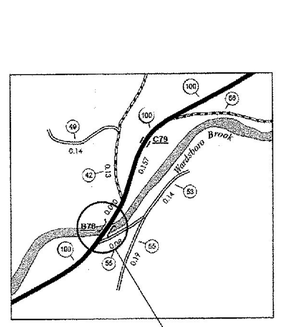
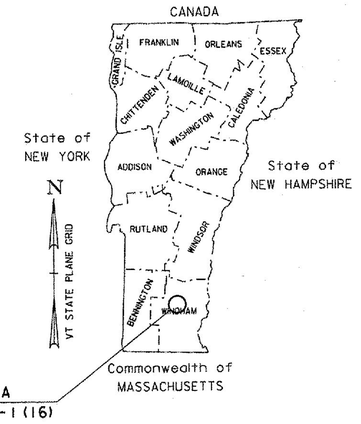
STATE OF VERMONT
AGENCY OF TRANSPORTATION





PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF JAMAICA
COUNTY OF WINDHAM

ROUTE NO : VT 100 (MINOR ARTERIAL) BRIDGE NO : 78

PROJECT LOCATION : LOCATED APPROXIMATELY 1.5 MILES SOUTH OF THE JUNCTION OF VT ROUTE 100 AND VT ROUTE 30.

PROJECT DESCRIPTION : REPLACE EXISTING BRIDGE WITH RELATED ROADWAY APPROACH AND CHANNEL WORK.

LENGTH OF STRUCTURE :	241.78 FEET.
LENGTH OF ROADWAY :	58.22 FEET.
LENGTH OF PROJECT :	300.00 FEET.

RECORD PLANS

CONTRACTOR: T. BUCK -- AUBURN, ME.

RESIDENT ENGINEER: CHAD GREENWOOD

CONSTRUCTION BEGAN: APRIL 20, 2013

CONSTRUCTION COMPLETE: JUNE 5, 2014

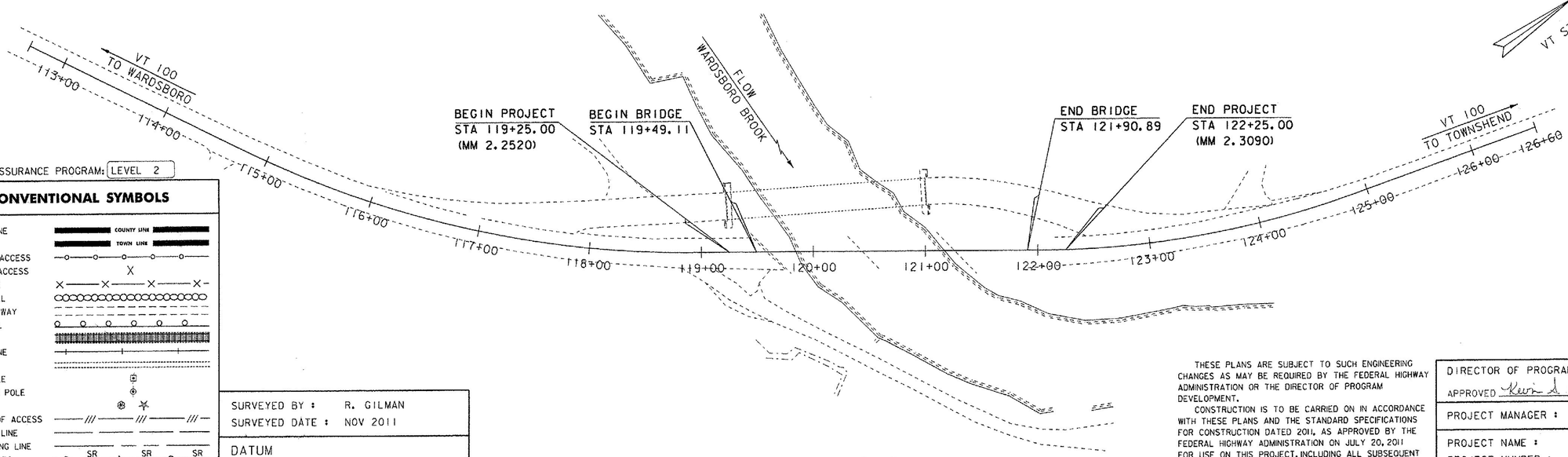
RECORD PLANS BY: CHAD GREENWOOD & CRAIG PIERCE

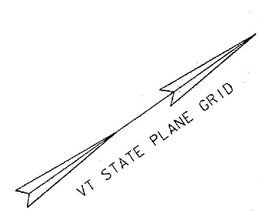
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY _____ RESIDENT ENGINEER

DATE 7/28/15

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.





SCALE 1" = 50'-0"
50 0 50

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. GILMAN
SURVEYED DATE : NOV 2011

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

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

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

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Kevin J. Marchi DATE 10/12/12

PROJECT MANAGER : KRISTIN HIGGINS

PROJECT NAME : JAMAICA
PROJECT NUMBER : ER-BRF 013-1(16)

SHEET 1 OF 85 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version 11.08.15

LRFD

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STANDARDS LIST

B-71	STANDARD FOR RESIDENTIAL AND COMMERCIAL DRIVES	07-08-2005
C-10	CURBING	02-11-2008
E-100	CONSTRUCTION APPROACH SIGNS	01-02-2004
E-100A	SIDE ROAD CONSTRUCTION - APPROACH SIGNS	01-02-2004
E-101	CONSTRUCTION SIGN DETAILS	05-30-2003
E-102	CONSTRUCTION SIGN DETAILS	06-30-2003
E-102A	CONSTRUCTION SIGN DETAILS	05-01-2004
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	06-30-2003
E-107A	BREAKAWAY BARRICADE DETAILS	06-08-2009
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-1995
E-134	BRIDGE NUMBER PLAQUE	08-08-1995
E-154	WARNING SIGN DETAILS	05-01-2004
E-164	SQUARE STEEL SIGN POST	06-08-2009
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	01-03-2000
G-1D	STEEL BEAM GUARDRAIL DETAILS (END TERMINAL, ANCHOR, MEDIAN)	01-03-2000

STRUCTURES DETAILS

SD-501.00	CONCRETE DETAILS AND NOTES	04-07-2010
SD-502.00	CONCRETE DETAILS AND NOTES	05-04-2010
SD-516.10	BRIDGE JOINT ASPHALTIC PLUG	04-07-2010
SD-601.00	STRUCTURAL STEEL DETAILS & NOTES	05-04-2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	04-02-2011

AS BUILT "REBAR" DETAIL

LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2013	1200	170	54	17.9	160
2033	1300	180	54	25.1	250

20 year ESAL for flexible pavement from 2013 to 2033 : 1331000

40 year ESAL for flexible pavement from 2013 to 2053 : 2965000

Design Speed : 50 mph

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: Feb. 2012

DRAINAGE AREA : 34.2 sq. mi.
CHARACTER OF TERRAIN : Hilly to mountainous
STREAM CHARACTERISTICS : Sinuos, semi-alluvial and probably incised, flood damaged
NATURE OF STREAMBED : Cobbles, boulders and gravel

PEAK FLOW DATA

Q 2.33 =	1,800 cfs	Q 50 =	7,275 cfs
Q 10 =	4,200 cfs	Q 100 =	8,975 cfs
Q 25 =	5,750 cfs	Q 500 =	13,150 cfs

DATE OF FLOOD OF RECORD : Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q50 = 14.0 fps
ICE CONDITIONS : Slight to moderate
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
IS ORDINARY RISE RAPID? Yes
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

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

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Two span steel beam bridge. (Damaged in flood and removed in 2011)
YEAR BUILT: Built in 1937 and reconstructured in 1975
CLEAR SPAN(NORMAL TO STREAM): Two spans at 56.5' = 113' total clear span
VERTICAL CLEARANCE ABOVE STREAMBED: 18'
WATERWAY OF FULL OPENING: 1535 sq. ft.
DISPOSITION OF STRUCTURE: It has been removed
TYPE OF MATERIAL UNDER SUBSTRUCTURE: See boring logs.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	672.7'	VELOCITY =	9.4 fps
Q10 =	674.8'	"	12.0 fps
Q25 =	675.9'	"	13.1 fps
Q50 =	677.0'	"	13.8 fps
Q100 =	678.4'	"	14.3 fps

LONG TERM STREAMBED CHANGES: The stream bed appears to have lowered about 3' from 1937 to 2006. It may have lowered several more feet during 2011 flooding.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 682.4'
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: Jamaica — DISTANCE: 12,000'
HIGHWAY # : VT 100 — STRUCTURE #: 75
CLEAR SPAN: 160' total — CLEAR HEIGHT: 25'
YEAR BUILT: Built 1939. Reconstructed 1997 — FULL WATERWAY: 2900 sq. ft.
STRUCTURE TYPE: 3 span bridge

DOWNSTREAM STRUCTURE

TOWN: Jamaica — DISTANCE: 6,300'
HIGHWAY # : TH 43 — STRUCTURE #: 33
CLEAR SPAN: 117' — CLEAR HEIGHT: 12'
YEAR BUILT: 1940 — FULL WATERWAY: 990 sq. ft.
STRUCTURE TYPE: Steel truss bridge

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
TONNAGE	**20**	**36**	**36**	**66**	**30**	**34.5**	**38**
INVENTORY	3.829	1.398					
POSTING							
OPERATING	4.964	1.812	2.777	1.559	2.915	2.649	2.672
COMMENTS:							

PILE DRIVING AND TESTING REQUIREMENTS

1. NOMINAL PILE DRIVING CAPACITY	R_{nd}:	SEE GEN. NOTES
2. PILE TEST RESISTANCE FACTOR	ϕ:	0.65
3. MAXIMUM PILE TIP ELEVATION		SEE GEN. NOTES
4. [0]		

PROPOSED STRUCTURE

STRUCTURE TYPE: 2 span steel beam bridge

CLEAR SPAN(NORMAL TO STREAM): Two spans at 87.5' = 175' total
VERTICAL CLEARANCE ABOVE STREAMBED: 16'
WATERWAY OF FULL OPENING: 1790 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	672.7'	VELOCITY=	9.4 fps
Q10 =	674.8'	"	12.1 fps
Q25 =	675.8'	"	13.2 fps
Q50 =	676.9'	"	14.0 fps
Q100 =	678.2'	"	14.6 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 682.4'
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 681.6'
VERTICAL CLEARANCE: @ Q50 = 4.7'

SCOUR: Long term channel degradation is estimated to be 3'.
Total scour at the pier = 8' at Q100 and 9' at Q500.
REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW:	70 cfs	
ORDINARY LOW WATER:	30 cfs	DEPTH OR ELEVATION:
ORDINARY HIGH WATER:	770 cfs	Depth = 1'
		Depth = 4'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: The temporary bridge is already in place.
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

The existing bridge was removed due to 2011 flood damage. The channel is now different than before the flood, due to flood damage and channel work. Existing bridge hydraulics is based on information from record plans combined with the new post-flood project survey. So it may not truly reflect the pre-flood conditions. The channel may change in the future as it tries to restabilize.

TEMP. IN PLACE

DESIGN VALUES

1. DESIGN LIVE LOAD		HL 93
2. FUTURE PAVEMENT	d_p:	2.5 INCH
3. DESIGN SPAN	L:	240.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5. PRESTRESSING STRAND	f_y:	---
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	---
8. CONCRETE, HIGH PERFORMANCE CLASS A HIGH STRENGTH	f'_c:	6.0 KSI
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	3.5 KSI
11. CONCRETE, CLASS C	f'_c:	--- KSI
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270 (WEATHERING)	f_y:	50 KSI
14. SOIL UNIT WEIGHT	γ:	0.140 KCF
15. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	---
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
17. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	---
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
19. NOMINAL AXIAL PILE RESISTANCE	q_p:	SEE PLANS
20. PILE YIELD STRENGTH ASTM A572	f_y:	50 KSI
21. PILE SIZE		HP 14X102
22. EST. PILE LENGTH	L_p:	SEE PLANS
23. PILE RESISTANCE FACTOR	ϕ:	0.65
24. LATERAL PILE DEFLECTION	Δ:	1" INCH
25. BASIC WIND SPEED	V_{3s}:	---
26. MINIMUM GROUND SNOW LOAD	p_g:	---
27. SEISMIC DATA PGA: ---	S_s:	---
	S_1:	---

PROJECT NAME: **JAMAICA**
PROJECT NUMBER: **ER-BRF 013-1(16)**

FILE NAME: **s11b212pi.xls**
PROJECT LEADER: **K. HIGGINS**
DESIGNED BY: **G. LAROHE**
PRELIMINARY INFORMATION SHEET

PLOT DATE: 10/23/2012
DRAWN BY: **K. FRIEDLAND**
CHECKED BY: **J. SALVATORI**
SHEET 2 OF 85

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED 2012, AND THEIR LATEST REVISIONS.

2. THE BRIDGE DESIGN, FOR ELEMENTS SHOWN ON SHEETS 27 THRU 30 AND 32 THRU 43, WAS COMPLETED AND PROVIDED BY: VANASSE HANGEN BRUSTLIN, INC., 7056 US ROUTE 7, NORTH FERRISBURGH, VT 05473.

3. DURING CONSTRUCTION, TRAFFIC SHALL BE MAINTAINED ON AN EXISTING TWO-WAY TEMPORARY BRIDGE CONSTRUCTED UPSTREAM OF THE EXISTING STRUCTURE.

4. REMOVAL OF THE TEMPORARY BRIDGE SHALL BE PAID FOR UNDER ITEM 900.645 "SPECIAL PROVISION (REMOVAL OF TEMPORARY BRIDGE AND APPROACHES)". THE TEMPORARY BRIDGE IS THE PROPERTY OF MABEY BRIDGE & SHORE. CONTRACTOR SHALL CONTACT KEVIN TRAYNOR AT (410) 365-0101 TO MAKE NECESSARY ARRANGEMENTS FOR A REPRESENTATIVE TO BE PRESENT DURING DELAUNCHING AND DISASSEMBLY.

5. FULL ACCESS TO ALL SIDE ROADS AND DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 900.645 "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".

6. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.

7. EMULSIFIED ASPHALT SHALL BE APPLIED BETWEEN ALL LIFTS OF PAVEMENT AT A RATE 0.025 TO 0.040 GAL/SY.

EARTHWORK AND RELATED ITEMS

8. THE "STONE FILL, TYPE IV" UNDER THE BRIDGE AS SHOWN IN THE PLANS SHALL BE PLACED BEFORE THE NEW STEEL GIRDERS ARE SET.

STRUCTURAL STEEL

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

10. ALL FIELD CONNECTIONS SHALL BE MADE USING 7/8" DIAMETER HIGH STRENGTH BOLTS MEETING SUBSECTION 714.05, IN 15/16" DIAMETER HOLES, PER SECTION 506 UNLESS OTHERWISE NOTED.

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

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

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

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

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

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

17. THE FAYING SURFACES ON THE CONNECTION PLATES SHALL BE PREPARED AS CLASS "B". THESE SURFACES SHALL BE PROTECTED FROM DAMAGE AND CORROSION.

PILES

18. ABUTMENT PILES:
    a. THE PILES SHALL BE HP 14 X 102.
    b. THE PILES SHALL BE DRIVEN TO A NOMINAL RESISTANCE OF 305 KIPS PROVIDED A MINIMUM OF 45 FEET BELOW THE BOTTOM OF PILE CAP HAS BEEN ACHIEVED.

19. TO PREVENT DAMAGE TO THE PILES, PILE SHOES ARE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04 (f).

20. PIER PILES:
    a. THE PILES SHALL BE HP 14 X 102.
    b. THE PILES SHALL BE DRIVEN TO A NOMINAL RESISTANCE OF 477 KIPS PROVIDED A MINIMUM OF 45 FEET BELOW THE BOTTOM OF PIER FOOTING HAS BEEN ACHIEVED.

21. PILE TESTING AND SEQUENCE
    a. A MINIMUM OF ONE DYNAMIC PILE TEST SHALL BE CONDUCTED ON THE FIRST PILE DRIVEN FOR EACH SUBSTRUCTURE UNIT, FOR A TOTAL OF THREE TESTS. MORE TESTS MAY BE REQUIRED BY THE RESIDENT ENGINEER.
    b. ABUTMENT PILES SHALL BE DRIVEN STARTING AT THE CENTERLINE OF VT 100 AND WORKING OUTWARD SO THAT THE EXTERIOR PILES ARE DRIVEN LAST.

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

CONCRETE

23. THE CONCRETE IN THE ABUTMENT ABOVE THE BRIDGE SEAT, DECK AND BRIDGE RAIL SHALL BE ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A".

24. THE PIER CAP SHALL BE ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A HIGH STRENGTH)" AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6,000 PSI.

25. ALL OTHER SUBSTRUCTURE CONCRETE SHALL BE ITEM 501.34 " CONCRETE, HIGH PERFORMANCE CLASS B" UNLESS OTHERWISE NOTED.

26. CONCRETE PORTIONS OF ABUTMENTS AND WINGWALLS ABOVE ADJACENT BRIDGE SEAT ELEVATIONS SHALL NOT BE PLACED UNTIL FINISH GRADES HAVE BEEN DETERMINED BY THE RESIDENT ENGINEER.

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

28. THE DECK IS TO BE POURED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTORS CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A TRANSVERSE CONSTRUCTION JOINT SHALL BE USED BETWEEN ADJACENT POURS. A MINIMUM 96 HOUR DELAY BETWEEN ADJACENT POURS SHALL BE OBSERVED.

29. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH X 1 INCH UNLESS OTHERWISE NOTED.

30. ITEM 514.10 "WATER REPELLENT, SILANE", SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES, EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.

31. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.

32. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. UPWARD KEYS SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

33. MINIMUM COVER FOR REINFORCING STEEL SHALL BE AS INDICATED IN THE PLANS.

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

35. REINFORCING STEEL IN THE ABUTMENTS ABOVE THE BRIDGE SEATS, DECK, BRIDGE RAIL, PIER CAP, AND SUB-CAP SHALL BE ITEM 507.12, "REINFORCING STEEL, LEVEL II".

36. REINFORCING STEEL IN THE ABUTMENTS BELOW THE BRIDGE SEAT, PIER COLUMN, AND PIER FOOTING SHALL BE ITEM 507.11, "REINFORCING STEEL, LEVEL I".

37. ALL 1 3/8 INCH DIAMETER THREADBAR IN THE PIER CAP, SUB-CAP, AND COLUMN SHALL BE PLAIN FINISH.

38. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:
    SPACING: +/- 1 INCH
    CLEARANCE: +/- 1/4 INCH

PRECAST PIER SUB-CAP

39. CONCRETE AND REINFORCING STEEL IN THE PRECAST PIER SUB-CAP SHALL BE PAID FOR UNDER ITEM 540.10, "PRECAST CONCRETE STRUCTURE (PIER SUB-CAP)". THIS SHALL INCLUDE ALL WORK NECESSARY TO FABRICATE, DELIVER, AND ERECT THE SUB-CAP COMPLETE AND IN-PLACE AS SHOWN ON THE PLANS, EXCEPT AS NOTED HEREIN. POST-TENSIONING OF THE SUB-CAP SHALL BE PAID FOR UNDER ITEM 900.645, "SPECIAL PROVISION (POST-TENSIONING, PIER SUB-CAP)". THIS SHALL INCLUDE ALL WORK NECESSARY TO COMPLETE POST TENSIONING OPERATIONS FOR THE SUB-CAP, COMPLETE AND IN-PLACE AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE POST TENSIONING SPECIAL PROVISION. ALL APPURTENANCES SHALL BE INCIDENTAL TO THE APPROPRIATE CONTRACT ITEM.

40. PRECAST PIER SUB-CAP CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6,000 PSI.

41. FABRICATION DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 540 AND SHALL INCLUDE AN ASSEMBLY PLAN WITH TEMPORARY BRACING REQUIREMENTS AS REQUIRED FOR ERECTION AND INSTALLATION. ALL COSTS SHALL BE INCIDENTAL TO CONTRACT ITEM 540.10 "PRECAST CONCRETE STRUCTURE (PIER SUB-CAP)". SEE ADDITIONAL REQUIREMENTS IN SECTION 540.

42. ALL COSTS FOR GROUTING OF VERTICAL REINFORCING STEEL AND SUB-CAP TO COLUMN MOMENT CONNECTION, INCLUDING GROUTING OF SHEAR KEY, SHALL BE INCIDENTAL TO 540.10 " PRECAST CONCRETE STRUCTURE (PIER SUB-CAP)". ALL COSTS FOR GROUTING OF TRANSVERSE POST-TENSIONING SHALL BE INCIDENTAL TO THE APPROPRIATE POST TENSIONING ITEM.

43. GROUT FOR VERTICAL REINFORCING STEEL AND HORIZONTAL JOINTS SHALL MEET THE REQUIREMENTS OF SUBSECTION 540.11. ALL GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6,000 PSI.

44. THE REINFORCEMENT DETAILED IN THE PLANS SHALL BE UTILIZED TO THE EXTENT PRACTICABLE. THE SPACING OF SHEAR REINFORCEMENT SHALL NOT BE ADJUSTED UNLESS A RE-DESIGN IS COMPLETED. ALL NEW DESIGNS AND CALCULATIONS SHALL BE STAMPED BY A LICENSED PROFESSIONAL ENGINEER AND SUBMITTED TO THE PROJECT MANAGER FOR APPROVAL.

45. THE TOP SURFACE OF THE SUB-CAP SHALL BE ROUGHENED TO AN AMPLITUDE OF ¼ INCH.

46. THE PIER SUB-CAP SHALL BE HANDLED USING LIFTING LOOPS OR INSERTS ONLY. THE MINIMUM SLING ANGLE FROM HORIZONTAL SHALL BE 60 DEGREES. TIMBER DUNNAGE SHALL BE USED FOR STORAGE AND TRANSPORTATION. UNDER NO CIRCUMSTANCES SHALL THE SUB-CAP BE HANDLED IN OTHER THAN AN UPRIGHT POSITION.

47. SEE PIER CONSTRUCTION SEQUENCE SHEET FOR CONSTRUCTION SEQUENCING AND SUB-CAP POST-TENSION STRESSING SEQUENCE.

POST-TENSIONING

48. POST-TENSIONING SHALL BE INSTALLED, GROUTED, AND PROTECTED IN ACCORDANCE WITH THE POST TENSIONING SPECIAL PROVISION.

49. SEE PIER CONSTRUCTION SEQUENCE SHEET FOR CONSTRUCTION SEQUENCING AND POST-TENSION STRESSING SEQUENCE.

50. POST-TENSIONING BARS SHALL BE AASHTO M275 (ASTM A722) GRADE 150.

51. PIER CAP AND SUB-CAP CONCRETE SHALL OBTAIN A MINIMUM CONCRETE STRENGTH OF 4,000 PSI PRIOR TO STRESSING.

52. EACH POST-TENSIONING BAR SHALL BE PULLED TO HAVE A NET TENSION OF 156 KIPS AFTER ACCOUNTING FOR SEATING AND OTHER INSTANTANEOUS LOSSES. TENSION SHALL BE VERIFIED BY PERFORMING A LIFT-OFF TEST PRIOR TO GROUTING.

53. GALVANIZE ANCHOR ASSEMBLIES AFTER FABRICATION ACCORDING TO AASHTO M232M/M232.

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER BRF 013-1(16)
FILE NAME: sllb212notes.dgn	PLOT DATE: 23-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
GENERAL NOTES	SHEET 3 OF 85

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS
1				
2330				
			4200	
			350	
			240	
			380	
			1	
950				
600				
600				
600				
6.3				
1				
			360	
			183	
			1	
			1614	
			3	
			331200	
			28900	
			100500	
			1	
			825	
			50	
			60	
			60	
			490	
1				
			1	
		10		
		1		
			3200	
48				
48				
246				
4				

TOTALS

GRAND TOTAL	FINAL
1	
2330	
4200	
350	
240	
380	
1	
950	
600	
600	
600	
6.3	
1	
360	
183	
1	
1614	
3	
331200	
28900	
100500	
1	
825	
50	
60	
60	
490	
1	
1	
10	
1	
3200	
48	
48	
246	
4	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
CY	COMMON EXCAVATION	203.15	
CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	
CY	STRUCTURE EXCAVATION	204.25	
CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
CY	COFFERDAM EXCAVATION, EARTH	208.30	
LS	COFFERDAM (PIER)	208.40	
SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
	BEGIN OPTION AA		
CY	SUBBASE OF GRAVEL	301.15	
CY	SUBBASE OF CRUSHED GRAVEL, COARSE GRADED	301.25	
CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
	END OPTION AA		
CWT	EMULSIFIED ASPHALT	404.65	
LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33	
CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	
LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10	
LF	STEEL PILING, HP 14 X 102	505.19	
EACH	DYNAMIC PILE LOADING TEST	505.45	
LB	STRUCTURAL STEEL, PLATE GIRDER	506.55	
LB	REINFORCING STEEL, LEVEL I (FPQ)	507.11	
LB	REINFORCING STEEL, LEVEL II (FPQ)	507.12	
LS	SHEAR CONNECTORS (2456 - 7/8" X 7")	508.15	
SY	LONGITUDINAL DECK GROOVING	509.10	
GAL	WATER REPELLENT, SILANE	514.10	
LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
LF	JOINT SEALER, HOT POURED	524.11	
LF	BRIDGE RAILING, CONCRETE F-SHAPE	525.70	
LS	MAINTENANCE OF STRUCTURES AND APPROACHES	527.10	
LS	PRECAST CONCRETE STRUCTURE (PIER SUB-CAP)	540.10	
HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	
TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15	
CY	STONE FILL, TYPE IV	613.13	
	BEGIN OPTION BB		
LF	PRECAST REINFORCED CONCRETE CURB, TYPE B	616.26	
LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28	
	END OPTION BB		
LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21	
EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		EARTHWORK SUMMARY
2330	CY	COMMON EXCAVATION (2330 x 1.0)
1260	CY	UNCLASSIFIED CHANNEL EXCAVATION (4200 x 0.30)
105	CY	STRUCTURE EXCAVATION (350 x 0.30)
114	CY	COFFERDAM EXCAVATION, EARTH (380 x 0.30)
3809	CY	SUB TOTAL
191	CY	ROUNDING
4000	CY	TOTAL FILL AVAILIBLE
200	CY	TOTAL FILL REQUIRED
3800	CY	TOTAL WASTE
		SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)
170	TON	TYPE IVS
205	TON	TYPE IIS
375	TON	TOTAL SUPERPAVE

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER BRF 013-1(16)

FILE NAME: slib212quantitysheet.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
QUANTITY SHEET 1

PLOT DATE: 23-OCT-2012
DRAWN BY: G. LAROCHE
CHECKED BY: K. FRIEDLAND
SHEET 4 OF 85

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
						ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						4					4		EACH	GUARDRAIL APPROACH SECTION TO CONCRETE BRIDGE RAILING, TL-3	621.747				
						163					163		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
						200					200		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				
						1605					1605		LF	4 INCH WHITE LINE	646.20				
						1490					1490		LF	4 INCH YELLOW LINE	646.21				
									2300		2300		SY	GEOTEXTILE UNDER STONE FILL	649.31				
								300			300		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515				
								100			100		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
								40			40		LB	SEED	651.15				
								300			300		LB	FERTILIZER	651.18				
								2			2		TON	AGRICULTURAL LIMESTONE	651.20				
								2			2		TON	HAY MULCH	651.25				
								125			125		CY	TOPSOIL	651.35				
								500			500		SY	GRUBBING MATERIAL	651.40				
								1			1		LS	EPSC PLAN	652.10				
								15			15		HR	MONITORING EPSC PLAN	652.20				
								1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
								700			700		SY	TEMPORARY EROSION MATTING	653.20				
								60			60		CY	VEHICLE TRACKING PAD	653.35				
								1			1		EACH	FILTER BAG	653.45				
								400			400		LF	BARRIER FENCE	653.50				
								1000			1000		LF	PROJECT DEMARCATION FENCE	653.55				
						6.91					6.91		SF	TRAFFIC SIGNS, TYPE A	675.20				
						44					44		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
						2					2		EACH	REMOVING SIGNS	675.50				
						2					2		EACH	ERECTING SALVAGED SIGNS	675.60				
									1		1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				
									33		33		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A HIGH STRENGTH)	900.608				
									240		240		LF	SPECIAL PROVISION (OBSTRUCTION REMOVAL FOR DRIVING PILES)	900.640				
									1		1		LS	SPECIAL PROVISION (POST-TENSIONING, PIER CAP)	900.645				
									1		1		LS	SPECIAL PROVISION (POST-TENSIONING, PIER SUB-CAP)	900.645				
						1					1		LS	SPECIAL PROVISION (REMOVAL OF TEMPORARY BRIDGE AND APPROACHES)	900.645				
						1					1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)	900.645				
						1					1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650				

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER BRF 013-1(16)
FILE NAME: slib212quantitysheet.dgn	PLOT DATE: 23-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: G. LAROCHE
DESIGNED BY: G. LAROCHE	CHECKED BY: K. FRIEDLAND
QUANTITY SHEET 2	SHEET 5 OF 85

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES					TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
1					1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT)(N.A.B.I.)	900.650				
53					53		SF	SPECIAL PROVISION (RETAINING WALL)	900.670				
375					375		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER BRF 013-1(16)

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PROJECT LEADER: K. HIGGINS
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QUANTITY SHEET 3

PLOT DATE: 23-OCT-2012
DRAWN BY: G. LAROCHE
CHECKED BY: K. FRIEDLAND
SHEET 6 OF 85

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES								TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
SUPER-STRUCTURE	APPROACH SLAB #1	APPROACH SLAB #2	ABUTMENT #1	PIER	ABUTMENT #2	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
			1500		2700	4200	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27			
			150		200	350	CY	STRUCTURE EXCAVATION	204.25			
			100	40	100	240	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30			
				380		380	CY	COFFERDAM EXCAVATION, EARTH	208.30			
				1		1	LS	COFFERDAM (PIER)	208.40			
236	28	28	34		34	360	CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33			
			43	93	47	183	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34			
			1			1	LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10			
			390	696	528	1614	LF	STEEL PILING, HP 14 X 102	505.19			
			1	1	1	3	EACH	DYNAMIC PILE LOADING TEST	505.45			
331200						331200	LB	STRUCTURAL STEEL, PLATE GIRDER	506.55			
			6700	14550	7650	28900	LB	REINFORCING STEEL, LEVEL I (FPQ)	507.11			
80600	3450	3450	4600	3800	4600	100500	LB	REINFORCING STEEL, LEVEL II (FPQ)	507.12			
1						1	LS	SHEAR CONNECTORS (2456 - 7/8" X 7")	508.15			
825						825	SY	LONGITUDINAL DECK GROOVING	509.10			
20			10	10	10	50	GAL	WATER REPELLENT, SILANE	514.10			
			30		30	60	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10			
			30		30	60	LF	JOINT SEALER, HOT POURED	524.11			
490						490	LF	BRIDGE RAILING, CONCRETE F-SHAPE	525.70			
				1		1	LS	PRECAST CONCRETE STRUCTURE (PIER SUB-CAP)	540.10			
			1200	200	1800	3200	CY	STONE FILL, TYPE IV	613.13			
			900	60	1340	2300	SY	GEOTEXTILE UNDER STONE FILL	649.31			
			1			1	LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50			
				33		33	CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A HIGH STRENGTH)	900.608			
			60	120	60	240	LF	SPECIAL PROVISION (OBSTRUCTION REMOVAL FOR DRIVING PILES)	900.640			
				1		1	LS	SPECIAL PROVISION (POST-TENSIONING, PIER CAP)	900.645			
				1		1	LS	SPECIAL PROVISION (POST-TENSIONING, PIER SUB-CAP)	900.645			

PROJECT NAME: JAMAICA
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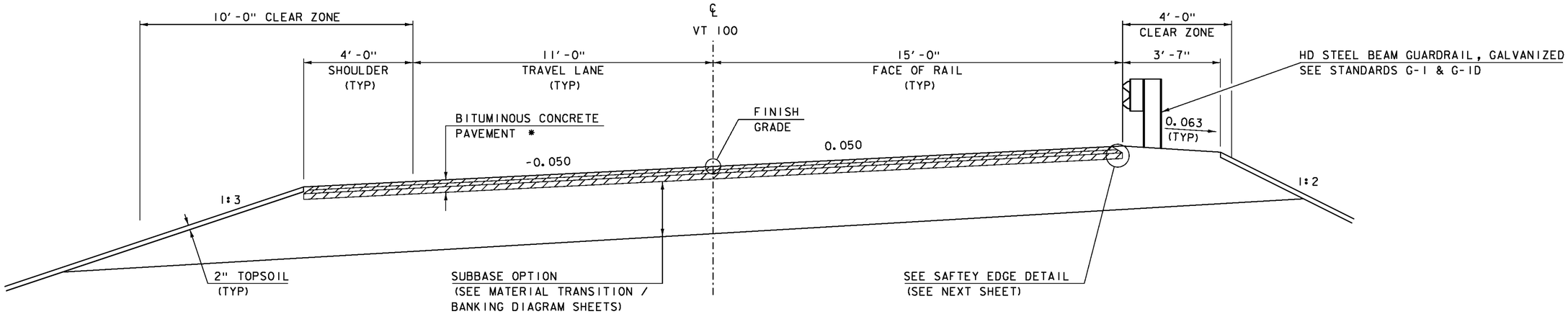
FILE NAME: sllb212quantitysheet.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
BRIDGE QUANTITY SHEET

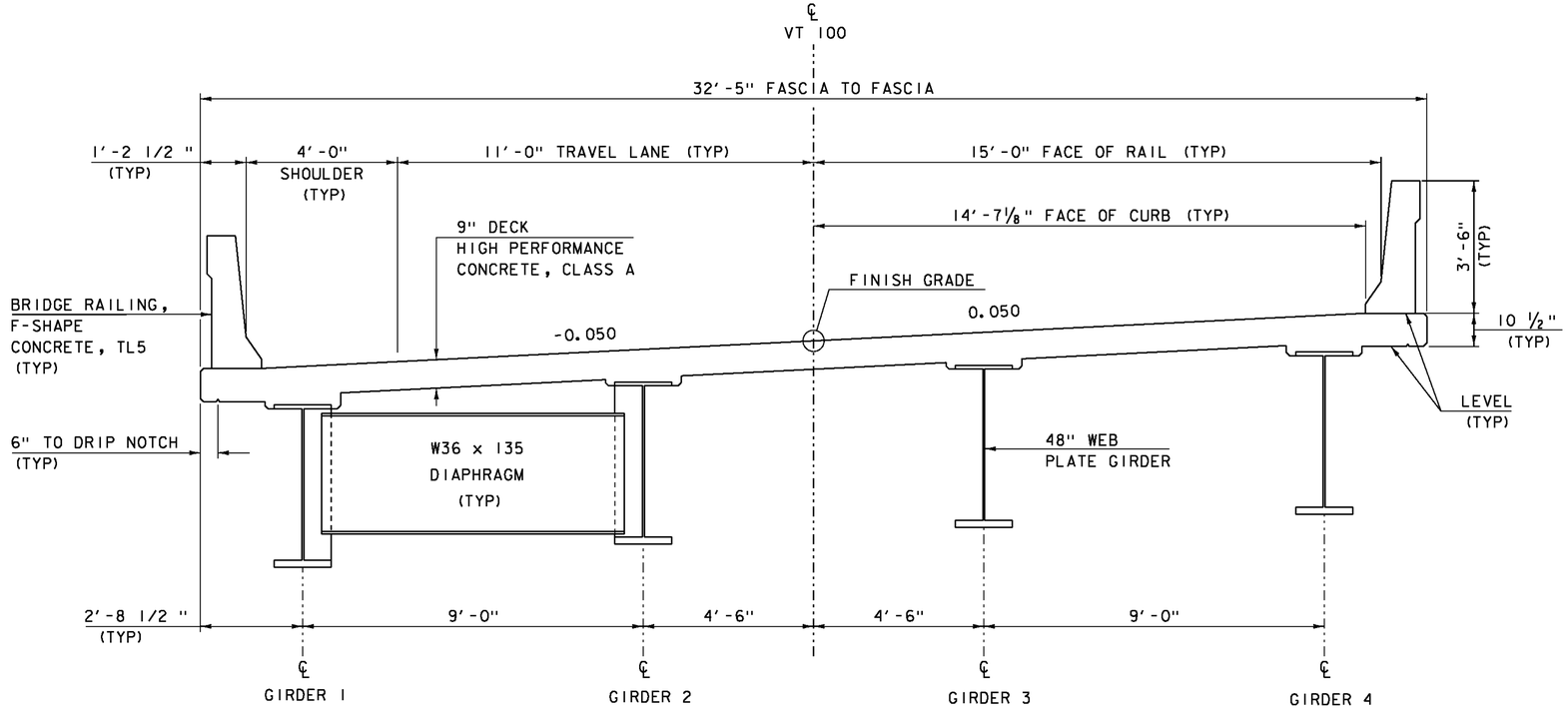
PLOT DATE: 23-OCT-2012
DRAWN BY: G. LAROCHE
CHECKED BY: K. FRIEDLAND
SHEET 7 OF 85



* 5½" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT
  - 1½" TYPE IVS OVER
  - 1½" TYPE IVS OVER
  - 2½" TYPE IIS
  - 24" SUBBASE OPTION

ROADWAY TYPICAL

SCALE ½" = 1'-0"



BRIDGE TYPICAL

SCALE ½" = 1'-0"

MATERIAL TOLERANCES

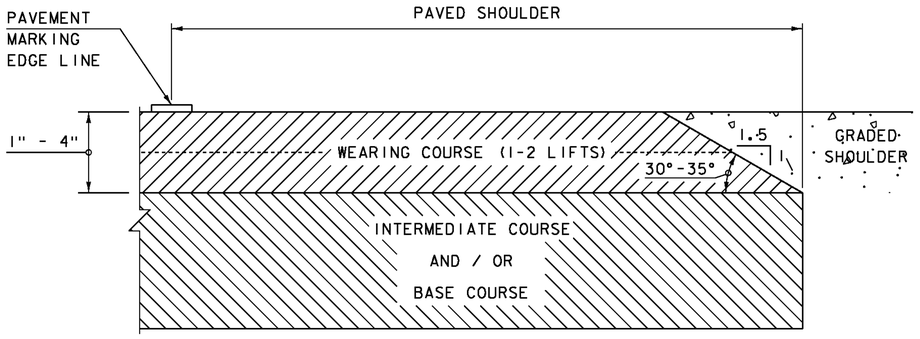
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- ¼"
- AGGREGATE SURFACE COURSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212typ.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
TYPICAL SECTIONS 1

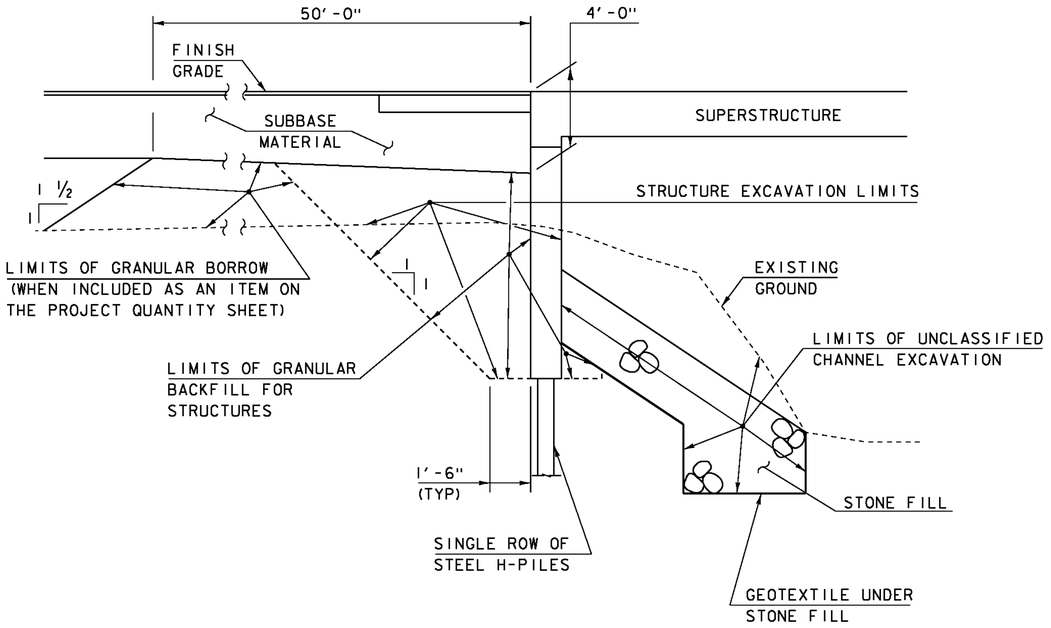
PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 8 OF 85



SAFETY EDGE DETAIL

NOT TO SCALE

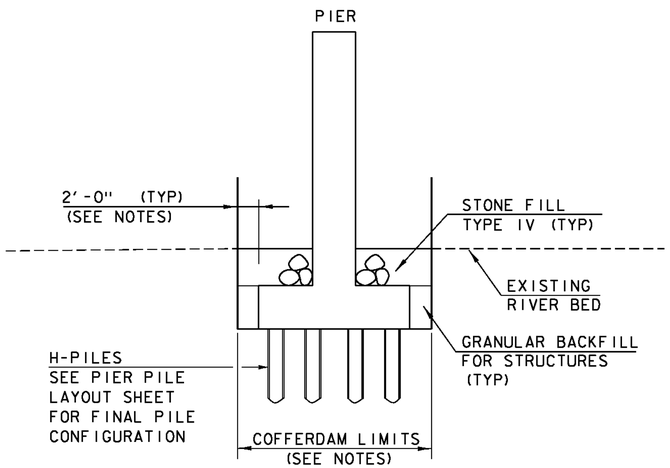
NOTE: LEVELING COURSE MAY INCLUDE THE "SAFETY EDGE" AT THE CONTRACTOR'S CHOICE.



TYPICAL INTEGRAL ABUTMENT SECTION

NOT TO SCALE

ACTUAL LIMITS OF STRUCTURE EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR. HOWEVER, ONLY THE EXCAVATION BETWEEN THE LIMITS SHOWN WILL BE PAID FOR UNDER ITEM 204.25 "STRUCTURE EXCAVATION". EXCAVATION BY THE CONTRACTOR OUTSIDE OF THESE LIMITS WILL BE AT THE EXPENSE OF THE CONTRACTOR.

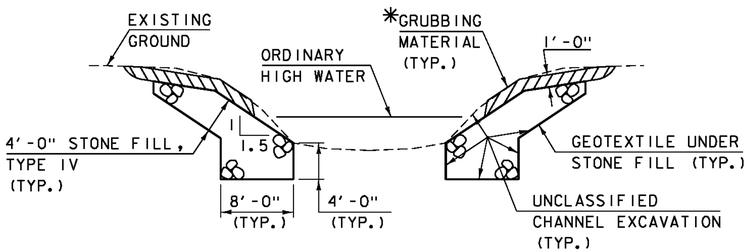


PIER EARTH WORK TYPICAL

(NOT TO SCALE)

COFFERDAM NOTES

1. COFFERDAM DIMENSIONS TO BE DETERMINED BY THE CONTRACTOR.
2. THE PAY LIMITS OF EITHER "COFFERDAM EXCAVATION, EARTH" ~~AND "COFFERDAM EXCAVATION, ROCK"~~ SHALL BE 2'-0" OUTSIDE THE PERIMETER OF THE FOOTING AND FROM BOTTOM OF EXCAVATION UP TO THE EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. IF A COFFERDAM IS CONSTRUCTED WHICH IS LARGER THAN THE INDICATED COFFERDAM EXCAVATION PAY LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE COFFERDAM PAY LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION. NO MEASUREMENT AND PAYMENT WILL BE MADE FOR COFFERDAM EXCAVATION AND GRANULAR BACKFILL FOR STRUCTURES OUTSIDE THE PAY LIMITS DEFINED IN NOTE 2.



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

*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.

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212typ.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
TYPICAL SECTIONS 2	SHEET 9 OF 85

GPS CONTROL POINTS

HVCTRL #1

T 127 AZ MK

NORTH = 209820.660
EAST = 1578913.510

GENERAL LOCATION, JAMAICA, VT. TO REACH FROM THE MOST SOUTHERLY INTERSECTION OF VT ROUTES 100 AND 30 IN EAST JAMAICA GO EAST ALONG VT ROUTE 30 FOR 0.2 MI (0.3 KM) TO THE MARK ON THE RIGHT OPPOSITE A LEDGE CUT. THE MARK IS SET IN THE TOP OF A FENO TYPE MONUMENT FLUSH WITH GROUND SURFACE. IT IS 1.9 M (6.2 FT) SOUTH OF AND ABOUT LEVEL WITH THE SOUTH EDGE OF PAVEMENT OF VT ROUTE 30, 5.0 M (16.4 FT) WEST NORTHWEST OF POLE NO.594/514, 21.0 M (68.9 FT) NORTHWEST OF A 60 CM PINE, AND 0.3 NORTH OF A FIBERGLASS WITNESS POST

HVCTRL #2

T 127

NORTH = 209918.560
EAST = 1577682.960
ELEV. = 553.800

GENERAL LOCATION, JAMAICA, VT. TO REACH FROM THE MOST SOUTHERLY INTERSECTION OF VT ROUTES 100 AND 30 IN EAST JAMAICA GO WEST ALONG VT ROUTE 100 AND 30 FOR ABOUT 65 M (213.3 FT) TO THE INTERSECTION OF A GRAVEL ROAD RIGHT AND THE MARK ON THE RIGHT IN THE SOUTHWEST CORNER OF THE STEPHEN BALLANTINE MEMORIAL ATHLETIC FIELD COMPLEX. THE MARK IS SET FLUSH WITH GROUND SURFACE IN THE TOP OF A CAST ALUMINUM MONUMENT. IT IS 10.7 M (35.1 FT) NORTH OF AND ABOUT 2 M (6.6 FT) LOWER THAN THE NORTH EDGE OF PAVEMENT OF VT ROUTE 100 AND 30, 9.5 M (31.2 FT) EAST OF THE CENTERLINE OF THE GRAVEL ROAD, 18.2 M (59.7 FT) NORTHWEST OF POLE NO. 599/5/505, AND 0.1 SOUTH OF A FIBERGLASS WITNESS POST.

TRAVERSE TIES

HVCTRL #10

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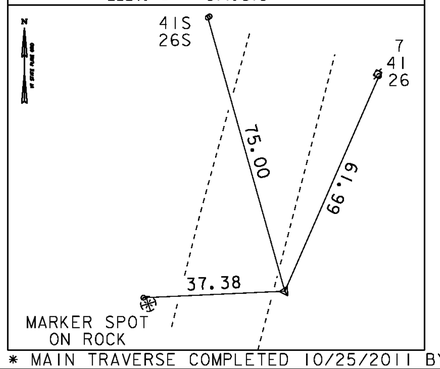
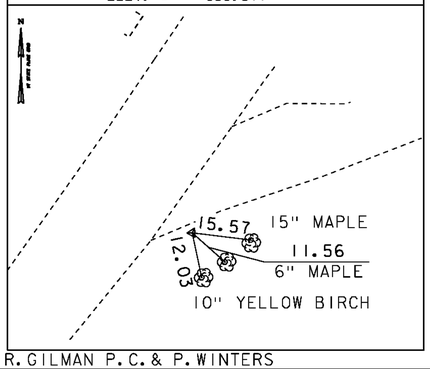
EAST = 1572929.230
ELEV. = 677.678



HVCTRL #11

NORTH = 206266.149
EAST = 1572597.994
ELEV. = 689.577



HVCTRL #23

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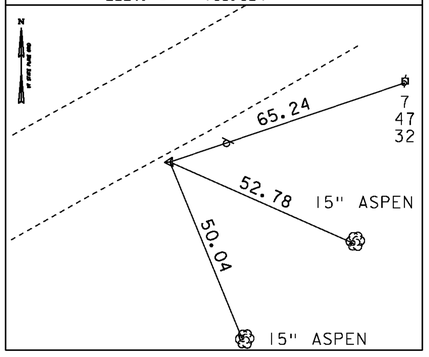
EAST = 1572150.803
ELEV. = 703.024



NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

* MAIN TRAVERSE COMPLETED 10/25/2011 BY R.GILMAN P.C.& P.WINTERS

ALIGNMENT TIES

Horizontal Alignment Name: VT 100 Prop
Description: Mainline

		STATION	NORTHING	EASTING
		Element: Linear		
POB	(1287)	112+65.55	205903.80	1572092.08
PC	(1288)	114+76.80	206005.84	1572277.05
		Tangent Direction:	N 61°07'00" E	
		Tangent Length:	211.25	
		Element: Circular		
PC	(1288)	114+76.80	206005.84	1572277.05
PI	( )	116+87.93	206107.82	1572461.91
CC	(1289)		206793.88	1571842.33
PT	(1290)	118+91.55	206281.36	1572582.14
		Radius:	900.00	
		Delta:	26°24'13" Left	
		Degree of Curvature(Arc):	6°21'58"	
		Length:	414.75	
		Tangent:	211.12	
		Chord:	411.09	
		Middle Ordinate:	23.79	
		External:	24.43	
		Tangent Direction:	N 61°07'00" E	
		Radial Direction:	S 28°53'00" E	
		Chord Direction:	N 47°54'54" E	
		Radial Direction:	S 55°17'13" E	
		Tangent Direction:	N 34°42'47" E	
		Element: Linear		
PT	(1290)	118+91.55	206281.36	1572582.14
PC	(1291)	122+03.82	206538.05	1572759.96
		Tangent Direction:	N 34°42'47" E	
		Tangent Length:	312.27	
		Element: Circular		
PC	(1291)	122+03.82	206538.05	1572759.96
PI	)	123+47.40	206656.08	1572841.73
CC	(1292)		207007.86	1572081.80
PT	(1293)	124+88.14	206794.80	1572878.82
		Radius:	825.00	
		Delta:	19°44'47" Left	

	STATION	NORTHING	EASTING
Degree of Curvature(Arc):	6°56'42"		
Length:	284.33		
Tangent:	143.59		
Chord:	282.92		
Middle Ordinate:	12.22		
External:	12.40		
Tangent Direction:	N 34°42'47" E		
Radial Direction:	S 55°17'13" E		
Chord Direction:	N 24°50'24" E		
Radial Direction:	S 75°02'00" E		
Tangent Direction:	N 14°58'00" E		
Element: Linear			
PT (1293)	124+88.14	206794.80	1572878.82
POE (1294)	126+59.72	206960.55	1572923.13
Tangent Direction:	N 14°58'00" E		
Tangent Length:	171.57		
Element: Linear			
POB (1016)	50+00.00	206368.66	1572928.41
POE (1014)	55+00.00	206495.65	1572444.81
Tangent Direction:	N 75°17'13" W		
Tangent Length:	500.00		

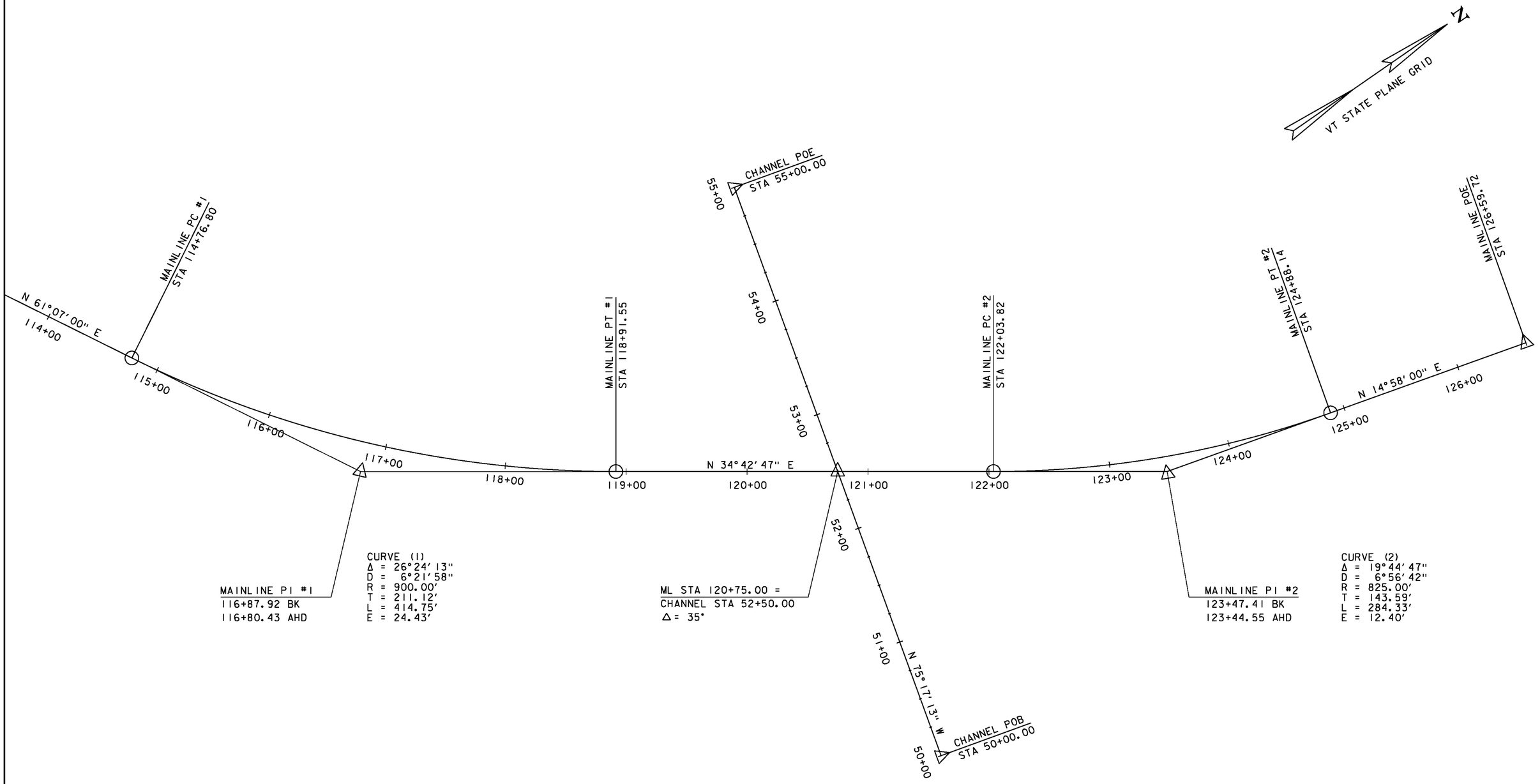
DATUM

VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)
ADJUSTMENT	COMPASS

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: survey\x11b212t1.dgn
PROJECT LEADER: K.HIGGINS
DESIGNED BY: J. SALVATORI
TIE SHEET

PLOT DATE: 10-18-12
DRAWN BY: S. DONOVAN
CHECKED BY: J. SALVATORI
SHEET 10 OF 85

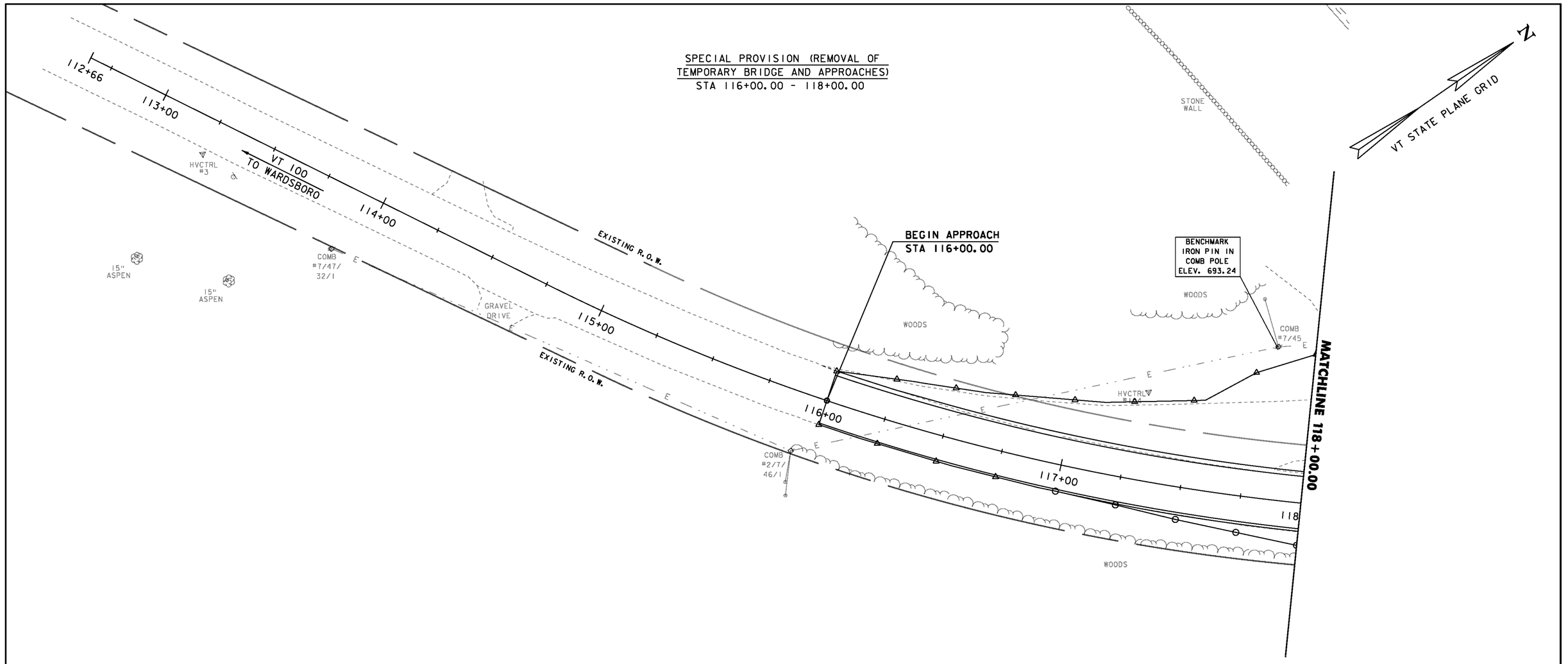


ALIGNMENT

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

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212bdr.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
ALIGNMENT	SHEET 11 OF 85

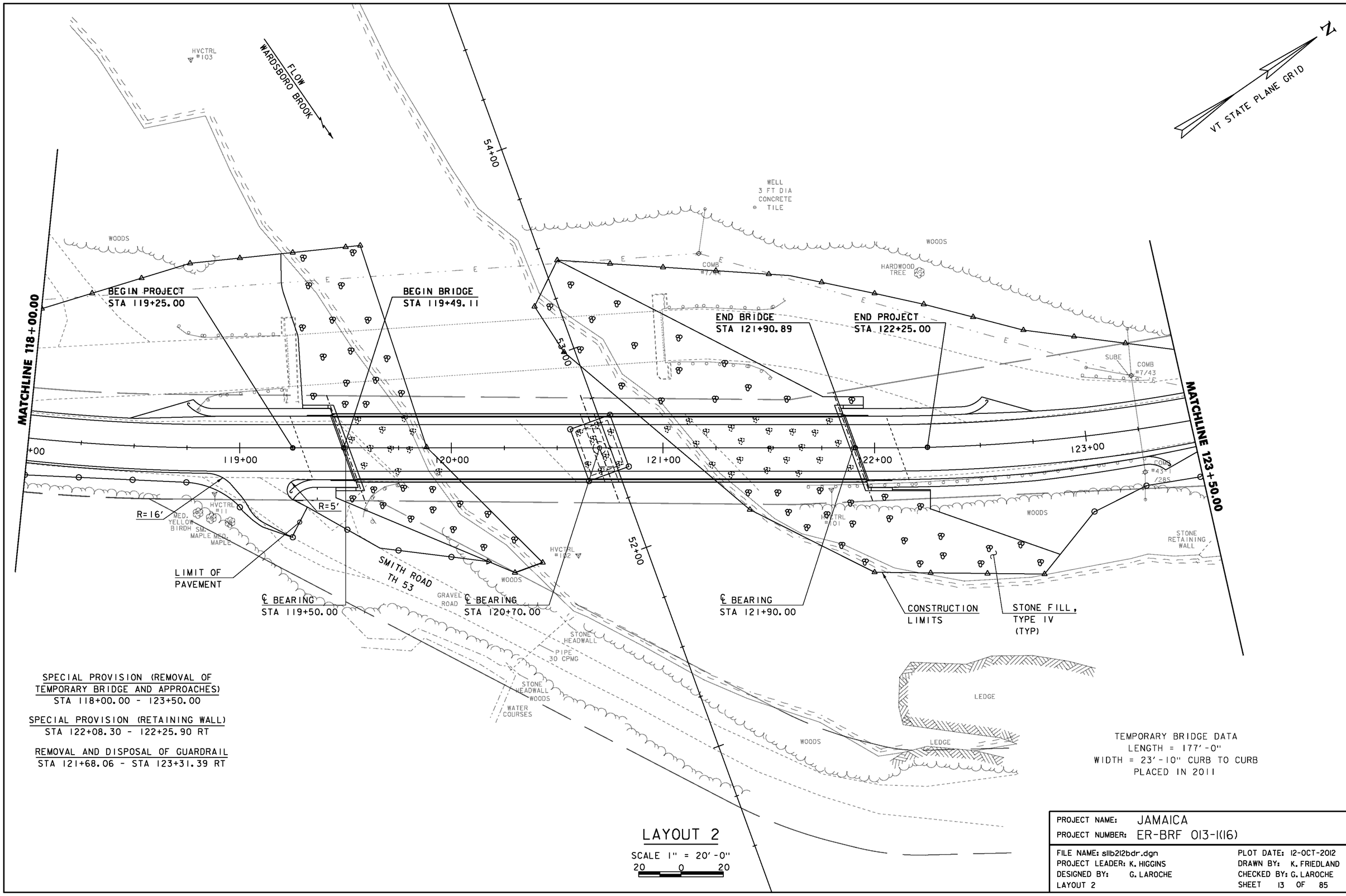
SPECIAL PROVISION (REMOVAL OF TEMPORARY BRIDGE AND APPROACHES)
STA 116+00.00 - 118+00.00



LAYOUT 1

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

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212bdr.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
LAYOUT 1	SHEET 12 OF 85



SPECIAL PROVISION (REMOVAL OF TEMPORARY BRIDGE AND APPROACHES)
STA 118+00.00 - 123+50.00

SPECIAL PROVISION (RETAINING WALL)
STA 122+08.30 - 122+25.90 RT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 121+68.06 - STA 123+31.39 RT

TEMPORARY BRIDGE DATA
LENGTH = 177'-0"
WIDTH = 23'-10" CURB TO CURB
PLACED IN 2011

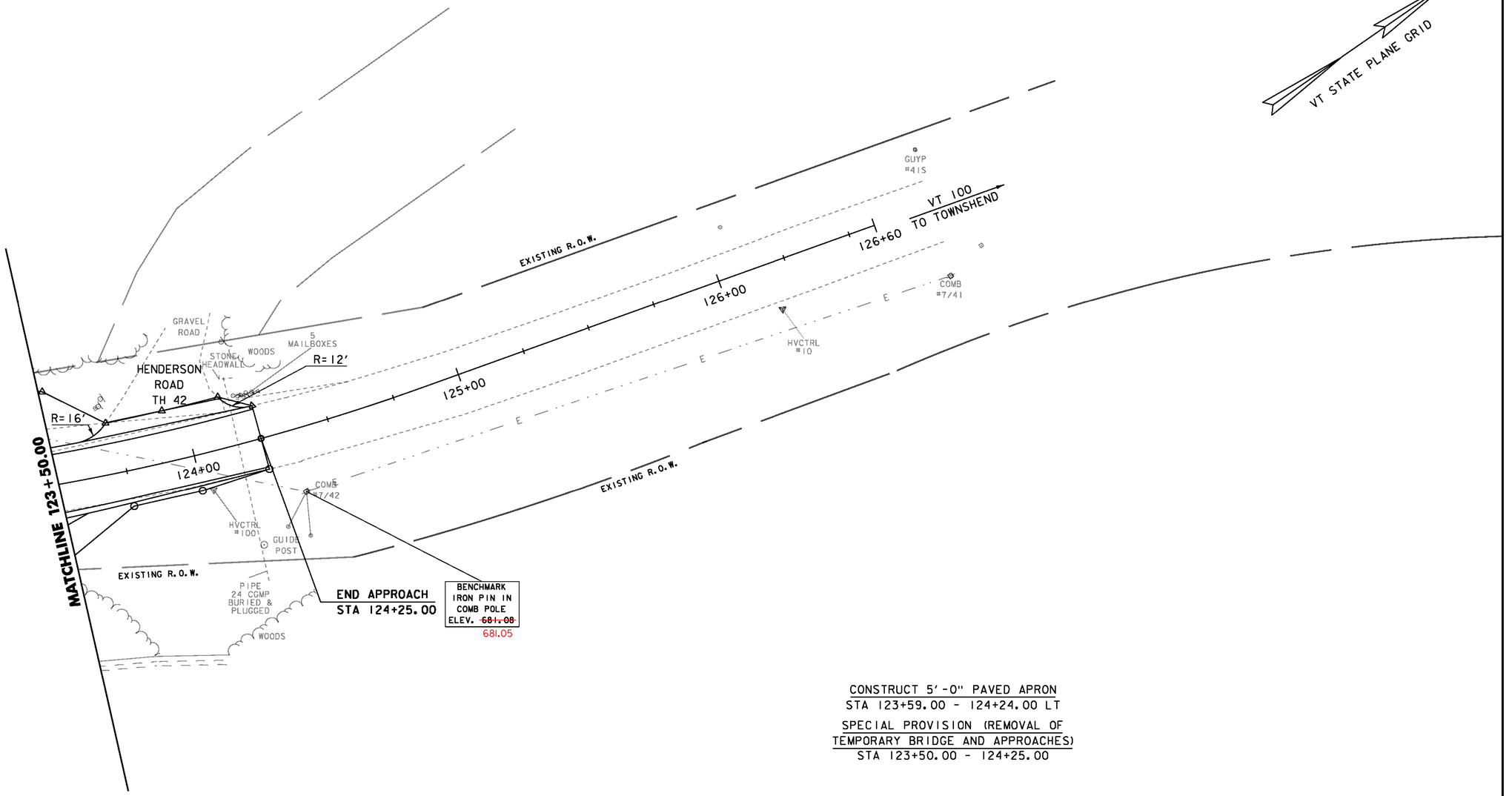
LAYOUT 2

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

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212bdr.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
LAYOUT 2

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 13 OF 85



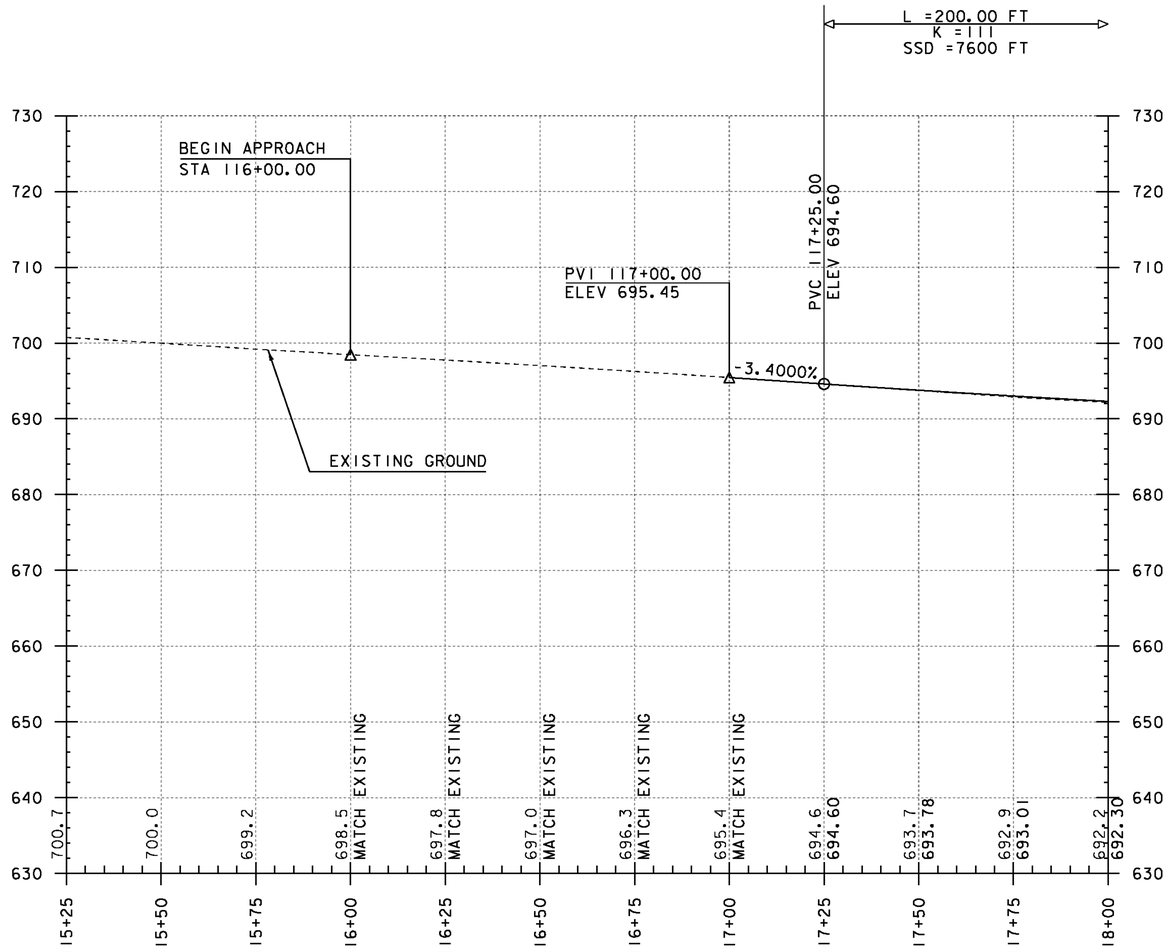
CONSTRUCT 5'-0" PAVED APRON
STA 123+59.00 - 124+24.00 LT

SPECIAL PROVISION (REMOVAL OF TEMPORARY BRIDGE AND APPROACHES)
STA 123+50.00 - 124+25.00

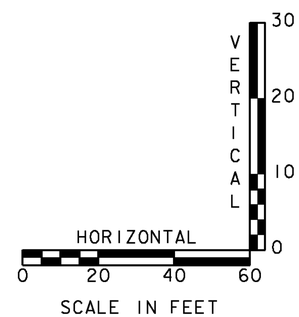
LAYOUT 3

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

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212bdr.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
LAYOUT 3	SHEET 14 OF 85



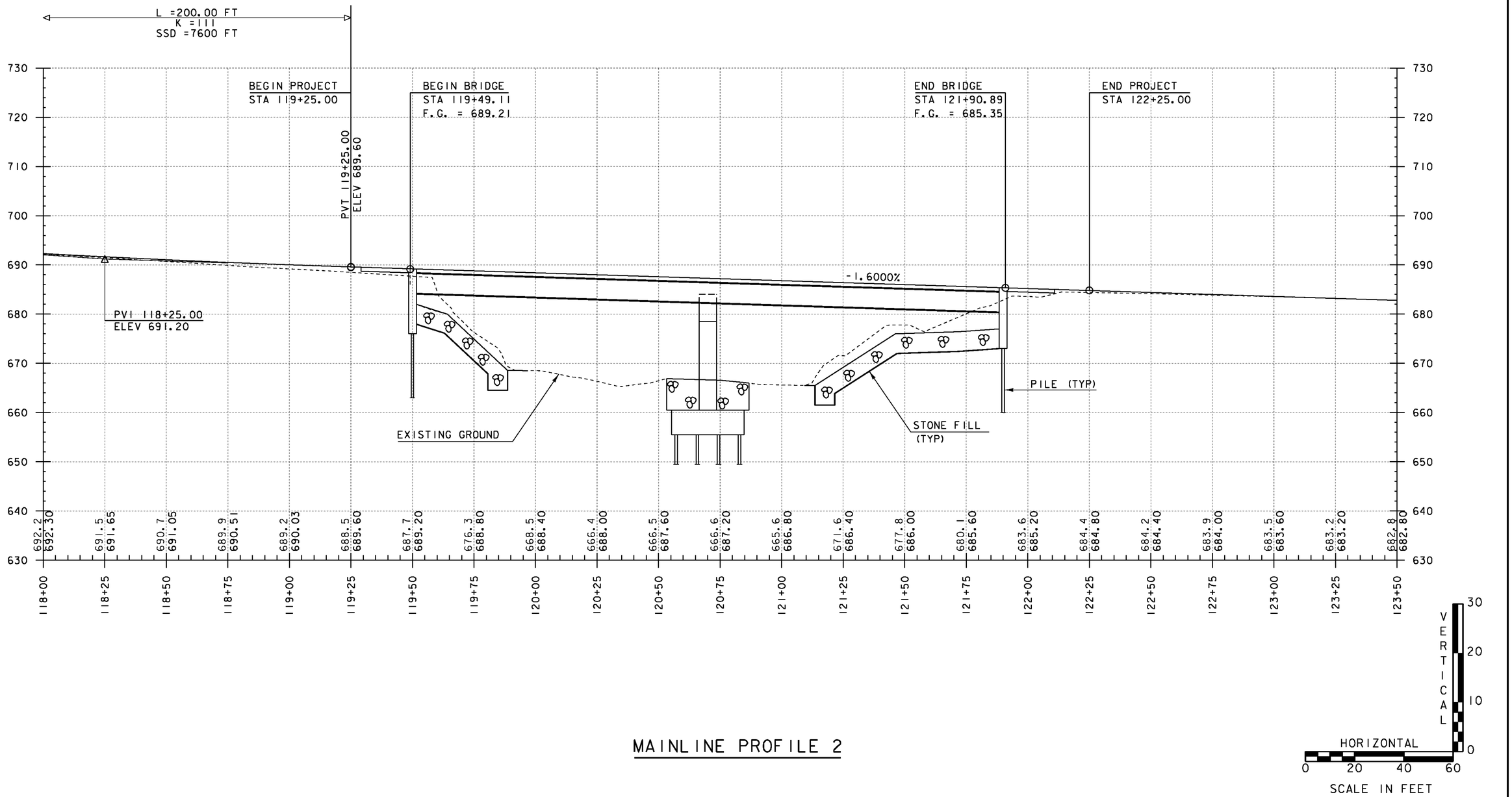
MAINLINE PROFILE 1



GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND

GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE

PROJECT NAME:	JAMIACA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212pro.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
MAINLINE PROFILE 1	SHEET 15 OF 85

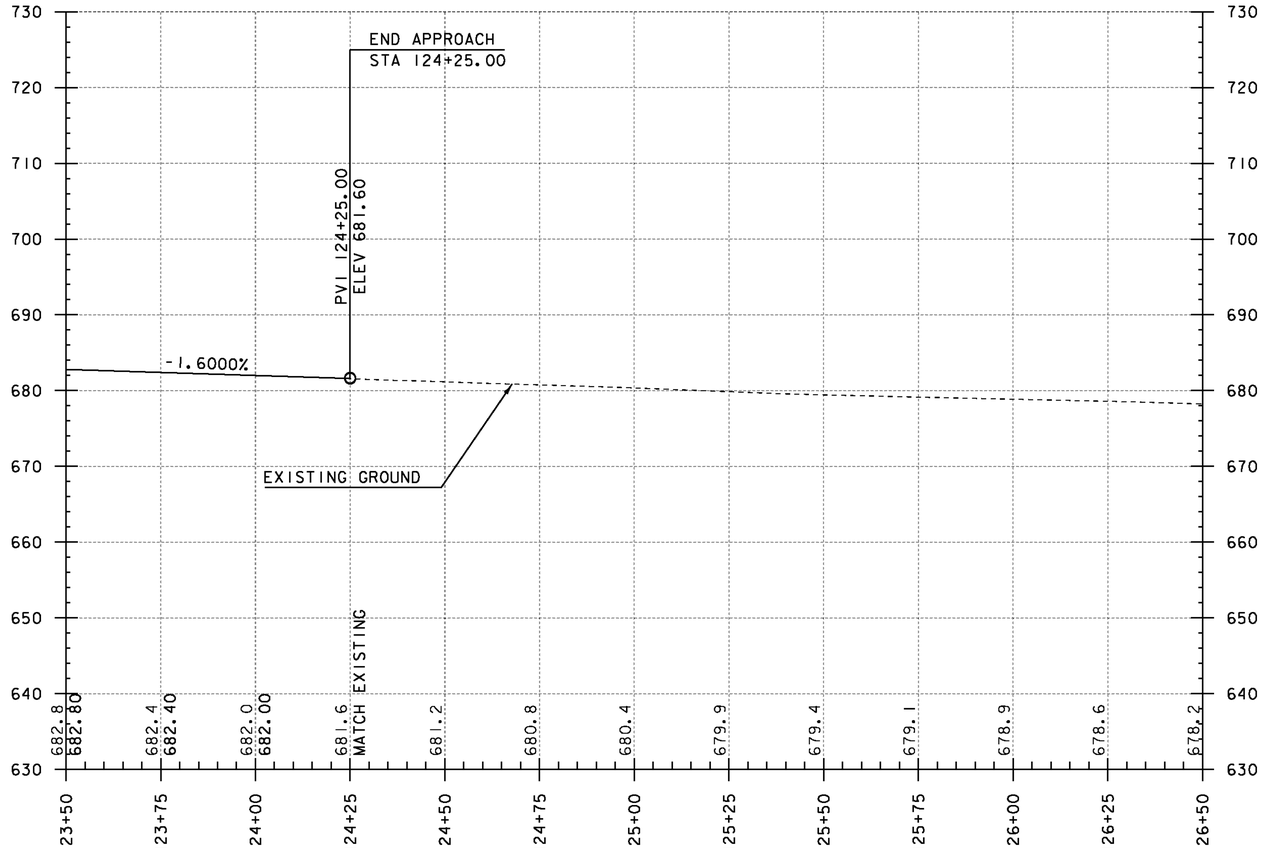


MAINLINE PROFILE 2

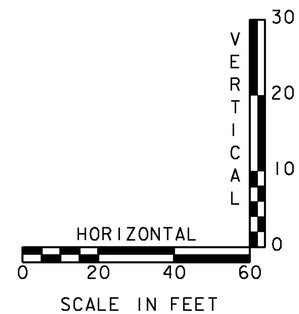
GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND

GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE

PROJECT NAME:	JAMIACA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: slib212pro.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
MAINLINE PROFILE 2	SHEET 16 OF 85



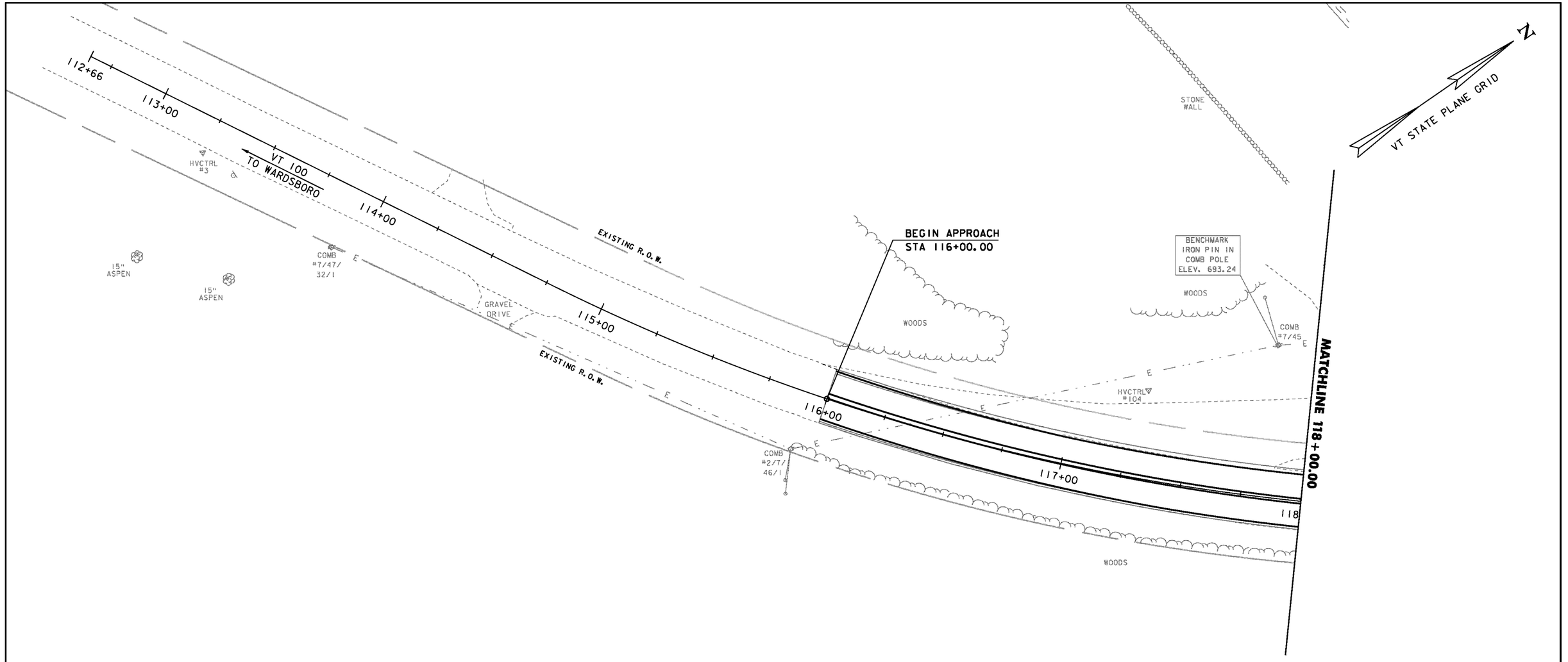
MAINLINE PROFILE 3



GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND

GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE

PROJECT NAME:	JAMIACA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: slib212pro.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
MAINLINE PROFILE 3	SHEET 17 OF 85



4 INCH WHITE LINE (LT & RT)
STA 116+00.00 - STA 118+00.00

4 INCH YELLOW LINE (DOUBLE)
STA 116+00.00 - STA 118+00.00

NOTE:
ADJUST NEW CENTERLINE AND EDGE LINES TO MATCH EXISTING LINES AT BEGIN/END APPROACH

SIGN LEGEND

N = NEW
R = REMOVE
RET = RETAIN
S = SALVAGE

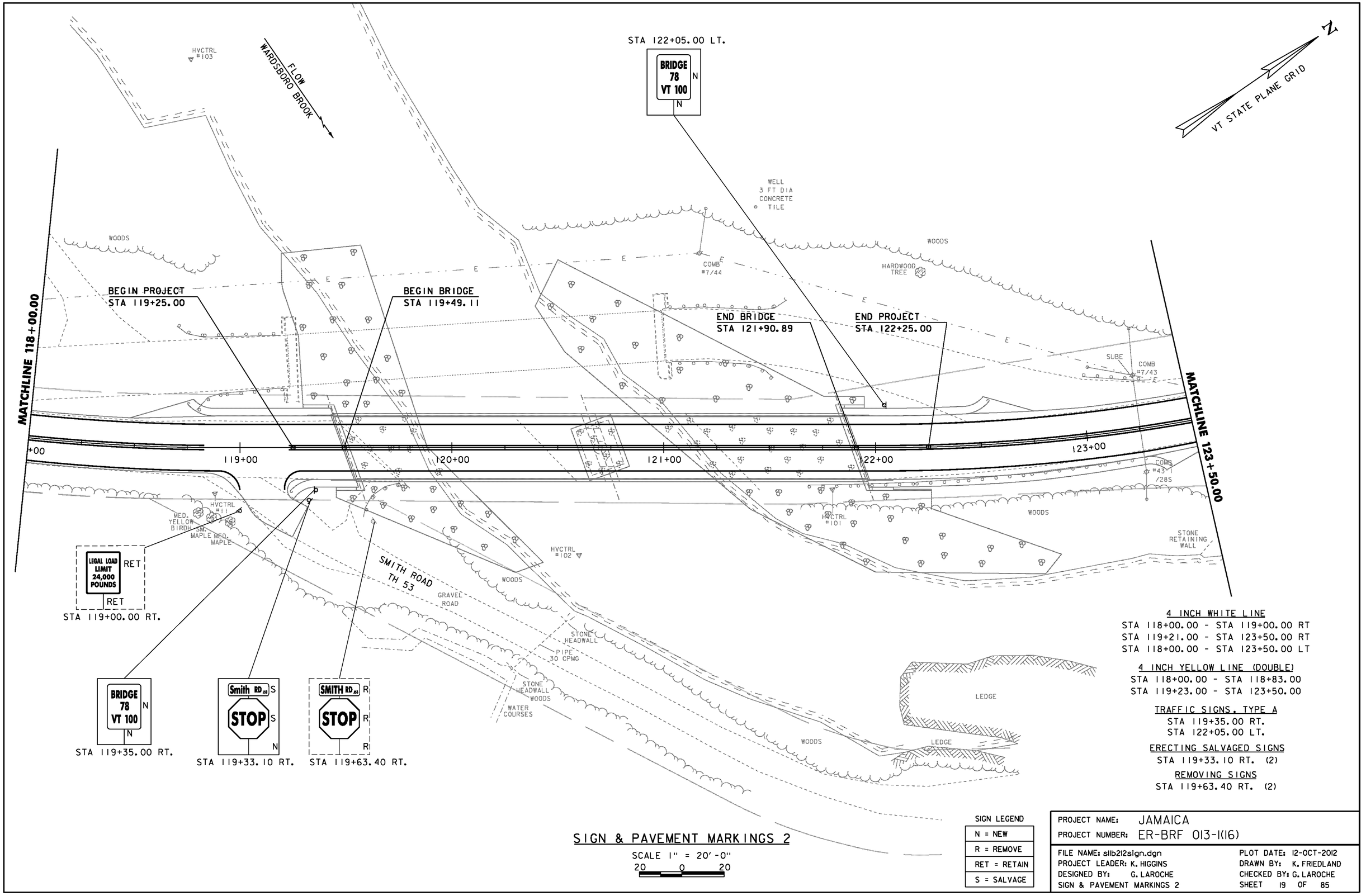
SIGN & PAVEMENT MARKINGS 1

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

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: slb212sign.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
SIGN & PAVEMENT MARKINGS 1

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 18 OF 85



4 INCH WHITE LINE
STA 118+00.00 - STA 119+00.00 RT
STA 119+21.00 - STA 123+50.00 RT
STA 118+00.00 - STA 123+50.00 LT

4 INCH YELLOW LINE (DOUBLE)
STA 118+00.00 - STA 118+83.00
STA 119+23.00 - STA 123+50.00

TRAFFIC SIGNS, TYPE A
STA 119+35.00 RT.
STA 122+05.00 LT.

