STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

SHELBY COUNTY

BRIDGE NO. 79-SR14-7.13L OVER I.C.R.R. AND NONCONNAH CREEK.
BRIDGE NO. 79-SR14-7.46 OVER I-55.
BRIDGE NO. 79-SR205-3.12 OVER OVERFLOW AND
BRIDGE NO. 79-SR205-6.60 OVER MARY'S CREEK

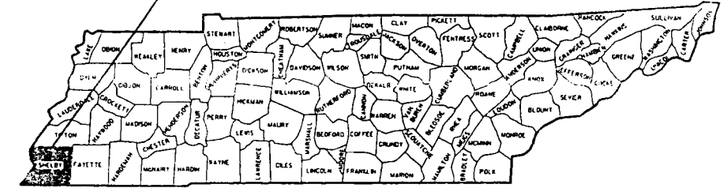
BRIDGE REPAIR

STATE ROUTES 14 & 205 F.A.H.S. NO. N/A

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	10/23/08	AJK	ADDED REVISION DATES
2	10/27/08	AJK	ADDED REVISION DATES

TENN.	YEAR	SHEET NO
	2008	1
FED AID PROJ NO		
STATE PROJ NO	79946-4287-04	

SHELBY COUNTY
PROJECT NO. 79946-4287-04



Index of Sheets

SHEET NO.	REVISION	SHEET NAME
1		TITLE SHEET
2-3		ESTIMATED QUANTITIES
4		GENERAL NOTES
5-16		TRAFFIC CONTROL PLANS

STANDARD ROADWAY AND STRUCTURE DRAWINGS

ROADWAY DESIGN STANDARDS

DWG. NO.	REVISION	DESCRIPTION
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	9-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS

SAFETY APPURTENANCES AND FENCE

DWG. NO.	REVISION	DESCRIPTION
S-GR-11	6-30-05	W-BEAM AND THRIE BEAM BARRIER RAIL AND RUB RAIL ALTERNATES
S-GR-12	5-27-03	W-BEAM BARRIER POST DETAILS AND SPECIFICATIONS
S-GR-13	5-27-03	BARRIER RAIL MOUNTING, POST BLOCK-OUTS WITH VERTICAL ADJUSTMENT HOLES
S-GR-13A		BARRIER RAIL MOUNTING POST FOR PLASTIC BLOCK-OUTS WITH HORIZONTAL ADJUSTMENT HOLES
S-GR-14	9-5-98	W-BEAM BARRIER FASTENING HARDWARE AND BRIDGE APPROACH DELINEATORS
S-GR-15	6-30-05	W-BEAM BARRIER TERMINAL ELEMENT DETAILS
S-GR-18	5-27-01	GUARDRAIL TERMINAL (TYPE IN-LINE) AND SHOULDER LINE DETAIL
S-GR-23	5-27-01	GUARDRAIL ATTACHMENTS TO STRUCTURES AND PROTECTIVE GUARDRAIL AT BRIDGE ENDS DETAIL
S-GR-24	5-27-01	MINIMUM INSTALLATION LENGTH FOR PROTECTIVE GUARDRAIL AT BRIDGE ENDS
* S-GR-43		TANGENTIAL GUARDRAIL TERMINAL ANCHOR (TYPE 38) POST LAYOUT AND ERECTION DETAILS
* S-GR-44		TANGENTIAL GUARDRAIL TERMINAL ANCHOR (TYPE 38) (2 TUBE) GUARDRAIL ELEMENT POST AND ASSEMBLY DETAILS

TRAFFIC CONTROL APPURTENANCES

DWG. NO.	REVISION	DESCRIPTION
T-M-1	4-15-04	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-FAB-1	5-27-97	FLASHING YELLOW ARROW BOARD
T-PBR-1	2-22-04	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2		DETAIL FOR VERTICAL PANELS AND FLEXIBLE DELINEATORS
T-WZ-11	10-06-06	ONE LANE CLOSURE DETAIL ON DIVIDED HIGHWAYS
T-WZ-12	10-06-06	ONE LANE CLOSURE DETAIL FOR BRIDGES ON DIVIDED HIGHWAYS
T-WZ-32	9-01-05	TRAFFIC CONTROL PLAN SIGNAL LAYOUT FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-34	9-01-05	TRAFFIC CONTROL PLAN GENERAL NOTES FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-35	7-29-03	TRAFFIC CONTROL PLAN PAY ITEM AND SIGN DETAILS FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE

EROSION CONTROL AND LANDSCAPING

DWG. NO.	REVISION	DESCRIPTION
EC-STR-1	3-15-04	PAY ITEMS, GENERAL NOTES AND TEMPORARY DEWATERING STRUCTURE
* EC-STR-3C	4-15-06	TEMPORARY SILT FENCE WITH BACKING
EC-STR-3E	4-15-06	EROSION CONTROL FABRIC JOINING DETAILS

LIST OF STANDARD DRAWINGS

DWG. NO.	REVISION	DESCRIPTION
SBR-2-124	1-4-96	DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10'-2" ENDPOST, 1988.
SBR-2-125	11-5-01	DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10'-2" ENDPOST, 1989.
SBR-2-126	1-4-96	DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10'-2" ENDPOST, 1988.

* TO BE PRINTED WITH PLANS

SPECIAL NOTES

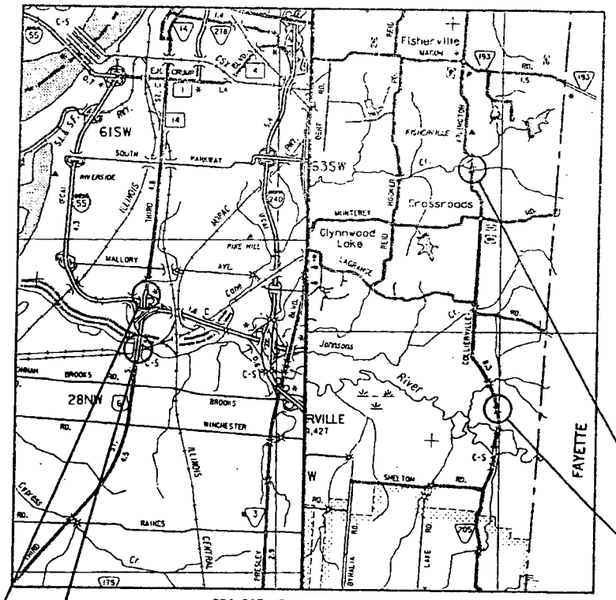
PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

T.D.O.T. MANAGER MIKE LAWSON

DESIGNER GARVER ENGINEERS CHECKED BY A. S. KHAIRI

PE NO. 106650



PROJECT LENGTH 0.00 MILE

PROJECT NO. 79946-4287-04
SR14 - L.M. 7.46

PROJECT NO. 79946-4287-04
SR14 - L.M. 7.13L

PROJECT NO. 79946-4287-04
SR205 - L.M. 6.60

PROJECT NO. 79946-4287-04
SR205 - L.M. 3.12

LIST OF DRAWINGS

DWG. NO.	REVISION DATE △1 △2	DRAWING
BR-89-52	10-27-08	LAYOUT OF BRIDGE TO BE REPAIRED (7.13L)
BR-89-53	10-27-08	LAYOUT OF BRIDGE TO BE REPAIRED (7.46)
BR-89-54	10-27-08	LAYOUT OF BRIDGE TO BE REPAIRED (3.12)
BR-89-55	10-27-08	LAYOUT OF BRIDGE TO BE REPAIRED (6.60)
BR-89-56	10-27-08	ESTIMATED QUANTITIES
BR-89-57	10-27-08	ESTIMATED QUANTITIES
BR-89-58	10-23-08	GENERAL NOTES
BR-89-59		BRIDGE REPAIR DETAILS
BR-89-60		BRIDGE REPAIR DETAILS
BR-89-61		BRIDGE REPAIR DETAILS
BR-89-62		BRIDGE REPAIR DETAILS
BR-89-63		BRIDGE REPAIR DETAILS
BR-89-64		BRIDGE REPAIR DETAILS
BR-89-65		BRIDGE REPAIR DETAILS
BR-89-66		BRIDGE REPAIR DETAILS
BR-89-67		BRIDGE REPAIR DETAILS
BR-89-68	10-23-08	BRIDGE REPAIR DETAILS
BR-89-69		BRIDGE REPAIR DETAILS
BR-89-70		BRIDGE REPAIR DETAILS
BR-89-71		BRIDGE REPAIR DETAILS
BR-89-72		BRIDGE REPAIR DETAILS
BR-89-73		BRIDGE REPAIR DETAILS
BR-89-74	10-23-08	BRIDGE REPAIR DETAILS
BR-89-75		BRIDGE REPAIR DETAILS
BR-89-75A		BRIDGE REPAIR DETAILS
BR-89-76		BRIDGE REPAIR DETAILS
BR-89-77		BRIDGE REPAIR DETAILS
BR-89-78		BRIDGE REPAIR DETAILS
BR-89-79		BRIDGE REPAIR DETAILS
BR-89-80		BRIDGE REPAIR DETAILS
BR-89-81		BRIDGE REPAIR DETAILS
BR-89-82	10-28-08	BRIDGE REPAIR DETAILS
BR-89-83		BRIDGE REPAIR DETAILS
BR-89-84		BRIDGE REPAIR DETAILS
BR-89-85		BRIDGE REPAIR DETAILS
BR-89-86		BRIDGE REPAIR DETAILS
BR-89-87		BRIDGE REPAIR DETAILS
BR-89-88		BRIDGE REPAIR DETAILS
BR-89-89		BRIDGE REPAIR DETAILS
BR-89-90		BRIDGE REPAIR DETAILS
BR-89-91		BRIDGE REPAIR DETAILS
BR-89-92		BRIDGE REPAIR DETAILS

LIST OF REFERENCE DRAWINGS (D)

DWG. NO.	DRAWING	
A-4-49	RIVETED HIGH TRUSS BRIDGE	BR. NO. 79-SR14-7.13L
A-4-50	RIVETED HIGH TRUSS BRIDGE	
A-4-55	RIVETED HIGH TRUSS BRIDGE	
A-4-121	STANDARD CONCRETE ABUTMENT	
A-4-124	CONCRETE GIRDER BRIDGE	
A-4-125	CONCRETE BRIDGE	
A-5-127	LAYOUT OF BRIDGE	
A-5-128	HANDRAIL & FLARED SPANS	
A-5-129	ABUTMENT NO. 1	
A-5-130	BENT NOS. 1 & 2	
A-5-131	CONCRETE BENTS	
A-5-132	BENT NOS. 10, 11, 12 & 14	
A-5-133	BENT NO. 13	
A-5-134	DETAILS OF PIERS	
A-5-135	EXPANSION DETAILS	
K-30-10	BRIDGE LAYOUT	BR. NO. 79-SR14-7.46
K-30-11	ABUTMENTS A & E	
K-30-12	PIERS B & D	
K-30-13	PIER C	
K-30-14	PRESTRESSED BEAM SPANS 1 & 4	
K-30-15	PRESTRESSED BEAM SPANS 2 & 3	
K-30-16	SUPERSTRUCTURE SLAB SPANS 1 & 4	
K-30-17	SUPERSTRUCTURE SLAB SPANS 2 & 3	
K-30-18	HANDRAIL, LIGHTING & SLAB DETAILS	
BR-22-82	LAYOUT OF BRIDGE	
BR-22-83	ESTIMATED QUANTITIES	
BR-22-84	GENERAL NOTES	
BR-22-85	CONSTRUCTION SEQUENCE	
BR-22-86	SUPERSTRUCTURE REPAIR DETAILS	
BR-22-87	PRESTRESSED BEAM REPAIR DETAILS	
BR-22-88	BEARING/RISER REPAIR DETAILS	
BR-22-89	MISCELLANEOUS REPAIR DETAILS	

(D) ALL REFERENCE DRAWINGS TO BE PRINTED WITH THE PLANS

LIST OF STANDARD DRAWINGS (CONT.)

DWG. NO.	REVISION	DESCRIPTION
SBR-2-138	11-05-01	SHOWING DETAILS OF ATTACHING NEW GUARDRAIL AT EXISTING BRIDGE END AND ALONG EXISTING BRIDGE RAIL, 1992
STD-1-1	7-31-00	BRIDGE RAILING CONCRETE PARAPET, 1990
STD-1-2	1-5-01	STEEL SLIDER PLATE ASSEMBLIES FOR CONCRETE PARAPET AND BRIDGE DECK DRAIN DETAILS, 1993
STD-2-2		VERTICAL PANEL DETAILS
STD-5-1	10-25-93	STANDARD PILE DETAILS
STD-14-3	7-31-00	STANDARD DETAILS FOR PRESTRESSED BOX BEAMS, 1995

APPROVED: Paul D. Degan
CHIEF ENGINEER

DATE

APPROVED: Gerald F. Nicely
COMMISSIONER

RECEIVED
DEC 1 2008
TN. DEPT. OF TRANSPORTATION

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

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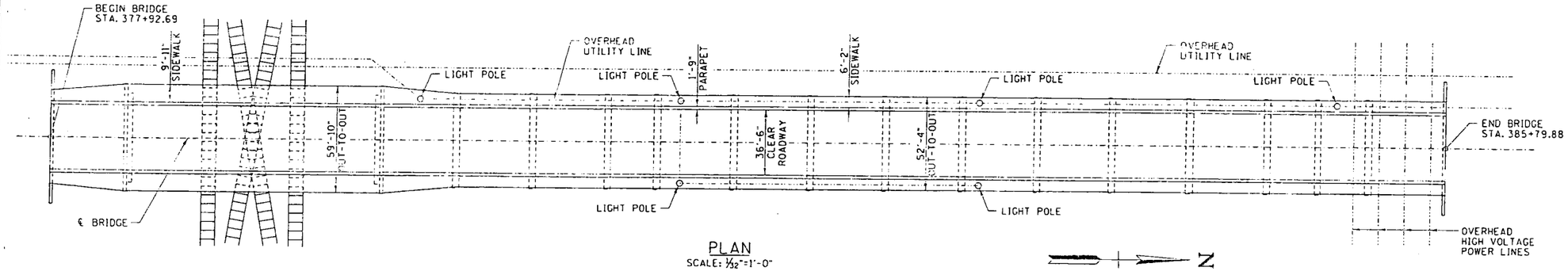
PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10/23/08	AJK	ADDED REVISION DATES
2	10/27/08	AJK	ADDED REVISION DATES



PLAN
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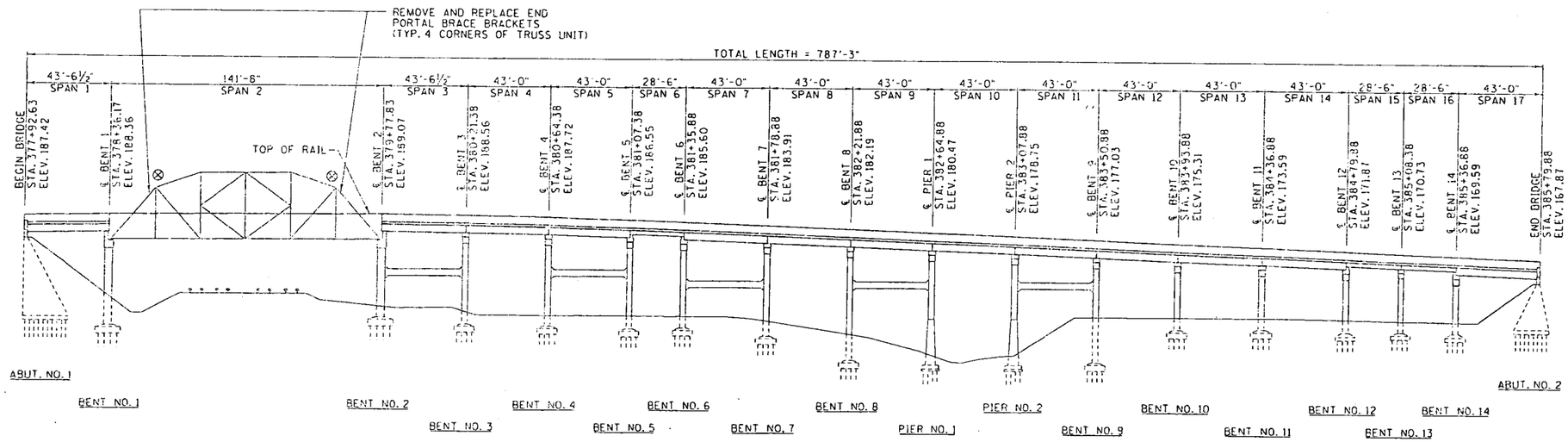

ELEVATION
SCALE: 1/32"=1'-0"

LIST OF DRAWINGS

DWG. NO.	REVISION DATE 1 2	DRAWING
BR-89-52	10-27-08	LAYOUT OF BRIDGE TO BE REPAIRED (7.13L)
BR-89-56	10-27-08	ESTIMATED QUANTITIES
BR-89-57	10-27-08	ESTIMATED QUANTITIES
BR-89-58	10-27-08	GENERAL NOTES
BR-89-59		BRIDGE REPAIR DETAILS
BR-89-60		BRIDGE REPAIR DETAILS
BR-89-61		BRIDGE REPAIR DETAILS

SCOPE OF WORK

REMOVE EXISTING END PORTAL BRACE BRACKETS AT BOTH ENDS OF BRIDGE (FOUR LOCATIONS ONLY). INSTALL NEW STRUCTURAL STEEL MEMBERS TO SUPPORT EXISTING PORTAL FRAME. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-60.

PROVIDE TRAFFIC CONTROL TO FACILITATE THE REMOVAL AND REPLACEMENT OF THE PORTAL BRACE BRACKETS. FOR NOTES AND DETAILS, SEE SHEET NOS. 5-7.

⊗ PROVIDE TEMPORARY SUPPORTS AT DESIGNATED LOCATIONS TO FACILITATE PORTAL REPAIR.

LIST OF REFERENCE DRAWINGS ⓓ

DWG. NO.	DRAWING
A-4-49	RIVETED HIGH TRUSS BRIDGE
A-4-50	RIVETED HIGH TRUSS BRIDGE
A-4-55	RIVETED HIGH TRUSS BRIDGE
A-4-121	STANDARD CONCRETE ABUTMENT
A-4-124	CONCRETE GIRDER BRIDGE
A-4-125	CONCRETE BRIDGE
A-5-127	LAYOUT OF BRIDGE
A-5-128	HANDRAIL ℄ FLARED SPANS
A-5-129	ABUTMENT NO. 1
A-5-130	BENT NOS. 1 ℄ 2
A-5-131	CONCRETE BENTS
A-5-132	BENT NOS. 10, 11, 12 ℄ 14
A-5-133	BENT NO. 13
A-5-134	DETAILS OF PIERS
A-5-135	EXPANSION DETAILS

UR. NO. 79-SR14-7.13L

ⓓ ALL REFERENCE DRAWINGS TO BE PRINTED WITH THE PLANS

LIST OF SPECIAL PROVISIONS

DWG. NO.	LAST REV. DATE	REGARDING
105A	**	APPROVAL OF SHOP DRAWINGS
108B	**	SPECIAL PROVISION REGARDING PROJECT COMPLETION AND LIQUIDATED DAMAGES
712F	**	FLORESCENT ORANGE CONSTRUCTION SIGNS

** DENOTES CURRENT REVISION DATE AS PER CONTRACT DOCUMENTS

RAILROAD NOTES

THE CONTRACTOR OR HIS/HER SUBCONTRACTORS SHALL CONDUCT WORK IN A MANNER TO SAFEGUARD THE OPERATIONS, FACILITIES, RIGHT OF WAY, AND PROPERTY OF I.C.R.R. ANY AND ALL WORK AFFECTING THE ABOVE ITEMS SHALL BE GOVERNED BY I.C.R.R. STANDARDS AND SPECIFICATIONS OR OTHER APPLICABLE CRITERIA, AND SUBJECT TO THE APPROVAL OF THE I.C.R.R. DIRECTOR, RIGHT-OF-WAY CONSTRUCTION OR HIS REPRESENTATIVES SO AS TO INSURE THE SAFE OPERATION OF TRAINS, PREVENT DELAYS TO TRAINS, AND TO INSURE THE SAFETY OF ALL CONCERNED. THE CONTRACTOR SHALL NOT STORE MATERIAL ON I.C.R.R. PROPERTY.

THE CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO PREVENT DEBRIS FROM FALLING ON TO THE RAILROAD RIGHT OF WAY. THIS SHALL BE ACCOMPLISHED BY USE OF BASKETS, NETTING, WRAPPING, SHIELD OR SIMILAR EFFECTIVE AND APPROVED MEANS THAT WILL NOT INFRINGE ON TEMPORARY VERTICAL CONSTRUCTION CLEARANCES IN THESE PLANS. BE ADVISED THAT I.C.R.R. NO LONGER ALLOW TRACK OR TRACKS TO BE OBSTRUCTED WITH AT GRADE CRANE MAT PROTECTION. COMPLETE AND FULL PROTECTION OF THE CONTRACTOR WORK AREA FOR STRUCTURE DEMOLITION WITHIN ALLOWABLE CLEARANCES WILL BE REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE
TO BE REPAIRED

SR14 OVER I.C.R.R. AND NONCONNAH CREEK
BRIDGE NO. 79-SR14-7.13L

SHELBY COUNTY
2008

HAJAD S. KHAIRI
REGISTERED ENGINEER
AGRICULTURE
NO. 108550
STATE OF TENNESSEE

GARVER ENGINEERS

DESIGNED BY	S. F. HARPER	DATE	OCTOBER 2007
DRAWN BY	C. W. THOMAS	DATE	OCTOBER 2007
SUPERVISED BY	J. H. RUDDELL	DATE	OCTOBER 2007
CHECKED BY	A. J. KHAIRI	DATE	OCTOBER 2007

IN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

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WORKSPACE: TDOT
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BRIDGE REPAIR QUANTITIES

NOTE	ITEM	DESCRIPTION	UNIT	7.13L	7.46	3.12	6.60	TOTAL	REV.
44 (1)	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	-	-	200	200	400	
44 (2)	209-08.01	TEMPORARY FILTER BARRIER	L.F.	200	400	400	400	1400	
44 (3)	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	-	-	20	20	40	
44 (3)	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	-	-	-	12	12	
44 (3)	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	-	-	-	75	75	
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	-	-	-	1	1	
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	-	1	1	1	3	
	411-01.10	ASPHALT MIX (PG64-22) GRADING "D"	TON	-	130	95	135	295	
	411-01.11	ASPHALT MIX (PG64-22) GRADING "E"	TON	-	-	80	-	80	
(4)	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	-	1700	640	750	3090	△
(6)	602-10.02	PORTAL REPAIRS	LS	1	-	-	-	1	
44 (5)	602-10.06	STRUCTURAL STEEL	LB.	-	-	9800	-	9800	
44 (7)	602-10.26	STRUCTURAL STEEL STRINGER REPAIRS	EACH	-	-	21	-	21	
(8)	602-10.50	STRUCTURAL STEEL (REPAIR)	EACH	-	-	-	12	12	
(13)	603-01	PAINT STEEL STRUCTURES	LS	0.5	-	0.5	-	1	
(9)	603-02.20	SPOT PAINTING EXISTING STEEL STRUCTURES	S.F.	-	-	1000	-	1000	
(10)	604-03.60	BRIDGE JOINT SEISMIC MODIFICATION (DESCRIPTION)	EACH	-	56	-	12	68	
(11)	604-04.02	APPLIED TEXTURE FINISH (EXISTING STRUCTURES)	S.Y.	-	-	-	170	170	
(12)	604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	S.Y.	-	1550	-	190	1740	
44 (14)	604-10.05	CONCRETE	S.F.	-	20	20	20	60	
(15)	604-10.06	CONCRETE HANDRAIL REPAIR	L.F.	-	22	25	-	47	
△ (45)	604-10.08	CONCRETE	L.S.	-	1	-	-	1	
(16)	604-10.09	CONCRETE	C.Y.	-	-	-	60	60	
(17)	604-10.13	CONCRETE SLAB REMOVAL	LS	-	-	-	1	1	
(18)	604-10.14	REMOVE EXISTING WEARING SURFACE	LS	-	-	0.80	0.20	1	
(19)	604-10.18	REINFORCING STEEL (REPAIRS)	LB.	-	8200	-	23,100	31,300	
(20)	604-10.20	HYDRODEMOLITION	S.Y.	-	1550	-	-	1550	
44 (21)	604-10.26	BRACING	EACH	4	-	21	-	25	
44 (22)	604-10.30	BRIDGE DECK REPAIRS (FULL DEPTH OF SLAB)	S.Y.	-	-	35	-	35	
44 (23)	604-10.42	CONCRETE REPAIRS	C.F.	-	640	-	-	640	
(24)	604-10.44	EXPANSION JOINT REPAIRS	L.F.	-	404	64	-	468	
(25)	604-10.50	BRIDGE DECK REPAIRS (PARTIAL DEPTH OF SLAB)	S.Y.	-	-	125	-	125	
△ (46)	604-10.52	PRESTRESSED BEAM REPAIR	L.S.	-	1	-	-	1	
44 (26)	604-10.54	CONCRETE REPAIRS	S.F.	-	20	20	20	60	
(27)	604-10.67	CONCRETE REPAIRS	L.F.	-	1708	-	-	1708	
△2 (28)									
(29)	615-02.02	PRESTRESSED CONCRETE BOX BEAM (17" X 36")	L.F.	-	-	-	318	318	
(30)	617-01	BRIDGE DECK SEALANT	S.Y.	-	-	700	-	700	
(31)	617-02	BRIDGE DECK CRACK SEALING	L.F.	-	1323	-	-	1323	
(32)	617-05	SEALANT	GAL.	-	14	-	-	14	
(33)	619-01	BRIDGE DECK OVERLAY (P.M.C.)	S.Y.	-	1550	-	-	1550	
(34)	620-03	CONCRETE PARAPET (STD-1-1)	L.F.	-	-	-	147	147	
(35)	705-01.01	GUARDRAIL AT BRIDGE ENDS	L.F.	-	-	108	108	216	
(36)	705-04.07	TANGENT ENERGY ABSORBING TERMINAL (NCHRP 350 TL3)	EACH	-	-	4	4	8	
(37)	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP 350 TL-3	EACH	1	2	2	2	7	
(38)	705-10.33	GUARDRAIL ATTACHMENT TO CONCRETE BRIDGE RAIL	L.F.	-	-	440	-	440	
44 (39)	709-05.08	MACHINED RIPRAP (CLASS B)	TON	-	-	-	60	60	
	712-01	TRAFFIC CONTROL	LS	0.2	0.5	0.2	0.1	1	
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	525	1194	420	225	2364	
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	29	205	18	18	270	
	712-05.01	WARNING LIGHTS (TYPE A)	EACH	14	48	-	-	62	
	712-05.03	WARNING LIGHTS (TYPE C)	EACH	26	103	14	14	157	
(40)	712-06	SIGNS (CONSTRUCTION)	S.F.	336	1772	305	305	2718	
(41)	712-06.01	VERTICAL PANELS	S.F.	32	32	28	28	120	
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	-	80	-	-	80	
	712-08.03	FLASHING ARROW BOARD (TYPE C)	EACH	1	8	-	-	9	
	712-09.01	REMOVABLE PAVEMENT MARKING LINE	L.F.	2920	6900	5650	5310	20780	△
	712-09.04	REMOVABLE PAVEMENT MARKING LINE (STOP LINE)	L.F.	-	-	24	24	48	
△	713-16.01	CHANGEABLE MESSAGE SIGN	EACH	-	2	-	-	2	
	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	-	0.50	0.25	0.25	1.00	
	717-01	MOBILIZATION	LS	0.25	0.25	0.25	0.25	1.0	
(42) ALT.	730-40	TEMPORARY TRAFFIC SIGNAL SYSTEM	EACH	-	-	1	1	2	
ALT.	730-50	TEMPORARY TRAFFIC SIGNAL SYSTEM (RADIO CONTROLLED)	EACH	-	-	1	1	2	
44 (43)	801-03	WATER (SEEDING & SODDING)	M.G.	-	2	5	5	12	
44 (43)	803-01	SODDING (NEW SOD)	S.Y.	-	1000	2300	2300	5600	

PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	2

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
△	10/23/08	AJK	ADDED ITEM NOS. 604-10.08, 604-10.52 & 713-16.01
			REVISED QUANTITY FOR ITEM NOS. 712-09.01
			& 415-01.02
△2	10/27/08	AJK	DELETED ITEM NO. 604-10.90

(1) INCLUDES THE COST OF ALL LABOR AND MATERIALS FOR FURNISHING, HAULING, PLACING AND COMPACTING BORROW MATERIAL AT BRIDGE NOS. 79-SR205-3.12 AND 79-SR205-6.60 ON THE EXISTING ROADWAY SIDE SLOPES AS NECESSARY TO ACCOMMODATE THE APPROACH GUARDRAIL AND ROADWAY WIDENING, AS REQUIRED BY THE ENGINEER, IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 203. COST WILL INCLUDE 3" THICKNESS OF TOPSOIL ON NEW FILL AREAS. THE ENGINEER MAY INCREASE, DECREASE, OR ELIMINATE THE QUANTITY FOR THIS ITEM.

(2) INCLUDES THE COST OF ALL LABOR AND MATERIALS FOR FURNISHING AND INSTALLING THE TEMPORARY SILT FENCE WHERE LOCATED BY THE ENGINEER, AND REMOVAL UPON PROJECT COMPLETION. SEE STD. DWGS. EC-STR-3C AND EC-STR-3E. THE ENGINEER MAY INCREASE, DECREASE FOR ELIMINATE THE QUANTITY FOR THIS ITEM. SEE SUBSECTION 209.07 OF THE SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.

(3) INCLUDES COST OF LABOR AND MATERIALS TO PLACE LISTED MATERIAL FOR ROADWAY WIDENING OR OTHER PURPOSES AS DIRECTED BY ENGINEER IN THE FIELD. THE QUANTITY MAY BE INCREASED, DECREASED, OR ELIMINATED BY THE ENGINEER.

(4) INCLUDES ALL COSTS ASSOCIATED WITH COLD PLANING EXISTING ASPHALT PAVEMENT ON THE BRIDGE APPROACHES AT BRIDGE NOS. 79-SR14-7.46, 79-SR205-3.12 AND 79-SR205-6.60. FOR DETAILS, SEE DWG. NO. BR-89-91 AND BR-89-92.

(5) INCLUDES THE COST OF LABOR AND MATERIALS FOR REMOVING DESIGNATED EXISTING DIAPHRAGMS, INSTALLING WEB SHEAR PLATES, DIAPHRAGMS, CONNECTION ANGLES, HIGH STRENGTH BOLTS, NUTS AND WASHERS AS DESIGNATED AT BRIDGE NO. 79-SR205-3.12. FOR LOCATIONS, SEE DWG. NO. BR-89-54. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-75 AND BR-89-75A.

(6) INCLUDES THE COST OF REMOVING PORTION OF EXISTING PORTAL MEMBERS AT BRIDGE NO. 79-SR14-7.13L AND INSTALLING NEW MEMBERS. FOR LOCATIONS, SEE DWG. NO. BR-89-52. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-60. (4 LOCATIONS TOTAL)

(7) INCLUDES THE COST OF LABOR AND MATERIAL TO REMOVE AND REPLACE DESIGNATED BEAM ENDS AND PROVIDE NEW BEARING ASSEMBLIES AT BRIDGE NO. 79-SR205-3.12. FOR LOCATIONS, SEE DWG. NO. BR-89-54. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-74.

(8) INCLUDES COST OF ALL LABOR AND MATERIALS NECESSARY TO PROVIDE STRUCTURAL STEEL LATERAL SEISMIC RESTRAINTS AT BOTH ABUTMENTS AND BOTH BENTS OF BRIDGE NO. 79-SR205-6.60, INCLUDING ANGLES, PLATES, ANCHOR BOLTS, WELDING AND GALVANIZING. FOR LOCATIONS, SEE DWG. NO. BR-89-55. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-86 AND BR-89-88.

