1			1		LS	EPSC PLAN	652.10				
		48			48		HR	MONITORING EPSC PLAN	652.20				
		1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
		150			150		SM	TEMPORARY EROSION MATTING	653.20				
		10			10		CM	TEMPORARY STONE CHECK DAM, TYPE I	653.25				
		40			40		CM	VEHICLE TRACKING PAD	653.35				
		2			2		EACH	INLET PROTECTION DEVICE, TYPE I	653.40				
		200			200		M	BARRIER FENCE	653.50				
		60			60		M	PROJECT DEMARCATION FENCE	653.55				
4					4		EACH	DECIDUOUS TREES (ACER SACCHARUM)(B&B)(100 mm CAL.)	656.30				
2					2		EACH	REMOVING SIGNS	675.50				
2					2		EACH	ERECTING SALVAGED SIGNS	675.60				
2					2		EACH	SETTING SALVAGED POSTS	675.61				
1					1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				

N.A.B.I. = NOT A BID ITEM

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01j282/str/s01j282qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
QUANTITY SHEET #2

PLOT DATE: 03/02/2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 5 OF 66

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

Metric

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
								60		60		CM	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE , CLASS A LOW CEMENT)	900.608				
					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				
					645			39		684		T	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

N.A.B.I = NOT A BID ITEM

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01j282/str/s01j282qs.dgn	PLOT DATE: 03/02/2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
QUANTITY SHEET #3	SHEET 6 OF 66

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

Metric

SUMMARY OF BRIDGE QUANTITIES								TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
CHANNEL	DECK	APPROACH SLAB NO. 1	APPROACH SLAB NO. 2	ABUTMENT NO. 1	ABUTMENT NO. 2	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
120						120	CM	UNCLASSIFIED CHANNEL EXCAVATION	203.27			
				140	100	240	CM	STRUCTURE EXCAVATION	204.25			
				90	90	180	CM	GRANULAR BACKFILL FOR STRUCTURES	204.30			
		20	20	25	25	90	CM	CONCRETE, HIGH PERFORMANCE CLASS B	501.34			
				0.5	0.5	1	LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10			
				130	140	270	M	STEEL PILING FOR INTEGRAL ABUTMENTS, HP 250 X 62 (HP 10 X 42)	505.205			
				1	1	2	EACH	DYNAMIC PILE LOADING TEST	505.45			
	19500					19500	KG	STRUCTURAL STEEL, ROLLED BEAM	506.50			
	6920	2020	2020	4850	4560	20370	KG	EPOXY COATED REINFORCING STEEL	507.17			
	1					1	LS	SHEAR CONNECTORS (920 - 22 x 178)	508.15			
	1					1	LS	STRUCTURAL PAINTING, SHOP APPLIED	513.25			
	1					1	LS	SURFACE PREPARATION, SHOP	513.40			
	15			5	5	25	L	WATER REPELLENT, SILANE	514.10			
	18					18	M	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10			
	300					300	SM	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20			
		9	9			18	M	JOINT SEALER, HOT POURED	524.11			
	39					39	M	BRIDGE RAILING, ANODIZED 3 RAIL ALUMINUM	525.225			
				0.5	0.5	1	EACH	PARTIAL REMOVAL OF STRUCTURE	529.20			
190						190	CM	STONE FILL, TYPE III	613.12			
220						220	SM	GEOTEXTILE UNDER STONE FILL	649.31			
110						110	SM	GRUBBING MATERIAL	651.40			
	60					60	CM	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE , CLASS A LOW CEMENT)	900.608			
	31	4	4			39	T	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680			

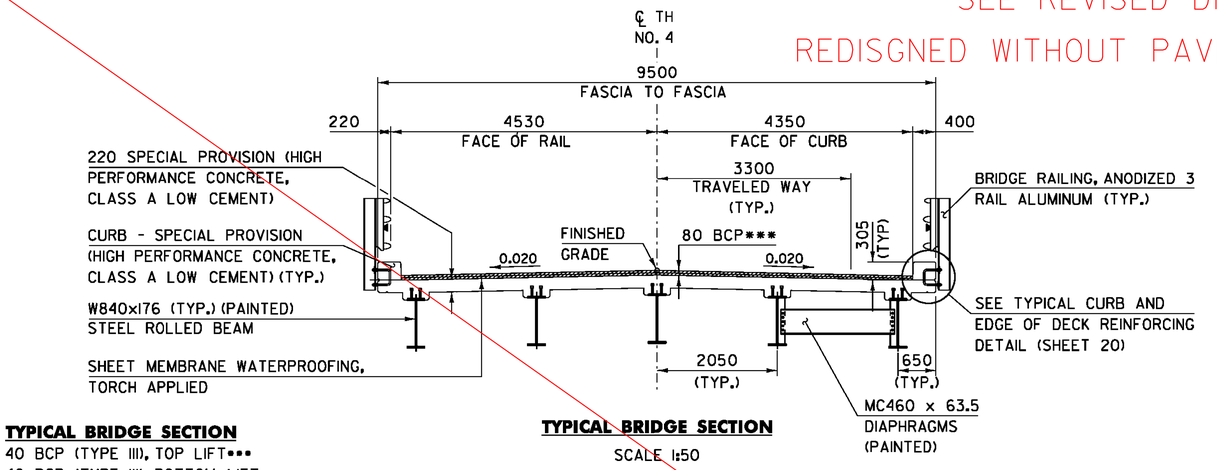
PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01j282/str/s01j282qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
BRIDGE QUANTITY SHEET #1

PLOT DATE: 03/02/2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 7 OF 58

SEE REVISED DRAWING

REDISGNED WITHOUT PAVEMENT ON DECK

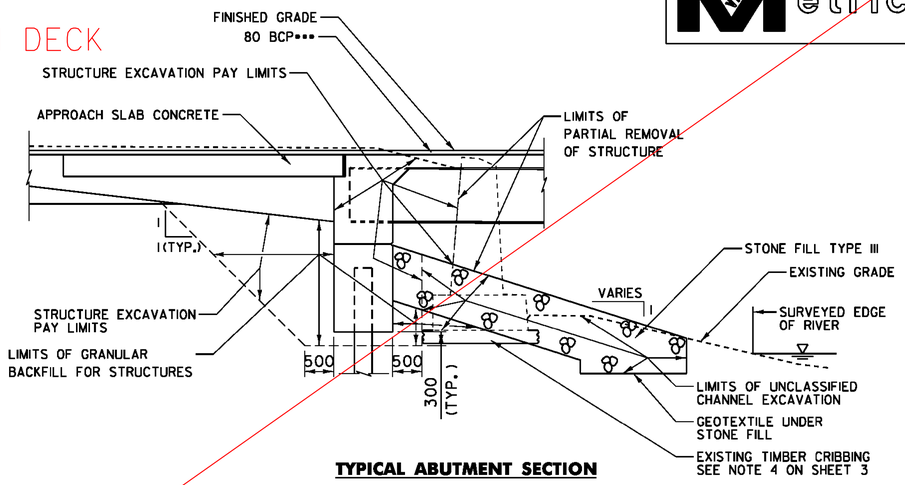


TYPICAL BRIDGE SECTION

40 BCP (TYPE III), TOP LIFT•••
40 BCP (TYPE III), BOTTOM LIFT

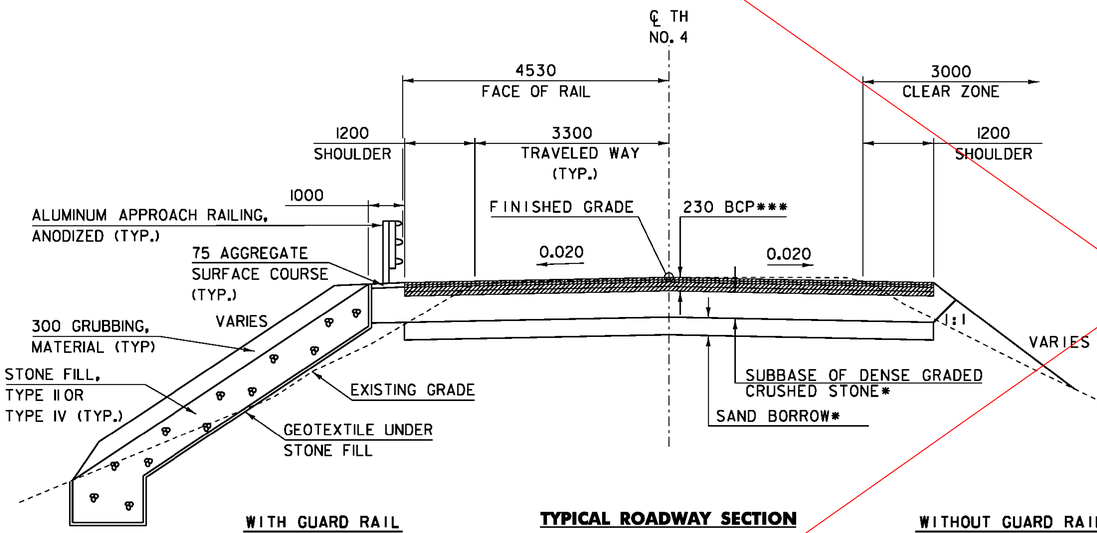
TYPICAL BRIDGE SECTION

SCALE 1:50



TYPICAL ABUTMENT SECTION

NOT TO SCALE

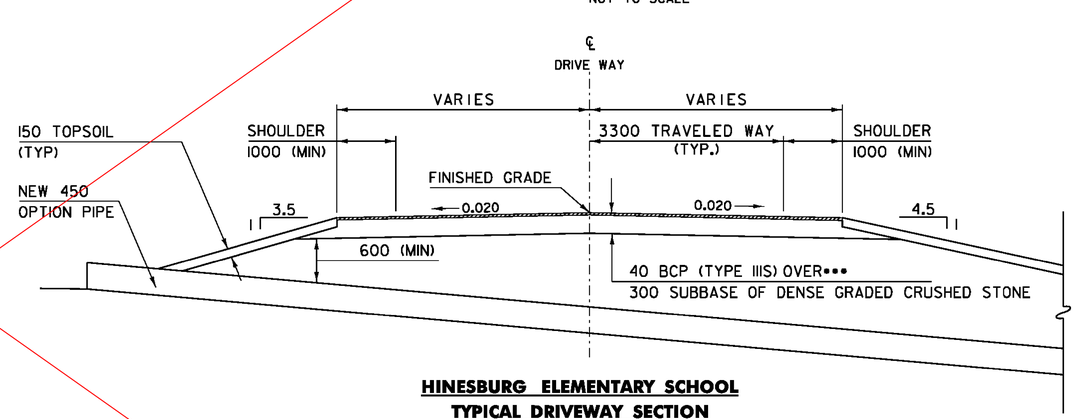


WITH GUARD RAIL

TYPICAL ROADWAY SECTION
(STA. 1+124.000 to STA. 1+140.000)

SCALE 1:50

WITHOUT GUARD RAIL

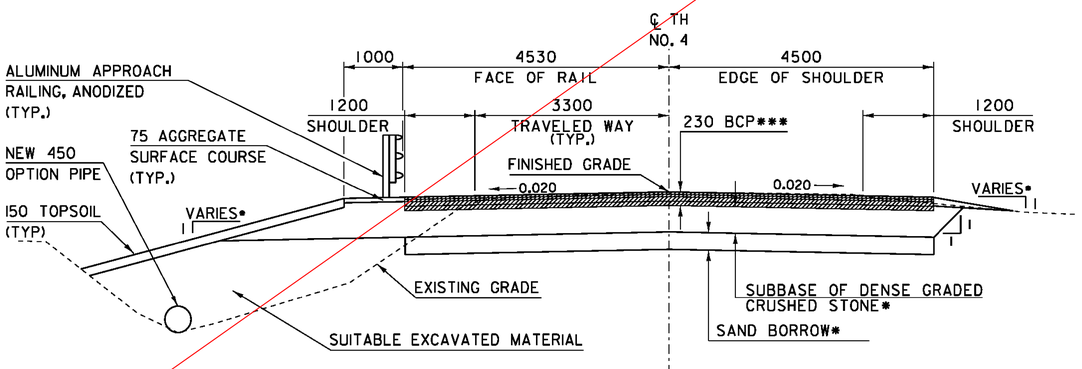


HINESBURG ELEMENTARY SCHOOL
TYPICAL DRIVEWAY SECTION

SCALE 1:50

TYPICAL ROADWAY SECTION
STA. 1+124.000 to STA 1+140.000

40 BCP (TYPE IIIS), TOP LIFT•••
40 BCP (TYPE IIIS), THIRD LIFT
75 BCP (TYPE IIS), SECOND LIFT
75 BCP (TYPE IIS), BOTTOM LIFT



TYPICAL ROADWAY SECTION
(STA. 1+073.750 to STA. 1+105.200)

SCALE 1:50

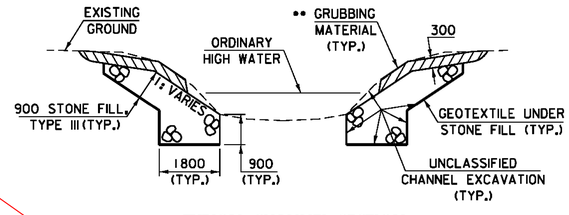
TYPICAL ROADWAY SECTION
STA. 1+073.750 to STA 1+105.200

40 BCP (TYPE IIIS), TOP LIFT•••
40 BCP (TYPE IIIS), THIRD LIFT
75 BCP (TYPE IIS), SECOND LIFT
75 BCP (TYPE IIS), BOTTOM LIFT

MATERIAL TOLERANCES

(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 6mm
- AGGREGATE SURFACE COURSE	+/- 13mm
SUBBASE	+/- 25mm
SAND BORROW	+/- 25mm
SUBGRADE	+/- 15mm



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

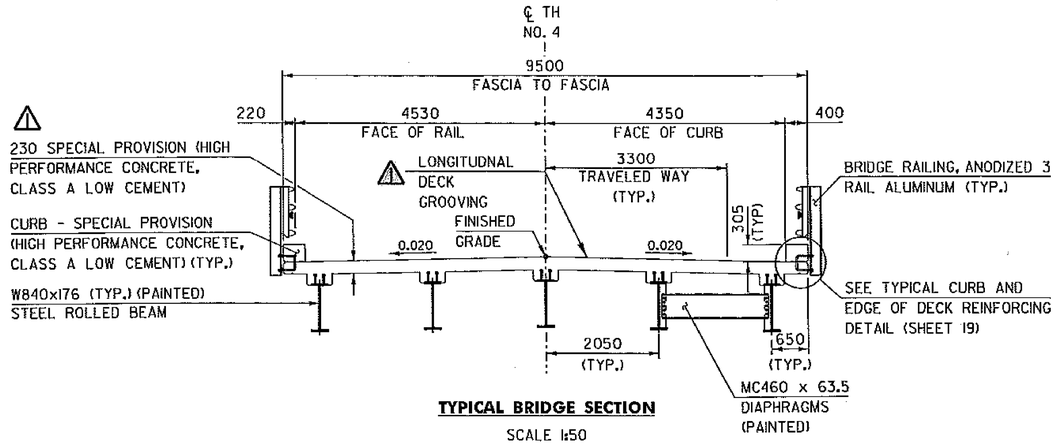
NOTES:

- • DEPTH VARIES, SEE MATERIAL TRANSITION DIAGRAM FOR DEPTHS AT SPECIFIC STATIONS.
- •• GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.
- ••• BCP SHALL BE READ AS BITUMINOUS CONCRETE PAVEMENT AND SHALL BE PAID FOR UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)"

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

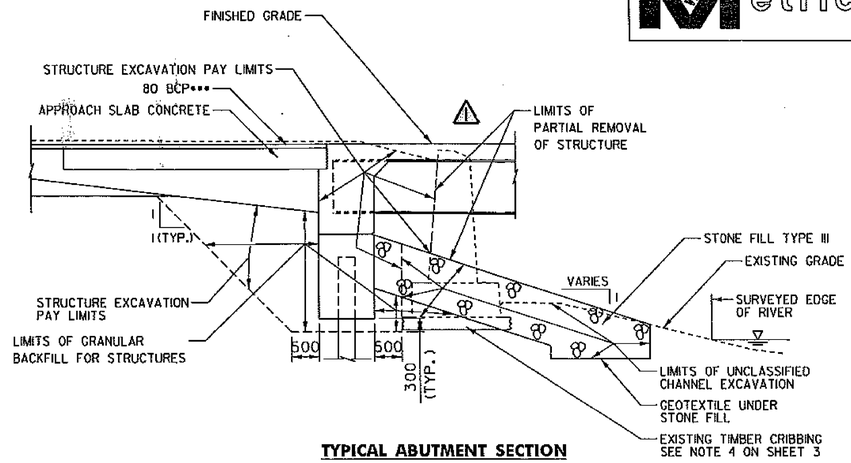
FILE NAME: 01J282/str/s01J282typ.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
TYPICAL SECTIONS

PLOT DATE: 10-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 8 OF 56



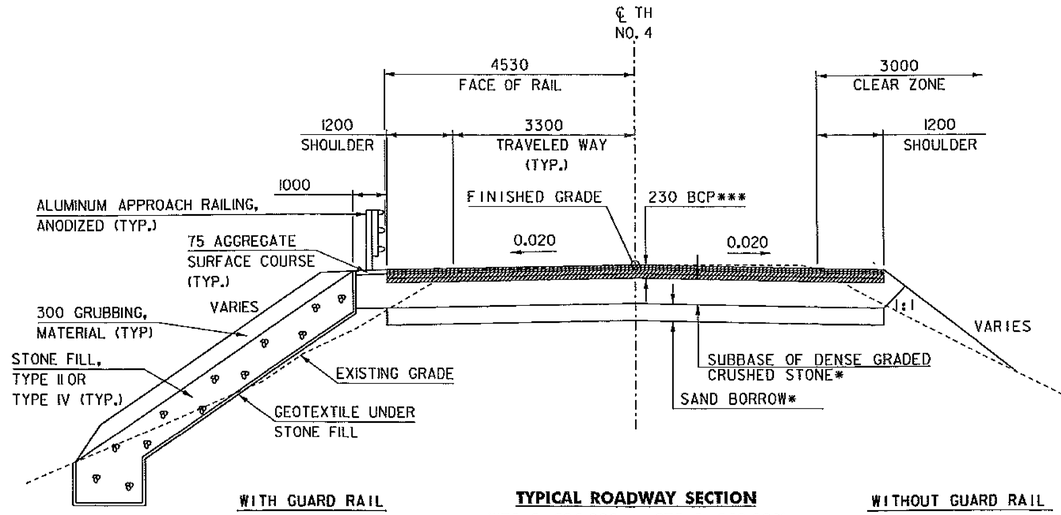
TYPICAL BRIDGE SECTION

SCALE 1:50



TYPICAL ABUTMENT SECTION

NOT TO SCALE

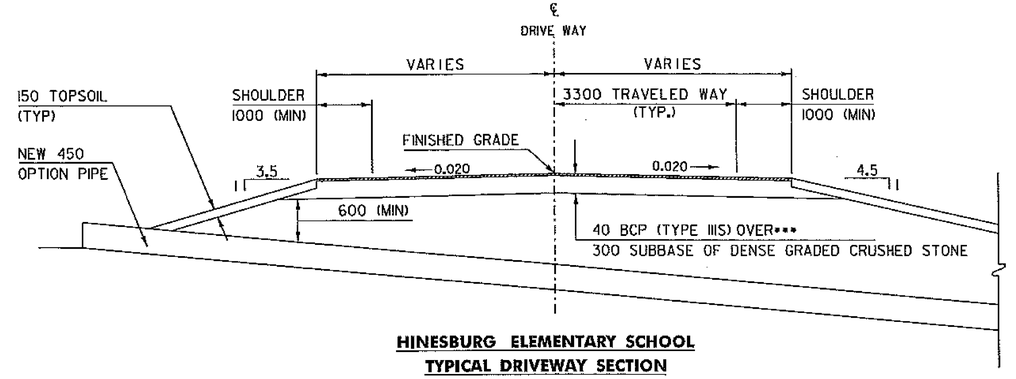


WITH GUARD RAIL

TYPICAL ROADWAY SECTION
(STA. 1+124.000 to STA. 1+140.000)

SCALE 1:50

WITHOUT GUARD RAIL

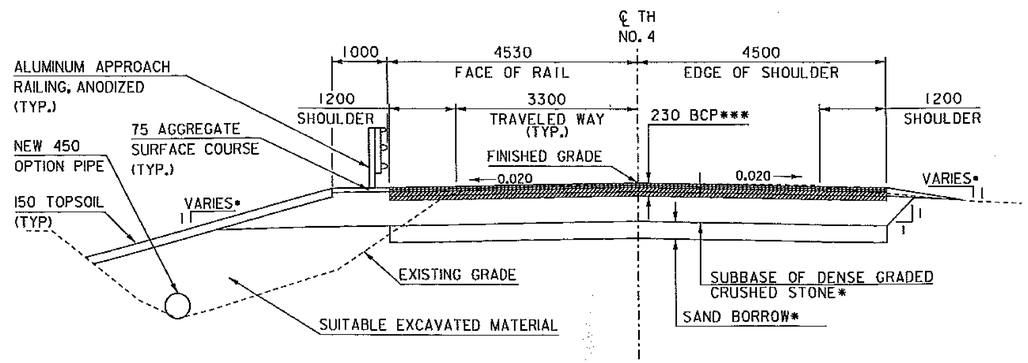


HINESBURG ELEMENTARY SCHOOL
TYPICAL DRIVEWAY SECTION

SCALE 1:50

TYPICAL ROADWAY SECTION
STA. 1+124.000 to STA 1+140.000

40 BCP (TYPE IIIS), TOP LIFT***
40 BCP (TYPE IIIS), THIRD LIFT
75 BCP (TYPE IIS), SECOND LIFT
75 BCP (TYPE IIS), BOTTOM LIFT



TYPICAL ROADWAY SECTION
(STA. 1+073.750 to STA. 1+105.200)

SCALE 1:50

TYPICAL ROADWAY SECTION
STA. 1+073.750 to STA 1+105.200

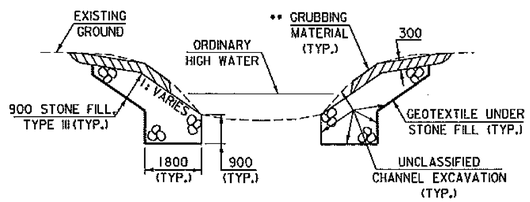
40 BCP (TYPE IIIS), TOP LIFT***
40 BCP (TYPE IIIS), THIRD LIFT
75 BCP (TYPE IIS), SECOND LIFT
75 BCP (TYPE IIS), BOTTOM LIFT

REVISION	DATE
⚠	REMOVED PAVEMENT FROM DECK 9-5-2011

MATERIAL TOLERANCES

(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 6mm
- AGGREGATE SURFACE COURSE	+/- 13mm
SUBBASE	+/- 25mm
SAND BORROW	+/- 25mm
SUBGRADE	+/- 15mm



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

NOTES:

- • DEPTH VARIES, SEE MATERIAL TRANSITION DIAGRAM FOR DEPTHS AT SPECIFIC STATIONS.
- •• GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.
- ••• BCP SHALL BE READ AS BITUMINOUS CONCRETE PAVEMENT AND SHALL BE PAID FOR UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)"

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01j282/str/s01j282typ.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
TYPICAL SECTIONS

PLOT DATE: 06-SEP-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 8R OF 56

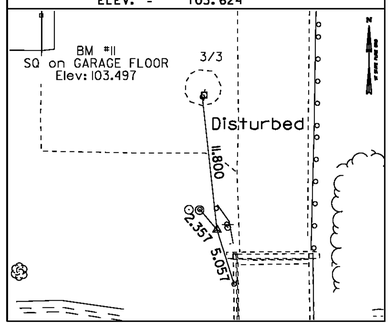
GPS CONTROL POINTS

Surveyed Dubois & King
Unknown Origin

TRAVERSE TIES

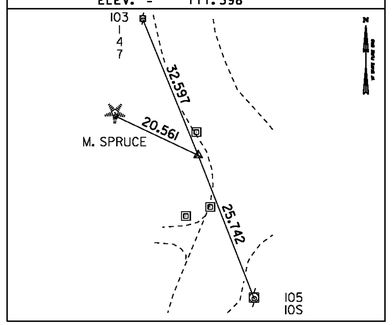
HVCTRL #11

NORTH = 202964.059
EAST = 451325.776
ELEV. = 103.624



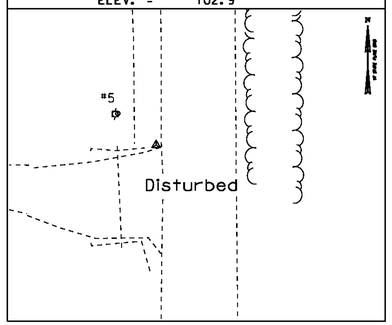
HVCTRL #12

NORTH = 203119.351
EAST = 451338.256
ELEV. = 111.398



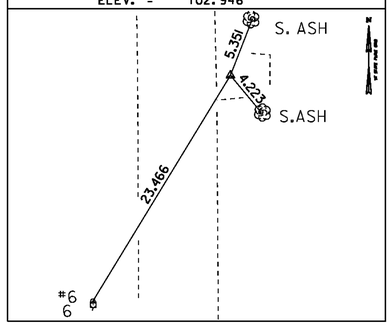
HVCTRL #13

NORTH = 202849.6
EAST = 451328.4
ELEV. = 102.9



HVCTRL #14

NORTH = 202805.479
EAST = 451337.502
ELEV. = 102.946



[ ]

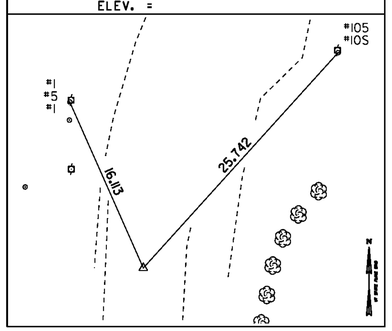
NORTH =
EAST =
ELEV. =

• Main Traverse DuBois & King date unknown

ALIGNMENT TIES

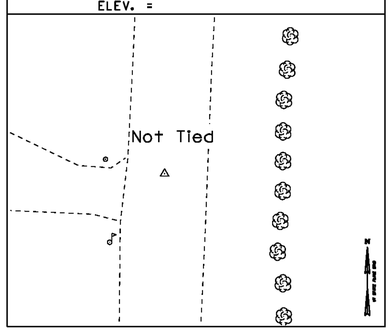
POB 1+000.000

NORTH = 203068.438
EAST = 451333.400
ELEV. =



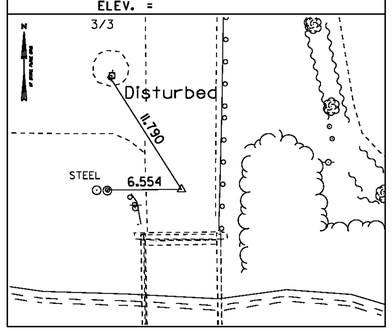
PC 1+019.812

NORTH = 203048.652
EAST = 451332.399
ELEV. =



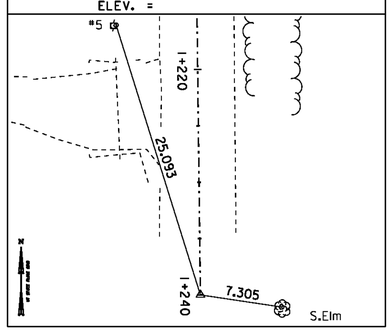
PT 1+102.579

NORTH = 202965.914
EAST = 451330.809
ELEV. =



POE 1+240.000

NORTH = 202828.502
EAST = 451332.476
ELEV. =



[ ]

NORTH =
EAST =
ELEV. =

• Alignment Tied & Staked July 7,2009 by L.ORVIS P.C. & C.CYR

DATUM

VERTICAL Assumed
HORIZONTAL NAD 83

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01l282/str/s01l282tle.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
TIE SHEET

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 9 OF 56

N

EXISTING CATCH BASIN

EXISTING DRAINAGE PIPE

PT 1+102.579

FLOW

CONNECT EXISTING DRAINAGE TO PROPOSED (SEE SHEET 14)

BEGIN PROJECT
STA 1+073.750

BEGIN APPROACH
MATCH EXISTING
STA 1+050.000

PC 1+019.812

EXISTING ROW

R=9m (TYP)

PAVED DRIVE

FLOW

FLOW

FLOW

CHANNEL LINE 20+060

20+040

CENTERLINE OF TEMPORARY DETOUR

NEW STONE FILL TYPE III

END BRIDGE
STA 1+124.000
F.G. = 103.875

SLOPE LIMITS FOR TEMPORARY DETOUR (TYP.)

END APPROACH
MATCH EXISTING
STA 1+192.500

END PROJECT
STA 1+140.000

TOE OF SLOPE LIMITS (TYP.)

EXISTING ROW

50.20"W

S2°53'50.20"W

S0°41'43.10"E

℄ SILVER STREET

TH NO. 4

S0°41'43.10"E

TO MONKTON

TO VT 116

1+020 1+040 1+060 1+080 1+100 1+120 1+140 1+160 1+180 1+200

AERIAL E&T

GMP 3

CZ

GMP 2

EXISTING ROW

R=3m (TYP)

EDGE OF PAVEMENT

PAVED DRIVE

EXISTING BUILDING

EXISTING BUILDING

PI STA. 1+061.209 BACK=
STA. 1+061.182 AHEAD

NEW POLE & PUSH POLE

DRY HYDRANT

BEGIN BRIDGE
STA 1+105.200
F.G.= 103.970

NEW STONE FILL
TYPE III (TYP.)

LAPLATTE RIVER

20+000

NEW POLE & GUY 9.75 M RT

WILLOW TREE (SAVE)

PERMANENT RELOCATION OF AERIAL E&T

NEW EDGE OF PAVEMENT (TYP.)

NEW STONE FILL TYPE II (TYP.)

NEW STONE FILL TYPE IV (TYP.)

CHANNEL LINE STA. 20+030.000=
BASELINE STA. 1+120.000
Δ = 90° 00'00" LT

LEGEND
WETLANDS

CURVE DATA NO. 1
Δ = 3°35'33"
D = 4°20'26"
R = 1320.000
T = 41.397
L = 82.767
E = 0.649
BANK = 0.027

BM NO.1
SPIKE IN POLE
GMP 3
EL. 103.86
(MAY HAVE BEEN COMPROMISED)
TO BE REMOVED BY OTHERS

LAYOUT PLAN

0 10 20

SCALE 1:250

EXISTING BRIDGE DATA
SINGLE SPAN BRIDGE WITH A STEEL BEAM AND CONCRETE DECK SUPERSTRUCTURE ON CONCRETE ABUTMENTS.
CLEAR SPAN 16.44M.
FASCIA TO FASCIA WIDTH 7.0M.

450 mm OPTION PIPE
STA. 1+063.50 LT - STA. 1+079.90 LT
STA. 1+081.10 LT - STA. 1+108.07 LT

PRECAST REINFORCED CONCRETE
PIPE DIW/ CAST IRON GRATE
STA. 1+080.50 LT

BRIDGE RAILING, ANODIZED 3 RAIL ALUMINUM
STA. 1+103.475 RT - STA. 1+124.125 RT
STA. 1+105.075 LT - STA. 1+124.125 LT

RELOCATE MAILBOX, SINGLE SUPPORT
STA. 1+073 RT

ALUMINUM APPROACH RAILING, ANODIZED
STA. 1+090.400 LT - STA. 1+105.075 LT
STA. 1+098.020 RT - STA. 1+103.475 RT
STA. 1+124.125 RT - STA. 1+140.625 RT
STA. 1+124.125 LT - STA. 1+140.470 LT

100mm WHITE LINE
STA. 1+020.0 LT - STA. 1+195.0 LT
STA. 1+020.0 RT - STA. 1+195.0 RT

100mm YELLOW LINE (DOUBLE CENTERLINE)
STA. 1+020.0 - STA. 1+195.0

REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 1+074.47 LT - STA. 1+106.27 LT
STA. 1+102.17 RT - STA. 1+105.60 RT
STA. 1+122.87 LT - STA. 1+139.29 LT
STA. 1+123.12 RT - STA. 1+139.80 RT

CONSTRUCT DRIVE
STA. 1+061.50 LT - STA. 1+078.30 LT
STA. 1+072.25 RT - STA. 1+100.60 RT

STONE FILL, TYPE II
STA. 1+135.0 RT - STA. 1+190.0 RT
STA. 1+135.0 LT - STA. 1+170.0 LT

STONE FILL, TYPE IV
STA. 1+124.2 RT - STA. 1+135.0 RT
STA. 1+124.2 LT - STA. 1+135.0 LT

DECIDUOUS TREES
(ACER SACCHARUM)
(B&B)(100mm CAL)
STA. 1+062 LT
STA. 1+089 LT
STA. 1+096 LT
STA. 1+103 LT

YIELDING MARKER POSTS
STA. 1+063.525 LT
STA. 1+106.790 LT

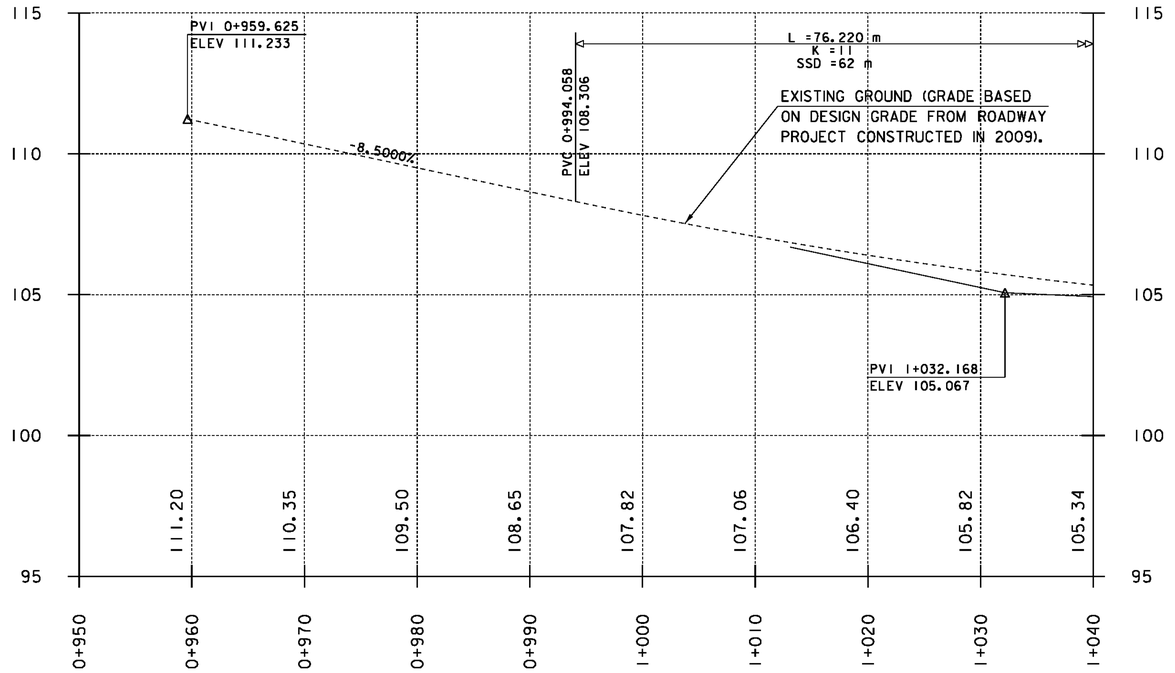
REMOVE TREES
(PAID UNDER ITEM 201.10)
STA. 1+062 LT
STA. 1+089 LT
STA. 1+096 LT
STA. 1+103 LT

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

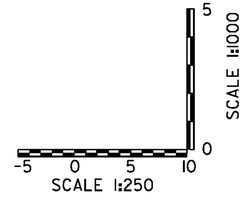
FILE NAME: 01J282/str/s01J282bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
LAYOUT PLAN

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 10 OF 56

NOTE:
ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE EXISTING GROUND.
ELEVATIONS SHOWN TO THE NEAREST THOUSANDTH ARE FINISHED GRADE.

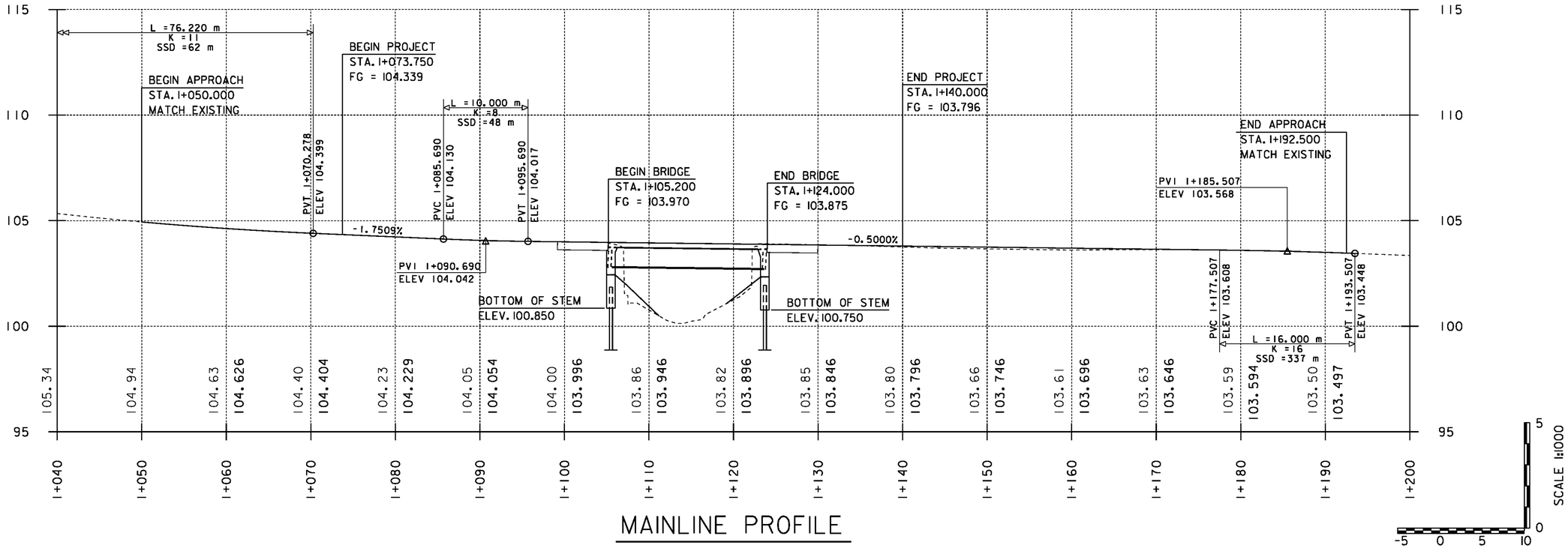


MAINLINE PROFILE



PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/s01J282xsl.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: W. LAMMER
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
MAINLINE PROFILE SHEET 1	SHEET 11 OF 56

NOTE:
ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE EXISTING GROUND.
ELEVATIONS SHOWN TO THE NEAREST THOUSANDTH ARE FINISHED GRADE.



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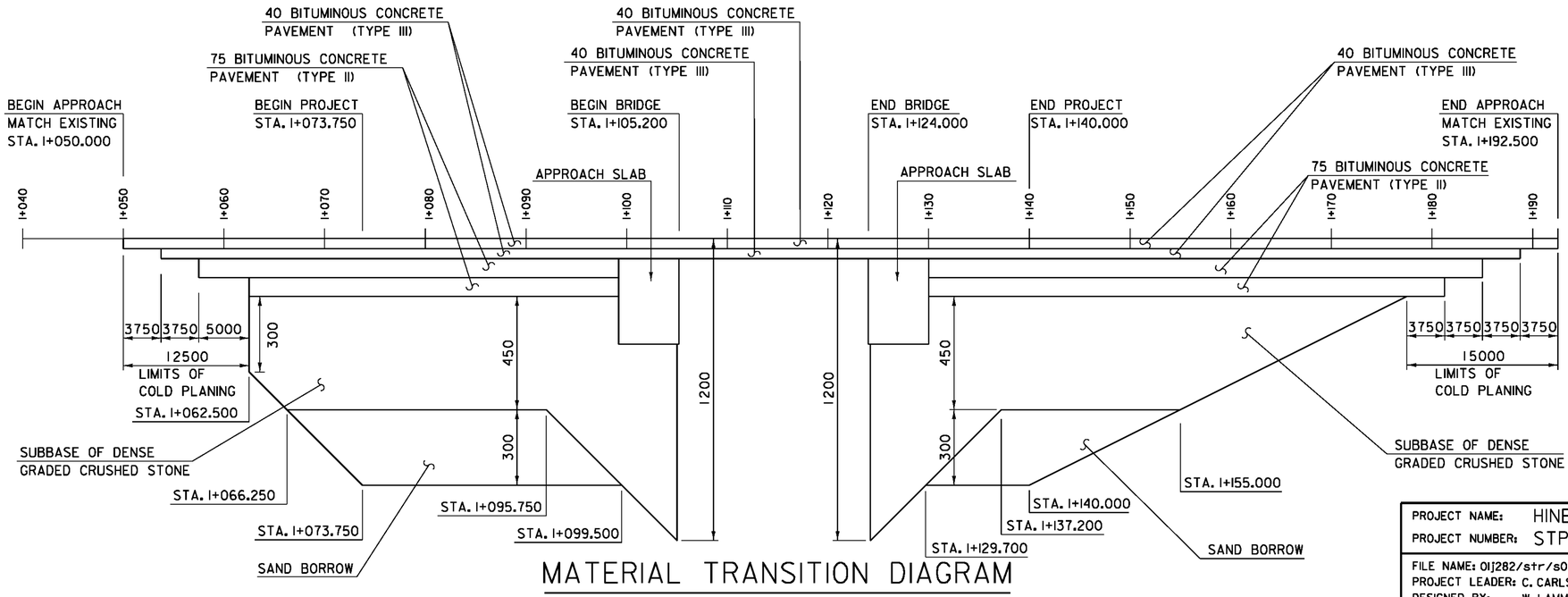
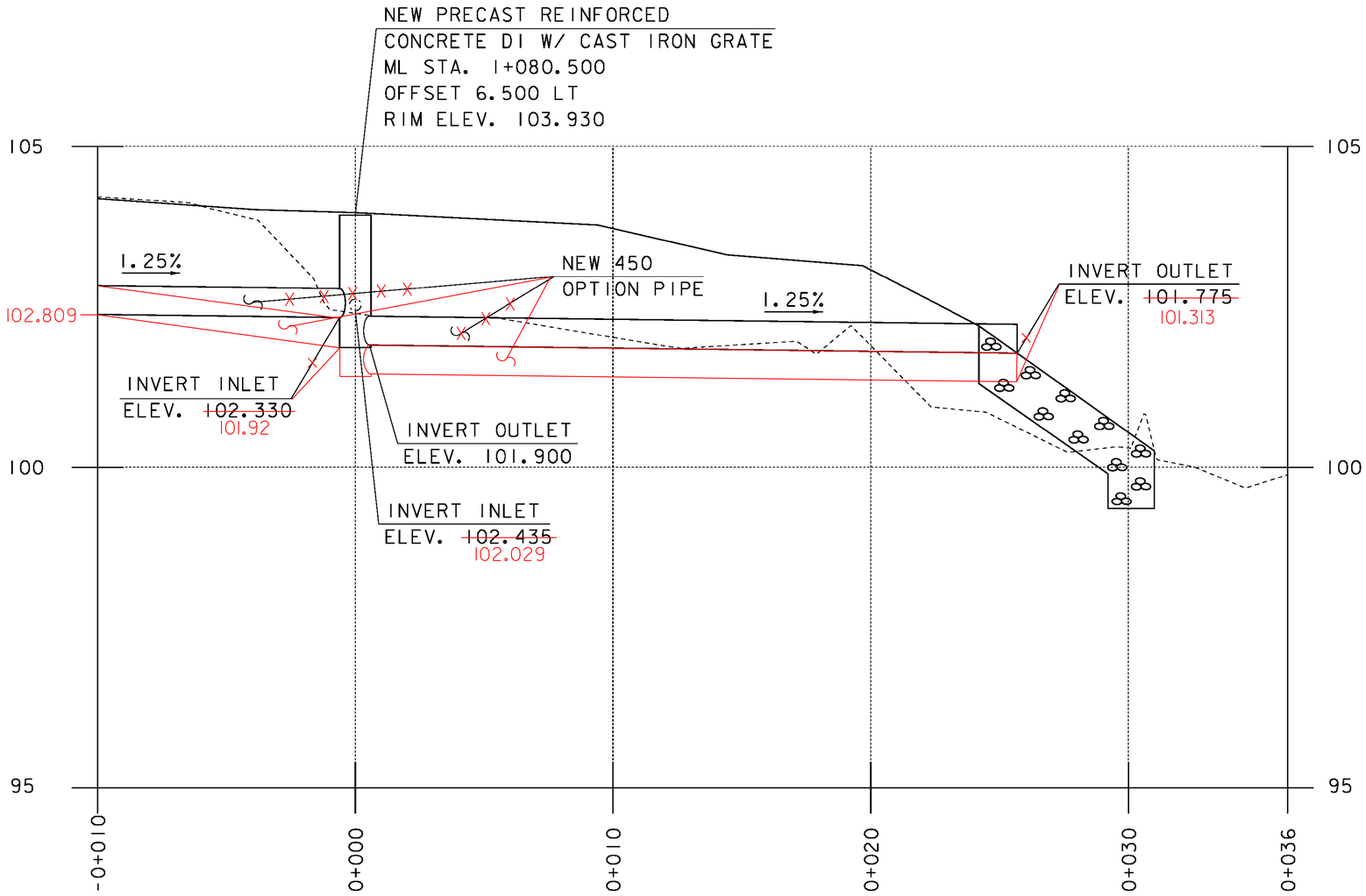


MATERIAL TRANSITION DIAGRAM

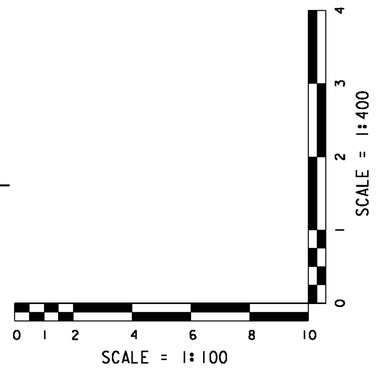
NTS

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01j282/str/s01j282xsl.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: W. LAMMER
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
MAINLINE PROFILE SHEET 2	SHEET 12 OF 56

NOTE:
ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE EXISTING GROUND.
ELEVATIONS SHOWN TO THE NEARES THOUSANDTH ARE FINISHED GRADE



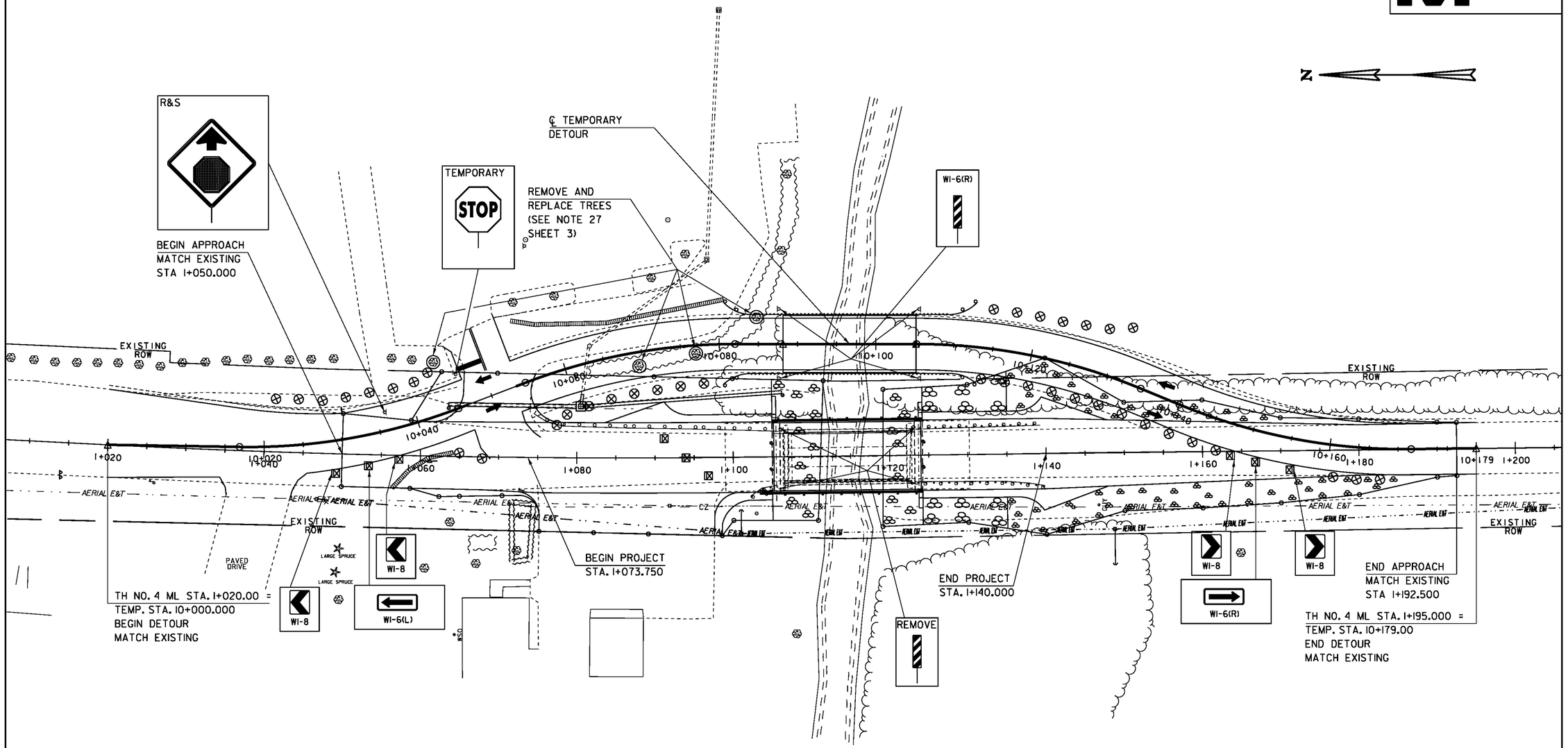
DRAINAGE PROFILE



PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)

FILE NAME: 01J282/str/s01J282xsl.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
DRAINAGE PROFILE SHEET	SHEET 13 OF 56

Metric



TRAFFIC CONTROL PLAN

0 10 20

SCALE 1:250

NOTE: SEE SHEET 15 FOR TRAFFIC CONTROL NOTES.

LEGEND	
DRUMS	⊗
TYPE 3 BARRICADES	⊠
TEMPORARY TRAFFIC BARRIER	
TRAFFIC FLOW ARROWS	←
R & S	REMOVE & SALVAGE

ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COVERED WITH PAVEMENT MARKING MASK. THIS WORK SHALL BE PAID UNDER ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE".

TEMPORARY 100mm WHITE LINE
TEMP. STA. 10+000 LT - TEMP. STA. 10+047 LT
TEMP. STA. 10+000 RT - TEMP. STA. 10+047 RT
TEMP. STA. 10+054 LT - TEMP. STA. 10+179 LT
TEMP. STA. 10+054 RT - TEMP. STA. 10+179 RT

TEMPORARY 100mm YELLOW LINE
(DOUBLE CENTERLINE)
TEMP. STA. 10+000 - TEMP. STA. 10+047
TEMP. STA. 10+050 LT
TEMP. STA. 10+053 - TEMP. STA. 10+178

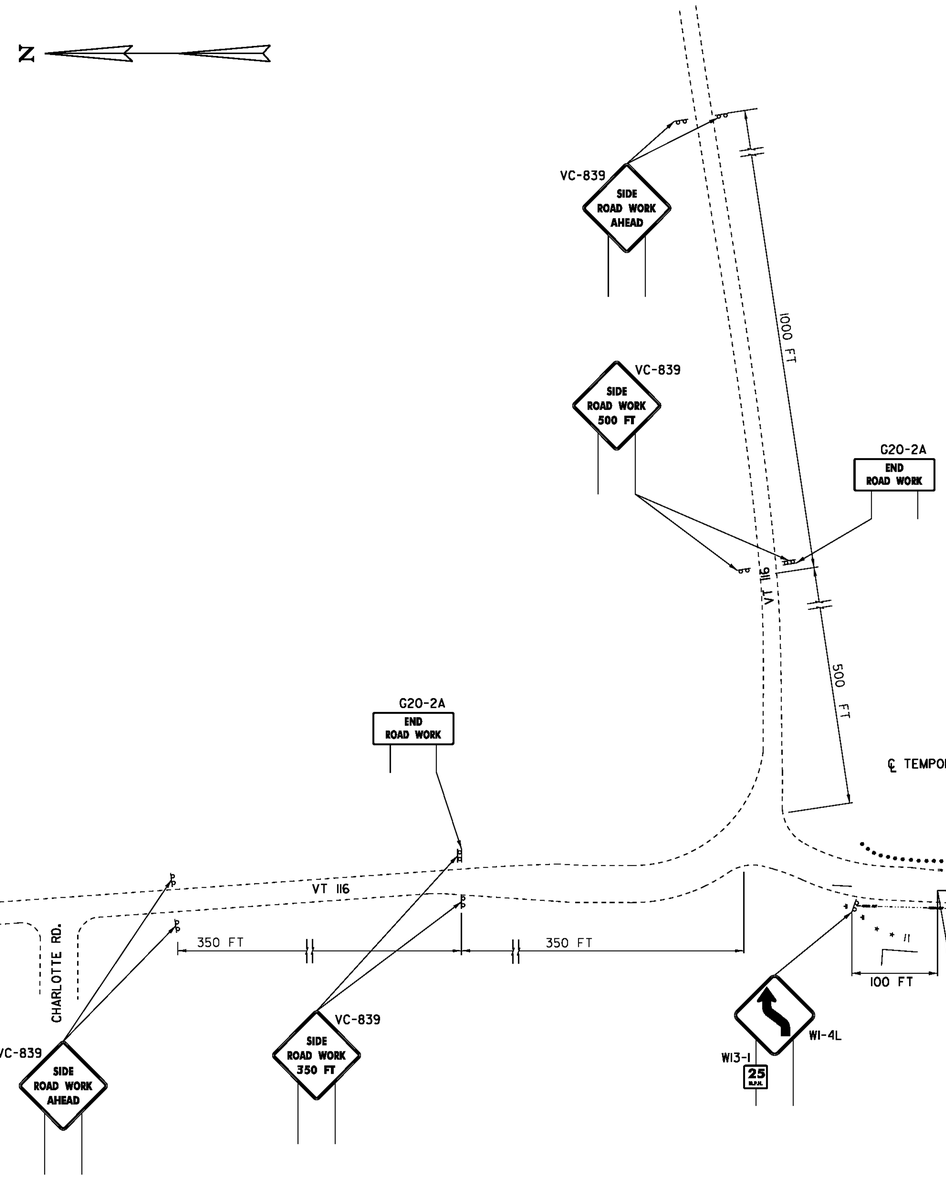
TEMPORARY 600mm STOP BAR
TEMP. STA. 10+047 LT - TEMP. STA. 10+051 LT

REMOVING SIGNS
STA. 1+055.3 LT "STOP AHEAD"
STA. 1+105.500 LT & RT NARROW BRIDGE SIGNS
STA. 1+123.700 LT & RT NARROW BRIDGE SIGNS

ERECTING SALVAGED SIGNS
STA. 1+015.0 LT "STOP AHEAD"

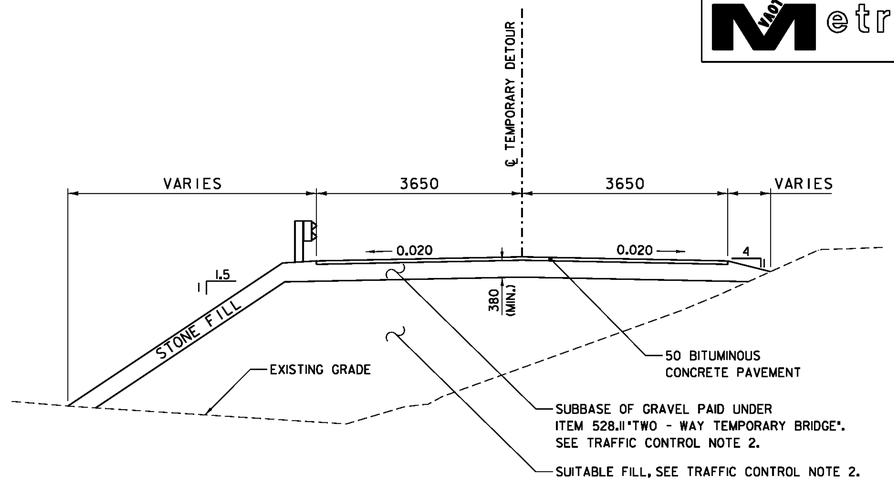
SETTING SALVAGED POSTS
STA. 1+015.0 LT "STOP AHEAD" (1 POST)

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01j282/str/s01j282trf.dgn	PLOT DATE: 10-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: W. LAMMER
TRAFFIC CONTROL SHEET 1	SHEET 14 OF 56



DETOUR PLAN

NOT TO SCALE



TYPICAL DETOUR SECTION WHERE FILL IS NEEDED

SCALE 1:50

TRAFFIC CONTROL NOTES:

1. THE EXISTING BRIDGE IS TO BE CLOSED TO TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR SHALL INSTALL A TEMPORARY TWO-WAY BRIDGE AND ASSOCIATED DETOUR UPSTREAM OF THE EXISTING BRIDGE AS SHOWN IN THESE PLANS.

2. ALL WORK ASSOCIATED WITH THE INSTALLATION AND REMOVAL OF THE TEMPORARY BRIDGE AND ITS APPROACHES, INCLUDING TEMPORARY TRAFFIC BARRIER, PAVEMENT, AND PAVEMENT MARKINGS WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 528.11.

3. PAYMENT FOR ALL ON AND OFF-PROJECT SIGNING AND TRAFFIC CONTROL DEVICES, INCLUDING DRUMS AND BARRICADES, WILL BE PAID FOR UNDER CONTRACT ITEM 641.10.

4. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVES DURING CONSTRUCTION. COST SHALL BE INCIDENTAL TO ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE".

5. FOLLOWING THE REMOVAL OF TEMPORARY DETOUR, ANY DAMAGE TO THE EXISTING PARKING LOT SHALL BE REPAIRED. THIS INCLUDES ANY OTHER ITEMS THAT NEED TO BE REMOVED TO INSTALL THE TEMPORARY DETOUR. REPAIRS TO PARKING LOT, INCLUDING PAVEMENT AND STRIPING, SHALL BE INCIDENTAL TO ITEM 528.11, "TWO WAY TEMPORARY BRIDGE". THE REPLACEMENT OF TREES

6. FOLLOWING THE REMOVAL OF THE TEMPORARY DETOUR, ALL FILL IN THE WETLANDS DUE TO THE TEMPORARY DETOUR SHALL BE REMOVED AND THE WETLANDS RESTORED TO THEIR EXISTING CONDITION. THIS SHALL BE INCIDENTAL TO ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE".

7. THE EXISTING TREES TO BE REMOVED SHALL BE REPLACED IN THE SAME LOCATION WITH SUGAR MAPLE TREES. THIS WORK SHALL BE PAID UNDER ITEM 656.30, "DECIDUOUS TREES, (ACER SACCHARUM)(B&B)(100mm CAL)".

8. ALTHOUGH THIS IS A METRIC PROJECT, ALL SIGN DATA SHALL APPEAR IN ENGLISH UNITS AS SHOWN ON THE PLANS.

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282\str\s01J282trf.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: W. LAMMER
TRAFFIC CONTROL SHEET 2	SHEET 15 OF 56

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 kPa	CONSISTENCY
<12	Very Soft
12-24	Soft
24-48	Med. Stiff
48-96	Stiff
96-192	Very Stiff
>192	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 300 mm For: 50.8 mm O.D. Sampler 35.0 mm I.D. Sampler Hammer Weight Of 63.5 kg. Hammer Fall Of 762 mm
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 30.1mm
BX	Core Size 42.0 mm
NX	Core Size 54.7 mm
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	To 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)

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 > 304.8 mm.

COBBLE - Rock fragments with an average dimension between 76.2 and 304.8 mm.

GRAVEL - Rounded particles of rock < 76.2 mm and > 2 mm (#10 sieve).

SAND - Particles of rock < 2 mm (#10 sieve) and > 75 µm (#200 sieve).

SILT - Soil < 75 µm (#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.

