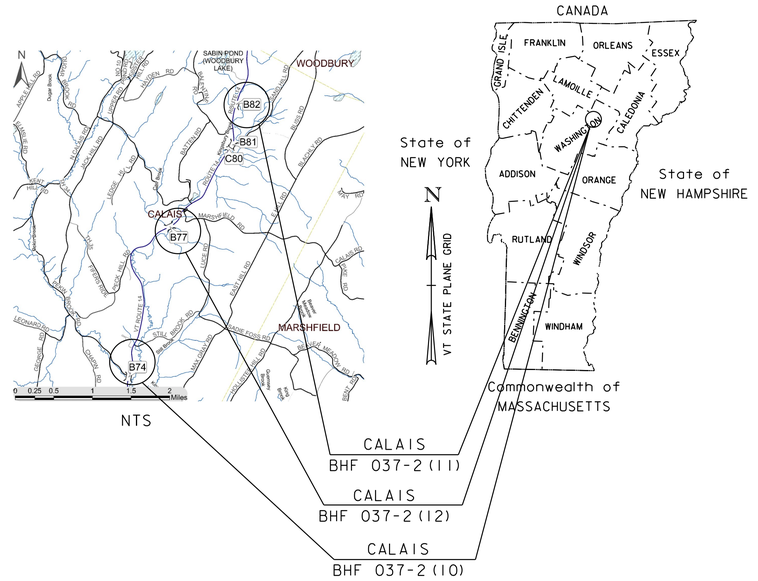
STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF CALAIS
COUNTY OF WASHINGTON



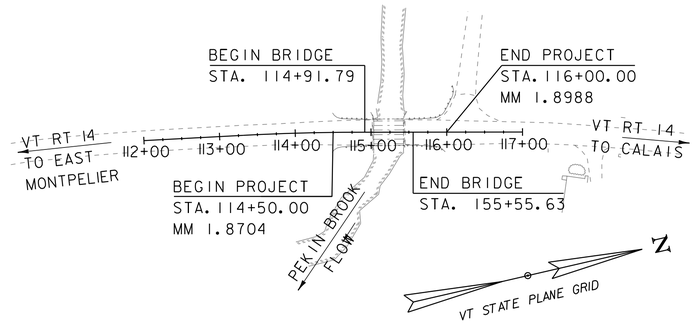
CALAIS BHF 037-2(10)

ROUTE NO : VT RTE 14, (RURAL MINOR ARTERIAL)
BRIDGE NO : 74

PROJECT LOCATION: 5.2 MILES NORTH OF JUNCTION WITH US ROUTE 2

PROJECT DESCRIPTION: REMOVAL AND REPLACEMENT OF BRIDGE #74 WITH RELATED APPROACH ROADWAY AND CHANNEL WORK.

LENGTH OF STRUCTURE: 63.84 FEET
LENGTH OF ROADWAY: 86.16 FEET
LENGTH OF PROJECT: 150.00 FEET



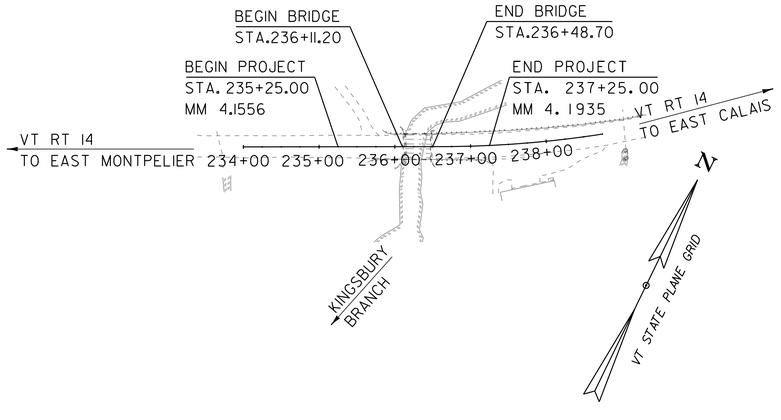
CALAIS BHF 037-2(12)

ROUTE NO : VT RTE 14, (RURAL MINOR ARTERIAL)
BRIDGE NO : 77

PROJECT LOCATION: 7.6 MILES NORTH OF JUNCTION WITH US ROUTE 2

PROJECT DESCRIPTION: REMOVAL AND REPLACEMENT OF BRIDGE #77 SUPERSTRUCTURE WITH RELATED APPROACH ROADWAY WORK.

LENGTH OF STRUCTURE: 37.50 FEET
LENGTH OF ROADWAY: 162.50 FEET
LENGTH OF PROJECT: 200.00 FEET



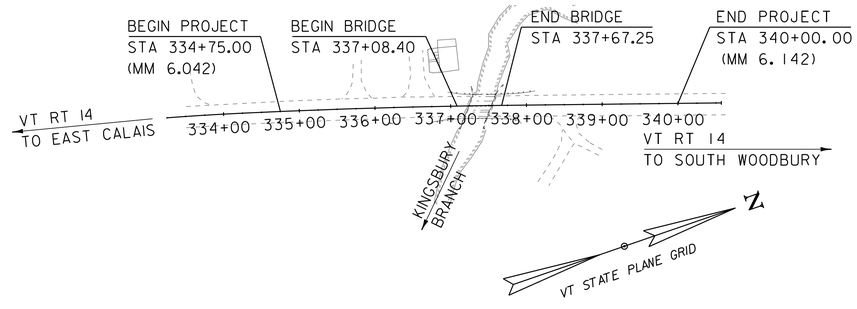
CALAIS BHF 037-2(11)

ROUTE NO: VT RTE 14, (RURAL MINOR ARTERIAL)
BRIDGE NO: BRIDGE 82

PROJECT LOCATION: 9.40 MILES NORTH OF JUNCTION WITH US ROUTE 2

PROJECT DESCRIPTION: REMOVAL AND REPLACEMENT OF BRIDGE #82 WITH RELATED APPROACH ROADWAY AND CHANNEL WORK.

LENGTH OF STRUCTURE: 58.85 FEET
LENGTH OF ROADWAY: 466.15 FEET
LENGTH OF PROJECT: 525.00 FEET



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 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 :	05-30-2012
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD83 (2007)

SCALE 1" = 100'-0"
100 0 100

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATOR
APPROVED _____ DATE _____

HIGHWAY DIVISION, CHIEF ENGINEER
APPROVED _____ DATE _____

PROJECT MANAGER : G. LAROCHE P.E.

PROJECT NAME : CALAIS
PROJECT NUMBER : BHF 037-2(10)

SHEET 1 OF 134 SHEETS

COMPOSITE DETAILS

BHF 037-2(10) BRIDGE 74

BHF 037-2(11) BRIDGE 82

STANDARDS LIST

B-5	SLOPE GRADING, EMBANKMENTS, MUCK	06-01-1994
D-4	VARIOUS DRAINAGE DETAILS	08-13-2007
D-30	UNDERDRAIN CONSTRUCTION DETAILS	08-13-2007
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-1995
E-136B	STATE ROUTE MARKER SIGN DETAILS	08-08-1995
E-193	PAVEMENT MARKING DETAILS	08-18-1995
G-1Bm	BOX BEAM GUARD RAIL	06-13-1997
G-19	GENERIC GRADING PLANS FOR GUARDRAIL END TERMINALS	11-15-2002
J-3	MAIL BOX SUPPORT DETAILS	08-07-1995
S-364A	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	02-02-2017
S-364B	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	02-02-2017
S-364C	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	02-02-2017
S-364D	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	02-02-2017
T-1	TRAFFIC CONTROL GENERAL NOTES	04-25-2016
T-2	TRAFFIC SIGN GENERAL NOTES	04-25-2016
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012
T-28	CONSTRUCTION SIGN DETAILS	08-06-2012
T-29	CONSTRUCTION SIGN DETAILS	08-06-2012
T-30	CONSTRUCTION SIGN DETAILS	08-06-2012
T-31	CONSTRUCTION SIGN DETAILS	08-06-2012
T-35	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS	08-06-2012
T-40	DELINEATORS AND MILEPOSTS	01-02-2013
T-42	BRIDGE NUMBER PLAQUE	04-09-2014
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01-02-2013
T-70	VERMONT REGULATORY SIGN DETAILS	04-25-2016

BHF 037-2(12) BRIDGE 77

COMPOSITE DETAILS

DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	2/9/2012
SD-502.00	CONCRETE DETAILS AND NOTES	10/10/2012
SD-516.10	BRIDGE JOINT ASHPALTIC PLUG	8/29/2011
SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES	6/4/2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	5/2/2011
HSD-400.01	SAFETY EDGE DETAILS	1/5/2018
HSD-621.06	GUARDRAIL TERMINAL LABEL DETAIL	2/27/2017

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(10) & (12) & (11)

FILE NAME: sl2bl44compIndex
PROJECT LEADER: G. LAROCHE
DESIGNED BY: F.BARROWS
INDEX OF SHEETS

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: F.BARROWS
SHEET 2 OF 134

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION 2018 STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8th EDITION, AND THEIR LATEST REVISIONS.
2. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.
3. THE CONTRACTOR SHALL PROVIDE A SITE-SPECIFIC EROSION PREVENTION AND SEDIMENT CONTROL PLAN IN ACCORDANCE WITH SECTION 653 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. ESTIMATED QUANTITIES FOR EPSC WORK HAVE BEEN INCLUDED IN THE CONTRACT FOR BIDDING PURPOSES. IF THE CONTRACTOR'S EPSC PLAN REQUIRES ITEMS OF WORK THAT ARE NOT INCLUDED IN THE PLANS, THE EXTRA WORK WILL BE PAID FOR AS PART OF ITEM 653.03 MAINTENANCE OF EPSC PLAN.

CONCRETE AND REINFORCING STEEL

4. WATER REPELLENT, SILANE, SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES, EXCEPT THE BOTTOM FACES OF THE SUPERSTRUCTURE BETWEEN DRIP NOTCHES. PAYMENT FOR SILANE WILL BE MADE UNDER ITEM 514.10 "WATER REPELLENT, SILANE".
5. PROVIDE REINFORCING AND MECHANICAL COUPLERS FOR TESTING IN ACCORDANCE WITH THE "VERMONT AGENCY OF TRANSPORTATION MATERIALS SAMPLING MANUAL".

TEMPORARY ROADWAY AND TRAFFIC CONTROL

6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, SUBMITTAL, AND IMPLEMENTATION OF SITE-SPECIFIC TRAFFIC CONTROL PLAN. THE SITE-SPECIFIC TRAFFIC CONTROL PLAN SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 641.
7. THE CONTRACTOR'S SITE-SPECIFIC TRAFFIC CONTROL PLAN SHALL MEET THE SPECIFIED DIMENSIONS HEREIN. REFERENCE PHASE 1 LAYOUT, PHASE 2 LAYOUT, AND PHASING TYPICAL SECTIONS FOR ADDITIONAL DETAILS AND REQUIREMENTS.
8. ANY REMOVAL, COVERING AND/OR RESETTING OF EXISTING TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE RESIDENT ENGINEER, WILL BE INCIDENTAL TO THE ITEM 641.11 -- TRAFFIC CONTROL, ALL-INCLUSIVE.
9. ANY TEMPORARY MEANS OF SUPPORTING EXCAVATION NECESSARY TO MAINTAIN TRAFFIC WILL BE INCLUDED IN THE PAYMENT OF ITEM 641.11 TRAFFIC CONTROL, ALL-INCLUSIVE. CONSTRUCTION DRAWINGS SHALL BE REQUIRED AS PER SUBSECTION 105.03.

TEMPORARY TRAFFIC SIGNALS

10. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S (VTrans) "STANDARD SPECIFICATIONS FOR CONSTRUCTION", DATED 2018, WITH CURRENT MODIFICATIONS.SIGNAL TIMING/TIMING ADJUSTMENTS SHALL BE ACCOMPLISHED WITHIN A 48 HOUR PERIOD AND PAYMENT WILL BE INCIDENTAL TO ITEM 678.40 "TEMPORARY TRAFFIC SIGNAL SYSTEM".
11. TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH ITEM 678.40 "TEMPORARY TRAFFIC SIGNAL SYSTEM" AND IN COMPLIANCE WITH THE LATEST EDITION OF THE MUTCD.
12. SIGNAL FACES SHALL BE LED AND CONSIST OF 12 INCH LENSES (RED, YELLOW AND GREEN).
13. THE BOTTOM OF THE HOUSING OF A SIGNAL FACE SUSPENDED OVER A ROADWAY SHALL NOT BE LESS THAN 16.5 FEET NOR MORE THAN 19.0 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 8.0 FEET NOR MORE THAN 15.0 FEET ABOVE THE GROUND. CAUTION SHOULD BE USED TO ENSURE COMPLIANCE WITH THE HEIGHT REQUIREMENT IN THE EVENT THE NEW APPROACH GRADE DIFFER SIGNIFICANTLY FROM THE FULL ROADWAY GRADE.
14. SIGNAL FACES FOR ANY ONE APPROACH SHALL NOT BE LESS THAN 8 FEET APART MEASURED HORIZONTALLY BETWEEN CENTER FACES.
15. THE CONTRACTOR SHALL HAVE THE OPTION OF INSTALLING SPAN WIRE OR CANTILEVER MAST ARM TRAFFIC SIGNALS IN PLACE OF A PORTABLE SIGNAL SYSTEM. DESIGN OF SUCH SYSTEM, INCLUDING REQUIRED POLE LOCATIONS, ANY REQUIRED GUYING, AND POWER CONNECTION SHALL BE THE RESPONSIBLITY OF THE CONTRACTOR. PAYMENT WILL BE CONSIDERED INCIDENTAL TO 678.40 "TEMPORARY TRAFFIC SIGNAL SYSTEM".
16. SIGNAL HEAD PLACEMENT IS CRITICAL. HEADS SHALL BE ADJUSTED TO REFLECT LANE LOCATION CHANGES AS REQUIRED.
17. POLES SUPPORTING SPAN WIRES AND/OR MAST ARMS SHALL BE ADEQUATELY BRACED OR GUYED AND SHALL BE PLACED SO AS NOT TO CREATE A HAZARD TO THE TRAVELLING PUBLIC.
18. LUMINAIRES SHALL BE INSTALLED AT EACH OF THE APPROACHES TO ADEQUATELY LIGHT THE STOP BAR AREAS. HIGH PRESSURE SODIUM OR LED LUMINAIRES ARE ACCEPTABLE FORMS OF LAMPS. THE MOUNTING HEIGHT FOR LUMINAIRES SHALL BE DETERMINED BY THE CONTRACTOR. ILLUMINANCE SHALL BE MEASURED AT NIGHTTIME AFTER INSTALLATION AT EACH STOP BAR. ILLUMINANCE SHALL BE NO LESS THAN 1.0 FOOT-CANDLES AND NOT TO EXCEED 2.0 FOOT-CANDLES. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40 "TEMPORARY TRAFFIC SIGNAL SYSTEM".
19. 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 UTILITY POLES, WIRES, ETC. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40 "TEMPORARY TRAFFIC SIGNAL SYSTEM".
20. STOP BARS SHALL BE LOCATED A MINIMUM OF 40' AND A MAXIMUM OF 120' FROM THE NEAREST SIGNAL HEAD.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SIGNAL PHASING AND TIMING. THE CONTRACTOR SHALL SUBMIT A PHASING DIAGRAM AND TIMING SCHEDULE TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL MAKE THE SIGNALS OPERATIONAL ONLY AFTER RECEIVING APPROVAL OF BOTH THE PHASING DIAGRAM AND TIMING SCHEDULE BY THE ENGINEER. DEVELOPMENT OF THE PHASING DIAGRAM AND TIMING SCHEDULE WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40 "TEMPORARY TRAFFIC SIGNAL SYSTEM".

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(10) & (12) & (11)

FILE NAME: sl2bl44complndex
PROJECT LEADER: G. LAROCHE
DESIGNED BY: S. COLEY
COMBINED PROJECT NOTES

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: F.BARROWS
SHEET 3 OF 134

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY 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. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

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

POINT	CODE	DESCRIPTION
	BF	BARRIER FENCE
	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
	PDF	PROJECT DEMARCATION FENCE
	R&RES	REMOVE & RESET
	R&REP	REMOVE & REPLACE
	R.T.& I.	RIGHT, TITLE, AND INTEREST
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
⧈	BNDNS	BOUND TO BE SET
◎	IPNF	IRON PIN FOUND
●	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 VALVE
	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 RADIUS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE
CB	CHORD BEARING

UTILITY SYMBOLOGY

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+TELEPHONE
- 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+TELEPHONE
- UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- 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
- PROJECT DEMARCATION FENCE
- BARRIER FENCE
- TREE PROTECTION ZONE (TPZ)
- STRIPING LINE REMOVAL
- SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

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
- PROPERTY LINE (P/L)
- SLOPE RIGHTS
- 6F PROPERTY BOUNDARY
- 4F PROPERTY BOUNDARY
- HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

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

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

ENVIRONMENTAL RESOURCES

- WETLAND BOUNDARY
- RIPARIAN BUFFER ZONE
- WETLAND BUFFER ZONE
- SOIL TYPE BOUNDARY
- T&E — THREATENED & ENDANGERED SPECIES
- 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
- (H) HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

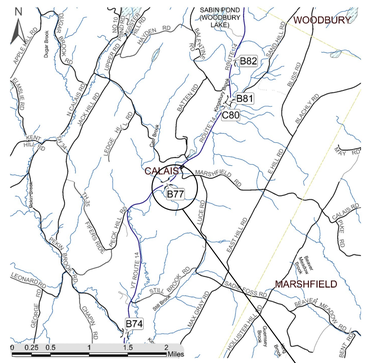
- ROAD EDGE PAVEMENT
- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- FENCE (EXISTING)
- FENCE WOOD POST
- FENCE STEEL POST
- GARDEN
- ROAD GUARDRAIL
- RAILROAD TRACKS
- CULVERT (EXISTING)
- STONE WALL
- WALL
- WOOD LINE
- BRUSH LINE
- HEDGE
- BODY OF WATER EDGE
- LEDGE EXPOSED

PROJECT NAME: CALAS
PROJECT NUMBER: BHF 037-2(10)

FILE NAME: sl2bl46lgnd.dgn
PROJECT LEADER: W.PELLETIER
DESIGNED BY: F.BARROWS
LEGEND SHEET

PLOT DATE: 02-JUN-2020
DRAWN BY: G.LAROCHE
CHECKED BY: F.BARROWS
SHEET 4 OF 134

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT

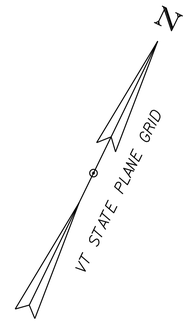
TOWN OF CALAIS
COUNTY OF WASHINGTON

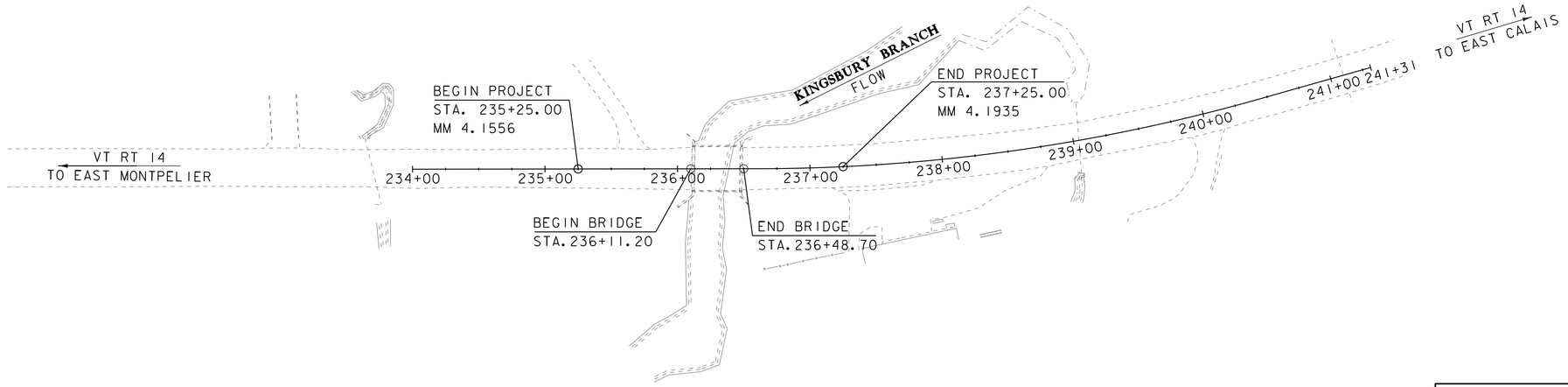
ROUTE NO : VT RTE 14, RURAL MINOR ARTERIAL BRIDGE NO: 77

PROJECT LOCATION: 7.6 MILES NORTH OF JUNCTION WITH US ROUTE 2

PROJECT DESCRIPTION: REMOVAL AND REPLACEMENT OF BRIDGE #77 SUPERSTRUCTURE WITH RELATED APPROACH ROADWAY WORK.

LENGTH OF STRUCTURE: 37.50 FEET
LENGTH OF ROADWAY: 162.50 FEET
LENGTH OF PROJECT: 200.00 FEET





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

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 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 :	VTRANS
SURVEYED DATE :	MAY 2012
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAV83 (07)

HIGHWAY DIVISION, CHIEF ENGINEER

APPROVED _____ DATE _____

PROJECT MANAGER : GARY LAROCHE, P.E.