ERECTING SALVAGED SIGNS
STA 119+33.10 RT. (2)

REMOVING SIGNS
STA 119+63.40 RT. (2)

SIGN & PAVEMENT MARKINGS 2

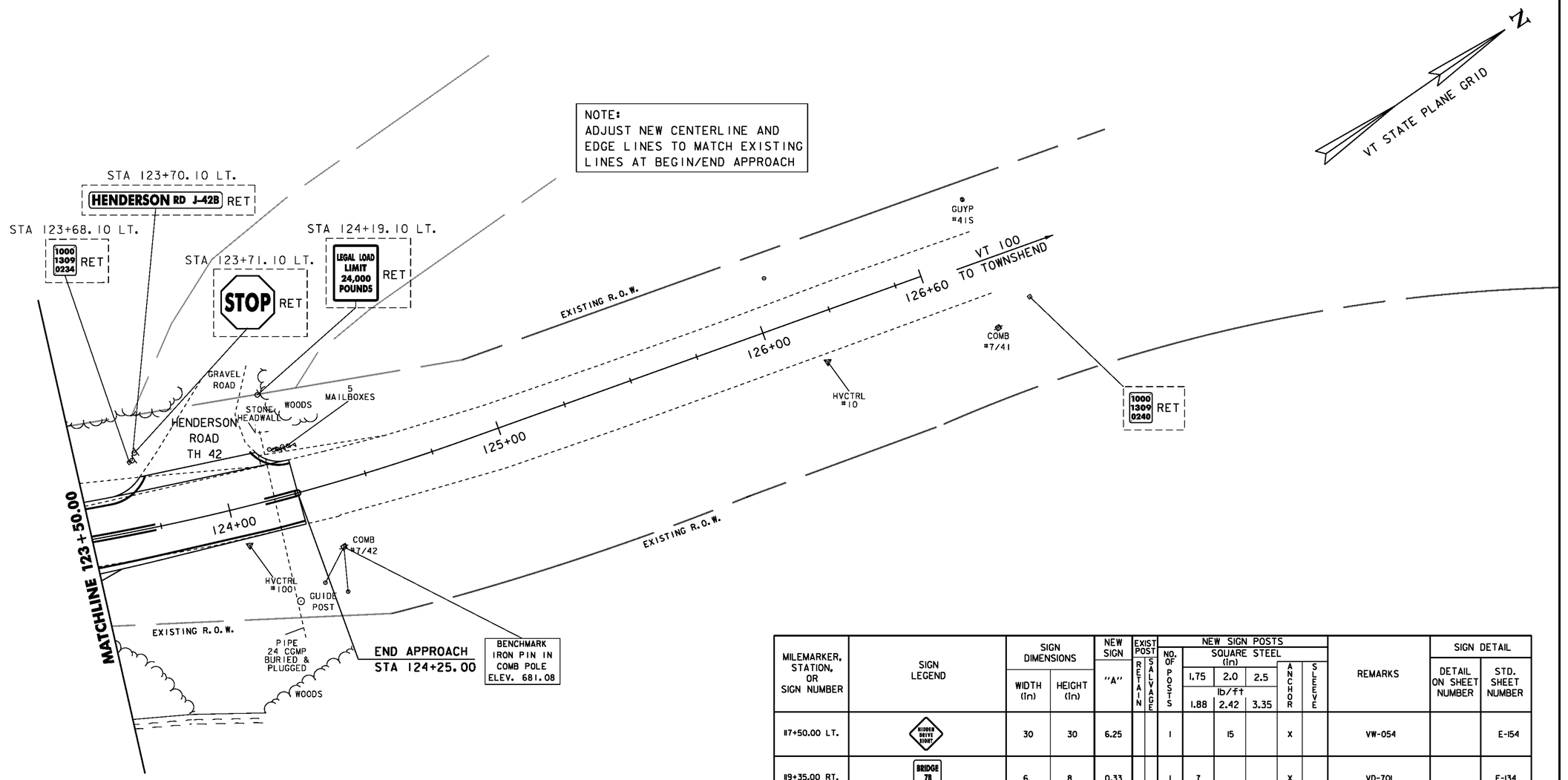
SCALE 1" = 20'-0"
20 0 20

SIGN LEGEND
N = NEW
R = REMOVE
RET = RETAIN
S = SALVAGE

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: slib212sign.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
SIGN & PAVEMENT MARKINGS 2

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 19 OF 85



4 INCH WHITE LINE
STA 123+50.00 - STA 124+25.00 RT
STA 123+50.00 - STA 123+73.00 LT
STA 124+13.00 - STA 124+25.00 LT

4 INCH YELLOW LINE (DOUBLE)
STA 123+50.00 - STA 123+73.00
STA 124+13.00 - STA 124+25.00

NOTES:

1. FOR SMITH ROAD SIGN USE 12" BRACKET.

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW SIGN "A"	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	SQUARE STEEL (in) 2.0 lb/ft 2.42	SQUARE STEEL (in) 2.5 lb/ft 3.35	ANCHOR	SLEEVE	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STD. SHEET NUMBER
117+50.00 LT.	HIDDEN DRIVE AHEAD	30	30	6.25			1		15		X		VW-054		E-154
119+35.00 RT.	BRIDGE 78 VT 100	6	8	0.33			1	7			X		VD-701		E-134
119+33.10 RT.	Smith RD J28 SALVAGE EXISTING SIGN														
119+33.10 RT.	STOP SALVAGE EXISTING SIGN						1		15		X				
122+05.00 LT.	BRIDGE 78 VT 100	6	8	0.33			1	7			X		VD-701		E-134
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."								FT 14	FT 30	FT		EA			
	TOTALS			SF 6.91					FT 44				SHS = STANDARD HIGHWAY SIGNS (MUTCD)		

SIGN LEGEND

N = NEW
R = REMOVE
RET = RETAIN
S = SALVAGE

SIGN & PAVEMENT MARKINGS 3

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

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212sign.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
SIGN & PAVEMENT MARKINGS 3

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 20 OF 85

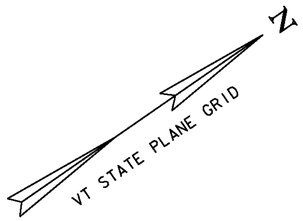
GUARDRAIL APPROACH SECTION TO CONCRETE BRIDGE RAILING, TL-3
STA 119+24.80 - STA 119+42.90 LT
STA 119+35.70 - STA 119+53.90 RT
STA 121+86.10 - STA 122+04.30 LT
STA 121+97.00 - STA 122+15.00 RT

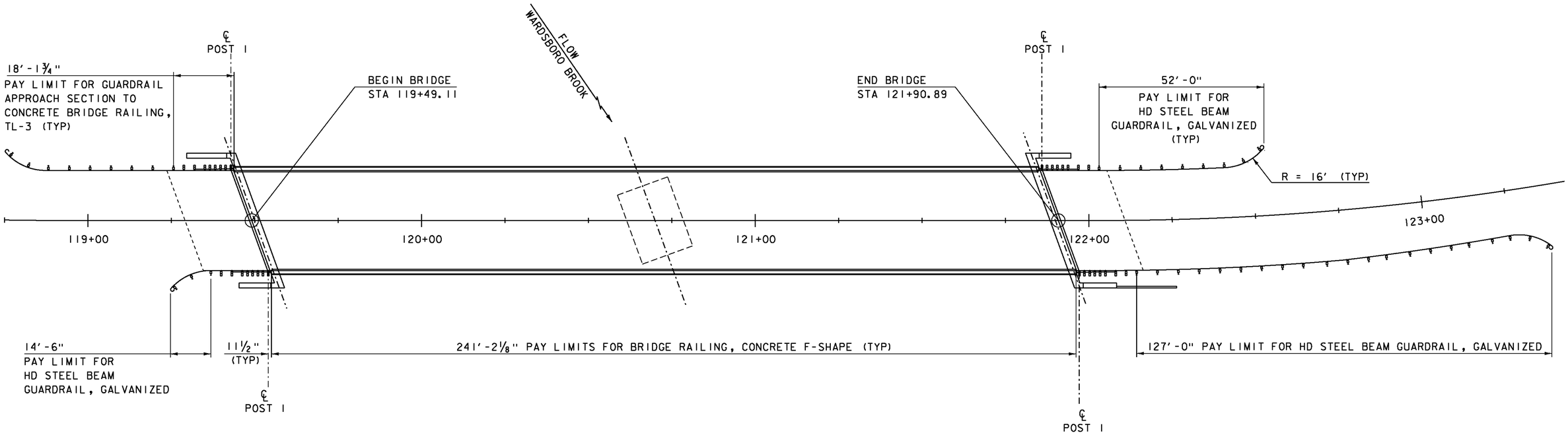
BRIDGE RAILING, F-SHAPE CONCRETE
STA 119+42.90 - STA 121+86.10 LT
STA 119+53.90 - STA 121+97.00 RT

HD STEEL BEAM GUARDRAIL, GALVANIZED
STA 118+74.90 - STA 119+24.80 LT
STA 119+23.60 - STA 119+35.70 RT
STA 122+04.30 - STA 122+54.90 LT
STA 122+15.00 - STA 123+37.50 RT

ANCHOR FOR STEEL BEAM RAIL
STA 118+87.20 LT
STA 119+35.70 RT
STA 122+42.50 LT
STA 123+25.70 RT

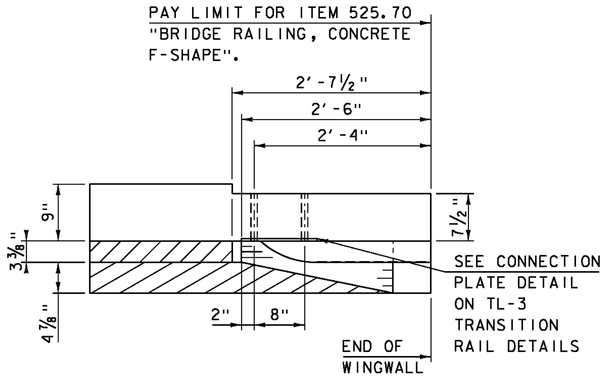
CONCRETE CURB, TYPE B
STA 119+31.80 - 119+43.80 LT
STA 119+43.00 - 119+55.00 RT
STA 121+84.99 - 121+96.99 LT
STA 121+96.20 - 122+08.20 RT





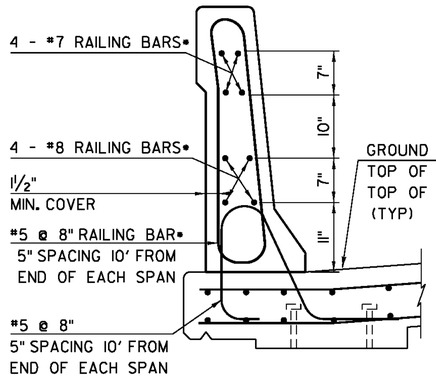
RAIL LAYOUT
NOT TO SCALE

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: slb212rail.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. SALVATORI
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
RAIL LAYOUT	SHEET 21 OF 85



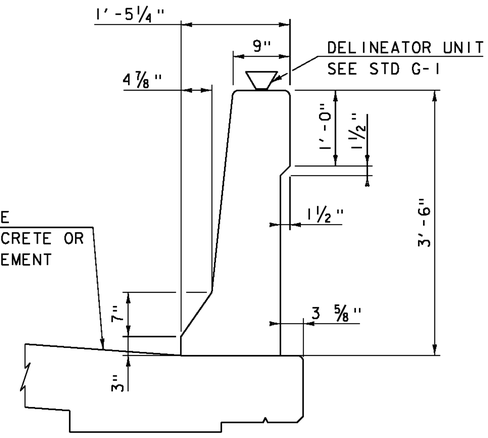
TL-5 F-SHAPE END OF RAIL PLAN

SCALE 1" = 1'-0"



TL-5 F-SHAPE RAIL (SHOWING RAIL REINFORCEMENT)

SCALE 1" = 1'-0"

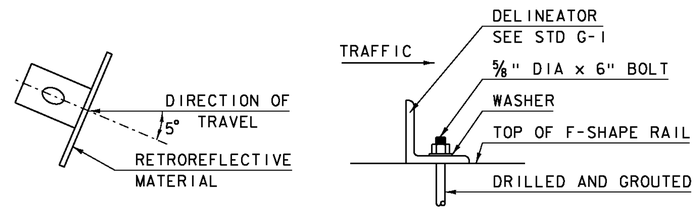


TL-5 F-SHAPE RAIL DETAIL ON BRIDGE

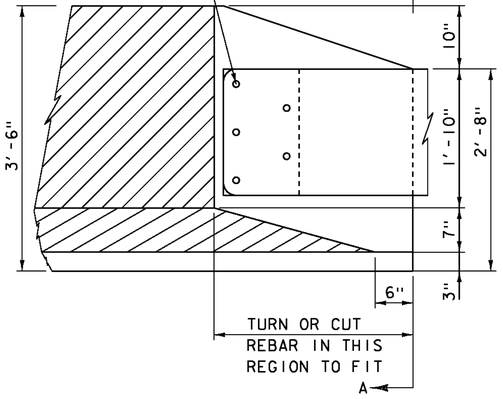
SCALE 1" = 1'-0"

BRIDGE RAIL NOTES:

1. RAIL MEETS TL-5 TEST LEVEL REQUIREMENTS OF NCHRP REPORT 350.
2. ½" VEE JOINTS SHALL BE PROVIDED IN EACH FACE OF THE CONCRETE RAIL AT INTERVALS NOT TO EXCEED 20 FEET.
3. THE ½" VEE JOINT SHALL EXTEND DOWNWARD 30" FROM THE TOP OF THE CONCRETE RAIL.
4. A CONSTRUCTION JOINT SHALL BE FORMED AT SUPPORT LOCATIONS.
5. THE BAR BENDING DETAILS FOR THE REINFORCING STEEL FOR THE CONCRETE RAIL ARE SHOWN ON THIS SHEET. THE #7 AND #8 RAILING BARS SHALL BE CONTINUOUS THROUGH THE VEE JOINT FOR THE LENGTH OF EACH BRIDGE SPAN.
6. THE RAILING BARS SHALL BE INCIDENTAL TO THE RAILING ITEM.
7. ALL METAL PARTS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M-111. ALL FIELD ALTERATIONS TO GALVANIZED MEMBERS SHALL BE PAINTED WITH 2 COATS OF ZINC RICH PAINT (SUBSECTION 726.08).
8. ALL PERMANENTLY EXPOSED CONCRETE SHALL BE TREATED WITH WATER REPELLENT SILANE IN ACCORDANCE WITH SECTION 514.
9. ALL DELINEATORS AND ALUMINUM ANGLES SHALL BE INCIDENTAL TO THE RAILING ITEM
10. DELINEATORS SHALL BE EVENLY SPACED ACROSS THE ENTIRE LENGTH OF BRIDGE RAILING BUT NOT WITHIN 2' OF ANY JOINT OPENING NOR HAVE A SPACING GREATER THAN 30'.
11. DELINEATORS SHALL BE AMBER OR WHITE WITH AMBER ON THE MEDIAN SIDE.

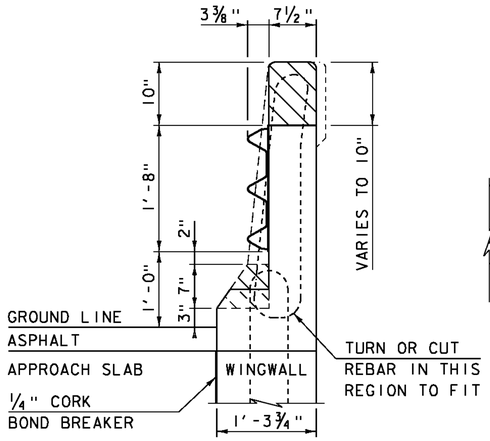


DELINEATOR MOUNTING DETAILS



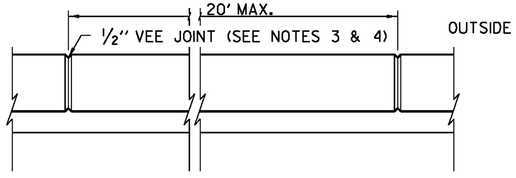
TL-5 F-SHAPE END OF RAIL ELEVATION

SCALE 1" = 1'-0"



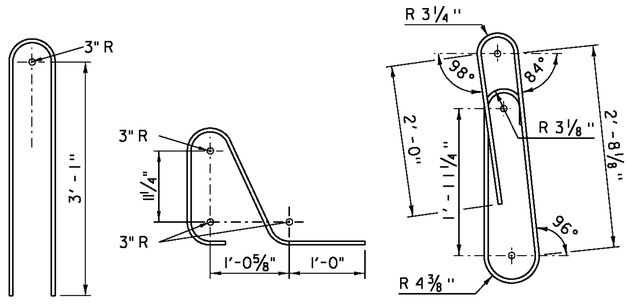
SECTION A-A

SCALE 1" = 1'-0"



PLAN VIEW OF RAIL

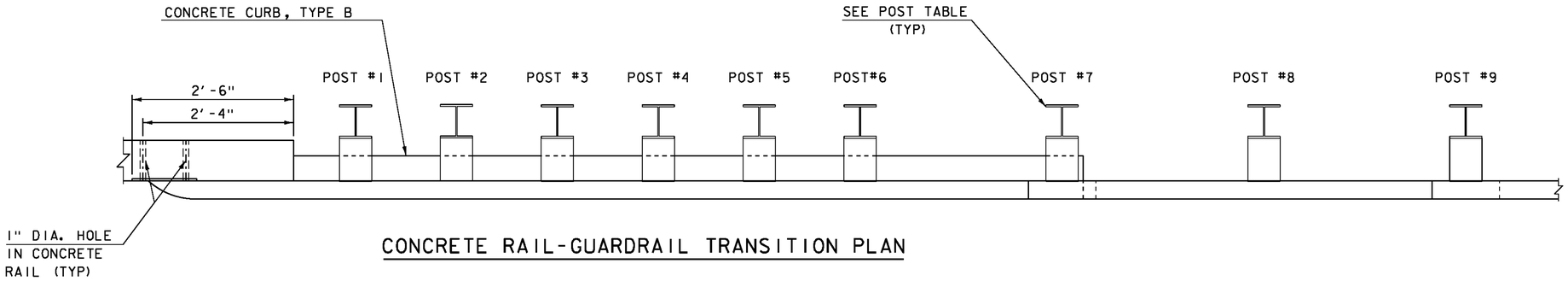
N.T.S.



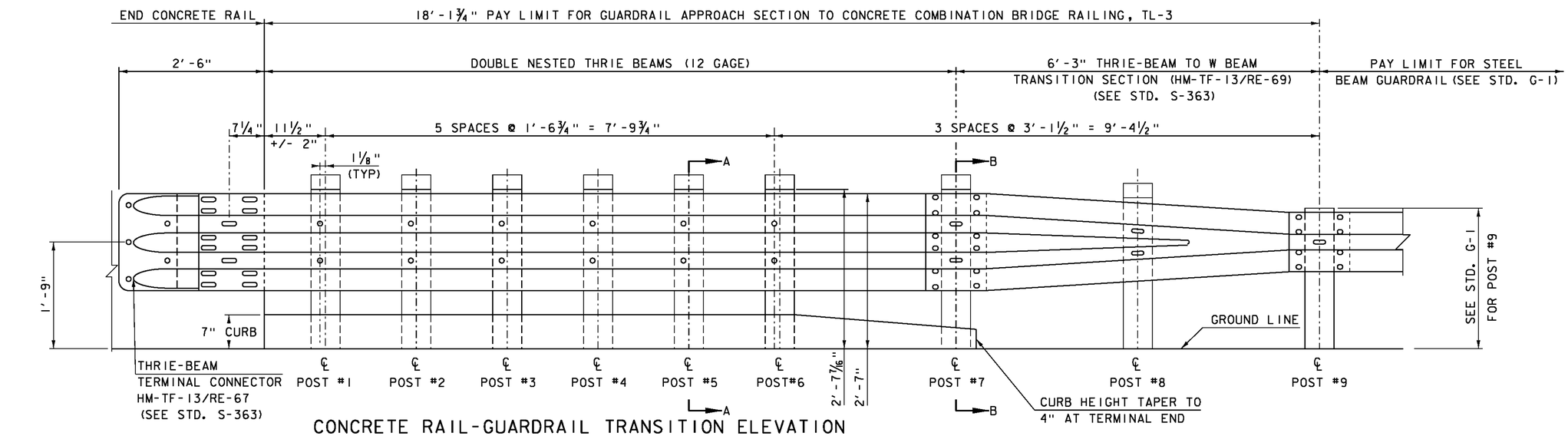
TL-5 BAR BENDING DETAIL

* THE RAILING BARS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR CONTRACT ITEM 525.70 "BRIDGE RAILING, CONCRETE F-SHAPE".

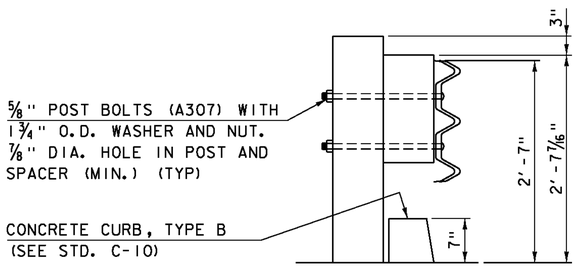
PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: slb212rail.dgn	PLOT DATE: 23-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: VTRANS
DESIGNED BY: VTRANS	CHECKED BY: J. SALVATORI
BRIDGE RAILING, CONCRETE F-SHAPE	SHEET 22 OF 85



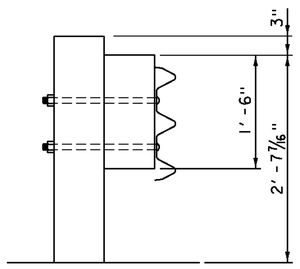
CONCRETE RAIL-GUARDRAIL TRANSITION PLAN



CONCRETE RAIL-GUARDRAIL TRANSITION ELEVATION



SECTION A-A



SECTION B-B

		STEEL	WOOD
SECTION		W6x9	6"X8"
OFFSET BLOCK		6"X8" WOOD	6"X8" RECESSED WOOD
EMBEDMENT DEPTH	POST# 1-6	7'-0"	7'-0"
	POST# 7&8	6'-0"	6'-0"
	POST# 9	SEE STD. G-1	SEE STD. G-1

POST TABLE

NOTES:

1. THRIE-BEAM TERMINAL CONNECTOR SHALL BE INCLUDED IN THE UNIT BID PRICE FOR GUARDRAIL APPROACH SECTION TO CONCRETE COMBINATION BRIDGE RAILING, TL-3.
2. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, A COMPOSITE MATERIAL POST AND/OR BLOCKOUT FROM THE APPROVED PRODUCTS LIST MAY BE SUBSTITUTED FOR A POST AND/OR BLOCKOUT OF SIMILAR DIMENSIONS.
3. THIS RAILING MEETS THE REQUIREMENTS FOR A NCHRP REPORT 350 TL-3 SERVICE LEVEL.

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: slib212rail.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: VTRANS
TL-3 TRANSITION RAIL DETAILS

PLOT DATE: 12-OCT-2012
DRAWN BY: VTRANS
CHECKED BY: J. SALVATORI
SHEET 23 OF 85

SOIL CLASSIFICATION

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

ROCK QUALITY DESIGNATION

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

SHEAR STRENGTH

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

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

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

COMMONLY USED SYMBOLS

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

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

DEFINITIONS (AASHTO)

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

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

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

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

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

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

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

VARVED - Alternate layers of silt and clay.

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

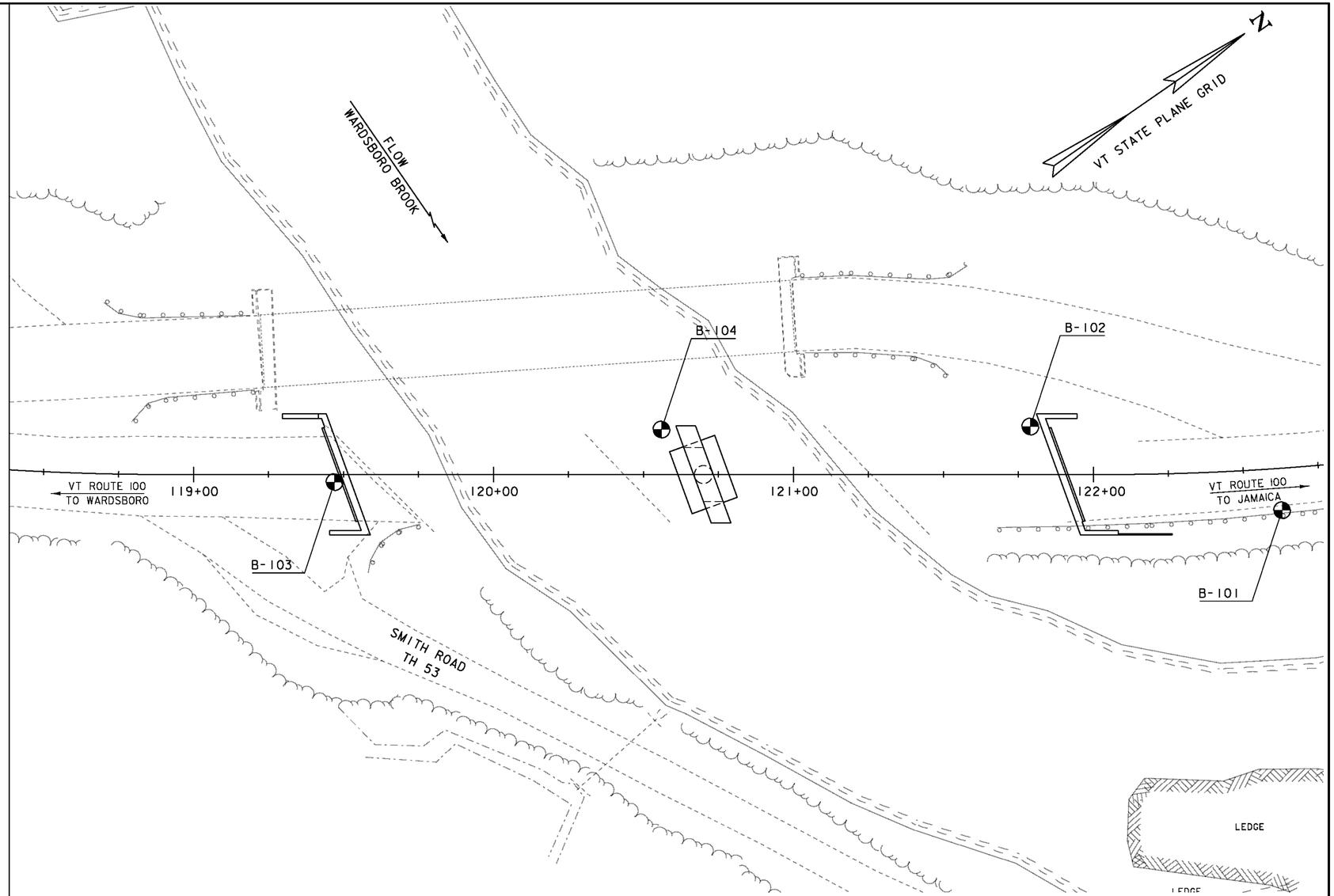
MUCK - Soft organic soil (containing > 10% organic material.

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

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

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

DIP - Inclination of bed with a horizontal plane.



BORING LAYOUT

SCALE 1" = 10'-0"

10 0 10

BORING CHART

HOLE NO.	SURV. STATION	OFFSET	GROUND ELEV.	ELEV. TLOB
B-101	122+62	14' RT	684.4	N/A
B-102	121+79	16' LT	680.3	587.1
B-103	119+47	2.5' RT	687.9	612.7
B-104	120+56	15' LT	665.5	592.0

GENERAL NOTES

1. The subsurface explorations shown herein were made between 02/02/12 and 02/16/12 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.
7. Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.

PROJECT NAME: JAMAICA

PROJECT NUMBER: ER BRF 013-1(16)

FILE NAME: sllb212bor.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
BORING LAYOUT SHEET

PLOT DATE: 12-OCT-2012
DRAWN BY: J. SALVATORI
CHECKED BY: G. LAROCHE
SHEET 24 OF 85

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

BORING LOG

JAMAICA
ER-BRF 013-1(16)
VT-100 BR-78

Boring No.: B-101
Page No.: 1 of 1
Pin No.: 11B212
Checked By: CEE

Boring Crew: GARROW, SALISBURY, WELLS
Date Started: 2/15/12 Date Finished: 2/15/12
VTSPG NAD83: N 206579.60 ft E 1572802.90 ft
Station: 122+62 Offset: 14.00
Ground Elevation: 684.4 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:		Auto/AWJ
Rig:	CME 45C TRACK	CE = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
		None Taken.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft – 0.4 ft					
		A-1-a, SaGr, brn, Moist, Broken Rock was within sample.	36-R@6.0"	15.4	53.5	36.5	10.0
		Field Note:, NXDC, Boulder					
5		Field Note:, No Recovery., Stone in sampler.	4-5-6-8 (11)				
		Field Note:, NXDC, Cobbles					
		A-2-4, SiSa, brn, Moist, Rec. = 0.7 ft	4-9-9-7 (18)	20.0	3.5	71.0	25.5
10		Visual Classification, Broken Rock with Sandy Gravel, brn, Moist, Rec. = 0.7 ft, NXDC, Encountered Cobbles when advancing casing. Insufficient sample for testing.	8-9-10-40 (19)	7.4			
		Visual Classification, Broken Rock with Sandy Gravel, gry, Moist, Rec. = 0.4 ft, Insufficient sample for testing.	18-R@6.0"	8.0			
15		Field Note:, NXDC, Cobbles					
		A-1-b, GrSa, brn, Moist, Rec. = 0.5 ft, Pulled casing and changed bit. NXDC, Encountered Cobbles when advancing casing.	3-6-7-22 (13)	15.4	37.1	51.4	11.5
		A-2-4, SiSaGr, brn, Moist, Rec. = 0.7 ft	3-6-17-14 (23)	14.1	43.5	28.9	27.6
20							
		A-4, SaSi, gry, Moist, Rec. = 1.7 ft	19-27-32-37 (59)	19.6	0.4	28.1	71.5
25							
		A-4, SaSi, gry, Moist, Rec. = 1.5 ft	20-35-R@6.0"	20.7		34.7	65.3
30							
		A-4, Si, gry, Moist, Rec. = 2.0 ft	17-31-39-37 (70)	22.2	3.1	18.4	78.5
35							
		A-4, Si, gry, Moist, Rec. = 1.6 ft	13-23-30-40 (53)	21.7	0.4	10.8	88.8
40							
		A-4, SaSi, gry, Moist, Rec. = 1.6 ft	27-24-40-R@6.0" (64)	15.4	1.2	30.8	68.0
45		Hole stopped @ 45.0 ft					

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

BORING LOG 2 JAMAICA ER-BRF 013-1(16).GPJ VERMONT AOT.GDT 2/24/12

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: slib212boringlogs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
BORING LOGS 1

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 25 OF 85

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

BORING LOG

JAMAICA
ER-BRF 013-1(16)
VT-100 BR-78

Boring No.: B-102
Page No.: 1 of 2
Pin No.: 11B212
Checked By: CEE

Boring Crew: GARROW, SALISBURY
Date Started: 2/08/12 Date Finished: 2/14/12
VTSPG NAD83: N 206527.20 ft E 1572732.90 ft
Station: 121+79 Offset: -16.00
Ground Elevation: 680.3 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C TRACK	CE = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
02/09/12	10.2	AM
02/14/12	14.7	AM

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
		A-1-a, SaGr, brn, Moist, Rec. = 0.9 ft, NXDC, Encountered Cobbles when advancing casing.				12-10-8-6 (18)	10.1	58.1	32.2	9.7		
		A-1-b, GrSa, brn, Moist, Rec. = 1.0 ft, NXDC, Encountered Cobbles when advancing casing.				10-9-8-19 (17)	12.2	43.0	43.9	13.1		
		A-1-a, SaGr, brn, Moist, Rec. = 0.4 ft, NXDC, Encountered Cobbles when advancing casing.				2-5-5-5 (10)	11.9	62.1	28.4	9.5		
		A-1-b, GrSa, brn, Moist, Rec. = 0.9 ft, NXDC, Encountered Cobbles when advancing casing.				42-9-5-4 (14)	16.5	38.8	47.9	13.3		
10		A-2-4, SlSa, brn, Moist, Rec. = 0.9 ft				3-2-1-1 (3)	29.2	11.8	67.0	21.2		
		A-1-b, GrSa, brn, MTW, Rec. = 0.9 ft				3-5-4-2 (9)	18.3	44.4	49.4	6.2		
		A-1-a, SaGr, brn, MTW, Rec. = 0.9 ft, NXDC, Encountered Cobbles when advancing casing.				4-10-13-R@1.0"	11.8	58.1	33.4	8.5		
		A-4, SaSi, gry, Moist, Rec. = 0.8 ft				9-9-13-20 (22)	18.7	15.2	29.4	55.4		
		A-4, Si, gry, Moist, Rec. = 1.7 ft				13-17-20-30 (37)	18.1	6.6	15.1	78.3	22	4
20		A-4, Si, gry, Moist, Rec. = 2.0 ft				10-15-25-33 (40)	21.9		11.0	89.0		
		A-4, Si, gry, MTD, Rec. = 1.9 ft				20-30-35-45 (65)	19.6		17.8	82.2		
		A-4, Si, gry, MTD, Rec. = 1.9 ft				20-30-36-46 (66)	19.4		17.9	82.1		
		A-4, SaSi, gry, MTD, Rec. = 1.8 ft				18-28-32-50 (60)	18.4		20.0	80.0		
		A-4, SaSi, gry, Moist, Rec. = 2.0 ft				20-26-36-42 (62)	21.5		24.1	75.9		
30		A-4, Si, gry, Moist, Rec. = 2.0 ft				13-17-32-50 (49)	21.0	1.0	15.9	83.1	23	2
		A-4, Si, gry, Moist, Rec. = 2.0 ft				27-24-27-24 (51)	16.3		17.0	83.0		
		A-4, Si, gry, Moist, Rec. = 1.9 ft				22-32-42-53 (74)	18.9	0.6	13.0	86.4		
40		A-4, SaSi, gry, Moist, Rec. = 1.8 ft				31-36-26-41 (62)	21.5		46.0	54.0		
		A-4, Si, gry, MTD, Rec. = 1.0 ft				30-50-R@0.0"	15.7	3.5	17.5	79.0		
50		A-4, Si, gry, MTD, Rec. = 0.5 ft				R@6.0"	16.4	0.6	14.5	84.9		

BOTTOM PILE CAP
EL. 673.00

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

BORING LOG 2 JAMAICA ER-BRF 013-1(16).GPJ VERMONT AOT.GDT 2/24/12

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

BORING LOG

JAMAICA
ER-BRF 013-1(16)
VT-100 BR-78

Boring No.: B-102
Page No.: 2 of 2
Pin No.: 11B212
Checked By: CEE

Boring Crew: GARROW, SALISBURY
Date Started: 2/08/12 Date Finished: 2/14/12
VTSPG NAD83: N 206527.20 ft E 1572732.90 ft
Station: 121+79 Offset: -16.00
Ground Elevation: 680.3 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C TRACK	CE = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
02/09/12	10.2	AM
02/14/12	14.7	AM

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
60		A-4, SaSi, gry, MTD, Rec. = 0.9 ft				43-R@4.5"	16.4		25.7	74.3		
		A-4, Si, gry, MTD, Rec. = 1.0 ft				27-R@6.0"	20.1		5.0	95.0		
70		A-4, SaSi, gry, MTD, Rec. = 0.9 ft				35-R@6.0"	15.5	2.7	21.6	75.7		
		A-4, SaSi, gry, MTD, Rec. = 0.9 ft				32-R@6.0"	17.3	2.0	20.4	77.6		
		A-4, SaSi, gry, MTD, Rec. = 1.0 ft				15-R@6.0"	16.1	7.1	23.3	69.6		
80		Field Note:, NXDC, Cobbles & Gravel										
		A-2-4, GrSa, gry, Moist, Rec. = 0.7 ft, Broken Rock was within sample. Field Note:, NXDC, Boulder				9-75-R@2.5"	17.1	35.4	53.8	10.8		
90		93.2 ft - 98.2 ft, Buff white, Dolomitic Marble, Hard, Unweathered, Good rock, NXMDC, RMR = 72	1 (?)	100 (64)	12 10 8 7 7	Top of Bedrock @ 93.2 ft						
100		98.2 ft - 103.2 ft, Buff white, Dolomitic Marble, Hard, Unweathered, Good rock, NXMDC, RMR = 72	2 (?)	100 (62)	5 7 7 7 9							
		Hole stopped @ 103.2 ft										

PILE TIP
EL. 587.00

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

BORING LOG 2 JAMAICA ER-BRF 013-1(16).GPJ VERMONT AOT.GDT 2/24/12

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: s11b212boringlogs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
BORING LOGS 2

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE

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

BORING LOG

JAMAICA
ER-BRF 013-1(16)
VT-100 BR-78

Boring No.: B-103
Page No.: 1 of 2
Pin No.: 11B212
Checked By: CEE

Boring Crew: GARROW, SALISBURY
Date Started: 2/02/12 Date Finished: 2/07/12
VTSPG NAD83: N 206325.50 ft E 1572615.70 ft
Station: 119+47 Offset: 2.50
Ground Elevation: 687.9 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C TRACK	CE = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
02/03/12	16.3	AM
02/06/12	10.4	AM
02/08/12	8.6	AM

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-1-a, SaGr, brn, Moist, Rec. = 0.9 ft				22-25-20-15 (45)	9.6	53.0	36.9	10.1
5		A-1-b, SaGr, brn, Moist, Rec. = 0.5 ft, NXDC, Encountered Cobbles when advancing casing.				7-9-9-R@3.5" (18)	11.3	48.5	38.0	13.5
		A-1-a, SaGr, gry-brn, Moist, Rec. = 1.0 ft, NXDC, Encountered Gravel when advancing casing.				17-18-17-20 (35)	9.4	60.1	30.1	9.8
		A-1-b, GrSa, gry, Moist, Rec. = 0.5 ft, NXDC, Encountered Cobbles when advancing casing.				5-13-12-5 (25)	10.4	42.2	48.0	9.8
10		A-1-a, SaGr, gry, Moist, Rec. = 0.7 ft, NXDC, Encountered Cobbles when advancing casing.				18-11-8-8 (19)	10.8	55.1	37.3	7.6
BOTTOM PILE CAP EL. 676.00		A-1-b, SaGr with Broken Rock, gry, Moist, Rec. = 1.2 ft, NXDC, Encountered Cobbles when advancing casing.				15-14-23-22 (37)	10.8	47.1	43.8	9.1
15		Field Note:, NXDC, Cobbles and Gravel								
		A-1-b, GrSa, gry, Moist, Rec. = 0.7 ft, NXDC, Encountered Cobbles when advancing casing.				7-12-17-30 (29)	11.3	41.2	46.5	12.3
20		Field Note:, NXDC, Cobbles								
		A-4, SaSi, gry, Moist, Rec. = 2.0 ft, NXDC, Encountered Gravel when advancing casing.				10-20-24-30 (44)	16.8	2.8	34.6	62.6
25		A-4, SaSi, gry, Moist, Rec. = 1.8 ft				24-22-24-26 (46)	17.4	2.3	22.3	75.4
		A-4, SaSi, gry, Moist, Rec. = 1.8 ft				19-25-22-25 (47)	18.3	0.2	29.8	70.0
		A-4, SaSi, gry, Moist, Rec. = 2.0 ft				14-21-24-28 (45)	19.4	9.5	45.1	45.4
30										
		A-4, SaSi, gry, MTD, Rec. = 1.5 ft				42-32-36-R@0.0" (68)	14.3	18.0	29.2	52.8
35										
		A-4, SaSi, gry, MTD, Rec. = 2.0 ft				26-31-35-43 (66)	18.3	0.8	32.1	67.1
40										
		A-4, SaSi, gry, MTD, Rec. = 0.9 ft				43-R@6.0"	15.1	0.2	24.2	75.6

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

BORING LOG 2 JAMACA ER-BRF 013-1(16).GPJ VERMONT AOT.GDT 2/24/12

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

BORING LOG

JAMAICA
ER-BRF 013-1(16)
VT-100 BR-78

Boring No.: B-103
Page No.: 2 of 2
Pin No.: 11B212
Checked By: CEE

Boring Crew: GARROW, SALISBURY
Date Started: 2/02/12 Date Finished: 2/07/12
VTSPG NAD83: N 206325.50 ft E 1572615.70 ft
Station: 119+47 Offset: 2.50
Ground Elevation: 687.9 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C TRACK	CE = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
02/03/12	16.3	AM
02/06/12	10.4	AM
02/08/12	8.6	AM

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
50		A-4, SaSi, gry, MTD, Rec. = 1.0 ft				36-62-R@0.0"	16.4	2.7	27.6	69.7
55		A-4, SaSi, gry, Moist, Rec. = 0.8 ft				40-R@3.5"	15.5	13.3	37.3	49.4
60		A-4, SaSi, gry, Moist, Rec. = 0.8 ft				40-R@3.5"	16.8	19.2	34.3	46.5
		A-4, GrSaSi, gry, MTD, Rec. = 0.3 ft				R@3.5"	13.3	23.1	33.5	43.4
65		A-2-4, SiSa, gry, MTD, Rec. = 0.5 ft				50-R@2.5"	9.4	18.3	47.6	34.1
70		Field Note:, NXDC, Cobbles and Gravel								
		A-2-4, GrSiSa, grn-gry, MTD, Rec. = 0.2 ft				R@2.5"	11.5	24.4	42.1	33.5
		Field Note:, NXDC, Cobbles								
75		75.2 ft – 77.2 ft, Light gray to dark gray, Biotite-quartz-plagioclase Gneiss, Hard, Unweathered, Good rock, NXMDC, RMR = 72	1 (40)	100 (65)	6 5	Top of Bedrock @ 75.2 ft				
		77.2 ft – 82.2 ft, Light gray to dark gray, Biotite-quartz-plagioclase Gneiss, Hard, Unweathered, Good rock, NXMDC, RMR = 76	2 (40)	100 (86)	7 4 3 4 5					
80		82.2 ft – 85.2 ft, Light gray to dark gray, Biotite-quartz-plagioclase Gneiss, Hard, Unweathered, Good rock, NXMDC, RMR = 72	3 (40)	80 (70)	4 5 5					
PILE TIP EL. 613.00		Hole stopped @ 85.2 ft								
85										

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

BORING LOG 2 JAMACA ER-BRF 013-1(16).GPJ VERMONT AOT.GDT 2/24/12

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: s11b212boringlogs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
BORING LOGS 3

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 27 OF 85

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

BORING LOG

JAMAICA
ER-BRF 013-1(16)
VT-100 BR-78

Boring No.: B-104
Page No.: 1 of 2
Pin No.: 11B212
Checked By: CEE

Boring Crew: GARROW, SALISBURY, WELLS
Date Started: 2/15/12 Date Finished: 2/16/12
VTSPG NAD83: N 206425.10 ft E 1572663.20 ft
Station: 120+56 Offset: -15.00
Ground Elevation: 665.5 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C TRACK	CE = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
		See Remarks #1.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
		Field Note:, NXDC, Gravel										
		A-1-a, SaGr, gry, Moist, Rec. = 1.0 ft				7-7-9-6 (16)	9.5	68.4	25.7	5.9		
5												
		Field Note:, NXDC, Gravel										
		A-1-a, SaGr, gry, Moist, Rec. = 0.8 ft				16-10-20-R@1.0" (30)	8.9	72.9	20.7	6.4		
10		Field Note:, NXDC, Cobbles										
BOTTOM PIER FOOTING EL. 653.00												
		A-4, Si, gry, Moist, Rec. = 1.7 ft				20-23-30-42 (53)	19.4	0.3	15.9	83.8		
15												
		A-4, Si, gry, MTD, Rec. = 1.6 ft				30-43-40-50 (83)	15.3		15.2	84.8		
20												
		A-4, Si, gry, MTD, Rec. = 1.6 ft				15-26-26-35 (52)	16.0	0.1	16.0	83.9		
25												
		A-4, SaSi, gry, Moist, Rec. = 1.6 ft				27-26-40-50 (66)	16.5	0.1	21.7	78.2		
30												
		A-4, Si, gry, Moist, Rec. = 1.6 ft				17-43-45-50 (88)	19.0		10.0	90.0	29	5
35												
		A-4, Si, gry, MTD, Rec. = 1.5 ft				30-36-R@6.0"	15.9		7.7	92.3	28	5
40												
		A-4, SaSi, gry, Moist, Rec. = 0.8 ft				43-R@5.0"	16.6		26.2	73.8		

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

BORING LOG 2 JAMAICA ER-BRF 013-1(16).GPJ VERMONT AOT.GDT 2/24/12

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

BORING LOG

JAMAICA
ER-BRF 013-1(16)
VT-100 BR-78

Boring No.: B-104
Page No.: 2 of 2
Pin No.: 11B212
Checked By: CEE

Boring Crew: GARROW, SALISBURY, WELLS
Date Started: 2/15/12 Date Finished: 2/16/12
VTSPG NAD83: N 206425.10 ft E 1572663.20 ft
Station: 120+56 Offset: -15.00
Ground Elevation: 665.5 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C TRACK	CE = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
		See Remarks #1.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
		A-4, SaSi, gry, Moist, Rec. = 0.9 ft				23-R@5.0"	22.1	0.5	24.0	75.5		
50												
		A-4, SaGrSi, gry, Moist, Rec. = 0.4 ft				R@5.0"	10.4	31.0	25.9	43.1		
55		Field Note:, NXDC, Cobbles & Gravel										
		A-4, GrSiSa, gry, Moist, Rec. = 0.3 ft				R@3.5"	9.7	24.3	39.1	36.6		
60												
		A-1-b, SaGr, gry, Moist, Rec. = 0.3 ft, Broken Rock was within sample.				R@3.5"	8.9	50.2	32.9	16.9		
65												
		Field Note:, NXDC, Boulder										
70												
		73.5 ft - 78.5 ft, Buff white, Dolomitic Marble, Hard, Unweathered, Good rock, NXWDC, RMR = 62	1 (?)	100 (20)	15 10 10 9 9		Top of Bedrock @ 73.5 ft					
75												
		78.5 ft - 83.5 ft, Buff white, Dolomitic Marble, Hard, Unweathered, Good rock, NXWDC, RMR = 48	2 (?)	78 (48)	10 5 5 3 4							
80												
		Hole stopped @ 83.5 ft										
85												

Remarks:
1. Water measured at 2.0 feet above ground in casing when casing at a depth greater than 40 feet.

PILE TIP
EL. 597.00

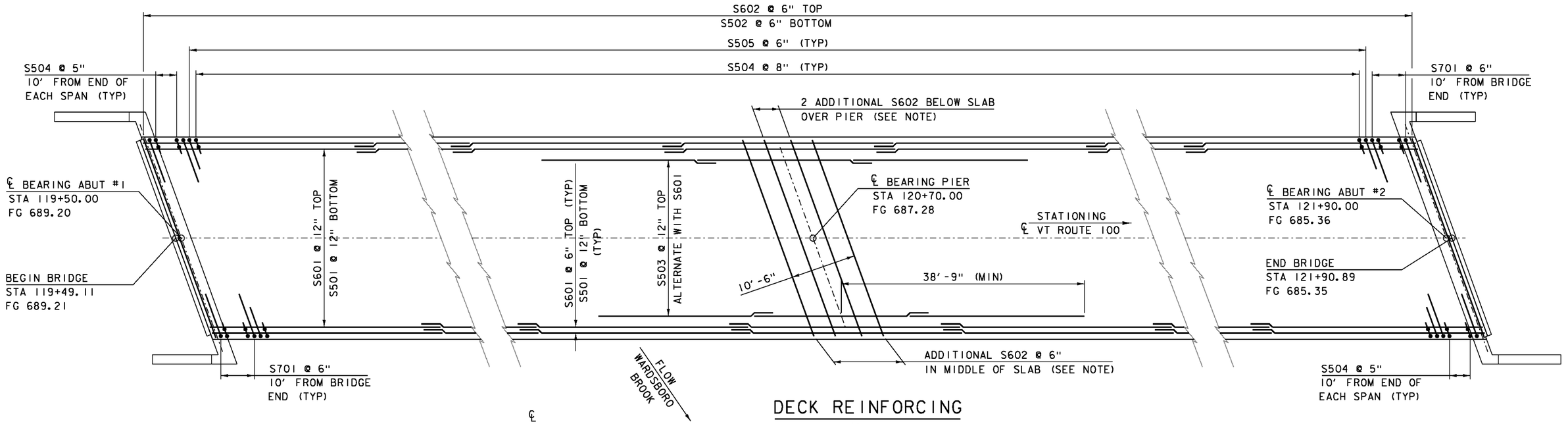
Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations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

BORING LOG 2 JAMAICA ER-BRF 013-1(16).GPJ VERMONT AOT.GDT 2/24/12

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

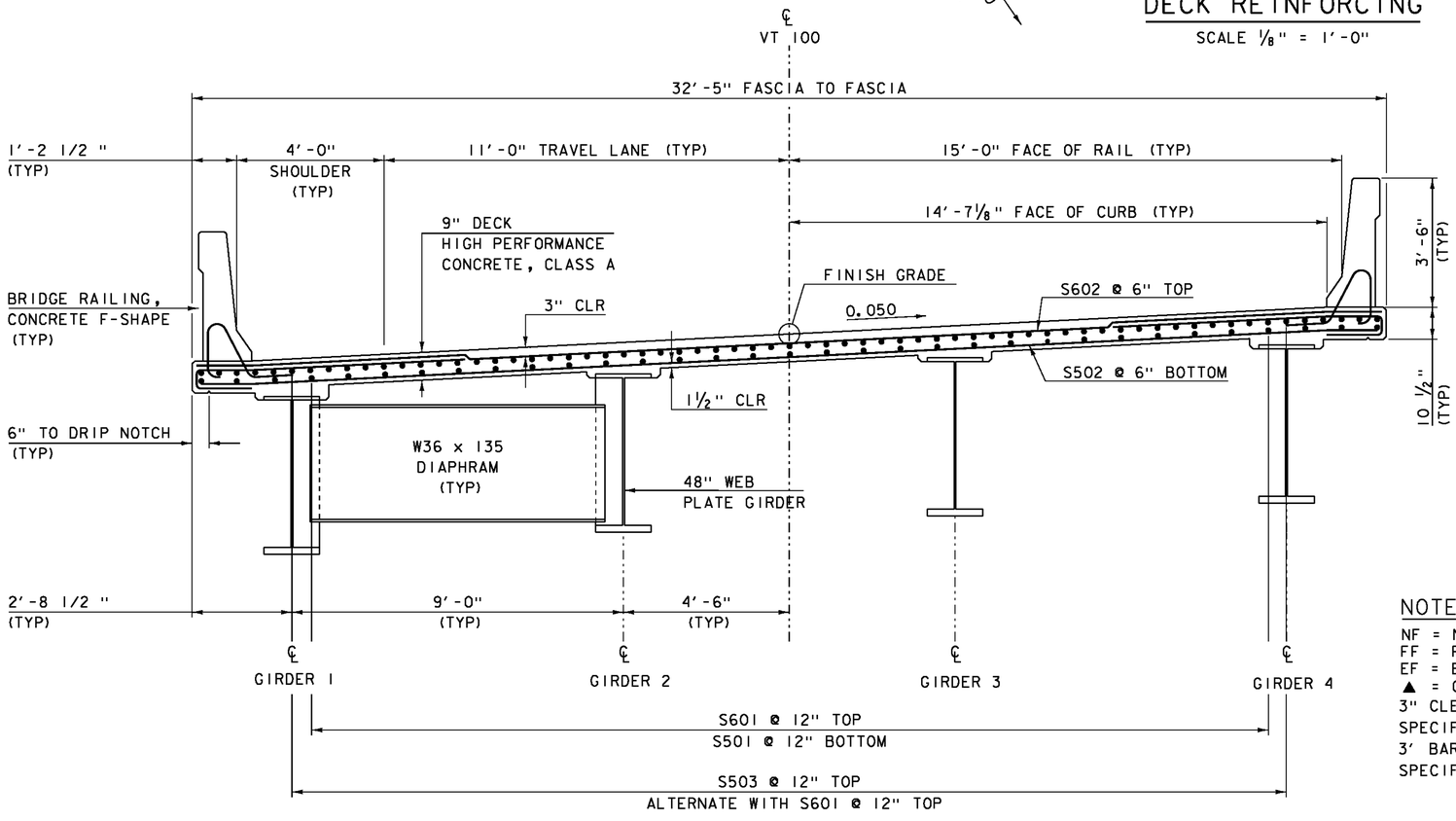
FILE NAME: sllb212boringlogs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
BORING LOGS 4

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 28 OF 85



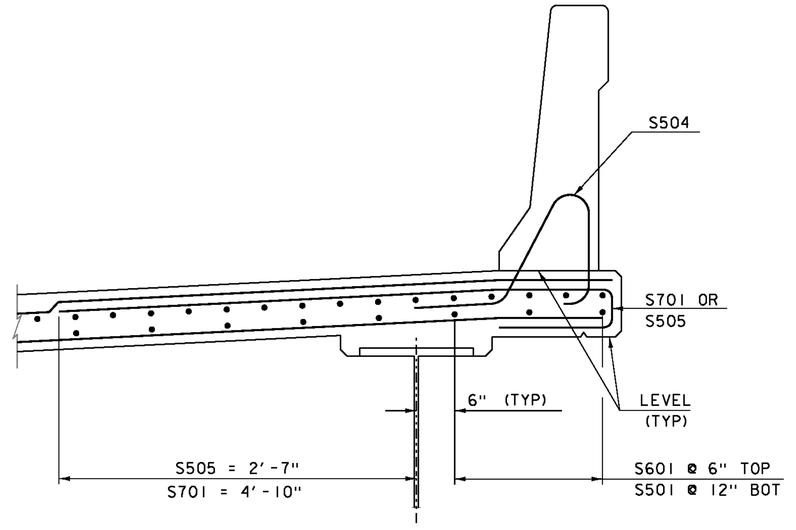
DECK REINFORCING

SCALE 1/8" = 1'-0"



TYPICAL DECK REINFORCEMENT

SCALE 1/2" = 1'-0"



TYPICAL OVERHANG REINFORCEMENT

SCALE 1" = 1'-0"

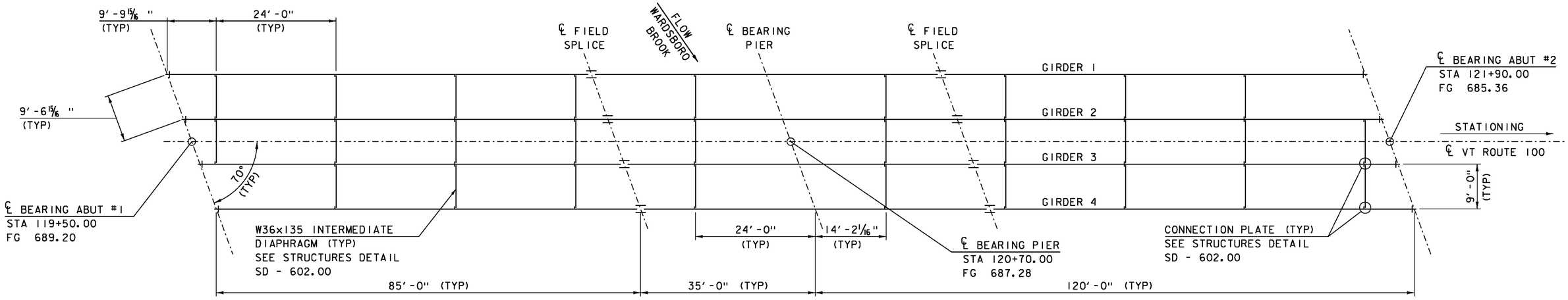
NOTE:

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

NOTE:
1. SEE PIER SUB CAP AND CAP REINFORCING SHEET FOR REINFORCING DETAILS OVER PIER.

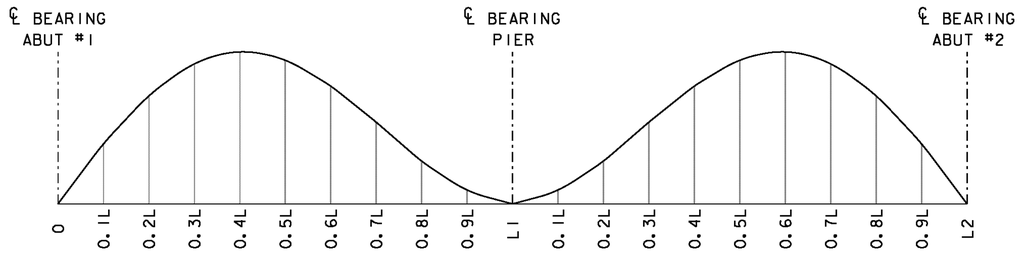
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212sup.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: VTRANS	DRAWN BY: VTRANS
DESIGNED BY: K. KRETSCH	CHECKED BY: G. GOODRICH
DECK PLAN	SHEET 29 OF 85



FRAMING PLAN

SCALE 1" = 10'-0"



CAMBER DIAGRAM

NOT TO SCALE

TOTAL DEFLECTION

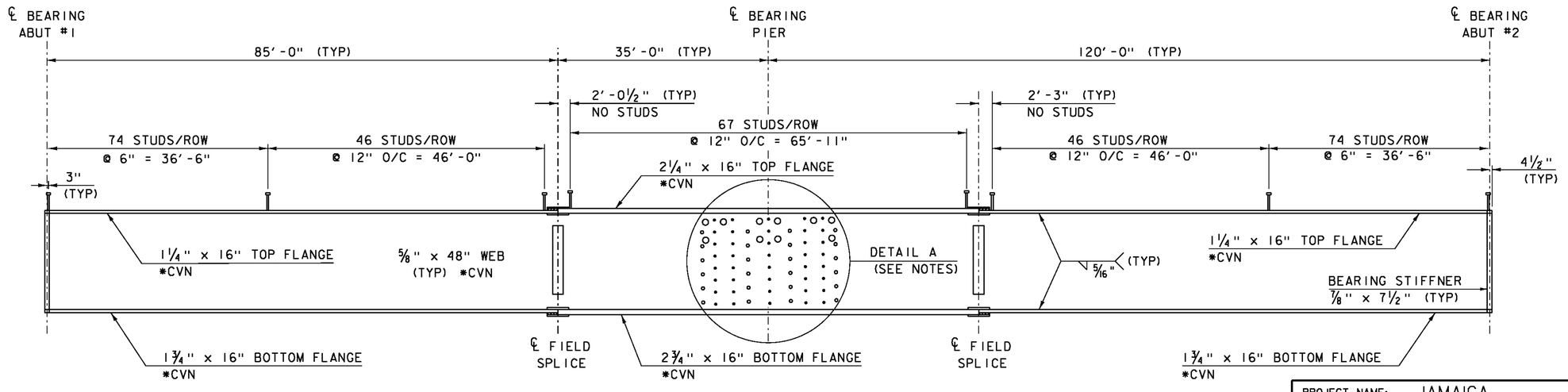
(INCHES)

	SPAN 1									SPAN 2									
GIRDER	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	PIER	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L
#1	- 7/8	-1 9/16	-2	-2 3/16	-2 1/16	-1 11/16	-1 3/16	- 5/8	- 3/16	0	- 3/16	- 5/8	-1 3/16	-1 11/16	-2 1/16	-2 3/16	-2	-1 9/16	- 7/8
#2	-15/16	-1 3/4	-2 1/4	-2 7/16	-2 5/16	-1 7/8	-1 5/16	-11/16	- 3/16	0	- 3/16	-11/16	-1 5/16	-1 7/8	-2 5/16	-2 7/16	-2 1/4	-1 3/4	-15/16
#3	-15/16	-1 3/4	-2 1/4	-2 7/16	-2 5/16	-1 7/8	-1 5/16	-11/16	- 3/16	0	- 3/16	-11/16	-1 5/16	-1 7/8	-2 5/16	-2 7/16	-2 1/4	-1 3/4	-15/16
#4	- 7/8	-1 9/16	-2	-2 3/16	-2 1/16	-1 11/16	-1 3/16	- 5/8	- 3/16	0	- 3/16	- 5/8	-1 3/16	-1 11/16	-2 1/16	-2 3/16	-2	-1 9/16	- 7/8

TOTAL CAMBER

(INCHES)

	SPAN 1									SPAN 2									
GIRDER	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L	PIER	0.1 L	0.2 L	0.3 L	0.4 L	0.5 L	0.6 L	0.7 L	0.8 L	0.9 L
#1	1 7/16	2 5/8	3 3/8	3 11/16	3 1/2	2 7/8	2	1 1/16	5/16	0	5/16	1 1/16	2	2 7/8	3 1/2	3 11/16	3 3/8	2 5/8	1 7/16
#2	1 1/2	2 13/16	3 5/8	3 15/16	3 3/4	3 1/16	2 1/8	1 1/8	5/16	0	5/16	1 1/8	2 1/8	3 1/16	3 3/4	3 15/16	3 5/8	2 13/16	1 1/2
#3	1 1/2	2 13/16	3 5/8	3 15/16	3 3/4	3 1/16	2 1/8	1 1/8	5/16	0	5/16	1 1/8	2 1/8	3 1/16	3 3/4	3 15/16	3 5/8	2 13/16	1 1/2
#4	1 7/16	2 5/8	3 3/8	3 11/16	3 1/2	2 7/8	2	1 1/16	5/16	0	5/16	1 1/16	2	2 7/8	3 1/2	3 11/16	3 3/8	2 5/8	1 7/16



TYPICAL GIRDER ELEVATION

HORZ SCALE 1" = 10'-0"

VERT SCALE 1/4" = 1'-0"

NOTES:

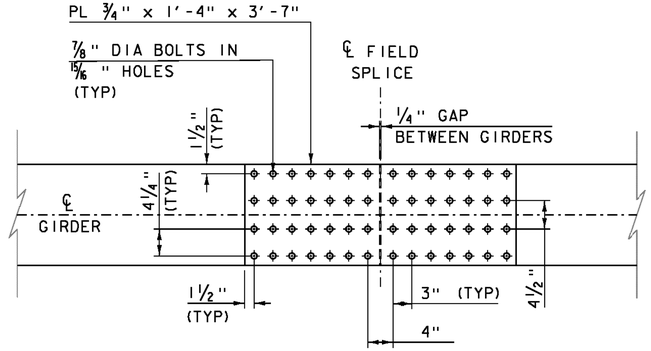
1. *CVN DENOTES THAT CHARPY V-NOTCH TEST IS REQUIRED.
2. EACH ROW SHALL HAVE TWO 7/8" DIA. WELDED STUD CONNECTORS.
3. SEE MISCELLANEOUS DETAILS SHEET 2 FOR "DETAIL A"

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

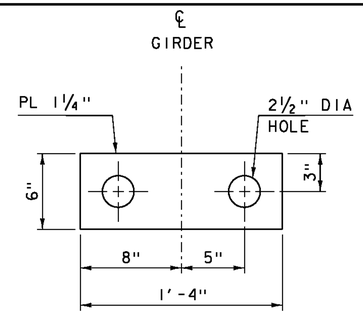
FILE NAME: sllb212sup.dgn
PROJECT LEADER: VTRANS
DESIGNED BY: K. KRETSCH
FRAMING PLAN & GIRDER ELEVATION

PLOT DATE: 12-OCT-2012
DRAWN BY: VTRANS
CHECKED BY: G. GOODRICH
SHEET 30 OF 85



NOTE:
LOWER TOP FLANGE SPLICE
SHALL BE SIMILIAR

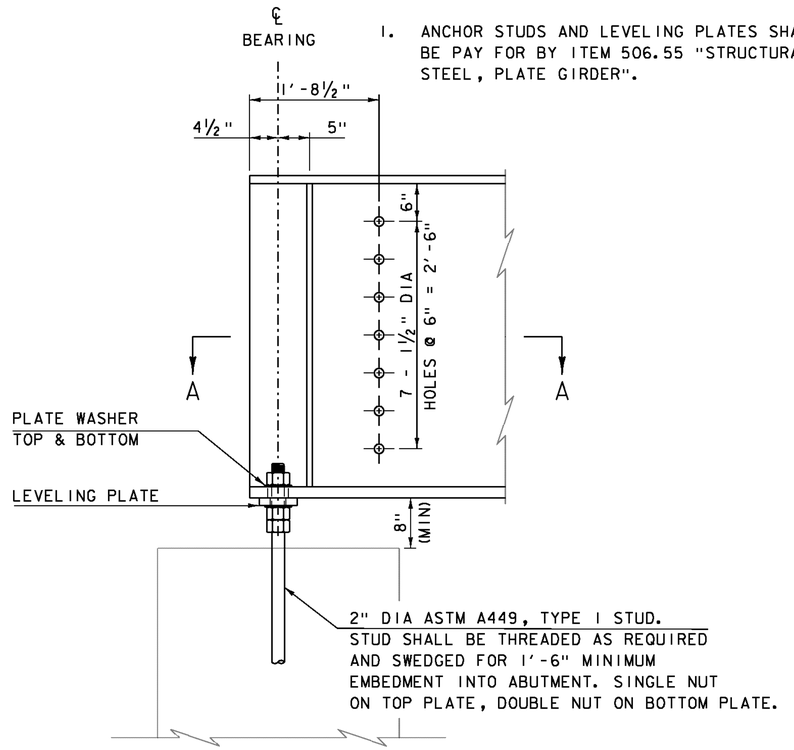
UPPER TOP FLANGE SPLICE
SCALE 1" = 1'-0"



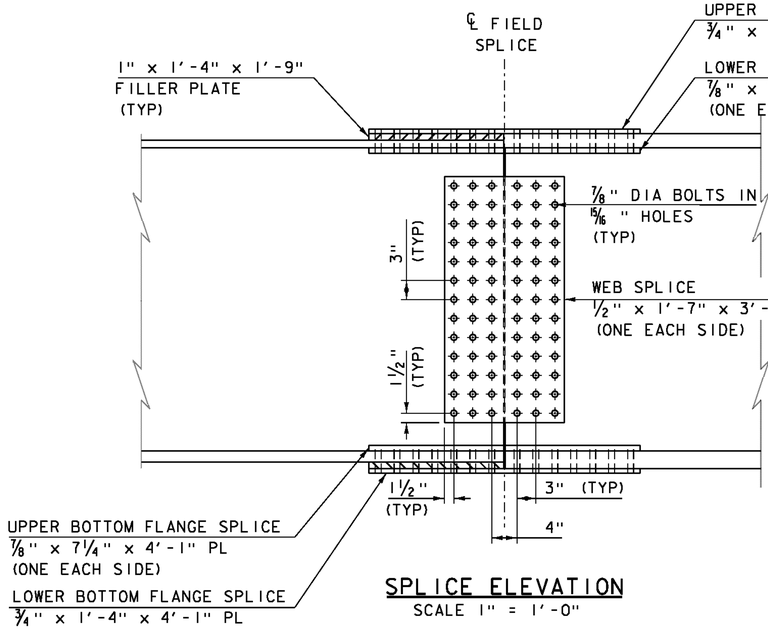
LEVELING PLATE
SCALE ½" = 1'-0"

NOTE:

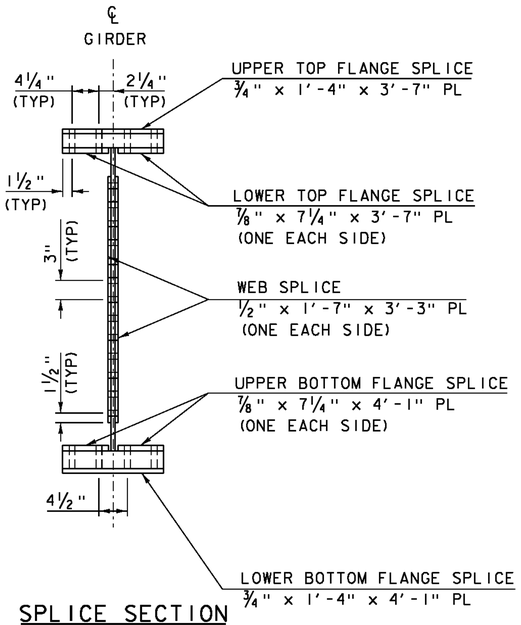
1. ANCHOR STUDS AND LEVELING PLATES SHALL BE PAY FOR BY ITEM 506.55 "STRUCTURAL STEEL, PLATE GIRDER".



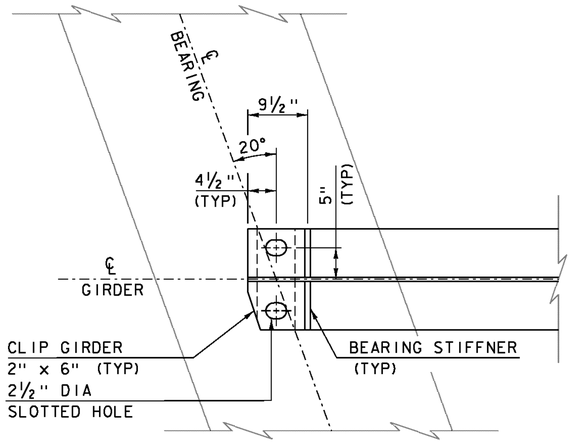
GIRDER END DETAIL
SCALE 1" = 1'-0"



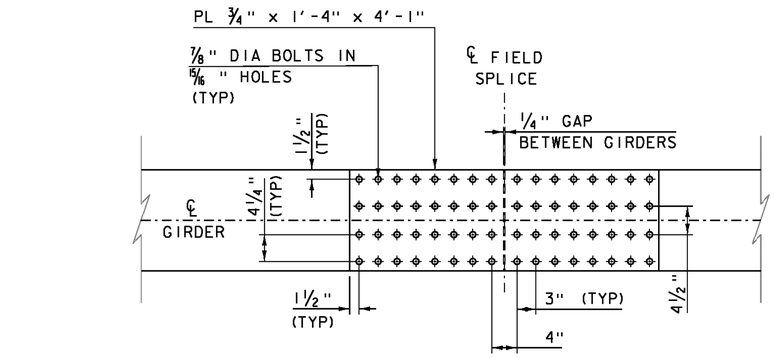
SPLICE ELEVATION
SCALE 1" = 1'-0"



SPLICE SECTION
SCALE 1" = 1'-0"



SECTION A-A
SCALE 1" = 1'-0"

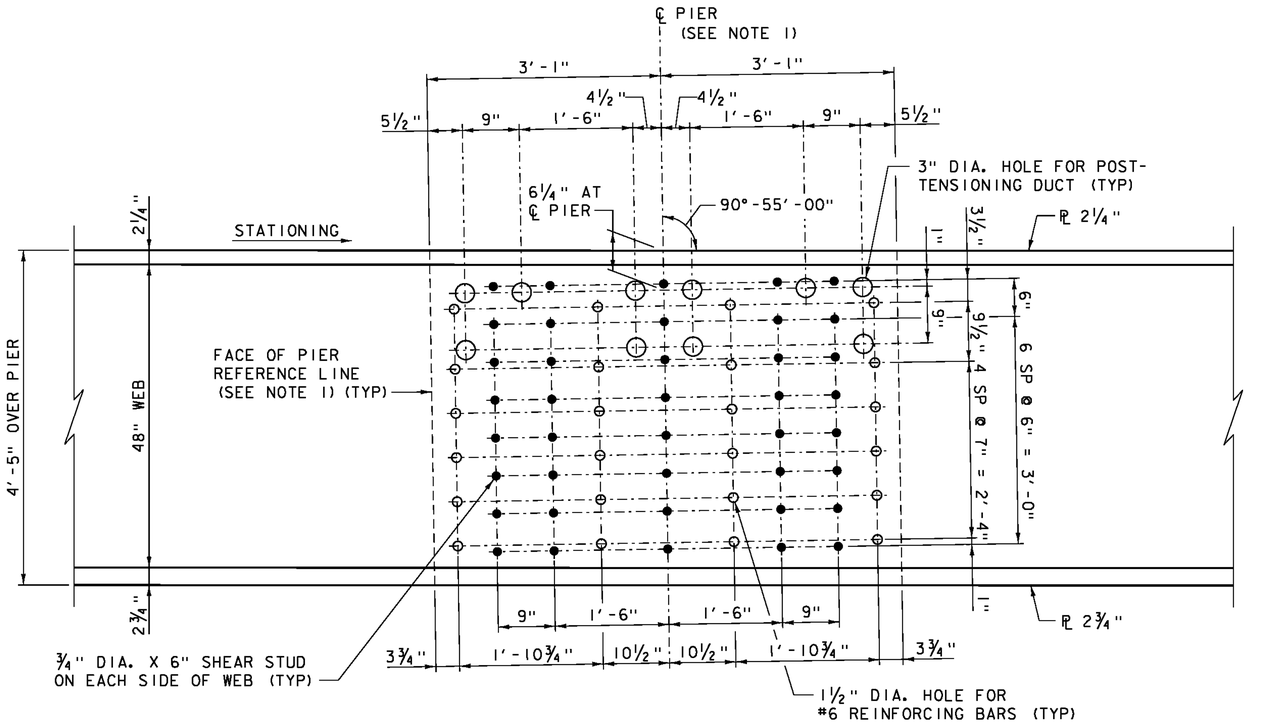


NOTE:
UPPER BOTTOM FLANGE SPLICE
SHALL BE SIMILIAR

LOWER BOTTOM FLANGE SPLICE
SCALE 1" = 1'-0"

Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212sup.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: VTRANS	DRAWN BY: VTRANS
DESIGNED BY: K. KRETSCH	CHECKED BY: G. GOODRICH
MISCELLANEOUS DETAILS I	SHEET 31 OF 85



DETAIL A

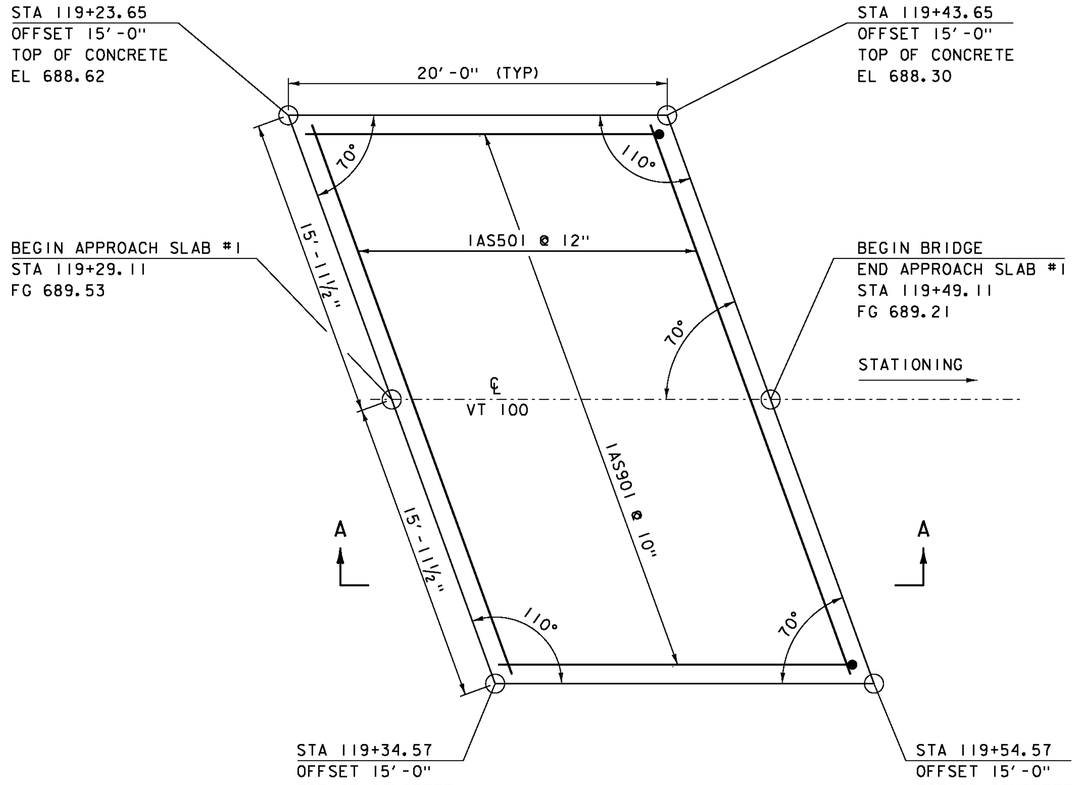
SCALE 1" = 1'-0"

NOTES:

1. CENTERLINE OF PIER AND FACE OF PIER REFERENCE LINE ARE VERTICAL AT ERECTION.
2. COLUMNS OF SHEAR STUDS, 1½" HOLES, AND 3" HOLES SHALL BE ALIGNED VERTICALLY AND PLUMB AT ERECTION TO ENSURE PROPER FIT-UP AND CLEARANCE TO FACE OF PIER CAP.

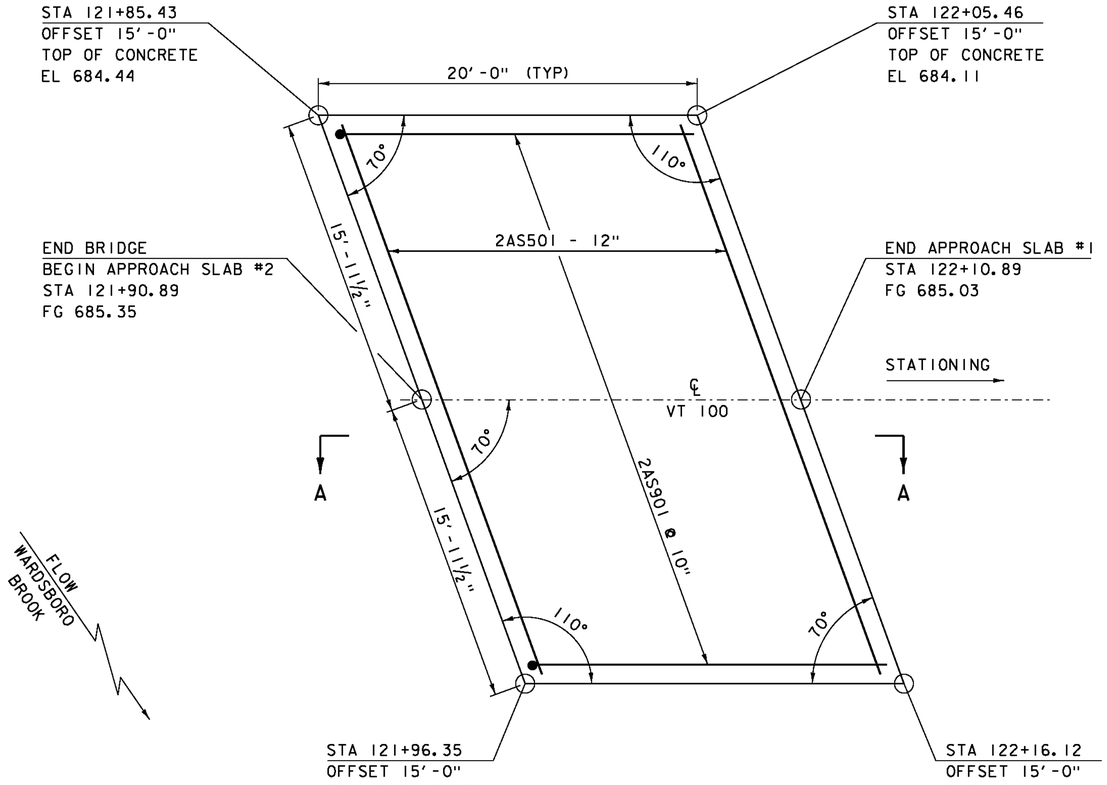
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: JAMAICA	
PROJECT NUMBER: ER-BRF 013-1(16)	
FILE NAME: z11b212sub_pier_girder.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS (VTRANS)	DRAWN BY: B.J. MASSE
DESIGNED BY: A.T. BURKHOLDER	CHECKED BY: G.S. GOODRICH
MISCELLANEOUS DETAILS 2	SHEET 32 OF 85



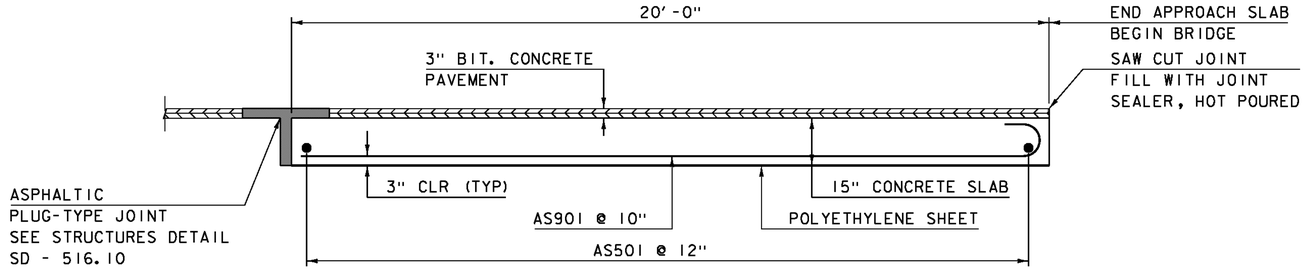
APPROACH SLAB #1 PLAN

SCALE ¼" = 1'-0"



APPROACH SLAB #2 PLAN

SCALE ¼" = 1'-0"



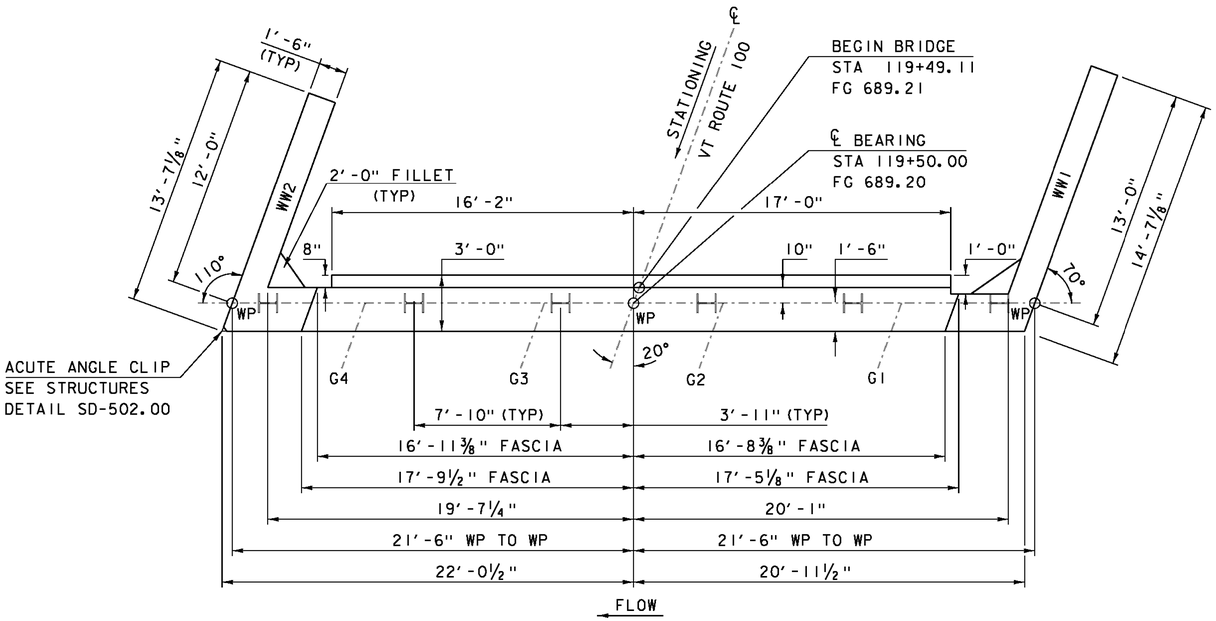
SECTION A-A
APPROACH SLAB ELEVATION

SCALE ¼" = 1'-0"

NOTE:

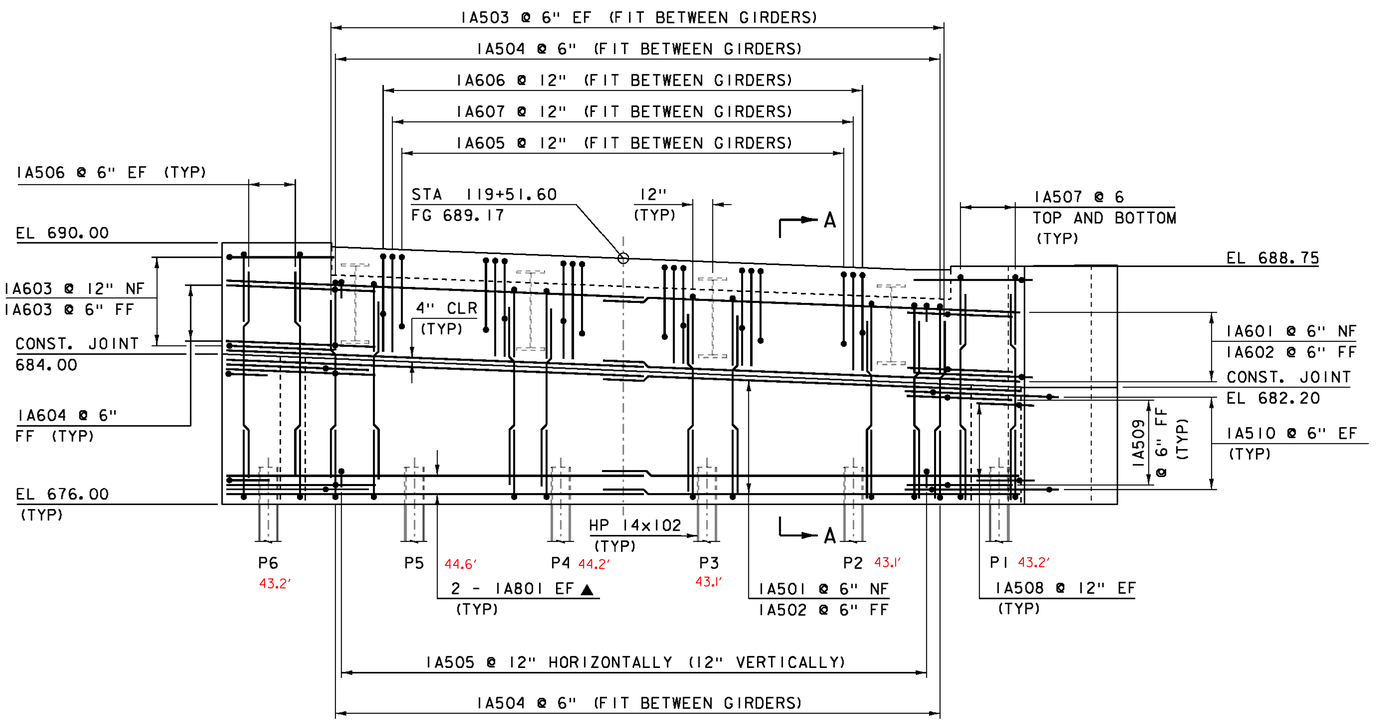
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
3'-0" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212sup.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: K. FRIEDLAND	CHECKED BY: J. SALVATORI
APPROACH SLAB DETAILS	SHEET 33 OF 85



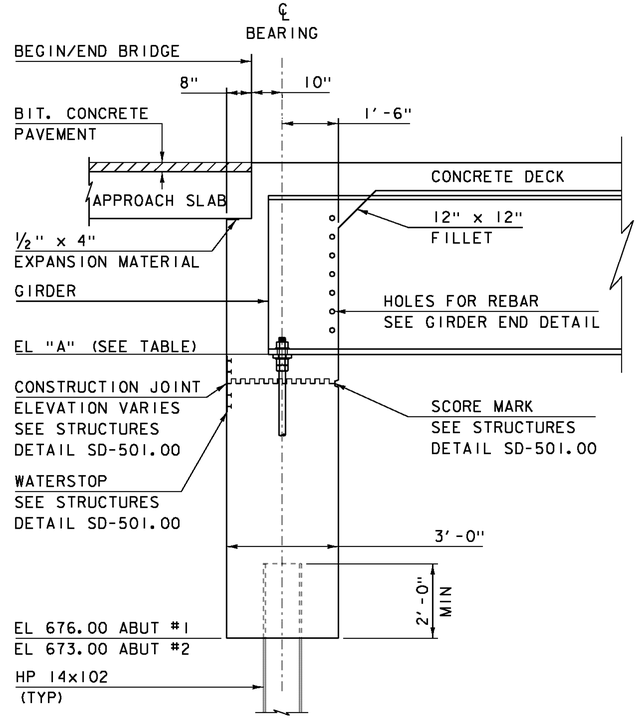
ABUTMENT 1 PLAN

SCALE ¼" = 1'-0"



ABUTMENT 1 ELEVATION

SCALE ¼" = 1'-0"



BRIDGE END DETAIL
ABUTMENT TYPICAL SECTION

SCALE ½" = 1'-0"

NOTES:

1. SEE ABUTMENT 2 SHEET FOR ABUTMENT REINFORCING.

NOTE:

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

GIRDER ELEVATION TABLE

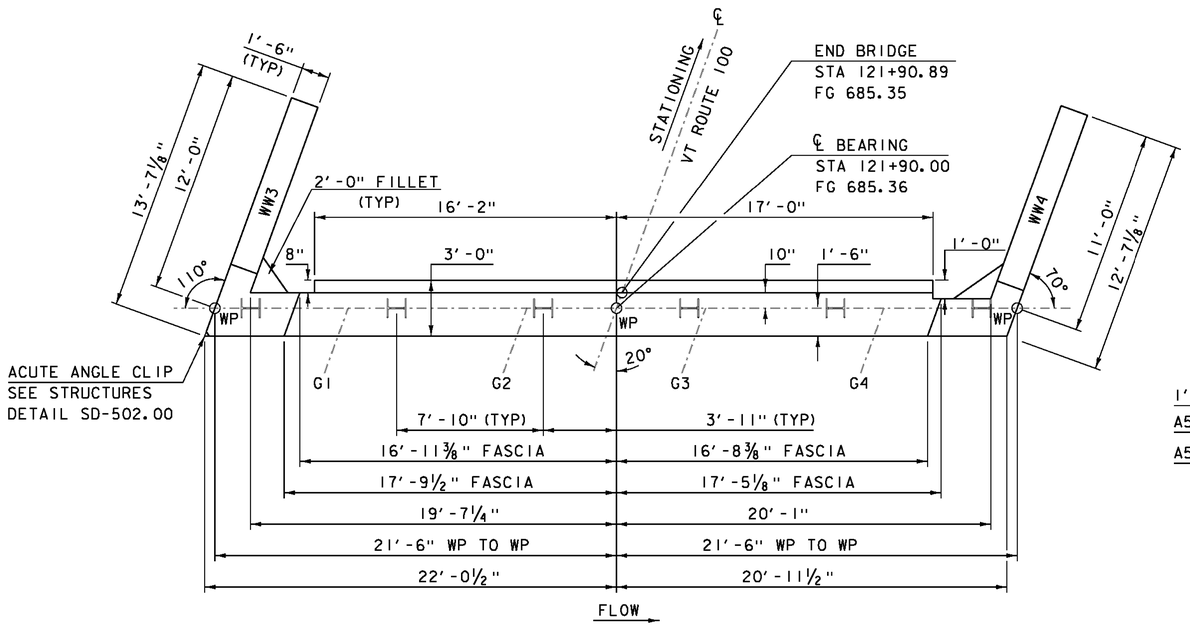
	ELEVATION "A"	
GIRDER NO.	ABUT 1	ABUT 2
1	683.24	679.40
2	683.64	679.80
3	684.04	680.20
4	684.43	680.59

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

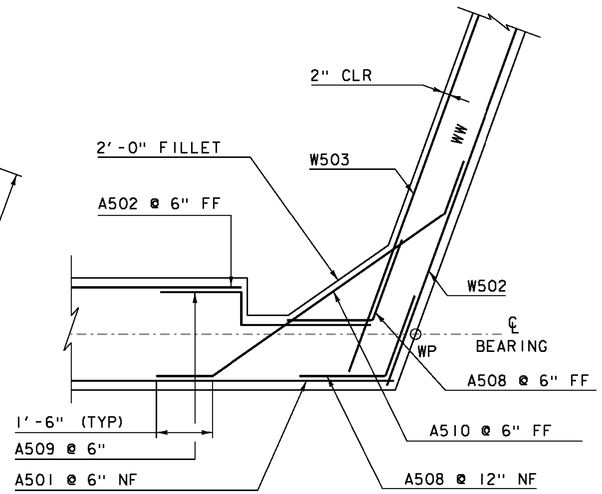
FILE NAME: s11b212sub.dgn
PROJECT LEADER: VTRANS
DESIGNED BY: K. KRETSCH
ABUTMENT 1

PLOT DATE: 12-OCT-2012
DRAWN BY: VTRANS
CHECKED BY: G. GOODRICH
SHEET 34 OF 85



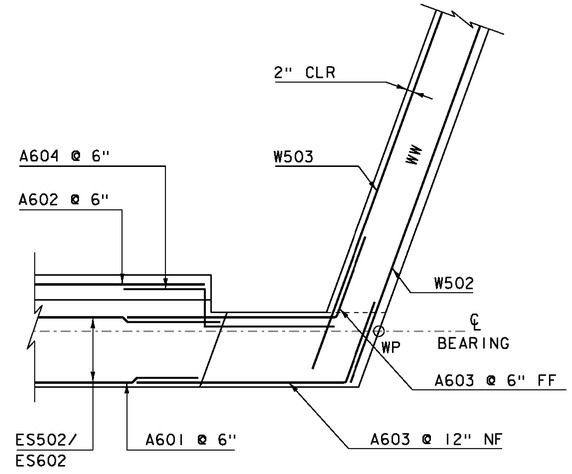
ABUTMENT 2 PLAN

SCALE ¼" = 1'-0"