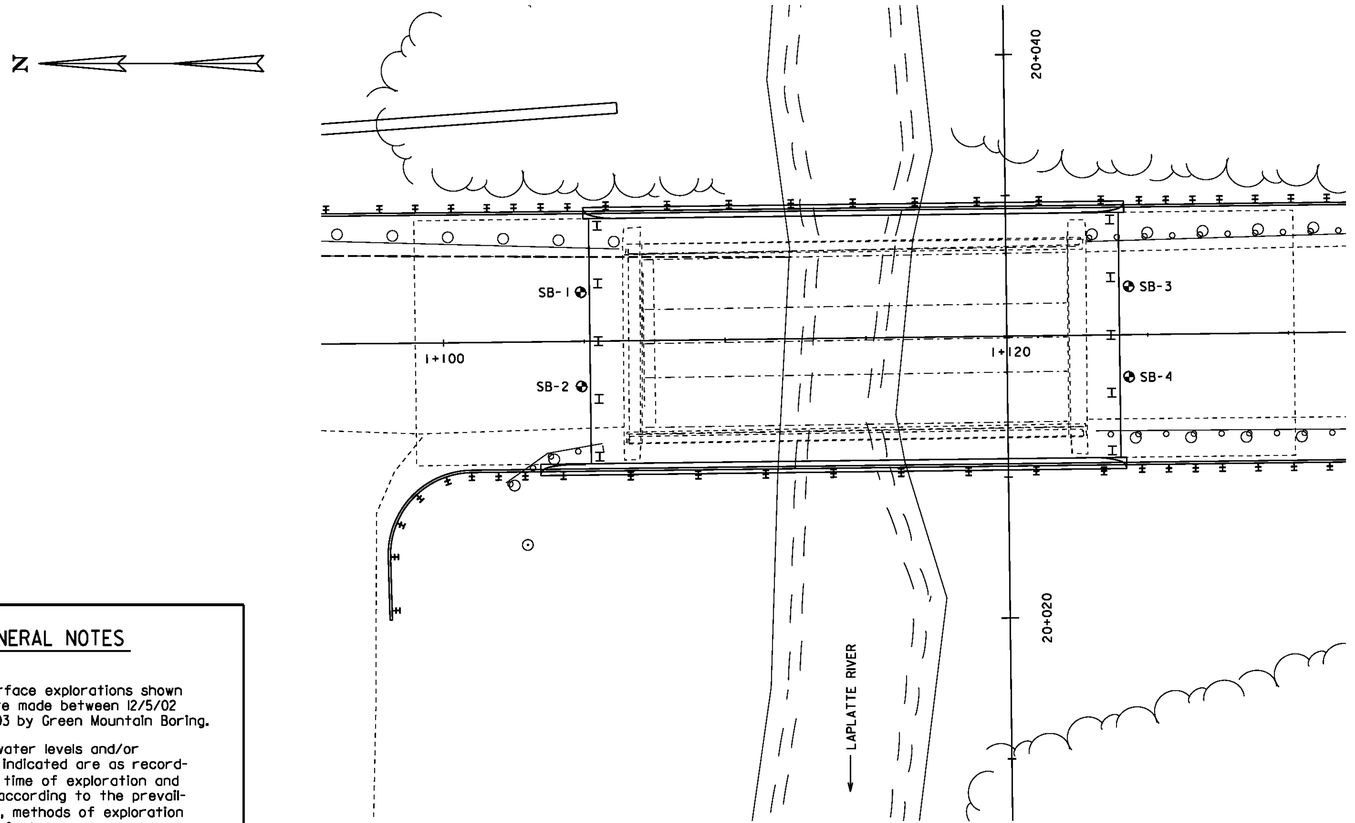
STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.

GENERAL NOTES

1. The subsurface explorations shown herein were made between 12/5/02 and 2/20/03 by Green Mountain Boring.
2. 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.
3. Engineering judgement 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 judgement by the Contractor.
4. 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.

HOLE NO.	STATION	OFFSET (m)	GROUND ELEV.	
SB-1	1+104.900	1.750 LT	103.912	
SB-2	1+104.900	1.600 RT	103.891	B-2 IN BORING LOG IS A CONTINUATION OF SB-2.
SB-3	1+124.300	1.725 LT	103.843	
SB-4	1+124.300	1.500 RT	103.894	B-4 IN BORING LOG IS A CONTINUATION OF SB-4.



BORING PLAN

0 1 2 4 6 8 10

SCALE = 1:100

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/s01J282bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
BORING LAYOUT

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 16 OF 56

GREEN MOUNTAIN BORING
PO Box 218 East Barre, Vermont 05649 802 476-5073

TO: Dubois & King, Inc. ATTN : Brian Austin Route 66 Professional Center PO Box 339 Randolph, Vermont 05060	PROJECT NAME: Silver Street Bridge LOCATION: Hinesburg, Vermont GMB JOB #: 02071	SHEET: 1 DATE: 12/5/02 HOLE #: SB-1 LINE & STA. OFFSET:	

Ground Water Observations 15' at 0 hours	Augers-Size I.D. 2 5/8" Split Spoon 1 3/8" Hammer-Wt 140# Hammer-Fall 30"	Surface Elevation: Date Started: 12/5/02 Date Completed: 12/5/02 Boring Foreman: Michael McGinley Inspector: Solls Engineer:

LOCATION OF BORING: As Mapped

Sample Depths From/To (Feet)	Type of Sample	Blows per 6" on Sampler	Moisture Density or Consist	Strata Change Elev.	Soil Identification	Sample No.	Pen. Inches	Rec. Inches
5-7	Dry	6,6,5,4	Damp		Silty sand and stones	1	24	10
10-12	Dry	4,4,4,4	Damp		Silty sand and stones with a trace of clay	2	24	6
15-17	Dry	4,4,5,2	Wet		Silty gray clay	3	24	14
20-22	Dry	1,0,0,1	Wet		Silty gray clay	4	24	24
25-27	Dry	Weight of Rod & Hammer	Wet		Silty gray clay	5	24	24
30-32	Dry	Weight of Rod & Hammer	Wet		Silty gray clay	6	24	24
35-37	Dry	Weight of Rod & Hammer	Wet		Silty gray clay	7	24	24
40-42	Dry	Weight of Rod & Hammer	Wet		Silty gray clay	8	24	24
45-47	Dry	WRH/WRH/1/1	Wet		Silty gray clay	9	24	24
50-52	Dry	WRH/WRH/5/1	Wet		Silty gray clay	10	24	24

SUMMARY: HOLE #SB-1

Used 2 5/8" augers, then split spoon to 52'
Ground Surface to 50'
Earth Boring 52'
Rock Coring
Samples: 10

GREEN MOUNTAIN BORING
PO Box 218 East Barre, Vermont 05649 802 476-5073

TO: Dubois & King, Inc. ATTN : Brian Austin Route 66 Professional Center PO Box 339 Randolph, Vermont 05060	PROJECT NAME: Silver Street Bridge LOCATION: Hinesburg, Vermont GMB JOB #: 02071	SHEET: 2 DATE: 12/5/02 HOLE #: SB-2 LINE & STA. OFFSET:	

Ground Water Observations 15' at 0 hours	Augers-Size I.D. 2 5/8" Split Spoon 1 3/8" Hammer-Wt 140# Hammer-Fall 30"	Surface Elevation: Date Started: 12/5/02 Date Completed: 12/5/02 Boring Foreman: Michael McGinley Inspector: Solls Engineer:

LOCATION OF BORING: As Mapped

Sample Depths From/To (Feet)	Type of Sample	Blows per 6" on Sampler	Moisture Density or Consist	Strata Change Elev.	Soil Identification	Sample No.	Pen. Inches	Rec. Inches
5-7	Dry	1,3,4,12,8	Dry		Silty sand and stones	1	24	12
10-12	Dry	2,4,4,4	Damp		Silty sand with some clay and a trace of organics	2	24	12
15-17	Dry	WRH/1/2,2	Wet		Silty sand with some clay and a trace of organics	3	24	24
20-22	Dry	WRH/WRH/WRH/1	Wet		Silty gray clay	4	24	24
25-27	Dry	WRH/WRH/WRH/1	Wet		Silty gray clay	5	24	24
30-32	Dry	Weight of Rod & Hammer	Wet		Silty gray clay	6	24	24
35-37	Dry	Weight of Rod & Hammer	Wet		Silty gray clay	7	24	24
40-42	Dry	Weight of Rod & Hammer	Wet		Silty gray clay	8	24	24
45-47	Dry	1/1,0/1	Wet		Silty gray clay	9	24	24
50-52	Dry	3/1,5/4			No recovery W/ostspoon	10	24	0

SUMMARY: HOLE #SB-2

Used 2 5/8" augers, then split spoon to 52'
Ground Surface to 50'
Earth Boring 52'
Rock Coring
Samples: 10

GREEN MOUNTAIN BORING
PO Box 218 East Barre, Vermont 05649 802 476-5073

TO: Dubois & King, Inc. ATTN : Brian Austin Route 66 Professional Center PO Box 339 Randolph, Vermont 05060	PROJECT NAME: Silver Street Bridge LOCATION: Hinesburg, Vermont GMB JOB #: 02071	SHEET: 3 DATE: 12/6/02 HOLE #: SB-3 LINE & STA. OFFSET:	

Ground Water Observations 20' at 0 hours	Augers-Size I.D. 2 5/8" Split Spoon 1 3/8" Hammer-Wt 140# Hammer-Fall 30"	Surface Elevation: Date Started: 12/6/02 Date Completed: 12/6/02 Boring Foreman: Michael McGinley Inspector: Solls Engineer:

LOCATION OF BORING: As Mapped

Sample Depths From/To (Feet)	Type of Sample	Blows per 6" on Sampler	Moisture Density or Consist	Strata Change Elev.	Soil Identification	Sample No.	Pen. Inches	Rec. Inches
5-7	Dry	2,2,2,3	Damp		Silty sand with some small stones	1	24	12
10-12	Dry	2/1,2,3	Damp		Silty brown and gray clay	2	24	16
15-17	Dry	WRH/1/2,1	Damp		Silty gray clay	3	24	24
20-22	Dry	Weight of Rod & Hammer	Wet		Silty gray clay	4	24	24
30-32	Dry	Weight of Rod & Hammer	Wet		Silty gray clay	5	24	24
40-42	Dry	WRH/WRH/2,2	Wet		Silty gray clay	6	24	24
50-52	Dry	Weight of Rod & Hammer	Wet		Silty gray clay with a silt lens	7	24	24
					Hit sandy gravel at 55'			
60-62'	Dry	5/7,8/12	Wet		Silty gray clay, into a medium/fine sand with stones	8	24	24

SUMMARY: HOLE #SB-3

Used 2 5/8" augers, then split spoon to 62'
Ground Surface to 60'
Earth Boring 62'
Rock Coring
Samples: 8

GREEN MOUNTAIN BORING
PO Box 218 East Barre, Vermont 05649 802 476-5073

TO: Dubois & King, Inc. ATTN : Brian Austin Route 66 Professional Center PO Box 339 Randolph, Vermont 05060	PROJECT NAME: Silver Street Bridge LOCATION: Hinesburg, Vermont GMB JOB #: 02071	SHEET: 4 DATE: 12/0.02 HOLE #: SB-4 LINE & STA. OFFSET:	

Ground Water Observations 20' at 0 hours	Augers-Size I.D. 2 5/8" Split Spoon 1 3/8" Hammer-Wt 140# Hammer-Fall 30"	Surface Elevation: Date Started: 12/0.02 Date Completed: 12/0.02 Boring Foreman: Michael McGinley Inspector: Solls Engineer:

LOCATION OF BORING: As Mapped

Sample Depths From/To (Feet)	Type of Sample	Blows per 6" on Sampler	Moisture Density or Consist	Strata Change Elev.	Soil Identification	Sample No.	Pen. Inches	Rec. Inches
5-7	Dry	2,4,5,3			No recovery	1	24	
10-12	Dry	3,4,5,6	Damp		Silty brown clay with some organics and a trace of brick	2	24	10
15-17	Dry	1,2,1,2	Damp		Silty gray clay	3	24	24
20-22	Dry	Weight of Rod & Hammer	Wet		Silty gray clay	4	24	24
30-32	Dry	Weight of Rod & Hammer	Wet		Silty gray clay	5	24	24
40-42	Dry	Weight of Rod & Hammer	Wet		Silty gray clay	6	24	24
50-52	Dry	WRH/2,5,5	Wet		Silty gray clay	7	24	24
60-62	Dry	9/1,6/1,6/1,7	Wet		Silty gray clay, lmb silt with a trace of clay	8	24	24
70-72	Dry	2,2,3,4	Wet		Silty sand with a trace of clay	9	24	24
80-82	Dry	12,21/15/1,9	Wet		Silty sand with some small stones	10	24	24

SUMMARY: HOLE #SB-4

Used 2 5/8" augers, then split spoon to 82'
Ground Surface to 80'
Earth Boring 82'
Rock Coring
Samples: 10

NOTE: THE BORINGS WERE PERFORMED USING ENGLISH UNITS. THEREFORE THE INFORMATION SHOWN ON THIS SHEET IS SHOWN IN ENGLISH UNITS.

GREEN MOUNTAIN BORING
PO Box 218 East Barre, Vermont 05649 802 476-5073

TO: Dubois & King, Inc. ATTN : Brian Austin Route 66 Professional Center PO Box 339 Randolph, Vermont 05060	PROJECT NAME: Silver Street Bridge LOCATION: Hinesburg, Vermont GMB JOB #: 02071-A	SHEET: 1 DATE: 1/14.03 HOLE #: B-2 LINE & STA. OFFSET:	

Ground Water Observations 15' at 0 hours	Augers-Size I.D. 2 5/8" Split Spoon 1 3/8" Hammer-Wt 140# Hammer-Fall 30"	Surface Elevation: Date Started: 1/14.03 Date Completed: 1/14.03 Boring Foreman: Michael McGinley Inspector: Solls Engineer:

LOCATION OF BORING: As staked (same hole as previous boring)

Sample Depths From/To (Feet)	Type of Sample	Blows per 6" on Sampler	Moisture Density or Consist	Strata Change Elev.	Soil Identification	Sample No.	Pen. Inches	Rec. Inches
					Drilled to 60 feet before sampling			
60-62	Dry	4/1,4,50/1,7	Wet		Silty sand with some clay (approximately 6-8" of fowling sand)	1	24	24
65-67	Dry	11/1,5/1,5/1,8	Wet		Medium gray/brown sand	2	24	16
					Unable to sample due to fowling sand, so drilled to auger refusal at 83 feet			

SUMMARY: HOLE #B-2

Used 2 5/8" augers to 83'
Earth Boring 83'
Rock Coring
Samples: 2

B-2 IS A CONTINUATION OF SB-2.

GREEN MOUNTAIN BORING
PO Box 218 East Barre, Vermont 05649 802 476-5073

TO: Dubois & King, Inc. ATTN : Brian Austin Route 66 Professional Center PO Box 339 Randolph, Vermont 05060	PROJECT NAME: Silver Street Bridge LOCATION: Hinesburg, Vermont GMB JOB #: 02071-A	SHEET: 2 DATE: 2/20.03 HOLE #: B-4 LINE & STA. OFFSET:	

Ground Water Observations 15' at 0 hours	Augers-Size I.D. 2 5/8" Split Spoon 1 3/8" Hammer-Wt 140# Hammer-Fall 30"	Surface Elevation: Date Started: 2/20.03 Date Completed: 2/21 .03 Boring Foreman: Michael McGinley Inspector: Solls Engineer:

LOCATION OF BORING: As staked (same hole as previous boring)

Sample Depths From/To (Feet)	Type of Sample	Blows per 6" on Sampler	Moisture Density or Consist	Strata Change Elev.	Soil Identification	Sample No.	Pen. Inches	Rec. Inches
					Drilled to 60 feet and attempted to sample			
60-62	Dry	19/9,8/1,3	Very wet		No recovery. Flowing sand, so drilled to refusal. Hit fill at 78 feet. Hit bony till at 85 feet. Auger refusal at 93 feet.	1	24	
					2/21 .03 Roller-rocked to refusal @ 93 feet. Flowing sand plugged rods, so unable to core.			
					Materials used: 4 bags of cold patch.			

SUMMARY: HOLE #B-4

Used 2 5/8" augers to 93'
Earth Boring 93'
Rock Coring
Samples:

B-4 IS A CONTINUATION OF SB-4.

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01I282/str/s01I282bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
BORING LOG

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 17 OF 56

N

℄ BEARING
STA. 1+105.500
F.G.=103.968

PRECAST REINFORCED CONCRETE
PIPE DI W/ CAST IRON GRATE

BEGIN APPROACH SLAB
STA. 1+099.200

450 OPTION
PIPE

PT
STA 1+102.579

LAPLATTE RIVER

20+040

BRIDGE RAILING, ANODIZED
3 RAIL ALUMINUM (TYP.)

CENTERLINE OF BEARING
STA. 1+123.700
F.G.=103.877

LIMITS OF STONE FILL (TYPE II)

END BRIDGE
STA. 1+124.000
F.G.= 103.875

W.W. NO. 1

W.W. NO. 3

EDGE OF TRAVEL
LANE (TYP.)

90° (TYP.)

℄ SILVER STREET
TH NO. 4

1+080

1+100

1+120

1+140

1:3

R=5000
(TYP)

PAVED DRIVE

W.W. NO. 2

W.W. NO. 4

STONE FILL
TYPE III

STONE FILL
TYPE III

STONE FILL
TYPE IV (TYP.)

EDGE OF PAVED
DRIVE

BEGIN BRIDGE
STA. 1+105.200
F.G.= 103.970

CHANNEL LINE 20+020

LIMITS OF STONE FILL (TYPE II)

END APPROACH SLAB
STA. 1+130.200

CHANNEL LINE STA. 20+030.000 =
BASELINE STA. 1+120.000
Δ = 90° 00'00"

PLAN

0 2 4 6 8 10
SCALE 1:100

PAY LIMITS
ALUMINUM APPROACH RAILING ANODIZED
(SEE SHEET 33)

PAY LIMITS
BRIDGE RAILING, ANODIZED 3 RAIL ALUMINUM
PAY LENGTH = 19 050 LT. AND 20 650 RT.

PAY LIMITS
ALUMINUM APPROACH RAILING ANODIZED
(SEE SHEET 34)

110
105
100
95

EXISTING
GROUND

FINAL
GRADE

3 (TYP.)
1

Q25 102.1 m

900mm STONE FILL,
TYPE III (TYP.)

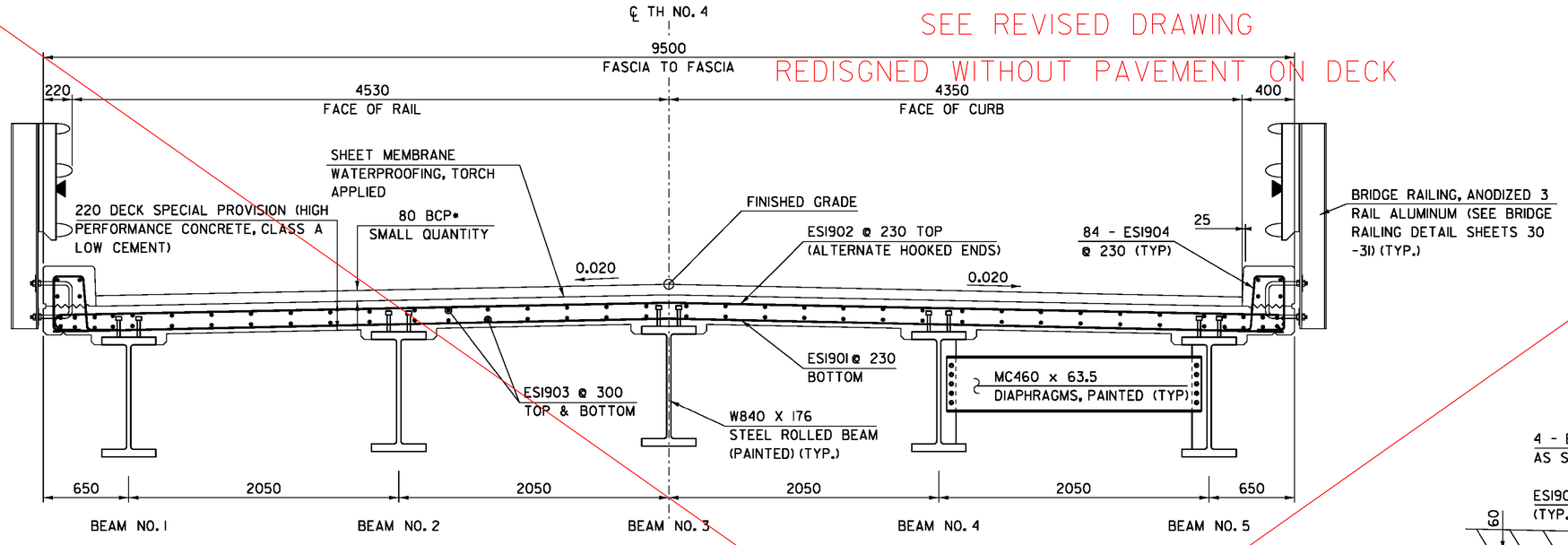
ELEVATION

0 2 4 6 8 10
SCALE 1:100

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/s01J282pe.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
PLAN & ELEVATION	SHEET 18 OF 56

SEE REVISED DRAWING

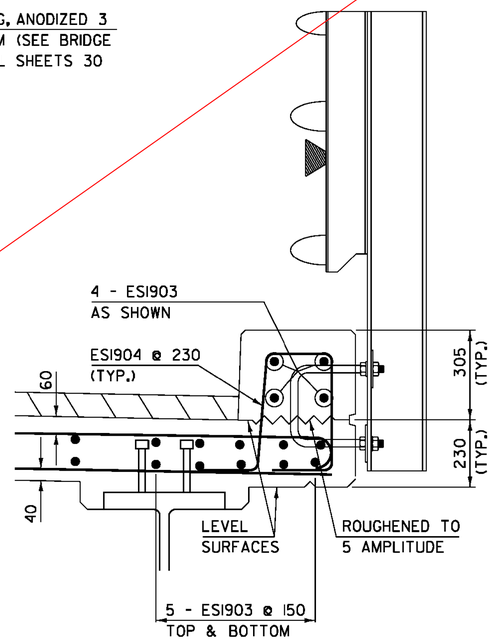
REDISGNED WITHOUT PAVEMENT ON DECK



TYPICAL BRIDGE SECTION

0 1 2

*TWO LIFTS OF 40 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)

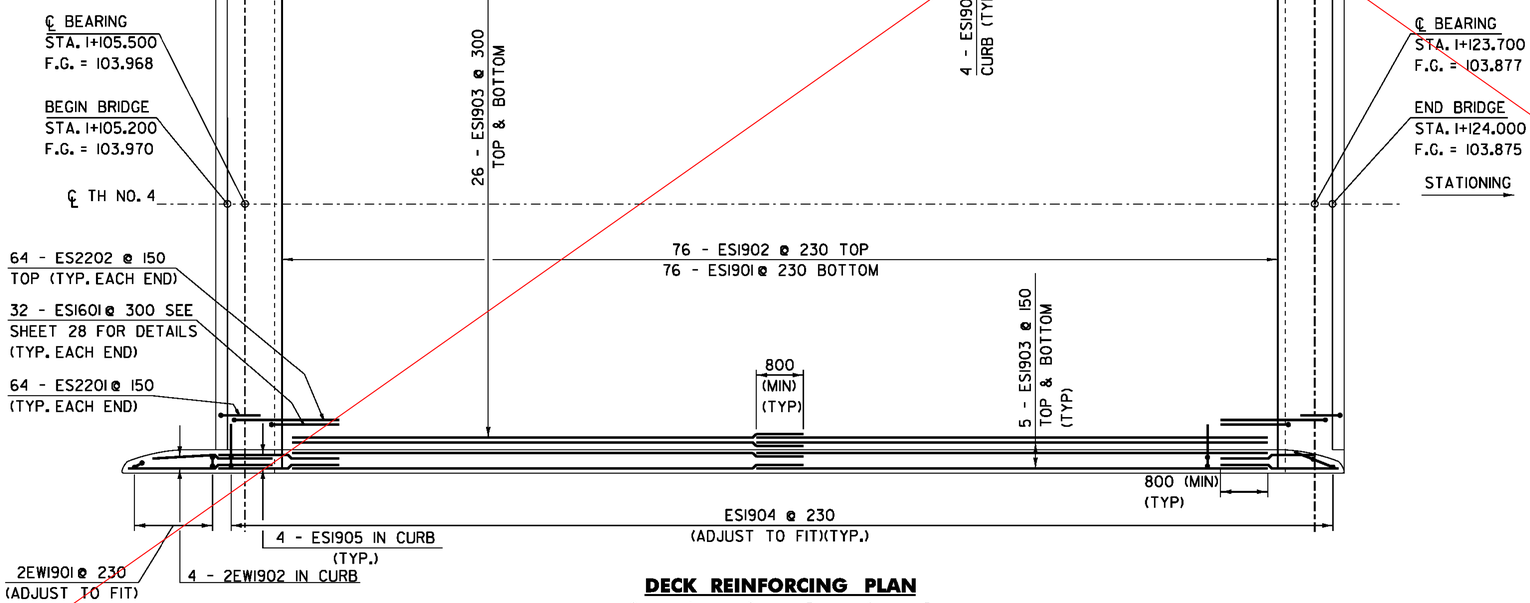


TYPICAL CURB AND EDGE OF DECK REINFORCING

SCALE 1:10

NOTES:

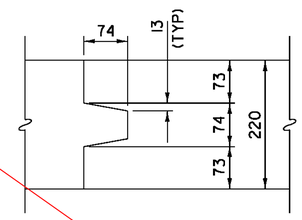
1. MINIMUM SPLICE DISTANCE ON ALL 19 BAR SHALL BE 800.
2. ALL BACKWALL CONCRETE ABOVE THE HORIZONTAL CONSTRUCTION JOINT SHALL BE POURED MONOLITHICALLY WITH DECK POURS.



DECK REINFORCING PLAN

0 1 2 3 4 5

SCALE = 1:50



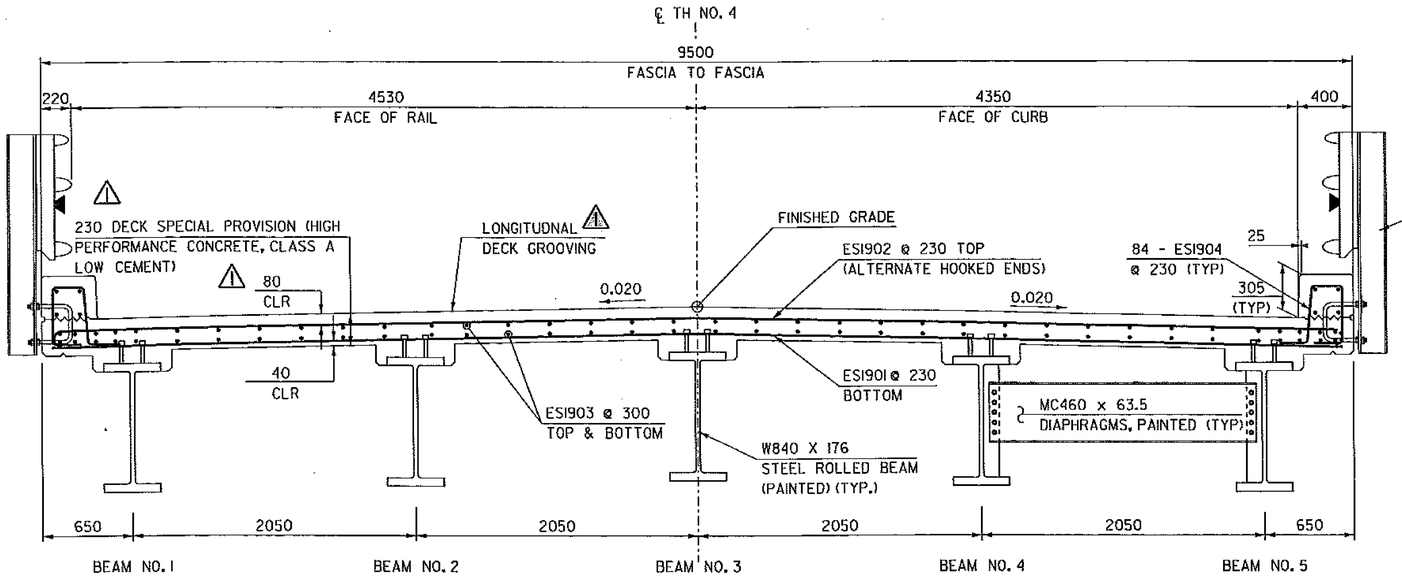
TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT

0 0.25 0.5

NOTES:

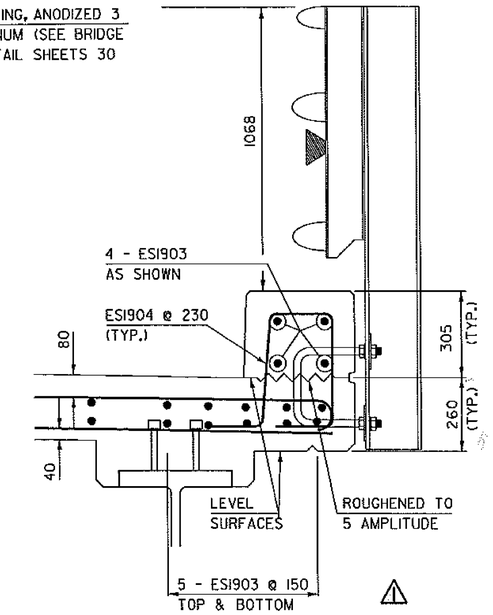
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
△ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/s01J282 str.dgn	PLOT DATE: 10-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
DECK LAYOUT	SHEET 19 OF 56



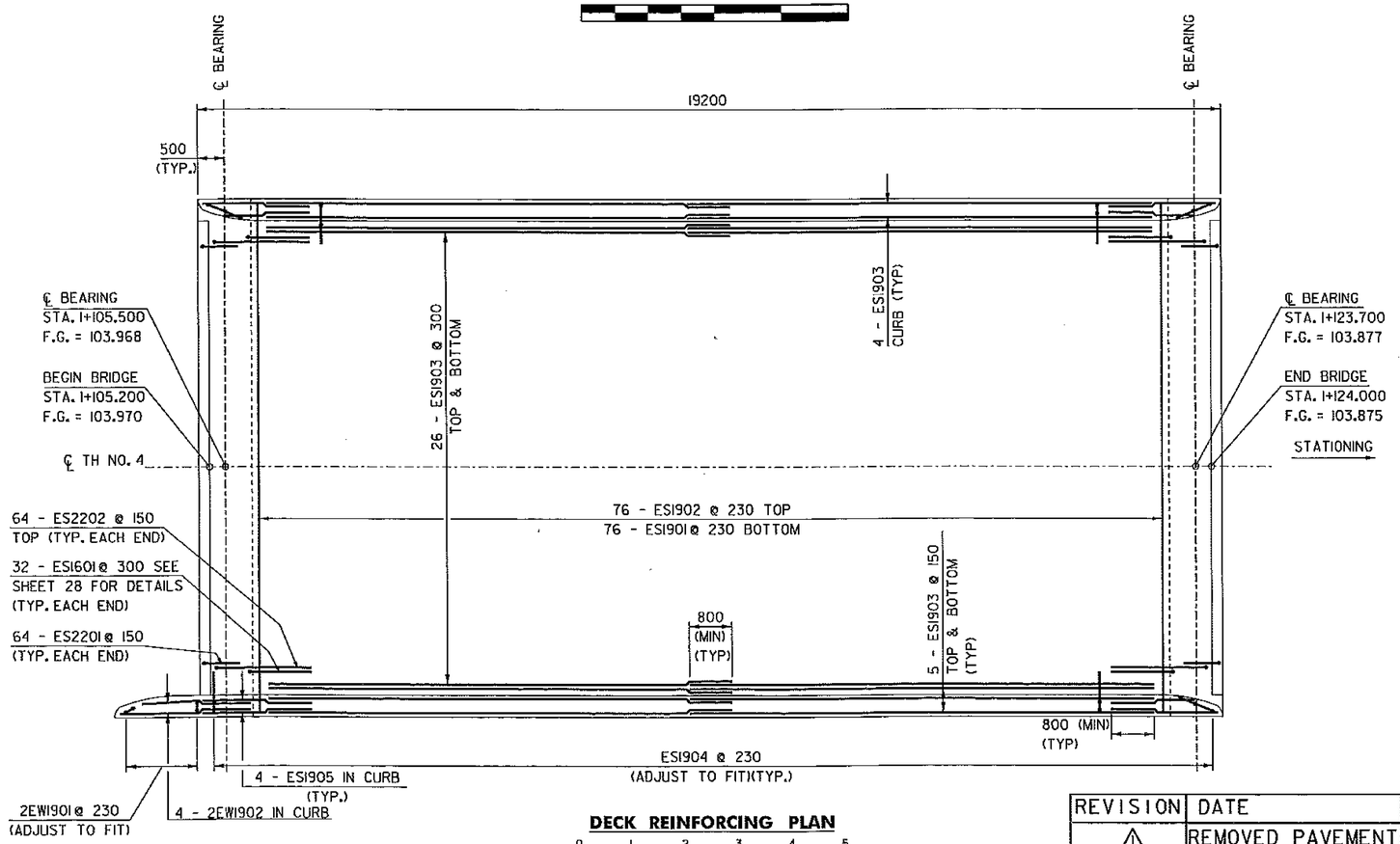
TYPICAL BRIDGE SECTION

0 1 2



TYPICAL CURB AND EDGE OF DECK REINFORCING

SCALE 1:10



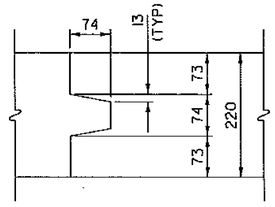
DECK REINFORCING PLAN

0 1 2 3 4 5

SCALE = 1:50

NOTES:

1. MINIMUM SPLICE DISTANCE ON ALL 19 BAR SHALL BE 800.
2. ALL BACKWALL CONCRETE ABOVE THE HORIZONTAL CONSTRUCTION JOINT SHALL BE POURED MONOLITHICALLY WITH DECK POURS.



TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT

0 0.25 0.5

REVISION	DATE
⚠	REMOVED PAVEMENT FROM DECK 9-5-2011

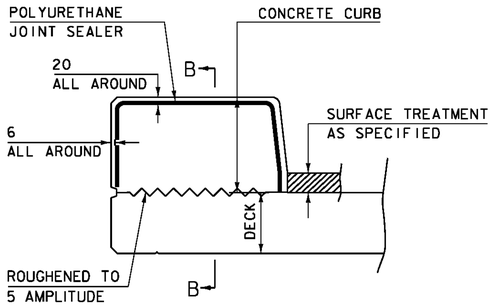
NOTES:

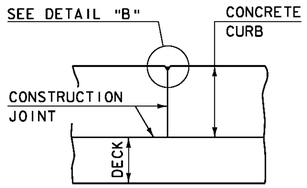
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
△ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

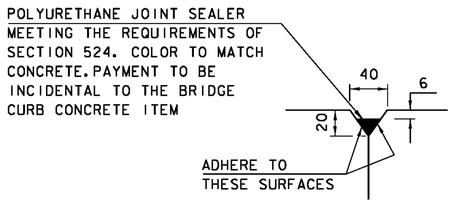
FILE NAME: 01J282/str/s01J282 str.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
DECK LAYOUT

PLOT DATE: 06-SEP-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 19 R OF 56





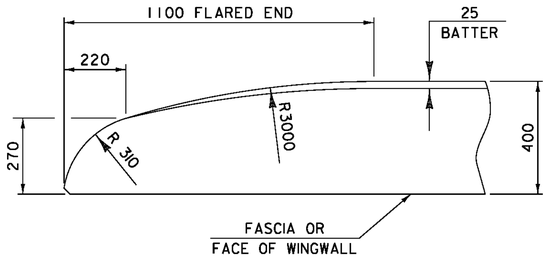
SECTION B - B
NOT TO SCALE



DETAIL "B"
NOT TO SCALE

CONCRETE CURB JOINT SECTION

(NOT TO SCALE)



FLARED END FOR 400 CURB

BARS SHALL BE TURNED AS
REQUIRED TO FIT FLARED ENDS

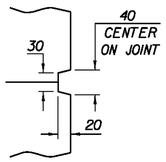
CONCRETE CURB JOINT NOTES

1. CONCRETE CURBS MAY BE PLACED IN ONE CONTINUOUS OPERATION, WITHOUT CONSTRUCTION JOINTS, IF AN APPROVED SHRINKAGE REDUCING ADMIXTURE LISTED IN THE SPECIAL PROVISIONS IS USED WITH THE CONCRETE MIX DESIGN. PAYMENT FOR THE SHRINKAGE REDUCING ADMIXTURE WILL BE INCIDENTAL TO THE BRIDGE CURB CONCRETE ITEM.

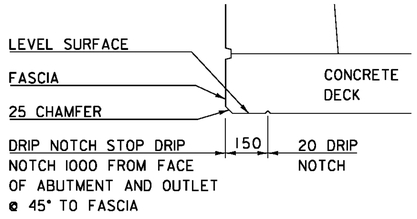
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 4570 CENTER TO CENTER AND 610 MINIMUM FROM THE CENTER OF NEAREST BRIDGE RAILING POST.

3. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.

4. LONGITUDINAL REINFORCING SHALL BE CONTINUOUS THROUGH CURB CONSTRUCTION JOINTS. CURB STIRRUP BARS SHALL BE TURNED AS NECESSARY TO MAINTAIN COVER IN THE FLARED CURB ENDS.

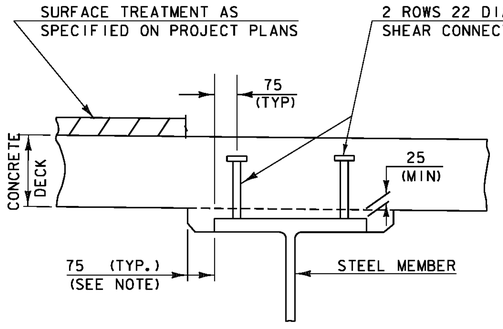


SCORE MARK DETAIL



DRIP NOTCH DETAIL

(NOT TO SCALE)

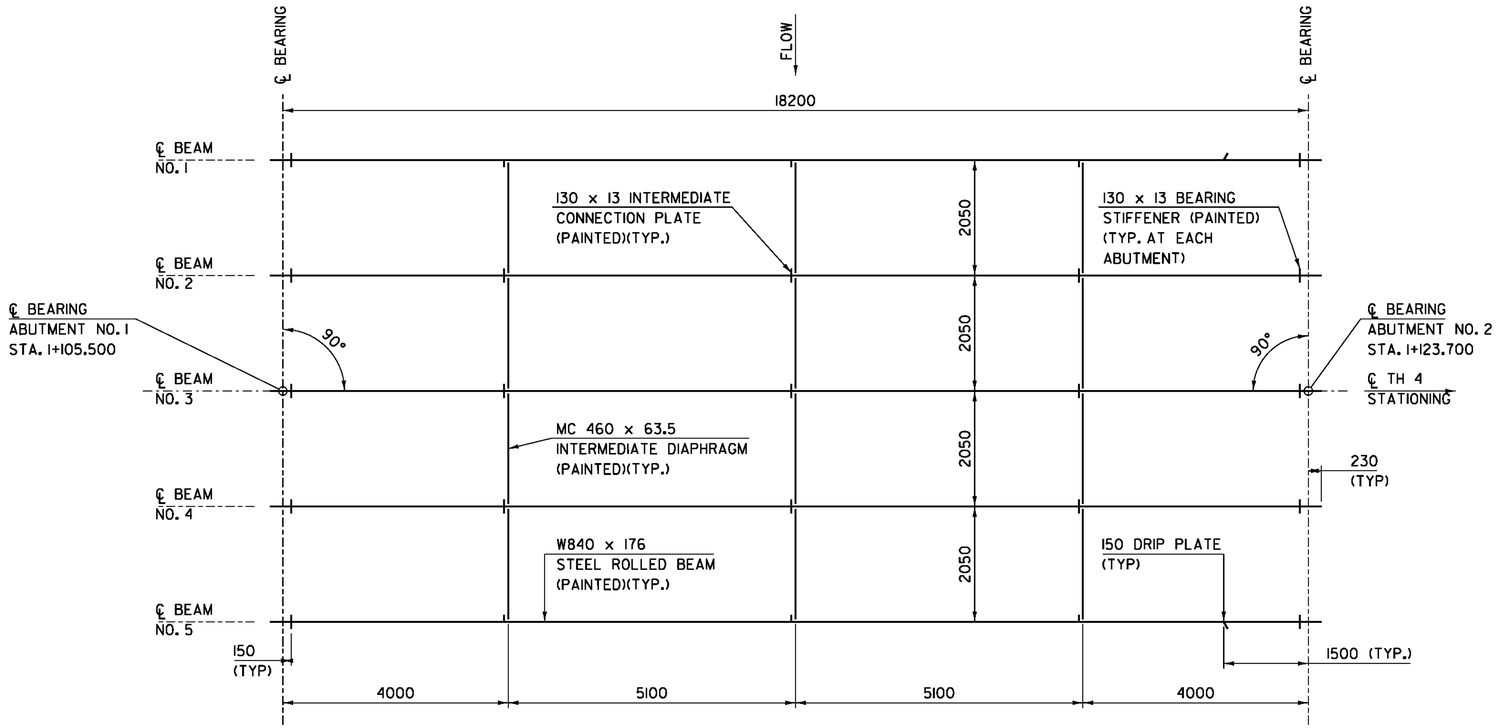


NOTE:
THE 75 HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. ANY VOIDS RESULTING FROM FORMING SYSTEM ELEMENTS SHALL BE FILLED WITH JOINT SEALER, POLYURETHANE MEETING THE REQUIREMENTS OF SECTION 524. THE COST OF THE JOINT SEALER, POLYURETHANE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

HAUNCH AND SHEAR CONNECTOR DETAIL

(NOT TO SCALE)

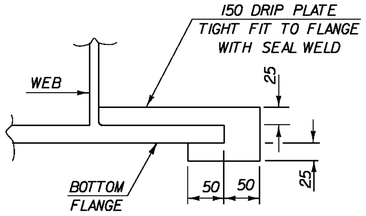
PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/s01J282 str.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
DECK DETAILS	SHEET 20 OF 56



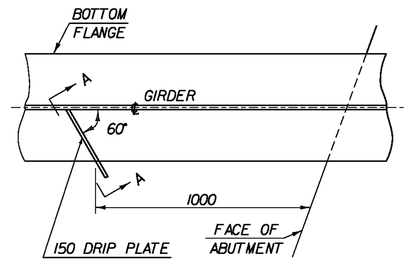
FRAMING PLAN

0 1 2 3 4 5

SCALE = 1:50

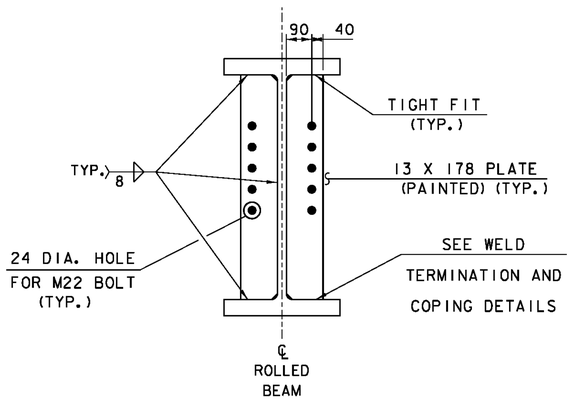


SECTION A - A



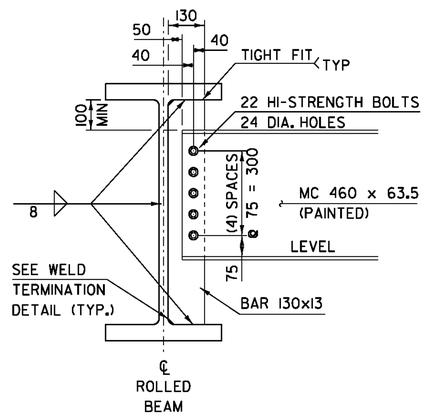
PLAN DRIP PLATE

NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS ON THE HIGH SIDE OF ALL PIERS AND ABUTMENTS OR AS INDICATED ON PROJECT PLANS.



INTERMEDIATE DIAPHRAGMS CONNECTION PLATE DETAIL

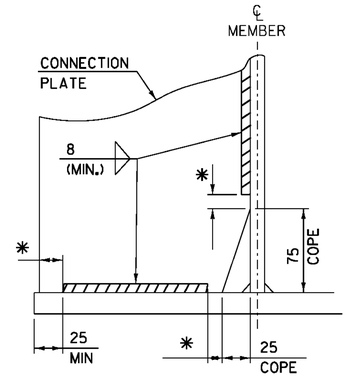
NTS



NOTE:
HI-STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO AASHTO DESIGNATION M164M

INTERMEDIATE DIAPHRAGMS FOR 840 BEAM

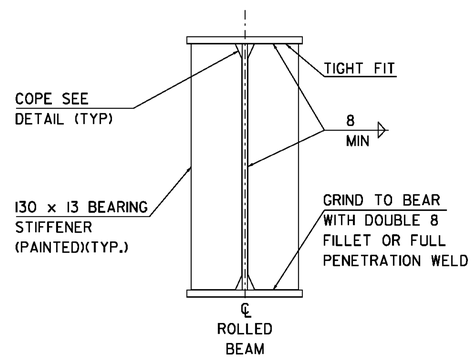
NTS



* NO WELD FOR 6 MIN. 13 MAX. (EXCEPT MUST MAINTAIN 25 MINIMUM FROM EDGE OF FLANGE)

WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS

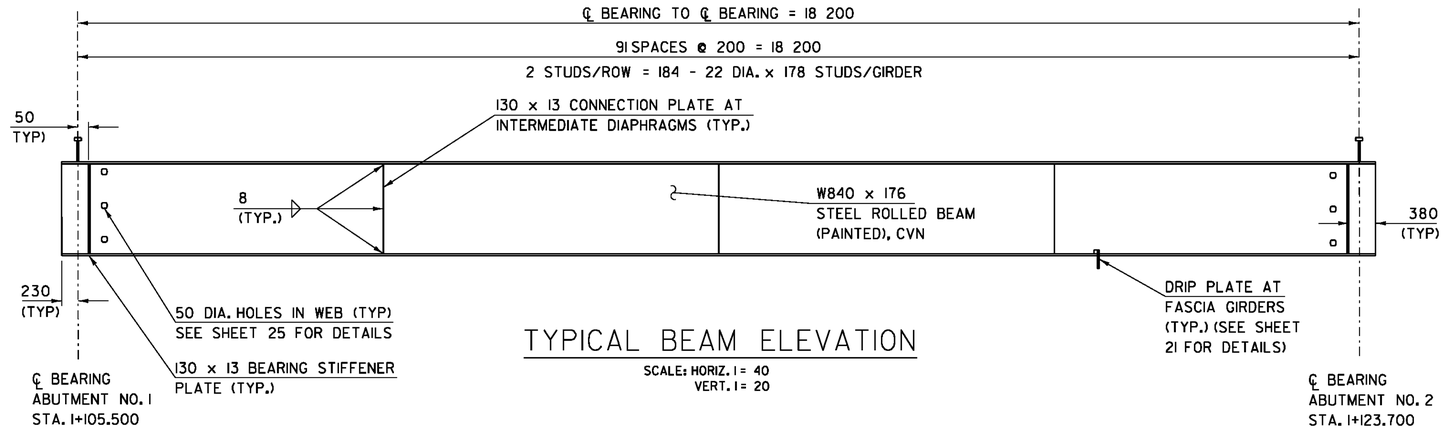
NTS



ABUTMENT BEARING STIFFENERS

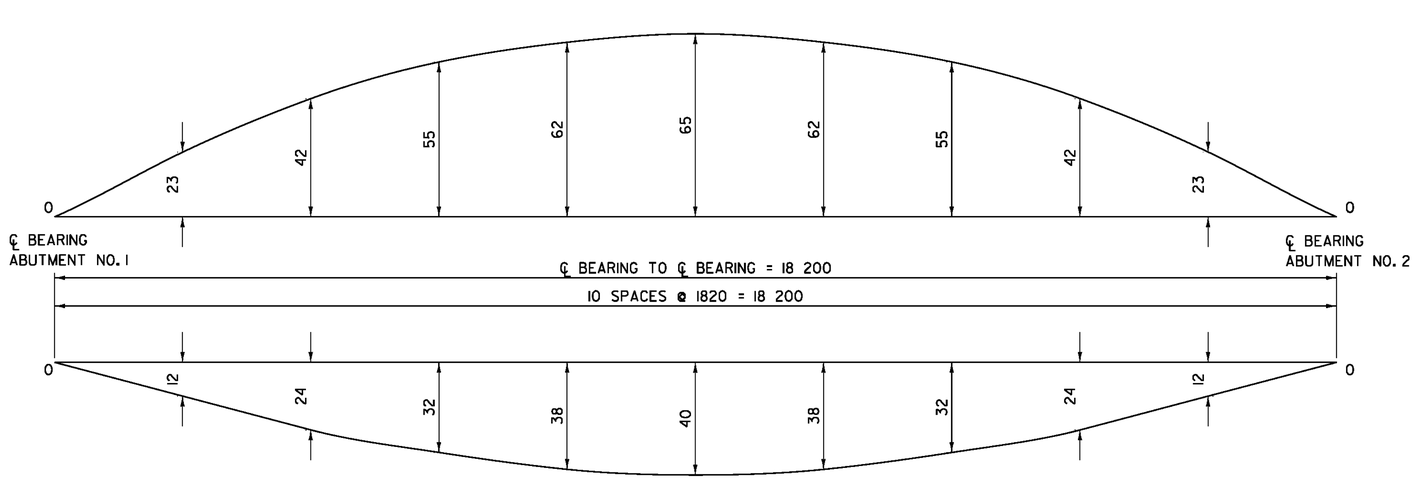
NTS

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/s01J282 str.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
FRAMING PLAN	SHEET 21 OF 56



TYPICAL BEAM ELEVATION

SCALE: HORIZ. 1 = 40
VERT. 1 = 20



DESIGN CAMBER & DEAD LOAD DEFLECTION DIAGRAM

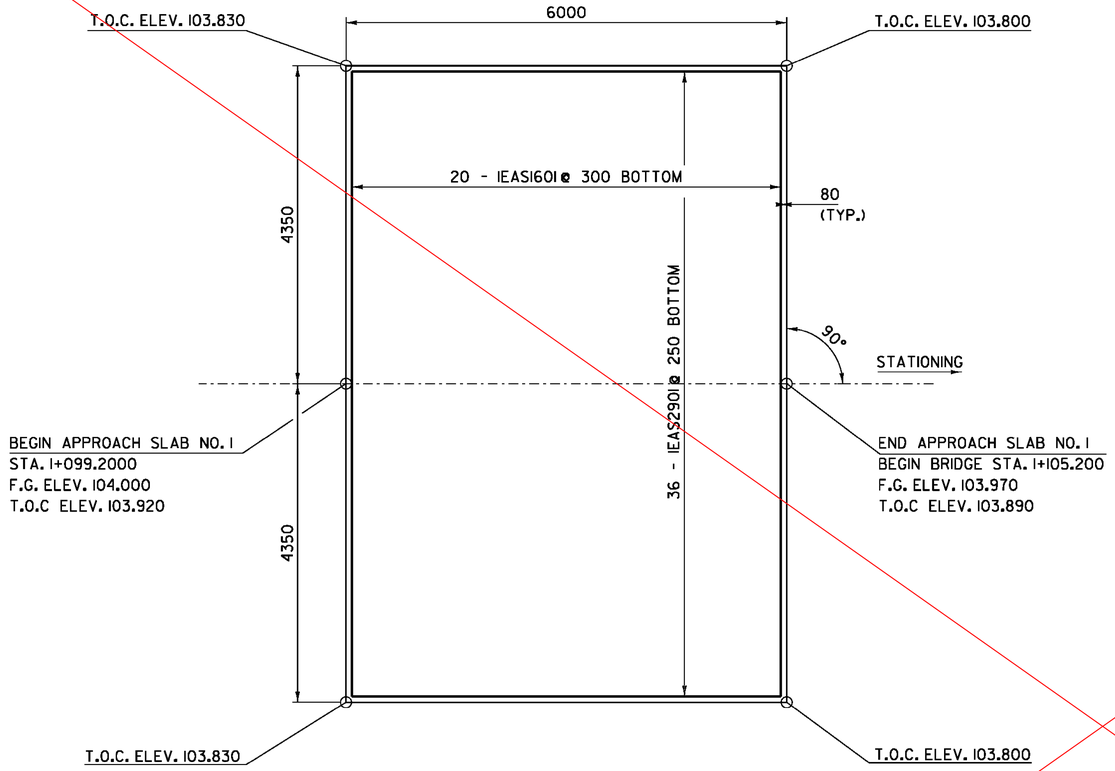
NTS

NOTE: CAMBER AND DEFLECTION MEASUREMENTS ARE GIVEN IN MILLIMETERS AT TENTH POINTS. DEAD LOAD DEFLECTION IS DUE TO GIRDER, DIAPHRAGMS, DECK, CURBS, PAVEMENT, AND RAILING.

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/s01J282 str.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
BEAM PROFILE	SHEET 22 OF 56

SEE REVISED DRAWING

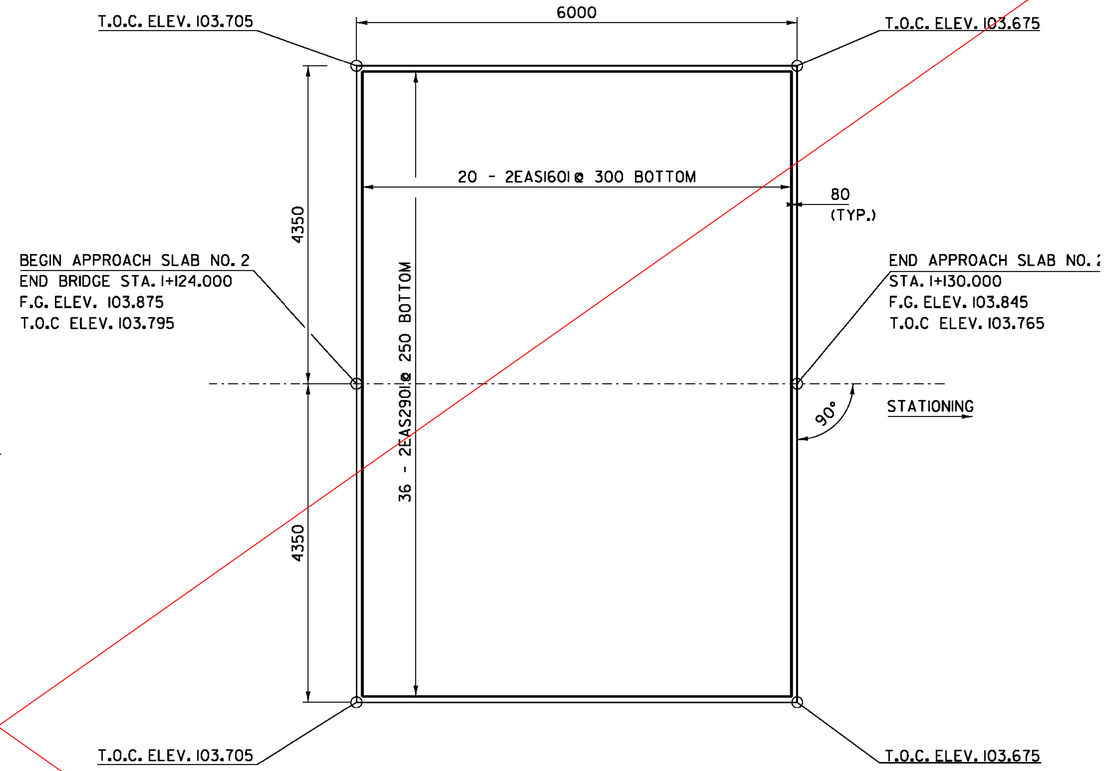
REDISGNED WITHOUT PAVEMENT ON DECK



APPROACH SLAB NO. 1 PLAN

0 1 2 3 4

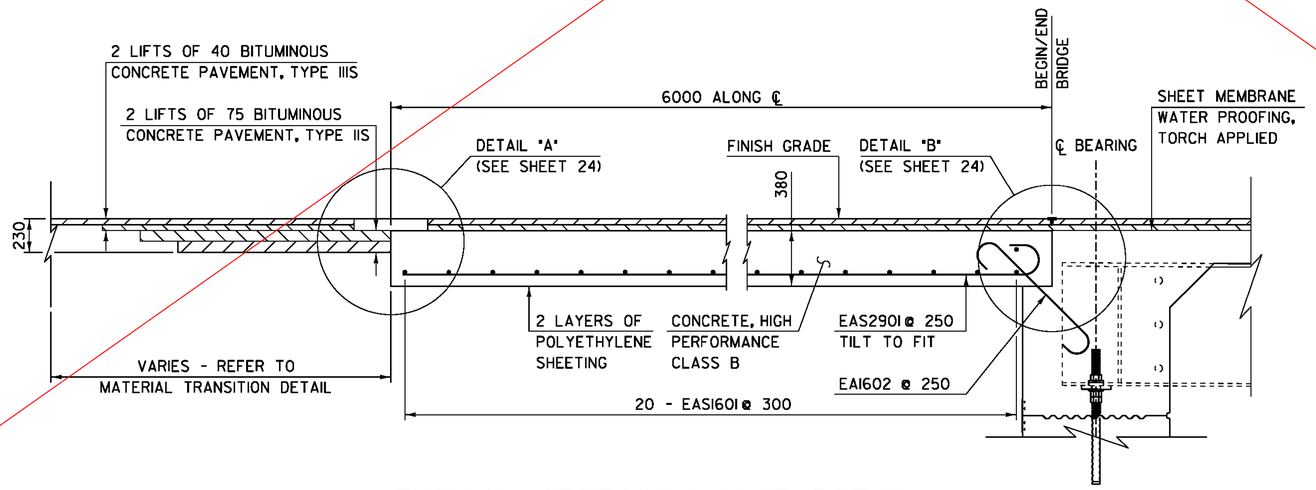
SCALE = 1:40



APPROACH SLAB NO. 2 PLAN

0 1 2 3 4

SCALE = 1:40



TYPICAL APPROACH SLAB DETAIL

0 1 2

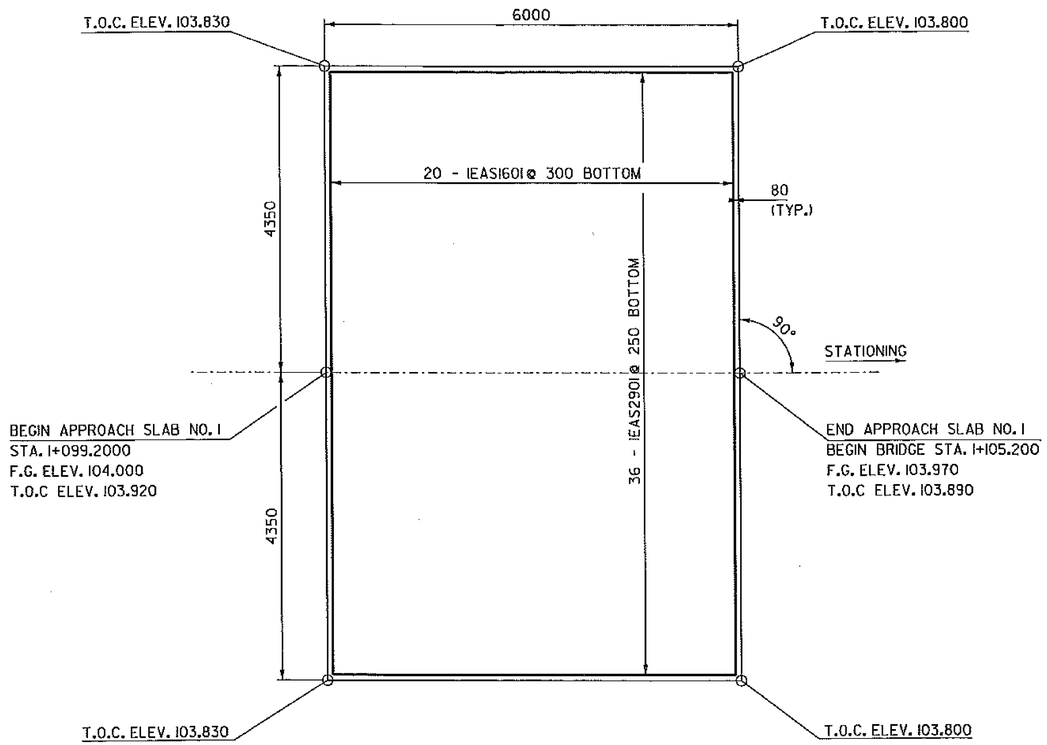
SCALE = 1:20

T.O.C. ELEV. : TOP OF CONCRETE APPROACH SLAB

NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS

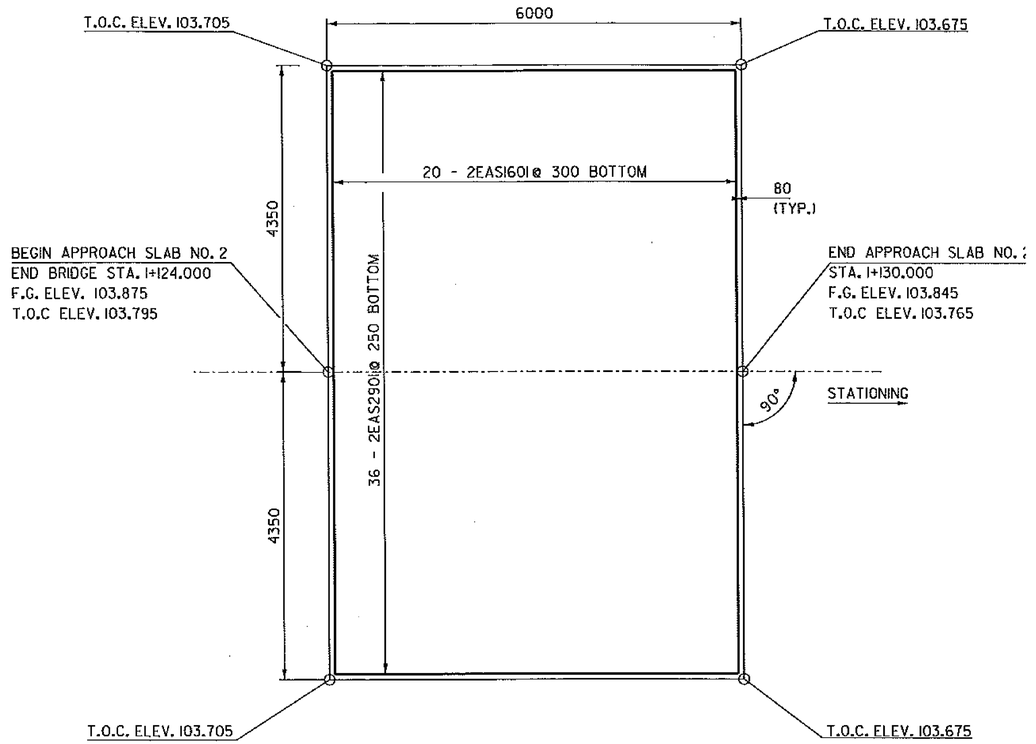
PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/s01J282 str.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
APPROACH SLAB LAYOUT	SHEET 23 OF 56



APPROACH SLAB NO. 1 PLAN

0 1 2 3 4

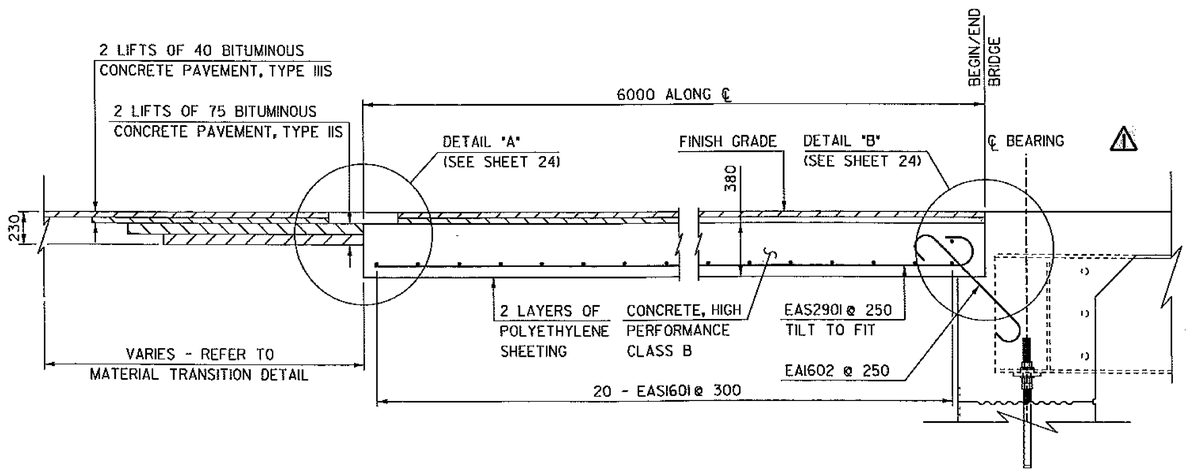
SCALE = 1:40



APPROACH SLAB NO. 2 PLAN

0 1 2 3 4

SCALE = 1:40



TYPICAL APPROACH SLAB DETAIL

0 1 2

SCALE = 1:20

REVISION	DATE
⚠	REMOVED PAVEMENT FROM DECK 9-5-2011

T.O.C. ELEV.: TOP OF CONCRETE APPROACH SLAB

NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS

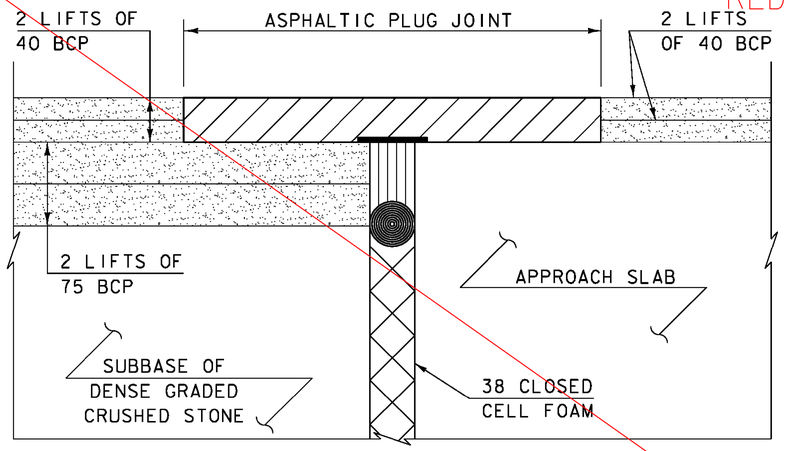
PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/s01J282 str.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
APPROACH SLAB LAYOUT

PLOT DATE: 06-SEP-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 23R OF 56

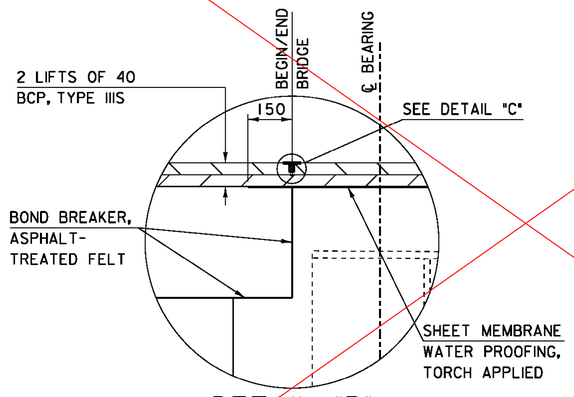
SEE REVISED DRAWING

REDISGNED WITHOUT PAVEMENT ON DECK



DETAIL "A"

(NOT TO SCALE)

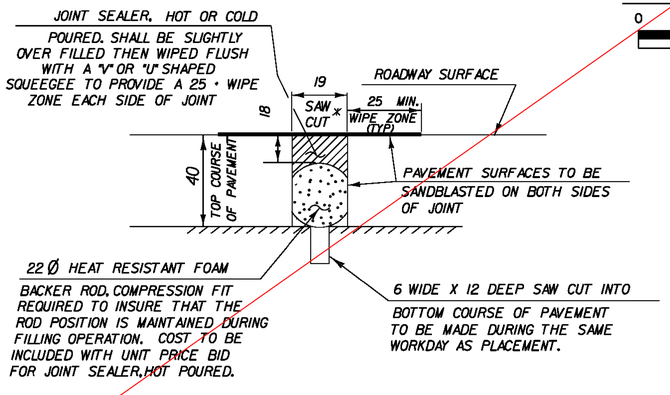


DETAIL "B"

(SAWN JOINT DETAIL)

0 0.5 1

SCALE = 1:10



DETAIL "C"

* JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE DECK. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER. SEE VT. SPECIFICATION 524 AND SPECIAL PROVISIONS. THIS WORK WILL BE PAID FOR UNDER ITEM 524J1, "JOINT SEALER, HOT POURED".

