

GENERAL NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002.
- DESIGN CRITERIA:
DESIGN LIVE LOAD FOR EXISTING STRUCTURE: M13.5 (H15-44)
DESIGN LIVE LOAD FOR NEW SUPERSTRUCTURE: MS22.5
SEISMIC PERFORMANCE CATEGORY: A
- THE FOLLOWING MATERIAL CRITERIA, DESIGNATIONS AND UNIT WEIGHTS APPLY TO THESE PLANS FOR DESIGN PURPOSES:
CONCRETE: HIGH PERFORMANCE CLASS "A" $f_c = 30 \text{ MPa}$
HIGH PERFORMANCE CLASS "B" $f_c = 25 \text{ MPa}$
STRUCTURAL STEEL: AASHTO M 270M GRADE 345W
REINFORCING STEEL: AASHTO M 31M GRADE 420
UNIT WEIGHT OF SOIL: 2243 kg/m³
ALLOWABLE SOIL BEARING PRESSURE AT ABUTMENT NO. 1 = 650 kPa
ALLOWABLE BEDROCK BEARING PRESSURE AT ABUTMENT NO. 2 = 950 kPa
- DIMENSIONS, ANGLES, BEARINGS, AND ELEVATIONS 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. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURE COMPONENTS IMPACTED BY THE NEW WORK TO ASSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER, OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER BEFORE ADVANCING THE WORK.
- WORKING DRAWINGS REQUIRED FOR VARIOUS ITEMS OF WORK SHALL INDICATE THE ACTUAL FIELD MEASUREMENTS AND SHALL BE SO NOTED.
- DIMENSIONS OF THE EXISTING BRIDGE HAVE BEEN CONVERTED TO METRIC UNITS IN ACCORDANCE WITH THE VERMONT AGENCY OF TRANSPORTATION'S METRIC POLICY AND ROUNDED TO THE NEAREST MILLIMETER.
- ABUTMENT NUMBERING DIFFERS FROM ORIGINAL PLANS.
- PLANS OF THE EXISTING BRIDGE ARE AVAILABLE FOR REVIEW DURING THE BIDDING PERIOD AT THE CONTRACT ADMINISTRATION OFFICE OF THE AGENCY OF TRANSPORTATION.
- ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES CELSIUS, UNLESS NOTED OTHERWISE.
- SEE SHEET 27 FOR REMOVAL AND REPAIR NOTES.
- SEE SHEET 9 FOR COFFERDAM NOTES.
- THE SURVEY LINE DOES NOT NECESSARILY COINCIDE WITH THE EXISTING VT 17 CENTERLINE.

CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION, POLLUTION, AND DISCHARGE OF RAW CONCRETE INTO MILL BROOK AS DIRECTED BY THE RESIDENT ENGINEER.
- ANY CONSTRUCTION WITHIN THE STREAM BANKS SHALL BE CONDUCTED DURING THE PERIOD DESIGNATED IN THE PERMITS. THE AGENCY OF NATURAL RESOURCES MUST APPROVE ANY DEVIATION FROM THIS PERIOD IN WRITING.
- ~~TRAFFIC WILL BE MAINTAINED DURING CONSTRUCTION BY UTILIZING A SINGLE TRAFFIC LANE WITH ALTERNATING EASTBOUND AND WESTBOUND TRAFFIC CONTROLLED BY A TEMPORARY TRAFFIC SIGNAL. PHASED CONSTRUCTION OF THE BRIDGE WILL BE REQUIRED. ALL WORK REQUIRED TO MAINTAIN TRAFFIC DURING CONSTRUCTION SHALL BE PAID AS ITEM 641.10 TRAFFIC CONTROL, UNLESS OTHERWISE NOTED.~~
- ~~TEMPORARY TRAFFIC SIGNAL SHALL BE PAID AS ITEM 678.40, TEMPORARY TRAFFIC SIGNAL SYSTEM.~~
- ITEM 505.36, TEMPORARY STEEL SHEET PILING IS INCLUDED AS TEMPORARY EXCAVATION SUPPORT AND TO SAFELY SEPARATE THE WORK AREA FROM TRAFFIC.
- ~~ITEM 621.90, TEMPORARY TRAFFIC BARRIER (MOD.), SHALL BE PAID ONLY ONCE.~~
- ITEM 204.25, STRUCTURE EXCAVATION SHALL BE USED TO EXCAVATE TO THE LIMITS SHOWN ON THE PLANS. SEE EARTHWORK TYPICALS ON SHEET 9.
- THE BRIDGE PLAQUE SHALL BE FURNISHED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AS SHOWN ON THE PLANS. ALL COSTS SHALL BE INCLUDED IN ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B.
- THE CONTRACTOR SHALL ERECT, MAINTAIN, REMOVE, AND/OR RESET AS REQUIRED ALL ON-PROJECT SIGNS AND BARRICADES. 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 STATE. THESE SIGNS SHALL BE REMOVED BY THE CONTRACTOR AND STOCKPILED AS DIRECTED BY THE RESIDENT ENGINEER FOR REMOVAL BY THE STATE 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.
- THE DESIGN OF THE FLEMING BRACKET OR SIMILAR FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE SPACED AT A MAXIMUM OF 1200 MILLIMETERS.

