STATE OF VERMONT
AGENCY OF TRANSPORTATION

GENERAL NOTES

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1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, LRFD FIFTH EDITION, DATED 2010 AND ITS LATEST REVISIONS.
2. DESIGN IS FOR AN HL-93 LIVE LOADING.
3. ITEM 529.15 "REMOVAL OF STRUCTURE" SHALL BE USED FOR THE REMOVAL OF THE EXISTING STEEL GIRDER SUPERSTRUCTURE AND ANY PORTIONS OF THE SUBSTRUCTURE NOT REMOVED UNDER THE ITEM "COFFERDAM EXCAVATION, ROCK".
4. THE EXISTING STEEL GIRDERS TO BE REMOVED ARE PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. ALL EXISTING STEEL REMOVED UNDER THIS PROJECT IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR MAY DISPOSE OF THE STEEL OR RETAIN IT FOR FUTURE REUSE. THE CONTRACTOR SHALL INFORM THE RESIDENT ENGINEER OF THE CONTRACTOR'S PLAN FOR THE STEEL PRIOR TO ITS REMOVAL.
5. RECORD PLANS FOR THE EXISTING BRIDGE ARE NOT AVAILABLE.
6. FOR TRAFFIC CONTROL NOTES, SEE SHEET 19.

REINFORCED CONCRETE NOTES

1. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF SECTION 507 FOR LEVEL 1 PLAIN REINFORCING AND SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE" (CRSI).
2. THE MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE TWO (2) INCHES ALONG WALL FACES AGAINST EARTH AND THREE (3) INCHES ELSEWHERE, UNLESS NOTED OTHERWISE.
3. REINFORCING PLACEMENT TOLERANCES SHALL BE:
   SPACING: +/- ONE INCH
   CLEARANCE: +/- ONE-QUARTER INCH
4. ALL ABUTMENT CONCRETE SHALL BE CONCRETE, HIGH PERFORMANCE CLASS B.
5. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT.
6. JOINTS AND SCORE MARKS IN THE CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
7. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH BY 1 INCH UNLESS NOTED OTHERWISE.
8. "WATER REPELLANT, SILANE", SHALL BE APPLIED TO ALL EXPOSED NEW CONCRETE SURFACES.

SUPERSTRUCTURE NOTES

1. ITEM 900.645, SPECIAL PROVISION (COMPOSITE ARCH SUPERSTRUCTURE), SHALL INCLUDE, BUT IS NOT LIMITED TO:

   RIGIFIED FIBER REINFORCED POLYMER TUBULAR ARCHES (RFTA)
   EXPANSIVE SELF CONSOLIDATING CONCRETE (SCC) FILL INSIDE THE TUBES

2. ITEM 900.670, SPECIAL PROVISION (FRP MECHANICALLY STABILIZED EARTH ARCH HEADWALLS), SHALL INCLUDE, BUT IS NOT LIMITED TO:

   VOIDED FRP MSE HEADWALL PANELS
   FRP CURVED FASCIA PLATES
   FRP GEOGRID REINFORCEMENT
   SELECT BACKFILL MATERIAL
   UNDERDRAIN AND DRAINAGE ELEMENTS

