

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SEVENTEENTH EDITION AND ITS LATEST REVISIONS.
2. BRIDGE IS DESIGNED FOR MS 22.5 LIVE LOAD WITH NO ALLOWANCE FOR FUTURE PAVEMENT.
3. IN-STREAM CONSTRUCTION SHALL BE RESTRICTED TO JUNE 1 TO OCTOBER 1, UNLESS THE CONTRACTOR OBTAINS WRITTEN PERMISSION FROM THE AGENCY OF NATURAL RESOURCES TO DO WORK OUTSIDE OF THAT TIME FRAME.
4. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION OR POLLUTION, ESPECIALLY THE DISCHARGE OF RAW CONCRETE, INTO THE CLARENDON RIVER.
5. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES C UNLESS OTHERWISE NOTED.
6. BRIDGE RAILING AND HEAVY DUTY STEEL BEAM GUARD RAIL W/ WOOD POSTS SHALL BE WEATHERING STEEL. (SEE NOTE 4 ON STD. DWG. SB-R6-82.) THE HANDRAIL ON THE BRIDGE SHALL BE COLOR GALVANIZED BROWN (TO MATCH WEATHERING STEEL). THE COLOR GALVANIZING WILL BE PAID FOR UNDER THE ITEM 525.42, "BRIDGE RAILING - HDSB/CURB MOUNTED/HANDRAIL (MOD.)".
7. THE STONE FILL, TYPE III SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE THE PRESTRESS UNITS ARE PLACED.
8. TWO 4"-6" DIAMETER MAPLE TREES SHALL BE PLANTED ON THE ROBICHAUD PROPERTY AT A LOCATION WHICH IS MUTUALLY ACCEPTABLE TO THE ROBICHAUD'S AND THE RESIDENT ENGINEER. THIS WORK WILL BE PAID FOR UNDER ITEM 656.30, "DECIDUOUS TREES (SUGAR MAPLE-ACER SACCHARUM B&B, 4" CAL)".
9. A WATER QUALITY AND QUANTITY TEST WILL BE PERFORMED AT THE WELL LOCATED AT STA 1+093.3 LT PRIOR TO AND IMMEDIATELY AFTER CONSTRUCTION. THIS WORK WILL BE PERFORMED BY AGENCY STAFF OR ITS DESIGNEES.
10. DUE TO THE PROXIMITY OF THE BARN AT APPROXIMATELY STA 1+030 LT AND THE HOUSES AT STATIONS 1+015 LT AND 1+100 LT(+), IT IS REQUIRED THAT THE CONTRACTOR ARRANGE FOR INSPECTION OF THE HOUSE/BARN FOUNDATIONS PRIOR TO PILE DRIVING AND FOR MONITORING OF THE FOUNDATIONS DURING PILE DRIVING AT ABUTMENT NO. 1. THIS WORK WILL BE INCIDENTAL TO THE ITEM 504.10, "FURNISHING EQUIPMENT FOR DRIVING PILING". SEE SPECIAL PROVISIONS.
11. THE EXISTING WINGWALLS AND ABUTMENTS AT ABUTMENT NO. 1 SHALL BE REMOVED DOWN TO 300 mm BELOW THE FINISHED CHANNEL GRADE UNDER THE ITEMS, "STRUCTURE EXCAVATION AND UNCLASSIFIED CHANNEL EXCAVATION".
12. THE EXISTING WINGWALLS AND ABUTMENTS AT ABUTMENT NO. 2 SHALL BE REMOVED UNDER THE ITEMS, "COFFERDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK". ANY PORTIONS OF THE EXISTING WINGWALLS/ABUTMENT THAT FALLS OUTSIDE OF THOSE LIMITS SHALL BE REMOVED TO 300 mm BELOW THE FINISHED CHANNEL GRADE AND PAID FOR UNDER THE ITEM "UNCLASSIFIED CHANNEL EXCAVATION".
13. ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE (MOD)" WILL INCLUDE THE REMOVAL OF THE "MABEY" BRIDGE WHICH INCLUDES THE DISMANTLING AND DELIVERING TO THE DISTRICT GARAGE IN MENDON. THE CONTRACTOR SHALL COORDINATE REMOVAL OF THE BRIDGE BY CONTACTING DAVE LATHROP, DTA #3 AT LEAST TWO WEEKS PRIOR TO THE DATE THAT THE CONTRACTOR WISHES TO REMOVE THE "MABEY" BRIDGE. DAVE LATHROP CAN BE CONTACTED AT (802)786-0029. SEE SPECIAL PROVISIONS.
14. THE ORIGINAL BEAMS FOR THE STRUCTURE ARE LOCATED BELOW THE "MABEY" BRIDGE. THE BEAMS SHALL BE REMOVED ALONG WITH ANY DECKING (THAT STILL MAY REMAIN) DOWN TO THE EXISTING BRIDGE SEAT ELEVATION. THIS WORK SHALL BE PAID FOR UNDER THE ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE" (MOD).
15. THE ORIGINAL BEAMS BELOW THE "MABEY" WERE PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. THE REMOVED BEAMS ARE TO BECOME 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 BEAMS.
16. a) ALL PILES SHALL BE FURNISHED WITH REINFORCED PILE POINT OF PREFABRICATED CAST STEEL MEETING THE REQUIREMENTS OF ASTM A-27. SEE SUBSECTION 505.04 (e).
b) THE PILES AT ABUTMENT NO. 1 SHALL BE DRIVEN TO AN ULTIMATE CAPACITY OF 900 KN.
17. EXISTING TRAFFIC SIGNS AND SIGN POSTS SHALL BE REMOVED AND STOCKPILED ON THE PROJECT. THEY WILL REMAIN THE PROPERTY OF THE TOWN. THE CONTRACTOR SHALL BE PREPARED TO LOAD THE SIGNS ON TRUCKS FURNISHED AT THE SITE BY THE TOWN FOR REMOVAL FROM THE SITE BY THE TOWN. NOTIFICATION MUST BE GIVEN ONE WEEK IN ADVANCE TO THE TOWN INDICATING WHEN THE MATERIAL WILL BE AVAILABLE. CONTACT FRANCIS BLAIR, JR., ROAD FOREMAN AT (802) 287-9371. THIS WORK WILL BE PAID FOR UNDER THE ITEM 675.50, "REMOVING SIGNS".

