

GENERAL NOTES:

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (MARCH 1981 EDITION).

LOADING: HS20-44 WITH ALTERNATE MILITARY.

DESIGN SPECIFICATIONS: AASHTO 1977, EDITION WITH APPENDIX.

▲ SPECIAL NOTE FOR CONCRETE BRIDGE DECK: CLASS A CONCRETE FOR BRIDGE DECKS SHALL BE IN ACCORDANCE WITH SECTION 604 EXCEPT AS FOLLOWS: MINIMUM 28 DAY COMPRESSIVE STRENGTH = 4500 PSI. MAXIMUM WATER/CEMENT = 50 GAL./SACK OF CEMENT. AIR CONTENT = 6% ± 2%.

▲ CONCRETE: TO BE CLASS "A", FC = 3,000 PSI. (SUBSTRUCTURE AND PARAPETS).

BRIDGE DECK FORMS: BRIDGE DECK FORMS FOR CONCRETE DECKS SHALL BE CONSTRUCTED USING EITHER REMOVAL FORMS OR PERMANENT FORMS. PERMANENT FORMS MAY BE EITHER REMAIN-IN-PLACE STEEL OR PRECAST, PRESTRESSED CONCRETE PANELS. IN EITHER CASE, FORMS SHALL BE ATTACHED BY MEANS OTHER THAN WELDING TO SUPPORT MEMBERS. THE CONTRACTOR SHALL TAKE STEPS TO ASSURE THE STABILITY OF THE EXTERIOR GIRDER AGAINST TWISTING OR OVERTURNING DURING SLAB POURING OPERATIONS.

REINFORCING STEEL: TO BE ASTM A615 GRADE 60. STANDARD CRS1 HOOK DETAILS APPLY UNLESS OTHERWISE NOTED ON BILL OF STEEL. BENDING DIMENSIONS SHOWN ARE BASED ON GRADE 60. SPACING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON DETAIL DRAWINGS. THE SUFFIX 'E', FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT.

SPECIAL NOTE - FOOTINGS FOR BEAMS: AFTER EXCAVATION TO ROCK FOR FOOTING HAS BEEN COMPLETED, HOLES 6 FT. DEEP SHALL BE DRILLED AT POINTS DESIGNATED BY THE ENGINEER. FROM THE RESULTS OBTAINED, THE ENGINEER SHALL DETERMINE THE FINAL FOOTING ELEVATIONS. NO REINFORCING STEEL FOR THE PIER COLUMNS SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED.

PILES: TO BE HP10 X42 DRIVEN TO REFUSAL ON ROCK OR A MINIMUM BEARING OF 55 TONS FOR THE ABUTMENTS.

NOTE: ALL FILL SHALL BE IN PLACE PRIOR TO EXCAVATING FOR PIER FOOTINGS. AFTER CONSTRUCTING THE PIER, EXTREME CARE SHALL BE TAKEN WHEN BACKFILLING SO AS NOT TO DAMAGE OR MISALIGN THE PIER.

BRIDGE RAIL SYSTEM: BUILD PARAPETS ACCORDING TO STANDARD DRAWINGS M-28-1.

SPECIAL NOTE FOR RAILROAD CROSSING: THE CONTRACTOR SHALL CONDUCT HIS WORK SO AS TO PROTECT THE RAILROAD TRACKS AND PROPERTIES FROM ANY DAMAGE. THE WORK SHALL BE DONE IN ACCORDANCE WITH THE REGULATIONS STIPULATED BY THE L.&N. RAILROAD SO AS TO MAINTAIN CLEARANCE AND NOT INTERRUPT TRAFFIC.

ERECTION: THE CONTRACTOR SHALL SUBMIT TO THE BRIDGE ENGINEER COMPLETE DETAILS OF HIS ERECTION SEQUENCE AND PROCEDURE FOR APPROVAL. HOWEVER NO FORMS OR FALSEWORK, FOR ANY BRIDGE, SHALL BE SUPPORTED FROM ANOTHER STRUCTURE.

SHOP DRAWINGS: SEE SPECIAL PROVISION NO. 105A.

LINSEED OIL PROTECTIVE TREATMENT: SURFACES RECEIVING AN APPLIED TEXTURE FINISH (AND DECKS WITH LSDC AND PMC ALT.) SHALL NOT RECEIVE A LINSEED OIL TREATMENT. SEE APPLIED TEXTURE FINISH DETAIL, THIS SHEET.

