

GENERAL NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, WITH ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION WITH INTERIMS THROUGH 2009.
- DESIGN IS FOR HL-93 LIVE LOADING.
- ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE BASED ON 45°F OR AS NOTED OTHERWISE.
- THE MINIMUM COVER FOR REINFORCING STEEL IN THE SUBSTRUCTURE SHALL BE TWO INCHES ALONG THE WALL FACES AGAINST EARTH, THREE INCHES ALONG SURFACES EXPOSED TO DEICING SALTS AND THREE INCHES ELSEWHERE UNLESS DETAILED OTHERWISE.
- REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE AS FOLLOWS:
 SPACING +/- 1"
 CLEARANCE +/- 1/4"
- ALL REINFORCING STEEL IN THE CONCRETE DECK, BRIDGE CURBS, CURTAIN WALLS, AND BACKWALL SHALL BE EPOXY COATED. WHEN EPOXY COATED REINFORCEMENT STEEL IS CUT, THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCEMENT STEEL WILL NOT BE PERMITTED.
- PROVIDE ALL REINFORCING STEEL ACCORDING TO ASTM SPECIFICATION A706 OR AASHTO M31 (ASTM A615) GRADE 60. PROVIDE FIELD BENT STIRRUPS AND OTHER FIELD BENT BARS ACCORDING TO ASTM SPECIFICATION A706. USE THE FOLLOWING SPLICE LENGTHS UNLESS OTHERWISE SHOWN. SPLICE LENGTHS ARE FOR 3500 PSI CONCRETE, CLASS B.

| BAR SIZE | | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 | #14 | #18 |
|---------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------------|-----|
| SPLICE LENGTH | UNCOATED | 2'-0" | 2'-0" | 2'-0" | 2'-0" | 2'-9" | 3'-6" | 4'-6" | 5'-7" | 6'-10" | NOT PERMITTED | |

- SPLICE REINFORCING STEEL AT ALTERNATE BARS, STAGGERED AT LEAST ONE SPLICE LENGTH OR AS FAR AS POSSIBLE, UNLESS SHOWN OTHERWISE.
- INCREASE ALL SPLICE LENGTHS 40% FOR HORIZONTAL BARS SO PLACED THAT MORE THAN 12' OF FRESH CONCRETE IS CAST BELOW THE BAR.
- SUPPORT OF REINFORCING ON FORMS, GROUND AND OTHER REINFORCING WILL BE IN ACCORDANCE WITH VTRANS STD. 507.05.

CONCRETE NOTES:

- ALL PORTIONS OF THE SUPERSTRUCTURE SHALL BE "CONCRETE, HIGH PERFORMANCE - CLASS A - LOW CEMENT" OR CONCRETE OF THE SAME CLASS WITH PROVISIONS FOR COLD-WEATHER CASTING AND APPROVED BY THE ENGINEER. 2
- F-BARRIER SHALL BE "CONCRETE, HIGH PERFORMANCE - CLASS A - LOW SHRINKAGE."
- ALL PORTIONS OF THE SUBSTRUCTURE INCLUDING PIERS AND APPROACH SLABS SHALL BE "CONCRETE, HIGH PERFORMANCE - CLASS B." MAXIMUM SIZE AGGREGATE TO BE 3/4". 1
- SURFACE OF BRIDGE SEATS UNDER THE BEARING DEVICES SHALL BE LEVEL. OTHER AREAS OF THE BRIDGE SEAT SHALL BE SLOPED 1/4" PER FOOT TOWARDS MIDSPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE GIVEN A MAGNESIUM FLOAT FINISH.
- CONCRETE PORTIONS OF THE ABUTMENT AND WINGWALLS, ABOVE THE ADJACENT BRIDGE SEAT ELEVATIONS, SHALL NOT BE PLACED UNTIL THE FINISH GRADE HAS BEEN DETERMINED BY THE DESIGN ENGINEER.
- THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. UPWARD KEYS SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
- JOINTS AND SCORE MARKS IN THE CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" X 1", UNLESS NOTED OTHERWISE.
- THE TOP SURFACE OF THE CONCRETE DECK SHALL BE FINISHED USING A 'TURF DRAG' METHOD IN ACCORDANCE WITH SPECIAL PROVISION "HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT" AND LONGITUDINAL DECK GROOVING IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS.
- WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL CONCRETE SURFACES EXPOSED IN FINAL CONDITION WITH THE EXCEPTION OF THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES. APPLICATION SHALL BE IN ACCORDANCE WITH SECTION 514, "WATER REPELLENT, SILANE". 1

