

PROJECT NOTES

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, AND ITS LATEST REVISIONS.
2. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.
3. THE BRIDGE IS DESIGNED FOR HL-93 LIVE LOAD WITH A 2.5 INCH ALLOWANCE FOR FUTURE PAVEMENT.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING CONSISTENCY BETWEEN THE FABRICATOR'S SHOP DRAWINGS OF RELATED COMPONENTS AND ENSURING THE FIT-UP OF ALL COMPONENTS. FABRICATION DRAWINGS SHALL SHOW RELATED COMPONENTS AND INDICATE AS SUCH.
5. THE EXISTING BRIDGE CONTAINS STRUCTURAL STEEL. THE STRUCTURAL STEEL MAY BE PAINTED WITH MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE REMOVED EXISTING STRUCTURAL STEEL.
6. THE REMOVAL OF THE EXISTING BRIDGE WILL BE PAID FOR UNDER ITEM 529.15, "REMOVAL OF STRUCTURE". THIS WORK WILL INCLUDE THE COMPLETE REMOVAL AND DISPOSAL OF THE EXISTING BRIDGE SUPERSTRUCTURE, INCLUDING ALL BEARINGS, ANCHOR BOLTS, AND THE BRIDGE SUBSTRUCTURE THAT FALLS OUTSIDE THE LIMITS COVERED BY THE CONTRACT EXCAVATION ITEMS.

TRAFFIC CONTROL

7. DURING THE CLOSURE PERIOD, TRAFFIC SHALL BE MAINTAINED BY AN OFF-SITE DETOUR TO BE SIGNED BY THE TOWN OF HUNTINGTON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING CLOSURE SIGNAGE AND PCMS AS SHOWN ON SHEETS 17 AND 18 IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD AND VTRANS STANDARDS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF A SITE SPECIFIC TRAFFIC CONTROL PACKAGE IDENTIFYING CONSTRUCTION ACTIVITIES BEFORE, DURING, AND AFTER THE BRIDGE CLOSURE PERIOD. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC CONTROL PLAN TO THE PROJECT MANAGER FOR ALL STAGES OF CONSTRUCTION, FOR APPROVAL. ALL COSTS WILL BE INCLUDED IN ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".
9. ALL ITEMS REQUIRED TO IMPLEMENT THE CONTRACTOR'S TRAFFIC CONTROL PLAN WILL NOT BE PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE BID PRICE FOR ITEM 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".
10. THE CONTRACTOR SHALL NOTIFY THE TOWN AND RESIDENTS WITHIN THE PROJECT LIMITS IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS.
11. FULL ACCESS TO ALL SIDE ROADS AND DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK WILL BE CONSIDERED INCIDENTAL TO 900.645, "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".
12. PAYMENT FOR UNIFORMED TRAFFIC OFFICERS AND FLAGGERS WILL BE MADE UNDER ITEM 630.10, "UNIFORMED TRAFFIC OFFICERS" AND ITEM 630.15, "FLAGGERS" RESPECTIVELY. PAYMENT FOR PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) WILL BE MADE UNDER ITEM 641.15, "PORTABLE CHANGEABLE MESSAGE SIGN".
13. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE 2009 EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AND ITS LATEST REVISIONS AND THE 2004 EDITION OF THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM), AND ITS 2012 SUPPLEMENT, PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).

EARTHWORK

14. COMPACTION OF THE SUBBASE MATERIAL SHALL BE IN ACCORDANCE WITH SUBSECTION 301.06.
15. THE CONTRACTOR MAY SUBSTITUTE SUBBASE MATERIAL FOR THE SAND BORROW SHOWN IN THE MATERIALS TRANSITION. THE SUBBASE MATERIAL SHALL BE THE TYPE SPECIFIED IN THE CONTRACT AND SHALL BE PLACED TO MEET THE SUBBASE SPECIFICATIONS. IF SUBBASE IS PLACED IN LIEU OF SAND BORROW, A GEOTEXTILE MEETING THE REQUIREMENTS OF ITEM 649.11, "GEOTEXTILE FOR ROADBED SEPARATOR" SHALL BE PLACED BETWEEN THE SUBGRADE AND SUBBASE MATERIAL. ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING THE GEOTEXTILE WILL BE INCIDENTAL TO ITEM 203.31, "SAND BORROW".
16. STONE FILL SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE THE NEW GIRDERS ARE SET, AS SHOWN ON THE PLANS.