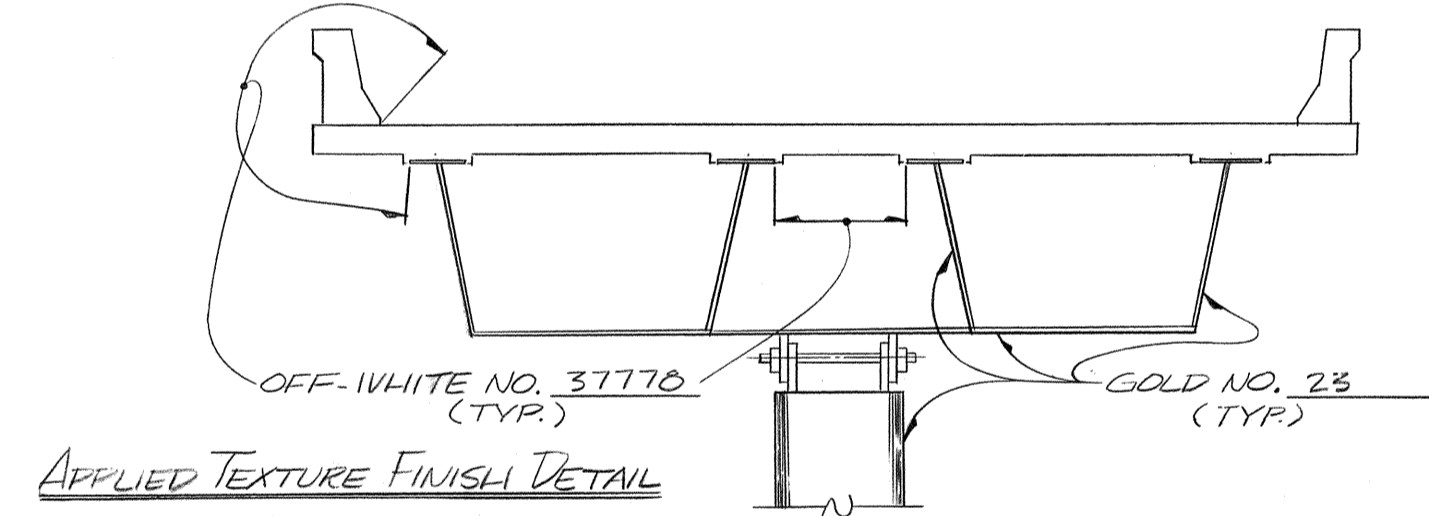
WELDING: SEE SPECIAL PROVISION NO. 602 AND STRUCTURAL STEEL NOTES THIS SHEET.

PAINT: SYSTEM B - INORGANIC ZINC - VINYL SYSTEM - GOLD TOP COAT - FOR PREPARATION OF SURFACES SEE TENNESSEE STANDARD SPECIFICATIONS 603.05B.

RADIOGRAPHIC, ULTRASONIC AND MAGNETIC INSPECTION: SEE SPECIAL PROVISION NO. 602 AND STRUCTURAL STEEL NOTES THIS SHEET.

STEEL STRUCTURES: SEE TENNESSEE STANDARD SPECIFICATIONS SECTION 602 AND STRUCTURAL STEEL NOTES THIS SHEET.

STANDARD ELASTOMERIC EXPANSION JOINT: ITEM 602-05.08 STANDARD ELASTOMERIC EXPANSION JOINT.



FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.22 OF THE TENNESSEE STANDARD SPECIFICATIONS. A TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS 2 FINISH. THE COLOR OF THE FINISH SHALL BE SIMILAR TO OFF-WHITE, FEDERAL SPECIFICATION NO. 3770, FEDERAL COLOR STANDARD NO. 595A, AND A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE.

STRUCTURAL STEEL GENERAL NOTES:

APPROVAL OF MATERIALS: NO FABRICATION SHALL BE STARTED UNTIL THE MATERIALS INVOLVED HAVE BEEN APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION DIVISION OF MATERIALS AND TESTS.

IDENTITY OF MAIN MATERIALS: SEE SPECIAL PROVISION NO. 602.

▲ FIELD CONNECTIONS: SHALL BE 7/8" Ø UNLESS OTHERWISE NOTED, HIGH TENSILE STRENGTH BOLTS ASTM-A325, ALL HIGH STRENGTH BOLTED CONNECTIONS ARE FRICTION TYPE EXCEPT AS NOTED.

ADDITIONAL SHOP SPlice NOTE: SHOP SPICES NECESSARY DUE TO LENGTHS OR SIZE OF MATERIAL INVOLVED MAY BE LOCATED BY THE FABRICATOR SUBJECT TO APPROVAL BY THE ENGINEER.

WELDING: AWS D1.1-80 STRUCTURAL WELDING CODE, AASHTO STANDARD SPECIFICATIONS FOR WELDING OF STRUCTURAL STEEL HIGHWAY BRIDGES, THIRD EDITION, 1981, AND SPECIAL PROVISION NO. 602.

ADDITIONAL FIELD SPlice NOTE: FIELD SPICES NECESSARY DUE TO LENGTHS INVOLVED MAY BE LOCATED BY THE FABRICATOR SUBJECT TO APPROVAL BY THE ENGINEER. DESIGNATED SPICE LOCATIONS MAY BE ELIMINATED BY THE CONTRACTOR SUBJECT TO APPROVAL BY THE ENGINEER.

NOTE: UNLESS OTHERWISE NOTED, SEE AASHTO SPECIFICATIONS ART 1.7.21 FOR MINIMUM SIZE OF FILLET WELD.