PROJECT NAME : CALAIS
PROJECT NUMBER : BHF 037-2(12)

SHEET 49 OF 134 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version
LRFD

INDEX OF SHEETS

PLAN SHEETS

STANDARDS LIST

DETAIL SHEETS

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: February 2014

DRAINAGE AREA : 18.6 sq. mi.
CHARACTER OF TERRAIN : Hilly to mountainous. Mix of forest, field, lakes and ponds.
STREAM CHARACTERISTICS : Alluvial, sinuous, probably incised
NATURE OF STREAMBED : Gravel and cobbles

PEAK FLOW DATA

Q 2.33 =	960 cfs	Q 50 =	2500 cfs
Q 10 =	1675 cfs	Q 100 =	2830 cfs
Q 25 =	2160 cfs	Q 500 =	3790 cfs

DATE OF FLOOD OF RECORD : Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q50 = 11.7 fps
ICE CONDITIONS : Moderate
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: 4% HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single Span Concrete T-Beam Bridge
YEAR BUILT: 1928
CLEAR SPAN(NORMAL TO STREAM): 34'
VERTICAL CLEARANCE ABOVE STREAMBED: 10'
WATERWAY OF FULL OPENING: 290 sq. ft.
DISPOSITION OF STRUCTURE: Replace superstructure on existing abutments
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown

WATER SURFACE ELEVATIONS AT:

Q2.33 =	753.7'	VELOCITY =	8.5 fps
Q10 =	755.8'	"	10.7 fps
Q25 =	757.0'	"	11.9 fps
Q50 =	758.5'	"	13.3 fps
Q100 =	759.2'	"	13.8 fps

LONG TERM STREAMBED CHANGES: The streambed scoured and/or degraded several feet since the bridge was built, especially along abutment 1. It appears stable now.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 759.9'
DISCHARGE OVER ROAD @Q100: 0 cfs

UPSTREAM STRUCTURE

TOWN: Calais DISTANCE: 2,600'
HIGHWAY # : TH 5 STRUCTURE #: 27
CLEAR SPAN: CLEAR HEIGHT:
YEAR BUILT: FULL WATERWAY:
STRUCTURE TYPE:

DOWNSTRUCTURE STRUCTURE

TOWN: Calais DISTANCE: 13,000'
HIGHWAY # : TH 52 STRUCTURE #: 29
CLEAR SPAN: CLEAR HEIGHT:
YEAR BUILT: FULL WATERWAY:
STRUCTURE TYPE:

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		1.63					
POSTING							
OPERATING	3.37	2.14	3.6	1.85	2.55	2.34	3.4
COMMENTS:	VT TRUCKS ARE RATED AT OPERATING LEVEL						

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span concrete beam bridge

CLEAR SPAN(NORMAL TO STREAM): 34'
VERTICAL CLEARANCE ABOVE STREAMBED: 10'
WATERWAY OF FULL OPENING: 290 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	753.7'	VELOCITY=	8.5 fps
Q10 =	755.8'	"	10.7 fps
Q25 =	757.0'	"	11.9 fps
Q50 =	758.6'	"	13.3 fps
Q100 =	759.2'	"	13.8 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 760.0'
DISCHARGE OVER ROAD @Q100: 0 cfs

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 758.3'
VERTICAL CLEARANCE: @ Q50 = *-0.3'

SCOUR: Contraction scour = 4' up to Q500. The channel alignment into the bridge will cause additional scour through the bridge. There will also be additional abutment scour.
REQUIRED CHANNEL PROTECTION: Stone Fill, Type III

PERMIT INFORMATION

		DEPTH OR ELEVATION:
AVERAGE DAILY FLOW:	40 cfs	
ORDINARY LOW WATER:	20 cfs	Elevation 749'
ORDINARY HIGH WATER:	410 cfs	Elevation 752'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: No temporary bridge required.
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	d_p:	0.0 INCH
3.	DESIGN SPAN	L:	36.00 FT
4.	MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	0.51 INCH
5.	PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	f_y:	270 KSI
6.	PRESTRESSED CONCRETE STRENGTH	f'_c:	8.0 KSI
7.	PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	4.0 KSI
8.	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A)	f'_c:	4.0 KSI
9.	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS B)	f'_c:	3.5 KSI
10.	CONCRETE HIGH PERFORMANCE, CLASS PSS	f'_c:	4.0 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:	---
17.	ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
18.	PILE RESISTANCE FACTOR	ϕ:	0.65
19.	LATERAL PILE DEFLECTION	Δ:	---
20.	BASIC WIND SPEED	V_{3s}:	---
21.	MINIMUM GROUND SNOW LOAD	p_g:	---
22.	SEISMIC DATA PGA: ---	S_s:	---
		S_1:	---
23.			
24.			---
25.			---
26.			---

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2015	3100	360	72	6.7	290
2035	3300	390	72	9.5	440

20 year ESAL for flexible pavement from 2015 to 2035 : 2609000
40 year ESAL for flexible pavement from 2015 to 2055 : 5803000
Design Speed : 50 mph

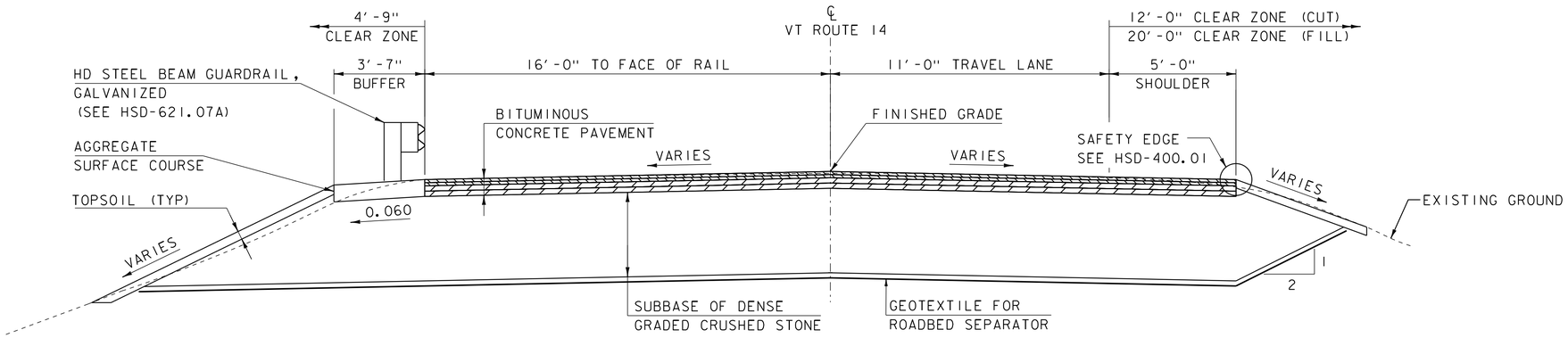
AS BUILT "REBAR" DETAIL

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

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

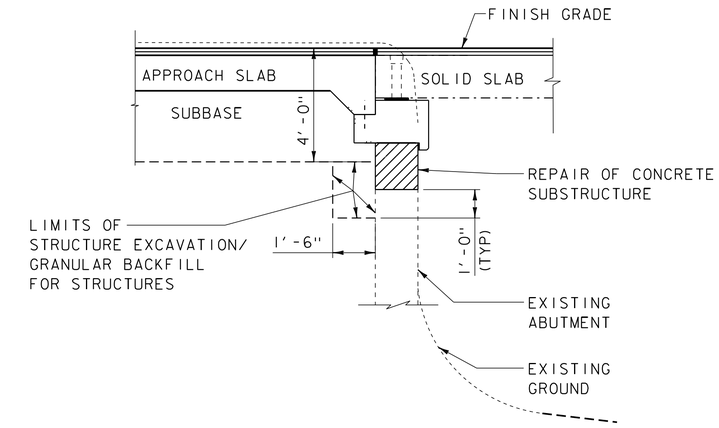
FILE NAME: PI Sheet Builder BR77.xls
PROJECT LEADER: G. LAROCHE
DESIGNED BY: F. BARROWS
PRELIMINARY INFORMATION SHEET

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: C. BURRAL
SHEET 50 OF 134



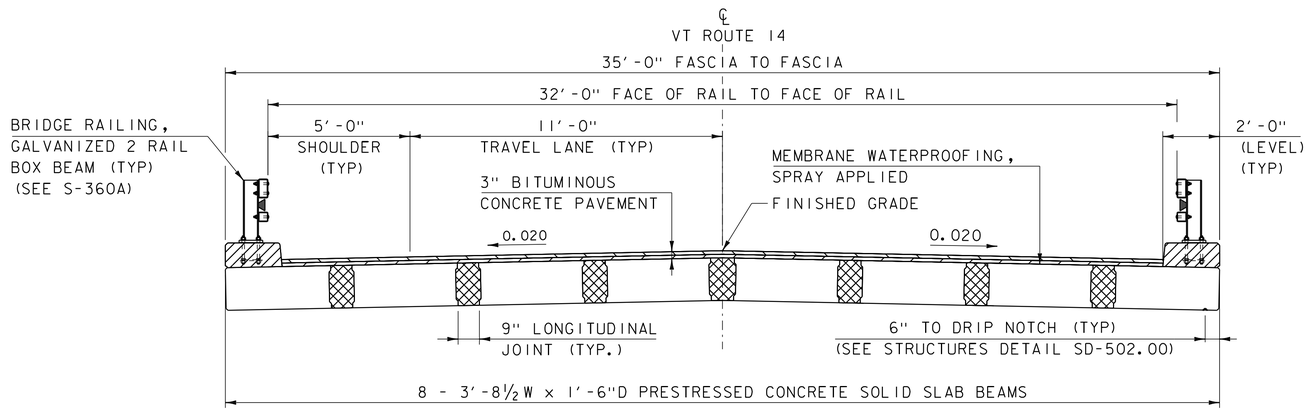
VT 14 TYPICAL SECTION

(NOT TO SCALE)



TYPICAL ABUTMENT SECTION

(NOT TO SCALE)



BRIDGE TYPICAL SECTION

(NOT TO SCALE)

ROADWAY MATERIAL REQUIREMENTS

	THICKNESS	DESCRIPTION
BINDER	70-28	PERFORMANCE GRADE ASPHALT BINDER
GYRATION	65	DESIGN NUMBER OF GYRATIONS
WEARING COURSE	1½"	406.36 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IVB)
INTERMEDIATE COURSE	1½"	406.36 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IVB)
BASE COURSE #2	2½"	406.35 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IIS)
BASE COURSE #1	2½"	406.35 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (TYPE IIS)
EMULSIFIED ASPHALT	---	STANDARD SPECIFICATIONS TABLE 406.12A
BUFFER	8"	AGGREGATE SURFACE COURSE (MATCH PAVE THICK)
SUBBASE	40"	SUBBASE OF DENSE GRADED CRUSHED STONE
TOPSOIL	4"	TOPSOIL

MATERIAL TOLERANCES

(IF USED ON PROJECT)

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

LEGEND

ITEM 900.608 SPECIAL PROVISION
(HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)

ITEM 900.608 SPECIAL PROVISION
(HIGH PERFORMANCE CONCRETE, CLASS A) (FPQ)

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

FILE NAME: sl2bl48typ.dgn
PROJECT LEADER: G. LAROCHE
DESIGNED BY: G. LAROCHE
TYPICAL SECTIONS

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: C. BURRALL
SHEET 51 OF 134

GENERAL

1. NO ADJUSTMENTS TO THE BITUMINOUS WEARING SURFACE ON THE BRIDGE SHALL BE MADE TO ACCOUNT FOR THE DIFFERENCE BETWEEN BEAM CAMBER AND THE THEORETICAL ROADWAY PROFILE. STEEL SHIMS, SPECIFIED ON THE BEARING SHEET, MAY BE UTILIZED TO SHIM THE BEAMS DURING ERECTION AS NECESSARY TO ACCOUNT FOR POTENTIAL DIFFERENTIAL CAMBER OF ADJACENT BEAMS.
2. THE REMOVAL OF THE EXISTING BRIDGE SUPERSTRUCTURE, APPROACH SLABS, ABUTMENTS, AND WINWALLS TO THE LIMITS/ELEVATIONS SHOWN IN THE PLANS WILL BE INCLUDED IN THE PAYMENT OF ITEM 529.20, “PARTIAL REMOVAL OF STRUCTURE”.
3. TEMPORARY MAILBOXES SHALL BE INSTALLED IN ACCORDANCE TO THE UNITED STATES POSTAL SERVICE MAILBOX GUIDELINES. http://www.usps.com/manage/mailboxes.htm

CONCRETE AND REINFORCING STEEL

4. REINFORCING EXTENDING INTO THE EXISTING ABUTMENTS TO THE SPECIFIED DEPTH SHOWN HEREIN SHALL BE DRILLED AND GROUTED WITH A TYPE IV MORTAR PER SUBSECTION 707.03. PAYMENT FOR DRILLING AND GROUTING BARS INTO THE EXISTING ABUTMENTS WILL BE INCLUDED IN THE PAYMENT OF ITEM 507.16 – DRILLING AND GROUTING DOWELS.
5. THE METHOD OF FORMING FOR SUBSEQUENT POURS AFTER PLACING THE SUPERSTRUCTURE SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR IS ENCOURAGED TO WORK WITH THE FABRICATOR IF ADDITIONAL SUPPORTS ARE REQUIRED. IN NO CASE SHALL THE CONTRACTOR ATTACH ADDITIONAL FORM OR SCREED SUPPORTS BY DRILLING OR SIMILAR MEANS INTO ANY PRECAST SUPERSTRUCTURE UNIT.
6. THE EFFECTIVE CURE TIME OF THE BRIDGE RAIL CURB MAY BE REDUCED TO A MINIMUM OF (7) SEVEN DAYS PROVIDED THAT THE CONCRETE HAS REACHED 85% OF THE 28-DAY COMPRESSIVE STRENGTH. THE BRIDGE RAIL CURB CONCRETE SHALL MEET ALL OTHER SPECIFICATIONS OF ITEM 900.680 SPECIAL PROVISION (CONCRETE, HIGH PERFORMANCE CLASS A).

PRECAST SOLID SLAB BEAMS

7. THE CONTRACTOR SHALL CONFIRM AT THE TIME OF FABRICATION DRAWING REVIEW THAT THE CALCULATED CAMBER ESTIMATE IS COMPATIBLE WITH THE GRADES AND ELEVATIONS OF THE REST OF THE STRUCTURE.
8. THE CONTRACTOR SHALL SUBMIT THE ERECTION PLAN A MINIMUM OF 30 CALENDAR DAYS PRIOR TO ERECTION. UNDER NO CIRCUMSTANCES SHALL THE SUPERSTRUCTURE BE ERECTED PRIOR TO HAVING AN ACCEPTED ERECTION PLAN.
9. THE CONTRACTOR SHALL MAINTAIN A MINIMUM CRANE CLEARANCE OF 7’-0” BETWEEN THE BACK OF THE ABUTMENTS AND THE CRANE MATS DURING THE ERECTION OF THE SUPERSTRUCTURE.
10. NO HOLES MAY BE DRILLED IN ANY PRECAST ELEMENTS WITHOUT THE APPROVAL OF THE FABRICATOR AND THE AGENCY.
11. ALL LIFTING POINTS IN THE SUPERSTRUCTURE SHALL BE REMOVABLE TO THE MINIMUM CLEAR COVER FOR REINFORCING STEEL SPECIFIED IN THE PLANS. PAYMENT FOR THIS WORK WILL BE INCLUDED IN THE PAYMENT OF ITEM 510.25 – PRESTRESSED CONCRETE SLABS.
12. ALL RECESSED LIFTING POINTS, ANCHOR BOLT, AND BLOCK OUTS SHALL BE FILLED WITH A TYPE IV MORTAT PER SUBSECTION 707.03. PAYMENT WILL BE INCLUDED IN THE PAYMENT ITEM 510.25 – PRESTRESSED CONCRETE SOLID SLABS.

LONGITUDINAL JOINTS

13. THE CONTRACTOR SHALL DETERMINE THE METHOD OF FORMING THE LONGITUDINAL CLOSURE POUR. FORMS SHALL BE REMOVABLE AND ABLE TO ACCOMMODATE DIFFERENTIAL CAMBER. FORM SUPPORTS SHALL NOT BE ATTACHED TO ANY PREFABRICATED SUPERSTRUCTURE ELEMENT BY DRILLING OR SIMILAR MEANS.
14. THE CONCRETE EDGES ALONG THE LONGITUDINAL CLOSURE POURS SHALL BE TREATED TO PROVIDE A ROUGHEND/ EXPOSED AGGREGATE SURFACE. THE AMPLITUDE OF THE EXPOSED AGGREGATE SHALL BE A MINIMUM OF 1/8” AND BE COMPLETE PRIOR TO ERECTION OF THE BEAMS. THE FABRICATIOR SHALL INDICATE THE METHOD USED TO ACHEVE THIS PROFILE ON FABRICATION DRAWINGS AND METHOD USED TO PROTECT THE REINFORCING STEEL.
15. THE LONGITUDINAL CLOSURE POUR CONCRETE SHALL OBTAIN A STRENGTH OF 4,000 PSI PRIOR TO ANY VEHICULAR LOADING.

MISCELLANEOUS

16. A THOROUGH INSPECTION OF THE EXISTING SUBSTRUCTURES TO BE RETAINED SHALL BE MADE BY THE CONTRACTOR AND ENGINEER. AREAS OF CONCRETE FOUND TO BE SPALLED, DELAMINATED OR OTHERWISE UNSOUND SHALL BE REPAIRED. THE AREAS THAT NEED TO BE REPAIRED WILL BE INCLUDED IN THE PAYMENT OF ITEM 580.13 “REPAIR OF CONCRETE SUBSTRUCTURE, CLASS I” AND ITEM 580.14 “REPAIR OF CONCRETE SUBSTRUCTURE, CLASS II”.

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

FILE NAME: sl2bl48gennotes.dgn
PROJECT LEADER: G. LAROCHE
DESIGNED BY: S. COLEY
PROJECT NOTES (12)

PLOT DATE: 02-JUN-2020
DRAWN BY: G. ROKES
CHECKED BY: A. LEMIEUX
SHEET 52 OF 134

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS
1				
960				
1				
			30	
			30	
340				
760				
40				
15				
0.34				
145				
182				
0.34				
			11995	
			344	
			65	
			300	
			20	
			31	
			137	
			93	
			78	
			1	
			24	
			3	
			1	
3				
1				
207				
1				
4				
295				
120				
960				
				0.34
				0.34
				0.34
				1
				1000
4				

TOTALS

GRAND TOTAL	FINAL
1	
960	
1	
30	
30	
340	
760	
40	
15	
0.34	
145	
182	
0.34	
11995	
344	
65	
300	
20	
31	
137	
93	
78	
1	
24	
3	
1	
3	
1	
207	
1	
4	
295	
120	
960	
0.34	
0.34	
0.34	
1	
1000	
4	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS (CALAIS (12))	201.10	
CY	COMMON EXCAVATION	203.15	
CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
CY	STRUCTURE EXCAVATION	204.25	
CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
SY	COARSE-MILLING, BITUMINOUS PAVEMENT	210.10	
CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
CY	AGGREGATE SURFACE COURSE	401.10	
CWT	EMULSIFIED ASPHALT	404.65	
LU	MAT DENSITY PAY ADJUSTMENT (N.A.B.I.)	406.29	
TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	406.35	
TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVB	406.36	
LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
LB	REINFORCING STEEL, LEVEL I (EPOXY)	507.11	
LF	DRILLING AND GROUTING DOWELS	507.16	
EACH	MECHANICAL BAR CONNECTOR (EPOXY(#5))	507.19	
LF	PRESTRESSED CONCRETE SOLID SLABS (18" X 44.5")	510.25	
GAL	WATER REPELLENT, SILANE	514.10	
LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
SY	MEMBRANE WATERPROOFING, SPRAY APPLIED	519.10	
LF	JOINT SEALER, HOT POURED	524.11	
LF	BRIDGE RAILING, GALVANIZED 2 RAIL BOX BEAM	525.33	
EACH	PARTIAL REMOVAL OF STRUCTURE (CALAIS (12))	529.20	
EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17	
SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS I	580.13	
SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II	580.14	
CY	STONE FILL, TYPE I	613.10	
EACH	REMOVE AND RESET MAILBOX, SINGLE SUPPORT	617.10	
LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21	
EACH	MANUFACTURED TERMINAL SECTION, TANGENT	621.51	
EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 2 RAIL BOX BEAM	621.72	
LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	
HR	UNIFORMED TRAFFIC OFFICERS	630.10	
HR	FLAGGERS	630.15	
LS	FIELD OFFICE, ENGINEERS	631.10	
LS	TESTING EQUIPMENT, CONCRETE	631.16	
LS	TESTING EQUIPMENT, BITUMINOUS	631.17	
LS	TESTING EQUIPMENT, GROUT	631.19	
DL	FIELD OFFICE COMMUNICATIONS (N.A.B.I.)	631.26	
EACH	CPM SCHEDULE	633.10	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		EARTHWORKS SUMMARY
		FILL AVAILABLE
576	CY	COMMON EXCAVATION (960 x 0.6)
9	CY	STRUCTURE EXCAVATION (30 x 0.3)
0	CY	ROUNDING
585	**CY**	**TOTAL FILL AVAILABLE**
		FILL REQUIRED
	CY	FACTORED FILL (30 x 1.15)
0	CY	ROUNDING
0	**CY**	**TOTAL FILL REQUIRED**
		SUPERPAVE BITUMINOUS CONCRETE PAVEMENT
145	TON	BASE COURSE
		SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVB
83.9	TON	INTERMEDIATE COURSE
98.1	TON	WEARING COURSE

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

FILE NAME: s12bl48qty.dgn
PROJECT LEADER: G. LAROCHE
DESIGNED BY: K. LIHIC
QUANTITY SHEET 1

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: C. BURRALL
SHEET 53 OF 134

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES								TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS				GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
	174							174		HR	EMPLOYEE TRAINEESHIP	634.10				
0.34								0.34		LS	MOBILIZATION/DEMOBILIZATION	635.11				
1								1		LS	TRAFFIC CONTROL, ALL-INCLUSIVE (CALAIS (12))	641.11				
650								650		LF	4 INCH WHITE LINE, WATERBORNE PAINT	646.201				
650								650		LF	4 INCH YELLOW LINE, WATERBORNE PAINT	646.2111				
940								940		SY	GEOTEXTILE FOR ROADBED SEPARATOR	649.11				
		10						10		LB	SEED	651.15				
		80						80		LB	FERTILIZER	651.18				
		0.5						0.5		TON	AGRICULTURAL LIMESTONE	651.20				
		17						17		CY	TOPSOIL	651.35				
		1						1		LS	EPSC PLAN CALAIS (12)	653.01				
		40						40		HR	MONITORING EPSC PLAN	653.02				
		1						1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.) CALAIS (12)	653.03				
		0.5						0.5		TON	HAY MULCH	653.10				
		36						36		CY	STABILIZED CONSTRUCTION ENTRANCE	653.35				
		500						500		LF	SILT FENCE, TYPE II	653.476				
		275						275		LF	BARRIER FENCE	653.50				
		225						225		LF	PROJECT DEMARCATION FENCE	653.55				
1.26								1.26		SF	TRAFFIC SIGN, TYPE A	675.20				
30								30		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
3								3		EACH	REMOVING SIGNS	675.50				
3								3		EACH	DELINEATOR WITH STEEL POST	676.10				
1								1		EACH	TEMPORARY TRAFFIC SIGNAL SYSTEM (CALAIS (12))	678.40				
0.34								0.34		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				
			26					26		CY	SPECIAL PROVISION (CONCRETE, HIGH PERFORMANCE CLASS A)	900.608				
			61					61		CY	SPECIAL PROVISION (CONCRETE, HIGH PERFORMANCE CLASS B)	900.608				
			13					13		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)	900.608				

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

FILE NAME: sl2bl48qty.dgn
PROJECT LEADER: G. LAROCHE
DESIGNED BY: K. LIHIC
QUANTITY SHEET 2

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: C. BURRALL
SHEET 54 OF 134

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES									TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
CHANNEL	DECK	APP SLAB 1	APP SLAB 2	ABUT 1	ABUT 2	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
				15	15	30	CY	STRUCTURE EXCAVATION	204.25			
				15	15	30	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30			
	1312	3420	3350	2012	1901	11995	LB	REINFORCING STEEL, LEVEL I (EPOXY)	507.11			
				176	168	344	LF	DRILLING AND GROUTING DOWELS	507.16			
		21	21	12	11	65	EACH	MECHANICAL BAR CONNECTOR (EPOXY(#5))	507.19			
	300					300	LF	PRESTRESSED CONCRETE SOLID SLABS (18" X 44.5")	510.25			
	3			8.5	8.5	20	GAL	WATER REPELLENT, SILANE	514.10			
					31	31	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10			
	137					137	SY	MEMBRANE WATERPROOFING, SPRAY APPLIED	519.10			
				31	62	93	LF	JOINT SEALER, HOT POURED	524.11			
	78					78	LF	BRIDGE RAILING, GALVANIZED 2 RAIL BOX BEAM	525.33			
	1					1	EACH	PARTIAL REMOVAL OF STRUCTURE (CALAIS (12))	529.20			
				16	8	24	EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17			
				1.5	1.5	3	SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS I	580.13			
				0.5	0.5	1	SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II	580.14			
	6			10	10	26	CY	SPECIAL PROVISION (CONCRETE, HIGH PERFORMANCE CLASS A)	900.608			
		30	31			61	CY	SPECIAL PROVISION (CONCRETE, HIGH PERFORMANCE CLASS B)	900.608			
	13					13	CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)	900.608			

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

FILE NAME: s12bl48qty.dgn
PROJECT LEADER: G. LAROCHE
DESIGNED BY: K. LIHIC
BRIDGE QUANTITY SHEET

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: C. BURRALL
SHEET 55 OF 134

GPS CONTROL POINTS

C771

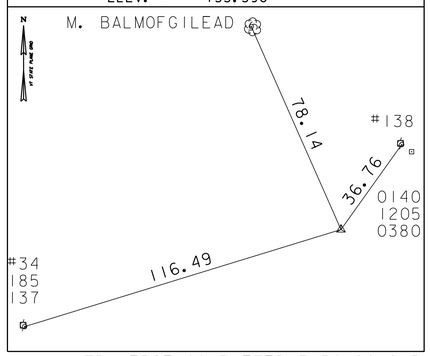
GENERAL LOCATION: CALAIS
FROM THE JUNCTION OF VT 14 AND VT 214 IN N. MONTPELIER PROCEED NORTHERLY ALONG VT 14 FOR APPROXIMATELY 4.1 MI. TO THE MARK ON THE RIGHT, 37' SOUTHERLY OF MILE MARKER 0140/1205/0380. THE MARK IS A 3/4" REBAR SET FLUSH WITH ALUMINUM CAP MARKED "CONTROL POINT". SEE HVCTRL #1 BELOW FOR COORDINATES.