ASPHALTIC PLUG JOINT NOTES

INSTALLATION:

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT, MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. REPAIR MATERIAL GREATER THAN 4 INCHES FROM FINISHED GRADE WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.
5. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 25 MM (1" +/-) OF BINDER ABOVE THE ROD.
6. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
7. PLACE 6 MM (1/4") THICK BY 200 MM (8") WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.
8. HEAT AND MIX THE BINDER MATERIAL AND AGGREGATE AS RECOMMENDED BY THE MANUFACTURER.
9. INSTALLATION OF MATERIAL, COMPACTION, AND TOP COATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
10. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.
11. ONCE THE JOINT REACHES 82 DEG C (180 DEG F) +/-, WATER MAY BE USED TO EXPEDITE THE COOLING PROCESS.
12. PROTECT JOINT FROM TRAFFIC UNTIL THE MATERIAL HAS COOLED TO 51 DEG C (125 DEG F) +/-.

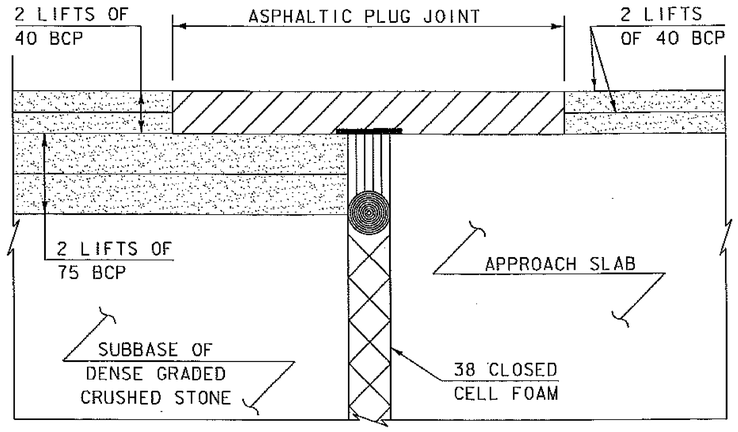
WEATHER LIMITATIONS

APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:

1. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
2. THE ROAD SURFACE IS DRY.
3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.

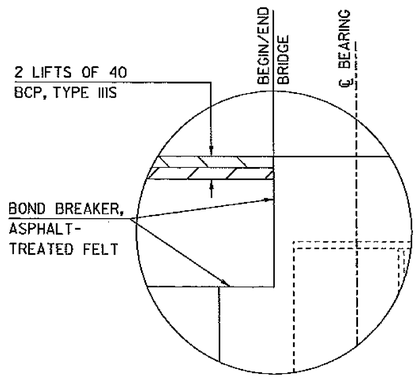
PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)

FILE NAME: 01J282/str/s01J282 str.dgn		PLOT DATE:	02-MAR-2011
PROJECT LEADER:	C. CARLSON	DRAWN BY:	C. MOONEY
DESIGNED BY:	W. LAMMER	CHECKED BY:	C. CARLSON
JOINT DETAILS		SHEET 24	OF 56



DETAIL "A"

(NOT TO SCALE)



⚠ DETAIL "B"

0 0.5 1

SCALE = 1:10

ASPHALTIC PLUG JOINT NOTES

INSTALLATION:

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT, MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. REPAIR MATERIAL GREATER THAN 4 INCHES FROM FINISHED GRADE WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.
5. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 25 MM (1" +/-) OF BINDER ABOVE THE ROD.
6. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
7. PLACE 6 MM (1/4") THICK BY 200 MM (8") WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.
8. HEAT AND MIX THE BINDER MATERIAL AND AGGREGATE AS RECOMMENDED BY THE MANUFACTURER.
9. INSTALLATION OF MATERIAL, COMPACTION, AND TOP COATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
10. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.
11. ONCE THE JOINT REACHES 82 DEG C (180 DEG F) +/-, WATER MAY BE USED TO EXPEDITE THE COOLING PROCESS.
12. PROTECT JOINT FROM TRAFFIC UNTIL THE MATERIAL HAS COOLED TO 51 DEG C (125 DEG F) +/-.

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APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:

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2. THE ROAD SURFACE IS DRY.
3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.

REVISION	DATE
⚠	REMOVED PAVEMENT FROM DECK 9-5-2011

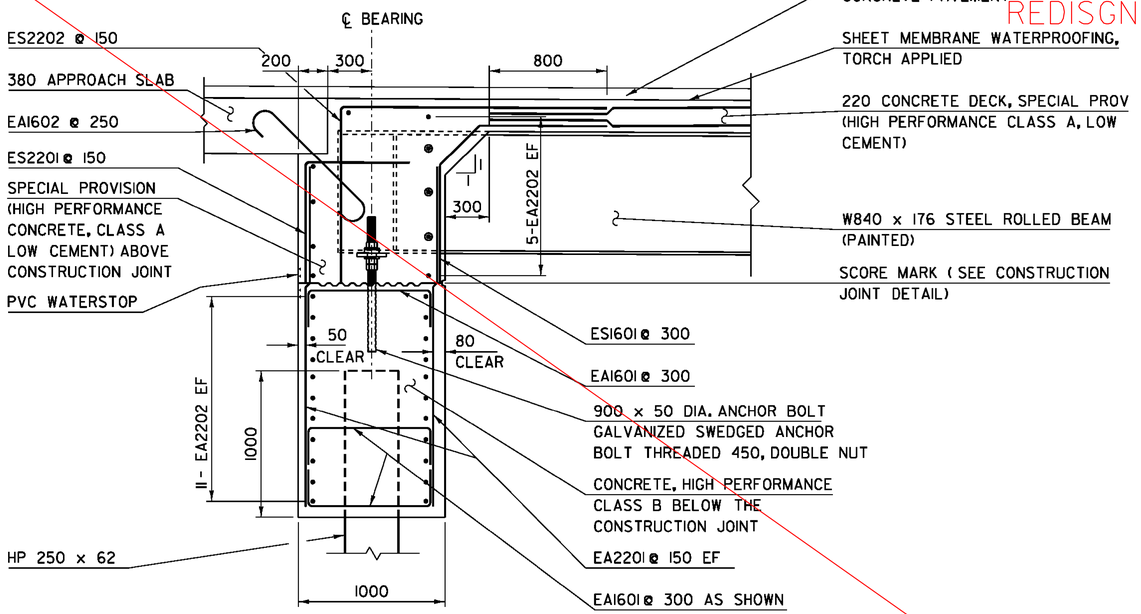
PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 011282/str/s011282 str.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
JOINT DETAILS

PLOT DATE: 06-SEP-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 24R OF 56

SEE REVISED DRAWING

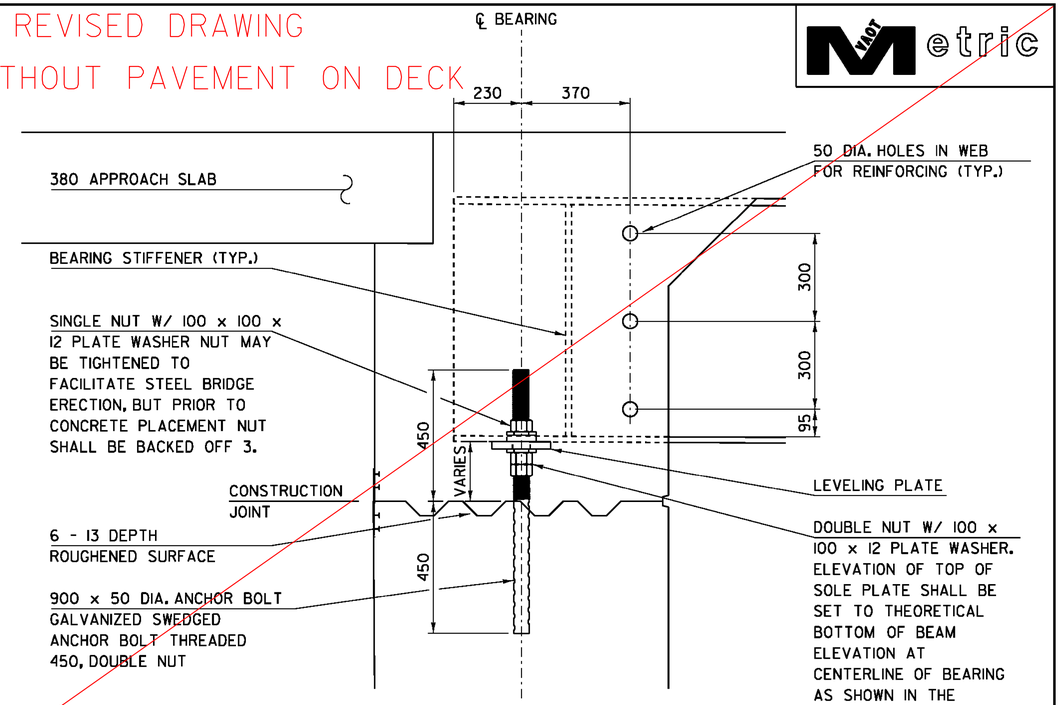
REDISGNED WITHOUT PAVEMENT ON DECK



TYPICAL ABUTMENT SECTION

0 1 2

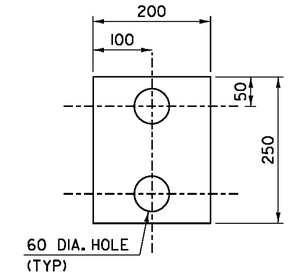
SCALE = 1:20



ELEVATION VIEW END OF BEAM ANCHOR BOLT DETAIL

0 0.5 1

SCALE = 1:10



LEVELING PLATE DETAIL

0 0.25 0.5

SCALE = 1:5

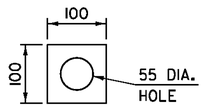
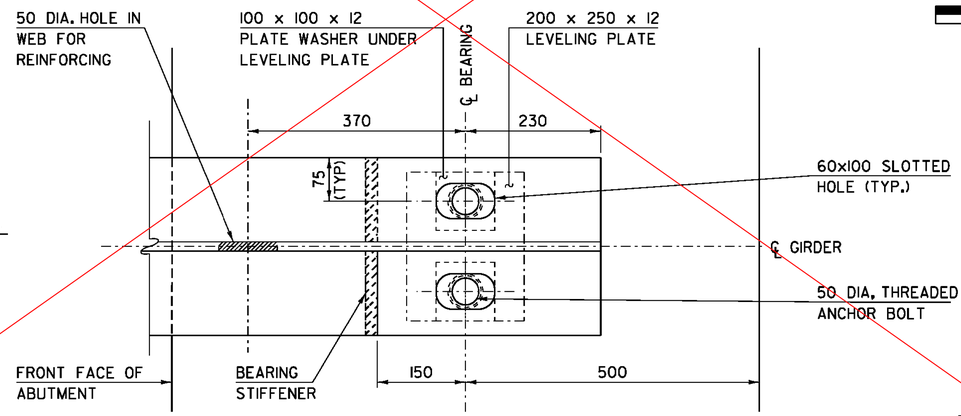


PLATE WASHER DETAIL

0 0.25 0.5

SCALE = 1:5

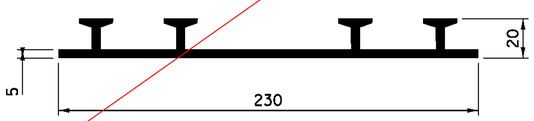


PLAN VIEW END OF BEAM ANCHOR BOLT DETAIL

0 0.25 0.5

SCALE = 1:5

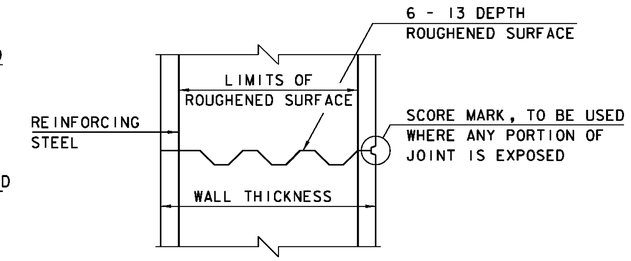
THEORETICAL BOTTOM OF BEAM ELEVATION AT CENTERLINE OF BEARING		
	ABUTMENT # 1	ABUTMENT # 2
GIRDER # 1	102.730	102.639
GIRDER # 2	102.771	102.680
GIRDER # 3	102.812	102.721
GIRDER # 4	102.771	102.680
GIRDER # 5	102.730	102.639



P.V.C. WATERSTOP

NOT TO SCALE

THE COST FOR P.V.C. WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE ENGINEER.



TYPICAL HORIZONTAL CONSTRUCTION JOINT

(NOT TO SCALE)

1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.

BEARING DEVICE ASSEMBLY NOTES

1. ALL COMPONENTS OF BEARING DEVICE ASSEMBLY, INCLUDING ANCHOR BOLTS, NUTS, WASHERS AND LEVELING PLATES SHALL BE PAID FOR UNDER ITEM 506.50, "STRUCTURAL STEEL, ROLLED BEAM".
2. COMPONENTS DO NOT HAVE TO BE GALVANIZED OR METALIZED.
3. ALL STEEL IN BEARING DEVICE ASSEMBLY SHALL BE AASHTO M 270M/M 270 GRADE 250.

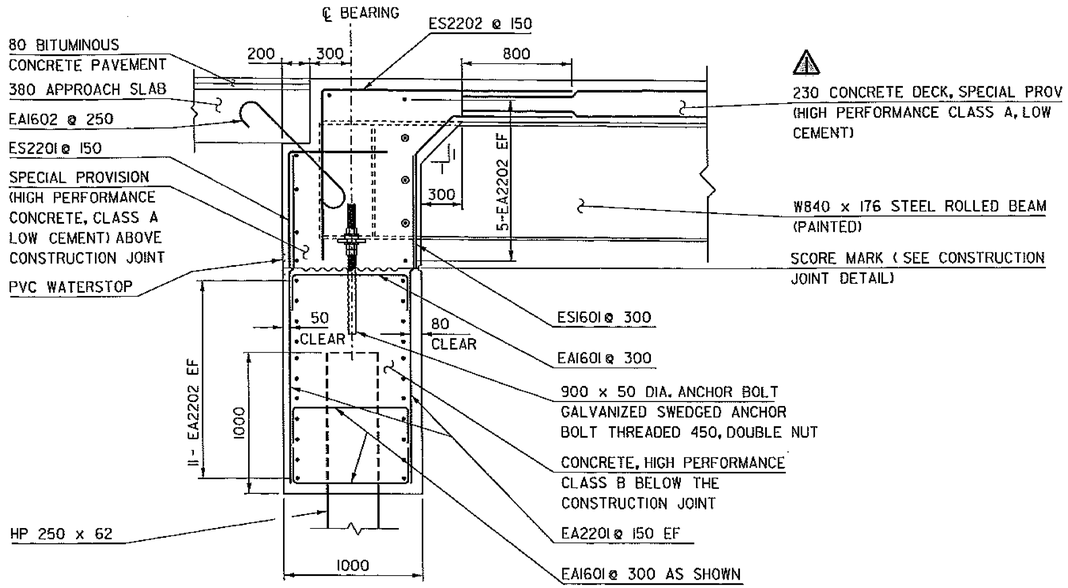
NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
△ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/s01J282 str.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
ABUTMENT TYPICAL AND BEARING DETAILS

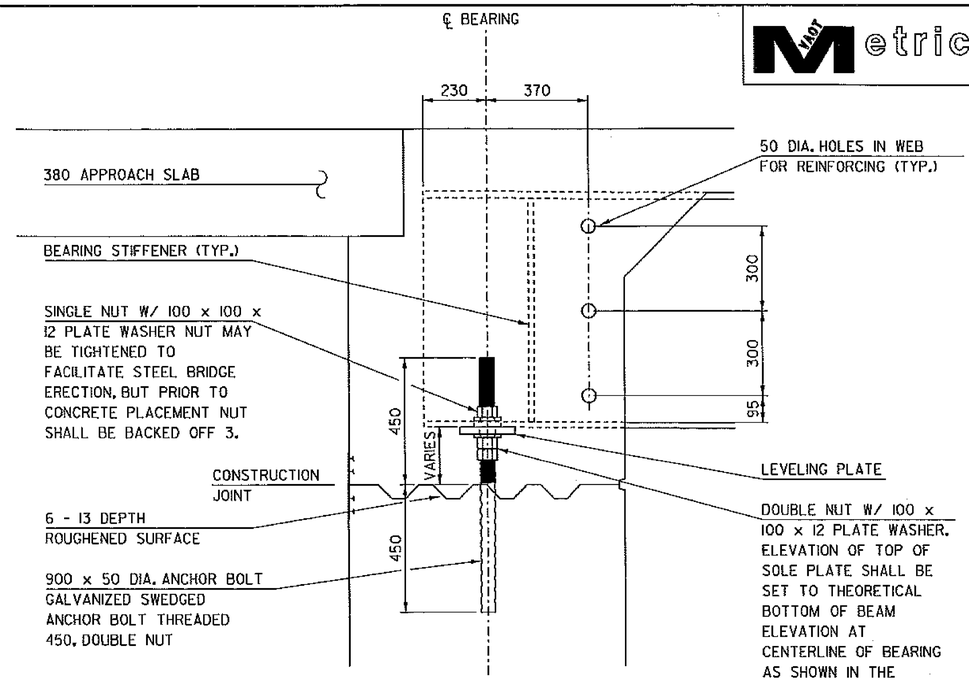
PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. MOONEY
SHEET 25 OF 56



TYPICAL ABUTMENT SECTION

0 1 2

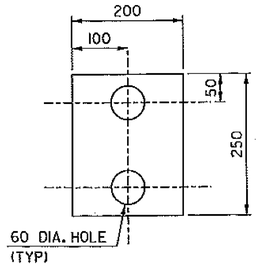
SCALE = 1:20



ELEVATION VIEW END OF BEAM ANCHOR BOLT DETAIL

0 0.5 1

SCALE = 1:10



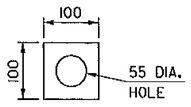


PLATE WASHER DETAIL

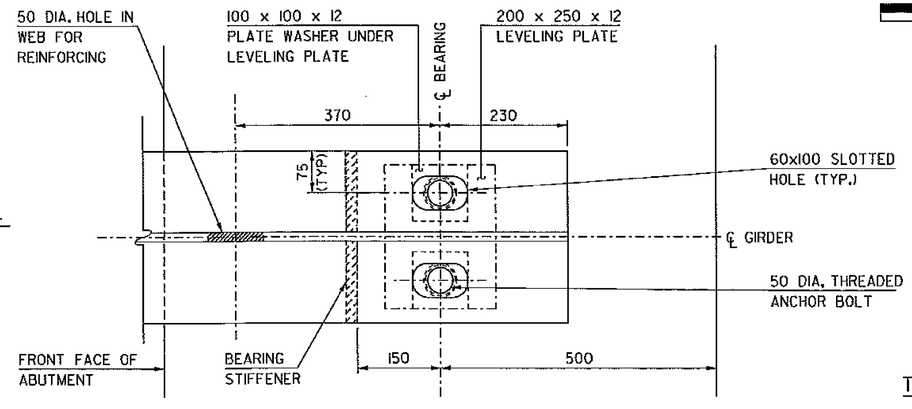
0 0.25 0.5

SCALE = 1:5

LEVELING PLATE DETAIL

0 0.25 0.5

SCALE = 1:5

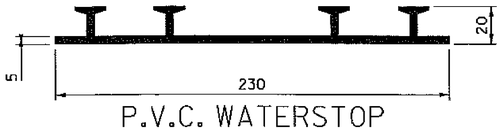


PLAN VIEW END OF BEAM ANCHOR BOLT DETAIL

0 0.25 0.5

SCALE = 1:5

THEORETICAL BOTTOM OF BEAM ELEVATION AT CENTERLINE OF BEARING		
	ABUTMENT # 1	ABUTMENT # 2
GIRDER # 1	102.730	102.639
GIRDER # 2	102.771	102.680
GIRDER # 3	102.812	102.721
GIRDER # 4	102.771	102.680
GIRDER # 5	102.730	102.639



P.V.C. WATERSTOP

NOT TO SCALE

THE COST FOR P.V.C. WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE ENGINEER.

BEARING DEVICE ASSEMBLY NOTES

1. ALL COMPONENTS OF BEARING DEVICE ASSEMBLY, INCLUDING ANCHOR BOLTS, NUTS, WASHERS AND LEVELING PLATES SHALL BE PAID FOR UNDER ITEM 506.50, "STRUCTURAL STEEL, ROLLED BEAM".
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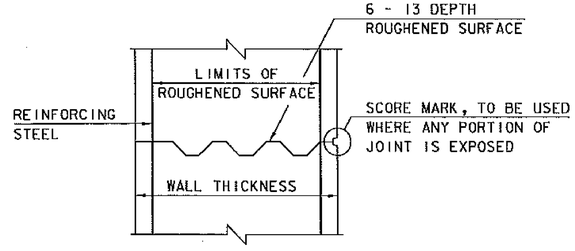


TYPICAL HORIZONTAL CONSTRUCTION JOINT

(NOT TO SCALE)

1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.

REVISION	DATE
△	REMOVED PAVEMENT FROM DECK 9-5-2011

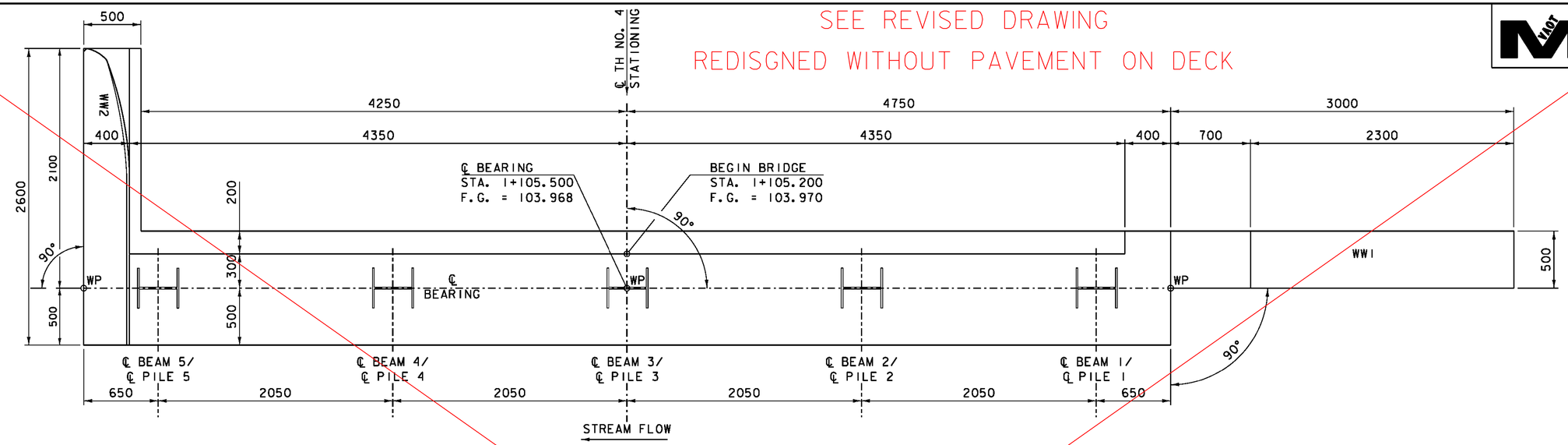
PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/s01J282 str.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
ABUTMENT TYPICAL AND BEARING DETAILS

PLOT DATE: 06-SEP-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. MOONEY
SHEET 25R OF 56

SEE REVISED DRAWING

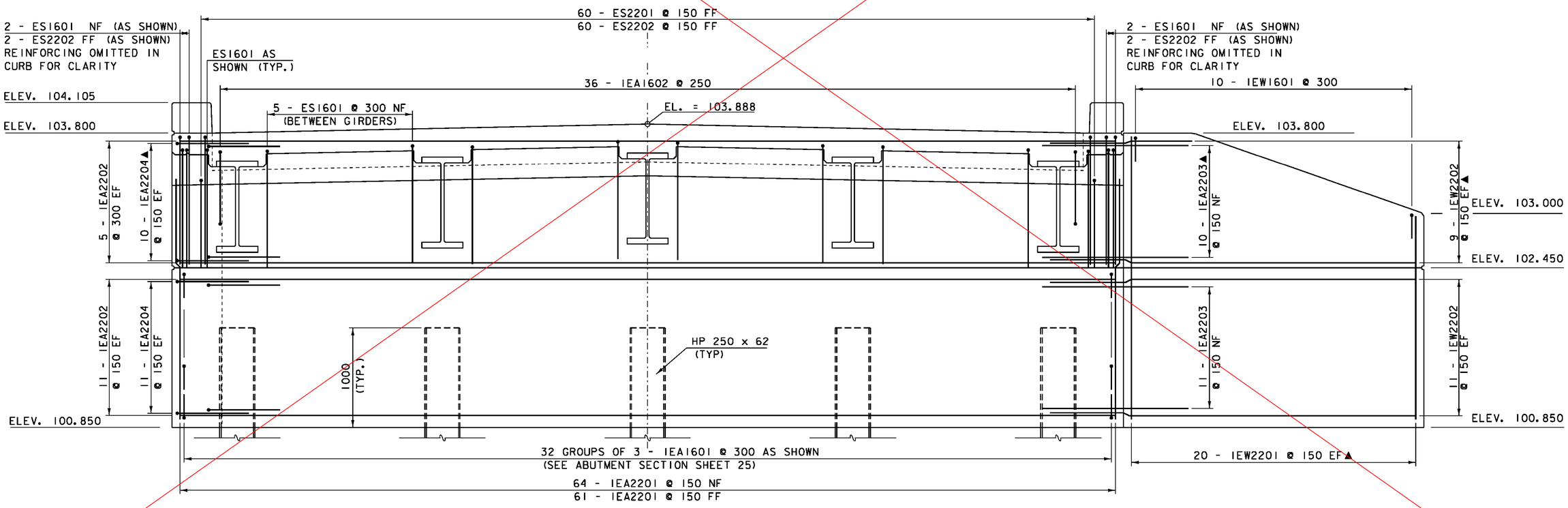
REDISGNED WITHOUT PAVEMENT ON DECK



ABUTMENT NO. 1 PLAN

0 1 2

SCALE = 1:20



ABUTMENT NO. 1 ELEVATION

0 1 2

SCALE = 1:20

NOTES:

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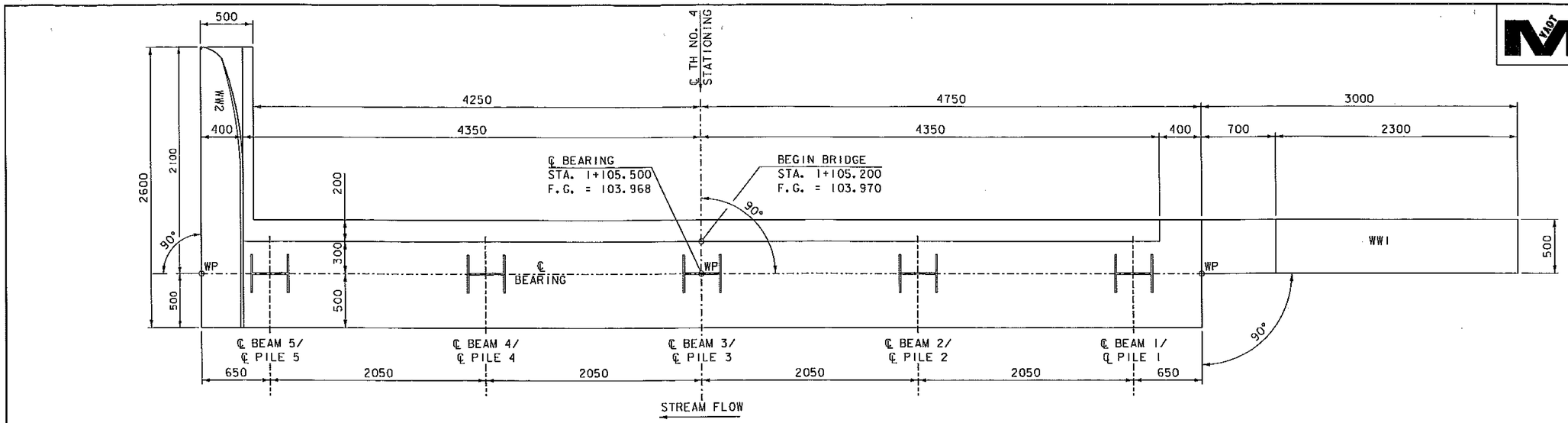
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS

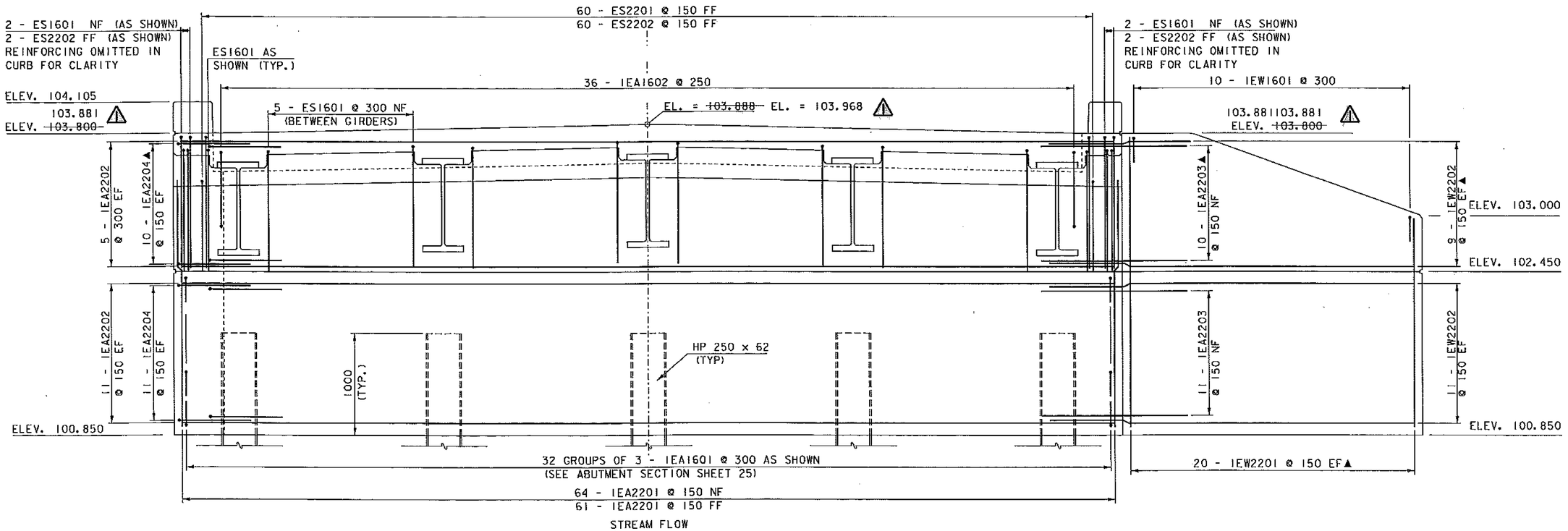
PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/01J282str.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
ABUTMENT NO. 1 DETAILS	SHEET 26 OF 56



ABUTMENT NO. 1 PLAN

0 1 2

SCALE = 1:20



ABUTMENT NO. 1 ELEVATION

0 1 2

SCALE = 1:20

REVISION	DATE
⚠	REMOVED PAVEMENT FROM DECK 9-5-2011

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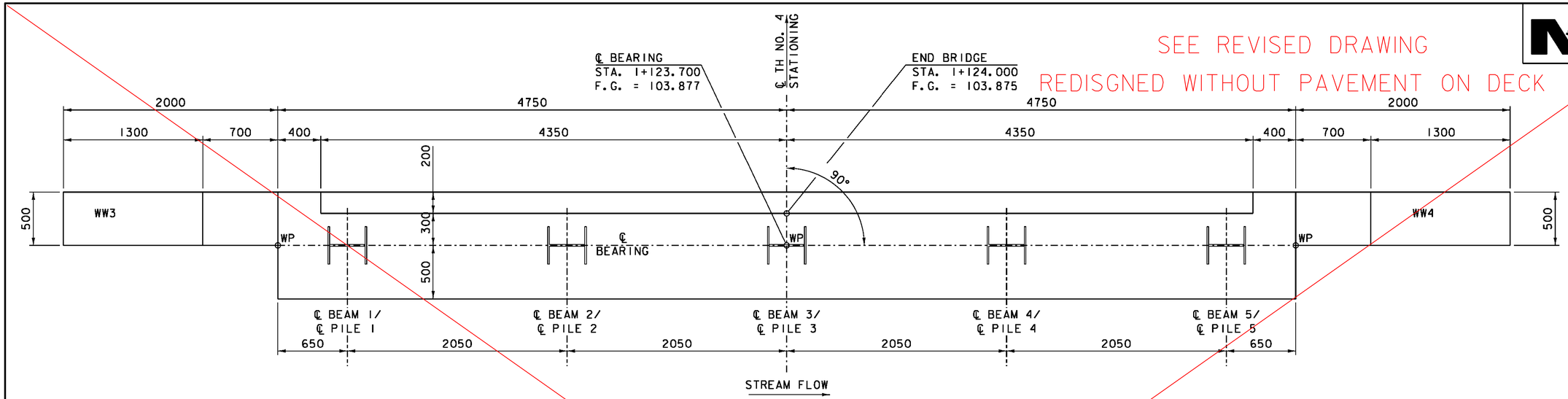
PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/01J282str.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
ABUTMENT NO. 1 DETAILS

PLOT DATE: 06-SEP-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 26 R OF 56

SEE REVISED DRAWING

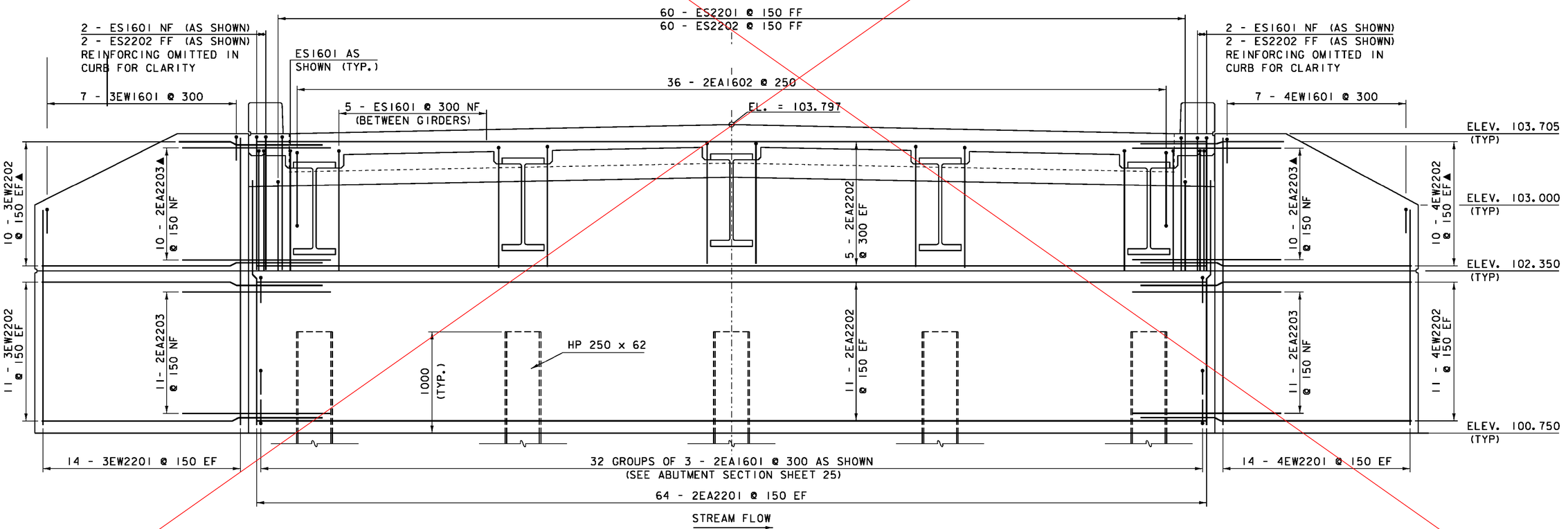
REDISGNED WITHOUT PAVEMENT ON DECK



ABUTMENT NO. 2 PLAN

0 1 2

SCALE = 1:20



ABUTMENT NO. 2 ELEVATION

0 1 2

SCALE = 1:20

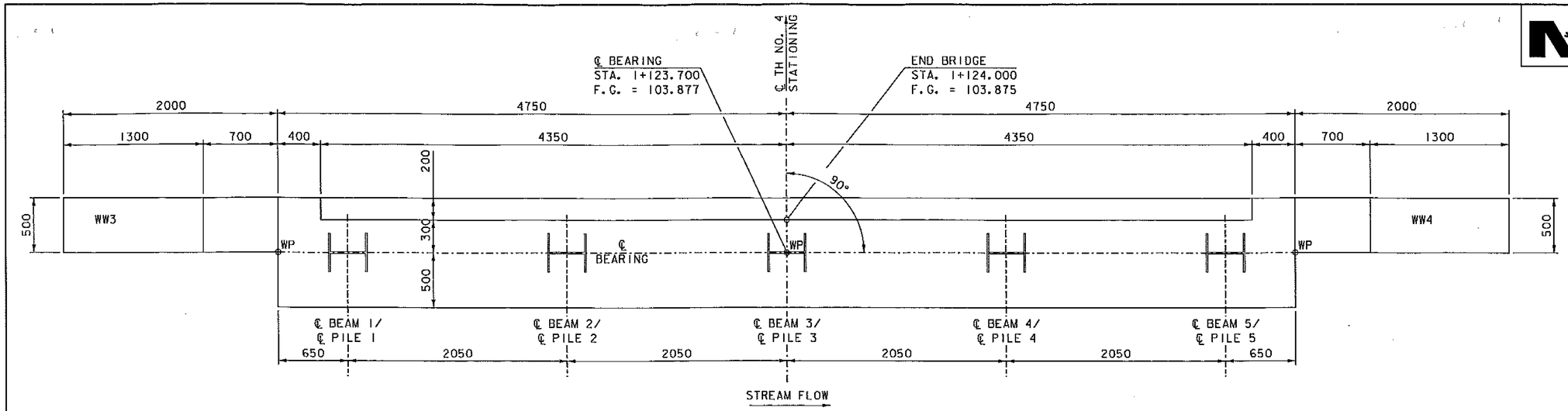
NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01j282/str/s01j282str.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
ABUTMENT NO. 2 DETAILS

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 27 OF 56



ABUTMENT NO. 2 PLAN

0 1 2

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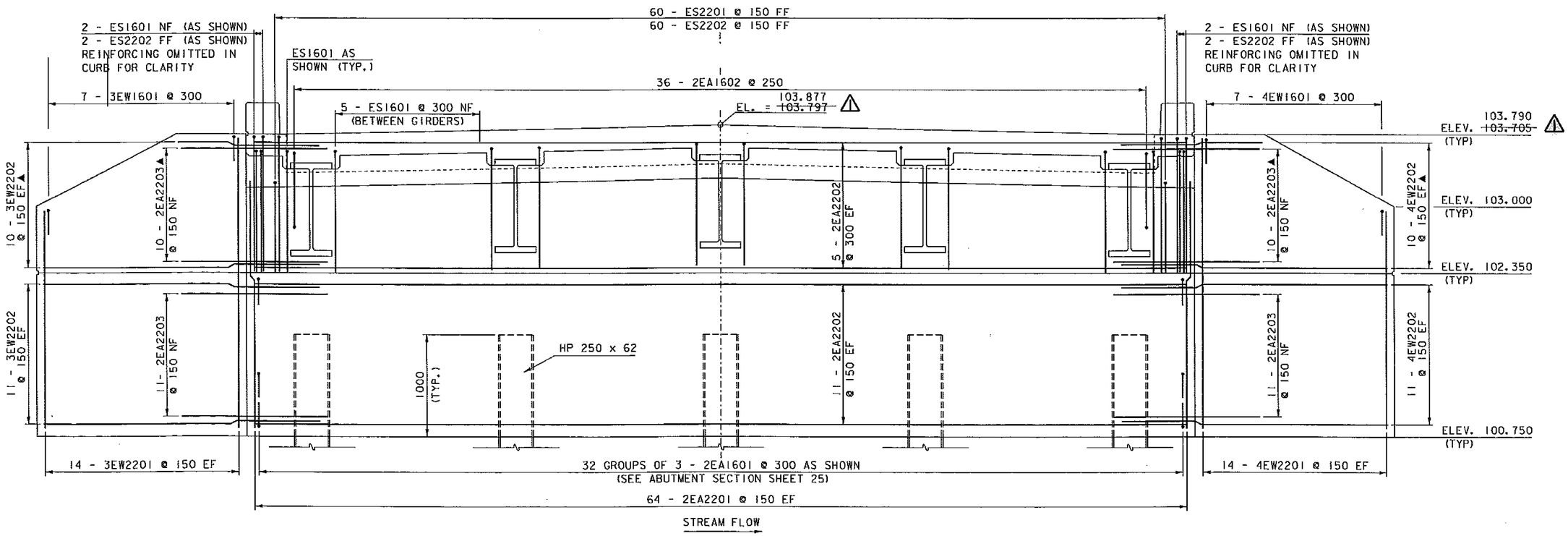


ABUTMENT NO. 2 ELEVATION

0 1 2

SCALE = 1:20

REVISION	DATE
⚠	REMOVED PAVEMENT FROM DECK 9-5-2011

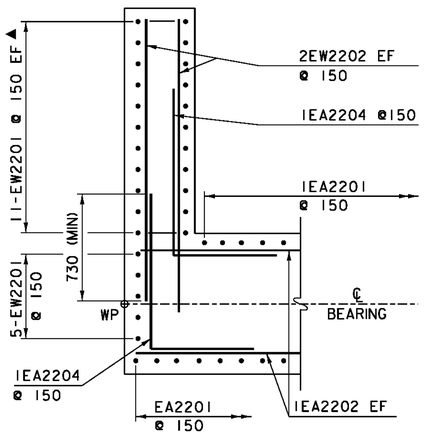
NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/s01J282str.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
ABUTMENT NO. 2 DETAILS

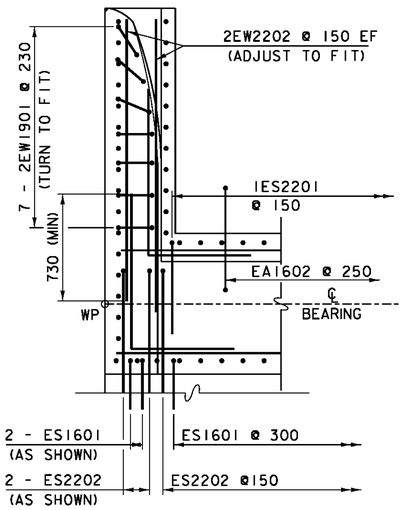
PLOT DATE: 06-SEP-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 27 R OF 56



WINGWALL 2 CORNER DETAIL (BELOW BRIDGE SEAT)

0 1 2

SCALE = 1:20

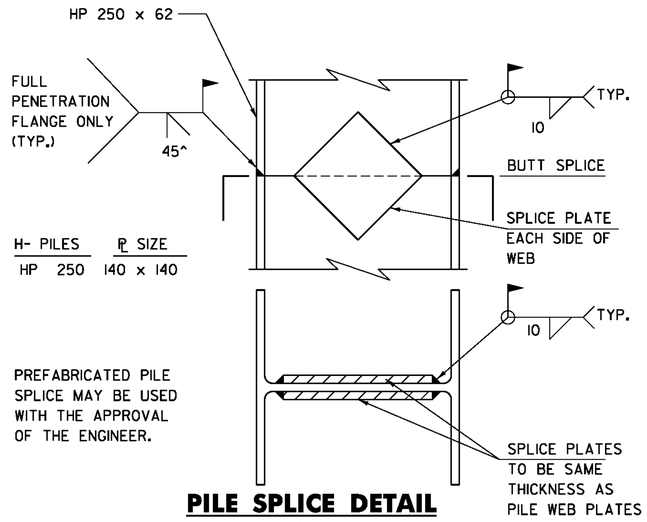


WINGWALL 2 CORNER DETAIL (ABOVE BRIDGE SEAT)

0 1 2

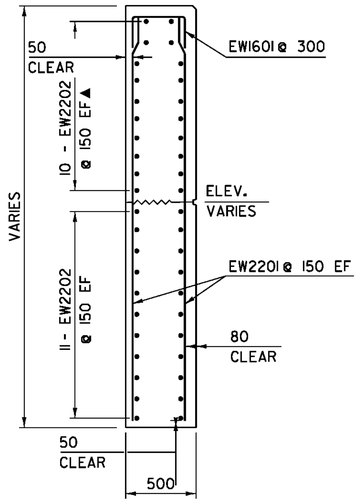
SCALE = 1:20

REBAR LABELS AND DIMENSIONS FOR; 2EW2201, IEA2201, IEA2202, & IEA2204 OMITTED FOR CLARITY. FOR BAR INFORMATION SEE WINGWALL 2 CORNER DETAIL (BELOW BRIDGE SEAT)



PILE SPLICE DETAIL

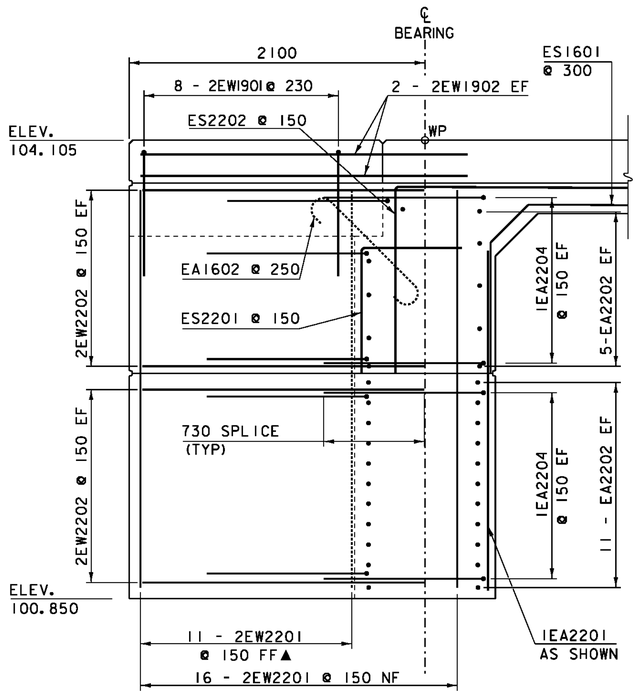
NTS



WINGWALL TYPICAL SECTION (1,3,4)

0 1 2

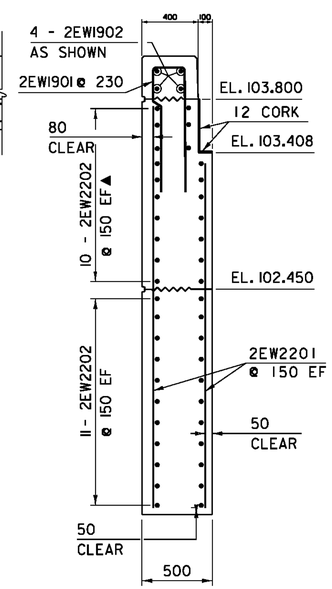
SCALE = 1:20



WINGWALL 2 ELEVATION

0 1 2

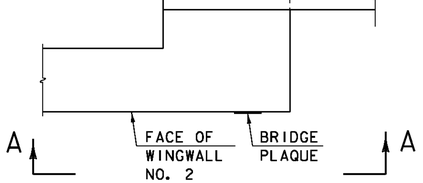
SCALE = 1:20



WINGWALL 2 TYPICAL SECTION

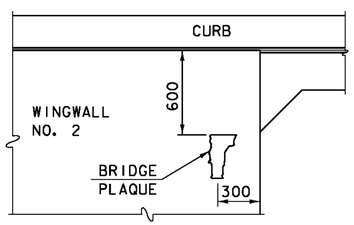
0 1 2

SCALE = 1:20



BRIDGE PLAQUE PLAN

NTS

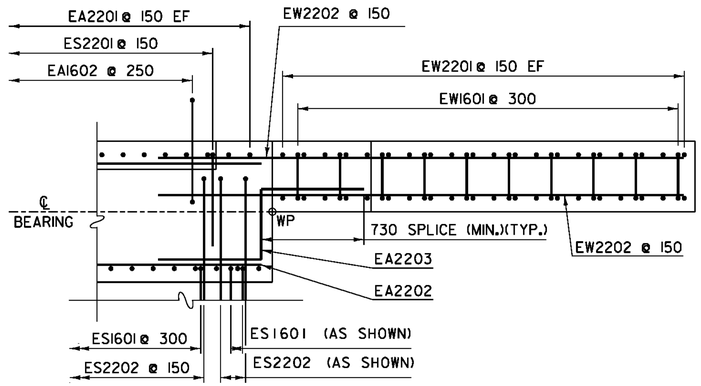


BRIDGE PLAQUE SECTION A-A

NTS

BRIDGE PLAQUE NOTES

1. VTRANS WILL SUPPLY THE BRIDGE PLAQUE.
2. INSTALL THE PLAQUE AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. PAYMENT FOR THE INSTALLATION OF THE BRIDGE PLAQUE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE



WINGWALL CORNER DETAIL (1,3,4)

0 1 2

SCALE = 1:20

NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/s01J282str.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
WINGWALL DETAILS	SHEET 28 OF 56

STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

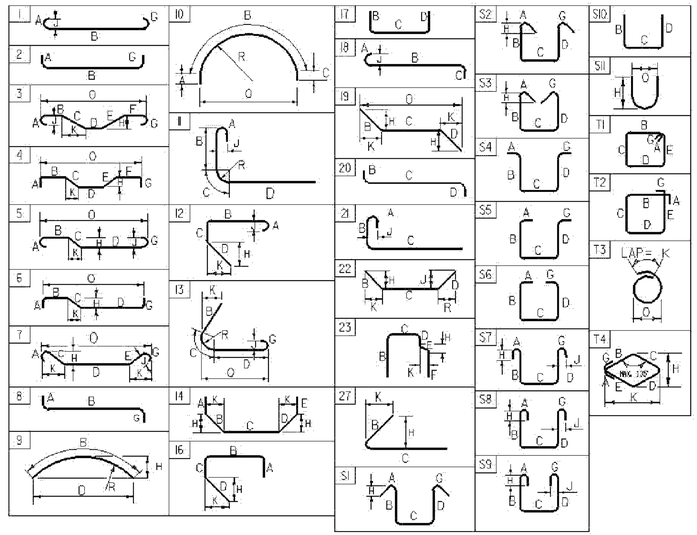
Metric

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	DECK																
	76	19	9340	ES1901	STR		9340										
	76	19	9545	ES1902	1	205	9340					---					
✳	161	19	8700	ES1903	STR		8700										
	168	19	1345	ES1904	S5	150	415	215	415			150					
✳	17	19	2020	ES1905	STR		2020										
	ABUTMENT NO. 1																
✳	97	16	1180	1EA1601	S10		155	870	155								
✳	37	16	1360	1EA1602	1	180	1000					180					
✳	33	16	2170	1ES1601	14	850	490	830									
✳	126	22	2370	1EA2201	STR		2370										
	32	22	9340	1EA2202	STR		9340										
	22	22	1960	1EA2203	8	730	500					730					
✳	43	22	1878	1EA2204	2	730	1148										
	64	22	1480	1ES2201	2	560	920										
✳	65	22	3090	1ES2202	2	1270	1820										
	WINGWALL NO. 1																
	10	16	680	1EW1601	S10		155	370	155								
▲	40	22	2820	1EW2201	STR		2820										
▲	42	22	3730	1EW2202	STR		3730										
	WINGWALL NO. 2																
△	9	19	1985	2EW1901	S10		885	215	885								
▲	4	19	2400	2EW1902	STR		2400										
▲	27	22	2850	2EW2201	STR		2850										
	42	22	2000	2EW2202	STR		2000										
	APPROACH SLAB NO. 1																
△	21	16	8540	1EAS1601	STR		8540										
△	38	29	6215	1EAS2901	1	375	5840										

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	ABUTMENT NO. 2																
✳	97	16	1180	2EA1601	S10		155	870	155								
✳	37	16	1360	2EA1602	1	180	1000					180					
✳	33	16	2170	2ES1601	14	850	490	830									
	128	22	2370	2EA2201	STR		2370										
✳	33	22	9340	2EA2202	STR		9340										
	42	22	1960	2EA2203	8	730	500					730					
	64	22	1485	2ES2201	2	560	925										
✳	65	22	3095	2ES2202	2	1275	1820										
	WINGWALL NO. 3																
	7	16	680	3EW1601	S10		155	370	155								
▲	28	22	2825	3EW2201	STR		2825										
▲	42	22	2730	3EW2202	STR		2730										
	WINGWALL NO. 4																
	7	16	680	4EW1601	S10		155	370	155								
▲	28	22	2825	4EW2201	STR		2825										
▲	42	22	2730	4EW2202	STR		2730										
	APPROACH SLAB NO. 2																
△	21	16	8540	2EAS1601	STR		8540										
△	38	29	6215	2EAS2901	1	375	5840										

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A 615M-SI). ALL BARS SHALL BE GRADE 420, 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 IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



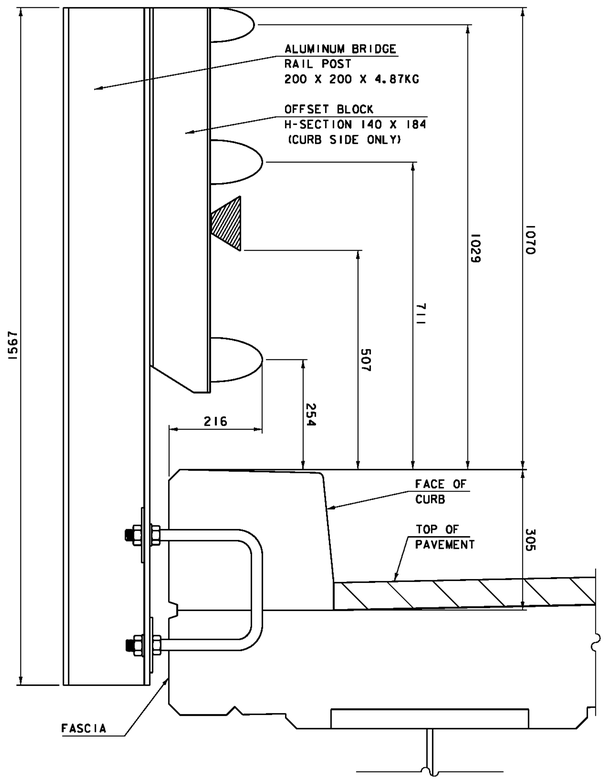
ASTM STANDARD REINFORCING BARS

BAR SIZE	NOMINAL MASS (Kg/m)	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER (mm)	CROSS SECTIONAL AREA (mm²)	PERIMETER (mm)
#10	0.560	9.5	71	29.84
#13	0.994	12.7	129	39.90
#16	1.552	15.9	199	49.95
#19	2.235	19.1	284	60.00
#22	3.042	22.2	387	69.74
#25	3.973	25.4	510	79.80
#29	5.060	28.7	645	90.16
#32	6.404	32.3	819	101.47
#36	7.907	35.8	1006	112.47
#43	11.380	43.0	1452	135.09
#57	20.240	57.3	2581	180.01

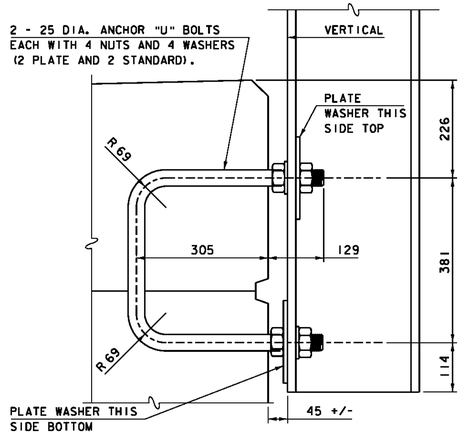
PROJECT NAME: **HINESBURG**
PROJECT NUMBER: **STP 0199(2)**

FILE NAME: **01j282/str/s01j282_rss.dgn**
PROJECT MANAGER: **C. CARLSON**
DESIGNED BY: **W. LAMMER**
REINFORCING STEEL SCHEDULE

PLOT DATE: **2/24/2011**
DRAWN BY: **C. MOONEY**
CHECKED BY: **C. CARLSON**
SHEET **29** OF **56**



SIDE ELEVATION OF THREE RAIL



ANCHORAGE DETAIL

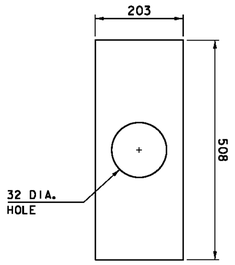
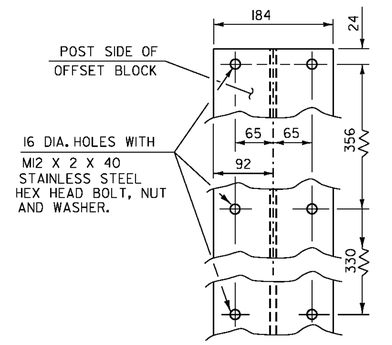
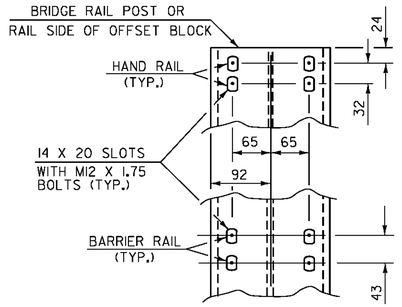


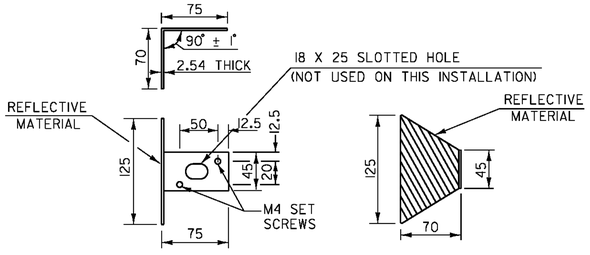
PLATE WASHER DETAIL



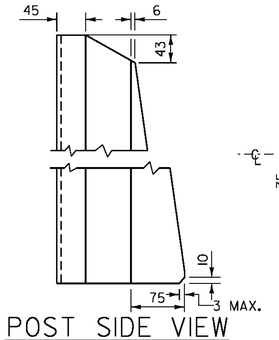
OFFSET BLOCK CONNECTION



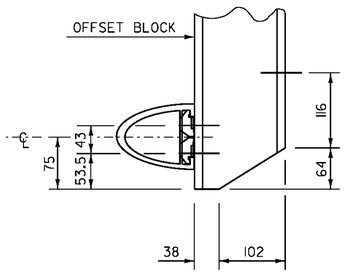
RAIL CONNECTION



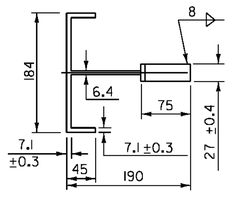
REFLECTOR DETAILS



POST SIDE VIEW



COPING DETAIL



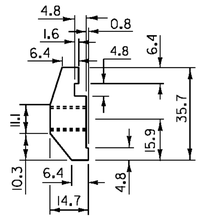
POST PLAN VIEW

NOTES

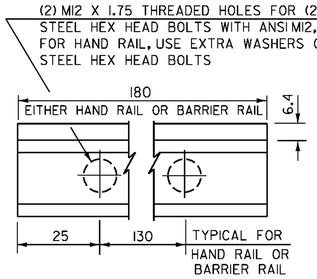
1. THIS REFLECTORIZED ALUMINUM DELINEATOR IS TO BE ERECTED EVERY 9 m (OR CLOSEST POST) WITH 2-M4 X 0.7 X 20 SET SCREWS.
2. DELINEATORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B 209M ALLOY 5052-H32.
3. RETROREFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE OF ENCAPSULATED LENS SILVER.
4. PAYMENT SHALL BE INCIDENTAL TO ITEM 525.225 BRIDGE RAILING, ANNODIZED 3 RAIL ALUMINUM.

