AMERICAN ENGINEERING CO.
CONSULTING ENGINEERS
LEXINGTON, KENTUCKY

DESIGNED BY S.L.M. DATE 4-1-75
DETAILED BY S.L.M. DATE 4-15-75
CHECKED BY S.M.H. DATE 4-15-75
TRACED BY S.L.M. DATE
REVISED DATE
REVISED DATE
REVISED DATE

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

KENTON-CAMPBELL COUNTIES BRIDGE OVER LICKING RIVER AT VISALIA

REFERENCE AND ESTIMATE OF QUANTITIES

ITEM / LOCATION	SHEET NO.	CLASS "A" CONCRETE	CLASS "AA" CONCRETE	REINF. STEEL	STRUCTURE EXCAVATION		END BENT BACKFILL	STRUCTURAL STEEL	CYCLOPEAN STONE SLOPE PROTECTION	ELECTRICAL CONDUIT	COFFER-DAMS	PILES: HP 12x53		6" ϕ DRAIN PIPE	TRANSFLEX 400A NEOPRENE EXP. DAM.	TRANSFLEX 650 NEOPRENE EXP. DAM.	CONCRETE OVERLAY ALTERNATE A LATEX	CONCRETE OVERLAY ALTERNATE B PORTLAND CEMENT	EPOXY SAND SLURRY	BLAST CLEANING		
					COMMON	SOLID ROCK						FURNISH	DRIVE									
		CU. YDS.	CU. YDS.	LBS.	CU. YDS.	CU. YDS.	LUMP SUM	LUMP SUM	TONS	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	CU. YDS.	CU. YDS.	STD. BATCH	SQ. YDS.		
TITLE AND QUANTITIES	1																					
GENERAL NOTES	2																					
"	3																					
SOUNDINGS	4,5																					
LAYOUT AND ELEVATION	6																					
PILE RECORD	7																					
END BENT 1	8,9	64.1	46.7	8270			(8)					1005	1005									
PIER 1	10,11	180.0		29600	190				87			505	505									
PIER 2	12,13	423.5		75670	460	90			109		(6)											
PIER 3	12,13	427.1		76330	715	110			109		(6)											
PIER 4	10,11	173.9		28740	125							888	888									
END BENT 2	8,9	64.1	47.2	8270			(8)		See Roadway Plans			1564	1564									
STRUCTURAL STEEL	14,15,16,17							(1)														
SUPERSTRUCTURE	18,19,20		909.6	194880						(3)				192			135.2	135.2	19	3266		
ELECTRICAL CONDUIT	20																					
EXPANSION DAMS	21, 22										**				47.5	47.5						
CONSTRUCTION ELEVATIONS	23,24																					
SUBSTRUCTURE TOTALS, KENTON CO.		667.6	46.7	113540	650	90	(8)		196		(6)	1510	1510									
SUPERSTRUCTURE TOTALS, KENTON CO.			494.8	97410				(2)		(4)				96		47.5	67.6	67.6	9.5	1633		
GRAND TOTALS, KENTON CO.		667.6	541.5	210980	650	90	(8)	(2)	196	(4)	(6)	1510	1510	96		47.5	67.6	67.6	9.5	1633		
SUBSTRUCTURE TOTALS, CAMPBELL CO.		665.1	47.2	113340	840	110	(8)		109		(6)	2452	2452									
SUPERSTRUCTURE TOTALS, CAMPBELL CO.			484.6	97410				(2)		(4)				96	47.5		67.6	67.6	9.5	1633		
GRAND TOTALS, CAMPBELL CO.		665.1	532.0	210780	840	110	(8)	(2)	109	(4)	(6)	2452	2452	96	47.5		67.6	67.6	9.5	1633		
SUBSTRUCTURE TOTALS		1332.7	93.9	226880	1490	200	(7)		305		(5)	3962	3962									
SUPERSTRUCTURE TOTALS			969.6	194860				(1)		(3)				192	47.5	47.5	135.2	135.2	19	3266		
GRAND TOTALS		1332.7	1063.5	421760	1490	200	(7)	(1)	305	(3)	(5)	3962	3962	192	47.5	47.5	135.2	135.2	19	3266		

(1) Approximate weight of structural steel = 1,247,280
(2) Approximate weight of structural steel = 623,640
(3) Total lump sum.
(4) Half total lump sum.
(5) Total lump sum for Cofferdams at Piers 2 & 3.
(6) Lump sum for one Pier.
(7) Total lump sum, for End Bent 1 & 2.

(8) (End Bent 1) Approximate Volume of Common Excavation is 125 cu. yds.
(End Bent 1) Approximate Volume of End Bent Backfill is 185 cu. yds.
(8) (End Bent 2) Approximate Volume of Common Excavation is 125 cu. yds.
(End Bent 2) Approximate Volume of End Bent Backfill is 185 cu. yds.