C772

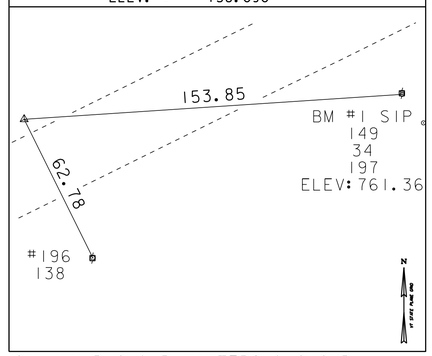
GENERAL LOCATION: CALAIS
FROM THE JUNCTION OF VT 14 AND VT 214 IN N. MONTPELIER PROCEED NORTHERLY ALONG VT 14 FOR APPROXIMATELY 4.3 MI. TO THE MARK ON THE LEFT, OPPOSITE POLE #196/148. THE MARK IS A 3/4" REBAR SET FLUSH WITH ALUMINUM CAP MARKED "CONTROL POINT". SEE HVCTRL #2 BELOW FOR COORDINATES.

TRAVERSE TIES

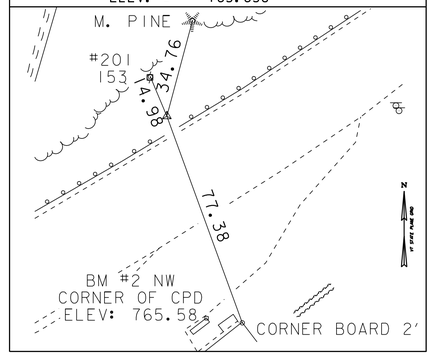
HVCTRL #1	
NORTH =	677337.090
EAST =	1655841.470
ELEV. =	753.390



HVCTRL #2	
NORTH =	678423.820
EAST =	1656887.650
ELEV. =	758.090



HVCTRL #3	
NORTH =	678771.293
EAST =	1657576.224
ELEV. =	765.638



NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

* MAIN TRAVERSE COMPLETED 5/30/2012 BY R.GILMAN P.C & P.WINTERS & C.CYR

ALIGNMENT TIES

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

DATUM

VERTICAL NAVD 88

HORIZONTAL NAD83 (07)

ADJUSTMENT NONE

PROJECT NAME: CALAIS

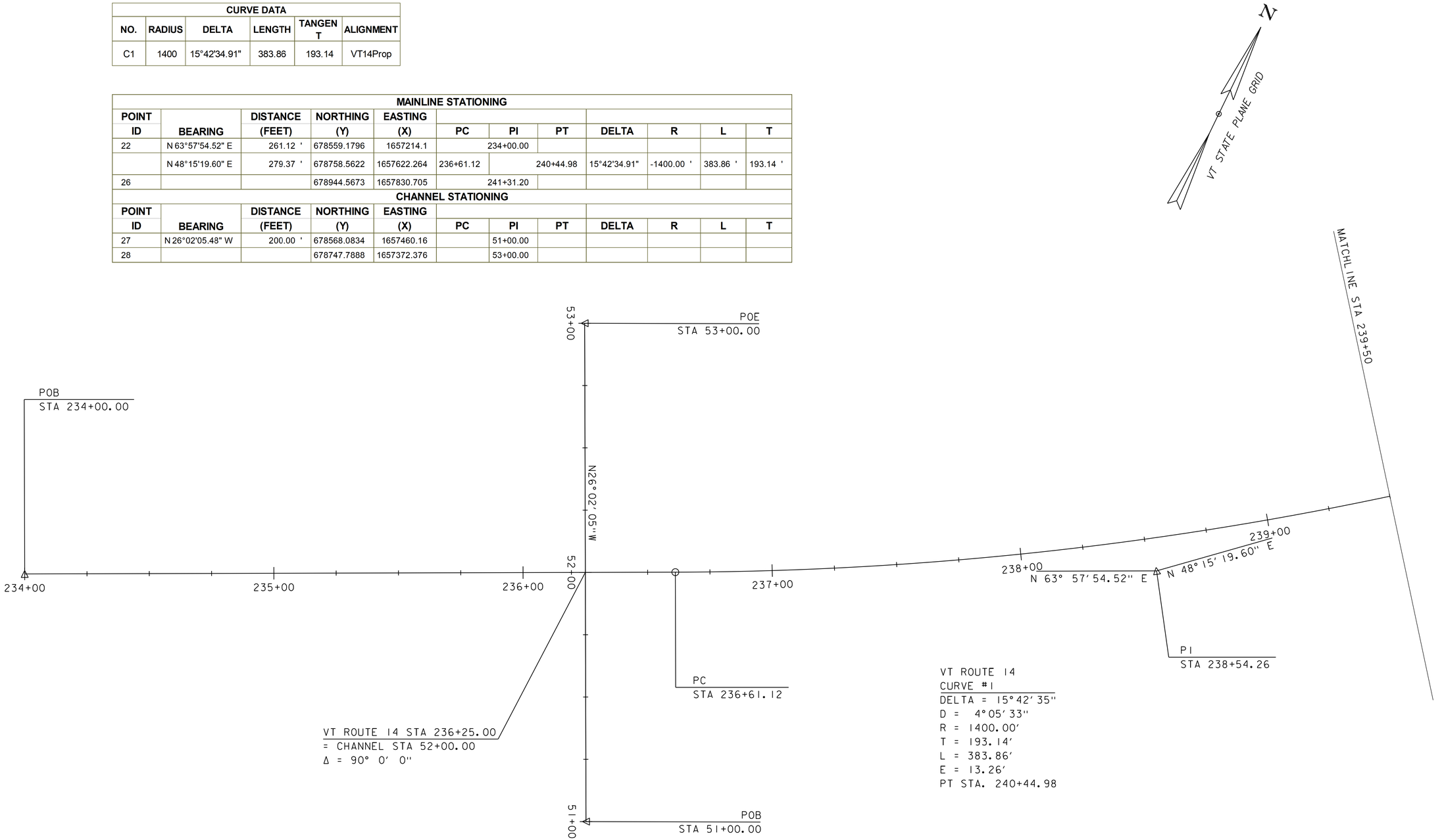
PROJECT NUMBER: BHF 037-2(12)

FILE NAME: 12bl48ti.dgn
PROJECT LEADER: G. LAROCHE
DESIGN BY: G. LAROCHE
TIE SHEET

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: G. LAROCHE
SHEET 56 OF 134

CURVE DATA					
NO.	RADIUS	DELTA	LENGTH	TANGENT	ALIGNMENT
C1	1400	15°42'34.91"	383.86	193.14	VT14Prop

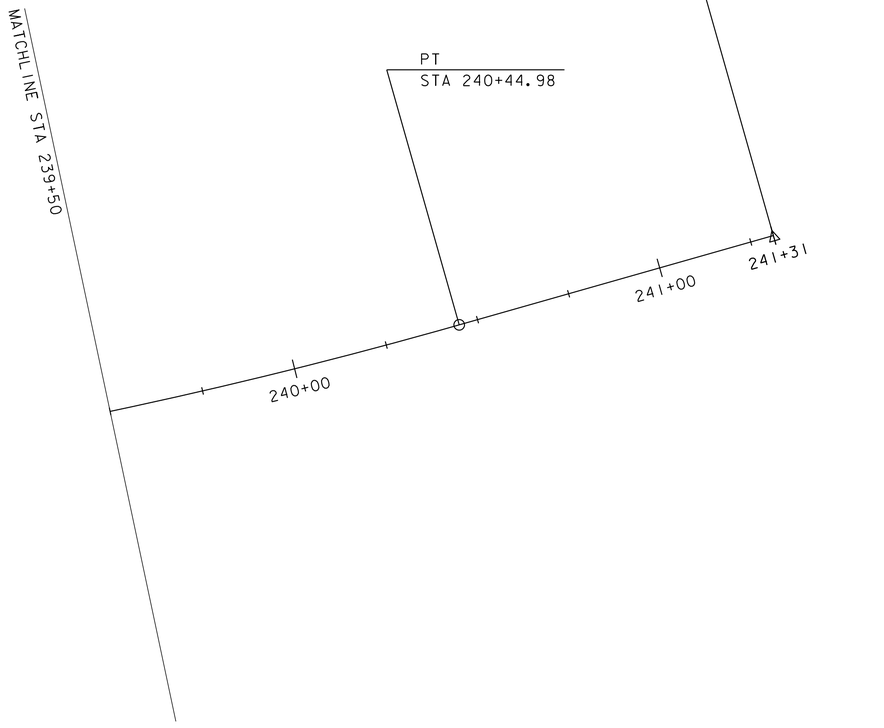
MAINLINE STATIONING											
POINT ID	BEARING	DISTANCE (FEET)	NORTHING (Y)	EASTING (X)	PC	PI	PT	DELTA	R	L	T
22	N 63°57'54.52" E	261.12 '	678559.1796	1657214.1		234+00.00					
	N 48°15'19.60" E	279.37 '	678758.5622	1657622.264	236+61.12		240+44.98	15°42'34.91"	-1400.00 '	383.86 '	193.14 '
26			678944.5673	1657830.705		241+31.20					
CHANNEL STATIONING											
POINT ID	BEARING	DISTANCE (FEET)	NORTHING (Y)	EASTING (X)	PC	PI	PT	DELTA	R	L	T
27	N 26°02'05.48" W	200.00 '	678568.0834	1657460.16		51+00.00					
28			678747.7888	1657372.376		53+00.00					

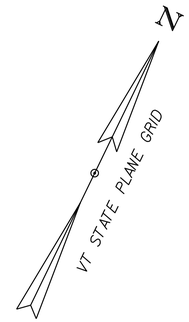


SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(12)

FILE NAME: sl2bl48alignbdr.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: S. COLEY	CHECKED BY: G. LAROCHE
ALIGNMENT SHEET 1	SHEET 57 OF 134





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

PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(12)	
FILE NAME: sl2bl48alignbdr.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: S. COLEY	CHECKED BY: G. LAROCHE
ALIGNMENT SHEET 2	SHEET 58 OF 134

PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(12)	
FILE NAME: s12b148exist.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: G. LAROCHE
DESIGNED BY: F.BARROWS	CHECKED BY: F.BARROWS
EXISTING CONDITIONS	SHEET 59 OF 134

COARSE MILLING, BITUMINOUS PAVEMENT
STA. 234+75.0 - 235+25.0
STA. 237+50.0 - 238+00.0

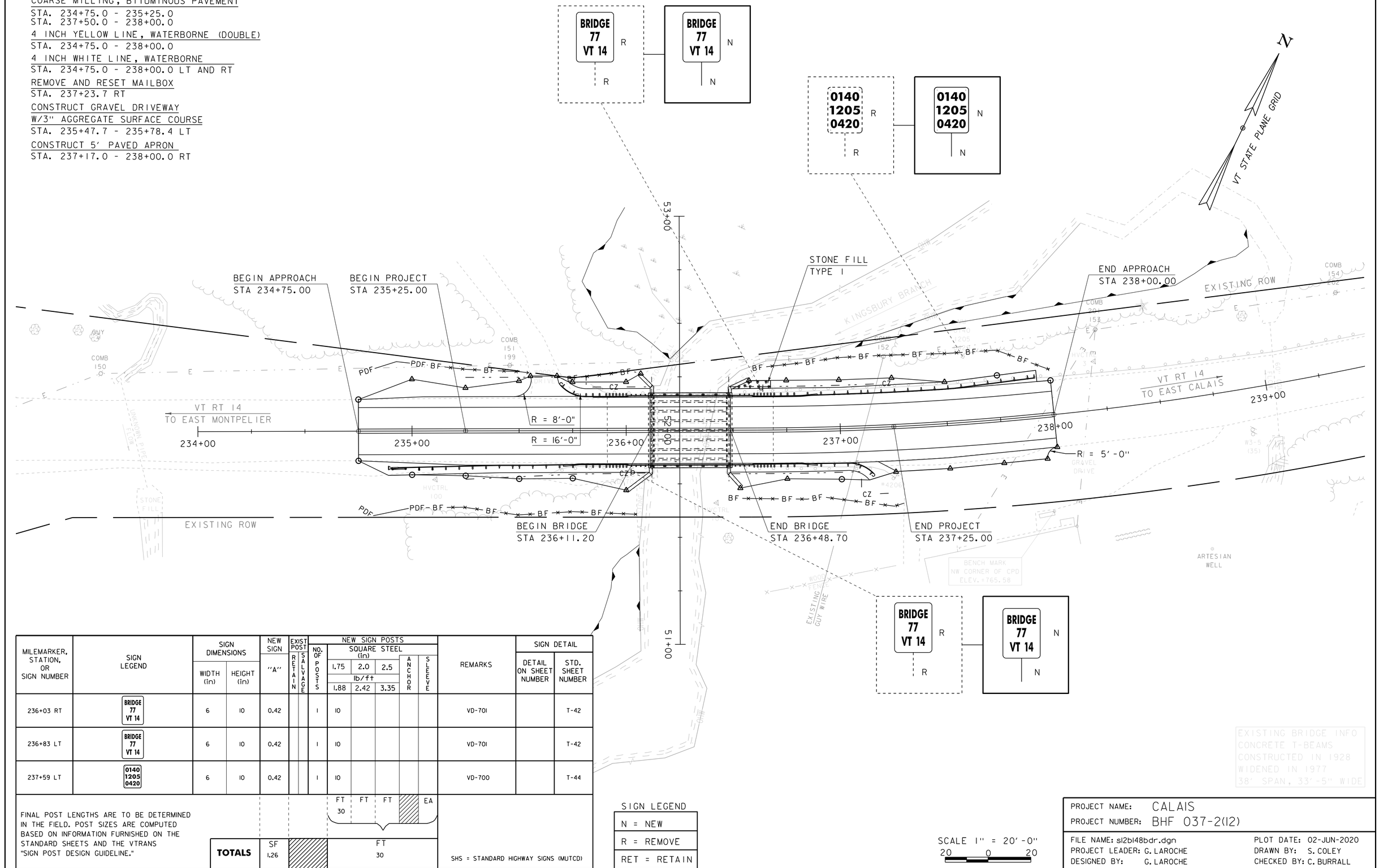
4 INCH YELLOW LINE, WATERBORNE (DOUBLE)
STA. 234+75.0 - 238+00.0

4 INCH WHITE LINE, WATERBORNE
STA. 234+75.0 - 238+00.0 LT AND RT

REMOVE AND RESET MAILBOX
STA. 237+23.7 RT

CONSTRUCT GRAVEL DRIVEWAY
W/3" AGGREGATE SURFACE COURSE
STA. 235+47.7 - 235+78.4 LT

CONSTRUCT 5' PAVED APRON
STA. 237+17.0 - 238+00.0 RT



MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS WIDTH (in)	SIGN DIMENSIONS HEIGHT (in)	NEW SIGN "A"	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	SQUARE STEEL (in) 2.0 lb/ft 2.42	SQUARE STEEL (in) 2.5 lb/ft 3.35	ANCHOR	SLEEVE	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	SIGN DETAIL STD. SHEET NUMBER
236+03 RT	BRIDGE 77 VT 14	6	10	0.42			1	10					VD-701		T-42
236+83 LT	BRIDGE 77 VT 14	6	10	0.42			1	10					VD-701		T-42
237+59 LT	0140 1205 0420	6	10	0.42			1	10					VD-700		T-44
								FT 30	FT	FT	FT	EA			
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."	**TOTALS**			SF 1.26				FT 30					SHS = STANDARD HIGHWAY SIGNS (MUTCD)		

SIGN LEGEND

N = NEW
R = REMOVE
RET = RETAIN

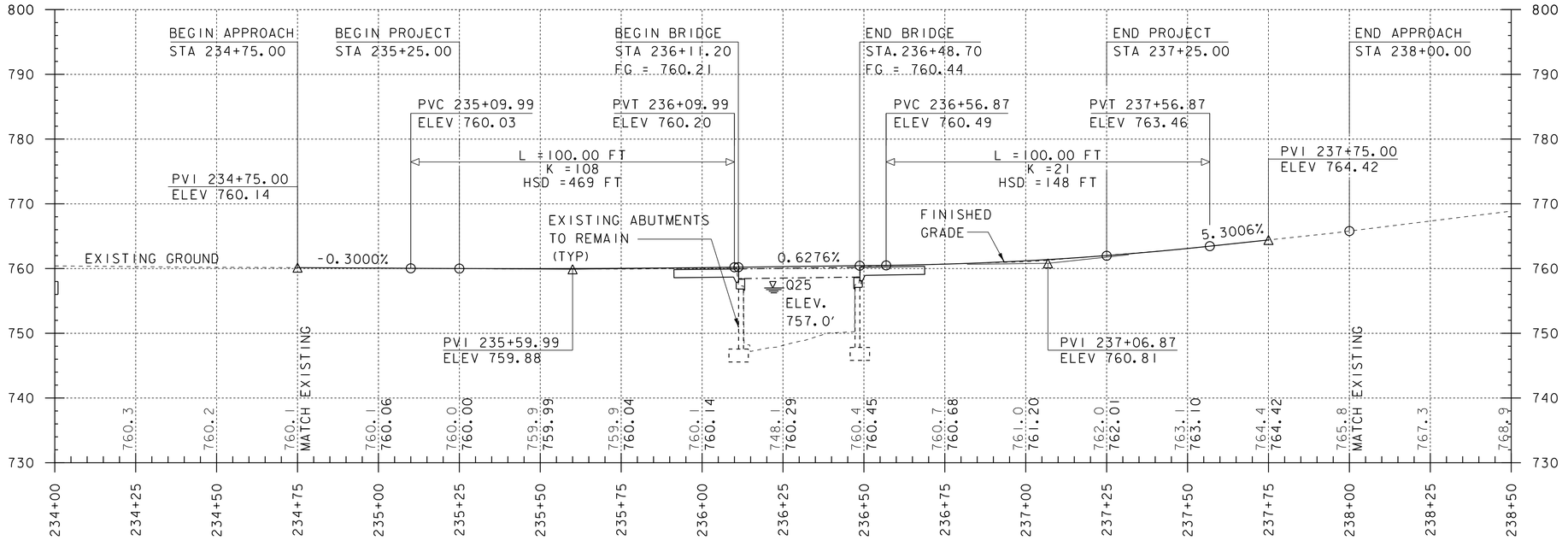
EXISTING BRIDGE INFO
CONCRETE T-BEAMS
CONSTRUCTED IN 1928
WIDENED IN 1977
38' SPAN, 33'-5" WIDE

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

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

FILE NAME: sl2bl48bdr.dgn
PROJECT LEADER: G. LAROCHE
DESIGNED BY: G. LAROCHE
LAYOUT SHEET

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: C. BURRALL



PROFILE ALONG CENTERLINE VT ROUTE 14

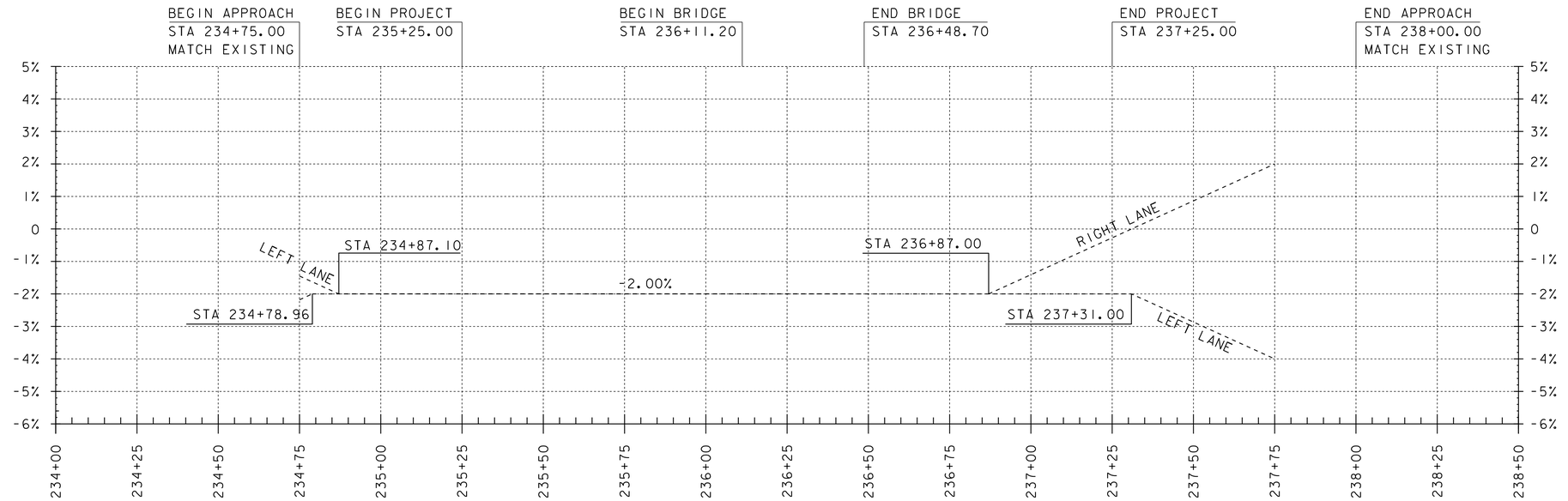
HOR. SCALE 1" = 20'-0"
VER. SCALE 1" = 10'-0"

NOTE:

GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG ℄

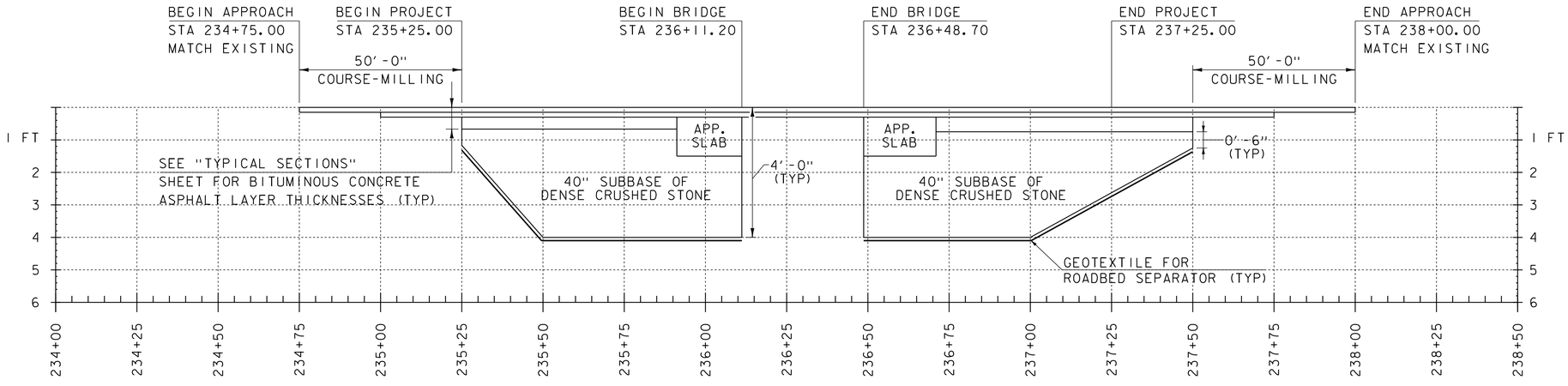
GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG ℄

PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(12)
FILE NAME: s12b148pro.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
PROFILE SHEET	SHEET 61 OF 134



BANKING DIAGRAM

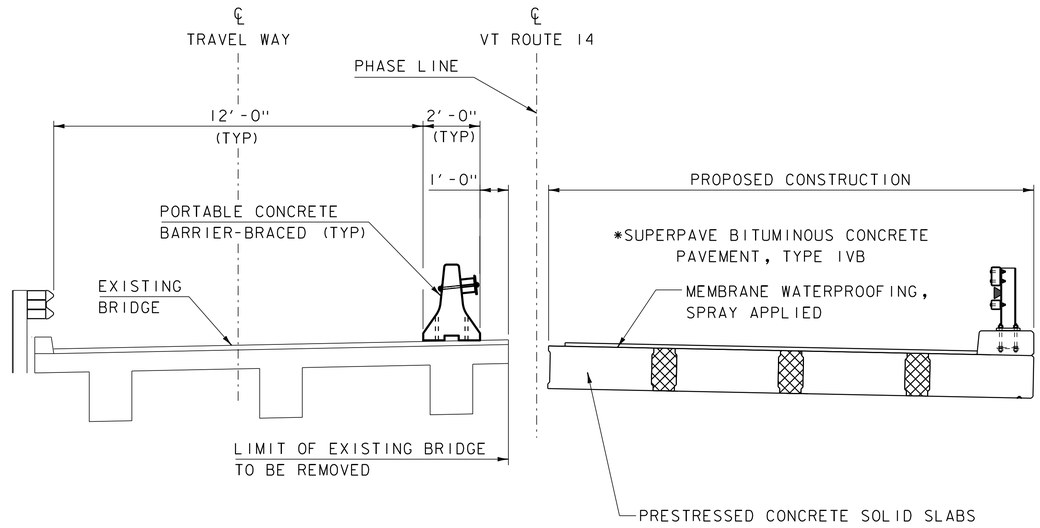
HOR. SCALE 1" = 20'-0"
VER. SCALE 1" = 2%