CONCRETE

18. THE HEIGHT OF FILL BEHIND ABUTMENTS WILL BE LIMITED TO THE BRIDGE SEAT ELEVATION UNTIL THE OVERLAY HAS BEEN POURED AND THE CURING PERIOD IS UP.
19. 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.
20. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 mm BY 25 mm.
21. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

22. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
23. REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING +/- 25 mm
CLEARANCE +/- 5 mm
24. MINIMUM COVER FOR REINFORCING STEEL SHALL BE 50 mm ALONG THE BACK FACES OF WALLS AGAINST EARTH, 50 mm ALONG THE TOP SURFACE OF THE DECK, 40 mm ALONG THE BOTTOM SURFACE OF THE DECK AND 80 mm ELSEWHERE, UNLESS OTHERWISE NOTED.
25. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL.
26. WATER REPELLENT (MOD.-SILANE) SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE DECK BETWEEN THE DRIP BEADS.
27. NO CONCRETE IN THE ABUTMENTS OR WINGWALLS SHALL BE PLACED ABOVE THE BRIDGE SEAT ELEVATIONS UNTIL THE VOIDED SLABS HAVE BEEN PROFILED AND THE FINISHED GRADE OF THE DECK HAS BEEN DETERMINED.
28. ALL SUBSTRUCTURE CONCRETE SHALL BE CONCRETE, HIGH PERFORMANCE CLASS B UNLESS OTHER WISE NOTED.
29. THE DECK OVERLAY AND CURBS SHALL BE CONCRETE, HIGH PERFORMANCE CLASS AA.

TEMPORARY BRIDGE

30. TRAFFIC WILL BE MAINTAINED ON A ONE-WAY TEMPORARY BRIDGE LOCATED DOWNSTREAM OF THE EXISTING STRUCTURE.
31. THE COST OF ON-PROJECT CONSTRUCTION SIGNS AND BARRICADES REQUIRED SHALL BE PAID FOR UNDER THE ITEM 641.10, "TRAFFIC CONTROL".
32. THE REMOVAL AND/OR RESETTING OF TEMPORARY TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE RESIDENT ENGINEER, SHALL BE PAID FOR UNDER THE ITEM 641.10, "TRAFFIC CONTROL".
33. FULL ACCESS TO ALL DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK SHALL BE INCIDENTAL TO ITEM 528.10 "ONE-WAY TEMPORARY BRIDGE." WHEN THE CONTRACTOR MUST TEMPORARILY RESTRICT ACCESS TO THE DRIVES, NOTICE TO THE PROPERTY OWNERS SHALL BE GIVEN IN ADVANCE BY THE CONTRACTOR.