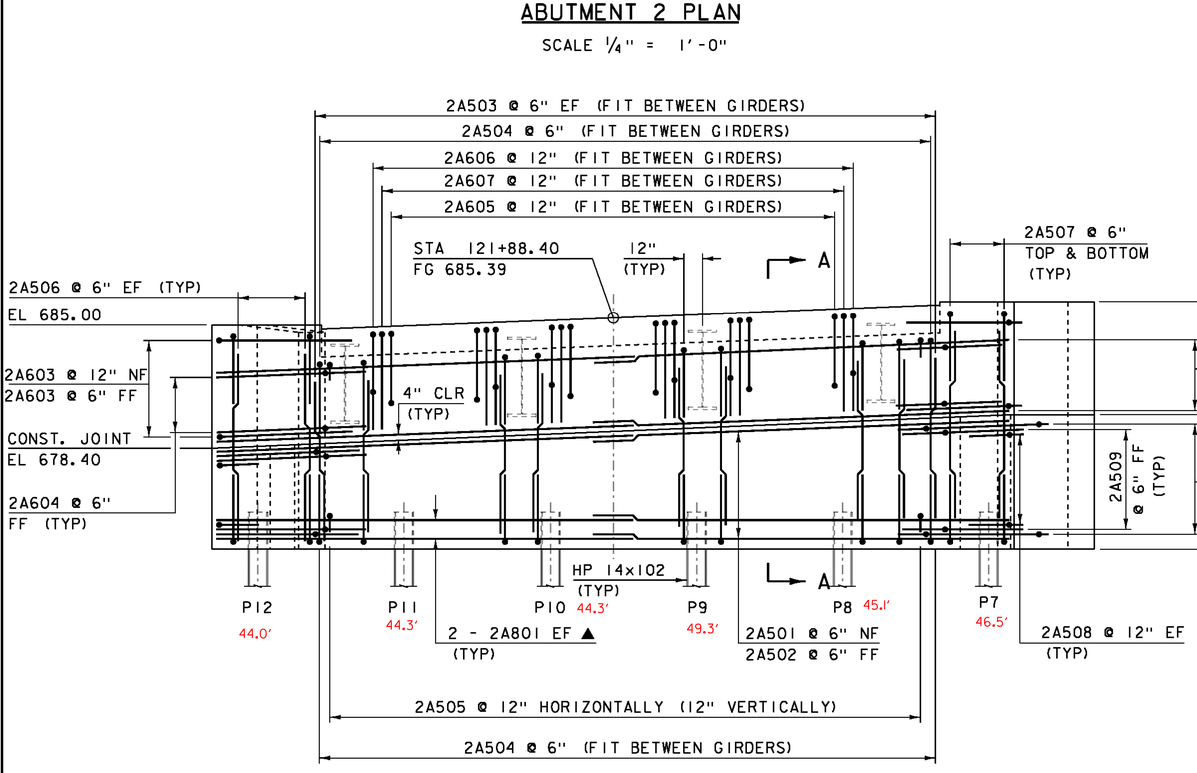
CORNER DETAIL BELOW CONSTRUCTION JOINT

SCALE ½" = 1'-0"



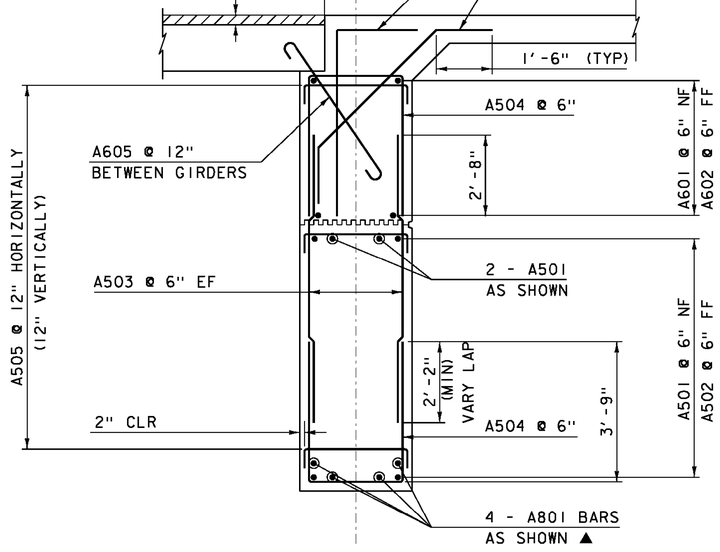
CORNER DETAIL ABOVE CONSTRUCTION JOINT

SCALE ½" = 1'-0"



ABUTMENT 2 ELEVATION

SCALE ¼" = 1'-0"



SECTION A-A ABUTMENT REINFORCING TYPICAL

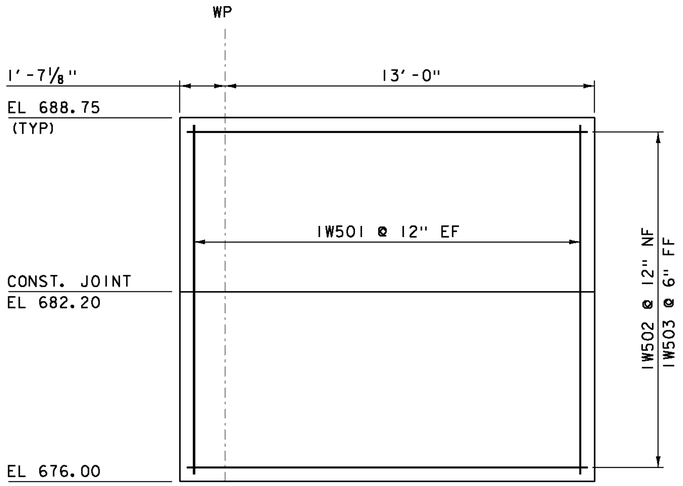
SCALE ½" = 1'-0"

NOTE:

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

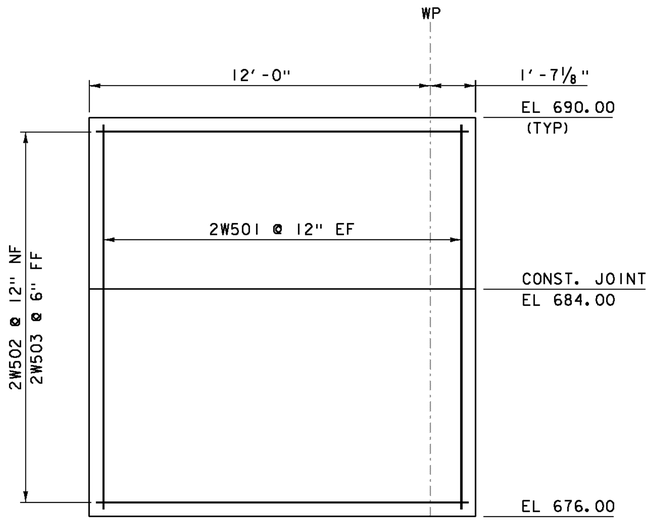
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212sub.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: VTRANS	DRAWN BY: VTRANS
DESIGNED BY: K. KRETSCH	CHECKED BY: G. GOODRICH
ABUTMENT 2	SHEET 35 OF 85



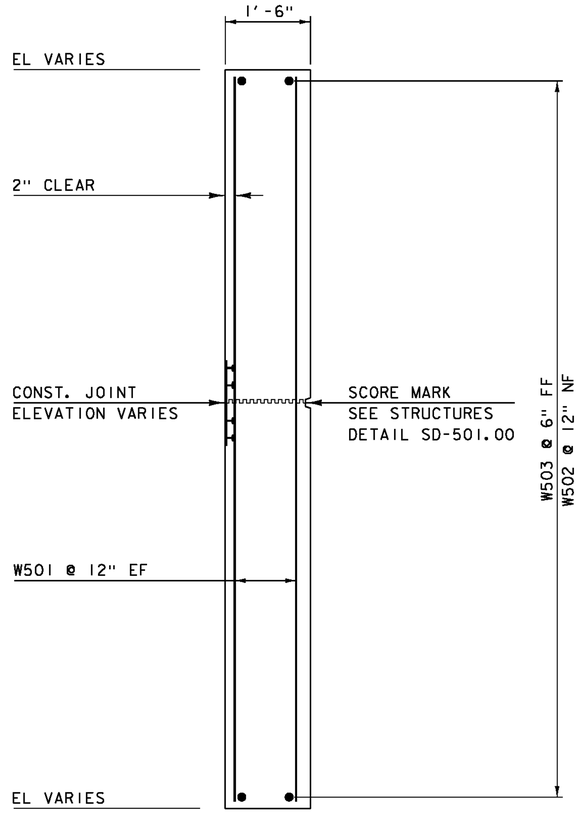
WINGWALL 1 ELEVATION

SCALE ⅜" = 1'-0"



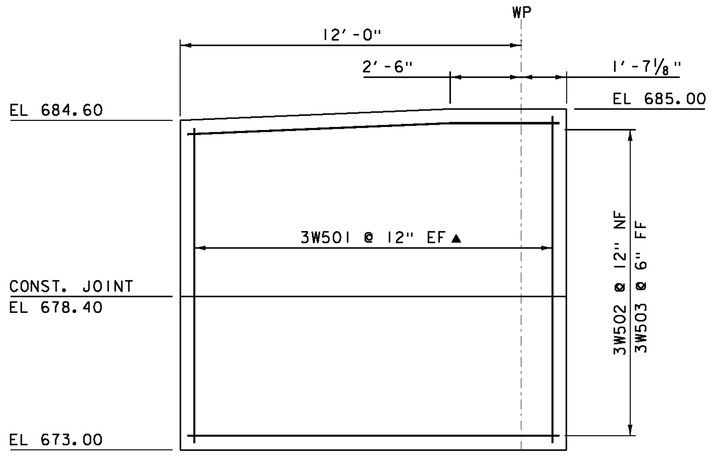
WINGWALL 2 ELEVATION

SCALE ⅜" = 1'-0"



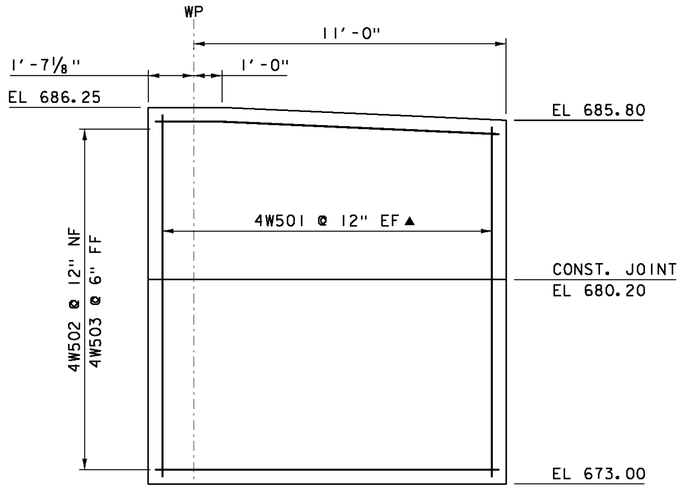
WINGWALL TYPICAL

SCALE ¾" = 1'-0"



WINGWALL 3 ELEVATION

SCALE ⅜" = 1'-0"



WINGWALL 4 ELEVATION

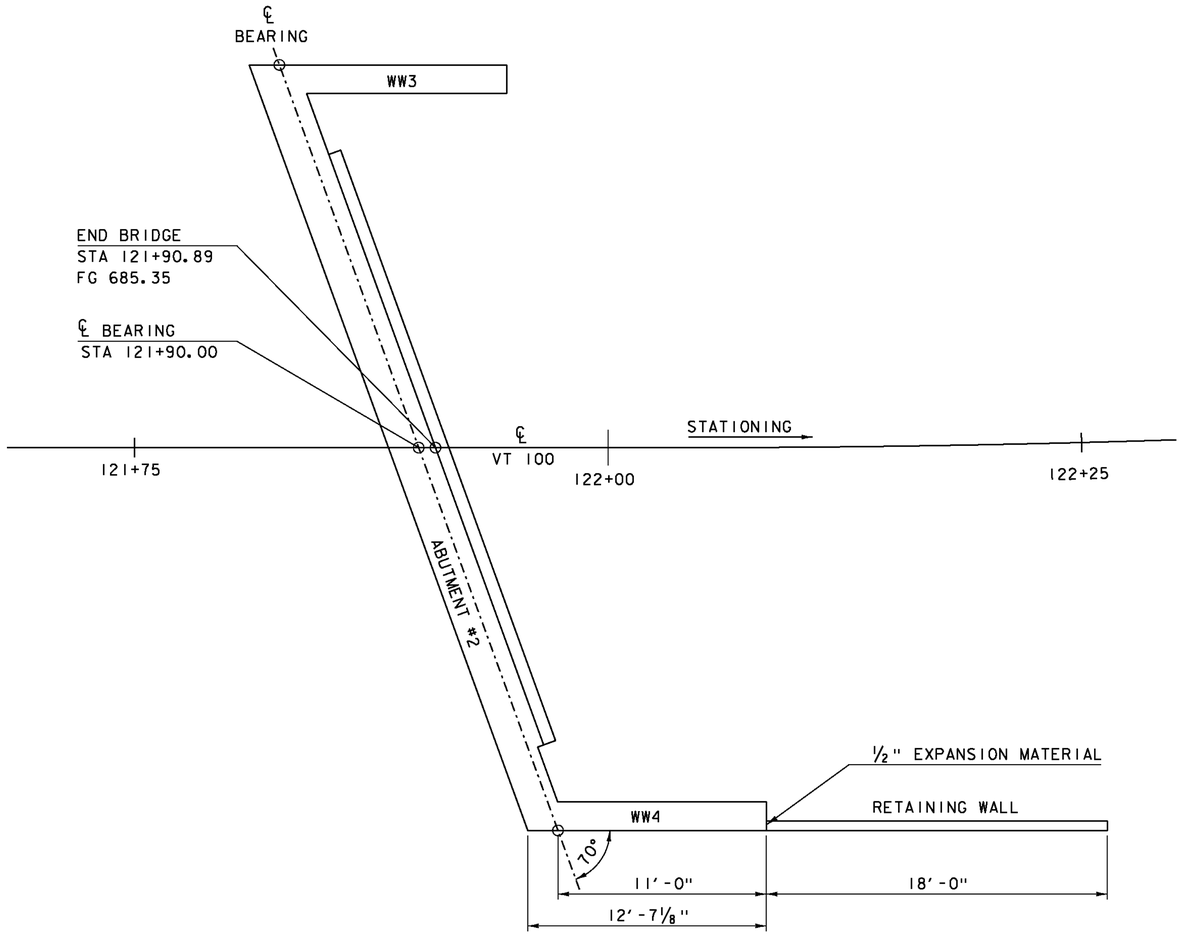
SCALE ⅜" = 1'-0"

NOTE:

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

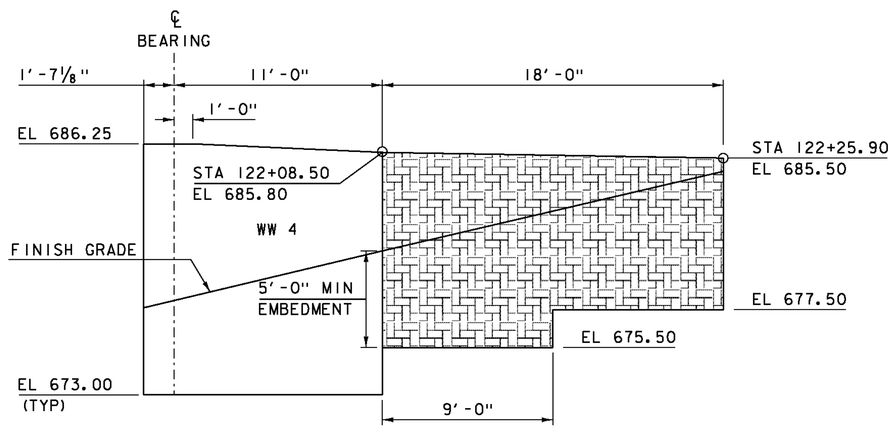
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: slib212sub.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: VTRANS	DRAWN BY: VTRANS
DESIGNED BY: K. KRETSCH	CHECKED BY: G. GOODRICH
WING WALL DETAILS	SHEET 36 OF 85



RETAINING WALL LAYOUT

SCALE ¼" = 1'-0"

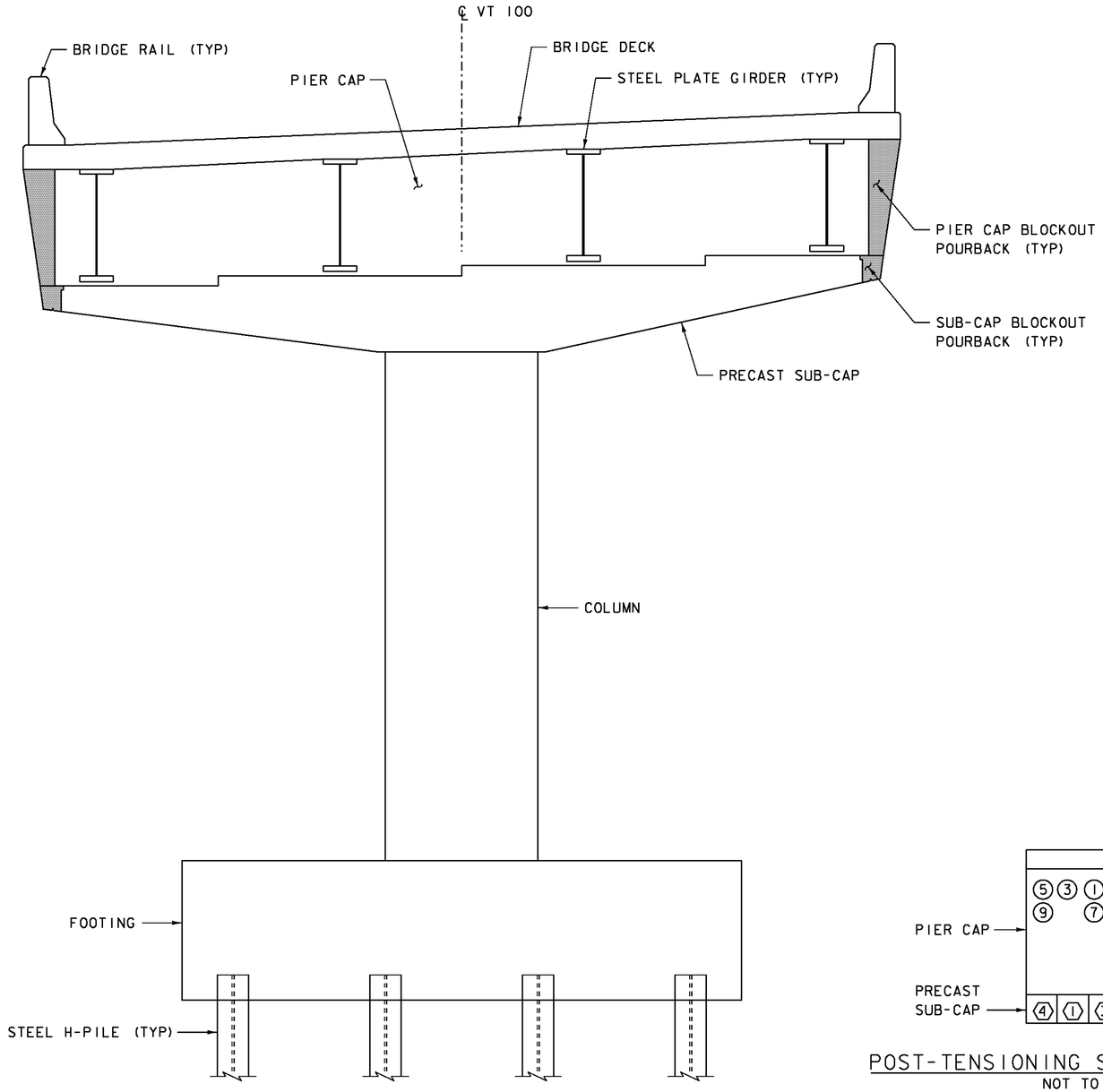


RETAINING WALL ELEVATION

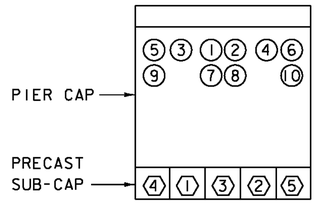
SCALE ¼" = 1'-0"

Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212sub.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: VTRANS	DRAWN BY: VTRANS
DESIGNED BY: K. KRETSCH	CHECKED BY: G. GOODRICH
RETAINING WALL	SHEET 37 OF 85



PIER SCHEMATIC
SCALE 3/8" = 1'-0"



POST-TENSIONING STRESSING SEQUENCE
NOT TO SCALE

LEGEND:

(#) = PIER CAP POST-TENSIONING SEQUENCE

⟨#⟩ = SUB-CAP POST-TENSIONING SEQUENCE (SEE CONSTRUCTION SEQUENCE NOTES 4, 5, AND 6 FOR SUB-CAP POST-TENSIONING STAGING)

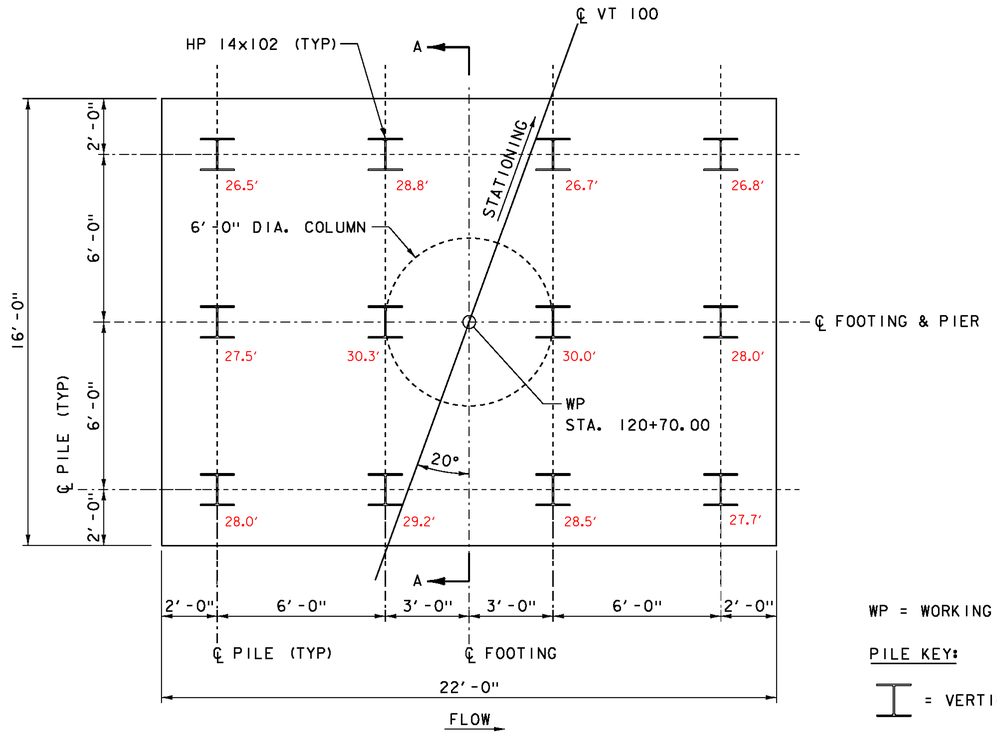
CONSTRUCTION SEQUENCE NOTES:

GENERAL: THE CONSTRUCTION SEQUENCE SHOWN FOR THIS PIER REPRESENTS THE GENERAL SEQUENCE OF CONSTRUCTION FOR WORK FLOW ONLY. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETENESS OF CONSTRUCTION AS REQUIRED TO CONSTRUCT THE PIER AS DETAILED IN THESE PLANS.

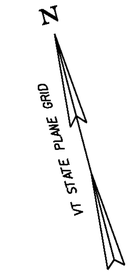
1. INSTALL PILES AND CONSTRUCT PIER FOOTING.
2. CONSTRUCT COLUMN, CHECKING VERTICAL REINFORCING STEEL EXTENDING FROM THE TOP OF COLUMN FOR PROPER ALIGNMENT AND PLUMBNESS PRIOR TO PLACING COLUMN CONCRETE. ALIGNMENT OF VERTICAL REINFORCING STEEL IS CRITICAL TO ENSURE CORRECT ORIENTATION OF PRECAST SUB-CAP. COORDINATE PLACEMENT OF VERTICAL REINFORCING STEEL WITH SLEEVES IN PRECAST SUB-CAP AS SHOWN IN THE PLANS.
3. ERECT PRECAST SUB-CAP, SHIMMING TO PROPER ELEVATION. CHECK ALIGNMENT OF SUB-CAP. INSTALL ANCHOR PLATE AND NUT ON VERTICAL THREADBAR TO "SNUG TIGHT" CONDITION. GROUT SHEAR KEY AND VERTICAL SLEEVES FOR COLUMN TO SUB-CAP CONNECTION. INSTALL COUPLER TO RECEIVE THE SECOND STAGE THREADBAR.
4. INSTALL AND STRESS PRECAST SUB-CAP POST-TENSIONING BARS 1 & 2 (SEE STRESSING SEQUENCE DIAGRAM, THIS SHEET). ONCE BARS ARE STRESSED, GROUT EACH BAR PER THE APPROVED DETAILS, AND IN ACCORDANCE WITH THE POST-TENSIONING SPECIAL PROVISION.
5. ERECT STRUCTURAL STEEL. SHIM PLATE GIRDERS TO PROPER ELEVATION.
6. INSTALL AND STRESS PRECAST SUB-CAP POST-TENSION BARS 3, 4, & 5 (SEE STRESSING SEQUENCE DIAGRAM, THIS SHEET). ONCE BARS ARE STRESSED, GROUT EACH BAR PER THE APPROVED DETAILS, AND IN ACCORDANCE WITH THE POST-TENSIONING SPECIAL PROVISION.
7. FILL PRECAST SUB-CAP BLOCKOUT POURBACKS FOR POST-TENSIONING ANCHORS AT EACH END OF SUB-CAP IN ACCORDANCE WITH THE POST-TENSIONING SPECIAL PROVISION.
8. FORM PIER CAP AND INSTALL REINFORCING STEEL AND TRANSVERSE POST-TENSIONING DUCTS. INSTALL SECOND STAGE VERTICAL THREADBARS (TERMINATING AT TOP OF PIER CAP). INSTALL ANCHOR PLATE AND NUTS AT TOP OF SECOND STAGE THREADBAR. PLACE PIER CAP CONCRETE AS DETAILED IN THE PLANS.
9. INSTALL AND STRESS PIER CAP POST-TENSION BARS 1 THRU 10 (SEE STRESSING SEQUENCE DIAGRAM, THIS SHEET). ONCE BARS ARE STRESSED, GROUT EACH BAR PER THE APPROVED DETAILS, AND IN ACCORDANCE WITH THE POST-TENSIONING SPECIAL PROVISION.
10. FILL PIER CAP BLOCKOUT POURBACKS FOR POST-TENSIONING ANCHORS AT EACH END OF PIER CAP IN ACCORDANCE WITH THE POST-TENSIONING SPECIAL PROVISION.
11. CONSTRUCT BRIDGE DECK AND FINAL STAGE OF INTEGRAL ABUTMENTS AS SHOWN IN THE PLANS AND IN ACCORDANCE WITH THE DECK POURING SEQUENCE.
12. CONSTRUCT BRIDGE RAIL.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: JAMAICA	
PROJECT NUMBER: ER-BRF 013-1(16)	
FILE NAME: zllb212sub_pier_const.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS (VTRANS)	DRAWN BY: B.J. MASSE
DESIGNED BY: K.G. KRETSCH	CHECKED BY: G.S. GOODRICH
PIER CONSTRUCTION SEQUENCE	SHEET 38 OF 85



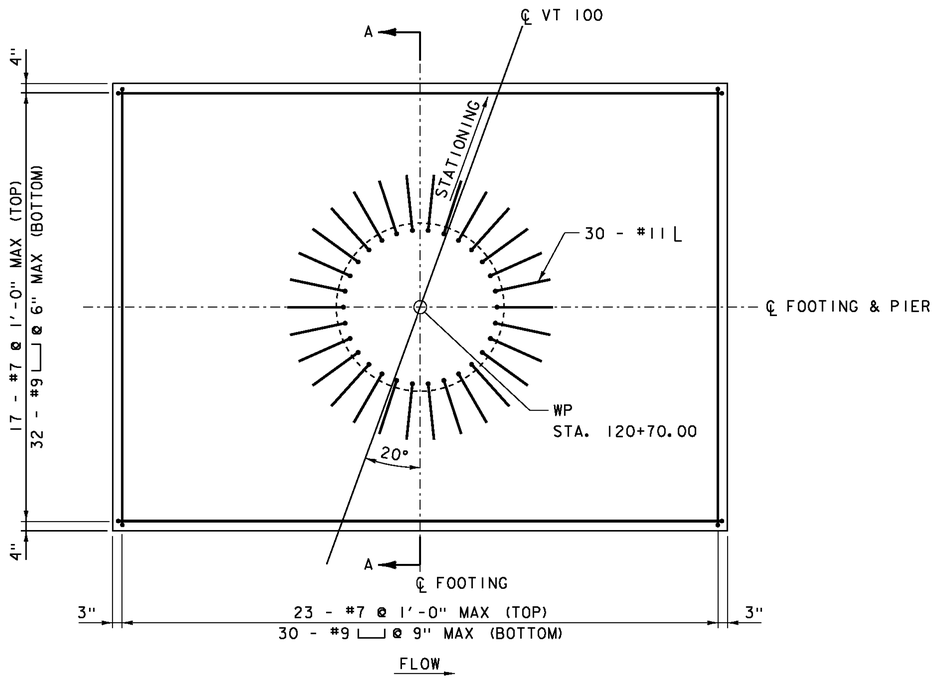
PIER FOOTING MASONRY & PILE LAYOUT
SCALE 3/8" = 1'-0"



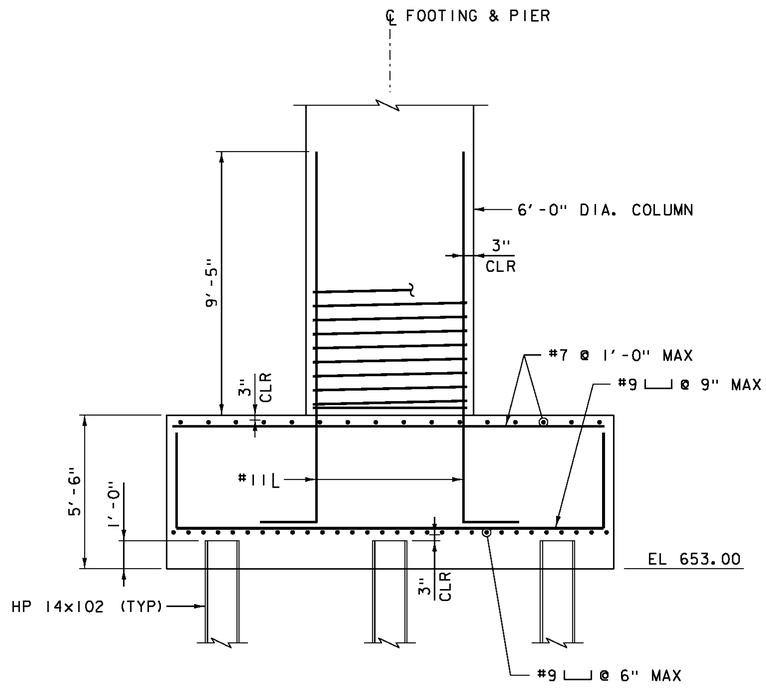
WP = WORKING POINT

PILE KEY:

= VERTICAL PILE



PIER FOOTING REINFORCING
SCALE 3/8" = 1'-0"



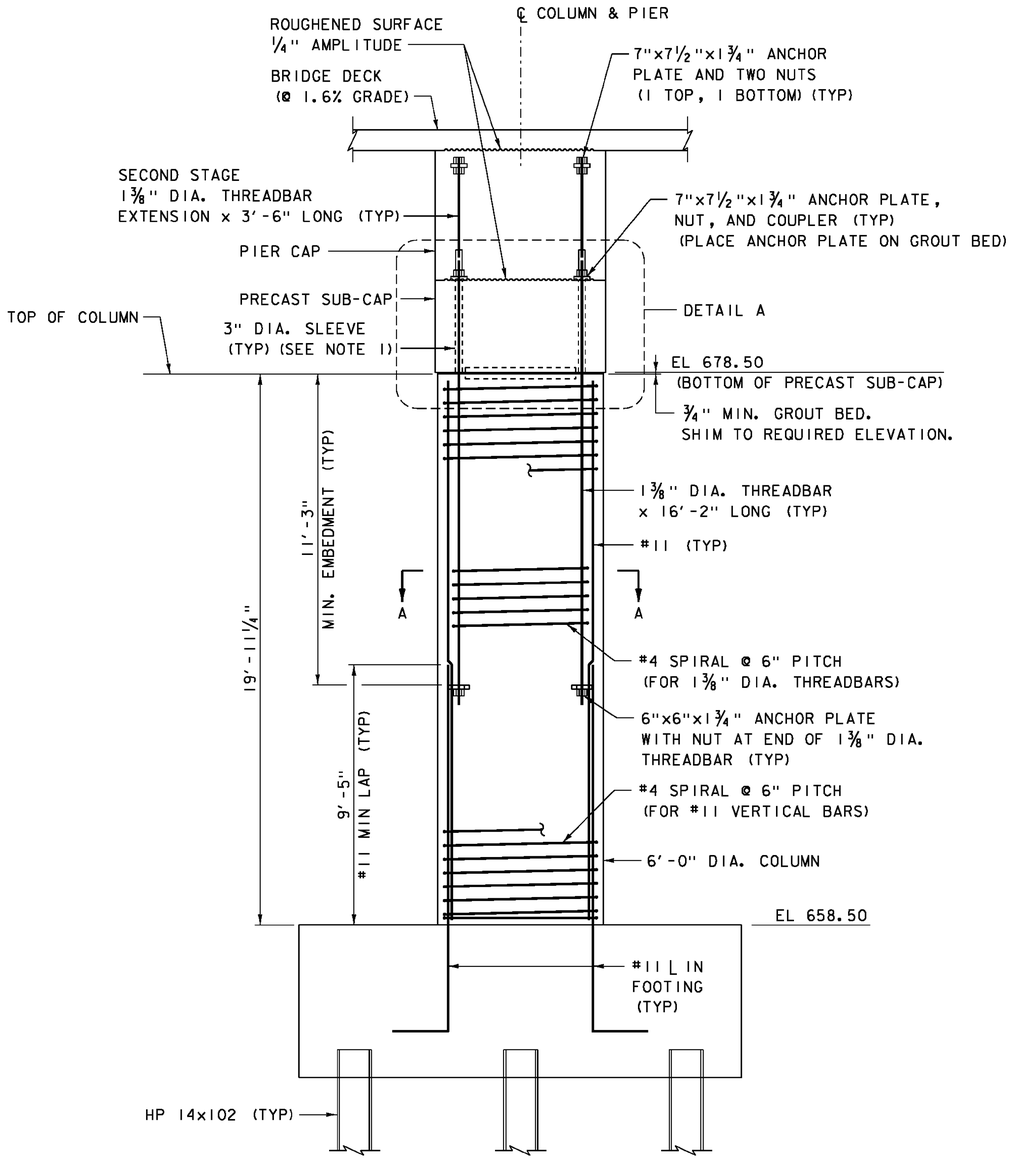
SECTION A-A
SCALE 3/8" = 1'-0"

NOTE:

1. PIER COLUMN SHOWN FOR PURPOSES OF LOCATING REINFORCING STEEL AS REQUIRED IN FOOTING.

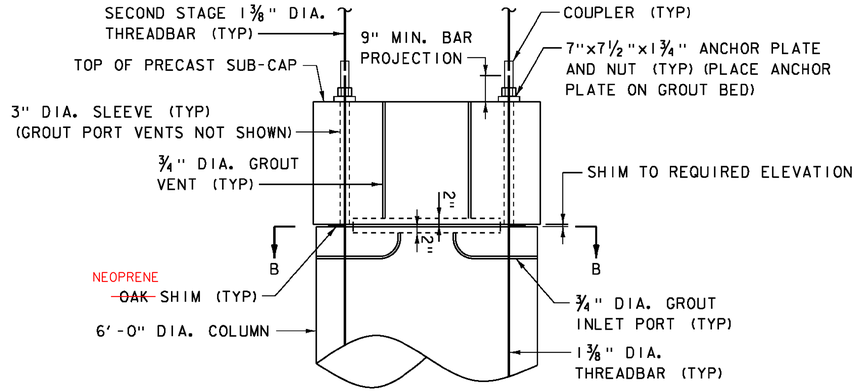
VHB *Vanasse Hangen Brustlin, Inc.*

PROJECT NAME: JAMAICA	
PROJECT NUMBER: ER-BRF 013-1(16)	
FILE NAME: z11b212sub_pier_footing.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS (VTRANS)	DRAWN BY: B.J. MASSE
DESIGNED BY: K.G. KRETSCH	CHECKED BY: G.S. GOODRICH
PIER FOOTING	SHEET 39 OF 85



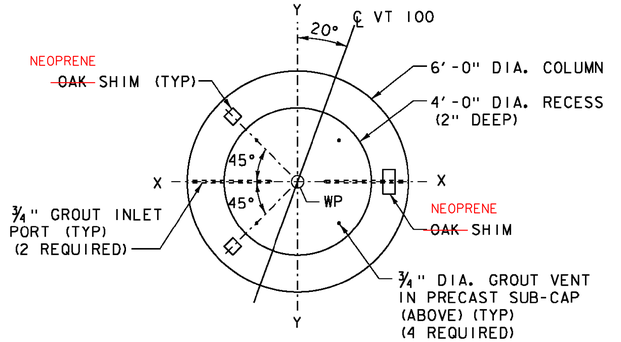
PIER SECTION

REINFORCING IN FOOTING AND PIER CAP
NOT SHOWN FOR CLARITY
SCALE ⅜" = 1'-0"



DETAIL A

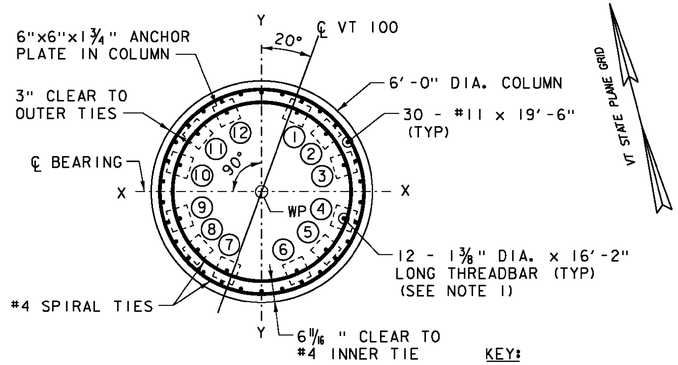
SCALE ½" = 1'-0"



SECTION B-B

SCALE ½" = 1'-0"

1⅜" THREADBAR PLACEMENT COORDINATES		
BAR NUMBER	X	Y
1	11 7/16"	2'-1 11/16"
2	1'-8 7/8"	1'-6 13/16"
3	2'-2 11/16"	8 11/16"
4	2'-2 11/16"	(8 11/16")
5	1'-8 7/8"	(1'-6 13/16")
6	11 7/16"	(2'-1 11/16")
7	(11 7/16")	(2'-1 11/16")
8	(1'-8 7/8")	(1'-6 13/16")
9	(2'-2 11/16")	(8 11/16")
10	(2'-2 11/16")	8 11/16"
11	(1'-8 7/8")	1'-6 13/16"
12	(11 7/16")	2'-1 11/16"
COORDINATES ARE RELATIVE TO CENTER OF COLUMN, ALIGNED WITH ℄ BEARING		



SECTION A-A

SCALE ½" = 1'-0"

KEY:

WP = WORKING POINT

⊖ = 1⅜" DIA. THREADBAR NUMBERS

NOTES:

1. CONTRACTOR SHALL COORDINATE THREADBAR PLACEMENT WITH PRECAST SUB-CAP FABRICATOR FOR PLACEMENT OF SLEEVES IN SUB-CAP TO ENSURE PROPER FIT-UP AND ALIGNMENT IN THE FIELD. SEE PIER SUB-CAP MASONRY SHEET FOR ADDITIONAL INFORMATION.
2. TRANSVERSE POST-TENSIONING DUCTS IN PRECAST SUB-CAP AND PIER CAP NOT SHOWN FOR CLARITY.

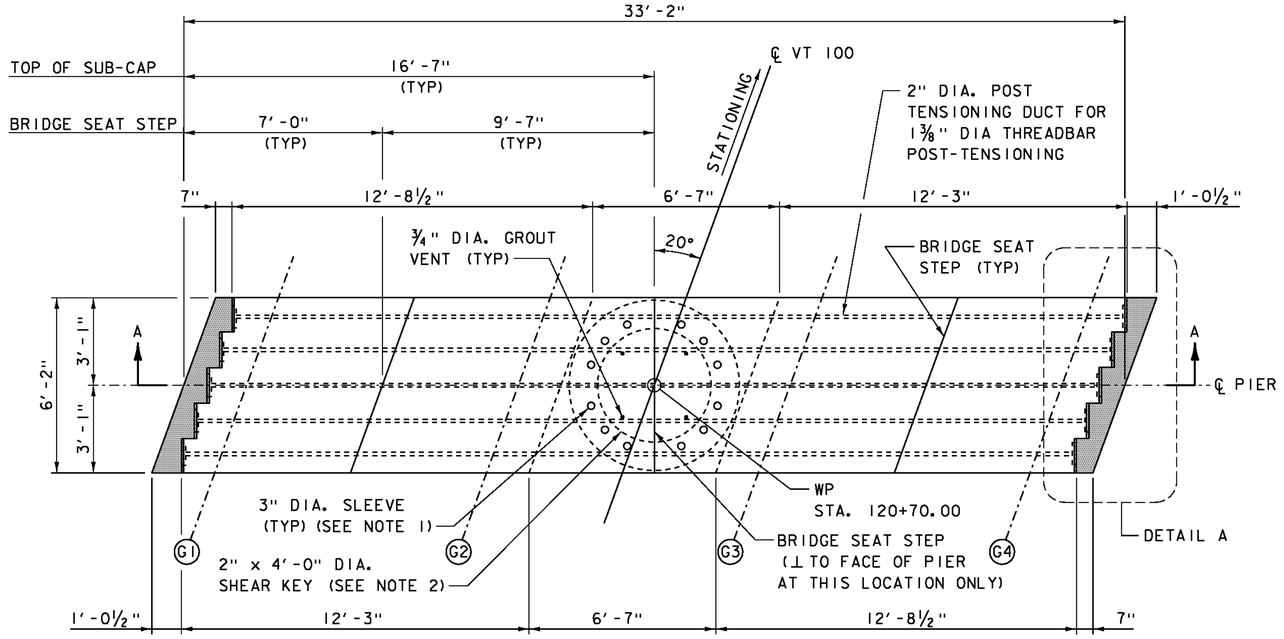
VHB Vanasse Hangen Brustlin, Inc.

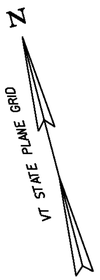
PROJECT NAME: JAMAICA

PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: z11b212sub_pier_col.dgn
PROJECT LEADER: K. HIGGINS (VTRANS)
DESIGNED BY: K.G. KRETSCH
PIER COLUMN

PLOT DATE: 12-OCT-2012
DRAWN BY: B.J. MASSE
CHECKED BY: G.S. GOODRICH
SHEET 40 OF 85

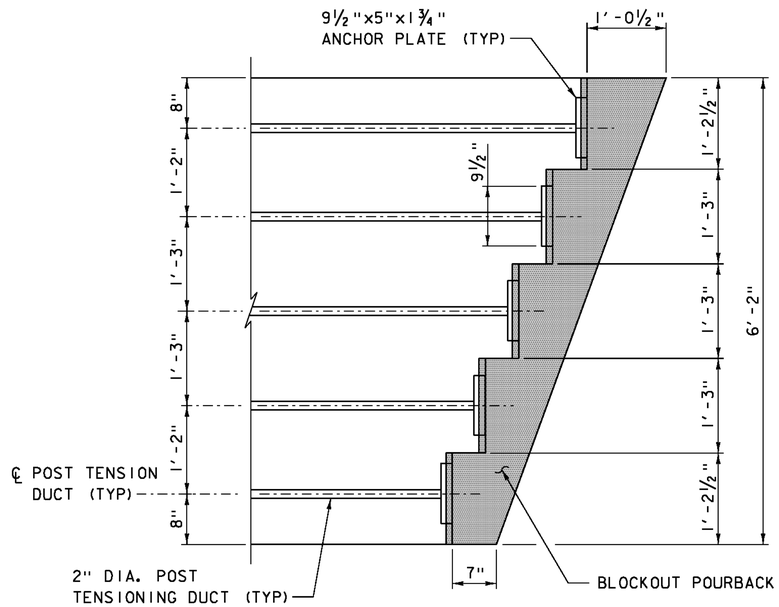




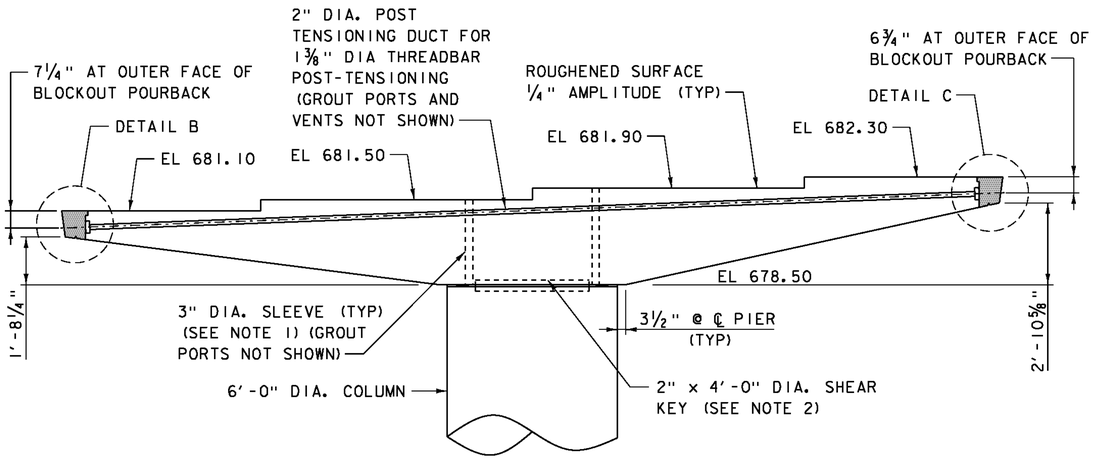
PRECAST SUB-CAP MASONRY PLAN
SCALE 3/8" = 1'-0"

WP = WORKING POINT

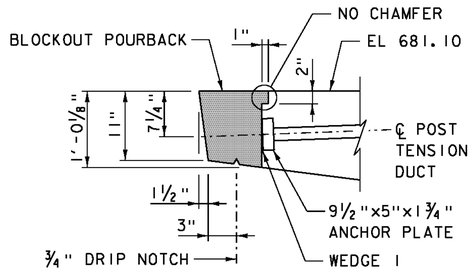
= CAST-IN-PLACE SUB-CAP BLOCKOUT POURBACK



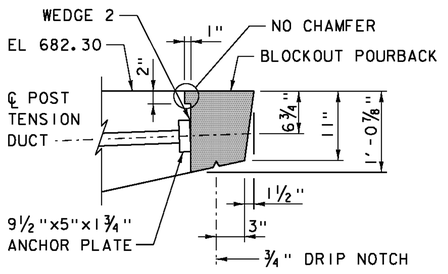
DETAIL A
EAST END OF SUB-CAP SHOWN.
WEST END SIMILAR BY 180° ROTATION.
SCALE 1" = 1'-0"



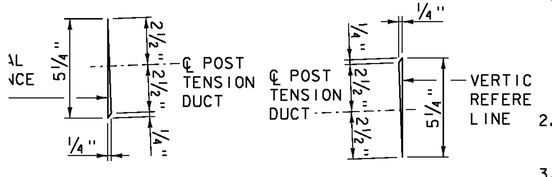
SECTION A-A
SCALE 3/8" = 1'-0"



DETAIL B
SCALE 1" = 1'-0"



DETAIL C
SCALE 1" = 1'-0"



WEDGE 1
SCALE 3" = 1'-0"

WEDGE 2
SCALE 3" = 1'-0"

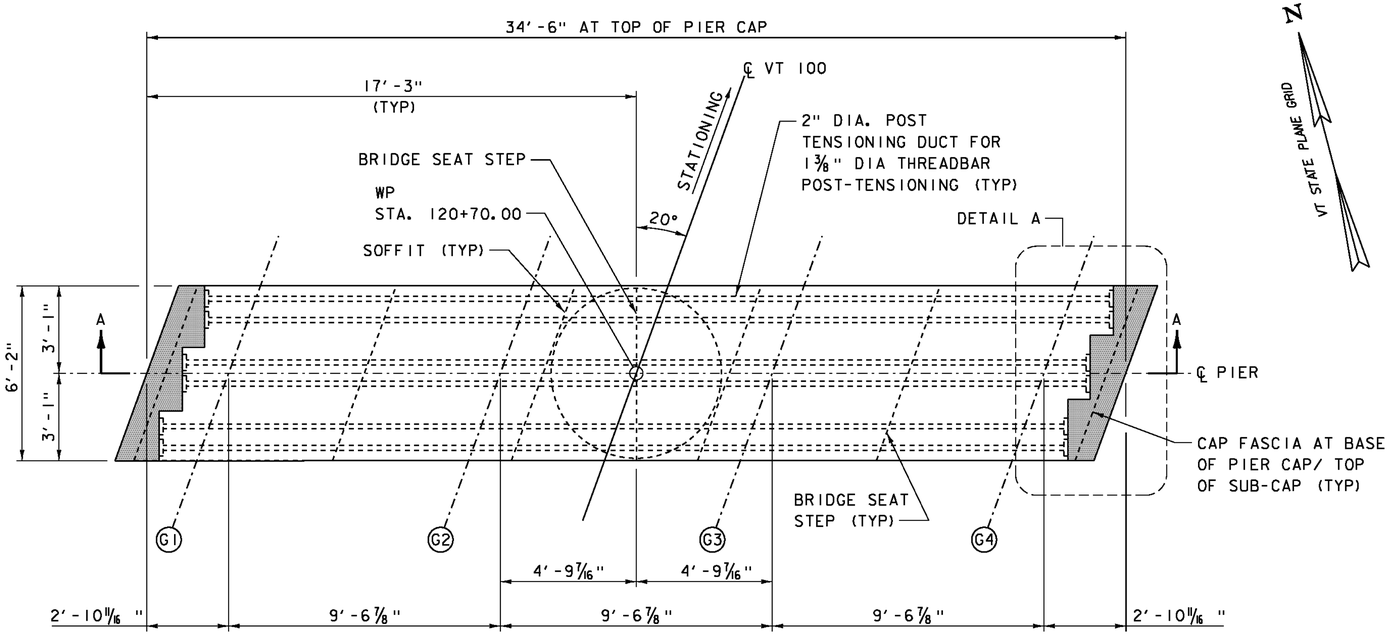
NOTES:

1. VERTICAL SLEEVE LOCATION SHALL BE COORDINATED WITH THE PLACEMENT OF THE VERTICAL THREADBAR EXTENDING FROM THE CAST-IN-PLACE COLUMN TO ENSURE PROPER FIT-UP AND CAP ALIGNMENT IN THE FIELD. SEE PIER COLUMN SHEET FOR PLACEMENT DETAILS.
2. SEE PIER COLUMN SHEET FOR ADDITIONAL SHEAR KEY DETAILS.
3. SEE PIER CONSTRUCTION SEQUENCE SHEET FOR POST-TENSIONING STRESSING SEQUENCE.
4. SEE PIER SUB-CAP AND CAP DETAILS SHEET FOR GIRDER BLOCKING DETAIL AND ELEVATIONS.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

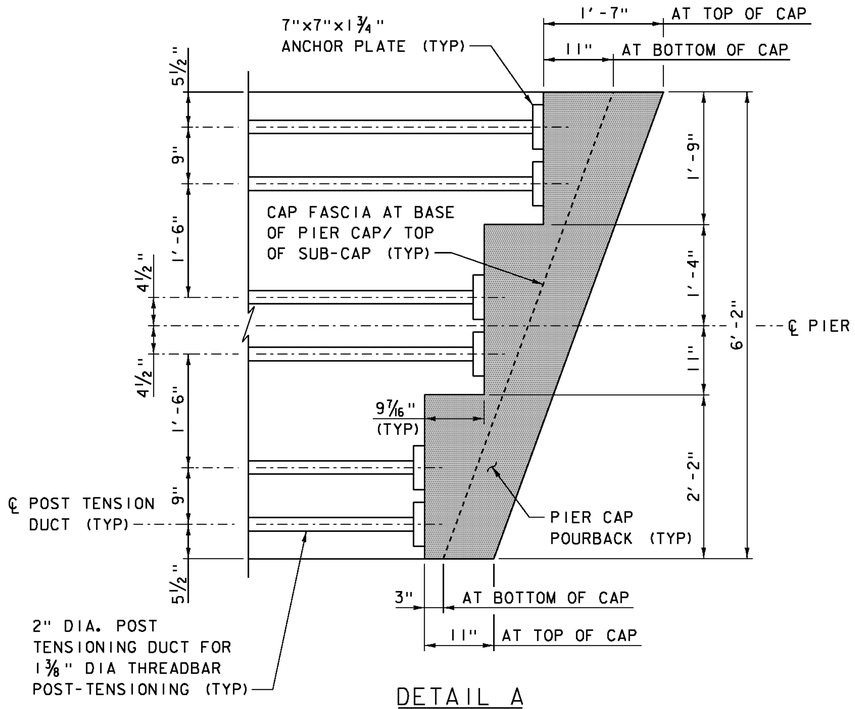
FILE NAME: z11b212sub_pier_cap_m.dgn
PROJECT LEADER: K. HIGGINS (VTRANS)
DESIGNED BY: A.T. BURKHOLDER
PIER SUB-CAP MASONRY
PLOT DATE: 12-OCT-2012
DRAWN BY: B.J. MASSE
CHECKED BY: G.S. GOODRICH
SHEET 41 OF 85



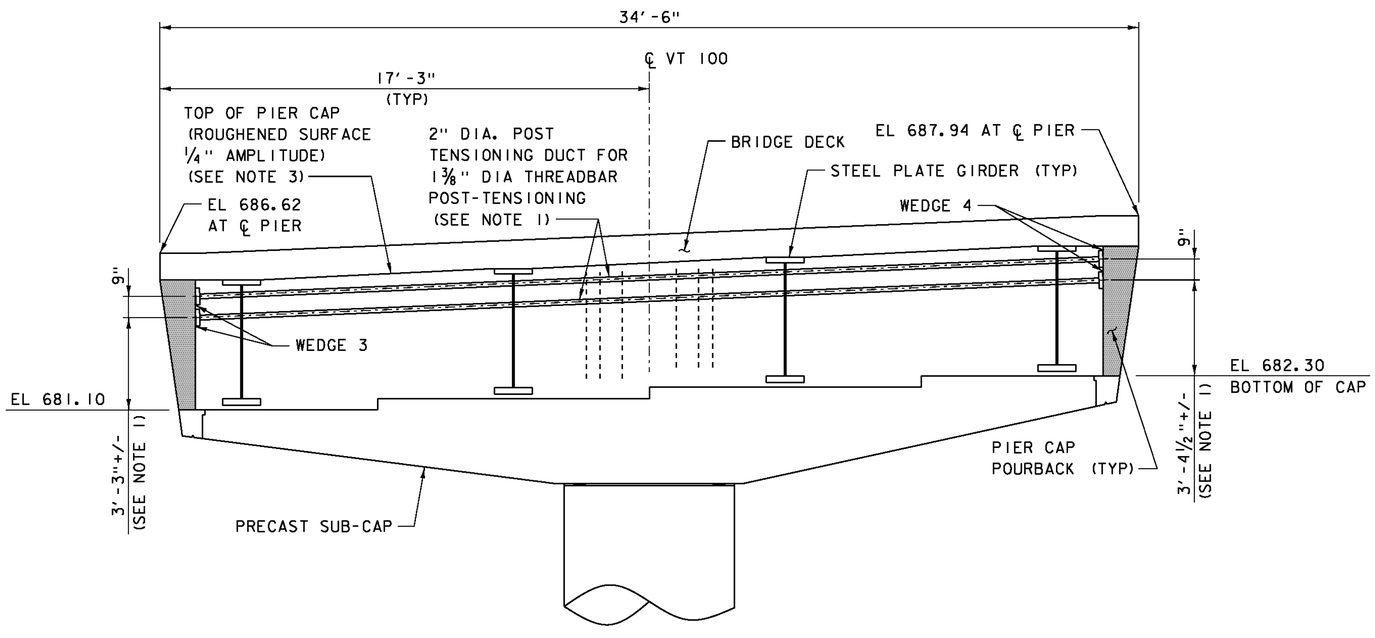
PIER CAP MASONRY PLAN
SCALE ⅜" = 1'-0"

WP = WORKING POINT

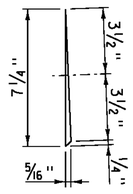
▨ = CAST-IN-PLACE PIER CAP BLOCKOUT POURBACK



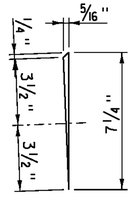
DETAIL A
EAST END OF CAP SHOWN.
WEST END OF CAP SAME BY 180° ROTATION.
SCALE 1" = 1'-0"



SECTION A-A
SCALE ⅜" = 1'-0"



WEDGE 3
SCALE 3" = 1'-0"



WEDGE 4
SCALE 3" = 1'-0"

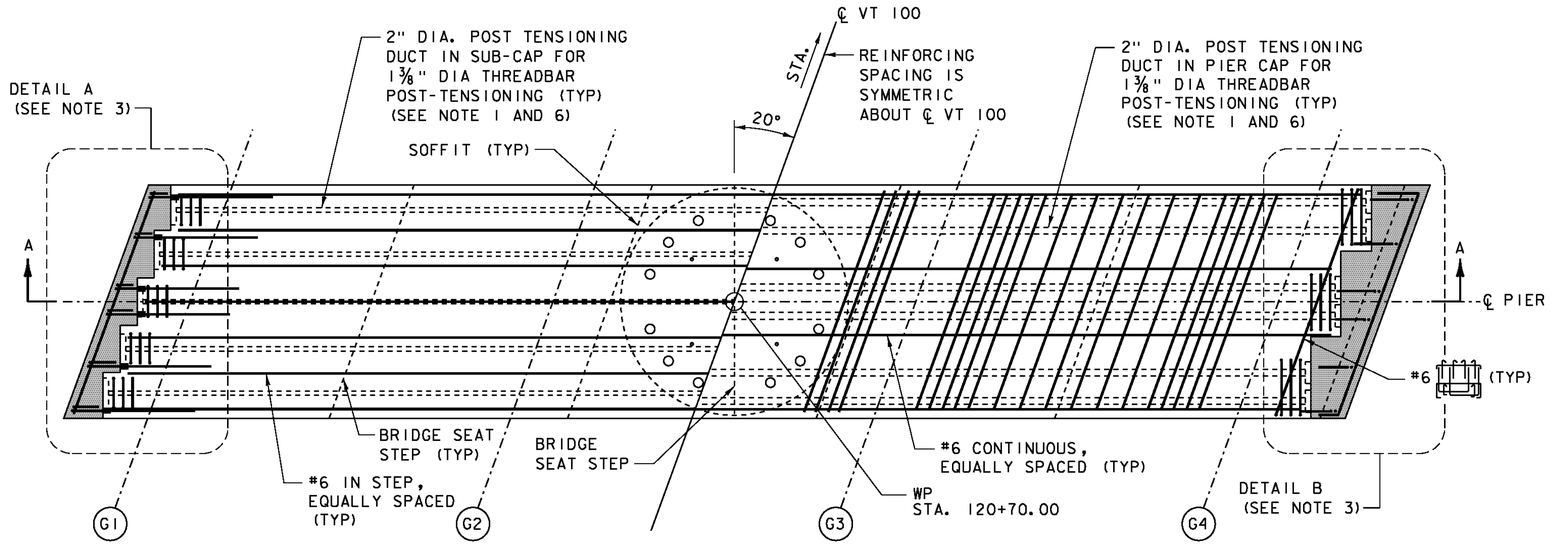
NOTES:

1. POST-TENSIONING BAR PROFILE IS SET BASED ON HOLES IN WEB OF GIRDER (SEE STEEL DETAILS FOR ADDITIONAL INFORMATION). POST-TENSIONING BARS SHALL BE CENTERED IN HOLES IN WEB. GROUT PORTS AND VENTS NOT SHOWN.
2. SEE PIER CONSTRUCTION SEQUENCE SHEET FOR POST-TENSIONING STRESSING SEQUENCE.
3. TOP OF PIER CAP TO BE FLUSH WITH TOP OF GIRDER TOP FLANGE.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

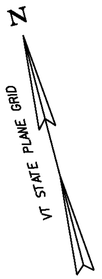
FILE NAME: z11b212sub_pier_encase.dgn
PROJECT LEADER: K. HIGGINS (VTRANS)
DESIGNED BY: A.T. BURKHOLDER
PIER CAP MASONRY
PLOT DATE: 12-OCT-2012
DRAWN BY: B.J. MASSE
CHECKED BY: G.S. GOODRICH
SHEET 42 OF 85



HALF PLAN SHOWING SUB-CAP TRANSVERSE REINFORCING

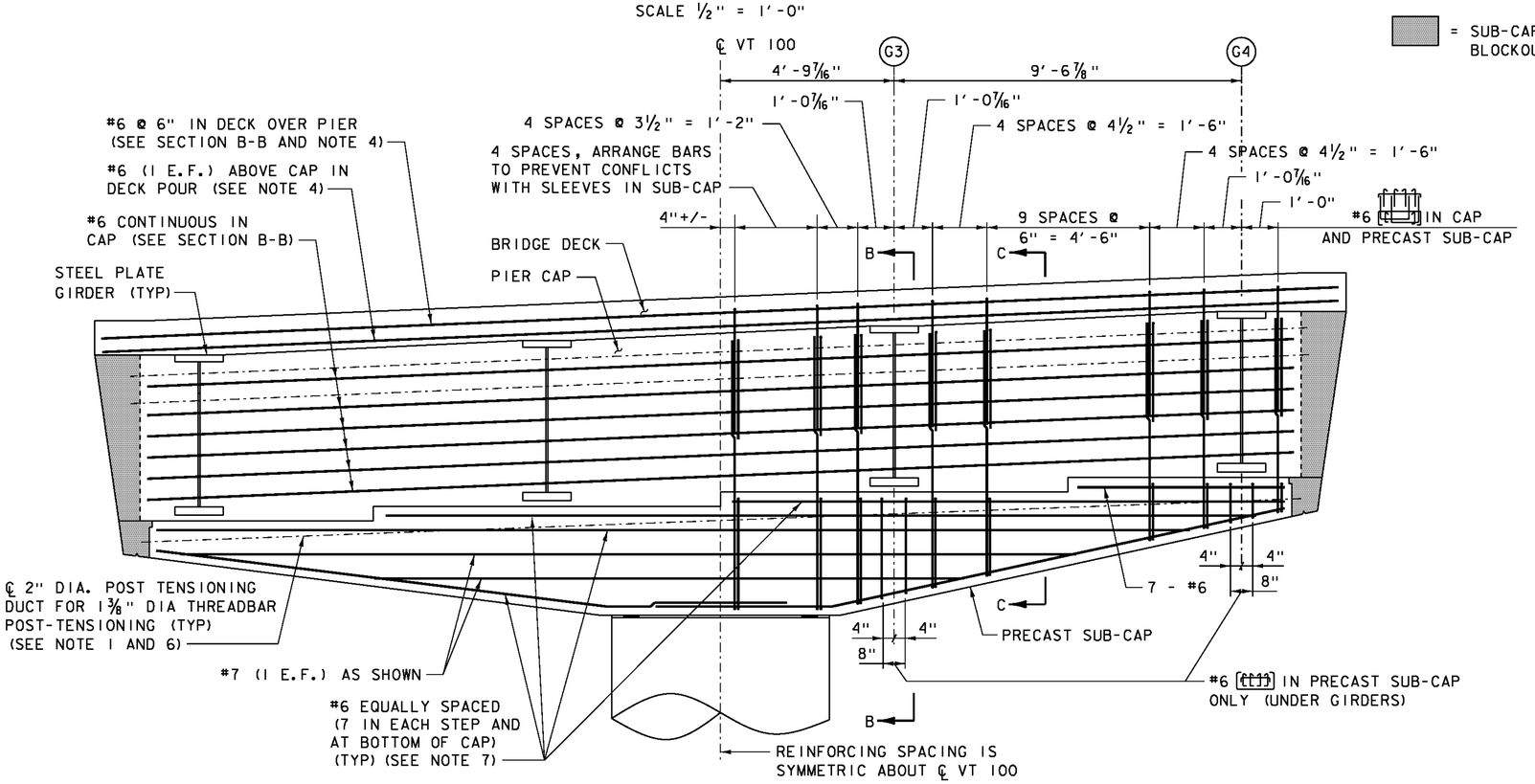
(SEE SECTION A-A FOR STIRRUP REINFORCING)

HALF PLAN SHOWING PIER CAP REINFORCING



PIER SUB-CAP AND CAP REINFORCING PLAN

SCALE 1/2" = 1'-0"



= SUB-CAP OR PIER CAP BLOCKOUT POURBACK

REINFORCING KEY:

N.F. = NEAR FACE
F.F. = FAR FACE
E.F. = EACH FACE

NOTES:

1. SEE PIER SUB-CAP MASONRY SHEET FOR LAYOUT OF POST-TENSIONING DUCTS.
2. SEE PIER CAP MASONRY SHEET FOR LAYOUT OF POST-TENSIONING DUCTS.
3. SEE PIER CAP END DETAIL SHEET FOR DETAILS A AND B.
4. SEE DECK PLAN FOR REINFORCING IN BRIDGE DECK.
5. SEE PIER SUB-CAP AND CAP DETAILS SHEET FOR SECTION B-B AND C-C.
6. SEE PIER CONSTRUCTION SEQUENCE SHEET FOR POST-TENSIONING STRESSING SEQUENCE.
7. ADJUST REINFORCING STEEL AS NEEDED TO AVOID CONFLICTS WITH POST-TENSIONING DUCTS AND VERTICAL SLEEVES.

SECTION A-A

TYPICAL DECK REINFORCING NOT SHOWN FOR CLARITY

SCALE 1/2" = 1'-0"

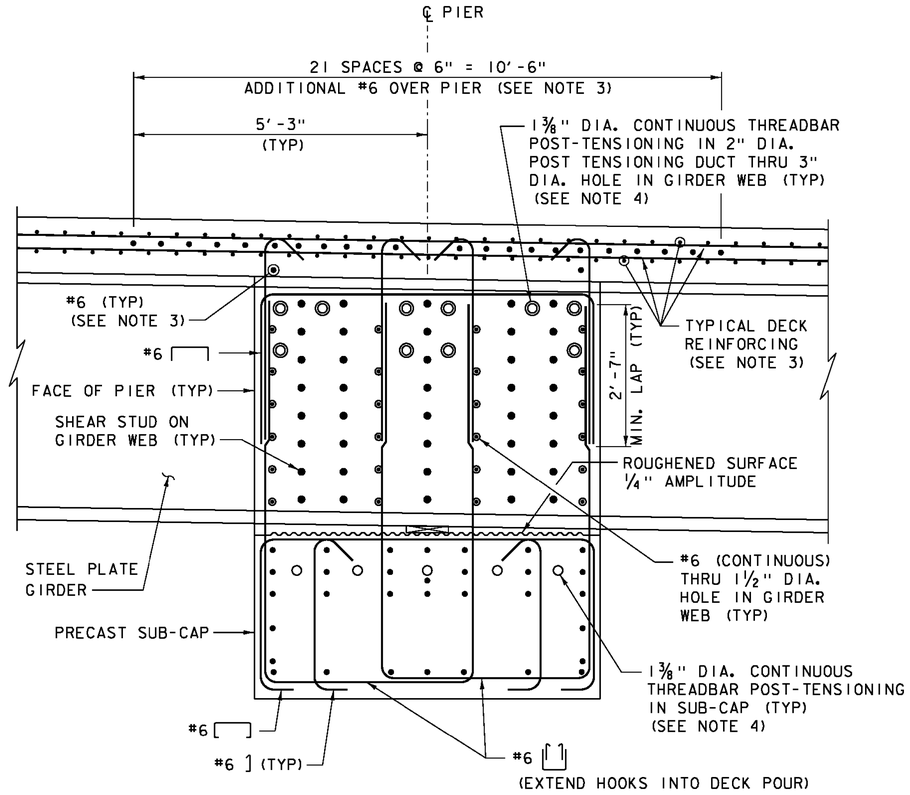
VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: JAMAICA

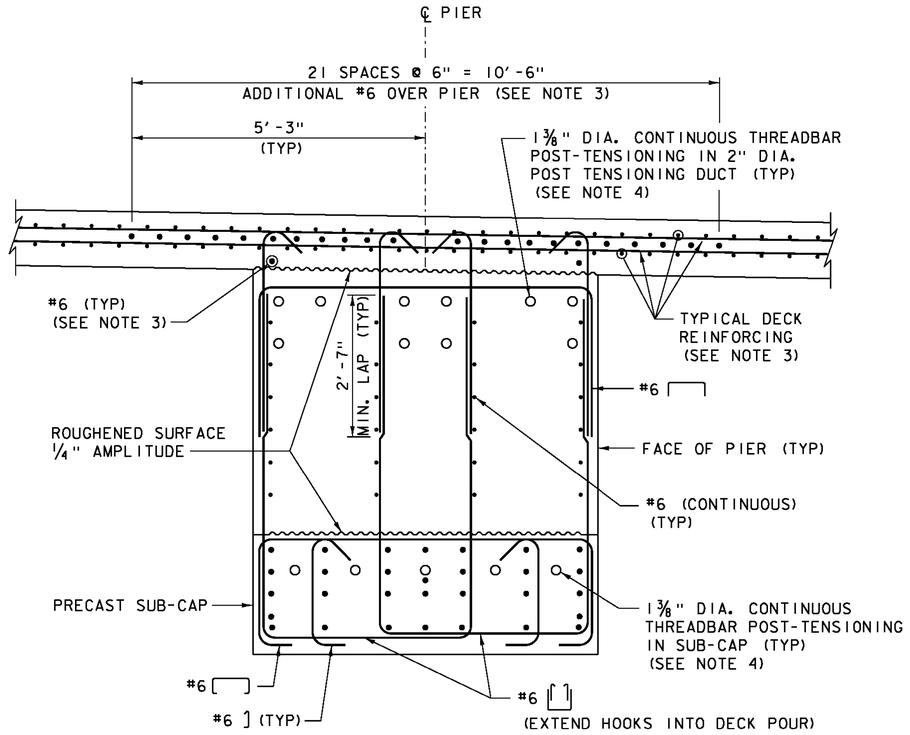
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: slib212sub_pier_cap_r.dgn
PROJECT LEADER: K. HIGGINS (VTRANS)
DESIGNED BY: A.T. BURKHOLDER
PIER SUB-CAP AND CAP REINFORCING

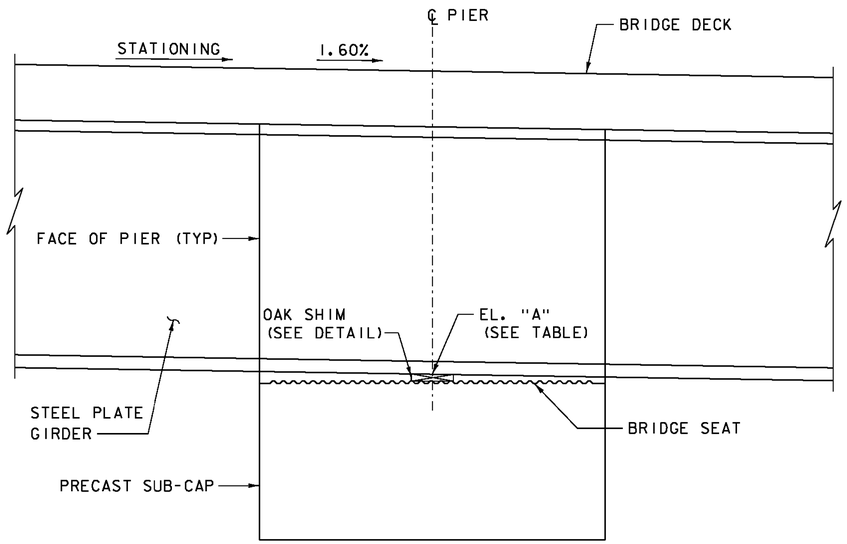
PLOT DATE: 12-OCT-2012
DRAWN BY: B.J. MASSE
CHECKED BY: G.S. GOODRICH
SHEET 43 OF 85



SECTION B-B
SCALE 3/4" = 1'-0"



SECTION C-C
SCALE 3/4" = 1'-0"

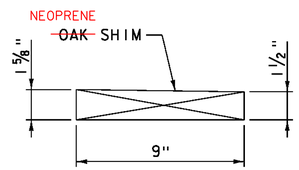


GIRDER BLOCKING DETAIL
REINFORCING STEEL NOT SHOWN FOR CLARITY
SCALE 3/4" = 1'-0"

GIRDER ELEVATION TABLE

GIRDER NO.	EL. "A"
GIRDER 1	681.23
GIRDER 2	681.63
GIRDER 3	682.03
GIRDER 4	682.43

GIRDER ELEVATIONS GIVEN AT ℄ PIER



NEOPRENE
~~OAK~~ SHIM DETAIL
NOT TO SCALE

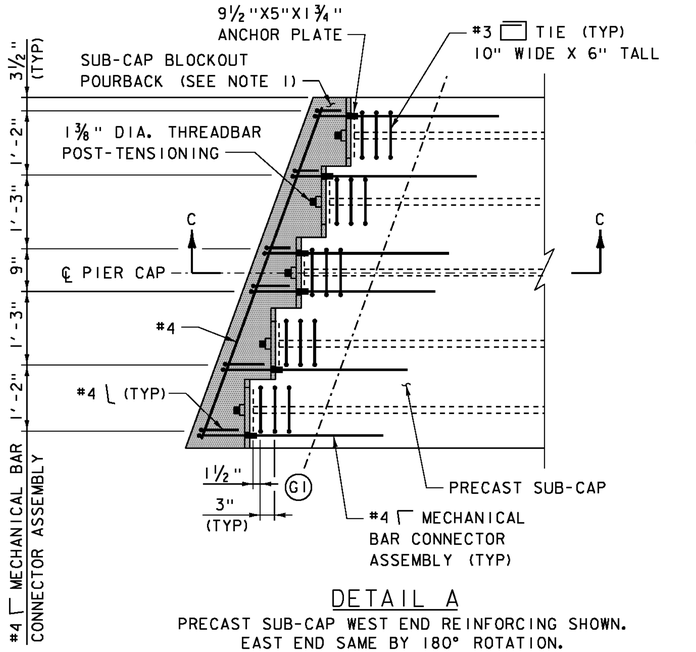
NOTES:

1. SEE PIER SUB-CAP MASONRY SHEET FOR LAYOUT OF POST-TENSIONING DUCTS.
2. SEE PIER CAP MASONRY SHEET FOR LAYOUT OF POST-TENSIONING DUCTS.
3. SEE DECK PLAN FOR REINFORCING IN BRIDGE DECK.
4. SEE PIER CONSTRUCTION SEQUENCE SHEET FOR POST-TENSIONING STRESSING SEQUENCE.

Vanasse Hangen Brustlin, Inc.

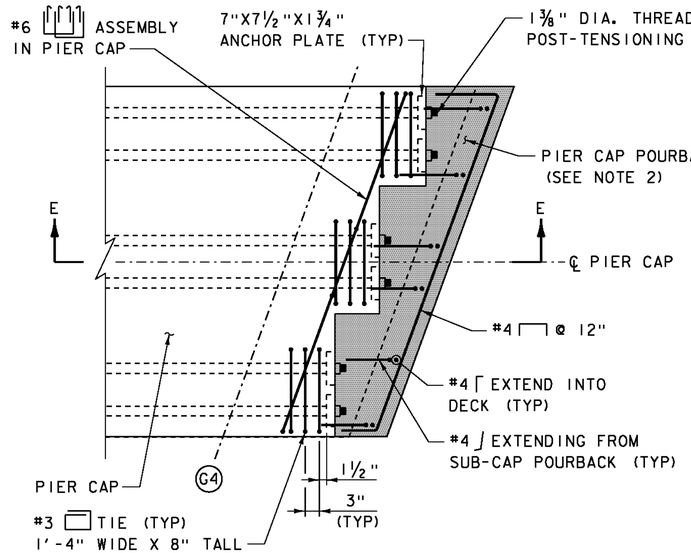
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: z11b212sub_pier_cap_dt.dgn
PROJECT LEADER: K. HIGGINS (VTRANS)
DESIGNED BY: A.T. BURKHOLDER
PIER SUB-CAP AND CAP DETAILS
PLOT DATE: 23-OCT-2012
DRAWN BY: B.J. MASSE
CHECKED BY: G.S. GOODRICH
SHEET 44 OF 85



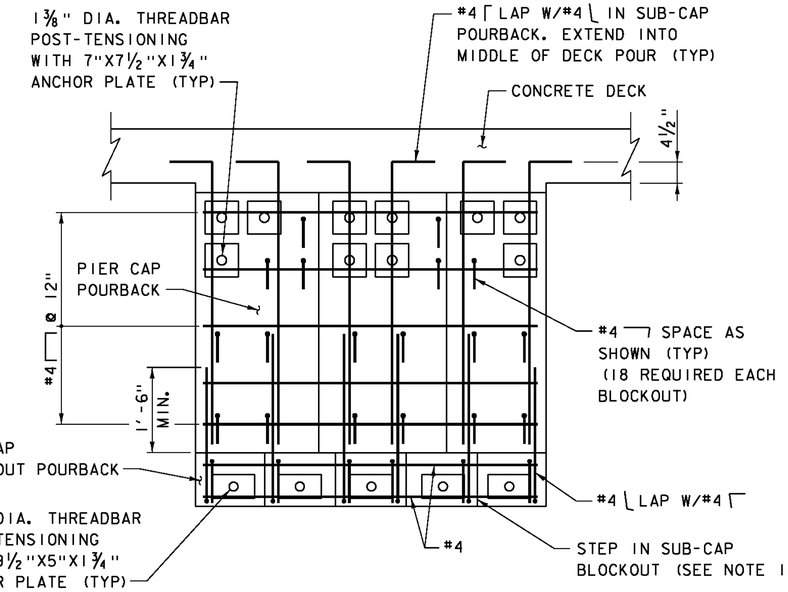
DETAIL A

PRECAST SUB-CAP WEST END REINFORCING SHOWN.
EAST END SAME BY 180° ROTATION.
ADDITIONAL REINFORCING IN SUB-CAP NOT SHOWN FOR CLARITY.
SCALE ¾" = 1'-0"



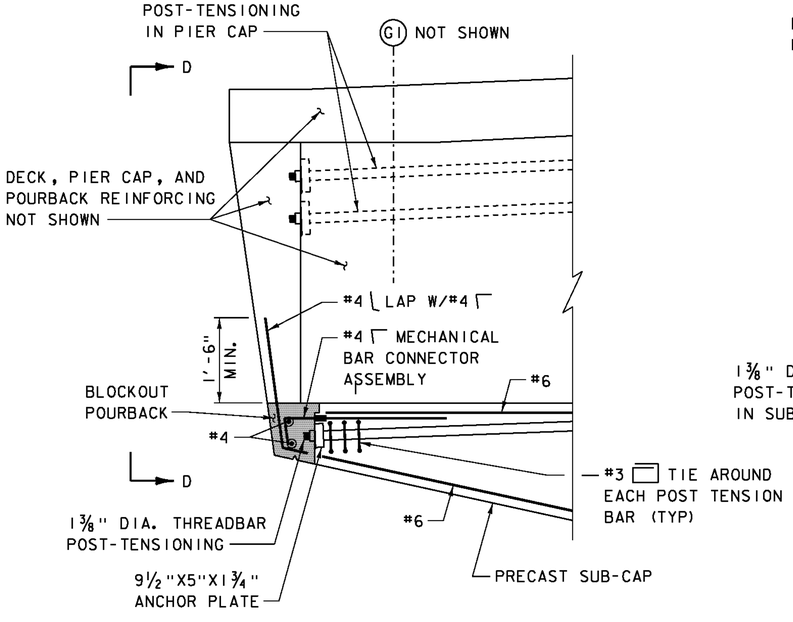
DETAIL B

PIER CAP EAST END REINFORCING SHOWN.
WEST END SAME BY 180° ROTATION.
ADDITIONAL REINFORCING IN PIER CAP NOT SHOWN FOR CLARITY.
SCALE ¾" = 1'-0"



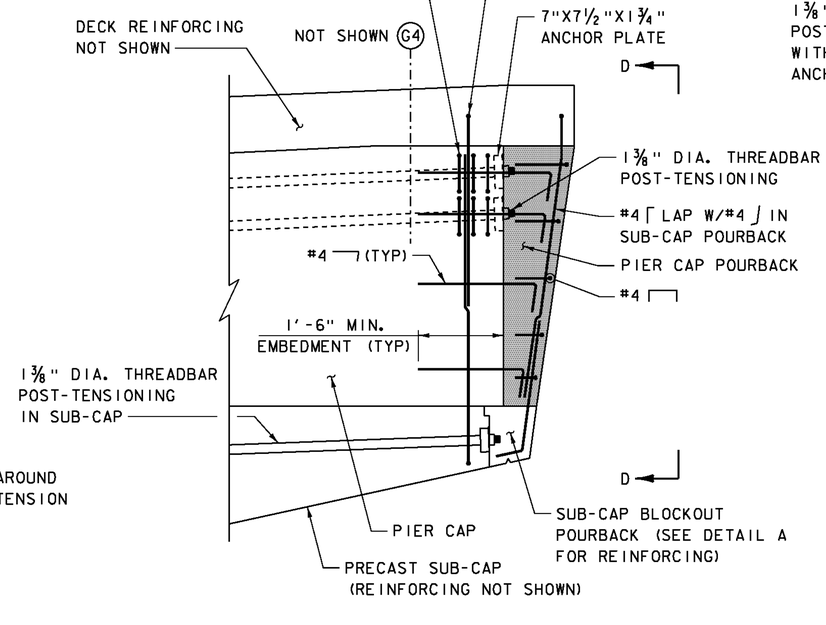
VIEW D-D

TYPICAL DECK, PRECAST SUB-CAP, AND PIER CAP
REINFORCING NOT SHOWN FOR CLARITY
SCALE ¾" = 1'-0"



SECTION C-C

PRECAST SUB-CAP WEST END REINFORCING SHOWN.
EAST END SIMILAR.
SCALE ¾" = 1'-0"



SECTION E-E

PIER CAP EAST END REINFORCING SHOWN.
WEST END SIMILAR.
SCALE ¾" = 1'-0"

= SUB-CAP OR PIER CAP BLOCKOUT POURBACK

NOTES:

1. SEE PIER SUB-CAP MASONRY SHEET FOR BLOCKOUT GEOMETRY.
2. SEE PIER CAP MASONRY SHEET FOR POURBACK GEOMETRY.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: z11b212sub_pier_pour_dt.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS (VTRANS)	DRAWN BY: B.J. MASSE
DESIGNED BY: A.T. BURKHOLDER	CHECKED BY: G.S. GOODRICH
PIER CAP END DETAILS	SHEET 45 OF 85

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF BRIDGE 78 WHICH IS LOCATED IN THE TOWN OF JAMAICA ON VERMONT ROUTE 100, APPROXIMATELY 1.5 MILES SOUTH OF THE JUNCTION OF VERMONT ROUTE 100 AND 30. THERE IS CURRENTLY A TEMPORARY BRIDGE IN PLACE, OFF ALIGNMENT, FOLLOWING THE DESTRUCTION OF THE OLD BRIDGE 78 DURING TROPICAL STORM IRENE. THE NEW STRUCTURE WILL BE APPROXIMATELY 241 FEET IN LENGTH WITH 59 FEET OF ROADWAY WORK. ABUTMENT #1 & #2 WILL BOTH BE INTEGRAL ABUTMENTS ON PILES.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 1.42 ACRES.

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

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS MOSTLY WELL ESTABLISHED TREE LINES WITH OCCASIONAL OPEN AREAS. VT ROUTE 100, SMITH ROAD AND HENDERSON ROAD ARE WITHIN THE PROJECT SITE. FOR FINAL CONTOURS AND SLOPES SEE CROSS SECTION SHEETS.

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

WARDSBORO BROOK IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE BROOK IS CLASSIFIED AS SINUOUS, SEMI-ALLUVIAL, AND INCISED WITH FLOOD DAMAGE. THE STREAM BED CONSISTS OF GRAVEL, COBBLES AND BOULDERS.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE EXISTING STRUCTURE. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE IV AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

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

56E	MONADNOCK FINE SANDY LOAM	25% TO 50% SLOPES	"K FACTOR" = 0.28
50B	COLTON LOAMY FINE SAND	2% TO 8% SLOPES	"K FACTOR" = 0.17
50D	COLTON LOAMY FINE SAND	15% TO 25% SLOPES	"K FACTOR" = 0.17
64	UDIFLUVENTS LOAMY	0% TO 3% SLOPES	"K FACTOR" = N/A
23	ONDAWA FINE SANDY LOAM	0% TO 3% SLOPES	"K FACTOR" = 0.24

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: NO
WATER RESOURCE: WARDSBORO BROOK
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC 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 APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

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

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, 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 CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

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

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

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

FILTER CURTAIN SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLANS PRIOR TO ANY CHANNEL WORK.

BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, WOVEN WIRE REINFORCED SILT FENCE SHALL BE USED INSTEAD OF SILT FENCE WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS.

1.4.5 DIVERT UPLAND RUNOFF

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

IT IS NOT ANTICIPATED THAT DIVERSIONARY MEASURES ARE NEEDED ON THIS PROJECT.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

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

IT IS NOT ANTICIPATED THAT CHECK STRUCTURES WILL BE NEEDED ON THIS PROJECT.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS. STONE FILL SHALL BE INSTALLED AS SHOWN ON THE EPSC PLANS. GEOTEXTILE SHALL BE INSTALLED BELOW THE STONE FILL TYPE IV AS SHOWN ON CHANNEL CROSS SECTIONS.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

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

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

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

1.4.9 WINTER STABILIZATION

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

1.4.10 STABILIZE SOIL AT FINAL GRADE

THE URBAN SEED MIX SHALL BE USED ON ALL AREAS TO BE RE-VEGETATED AS SHOWN ON THE FINAL CONDITIONS PLANS.

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.

TREATMENT OF DEWATERING COFFERDAM IS ANTICIPATED. A FILTER BAG LOCATION FOR TREATMENT HAS BEEN PROPOSED AND IS SHOWN ON THE PLANS. HOWEVER THE SPECIFIC MEANS FOR TREATMENT OF DISCHARGE SHALL BE PROVIDED BY THE CONTRACTOR.

1.4.12 INSPECT YOUR SITE

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

1.5 SEQUENCE AND STAGING

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

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

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

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212ero_narrative.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
EPSC NARRATIVE

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 46 OF 85

64 UDIFLUVENTS, LOAMY
WITH 0% TO 3% SLOPES
"K FACTOR" = N/A

RIPARIAN BUFFER

VT STATE PLANE GRID

N

112+66

113+00

VT 100
TO WARDSBORO

114+00

HVCTRL
#3

15"
ASPEN

15"
ASPEN

COMB
#7/T7/
32/1

EXISTING R.O.W.

GRAVEL
DRIVE

115+00

EXISTING R.O.W.

**LADD,
KEVIN & DANA**

WOODS

BENCHMARK
IRON PIN IN
COMB POLE
ELEV. 693.24

WOODS

059

COMB
#7/45

HVCTRL
#104

116+00

COMB
#2/T7/
46/1

117+00

118

MATCHLINE 118+00.00

WOODS

P
L

**N/F
SCACCIAFERRO**

50B COLTON LOAMY FINE SAND
WITH 2% TO 8% SLOPES
"K FACTOR" = 0.17

P
L

**N/F
MILLER**

56E MONADNOCK FINE SANDY LOAM
WITH 25% TO 50% SLOPES
"K FACTOR" = 0.28

LEGEND

RIPARIAN BUFFER	
P/L	PROPERTY LINE
	RIGHT-OF-WAY LINE
SOIL BOUNDARY	

EXISTING CONDITIONS SHEET 1

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

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: slb212ero_ex.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
EXISTING CONDITIONS SHEET 1

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 47 OF 85

64 UDIFLUVENTS, LOAMY
WITH 0% TO 3% SLOPES
"K FACTOR" = N/A

64 UDIFLUVENTS, LOAMY
WITH 0% TO 3% SLOPES
"K FACTOR" = N/A

50D COLTON LOAMY FINE SAND
WITH 15% TO 25% SLOPES
"K FACTOR" = 0.17

50B COLTON LOAMY FINE SAND
WITH 2% TO 8% SLOPES
"K FACTOR" = 0.17

23 ONDAWA FINE SANDY LOAM
WITH 0 TO 3% SLOPES
"K FACTOR" = 0.24

23 ONDAWA FINE SANDY LOAM
WITH 0 TO 3% SLOPES
"K FACTOR" = 0.24

56E MONADNOCK FINE SANDY LOAM
WITH 25% TO 50% SLOPES
"K FACTOR" = 0.28

LADD,
KEVIN & DANA

BEMIS,
MARTIN N. & CAROL ANN

ROBINSON,
BERNARD W. & ELAINE A.