MATERIAL TRANSITIONS

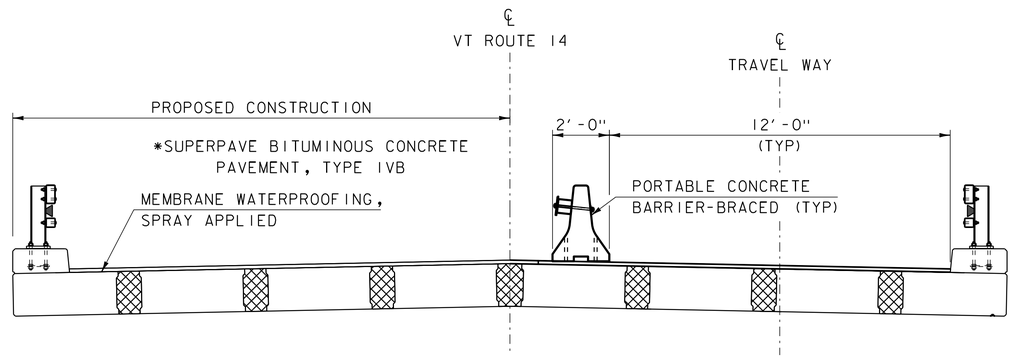
HOR. SCALE 1" = 20'-0"
VER. SCALE 1" = 2'-0"

PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(12)
FILE NAME: sl2bl48pro.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
BANKING DIAGRAM & MATERIAL TRANSITION	SHEET 62 OF 134



PHASE #1 BRIDGE TYPICAL SECTION

(NOT TO SCALE)



PHASE #2 BRIDGE TYPICAL SECTION

(NOT TO SCALE)

NOTES

1. PHASE 1 AND 2 REFLECTS ONE-WAY, ALTERNATING TRAFFIC CONTROLLED BY TEMPORARY TRAFFIC SIGNALS.
2. PHASING TYPICAL SECTIONS ARE CONCEPTUAL ONLY. PHASING TYPICAL SECTIONS ARE INTENDED TO COMMUNICATE BASIC SITE CONDITIONS THAT INCLUDE LANE WIDTHS AND SHOULDER WIDTHS.
3. TEMPORARY BARRIER IN THE PLAN SHALL BE IN ACCORDANCE WITH SECTION 621.
4. SUPPORT OF EXCAVATION LOCATED WITHIN THE DEFLECTION DISTANCE OF THE TRAFFIC BARRIER SHALL BE DESIGNED TO WITHSTAND A TRAFFIC BARRIER COLLISION LOAD. THE SUPPORT OF EXCAVATION SHALL EXTEND UP TO A HEIGHT THAT IS EQUAL TO OR HIGHER THAN THE TOP OF THE ADJACENT BARRIER.
5. CONCRETE BARRIER EXPOSED TO TRAFFIC SHALL BE DELINEATED TO MATCH THE CORRESPONDING TEMPORARY PAVEMENT MARKING. REFLECTORS SHALL BE MOUNTED EVERY 20 FEET ALONG THE SIDE OF THE BARRIER EXPOSED TO TRAFFIC.
6. THE CONTRACTOR MAY FASTEN THE TEMPORARY TRAFFIC BARRIER TO THE EXISTING BRIDGE DECK DURING PHASE 1.

* THE TRAVEL WAY SURFACE OVER THE PROPOSED STRUCTURE CONSTRUCTED DURING PHASE 1 WILL BE 1½" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVB OVER WATERPROOFING MEMBRANE UNTIL FINAL PAVING OPERATIONS ARE COMPLETED DURING PHASE 2.

LEGEND

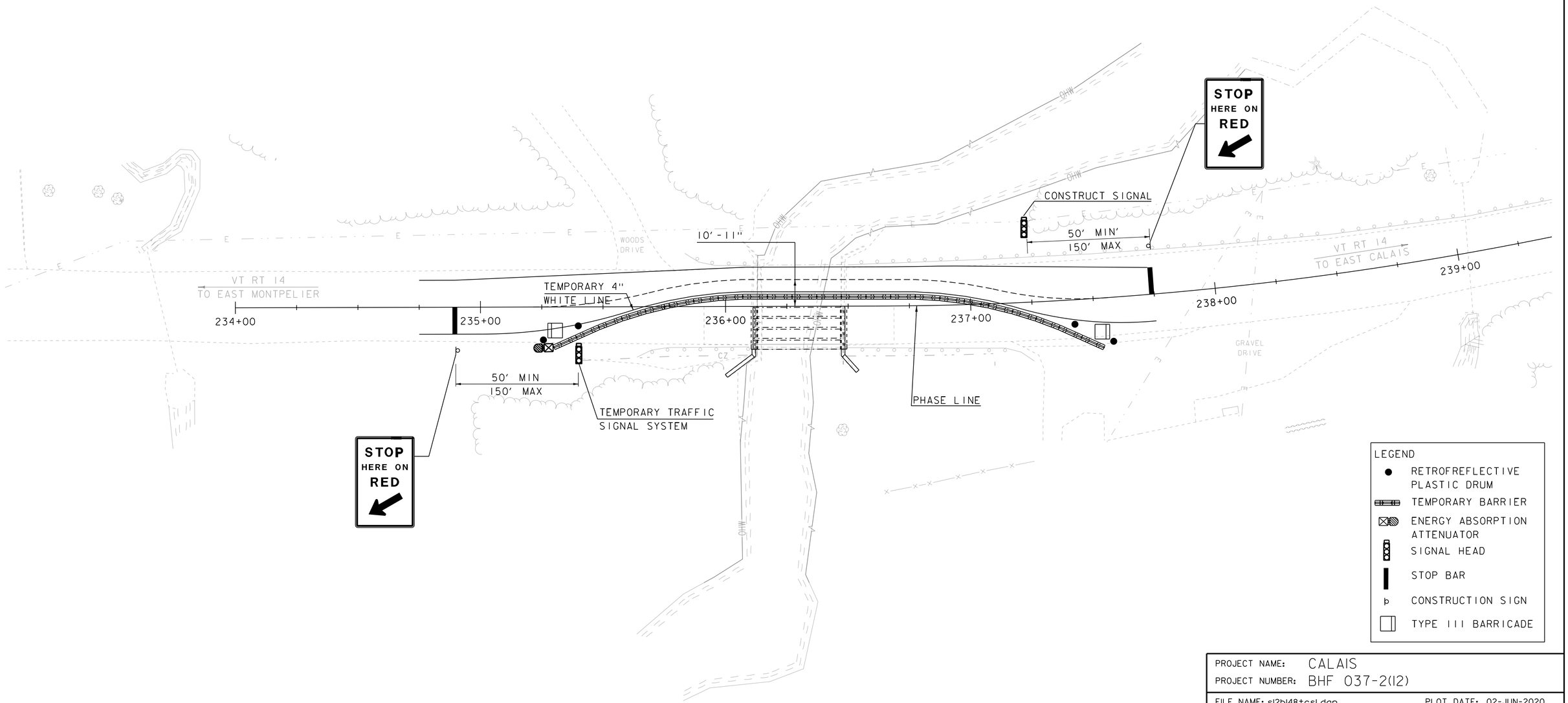
ITEM 900.608 SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)

PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(12)
FILE NAME: sl2bl48typ.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: S. COLEY	CHECKED BY: G. LAROCHE
PHASE TYPICAL SECTIONS	SHEET 63 OF 134

TRAFFIC CONTROL NOTES:

1. THE PHASING LAYOUT IS CONCEPTUAL ONLY. PHASING LAYOUT IS INTENDED TO COMMUNICATE BASIC SITE CONDITIONS THAT INCLUDE LANE, BARRIER, RETAINING WALL, AND TRAFFIC LIGHT LOCATIONS.

2. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES THAT ACCESS VT-14 WITHIN THE PROJECT LIMITS AT ALL TIMES, FOR ALL PHASES OF CONSTRUCTION. IF ACCESS CANNOT BE MAINTAINED, THE CONTRACTOR SHALL COORDINATE ACCESS WITH THE PROPERTY OWNER AND OBTAIN APPROVAL OF THE ENGINEER.



LEGEND

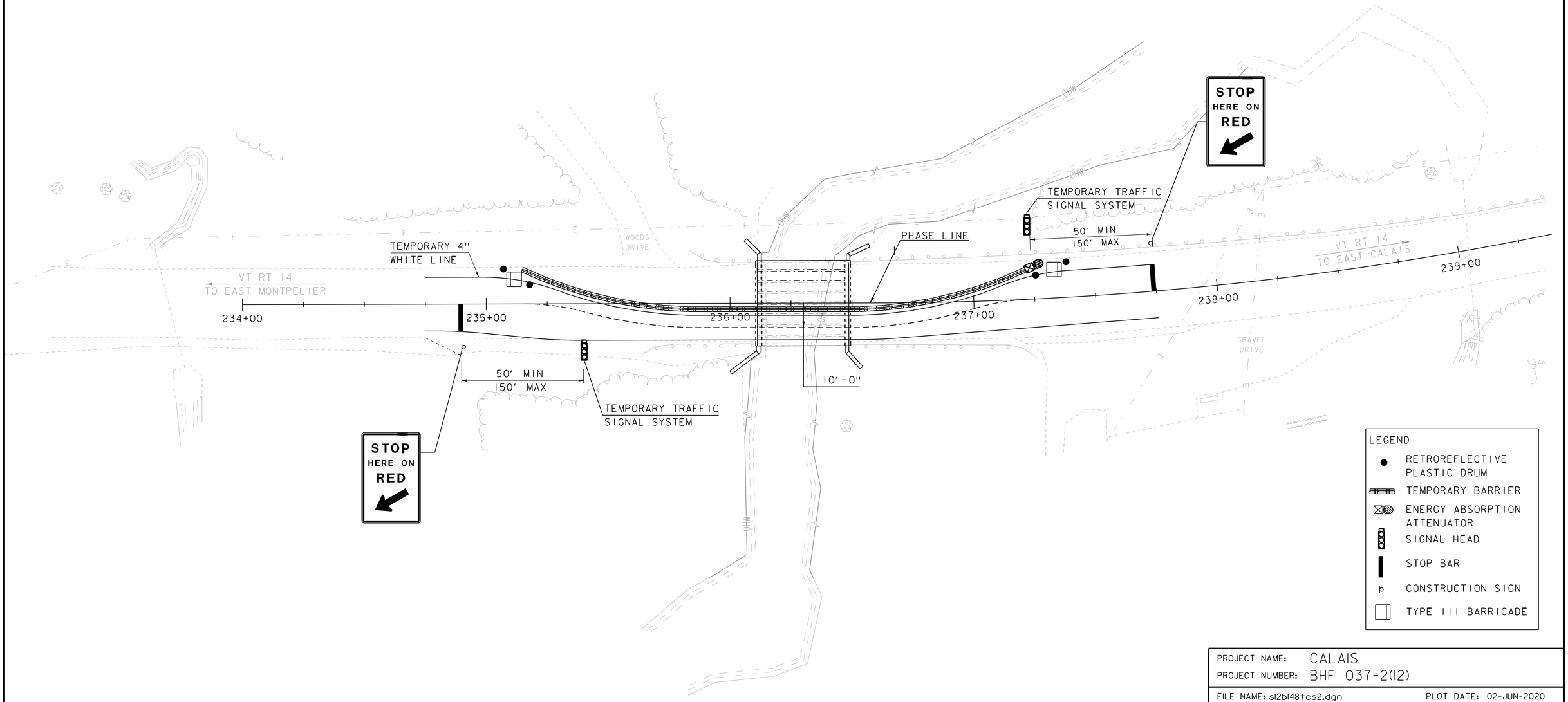
- RETROFREFLECTIVE PLASTIC DRUM
- TEMPORARY BARRIER
- ENERGY ABSORPTION ATTENUATOR
- SIGNAL HEAD
- STOP BAR
- CONSTRUCTION SIGN
- TYPE III BARRICADE

PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(12)
FILE NAME: sl2bl48tcsl.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
TRAFFIC CONTROL PHASE I	SHEET 64 OF 134

TRAFFIC CONTROL NOTES:

1. THE PHASING LAYOUT IS CONCEPTUAL ONLY. PHASING LAYOUT IS INTENDED TO COMMUNICATE BASIC SITE CONDITIONS THAT INCLUDE LANE, BARRIER, RETAINING WALL, AND TRAFFIC LIGHT LOCATIONS.

2. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES THAT ACCESS VT-14 WITHIN THE PROJECT LIMITS AT ALL TIMES, FOR ALL PHASES OF CONSTRUCTION. IF ACCESS CANNOT BE MAINTAINED, THE CONTRACTOR SHALL COORDINATE ACCESS WITH THE PROPERTY OWNER AND OBTAIN APPROVAL OF THE ENGINEER.



LEGEND

- RETROREFLECTIVE PLASTIC DRUM
- TEMPORARY BARRIER
- ENERGY ABSORPTION ATTENUATOR
- SIGNAL HEAD
- STOP BAR
- CONSTRUCTION SIGN
- TYPE III BARRICADE

PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(12)

FILE NAME: sl2bl48tcs2.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: G. LAROCHE	CHECKED BY: G. LAROCHE
TRAFFIC CONTROL PHASE 2	SHEET 65 OF 134

REMOVAL AND DISPOSAL OF GUARDRAIL

STA 235+83.4 - 236+10.4 LT
STA 235+63.8 - 236+09.7 RT
STA 236+49.9 - 237+92.6 LT
STA 236+49.3 - 237+24.8 RT

HEAVY DUTY STEEL BEAM GUARDRAIL, GALVANIZED

STA 235+69.0 - 235+81.4 LT (G-1)
STA 235+40.7 - 235+81.4 RT (MGS)
STA 236+78.7 - 237+92.6 LT (MGS)
STA 236+78.4 - 237+15.2 RT (G-1)

ANCHOR FOR STEEL BEAM GUARDRAIL

STA 235+77.7 LT
STA 237+07.3 RT

GUARDRAIL APPROACH SECTION, GALVANIZED 2 RAIL BOX BEAM

STA 235+81.4 - 236+10.4 LT
STA 235+81.4 - 236+10.4 RT
STA 236+49.4 - 236+78.7 LT
STA 236+49.4 - 236+78.4 RT

MGS TANGENTIAL END SECTION

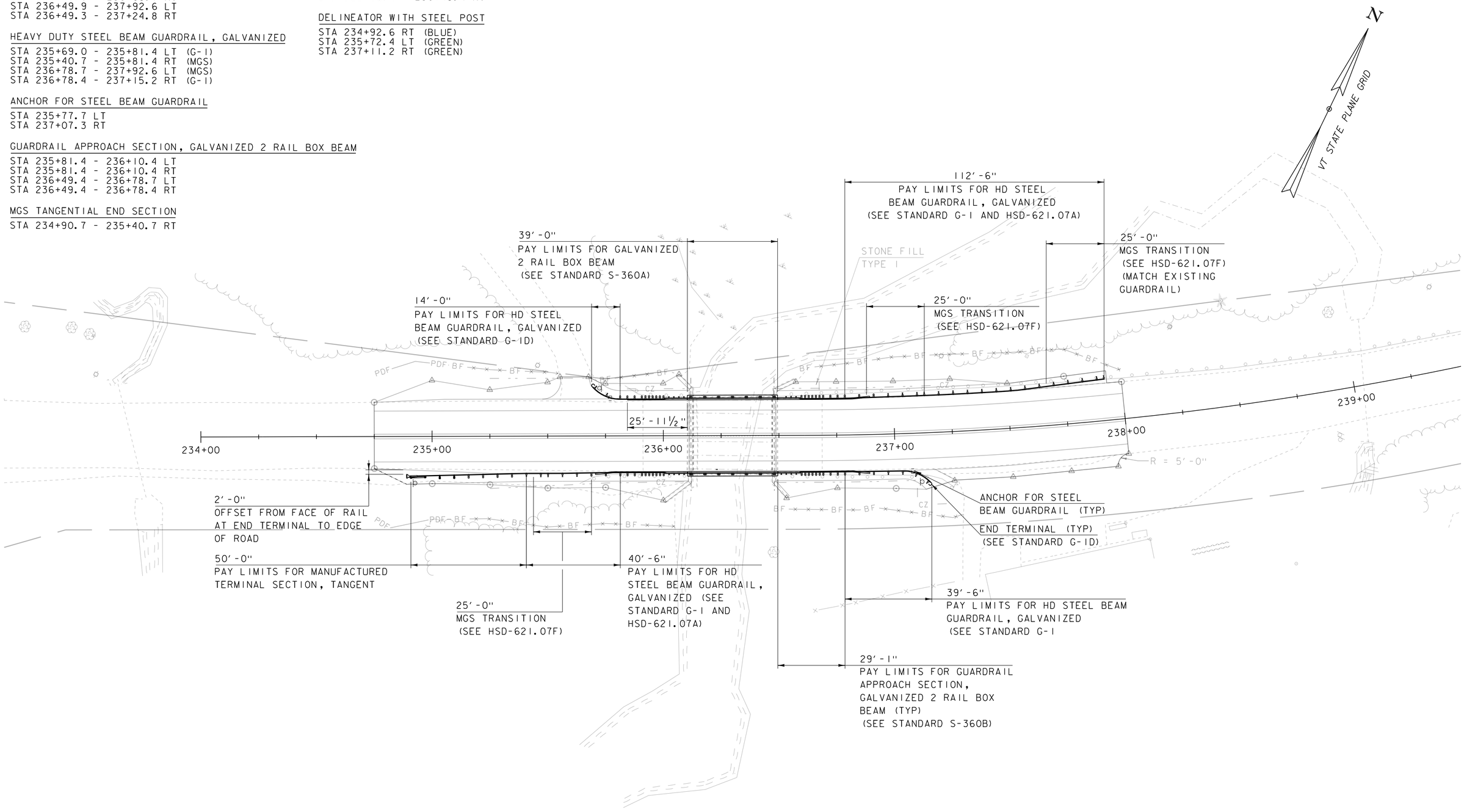
STA 234+90.7 - 235+40.7 RT

BRIDGE RAIL, GALVANIZED 2 RAIL BOX BEAM

STA 236+10.4 - 236+49.4 LT
STA 236+10.4 - 236+49.4 RT

DELINEATOR WITH STEEL POST

STA 234+92.6 RT (BLUE)
STA 235+72.4 LT (GREEN)
STA 237+11.2 RT (GREEN)

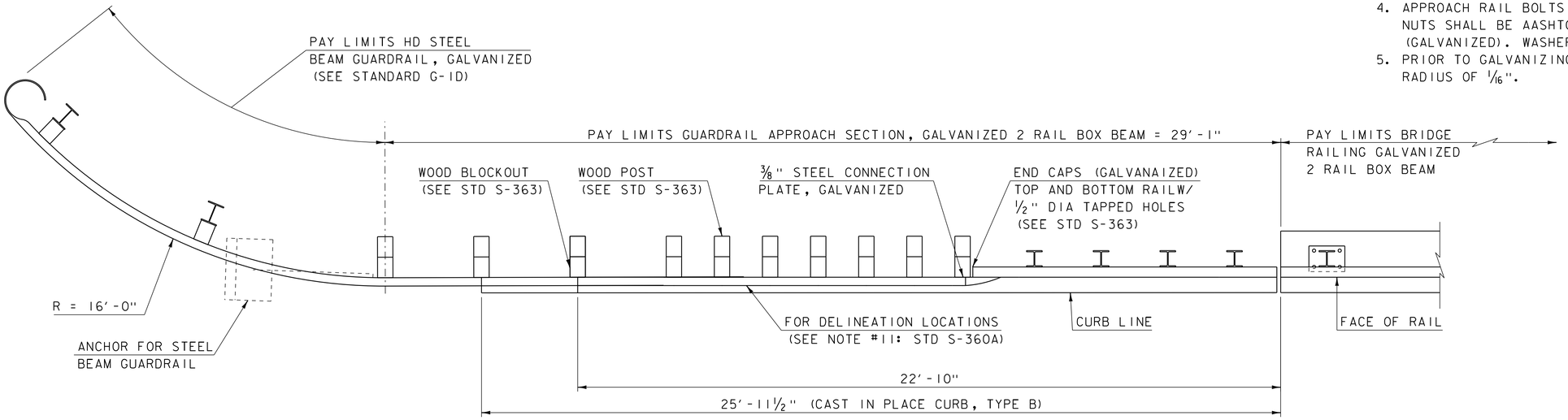


SCALE 1" = 20'-0"
20 0 20

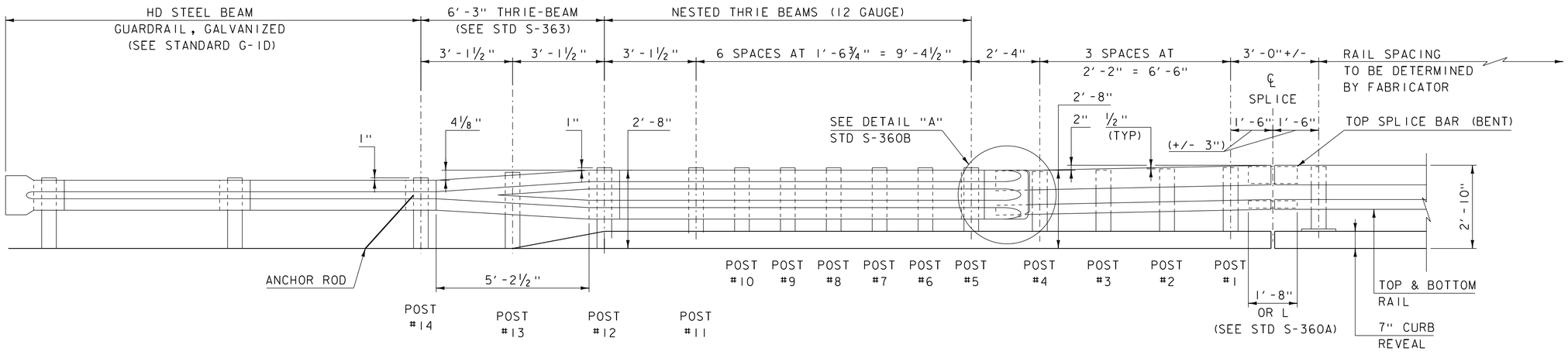
PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(12)
FILE NAME: s12b148rail.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: G. LAROCHE	CHECKED BY: C. MOONEY
GUARDRAIL LAYOUT SHEET	SHEET 66 OF 134

NOTES:

1. PAYMENT FOR GUARDRAIL APPROACH SECTION. GALVANIZED 2 RAIL BOX BEAM SHALL INCLUDE THE TERMINAL CONNECTOR, CONNECTION PLATE, DEFLECTOR PLATE, RAIL, POSTS, BLOCKS AND ATTACHMENT HARDWARE
2. ALL APPROACH RAIL SPLICES SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW
3. TUBE AND STEEL POST MATERIALS, DIMENSION SIZES AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL, UNLESS OTHERWISE NOTED.
4. APPROACH RAIL BOLTS SHALL BE ASTM A307 GRADE A AND NUTS SHALL BE AASHTO M291 (ASTM A563 GRADE A OR BETTER) (GALVANIZED). WASHERS SHALL BE ASTM F844.
5. PRIOR TO GALVANIZING, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".