ALUMINUM BRIDGE RAILING DETAILS 1

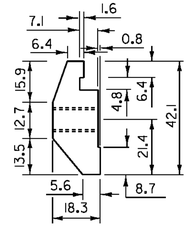
PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/s01J282rail.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
ALUMINUM BRIDGE RAILING DETAILS 1	SHEET 30 OF 56



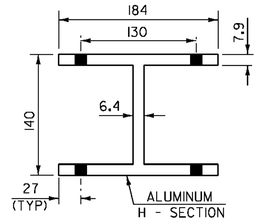
POST CONNECTION HAND RAIL SECTION



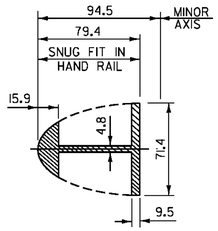
POST CONNECTION ELEVATION



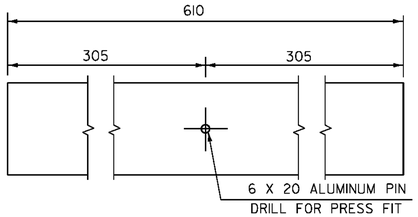
POST CONNECTION BARRIER RAIL SECTION



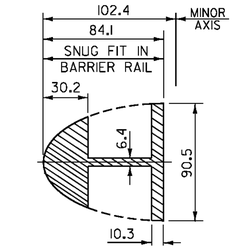
PLAN VIEW OF OFFSET BLOCK (TO BE USED ON SUPERSTRUCTURE ON CURB SIDE)



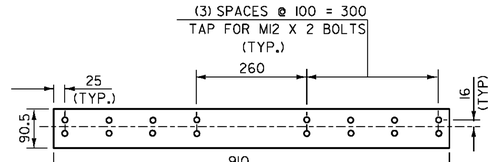
HAND RAIL SPLICE SECTION



ELEVATION OF HAND RAIL SPLICE BAR



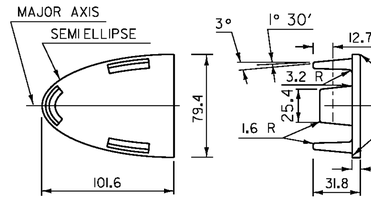
BARRIER RAIL SPLICE SECTION



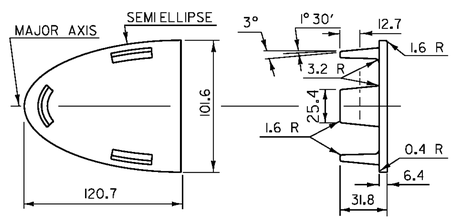
ELEVATION OF STD. BARRIER RAIL SPLICE BAR (FROM BACK)

NOTES

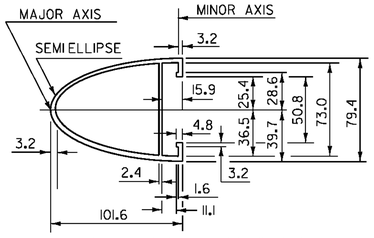
1. ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO SUBSECTION 714.07.
2. ALUMINUM POSTS, POST BASES, SPLICE BARS, OFFSET BLOCKS, CONNECTION BARS, RAILS, AND BALUSTER FRAMES SHALL CONFORM TO ASTM B 221M ALLOY 6061-T6 OR ALLOY 6351-T5. MINIMUM YIELD STRNGTH Fy = 240 MPa.
3. ALUMINUM RAIL END CAPS SHALL CONFORM TO ASTM B 26/B 26M ALLOY 356-T6.
4. THE POST, RAIL, AND OFFSET BLOCK CONNECTION BOLTS AND SET SCREWS SHALL CONFORM TO SUBSECTION 732.02(b).
5. THE ANCHOR PLATE FOR THE POST ANCHOR ASSEMBLY SHALL BE AASHTO M 270M/M 270 GRADE 250 OR HIGHER STRUCTURAL STEEL.
6. WELDING SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 506.10.
7. UNLESS OTHERWISE SPECIFIED, ANCHOR BOLTS SHALL BE CAST INTO THE CONCRETE AS DETAILED.
8. WHENEVER FEASIBLE, BARRIER RAIL AND HAND RAIL SECTIONS SHALL BE FULL LENGTH SECTIONS (12 m +) AND WHEN PRACTICAL SHALL BE ATTACHED TO THREE POSTS. RAILS SHALL BE SPLICED AT EACH DECK JOINT AND INTERMITTENTLY AS REQUIRED. SPLICES SHALL OCCUR WITHIN THE SAME PANEL.
9. ENDS OF RAILS SHALL BE CUT SQUARE AND GROUND FREE OF BURRS OR RAGGED EDGES. EXPOSED ENDS SHALL BE CAPPED.
10. THE CONCRETE CONTACT SURFACE AT THE POST BASE SHALL BE BUSH HAMMERED AND/OR SHIMMED AS REQUIRED FOR PROPER POST ALIGNMENT. POST HEIGHT ADJUSTMENTS LESS THAN 6 mm SHALL BE WITH 2-mm AND 3-mm SHIMS. CORRECTIONS EXCEEDING 6 mm SHALL BE WITH EPOXY MORTAR. FABRIC BEARING PADS AND ANY REQUIRED SHIMS OR EPOXY MORTAR ARE INCIDENTAL TO THE UNIT PRICE BID FOR THE RAILING.
11. SHIMS AND 3-mm FABRIC BEARING PADS SHALL BE 273 mm SQUARE WITH SLOTTED HOLES SIZED AND LOCATED THE SAME AS THE POST BASE DETAIL. FABRIC BEARING PADS SHALL CONFORM TO SUBSECTION 731.01 OR 731.02, SHIM MATERIAL SHALL BE ASTM B 209M ALLOY 1100-0.
12. EXTRUDED SECTIONS ARE DETAILED TO COMPLY WITH CURRENT AASHTO-AGC-ARTBA STANDARDS. MINOR VARIATIONS OF THE DETAILS SHOWN MAY BE CONSIDERED PROVIDING THEY DO NOT REDUCE THE STRENGTH CAPACITY OF THE RAIL SYSTEM.
13. ALUMINUM WASHERS SHALL BE ASTM B209M ALLOY ACLAD 2024-T4.
14. THE RAILING SYSTEM AND ASSOCIATED HARDWARE SHALL BE ANODIZED TO A BLACK SATIN FINISH.



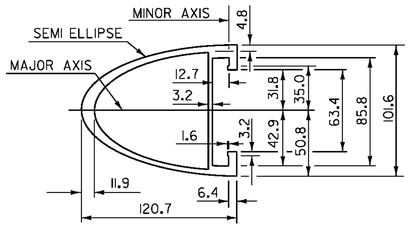
HAND RAIL END CAP



BARRIER RAIL END CAP



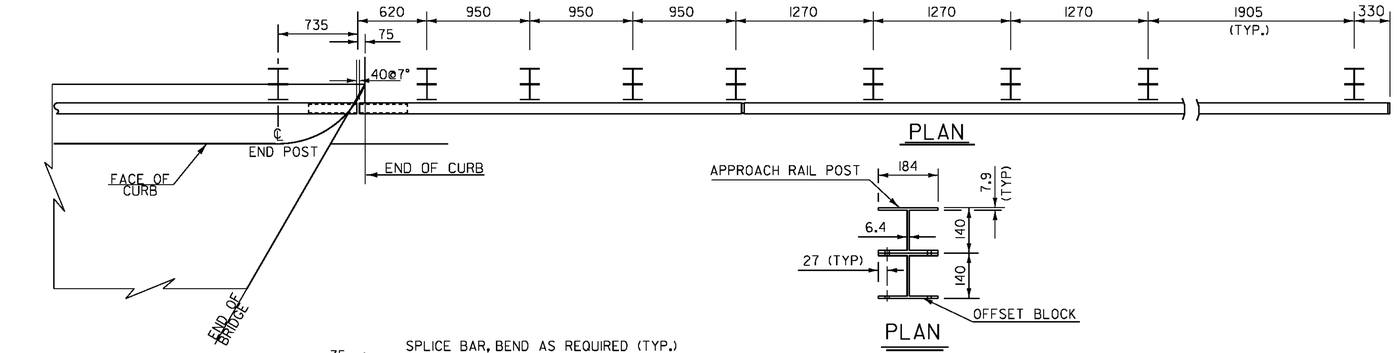
HAND RAIL SECTION



BARRIER RAIL SECTION
(SEE NEXT SHEET FOR ELEVATION OF BARRIER RAIL)

ALUMINUM BRIDGE RAILING DETAILS 2

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/s01J282rail.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
ALUMINUM BRIDGE RAILING DETAILS 2	SHEET 31 OF 56



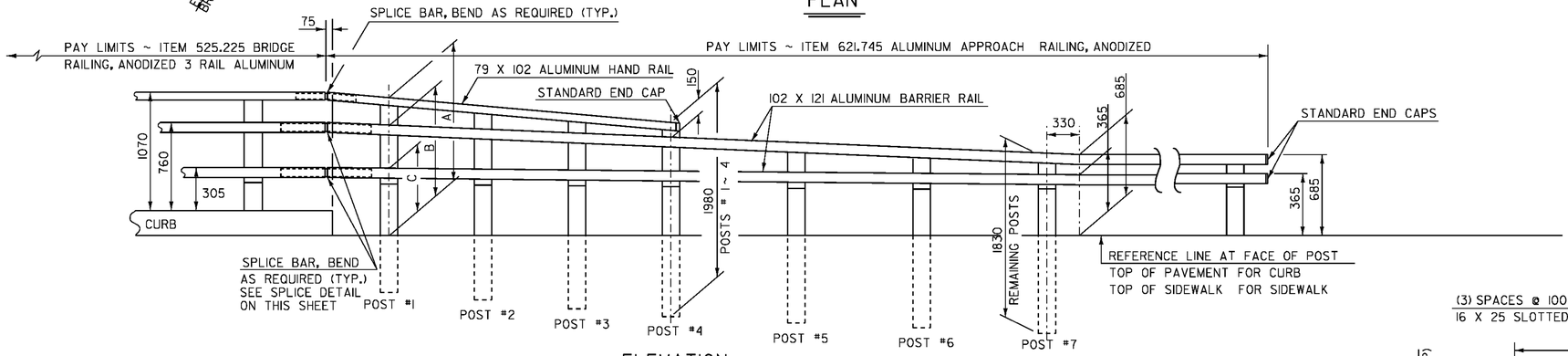
PLAN

PLAN

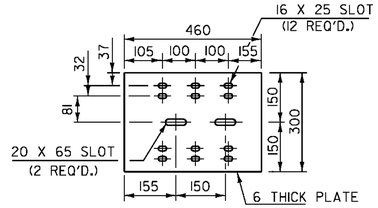
ALUMINUM APPROACH RAIL
RAIL DIMENSIONS FOR A CURB CONDITION

POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	1241	959	516	293	444	851	-
2	1158	920	494	249	426	789	-
3	1075	881	473	205	408	728	-
4	992	842	451	162	391	667	-
5	-	790	423	-	367	-	493
6	-	737	394	-	344	-	470
7	-	685	365	-	320	-	446

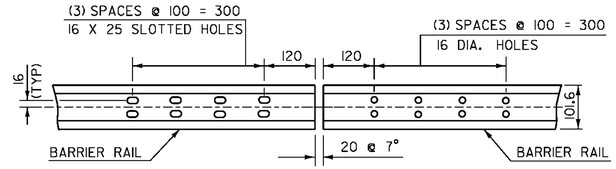
ALL REMAINING POSTS ARE TO HAVE THE SAME DIMENSIONS AS POST NO. 7



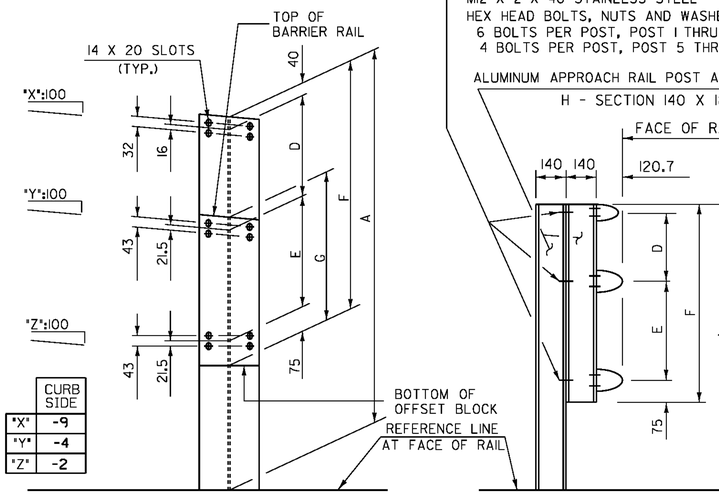
ELEVATION



BACK-UP PLATE DETAILS



ELEVATION OF BARRIER RAIL (FROM BACK) AT ALL INTERMEDIATE RAIL SPLICES



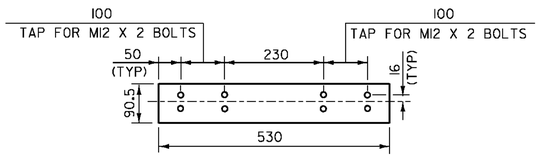
FRONT ELEVATION

ATTACH OFFSET BLOCK TO POST WITH
M12 X 2 X 40 STAINLESS STEEL
HEX HEAD BOLTS, NUTS AND WASHERS.
6 BOLTS PER POST, POST 1 THRU 4;
4 BOLTS PER POST, POST 5 THRU 7.

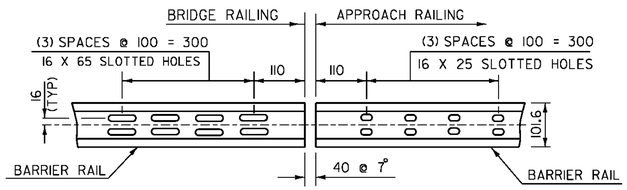
ALUMINUM APPROACH RAIL POST AND OFFSET BLOCK
H - SECTION 140 X 184

SIDE ELEVATION

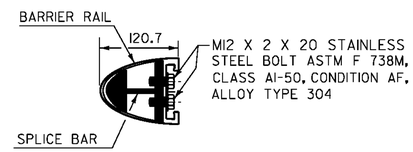
APPROACH RAIL DETAILS



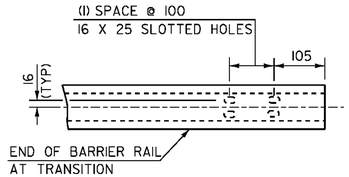
ELEVATION OF BARRIER RAIL SPLICE BAR TO BE USED AT TRANSITION BETWEEN APPROACH RAIL & GUARD RAIL (FROM BACK)



ELEVATION OF BARRIER RAIL (FROM BACK)



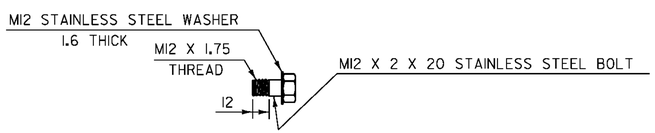
TYPICAL SECTION THROUGH BARRIER RAIL SPLICE



ELEVATION OF BARRIER RAIL (FROM FRONT) AT TRANSITION

NOTES

1. POST 1 THROUGH 7 SHALL BE EXTRUDED ALUMINUM.
2. DETAILS ARE SHOWN FOR TRANSITION TO A 3 RAIL ALUMINUM BRIDGE RAILING.
3. DIMENSIONS SHOWN ARE FROM A REFERENCE LINE AT THE FACE OF POST FOR A NORMAL CROWNED SECTION. APPROPRIATE CORRECTIONS SHALL BE MADE FOR CROSS SLOPES OTHER THAN A NORMAL SECTION.

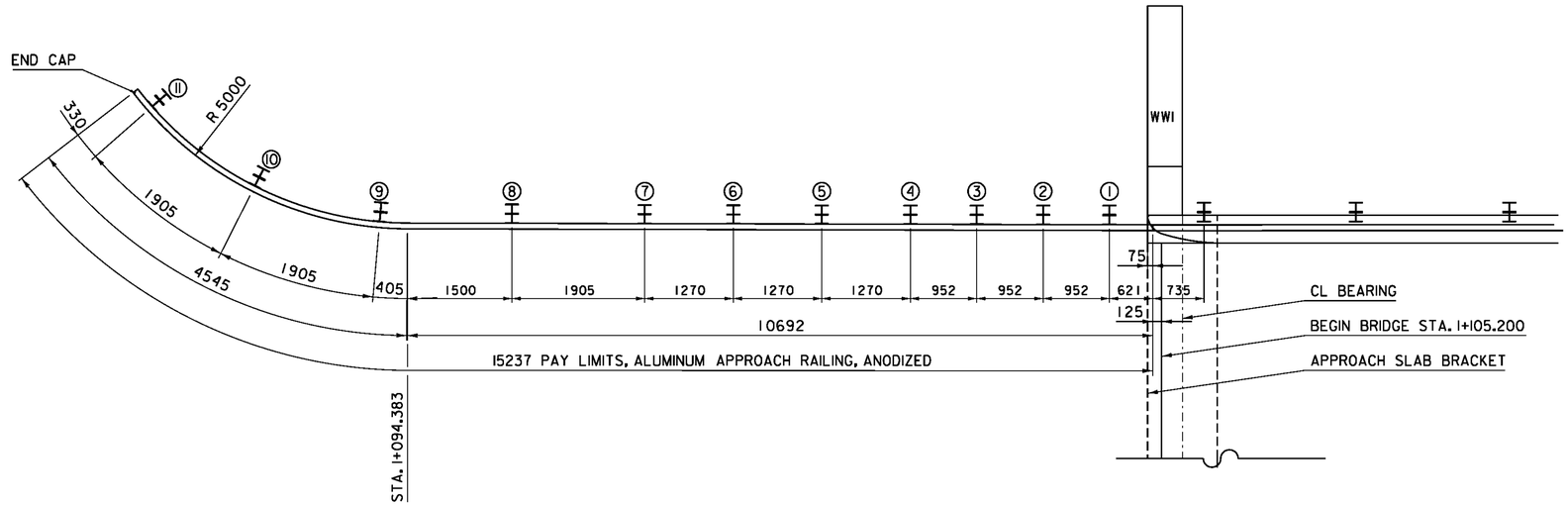


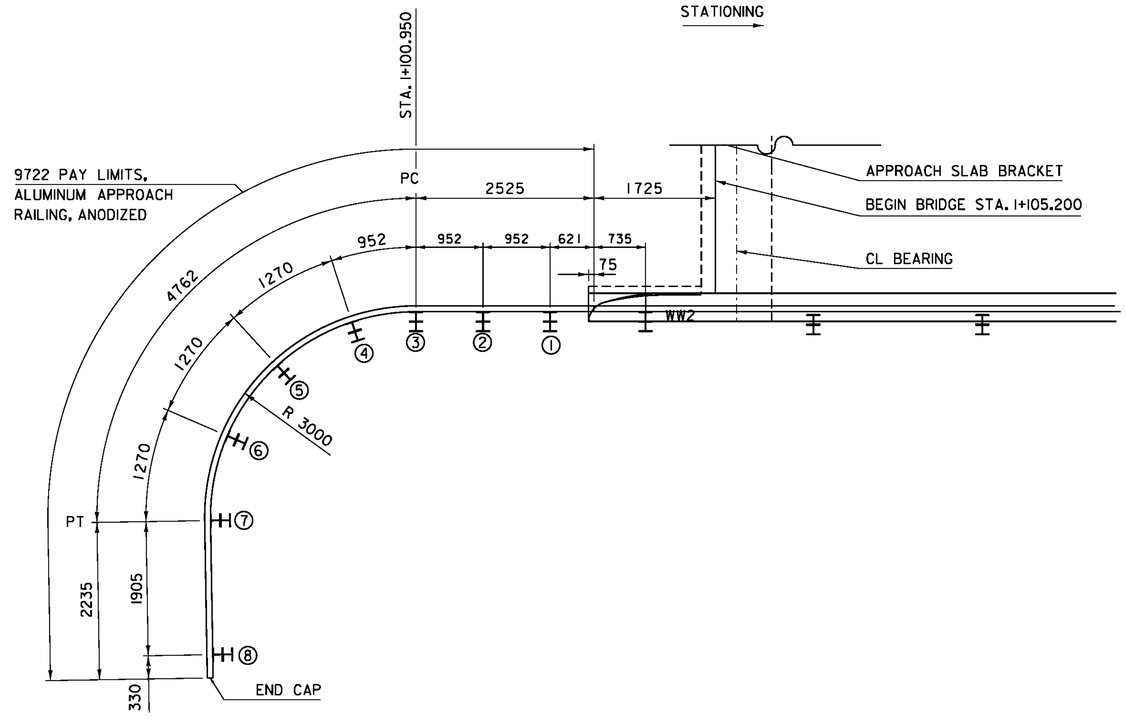
STAINLESS STEEL BOLT DETAILS
(FOR SPLICE BARS)

ALUMINUM APPROACH RAILING DETAILS

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)

FILE NAME: 01l282/str/s01l282rail.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
ALUMINUM APPROACH RAILING DETAILS	SHEET 32 OF 56

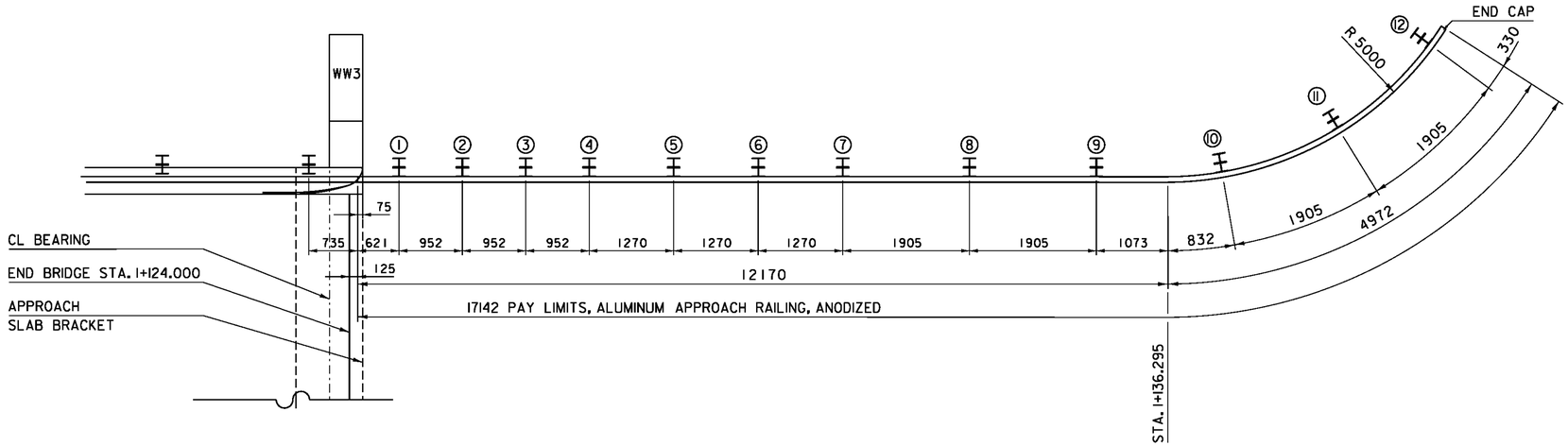




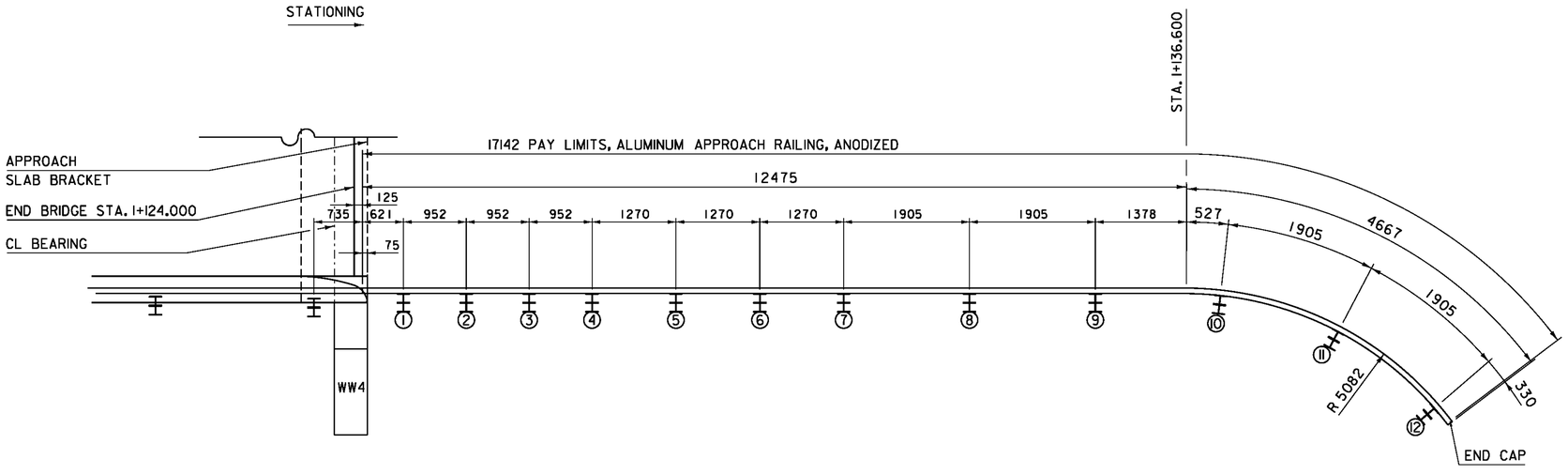
0 1 2 3 4

SCALE = 1:40

PROJECT NAME:	HINESBURG		
PROJECT NUMBER:	STP 0199(2)		
FILE NAME: 011282/str/s011282rail.dgn		PLOT DATE:	02-MAR-2011
PROJECT LEADER:	C. CARLSON	DRAWN BY:	C. MOONEY
DESIGNED BY:	W. LAMMER	CHECKED BY:	C. CARLSON
APPROACH RAILING LAYOUT 1		SHEET 33	OF 56



STATIONING

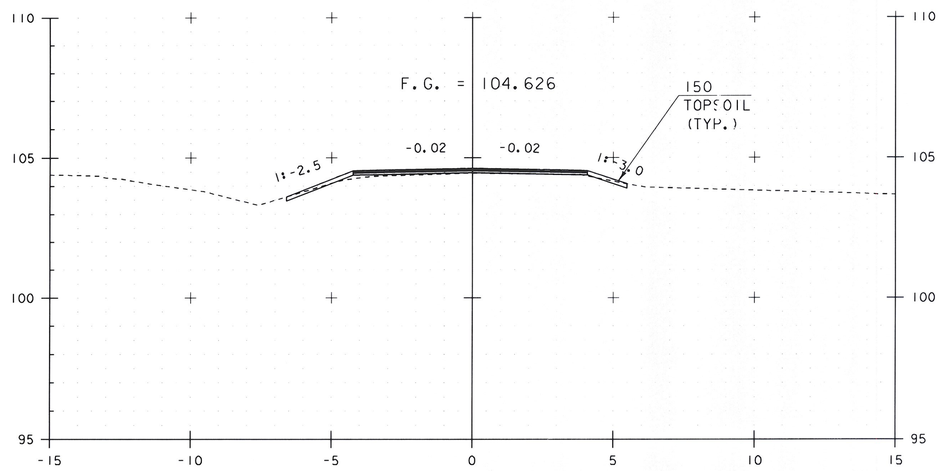


0 1 2 3 4

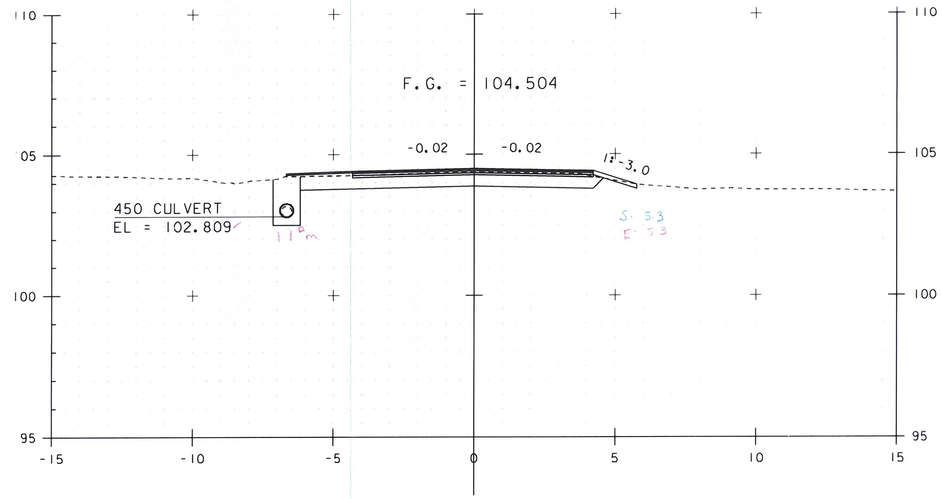
SCALE = 1:40

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01l282/str/s01l282rail.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
APPROACH RAILING LAYOUT 2	SHEET 34 OF 56

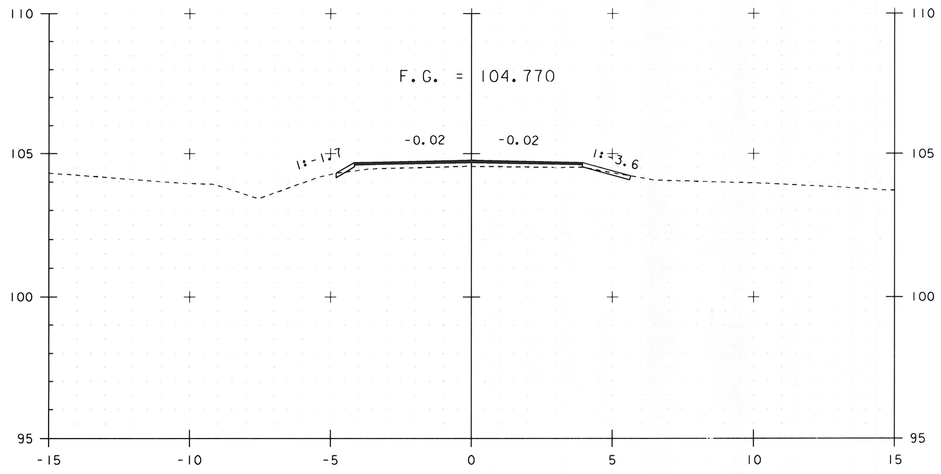
NOTE:
EXISTING CULVERT TYPES, SIZES, AND FLOW LINE ELEVATIONS TO BE VERIFIED IN THE FIELD



1+060.00

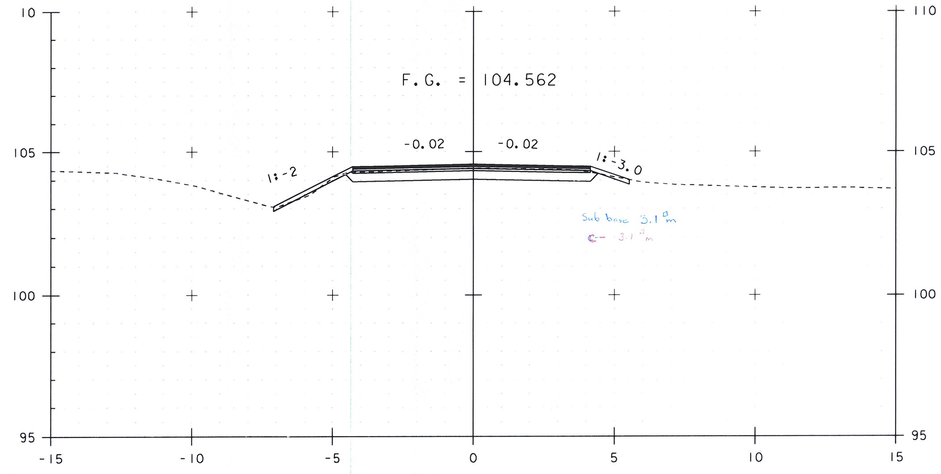


1+065.00



STA 1+050.000
BEGIN APPROACH
MATCH EXISTING

1+055.00



1+062.50

0 1 2 4 6 8 10
SCALE = 1:100

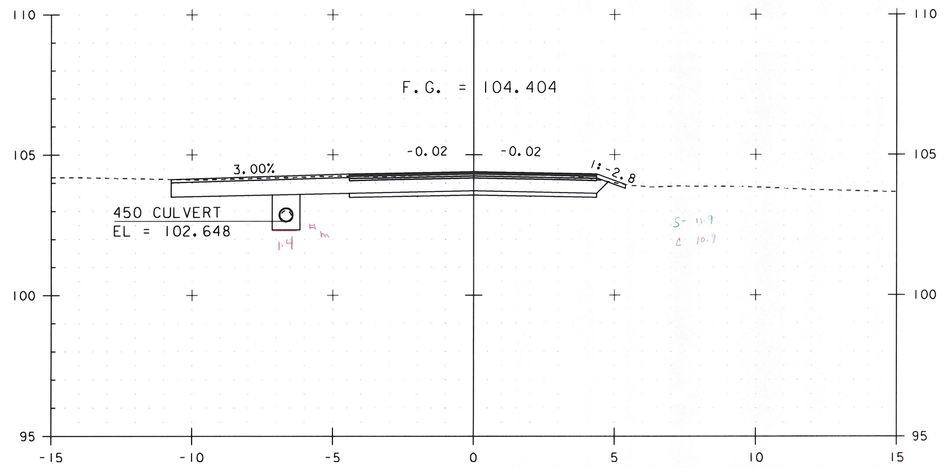
STA. 1+055 TO STA. 1+065

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01j282/str/s01j282xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
MAINLINE SECTIONS SHEET 1

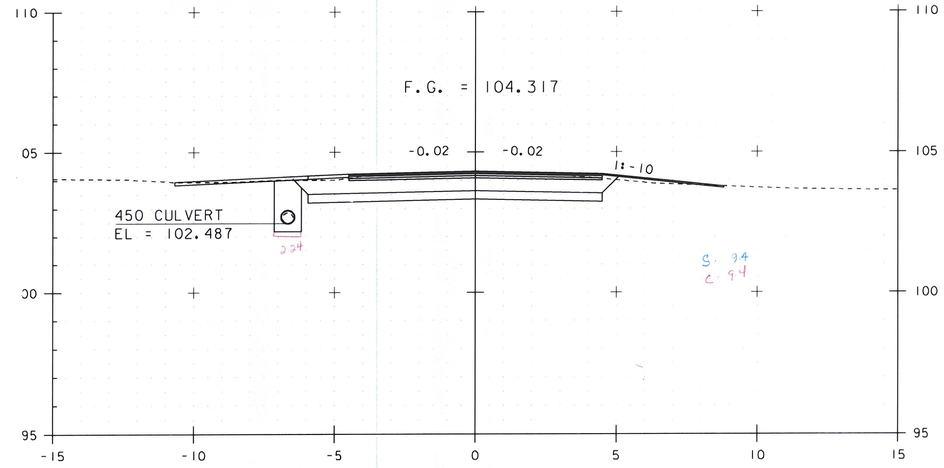
PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 35 OF 56

NOTE:
EXISTING CULVERT TYPES, SIZES,
AND FLOW LINE ELEVATIONS TO BE
VERIFIED IN THE FIELD

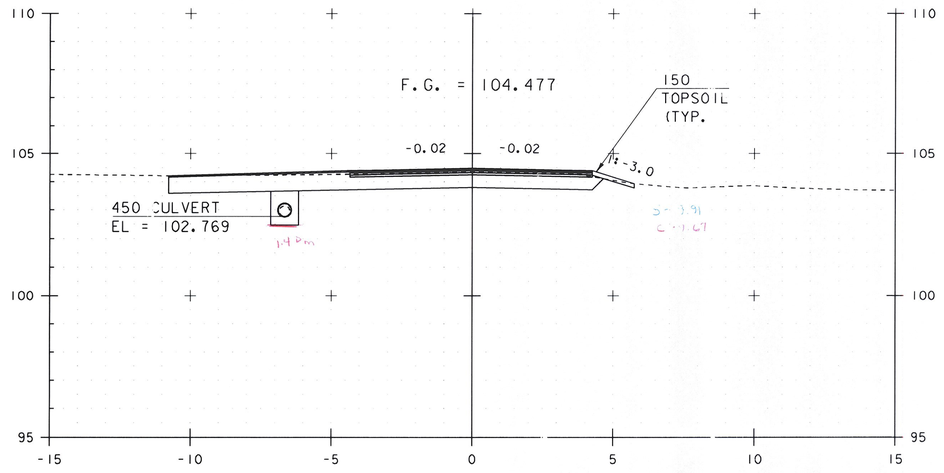


STA 1+070.00 LT
CONSTRUCT DRIVE
SEE SHEET 8 FOR DETAILS

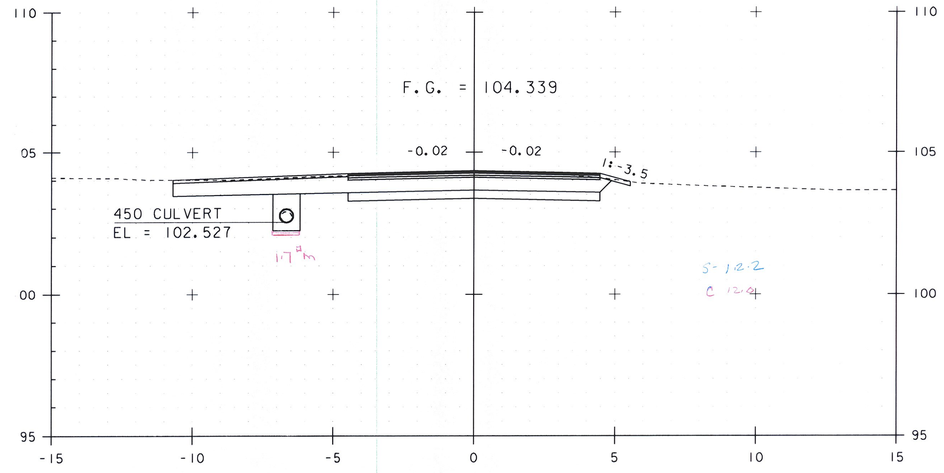
1+070.00



1+075.00



1+066.25



STA 1+073.750
BEGIN PROJECT
END APPROACH

1+073.75

0 1 2 4 6 8 10
SCALE = 1:100

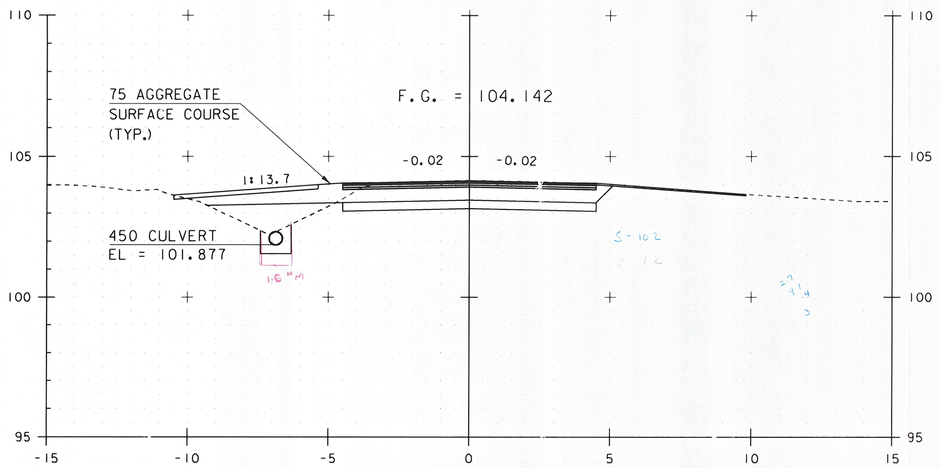
STA. 1+066 TO STA. 1+075

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/s01J282xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
MAINLINE SECTIONS SHEET 2

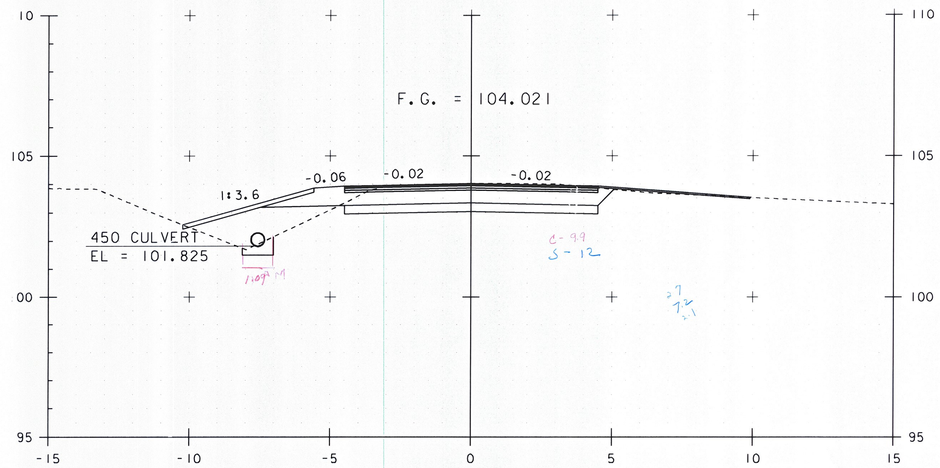
PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 36 OF 56

NOTE:
EXISTING CULVERT TYPES, SIZES, AND FLOW LINE ELEVATIONS TO BE VERIFIED IN THE FIELD

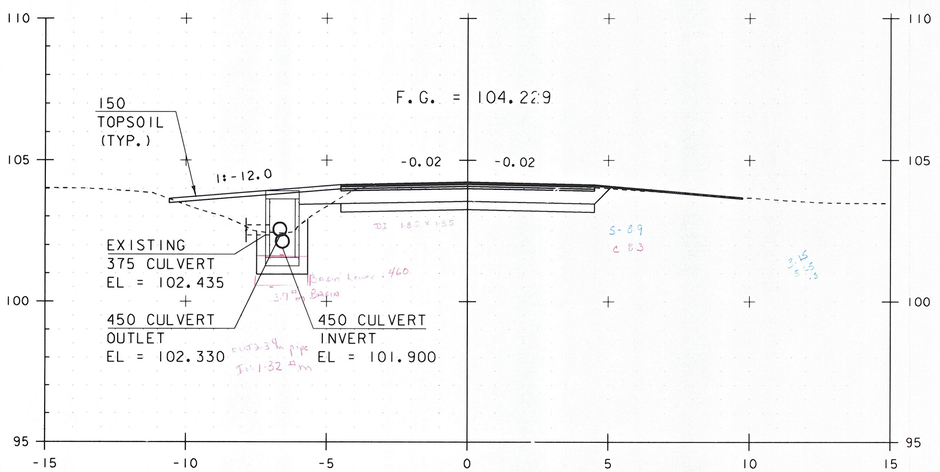


1+085.00

STA. 1+087.00 RT
CONSTRUCT DRIVE

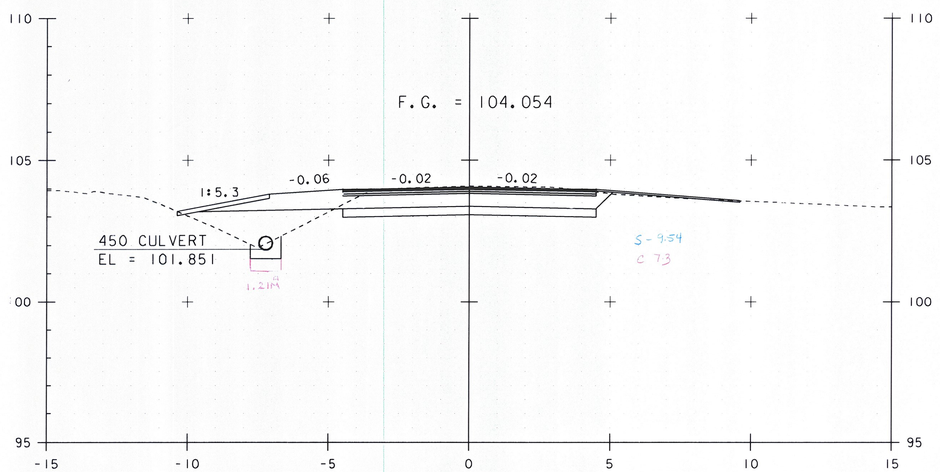


1+095.00



STA. 1+080.50 LT
MATCH NEW DI INTO
EXISTING DRAINAGE
SYSTEM

1+080.00

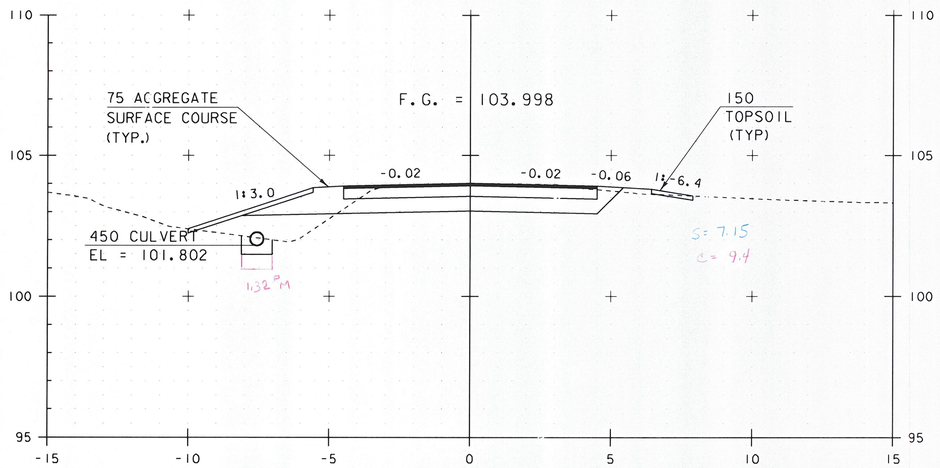


1+090.00

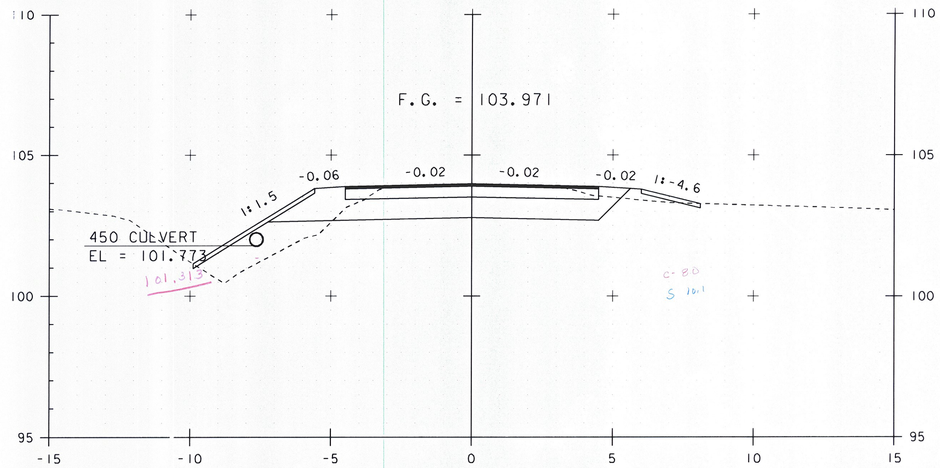
0 1 2 4 6 8 10
SCALE = 1: 100

STA. 1+080 TO STA. 1+095

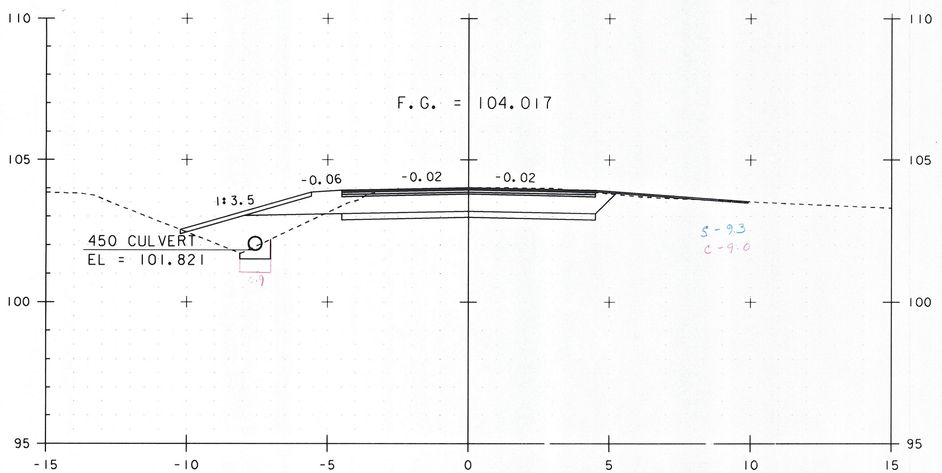
PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/s01J282xsl.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
MAINLINE SECTIONS SHEET 3	SHEET 37 OF 56



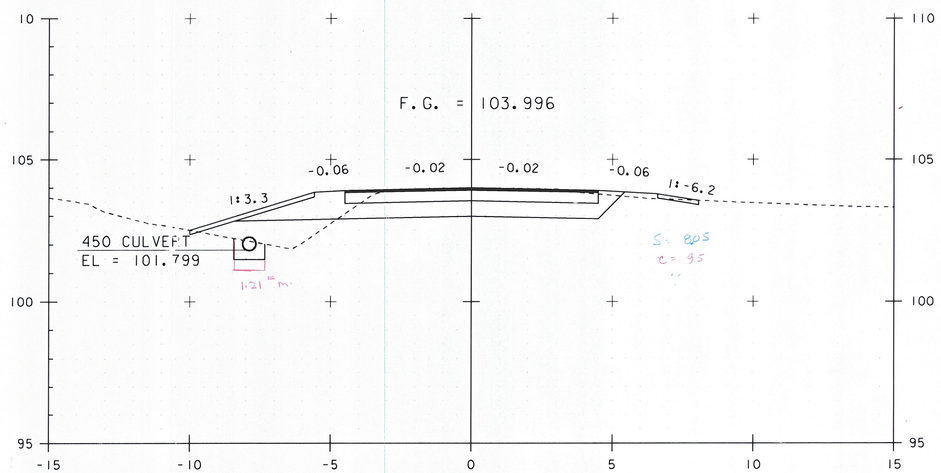
1+099.50



1+105.00



1+095.75



1+100.00

0 1 2 4 6 8 10

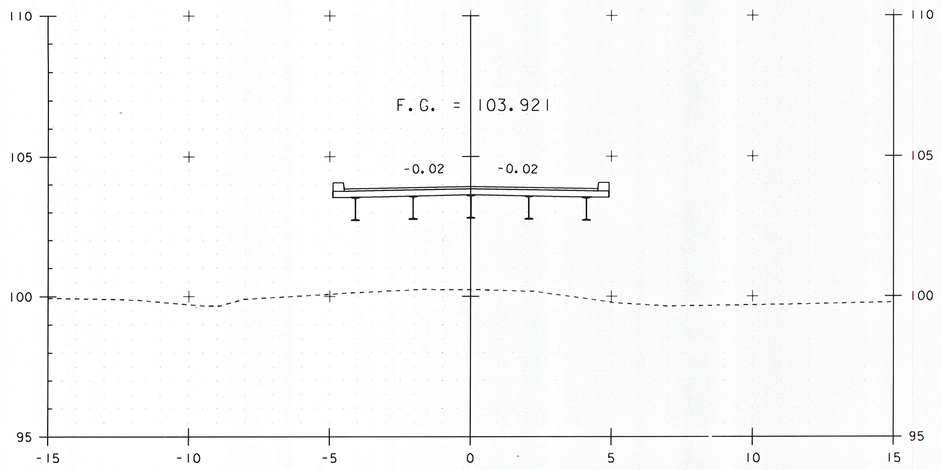
SCALE = 1:100

STA. 1+096 TO STA. 1+105

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

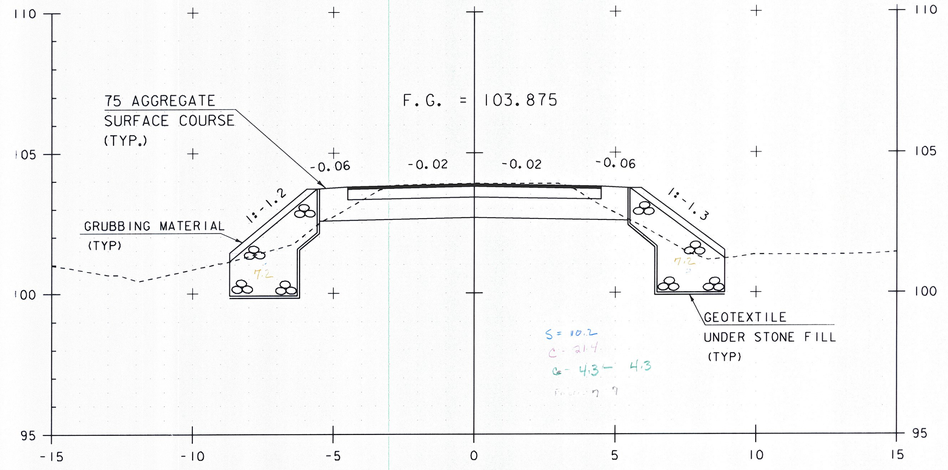
FILE NAME: 01J282/str/s01J282xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
MAINLINE SECTIONS SHEET 4

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 38 OF 56



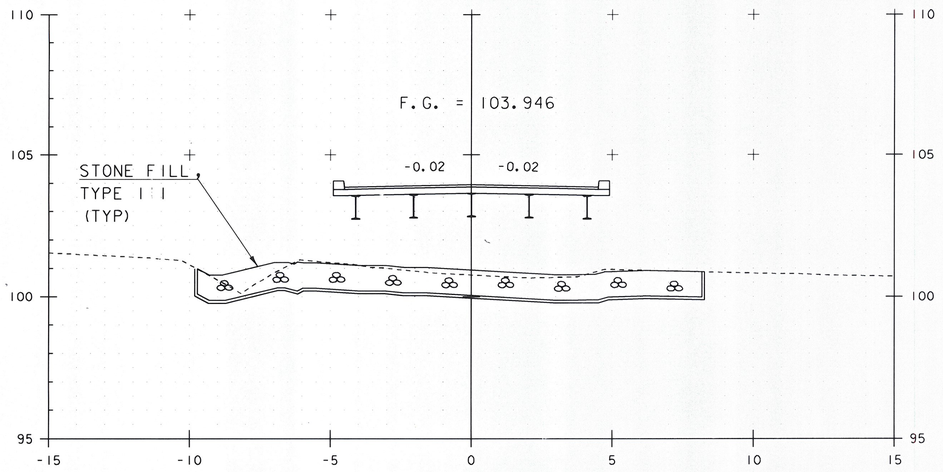
1+115.00

STA 1+124.000
END STONE FILL, TYPE III
BEGIN STONE FILL, TYPE IV (LT & RT)
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL



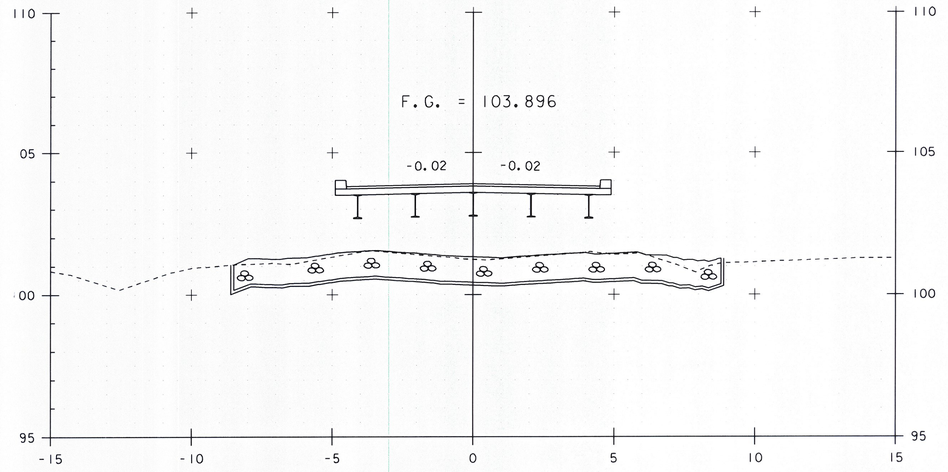
1+124.20

STA 1+124.000
END BRIDGE



STA 1+105.200
BEGIN BRIDGE

1+110.00



1+120.00

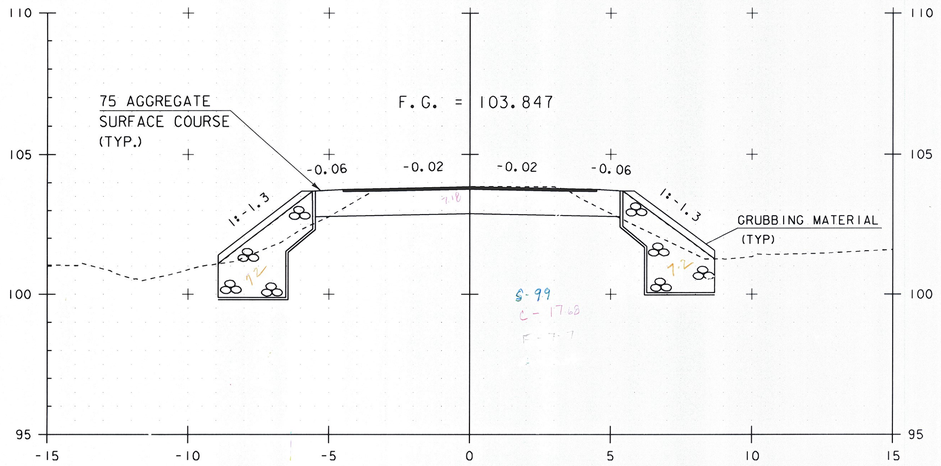
0 1 2 4 6 10
SCALE = 1:100

STA. 1+110 TO STA. 1+124

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

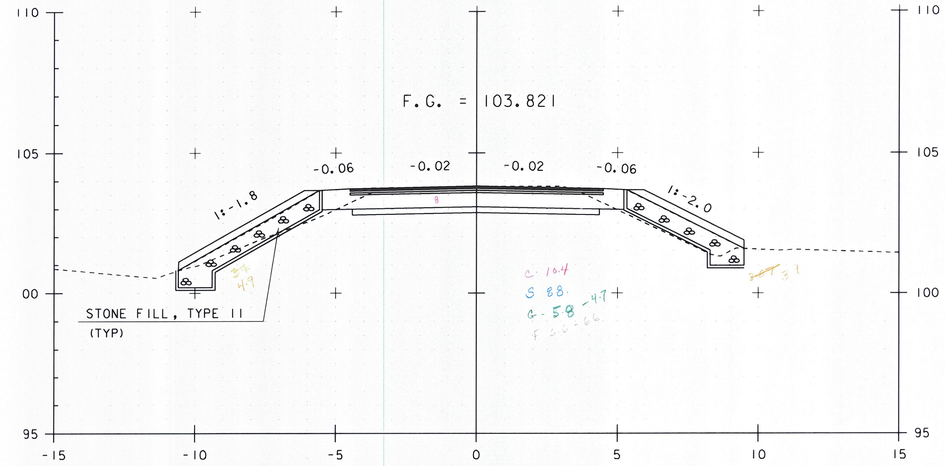
FILE NAME: 01j282/str/s01j282xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
MAINLINE SECTIONS SHEET 5

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 39 OF 56

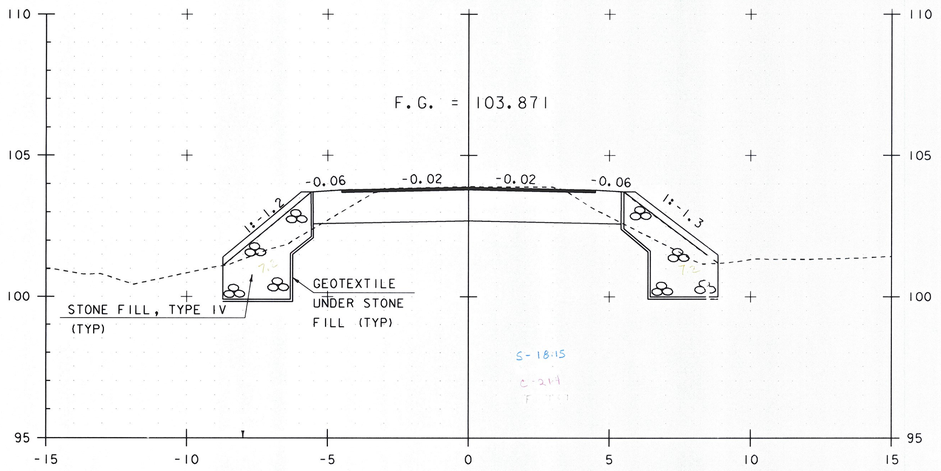


1+129.70

STA 1+135.000
END STONE FILL, TYPE IV
BEGIN STONE FILL, TYPE II (LT & RT)



1+135.00



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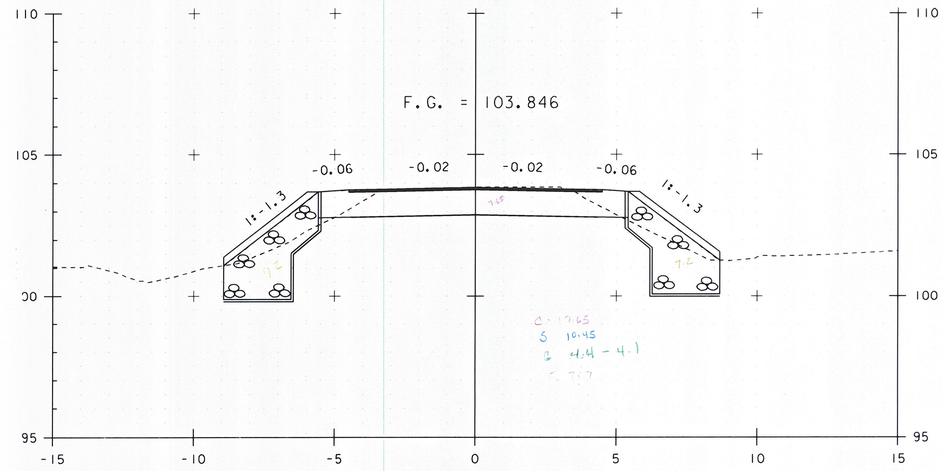

1+130.00

0 1 2 4 6 8 10
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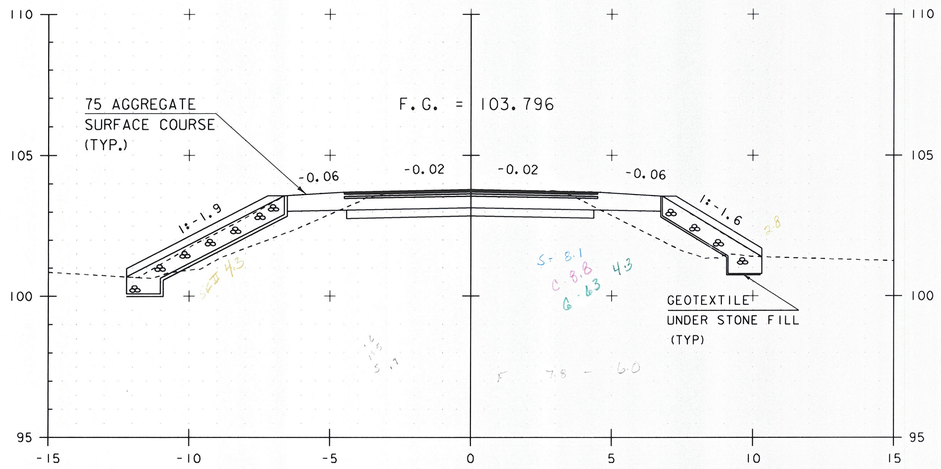
STA. 1+125 TO STA. 1+135

PROJECT NAME: HINESBURG	
PROJECT NUMBER: STP 0199(2)	
FILE NAME: 01J282/str/s01J282xsl.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
MAINLINE SECTIONS SHEET 6	SHEET 40 OF 56



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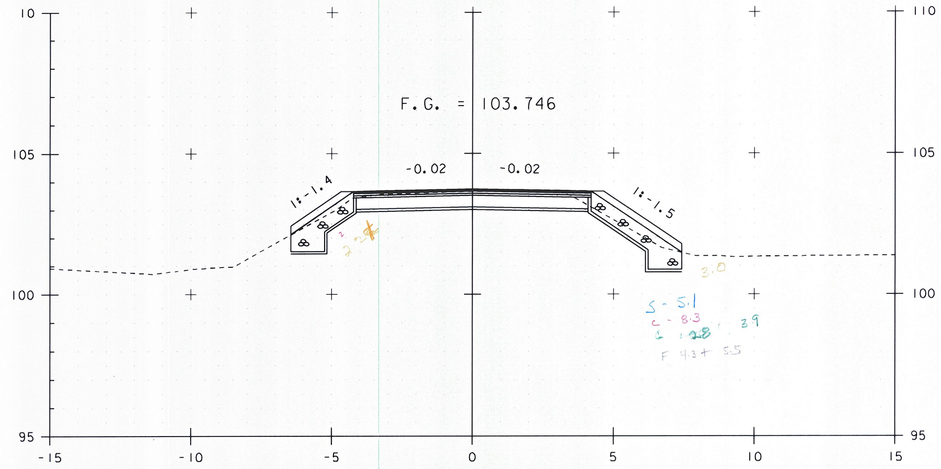
END PROJECT
BEGIN ROADWAY APPROACH

1+140.00



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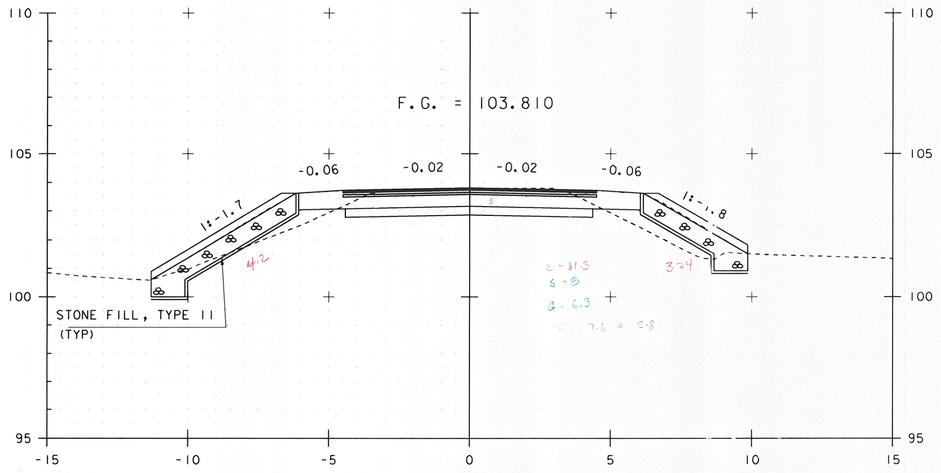

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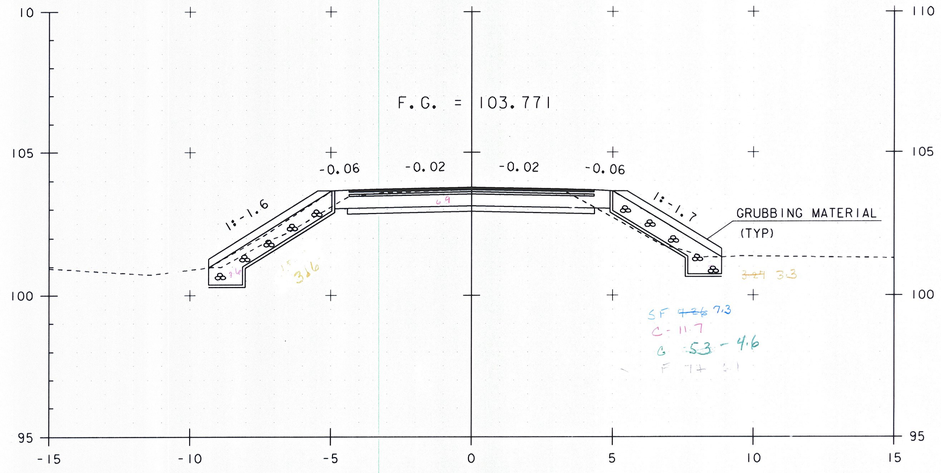
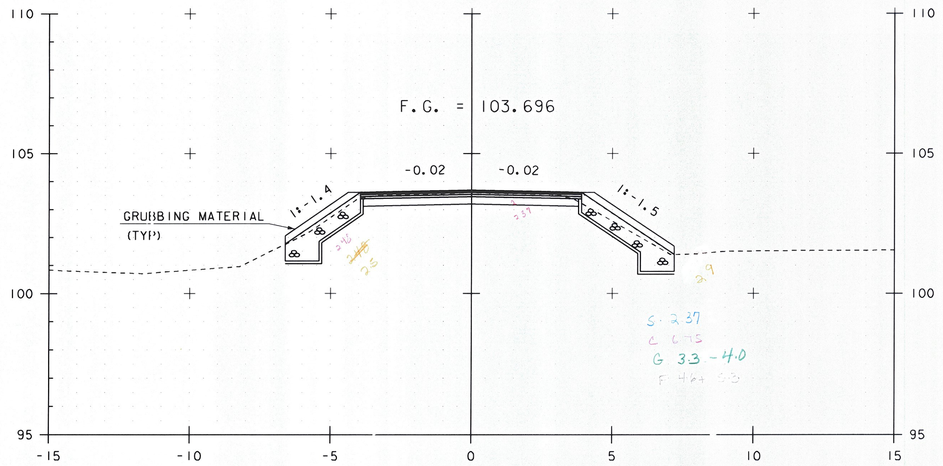


1+145.00

STA. 1+137 TO STA. 1+150

PROJECT NAME: HINESBURG	
PROJECT NUMBER: STP 0199(2)	
FILE NAME: 01J282/str/s01J282xsl.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
MAINLINE SECTIONS SHEET 7	SHEET 41 OF 56



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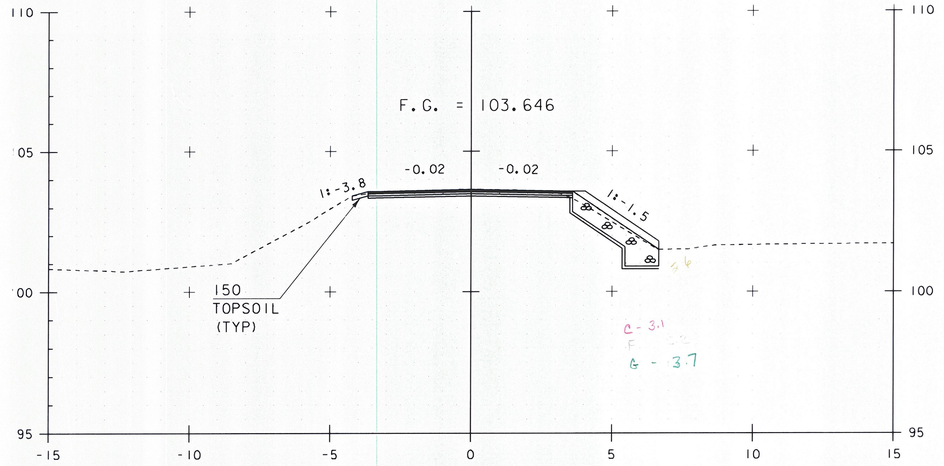
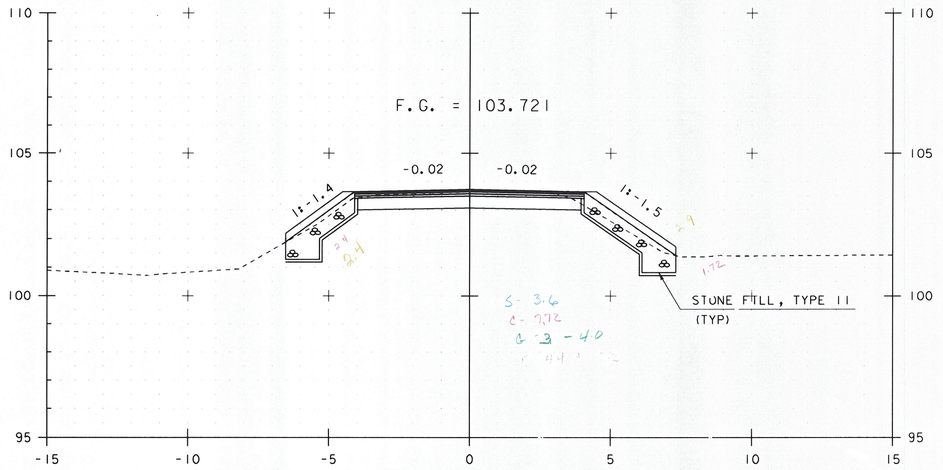


STA. 1+170.000
END STONE FILL, TYPE II (LT)
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL

1+170.00



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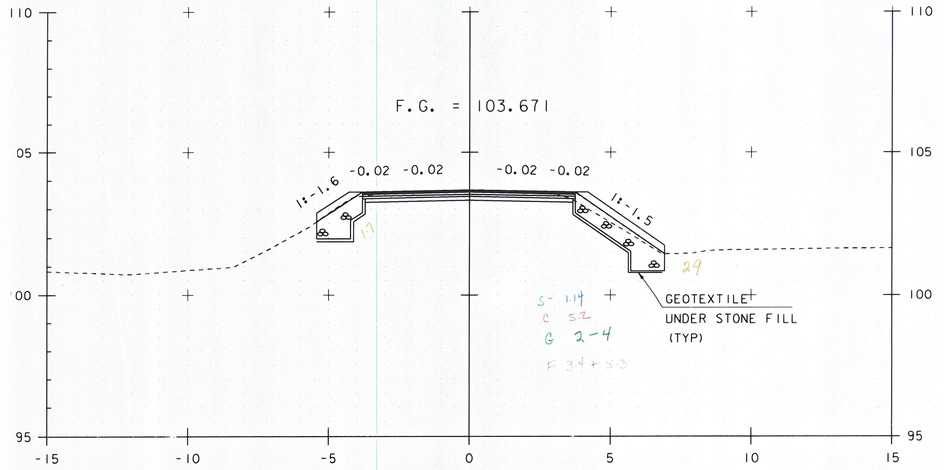


1+165.00

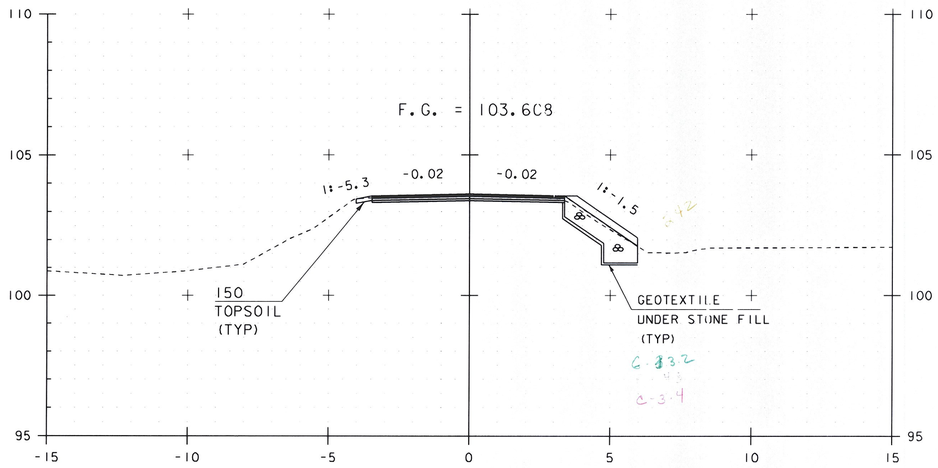
0 1 2 4 6 8 10
SCALE = 1:100

STA. 1+155 TO STA. 1+170

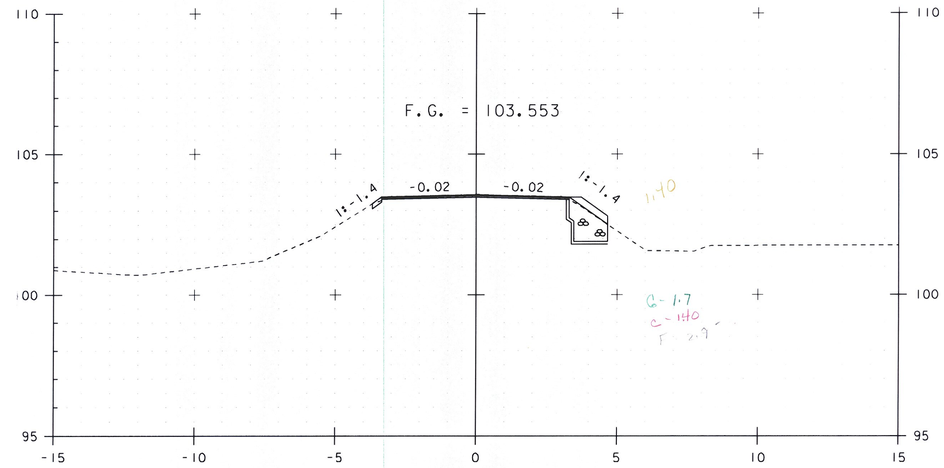
PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/s01J282xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
MAINLINE SECTIONS SHEET 8

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 42 OF 56



1+177.50



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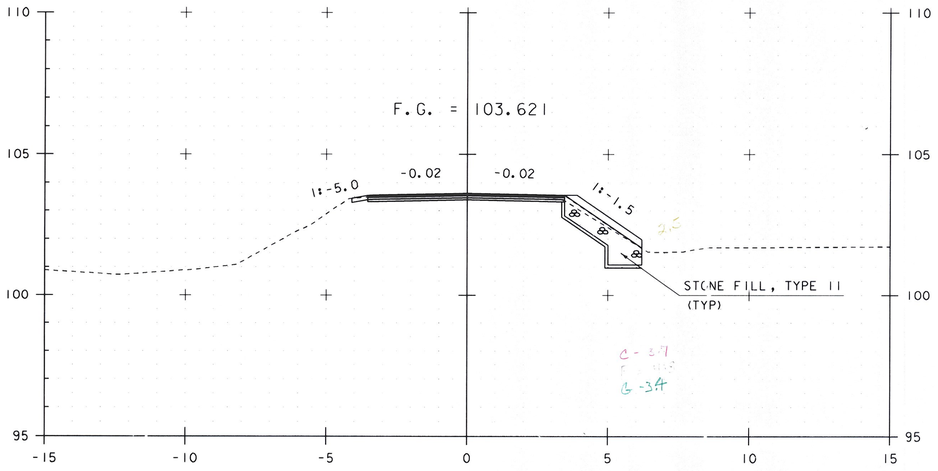
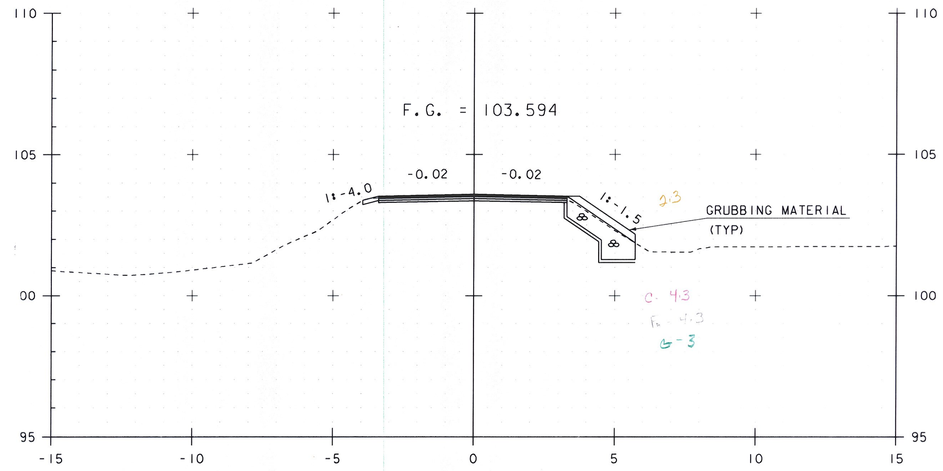


1+175.00



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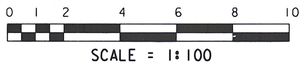
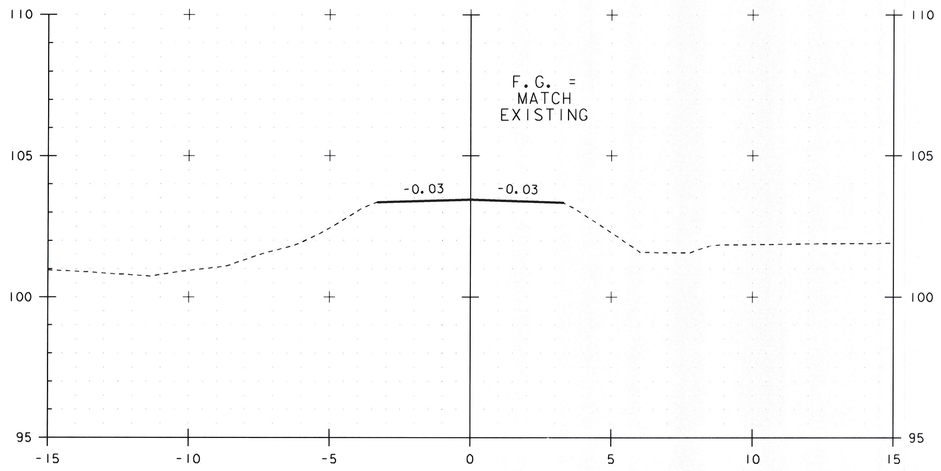


STA. 1+175 TO STA. 1+185

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

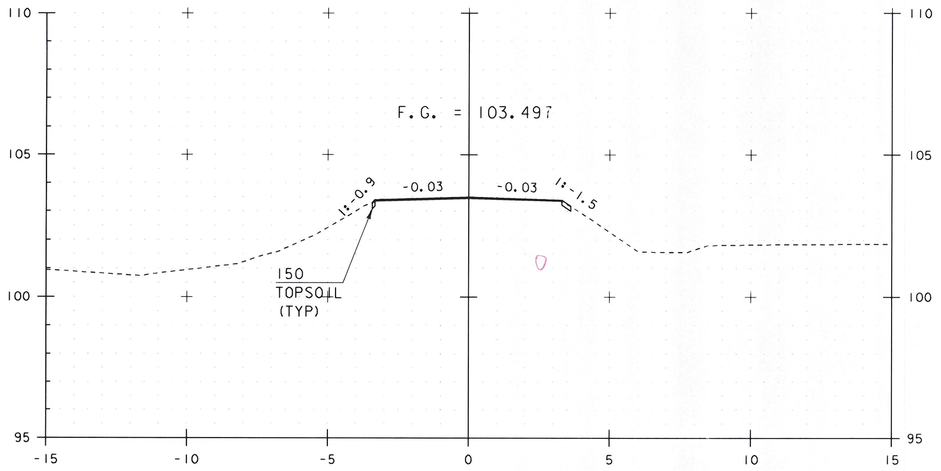
FILE NAME: 01J282/str/s01J282xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
MAINLINE SECTIONS SHEET 9

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 43 OF 56



1+192.50

STA. 1+192.500
END APPROACH



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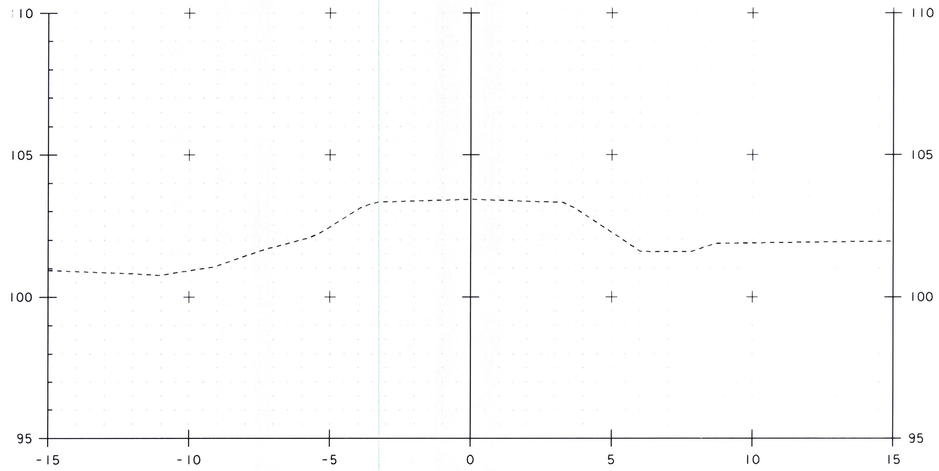
STA. 1+190.00
END STONE FILL,
TYPE II (RT)
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL



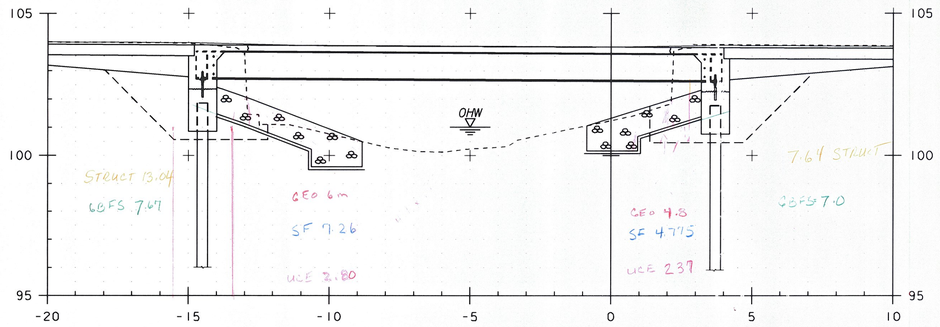
1+195.00

0 1 2 4 6 8 10

SCALE = 1:100

STA. 1+190 TO STA. 1+195

PROJECT NAME: HINESBURG	
PROJECT NUMBER: STP 0199(2)	
FILE NAME: 01J282/str/s01J282xsl.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
MAINLINE SECTIONS SHEET 10	SHEET 44 OF 56



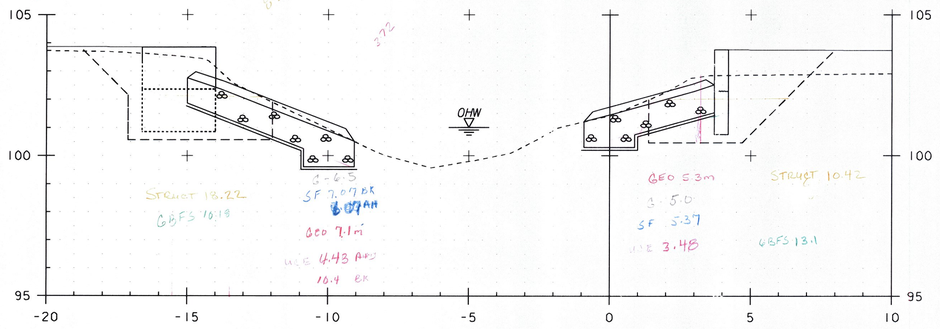
20+030.00

STA 20+25.100 (LT CHANNEL)
BEGIN STRUCTURE EXCAVATION
GRANULAR BACKFILL FOR STRUCTURES
STA 20+25.100 (LT & RT CHANNEL)
END GRUBBING MATERIAL

STA 20+40.500 (LT CHANNEL)
END UNCLASSIFIED CHANNEL EXCAVATION
STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL

STA 20+38.250 (LT CHANNEL)
END STRUCTURE EXCAVATION
GRANULAR BACKFILL FOR STRUCTURES

STA 20+38.500 (RT CHANNEL)
END UNCLASSIFIED CHANNEL EXCAVATION
STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL



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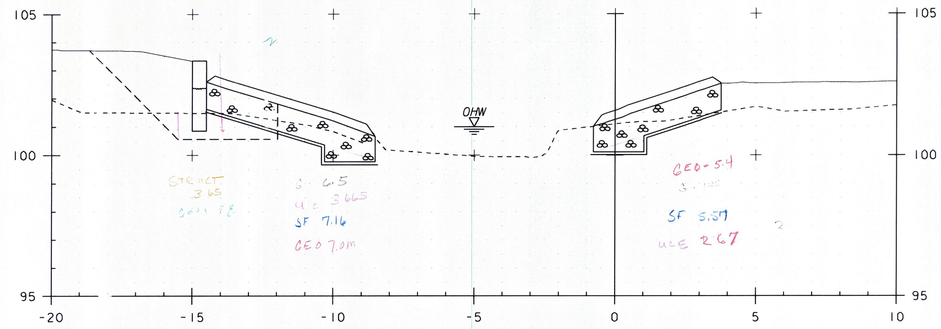
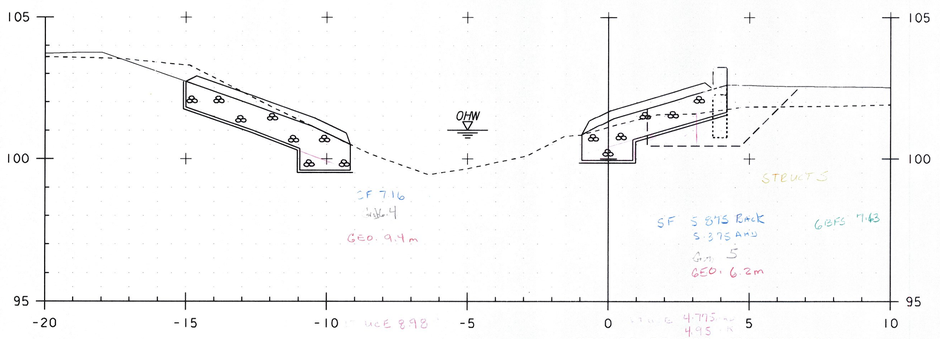


20+037.00

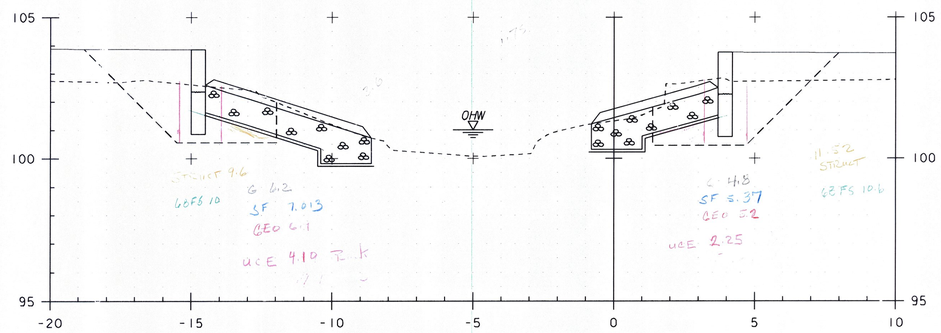
STA 20+37.000 (RT CHANNEL)
END STRUCTURE EXCAVATION
GRANULAR BACKFILL FOR STRUCTURES



20+023.00

STA 20+22.100 (RT CHANNEL)
BEGIN STRUCTURE EXCAVATION
GRANULAR BACKFILL FOR STRUCTURES

STA 20+21.000 (LT & RT CHANNEL)
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
STONE FILL, TYPE III
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL



20+035.00

STA 20+34.900 (LT & RT CHANNEL)
BEGIN GRUBBING MATERIAL

0 1 2 4 6 8 10
SCALE = 1:100
STA. 20+023 TO STA. 20+037

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 0ij282/str/s0ij282xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
CHANNEL SECTIONS

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 45 OF 56

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

HINESBURG STP 0199(2) INVOLVES THE REPLACEMENT OF BRIDGE 10 CARRYING SILVER STREET (TH 4) OVER THE LAPLATTE RIVER IN HINESBURG, VT. THE BRIDGE WILL BE REPLACED ON THE EXISITING ALIGNMENT WITH MINIMAL WIDENING AND NECESSARY APPROACH WORK TO MATCH INTO THE EXISTING ROADWAY. TWO-WAY TRAFFIC WILL BE MAINTAINED DURING CONSTRUCTION ON A TEMPORARY BRIDGE TO BE CONSTRUCTED EAST OF THE EXISTING BRIDGE.

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 0.93 ACRES.

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

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE PROJECT IS LOCATED IN A DIP IN SILVER STREET AT THE NORTH EDGE OF AN OPEN FIELD. WOODED AREAS BORDER THE IMMEDIATE PROJECT SITE, WITH A RESIDENCE LOCATED TO THE NORTHWEST, AND A PAVED PARKING LOT FOR THE HINESBURG ELEMENTARY SCHOOL IN THE NORTHEAST QUADRANT. THE RESIDENTIAL PROPERTY TO THE NORTHWEST HAS A PARKING LOT IN FRONT ACCESSING SILVER STREET. THERE IS A 40-FOOT GRASS/TREED BUFFER BETWEEN THIS PARKING LOT AND THE LAPLATTE RIVER.

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

BRIDGE 10 CROSSES THE LAPLATTE RIVER. THE RIVER IS CLASSIFIED AS SINUOUS, ALLUVIAL, PROBABLY INCISED AT THE PROJECT SITE. THE STREAMBED IS A MIXTURE OF SILT, SAND, GRAVEL, COBBLES AND SOME STONES. CLASS II WETLANDS ARE LOCATED IN THE NORTHEAST, SOUTHEAST AND SOUTHWEST PROJECT AREAS.

THERE ARE TWO EXISTING IN-LINE CATCH BASINS IN THE SCHOOL PARKING LOT. THESE CATCH BASINS DISCHARGE TO A DITCH AT STATION 1+080LT, THEN OVERLAND TO THE LAPLATTE RIVER. A NEW DROP INLET WILL BE INSTALLED AND TIED INTO THE EXISTING OUTFLOW; DRAINAGE WILL BE CONVEYED VIA A NEW 450MM OPTION PIPE TO THE LAPLATTE RIVER AT STATION 1+108LT. A NEW 450MM OPTION PIPE WILL BE INSTALLED UNDER THE SCHOOL PARKING LOT ENTRANCE ALSO CONNECTED TO THE NEW DROP INLET.

DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM A FEW NEARBY AREAS.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES, UNDERGROWTH AND GRASSED AREAS. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY INSTALLATION OF THE TEMPORARY BRIDGE. AS PART OF THE PROJECT, THE RIVER CHANNEL WILL BE ARMORED WITH STONE FILL TYPE III AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES. TREES WILL BE REMOVED AND REPLACED AT STATIONS: 1+062 LT, 1+089LT, 1+096LT, AND 1+103LT.

1.2.4 SOILS

SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF CHITTENDEN, VERMONT. SOILS ON THE PROJECT SITE ARE: Le - LIMERICK SILT LOAM; Lh LIVINGSTON CLAY; AND MyB - MUNSON RAYNHAM SILT LOAMS. K-FACTOR = 0.49 FOR ALL SOILS, INDICATING HIGH EROSION POTENTIAL.

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: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: YES, POPULATION OF STONECAT LOCATED DOWNSTREAM OF PROJECT.
WATER RESOURCE: LAPLATTE RIVER
WETLANDS: YES, CLASS II WETLANDS LOCATED IN THE NORTHEAST, SOUTHEAST AND SOUTHWEST PROJECT AREAS.

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, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION PREVENTION AND SEDIMENT 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 POLLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFC MEANS AND METHODS OF THE CONTRACTOR. 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 APPPROVED 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. DUE TO THE CLASS II WETLANDS WITHIN THE CONSTRUCTION AREA, BARRIER FENCE SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FEET OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, ETC).

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 WILL 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 CGP 3-9020, 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 PREVENTION 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 CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND 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 AND FILTER CURTAIN AS PROPOSED ON THE EPSC PLAN.

CONSTRUCT DROP INLET PROTECTION DEVICE AT STATION 1+080.500 LT

1.4.5 DIVERT UPLAND RUNOFF

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

IT IS NOT ANTICPIATED THAT DIVERSION MEASURES BEYOND THE PROPOSED DRAINAGE PIPE NORTHEAST OF THE BRIDGE WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

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

STONE CHECK DAMS WILL BE INSTALLED AS SHOWN ON THE EPSC PLAN FROM STATION 1+105 LT TO STATION 1+110 LT. SIZE AND SPACING OF THE CHECK DAMS SHALL BE AS INDICATED IN THE CHECK DAM DETAIL DRAWING ON SHEET 51.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

DI STA 1+080.500 LT

NEW 450 MM OPTION PIPE STA 1+063.50 LT to STA 1+079.90 LT
NEW 450 MM OPTION PIPE STA 1+081.10 LT to STA 1+108.07 LT

STONE FILL, TYPE II AS SHOWN ALONG SIDE SLOPES
STONE FILL, TYPE III AS SHOWN ALONG CHANNEL

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. ANY SLOPES TO BE EXPOSED FOR MORE THAN 14 DAYS PRIOR TO FINAL GRADING SHALL BE TRACKED AND MULCHED. SLOPES SHALL BE STABILIZED IF RAIN IS FORECAST WITHIN THE FOLLOWING 48 HOURS.

1.4.9 WINTER STABILIZATION

ALL EARTH DISTURBANCES ASSOCIATED WITH THIS PROJECT SHALL BE STABILIZED PRIOR TO THE WINTER SEASON (OCTOBER 15 THROUGH APRIL 15). SHOULD THE PROJECT CAUSE EARTH DISTURBANCE DURING THE WINTER, THE CONTRACTOR SHALL PREPARE A WINTER-SPECIFIC EPSC. 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.

USE OF A COFFERDAM IS NOT ANTICIPATED. THE SPECIFIC MEANS FOR TREATMENT OF DISCHARGE SHALL BE PROVIDED BY THE CONTRACTOR FOR ANY DEWATERING.

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

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR

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.

1.5.3 UPDATES

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)

FILE NAME: 01J282/str/s01J282eroNotes.dgn		PLOT DATE:	02-MAR-2011
PROJECT MANAGER: C. CARLSON		DRAWN BY:	C. MOONEY
DESIGNED BY:	W. LAMMER	CHECKED BY:	W. LAMMER
EROSION CONTROL NOTES		SHEET	46 OF 56

N

VTrans Metric

PAVED DRIVE

EXISTING DRAINAGE PIPE

RIPARIAN ZONE

FLOW

WETLANDS CLASS II

TALL GRASS

GRASSY LAWN

EXISTING ROW

WETLAND BUFFER

MHO

OHW

MIXED TREES LINE

TO MONKTON

℄ SILVER STREET

TH NO. 4

1+020 TO VT 116 1+040 1+060 1+080 1+100 1+120 1+140 1+160 1+180 1+200

AERIAL E&T

PAVED DRIVE

EXISTING BUILDING

LAPLATTE RIVER

MIXED TREES

WETLANDS CLASS II

GRASSY LAWN

SOILS INFORMATION:

1. THE SOIL TYPES IDENTIFIED FOR THIS PROJECT ARE LIVINGSTON CLAY, NORTH OF THE LAPLATTE RIVER TO APPROXIMATELY STA. 1+070, AND LIMERICK SILT LOAM, SOUTH OF THE LAPLATTE RIVER. MUNSON RAYNHAM SILT LOAMS ARE PRESENT WITHIN THE PROJECT AREA NORTH OF APPROXIMATELY STA. 1+070.

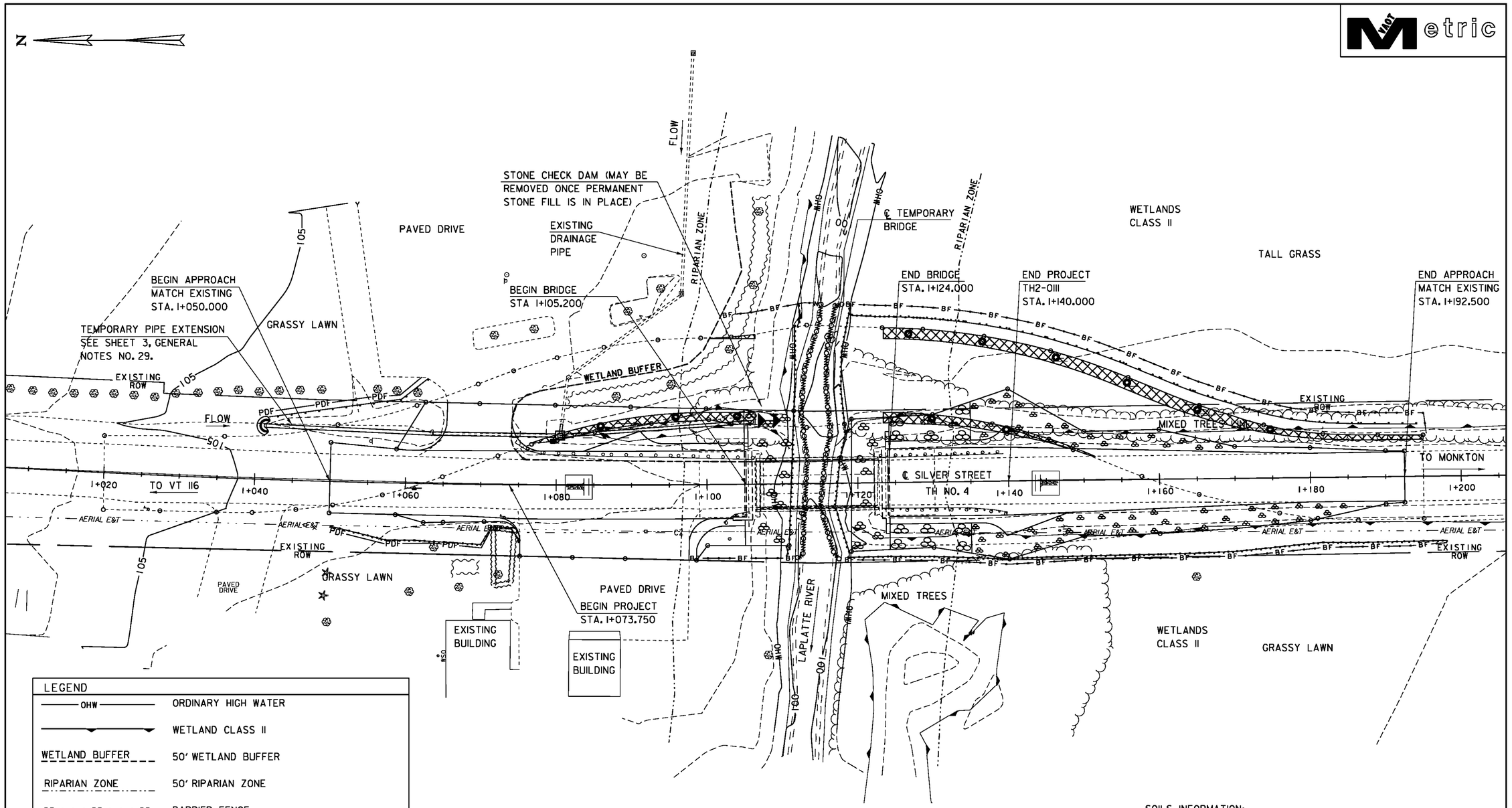
LEGEND	
—AERIAL E&T— · · — · · —	AERIAL ELECTRIC & TELEPHONE
WETLAND BUFFER	50' WETLAND BUFFER
	WETLAND CLASS II
RIPARIAN ZONE	50' RIPARIAN ZONE
—OHW—	ORDINARY HIGH WATER

EXISTING CONDITIONS SITE PLAN

0 10 20

SCALE 1:250

PROJECT NAME:	HINESBURG
PROJECT NUMBER:	STP 0199(2)
FILE NAME: 01J282/str/s01J282eroExist.dgn	PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
EXISTING CONDITIONS SITE PLAN	SHEET 47 OF 56



LEGEND

OHW	ORDINARY HIGH WATER
	WETLAND CLASS II
WETLAND BUFFER	50' WETLAND BUFFER
RIPARIAN ZONE	50' RIPARIAN ZONE
BF BF BF	BARRIER FENCE
PDF PDF	PROJECT DEMARCATION FENCE
	WOVEN WIRE SILT FENCE
	SILT FENCE
	FILTER CURTAIN
	TEMPORARY EROSION MATTING
	CHECK DAM
	STABILIZED CONSTRUCTION ENTRANCE
	STONE AND BLOCK DROP INLET PROTECTION
	PIPE INLET PROTECTION

SILT FENCE INSTALLATION MAY REQUIRE PHASING TO MAXIMIZE EFFECTIVENESS. INSTALL AND/OR MOVE SILT FENCE AS CONSTRUCTION PROGRESSES TO OBTAIN THE GREATEST PREVENTION OF SEDIMENT TRANSPORT.

FOR CLARITY, AREAS TO BE SEEDED AND MULCHED HAVE NOT BEEN INDICATED; HOWEVER, ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AS APPLICABLE.

THERE IS AN UNDERDRAIN OUTLET NEAR STA. 1+040 LT IN THE DRAINAGE DITCH. THIS SHOULD BE GIVEN CONSIDERATION WHEN CONSTRUCTING THE TEMPORARY DETOUR.

SOILS INFORMATION:

1. THE SOIL TYPES IDENTIFIED FOR THIS PROJECT ARE LIVINGSTON CLAY, NORTH OF THE LAPLATTE RIVER TO APPROXIMATELY STA. 1+070, AND LIMERICK SILT LOAM, SOUTH OF THE LAPLATTE RIVER. MUNSON RAYNHAM SILT LOAMS ARE PRESENT WITHIN THE PROJECT AREA NORTH OF APPROXIMATELY STA. 1+070.

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

0 10 20

SCALE 1:250

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/s01J282eroConst.dgn PLOT DATE: 02-MAR-2011
PROJECT LEADER: C. CARLSON DRAWN BY: C. MOONEY
DESIGNED BY: W. LAMMER CHECKED BY: C. CARLSON
EPSC PLAN SHEET 48 OF 56

VTrans Metric

N

PAVED DRIVE

BEGIN BRIDGE
STA 1+105.200

BEGIN APPROACH
MATCH EXISTING
STA 1+050.000

RIPARIAN ZONE

WETLANDS
CLASS II

TALL GRASS

END PROJECT
TH2-0111
STA 1+140.000

END BRIDGE
STA 1+124.000

END APPROACH
MATCH EXISTING
STA 1+192.500

GRASSY LAWN

WETLAND BUFFER

FLOW

MIXED TREES LINE

1+020 TO VT 116 1+040 1+060 1+080 1+100 1+120 ℄ SILVER STREET TH NO. 4 1+140 1+160 TO MONKTON 1+180 1+200

AERIAL E&T

NEW POLE &
GUY 9.75 M RT

PAVED DRIVE

GRASSY LAWN

BEGIN PROJECT
TH2-011
STA. 1+073.750

EXISTING BUILDING

PAVED DRIVE

EXISTING BUILDING

NEW POLE &
PUSH POLE

LAPLATTE RIVER

MIXED TREES

WETLANDS
CLASS II

GRASSY LAWN

FOR CLARITY, AREAS TO BE SEEDED AND MULCHED HAVE NOT BEEN INDICATED; HOWEVER, ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AS APPLICABLE.

LEGEND	
OHW	ORDINARY HIGH WATER
	WETLAND CLASS II
WETLAND BUFFER	50' WETLAND BUFFER
RIPARIAN ZONE	50' RIPARIAN ZONE

FINAL CONDITIONS SITE PLAN

0 10 20

SCALE 1: 250

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/s01J282erpFinal.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
FINAL CONDITIONS SITE PLAN

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 49 OF 56

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			

GENERAL GUIDANCE			
FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	19-19-19	PELLETIZED	LIQUID
500 LBS/AC		2 TONS/AC	4.4 GAL/AC

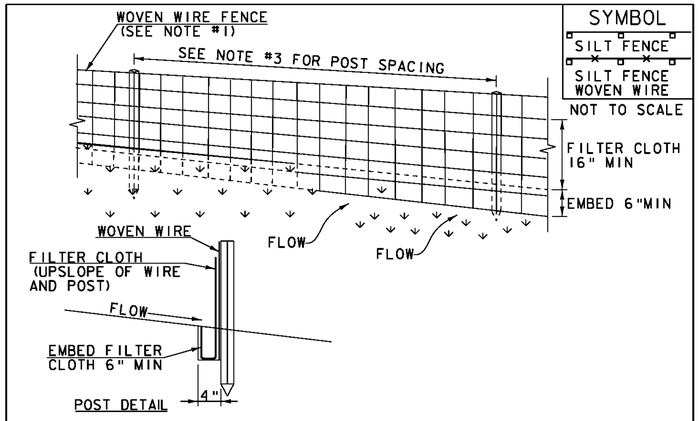
CONSTRUCTION GUIDANCE

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 LANSCAPE MAUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF



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.

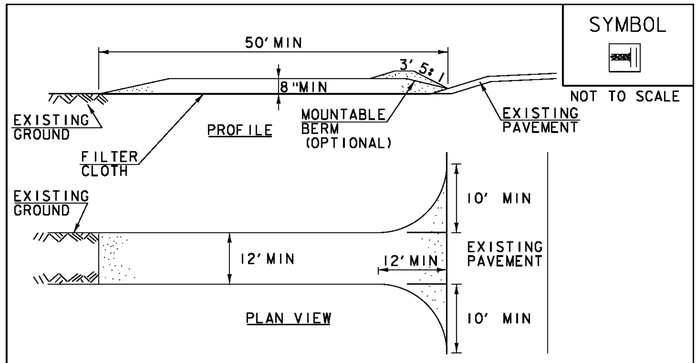
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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



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.

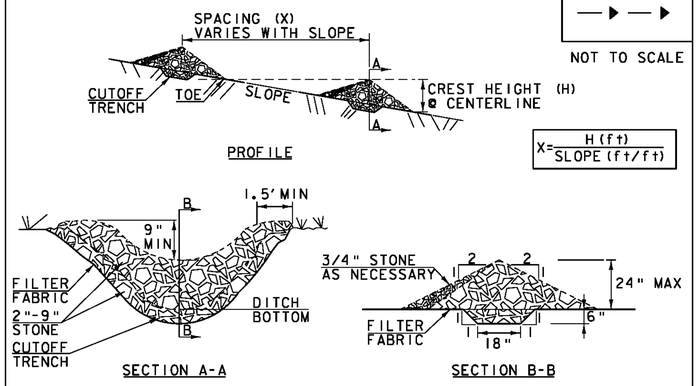
REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 0199282/str/s0199282eroDet.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
EPSC DETAIL SHEET 1
PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: W. LAMMER
SHEET 50 OF 56

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 OFTHE 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

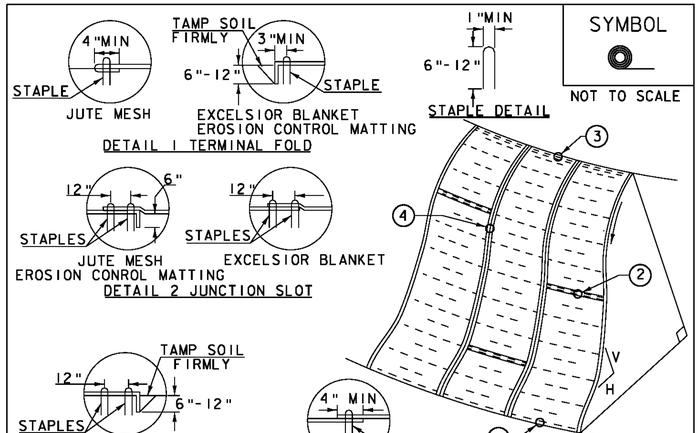
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

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

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

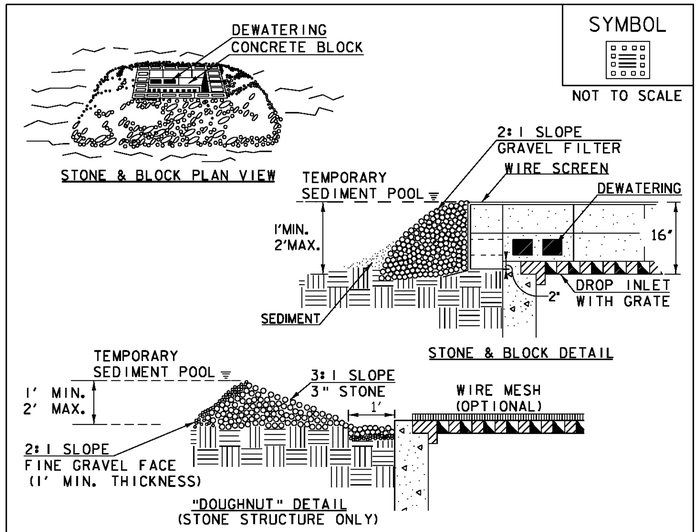
ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

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

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2" MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR ½" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL ½"- ¾" IN DIAMETER PLACED 2" BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1' THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3" STONE AS SHOWN ON THE DRAWINGS.
5. MAXIMUM DRAINAGE AREA 1 ACRE

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

STONE & BLOCK 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.

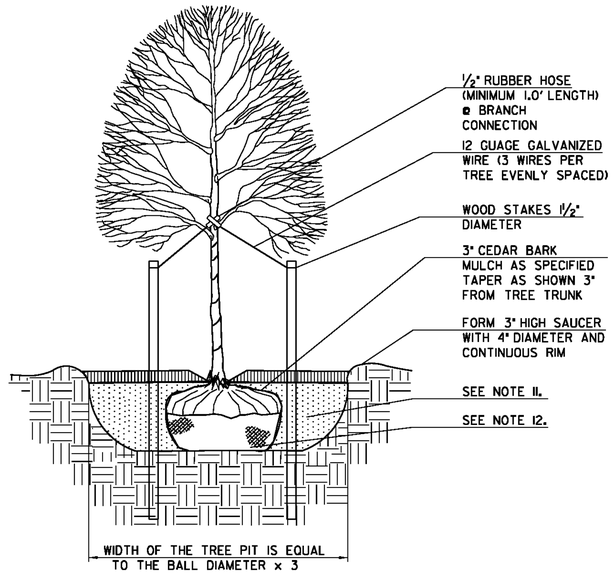
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 0199282/str/s0199282eroDet.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
EPSC DETAIL SHEET 2

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: W. LAMMER
SHEET 51 OF 56

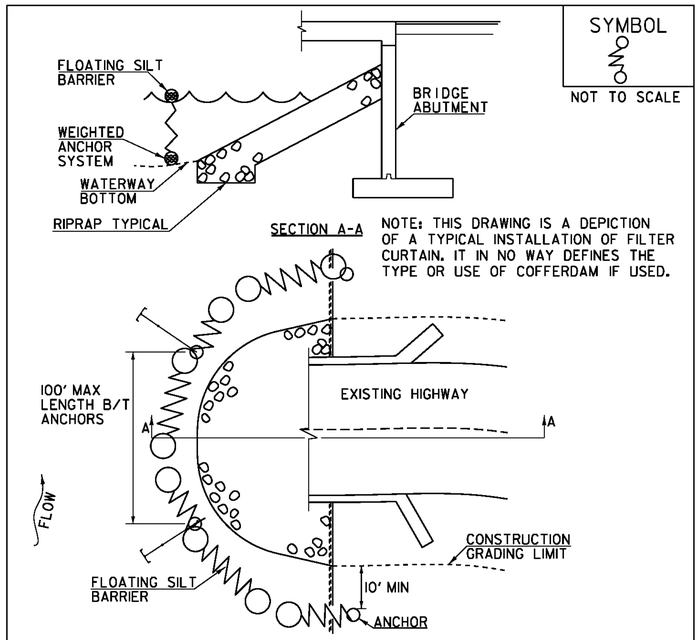


DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

NOTES:

1. EACH BED SHAPE SHALL BE 10 FT X 10 FT. LOCATIONS AND BED SHAPES ARE APPROXIMATE AND MAY VARY DUE TO SLOPE. FINAL LOCATION AND ELEVATIONS TO BE DETERMINED BY THE ENGINEER BASED ON ACTUAL SLOPE CONDITIONS.
2. SEE LAYOUT SHEET FOR ACTUAL GROUPING LOCATIONS.
3. GROUPING SHAPES ARE TO BE STAKED AND LAID OUT TO GIVE A NATURAL APPEARANCE.
4. TYPICAL GROUPING LAYOUTS SHOWN ARE FOR FLAT AND STEEP SLOPES OF PROJECT WHERE THERE IS NO STONE FILL.
5. WATER ALL TREES AT TIME OF PLANTING. EACH TREE SHALL RECEIVE A MINIMUM OF 10 GALLONS OF WATER TWICE A WEEK.
6. FOLLOW STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AS MODIFIED. SECTION 656 AND SECTION 755.
7. SEE SUBSECTION 755.07 FOR THE APPLICATION OF MYCORRHIZAL FUNGI PER MANUFACTURER'S RECOMMENDATIONS. LANDSCAPING BACKFILL MIX SHALL COMPLY WITH SUBSECTION 755.01, TOPSOIL 755.02, AND COMPOST 755.05 SHALL COMPLY WITH THE RECOMMENDED AMOUNT OF ORGANIC MATERIAL AS SPECIFIED.
8. LANDSCAPE BACKFILL MIX SHALL BE TESTED FOR ORGANIC MATERIAL OF 8.6%.
9. BARK MULCH SHALL CONFORM TO THE MATERIALS REQUIREMENTS OF SUBSECTION 755.10 (C) BARK MULCH FOR CEDAR AND PINE ONLY.
10. CONTRACTOR SHALL PROVIDE A LOG TO THE RESIDENT SHOWING DATES OF WATERING AND NOTING NATURAL RAINFALL EVENTS WHEN NO WATERING OCCURS. WATERING SHALL COMPLY WITH SUBSECTION 656.08(F) WATERING.
11. BACK FILL WITH PLANTING MIX OF HALF TOPSOIL, ONE QUARTER COMPOST AND ONE QUARTER NATIVE MATERIAL AS APPROVED BY THE RESIDENT ENGINEER AND LANDSCAPE ARCHITECT. TAMP TO REMOVE AIR POCKETS AND WATER IMMEDIATLEY AFTER PLANTING. TREES MUST RECEIVE A MINIMUM OF 10 GALLONS OF WATER AT EACH WATERING, TWICE WEEKLY DURING THE ESTABLISHMENT PERIOD. TREE WATERING BAGS WILL BE USED FOR ALL WATERING OF TREES.
12. PLACE TREE IN THE HOLE SO THAT MAIN ORDER ROOTS ARE AT FINISHED GRADE. DETERMINE DEPTH OF MAIN ORDER ROOTS IN THE BALL BEFORE PLACING IN THE HOLE BY USING A SIMPLE PROBE IF VISUAL OR MANUAL METHOD IS UNCLEAR. REMOVE ANY EXCESS SOIL ON TOP OF THE ROOT BALL ABOVE MAIN ORDER ROOTS. REMOVE ANY TWINE AND BURLAP FROM STEM AND TOP HALF OF BALL; IF SYNTHETIC, REMOVE COMPLETELY. CUT WIRE BASKETS AND REMOVE ENTIRE SIDES.
13. STAKE ONLY THOSE TREES PLANTED IN WINDY, EXPOSED LOCATIONS WHERE THEY MIGHT BE BLOWN OVER OR VANDALIZED AS DETERMINED BY RESIDENT ENGINEER OR LANDSCAPE ARCHITECT.
14. COMPLETELY REMOVE ALL GUY WIRES, RUBBER HOSE, AND STAKES ONE YEAR AFTER PLANTING.



