

GENERAL NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, GENERAL SPECIAL PROVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.
- DESIGN LIVE LOAD FOR NEW SUPERSTRUCTURE, INCLUDING THE RE-USED BEAMS: HS20
- THE FOLLOWING MATERIAL CRITERIA APPLIES TO THESE PLANS FOR DESIGN PURPOSES:  
 CONCRETE: HIGH PERFORMANCE CLASS A  $f'c = 4000$  PSI  
 REINFORCING STEEL: AASHTO M 31 GRADE 60
- FEATURES OF THE EXISTING BRIDGE SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND LIMITED FIELD INVESTIGATION AND MAY NOT ACCURATELY REFLECT ACTUAL FIELD CONDITIONS. ACCORDINGLY THE CONTRACTOR IS RESPONSIBLE FOR TAKING SUFFICIENT FIELD MEASUREMENTS OF EXISTING COMPONENTS TO VERIFY THE DIMENSIONS OF THE PROPOSED COMPONENTS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER, OR EXTENT OF THE EXISTING STRUCTURE SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER BEFORE ADVANCING THE WORK OR BEGINNING FABRICATION OF PROPOSED COMPONENTS. IN PARTICULAR, ONCE THE EXISTING SUPERSTRUCTURE IS REMOVED THE CONTRACTOR MUST PROVIDE THE MEASUREMENTS TO ENSURE PROPER FIT OF THE RE-USED BEAMS.
- VT ROUTE 121 WAS RECONSTRUCTED FROM THE END OF THE BRIDGE (STA. 21+57) TO THE EAST AFTER THIS PROJECT'S ORIGINAL SURVEY. VTRANS WILL RESURVEY THIS PORTION OF THE ROADWAY AND PROVIDE UPDATED INFORMATION TO THE CONTRACTOR PRIOR TO ISSUING A NOTICE TO PROCEED. FINAL OVERLAY AND PAVEMENT MARKINGS EAST OF THE BRIDGE SHALL MATCH THE NEW SURVEYED CROWN LINE, EDGE OF PAVEMENT, AND PAVEMENT MARKINGS.
- PARTIAL PLANS OF THE EXISTING BRIDGE ARE AVAILABLE FOR REVIEW DURING THE BIDDING PERIOD AT THE VTRANS OFFICE OF CONTRACT ADMINISTRATION.
- ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.
- ALTERNATING ONE LANE TRAFFIC WILL BE MAINTAINED DURING CONSTRUCTION WITH TRAFFIC LIGHTS.
- UTILITY RELOCATION IS NOT ANTICIPATED.

CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION, POLLUTION, AND DISCHARGE OF RAW CONCRETE INTO SAXTONS RIVER AS DIRECTED BY THE RESIDENT ENGINEER.
- ITEM 203.15, COMMON EXCAVATION AND ITEM 204.25, STRUCTURE EXCAVATION SHALL BE USED TO EXCAVATE TO THE LIMITS SHOWN ON THE PLANS. SEE EARTHWORK TYPICAL ON SHEET 5.
- THE CONTRACTOR SHALL ERECT, MAINTAIN, REMOVE, AND/OR RESET AS REQUIRED ALL ON-PROJECT SIGNS AND BARRICADES. ALL SIGNS AND BARRICADES SHALL BE INSPECTED AND REPAIRED DAILY. ALL SIGNS AND BARRICADES SHALL BE CLEANED OF DUST AND DEBRIS WEEKLY. THE COST OF ALL CONSTRUCTION SIGNS AND BARRICADES SHALL BE INCLUDED IN ITEM 641.10, TRAFFIC CONTROL.
- ANY EXISTING SIGNS NOT REUSED SHALL REMAIN THE PROPERTY OF THE TOWN OF GRAFTON. THESE SIGNS SHALL BE REMOVED BY THE CONTRACTOR AND STOCKPILED AS DIRECTED BY THE RESIDENT ENGINEER FOR REMOVAL BY THE TOWN AND SHALL BE PAID AS ITEM 675.50, REMOVING SIGNS.
- GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE.
- FULL ACCESS TO ALL DRIVES WITHIN THE PROJECT/APPROACH LIMITS SHALL BE MAINTAINED AT ALL TIMES.
- THE STONE FILL UNDER THE BRIDGE SHALL BE PLACED BEFORE THE BEAMS ARE SET.
- CONCRETE PORTIONS OF THE WINGWALLS SHALL NOT BE PLACED UNTIL THE FINISH GRADE HAS BEEN DETERMINED BY THE RESIDENT ENGINEER.
- THE DESIGN OF THE FLEMING BRACKET OR SIMILAR FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE SPACED AT A MAXIMUM OF 4'-0".
- AN ESTIMATED QUANTITY FOR ITEM 649.61, GEOTEXTILE FOR FILTER CURTAIN HAS BEEN ADDED TO THE QUANTITY SUMMARY IN THE EVENT IT IS REQUIRED DURING CONSTRUCTION. THIS ITEM IS NOT CURRENTLY SHOWN ANYWHERE ON THE PLANS.