(9) INCLUDES ALL COSTS ASSOCIATED WITH CLEANING AND PAINTING ALL EXISTING BEAM ENDS (FLANGES AND WEB), ACCESSIBLE SURFACES OF EXISTING DIAPHRAGMS TO REMAIN AND ALL EXISTING BEARINGS TO REMAIN AT BRIDGE NO. 79-SR205-3.12. FOR LOCATIONS, SEE DWG. NO. BR-89-54. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-58 AND BR-89-74 THRU BR-89-75A.

(10) INCLUDES COST OF ALL LABOR AND MATERIALS NECESSARY TO PROVIDE CORROSION RESISTANT WIRE ROPES FOR ALL BEAMS AT BOTH ABUTMENTS OF BRIDGE NO. 79-SR205-6.60 AND AT DESIGNATED LOCATIONS AT BRIDGE NO. 79-SR14-7.46, INCLUDING 1" DIA. ANCHOR BOLTS, ANGLES, AND GALVANIZED ROPE THIMBLES. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-86 AND BR-89-87. FOR LOCATIONS, SEE DWG. NOS. BR-89-53 AND BR-89-55.

(11) INCLUDES ALL COSTS TO APPLY TEXTURE FINISH TO BRIDGE NO. 79-SR205-6.60 AS SHOWN ON DETAIL ON DWG. NO. BR-89-89.

(12) INCLUDES COST TO PERFORM BRIDGE DECK GROOVING WITHIN 1'-0" OF THE TOE OF THE CURB FOR FULL LENGTH OF BRIDGE NOS. 79-SR14-7.46 AND 79-SR205-6.60. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-64, BR-89-80 AND BR-89-81.

(13) INCLUDES ALL COSTS ASSOCIATED WITH PAINTING NEW STRUCTURAL STEEL INCLUDING NEW BEAM ENDS, NEW WEB SHEAR PLATES, NEW DIAPHRAGMS, CONNECTION ANGLES AND BEARING ASSEMBLIES AT BRIDGE NO. 79-SR205-3.12. THIS ITEM ALSO INCLUDES COST TO PAINT NEW PORTAL MEMBERS AT BRIDGE NO. 79-SR14-7.13L. FOR LOCATIONS, SEE DWG. NOS. BR-89-52 AND BR-89-54. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-58, BR-89-61 AND BR-89-74 THRU BR-89-75A.

(14) INCLUDES ALL COSTS ASSOCIATED WITH SPALL REPAIRS USING HIGH EARLY STRENGTH CONCRETE AT FIELD DESIGNATED LOCATIONS AT BRIDGE NOS. 79-SR14-7.46, 79-SR205-3.12 AND 79-SR205-6.60. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-89.

(15) INCLUDES THE COST OF LABOR AND MATERIALS FOR REPAIRING CONCRETE HANDRAIL AT BRIDGE NOS. 79-SR14-7.46 AND 79-SR205-3.12. FOR LOCATIONS, SEE DWG. NOS. BR-89-53 AND BR-89-54. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-69, BR-89-70, BR-89-77, AND BR-89-78.

(16) INCLUDES COST OF ALL LABOR AND MATERIALS FOR FORMING AND PLACING HIGH EARLY STRENGTH CONCRETE IN THE NEW SLAB, CANTILEVERS, ABUTMENT BACKWALL, AND DIAPHRAGMS AT BRIDGE NO. 79-SR205-6.60. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-80 THRU BR-89-84.

(17) INCLUDES THE COST OF ALL LABOR AND MATERIALS FOR REMOVING EXISTING CANTILEVER, EXISTING SLAB, BEAMS, BRIDGERAIL AND DIAPHRAGMS AT BRIDGE NO. 79-SR205-6.60. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-80 AND BR-89-81.

(18) INCLUDES ALL COSTS FOR REMOVING EXISTING ASPHALT SURFACE FROM BRIDGE END TO BRIDGE END AT BRIDGE NOS. 79-SR205-3.12 AND 79-SR205-6.60. FOR NOTES, DETAILS AND APPROXIMATE DEPTHS, SEE DWG. NOS. BR-89-72, BR-89-73, BR-89-80 AND BR-89-81.

(19) INCLUDES COST OF ALL REINFORCING STEEL REQUIRED TO COMPLETE REPAIRS AS SHOWN ON THESE PLANS WITH THE EXCEPTION OF THE REINFORCING STEEL REQUIRED FOR THE CONCRETE HANDRAIL REPAIR AT BRIDGE NO. 79-SR14-7.46, EXPANSION JOINTS AND CONCRETE HANDRAIL REPAIR AT BRIDGE NO. 79-SR205-3.12, AND CONCRETE BRIDGERAIL, END POSTS AND PRESTRESSED BEAMS AT BRIDGE NO. 79-SR205-6.60.

(20) INCLUDES ALL COSTS TO HYDRODEMOLITION THE BRIDGE DECK 1¼" MINIMUM AND REMOVE ALL PARTIAL DEPTH DETERIORATED CONCRETE AT BRIDGE NO. 79-SR14-7.46. ROTORMILLING THE DECK PRIOR TO HYDRODEMOLITION IS ALLOWED. SEE DWG. NO. BR-89-64 FOR NOTES AND DETAILS.

(21) INCLUDES THE COST OF LABOR, MATERIALS, AND EQUIPMENT TO SUPPORT DESIGNATED BEAM ENDS DURING REMOVAL AND REPLACEMENT OF BEAM ENDS AT BRIDGE NO. 79-SR205-3.12. THIS ITEM ALSO INCLUDES ALL COSTS ASSOCIATED WITH PROVIDING BRACING DURING PORTAL REPAIRS AT BRIDGE NO. 79-SR14-7.13L. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-60 AND BR-89-74.

(22) INCLUDES ALL COSTS TO PERFORM FULL DEPTH REPAIRS AT BRIDGE NO. 79-SR205-3.12. SEE DWG. NO. BR-89-90 FOR DETAILS.

(23) INCLUDES ALL COSTS OF LABOR AND MATERIAL TO LOCK-UP ALL TRANSVERSE PIER JOINTS AND REPAIR DESIGNATED ABUTMENT WINGWALLS AT BRIDGE NO. 79-SR14-7.46. SEE DWG. NOS. BR-89-66 AND BR-89-71 FOR DETAILS.

(24) INCLUDES ALL COSTS ASSOCIATED WITH INSTALLING NEW EXPANSION JOINTS AT BOTH ABUTMENTS OF BRIDGE NOS. 79-SR14-7.46 AND 79-SR205-3.12 AND REPAIRING LONGITUDINAL JOINT AT BRIDGE NO. 79-SR14-7.46 AS SHOWN ON DETAILS ON DWG. NOS. BR-89-65, BR-89-67 AND BR-89-76.

* FOR NOTES 25 THRU 44 SEE DWG. NO. BR-89-57.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED QUANTITIES

BRIDGE NOS. 79-SR14-7.13L, 79-SR14-7.46, 79-SR205-3.12 AND 79-SR205-6.60

SHELBY COUNTY
2008

AMJAD S. KHAIRI, REGISTERED ENGINEER, NO. 106650, STATE OF TENNESSEE — 10/27/08

GARVER ENGINEERS

DESIGNED BY A. J. KHAIRI DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY J. H. RUDDELL DATE OCTOBER 2007
CHECKED BY A. J. KHAIRI DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

BR-89-56

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(25) INCLUDES ALL COSTS TO PERFORM PARTIAL DEPTH CONCRETE REPAIRS AT BRIDGE NO. 79-SR205-3.12. SEE DECK REPAIR NOTES ON DWG. NO. BR-89-90.

(26) INCLUDES ALL COSTS ASSOCIATED WITH SPALL REPAIRS USING POLYMER MODIFIED CEMENTITIOUS PATCHING MATERIAL AT FIELD DESIGNATED LOCATIONS AT BRIDGE NOS. 79-SR14-7.46, 79-SR205-3.12 AND 79-SR205-6.60. THE ENGINEER MAY INCREASE, DECREASE OR ELIMINATE THE QUANTITY FOR THIS ITEM. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-89.

(27) INCLUDES ALL COST ASSOCIATED WITH SAW CUTTING 1" DEEP 1'-0" FROM THE FACES OF EXISTING SIDEWALKS AND MEDIAN AND ALONG ABUTMENTS AND PORTABLE BARRIER RAIL AT BRIDGE NO. 79-SR14-7.46. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-62 AND BR-89-63.

△ (28)

(29) INCLUDES COST OF FORMING, FABRICATING AND INSTALLING EIGHTEEN (18) NEW 17"X36" PRESTRESSED CONCRETE BOX BEAMS AT BRIDGE NO. 79-SR205-6.60, INCLUDING REINFORCING STEEL, STRANDS, PLAIN ELASTOMERIC BEARING PADS, DOWEL BARS, LIFTING STRANDS, INSERTS, AND THREADED BARS. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-80, BR-89-81 AND BR-89-85.

(30) INCLUDES THE COST OF LABOR AND MATERIALS FOR PLACING BRIDGE DECK SEALANT BETWEEN GUTTERLINES FROM BRIDGE END TO BRIDGE END AT BRIDGE NO. 79-SR205-3.12. ITEM ALSO INCLUDES PLACEMENT OF 3'-0" WIDE SEALANT MEMBRANE, BACKER ROD, AND JOINT SEALANT ACROSS DECK JOINTS AT ALL PIERS. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-90.

(31) INCLUDES ALL COSTS FOR INSTALLING DECK SEALER (HMWM) AT ALL JOINTS AT BRIDGE NO. 79-SR14-7.46 IN THE POLYMER MODIFIED CONCRETE DECK OVERLAY, INCLUDING DECK SURFACE PREPARATION, CLEANING, LABOR, AND ALL MISCELLANEOUS MATERIALS REQUIRED TO SEAL THE JOINTS ALONG THE EDGE OF EXISTING SIDEWALKS, MEDIAN, ABUTMENTS AND TRAFFIC PHASES ACCORDING TO MANUFACTURER'S SPECIFICATIONS. THIS ITEM DOES NOT INCLUDE THE COST FOR FURNISHING THE DECK SEALER (HMWM). SEE SPECIAL PROVISION 604CR.

(32) INCLUDES ALL COSTS FOR FURNISHING THE SEALER MATERIAL (HMWM = HIGH MOLECULAR WEIGHT METHACRYLATE) FOR SEALING OVERLAY AT JOINTS AT THE FACES OF PARAPETS, PORTABLE BARRIER RAIL AND EXPANSION JOINTS AT BRIDGE NO. 79-SR14-7.46.

(33) INCLUDES ALL COSTS ASSOCIATED WITH PLACING AND FINISHING OF THE NEW POLYMER MODIFIED CONCRETE (PMC) OVERLAY AT BRIDGE NO. 79-SR14-7.46. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-64 AND TENN D.O.T. STANDARD SPECIFICATION AND SPECIAL PROVISION 619A.

(34) INCLUDES COST OF ALL LABOR AND MATERIALS FOR CONSTRUCTING NEW STANDARD CONCRETE PARAPET, END POSTS, AND DECK DRAINS AT BRIDGE NO. 79-SR205-6.60. FOR DETAILS AND NOTES, SEE STD. DWGS. STD-1-1, STD-1-2, SBR-2-125 AND SBR-2-126 AND DWG. NOS. BR-89-80 AND BR-89-81.

(35) INCLUDES COST OF INSTALLING NEW GUARDRAIL COMPONENTS TO MATCH THE CURVATURE CALLED FOR ON DRAWING NOS. BR-89-54 AND BR-89-55, OR THE STD. S-GR SERIES DRAWINGS, AS APPLICABLE.

(36) INCLUDES ALL COSTS TO FURNISH AND INSTALL THE GUARDRAIL END TERMINALS THAT MEET THE NCHRP CRASH CRITERIA. TERMINAL-ET-2000-LET AND THE SEQUENTIAL KINKING TERMINAL-SKT. FOR LOCATIONS, SEE DWG. NOS. BR-89-54 AND BR-89-55.

(37) THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3. EXAMPLES WOULD BE A QUAD-GUARD, A REACT 350 OR A TRACC. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS LISTED ON THE MANUFACTURER'S BILL OF MATERIALS. SHOP DRAWINGS OF THE PORTABLE ENERGY TERMINALS MUST BE SUBMITTED TO AND APPROVED BY THE DIVISION OF STRUCTURES PRIOR TO INSTALLATION. THE CONTRACTOR SHALL BE PAID FOR A MAXIMUM OF SEVEN (7) ENERGY ABSORBING TERMINALS, NCHRP 350, TL 3 WHICH SHALL BE RELOCATED AS NECESSARY.

(38) INCLUDES THE COST OF LABOR AND MATERIAL FOR ATTACHING W-BEAM GUARDRAIL TO BOTH BRIDGE RAILS AT BRIDGE NO. 79-SR205-3.12. FOR NOTES AND DETAILS, SEE DWG. NOS. BR-89-72, BR-89-73 AND BR-89-79.

(39) INCLUDES THE COST OF LABOR AND MATERIAL TO PROVIDE CLASS B RIPRAP AT ABUTMENT NO. 1 AND ABUTMENT NO. 2 OF BRIDGE NO. 79-SR205-6.60 AS DIRECTED BY THE ENGINEER. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-61.

(40) INCLUDES ALL COSTS ASSOCIATED WITH THE INSTALLATION AND MAINTENANCE OF SIGN PANELS, SHEETING AND SUPPORTS. SEE SPECIAL PROVISION NO. 712F.

(41) INCLUDES ALL COSTS FOR FURNISHING AND INSTALLING VERTICAL PANELS MOUNTED ON THE INTERCONNECTED PORTABLE CONCRETE BARRIER RAIL. FOR NOTES AND DETAILS, SEE STD. DWG. NO. T-PBR-2. FOR LOCATIONS, SEE TRAFFIC CONTROL SHEETS.

(42) INTERNATIONAL TRAFFIC SYSTEM INC., LAKELAND, FLORIDA. OFB 1000 RF SERIES (SPAN WIRE MOUNTED). ONE MICROWAVE DETECTION AND ONE LOOP DETECTION ARE REQUIRED EACH APPROACH.

(43) INCLUDES ALL COSTS OF ALL LABOR AND MATERIALS FOR FURNISHING AND INSTALLING THE LISTED ITEMS WHERE LOCATED BY THE ENGINEER, IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE ENGINEER MAY INCREASE, DECREASE OR ELIMINATE THE QUANTITY FOR THIS ITEM.

(44) THE ENGINEER MAY INCREASE, DECREASE OR ELIMINATE THE QUANTITY FOR THIS ITEM.

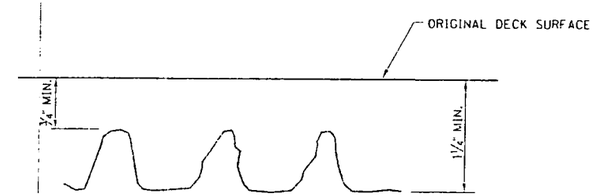
△ (45) INCLUDES COST OF ALL LABOR, MATERIALS, EQUIPMENTS TO REPAIR DAMAGED PRESTRESSED BEAMS. THIS ITEM WILL INCLUDE COSTS TO REMOVE DETERIORATED CONCRETE, SAW CUTTING, CLEAN EXISTING EXPOSED REINFORCEMENT, FORMING, POURING USING HIGH STRENGTH EARLY CONCRETE AND FORM REMOVAL OF ALL DAMAGED AREAS DUE TO THE RECENT TRUCK IMPACT. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-68. (20 C.F. OF HIGH EARLY STRENGTH CONCRETE)

△ (46) INCLUDES COST OF ALL LABOR, MATERIALS, EQUIPMENTS TO REPAIR DAMAGED PRESTRESSED BEAMS. THIS ITEM WILL INCLUDE COSTS TO REMOVE DETERIORATED CONCRETE, SAW CUTTING, CLEAN EXISTING EXPOSED REINFORCEMENT, FORMING, POURING USING HIGH STRENGTH EARLY CONCRETE AND FORM REMOVAL OF ALL DAMAGED AREAS PRIOR TO THE RECENT TRUCK IMPACT. FOR NOTES AND DETAILS, SEE DWG. NO. BR-89-68. (12 C.F. OF HIGH EARLY STRENGTH CONCRETE)

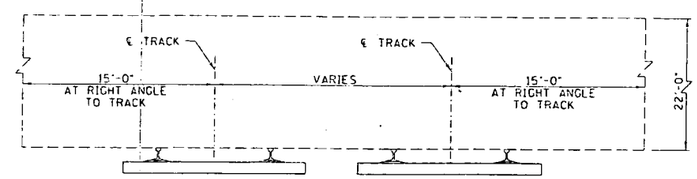
PROJECT NO.	YEAR	SHEET NO.
79946-4267-04	2008	3

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10/23/08	AJK	ADDED NOTES 45 AND 46
2	10/27/08	AJK	DELETED NOTE 28



DETAIL SHOWING DEPTH OF REMOVAL BY HYDRODEMOLITION



RAILROAD CONSTRUCTION CLEARANCE DIAGRAM

SCALE: NONE

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED QUANTITIES

BRIDGE NOS. 79-SR14-7.13L, 79-SR14-7.46, 79-SR205-3.12 AND 79-SR205-6.60

SHELBY COUNTY
2008

AMJAD S. KHAIRI
REGISTERED ENGINEER
CIVIL
CERTIFICATE NO. 106660
STATE OF TENNESSEE
10/27/08

BR-89-57

GARVER ENGINEERS

DESIGNED BY	A. J. KHAIRI	DATE	OCTOBER 2007
DRAWN BY	C. W. THOMAS	DATE	OCTOBER 2007
SUPERVISED BY	J. H. RUDDELL	DATE	OCTOBER 2007
CHECKED BY	A. J. KHAIRI	DATE	OCTOBER 2007

TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

WORKSPACE: TDOT
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PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	4

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10/23/08	AJK	REVISED NOTE

SPECIAL NOTES

1. SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (MARCH 1, 2006 EDITION).
2. DESIGN SPECIFICATIONS: AASHTO 2002 EDITION WITH ADDENDA.
3. REINFORCING STEEL: SEE THE STANDARD SPECIFICATIONS.
4. SHOP DRAWINGS: SHALL BE SUBMITTED ACCORDING TO SPECIAL PROVISION NO. 105A. 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: SHALL BE IN ACCORDANCE WITH ANSI/AASHTO/AWS D1.5-88 BRIDGE WELDING CODE AND THE STANDARD SPECIFICATIONS.
7. HIGH EARLY STRENGTH CONCRETE: THE MIX TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS CLASS "A", EXCEPT THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS, THE WATER-TO-CEMENT RATIO SHALL BE A MAXIMUM OF 0.40. NO FLY ASH REPLACEMENT WILL BE PERMITTED AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 PSI. THE HIGH EARLY STRENGTH CONCRETE SHALL ATTAIN A COMPRESSIVE STRENGTH OF 3000 PSI BEFORE LOADING.
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. SPECIFICALLY, THE CONTRACTOR IS NOT ALLOWED TO USE A HYDRAULIC RAM MOUNTED ON A BACKHOE (COMMONLY CALLED A HOE RAM) OR OTHER SIMILARLY HEAVY EQUIPMENT FOR CONCRETE REMOVAL. PNEUMATIC HAMMERS MAY BE USED TO REMOVE UNSOUND CONCRETE. FOR PARTIAL DEPTH OF CONCRETE SLAB REMOVAL AND ANY WORK OVER BEAMS, THE MAXIMUM HAMMER SIZE IS 60 POUND CLASS. 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. 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.
14. CONCRETE FOR PARAPETS: TO BE CLASS "A" CONCRETE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
15. 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.
16. GROUT: GROUT SHALL BE A PORTLAND CEMENT TYPE IN ACCORDANCE WITH STANDARD SPECIFICATION 918.21-GROUT.
17. ☞ WIRE ROPE: WIRE ROPES SHALL BE AS SPECIFIED IN AASHTO DESIGNATION M277-81 (1990). CLIPS SHALL CUMULATIVELY DEVELOP 125% OF YIELD STRENGTH OF WIRE ROPE AND BE VERIFIED BY T.D.O.T. MATERIALS AND TESTS DIVISION. A MINIMUM OF FOUR (4) CLIPS MUST BE USED AT EACH CONNECTION END OF ¾" ø WIRE ROPE. ¾" ø WIRE ROPE SHALL HAVE A STRENGTH OF 26 TONS. ALL WIRE ROPES SHALL BE CLASS A ZINC COATED.

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.

PAVEMENT - RESURFACING

THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.

GALVANIZING OF NEW STEEL

ALL NEW STRUCTURAL STEEL SHALL BE GALVANIZED TO ASTM A123 STANDARDS.

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), S.F.

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 WHERE 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.

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.

UTILITY NOTES

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 IN ORDER TO EXPEDITE 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.

☞ NOTES:
THE CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO ENSURE THAT NO DEBRIS IS DROPPED INTO THE STREAM. 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 3.12 AND 6.60 OF SR205.

△ THE CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO ENSURE THAT WETLANDS "W-1", "W-2", "W-3", "W-4", "W-5", "W-6" AND "W-7" AND STREAMS "S-1", "S-2" AND "S-3" AT OVERFLOW BRIDGE AND MARY'S CREEK BRIDGE WILL NOT BE PERMANENTLY DISTURBED. THE ENTIRE AREA UNDER BOTH BRIDGES SHALL NOT BE DISTURBED. SEE DWG. NOS. BR-89-54 AND BR-89-55 FOR DETAILS.

☞ NOTE:
ALL STRUCTURAL STEEL FOR SEISMIC RESTRAINERS INCLUDING LATERAL RESTRAINERS, EXCEPT FOR CORROSION RESISTANT WIRE ROPE AND THIMBLES, SHALL BE FABRICATED BY AN AISC SIMPLE STEEL BRIDGE CERTIFIED SHOP.

PAVEMENT MARKINGS

FINAL PAVEMENT MARKING

PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT 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. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), LIN. MI.

☞ SPECIAL NOTE CONCERNING CURING OF NEW CONCRETE PARAPET

THE CONTRACTOR SHALL CURE ALL NEW PARAPETS AS FOLLOWS: IMMEDIATELY AFTER PLACEMENT OF NEW PARAPET, PRE-SOAKED WET BURLAP SHALL BE PLACED OVER THE NEW PARAPET. THIS WOULD BE DONE AS SOON AS THE NEW PARAPET WILL HOLD THE WEIGHT OF THE WET BURLAP AFTER THE SLIP FORM HAS PASSED. A SOAKER HOSE WILL THEN BE PLACED ON TOP OF THE NEW PARAPET AND PLASTIC BE PLACED OVER THE SOAKER HOSE AND BURLAP. THE NEW PARAPETS WILL BE CONTINUOUSLY WET CURED FOR APPROXIMATELY 24 HRS.

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.

WORKER PROTECTION

OUR MAINTENANCE RECORDS INDICATE THAT STRUCTURAL STEEL AT BRIDGE NOS. 79-SR14-7.13L AND 79-SR205-3.12 WERE ORIGINALLY PAINTED WITH MATERIALS CONTAINING LEAD AND/OR CHROMATES AND THE CONTRACTOR SHALL BE REQUIRED TO PROCEED ACCORDINGLY TO TAKE ALL MANDATORY SAFEGUARDS PRESCRIBED BY THE STATE AND FEDERAL LAW FOR BOTH THE WORKER'S PROTECTION AND HAZARDOUS MATERIALS DISPOSAL.

PAINTING OF STEEL STRUCTURES (BRIDGE NOS. 79-SR14-7.13L AND 79-SR205-3.12)

ALL EXISTING DIAPHRAGMS TO REMAIN, EXISTING BEARINGS TO REMAIN AND EXISTING BEAM ENDS (WEB AND FLANGES) AT BRIDGE NO. 79-SR205-3.12, AND EXISTING DESIGNATED REPAIR AREAS TO REPAIR EXISTING PORTALS AT BRIDGE NO. 79-SR14-7.13L SHALL BE CLEANED IN ACCORDANCE WITH SECTION 603.13, REPAINTING OF EXISTING STEEL STRUCTURE, TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

CLEANING OF STEEL MAY BE DONE WITH A VACUUM-SHROUDED DEVICE CAPABLE OF CONTAINING ALL WASTE MATERIAL ELIMINATING THE TOTAL CONTAINMENT REQUIREMENT.

PAINTING NEW STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH SECTION 603.06, SCHEDULE OF PAINTING, SYSTEM A, OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. COLOR OF TOP COAT SHALL COMPLY WITH FEDERAL STANDARD NO. 595A, 24110 BRIGHT GREEN.

COST OF PAINTING NEW BEAM ENDS (FLANGES AND WEB), NEW BEARINGS, NEW DIAPHRAGMS, NEW WEB SHEAR PLATES AND NEW CONNECTION ANGLES AT BRIDGENO. 79-SR205-3.12 AND THE NEW STEEL PLATES AT BRIDGE NO. 79-SR14-7.13L SHALL BEINCLUDED IN THE PRICE BID FOR ITEM NO. 603-01, PAINT STEEL STRUCTURE, L.S.

PAINTING EXISTING STRUCTURAL STEEL COMPONENTS TO REMAIN SHALL BE IN ACCORDANCE WITH SECTION 603.06, SCHEDULE OF PAINTING, SYSTEM B, OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. COLOR OF TOP COAT SHALL COMPLY WITH FEDERAL STANDARD NO. 595A, 24110 BRIGHT GREEN.

COST OF CLEANING AND PAINTING EXISTING BEAM ENDS (FLANGES AND WEB), NEW AND EXISTING BEARINGS TO REMAIN, AND EXISTING DIAPHRAGMS AT BRIDGE NO. 79-SR205-3.12 SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 603-02.20, SPOT PAINTING EXISTING STEEL STRUCTURES, S.F.

7.13L 3.12

7.46 6.60

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

AMJAD S. KHAIRI REGISTERED ENGINEER NO. 106650 STATE OF TENNESSEE 10/23/08

BRIDGE NOS. 79-SR14-7.13L, 79-SR14-7.46, 79-SR205-3.12 AND 79-SR205-6.60

SHELBY COUNTY
2008

GARVER ENGINEERS

DESIGNED BY A. J. KHAIRI DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY J. H. RUDDELL DATE OCTOBER 2007
CHECKED BY A. J. KHAIRI DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

BR-89-58

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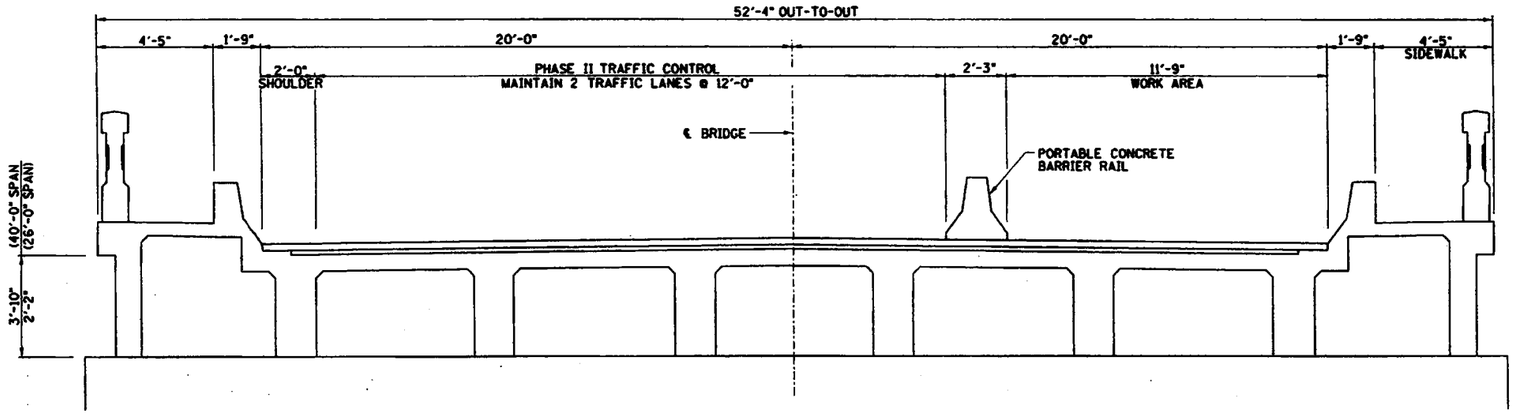
PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

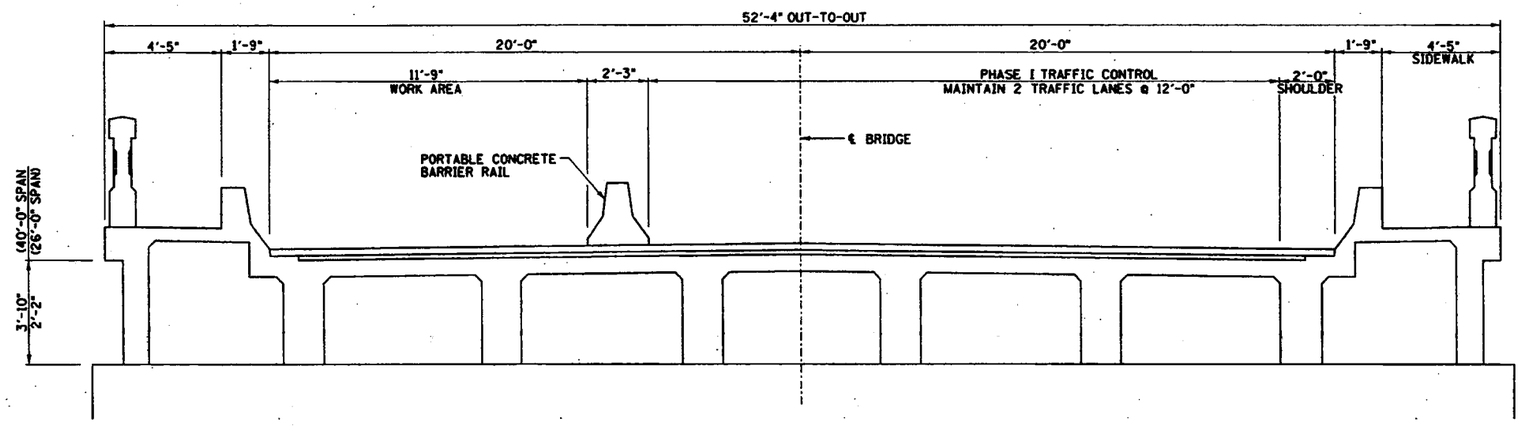
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PHASE I DEMOLITION/CONSTRUCTION

SCALE: 3/8" = 1'-0'



PHASE II DEMOLITION/CONSTRUCTION

SCALE: 3/8" = 1'-0'

NOTES:

ALL COSTS ASSOCIATED WITH INTERCONNECTED PORTABLE BARRIER RAIL SHALL BE INCLUDED UNDER ITEM NO. 712-02.02.

