

BRIDGES 88 N & S PROJECT NOTES

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 1996, AND ITS LATEST REVISIONS.
2. DURING CONSTRUCTION, TRAFFIC SHALL BE MAINTAINED AS INDICATED IN THE TRAFFIC CONTROL SHEETS INCLUDED IN THE PLANS.
3. THESE PLANS WERE PREPARED USING INFORMATION FROM THE VAOT RECORD PLANS AND ASSOCIATED FABRICATION DRAWINGS FOR BRIDGES 88N AND 88S, AND ANY FIELD MEASUREMENTS THAT HAVE BEEN PERFORMED SINCE ORIGINAL CONSTRUCTION. REFERENCE SHEETS FROM THE RECORD PLANS AND FABRICATION DRAWINGS ARE INCLUDED IN THE PLANS FOR THE CONTRACTOR'S USE. THESE SHEETS ARE LOCATED AT THE END OF THIS (BR 400) SERIES OF BRIDGE SHEETS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING IN THE FIELD ANY DIMENSIONS OF EXISTING MATERIAL INCLUDED IN THESE REFERENCE SHEETS OR IN THE PLANS. MINOR MODIFICATIONS MAY BE REQUIRED TO THE DIMENSIONS SHOWN ON THE PLANS IN ORDER TO FIT ACTUAL FIELD CONDITIONS.
4. EXISTING ELEVATIONS SHOWN IN THE PLANS ARE BASED ON A CORRELATION BETWEEN THE RECORD PLANS ELEVATIONS AND THE VAOT SURVEY OF THE PROJECT AREA AND BRIDGE COMPONENTS. THE ADJUSTMENT FACTOR FOR EXISTING ELEVATIONS USED IN DESIGN, RELATIVE TO ELEVATIONS INDICATED ON THE RECORD PLANS, WAS -0.22 FT.
5. HORIZONTAL DIMENSIONS SHOWN IN THE PLANS ARE RELATIVE TO THE EXISTING BRIDGE CENTERLINES. THE RESIDENT ENGINEER SHALL ESTABLISH THESE CENTERLINES PRIOR TO REMOVAL OF ANY PARTS OF THE BRIDGES. THESE BRIDGE CENTERLINES ARE OFFSET FROM THE ROADWAY SURVEY CENTERLINES BY THE DIMENSIONS INDICATED. A FIELD ADJUSTMENT IS REQUIRED TO TAPER THE ROADWAY CENTERLINES TO THE BRIDGE CENTERLINES IN THE AREAS OF NEW APPROACH SLAB AND BRIDGE CONSTRUCTION. THE LENGTH OF FIELD ADJUSTMENT SHALL BE DETERMINED BY THE RESIDENT ENGINEER.
6. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68°F.

EARTHWORK AND RELATED ITEMS

7. REMOVAL AND DISPOSAL OF PAVEMENT ON THE EXISTING BRIDGE DECKS AND APPROACH SLABS SHALL BE PAID FOR UNDER ITEM 529.10, "REMOVAL OF BRIDGE PAVEMENT" .
8. REMOVAL AND DISPOSAL OF THE FOLLOWING SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE":
- EXISTING APPROACH SLABS;
 - EXISTING BRIDGE RAIL;
 - EXISTING CURBS;
 - EXISTING DECK CONCRETE, INCLUDING CURTAIN WALL CONCRETE AT THE ABUTMENTS;
 - EXISTING SHEAR STUDS;
 - EXISTING BEARINGS;
 - EXISTING SUBSTRUCTURE CONCRETE TO BE REMOVED AS SHOWN IN THE PLANS;
 - ALL EXISTING REINFORCING STEEL INCLUDED IN THE ABOVE AND
 - ALL OTHER BRIDGE COMPONENTS NOT RE-USED, INCLUDING BUT NOT LIMITED TO EXISTING DECK EXPANSION JOINTS AND DRAIN TROUGHS, SCUPPERS, AND OTHER EXISTING DRAINAGE APPURTENANCES ATTACHED TO THE EXISTING ABUTMENTS AND PIERS.
9. THE EXISTING ABUTMENTS ARE FOUNDED ON STEEL PILE (I2BP53) FOUNDATIONS. WHEN EXCAVATING FOR THE PLACEMENT OF NEW BACKWALLS AT THE ABUTMENTS, THE CONTRACTOR SHALL NOT EXCAVATE BELOW THE EXISTING BOTTOM OF FOOTING CONCRETE ELEVATION. PAYMENT FOR STRUCTURE EXCAVATION SHALL BE AS SHOWN IN THE PLANS.

