

STATE OF VERMONT AGENCY OF TRANSPORTATION



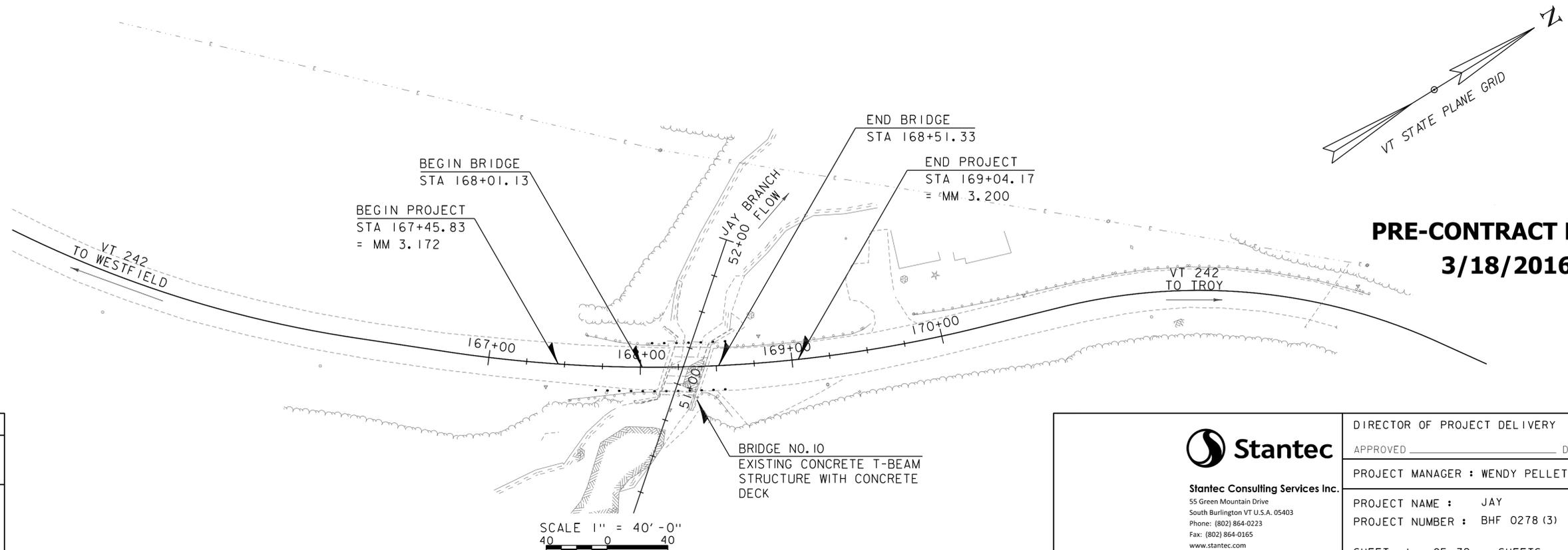
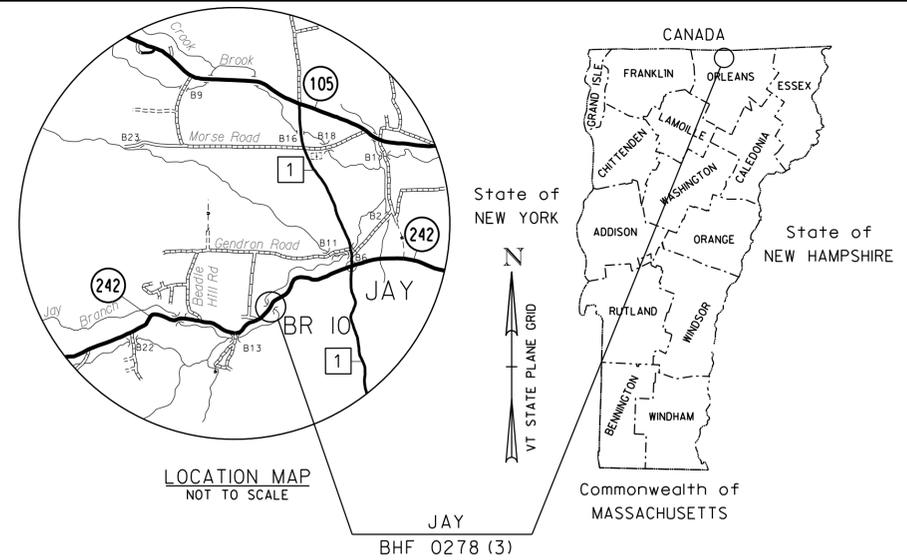
PROPOSED IMPROVEMENT BRIDGE PROJECT

TOWN OF JAY
COUNTY OF ORLEANS
ROUTE NO: VT RTE 242, RURAL MAJOR COLLECTOR BRIDGE NO.10

PROJECT LOCATION: 2.3 MILES WEST OF JUNCTION WITH VT ROUTE 101

PROJECT DESCRIPTION: REPLACEMENT OF EXISTING BRIDGE WITH A GALVANIZED STEEL BEAM AND CAST-IN-PLACE CONCRETE DECK SUPERSTRUCTURE AND A CONCRETE SUBSTRUCTURE, WITH RELATED ROADWAY AND CHANNEL WORK.

LENGTH OF STRUCTURE: 50.20 FEET
 LENGTH OF ROADWAY: 108.14 FEET
 LENGTH OF PROJECT: 158.34 FEET



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.

QUALITY ASSURANCE PROGRAM : LEVEL 2	
SURVEYED BY :	R. GILMAN
SURVEYED DATE :	06-07-2012
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD83 (2007)

Stantec
Stantec Consulting Services Inc.
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DIRECTOR OF PROJECT DELIVERY	
APPROVED _____	DATE _____
PROJECT MANAGER : WENDY PELLETIER, P. E.	
PROJECT NAME :	JAY
PROJECT NUMBER :	BHF 0278 (3)
SHEET 1	OF 72 SHEETS

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FINAL HYDRAULIC REPORT

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STANDARDS LIST

B-71	STANDARD FOR RESIDENTIAL AND COMMERCIAL DRIVES	07-08-2005
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-1995
G-1BM	BOX BEAM GUARD RAIL	06-13-1997
J-3	MAIL BOX SUPPORT DETAILS	08-07-1995
S-364A	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	02-10-2014
S-364B	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	02-10-2014
S-364C	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	02-10-2014
S-364D	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	04-23-2012
T-1	TRAFFIC CONTROL GENERAL NOTES	08-06-2012
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012
T-28	CONSTRUCTION SIGN DETAILS	08-06-2012
T-30	CONSTRUCTION SIGN DETAILS	08-06-2012
T-35	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS	08-06-2012
T-36	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS FOR PAVING	08-06-2012
T-42	BRIDGE NUMBER PLAQUE	04-09-2014
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01-02-2013

HYDROLOGIC DATA

Date: July 2015

DRAINAGE AREA : 9.2 sq. mi.
 CHARACTER OF TERRAIN : Hilly to mountainous, mostly forested with some development
 STREAM CHARACTERISTICS : Sinuous, semi-alluvial. Grade transition from steep to flatter.
 NATURE OF STREAMBED : Sand, gravel, cobbles, boulders and ledge

PEAK FLOW DATA

Q 2.33 =	550 cfs	Q 50 =	1800 cfs
Q 10 =	1100 cfs	Q 100 =	2100 cfs
Q 25 =	1500 cfs	Q 500 =	3000 cfs

DATE OF FLOOD OF RECORD : Unknown
 ESTIMATED DISCHARGE: Unknown
 WATER SURFACE ELEV.: Unknown
 NATURAL STREAM VELOCITY : @ Q50 = 14.7 fps
 ICE CONDITIONS : Moderate
 DEBRIS: Moderate
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes
 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: Single span concrete T-beam bridge
 YEAR BUILT: Built 1927, reconstructed 1964
 CLEAR SPAN(NORMAL TO STREAM): 22'
 VERTICAL CLEARANCE ABOVE STREAMBED: 8'
 WATERWAY OF FULL OPENING: 175 sq. ft.
 DISPOSITION OF STRUCTURE: Remove and replace with new bridge.
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: See boring logs.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1030.3'	VELOCITY =	9.8 fps
Q10 =	1032.5'	"	12.4 fps
Q25 =	1033.9'	"	13.8 fps
Q50 =	1035.0'	"	14.6 fps
Q100 =	1036.0'	"	15.1 fps

LONG TERM STREAMBED CHANGES: Scour hole through bridge and at outlet.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY: Above Q100
 RELIEF ELEVATION: 1036.2'
 DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: Jay DISTANCE: 2,100'
 HIGHWAY #: TH 23 STRUCTURE #: 13
 CLEAR SPAN: 36' CLEAR HEIGHT: 10'
 YEAR BUILT: 1955, reconstructed 2008 FULL WATERWAY:
 STRUCTURE TYPE: I-beam bridge

DOWNSTREAM STRUCTURE

TOWN: Jay DISTANCE: 5,800'
 HIGHWAY #: TH 1 STRUCTURE #: 6
 CLEAR SPAN: 41' CLEAR HEIGHT: 8'
 YEAR BUILT: 1971 FULL WATERWAY:
 STRUCTURE TYPE: I-beam bridge

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEM
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY	1.41	1.11					
POSTING							
OPERATING	1.83	1.44	1.94	1.02	1.35	1.24	1.59
COMMENTS:							

AS BUILT "REBAR" DETAIL		
LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

STRUCTURES DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	02-09-2012
SD-502.00	CONCRETE DETAILS AND NOTES	10-10-2012
SD-516.10	BRIDGE JOINT ASPHALTIC PLUG	08-29-2011
SD-601.00	STRUCTURAL STEEL DETAILS & NOTES	06-04-2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER AND NOTES	05-02-2011

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT	20 year ESAL for flexible pavement from 2015 to 2035 : 478500
2015	1400	290	62	11.6	170	40 year ESAL for flexible pavement from 2015 to 2055 : 0
2035	1500	300	62	15.6	240	Design Speed : 40 mph

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span steel beam bridge with concrete deck
 CLEAR SPAN(NORMAL TO STREAM): 40'
 VERTICAL CLEARANCE ABOVE STREAMBED: 9'
 WATERWAY OF FULL OPENING: 328 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1029.9'	VELOCITY =	9.8 fps
Q10 =	1031.0'	"	12.4 fps
Q25 =	1031.8'	"	13.8 fps
Q50 =	1032.5'	"	14.6 fps
Q100 =	1033.1'	"	15.1 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY: Above Q100
 RELIEF ELEVATION: 1036.2'
 DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 1035.9' upstr., 1033.9' dnstr.
 VERTICAL CLEARANCE: @ Q50 = 3.4' upstr. & 1.4' dnstr. above approach W.S.E.

SCOUR: 0' of contraction scour up to Q500.

REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW: - DEPTH OR ELEVATION:
 ORDINARY LOW WATER: -
 ORDINARY HIGH WATER: -

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: No temporary bridge required. Use phased construction.
 CLEAR SPAN (NORMAL TO STREAM):
 VERTICAL CLEARANCE ABOVE STREAMBED:
 WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN ONE-WAY TRAFFIC ON THE EXISTING STRUCTURE.
2. INSTALL AND MAINTAIN TRAFFIC SIGNALS.
3. SIDEWALKS ARE NOT NECESSARY

DESIGN VALUES

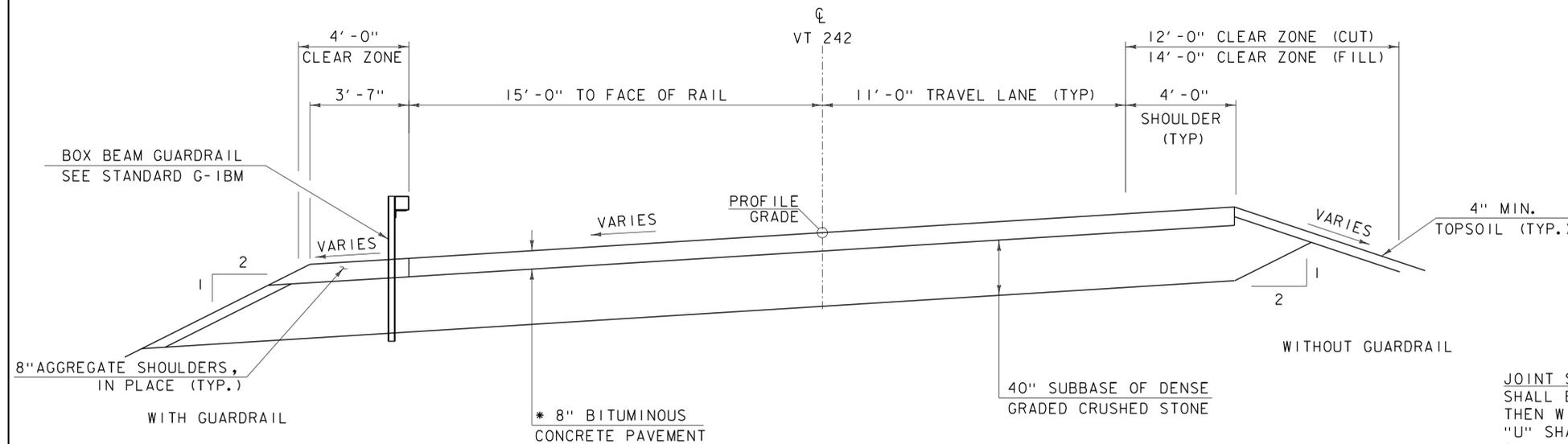
1. DESIGN LIVE LOAD	HL-93
2. FUTURE PAVEMENT	---
3. DESIGN SPAN	L: 45.41 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ: ---
5. PRESTRESSING STRAND	f _y : ---
6. PRESTRESSED CONCRETE STRENGTH	f' _c : ---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f' _{cr} : ---
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f' _c : 4.0 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 : 3.0 KSI
12. REINFORCING STEEL	f _y : 60 KSI
13. STRUCTURAL STEEL AASHTO M270	f _y : ---
14. NOMINAL BEARING RESISTANCE OF SOIL	q _n : ---
15. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: ---
16. NOMINAL BEARING RESISTANCE OF ROCK	q _n : 150 KSF
17. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: 0.45
18. PILE RESISTANCE FACTOR	φ: ---
19. LATERAL PILE DEFLECTION	Δ: ---
20. BASIC WIND SPEED	V _{3s} : ---
21. MINIMUM GROUND SNOW LOAD	p _g : ---
22. SEISMIC DATA	PGA: 0 S _s : --- S _f : ---
23.	---
24.	---
25.	---
26.	---

PROJECT NAME: JAY
 PROJECT NUMBER: BHF 0278(3)
 FILE NAME: Jay PI sheet.xls PLOT DATE: 3/18/2016
 PROJECT LEADER: M. Chenette DRAWN BY: L. Buxton
 DESIGNED BY: G. Bogue CHECKED BY: M. Chenette
 PRELIMINARY INFORMATION SHEET 1 SHEET 2 OF 72

MATERIAL TOLERANCES

(IF USED ON PROJECT)

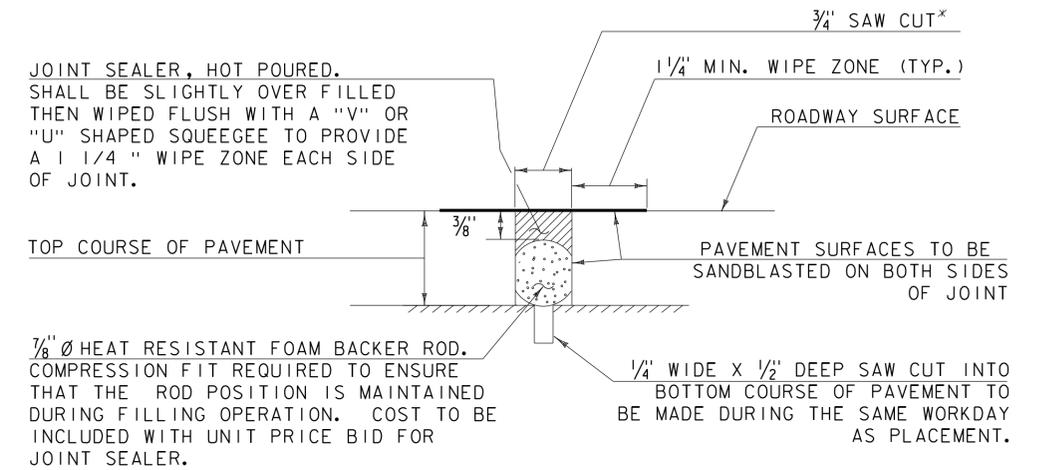
SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"



- * 1 1/2" TYPE IVS OVER
- 1 1/2" TYPE IVS OVER
- 2 1/2" TYPE IIS OVER
- 2 1/2" TYPE IIS
- EMULSIFIED ASPHALT
- BETWEEN LAYERS (SEE NOTE 1)

VT 242 TYPICAL SECTION

SCALE 3/8" = 1'-0"



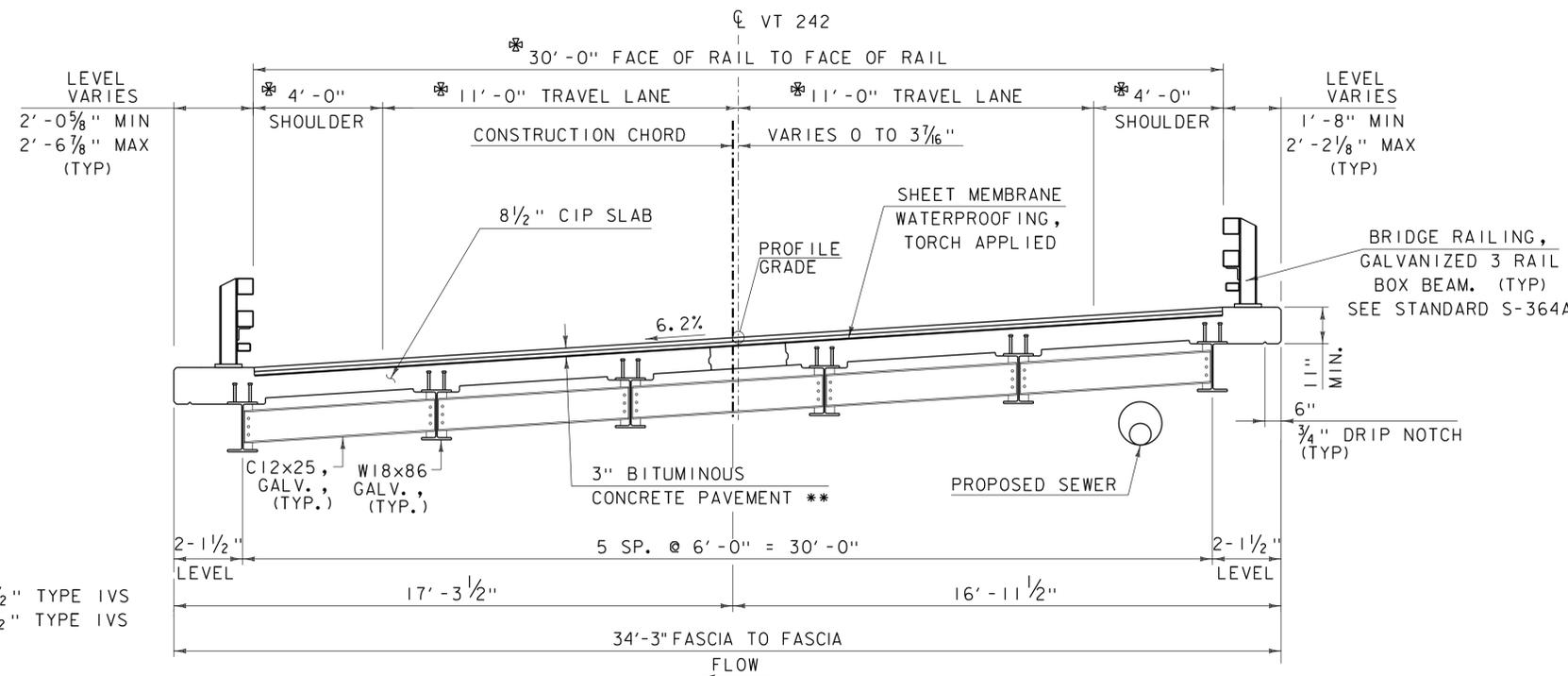
SAWED PAVEMENT JOINT DETAIL

NOT TO SCALE

* JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE DECK. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER.

NOTES:

1. EMULSIFIED ASPHALT SHALL BE APPLIED ON COLD PLANED SURFACES AT THE RATE OF 0.08 GAL/SY AND BETWEEN PAVED LAYERS AT THE RATE OF 0.04 GAL/SY. EMULSIFIED ASPHALT TO BE PAID UNDER ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)



** 1 1/2" TYPE IVS
1 1/2" TYPE IVS

BRIDGE TYPICAL SECTION

SCALE 3/8" = 1'-0"

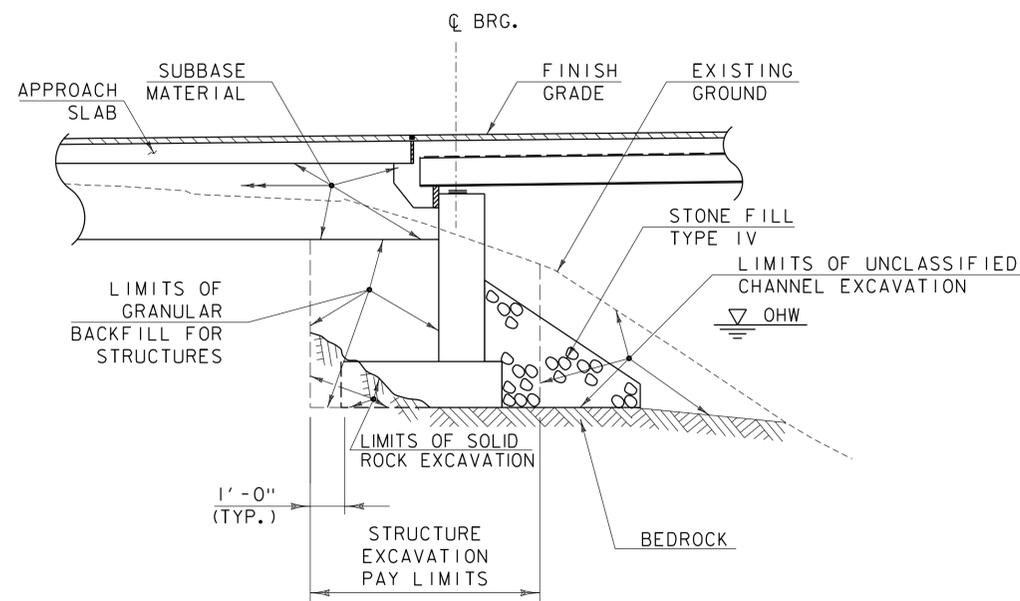
⊕ INDICATES RADIAL DIMENSIONS



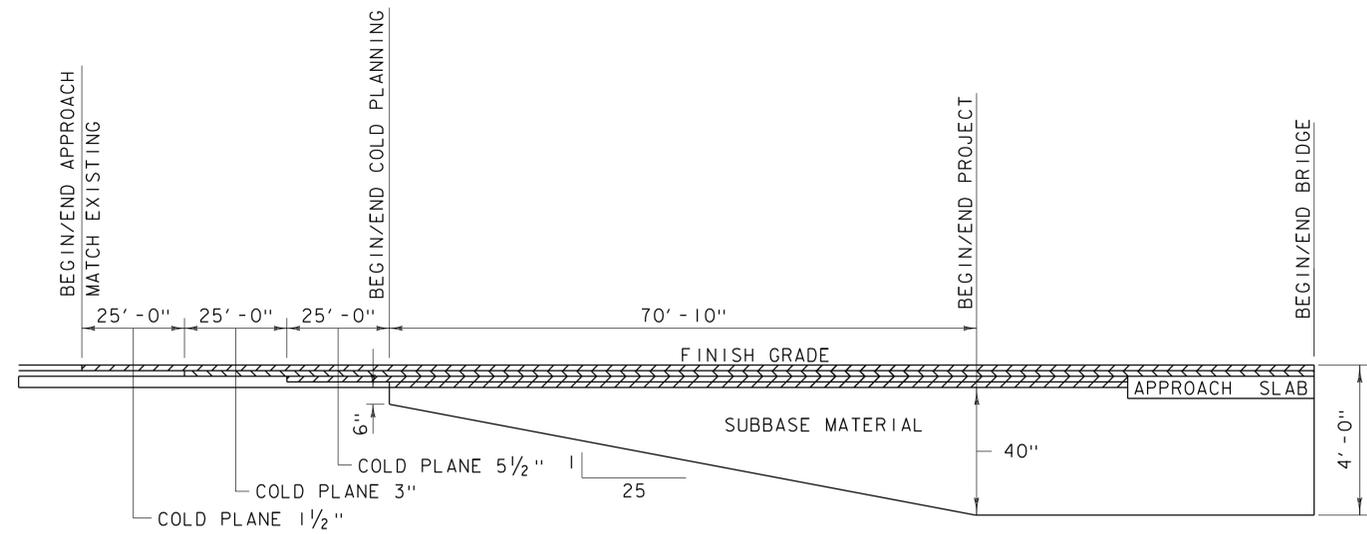
PROJECT NAME: JAY
PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12cl54+yp.dgn
PROJECT LEADER: M. CHENETTE
DESIGNED BY: N. TIRK
TYPICAL SECTIONS - TYP 1

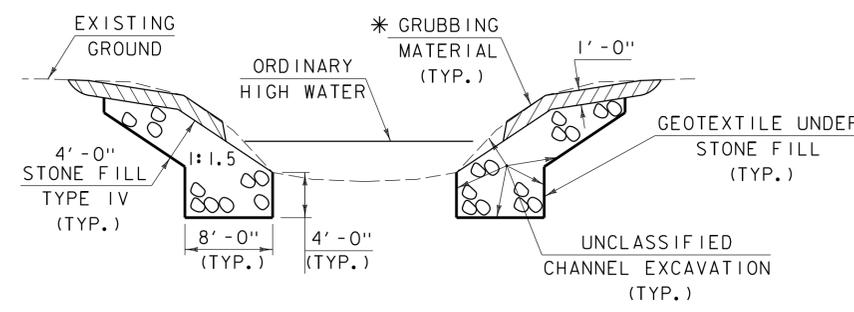
PLOT DATE: 3/18/2016
DRAWN BY: L. BUXTON
CHECKED BY: M. CHENETTE
SHEET 3 OF 72



TYPICAL EARTHWORK SECTION
(NOT TO SCALE)

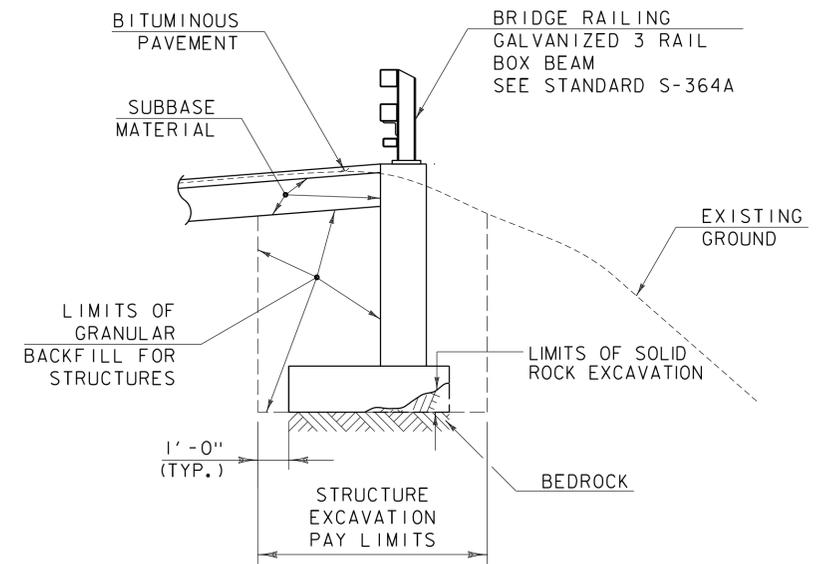


TYPICAL APPROACH SECTION
(ELEVATION IN CUT AND FILL)
(NOT TO SCALE)

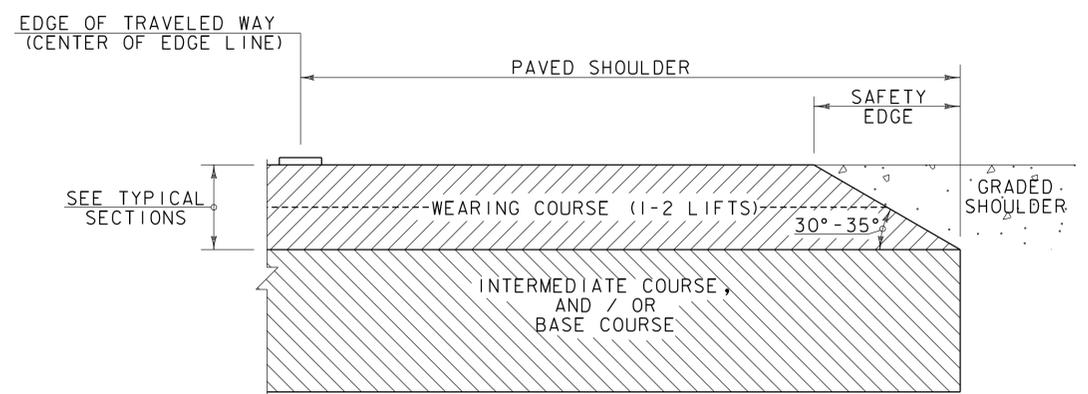


CHANNEL TYPICAL SECTION
NOT TO SCALE

* 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.



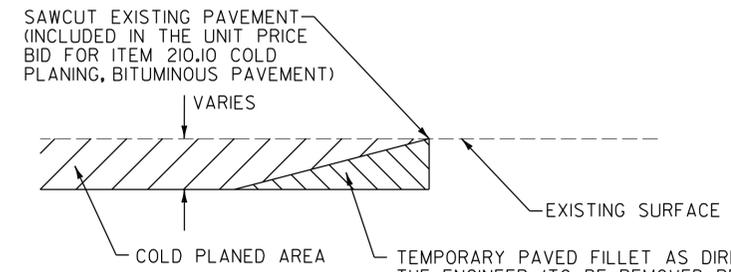
TYPICAL WINGWALL SECTION - UPSTREAM
(NOT TO SCALE)



SAFETY EDGE DETAIL
NOT TO SCALE

NOTES:

1. THE EDGE OF PAVEMENT SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE 30 TO 35 DEGREE ANGLE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.
2. THE PAVED SHOULDER EXTENDS FROM THE EDGE OF TRAVELED WAY TO THE EDGE OF THE WEARING COURSE, INCLUDING THE "SAFETY EDGE".



DETAIL AT VERTICAL COLD PLANE JOINTS

NOTE: THIS DETAIL SHALL BE USED AT THE LOCATIONS SHOWN ABOVE AS DIRECTED BY THE ENGINEER.



PROJECT NAME:	JAY	PLOT DATE:	3/18/2016
PROJECT NUMBER:	BHF 0278(3)	DRAWN BY:	L. BUXTON
FILE NAME:	z12c154typ.dgn	DESIGNED BY:	N. TIRK
PROJECT LEADER:	M. CHENETTE	CHECKED BY:	M. CHENETTE
TYPICAL SECTIONS - TYP 2			SHEET 4 OF 72

GENERAL PROJECT NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 2011, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SEVENTH EDITION DATED 2014, AND ITS LATEST REVISIONS.
2. THE BRIDGE IS DESIGNED FOR AN HL-93 LIVE LOAD.
3. ITEM 529.15 "REMOVAL OF STRUCTURE" IS FOR THE REMOVAL OF THE EXISTING STRUCTURE INCLUDING THE SUPERSTRUCTURE, ABANDONED UTILITIES AND APPURTENANCES AND ABUTMENTS INCLUDING THE FOOTING AND ANY PORTION OF THE SUBSTRUCTURE OUTSIDE THE LIMITS OF STRUCTURE EXCAVATION OR UNCLASSIFIED CHANNEL EXCAVATION.
4. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.
5. ALL CONSTRUCTION AND ACCESS SHALL BE WITHIN THE RIGHT OF WAY UNLESS SHOWN ON THE ROW PLANS OR APPROVED IN WRITING BY THE PROPERTY OWNER AND VTRANS ENVIRONMENTAL PERMITTING. THE CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE PROPERTY OWNER(S) TO OBTAIN WRITTEN APPROVAL OF LAND USE OUTSIDE THE RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT COPIES OF THE WRITTEN PROPERTY AGREEMENTS TO THE RESIDENT ENGINEER.

CONCRETE AND REINFORCING STEEL

6. ITEM 514.10 WATER REPELLANT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF DECK BETWEEN DRIP BEADS.
7. ALL REINFORCEMENT IN THE SUPERSTRUCTURE (INCLUDING CURTAIN WALLS) SHALL PROVIDE LEVEL II CORROSION RESISTANCE. LEVEL I CORROSION RESISTANCE IS ACCEPTABLE FOR THE SUBSTRUCTURE.
8. CONCRETE FOR THE DECK AND CURTAIN WALL SHALL BE ITEM 501.33, CONCRETE, HIGH PERFORMANCE CLASS A. CONCRETE FOR THE SUBSTRUCTURE SHALL BE HIGH PERFORMANCE CLASS B AND WILL BE PAID FOR UNDER ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B.
9. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL. OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 1/4 INCH PER FOOT. THE ABUTMENT SEATS SHALL BE SLOPED FULL WIDTH TOWARD MIDSPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE GIVEN A MAGNESIUM FLOAT FINISH.
10. NO CONCRETE SHALL BE PLACED IN THE ABUTMENTS OR WINGWALLS ABOVE THE ADJACENT BEAM SEAT ELEVATIONS UNTIL THE BEAMS HAVE BEEN SET.
11. CLEAR COVER ON REINFORCING STEEL SHALL BE PER THE FOLLOWING LIST UNLESS NOTED OTHERWISE:

LOCATION	CLEAR COVER (INCHES)
UNDERSIDE OF BRIDGE DECK _____	1.5
EXPOSED TO EARTH OR WEATHER _____	2
TOP OF PAVED BRIDGE DECK _____	2.5
DIRECT EXPOSURE TO DEICING SALTS (CURBS, DECK FASCIA AND EXPOSED FACES OF WALLS) _____	3
CAST AGAINST EARTH _____	3

STRUCTURAL STEEL

12. ALL STRUCTURAL STEEL SHALL CONFORM TO AASHTO M 270MM 270 GRADE 50 AND WILL BE PAID FOR UNDER ITEM 506.50, "STRUCTURAL STEEL, ROLLED BEAM". ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 726.08. GALVANIZING WILL BE PAID FOR UNDER ITEM 900.645, "SPECIAL PROVISION (GALVANIZING STRUCTURAL STEEL)". ALL WELDING TO THE STRUCTURAL STEEL SHALL BE COMPLETED PRIOR TO GALVANIZING.
13. AFTER THE SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF EACH GIRDER UNDER THE DIRECTION OF THE ENGINEER. THESE ELEVATIONS SHALL BE USED IN DETERMINING FINAL GRADE.
14. ALL CONNECTIONS USING 7/8 INCH DIAMETER BOLTS CONFORMING TO AASHTO M 164 TYPE I GALVANIZED. HOLES SHALL BE 15/16 INCH DIAMETER, UNLESS OTHERWISE NOTED. BOLTS THAT HAVE BEEN FULLY TIGHTENED SHALL NOT BE REUSED.

15. ANY HOLES IN THE FASCIA BEAMS NOT OTHERWISE FILLED SHALL BE FITTED WITH BUTTON HEAD OR HEX HEAD BOLTS CONFORMING TO TYPE 1 GALVANIZED. THE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19 OF THE STANDARD SPECIFICATIONS.
16. BEAMS ARE TO BE CHARPY-V NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.01.
17. BEAM WEBS SHALL BE PLUMB IN THEIR FINAL POSITION.
18. WHERE GALVANIZING HAS BEEN REMOVED BY ANY MEANS FROM BRIDGE COMPONENTS INCLUDING ASSOCIATED HARDWARE, IT SHALL BE REPAIRED IN ACCORDANCE WITH SUBSECTION 726.08 OF THE SPECIFICATIONS. COSTS FOR THIS WORK SHALL BE INCIDENTAL TO THE ITEM UNDER WHICH THE GALVANIZED COMPONENT IS PROVIDED.
19. CONNECTIONS NOT DETAILED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL.
20. SHEAR STUDS SHALL BE INSTALLED IN THE SHOP, PRIOR TO GALVANIZING.

GEOTECHNICAL

21. BEDROCK ELEVATIONS MAY VARY AND ADJUSTMENTS IN BOTTOM OF FOOTING ELEVATION AND GEOMETRY ARE EXPECTED.
22. IN AREAS WHERE THE FOOTINGS WILL BEAR ON BEDROCK ALL SOIL, WEATHERED ROCK AND FRACTURED ROCK SHALL BE REMOVED FROM THE BEDROCK SURFACE PRIOR TO PLACING CONCRETE FOR THE FOOTING.
23. UPON COMPLETION OF THE EXCAVATION FOR SUBSTRUCTURES FOUNDED ON BEDROCK AND PRIOR TO PLACING FORMWORK, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER AND THE VTRANS GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER WILL DETERMINE IF THE BEDROCK IS COMPETENT TO OBTAIN THE NOMINAL BEARING RESISTANCE AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE VTRANS GEOTECHNICAL ENGINEER 72 HOURS IN ADVANCE WHEN THE ANALYSIS WILL BE NEEDED.
24. A MAXIMUM OF 6" OVER BREAKAGE WILL BE REPLACED WITH "HIGH PERFORMANCE CLASS B CONCRETE. OVER BREAKAGE BEYOND 6" SHALL BE REPLACED WITH "HIGH PERFORMANCE CLASS B CONCRETE" AT THE EXPENSE OF THE CONTRACTOR.
25. THE ABUTMENTS HAVE BEEN DESIGNED FOR THE TOP OF THE FOOTING ELEVATIONS AS SHOWN ON PLANS. FOR ALL SUBSTRUCTURES, WHERE BEDROCK IS WITHIN ONE FOOT BELOW THE BOTTOM OF THE AS DESIGNED FOOTING, THE FOOTING MAY BE POURED TO THE TOP OF THE BEDROCK USING "CONCRETE, HIGH PERFORMANCE CLASS B". IF THE BEDROCK ELEVATION IS GREATER THAN 1'-0" BELOW THE DESIGN BOTTOM OF FOOTING, A SUB-FOOTING SHALL BE POURED SO THAT THE DESIGN TOP OF FOOTING IS AT THE REQUIRED ELEVATION, USING "CONCRETE, CLASS C". THE LIMITS OF THE SUBFOOTING SHALL BE 1'-0" OUTSIDE THE LIMITS OF THE FOOTING.
26. IN THE EVENT THAT A SUB-FOOTING IS REQUIRED, #8 DOWELS SPACED 4'-0" ON CENTER SHALL BE EMBEDDED A MINIMUM OF 1'-6" INTO THE FOOTING, THROUGH THE SUB-FOOTING, AND 2'-0" INTO BEDROCK.
27. IF BEDROCK IS ABOVE THE DESIGN BOTTOM OF FOOTING, THE FOOTING MAY BE RAISED. BEFORE ANY UPWARD ADJUSTMENT IS MADE IN FOOTING ELEVATION, THE PROJECT MANAGER SHALL BE CONTACTED AND PROVIDED WITH A BEDROCK PROFILE. NO FURTHER WORK SHALL BE DONE UNTIL APPROVAL OF THE CONFIGURATION IS RECEIVED.
28. ABUTMENT AND WINGWALL FOOTINGS SHALL BEAR ON BEDROCK.
29. AN EXISTING 10" PRESSURE SEWER AND PIPE BRIDGE IS LOCATED NEAR THE UPSTREAM SIDE OF THE ROADWAY BRIDGE. THE CONTRACTOR SHALL PROTECT THE SEWER AND PIPE BRIDGE FROM DAMAGE DURING CONSTRUCTION, INCLUDING THE PIPE BRIDGE PIERS AND FOOTINGS.

PROJECT NAME: JAY
PROJECT NUMBER: BHF 0278(3)

FILE NAME: z120154gen.nts.dgn	PLOT DATE: 3/18/2016
PROJECT LEADER: M. CHENETTE	DRAWN BY: L. BUXTON
DESIGNED BY: T. KNIGHT	CHECKED BY: G. BOGUE
GENERAL NOTES	SHEET 5 OF 72



QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
						ROADWAY	EROSION CONTROL	UTILITIES (NO FEDERAL PARTICIPATIO	BRIDGE NO. 10	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						1					1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				
						900					900		CY	COMMON EXCAVATION	203.15				
									21		21		CY	SOLID ROCK EXCAVATION	203.16				
									570		570		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				
						1					1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22				
									640		640		CY	STRUCTURE EXCAVATION	204.25				
									190		190		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
									1		1		LS	COFFERDAM (COFFERDAM, ABUT. 1)	208.40				
									1		1		LS	COFFERDAM (COFFERDAM, ABUT. 2)	208.40				
						400					400		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10				
						830					830		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35				
						12					12		CWT	EMULSIFIED ASPHALT	404.65				
									70		70		CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33				
									210		210		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
									29400		29400		LB	STRUCTURAL STEEL, ROLLED BEAM	506.50				
									20050		20050		LB	REINFORCING STEEL, LEVEL I	507.11				
									16800		16800		LB	REINFORCING STEEL, LEVEL II	507.12				
									110		110		LF	DRILLING AND GROUTING DOWELS	507.16				
									214		214		EACH	MECHANICAL BAR CONNECTOR	507.19				
									1		1		LS	SHEAR CONNECTORS (732- 7/8" DIAM. x 7")	508.15				
									10		10		GAL	WATER REPELLENT, SILANE	514.10				
									64		64		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10				
									170		170		SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20				
									64		64		LF	JOINT SEALER, HOT POURED	524.11				
									142		142		LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	525.335				
									1		1		EACH	REMOVAL OF STRUCTURE (REMOVAL OF BRIDGE #10 - 952 SF)	529.15				
									12		12		EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD W/ EXT. LOAD PLATES	531.18				
														BEGIN OPTION AA					
									1		1		LS	PRECAST CONCRETE STRUCTURE (PRECAST STRUCTURE, APP SLAB 1)	540.10				
									1		1		LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE, APP SLAB 1)	900.645				
														END OPTION AA					
														BEGIN OPTION BB					
									1		1		LS	PRECAST CONCRETE STRUCTURE (PRECAST STRUCTURE, APP SLAB 2)	540.10				
									1		1		LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE, APP SLAB 2)	900.645				
														END OPTION BB					
									60		60		CY	CONCRETE, CLASS C	541.30				
									500		500		CY	STONE FILL, TYPE IV	613.13				
						1					1		EACH	RELOCATE MAILBOX, SINGLE SUPPORT	617.10				
						100					100		LF	BOX BEAM GUARDRAIL	621.30				

PROJECT NAME: JAY
PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12c154frm.dgn
PROJECT LEADER: M. CHENETTE
DESIGNED BY: I. MAYNARD
QUANTITY SHEET 1 OF 3

PLOT DATE: 3/18/2016
DRAWN BY: I. MAYNARD
CHECKED BY: G. SANTY
SHEET 6 OF 72



QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
						ROADWAY	EROSION CONTROL	UTILITIES (NO FEDERAL PARTICIPATIO	BRIDGE NO. 10	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						2					2		EACH	MANUFACTURED TERMINAL SECTION, TANGENT	621.51				
						4					4		EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	621.725				
						250					250		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
						20					20		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
						1000					1000		HR	FLAGGERS	630.15				
										1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
										1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
										1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
										1	1		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26				
						520					520		HR	EMPLOYEE TRAINEESHIP	634.10				
						1					1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
						2					2		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15				
						900					900		LF	DURABLE 4 INCH WHITE LINE, THERMOPLASTIC	646.402				
						900					900		LF	DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC	646.412				
									360		360		SY	GEOTEXTILE UNDER STONE FILL	649.31				
							45				45		SY	GEOTEXTILE FOR SILT FENCE	649.51				
							20				20		LB	SEED	651.15				
							120				120		LB	FERTILIZER	651.18				
							1				1		TON	AGRICULTURAL LIMESTONE	651.20				
							1				1		TON	HAY MULCH	651.25				
							65				65		CY	TOPSOIL	651.35				
							360				360		SY	GRUBBING MATERIAL	651.40				
							1				1		LS	EPSC PLAN	652.10				
							20				20		HR	MONITORING EPSC PLAN	652.20				
							1				1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
							360				360		SY	TEMPORARY EROSION MATTING	653.20				
							2				2		CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25				
							40				40		CY	VEHICLE TRACKING PAD	653.35				
							2				2		EACH	FILTER BAG	653.45				
							310				310		LF	BARRIER FENCE	653.50				
							320				320		LF	PROJECT DEMARCATION FENCE	653.55				
							1				1		SF	TRAFFIC SIGNS, TYPE A	675.20				
							35				35		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
							1				1		EACH	ERECTING SALVAGED SIGNS	675.60				
							1				1		EACH	TEMPORARY TRAFFIC SIGNAL SYSTEM	678.40				
									8		8		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPQ)	900.608				
									1		1		LS	SPECIAL PROVISION (GALVANIZING STUCTURAL STEEL)	900.645				
								1			1		LS	SPECIAL PROVISION (SANITARY SEWER)	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: JAY
PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12c154frm.dgn
PROJECT LEADER: M. CHENETTE
DESIGNED BY: I. MAYNARD
QUANTITY SHEET 2 OF 3

PLOT DATE: 3/18/2016
DRAWN BY: I. MAYNARD
CHECKED BY: G. SANTY
SHEET 7 OF 72



BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES										TOTALS		DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES				
						APP SLAB 1	ABUTMENT 1	SUPER-STRUCTURE	ABUTMENT 2	APP SLAB 2	BRIDGE TOTAL		UNIT	ITEMS	ITEM NUMBER		QUANTITIES	UNIT	ITEMS
							6		15		21		CY	SOLID ROCK EXCAVATION	203.16				
							390		180		570		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				
							408		232		640		CY	STRUCTURE EXCAVATION	204.25				
							140		50		190		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
							1				1		LS	COFFERDAM (COFFERDAM, ABUT. 1)	208.40				
									1		1		LS	COFFERDAM (COFFERDAM, ABUT. 2)	208.40				
								70			70		CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33				
							130		80		210		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
								29400			29400		LB	STRUCTURAL STEEL, ROLLED BEAM	506.50				
							12775		7275		20050		LB	REINFORCING STEEL, LEVEL I	507.11				
								16800			16800		LB	REINFORCING STEEL, LEVEL II	507.12				
							62.5		47.5		110		LF	DRILLING AND GROUTING DOWELS	507.16				
							12	190	12		214		EACH	MECHANICAL BAR CONNECTOR	507.19				
								1			1		LS	SHEAR CONNECTORS (732- 7/8" DIAM. x 7")	508.15				
							4	3	3		10		GAL	WATER REPELLENT, SILANE	514.10				
								64			64		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10				
								170			170		SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20				
								64			64		LF	JOINT SEALER, HOT POURED	524.11				
								142			142		LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	525.335				
								1			1		EACH	REMOVAL OF STRUCTURE (REMOVAL OF BRIDGE #10 - 952 SF)	529.15				
							6		6		12		EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD W/ EXT. LOAD PLATES	531.18				
														BEGIN OPTION AA					
						1					1		LS	PRECAST CONCRETE STRUCTURE (PRECAST STRUCTURE, APP SLAB 1)	540.10				
						1					1		LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE, APP SLAB 1)	900.645				
														END OPTION AA					
														BEGIN OPTION BB					
									1		1		LS	PRECAST CONCRETE STRUCTURE (PRECAST STRUCTURE, APP SLAB 2)	540.10				
									1		1		LS	SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE, APP SLAB 2)	900.645				
														END OPTION BB					
							35		25		60		CY	CONCRETE, CLASS C	541.30				
							340		160		500		CY	STONE FILL, TYPE IV	613.13				
							245		115		360		SY	GEOTEXTILE UNDER STONE FILL	649.31				
						2.5	2		1	2.5	8		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPQ)	900.608				
								1			1		LS	SPECIAL PROVISION (GALVANIZING STUCTURAL STEEL)	900.645				

PROJECT NAME: JAY
PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12c154frm.dgn
PROJECT LEADER: M. CHENETTE
DESIGNED BY: T. KNIGHT
BRIDGE QUANTITY SHEET 1

PLOT DATE: 3/18/2016
DRAWN BY: I. MAYNARD
CHECKED BY: M. CHENETTE
SHEET 9 OF 72



GENERAL INFORMATION

SYMBOLGY LEGEND NOTE

THE SYMBOLGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLGY. THE SYMBOLGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

R. O. W. ABBREVIATIONS (CODES) & SYMBOLS

POINT CODE	DESCRIPTION
CH	CHANNEL EASEMENT
CONST	CONSTRUCTION EASEMENT
CUL	CULVERT EASEMENT
D&C	DISCONNECT & CONNECT
DIT	DITCH EASEMENT
DR	DRAINAGE EASEMENT
DRIVE	DRIVEWAY EASEMENT
EC	EROSION CONTROL
HWY	HIGHWAY EASEMENT
I&M	INSTALL & MAINTAIN EASEMENT
LAND	LANDSCAPE EASEMENT
R&RES	REMOVE & RESET
R&REP	REMOVE & REPLACE
SR	SLOPE RIGHT
UE	UTILITY EASEMENT
(P)	PERMANENT EASEMENT
(T)	TEMPORARY EASEMENT
■	BNDNS BOUND SET
▣	BNDNS BOUND TO BE SET
●	IPNS IRON PIN SET
⊙	IPNS IRON PIN TO BE SET
⊠	CALC EXISTING ROW POINT
○	PROW PROPOSED ROW POINT
[LENGTH]	LENGTH CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT CODE	DESCRIPTION
⊕	APL BOUND APPARENT LOCATION
□	BM BENCHMARK
▣	BND BOUND
⊠	CB CATCH BASIN
⊕	COMB COMBINATION POLE
⊠	DITHR DROP INLET THROATED DNC
⊕	EL ELECTRIC POWER POLE
○	FPOLE FLAGPOLE
○	GASFIL GAS FILLER
○	GP GUIDE POST
×	GSO GAS SHUT OFF
○	GUY GUY POLE
○	GUYW GUY WIRE
×	GV GATE VALUE
⊕	H TREE HARDWOOD
△	HCTRL CONTROL HORIZONTAL
△	HVCTRL CONTROL HORIZ. & VERTICAL
◇	HYD HYDRANT
●	IP IRON PIN
●	IPIPE IRON PIPE
⊠	LI LIGHT - STREET OR YARD
⊠	MB MAILBOX
○	MH MANHOLE (MH)
■	MM MILE MARKER
■	PM PARKING METER
■	PMK PROJECT MARKER
○	POST POST STONE/WOOD
⊠	RRSIG RAILROAD SIGNAL
⊠	RRSL RAILROAD SWITCH LEVER
⊕	S TREE SOFTWOOD
⊕	SAT SATELLITE DISH
⊕	SHRUB SHRUB
⊠	SIGN SIGN
⊠	STUMP STUMP
⊠	TEL TELEPHONE POLE
○	TIE TIE
⊠	TSIGN SIGN W/DOUBLE POST
⊠	VCTRL CONTROL VERTICAL
○	WELL WELL
×	WSO WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADUIS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

UTILITY SYMBOLGY

UNDERGROUND UTILITIES

— UGU —	UTILITY (GENERIC-UNKNOWN)
— UT —	TELEPHONE
— UE —	ELECTRIC
— UC —	CABLE (TV)
— UEC —	ELECTRIC+CABLE
— UET —	ELECTRIC+TELEPHONE
— UCT —	CABLE+TELEPHONE
— UECT —	ELECTRIC+CABLE+TELEP.
— G —	GAS LINE
— W —	WATER LINE
— S —	SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

— AGU —	UTILITY (GENERIC-UNKNOWN)
— T —	TELEPHONE
— E —	ELECTRIC
— C —	CABLE (TV)
— EC —	ELECTRIC+CABLE
— ET —	ELECTRIC+TELEPHONE
— AER E&T —	ELECTRIC+TELEPHONE
— CT —	CABLE+TELEPHONE
— ECT —	ELECTRIC+CABLE+TELEP.
—	UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLGY

PROJECT DESIGN & LAYOUT SYMBOLGY

— — — CZ — — —	CLEAR ZONE
—————	PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