FOR MORE DETAILS ON TRAFFIC CONTROL, SEE SHEET NOS. 5-7.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I.C.R.R. AND NONCONNAH CREEK
BRIDGE NO. 79-SR14-7.13L

SHELBY COUNTY
2008

7.13L

GARVER ENGINEERS

DESIGNED BY S. F. HARPER DATE OCTOBER 2007
DRAWN BY C. W. THOMAS DATE OCTOBER 2007
SUPERVISED BY J. H. RUDDELL DATE OCTOBER 2007
CHECKED BY A. J. KHAIRI DATE OCTOBER 2007 TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

BR-89-59

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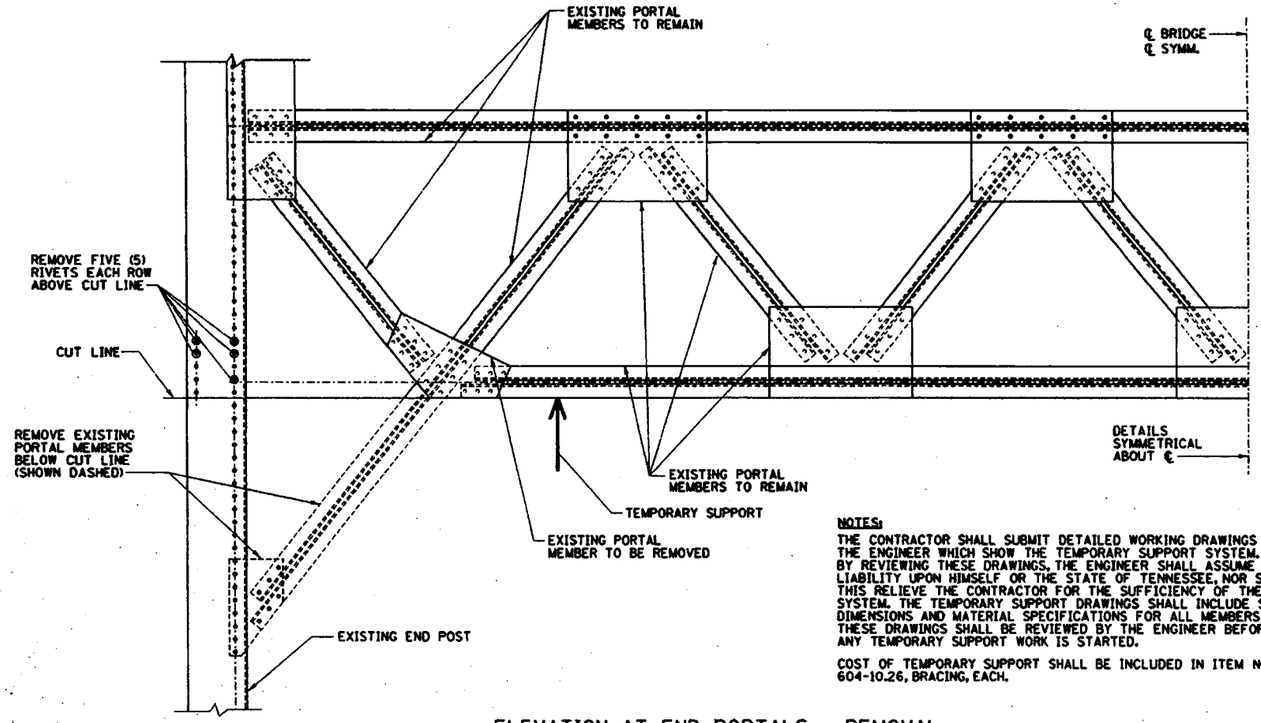
PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



ELEVATION AT END PORTALS - REMOVAL

SCALE: 3/8" = 1'-0"

NOTES:

THE CONTRACTOR SHALL SUBMIT DETAILED WORKING DRAWINGS TO THE ENGINEER WHICH SHOW THE TEMPORARY SUPPORT SYSTEM. BY REVIEWING THESE DRAWINGS, THE ENGINEER SHALL ASSUME NO LIABILITY UPON HIMSELF OR THE STATE OF TENNESSEE, NOR SHALL THIS RELIEVE THE CONTRACTOR FOR THE SUFFICIENCY OF THE SUPPORT SYSTEM. THE TEMPORARY SUPPORT DRAWINGS SHALL INCLUDE SIZES, DIMENSIONS AND MATERIAL SPECIFICATIONS FOR ALL MEMBERS USED. THESE DRAWINGS SHALL BE REVIEWED BY THE ENGINEER BEFORE ANY TEMPORARY SUPPORT WORK IS STARTED.

COST OF TEMPORARY SUPPORT SHALL BE INCLUDED IN ITEM NO. 604-10.26, BRACING, EACH.

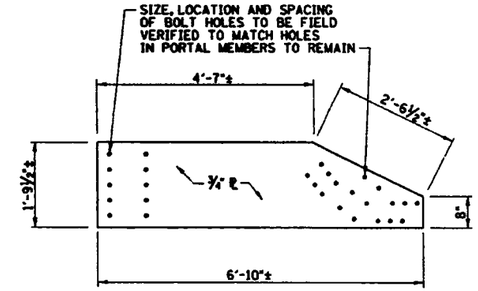
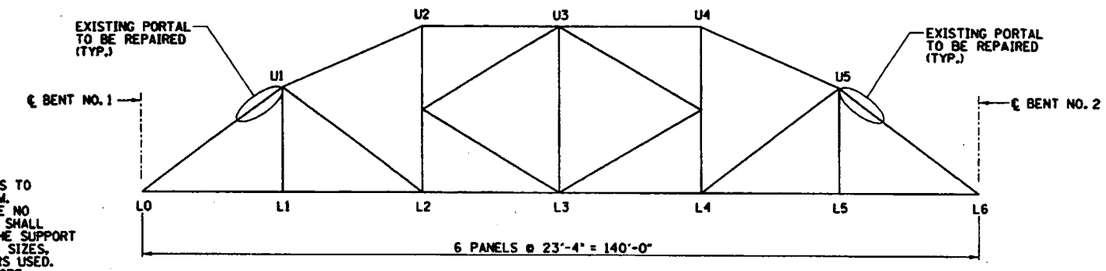
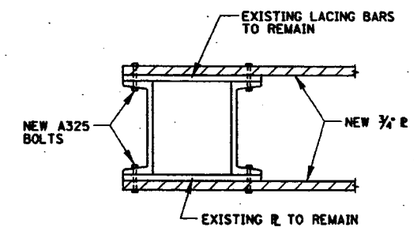


PLATE DETAIL

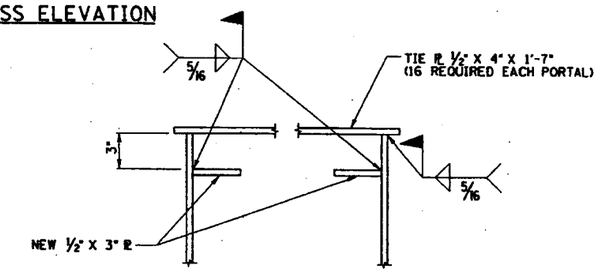
(TWO (2) REQUIRED)



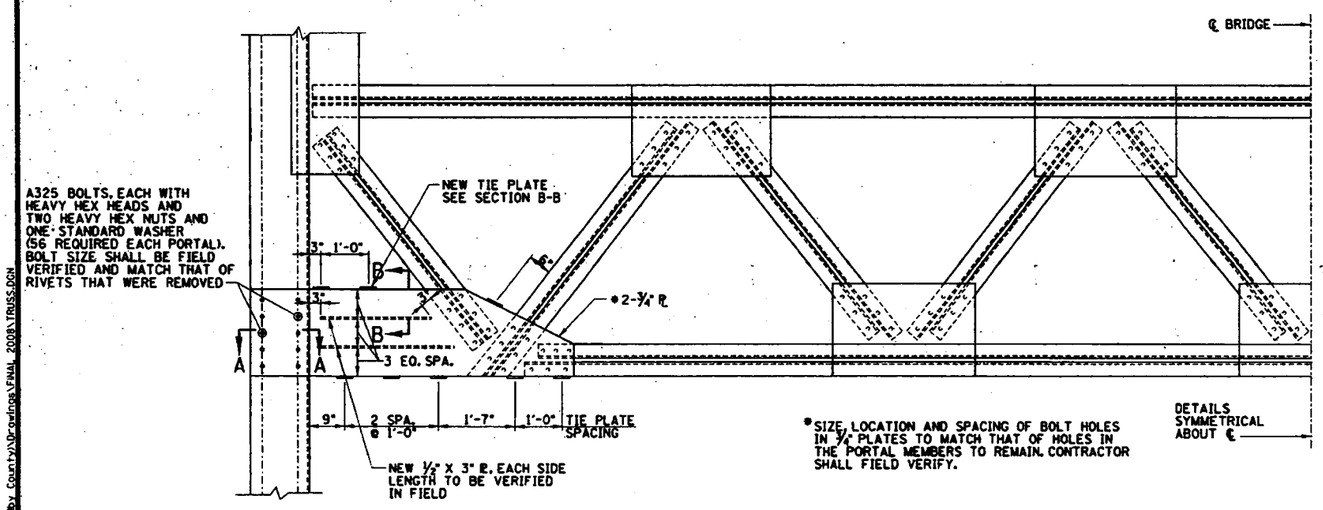
TRUSS ELEVATION



SECTION A-A



SECTION B-B



*SIZE, LOCATION AND SPACING OF BOLT HOLES IN ¾" PLATES TO MATCH THAT OF HOLES IN THE PORTAL MEMBERS TO REMAIN. CONTRACTOR SHALL FIELD VERIFY.

ELEVATION AT END PORTALS - CONSTRUCTION

SCALE: 3/8" = 1'-0"

NOTES:

FOR SCOPE OF WORK FOR PORTAL REPAIR, SEE DWG. NO. BR-89-61.

7.13L

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I.C.R.R. AND NONCONNAH CREEK
BRIDGE NO. 79-SR14-7.13L

SHELBY COUNTY
2008

GARVER ENGINEERS

DESIGNED BY	A. J. KHAIRI	DATE	OCTOBER 2007
DRAWN BY	C. W. THOMAS	DATE	OCTOBER 2007
SUPERVISED BY	J. H. RUDDELL	DATE	OCTOBER 2007
CHECKED BY	A. J. KHAIRI	DATE	OCTOBER 2007

TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

BR-89-60

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PROJECT NO.	YEAR	SHEET NO.
79946-4287-04	2008	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

SCOPE OF WORK AT END PORTAL LOCATIONS

NUMBER OF PORTALS INVOLVED = TWO (2) (ONE AT EACH END OF TRUSS SPAN)

NUMBER OF REPAIR AREAS = FOUR (4) (TWO AT EACH PORTAL)

COST OF REMOVING PORTIONS OF EXISTING PORTALS AND INSTALLING MATERIALS AS NECESSARY TO RECONSTRUCT TWO (2) NEW PORTALS (COMPLETE AND IN PLACE) SHALL BE PAID FOR UNDER ITEM NO. 602-10.02, PORTAL REPAIRS, L.S.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO HEADQUARTERS, BRIDGE INSPECTION AND REPAIR OFFICE FOR APPROVAL PRIOIR TO SHOP FABRICATION.

ALL NEW STRUCTURAL STEEL MEMBERS AND PLATES SHALL RECEIVE A SHOP PRIMER COAT OF 2½ MILS MINIMUM DRY FILM THICKNESS OF INORGANIC ZINC.

CONTRACTOR SHALL FIELD MEASURE ALL MEMBER SIZES AND LENGTHS PRIOR TO SHOP FABRICATION.

ALL STRUCTURAL STEEL MEMBERS SHALL BE AASHTO M270 GRADE 36.

NEW PORTAL MEMBERS SHALL BE PAINTED IN ACCORDANCE WITH 603.06, SCHEDULE OF PAINTING, SYSTEM A OR THE TENNESSEE D.O.T. STANDARD SPECIFICATIONS. COLOR OF THE TOP COAT SHALL COMPLY WITH FEDERAL STANDARD NO. 595A, 24110 BRIGHT GREEN. SEE SECTIONS 603 AND 910 OF THE STANDARD SPECIFICATIONS. COST OF PAINTING TO BE INCLUDED IN ITEM NO. 603-01, PAINT STEEL STRUCTURES, L.S.

FOR NOTES REGARDING TEMPORARY SUPPORTS, SEE DWG. NO. BR-89-74.

7.13L

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

SR14 OVER I.C.R.R. AND NONCONNAH CREEK
BRIDGE NO. 79-SR14-7.13L

SHELBY COUNTY
2008

GARVER ENGINEERS

DESIGNED BY	S. F. HARPER	DATE	OCTOBER 2007
DRAWN BY	G. W. THOMAS	DATE	OCTOBER 2007
SUPERVISED BY	J. H. RUDDELL	DATE	OCTOBER 2007
CHECKED BY	A. J. KHAIMI	DATE	OCTOBER 2007

TN D.O.T. ENGINEERING SUPERVISOR M. LAWSON

BR-89-61

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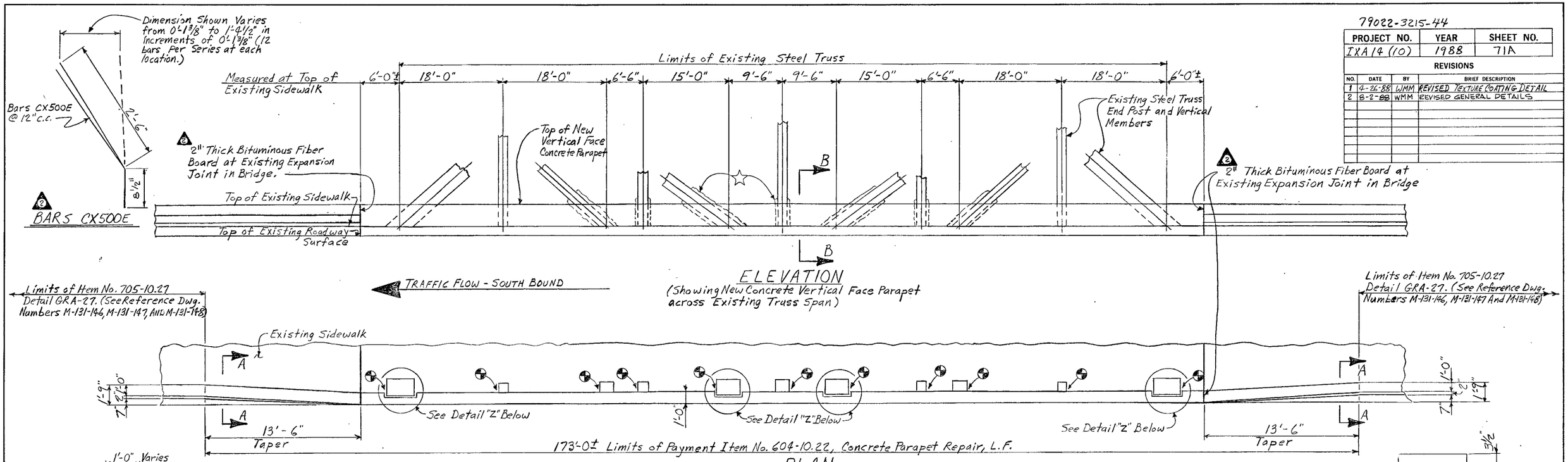
79022-3215-44

PROJECT NO.	YEAR	SHEET NO.
IXA 14 (10)	1988	71A

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	4-26-88	WMM	REVISED TEXTURE COATING DETAIL
2	6-2-88	WMM	REVISED GENERAL DETAILS



Denotes: Holes for Epoxy Grouted bars to be drilled with a High Speed Drill. The Drill Bit shall be capable of drilling through Existing Reinforcing Bars and Concrete. The diameter of the holes shall be 1/4"(±) larger than the Diameter of the Reinforcing Bars. The holes shall be thoroughly cleaned by methods approved by the Engineer. After cleaning out the holes, pack with an approved grout and drive the Reinforcing Bar to its seat. A List of Approved Grouts may be obtained from the Department of Transportation, Division of Materials and Test.

NOTE: Bars A501E in the Traffic Face of the Parapet to rest on top of the Existing Curb, and clear the top of the New Poured Parapet 1 1/2"(±).

NOTE: When pouring New Vertical Face Concrete Parapet; Contractor shall place a 1/2" Bituminous Fiber Board between the Existing Steel Vertical Truss Members and the New Concrete Parapet Wall as shown in Plan View above.

NOTE: Existing Concrete Sleeve on the Steel Vertical Truss Members to be chipped and removed in areas that will come in contact with the New Concrete Parapet Wall. Cost of removing these Existing Portions of Concrete to be included in item bid on.

NOTE: Cost of pouring New Concrete Vertical Face Parapet with Class "A" f'c = 3,000 p.s.i. Concrete, Epoxy Coated Reinforcing Steel, the Removal of any Existing Concrete, 1/2" Bituminous Fiber Board, Drilling, Epoxy Grout, Texture Coating, Forming, Labor, and any Miscellaneous Materials necessary to complete the repairs as shown to be included in Item No. 604-10.22, Concrete Parapet Repairs, L.F.

TOTAL L.F. FOR ITEM NO. 705-10.27 = 1,263 FT.

TOTAL L.F. FOR ITEM NO. 604-10.22 = 346 FT.

(BRIDGE No. 79-14-7.11)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

Bridge Repair Details

State Route 14 over Nonconnah Creek

Bridge No. 79-14-7.11

Shelby County

DESIGNED BY	McInturff	DATE	4-88
DRAWN BY	G. Isbell	DATE	
SUPERVISED BY	R. Gentry, W. McInturff	DATE	
CHECKED BY	Glasgow, Graves	DATE	4-88

CORRECT Edward P. Wasserman 1988
ENGINEER OF STRUCTURES

APPROVED Louis Evans
DIRECTOR OF HIGHWAYS

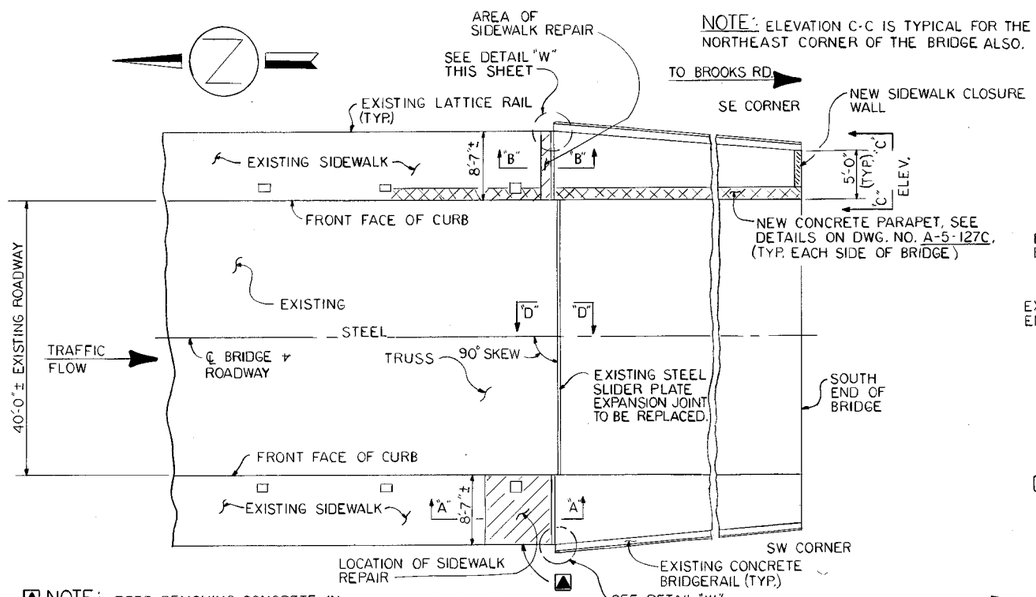
A-5-127C

79022-3215-44

PROJECT NO.	YEAR	SHEET NO.
IXA 14 (10)	1988	71B

REVISIONS

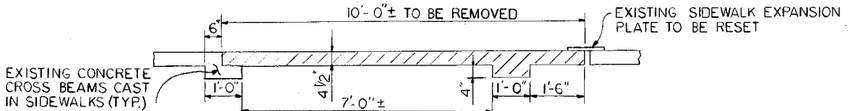
NO.	DATE	BY	BRIEF DESCRIPTION
1	8-5-88	WMM	ADDED SHEET SHOWING BRIDGE REPAIRS TO PLANS.



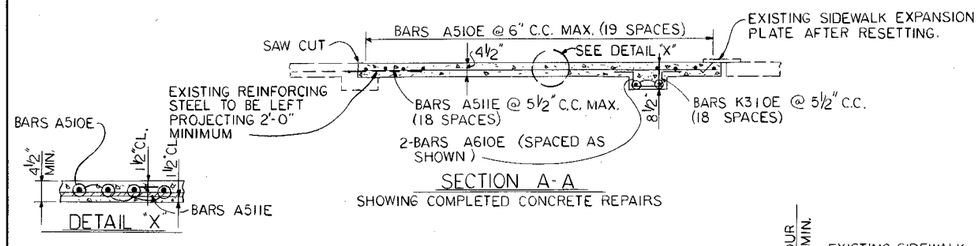
NOTE: ELEVATION C-C IS TYPICAL FOR THE NORTHEAST CORNER OF THE BRIDGE ALSO.

PART PLAN
SOUTHBOUND LANE

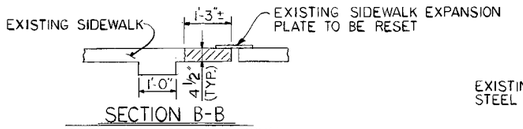
▲ NOTE: AFTER REMOVING CONCRETE IN THE REPAIR AREA, THE CONTRACTOR IS TO STRAIGHTEN THE OUTSIDE SIDEWALK I-BEAM AND REWELD. COST TO BE INCLUDED IN ITEM NO. 602-10.01, STRUCTURAL STEEL REPAIRS, L.S.. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER.



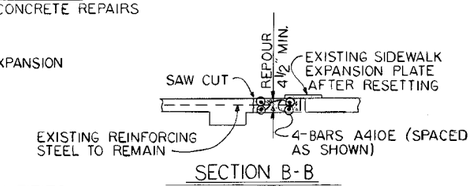
SECTION A-A
SHOWING LIMITS OF REMOVAL



SECTION A-A
SHOWING COMPLETED CONCRETE REPAIRS



SECTION B-B
SHOWING LIMITS OF REMOVAL



SECTION B-B
SHOWING COMPLETED CONCRETE REPAIRS

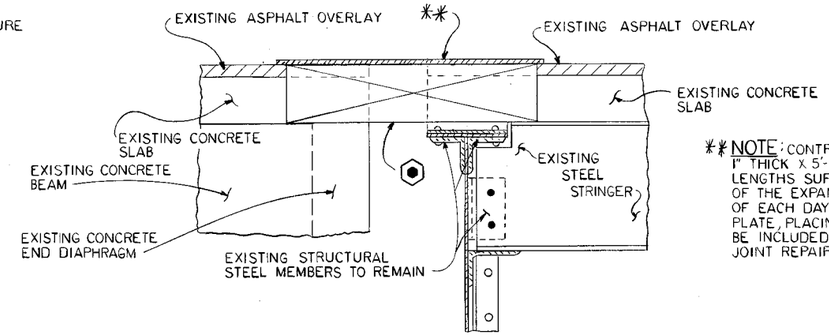
ESTIMATED QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QTY.
①	602-10.01	STRUCTURAL STEEL REPAIRS	L. S.	1
②	604 10.18	REINFORCING STEEL (REPAIRS)	LBS.	485
③	604-10.40	EXPANSION JOINT REPAIRS (TYPE "D")	L.F.	42
④	604-10.42	CONCRETE REPAIRS	C.F.	53

① INCLUDES REPAIRS TO THE EXISTING STEEL LATTICE RAIL (2 LOCATIONS), AND STRAIGHTENING THE OUTSIDE SIDEWALK I-BEAM. SEE NOTES AND DETAILS THIS SHEET.
② INCLUDES COST OF ALL REINFORCING STEEL NECESSARY FOR THE SIDEWALK REPAIRS AND SIDEWALK CLOSURE WALLS. SEE BILL OF STEEL AND NOTES THIS SHEET.
③ INCLUDES MATERIALS AND LABOR NECESSARY TO INSTALL NEW TYPE "D" STRIP SEAL EXPANSION JOINT AT BENT NO.1 SOUTHBOUND LANE. SEE NOTES AND DETAILS THIS SHEET AND ON REFERENCE DWGS. NO. M-106-76, M-106-77, & M-106-79.
④ INCLUDES ALL MATERIALS NECESSARY TO REPAIR THE EXISTING SIDEWALKS AND TO POUR 2 SIDEWALK CLOSURE WALLS. SEE NOTES AND DETAILS THIS SHEET.

DESIGNED BY ____ DATE ____
DRAWN BY J.H. DATE 7-88
SUPERVISED BY GENTRY & McINTURFF DATE 7-88
CHECKED BY GLASGOW & GRAVES DATE 7-88

NOTE: FOR ADDITIONAL DETAILS OF THE EXISTING STEEL TRUSS BRIDGE, SEE REFERENCE DWGS. NO. A-4-49, A-4-125, A-5-127, & A-5-135.



** NOTE: CONTRACTOR TO FURNISH AND PLACE A 1" THICK X 5'-0" MINIMUM WIDTH STEEL PLATE IN LENGTHS SUFFICIENT TO COVER ALL OPEN AREAS OF THE EXPANSION JOINT REPAIRS AT THE END OF EACH DAYS WORK. COST OF THE STEEL COVER PLATE, PLACING AND REMOVING OF SAME SHALL BE INCLUDED IN ITEM NO. 604-10.40, EXPANSION JOINT REPAIRS (TYPE "D"), L.F..

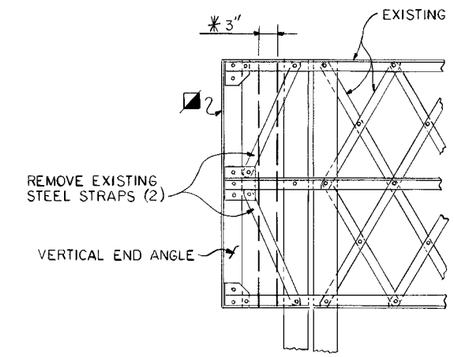
SECTION D-D
TYPICAL @ BENT NO.1 SOUTH END OF EXISTING STEEL TRUSS BRIDGE

⬢ NOTE: CONTRACTOR TO PLACE NEW TYPE "D" STRIP SEAL EXPANSION JOINT AT THIS LOCATION. JOINT OPENING SHALL BE 2" @ 60°F WITH A TOTAL MOVEMENT REQUIRED OF 4" (ACTUAL SETTING AS PER EXPANSION JOINT SHOP DRAWINGS). FOR DETAILS & NOTES, SEE REFERENCE DWGS. NO. M-106-76, M-106-77, & M-106-79. COST OF ALL MATERIALS AND LABOR NECESSAR TO PLACE THE NEW EXPANSION JOINT AT THIS LOCATION TO BE INCLUDED UNDER ITEM NO. 604-10.40, EXPANSION JOINT REPAIRS (TYPE "D"), L.F.. SEE REFERENCE DWG. NO. A-5-135.

NOTE TO CONTRACTOR: A COMPLETE FIELD MEASUREMENT SHALL BE TAKEN BEFORE ANY FABRICATION OF THE TYPE "D" STRIP SEAL EXPANSION JOINT IS BEGUN. IT SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS IN THE EXPANSION JOINT REPAIR AREA.

NOTE: CONTRACTOR TO SUBMIT A COMPLETE SET OF SHOP DWGS. TO THE ENGINEERING DIRECTOR, DIVISION OF STRUCTURES, FOR REVIEW BEFORE ANY FABRICATION IS BEGUN.

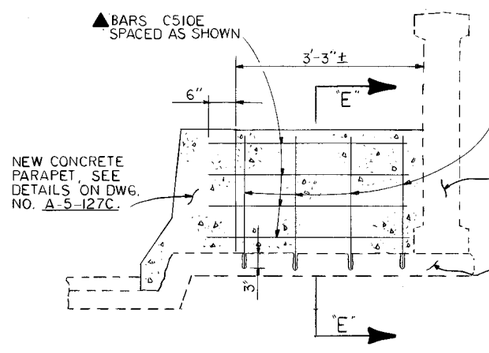
NOTE: TOTAL LINEAR FEET OF EXPANSION JOINT REPAIR IS 42. THIS INCLUDES PLACING THE EXPANSION JOINT UP THE THE FACE OF THE EXISTING CURBS.



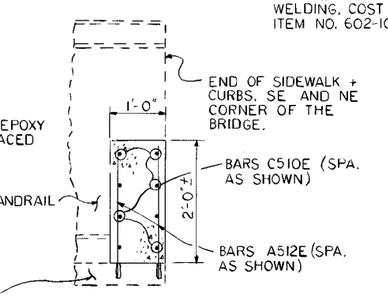
◪ THE PRESENT STEEL RAIL IS WEDGED AGAINST THE EXISTING CONCRETE RAIL AT THESE TWO (2) LOCATIONS.

DETAIL "W"
TYPICAL @ TWO 2 LOCATIONS

✳ NOTE: CONTRACTOR TO REMOVE 3" OF THE EXISTING STEEL HORIZONTAL LATTICE RAIL ANGLES AND 2 STEEL STRAPS AND REALIGN BY FIELD WELDING. COST OF ALL STEEL LATTICE REPAIRS TO BE INCLUDED UNDER ITEM NO. 602-10.01, STRUCTURAL STEEL REPAIRS, L.S..



ELEVATION C-C
SHOWING LIMITS OF NEW SIDEWALK CLOSURE WALL
TWO (2) REQUIRED

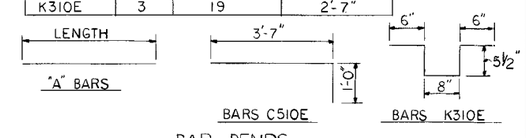


SECTION E-E

NOTE: CONTRACTOR TO POUR SIDEWALK CLOSURE WALL AT THE END OF THE BRIDGE (SIDEWALK AREA) AT THE NORTHEAST AND SOUTHEAST CORNERS OF THE BRIDGE.

BILL OF STEEL

BAR	SIZE	NO. REQ'D	LENGTH
A410E	4	4	8'-3"
A510E	5	20	8'-3"
A511E	5	19	9'-8"
A512E	5	8	2'-1"
A610E	6	2	8'-3"
C510E	5	8	4'-7"
K310E	3	19	2'-7"



BAR BENDS

NOTE: COST OF ALL EPOXY COATED REINFORCING STEEL TO BE PAID FOR UNDER ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LBS..

NOTE: COST OF REMOVING PORTIONS OF THE EXISTING SIDEWALKS, FORMING, CLASS "A" f'c = 3,000 P.S.I. CONCRETE, RESETTING THE EXISTING STEEL EXPANSION PLATES ON THE SIDEWALKS, MASONRY DRILLING, EPOXY GROUT, LABOR, AND ANY MISCELLANEOUS MATERIALS NECESSARY TO PERFORM THE REPAIRS TO THE SIDEWALK AREAS AND TO POUR THE TWO (2) SIDEWALK CLOSURE WALLS TO BE INCLUDED IN ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F..

▲ NOTE TO CONTRACTOR: WHEN POURING CONCRETE FOR NEW CONCRETE SLOPED FACE PARAPET, PROVISIONS SHALL BE MADE FOR PLACING BARS C510E IN THE NEW SIDEWALK CLOSURE WALLS.

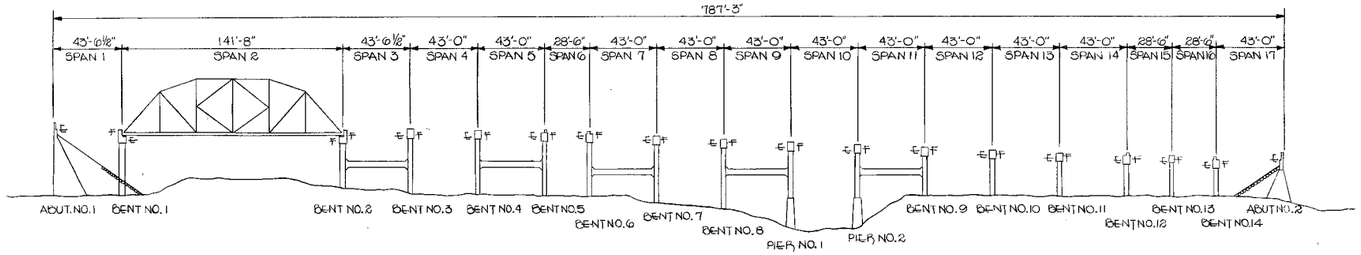
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
STATE ROUTE 14 OVER
NONCONNAH CREEK
BRIDGE NO. 79-14-7.11
SHELBY COUNTY
1988

CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES
APPROVED Louis Graves
DIRECTOR OF HIGHWAYS

1

A-5-127D



SECTION ALONG ℄ OF BRIDGE AND ROADWAY

(BRIDGE NO. 79-SR014-7.12, S.B.L.)