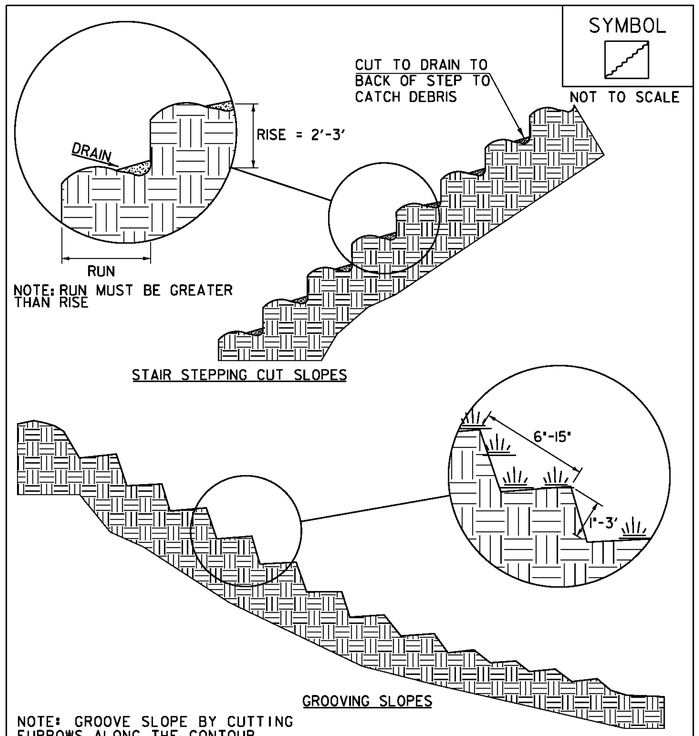
CONSTRUCTION SPECIFICATIONS

1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

FILTER CURTAIN

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.61).

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF
SEPTEMBER 4, 2009	WHF



NOTE: GROOVE SLOPE BY CUTTING FURROWS ALONG THE CONTOUR. IRREGULARITIES IN THE SOIL SURFACE CATCH RAINWATER AND RETAIN LIME, FERTILIZER AND SEED.

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

SURFACE ROUGHENING

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 CONSIDERED INCIDENTAL TO THE CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

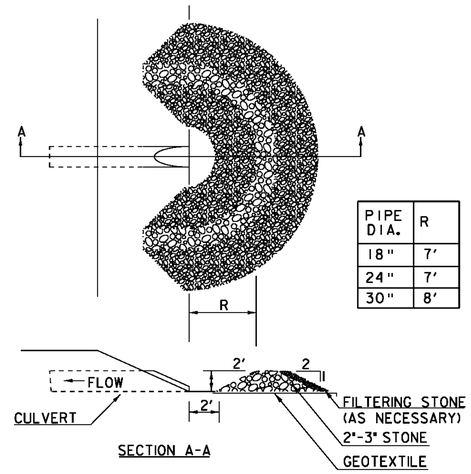
FILE NAME: 01J282/str/s01J282eroDet.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
EPSC DETAIL SHEET 3

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: W. LAMMER
SHEET 52 OF 56

Metric

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

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 0199282/str/s0199282eroDet.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
EPSC DETAIL SHEET 4

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: W. LAMMER
SHEET 53 OF 56

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

VTrans Metric

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	PARCEL DELETED														FORMERLY RUGGLES
2	BLUMEN, STEVEN R. & CYNTHIA A.	11,12	1+114.00 RT.	1+231.94 RT.			UE	(P)	411 SM	WDOE	1/28/2011	HINESBURG	217	31-32	4,424 S.F.±
			1+140.00 RT.				INSTALL & MAINTAIN	(P)							ANCHOR & GUY WIRE
3	UNITED CHURCH OF HINESBURG	11	1+114.28 LT.	1+164.78 LT.			DETOUR	(T)	315 SM						3,391 S.F.±; TWO-WAY VEHICULAR
	F/K/A THE BAPTIST SOCIETY OF HINESBURG		1+116.16 LT.	1+174.60 LT.			CONST.	(T)	216 SM						2,325 S.F.±; INCLUDES EROSION CONTROL & BF
			1+132.22 LT.	1+144.39 LT.			SLOPE	(P)	16 SM						173 S.F.±
			1+116.15 LT.	1+118.33 LT.			INSTALL	(T)							FILTER CURTAIN
4	GREEN MOUNTAIN POWER CORPORATION	11,12	1+048.09 RT.	1+231.94 RT.											UTILITY
5	WAITSFIELD AND CHAMPLAIN VALLEY TELCOM	11,12	1+048.09 RT.	1+231.94 RT.											UTILITY

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1	10,11	PARCEL NO. 1 RUGGLES. DELETE PARCEL PER C.O. 9669.	11/9/2010
		APPROVED BY: HP MADE BY: MR	

PLOT DATE 2/15/2011

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

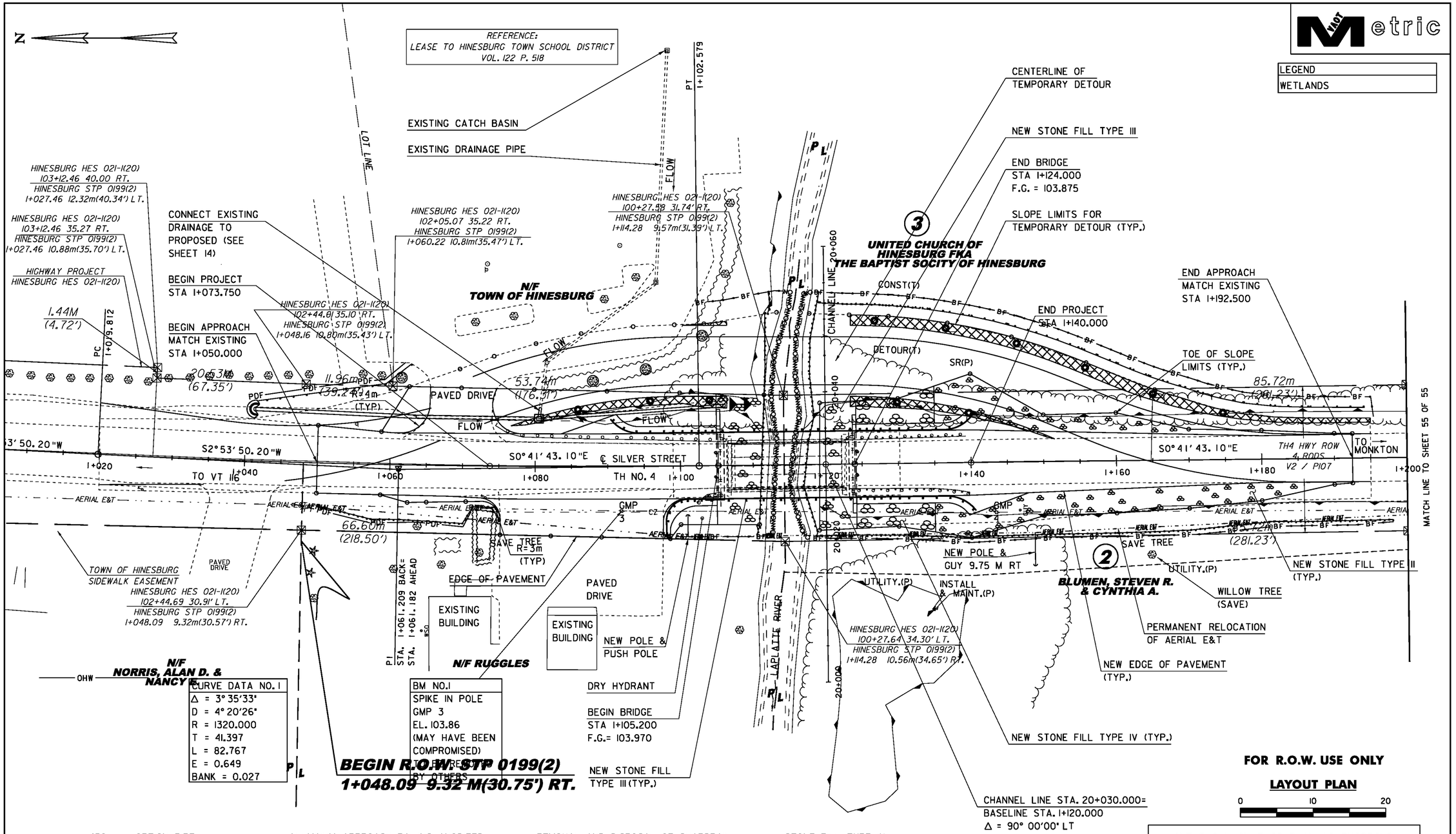
APPROVED: HARRY PETROVS DATE: 06-14-10
CHIEF, PLANS & TITLES

FOR R.O.W. USE ONLY

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/s01J282row.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
ROW DETAIL SHEET

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 54 OF 56



CURVE DATA NO. 1
Δ = 3° 35'33"
D = 4° 20'26"
R = 1320.000
T = 41.397
L = 82.767
E = 0.649
BANK = 0.027

BM NO.1
SPIKE IN POLE
GMP 3
EL. 103.86
(MAY HAVE BEEN COMPROMISED)
ELEVATION BY OTHERS

LEGEND
WETLANDS

FOR R.O.W. USE ONLY

LAYOUT PLAN

0 10 20

LINE 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 TOWN OF HINESBURG'S AQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

450 mm OPTION PIPE
STA. 1+063.50 LT - STA. 1+079.90 LT
STA. 1+081.10 LT - STA. 1+108.07 LT

PRECAST REINFORCED CONCRETE PIPE DIW/ CAST IRON GRATE
STA. 1+080.50 LT

BRIDGE RAILING, ANODIZED 3 RAIL ALUMINUM
STA. 1+103.475 RT - STA. 1+124.125 RT
STA. 1+105.075 LT - STA. 1+124.125 LT

RELOCATE MAILBOX, SINGLE SUPPORT
STA. 1+073 RT

ALUMINUM APPROACH RAILING, ANODIZED
STA. 1+090.400 LT - STA. 1+105.075 LT
STA. 1+098.020 RT - STA. 1+103.475 RT
STA. 1+124.125 RT - STA. 1+140.625 RT
STA. 1+124.125 LT - STA. 1+140.470 LT

100mm WHITE LINE
STA. 1+020.0 LT - STA. 1+195.0 LT
STA. 1+020.0 RT - STA. 1+195.0 RT

100mm YELLOW LINE (DOUBLE CENTERLINE)
STA. 1+020.0 - STA. 1+195.0

REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 1+074.47 LT - STA. 1+106.27 LT
STA. 1+102.17 RT - STA. 1+105.60 RT
STA. 1+122.87 LT - STA. 1+139.29 LT
STA. 1+123.12 RT - STA. 1+139.80 RT

CONSTRUCT DRIVE
STA. 1+061.50 LT - STA. 1+078.30 LT
STA. 1+072.25 RT - STA. 1+100.60 RT

STONE FILL, TYPE II
STA. 1+135.0 RT - STA. 1+190.0 RT
STA. 1+135.0 LT - STA. 1+170.0 LT

STONE FILL, TYPE IV
STA. 1+124.2 RT - STA. 1+135.0 RT
STA. 1+124.2 LT - STA. 1+135.0 LT

DECIDUOUS TREES (ACER SACCHARUM) (B&B)(100mm CAL)
STA. 1+062 LT
STA. 1+089 LT
STA. 1+096 LT
STA. 1+103 LT

YIELDING MARKER POSTS
STA. 1+063.525 LT
STA. 1+106.790 LT

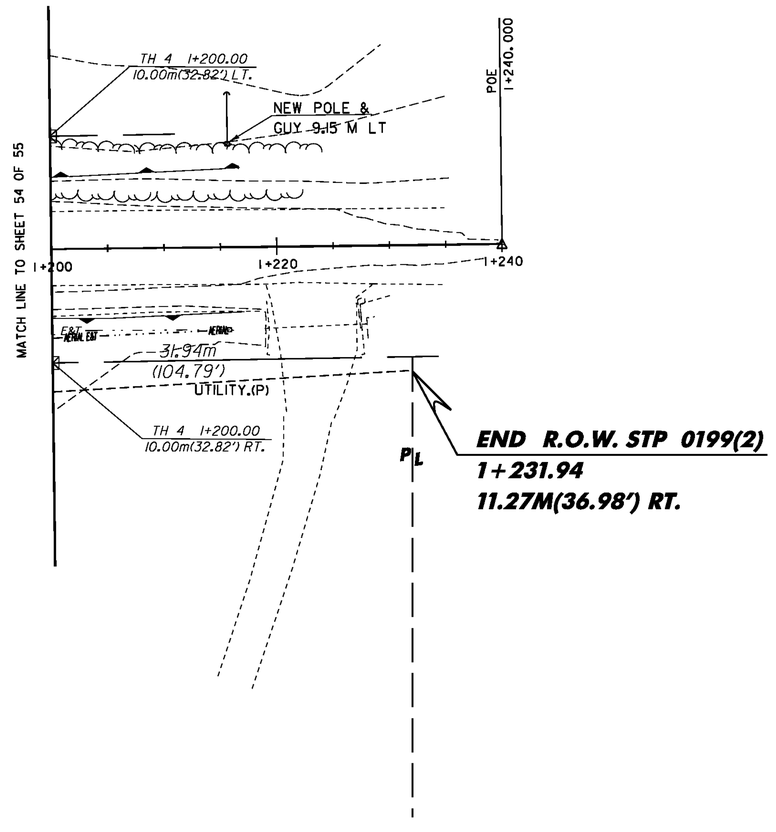
REMOVE TREES (PAID UNDER ITEM 201.10)
STA. 1+062 LT
STA. 1+089 LT
STA. 1+096 LT
STA. 1+103 LT

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/s01J282row.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
ROW LAYOUT SHEET 1

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 55 OF 56

N



LAYOUT PLAN

0 10 20

SCALE 1:250

LINE 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 TOWN OF HINESBURG'S AQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

FOR R.O.W. USE ONLY

PROJECT NAME: HINESBURG
PROJECT NUMBER: STP 0199(2)

FILE NAME: 01J282/str/s01J282row.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: W. LAMMER
ROW LAYOUT SHEET 2

PLOT DATE: 02-MAR-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 56 OF 56

STRUCTURAL STEEL 66

VERMONT

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Agency of Transportation

July 25, 2011

L.B. Foster Co./Foster Precise
3 Farm Lane
Georgetown, MA 01833

Attn: Robert E. Small

Project Name: Hinesburg **Project #: STP 0199(2)**

Structure Identification: Bridge 10 on TH 4 over the LaPlatte River

The following "**General Notes", "Erection Drawing", "Girder Detail" (1-5) and "Diaphragm Detail" (6 and X1)** [Item 506.50, Structural Steel, Rolled Beam] for the above project (Vendor's Job **#3578**), transmitted by A.L. St. Onge Contractors, Inc., and received by our office on July 22, 2011, have been reviewed and are being returned herewith.

All sheets and welding procedures are approved.

Please make appropriate changes as indicated on these "as noted" or "approved" drawings and submit white prints for our use in the record plans for this project. Also, please submit extended weights for our approval. **Partial payment for this item will be withheld until extended weights are received and approved.**

You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. Jeff must receive and acknowledge your notice at least seven days prior to that date, as per Specification 506.03. You may contact Jeff by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

Carolyn W. Carlson
Project Manager

Attachments
cc: [X] Resident Engineer – Vic Dwire – w/prints
[X] Shop Inspector - Jeff Clark – w/prints
[X] Contractor – A.L. St. Onge Contractors, Inc. – w/prints
[X] Construction Divison – letter only
[X] Materials & Research Section (C&IA Unit) – letter only
[X] Files (CWC)

VTrans Working to Get You There
Vermont Agency of Transportation

STRUCTURAL STEEL

67

L.B.Foster Co.

Foster Precise

3 Farm Lane • Georgetown • MA • 01833 • Ph:(978) 352-2591 • Fax:(978) 352-2182

Letter Of Transmittal

Project Number: 3578

Project Name: VTAOT STP 0199(2) Replace Silver St Brdg-Hi

LOT No.: 2

Date: 7/11/11 8:34 AM

To:
Stacey St.Onge
A.L. St.Onge Contractors, Inc.
P.O. Box 65
82 Fuller Bridge Road
Montgomery Center, VT 05471
Ph: (802) 326-4792
Fax: (802) 326-4005

CC: None

Subject: WELDING PROCEDURE SPECIFICATIONS

We are sending you the following 5 page(s) via e-Mail

Please return the following by:

☐Shop Drawings ☐Contract Drawings ☑Miscellaneous Other:

Purpose of Transmittal: For Approval

Items:

Copies	Date	Rev #	Description
1	7/11/2011		WELDING PROCEDURE SPECIFICATION SMAW 01
Sheets: 2			
1	7/11/2011		WELDING PROCEDURE SPECIFICATION SAW 01
Sheets: 2			
1			PROCEDURE QUALIFICATION RECORD
Sheets: 5			

Remarks:

Good Morning,

Please find attached welding procedure specifications for consideration on the above referenced project.

Please feel free to call with any questions.

Vermont Agency of Transportation

RECEIVED

CK'D BY WDL **OK'D BY** JWC

11:43 am, Jul 11, 2011

RESUBMIT **APPROVED** X

BY CWC, Proj. Mgr. **DATE** 07/19/11

Respectfully,

Walter Borkowski Ext.14

FOSTER PRECISE

STRUCTURAL STEEL 68

LB FOSTER CO Precise Structural Products

Welding Procedure Specification

VT AOT 01

Material Spec. ASTM A709 G36, G50 & G50W

Vermont Agency of Transportation
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11:43 am, Jul 11, 2011

Welding Process(es) SMAW

CK'D BY WDL OK'D BY JWC

Position of Welding 1F, 2F, 3F, 4F

Manual ☒ Machine ☐ Semi-Automatic ☐ Automatic ☐

RESUBMIT ____ APPROVED X
BY CWC, Proj. Mgr. DATE 07/19/11

Filler Metal Specification AWS A5.1

Filler Metal Classification E7018

Flux N/A

Shielding Gas N/A Gas Flow Rate N/A

Single or Multiple Pass Single

Single or Multiple Arc SINGLE

Welding Current REVERSE

Polarity: AC ☐ DCEP ☒ DCEN ☐ Pulsed ☐

Welding Progression Up ☐ Down ☐

Root Treatment CLEAN AS TO REMOVE CONTAMINANTS

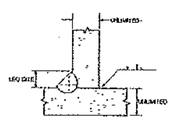
Preheat Temperature N/A Interpass Temperature N/A

Postheat Treatment N/A

Heat Input Min N/A Max N/A

WELDING PROCEDURE

Pass No.	Electrode Size	Amperes	Volts	Travel Speed	Other	Joint Detail
ALL	3/32	120-150				
ALL	1/8	140-180				
ALL	5/32	160-210				
ALL	3/16	190-250				



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

Procedure No. 1 TACK WELD Contractor ____

Revision No. ____ Authorized By WALTER J. BORKOWSKI Date 7/11/2011

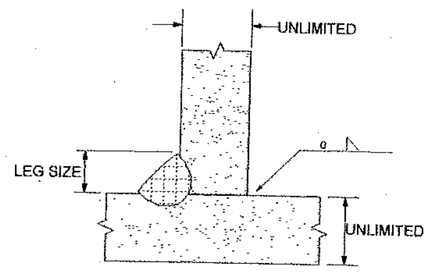
STRUCTURAL STEEL 69

LB FOSTER CO Precise Structural Products

Welding Procedure Specification

VT AOT 01

Joint Detail



MEMO

THIS PROCEDURE APPLIES TO TACK WELDING ONLY.

TACK LEG SIZE SHALL BE 1/8" OR 3/16".

Vermont Agency of Transportation

RECEIVED

CK'D BY WDL **OK'D BY** JWC

11:43 am, Jul 11, 2011

RESUBMIT _____ **APPROVED** X

BY CWC, Proj. Mgr. **DATE** 07/19/11

STRUCTURAL STEEL 70

LB FOSTER CO Precise Structural Products

Welding Procedure Specification

VT AOT 02

Material Spec. ASTM A709 G36, G50 & G50W — AASHTO M270 G36, G50 & G50W

Welding Process(es) SAW

Position of Welding 1F & 2F

Manual ☐ Machine ☐ Semi-Automatic ☒ Automatic ☐

Filler Metal Specification AWS A5.23

Filler Metal Classification F7A2-ENi1K-Ni1-H8

Flux LINCOLN 860

Shielding Gas N/A — Gas Flow Rate N/A

Single or Multiple Pass BOTH

Single or Multiple Arc SINGLE

Welding Current REVERSE

Polarity: AC ☐ DCEP ☒ DCEN ☐ Pulsed ☐

Welding Progression Up ☐ Down ☐

Root Treatment CLEAN AS TO REMOVE CONTAMINANTS

Preheat Temperature *** SEE PAGE 2 — Interpass Temperature *** SEE PAGE 2

Postheat Treatment N/A

Heat Input Min 48.55 KILOJOULES/IN Max 76.29 KILOJOULES/IN

Vermont Agency of Transportation
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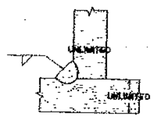
11:43 am, Jul 11, 2011
RESUBMIT ____ APPROVED X
BY CWC, Proj. Mgr. DATE 07/19/11

WELDING PROCEDURE

Pass No.	Electrode Size	Amperes	Volts	Travel Speed	Other
All	5/64	330-350	33-35	10-11	

Joint Detail



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

Procedure No. 001 - FILLET WELD Contractor ____

Revision No. ____ Authorized By WALTER J. BORKOWSKI Date 7/11/2011

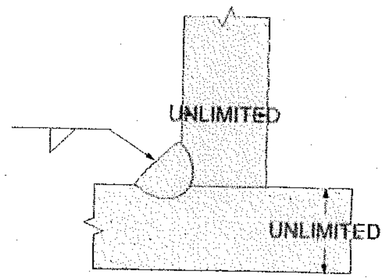
STRUCTURAL STEEL 71

LB FOSTER CO Precise Structural Products

Welding Procedure Specification

VT AOT 02

Joint Detail



MEMO

*** MINIMUM PREHEAT AND INTERPASS TEMPERATURE SHALL BE AS FOLLOWS: TO 3/4" INCL 50 DEG F, OVER 3/4" TO 1-1/2" INCL 70 DEG F, OVER 1-1/2" TO 2-1/2" INCL 150 DEG F, OVER 2-1/2" 225 DEG F.

LEG DIMENSION SHALL BE 5/16".

PROCEDURE QUALIFICATION RECORD NUMBER SAW-01-2009

Vermont Agency of Transportation

RECEIVED

CK'D BY WDL OK'D BY JWC

11:43 am, Jul 11, 2011

RESUBMIT APPROVED X

BY CWC, Proj. Mgr. DATE 07/19/11

L.B. FOSTER COMPANY
PROCEDURE: SAW-01-2009

FABRICATOR L. B. Foster Company **TEST DATE** December 3, 2009
PROCESS Submerged Arc Welding (SAW) **FILLER METAL CLASSIFICATION** F7A2-ENilK-Nil-H8
ELECTRODES Lincoln LA75 **FLUX** Lincoln 860, AWS Classification A5.23 (electrode & flux)

	DIAMETER	AMPS	VOLTS	CURRENT & POLARITY
(1)	3/32 inches	340	34	DCEP
(2)				
(3)				

SHIELDING GAS NA **FLOW RATE** NA **DEW POINT** NA
TRAVEL SPEED 10 IPM **MATERIAL SPECIFICATION & THICKNESS** ASTM A709, G50, 1 in. Plate
PREHEAT TEMP. 150 °F **INTERPASS TEMP.** 450 °F

SPECIMEN	TEST RESULTS		
		(1)	(2)
ALL WELD METAL TENSION	TENSILE STRENGTH (PSI)	84,209 PSI	84,967 PSI
	YIELD STRENGTH (PSI)	71,427 PSI	68,481 PSI
	ELONGATION IN 2" (%)	26.5	25.4
(AWMT)	REDUCTION IN AREA (%)	58.9	64.1
SIDE BENDS	1. acceptable 2. acceptable 3. acceptable 4. acceptable		
REDUCTION SECTION TENSION	TENSILE STRENGTH 1. 86,844 PSI 2. 89,651 PSI	LOCATION OF BREAK 1. base metal 2. base metal	
CHARPY IMPACT (WELD METAL)	(26 , 34 , 36 , 43 , 25)	AVG. FT-LBS 32 @ -20 °F	
	(- , - , - , - , -) ESW & EGW	AVG. FT-LBS - @ - °F	
	(, , , ,)	AVG. FT-LBS @ °F	
CHEMISTRY	C - Mn - P - Cu - Si - Ni - Cr - Mo - V - S -		

REMARKS:

All nondestructive tests conducted by : *ABC Testing Incorporated* Project: *124009*
All mechanical tests conducted by : *ABC Testing Incorporated*
Sample preparation conducted by: *Accurate Tool and Machine*
Chemical analysis conducted by: - Report Number: -
Radiography: *acceptable*
Welded by: *Mariano Cepeda* Identification number: -
Welding Witnessed by: -

Test Witness: _____ **Agency** _____

Results Reviewed: _____ **DOT Acceptance** _____ **Date** _____

STRUCTURAL STEEL 72

STRUCTURAL STEEL 73

A B C Testing Inc.

95 FIRST STREET • P.O. BOX 868 • BRIDGEWATER, MASSACHUSETTS 02324
TELEPHONE 508 - 697 - 6068 • FAX # 508 - 697 - 6154

MECHANICAL TEST REPORT

ABC Testing number: *124009* Date: *December 22, 2009*
Customer: *Foster - Precise* Purchase order: *verbal instruction (W. Borkowski)*
Code or Standard: *ASTM E - 8, ASTM E - 23 and AWS D1.5*
PQR #, Heat #, or other *Flat (1G), F2A2-ENiIK-NiI-H8*
Material & Dimensions: *1 inch thick plate (ASTM A 709, Gr 50)*
Remarks: *Impact tests: -20 degrees F*

BEND TESTS

Type and Figure	Result
Transverse Side - Figure 5.11	*Acceptable*
Transverse Side - Figure 5.11	*Acceptable*
Transverse Side - Figure 5.11	*Acceptable*
Transverse Side - Figure 5.11	*Acceptable*

TENSILE TESTS

Type & Figure *Transverse Rectangular - Figure 5.10*

Specimen	Width (inches)	Thickness (inches)	Area (sq. in.)	Ultimate Load (pounds)	Ultimate Strength (PSI)	Type of Failure
A	*0.747*	*1.022*	*0.763*	*66,300*	*86,844*	*Duct - BM*
B	*0.740*	*1.026*	*0.759*	*68,000*	*89,651*	*Duct - BM*

Type & Figure *Standard Round All Weld Metal Tension - Figure 5.9*

Specimen	Diameter	Area	Yield Load	Tensile Load	Yield Strength	Tensile Strength
	(inches)	(sq. inches)	(pounds)	(pounds)	(PSI)	(PSI)
W.M.-1	*0.504*	*0.200*	*14,250*	*16,800*	*71,427*	*84,209*
W.M.-2	*0.501*	*0.197*	*13,500*	*16,750*	*68,481*	*84,967*
	Gage length	**New length**	**% elongation**	**New diameter**	**Reduced Area**	**% RA**
	(inches)	(inches)		(inches)	(sq. inches)	
W.M.-1	*2.014*	*2.547*	*26.46*	*0.323*	*0.082*	*58.93*
W.M.-2	*2.014*	*2.525*	*25.37*	*0.300*	*0.071*	*64.14*

IMPACT TESTS

Type & Figure *Charpy (Simple Beam) - Standard Size (Figure 4 - ASTM E 23)*

Specimen	1	2	3	4	5	average **
	(ft - lbs)	(ft - lbs)	(ft - lbs)	(ft - lbs)	(ft - lbs)	(ft - lbs)
Center	*26*	*34*	*36*	*43*	*25*	*32.00*

*** discard the highest and lowest values and average the remaining values.*

All tests were conducted in accordance with the referenced standard.

By: *Michael Medeiros*

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL **OK'D BY** JWC
11:43 am, Jul 11, 2011
RESUBMIT _____ **APPROVED** X
BY CWC, Proj. Mgr. **DATE** 07/19/11

STRUCTURAL STEEL 74

A B C Testing Inc.

95 FIRST STREET • P.O. BOX 868 • BRIDGEWATER, MASSACHUSETTS 02324
TELEPHONE 508 - 697 - 6068 • FAX # 508 - 697 - 6154

RECORD OF RADIOGRAPHIC EXAMINATION

TO *L.B. Foster Co., Inc.*
3 Farm Lane
Georgetown, MA 01833

Client's Order No. *3507*
ABC Project No. *124009*
Date *December 22, 2009*
Drawing No. ____
Contract No. ____

Location Involved *ABC Testing Laboratory* Date *December 4, 2009*
Object or Part Radiographed *1 inch PQR plate* Approved proc. No. *RT1/3* rev. *2*
Joint Type *long, butt* Coverage *full* Penetrameter Location *source side*
Type of Material *steel* Group No. *1* Penetrameter *(2)#20* Group No. *1*
Wall Thickness *1 in* Total Exposure Thickness *1 1/2 in* Shim(s)/Reinforcement *0*
Source of Radiation *X-ray* Curies *N/A* No of Exp *2* per weld *2* Total
Focal Spot *4.0mm* KV *300* MA *10* Angle of Source *90* Degrees
Mfr of Machine *Philips* Exposure Type *single* wall Location of Markers *source side*
Standard *AWS D1.5* Object to Film Distance *1 1/2 in* Film to source Distance *36 inches*
Time of Exposure *1.4 minutes* Type of film *Agfa D7* No. of film *2* Screens *Pb.010 x .010 in*
Acceptance Standard *AWS D1.5* Radiograph Status *original* View Type *single*
Remarks: *FCM*

Serial and Film Number	Acceptable	Rejectable	Cracks	Lack of Pent.	Lack of Fusion	Slag Inclusion	Porosity	Suck - up	Burn Through	Undercutting	Tungsten	Film Artifacts	2-2t Sensitivity	Retake	Remarks
MC#13 A-B	X						X						X		
B-C	X												X		

Radiographed By *M.Taylor*

Reported By *Bruce M. Richardson*
Bruce M. Richardson, Level III, 22385

Owner / Manufacturers Review
By ____ Date: ____

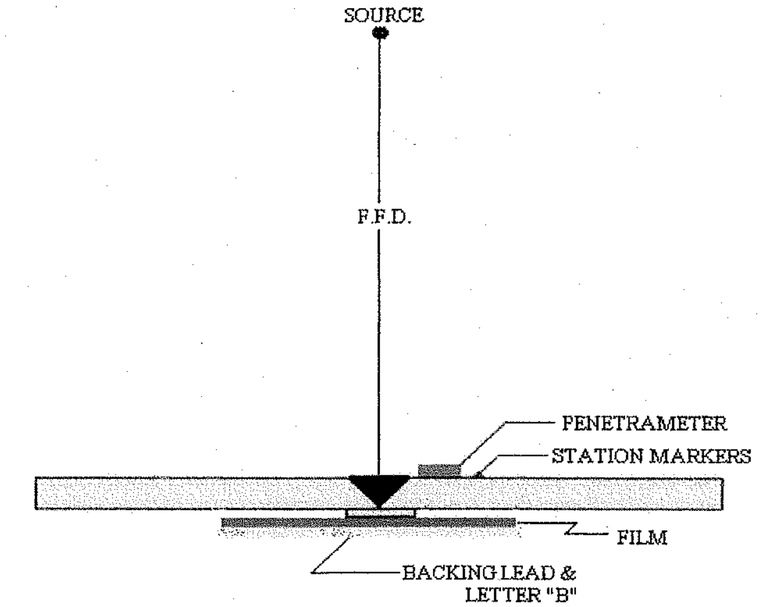
STRUCTURAL STEEL 75

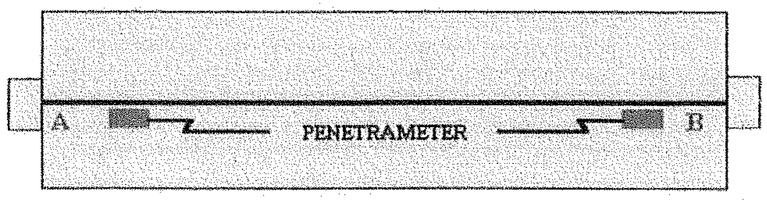
A.B.C. Testing, Inc.

95 FIRST STREET • P.O. BOX 868 • BRIDGEWATER, MASSACHUSETTS 02324
TELEPHONE 508 - 697 - 6068 • FAX # 508 - 697 - 6154

Radiographic Shooting Sketch

Client: L.B. Foster Co., Inc.
Purchase order: 3507
Object: 1 inch PQR plate
RT date: December 4, 2009





Technique variables data

Source: X-ray
Penetrameter: (2)#20
Film type: Agfa D7
Focal Film distance: 36 inches
Shim: 0

Vermont Agency of Transportation
RECEIVED
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11:43 am, Jul 11, 2011
RESUBMIT ____ APPROVED X
BY CWC, Proj. Mgr. DATE 07/19/11

STRUCTURAL STEEL 76

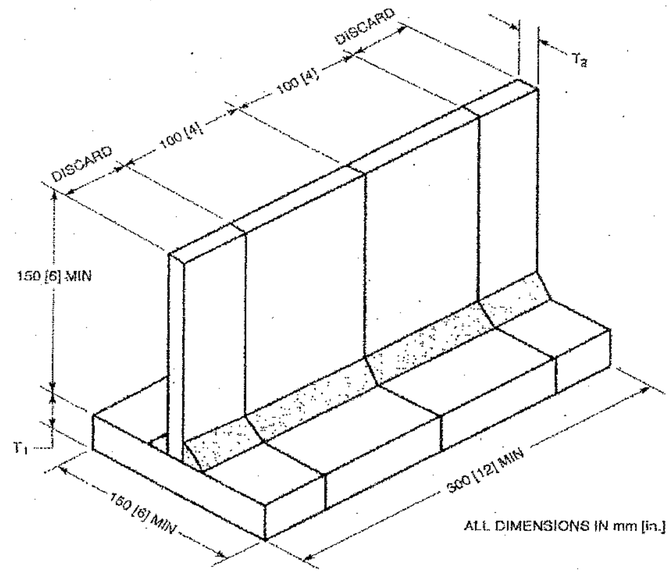
A B C Testing Inc.

95 FIRST STREET • P.O. BOX 868 • BRIDGEWATER, MASSACHUSETTS 02324
TELEPHONE 508 - 697 - 6068 • FAX # 508 - 697 - 6154

FILLET PROCEDURE QUALIFICATION REPORT

TO *L.B. Foster Company*
3 Farm Lane
Georgetown, MA 01833

Client's Order No. *transmittal (W. Borkowski)*
ABC Project No. *124009*
Date *December 23, 2009*



Welders Name: *Mariano Cepeda*

Material & Dimensions: *ASTM A709, grade 50 (T_1 = 1 inch, T_2 = 1 inch)*

Figure number: *figure 5.8*

Position: *horizontal (2F)*
Visual test result: *acceptable*
Macroetch result: *acceptable (3 locations)*
Remarks:

All testing was conducted in accordance with the referenced Standard

Vermont Agency of Transportation

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BY CWC, Proj. Mgr. **DATE** 07/19/11

By: Bruce M. Richardson
Bruce M. Richardson

STRUCTURAL ~~BRIDGE~~ 77
STEEL

GENERAL NOTES

SPECIFICATIONS

ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS AND STANDARD SPECIFICAIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002 AND ITS LATEST REVISIONS. △1

ALL WELDING SHALL BE IN ACCORDANCE WITH THE CURRENT STRUCTURAL WELDING CODE ANSI/AASHTO/AWS D1.5. AND THR PROVISIONS OF SUBSECTION 506.10

MATERIAL SPECIFICATIONS

ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M270 GR 50 (U.O.N.).

ALL BOLTS FOR THIS PROJECT SHALL BE HIGH STRENGTH HEX HEAD BOLTS AND CONFORM TO ASTM A325 TYPE 1. MECHANICALLY GALVANIZED AND AASHTO DESIGNATION M164M △1

FABRICATION

CVN- INDICATES CHARPY V-NOTCH TESTED FOR ZONE 2, IN ACCORDANCE WITH SUBSECTION 714.01 OF THE STANDARD SPECIFICATIONS.

MAIN LOAD CARRYING MEMBERS ARE ALL STRINGER BEAMS.

THE BOTTOM FLANGE OF STEEL BEAMS AT BEARING AREAS SHALL BE SHOP STRAIGHTENED AS NECESSARY TO PROVIDE UNIFORM CONTACT BETWEEN THE BEAM FLANGE & THE BEARING AT THE BRIDGE SEAT.

REMOVE SURFACE OF FLAME HARDENED STEEL BY GRINDING TO EXTENT NECESSARY TO ACHIEVE THE SPECIFIED SURFACE PROFILE.

ERECTION NOTES

ALL CONNECTION ARE BEING MADE WITH HIGH STRENGTH BOLTS NOTED ABOVE WITH ONE (1) HARDENED WASHER (ASTM F436 TYPE 1) TO BE PLACED UNDER THE TURNED ELEMENT.

SHIPPING MARK NUMBER WILL BE LOCATED AS SHOWN ON ERECTION PLANS.

CLEANING

ALL STEEL SHALL BE CLEANED IN ACCORDANCE WITH SSPC-SP10 BLAST CLEANING PRIOR TO PAINTING

PAINT

DRY FILM THICKNESS:

PRIMER: 3-10 MILS (3-5 MIN)------CAR80 859 △1

INTERMEDIATE: 4-6 MILS------CARBOLINE 888

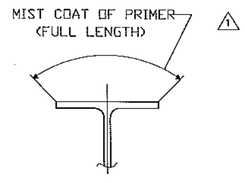
FINISH: 3-5 MILS------CARBOTHANE 133HB ALIPHATIC POLYURETHANE
COLOR 20059 (BROWN) OF FEDERAL STANDARD 595B.

PAINTED AREAS:

FAYING AREAS WITHIN 3" OF OPEN HOLES SHALL BE GIVEN A COAT OF PRIMER PAINT ONLY.

THE TOP OF TOP FLANGE OF BEAMS WHICH ARE TO RECEIVE FIELD WELDED STUDS SHALL BE GIVEN A MIST COAT (1-1½ MILS) OF PRIMER PAINT ONLY.
(SEE DETAIL 1 BELOW)

ITEM NO.	DESCRIPTION	
506.50	Structural Steel, Rolled Beam	PER KG
513.25	Structural Steel Paint Shop Applied	LS
513.40	Surface Preparation Shop	LS



DETAIL 1

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
8:02 am, Jul 25, 2011
RESUBMIT ____ APPROVED X
BY CWC DATE 07/25/11

REV.NO	DATE	REVISION
3		
2		
1	7.21.11	APPROVER COMMENTS

GENERAL NOTES

SILVER ST. BRDG – HINESBURG
STATE OF VERMONT
PROJECT No. STP 0199(2)

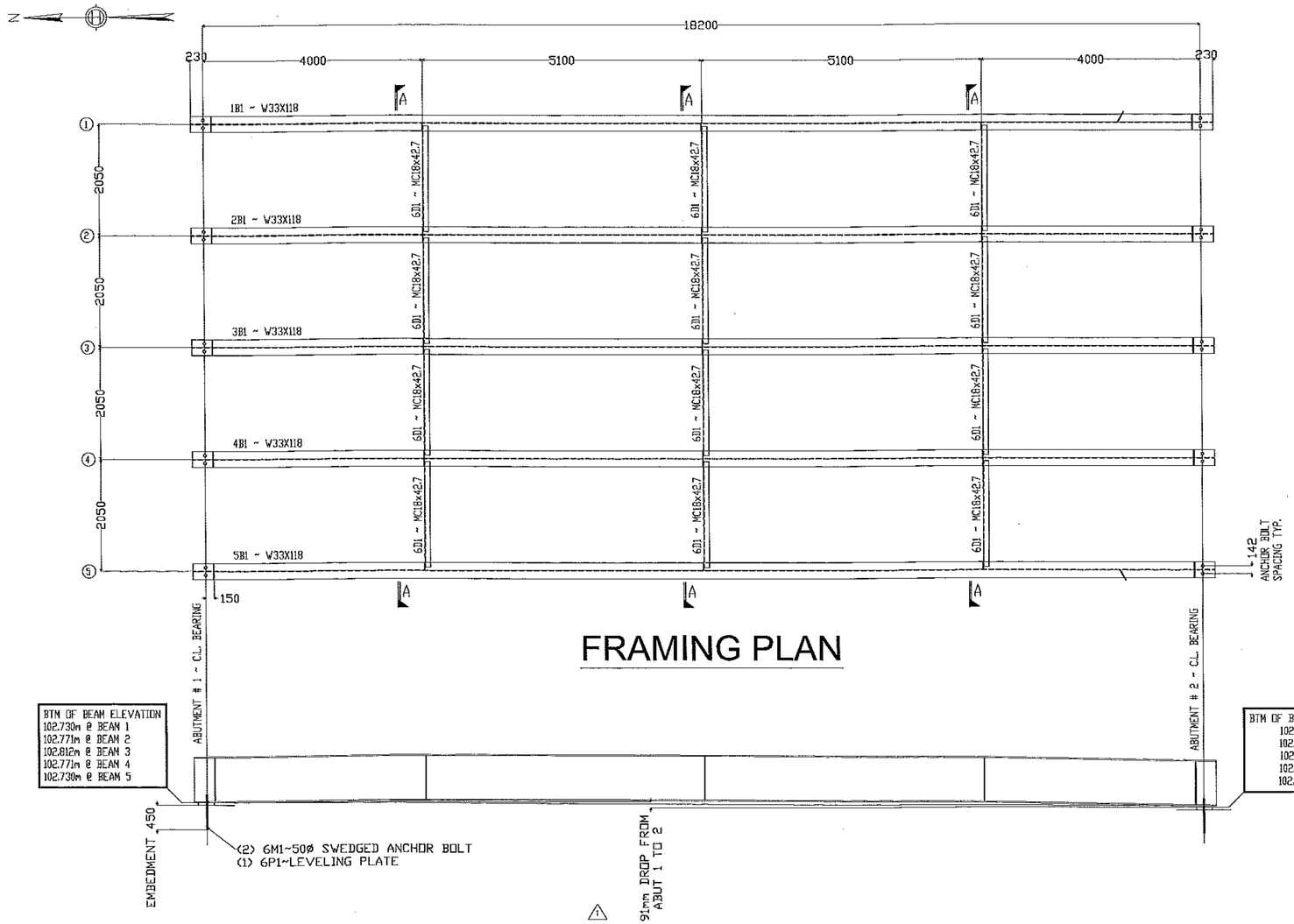
PRECISE STRUCTURAL PRODUCTS
3 FARM LANE
GEORGETOWN, MA 01833
978-352-2591

OWNER: VT AGENCY OF TRANSPORTATION
CONTRACTOR: A.L. ST.ONGE CONTRACTORS, INC

DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
KC 06/24/11	WL 06/28/11				3578	GN1

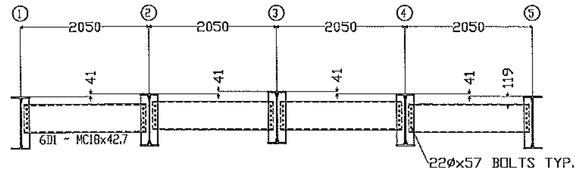
STRUCTURAL STEEL 78

FIELD BOLT SUMMARY					NOTE: 4% ADDITIONAL BOLTS ADDED + 3 FOR TESTING	
LINE	No. OF BOLTS	BOLT DIAM.	TYPE	BOLT LENGTH	ACTUAL COUNT	REMARKS
1	128	22	ASTM – A325 MC	57	120	w / 1 FLAT WASHER
2	–	–	–	–	–	–
3	–	–	–	–	–	–
4	–	–	–	–	–	–



FRAMING PLAN

GIRDER ELEVATION



SECTION A-A

Vermont Agency of Transportation

RECEIVED

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2		
1	7.21.11	APPROVER COMMENTS

ERECTION DRAWING

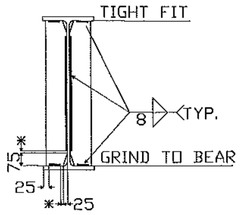
SILVER ST. BRDG – HINESBURG
STATE OF VERMONT
PROJECT No. STP 0199(2)

PRECISE STRUCTURAL PRODUCTS
3 FARM LANE
GEORGETOWN, MA 01833
978-352-2591

OWNER: VT AGENCY OF TRANSPORTATION
CONTRACTOR: A.L. ST.ONGE CONTRACTORS, INC

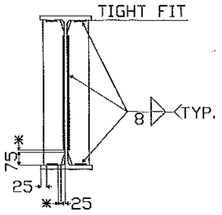
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
KC 06/24/11	WL 06/28/11				3578	E1

STRUCTURAL STEEL 79



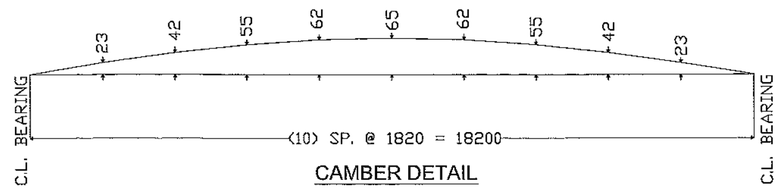
TYP. ABUTMENT STIFFENER WELD DETAIL (AT ENDS OF BEAM)

* NO WELD FOR 6mm MIN. OR 13mm MAX.



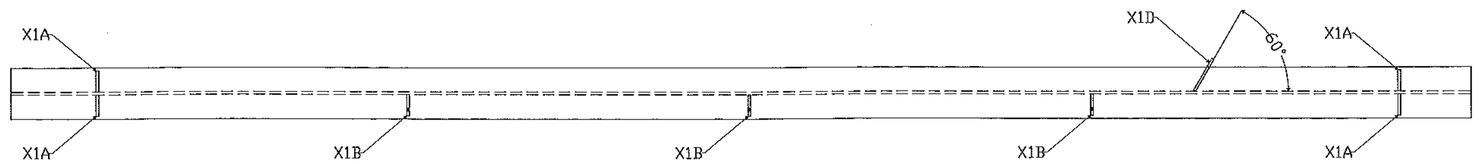
TYP. DIAPHRAGM STIFFENER WELD DETAIL

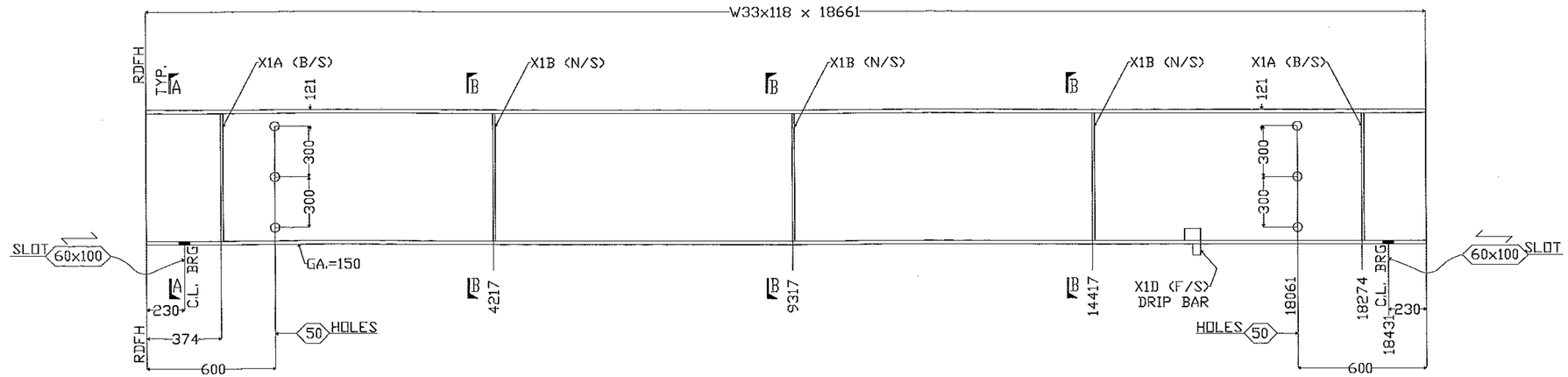
* NO WELD FOR 6mm MIN. OR 13mm MAX.



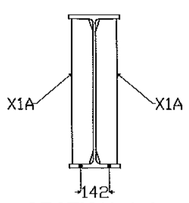
CAMBER DETAIL

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
1	1B1			W33x118	18661	CVN		
		4	X1A	PL13x130	797			
		3	X1B	PL13x130	797			
		1	X1D	PL25x69	210			

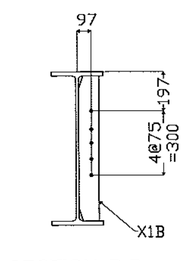




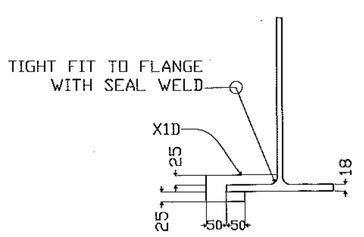
ONE ~ GIRDER DETAIL ~ 1B1



SECTION A-A



SECTION B-B



DETAIL OF DRIP BAR ⚠1

Vermont Agency of Transportation

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8:02 am, Jul 25, 2011

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BY CWC DATE 07/25/11

SHOP NOTE: DIM'S SHOWN ARE IN METRIC (mm)

SHOP NOTES

HOLES: 24ø UON
BOLTS: PER GN1
PAINT: PER GN1
WELDS: ER 80S-Ni1
MATERIAL: M270 GR.50

REV.NO	DATE	REVISION
3		
2		
1	7.21.11	APPROVER COMMENTS

GIRDER DETAIL

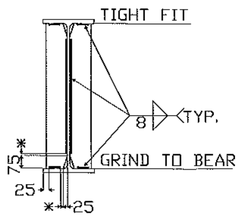
SILVER ST. BRDG – HINESBURG
STATE OF VERMONT
PROJECT No. STP 0199(2)

PRECISE STRUCTURAL PRODUCTS
3 FARM LANE
GEORGETOWN, MA 01833
978-352-2591

OWNER: VT AGENCY OF TRANSPORTATION
CONTRACTOR: A.L. ST.ONGE CONTRACTORS, INC

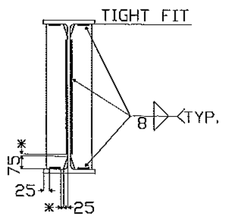
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
KC 06/24/11	WL 06/28/11				3578	1

STRUCTURAL STEEL 80



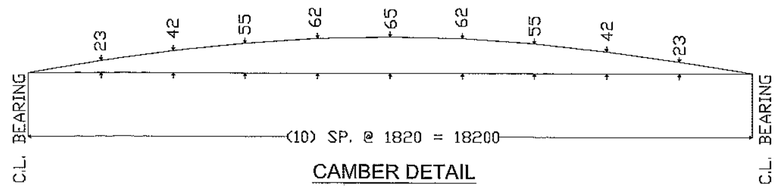
TYP. ABUTMENT STIFFENER
WELD DETAIL (AT ENDS OF BEAM)

* NO WELD FOR 6mm MIN.
OR 13mm MAX.



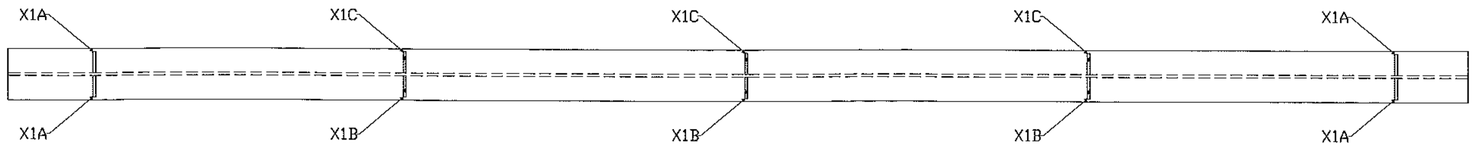
TYP. DIAPHRAGM STIFFENER
WELD DETAIL

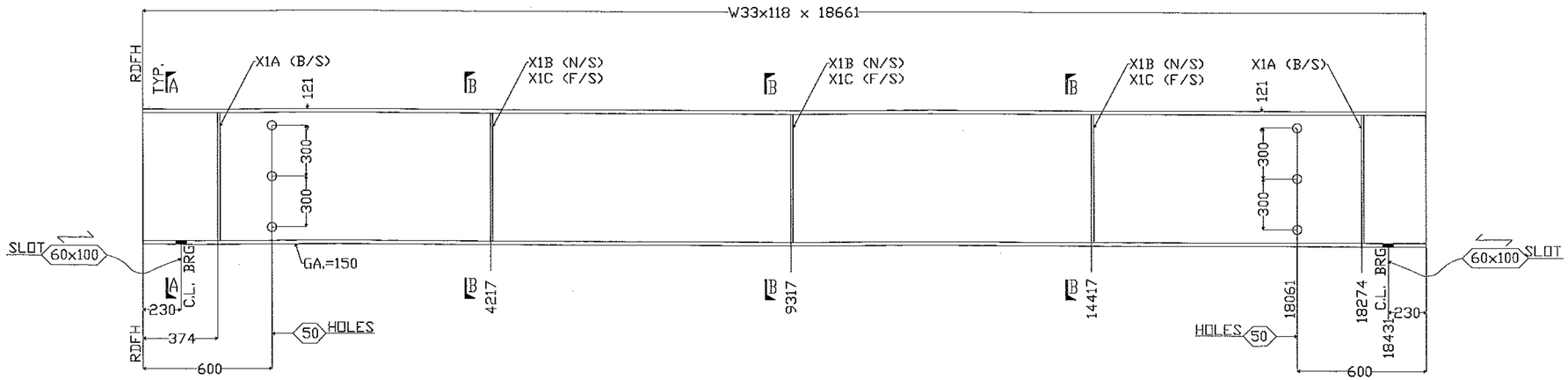
* NO WELD FOR 6mm MIN.
OR 13mm MAX.



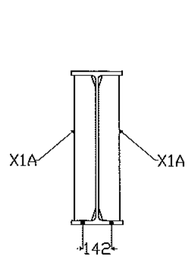
CAMBER DETAIL

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
1	2B1			W33x118	18661	CVN		
		4	X1A	PL13x130	797			
		3	X1B	PL13x130	797			
		3	X1C	PL13x130	797			

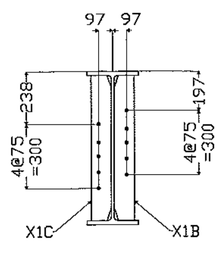




ONE ~ GIRDER DETAIL ~ 2B1



SECTION A-A



SECTION B-B

Vermont Agency of Transportation
RECEIVED
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RESUBMIT APPROVED X
BY CWC DATE 07/25/11

SHOP NOTE: DIM'S SHOWN ARE IN METRIC (mm)

SHOP NOTES
HOLES: 24ø UON
BOLTS: PER GN1
PAINT: PER GN1
WELDS: ER 80S-Ni1
MATERIAL: M270 GR.50

REV.NO	DATE	REVISION
3		
2		
1	7.21.11	APPROVER COMMENTS

GIRDER DETAIL

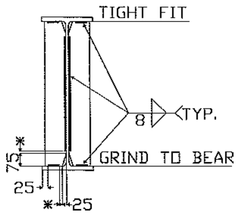
SILVER ST. BRDG – HINESBURG
STATE OF VERMONT
PROJECT No. STP 0199(2)

PRECISE STRUCTURAL PRODUCTS
3 FARM LANE
GEORGETOWN, MA 01833
978-352-2591

OWNER: VT AGENCY OF TRANSPORTATION
CONTRACTOR: A.L. ST.ONGE CONTRACTORS, INC

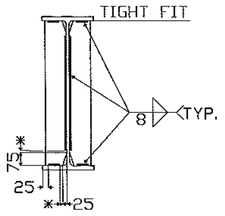
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
KC 06/24/11	WL 06/28/11				3578	2

STRUCTURAL STEEL 81



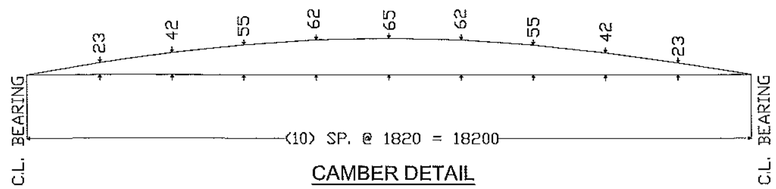
TYP. ABUTMENT STIFFENER
WELD DETAIL (AT ENDS OF BEAM)

* NO WELD FOR 6mm MIN.
OR 13mm MAX.



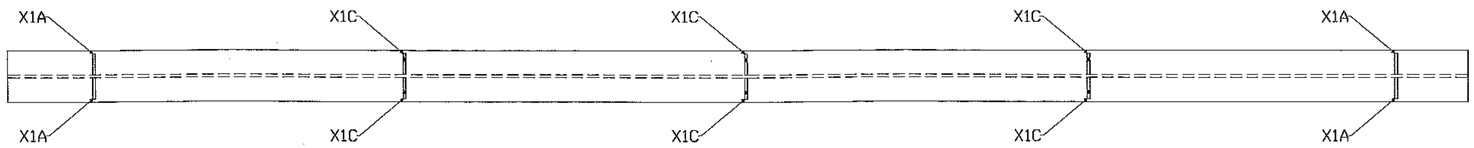
TYP. DIAPHRAGM STIFFENER
WELD DETAIL

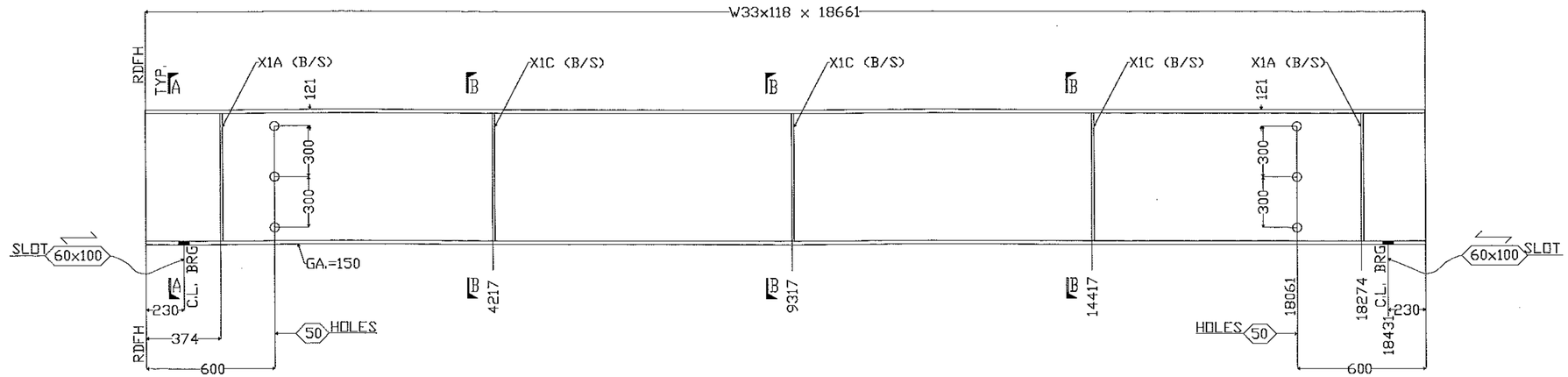
* NO WELD FOR 6mm MIN.
OR 13mm MAX.