▲ —▲ —▲ —▲ —▲	TOP OF CUT SLOPE
○ —○ —○ —○ —○	TOE OF FILL SLOPE
⊗ ⊗ ⊗ ⊗ ⊗	STONE FILL
-----	BOTTOM OF DITCH
-----	CULVERT PROPOSED
-----	STRUCTURE SUBSURFACE
PDF — PDF —	PROJECT DEMARCATION FENCE
BF — BF —	BARRIER FENCE
XXXXXXXXXXXXXXXXXXXX	TREE PROTECTION ZONE (TPZ)
//////	STRIPING LINE REMOVAL
~~~~~	SHEET PILES

**CONVENTIONAL BOUNDARY SYMBOLGY**

**BOUNDARY LINES**

—————	TOWN BOUNDARY LINE
—————	COUNTY BOUNDARY LINE
—————	STATE BOUNDARY LINE
———	PROPOSED STATE R.O.W. (LIMITED ACCESS)
———	PROPOSED STATE R.O.W.
———	STATE ROW (LIMITED ACCESS)
———	STATE ROW
———	TOWN ROW
-----	PERMANENT EASEMENT LINE (P)
-----	TEMPORARY EASEMENT LINE (T)
-----	SURVEY LINE
— P — P —	PROPERTY LINE (P/L)
— L — L —	PROPERTY LINE (P/L)
▲ — SR — SR — SR —	SLOPE RIGHTS
6f — 6f —	6F PROPERTY BOUNDARY
4f — 4f —	4F PROPERTY BOUNDARY
HAZ — HAZ —	HAZARDOUS WASTE

**EPSC LAYOUT PLAN SYMBOLGY**

**EPSC MEASURES**

ONNOONNOONNO	FILTER CURTAIN
—	SILT FENCE
—	SILT FENCE WOVEN WIRE
—	CHECK DAM
■	DISTURBED AREAS REQUIRING RE-VEGETATION
⊠	EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLGY

**ENVIRONMENTAL RESOURCES**

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

**ARCHEOLOGICAL & HISTORIC**

— ARCH —	ARCHEOLOGICAL BOUNDARY
— HISTORIC DIST —	HISTORIC DISTRICT BOUNDARY
— HISTORIC —	HISTORIC AREA
Ⓜ	HISTORIC STRUCTURE

**CONVENTIONAL TOPOGRAPHIC SYMBOLGY**

**EXISTING FEATURES**

-----	ROAD EDGE PAVEMENT
-----	ROAD EDGE GRAVEL
-----	DRIVEWAY EDGE
-----	DITCH
-----	FOUNDATION
— x — x — x — x —	FENCE (EXISTING)
— □ — □ — □ — □ —	FENCE WOOD POST
— ○ — ○ — ○ — ○ —	FENCE STEEL POST
~~~~~	GARDEN
—	ROAD GUARDRAIL
	RAILROAD TRACKS
-----	CULVERT (EXISTING)
-----	STONE WALL
-----	WALL
~~~~~	WOOD LINE
~~~~~	BRUSH LINE
~~~~~	HEDGE
-----	BODY OF WATER EDGE
-----	LEDGE EXPOSED

PROJECT NAME: JAY  
PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12c154legend.dgn  
PROJECT LEADER: M. CHENETTE  
DESIGNED BY: VTRANS  
CONVENTIONAL SYMBOLGY LEGEND

PLOT DATE: 3/18/2016  
DRAWN BY: VTRANS  
CHECKED BY: VTRANS  
SHEET 10 OF 72



GPS CONTROL POINTS

HVCTRL #1

IRENE  
 NORTH = 886825.990  
 EAST = 1663654.360  
 ELEV. = 830.06

GENERAL LOCATION, TROY, VT.

TO REACH FROM THE INTERSECTION OF VT ROUTE 242 AND VT ROUTE 101 GO SOUTH ALONG VT ROUTE 101 FOR 1.0 MI (1.6 KM) TO THE SITE OF THE MARK ON THE RIGHT.

THE MARK IS SET 20 CM (8 INCHES) BELOW GROUND SURFACE IN THE TOP OF A FENO STYLE MONUMENT.

IT IS 7.2 M (23.6 FT) WEST OF AND ABOUT 0.4 M (1.3 FT) LOWER THAN THE CENTERLINE OF VT ROUTE 101, 28.9 M (94.8 FT) SOUTHEAST OF POLE NO 36E, 47.9 M (157.2 FT) WEST OF A 10 CM (4 INCH) DOUBLE-TRUNK WHITE BIRCH, 71.0 M (232.9 FT) NORTH OF THE CENTERLINE OF A CURB CUT FOR A WOODS ROAD ACCESS ON THE WEST SIDE OF VT ROUTE 101 AND 0.3 M (1.0 FT) EAST OF A FIBERGLASS WITNESS POST.

HVCTRL #2

MCDERMOT  
 NORTH = 891948.545  
 EAST = 1662740.181  
 ELEV. = 876.712

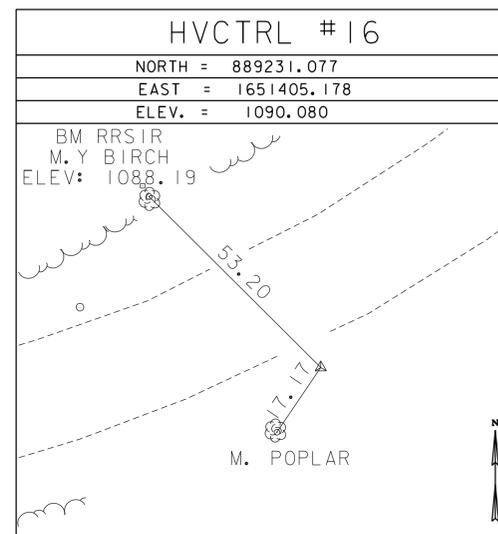
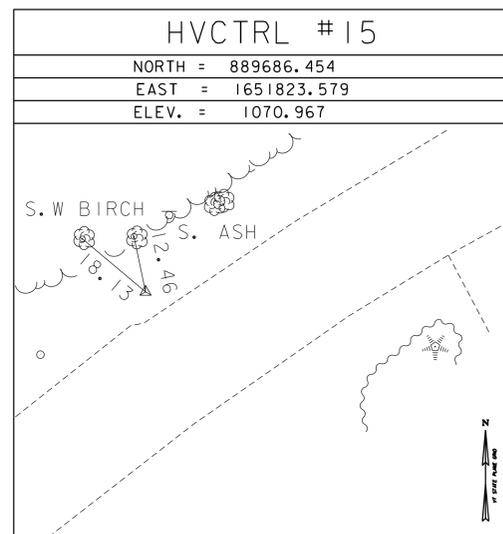
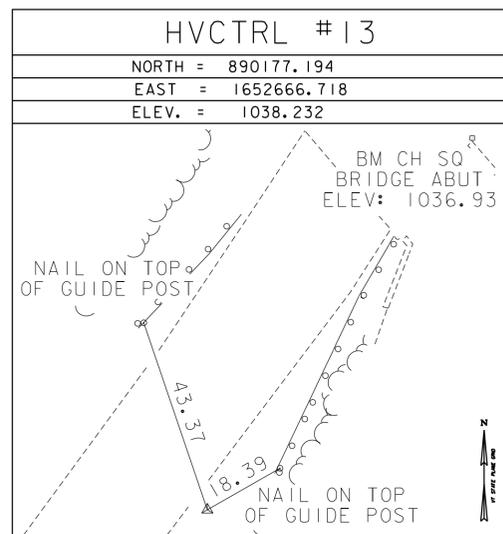
GENERAL LOCATION, TROY, VT. OWNERSHIP, IRENE MCDERMOT, CROSS ROAD, JAY, VT 05859.

TO REACH FROM THE INTERSECTION OF VT ROUTE 242 AND VT ROUTE 101 GO WEST ALONG VT ROUTE 242 FOR 0.05 MI (0.1 KM) TO THE SITE OF THE MARK ON THE LEFT.

THE MARK IS SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A 0.7 M (2.3 FT) X 0.5 M (1.6 FT) ROCK OUTCROP IN A LARGE FIELD.

IT IS 52.8 M (173.2 FT) SOUTH OF AND ABOUT 0.5 M (1.6 FT) LOWER THAN THE CENTERLINE OF VT ROUTE 242, 72.0 M (236.2 FT) SOUTHEAST OF POLE NO 3 10/51SX AND 46.4 M (152.2 FT) SOUTH-SOUTHWEST OF POLE NO 10/5T AND A FIBERGLASS WITNESS POST.

TRAVERSE TIES



HVCTRL #14

SEWER  
 NORTH = 889902.639  
 EAST = 1652385.564  
 ELEV. = 1050.452

GENERAL LOCATION, JAY, VT.

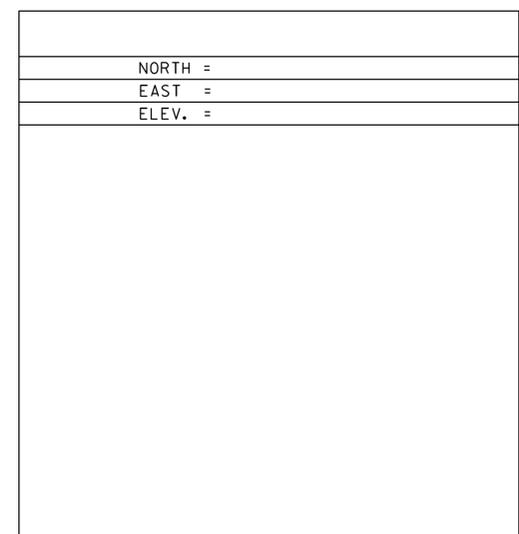
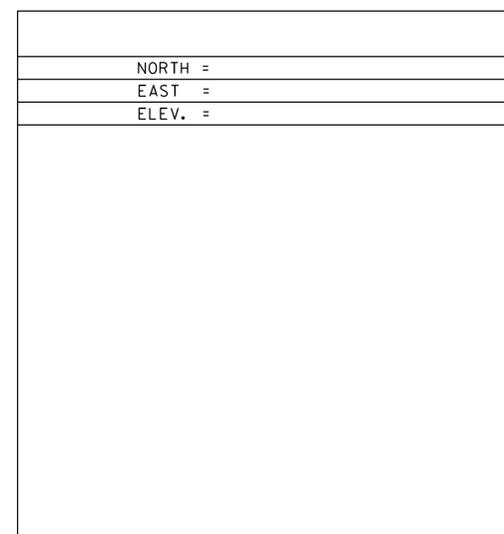
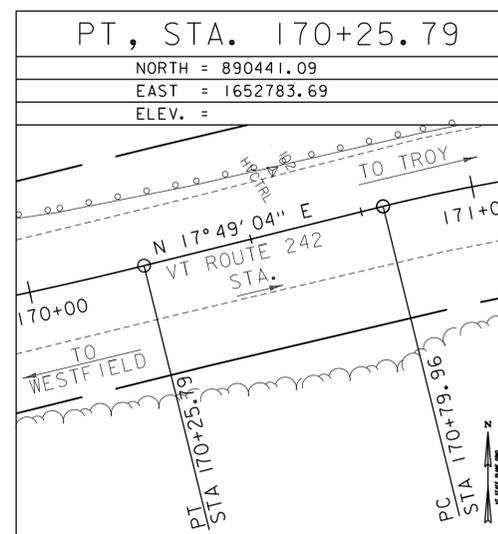
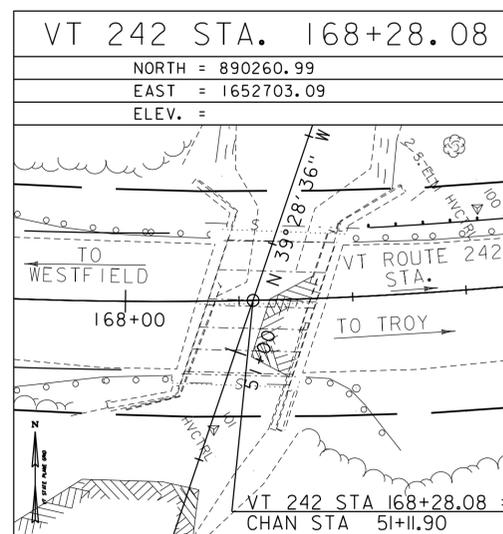
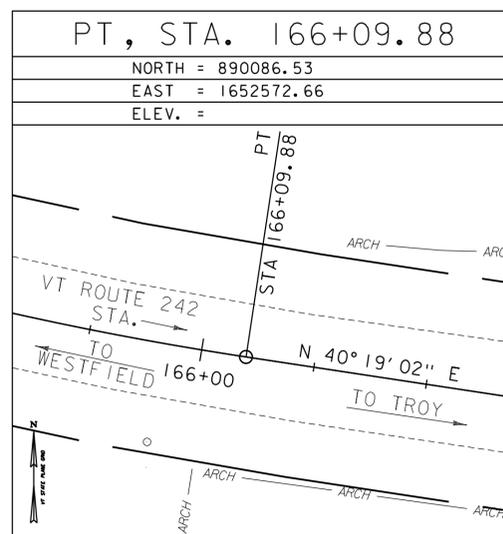
TO REACH FROM THE INTERSECTION OF VT ROUTE 242 AND VT ROUTE 101 IN TROY GO WEST ALONG VT ROUTE 242 FOR 2.3 MI (3.7 KM) TO THE SITE OF THE MARK ON THE LEFT.

THE MARK IS A FENO DISK SET IN THE TOP OF THE EAST SIDE OF THE CONCRETE COPING FOR A SEWER MANHOLE.

IT IS 6.5 M (21.3 FT) SOUTH OF AND 0.1 M (0.3 FT) LOWER THAN THE CENTERLINE OF VT ROUTE 242, 27.1 M (88.9 FT) EAST-SOUTHEAST OF AND ACROSS THE ROAD FROM POLE NO 10B/16S AND 20.6 M (67.6 FT) EAST-SOUTHEAST OF AND ACROSS THE ROAD FROM ANOTHER SEWER MANHOLE.

*MAIN TRAVERSE COMPLETED 10/09/2010 FOR WESTFIELD - JAY - TROY STP2903(1) [09C362] BY R.GILMAN P.C. & P.WINTERS & C.CYR

ALIGNMENT TIES



DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (2007)
ADJUSTMENT	COMPASS

PROJECT NAME:	JAY	PLOT DATE:	3/18/2016
PROJECT NUMBER:	BHF 0278(3)	DRAWN BY:	VTRANS
FILE NAME:	z12cl54ti.dgn	DESIGNED BY:	VTRANS
PROJECT LEADER:	M. CHENETTE	CHECKED BY:	VTRANS/STANTEC
TIE SHEET			SHEET 11 OF 72



**BOX BEAM GUARDRAIL**  
 STA. 167+19.1 TO 167+37.1, RT  
 STA. 167+68.8 TO 167+73.6, LT  
 STA. 168+88.9 TO 168+93.7, RT  
 STA. 168+90.4 TO 169+26.4, LT

**DURABLE 4 INCH YELLOW LINE**  
 STA. 166+00.0 TO STA. 170+50.0, CL (DOUBLE)

**RELOCATE MAILBOX SINGLE SUPPORT**  
 STA. 169+83.9, LT

**CURVE 1 DATA**  
 PC = 162+40.92  
 DELTA = 27°48'56"  
 D = 7°32'20"  
 R = 760.00'  
 T = 188.19'  
 L = 368.96'  
 E = 22.95'

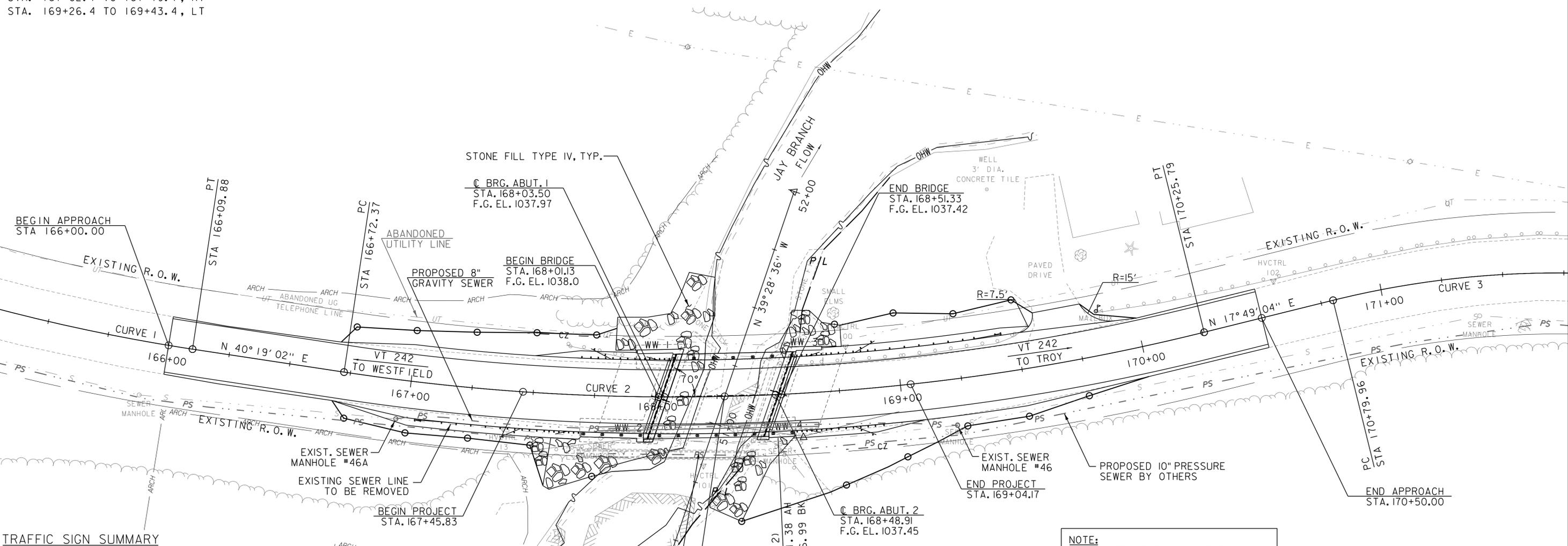
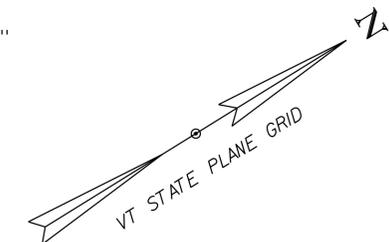
**CURVE 2 DATA**  
 DELTA = 22°29'57"  
 D = 6°21'58"  
 R = 900.00'  
 T = 179.02'  
 L = 353.42'  
 E = 17.63'

**CURVE 3 DATA**  
 PT = 173+33.55  
 DELTA = 38°14'08"  
 D = 15°04'40"  
 R = 380.00'  
 T = 131.72'  
 L = 253.59'  
 E = 22.18'

**APPROACH SECTION, GALVANIZED 3 RAIL BOXBEAM**  
 STA. 167+37.1 TO 167+69.1, RT  
 STA. 167+73.6 TO 168+05.6, LT  
 STA. 168+54.9 TO 168+88.9, RT  
 STA. 168+56.4 TO 169+90.4, LT

**REMOVAL AND DISPOSAL OF GUARDRAIL**  
 STA. 167+53.7 TO 168+10.5, RT  
 STA. 167+62.3 TO 168+18.6, LT  
 STA. 168+39.4 TO 168+59.0, RT  
 STA. 168+50.7 TO 169+54.9, LT

**MANUFACTURED TERMINAL END SECTION, TANGENT**  
 STA. 167+02.1 TO 167+19.1, RT  
 STA. 169+26.4 TO 169+43.4, LT



**TRAFFIC SIGN SUMMARY**

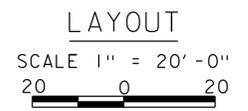
STATION	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS		NO. OF POSTS	NEW SIGN POSTS			REMARKS	DETAIL IN SHSM BOOK	STD. SHEET NUMBER	
		E	WIDTH (in)	HEIGHT (in)	TYPE "A"		SALV. SIGN	SQUARE STEEL (in)					
								1.75	2.0				2.5
167+95, RT	BRIDGE 10 VT-242	I	6	10	0.42	I	X				X	VR-701	T-42
168+62, LT	BRIDGE 47 VT-242	I	6	10	0.42	I	X				X	VR-701	T-42
168+30, LT	SPEED LIMIT 40	I	24	30		I		X			X	R2-1	X
<b>TOTALS</b>					SF	EA							
					0.84	I							31

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."

**NOTE:**  
 THE CONTRACTOR SHALL FURNISH AND INSTALL PROPOSED 8" GRAVITY SEWER LINE BETWEEN EXISTING MANHOLES 46 AND 46A. PAYMENT WILL BE UNDER ITEM 900.645, SPECIAL PROVISION (SANITARY SEWER). SEE SHEET 63 FOR DETAILS.

EXISTING BRIDGE INFO  
 CONCRETE T-BEAM BRIDGE  
 28' SPAN, 34'-6" WIDE  
 BUILT 1927,  
 RECONSTRUCTED 1964

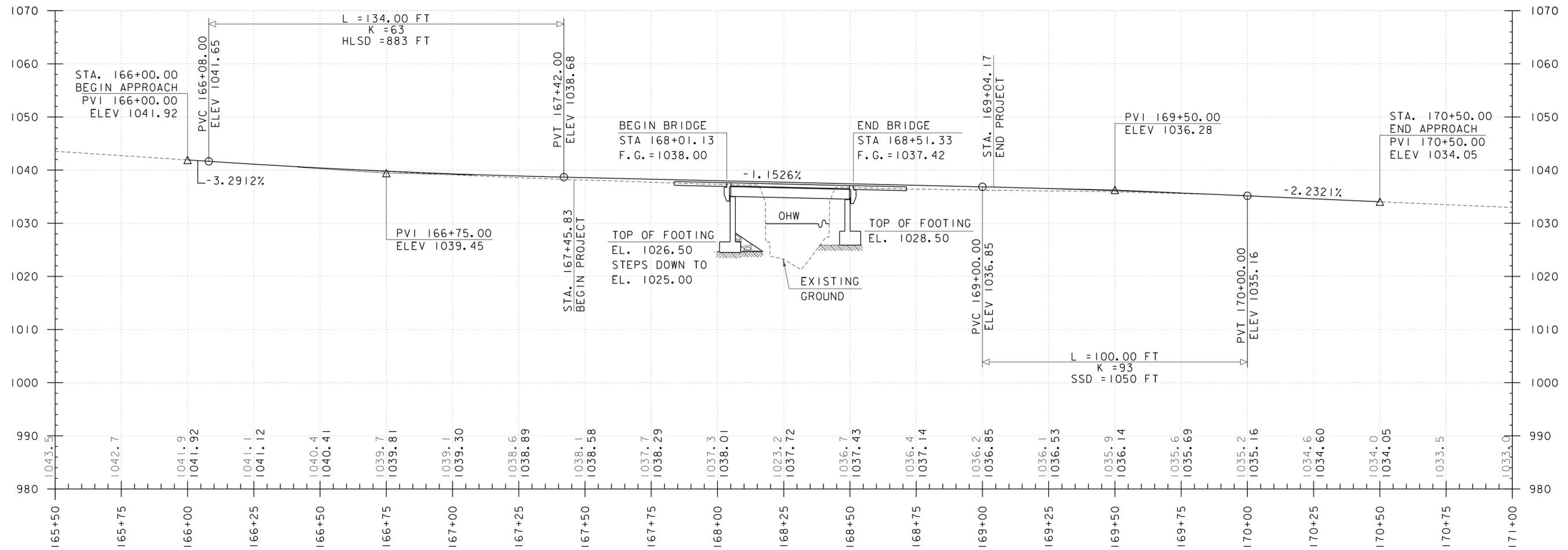
PROPOSED 10" PRESSURE SEWER AND PIPE BRIDGE BY OTHERS (TO BE CONSTRUCTED PRIOR TO THIS CONTRACT)



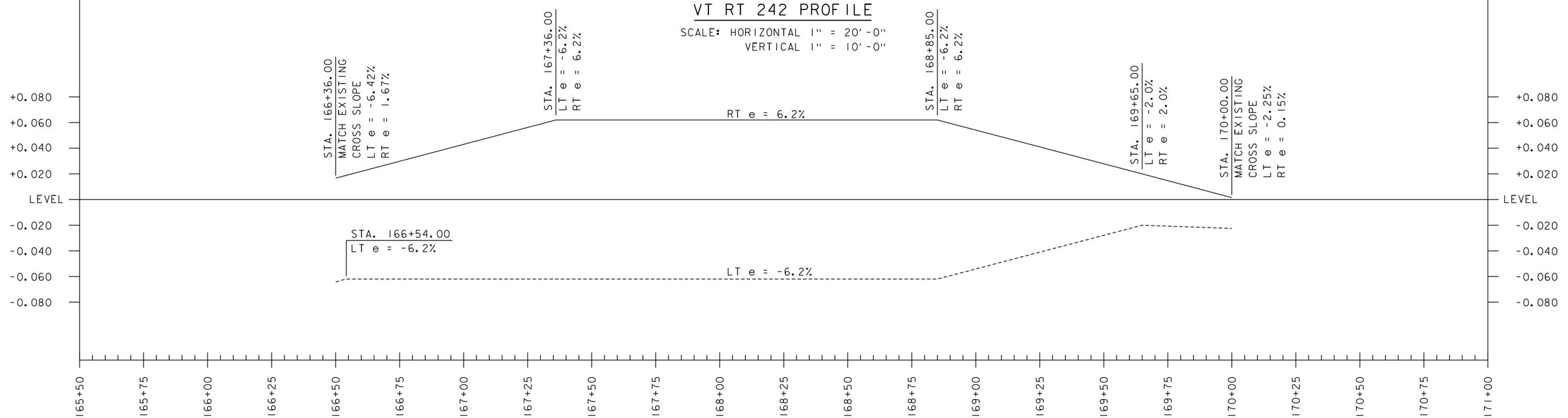
PROJECT NAME: JAY  
 PROJECT NUMBER: BHF 0278(3)  
 FILE NAME: z12cl54bdr.dgn  
 PROJECT LEADER: M. CHENETTE  
 DESIGNED BY: I. MAYNARD  
 LAYOUT SHEET

PLOT DATE: 3/18/2016  
 DRAWN BY: I. MAYNARD  
 CHECKED BY: M. CHENETTE  
 SHEET 12 OF 72





**VT RT 242 PROFILE**  
 SCALE: HORIZONTAL 1" = 20' -0"  
 VERTICAL 1" = 10' -0"



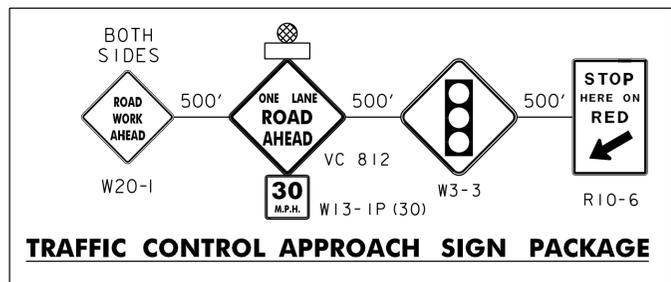
**VT RT 242 BANKING DIAGRAM**

SCALE: HORIZONTAL 1" = 20' -0"  
 VERTICAL 1" = 4% SLOPE

NOTE:  
 GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG  $\phi$   
 GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG  $\phi$

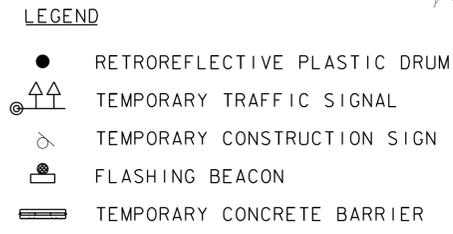
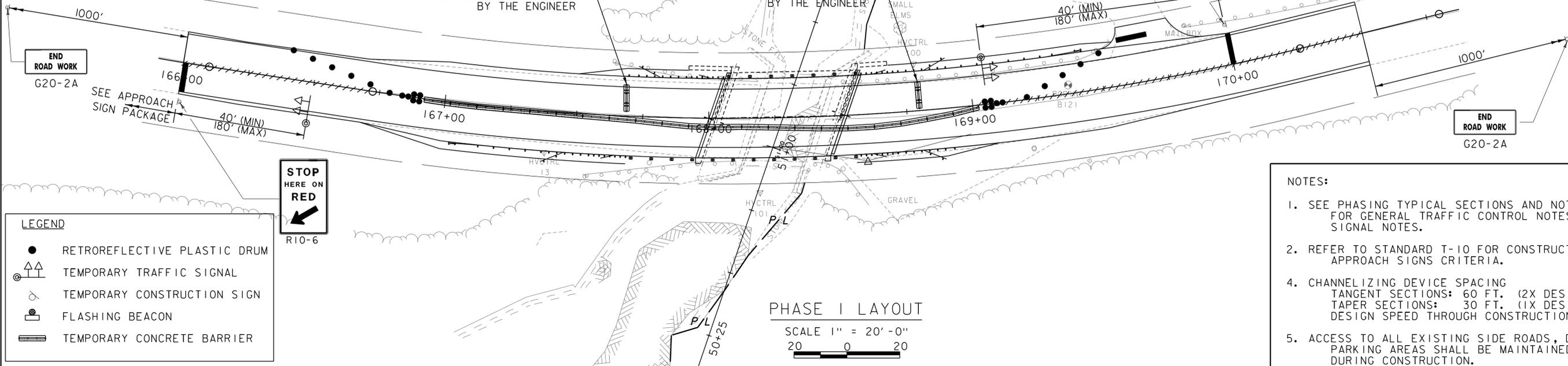
PROJECT NAME:	JAY	FILE NAME:	z12c154profile.dgn	PLOT DATE:	3/18/2016
PROJECT NUMBER:	BHF 0278(3)	PROJECT LEADER:	M. CHENETTE	DRAWN BY:	I. MAYNARD
		DESIGNED BY:	I. MAYNARD	CHECKED BY:	M. CHENETTE
		PROFILE & BANKING DIAGRAM SHEET		SHEET	13 OF 72



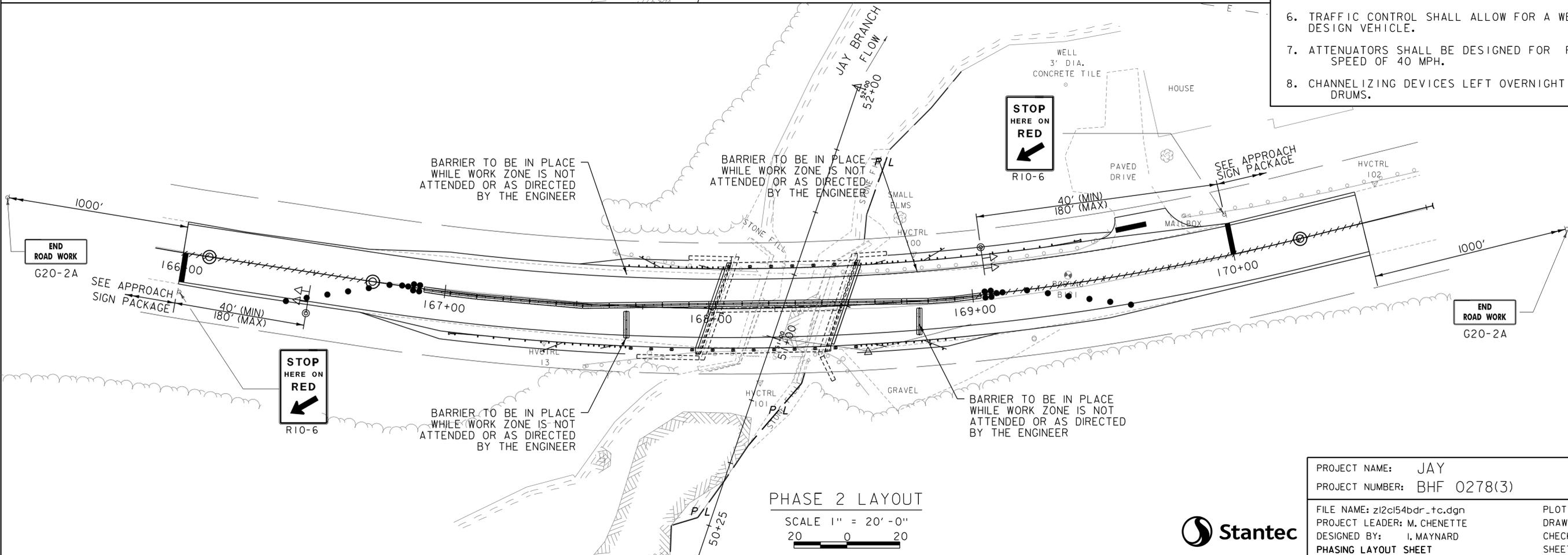


BARRIER TO BE IN PLACE WHILE WORK ZONE IS NOT ATTENDED OR AS DIRECTED BY THE ENGINEER

BARRIER TO BE IN PLACE WHILE WORK ZONE IS NOT ATTENDED OR AS DIRECTED BY THE ENGINEER

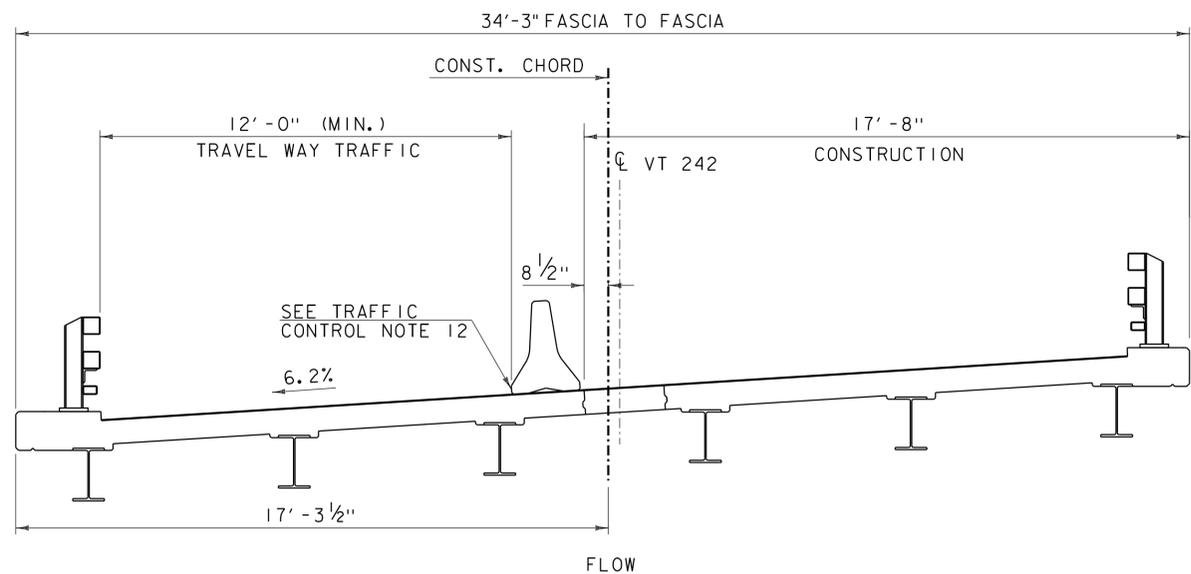


- NOTES:**
1. SEE PHASING TYPICAL SECTIONS AND NOTES SHEET FOR GENERAL TRAFFIC CONTROL NOTES AND TEMPORARY SIGNAL NOTES.
  2. REFER TO STANDARD T-10 FOR CONSTRUCTION APPROACH SIGNS CRITERIA.
  4. CHANNELIZING DEVICE SPACING  
TANGENT SECTIONS: 60 FT. (2X DESIGN SPEED LIMIT)  
TAPER SECTIONS: 30 FT. (1X DESIGN SPEED LIMIT)  
DESIGN SPEED THROUGH CONSTRUCTION ZONE = 30MPH
  5. ACCESS TO ALL EXISTING SIDE ROADS, DRIVES, AND PARKING AREAS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
  6. TRAFFIC CONTROL SHALL ALLOW FOR A WB-67 DESIGN VEHICLE.
  7. ATTENUATORS SHALL BE DESIGNED FOR POSTED SPEED OF 40 MPH.
  8. CHANNELIZING DEVICES LEFT OVERNIGHT SHALL BE DRUMS.



PROJECT NAME: JAY	PLOT DATE: 3/18/2016
PROJECT NUMBER: BHF 0278(3)	DRAWN BY: I. MAYNARD
FILE NAME: z12cl54bdr_tc.dgn	CHECKED BY: G. SANTY
PROJECT LEADER: M. CHENETTE	SHEET 14 OF 72
DESIGNED BY: I. MAYNARD	
PHASING LAYOUT SHEET	

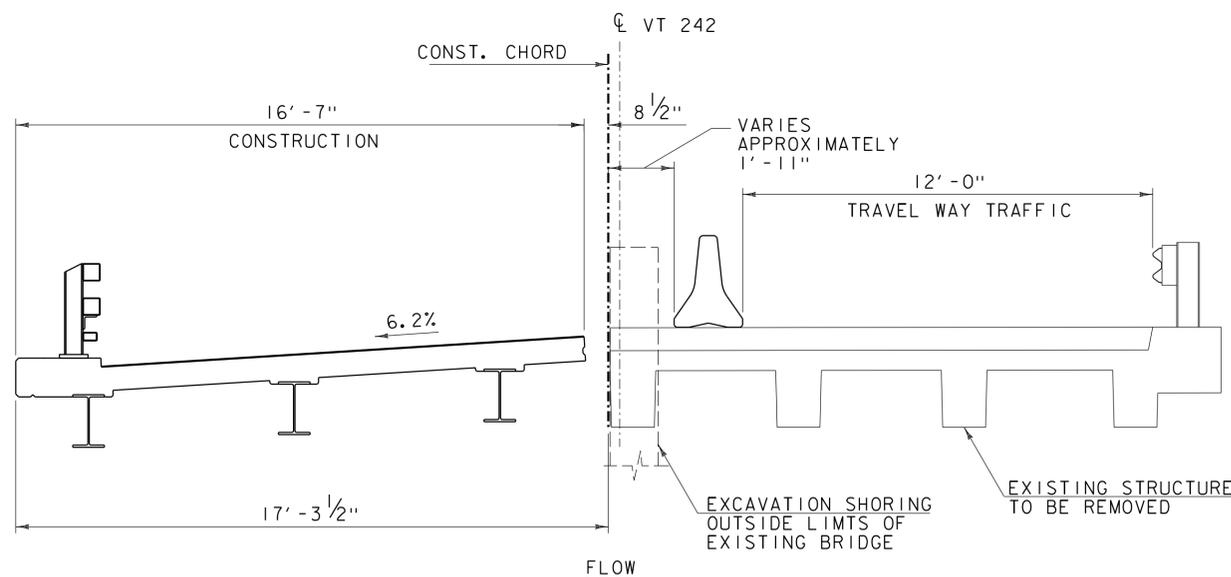




**PHASE 2 BRIDGE TYPICAL SECTION**

SCALE  $\frac{3}{8}$ " = 1'-0"

DIMENSIONS ARE RADIAL UNLESS NOTED



**PHASE 1 BRIDGE TYPICAL SECTION**

SCALE  $\frac{3}{8}$ " = 1'-0"

DIMENSIONS ARE RADIAL UNLESS NOTED

**TRAFFIC CONTROL**

1. THE TRAFFIC CONTROL PLANS ARE SCHEMATIC ONLY AND SHOULD BE USED AS A REFERENCE. THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR ONE LANE CLOSURES PER THE LATEST VERSION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD). THE CONTRACTOR SHALL ALLOW THE ENGINEER 14 CALENDAR DAYS TO REVIEW AND ACCEPT THE PROPOSED PLANS BEFORE THEY ARE TO BE IMPLEMENTED. NO WORK SHALL COMMENCE UNTIL THE TRAFFIC CONTROL PLAN HAS BEEN APPROVED. DEVELOPMENT AND IMPLEMENTATION OF TRAFFIC CONTROL PLAN SHALL BE IN ACCORDANCE WITH ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL ALL INCLUSIVE).
2. SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS OR CORNER SIGHT DISTANCE FROM HIGHWAYS OR DRIVES.
3. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
4. ORANGE SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) TYPE VII, VIII OR IX REQUIREMENTS, UNLESS OTHERWISE NOTED.
5. ROLL UP SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM TYPE VI.
6. SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
7. FIXED SIGNS SHALL BE IN COMPLIANCE WITH VAOT CONSTRUCTION STANDARD E-121.
8. WHERE SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 COMPLIANT. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POST(S). WHEN ANCHORS ARE INSTALLED, STUB SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
9. THE NUMBER OF CHANNELIZING DEVICES AND OTHER TRAFFIC CONTROL DEVICES SHOWN ON THE TRAFFIC CONTROL PLANS ARE FOR ILLUSTRATIVE PURPOSES ONLY, THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BASED ON INDIVIDUAL DETOUR CONDITIONS (TAPERS, SPEED LIMITS, LENGTH OF DETOUR, CURVE, ETC.).
10. THE CONTRACTOR SHALL SHIFT TRAFFIC IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. ALL EQUIPMENT SHALL BE MOVED TO A LOCATION OUTSIDE OF THE CONSTRUCTION CLEAR ZONE (15') DURING NON-WORK PERIODS IF POSSIBLE. IF NOT POSSIBLE, EQUIPMENT SHALL BE OFF ROADWAY AND MARKED WITH CHANNELIZING DEVICES.
11. A 250 WATT MER/150 WATT HSP LUMINAIRE AND MAST ARM SHALL BE PROVIDED ON A POLE ON EACH APPROACH AT A MOUNTING HEIGHT OF 30 FEET ABOVE THE ROADWAY CENTERLINE. THE INTENT IS TO LIGHT UP THE AREA AROUND THE SIGNAL HEADS AND STOP BAR FOR INCREASED VISIBILITY. THE ENGINEER SHALL DETERMINE THE ADEQUACY OF THE LIGHTING AND DIRECT CHANGES IF THE LIGHTING IS INSUFFICIENT. LIGHTING SHALL BE PAID INCIDENTAL TO ITEM 678.40, TEMPORARY TRAFFIC SIGNAL SYSTEM.
