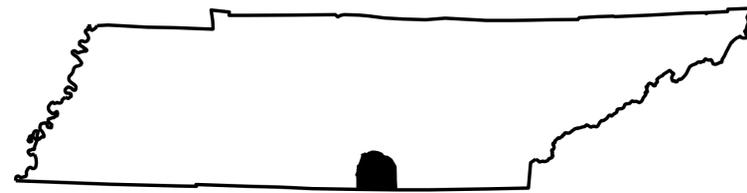


TYPE	YEAR	PROJECT NO.	SHEET NO.
CONSTR.	2013	BRZE-2600(37)	2



# FRANKLIN COUNTY

**X081**

LEON STEPHENS  
LANE OVER  
CROW CREEK  
STATION 14+95.50

PRESTRESSED CONCRETE  
TYPE IV I-BEAM WITH  
COMPOSITE DECK SLAB

(ALTERNATE)  
ROLLED STEEL  
SHAPE W44x335  
GIRDERS WITH  
COMPOSITE DECK SLAB

SPAN 1: 113'-0"

22'-0" ROADWAY WITH  
STD-7-1 BRIDGERAIL  
90°00'00" SKEW

LAYOUT DRAWING NO.  
M-371-362

ESTIMATED BRIDGE QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202-04.01	REMOVAL OF STRUCTURES (BRIDGE NO. 26-0B200-00.18)	1	L.S.
204-02.01	DRY EXCAVATION (BRIDGES)	266	C.Y.
303-01.02	GRANULAR BACKFILL (BRIDGES)	22	TON
604-02.03	EPOXY COATED REINFORCING STEEL	21,733	LB.
604-03.01	CLASS 'A' CONCRETE (BRIDGES)	68	C.Y.
604-03.09	CLASS 'D' CONCRETE (BRIDGE DECK)	71	C.Y.
606-02.03	STEEL PILE (10 INCH)	372	L.F.
606-02.06	PILE TIPS (STEEL PILE, 10 INCH)	16	EA.
620-06	CONCRETE RAILING (STD-7-1)	289	L.F.
710-09.01	6" PERF. PIPE WITH VERTICAL DRAIN SYSTEM	84	L.F.
710-09.02	6" PIPE UNDERDRAIN	32	L.F.

NOTE TO BIDDER: ABOVE QUANTITIES ARE COMMON FOR EITHER GIRDER ALTERNATIVE.

ESTIMATED BRIDGE QUANTITIES: PRESTRESSED I-BEAM ALTERNATE "A"			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	8,142	LB.
604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURE)	481	S.Y.
615-01.04	PRESTRESSED CONCRETE I-BEAM (TYPE IV)	330	L.F.

ESTIMATED BRIDGE QUANTITIES: STEEL BEAM ALTERNATE "B"			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
602-03	STEEL STRUCTURES (STEEL BEAM ALTERNATE)	1	L.S.
604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	8,262	LB.
604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURE)	309	S.Y.

FOOTNOTE: SEE DWG. NO. M-371-363.

<u>LIST OF DRAWINGS</u>	<u>DWG. NO.</u>	<u>LAST REV. DATE</u>
LAYOUT OF BRIDGE .....	M-371-362	3-12-14
BILL OF STEEL .....	M-371-370	.....

<u>LIST OF STANDARD DRAWINGS</u>	<u>DWG. NO.</u>	<u>LAST REV. DATE</u>
STD. PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS .....	STD-4-1	4-8-05
STD. PRECAST PRESTRESSED BRIDGE DECK PANELS DESIGN CRITERIA .....	STD-4-2	4-8-05
STD. PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS .....	STD-4-3	3-2-02
STD. PRECAST PRESTRESSED BRIDGE DECK PANELS CONSTRUCTION DETAILS .....	STD-4-4	6-10-96
STANDARD PILE DETAILS .....	STD-5-1	10-25-93
STANDARD PILE DETAILS .....	STD-5-2	4-8-05
STANDARD CONCRETE BRIDGE RAIL .....	STD-7-1	11-1-10
REINF. BAR SUPPORT DETAILS FOR CONC. SLABS .....	STD-9-1	10-7-08
MISCELLANEOUS ABUTMENT & DRAINAGE DETAILS .....	STD-10-1	4-8-05
STD. DETAILS AND INTERMEDIATE DIAPHRAGM DETAILS FOR I-BEAMS .....	STD-14-2	11-1-10