H-PILES

17. ABUTMENT NO. 1 PILES
 - A. THE PILES SHALL BE HP 12x63.
 - B. THE PILES SHALL BE DRIVEN TO A NOMINAL PILE DRIVING RESISTANCE (RNDR) OF 350 KIPS, PROVIDED A MINIMUM PENETRATION OF 25.5 FEET BELOW THE BOTTOM OF PILE CAP HAVE BEEN ACHIEVED.
NOT ALL PILES MET THIS-SEE VTRANS RFI #2
18. TO PREVENT DAMAGE TO THE PILES, PILE SHOES ARE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04 (f).
19. A MINIMUM OF TWO DYNAMIC TESTS ARE REQUIRED AT ABUTMENT NO. 1 DURING PILE INSTALLATION. PAYMENT IS ITEM 505.45, "DYNAMIC PILE LOADING TEST".
20. THE TOPS OF THE PILES AFTER INSTALLATION SHALL NOT VARY FROM THE POSITION SHOWN ON THE PLANS BY MORE THAN 3 INCHES. THE PILE ORIENTATION SHALL NOT VARY BY MORE THAN 5 DEGREES. THE CONTRACTOR SHALL DEMONSTRATE TO THE SATISFACTION OF THE ENGINEER HOW THE TOLERANCES WILL BE MET. THESE MEASURES SHALL BE DEMONSTRATED IN A SUBMITTAL TO BE ACCEPTED BEFORE PILE DRIVING COMMENCES.
21. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.

STRUCTURAL STEEL

22. ALL STRUCTURAL STEEL WILL BE PAID UNDER ITEM 506.55, "STRUCTURAL STEEL, PLATE GIRDER (FPQ)" SHALL CONFORM TO AASHTO M270M/M270 GRADE 50W.
23. ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
24. ALL MEMBERS MARKED (CVN) MUST MEET THE CHARPY V-NOTCH TESTING REQUIREMENTS AS INDICATED IN SUBSECTION 714.01.
25. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH-STRENGTH BOLTS IN 15/16" DIAMETER HOLES, PER SECTION 506.
26. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.10.
27. ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
28. AFTER THE STRUCTURAL STEEL HAS BEEN SET ON THE BEARINGS, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF EACH GIRDER UNDER THE DIRECTION OF THE RESIDENT ENGINEER. THESE ELEVATIONS SHALL BE USED IN DETERMINING THE FINAL GRADE.
29. ANY HOLES IN FASCIA GIRDERS NOT OTHERWISE FILLED SHALL BE FILLED WITH BOLTS CONFORMING TO ASTM A325 TYPE III. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19
30. BEARING STIFFENERS AND GIRDER ENDS SHALL BE VERTICAL UNDER FULL DEAD LOAD DEFLECTION.

CONCRETE

31. AN OPTIONAL HORIZONTAL CONSTRUCTION JOINT IS SHOWN FOR THE ABUTMENT NO. 1 AND NO. 2 CHEEKWALLS, AND WINGWALL NO. 3 AND NO. 4 (ABOVE THE BRIDGE SEAT ELEVATION). THIS IS ALLOWED IN ORDER TO REDUCE THE WEIGHT OF THE ABUTMENTS FOR HANDLING AND PLACEMENT, IF NECESSARY. THE CONTRACTOR HAS THE OPTION TO USE PRECAST OR CAST-IN-PLACE CONCRETE ABOVE THE HORIZONTAL CONSTRUCTION JOINT (IF USED), AS INDICATED IN THE TABLE ON PROJECTS NOTES (2 OF 2). ALL COSTS ASSOCIATED WITH CONSTRUCTING THE OPTIONAL CONSTRUCTION JOINT AND CONSTRUCTING THE CHEEKWALLS AND WINGWALLS (ABOVE THE CONSTRUCTION JOINT) WILL BE INCLUDED IN THE COST OF THE APPROPRIATE PRECAST CONCRETE ITEM. THIS WILL INCLUDE BUT NOT BE LIMITED TO PRECAST OR CAST-IN-PLACE CONCRETE, REINFORCING STEEL, AND MECHANICAL SPLICE CONNECTORS. ALL REINFORCING ACROSS THE HORIZONTAL CONSTRUCTION JOINT (IF USED) SHALL BE ADEQUATELY DEVELOPED BY MEANS OF THE DETAILS IN THE PLANS OR THE USE OF MECHANICAL SPLICE CONNECTORS. IF MECHANICAL SPLICE CONNECTORS ARE USED THEY SHALL MEET THE REQUIREMENTS OF SECTION 507 FOR LEVEL I (EPOXY COATED).
32. IN ACCORDANCE WITH SUBSECTION 506.23 (a) AND AS DIRECTED BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL TAKE MEASURES NECESSARY TO PROTECT ALL SUBSTRUCTURE CONCRETE FROM STAINING DUE TO OXIDE FORMATION ON THE STRUCTURAL STEEL PRIOR TO PLACEMENT OF THE DECK. THESE MEASURES WILL NOT BE PAID FOR SEPARATELY BUT WILL BE CONSIDERED INCIDENTAL TO THE ADJACENT CONCRETE ITEM. ANY SUCH STAINING THAT OCCURS PRIOR TO DECK PLACEMENT SHALL BE REMOVED AT NO ADDITIONAL COST TO THE STATE.
33. RELATIVE TO GRADE, ALL DECK POURS SHALL BEGIN FROM THE LOW ELEVATION END AND PROCEED TOWARDS THE HIGH ELEVATION END.
34. FLEMING BRACKETS OR SIMILAR FALSE WORK SHALL BE DESIGNED BY THE CONTRACTOR AND PLACED AT A MAXIMUM SPACING OF 4'-0". THE BRACKETS SHALL BEAR NEAR THE BOTTOM FLANGE AND IN NO CASE SHALL THEY BEAR ABOVE THE BOTTOM QUARTER OF THE WEB DEPTH.

35. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1" UNLESS OTHERWISE NOTED.
36. ITEM 514.10, "WATER REPELLENT, SILANE", SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.
37. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
38. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTH STEEL TROWEL FINISHED.
39. ALL FORM SUPPORTS AND FORM TIES THAT ARE TO REMAIN PERMANENTLY IN THE CONCRETE ABOVE THE BRIDGE SEAT SHALL BE AT A MINIMUM PROTECTION LEVEL OF GALVANIZED AND CONFORM TO SECTION 726 OF THE SPECIFICATIONS.
40. THE CONCRETE CURING REQUIREMENTS OF FOR CONCRETE, CLASS C IN THE SUBFOOTING MAY BE WAIVED WHEN THE CONCRETE HAS ACHIEVED THE SPECIFIED 28-DAY COMPRESSIVE STRENGTH.

PRECAST CONCRETE PILE CAP AND ABUTMENT

41. PRECAST CONCRETE COMPRESSIVE STRENGTH: $f'c = 5,000$ PSI.
42. ALL LIFTING POINTS IN THE SUBSTRUCTURES SHALL BE REMOVABLE TO A MINIMUM DEPTH OF 3". THE LIFTING POINTS SHALL BE DETAILED IN THE APPROPRIATE FABRICATION DRAWING. PAYMENT FOR THIS WORK WILL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PRECAST ITEM.
43. ALL RECESSED LIFTING POINTS AND BLOCKOUTS SHALL BE FILLED WITH A TYPE IV MORTAR MEETING THE REQUIREMENTS OF SUBSECTION 707.03 OR OTHER PRODUCT FROM THE "VERMONT AGENCY OF TRANSPORTATION APPROVED PRODUCTS LIST" (APL) AS APPROVED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PRECAST ITEM.
44. THE METHOD OF FORMING FOR SUBSEQUENT CONCRETE PLACEMENTS AFTER PLACING PRECAST UNITS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR IS ENCOURAGED TO WORK WITH THE FABRICTOR IF ADDITIONAL SUPPORTS MAY BE REQUIRED. IN NO CASE SHALL THE CONTRACTOR ATTACH ADDITIONAL FORM SUPPORTS BY DRILLING OR SIMILAR MEANS INTO ANY PRECAST UNIT.
45. SHEET MEMBRANE WATERPROOFING, PREFORMED SHEET SHALL BE INSTALLED WHERE SHOWN ON THE PLANS AND MEET THE REQUIREMENTS OF SUBSECTION 726.11. PAYMENT FOR SHEET MEMBRANE WATERPROOFING, PREFORMED SHEET WILL BE CONSIDERED INCIDENTAL TO THE ADJACENT PRECAST ITEM.

REINFORCING STEEL

46. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
47. TEST BARS SHALL BE PROVIDED IN ACCORDANCE WITH THE "VERMONT AGENCY OF TRANSPORTATION MATERIAL SAMPLING MANUAL" AVAILABLE ON THE AGENCY WEBSITE. ALL COSTS ASSOCIATED WITH PROVIDING BARS FOR TESTING WILL BE INCLUDED IN THE UNIT BID PRICE FOR THE APPROPRIATE REINFORCING STEEL OR PRECAST CONCRETE ITEM.
48. THE CONTRACTOR SHALL PROVIDE THREE (3) ASSEMBLED SPLICE TUBES PER SPLICE CONNECTOR SIZE FOR TESTING. THE CONNECTION SHALL BE ASSEMBLED IN THE FIELD BY THE CONTRACTOR AND WITNESSED BY THE ENGINEER. THE DOWEL BAR MECHANICAL SPLICE CONNECTORS WILL BE PAID FOR UNDER ITEM 540.10, "PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 1)" OR ITEM 900.645, "SPECIAL PROVISION (CONTRACTOR-FABRICATED PRECAST CONCRETE STRUCTURE) (ABUTMENT NO. 1)" AS APPROPRIATE.
49. MINIMUM COVER FOR REINFORCING STEEL SHALL BE 2" ALONG THE BACK FACES OF WALLS AGAINST EARTH, 1 1/2" ALONG THE BOTTOM SURFACE OF THE DECK AND 3" ELSEWHERE, UNLESS OTHERWISE NOTED.
50. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:

SPACING +/- 1"
CLEARANCE +/- 1/4"
51. CUTTING AND REPAIRING DAMAGED AREAS OF COATED REINFORCING STEEL SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 507.04.

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PROJECT LEADER: S.E. BURBANK
DESIGNED BY: K.C. BARRY
PROJECT NOTES (1 OF 2)

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