12. THE TEMPORARY TRAFFIC BARRIER SHALL BE ADEQUATELY ANCHORED TO PREVENT MOVEMENT IF IMPACTED. ANCHORS SHALL BE LOCATED TO AVOID DECK REINFORCEMENT. ANCHOR INSERTS OR MATERIALS THAT WILL BE PERMANENTLY EMBEDDED IN THE DECK SHALL BE STAINLESS STEEL. FILL ANCHORAGE HOLES WITH AN APPROVED GROUT AFTER THE BARRIER IS REMOVED.

**TEMPORARY TRAFFIC SIGNALS:**

1. TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL BE IN ACCORDANCE WITH ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM".
2. DESIGN OF THE SIGNAL SUPPORTS AND ANY REQUIRED GUYING IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. SIGNAL PHASING/TIMING ADJUSTMENTS REQUESTED BY THE ENGINEER SHALL BE ACCOMPLISHED WITHIN A 48 HOUR PERIOD.
4. SIGNAL FACES SHALL BE LED AND CONSIST OF 12" LENSES. (RED, YELLOW, AND GREEN)
5. THE BOTTOM OF THE HOUSING OF A SIGNAL FACE SUSPENDED OVER A ROADWAY SHALL NOT BE LESS THAN 16.5 FEET NOR MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY. THE BOTTOM OF A SIGNAL FACE NOT MOUNTED OVER A ROADWAY SHALL NOT BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE GROUND. CAUTION SHOULD BE USED TO INSURE COMPLIANCE WITH THE HEIGHT REQUIREMENTS IN THE EVENT THE NEW APPROACH GRADES DIFFER SIGNIFICANTLY FROM THE OLD ROAD GRADE.
6. SIGNAL FACES FOR ANY ONE APPROACH SHALL NOT BE LESS THAN 8 FEET APART MEASURED HORIZONTALLY BETWEEN CENTER FACES.
7. SIGNAL HEADS MAY BE HUNG ON A SPAN WIRE OR ON A CANTILEVER MAST ARM HOWEVER, THE USE OF PORTABLE SIGNALS IS ENCOURAGED. AT LEAST ONE SIGNAL HEAD SHALL BE UNMISTAKABLY IN LINE WITH THE CENTER OF APPROACHING TRAFFIC AT ALL TIMES. THE SECOND SIGNAL HEAD MAY BE POST MOUNTED, LOCATED AT A DISTANCE OF NO GREATER THAN 14.5 FEET FROM THE CENTER OF THE APPROACH LANE WHEN THE STOP BAR IS 40 FEET FROM THE SIGNAL HEAD. CONSULT THE CURRENT EDITION OF THE MUTCD FOR ADDITIONAL INFORMATION CONCERNING SIGNAL PLACEMENT.
8. SIGNAL HEAD PLACEMENT IS CRITICAL. HEADS SHALL BE ADJUSTED TO REFLECT LANE LOCATION CHANGES.
9. THE SIGNAL SYSTEM SHALL CONSIST OF POLES, SIGNS AND POSTS, WARNING SIGNS, FLASHING BEACONS, ASSOCIATED PAVEMENT MARKINGS, AND SIGNAL EQUIPMENT TO PROVIDE FOR AN ADEQUATE DESIGN. IT ALSO INCLUDES PERMITS AND COSTS ASSOCIATED WITH PROVIDING ELECTRICAL POWER.
10. INSTALL WIRING BETWEEN SIGNAL POLES TO PROVIDE FOR A SAFE INSTALLATION. ATTACHMENT TO UTILITY POLES TO BE COORDINATED BY THE CONTRACTOR WITH THE UTILITY COMPANY.
11. PLACE TEMPORARY POLES BEHIND GUARDRAIL OR OUTSIDE OF THE CLEAR ZONE.
12. POLES SUPPORTING SPAN WIRES AND/OR MAST ARMS SHALL BE ADEQUATELY BRACED OR GUYED AND SHALL NOT BE PLACED SO AS TO CREATE A HAZARD TO THE TRAVELING PUBLIC.
13. ALL TEMPORARY SIGNAL EQUIPMENT, SIGNS, ETC., SHALL BELONG TO THE CONTRACTOR AT THE END OF THE PROJECT AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR REMOVAL INCLUDING ANY TEMPORARY PAVEMENT MARKINGS, UTILITY POLES, WIRES, ETC.



PROJECT NAME: JAY  
 PROJECT NUMBER: BHF 0278(3)  
 FILE NAME: z12c154+yp.dgn  
 PROJECT LEADER: M. CHENETTE  
 DESIGNED BY: N. TIRK  
 PHASING TYPICAL SECTIONS AND NOTES

PLOT DATE: 3/18/2016  
 DRAWN BY: L. BUXTON  
 CHECKED BY: M. CHENETTE  
 SHEET 15 OF 72

**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.O.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)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	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 3/8"
- 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
- ROD Rock Quality Designation
- CBR California Bearing Ratio
- < Less Than
- > Greater Than
- R Refusal (N > 100)
- VTSPG NAD83 - See Note 7

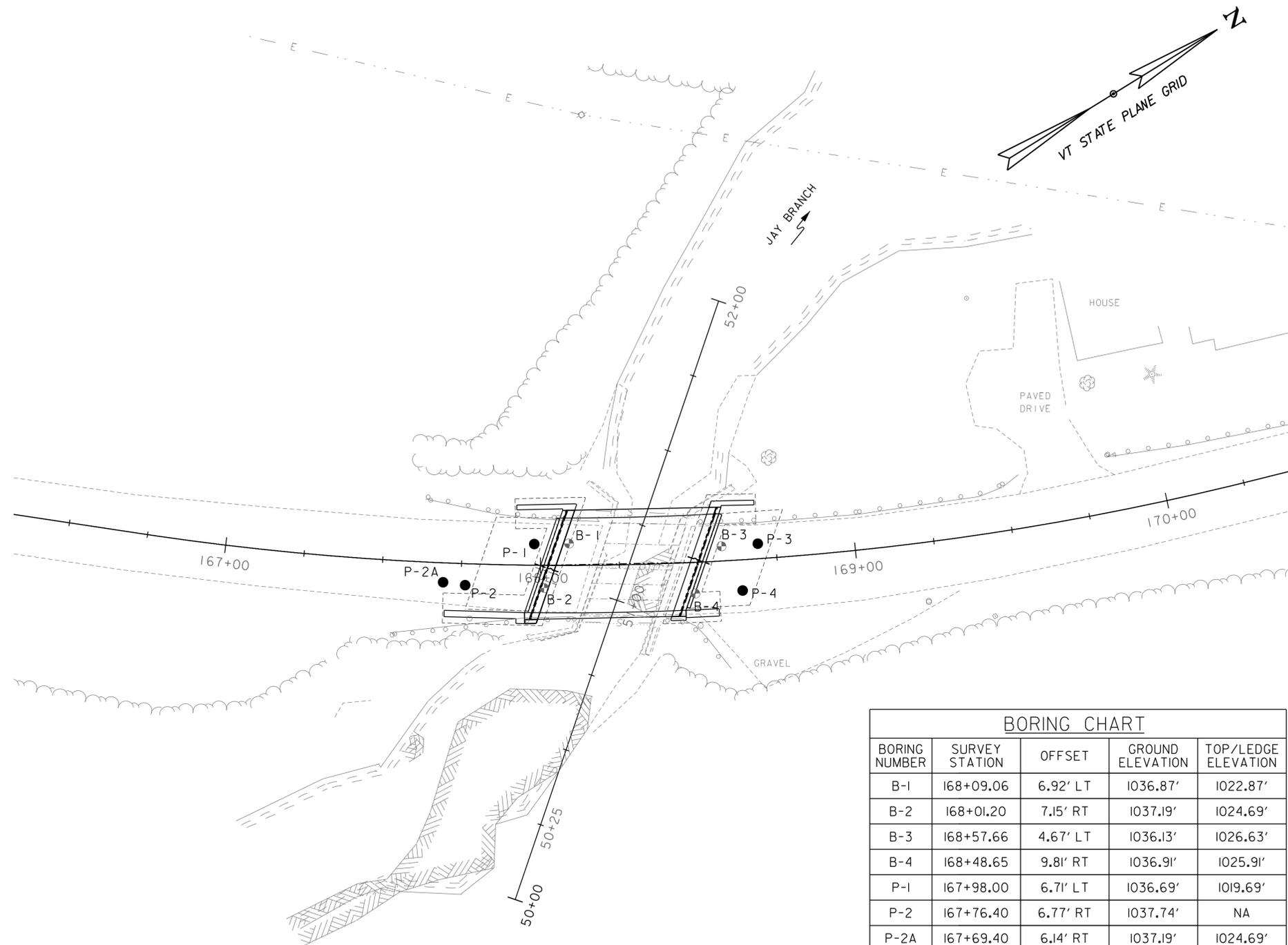
**COLOR**

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

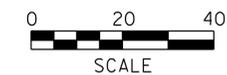
**DEFINITIONS (AASHTO)**

- 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).
- SLT - 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.

- GENERAL NOTES**
- The subsurface explorations shown herein were made in April 2014 by NH Boring and Stantec Consulting Services, INC.
  - 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.
  - 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.
  - 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.
  - 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.
  - 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.
  - Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.



**BORING PLAN**



**BORING CHART**

BORING NUMBER	SURVEY STATION	OFFSET	GROUND ELEVATION	TOP/LEDGE ELEVATION
B-1	168+09.06	6.92' LT	1036.87'	1022.87'
B-2	168+01.20	7.15' RT	1037.19'	1024.69'
B-3	168+57.66	4.67' LT	1036.13'	1026.63'
B-4	168+48.65	9.81' RT	1036.91'	1025.91'
P-1	167+98.00	6.71' LT	1036.69'	1019.69'
P-2	167+76.40	6.77' RT	1037.74'	NA
P-2A	167+69.40	6.14' RT	1037.19'	1024.69'
P-3	168+69.24	4.77' LT	1035.96'	1026.46'
P-4	168+63.52	9.69' RT	1036.75'	1027.25'

**LEGEND:**

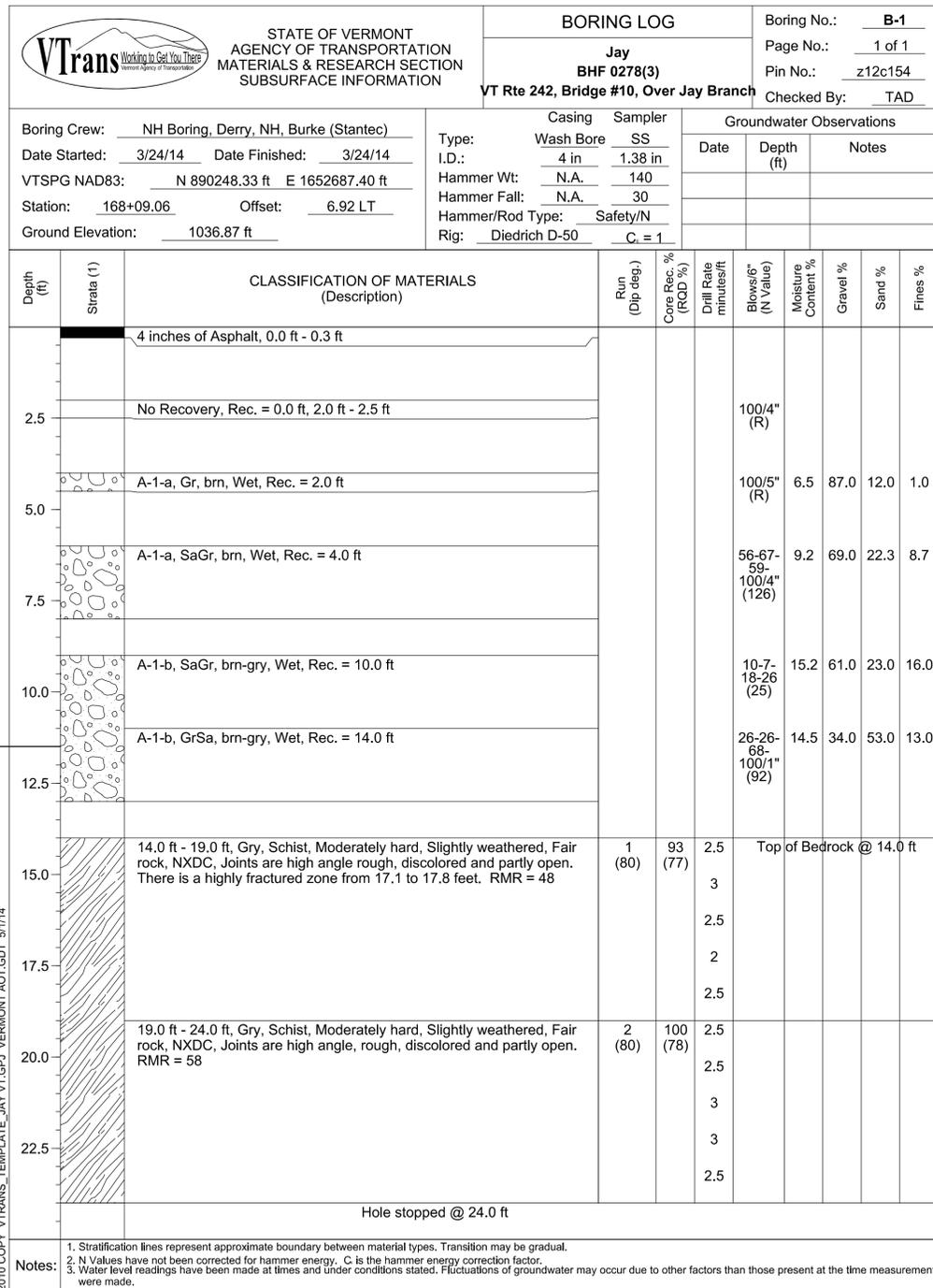
- ⊕ BRIDGE BORING
- PROBE

PROJECT NAME: JAY  
PROJECT NUMBER: BHF 0278(3)

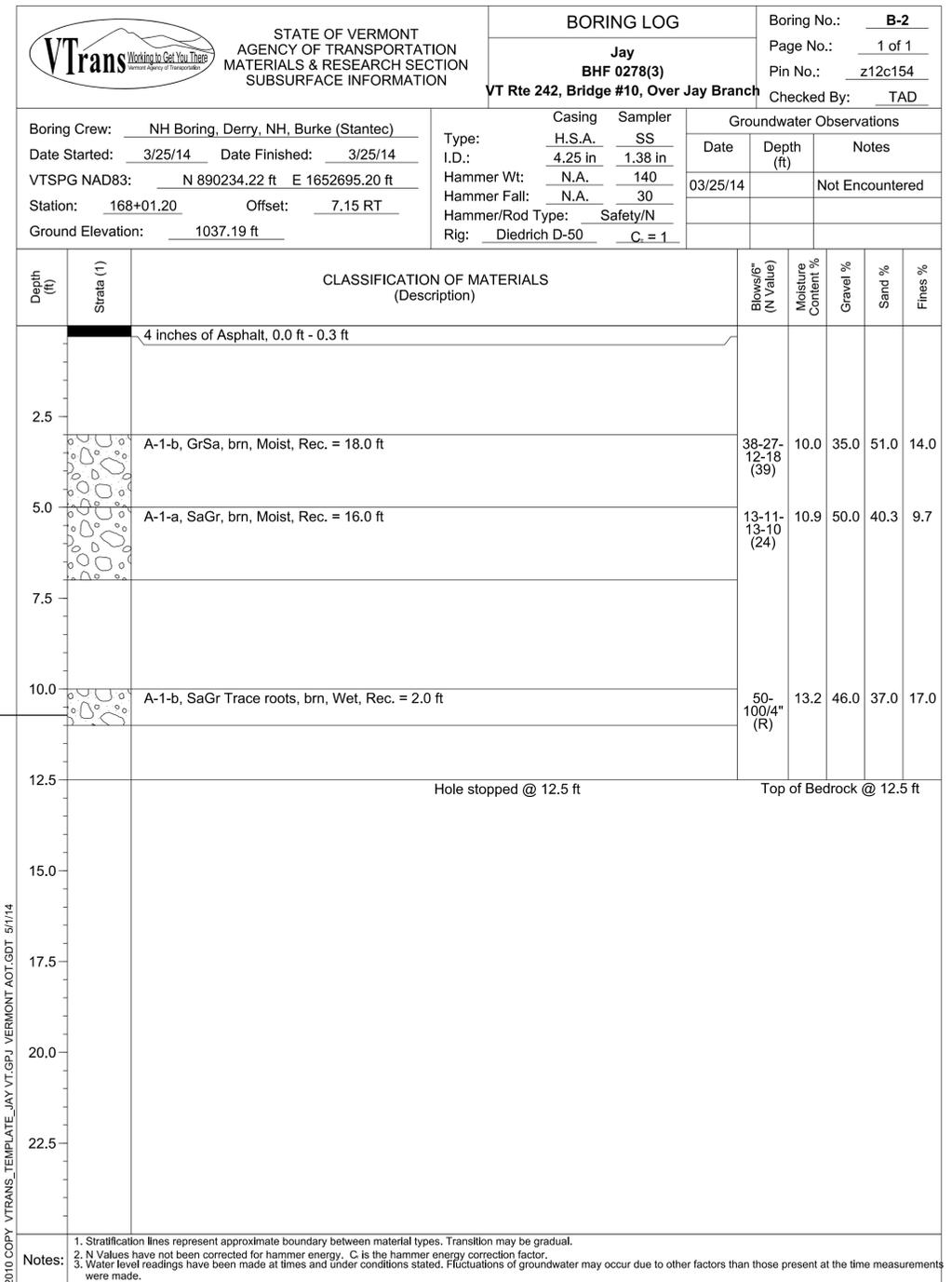
FILE NAME: z12cl54bdr_bor_pl.dgn  
PROJECT LEADER: M. CHENETTE  
DESIGNED BY: J. HUNGERFORD  
BORING PLAN

PLOT DATE: 3/18/2016  
DRAWN BY: L. BUXTON  
CHECKED BY: M. CHENETTE  
SHEET 16 OF 72





TOP OF FOOTING  
EL. 1025.0



TOP OF FOOTING  
EL. 1026.5

PROJECT NAME: JAY  
 PROJECT NUMBER: BHF 0278(3)  
 FILE NAME: z12c154bor_log.dgn  
 PROJECT LEADER: M. CHENETTE  
 DESIGNED BY: T DYKSTRA  
 BORING LOG I

PLOT DATE: 3/18/2016  
 DRAWN BY: L. BUXTON  
 CHECKED BY: J. HUNGERFORD  
 SHEET 17 OF 72



VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG			Boring No.: <b>B-3</b>		
				Jay BHF 0278(3) VT Rte 242, Bridge #10, Over Jay Branch			Page No.: 1 of 1		
				Checked By: TAD			Pin No.: z12c154		
Boring Crew: NH Boring, Derry, NH, Burke (Stantec)		Casing Sampler		Groundwater Observations					
Date Started: 3/25/14 Date Finished: 3/25/14		Type: H.S.A. SS		Date		Notes			
VTSPG NAD83: N 890288.98 ft E 1652713.53 ft		I.D.: 4.25 in 1.38 in		03/25/14		Not Encountered			
Station: 168+57.66 Offset: 4.67 LT		Hammer Wt: N.A. 140							
Ground Elevation: 1036.13 ft		Hammer/Fall: N.A. 30							
		Hammer/Rod Type: Safety/N							
		Rig: Diedrich D-50 C = 1							
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)			Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		4 inches of Asphalt, 0.0 ft - 0.2 ft							
2.5		A-2-4, SiSa, brn, Moist, Rec. = 18.0 ft			56-50-54-38 (104)	17.6	2.0	72.0	26.0
5.0		A-2-4, SiSa, brn, Moist, Rec. = 20.0 ft			16-13-5-4 (18)	17.1	7.0	63.0	30.0
		A-2-4, SiSa, brn, Moist				12.1	2.0	75.0	23.0
7.5		Hole stopped @ 9.5 ft			Top of Bedrock @ 9.5 ft				
10.0									
12.5									
15.0									
17.5									
20.0									
22.5									

TOP OF FOOTING  
EL. 1028.5

2010 COPY VTRANS_TEMPLATE_JAY_VT.GPJ VERMONT AOT.GDT 5/1/14

Notes:  
 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.  
 2. N Values have not been corrected for hammer energy. C 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.

TOP OF FOOTING  
EL. 1028.5

2010 COPY VTRANS_TEMPLATE_JAY_VT.GPJ VERMONT AOT.GDT 5/1/14

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG			Boring No.: <b>B-4</b>					
				Jay BHF 0278(3) VT Rte 242, Bridge #10, Over Jay Branch			Page No.: 1 of 1					
				Checked By: TAD			Pin No.: z12c154					
Boring Crew: NH Boring, Derry, NH, Burke (Stantec)		Casing Sampler		Groundwater Observations								
Date Started: 3/24/14 Date Finished: 3/26/14		Type: Wash Bore SS		Date		Notes						
VTSPG NAD83: N 890274.08 ft E 1652721.87 ft		I.D.: 4 in 1.38 in										
Station: 168+48.65 Offset: 9.81 RT		Hammer Wt: N.A. 140										
Ground Elevation: 1036.91 ft		Hammer/Fall: N.A. 30										
		Hammer/Rod Type: Safety/N										
		Rig: Diedrich D-50 C = 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 %
		4 inches of Asphalt, 0.0 ft - 0.3 ft										
2.5												
5.0		A-1-b, SaGr, gray, Wet, Rec. = 2.0 ft						78-100/3" (R)	95.8	57.0	29.0	14.0
7.5		No Recovery, Rec. = 0.0 ft, 7.0 ft - 7.5 ft						100/0" (R)				
10.0		A-1-a, SaGr, brn, Wet, Rec. = 6.0 ft						30-51-97-100/0" (148)	8.5	70.0	22.4	7.6
11.0		11.0 ft - 14.7 ft, Gry, Schist, Moderately hard, Fresh, Fair rock, NXDC, There are no joints from 11 to 114.7 feet. RMR = 51 (for entire core run)			1	90 (75)	3	Top of Bedrock @ 11.0 ft				
12.5							3					
15.0		14.7 ft - 16.0 ft, Dk/bn, Schist, Severely weathered, Highly fractured					4					
							5.5					
							5					
		Hole stopped @ 16.0 ft										
17.5		Remarks: Excess water from drilling process resulted in the high m.c. in the sample from 4 to 5 feet.										
20.0												
22.5												

Notes:  
 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.  
 2. N Values have not been corrected for hammer energy. C 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.

PROJECT NAME: JAY  
 PROJECT NUMBER: BHF 0278(3)  
 FILE NAME: z12c154bor_log.dgn  
 PROJECT LEADER: M. CHENETTE  
 DESIGNED BY: T. DYKSTRA  
 BORING LOG 2

PLOT DATE: 3/18/2016  
 DRAWN BY: L. BUXTON  
 CHECKED BY: J. HUNGERFORD  
 SHEET 18 OF 72



 STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: <b>P-1</b>					
		<b>Jay</b> <b>BHF 0278(3)</b> <b>VT Rte 242, Bridge #10, Over Jay Branch</b>		Page No.: 1 of 1					
Boring Crew: <u>NH Boring, Derry, NH, Burke (Stantec)</u> Date Started: <u>3/25/14</u> Date Finished: <u>3/25/14</u> VTSPG NAD83: <u>N 890238.55 ft E 1652682.72 ft</u> Station: <u>167+98.00</u> Offset: <u>6.71 LT</u> Ground Elevation: <u>1036.69 ft</u>		Casing Sampler Type: <u>H.S.A.</u> I.D.: <u>4.25 in</u> Hammer Wt: <u>N.A.</u> <u>N.A.</u> Hammer Fall: <u>N.A.</u> <u>N.A.</u> Hammer/Rod Type: Rig: <u>Diedrich D-50</u> <u>C. =</u>		Groundwater Observations Date Depth (ft) Notes					
Depth (ft) 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5	Strata (1)	CLASSIFICATION OF MATERIALS (Description)		Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	
									TOP OF FOOTING EL. 1025.0
				Top of Bedrock @ 17.0 ft					
		Remarks: Advanced auger probe to refusal on probable bedrock at 17.0 feet below ground surface.							
2010 COPY VTRANS_TEMPLATE_JAY.VT.GPJ VERMONT AOT.GDT 5/1/14		Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. C 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.							

 STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: <b>P-2</b>					
		<b>Jay</b> <b>BHF 0278(3)</b> <b>VT Rte 242, Bridge #10, Over Jay Branch</b>		Page No.: 1 of 1					
Boring Crew: <u>NH Boring, Derry, NH, Burke (Stantec)</u> Date Started: <u>3/25/14</u> Date Finished: <u>3/25/14</u> VTSPG NAD83: <u>N 890213.42 ft E 1652681.30 ft</u> Station: <u>167+76.40</u> Offset: <u>6.77 RT</u> Ground Elevation: <u>1037.74 ft</u>		Casing Sampler Type: <u>H.S.A.</u> I.D.: <u>4.25 in</u> Hammer Wt: <u>N.A.</u> <u>N.A.</u> Hammer Fall: <u>N.A.</u> <u>N.A.</u> Hammer/Rod Type: Rig: <u>Diedrich D-50</u> <u>C. =</u>		Groundwater Observations Date Depth (ft) Notes					
Depth (ft) 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5	Strata (1)	CLASSIFICATION OF MATERIALS (Description)		Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	
									TOP OF FOOTING EL. 1026.5
				Remarks: Auger probe encountered refusal 4.0 feet below ground surface on probable cobble or boulder. Relocated 7 feet south to P-2A.					
2010 COPY VTRANS_TEMPLATE_JAY.VT.GPJ VERMONT AOT.GDT 5/1/14		Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. C 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.							

PROJECT NAME: <b>JAY</b>	PLOT DATE: 3/18/2016
PROJECT NUMBER: <b>BHF 0278(3)</b>	DRAWN BY: L. BUXTON
FILE NAME: z12c154bor_log.dgn	CHECKED BY: J. HUNGERFORD