STRUCTURAL STEEL NOTES

- THE END OF THE GIRDERS, INCLUDING ALL STIFFENERS, CONNECTION PLATES, AND CROSS FRAMES NEAR THE ABUTMENTS, SHALL BE GIVEN A SHOP APPLIED PAINT SYSTEM FOR A DISTANCE EQUAL TO 13'-7" (SOUTH END) AND 10'-6" (NORTH END) AND GREASED AFTER INSTALLATION PER STANDARD SPECIFICATION 513. THE PAINT SHALL BE BROWN FEDERAL COLOR CHIP 30045.
- ALL FIELD SPLICE CONNECTIONS AND CROSS FRAMES AT PIER SHALL BE MADE WITH 1" DIA. H.S. BOLTS IN 1 1/16" DIA. HOLES, UNLESS OTHERWISE NOTED. ALL OTHER FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH-STRENGTH BOLTS IN 1 1/16" DIAMETER HOLES, PER SUBSECTION 506.19, UNLESS OTHERWISE SPECIFIED.
- ALL HOLES IN THE WEBS OF THE FASCIA GIRDERS THAT ARE NOT OTHER-WISE FILLED, SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUB-SECTION 506.19.
- ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.10.
- STRUCTURAL STEEL MEMBERS WITHIN THE 'CVN TENSION ZONE' NOTED IN THE PLANS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.01 OF THE STANDARD SPECIFICATIONS.
- ENDS OF GIRDERS ARE TO BE VERTICAL IN THEIR FINAL POSITION.
- THE FAYING SURFACES ON THE CONNECTIONS PLATES SHALL BE PREPARED AS CLASS 'A'. THESE SURFACES SHALL BE PROTECTED FROM DAMAGE AND CORROSION PRIOR TO THE CONNECTION.
- THE FAYING SURFACES ON THE FIELD SPLICE PLATES SHALL BE PREPARED AS CLASS 'B'. THESE SURFACES SHALL BE PROTECTED FROM DAMAGE AND CORROSION PRIOR TO THE CONNECTION.
- WEB SHOP SPLICES ARE LIMITED TO ONE PER FIELD SECTION UNLESS APPROVED IN WRITING BY THE ENGINEER. WEB SHOP SPLICES SHALL BE A MINIMUM OF 1' FROM THE END OF THE LONGEST FIELD SPLICE PLATES IN FLANGES OR WEB.
- WEB SHOP SPLICES SHALL BE A MINIMUM OF 1' FROM FLANGE TRANSITIONS OR STIFFENERS.
- SECTIONS OF FLANGE PLATES OR WEB PLATES BETWEEN TRANSVERSE SHOP SPLICES OR BETWEEN A TRANSVERSE SHOP SPLICE AND A FIELD SPLICE SHALL BE NOT LESS THAN 20 FEET IN LENGTH UNLESS OTHERWISE SHOWN ON THE PLANS.
- BEARING STIFFENERS SHALL BE PLUMB AFTER ERECTION AND DEAD LOADING OF THE STRUCTURE. INTERMEDIATE WEB STIFFENERS AND CROSS FRAME CONNECTION PLATES MAY BE EITHER PLUMB OR NORMAL TO THE TOP FLANGE.
- NEW STRUCTURAL STEEL SHALL BE AASHTO M270 (ASTM A709) GRADES 50W & HPS70W, UNLESS NOTED OTHERWISE.
- FABRICATION OF HPS PLATES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE GUIDE SPECIFICATION FOR HIGHWAY BRIDGE FABRICATION WITH HPS70 STEEL BY AISC-FHWA-NAVY HPS STEERING COMMITTEE AND WELDING ADVISORY GROUP.
- ALL COMPONENTS DESIGNATED FOR GALVANIZING SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M11 (ASTM A123).
- CAMBER VALUES PROVIDED ARE BASED ON A SPECIFIC DECK POURING SEQUENCE. CHANGES TO THIS POURING SEQUENCE SHALL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
- DRIP PLATES SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAIL SD-601.00.