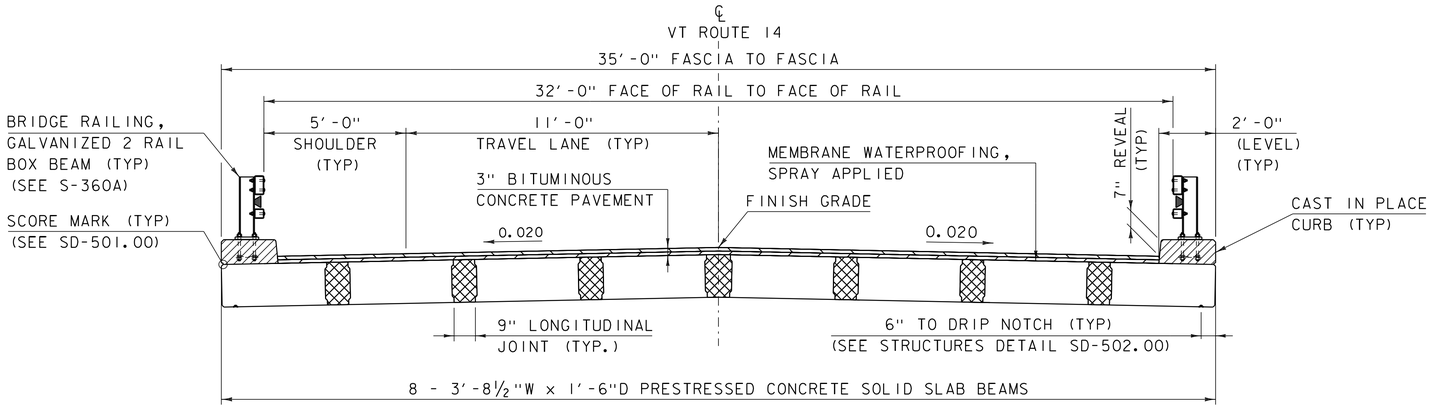


RAILING TRANSITION PLAN



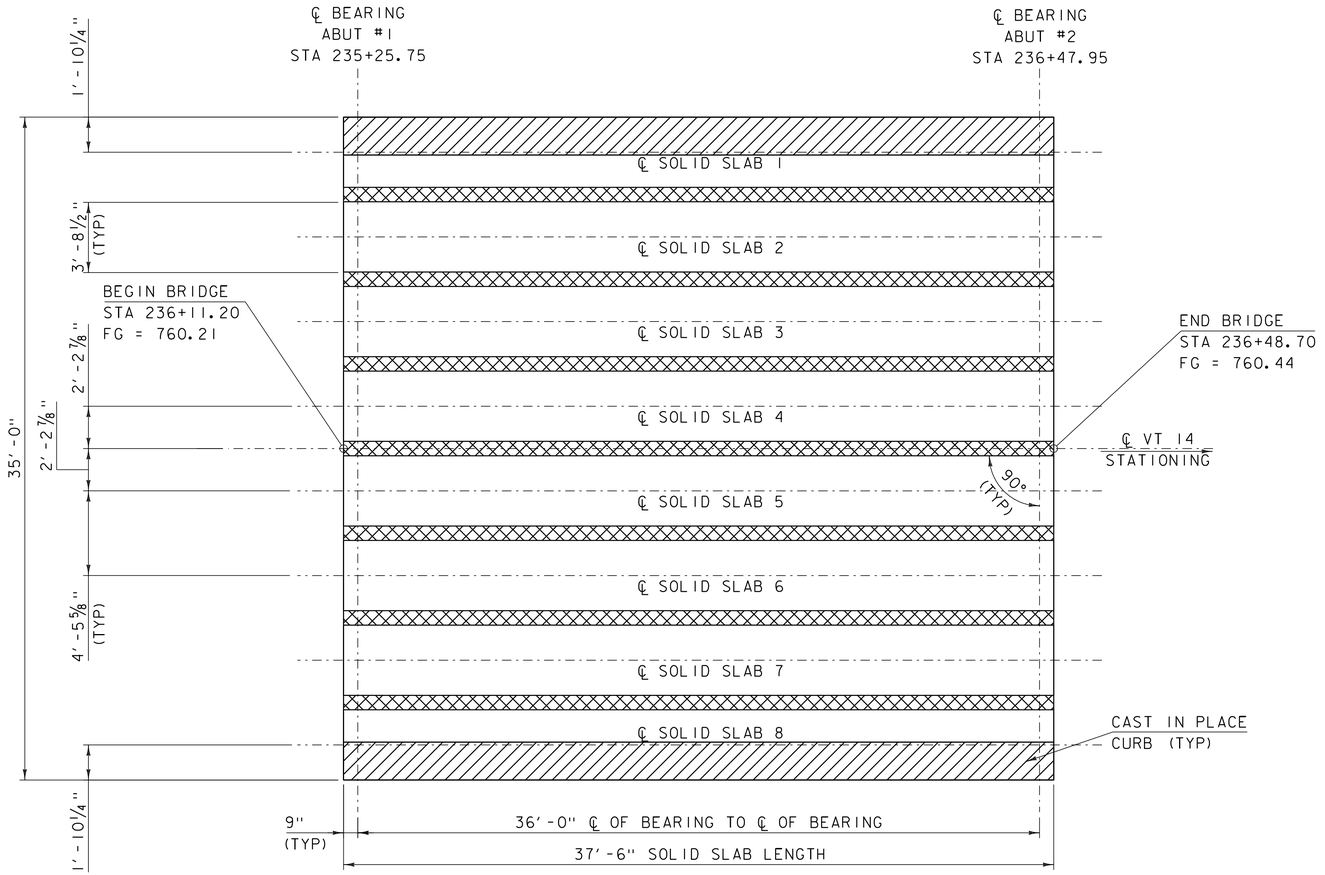
RAILING TRANSITION ELEVATION
ALONG FACE OF RAIL

PROJECT NAME:	CALAIS
PROJECT NUMBER:	NHF 037-2(12)
FILE NAME: sl2bl48rail.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: G. LAROCHE	CHECKED BY: C. MOONEY
APPROACH RAIL DETAILS	SHEET 67 OF 134



BRIDGE TYPICAL SECTION

SCALE ⅜" = 1′-0"



SOLID SLAB LAYOUT

SCALE ¼" = 1′-0"

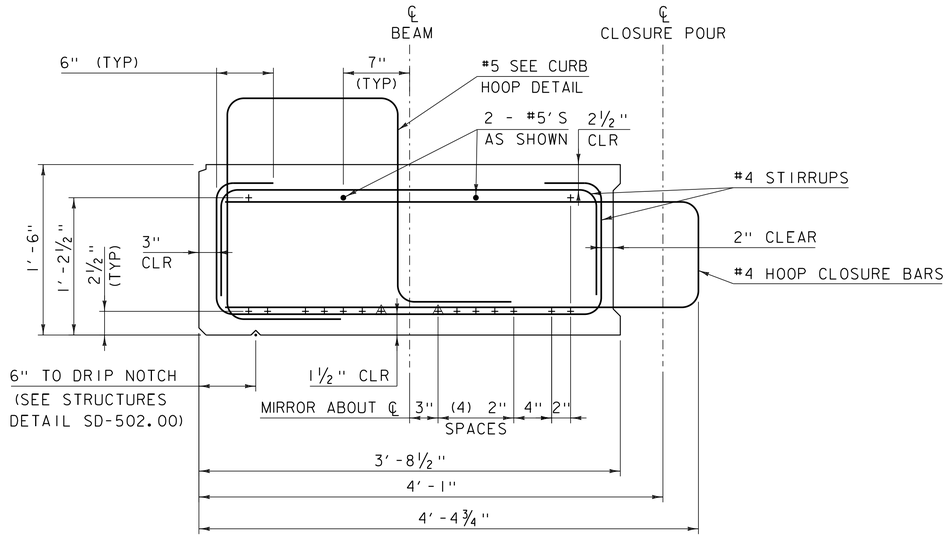
ITEM 900.608 SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)

ITEM 900.608 SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A)

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

FILE NAME: s12b148sup.dgn
PROJECT LEADER: G. LAROCHE
DESIGNED BY: A. LEMIEUX
FRAMING PLAN

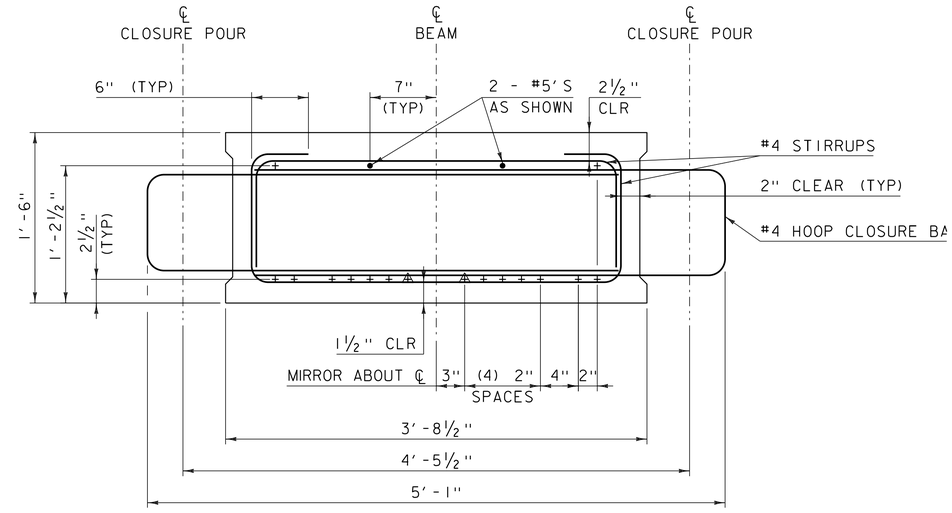
PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: A. LEMIEUX
SHEET 68 OF 134



SLAB 1 AND 8

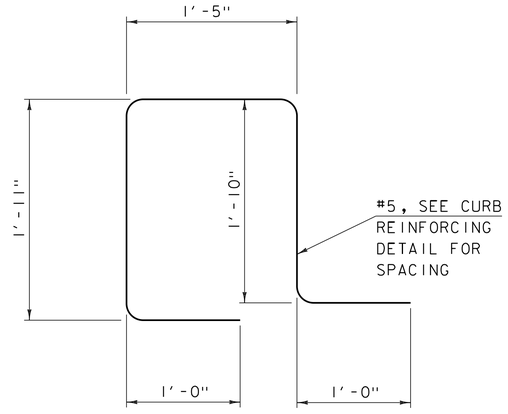
SCALE 1½" = 1'-0"

NOTE: BEAM 8 IS A MIRROR IMAGE OF BEAM 1



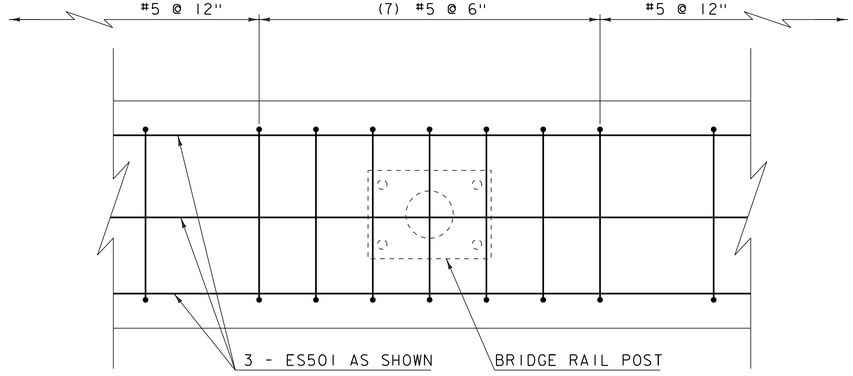
SLAB 2 TO 7

SCALE 1½" = 1'-0"



CURB HOOP DETAIL

SCALE 1½" = 1'-0"



CURB REINFORCING DETAIL

SCALE 1½" = 1'-0"

NOTES:

\+ DENOTES STRAIGHT 0.60" DIAMETER FULLY BONDED PRESTRESSING STRANDS

⚠ DENOTES STRANDS DEBONDED FOR 4'-0" AT EACH END OF BEAM

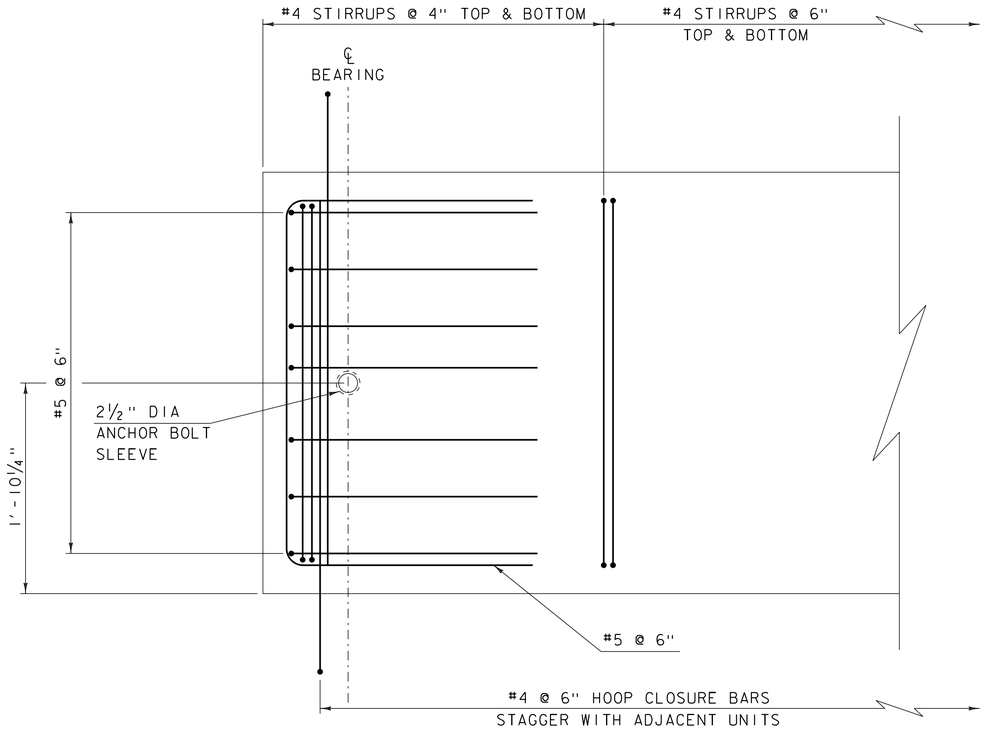
☒ SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)

▨ SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A)

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

FILE NAME: s12b148sup.dgn
PROJECT LEADER: G. LAROCHE
DESIGNED BY: A. LEMIEUX
SOLID SLAB DETAILS

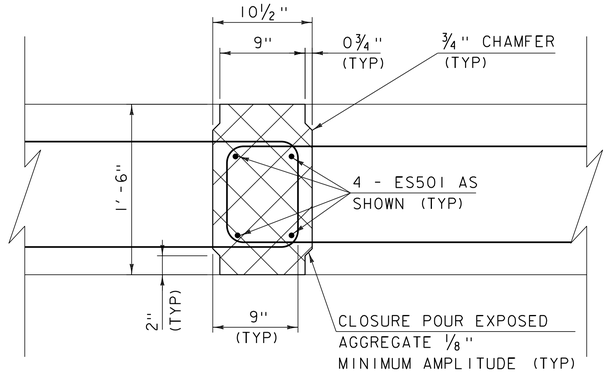
PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: A. LEMIEUX
SHEET 69 OF 134



BEAM END REINFORCEMENT PLAN

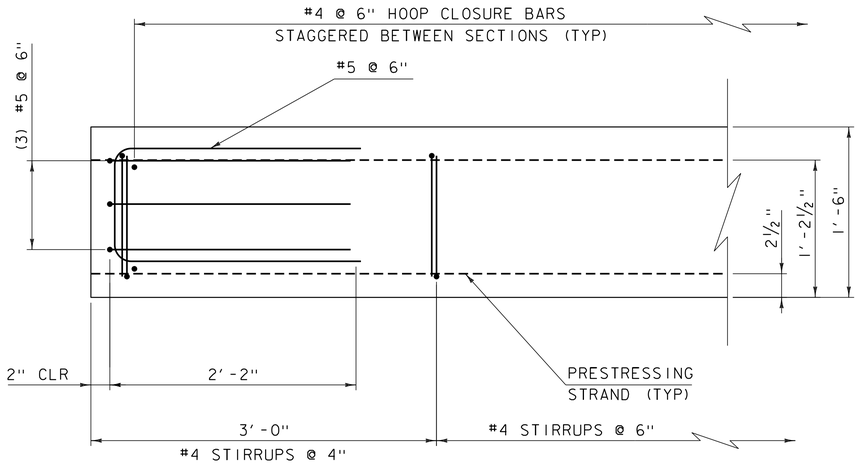
SCALE 1½" = 1'-0"

PRESTRESSING STRANDS OMMITTED FOR CLARITY



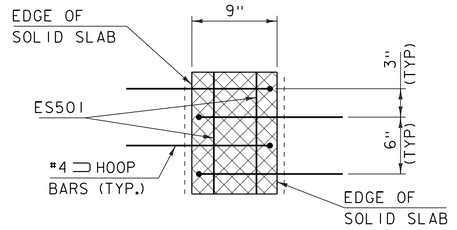
CLOSURE POUR DETAIL SECTION

SCALE 1½" = 1'-0"



BEAM END REINFORCEMENT ELEVATION

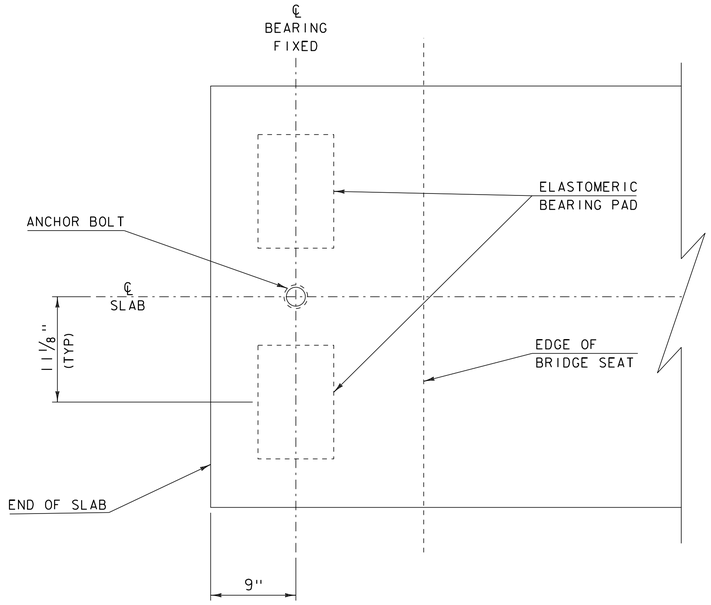
SCALE 1½" = 1'-0"



CLOSURE POUR PARTIAL PLAN

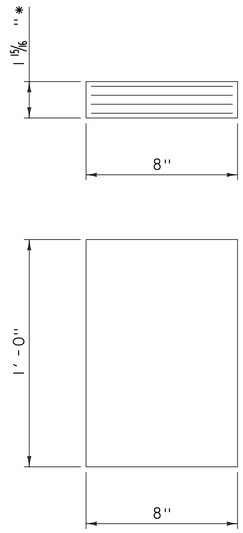
SCALE 1½" = 1'-0"

PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(12)
FILE NAME: s12b148sup.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: A. LEMIEUX	CHECKED BY: A. LEMIEUX
END BEAM REINFORCING DETAILS	SHEET 70 OF 134



ABUTMENT 1
BEARING PAD PLACEMENT DETAIL

NOT TO SCALE



ABUTMENT 1
ELASTOMERIC BEARING DETAIL

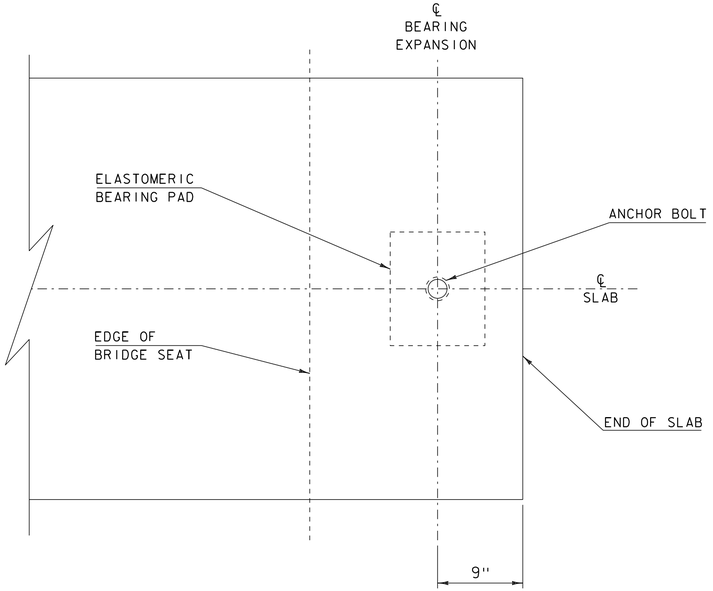
SCALE 3" = 1'-0"

* 2 - ¼" EXTERIOR LAYERS OF ELASTOMER
3 - ⅜" INTERIOR LAYERS OF ELASTOMER
4 - 14 GAUGE STEEL

BEARING NOTES:

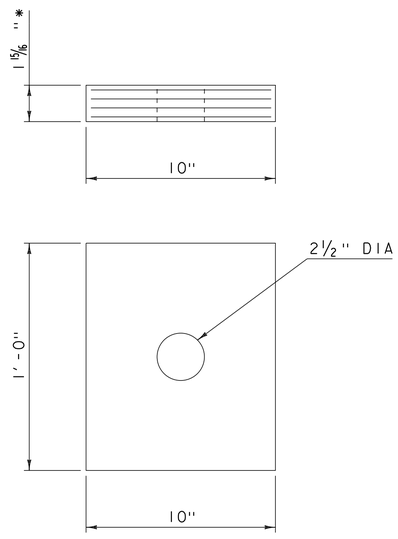
1. ANCHOR BOLTS TO BE ASTM F1554 GR. 105.
2. GROUT ANCHOR BOLTS INTO THE SLEEVES ON THE FIXED END. BEFORE THE GROUT CURES, PLACE THE WASHER PLATE AND INSTALL THE NUT ON TOP AND HAND TIGHTEN.
3. PAYMENT FOR BEAM ANCHORAGE, INCLUDING DRILLING, GROUTING, ALL MATERIALS, LABOR, AND INCIDENTALS WILL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE SOLID SLABS.
4. THE ELASTOMER WAS DESIGNED WITH A SHEAR MODULUS OF 120 PSI +/- 10% AND A DUROMETER HARDNESS OF 50.
5. SHIMS MAY BE REQUIRED TO ADJUST FOR FINAL GRADE AND CAMBER TOLERANCES. THE CONTRACTOR SHALL HAVE ONE 1#4" THICK STEEL SHIM AVAILABLE PER BEARING PAD. THE SHIMS SHALL BE 1#4" LARGER THAN THE ELASTOMERIC BEARING ON ALL SIDES. THE COST OF THE SHIMS WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 531.17 "BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD".
7. DESIGN SERVICE LOADS PER BEARING: (DESIGN METHOD A)
   ABUTMENT 1:
   MAX DEAD LOAD: 11.02 KIP
   MAX LIVE LOAD: 19.47 KIP

   ABUTMENT 2:
   MAX DEAD LOAD: 22.05 KIP
   MAX LIVE LOAD: 38.94 KIP



ABUTMENT 2
BEARING PAD PLACEMENT DETAIL

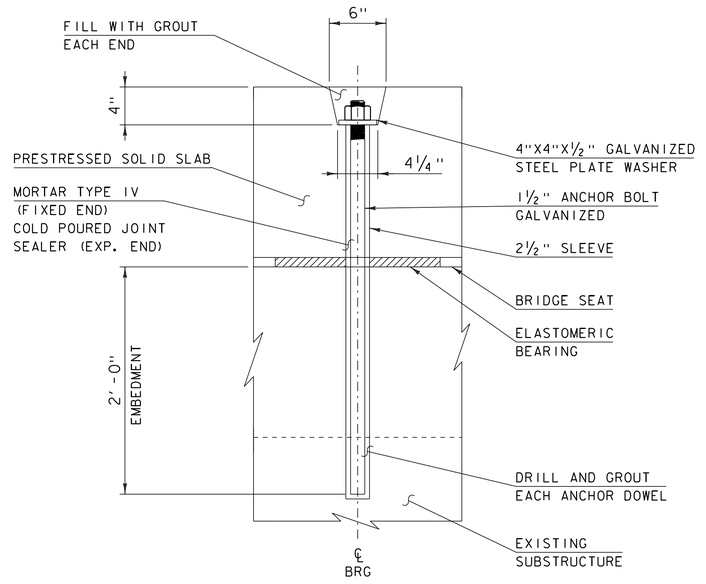
NOT TO SCALE



ABUTMENT 2
ELASTOMERIC BEARING DETAIL

SCALE 3" = 1'-0"