PROJECT LEADER: M. CHENETTE	SHEET 19 OF 72
DESIGNED BY: T. DYKSTRA	
BORING LOG 3	



VTTrans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: <b>P-2A</b>		
				Jay BHF 0278(3) VT Rte 242, Bridge #10, Over Jay Branch		Page No.: 1 of 1		
				Checked By: TAD		Pin No.: z12c154		
Boring Crew: NH Boring, Derry, NH, Burke (Stantec)		Casing Sampler		Groundwater Observations				
Date Started: 3/25/14 Date Finished: 3/25/14		Type: H.S.A.		Date		Depth (ft)		
VTSPG NAD83: N 890207.95 ft E 1652676.84 ft		I.D.: 4.25 in						
Station: 167+69.40 Offset: 6.14 RT		Hammer Wt: N.A. N.A.						
Ground Elevation: 1037.19 ft		Hammer Fall: N.A. N.A.						
		Hammer/Rod Type:						
		Rig: Diedrich D-50 C. =						
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)		Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
2.5								
5.0								
7.5								
10.0								
12.5								
15.0		Remarks: Advanced auger probe to refusal on probable bedrock at 12.5 feet below ground surface.						
17.5								
20.0								
22.5								
Notes:		1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. C 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.						

TOP OF FOOTING  
EL. 1026.5

2010 COPY VTRANS_TEMPLATE_JAY_VT.GPJ VERMONT AOT.GDT 5/1/14

TOP OF FOOTING  
EL. 1028.5

2010 COPY VTRANS_TEMPLATE_JAY_VT.GPJ VERMONT AOT.GDT 5/1/14

VTTrans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: <b>P-3</b>		
				Jay BHF 0278(3) VT Rte 242, Bridge #10, Over Jay Branch		Page No.: 1 of 1		
				Checked By: TAD		Pin No.: z12c154		
Boring Crew: NH Boring, Derry, NH, Burke (Stantec)		Casing Sampler		Groundwater Observations				
Date Started: 3/25/14 Date Finished: 3/25/14		Type: H.S.A.		Date		Depth (ft)		
VTSPG NAD83: N 890299.19 ft E 1652718.89 ft		I.D.: 4.25 in						
Station: 168+69.24 Offset: 4.77 LT		Hammer Wt: N.A. N.A.						
Ground Elevation: 1035.96 ft		Hammer Fall: N.A. N.A.						
		Hammer/Rod Type:						
		Rig: Diedrich D-50 C. =						
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)		Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
2.5								
5.0								
7.5								
10.0								
12.5								
15.0								
17.5								
20.0								
22.5								
Notes:		1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. C 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.						

Top of Bedrock @ 9.5 ft

Remarks:  
Advanced auger probe to refusal on probable bedrock at 9.5 feet below ground surface.

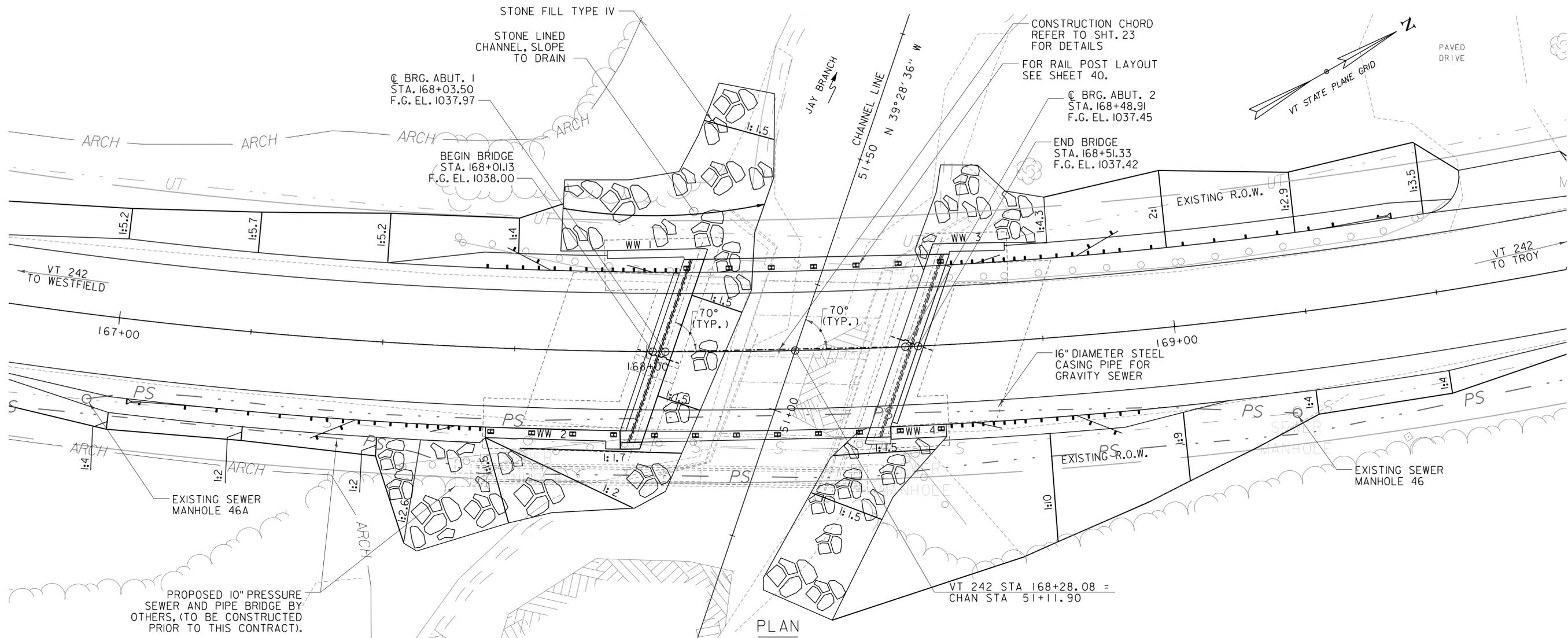


PROJECT NAME: JAY	PLOT DATE: 3/18/2016
PROJECT NUMBER: BHF 0278(3)	DRAWN BY: L. BUXTON
FILE NAME: z12c154bor_log.dgn	CHECKED BY: J. HUNGERFORD
PROJECT LEADER: M. CHENETTE	SHEET 20 OF 72
DESIGNED BY: T. DYKSTRA	
BORING LOG 4	

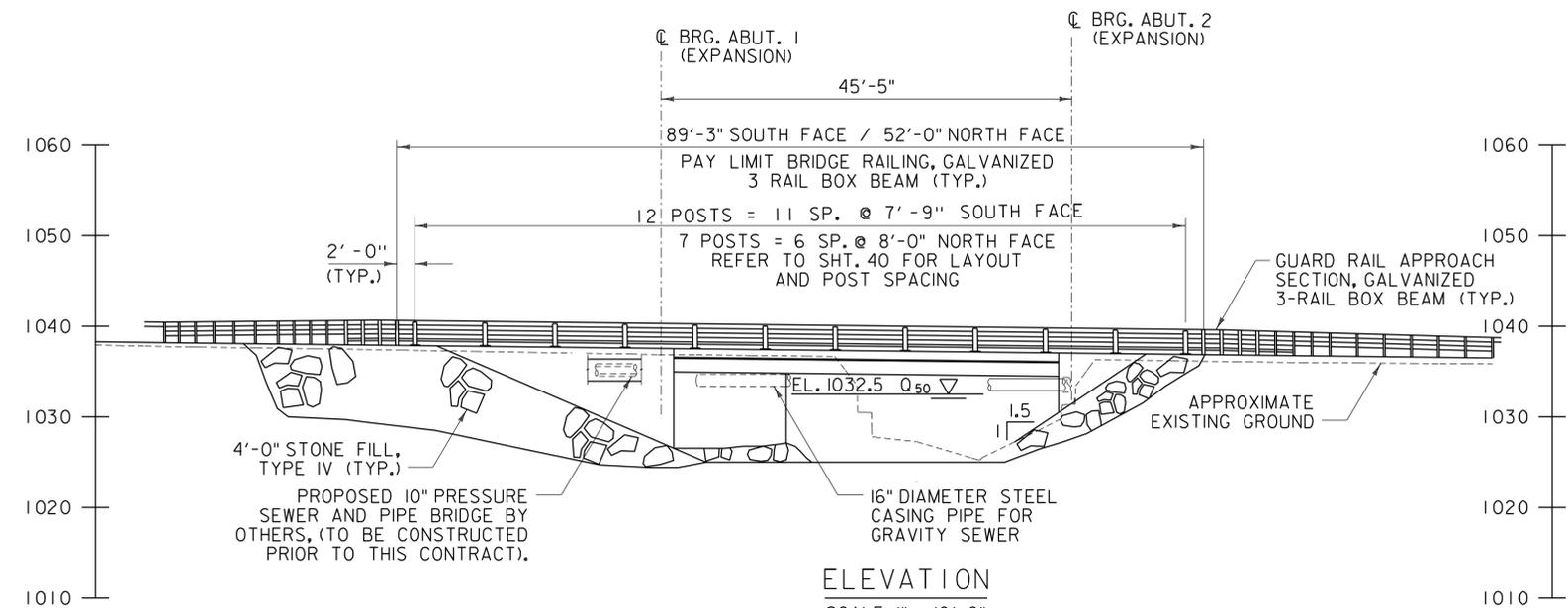
 STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		<b>BORING LOG</b>		Boring No.: <b>P-4</b>	
		<b>Jay</b> <b>BHF 0278(3)</b> <b>VT Rte 242, Bridge #10, Over Jay Branch</b>		Page No.: 1 of 1	
Boring Crew: <u>NH Boring, Derry, NH, Burke (Stantec)</u> Date Started: <u>3/25/14</u> Date Finished: <u>3/25/14</u> VTSPG NAD83: <u>N 890287.33 ft E 1652728.97 ft</u> Station: <u>168+63.52</u> Offset: <u>9.69 RT</u> Ground Elevation: <u>1036.75 ft</u>		Casing Sampler Type: <u>H.S.A.</u> I.D.: <u>4.25 in</u> Hammer Wt: <u>N.A.</u> <u>N.A.</u> Hammer Fall: <u>N.A.</u> <u>N.A.</u> Hammer/Rod Type: Rig: <u>Diedrich D-50</u> <u>C. =</u>		Groundwater Observations Date Depth (ft) Notes	
Depth (ft) 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5	Strata (1)	CLASSIFICATION OF MATERIALS (Description)			Blows/6" (N Value)
					Moisture Content %
					Sand %
					Fines %
TOP OF FOOTING EL. 1028.5		Top of Bedrock @ 9.5 ft			
		Remarks: Advanced auger probe to refusal on probable bedrock at 9.5 feet below ground surface.			
2010 COPY VTRANS_TEMPLATE_JAY_VT.GPJ VERMONT AOT.GDT 5/1/14		Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. C 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.			



PROJECT NAME: JAY	PLOT DATE: 3/18/2016
PROJECT NUMBER: BHF 0278(3)	DRAWN BY: L. BUXTON
FILE NAME: z12c154bor_log.dgn	CHECKED BY: J. HUNGERFORD
PROJECT LEADER: M. CHENETTE	SHEET 21 OF 72
DESIGNED BY: T. DYKSTRA	
BORING LOG 5	

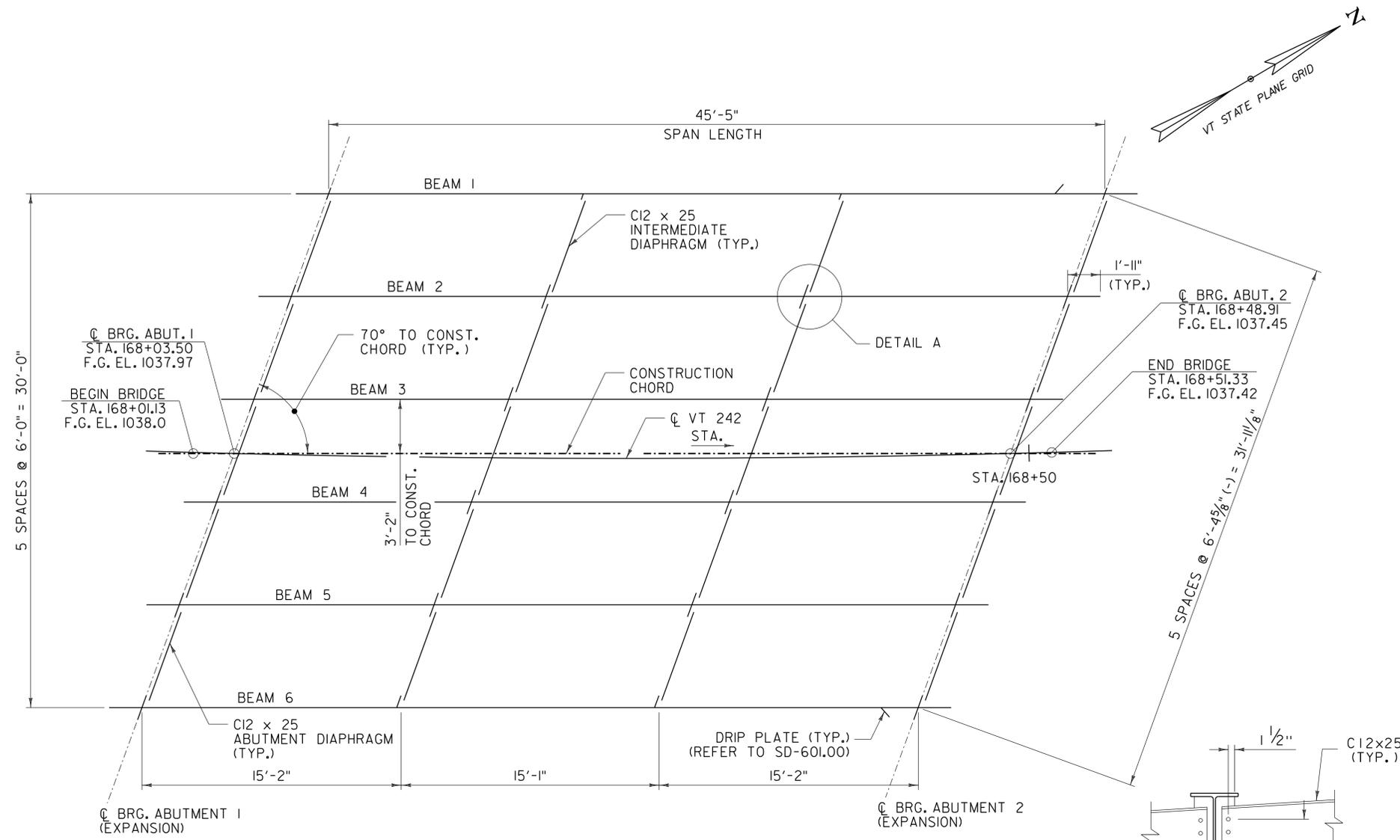


SCALE: 1" = 10'-0"  
0 10 20

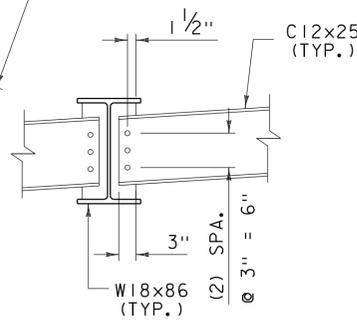


PROJECT NAME:	JAY	PLOT DATE:	3/18/2016
PROJECT NUMBER:	BHF 0278(3)	DRAWN BY:	L. BUXTON
FILE NAME:	z12c154bdr_pe.dgn	DESIGNED BY:	J. HUNGERFORD
PROJECT LEADER:	M. CHENETTE	CHECKED BY:	T. KNIGHT
DESIGNED BY:	J. HUNGERFORD	SHEET	22 OF 72
PLAN AND ELEVATION			

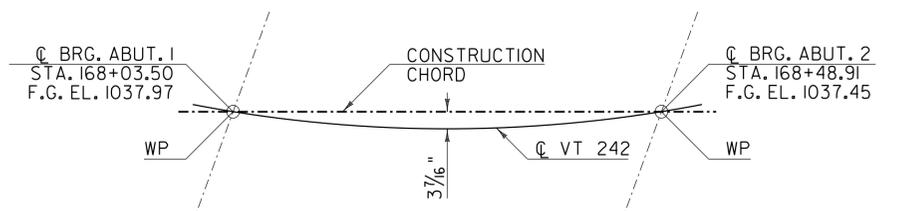




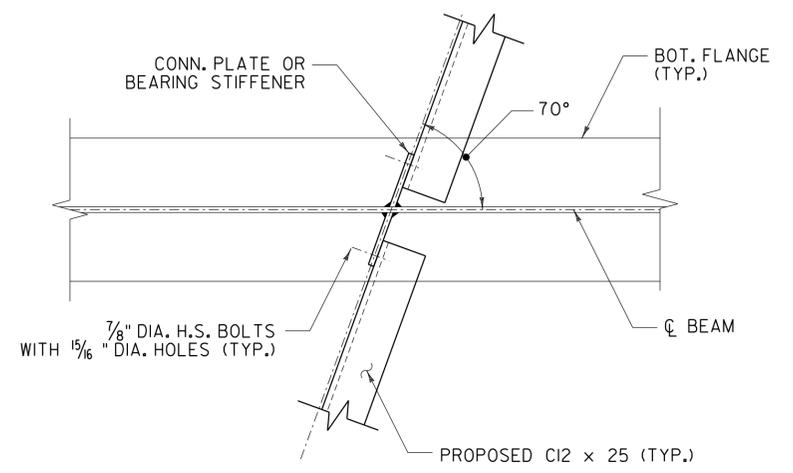
**FRAMING PLAN**  
SCALE: 1/4" = 1'-0"



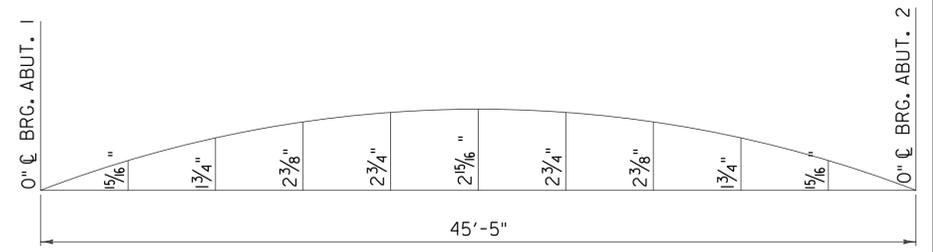
**DIAPHRAGM DETAIL**  
SCALE 3/4" = 1'-0"



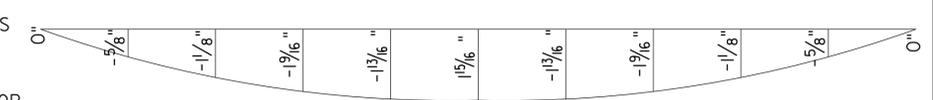
**CONSTRUCTION CHORD LAYOUT**  
NOT TO SCALE



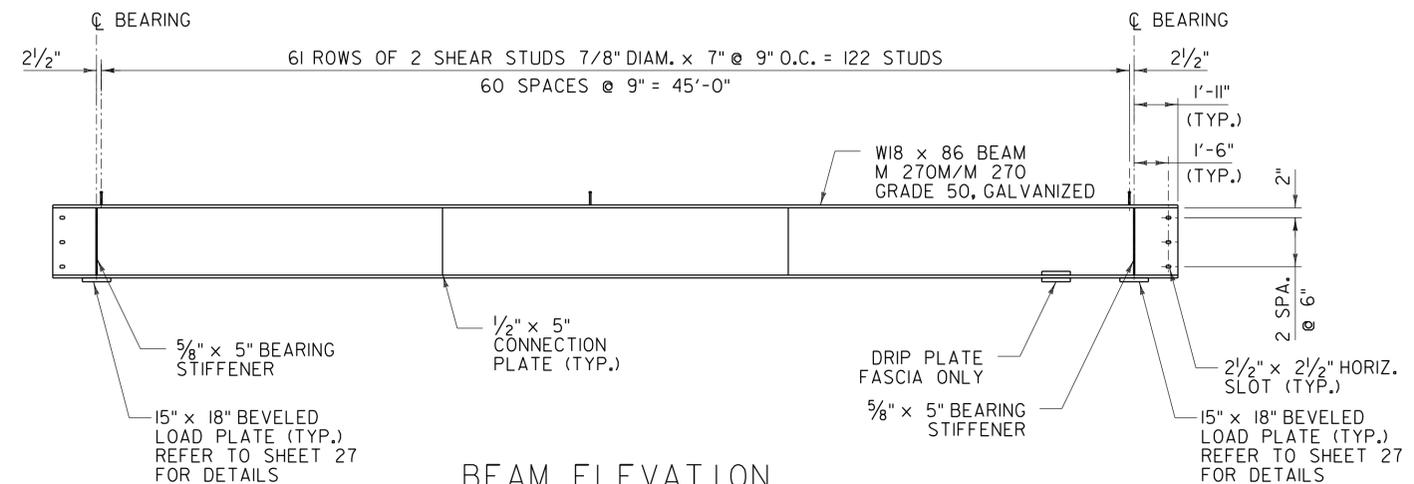
**DETAIL A**  
NOT TO SCALE



**CAMBER DIAGRAM**  
SCALE 1" = 1'-0"



**DEAD LOAD DEFLECTION**  
SCALE 1" = 1'-0"

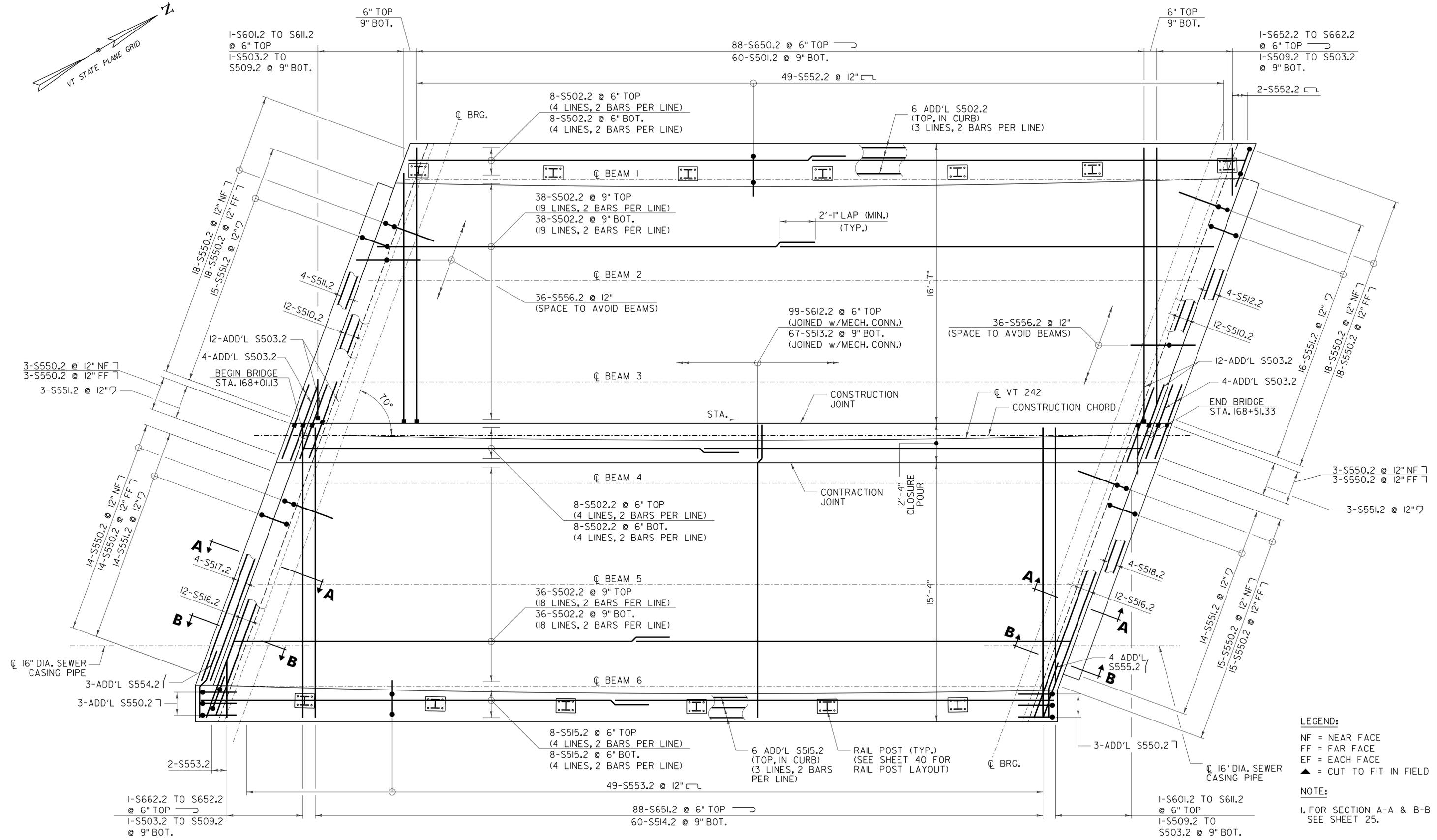
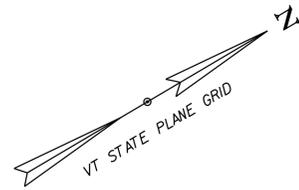


**BEAM ELEVATION**  
NOT TO SCALE

- NOTES:**
- CAMBER AND DEAD LOAD MEASUREMENTS ARE GIVEN IN INCHES AT SPAN TENTH POINTS.
  - DEAD LOAD DEFLECTIONS SHOWN ARE FOR ALL DEAD LOADS AND SUPERIMPOSED DEAD LOADS INCLUDING GIRDER AND DIAPHRAGM WEIGHTS. DESIGN DEAD LOAD DEFLECTIONS SHOWN ARE BASED ON THE AVERAGE OF BEAMS 1 THRU 6.
  - FOR DIAPHRAGM DETAILS REFER TO SD 602.00.
  - END OF BEAMS & BEARING STIFFENERS SHALL BE VERTICAL UNDER DEAD LOAD.



PROJECT NAME: JAY	PLOT DATE: 3/18/2016
PROJECT NUMBER: BHF 0278(3)	DRAWN BY: J. SOTER
FILE NAME: z12c154fra.dgn	DESIGNED BY: N. TIRK
PROJECT LEADER: M. CHENETTE	CHECKED BY: T. KNIGHT
FRAMING PLAN & DETAILS	SHEET 23 OF 72



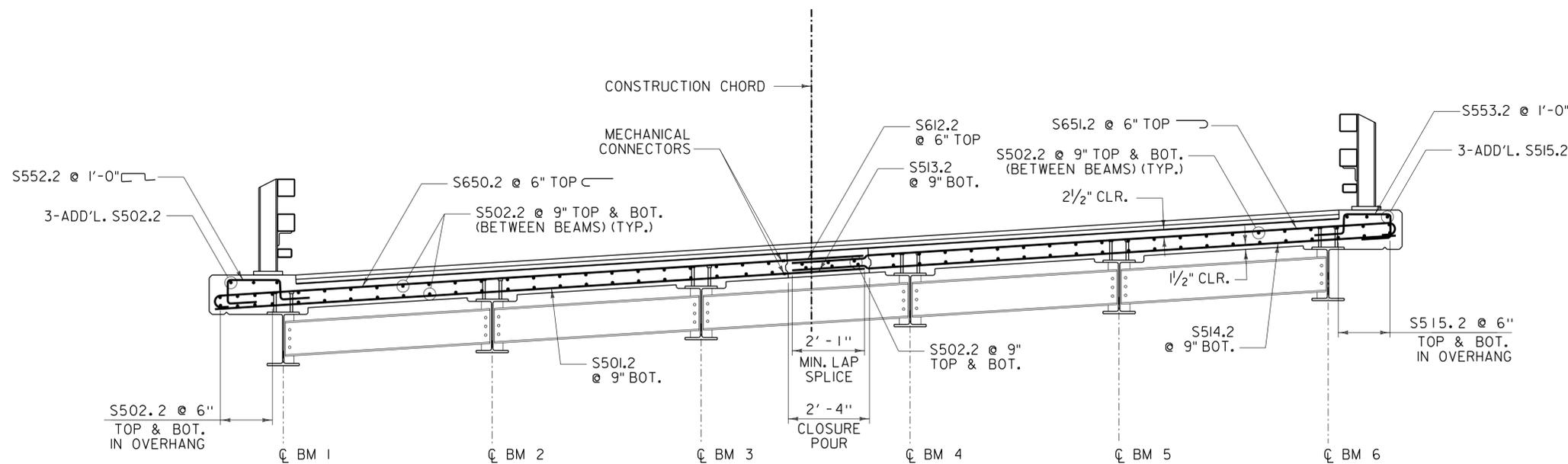
**LEGEND:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD

**NOTE:**  
 1. FOR SECTION A-A & B-B SEE SHEET 25.

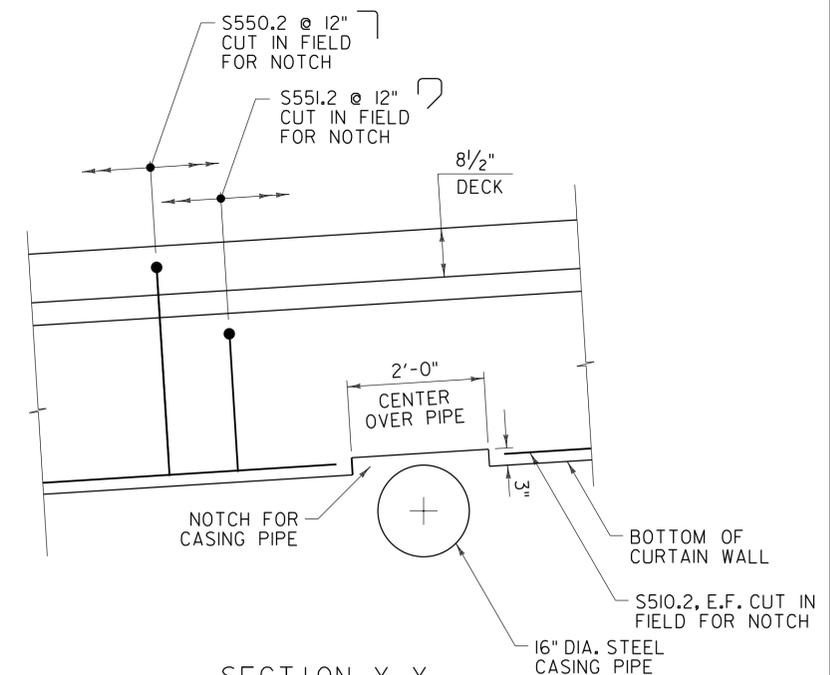
**DECK REINFORCEMENT PLAN**  
 SCALE: 3/8" = 1'-0"

PROJECT NAME:	JAY
PROJECT NUMBER:	BHF 0278(3)
FILE NAME:	z12cl54deck.pldgn
PROJECT LEADER:	M. CHENETTE
DESIGNED BY:	N. TIRK
DECK REINFORCEMENT	
PLOT DATE:	3/18/2016
DRAWN BY:	J. SOTER
CHECKED BY:	T. KNIGHT
SHEET	24 OF 72

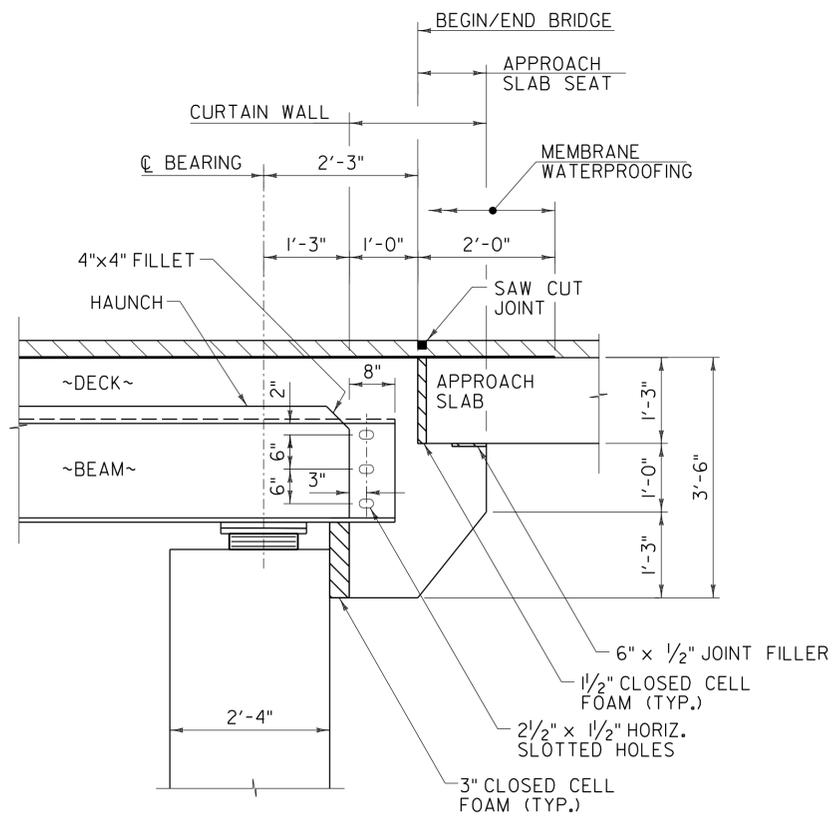




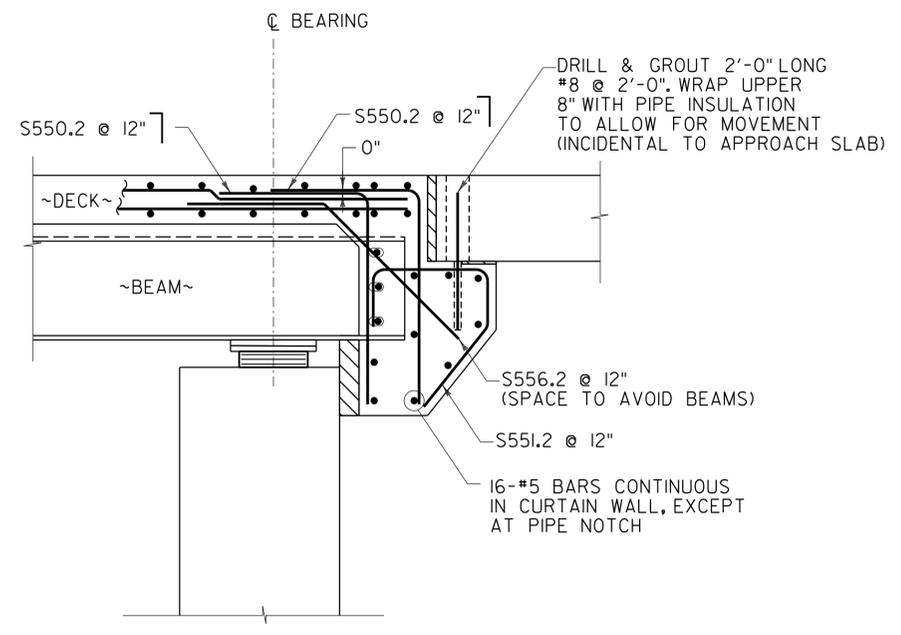
TYPICAL DECK REINFORCEMENT SECTION  
SCALE: 1/2" = 1'-0"



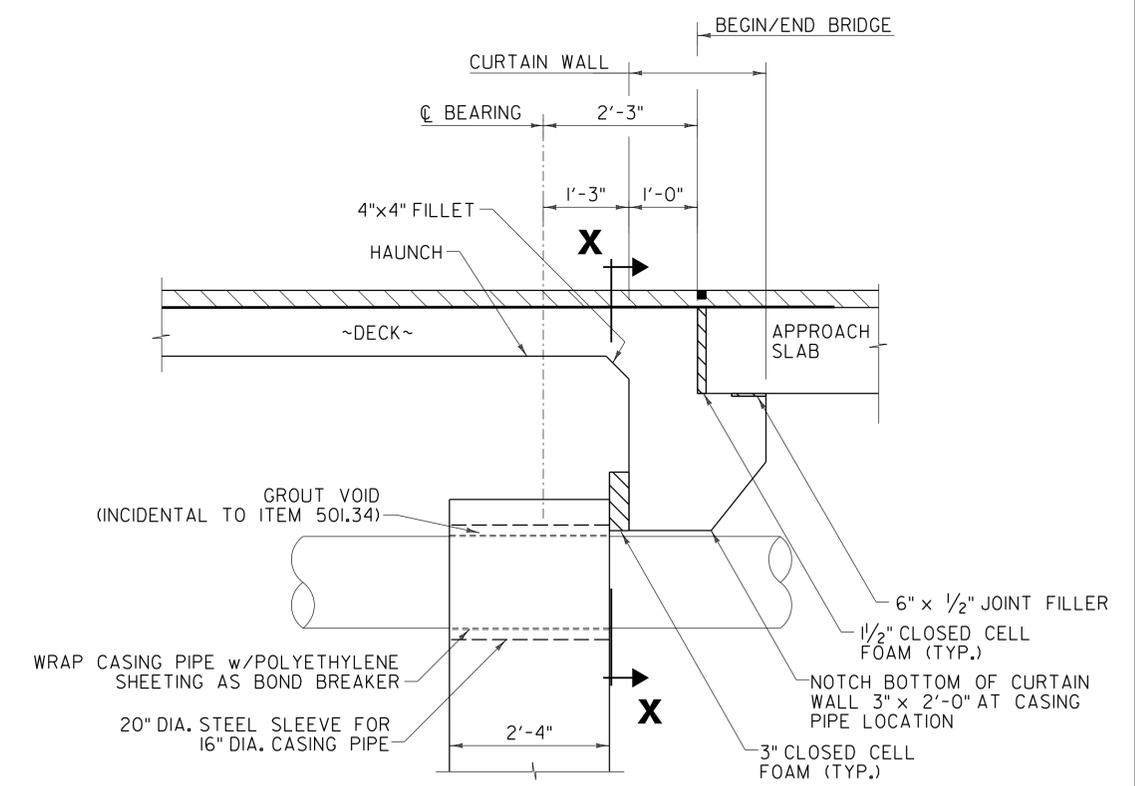
SECTION X-X  
SCALE 3/4" = 1'-0"



SECTION A-A MASONRY  
SCALE 3/4" = 1'-0"



SECTION A-A REINFORCEMENT  
SCALE 3/4" = 1'-0"

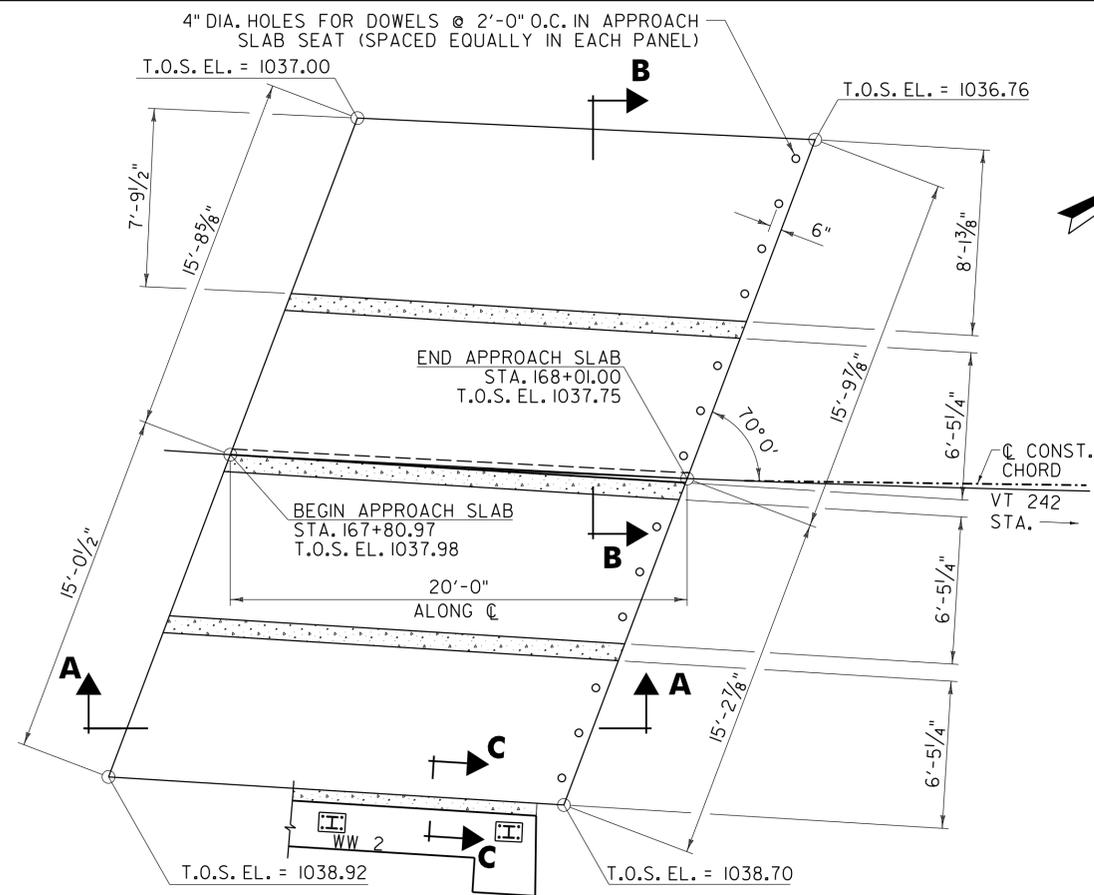


SECTION B-B MASONRY  
SCALE 3/4" = 1'-0"

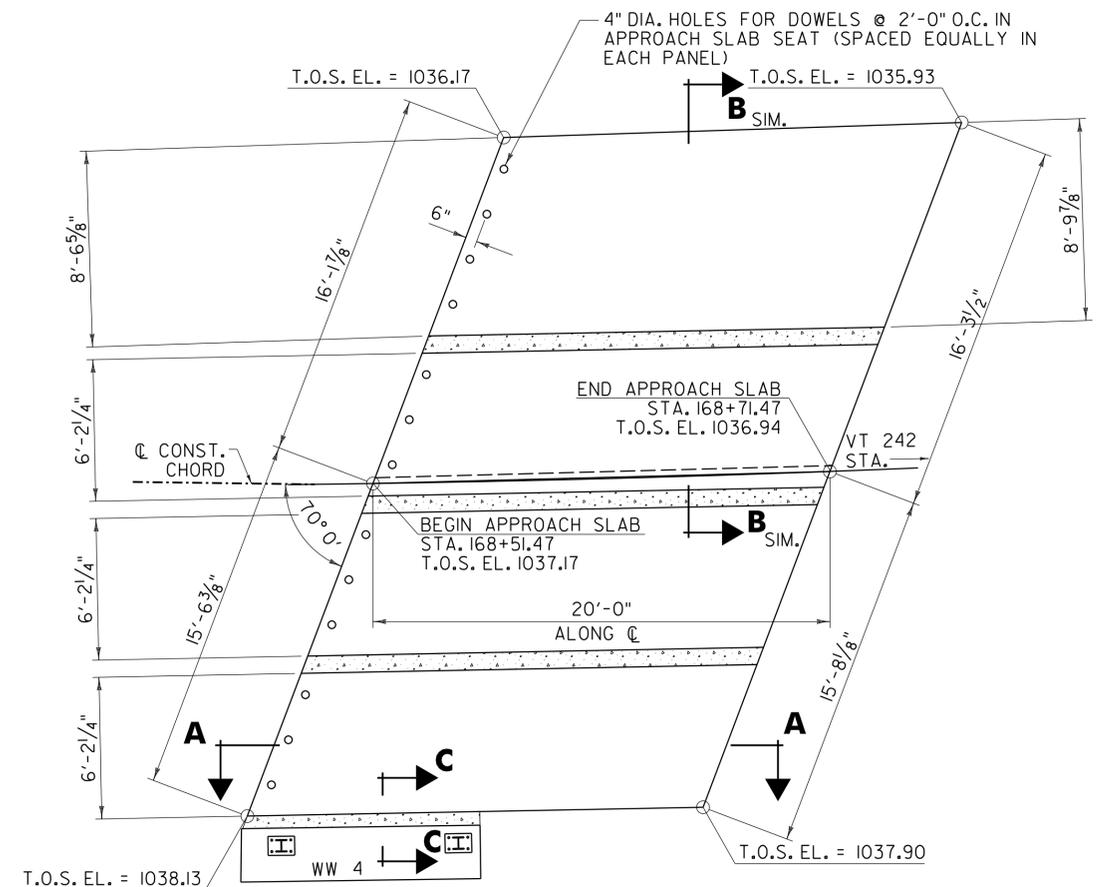
LEGEND:  
NF = NEAR FACE  
FF = FAR FACE  
EF = EACH FACE  
▲ = CUT TO FIT IN FIELD

PROJECT NAME:	JAY	PLOT DATE:	3/18/2016
PROJECT NUMBER:	BHF 0278(3)	DRAWN BY:	J. SOTER
FILE NAME:	z12c154deck.pldgn	DESIGNED BY:	N. TIRK
PROJECT LEADER:	M. CHENETTE	CHECKED BY:	G. BOGUE
TYPICAL REINFORCEMENT SECTIONS		SHEET 25 OF 72	

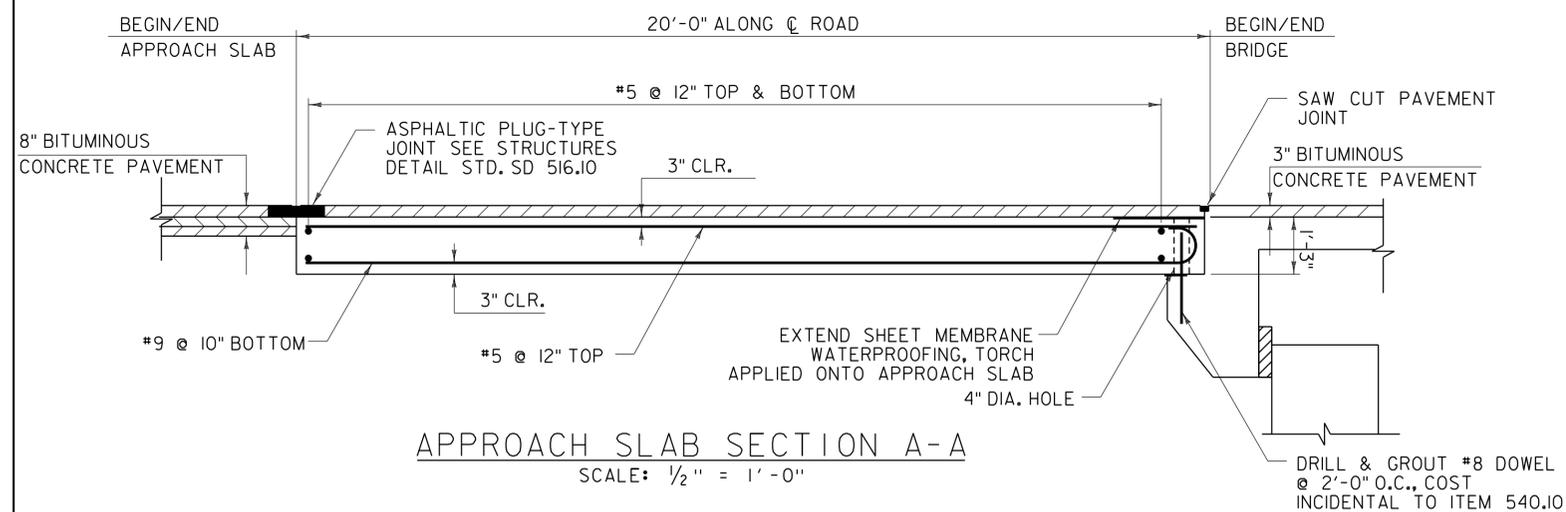




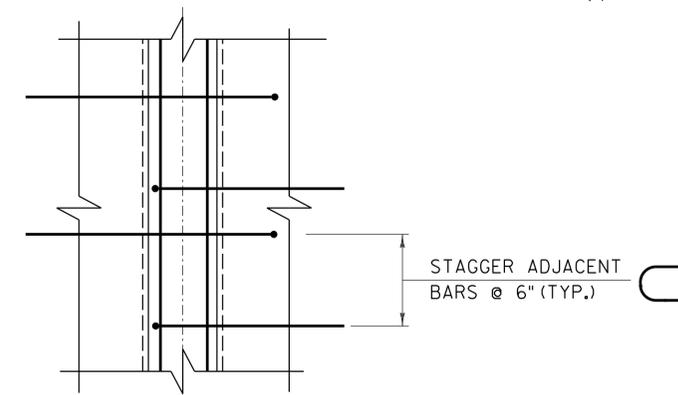
APPROACH SLAB NO. 1 PLAN  
SCALE: 1/4" = 1'-0"



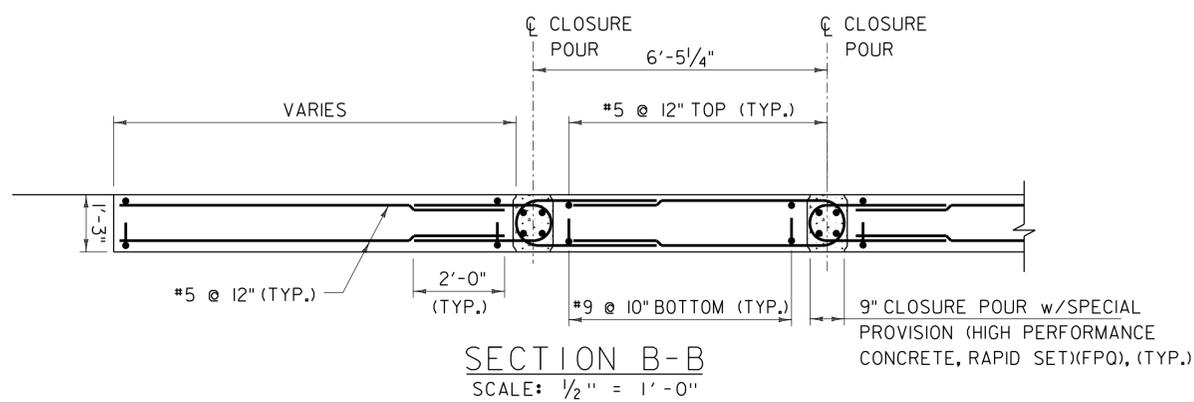
APPROACH SLAB NO. 2 PLAN  
SCALE: 1/4" = 1'-0"



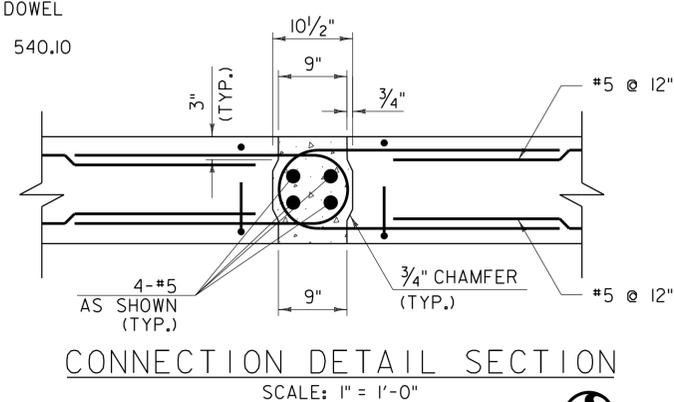
APPROACH SLAB SECTION A-A  
SCALE: 1/2" = 1'-0"



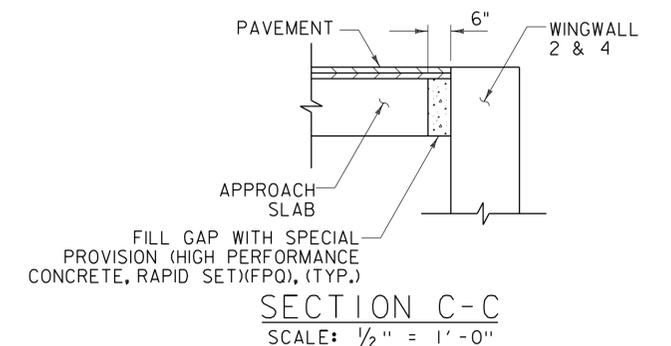
CONNECTION DETAIL PLAN  
SCALE: 1" = 1'-0"



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



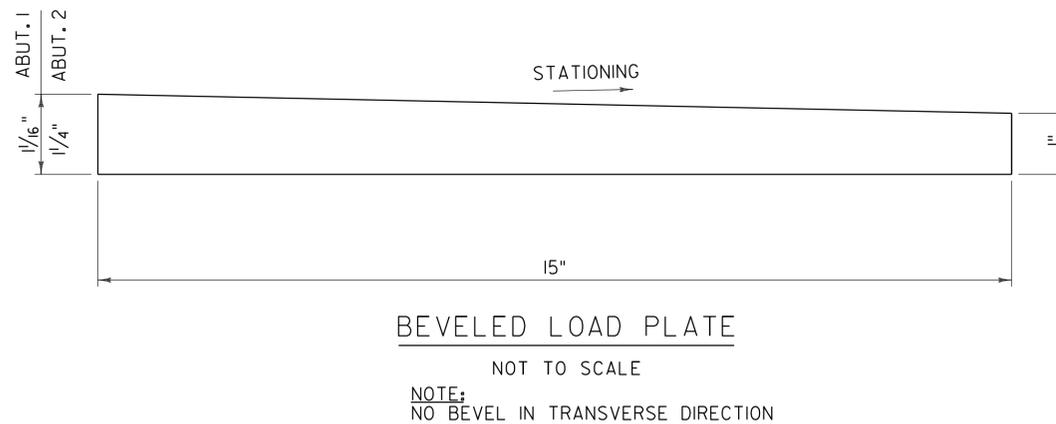
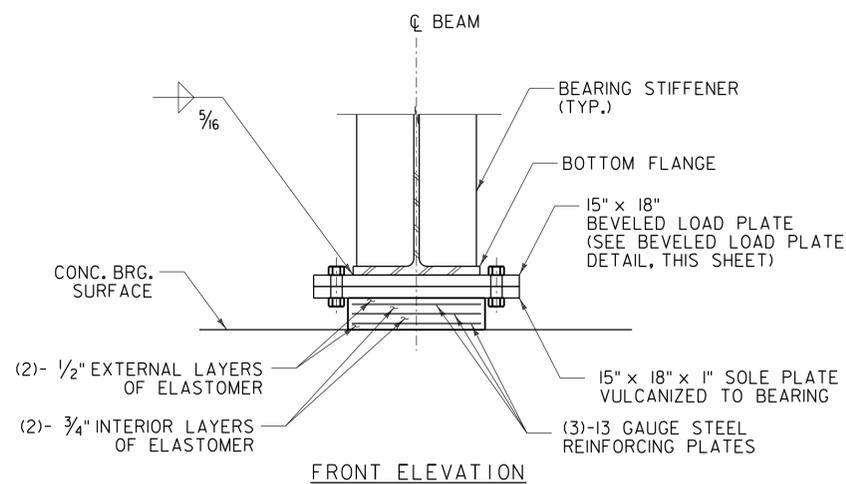
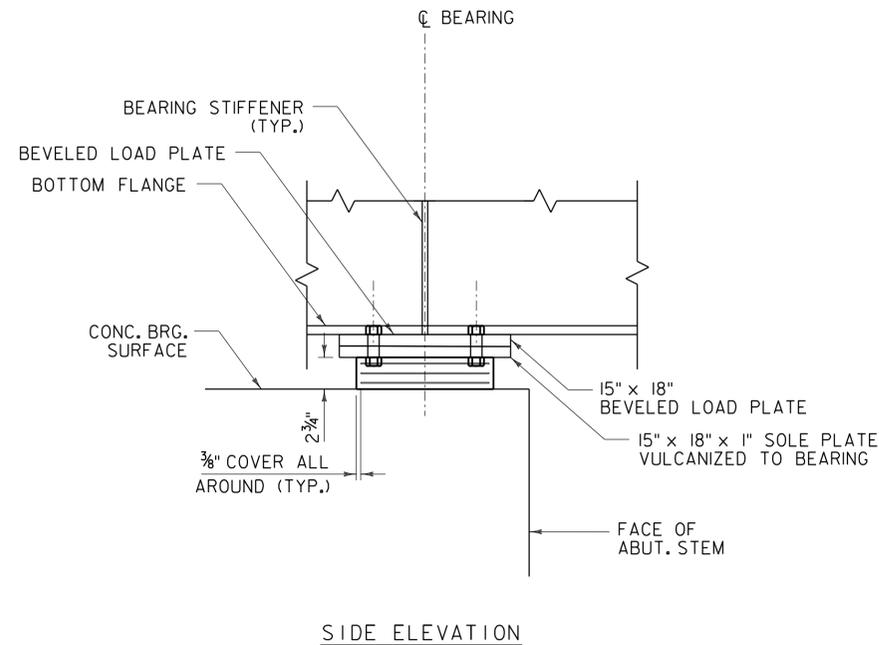
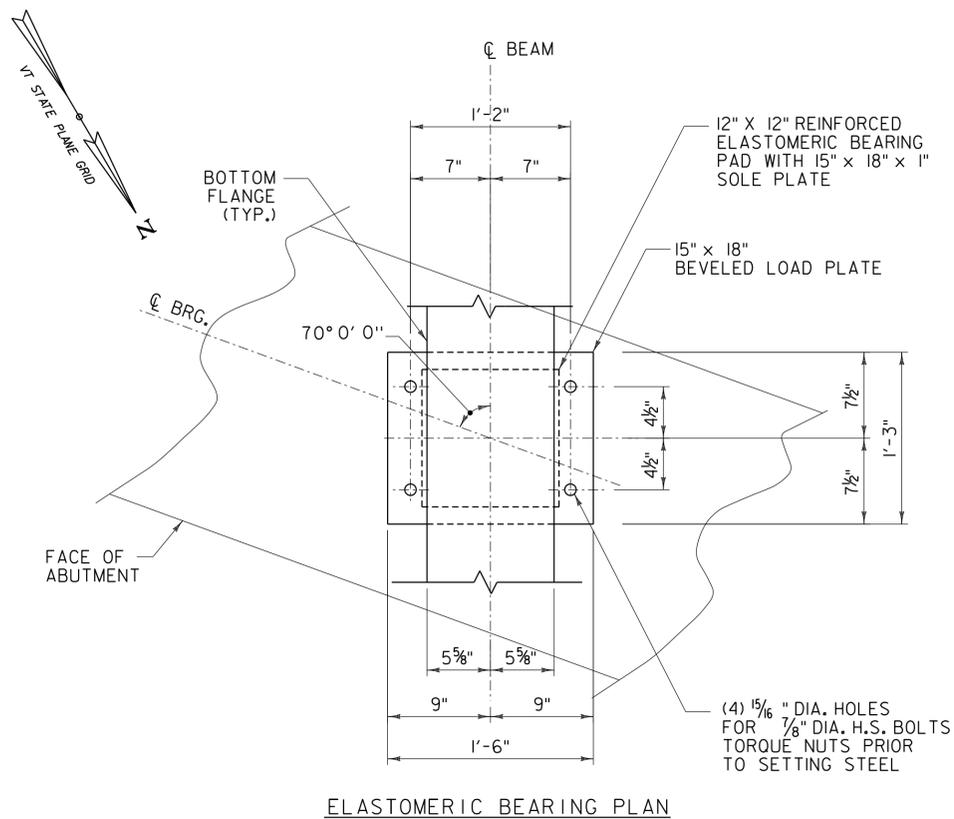
CONNECTION DETAIL SECTION  
SCALE: 1" = 1'-0"



PROJECT NAME: JAY  
PROJECT NUMBER: BHF 0278(3)  
FILE NAME: z12c154apps1ab.dgn  
PROJECT LEADER: M. CHENETTE  
DESIGNED BY: N. TIRK  
APPROACH SLAB DETAILS

PLOT DATE: 3/18/2016  
DRAWN BY: L. BUXTON  
CHECKED BY: T. KNIGHT  
SHEET 26 OF 72





ELASTOMERIC BEARING ASSEMBLY  
SCALE 1/2" = 1'-0"

**BEARING NOTES:**

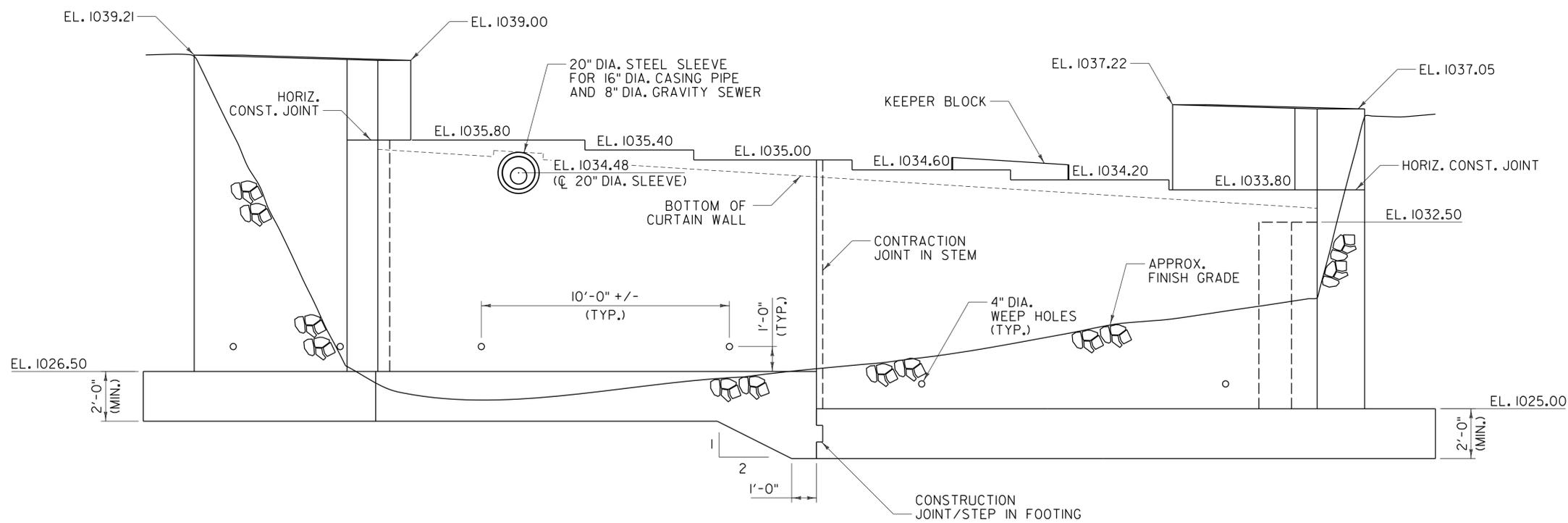
1. BEARINGS SHALL CONFORM TO APPLICABLE SUBSECTIONS OF THE STANDARD SPECIFICATION SECTIONS 531 AND 731.
  2. ELASOTMERIC BEARINGS AND SOLE PLATE SHALL BE PAID FOR UNDER ITEM 531.8. LOAD PLATE AND CONNECTION HARDWARE ARE TO BE PAID FOR AS STRUCTURAL STEEL.
  3. FABRICATION DRAWINGS INCLUDING BONDING AND VULCANIZING PROCEDURES SHALL BE SUBMITTED IN ACCORDANCE WITH SUBSECTION 531.03.
  4. THE CONCRETE SURFACE UNDER THE BEARING DEVICE SHALL BE LEVEL.
  5. DECK POUR ADJUSTMENT:  
THE BOTTOM FLANGE IS ANTICIPATED TO ELONGATE LESS THAN 1/4" DUE TO PLACEMENT OF THE CONCRETE DECK AND THE BEARINGS ARE DESIGNED TO ACCOMMODATE THIS MOVEMENT. THE TEMPERATURE SETTING RANGE FOR INSTALLATION OF THE ELASTOMERIC BEARINGS WITHOUT THE NEED FOR ADJUSTMENT IS 20 TO 70 DEGREES F.
  6. THE SHEAR MODULUS OF THE ELASTOMER SHALL BE BETWEEN 130 AND 175 psi.
  7. VULCANIZING ELASTOMER TO STEEL PLATES SHALL BE DONE DURING PRIMARY MOLD PROCESS.
  8. AN 1/8" GAP SHALL BE LEFT BELOW THE NUT. THE ANCHOR BOLT THREADS SHALL BE BURRED TO PREVENT REMOVAL OF THE NUTS (TYP.)
  9. STEEL REINFORCED ELASTOMERIC BEARINGS WERE DESIGNED PER METHOD = A.
- ELASTOMERIC BEARING DESIGN CRITERIA:
- ABUTMENT 1 AND 2 BEARINGS - SERVICE LOADS
- A. DESIGN DEAD LOAD REACTION = 22.9 KIPS/BEARING
  - B. DESIGN LIVE LOAD REACTION = 38.0 KIPS/BEARING
  - C. ROTATION CAPACITY = 0.015 RADIANS
10. ALL STEEL IN BEARING DEVICES SHALL BE AASHTO M 270M/M 270, (ASTM A-709) GRADE 36 (MIN.).



PROJECT NAME: JAY  
PROJECT NUMBER: BHF 0278(3)  
FILE NAME: z12c154brg.det.dgn  
PROJECT LEADER: M. CHENETTE  
DESIGNED BY: N. TIRK  
BEARING DETAILS

PLOT DATE: 3/18/2016  
DRAWN BY: L. BUXTON  
CHECKED BY: T. KNIGHT  
SHEET 27 OF 72



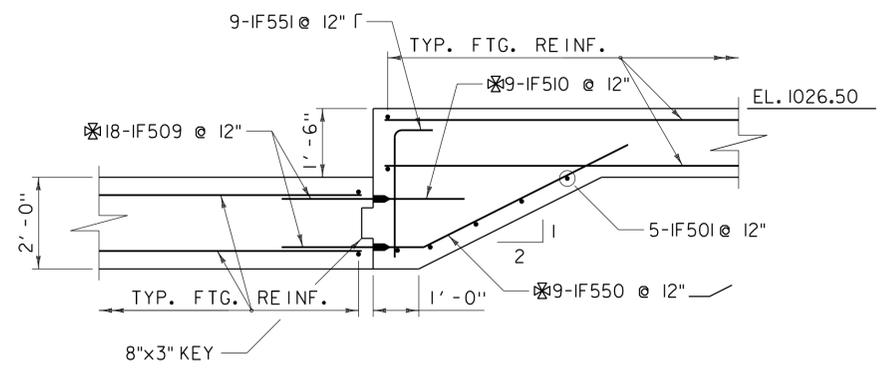
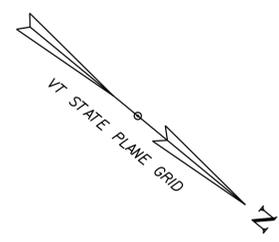
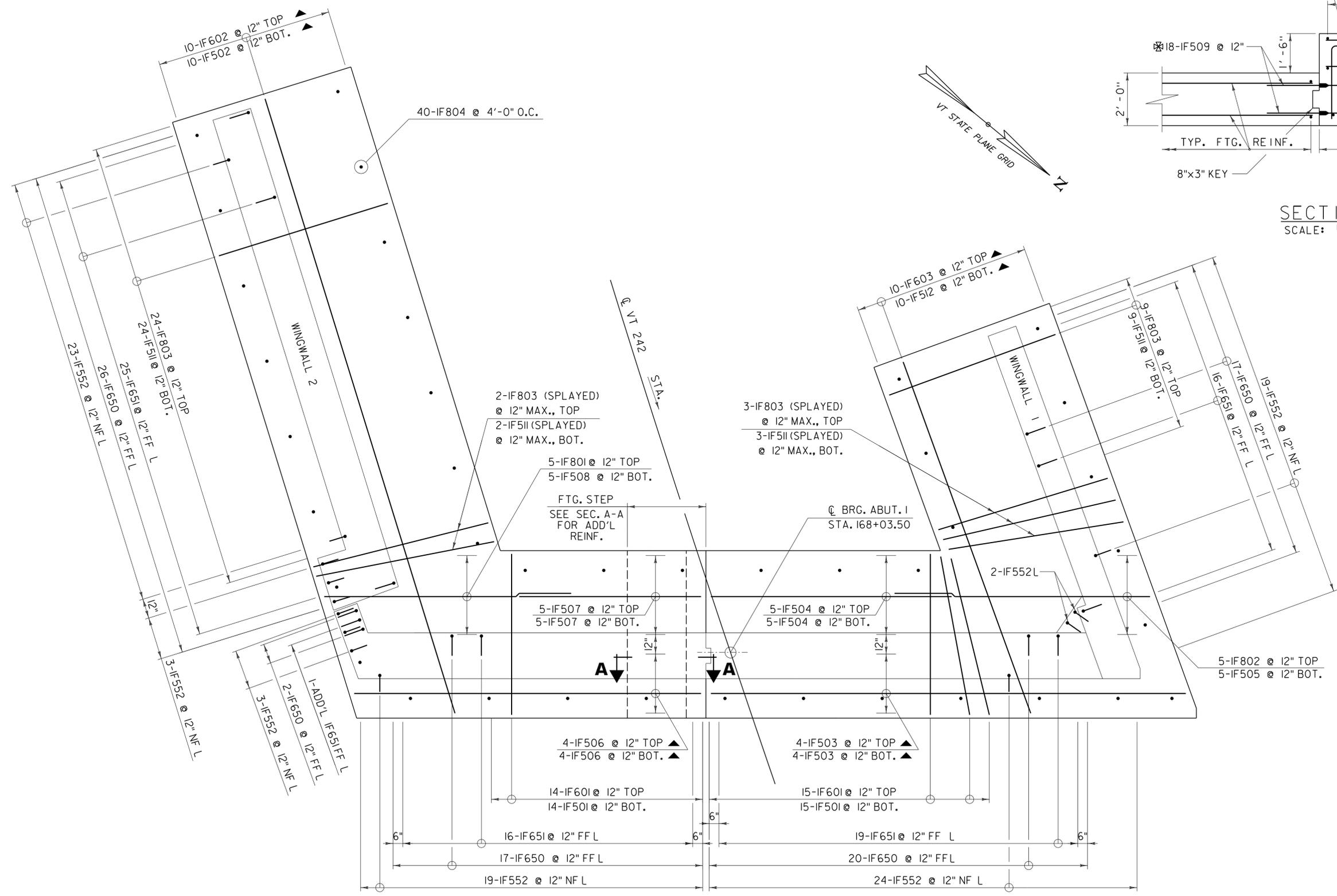


ABUTMENT NO. 1 ELEVATION  
 SCALE: 3/8" = 1'-0"

NOTE: FOR KEEPER BLOCK  
 DETAIL REFER TO  
 SHEET 31.

PROJECT NAME: JAY	PLOT DATE: 3/18/2016
PROJECT NUMBER: BHF 0278(3)	DRAWN BY: J. SOTER
FILE NAME: z12c154abuts.dgn	DESIGNED BY: N. TIRK
PROJECT LEADER: M. CHENETTE	CHECKED BY: T. KNIGHT
ABUTMENT NO. 1 ELEVATION	SHEET 29 OF 72





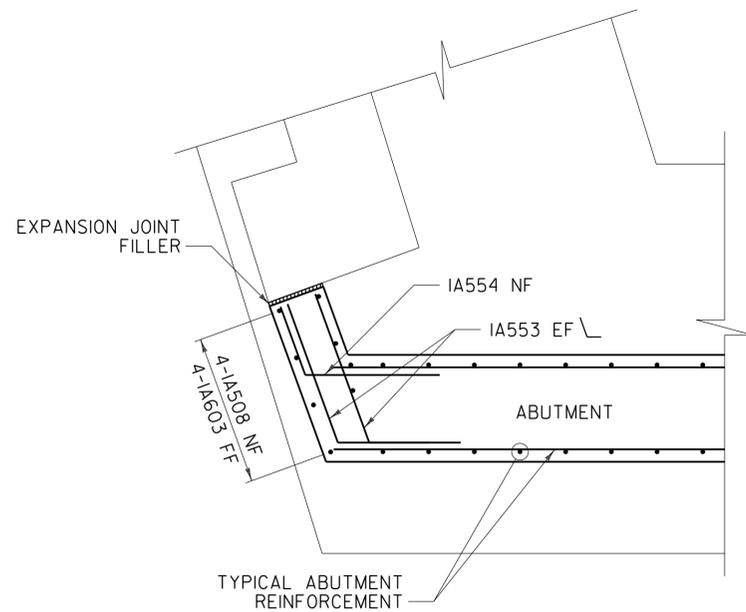
SECTION A-A  
SCALE: 1/2" = 1'-0"

ABUTMENT NO. 1 FOOTING REINFORCEMENT  
SCALE: 3/8" = 1'-0"

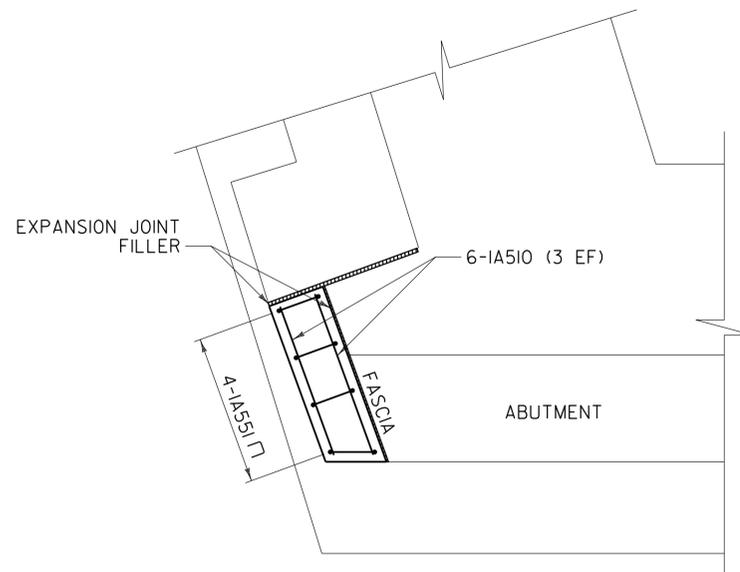
**LEGEND:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD  
 ⊗ = INDICATES BAR JOINED WITH MECHANICAL CONNECTOR  
 ALL SPLICES 2'-0" UNLESS NOTED OTHERWISE.

PROJECT NAME:	JAY	FILE NAME:	z12c154abuts.dgn	PLOT DATE:	3/18/2016
PROJECT NUMBER:	BHF 0278(3)	PROJECT LEADER:	M. CHENETTE	DRAWN BY:	J. SOTER
		DESIGNED BY:	N. TIRK	CHECKED BY:	T. KNIGHT
		ABUTMENT NO. 1 FOOTING REINFORCEMENT			SHEET 30 OF 72

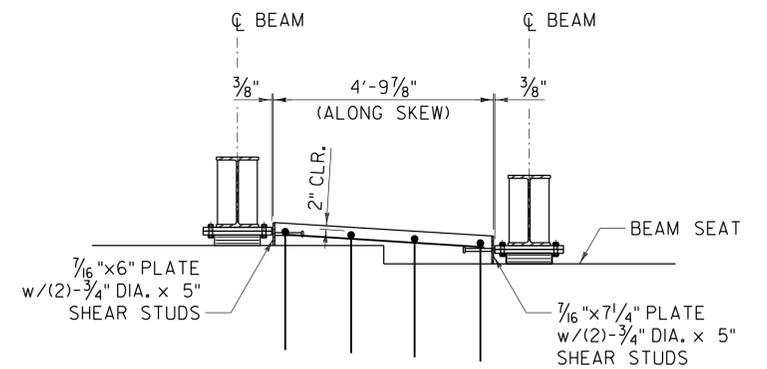




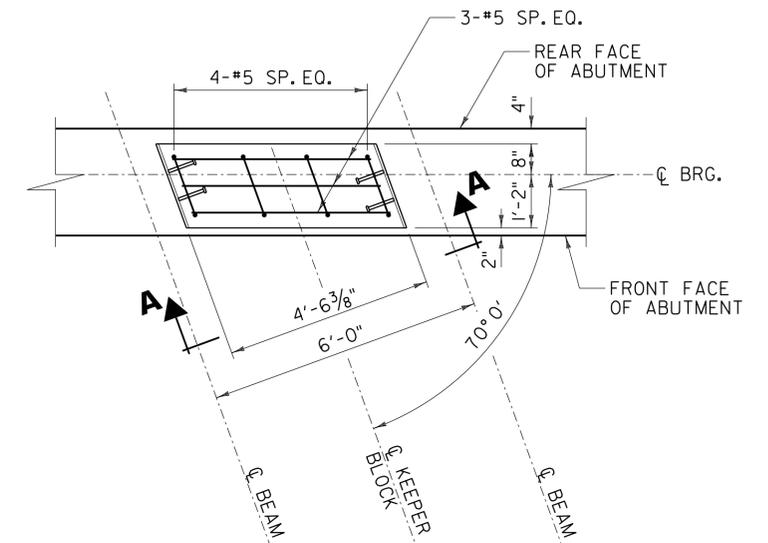
**SOUTHEAST CORNER REINFORCEMENT  
(BELOW BEAM SEAT)**  
SCALE: 1/2" = 1'-0"



**SOUTHEAST CORNER REINFORCEMENT  
(ABOVE BEAM SEAT)**  
SCALE: 1/2" = 1'-0"

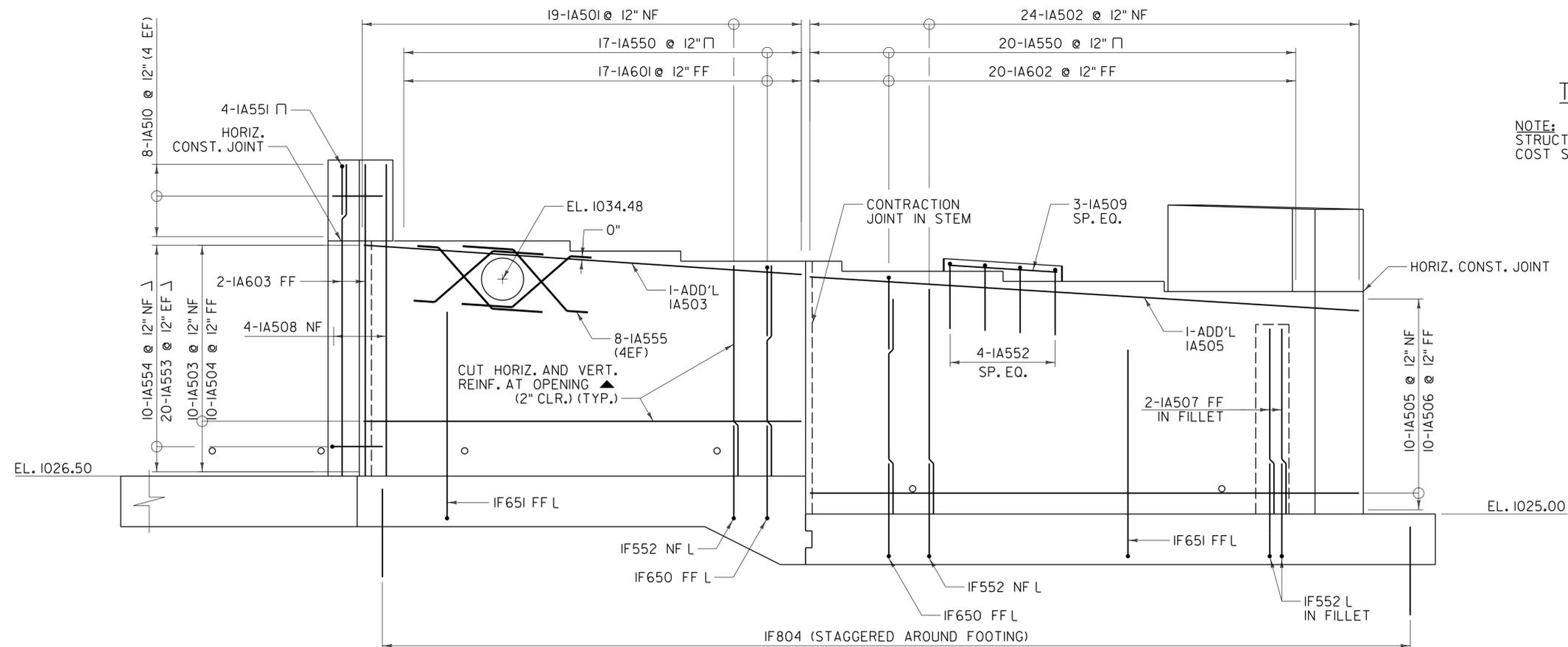


**SECTION A-A**



**TYPICAL KEEPER BLOCK DETAIL**  
SCALE: 1/2" = 1'-0"

NOTE:  
STRUCTURAL STEEL PLATES ARE TO BE GRADE 36 AND GALVANIZED.  
COST SHALL BE CONSIDERED INCIDENTAL TO THE CONCRETE.



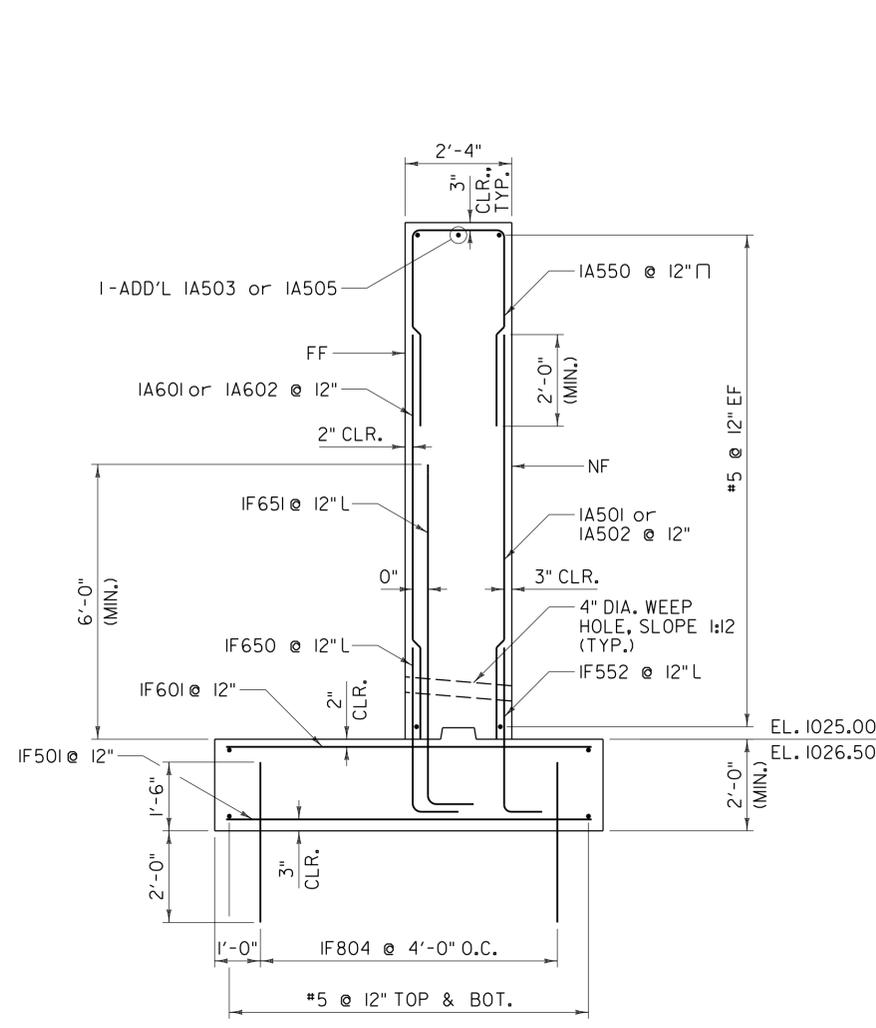
**ABUTMENT NO. 1 REINFORCEMENT ELEVATION**  
SCALE: 3/8" = 1'-0"

**LEGEND:**  
NF = NEAR FACE  
FF = FAR FACE  
EF = EACH FACE  
▲ = CUT TO FIT IN FIELD  
  
ALL SPLICES 2'-0" UNLESS NOTED OTHERWISE.

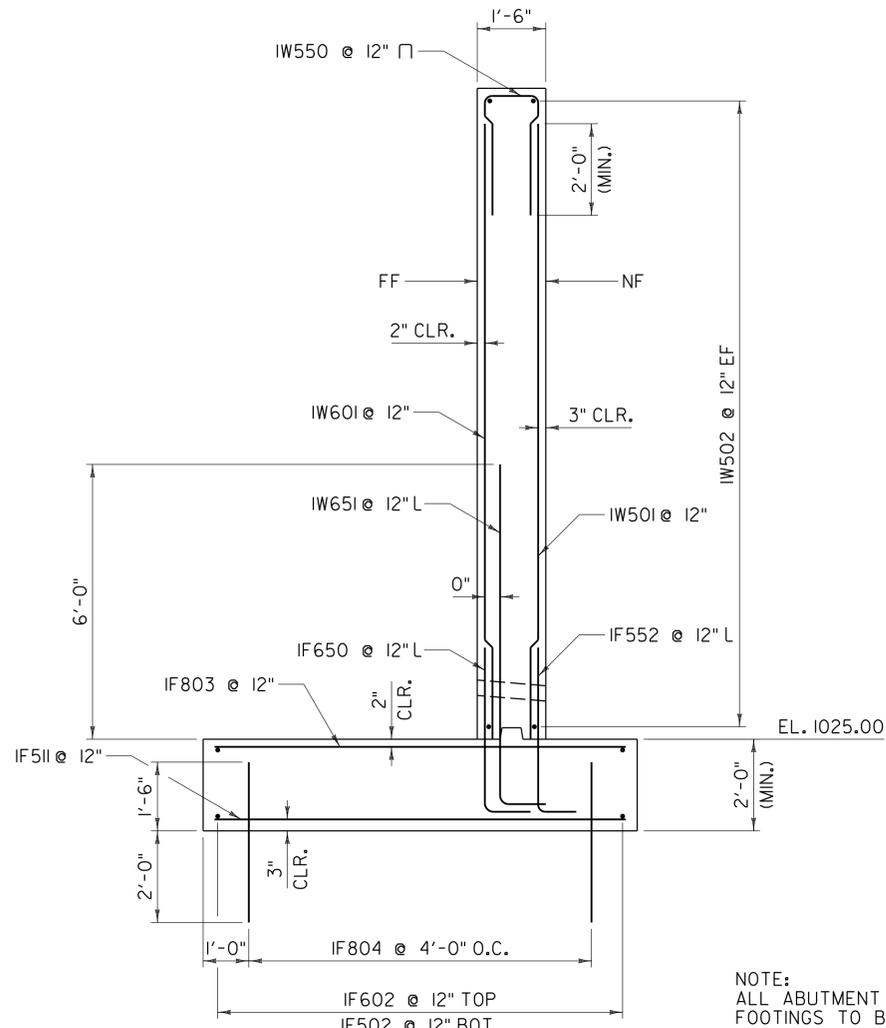
PROJECT NAME: JAY  
PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12c154abuts.dgn  
PROJECT LEADER: M. CHENETTE  
DESIGNED BY: N. TIRK  
ABUTMENT NO. 1 REINFORCEMENT ELEVATION  
  
