

GENERAL NOTES:

- SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS, THE TENNESSEE DEPARTMENT OF TRANSPORTATION (MARCH 1, 2006 EDITION) INCLUDING SPECIAL PROVISIONS UNLESS NOTED OTHERWISE.
- 2) LOADING: LIVE LOAD IS HL-93, 20-44; PLUS 33 PSF FOR FUTURE WEARING SURFACE.
 - 3) DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION, 2007, WITH SEISMIC DESIGN COEFFICIENT OF 0.20.
 - 4) CAST IN PLACE CONCRETE: TO BE CLASS 'A', $f'c = 4,000$ PSI PER SHELBY COUNTY SPECIFICATIONS UNLESS OTHERWISE NOTED.
 - 5) CONCRETE BRIDGE DECK: CLASS 'D', $f'c = 5,000$ PSI CONCRETE FOR BRIDGE DECKS SHALL BE IN ACCORDANCE WITH SHELBY COUNTY STANDARD SPECIFICATIONS. PAYMENT WILL BE UNDER ITEM 604-03.09.
 - 6) BRIDGE DECK SURFACE FINISH: TO BE IN ACCORDANCE WITH NOTE (C), SECTION 604.22 OF STANDARD SPECIFICATIONS. THE SAME FINISH WILL BE PROVIDED TO THE PAVEMENT @ BRIDGE ENDS.
 - 7) BRIDGE DECK FORMS: BRIDGE DECK FORMS FOR CONCRETE DECKS SHALL BE CONSTRUCTED USING EITHER REMOVABLE FORMS OR PERMANENT FORMS. PERMANENT FORMS MAY BE REMAIN-IN-PLACE STEEL. FORMS SHALL BE ATTACHED BY MEANS OTHER THAN WELDING TO MAIN STRUCTURAL MEMBERS OR REINFORCING STEEL. TEMPORARY ERECTION DIAPHRAGMS MUST BE USED AT THE ENDS OF PRECAST CONCRETE GIRDERS WHERE END DIAPHRAGMS, SUPPORT DIAPHRAGMS, OR ABUTMENT BACKWALLS ARE TO BE POURED CONCURRENTLY WITH THE DECK AND SHALL BE PROVIDED ELSEWHERE IN ACCORDANCE WITH THE SPECIFICATIONS TO PREVENT GIRDER ROTATION. SEE ARTICLE 604.05 OF THE STANDARD SPECIFICATIONS.
 - 8) REINFORCING STEEL: TO BE ASTM A615 GRADE 60. SUFFIX 'E' FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT. SEE SECTIONS 604 & 907 OF THE STANDARD SPECIFICATIONS.
 - 9) PRECAST PILES: PILES SHALL BE SIZE 14"x14". FOR PILE DESIGN LOADS, CUT-OFF ELEVATIONS AND, IF SPECIFIED, MINIMUM TIP ELEVATIONS, SEE THE SUBSTRUCTURE DRAWINGS. PILE INSTALLATION SHALL BE ACHIEVED WITHOUT DAMAGE TO THE PILE BY DRIVING PILES WITH APPROVED EQUIPMENT IN ACCORDANCE WITH THE SPECIFICATIONS AND, WHEN NECESSARY, PRE-DRILLING HOLES OR JETTING.
 - 10) AFTER EXCAVATION TO THE PROPOSED FOOTING ELEVATIONS, A TEST PILE SHALL BE INSTALLED AT EACH SUBSTRUCTURE AT THE LOCATION DESIGNATED ON SHEET 16. A LOAD TEST SHALL THEN BE APPLIED TO THE TEST PILE. FROM THE RESULTS OF THE LOAD TEST, THE ENGINEER WILL DETERMINE THE REQUIRED LENGTH OF THE PRODUCTION PILES AND THE REQUIRED BEARING.