SHOP ASSEMBLY: PROGRESSIVE SHOP ASSEMBLY WILL BE ALLOWED. SEE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, ART. 2.10.14 (B).

STRUCTURAL STEEL: STRUCTURAL STEEL SHALL CONFORM TO: ASTM A36 (AASHTO M183), ASTM A572 (AASHTO M223), ASTM A588 (AASHTO M222).

SPECIAL STEEL ERECTION NOTE: TEMPORARY STRUCTURE WILL BE REQUIRED IN THE MEDIAN AREA BETWEEN FRANKLIN ROAD AND INTERSTATE 65 TO ACCOMMODATE THE STEEL ERECTION FOR SPAN THREE OF STRUCTURES 166 AND 167. THE TEMPORARY STRUCTURE MUST MEET THE REQUIREMENTS OF AASHTO ART. 2.10.54. THE BOX GIRDER FIELD SPICE AS SHOWN FOR SPAN THREE OF STRUCTURES 166 AND 167 MUST BE MADE IN THE FINAL POSITION. THE FIRST SEGMENT OF EACH BOX GIRDER MUST LAND ON AND BE SUPPORTED BY THE TEMPORARY STRUCTURE AND THE SECOND SEGMENT OF THE SAME GIRDER LINE MUST BE IN PLACE AND AT LEAST ONE HALF THE HOLES FILLED WITH BOLTS AND CYLINDRICAL ERECTION PINS, (HALF BOLTS AND HALF PINS), BEFORE THE FIRST SEGMENT OF ANOTHER GIRDER LINE IS PLACED. TRAFFIC MUST BE MAINTAINED ON FRANKLIN ROAD OR INTERSTATE 65 AT ALL TIMES. STEEL WILL NOT BE ALLOWED TO SLING OR BE HELD BY THE CRANE OVER MOVING TRAFFIC AT ANY TIME. SEE ROADWAY TRAFFIC CONTROL PLAN FOR ADDITIONAL INFORMATION. THE COST OF TEMPORARY ERECTION STRUCTURE IS TO BE INCLUDED IN ITEM NO'S 602-14.05 AND 602-14.06, (STEEL STRUCTURES ERECTION).

DESIGNED BY C.M. HILES DATE 01-82  
 DRAWN BY MIKE CHILDRIS DATE 01-82  
 SUPERVISED BY HARRISON HILES DATE 01-82  
 CHECKED BY HILES DATE

LIST OF DRAWINGS

TITLE OR DRAWING	DRAWING NO.
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ABUTMENTS NO. 1 AND 2 DETAILS	M-15-86
PIERS NO. 1, 2, 3 AND 4	M-15-87
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SUPERSTRUCTURE - BRIDGE NO. 167	M-15-100
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BOX GIRDER ELEVATIONS BRIDGE NO. 166	M-15-102
BOX GIRDER ELEVATIONS BRIDGE NO. 167	M-15-103
DEAD LOAD CORRECTION CURVES BRIDGES NO. 166 AND 167	M-15-104
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STRUCTURAL STEEL DETAILS BRIDGES NO. 162, 166 AND 167	M-15-113
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FIELD SPICES BRIDGES NO. 162, 166 AND 167	M-15-116
FIELD SPICES BRIDGES NO. 163, 164 AND 165	M-15-117
BEARING DEVICES	M-15-118
STANDARD ELASTOMERIC EXPANSION JOINT	K-86-1,2, & 6

DRAWING TITLE	DRAWING NO.(S)	LATEST REVISION DATE
BRIDGE RAILING - CONCRETE PARAPET	M-28-1	07-17-81
STANDARD REINFORCING BAR SUPPORT DETAILS	K-80-14	08-27-76
REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS	K-86-144	07-17-81
MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS	K-85-150	01-09-75
STANDARD PILE DETAILS	H-5-111	11-27-73

DRAWING TITLE	DRAWING NO.(S)	LATEST REVISION DATE
TENNESSEE STANDARD PRECAST PRESTRESSED BRIDGE DECK PANELS	K-80-15A	
PORTABLE BARRIER RAIL	M-28-15B	07-17-81

LIST OF SPECIAL PROVISIONS

NO.	DESCRIPTION OF:	LATEST REVISION DATE
105A	REGARDING APPROVAL OF SHOP DRAWINGS	07-02-79
602	REGARDING STEEL STRUCTURES	09-08-81
602A	REGARDING STEEL STRUCTURES	07-05-79
907A	REGARDING EPOXY COATED REINFORCING STEEL	09-08-81

PROJECT NO.	YEAR	SHEET NO.
I-440-4(48)211	1982	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
4-21-82	CMH		ADDED NOTE CLASS A CONCRETE (BRIDGE DECK) PREV. FIELD CONNECTION NOTE.
9-14-82	CMH		GENERAL REVISION

STATE OF TENNESSEE  
 DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS

GENERAL NOTES  
 I440-165 DIRECTIONAL INTERCHANGE  
 4 LEVEL GRADE SEPARATION  
 DAVIDSON COUNTY  
 1982

CORRECT *Clifton L. Lovell*  
 ENGINEER OF STRUCTURES  
 APPROVED *Louis Evans*  
 DIRECTOR OF HIGHWAYS

MICROFILMED

PROJECT NO.	YEAR	SHEET NO.
T-440-4(48)211	1982	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	4-21-82	CMH	REV. ITEM NO. 604-03.01
			ADDED ITEM NO. 604-01.12
			DELETED ITEM NO. 712-02
2	9-14-82	CMH	GENERAL REVISION
3	1-24-83	F.C.	LIGHTING
4	5/20/83	CMH	ADDED BARS ABOVE.
5	7/21/87	CMH	REV. CONC. QUANTITY.