SPECIAL PROVISIONS

No. 30B - Membrane Curing of Concrete Structures * *
No. 35D - Class "AA" Concrete
No. 36B - Set Retarding Admixture for Concrete
No. 45D - Water Pollution Control
No. 48A - Bridge Deck Repairs
No. 80B - Blast Cleaning and Painting of Structural Steel
No. 99A - Concrete Surface Finish
No. 101A - Welding Steel Bridges
No. 102 - Coarse Aggregates
No. 109C - Latex Concrete Overlay
No. 123 - Portland Cement Concrete Overlay
** Do not apply membrane curing compound to bridge deck.

REFERENCES

Standard Drawings listed below are the Current Edition and are to be used with these plans.

STANDARD DRAWINGS

BGB-001-02
BGB-002-02
BGB-003-02
BGX-006
BJE-001-02
BPS-003

BILL OF INCIDENTAL MATERIAL

ITEM	NO.	DESCRIPTION	LOCATION
Plastic Pipe	24	1" ϕ Inside Diameter	See Sheet 8 & Rdwy. Plans.

AMERICAN ENGINEERING CO.
CONSULTING ENGINEERS
LEXINGTON, KENTUCKY

SIGNED Homer M. Walker
DATE 11-14-75

STATE OF KENTUCKY
HOMER M. WALKER
3153
REGISTERED
PROFESSIONAL ENGINEER

Licking River Bridge at Visalia — Sheet 1 of 24

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE - ALEXANDRIA
ROAD SP-59-625-3L
STATION 160+90.00 **P. E. PROJECT NO.** SP-19-116-2L

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
SP59-625-3B1		19305

UPDATE DATE

LETTING DATE

GENERAL NOTES

SPECIFICATIONS:

KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION WITH REVISIONS, SHALL APPLY TO THIS PROJECT.

DESIGN LOAD:

THIS BRIDGE IS DESIGNED FOR HS 20-44 LIVE LOAD AS SPECIFIED IN 1973 AASHO SPECIFICATIONS OR ALTERNATE LOADING OF TWO 24 KIP AXLES SPACED FOUR FEET APART, WHICHEVER PRODUCES THE GREATER STRESS. THIS BRIDGE IS DESIGNED FOR A WIND LOAD BASED ON A WIND VELOCITY OF 84 M.P.H.

DESIGN STRESSES:

FOR CLASS "AA" REINF. CONC.	FOR CLASS "A" REINF. CONC.
f_s = 20,000 PSI	f_s = 20,000 PSI
f_c = 1,200 PSI FOR DECK SLABS	f_c = 1,200 PSI
f_c = 1,600 PSI FOR OTHER THAN SLABS	f'_c = 3,000 PSI
f'_c = 4,000 PSI	u = 200 PSI FOR EMBEDMENT
u = 200 PSI FOR EMBEDMENT	u = 300 PSI FOR E_o
u = 300 PSI FOR E_o	n = 10
n = 8	

STRUCTURE STEEL

f_s = 20,000 PSI (A-36)

FOUNDATION PRESSURE:

FOOTINGS AS DESIGNED HAVE A MAXIMUM PRESSURE OF 12,500 P.S.F. PILES AS DESIGNED HAVE A MAXIMUM AXIAL LOAD OF 61 TONS PER PILE AND A MAXIMUM HORIZONTAL SHEAR OF 2.0 TONS PER PILE.

SPECIAL CARE SHALL BE TAKEN NOT TO DISTURB THE BOTTOM OF PIER FOOTING EXCAVATIONS, AND THE FINAL REMOVAL OF THE FOUNDATION MATERIAL TO GRADE SHALL NOT BE MADE UNTIL IMMEDIATELY PRIOR TO THE CONCRETE BEING PLACED. ADDITIONAL EXCAVATION DUE TO NON-COMPLIANCE WITH THE ABOVE NOTE WILL BE AT THE CONTRACTOR'S EXPENSE.

A IMPERVIOUS BACKFILL MATERIAL (AASHO CLASSIFICATION A-6 OR A-7 SOIL) SHALL BE UTILIZED AT ALL FOOTINGS TO PREVENT SURFACE WATER FROM PERCOLATING TO THE BEARING MATERIAL. THE BACKFILL MATERIAL SHALL BE PLACED AS SOON AFTER CONSTRUCTION OF THE FOOTINGS AS POSSIBLE. PAYMENT FOR THE IMPERVIOUS BACKFILL MATERIAL SHALL BE INCLUDED IN THE LUMP SUM BID FOR END BENT BACKFILL.

CONCRETE:

CLASS "AA" CONCRETE IS TO BE USED THROUGHOUT THE SUPERSTRUCTURE AND IS TO BE USED IN THE PORTIONS OF THE SUBSTRUCTURE ABOVE THE BEARING SEATS. CLASS "A" CONCRETE IS TO BE USED IN THE SUBSTRUCTURE BELOW THE BEARING SEATS.