REINFORCING STEEL NOTES:

- REINFORCING STEEL IN THE DECK, CURTAIN WALLS, APPROACH SLABS, AND BRUSH CURBS SHALL BE EPOXY COATED AND PAID AS ITEM 507.17, EPOXY COATED REINFORCING STEEL. REINFORCING STEEL MECHANICAL CONNECTORS SHALL BE EPOXY COATED AND PAID AS ITEM 507.19, MECHANICAL BAR CONNECTOR. ALL OTHER REINFORCING STEEL SHALL BE PAID AS ITEM 507.15, REINFORCING STEEL.
- DRILLING AND GROUTING DOWELS SHALL BE PAID AS ITEM 507.16, DRILLING AND GROUTING DOWELS. ALL DRILLED HOLES SHALL HAVE A MINIMUM OF 150 MILLIMETERS CLEAR COVER.
- MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
ALONG BACK FACES OF WALLS AGAINST EARTH: FIFTY (50) MILLIMETERS
ALONG TOP SURFACE OF DECK SLAB: SIXTY-FIVE (65) MILLIMETERS
ALONG BOTTOM SURFACE OF DECK SLAB: FORTY (40) MILLIMETERS
ELSEWHERE UNLESS OTHERWISE INDICATED: EIGHTY (80) MILLIMETERS
- REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:
SPACING: ± 25 MILLIMETERS
CLEARANCE: ± 5 MILLIMETERS

STRUCTURAL STEEL NOTES:

- ALL NEW STRUCTURAL STEEL SHALL BE AASHTO M 270M, GRADE 345W UNLESS OTHERWISE NOTED.
- ITEM 506.50, STRUCTURAL STEEL (ROLLED BEAM), SHALL INCLUDE ROLLED BEAMS, CONNECTION PLATES, DIAPHRAGMS, AND ALL REQUIRED FASTENERS.
- ALL BOLTED FIELD CONNECTIONS SHALL BE MADE WITH 22 MILLIMETER DIAMETER HIGH STRENGTH BOLTS IN 24 MILLIMETER DIAMETER HOLES UNLESS OTHERWISE NOTED.
- CONNECTIONS NOT DESIGNATED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL.
- SHEAR CONNECTORS SHALL BE FIELD WELDED USING AUTOMATICALLY TIMED STUD WELDING EQUIPMENT AND SHALL BE PAID AS ITEM 508.15, SHEAR CONNECTORS.
- AFTER THE SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF THE BEAM SHALL BE TAKEN BY THE CONTRACTOR, AS DIRECTED BY THE RESIDENT ENGINEER, FOR USE IN DETERMINING THE FINAL GRADE AND HAUNCH DEPTHS.
- ANY HOLES IN FASCIA BEAM WEBS NOT OTHERWISE FILLED SHALL BE FITTED WITH BUTTON HEAD OR HEX HEAD BOLTS CONFORMING TO AASHTO M 164M, TYPE 3.
- THE ENDS OF BEAMS SHALL BE VERTICAL UNDER FULL DEAD LOAD DEFLECTION.