PROJECT NO.	YEAR	SHEET NO.
79024-4235-04	1982	3

REVISIONS

NO	DATE	BY	BRIEF DESCRIPTION

ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	QUANITY	
403-01	BIT. MTL. FOR TACK COAT	TON	1	(1)
411-01.01	MIN. AGGR. FOR ASPHALTIC CONC. SURFACE (GRADE D)	TON	262	(1)
411-01.02	ASPHALT CEMENT FOR ASPHALTIC CONC. SURFACE (GRADE D)	TON	17	(1)
602-10.06	STRUCTURAL STEEL	LBS.	6925	(2)
603-02.01	REPAINTING EXISTING STEEL STRUCTURES	L.S.	1	(3)
604-10.02	CONCRETE REPAIRS	C.Y.	4.7	
604-10.18	REINFORCING STEEL REPAIRS	LBS.	324	
717-01	MOBILIZATION	L.S.	1	

(1) NOTE: PAVING QUANTITIES INCLUDE 50'-0" TRANSITION AT EACH END OF BRIDGE.

(2) NOTE: INCLUDES MC18X45.8, STEEL PLATES, MC12X45, SHIM PLATES, LEAD PLATES OR ALL ELASTOMERIC PADS AND ALL ANCHORS OR BOLTS WITH HEX NUTS & WASHERS.

(3) NOTE: ESTIMATED WEIGHT OF STRUCTURAL STEEL TO BE BLASTCLEANED AND PAINTED = 310,000 POUNDS.

GENERAL SCOPE OF WORK

1) STRUCTURAL STEEL BEAM SUPPORTS TO BE INSTALLED AT SIX (6) INTERIOR BEAMS AT BENT NO. 14.
2) REMOVE END DIAPHRAGMS AT THE EAST END OF SPAN NO. 16 AND PLACE NEW REINFORCING STEEL & REPOUR.
3) BLASTCLEAN AND PAINT HIGH STEEL TRUSS.
4) OVERLAY EXISTING BRIDGE DECK WITH 1½" ASPHALTIC CONCRETE. *STRIPING OF BRIDGE OVERLAY TO BE DONE BY STATE MAINTENANCE FORCES.*

GENERAL NOTES

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

BLAST CLEANING AND PAINTING: SYSTEM B - INORGANIC ZINC VINYL PAINT SYSTEM. COLOR OF VINYL PAINT TO MATCH FEDERAL STANDARD NO. 595, 24110 GREEN. SEE SECTION 603 AND 910 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION.

HIGH STRENGTH BOLTS: SHALL BE AS NOTED PER DRAWING. HIGH TENSILE STRENGTH BOLTS ASTM-A325 UNLESS OTHERWISE SHOWN. SEE AASHTO SPECIFICATIONS ART. 2.10.20. ALL HIGH STRENGTH BOLTED CONNECTIONS ARE FRICTION TYPE.

STRUCTURAL STEEL: SHALL CONFORM TO AASHTO M-183 (ASTM A36) UNLESS OTHERWISE NOTED.

CONCRETE: CONCRETE TO BE CLASS "A" HIGH EARLY STRENGTH. F'C = 3,000 PSI. TRAFFIC WILL NOT BE PERMITTED ON THE REPAIR AREA UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 2,000 PSI MINIMUM AND THE CONCRETE HAS BEEN PLACED A MINIMUM OF FIVE (5) DAYS.

LIST OF DRAWINGS	DWG. NO.	LAST REV. DATE
BRIDGE REPAIR DETAILS	A-5-127A	
BRIDGE REPAIR DETAILS	A-5-127B	
REFERENCE DRAWINGS	A-5-127, 132, A-4-124, 125 A-4-49, 50 & 55	

SPECIAL NOTE: AT LEAST ONE (1) TRAFFIC LANE TO REMAIN OPEN AT ALL TIMES. AT THE END OF EACH WORK DAY, TRAFFIC CONTROL DEVICES SHALL BE REMOVED AND BOTH LANES OF THE BRIDGE OPENED TO TRAFFIC. DURING THE CURING STAGE OF THE CONCRETE POUR AT THE JOINT AT BENT NO. 14, THE CONTRACTOR SHALL PROVIDE A STEEL PLATE ACROSS THE JOINT IN ORDER TO MAINTAIN TRAFFIC AND PROTECT THE NEW CONCRETE. COST OF STEEL PLATE TO BE INCLUDED IN OTHER ITEMS BID ON.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR
STATE ROUTE 14 OVER I.C.R.R. & NONCONNAH CREEK
BRIDGE NO. 79-SR014-7.12
SHELBY COUNTY
1982

DESIGNED BY RICHARD GENTRY DATE 3-82
DRAWN BY KIM FRANKENFIELD DATE 3-82
SUPERVISED BY McINTURFF & GENTRY DATE 3-82
CHECKED BY GRAVES & GENTRY DATE 3-82

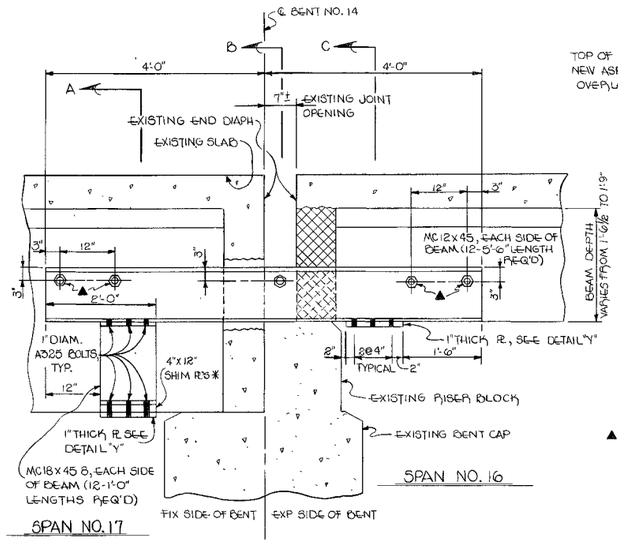
CORRECT Gladson L. Foreall
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

A-5-127A

PROJECT NO.	YEAR	SHEET NO.
79024-4235-04	1982	4

REVISIONS

NO	DATE	BY	BRIEF DESCRIPTION

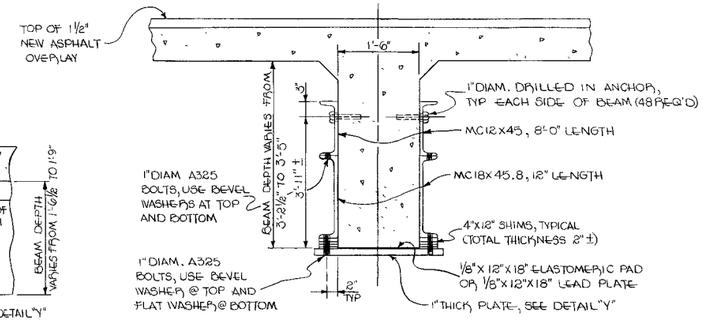


SECTION X-X @ BENT NO. 14

(SHOWING PROPOSED STRUCTURAL STEEL SADDLE BEAMS FOR SIX (6) INTERIOR BEAMS.)

✱ USE VARYING THICKNESS 4"X 12" SHIM R'S TO MAKE UP THICKNESS.

▩ REMOVE EXISTING DIAPHRAGM BETWEEN BEAMS, SEE SECTION W-W BELOW.

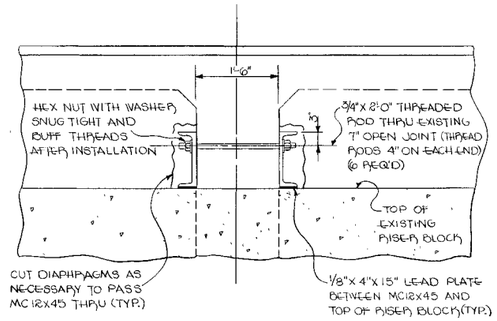


SECTION A

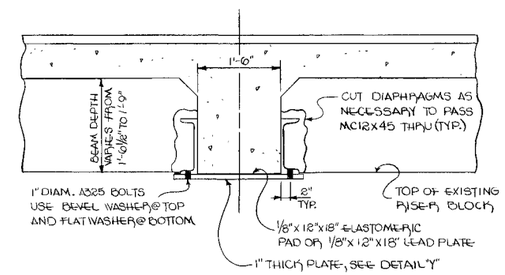
NOTE. BOLT HOLE DIAMETERS ARE 1 1/8" UNLESS OTHERWISE NOTED.

▲ 1" DIAM. DRILLED IN ANCHORS, TYP. EACH SIDE OF BEAM. NOTE: SEE ANCHOR PULL OUT NOTES THIS SHEET.

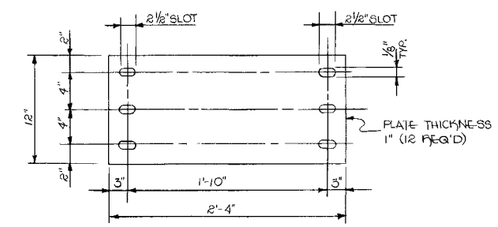
NOTE: COST OF DRILLED IN ANCHORS, COMPLETE AND IN PLACE, SHALL BE INCLUDED IN COST OF STRUCTURAL STEEL ITEM NO. 602-10.06.



SECTION B



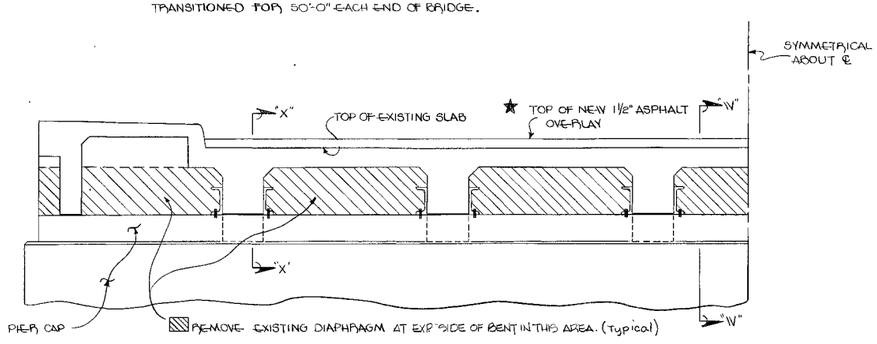
SECTION C



DETAIL "Y"

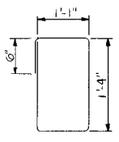
DETAILS SHOWING STRUCTURAL STEEL BEAM SUPPORTS @ BENT NO. 14

★ NOTE: NEW 1 1/2" ASPHALT OVERLAY TO BE TRANSITIONED FOR 50'-0" EACH END OF BRIDGE.



ONE HALF CROSS SECTION

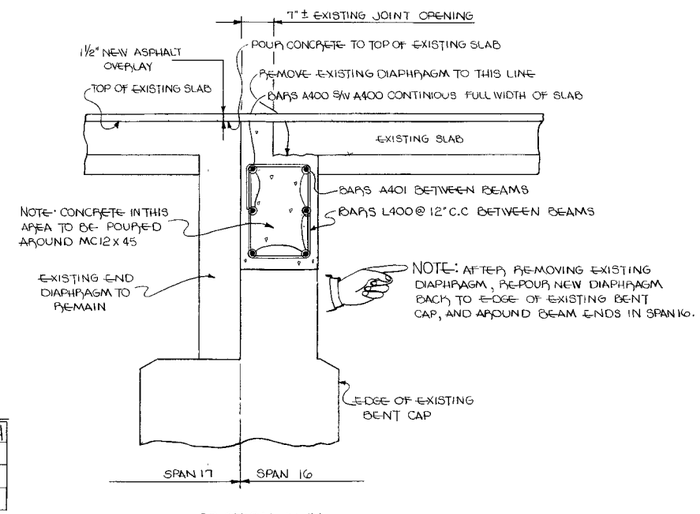
TYPICAL AT BENT NO. 14



BARS L400

BILL OF STEEL

ITEM	NO. REQ.	LENGTH
L400	42	5'-4"
A400	4	26'-9"
A401	28	5'-6"



SECTION W-W

SHOWING DIAPHRAGM REMOVAL IN SPAN 16 AND AREAS TO BE RE-POURED.

DRILLED IN ANCHORS:

CERTIFICATION: THE CONTRACTOR SHALL FURNISH CERTIFIED ANCHOR PULL OUT DATA FROM AN INDEPENDANT TESTING LABORATORY USING CLASS "A" CONCRETE AS PRESCRIBED BY TENNESSEE HIGHWAY SPECIFICATIONS. THE REQUIRED ULTIMATE LOAD FOR 1" Ø ANCHORS IS 25,000 LBS. IN PLACE REQUIREMENTS: THE UNITS SHALL BE SUB-SET 3/32" TO 1/4" AND TORQUED, WITH MC12x40 IN PLACE TO AN EQUIVALENT DIRECT PULL OUT LOAD OF 60 PERCENT OF REQUIRED ULTIMATE LOAD. SLIPPAGE SHALL NOT EXCEED 1/4". THE DEPARTMENT WILL PERFORM TESTING OF AT LEAST TWO (2) ANCHORS AT BENT NO. 14 TO INSURE THE SPECIFIED IN PLACE REQUIREMENTS. INSTALLATION NOT MEETING THESE REQUIREMENTS MUST BE CORRECTED AT CONTRACTOR'S EXPENCE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
(S.B.L) STATE ROUTE 14 OVER I.C.RR & NONCONNAH CREEK
BRIDGE NO. 79-SR014-7.12
SHELBY COUNTY
1982

DESIGNED BY A.B.G. & W.M.M. DATE 3-82
DRAWN BY KIM FRANKENFIELD DATE 3-82
SUPERVISED BY MCINTURFF DATE 3-82
CHECKED BY CRAWES & GENTRY DATE 3-82

CORRECT Gilbellon L. Foreall
ENGINEER OF STRUCTURES
APPROVED Louis Guano
DIRECTOR OF HIGHWAYS

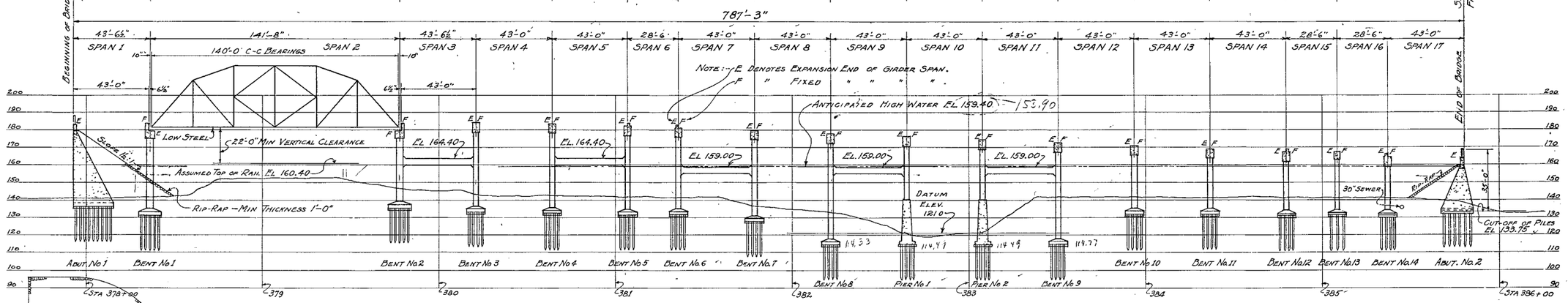
A-5-1278

Date Last Revision 12-13-29

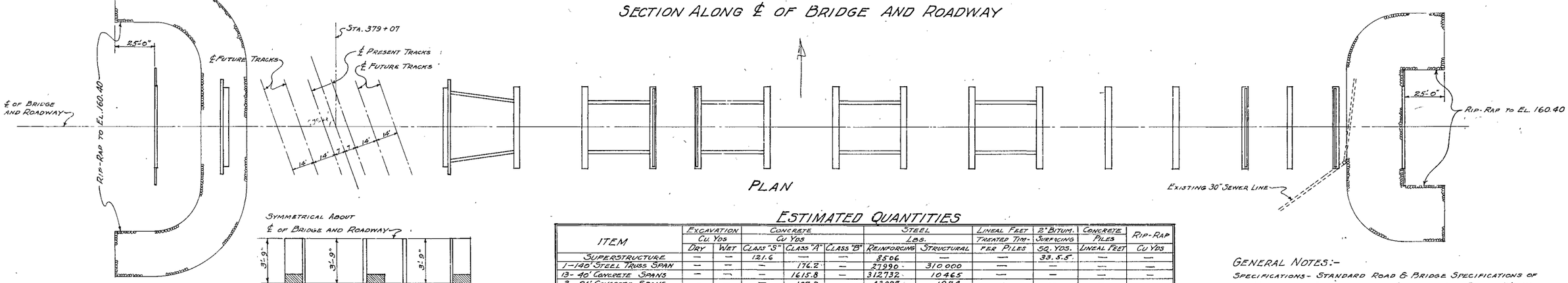
FED ROAD DIST NO.	STATE	FED AID PROJ NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN.	218-D	19		-

S.A.P.

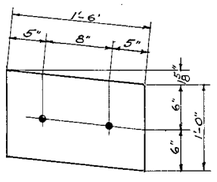
NOTE:
FOR SKETCH SHOWING VERTICAL CURVE AND GRADES OVER BRIDGE SEE DWG. A-5-135



SECTION ALONG ℄ OF BRIDGE AND ROADWAY

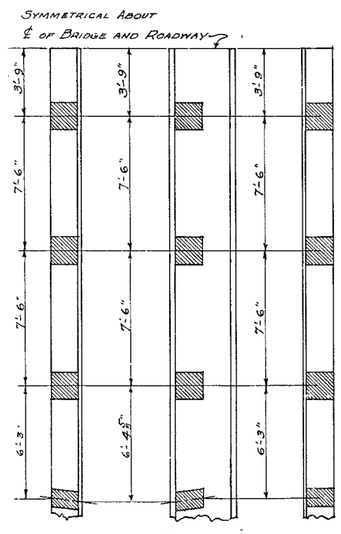


PLAN



DETAIL OF SKEWED PLATE

THIS GIRDER BEARING PLATE TO BE USED FOR OUTSIDE GIRDERS OF SPANS 1 AND 3, INSTEAD OF RECTANGULAR PLATE SHOWN ON DRAWING A-4-125.



ABUT No. 1 BENT No. 3 ABUT No. 2
LOCATION OF GIRDER BEARING PLATES

ESTIMATED QUANTITIES

ITEM	Excavation Cu. Yds Dry	Excavation Cu. Yds Wet	Concrete Cu Yds Class "S"	Concrete Cu Yds Class "A"	Concrete Cu Yds Class "B"	Steel Lbs. Reinforcing	Steel Lbs. Structural	Lineal Feet Treated Timber Piles	2" Bitum. Surfacing Sq. Yds.	Concrete Piles Lineal Feet	Rip-Rap Cu Yds
SUPERSTRUCTURE	—	—	121.6	—	—	8506	—	—	33.5.5	—	—
1-140' STEEL TRUSS SPAN	—	—	—	176.2	—	27990	310 000	—	—	—	—
13-40' CONCRETE SPANS	—	—	—	1615.8	—	312732	10465	—	—	—	—
3-26' CONCRETE SPANS	—	—	—	187.2	—	43827	1974	—	—	—	—
SUBSTRUCTURE	—	—	—	—	—	—	—	—	—	—	—
ABUTMENT No. 1	224	—	—	214.1	—	9647	—	—	—	1620	215
ABUTMENT No 2	210	—	—	97.0	—	7354	—	1020	—	—	253
PIER No 1	10	138	—	58.8	190.3	8742	—	1200	—	—	—
PIER No 2	52	154	—	67.4	190.3	8643	—	1200	—	—	—
BENT No. 1	459	—	—	162.9	—	14199	—	1200	—	—	—
" " 2	477	—	—	158.3	—	13744	—	1200	—	—	—
" " 3	376	—	—	118.8	—	14293	—	800	—	—	—
" " 4	376	—	—	118.8	—	14293	—	800	—	—	—
" " 5	376	—	—	123.2	—	14691	—	800	—	—	—
" " 6	361	—	—	123.2	—	14605	—	800	—	—	—
" " 7	331	—	—	119.6	—	14438	—	800	—	—	—
" " 8	408	121	—	128.5	—	15025	—	800	—	—	—
" " 9	1040	116	—	124.2	—	14702	—	800	—	—	—
" " 10	361	—	—	94.3	—	9729	—	800	—	—	—
" " 11	341	—	—	92.7	—	9612	—	800	—	—	—
" " 12	334	—	—	81.8	—	9555	—	640	—	—	—
" " 13	277	—	—	59.3	—	6999	—	520	—	—	—
" " 14	320	—	—	80.4	—	9439	—	640	—	—	—
LONGITUDINAL STRUTS	—	—	—	107.3	—	24912	—	—	—	—	—
TOTALS	6333	529	121.6	4098.9	380.6	627677	322439	14220	3315.5	1620	468

GENERAL NOTES:-
SPECIFICATIONS - STANDARD ROAD & BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS.
TIMBER PILES TO BE 20' LONG AND TREATED.
RIP-RAP - SEE SPECIFICATIONS.
FORMS AND FINISH - SEE SPECIFICATIONS.
SURFACING TO BE 2" OF BITUMINOUS MATERIAL.
THE FALSEWORK FOR THE STEEL SPAN SHALL BE SO BUILT AS NOT TO INTERFERE WITH RAILROAD TRAFFIC AND SHALL CONFORM TO ALL REQUIREMENTS OF THE I.C.R.R. THREE PRINTS OF THE FALSEWORK SHALL BE SUBMITTED TO THE STATE BRIDGE ENGINEER AND HIS APPROVAL SECURED BEFORE ANY WORK IS DONE.

LIST OF DRAWINGS:-
140' STEEL SPAN - SEE DRAWINGS A-4-49, A-4-50, AND A-4-55. USE TYPE "B" FLOOR BEAM AS ON A-4-55. SEE ALSO DRAWING A-5-135
GIRDERS - SPANS 1 AND 3 SEE DRAWINGS A-4-125 AND A-5-128. SPANS 4, 5, 7, 8, 9, 10, 11, 12, 13, 14 AND 17 SEE DRAWING A-4-125
SPANS 6, 15 AND 16 SEE DRAWING A-4-124. FOR SPECIAL DETAIL FOR ALL GIRDER SPANS SEE DRAWING A-5-135.
ABUTMENTS - ABUTMENT No. 1 SEE DRAWING A-5-129; ABUTMENT No 2 SEE DRAWING A-4-121 AND THIS SHEET.
BENTS - BENTS 1 AND 2 SEE DRAWING A-5-130; BENTS 3-9 SEE DRAWING A-5-131; BENTS 10, 11, 12, 14 SEE DRAWING A-5-132; BENT 13 SEE DRAWING A-5-133
PIERS - PIERS 1 AND 2 SEE DRAWING A-5-134.
LONGITUDINAL STRUTS - SEE DRAWING A-5-131.
HANDRAIL FOR GIRDER SPANS - SEE DRAWING A-5-128.
FOR EXPANSION DETAILS - SEE DRAWING A-5-135.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

LAYOUT OF BRIDGE

STA. 377+92.63
SHELBY CO.
1929

BRIDGE NO. 79SR0140006

DESIGNED BY W. T. St. Clair DATE Oct. 1929
DRAWN BY W. T. St. C. DATE Oct. 1929
TRACED BY DATE 11/21/29
CHECKED BY DATE Nov. 29

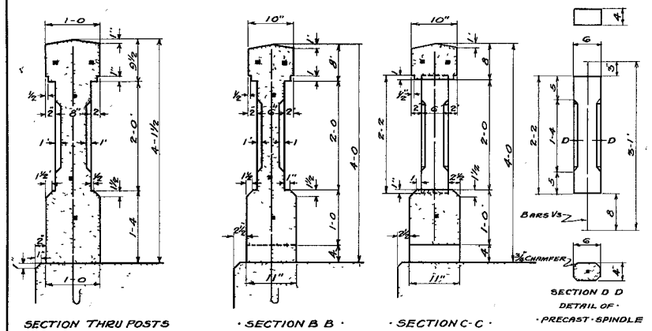
CORRECT L. H. Gustafson BRIDGE ENGINEER
APPROVED C. M. Connor STATE HIGHWAY ENGINEER

A-5-127

12-13-29 Note added for falsework for steel span.

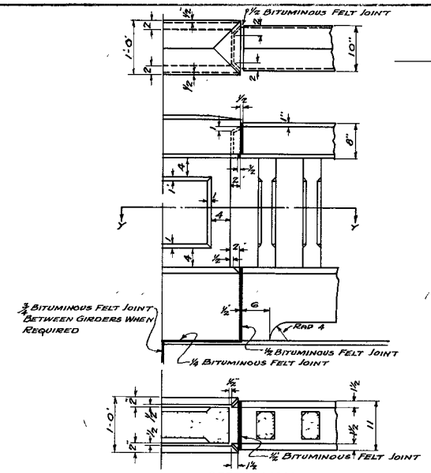
FED ROAD DIST NO	STATE	FED AID PROJ NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN	218-D	19		

S.A.P

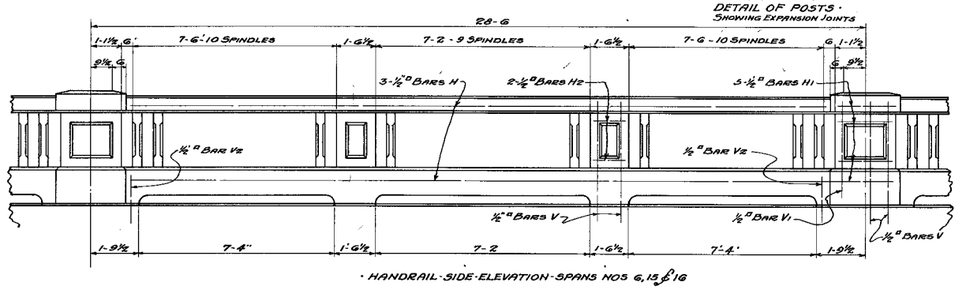


GENERAL NOTES

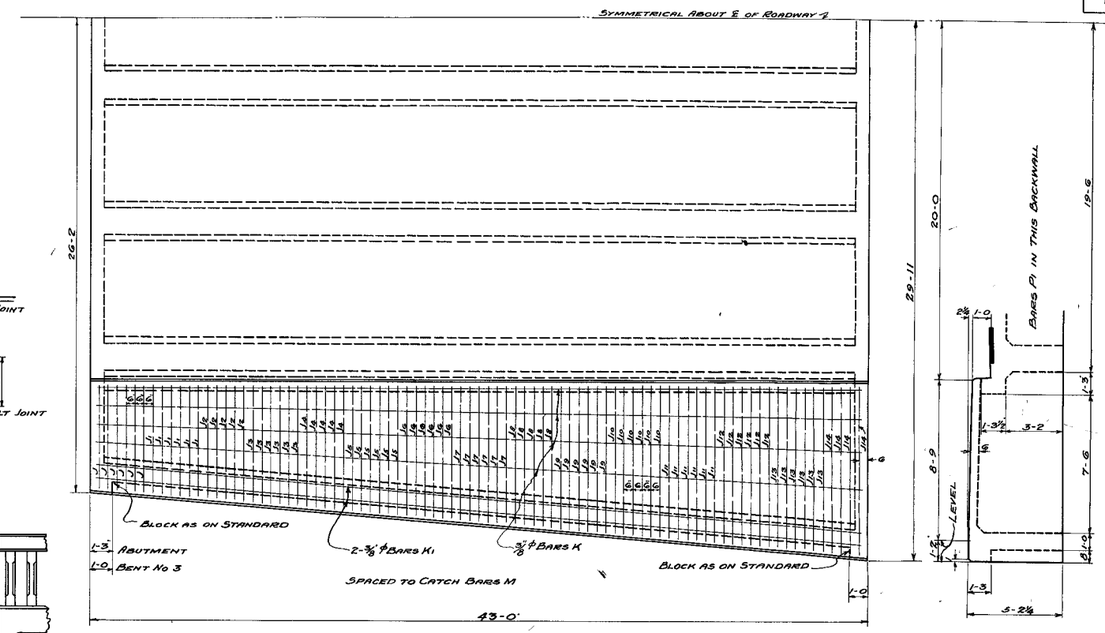
SPECIFICATIONS STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
CONCRETE IN HANDRAIL TO BE CLASS "S"
FORMS AND FINISH SEE SPECIFICATIONS



· SECTION Y Y
DETAIL OF POSTS ·
SHOWING EXPANSION JOINTS



· HANDRAIL · SIDE · ELEVATION · SPANS NOS 6, 15 & 16



· HALF · PLAN

SHOWING FLARED SIDEWALKS ON SPANS ADJACENT TO STEEL TRUSS SPAN FOR DETAILS NOT SHOWN SEE DWG A-4-125

· ADDITIONAL · BILL OF STEEL
· FOR ONE · FLARED SPAN ·

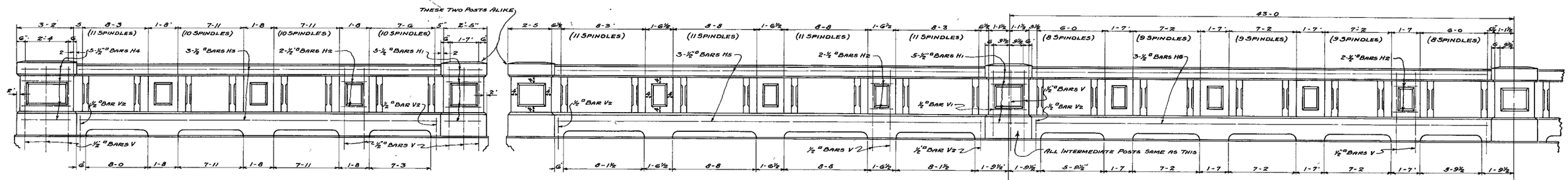
MARK	SIZE	NO	LENGTH
J	3/8" ϕ	12	5-9
J1	3/8" ϕ	12	6-0
J2	3/8" ϕ	10	6-3
J3	3/8" ϕ	12	6-6
J4	3/8" ϕ	10	6-9
J5	3/8" ϕ	12	7-0
J6	3/8" ϕ	12	7-3
J7	3/8" ϕ	12	7-6
J8	3/8" ϕ	10	7-9
J9	3/8" ϕ	12	8-0
J10	3/8" ϕ	12	8-3
J11	3/8" ϕ	12	8-6
J12	3/8" ϕ	12	8-9
J13	3/8" ϕ	12	9-0
J14	3/8" ϕ	8	9-3
P	1/2" □	8	27-3
P1	1/2" □	8	30-0

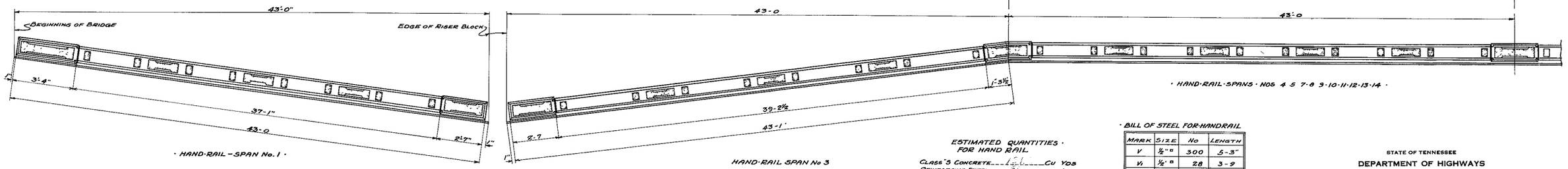
· HALF · END · VIEW OVER BENT · No 1 OR No 2 ·

NOTE SUBSTITUTE ABOVE BILL FOR BARS J AND P IN BILL ON A-4-125. REST OF BILL AS GIVEN.

