

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED 2007, AND ITS LATEST REVISIONS.
2. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68° FAHRENHEIT, UNLESS NOTED OTHERWISE.
3. A MINIMUM OF 1'-0" COVER OVER THE BOX MUST BE PROVIDED BEFORE ALLOWING ANY VEHICLE OVER THE NEW STRUCTURE.
4. ITEM 529.15, "REMOVAL OF STRUCTURE" SHALL BE USED FOR REMOVAL OF THE EXISTING PIPE ARCH AND ANY PORTIONS OF HEADWALLS NOT REMOVED UNDER THE ITEMS "STRUCTURE EXCAVATION" OR "UNCLASSIFIED CHANNEL EXCAVATION".
5. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE AS FOLLOWS:
SPACING +/- 1"
CLEARANCE +/- 1/4"
6. TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT A RATE OF 0.025 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT OR AS DIRECTED BY THE ENGINEER.
7. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" X 1".
8. WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES OF THE BOX, WINGWALLS, AND HEADWALLS. WATER REPELLENT SHALL BE APPLIED TO THE EXPOSED INSIDE SURFACE OF THE BOX STARTING AT THE OPENING AT EACH END AND EXTENDING 3 FEET INTO THE BOX, INCLUDING THE BOTTOM SURFACE OF THE TOP SLAB AND THE TOP SURFACE OF THE BOTTOM SLAB. THIS SHALL BE PAID FOR UNDER ITEM 514.10, "WATER REPELLENT, SILANE".
9. THIS CULVERT SHALL BE BUILT USING ACCELERATED CONSTRUCTION TECHNIQUES. SEE SPECIAL PROVISIONS FOR DETAILS.
10. ALL ROADWORK AND BRIDGE WORK HAS BEEN DESIGNED TO BE CONSTRUCTED WITHIN THE EXISTING RIGHT OF WAY AS SHOWN ON THE PLANS.
11. FOR INFORMATION REGARDING UTILITIES, SEE THE SPECIAL PROVISIONS.
12. CARE SHALL BE TAKEN WHEN DRIVING GUARDRAIL POSTS OVER THE BOX AS TO NOT DAMAGE THE BOX WITH THE BREAKAWAY POST. THE PORTION OF RAIL ABOVE THE BOX SHALL BE A 25'-0" SECTION OF DOUBLE NESTED RAIL. THE PAYMENT FOR NESTED RAIL SECTIONS OVER THE BOX SHALL BE PAID FOR UNDER ITEM 621.217, "HD STEEL BEAM GUARDRAIL, GALVANIZED/NESTED W/8 FEET POSTS".
13. NO SUBSURFACE INVESTIGATION HAS BEEN CONDUCTED ON THIS PROJECT. LEDGE OR BOULDERS MAY OR MAY NOT BE ENCOUNTERED DURING THE CONSTRUCTION PROCESS. IF NECESSARY, THE ENGINEER WILL MAKE A DETERMINATION REGARDING SUBSURFACE CONDITIONS IN ACCORDANCE WITH SUBSECTION 104.08.

EARTHWORK AND RELATED ITEMS

14. TEMPORARY CONSTRUCTION FILLS WITHIN THE WATERCOURSE FOR ANY PURPOSE SHALL CONSIST OF CLEAN STONE FILL ONLY. NO OTHER FILLING IN THE STREAM SHALL OCCUR WITHOUT THE APPROVAL OF THE STREAM ALTERATION ENGINEER.
15. "STONE FILL, TYPE I" SHALL BE USED AT THE DISCRETION OF THE RESIDENT ENGINEER TO PREVENT EROSION BEHIND THE WINGWALLS AND AS DIRECTED ON THE PLANS. PAYMENT FOR MATERIAL AND PLACEMENT SHALL BE MADE UNDER ITEM 613.10, "STONE FILL, TYPE I".