<u>LIST OF SPECIAL PROVISIONS</u>	<u>DWG. NO.</u>	<u>LAST REV. DATE</u>
STEEL STRUCTURES .....	602	3-1-06

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS

ESTIMATED  
BRIDGE  
QUANTITIES









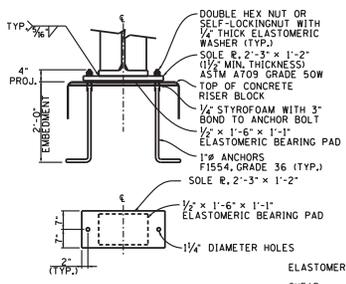
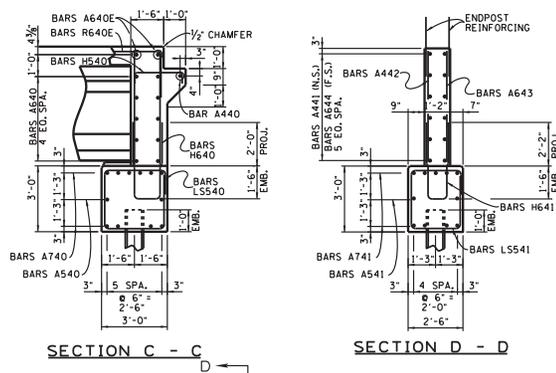
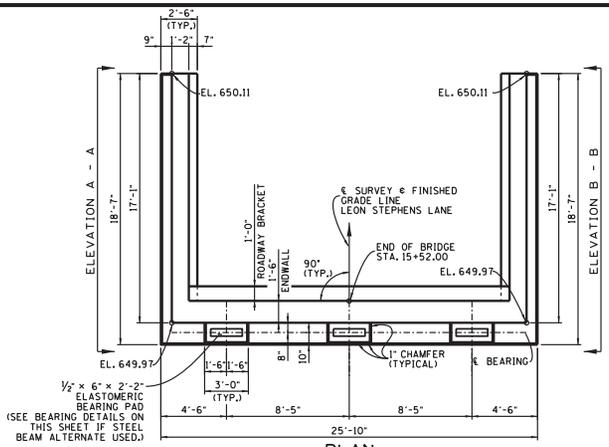






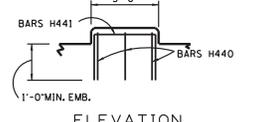
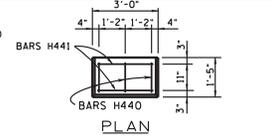


CONST. NO. 26071-3401-94			
PROJECT NO.	YEAR	SHEET NO.	
BRZE-2600(37)	2013		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

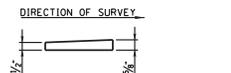


**BEARING DETAILS**  
(STEEL BEAM ALTERNATE "B" ONLY)  
NOTE: THE ELASTOMERIC BEARING IS TO BE VULCANIZED TO THE SOLE PLATE.

ELASTOMER: SHORE "A" HARDNESS = 70  
SHEAR MODULUS: 200 PSI MIN. 300 PSI MAX.



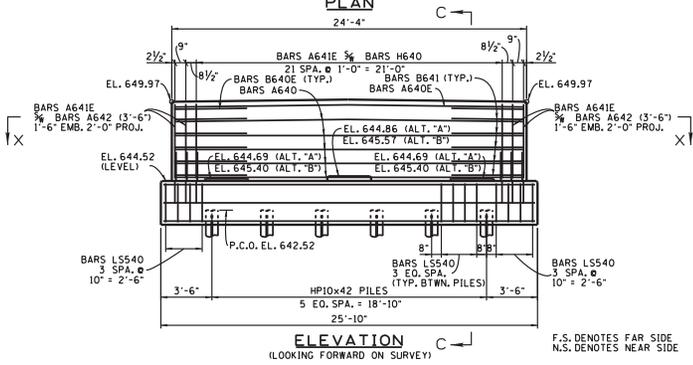
**RISER BLOCK REINFORCEMENT**  
(STEEL BEAM ALTERNATE "B" ONLY)