STRUCTURAL STEEL

10. UNLESS OTHERWISE NOTED IN THE PLANS, THE EXISTING SUPERSTRUCTURE STEEL WILL BE RE-USED AND THE EXISTING PAINT SYSTEM WILL BE RETAINED. THIS EXISTING PAINT SYSTEM MAY CONTAIN LEAD, SO THE CONTRACTOR IS ADVISED TO EXERCISE CAUTION WHEN HANDLING AND WORKING WITH THE EXISTING STEEL.

11. THE FINAL 3 FEET OF EXISTING BEAM ENDS IN THE AREAS OF NEW BEAM SPLICES AT THE PIERS, AND ANY OTHER AREAS OF TOUCH-UP ALONG THE SPANS AS DIRECTED BY THE RESIDENT ENGINEER, SHALL BE BLAST CLEANED AND REPAINTED. BEAM SPLICES SHALL BE CONSTRUCTED AFTER THE BEAMS HAVE BEEN BLAST CLEANED AND PRIOR TO THE FIRST COAT OF PAINT. THE CONTRACTOR SHALL ENSURE COMPATIBILITY BETWEEN THE EXISTING AND NEW PAINT SYSTEMS. THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 513, AND SHALL BE PAID FOR UNDER ITEM 513.20, "STRUCTURE PAINTING". SEE THE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
12. SURFACE AREAS OF BRIDGE COMPONENTS WITHIN THE FINAL 3 FEET OF EXISTING BEAM ENDS AT ABUTMENT NOS. 6 AND 8 SHALL BE GREASE RUSTPROOFED AS PER SUBSECTION 513.06 (D) OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.
13. ANY DAMAGE DONE TO EXISTING STEEL TO BE RE-USED DUE TO REMOVAL OPERATIONS SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
14. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE 1995 ANSI/AASHTO/AWS D1.5-95 BRIDGE WELDING CODE. REPAIRS TO EXISTING STEEL BEAMS REQUIRED DUE TO THE REMOVAL OF EXISTING SHEAR STUDS SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 7.7.5.1 OF THE CODE. MAGNETIC PARTICLE TESTING SHALL BE PERFORMED ON ALL REPAIRS PERFORMED IN TENSION AREAS.
15. THERE ARE EXISTING HOLES IN THE STEEL BEAMS THAT ARE NOT RE-USED IN THE REHABILITATION DESIGN. THESE INCLUDE HOLES IN THE BOTTOM FLANGES AT BEAM ENDS FOR BEARING ANCHORAGE AT BOTH THE ABUTMENTS AND PIERS, AND HOLES IN THE WEB AT BEAM ENDS FOR TRANSVERSE REINFORCING STEEL AT BOTH ABUTMENTS. THESE HOLES SHALL BE PLUG WELDED. THE WELD METAL SHALL CONFORM TO AASHTO M270, GRADE 36. THE CONTRACTOR SHALL SUBMIT DETAILS FOR THIS WORK TO THE STRUCTURES ENGINEER FOR APPROVAL. PAYMENT SHALL BE MADE SUBSIDIARY TO ITEM 506.75, "STRUCTURAL STEEL (MOD.)" AS INDICATED IN NOTE 17 BELOW.
16. THE FOLLOWING SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 506.60, "STRUCTURAL STEEL":