REINFORCEMENT:

DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE CLEAR DISTANCES UNLESS OTHERWISE SHOWN. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS.

BEVELED EDGES:

ALL EXPOSED EDGES SHALL BE BEVELED 7/8" UNLESS OTHERWISE SHOWN.

BILL OF INCIDENTAL MATERIAL:

THE QUANTITIES SHOWN IN THE BILL OF INCIDENTAL MATERIAL ARE APPROXIMATE ONLY AND THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ENOUGH MATERIAL TO COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE COST OF THESE ITEMS IS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "AA" CONCRETE.

PILING:

PILING SHALL BE DRIVEN TO REFUSAL OR TO SOLID ROCK. TEST PILES SHALL BE DRIVEN WHERE DESIGNATED ON THE PLANS TO DETERMINE THE LENGTH OF PILE REQUIRED. ALL TEST PILES SHALL BE ACCURATELY LOCATED SO THAT THEY MAY BE USED IN THE FINISHED STRUCTURE.

TYPE OF PILES:

THE CONTRACTOR SHALL USE HP 12 X 53 PILES THROUGHOUT THE STRUCTURE IN ACCORDANCE WITH STANDARD DRAWING BPS-003, CURRENT EDITION.

COFFERDAMS:

COFFERDAMS SHALL BE REQUIRED FOR PIERS 2 AND 3 AND ALL PROVISIONS OF THE SPECIFICATIONS SHALL APPLY, EXCEPT AS HEREIN MODIFIED. THE CONTRACTOR SHALL SUBMIT DRAWINGS TO THE ENGINEER FOR REVIEW WHICH SHOW HIS PROPOSED METHOD OF COFFERDAM CONSTRUCTION. COFFERDAM CONSTRUCTION SHALL NOT START BEFORE THESE SUBMITTED DRAWINGS HAVE BEEN REVIEWED AND HAVE BEEN APPROVED AS DIRECTED IN THE SPECIFICATIONS. SHEETING SHALL BE DRIVEN TO REFUSAL INTO THE HARD FOUNDATION MATERIAL. COFFERDAMS SHALL BE WELL BRACED, AS NEAR WATER TIGHT AS PRACTICABLE AND SHALL BE CONSTRUCTED TO ALLOW FOR CONCRETE FOUNDATION SEAL, IF REQUIRED. COFFERDAMS WHICH ARE TILTED OR MOVED LATERALLY DURING CONSTRUCTION DUE TO ANY CAUSE SHALL BE RIGHTED, RESET OR ENLARGED SO AS TO PROVIDE THE CLEARANCE NECESSARY FOR THE CONSTRUCTION OF THE SUBSTRUCTURE AS SHOWN ON THE PLANS, AND THIS SHALL BE AT THE SOLE EXPENSE OF THE CONTRACTOR. ALL SHEETING SHALL BE REMOVED OR CUT OFF AT THE TOP OF THE EXCAVATION. COFFERDAMS FOR PIERS 2 AND 3 WILL BE PAID FOR AT THE LUMP SUM BID FOR "COFFERDAMS" WHICH PAYMENT SHALL INCLUDE AND BE FULL COMPENSATION FOR ANY REQUIRED PLANS, FOR FURNISHING, HAULING AND PLACING ALL NECESSARY MATERIALS, CONSTRUCTION AND MAINTENANCE, UNWATERING, REMOVAL OF BRACING AND REMOVAL OF OR CUTTING OFF OF SHEETING, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS PART OF THE WORK. IF FOUNDATION SEALS ARE REQUIRED ALL ADDITIONAL COSTS SHALL BE AS PROVIDED FOR IN THE SPECIFICATIONS.

BLASTING NEAR PIER SITES:

THE BEARING VALUE OF THE ROCK LOCATED UNDER THE PROPOSED BRIDGE PIERS MUST BE PRESERVED FROM DAMAGE BY BLASTING, BY CONCUSSION FROM BLASTING, OR BY EXCESSIVE BACKBREAKAGE. ANY INCREASES IN STRUCTURE COSTS CAUSED BY BLASTING TO THE BRIDGE FOUNDATIONS SHALL BE AN EXPENSE OF THE CONTRACTOR.

CONSTRUCTION IDENTIFICATION:

THE NAMES OF THE PRIME CONTRACTOR AND THE SUB-CONTRACTOR SHALL BE IMPRINTED IN THE CONCRETE WITH ONE INCH LETTERS AT A LOCATION DESIGNATED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ALL PLANS, EQUIPMENT AND LABOR NECESSARY TO DO THE WORK FOR WHICH NO DIRECT PAYMENT WILL BE MADE.