**SOLE PLATE SLOPE DETAIL**  
(STEEL BEAM ALTERNATE "B" ONLY)

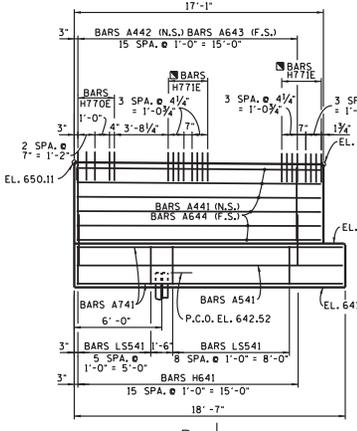


**RISER BLOCK SLOPE DETAIL**  
(PRESTRESSED I-BEAM ALT. "A" ONLY, OTHERWISE LEVEL)

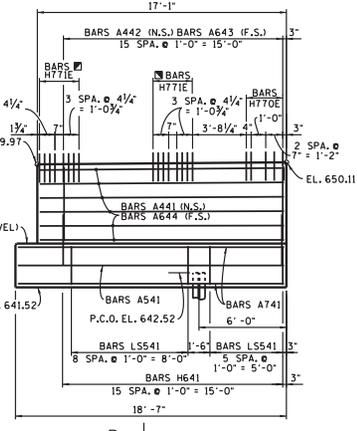


**ELEVATION**  
(LOOKING FORWARD ON SURVEY)

F.S. DENOTES FAR SIDE  
N.S. DENOTES NEAR SIDE



**ELEVATION A - A**



**ELEVATION B - B**

NOTE: BARS H771E TO BE INCLUDED IN THE SUPERSTRUCTURE STEEL REINFORCING QUANTITIES AND BILL OF STEEL. SEE STD. DWG. STD-7-1 FOR MORE INFORMATION.

**ABUTMENT GENERAL NOTES:**

- NOTE: RISER BLOCKS TO BE POURED MONOLITHICALLY WITH ABUTMENT BEAM. RISER BLOCK BEARING PAD SURFACE TO CONFORM TO BOTTOM OF BEAM GRADE.
- NOTE: COST OF BRIDGERAIL AND POST IS TO BE INCLUDED IN THE UNIT PRICE BID FOR BRIDGERAIL SYSTEM.
- NOTE: ELASTOMERIC PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE BEING DISTURBED BY SETTING BEAMS. PLACE RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.
- NOTE: THE GIRDERS SHALL BE IN PLACE PRIOR TO POURING THE ABUTMENT BACKWALL.
- NOTE: WHEN POURING WINGWALLS, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR WINGPOSTS AND PARAPETS. SEE STD-7-1.
- NOTE: NOT LESS THAN HALF OF THE SLAB SHALL BE POURED PRIOR TO OR CONCURRENTLY WITH PLACEMENT OF ANY PART OF THE ABUTMENT BACKWALLS. AT LEAST THE TOP 12 INCHES OF THE BACKWALL SHALL BE POURED CONCURRENTLY WITH THE END OF SLAB. ONE ABUTMENT BACKWALL MUST BE POURED FULL-HEIGHT CONCURRENTLY WITH THE END OF SLAB.
- NOTE: (APPLIES ONLY TO ALTERNATE "B") WHEN POURING ABUTMENT BEAM, PROVISIONS SHALL BE MADE FOR SETTING ANCHOR BOLTS.

ESTIMATED QUANTITIES			
CLASS "A" CONCRETE (BRIDGES) C.Y.	EPOXY COATED REINFORCING (BRIDGES) LB.	STEEL BAR REINFORCEMENT (BRIDGES) (PRESTRESSED I-BEAM) LB.	STEEL BAR REINFORCEMENT (BRIDGES) (STEEL BEAM) LB.
34	822	4,071	4,131

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
**ABUTMENT NO. 2**  
LEON STEPHENS LANE  
OVER  
CROW CREEK  
STATION 14+95.50  
FRANKLIN COUNTY  
2013

*Tracy E. Huff*  
10-22-2013

CORRECT *Dave J. Ford*  
CHIEF ENGINEER

DESIGNED BY J. SHOULDERS DATE 8-2013  
DRAWN BY B. KIRK SHOULDERS DATE 8-2013  
SUPERVISED BY TRACY HUFF DATE 8-2013  
CHECKED BY JASON MILLER DATE 9-2013

**SECTION X - X**



**BILL OF STEEL**

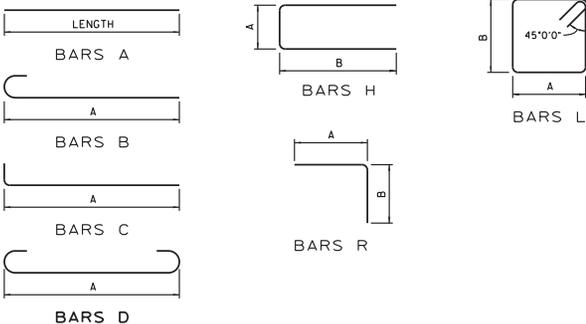
SUPERSTRUCTURE									
BAR	LOCATION	SIZE	NO. REUD	BENDING DIMENSIONS				LENGTH	
				A	B	C	D		
EPOXY									
A500E	SLAB	5	112					58'-0"	
A501E	SLAB	5	147					24'-0"	
A600E	SLAB	6	189					24'-0"	
H771E	SLAB/BRIDGERAIL	7	240	7'	2'-7"			5'-9"	
REGULAR									