TOWN OF
JAMAICA

GRECO, MI

MATCHLINE 118+00.00

MATCHLINE 123+50.00

RIPARIAN BUFFER

WARDSBORO BROOK

FLOW

SMITH ROAD
TH 53

GRAVEL
ROAD

EXISTING R.O.W.

WELL
3 FT DIA
CONCRETE
TILE

HARDWOOD
TREE

WOODS

COMB
#7/44

COMB
#7/43

SUBE

HVCTRL
#103

HVCTRL
#102

HVCTRL
#101

HVCTRL
#11

MED.
YELLOW
BIRDH SM.
MAPLE MED.
MAPLE

STONE
HEADWALL

PIPE
30 CPMG

WATER
COURSES

STONE
RETAINING
WALL

LEDGE

54+00

53+00

52+00

118+00

119+00

120+00

121+00

122+00

123+00

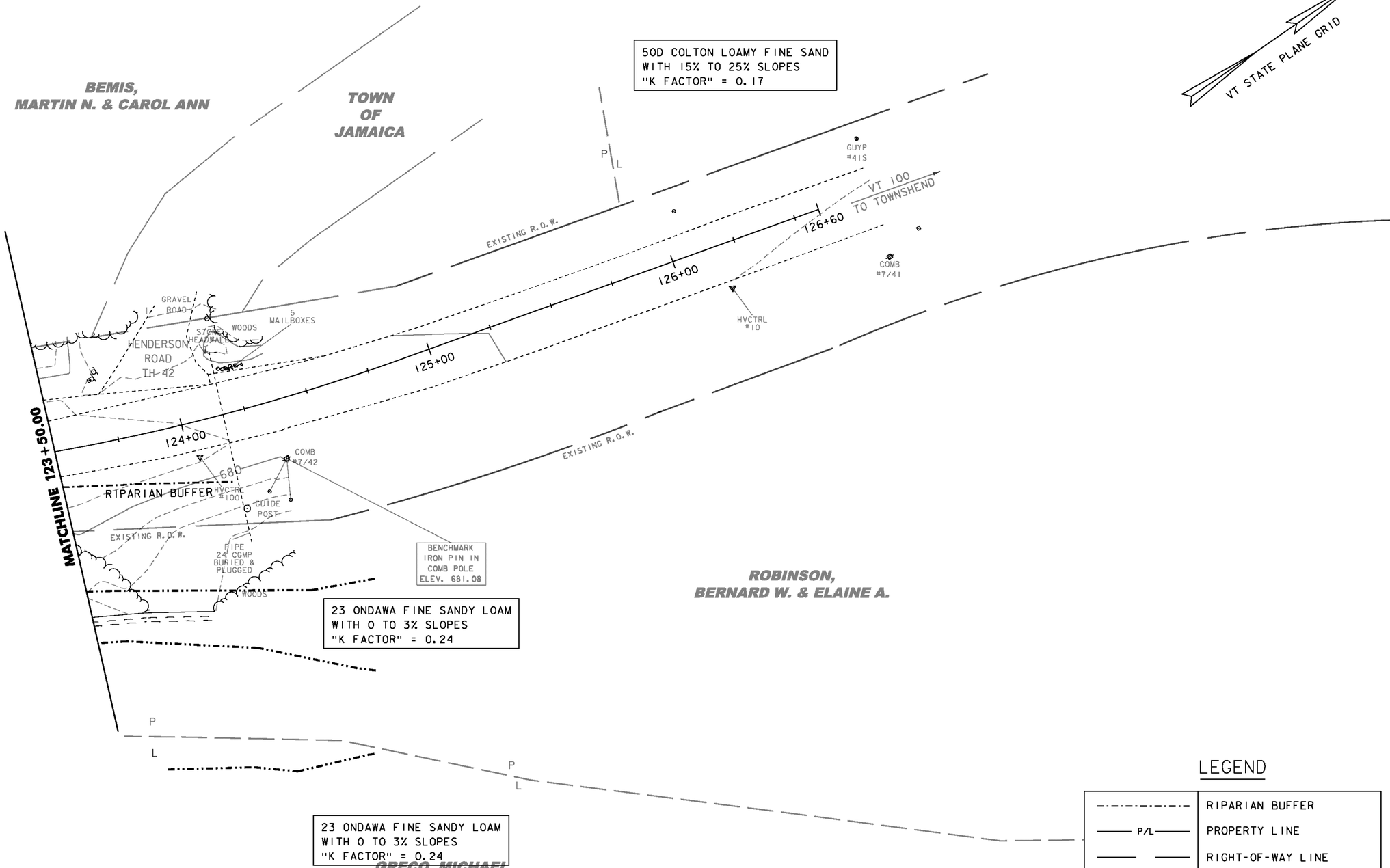
LEGEND

---·---·---	RIPARIAN BUFFER
——— P/L ———	PROPERTY LINE
——— ———	RIGHT-OF-WAY LINE
---·---·---	SOIL BOUNDARY

EXISTING CONDITIONS SHEET 2

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

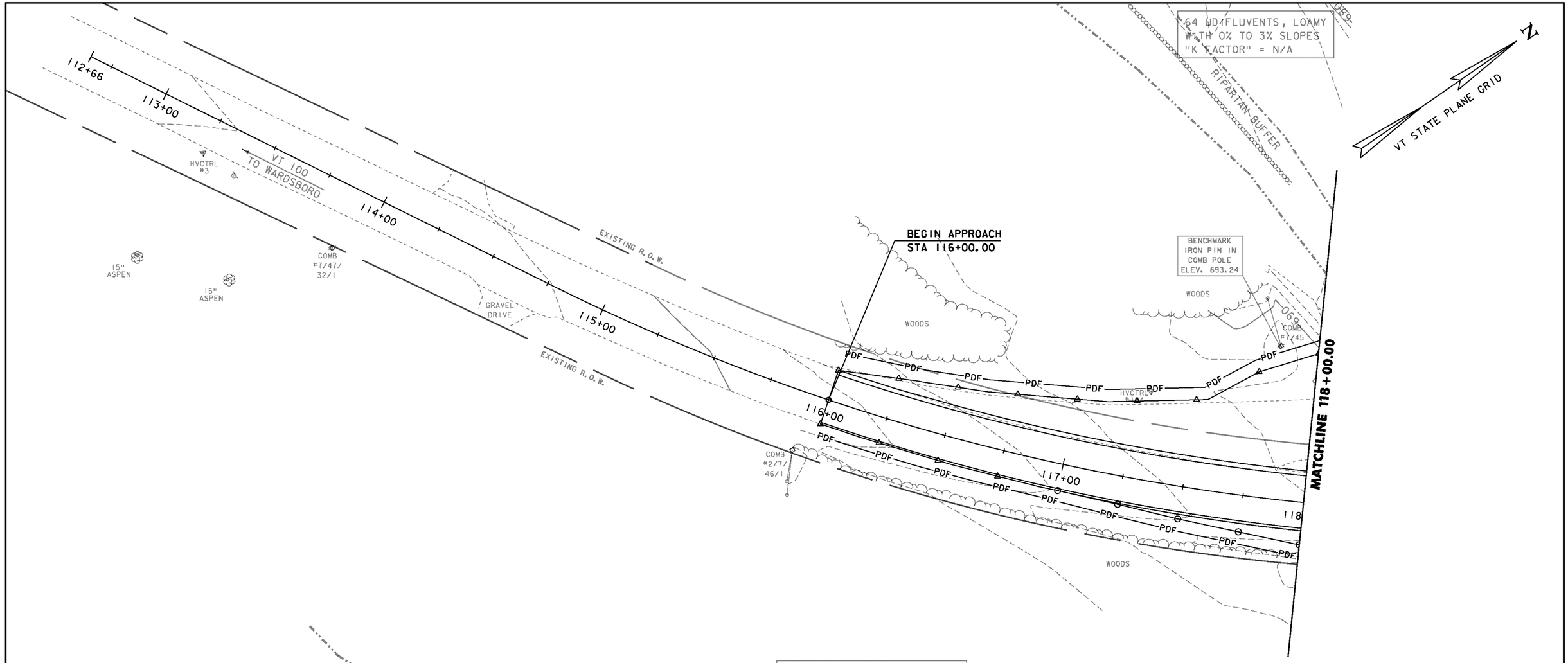
PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212ero_ex.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
EXISITING CONDITIONS SHEET 2	SHEET 48 OF 85



EXISTING CONDITIONS SHEET 3

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

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212ero_ex.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
EXISITING CONDITIONS SHEET 3	SHEET 49 OF 85



LEGEND

	CUT/FILL LIMITS
PDF	PROJECT DEMARCATION FENCE
	SILT FENCE, WIRE WOVEN REINFORCED
BF BF	BARRIER FENCE
	FILTER BAG
	SURFACE ROUGHENING
	ROLLED EROSION CONTROL PRODUCT (RECP)
	STONE FILL
	STABILIZED CONSTRUCTION ENTRANCE
	TURBIDITY CURTAIN

EPSC - CONSTRUCTION SITE PLAN SHEET 1

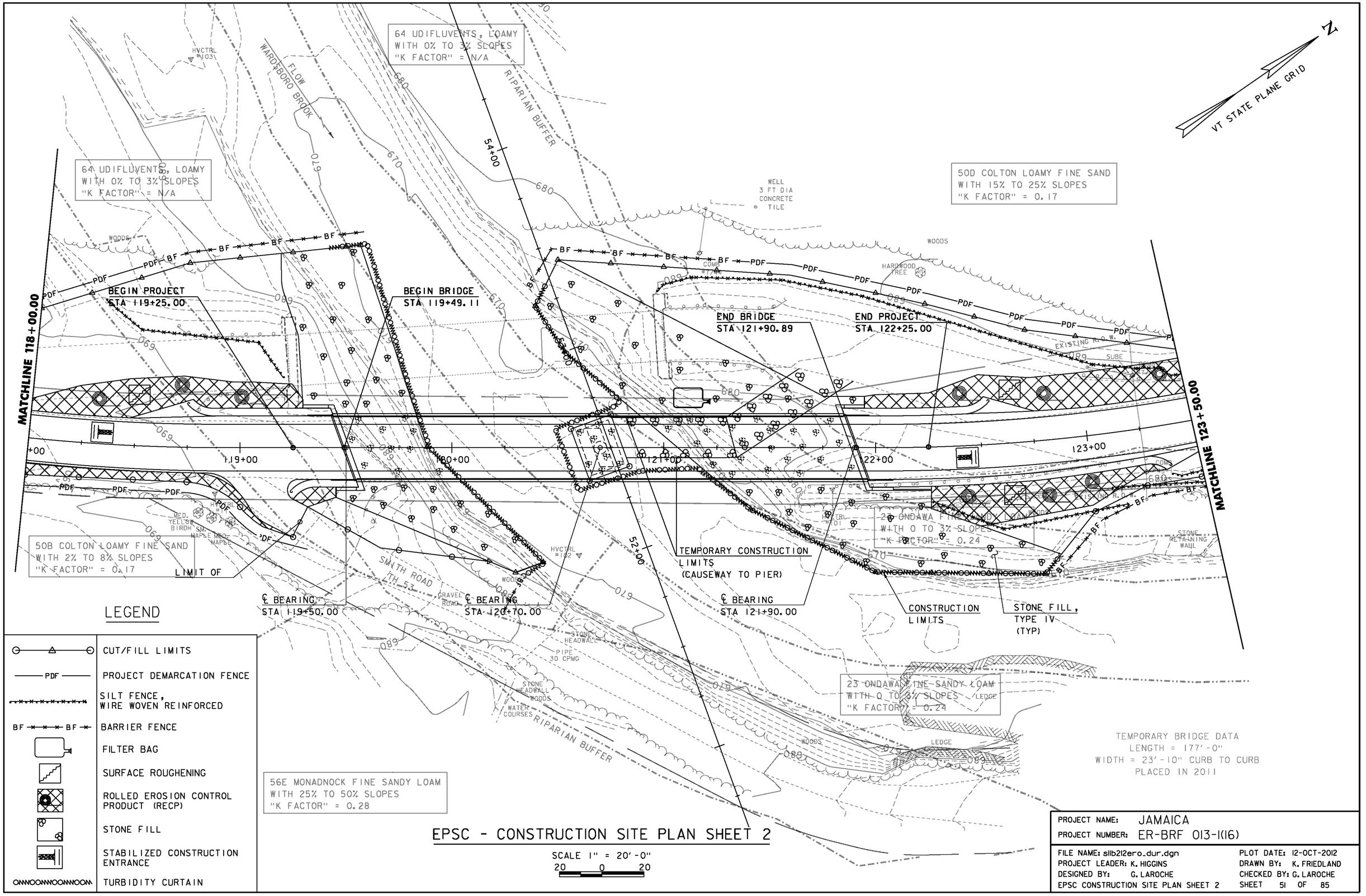
SCALE 1" = 20'-0"

20 0 20

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212ero_dur.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
EPSC CONSTRUCTION SITE PLAN SHEET 1

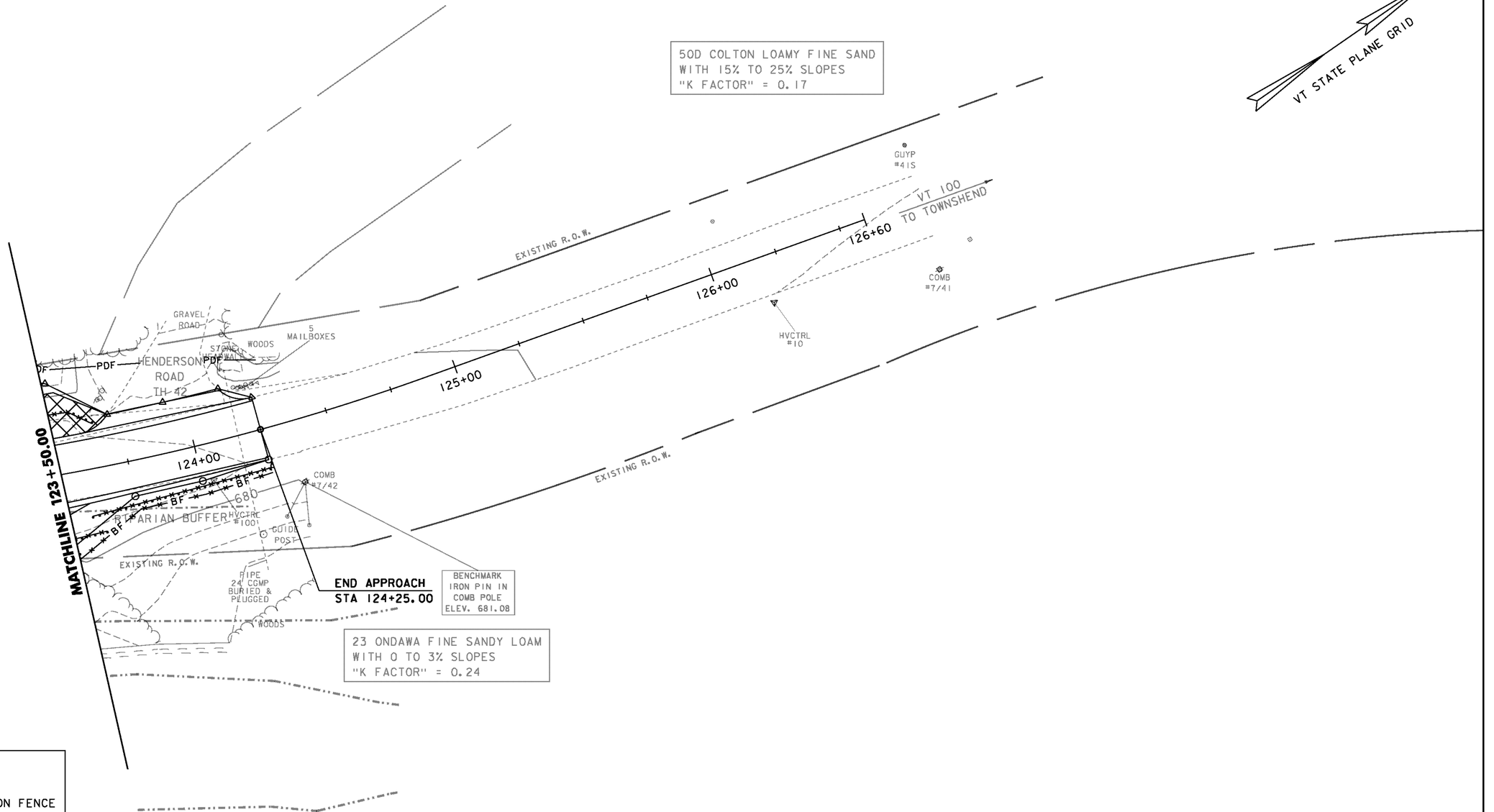
PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 50 OF 85



EPSC - CONSTRUCTION SITE PLAN SHEET 2

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

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212ero_dur.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
EPSC CONSTRUCTION SITE PLAN SHEET 2	SHEET 51 OF 85



LEGEND

	CUT/FILL LIMITS
PDF	PROJECT DEMARCATION FENCE
	SILT FENCE, WIRE WOVEN REINFORCED
BF BF	BARRIER FENCE
	FILTER BAG
	SURFACE ROUGHENING
	ROLLED EROSION CONTROL PRODUCT (RECP)
	STONE FILL
	STABILIZED CONSTRUCTION ENTRANCE
	TURBIDITY CURTAIN

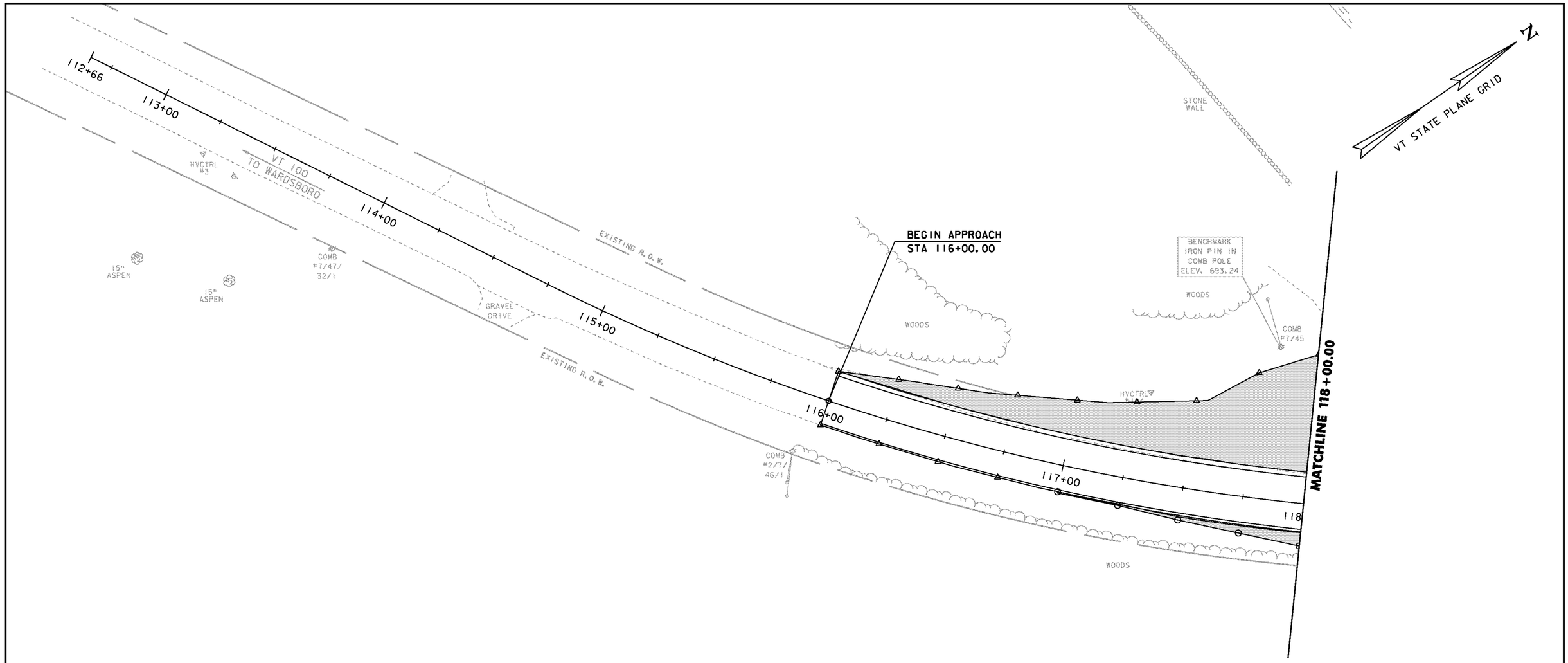
EPSC - CONSTRUCTION SITE PLAN SHEET 3

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

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212ero_dur.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
EPSC CONSTRUCTION SITE PLAN SHEET 3

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 52 OF 85



AREAS OF EARTH DISTURBANCE
THAT WILL REQUIRE REVEGETATION.

FINAL CONDITIONS SHEET 1

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

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)

FILE NAME: s11b212ero_final.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
FINAL CONDITIONS SHEET 1	SHEET 53 OF 85

N

VT STATE PLANE GRID

MATCHLINE 118+00.00

BEGIN PROJECT
STA 119+25.00

BEGIN BRIDGE
STA 119+49.11

END BRIDGE
STA 121+90.89

END PROJECT
STA 122+25.00

MATCHLINE 123+50.00

54+00

53+00

52+00

119+00

120+00

121+00

122+00

123+00

HVCTRL #103

FLOW WARDSBORO BROOK

WELL 3 FT DIA CONCRETE @ TILE

WOODS

COMB

HARDWOOD TREE

EXISTING R.O.W.

HVCTRL #101

HVCTRL #102

HVCTRL #11

RED, YELLOW BIRCH SM. MAPLE RED. MAPLE

STONE RETAINING WALL

LIMIT OF PAVEMENT

℄ BEARING
STA 119+50.00

SMITH ROAD TH 53

GRAVEL ROAD

℄ BEARING
STA 120+70.00

℄ BEARING
STA 121+90.00

CONSTRUCTION LIMITS

STONE FILL, TYPE IV (TYP)

STONE HEADWALL

PIPE 30 CPMG

STONE HEADWALL

WATER COURSES

LEDGE

LEDGE

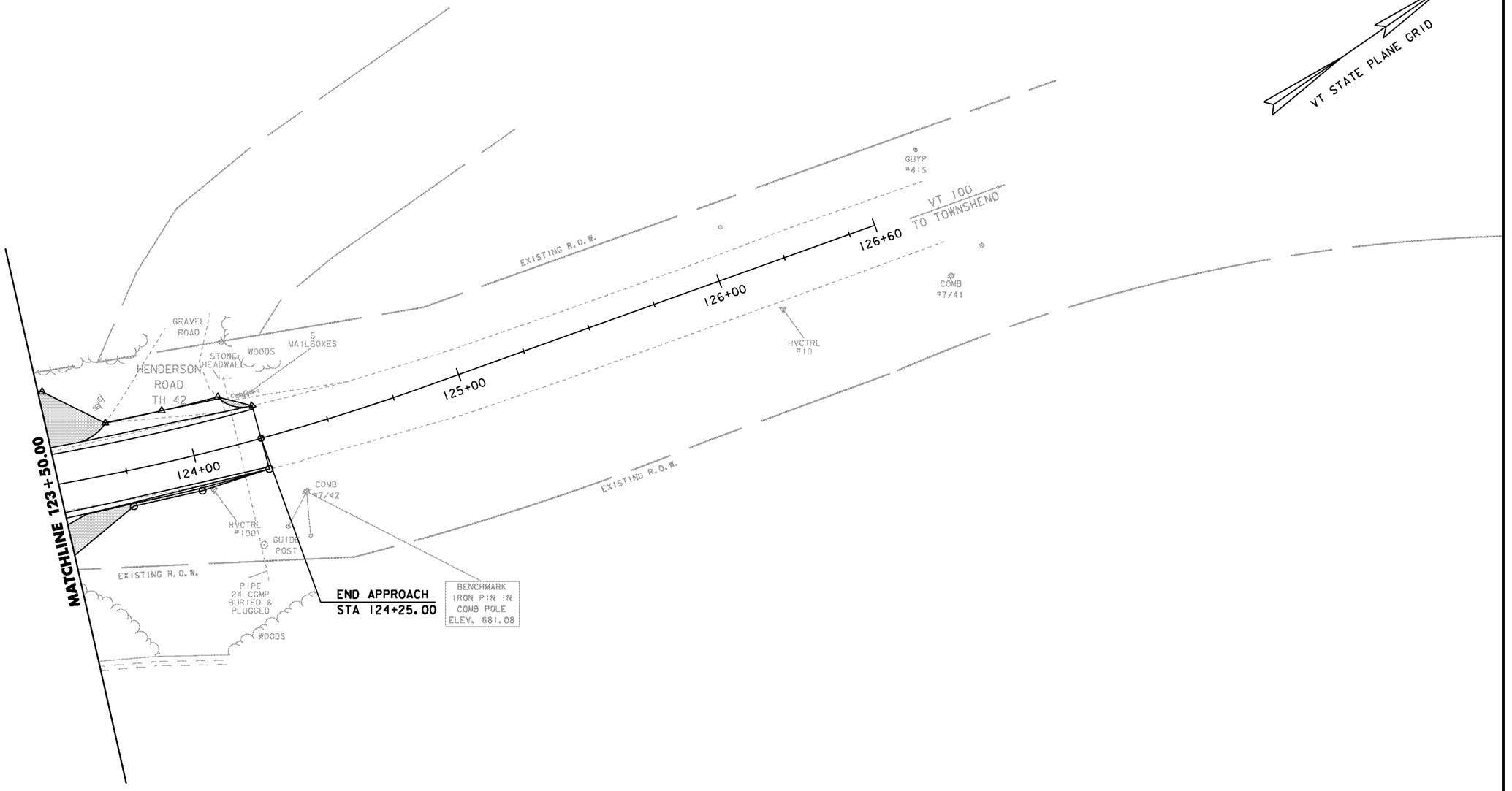
AREAS OF EARTH DISTURBANCE
THAT WILL REQUIRE REVEGETATION.

FINAL CONDITIONS SHEET 2

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

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)

FILE NAME: sllb212ero_final.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
FINAL CONDITIONS SHEET 2	SHEET 54 OF 85



AREAS OF EARTH DISTURBANCE
THAT WILL REQUIRE REVEGETATION.

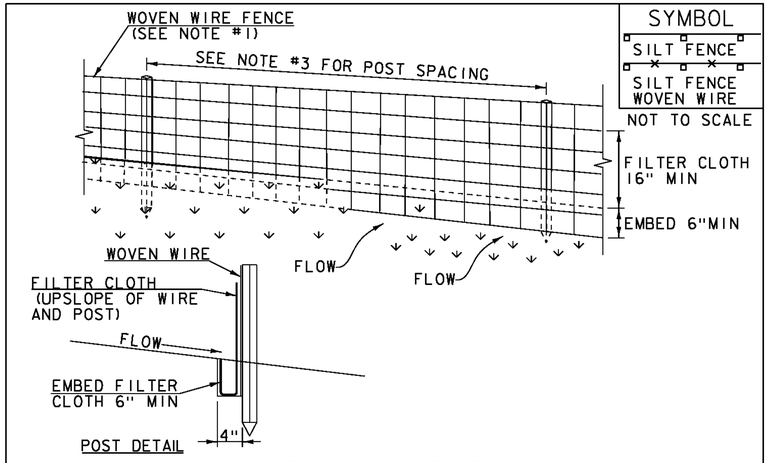
FINAL CONDITIONS SHEET 3

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

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212ero_final.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
FINAL CONDITIONS SHEET 3

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 55 OF 85



SYMBOL

SILT FENCE

SILT FENCE WOVEN WIRE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

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

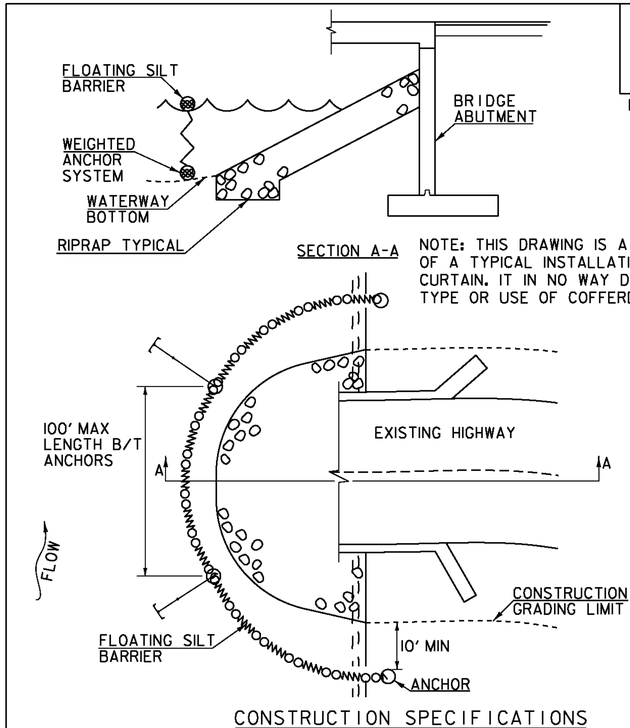
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

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

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

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



SYMBOL

NOT TO SCALE

NOTE: THIS DRAWING IS A DEPICTION OF A TYPICAL INSTALLATION OF FILTER CURTAIN. IT IN NO WAY DEFINES THE TYPE OR USE OF COFFERDAM IF USED.

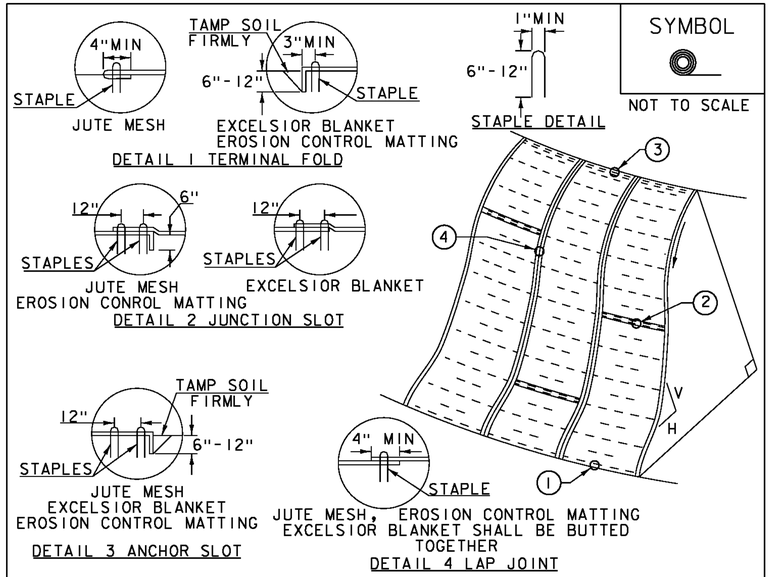
CONSTRUCTION SPECIFICATIONS

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



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

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

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

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

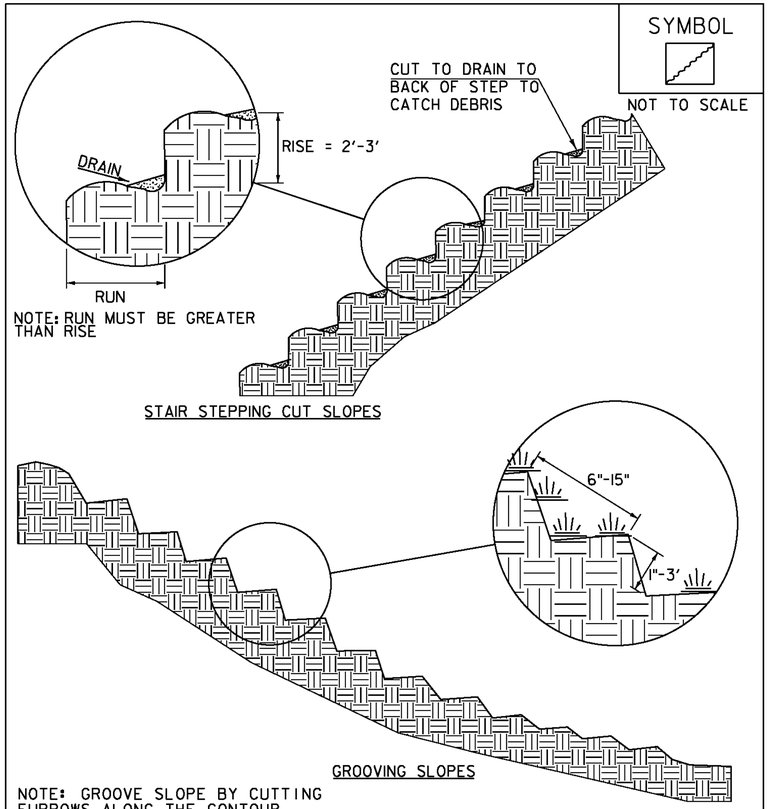
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20)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

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER BRF 013-1(16)

FILE NAME: slib212epsc_details.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. SALVATORI
EPSC DETAILS 1

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: J. SALVATORI
SHEET 56 OF 85



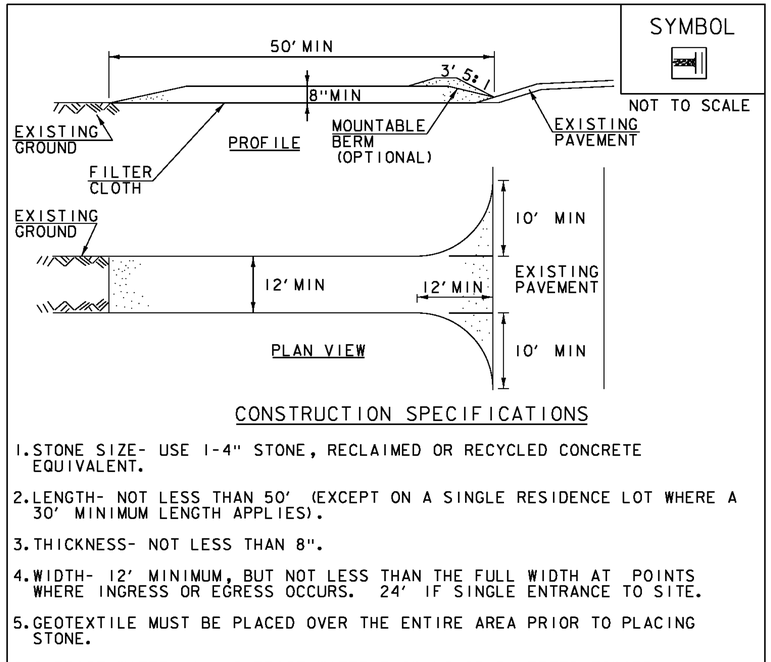
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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



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

VAOT RURAL AREA MIX

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

VAOT URBAN AREA MIX

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

SOIL AMENDMENT GUIDANCE

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

CONSTRUCTION GUIDANCE

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

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

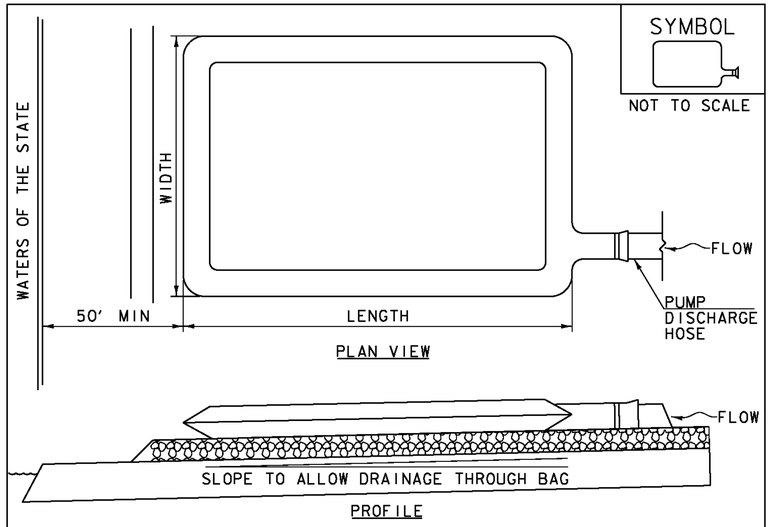
TURF ESTABLISHMENT

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

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER BRF 013-1(16)

FILE NAME: sllb212epsc_details.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. SALVATORI
EPSC DETAILS 2

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: J. SALVATORI
SHEET 57 OF 85



CONSTRUCTION SPECIFICATIONS

1. THE PRIMARY PURPOSE OF FILTER BAG IS TO RETAIN SILT, SAND, AND FINES DURING DEWATERING OPERATIONS.
2. FILTER BAGS SHALL BE INSTALLED ON A VEGETATED SLOPE GRADED TO ALLOW INCOMING WATER TO FLOW THROUGH THE BAG.
3. FILTER BAGS MAY ALSO BE PLACED ON COARSE AGGREGATE, STONE, OR HAYBALES TO INCREASE FILTRATION EFFICIENCY.
4. FILTER BAGS SHALL BE LOCATED A MINIMUM OF 50' FROM WATERS OF THE STATE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. THE NECK OF THE FILTER BAG SHALL BE STRAPPED TIGHTLY TO THE DISCHARGE HOSE.
6. A FILTER BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A REASONABLE RATE.
7. FILTER BAG SHALL BE DISPOSED OF AS APPROVED IN THE EPSC PLAN OR AS DIRECTED BY THE ENGINEER.

FILTER BAG

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

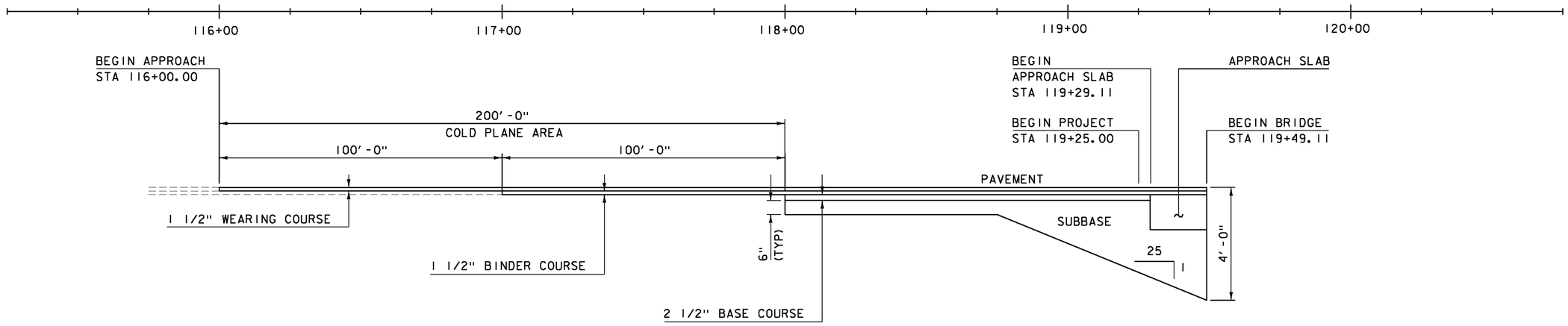
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR FILTER BAG (PAY ITEM 653.45) AND AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER BRF 013-1(16)

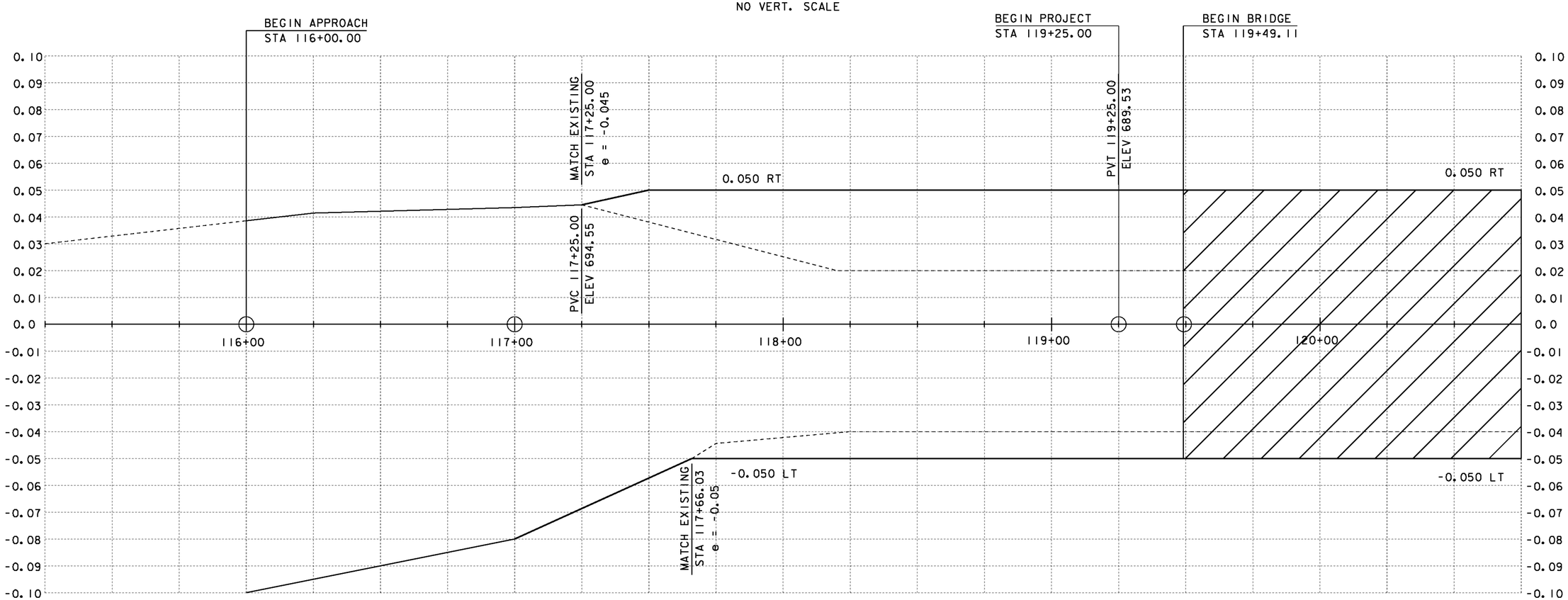
FILE NAME: sllb212epsc_details.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. SALVATORI
EPSC DETAILS 3

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: J. SALVATORI
SHEET 58 OF 85



MATERIAL TRANSITION 1

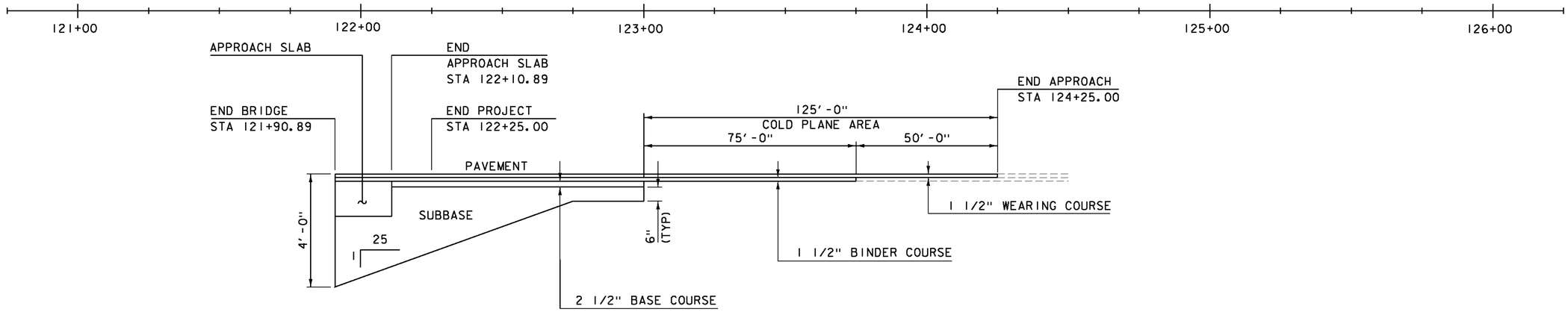
HOR. SCALE 1" = 20'-0"
NO VERT. SCALE



BANKING DIAGRAM 1

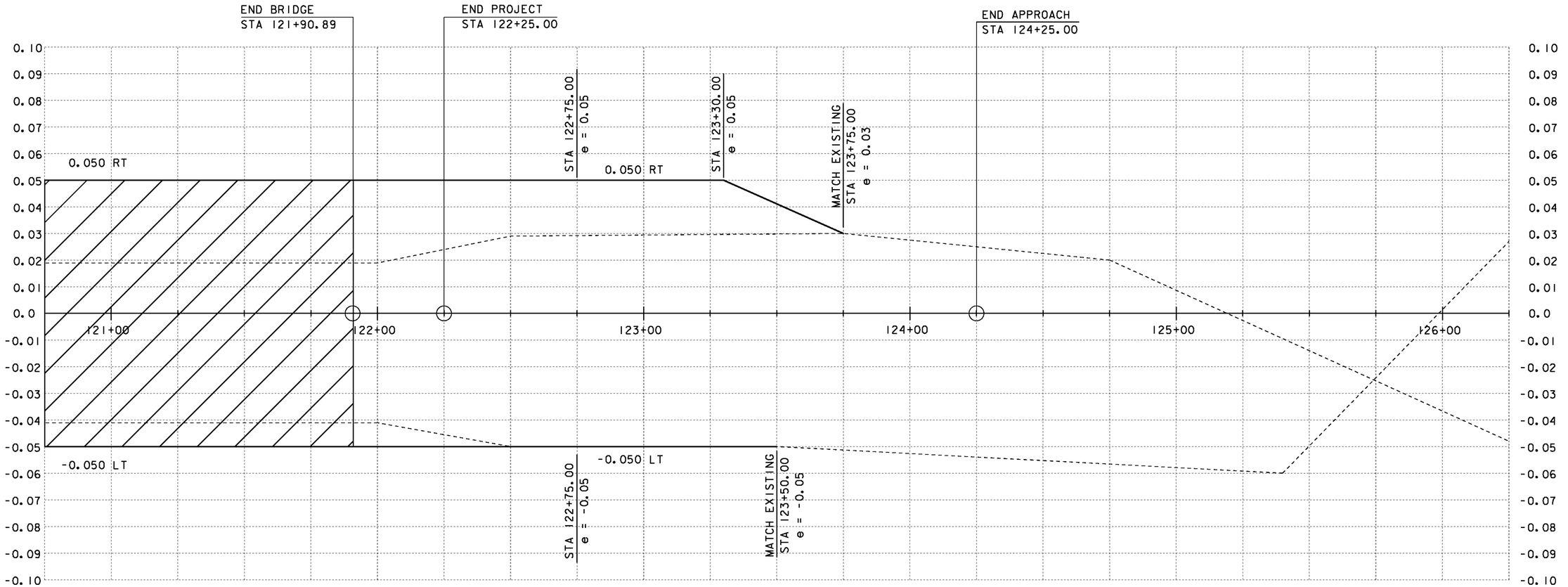
HOR. SCALE 1" = 20'-0"
NO VERT. SCALE

PROJECT NAME:	JAMIACA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212pro.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
MATERIAL TRANSITION / BANKING DIAGRAM 1	SHEET 59 OF 85



MATERIAL TRANSITION 2

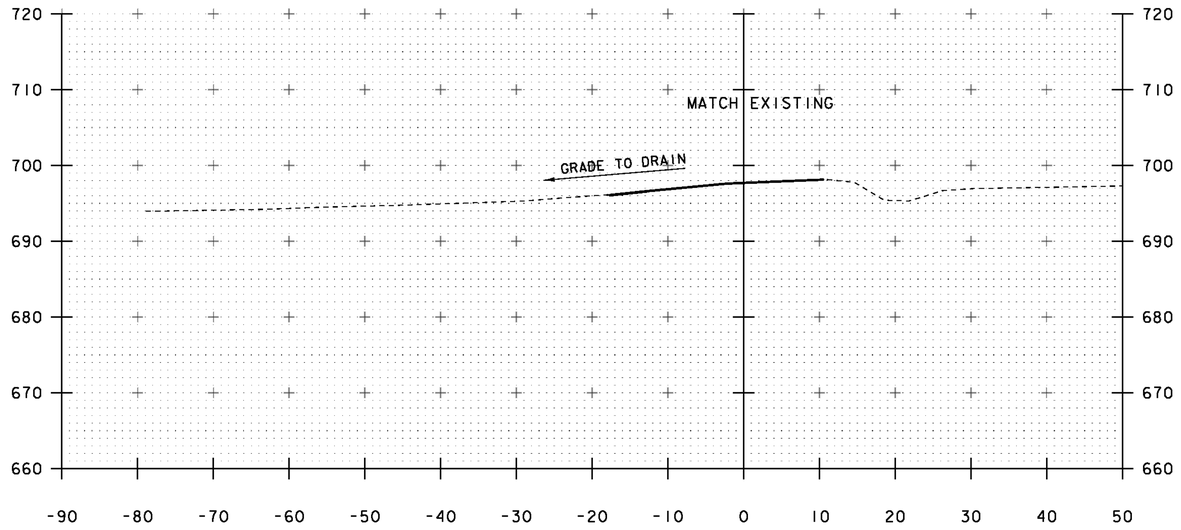
HOR. SCALE 1" = 20'-0"
NO VERT. SCALE



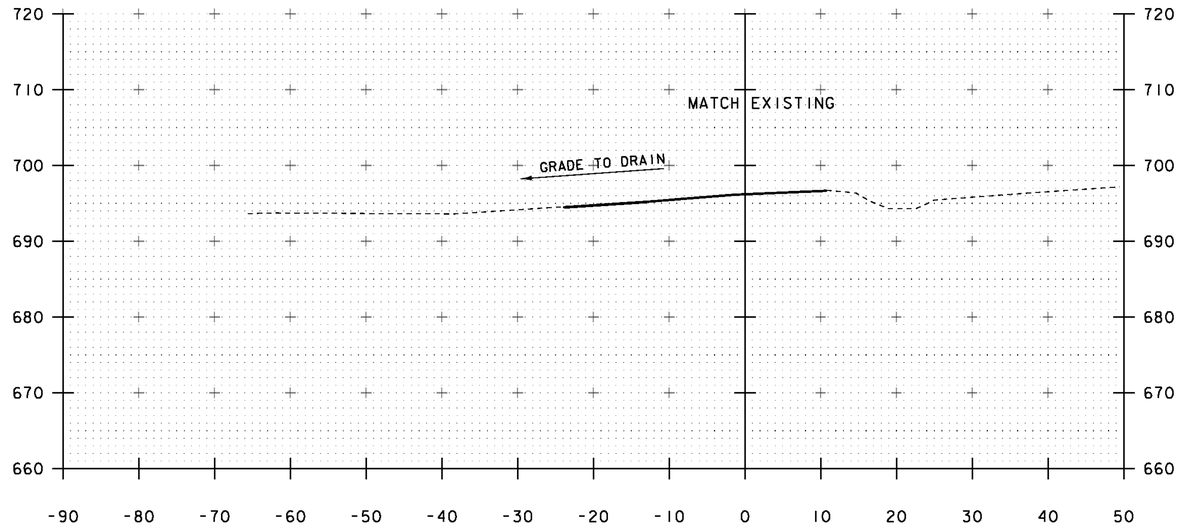
BANKING DIAGRAM 2

HORITONTAL SCALE 1" = 20'-0"
VERTICAL NOT TO SCALE

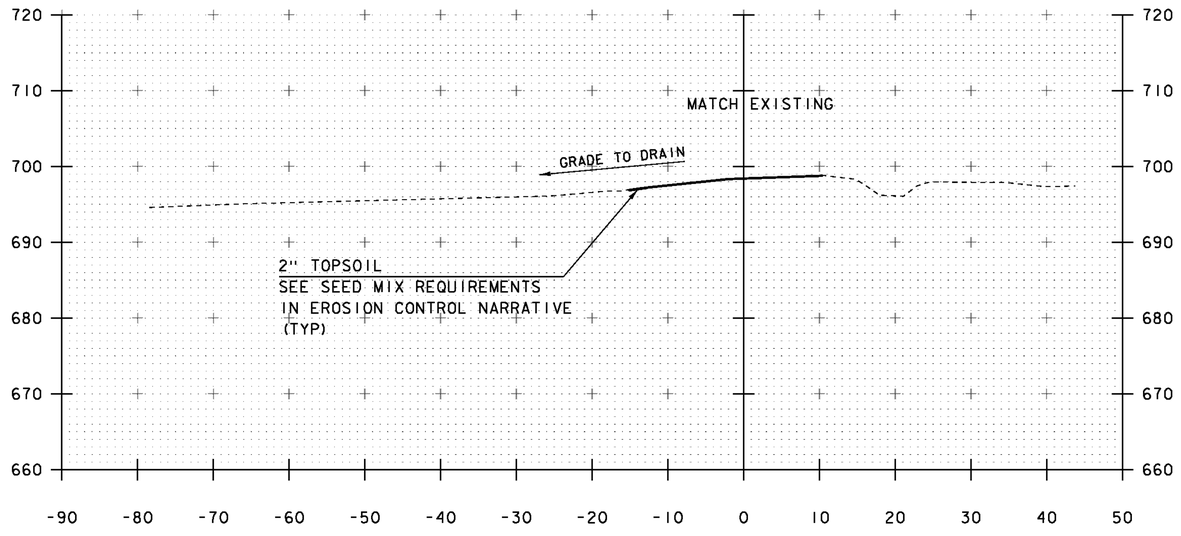
PROJECT NAME:	JAMIACA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212pro.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
MATERIAL TRANSITION / BANKING DIAGRAM 2	SHEET 60 OF 85



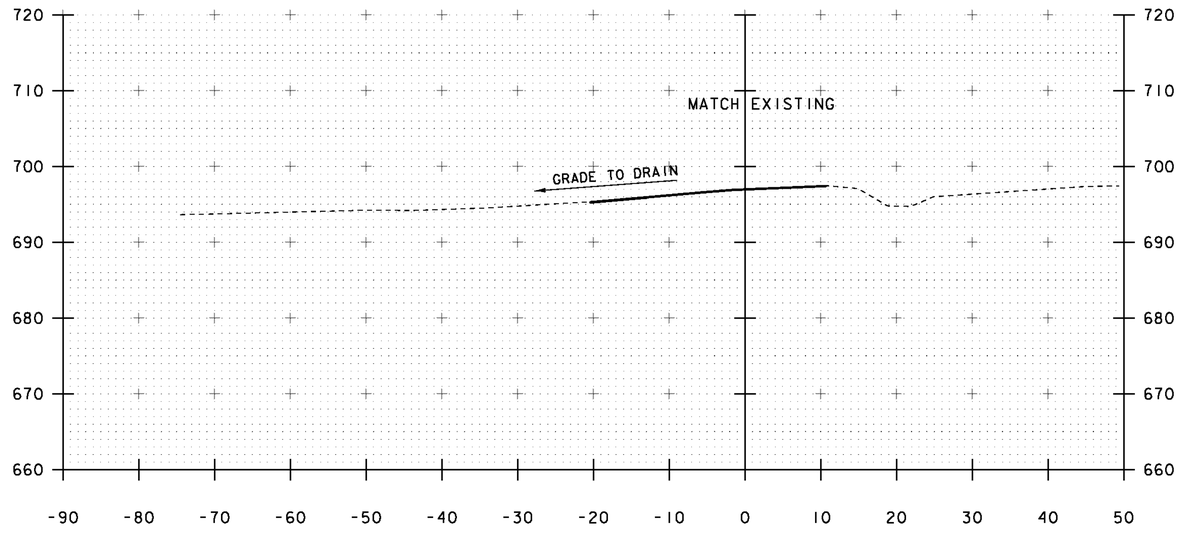
116+25



116+75



116+00
BEGIN APPROACH



116+50

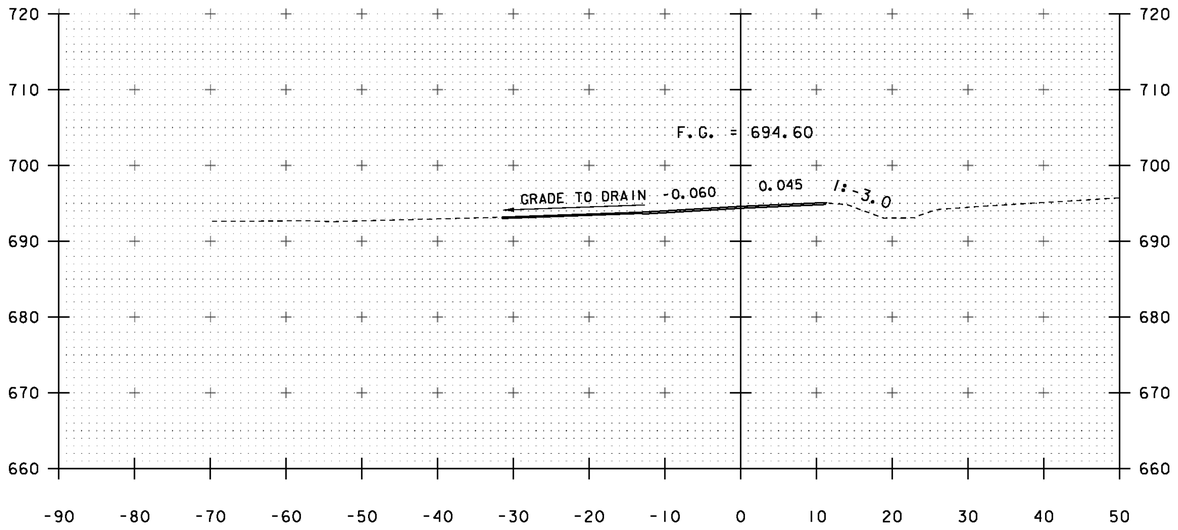
SCALE 1" = 10'-0"
10 0 10

STA. 116+00 TO STA. 116+75

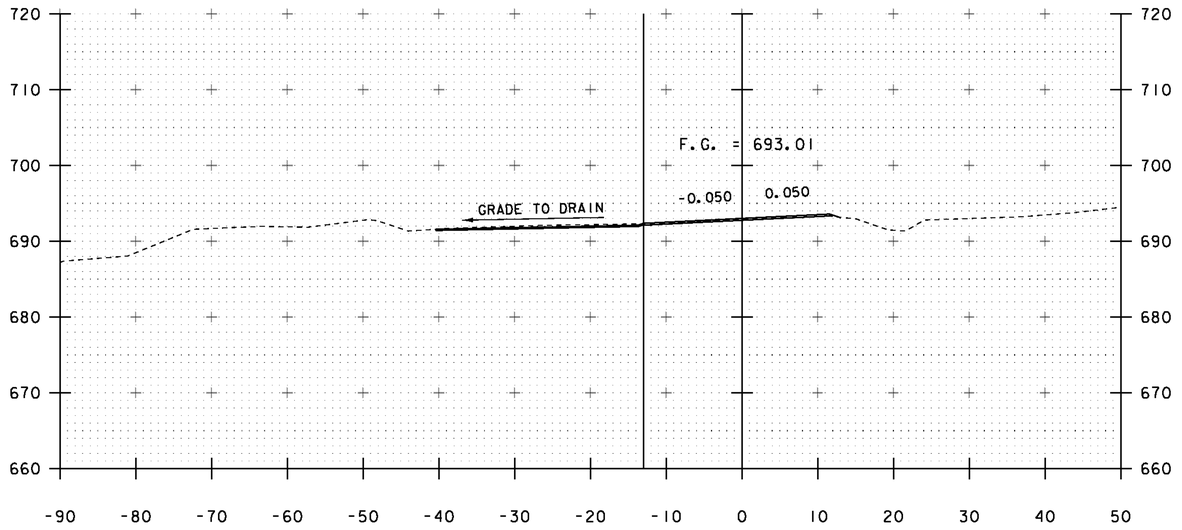
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
MAINLINE CROSS SECTION 1

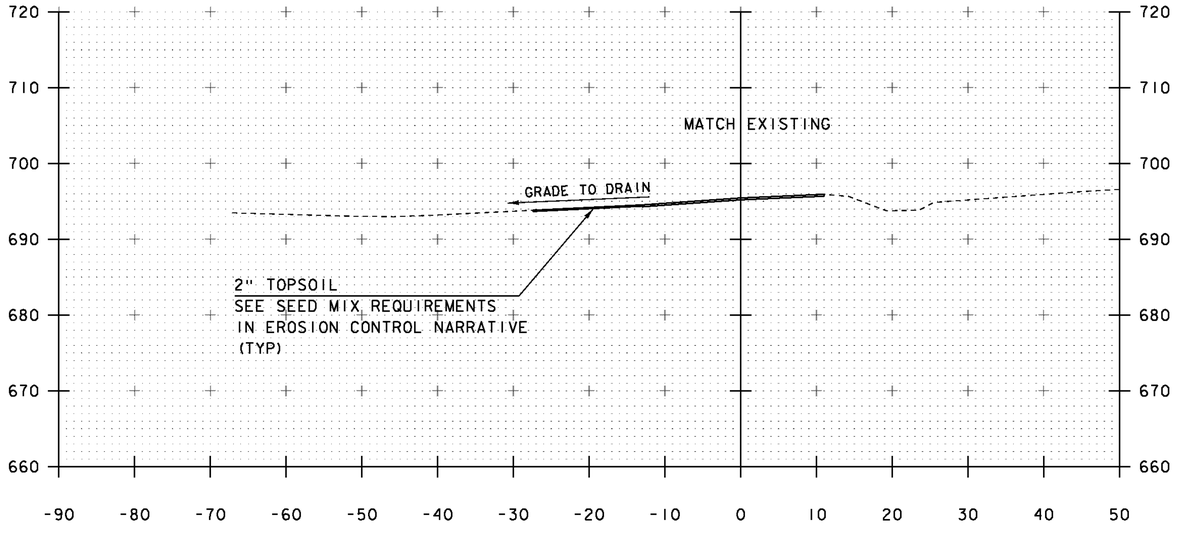
PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 61 OF 85



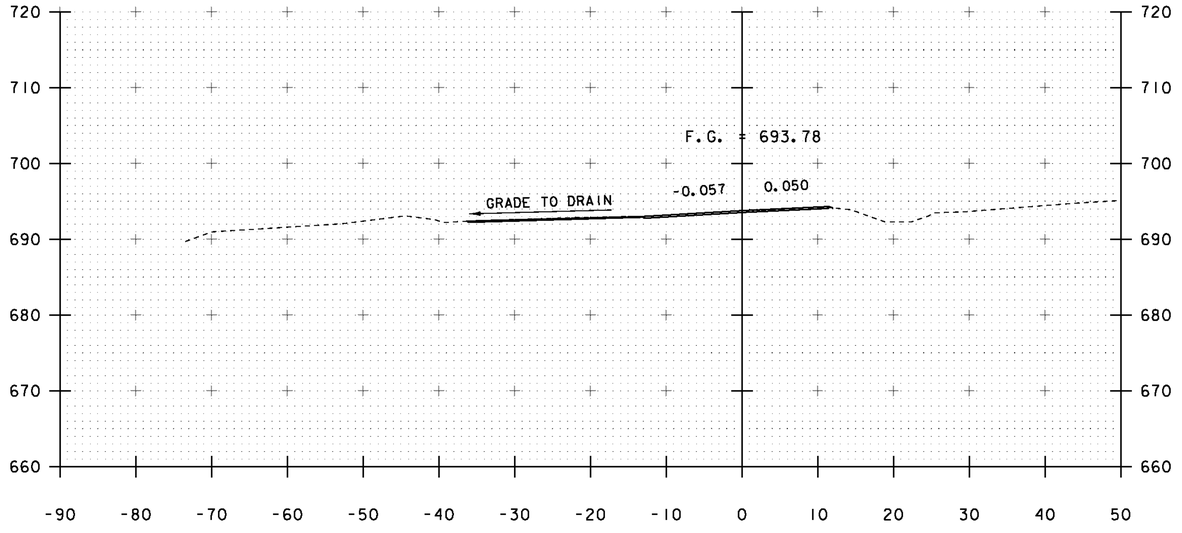
117+25



117+75



117+00



117+50

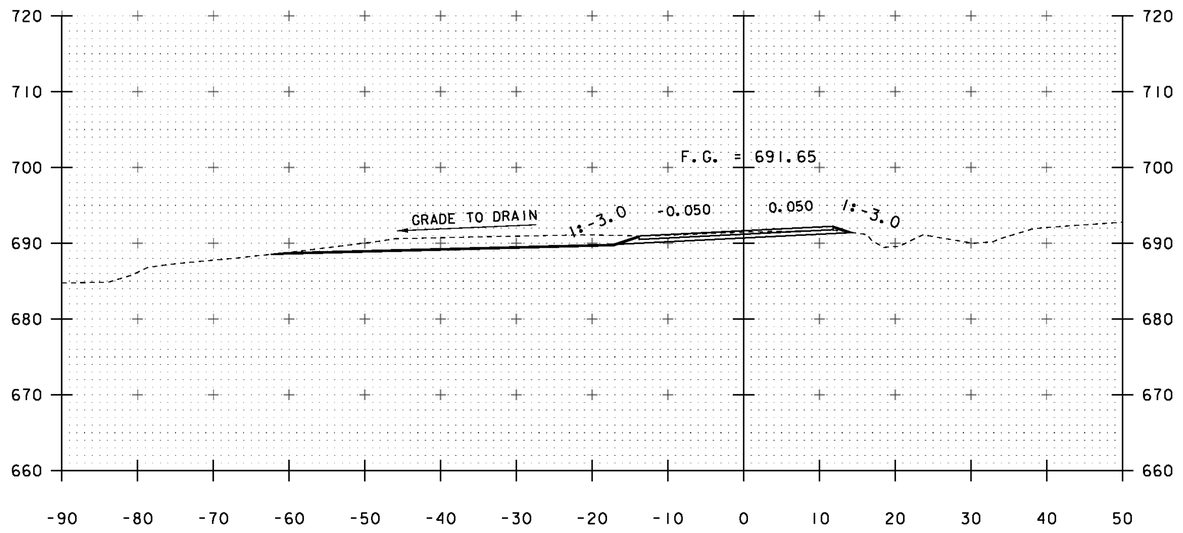
SCALE 1" = 10'-0"
10 0 10

STA. 117+00 TO STA. 117+75

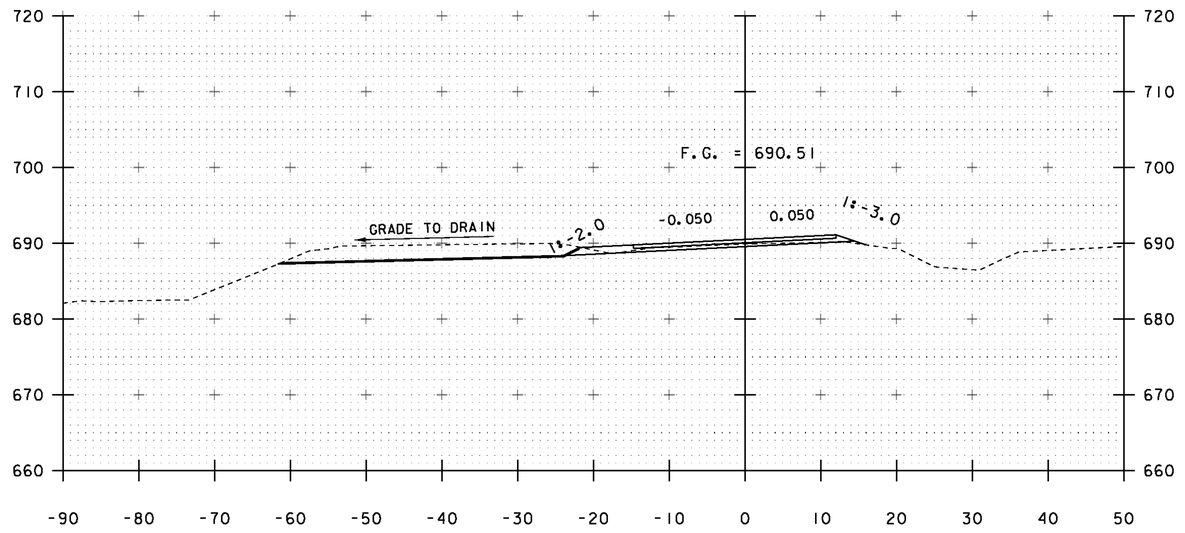
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
MAINLINE CROSS SECTION 2

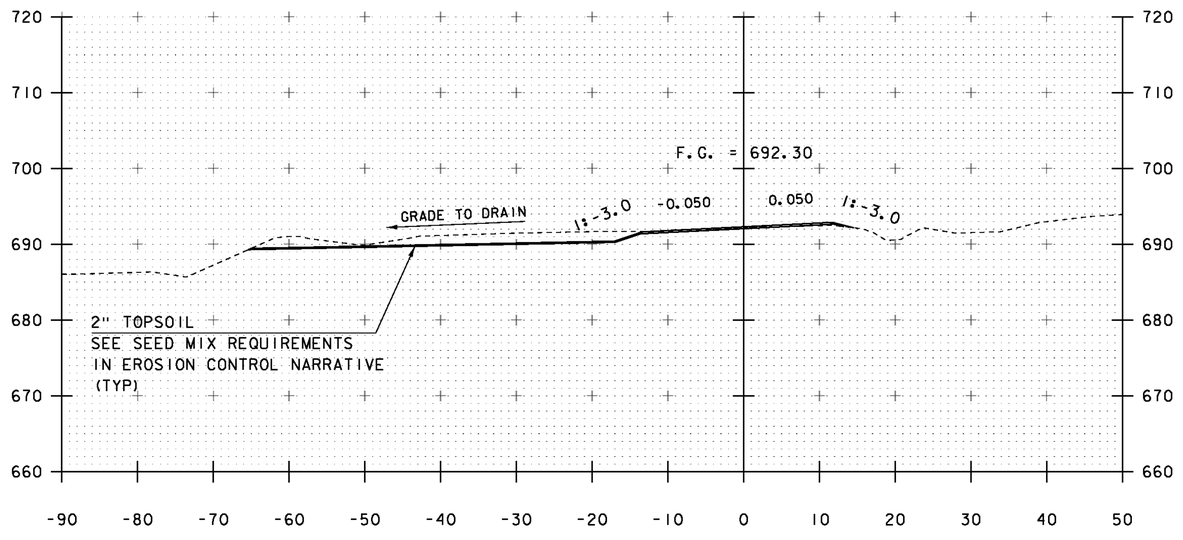
PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 62 OF 85



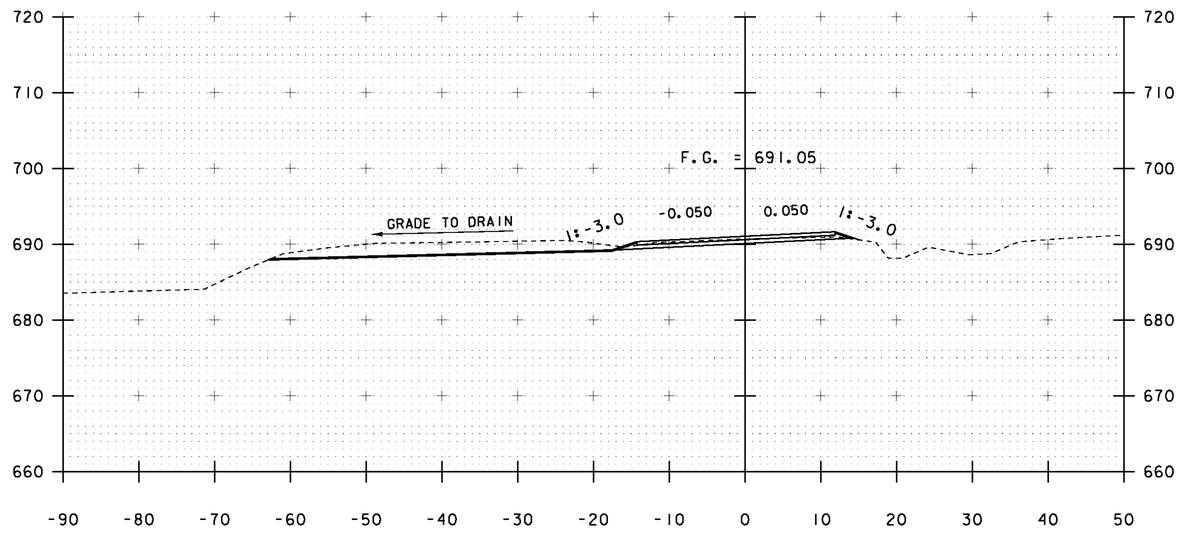
118+25



118+75



118+00

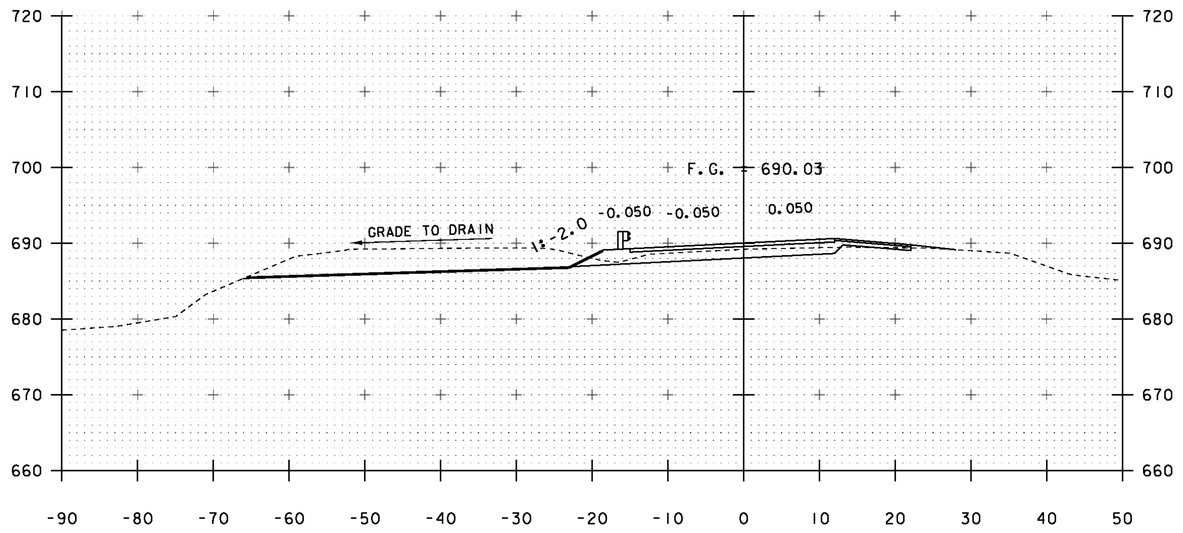


118+50

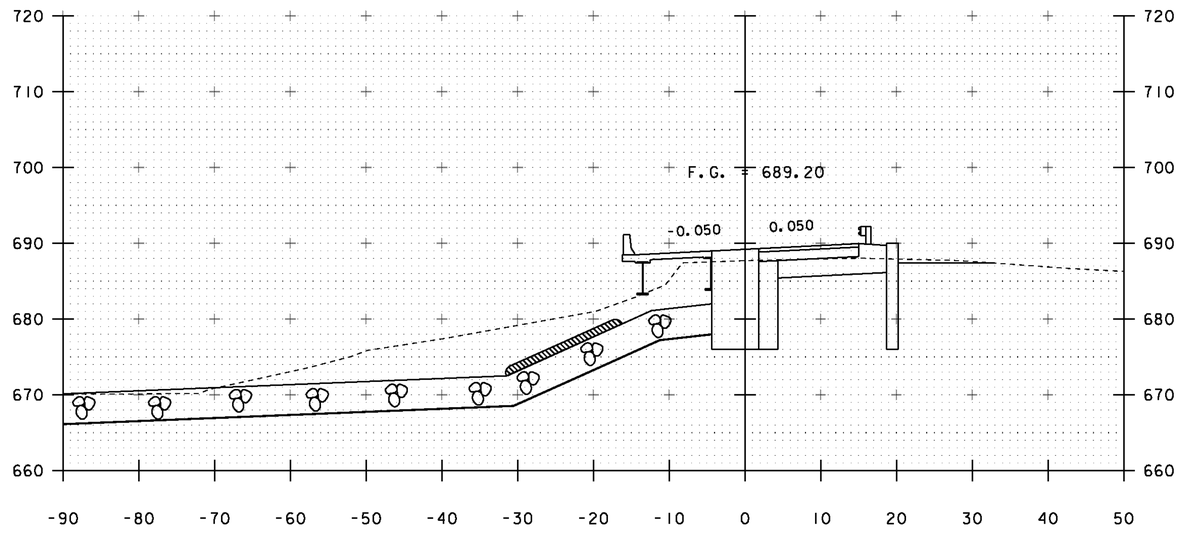
SCALE 1" = 10'-0"
10 0 10

STA. 118+00 TO STA. 118+75

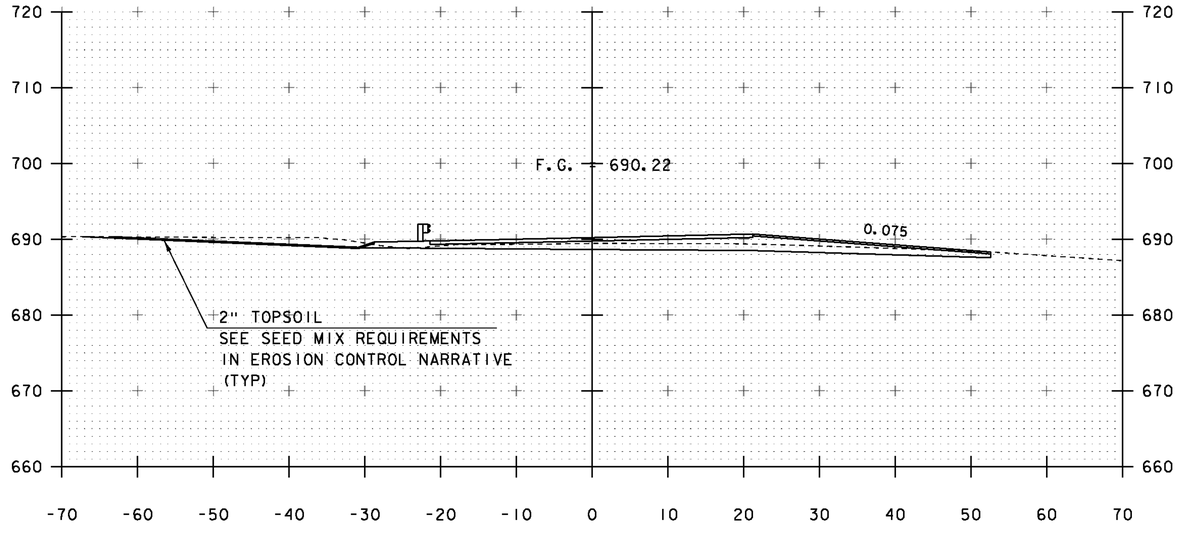
PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212xs.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
MAINLINE CROSS SECTION 3	SHEET 63 OF 85



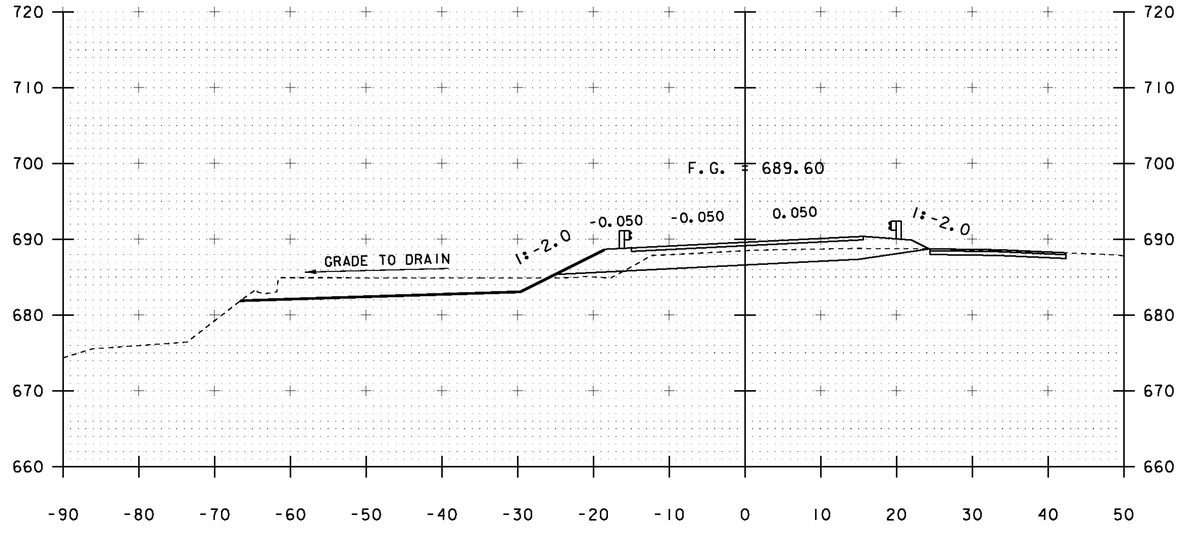
119+00



119+50
BEGIN BRIDGE - 119+49.11



118+90
TOWN HIGHWAY 55 SKEWED @ 45 DEG.