ITEM NO.	204-01.01	204-01.01	204-05	602-05.02	604-02.03	604-03.01	604-03.02	604-03.03	604-04.01	604-22.03	606-32.03	606-42.03	620-05	709-01	710-10	710-11	604-01.12
ITEM	DRY EXCAVATION (BRIDGES)	ROCK EXCAVATION (BRIDGES)	ROCK DRILLING (BRIDGES)	STD. ELASTOMERIC EXPANSION DEVICE	EPXY COATED REINFORCING STEEL	CLASS A CONCRETE (BRIDGES)	STEEL BAR REINFORCEMENT (BRIDGES)	LINSEED OIL TREATMENT	APPLIED TEXTURE FINISH (NEW STRUCTURES)	STEEL PILES (10-INCH) (DRIVING)	STEEL PILES (10-INCH) (FURNISH DOMESTIC)	STEEL PILES (10-INCH) (FURNISH FOREIGN)	CONCRETE PARAPET	REINFORCED CONCRETE SLOPE PAVEMENT	6" PERF. C.M. PIPE (18 GA.) WITH PERCUS. BACKFILL	6" C.M. PIPE UNDERDRAINS (18 GA.)	CLASS A CONCRETE (BRIDGE DECK)
UNIT OF MEASUREMENT	C.Y.	C.Y.	L.F.	L.F.	LBS.	C.Y.	LBS.	S.Y.	S.Y.	L.F.	L.F.	L.F.	L.F.	C.Y.	L.F.	L.F.	C.Y.
SUPERSTRUCTURE					205,767												668.4
ABUTMENT NO. 1	119.0		12		2,655		79.8		7728							52	26
PIER NO. 2		298.9	12				126.0		2897								
PIER NO. 3		124.1	12				119.2		26959								
PIER NO. 4		98.0	12				100.4		21464								
ABUTMENT NO. 2	71.7				2,655		62.8		5388	194	194	194		24.1	52	26	
PAVEMENT & BRIDGE ENDS					21,464		80.6			100	100	100					
TOTALS	189.7	525.3	48	87	232,541	563.8	90437	2533	2,063	294	294	294	1062	24.1	104	52	668.4
SUPERSTRUCTURE					136,445												385.1
ABUTMENT NO. 1	61.6				1866		50.9		4484		190	190		21.3	40	26	
PIER NO. 1	106.2	12.3	12				77.3		17,743								
PIER NO. 2		92.5	12				65.4		20,819					8.6	40	26	
PIER NO. 3	97.1	9.3	12				66.0		6,576								
ABUTMENT NO. 2					14,894		55.5			80	80	80					
PAVEMENT & BRIDGE ENDS					14,894		55.5			80	80	80					
TOTALS	264.9	114.1	36	63	155,071	385.1	49,624	1619	1668	270	270	270	958	30.1	80	52	385.1
SUPERSTRUCTURE					206,273												581.8
ABUTMENT NO. 1	68.9				2,212		56.1		4886		206	206		17.3	43	27	
PIER NO. 1		95.0	12				93.9		24,070								
PIER NO. 2		92.5	12				108.8		32,528								
PIER NO. 3		87.1	12				102.9		30,320								
PIER NO. 4	204.2	6.2	12				103.1		27,546								
ABUTMENT NO. 2	68.9				2,212		56.1		4,888	361	361	361		40.0	43	28	
PAVEMENT & BRIDGE ENDS					14,894		55.5			80	80	80					
TOTALS	342.0	285.8	48	63	225,591	576.4	124,267	2364	2483	649	649	649	1425	57.3	86	55	581.8
SUPERSTRUCTURE					209,593												596.8
ABUTMENT NO. 1	71.5				1939		57.0		5,077		442	442		63.5	44	28	
PIER NO. 1		103.4	12				101.3		29,670								
PIER NO. 2		106.6	12				106.6		31,776								
PIER NO. 3		49.0	12				84.6		20,503								
PIER NO. 4	71.5	98.0	12				57.0		5,077								
ABUTMENT NO. 2					1939		57.0		5,077	186	186	186		31.7	44	28	
PAVEMENT & BRIDGE ENDS					15,149		55.5			80	80	80					
TOTALS	192.0	201.4	36	63	226,620	462.2	92,105	2388	2,515	708	708	708	1452	95.2	88	56	596.8
SUPERSTRUCTURE					407,716												1419.5
ABUTMENT NO. 1	92.4				2891		78.2		6,608		721	721		126.5	60	30	
PIER NO. 1	612.6	62.3	12				284.3		117,928								
PIER NO. 2	404.9	93.4	12				287.4		119,776								
PIER NO. 3		498.4	12				281.1		112,225								
PIER NO. 4	384.2	62.3	12				252.6		92,695								
PIER NO. 5	269.9	41.5	12				260.2		96,770								
CRUSHALL					261		5,729	46									
ABUTMENT NO. 2	92.4				2891		78.3		6,608	609	609	609		97.0	60	30	
PAVEMENT & BRIDGE ENDS					21,591		80.6			100	100	100					
TOTALS	1856.4	757.9	60	87	435,089	1023.8	562,246	4803	4,152	1,430	1,430	1,430	2087	223.5	120	60	1419.5
SUPERSTRUCTURE					415,191												1447.1
ABUTMENT NO. 1	92.4				2891		78.1		6,608		726	726		141.9	60	30	
PIER NO. 1	612.6	62.3	12				286.7		119,409								
PIER NO. 2	404.9	93.4	12				289.8		121,146								
PIER NO. 3		498.4	12				283.6		117,431								
PIER NO. 4	384.2	62.3	12				255.1		94,001								
PIER NO. 5	269.9	41.5	12				268.6		98,331								
ABUTMENT NO. 2	92.4				2891		78.3		6,608	604	604	604		98.1	60	30	
PAVEMENT & BRIDGE ENDS					21,591		80.6			100	100	100					
TOTALS	1856.4	757.9	60	87	442,564	1014.8	563,534	4895	4,184	1,430	1,430	1,430	2128	240.0	120	60	1447.1
GRAND TOTALS	4701.4	2642.4	288	450	1,719,476	5,186.1	1,482,212	18,602	17,065	4,781	4,781	4,781	9,122	670.2	593	335	6098.7