· ESTIMATED · QUANTITIES ·
(ONE FLARED SPAN)

CONCRETE CLASS A	CU YDS
REINFORCING STEEL	LBS.
STRUCTURAL STEEL	LBS





· HAND · RAIL - SPAN No. 1 ·

HAND · RAIL SPAN No 3

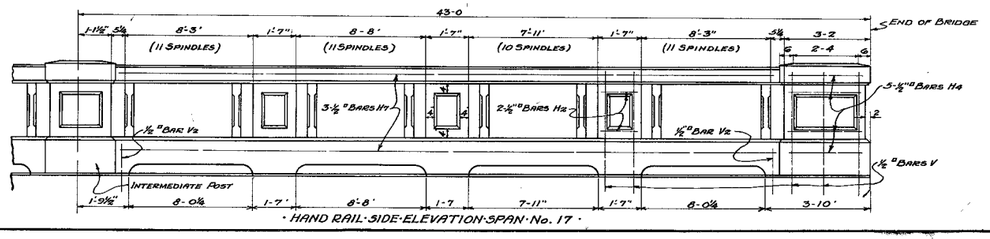
· HAND · RAIL · SPANS · NOS 4 5 7-8 9-10-11-12-13-14 ·

ESTIMATED QUANTITIES ·
FOR HAND RAIL

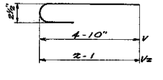
CLASS "S" CONCRETE	CU YDS
REINFORCING STEEL	LBS

· BILL OF STEEL FOR · HANDRAIL

MARK	SIZE	NO	LENGTH
V	1/2" □	300	5-3"
V1	1/2" □	28	3-9
V2	1/2" □	64	2-6
V3	1/2" □	1290	3-1'
H	1/2" □	18	25-6
H1	1/2" □	160	2-0"
H2	1/2" □	220	1'-3
H3	1/2" □	6	36-9"
H4	1/2" □	20	2'-9'
H5	1/2" □	6	38-9'
H6	1/2" □	60	40-0
H7	1/2" □	6	38'-0



· HAND RAIL · SIDE · ELEVATION · SPAN · No. 17 ·



STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

· DETAILS OF ·

HANDRAIL & FLARED SPANS

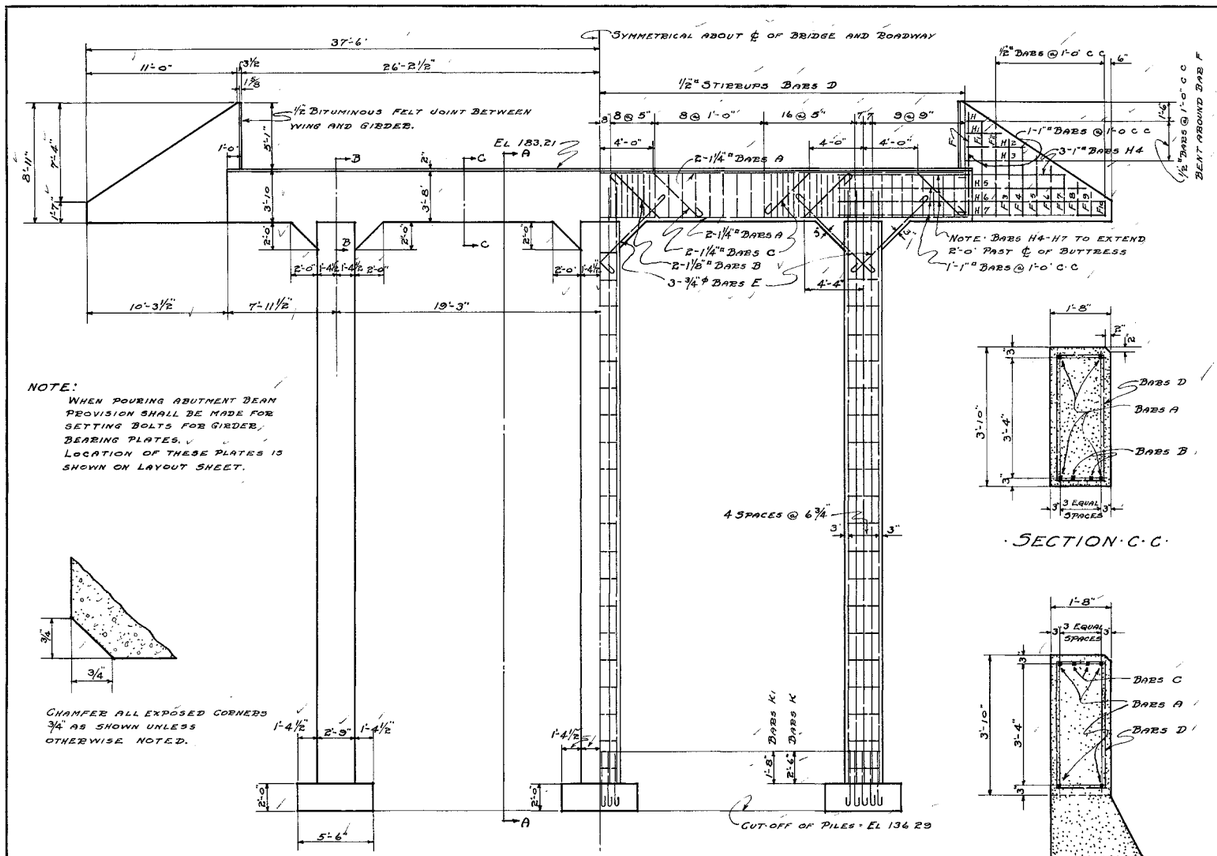
· FOR BRIDGE · AT · STA 377+92 ℄ ·
SHELBY · CO
1929

CORRECT L. N. Freeman BRIDGE ENGINEER
APPROVED J. C. McCleven STATE HIGHWAY ENGINEER

A-5-128

DESIGNED BY		DATE	
DRAWN BY	W. T. S. Ave	DATE	Oct 1928
TRACED BY	Moody Smithson	DATE	Oct 1928
CHECKED BY	W. Clark	DATE	Nov 1928

FED ROAD DIST. No.	STATE	FED AID PROJ No.	FISCAL YEAR	SHEET No	TOTAL SHEETS
8	TENN.	218-D S.A.P.	19		



NOTE:
WHEN POURING ABUTMENT BEAM PROVISION SHALL BE MADE FOR SETTING BOLTS FOR GIRDER BEARING PLATES. LOCATION OF THESE PLATES IS SHOWN ON LAYOUT SHEET.

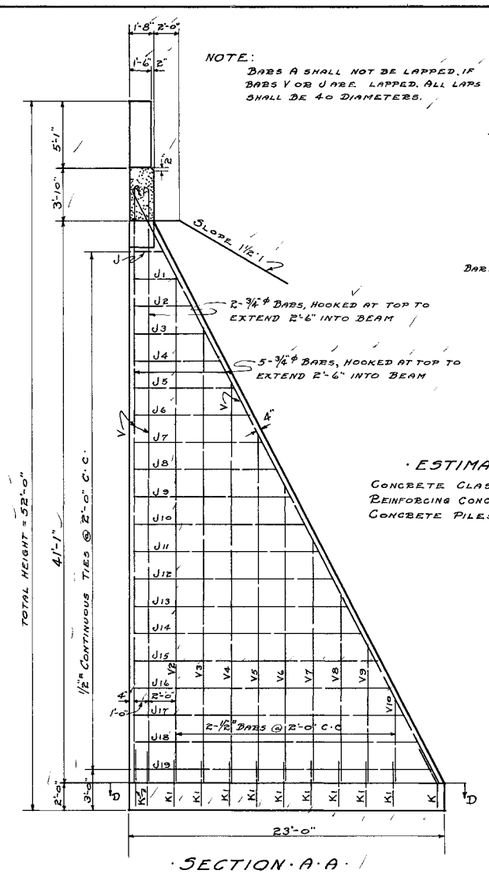
CHAMFER ALL EXPOSED CORNERS ¾" AS SHOWN UNLESS OTHERWISE NOTED.

· FRONT · ELEVATION ·

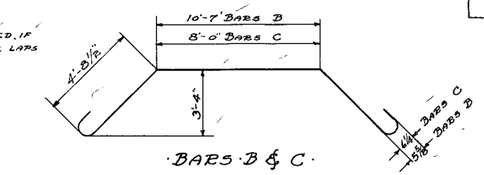
· SECTION · C · C ·

· SECTION · B · B ·

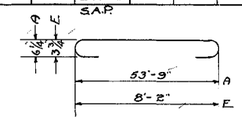
NOTE:
BARS A SHALL NOT BE LAPPED, IF BARS V OR J ARE LAPPED. ALL LAPS SHALL BE 40 DIAMETERS.



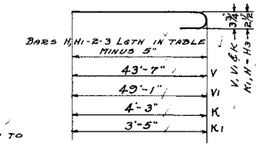
· SECTION · A · A ·



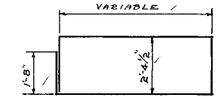
· BARS · B & C ·



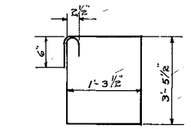
· BARS · A · E ·



BARS V, V1, K & K1



· BARS J · J19 ·



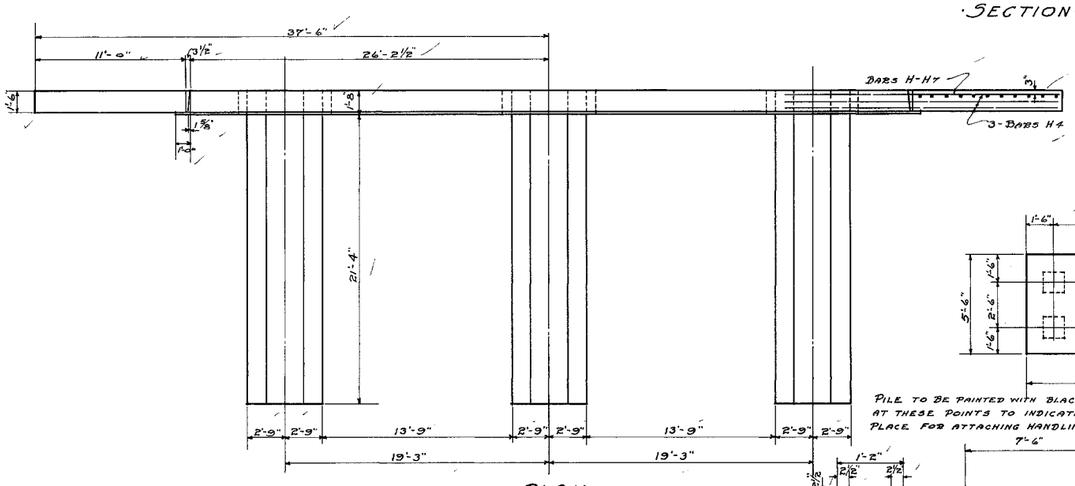
· BARS · D ·

· ESTIMATED · QUANTITIES ·

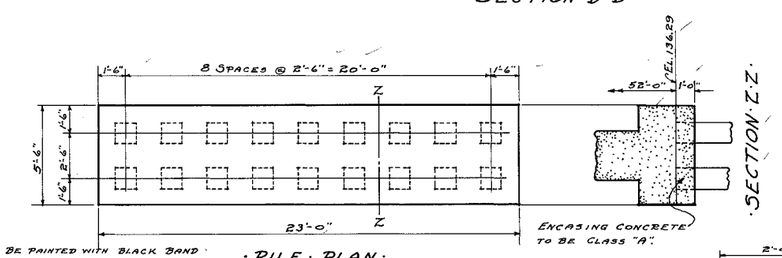
CONCRETE CLASS "A" 214.1 CU. YDS.
REINFORCING CONCRETE 9647 LBS.
CONCRETE PILES 1620 LIN. FT.

· BILL · OF · STEEL ·

MARK	SIZE	No.	LENGTH	MARK	SIZE	No	LENGTH
A	1⅛"	4	55'-9"	V6	½"	6	25'-6"
B	1⅛"	4	21'-10"	V7	"	6	21'-9"
C	1⅛"	6	19'-5"	V8	"	6	18'-0"
D	½"	86	10'-5"	V9	"	6	14'-0"
E	¾"ϕ	18	9'-6"	V10	"	6	10'-0"
F	1"	2	8'-0"	J	½"	3	10'-9"
F1	1"	2	7'-6"	J1	"	3	12'-9"
F2	½"	2	6'-9"	J2	"	3	15'-0"
F3	"	2	6'-0"	J3	"	3	17'-0"
F4	"	2	5'-6"	J4	"	3	19'-0"
F5	"	2	4'-9"	J5	"	3	21'-0"
F6	"	2	4'-0"	J6	"	3	23'-3"
F7	"	2	3'-6"	J7	"	3	25'-3"
F8	"	2	2'-9"	J8	"	3	27'-3"
F9	"	2	2'-0"	J9	"	3	29'-6"
F10	½"	2	1'-6"	J10	"	3	31'-6"
H	½"	2	2'-3"	J11	"	3	33'-6"
H1	"	2	3'-9"	J12	"	3	35'-6"
H2	"	2	5'-3"	J13	"	3	37'-6"
H3	½"	2	6'-9"	J14	"	3	39'-9"
H4	1"	6	17'-0"	J15	"	3	41'-9"
H5	1"	2	18'-6"	J16	"	3	43'-9"
H6	1"	2	20'-0"	J17	"	3	46'-0"
H7	1"	2	20'-3"	J18	"	3	48'-0"
V	¾"ϕ	21	44'-3"	J19	½"	3	50'-0"
V1	¾"ϕ	15	49'-9"	K	¾"ϕ	36	4'-11"
V2	½"	6	37'-0"	K1	½"	54	3'-10"
V3	"	6	33'-3"				
V4	½"	6	29'-6"				

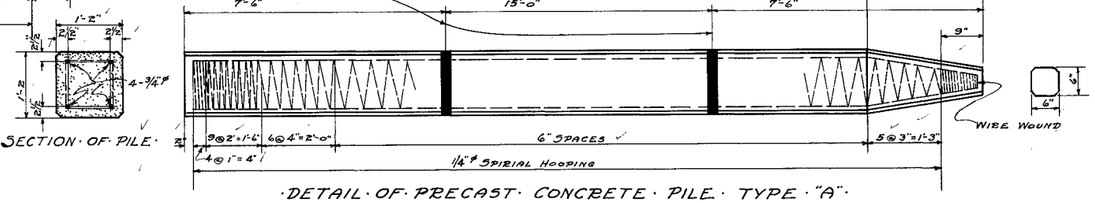


· PLAN ·



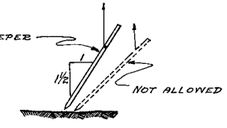
· PILE · PLAN ·

· SECTION · Z · Z ·



· DETAIL · OF · PRECAST · CONCRETE · PILE · TYPE · "A" ·

NOTE:
IN HANDLING THE PILES, THEY SHALL BE SUPPORTED AT THE QUARTER POINTS. PILES TO BE PICKED UP BY PULLING ON BOTH LINES UNIFORMLY. END OF PILE NOT TO TOUCH GROUND UNLESS PILE IS INCLINED 1:1½ OR STEEPER



· SECTION · OF · PILE ·

GENERAL NOTES:
SPECIFICATIONS STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS & PUBLIC WORKS.
CONCRETE TO BE CLASS "A".
REINFORCING STEEL: SEE SPECIFICATIONS.
FORMS AND FINISH: SEE SPECIFICATIONS.
ROCK FOUNDATION: SEE SPECIFICATIONS.
ENCASING CONCRETE TO BE CLASS "A".
PILING TO BE CLASS "B" CONCRETE WITH CLASS "B" AGGREGATE.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

DETAILS OF

ABUTMENT NO 1

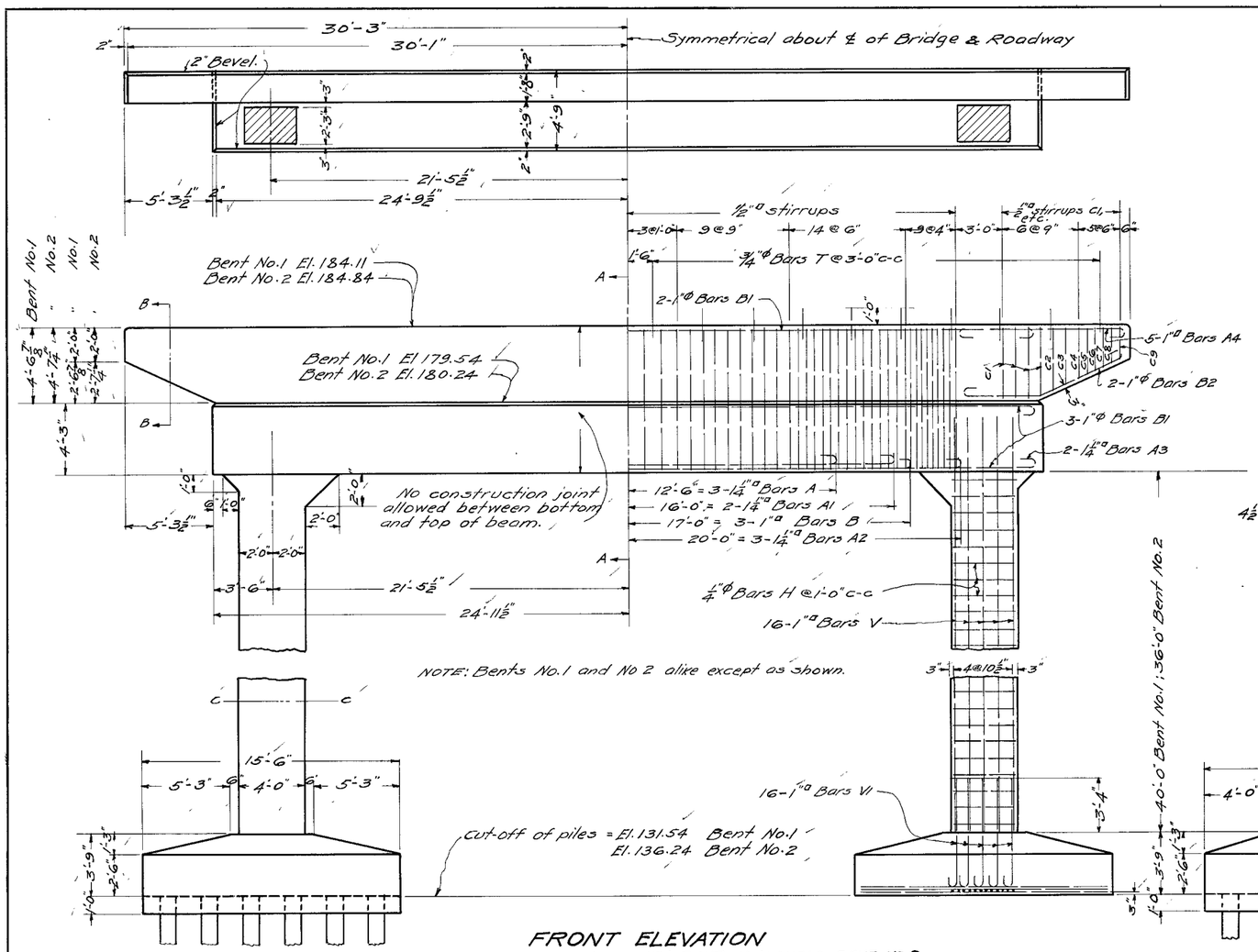
FOR BRIDGE AT STA 377+92.62
SHELBY CO.
1929

CORRECT: L. W. Erickson — BRIDGE ENGINEER
APPROVED: J. C. McCanless — STATE HIGHWAY ENGINEER

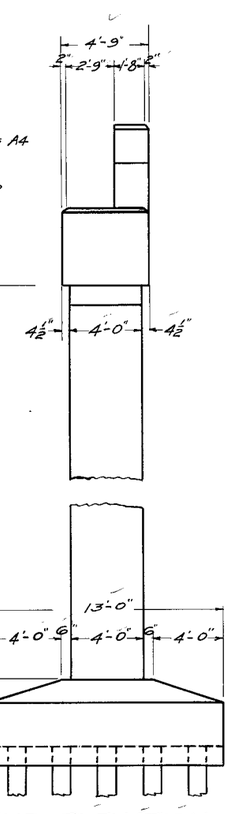
A-5-129

DESIGNED BY ..... DATE .....
DRAWN BY ..... DATE .....
TRACED BY Douglas Wells DATE 12-5-29
CHECKED BY ..... DATE .....

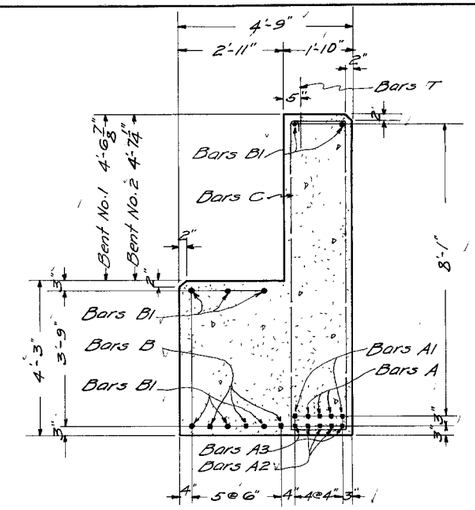
FED ROAD DIST No	STATE	FED AID PROJ No	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN.		19		



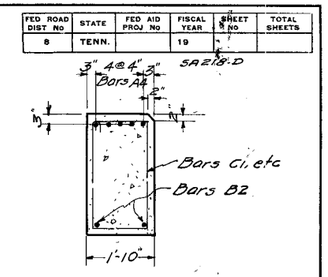
FRONT ELEVATION
LOOKING BACK ON SURVEY BENT NO.1; AHEAD BENT NO.2



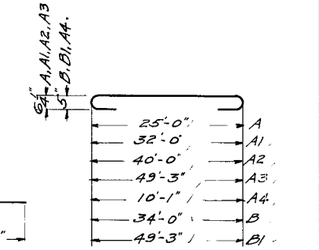
END ELEVATION



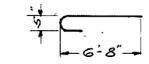
SECTION A-A



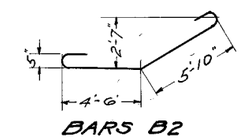
SECTION B-B



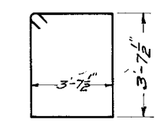
BARS A, A1, A2, A3, A4, B, B1



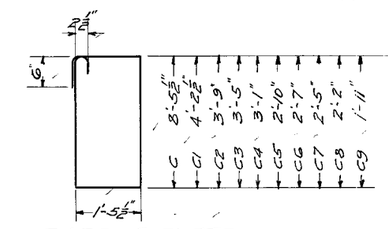
BARS V1



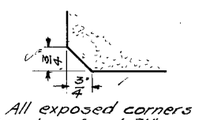
BARS B2



BARS H



BARS C, C1, ETC.

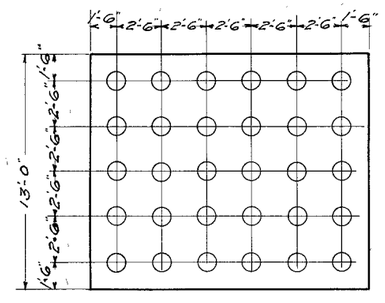


All exposed corners to be chamfered ¾" as shown unless otherwise noted.

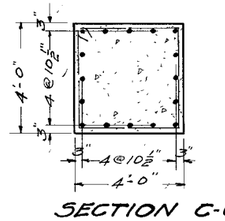
BILL OF STEEL

BENT NO.1				BENT NO.2			
MARK	SIZE	NO	LENGTH	MARK	SIZE	NO	LENGTH
A	1¼"□	3	27'-0"	A	1¼"□	3	27'-0"
A1	"	2	34'-0"	A1	"	2	34'-0"
A2	1¼"□	3	42'-0"	A2	1¼"□	3	42'-0"
A3	1¼"□	2	51'-3"	A3	1¼"□	2	51'-3"
A4	1"□	10	11'-9"	A4	1"□	10	11'-9"
B	1"□	3	35'-8"	B	1"□	3	35'-8"
B1	1"φ	8	50'-11"	B1	1"φ	8	50'-11"
B2	1"φ	4	12'-0"	B2	1"φ	4	12'-0"
C	½"□	71	20'-8"	C	½"□	71	20'-8"
C1	"	8	12'-2"	C1	"	8	12'-2"
C2	"	2	11'-3"	C2	"	2	11'-3"
C3	"	2	10'-7"	C3	"	2	10'-7"
C4	"	2	9'-11"	C4	"	2	9'-11"
C5	"	2	9'-5"	C5	"	2	9'-5"
C6	"	2	8'-11"	C6	"	2	8'-11"
C7	"	2	8'-7"	C7	"	2	8'-7"
C8	"	2	8'-1"	C8	"	2	8'-1"
C9	½"□	2	7'-7"	C9	½"□	2	7'-7"
F	⅞"φ	24	15'-0"	F	⅞"φ	24	15'-0"
F1	"	24	12'-6"	F1	"	24	12'-6"
F2	"	8	14'-9"	F2	"	8	14'-9"
F3	"	8	15'-6"	F3	"	8	15'-6"
F4	"	8	16'-6"	F4	"	8	16'-6"
F5	"	8	17'-3"	F5	"	8	17'-3"
F6	⅞"φ	16	17'-9"	F6	⅞"φ	16	17'-9"
H	¼"φ	80	15'-0"	H	¼"φ	72	15'-0"
V	1"□	32	43'-3"	V	1"□	32	39'-3"
V1	1"□	32	7'-6"	V1	1"□	32	7'-6"
T	¾"φ	20	2'-0"	T	¾"φ	20	2'-0"

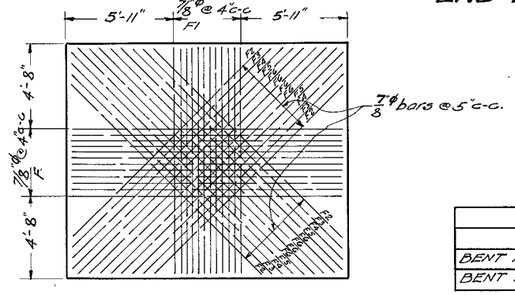
NOTE: Steel for Bent No.2 same as for Bent No.1 except as shown.



PLAN OF FOOTING
SHOWING SPACING OF PILES



SECTION C-C



PLAN OF FOOTING
SHOWING REINFORCING

ESTIMATED QUANTITIES			
	CLASS "A" CONCRETE CU. YDS.	REINF. STEEL LBS.	TREATED PILES LIN. FT
BENT NO.1	162.9	14199	1200
BENT NO.2	158.3	13744	1200

Specifications. Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works.
Concrete shall be Class A.
Reinforcing steel: See Specifications.
Forms and Finish: See Specifications.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

DETAILS OF

BENTS NO 1 AND NO 2

FOR BRIDGE AT STA. 377 + 92.63
SHELBY CO
1929

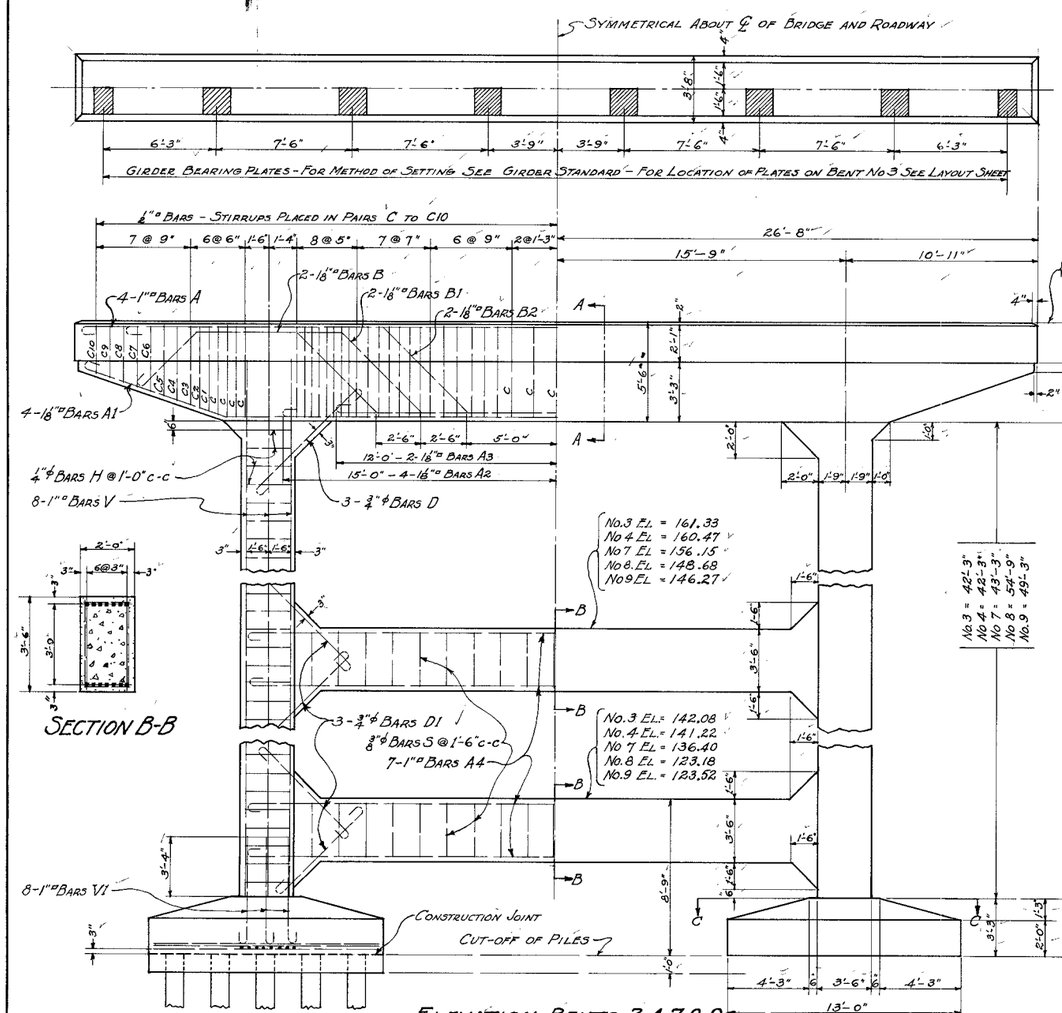
DESIGNED BY W. T. St Clair DATE
DRAWN BY W. T. St. C. DATE Oct. 1929
TRACED BY DATE 11-14-29
CHECKED BY DATE

CORRECT: BRIDGE ENGINEER
APPROVED: STATE HIGHWAY ENGINEER

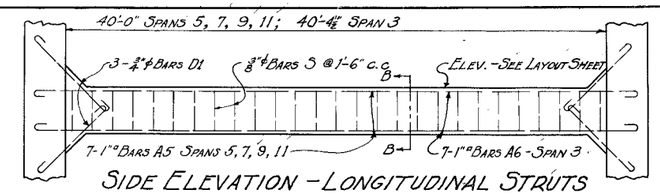
A-5-130

FED ROAD DIST. NO	STATE	FED AID PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN.		19		