119+25
END APPROACH
BEGIN PROJECT

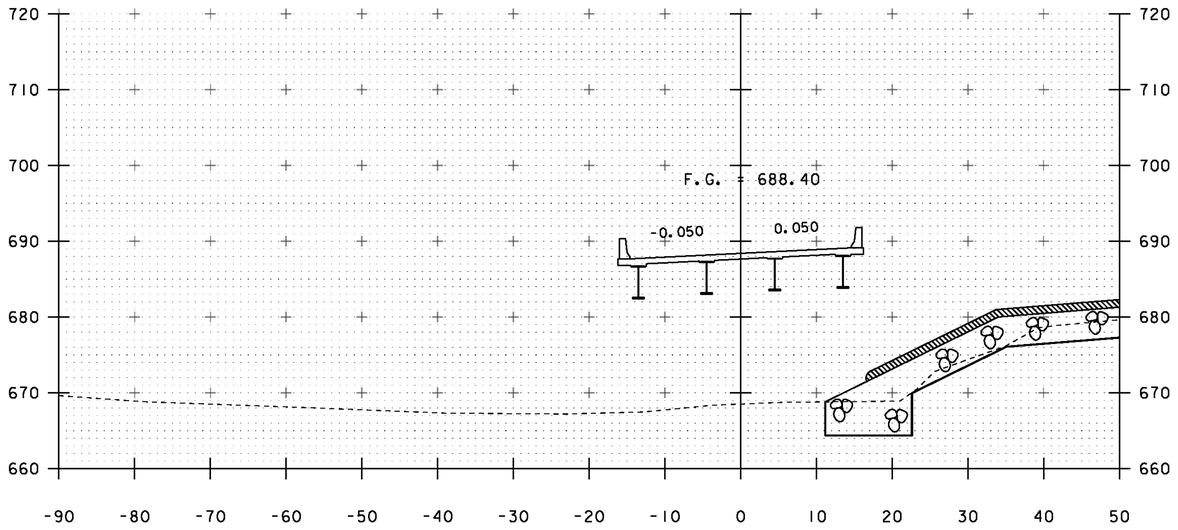
SCALE 1" = 10'-0"
10 0 10

STA. 118+90 TO STA. 119+50

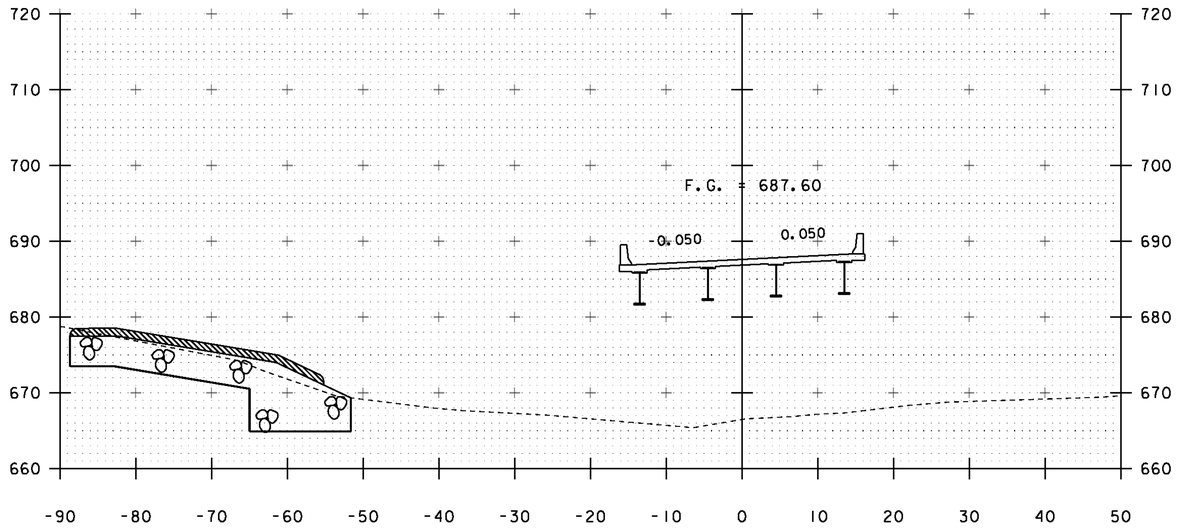
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
MAINLINE CROSS SECTION 4

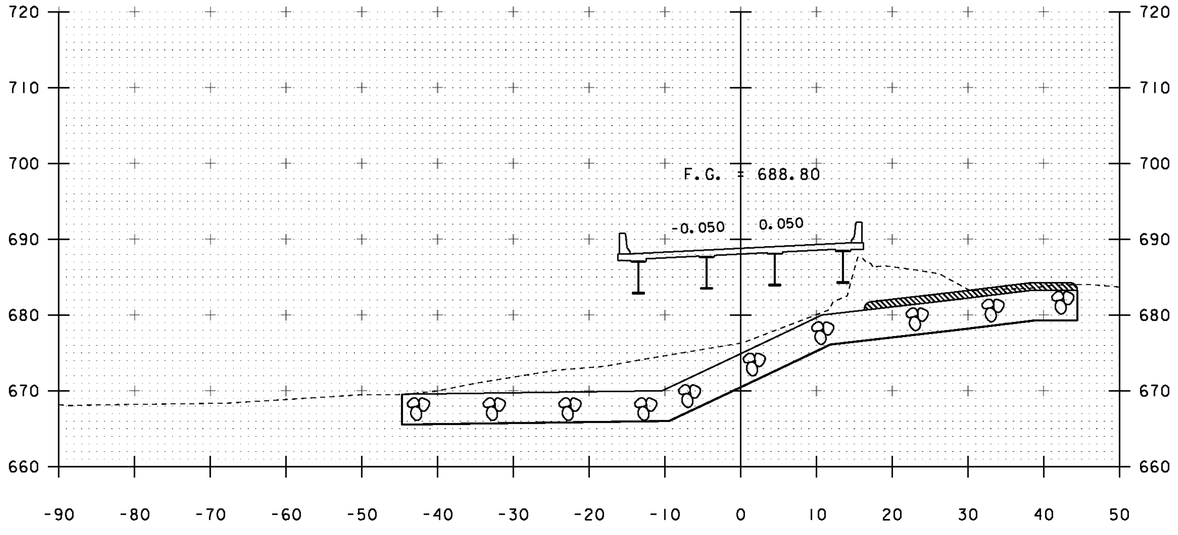
PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 64 OF 85



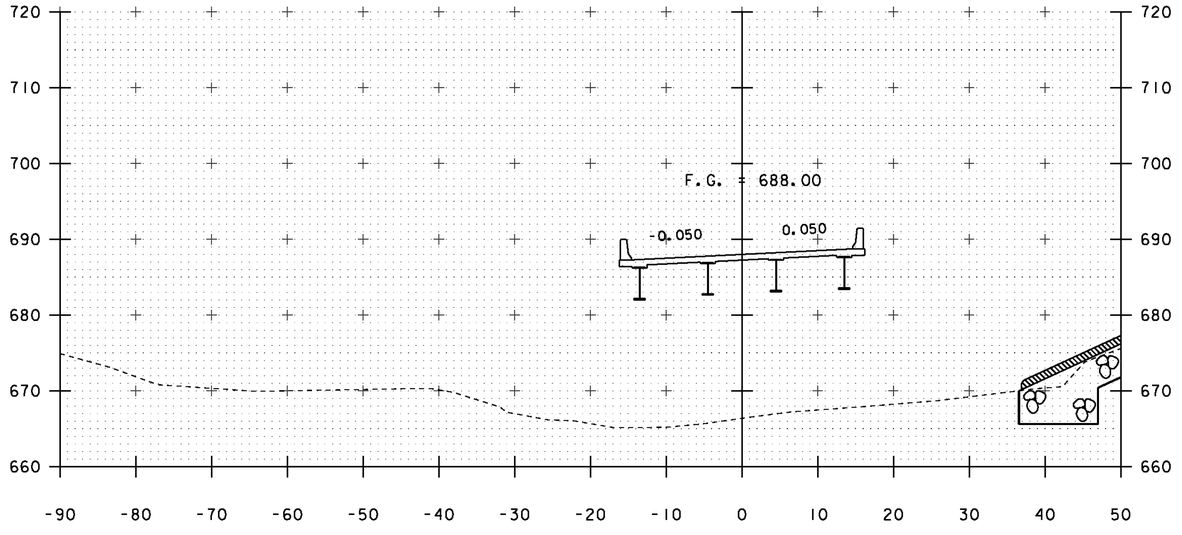
120+00



120+50



119+75



120+25

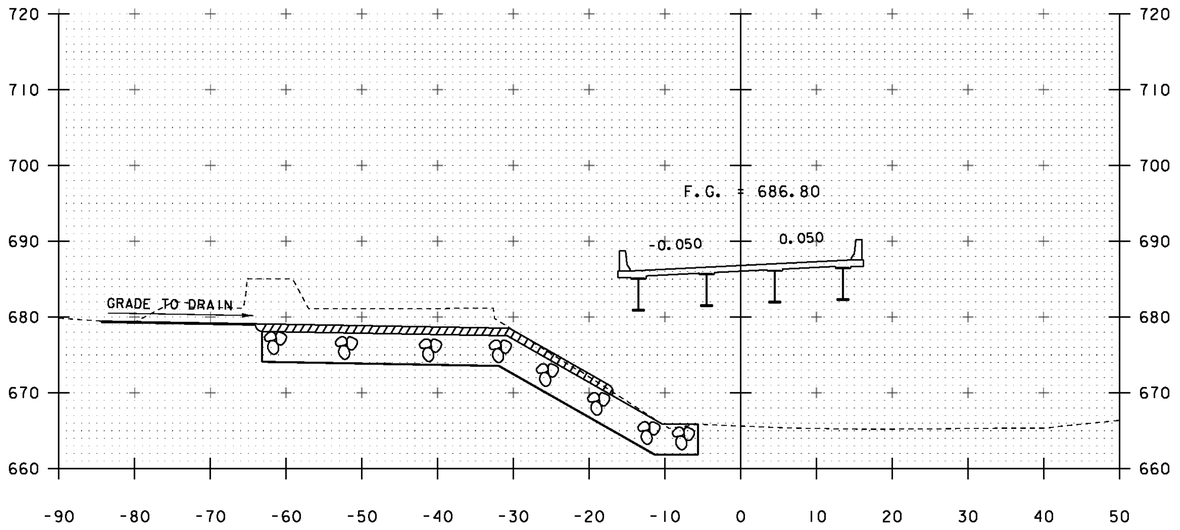
SCALE 1" = 10'-0"
10 0 10

STA. 119+75 TO STA. 120+50

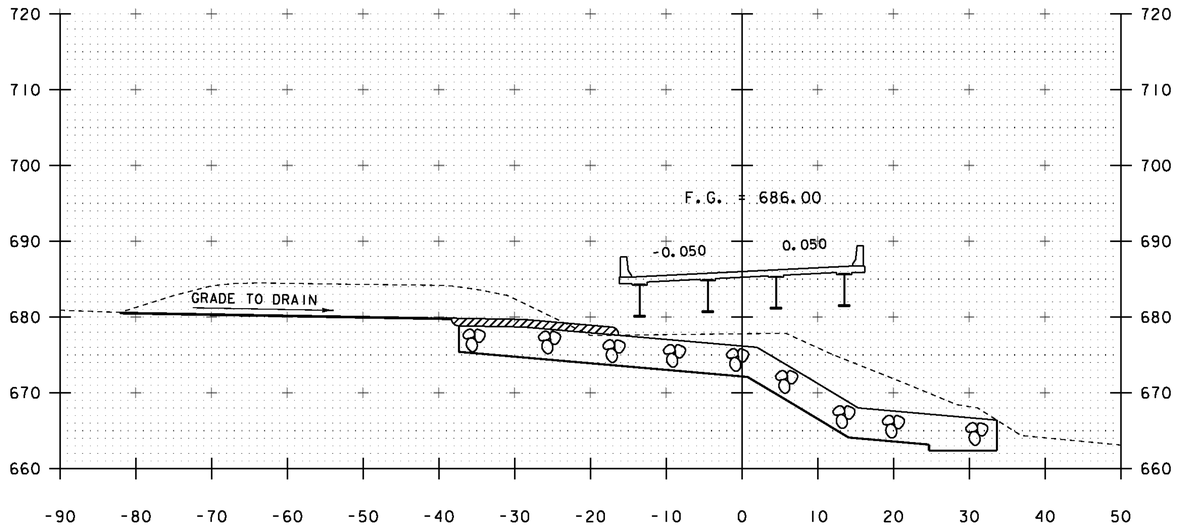
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
MAINLINE CROSS SECTION 5

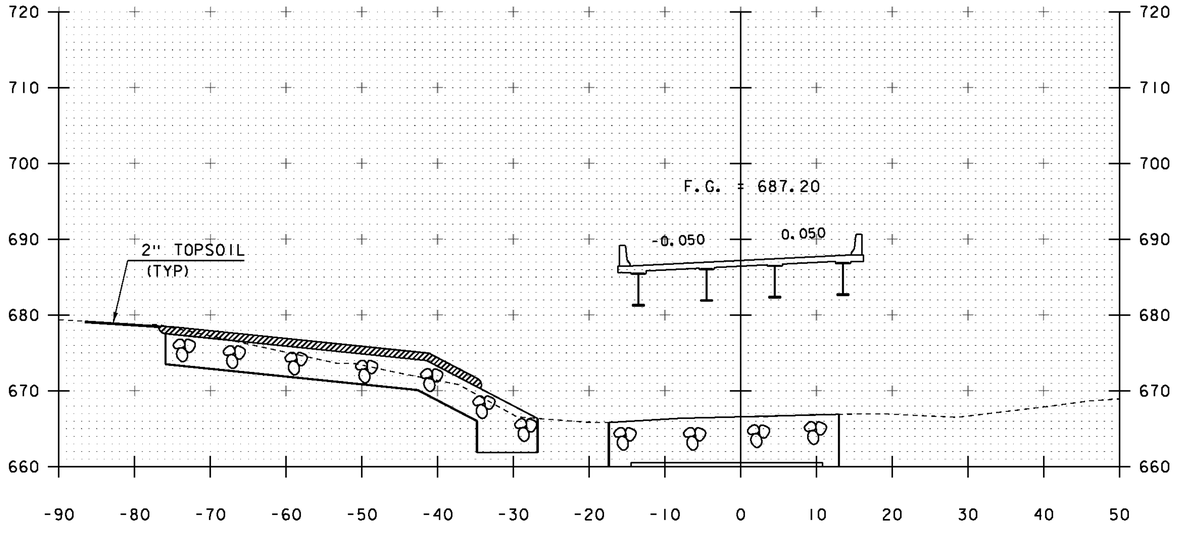
PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 65 OF 85



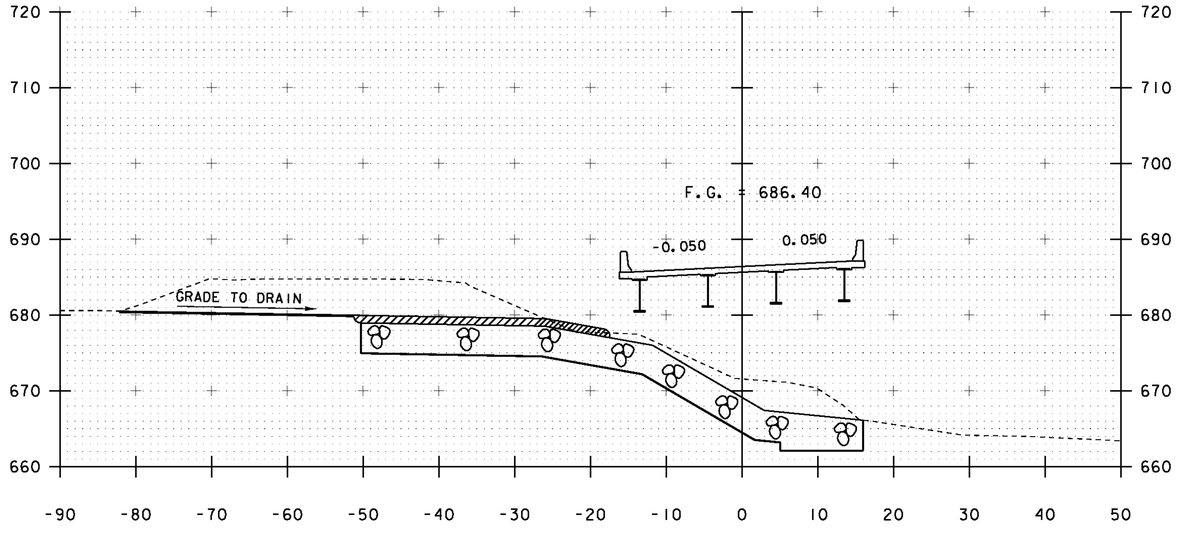
121+00



121+50



120+75

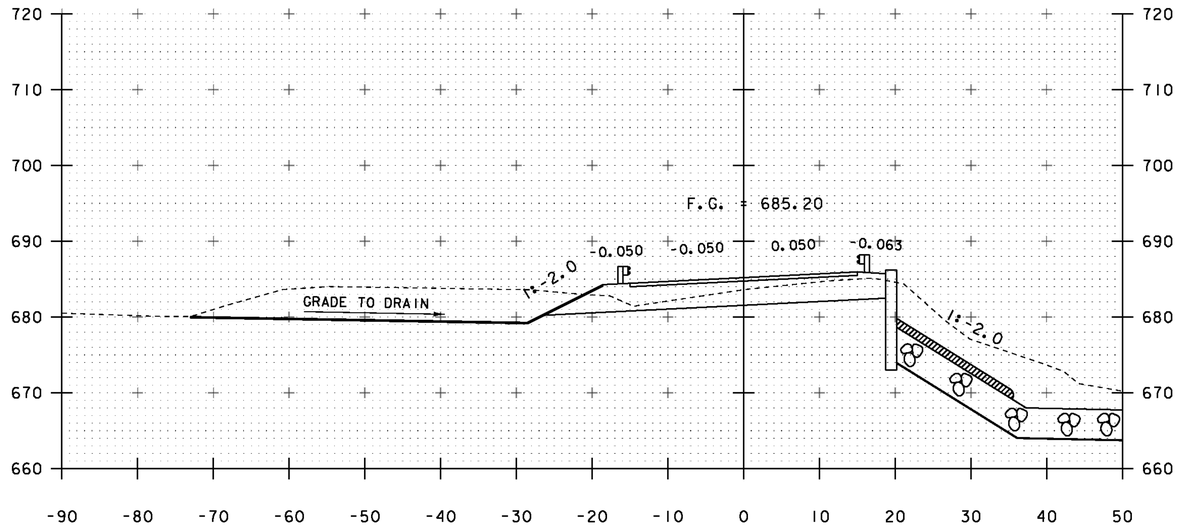


121+25

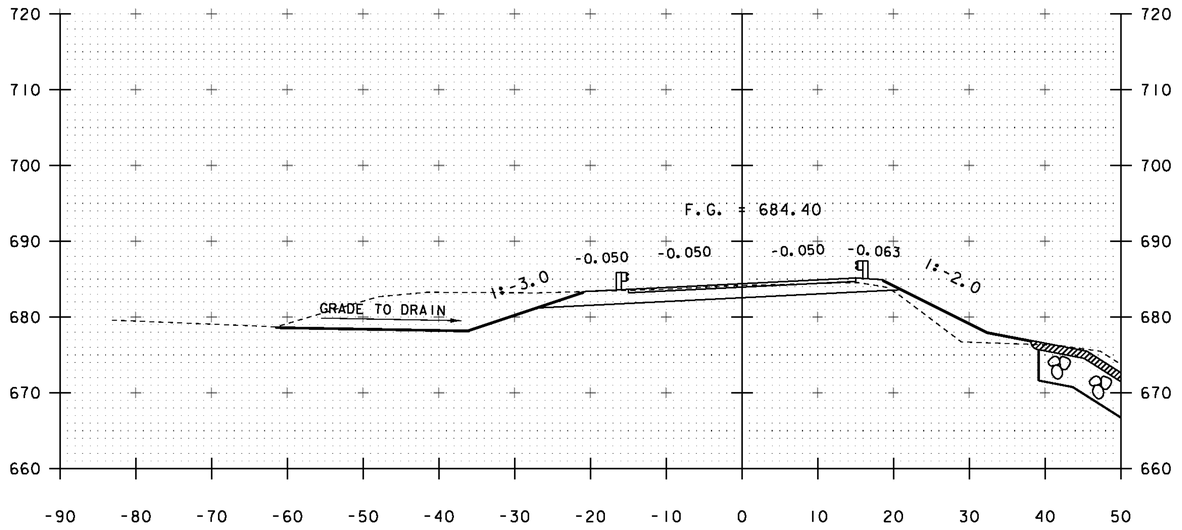
SCALE 1" = 10'-0"
10 0 10

STA. 120+75 TO STA. 121+50

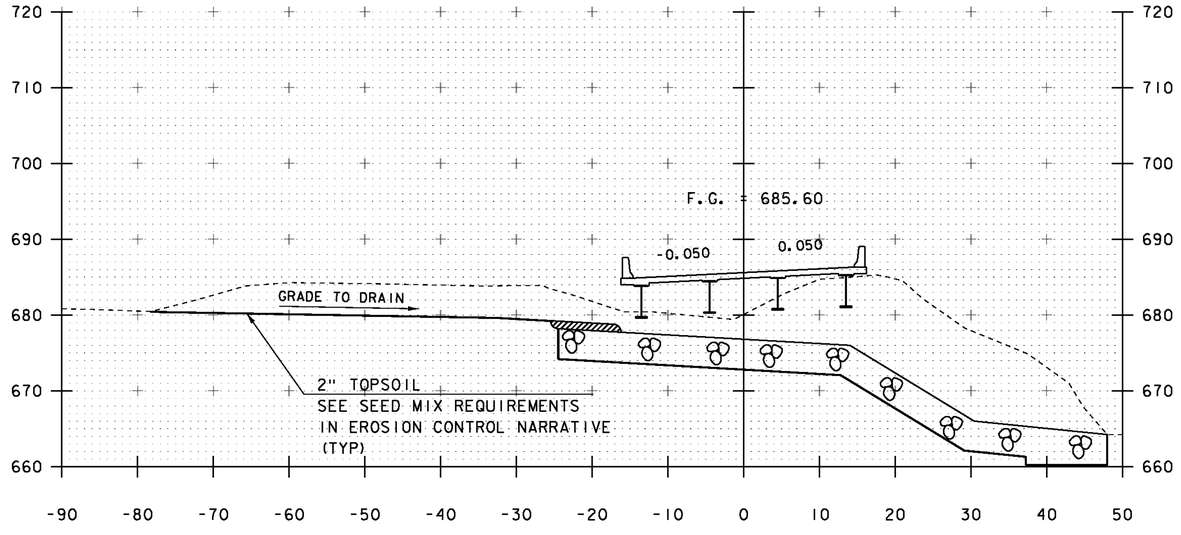
PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212xs.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
MAINLINE CROSS SECTION 6	SHEET 66 OF 85



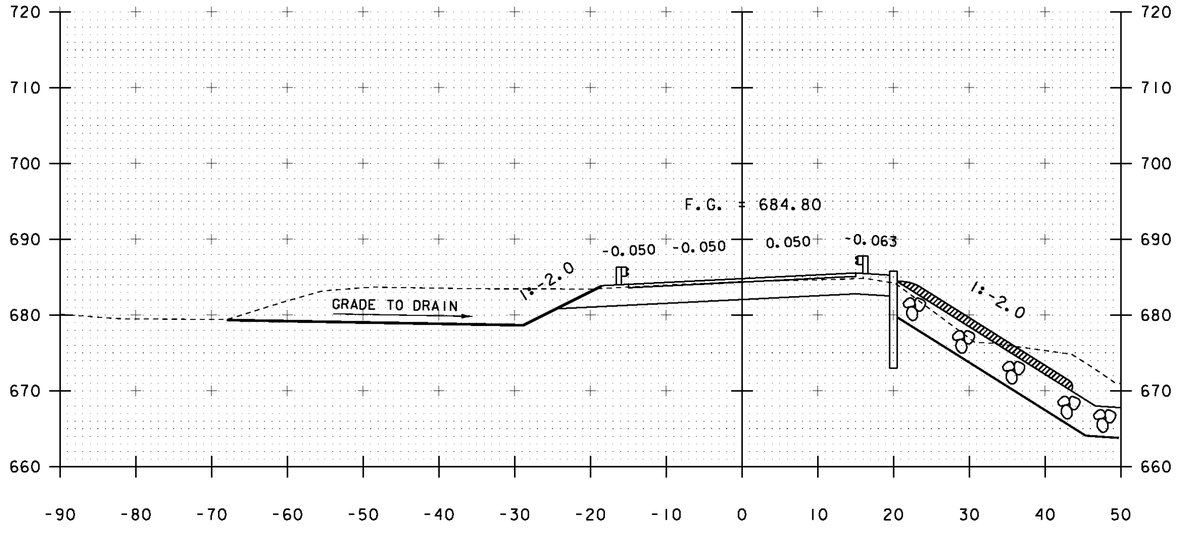
122+00
END BRIDGE - 121+90.89



122+50



121+75



122+25
END PROJECT
BEGIN APPROACH

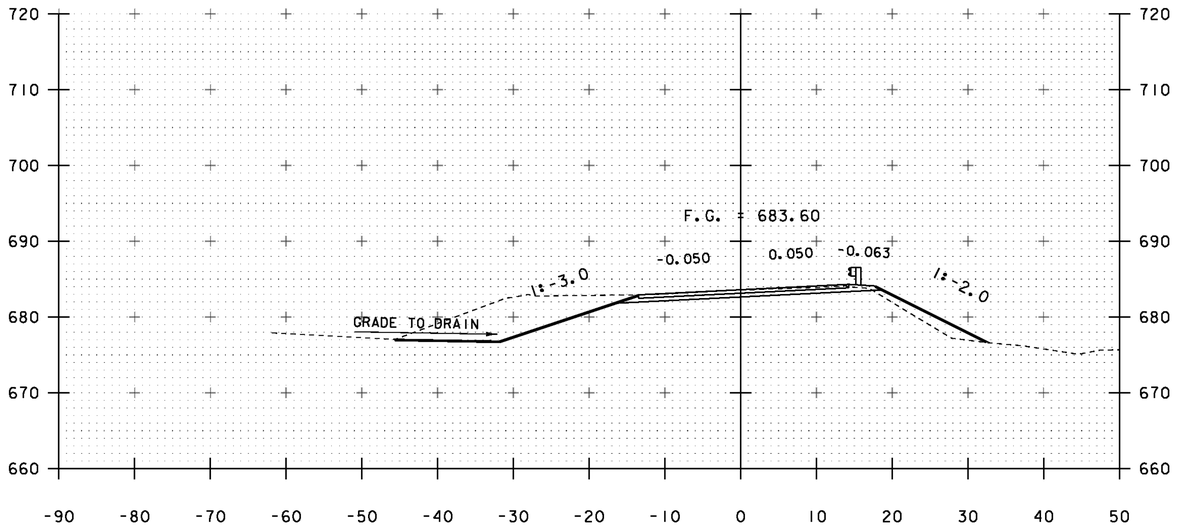
SCALE 1" = 10'-0"
10 0 10

STA. 121+75 TO STA. 122+50

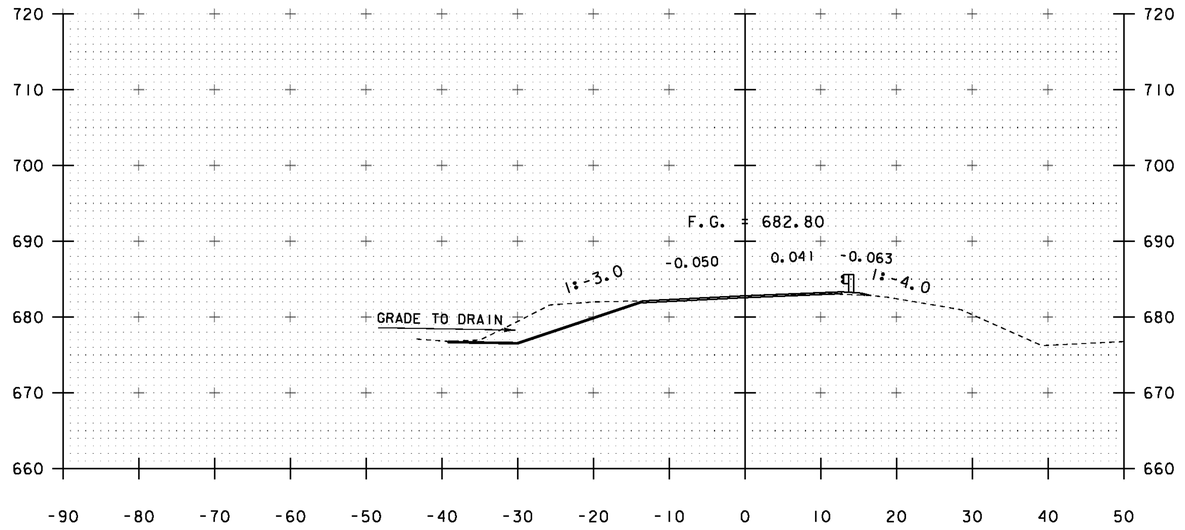
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
MAINLINE CROSS SECTION 7

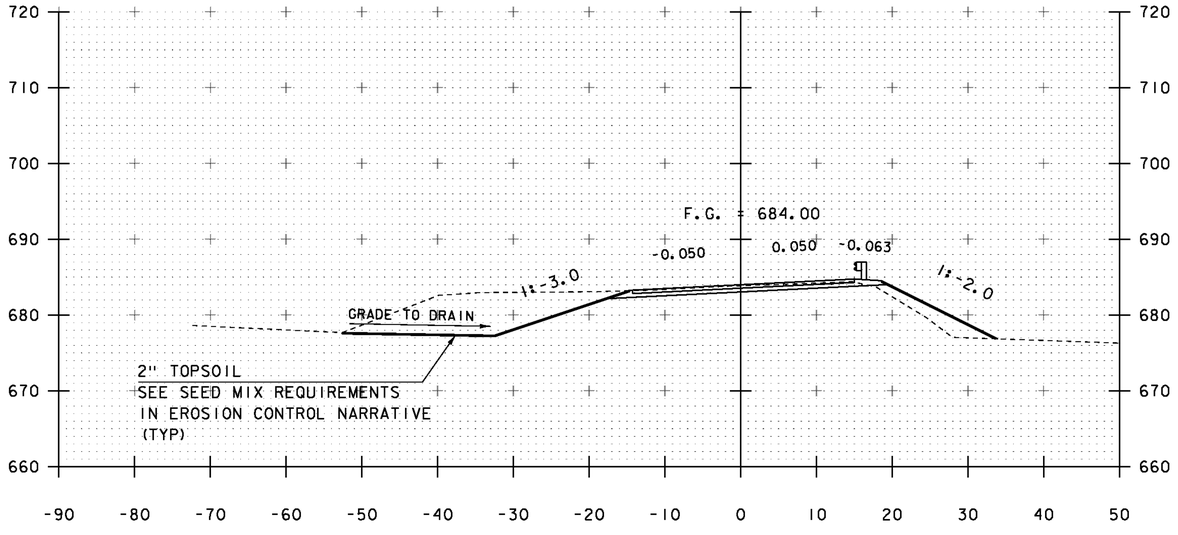
PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 67 OF 85



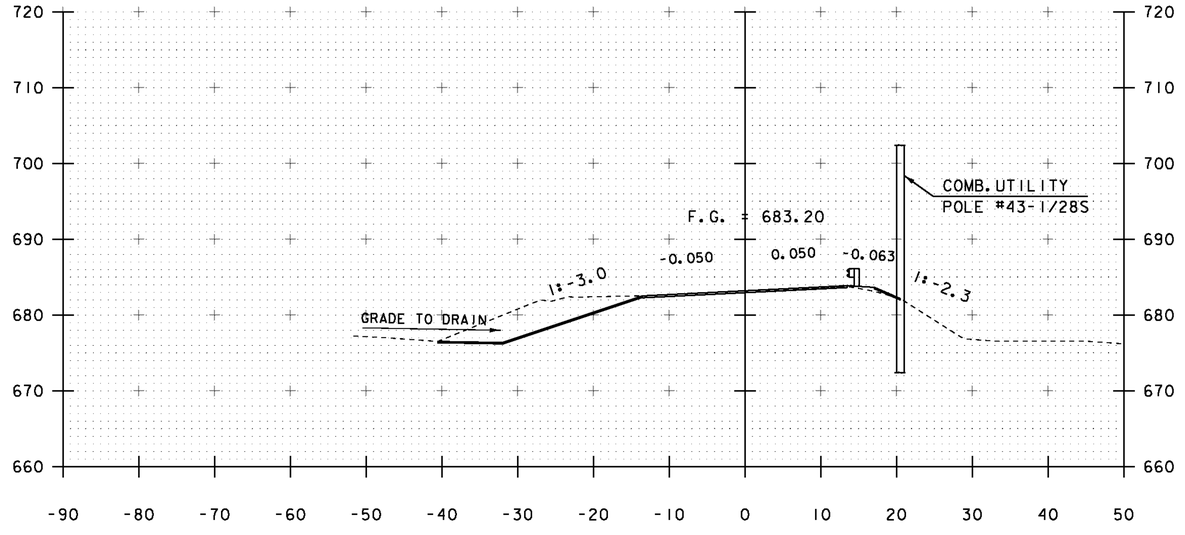
123+00



123+50



122+75

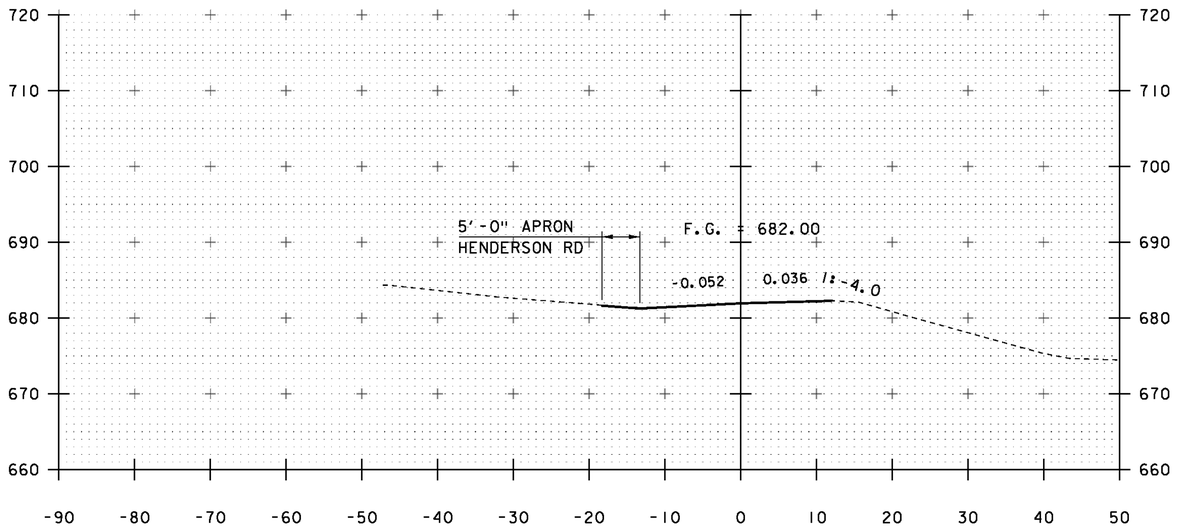


123+25

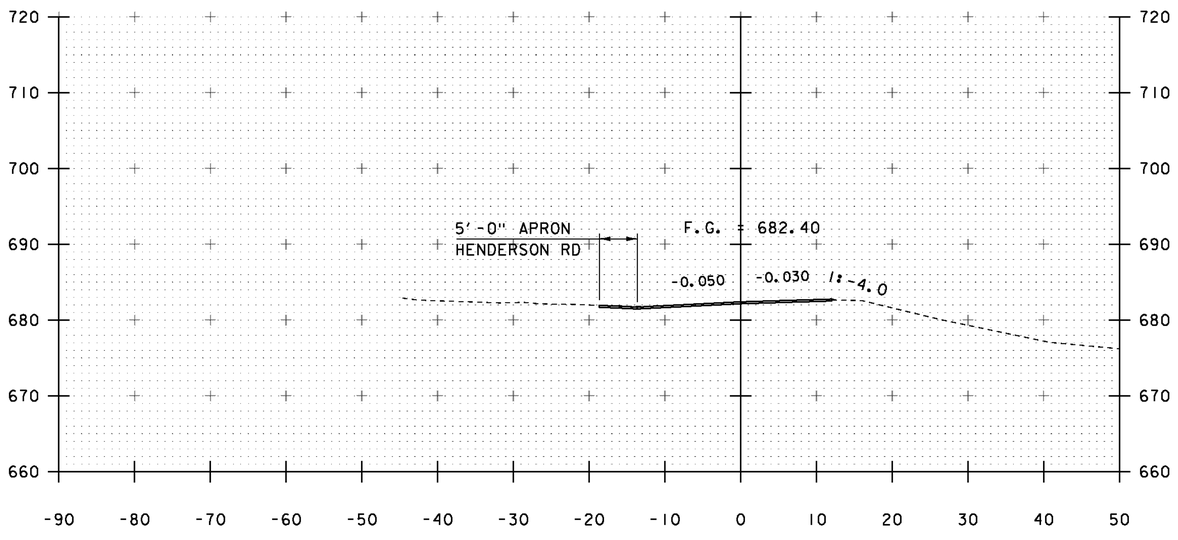
SCALE 1" = 10'-0"
10 0 10

STA. 122+75 TO STA. 123+50

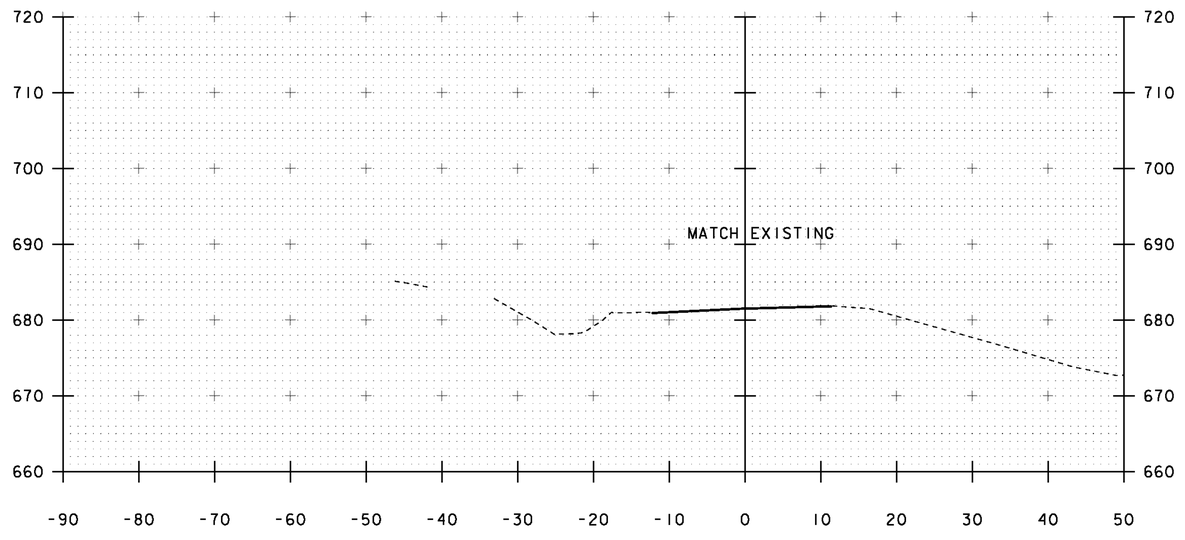
PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212xs.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
MAINLINE CROSS SECTION 8	SHEET 68 OF 85



124+00



123+75



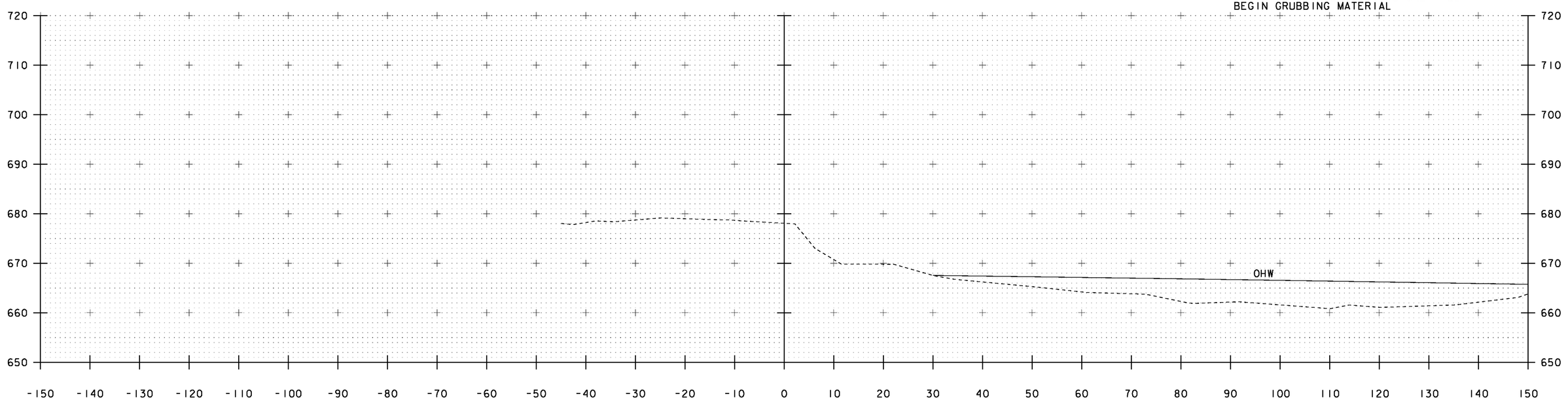
124+25
END APPROACH

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

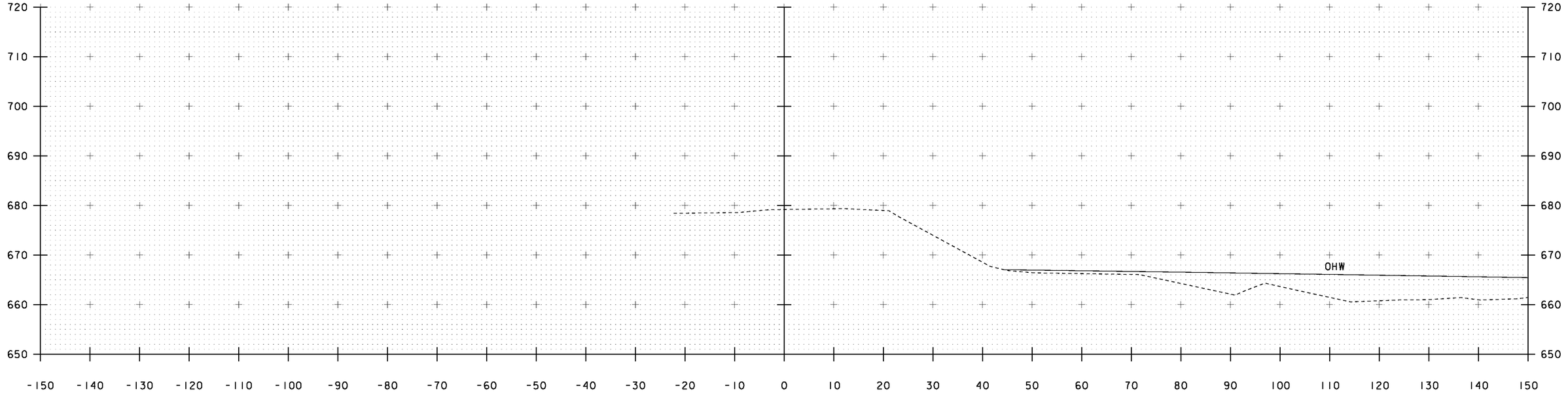
STA. 123+75 TO STA. 124+25

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212xs.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
MAINLINE CROSS SECTION 9	SHEET 69 OF 85

STA 51+24.00 RT (ABUT #2)
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
BEGIN STONE FILL, TYPE IV
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN GRUBBING MATERIAL



51+25



51+00

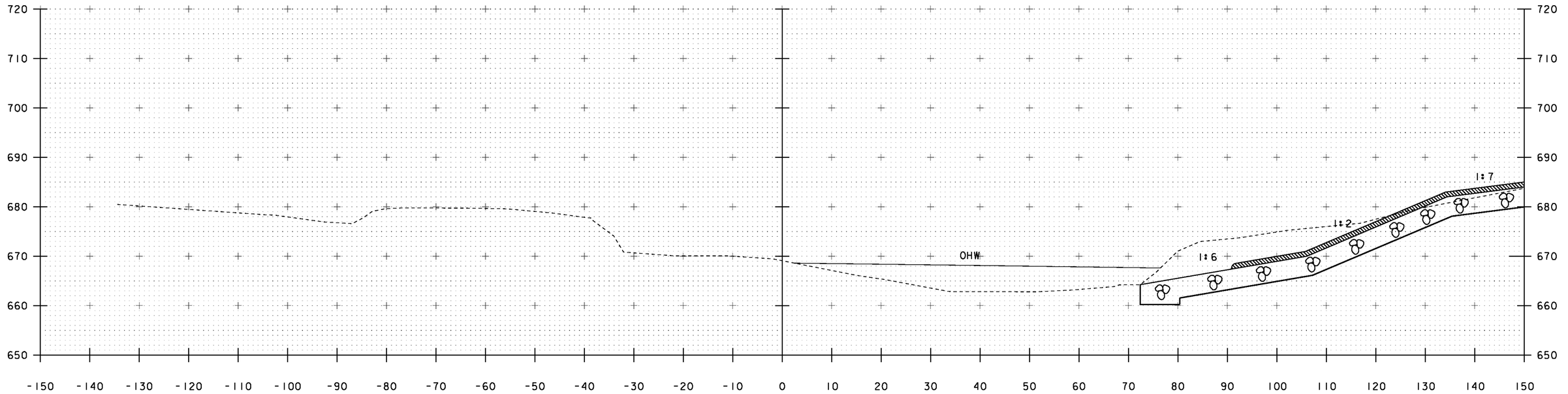
SCALE 1" = 10'-0"
10 0 10

STA. 51+00 TO STA. 51+25

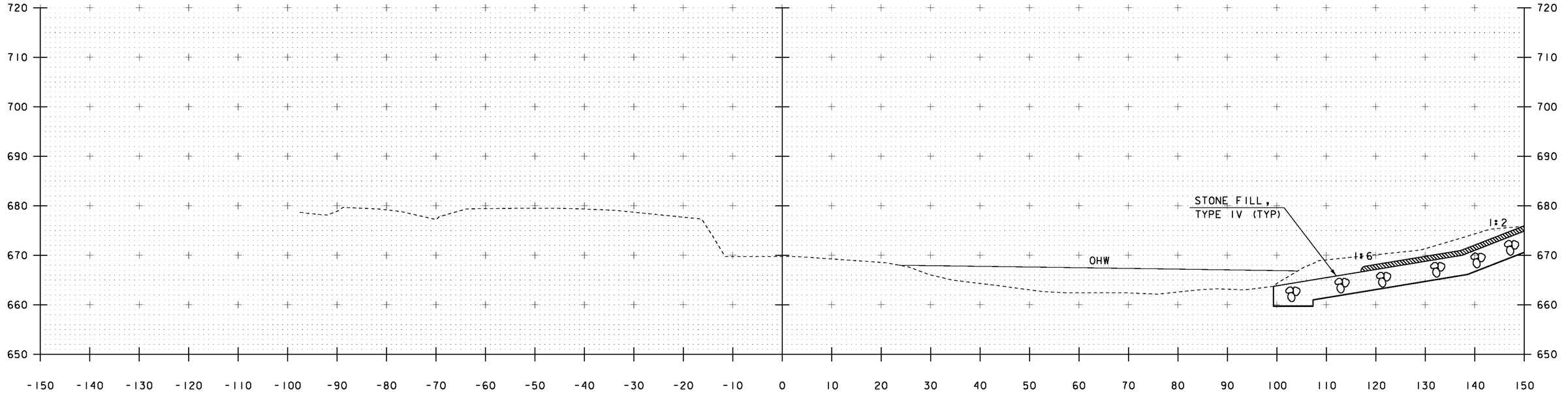
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
CHANNEL CROSS SECTIONS 1

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 70 OF 85



51+75

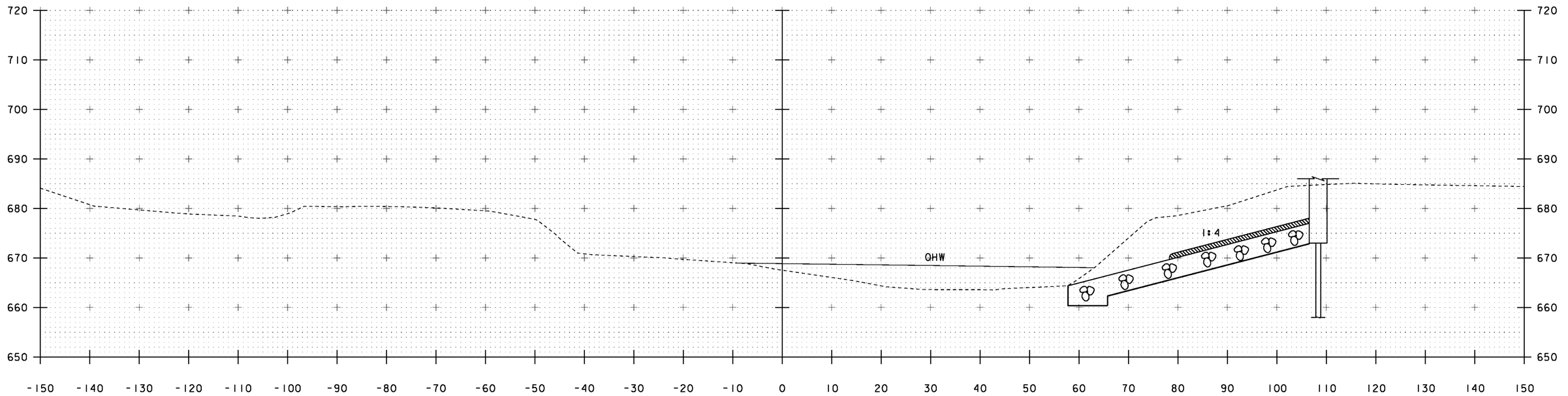


51+50

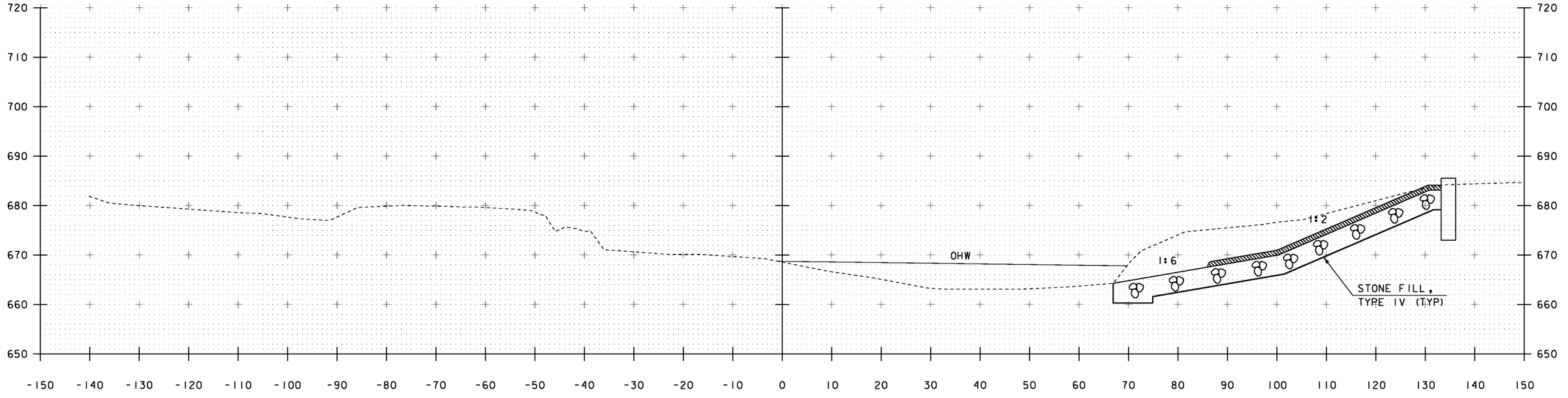
SCALE 1" = 10'-0"
10 0 10

STA. 51+50 TO STA. 51+75

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER-BRF 013-1(16)
FILE NAME: sllb212xs.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: K. FRIEDLAND
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
CHANNEL CROSS SECTIONS 2	SHEET 71 OF 85



51+90



51+80

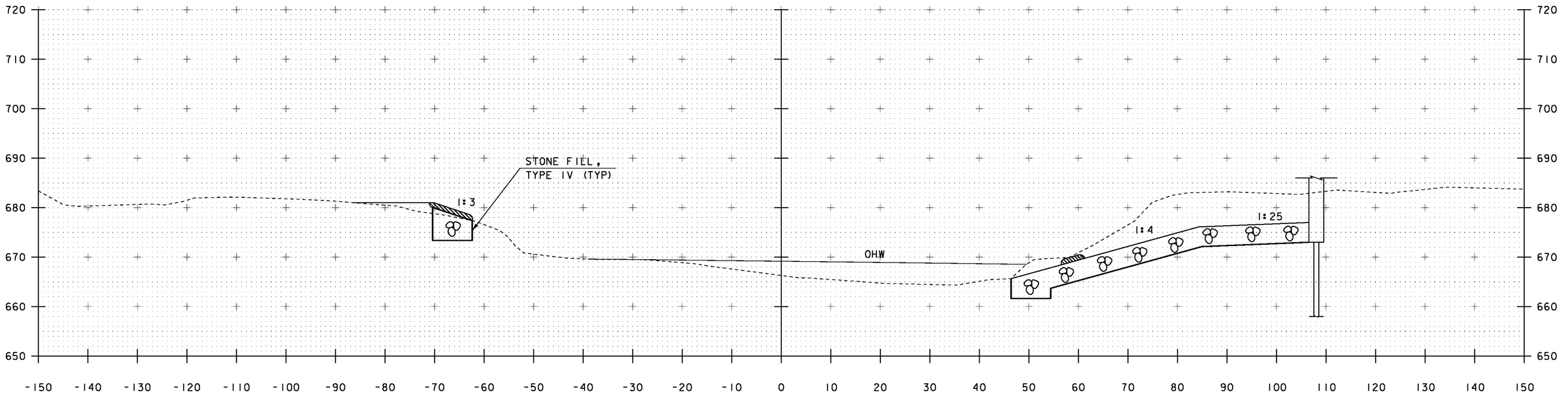
SCALE 1" = 10'-0"
10 0 10

STA. 51+80 TO STA. 51+90

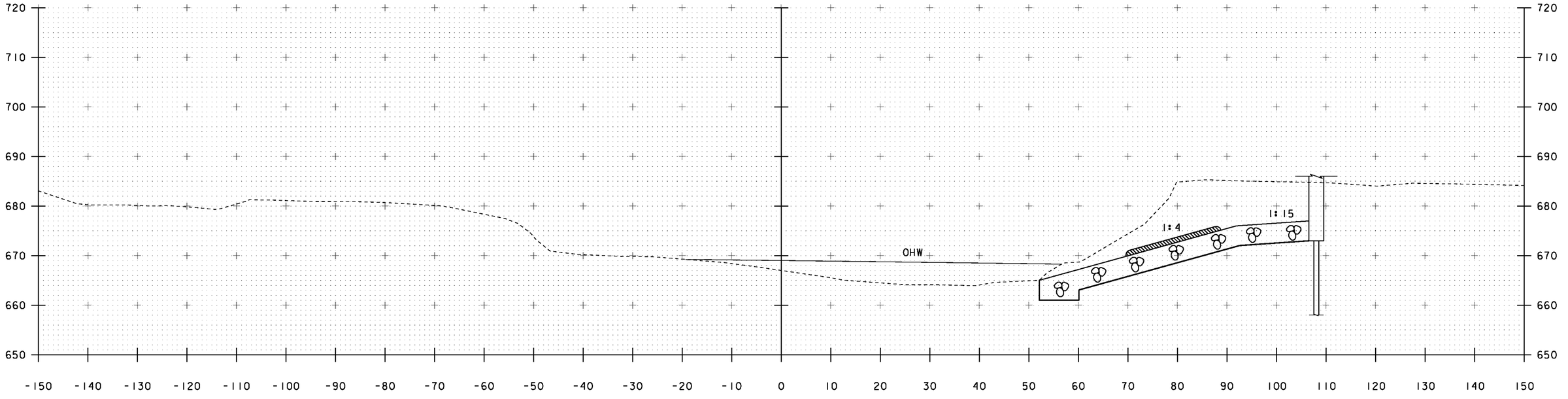
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
CHANNEL CROSS SECTIONS 3

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 72 OF 85



52+10



52+00

STA 52+10.00 LT (ABUT #1)
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
BEGIN STONE FILL, TYPE IV
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN GRUBBING MATERIAL

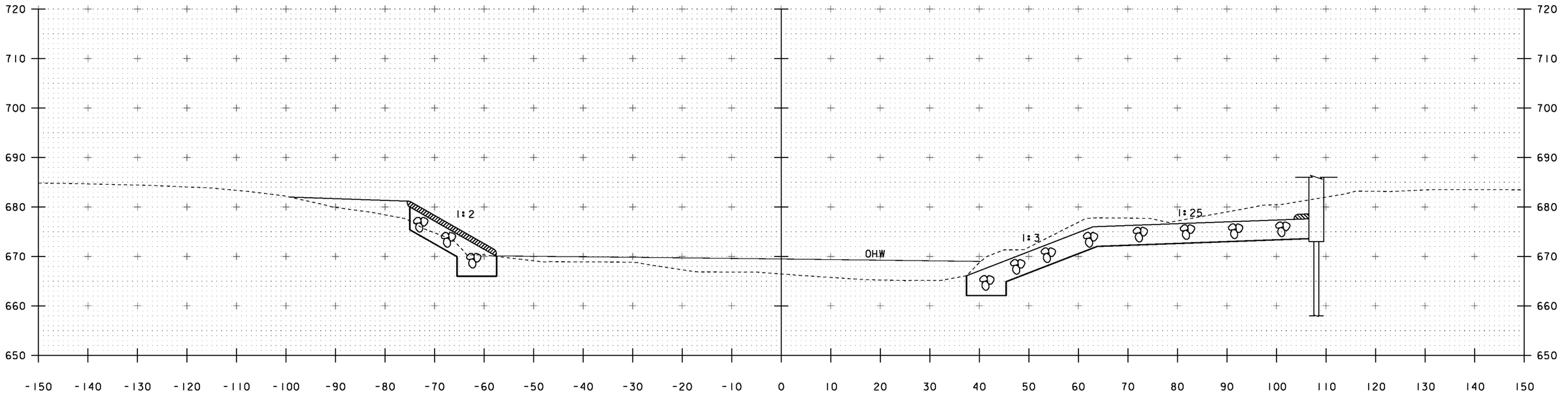
SCALE 1" = 10'-0"
10 0 10

STA. 52+00 TO STA. 52+10

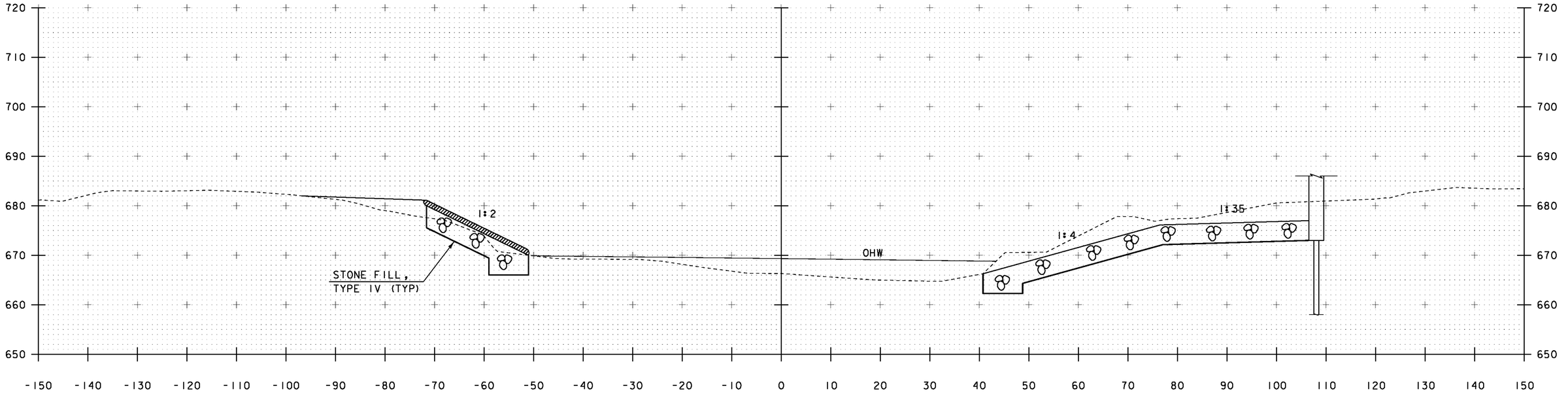
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
CHANNEL CROSS SECTIONS 4

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 73 OF 85



52+30



52+20

STA 52+17.00 RT (ABUT #2)
END GRUBBING MATERIAL

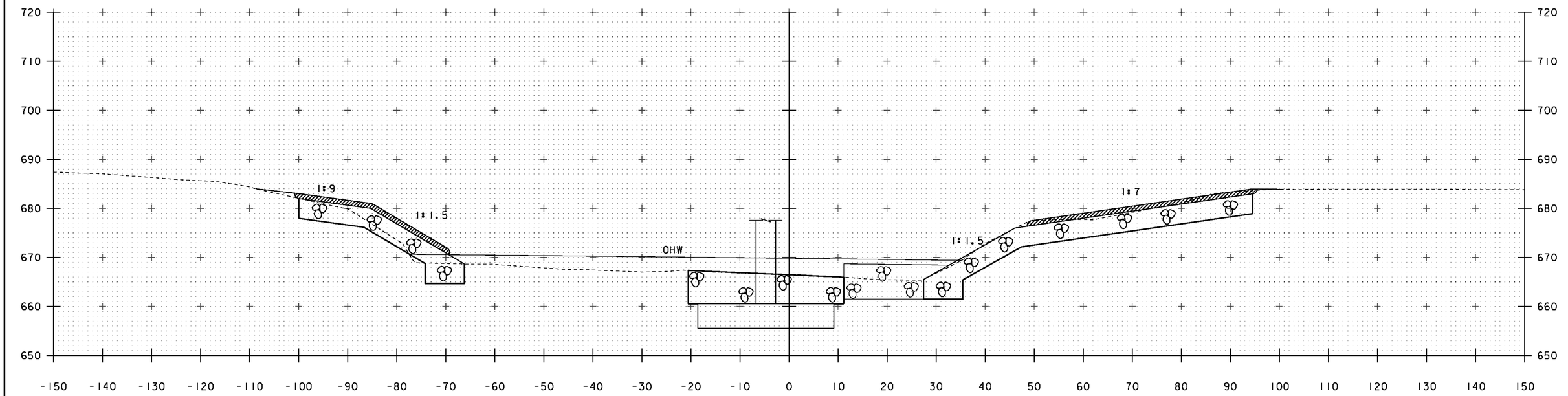
SCALE 1" = 10'-0"
10 0 10

STA. 52+20 TO STA. 52+30

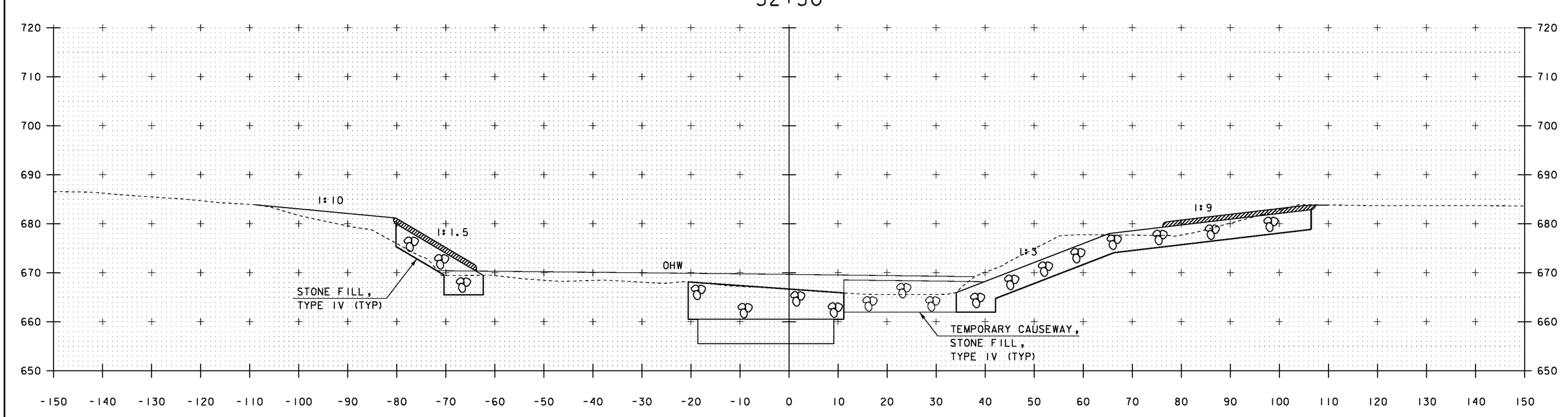
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
CHANNEL CROSS SECTIONS 5

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 74 OF 85



52+50



52+40

STA 52+31.00 RT (ABUT #2)
BEGIN GRUBBING MATERIAL

NOTE: SUPERSTRUCTURE OMITTED FOR CLARITY

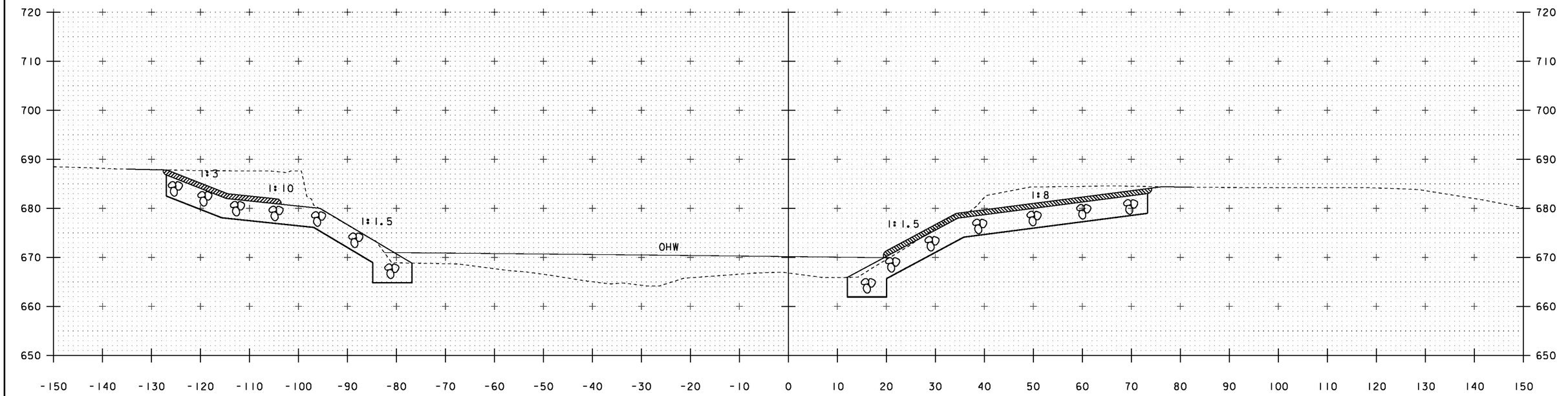
SCALE 1" = 10'-0"
10 0 10

STA. 52+40 TO STA. 52+50

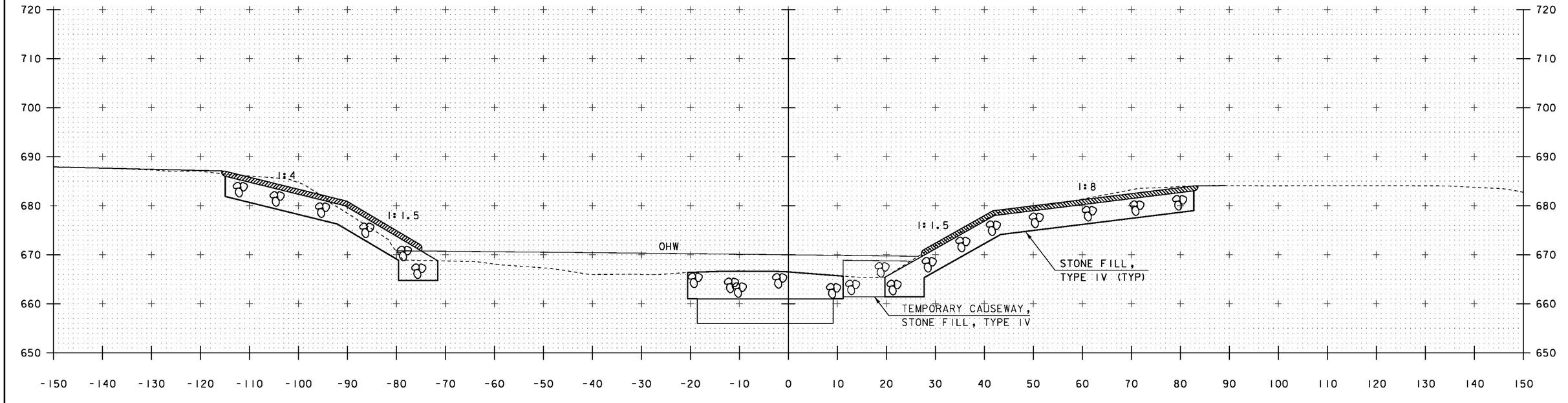
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
CHANNEL CROSS SECTIONS 6

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 75 OF 85



52+70



52+60

STA 52+58.00 LT (ABUT #1)
END GRUBBING MATERIAL

NOTE: SUPERSTRUCTURE OMITTED FOR CLARITY

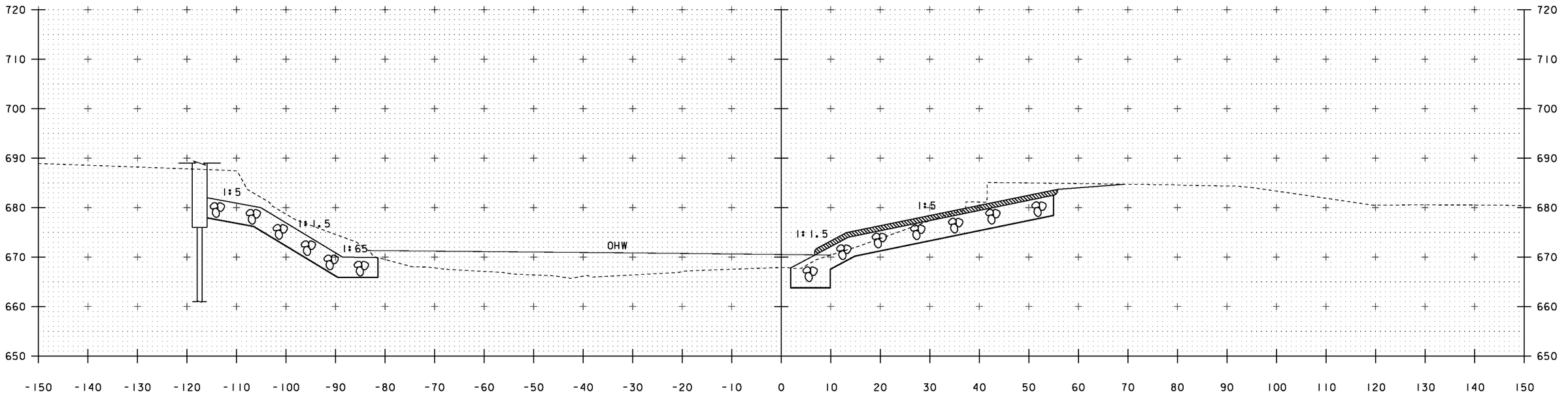
SCALE 1" = 10'-0"
10 0 10

STA. 52+60 TO STA. 52+70

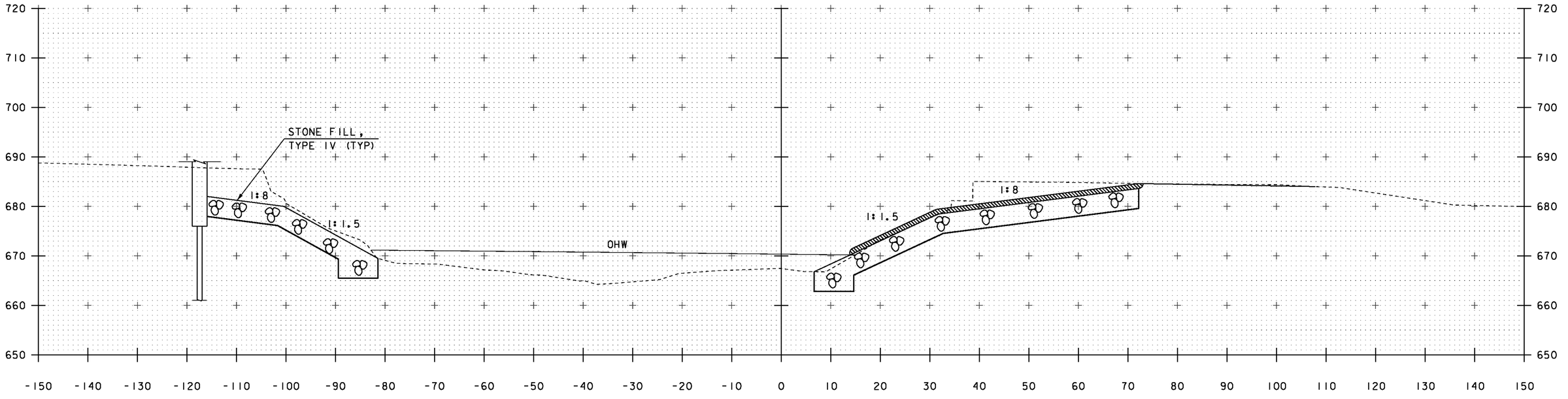
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
CHANNEL CROSS SECTIONS 7

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 76 OF 85



52+90



52+80

NOTE: SUPERSTRUCTURE OMITTED FOR CLARITY

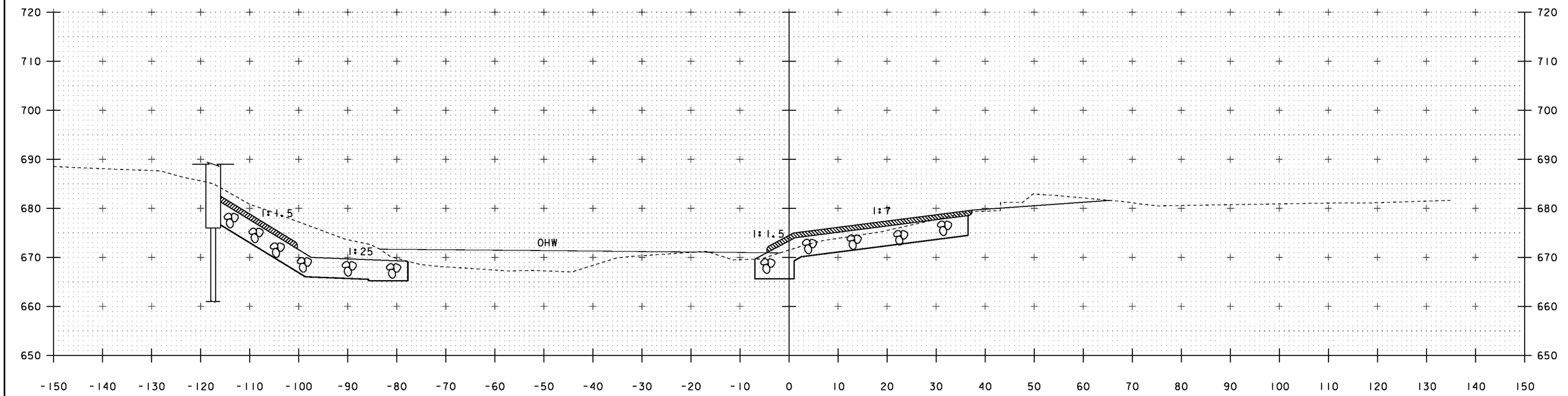
SCALE 1" = 10'-0"
10 0 10

STA. 52+80 TO STA. 52+90

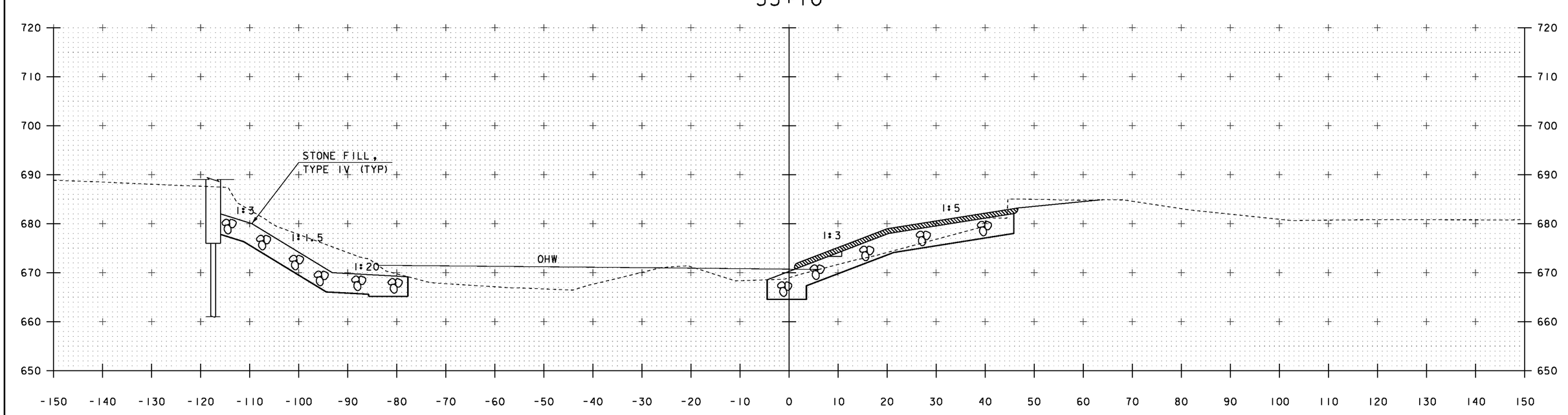
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
CHANNEL CROSS SECTIONS 8

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 77 OF 85



53+10



53+00

STA 52+97.00 LT (ABUT #1)
BEGIN GRUBBING MATERIAL

NOTE: SUPERSTRUCTURE OMITTED FOR CLARITY

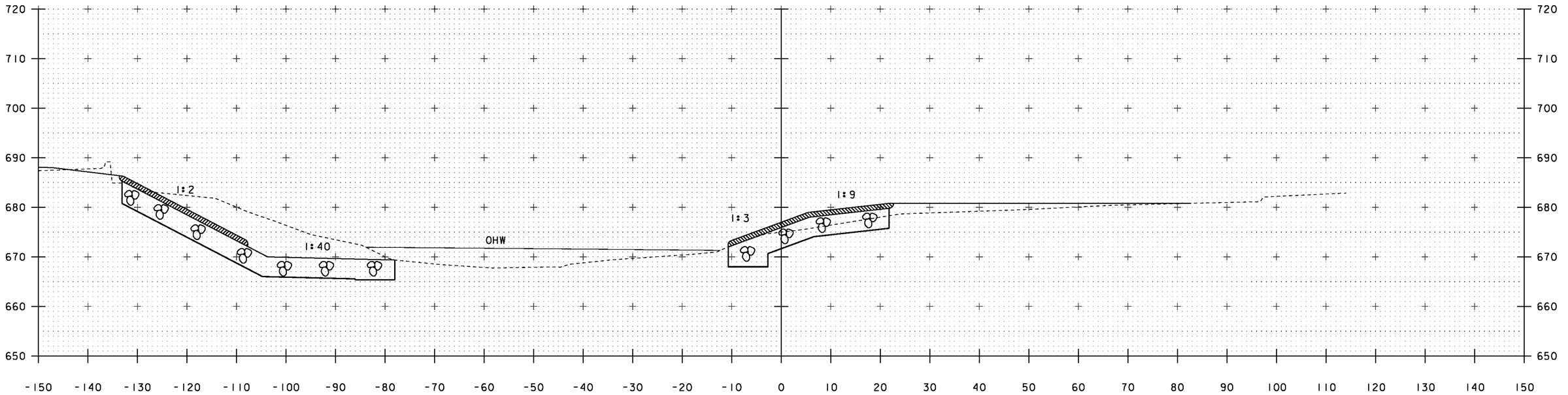
SCALE 1" = 10'-0"
10 0 10

STA. 53+00 TO STA. 53+10

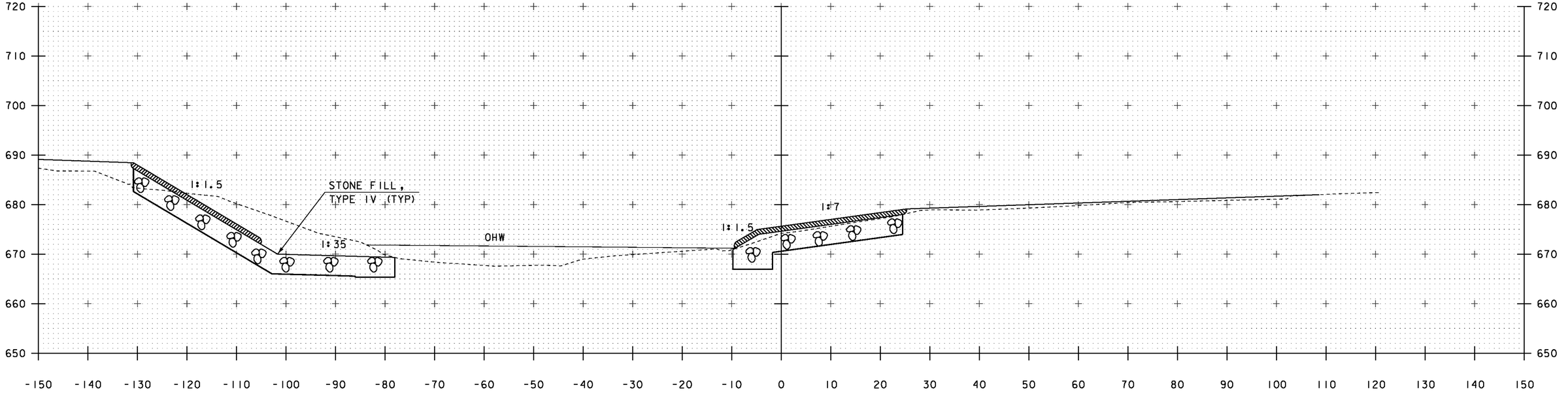
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
CHANNEL CROSS SECTIONS 9

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 78 OF 85



53+25



53+20

NOTE: SUPERSTRUCTURE OMITTED FOR CLARITY

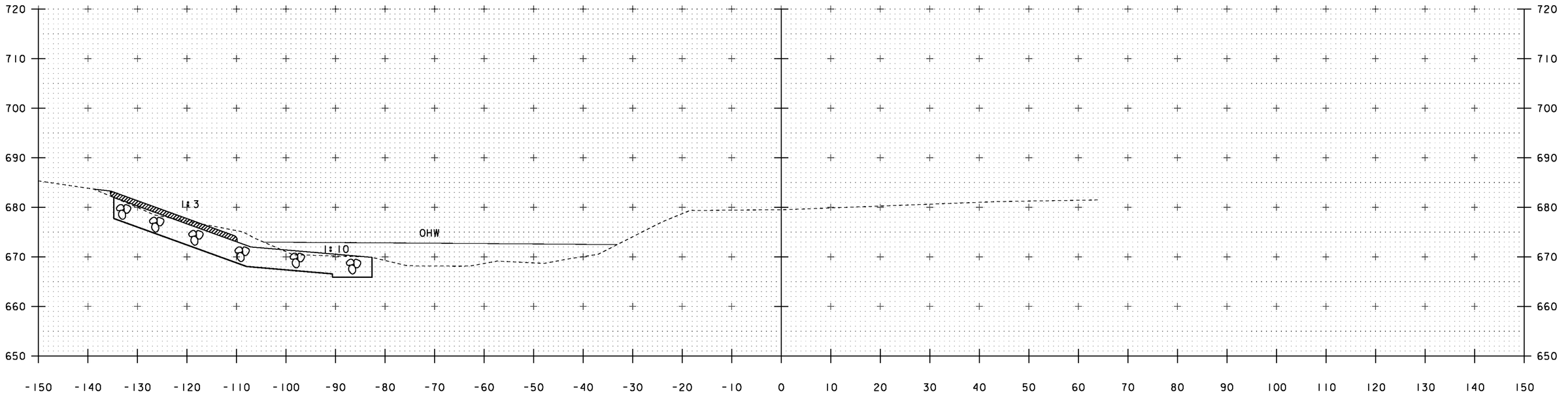
SCALE 1" = 10'-0"
10 0 10

STA. 53+20 TO STA. 53+25

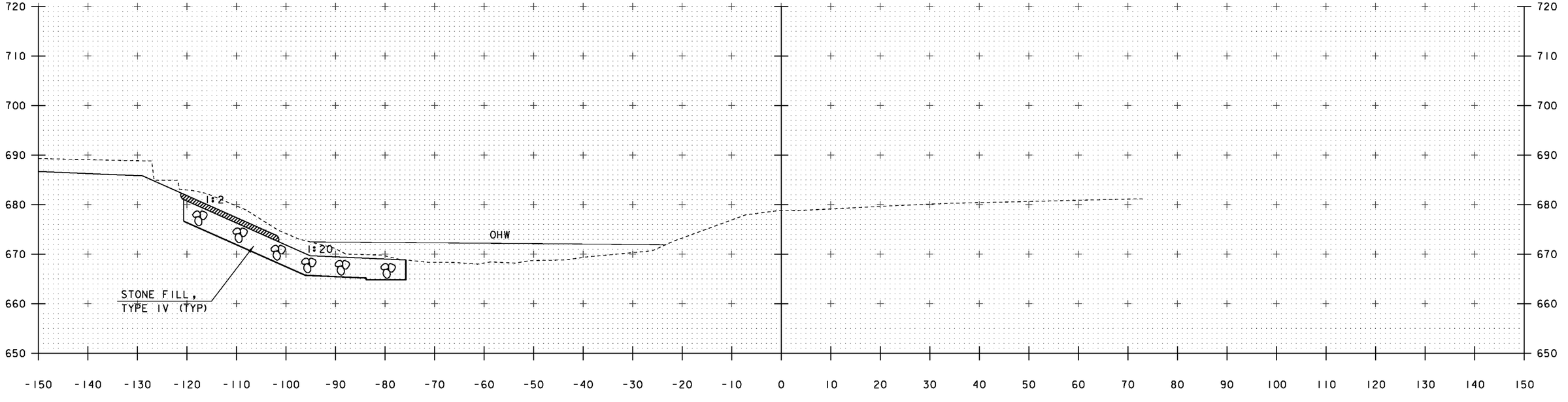
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
CHANNEL CROSS SECTIONS 10

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 79 OF 85



53+75



53+50

STA 53+42.00 RT (ABUT #2)
END UNCLASSIFIED CHANNEL EXCAVATION
END STONE FILL, TYPE IV
END GEOTEXTILE UNDER STONE FILL
END GRUBBING MATERIAL

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

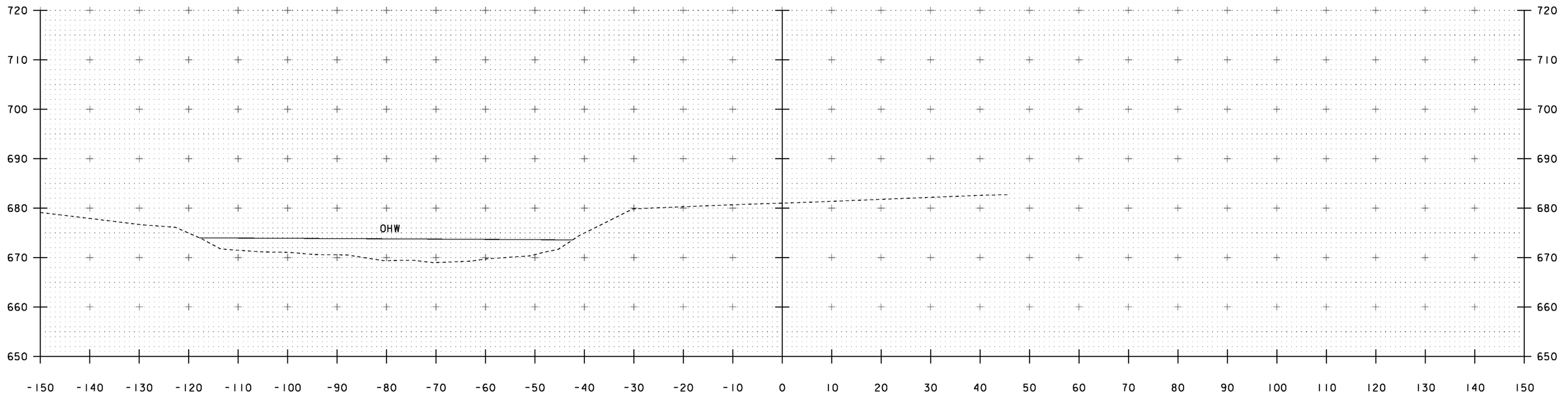
STA. 53+50 TO STA. 53+75

NOTE: SUPERSTRUCTURE OMITTED FOR CLARITY

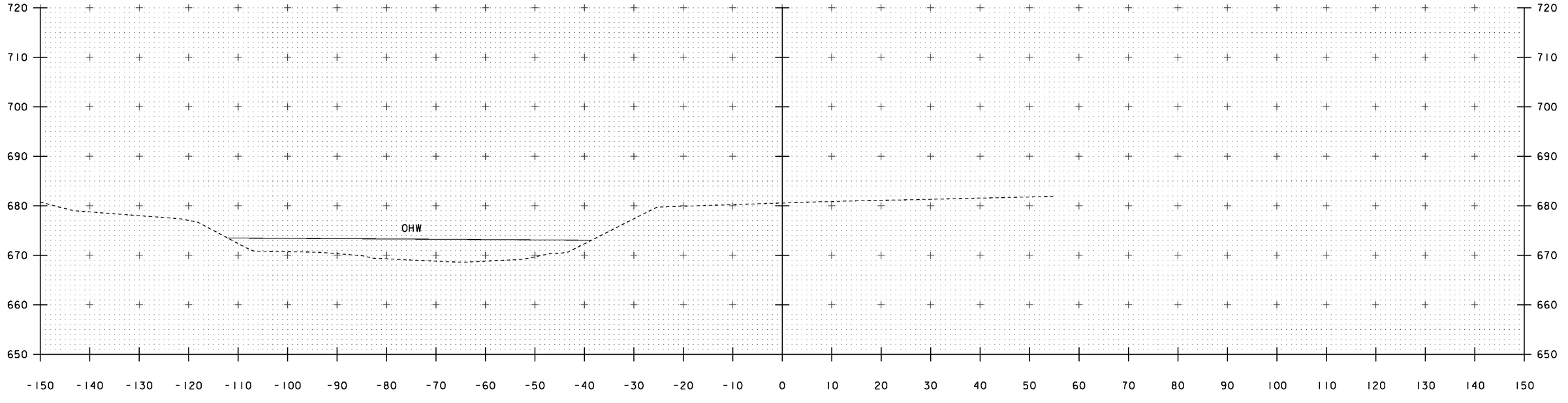
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
CHANNEL CROSS SECTIONS II

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 80 OF 85



54+25



54+00

STA 53+98 LT (ABUT #1)
END UNCLASSIFIED CHANNEL EXCAVATION
END STONE FILL, TYPE IV
END GEOTEXTILE UNDER STONE FILL
END GRUBBING MATERIAL

NOTE: SUPERSTRUCTURE OMITTED FOR CLARITY

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

STA. 54+00 TO STA. 54+25

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER-BRF 013-1(16)

FILE NAME: sllb212xs.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: G. LAROCHE
CHANNEL CROSS SECTIONS 12

PLOT DATE: 12-OCT-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: G. LAROCHE
SHEET 81 OF 85

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
1	LADD, KEVIN & DANA	3, 4	116+25.00 LT	120+28.92 LT	0.47 A					WD		JAMAICA			20,400 SF±
							CONST	(T)							
							SLOPE	(T)							TEMP. RIGHTS PREVIOUSLY ACQUIRED
							ACCESS	(T)							03/19/2012; PROJECT JAMAICA
							DETOUR	(T)							STP ER IRNO (100)
							REMOVE TREES	(T)							
2	BEMIS, MARTIN N. & CAROL ANN	4, 5	119+66 LT	123+28 LT			UTILITY	(P)	0.22 A			JAMAICA			9,480 SF±
			120+39 LT	121+89 LT			INSTALL	(T)	0.10 A						STONE FILL & EC; 4,200 SF±
			121+20 LT				INSTALL & MAINT	(P)							GUYWIRE & ANCHOR
			122+97 LT	123+43 LT			CONST	(T)	120 SF						INCL. PDF
			123+27 LT				INSTALL & MAINT	(P)							GUYWIRE & ANCHOR
	RIGHTS TO BE VALUED AS ER		120+25 LT	123+50 LT			REMOVE TREES	(T)	4,000 SF						
	RIGHTS TO BE VALUED AS ER		120+37 LT	123+25 LT			CONST	(T)	1,400 SF						INCL. PDF
	RIGHTS TO BE VALUED AS ER		120+40 LT	123+25 LT			DETOUR	(T)	0.26 A						11,150 SF±
3	ROBINSON, BERNARD W. & ELAINE A.	4, 5	120+72.91 RT	123+75.00 RT	0.46 A					WDIF	08/27/12	JAMAICA	113	322-323	20,000 SF±
4	GRECO, MICHAEL	4, 5	119+65.33 RT	122+03.82 RT	0.15 A					WDIF	08/27/12	JAMAICA	113	326-327	6,700 SF±
5	TOWN OF JAMAICA	4, 5	118+86 RT	120+18 RT			APPROACH	(T)				JAMAICA			TH53
			119+49 RT	120+30 RT			INSTALL & MAINT	(P)	280 SF						STONE FILL

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1	2, 4, 5	PARCEL 4 BISCEGLIA - CHANGE NAME TO MICHAEL GRECO	06/28/12
		COMPLETED BY: MT PER C.O. 9772 APPROVED BY: HP	
2	2, 4	PARCEL 2 BEMIS - FEE ACQUISITION REMOVED. PERMANENT	08/13/12
		UTILITY ADDED WITH AREA FROM P/L TO P/L AS NEEDED.	
		ADD TEMP INSTALL EASEMENT FOR STONE FILL.	
		COMPLETED BY: MT PER C.O. 9775 APPROVED BY: HP	

PLAN LEGEND

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

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

APPROVED: HARRY PETROVS DATE: 06-08-12
CHIEF, PLANS & TITLES

PROJECT NAME:	JAMAICA		
PROJECT NUMBER:	ER-BRF 013-1(16)		
FILE NAME:	r11b212_Detail.xls	PLOT DATE:	12-OCT-2012
PROJECT LEADER:	K. HIGGINS	DRAWN BY:	M. TROTTIER
DESIGNED BY:	T. FILLBACH	CHECKED BY:	E. PIERCE
R.O.W. DETAIL SHEET #1		SHEET 82	OF 85

SPECIAL PROVISION (REMOVAL OF TEMPORARY DETOUR)
STA 116+00.00 - 118+00.00

N

VT STATE PLANE GRID

BEGIN ROW PROJECT
116+25.00 23.68' LT

115+10.92
25.98' LT

R 793.12'
L 110.91'

LADD,
KEVIN & DANA

BEGIN APPROACH
STA 116+00.00

117+50.00
80.00' LT

BENCHMARK
IRON PIN IN
COMB POLE
ELEV. 693.24

[196.65']

130.43'

[R 793.12'
L 236.56']

115+09.80
23.51' RT

R 842.62'
L 369.10'

STATE OF VERMONT
HWY. EASE.
PER RESURVEY
VOL. 4 PG. 427
1965
49.5'

N60°-10'-38"E
550.70'

S60°-10'-38"W
550.70'

EXISTING R.O.W.

112+66
113+00
114+00
115+00
116+00
117+00
118

MATCHLINE 118+00.00

VT 100
TO WARDSBORO

HVCTRL #3

BUS TURN SIGN

PAVED DRIVE

GRAVEL DRIVE

STONE WALL

WOODS

COMB #7/45

COMB #2/T7 46/1

COMB #7/85 248/32 32/1

TIE 15" ASPEN

15" ASPEN

P/L

N/F
SCACCIAFERRO

N/F
MILLER

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

FOR R.O.W. USE ONLY

⊠ CALCULATED ROW POINT

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

PROJECT NAME:	JAMAICA
PROJECT NUMBER:	ER BRF 013-1(16)
FILE NAME: r11b212_layl.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: E. PIERCE
DESIGNED BY: T. FILLBACH	CHECKED BY: E. PIERCE
ROW LAYOUT SHEET 1 OF 3	SHEET 83 OF 85

LADD,
KEVIN & DANA

FLOW
WAROSSBORO BROOK

P L

BEMIS,
MARTIN N. & CAROL ANN

WELL
3 FT DIA
CONCRETE
TILE
MONITOR WELL

INSTALL&
MAINT(P)

REMOVE TREES(T)

WOODS

HARDWOOD
TREE

CONST(T)

INSTALL&
MAINT(P)

CONST(T)

DETOUR(T)

SUBE

COMB

STATE OF VERMONT
HWY. EASE.
PER RESURVEY
VOL. 4 PG. 427
1965
WIDTH VARIES

N25° 09' 37"E
325.65'

[196.65']

119+59.27
103.99' LT

15'
UTIL(P)
15'

BEGIN PROJECT
STA 119+25.00

BEGIN BRIDGE
STA 119+49.11

106'+/-

END BRIDGE
STA 121+90.89

END PROJECT
STA 122+25.00

INSTALL
(T)

121+59.78
22.76' LT

118+68.02
25.08' LT

[R 793.12'
L 236.56']

120+28.92
23.92' LT

160.29'

N 35° 13' 13" E

130.87'

49.5'

MATCHLINE 118+00.00

MATCHLINE 123+50.00

54+00

119+00

120+00

121+00

122+00

123+00

S35° 13' 13"W
107.58'

89.36'

120+72.91
25.97' RT

121+62.27
26.76' RT

[219.00']

S32° 06' 30"W

52+00

TEMPORARY CONSTRUCTION
LIMITS
(CAUSEWAY TO PIER)

152'+/-

CONSTRUCTION
LIMITS

STONE FILL,
TYPE IV
(TYP)

STONE
RETAINING
WALL

R=16'

R=5'

RED
YELLOW
BIRCH
SUGAR
MAPLE
MAPLE

R 842.62'
L 369.10'

118+68.83
24.42' RT

LIMIT OF
PAVEMENT

119+65.33
25.02' RT

S35° 13' 13"W
97.08'

SMITH ROAD
TH 53

GRAVEL
ROAD

INSTALL&MAINT(P)

162.21'

℄ BEARING
STA 119+50.00

℄ BEARING
STA 120+70.00

APPROACH(T)

℄ BEARING
STA 121+30.00

121+09.17
100.00' RT

122+03.82
100.00' RT

94.65'

[194'+/-]

STONE
HEADWALL

PIPE
30 CPMC

STONE
HEADWALL

WOODS

WATER
COURSES

LEDGE

WOODS

LEDGE

TH55
SMITH RD
ASSUMED 3 ROD R.O.W.