NOTE: THE COST OF BITUMINOUS FIBERBOARD AND ALL MISCELLANEOUS JOINT MATERIAL TO BE INCLUDED IN BRIDGE ITEMS BID ON.

NOTE: THE COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN COST OF PERFORATED C.M. PIPE.

NOTE: EXCAVATION BASED ON LOWER ROAD PROFILE.

NOTE: THE COST OF 60 THREADED STEEL INSERTS AND 20 7/8" X 4" HEX HEAD BOLTS (ASBT) TO BE INCLUDED IN BRIDGE ITEMS BID ON.

ITEM NO.	602-14.01	602-18.01	602-26.01	602-14.02	602-10.02	602-26.02	602-14.03	602-10.03	602-26.03	602-14.04	602-18.04	602-26.04	602-14.05	602-18.05	602-26.05	602-14.06	602-18.06	602-26.06	714-01.01	714-01.02	714-01.03	714-01.04	714-01.05	714-01.06
ITEM	STEEL STRUCTURES (ERECTION)	STEEL STRUCTURES (FURNISH DOMESTIC)	STEEL STRUCTURES (FURNISH FOREIGN)	STEEL STRUCTURES (ERECTION)	STEEL STRUCTURES (FURNISH DOMESTIC)	STEEL STRUCTURES (FURNISH FOREIGN)	STEEL STRUCTURES (ERECTION)	STEEL STRUCTURES (FURNISH DOMESTIC)	STEEL STRUCTURES (FURNISH FOREIGN)	STEEL STRUCTURES (ERECTION)	STEEL STRUCTURES (FURNISH DOMESTIC)	STEEL STRUCTURES (FURNISH FOREIGN)	STEEL STRUCTURES (ERECTION)	STEEL STRUCTURES (FURNISH DOMESTIC)	STEEL STRUCTURES (FURNISH FOREIGN)	STEEL STRUCTURES (ERECTION)	STEEL STRUCTURES (FURNISH DOMESTIC)	STEEL STRUCTURES (FURNISH FOREIGN)	STRUCTURE LIGHTING (S-W ROADWAY OVER I-65)	STRUCTURE LIGHTING (N-E ROADWAY OVER I-65)	STRUCTURE LIGHTING (S-E ROADWAY OVER S-W & N-E ROADWAYS)	STRUCTURE LIGHTING (W-N ROADWAY OVER S-W & N-E ROADWAYS)	STRUCTURE LIGHTING (EASTBOUND I-440 OVER S-E & W-N)	STRUCTURE LIGHTING (WESTBOUND I-440 OVER S-E & W-N)
DESCRIPTION	STRUCTURE 162 - STATION AT BEGINNING OF BRIDGE STA. 146+1.51			STRUCTURE 163 - STATION AT BEGINNING OF BRIDGE STA. 17+44.02			STRUCTURE 164 - STATION AT BEGINNING OF BRIDGE STA. 247+31.20			STRUCTURE 165 - STATION AT BEGINNING OF BRIDGE STA. 417+60.85			STRUCTURE 166 - STATION AT BEGINNING OF BRIDGE STA. 345+16.49			STRUCTURE 167 - STATION AT BEGINNING OF BRIDGE STA. 345+16.49								
STRUCTURE 162																								
STRUCTURE 163																								
STRUCTURE 164																								
STRUCTURE 165																								
STRUCTURE 166																								
STRUCTURE 167																								