PLOT DATE: 3/18/2016  
DRAWN BY: J. SOTER  
CHECKED BY: T. KNIGHT  
SHEET 31 OF 72

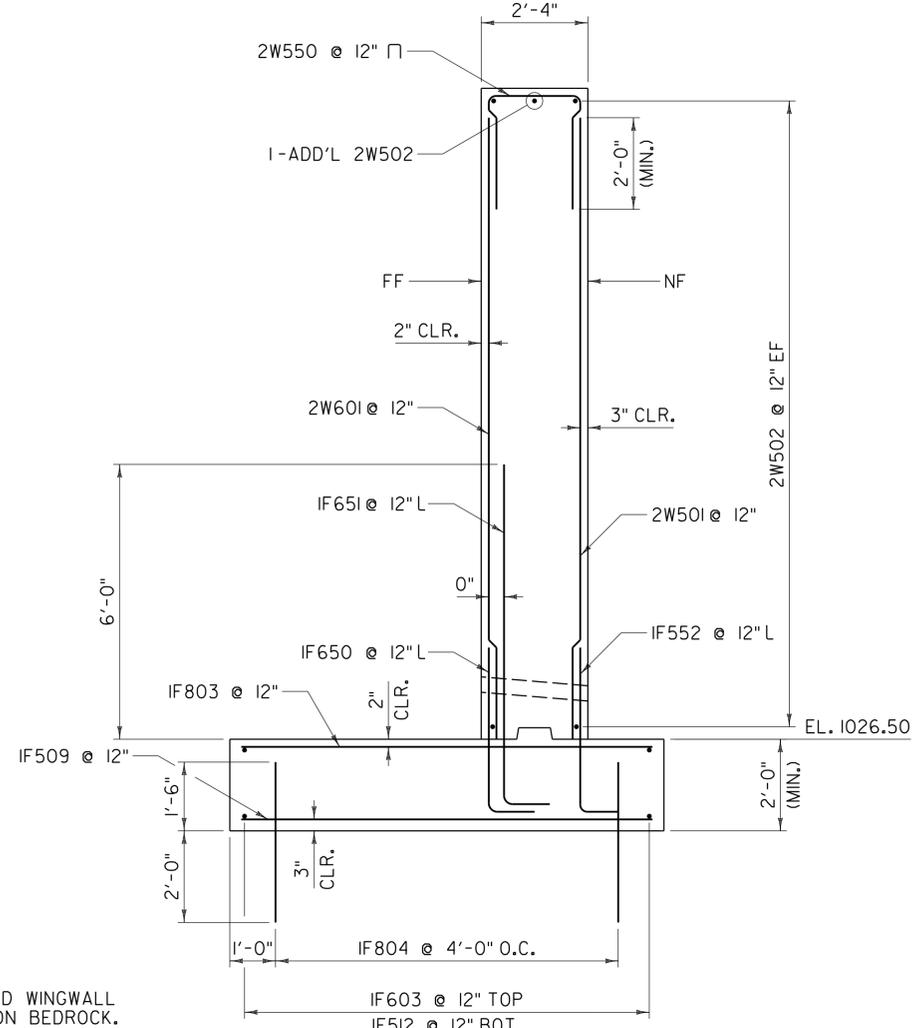




ABUTMENT NO. 1 REINFORCEMENT  
SCALE: 1/2" = 1'-0"

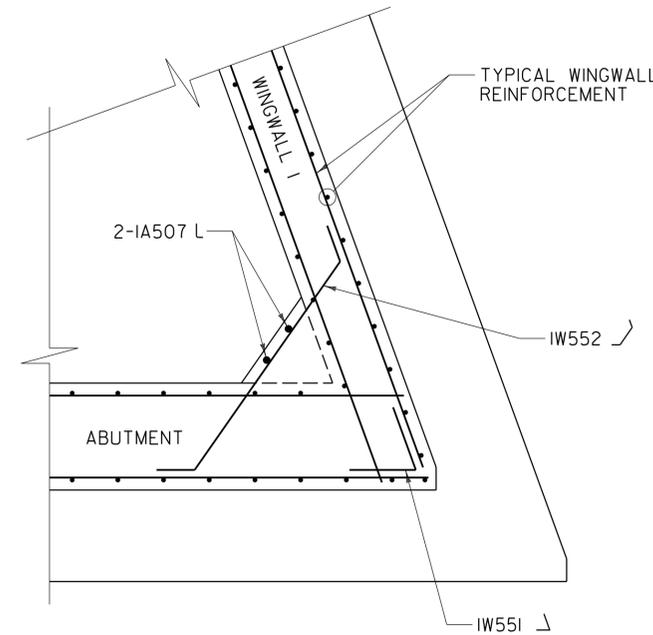


WINGWALL 1 REINFORCEMENT  
SCALE: 1/2" = 1'-0"

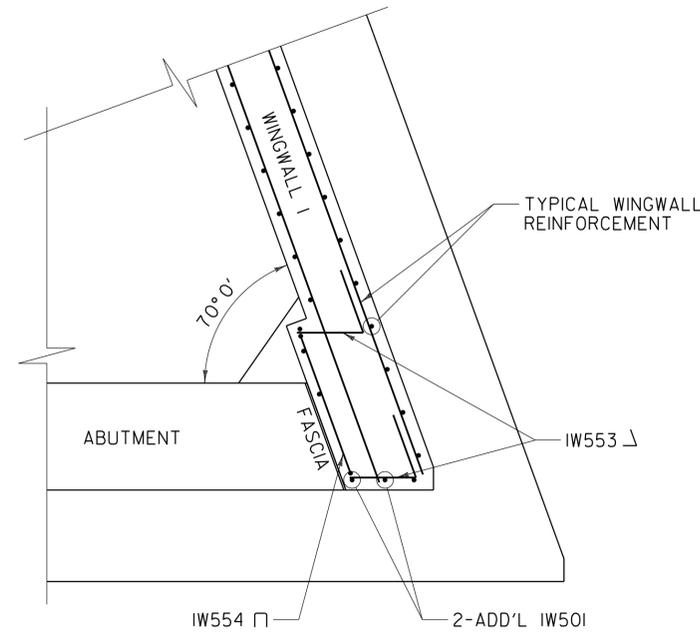


WINGWALL 2 REINFORCEMENT  
SCALE: 1/2" = 1'-0"

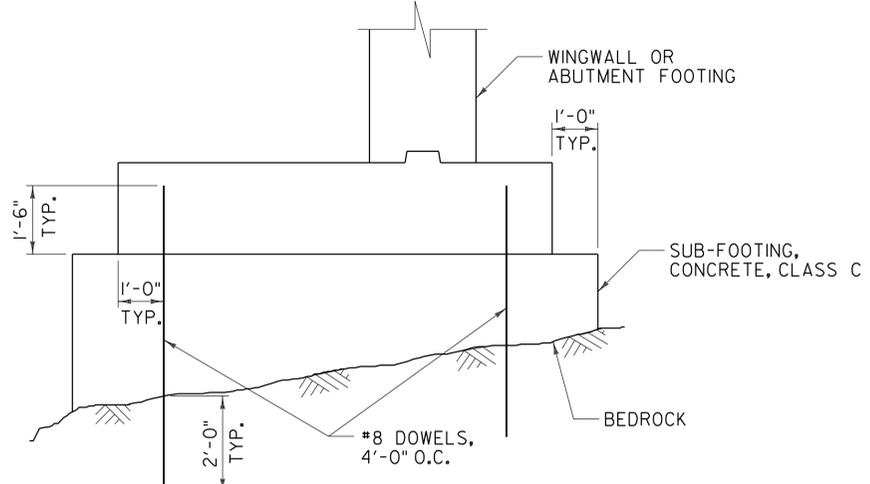
NOTE:  
ALL ABUTMENT AND WINGWALL  
FOOTINGS TO BE ON BEDROCK.



WINGWALL 1 CORNER  
REINFORCEMENT (BELOW FILLET)  
SCALE: 1/2" = 1'-0"



WINGWALL 1 CORNER  
REINFORCEMENT (ABOVE FILLET)  
SCALE: 1/2" = 1'-0"



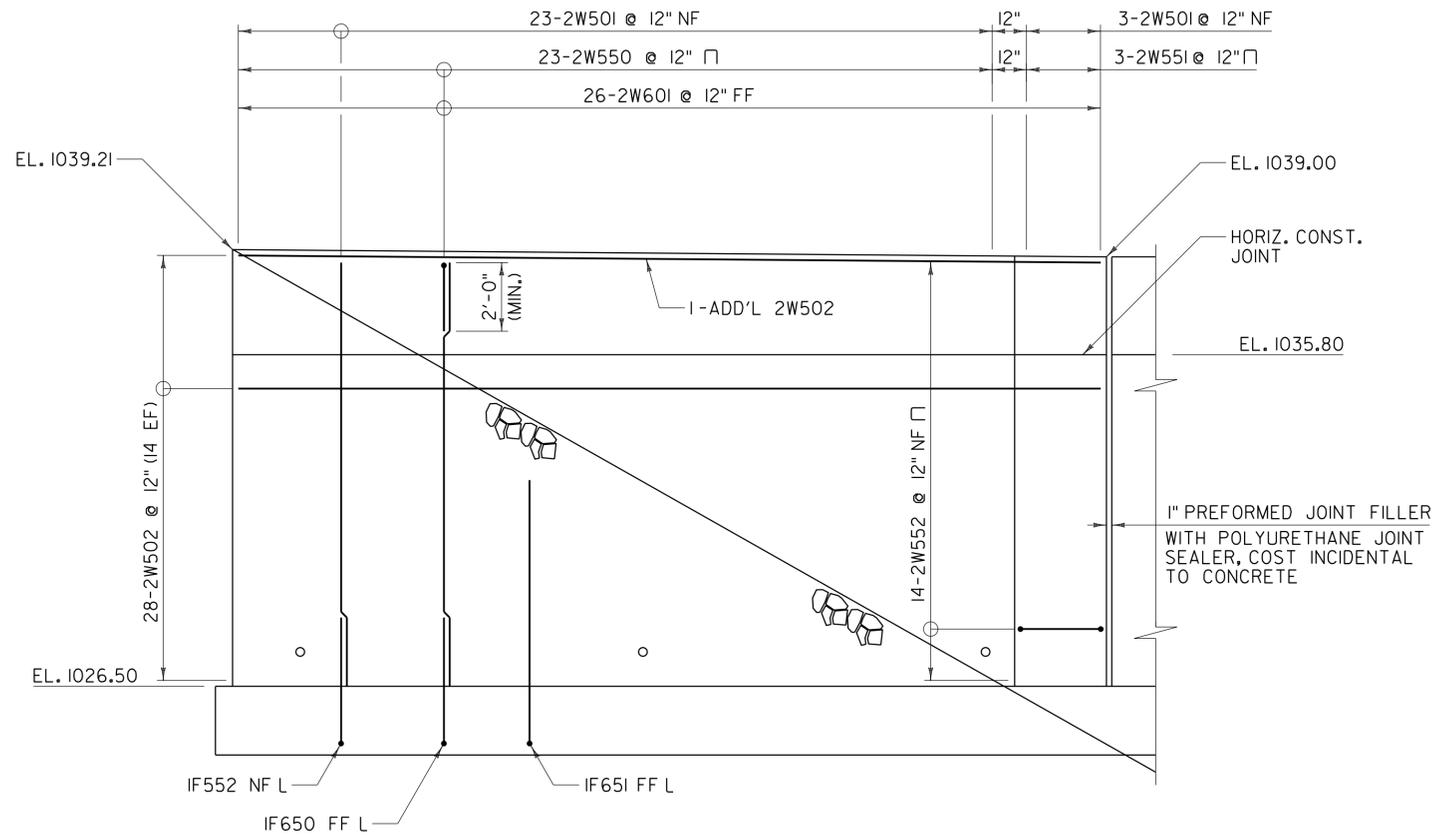
NOTE:  
SUB-FOOTING IS REQUIRED IF BEDROCK IS GREATER THAN  
1'-0" BELOW THE DESIGN BOTTOM OF FOOTING ELEVATION.

DETAIL TYPICAL SUB-FOOTING  
NOT TO SCALE

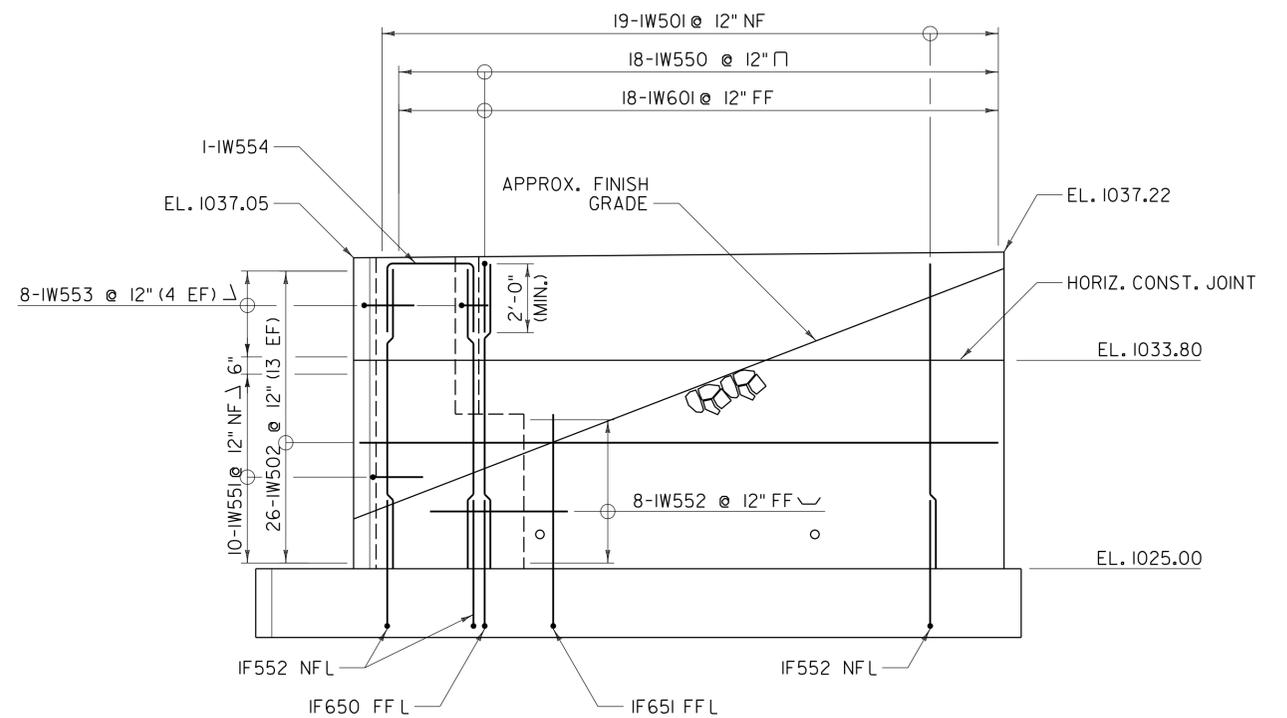
LEGEND:  
NF = NEAR FACE  
FF = FAR FACE  
EF = EACH FACE  
▲ = CUT TO FIT IN FIELD  
ALL SPLICES 2'-0" UNLESS NOTED OTHERWISE.

PROJECT NAME:	JAY	PLOT DATE:	3/18/2016
PROJECT NUMBER:	BHF 0278(3)	DRAWN BY:	J. SOTER
FILE NAME:	z12cl54abuts.dgn	DESIGNED BY:	N. TIRK
PROJECT LEADER:	M. CHENETTE	CHECKED BY:	T. KNIGHT
ABUTMENT NO. 1 REINFORCEMENT SECTIONS		SHEET 32 OF 72	





**WINGWALL 2 REINFORCEMENT**  
SCALE: 3/8" = 1'-0"



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

**LEGEND:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD  
 ALL SPLICES 2'-0" UNLESS NOTED OTHERWISE.

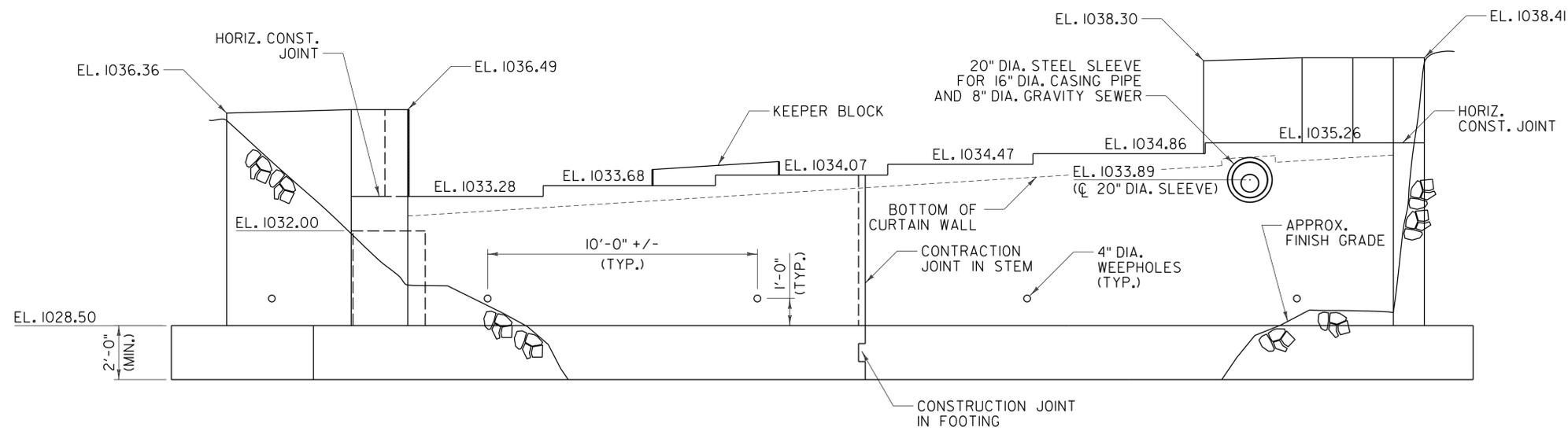
PROJECT NAME: JAY  
 PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12c154abuts.dgn  
 PROJECT LEADER: M. CHENETTE  
 DESIGNED BY: N. TIRK  
 ABUTMENT NO. 1 WINGWALL DETAILS

PLOT DATE: 3/18/2016  
 DRAWN BY: J. SOTER  
 CHECKED BY: T. KNIGHT  
 SHEET 33 OF 72







**ABUTMENT NO. 2 ELEVATION**  
 SCALE: 3/8" = 1'-0"

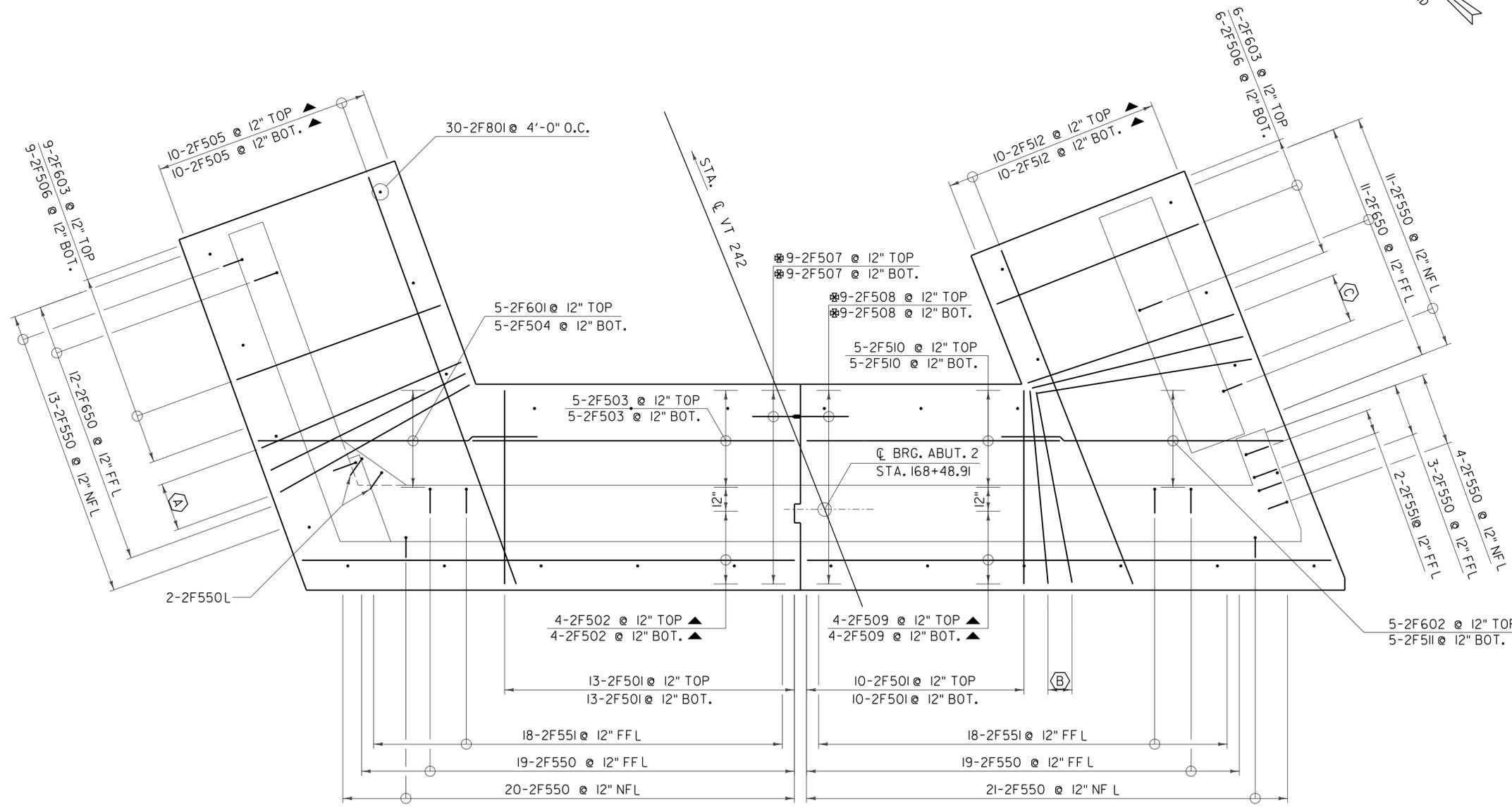
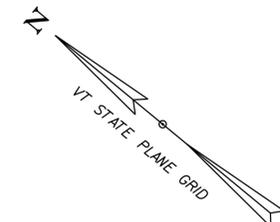
NOTE: FOR KEEPER BLOCK  
 DETAIL REFER TO  
 SHEET 31.

PROJECT NAME: JAY  
 PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12c154abuts.dgn  
 PROJECT LEADER: M. CHENETTE  
 DESIGNED BY: N. TIRK  
 ABUTMENT NO. 2 ELEVATION

PLOT DATE: 3/18/2016  
 DRAWN BY: J. SOTER  
 CHECKED BY: T. KNIGHT  
 SHEET 35 OF 72





**LEGEND**

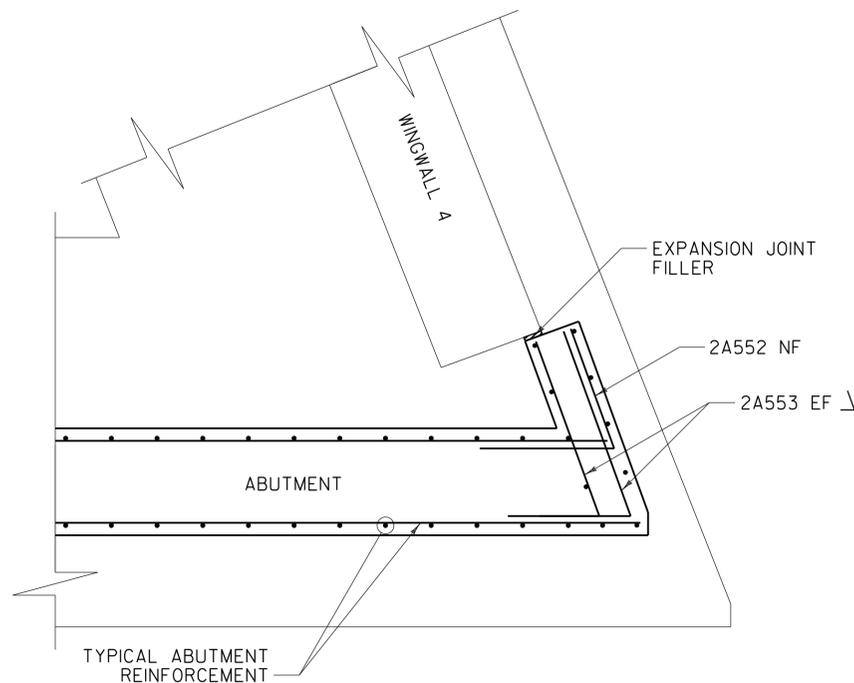
(A)	3-2F603 (SPLAYED) @ 12" MAX. BEHIND STEM, TOP 3-2F506 (SPLAYED) @ 12" MAX. BEHIND STEM, BOT.
(B)	2-2F501 (SPLAYED) @ 12" MAX. BEHIND STEM, TOP 2-2F501 (SPLAYED) @ 12" MAX. BEHIND STEM, BOT.
(C)	3-2F603 (SPLAYED) @ 12" MAX. BEHIND STEM, TOP 3-2F506 (SPLAYED) @ 12" MAX. BEHIND STEM, BOT.

**LEGEND:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD  
 ⊗ = INDICATES BAR JOINED WITH MECHANICAL CONNECTOR  
 ALL SPLICES 2'-0" UNLESS NOTED OTHERWISE.

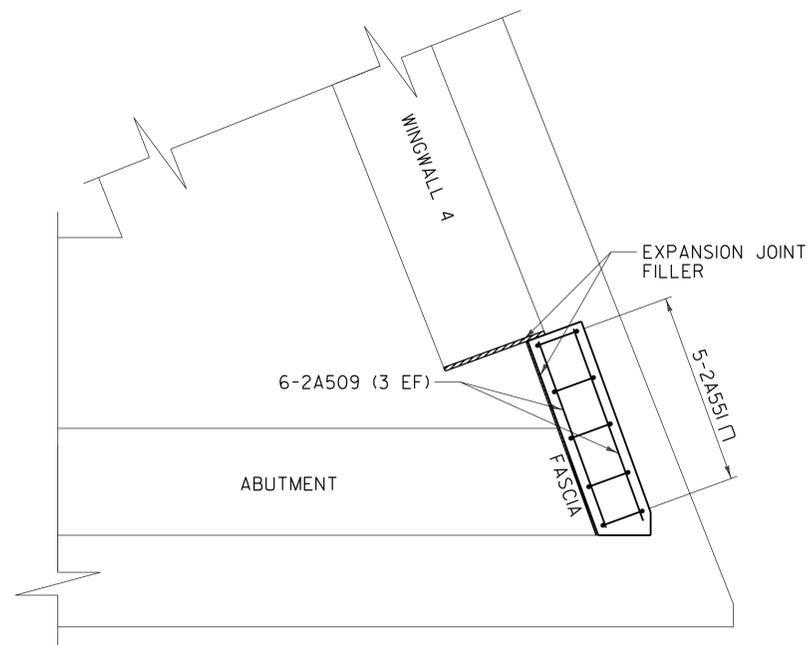
**ABUTMENT NO. 2 FOOTING REINFORCEMENT**  
 SCALE: 3/8" = 1'-0"

PROJECT NAME:	JAY	FILE NAME:	z12c154abuts.dgn	PLOT DATE:	3/18/2016
PROJECT NUMBER:	BHF 0278(3)	PROJECT LEADER:	M. CHENETTE	DRAWN BY:	J. SOTER
		DESIGNED BY:	N. TIRK	CHECKED BY:	T. KNIGHT
		ABUTMENT NO. 2	FOOTING REINFORCEMENT	SHEET	36 OF 72

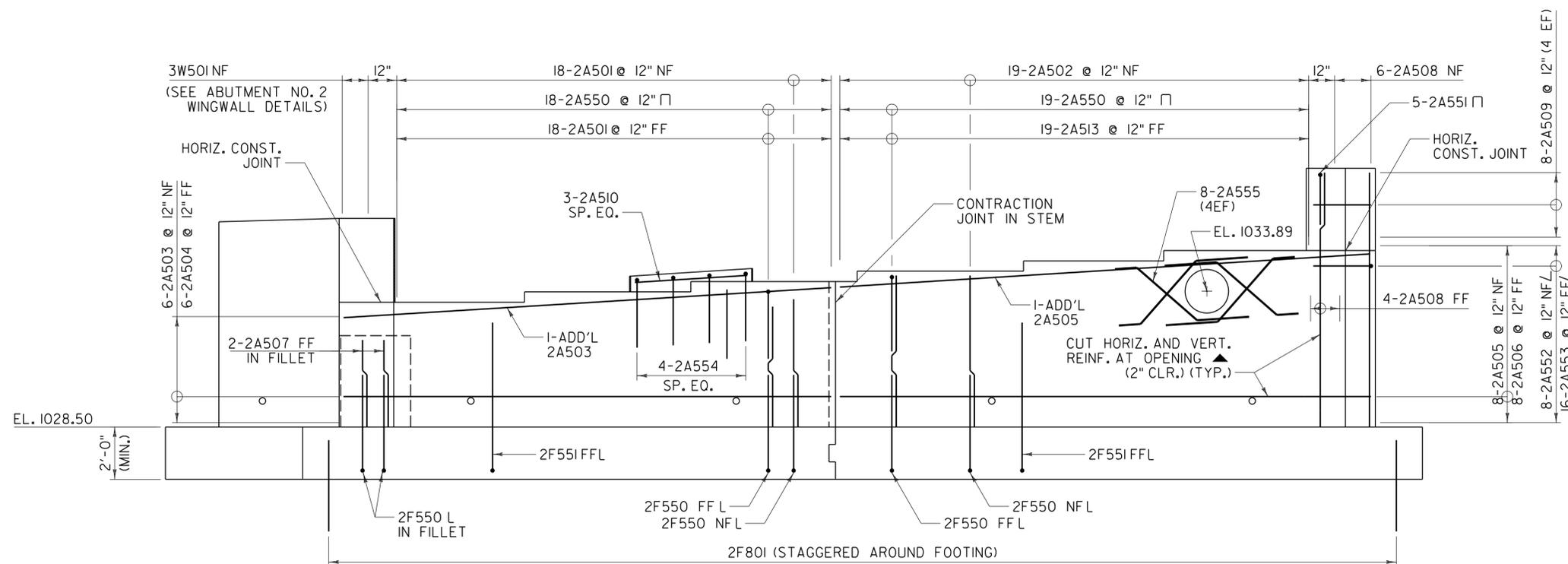




NORTHWEST CORNER REINFORCEMENT  
(BELOW BEAM SEAT)  
SCALE: 1/2" = 1'-0"



NORTHWEST CORNER REINFORCEMENT  
(ABOVE BEAM SEAT)  
SCALE: 1/2" = 1'-0"



ABUTMENT NO. 2 REINFORCEMENT ELEVATION  
SCALE: 3/8" = 1'-0"

**LEGEND:**  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 ▲ = CUT TO FIT IN FIELD

**NOTES:**  
 1. FOR TYPICAL KEEPER BLOCK  
 DETAIL SEE SHEET 31.

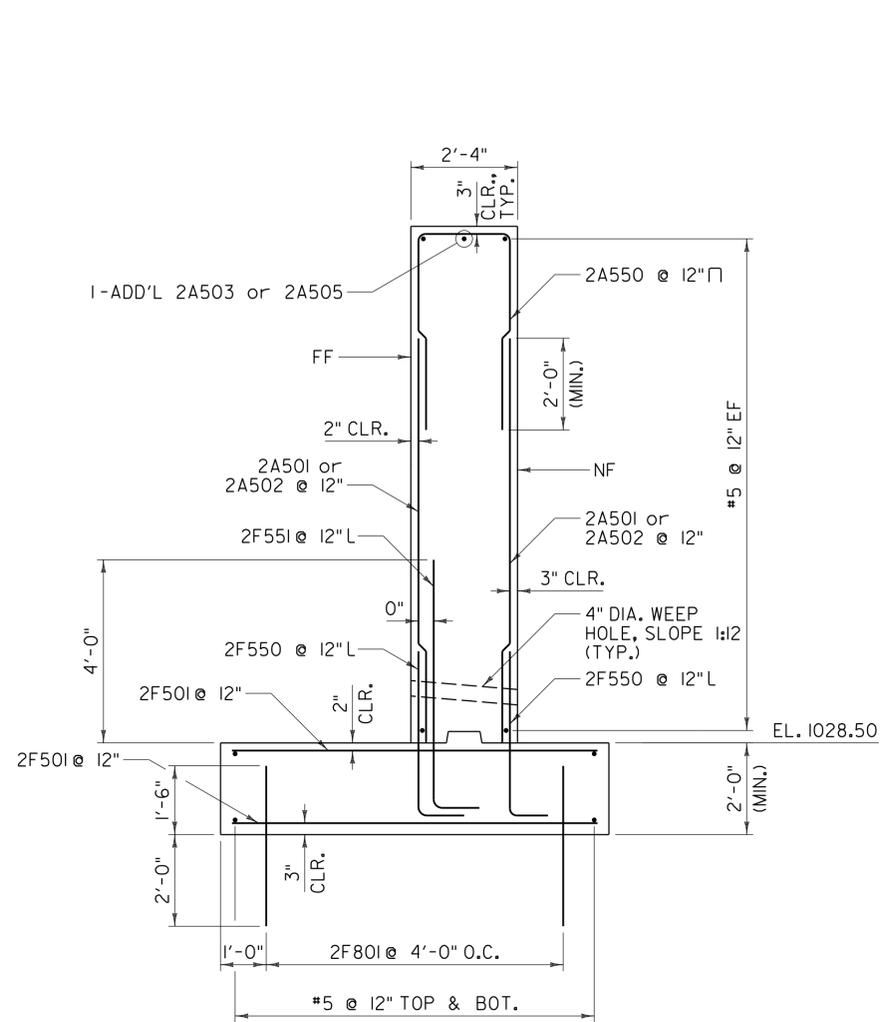
ALL SPLICES 2'-0" UNLESS  
 NOTED OTHERWISE.

PROJECT NAME: JAY  
 PROJECT NUMBER: BHF 0278(3)

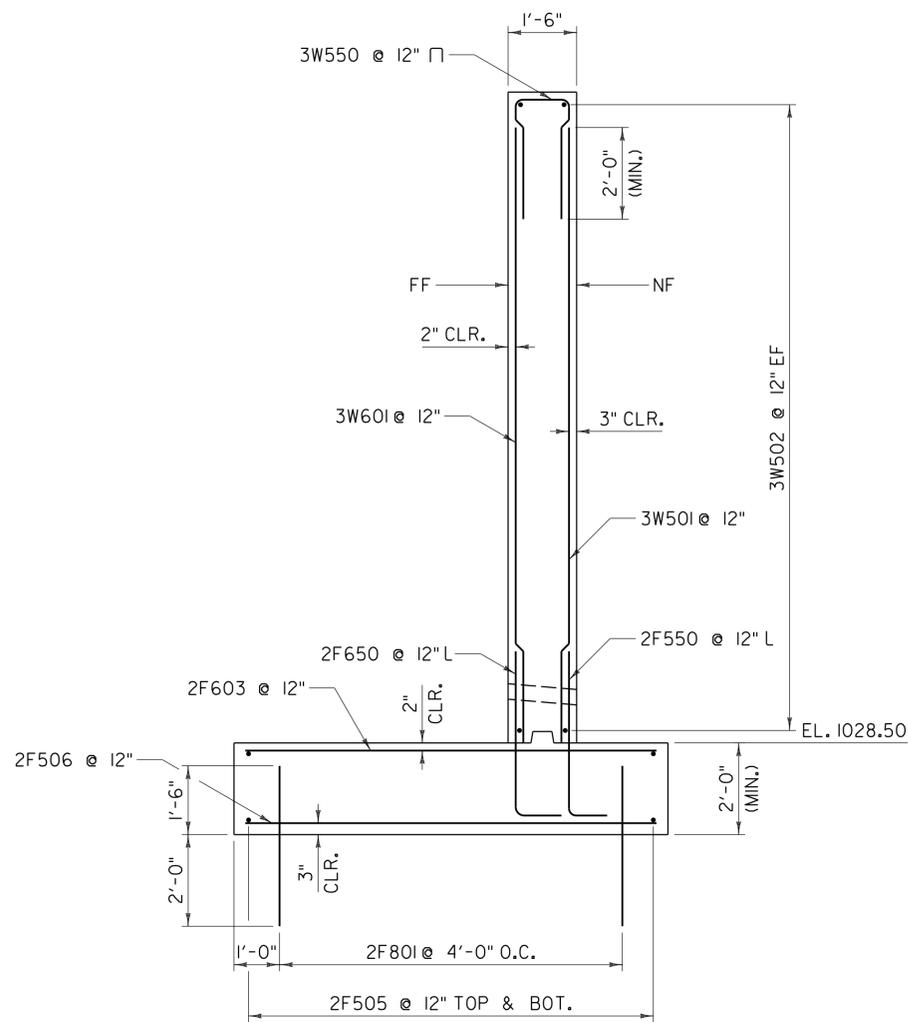
FILE NAME: z12c154abuts.dgn  
 PROJECT LEADER: M. CHENETTE  
 DESIGNED BY: N. TIRK  
 ABUTMENT NO. 2 REINFORCEMENT ELEVATION SHEET 37 OF 72

PLOT DATE: 3/18/2016  
 DRAWN BY: J. SOTER  
 CHECKED BY: T. KNIGHT

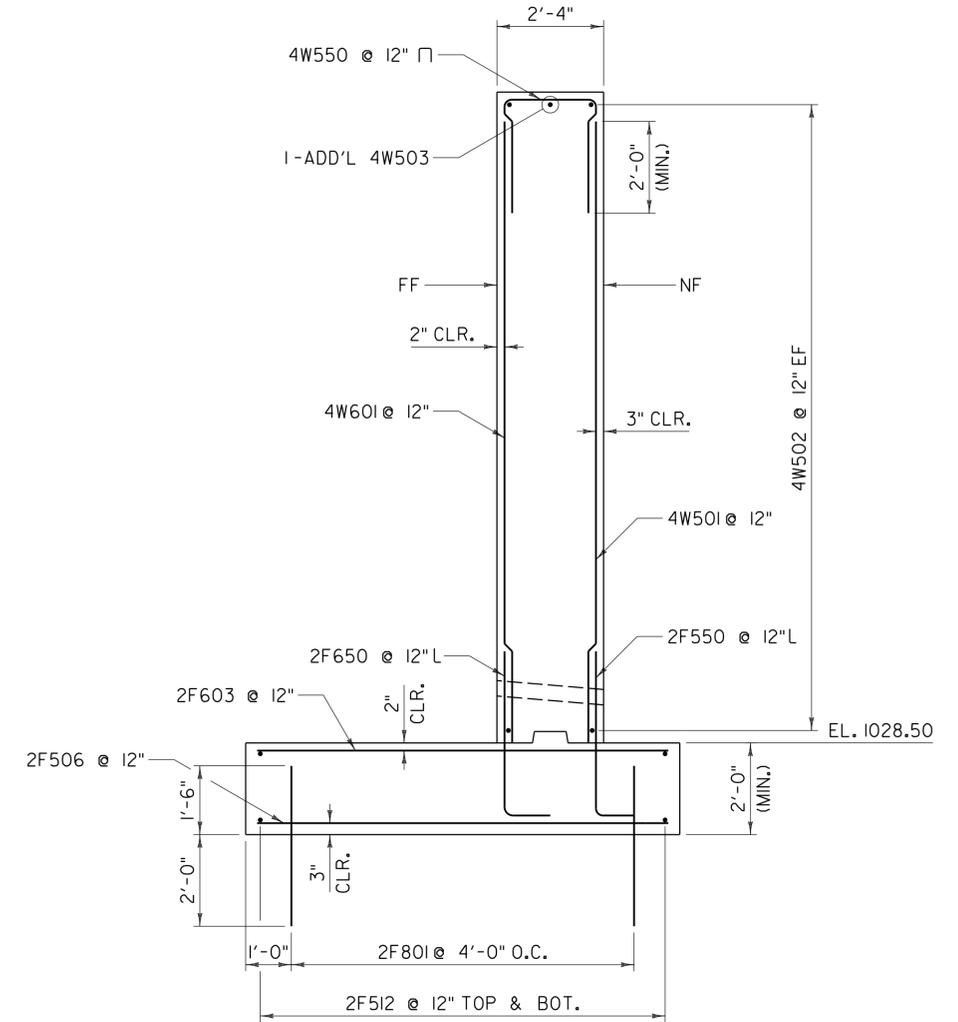




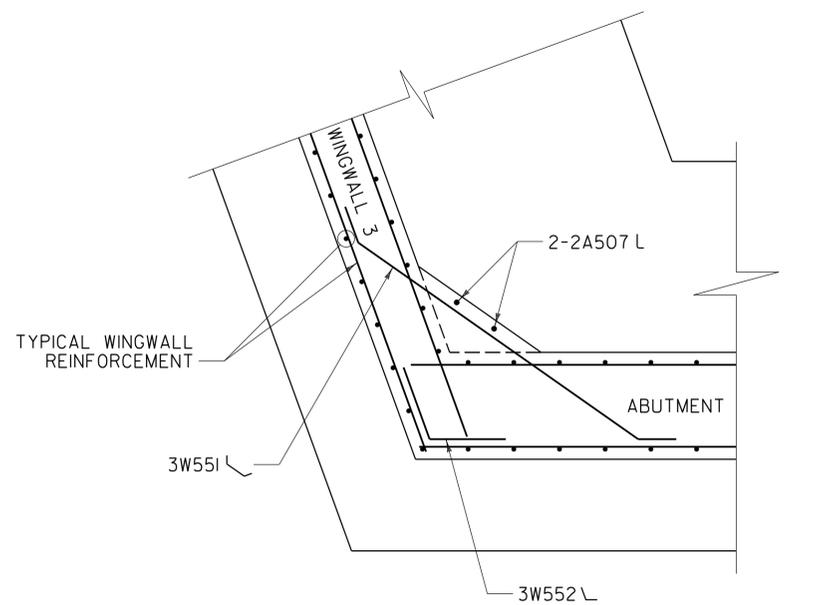
ABUTMENT NO. 2 REINFORCEMENT  
SCALE: 1/2" = 1'-0"



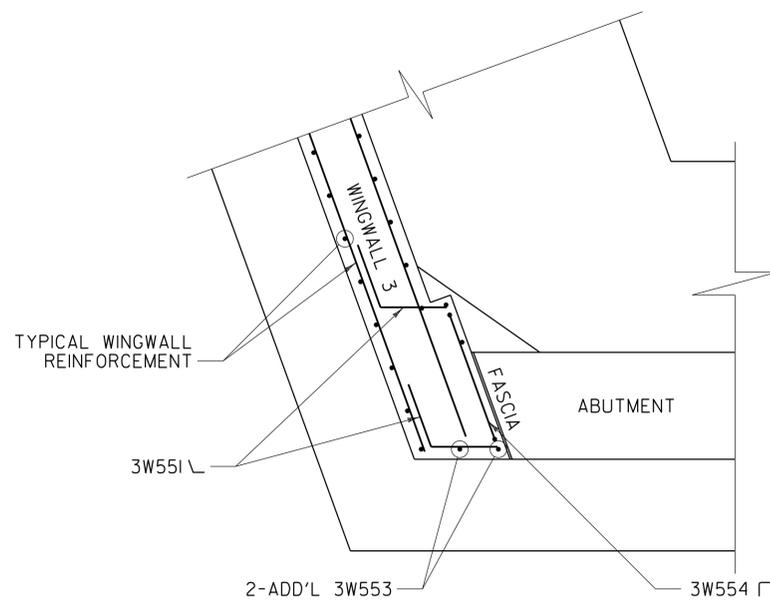
WINGWALL 3 REINFORCEMENT  
SCALE: 1/2" = 1'-0"



WINGWALL 4 REINFORCEMENT  
SCALE: 1/2" = 1'-0"



WINGWALL 3 CORNER REINFORCEMENT (BELOW FILLET)  
SCALE: 1/2" = 1'-0"

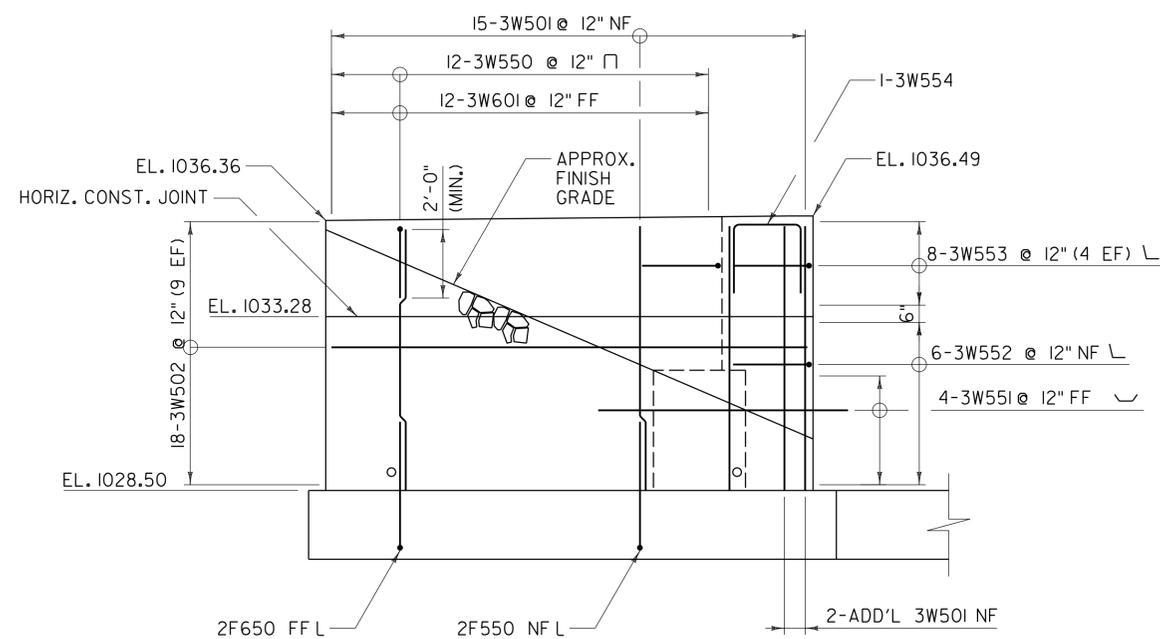


WINGWALL 3 CORNER REINFORCEMENT (BELOW FILLET)  
SCALE: 1/2" = 1'-0"

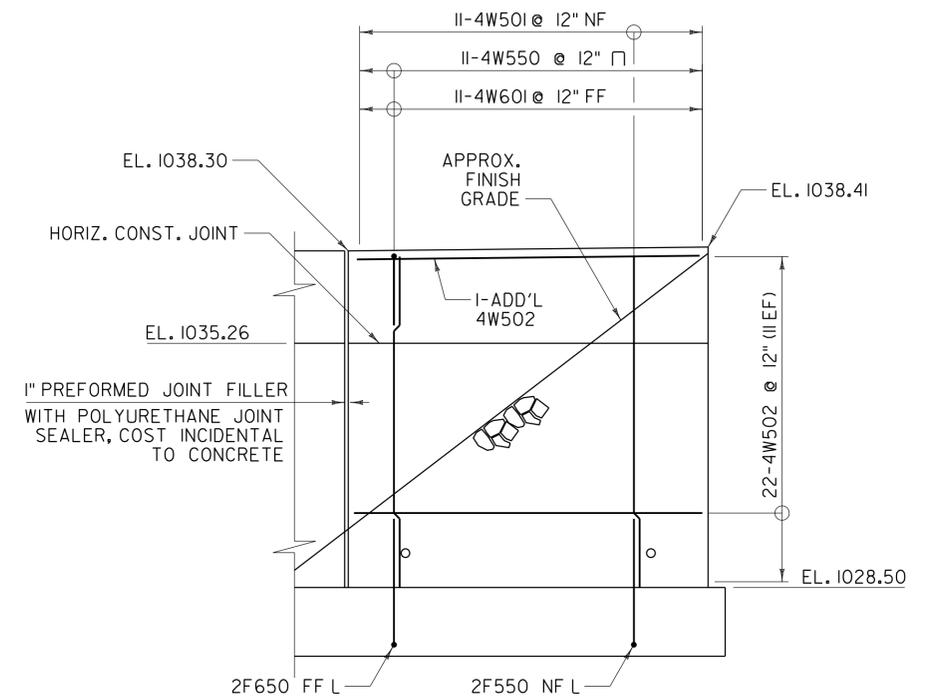
**LEGEND:**  
NF = NEAR FACE  
FF = FAR FACE  
EF = EACH FACE  
▲ = CUT TO FIT IN FIELD  
ALL SPLICES 2'-0" UNLESS NOTED OTHERWISE.

PROJECT NAME:	JAY	PLOT DATE:	3/18/2016
PROJECT NUMBER:	BHF 0278(3)	DRAWN BY:	J. SOTER
FILE NAME:	z12c154abuts.dgn	DESIGNED BY:	N. TIRK
PROJECT LEADER:	M. CHENETTE	CHECKED BY:	T. KNIGHT
ABUTMENT NO. 2 REINFORCEMENT SECTIONS	SHEET 38 OF 72		





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



WINGWALL 4 REINFORCEMENT  
SCALE: 3/8" = 1'-0"

**NOTE:**

1. FOR WINGWALL 3 CORNER REINFORCEMENT DETAILS REFER TO SHEET 38.

**LEGEND:**

NF = NEAR FACE  
FF = FAR FACE  
EF = EACH FACE  
▲ = CUT TO FIT IN FIELD

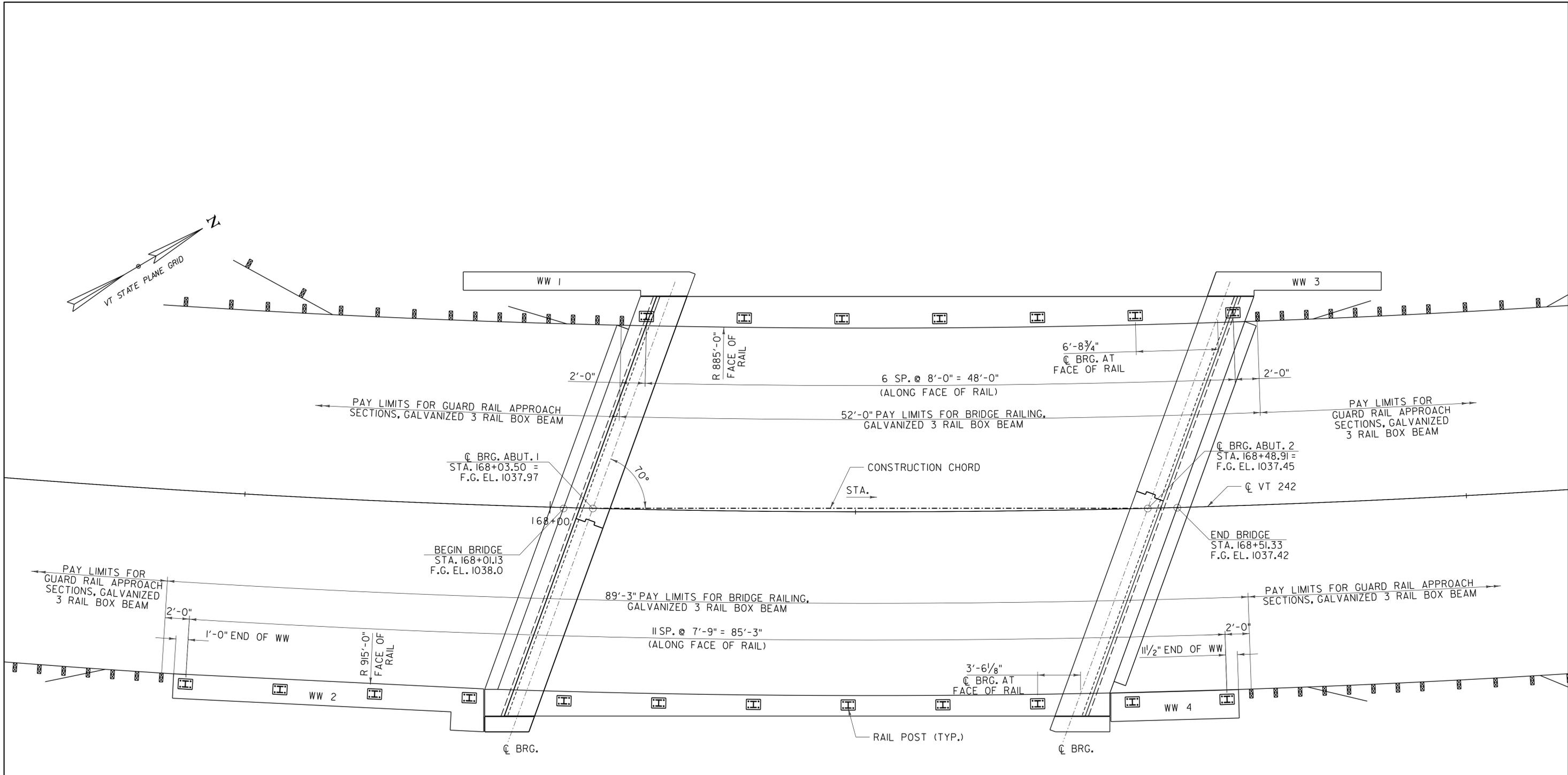
ALL SPLICES 2'-0" UNLESS NOTED OTHERWISE.

PROJECT NAME: JAY  
PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12c154abuts.dgn  
PROJECT LEADER: M. CHENETTE  
DESIGNED BY: N. TIRK  
ABUTMENT NO. 2 WINGWALL DETAILS

PLOT DATE: 3/18/2016  
DRAWN BY: J. SOTER  
CHECKED BY: T. KNIGHT  
SHEET 39 OF 72





BRIDGE RAIL LAYOUT  
SCALE: 1/4" = 1'-0"

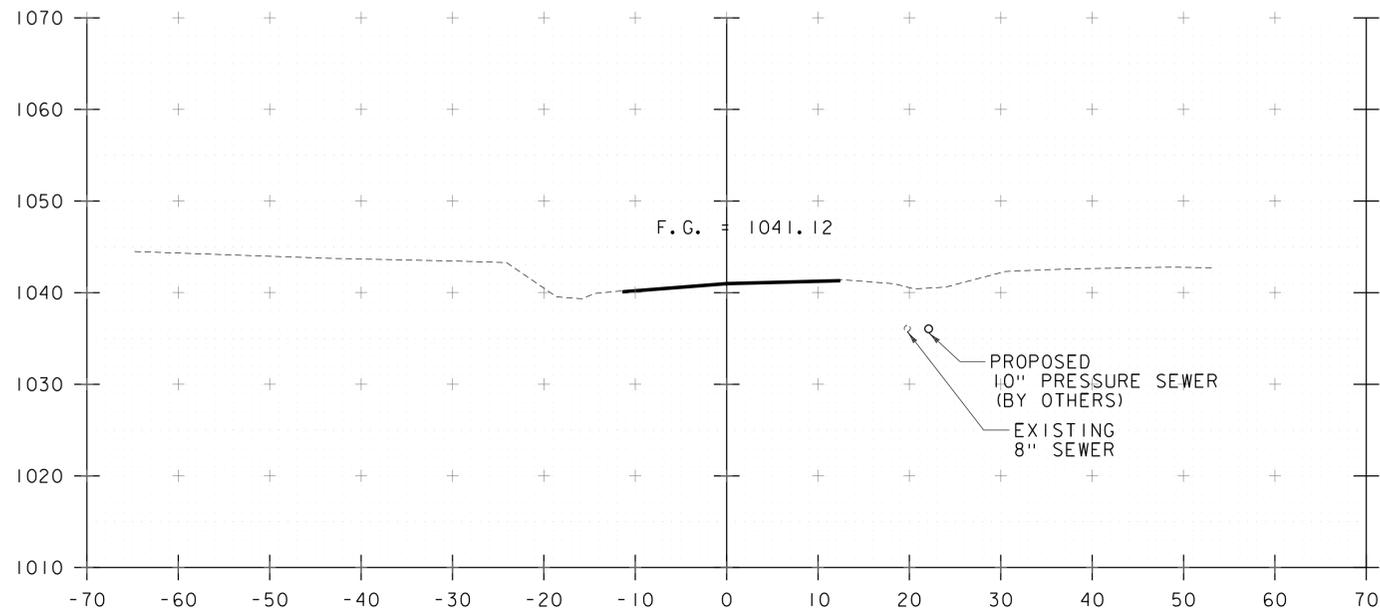
PROJECT NAME: JAY	PLOT DATE: 3/18/2016
PROJECT NUMBER: BHF 0278(3)	DRAWN BY: J. SOTER
FILE NAME: z12c154bdr_brail.dgn	DESIGNED BY: N. TIRK
PROJECT LEADER: M. CHENETTE	CHECKED BY: T. KNIGHT
BRIDGE RAIL LAYOUT	SHEET 40 OF 72



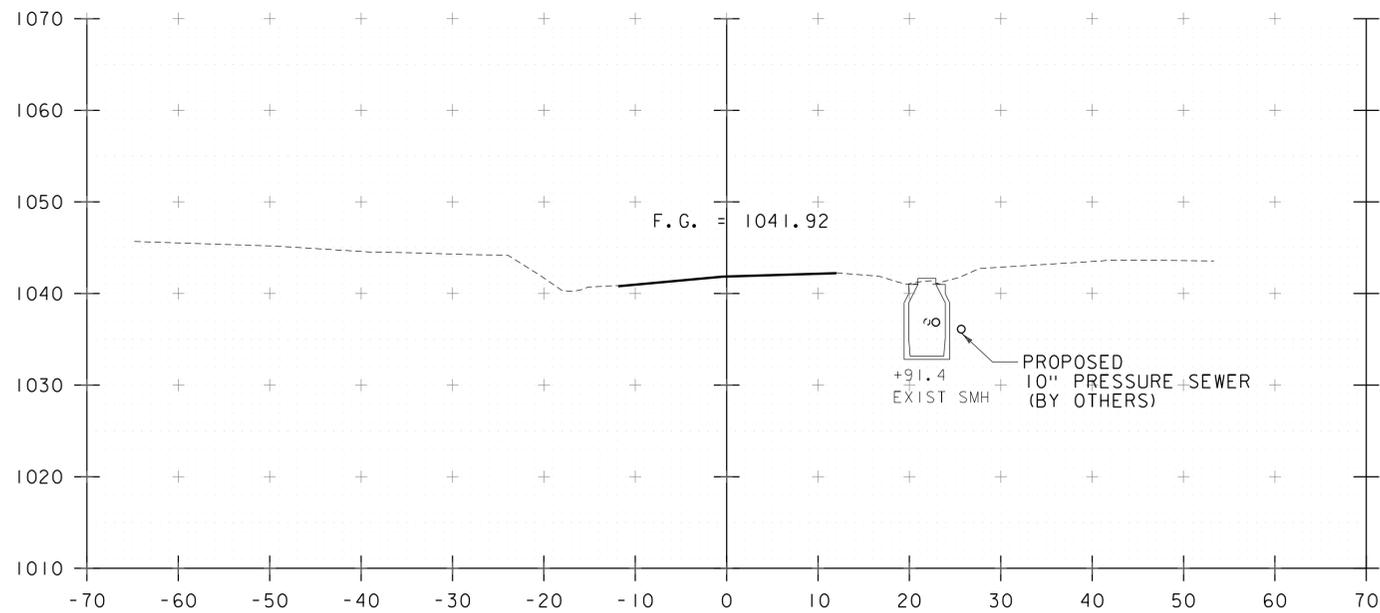
# REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O							
<b>ABUTMENT NO. 1 SUBFOOTING</b>																																										
▲	10	8	8'-0"	1SF801	STR														5	6	11'-6"	2F601	STR																			
																			*	22	6	9'-0"	2F603	STR																		
<b>ABUTMENT NO. 1 FOOTING</b>																																										
	34	5	8'-0"	1F501	STR														▲	30	8	4'-6"	2F801	STR																		
▲	10	5	34'-0"	1F502	STR															112	5	4'-7"	2F550	17		3'-9"	0'-10"	---														
▲	8	5	23'-1"	1F503	STR														*	39	5	6'-9"	2F551	17		5'-9"	1'-0"	---														
	10	5	16'-0"	1F504	STR															23	6	4'-9"	2F650	17		3'-9"	1'-0"	---														
	5	5	11'-9"	1F505	STR																																					
▲	8	5	18'-7"	1F506	STR																																					
	10	5	10'-3"	1F507	STR																																					
	5	5	11'-6"	1F508	STR																																					
	18	5	2'-0"	1F509	STR																																					
	9	5	2'-0"	1F510	STR																																					
	38	5	9'-0"	1F511	STR																																					
▲	10	5	21'-10"	1F512	STR																																					
*	30	6	8'-0"	1F601	STR																																					
▲	10	6	34'-0"	1F602	STR																																					
	10	6	21'-10"	1F603	STR																																					
*	6	8	11'-9"	1F801	STR																																					
	5	8	13'-0"	1F802	STR																																					
*	39	8	9'-0"	1F803	STR																																					
▲	40	8	4'-6"	1F804	STR																																					
	9	5	5'-4"	1F550	22		0'-10"	4'-6"	---					0'-4"	---	0'-9"	---																									
	9	5	3'-11"	1F551	17		0'-10"	3'-1"	---																																	
	93	5	4'-7"	1F552	17		3'-9"	0'-10"	---																																	
	82	6	4'-9"	1F650	17		3'-9"	1'-0"	---																																	
	77	6	8'-9"	1F651	17		7'-9"	1'-0"	---																																	
<b>ABUTMENT NO. 1 STEM</b>																																										
*	20	5	8'-3"	1A501	STR																																					
	24	5	8'-6"	1A502	STR																																					
	11	5	17'-4"	1A503	STR																																					
	10	5	18'-0"	1A504	STR																																					
	11	5	21'-9"	1A505	STR																																					
	10	5	21'-1"	1A506	STR																																					
*	3	5	7'-3"	1A507	STR																																					
	4	5	12'-3"	1A508	STR																																					
	3	5	4'-4"	1A509	STR																																					
	8	5	3'-4"	1A510	STR																																					
	17	6	8'-3"	1A601	STR																																					
	20	6	8'-6"	1A602	STR																																					
	3	6	12'-3"	1A603	STR																																					
	37	5	7'-9"	1A550	17		2'-11"	1'-11"	2'-11"																																	
	4	5	4'-9"	1A551	17		2'-0"	0'-9"	2'-0"																																	
	4	5	5'-10"	1A552	17		2'-2"	1'-6"	2'-2"																																	
	20	5	5'-4"	1A553	22		---	3'-4"	2'-0"																																	
	10	5	4'-2"	1A554	22		1'-2"	3'-0"	---																																	
	8	5	5'-11"	1A555	4	---	0'-10"	3'-1"	2'-0"	---																																
<b>WINGWALL 1</b>																																										
	21	5	11'-10"	1W501	STR																																					
	26	5	18'-1"	1W502	STR																																					
*	19	6	11'-10"	1W601	STR																																					
	18	5	5'-8"	1W550	17		2'-4"	1'-0"	2'-4"																																	
	10	5	4'-0"	1W551	27		2'-0"	2'-0"						1'-4"		0'-6"																										
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<b>WINGWALL 2</b>																																										
	26	5	12'-3"	2W501	STR																																					
	28	5	25'-0"	2W502	STR																																					
	26	6	12'-3"	2W601	STR																																					
	23	5	6'-5"	2W550	17		2'-3"	1'-11"	2'-3"																																	
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	14	5	8'-5"	2W552	17		3'-0"	2'-5"	3'-0"																																	
<b>ABUTMENT NO. 2 SUBFOOTING</b>																																										
▲	8	8	8'-0"	2SF801	STR																																					
<b>ABUTMENT NO. 2 FOOTING</b>																																										
*	51	5	8'-0"	2F501	STR				</																																	

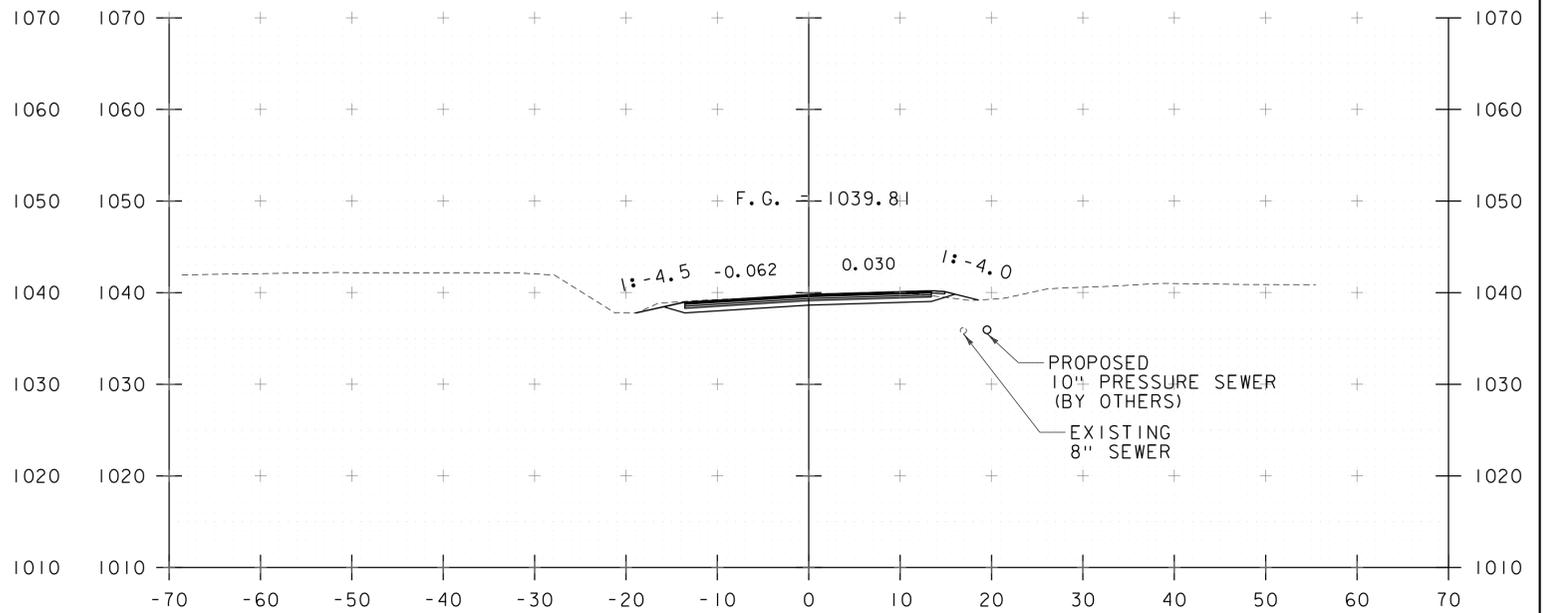




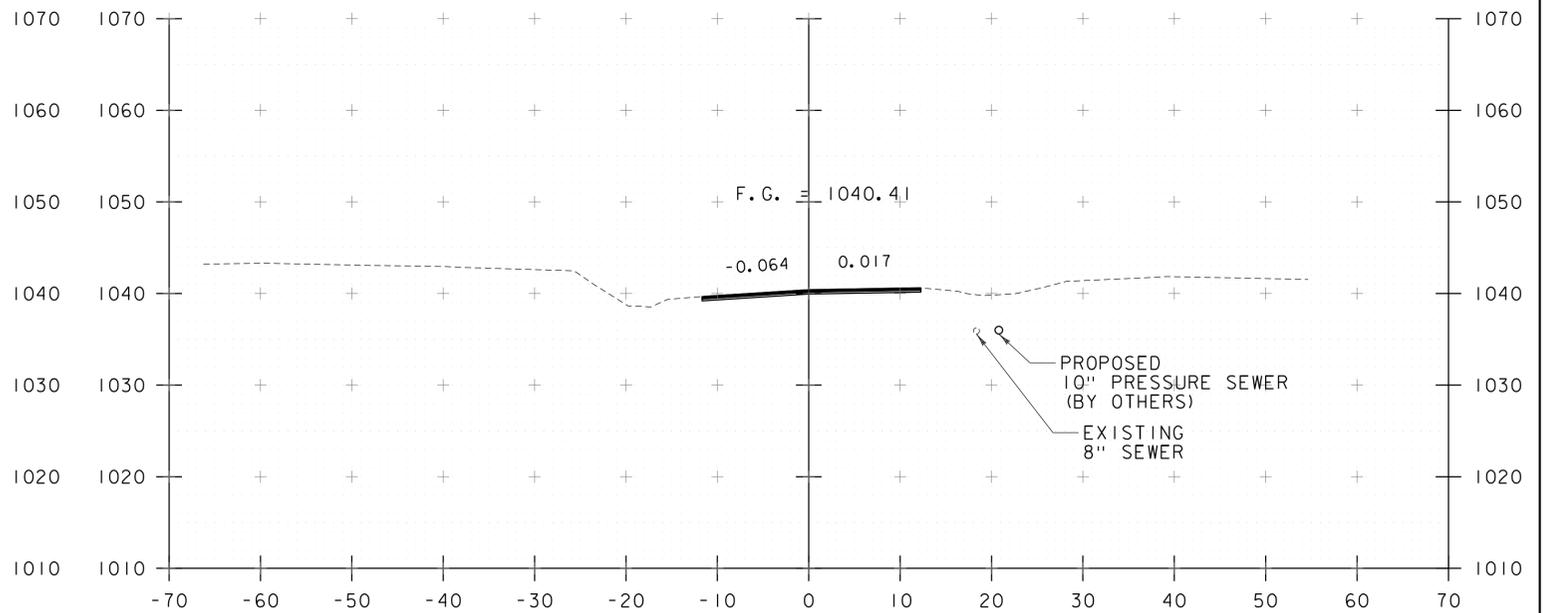
166+25



166+00  
BEGIN APPROACH



166+75



166+50

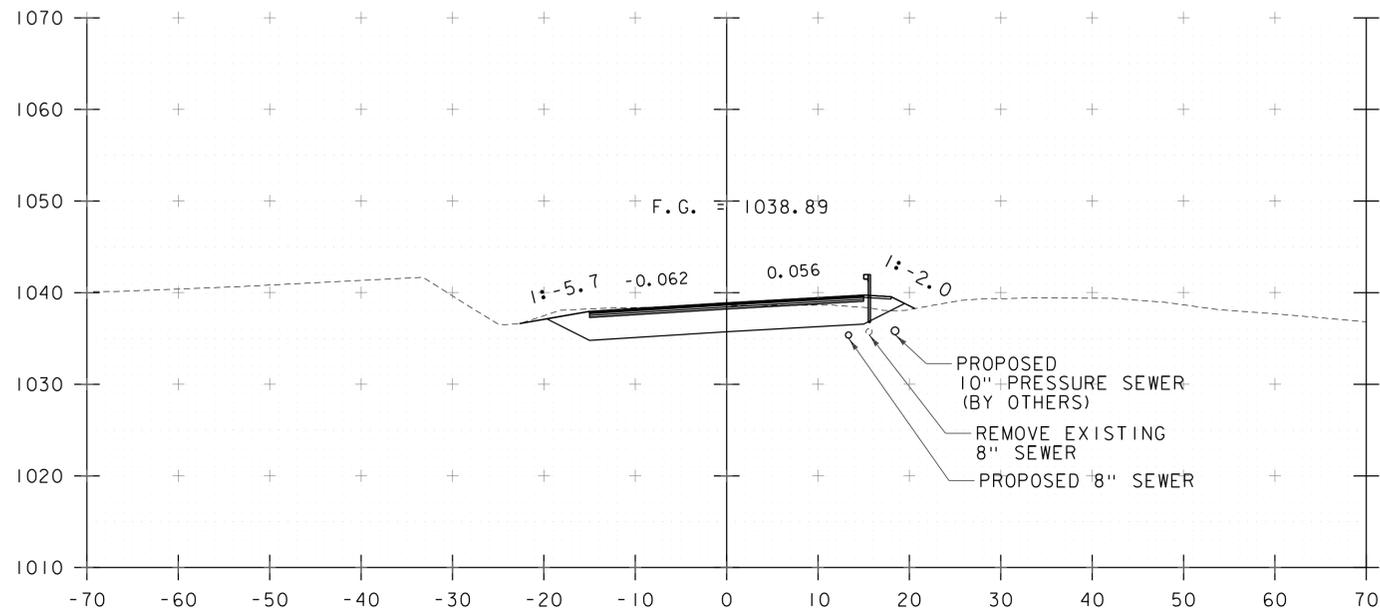
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PROJECT NAME: JAY  
PROJECT NUMBER: BHF 0278(3)

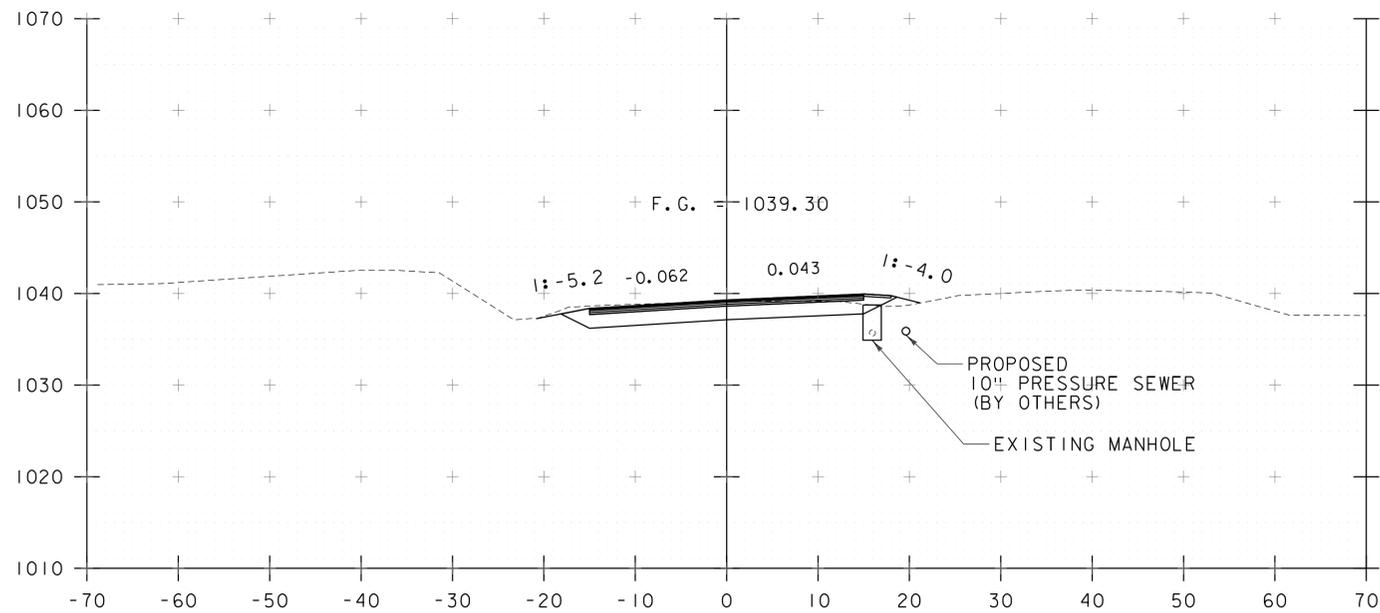
FILE NAME: z12c154xsl.dgn  
PROJECT LEADER: M. CHENETTE  
DESIGNED BY: I. MAYNARD  
ROADWAY CROSS SECTIONS - RXS 1

PLOT DATE: 3/18/2016  
DRAWN BY: I. MAYNARD  
CHECKED BY: G. SANTY  
SHEET 43 OF 72

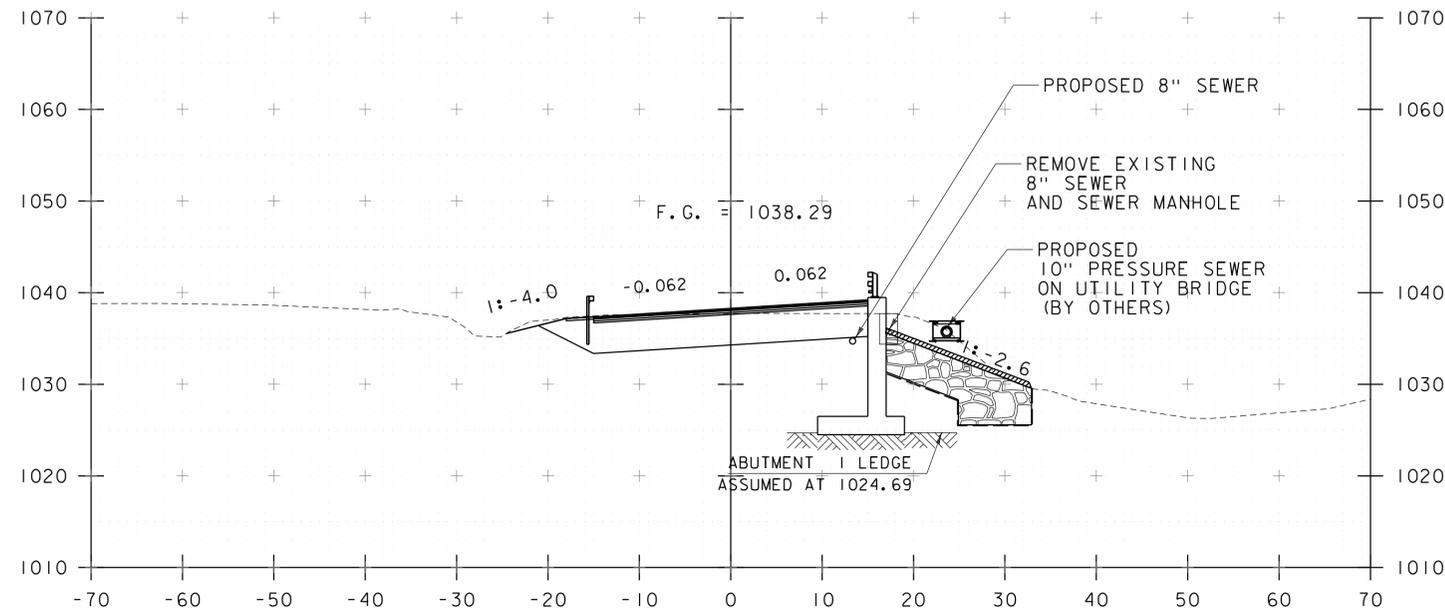




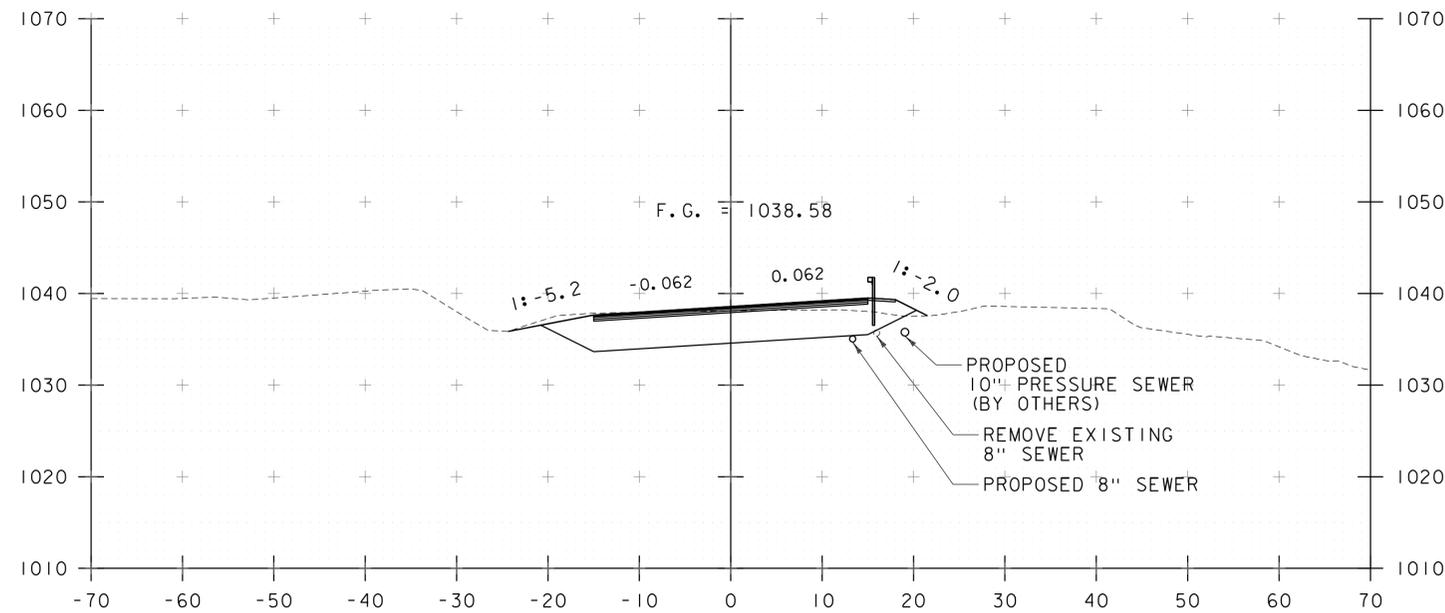
167+25



167+00



167+75

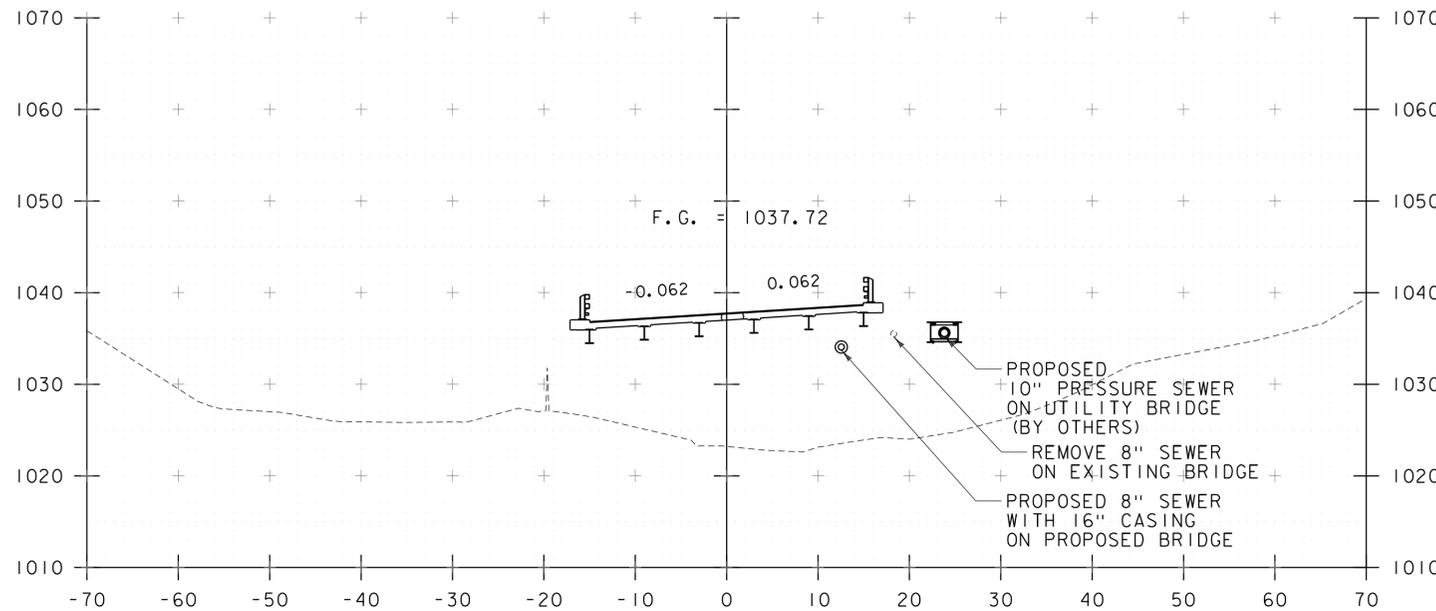


167+50  
167+45.83  
BEGIN PROJECT

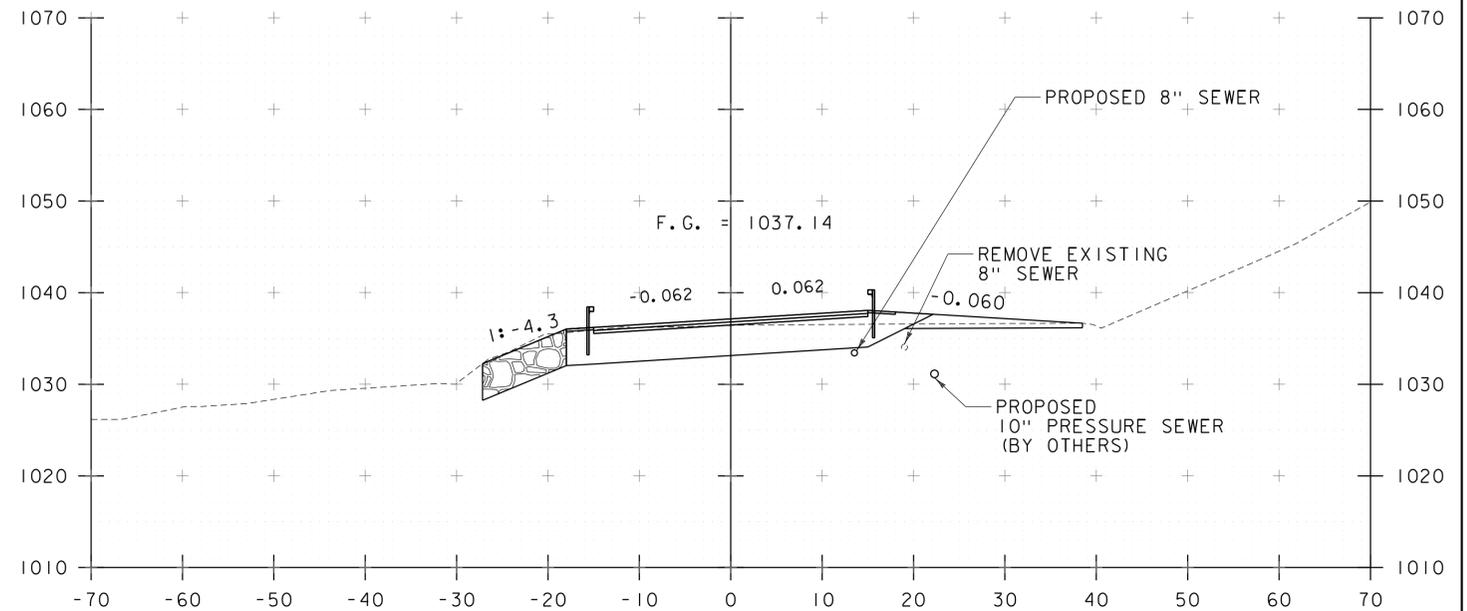
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PROJECT NAME:	JAY
PROJECT NUMBER:	BHF 0278(3)
FILE NAME:	z12c154xsl.dgn
PROJECT LEADER:	M. CHENETTE
DESIGNED BY:	I. MAYNARD
ROADWAY CROSS SECTIONS - RXS 2	
PLOT DATE:	3/18/2016
DRAWN BY:	I. MAYNARD
CHECKED BY:	G. SANTY
SHEET	44 OF 72

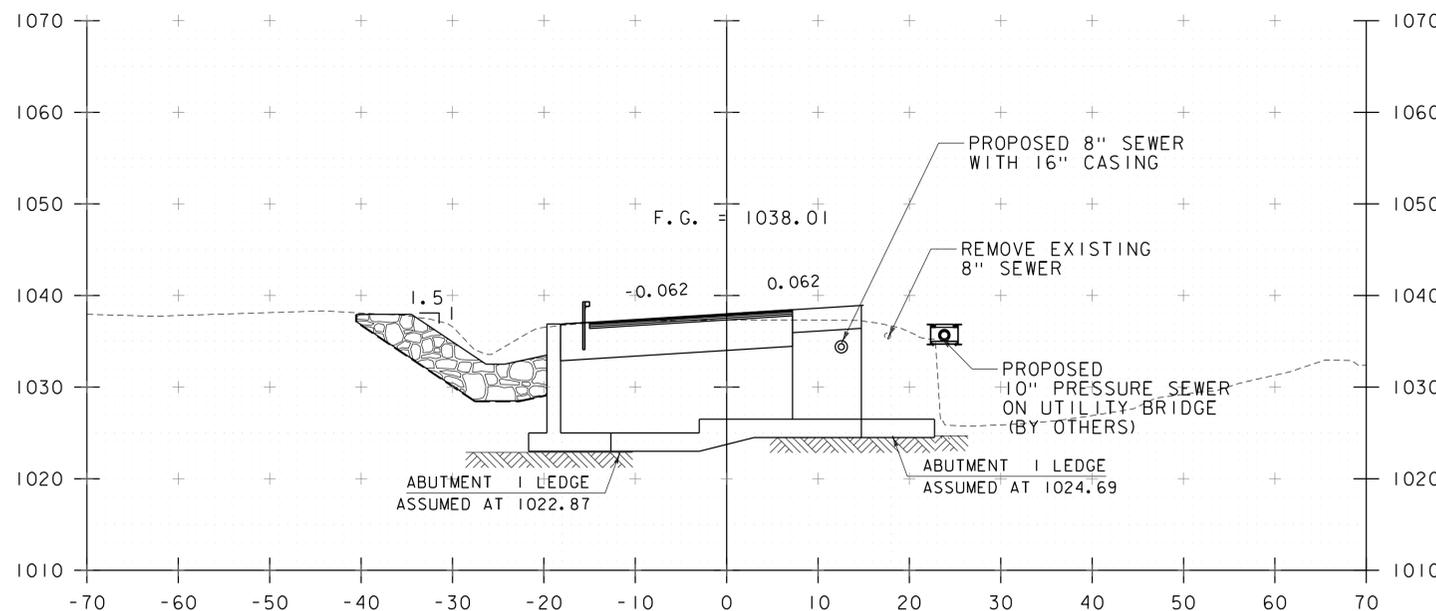




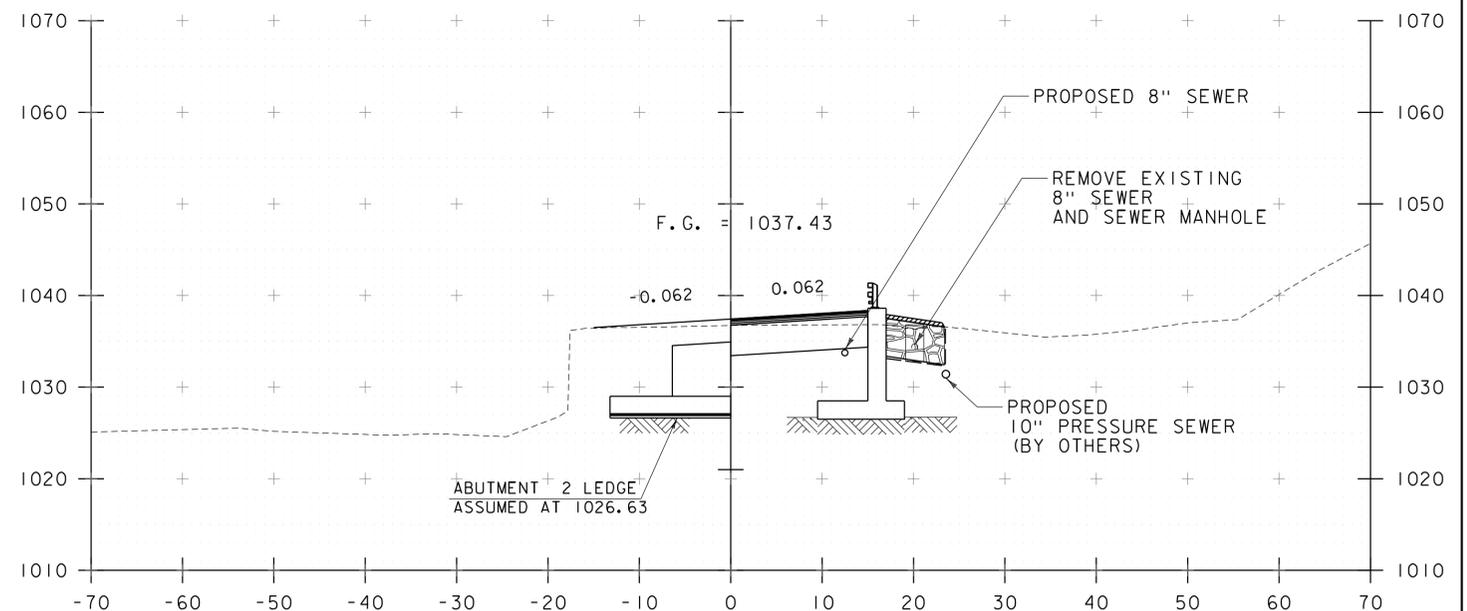
168+25  
168+01.13  
BEGIN BRIDGE



168+75  
168+51.33  
END BRIDGE



168+00



168+50

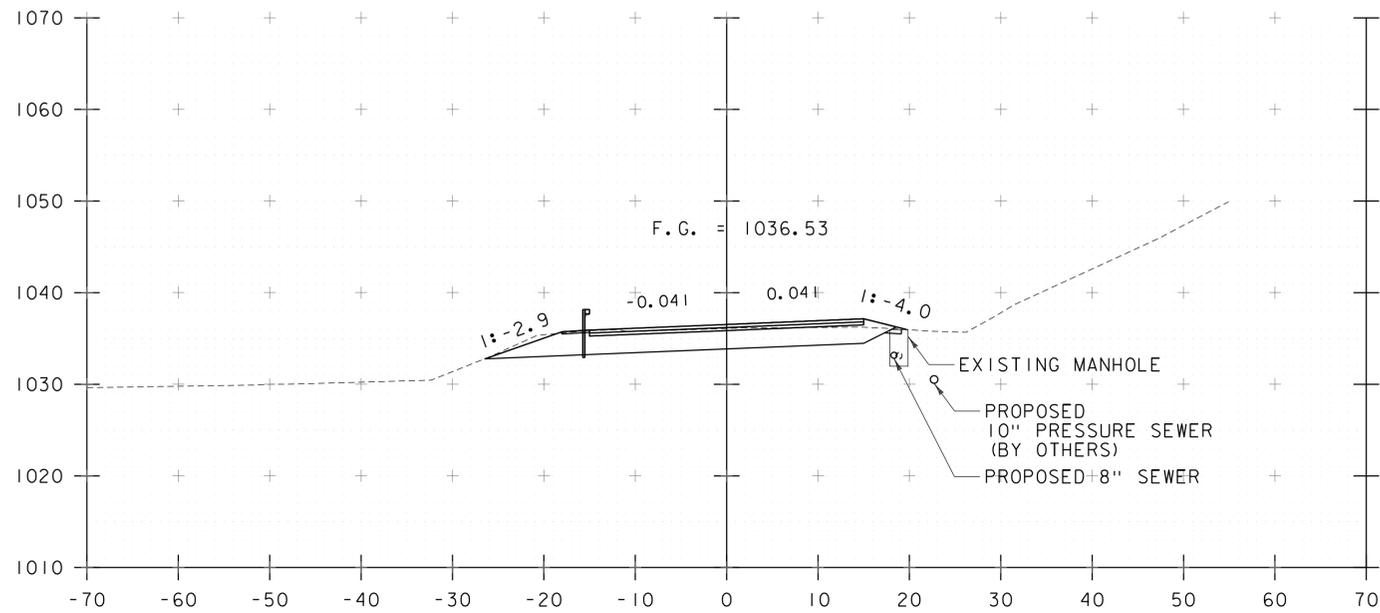
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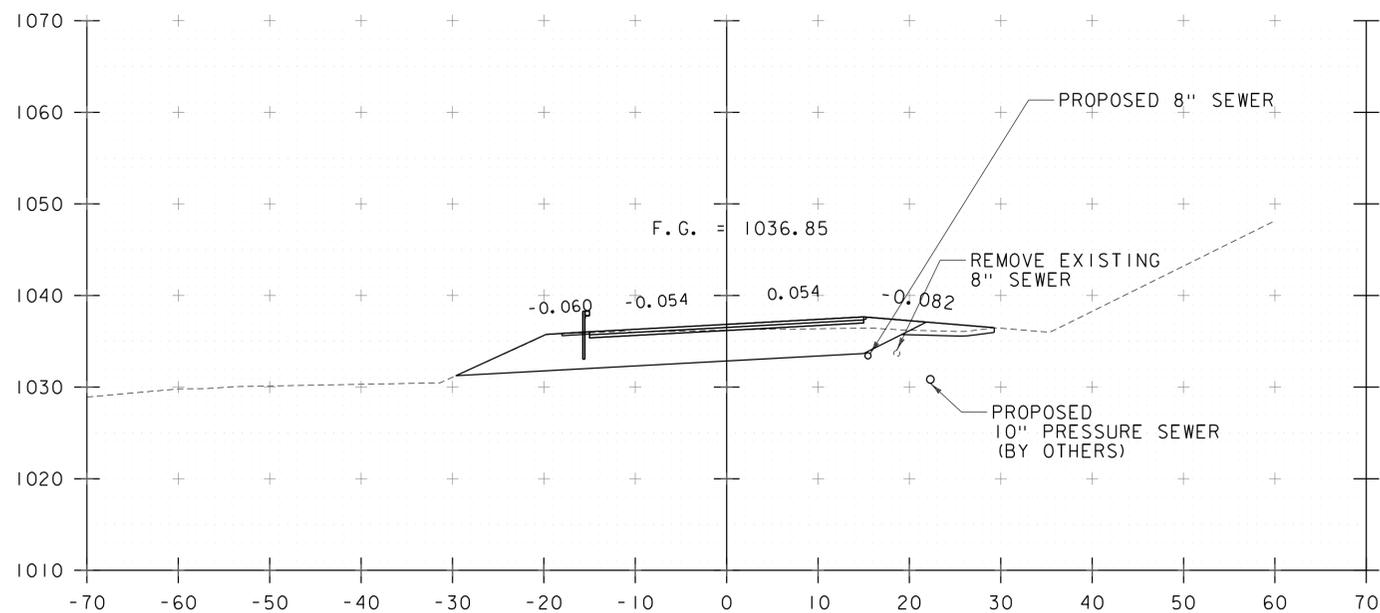
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PROJECT LEADER: M. CHENETTE  
DESIGNED BY: I. MAYNARD  
ROADWAY CROSS SECTIONS - RXS 3

PLOT DATE: 3/18/2016  
DRAWN BY: I. MAYNARD  
CHECKED BY: G. SANTY  
SHEET 45 OF 72

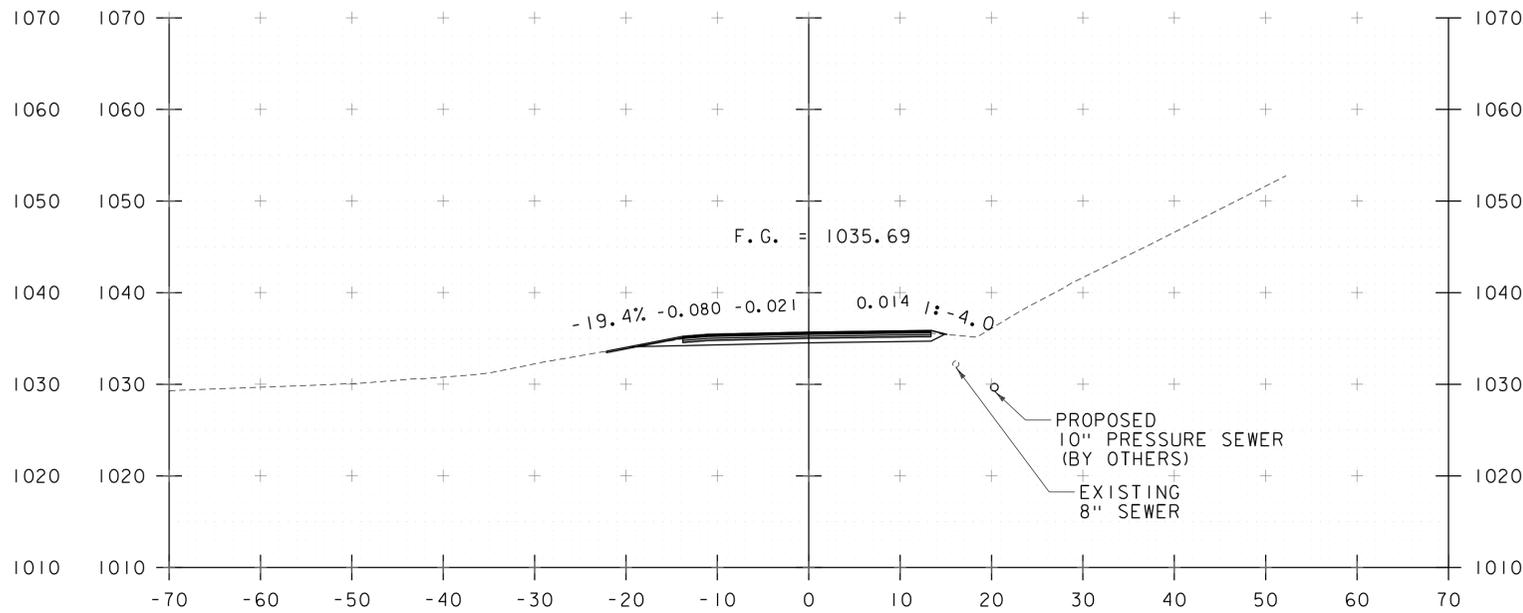