ANCHOR BOLT HOLES:

HOLES OF DEPTHS AND DIMENSIONS SHOWN SHALL BE DRILLED FOR THE ANCHOR BOLTS, AFTER THE STEEL SUPERSTRUCTURE HAS BEEN ERECTED, BY THE SUPERSTRUCTURE CONTRACTOR WHO SHALL BE RESPONSIBLE FOR KEEPING HOLES DRY IN FREEZING WEATHER. AFTER BASE PLATES ARE PROPERLY SET, STEEL ERECTED AND HOLES DRILLED, THE ANCHOR BOLTS ARE PLACED IN THE DRILLED HOLES, MOLTEN LEAD SHALL BE POURED IN THE DRILLED HOLES AND PACKED UNTIL THE HOLES ARE COMPLETELY FILLED FLUSH TO THE TOP OF THE BASE PLATES. THE COST OF DRILLING ANCHOR BOLT HOLES, FURNISHING LEAD AND FILLING HOLES WITH MOLTEN LEAD SHALL BE INCIDENTAL TO AND INCLUDED IN THE LUMP SUM BID FOR STRUCTURAL STEEL.

NEOPRENE EXPANSION DAMS:

THE NEOPRENE EXPANSION DEVICES SHALL BE IN ACCORDANCE WITH TRANSFLEX MODELS 650 AND 400A AS DESIGNED AND DETAILED BY THE GENERAL TIRE AND RUBBER COMPANY, INDUSTRIAL PRODUCTS DIVISION, WABASH, INDIANA. THE EXPANSION DEVICES SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER AND UNDER THE MANUFACTURER'S SUPERVISION. THE EXPANSION DEVICES SHALL BE PAID FOR AT THE UNIT PRICE BID PER LINEAL FOOT AND SHALL INCLUDE ALL MATERIALS, TOOLS, EQUIPMENT, SUPPLIES, LABOR AND OTHER INCIDENTALS NECESSARY TO THE SATISFACTORY COMPLETION OF MANUFACTURE AND INSTALLATION.

ELECTRICAL CONDUIT:

THE LUMP SUM BID FOR THIS ITEM SHALL INCLUDE FURNISHING ALL JUNCTION BOXES, CONDUIT AND OTHER MATERIALS AND LABOR NECESSARY FOR PLACING THESE MATERIALS IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

SURFACE FINISH OF CLASS "AA" CONCRETE IN THE BRIDGE DECK:

THE DECK OF THIS STRUCTURE IS TO RECEIVE AN OVERLAY, THEREFORE, THE BURLAP DRAG FINISH SPECIFIED BY ARTICLE 411.3.3-H.5 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1965 EDITION, IS ELIMINATED, NOR WILL ANY SURFACE TEXTURING BEYOND 10-FT. STRAIGHTEDGE (ARTICLE 411.3.3-H.4) BE PERMITTED. THE CONTRACTOR IS CAUTIONED THAT THE PROPOSED DECK OVERLAYS ARE VERY SENSITIVE TO OILS, GREASE, PAINTS, WAXES AND SIMILAR SUBSTANCES AND IF THESE SUBSTANCES ARE DEPOSITED ON THE DECK, HE WILL BE RESPONSIBLE FOR THEIR COMPLETE REMOVAL WHICH MAY INCLUDE REMOVAL AND REPLACEMENT OF THE AFFECTED CONCRETE TO THE DEPTH THE SUBSTANCES HAVE PENETRATED. ANY EXPENSE OF THIS REMOVAL WILL BE BORNE BY THE CONTRACTOR.

CURING OF CLASS "AA" CONCRETE IN THE BRIDGE DECK:

THE DECK OF THIS STRUCTURE IS TO RECEIVE AN OVERLAY, THEREFORE, MEMBRANE CURING AS SPECIFIED IN SPECIAL PROVISION NO. 30-B IS NOT APPLIED TO THE BRIDGE DECK. THE CONCRETE DECK, INCLUDING PORTIONS OF THE CURBS AND/OR BARRIER WALLS DESIGNATED, MUST BE CURED IN CONFORMITY WITH ARTICLE 403.3.7 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1965 EDITION WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

1. NO CURING COMPOUND, STYRENE BUTADIENE, LINSEED OIL, MASONRY COATING, FORM OIL OR SIMILAR SUBSTANCES WILL BE PERMITTED ON THE CLASS "AA" CONCRETE DECK SURFACE NOR FOR SIX INCHES VERTICALLY ABOVE THE CLASS "AA" CONCRETE GUTTER LINE OF THE INTERIOR FACES OF BARRIER WALLS.
2. AS SOON AFTER FINAL FINISH OF THE CONCRETE AS POSSIBLE ONE THICKNESS OF PRE-WETTED BURLAP MUST BE APPLIED AND KEPT MOIST BY A FOG OF SPRAY APPLICATION OF WATER. THIS ONE THICKNESS OF BURLAP MUST BE FOLLOWED, AS SOON AS POSSIBLE, WITHOUT DAMAGING THE SURFACE OF THE CONCRETE, WITH AN ADDITIONAL LAYER OF WET BURLAP, COTTOM MATS, ETC., AS REQUIRED BY ARTICLE 403.3.7.
3. THE REQUIRED INITIAL LAYER OF BURLAP SHALL BE PRE-WETTED BY COMPLETE SATURATION WITH WATER EXCEPT THAT IT SHALL BE SQUEEZED FREE OF EXCESS WATER THAT WILL DAMAGE THE CONCRETE SURFACE BY DRIPPING. THE PRE-WETTED BURLAP MUST BE APPLIED FROM WORK BRIDGES AND WALKWAYS IN A MANNER THAT WILL PRECLUDE WORKMEN OR TOOLS DAMAGING THE FRESH CONCRETE SURFACE. THE PRE-WETTED BURLAP MUST BE APPLIED IN A MANNER THAT WILL PREVENT IT FROM BEING DRAGGED, UNTANGLED, OR UNROLLED ON THE FRESH CONCRETE SURFACE AND DAMAGING IT.