ABUTMENT NO. 1									
BAR	LOCATION	SIZE	NO. REUD	BENDING DIMENSIONS				LENGTH	
				A	B	C	D		
EPOXY									
A640E	ENDWALL	6	2					24'-0"	
A641E	ENDWALL	6	52					5'-3"	
B640E	ENDWALL	6	2	5'-0"				5'-8"	
H770E	WINGWALL/BRIDGERAIL	7	10	8 1/2'	3'-4"			7'-5"	
R640E	ENDWALL	6	22	2'-7"	2'-7"			5'-2"	
REGULAR									
A440	RDWY BRKT	4	1					21'-8"	
A441	WINGWALL	4	12					16'-9"	
A442	WINGWALL	4	32					5'-3"	
A540	ABUT. BEAM	5	2					25'-6"	
A541	WING BEAM	5	4					18'-3"	
A640	ENDWALL	6	10					24'-0"	
A642	ENDWALL	6	8					3'-6"	
A643	WINGWALL	6	32					5'-3"	
A644	WINGWALL	6	12					16'-9"	
A740	ABUT. BEAM	7	10					25'-6"	
A741	WING BEAM	7	18					18'-3"	
B640	ENDWALL	6	10	5'-0"				5'-8"	
H540	RDWY BRKT	5	22	2'-2"	6"			3'-2"	
H640	ABUT. BEAM	6	22	1'-2"	3'-9"			8'-8"	
H641	WING BEAM	6	32	10'	3'-8"			8'-2"	
L5540	ABUT. BEAM	5	28	2'-8"	2'-8"			12'-0"	
L5541	WING BEAM	5	30	2'-2"	2'-8"			11'-0"	
H440	RISER BLOCK	4	9	1'-1"	2'-2"			5'-5"	
H441	RISER BLOCK	4	6	2'-8"	2'-2"			7'-0"	

ABUTMENT NO. 2									
BAR	LOCATION	SIZE	NO. REUD	BENDING DIMENSIONS				LENGTH	
				A	B	C	D		
EPOXY									
A640E	ENDWALL	6	2					24'-0"	
A641E	ENDWALL	6	52					5'-3"	
B640E	ENDWALL	6	2	5'-0"				5'-8"	
H770E	WINGWALL/BRIDGERAIL	7	10	8 1/2'	3'-4"			7'-5"	
R640E	ENDWALL	6	22	2'-7"	2'-7"			5'-2"	
REGULAR									
A440	RDWY BRKT	4	1					21'-8"	
A441	WINGWALL	4	12					16'-9"	
A442	WINGWALL	4	32					5'-3"	
A540	ABUT. BEAM	5	2					25'-6"	
A541	WING BEAM	5	4					18'-3"	
A640	ENDWALL	6	10					24'-0"	
A642	ENDWALL	6	8					3'-6"	
A643	WINGWALL	6	32					5'-3"	
A644	WINGWALL	6	12					16'-9"	
A740	ABUT. BEAM	7	10					25'-6"	
A741	WING BEAM	7	18					18'-3"	
B640	ENDWALL	6	10	5'-0"				5'-8"	
H540	RDWY BRKT	5	22	2'-2"	6"			3'-2"	
H640	ABUT. BEAM	6	22	1'-2"	3'-9"			8'-8"	
H641	WING BEAM	6	32	10'	3'-8"			8'-2"	
L5540	ABUT. BEAM	5	28	2'-8"	2'-8"			12'-0"	
L5541	WING BEAM	5	30	2'-2"	2'-8"			11'-0"	
H440	RISER BLOCK	4	9	1'-1"	2'-2"			5'-5"	
H441	RISER BLOCK	4	6	2'-8"	2'-2"			7'-0"	

CONST. NO. 26071-3401-94			
PROJECT NO. BRZE-2600(37)	YEAR 2013	SHEET NO.	
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NO.	DATE	BY	BRIEF DESCRIPTION

\* DENOTES USE OF BARS IF STEEL BEAM ALTERNATE "B" IS USED.  
BARS SHALL BE EXCLUDED IF PRESTRESS I-BEAM ALTERNATE "A" IS USED.



**REINFORCING STEEL CODE**

TYPE	SIZE	SERIES
A	5	06

NOTE: DIMENSIONS SHOWN ON THIS SHEET ARE OUTSIDE TO OUTSIDE OF BAR. STANDARD U.S.S.I. HOOD DETAILS SHALL APPLY, EXCEPT AS NOTED.  
NOTE: THE SUFFIX E FOR BARS SO MARKED DENOTES EPOXY COATED REINFORCEMENT.



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
**BILL OF STEEL**  
LEON STEPHENS LANE  
OVER  
CROW CREEK  
STATION 14+95.50  
FRANKLIN COUNTY  
2013

DESIGNED BY J. SHOULDERS DATE 8-2013  
DRAWN BY J. SHOULDERS DATE 8-2013  
SUPERVISED BY E. MILLER DATE 8-2013  
CHECKED BY E. MILLER DATE 8-2013

CORRECT *Tracy E. Huff*  
ENGINEER