PROJECT NO.	YEAR	SHEET NO.
79224-4205-04	2015	3

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

SPECIAL NOTES

① SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (JANUARY 1, 2015 EDITION).

② DESIGN SPECIFICATIONS: AASHTO 2002 EDITION WITH ADDENDA.

③ REINFORCING STEEL: SEE THE STANDARD SPECIFICATIONS.

④ SHOP DRAWINGS: SHOP DRAWINGS SHALL BE SUBMITTED TO THE BRIDGE REPAIR OFFICE OF THE DIVISION OF STRUCTURES.

⑤ BOLTS: SHALL BE HIGH TENSILE STRENGTH BOLTS (ASTM A325). RODS AND U-BOLTS SHALL BE ASTM A193-B7, UNLESS OTHERWISE NOTED. SIZE TO BE AS NOTED ON PLANS. NUTS SHALL CONFORM TO ASTM A193-B7, SECTION 2 REFERENCE DOCUMENT. SEE AASHTO SPECIFICATIONS; ARTICLE 11.5.6, DIVISION II. EXISTING CONTACT SURFACES SHALL BE CLEANED TO SSPC-10 SPECIFICATIONS PRIOR TO ATTACHMENT OF NEW MEMBERS.

⑥ WELDING: SEE CURRENT EDITION OF THE AASHTO/AWS D1.5 BRIDGE WELDING CODE. CONTRACTOR IS TO SUBMIT WELDING PROCEDURE SPECIFICATIONS (BASED ON SUCCESSFUL TEST RESULTS AS RECORDED IN A PROCEDURE QUALIFICATION TEST RECORD, SEE AASHTO/AWS D1.5 SECTION 1.9 AND SECTION 5 (QUALIFICATION)) AND WELDER CERTIFICATIONS TO THE ENGINEER FOR REVIEW BEFORE WELDING WILL BE ALLOWED. WELDER CERTIFICATION SHALL INCLUDE PROOF OF CONTINUOUS WORK USING THE SPECIFIED WELDING PROCESS.

WELDING PROCEDURE SPECIFICATIONS ARE NOT REQUIRED FOR TEMPORARY WELDS; STAY-IN-PLACE METAL DECKING IS CONSIDERED TEMPORARY.

THE WELDING PROCEDURE SPECIFICATIONS SHOULD BE ON SITE FOR WELDER AND INSPECTOR REVIEW.

WELDING IS TO BE DONE BY THE CERTIFIED WELDER; SUPERVISION OF NON-CERTIFIED WELDER IS NOT PERMITTED. TDOT HAS THE OPTION OF HAVING THE WELDER RECERTIFIED IF QUESTIONABLE WORK IS OBSERVED; COST OF THIS RECERTIFICATION IS TO BE PAID FOR BY THE CONTRACTOR.

WELDER QUALIFICATION POSITIONS FOR FILLET AND GROOVE WELDS; FLAT (F), HORIZONTAL (H), VERTICAL (V), OVERHEAD (OH), SEE FIG 5.4 OR FIG 5.5 IN AASHTO/AWS D1.5 FOR POSITION LIMITS.

QUALIFICATION TEST		TYPE OF WELD & POSITION OF WELDING QUALIFIED PLATE	
WELD	POSITION	GROOVE	FILLET
GROOVE	1G	F	F, H
	2G	F, H	F, H
	3G	F, H, V	F, H, V
	4G	F, OH	F, H, OH
	3G & 4G	ALL	ALL
FILLET	1F		F
	2F		F, H
	3F		F, H, V
	4F		F, H, OH
	3F & 4F		ALL