SPECIAL PROVISION (REMOVAL OF
TEMPORARY BRIDGE AND APPROACHES)
STA 118+00.00 - 123+50.00

SPECIAL PROVISION (RETAINING WALL)
STA 122+08.30 - 122+25.90 RT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 121+68.06 - STA 123+31.39 RT

N/F
MILLER

1

2

3
ROBINSON,
BERNARD W. & ELAINE A.

4

5
TOWN OF
JAMAICA

GRECO, MICHAEL

VT STATE PLANE GRID

N

☒ CALCULATED
ROW POINT

LAYOUT 2

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

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

FOR R.O.W. USE ONLY

PROJECT NAME: JAMAICA
PROJECT NUMBER: ER BRF 013-1(16)

FILE NAME: r11b212_lay2.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: T. FILLBACH
ROW LAYOUT SHEET 2 OF 3

PLOT DATE: 12-OCT-2012
DRAWN BY: E. PIERCE
CHECKED BY: E. PIERCE
SHEET 84 OF 85

BEMIS,
MARTIN N. & CAROL ANN

TOWN OF JAMAICA

TH42
HENDERSON RD.
ASSUMED 3 ROD R.O.W.

N 207044.10
E 1572917.36

VT STATE PLANE GRID

N

P
L

242.77'

EXISTING R.O.W.

N14°58'26"E

GUYP #41S

GUYP #41S

124+96.18
27.18' LT

SMALL ROCK BOULDER

VT 100
TO TOWNSHEND

126+60

126+00

COMB #7/41

COMB #7/41

MM 1000/1309/0240

N25°09'37"E
325.65'

GRAVEL ROAD

5 MAILBOXES

STONE WALL

WOODS

R=12'

PDF

PDF

HENDERSON ROAD TH 42

STATE OF VERMONT
HWY. EASE.
PER RESURVEY
VOL. 4 PG. 427
1965
WIDTH VARIES

125+00

E

E

R=16'

124+00

N14°28'04"E
72.07'

126+46.77
52.31' RT

125+76.25
52.90' RT

HOUSE

MATCHLINE 123+50.00

BF

BF

BF

COMB #7/42

124+44.77
50.48' RT

R 1005.27'
L 134.27'

EXISTING R.O.W.

GUIDE POST

74.93'
[219.00'] S32°06'30"W

EXISTING R.O.W.

123+75.00
35.26' RT

24 CCMP PIPE BURIED & PLUGGED

END APPROACH
STA 124+25.00

WOODS

ROBINSON,
BERNARD W. & ELAINE A.

3

82.23'

END ROW PROJECT
123+75.00 117.49' RT

CONSTRUCT 5'-0" PAVED APRON
STA 123+59.00 - 124+24.00 LT

SPECIAL PROVISION (REMOVAL OF TEMPORARY BRIDGE AND APPROACHES)
STA 123+50.00 - 124+25.00

P
[194'+/-]
L

P
L

GRECO, MICHAEL

☒ CALCULATED ROW POINT

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

FOR R.O.W. USE ONLY

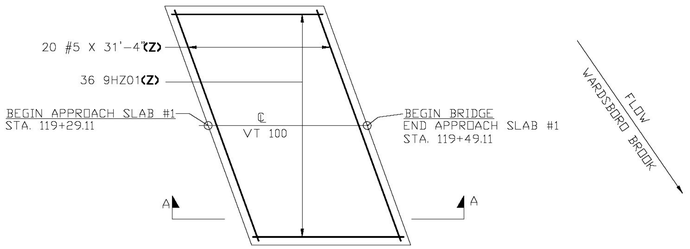
LAYOUT 3

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

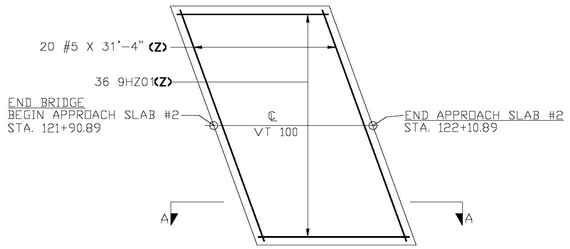
PROJECT NAME: JAMAICA
PROJECT NUMBER: ER BRF 013-1(16)

FILE NAME: r11b212_lay3.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: T. FILLBACH
ROW LAYOUT SHEET 3 OF 3

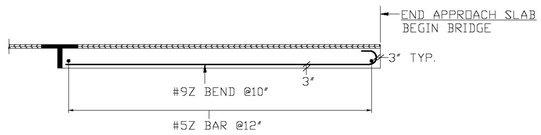
PLOT DATE: 12-OCT-2012
DRAWN BY: E. PIERCE
CHECKED BY: E. PIERCE
SHEET 85 OF 85



APPROACH SLAB #1 PLAN

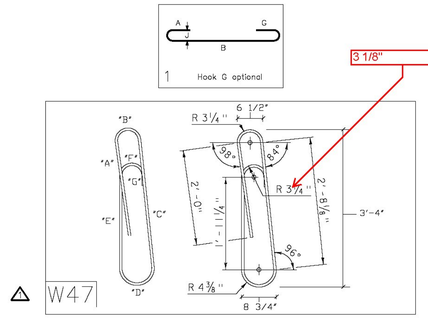


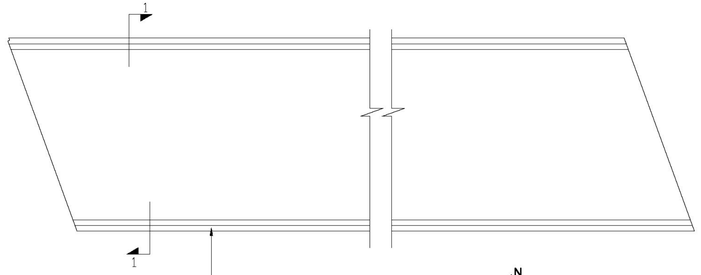
APPROACH SLAB #2 PLAN



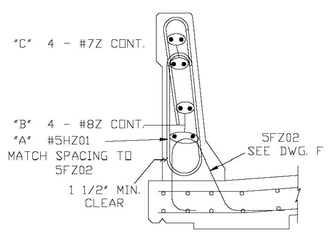
SECT. A-A
APPROACH SLAB ELEV.

Release Number: 018					BAR LIST											
Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
9HZ01	36	#9	20'-8 ½"	1	1'-3"	19'-5 ½"							0'-11 ⅜"			
Release Number: 019					BAR LIST											
Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
9HZ01	36	#9	20'-8 ½"	1	1'-3"	19'-5 ½"							0'-11 ⅜"			
Release Number: 020					BAR LIST											
Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
5HZ01	762	#5	9'-8"	W47	2'-0"	0'-10"	2'-8"	1'-2"	1'-11"	9 3/4"	2 1/2"					





DECK PLAN



SECT. 1
BRIDGE RAILING REINF.
FLD. ADJ. AS REQ.

LAP CHART	
BAR SIZE	LAP
#7	3'-10"
#8	5'-0"

ALL BAR ON THIS DWG. IS DUAL COATED

-ELEVATIONS & DIMENSIONS SHOWN ON THIS DWG. ARE FOR REINF. DETAILING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION.

-DUAL COATED BAR - ASTM A1055M (Z BAR)

-DUAL COATED BAR DENOTED (Z)

FOR FIELD USE

Vermont Agency of Transportation
RECEIVED
CK'D BY RK/JG OK'D BY JS
July 3, 2013
RESUBMIT NO Approved AsNoted
BY KH DATE 7-15-2013

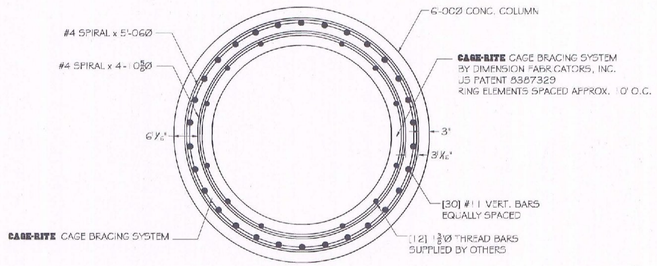
6			
5			
4			
3			
2	05/10/13	1	REV'D/ENG. COMM./FOR RECORD & JOB USE
1	04/26/13	0	APPROVAL
	DATE	REV.#	SENT FOR

DIMENSION
DIMENSION FABRICATORS INC.
2000 7TH STEET
SCOTIA, N.Y. 12302
PH: (518) 374-1936
FAX (518) 374-4530
www.dimensionfabricators.com

STRUCTURE	VTAOT JAMAICA ER BRF 013-1(16)
LOCATION	RTE 1005 JAMAICA, VT
ARCHITECT	
ENGINEER	
CUSTOMER	T. BUCK CONSTRUCTION

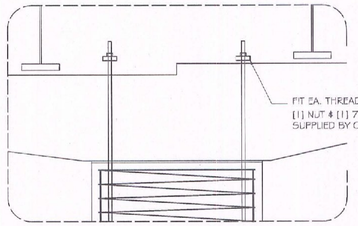
DRAWN BY: WAYNE | DATE: 04/23/13 | DFI #: 8421

DRAWING COVERS: APPROACH SLABS AND BRIDGE RAILING REINF. | DRAWING #: H

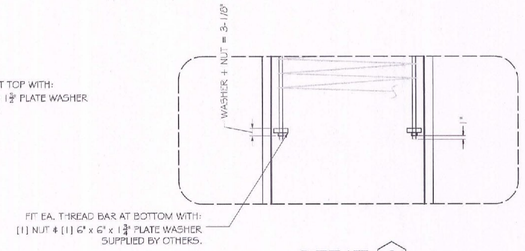


SECTION (1/01)

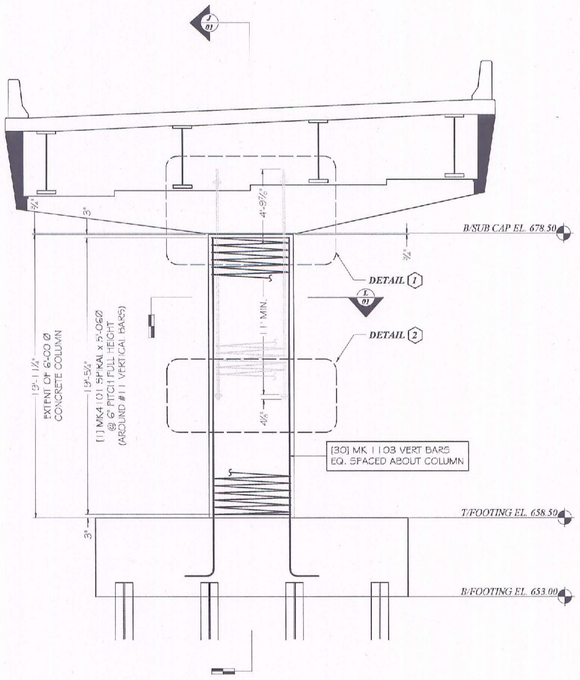
PIER COLUMN REINFORCING SCHEDULE															
VERT & SPI REINFORCING					BENDING DIMENSIONS									ACCESSORIES	
QTY	MARK	SIZE	TYPE	WEIGHT	A	B	C	D	E	J	G	K	O	QUANTITY	SIZE
30	1103	#11	17	4104		2'-0"	23'-9"							12	PL 1 3/4" x 7" x 7 3/4"
12		1 3/8	THD	1030	16'-02									12	PL 1 3/4" x 6" x 6"
1	4101	#4	SPI	738	19'-5"	5'-6"	0'-6"	1	1	41				24	NUTS FOR THD. BAR
1	4102	#4	SPI	384	11'-0"	4-10 1/2"	0'-6"	1	1	24					
				6257										ACCESSORY WEIGHT	####



DETAIL (1)

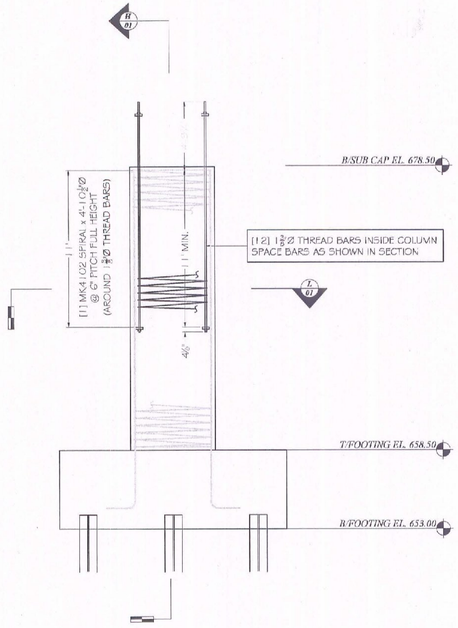


DETAIL (2)



PIER COLUMN & CAP FRONT ELEVATION

SECTION (H/01)



PIER COLUMN END ELEVATION

SECTION (J/01)

Vermont Agency of Transportation

RECEIVED

CK'D BY VHB OK'D BY JTS

May 10, 2013

RESUBMIT NO Approved

BY KMH DATE 05/15/13

SHOP DRAWING REVIEW

☑ REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

☐ REJECTED ☐ REVISE AND RESUBMIT ☐ FURNISH AS CORRECTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

VHB Vanasse Hangen Brustlin, Inc.

Job Number: 53550.40

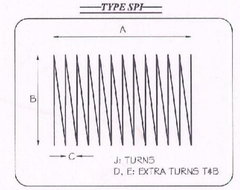
Reviewed By: S.Goodrich

Date: 5-14-2013

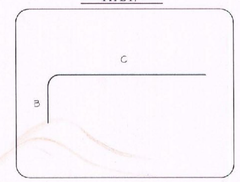
GENERAL NOTES

1. ALL REBAR INCLUDED ON THIS DRAWING SHALL BE OF ASTM A615 GRADE 60 REBAR.
2. INTERSECTIONS OF SPIRAL BARS AND VERTICAL BARS SHALL BE DOUBLE-WIRE TIED.
3. SPIRAL BARS SHALL BE SPLICED USING AN OVER LAP SPLICE OF 1/2 TURN MINIMUM.
4. SPIRALS SHALL BE TERMINATED AT TOP AND BOTTOM OF REBAR CAGE BY 1 1/2 EXTRA TURNS AT 0" PITCH.
5. PICK WEIGHT SHOWN INCLUDES ALL REBAR, MECHANICAL COUPLERS, CS. PIPES, TIE WIRE, CS. PIPE CLAMP-TYPE POSITIONERS AND CAGE BRACING SYSTEM ELEMENTS.
6. ELEVATIONS SHOWN ARE FOR INFORMATION ONLY AND SHALL NOT BE USED FOR CONSTRUCTION.

TYPE SPI



TYPE 17



No.	Revision/Issue	Date
1	Rev. per Reviewer Comments	04/25/13

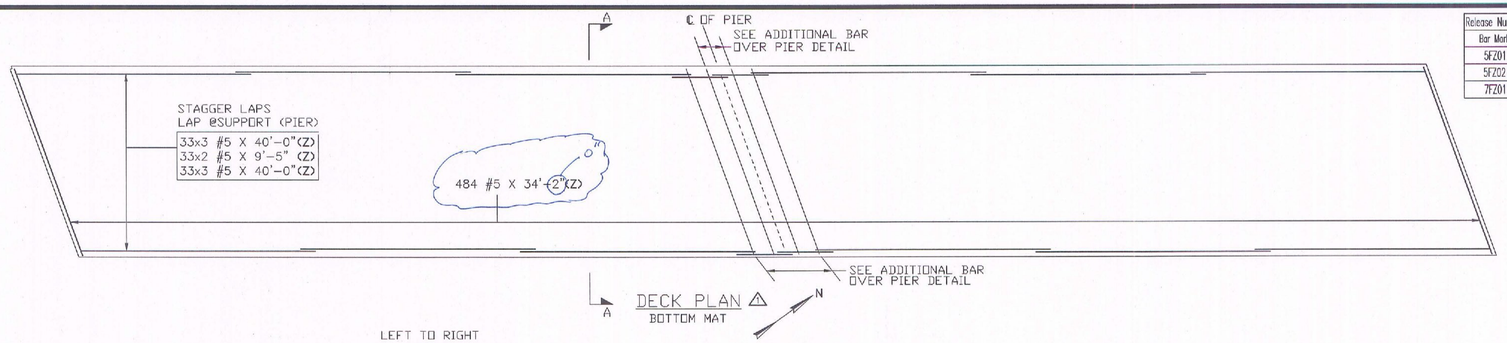
DIMENSION

DIMENSION FABRICATORS, INC.
2000 SEVENTH STREET
SCOTIA, NY 12302
www.dimensionfab.com

Project Name and Address

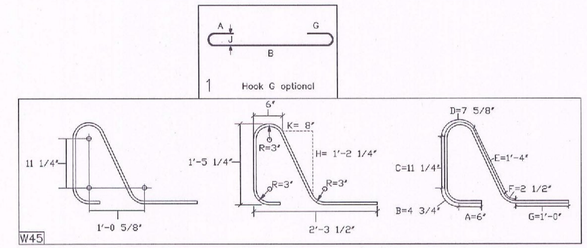
T. Buck Construction
VT AOT Jamaica ER BRF 013 - 1(16)
Jamaica, VT
Pier Column Reinforcing with Threadbar Extensions
State of Vermont AOT
Reference Drawings: Sheet 38, 39, 40
Vanasse, Hangen Brustlin, Inc.

Project	Sheet
8421	P-R01
Date: 04.25.13	
Scale: NA	

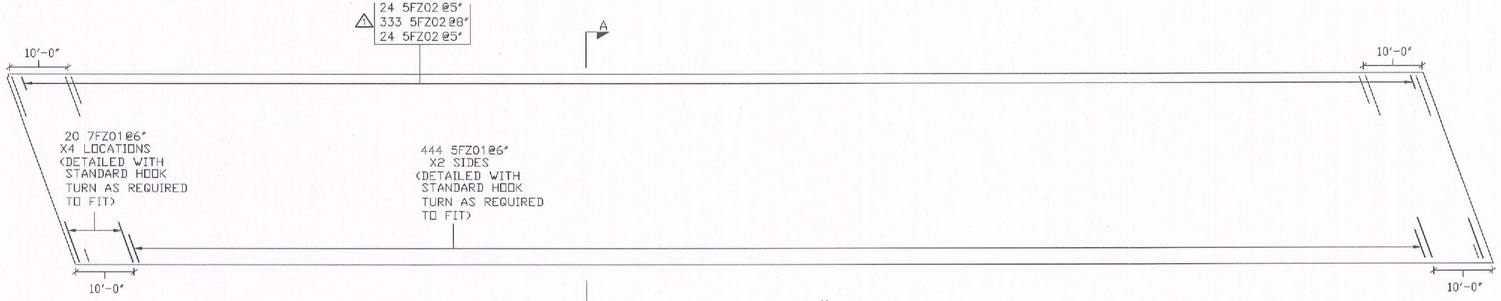


DECK PLAN ⚠1
BOTTOM MAT

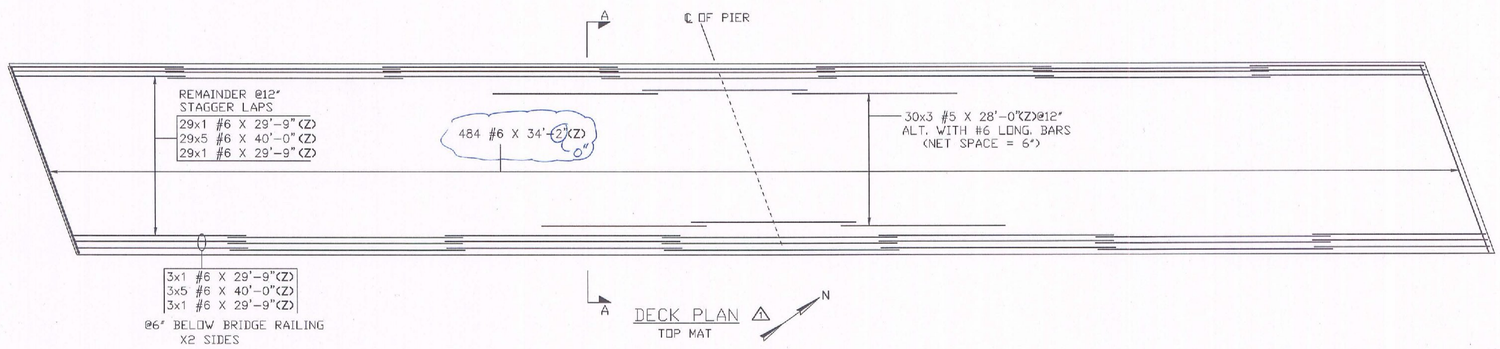
Release Number: 017					BAR LIST												
Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
5FZ01	888	#5	5'-11"	1	0'-7"	5'-4"							0'-5"			
5FZ02	762	#5	4'-6 ½"	W45	0'-6"	0'-4 ½"	0'-11 ¼"	0'-7 ½"	1'-4"	0'-2 ½"	1'-0"					
7FZ01	80	#7	8'-4"	1	0'-10"	7'-6"							0'-7"			



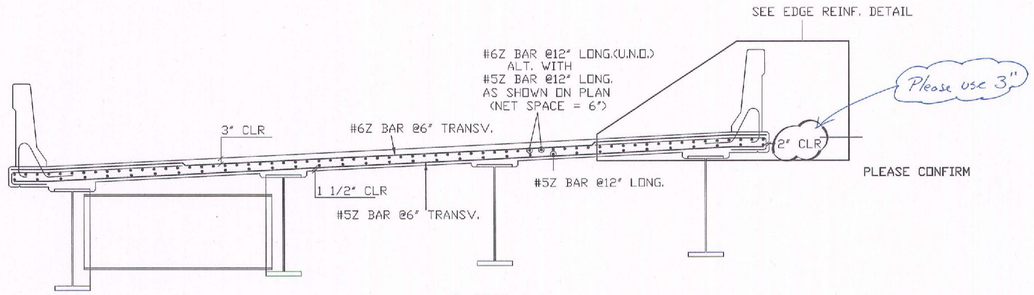
LEFT TO RIGHT
X2 SIDES
⚠1
24 5FZ02@5"
333 5FZ02@8"
24 5FZ02@5"



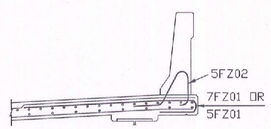
DECK PLAN ⚠1
MAT EDGE REINF.



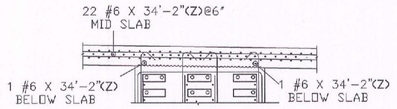
DECK PLAN ⚠1
TOP MAT



⚠ SECT. A-A



EDGE REINF.
SEE BOTTOM MAT EDGE REINF.
PLAN FOR QUANTITY AND SPACING



ADDITIONAL BAR OVER PIER

PLEASE CONFIRM

LAP CHART	
BAR SIZE	LAP
#5	2'-6"
#6	3'-0"

Acceptable

ALL BAR ON THIS DWG. IS DUAL COATED

-ELEVATIONS & DIMENSIONS SHOWN ON THIS DWG. ARE FOR REINF. DETAILING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION.
-DUAL COATED BAR - ASTM A1055M (Z BAR)
-DUAL COATED BAR DENOTED (Z)

Vermont Agency of Transportation
RECEIVED
Jamaica ER BRF 013-2(16) Deck RSS Approved 6-7-2012.pdf
CK'D BY VHB OK'D BY JTS
April 22, 2013
RESUBMIT NO Approved AsNoted
BY KMH DATE 05/08/13

SHOP DRAWING REVIEW
☐ REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.
☐ REJECTED ☐ REVISE AND RESUBMIT ☑ FURNISH AS CORRECTED
CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.
VHB Vanasse Hangen Brustlin, Inc.
Job Number: 57550.00
Reviewed By: G.S. Goodrich
Date: 5-01-2013

FOR APPROVAL

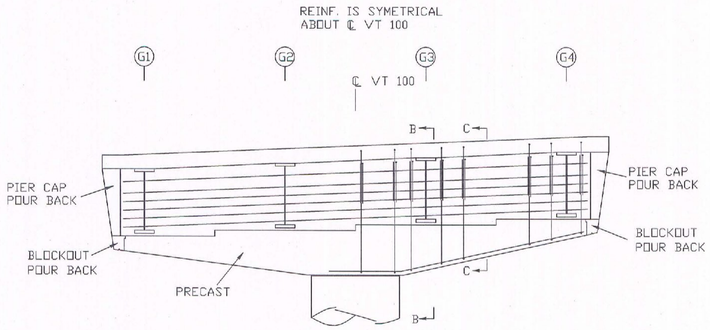
6			
5			
4			
3			
2	04/22/13	⚠	REVD PER INTERNAL REVIEW/APPROVAL
1	04/19/13	0	APPROVAL
	DATE	REV.#	SENT FOR

DIMENSION
DIMENSION FABRICATORS INC.
2000 7TH STREET
SCOTIA, N.Y. 12302
PH. (518) 374-1926
FAX (518) 374-4830
www.dimensionfabricators.com

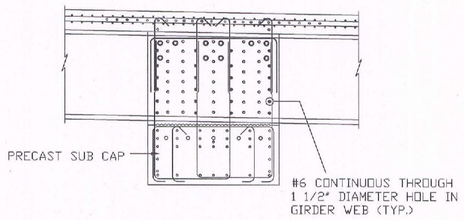
STRUCTURE	VTAOT JAMAICA ER BRF 013-1(16)
LOCATION	RTE 1005 JAMAICA, VT
ARCHITECT	
ENGINEER	
CUSTOMER	T. BUCK CONSTRUCTION

DRAWN BY	DATE	DFI #
WAYNE	04/19/13	8421

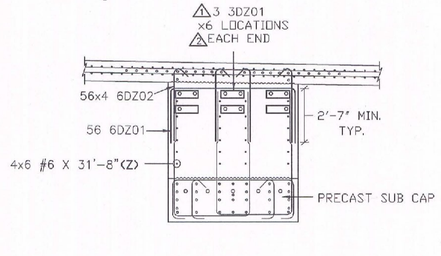
DRAWING COVERS	DRAWING #
DECK REINF.	F



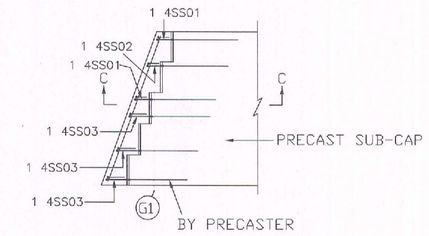
PIER CAP ELEVATION



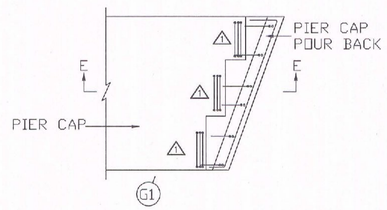
SECT. B-B



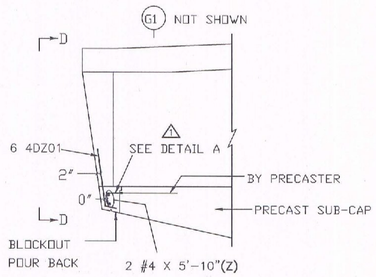
SECT. C-C
PILE CAP REINF. TO MATCH
PRECAST VERTS.



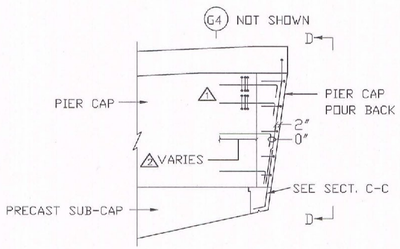
DETAIL A
PRECAST SUB-CAP WEST END
REINFORCING SHOWN
EAST END SAME BY 180° ROTATION



DETAIL B
PIER CAP EAST END
REINFORCING SHOWN
WEST END SAME BY 180° ROTATION



SECT. C-C
PRECAST SUB-CAP WEST END
REINFORCING SHOWN
EAST END SIMILAR



SECT. E-E
PIER CAP EAST END
REINFORCING SHOWN
WEST END SIMILAR

⚠2 ⚠2 Release Number: 014

BAR LIST

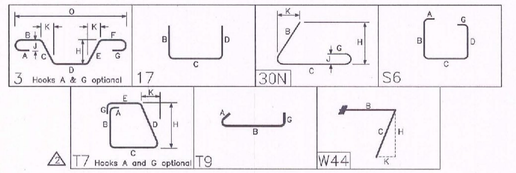
Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
3DZ01	36	#3	5'-2"	S6	1'-3"	0'-6"	1'-4"	0'-8"			1'-3"					
4DZ01	12	#4	2'-8 ¾"	3		2'-4"	0'-4 ¾"					0'-4 ½"		0'-1 ½"	2'-5 ½"	
4DZ02	12	#4	5'-9"	T7		0'-9"	5'-0"									
4DZ03	2	#4	8'-1 ½"	T7			0'-8 ½"	6'-2"	1'-3"			5'-10"		2'-1 ½"		
4DZ04	16	#4	2'-6 ½"	30N		0'-5 ½"	2'-1"					0'-6"		0'-1"		
4DZ05	8	#4	2'-5 ½"	30N		0'-5 ½"	2'-0"					0'-6"		0'-1"		
4DZ06	12	#4	2'-3 ½"	30N		0'-5 ½"	1'-10"					0'-6"		0'-1"		
4DZ07	2	#4	7'-10"	T7			0'-7"	6'-2"	1'-1"			5'-10"		2'-1 ½"		
4DZ08	2	#4	7'-7"	T7			0'-5"	6'-2"	1'-0"			5'-10"		2'-1 ½"		
4DZ09	2	#4	7'-4"	T7			0'-4"	6'-2"	0'-10"			5'-10"		2'-1 ½"		
4DZ10	2	#4	7'-3"	T7			0'-4"	6'-2"	0'-9"			5'-10"		2'-1 ½"		
6DZ01	56	#6	11'-4"	T7		2'-7"	6'-2"	2'-7"								
6DZ02	224	#6	4'-2"	T9	0'-8"	3'-6"										

⚠2 ⚠2 Release Number: 015

BAR LIST

Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
✳✳4SS01	4	#4	1'-0 ¾"	W44		0'-6 ¾"	0'-6"					0'-6"		0'-1"		
✳✳4SS02	2	#4	0'-11 ¾"	W44		0'-5 ¾"	0'-6"					0'-6"		0'-1"		
✳✳4SS03	6	#4	1'-3 ¾"	W44		0'-9 ¾"	0'-6"					0'-6"		0'-1"		

⚠2 **DIMENSION B INCLUDES 3/4" OF THREAD TO ENGAGE COUPLER IN PRECAST CAP



Vermont Agency of Transportation

RECEIVED

Jamaica ER BRF 013-2(16) Pier Cap Reinf Approved 4-24-2013.pdf

CK'D BY VHB OK'D BY JTS

April 22, 2013

RESUBMIT NO Approved

BY KMH DATE 04/24/13

SHOP DRAWING REVIEW

☑ RECEIVED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS. ☐ FURNISH AS CORRECTED

☐ REJECTED ☐ REVISE AND RESUBMIT

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

VHB Vanasse Hangen Brustlin, Inc. Job Number: 57550.00 Reviewed By: G.S. Goodrich Date: 4-23-2013

⚠2 NOTE: BAR MARKS MAY CHANGE WHEN DRAWING IS REVISED

-ELEVATIONS & DIMENSIONS SHOWN ON THIS DWG. ARE FOR REINF. DETAILING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION.

-DUAL COATED BAR - ASTM A1055 (Z BAR)

-STAINLESS STEEL BAR - ASTM A995 GRADE 60

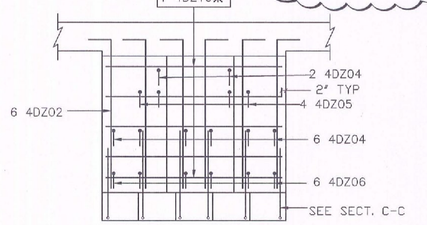
-DUAL COATED BAR DENOTED (Z)

-STAINLESS STEEL BAR DENOTED (SS)

FOR APPROVAL

TOP TO BOTTOM
1 4DZ03
1 4DZ07
1 4DZ08
1 4DZ09✳
1 4DZ10✳

⚠2 ✳DIMENSION C - 4" IS THE SMALLEST BEND THAT CAN BE MADE ON A #4 BAR



⚠2 ⚠2 VIEW D-D
PIER CAP POURBACK
2 ENDS THUS

6			
5			
4			
3	04/22/13	⚠2	REV'D/ENG. COMM./APPROVAL
2	04/16/13	⚠1	REV'D/ENG. COMM./APPROVAL
1	04/12/13	0	APPROVAL
	DATE	REV.#	SENT FOR

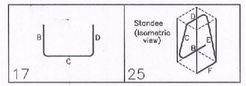
DIMENSION
DIMENSION FABRICATORS INC.
2900 7TH STEET
SCOTIA, N.Y. 12302
PH: (518) 374-1636
FAX (518) 374-4830
www.dimensionfabricators.com

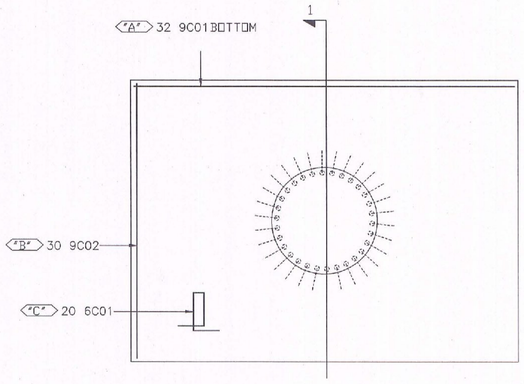
STRUCTURE	VTAOT JAMAICA ER BRF 013-1(16)
LOCATION	JAMAICA, VT
ARCHITECT	
ENGINEER	
CUSTOMER	T. BUCK CONSTRUCTION

DRAWN BY WAYNE DATE 04/12/13 DFI # 8421

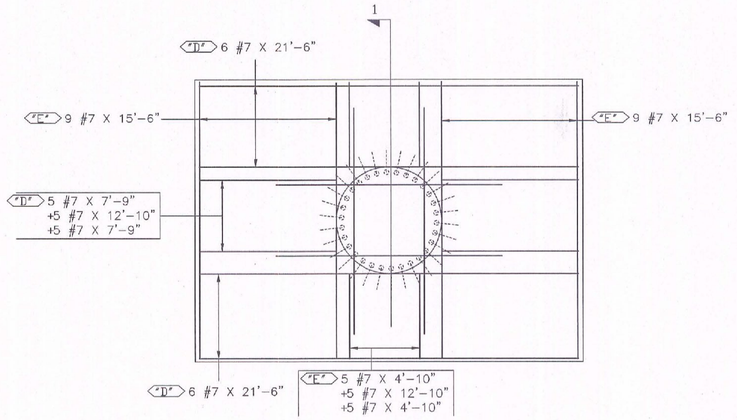
DRAWING COVERS: PIER CAP REINF. DRAWING #: D

Release Number: 013					BAR LIST											
Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
6C01	20	#6	12'-0 ½"	25		1'-6"	3'-9 ¼"	1'-6"	3'-9 ¼"	1'-6"		3'-8"		1'-10"		
9C01	32	#9	29'-6"	17		4'-0"	21'-6"	4'-0"								
9C02	30	#9	23'-6"	17		4'-0"	15'-6"	4'-0"								

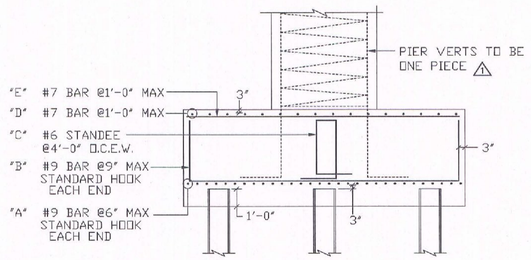




⚠2 ⚠1 PIER FTG. PLAN
BOTTOM MAT



⚠2 PIER FTG. PLAN
TOP MAT
LAP = 3'-5"



SECT. 1
PIER REINF ON FUTURE DWG.

Vermont Agency of Transportation
RECEIVED
CK'D BY VHB OK'D BY JTS
May 13, 2013
RESUBMIT NO Approved
BY KMH DATE 05/15/13

SHOP DRAWING REVIEW
☑ REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.
☐ REJECTED ☐ REVISE AND RESUBMIT ☐ FURNISH AS CORRECTED
CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.
VHB Vanasse Hangen Brustlin, Inc.
Job Number: 57550.00
Reviewed By: G.J. Goudreau
Date: 5-13-2013

-ELEVATIONS & DIMENSIONS SHOWN ON THIS DWG. ARE FOR REINF. DETAILING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION.
-REINF. BARS ASTM A615 GRADE 60

FOR APPROVAL

6			
5			
4	05/13/13	⚠	TOP MAT REVISED/APPROVAL
3	04/09/13	–	APPRVD AS RESUBM./FOR RECORD & JOB USE
2	03/27/13	⚠	REVD/ENG. COMM./APPROVAL
1	03/04/13	0	APPROVAL
	DATE	REV.#	SENT FOR

DIMENSION
DIMENSION FABRICATORS INC.
2000 7TH STEET SCOTIA, N.Y. 12302 PH: (518) 374-1936 FAX: (518) 374-1630 www.dimensionfabricators.com

STRUCTURE	VTAOT JAMAICA ER BRF 013-1(16)
LOCATION	JAMAICA, VT
ARCHITECT	
ENGINEER	
CUSTOMER	T. BUCK CONSTRUCTION

DRAWN BY: WAYNE | DATE: 03/04/13 | DFI #: 8421
DRAWING COVERS: PIER FTG. REINF. | DRAWING #: C

R&M Engineering Consultants
P.O. Box 428
Gilmanton, New Hampshire 03273
603-393-9842/603-556-7369 (Fax)

FIELD REPORT

To:	Tim Dudley	**From:**	Richard Bushnell, P.E.
Company:	SD Ireland Companies	**Pages:**	5
Address:	P.O. Box 2286 South Burlington, Vermont	**Date:**	5.2.2013
Re:	Jamaica - VT Retaining Wall Project No. 13-118	**CC:**	

☐ Urgent ☒ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Comments:

R&M Engineering has reviewed the submittal review and performed the following:

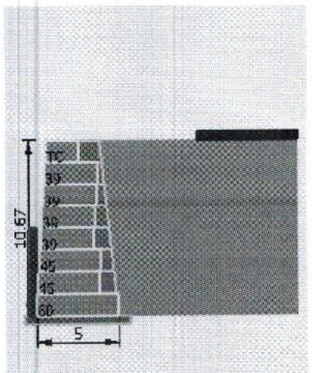
1. Calculations were updated to reflect the 34 deg friction angle and 140 pcf unit weight for the retained soil, as well as the live load surcharge increased to 280 psf. Attached are the revised calculation sheets.
2. With regards to the question regarding the Factor of Safety for sliding noted on Section 3. The Factor of Safety is calculated in two separate locations – between the Base Block and the Leveling Pad and between the Leveling Pad and the Foundation Soil. The program then reports the lowest of the two Factor of Safety on the output sheet.
3. The plan has been revised as per the comments.

Should you have any question or need further information do not hesitate to contact my office.

ReCon Walls

ReCon Retaining Walls, Inc version 2.1

Project:	Jamaica - ER-BRF 013-1(16)
Location:	Jamaica, Vermont
Designer:	R&M Engineering Consultants
Date:	5/2/2013
Section:	Section 1
Design Method:	AASHTO_LRFD
Seismic Acc:	0.120



SOIL PARAMETERS

	Phi	coh	Gamma
Retained Soil:	34 deg	0 psf	140 pcf
Foundation Soil:	32 deg	0 psf	125 pcf

Leveling Pad: Crushed Stone

GEOMETRY

Design Height:	10.67 ft	Live Load:	280 psf
Wall Batter/Tilt:	3.58/ 0.00 deg	Live Load Offset:	6.00 ft
Embedment:	5.33 ft	Live Load Width:	24 ft
Leveling Pad Depth:	0.50 ft	Dead Load:	0 psf
Slope Angle:	0 deg	Dead Load Offset:	0 ft
Slope Length:	0 ft	Dead Load Width:	0 ft
Slope Toe Offset:	0 ft	Leveling Pad Width:	6.00 ft

LOAD FACTORS

Load Case:	Str max(d)	Str min(r)	Seis max(sd)	Seis min(sr)	Service(serv)
Dead Load (DC)	1.25	0.90	1.25	0.90	1.00
Dead Load Driving (EH)	1.50	0.90	1.50	0.90	1.00
Vertical Earth load (EV)	1.35	1.00	1.35	1.00	1.00
Live Load (LL, PL, LS)	1.75	0.00	0.50	0.00	1.00

RESISTANCE FACTORS

Resistance Case:	Reduction Factor
Bearing Resistance(RFbr)	0.45
Sliding Concrete to Stone(RFsl_c)	0.90
Sliding Stone to Soil(RFsl_s)	0.90

RESULTS (Static / Seismic)

CDR Sliding:	1.35 (fnd) / 1.13	CDR Bearing:	3.80 / 3.80
CDR Eccentricity:	L/ 4.34 / L/ 5.60	Bearing	2815.72 / 188.07

Name	Elev.	FSsl	L/e	siesFSsl	Seis L/e
TC	9.33	146.94	78.98	81.20	131.18
39	8.00	39.29	39.51	23.17	37.22
39	6.67	18.23	15.41	11.99	14.94
39	5.33	10.62	8.12	7.43	7.97
39	4.00	7.02	4.98	5.10	4.92
45	2.67	4.91	6.76	3.69	8.02
45	1.33	3.65	4.26	2.90	5.16
60	0.00	1.38	4.34	1.13	5.60

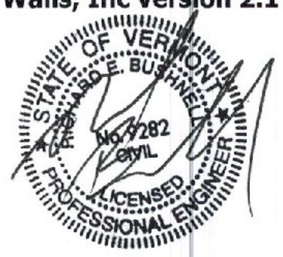
Note: Calculations are for Preliminary use only and should
not be used for construction without the review of a qualified professional.
ReCon Retaining Walls, Inc

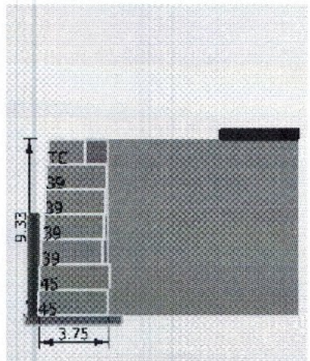
ReCon Walls

ReCon Retaining Walls, Inc version 2.1

Project: Jamaica - ER-BRF 013-1(16)
Location: Jamaica, Vermont
Designer: R&M Engineering Consultants
Date: 5/2/2013

Section: Section 2
Design Method: AASHTO_LRFD
Seismic Acc: 0.120





SOIL PARAMETERS	Phi	coh	Gamma
Retained Soil:	34 deg	0 psf	140 pcf
Foundation Soil:	32 deg	0 psf	125 pcf

Leveling Pad: Crushed Stone

GEOMETRY

Design Height:	9.33 ft	Live Load:	280 psf
Wall Batter/Tilt:	3.58/ 0.00 deg	Live Load Offset:	6.00 ft
Embedment:	5.33 ft	Live Load Width:	24 ft
Leveling Pad Depth:	0.50 ft	Dead Load:	0 psf
Slope Angle:	0 deg	Dead Load Offset:	0 ft
Slope Length:	0 ft	Dead Load Width:	0 ft
Slope Toe Offset:	0 ft	Leveling Pad Width:	4.75 ft

LOAD FACTORS

Load Case:	Str max(d)	Str min(r)	Seis max(sd)	Seis min(sr)	Service(serv)
Dead Load (DC)	1.25	0.90	1.25	0.90	1.00
Dead Load Driving (EH)	1.50	0.90	1.50	0.90	1.00
Vertical Earth load (EV)	1.35	1.00	1.35	1.00	1.00
Live Load (LL, PL, LS)	1.75	0.00	0.50	0.00	1.00

RESISTANCE FACTORS

Resistance Case:	Reduction Factor
Bearing Resistance(RFbr)	0.45
Sliding Concrete to Stone(RFsl_c)	0.90
Sliding Stone to Soil(RFsl_s)	0.90

RESULTS (Static / Seismic)

CDR Sliding:	1.41 (fnd) / 1.11	CDR Bearing:	4.25 / 4.25
CDR Eccentricity:	L/ 4.27 / L/ 5.18	Bearing	2381.45 / 157.00

Name	Elev.	FSsl	L/e	siesFSsl	Seis L/e
TC	8.00	148.42	80.61	81.72	134.90
39	6.67	39.49	39.46	23.26	37.18
39	5.33	18.29	15.46	12.03	14.98
39	4.00	10.65	8.15	7.44	7.99
39	2.67	7.04	4.99	5.11	4.93
45	1.33	4.92	6.77	3.70	8.04
45	0.00	1.44	4.27	1.11	5.18

Note: Calculations are for Preliminary use only and should
not be used for construction without the review of a qualified professional.

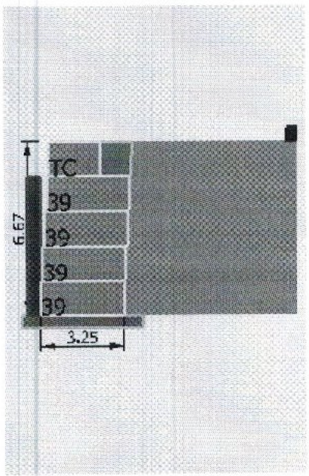
ReCon Walls

ReCon Retaining Walls, Inc version 2.1

Project: Jamaica - ER-BRF 013-1(16)
Location: Jamaica, Vermont
Designer: R&M Engineering Consultants
Date: 5/2/2013

Section: Section 3
Design Method: AASHTO_LRFD
Seismic Acc: 0.120

STATE OF VERMONT
RICHARD E. BUSWELL
No. 9282
CIVIL
LICENSED
PROFESSIONAL ENGINEER



SOIL PARAMETERS	Phi	coh	Gamma
Retained Soil:	34 deg	0 psf	140 pcf
Foundation Soil:	32 deg	0 psf	125 pcf

Leveling Pad: Crushed Stone

GEOMETRY

Design Height:	6.67 ft	Live Load:	280 psf
Wall Batter/Tilt:	3.58/ 0.00 deg	Live Load Offset:	6.00 ft
Embedment:	5.33 ft	Live Load Width:	24 ft
Leveling Pad Depth:	0.50 ft	Dead Load:	0 psf
Slope Angle:	0 deg	Dead Load Offset:	0 ft
Slope Length:	0 ft	Dead Load Width:	0 ft
Slope Toe Offset:	0 ft	Leveling Pad Width:	4.25 ft

LOAD FACTORS

Load Case:	Str max(d)	Str min(r)	Seis max(sd)	Seis min(sr)	Service(serv)
Dead Load (DC)	1.25	0.90	1.25	0.90	1.00
Dead Load Driving (EH)	1.50	0.90	1.50	0.90	1.00
Vertical Earth load (EV)	1.35	1.00	1.35	1.00	1.00
Live Load (LL, PL, LS)	1.75	0.00	0.50	0.00	1.00

RESISTANCE FACTORS

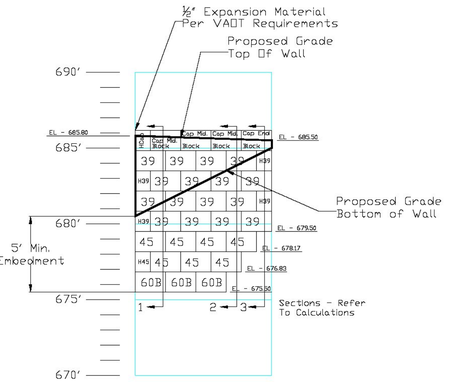
Resistance Case:	Reduction Factor
Bearing Resistance(RFbr)	0.45
Sliding Concrete to Stone(RFsl_c)	0.90
Sliding Stone to Soil(RFsl_s)	0.90

RESULTS (Static / Seismic)

CDR Sliding:	1.64 (lvlpd) / 1.19	CDR Bearing:	7.21 / 7.21
CDR Eccentricity:	L/ 4.98 / L/ 4.92	Bearing	1396.71 / 125.71

Name	Elev.	FSsl	L/e	siesFSsl	Seis L/e
TC	5.33	146.94	78.98	81.20	131.18
39	4.00	39.29	39.51	23.17	37.22
39	2.67	18.23	15.41	11.99	14.94
39	1.33	10.62	8.12	7.43	7.97
39	0.00	1.64	4.98	1.19	4.92

Note: Calculations are for Preliminary use only and should
not be used for construction without the review of a qualified professional.



RECON BLOCK RETAINING WALL
ELEVATION VIEW
FACING WALL

Scale: H - 1"=10' V - 1"=5'

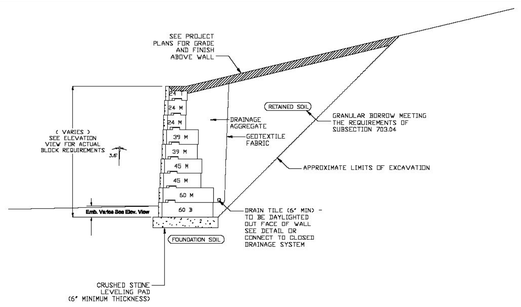
Quantities

½ FH CAP BLOCK - 1 blks (5.33 sf)
FH CAP BLOCK - 3 blks (31.98 sf)
FH CAP END BLOCK - 1 blk (13.33 sf)
39 FULL BLOCK - 16 blks (85.28 sf)
H39 FULL BLOCK - 4 blk (10.66 sf)
45 FULL BLOCK - 7 blks (37.31 sf)
H45 FULL BLOCK - 1 blk (2.67 sf)
60 BASE BLOCK - 3 blk (15.99 sf)

TOTAL SF OF WALL FACE - 202.55 sq ft

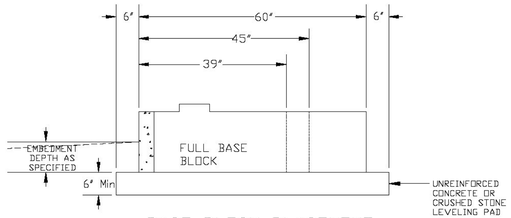
LEGEND

24	SIZE & TYPE OF BLOCK - I.E. 24 FULL BLOCK
24B	SIZE & TYPE OF BLOCK - I.E. 24 BASE BLOCK



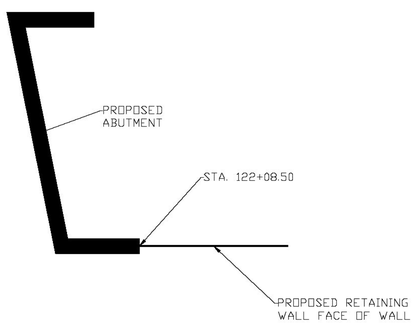
TYPICAL GRAVITY WALL SECTION

NTS



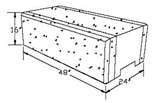
BASE BLOCK PLACEMENT

NOTES:
1. LEVELING PAD SHOULD BE AS SPECIFIED BY THE DESIGN ENGINEER IN THE PROJECT PLAN SET.
2. THE WIDTH OF THE LEVELING PAD MUST EXTEND 6" (MINIMUM) IN FRONT AND 6" (MIN) IN BACK OF THE BASE BLOCK. AS A RESULT, THE TYPICAL WIDTH OF LEVELING PAD WOULD BE:
   39" DEEP BASE BLOCK..LEVELING PAD WIDTH IS 51"
   45" DEEP BASE BLOCK..LEVELING PAD WIDTH IS 57"
   60" DEEP BASE BLOCK..LEVELING PAD WIDTH IS 72"
3. **SET THE BASE BLOCK AND CHECK FOR LEVEL FROM FRONT TO BACK.**
4. COMPACTION TO THE SPECIFIED EMBEDMENT DEPTH SHALL BE DONE IN FRONT OF THE BASE BLOCK **BEFORE** COMPACTION IS DONE BEHIND THE BASE BLOCK. THIS REDUCES THE CHANCE THAT COMPACTION BEHIND THE BASE BLOCK WILL ROLL THE BASE BLOCK FORWARD.
5. SEE BLOCK SPECIFICATION & INSTALLATION INSTRUCTIONS FOR MORE DETAILS.

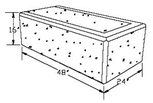


VICINITY SKETCH

(REFER TO PROJECT PLANS FOR SCALED LOCATIONS)
NOT TO SCALE

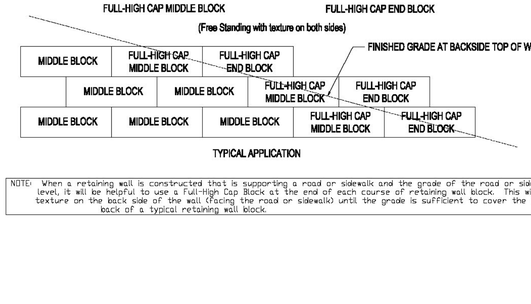


FULL-HIGH CAP MIDDLE BLOCK



FULL-HIGH CAP END BLOCK

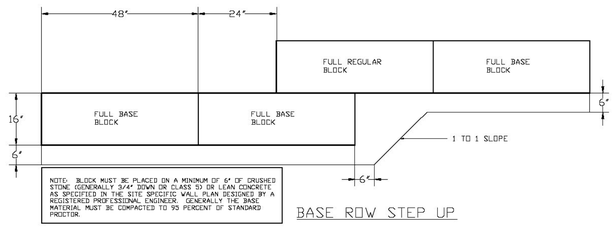
(Free Standing with texture on both sides)



TYPICAL APPLICATION

NOTE: When a retaining wall is constructed that is supporting a road or sidewalk and the grade of the road or sidewalk is not level, it will be helpful to use a Full-High Cap Block at the end of each course of retaining wall block. This will provide texture on the back side of the wall (facing the road or sidewalk) until the grade is sufficient to cover the untextured back of a typical retaining wall block.

Vermont Agency of Transportation
RECEIVED
Jamaica ER BRF013-1(16)Retaining Wall Submittal 5-2-2013.pdf
CK'D BY CB/JG/GL OK'D BY JTS
May 4, 2013
RESUBMIT NO Approved
BY KH DATE 05/15/13



BASE ROW STEP UP

NOTES:

1. *WALL TO BE CONSTRUCTED TO LINE AND GRADE ON THE CIVIL ENGINEERING SITE PLAN PREPARED BY VHB, INC. DATED 12 OCTOBER 2012.*
2. *EXCAVATION LIMITS FOR INSTALLATION OF THE RETAINING WALL SHALL CONFORM TO OSHA STANDARDS. CONTRACTOR IS RESPONSIBLE FOR CLASSIFICATION OF SOIL IN ACCORDANCE WITH OSHA STANDARDS AND MAINTAINING APPROPRIATE SLOPE LAYBACK REQUIREMENTS. ADDITIONALLY, CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF PROPERTY LINE BOUNDARIES AND OBTAINING APPROPRIATE PERMITS OR EASEMENTS AS NECESSARY TO COMPLETE INSTALLATION OF THE RETAINING WALL. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE BEARING AREA FOR THE EXISTING STRUCTURE AND PROVIDING ANY SUPPORT REQUIRED. CONTRACTOR IS ALSO RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF THE EXISTING CMU WALL. CONTRACTOR TO TAKE CARE IN NOT DISTURBING WALL DURING INSTALLATION.*
3. *BACKFILL BEHIND WALL TO BE FREE-DRAINING BACKFILL SHALL BE WELL-GRADED, COMPACTIBLE AGGREGATE MEETING AND PLACED IN ACCORDANCE WITH VAOT SPECIFICATIONS.*
4. *UNIT DRAINAGE FILL TO CONSIST OF DRAINAGE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 704.16, PLACE GEOTEXTILE FABRIC, MEETING THE REQUIREMENTS OF SUBSECTINO 720 BETWEEN THE DRAINAGE AGGREGATE AND GRANULAR BACKFILL.*
5. *SUBGRADE UNDERLYING LEVELING PAD SHALL CONSIST OF FIRM, DRY, UNDISTURBED NATURAL GLACIAL TILL SOILS OR FREE-DRAINING FILL COMPACTED TO 95% OF MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH STANDARD PROCTOR TEST (ASTM D-698). SUBGRADE TO BE CAPABLE OF 3,000 PSF BEARING CAPACITY TO BE VERIFIED BY QUALIFIED ENGINEER IN FIELD.*
6. *RETAINING WALL SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.*
7. *FOUNDATION DRAIN TO DAYLIGHT AT LOW-POINT OF WALL OR CONNECT TO A CLOSED DRAINAGE SYSTEM. WALL BLOCK TO BE CUT OR CORED IN FIELD TO ALLOW FOR DRAIN PIPE TO EXTEND THROUGH FACE OF WALL. SEE DETAIL PROVIDED HEREON.*
8. *FENCE OR GUARDRAIL, IS TO BE INSTALLED WHERE REQUIRED BY CODE OR PROJECT PLANS. REFER TO RECON STANDARD DETAIL FOR INSTALLATION OF APPROPRIATE ITEM AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ACTUAL DESIGN OF FENCE/GUARDRAIL BY OTHERS.*
9. *IF SITE CONDITIONS ARE DIFFERENT THAN THOSE ASSUMED FOR DESIGN, R&M ENGINEERING CONSULTANTS SHOULD BE NOTIFIED AND THE VALIDITY OF THE DESIGN VERIFIED.*
10. *CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL EROSION CONTROL MEASURES REQUIRED BY CODE - R&M IS NOT RESPONSIBLE FOR EROSION CONTROL MEASURES OR APPLICATION OF FINISH SLOPE TREATMENT.*

RETAINING WALL CONSTRUCTION PLAN
RECON BLOCK WALL
JAMAICA ER-BRF 013-1(16) SPECIAL PROVISION RETANING WALL JAMAICA, VT

DATE:	REVISIONS	DATE:	DRAWN BY
5/2/13	PER COMMENTS	3/15/13	R. BUSHNELL, P. E.
		PROJ. NUMBER 13-118	CHECKED BY R. BUSHNELL, P. E.

SHEET 1 OF 1

PREPARED FOR:
SD IRELAND COMPANIES
WILLISTON, VERMONT

PREPARED BY:
R & M ENGINEERING CONSULTANTS
38 EDWARDS DRIVE, GILMANTON IW, NH 03837
TEL: (603) 393-9842 FAX: (603) 556-7369

S.D. Ireland
Concrete Construction Corporation
802-863-6222 • Fax: 802-860-1528
www.sdireland.com

CONCRETE MIX DESIGN

5000 psi

SCC

SDI MIX CODE: P50TER

DATE: September 14, 2012 **PLANT:** Burlington, VT

PROJECT: **General DOT Precast - 2012**

FINE AGGREGATE: ASTM C 33	Source:	Hinesburg Sand & Gravel
	Specific Gravity:	2.67 (Abs.: 1.15%)
	Fineness Modulus:	2.9
COARSE AGGREGATE: ASTM C 33	Source:	S.D. Ireland, Brownell Quarry
	Specific Gravity:	2.74 (Abs.: 0.37%)
	Description	3/4" 100% Crushed Stone (Size #67)

CEMENT: Ternary Blend Cement; Lefarge North America Lakes and Seaway Re St. Constant, Quebec (22% Slag, 5% Silica Fume, 73% Type II Cement) (Sp.Gvty: 2.98)

ADMIXTURES: Water Reducer (HRWR): Glenium 7500; BASF Admixtures
Air Entraining Agent: Darex II AEA; Grace Concrete Chemicals

CONSTITUENTS (LBS. /YD³)

		Abs.Vol.
Coarse Aggregate (SSD)	1700	9.94
Fine Aggregate (SSD)	1096	6.58
Cement	705	3.91
Water	300	4.81
Air Content (Entrained)	6.5%	1.76
Total	3801	27.00ft³

MIX PROPERTIES/ REQUIREMENTS

Water Cement Ratios: 0.41 (0.44)
Entrained Air Content: 5.0 % – 9.0%
Dry Unit Weight: 140.8 ± pcf
Spread: 21" to 27"
Concrete Temperatures: 50 – 85°F

***ADMIXTURE(S) DOSEAGE (OZ. /YD³)**

Glenium 7500 (HRWR)	46 - 53
Darex II AEA	2.8

TYPICAL STRENGTH GAIN

18-HOURS	1980 psi
3-DAYS	3760 psi
7-DAYS	4790 psi
28-DAYS	6020 psi

*Admixture dosage rates are subject to change.

10 x C DIMENSION 2'-0"
55 x C DIMENSION 2'-8"
9 x C DIMENSION 1'-8"

85

△2 Release Number: 005

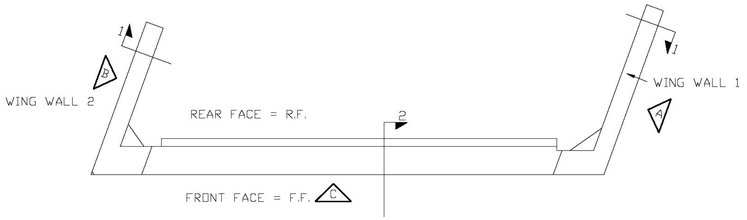
BAR LIST

Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
5A01	74	#5	10'-1"	17		3'-9"	2'-7"	3'-9"								
5A02	260	#5	4'-3"	17		0'-10"	2'-8"	0'-10"								
5A03	8	#5	4'-4"	36		2'-2"	2'-2"					2'-0 ¾"		0'-8 ¾"		
5A04	15	#5	9'-1 ¾"	3			1'-5 ¾"	6'-2"	1'-5 ¾"			1'-2 ¾"		0'-10 ¾"	7'-10 ½"	
5A05	15	#5	6'-5"	20		2'-2"	0'-8"	3'-7"								
5A06	7	#5	4'-3 ¾"	3		2'-2"	2'-1 ¾"					2'-0 ¾"		0'-8 ¾"	2'-10 ¾"	
5A07	13	#5	10'-11 ½"	3			1'-5 ¾"	8'-0"	1'-5 ¾"			0'-10 ¾"		1'-2 ¾"	10'-5 ½"	
5A08	13	#5	6'-5"	20		2'-2"	1'-0"	3'-3"								

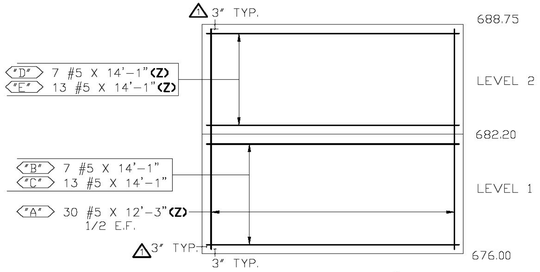
△2 Release Number: 006

BAR LIST

Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
6AZ01	190	#5	4'-3"	17		0'-10"	2'-8"	0'-10"								
6AZ02	10	#5	13'-5"	17		5'-5"	1'-11"	5'-5"								
6AZ03	55	#5	10'-7"	17		4'-0"	2'-8"	4'-0"								
6AZ04	9	#5	14'-1"	17		5'-9"	1'-8"	5'-9"								
6AZ01	37	#6	6'-4"	1	0'-8"	5'-0"					0'-8"		0'-6"			
6AZ02	37	#6	7'-2"	17		2'-2"	5'-0"									
6AZ03	37	#6	8'-0"	3			1'-6"	5'-0"	1'-6"			1'-0 ¾"		1'-0 ¾"	7'-1 ¾"	
6AZ04	6	#6	8'-5"	36		6'-3"	2'-2"					2'-0 ¾"		0'-8 ¾"		
6AZ05	12	#6	7'-2"	36		5'-0"	2'-2"					2'-0 ¾"		0'-8 ¾"		
6AZ06	12	#6	6'-5"	20		2'-2"	0'-8"	3'-7"								
6AZ07	14	#6	6'-5"	20		2'-2"	1'-0"	3'-3"								
6AZ08	14	#6	7'-8 ¾"	3		5'-7"	2'-1 ¾"					2'-0 ¾"		0'-8 ¾"	6'-3 ¾"	
6AZ09	7	#6	8'-4 ¾"	3		6'-3"	2'-1 ¾"					2'-0 ¾"		0'-8 ¾"	6'-11 ¾"	



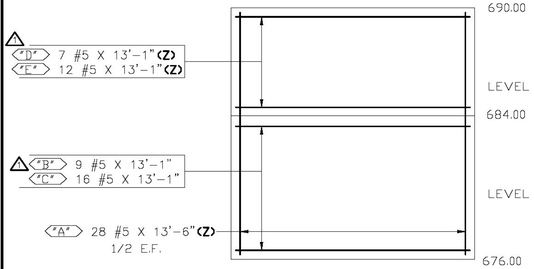
ABUTMENT PLAN



ELEVATION △A

WINGWALL 1

△ ALL BAR LENGTHS REVISED PER NEW CLEARANCE DIMENSION



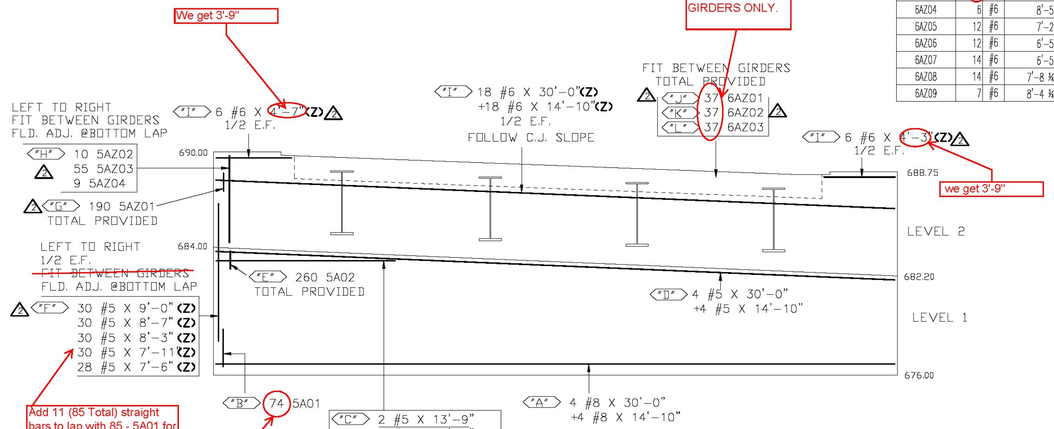
ELEVATION △B

WINGWALL 2

△ ALL BAR LENGTHS REVISED PER NEW CLEARANCE DIMENSION

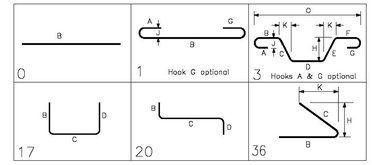
We get 3'-9"

We GET 27. PLANS SHOW BETWEEN GIRDERS ONLY.



Add 11 (85 Total) straight bars to lap with 85 - 5A01 for under steel girders. Front Face bars not to penetrate bridge seat (hold at 3" below)

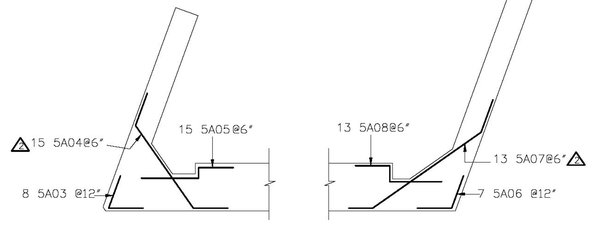
85



△ ELEVATION C

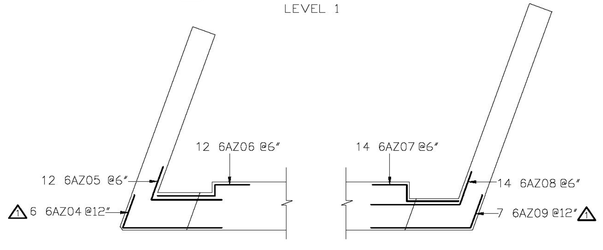
ABUTMENT

FLD. ADJ. AS REQ.



△ BELOW THE CONSTRUCTION JOINT

LEVEL 1

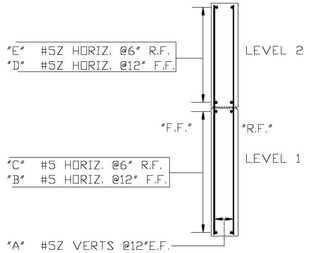


ABOVE THE CONSTRUCTION JOINT

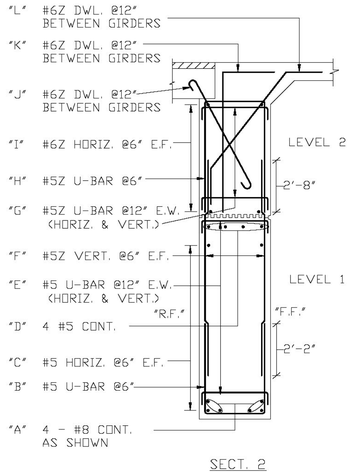
LEVEL 2

CORNER BARS

FLD. ADJ. AS REQ.



SECT. 1



SECT. 2

NOTE: BAR MARKS MAY CHANGE WHEN DRAWING IS REVISED

LAP = 2'-2" U.N.O.

- ELEVATIONS & DIMENSIONS SHOWN ON THIS DWG. ARE FOR REINF. DETAILING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION.
- BLACK REINF. BARS - ASTM A615 GRADE 60
- DUAL COATED BAR - ASTMA1055 (Z BAR)
- **DUAL COATED BAR DENOTED (Z)**

FOR APPROVAL

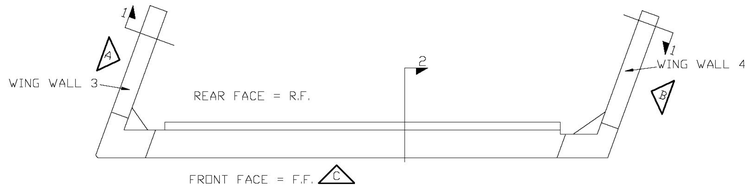
6			
5			
4			
3	04/02/13	△2	REV'D/ENG. COMM./APPROVAL
2	03/22/13	△1	REV'D/ENG. COMM./APPROVAL
1	02/19/13	0	APPROVAL
	DATE	REV.#	SENT FOR

DIMENSION
DIMENSION FABRICATORS INC.
2000 7TH STEET
SCOTIA, N.Y. 12302
PH: (518) 374-1936
FAX (518) 374-4530
www.dimensionfabricators.com

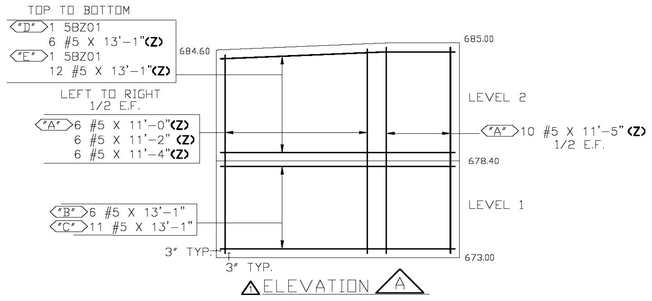
STRUCTURE	VTAOT JAMAICA ER BRF 013-1(16)
LOCATION	JAMAICA, VT
ARCHITECT	
ENGINEER	
CUSTOMER	T. BUCK CONSTRUCTION

DRAWN BY	DATE	DFI #
WAYNE	02/19/13	8421

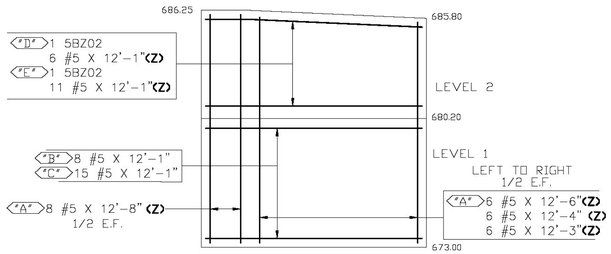
DRAWING COVERS	DRAWING #
ABUTMENT 1 REINF.	A



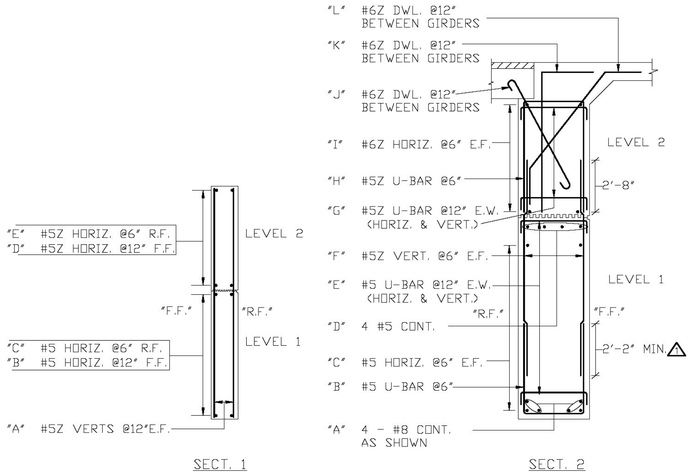
ABUTMENT PLAN



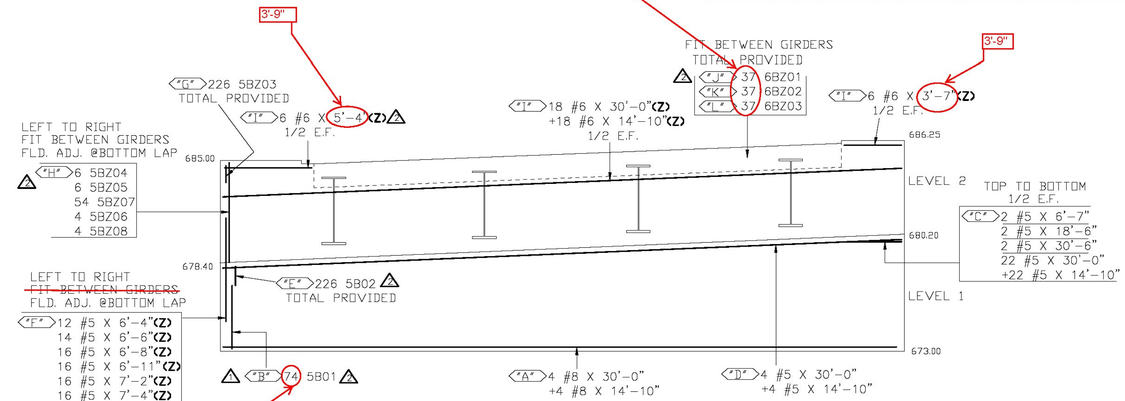
△ ELEVATION A
WINGWALL 3



△ ELEVATION B
WINGWALL 4

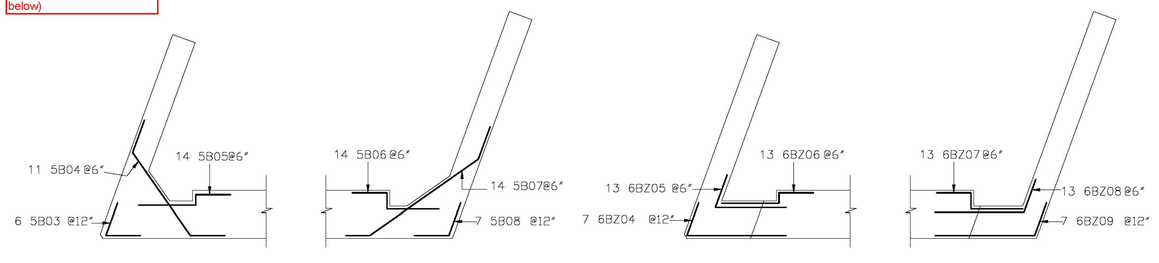


SECT. 1 SECT. 2



△ ELEVATION C
ABUTMENT
FLD. ADJ. AS REQ.

Add 11 (85 Total) straight bars to lap with 85 - 5A01 for under steel girders. Front Face bars not to penetrate bridge seat (hold at 3" below)

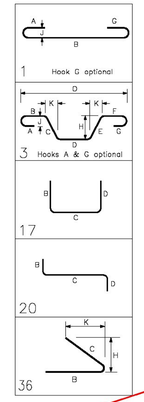


△ BELOW THE CONSTRUCTION JOINT
LEVEL 1

ABOVE THE CONSTRUCTION JOINT
LEVEL 2

CORNER BARS
FLD. ADJ. AS REQ.

85



27

VAIRES 1'-7" TO 2'-8" See comment for Abut. 1

Release Number: 007 — BAR LIST

Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
5BZ01	2	#5	13'-2 ¾"	3		9'-4"	3'-10 ¾"					0'-2"		3'-10 ¾"	13'-2 ¾"	

Release Number: 009 — BAR LIST

Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
5BZ02	2	#5	12'-3"	3		9'-10"	2'-5"					0'-1 ¾"		2'-5"	12'-3"	

△ Release Number: 011 — BAR LIST

Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
5B01	74	#5	10'-1"	17		3'-9"	2'-7"	3'-9"								
5B02	226	#5	4'-3"	17		0'-10"	2'-8"	0'-10"								
5B03	6	#5	4'-4"	36		2'-2"	2'-2"					2'-0 ¾"		0'-8 ¾"		
5B04	11	#5	9'-1 ½"	3			1'-5 ¾"	6'-2"	1'-5 ¾"			1'-2 ¾"		0'-10 ¾"	7'-10 ½"	
5B05	14	#5	6'-4"	20		2'-2"	0'-8"	3'-6"								
5B06	14	#5	6'-8"	20		2'-2"	1'-0"	3'-6"								
5B07	14	#5	10'-11 ½"	3			1'-5 ¾"	8'-0"	1'-5 ¾"			0'-10 ¾"		1'-2 ¾"	10'-5 ½"	
5B08	7	#5	4'-3 ¾"	3		2'-2"	2'-1 ¾"					2'-0 ¾"		0'-8 ¾"	2'-10 ¾"	

△ Release Number: 012 — BAR LIST

Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'J'	'K'	'O'	'R'
5BZ03	226	#5	4'-3"	17		0'-10"	2'-8"	0'-10"								
5BZ04	6	#5	14'-9"	17		6'-1"	2'-0"	6'-1"								
5BZ05	6	#5	14'-5"	17		5'-11"	2'-0"	5'-11"								
5BZ06	4	#5	13'-11"	17		5'-8"	1'-8"	5'-8"								
5BZ07	54	#5	10'-9"	17		4'-1"	2'-8"	4'-1"								
5BZ08	4	#5	13'-7"	17		5'-6"	1'-8"	5'-6"								
6BZ01	37	#6	6'-4"	1	0'-8"	5'-0"					0'-8"		0'-6"			
6BZ02	37	#6	7'-2"	17		2'-2"	5'-0"									
6BZ03	37	#6	8'-0"	3			1'-6"	5'-0"	1'-6"			1'-0 ¾"		1'-0 ¾"	7'-1 ½"	
6BZ04	7	#6	8'-5"	36		6'-3"	2'-2"					2'-0 ¾"		0'-8 ¾"		
6BZ05	13	#6	7'-2"	36		5'-0"	2'-2"					2'-0 ¾"		0'-8 ¾"		
6BZ06	13	#6	6'-5"	20		2'-2"	0'-8"	3'-7"								
6BZ07	13	#6	6'-5"	20		2'-2"	1'-0"	3'-3"								
6BZ08	13	#6	7'-8 ¾"	3		5'-7"	2'-1 ¾"					2'-0 ¾"		0'-8 ¾"	6'-3 ¾"	
6BZ09	7	#6	8'-4 ¾"	3		6'-3"	2'-1 ¾"					2'-0 ¾"		0'-8 ¾"	6'-11 ¾"	

△ NOTE: BAR MARKS MAY CHANGE WHEN DRAWING IS REVISED

LAP = 2'-2" U.N.O.

-ELEVATIONS & DIMENSIONS SHOWN ON THIS DWG. ARE FOR REINF. DETAILING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION.
-BLACK REINF. BARS - ASTM A615 GRADE 60
-DUAL COATED BAR - ASTMA1055 (Z BAR)
-DUAL COATED BAR DENOTED (Z)

FOR APPROVAL

6			
5			
4			
3	04/02/13	△	REV'D/ENG. COMM./APPROVAL
2	03/27/13	△	REV'D/ENG. COMM./APPROVAL
1	02/22/13	0	APPROVAL
	DATE	REV.#	SENT FOR

DIMENSION
DIMENSION FABRICATORS INC.
2000 7TH STEET
SCOTIA, N.Y. 12302
PH: (518) 374-1836
FAX (518) 374-4530
www.dimensionfabricators.com

STRUCTURE	VTAOT JAMAICA ER BRF 013-1(16)
LOCATION	JAMAICA, VT
ARCHITECT	
ENGINEER	
CUSTOMER	T. BUCK CONSTRUCTION

DRAWN BY	DATE	DFI #
WAYNE	02/22/13	8421

DRAWING COVERS	DRAWING #
ABUTMENT 2 REINF.	B

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

1. ALL MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS DATED 2012, AND THEIR LATEST REVISIONS.

MATERIAL SPECIFICATIONS

1. ALL STRUCTURAL STEEL TO BE UNPAINTED AASHTO M270 GRADE 50W, UNLESS NOTED.
2. MATERIAL NOTES "T2" ON DETAIL DRAWINGS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF VERMONT STANDARD SPECIFICATIONS SECTION 714.01.
3. HIGH STRENGTH BOLTS SHALL BE 7/8" DIAMETER, ASTM A325 (TYPE 3), IN 15/16" DIAMETER HOLES. NUTS SHALL BE A563 (TYPE 3) GRADE C3, AND WASHERS SHALL BE F436 (TYPE 3).

   BOLTS & NUTS SHALL BE ROTATIONAL CAPACITY TESTED.
   DO NOT MIX BOLTS & NUTS FROM DIFFERENT CONTAINERS UNLESS ALL BOLTS & NUTS HAVE THE SAME LOT NUMBER.

FABRICATION

1. ALL HOLES SHALL BE PUNCHED OR DRILLED FULL SIZE, UNLESS NOTED.

WELDING

1. THE CONFIGURATION OF THE WELD JOINTS AND ALL WELDING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO/AWS D1.5-08 BRIDGE WELDING CODE; IN ADDITION TO THE PROVISIONS OF VERMONT STANDARD SPECIFICATIONS SECTION 506.10. ALL WELDING WILL BE DETAILED TO PRE-QUALIFIED JOINTS, UNLESS PROHIBITED BY THE DESIGNER.
2. WELDING OF MAIN LOAD CARRYING MEMBERS AND ATTACHMENTS SHALL BE PERFORMED USING THE AUTOMATIC SUBMERGED ARC & SHIELDED METAL ARC PROCESSES. ALL WELDS ARE CONTINUOUS, UNLESS NOTED.
3. NON-DESTRUCTIVE TESTING OF WELDS SHALL BE IN ACCORDANCE WITH THE REFERENCED SPECIFICATION.
4. SEE DETAIL "WS1" FOR THE WELD TERMINATION DETAIL.

FIELD CONNECTIONS

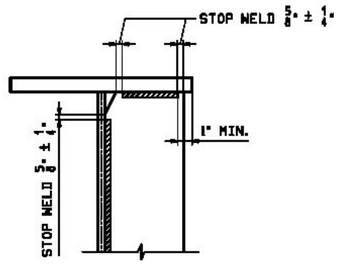
1. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH STRENGTH A325 BOLTS, INSTALLED PER SECTION 506.19(c). SEE SHEET E1 FOR BOLT SIZES.
2. BOLTS SHALL HAVE A HEAVY HEX HEAD, HEAVY HEX NUT, AND AT LEAST ONE HARD FLAT WASHER EACH. WASHER TO BE PLACED UNDER THE TURNED ELEMENT.
3. PIECE MARKS WILL BE LOCATED AS SHOWN ON SHEET E1.

CLEANING

1. ALL STEEL SHALL BE BLAST CLEANED IN ACCORDANCE WITH SSPC SP-10.

PAINTING

1. ALL STEEL SHALL BE UNPAINTED.



DETAIL "WS1"
STIFF. WELD TERMINATION

NOTE TO ENGINEER:
THESE NOTES ARE NOT INTENDED TO BE ALL INCLUSIVE AND COMPLIANCE WITH RELEVANT SPECIFICATIONS REMAIN UNCHANGED.

Vermont Agency of Transportation
RECEIVED
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT NO Approved AsNoted
BY KMH DATE 03/18/13

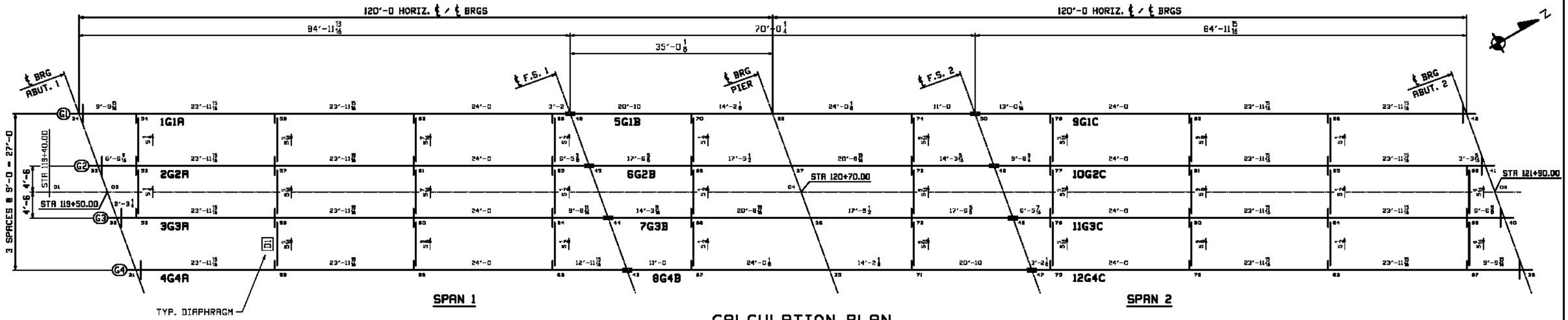
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:

DESCRIPTION: GENERAL NOTES

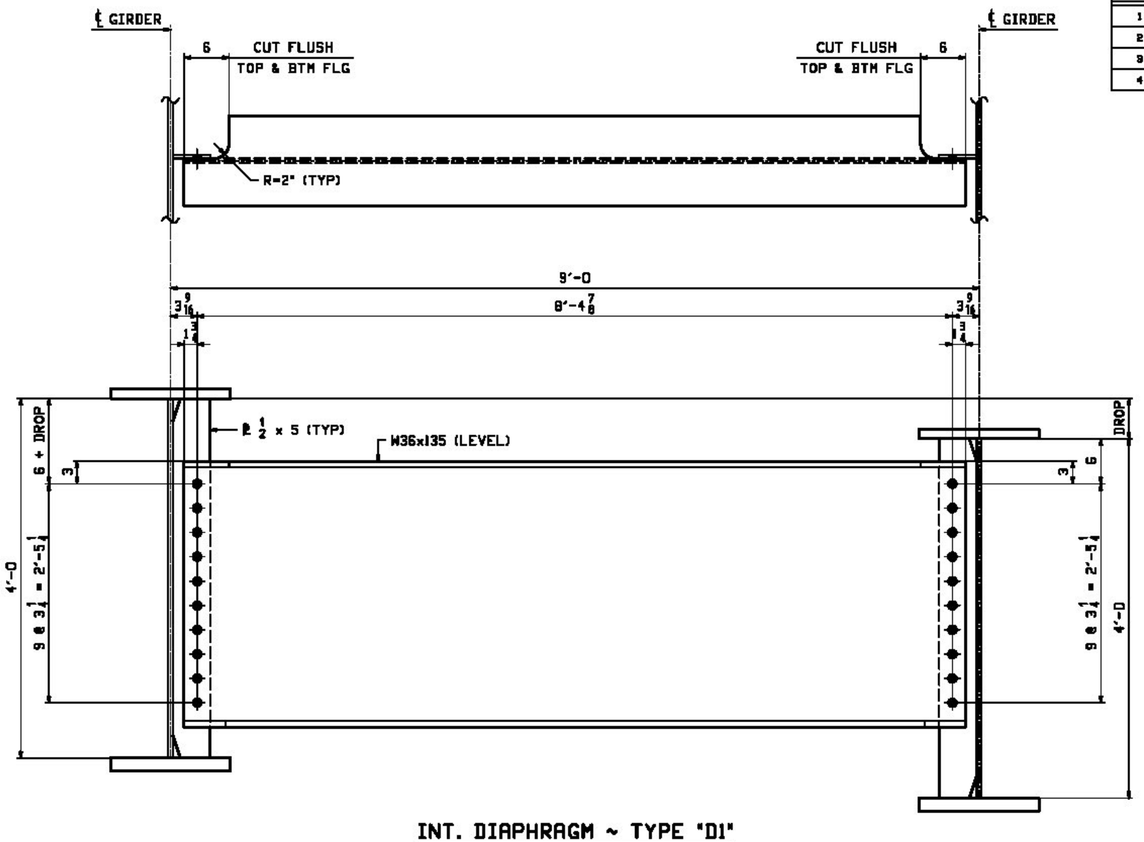
CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/04	
	CHKD: DBH	DATE: 02/27	
LOCATION: TOWN OF JAMAICA, VT	JOB NO.	DWG NO.	
PROJ NO. ER-BRF 013-1(16)	529-1	GN1	
CUSTOMER: T. BUCK CONSTRUCTION		REV.	