2 SUBSTRUCTURE & FOUNDATION NOTES:

- PROVIDE HP14X17 ASTM A572, GRADE 50 PILES AT ALL BENTS. ALL PILES SHALL BE EQUIPPED WITH APPROVED REINFORCED TIPS. DRIVE PILES TO THE FOLLOWING NOMINAL RESISTANCES:
 6N: ABUTMENT 1 - 670 KIPS, PIER - 700 KIPS, AND ABUTMENT 2 - 360 KIPS. 2
 6S: ABUTMENT 1 - 670 KIPS, PIER - 790 KIPS, AND ABUTMENT 2 - 430 KIPS.
- DRIVE PILES TO THE SPECIFIED NOMINAL RESISTANCES USING DRIVING CRITERIA DEVELOPED FROM A WAVE EQUATION ANALYSIS. REFER TO FINAL GEOTECHNICAL REPORT PREPARED BY NOBIS ENGINEERING, INC. DATED 06/17/2011.
- REFER TO FINAL GEOTECHNICAL REPORT FOR PILE DRIVING ANALYZER (PDA) REQUIREMENTS TO BE USED TO VERIFY FINAL PILE CAPACITIES.
- REMOVE EXISTING FOUNDATIONS TO A MINIMUM OF 2' BELOW GROUND OR AS REQUIRED TO CONSTRUCT PROPOSED SUBSTRUCTURES.
- CONTRACTOR SHALL PROTECT EXISTING SUBSTRUCTURE DURING CONSTRUCTION OF NEW PIER FOUNDATION. PROTECTION SHALL CONSIDER, BUT CONSIDERATION SHALL NOT BE LIMITED TO, THE EFFECTS OF SOIL HEAVING, SOIL VIBRATION, AND INCREASED LATERAL PRESSURES IN THE VICINITY OF THE EXISTING PIER SPREAD FOOTING. CONTRACTOR SHALL MONITOR EXISTING SUBSTRUCTURE FOR MOVEMENTS DURING PILE DRIVING. CONTRACTOR SHALL CEASE OPERATIONS AND NOTIFY THE DESIGN ENGINEER IF MOVEMENT EXCEEDS 1/4".

| REVISION # | DESCRIPTION | DATE |
|------------|---------------|----------|
| REVISION 1 | ADDED NOTE | 07/27/11 |
| REVISION 2 | REVISED NOTES | 08/29/11 |

RFC PLANS - WORK PACKAGES #5&9
 BRIDGE 6N & 6S
 SEPTEMBER 30, 2011

PROJECT NAME: BRATTLEBORO
 PROJECT NUMBER: IM 091-(150)

**AS BUILT
 RECORD PLANS**

BECK & BELLUCCI, INC.

TYLIN INTERNATIONAL

FILE NAME: ZB-100-BR6-102.dgn
 PROJECT LEADER: Brian W. Clogston P.E.
 DESIGNED BY: Joe Krajewski, P.E.
 BRIDGE 6N & S - GENERAL NOTES

PLOT DATE: 9/30/2011
 DRAWN BY: S. A. Morgan
 CHECKED BY: J. England, P.E.
 SHEET ZB-100-BR6-102