BEARING NOTES:

- PREFORMED FABRIC PAD DESIGN CRITERIA:
MAXIMUM ALLOWABLE BEARING PRESSURE ON CONCRETE = 6.9 MPa
MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIANS.
HORIZONTAL CAPACITY SHALL BE A MINIMUM OF 6% VERTICAL LOAD
DESIGN LOAD PER BEARING: 476 kN
- BEARINGS SHALL BE PAID AS ITEM 531.10, BEARING DEVICE ASSEMBLY (FABRIC).
- ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS) SHALL BE AASHTO M 270M, GRADE 250.
- ANCHOR BOLTS SHALL BE DRILLED AND SET WITH A MINIMUM OF 400 MILLIMETERS EMBEDMENT INTO CONCRETE. HOLES SHALL BE SEVENTY (70) MILLIMETERS IN DIAMETER AND BOLTS SHALL BE SET IN TYPE IV MORTAR. ALL COST SHALL BE INCLUDED UNDER ITEM 531.10, BEARING DEVICE ASSEMBLY (FABRIC).
- ANCHOR BOLTS SHALL BE SWEDGED WITH 125 MILLIMETERS OF THREAD. EXPANSION BEARING NUTS ARE TO BE DRAWN UP FINGER TIGHT AND THEN BACKED OFF FIVE (5) MILLIMETERS. THREADS SHALL BE BURRED ABOVE NUT TO PREVENT NUT REMOVAL.
- THE CONTRACTOR SHALL TAKE ELEVATIONS OF EACH ABUTMENT NO. 2 BEARING SEAT AND ORDER SHIM PLATES OF SUFFICIENT THICKNESS TO EQUAL THE DIFFERENCE BETWEEN THE EXISTING BEARING SEAT ELEVATION AND THE NEW BOTTOM OF PREFORMED FABRIC PAD ELEVATION. THE BOTTOM OF PREFORMED FABRIC PAD ELEVATIONS ARE AS SHOWN ON SHEET 25. ALL COSTS SHALL BE INCLUDED IN ITEM 531.10, BEARING DEVICE ASSEMBLY (FABRIC). SHIM PLATE DETAILS SHALL BE SUBMITTED FOR REVIEW WITH THE BEARING FABRICATION DRAWINGS.
- ADJUSTMENT OF THE EXISTING ABUTMENT NO. 2 BEARING SEATS MAY BE REQUIRED TO PROVIDE A LEVEL SURFACE FOR THE NEW BEARINGS. ADJUSTMENT TO THE BEARING SEATS SHALL BE AS DIRECTED BY THE RESIDENT ENGINEER AND ALL COSTS SHALL BE INCLUDED IN ITEM 531.10, BEARING DEVICE ASSEMBLY (FABRIC).
- AN OUTLET (V-GROOVE) SHALL BE PROVIDED FOR ANY BEARING RECESSED INTO THE BRIDGE SEAT TO PREVENT WATER FROM PONDING NEAR THE BEARING. OUTLETS SHALL BE AS DIRECTED BY THE RESIDENT ENGINEER AND ALL COSTS SHALL BE INCLUDED IN ITEM 531.10, BEARING DEVICE ASSEMBLY (FABRIC).