- NEW STEEL FOR SPLICES AT THE PIERS;
 - NEW STEEL AND WELDING FOR BEAM END REPAIRS AT THE PIERS;
 - NEW STEEL FOR ABUTMENT AND PIER DIAPHRAGMS AND
 - NEW DOWNSPOUTS AND ATTACHMENT HARDWARE.
17. THE FOLLOWING SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 506.75, "STRUCTURAL STEEL (MOD.)" :
- FOR EXISTING STEEL TO BE RE-USED, ANY REMOVAL, LOADING, TRANSPORTING AND ERECTION COSTS ASSOCIATED WITH ITS RE-USE AS DETAILED IN THE PLANS AND AS DIRECTED BY THE RESIDENT ENGINEER
 - REPAIRS TO EXISTING STEEL BEAMS REQUIRED DUE TO THE REMOVAL OF EXISTING SHEAR STUDS AND MAGNETIC PARTICLE TESTING AS INDICATED IN NOTE 14 ABOVE.
 - THE PLUG WELDING OF EXISTING HOLES NOT RE-USED AS INDICATED IN NOTE 15 ABOVE.
18. STEEL FOR NEW DIAPHRAGMS AND CONNECTION PLATES AT THE ABUTMENTS AND PIERS, AND FOR BEAM END REPAIRS AT THE PIERS AS SHOWN IN THE PLANS, SHALL BE PAINTED AND SHALL CONFORM TO AASHTO M270 GRADE 36. ALL NEW STEEL FOR SPLICE ASSEMBLIES AT THE PIERS SHALL BE PAINTED AND SHALL CONFORM TO AASHTO M270 GRADE 50.
19. AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF THE GIRDERS SHALL BE TAKEN AS DIRECTED BY THE RESIDENT ENGINEER FOR USE IN DETERMINING FINISHED GRADES. NEW CONCRETE PORTIONS OF THE ABUTMENTS AND WINGWALLS ABOVE ADJACENT BRIDGE SEAT ELEVATIONS SHALL NOT BE PLACED UNTIL FINISHED GRADES HAVE BEEN DETERMINED BY THE RESIDENT ENGINEER.
20. FLEMING BRACKETS OR SIMILAR FALSEWORK SHALL BE SPACED AS REQUIRED BY DESIGN, BUT SHALL BE LIMITED TO A MAXIMUM OF 4 FEET. THE DESIGN OF FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
21. THE CHARPY V-NOTCH TEST IS REQUIRED ONLY FOR THOSE MEMBERS DESIGNATED AS SUCH IN THE PLANS AS SPECIFIED IN SUBSECTION 714.01 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.
22. ANY BOLT HOLES IN THE WEBS OF THE FASCIA BEAMS NOT OTHERWISE FILLED SHALL BE FILLED WITH GALVANIZED BUTTON HEAD OR HEX HEAD BOLTS MEETING AASHTO M164, TYPE 1. THE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.
23. ALL FIELD CONNECTIONS SHALL BE MADE USING 7 /8 INCH DIAMETER GALVANIZED BOLTS MEETING AASHTO M164, TYPE 1. HOLES SHALL BE 15 /16 INCH DIAMETER, UNLESS OTHERWISE NOTED. ANY CONNECTIONS NOT DESIGNATED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.