LEDGE (@ ABUTMENT NO. 2)

34. THE STRUCTURES SECTION SHALL BE CONTACTED IF LEDGE IS ENCOUNTERED MORE THAN 600 mm BELOW THE INDICATED BOTTOM OF FOOTING ELEVATIONS AS SHOWN ON THE PLANS. PROFILES OF THE LEDGE MAY BE REQUIRED TO ADJUST THE FOOTING ELEVATIONS AND SIZE. NO FURTHER WORK SHALL BE DONE ON THE FOOTINGS UNTIL A REPLY IS RECEIVED FROM THE STRUCTURES SECTION.
35. FOOTINGS SHALL BE PLACED ON SOUND, CLEAN LEDGE, ALL OVER BREAKAGE BELOW INDICATED BOTTOM OF FOOTING SHALL BE REPLACED WITH "CONCRETE, HIGH PERFORMANCE CLASS B". A MAXIMUM OF 150 mm AVERAGE DEPTH SHALL BE PAID FOR AS "CONCRETE, HIGH PERFORMANCE CLASS B", ANY ADDITIONAL CONCRETE REQUIRED SHALL BE PLACED AT THE CONTRACTOR'S EXPENSE. THESE QUANTITIES HAVE BEEN ADDED TO THE QUANTITY SHEET.
36. THE CONTRACTOR HAS THE OPTION OF POURING CONCRETE, HIGH PERFORMANCE CLASS B TO LEDGE INSTEAD OF POURING A SUB-FOOTING WITH CONCRETE, CLASS C. ANY CONCRETE, HIGH PERFORMANCE CLASS B USED IN A SUB-FOOTING WILL BE PAID FOR AT THE CONCRETE, CLASS C BID PRICE.

PRESTRESSED CONCRETE

38. THE PRESTRESSED UNITS SHALL BE OVERLAID WITH CONCRETE, HIGH PERFORMANCE CLASS AA. THE CONCRETE IS TO BE POURED WITH A MAXIMUM POUR DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A CONSTRUCTION JOINT SHALL BE USED. A NINETY SIX HOUR DELAY BETWEEN THE COMPLETION OF ONE DAY'S POUR AND THE BEGINNING OF ANY OTHER POUR SHALL ALSO BE OBSERVED.
39. PRESTRESSED, PRECAST MEMBERS SHALL:
 - A. CONFORM TO SECTION 510A "PRESTRESSED CONCRETE".
 - B. BE 540 X 914 AND 540 X 1220 VOIDED SLABS
 - C. HAVE THE ENDS OF THE STRANDS RECESSED AND GROUTED AS PER STANDARD PRACTICE
 - D. CONTAIN VOIDS WHICH ARE CONTINUOUS EXCEPT AS SHOWN IN THE PLAN DETAIL
 - E. HAVE VOID DRAINS AT EACH END OF EACH VOID. THE VOID DRAINS SHALL BE 20 mm DIAMETER, NON-FERROUS, AND SHALL BE CLEANED AFTER ERECTION
 - F. USE CONCRETE WITH F'c = 42 MPa AND Fc = 30 MPa
 - G. CONTAIN PRESTRESSING STRANDS WHICH ARE 15.24 mm DIAMETER, 1860 MPa, LO RELAXATION STRANDS PULLED TO 75 % OF THEIR YIELD.
 - H. BE DESIGNED FOR AN AASHTO MS 22.5 LIVE LOAD.
 - I. HAVE THE TOP SURFACE RAKED TO UNIFORM ROUGHNESS WITH AN AVERAGE AMPLITUDE OF 6 mm.
40. THE FABRICATOR MAY, WITH THE APPROVAL OF THE STRUCTURES ENGINEER, ALTER THE DESIGN, AS DETAILED, TO MEET THE PLANT'S PRESTRESSING OPERATION AND MATERIAL REQUIREMENTS. AN ALTERNATE STRAND CONFIGURATION MAY BE SUBMITTED FOR APPROVAL PROVIDED THAT THE DESIGN IS STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT AND THAT THE DESIGN MEETS ALL OF THE APPLICABLE DESIGN CRITERIA, LOADINGS AND CODES.