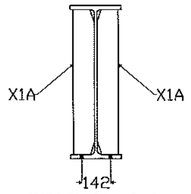
CAMBER DETAIL

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
1	3B1			W33x118	18661	CVN		
		4	X1A	PL13x130	797			
		6	X1C	PL13x130	797			

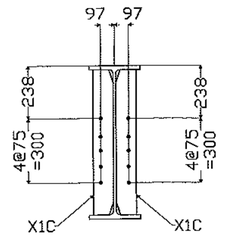




ONE ~ GIRDER DETAIL ~ 3B1



SECTION A-A



SECTION B-B

Vermont Agency of Transportation
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SHOP NOTE: DIM'S SHOWN ARE IN METRIC (mm)

SHOP NOTES
HOLES: 24ø UON
BOLTS: PER GN1
PAINT: PER GN1
WELDS: ER 80S-Ni1
MATERIAL: M270 GR.50

REV.NO	DATE	REVISION
3		
2		
1	7.21.11	APPROVER COMMENTS

GIRDER DETAIL

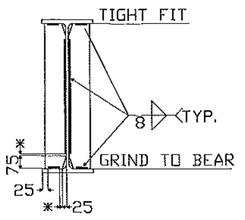
SILVER ST. BRDG - HINESBURG
STATE OF VERMONT
PROJECT No. STP 0199(2)

PRECISE STRUCTURAL PRODUCTS
3 FARM LANE
GEORGETOWN, MA 01833
978-352-2591

OWNER: VT AGENCY OF TRANSPORTATION
CONTRACTOR: A.L. ST.ONGE CONTRACTORS, INC

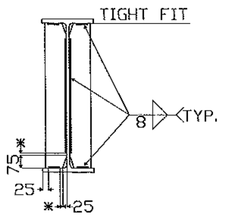
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
KC 06/24/11	WL 06/28/11				3578	3

STRUCTURAL STEEL 8B



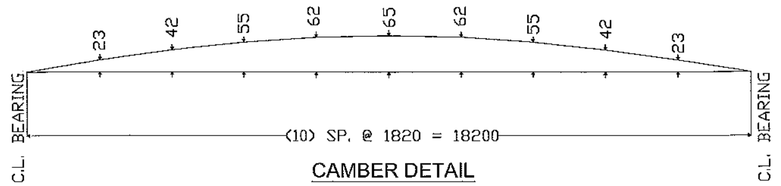
TYP. ABUTMENT STIFFENER
WELD DETAIL (AT ENDS OF BEAM)

* NO WELD FOR 6mm MIN.
OR 13mm MAX.



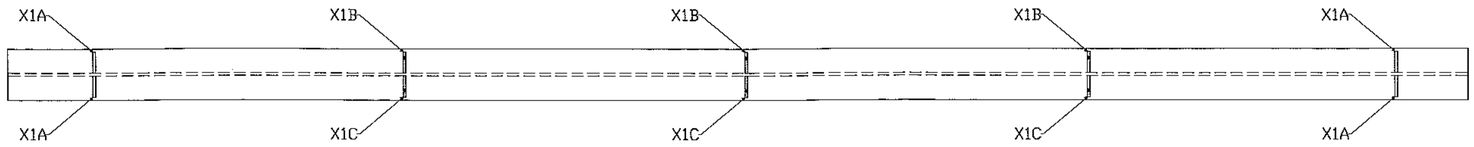
TYP. DIAPHRAGM STIFFENER
WELD DETAIL

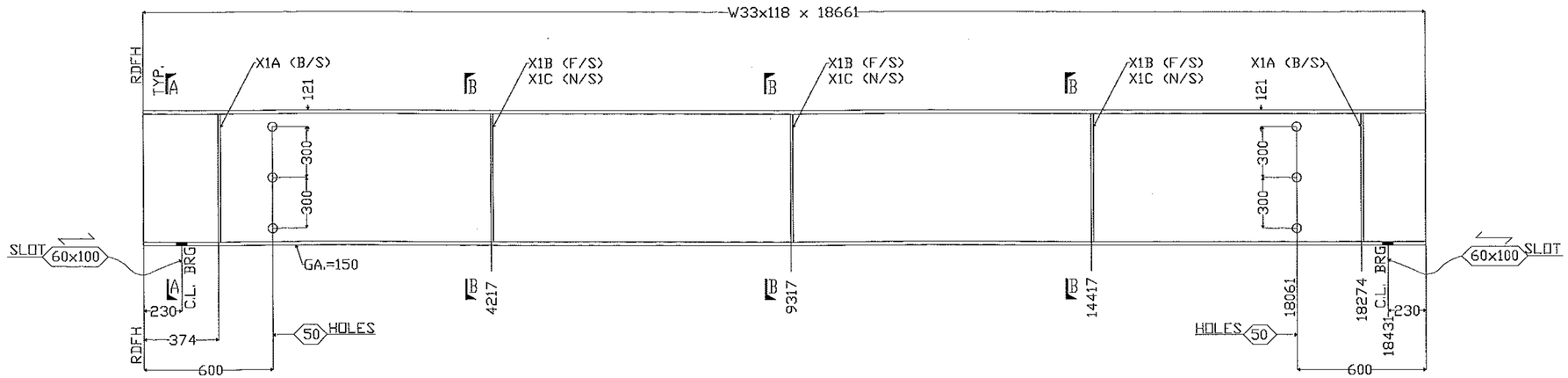
* NO WELD FOR 6mm MIN.
OR 13mm MAX.



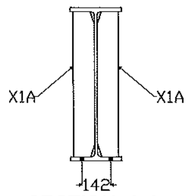
CAMBER DETAIL

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
1	4B1			W33x118	18661	CVN		
		4	X1A	PL13x130	797			
		3	X1B	PL13x130	797			
		3	X1C	PL13x130	797			

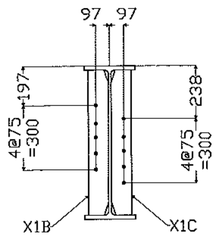




ONE ~ GIRDER DETAIL ~ 4B1



SECTION A-A



SECTION B-B

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
8:02 am, Jul 25, 2011
RESUBMIT APPROVED X
BY CWC DATE 07/25/11

SHOP NOTE: DIM'S SHOWN ARE IN METRIC (mm)

SHOP NOTES
HOLES: 24ø UON
BOLTS: PER GN1
PAINT: PER GN1
WELDS: ER 80S-Ni1
MATERIAL: M270 GR.50

REV.NO	DATE	REVISION
3		
2		
1	7.21.11	APPROVER COMMENTS

GIRDER DETAIL

SILVER ST. BRDG – HINESBURG
STATE OF VERMONT
PROJECT No. STP 0199(2)

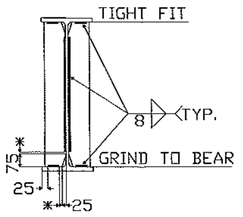
PRECISE STRUCTURAL PRODUCTS
3 FARM LANE
GEORGETOWN, MA 01833
978-352-2591

OWNER: VT AGENCY OF TRANSPORTATION
CONTRACTOR: A.L. ST.ONGE CONTRACTORS, INC

DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
KC 06/24/11	WL 06/28/11				3578	4

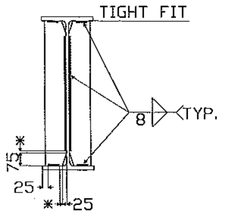
STRUCTURAL STEEL

83



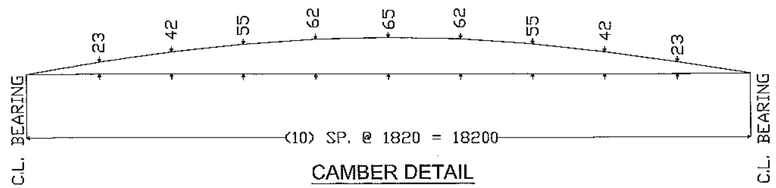
TYP. ABUTMENT STIFFENER
WELD DETAIL (AT ENDS OF BEAM)

* NO WELD FOR 6mm MIN.
OR 13mm MAX.



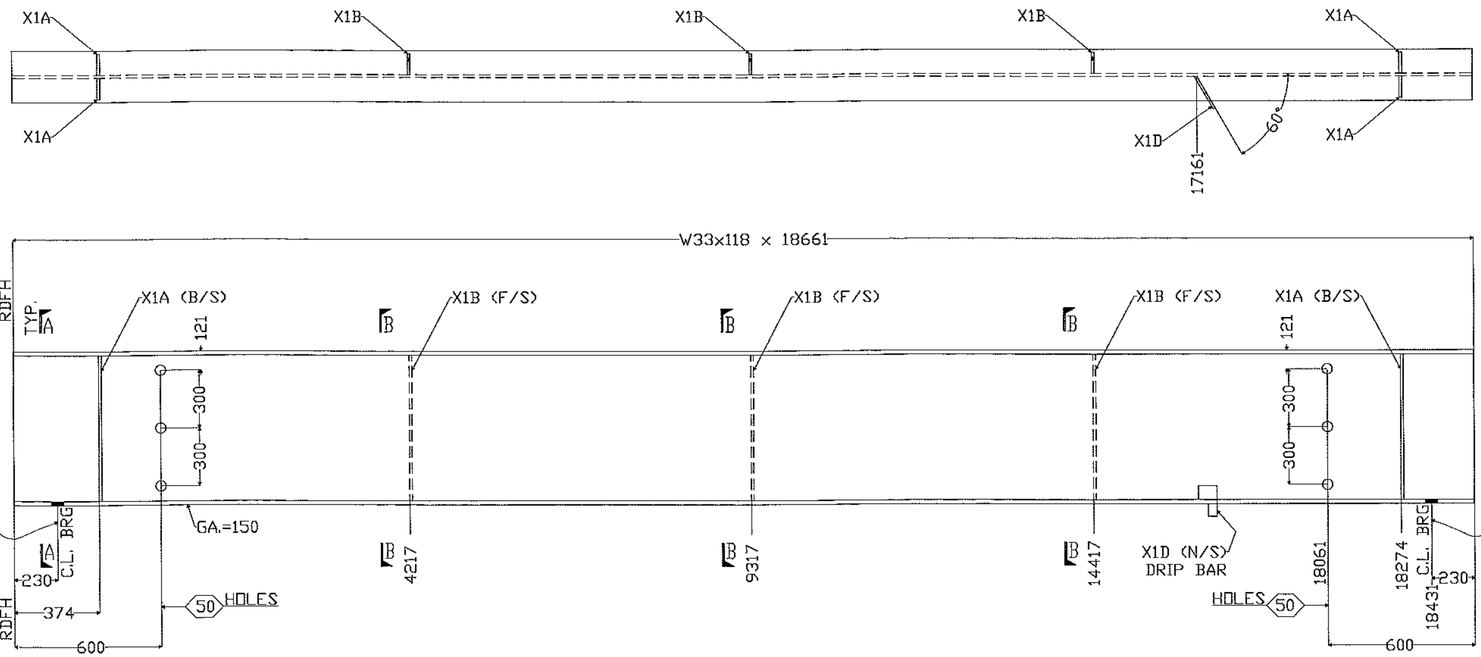
TYP. DIAPHRAGM STIFFENER
WELD DETAIL

* NO WELD FOR 6mm MIN.
OR 13mm MAX.

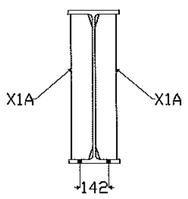


CAMBER DETAIL

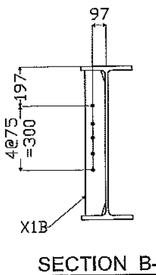
SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
1	5B1			W33x118	18661	CVN		
		4	X1A	PL13x130	797			
		3	X1B	PL13x130	797			
		1	X1D	PL25x69	210			



ONE ~ GIRDER DETAIL ~ 5B1



SECTION A-A



SECTION B-B

Vermont Agency of Transportation

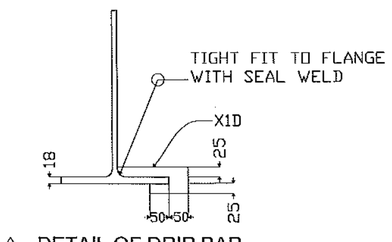
RECEIVED

CK'D BY WDL OK'D BY GS

8:02 am, Jul 25, 2011

RESUBMIT ____ APPROVED X

BY CWC DATE 07/25/11



⚠1 DETAIL OF DRIP BAR

SHOP NOTE: DIM'S SHOWN ARE IN METRIC (mm)

SHOP NOTES
HOLES: 24ø UON
BOLTS: PER GN1
PAINT: PER GN1
WELDS: ER 80S-Ni1
MATERIAL: M270 GR.50

REV.NO	DATE	REVISION
3		
2		
1	7.21.11	APPROVER COMMENTS

GIRDER DETAIL

SILVER ST. BRDG – HINESBURG
STATE OF VERMONT
PROJECT No. STP 0199(2)

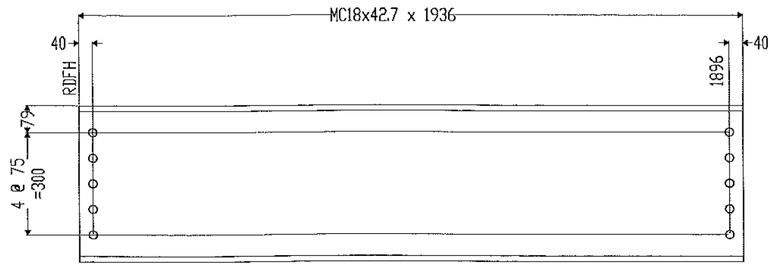
PRECISE STRUCTURAL PRODUCTS
3 FARM LANE
GEORGETOWN, MA 01833
978-352-2591

OWNER: VT AGENCY OF TRANSPORTATION
CONTRACTOR: A.L. ST.ONGE CONTRACTORS, INC

DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
KC 06/24/11	WL 06/28/11				3578	5

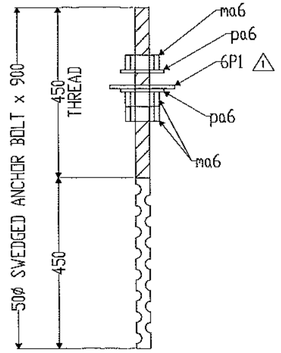
STRUCTURAL STEEL.

84



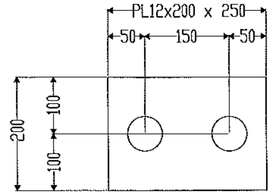
12 ~ DIAPHRAGMS ~ 6D1

3 COAT



20 ~ ANCHOR BOLTS ~ 6M1

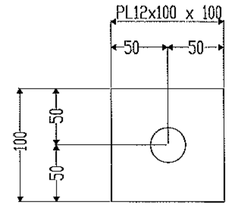
GALVANIZED



10 ~ LEVELING PLATE ~ 6P1

HOLES TO BE 60mmø
PRIMER ONLY

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
12	6D1			MC18x42.7	1936			
20	6M1			50ø SWEDGED ANCHOR BOLT	900	GALV A307		
		60	ma6	50ø HHN		GALV		
		40	pa6	PL12x100	100	M270 GR 250		
10	6P1			PL12x200	250	M270 GR 250		



DETAIL OF "pa6"

HOLES TO BE 55mmø
PRIMER ONLY

Vermont Agency of Transportation

RECEIVED

CK'D BY WDL OK'D BY GS

8:02 am, Jul 25, 2011

RESUBMIT ____ APPROVED X

BY CWC DATE 07/25/11

SHOP NOTE: DIM'S SHOWN ARE IN METRIC (mm)

SHOP NOTES

HOLES: 24ø UON

BOLTS: PER GN1

PAINT: PER GN1

WELDS: N.A.

MATERIAL: M270 GR.50 UON

REV.NO	DATE	REVISION
3		
2		
1	7.21.11	APPROVER COMMENTS

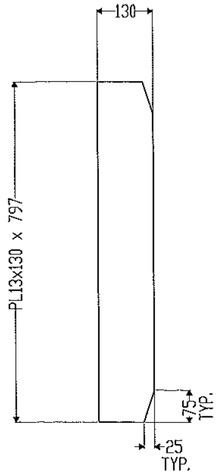
DIAPHRAGM DETAIL

SILVER ST. BRDG – HINESBURG
STATE OF VERMONT
PROJECT No. STP 0199(2)

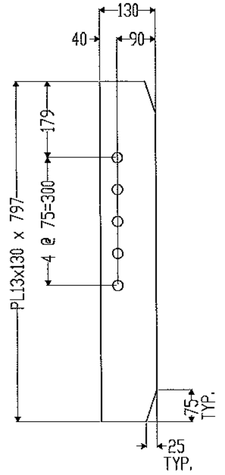
PRECISE STRUCTURAL PRODUCTS
3 FARM LANE
GEORGETOWN, MA 01833
978-352-2591

OWNER: VT AGENCY OF TRANSPORTATION
CONTRACTOR: A.L. ST.ONGE CONTRACTORS, INC

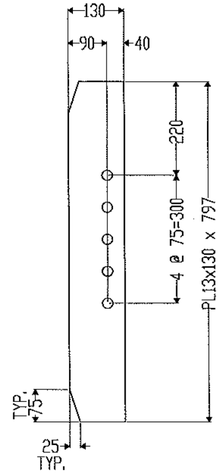
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
KC 06/24/11	WL 06/28/11				3578	6



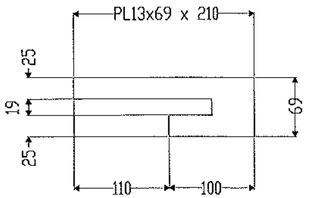
DETAIL OF "X1A" ~ 20 REQ'D



DETAIL OF "X1B" ~ 12 REQ'D



DETAIL OF "X1C" ~ 12 REQ'D



DETAIL OF "X1D" ~ 2 REQ'D

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
8:02 am, Jul 25, 2011
RESUBMIT ____ APPROVED X
BY CWC DATE 07/25/11

SHOP NOTE: DIM'S SHOWN ARE IN METRIC (mm)

SHOP NOTES
HOLES: 24ø UON
BOLTS: PER GN1
PAINT: PER GN1
WELDS: N.A.
MATERIAL: M270 GR.50

REV.NO	DATE	REVISION
3		
2		
1	-	-

DIAPHRAGM DETAIL

SILVER ST. BRDG – HINESBURG
STATE OF VERMONT
PROJECT No. STP 0199(2)

PRECISE STRUCTURAL PRODUCTS
3 FARM LANE
GEORGETOWN, MA 01833
978-352-2591

OWNER: VT AGENCY OF TRANSPORTATION
CONTRACTOR: A.L. ST.ONGE CONTRACTORS, INC

DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
KC 06/24/11	WL 06/28/11				3578	X1

BRIDGE .86
RAILING

VERMONT

State of Vermont
PDD/Structures Design Section
One National Life Drive
Montpelier, VT 05633-5001
www.aot.state.vt.us

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Agency of Transportation

July 14, 2011

L.B. Foster Co. via email
1016 Greentree Road
Pittsburg, PA 15220

Attn: Cathy Starr

Project Name: Hinesburg Project #: STP 0199(2)

Structure Identification: Bridge 10 on TH 4 over the LaPlatte River

The following "**Bridge Railing, Anodized 3 Rail Aluminum" and "Aluminum Approach Railing, Anodized details** for the above project (Vendor's Job **#AR0689)**, transmitted by F. R. Lafayette, and received by our office on July 13 and 14, 2011, have been reviewed and are being returned herewith.

Sheets: LB1 - LB17 are approved.

Welding Procedures have been received and we anticipate their approval next week. We understand these procedures have been submitted for review even though fabrication may be completed without any welding.

You must provide notice to our fabrication inspector Jeff Clark as to the date fabrication represented by these drawings will begin. Jeff may be contacted by phone at (802)828-0044 or email at jeff.clark@state.vt.us. That notice must be received at least seven days prior to that date, as per Specification 506.03. Any material fabricated prior to the notification date is subject to rejection without further cause.

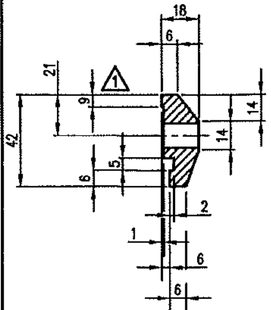
Sincerely,
Carolyn W. Carlson

Carolyn W. Carlson
Project Manager

Attachments
cc: [X] Resident Engineer – Vic Dwire – w/plans
[X] Shop Inspector - Jeff Clark w/plans
[X] Contractor – A.L. St. Onge Contractors, Inc. – w/plans
[X] Materials & Research (C&IA Unit) - letter only
[X] F. R. Lafayette, Inc. – Brent Tewksbury w/plans
[X] Construction Division - letter only
[X] Files (CWC)

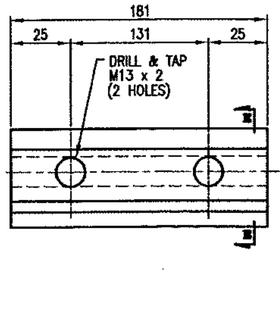
VTrans Working to Get You There
Vermont Agency of Transportation

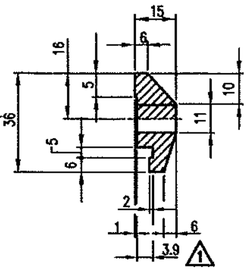
BRIDGE RAILING '87



SECTION 'E'-'E'

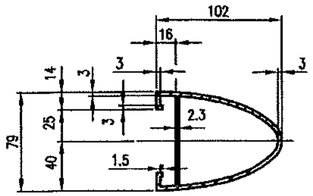
92 ~ REQ'D CLAMP BAR CB-03-A #19447
(BARRIER RAIL)



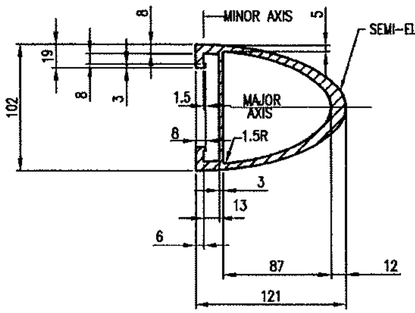


SECTION 'E'-'E'

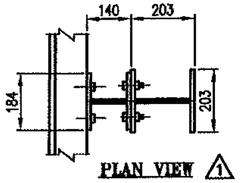
46 ~ REQ'D CLAMP BAR CB-01-H #28596
(HANDRAIL)



TYPICAL SECTION
(HANDRAIL)



TYPICAL SECTION
(BARRIER RAIL)



PLAN VIEW 1

GENERAL NOTES

ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006 AND ITS LATEST REVISIONS.

DESCRIPTION	ASTM	ALLOY/GR.	REMARKS
RAILS, POSTS, SPLICES, CLAMP BARS, PINS, & BALUSTER FRAMES	B221	6061-T6 OR 6351-T5	MIN. YIELD STRENGTH Fy = 240 MPa
BALUSTERS	B221	6061 OR 6063	T4 - USED FOR SUPERIOR EXPANDING QUALITIES
ANCHOR PLATE	A569		COMMERCIAL QUALITY (PLAIN)
SET SCREWS FOR BALUSTERS	F880	TYPE 303	
STAINLESS STEEL BOLTS	A193	GRADE B8	
STAINLESS HEX NUTS	A194	GRADE B8	
ANCHOR U-BOLTS	A449		GALV. A153
STEEL HEX. NUTS	A563	GRADE DH	GALV. A153
STEEL WASHERS	F436		GALV. A153
PLATE WASHERS	B209	2024-T3	ALCLAD
ALUMINUM WASHERS	B209	2024-T3	ALCLAD
END CAPS	B26		356-F
ELECTRODES FOR WELDING		AWS A5.10 ER5356	

POSTS TO BE NORMAL TO GRADE AND RAILS SHALL BE PARALLEL TO GRADE. RAILS TO BE ATTACHED TO A MINIMUM OF THREE POSTS WHEN POSSIBLE.

ALL RAILS AND WELDS TO BE FREE FROM ALL BURRS AND ROUGH EDGES. ENDS OF TUBE SECTIONS SHALL BE SAWED OR MILLED. GRIND ALL CUT EDGES SMOOTH.

ALL THREADS TO BE UNC CLASS 2A/2B.

ALL EXTRUSION TOLERANCES NOT SHOWN SHALL BE IN ACCORDANCE WITH ASTM B221.

IF CUT THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN THE ROOT DIAMETER OF THREADS

THE SPLICE BAR SHALL BE ATTACHED TO THE RAIL ELEMENT AS FOLLOWS:
THE RAIL SPLICE AT THE BRIDGE EXPANSION JOINT SHALL BE FASTENED ON BOTH SIDES OF THE RAIL SPLICE USING THE FULLY THREADED WASHER FACED BOLTS, TIGHTENED SECURELY TO THE END OF THREADS, AND LEAVING A 3mm GAP, THIS ALLOWS EXPANSION ON BOTH SIDES OF THE JOINT.

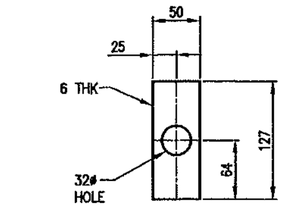
ALL NUTS SHALL COMPLY WITH AMERICAN HEXAGON ANSI SPECIFICATIONS B18.2

FASTENERS & HOLES WILL BE SUPPLIED IN STANDARD US EQUIVALENT UNITS FOR THE METRIC DESIGNATIONS.

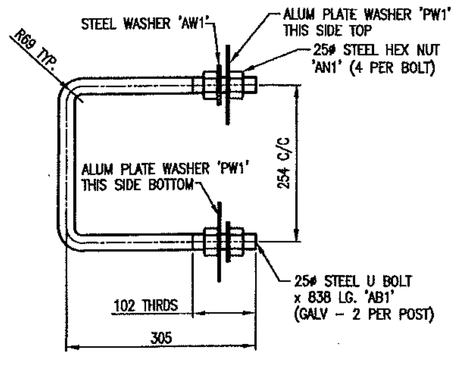
ANODIZED

- ALL ALUM. COMPONENTS SHALL BE ANODIZED TO A BLACK (HARD SATIN FINISH) COLOR, FED. STD. COLOR No. 27038. THE ANODIC COATING SHALL BE ARCHITECTURAL CLASS I WITH A MIN. THICKNESS OF 0.7 mils AND A MIN. WEIGHT OF 35 mg/sq in
- ALL VISIBLE STN. STL. HARDWARE SHALL BE FIELD PAINTED BLACK TO MATCH THE ANODIZED RAIL. TOUCH UP PAINT SHALL BE PROVIDED.
- SAMPLES SHALL BE SUBMITTED FOR THE ENGINEER'S APPROVAL.

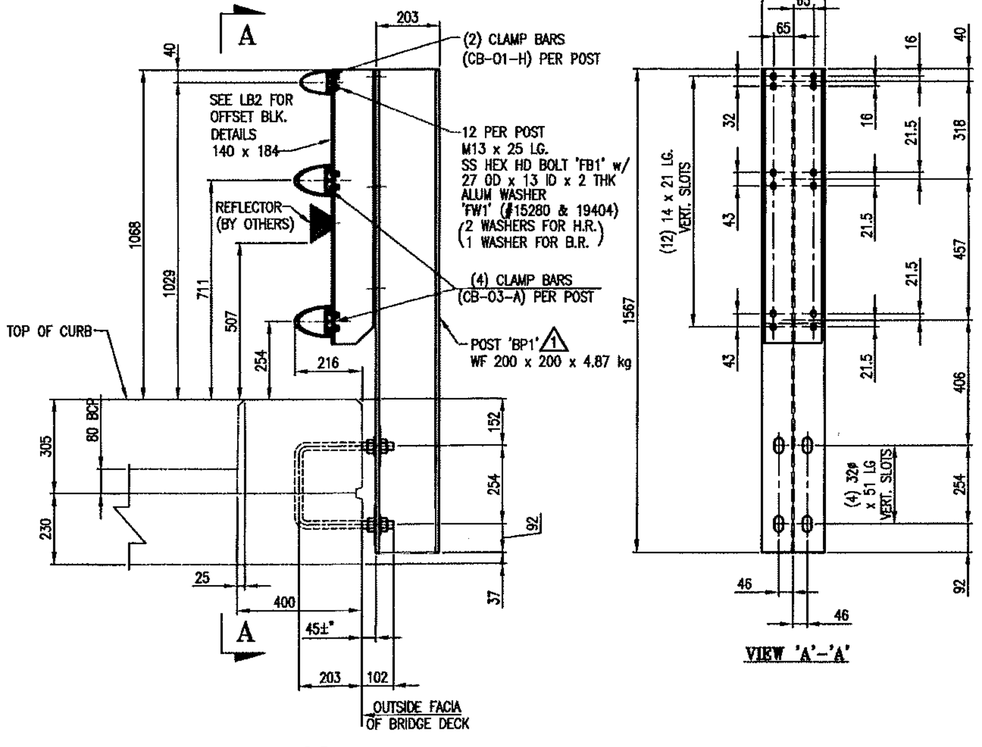
Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
7:54 am, Jul 13, 2011
RESUBMIT APPROVED X
BY CWC, Proj. Mgr. DATE 07/13/11
PROJECT No. STP 0199 (2) ITEM No: 525.225



92 ~ REQ'D ALUM. PLATE WASHER 'PW1'



46 ~ REQ'D ANCHOR BOLTS AB1



23 ~ REQ'D FABRICATED BRIDGE POSTS BP1 (SPECIAL)
(CURB)

VIEW 'A'-'A'

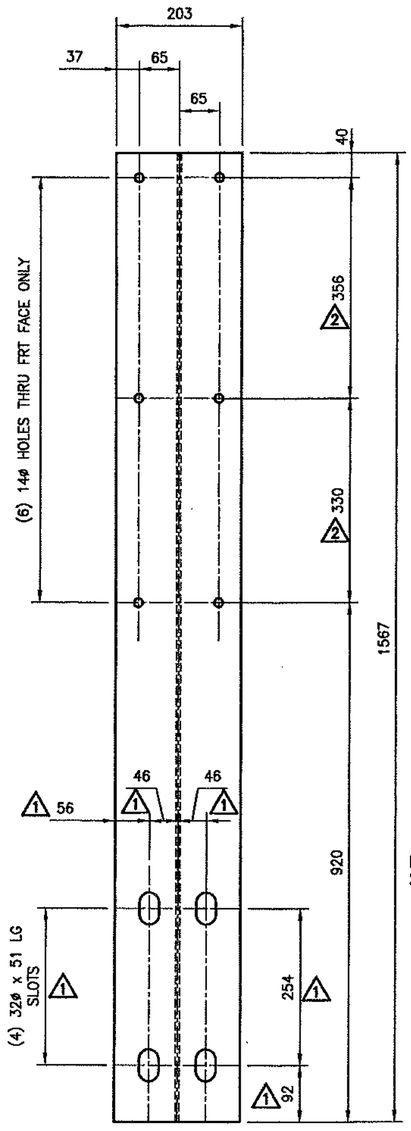
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

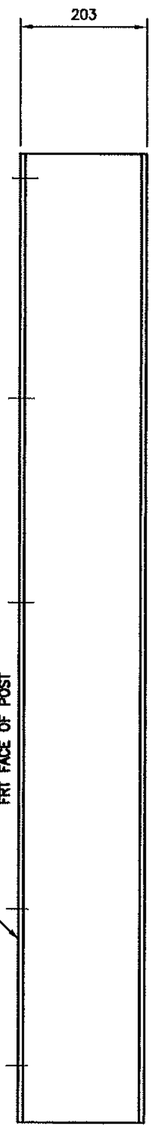
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
BRIDGE RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
3L ALUM BRIDGE RAILING ~ GENERAL NOTES & TYP. DETAILS

REV.	DESCRIPTION	BY	DATE
1	GENERAL REVISION PER APPROVAL MARKUPS	CMS	07 12 11

MADE CMS DATE 06/15/11 JOB No. AR0689 CUST. No.
CHECK DJ DATE 06/28/11 DRAWING LB1 REV. No. ONE



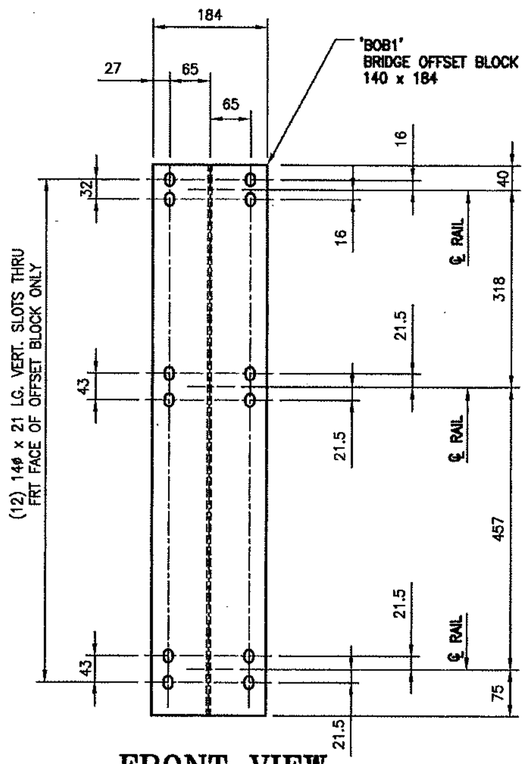
FRONT VIEW



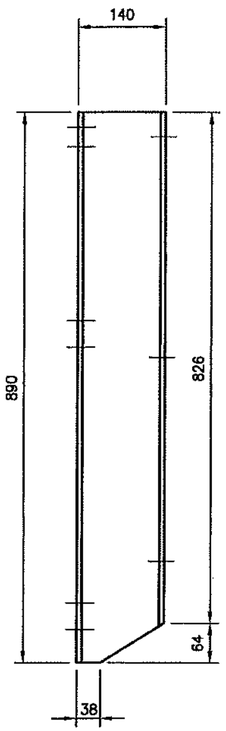
SIDE VIEW

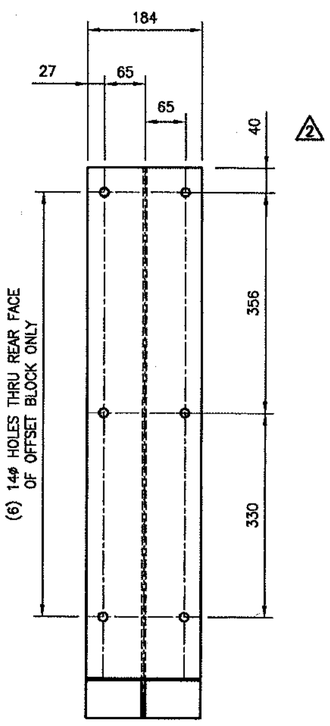
23 ~ REQ'D FABRICATED RAIL POSTS BP1 (SPECIAL)

(CURB SIDE)



FRONT VIEW

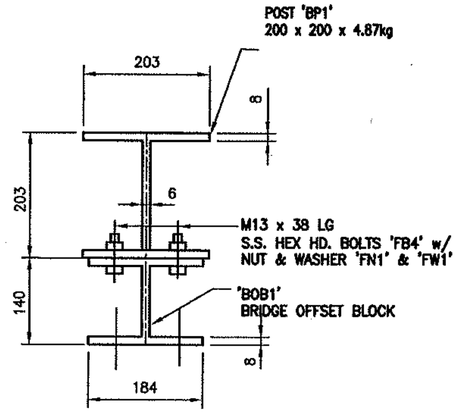




REAR VIEW

23 ~ REQ'D BRIDGE OFFSET BLOCK 'BOB1'

(CURB SIDE)



TYP. PLAN VIEW POST & BRIDGE OFFSET BLOCK

Vermont Agency of Transportation

RECEIVED

CK'D BY WDL OK'D BY GS

10:02 am, Jul 14, 2011

RESUBMIT APPROVED X

BY CWC, Proj. Mgr. DATE 07/14/11

ANODIZED

● (SEE LB01 FOR DETAILS)

PROJECT No. STP 0199(2) ITEM No: 525.225

APPROVED: REC'D APPROVAL DRAWING

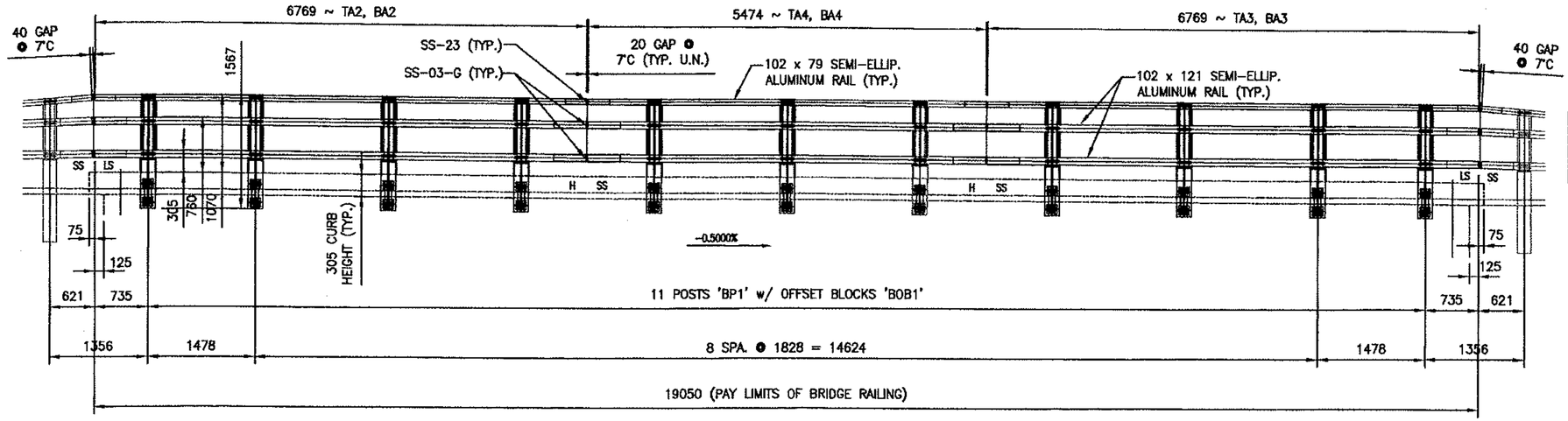
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN
BRIDGE RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJOR COLLECTOR), CLASS 2
OVER LAPLATTE RIVER ~ 31 ALUM BRIDGE RAILING ~ POST & OFFSET BLOCK DETAILS

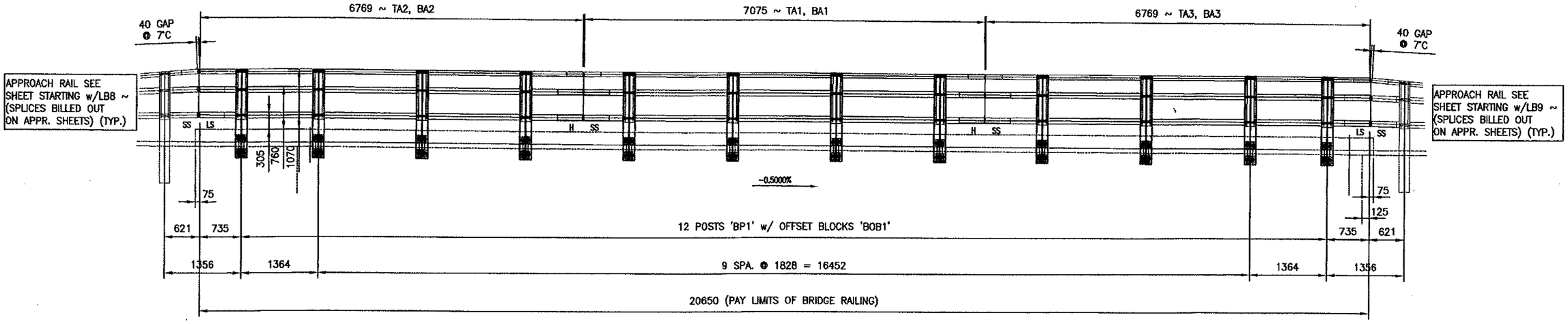
MADE CMS DATE 06/17/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB2 REV. No. 2

REV.	DESCRIPTION	BY	DATE
2	MOVED REAR HOLES PER APPROVAL MARKUPS	CMS	07 14 11
1	GENERAL REVISION PER APPROVAL MARKUPS	CMS	07 12 11

H = HOLE SIDE
SS = SHORT SLOTTED SIDE
LS = LONG SLOTTED SIDE



INSIDE ELEVATION ~ EAST RAIL



OUTSIDE ELEVATION ~ WEST RAIL

NOTE:
- THIS CONTRACT IS BASED UPON THE CONTRACTOR SETTING AND SPACING THE ANCHOR BOLTS TO THE MEASUREMENTS SHOWN ON THE APPROVED SHOP DRAWINGS. THE L.B. FOSTER CO. WILL NOT BE RESPONSIBLE FOR WORK NECESSITATED BY ANY OTHER SETTING AND SPACING.
- THIS DRAWING IS NOT TO SCALE.
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWING LB1 & LB2.
- LENGTH OF RAILING ON THIS SHEET IS 39700mm (130.25 LF) PAY LENGTH.
- POST SPACING IS MEASURED HORIZONTALLY ALONG BF OF PARAPET.
- SPLICE GAP AT SLEEVE = 19 TYP.
- * RAIL LENGTHS DO NOT INCLUDE GAPS.
- COMPENSATION FOR VERTICAL CURVE HAS BEEN INCLUDED IN RAIL LENGTHS

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
7:54 am, Jul 13, 2011
RESUBMIT ____ APPROVED X
BY CWC, Proj. Mgr. DATE 07/13/11

ANODIZED
(SEE LB1 FOR NOTES)

FOR RAILING KEY PLAN SEE DWG LB4

REV.	DESCRIPTION	BY	DATE

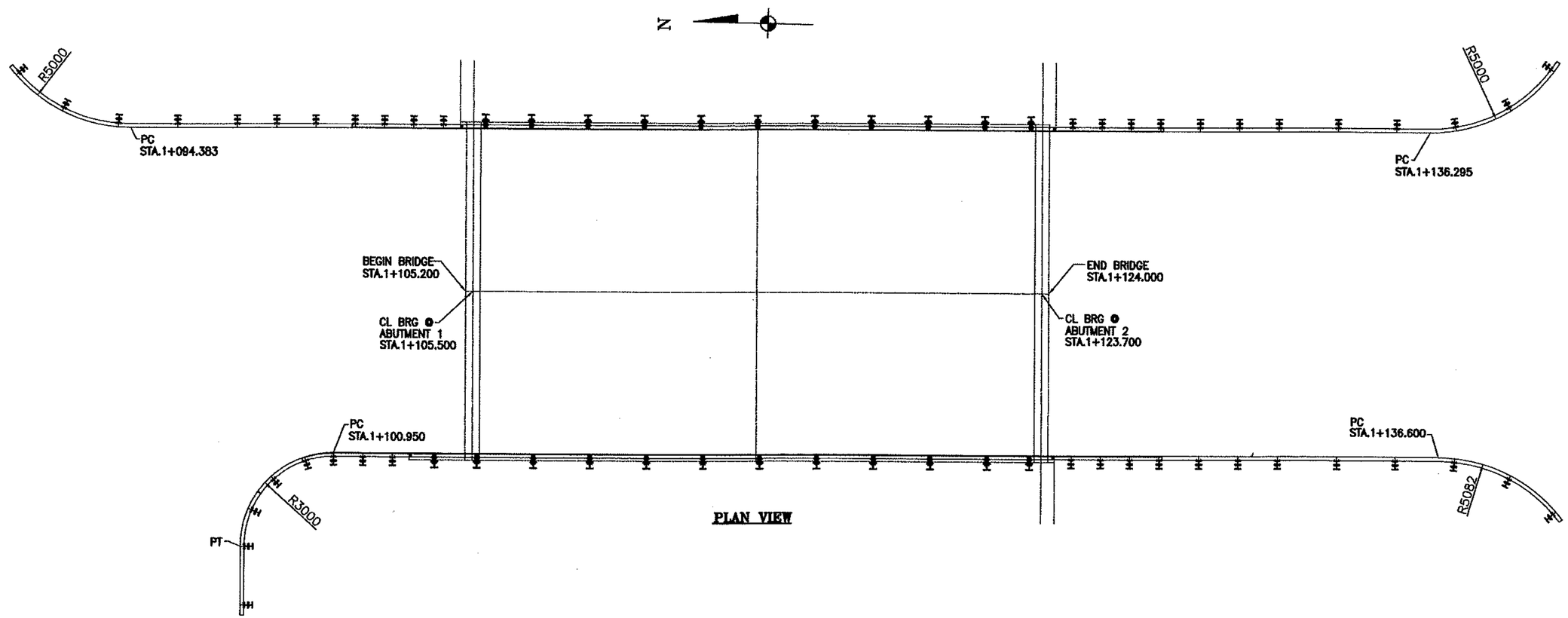
PROJECT No. STP 0199(2) ITEM No: 525.225

APPROVED: _____ REC'D APPROVAL ____ DRAWING ____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN
BRIDGE RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJOR COLLECTOR), CLASS 2
OVER LAPLATTE RIVER ~ 3L ALUM BRIDGE RAILING ~ ELEVATIONS

MADE CMS DATE 06/17/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB3 REV. No.



PLAN VIEW

ANODIZED
(SEE LB1 FOR NOTES)

PROJECT No. STP 0199(2)

ITEM Nos: 525.225
621.745

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

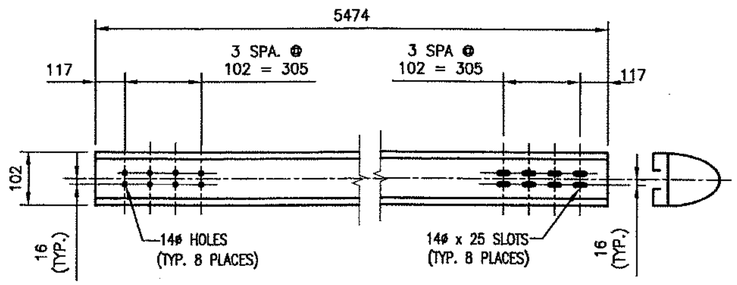
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN
BRIDGE RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJOR COLLECTOR), CLASS 2
OVER LAPLATTE RIVER ~ 3L ALUM BRIDGE RAILING ~ KEY PLAN

MADE CMS DATE 06/17/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB4 REV. No.

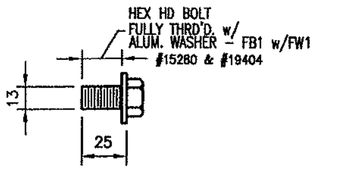
Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
7:54 am, Jul 13, 2011
RESUBMIT _____ APPROVED X
BY CWC, Proj. Mgr. DATE 07/13/11

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB1 & LB2

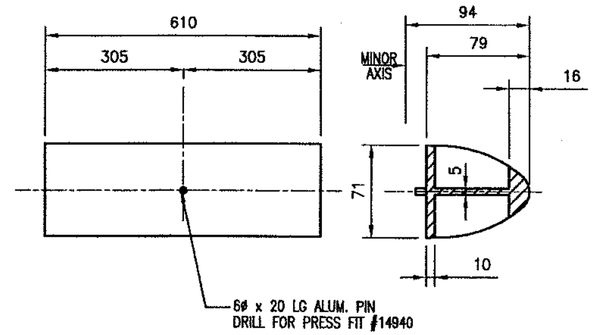
REV.	DESCRIPTION	BY	DATE



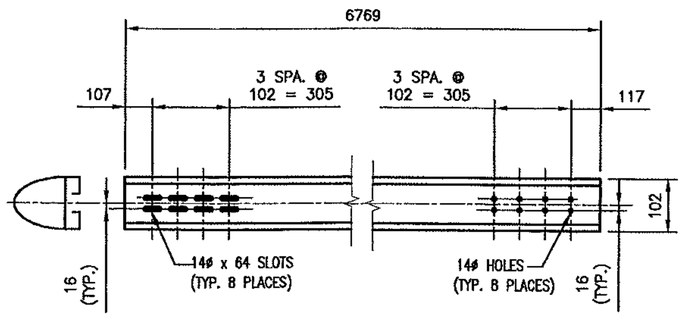
2 REQ'D. ~ RAIL 'BA4'
(BACK ELEVATION VIEW)



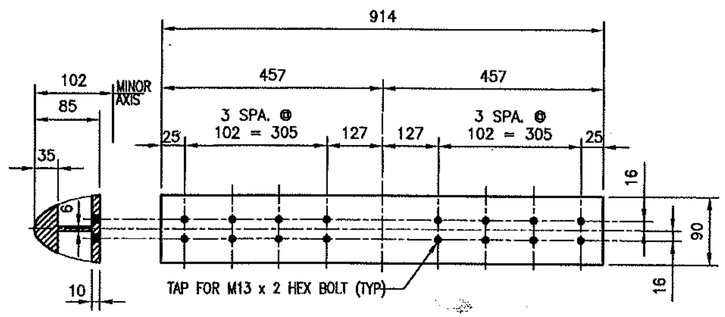
SPLICE BOLT DETAILS



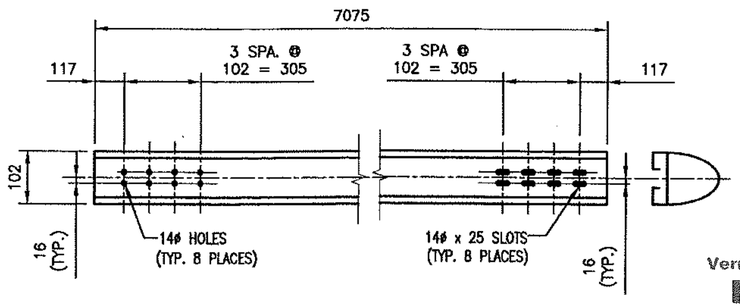
4 ~ REQ'D SPLICE SLEEVES SS-23
(REAR ELEVATION)(HANDRAIL) #20204



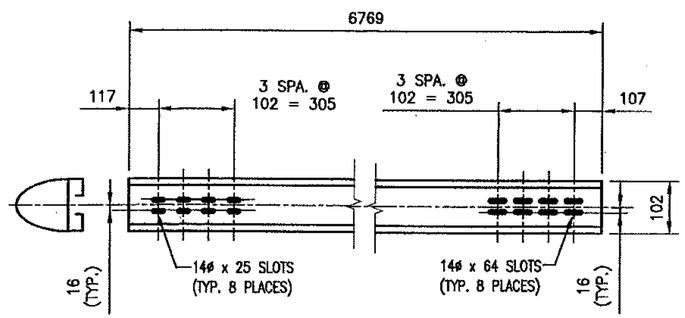
4 REQ'D. ~ RAIL 'BA2'
(BACK ELEVATION VIEW)



8 ~ REQ'D SPLICE SLEEVES SS-03-G
(BARRIER RAIL ~ BACK ELEV VIEW) #19501 (EXTR.)



2 REQ'D. ~ RAIL 'BA1'
(BACK ELEVATION VIEW)



4 REQ'D. ~ RAIL 'BA3'
(BACK ELEVATION VIEW)

ANODIZED
(SEE NOTES ON LB1)

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
7:54 am, Jul 13, 2011
RESUBMIT APPROVED X
BY CWC, Proj. Mgr. DATE 07/13/11

REV.	DESCRIPTION	BY	DATE

PROJECT No. STP 0199(2) ITEM No: 525.225

APPROVED: REC'D APPROVAL DRAWING

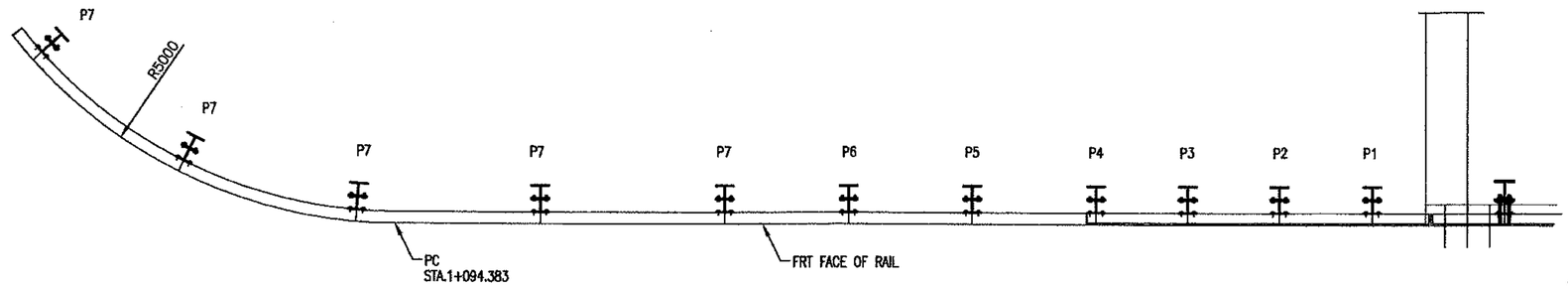
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN
BRIDGE RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJOR COLLECTOR), CLASS 2
OVER LAPLATTE RIVER ~ 3L ALUM BRIDGE RAILING ~ RAIL DETAILS

MADE CMS DATE 06/03/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB5 REV. No.

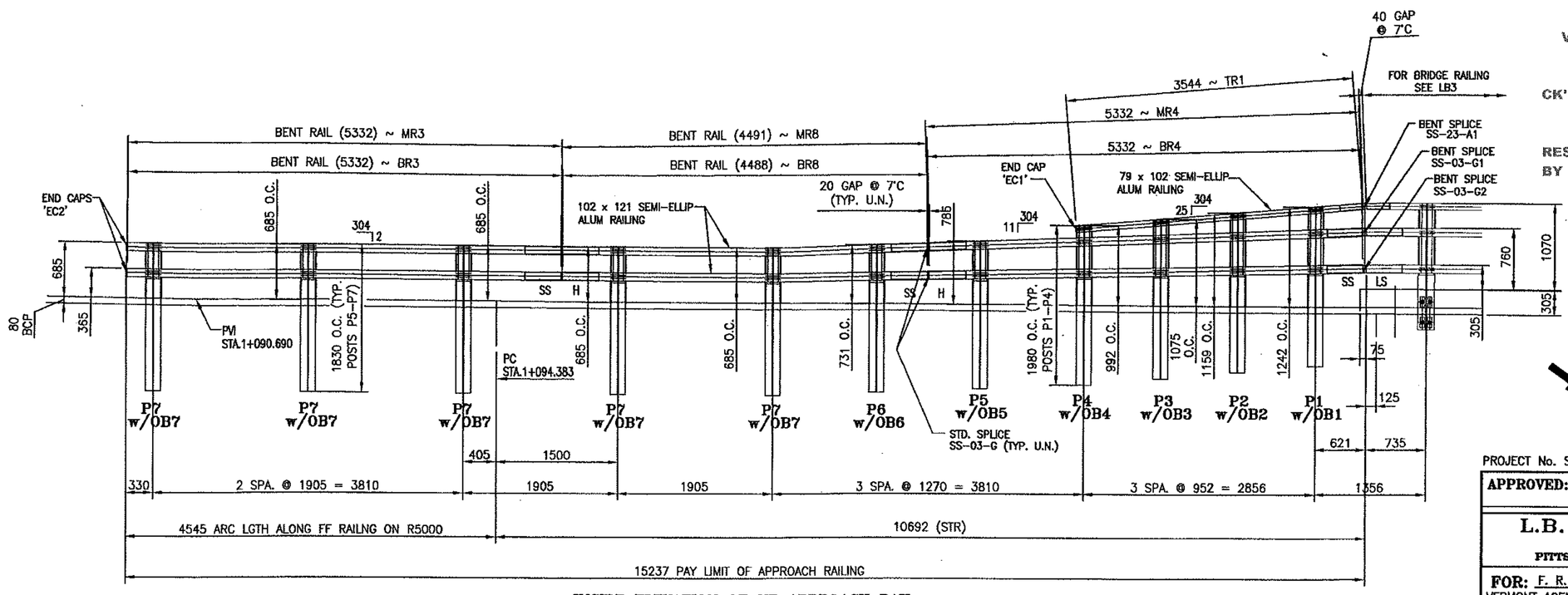
BRIDGE RAILING 92

H = HOLE SIDE
SS = SHORT SLOTTED SIDE
LS = LONG SLOTTED SIDE



PLAN VIEW

NOTE:
- RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
- LENGTH OF APPROACH RAILING ON THIS SHEET IS 15.2 M (50 LF) PAY LENGTH.
- METRIC DIMENSIONS ARE IN MILLIMETERS (mm), UNLESS NOTED.



INSIDE ELEVATION OF NE APPROACH RAIL

ANODIZED
(SEE LB1 FOR SPECIFICATIONS)

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
7:54 am, Jul 13, 2011
RESUBMIT APPROVED X
BY CWC, Proj. Mgr. DATE 07/13/11

REV.	DESCRIPTION	BY	DATE

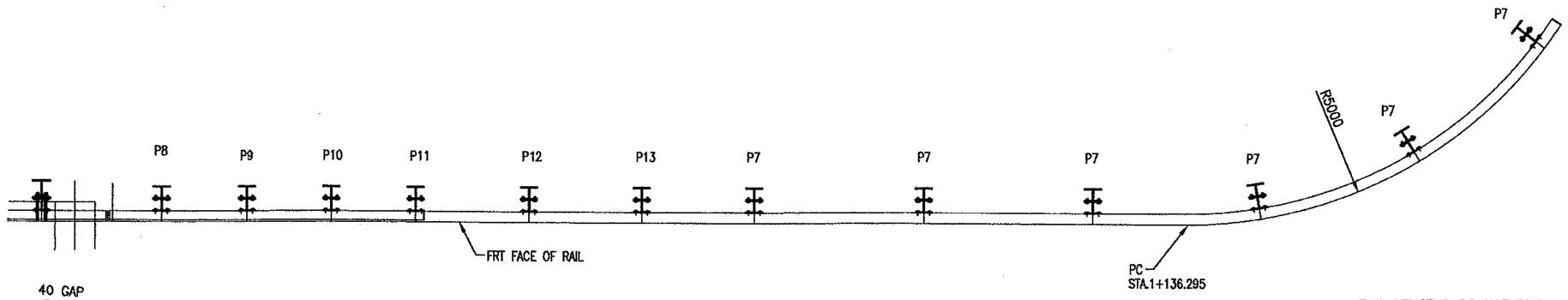
PROJECT No. STP 0199 (2) ITEM No: 621.74

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

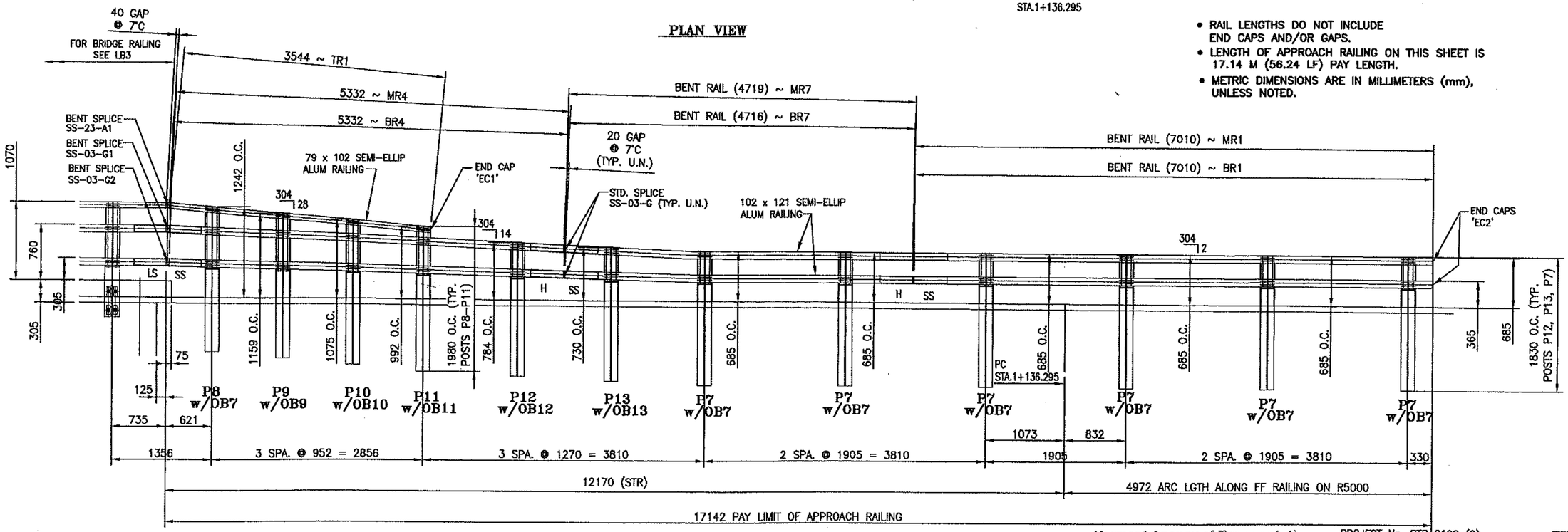
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
APPROACH RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
3L ALUMINUM NE APPROACH RAIL ELEVATIONS

MADE CMS DATE 06/17/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB6 REV. No.



H = HOLE SIDE
SS = SHORT SLOTTED SIDE
LS = LONG SLOTTED SIDE

PLAN VIEW



- RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
- LENGTH OF APPROACH RAILING ON THIS SHEET IS 17.14 M (56.24 LF) PAY LENGTH.
- METRIC DIMENSIONS ARE IN MILLIMETERS (mm), UNLESS NOTED.

