

EARTHWORK

1. ITEM 529.15 "REMOVAL OF STRUCTURE" WILL BE USED FOR THE REMOVAL OF THE EXISTING STRUCTURE. THE SUBSTRUCTURE SHALL BE COMPLETELY REMOVED WITHIN THE LIMITS OF STRUCTURE EXCAVATION AND UNCLASSIFIED CHANNEL EXCAVATION, AND WILL BE PAID UNDER THE APPLICABLE EXCAVATION ITEM. OUTSIDE OF THOSE LIMITS, THE STRUCTURE SHALL BE REMOVED TO 2'-0" BELOW FINISH GRADE AND SHALL BE PAID FOR UNDER ITEM 529.15 "REMOVAL OF STRUCTURE".

H-PILES

2. TO ENSURE THAT THE NOMINAL CAPACITY HAS BEEN ATTAINED AND TO PREVENT THE OVERSTRESSING OF THE PILES DURING DRIVING OPERATIONS, A DYNAMIC PILE TEST SHALL BE CONDUCTED ON THE FIRST PILE DRIVEN AT EACH ABUTMENT. MORE TESTS MAY BE ORDERED BY THE ENGINEER. ADDITIONAL TEST(S) ORDERED BY THE ENGINEER WILL BE PAID FOR AT THE UNIT PRICE BID FOR CONTRACT ITEM 505.45, "DYNAMIC PILE LOADING TEST".
3. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN-PLACE LENGTHS MAY VARY BASED ON BEDROCK LOCATION.
- 3A. IT IS POSSIBLE THAT A CONFLICT MAY OCCUR BETWEEN PILES 1 & 7 AND THE EXISTING SUBSTRUCTURE. IF PILES ARE UNABLE TO BE DRIVEN IN THESE LOCATIONS, THE CONTRACTOR MAY PROPOSE TO RELOCATE THE PILES TO AVOID THE CONFLICT. THE PROPOSED RELOCATION SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR APPROVAL.

STRUCTURAL STEEL


4. ALL NEW STRUCTURAL STEEL SHALL BE AASHTO M 270M/M 270 GRADE 50 AND GALVANIZED..
5. GIRDER WEBS SHALL BE PLUMB IN FINAL POSITION.
6. CHARPY V-NOTCH TEST: ALL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS SHALL BE TESTED IN ACCORDANCE WITH SUBSECTION 714.01.
7. BOLTS FOR ALL BOLTED CONNECTIONS SHALL BE 7/8 INCH DIAMETER HIGH STRENGTH TYPE 1 BOLTS CONFORMING TO THE REQUIREMENTS OF SECTION 714.05, IN 15/16 INCH DIAMETER HOLES, UNLESS NOTED OTHERWISE.
8. CONNECTIONS NOT SHOWN IN THE PLANS SHALL BE DETAILED BY THE FABRICATOR IN THE FABRICATION DRAWINGS AND SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL.
9. AFTER THE SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF GIRDERS SHALL BE TAKEN UNDER DIRECTION OF THE RESIDENT ENGINEER FOR USE IN DETERMINING THE FINAL GRADE AND HAUNCH DEPTHS.
10. FLEMING BRACKETS OR SIMILAR FALSE WORK: SPACE FLEMING BRACKETS OR SIMILAR FALSEWORK AS REQUIRED BY DESIGN WITH A MAXIMUM SPACING OF 4'-0" AND SHALL EXTEND AT LEAST 75% OF THE DEPTH OF THE WEB. THE DESIGN OF FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
11. HOLES IN WEB: FILL ANY BOLT HOLES IN THE WEBS OF THE BEAMS NOT OTHERWISE FILLED WITH BUTTON HEAD OR HEX HEAD BOLTS MEETING ASTM A 325 TYPE 1, AND SHALL MEET THE REQUIREMENTS OF SUBSECTION 714.05. TIGHTEN THE BOLTS IN ACCORDANCE WITH SUBSECTION 506.19 OF THE STANDARD SPECIFICATIONS.
12. THE CONTRACTOR SHALL MAINTAIN A MINIMUM CLEARANCE EQUIVALENT TO THE BACKFILL HEIGHT BETWEEN THE ABUTMENT AND THE CRANE MATS DURING ERECTION OF THE SUPERSTRUCTURE. IF THE CONTRACTOR PROPOSES A CLOSER DISTANCE BETWEEN THE ABUTMENT AND THE CRANE MATS THEN THEY SHALL SUBMIT CALCULATIONS STAMPED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF VERMONT TO THE PROJECT MANAGER FOR APPROVAL. THE CALCULATIONS SHALL SUBSTANTIATE THAT THE PROPOSED CONFIGURATION WILL NOT OVERSTRESS THE PILES OR ROTATE THE ABUTMENT BEYOND 0.01 RADIANS. ALL COSTS ASSOCIATED WITH THIS WORK WILL BE INCLUDED IN THE PAYMENT OF ITEM 506.55, "STRUCTURAL STEEL, PLATE GIRDER (GALVANIZED (FPQ))".