S.A.218-D



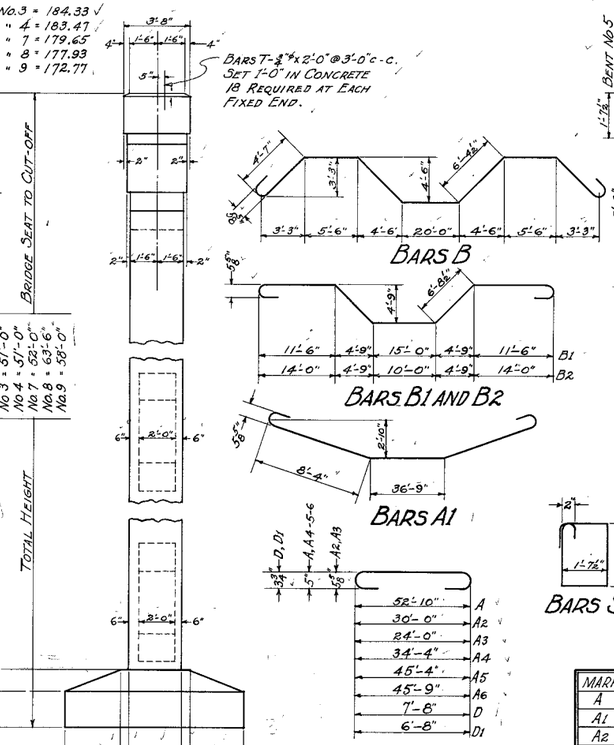
ELEVATION BENTS 3,4,7,8,9

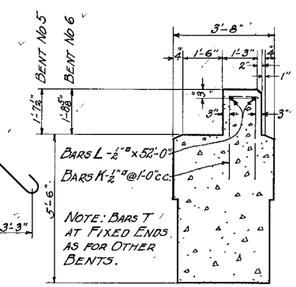


SIDE ELEVATION - LONGITUDINAL STRUTS

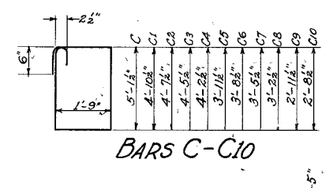
ONE PAIR REQUIRED BETWEEN SUBSTRUCTURE UNITS AS SHOWN ON LAYOUT SHEET. - QUANTITIES NOT INCLUDED IN THOSE FOR BENTS

BILL OF STEEL AND ESTIMATED QUANTITIES FOR LONG. STRUTS					
	BARS A5 (OR A6)	BARS D1	BARS S	REINFORCING ST.	CL. A CONCRETE
SPAN 3	28-1"□ x 47'-6"	24-3/4"φ x 8'-0"	54-3/8"φ x 10'-4"	5020	21.7
" 5	28-1"□ x 47'-0"	"	54-3/8"φ x 10'-4"	4973	21.4
" 7	28-1"□ x 47'-0"	"	54-3/8"φ x 10'-4"	4973	21.4
" 9	28-1"□ x 47'-0"	"	54-3/8"φ x 10'-4"	4973	21.4
" 11	28-1"□ x 47'-0"	24-3/4"φ x 8'-0"	54-3/8"φ x 10'-4"	4973	21.4
TOTALS				24912	107.3

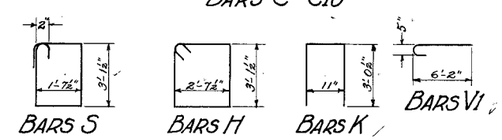




SECTION D-D

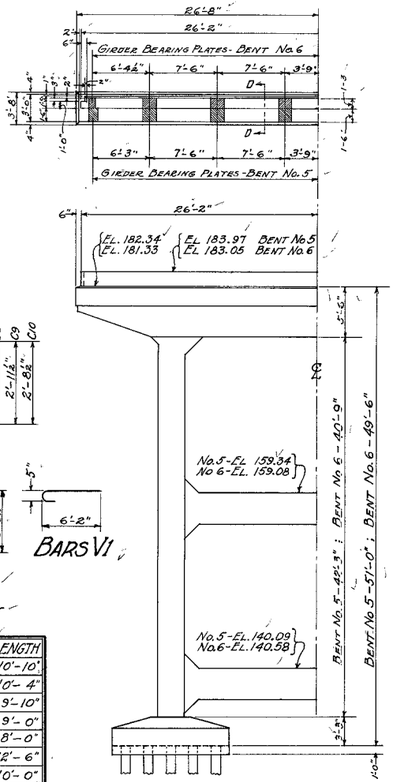


BARS C-C10



BILL OF STEEL FOR ONE BENT CONSTANT FOR ALL BENTS

MARK	SIZE	NO.	LENGTH	MARK	SIZE	NO.	LENGTH
A	1"□	4	34'-6"	C8	1/2"□	4	10'-10"
A1	1 8/8"□	4	55'-3"	C9	"	4	10'-4"
A2	"	4	31'-10"	C10	1/2"□	4	9'-10"
A3	1 8/8"□	2	25'-10"	D	3/4"φ	6	9'-0"
A4	1"□	28	36'-0"	D1	3/4"φ	24	8'-0"
B	1 8/8"□	2	54'-9"	F	3/8"φ	16	12'-6"
B1	"	2	53'-3"	F1	"	16	10'-0"
B2	1 8/8"□	2	53'-3"	F2	"	8	13'-0"
C	1/2"□	110	14'-8"	F3	"	8	13'-9"
C1	"	4	14'-2"	F4	3/8"φ	16	14'-3"
C2	"	4	13'-8"	S	3/8"φ	38	10'-4"
C3	"	4	13'-4"	T	3/4"φ	18	2'-0"
C4	"	4	12'-10"	V1	1"□	16	7'-0"
C5	"	4	12'-4"				
C6	"	4	11'-10"				
C7	1/2"□	4	11'-4"				



HALF ELEVATION BENTS 5 & 6

LOOKING AHEAD ON SURVEY BENT No.5. LOOKING BACK BENT No.6. DETAILS NOT SHOWN SAME AS FOR BENTS 3, 4, 7, 8, 9.

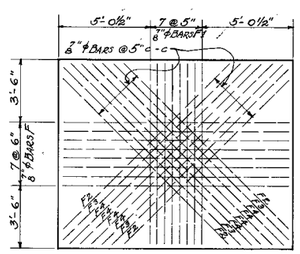
— GENERAL NOTES —

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS.

CONCRETE SHALL BE CLASS "A".

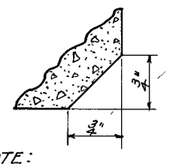
REINFORCING STEEL: SEE SPECIFICATIONS.

FORMS & FINISH: SEE SPECIFICATIONS.



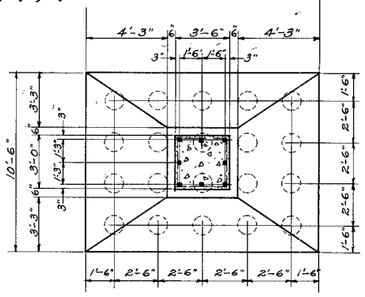
PLAN OF FOOTING

SHOWING REINFORCING STEEL



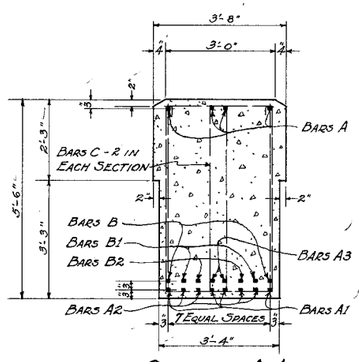
NOTE:

ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" AS SHOWN UNLESS OTHERWISE NOTED.



SECTION C-C

SHOWING PILES



SECTION A-A

ADDITIONAL BILL OF STEEL AND ESTIMATED QUANTITIES						
	16-1"□ BARS V	BARS H 3/8"φ 12'-0"	52-1/2"□ BARS K	2-1/2"□ BARS L	REINFORCING STEEL LBS.	CLASS A CONCRETE CU. YDS.
	LENGTH	NUMBER	LENGTH	LENGTH		
BENT No.3	45'-6"	84	—	—	14,293	118.8
" " 4	45'-6"	84	—	—	14,293	118.8
" " 5	45'-6"	84	7'-0"	52'-0"	14,691	123.2
" " 6	44'-0"	82	7'-0"	52'-0"	14,605	122.3
" " 7	46'-6"	84	—	—	14,438	119.6
" " 8	58'-0"	110	—	—	15,025	128.5
" " 9	52'-6"	98	—	—	14,702	124.2

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

DETAILS OF CONCRETE BENTS NOS. 3, 4, 5, 6, 7, 8, 9

FOR BRIDGE AT STA. 377 + 92 53
SHELBY CO.
1929

CORRECT: L. N. Levitson — BRIDGE ENGINEER

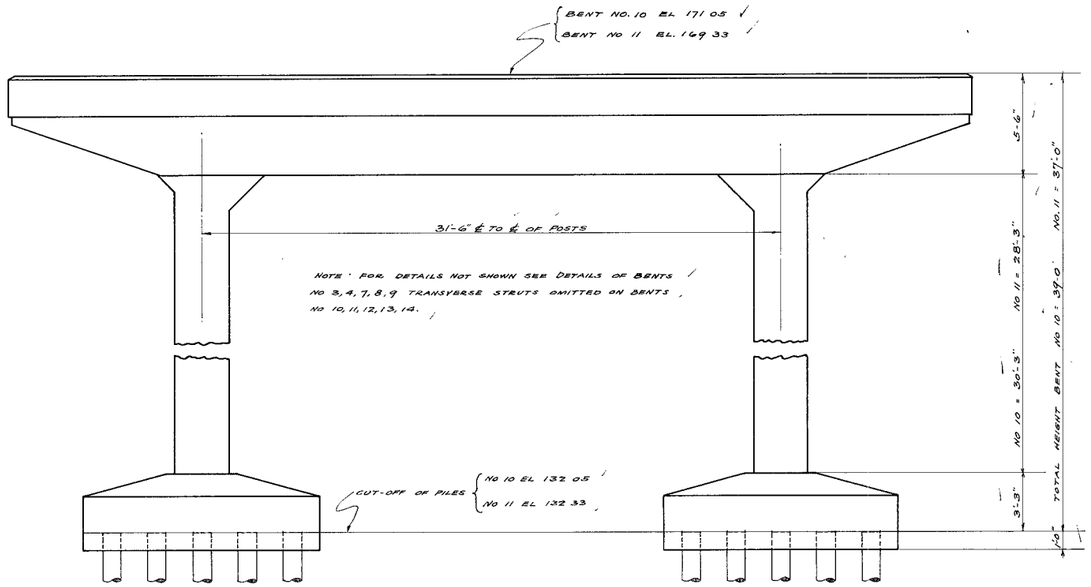
APPROVED: J. C. McCanless — STATE HIGHWAY ENGINEER

DESIGNED BY: W. T. St. Clair — DATE
DRAWN BY: W. T. St. Clair — DATE Oct. 1929
TRACED BY: Walton Murray — DATE 11/13/29
CHECKED BY: L. N. Clark — DATE Nov. 1929

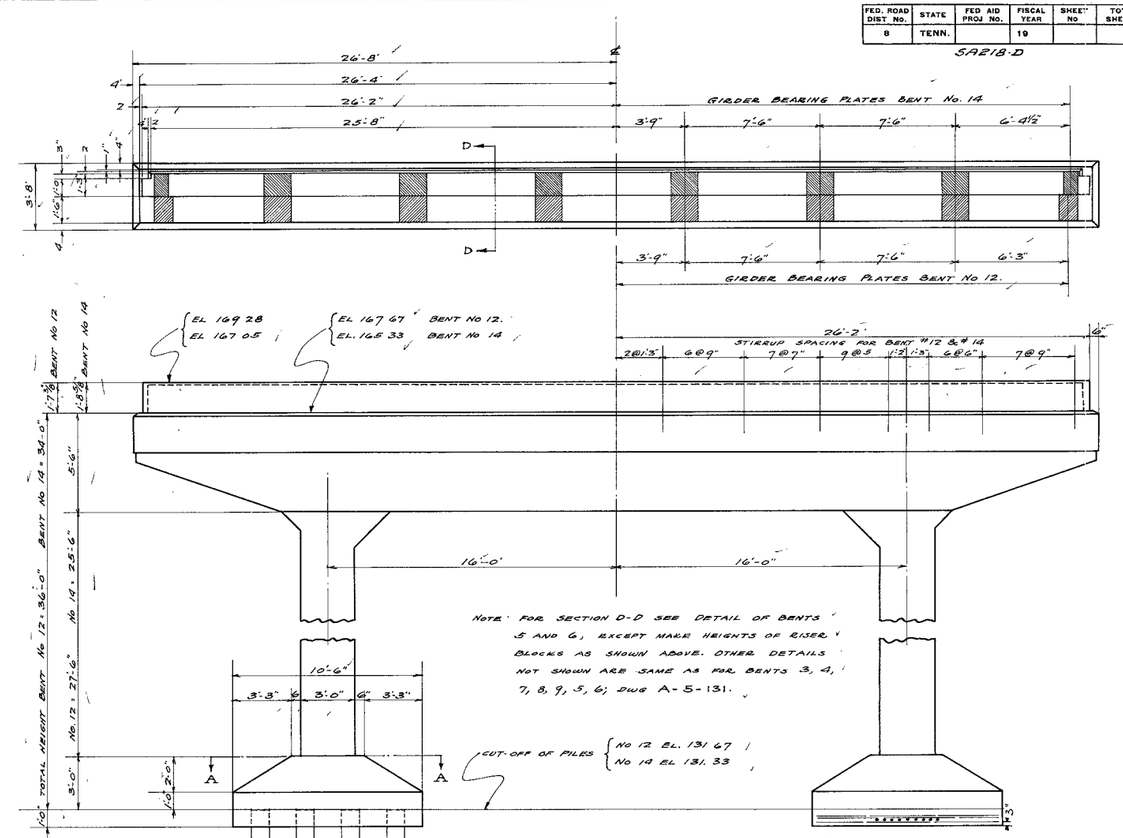
A-5-131

FED. ROAD DIST. No.	STATE	FED AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
8	TENN.		19		

SA218-D



ELEVATION · BENTS · 10 · AND · 11 ·

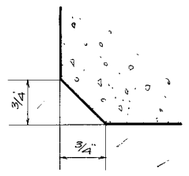


ELEVATION · BENTS · 12 AND 14
LOOKING AHEAD ON SURVEY BENT · No 12
LOOKING BACK ON SURVEY BENT No 14.

BILL OF · STEEL · FOR · ONE BENT
· BENTS 10 AND 11 ·

MARK	SIZE	NO	LENGTH	MARK	SIZE	NO	LENGTH
A	1"	4	54'-6"	C_9	½"	4	10'-4"
A_1	1⅛"	4	55-3"	C_{10}	½"	4	9'-10"
A_2	"	4	31'-10"	D	¾ϕ	6	9-0
A_3	1⅛"	2	25'-10"	F	⅞ϕ	16	12'-6"
B	1⅛"	2	54'-9"	F_1	"	16	10'-0"
B_1	"	2	53-3"	F_2	"	8	13'-0"
B_2	1⅛"	2	53'-3"	F_3	"	8	13'-9"
C	½"	110	14'-8"	F_4	⅞ϕ	16	14'-3"
C_1	"	4	14'-2"	T	¾ϕ	18	2-0"
C_2	"	4	13'-8"	V	1"	16	*
C_3	"	4	13-4"	V_1	1"	16	7'-0"
C_4	"	4	12'-10"	H	1¼ϕ	⊙	12'-0"
C_5	"	4	12'-4"				
C_6	"	4	11'-10"				
C_7	"	4	11'-4"				
C_8	½"	4	10'-10"				

* BARS V - LENGTH No 10 = 33'-6", No. 11 = 31'-6"
⊙ BARS H · NUMBER No. 10: 60; No 11 = 56

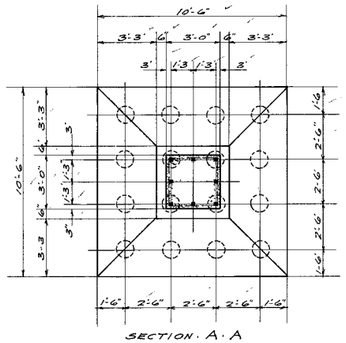


NOTE CHAMFER ALL EXPOSED CORNERS AS SHOWN UNLESS OTHERWISE NOTED.

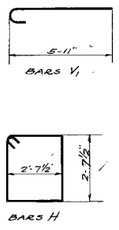
BILL OF · STEEL FOR · ONE · BENT
BENTS 12 AND 14

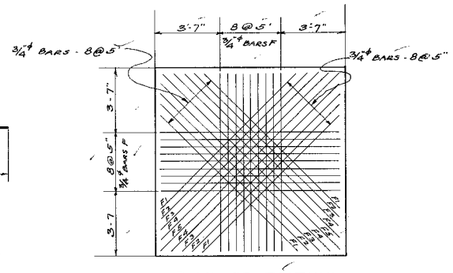
MARK	SIZE	NO	LENGTH	MARK	SIZE	NO	LENGTH
A	1"	4	54'-6"	C_9	½"	4	10'-4"
A_1	1⅛"	4	55'-3"	C_{10}	½"	4	9'-10"
A_2	"	4	31'-10"	D	¾ϕ	6	9'-0"
A_3	"	2	25-10"	F	¾ϕ	36	10'-0"
B	"	2	54'-9"	F_1	"	8	10'-9"
B_1	"	2	53'-3"	F_2	"	8	11'-6"
B_2	1⅛"	2	53'-3"	F_3	"	8	12'-6"
C	½"	114	14'-8"	F_4	"	8	13'-3"
C_1	"	4	14'-2"	F_5	¾ϕ	4	14'-0"
C_2	"	4	13'-8"	T	¾ϕ	18	2'-0"
C_3	"	4	13'-4"	V	1"	16	*
C_4	"	4	12'-10"	V_1	1"	16	6'-9"
C_5	"	4	12'-4"	H	1¼ϕ	⊙	11'-0"
C_6	"	4	11'-10"	K_1	½"	52	7'-0"
C_7	"	4	11'-4"	L	½"	2	52'-0"
C_8	½"	4	10'-10"				

* BARS V - LENGTH No. 12 = 30'-9"; No 14 = 28'-9"
⊙ BARS H · NUMBER No 12 = 54, No 14 = 50.



SECTION · A · A
· SHOWING PILE SPACING ·





PLAN OF · FOOTING ·
SHOWING REINFORCING STEEL.

· ESTIMATED QUANTITIES ·

	CLASS "A" CONCRETE CU YDS	REINFORCING STEEL LBS
BENT No. 10	94.3	9729
BENT No. 11	92.7	9612
BENT No. 12	81.8	9555
BENT No 14	80.4	9439

GENERAL NOTES ·
SPECIFICATIONS · STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
CONCRETE SHALL BE CLASS "A"
REINFORCING STEEL . SEE SPECIFICATIONS
FORMS AND FINISH . SEE SPECIFICATIONS .

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

· DETAILS OF
· BENTS · 10 · 11 · 12 · & · 14 ·
· FOR · BRIDGE AT · STA 377 + 92.63
· SHELBY · CO
· 1929 ·

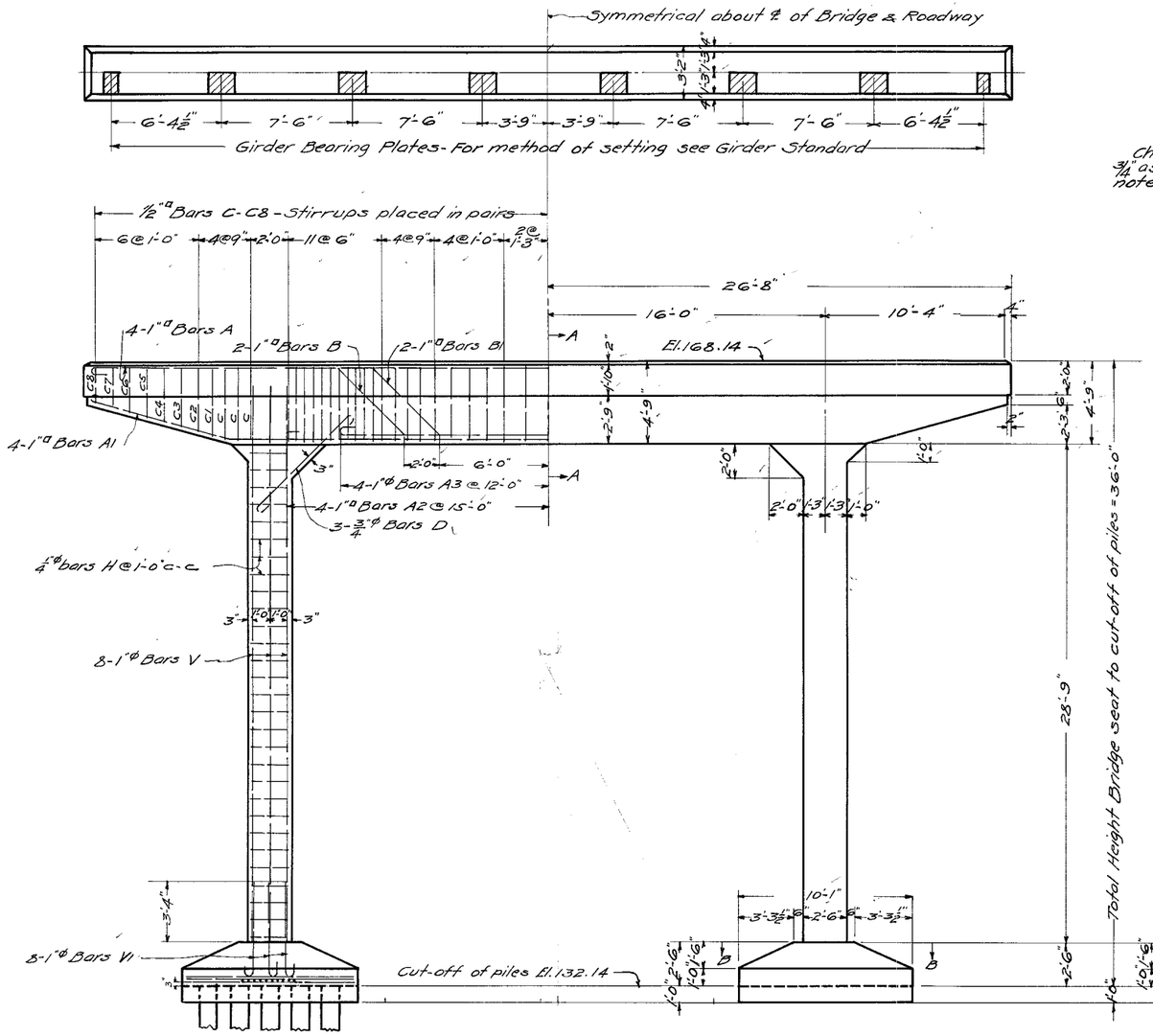
DESIGNED BY W. T. St. Clair DATE
DRAWN BY W. T. St. C. DATE Oct 1929
TRACED BY E. GARY HAMMOND DATE NOV 19 1929
CHECKED BY W. Cable DATE Nov 28 29

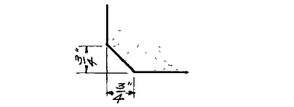
CORRECT L. N. Rowlison BRIDGE ENGINEER
APPROVED J. C. McCrea STATE HIGHWAY ENGINEER

A-5-132

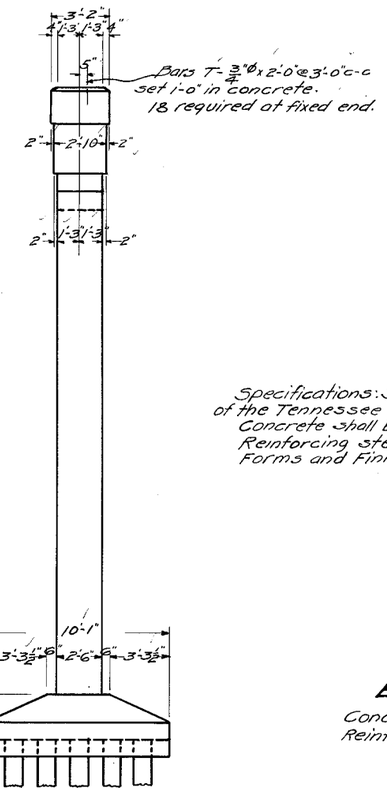
FED ROAD DIST No	STATE	FED AID PROJ No	FISCAL YEAR	SHEET No	TOTAL SHEETS
8	TENN.		19		

5A218-D

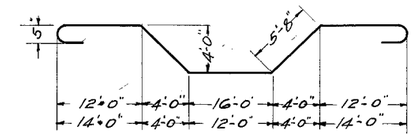




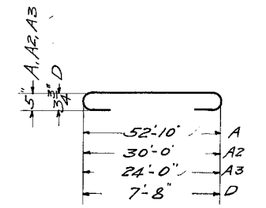
Chamfer all exposed corners ¾" as shown unless otherwise noted.



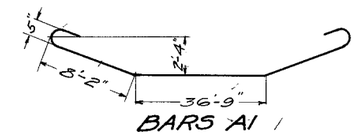
END ELEVATION



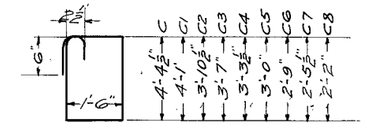
BARS B AND B1



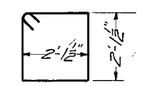
BARS A, A2, A3, D



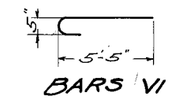
BARS A1



BARS C-C8



BARS H



BARS V1

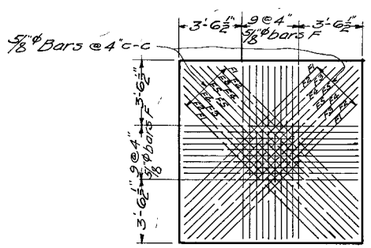
General Notes
Specifications: Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works.
Concrete shall be Class A.
Reinforcing steel: See Specifications.
Forms and Finish: See Specifications.

BILL OF STEEL

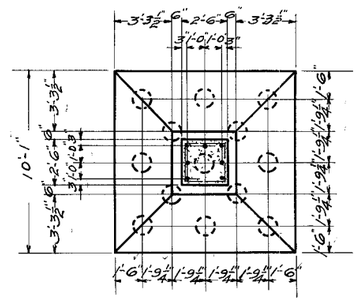
MARK	SIZE	NO	LENGTH
A	1"□	4	54'-6"
A1	"	4	54'-9"
A2	1"□	4	31'-8"
A3	1"Φ	4	25'-8"
B	1"□	2	53'-0"
B1	1"□	2	53'-0"
C	½"□	98	12'-8"
C1	"	4	12'-1"
C2	"	4	11'-8"
C3	"	4	11'-1"
C4	"	4	10'-6"
C5	"	4	9'-11"
C6	"	4	9'-5"
C7	"	4	8'-10"
C8	½"□	4	8'-3"
D	¾"Φ	6	9'-0"
H	¼"Φ	58	9'-0"
V	1"Φ	16	32'-0"
V1	1"Φ	16	6'-3"
F	⅝"Φ	40	9'-7"
F1	"	8	10'-6"
F2	"	8	11'-3"
F3	"	8	12'-0"
F4	"	8	12'-9"
F5	⅝"Φ	8	13'-3"
T	¾"Φ	18	2'-0"

ESTIMATED QUANTITIES

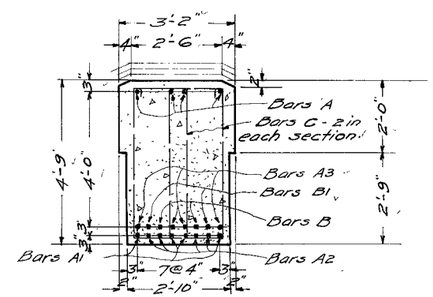
Concrete, Class A	59.3 Cu. Yds.
Reinforcing steel	6999 Lbs.



PLAN OF FOOTING
SHOWING REINFORCING STEEL



SECTION B-B
SHOWING PILE SPACING



SECTION A-A

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

DETAILS OF

BENT NO 13

FOR BRIDGE AT STA. 377+92.63
SHELBY CO
1929

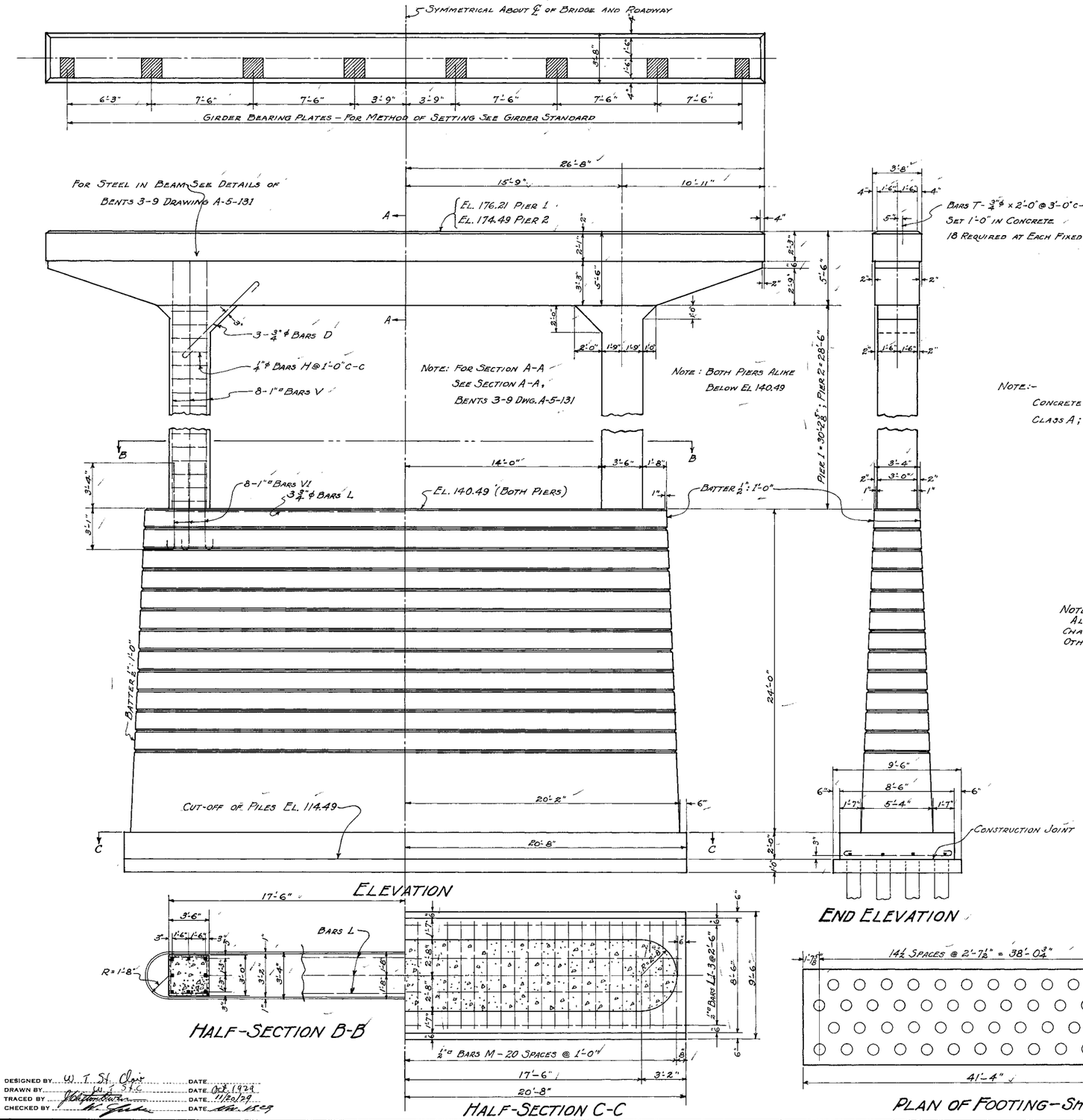
CORRECT: L. M. Rentfro — BRIDGE ENGINEER
APPROVED: J. C. McCanless — STATE HIGHWAY ENGINEER

A-5-133

DESIGNED BY W. T. St. Clair DATE
DRAWN BY W. T. St. C. DATE Oct. 1929
TRACED BY Shearer DATE 11-20-29
CHECKED BY [illegible] DATE [illegible]

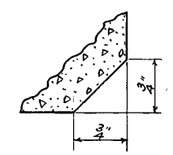
FED ROAD DIST NO.	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN.		19		

5A218-D



Note:-
For Bending Details of Bars A-A3, B-B2, C-C10, D and H see Details Bents 3-9 Dwg. A-5-131.