PRECAST CONCRETE BOX

16. DESIGN CRITERIA:
 - A. DESIGN SHALL BE IN ACCORDANCE WITH 2007 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
 - B. SOIL UNIT WEIGHT OF RETAINED SOIL = 140 PCF
 - C. DESIGN LIVE LOAD = AASHTO HL-93
 - D. NOMINAL (UNFACTORED) BEARING RESISTANCE ≤ 6.7 KSF
 - E. USE K_o FOR THE DESIGN OF THE CONCRETE BOX AND K_a FOR THE DESIGN OF THE WINGWALLS.
 - F. CONCRETE COMPRESSIVE STRENGTH - SEE SUBSECTION 540.05(e)
 - G. ALL REINFORCING STEEL SHALL BE GRADE 60 BLACK REBAR.
 - H. THE WINGWALLS MUST BE AN EARTH RETAINING WALL SYSTEM WHICH HAS BEEN REVIEWED AND APPROVED BY THE STATE OF VERMONT AGENCY OF TRANSPORTATION.
17. THE LUMP SUM COST FOR ITEM 540.10, "PRECAST CONCRETE STRUCTURE" SHALL INCLUDE PRECAST HEADWALLS, PRECAST WINGWALLS, PRECAST CUTOFF WALLS, ANY JOINT SEALER REQUIRED, AND ANY OTHER LABOR AND MATERIALS NECESSARY TO INSTALL THE BOX.
18. A LOAD RATING SHALL BE PROVIDED BY THE PRECAST CONCRETE BOX FABRICATOR. THIS SHALL BE PAID FOR UNDER ITEM 540.10, "PRECAST CONCRETE STRUCTURE".
19. THE PRECAST SECTIONS ARE SHOWN FOR REFERENCE ONLY. THE ACTUAL DIMENSIONS AND CONFIGURATION WILL BE DEPENDENT ON THE FABRICATOR. THE MINIMUM INSIDE CLEAR DIMENSION SHALL BE 8'-0" AND THE RISE SHALL BE 4'-6". THE ENDS OF THE FIRST AND LAST UNITS SHALL BE VERTICAL.
20. HEADWALLS, CUTOFF WALLS, AND WINGWALLS #1, #2, #3, & #4 SHALL BE PRECAST. ALL CONNECTIONS SHALL BE DESIGNED AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
21. BACKFILLING BEHIND THE BOX AND USE OF EQUIPMENT ON OR ADJACENT TO THE BOX SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
22. THE SILLS WILL BE 1'-0" FRONT TO BACK AND 8'-0" LONG AS SHOWN IN PLANS. THEY WILL BE PRECAST CONCRETE PLACED AT THE FACTORY AS SHOWN ON THE PLANS AT ROUGHLY 8'-0" ON CENTER AND AT BOTH THE INLET AND THE OUTLET.
23. THE STRUCTURE WILL BE AT A 2.50% GRADE SIMULATING THAT OF THE STREAM.
24. THE EXTERIOR (TOP AND SIDES) OF ALL CONCRETE BOX JOINTS ALONG WITH ALL LIFTING HOLES SHALL BE FILLED WITH MORTAR TYPE IV AFTER BEING SET IN THEIR FINAL POSITION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 540.10, "PRECAST CONCRETE STRUCTURE".
25. A TWO (2) FOOT WIDE STRIP OF MEMBRANE WATERPROOFING SHALL BE INSTALLED (IN ACCORDANCE WITH SECTION 519) AT EACH BOX JOINT (TOP AND SIDES). THE MEMBRANE SHALL BE CENTERED ON THE JOINT AND COVER THE FULL HEIGHT OF THE SIDE JOINTS. THE TOP OF THE JOINTS SHALL THEN BE COVERED WITH THE TWO (2) FOOT STRIP OF MEMBRANE. THE SHEETS SHALL OVERLAP THE EDGES BY ONE (1) FOOT ON EACH SIDE. THE PAYMENT FOR MEMBRANE SHALL BE UNDER THE ITEM 519.20, "SHEET MEMBRANE WATERPROOFING, TORCH APPLIED".
26. THE FABRICATOR SHALL PROVIDE FABRICATION DRAWINGS, CONFORMING TO VAOT STANDARD SPECIFICATION SUBSECTION 105.03 AND THE APPLICABLE PROVISIONS OF SUBSECTION 540.10 AND DESIGN CALCULATIONS TO THE STRUCTURES ENGINEER FOR WRITTEN APPROVAL PRIOR TO CONSTRUCTION.
27. NO HOLES SHALL BE DRILLED IN THE BOX WITHOUT THE APPROVAL OF THE FABRICATOR AND THE STATE OF VERMONT AGENCY OF TRANSPORTATION.
28. NEW PRECAST CONCRETE BOX AND WINGWALLS SHALL BE INSTALLED IN THE DRY. CONTROL OF WATER SHALL BE PAID FOR UNDER PAY ITEM 900.645, "SPECIAL PROVISION (TEMPORARY RELOCATION OF STREAM)".

PROJECT NAME: FAIRLEE
PROJECT NUMBER: STP CULV (13)

FILE NAME: s08c060notes.dgn	PLOT DATE: 11-MAR-2009
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: L.J.STONE
DESIGNED BY: L.J.STONE	CHECKED BY: E.L.RUSTAY
GENERAL NOTES	SHEET 13 OF 26