INSIDE ELEVATION OF SE APPROACH RAIL

ANODIZED
(SEE LB1 FOR SPECIFICATIONS)

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
7:54 am, Jul 13, 2011
RESUBMIT APPROVED X
BY CWC, Proj. Mgr. DATE 07/13/11

REV.	DESCRIPTION	BY	DATE

PROJECT No. STP 0199 (2) ITEM No: 621.745

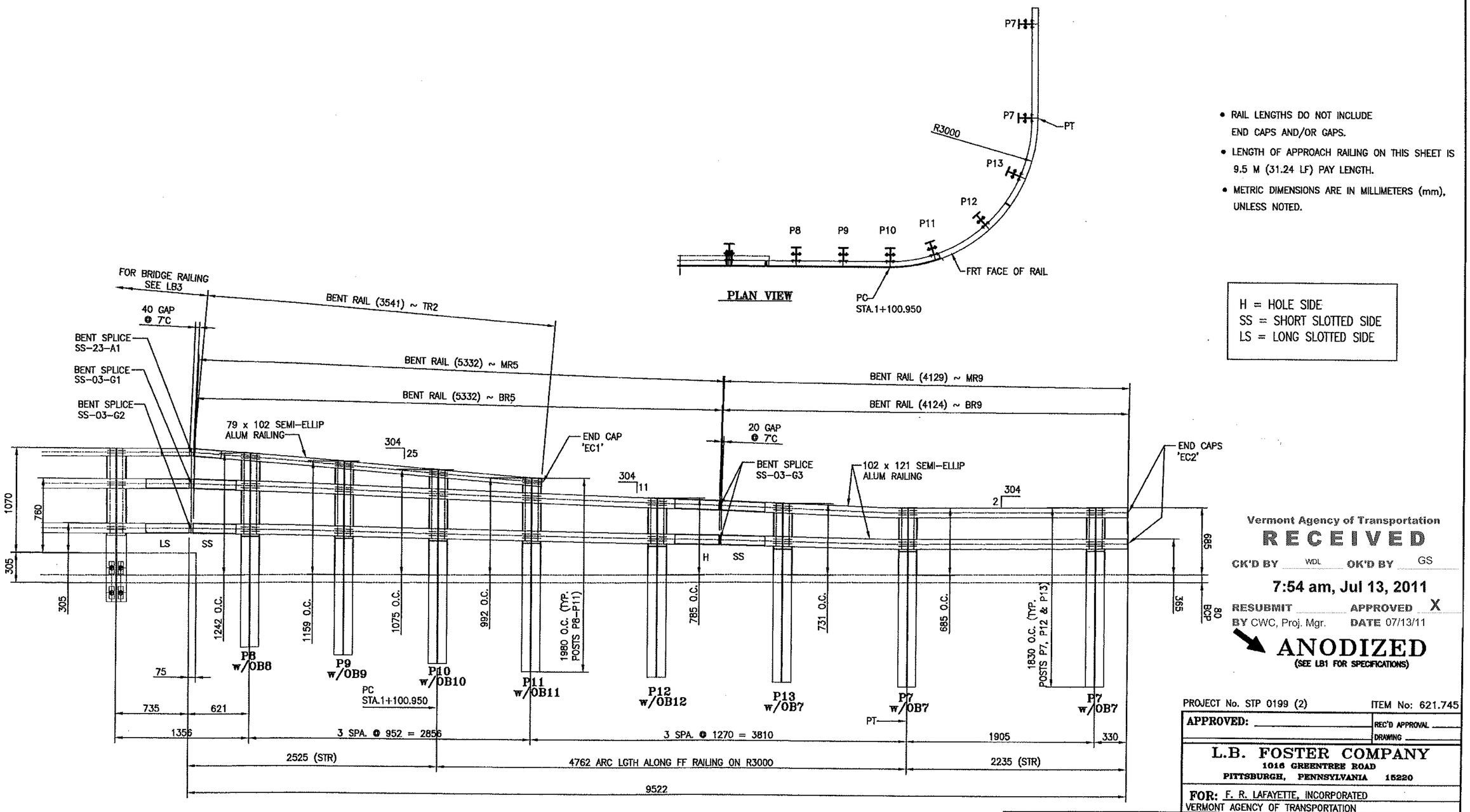
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
APPROACH RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
3L ALUMINUM SE APPROACH RAIL ELEVATIONS

MADE CMS DATE 06/20/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB7 REV. No.

BRIDGE RAILING 94



INSIDE ELEVATION OF NW APPROACH RAIL

- RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
- LENGTH OF APPROACH RAILING ON THIS SHEET IS 9.5 M (31.24 LF) PAY LENGTH.
- METRIC DIMENSIONS ARE IN MILLIMETERS (mm), UNLESS NOTED.

H = HOLE SIDE
SS = SHORT SLOTTED SIDE
LS = LONG SLOTTED SIDE

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
7:54 am, Jul 13, 2011
RESUBMIT APPROVED X
BY CWC, Proj. Mgr. DATE 07/13/11

ANODIZED
(SEE LB1 FOR SPECIFICATIONS)

REV.	DESCRIPTION	BY	DATE

PROJECT No. STP 0199 (2) ITEM No: 621.745

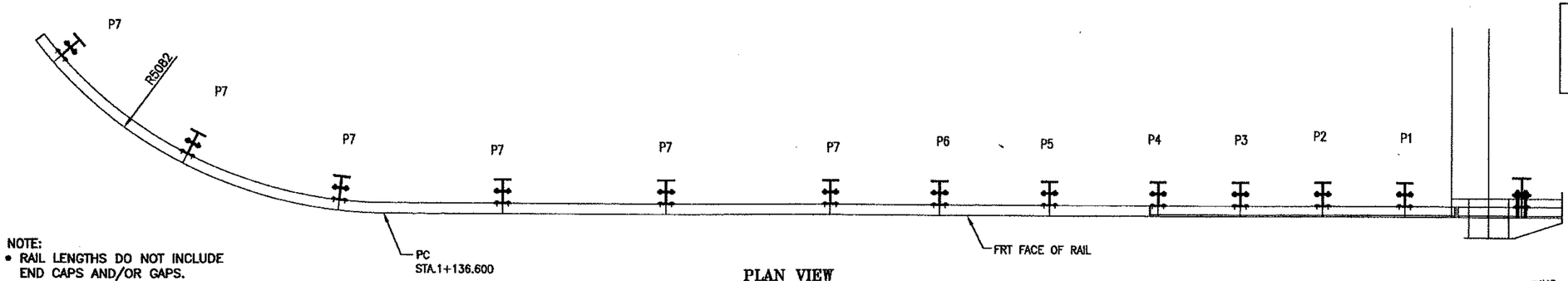
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
APPROACH RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
3L ALUMINUM NW APPROACH RAIL ELEVATIONS

MADE CMS DATE 06/20/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB8 REV. No.

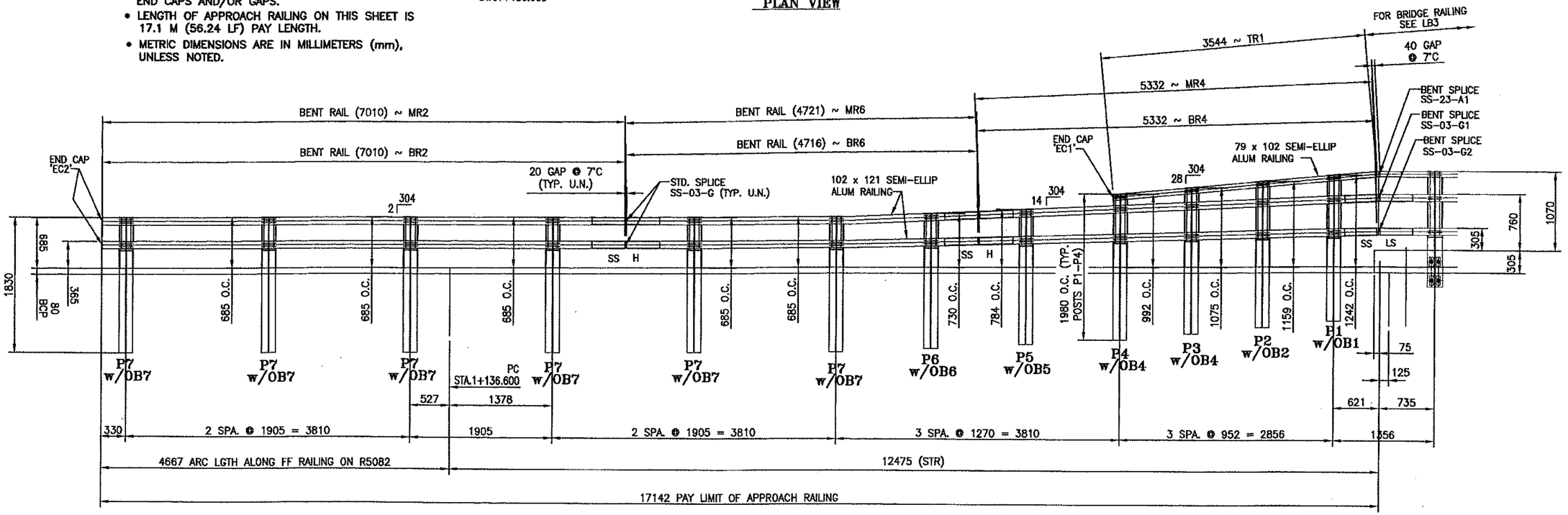
BRIDGE RAILING 95



H = HOLE SIDE
SS = SHORT SLOTTED SIDE
LS = LONG SLOTTED SIDE

NOTE:
- RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
- LENGTH OF APPROACH RAILING ON THIS SHEET IS 17.1 M (56.24 LF) PAY LENGTH.
- METRIC DIMENSIONS ARE IN MILLIMETERS (mm), UNLESS NOTED.

PLAN VIEW



INSIDE ELEVATION OF SW APPROACH RAIL

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
7:54 am, Jul 13, 2011
RESUBMIT APPROVED X
BY CWC, Proj. Mgr. DATE 07/13/11

ANODIZED
(SEE LB1 FOR SPECIFICATIONS)

REV.	DESCRIPTION	BY	DATE

PROJECT No. STP 0199 (2) ITEM No: 621.74

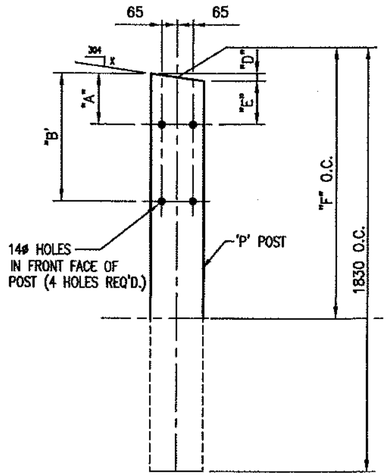
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

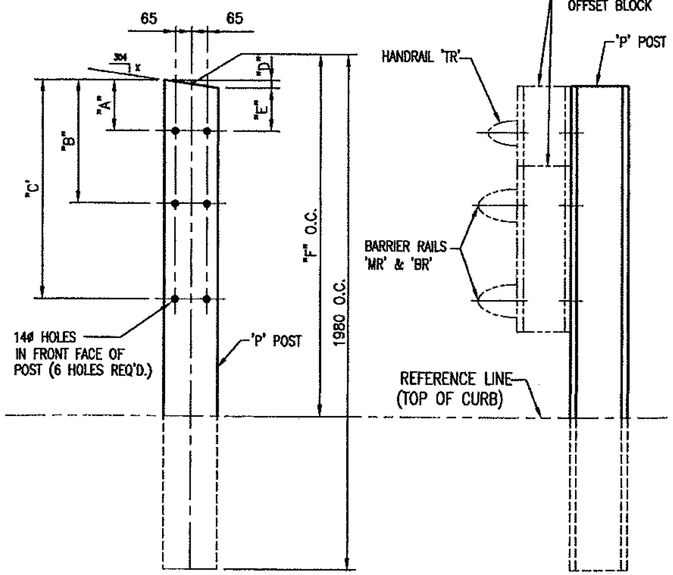
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
APPROACH RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
3L ALUMINUM SW APPROACH RAIL ELEVATIONS

MADE CMS DATE 06/17/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB9 REV. No.

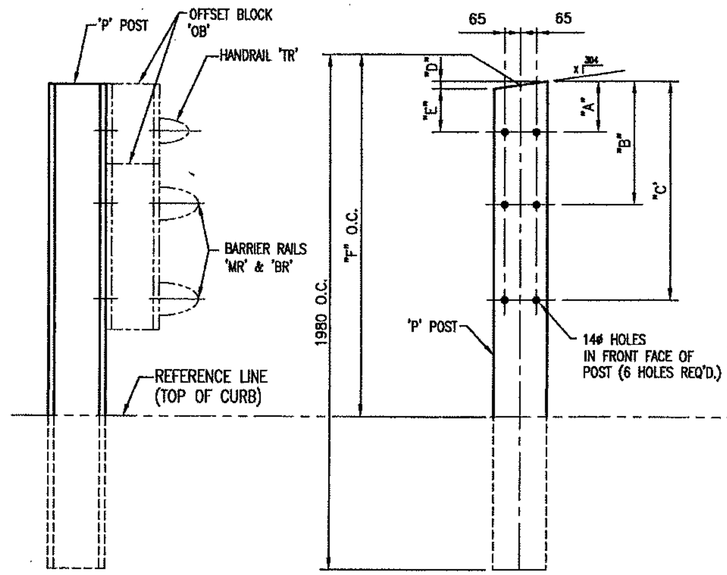
BRIDGE RAILING 96



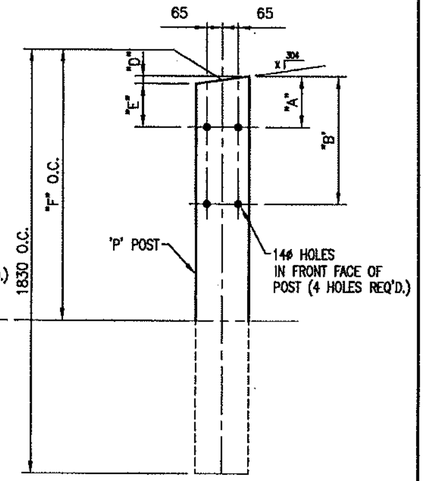
P7, P12, P13



P8–P11



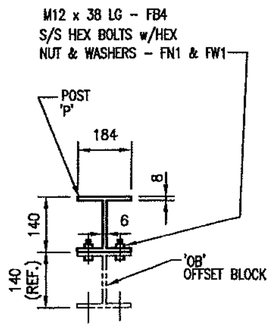
P1–P4



P5, P6

POST DETAIL CHART FOR SE & NW APPROACHES

		OFFSET BLOCK MTG. DIMENSIONS						BEV
POST No.	QTY.	A	B	C	D	E	F (0.C.)	X
P8	2	48	347	786	17	31	1242	28
P9	2	48	299	725	17	31	1159	28
P10	2	48	256	663	17	31	1075	28
P11	2	48	213	602	17	31	992	28
P7	19	51	371		0	51	685	SQ
P12	2	55	396		9	46	784	14
P13	2	55	420		9	46	730	14



TYP. SECT. POST & OFFSET BLOCK

POST DETAIL CHART FOR SW & NE APPROACHES

		OFFSET BLOCK MTG. DIMENSIONS						BEV
POST No.	QTY.	A	B	C	D	E	F (0.C.)	X
P1	2	47	341	785	15	32	1242	25
P2	2	47	298	724	15	32	1159	25
P3	2	47	255	662	15	32	1075	25
P4	2	47	212	601	15	32	992	25
P5	2	54	419		7	47	785	11
P6	2	54	395		7	47	731	11

ANODIZED
(SEE NOTES ON LB1)

*NOTE:
FOR POST TOPS THAT HAVE BEVELS LESS THAN OR EQUAL TO 3 – THE POSTS WILL BE TREATED SQUARE.

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
7:54 am, Jul 13, 2011
RESUBMIT APPROVED X
BY CWC, Proj. Mgr. DATE 07/13/11

REV.	DESCRIPTION	BY	DATE

PROJECT No. STP 0199 (2) ITEM No: 621.745

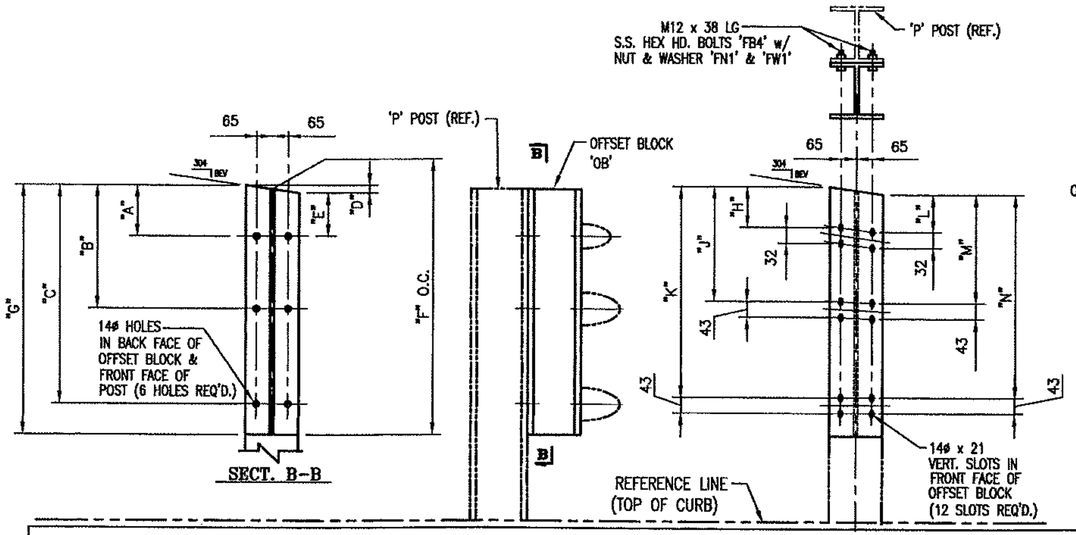
APPROVED: REC'D APPROVAL DRAWING

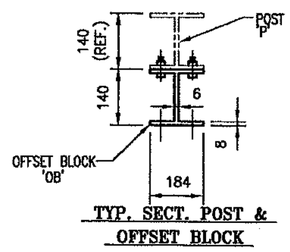
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

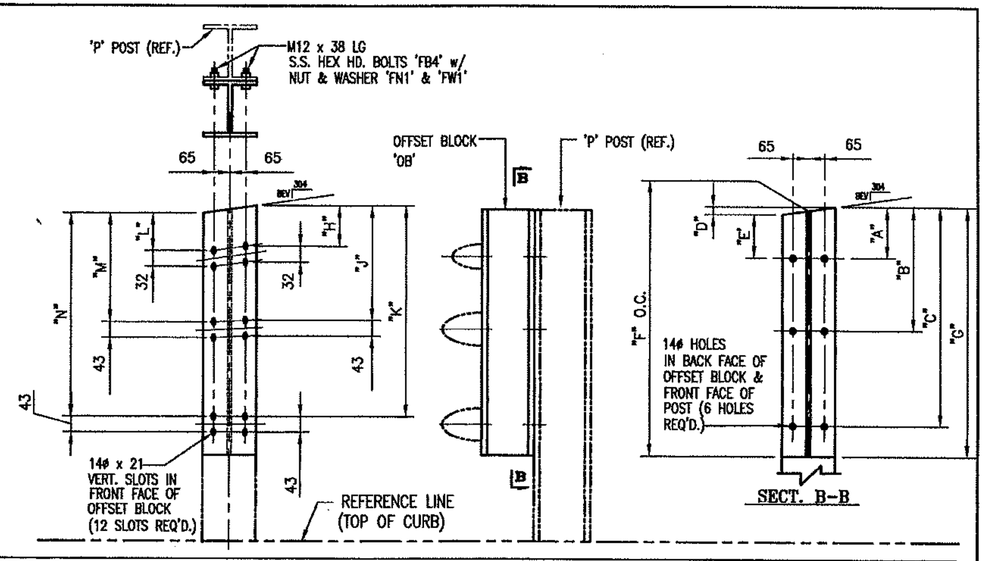
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
APPPROACH RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
APPROACH RAIL POST DETAILS

MADE CMS DATE 06/18/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB10 REV. No.

BRIDGE RAILING 97







OFFSET BLOCK CHART FOR SE & NW APPROACHES POSTS P8–P11

POST No.	OFFSET BLOCK	QTY.	OFFSET BLOCK ~ POST MTG. DIMENSIONS A	B	C	D	E	F (0.C.)	G	BEV X
P8	OB8	2	48	342	786	17	31	851	860	28
P9	OB9	2	48	299	725	17	31	789	798	28
P10	OB10	2	48	256	663	17	31	728	737	28
P11	OB11	2	48	213	602	17	31	667	676	28

OFFSET BLOCK ~ RAIL MTG. DIMENSIONS

POST No.	OFFSET BLOCK	H	J	K	L	M	N
P8	OB8	26	318	763	21	307	749
P9	OB9	26	275	701	21	264	688
P10	OB10	26	232	640	21	221	627
P11	OB11	26	189	579	21	178	565

OFFSET BLOCK CHART FOR SW & NE APPROACHES POSTS P1–P4

POST No.	OFFSET BLOCK	QTY.	OFFSET BLOCK ~ POST MTG. DIMENSIONS A	B	C	D	E	F (0.C.)	G	BEV X
P1	OB1	2	47	341	785	15	32	851	859	25
P2	OB2	2	47	298	724	15	32	789	797	25
P3	OB3	2	47	255	662	15	32	728	736	25
P4	OB4	2	47	212	601	15	32	667	675	25

OFFSET BLOCK ~ RAIL MTG. DIMENSIONS

POST No.	OFFSET BLOCK	H	J	K	L	M	N
P1	OB1	26	317	762	22	307	749
P2	OB2	26	274	701	22	264	688
P3	OB3	26	231	640	22	221	627
P4	OB4	26	188	579	22	178	566

Vermont Agency of Transportation
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BY CWC, Proj. Mgr. DATE 07/13/11

*NOTE:
FOR POST TOPS THAT HAVE BEVELS LESS THAN OR EQUAL TO 3 – THE POSTS WILL BE TREATED SQUARE.

NOTE:
2 CLAMPING BARS CB-01-H (#28596) PER POSTS P1–P4, P8–P11
4 CLAMPING BARS CB-03-A (#19447) PER POSTS P1–P4, P8–P11 w/ M13 x 25 S.S. BOLT 'FB1', 27 O.D. x 13 I.D. x 2 ALUM THK WASHER 'FW1' (#15280 & #19404) (16 PER POST)

ANODIZED
(SEE NOTES ON LB1)

REV.	DESCRIPTION	BY	DATE

PROJECT No. STP 0199 (2) ITEM No: 621.745

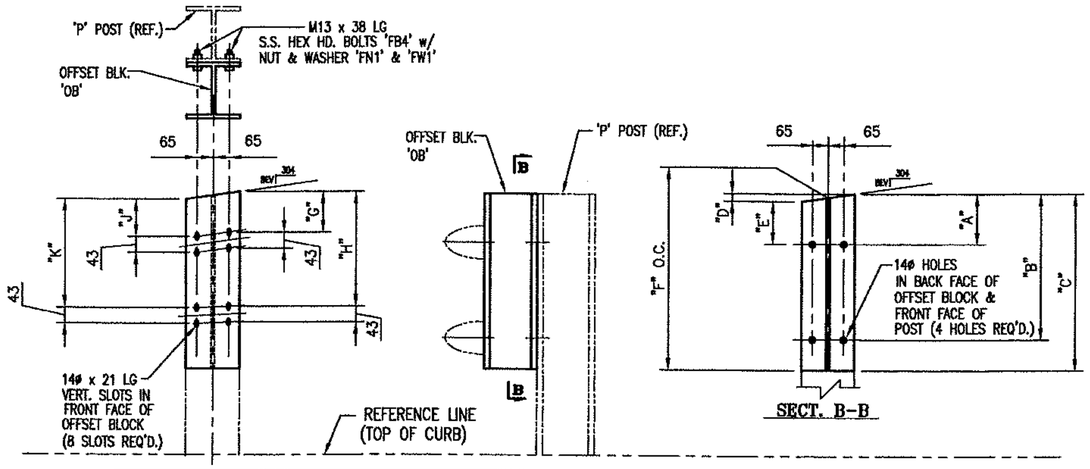
APPROVED: _____ REC'D APPROVAL ____ DRAWING ____

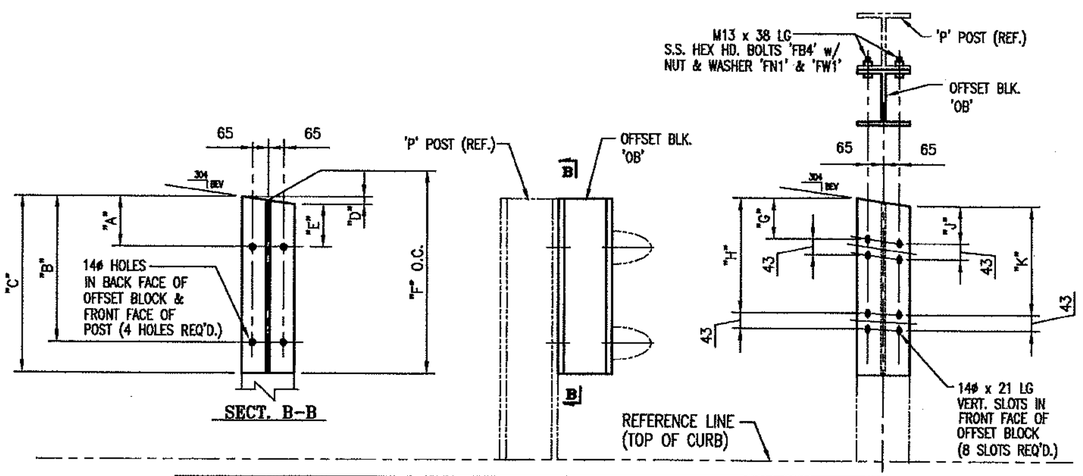
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
APPROACH RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
OFFSET BOX DETAILS

MADE CMS DATE 06/18/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB11 REV. No.

BRIDGE RAILING 98





OFFSET BLOCK CHART FOR NE & SW APPROACHES
POSTS P5, P6. P7

			OFFSET BLOCK ~ POST MTG. DIMENSIONS						BEV
POST No.	OFFSET BLOCK	QTY.	A	B	C	D	E	F (O.C.)	X
P5	OB5	2	54	419	496	7	47	493	11
P6	OB6	2	54	395	473	7	47	470	11
P7	OB7	19	51	371	446	0	51	446	SQ

OFFSET BLOCK CHART FOR NW & SE APPROACHES
POSTS P12, P13

			OFFSET BLOCK ~ POST MTG. DIMENSIONS						BEV
POST No.	OFFSET BLOCK	QTY.	A	B	C	D	E	F (O.C.)	X
P12	OB12	2	55	396	497	9	46	493	11
P13	OB13	2	55	420	474	9	46	470	11

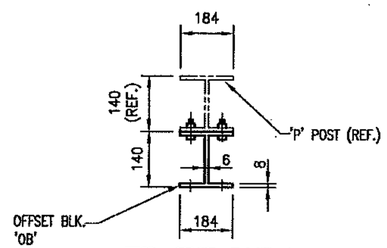
OFFSET BLOCK ~ RAIL MTG. DIMENSIONS

POST No.	OFFSET BLOCK	G	H	J	K
P5	OB5	30	397	28	392
P6	OB6	30	373	28	368
P7	OB7	30	350	30	350

OFFSET BLOCK ~ RAIL MTG. DIMENSIONS

POST No.	OFFSET BLOCK	G	H	J	K
P12	OB12	31	397	28	392
P13	OB13	31	372	28	367

*NOTE:
FOR POST TOPS THAT HAVE BEVELS LESS THAN OR EQUAL TO 3 ~ THE POSTS WILL BE TREATED SQUARE.



TYP. SECT. POST & OFFSET BLOCK

NOTE:
2 CLAMPING BARS CB-01-H (#28596) PER POSTS P1-P4, P8-P11
4 CLAMPING BARS CB-03-A (#19447) PER POSTS P1-P4, P8-P11 w/ M13 x 25 S.S. BOLT 'FB1', 27 O.D. x 13 I.D. x 2 ALUM THK WASHER 'FW1' (#15280 & #19404) (16 PER POST)

ANODIZED
(SEE NOTES ON LB1)

Vermont Agency of Transportation
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CK'D BY WDL OK'D BY GS
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REV.	DESCRIPTION	BY	DATE

PROJECT No. STP 0199 (2) ITEM No: 621.745

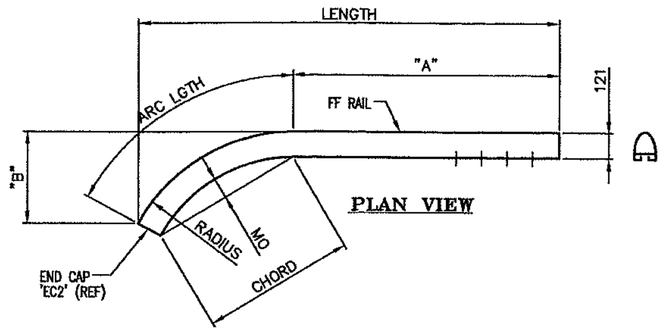
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

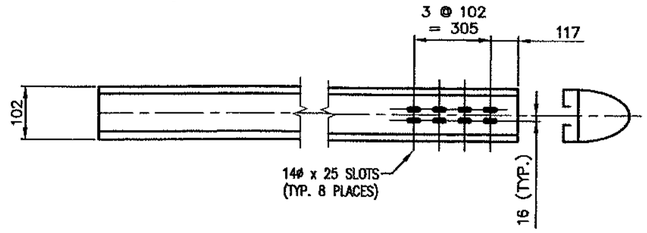
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
APPROACH RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
OFFSET BLOCK DETAILS

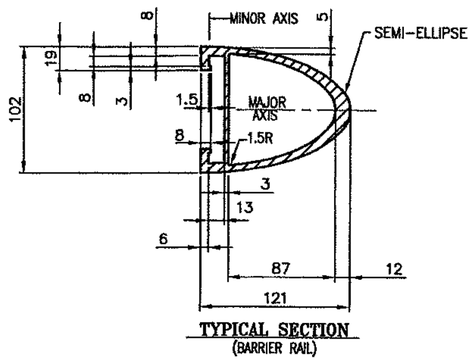
MADE CMS DATE 06/19/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB12 REV. No.

BRIDGE RAILING 99

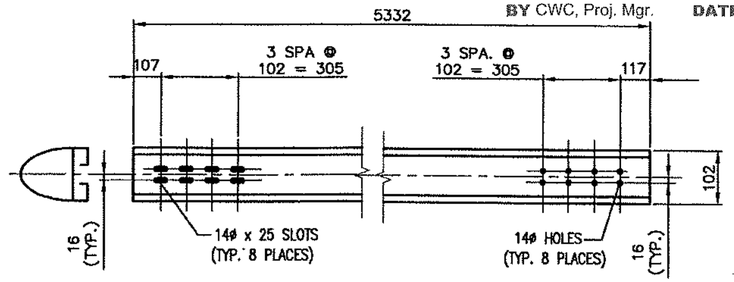


PLAN VIEW





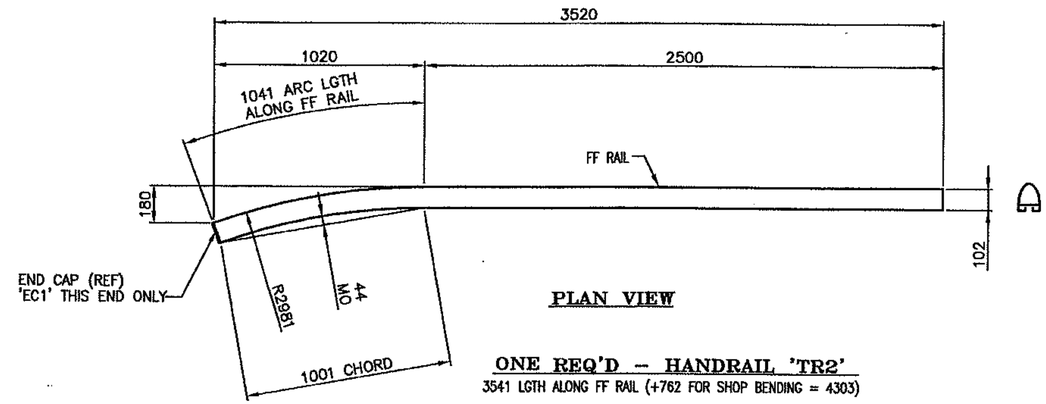
TYPICAL SECTION
(BARRIER RAIL)



3 REQ'D. ~ RAIL 'MR4'
(BACK ELEVATION VIEW)

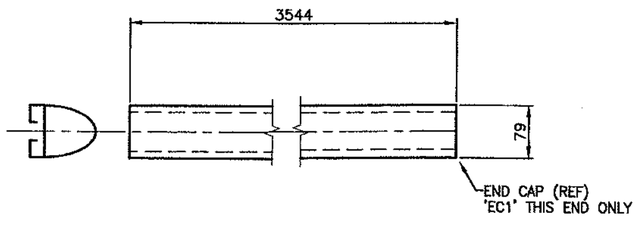
3 REQ'D. ~ RAIL 'BR4'
(BACK ELEVATION VIEW)

BENT RAILS										MATL FOR BENDING
MK.	QTY	OAL (ALONG FF RAIL)	LENGTH	ARC LGTH	"A"	"B"	MO	CHORD	RADIUS	
MR1	1	7010	6233	4966	2044	2270	589	4649	5000	+762
BR1	1	7010	6233	4966	2044	2270	589	4649	5000	+762
MR2	1	7010	6383	4661	2349	1992	513	4392	5082	+762
BR2	1	7010	6383	4661	2349	1992	513	4392	5082	+762
MR3	1	5332	4734	4539	793	1923	494	4279	5000	+762
BR3	1	5332	4734	4539	793	1923	494	4279	5000	+762

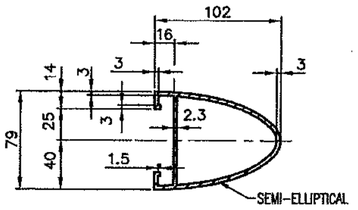


PLAN VIEW

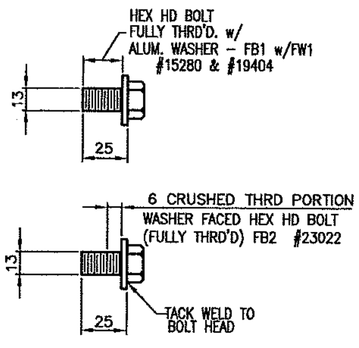
ONE REQ'D – HANDRAIL 'TR2'
3541 LGTH ALONG FF RAIL (+762 FOR SHOP BENDING = 4303)



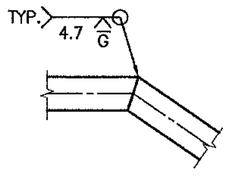
3 REQ'D – HANDRAIL 'TR1'
(FRONT ELEVATION VIEW)



TYPICAL SECTION
(HANDRAIL)



SPLICE BOLT DETAILS



TYPICAL WELD DETAIL
(OPTIONAL IF REQ'D.)

ANODIZED
(SEE NOTES ON LB1)

PROJECT No. STP 0199 (2) ITEM No: 621.745
APPROVED: REC'D APPROVAL
DRAWING

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

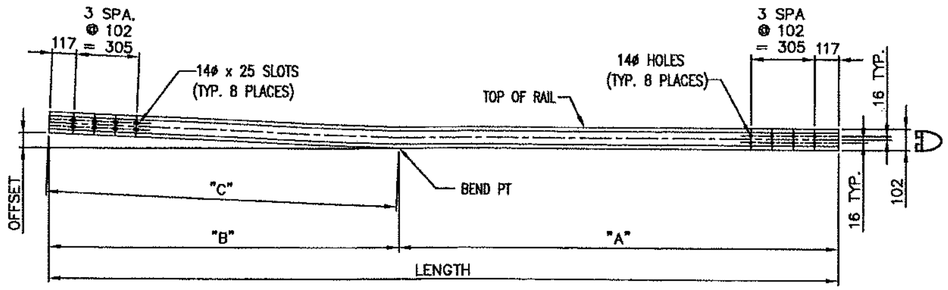
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
APPROACH RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
3L ALUMINUM APPROACH RAIL – RAIL DETAILS

MADE CMS DATE 06/19/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB13 REV. No.

REV.	DESCRIPTION	BY	DATE

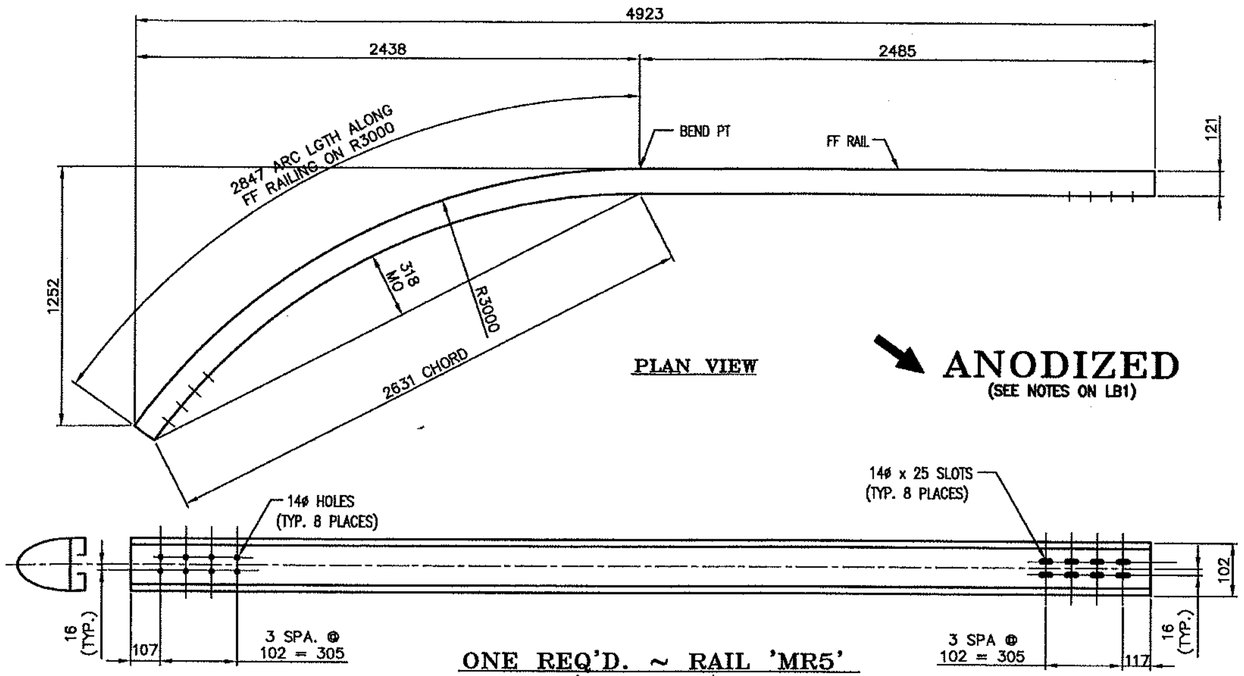
100

BRIDGE RAILING



REAR ELEVATION VIEW

BENT RAILS							
MK.	QTY	OAL (ALONG BOTTOM)	LENGTH	OFFSET	"A"	"B"	"C"
MR6	1	4721	4720	72	3025	1694	1696
BR6	1	4716	4716	40	3025	1691	1691
MR8	1	4491	4490	72	2781	1709	1710
BR8	1	4488	4487	39	2798	1689	1690

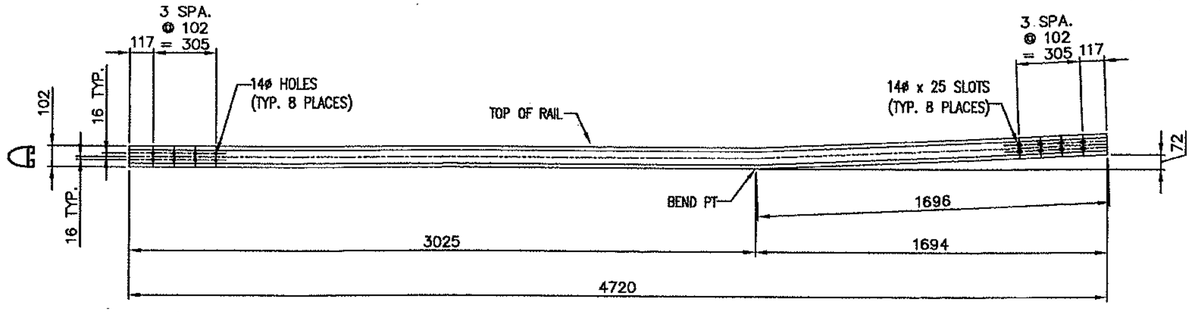


PLAN VIEW

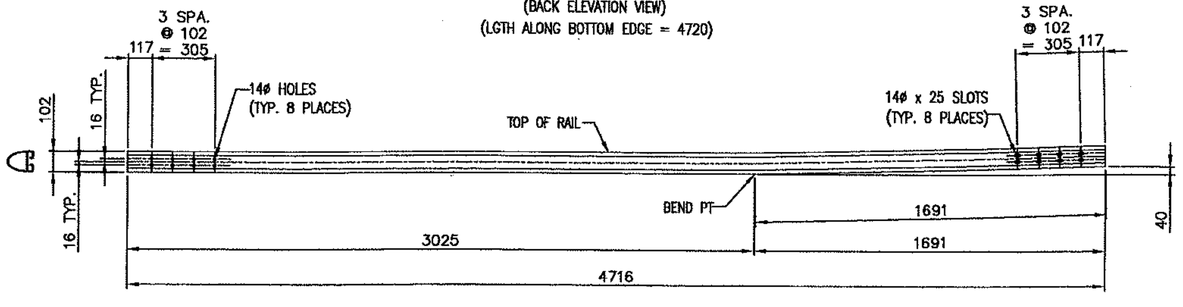
ANODIZED
(SEE NOTES ON LB1)

ONE REQ'D. ~ RAIL 'MR5'
(BACK ELEVATION VIEW)

ONE REQ'D. ~ RAIL 'BR5'
(BACK ELEVATION VIEW)



ONE REQ'D. ~ RAIL 'MR7'
(BACK ELEVATION VIEW)
(LGTH ALONG BOTTOM EDGE = 4720)



ONE REQ'D. ~ RAIL 'BR7'
(BACK ELEVATION VIEW)
(LGTH ALONG BOTTOM EDGE = 4716)

Vermont Agency of Transportation
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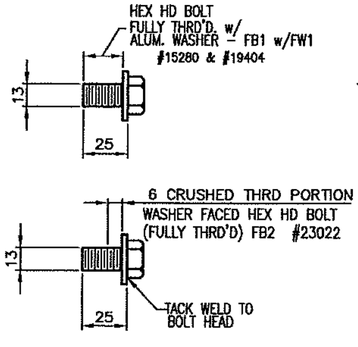
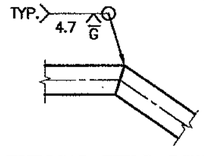
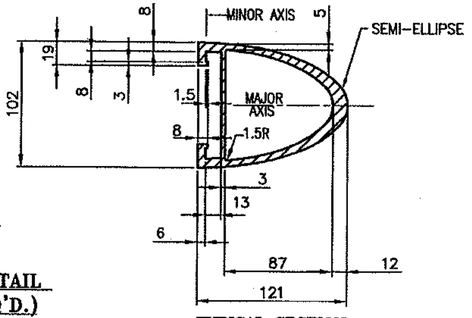


SPLICE BOLT DETAILS



TYPICAL WELD DETAIL
(OPTIONAL IF REQ'D.)



TYPICAL SECTION
(BARRIER RAIL)

REV.	DESCRIPTION	BY	DATE

PROJECT No. STP 0199 (2) ITEM No: 621.745

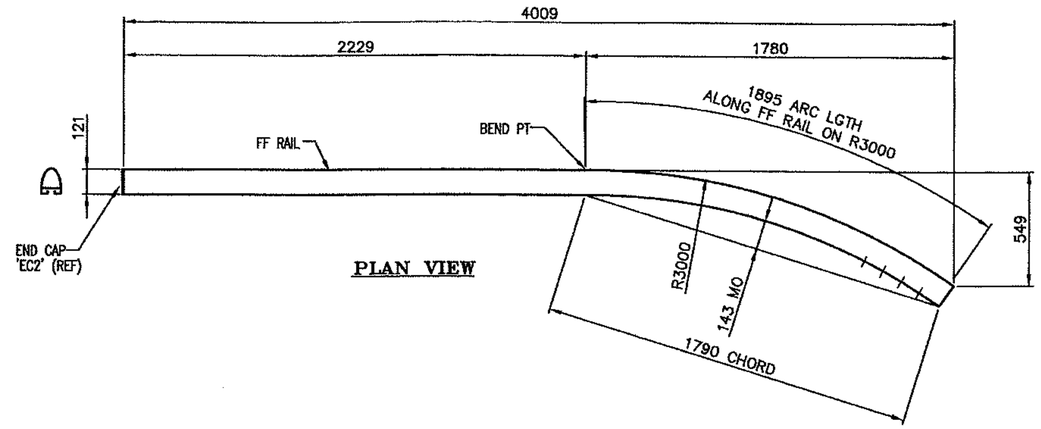
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

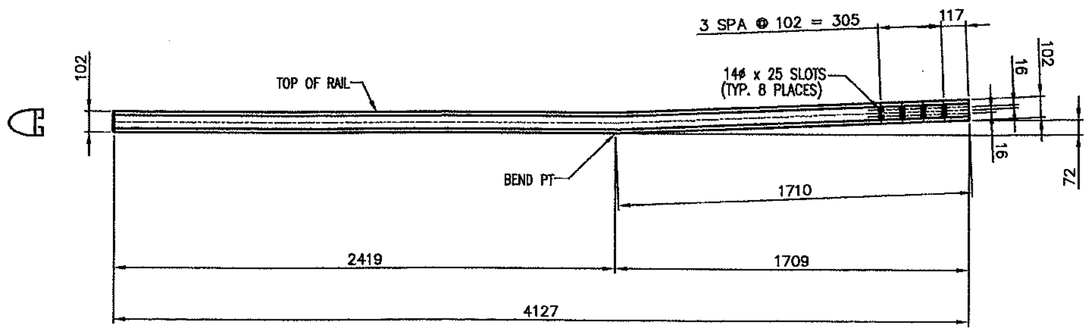
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
APPROACH RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
3L ALUMINUM APPROACH RAIL - RAIL DETAILS

MADE CMS DATE 06/19/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB14 REV. No.

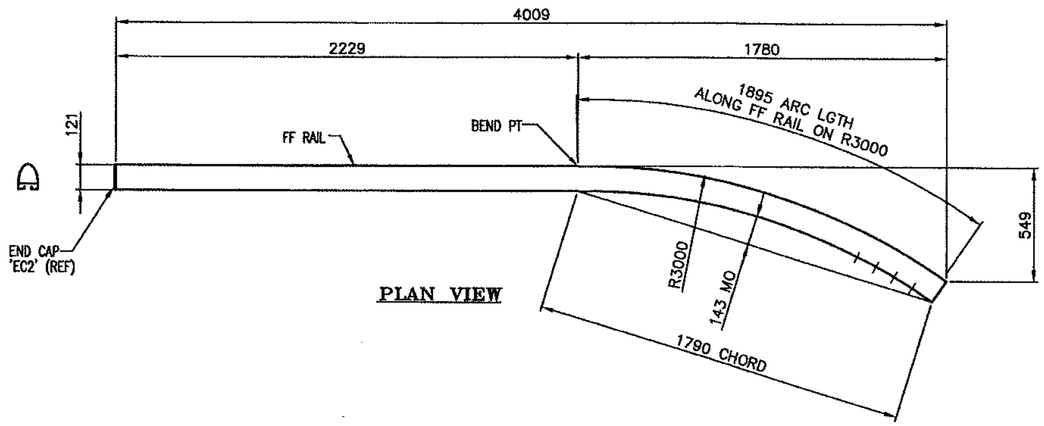
BRIDGE RAILING



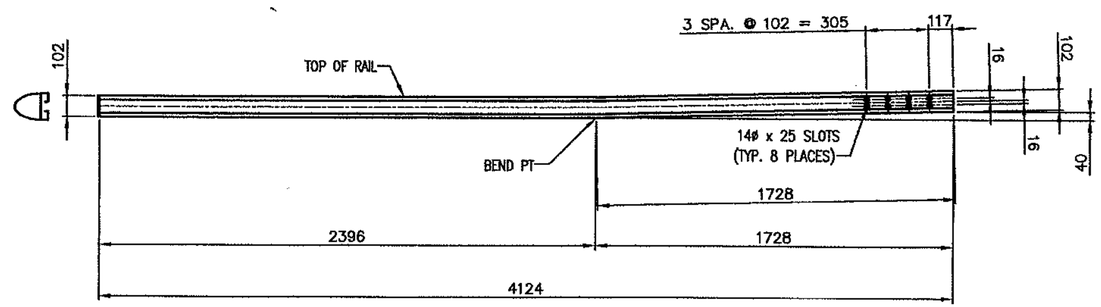
PLAN VIEW



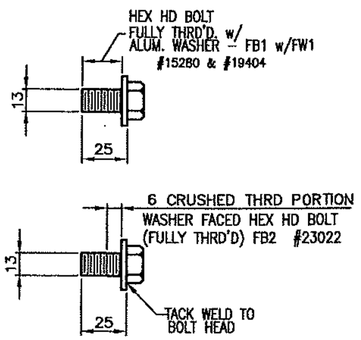
ONE REQ'D. ~ RAIL 'MR9'
(BACK ELEVATION VIEW)
(OAL ALONG LONGEST EDGE = 4129 + 762 (FOR SHOP BENDING = 4891)



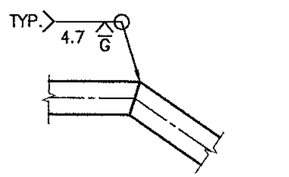
PLAN VIEW



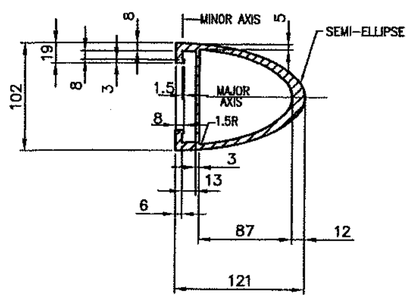
ONE REQ'D. ~ RAIL 'BR9'
(BACK ELEVATION VIEW)
(OAL ALONG LONGEST EDGE = 4124 + 762 (FOR SHOP BENDING = 4886)



SPLICE BOLT DETAILS



TYPICAL WELD DETAIL
(OPTIONAL IF REQ'D.)



TYPICAL SECTION
(BARRIER RAIL)

ANODIZED
(SEE NOTES ON LB1)

Vermont Agency of Transportation
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CK'D BY WDL OK'D BY GS
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BY CWC, Proj. Mgr. DATE 07/13/11

REV.	DESCRIPTION	BY	DATE

PROJECT No. STP 0199 (2) ITEM No: 621.745
APPROVED: REC'D APPROVAL
DRAWING

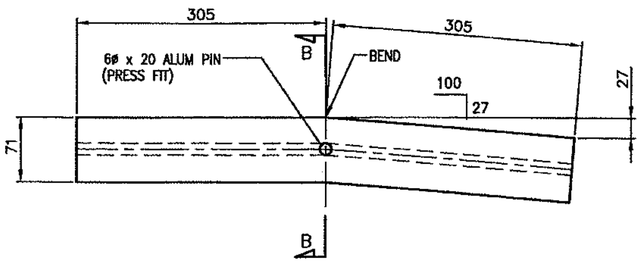
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
APPROACH RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
3L ALUMINUM APPROACH RAIL - RAIL DETAILS

MADE CMS DATE 06/21/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB15 REV. No.

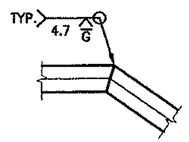
102

BRIDGE RAILING

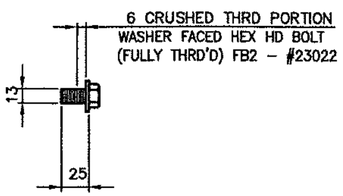


REAR ELEVATION VIEW

4 ~ REQ'D HANDRAIL SPLICE SLEEVES SS-23-A
#20204

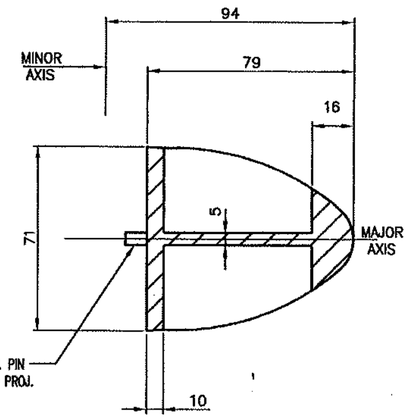


TYPICAL WELD DETAIL
@ MITERED SPLICES (OPTIONAL IF REQ'D.)

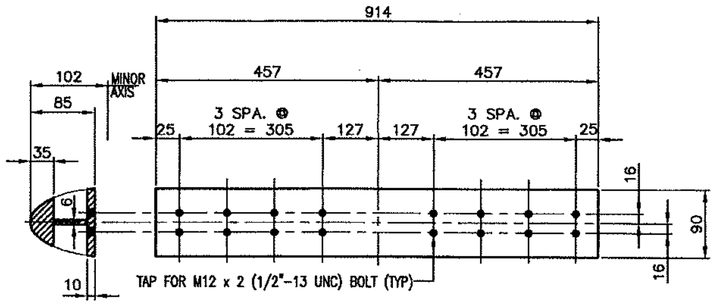


SPLICE BOLT DETAILS

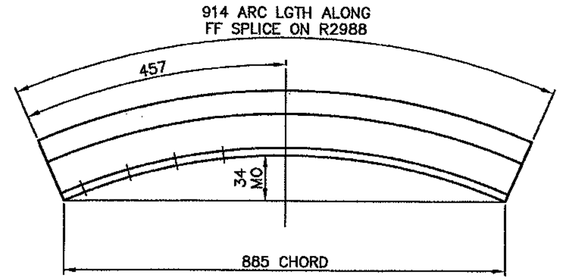
FASTENERS & HOLES WILL BE SUPPLIED IN STANDARD US EQUIVALENT UNITS FOR THE METRIC DESIGNATIONS.



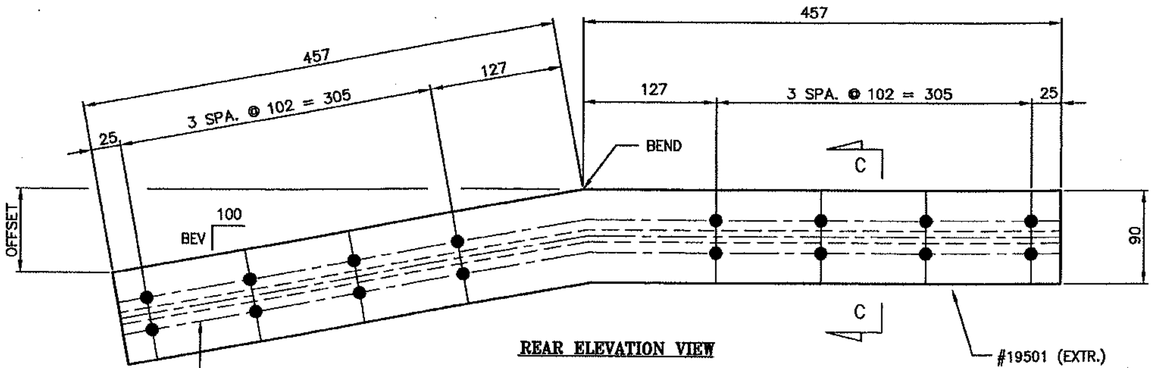
SECTION B-B



12 ~ REQ'D BENT SPLICE SLEEVES SS-03-G
(BARRIER RAIL - BACK ELEV VIEW) #19501 (EXTR.)



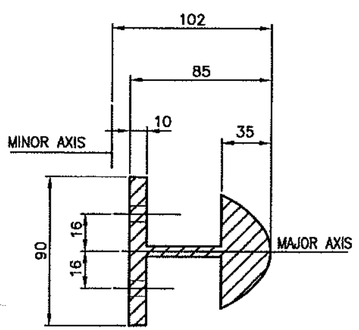
PLAN VIEW



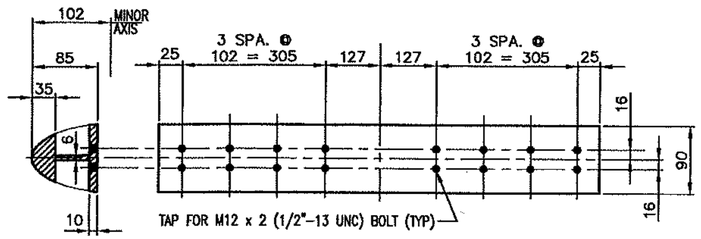
REAR ELEVATION VIEW

DRILL AND TAP FOR
M12 x 2 BOLT (16 REQ'D)
'FB2'

BARRIER RAIL SPLICES			
MK.	QTY.	OFFSET	BEV
SS-03-G1	4	19	13
SS-03-G2	4	11	7



SECTION C-C



2 ~ REQ'D BENT SPLICE SLEEVES SS-03-G3
(BARRIER RAIL - BACK ELEV VIEW) #19501 (EXTR.)

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
7:54 am, Jul 13, 2011
RESUBMIT APPROVED X
BY CWC, Proj. Mgr. DATE 07/13/11

ANODIZED
(SEE NOTES ON LB1)

REV.	DESCRIPTION	BY	DATE

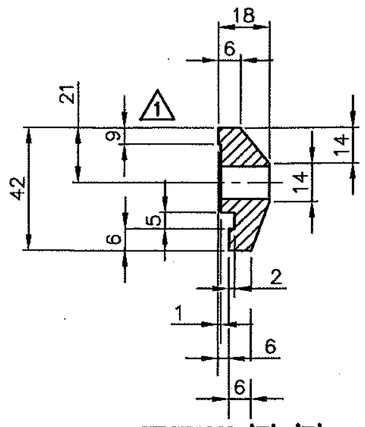
PROJECT No. STP 0199 (2) ITEM No: 621.745

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

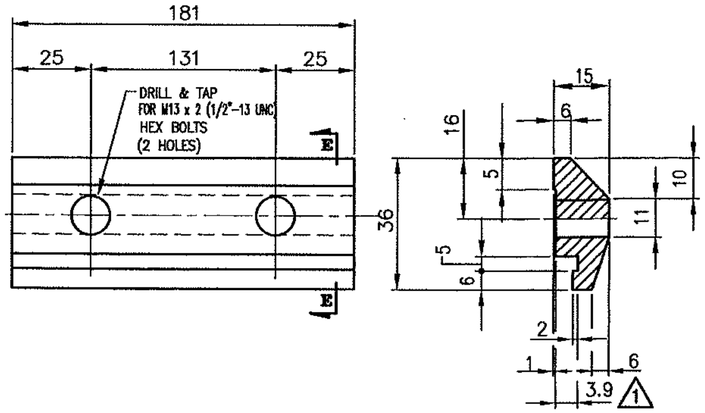
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
APPROACH RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
3L ALUMINUM APPROACH RAIL ~ MISC DETAILS

MADE CMS DATE 06/19/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB16 REV. No.



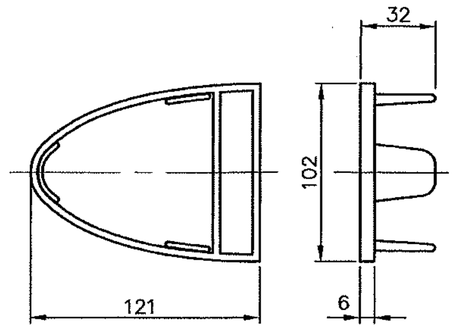
SECTION 'E'–'E'

172 ~ REQ'D CLAMP
BAR CB-03-A #19447
(BARRIER RAIL)

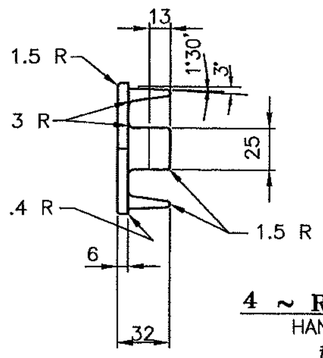


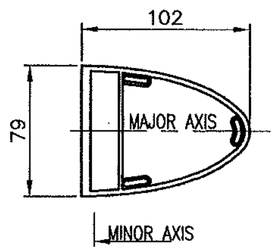
SECTION 'E'–'E'

32 ~ REQ'D CLAMP
BAR CB-01-H #28596
(HANDRAIL)



8 ~ REQ'D. ALUM
END CAPS EC2 #19345
BARRIER RAIL (DRIVE TYPE)





4 ~ REQ'D END CAPS 'EC1'
HANDRAIL (DRIVE TYPE)
#19344

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY GS
7:54 am, Jul 13, 2011
RESUBMIT APPROVED X
BY CWC, Proj. Mgr. DATE 07/13/11

ANODIZED
(SEE NOTES ON LB1)

REV.	DESCRIPTION	BY	DATE
1	GEN. REVISION PER APPROVAL MARKUP	CMS	01 22 10

PROJECT No. STP 0199 (2) ITEM No: 621.745

APPROVED: REC'D APPROVAL DRAWING

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF HINESBURG, COUNTY OF CHITTENDEN, VT
APPROACH RAILING FOR BRIDGE #10, TOWN HIGHWAY 4 (MAJ. COLLECTOR) CLASS 2
3L ALUMINUM APPROACH RAIL ~ MISC DETAILS

MADE CMS DATE 06/19/11 JOB No. AR0689 CUST. No.
CHECK Dd DATE 06/28/11 DRAWING LB17 (LAST) REV. No. ONE