CALCULATION PLAN

LINE	GRADE		
	ABUT. 1	PIER	ABUT. 2
1	-.0120	-.0160	-.0205
2	-.0121	-.0160	-.0199
3	-.0121	-.0160	-.0199
4	-.0115	-.0160	-.0200



INT. DIAPHRAGM ~ TYPE "D1"

LOOKING DOWNSTATION

NOTE
THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION. THIS DWG IS SUBMITTED FOR INFORMATION ONLY AND IS NOT INTENDED FOR SHOP FABRICATION.

NOTES
1. LONGITUDINAL DIMENSIONS ARE SLOPING ALONG BOTT OF WEB WITH CORRECTIONS MADE FOR GRADE & DL CAMBER (UN).
2. TRANSVERSE DIMENSIONS ARE IN A HORIZ. PLANE (UN).
3. DROP ARROW POINTS TOWARDS LOW END OF MEMBER.
4. ENDS OF GIRDERS AND BRG. STIFF'S ARE VERTICAL AFTER DL ROTATION.
5. DIAPHRAGM CONN. PLATES ARE NORMAL TO GRADE.
6. BOTT PT NUMBERS = TOP PT NUMBERS + 100.
7. DIAPHRAGM DROPS ARE CALCULATED IN THEIR FINAL POSITION.
8. COMBINE DIAPHRAGMS FOR DIFFERENCES IN DROPS OF +/- 1/16".

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1		

DESCRIPTION: CALCULATION PLAN & LAYOUT

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 01/30	
	CHKD: DBH	DATE: 02/27	
LOCATION: TOWN OF JAMAICA, VT	JOB NO.	DWG NO.	
PROJ NO. ER-BRF 013-1(16)	529-1	WS1	
CUSTOMER: T. BUCK CONSTRUCTION		REV. 0	

Vermont Agency of Transportation
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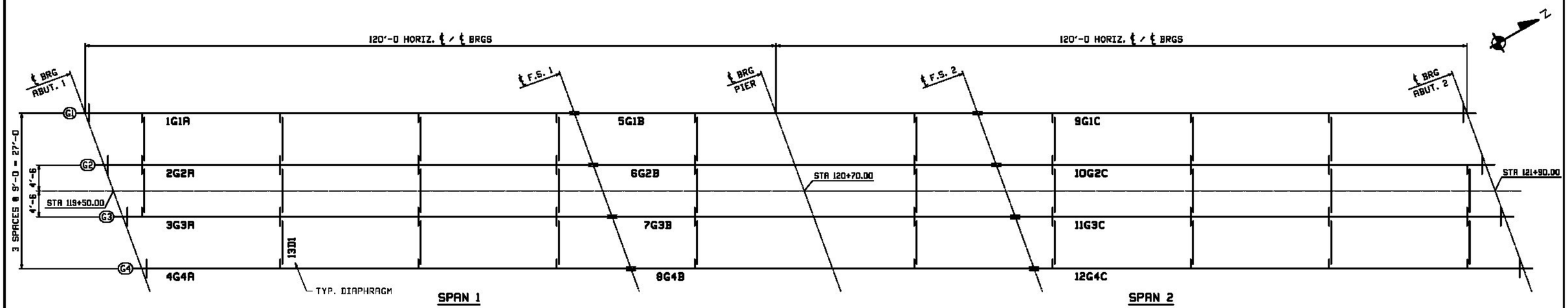
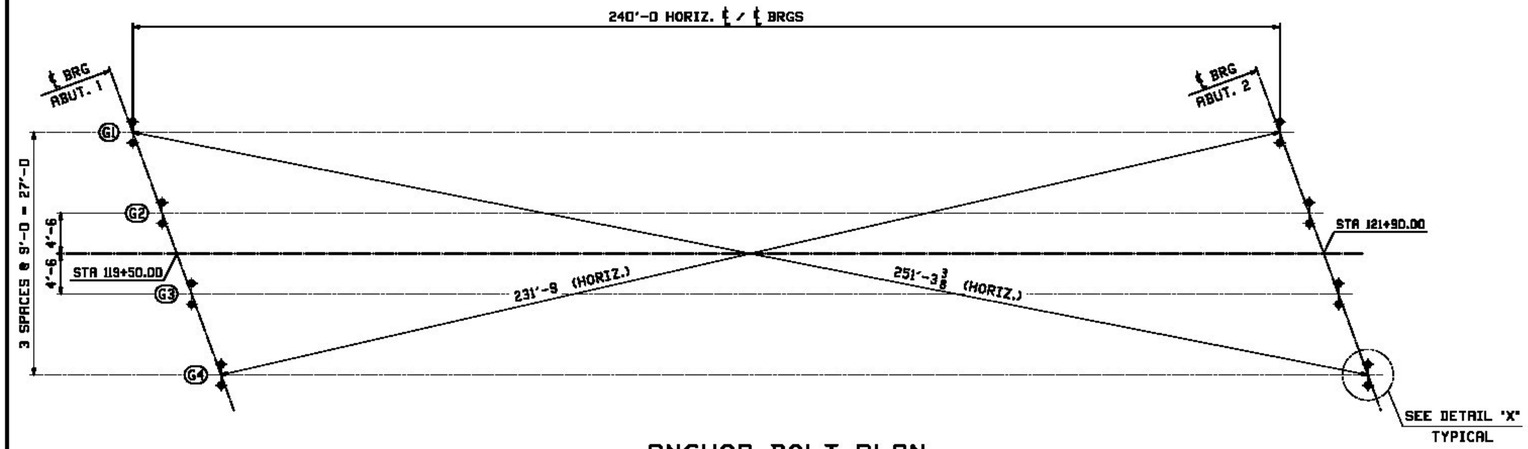
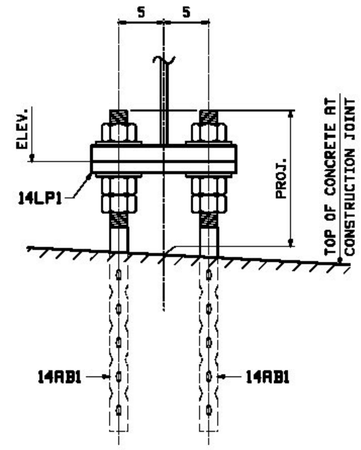
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT _____ Approved
BY KMH DATE 03/18/13



FRAMING PLAN

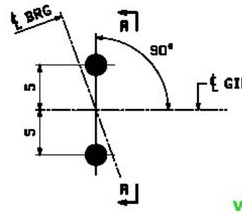


ANCHOR BOLT PLAN



SECTION A-A
TYPICAL

GIRDER LINE		PROJ.	ELEV.
ABUT. 1	G1	1'-3¼	683.24
	G2	1'-3¼	683.64
	G3	1'-3¼	684.04
	G4	1'-3¼	684.43
ABUT. 2	G1	1'-2¼	679.40
	G2	1'-2¼	679.80
	G3	1'-2¼	680.20
	G4	1'-2¼	680.59



DETAIL "X"
TYPICAL

FIELD BOLT LIST — A325 Type 3 BOLTS

LINE	NO REQ'D.	BOLT DIAM.	BOLT LEN.	BOLTS /CONN.	# OF CONN.	GRIP	THICKNESS OF PCS. CONNECTED						WASHER CODE	PIECES CONNECTED AND REMARKS
1														
2														FIELD SPLICE
3	448	⅞	5½	56	8	3⅜	¾	2¼	⅞				2	Top Flange Splice
4	624	⅞	3	78	8	1⅝	½	⅝	½				1	Web Splice
5	912	⅞	8	64	8	4⅜	¾	2¾	⅞				2	Btm Flange Splice
6														
7														INT. DIAPHRAGMS
8	560	⅞	2½	10	56	1⅛	½	⅝					1	Conn. Plate - Diaphragm Web
9														

WASHER CODES
1: 1 Hard Flat Washer
2: 2 Hard Flat Washers

FIELD BOLT SUMMARY — 2% + 2 ADDED, MIN. 2 EXTRA

LINE	NO. OF BOLTS	BOLT DIAM.	TYPE	BOLT LEN	ACTUAL COUNT	REMARKS
1	573	⅞	A325 Type 3	2½	580	
2	838	⅞	"	3	824	
3	459	⅞	"	5½	448	
4	524	⅞	A325 Type 3	8	512	
5						
6	3177	Hard Flat Washers	for ⅞ ø	BOLT	F436-3	
7						
8						
9						

Vermont Agency of Transportation
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CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT ____ Approved
BY KMH DATE 03/18/13

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

MATERIAL: | SURFACE PREP. & PAINT: | HOLES: | SHOP BOLTS:

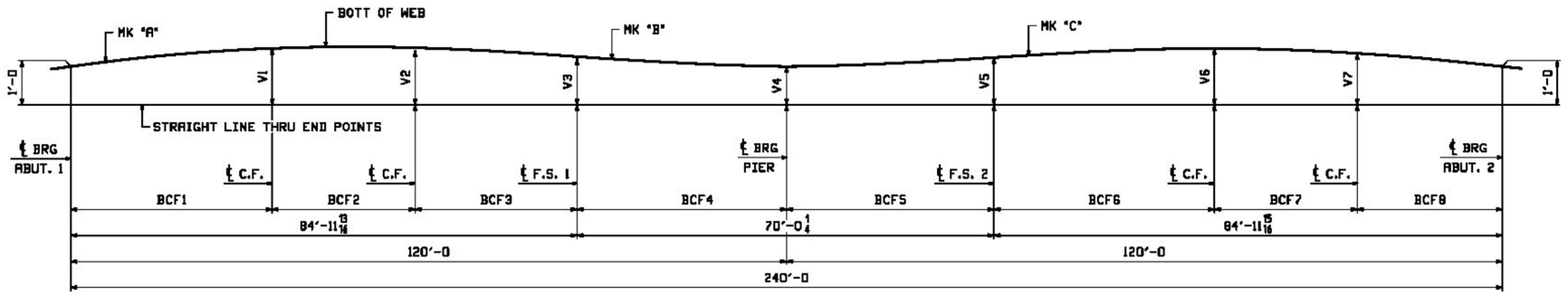
DESCRIPTION: FRAMING PLAN, ANCHOR BOLT PLAN & FIELD BOLTS

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENSOR 3984

STRUCTURE: VT 100 OVER WARDSBORO BROOK
BRIDGE NO 78
WINDHAM COUNTY

DRAWN: EEO | DATE: 02/04
CHKD: DBH | DATE: 02/27

LOCATION: TOWN OF JAMAICA, VT | JOB NO. 529-1 | DWG NO. E1
PROJ NO. ER-BRF 013-1(16)
CUSTOMER: T. BUCK CONSTRUCTION | REV. △



SHOP ASSEMBLY DIAGRAM

LINE	V1	V2	V3	V4	V5	V6	V7	BCF1	BCF2	BCF3	BCF4	BCF5	BCF6	BCF7	BCF8	"A"	"B"	"C"
1	1'-3 1/4	1'-3 9/16	1'-1 15/16	1'-0	1'-1 15/16	1'-3 11/16	1'-2 5/8	33'-9 7/8	23'-11 15/16	27'-2	35'-0 1/8	35'-0 1/8	37'-0 1/16	23'-11 15/16	23'-11 15/16	1G1A	5G1B	9G1C
2	1'-3 5/16	1'-3 7/8	1'-2 1/16	1'-0	1'-2 1/16	1'-3 15/16	1'-3 1/16	30'-6 1/2	23'-11 15/16	30'-5 3/8	35'-0 1/8	35'-0 1/8	33'-8 3/4	23'-11 15/16	27'-3 1/4	2G2A	6G2B	10G2C
3	1'-3 1/16	1'-3 15/16	1'-2 1/16	1'-0	1'-2 1/16	1'-3 7/8	1'-3 5/16	27'-3 3/16	23'-11 15/16	33'-8 11/16	35'-0 1/8	35'-0 1/8	30'-5 7/16	23'-11 15/16	30'-6 9/16	3G3A	7G3B	11G3C
4	1'-2 5/8	1'-3 11/16	1'-1 15/16	1'-0	1'-1 15/16	1'-3 9/16	1'-3 1/4	23'-11 15/16	23'-11 15/16	36'-11 15/16	35'-0 1/8	35'-0 1/8	27'-2 1/8	23'-11 15/16	33'-9 7/8	4G4A	8G4B	12G4C

NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. ALL DIMENSIONS GIVEN AT BTM OF WEB.

Vermont Agency of Transportation
RECEIVED
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT Approved
BY KMH DATE 03/18/13

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

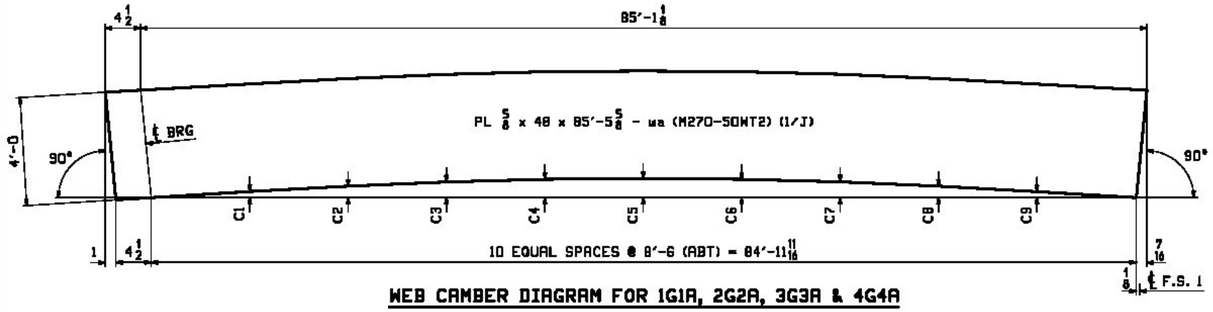
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:

DESCRIPTION: SHOP ASSEMBLY DIAGRAM

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/04	
	CHKD: DBH	DATE: 02/27	
LOCATION: TOWN OF JAMAICA, VT	JOB NO. 529-1	DWG NO. SA1	
PROJ NO. ER-BRF 013-1(16)			
CUSTOMER: T. BUCK CONSTRUCTION		REV. 0	

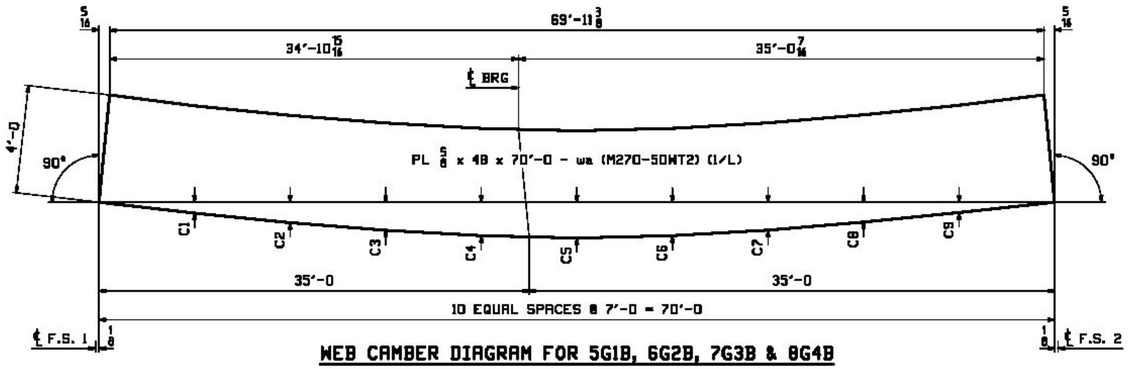
Thu, Feb 28, 2013 08:08:53 PM J:\Projects\Jobs\529\SA1.dwg



WEB CAMBER DIAGRAM FOR 1G1A, 2G2A, 3G3A & 4G4A

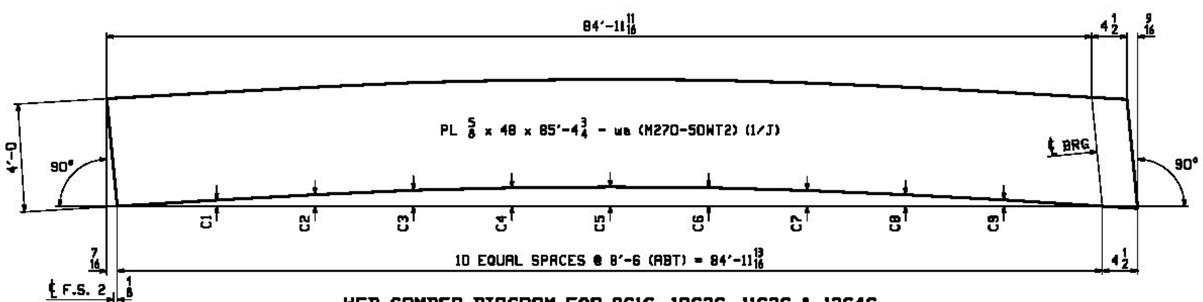
MARK	C1	C2	C3	C4	C5	C6	C7	C8	C9
1G1A	7/8	1 9/16	2 1/8	2 1/2	2 5/8	2 1/2	2 3/16	1 9/16	13/16
2G2A	7/8	1 5/8	2 5/16	2 11/16	2 13/16	2 11/16	2 5/16	1 11/16	7/8
3G3A	7/8	1 5/8	2 5/16	2 11/16	2 13/16	2 11/16	2 5/16	1 11/16	7/8
4G4A	7/8	1 5/8	2 3/16	2 1/2	2 5/8	2 1/2	2 1/8	1 9/16	7/8

Vermont Agency of Transportation
RECEIVED
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT Approved
BY KMH DATE 03/18/13

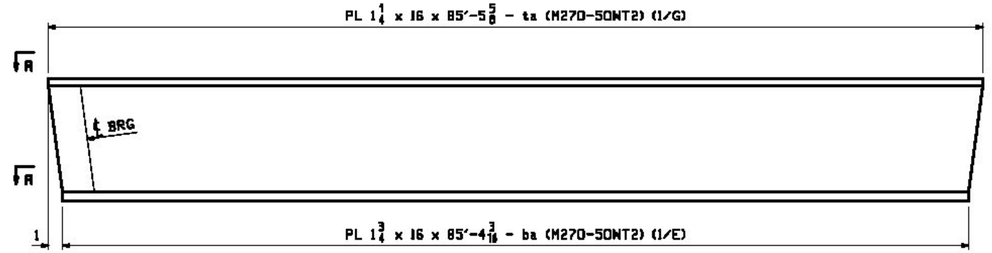


WEB CAMBER DIAGRAM FOR 5G1B, 6G2B, 7G3B & 8G4B

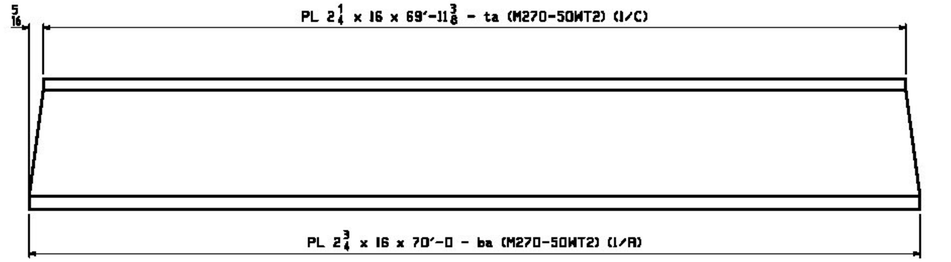
MARK	C1	C2	C3	C4	C5	C6	C7	C8	C9
5G1B	9/16	1 1/8	1 1/2	1 13/16	1 15/16	1 13/16	1 1/2	1 1/8	9/16
6G2B	5/8	1 3/16	1 5/8	1 7/8	2 1/16	1 7/8	1 9/16	1 1/8	5/8
7G3B	5/8	1 1/8	1 5/8	1 7/8	2 1/16	1 7/8	1 5/8	1 3/16	5/8
8G4B	9/16	1 1/16	1 1/2	1 13/16	1 15/16	1 13/16	1 1/2	1 1/8	9/16



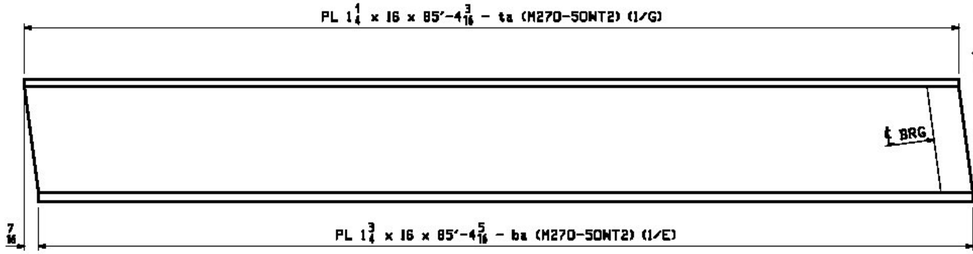
WEB CAMBER DIAGRAM FOR 9G1C, 10G2C, 11G3C & 12G4C



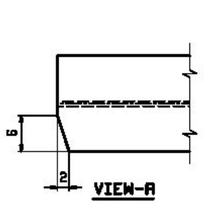
FLANGE DIAGRAM FOR 1G1A, 2G2A, 3G3A & 4G4A

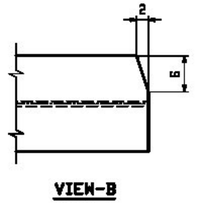


FLANGE DIAGRAM FOR 5G1B, 6G2B, 7G3B & 8G4B



FLANGE DIAGRAM FOR 9G1C, 10G2C, 11G3C & 12G4C





MARK	C1	C2	C3	C4	C5	C6	C7	C8	C9
9G1C	7/8	1 9/16	2 1/8	2 1/2	2 5/8	2 1/2	2 3/16	1 5/8	7/8
10G2C	7/8	1 11/16	2 5/16	2 11/16	2 13/16	2 11/16	2 5/16	1 5/8	7/8
11G3C	7/8	1 11/16	2 5/16	2 11/16	2 13/16	2 11/16	2 5/16	1 5/8	7/8
12G4C	13/16	1 9/16	2 3/16	2 1/2	2 5/8	2 1/2	2 1/8	1 9/16	7/8

NOTES:
1. FOR GENERAL NOTES SEE DWG GN1.
2. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

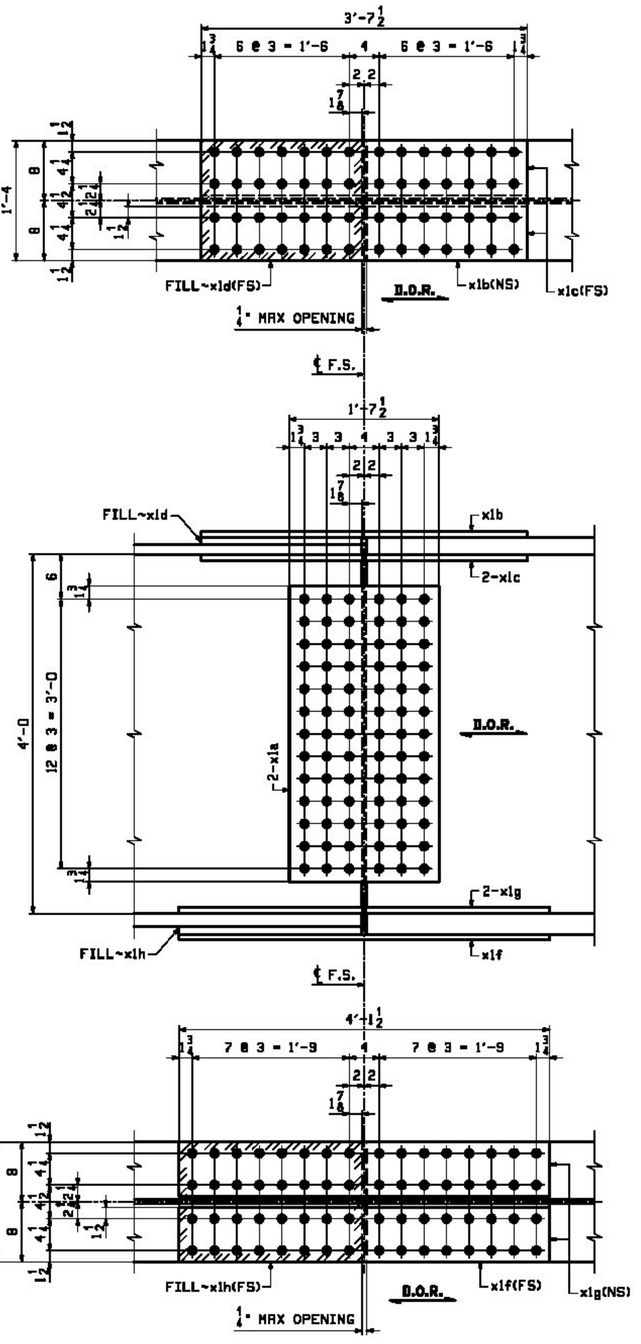
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50WT2	SEE GN1		

DESCRIPTION: CAMBER AND FLANGE DIAGRAMS

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 01/31	
	CHKD: DBH	DATE: 02/27	
LOCATION: TOWN OF JAMAICA, VT	JOB NO.	DWG NO.	
PROJ NO. ER-BRF 013-1(16)	529-1	C1	
CUSTOMER: T. BUCK CONSTRUCTION		REV.	

Thu, Feb 28, 2013 09:54:41 PM //casco/jobs/529-1/dwg/529-1 C1.dwg

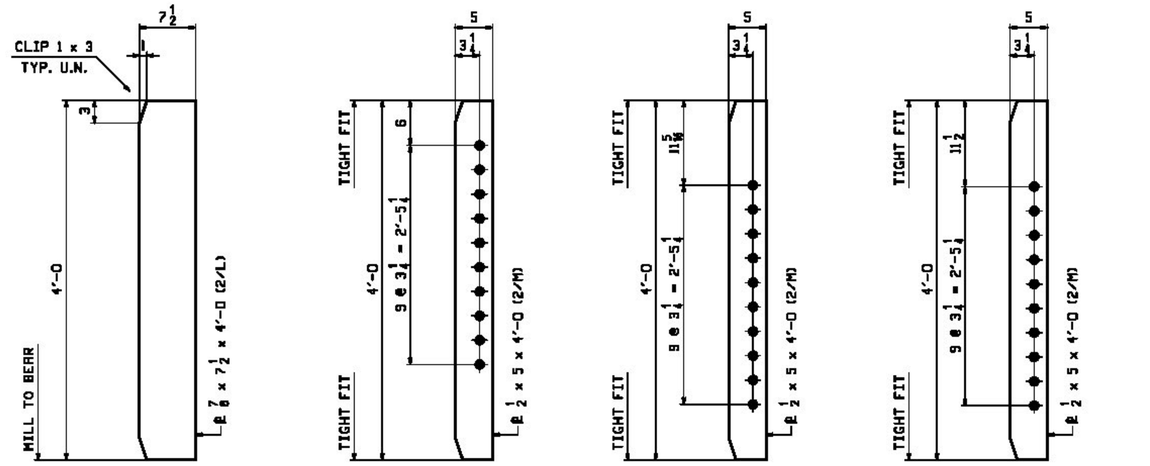


4 ~ FIELD SPLICE DETAIL ~ X1M1 (AS SHOWN)

FIELD SPLICE 1

4 ~ FIELD SPLICE DETAIL ~ X1M2 (ROTATE 180°)

FIELD SPLICE 2



16 ~ BRG STIFF. ~ x1k

@ ABUT's

28 ~ CONN. PLATE ~ x1m

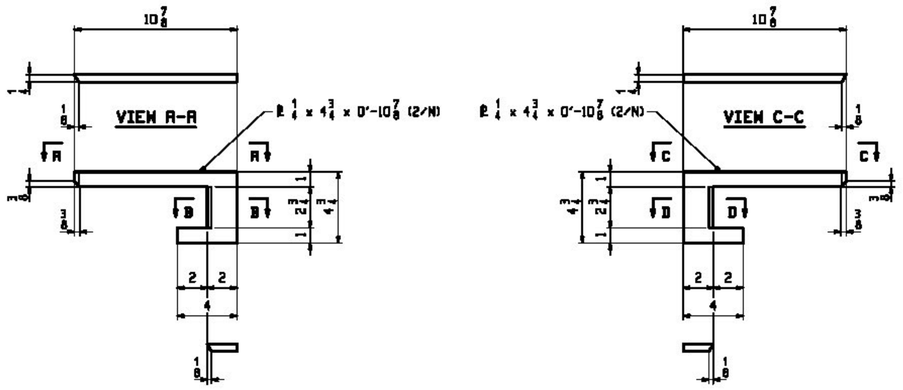
LOW SIDE

15 ~ CONN. PLATE ~ x1n

HIGH SIDE @ 5¼ - 5⅜ DROP

13 ~ CONN. PLATE ~ x1p

HIGH SIDE @ 5 7/16 - 5 9/16 DROP



SECT B-B

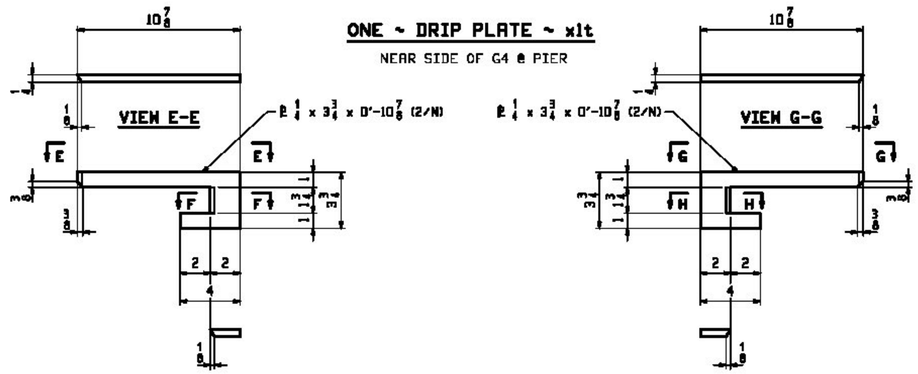
SECT D-D

ONE ~ DRIP PLATE ~ x1s

FAR SIDE OF G1 @ PIER

ONE ~ DRIP PLATE ~ x1t

NEAR SIDE OF G4 @ PIER



SECT F-F

SECT H-H

ONE ~ DRIP PLATE ~ x1v

FAR SIDE OF G1 @ ABUT. 2

ONE ~ DRIP PLATE ~ x1w

NEAR SIDE OF G4 @ ABUT. 2

BILL OF MATERIAL

ITEM INFO PAGE	ITEM INFO LINE	SHOP MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		X1M1	4		FIELD SPLICE 1				1079	
2	B		8	x1a	PL ½x39½	1	7½	M270-50WT2	109	
2	C		4	x1b	PL ¾x16	3	7½	M270-50WT2	148	
2	D		8	x1c	PL ⅞x7¼	3	7½	M270-50WT2	76	
2	G		4	x1d	PL 1x15	1	9⅝	FILL	98	
2	E		4	x1f	PL ¾x16	4	1½	M270-50WT2	158	
2	F		8	x1g	PL ⅞x7¼	4	1½	M270-50WT2	89	
2	H		4	x1h	PL 1x15	2	0⅝	FILL	112	
		X1M2	4		FIELD SPLICE 2				1079	
2	B		8	x1a	PL ½x39½	1	7½	M270-50WT2	109	
2	C		4	x1b	PL ¾x16	3	7½	M270-50WT2	148	
2	D		8	x1c	PL ⅞x7¼	3	7½	M270-50WT2	76	
2	G		4	x1d	PL 1x15	1	9⅝	FILL	98	
2	E		4	x1f	PL ¾x16	4	1½	M270-50WT2	158	
2	F		8	x1g	PL ⅞x7¼	4	1½	M270-50WT2	89	
2	H		4	x1h	PL 1x15	2	0⅝	FILL	112	

JOB NO. 529-1 | DRAWING NO. X1 | REV.

NOTE:
MATERIAL FOR FIELD SPLICES BILLED HERE ONLY.
ALL OTHER MATERIAL BILLED ON DETAIL DRAWINGS.

Vermont Agency of Transportation
RECEIVED
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT Approved
BY KMH DATE 03/18/13

NOTES:
1. FOR GENERAL NOTES SEE DRAWING GN1.
2. HOLES IN SPLICE PLATES ARE PRE-DRILLED.
3. ENDS OF GIRDERS ARE DRILLED FROM SOLID DURING SHOP ASSEMBLY, USING SPLICE PLATES AS A TEMPLATE.
4. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.
5. D.O.R. - DENOTES DIRECTION OF MILL ROLLING.

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

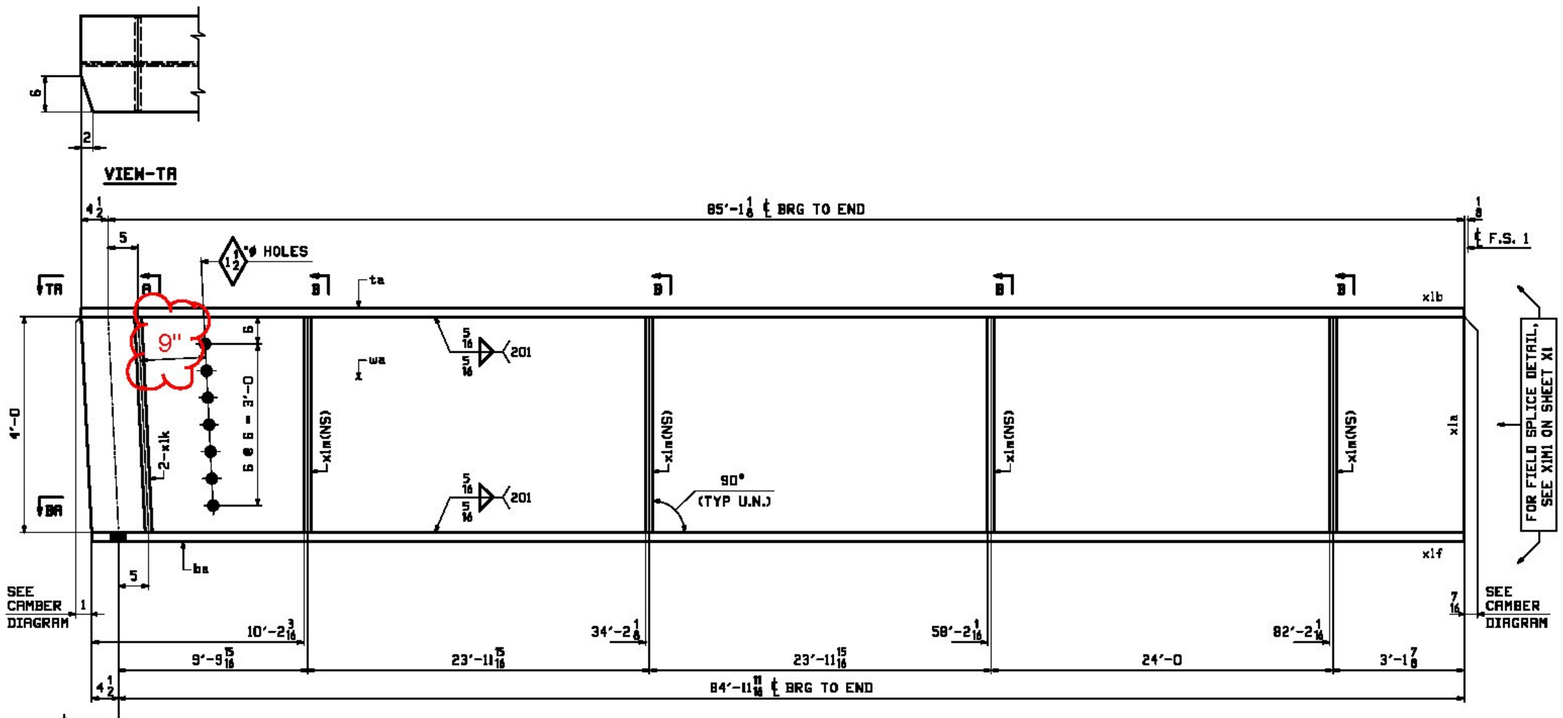
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	15/16"ø	NONE

DESCRIPTION: GIRDER STANDARDS

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

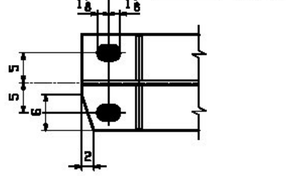
STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY		DRAWN: EEO	DATE: 01/31
		CHKD: DBH	DATE: 02/27
LOCATION: TOWN OF JAMAICA, VT		JOB NO.	DWG NO.
PROJ NO. ER-BRF 013-1(16)		529-1	X1
CUSTOMER: T. BUCK CONSTRUCTION			REV.

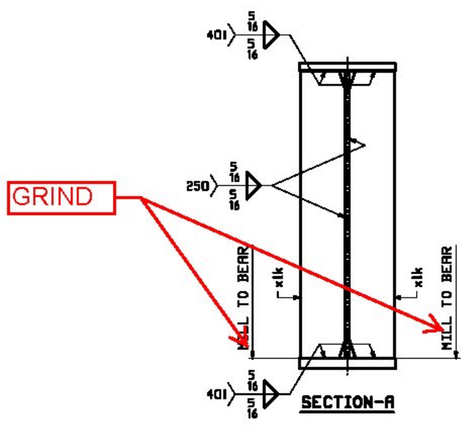
ASM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								529-1	1	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		1G1A	1		GIRDER				22998	
1	J		1	wa	PL $\frac{5}{8}$x48	85	$5\frac{5}{8}$	M270-50W T2	8725	
1	G		1	ta	PL $1\frac{1}{4}$x16	85	$5\frac{5}{8}$	M270-50W T2	5817	
1	E		1	ba	PL $1\frac{3}{4}$x16	85	$4\frac{3}{16}$	M270-50W T2	8132	
2	L		2	x1k	PL $\frac{7}{8}$x7$\frac{1}{2}$	4	0		85	
2	M		4	x1m	PL $\frac{1}{2}$x5	4	0		34	

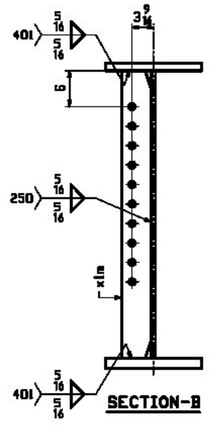


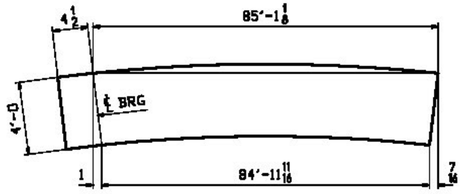
ONE ~ GIRDER ~ 1G1A

NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. FOR FIELD SPLICE DETAILS SEE SHEET X1.
3. FOR GIRDER STANDARD DETAILS SEE SHEET X1.
4. FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1.
5. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.









ORIENTATION DIAGRAM

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	15/16"ø U.N.	NONE

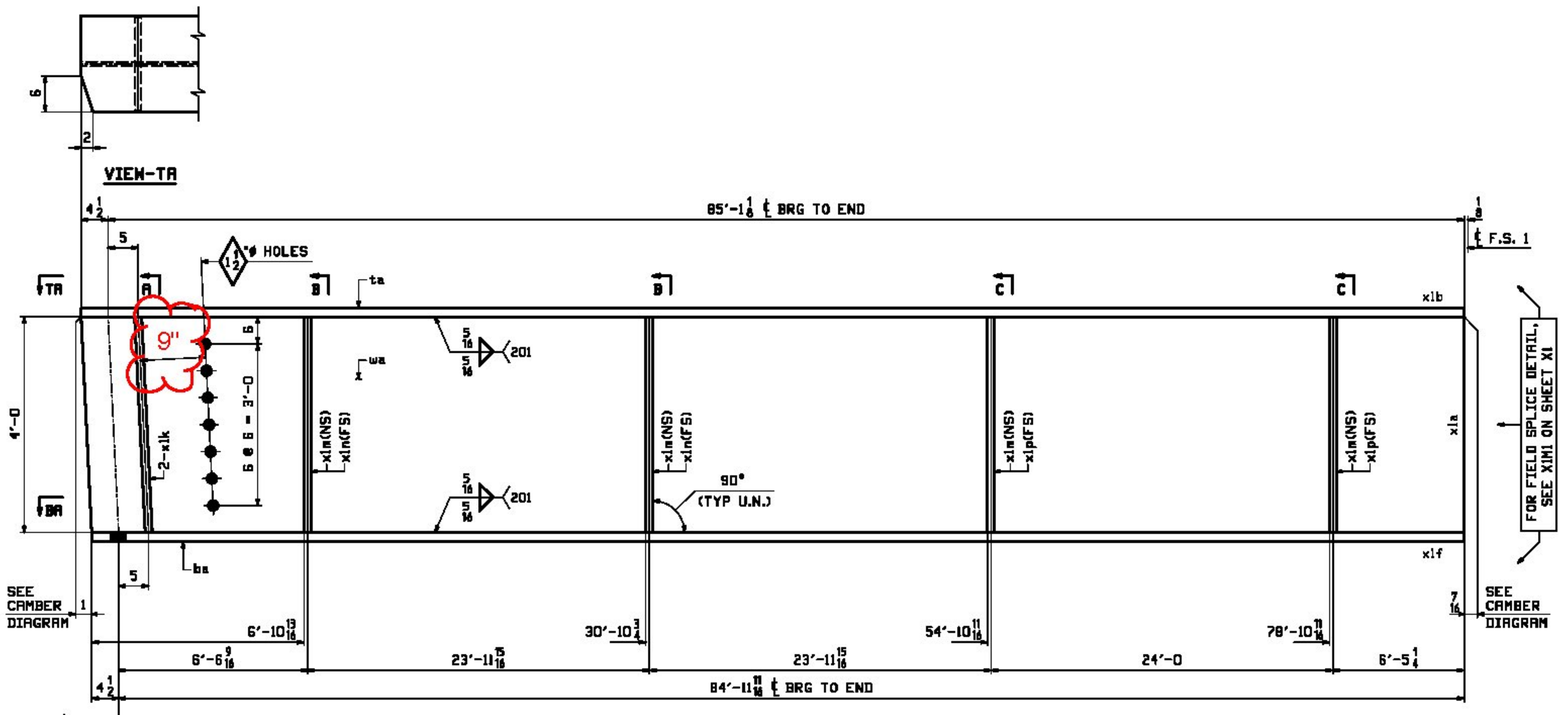
DESCRIPTION: GIRDER ~ 1G1A

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/01	
	CHKD: DBH	DATE: 02/27	
LOCATION: TOWN OF JAMAICA, VT	JOB NO. 529-1	DWG NO. 1	
PROJ NO. ER-BRF 013-1(16)			
CUSTOMER: T. BUCK CONSTRUCTION		REV. △	

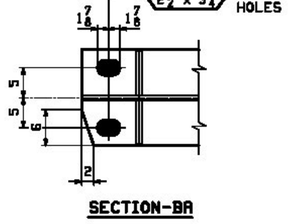
Vermont Agency of Transportation
RECEIVED
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT NO Approved AsNoted
BY KMH DATE 04/02/13

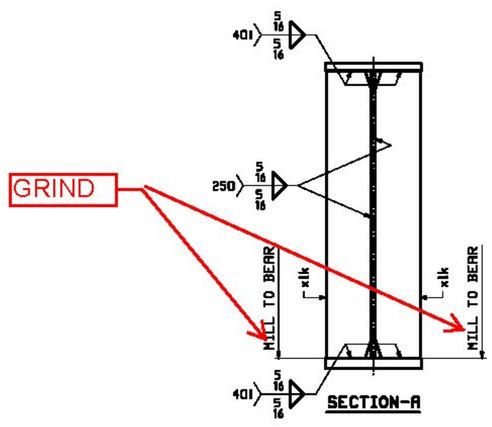
ASM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								529-1	2	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		2G2A	1		GIRDER				23124	
1	J		1	wa	PL $\frac{5}{8}$x48	85	$5\frac{5}{8}$	M270-50W T2	8725	
1	G		1	ta	PL $1\frac{1}{4}$x16	85	$5\frac{5}{8}$	M270-50W T2	5817	
1	E		1	ba	PL $1\frac{3}{4}$x16	85	$4\frac{3}{16}$	M270-50W T2	8132	
2	L		2	x1k	PL $\frac{7}{8}$x$7\frac{1}{2}$	4	0		85	
2	M		4	x1m	PL $\frac{1}{2}$x5	4	0		34	
2	M		2	x1n	PL $\frac{1}{2}$x5	4	0		34	
2	M		2	x1p	PL $\frac{1}{2}$x5	4	0		34	

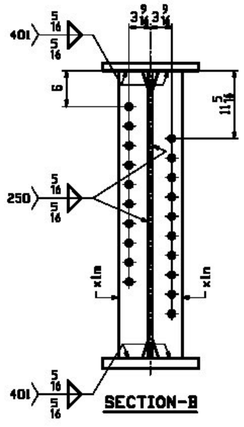


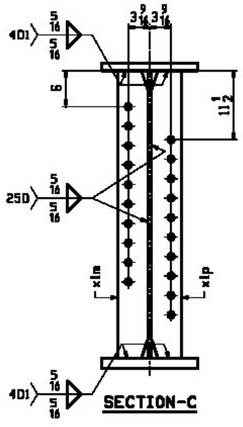
ONE ~ GIRDER ~ 2G2A

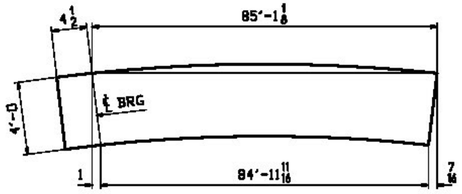
NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. FOR FIELD SPLICE DETAILS SEE SHEET X1.
3. FOR GIRDER STANDARD DETAILS SEE SHEET X1.
4. FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1.
5. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.











ORIENTATION DIAGRAM

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

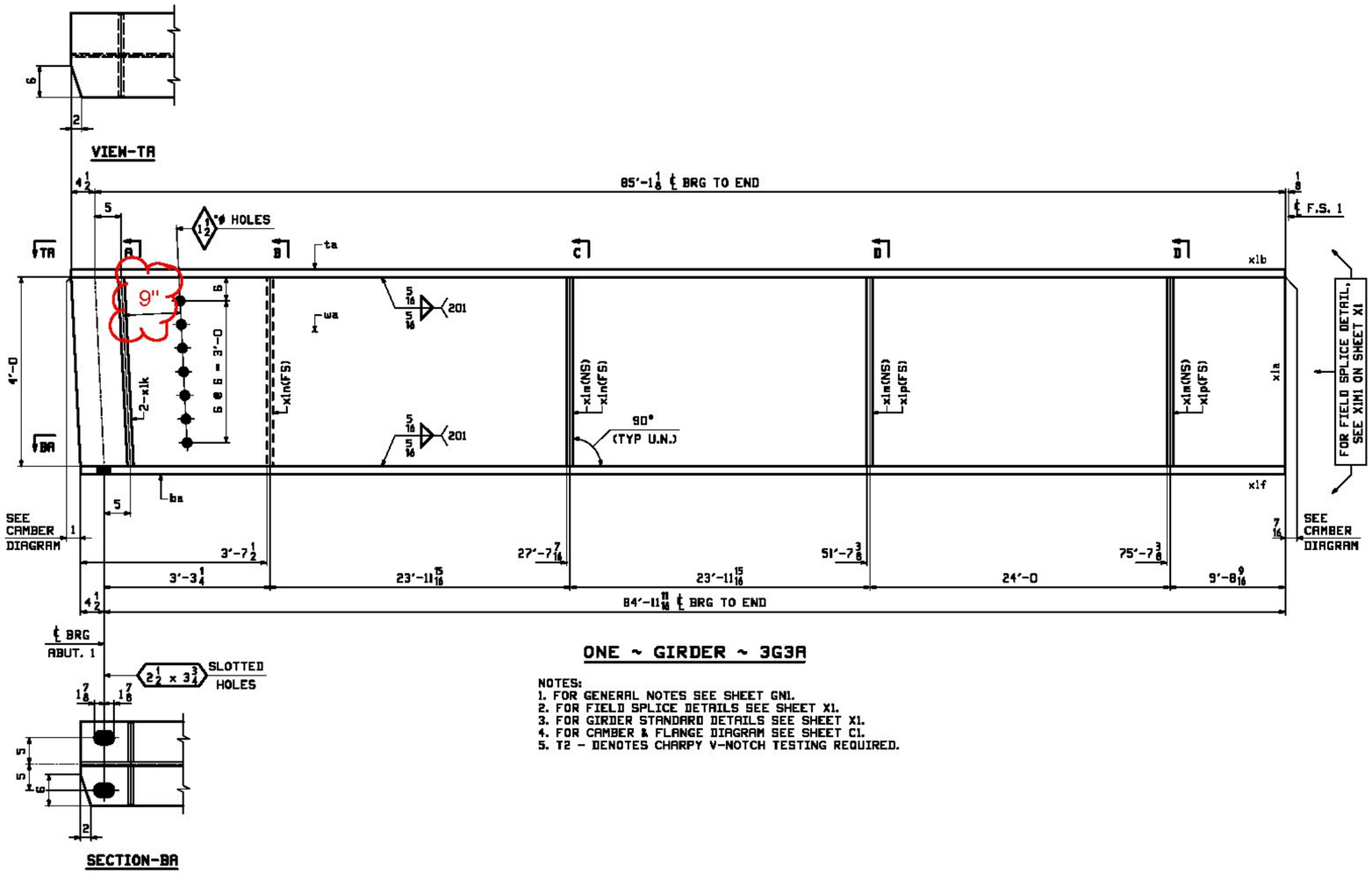
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	15/16"ø U.N.	NONE

DESCRIPTION: GIRDER ~ 2G2A

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

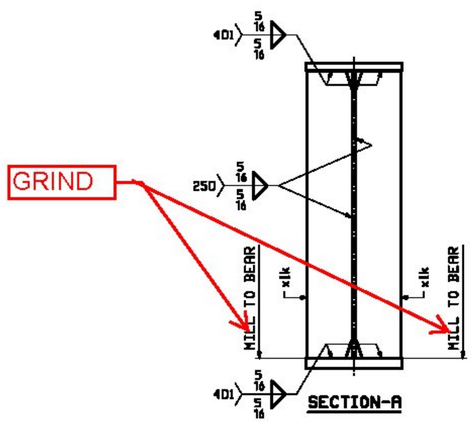
STRUCTURE:	DRAWN:	DATE:
VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	EEO	02/01
	CHKD: DBH	DATE: 02/27
LOCATION: TOWN OF JAMAICA, VT	JOB NO. 529-1	DWG NO. 2
PROJ NO. ER-BRF 013-1(16)		
CUSTOMER: T. BUCK CONSTRUCTION		REV.

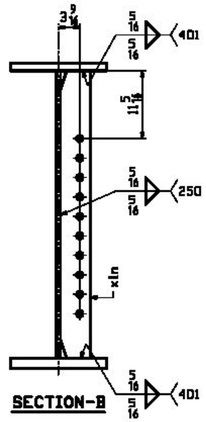
Vermont Agency of Transportation
RECEIVED
CK'D BY GM/JJWC OK'D BY GG
March 6, 2013
RESUBMIT NO Approved AsNoted
BY KMH DATE 04/02/13

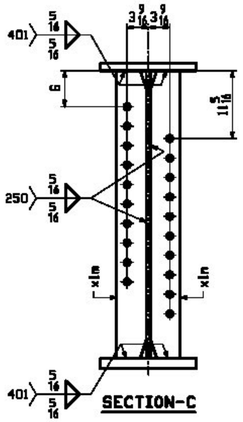


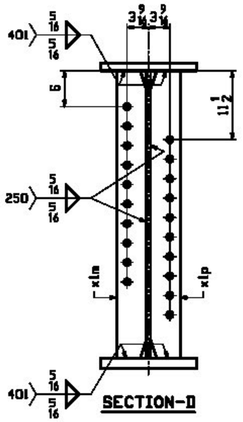
ONE ~ GIRDER ~ 3G3A

NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. FOR FIELD SPLICE DETAILS SEE SHEET X1.
3. FOR GIRDER STANDARD DETAILS SEE SHEET X1.
4. FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1.
5. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.



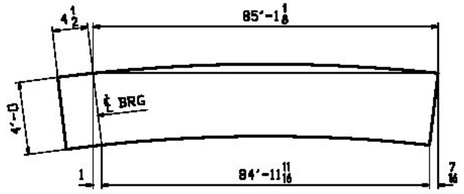






ADM INFO		SHOP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
						LENGTH		529-1	3	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	FT	INCHES	REMARKS	WT	PROCUREMENT NOTES
		3G3A	1		GIRDER				23090	
1	J		1	wa	PL 5/8x48	85	5 5/8	M270-50W T2	8725	
1	G		1	ta	PL 1 1/4x16	85	5 5/8	M270-50W T2	5817	
1	E		1	ba	PL 1 3/4x16	85	4 3/16	M270-50W T2	8132	
2	L		2	x1k	PL 7/8x7 1/2	4	0		85	
2	M		3	x1m	PL 1/2x5	4	0		34	
2	M		2	x1n	PL 1/2x5	4	0		34	
2	M		2	x1p	PL 1/2x5	4	0		34	

Vermont Agency of Transportation
RECEIVED
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT NO Approved AsNoted
BY KMH DATE 04/02/13



ORIENTATION DIAGRAM

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

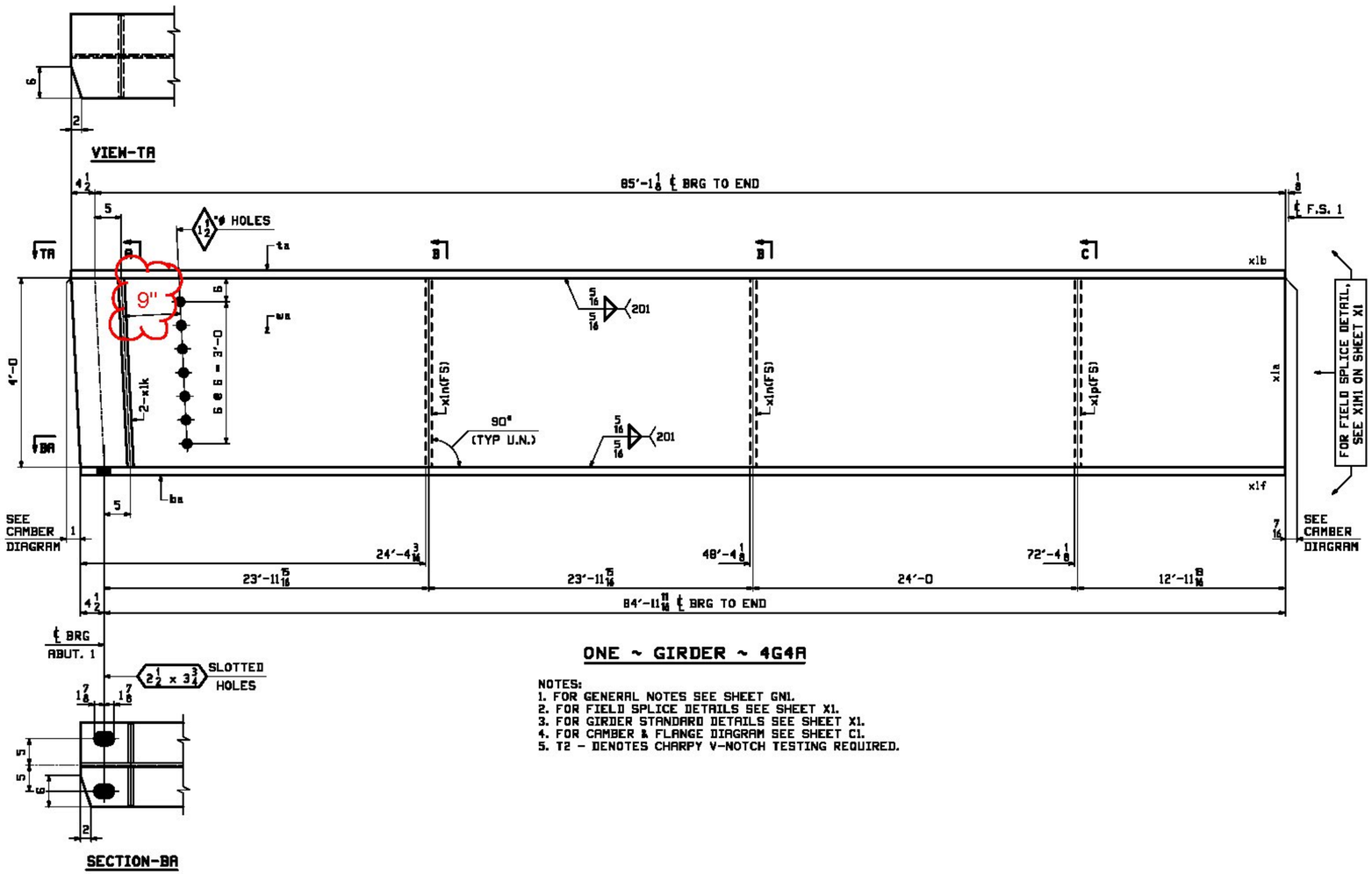
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	15/16"ø U.N.	NONE

DESCRIPTION: GIRDER ~ 3G3A

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

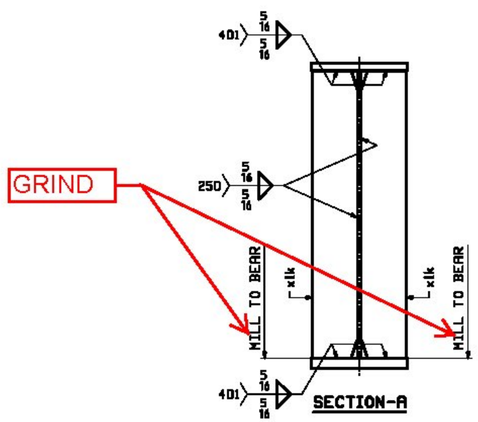
STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/01
	CHKD: DBH	DATE: 02/27
LOCATION: TOWN OF JAMAICA, VT	JOB NO.	DWG NO.
PROJ NO. ER-BRF 013-1(16)	529-1	3
CUSTOMER: T. BUCK CONSTRUCTION		REV.

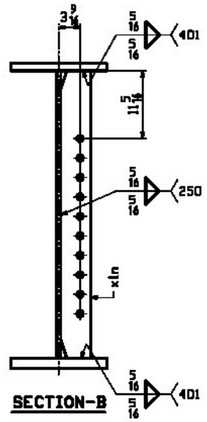
ADM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
						LENGTH		529-1	4	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	FT	INCHES	REMARKS	WT	PROCUREMENT NOTES
		4G4A	1		GIRDER				22954	
1	J		1	wa	PL $\frac{5}{8}$x48	85	$5\frac{5}{8}$	M270-50W,T2	8725	
1	G		1	ta	PL $1\frac{1}{4}$x16	85	$5\frac{7}{8}$	M270-50W,T2	5817	
1	E		1	ba	PL $1\frac{3}{4}$x16	85	$6\frac{3}{16}$	M270-50W,T2	8132	
2	L		2	x1k	PL $\frac{7}{8}$x$7\frac{1}{2}$	4	0		85	
2	M		2	x1n	PL $\frac{1}{2}$x5	4	0		34	
2	M		1	x1p	PL $\frac{1}{2}$x5	4	0		34	

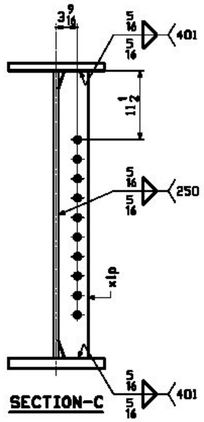


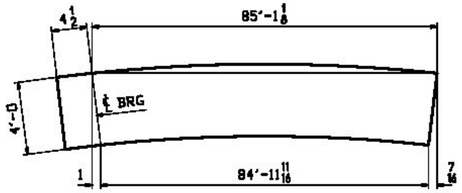
ONE ~ GIRDER ~ 4G4A

NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. FOR FIELD SPLICE DETAILS SEE SHEET X1.
3. FOR GIRDER STANDARD DETAILS SEE SHEET X1.
4. FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1.
5. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.









ORIENTATION DIAGRAM

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

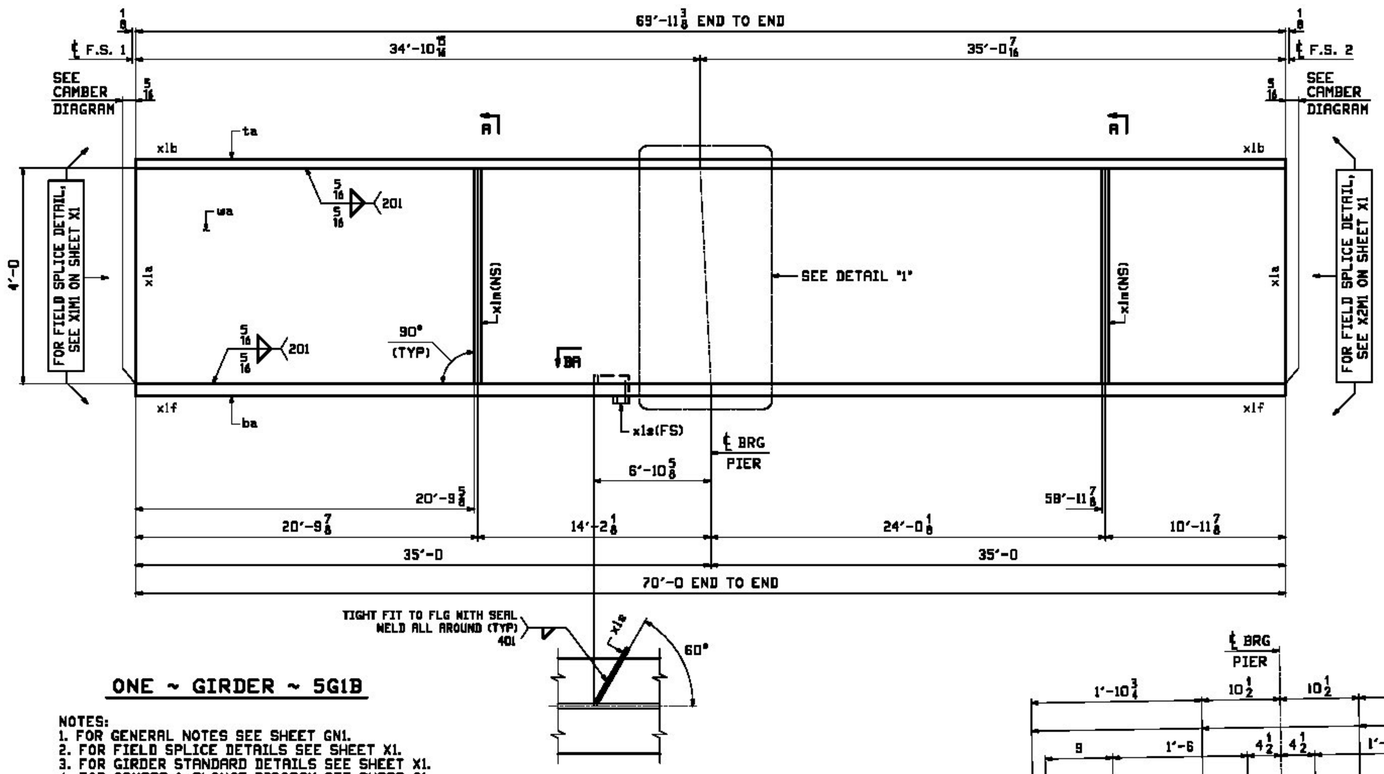
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	15/16"ø U.N.	NONE

DESCRIPTION: GIRDER ~ 4G4A

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/01	
	CHKD: DBH	DATE: 02/27	
LOCATION: TOWN OF JAMAICA, VT	JOB NO. 529-1	DWG NO. 4	
PROJ NO. ER-BRF 013-1(16)			
CUSTOMER: T. BUCK CONSTRUCTION		REV.	

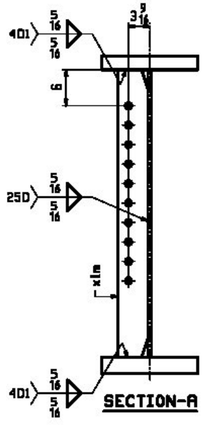
Vermont Agency of Transportation
RECEIVED
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT NO Approved AsNoted
BY KMH DATE 04/02/13



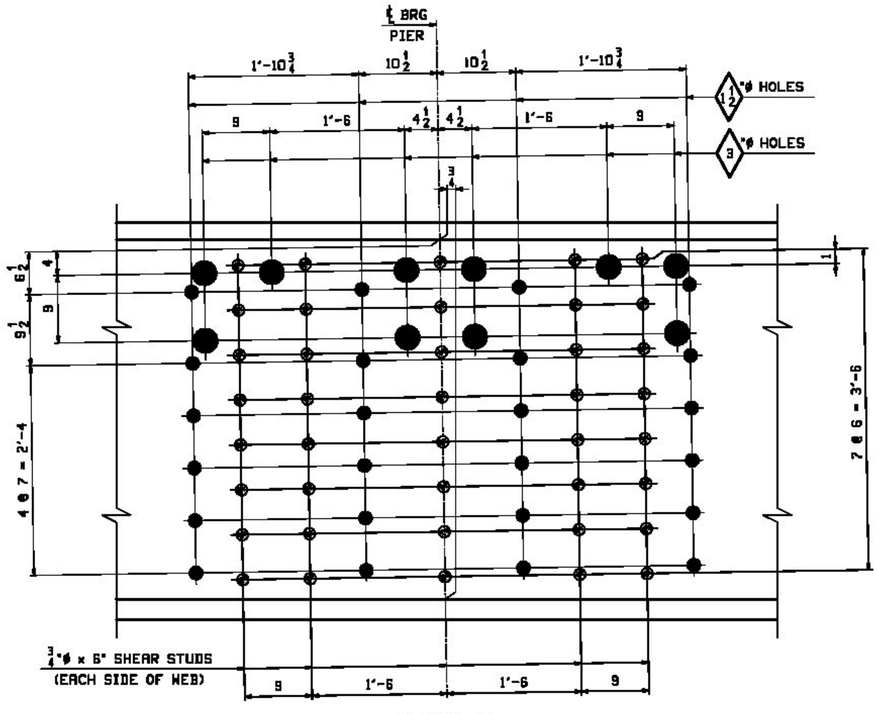
ONE ~ GIRDER ~ 5G1B

NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. FOR FIELD SPLICE DETAILS SEE SHEET X1.
3. FOR GIRDER STANDARD DETAILS SEE SHEET X1.
4. FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1.
5. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.

SECTION-BB



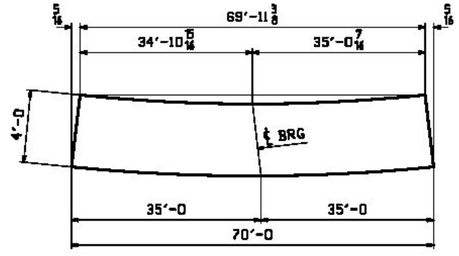
SECTION-A



DETAIL "1"

ASM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.		REV.
								529-1	5		
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES	
		SG1B	1		GIRDER				26336		
1	L		1	wa	PL 5/8 x 48	70	0	M270-50WT2	7145		
1	C		1	ta	PL 2 1/4 x 16	69	11 3/8	M270-50WT2	8569		
1	A		1	ba	PL 2 3/4 x 16	70	0	M270-50WT2	10491		
2	M		2	x1m	PL 1/2 x 5	4	0		34		
2	N		1	x1s	PL 1/4 x 4 3/4	0	10 7/8		4		
2	R		80		STUD 3/4 ø	0	6	TYP	.66		

Vermont Agency of Transportation
RECEIVED
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT Approved
BY KMH DATE 03/18/13



ORIENTATION DIAGRAM

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

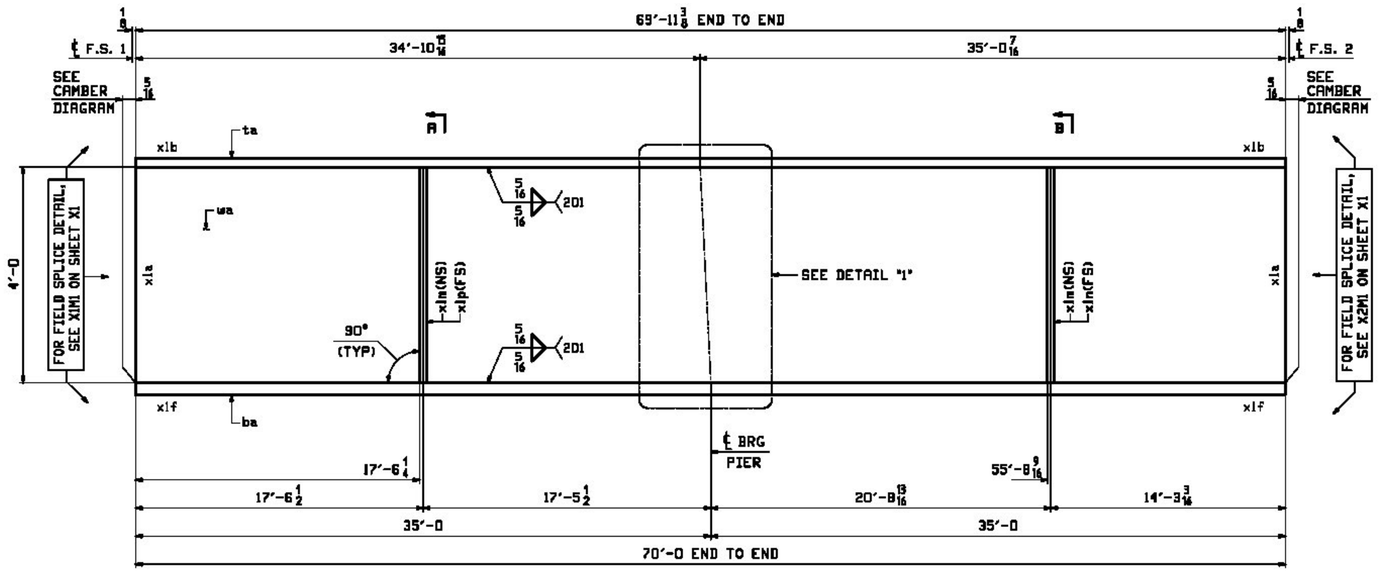
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	15/16" ø U.N.	NONE

DESCRIPTION: GIRDER ~ 5G1B

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

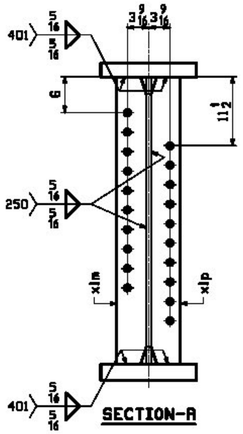
STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/01	
	CHKD: DBH	DATE: 02/27	
LOCATION: TOWN OF JAMAICA, VT	JOB NO. 529-1	DWG NO. 5	
PROJ NO. ER-BRF 013-1(16)			
CUSTOMER: T. BUCK CONSTRUCTION		REV. △	

FAB INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.		REV.
						LENGTH		529-1	6		
PAGE	LINE	MARK	QTY	MARK	MATERIAL	FT	INCHES	REMARKS	WT	PROCUREMENT NOTES	
		6G2B	1		GIRDER				26400		
1	L		1	wa	PL $\frac{5}{16}$x48	70	0	M270-50WT2	7145		
1	C		1	ta	PL $2\frac{1}{4}$x16	69	$11\frac{3}{8}$	M270-50WT2	8569		
1	A		1	ba	PL $2\frac{3}{4}$x16	70	0	M270-50WT2	0491		
2	M		2	x1m	PL $\frac{1}{2}$x5	4	0		34		
2	M		1	x1n	PL $\frac{1}{2}$x5	4	0		34		
2	M		1	x1p	PL $\frac{1}{2}$x5	4	0		34		
2	R		80		STUD $\frac{3}{4}$ ø	0	6	WLDR	.65		

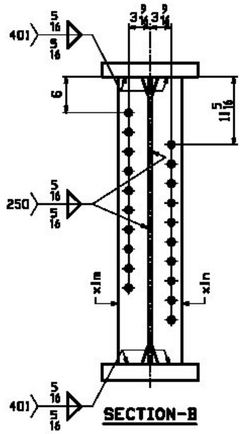


ONE ~ GIRDER ~ 6G2B

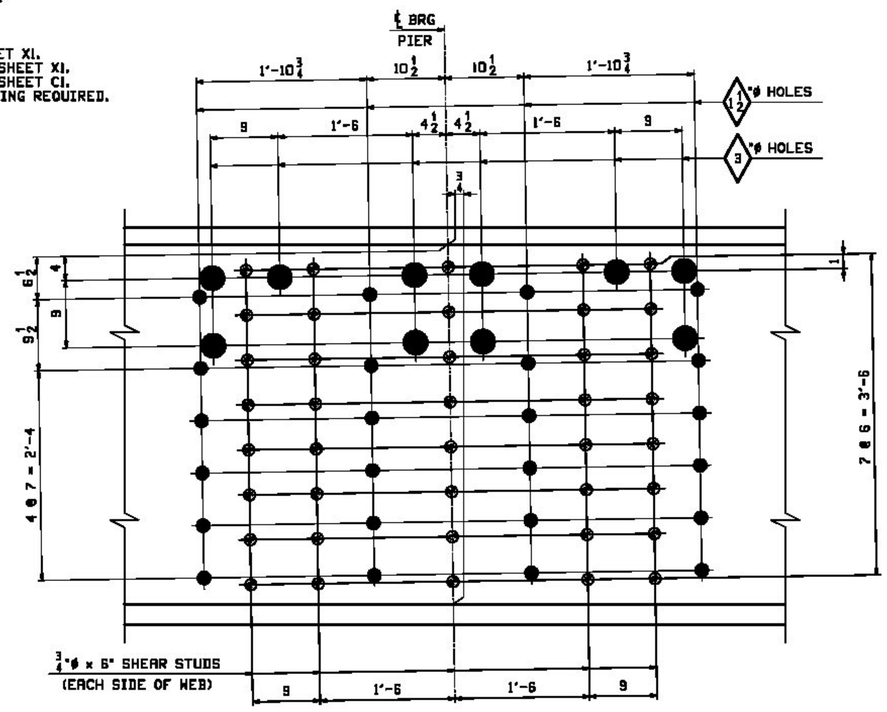
NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. FOR FIELD SPLICE DETAILS SEE SHEET X1.
3. FOR GIRDER STANDARD DETAILS SEE SHEET X1.
4. FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1.
5. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.



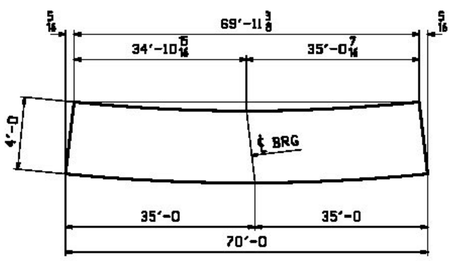
SECTION-A



SECTION-B



DETAIL "1"



ORIENTATION DIAGRAM

Vermont Agency of Transportation
RECEIVED
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT Approved
BY KMH DATE 03/18/13

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

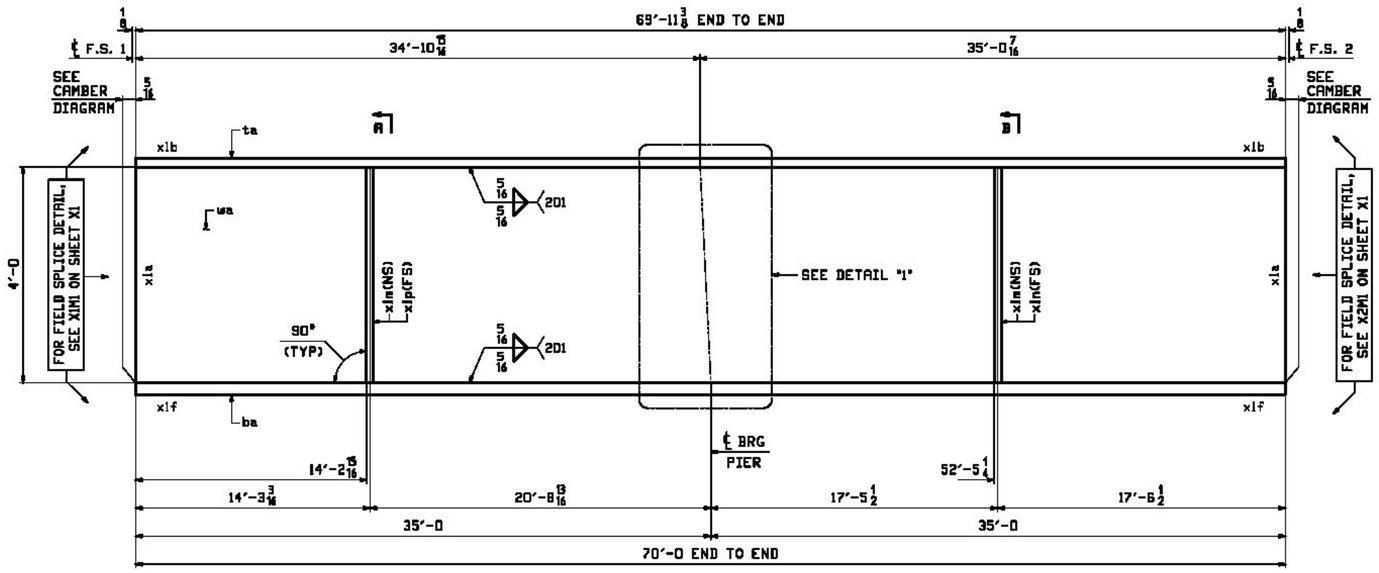
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	15/16 ø U.N.	NONE

DESCRIPTION: GIRDER ~ 6G2B

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

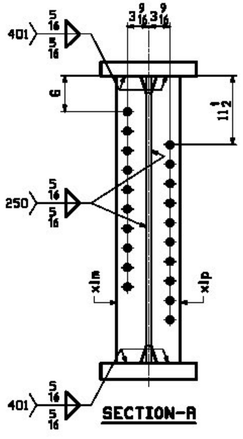
STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/01
	CHKD: DBH	DATE: 02/27
LOCATION: TOWN OF JAMAICA, VT	JOB NO.	DWG NO.
PROJ NO. ER-BRF 013-1(16)	529-1	6
CUSTOMER: T. BUCK CONSTRUCTION		REV. △

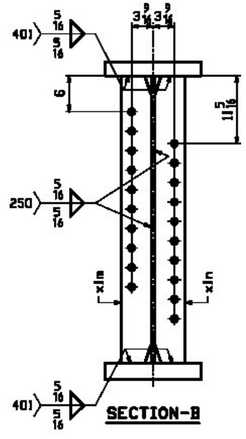
BOM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								529-1	7	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		7G3B	1		GIRDER				26400	
1	L		1	wa	PL $\frac{5}{8}$x48	70	0	M270-50WT2	7146	
1	C		1	ta	PL $2\frac{1}{4}$x16	69	$11\frac{3}{8}$	M270-50WT2	8569	
1	A		1	ba	PL $2\frac{3}{4}$x16	70	0	M270-50WT2	10491	
2	M		2	x1m	PL $\frac{1}{2}$x5	4	0		34	
2	M		1	x1n	PL $\frac{1}{2}$x5	4	0		34	
2	M		1	x1p	PL $\frac{1}{2}$x5	4	0		34	
2	R		80		STUD $\frac{3}{4}$ ø	0	6	WLDR	.65	

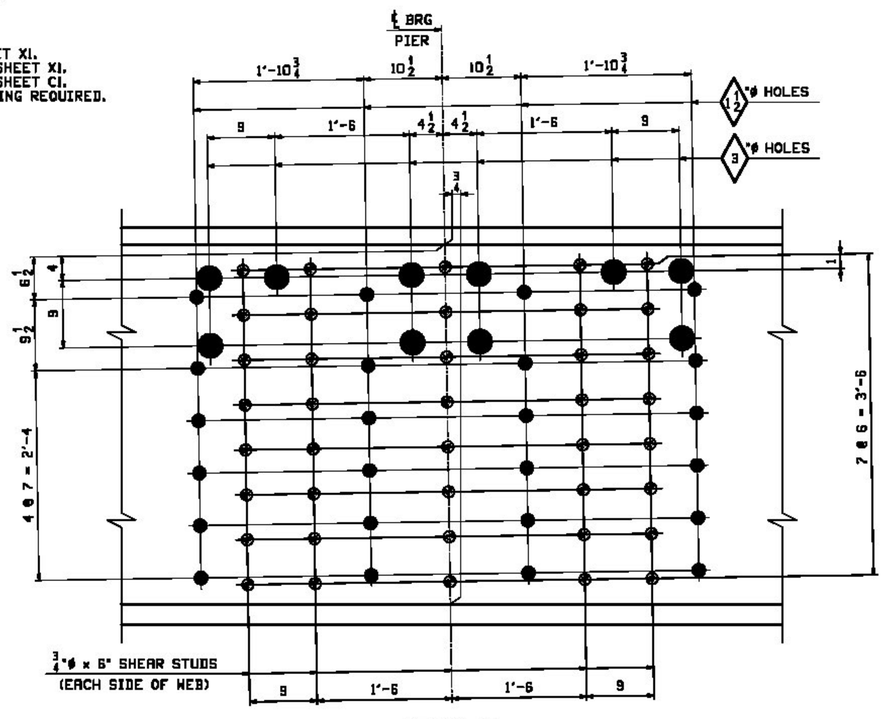


ONE ~ GIRDER ~ 7G3B

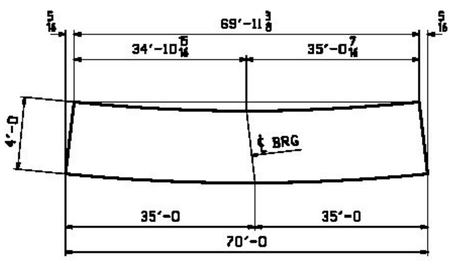
NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. FOR FIELD SPLICE DETAILS SEE SHEET X1.
3. FOR GIRDER STANDARD DETAILS SEE SHEET X1.
4. FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1.
5. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.







DETAIL "1"



ORIENTATION DIAGRAM

Vermont Agency of Transportation

RECEIVED

CK'D BY GML/JWC OK'D BY GG

March 6, 2013

RESUBMIT ____ Approved

BY KMH DATE 03/18/13

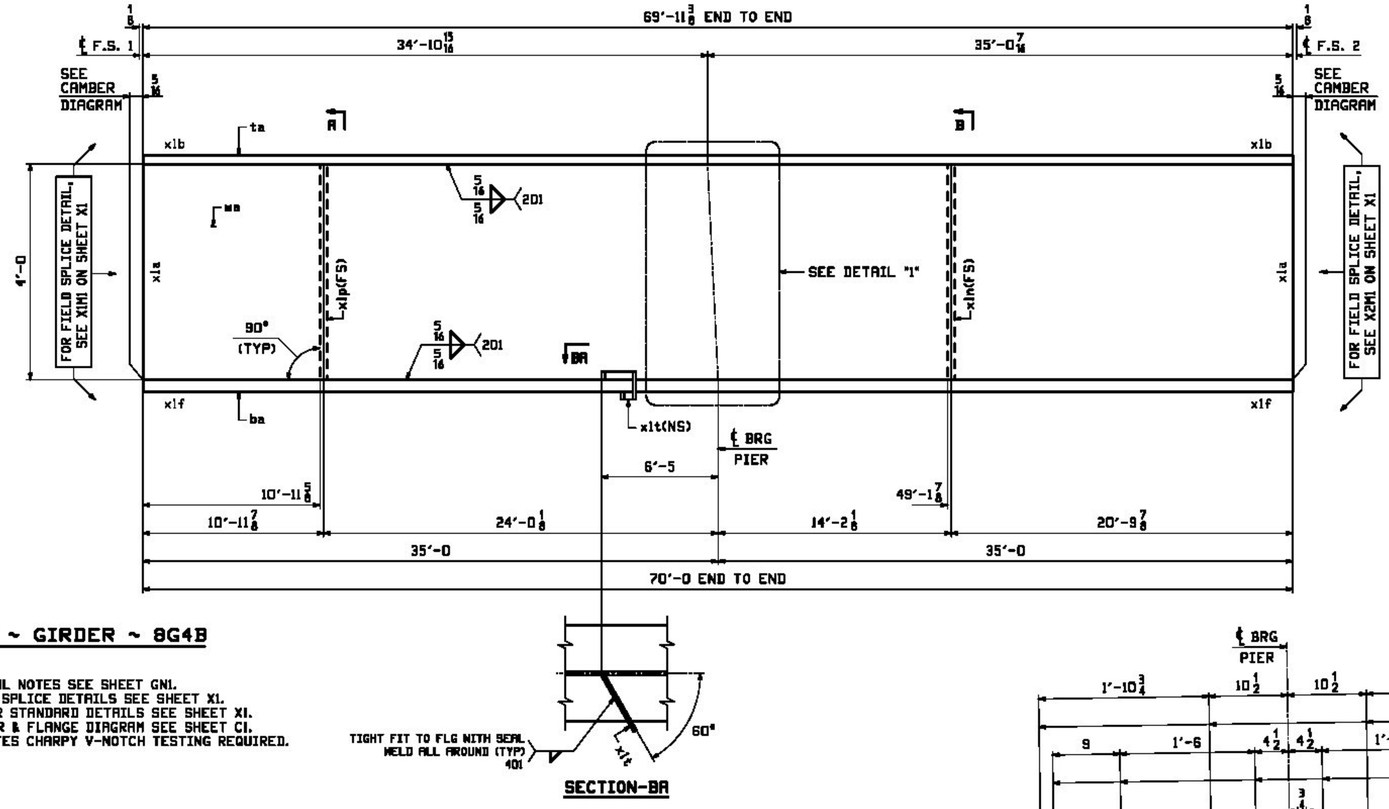
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	$\frac{15}{16}$ø U.N.	NONE

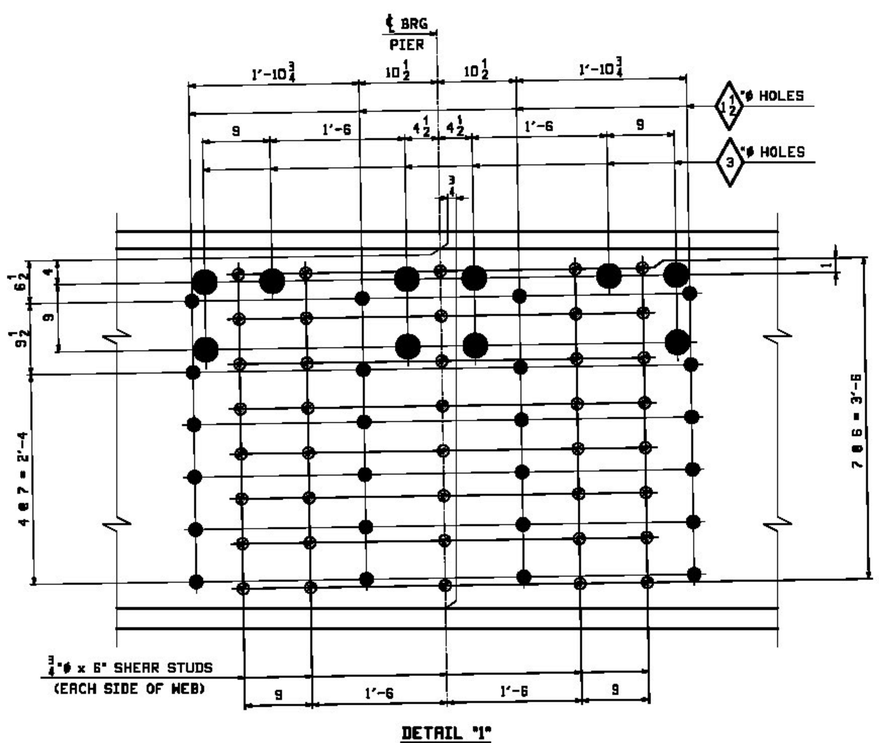
DESCRIPTION: GIRDER ~ 7G3B

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. SOUTH PORTLAND, ME 04106
PHONE (207) 780-6722 FAX. (207) 780-6726

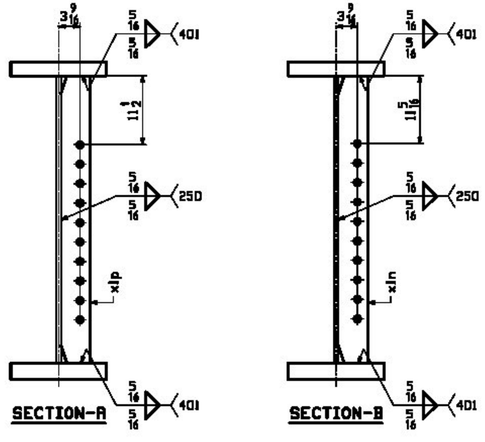
STRUCTURE:	VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/04
		CHKD: DBH	DATE: 02/27
LOCATION:	TOWN OF JAMAICA, VT	JOB NO.	DWG NO.
PROJ NO.	ER-BRF 013-1(16)	529-1	7
CUSTOMER:	T. BUCK CONSTRUCTION		REV. △



SECTION-BA



DETAIL "1"



SECTION-A

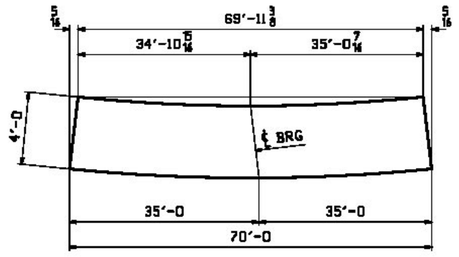
SECTION-B

ONE ~ GIRDER ~ 8G4B

NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. FOR FIELD SPLICE DETAILS SEE SHEET X1.
3. FOR GIRDER STANDARD DETAILS SEE SHEET X1.
4. FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1.
5. T2 – DENOTES CHARPY V-NOTCH TESTING REQUIRED.