CONCRETE

13. ALL CONCRETE FOR THE BRIDGE DECK, BACKWALLS, AND WINGWALLS ABOVE THE BRIDGE SEAT SHALL BE SPECIAL PROVISION (CONCRETE, HIGH PERFORMANCE CLASS A) AND SHALL BE PAID FOR UNDER ITEM 900.608 "SPECIAL PROVISION (CONCRETE, HIGH PERFORMANCE CLASS A)".
14. ALL CONCRETE FOR THE SUBSTRUCTURE BELOW THE BRIDGE SEAT AND APPROACH SLABS SHALL BE SPECIAL PROVISION (CONCRTE, HIGH PERFORMANCE CLASS B) AND SHALL BE PAID FOR UNDER ITEM 900.608 "SPECIAL PROVISION (CONCRETE, HIGH PERFORMANCE CLASS B)".
15. ITEM 520.10, "MEMBRANE WATERPROOFING, SPRAY APPLIED" SHALL BE APPLIED TO THE BRIDGE DECK AND 3 INCHES UP THE SIDES AS PER THE MANUFACTURER'S INSTRUCTIONS AND EXTEND ONTO THE APPROACH SLABS 2 FEET BEYOND THE BEGIN/END BRIDGE
16. ALL MECHANICAL CONNECTORS IN THE DECK AND ABOVE THE BRIDGE SEAT IN THE SUBSTRUCTURE SHALL BE LEVEL 2, BELOW THE BRIDGE SEAT IN THE SUBSTRUCTURE AND IN THE APPROACH SLABS SHALL BE LEVEL 1 (EPOXY COATED). ALL MECHANICAL BAR CONNECTORS SHALL BE PAID FOR UNDER ITEM 507.19 "MECHANICAL BAR CONNECTORS".

17. THE CONTRACTOR SHALL PRE-LOAD EACH OF THE BEAMS IN PHASE II TO A UNIFORM LOAD OF 480 LB/FT, +/-50 LB/FT. PRE-LOAD SUPPORT POINT LOADS SHALL NOT EXCEED 1.5 KIPS AND SHALL BE LOCATED WITHIN THE MIDDLE HALF OF THE TOP FLANGE. THE CONTRACTOR SHALL SUBMIT FABRICATION DRAWINGS OF PROPOSED PRE-LOADING. THE CONTRACTOR MAY PROPOSE ALTERNATE SUPPORT CONDITIONS EXCEEDING THESE LIMITATIONS IN A CONSTRUCTION DRAWING SUBMITTAL, IN LIEU OF THE FABRICATION DRAWING SUBMITTAL. PRE-LOAD SHALL BE REMOVED PROGRESSIVELY WITH THE PHASE II DECK POUR, WITH THE DISTANCE BETWEEN THE LEADING EDGE OF THE POUR AND THE PRE-LOAD BEING REMOVED NOT TO EXCEED 14 FEET. PAYMENT FOR THIS WORK WILL BE INCIDENTAL TO ITEM 900.608 "SPECIAL PROVISION (CONCRETE, HIGH PERFORMANCE CLASS A)".