 - 11) THE CONTRACTOR SHALL INSTALL PILING SUCH THAT ALL THE FOLLOWING REQUIREMENTS ARE MET. THE TIP ELEVATION FOR ALL TEST PILES AND PRODUCTION PILES SHALL BE EQUAL TO OR BELOW THE MINIMUM PILE TIP ELEVATION SHOWN ON THE PLANS. IN ADDITION, TEST PILES TO BE LOAD TESTED SHALL BE INSTALLED TO AT LEAST THE SPECIFIED BEARING SHOWN ON THE PLANS OR FULL LENGTH; ALL OTHER TEST PILES SHALL BE INSTALLED TO AT LEAST 1.5 TIMES THE SPECIFIED BEARING SHOWN ON THE PLANS OR FULL LENGTH. ALL PRODUCTION PILES SHALL BE INSTALLED FULL LENGTH UNLESS EXCESSIVELY HARD DRIVING WHICH MIGHT DAMAGE THE PILE IS ENCOUNTERED. IF THE PRODUCTION PILES DO NOT ACHIEVE THE MINIMUM REQUIRED BEARING, THE ENGINEER WILL DETERMINE IF ADDITIONAL PILING IS REQUIRED.
 - 12) IN THE EVENT THAT DRIVING TEST PILES TO AT LEAST THE MINIMUM TIP ELEVATION OR PRODUCTION PILE FULL LENGTH MIGHT DAMAGE THE PILE BECAUSE OF EXCESSIVELY HARD DRIVING, THE CONTRACTOR SHALL USE OTHER METHODS APPROVED BY THE ENGINEER FOR INSTALLING THE PILES SUCH AS JETTING OR PRE-DRILLING HOLES. HOWEVER, ALL PILES MUST BE DRIVEN BY HAMMER FOR THE LAST TWO FEET OF PENETRATION. NO MEASUREMENT FOR PAYMENT WILL BE MADE FOR PRE-DRILLING HOLES OR FOR JETTING PILING TO OBTAIN THE REQUIRED PILE PENETRATION.
 - 13) THE PILE LOAD TEST SHALL BE CONDUCTED IN ACCORDANCE WITH SPECIFICATIONS. THE PILE LOAD TEST APPARATUS FOR APPLYING LOADS AND MEASURING MOVEMENT SHALL MEET THE REQUIREMENTS OF ASTM D-1143, STANDARD METHOD OF TESTING PILES UNDER STATIC AXIAL COMPRESSIVE LOAD. WHEN INSUFFICIENT CLEARANCE IS AVAILABLE WITHIN AN EXCAVATION, THE CLEARANCE REQUIREMENTS IN ARTICLE 4.1.1 MAY BE REDUCED, BUT ONLY WITH PRIOR APPROVAL OF THE ENGINEER.
 - 14) ALTERNATE PILES: THE CONTRACTOR MAY USE PILING OF A DIFFERENT MATERIAL OR CONFIGURATION FROM THAT SHOWN ON THE PLANS. PROVIDED THE SUBSTITUTION MEETS MINIMUM DESIGN STANDARDS AND SPECIFICATIONS AND THAT ANY ADDITIONAL COST IS ASSUMED BY THE CONTRACTOR.
 - 15) SPECIAL NOTE FOR UTILITIES: IT IS INTENDED THAT THE COST OF MATERIALS AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION AND/OR RELOCATION OF UTILITIES SHALL BE BORNE BY OTHERS AND SHALL NOT BE PAID FOR AS PART OF THIS CONTRACT. THE CONTRACTOR SHALL COOPERATE WITH OTHERS IN THE INSTALLATION AND/OR RELOCATION OF UTILITIES WITH NO ADDITIONAL COMPENSATION ALLOWED TO THE CONTRACTOR AS A RESULT.
 - 16) SHOP DRAWINGS: SEE SPECIAL PROVISIONS NO. 105A.
 - 17) RIP-RAP: MACHINED RIP-RAP SHALL BE GRADE "B" PER TDOT SPECIFICATIONS 2370 AND SHALL BE PAID FOR UNDER ITEM NO. 709-05.08.
 - 18) FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.21 OF THE TENNESSEE STANDARD SPECIFICATIONS. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. THE APPLIED TEXTURE FINISH SHALL BE MEASURED AND PAID FOR UNDER ITEM 604-04.01.