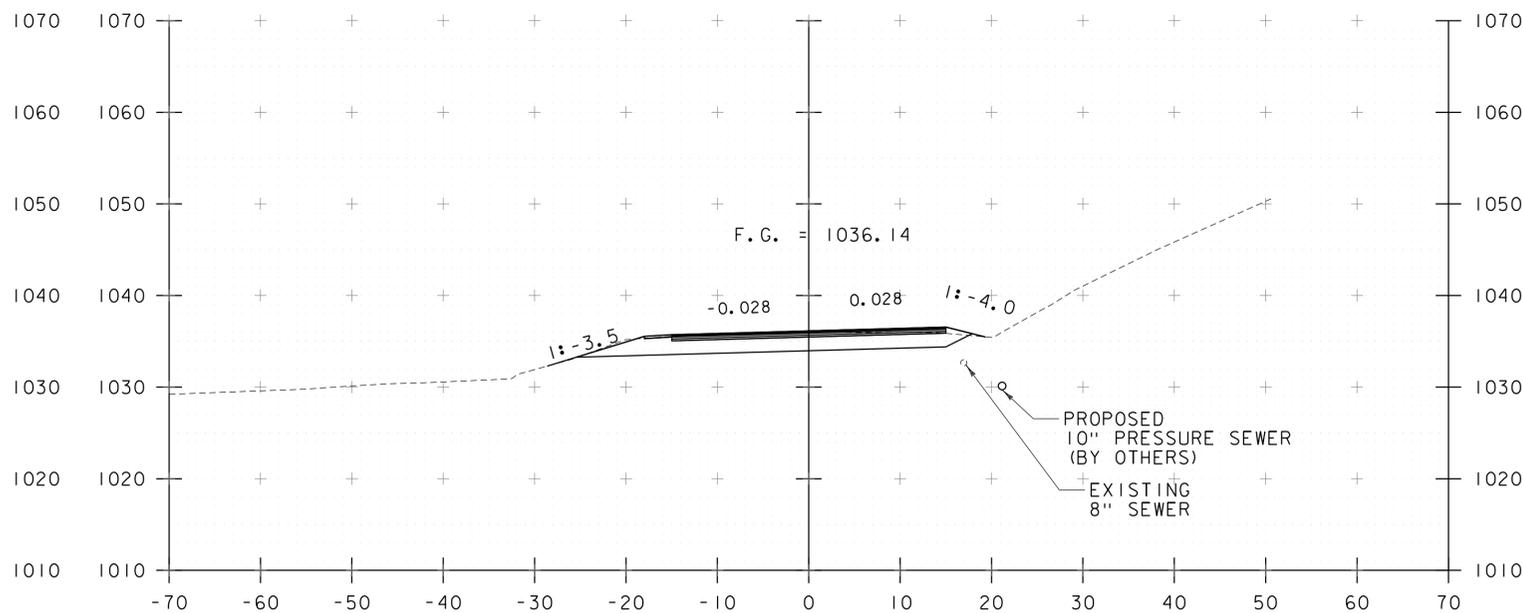
169+25



169+00  
169+04.17  
END PROJECT



169+75



169+50

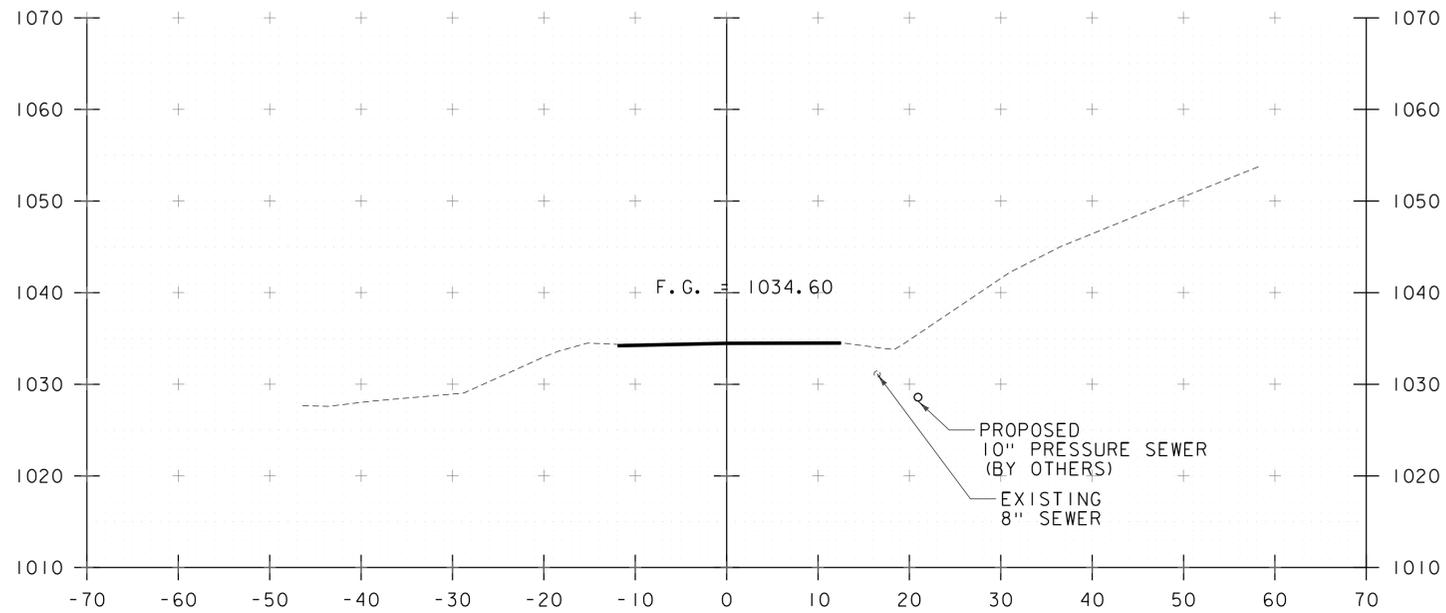
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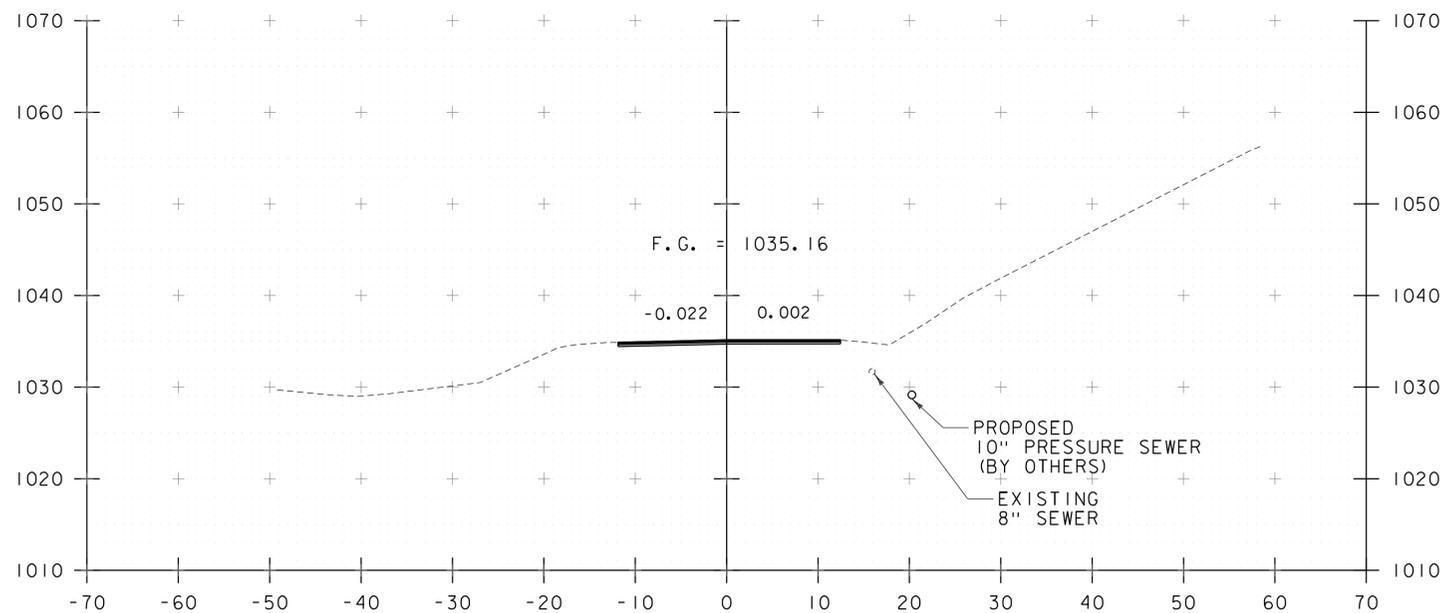
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PROJECT LEADER: M. CHENETTE  
DESIGNED BY: I. MAYNARD  
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PLOT DATE: 3/18/2016  
DRAWN BY: I. MAYNARD  
CHECKED BY: G. SANTY  
SHEET 46 OF 72

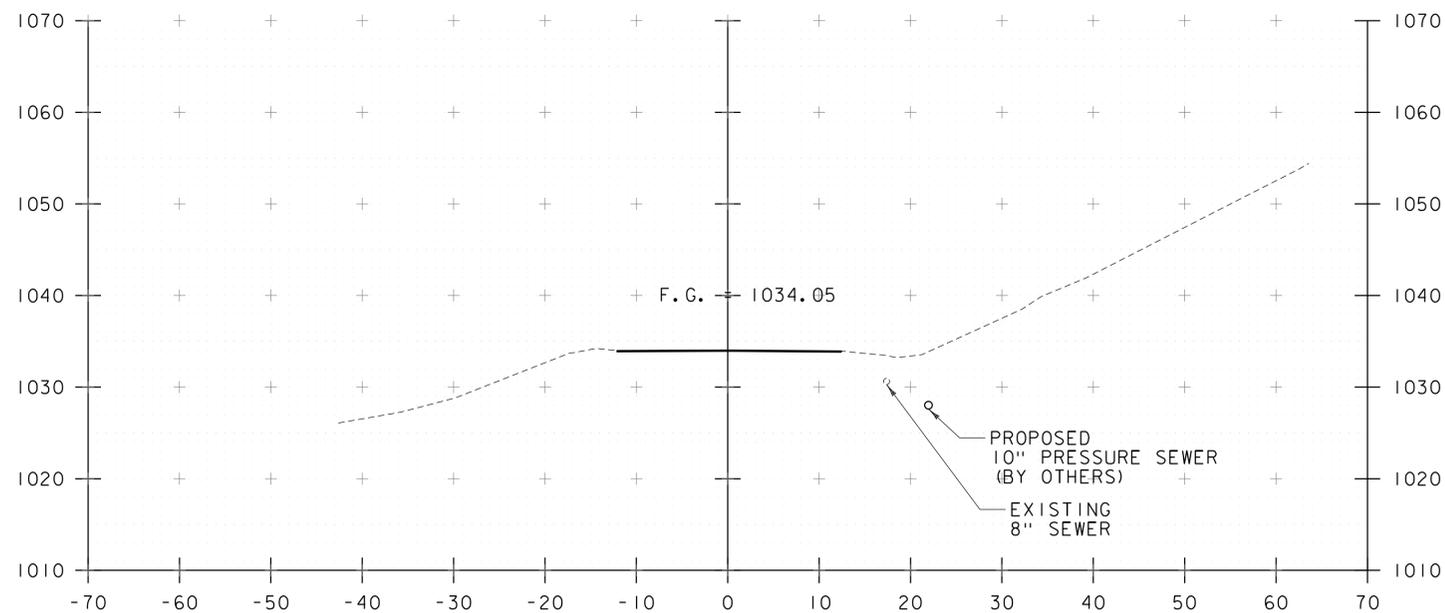




170+25



170+00



170+50  
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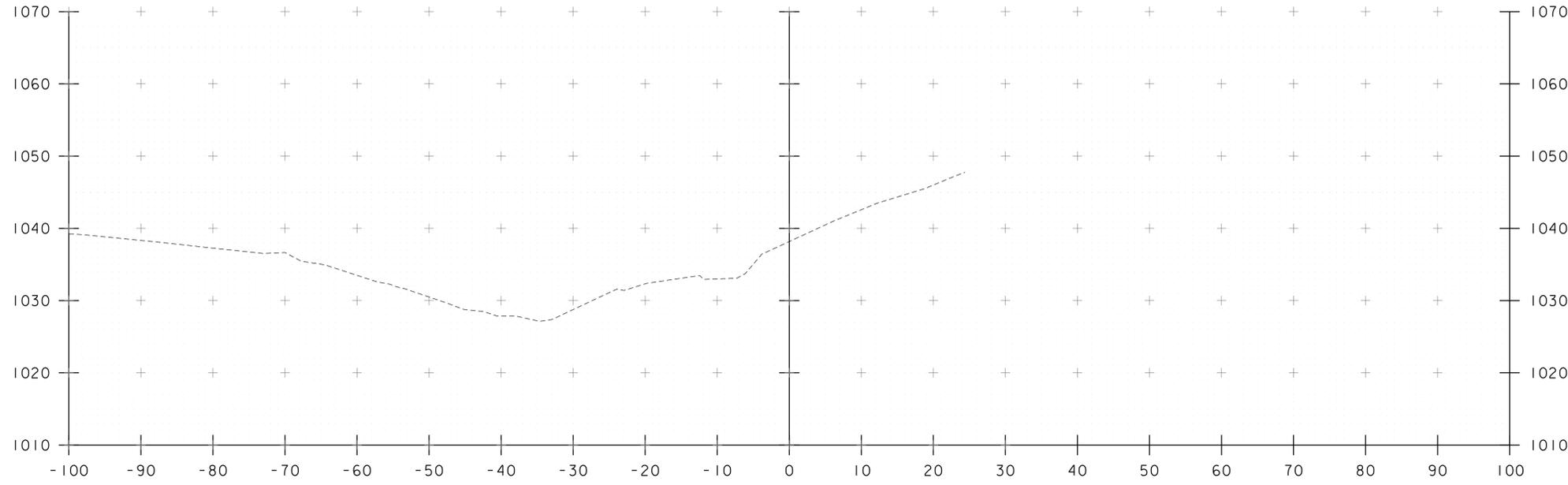
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PROJECT NUMBER: BHF 0278(3)

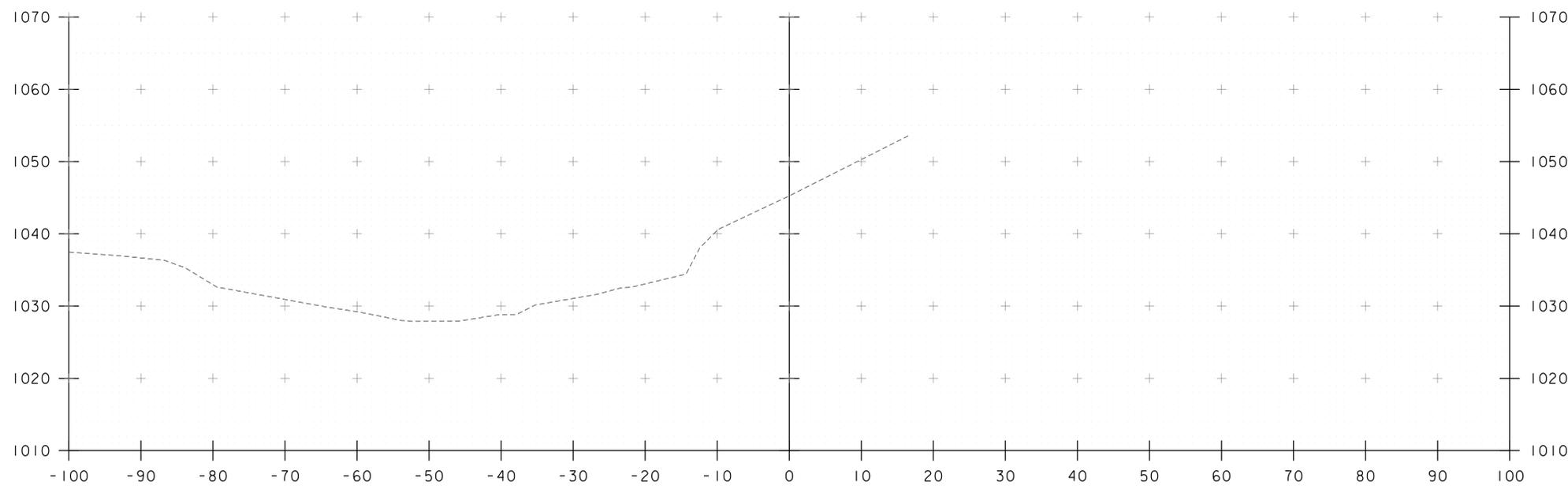
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PROJECT LEADER: M. CHENETTE  
DESIGNED BY: I. MAYNARD  
ROADWAY CROSS SECTIONS - RXS 5

PLOT DATE: 3/18/2016  
DRAWN BY: I. MAYNARD  
CHECKED BY: G. SANTY  
SHEET 47 OF 72





50+25



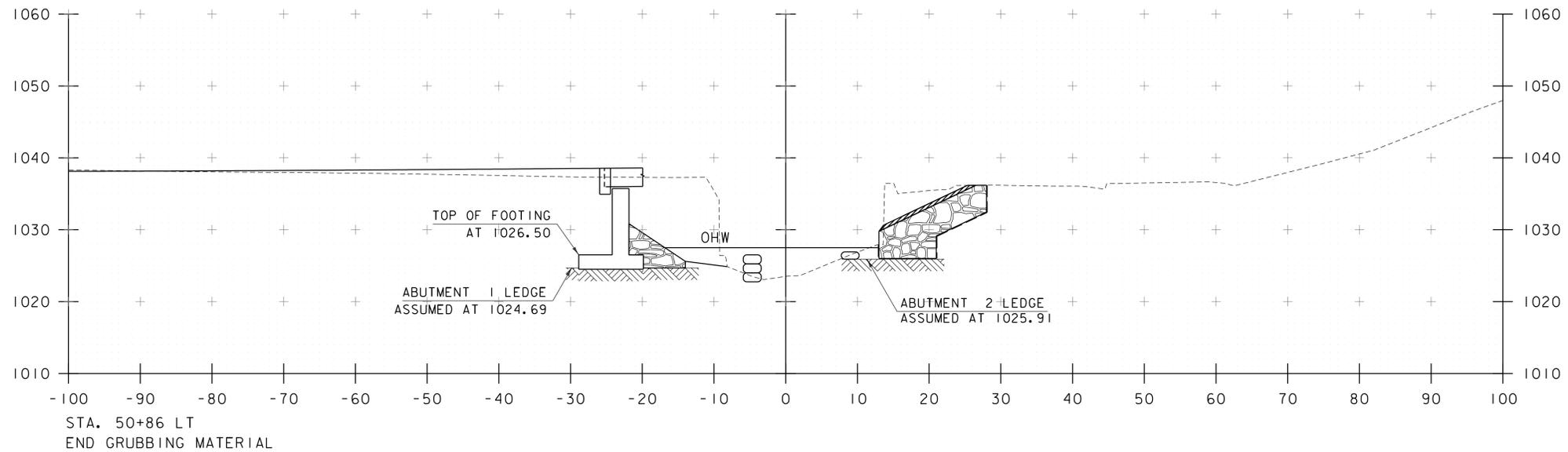
50+00

STA. 50+00 TO STA. 50+25

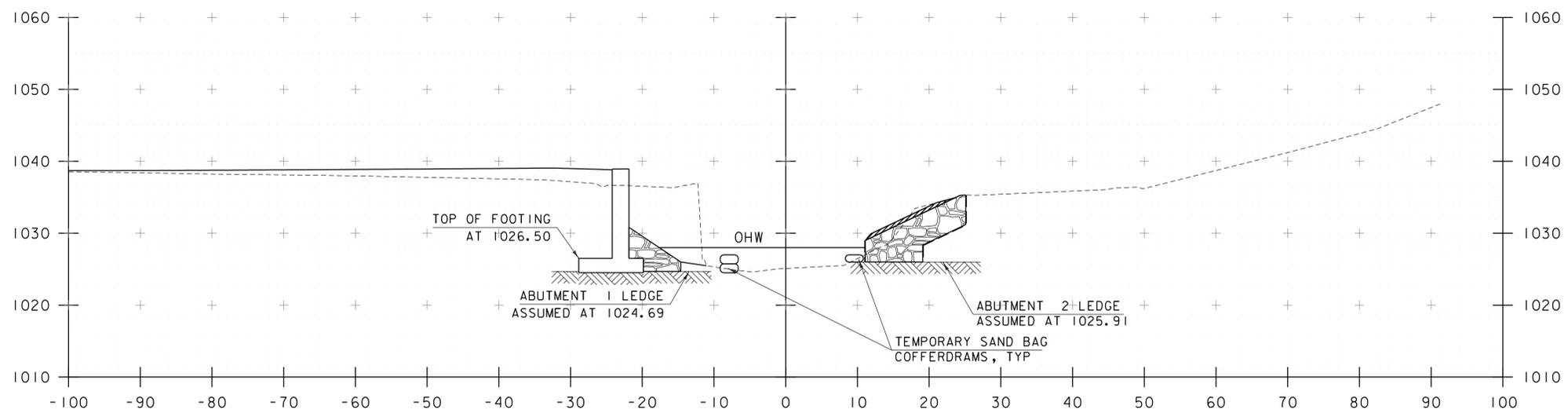
PROJECT NAME: JAY	PLOT DATE: 3/18/2016
PROJECT NUMBER: BHF 0278(3)	DRAWN BY: L. BUXTON
FILE NAME: z12c154xsl.dgn	CHECKED BY: M. CHENETTE
PROJECT LEADER: M. CHENETTE	SHEET 48 OF 72
DESIGNED BY: J. HUNGERFORD	
CHANNEL CROSS SECTIONS - CXS 1	







50+94



50+85

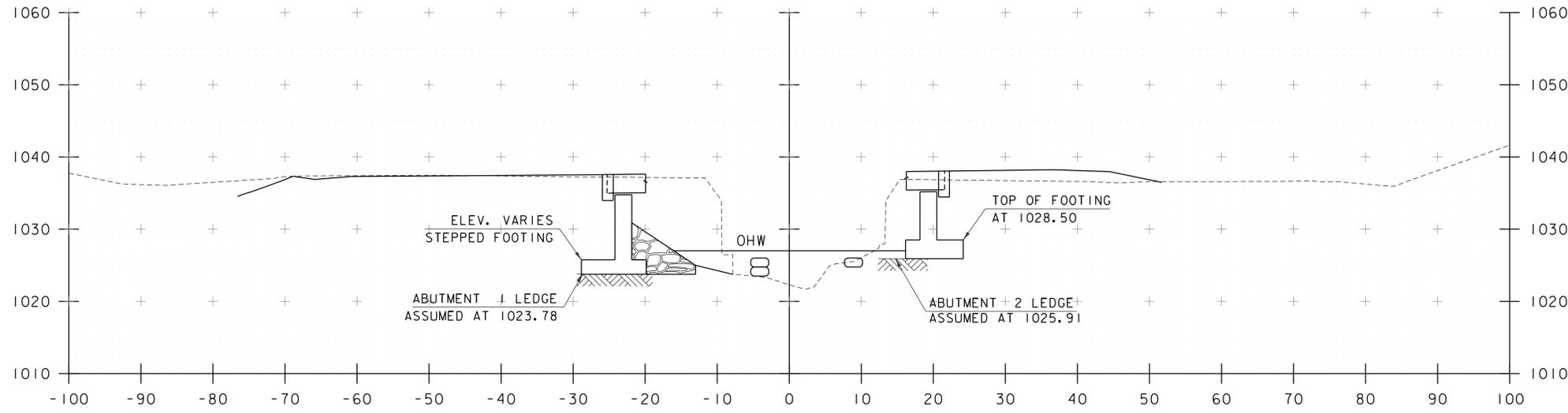
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PROJECT NUMBER: BHF 0278(3)

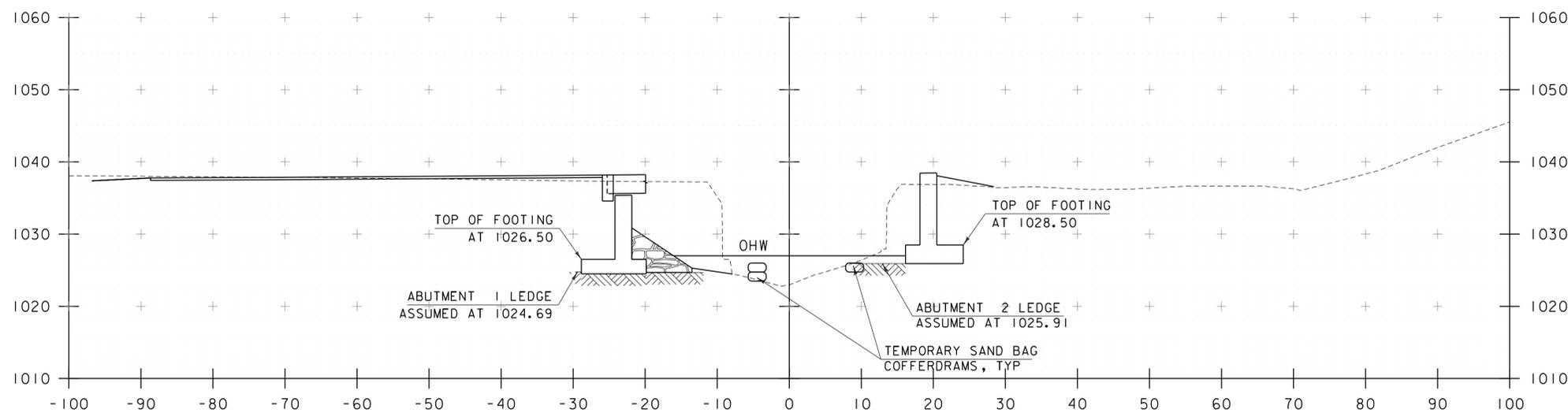
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PROJECT LEADER: M. CHENETTE  
DESIGNED BY: J. HUNGERFORD  
CHANNEL CROSS SECTIONS - CXS 3

PLOT DATE: 3/18/2016  
DRAWN BY: L. BUXTON  
CHECKED BY: M. CHENETTE  
SHEET 50 OF 72





51+10



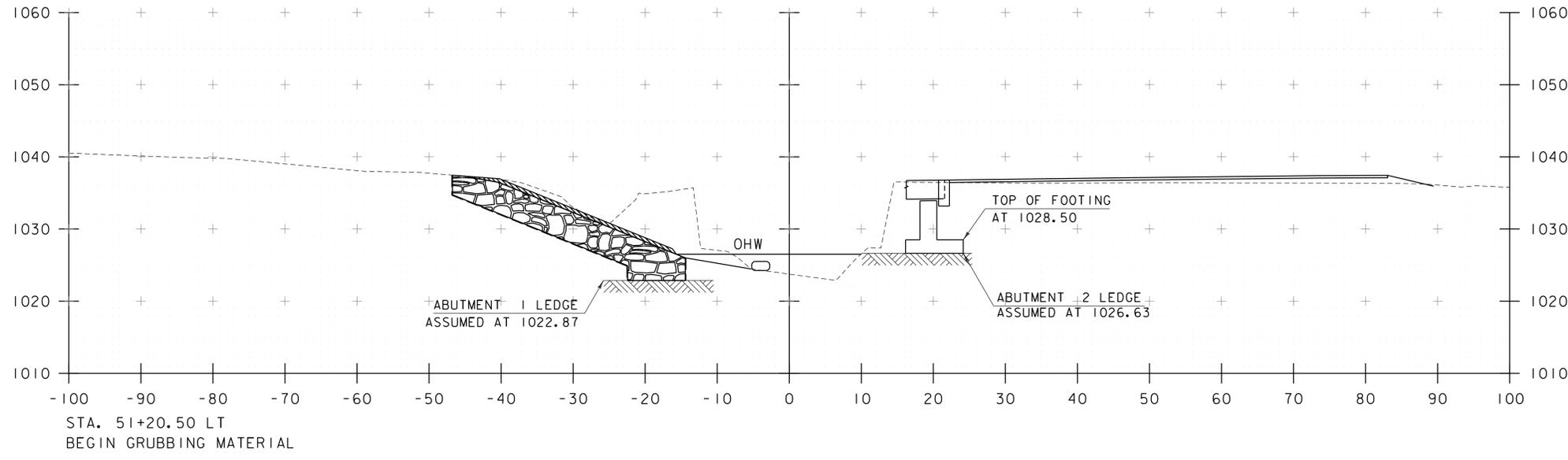
51+00

STA. 51+00 RT  
 END UNCLASSIFIED CHANNEL EXCAVATION  
 STONE FILL, TYPE IV  
 GEOTEXTILE UNDER STONE FILL  
 GRUBBING MATERIAL

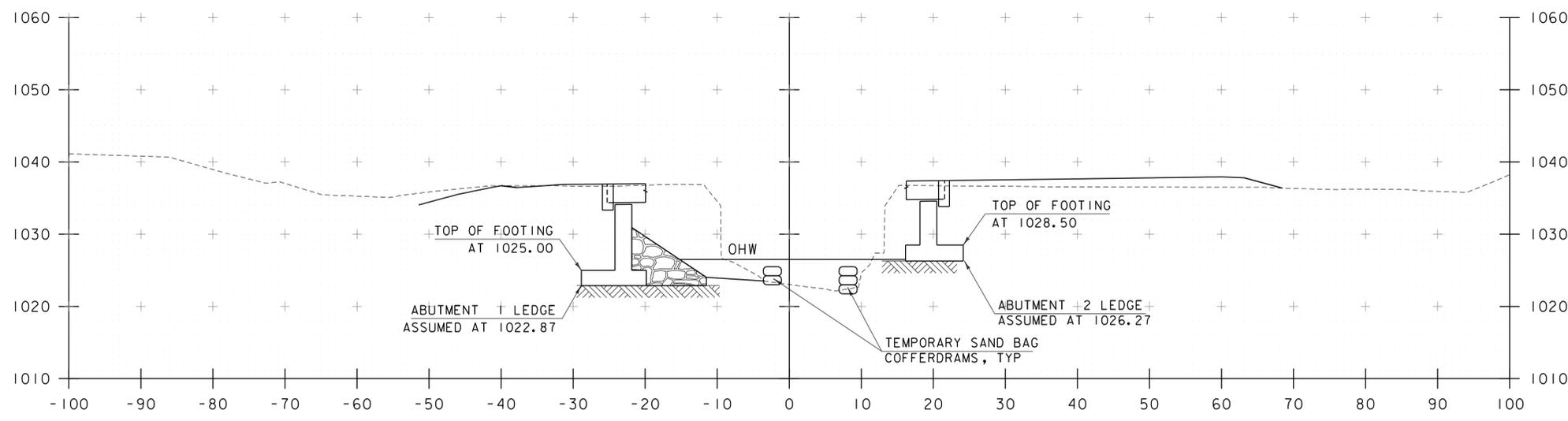
STA. 51+00 TO STA. 51+10

PROJECT NAME: JAY	PLOT DATE: 3/18/2016
PROJECT NUMBER: BHF 0278(3)	DRAWN BY: L. BUXTON
FILE NAME: z12c154xsl.dgn	CHECKED BY: M. CHENETTE
PROJECT LEADER: M. CHENETTE	SHEET 51 OF 72
DESIGNED BY: J. HUNGERFORD	
CHANNEL CROSS SECTIONS - CXS 4	





51+30

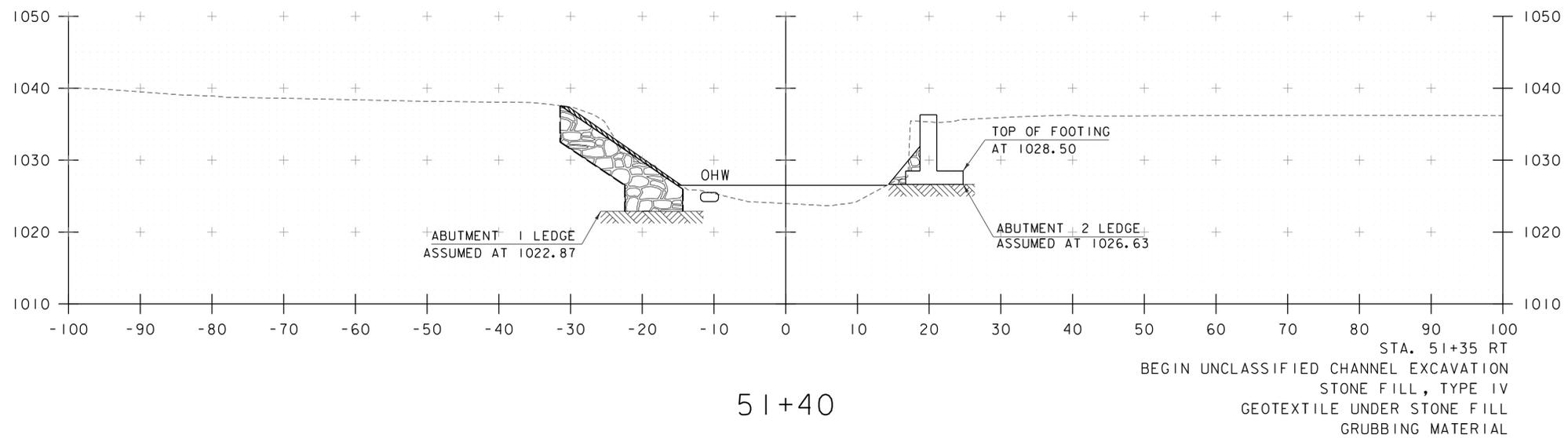
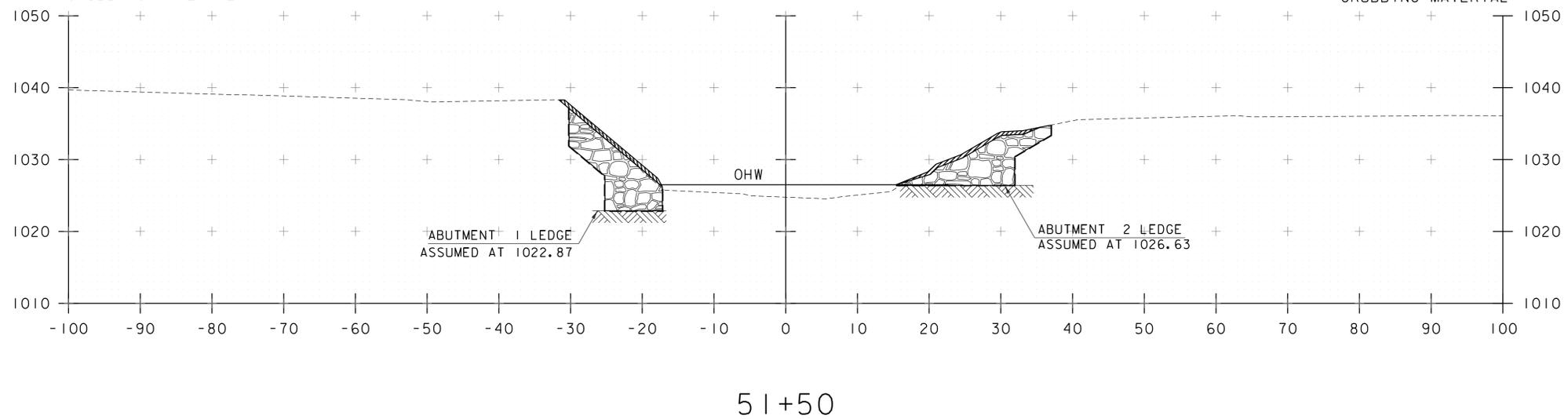
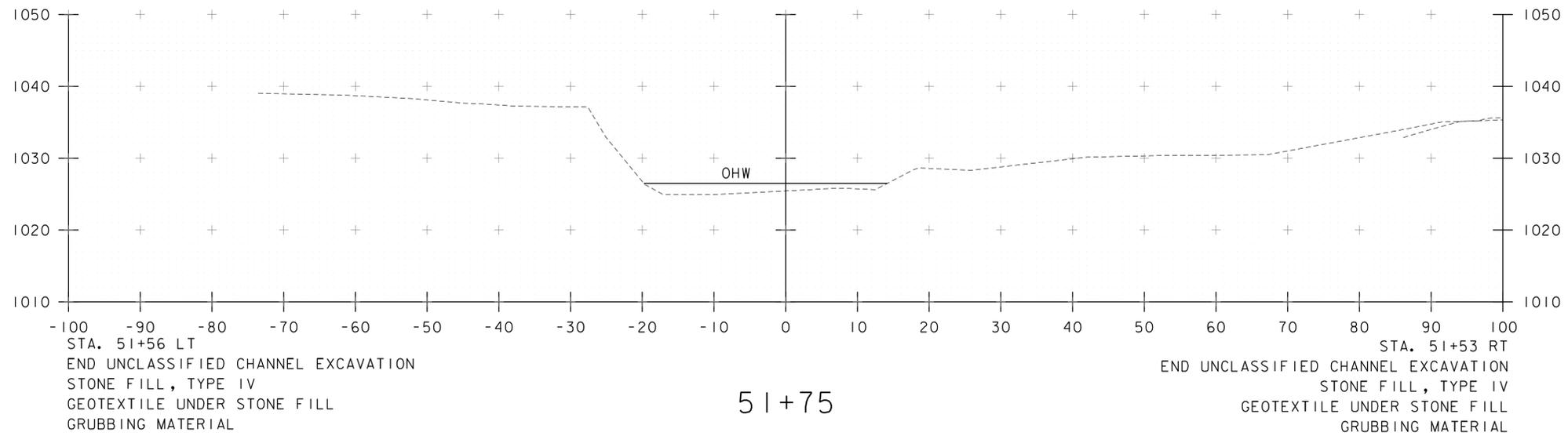


51+20

STA. 51+20 TO STA. 51+30

PROJECT NAME: JAY	PLOT DATE: 3/18/2016
PROJECT NUMBER: BHF 0278(3)	DRAWN BY: L. BUXTON
FILE NAME: z12c154xsl.dgn	DESIGNED BY: J. HUNGERFORD
PROJECT LEADER: M. CHENETTE	CHECKED BY: M. CHENETTE
CHANNEL CROSS SECTIONS - CXS 5	SHEET 52 OF 72





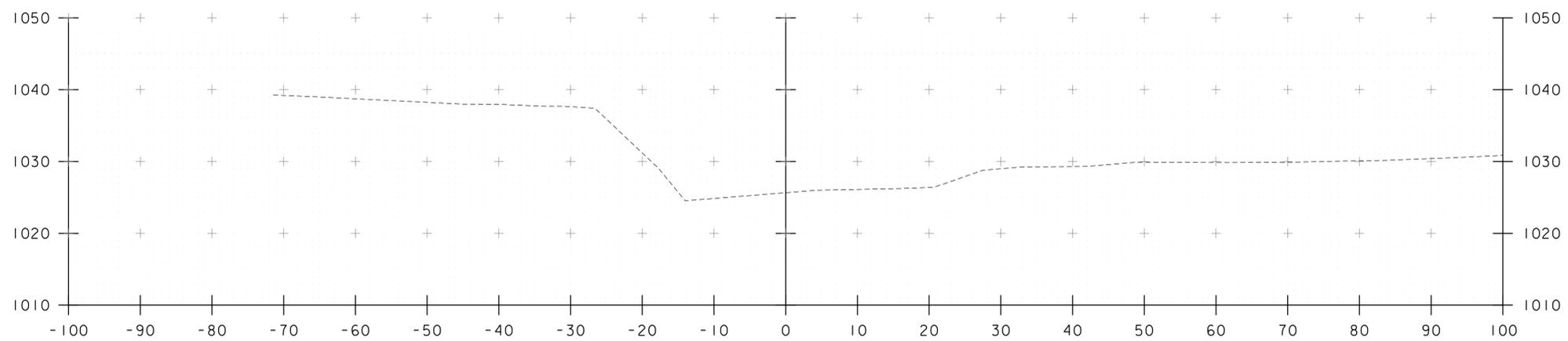
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PROJECT NAME: JAY  
PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12c154xsl.dgn  
PROJECT LEADER: M. CHENETTE  
DESIGNED BY: J. HUNGERFORD  
CHANNEL CROSS SECTIONS - CXS 6

PLOT DATE: 3/18/2016  
DRAWN BY: L. BUXTON  
CHECKED BY: M. CHENETTE  
SHEET 53 OF 72





51+99

STA. 51+99 TO STA. 51+99

PROJECT NAME: JAY	PLOT DATE: 3/18/2016
PROJECT NUMBER: BHF 0278(3)	DRAWN BY: L. BUXTON
FILE NAME: z12c154xsl.dgn	CHECKED BY: M. CHENETTE
PROJECT LEADER: M. CHENETTE	SHEET 54 OF 72
DESIGNED BY: J. HUNGERFORD	
CHANNEL CROSS SECTIONS - CXS 7	



## EPSC PLAN NARRATIVE

### 1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF BRIDGE #10, RELATED CHANNEL WORK AND INCIDENTALS. BRIDGE #10 IS LOCATED IN THE TOWN OF JAY, VT ROUTE 242, 2.3 MILES WEST OF THE JUNCTION WITH VT ROUTE 101. THE LENGTH OF THE BRIDGE WILL BE INCREASED TO 50.20 FEET.

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

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.48 ACRES.

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

### 1.2 SITE INVENTORY

#### 1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE IMMEDIATE PROJECT AREA IS HILLY TO MOUNTAINOUS AND FEATURES A MIXTURE OF FORESTED AND OPEN LAND COVER. THERE IS ONE HOUSE ADJACENT TO THE SITE.

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

JAY BRANCH IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE JAY BRANCH IS CLASSIFIED AS STRAIGHT, WITH SOME ARMORED BANKS. THE STREAM BED CONSISTS OF BOULDERS, BED ROCK AND SOME STONES. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF WATER FROM NEARBY SLOPES.

#### 1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF OPEN GRASSED AREAS, HARDWOOD TREES AND UNDERGROWTH. THERE WILL BE MINOR CLEARING ASSOCIATED WITH ABUTMENT EXCAVATION. 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 ORLEANS, VERMONT. SOILS ON THE PROJECT SITE ARE AS FOLLOWS:

SHEEPCOT GRAVELLY FINE SANDY LOAM, 3 TO 8% SLOPES, "K FACTOR" = 0.17. THE SOIL IS CONSIDERED TO HAVE LOW EROSION POTENTIAL.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:

0.0-0.23 = LOW EROSION POTENTIAL

0.24-0.36 = MODERATE EROSION POTENTIAL

0.37 AND HIGHER = HIGH EROSION POTENTIAL

#### 1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: COLD WATER STREAM

HISTORICAL OR ARCHEOLOGICAL AREAS: YES, SOUTH OF BRIDGE BOTH SIDES

PRIME AGRICULTURAL LAND: NO

THREATENED AND ENDANGERED SPECIES: YES, NLEB (NORTHERN LONG EARED BAT)

WATER RESOURCE: JAY BRANCH

WETLANDS: NO

### 1.3 RISK EVALUATION

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

### 1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. 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) AND/OR BARRIER FENCE (BF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

#### 1.4.2 LIMIT DISTURBANCE AREA

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

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

#### 1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE 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.

#### 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.

THE PROJECT AREA IS RELATIVELY FLAT WITH MINIMAL OFF-SITE RUNOFF FLOWING THROUGH THE SITE. THEREFORE DIVERSION MEASURES WILL NOT BE NECESSARY.

#### 1.4.6 SLOW DOWN CHANNELIZED RUNOFF

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

CHECK DAMS TO BE INSTALLED AT THE LOCATIONS SHOWN ON THE EPSC PLAN.

#### 1.4.7 CONSTRUCT PERMANENT CONTROLS

THERE ARE NO PERMANENT STORMWATER TREATMENT DEVICES TO BE INSTALLED WITH THIS PROJECT.

#### 1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

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

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

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

#### 1.4.9 WINTER STABILIZATION

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

#### 1.4.10 STABILIZE SOIL AT FINAL GRADE

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

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

#### 1.4.11 DE-WATERING ACTIVITIES

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

SEDIMENT CONTAINMENT BAGS (FILTER BAGS) WILL BE USED AS NECESSARY AND AS DIRECTED BY THE ENGINEER. SEE SHEET 60 FOR DETAIL.

#### 1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS.

### 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 SPECIFICATION 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

#### 1.5.3 UPDATES

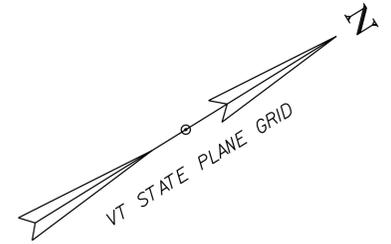
PROJECT NAME: JAY  
PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12c154frm.dgn  
PROJECT LEADER: M. CHENETTE  
DESIGNED BY: I. MAYNARD  
EPSC NARRATIVE

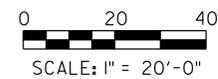
PLOT DATE: 3/18/2016  
DRAWN BY: D. BARNES  
CHECKED BY: G. SANTY  
SHEET 55 OF 72



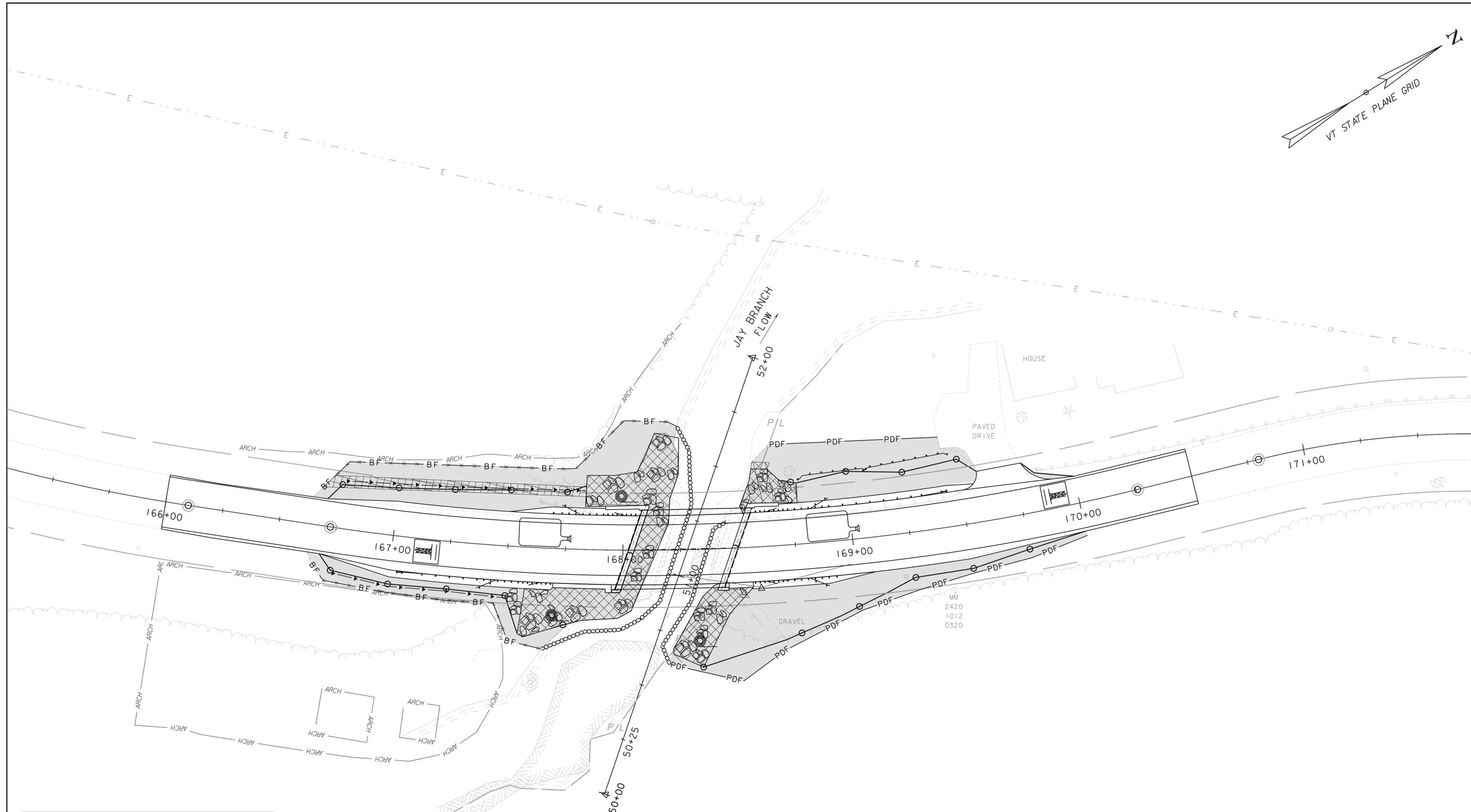
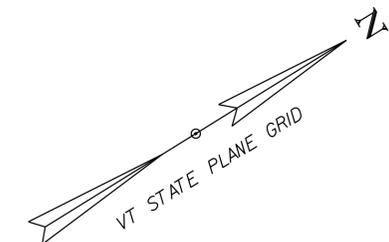
SOIL CONDITIONS  
 SHEEPSCOT GRAVELLY FINE SANDY LOAM  
 3%-8% SLOPES  
 LOW EROSION POTENTIAL  
 K = 0.17



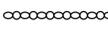
SOIL CONDITIONS  
 DIXFIELD SANDY LOAM  
 VERY STONY  
 35%-60% SLOPES  
 MODERATE EROSION POTENTIAL  
 K = 0.28



PROJECT NAME: JAY	PLOT DATE: 3/18/2016
PROJECT NUMBER: BHF 0278(3)	DRAWN BY: D. BARNES
FILE NAME: z12c154bdr_ero.dgn	DESIGNED BY: I. MAYNARD
PROJECT LEADER: M. CHENETTE	CHECKED BY: G. SANTY
EPSC EXISTING CONDITIONS SITE PLAN	SHEET 56 OF 72



**LEGEND**

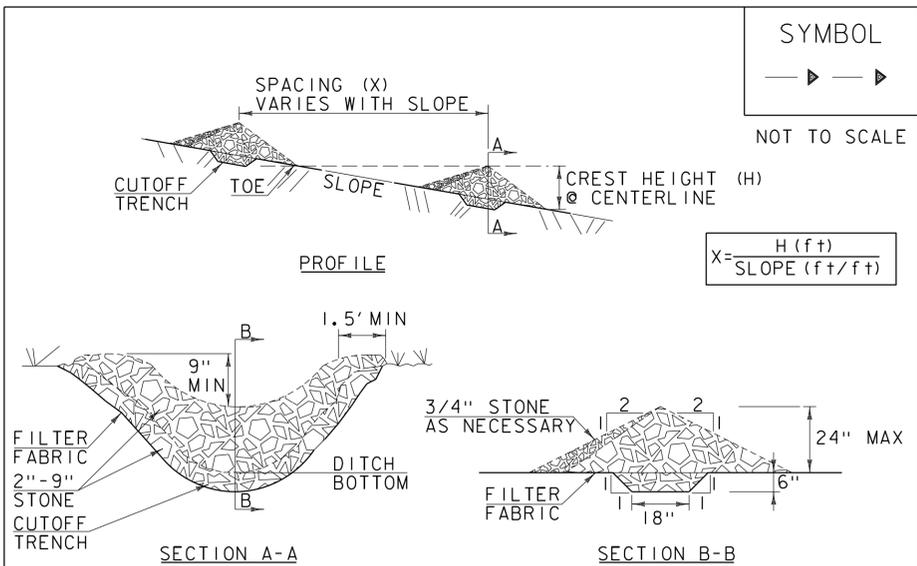
-  VEHICLE TRACKING PAD
-  FILTER BAG
-  COFFERDAM

FOR ADDITIONAL INFORMATION, SEE  
CONVENTIONAL SYMBOLGY LEGEND SHEET



PROJECT NAME: JAY	PLOT DATE: 3/18/2016
PROJECT NUMBER: BHF 0278(3)	DRAWN BY: D. BARNES
FILE NAME: z12c154bdr_ero.dgn	CHECKED BY: G. SANTY
PROJECT LEADER: M. CHENETTE	SHEET 57 OF 72
DESIGNED BY: I. MAYNARD	
EPSC CONSTRUCTION SITE PLAN	





SYMBOL  
  
 NOT TO SCALE

$X = \frac{H(f+t)}{\text{SLOPE}(f+t/f+t)}$

**CONSTRUCTION SPECIFICATIONS**

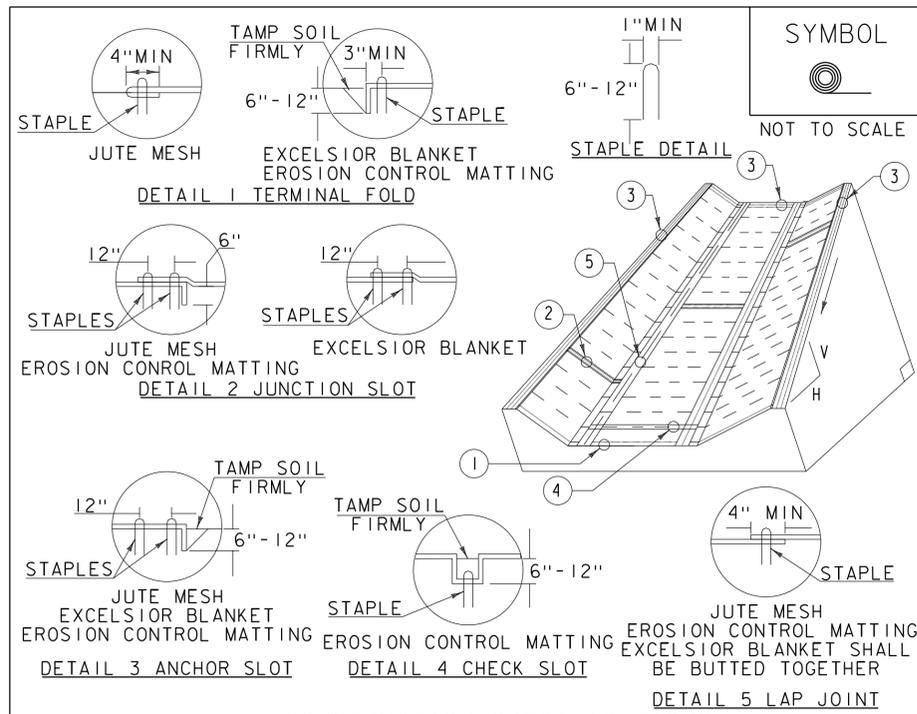
1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A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

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

CHECK DAM

NOTES:  
 REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.  
 THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF



SYMBOL  
  
 NOT TO SCALE

**CONSTRUCTION SPECIFICATIONS**

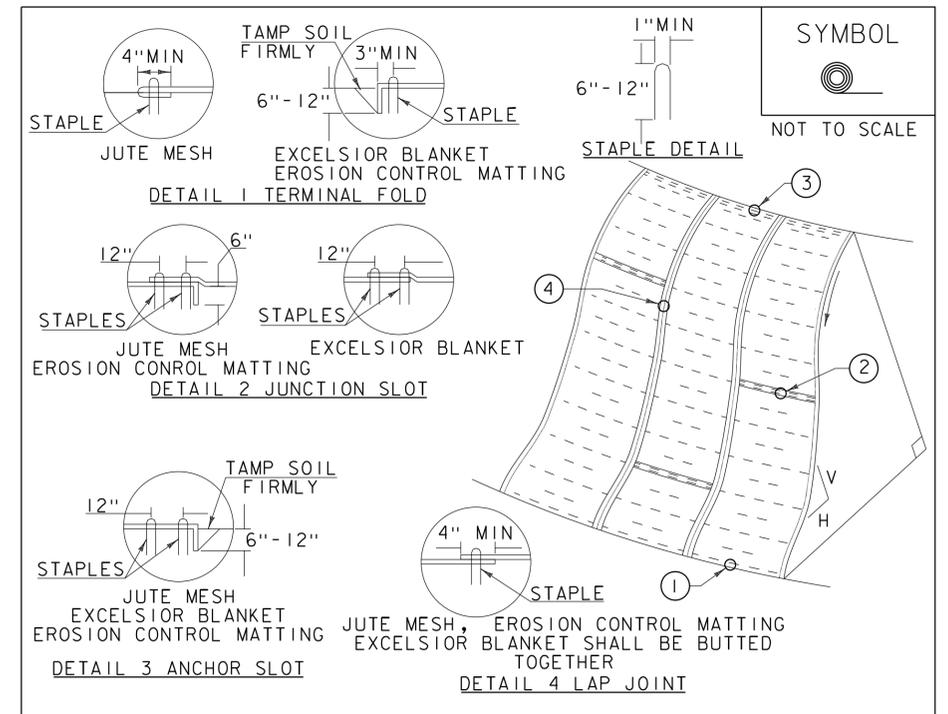
1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

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

ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

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

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



SYMBOL  
  
 NOT TO SCALE

**CONSTRUCTION SPECIFICATIONS**

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' 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

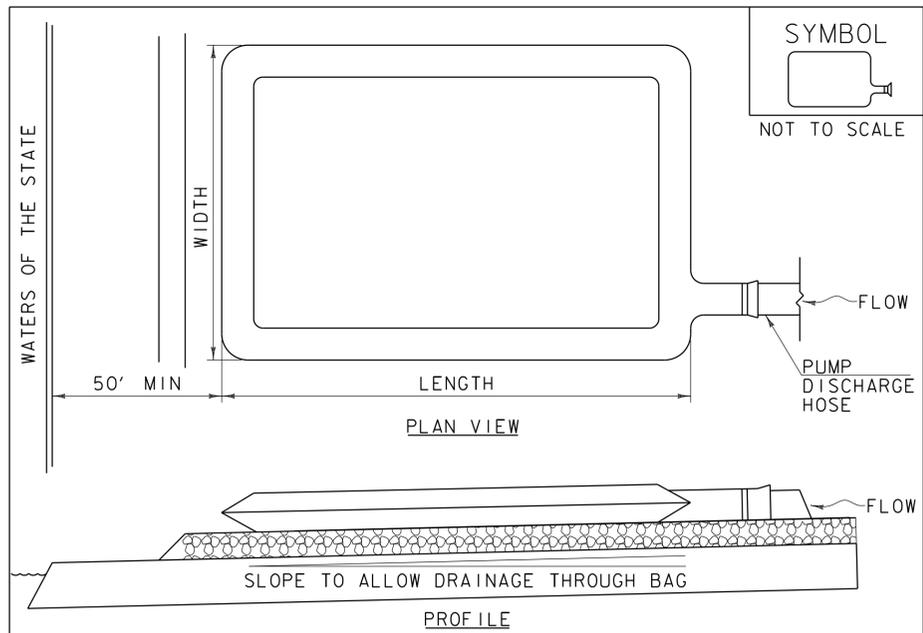
NOTES:  
 REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.  
 THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM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

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

PROJECT NAME: JAY  
 PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12c154ero.dets.dgn  
 PROJECT LEADER: M. CHENETTE  
 DESIGNED BY: VAOT  
 EPSC DETAILS I

PLOT DATE: 3/18/2016  
 DRAWN BY: VAOT  
 CHECKED BY: VAOT  
 SHEET 59 OF 72



**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

VAOT LOW GROW/FINE FESCUE MIX						
WEIGHT	LBS/AC		NAME	LATIN NAME	GERM	PURITY
	BROADCAST	HYDROSEED				
38%	57	95	CREeping RED FESCUE	FESTUCA RUBRA VAR. RUBRA	90%	98%
29%	43.5	72.5	HARD FESCUE	FESTUCA LONGIFOLIA	85%	95%
15%	22.5	37.5	CHEWINGS FESCUE	FESTUCA RUBRA VAR. COMMUTATA	87%	95%
15%	22.5	37.5	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	90%	95%
3%	4.5	7.5	INERTS			
100%	150	250				

VAOT RURAL AREA MIX						
WEIGHT	LBS/AC		NAME	LATIN NAME	GERM	PURITY
	BROADCAST	HYDROSEED				
37.5%	22.5	45	CREeping RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98%
37.5%	22.5	45	TALL FESCUE	FESTUCA ARUNDINACEA	90%	95%
5.0%	3	6	RED TOP	AGROSTIS GIGANTEA	90%	95%
15.0%	9	18	WHITE FIELD CLOVER	TRIFOLIUM REPENS	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%	60	120				

**GENERAL AMENDMENT GUIDANCE**

FERTILIZER	LIME	
10/20/10	AG LIME	PELLITIZED
500 LBS/AC	2 TONS/AC	1 TONS/AC

**CONSTRUCTION GUIDANCE**

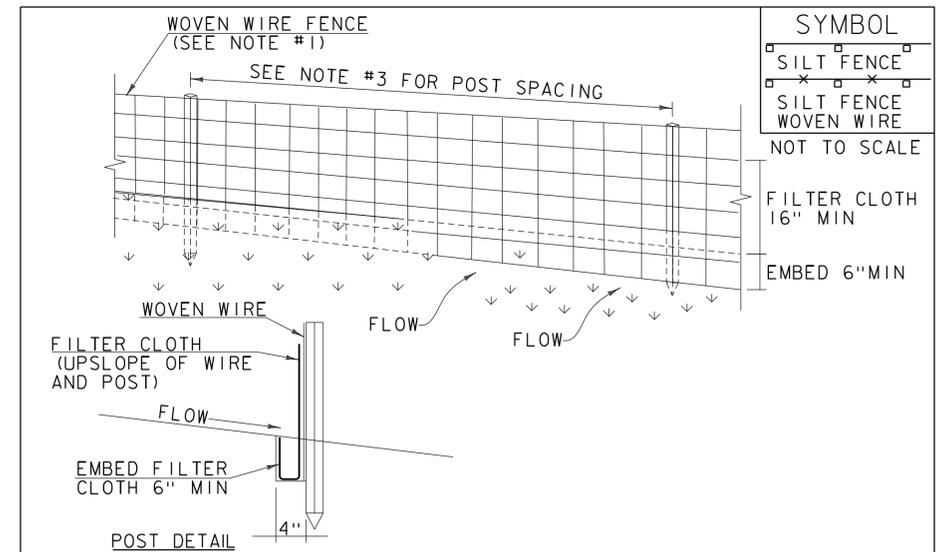
1. SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.
2. SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT 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. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED PROPOSED FOR USE WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED.
7. 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

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651J5)

REVISIONS	
JANUARY 12, 2015	WHF



**CONSTRUCTION SPECIFICATIONS**

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAF1100X, 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.

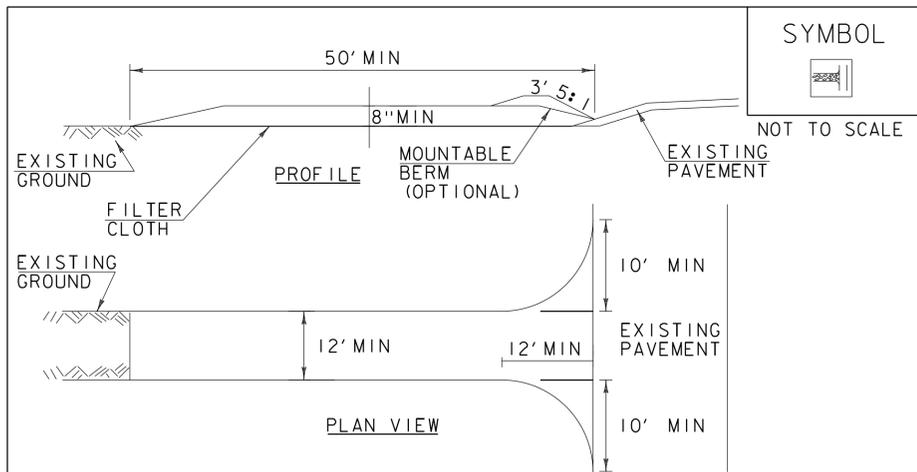