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

REVISION	DATE	BY	DESCRIPTION
	10/05/2020	VAOT	ADDED NOTE 3A REVISED NOTE 1

FILE NAME: sl2bl44gennotes.dgn  
PROJECT LEADER: G. LAROCHE  
DESIGNED BY: G. ROKES  
PROJECT NOTES (10)

PLOT DATE: 05-OCT-2020  
DRAWN BY: G. ROKES  
CHECKED BY: S. COLEY  
SHEET 9 OF 135

GENERAL

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE PCI NORTHEAST'S NEXT D STANDARDS DATED JANUARY 2010, WITH 2015 REVISIONS.
- TEMPORARY MAILBOXES SHALL BE INSTALLED IN ACCORDANCE TO THE UNITED STATES POSTAL SERVICE MAILBOX GUIDELINES. <https://www.usps.com/manage/mailboxes.htm>

EARTHWORK

- 2

3. ITEM 529.15 "REMOVAL OF STRUCTURE" WILL BE USED FOR THE REMOVAL OF THE EXISTING STRUCTURE. THE SUBSTRUCTURE SHALL BE COMPLETELY REMOVED WITHIN THE LIMITS OF STRUCTURE EXCAVATION AND UNCLASSIFIED CHANNEL EXCAVATION, AND WILL BE PAID UNDER THE APPLICABLE EXCAVATION ITEM. OUTSIDE OF THOSE LIMITS, THE STRUCTURE SHALL BE REMOVED TO 2'-0" BELOW FINISH GRADE AND SHALL BE PAID FOR UNDER ITEM 529.15 "REMOVAL OF STRUCTURE".
4. ABUTMENTS MAY BE BACKFILLED TO 1'-6" BELOW THE BRIDGE SEAT PRIOR TO ERECTING THE SUPERSTRUCTURE.

H-PILES

- TO ENSURE THAT THE NOMINAL CAPACITY HAS BEEN ATTAINED AND TO PREVENT THE OVERSTRESSING OF THE PILES DURING DRIVING OPERATIONS, A DYNAMIC PILE TEST SHALL BE CONDUCTED ON THE FIRST PILE DRIVEN AT EACH ABUTMENT. MORE TESTS MAY BE ORDERED BY THE ENGINEER. ADDITIONAL TEST(S) ORDERED BY THE ENGINEER WILL BE PAID FOR AT THE UNIT PRICE BID FOR CONTRACT ITEM 505.45, "DYNAMIC PILE LOADING TEST".
- THE PILE SHALL HAVE A MINIMUM PENETRATION OF 35 FEET BELOW THE BOTTOM OF PILE CAP.
- FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN-PLACE LENGTHS MAY VARY BASED ON BEDROCK LOCATION.

- 2

7A. IT IS POSSIBLE THAT A CONFLICT MAY OCCUR BETWEEN PILE 6 AND THE EXISTING SUBSTRUCTURE. IF THE PILE IS UNABLE TO BE DRIVEN IN THIS LOCATION, THE CONTRACTOR MAY PROPOSE TO RELOCATE THE PILE TO AVOID THE CONFLICT. THE PROPOSED RELOCATION SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR APPROVAL.

CONCRETE AND REINFORCING STEEL

- THE METHOD OF FORMING FOR SUBSEQUENT POURS AFTER PLACING PRECAST/PRESTRESSED SUPERSTRUCTURE UNITS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR IS ENCOURAGED TO WORK WITH THE FABRICATOR IF ADDITIONAL SUPPORTS MAY BE REQUIRED. IN NO CASE SHALL THE CONTRACTOR ATTACH ADDITIONAL FORM OR SCREED SUPPORTS BY DRILLING OR SIMILAR MEANS INTO ANY PRECAST/PRESTRESSED SUPERSTRUCTURE OR SUBSTRUCTURE UNITS.
- ALL MECHANICAL CONNECTORS ABOVE THE BRIDGE SEAT IN THE SUBSTRUCTURE SHALL BE LEVEL 2. BELOW THE BRIDGE SEAT IN THE SUBSTRUCTURE AND IN THE APPRAOCH SLABS SHALL BE LEVEL 1 (EPOXY COATED). ALL MECHANICAL BAR CONNECTORS SHALL BE PAID FOR UNDER ITEM 507.19 "MECHANICAL BAR CONNECTORS".
- ALL CONCRETE FOR THE SUBSTRUCTURE BELOW THE BRIDGE SEAT, AND THE APPROACH SLABS SHALL BE SPECIAL PROVISION (CONCRETE, HIGH PERFORMANCE CLASS B); AND SHALL BE PAID FOR UNDER ITEM 900.608 "SPECIAL PROVISION (CONCRETE, HIGH PERFORMANCE CLASS B)".