41.	NOT USED		
42.	THE 13 mm DIAMETER TRANSVERSE TENDONS SHALL BE POLYSTRAND OR EQUIVALENT. THE 19 mm PLATE SHALL CONFORM TO AASHTO M270/M270M GR 345. THE 19 mm PLATE, AND THE CHUCKS SHALL BE GALVANIZED AFTER FABRICATION, ACCORDING TO AASHTO M232/M232M. ALL WORK COVERED IN THIS NOTE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEMS.		
43.	THE JOINTS BETWEEN THE VOIDED SLABS SHALL BE FILLED WITH MORTAR, TYPE IV, IN ACCORDANCE WITH SECTION 510.13a. THIS WORK WILL BE PAID FOR UNDER THE ITEM 510.24, "GROUTING SHEAR KEYS".		
44.	THE TRANSVERSE STRANDS SHALL BE INSTALLED PRIOR TO THE PLACEMENT OF THE MORTAR AND CASTING OF THE CONCRETE, HIGH PERFORMANCE CLASS AA.		
45.	MATERIALS, LABOR AND EQUIPMENT FOR ALL GROUTING AND FOR THE COLD POURED JOINT FILLER SHALL BE INCLUDED IN THE UNIT PRICE FOR THE ITEMS. THE GROUT SHALL CONFORM TO MORTAR, TYPE IV.		
46.	THE CONTRACTOR SHALL GIVE THE VAOT MATERIALS AND RESEARCH SECTION TWO WEEKS NOTICE PRIOR TO THE PRESTRESS FABRICATOR CONSTRUCTING THE UNITS.		
47.	SERVICE LOADS	540x914	540x1220
	MEMBER MOMENT	344 kN-m	443 kN-m
	DECK MOMENT	153 kN-m	183 kN-m
	SUPERIMPOSED DEAD LOAD MOMENT	16 kN-m	20 kN-m
	LIVE LOAD & IMPACT MOMENT	439 kN-m	586 kN-m
	DEAD LOAD REACTION	129 kN	159 kN
	LIVE LOAD & IMPACT REACTION	338 kN	338 kN
	TOTAL REACTION	467 kN	497 kN
	FINAL CAMBER	22 mm	22 mm

48. **BEARING NOTES**
THE BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.10, "BEARING DEVICE ASSEMBLY (ELASTOMERIC)".

SEQUENCE OF CONSTRUCTION FOR PRESTRESSED VOIDED SLABS

- (A) Layout Working Lines
 - * Lay out working lines for the bridge's entire width on the beam seat. Measure all working lines from a common working point.
 - * The working lines are to be based on the nominal beam widths.
- (B) Verify Beam Seat Elevations
 - * Take elevations at beam seats.
 - * If seats are high, grind to correct elevations.
 - * If seats are low, add shims.
 - * Locate and drill 3" dia holes for anchor bolts.
 - * Install bearings.
- (C) Erect Beams
 - * Beams shall be placed to fit within the working lines.
 - * As work progresses, install hardwood wedges between adjacent beams to maintain proper joint opening (a minimum of one wedge at each lateral tie).
 - * Place anchor bolts.
 - * Grout anchor bolts in abutment.
- (D) Install Backer Rod
 - * Filler shall be placed below the key's bottom as shown on the Plans.
- (E) Install Transverse Ties
 - * A seamless polypropylene sheath shall cover ties (with corrosion inhibitor grease between sheath and strand).
 - * Feed ties through ducts.
 - * Verify that hardwood wedges are in place as required to prevent slippage of beams.
 - * Using calibrated jack, post-tension ties to approximately 22.2 kN to remove sag in the tie and to seat the chuck.
- (F) Grout Shear Keys
 - * Clean joint with an oil free air-blast immediately before grout placement. Then verify that the backer rod is still in place.
 - * Additional joint preparation and grout placement shall be per manufacturer's recommendations.
 - * Carefully rod joints to eliminate any possibility of voids.
- (G) Post-Tension Transverse Ties
 - * Grout shall attain a minimum compressive strength of 10.3 MPa, based on the manufacturer's recommendations, prior to stressing.
 - * Using a calibrated jack operated by qualified personnel, post-tension ties to 133.5 kN.
- (H) End Details
 - * Grout Anchor Bolt Ends at the Fixed Ends at Bridge Seats and Place Cold Poured Joint Sealer at Expansion End
 - * Before grout cures, place washer plate and install hold down nuts.
 - Fixed end, nut tightened
 - Expansion end, nut hand tightened and loosened by 1/2 turn.
 - * Grout over nut and bolt on fixed end, place cold poured joint sealer over nut and bolt on expansion end.
- (I) Finish Work
 - * Remove wedges, and patch deck and fascia beams at transverse ties.
 - * The contractor shall keep the prestressed units saturated with water for twelve hours prior to placement of the overlay.
 - * Remove any freestanding water immediately before concrete placement.
 - * Place an overlay.

PROJECT NAME:	CLARENDON	
PROJECT NUMBER:	BRO 1443(34)	
FILE NAME:	/str1/95j286/sj286gen.xls	PLOT DATE: 7/22/2003
PROJECT LEADER:	R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY:	C. CARLSON	CHECKED BY: C. CARLSON
GENERAL NOTES SHEET		SHEET 24 OF 43