FROM TABLE 5.7, WELDER QUALIFICATION - TYPE AND POSITION LIMITATIONS, AASHTO/AWS D1.5

⑦ CONCRETE FOR NEW SLAB, FULL DEPTH SLAB REPAIR, BRIDGE RAIL AND NEW DIAPHRAGMS: TO BE CLASS "A" HIGH EARLY STRENGTH CONCRETE. THE CONCRETE FOR THIS CONSTRUCTION SHALL OBTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI IN 18 HOURS. THE CONTRACTOR SHALL SUBMIT A CONCRETE DESIGN CAPABLE OF OBTAINING 3500 PSI IN 18 HOURS TO THE MATERIALS AND TEST DIVISION OF THE TENNESSEE D.O.T. FOR APPROVAL AND VERIFICATION THAT THE CONCRETE WILL MEET THE MINIMUM STRENGTH REQUIREMENTS IN THE ALLOTTED TIME. THE DESIGN SUBMITTAL AND TESTING SHALL BE COMPLETED BEFORE ANY WORK ON THE BRIDGE IS BEGUN. NO LOADING SHALL BE PERMITTED ON THE DIAPHRAGM OR DECK UNTIL THE CONCRETE HAS A COMPRESSIVE STRENGTH OF 3000 PSI.

⑧ CONCRETE CURING: ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS.

⑨ NON-PAY ITEMS: ONLY ITEMS SHOWN ON THE PROPOSAL AS PAY ITEMS WILL BE PAID FOR. COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE PRICE FOR THE PAY ITEMS.

⑩ DEMOLITION: THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE THAT ARE NOT TO BE REMOVED. A SMALL HAMMER MOUNTED ON A BOBCAT WILL BE PERMITTED FOR CONCRETE DEMOLITION. PNEUMATIC HAMMERS MAY BE USED TO REMOVE UNSOUND CONCRETE. SAWING OR CUTTING OF THE CONCRETE IS ACCEPTABLE SO LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED. ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET THE APPROVAL OF THE ENGINEER.

⑪ ROADSIDE BANKS/SLOPES USED BY THE CONTRACTOR FOR WORK ACCESS, PARKING, SHOULDER WIDENING, AND ANY OTHER PURPOSES THAT ARE DISTURBED BY HIS OPERATIONS SHALL BE REPAIRED BY REMOVING ADDED FILL AND ASPHALT, REGRADING, RESEEDING, MULCHING OR WHATEVER OTHER MEANS ARE NECESSARY TO RESTORE THE BANKS/SLOPES TO THE ORIGINAL CONDITION. ALL RESTORATION WORK SHALL MEET THE FULL SATISFACTION OF THE ENGINEER. COST OF ALL RESTORATION WORK SHALL BE INCLUDED IN ITEMS BID ON.

⑫ STRUCTURAL STEEL: SHALL CONFORM TO AASHTO M270 GRADE 36 (ASTM A709 GRADE 36) UNLESS OTHERWISE NOTED ON THE PLANS.

⑬ TIMBER: ALL TIMBER SHALL MEET THE REQUIREMENTS OF SECTIONS 601 AND 911 OF THE TDOT STANDARD SPECIFICATIONS.

⑭ GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED ½" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT AND THE BAR DRIVEN TO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED ¼" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT AND THE BAR DRIVEN TO ITS SEAT. ALL GROUTING MATERIAL SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TESTS.

⑮ GROUT: GROUT SHALL BE A PORTLAND CEMENT TYPE I IN ACCORDANCE WITH STANDARD SPECIFICATION 918.21-GROUT.

⑯ MECHANICAL BAR SPLICERS: MUST BE ON THE APPROVED LIST MAINTAINED BY THE DIVISION OF MATERIALS AND TESTS. THE BAR SPLICER SHALL MEET AASHTO STANDARD SPECIFICATIONS FOR MECHANICAL CONNECTION. WHEN EPOXY COATING IS REQUIRED, THE EXPOSED THREADS SHALL BE REPAIRED AFTER SPLICING ACCORDING TO THE STANDARD SPECIFICATIONS, SECTION 907. THE COST OF FURNISHING THE BAR SPLICERS, (AND EPOXY COATING WHEN REQUIRED) INCLUDING ALL LABOR AND MATERIALS NECESSARY FOR COMPLETE INSTALLATION, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS BID ON.

GRADING

ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

CONST. WORK ZONE TRAFFIC CONTROL

ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE (1) WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.

IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COST OF REMOVAL, COVERING AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY. BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), SQUARE FOOT.

A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS FLAGGER SIGNS, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRTY (30) FEET SETBACK. THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

THE CONTRACTOR WILL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC, UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO BE PARKED WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRTY (30) FEET SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED AND THE CHANNELIZING DEVICES ARE TO BE IN PLACE BEFORE BEING OPENED TO TRAFFIC.