NEXT D BEAMS

- NEXT D BEAMS ARE A NON-PROPRIETARY SHAPE DEVELOPED BY PCI NORTHEAST (PCINE). STANDARDIZED SECTION PROPERTIES AND DETAILS MAY BE FOUND AT <http://www.pcine.org>.
- 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 510.26 "PRESTRESSED CONCRETE NEXT D BEAMS".
- ALL RECESSED LIFTING POINTS AND BLOCKOUTS SHALL BE FILLED WITH A TYPE IV MORTAR PER SUBSECTION 707.03. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 510.26 "PRESTRESSED CONCRETE NEXT D BEAMS".
- DUE TO STABILITY CONCERNS AT THE ABUTMENTS DURING THE ERECTION OF THE SUPERSTRUCTURE, 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.
- THE CONTRACTOR SHALL MAINTAIN A MINIMUM CLEARANCE EQUIVALENT TO THE BACKFILL HEIGHT BETWEEN THE ABUTMENT AND THE CRANE MATS DURING ERECTION OF THE SUPERSTRUCTURE. IF THE CONTRACTOR PROPOSES A CLOSER DISTANCE BETWEEN THE ABUTMENT AND THE CRANE MATS THEN THEY SHALL SUBMIT CALCULATIONS STAMPED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF VERMONT TO THE PROJECT MANAGER FOR APPROVAL. THE CALCULATIONS SHALL SUBSTANTIATE THAT THE PROPOSED CONFIGURATION WILL NOT OVERSTRESS THE PILES OR ROTATE THE ABUTMENT BEYOND 0.01 RADIANS. ALL COSTS ASSOCIATED WITH THIS WORK WILL BE INCLUDED IN THE PAYMENT OF ITEM 510.26, "PRESTRESSED CONCRETE NEXT D BEAMS".
- 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.

LONGITUDINAL JOINTS / ABUTMENT CLOSURE POUR

- FORMS FOR LONGITUDINAL BEAM JOINTS SHALL BE REMOVABLE AND ABLE TO ACCOMMODATE DIFFERENTIAL CAMBER

- THE CONCRETE EDGES ALONG THE LONGITUDINAL CLOSURE POURS SHALL BE TREATED TO PROVIDE A ROUGHENED/ EXPOSED AGGREGATE SURFACE. THAT AMPLITUDE OF THE EXPOSED AGGREGATE SHALL BE A MINIMUM OF 1/8" AND BE COMPLETED PRIOR TO ERECTION OF THE BEAMS. THE FABRICATOR SHALL INDICATE THE METHOD USED TO ACHIEVE THIS PROFILE ON THE FABRICATION DRAWINGS AND METHOD USED TO PROTECT THE REINFORCING STEEL.
- SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) SHALL BE CURED UNTIL IT HAS REACHED A COMPRESSIVE STRENGTH OF 5 KSI.

ADDITIONAL NOTES

20. ALL REINFORCING STEEL FOR THE NEXT D BEAMS SHALL MEET THE REQUIREMENTS OF ITEM 507.12 "REINFORCING STEEL, LEVEL II". COSTS FOR THIS REINFORCING STEEL SHALL BE INCLUDED IN THE PAYMENT OF ITEM 510.26 "PRESTRESSED CONCRETE NEXT D BEAMS."

REVISION	DATE	BY	DESCRIPTION
	09/24/2020	VAOT	ADDED NOTE 20
	10/05/2020	VAOT	ADDED NOTE 7A REVISED NOTE 3

PROJECT NAME: CALAIS	
PROJECT NUMBER: BHF 037-2(III)	
FILE NAME: sl2bl46gennotes.dgn	PLOT DATE: 05-OCT-2020
PROJECT LEADER: G. LAROCHE	DRAWN BY: S. COLEY
DESIGNED BY: S. COLEY	CHECKED BY: F. BARROWS
PROJECT NOTES (III)	SHEET 86 OF 135