* 2 - ¼" EXTERIOR LAYERS OF ELASTOMER
3 - ⅜" INTERIOR LAYERS OF ELASTOMER
4 - 14 GAUGE STEEL



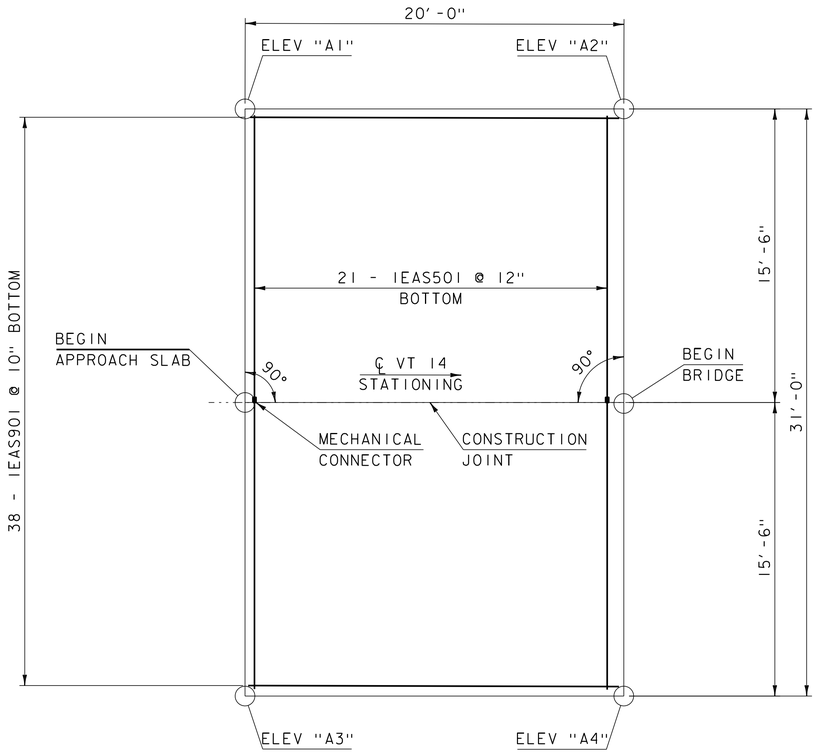
PRESTRESSED BEAM
ANCHOR DETAIL

NOT TO SCALE

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

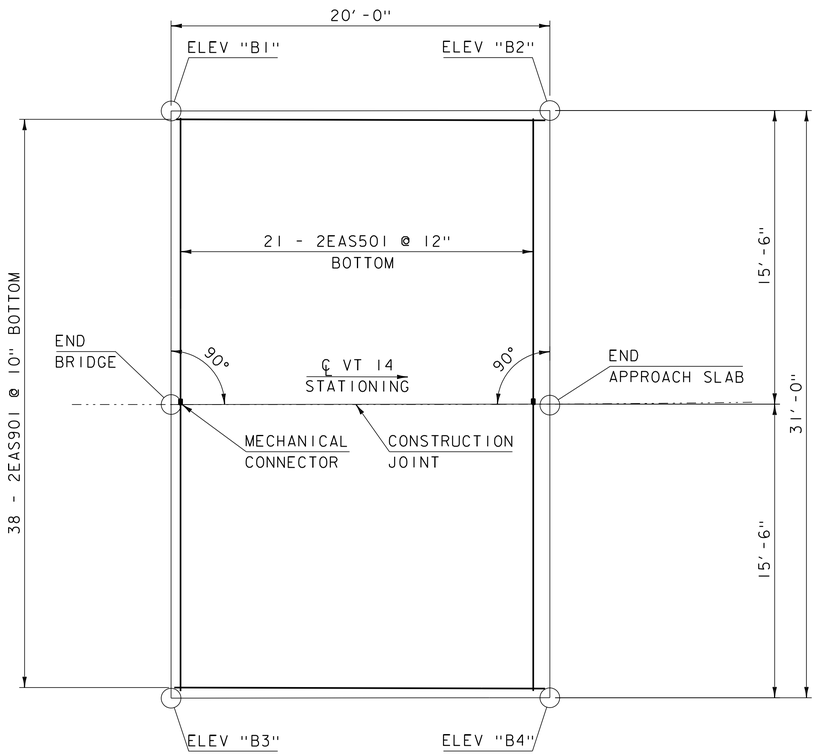
FILE NAME: sl2bl48brg.dgn
PROJECT LEADER: G. LAROCHE
DESIGNED BY: A. LEMIEUX
ELASTOMERIC BEARING DETAILS

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: C. BURRALL
SHEET 71 OF 134



APPROACH SLAB NO 1

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

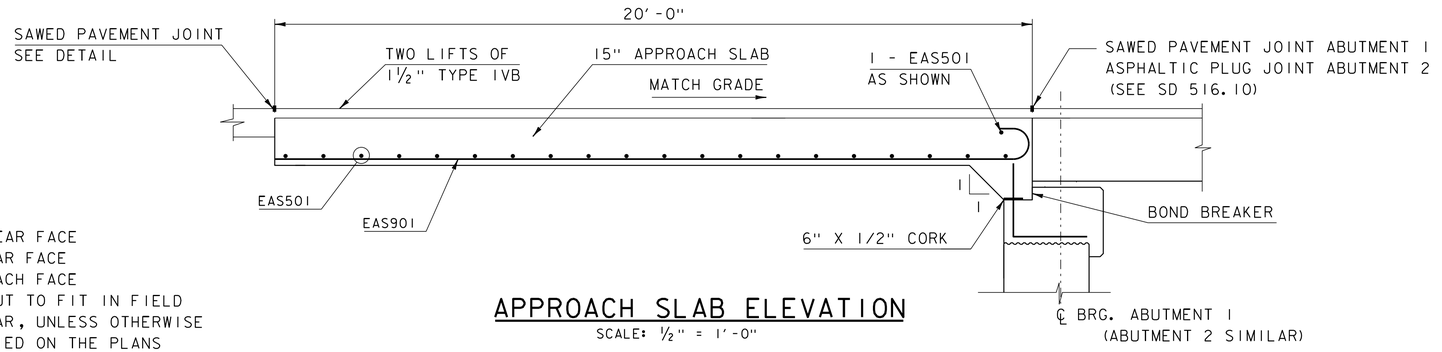


APPROACH SLAB NO 2

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

	STATION	OFFSET	ELEVATION
A1	235+91.20	15.50' LT	759.54
A2	236+11.20	15.50' LT	759.65
BEGIN AS 1	235+91.20	0.00'	759.85
BEGIN BRIDGE	236+11.20	0.00'	759.96
A3	235+91.20	15.50' RT	759.54
A4	236+11.20	15.50' RT	759.65
B1	236+48.70	15.50' LT	759.88
B2	236+68.70	15.50' LT	760.04
END BRIDGE	236+48.70	0.00'	760.20
END AS 2	236+68.70	0.00'	760.35
B3	236+48.70	15.50' RT	759.88
B4	236+68.62	15.50' RT	760.04

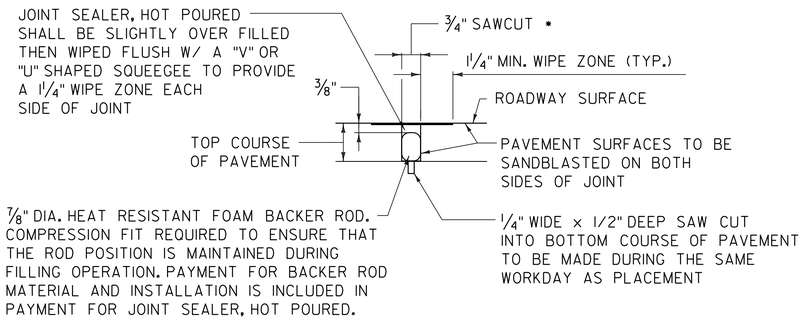
NOTES:
1. COMPACT THE SUBBASE IN THE AREA UNDER THE APPRAOCH SLAB TO A SMOOTH SURFACE.
2. MATERIAL FOR THE POLYETHELENE SHEETING SHALL MEET THE REQUIREMENTS OF SUBSECTION (725.01C) OF THE STANDARD SPECIFICATIONS. PLACE THE SHEETING ON TOP OF THE FINISHED SUBBASE FOR THE FULL LENGTH AND WIDTH OF THE APPROACH SLAB, AS SHOWN IN THE APPROACH SLAB DETAIL. LAP SHEETING AT LEAST 24 INCHES. PAYMENT INCIDENTAL TO ITEM 900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS B)".
3. PAYMENT FOR BOND BREAKER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PAY ITEM 900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS B)".
4. ITEM 507.19 MECHANICAL BAR CONNECTOR #5 EPOXY FOR 1EA50I AND 2EA50I



NOTES:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS
2'-6" SPLICE LENGTH UNLESS OTHERWISE SPECIFIED

APPROACH SLAB ELEVATION

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



SAWED PAVEMENT JOINT DETAIL

NOT TO SCALE

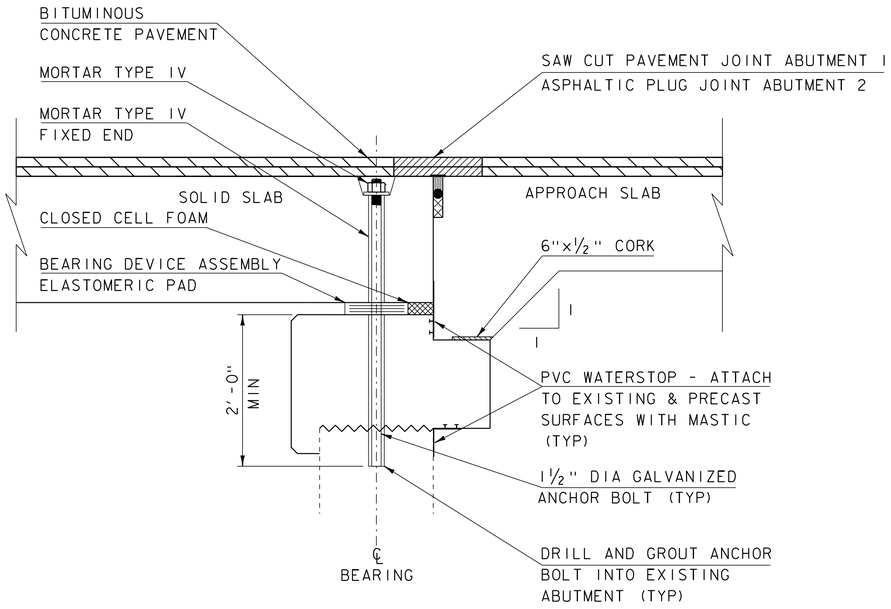
1. JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF THE CONCRETE DECK. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER.
2. SAWED PAVEMENT JOINTS SHALL BE LOCATED BETWEEN THE APPROACH SLABS AND EACH END OF THE BRIDGE AND BETWEEN THE APPROACH SLABS AND ANY PAVED APRONS FOR DRIVES

• SAWED PAVEMENT JOINT AT APRON SHALL BE CUT TO FULL PAVEMENT DEPTH.

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

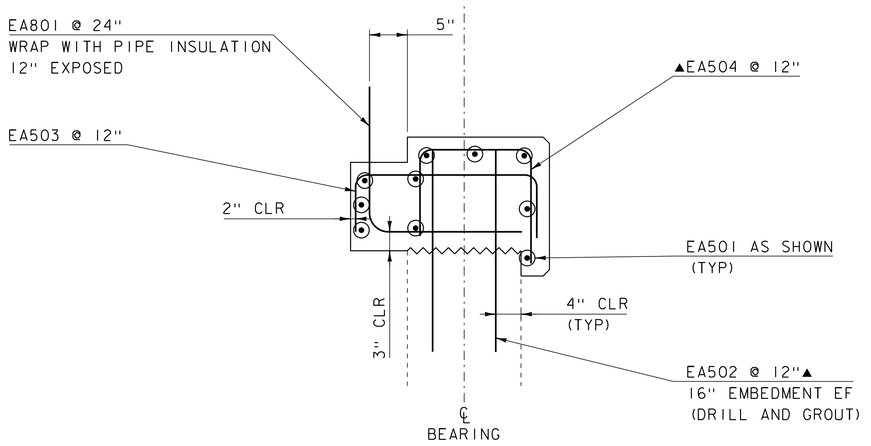
FILE NAME: sl2bl48appslab.dgn
PROJECT LEADER: G. LAROCHE
DESIGNED BY: S. COLEY
APPROACH SLAB DETAILS

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: A. MANN
SHEET 72 OF 134



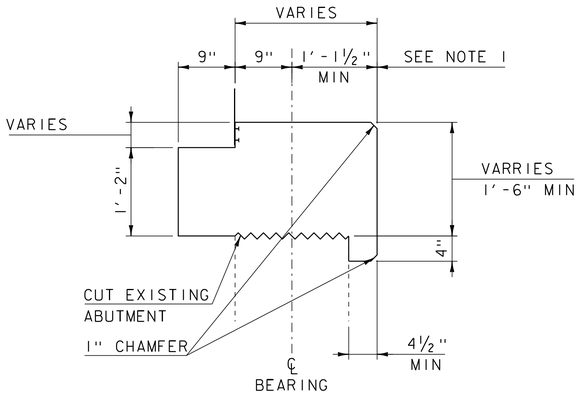
BRIDGE END DETAIL

SCALE: 1" = 1'-0"



BRIDGE SEAT TYPICAL REINFORCING

SCALE: 1" = 1'-0"

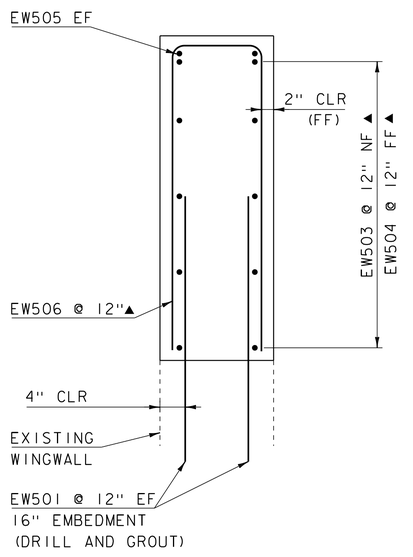


BRIDGE SEAT TYPICAL

SCALE: 1" = 1'-0"

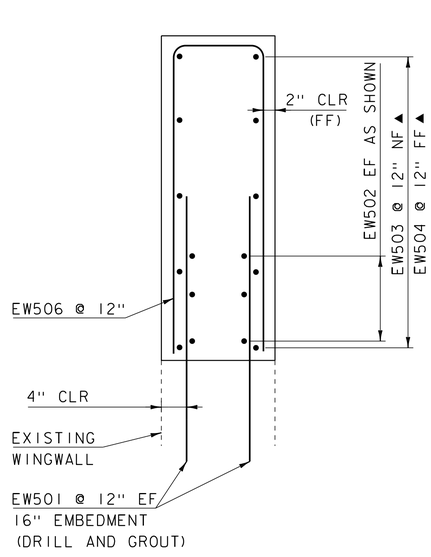
NOTE:
1. THE NEAR FACE OF ABUTMENT CAP MAY BE FORMED ALONG THE FACE OF THE EXISTING ABUTMENT, BUT SHALL MEET THE SPECIFIED MINIMUM DIMENSIONS HEREIN

2. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY CL BEARING LOCATIONS AND ACTUAL ABUTMENT CAP GEOMETRY TO MEET ALL SPECIFIED MINIMUM DIMENSIONS.



WINGWALL TYPICAL REINFORCING

SCALE: 1" = 1'-0"



TYPICAL SECTION A-A REINFORCING

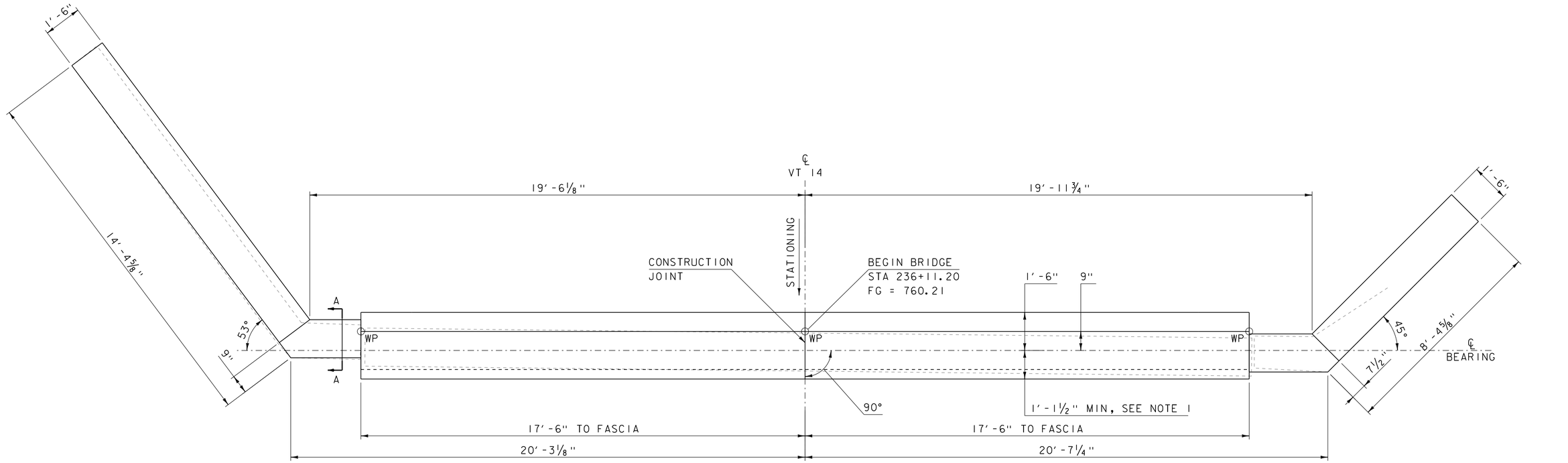
SCALE: 1" = 1'-0"

NOTE:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-6" SPLICE LENGTH UNLESS OTHERWISE SPECIFIED

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

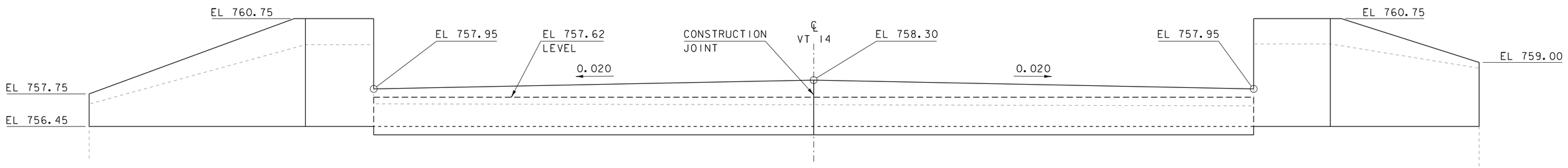
FILE NAME: sl2bl48sub
PROJECT LEADER: G. LAROCHE
DESIGNED BY: A. LEMIEUX
ABUTMENT TYPICAL SECTIONS

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: A. LEMIEUX
SHEET 73 OF 134



ABUTMENT 1 PLAN

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



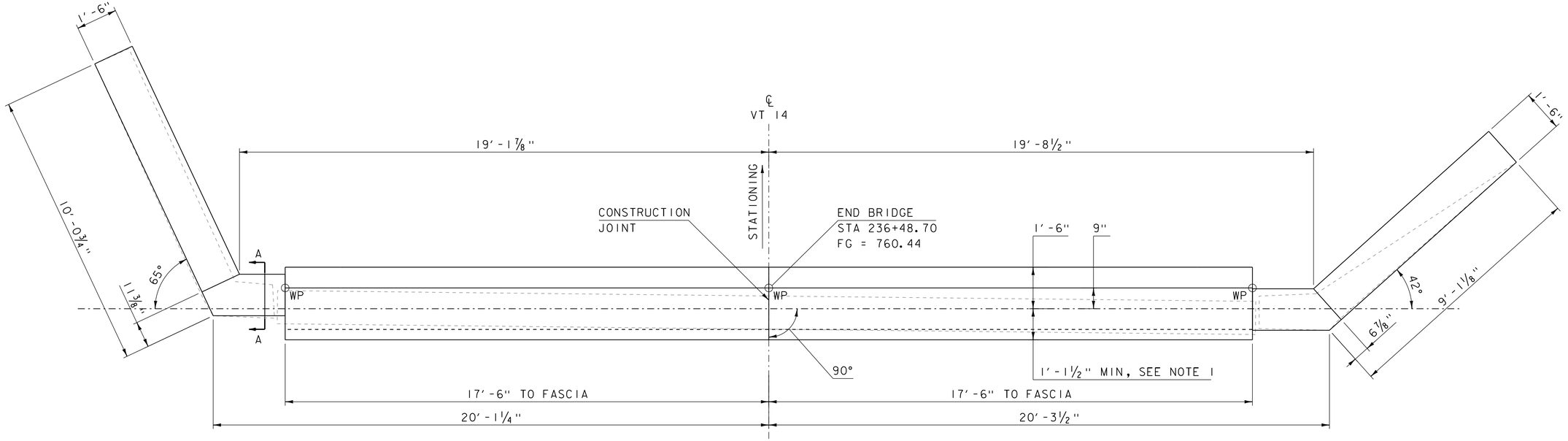
ABUTMENT 1 ELEVATION

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

NOTE:
1. THE NEAR FACE OF ABUTMENT CAP MAY BE FORMED ALONG THE FACE OF THE EXISTING ABUTMENT, BUT SHALL MEET THE SPECIFIED MINIMUM DIMENSIONS HEREIN

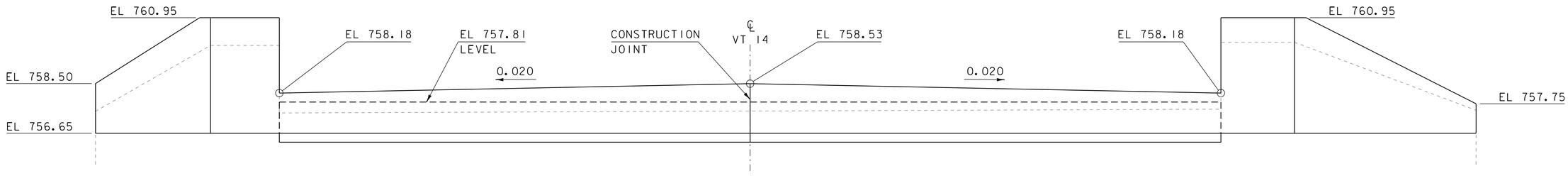
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY CL BEARING LOCATIONS AND ACTUAL ABUTMENT CAP GEOMETRY TO MEET ALL SPECIFIED MINIMUM DIMENSIONS.

PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(12)
FILE NAME: s12b148sub.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: A. LEMIEUX	CHECKED BY: A. MANN
ABUTMENT 1	SHEET 74 OF 134



ABUTMENT 2 PLAN

SCALE: ½" = 1'-0"



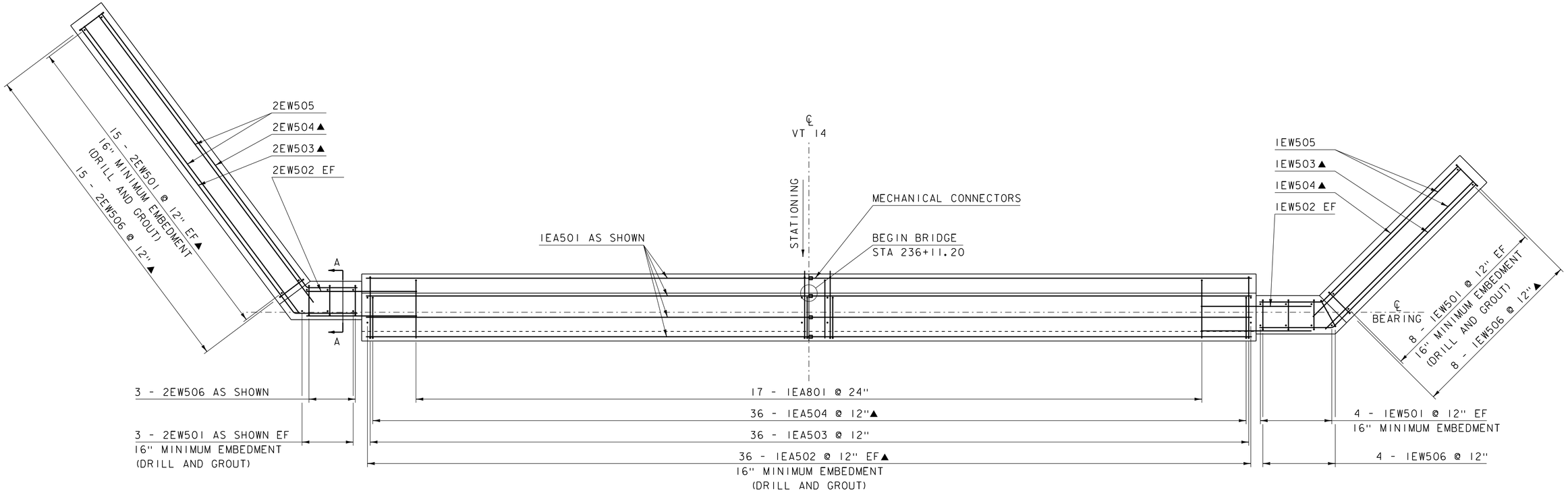
ABUTMENT 2 ELEVATION

SCALE: ½" = 1'-0"

NOTE:
1. THE NEAR FACE OF ABUTMENT CAP MAY BE FORMED ALONG THE FACE OF THE EXISTING ABUTMENT, BUT SHALL MEET THE SPECIFIED MINIMUM DIMENSIONS HEREIN

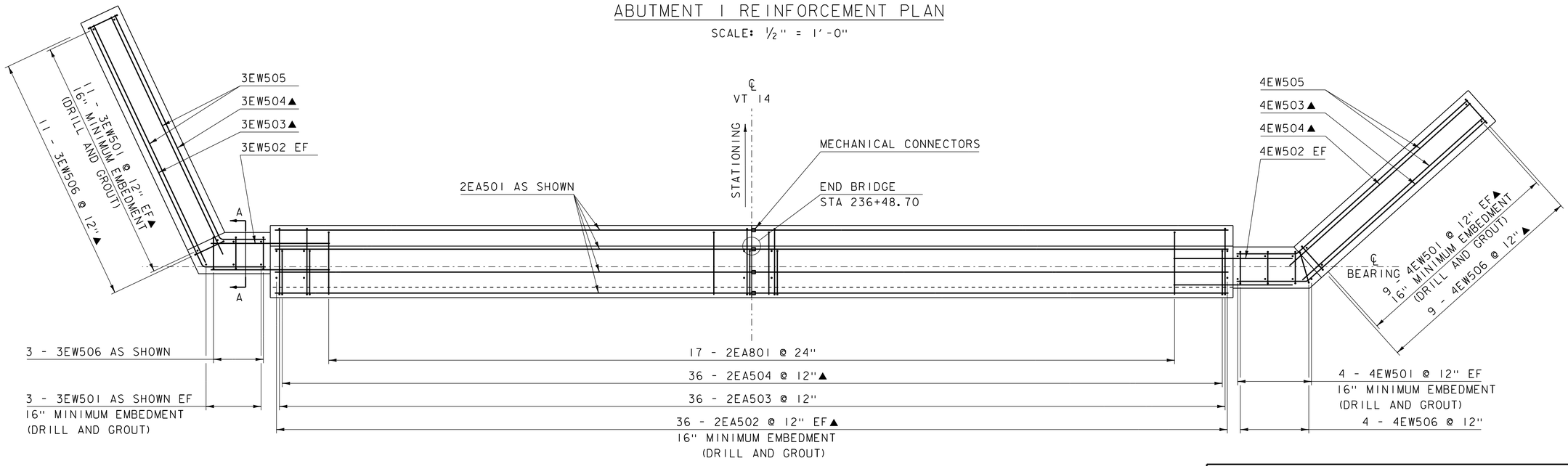
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY CL BEARING LOCATIONS AND ACTUAL ABUTMENT CAP GEOMETRY TO MEET ALL SPECIFIED MINIMUM DIMENSIONS.

PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(12)
FILE NAME: sl2bl48sub	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: A. LEMIEUX	CHECKED BY: A. LEMIEUX
ABUTMENT 2	SHEET 75 OF 134



ABUTMENT 1 REINFORCEMENT PLAN

SCALE: ½" = 1'-0"



ABUTMENT 2 REINFORCEMENT PLAN

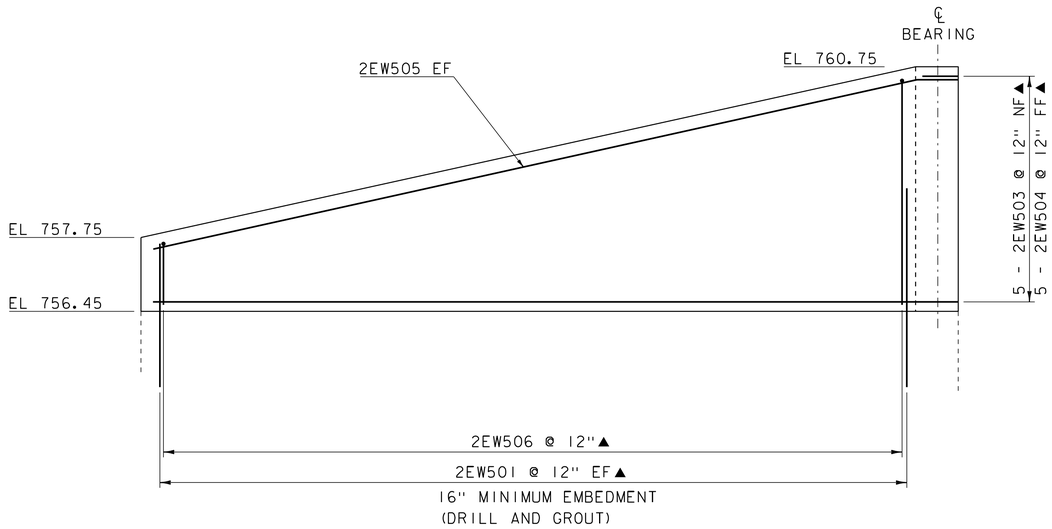
SCALE: ½" = 1'-0"

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

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

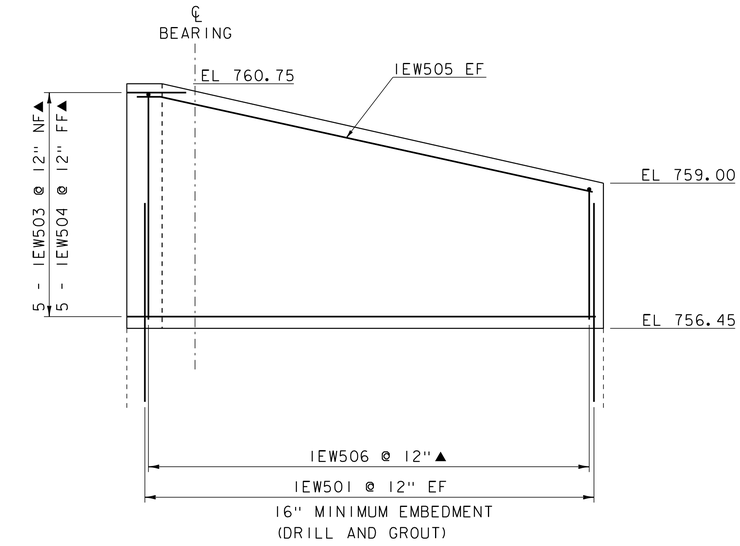
FILE NAME: sl2bl48sub
PROJECT LEADER: G. LAROCHE
DESIGNED BY: A. LEMIEUX
ABUTMENT REINFORCING

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: A. LEMIEUX
SHEET 76 OF 134



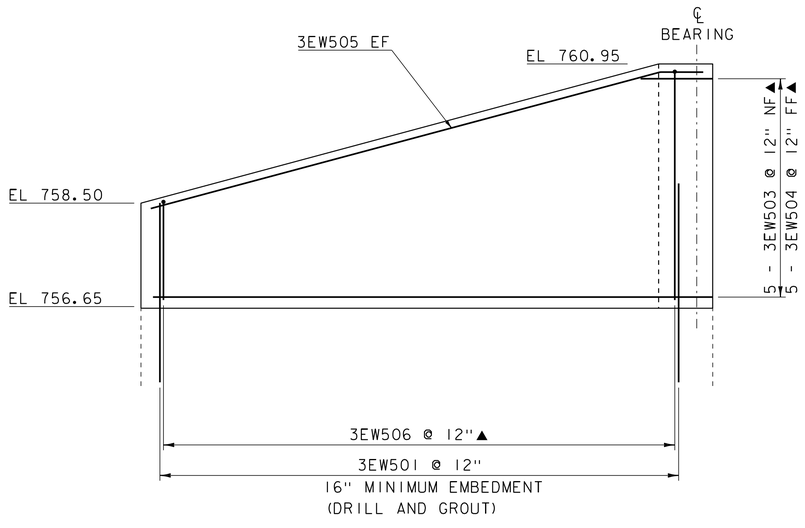
WINGWALL 2 ELEVATION

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



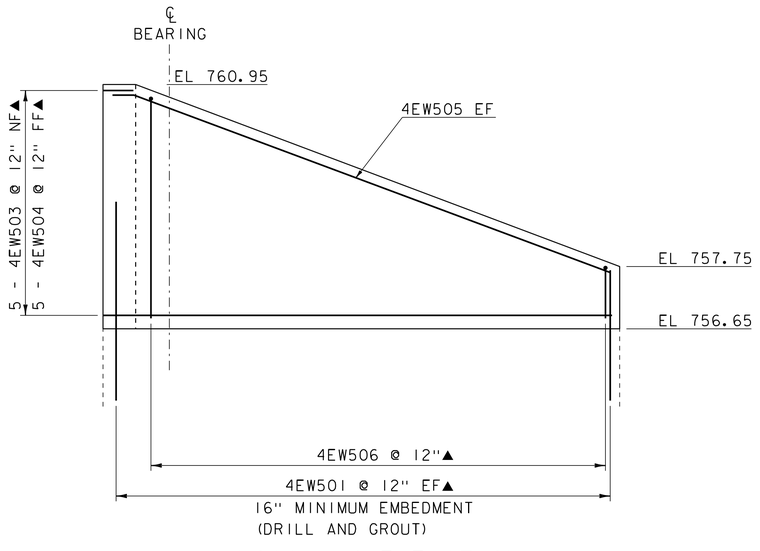
WINGWALL 1 ELEVATION

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



WINGWALL 3 ELEVATION

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



WINGWALL 4 ELEVATION

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

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

PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(12)	
FILE NAME: sl2bl48sub	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: A. LEMIEUX	CHECKED BY: A. LEMIEUX
WINGWALL REINFORCING	SHEET 77 OF 134

STATE OF VERMONT
AGENCY OF TRANSPORTATION

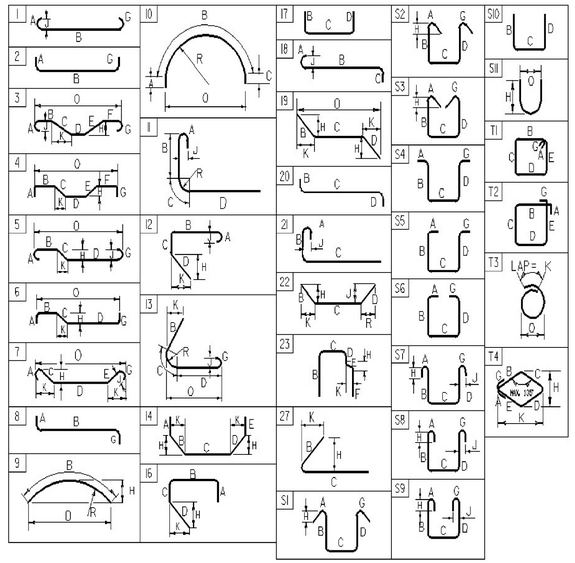
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	DECK JOINTS																
	34	5	37'- 0"	ES501	STR	37'- 0"											
	APPROACH SLAB 1																
	42	5	15'- 3"	1EAS501	STR	15'- 3"											
✳	39	9	20'- 9"	1EAS901	1	1'- 3"	19'- 6"							1'- 0"			
	APPROACH SLAB 2																
	42	5	15'- 3"	1EAS501	STR	15'- 3"											
	38	9	20'- 9"	1EAS901	1	1'- 3"	19'- 6"							1'- 0"			
	ABUTMENT 1																
	20	5	17'- 3"	1EA501	STR	17'- 3"											
▲	72	5	3'- 2"	1EA502	STR	3'- 2"											
	36	5	3'- 9"	1EA503	S10		8"	2'- 3"	10"								
▲	36	5	4'- 6"	1EA504	S10		1'- 5"	1'- 5"	1'- 8"								
△	18	8	4'- 1"	1EA801	17		1'- 11"	2'- 2"									
	ABUTMENT 2																
	20	5	17'- 3"	1EA501	STR	17'- 3"											
▲	72	5	3'- 2"	1EA502	STR	3'- 2"											
	36	5	3'- 9"	1EA503	S10		8"	2'- 3"	10"								
▲	36	5	4'- 6"	1EA504	S10		1'- 5"	1'- 5"	1'- 8"								
	17	8	4'- 1"	1EA801	17		1'- 11"	2'- 2"									
	WING WALL 1																
	24	5	3'- 10"	1EW501	STR	3'- 10"											
△	6	5	5'- 0"	1EW502	STR	5'- 0"											
▲	5	5	11'- 1"	1EW503	22		2'- 11"	8'- 2"					2'- 0"		2'- 0"		
▲	5	5	9'- 11"	1EW504	22		2'- 4"	7'- 7"					1'- 8"		1'- 8"		
	2	5	8'- 3"	1EW505	22		6"	7'- 9"					1"		5"		
▲	12	5	9'- 1"	1EW506	S10		4'- 0"	1'- 1"	4'- 0"								
	WING WALL 2																
▲	36	5	3'- 10"	2EW501	STR	3'- 10"											
	6	5	5'- 0"	2EW502	STR	5'- 0"											
▲	5	5	16'- 9"	2EW503	22		2'- 7"	14'- 2"					2'- 1"		1'- 7"		
▲	5	5	15'- 3"	2EW504	22		1'- 10"	13'- 5"					1'- 6"		1'- 1"		
	2	5	14'- 5"	2EW505	22		7"	13'- 10"					2"		9"		
▲	18	5	9'- 1"	2EW506	S10		4'- 0"	1'- 1"	4'- 0"								
	WING WALL 3																
▲	28	5	3'- 10"	3EW501	STR	3'- 10"											
	6	5	5'- 0"	3EW502	STR	5'- 0"											
▲	5	5	12'- 3"	3EW503	22		2'- 5"	9'- 10"					2'- 2"		1'- 0"		
▲	5	5	10'- 5"	3EW504	22		1'- 6"	8'- 11"					1'- 4"		0'- 8"		
	2	5	10'- 3"	3EW505	22		9"	9'- 6"					3"		8"		
▲	14	5	9'- 1"	3EW506	S10		4'- 0"	1'- 1"	4'- 0"								
	WING WALL 4																
▲	26	5	3'- 10"	4EW501	STR	3'- 10"											
	6	5	5'- 0"	4EW502	STR	5'- 0"											
▲	5	5	11'- 6"	4EW503	22		2'- 7"	8'- 11"					1'- 9"		1'- 11"		
▲	5	5	10'- 4"	4EW504	22		2'- 0"	8'- 4"					1'- 4"		1'- 6"		
	2	5	9'- 4"	4EW505	22		5"	8'- 11"					2"		5"		
▲	13	5	9'- 1"	4EW506	S10		4'- 0"	1'- 1"	4'- 0"								

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O

~ NOTES ~

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



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION DIAMETER INCHES	AREA INCHES²	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.04	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.14
#9	3.400	1.13	1.00	3.54
#10	4.3	1.270	1.27	3.990
#11	5.31	1.410	1.56	4.430
#14	7.65	1.69	2.25	5.32
#18	13.60	2.26	4.00	7.09

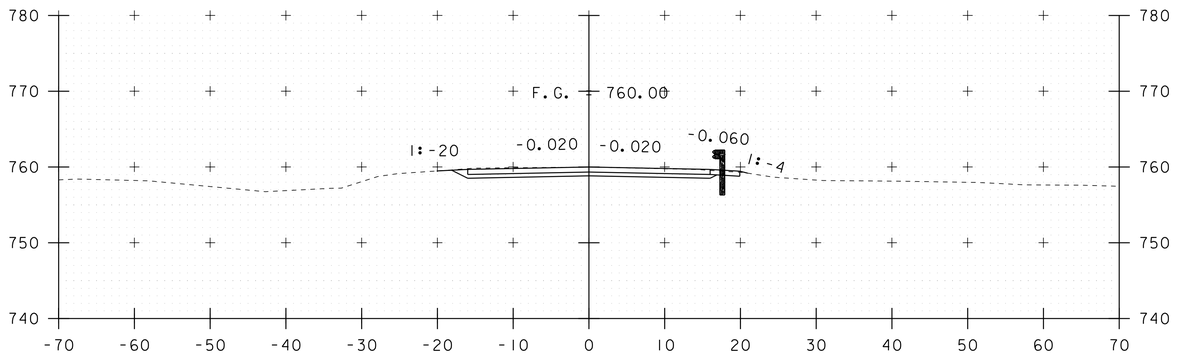
~ REINFORCING STEEL CORROSION RESISTANCE LEVEL ~

THE REINFORCING STEEL MARKS IN THIS SCHEDULE INDICATE THE REQUIRED BAR CORROSION RESISTANCE LEVEL. CORROSION RESISTANCE LEVEL IS DENOTED WITH A .2 FOR LEVEL TWO SUFFIX OR .3 FOR LEVEL THREE SUFFIX. .1 FOR LEVEL ONE IS TO BE OMITTED. THE BAR MATERIAL TYPE AND BAR STEEL GRADE PROVIDED FOR EACH CORROSION LEVEL WILL BE RECORDED ON THE PLAN SET PI SHEET FOR AS-BUILT RECORD PLAN ARCHIVES.

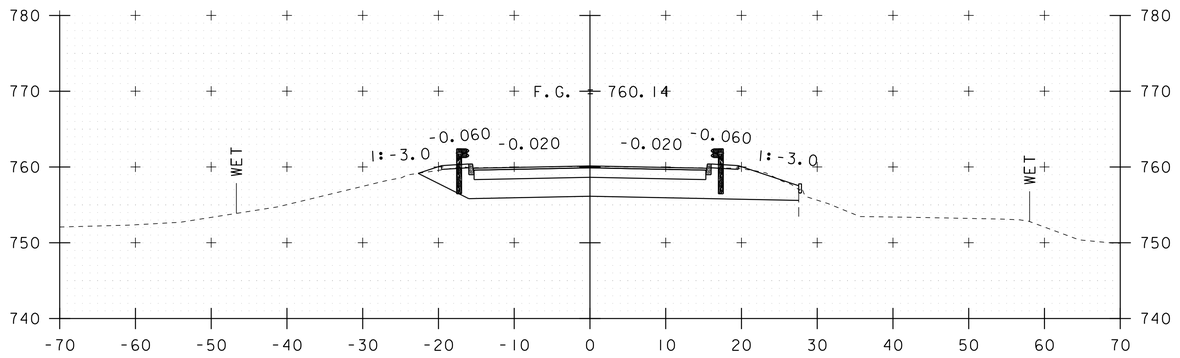
PROJECT NAME: **CALAIS**
PROJECT NUMBER: **BHF 037-2(12)**

FILE NAME: **s12b148reinf.dgn**
PROJECT MANAGER: **G. LAROCHE**
DESIGNED BY: **C. FRENCH**
REINFORCING STEEL SCHEDULE SHEET #1