Note:-
Concrete Above El 140.49 to be Class A; Below to be Class B.



Note:-
All Exposed Corners to be Chamfered 3/4" as Shown Unless Otherwise Noted.

General Notes:-
Specifications: Standard Road & Bridge Specifications of the Tennessee Department of Highways and Public Works
Reinforcing Steel: See Specifications.
Forms and Finish: See Specifications.

Bill of Steel for One Pier

MARK	SIZE	NO.	LENGTH	MARK	SIZE	NO.	LENGTH
A	1"□	4	54'-6"	C9	1/2"□	4	10'-4"
A1	1 1/8"□	4	55'-3"	C10	1/2"□	4	9'-10"
A2	"	4	31'-10"	D	3/4"ϕ	6	9'-0"
A3	1 1/8"□	2	25'-10"	H	1/4"ϕ	*	12'-0"
B	"	2	54'-9"	V	1"□	16	⊗
B1	"	2	53'-3"	VI	1"□	16	7'-3"
B2	1 1/8"□	2	53'-3"	L	3/4"ϕ	3	35'-0"
C	1/2"□	110	14'-8"	L1	1/2"□	4	40'-9"
C1	"	4	14'-2"	M	1/2"□	41	9'-10"
C2	"	4	13'-8"	T	3/4"ϕ	18	2'-0"
C3	"	4	13'-4"				
C4	"	4	12'-10"				
C5	"	4	12'-4"				
C6	"	4	11'-10"				
C7	"	4	11'-4"				
C8	1/2"□	4	10'-10"				

* Bars H- 60 for Pier 1; 58 for Pier 2.
⊗ Bars V- 33'-6" for Pier 1; 31'-9" for Pier 2.

Estimated Quantities

Pier 1	Class A Concrete	58.8	Cu. Yds.
	Class B Concrete	190.3	Cu. Yds.
	Reinforcing Steel	8742	Lbs.
Pier 2	Class A Concrete	57.4	Cu. Yds.
	Class B Concrete	190.3	Cu. Yds.
	Reinforcing Steel	8643	Lbs

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

DETAILS OF PIERS

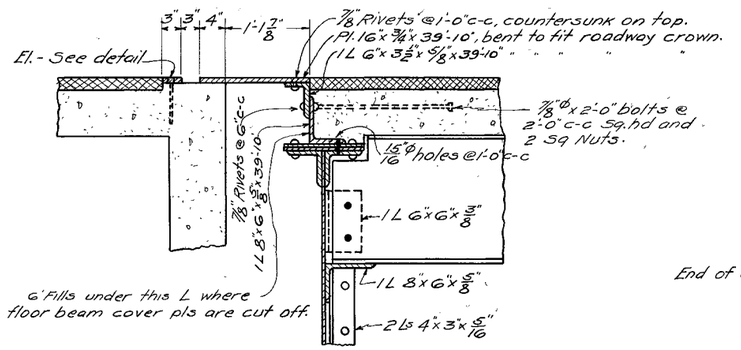
FOR BRIDGE AT STA. 377+92 ℄
SHELBY CO.
1929

DESIGNED BY W. T. St. Clair DATE
DRAWN BY W. T. St. C. DATE Oct. 1929
TRACED BY DATE 11/20/29
CHECKED BY DATE

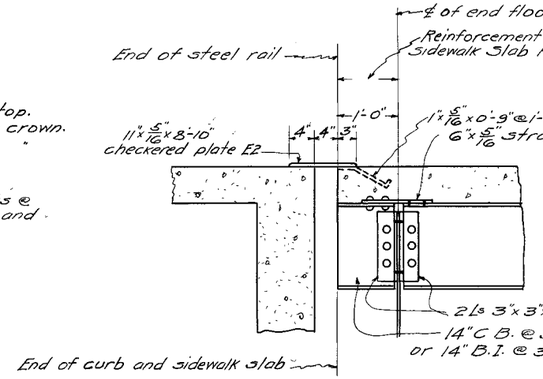
CORRECT L. H. Gridham BRIDGE ENGINEER
APPROVED W. C. McDonald STATE HIGHWAY ENGINEER

A-5-134

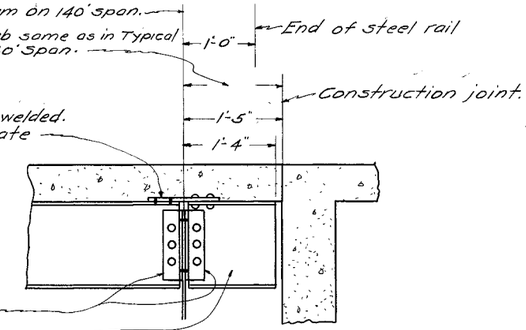
FED ROAD DIST. No	STATE	FED AID PROJ. No.	FISCAL YEAR	SHEET No	TOTAL SHEETS
8	TENN.	218-D S.A.P.			



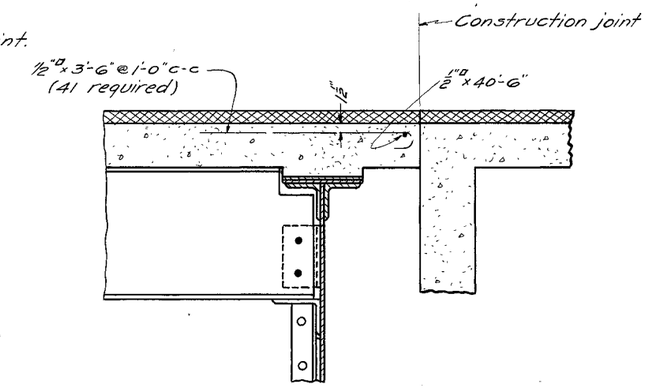
SECTION THROUGH ROADWAY OVER BENT NO. 1



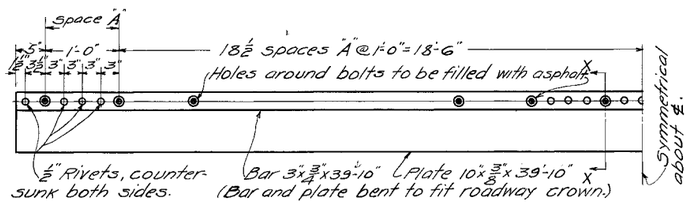
SECTION THROUGH SIDEWALK OVER BENT NO. 1



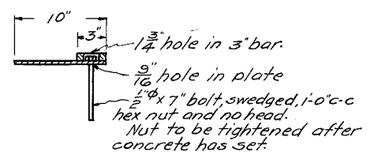
SECTION THROUGH SIDEWALK OVER BENT NO. 2



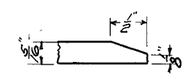
SECTION THROUGH ROADWAY OVER BENT NO. 2



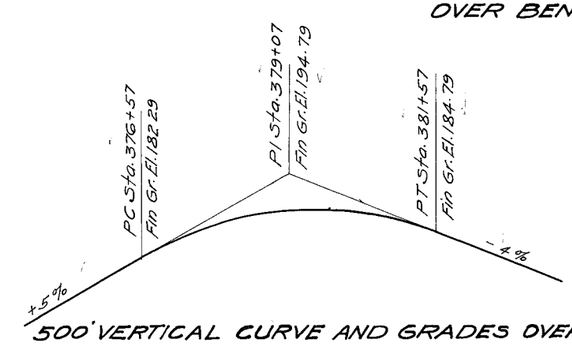
EXPANSION PLATES E1



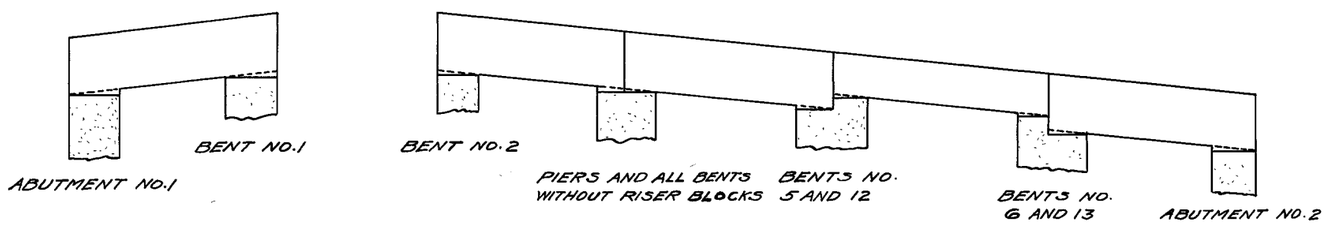
SECTION X-X



DETAIL OF ENDS OF PLATE E2



500' VERTICAL CURVE AND GRADES OVER BRIDGE



SKETCH SHOWING BLOCKS POURED WITH GIRDER STEMS TO OBTAIN LEVEL BEARING

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

EXPANSION DETAILS

FOR BRIDGE AT STA. 377+92.63
SHELBY CO
1929

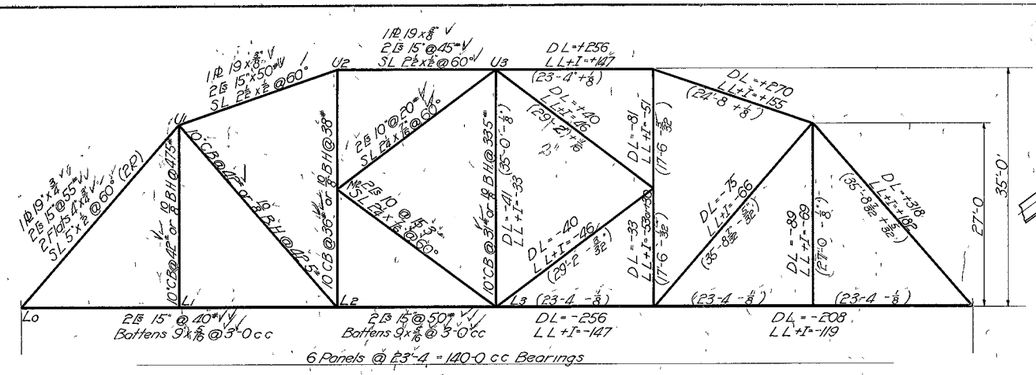
CORRECT L. N. Erickson BRIDGE ENGINEER
APPROVED J. C. McCanless STATE HIGHWAY ENGINEER

A-5-135

DESIGNED BY W. T. St Clair DATE
DRAWN BY W. T. St. C. DATE Oct. 1929
TRACED BY Warner DATE 11-12-29
CHECKED BY N. Gates DATE Nov. 15-29

FED ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN		19		

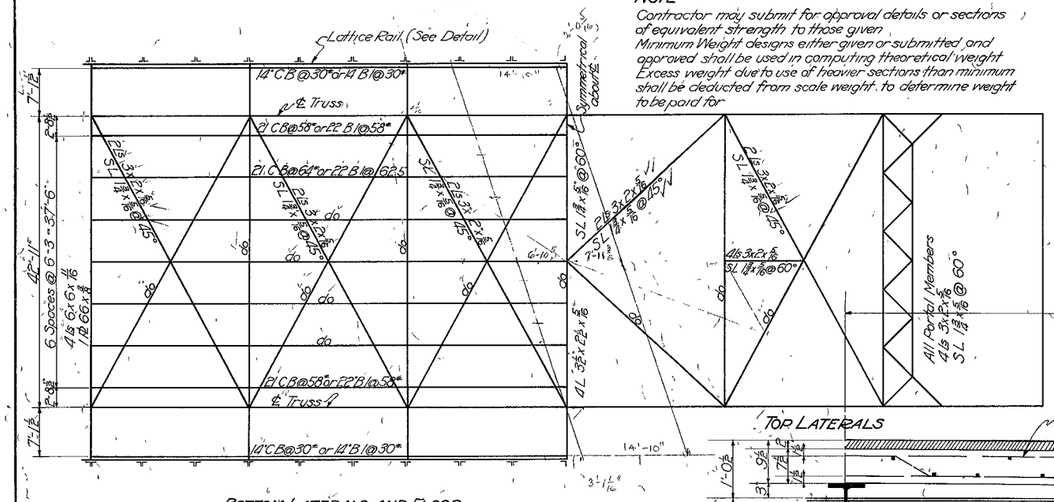
SBP 16A



TRUSSES

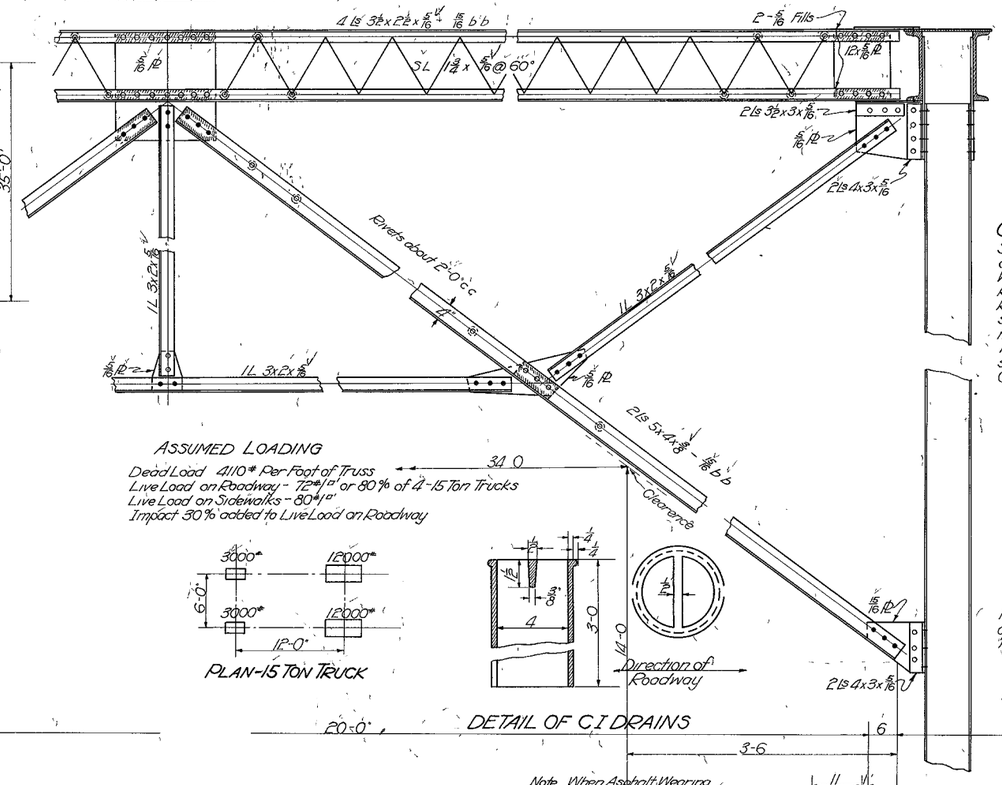
NOTE

Contractor may submit for approval details or sections of equivalent strength to those given.
Minimum Weight designs either given or submitted, and approved shall be used in computing theoretical weight.
Excess weight due to use of heavier sections than minimum shall be deducted from scale weight, to determine weight to be paid for.



TOP LATERALS

BOTTOM LATERALS AND FLOOR



ASSUMED LOADING

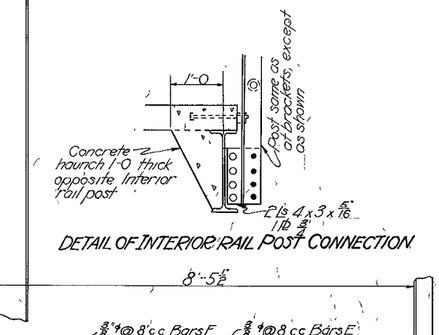
Dead Load 4110# Per Foot of Truss
Live Load on Roadway - 72#/□' or 80% of 4-15 Ton Trucks
Live Load on Sidewalks - 80#/□'
Impact 30% added to Live Load on Roadway

PLAN-15 TON TRUCK

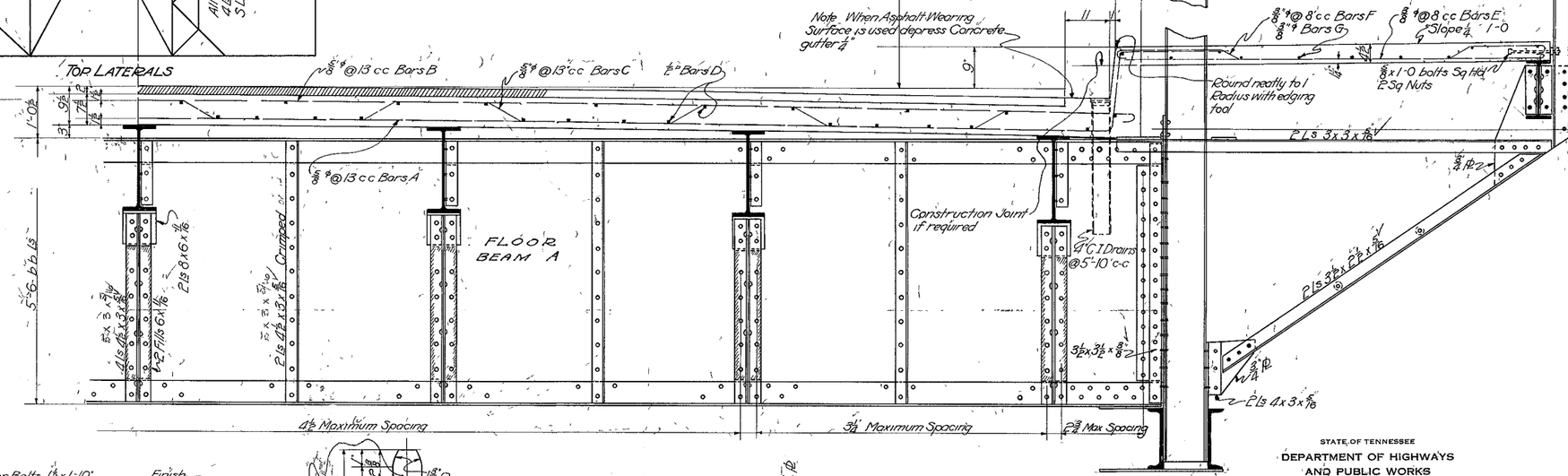
DETAIL OF C.I. DRAINS

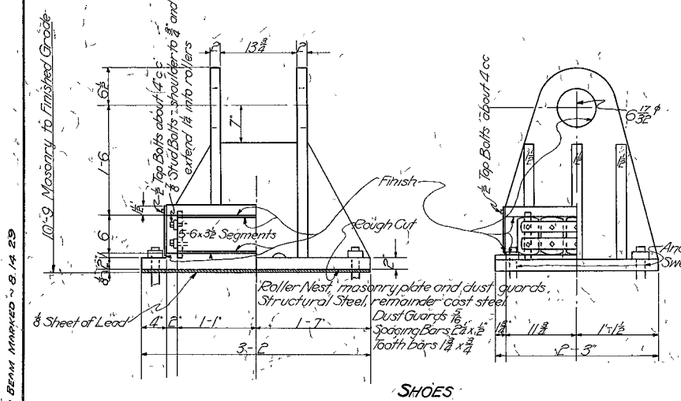
GENERAL NOTES

Specifications Standard Road & Bridge Specifications of the Tennessee Department of Highways & Public Works
Rivets - 3/4" except 7/8" in 2 Ls & 5/8" in 1 3/8 & 1 1/2 bars
Reaming Main Field Connections of Trusses shall be subpunched, assembled in the shop, reamed & match marked while assembled
Holes for connection of Floor beams to Trusses shall be subpunched & Reamed to a template 1" thick
Concrete in Floor shall be Class "A"

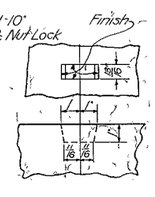


DETAIL OF INTERIOR RAIL POST CONNECTION

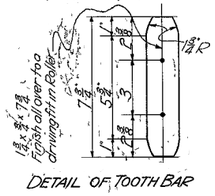




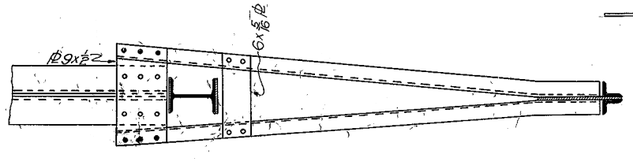
SHOES



DETAIL OF RECESS FOR TOOTH BAR



DETAIL OF TOOTH BAR



SECTION B-B

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

RIVETED HIGH TRUSS BRIDGE

SPAN 140'-0" ROADWAY 40'-0" SIDEWALKS 6'-6"
WITH CONCRETE FLOOR SLAB
1929

DESIGNED BY A. R. Stump DATE March 1931
DRAWN BY A. R. S. DATE "
TRACED BY W. J. Givens DATE 3-28-29
CHECKED BY L. A. Loos DATE March 1929

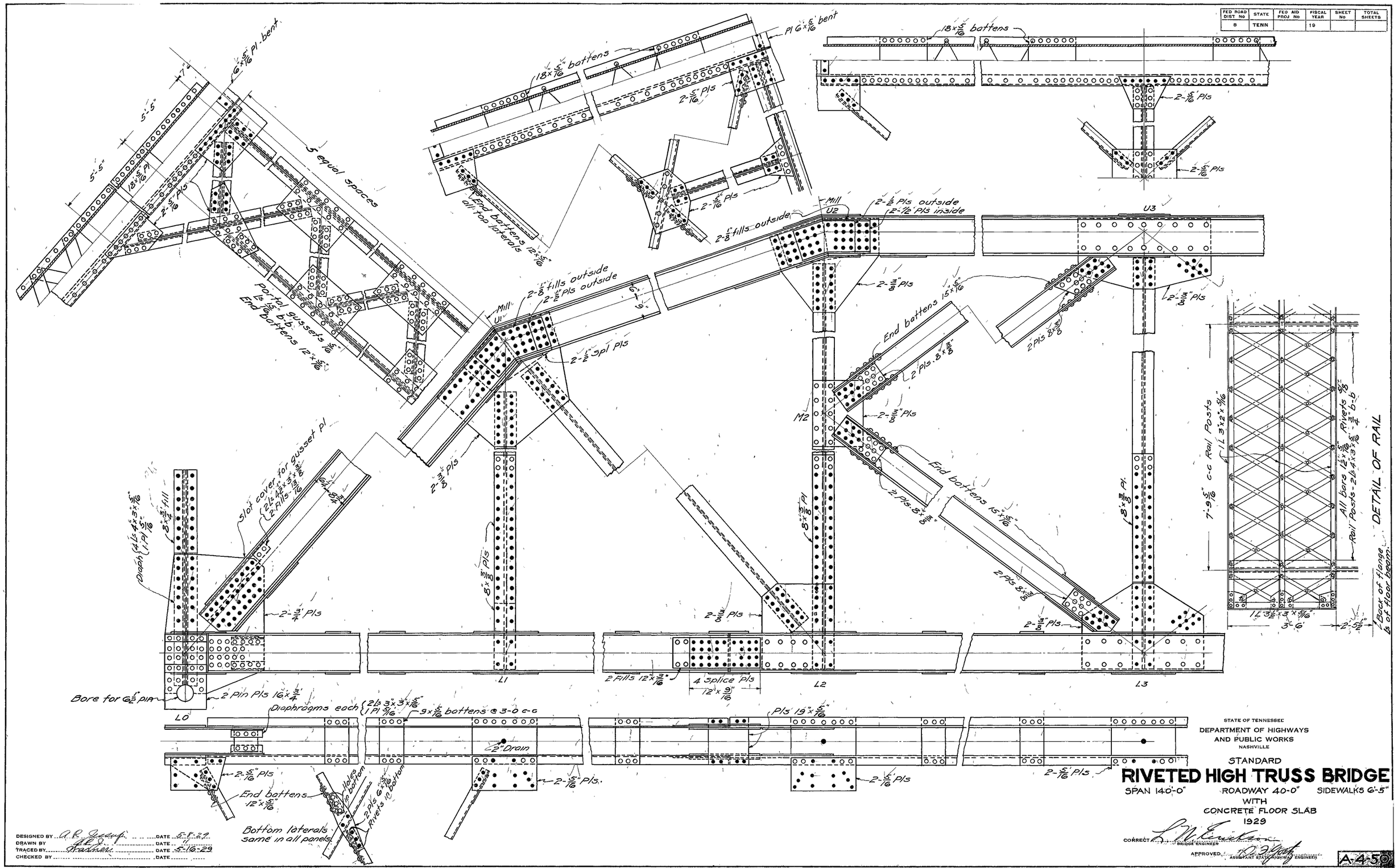
CORRECT L. W. Herndon BRIDGE ENGINEER
APPROVED O. E. Yates ASSISTANT STATE HIGHWAY ENGINEER

A-4-49

WITH A-4-50

FLOOR BEAM MARKED ~ 8 14 29

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN		19		



STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

STANDARD

RIVETED HIGH TRUSS BRIDGE

SPAN 140'-0" ROADWAY 40'-0" SIDEWALKS 6'-5"

WITH CONCRETE FLOOR SLAB

1929

CORRECT L. M. Erickson BRIDGE ENGINEER

APPROVED W. J. Hall ASSISTANT STATE HIGHWAY ENGINEER

A-450

WITH A-449 & A-455

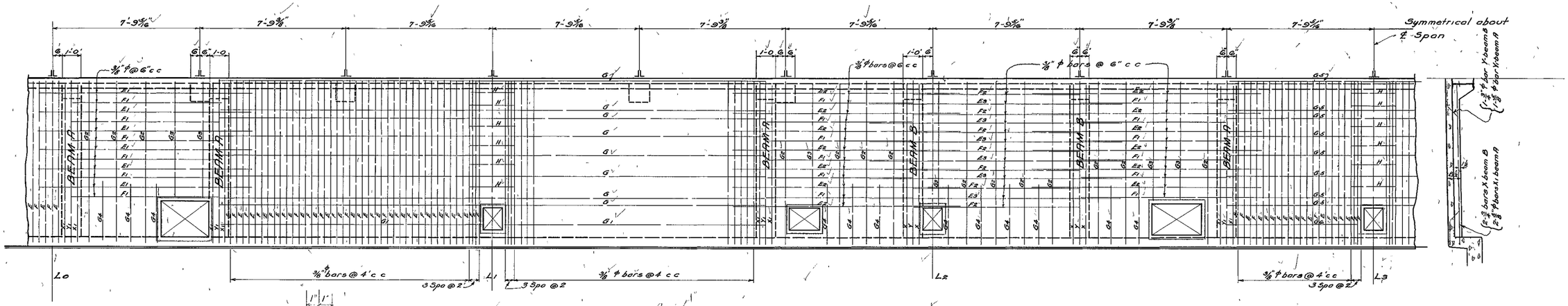
DESIGNED BY A. R. Jump DATE 5-8-29
DRAWN BY DATE
TRACED BY Fraiman DATE 5-16-29
CHECKED BY DATE

MICROFILMED

DATE OF LAST REVISION 8 14 29

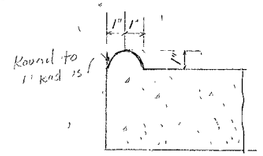
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN		19		

SBP16A



PLAN OF SIDEWALK

Openings shown, to clear Truss Members 2" all around

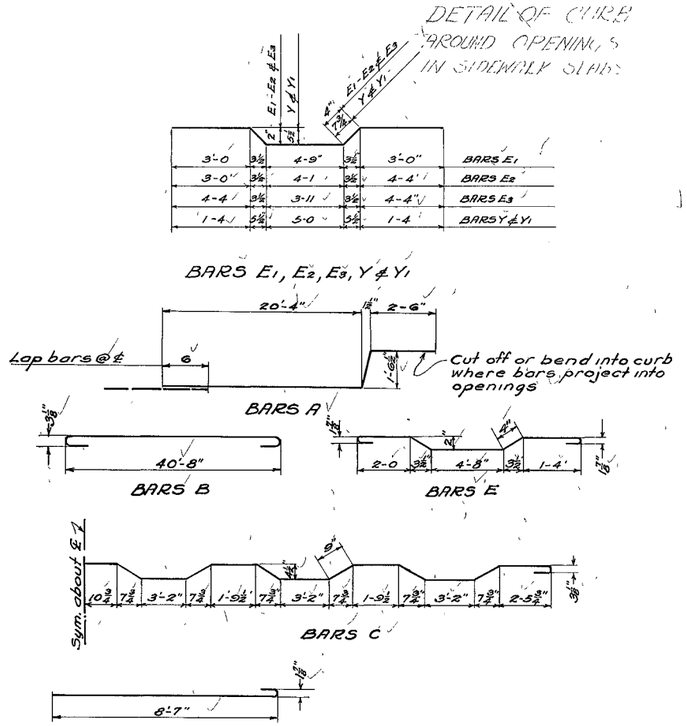


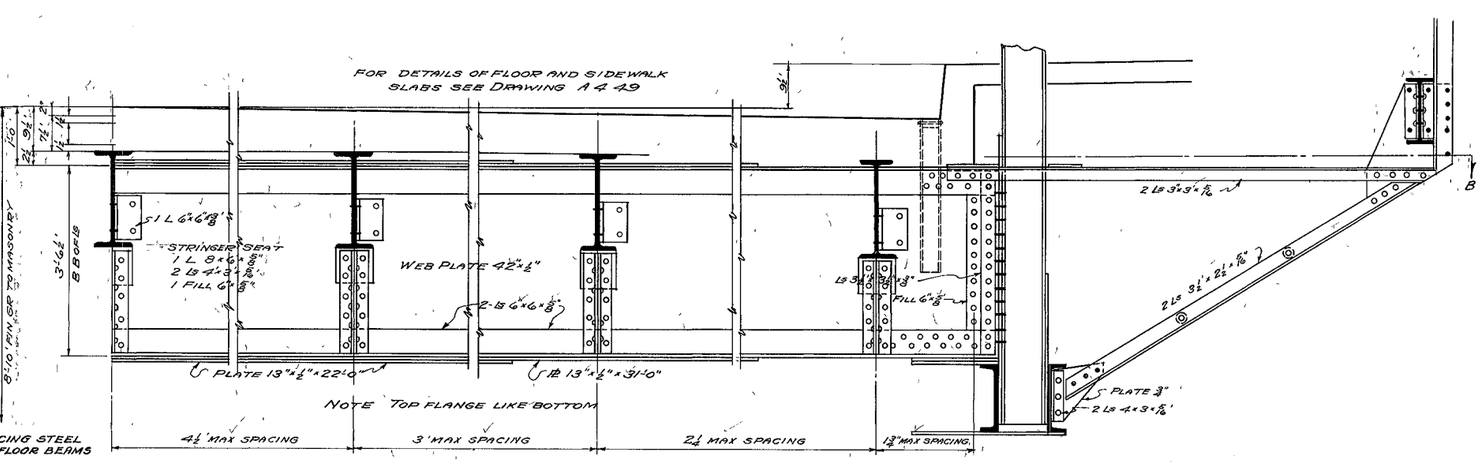
DETAIL OF CURB AROUND OPENINGS IN SIDEWALK SLABS

BILL OF REINFORCING STEEL

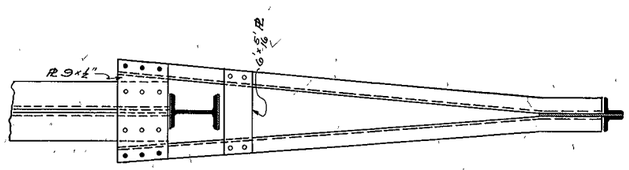
MARK	SIZE	NUMBER	LENGTH
A	3/8" ϕ	260	24'-5"
B	3/8" ϕ	130	41'-8"
C	3/8" ϕ	130	42-11
D	1/2" ϕ	192	37-0"
E	3/8" ϕ	216	9'-4"
E1	3/8" ϕ	24	11-5"
E2	3/8" ϕ	52	12'-1"
E3	3/8" ϕ	24	13'-3"
F	3/8" ϕ	216	8'-11"
F1	3/8" ϕ	72	7-9"
F2	3/8" ϕ	28	8'-9"
G	3/8" ϕ	32	29'-0"
G1	3/8" ϕ	8	13-9"
G2	3/8" ϕ	56	8-6
G3	3/8" ϕ	24	6-0"
G4	3/8" ϕ	48	3'-0"
G5	3/8" ϕ	16	15-6"
G6	3/8" ϕ	4	7-0"
H	3/8" ϕ	36	2-6
X	3/8" ϕ	16	8'-3"
X1	3/8" ϕ	32	8-3
Y	3/8" ϕ	8	9-0'
Y1	3/8" ϕ	16	9-0