NOTE: LUMP SUM: TOTAL ESTIMATED WEIGHT OF 976,012 LBS. STRUCTURAL STEEL INCLUDES 856,416 LBS. A36 119,696 LBS. A572

NOTE: LUMP SUM: TOTAL ESTIMATED WEIGHT OF 462,307 LBS. STRUCTURAL STEEL INCLUDES 472,902 LBS. A36 194,405 LBS. A572

NOTE: LUMP SUM: TOTAL ESTIMATED WEIGHT OF 1,192,888 LBS. STRUCTURAL STEEL INCLUDES 874,100 LBS. A36 318,788 LBS. A572

NOTE: LUMP SUM: TOTAL ESTIMATED WEIGHT OF 1,155,015 LBS. STRUCTURAL STEEL INCLUDES 863,764 LBS. A36 291,251 LBS. A572

NOTE: LUMP SUM: TOTAL ESTIMATED WEIGHT OF 2,418,032 LBS. STRUCTURAL STEEL INCLUDES 1,737,175 LBS. A36 680,857 LBS. A572

NOTE: LUMP SUM: TOTAL ESTIMATED WEIGHT OF 2,427,998 LBS. STRUCTURAL STEEL INCLUDES 1,743,714 LBS. A36 684,284 LBS. A572

NOTE: LUMP SUM FOR STRUCTURE LIGHTING, ITEM NO. 714-01.01 INCLUDES 430 FT. 1" CONDUIT WITH PULL WIRES, 4 - 4"x4"x3" JUNCTION BOXES AND ALL NECESSARY MATERIALS FOR INSTALLATION OF STRUCTURE LIGHTING.

NOTE: ESTIMATED WEIGHT OF A36 INCLUDES LEAD PLATES, SELF LUBRICATED BRONZE PLATES, SHEAR CONNECTORS, BOLTS, ANCHOR BOLTS, BEARING PINS, ETC... ALSO SEE TENNESSEE STANDARD SPECIFICATIONS.

NOTE: LUMP SUM FOR STRUCTURE LIGHTING, ITEM NO. 714-01.02 INCLUDES 425 FT. 1" CONDUIT WITH PULL WIRES, 4 - 4"x4"x3" JUNCTION BOXES AND ALL NECESSARY MATERIALS FOR INSTALLATION OF STRUCTURE LIGHTING.

NOTE: LUMP SUM FOR STRUCTURE LIGHTING, ITEM NO. 714-01.03 INCLUDES 475 FT. 1" CONDUIT WITH PULL WIRES, 2 - 4"x4"x3" JUNCTION BOXES AND ALL NECESSARY MATERIALS FOR INSTALLATION OF STRUCTURE LIGHTING.

NOTE: LUMP SUM FOR STRUCTURE LIGHTING, ITEM NO. 714-01.04 INCLUDES 290 FT. 1" CONDUIT WITH PULL WIRES, 4 - 4"x4"x3" JUNCTION BOXES AND ALL NECESSARY MATERIALS FOR INSTALLATION OF STRUCTURE LIGHTING.

NOTE: LUMP SUM FOR STRUCTURE LIGHTING, ITEM NO. 714-01.05 INCLUDES 530 FT. 1" CONDUIT WITH PULL WIRES, 2 - 4"x4"x3" JUNCTION BOXES AND ALL NECESSARY MATERIALS FOR INSTALLATION OF STRUCTURE LIGHTING.