BRIDGE GENERAL NOTES:

1. LUMP SUM: EXISTING BRIDGE CONSISTS OF FIVE SPANS FROM 31'± END SPANS AND 49'± MID. SPANS FOR A TOTAL LENGTH OF 211'± ABUTMENTS CONSIST OF CONCRETE CAPS OVER CONCRETE PILES. BENT CAPS SUPPORTED ON CONCRETE COLUMNS, UP TO GROUND LEVEL. STEEL BEAMS, ALL MATERIAL SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR. THE COST OF REMOVAL AND RELOCATION OF EXISTING FENCE TO BE INCLUDED IN THIS PROVISION.
2. EXCAVATION BASED ON EXISTING GROUND.
3. COST OF ELASTOMERIC PADS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE COST OF THE PRESTRESSED BEAM.
4. COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN COST OF PERFORATED PIPE.
5. THE COST OF 8 INSERT ASSEMBLIES AND 32-- $\frac{7}{8}$ " ϕ x 2" HEX HEAD BOLTS, (A307), TO BE INCLUDED IN ITEM 620-05.
6. ALL REINFORCING STEEL IN THE PARAPET (RAIL) SHALL BE EPOXY COATED. COST TO BE INCLUDED IN THE PRICE BID FOR ITEM 620-05.
7. BRIDGE RAIL SYSTEM: BUILD PARAPETS ACCORDING TO STANDARD DRAWING STD-11-1.
8. NOTE: THE COST OF BITUMINOUS - FIBERBOARD, ETC., AND ALL MISCELLANEOUS JOINT MATERIAL TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS.
9. THE COST OF ALL MATERIAL AND LABOR NECESSARY FOR THE INSTALLATION OF ANCHOR BOLT ASSEMBLIES AT BENTS SHALL BE INCLUDED IN ITEM No. 604-03.01 CLASS 'A' CONCRETE (BRIDGES).
10. COST OF PREPARATION OF TOP OF PILES FOR SEISMIC REQUIREMENTS SHALL BE INCLUDED IN ITEM 606-12.01. SEE STANDARD DRAWING STD-6-1 FOR DETAILS. THE PILE AND TEST PILE LENGTHS SHOWN DO NOT INCLUDE THE 2 FEET REQUIRED FOR SEISMIC ATTACHMENTS.
11. GRANULAR BACKFILL SHALL BE CLASS 'A' GRADING 'D' MATERIAL, SEE STANDARD DRAWING STD-10-1.
12. SQUARE YARD FOR PAVEMENT AT BRIDGE ENDS SHALL BE MEASURED AS ROAD SURFACE AREA AND SHALL INCLUDE ALL CONCRETE, REINFORCING STEEL, PILES, BRIDGE END DRAINS, AND OTHER INCIDENTALS NECESSARY FOR COMPLETE INSTALLATION. PRIOR TO CONSTRUCTION OF PAVEMENT AT BRIDGE ENDS, THE CONTRACTOR SHALL SUBMIT A PROPOSED BILL OF STEEL TO THE ENGINEER FOR APPROVAL.
13. WHEN POURING CURB AND SIDEWALK PROVISION SHALL BE MADE FOR SETTING REINFORCING STEEL FOR PARAPET. NO SIDEWALK OR PARAPET SHALL BE POURED UNTIL THE SLAB FOR THAT PHASE IS POURED AND CURED AND FALSE WORK IS REMOVED. WHEN POURING PARAPET, PROVISIONS SHALL BE MADE FOR SETTING ANCHOR BOLTS FOR PARAPET RAIL.
14. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SUPPORTING THE BEAMS TO PREVENT DAMAGE DUE TO TWISTING OR OVERTURNING DURING ALL PHASES OF CONSTRUCTION. IT IS STRONGLY RECOMMENDED THAT THE TEMPORARY ERECTION DIAPHRAGMS BE INSTALLED AND THE PERMANENT INTERMEDIATE DIAPHRAGMS BE POURED AND CURE PRIOR TO PLACING ANY LOADS ON THE GIRDERS. HOWEVER, TEMPORARY ERECTION DIAPHRAGMS MUST BE IN PLACE IN THE SPAN AT THE TIME THE SLAB IS POURED IN SAID SPAN.
15. NOTE: SUPPORT DIAPHRAGMS AT THE BENT SHALL BE FORMED AND THE BOTTOM 15" POURED AS SOON AS POSSIBLE AFTER THE BEAMS HAVE BEEN SET. THE REMAINDER OF THE DIAPHRAGM SHALL BE POURED CONCURRENTLY WITH THE DECK SLAB. ALL BENT DIAPHRAGM CONCRETE SHALL BE INCLUDED IN THE QUANTITY FOR ITEM 604-03.09. COST FOR INTERMEDIATE DIAPHRAGMS ARE TO BE INCLUDED IN COST OF OTHER ITEMS.
16. SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S OPTION. EXCEPT NO JOINT MAY BE LOCATED CLOSER THAN 10 FEET OR FURTHER THAN 15 FEET FROM AN INTERIOR SUPPORT. THE SLAB IN THE MIDDLE SECTION OF BOTH ADJACENT SPANS MUST BE POURED TO WITHIN AT LEAST 15 FEET OF THE SUPPORTS EITHER PRIOR TO OR CONCURRENTLY WITH THE SLAB OVER AN INTERIOR SUPPORT. NO EQUIPMENT SHALL BE PERMITTED ON THE BRIDGE UNTIL ALL POURS ARE MADE AND THE CONCRETE IS PROPERLY CURED.
17. DECK DRAINS ARE REQUIRED. SEE STD 1-2SS TYPE 1. FOR SIMILAR DETAILS.
18. THE FILL AT ABUTMENT 1 AND 2 OF THE BRIDGE SHALL BE IN PLACE AND THOROUGHLY COMPACTED BEFORE ABUTMENT PILES ARE DRIVEN.
19. NON-PAY ITEMS: ONLY ITEMS SHOWN ON THE PROPOSAL AS PAY ITEM WILL BE PAID FOR. COMPENSATION FOR ALL INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE UNIT PRICE BID.
20. PRIOR TO CONSTRUCTION OF THE PAVEMENT AT BRIDGE ENDS, THE CONTRACTOR SHALL SUBMIT A PROPOSED BILL OF STEEL TO THE ENGINEER.
21. BID PRICE SHALL INCLUDE COST OF WELDED END PLATES, CLASS 'A' CONCRETE FILL AND LABOR REQUIRED FOR COMPLETE INSTALLATION OF STEEL PIPE PILES.
22. BID PRICE SHALL INCLUDE COST OF FILTER CLOTH.

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