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

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

PROJECT NAME: JAY  
PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12c154ero.dets.dgn  
PROJECT LEADER: M. CHENETTE  
DESIGNED BY: VAOT  
EPSC DETAILS 2

PLOT DATE: 3/18/2016  
DRAWN BY: VAOT  
CHECKED BY: VAOT  
SHEET 60 OF 72



SYMBOL



NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

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

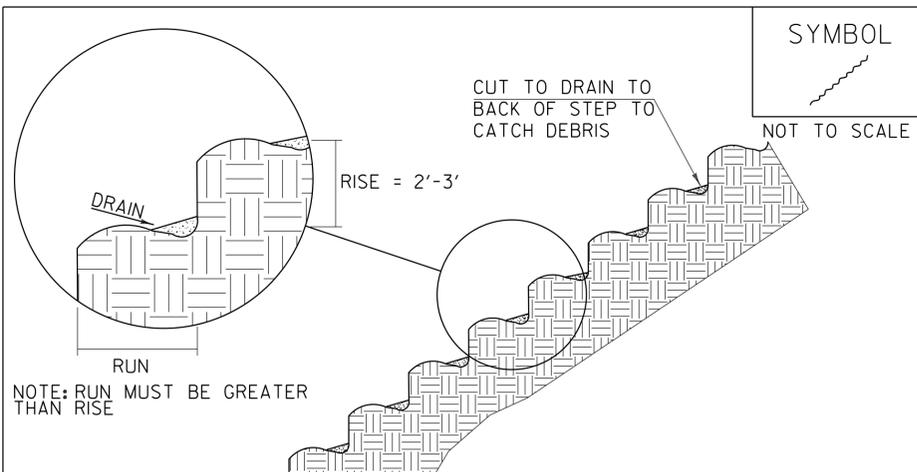
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED  
CONSTRUCTION  
ENTRANCE

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

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

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF



SYMBOL



NOT TO SCALE

STAIR STEPPING CUT SLOPES

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

GROOVING SLOPES

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

SURFACE ROUGHENING

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

THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE  
CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: JAY  
PROJECT NUMBER: BHF 0278(3)

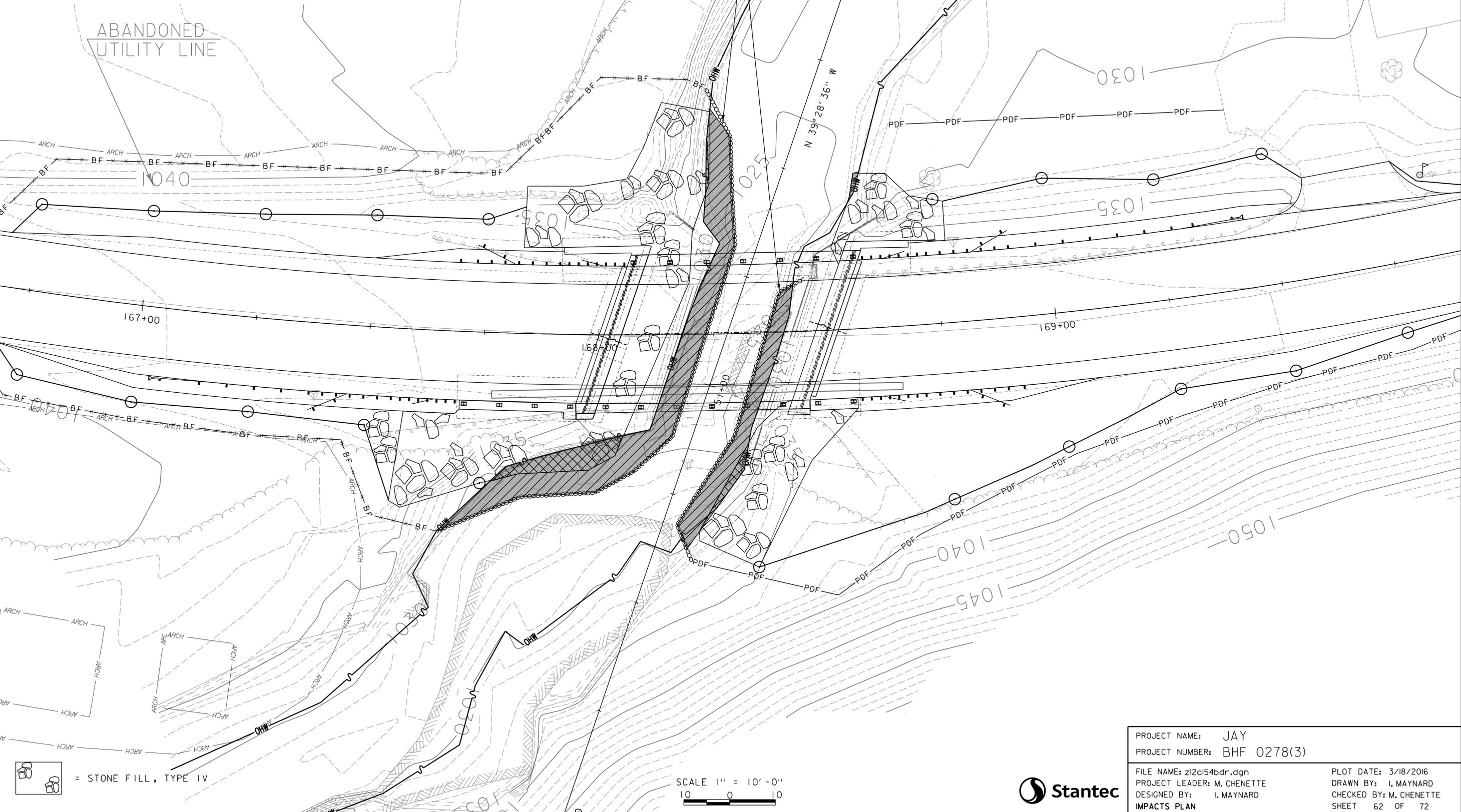
FILE NAME: z12c154ero.dets.dgn  
PROJECT LEADER: M. CHENETTE  
DESIGNED BY: VAOT  
EPSC DETAILS 3

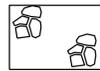
PLOT DATE: 3/18/2016  
DRAWN BY: VAOT  
CHECKED BY: VAOT  
SHEET 61 OF 72

IMPACTS BELOW ORDINARY HIGH WATER

	TEMPORARY IMPACTS BELOW OHW:	818 SF
	PERMANENT IMPACTS BELOW OHW:	136 SF

TOTAL IMPACTS: 954 SF



 = STONE FILL, TYPE IV

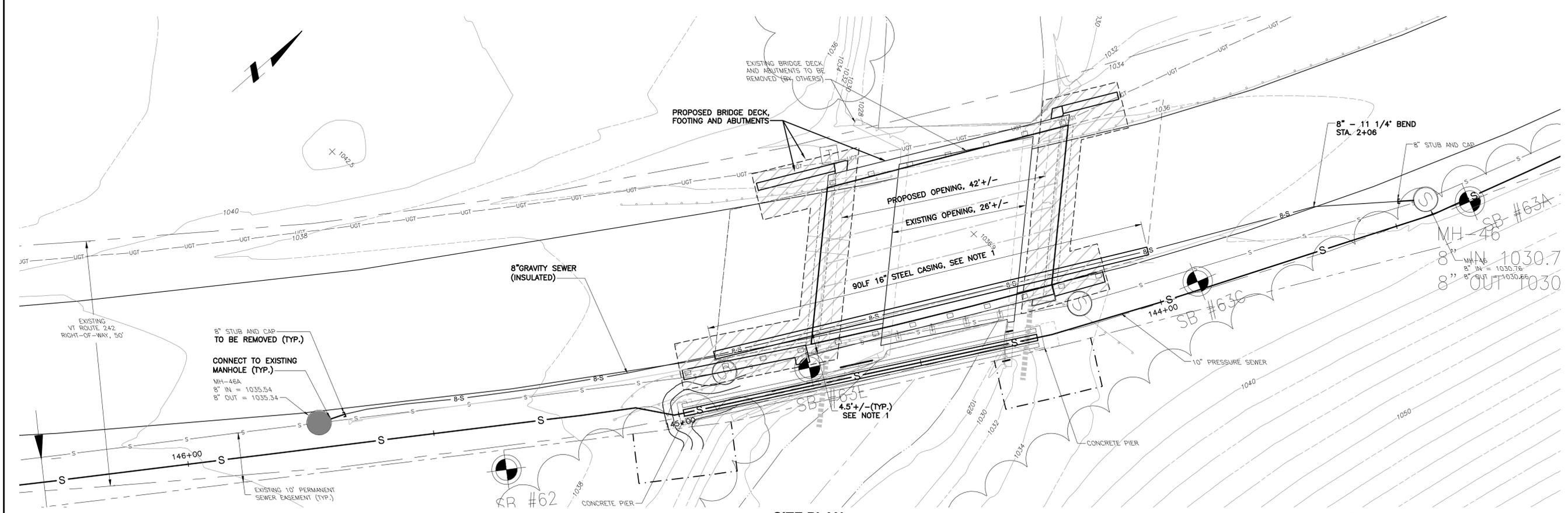
SCALE 1" = 10'-0"  
10 0 10



PROJECT NAME: JAY  
PROJECT NUMBER: BHF 0278(3)

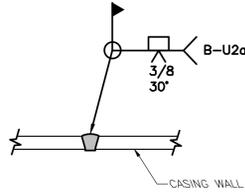
FILE NAME: z12c154bdr.dgn  
PROJECT LEADER: M. CHENETTE  
DESIGNED BY: I. MAYNARD  
IMPACTS PLAN

PLOT DATE: 3/18/2016  
DRAWN BY: I. MAYNARD  
CHECKED BY: M. CHENETTE  
SHEET 62 OF 72



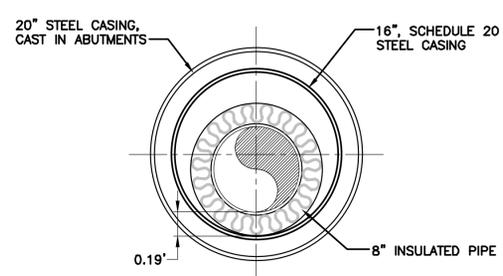
**SITE PLAN**  
SCALE: 1" = 10'

- NOTES**
1. WELDING SHALL COMPLY WITH AWWA STANDARD C206 AND AWS D1.1. ALL WELDING SHALL BE PERFORMED BY A WELDER CERTIFIED FOR POSITION AND PROCESS UTILIZED.
  2. NO WELDS PERMITTED IN THE MIDDLE THIRD OF THE SPAN BETWEEN ABUTMENTS, STA. 0+69 TO 0+84.

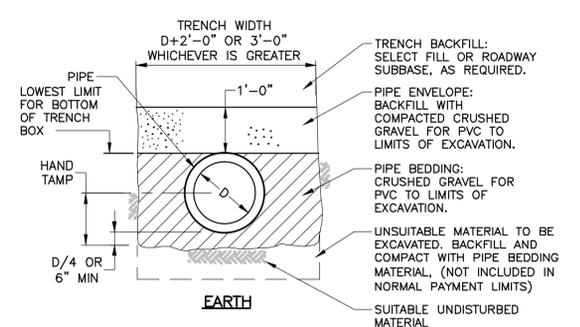


**TYPICAL CASING SPLICE WELD**  
NOT TO SCALE

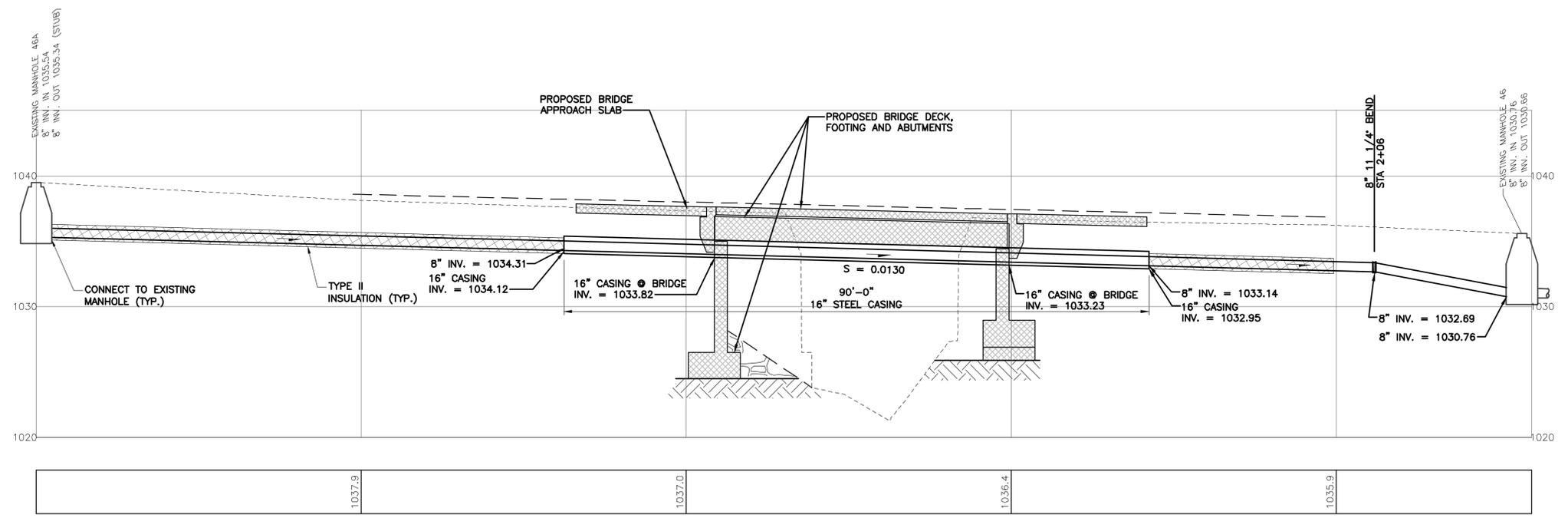
- NOTES**
1. A 20-INCH STEEL CASING WILL BE CAST IN TO THE ABUTMENTS TO ACCOMMODATE INSTALLATION OF THE 16-INCH STEEL CASING.
  2. PLUG EXISTING SEWER INSIDE MH-46A AND MH-46B WITH NON-SHRINK GROUT AFTER NEW SEWER INSTALLED AND PLACED INTO SERVICE.



**TYPICAL CASING SECTION**  
NOT TO SCALE



**TRENCH SECTIONS**  
NOT TO SCALE



**PROFILE**  
SCALE: HORIZ. 1" = 10'  
VERT. 1" = 5'

**TOWNS OF TROY AND JAY VERMONT**  
**WASTEWATER COLLECTION SYSTEM (CONTRACT #4)**

**GRAVITY SEWER PLAN, PROFILE AND DETAILS**

Rev.	Date	Description
D	5/15/14	FOR BID
C	7/3/13	FOR REVIEW
B	7/8/13	FOR APPROVAL
A	5/11/13	90% PERMIT REVIEW SET

**REVIEW SUBMITTAL NOT FOR CONSTRUCTION**



T&H NO.: 3452  
DATE: 03/2015  
SCALE: AS NOTED

**C29.1**



BOX BEAM GUARDRAIL  
 STA. 167+19.4 TO 167+40.4, RT  
 STA. 167+69.1 TO 167+73.3, LT  
 STA. 168+85.6 TO 168+89.8, RT  
 STA. 168+90.1 TO 169+35.1, LT

DURABLE 4 INCH YELLOW LINE  
 STA. 166+00.0 TO STA. 170+50.0, CL (DOUBLE)

DURABLE 4 INCH WHITE LINE  
 STA. 166+00.0 TO STA. 170+50.0, LT  
 STA. 166+00.0 TO STA. 170+50.0, RT

RELOCATE MAILBOX SINGLE SUPPORT  
 STA. 169+83.9, LT

CONSTRUCT DRIVE  
 STA. 169+67, LT (PAVED)

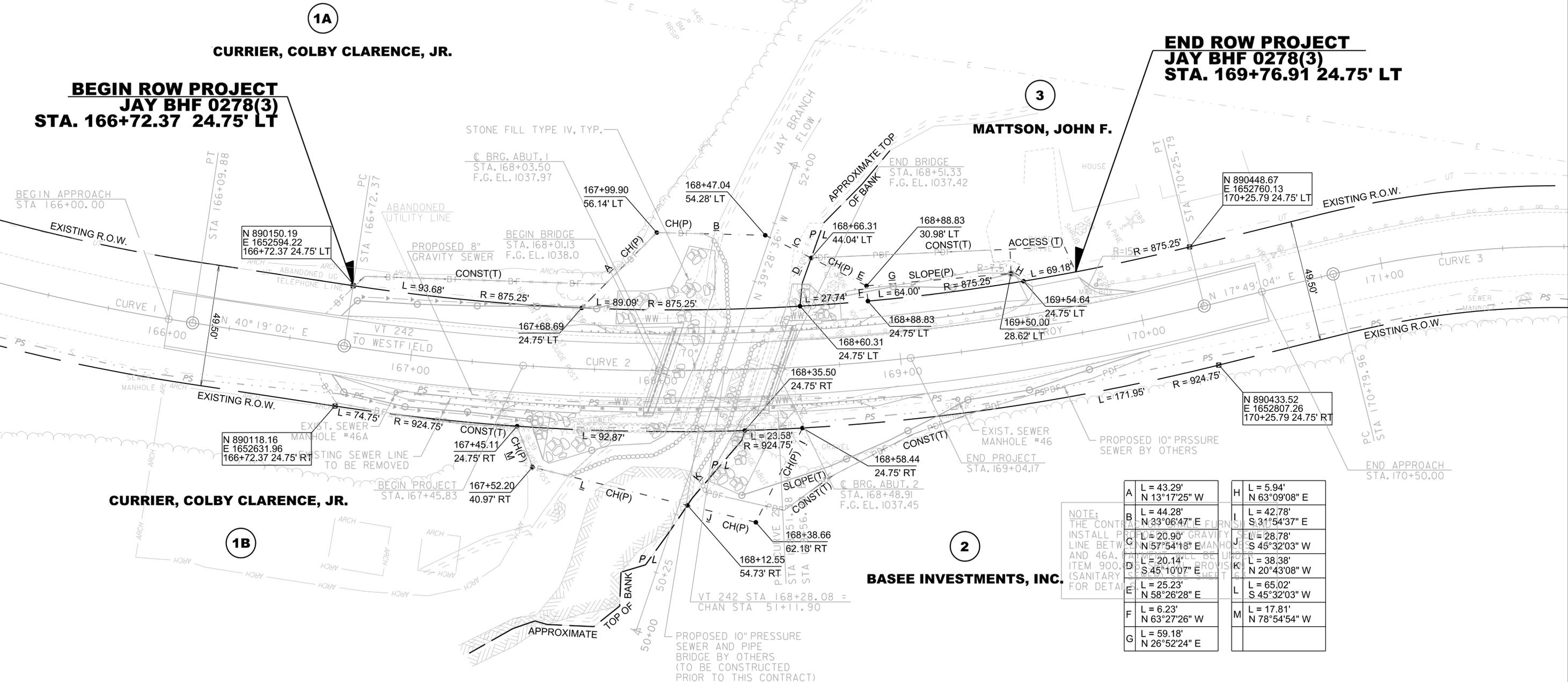
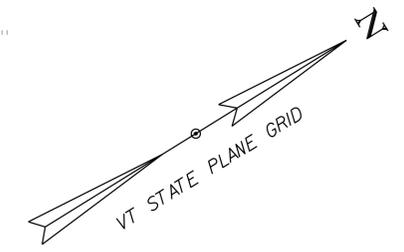
CURVE 1 DATA  
 PC = 162+40.92  
 DELTA = 27°48'56"  
 D = 7°32'20"  
 R = 760.00'  
 T = 188.19'  
 L = 368.96'  
 E = 22.95'

CURVE 2 DATA  
 DELTA = 22°29'57"  
 D = 6°21'58"  
 R = 900.00'  
 T = 179.02'  
 L = 353.42'  
 E = 17.63'

CURVE 3 DATA  
 PT = 173+33.55  
 DELTA = 38°14'08"  
 D = 15°04'40"  
 R = 380.00'  
 T = 131.72'  
 L = 253.59'  
 E = 22.18'

MANUFACTURED TERMINAL END SECTION, TANGENT  
 STA. 167+05.4 TO 167+19.4, RT  
 STA. 169+35.1 TO 169+49.1, LT

PLAN REFERENCES  
 - HIGHWAY PROJECT JAY SK4 (1959)  
 - SURVEY FOR BASEE INVESTMENTS, INC.,  
 BY GEORGE W. RUMERY, DATED 6/2008.



**CURRIER, COLBY CLARENCE, JR.**

**MATTSON, JOHN F.**

**CURRIER, COLBY CLARENCE, JR.**

**BASEE INVESTMENTS, INC.**

NOTE:  
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY UNDISCOVERED UTILITIES SHALL BE DELETED FROM THIS PLAN AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND DEEPENING ALL UTILITIES TO BE UNDERGROUND. SEE SHEET 65 FOR DETAILS.

A	L = 43.29' N 13°17'25" W	H	L = 5.94' N 63°09'08" E
B	L = 44.28' N 33°06'47" E	I	L = 42.78' S 31°54'37" E
C	L = 20.90' N 57°54'18" E	J	L = 28.78' S 45°32'03" W
D	L = 20.14' S 45°10'07" E	K	L = 38.38' N 20°43'08" W
E	L = 25.23' N 58°26'28" E	L	L = 65.02' S 45°32'03" W
F	L = 6.23' N 63°27'26" W	M	L = 17.81' N 78°54'54" W
G	L = 59.18' N 26°52'24" E		

EXISTING BRIDGE INFO  
 CONCRETE T-BEAM BRIDGE  
 28' SPAN, 34'-6" WIDE  
 BUILT 1927,  
 RECONSTRUCTED 1964

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**

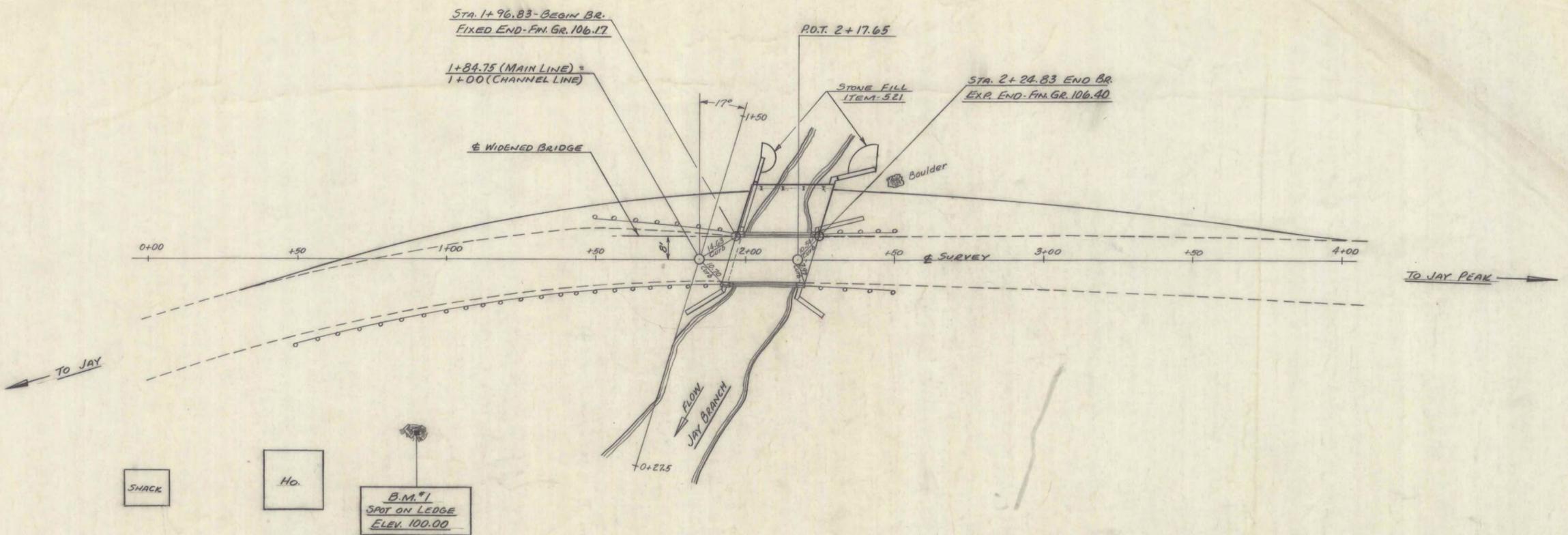
PROJECT NAME: JAY  
 PROJECT NUMBER: BHF 0278(3)

FILE NAME: z12cl54bdr_ROW.dgn  
 PROJECT LEADER: M. CHENETTE  
 DESIGNED BY: H. PETROVS  
 LAYOUT SHEET - R.O.W.

PLOT DATE: 3/17/2016  
 DRAWN BY: L. BUXTON  
 CHECKED BY: M. CHENETTE  
 SHEET 65 OF 72



PLAN  
 CHECKED BY: [Signature]  
 DATE: 1/16/63  
 NO. OF WAY CHECKED: 1



SHACK  
 Ho.  
 B.M. #1  
 SPOT ON LEDGE  
 ELEV. 100.00

TWO CABLE GUARD RAIL

STA. TO STA.	LIN. FT.	ANCHORS
1+50 Lt. 1+98 Lt.	48	1
2+29 Lt. 2+69 Lt.	40	1
<b>TOTALS</b>	<b>88</b>	<b>2</b>

~SUMMARY OF QUANTITIES~

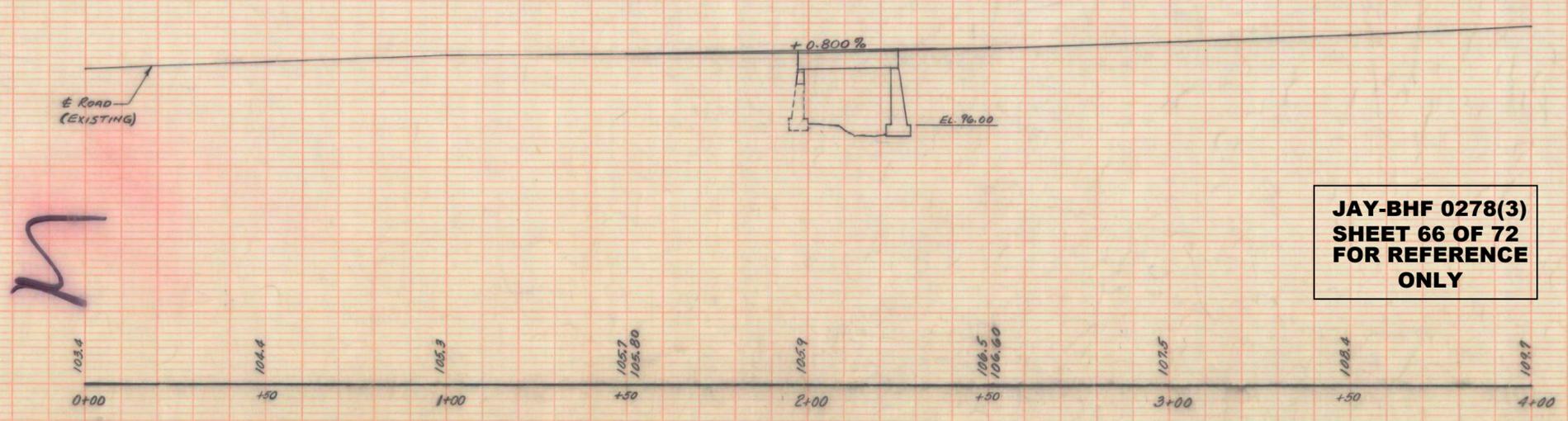
ITEM NO.	ITEM	UNIT	TOTAL	FINAL
101-B	SOLID ROCK EXCAVATION	C.Y.	10	
107	STRUCTURE EXCAVATION	C.Y.	48	
20HA	SUB-BASE OF GRAVEL (MOD.)	C.Y.	18	
317	SINGLE TACK COAT OF REFINED TAR & SLADE MIX PEA STONE SEAL WITH CURBANK ASPHALT	GAL.	1258	
401-AB	CONCRETE CLASS AA (MOD.)	C.Y.	26	
401-B	CONCRETE CLASS B (MOD.)	C.Y.	51	
402	REINFORCING STEEL	LB.	7996	
521	STONE FILL (HEAVY TYPE)	C.Y.	9	
542	TWO CABLE GUARD RAIL	L.F.	88	
543	THREE CABLE GUARD RAIL WITH STEEL POSTS (MOD.)	L.F.	56	
545	ANCHORS FOR TWO CABLE GUARD RAIL	EA.	2	
574	PREPARING SUPERSTRUCTURE FOR WIDENING	L.S.	1	
102	BORROW	C.Y.	213	

RECOMMENDED FOR APPROVAL: [Signature] DISTRICT ENGINEER DATE: 4/13/63  
 RECOMMENDED FOR APPROVAL: [Signature] BRIDGE ENGINEER DATE: 1/30/63  
 RECOMMENDED FOR APPROVAL: [Signature] ASSISTANT CHIEF ENGINEER DATE: 1/31/63  
 APPROVED BY: [Signature] CHIEF ENGINEER DATE: 7/21/63

~LIST OF SHEETS~

1	PLAN & PROFILE	
2	DETAILS OF ABUTMENT NO. 1	
3	" " " NO. 2	
4	SUPERSTRUCTURE DETAILS	
5	REINFORCING STEEL DETAILS	
6-7	CHANNEL SECTIONS	
8	ROADWAY SECTIONS	
9	STANDARD DWG. G-3	
10	" " SCB-06-62	
11	" " E-2	
12	" " G-2a	

**JAY-BHF 0278(3)  
 SHEET 66 OF 72  
 FOR REFERENCE  
 ONLY**

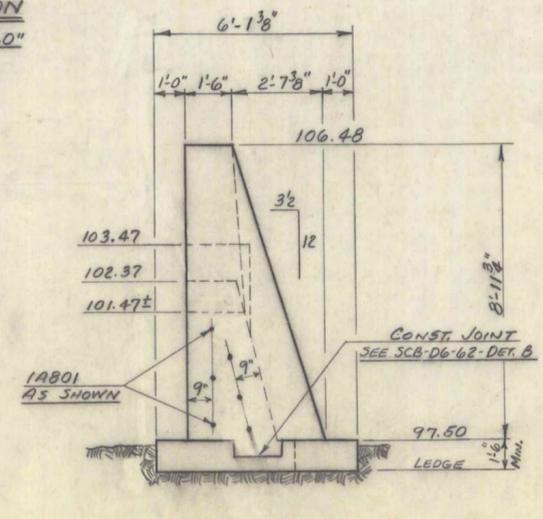
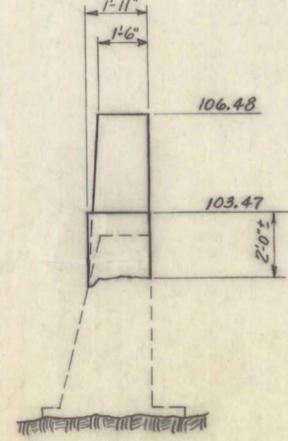
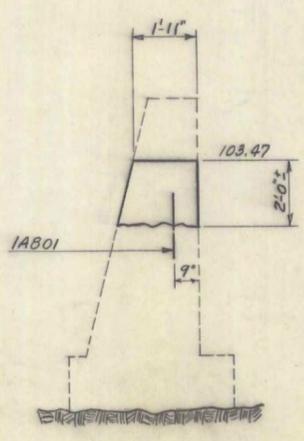
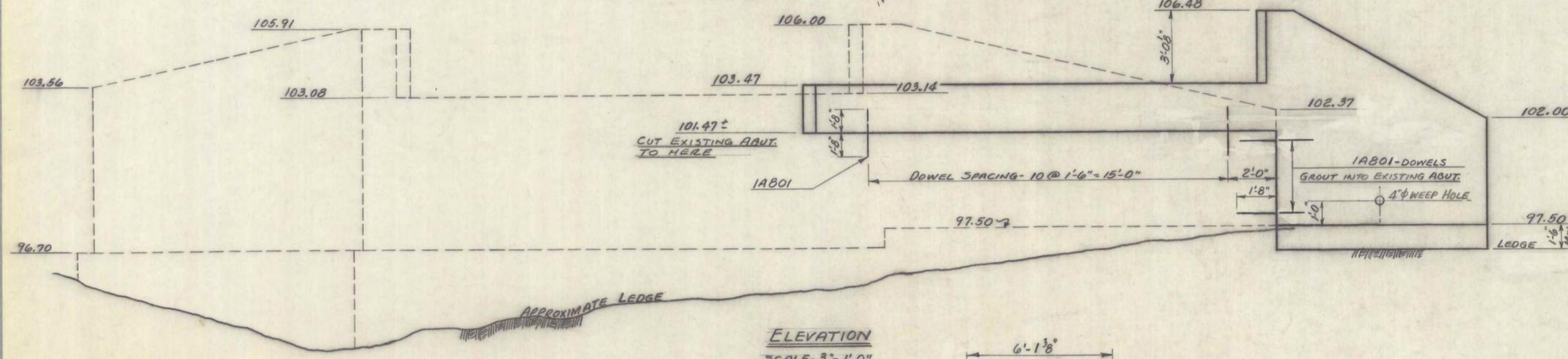
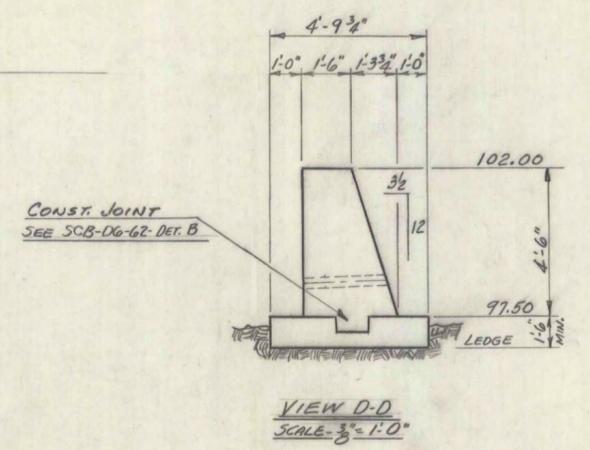
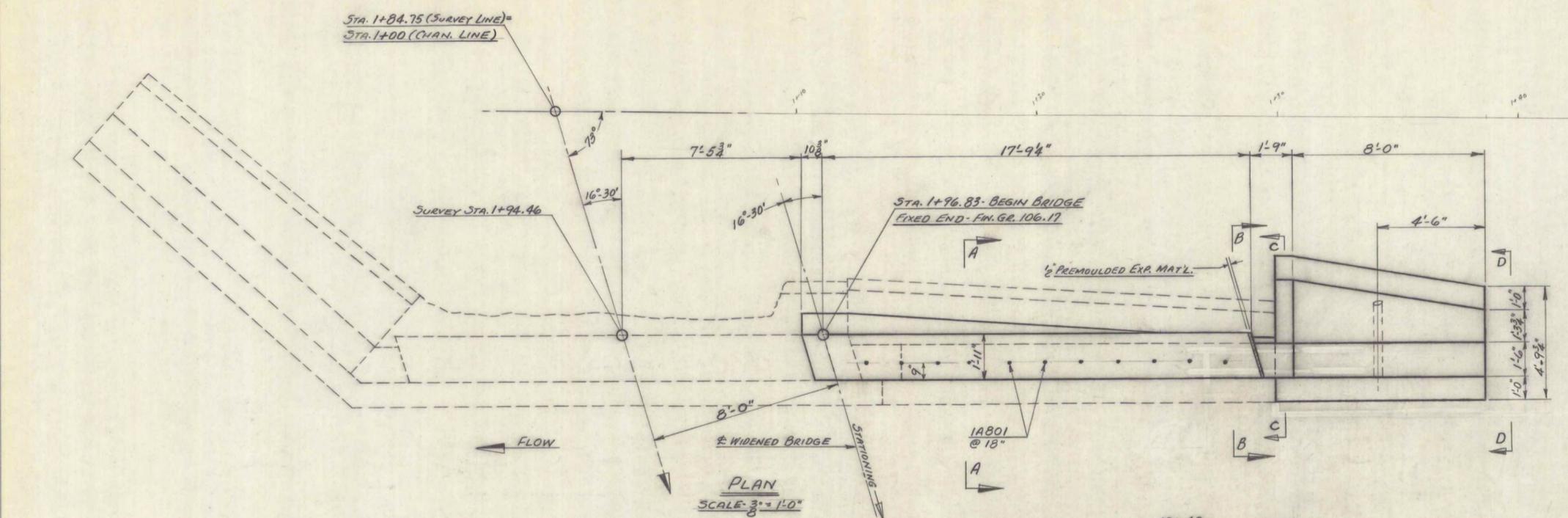


JAY  
 JAY PEAK BRIDGE  
 STATE MAINTENANCE  
 1222-494

PLAN  
 CHECKED BY: [Signature]  
 DATE: 1/16/63  
 NO. OF WAY CHECKED: 1

PROJECT: Jay  
 NUMBER: ST-1222-494  
 TYPE: Conc. T-Beam Widening  
 CONTRACTOR: [Blank]  
 YEAR: 1963  
 LOCATION: Jay - Tracy Highway - Log Sta. 95+98

B.M. #1 - SPOT ON LEDGE - 58' RT. STA. 0+90



**JAY-BHF 0278(3)  
SHEET 67 OF 72  
FOR REFERENCE ONLY**

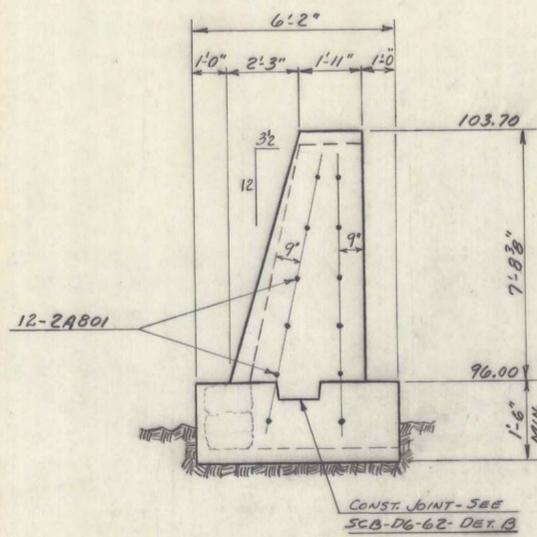
ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.			9	
401-B	CONC. CLASS B (MOD.)	C.Y.			12	
402	REINF. STEEL (SEE REINF. STEEL DETS.)	LBS.				
407	ASPHALTIC-ASB. COATING	S.Y.				
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
502-A	UNTREATED TIMBER PILING	L.F.				
101-B	SOLID ROCK EXCAVATION	C.Y.			4	
521	STONE FILL (HEAVY TYPE)	C.Y.			3	

**STATE OF VERMONT**  
DEPARTMENT OF HIGHWAYS

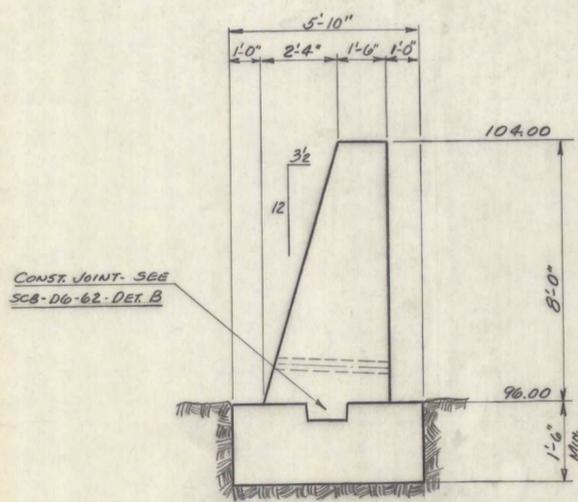
TOWN OF JAY  
JAY-TROY  
ROUTE NO.            LOG STA. 98+98

**DETAILS OF ABUTMENT NO. 1**  
JAY PEAK BRIDGE  
SCALE 3/8" = 1'-0"

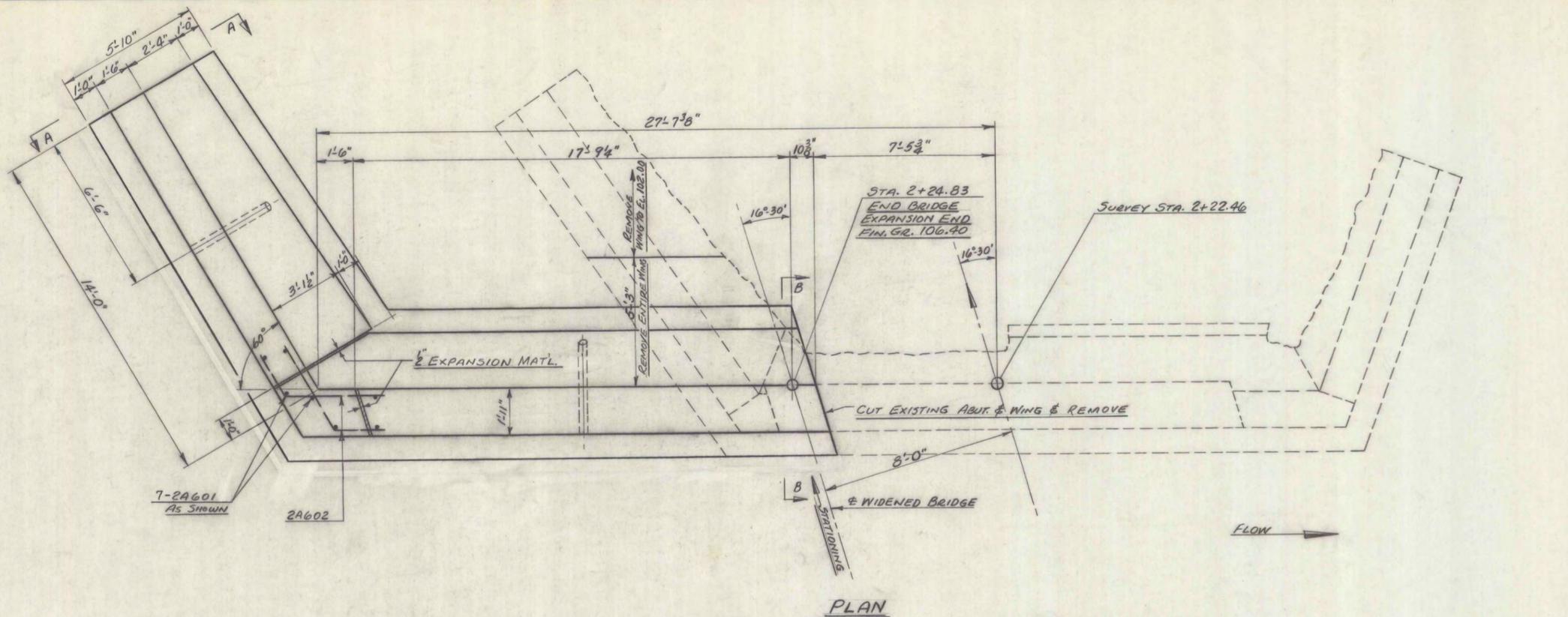
SURVEYED BY BUBLEY  
DRAWN BY RTB 2/63 CHECKED BY RND  
STATE MAINT.  
PROJECT NO. 1222-494  
SHEET 2 OF 12



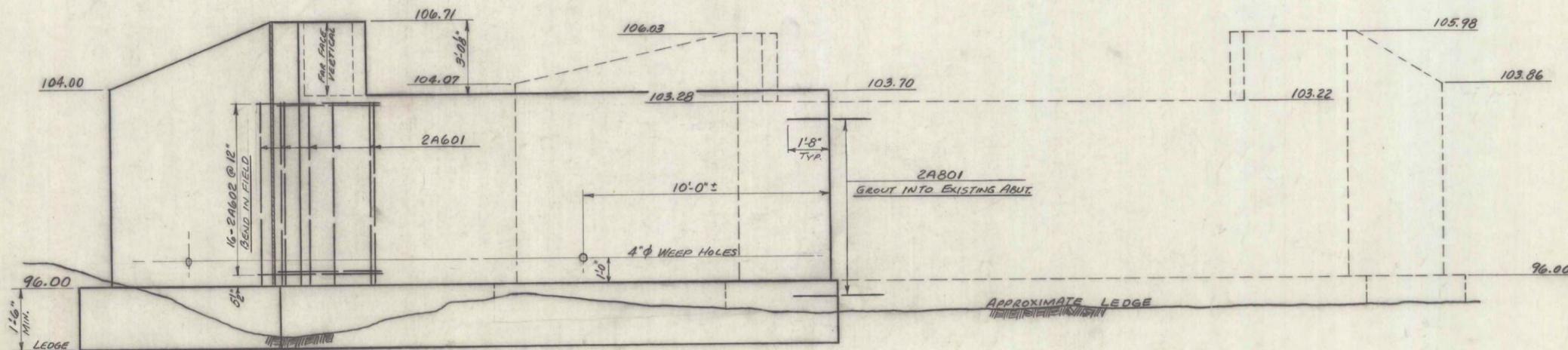
SECTION B-B



VIEW A-A



PLAN



ELEVATION



**JAY-BHF 0278(3)  
SHEET 68 OF 72  
FOR REFERENCE ONLY**

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C. Y.				
106-B	CHAN. EXCAV. OF ROCK	C. Y.				
106-C	UNCLASS. CHAN. EXCAV.	C. Y.				
107	STRUCT. EXCAV.	C. Y.			39	
401-B	CONC. CLASS B (MOD.)	C. Y.			39	
402	REINF. STEEL (SEE REINF. STEEL DETS.)	LBS.				
407	ASPHALTIC-ASB. COATING	S. Y.				
502-B	TREATED TIMBER PILING	L. F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L. F.				
502-A	UNTREATED TIMBER PILING	L. F.				
101-B	SOLID ROCK EXCAVATION	C. Y.			6	
521	STONE FILL (HEAVY TYPE)	C. Y.			6	

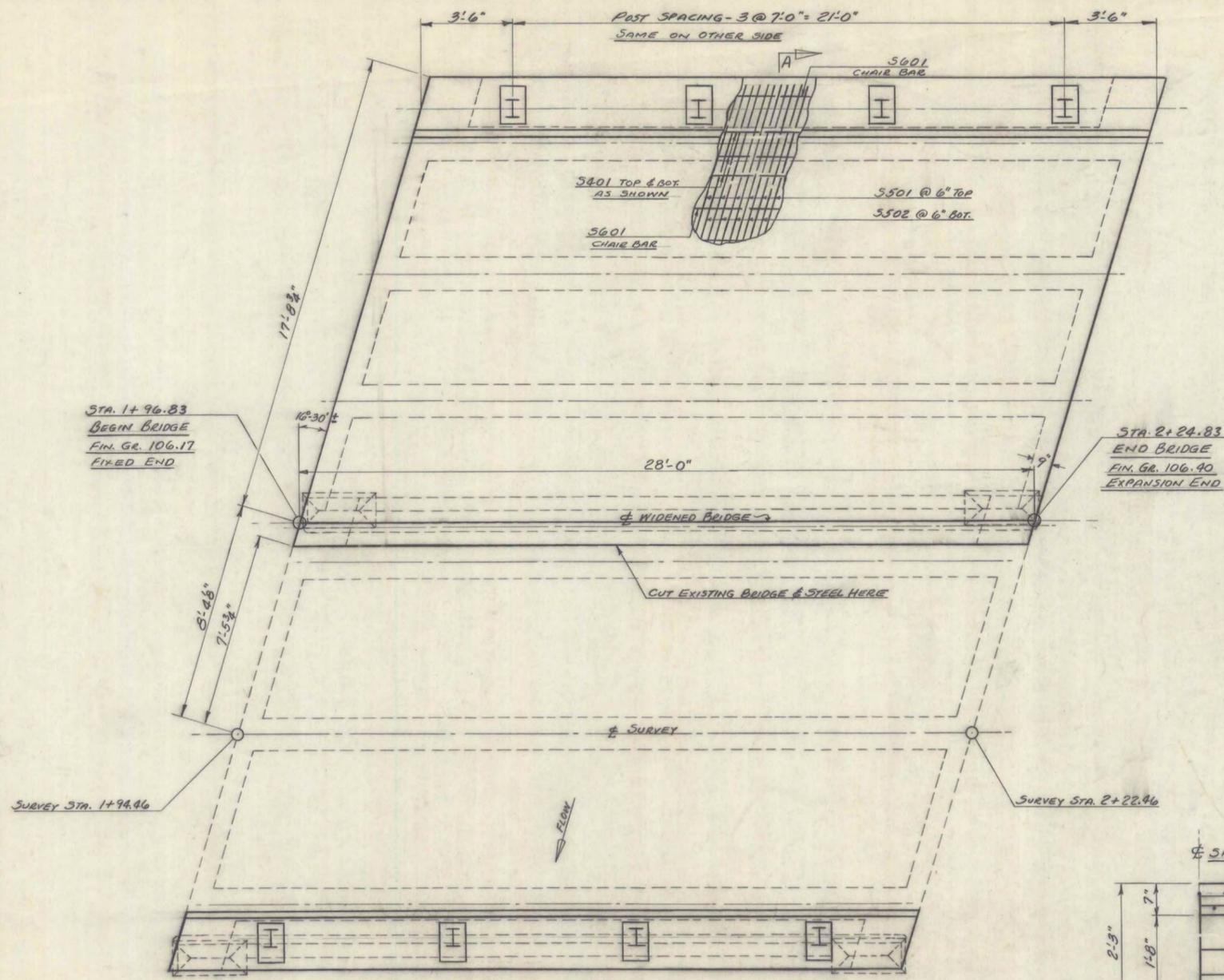
**STATE OF VERMONT**  
DEPARTMENT OF HIGHWAYS

TOWN OF JAY  
ROUTE NO. JAY-TRDY LOG STA. 98+98

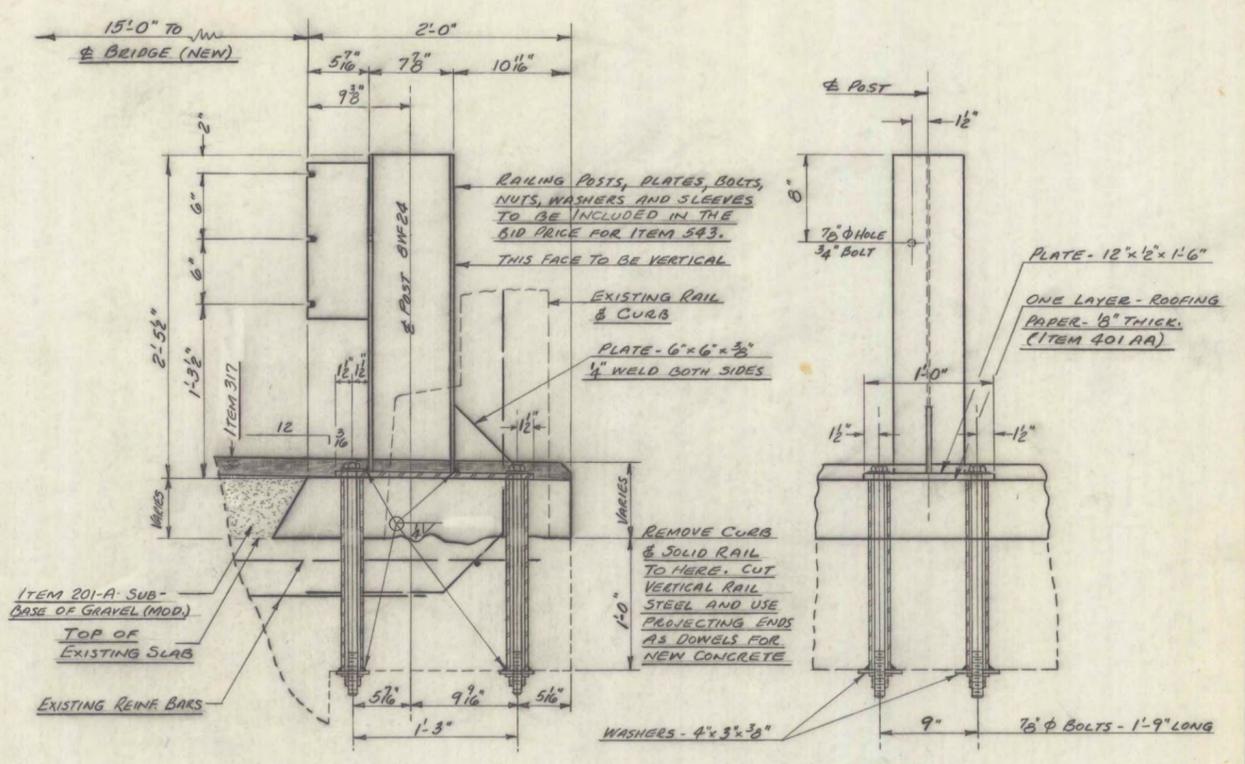
DETAILS OF ABUTMENT NO. 2  
JAY PEAK BRIDGE

SCALE  $\frac{3}{8}'' = 1'-0''$

SURVEYED BY BURLEY  
DRAWN BY RTB*/63 CHECKED BY RND  
PROJECT NO. STATE MAINT 1222-494  
SHEET 3 OF 12

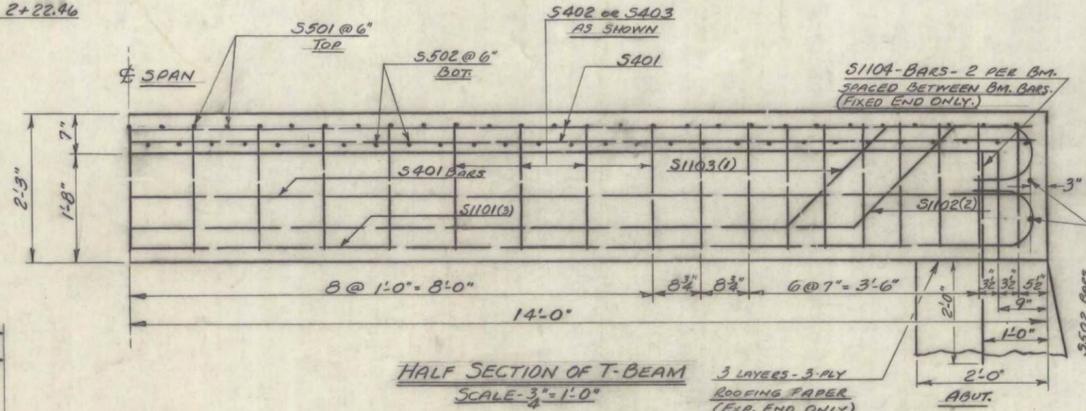


PLAN  
SCALE: 3/8" = 1'-0"

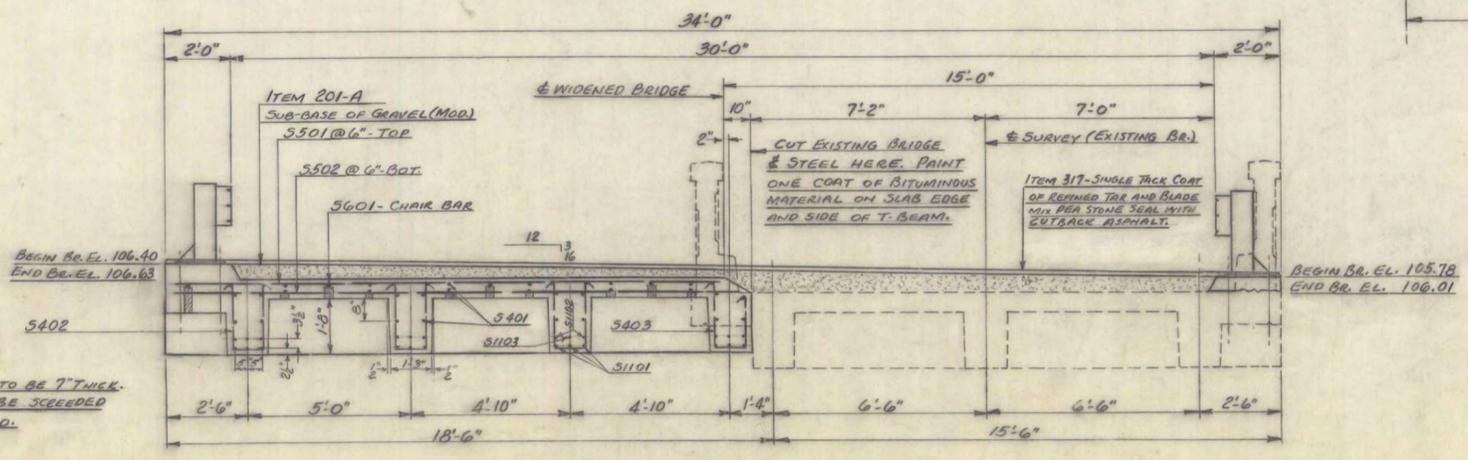


DETAIL OF GUARD RAIL POST (DOWNSTREAM)  
SCALE: 1/2" = 1'-0"  
(UPSTREAM POSTS SIMILAR)

- NOTES-**
1. FOR ADDITIONAL RAILING DETAILS SEE STD. DNG. G-3. RAILING POSTS TO BE NORMAL TO GRADE.
  2. RAIL POSTS, AND ALL RELATED HARDWARE, TO BE GALVANIZED.



HALF SECTION OF T-BEAM  
SCALE: 3/4" = 1'-0"



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

NOTE - SLAB TO BE 7" THICK. SURFACE TO BE SKEEDED AND FLOATED.

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C. Y.				
106-B	CHAN. EXCAV. OF ROCK	C. Y.				
106-C	UNCLASS. CHAN. EXCAV.	C. Y.				
107	STRUCT. EXCAV.	C. Y.				
401-AA	CONC. CLASS AA (MOD.)	C. Y.			26	
402	REINF. STEEL (SEE REINF. STEEL DETS)	LBS.				
407	ASPHALTIC-ASB. COATING	S. Y.				
502-B	TREATED TIMBER PILING	L. F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L. F.				
502-A	UNTREATED TIMBER PILING	L. F.				
201-A	SUB-BASE OF GRAVEL (MOD.)	C. Y.			18	
317	SINGLE TACK COAT OF REF. TAR & BLADE MIX PER STONE SEAL WITH CUTBACK ASPHALT	GAU.	BRIDGE - 127		1258	
543	THREE CHAIR GUARD RAIL WITH STEEL POSTS (MOD)	L. F.	ROADWAY - 1131		56	
574	PREPARING SUPERSTRUCTURE FOR WIDENING	L. S.			1	

**JAY-BHF 0278(3)  
SHEET 69 OF 72  
FOR REFERENCE ONLY**

STATE OF VERMONT  
DEPARTMENT OF HIGHWAYS

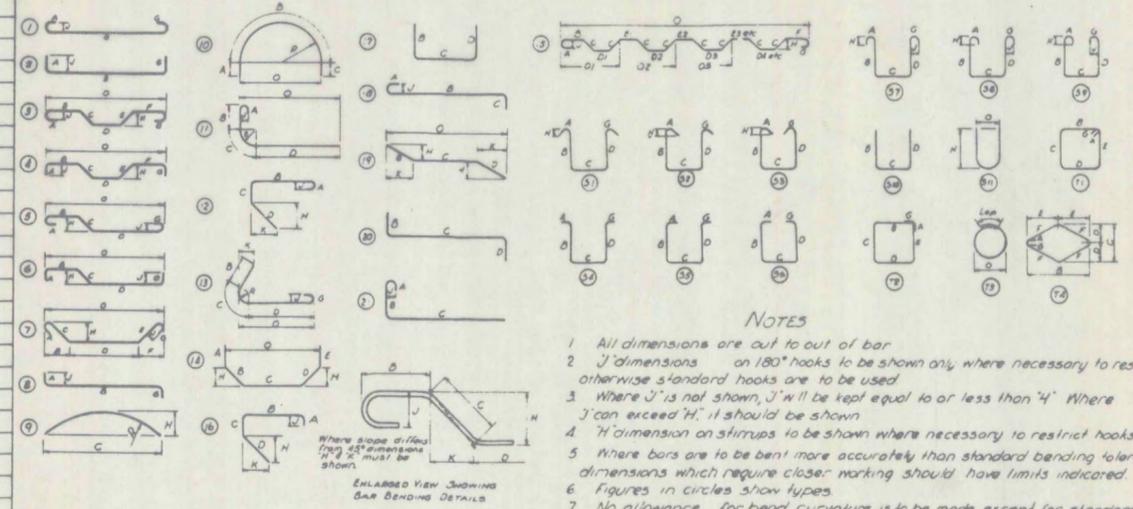
TOWN OF JAY  
ROUTE NO. JAY-TRAY HIGHWAY LOG STA. 98+98

**SUPERSTRUCTURE DETAILS**  
**JAY PEAK BRIDGE**

SCALE AS NOTED  
SURVEYED BY BURLEY  
DRAWN BY RTB CHECKED BY RND  
PROJECT NO. STATE MAINT. 1222-474  
SHEET 4 OF 12

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
1																	
2																	
3																	
4																	
5																	
6																	
7																	
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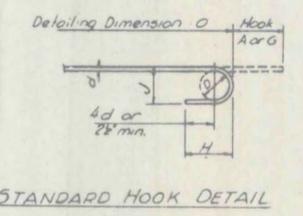
TYPICAL BAR BENDS



NOTES

- All dimensions are out to out of bar.
- J dimensions on 180° hooks to be shown only where necessary to restrict hook size, otherwise standard hooks are to be used.
- Where J is not shown, J will be kept equal to or less than 4". Where J can exceed H, it should be shown.
- H dimension on stirrups to be shown where necessary to restrict hooks.
- Where bars are to be bent more accurately than standard bending tolerances, bending dimensions which require closer marking should have limits indicated.