ALTERNATE TYPES OF CONCRETE OVERLAY:

THE CONTRACTOR SHALL USE, AT HIS OPTION, ONE OF THE FOLLOWING ALTERNATES THROUGHOUT THE PROJECT:

ALTERNATE A - CONCRETE OVERLAY, LATEX, IN ACCORDANCE WITH SPECIAL PROVISION NO. 108, CURRENT EDITION.

ALTERNATE B - CONCRETE OVERLAY, PORTLAND CEMENT, IN ACCORDANCE WITH SPECIAL PROVISION NO. 112, CURRENT EDITION.

DESIGNED BY	S.M.H.	CHECKED BY	H.M.W.	DATE	3-28-95
DETAILED BY	B.M.M.	CHECKED BY	S.M.H.	DATE	3-29-95
TRACED BY	B.M.M.	CHECKED BY	S.M.H.	DATE	3-29-95

REVISED ____ DATE ____

REVISED ____ DATE ____

REVISED ____ DATE ____

GENERAL NOTES

Licking River Bridge at Visalia *Sheet 2*

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD
STATION 160+90.00 **P. E. PROJECT NO.**

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305

UPDATE DATE

LETTING DATE

GENERAL NOTES

SPECIFICATIONS:

THE KENTUCKY DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, WITH REVISIONS, SHALL APPLY TO THIS PROJECT.

WELDING SPECIFICATIONS:

ALL WELDING AND WELDING MATERIALS, SHALL CONFORM TO AWS D.1.1-72 "STRUCTURAL WELDING CODE" WITH REV. 1-73 AND REV. 2-74. MODIFICATIONS AND ADDITIONS AS STATED ON THE PLANS, ASSHTO 1974 STANDARD SPECIFICATIONS FOR WELDING OF STRUCTURAL STEEL HIGHWAY BRIDGES (WITH 1975 INTERIMS), AND SPECIAL PROVISION 101-A SHALL SUPERSEDE THE AWS SPECIFICATIONS.

PAYMENT FOR STRUCTURAL STEEL:

THE LUMP SUM BID FOR STRUCTURAL STEEL SHALL BE FULL PAYMENT FOR ALL STRUCTURE STEEL, DRAINS, BOLTS, WASHERS, STEEL PINS, LEAD PLATES, MOLTEN LEAD, WELDING AND WELDING MATERIALS, PAINT AND ALL LABOR AND MATERIALS NECESSARY TO ERECT THE STEEL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE APPROXIMATE WEIGHT OF STRUCTURAL STEEL SHOWN IN THE ESTIMATE OF QUANTITIES DOES NOT INCLUDE OVERRUN OR WELD MATERIAL.

TEMPORARY SUPPORTS:

TEMPORARY SUPPORTS OR SHORING WILL NOT BE PERMITTED UNDER THE GIRDERS WHEN POURING THE CONCRETE FLOOR SLAB OR WHEN TAKING "TOP OF STEEL" ELEVATIONS.

MATERIALS:

A.S.T.M. SPECIFICATIONS, CURRENT EDITION, AS DESIGNATED BELOW SHALL GOVERN THE MATERIALS FURNISHED:

MATERIAL	ASTM DESIGNATION CURRENT SPECS.
STRUCTURAL STEEL (GIRDERS, DIAPHRAGM, LATERAL BRACING, SPLICES, EXPANSION ROCKERS & FIXED SHOES, ANCHOR BOLTS)	A36-70a
STEEL PINS	A108-73 (GRADE 1016-1030 INCL.)
SHEET LEAD AND PIG LEAD	B29-55(1971)
HIGH STRENGTH BOLTS, NUTS & WASHERS	A325-71a
LOW-CARBOR STEEL MACHINE BOLTS, NUTS AND TAP BOLTS	A307-68
GRAY IRON CASTINGS	A48-64(1971) CLASS 30A

PRINCIPAL LOAD CARRYING STRUCTURAL STEEL MEMBERS* SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TOUGHNESS TEST, APPLICABLE TO GROUP 2 MINIMUM SERVICE TEMPERATURE FROM -1°F TO -30°F.IN ACCORDANCE WITH THE FOLLOWING LISTING:

FOR A36 STEEL (UP TO 4" INCLUSIVE) - 15 FT. LB. @ 40°F, SAMPLING AND TESTING PROCEDURES SHALL BE IN ACCORDANCE WITH ASTM A673 CURRENT EDITION UTILIZING (H) FREQUENCY TESTING FOR A36 STEEL.