ASM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
						LENGTH		529-1	8	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	FT	INCHES	REMARKS	WT	PROCUREMENT NOTES
		8G4B	1		GIRDER				26336	
1	L		1	wt	PL 5/8 x48	70	0	M270-50WT2	7145	
1	C		1	ta	PL 2 1/4 x16	69	11 3/8	M270-50WT2	8569	
1	A		1	ba	PL 2 3/4 x16	70	0	M270-50WT2	0491	
2	M		1	x1n	PL 1/2 x5	4	0		34	
2	M		1	x1p	PL 1/2 x5	4	0		34	
2	N		1	x1t	PL 1/4 x4 3/4	0	10 7/8		4	
2	R		80		STUD 3/4 ϕ	0	6	WLDR	.65	

Vermont Agency of Transportation
RECEIVED
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT Approved
BY KMH DATE 03/18/13



ORIENTATION DIAGRAM

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

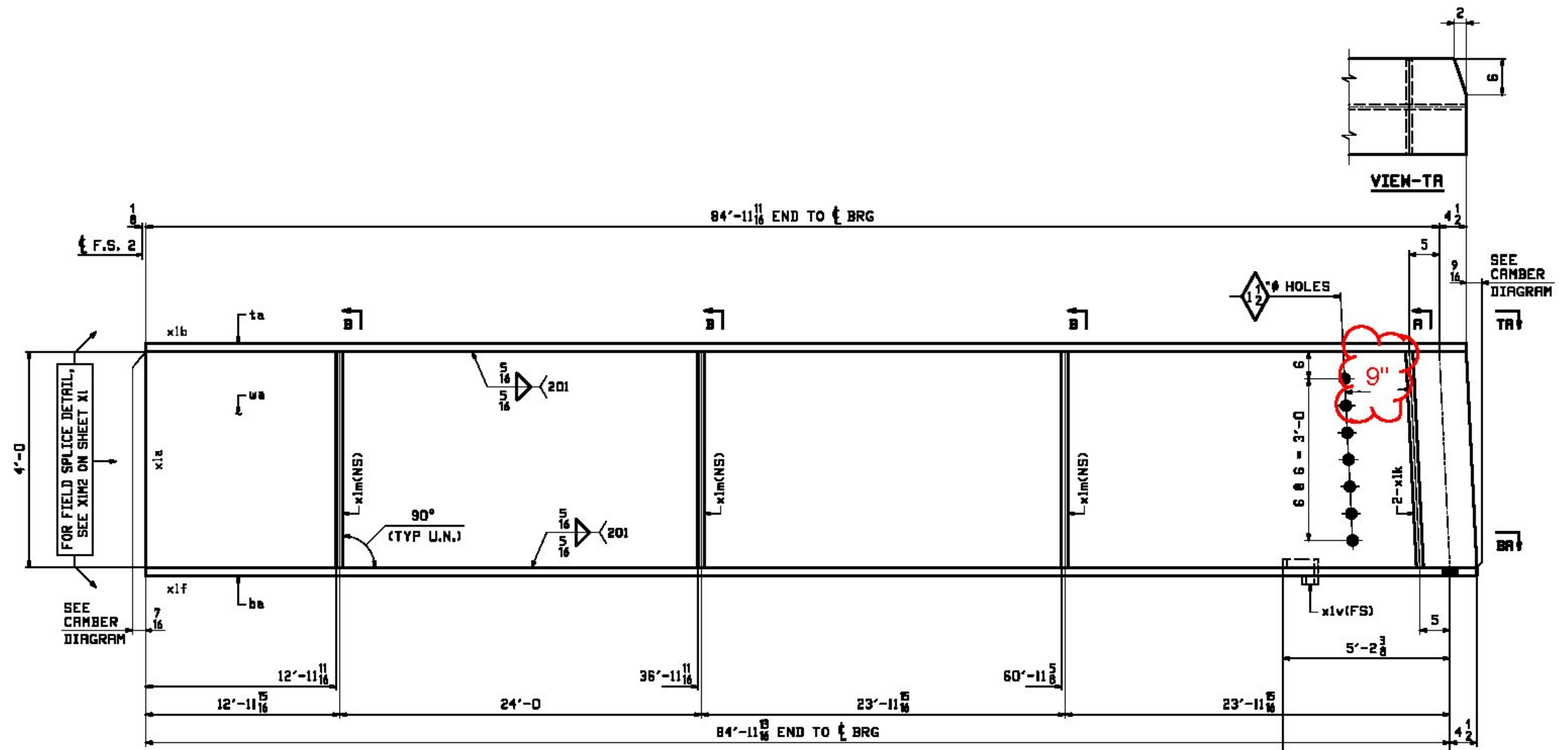
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	15/16" ϕ U.N.	NONE

DESCRIPTION: GIRDER ~ 8G4B

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

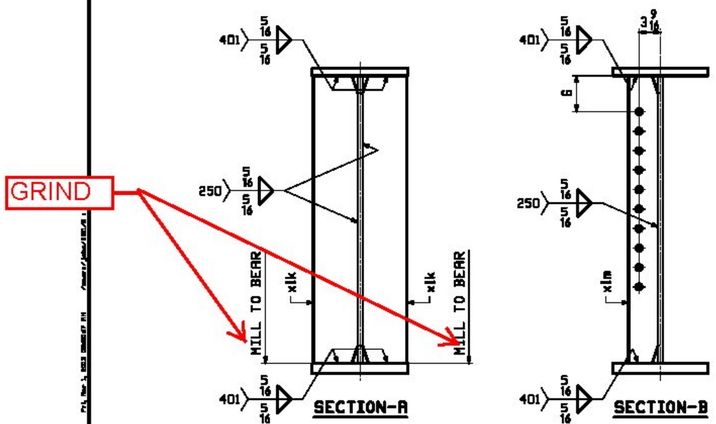
STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/04	
	CHKD: DBH	DATE: 02/27	
LOCATION: TOWN OF JAMAICA, VT	JOB NO. 529-1	DWG NO. 8	
PROJ NO. ER-BRF 013-1(16)			
CUSTOMER: T. BUCK CONSTRUCTION		REV.	

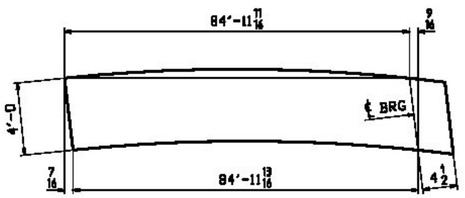
ASM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								529-1	9	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		9G1C	1		GIRDER				22942	
1	J		1	wa	PL $\frac{5}{8}$x48	85	$4\frac{3}{4}$	M270-50WT2	8719	
1	G		1	ta	PL $1\frac{1}{4}$x16	85	$4\frac{3}{16}$	M270-50WT2	5808	
1	E		1	ba	PL $1\frac{3}{4}$x16	85	$4\frac{5}{16}$	M270-50WT2	8133	
2	L		2	x1k	PL $\frac{7}{8}$x7$\frac{1}{2}$	4	0		85	
2	M		3	x1m	PL $\frac{1}{2}$x5	4	0		34	
2	N		1	x1v	PL $\frac{1}{4}$x3$\frac{3}{4}$	0	$10\frac{7}{8}$		3	



ONE ~ GIRDER ~ 9G1C

NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. FOR FIELD SPLICE DETAILS SEE SHEET X1.
3. FOR GIRDER STANDARD DETAILS SEE SHEET X1.
4. FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1.
5. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.





ORIENTATION DIAGRAM

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
D						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	$\frac{15}{16}$" ø U.N.	NONE

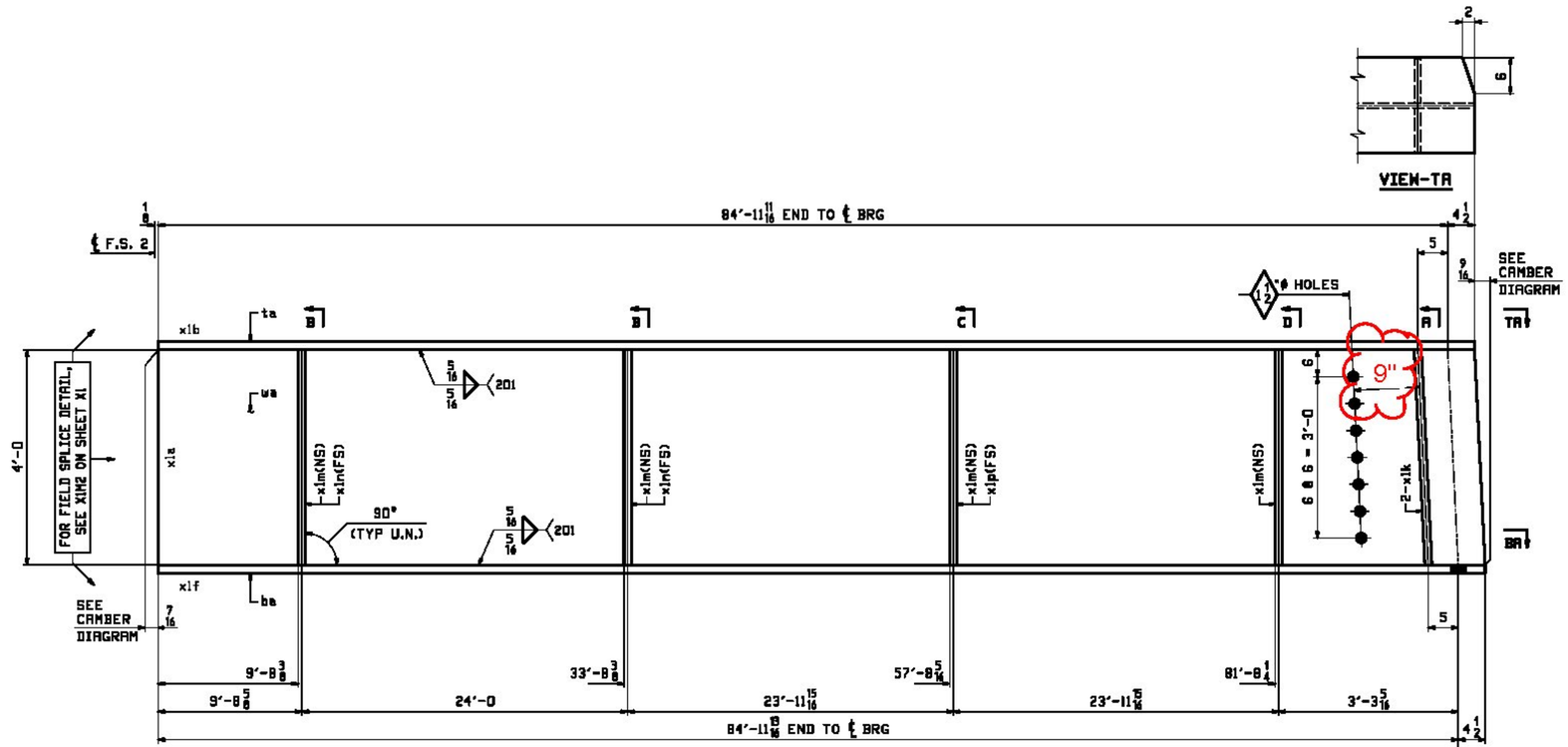
DESCRIPTION: GIRDER ~ 9G1C

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE:	DRAWN:	DATE:
VT 100 OVER HARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	EEO	02/04
	CHKD: DBH	DATE: 02/27
LOCATION: TOWN OF JAMAICA, VT	JOB NO.	DWG NO.
PROJ NO. ER-BRF 013-1(16)	529-1	9
CUSTOMER: T. BUCK CONSTRUCTION		REV.

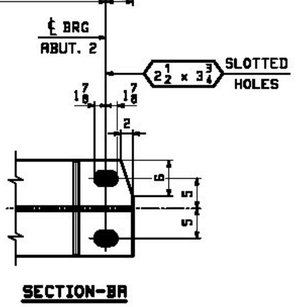
Vermont Agency of Transportation
RECEIVED
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT NO Approved AsNoted
BY KMH DATE 04/02/13

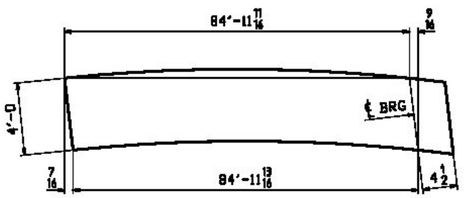
ADM INFO		SHOP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
						LENGTH		529-1	10	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	FT	INCHES	REMARKS	WT	PROCUREMENT NOTES
		10G2C	1		GIRDER				23076	
1	J		1	wa	PL $\frac{5}{8}$x48	85	$4\frac{3}{4}$	M270-50WT2	8719	
1	G		1	ta	PL $1\frac{1}{4}$x16	85	$4\frac{3}{16}$	M270-50WT2	5808	
1	E		1	ba	PL $1\frac{3}{4}$x16	85	$4\frac{5}{16}$	M270-50WT2	8133	
2	L		2	x1k	PL $\frac{7}{8}$x$7\frac{1}{2}$	4	0		85	
2	M		4	x1m	PL $\frac{1}{2}$x5	4	0		34	
2	M		2	x1n	PL $\frac{1}{2}$x5	4	0		34	
2	M		1	x1p	PL $\frac{1}{2}$x5	4	0		34	



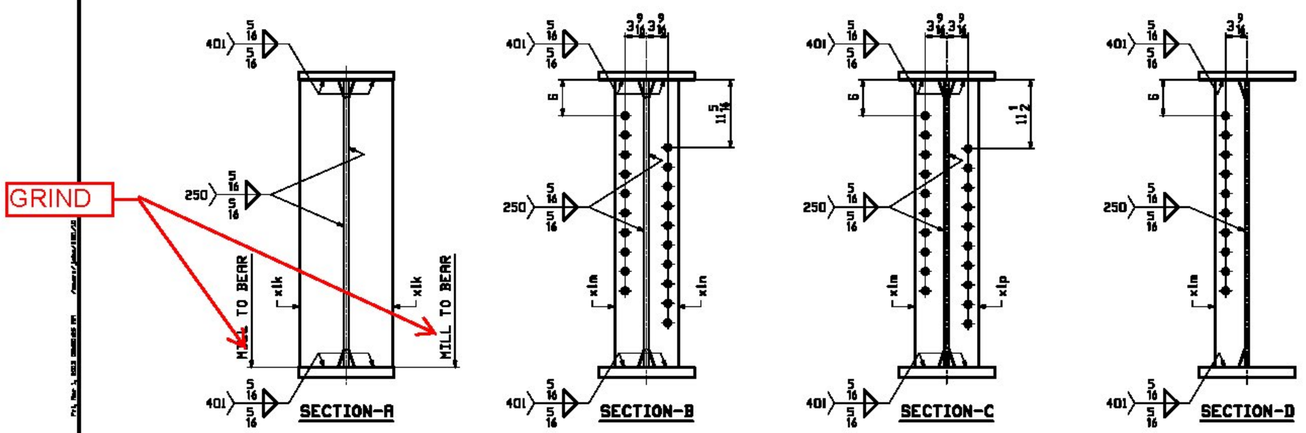
ONE ~ GIRDER ~ 10G2C

NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. FOR FIELD SPLICE DETAILS SEE SHEET X1.
3. FOR GIRDER STANDARD DETAILS SEE SHEET X1.
4. FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1.
5. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.





ORIENTATION DIAGRAM



REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	15-15/16" ø U.N.	NONE

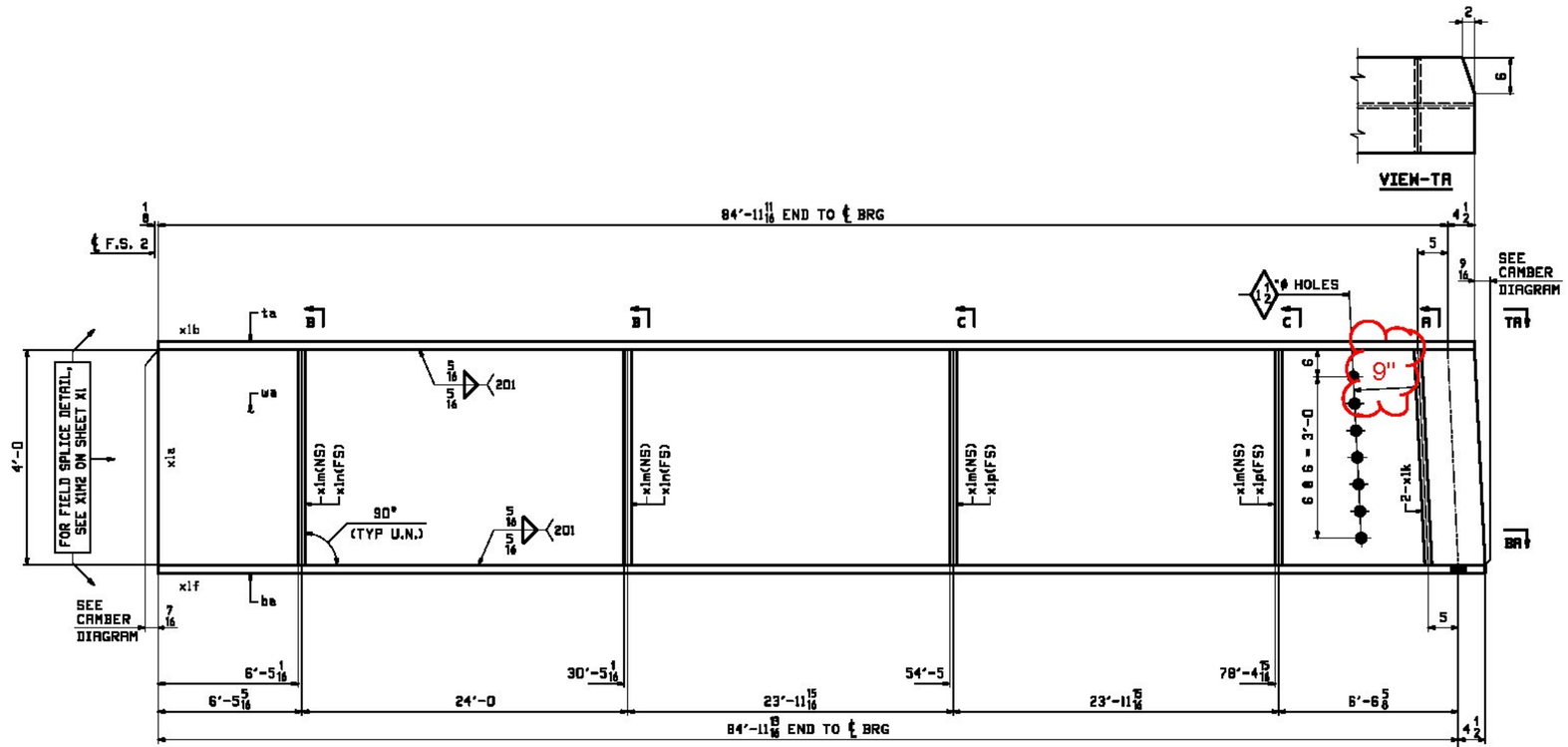
DESCRIPTION: GIRDER ~ 10G2C

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

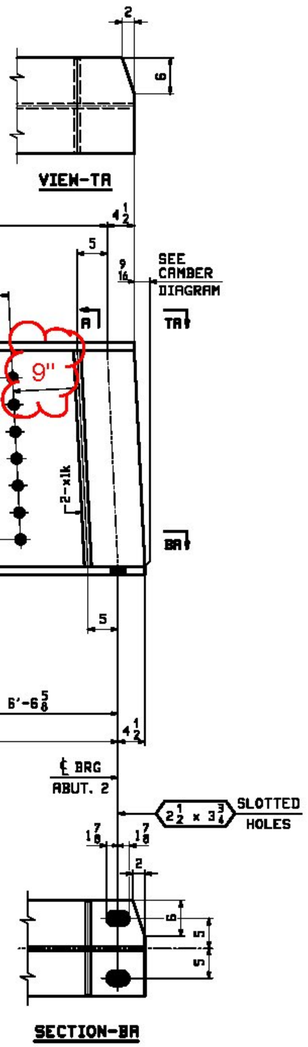
STRUCTURE: VT 100 OVER HARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/04	
	CHKD: DBH	DATE: 02/27	
LOCATION: TOWN OF JAMAICA, VT	JOB NO.	DWG NO.	
PROJ NO. ER-BRF 013-1(16)	529-1	10	
CUSTOMER: T. BUCK CONSTRUCTION		REV. △	

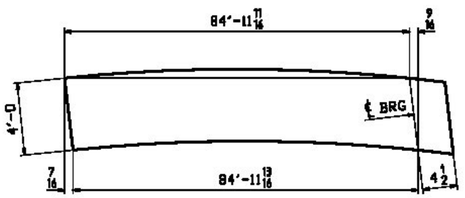
Vermont Agency of Transportation
RECEIVED
CK'D BY GMU/JWC OK'D BY GG
March 6, 2013
RESUBMIT NO Approved AsNoted
BY KMH DATE 04/02/13

ASM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								529-1	11	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		11G3C	1		GIRDER				23110	
1	J		1	wa	PL $\frac{5}{8}$x48	85	$4\frac{3}{4}$	M270-50WT2	8719	
1	G		1	ta	PL $1\frac{1}{4}$x16	85	$4\frac{3}{16}$	M270-50WT2	5808	
1	E		1	ba	PL $1\frac{3}{4}$x16	85	$4\frac{5}{16}$	M270-50WT2	8133	
2	L		2	x1k	PL $\frac{7}{8}$x$7\frac{1}{2}$	4	0		85	
2	M		4	x1m	PL $\frac{1}{2}$x5	4	0		34	
2	M		2	x1n	PL $\frac{1}{2}$x5	4	0		34	
2	M		2	x1p	PL $\frac{1}{2}$x5	4	0		34	



VIEW-TA

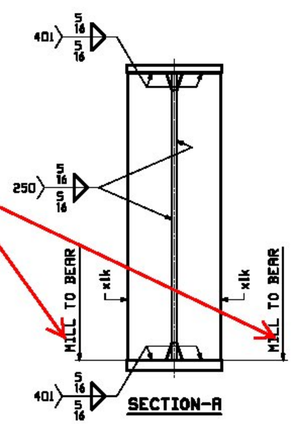


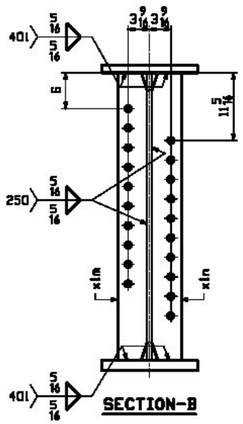


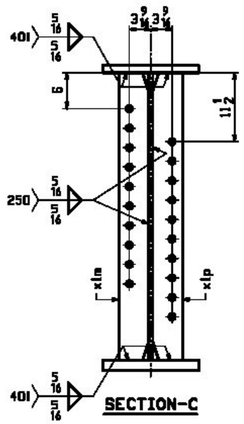
ORIENTATION DIAGRAM

ONE ~ GIRDER ~ 11G3C

NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. FOR FIELD SPLICE DETAILS SEE SHEET X1.
3. FOR GIRDER STANDARD DETAILS SEE SHEET X1.
4. FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1.
5. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.







GRIND

Vermont Agency of Transportation
RECEIVED
CK'D BY GMU/JWC OK'D BY GG
March 6, 2013
RESUBMIT NO Approved AsNoted
BY KMH DATE 04/02/13

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
D						

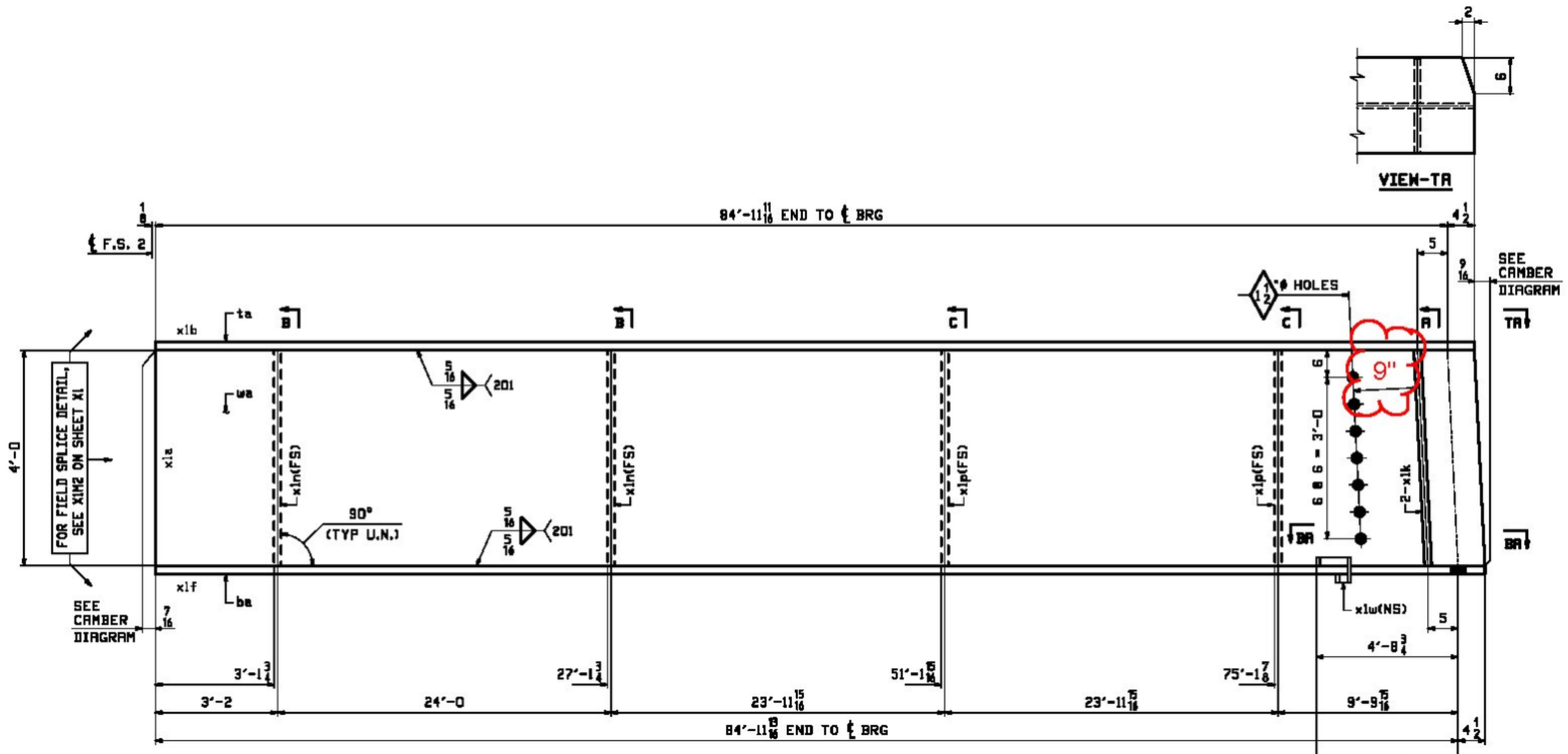
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	$\frac{15}{16}$ϕ U.N.	NONE

DESCRIPTION: GIRDER ~ 11G3C

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726
TENSOR 3981

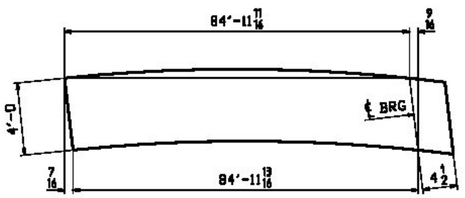
STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/04
	CHKD: DBH	DATE: 02/27
LOCATION: TOWN OF JAMAICA, VT	JOB NO.	DWG NO.
PROJ NO. ER-BRF 013-1(16)	529-1	11
CUSTOMER: T. BUCK CONSTRUCTION		REV. △

ADM INFO		SHOP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								529-1	12	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		12G4C	1		GIRDER				22976	
1	J		1	wa	PL $\frac{5}{8}$x48	85	$4\frac{3}{4}$	M270-50WT2	8718	
1	G		1	ta	PL $1\frac{1}{4}$x16	85	$4\frac{3}{16}$	M270-50WT2	5808	
1	E		1	ba	PL $1\frac{3}{4}$x16	85	$4\frac{5}{16}$	M270-50WT2	8133	
2	L		2	x1k	PL $\frac{7}{8}$x$7\frac{1}{2}$	4	0		85	
2	M		2	x1n	PL $\frac{1}{2}$x5	4	0		34	
2	M		2	x1p	PL $\frac{1}{2}$x5	4	0		34	
2	N		1	x1w	PL $\frac{1}{4}$x$3\frac{3}{4}$	0	$10\frac{7}{8}$		3	

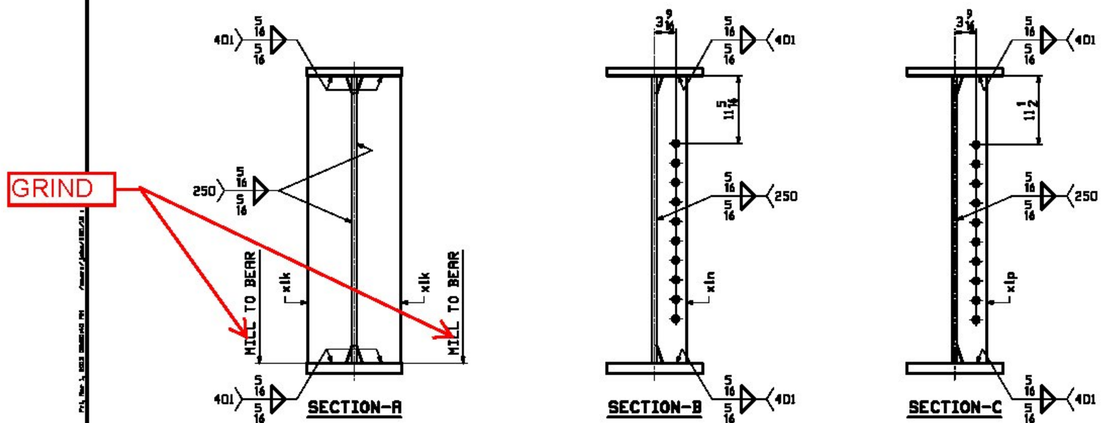


ONE ~ GIRDER ~ 12G4C

NOTES:
1. FOR GENERAL NOTES SEE SHEET GN1.
2. FOR FIELD SPLICE DETAILS SEE SHEET X1.
3. FOR GIRDER STANDARD DETAILS SEE SHEET X1.
4. FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1.
5. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.



ORIENTATION DIAGRAM



Vermont Agency of Transportation
RECEIVED
CK'D BY GMLJWC OK'D BY GG
March 6, 2013
RESUBMIT NO Approved AsNoted
BY KMH DATE 04/02/13

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

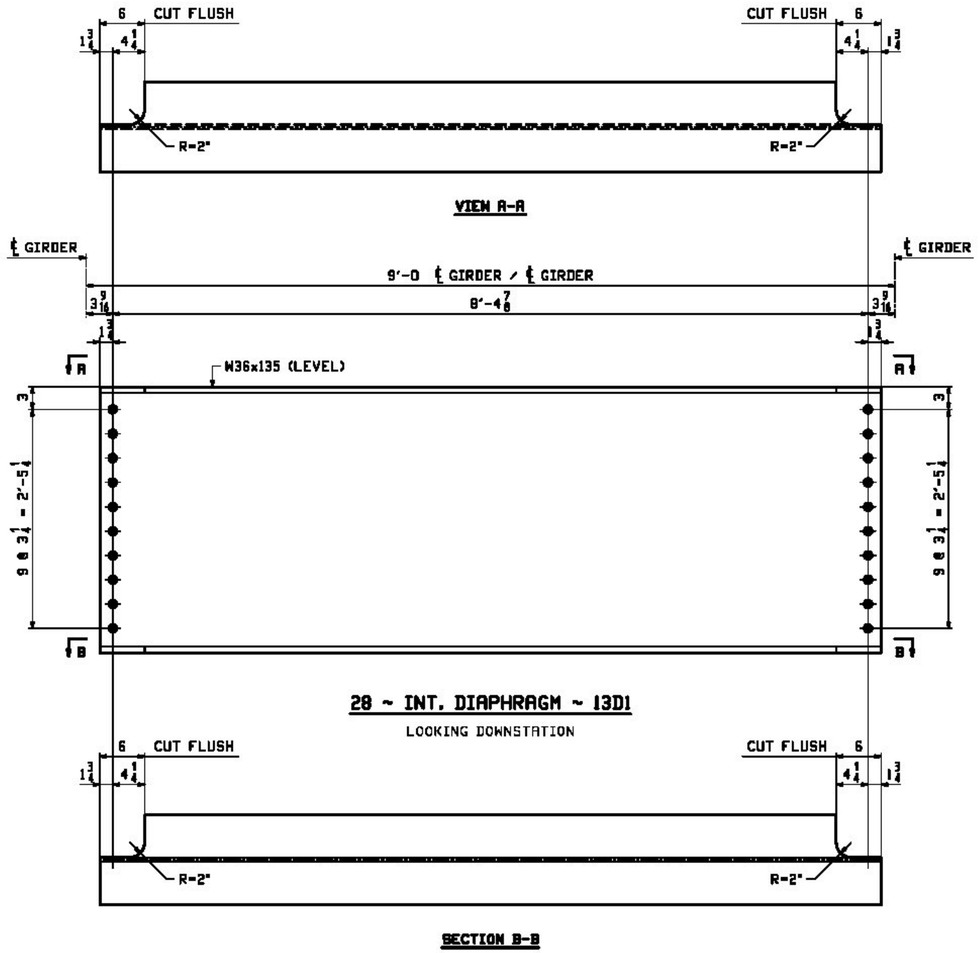
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	$\frac{15}{16}$"ø U.N.	NONE

DESCRIPTION: GIRDER ~ 12G4C

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: VT 100 OVER HARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/04
	CHKD: DBH	DATE: 02/27
LOCATION: TOWN OF JAMAICA, VT	JOB NO.	DWG NO.
PROJ NO. ER-BRF 013-1(16)	529-1	12
CUSTOMER: T. BUCK CONSTRUCTION		REV. △

ASM INFO		SHIP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								529-1	13	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		13D1	28		INT. DIAPHRAGM				1174	
2	U		28		W 36x135	8	9 3/8		1174	



SECTION B-B

Vermont Agency of Transportation
RECEIVED
CK'D BY GML/JWC OK'D BY GG
March 6, 2013
RESUBMIT Approved
BY KMH DATE 03/18/13

NOTES:
1. FOR GENERAL NOTES SEE DRAWING GN1.
2. T2 - DENOTES CHARPY V-NOTCH TESTING REQUIRED.

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

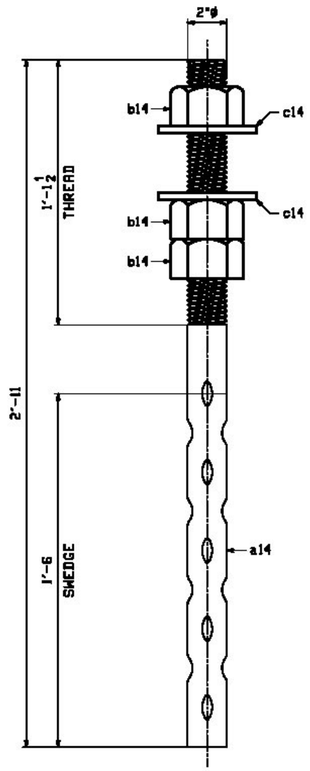
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270-50W	SEE GN1	13/16"ø	NONE

DESCRIPTION: INT. DIAPHRAGMS

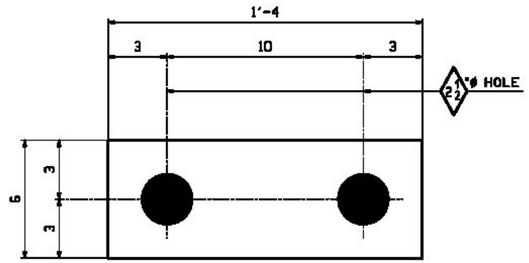
CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE:	VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/04
		CHKD: DBH	DATE: 02/27
LOCATION:	TOWN OF JAMAICA, VT	JOB NO.	DWG NO.
PROJ NO.	ER-BRF 013-1(16)	529-1	13
CUSTOMER:	T. BUCK CONSTRUCTION		REV. 0

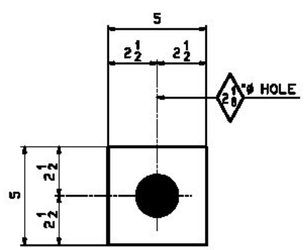
ASM INFO		SHOP	BILL OF MATERIAL					JOB NO.	DRAWING NO.	REV.
								529-1	14	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT	LENGTH INCHES	REMARKS	WT	PROCUREMENT NOTES
		14AB1	16		ANCHOR BOLT ASSEMBLY				28	
3	B		16	a14	2 # HDG	2	11	THRD = 19-1/2" MIN	14	
3	C		48	b14	2 # HHN			ASTM	3	
3	D		32	c14	PL $\frac{3}{8}$ x5	0	5	ASTM-36M	3	
					LEVELING PLATE					
3	E	14LP1	8		PL $1\frac{1}{4}$ x6	1	4	ASTM-36M	34	



16 ~ ANCHOR BOLTS ~ 14AB1



8 ~ LEVELING PLATE ~ 14LP1



32 ~ PLATE WASHER ~ c14

Vermont Agency of Transportation

RECEIVED

CK'D BY GML/JWC OK'D BY GG

March 6, 2013

RESUBMIT Approved

BY KMH DATE 03/18/13

NOTES:

1. FOR GENERAL NOTES SEE DRAWING GN1.

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						

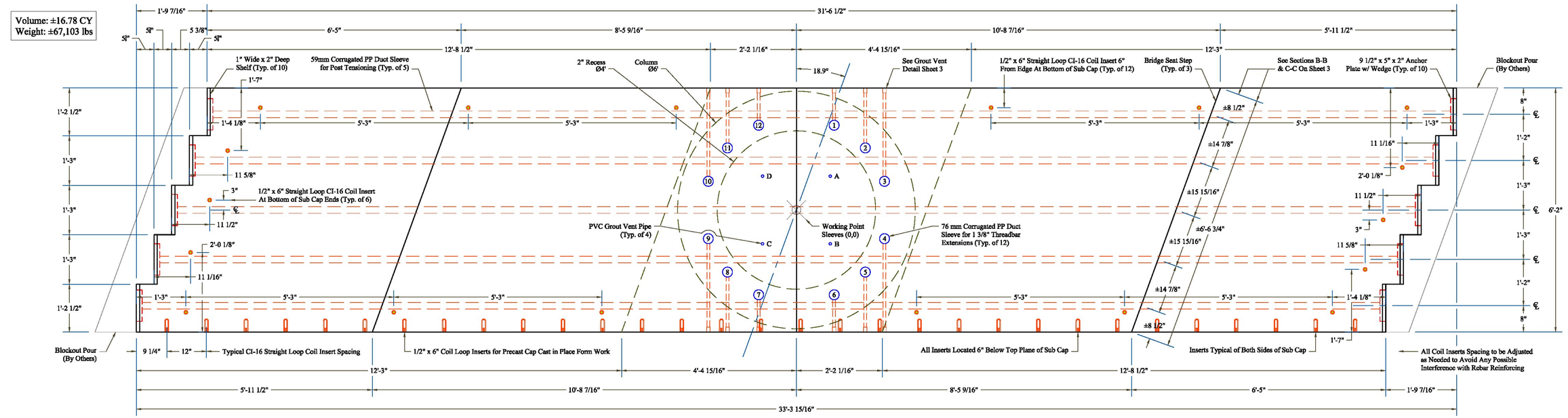
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
AS NOTED	NONE	AS NOTED	NONE

DESCRIPTION: ANCHOR BOLTS

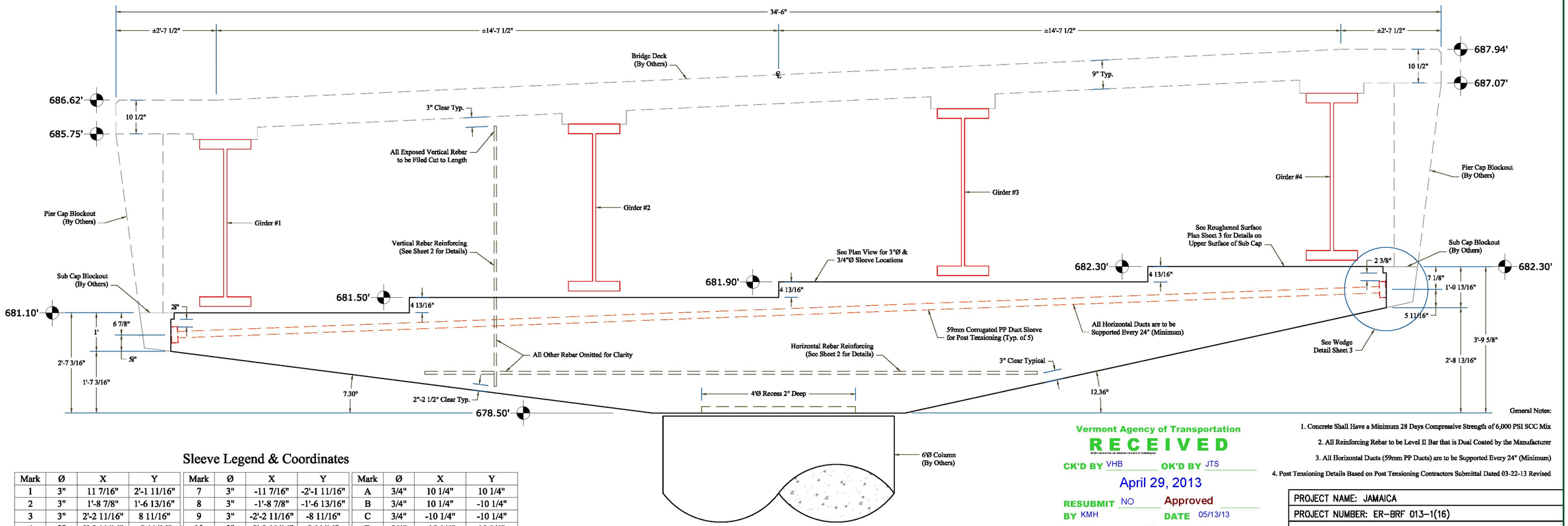
CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: VT 100 OVER WARDSBORO BROOK BRIDGE NO 78 WINDHAM COUNTY	DRAWN: EEO	DATE: 02/27
	CHKD: DBH	DATE: 02/27
LOCATION: TOWN OF JAMAICA, VT	JOB NO. 529-1	DWG NO. 14
PROJ NO. ER-BRF 013-1(16)		
CUSTOMER: T. BUCK CONSTRUCTION		REV.

Volume: ±16.78 CY
Weight: ±67,103 lbs



Plan View



Elevation View at ℄

Sleeve Legend & Coordinates

Mark	Ø	X	Y
1	3"	11 7/16"	2'-1 11/16"
2	3"	1'-8 7/8"	1'-6 13/16"
3	3"	2'-2 11/16"	8 11/16"
4	3"	2'-2 11/16"	-8 11/16"
5	3"	1'-8 7/8"	-1'-6 13/16"
6	3"	11 7/16"	-2'-1 11/16"

Mark	Ø	X	Y
7	3"	-11 7/16"	-2'-1 11/16"
8	3"	-1'-8 7/8"	-1'-6 13/16"
9	3"	-2'-2 11/16"	-8 11/16"
10	3"	-2'-2 11/16"	8 11/16"
11	3"	-1'-8 7/8"	1'-6 13/16"
12	3"	-11 7/16"	2'-1 11/16"

Mark	Ø	X	Y
A	3/4"	10 1/4"	10 1/4"
B	3/4"	10 1/4"	-10 1/4"
C	3/4"	-10 1/4"	-10 1/4"
D	3/4"	-10 1/4"	10 1/4"

Vermont Agency of Transportation
RECEIVED
CK'D BY VHB OK'D BY JTS
April 29, 2013
RESUBMIT NO Approved
BY KMH DATE 05/13/13

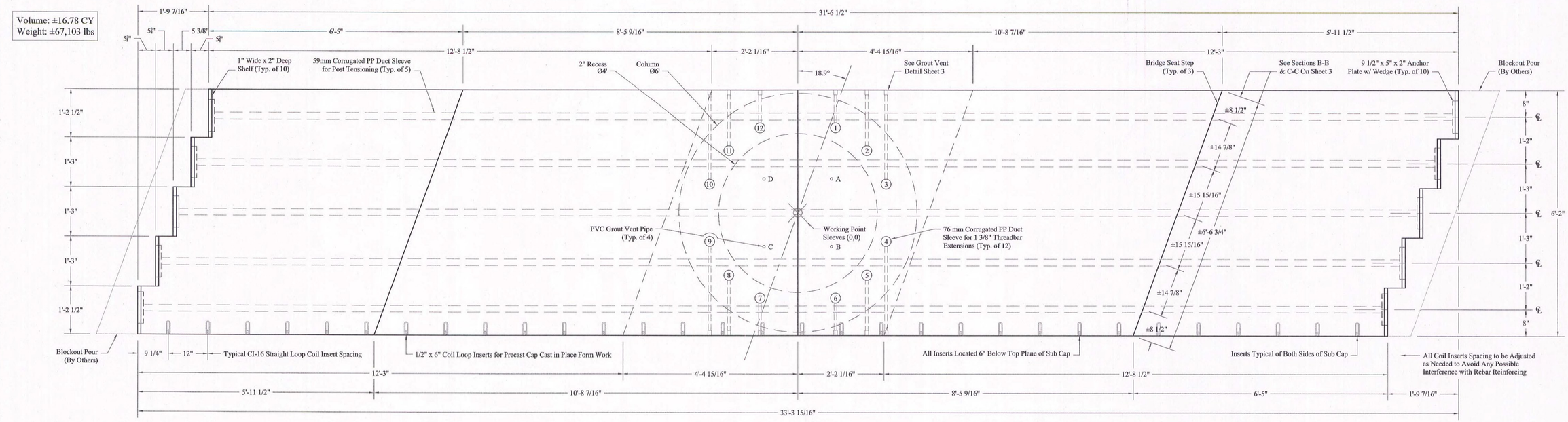
General Notes:

1. Concrete Shall Have a Minimum 28 Days Compressive Strength of 6,000 PSI SCC Mix
2. All Reinforcing Rebar to be Level II Bar that is Dual Coated by the Manufacturer
3. All Horizontal Ducts (59mm PP Ducts) are to be Supported Every 24" (Minimum)
4. Post Tensioning Details Based on Post Tensioning Contractors Submittal Dated 03-22-13 Revised

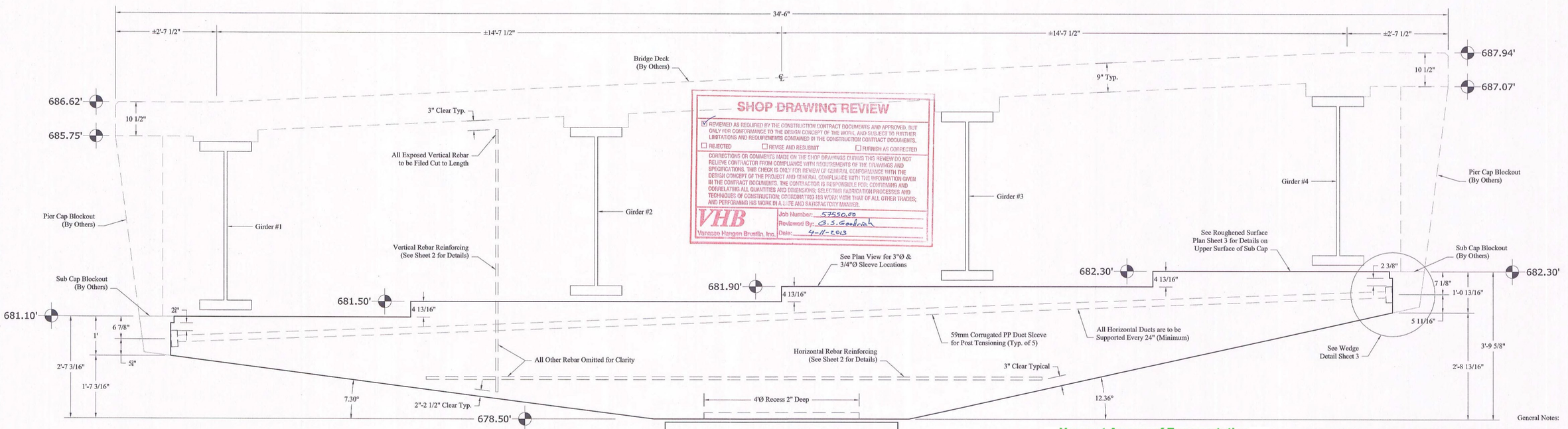
SD Ireland PRECAST DIVISION

PROJECT NAME: JAMAICA	
PROJECT NUMBER: ER-BRF 013-1(16)	
PRECAST SUB-CAP PRODUCTION DRAWING SET	
DRAWING: PLAN LAYOUT & ELEVATION VIEW	
DRAWN BY: CD	DATE: 04/11/13
APPROVED BY: TD	SHEET: 1 OF 4

Volume: ±16.78 CY
Weight: ±67,103 lbs



Plan View



Elevation View at ℄

Sleeve Legend & Coordinates

Mark	Ø	X	Y
1	3"	11 7/16"	2'-1 11/16"
2	3"	1'-8 7/8"	1'-6 13/16"
3	3"	2'-2 11/16"	8 11/16"
4	3"	2'-2 11/16"	-8 11/16"
5	3"	1'-8 7/8"	-1'-6 13/16"
6	3"	11 7/16"	-2'-1 11/16"

Mark	Ø	X	Y
7	3"	-11 7/16"	-2'-1 11/16"
8	3"	-1'-8 7/8"	-1'-6 13/16"
9	3"	-2'-2 11/16"	-8 11/16"
10	3"	-2'-2 11/16"	8 11/16"
11	3"	-1'-8 7/8"	1'-6 13/16"
12	3"	-11 7/16"	2'-1 11/16"

Mark	Ø	X	Y
A	3/4"	10 1/4"	10 1/4"
B	3/4"	10 1/4"	-10 1/4"
C	3/4"	-10 1/4"	-10 1/4"
D	3/4"	-10 1/4"	10 1/4"

SHOP DRAWING REVIEW

☑ REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

☐ REJECTED ☐ REVISE AND RESUBMIT ☐ FURNISH AS CORRECTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

VHB Vanasse Hangen Brustlin, Inc. Job Number: 57550.00 Reviewed By: A.S.Goodrich Date: 4-11-2013

Vermont Agency of Transportation
RECEIVED
CK'D BY VHB OK'D BY JTS
April 11, 2013
RESUBMIT NO Approved
BY KMH DATE 04/12/13

SD Ireland PRECAST DIVISION

General Notes:

1. Concrete Shall Have a Minimum 28 Days Compressive Strength of 6,000 PSI SCC Mix
2. All Reinforcing Rebar to be Level II Bar that is Dual Coated by the Manufacturer
3. All Horizontal Ducts (59mm PP Ducts) are to be Supported Every 24" (Minimum)
4. Post Tensioning Details Based on Post Tensioning Contractors Submittal Dated 03-22-13 Revised

PROJECT NAME: JAMAICA	
PROJECT NUMBER: ER-BRF 013-1(16)	
PRECAST SUB-CAP PRODUCTION DRAWING SET	
DRAWING: PLAN LAYOUT & ELEVATION VIEW	
DRAWN BY: CD	DATE: 04/11/13
APPROVED BY: TD	SHEET: 1 OF 4

Notes: 31" Minimum Lap Length Typical

Horizontal Reinforcing

(3) 4F1 (Typ. of 10)

3" Clear Typical for All Horizontal Reinforcing

For Vertical Reinforcing Call Outs See Section B & Section C Located on Sheet 3

F 3 3/8"
±11 1/4"
E
±11 1/4"
D
±11 1/4"
C
±11 1/4"
B
±11 1/4"
A 3 3/8"

Typical of All Ties (Centered About Post Tensioning Duct) 3 1/4" 3"

1: 6A7
2: 6A12
3: 6A13
4: 6A20
5: 7A1
6: 7A2
7R: 6B7
7L: 6B14
7C: 6B15

1: 6A6
2: 6A12
3: 6A13
4: 6A19
5: ---
6: ---
7R: 6B6
7L: 6B13
7C: 6B20

1: 6A5
2: 6A11
3: 6A13
4: 6A18
5: ---
6: ---
7R: 6B5
7L: 6B12
7C: 6B19

1: 6A4
2: 6A10
3: 6A13
4: 6A17
5: ---
6: ---
7R: 6B4
7L: 6B11
7C: 6B18

Rotation of Reinforcing is Allowable in Order to Avoid Pipe Interference

Rotation of Reinforcing is Allowable in Order to Avoid Pipe Interference

* See Additional Reinforcing Detail Located on Sheet 3

1: 6A3
2: 6A9
3: 6A13
4: 6A16
5: ---
6: ---
7R: 6B3
7L: 6B10
7C: 6B17

1: 6A2
2: 6A9
3: 6A13
4: 6A15
5: ---
6: ---
7R: 6B2
7L: 6B9
7C: 6B16

1: 6A1
2: 6A8
3: 6A13
4: 6A14
5: 7A1
6: 7A2
7R: 6B1
7L: 6B8
7C: 6B15

2"-2 1/4" Clear Typical for All Vertical Reinforcing

4G1 Spacing

3 1/2" 1'-2" 1'-3" 9" 1'-3" 1'-2" 3 1/2"

Shaded Regions Indicate Possible Interference, Adjust Dowel Bar Sub & Horizontal Reinforcing as Needed (Typical of 4 Locations)

6C3 6C4 6C5 6C6/6C11* 6C7/6C12* 6C8/6C13* 6C9 6C10

Plan View

AD: 6C1 B: 6E1 CF: 6C1 E: 6E1 AF: 6D1 — 4 7/8"
B: 6E2 C: 6E2 D: 6E2 E: 6E2 AF: 6A21 AF: 6D2 — 8 1/16"
AD: 6C1 B: 6E5 CF: 6C1 E: 6E5 AF: 6D5 — 8"
AD: 6C1 B: 6E6 CF: 6C1 E: 6E6 AF: 6D6 — 8 7/16"
4 Spaces at 4 1/2"
AD: 6C1 B: 6E9 CF: 6C1 E: 6E9 AF: 6D9 — 6"
AD: 6C1 B: 6E13 CF: 6C1 E: 6E13 AF: 6D13 — 6"
AD: 6C1 B: 6E10 CF: 6C1 E: 6E10 AF: 6D10 — 6"
AD: 6C1 B: 6E14 CF: 6C1 E: 6E14 AF: 6D14 — 6"
AD: 6C1 B: 6E17 CF: 6C1 E: 6E17 AF: 6D17 — 6"
AD: 6C1 B: 6E21 CF: 6C1 E: 6E21 AF: 6D21 — 6"
AD: 6C1 B: 6E18 CF: 6C1 E: 6E18 AF: 6D18 — 6"
4 Spaces at 4 1/2"
B: 6E22 C: 6E22 D: 6E22 E: 6E22 AF: 6A21 AF: 6D22 — 8 7/16"
AD: 6C1 B: 6E25 CF: 6C1 E: 6E25 AF: 6D25 — 8"
AD: 6C1 B: 6E29 CF: 6C1 E: 6E29 AF: 6D29 — 8 7/16"
AD: 6C1 B: 6E26 CF: 6C1 E: 6E26 AF: 6D26 — 6"
4 Spaces at 3 1/4"
AD: 6C1 B: 6E29 CF: 6C1 E: 6E29 AF: 6D29 — 6 3/8"
AD: 6C1 B: 6E29 CF: 6C1 E: 6E29 AF: 6D29 — 8 1/8"
AD: 6C2 B: 6E29 CF: 6C1 E: 6E36 AF: 6D29 — 6 3/4"
AD: 6C1 B: 6E36 CF: 6C1 E: 6E36 AF: 6D29 — 6 3/4"
AD: 6C1 B: 6E37 CF: 6C1 E: 6E37 AF: 6D37 — 6 3/4"
AD: 6C1 B: 6E37 CF: 6C1 E: 6E37 AF: 6D37 — 8 1/8"
AD: 6C1 B: 6E37 CF: 6C1 E: 6E37 AF: 6D37 — 6 3/8"
4 Spaces at 3 1/4"
AD: 6C1 B: 6E41 CF: 6C1 E: 6E41 AF: 6D41 — 8 7/16"
B: 6E42 C: 6E42 D: 6E42 E: 6E42 AF: 6A21 AF: 6D42 — 8"
AD: 6C1 B: 6E44 CF: 6C1 E: 6E44 AF: 6D44 — 8 7/16"
AD: 6C1 B: 6E45 CF: 6C1 E: 6E45 AF: 6D45 — 6"
AD: 6C1 B: 6E48 CF: 6C1 E: 6E48 AF: 6D48 — 6"
4 Spaces at 4 1/2"
AD: 6C1 B: 6E52 CF: 6C1 E: 6E52 AF: 6D52 — 6"
AD: 6C1 B: 6E49 CF: 6C1 E: 6E49 AF: 6D49 — 6"
AD: 6C1 B: 6E15 CF: 6C1 E: 6E15 AF: 6D15 — 6"
AD: 6C1 B: 6E56 CF: 6C1 E: 6E56 AF: 6D56 — 6"
AD: 6C1 B: 6E60 CF: 6C1 E: 6E60 AF: 6D60 — 6"
AD: 6C1 B: 6E57 CF: 6C1 E: 6E57 AF: 6D57 — 6"
4 Spaces at 4 1/2"
AD: 6C1 B: 6E61 CF: 6C1 E: 6E61 AF: 6D61 — 8 7/16"
AD: 6C1 B: 6E64 CF: 6C1 E: 6E64 AF: 6D64 — 8"
8 1/16" — 4 7/8"

B: 6E3 C: 6E3 D: 6E3 E: 6E3 AF: 6A21 AF: 6D3
AD: 6C1 B: 6E4 CF: 6C1 E: 6E4 AF: 6D4
AD: 6C1 B: 6E7 CF: 6C1 E: 6E7 AF: 6D7
AD: 6C1 B: 6E8 CF: 6C1 E: 6E8 AF: 6D8
AD: 6C1 B: 6E11 CF: 6C1 E: 6E11 AF: 6D11
AD: 6C1 B: 6E12 CF: 6C1 E: 6E12 AF: 6D12
AD: 6C1 B: 6E15 CF: 6C1 E: 6E15 AF: 6D15
AD: 6C1 B: 6E16 CF: 6C1 E: 6E16 AF: 6D16
AD: 6C1 B: 6E19 CF: 6C1 E: 6E19 AF: 6D19
AD: 6C1 B: 6E20 CF: 6C1 E: 6E20 AF: 6D20
B: 6E23 C: 6E23 D: 6E23 E: 6E23 AF: 6A21 AF: 6D23
AD: 6C1 B: 6E24 CF: 6C1 E: 6E24 AF: 6D24
AD: 6C1 B: 6E26 CF: 6C1 E: 6E26 AF: 6D26
AD: 6C1 B: 6E26 CF: 6C1 E: 6E26 AF: 6D26
AD: 6C1 B: 6E29 CF: 6C1 E: 6E29 AF: 6D29
AD: 6C1 B: 6E29 CF: 6C2 E: 6E36 AF: 6D29
AD: 6C1 B: 6E36 CF: 6C1 E: 6E36 AF: 6D36
AD: 6C1 B: 6E36 CF: 6C1 E: 6E36 AF: 6D36
AD: 6C1 B: 6E40 CF: 6C1 E: 6E40 AF: 6D40
B: 6E43 C: 6E43 D: 6E43 E: 6E43 AF: 6A21 AF: 6D43
AD: 6C1 B: 6E46 CF: 6C1 E: 6E46 AF: 6D46
AD: 6C1 B: 6E50 CF: 6C1 E: 6E50 AF: 6D50
AD: 6C1 B: 6E47 CF: 6C1 E: 6E47 AF: 6D47
AD: 6C1 B: 6E51 CF: 6C1 E: 6E51 AF: 6D51
AD: 6C1 B: 6E54 CF: 6C1 E: 6E54 AF: 6D54
AD: 6C1 B: 6E58 CF: 6C1 E: 6E58 AF: 6D58
AD: 6C1 B: 6E55 CF: 6C1 E: 6E55 AF: 6D55
AD: 6C1 B: 6E59 CF: 6C1 E: 6E59 AF: 6D59
B: 6E62 C: 6E62 D: 6E62 E: 6E62 AF: 6A21 AF: 6D62
B: 6E63 C: 6E63 D: 6E63 E: 6E63 AF: 6A21 AF: 6D63

31" Lap Typ.

Line to Field Cut Vert. Rebar

Horizontal Reinforcing

For Horizontal Reinforcing Call Outs See Section B & Section C Located on Sheet 3

1 4 13/16"
2 4 13/16"
3 4 13/16"
4 7 1/8"
5 8 1/8"
6 7 3/8"
7 2"

3 3/16"

#4 Dowel Bar Sub

Section A

Notes:

1. Horizontal Reinforcing Call Out 7 is Divided into 3 Separate Bars Consisting of 7L (Left), 7C (Center) & 7R (Right) Based on Their Location Relative to Section A Sheet 2
2. Concrete Shall Have a Minimum 28 Days Compressive Strength of 6,000 PSI SCC Mix
3. All Reinforcing Rebar to be Level II Bar that is Dual Coated by the Manufacturer
4. Precast Sub Cap Shall be Poured in the Upright Position and Handled in the Upright Position Only Using Methods Shown on Lifting Handling Detail Located on Sheet 4

Vermont Agency of Transportation
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April 11, 2013
RESUBMIT NO Approved
BY KMH DATE 04/12/13

SHOP DRAWING REVIEW
☑ REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.
☐ REVISE AND RESUBMIT
☐ REJECTED
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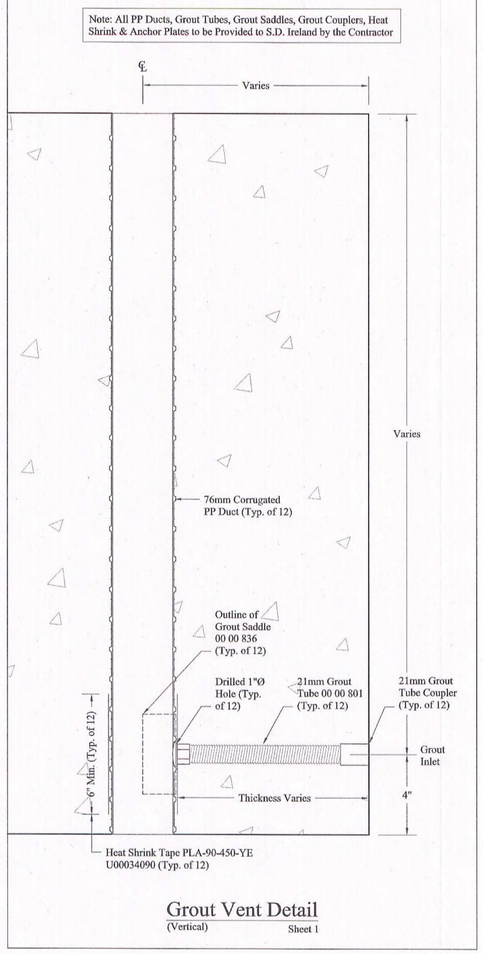
VHB Vanasse Hangen Brustlin, Inc. Job Number: 53550.00 Reviewed By: G.S. Goodrich Date: 4-11-13

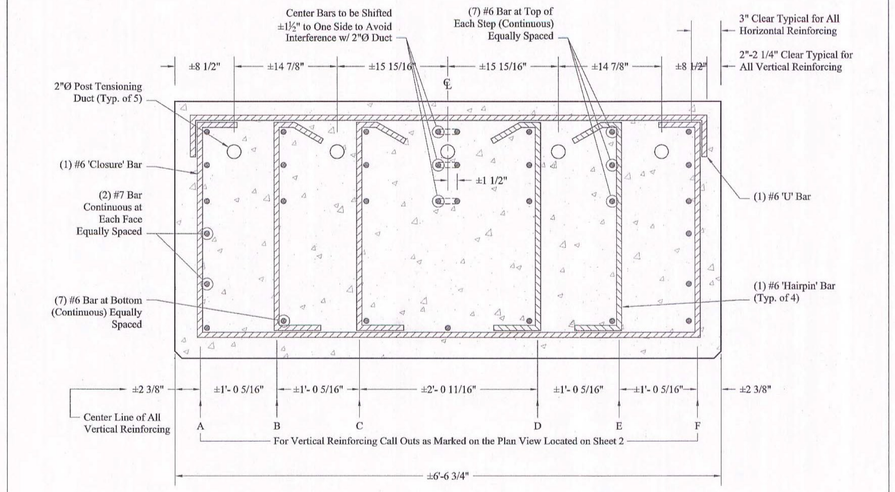
PROJECT NAME: JAMAICA	
PROJECT NUMBER: ER-BRF 013-1(16)	
PRECAST SUB-CAP PRODUCTION DRAWING SET	
DRAWING: REBAR REINFORCING PLAN & SECTION	
DRAWN BY: CD	DATE: 04/11/13
APPROVED BY: TD	SHEET: 2 OF 4

SD Ireland PRECAST DIVISION

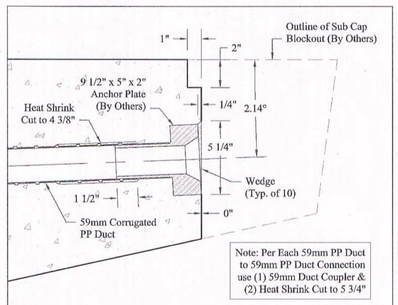
Note: All PP Ducts, Grout Tubes, Grout Saddles, Grout Couplers, Heat Shrink & Anchor Plates to be Provided to S.D. Ireland by the Contractor



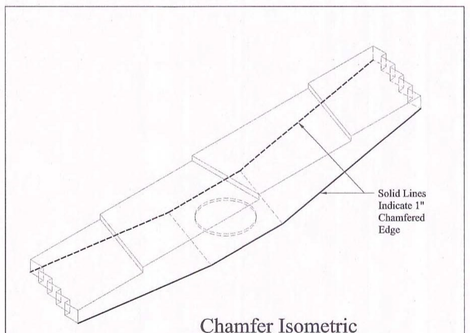
Grout Vent Detail
(Vertical) Sheet 1



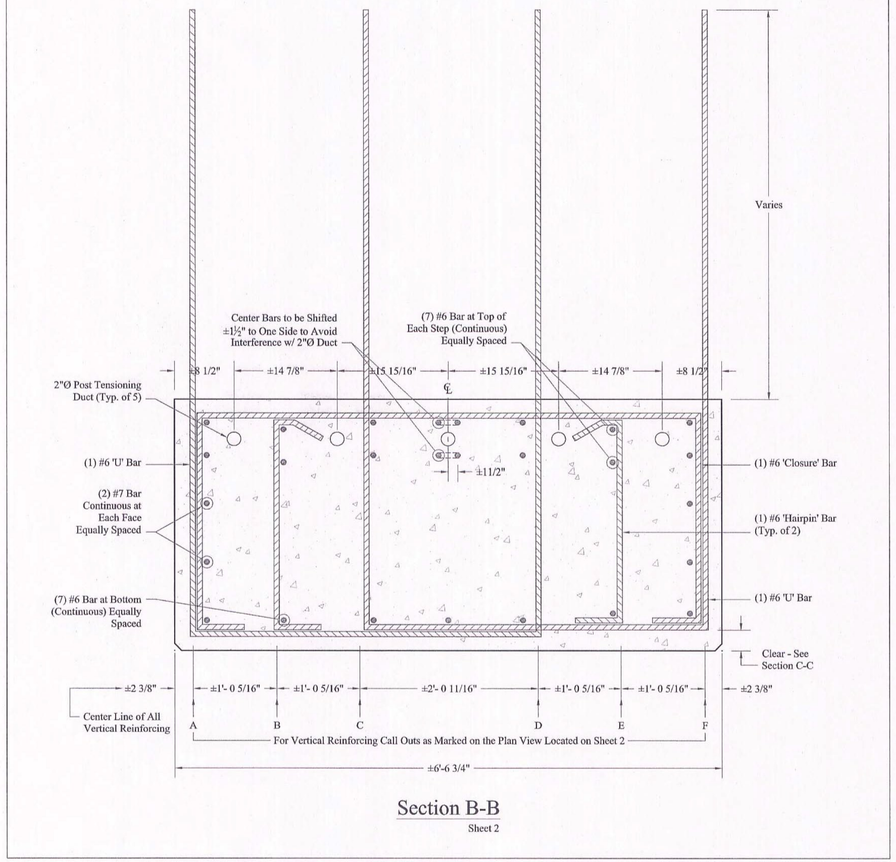
Section C-C
Sheet 2



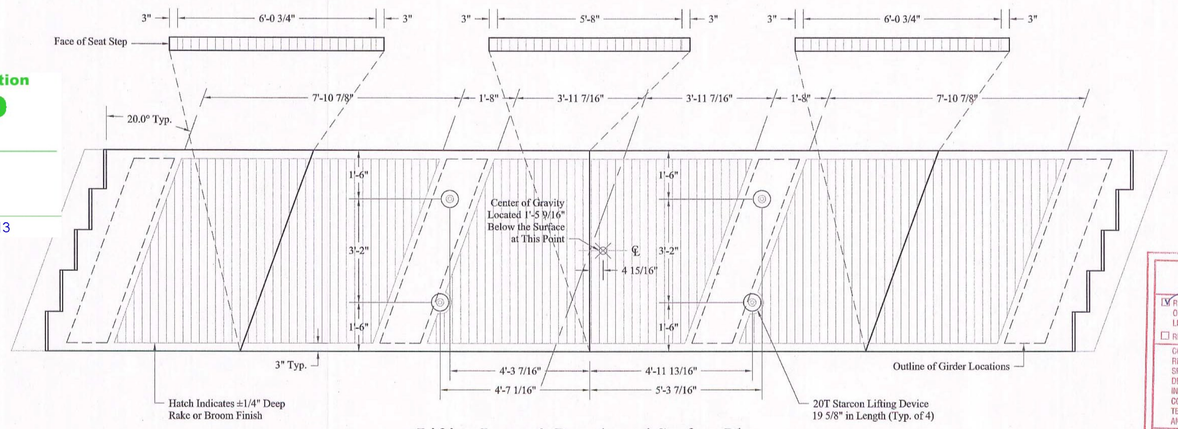
Wedge Plate Detail
(Horizontal) Sheet 1



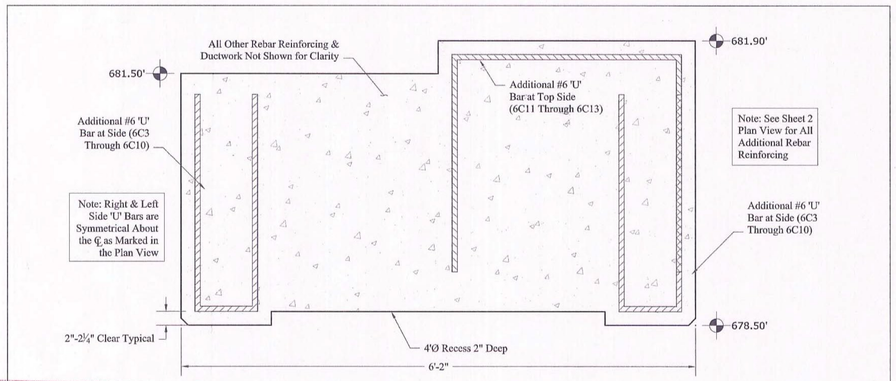
Chamfer Isometric
Sheet 3



Section B-B
Sheet 2



Lifting Insert & Roughened Surface Plan



Additional Reinforcing Detail
Sheet 1

Vermont Agency of Transportation
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VHB Vanasse Hangen Brustlin, Inc.
Job Number: 52550.00
Reviewed By: G.S.Gould, PE
Date: 4-11-13

SD Ireland PRECAST DIVISION

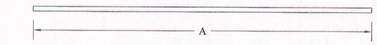
PROJECT NAME: JAMAICA	
PROJECT NUMBER: ER-BRF 013-1(16)	
PRECAST SUB-CAP PRODUCTION DRAWING SET	
DRAWING: REBAR SHEDULE & FORM LINER/LIFTING DEVICE PLAN	
DRAWN BY: CD	DATE: 04/11/13
APPROVED BY: TD	SHEET: 3 OF 4

Bar List - Horizontal Reinforcing

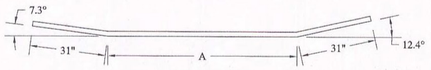
Mark	# Total	Length	Type	A	B	C	*
6A1	1	5'-6 1/4"	1	66 1/4"			
6A2	1	5'-5"	1	65"			
6A3	1	5'-9"	1	69"			
6A4	1	5'-7 3/4"	1	67 3/4"			
6A5	1	5'-6 1/2"	1	66 1/2"			
6A6	1	5'-5 1/4"	1	65 1/4"			
6A7	1	5'-9 1/2"	1	69 1/2"			
6A8	1	16'-2"	1	194"			
6A9	2	15'-8 1/2"	1	188 1/2"			
6A10	1	15'-3 1/4"	1	183 1/4"			
6A11	1	14'-9 3/4"	1	177 3/4"			
6A12	2	14'-4 1/2"	1	172 1/2"			
6A13	7	23'-8 1/2"	1	284 5/8"			
6A14	1	28'-2 1/4"	1	338 1/4"			
6A15	1	27'-10 1/4"	1	334 1/4"			
6A16	1	27'-11 1/2"	1	335 1/2"			
6A17	1	28'-0 3/4"	1	336 3/4"			
6A18	1	28'-2"	1	338"			
6A19	1	27'-10"	1	334"			
6A20	1	27'-11 1/4"	1	335 1/4"			
6A21	8	7'-2 1/4"	3	74 1/2"	6"	6"	
7A1	2	24'-3 3/4"	1	291 1/2"			
7A2	2	15'-10 3/4"	1	190 5/8"			
6B1	1	12'-3 3/4"	1	147 3/4"			
6B2	1	12'-2 1/2"	1	146 1/2"			
6B3	1	12'-6 3/4"	1	150 3/4"			
6B4	1	12'-5 1/2"	1	149 1/2"			
6B5	1	12'-4"	1	148"			
6B6	1	12'-2 3/4"	1	146 3/4"			
6B7	1	12'-7"	1	151"			
6B8	1	12'-4 1/2"	1	148 1/2"			
6B9	1	12'-0 1/2"	1	144 1/2"			
6B10	1	12'-1 3/4"	1	145 3/4"			
6B11	1	12'-3"	1	147"			
6B12	1	12'-4 1/4"	1	148 1/4"			
6B13	1	12'-0 1/4"	1	144 1/4"			
6B14	1	12'-1 1/2"	1	145 1/2"			
6B15	2	11'-8 1/2"	2a	78 1/2"			
6B16	1	12'-0 1/2"	2b	18 3/4"	24 1/2"	35"	
6B17	1	12'-0 1/2"	2b	10 3/4"	48 3/4"	18 3/4"	
6B18	1	12'-0 1/2"	2b	12 1/4"	54"	12 1/4"	
6B19	1	12'-0 1/2"	2b	19"	48 3/4"	10 1/2"	
6B20	1	12'-0 1/2"	2b	35 1/4"	24 1/2"	18 1/2"	

Bar List - Vertical Reinforcing

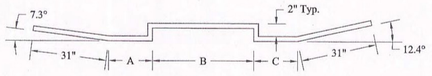
Mark	# Total	Length	Type	A	B	C	*
6C1	126	20'-0"	3	50"	95"	95"	
6C2	2	14'-7"	3	50"	95"	30"	
6C3	2	6'-7 1/2"	3	17 1/2"	31"	31"	
6C4	2	6'-0 1/2"	3	10 1/2"	31"	31"	
6C5	2	5'-11 1/4"	3	9 1/4"	31"	31"	
6C6	2	6'-0"	3	10"	31"	31"	
6C7	2	6'-2 1/2"	3	12 1/2"	31"	31"	
6C8	2	6'-6 1/2"	3	16 1/2"	31"	31"	
6C9	2	7'-0 1/2"	3	22 1/2"	31"	31"	
6C10	2	8'-1"	3	35"	31"	31"	
6C11	1	6'-8"	3	18"	31"	31"	
6C12	1	8'-7 1/4"	3	41 1/4"	31"	31"	
6C13	1	10'-3 1/4"	3	61 1/4"	31"	31"	



Type 1



Type 2a



Type 2b

Bar List - Vertical Reinforcing

Mark	# Total	Length	Type	A	B	C	*
6D1	1	8'-7 1/4"	4	74 1/4"	8 1/2"	8 1/2"	
6D2	1	8'-9 1/4"	4	74 1/4"	9 1/2"	9 1/2"	
6D3	1	8'-11 1/4"	4	74 1/4"	10 1/2"	10 1/2"	
6D4	1	9'-1 1/2"	4	74 1/4"	11 5/8"	11 5/8"	
6D5	1	9'-2 1/2"	4	74 1/4"	12 1/8"	12 1/8"	
6D6	1	9'-3 3/4"	4	74 1/4"	12 3/4"	12 3/4"	
6D7	1	9'-5"	4	74 1/4"	13 3/8"	13 3/8"	
6D8	1	9'-6 1/4"	4	74 1/4"	14"	14"	
6D9	1	9'-7 3/4"	4	74 1/4"	14 3/4"	14 3/4"	
6D10	1	9'-9 1/4"	4	74 1/4"	15 1/2"	15 1/2"	
6D11	1	9'-10 3/4"	4	74 1/4"	16 1/4"	16 1/4"	
6D12	1	10'-0 1/4"	4	74 1/4"	17"	17"	
6D13	1	10'-11 1/4"	4	74 1/4"	22 1/2"	22 1/2"	
6D14	1	11'-1"	4	74 1/4"	23 3/8"	23 3/8"	
6D15	2	11'-2 1/2"	4	74 1/4"	24 1/8"	24 1/8"	
6D16	1	11'-4"	4	74 1/4"	24 7/8"	24 7/8"	
6D17	1	11'-5 1/2"	4	74 1/4"	25 5/8"	25 5/8"	
6D18	1	11'-6 3/4"	4	74 1/4"	26 1/4"	26 1/4"	
6D19	1	11'-7 3/4"	4	74 1/4"	26 3/4"	26 3/4"	
6D20	1	11'-9"	4	74 1/4"	27 3/8"	27 3/8"	
6D21	1	11'-10 1/4"	4	74 1/4"	28"	28"	
6D22	1	12'-0 1/4"	4	74 1/4"	29"	29"	
6D23	1	12'-2 1/2"	4	74 1/4"	30 1/8"	30 1/8"	
6D24	1	12'-4 1/2"	4	74 1/4"	31 1/8"	31 1/8"	
6D25	1	12'-5 1/4"	4	74 1/4"	31 1/2"	31 1/2"	
6D26	3	12'-6 1/4"	4	74 1/4"	32"	32"	
6D29	6	12'-2 1/4"	4	74 1/4"	30"	30"	
6D36	2	12'-11 3/4"	4	74 1/4"	34 3/4"	34 3/4"	
6D37	3	13'-3 3/4"	4	74 1/4"	36 3/4"	36 3/4"	
6D40	1	13'-2 3/4"	4	74 1/4"	36 1/4"	36 1/4"	
6D41	1	13'-1 1/4"	4	74 1/4"	35 1/2"	35 1/2"	
6D42	1	12'-9 1/4"	4	74 1/4"	33 1/2"	33 1/2"	
6D43	1	12'-5 3/4"	4	74 1/4"	31 3/4"	31 3/4"	
6D44	1	12'-2"	4	74 1/4"	29 7/8"	29 7/8"	
6D45	1	12'-0"	4	74 1/4"	28 7/8"	28 7/8"	
6D46	1	11'-10"	4	74 1/4"	27 7/8"	27 7/8"	
6D47	1	11'-8"	4	74 1/4"	26 7/8"	26 7/8"	
6D48	1	11'-6"	4	74 1/4"	25 7/8"	25 7/8"	
6D49	1	11'-3 1/2"	4	74 1/4"	24 5/8"	24 5/8"	
6D50	1	11'-0 3/4"	4	74 1/4"	23 1/4"	23 1/4"	
6D51	1	10'-10 1/4"	4	74 1/4"	22"	22"	
6D52	1	10'-7 1/2"	4	74 1/4"	20 5/8"	20 5/8"	
6D54	1	11'-0"	4	74 1/4"	22 7/8"	22 7/8"	
6D55	1	10'-9 1/4"	4	74 1/4"	21 1/2"	21 1/2"	
6D56	1	10'-6 3/4"	4	74 1/4"	20 1/4"	20 1/4"	
6D57	1	10'-4"	4	74 1/4"	18 7/8"	18 7/8"	
6D58	1	10'-2"	4	74 1/4"	17 7/8"	17 7/8"	
6D59	1	10'-0"	4	74 1/4"	16 7/8"	16 7/8"	
6D60	1	9'-10 1/4"	4	74 1/4"	16"	16"	
6D61	1	9'-8 1/4"	4	74 1/4"	15"	15"	
6D62	1	9'-4 1/4"	4	74 1/4"	13 1/8"	13 1/8"	
6D63	1	9'-1"	4	74 1/4"	11 3/8"	11 3/8"	
6D64	1	8'-9 1/2"	4	74 1/4"	9 5/8"	9 5/8"	

Bar List - Ties

Mark	# Total	Length	Type	A	B	C	*
4F1	30	3'-4"	7	10"	6"	8"	

Bar List - Dowel Bar Subs

Mark	# Total	Length	Type	A	B	C	*
4G1	12	2'-3"	5	27"	---		

Vermont Agency of Transportation

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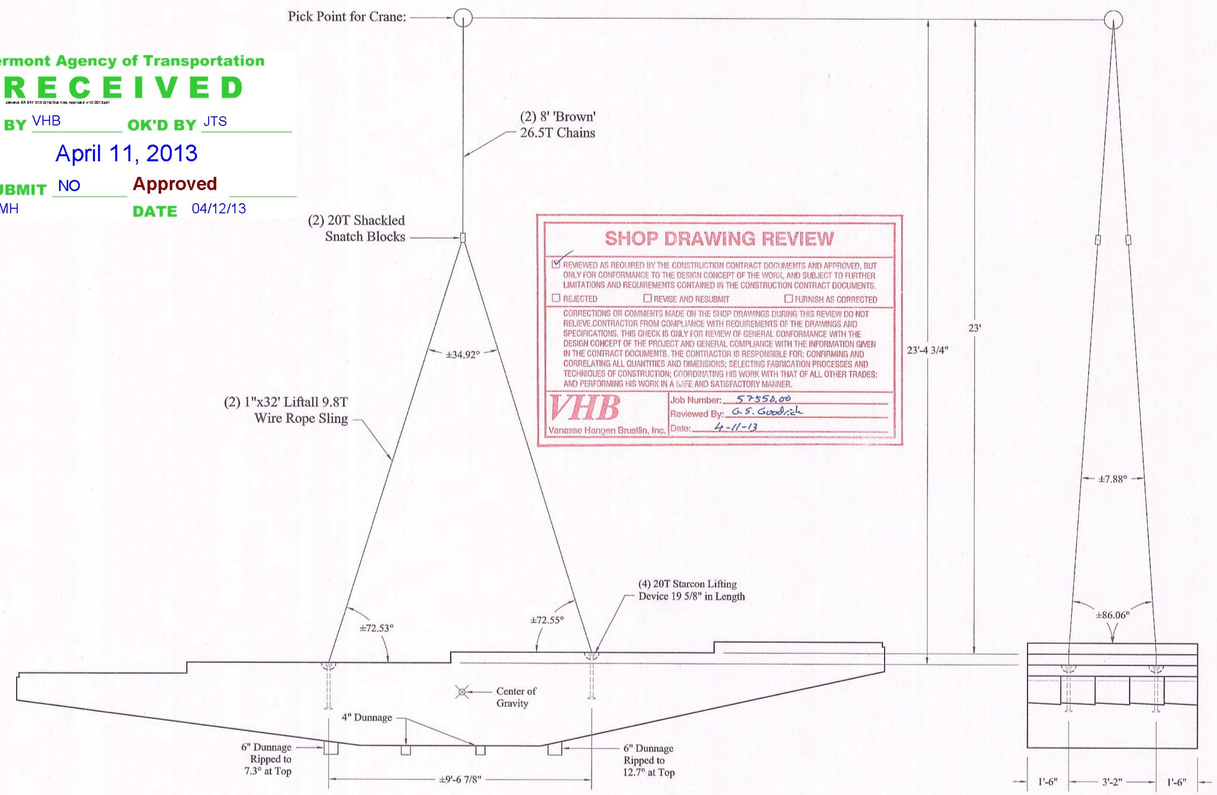
April 11, 2013

RESUBMIT NO Approved

BY KMH DATE 04/12/13



Elevation View

End View

SHOP DRAWING REVIEW

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VHB Vanasse Hangen Brustlin, Inc. Job Number: 57556.00 Reviewed By: G.S. Goodrich Date: 4-11-13

Bar List - Hairpins

Mark	# Total	Length	Type	A	*
6E1	2	1-11 1/2"	6	8 1/2"	
6E2	4	2'-0 1/2"	6	9 1/2"	
6E3	4	2'-1 1/2"	6	10 1/2"	
6E4	2	2'-2 5/8"	6	11 5/8"	
6E5	2	2'-3 1/8"	6	12 1/8"	
6E6	2	2'-3 3/4"	6	12 3/4"	
6E7	2	2'-4 3/8"	6	13 3/8"	
6E8	2	2'-5"	6	14"	
6E9	2	2'-5 3/4"	6	14 3/4"	
6E10	2	2'-6 1/2"	6	15 1/2"	
6E11	2	2'-7 1/4"	6	16 1/4"	
6E12	2	2'-8"	6	17"	
6E13	2	3'-1 1/2"	6	22 1/2"	
6E14	2	3'-2 3/8"	6	23 3/8"	

Bar List - Hairpins

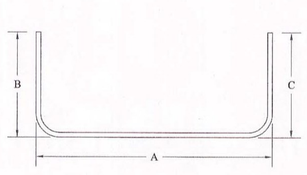
Mark	# Total	Length	Type	A	*
6E15	4	3'-3 1/8"	6	24 1/8"	
6E16	2	3'-3 7/8"	6	24 7/8"	
6E17	2	3'-4 5/8"	6	25 5/8"	
6E18	2	3'-5 1/4"	6	26 1/4"	
6E19	2	3'-5 3/4"	6	26 3/4"	
6E20	2	3'-6 3/8"	6	27 3/8"	
6E21	2	3'-7"	6	28"	
6E22	4	3'-8"	6	29"	
6E23	4	3'-9 1/8"	6	30 1/8"	
6E24	2	3'-10 1/8"	6	31 1/8"	
6E25	2	3'-10 1/2"	6	31 1/2"	
6E26	6	3'-11"	6	32"	
6E29	8	3'-9"	6	30"	
6E36	8	4'-1 3/4"	6	34 3/4"	

Bar List - Hairpins

Mark	# Total	Length	Type	A	*
6E37	6	4'-3 3/4"	6	36 3/4"	
6E40	2	4'-3 1/4"	6	36 1/4"	
6E41	2	4'-2 1/2"	6	35 1/2"	
6E42	4	4'-0 1/2"	6	33 1/2"	
6E43	4	3'-10 3/4"	6	31 3/4"	
6E44	2	3'-8 7/8"	6	29 7/8"	
6E45	2	3'-7 7/8"	6	28 7/8"	
6E46	2	3'-6 7/8"	6	27 7/8"	
6E47	2	3'-5 7/8"	6	26 7/8"	
6E48	2	3'-4 7/8"	6	25 7/8"	
6E49	2	3'-3 5/8"	6	24 5/8"	
6E50	2	3'-2 1/4"	6	23 1/4"	
6E51	2	3'-1"	6	22"	
6E52	2	2'-11 5/8"	6	20 5/8"	

Bar List - Hairpins

Mark	# Total	Length	Type	A	*
6E54	2	3'-1 7/8"	6	22 7/8"	
6E55	2	3'-0 1/2"	6	21 1/2"	
6E56	2	2'-11 1/4"	6	20 1/4"	
6E57	2	2'-9 7/8"	6	18 7/8"	
6E58	2	2'-8 7/8"	6	17 7/8"	
6E59	2	2'-7 7/8"	6	16 7/8"	
6E60	2	2'-7"	6	16"	
6E61	2	2'-6"	6	15"	
6E62	4	2'-4 1/8"	6	13 1/8"	
6E63	4	2'-2 3/8"	6	11 3/8"	
6E64	2	2'-0 5/8"	6	9 5/8"	



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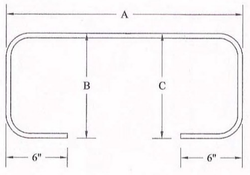

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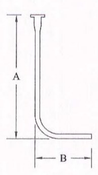

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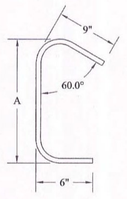

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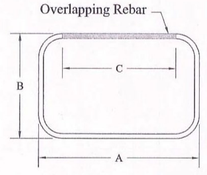

Type 7

Notes:
Rebar Tolerance: +0" -1/4"

SD Ireland PRECAST DIVISION

PROJECT NAME: JAMAICA	
PROJECT NUMBER: ER-BRF 013-1(16)	
PRECAST SUB-CAP PRODUCTION DRAWING SET	
DRAWING: REBAR SHEDULE & LIFTING/HANDLING NOTES	
DRAWN BY: CD	DATE: 04/11/13
APPROVED BY: TD	SHEET: 4 OF 4