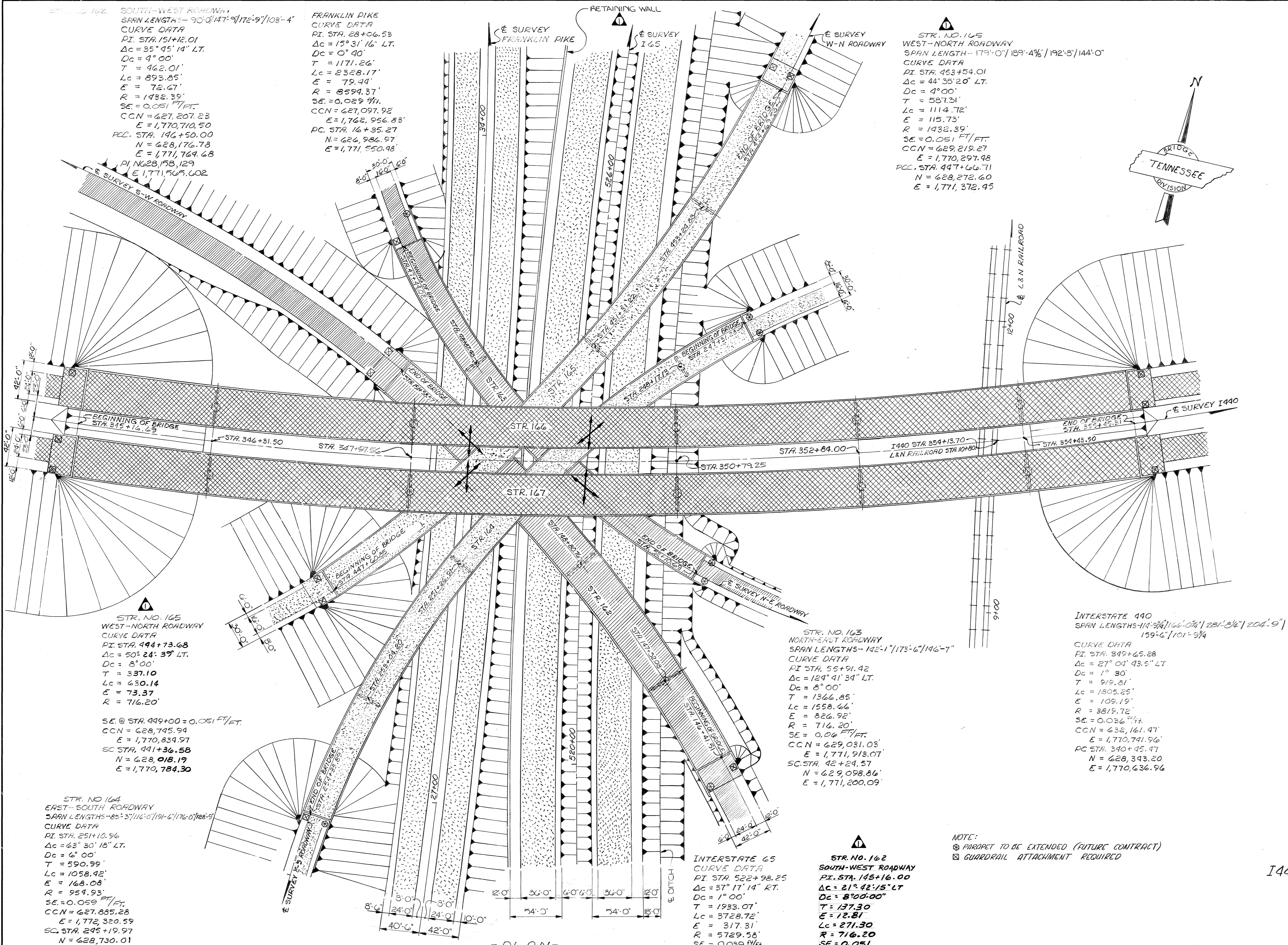
NOTE: LUMP SUM FOR STRUCTURE LIGHTING, ITEM NO. 714-01.06 INCLUDES 420 FT. 1" CONDUIT WITH PULL WIRES, 2 - 4"x4"x3" JUNCTION BOXES AND ALL NECESSARY MATERIALS FOR INSTALLATION OF STRUCTURE LIGHTING.

DESIGNED BY C.M. HILES DATE 01  
 DRAWN BY MIKE CHILDRESS DATE 01-82  
 SUPERVISED BY WARREN HILES DATE 01-82  
 CHECKED BY C.M. HILES DATE 01-82

STATE OF TEN

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	I-440-2(48)211	1982		

REVISIONS				
NO.	DATE	BY	BRIEF DESCRIPTION	
1	9-14-82	C.M.H.	GENERAL REVISION	



STR. NO. 162  
SOUTH-WEST ROADWAY  
SPAN LENGTHS - 90'-0" / 147'-9" / 172'-9" / 103'-4"  
CURVE DATA  
PI STA. 151+12.01  
 $\Delta c = 35^\circ 45' 14" \text{ LT.}$   
 $Dc = 4^\circ 00'$   
 $T = 462.01'$   
 $Lc = 893.85'$   
 $E = 72.67'$   
 $R = 1432.39'$   
 $SE = 0.051 \text{ FT/FT.}$   
 $CCN = 627,207.23$   
 $E = 1,770,710.50$   
P.C. STA. 146+50.00  
 $N = 628,176.73$   
 $E = 1,771,769.68$   
P.I. NO. 28,153,129  
 $E = 1,771,565.602$

FRANKLIN DIKE  
CURVE DATA  
PI STA. 28+06.53  
 $\Delta c = 15^\circ 31' 16" \text{ LT.}$   
 $Dc = 0^\circ 40'$   
 $T = 1171.26'$   
 $Lc = 2328.17'$   
 $E = 79.44'$   
 $R = 8594.37'$   
 $SE = 0.029 \text{ FT/FT.}$   
 $CCN = 627,097.92$   
 $E = 1,762,956.83'$   
P.C. STA. 16+35.27  
 $N = 626,986.97$   
 $E = 1,771,550.98$

STR. NO. 165  
WEST-NORTH ROADWAY  
SPAN LENGTHS - 179'-0" / 189'-4" / 192'-8" / 144'-0"  
CURVE DATA  
PI STA. 453+54.01  
 $\Delta c = 44^\circ 35' 20" \text{ LT.}$   
 $Dc = 4^\circ 00'$   
 $T = 537.31'$   
 $Lc = 1114.72'$   
 $E = 115.73'$   
 $R = 1432.39'$   
 $SE = 0.051 \text{ FT/FT.}$   
 $CCN = 629,219.27$   
 $E = 1,770,297.98$   
P.C. STA. 447+66.71  
 $N = 628,272.60$   
 $E = 1,771,372.45$