NOTE BILL OF REINFORCING STEEL IS FIGURED C C END FLOOR BEAMS





FLOOR BEAM B



SECTION B B

Est Quants
Struct Steel 810,000 Lbs
Reinf " 37990 Lbs
Conc Class A 1762 Cu yds

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

RIVETED HIGH TRUSS BRIDGE

SPAN 140'-0" ROADWAY 40'-0" SIDEWALKS 6'-5"
WITH
CONCRETE FLOOR SLAB
1929

DESIGNED BY A. R. Jeffries DATE 5-10-29
DRAWN BY " DATE "
TRACED BY Moody Smotherman DATE May 16, 1929
CHECKED BY DATE

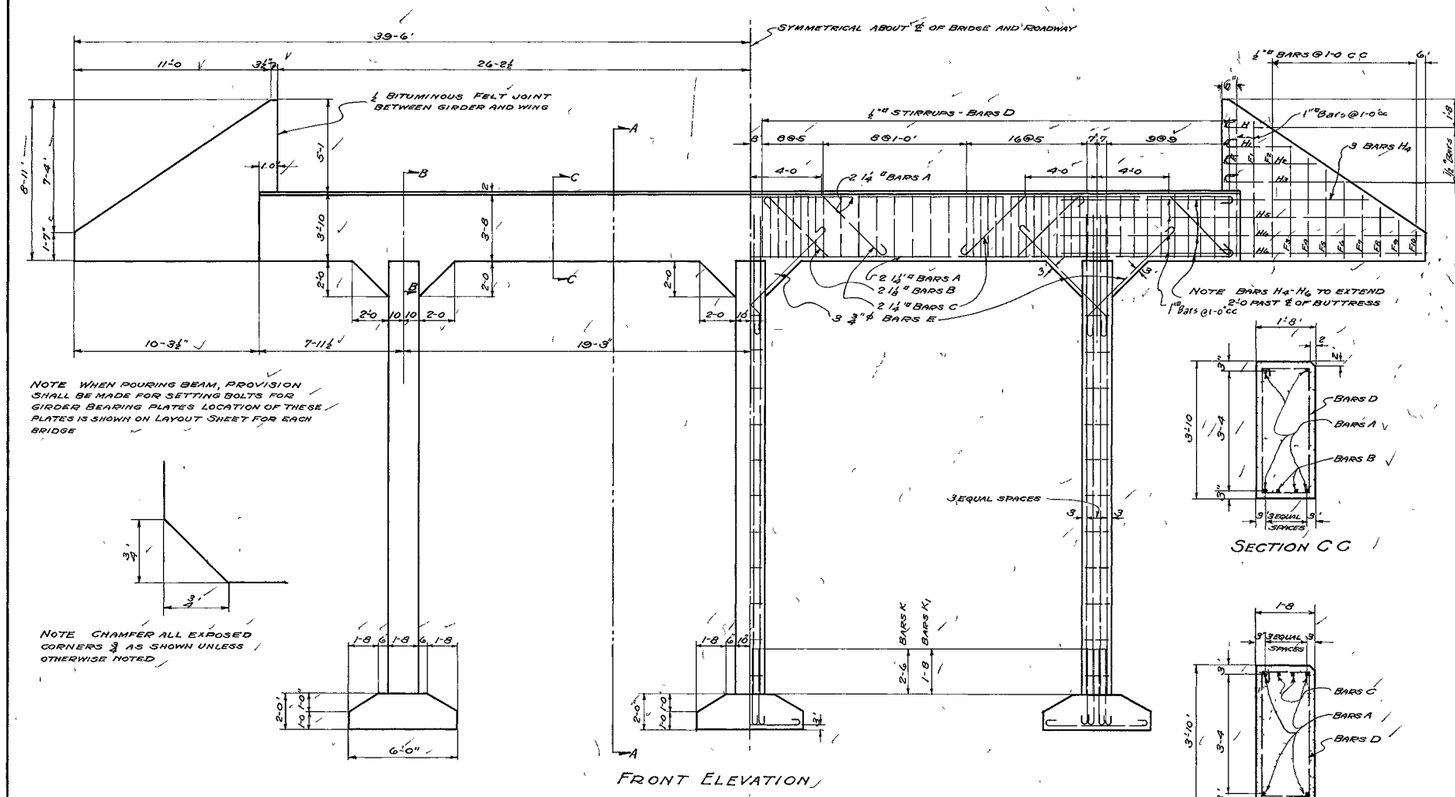
CORRECT L. W. Kenilworth BRIDGE ENGINEER
APPROVED O. Sixth ASSISTANT STATE HIGHWAY ENGINEER

A-4-55

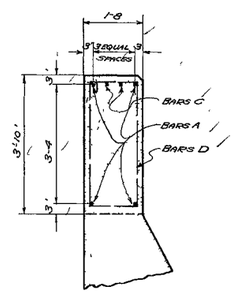
WITH A-4-49 & A-4-50

FLOOR BEAM B ADDED 8 14 29

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN		19		

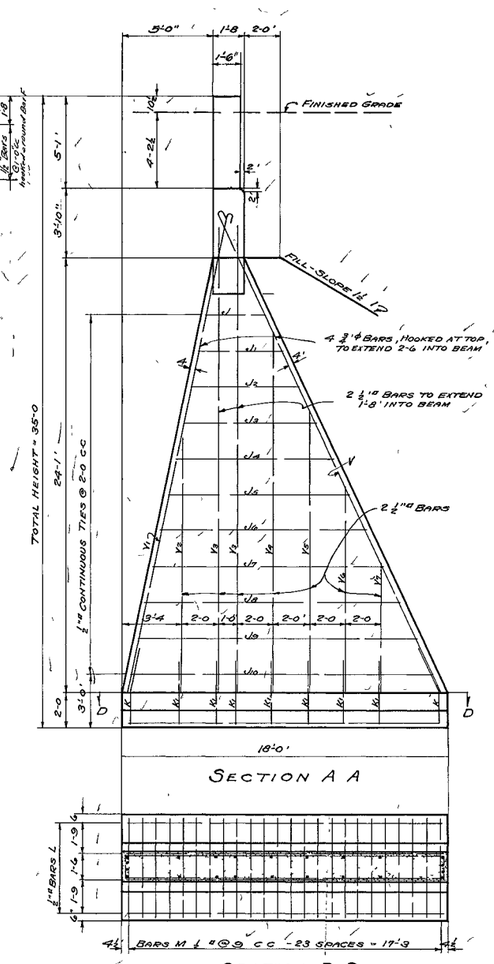


FRONT ELEVATION



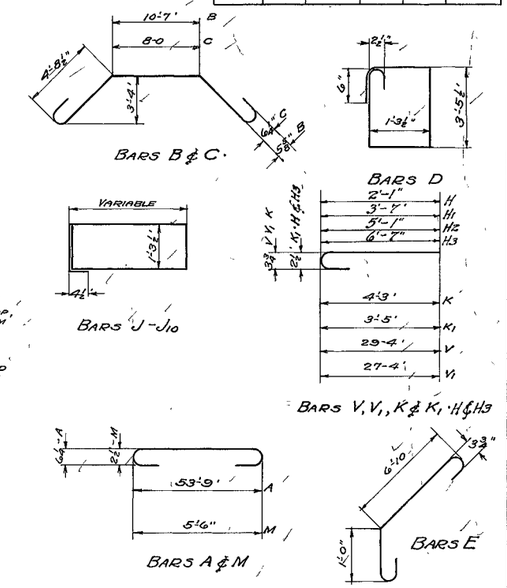
SECTION C C

SECTION B B



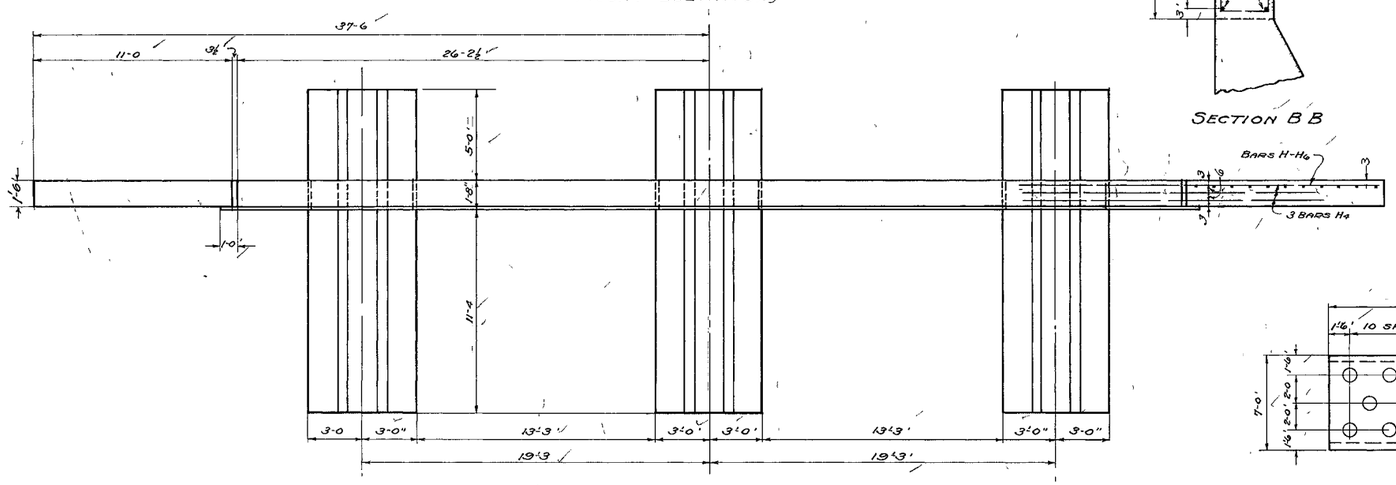
SECTION A A

SECTION D D

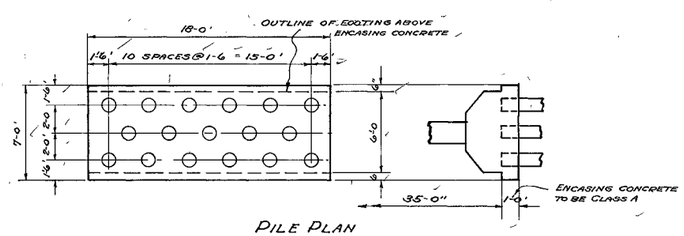


BILL OF STEEL

MARK	SIZE	NO	LENGTH	MARK	SIZE	NO	LENGTH
A	1¼" ϕ	4	55'-9"	V1	¾" ϕ	12	28'-0"
B	1¼" □	4	21'-10	V2	½" □	6	19'-9
C	1¼" □	6	19'-5"	V3	"	12	25'-9
D	½" □	86	10'-5"	V4	"	6	20'-0
E	¾" ϕ	18	9'-2"	V5	"	6	15'-9
F	1" □	2	8'-0"	V6	"	6	11'-6"
F1	1" □	2	7'-6"	V7	½" □	6	7'-3"
F2	½" □	2	6'-9"	J	½" □	3	10'-9"
F3	"	2	6'-0"	J1	"	3	13'-6"
F4	"	2	5'-6"	J2	"	3	16'-3
F5	"	2	4'-9	J3	"	3	19'-0
F6	"	2	4'-0"	J4	"	3	21'-9
F7	"	2	3'-6	J5	"	3	24'-3
F8	"	2	2'-9"	J6	"	3	27'-0
F9	"	2	2'-0"	J7	"	3	29'-9"
F10	½" □	2	1'-6"	J8	"	3	32'-6"
H	½" □	2	2'-6"	J9	"	3	35'-3
H1	"	2	4'-0"	J10	½" □	3	37'-9
H2	"	2	5'-6"	K	¾" ϕ	24	4'-11"
H3	½" □	2	7'-0"	K1	½" □	42	3'-10
H4	1" □	6	17'-0"	L	½" □	12	17'-6"
H5	"	2	18'-6"	M	½" □	72	6'-4"
H6	1" □	4	20'-0				
V	¾" ϕ	12	30'-0"				



PLAN



PILE PLAN

ESTIMATED QUANTITIES

REINFORCING STEEL	7354	LBS
CLASS 'A' CONCRETE	845	CU YDS
ENCASING CONCRETE (CL 'A')	12.5	CU YDS

GENERAL NOTES

SPECIFICATIONS STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS

CONCRETE TO BE CLASS A'

REINFORCING STEEL SEE SPECIFICATIONS

FORMS AND FINISH SEE SPECIFICATIONS

ROCK FOUNDATION SEE SPECIFICATIONS

ENCASING CONCRETE TO BE CLASS 'A'

SPECIAL NOTES

WHEN POURING ABUTMENT BEAM PROVISION SHALL BE MADE FOR SETTING GIRDER EXPANSION PLATES LOCATION OF THESE PLATES IS SHOWN ON LAYOUT SHEET FOR EACH BRIDGE

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

STANDARD

CONCRETE ABUTMENT

OPEN TYPE

HEIGHT 35'-0" ROADWAY 40'-0" SIDEWALKS 2 @ 5'-0"
FOR 40'-0 SPAN
1929

CORRECT: L. W. Trickey — BRIDGE ENGINEER

APPROVED: J. C. McCann — STATE HIGHWAY ENGINEER

A 4 121.

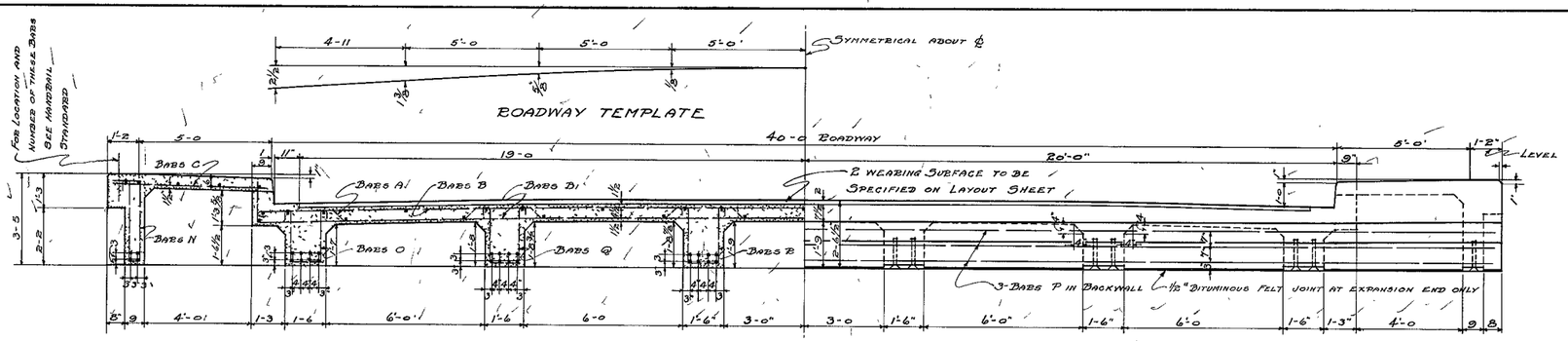
DESIGNED BY W. T. St Clair DATE
DRAWN BY W. T. St C DATE Oct. 1929
TRACED BY FRANK D. GRAVES DATE Nov. 19. 29.
CHECKED BY [illegible] DATE [illegible]

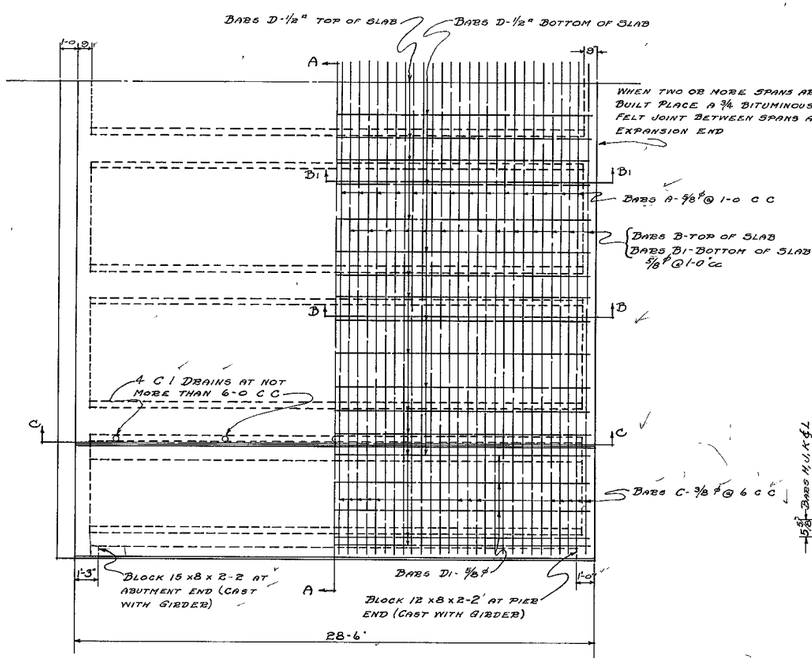
Revised Aug. Date by [illegible] 30-1-30

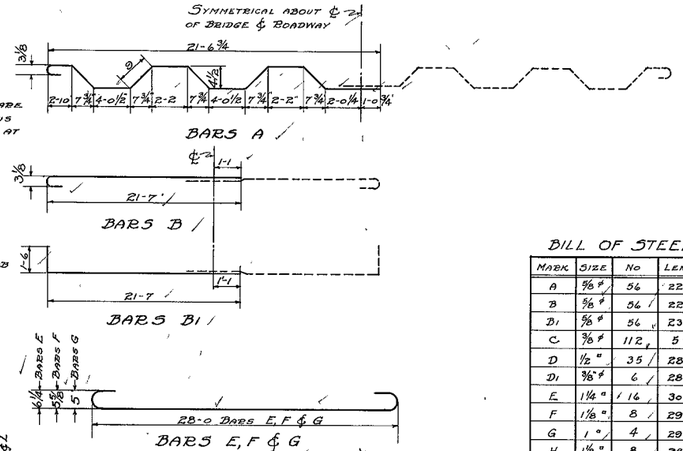
MICROFILMED

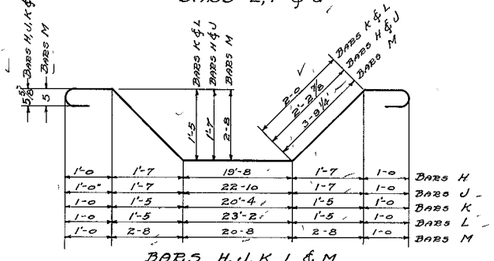
DATE OF LAST REVISION: 12-19-29

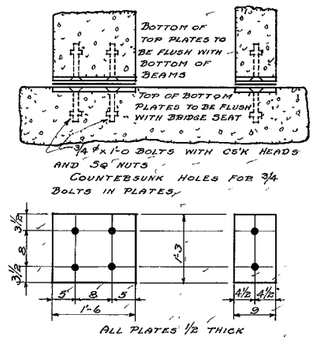
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN		19		







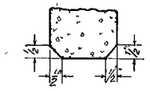




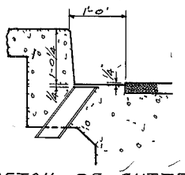
DETAILS OF STEEL PLATES FOR EXPANSION ENDS

16 GAUGE COPPER PLATES (SAME SIZE AS STEEL PLATES) TO BE USED BETWEEN TOP AND BOTTOM PLATES

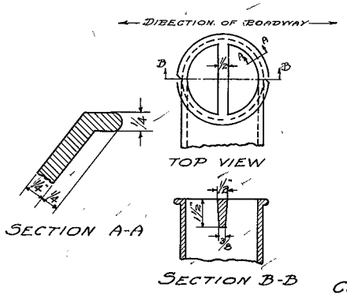
8 REQUIRED EACH EXPANSION END

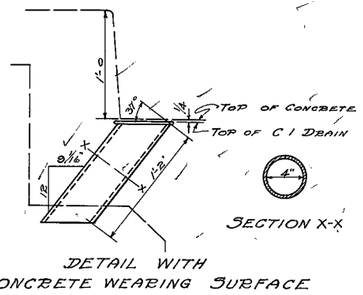


CHAMFER BOTTOM CORNERS OF ALL BEAMS 1/2" AS SHOWN



DETAIL OF GUTTER WITH BITUMINOUS SURFACING



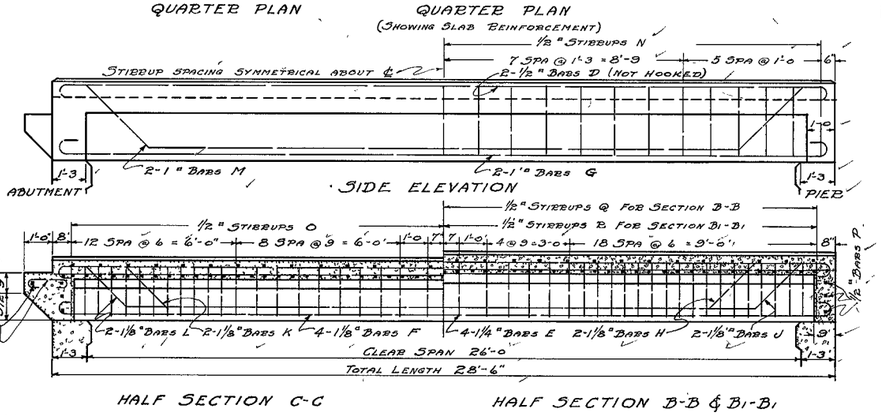


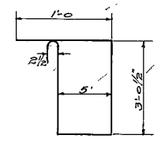
DETAILS OF 4 C.I. BOADWAY DRAIN PIPE

BILL OF STEEL

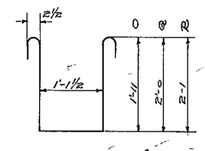
MARK	SIZE	No	LENGTH
A	5/8"ϕ	56	22-7
B	5/8"ϕ	56	22'-1
B1	5/8"ϕ	56	23'-1
C	3/8"ϕ	112	5-9
D	1/2"	35	28-0
D1	5/8"ϕ	6	28-0
E	1 1/4"	16	30-0
F	1 1/8"	8	29-10
G	1"	4	29-8
H	1 1/8"	8	28-0
J	1 1/8"	8	31-2
K	1 1/8"	4	28-2
L	1 1/8"	4	31-0
M	1"	4	31'-11
N	1/2"	50	7'-11
O	1/2"	88	5'-10'
P	1/2"	12	27'-3"
Q	1/2"	36	6-0
R	1/2"	36	6'-2
T	1/2"	*	2'-3
U	1/2"	*	27'-3'

* BARS T & U REQUIRED FOR ENDS OF BRIDGE ONLY FOR END SPAN FURNISH 52 BARS T & 2 BARS U, FOR SINGLE SPAN BRIDGES 104 BARS T & 4 BARS U





BARS N



BARS O, Q & R

GENERAL NOTES

SPECIFICATIONS STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS

CONCRETE SHALL BE CLASS "A"

REINFORCING STEEL SEE SPECIFICATIONS

ALL DIMENSIONS RELATING TO REINFORCEMENT ARE TO CENTERS OF BARS

FORMS AND FINISH SEE SPECIFICATIONS

ESTIMATED QUANTITIES FOR ONE INTERMEDIATE SPAN

CONCRETE CLASS A 624 CU YDS
REINFORCING STEEL 14609 LBS
STRUCTURAL STEEL 658 LBS

NOTE

FOR EACH END SPAN ADD 2.3 CU YDS CLASS A CONCRETE AND 146 LBS OF REINFORCING STEEL TO TAKE CARE OF BRACKET AND ADDITIONAL IN BLOCKS

THE COST OF C I DRAINS AND OF ALL BITUMINOUS FELT JOINTS SHALL BE INCLUDED IN THE PRICE PER CU YD OF CLASS A CONCRETE.

WHEN SURFACING IS CONCRETE ADD 6.7 CU YDS CLASS A CONCRETE TO ABOVE QUANTITIES

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

STANDARD

CONCRETE GIRDER BRIDGE

DECK GIRDER TYPE WITH 5'-0' SIDEWALKS
SPAN 26'-0" BOADWAY 40'-0"
1929

CORRECT L. N. Rentzer
BRIDGE ENGINEER

APPROVED J. C. McEwen
STATE HIGHWAY ENGINEER

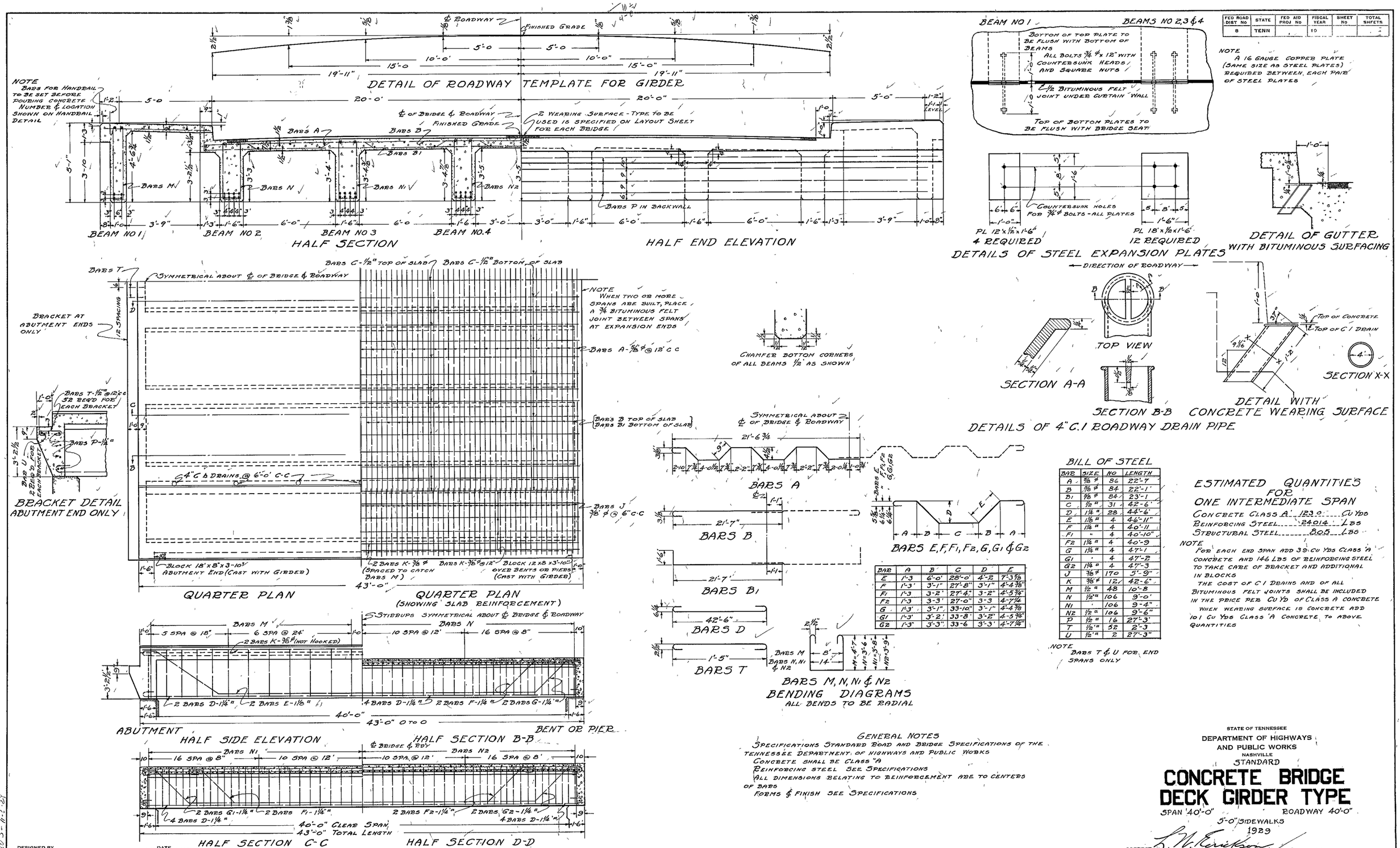
A-4-124

DESIGNED BY ..... DATE .....
DRAWN BY W. T. St. Clair DATE Oct 1924
TRACED BY Douglas Wells DATE 11-20-29
CHECKED BY ..... DATE .....

EXPANSION JOINT NOTE ADDED DEC 19 1929

MICROFILMED

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN		10		



BAR	A	B	C	D	E
E	1'-3	6'-0"	28'-0"	4'-2	7'-3 7/8
F	1'-3'	3'-1"	27'-8"	3'-1"	4'-4 7/8"
F1	1'-3	3'-2'	27'-4"	3'-2"	4'-5 3/4"
F2	1'-3	3'-3'	27'-0"	3'-3	4'-7 1/4
G	1'-3'	3'-1",	33'-10"	3'-1"	4'-4 7/8
G1	1'-3'	3'-2'	33'-8'	3'-2"	4'-5 3/4"
G2	1'-3"	3'-3",	33'-6	3'-3'	4'-7 1/4"

BILL OF STEEL

BAR	SIZE	NO	LENGTH
A	7/8" ø	86	22'-7
B	7/8" ø	84	22'-1'
B1	7/8" ø	84	23'-1
C	1/2" ø	31	42'-6'
D	1 1/4" ø	28	44'-6'
E	1 1/8" ø	4	4'-6'-11"
F	1 1/8" ø	4	4'-0'-11
F1	"	4	4'-0'-10"
F2	1 1/8" ø	4	4'-0'-9
G	1 1/4" ø	4	4'-7'-1
G1	"	4	4'-7'-2
G2	1 1/4" ø	4	4'-7'-3
J	3/8" ø	170	5'-9"
K	3/8" ø	12	42'-6'
M	1/2" ø	48	10'-8
N	1/2" ø	106	9'-0'
N1	"	106	9'-4"
N2	1/2" ø	106	9'-6"
P	1/2" ø	16	27'-3'
T	1/2" ø	52	2'-3
U	1/2" ø	2	27'-3"

NOTE
BARS T & U FOR END SPANS ONLY

ESTIMATED QUANTITIES FOR ONE INTERMEDIATE SPAN

CONCRETE CLASS A 123.0 CU YDS
REINFORCING STEEL 24014 LBS
STRUCTURAL STEEL 805 LBS

NOTE
FOR EACH END SPAN ADD 39 CU YDS CLASS 'A' CONCRETE AND 146 LBS OF REINFORCING STEEL TO TAKE CARE OF BRACKET AND ADDITIONAL IN BLOCKS
THE COST OF C.I. DRAINS AND OF ALL BITUMINOUS FELT JOINTS SHALL BE INCLUDED IN THE PRICE PER CU YD OF CLASS A CONCRETE
WHEN WEARING SURFACE IS CONCRETE ADD 101 CU YDS CLASS 'A' CONCRETE TO ABOVE QUANTITIES

GENERAL NOTES
SPECIFICATIONS STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
CONCRETE SHALL BE CLASS "A"
REINFORCING STEEL SEE SPECIFICATIONS
ALL DIMENSIONS RELATING TO REINFORCEMENT ARE TO CENTERS OF BARS
FORMS & FINISH SEE SPECIFICATIONS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE
STANDARD

CONCRETE BRIDGE DECK GIRDER TYPE

SPAN 40'-0" ROADWAY 40'-0"
5'-0" SIDEWALKS
1929

CORRECT L. N. Erickson BRIDGE ENGINEER
APPROVED H. G. Mason STATE HIGHWAY ENGINEER

A-4-125

DESIGNED BY
DRAWN BY W. T. St. Clair DATE Oct 1929
TRACED BY Douglas Wells DATE 10-30-29
CHECKED BY DATE

MICROFILMED