*THE FOLLOWING BRIDGE MEMBER MATERIAL SHALL BE REQUIRED TO MEET THE LONGITUDINAL CHARPY V-NOTCH TOUGHNESS TEST:

1. ALL FLANGE AND WEB MATERIAL IN LONGITUDINAL GIRDER SHAPES, INCLUDING WEB AND FLANGE SPLICE PLATES.

CLEANING AND PAINTING:

SPECIAL PROVISION 80-B APPLIES TO THIS PROJECT AND CONTRACTORS ARE HEREBY REMINDED THAT IN ACCORDANCE WITH THE SPECIAL PROVISION ALL STEEL SURFACES TO BE PAINTED, INCLUDING EXPOSED SURFACES OF SPLICE PLATES, SHALL BE BLAST CLEANED TO A NEAR-WHITE CONDITION IN ACCORDANCE WITH SSPC 10 IMMEDIATELY PRIOR TO BEING PAINTED WITH THE FIRST COAT OF PAINT, REGARDLESS OF WHETHER THE FIRST COAT IS APPLIED IN THE SHOP OR IN THE FIELD.

SHOP ASSEMBLY:

GENERAL REAMING OF HOLES FOR EACH BOLTED SPLICE CONNECTION OF EACH LONGITUDINAL GIRDER LINE SHALL BE REQUIRED. EACH CONTINUOUS LONGITUDINAL GIRDER UNIT SHALL BE PROGRESSIVELY SHOP ASSEMBLED WITH AT LEAST THREE CONTIGUOUS SHOP SECTIONS ADJUSTED TO LINE, ELEVATIONS, CAMBER AND FIT FOR DRILLING OR REAMING. AT LEAST ONE SHOP SECTION SHALL BE ADDED AT THE ADVANCING END OF THE ASSEMBLY BEFORE ANY SHOP SECTION IS REMOVED FROM THE REARWARD END SO THAT THE ASSEMBLED PORTION OF THE STRUCTURE IS NEVER LESS THAN THREE CONTIGUOUS SHOP SECTIONS.

GIRDER SECTIONS SHALL REMAIN ASSEMBLED FOR INSPECTION BY THE BUREAU OF HIGHWAYS INSPECTOR AND ARE TO BE MATCHMARKED WHILE ASSEMBLED.

OTHER MAJOR BOLTED CONNECTIONS TO THE LONGITUDINAL GIRDERS SHALL BE DRILLED IN THE SHOP WITH CONNECTING PARTS ASSEMBLED OR SHALL BE REAMED TO A METAL TEMPLATE WITHOUT ASSEMBLY. CONNECTIONS FOR THE CROSS FRAMES, DIAPHRAGMS, LATERAL BRACING, AND OTHER MINOR MEMBERS MAY BE PUNCHED OR DRILLED FULL SIZE WITHOUT ASSEMBLY SUBJECT TO THE REQUIREMENTS IN THE SPECIFICATIONS FOR GENERAL REAMING.

CAMBER:

WEB PLATES SHALL BE CUT TO PROVIDE FOR THE TOTAL CAMBER OF THE GIRDER. GIRDERS WHICH DO NOT CONFORM TO PLAN CAMBER AND GRADE IN THE ERECTED POSITION SHALL BE CONSIDERED AS REQUIRING AT NO ADDITIONAL COST TO THE STATE, EITHER AN ADJUSTMENT IN DEPTH OF THE CONCRETE SLAB HAUNCH OVER THE STEEL SUPPORTING MEMBERS OR A REWORKING OF THE GIRDER CAMBER TO MEET THE PLAN GRADE AND SLAB THICKNESS.

STEEL FINISH:

STEEL BEARING SURFACES IN CONTACT SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 408.3.1-H3 OF THE SPECIFICATIONS.

SPECIFICATIONS FOR SURFACE FINISH OF STEEL:

HEAVY PLATES IN CONTACT IN SHOES TO BE WELDED	A.N.S.I. 1000
BRIDGE ROLLERS AND ROCKERS	A.N.S.I. 250
PINS AND PIN HOLES	A.N.S.I. 125
MILLED ENDS OF COMPRESSION MEMBERS, STIFFENERS & FILLERS	A.N.S.I. 500

WELDING PROCEDURE:

QUALIFICATION TESTS OF ALL WELDING PROCEDURES SHALL BE COMPLETED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO THE FINAL APPROVAL OF THE SHOP DRAWINGS AND WELDING PROCEDURE AND THE START OF FABRICATION.