STR. NO. 165  
WEST-NORTH ROADWAY  
CURVE DATA  
PI STA. 494+73.68  
 $\Delta c = 50^\circ 24' 37" \text{ LT.}$   
 $Dc = 8^\circ 00'$   
 $T = 337.10$   
 $Lc = 630.14$   
 $E = 73.37$   
 $R = 716.20'$   
 $SE @ \text{ STA. } 499+00 = 0.051 \text{ FT/FT.}$   
 $CCN = 628,745.94$   
 $E = 1,770,834.97$   
SC STA. 491+36.58  
 $N = 628,018.19$   
 $E = 1,770,784.30$

STR. NO. 163  
NORTH-EAST ROADWAY  
SPAN LENGTHS - 142'-1" / 173'-6" / 146'-7"  
CURVE DATA  
PI STA. 55+91.42  
 $\Delta c = 124^\circ 41' 34" \text{ LT.}$   
 $Dc = 8^\circ 00'$   
 $T = 1366.85'$   
 $Lc = 1558.66'$   
 $E = 826.92'$   
 $R = 716.20'$   
 $SE = 0.06 \text{ FT/FT.}$   
 $CCN = 629,031.03$   
 $E = 1,771,913.07$   
SC STA. 42+24.57  
 $N = 629,098.86'$   
 $E = 1,771,200.09'$

INTERSTATE 440  
SPAN LENGTHS - 114'-3" / 166'-0" / 231'-8" / 204'-9"  
159'-6" / 101'-9"  
CURVE DATA  
PI STA. 349+65.28  
 $\Delta c = 27^\circ 04' 43.5" \text{ LT.}$   
 $Dc = 1^\circ 30'$   
 $T = 919.81'$   
 $Lc = 1805.25'$   
 $E = 109.19'$   
 $R = 3819.72'$   
 $SE = 0.036 \text{ FT/FT.}$   
 $CCN = 632,161.47'$   
 $E = 1,770,741.96'$   
P.C. STA. 340+45.47  
 $N = 628,343.20$   
 $E = 1,770,636.96$

STR. NO. 164  
EAST-SOUTH ROADWAY  
SPAN LENGTHS - 85'-3" / 116'-0" / 191'-6" / 176'-0" / 128'-5"  
CURVE DATA  
PI STA. 251+10.96  
 $\Delta c = 63^\circ 30' 18" \text{ LT.}$   
 $Dc = 6^\circ 00'$   
 $T = 590.99'$   
 $Lc = 1058.42'$   
 $E = 168.08'$   
 $R = 954.93'$   
 $SE = 0.059 \text{ FT/FT.}$   
 $CCN = 627,855.28$   
 $E = 1,772,320.59$   
SC STA. 245+19.97  
 $N = 628,730.01$   
 $E = 1,771,875.25$

INTERSTATE 65  
CURVE DATA  
PI STA. 522+98.25  
 $\Delta c = 37^\circ 17' 14" \text{ RT.}$   
 $Dc = 1^\circ 00'$   
 $T = 1933.07'$   
 $Lc = 3728.72'$   
 $E = 317.31'$   
 $R = 5729.58'$   
 $SE = 0.039 \text{ FT/FT.}$   
 $CCN = 629,357.08$   
 $E = 1,777,226.25$   
P.C. STA. 503+65.18  
 $N = 626,596.49$   
 $E = 1,772,205.57$

STR. NO. 162  
SOUTH-WEST ROADWAY  
PI STA. 145+16.00  
 $\Delta c = 21^\circ 42' 15" \text{ LT.}$   
 $Dc = 8^\circ 00' 00"$   
 $T = 137.30$   
 $E = 12.81'$   
 $Lc = 271.30$   
 $R = 716.20$   
 $SE = 0.051$   
 $CCN = 627,692.01$   
 $E = 1,771,237.69$   
SC STA. 143+78.70  
 $N = 627,747.44$   
 $E = 1,771,706.78$

NOTE:  
⊗ PARAPET TO BE EXTENDED (FUTURE CONTRACT)  
⊗ GUARDRAIL ATTACHMENT REQUIRED

DESIGNED BY: C.M. HILES  
DRAWN BY: M.D.  
TRACED BY:  
CHECKED BY: C.M. HILES

DATE: MAY 81  
DATE: MAY 81  
DATE:  
DATE:

STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
NASHVILLE

LAYOUT  
I440-I65 DIRECTIONAL INTERCHANGE  
4 LEVEL GRADE SEPARATION  
DAVIDSON COUNTY  
1982

CORRECT: *Colleton L. Lovelace*  
BRIDGE ENGINEER

APPROVED: *Steve Evans*  
STATE HIGHWAY ENGINEER

M-15-57

MICROFILMED