CONCRETE AND REINFORCING STEEL

24. DECK CONCRETE SHALL BE CONCRETE, CLASS A AND SHALL BE PAID FOR UNDER ITEM 501.22, "CONCRETE, CLASS A". NEW SUBSTRUCTURE AND APPROACH SLAB CONCRETE SHALL BE CONCRETE, CLASS B AND SHALL BE PAID FOR UNDER ITEM 501.25, "CONCRETE, CLASS B" UNLESS OTHERWISE NOTED. **NOTE: HIGH PERFORMANCE CONCRETE WAS USED FOR ALL OF BR. #88 N.**
25. CONCRETE FOR CURBS AND THOSE PORTIONS OF BACKWALLS INDICATED IN THE PLANS SHALL BE SILICA-FUME AND SHALL BE PAID FOR UNDER ITEM 501.60, "SILICA-FUME CONCRETE".
26. THE DECKS ARE TO BE POURED IN ACCORDANCE WITH THE PROPOSED DECK POUR SEQUENCE SHOWN IN THE PLANS.
27. WHEN CONSTRUCTING THE DECKS, THE CONCRETE SHALL BE POURED PARALLEL TO THE CENTERLINE OF BEARING SO AS TO LOAD THE GIRDERS EQUALLY.
28. A QUANTITY FOR ITEM 580.13, "REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS 1" HAS BEEN INCLUDED IN THE PLANS. THIS ITEM SHALL BE USED AT THE DISCRETION OF THE RESIDENT ENGINEER AS PAYMENT FOR THE REPAIR OF ANY EXISTING SUBSTRUCTURE CONCRETE NOT OTHERWISE REPAIRED OR REPLACED AS SHOWN IN THE PLANS. DAMAGE BEYOND THE LIMITS DEFINED IN THE PLANS OR BY THE RESIDENT ENGINEER PRIOR TO THE BEGINNING OF WORK FOR EXISTING CONCRETE REMOVAL SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR. SEE SUPPLEMENTAL SPECIFICATION 580 FOR ADDITIONAL INFORMATION.
29. EXISTING BEARING ANCHOR BOLTS SHALL BE CUT A MINIMUM OF 2" BELOW FINAL CONCRETE ELEVATION.
30. IN AREAS WHERE NEW CONCRETE WILL BE MATED TO EXISTING CONCRETE, THE EXISTING SURFACE SHALL BE PREPARED ACCORDING TO SUBSECTION 501.13 (B) OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.
31. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF DECKS BETWEEN DRIP NOTCHES.
32. ALL EXPOSED EDGES OF NEW CONCRETE SHALL BE CHAMFERED 1" X 1". JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
33. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
34. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL. OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 1/4 INCH PER FOOT. ABUTMENT SEATS SHALL BE SLOPED FULL WIDTH TOWARD MIDSPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTH STEEL TROWEL FINISHED.
35. DRILLING AND GROUTING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH SECTION 507 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. ANY HOLES DRILLED IN CONCRETE FOR GROUTING REINFORCING STEEL SHALL BE A MINIMUM OF 6 INCHES FROM THE EDGE OF EXISTING CONCRETE. PAYMENT FOR DRILLING AND GROUTING SHALL BE MADE UNDER ITEM 507.16, "DRILLING AND GROUTING DOWELS".
36. ALL NEW SUPERSTRUCTURE, SUBSTRUCTURE, AND APPROACH SLAB REINFORCING STEEL SHALL BE EPOXY COATED AND PAID FOR UNDER ITEM 507.17, "EPOXY COATED REINFORCING STEEL". WHEN EPOXY COATED REINFORCING STEEL IS TO BE CUT, THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCING STEEL WILL NOT BE PERMITTED.
37. MINIMUM COVER FOR REINFORCING STEEL SHALL BE AS INDICATED IN THE PLANS.
38. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:
- SPACING: +/- 1"
- CLEARANCE: +/- 1/4"

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of FAIRFAX-FAIRFIELD-ST. ALBANS		Bridge No.	88 N&S
Highway No.		Log Sta.	
1-89		Surv. Sta.	
1-89 OVER ST. ALBANS SOUTH STATE HIGHWAY (EXIT 19)			
88 N & S PROJECT NOTES			
Designed By M. LOZIER		Drawn By G. ROY	
Checked By	Date	Bridge Design Supervisor	
M. LOZIER	2/00	R. R. WHITCOMB	Date 2/00
PROJECT		PROJECT NO.	
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