PLOT DATE: **2/19/2020**
DRAWN BY: **C. FRENCH**
CHECKED BY: **S. COLEY**
SHEET 78 OF 134

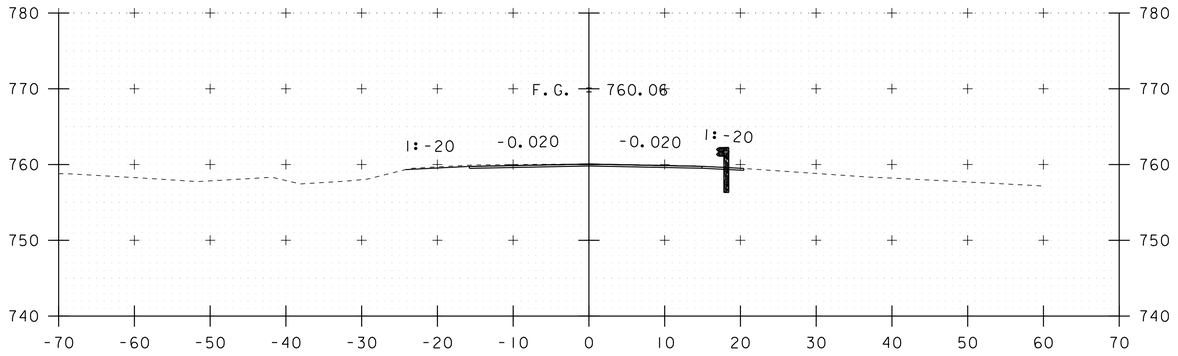


235+25
BEGIN PROJECT

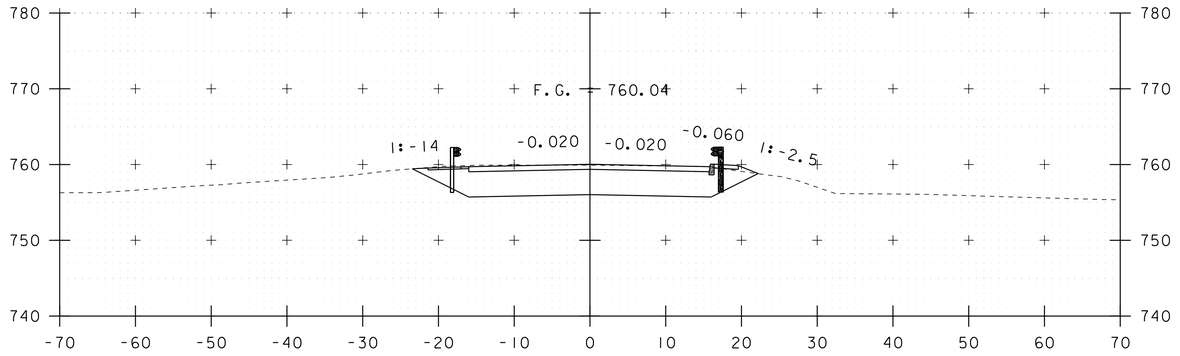


STA 236+11.20
BEGIN BRIDGE

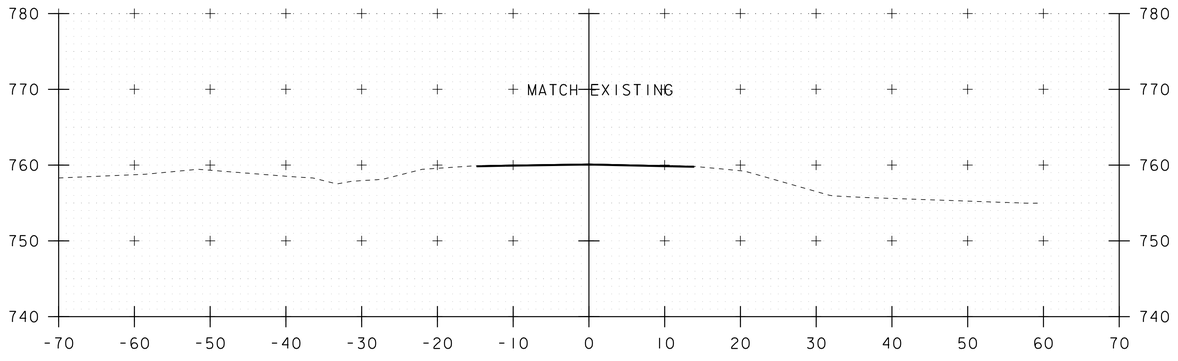
236+00



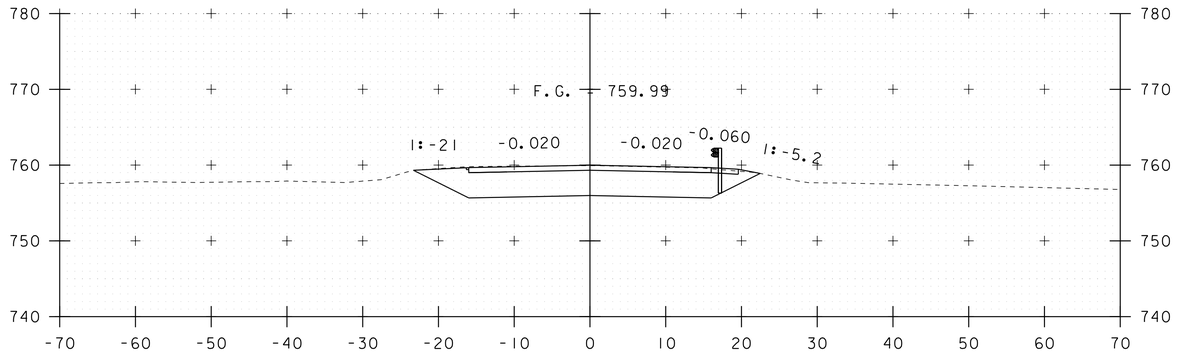
235+00



235+75



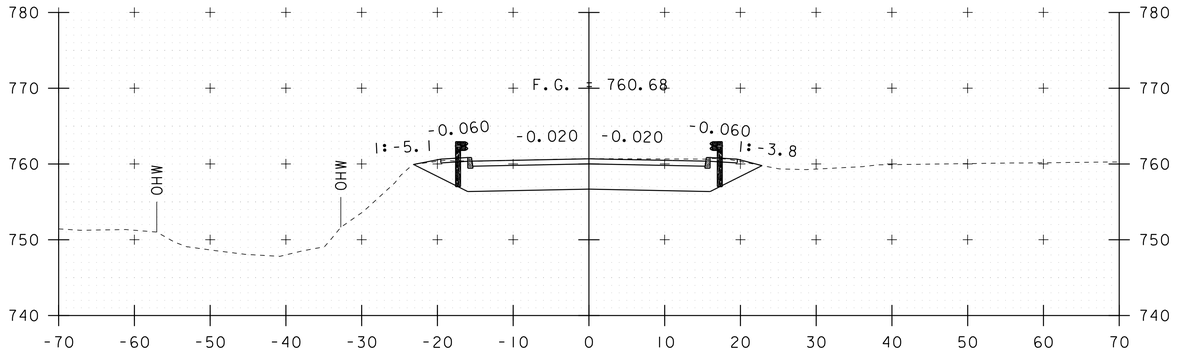
234+75
BEGIN APPROACH

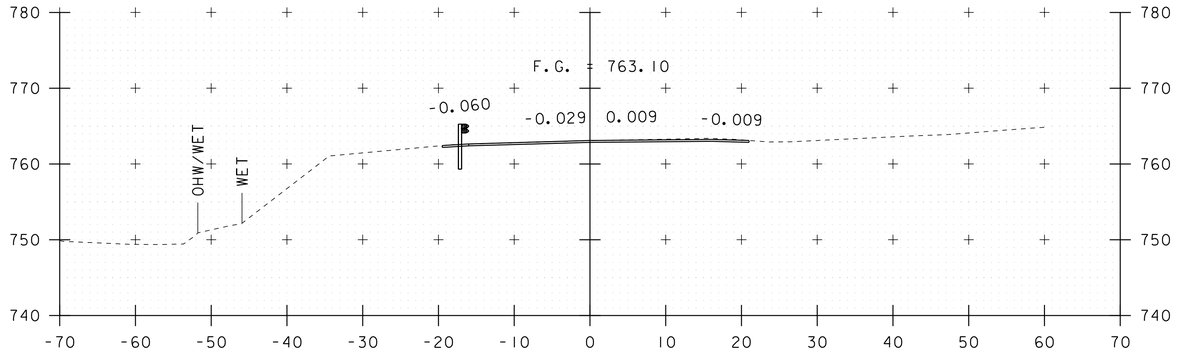


235+50

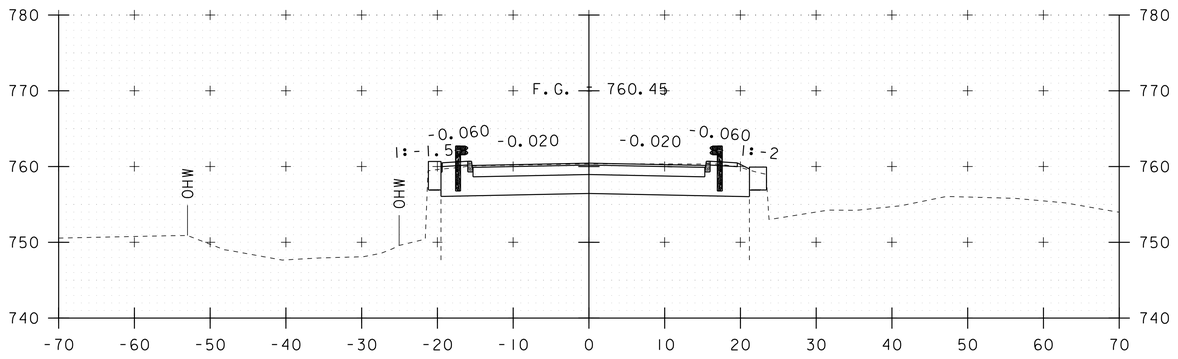
PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(12)
FILE NAME: sl2bl48xs.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: S. COLEY	CHECKED BY: C. BURRALL
MAINLINE CROSS SECTIONS 1	SHEET 79 OF 134

STA. 234+75 TO STA. 236+00





236+75



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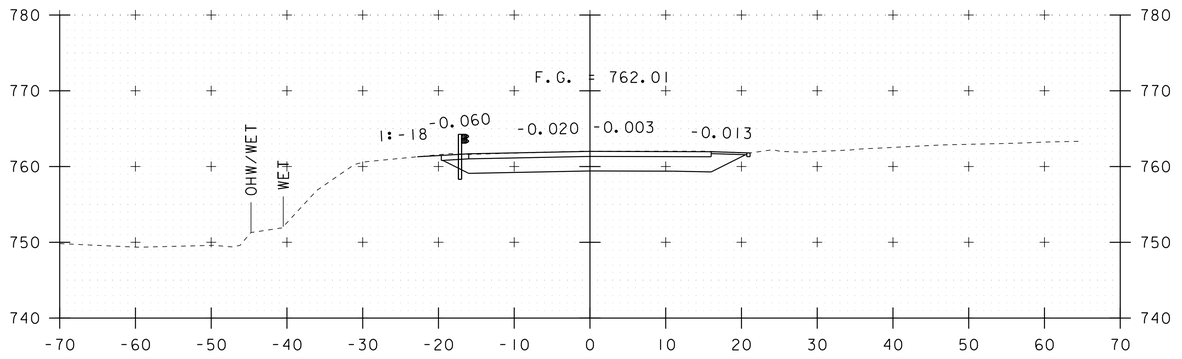
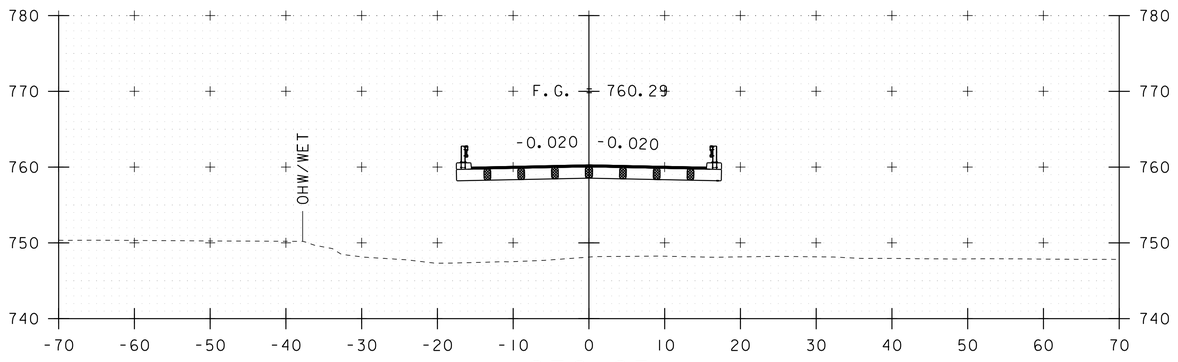
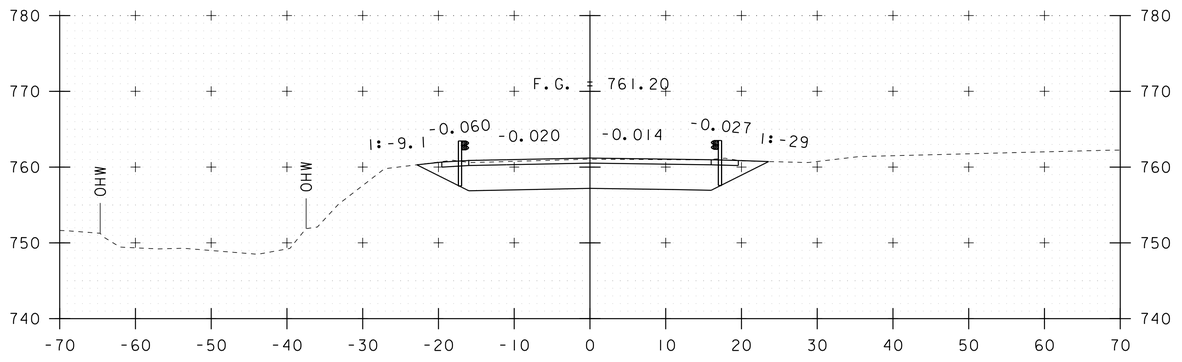


236+50

237+25
END PROJECT





236+25

STA 236+48.70
END BRIDGE

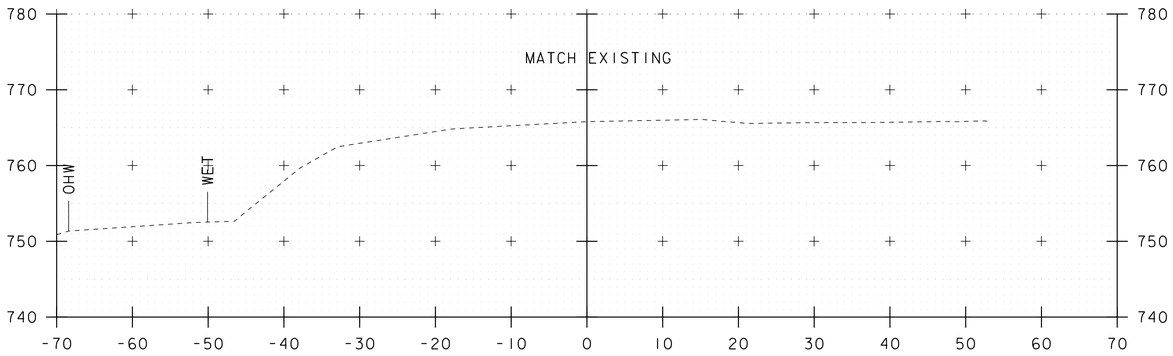
237+00

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

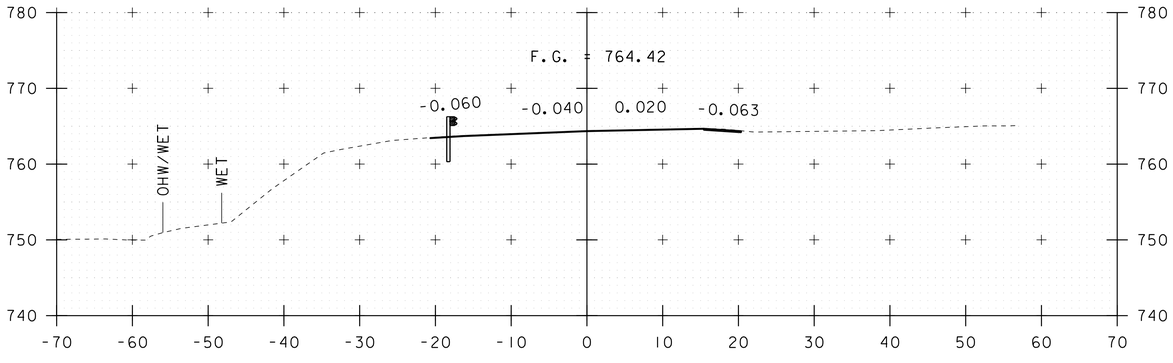
FILE NAME: sl2bl48xs.dgn
PROJECT LEADER: G. LAROCHE
DESIGNED BY: S. COLEY
MAINLINE CROSS SECTIONS 2

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: C. BURRALL
SHEET 80 OF 134

STA. 236+25 TO STA. 237+50



238+00
END APPROACH



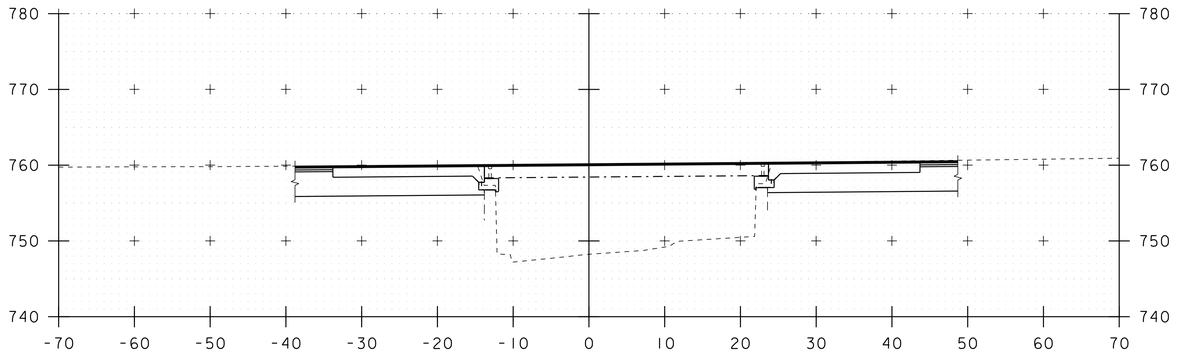
237+75

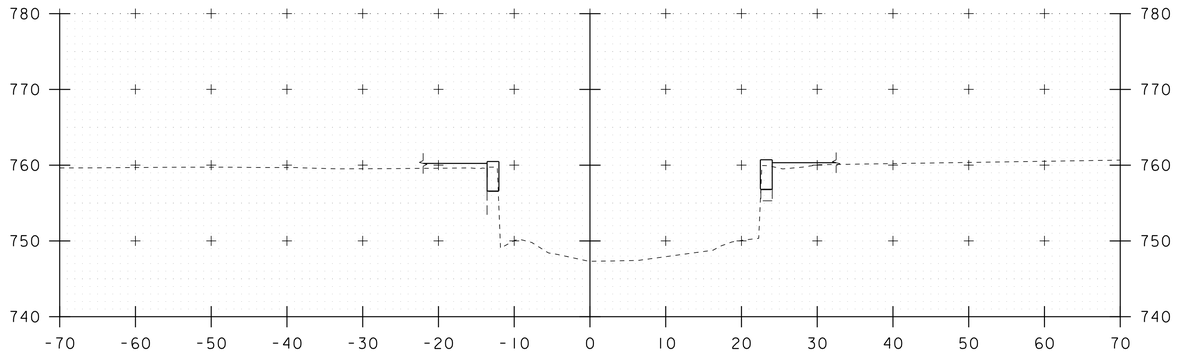
STA. 237+75 TO STA. 238+00

PROJECT NAME: CALAIS
PROJECT NUMBER: BHF 037-2(12)

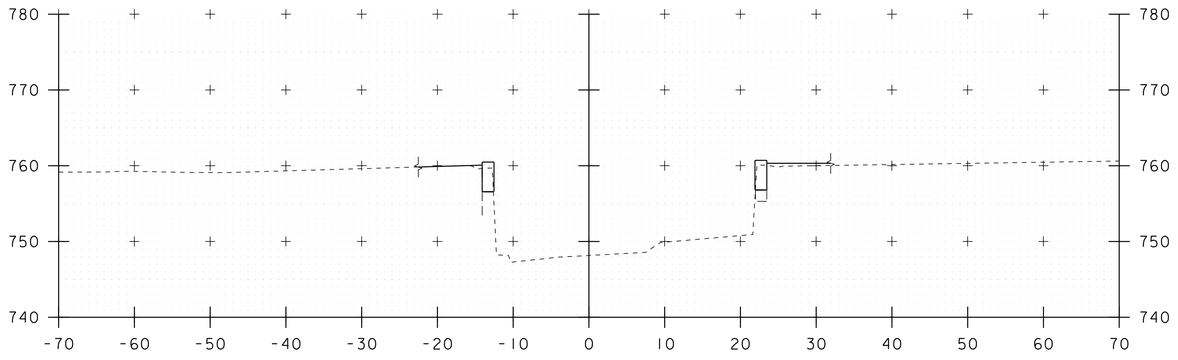
FILE NAME: sl2bl48xs.dgn
PROJECT LEADER: G. LAROCHE
DESIGNED BY: S. COLEY
MAINLINE CROSS SECTIONS 3

PLOT DATE: 02-JUN-2020
DRAWN BY: S. COLEY
CHECKED BY: C. BURRALL
SHEET 81 OF 134

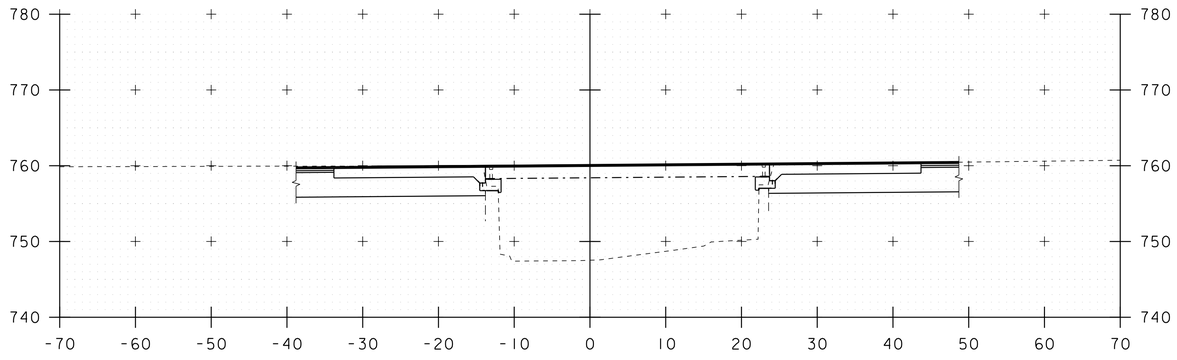




51+90



52+20



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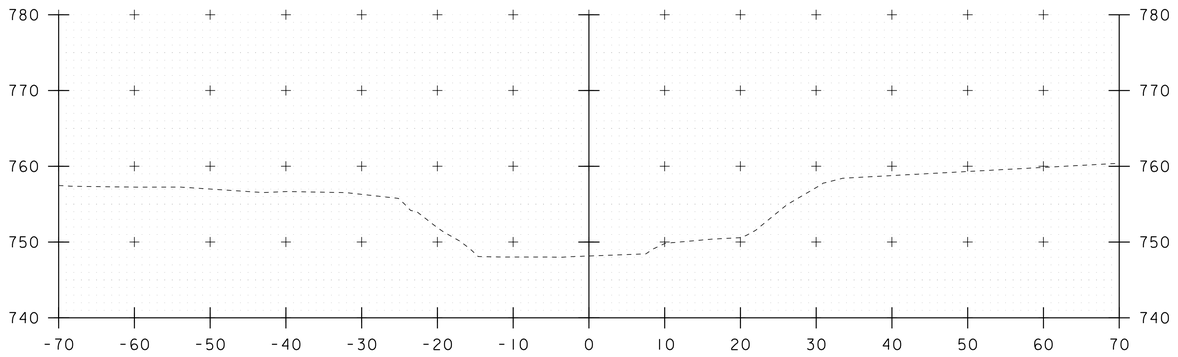

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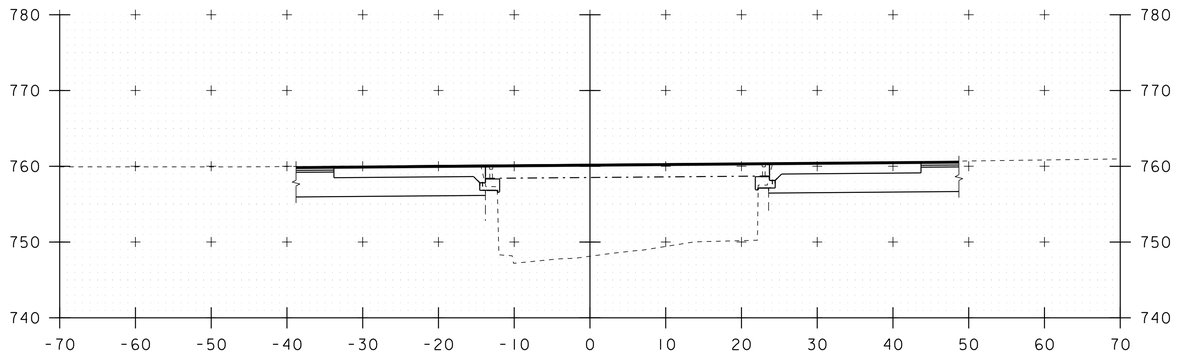


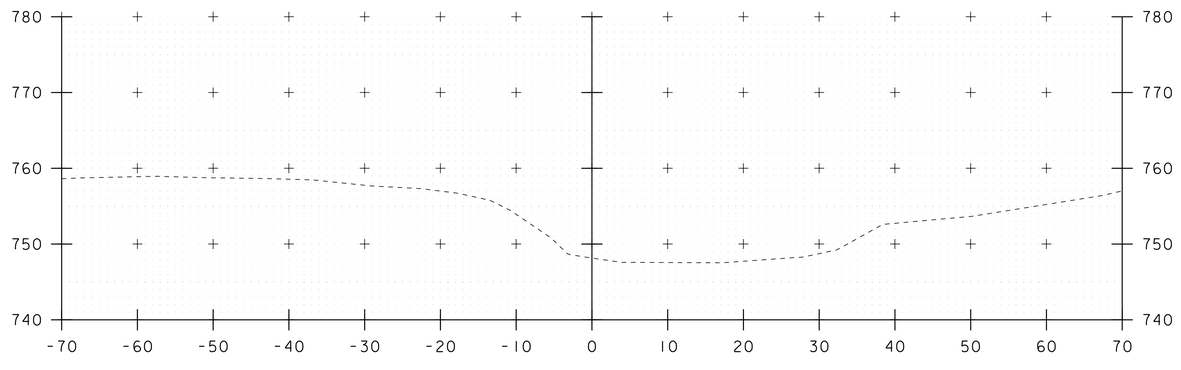
51+70

52+00

PROJECT NAME:	CALAIS
PROJECT NUMBER:	BHF 037-2(12)

FILE NAME: s12b148xs.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: S. COLEY	CHECKED BY: C. BURRALL
CHANNEL CROSS SECTIONS 1	SHEET 82 OF 134

STA. 51+70 TO STA. 52+20



52+30

STA. 52+30 TO STA. 52+30

PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(12)	
FILE NAME: sl2bl48xs.dgn	PLOT DATE: 02-JUN-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: S. COLEY	CHECKED BY: C. BURRALL
CHANNEL CROSS SECTIONS 2	SHEET 83 OF 134