3. ITEM 900.645 SPECIAL PROVISION (CONCRETE ARCH SLAB ON FRP DECKING), SHALL INCLUDE, BUT IS NOT LIMITED TO:

   CORRUGATED FRP DECKING
   SLAB REINFORCEMENT
   CONCRETE (ARCH) SLAB

4. THE MANUFACTURER SHALL DESIGN THE BRIDGE SUPERSTRUCTURE, INCLUDING (BUT NOT LIMITED TO) THE COMPOSITE ARCH TUBES, FIBER REINFORCED POLYMER FRP) DECKING, REINFORCED CONCRETE SLAB, AND VOIDED FRP MSE HEADWALLS. THE MANUFACTURER SHALL PROVIDE STAMPED DESIGN CALCULATIONS PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF VERMONT. THE MANUFACTURER SHALL CONSIDER STRENGTH, STIFFNESS, AND STABILITY OF THE PREFABRICATED ELEMENTS FOR LOADS GENERATED DURING FABRICATION, TRANSPORTATION, ERECTION, CONSTRUCTION OPERATIONS, AND ULTIMATE TRAFFIC CONDITIONS. THE MANUFACTURER SHALL OBTAIN WRITTEN APPROVAL OF THE FABRICATION DRAWINGS FROM THE STRUCTURES ENGINEER PRIOR TO FABRICATION.
5. THE MANUFACTURER SHALL SUPPLY LOAD RATINGS FOR THE SUPERSTRUCTURE BASED ON VERMONT'S SEVEN STANDARD TRUCKS. COMPLETED LOAD RATING TABLE AND CALCULATIONS SHALL BE INCLUDED WITH THE FABRICATION DRAWINGS AND SIGNED, STAMPED AND DATED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF VERMONT.
6. THE CONTRACTOR SHALL FURNISH DETAILS, PROCEDURES, AND CALCULATIONS FOR PLACEMENT OF THE SELF CONSOLIDATING CONCRETE (SCC), INCLUDING (BUT NOT LIMITED TO) STANDPIPES AND SUPPORT FRAMING, FOR APPROVAL BY THE RESIDENT ENGINEER PRIOR TO PLACEMENT OF THE ABUTMENT CLOSURE POUR.
7. FABRICATION DRAWINGS SHALL BE SUBMITTED (5 WEEKS PRIOR TO FABRICATION OF THE SUPERSTRUCTURE) TO THE ENGINEER IN ACCORDANCE WITH STANDARD SPECIFICATION SUBSECTION 105.03(B).
8. THE CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S REQUIREMENTS REGARDING BACKFILL AND COMPACTION LIMITS, PROPERTIES, AND PROCEDURES, INCLUDING RESTRICTIONS OF CONSTRUCTION MACHINERY AND OPERATIONS.
9. LIVE LOAD DEFLECTION SHALL BE LIMITED TO L/1000.

SUBSTRUCTURE NOTES

1. ITEM 900.670, SPECIAL PROVISION (PRECAST CONCRETE GRAVITY RETAINING WALL) (PCGRW) SHALL INCLUDE, BUT IS NOT LIMITED TO:

   PRECAST MODULAR WALL UNITS
   CONCRETE BEARING PADS
   BACKFILL MATERIAL

2. BEARING RESISTANCE FOR PCGRW SHALL BE INVESTIGATED AT THE STRENGTH LIMIT STATE USING FACTORED LOADS AND A FACTORED BEARING RESISTANCE FO 10 KSF FOR WALL SYSTEM BASES FROM 8 TO 20 FEET WIDE. THE BEARING RESISTANCE FACTOR FOR SPREAD FOOTINGS ON SOIL IS 0.45. BASED ON PRESUMPTIVE BEARING RESISTANCE VALUES, A FACTORED BEARING RESISTANCE OF 3 KSF MAY BE USED TO CONTROL SETTLEMENT WHEN ANALYZING THE SERVICE LIMIT STATE ASSUMING A RESISTANCE FACTOR OF 1.0.
3. THE ABUTMENT WINGWALL PEDESTALS WERE DESIGNED TO ACT INDEPENDENTLY OF THE PRECAST CONCRETE GRAVITY RETAINING WALLS AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL SUBMIT RETAINING WALL DETAILS AND DESIGN CALCULATIONS FOR THE PRECAST CONCRETE GRAVITY RETAINING WALLS, STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT. CONSTRUCTION OF THE ABUTMENTS SHALL NOT BE PERMITTED UNTIL THE PRECAST CONCRETE GRAVITY RETAINING WALL STRUCTURAL DESIGN HAS BEEN APPROVED BY THE STRUCTURES ENGINEER.
4. THE COFFERDAM LAYOUT DEPICTED IN THE PLANS ON THE EPSC SHEETS INCLUDES ALL CHANNEL WORK, ABUTMENT REMOVAL, AS WELL AS ABUTMENT AND PRECAST CONCRETE GRAVITY RETAINING WALL CONSTRUCTION.
5. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT THE SPREAD FOOTING ABUTMENTS ARE FOUNDED ON SOILS THAT ARE HIGHLY SENSITIVE TO MOISTURE AND WILL REQUIRE LIMITING DISTURBANCE. COFFERDAMS SHALL BE INSTALLED DEEP ENOUGH BELOW THE BOTTOM OF EXCAVATION LEVEL TO CONTROL LATERAL SEEPAGE AND PIPING SO THAT FOUNDATION SUBGRADE IS STABLE, AS DETERMINED BY THE RESIDENT ENGINEER.

McFarland Johnson

PROJECT NAME: FAIRFIELD
PROJECT NUMBER: BRO 1448(38)

FILE NAME: z11j072gen.dgn
PROJECT LEADER: D. LANDRY
DESIGNED BY: E. ALEXOPOULOS
GENERAL NOTES

PLOT DATE: 01-NOV-2013
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