CONNECTIONS:

UNLESS OTHERWISE PROVIDED ON THE PLANS, ALL CONNECTIONS SHALL BE 7/8" DIAMETER HIGH STRENGTH BOLTS. OPEN HOLES SHALL BE 15/16" DIAMETER. ALL JOINTS ARE DESIGNED AS FRICTION TYPE CONNECTIONS. TIGHTENING SHALL BE DONE WITH PROPERLY CALIBRATED WRENCHES.

DIMENSIONS:

DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 60 DEGREES FAHRENHEIT. LAYOUT DIMENSIONS ARE HORIZONTAL MEASUREMENTS. END OF GIRDERS AND BEARING STIFFENERS ARE VERTICAL.

PROHIBITED FIELD WELDING:

EXCEPT AS SHOWN ON THE PLANS, NO WELDING OF ANY NATURE SHALL BE PERFORMED ON THE LOAD CARRYING MEMBERS OF THE BRIDGE WITHOUT THE WRITTEN CONSENT OF THE DIRECTOR, DIVISION OF BRIDGES, OR HIS AUTHORIZED REPRESENTATIVE, AND THEN ONLY IN THE MANNER AND AT THE LOCATIONS DESIGNATED IN THE AUTHORIZATION.

ADDITIONAL FIELD SPLICES:

IF ADDITIONAL FIELD SPLICES ARE PERMITTED THEY SHALL BE AT THE CONTRACTOR'S EXPENSE AND SHALL BE INCLUDED IN THE "LUMP SUM BID" FOR STRUCTURAL STEEL.

SHOP CONNECTIONS:

ALL WELDED SHOP SPLICES IN FLANGES OR WEB OF GIRDERS SHALL BE SHOWN ON THE SHOP DRAWINGS.

DRAIN DETAILS:

FOUNDRY NOTE - ALL DRAINS SHALL BE GRAY IRON CASTINGS, ASTM A48, CURRENT EDITION, CLASS 30A. REPORT OF FIELD INSPECTION OF CASTINGS, CURRENT FORM, SHALL BE SUBMITTED TO THE DIVISION OF MATERIALS.

THE DRAIN PIPE SHALL BE 6" STANDARD WEIGHT IN ACCORDANCE WITH ARTICLE 643.12.0 OF THE SPECIFICATIONS.

PIPE, FITTINGS, AND CONNECTIONS SHALL BE INCLUDED IN THE UNIT PRICE PER LINEAR FOOT OF 6" DRAIN PIPE COMPLETE IN PLACE. PIPE AND ALL FITTINGS SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIAL PROVISION FOR BLAST CLEANING AND PAINTING STRUCTURAL STEEL, CURRENT EDITION.

ALL CAST IRON GRATE SHALL BE SECURELY BOLTED TO THE FRAME, AND IN ADDITION SHALL BE ATTACHED TO THE FRAME WITH A CHAIN OF SUFFICIENT LENGTH TO PERMIT REMOVAL FOR CLEAN OUT PURPOSES.