CONCRETE NOTES:

- CONCRETE PAYMENT AND CLASSIFICATION SHALL BE AS FOLLOWS:
ITEM 501.33, CONCRETE, HIGH PERFORMANCE CLASS A: DECK, CURBS, AND CURTAIN WALL
ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B: ALL OTHER COMPONENTS
- ITEM 514.10, WATER REPELLENT, SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON BRIDGE SUPERSTRUCTURE EXCEPT THE BOTTOM OF THE DECK BETWEEN THE DRIP NOTCHES. WATER REPELLENT SHALL ALSO BE APPLIED TO THE EXPOSED CONCRETE ON THE NEW AND EXISTING SUBSTRUCTURES.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 MILLIMETERS BY 25 MILLIMETERS, UNLESS OTHERWISE NOTED. A 15 MILLIMETER RADIUS SHALL BE USED ON THE TOP INSIDE CORNER OF CURBS.
- JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
- SURFACES OF THE ABUTMENT SEATS UNDER THE BEARING DEVICE SHALL BE LEVEL. OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 6 MILLIMETERS PER 300 MILLIMETERS.
- 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.
- FOR EACH CONSTRUCTION PHASE, THE CONCRETE DECK SHALL BE PLACED CONTINUOUSLY WITHIN ONE EIGHT HOUR WORKING DAY. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A TRANSVERSE CONSTRUCTION JOINT SHALL BE USED AS SHOWN ON SHEET 20. THERE SHALL BE A MINIMUM DELAY PERIOD OF 96 HOURS BETWEEN POURS.

FOUNDATION NOTES:

- WINGWALLS #1 AND #2 ARE ON SPREAD FOOTINGS DESIGNED TO BEAR ON SOIL.
- WINGWALL #4 IS ON A SPREAD FOOTING DESIGNED TO BEAR ON BEDROCK. THE PROPOSED BOTTOM OF FOOTING ELEVATION WAS SET EQUAL TO THE EXISTING BOTTOM OF FOOTING ELEVATION. THIS INFORMATION WAS TAKEN FROM AS-BUILT PLANS OF THE EXISTING BRIDGE. IF BEDROCK IS FOUND TO BE LOWER THAN THE PROPOSED BOTTOM OF FOOTING ELEVATION, UP TO 600 MILLIMETERS SHALL BE REPLACED WITH A CONCRETE, HIGH PERFORMANCE CLASS B SUB-FOOTING AND PAID AS ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B. IF A SUB-FOOTING IS REQUIRED, A 150x200 CONTINUOUS SHEAR KEY SHALL BE FORMED BETWEEN THE SPREAD FOOTING AND THE SUB-FOOTING. IF BEDROCK IS ENCOUNTERED MORE THAN 600 MILLIMETERS ABOVE OR BELOW THE BOTTOM OF FOOTING ELEVATION, THE STRUCTURES ENGINEER SHALL BE CONTACTED. NO FURTHER WORK SHALL BE DONE ON THE WINGWALL UNLESS DIRECTED BY THE RESIDENT ENGINEER.
- FOR WINGWALLS ON SOIL, UNDERCUT FOOTING 300 MILLIMETERS OR AS DIRECTED BY THE ENGINEER. FOR WINGWALLS ON BEDROCK, OVERBREAKAGE BELOW THE BOTTOM OF FOOTING ELEVATION SHALL BE REPLACED WITH CONCRETE, HIGH PERFORMANCE CLASS B. A MAXIMUM OF 150 MILLIMETERS SHALL BE PAID AS ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B. ANY ADDITIONAL OVERBREAKAGE SHALL ALSO BE REPLACED WITH CONCRETE, HIGH PERFORMANCE CLASS B AT THE CONTRACTOR'S EXPENSE.

STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of	FAYSTON	Bridge No.	36
Highway No.	VT 17	Log Sta.	
		Surv. Sta.	
VT 17 OVER MILL BROOK			
CONSTRUCTION NOTES			
Designed By	M.A. COLGAN	Drawn By	B.J. MASSE
Checked By	Date	Bridge Design Supervisor	
M.A. COLGAN	1/06	M.A. COLGAN	Date 1/06
PROJECT	FAYSTON	PROJECT NO.	BHF 0200(9)
I.G.C. Info.			
Bridge Sheet No.	50543NOT	Sheet	19 of 70