UTILITY NOTES

☞ ALL UTILITIES ON EXISTING BRIDGES MUST BE RELOCATED BY UTILITY OWNERS.

THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106, WILL BE REQUIRED.

THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF THE WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL OWNER OF HIS PLAN OF OPERATION IN THE AREA OF UTILITIES. PRIOR TO COMMENCING THE WORK, THE CONTRACTOR SHALL CONTACT OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA65-31-106.

UNLESS OTHERWISE NOTIFIED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WERE CONSTRUCTION STAKES, LINES AND GRADES ARE A CONTRACT ITEM, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SLOPE STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK, AND AT ANY LOCATION OF THE PROJECT DIRECTED BY THE ENGINEER.

GUARDRAIL

THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETELY IN PLACE.

THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

MISCELLANEOUS

NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

☞ NOTES:
THE CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO ENSURE THAT NO DEBRIS IS DROPPED INTO THE STREAMS AT BRIDGES AT LOG MILES 26.28, 26.58, 26.74, 26.90 AND 27.25. THIS SHALL BE ACCOMPLISHED BY THE USE OF BASKETS, NETTING, WRAPPING, WORK PLATFORM, OR OTHER SIMILARLY EFFECTIVE MEANS. ANY DEBRIS WHICH IS ALLOWED TO DROP ON THE BANKS BELOW THE BRIDGE SHALL NOT BE ALLOWED TO ENTER THE STREAM AND SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. COST OF REMOVING AND DISPOSING OF DEBRIS SHALL BE INCLUDED IN ITEMS BID ON.

THE CONTRACTOR SHALL NOT DISTURB ANY PORTION OF THE STREAMS AND WETLAND AREAS AT LOG MILES 26.28, 26.58, 26.74, 26.90 AND 27.25.

THE CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO ENSURE THAT WETLAND "WTL-1" AND STREAM "STR-1" AT OVERFLOW BRIDGES AND LOOSAHATCHIE RIVER BRIDGE WILL NOT BE PERMANENTLY DISTURBED. THE ENTIRE AREA UNDER ALL BRIDGES SHALL NOT BE DISTURBED. SEE DWG. NOS. BR-118-184 THRU BR-118-190 FOR DETAILS.

PAVEMENT MARKINGS

FINAL PAVEMENT MARKING - ITEM NO. 716-13.02

PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" SPRAY THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.02, SPRAY THERMO PAVEMENT MARKING (60 MIL) (6 IN. LINE), LIN. MI. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

SPECIAL NOTE CONCERNING ASBESTOS

THE EXISTING BRIDGES CONTAIN ASBESTOS CONTAINING MATERIALS LOCATED IN THE DECK PIPE DRAINS AND IN FELT ON TOP OF BENT CAPS. THE CONTRACTOR SHALL REFER TO SPECIAL PROVISION SP202ACM - REMOVAL OF ASBESTOS CONTAINING MATERIAL PRIOR TO WORK FOR GUIDANCE ON REMOVING AND/OR WORK AROUND ASBESTOS CONTAINING MATERIALS. THE CONTRACTOR IS REQUIRED TO TAKE ALL MANDATORY SAFEGUARDS PRESCRIBED BY STATE AND FEDERAL LAW FOR BOTH WORKER PROTECTION AND HAZARDOUS MATERIALS DISPOSAL.

26.28 26.74
26.58 26.90 27.25

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS
STATE ROUTE 14
BRIDGE NO. 79-SR14-26.28
BRIDGE NO. 79-SR14-26.58
BRIDGE NO. 79-SR14-26.74
BRIDGE NO. 79-SR14-26.90
BRIDGE NO. 79-SR14-27.25
SHELBY COUNTY
2015

AMJAD S. KHAIRI REGISTERED ENGINEER AGRICULTURE COMMERCE No. 106650 STATE OF TENNESSEE 04/27/15

GARVER

DESIGNED BY L. I. COBOS DATE APR 2015
DRAWN BY C. W. THOMAS DATE APR 2015
SUPERVISED BY J. H. RUDDELL DATE APR 2015
CHECKED BY A. J. KHAIRI DATE APR 2015
TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

BR-118-192

JLHalbrook 4/27/2015 10:40:55 AM
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