REINFORCING STEEL NOTES:

- ALL REINFORCING STEEL SHALL BE EPOXY COATED AND PAID AS ITEM 507.17, EPOXY COATED REINFORCING STEEL.
- MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:  
 ALONG BACK FACES OF WALLS AGAINST EARTH: 2"  
 ALONG TOP SURFACE OF DECK: 2 1/2"  
 ALONG BOTTOM SURFACE OF DECK: 1 1/2"  
 ELSEWHERE UNLESS OTHERWISE INDICATED: 3"
- REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:  
 SPACING:  $\pm 1$ "  
 CLEARANCE:  $\pm 3/16$ "
- WHEN EPOXY COATED REINFORCING STEEL IS 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.

CONCRETE NOTES:

- CONCRETE SHALL BE AS FOLLOWS:  
 ITEM 501.33, CONCRETE, HIGH PERFORMANCE CLASS A: DECK AND CURBS  
 ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B: APPROACH SLABS AND ABUTMENTS
- ITEM 514.10, WATER REPELLENT (MOD. - SILANE), SHALL BE APPLIED TO:  
 ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE EXCEPT THE BOTTOM OF THE DECK BETWEEN DRIP NOTCHES.  
 ALL EXPOSED SURFACES ON ABUTMENTS AND WINGWALLS
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" BY 1", UNLESS OTHERWISE NOTED.
- JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
- SURFACES OF THE BRIDGE SEATS UNDER THE BEARING DEVICE SHALL BE LEVEL. OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 1/4" PER FOOT.
- THE KEY ON CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT UNLESS OTHERWISE INDICATED. ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
- THE DECK SHALL BE PLACED IN A SINGLE POUR.

STRUCTURAL STEEL NOTES:

- ALL NEW STRUCTURAL STEEL COMPONENTS SHALL BE AASHTO M 270, GRADE 50 UNLESS OTHERWISE NOTED.
- ALL BOLTED FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH STRENGTH BOLTS IN 15/16" DIAMETER HOLES UNLESS OTHERWISE NOTED.
- CONNECTIONS NOT DESIGNED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL.
- AFTER THE SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF BEAM WILL BE TAKEN BY THE RESIDENT ENGINEER FOR USE IN DETERMINING THE FINAL GRADE AND HAUNCH DEPTHS.
- ANY HOLES IN BEAM WEBS NOT OTHERWISE FILLED SHALL BE FITTED WITH GALVANIZED BUTTON HEAD OR HEX HEAD BOLTS CONFORMING TO AASHTO M 164, TYPE 1.
- ITEM 506.60, STRUCTURAL STEEL SHALL INCLUDE ALL NEW DIAPHRAGMS, CONNECTION PLATES, BEARING BLOCKOUT PLATES, AND ALL NEW CONNECTIONS.
- ITEM 506.75, STRUCTURAL STEEL (MOD. - RECYCLED BEAMS) SHALL INCLUDE ALL COSTS ASSOCIATED WITH THE PREPARATION, TRANSPORTATION, AND ERECTION OF THE RECYCLED BEAMS. SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
- ALL NEW STRUCTURAL STEEL COMPONENTS SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATION ITEMS 513.25, STRUCTURAL PAINTING, SHOP APPLIED; 513.35, CONTAINMENT AND ENVIRONMENTAL PROTECTION, SHOP; AND 513.40, SURFACE PREPARATION, SHOP.
- THE EXISTING STEEL BEAMS TO BE RECYCLED SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH SPECIFICATION ITEMS 513.30, STRUCTURAL PAINTING, FIELD APPLIED; 513.36, CONTAINMENT AND ENVIRONMENTAL PROTECTION, FIELD; AND 513.41, SURFACE PREPARATION, FIELD. THE FIELD PREPARATION SHALL BE AS SPECIFIED IN SECTION 513.04(E), FIELD ENVIRONMENT, PARAGRAPH TWO. THE CONTRACTOR WILL BE RESPONSIBLE FOR ESTIMATING THE EXTENT OF CLEANING THAT WILL BE REQUIRED BASED ON VISUAL EXAMINATION OF THE BEAMS. NO APPROXIMATE AMOUNT OF REMOVAL WILL BE DETAILED IN THE PLANS.
- IN ADDITION TO THE CLEANING SPECIFIED IN SECTION 513.04(E), PARAGRAPH TWO, ALL EXISTING PAINT WITHIN FOUR INCHES EITHER SIDE OF NEW CONNECTION PLATES SHALL BE REMOVED PRIOR TO WELDING THE NEW PLATES INTO POSITION.

REMOVAL AND REPAIR NOTES:

- REMOVAL OF EXISTING BRIDGE PAVEMENT SHALL BE PAID AS ITEM 529.10, REMOVAL OF BRIDGE PAVEMENT. THE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY AT AN OFF-SITE LOCATION.
- ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE SHALL INCLUDE:
  - REMOVAL OF THE EXISTING BRIDGE RAILING, CONCRETE CURBS, CONCRETE BRIDGE DECK, AND CURTAIN WALLS.
  - REMOVAL OF THE EXISTING PIER TO TOP OF STREAMBED. ALL PIER REMOVAL SHALL BE COMPLETED "FROM ABOVE" THROUGH THE USE OF LIFTING DEVICES. NO MACHINERY OR HAUL ROAD ACCESS WILL BE ALLOWED IN THE SAXTONS RIVER. SPECIAL ATTENTION SHALL BE PAID TO THE ARMY CORPS OF ENGINEERS' WATER QUALITY CONTROL PROCEDURES.
  - REMOVAL OF THE EXISTING STRUCTURAL STEEL BEAMS AND DIAPHRAGMS. THE STRUCTURAL STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD PAINT. THE STRUCTURAL STEEL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND THE CONTRACTOR MAY DISPOSE OF IT OR RETAIN IT FOR FUTURE USE. THE CONTRACTOR SHALL SUBMIT A DISPOSAL OR SALVAGE PLAN TO THE RESIDENT ENGINEER FOR APPROVAL PRIOR TO REMOVAL.
  - REMOVAL OF ALL THE BEARING DEVICES.
  - REMOVAL OF PORTIONS OF THE EXISTING ABUTMENTS AND WINGWALLS AS SHOWN ON THE PLANS AND DIRECTED BY THE RESIDENT ENGINEER.
  - ERECTION, MAINTENANCE, AND REMOVAL OF TEMPORARY STRUCTURES TO PREVENT DEBRIS FROM FALLING INTO THE SAXTONS RIVER.
- THE CONTRACTOR'S METHODS FOR PARTIAL REMOVAL OF THE EXISTING STRUCTURES SHALL BE APPROVED BY THE RESIDENT ENGINEER PRIOR TO ANY REMOVAL WORK.
- LIMITS OF REMOVAL ARE APPROXIMATE. THE ACTUAL LIMITS OF CONCRETE REPAIR ARE NOT SHOWN. THE ENGINEER SHALL ESTABLISH ACTUAL LIMITS AFTER A JOINT INSPECTION BY THE CONTRACTOR AND THE RESIDENT ENGINEER. EXISTING ELEVATIONS SHALL BE FIELD VERIFIED TO ENSURE THE REMOVAL LIMITS ARE ADEQUATE TO OBTAIN THE REQUIRED DIMENSIONS AND ELEVATIONS OF THE NEW CONSTRUCTION. ALL COSTS OF THIS INSPECTION, INCLUDING FURNISHING ANY EQUIPMENT NEEDED TO ACCESS AREAS, SHALL BE INCLUDED UNDER ITEM 635.11, MOBILIZATION/DEMobilIZATION.
- SAWCUTS SHALL BE 1 INCH DEEP ALONG ALL EXPOSED REMOVAL LINES WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE. ALL COSTS SHALL BE INCLUDED IN ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE.
- EXISTING REINFORCING STEEL EXPOSED DURING REMOVAL OPERATIONS, WITHIN THE LIMITS OF THE NEW MASONRY, SHALL BE RETAINED AND INCORPORATED INTO THE NEW MASONRY. EXISTING REINFORCING STEEL TO BE RETAINED SHALL BE CLEANED OF ALL CONCRETE, DIRT, SCALE, PAINT, OIL AND OTHER FOREIGN SUBSTANCES. ALL COST SHALL BE INCLUDED IN ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE.
- EXISTING REINFORCING STEEL THAT WILL NOT BE INCORPORATED INTO THE NEW MASONRY SHALL BE REMOVED A MINIMUM OF 1 INCH BEYOND THE MASONRY SURFACE. CAVITIES PRODUCED BY REMOVAL SHALL BE REPAIRED IN ACCORDANCE WITH REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS 1. ALL COSTS SHALL BE INCLUDED IN ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE.
- EXISTING ANCHOR BOLTS SHALL BE PARTIALLY REMOVED OR INCORPORATED INTO THE NEW WORK AS DIRECTED BY THE RESIDENT ENGINEER. PARTIAL REMOVAL DETAILS FOR OR INCORPORATION INTO THE NEW WORK SHALL BE SIMILAR AS REQUIRED FOR REINFORCING STEEL (SEE NOTE 7).
- THE ENGINEER SHALL ORDER REPLACEMENT OF ANY EXISTING SUBSTRUCTURE REINFORCING STEEL THAT IS DETERIORATED (WITH MORE THAN 25% SECTION LOSS) WITH NEW REINFORCING STEEL OF THE SAME SIZE. ALL REINFORCING STEEL SHALL HAVE A MINIMUM 2'-0" LAP SPLICE. ALL NEW REINFORCING STEEL SHALL BE PAID UNDER ITEM 507.15, REINFORCING STEEL.
- ABUTMENT REPAIRS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 580.
- AN ESTIMATED QUANTITY FOR ITEM 580.15, REMOVAL OF CONCRETE SUBSTRUCTURE SURFACE CLASS III HAS BEEN ADDED TO THE QUANTITY SUMMARY IF IT IS REQUIRED DURING CONSTRUCTION. THIS ITEM IS NOT CURRENTLY SHOWN ON THE PLANS.

SEE SHEET 26R

**TOWN OF GRAFTON  
CAMBRIDGEPORT BRIDGE**

Town Of	GRAFTON	Bridge No.	16G
Highway No.	TH 1	Log Sta.	
		Surv. Sta.	
TH 1 (CAMBRIDGEPORT BRIDGE) OVER THE SAXTONS RIVER			

**CONSTRUCTION NOTES**

Designed By	J. T. KLEIN	Drawn By	B. J. MASSE
Checked By	Date	Bridge Design Supervisor	
M. A. COLGAN	5/05	M. A. COLGAN	Date 5/05
PROJECT	GRAFTON	PROJECT NO.	TH2-0104

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**VHB Vanasse Hangen Brustlin, Inc.**