- Figures in circles show types.
- No allowance for bend curvature is to be made except for standard hook & radii in excess of same.

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
163																	
164	17	8	3-4	1A801	STR.												
165																	
166																	
167																	
168	16	6	6-0	2A602	STR.												
169	7	6	7-6	2A601	STR.												
170	12	8	3-4	2A801	STR.												
171																	
172																	
173																	
174																	
175	35	4	27-6	5401	STR.												
176	55	5	17-3	5501	STR.												
177	60	5	18-0	5502	STR.												
178	4	6	27-6	5601	STR.												
179	8	11	4-0	51104	STR.												
180																	
181	35	4	5-5	5403	SI	0-5	2-0	1-0	1-7								
182	105	4	5-10	5402	SI	0-5	2-0	1-0	2-0								
183	12	11	29-10	51101	1	1-2	27-6										
184	8	11	31-1	51102	3	1-2	1-3	2-1 1/2	22-0	2-1 1/2	1-3	1-2	1-6	0-10			27-6
185	4	11	31-1	51103	3	1-2	2-3	2-1 1/2	20-0	2-1 1/2	2-3	1-2	1-6	0-10			27-6
186																	
187																	
188																	
189																	
190																	



BAR SIZES

Equivalent Size	Present (Numbers)
1/4"	#2
3/8"	#3
1/2"	#4
5/8"	#5
3/4"	#6
7/8"	#7
1"	#8
1 1/8"	#9
1 1/4"	#10
1 3/8"	#11

8. Bar reinforcement metal shall conform to the requirements of the Standard Specifications for new Billet-Steel Concrete Reinforcement Bars (Intermediate Grade) Serial Designation A.S.H.O. M31-49 or its latest revision. All bars shall be deformed to conform with A.S.T.M. Specifications A305-49.

**NOTE-**  
 MINIMUM BENDS TO BE AS FOLLOWS:  
 STIRRUPS AND TIE BARS SHALL BE BENT AROUND A PIN HAVING A DIAMETER NOT LESS THAN TWO TIMES THE MINIMUM THICKNESS OF THE BAR. BENDS FOR OTHER BARS SHALL BE MADE AROUND A PIN HAVING A DIAMETER NOT LESS THAN SIX TIMES THE MINIMUM THICKNESS EXCEPT FOR BARS LARGER THAN 1 INCH, IN WHICH CASE THE BENDS SHALL BE MADE AROUND A PIN OF EIGHT BAR DIAMETERS.

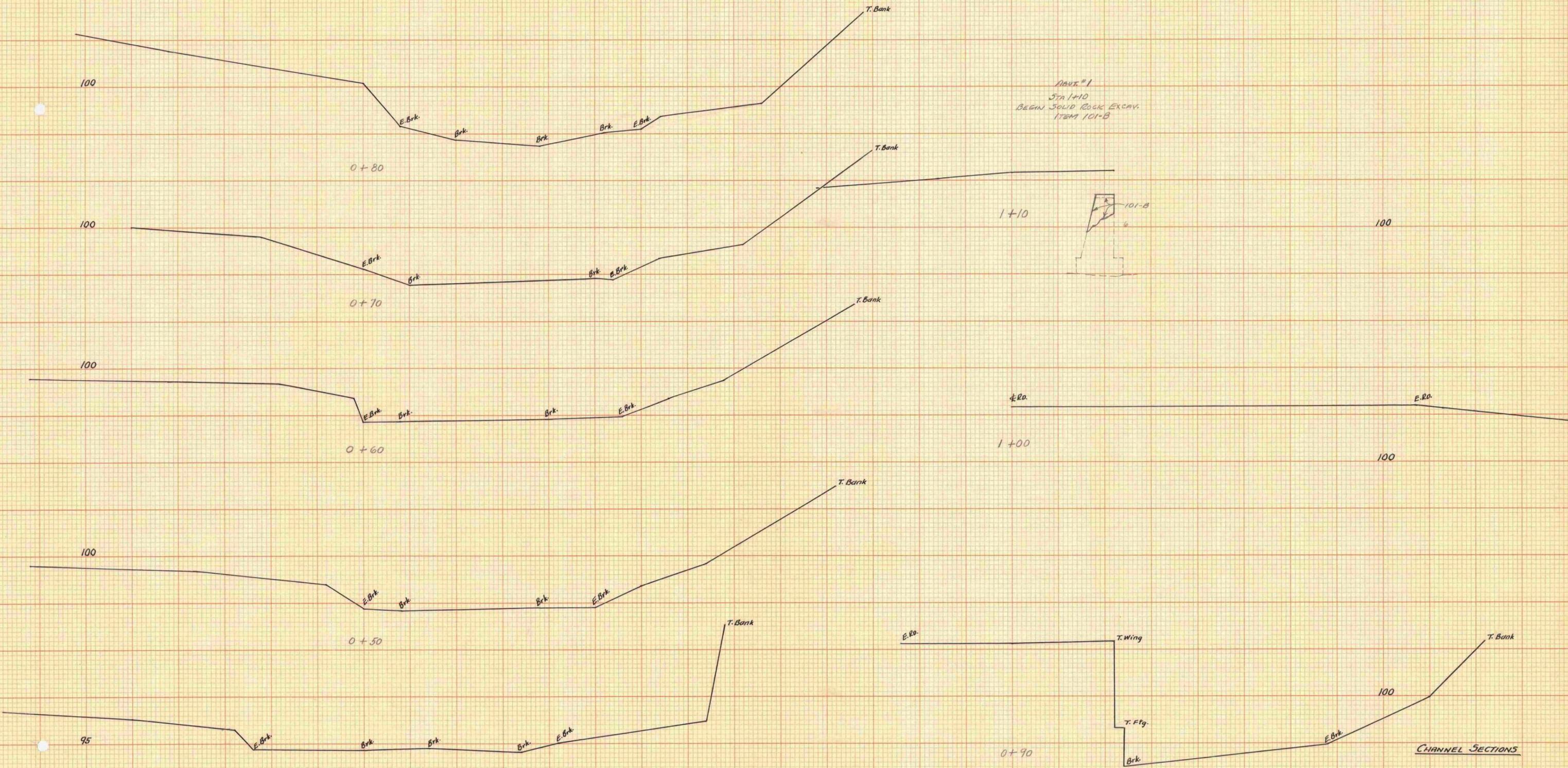
ESTIMATED QUANTITIES

Location	Pounds
ABUTMENT NO.1	152
ABUTMENT NO.2	330
SUPERSTRUCTURE	7514
TOTAL	7996

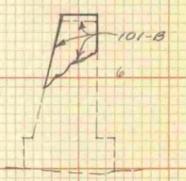
JAY  
 JAY-TROY HIGHWAY  
 JAY PEAK BRIDGE  
 STATE MAINTENANCE-1222-494  
 REINFORCING STEEL DETAILS

JAY-BHF 0278(3)  
 SHEET 70 OF 72  
 FOR REFERENCE ONLY

DRAWN BY- RTB.  
 CHECKED BY- BND. SHEET 5 OF 12



ABUT. #1  
 STA 1+10  
 BEGIN SOLID ROCK EXCAV.  
 ITEM 101-B

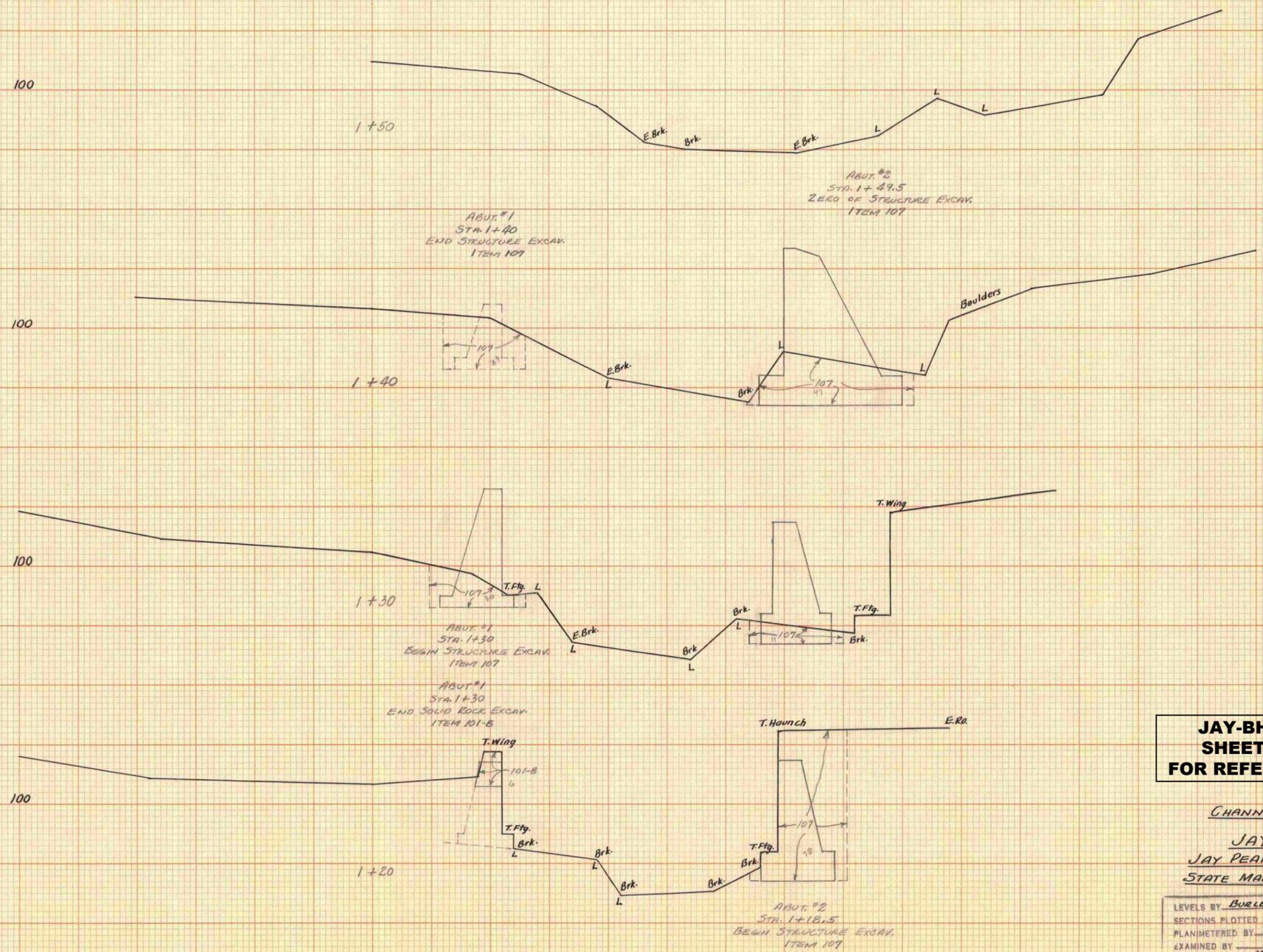


**JAY-BHF 0278(3)  
 SHEET 71 OF 72  
 FOR REFERENCE ONLY**

**JAY  
 JAY PEAK BRIDGE  
 STATE MAINTENANCE**

LEVELS BY BURLEY CKD. BY R.B.  
 SECTIONS PLOTTED BY R.T.B. CKD. BY R.T.B.  
 PLANIMETERED BY R.T.B. CKD. BY _____  
 EXAMINED BY _____  
 1222 NO. 494 FILED  
 SHEET 6 OF 12

**1 INCH = 5 FEET**



**JAY-BHF 0278(3)  
SHEET 72 OF 72  
FOR REFERENCE ONLY**

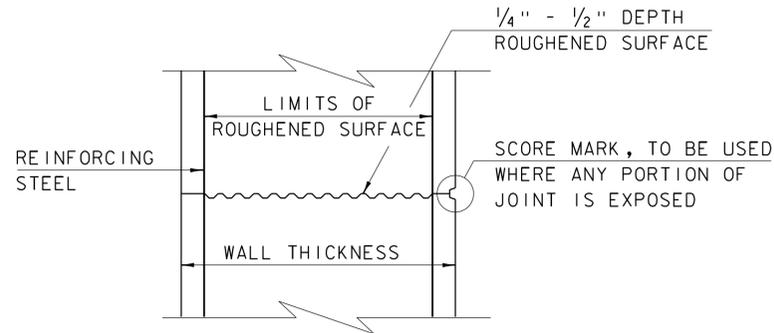
*CHANNEL SECTIONS*  
**JAY  
JAY PEAK BRIDGE  
STATE MAINTENANCE**

LEVELS BY <u>BURLEY</u>	CKD. BY <u>RTB</u>
SECTIONS PLOTTED BY <u>RTB</u>	CKD. BY <u>RTB</u>
PLANIMETERED BY <u>RTB</u>	CKD. BY <u>RTB</u>
EXAMINED BY <u>1222 NO. 494</u>	FILED
SHEET <u>7</u> OF <u>12</u>	

**1 INCH = 5 FEET**

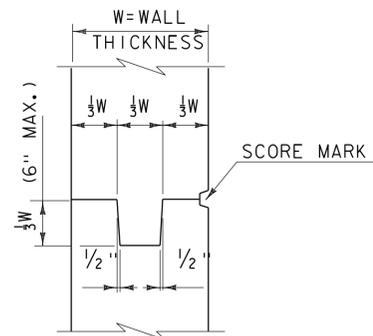
**CONCRETE GENERAL NOTES**

1. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1"
2. REINFORCING STEEL SIZE AND SPACING SHOWN IN THE PLANS IS BASED ON 60 KSI STEEL, UNLESS NOTED OTHERWISE. WITH THE ENGINEER'S PERMISSION, BAR SIZE AND SPACING MAY BE MODIFIED ACCORDING TO THE LATEST AASHTO LRFD BRIDGE DESIGN SPECIFICATION AND STRUCTURES DESIGN MANUAL WHEN USING HIGHER STRENGTH STEEL.

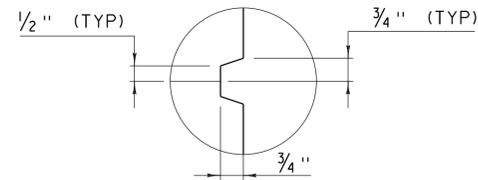


**TYPICAL HORIZONTAL CONSTRUCTION JOINT**  
(NOT TO SCALE)

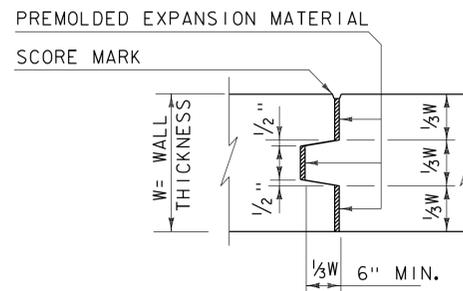
1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.



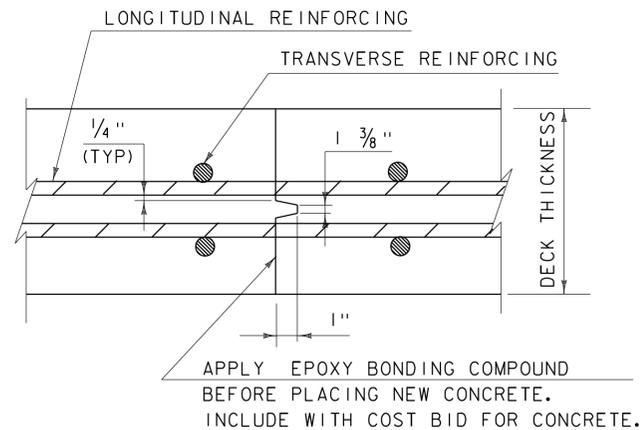
**TYPICAL CONCRETE CONSTRUCTION JOINT**  
(NOT TO SCALE)



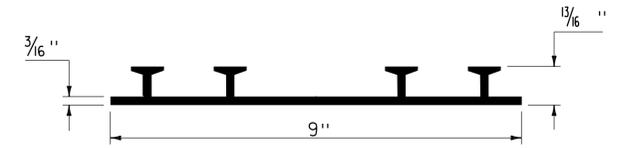
**SCORE MARK DETAIL**  
(NOT TO SCALE)



**TYPICAL CONCRETE EXPANSION JOINT**  
(NOT TO SCALE)



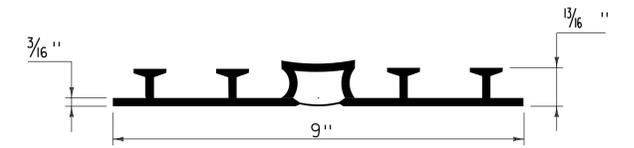
**TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS**  
(NOT TO SCALE)



**P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS**  
(NOT TO SCALE)

PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

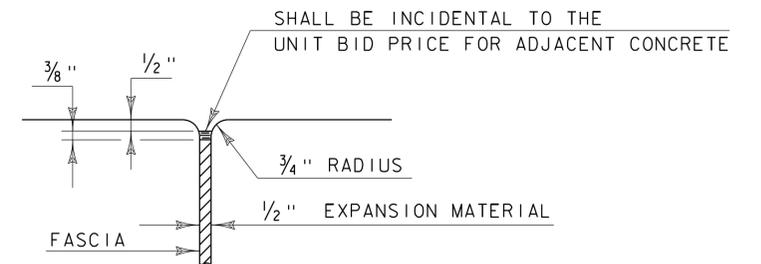
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



**P.V.C. WATERSTOP FOR EXPANSION JOINTS**  
(NOT TO SCALE)

PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



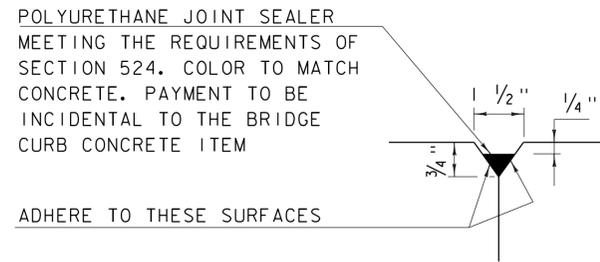
**JOINT BETWEEN FASCIA AND WINGWALL**  
(NOT TO SCALE)

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
FEBRUARY 9, 2012	REBAR SUBSTITUTION ALLOWANCE ADDED TO CONCRETE GENERAL NOTES.

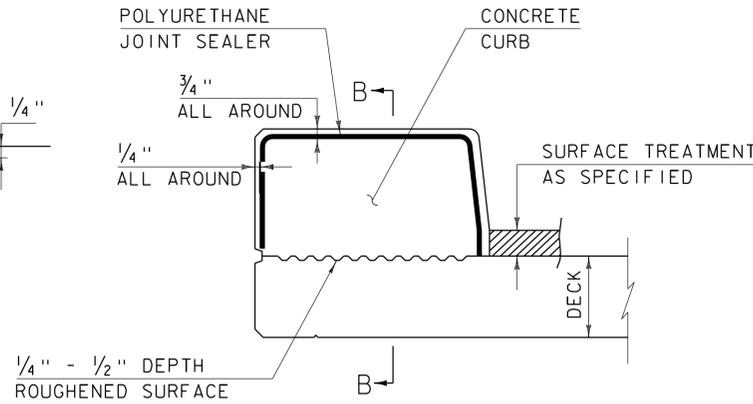
**CONCRETE  
DETAILS AND NOTES**



**STRUCTURES  
DETAIL  
SD-501.00**

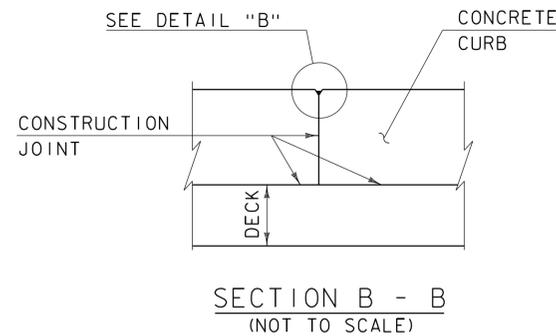


DETAIL "B"  
(NOT TO SCALE)

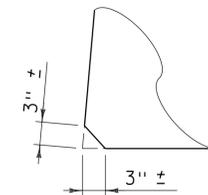


CONCRETE CURB JOINT SECTION  
(NOT TO SCALE)

1. SEE TYPICAL HORIZONTAL CONSTRUCTION JOINT DETAIL FOR ADDITIONAL INFORMATION



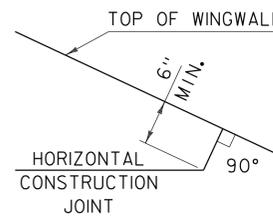
SECTION B - B  
(NOT TO SCALE)



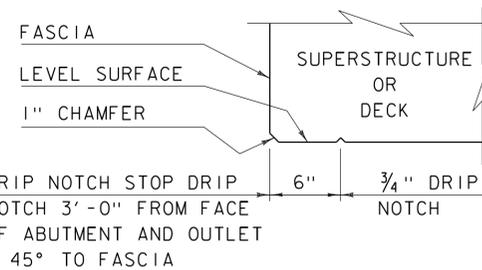
ACUTE ANGLE  
CLIP DETAIL  
(NOT TO SCALE)

CONCRETE CURB JOINT NOTES

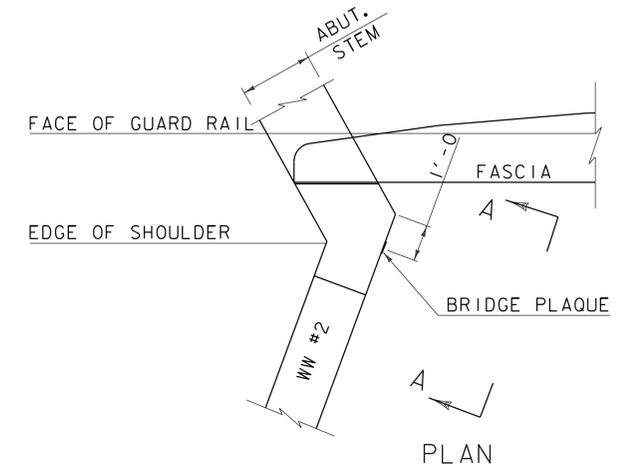
1. CONCRETE CURBS MAY BE PLACED IN ONE CONTINUOUS OPERATION IF AN APPROVED SHRINKAGE REDUCING ADMIXTURE LISTED IN THE SPECIAL PROVISIONS IS USED WITH THE CONCRETE MIX DESIGN. PAYMENT FOR THE SHRINKAGE REDUCING ADMIXTURE WILL BE INCIDENTAL TO THE BRIDGE CURB CONCRETE ITEM.
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 15'-0" CENTER TO CENTER AND 2'-0" MINIMUM FROM THE CENTER OF NEAREST BRIDGE RAILING POST.
3. ON MULTI-SPAN CONTINUOUS SUPERSTRUCTURES, REGARDLESS OF WHETHER APPROVED SHRINKAGE REDUCING ADMIXTURE IS USED, CURB JOINTS SHALL BE LOCATED OVER THE CENTERLINE OF PIERS AND 7'-0" EACH SIDE OF THE CENTERLINE OF EACH PIER.
4. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.
5. LONGITUDINAL REINFORCING SHALL BE CONTINUOUS THROUGH CURB CONSTRUCTION JOINTS. CURB STIRRUP BARS SHALL BE TURNED AS NECESSARY TO MAINTAIN COVER IN THE FLARED CURB ENDS.
6. THE JOINT SPACING AND DETAILS SHOWN SHALL APPLY TO SIDEWALKS WHEN SHOWN IN THE PLANS.



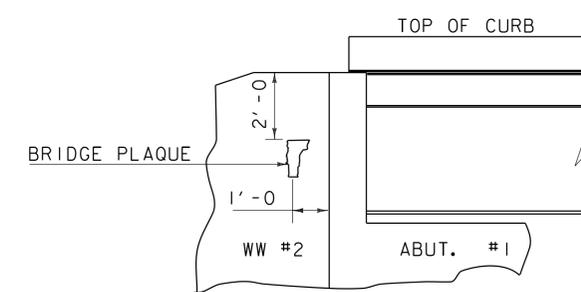
HORIZONTAL WINGWALL  
CONSTRUCTION JOINT  
(NOT TO SCALE)



DRIP NOTCH DETAIL  
(NOT TO SCALE)



PLAN



VIEW "A - A"

BRIDGE PLAQUE  
(NOT TO SCALE)

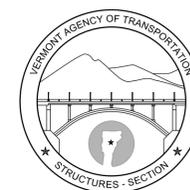
THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER.

PAYMENT FOR INSTALLATION OF THE BRIDGE PLAQUE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

REVISIONS

MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
JUNE 4, 2010	MODIFIED AND ADDED TWO DETAILS
OCTOBER 10, 2012	MODIFIED HORZ. JOINT WINGWALL ADD 6" MIN. DIMENSION

CONCRETE  
DETAILS AND NOTES



STRUCTURES  
DETAIL  
SD-502.00

ASPHALTIC PLUG JOINT NOTES

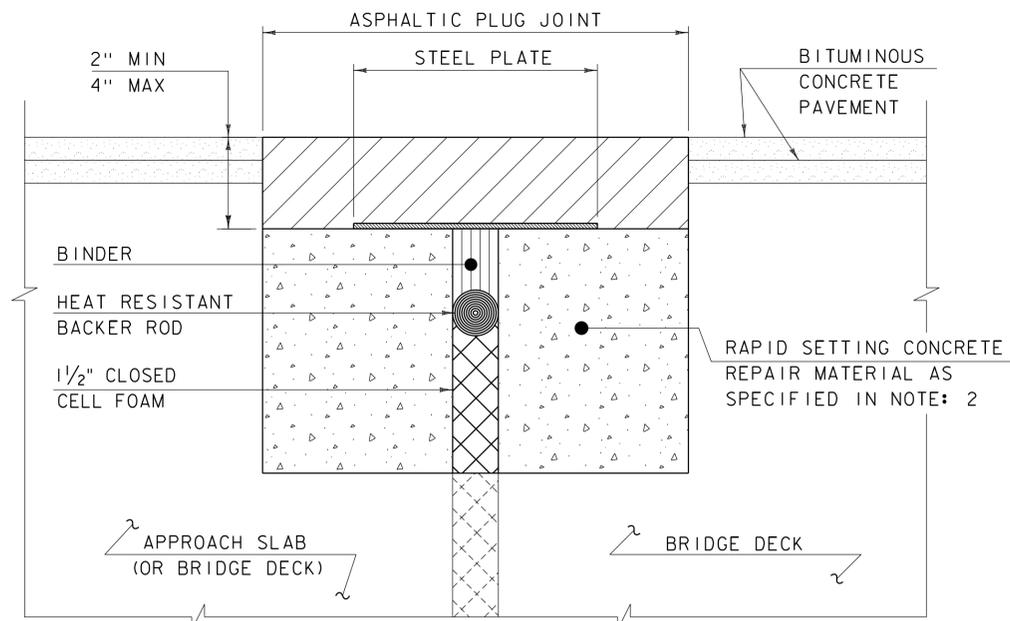
INSTALLATION:

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT, MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
5. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
6. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

WEATHER LIMITATIONS

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

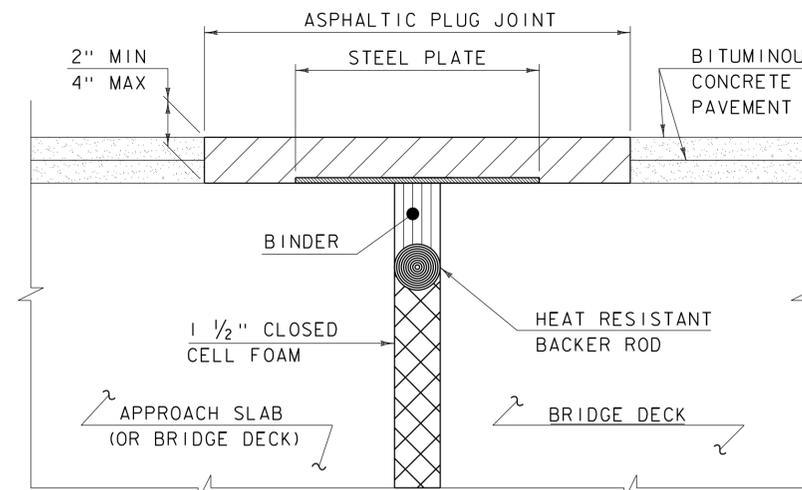
1. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
2. THE ROAD SURFACE IS DRY.
3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.



ASPHALTIC PLUG JOINT DETAIL - REHAB

NOTES:

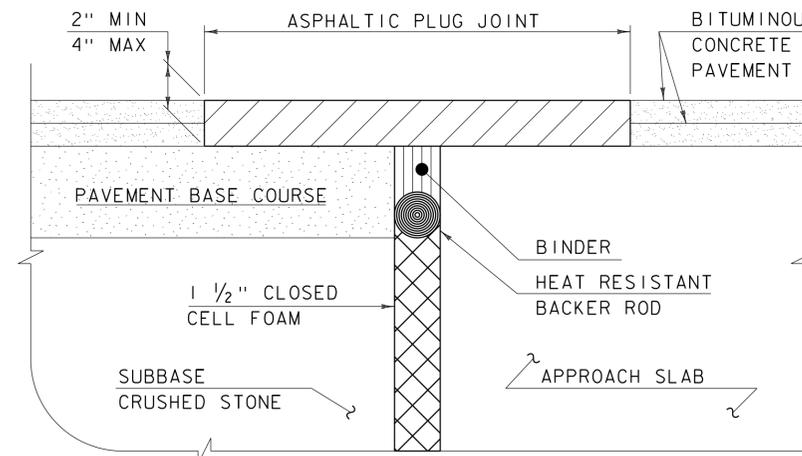
1. THE CONTRACTOR SHALL REMOVE ALL ASPHALTIC PLUG JOINT MATERIAL AND DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER. REMOVAL OF THE FIRST 4 INCHES OF MATERIAL SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG. ANY REMOVAL OF MATERIAL GREATER THAN 4 INCHES SHALL BE INCLUDED IN THE BID PRICE OF ITEM 580.20 RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE.
2. THE CONTRACTOR SHALL REPLACE REMOVED MATERIAL THAT IS LESS THAN 4" FROM FINISHED GRADE WITH ASPHALTIC PLUG JOINT MATERIAL MEETING THE REQUIREMENTS OF SUBSECTION 707.15. ALL REMOVED MATERIAL THAT IS GREATER THAN 4 INCHES FROM FINISHED GRADE SHALL BE REPLACED WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.
4. PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.



ASPHALTIC PLUG JOINT DETAIL "A" - NEW

NOTE:

PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER.



ASPHALTIC PLUG JOINT DETAIL "B" - NEW

DETAILS ON THIS SHEET ARE NOT TO SCALE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
AUGUST 29, 2011	ADD DETAIL "B" AND REV. NOTES

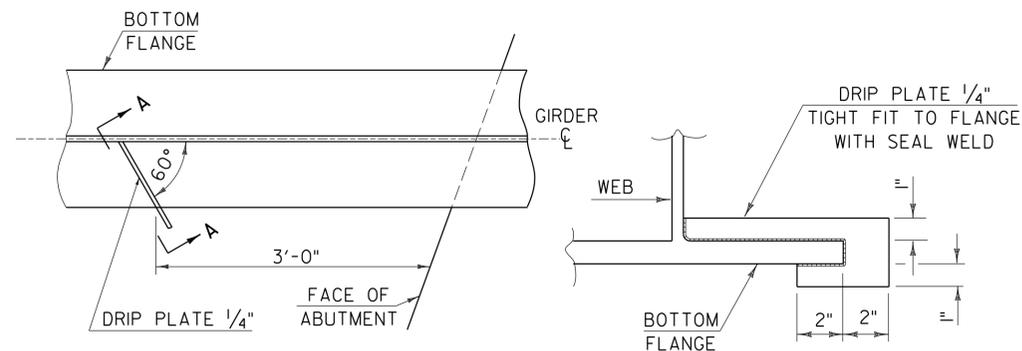
BRIDGE JOINT  
ASPHALTIC PLUG



STRUCTURES  
DETAIL  
SD-516.10

STRUCTURAL STEEL GENERAL NOTES:

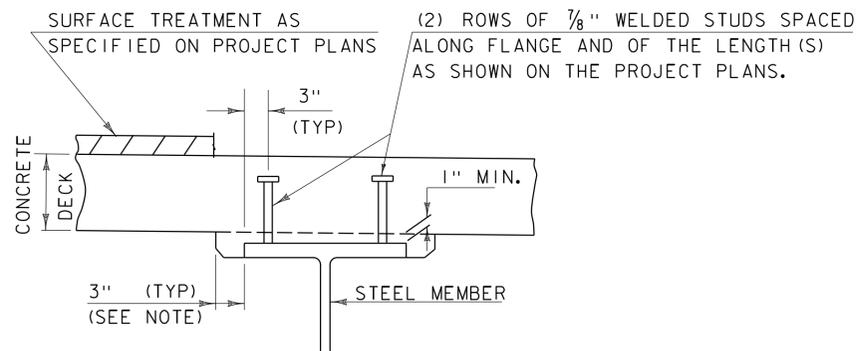
1. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH-STRENGTH BOLTS IN 15/16" DIAMETER HOLES, PER SUBSECTION 506.I9, UNLESS OTHERWISE SPECIFIED.
2. ALL HOLES IN THE WEBS OF THE FASCIA GIRDERS THAT ARE NOT OTHERWISE FILLED, SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.I9.
3. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.I0.
4. ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
5. STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.01 OF THE STANDARD SPECIFICATIONS.
6. ENDS OF GIRDERS ARE TO BE VERTICAL IN THEIR FINAL POSITION.
7. AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF THE GIRDERS SHALL BE TAKEN AS DIRECTED BY THE RESIDENT ENGINEER FOR USE IN DETERMINING FINISHED GRADES.



PLAN DRIP PLATE

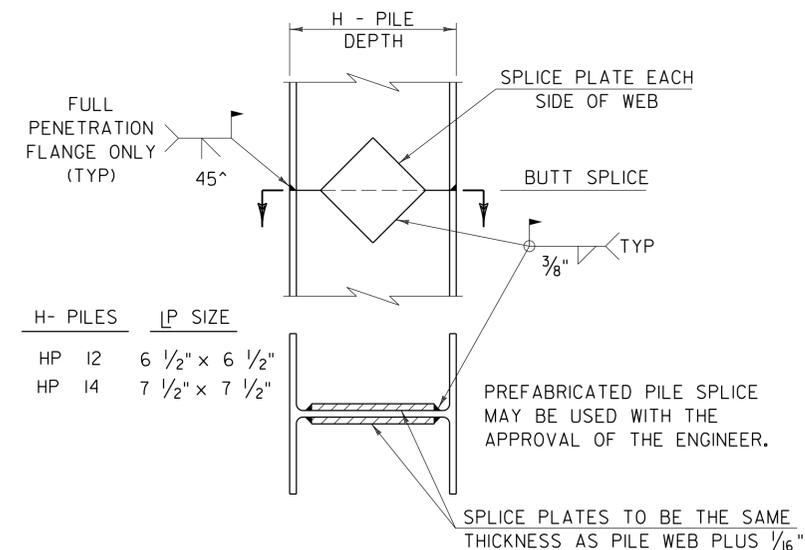
SECTION A - A

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



NOTE:  
THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. ANY VOIDS RESULTING FROM FORMING SYSTEM ELEMENTS SHALL BE FILLED WITH JOINT SEALER, POLYURETHANE MEETING THE REQUIREMENTS OF SECTION 524. THE COST OF THE JOINT SEALER, POLYURETHANE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

HAUNCH AND SHEAR CONNECTOR DETAIL

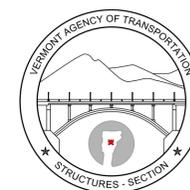


DETAIL OF PILE SPLICE

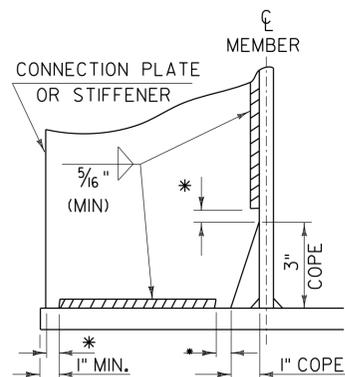
DETAILS ON THIS SHEET ARE "NOT TO SCALE" UNLESS NOTED OTHERWISE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
JUNE 4, 2010	MODIFIED NOTES

# STRUCTURAL STEEL DETAILS & NOTES

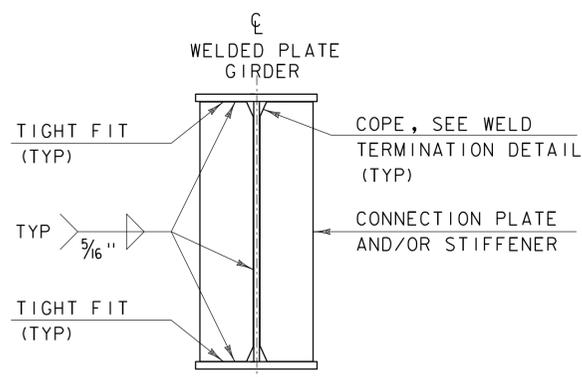


# STRUCTURES DETAIL SD-601.00



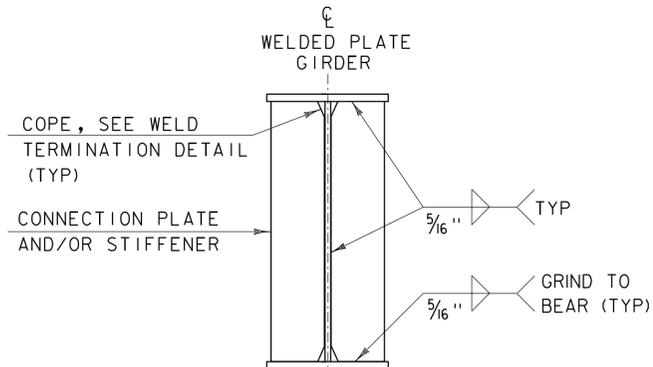
WELD TERMINATION AND COPING  
DETAILS FOR STEEL MEMBERS

*NO WELD FOR 3/8" MIN. 7/8" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)

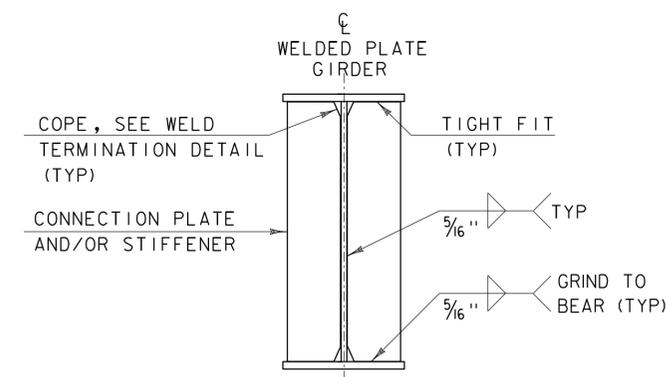


INTERMEDIATE CONNECTION PLATES  
AND/OR STIFFENERS FOR WELDED  
PLATE GIRDERS

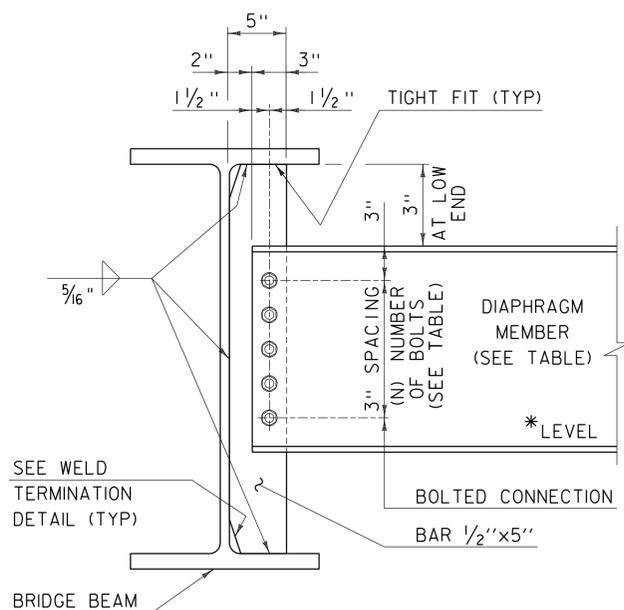
INTERMEDIATE DETAIL IS ONLY USED WHEN PLATE DOES NOT OCCUR AT AN ABUTMENT OR PIER.



ABUTMENT BEARING STIFFENERS  
AND/OR CONNECTION PLATES  
FOR WELDED PLATE GIRDERS



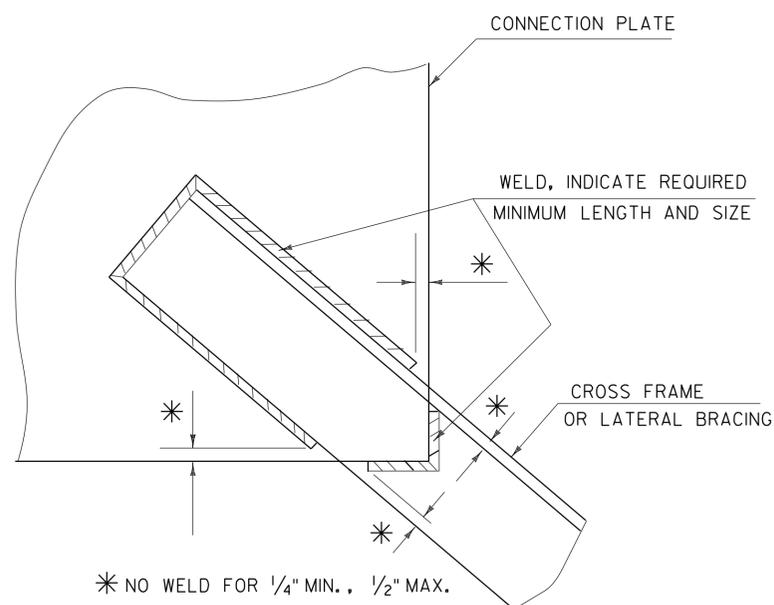
PIER BEARING STIFFENERS  
AND/OR CONNECTION PLATES  
FOR WELDED PLATE GIRDERS



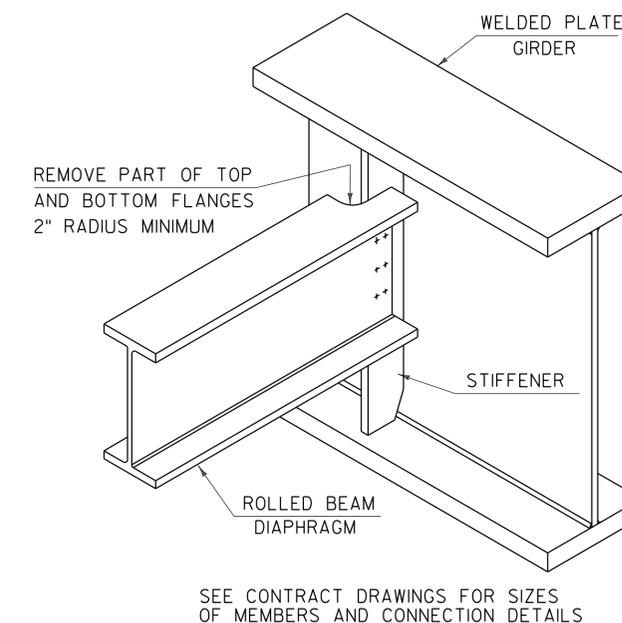
INTERMEDIATE DIAPHRAGMS  
FOR 24" TO 48" BRIDGE BEAMS

* IF CLEARANCE CANNOT BE MET, DIAPHRAGM MAY BE SLOPED.

	DEPTH	DIAPHRAGM MEMBER	(N) BOLTS
ROLLED BEAM	24"	C15x33.9	4
	30"		
	31"	MC18x42.7	5
	36"		
PLATE GIRDER WEB	37"	W21x44	6
	42"		
	31"	W27x84	7
	36"		
37"	W33x118	9	
42"			
	43"	W36x135	10
	48"		



WELD LOCATION DETAIL AT CROSS  
FRAMES AND LATERAL BRACING



ROLLED BEAM USED AS DIAPHRAGM

DETAILS ON THIS SHEET ARE "NOT TO SCALE" UNLESS NOTED OTHERWISE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
MAY 2, 2011	ADD INTERMEDIATE DIAPHRAGMS DETAIL & ADD NOT TO SCALE NOTE

# STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES



STRUCTURES  
DETAIL  
SD-602.00