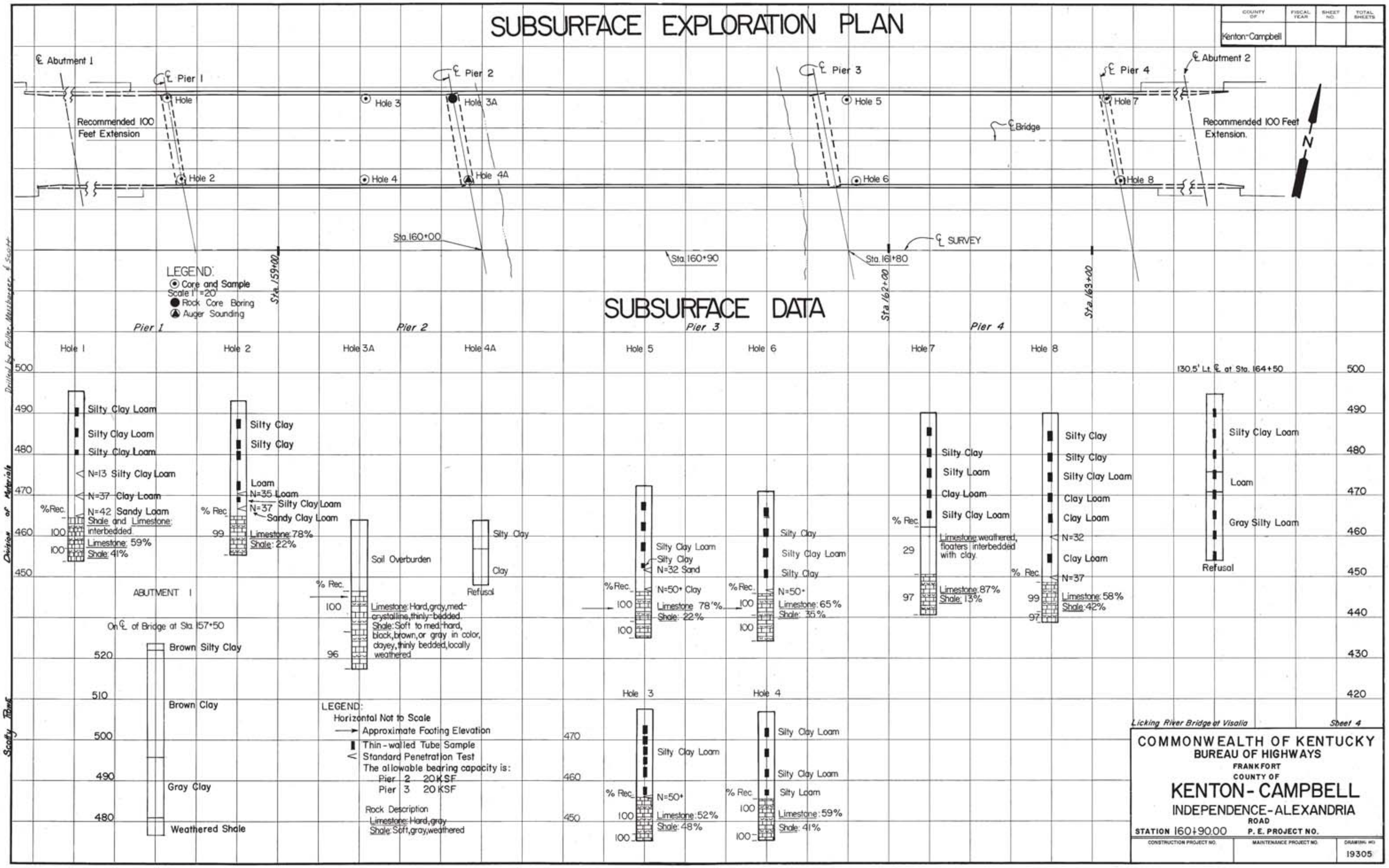
DESIGNED BY S.M.H. DATE
DETAILED BY B.M.M. DATE
TRACED BY B.M.M. DATE
CHECKED BY H.W.W. DATE 8-20-75 REVISED
CHECKED BY S.M.H. DATE 8-30-75 REVISED
CHECKED BY S.M.H. DATE 8-30-75 REVISED

GENERAL NOTES

Licking River Bridge at Visalia Sheet 3

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD
STATION 160+90.00 **P. E. PROJECT NO.**

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305


SUBSURFACE EXPLORATION PLAN
COUNTY OF
FISCAL YEAR
SHEET NO.
TOTAL SHEETS
Kenton-Campbell
℄ Abutment 1
℄ Pier 1
℄ Pier 2
℄ Pier 3
℄ Pier 4
℄ Abutment 2
Hole 1
Hole 2
Hole 3
Hole 4
Hole 3A
Hole 4A
Hole 5
Hole 6
Hole 7
Hole 8
Recommended 100 Feet Extension
Recommended 100 Feet Extension.
℄ Bridge
N
Sta. 160+00
Sta. 160+90
Sta. 161+80
℄ SURVEY
Sta. 159+00
Sta. 162+00
Sta. 163+00
LEGEND:
Core and Sample
Scale 1" = 20'
Rock Core Boring
Auger Sounding
SUBSURFACE DATA
Pier 1
Pier 2
Pier 3
Pier 4
Drilled by Fuller, Hershberger, & Scott
Division of Materials
Scotty Rowe
500
490
480
470
460
450
440
430
420
Silty Clay Loam
Silty Clay Loam
Silty Clay Loam
N=13 Silty Clay Loam
N=37 Clay Loam
N=42 Sandy Loam
%Rec.
Shale and Limestone: interbedded
100
100
Limestone: 59%
Shale: 41%
Silty Clay
Silty Clay
Loam
N=35 Loam
N=37 Silty Clay Loam
Sandy Clay Loam
% Rec.
99
Limestone: 78%
Shale: 22%
Soil Overburden
% Rec.
100
96
Limestone: Hard, gray, med-crystalline, thinly bedded.
Shale: Soft to med. hard, black, brown, or gray in color, clayey, thinly bedded, locally weathered
Silty Clay
Clay
Refusal
Silty Clay Loam
Silty Clay
N=32 Sand
N=50+ Clay
%Rec.
100
100
Limestone 78%
Shale: 22%
Silty Clay
Silty Clay Loam
Silty Clay
N=50+
%Rec.
100
100
Limestone: 65%
Shale: 35%
Silty Clay
Silty Loam
Clay Loam
Silty Clay Loam
% Rec.
29
97
Limestone weathered, floaters interbedded with clay.
Limestone: 87%
Shale: 13%
Silty Clay
Silty Clay
Silty Clay Loam
Clay Loam
Clay Loam
N=32
Clay Loam
N=37
% Rec.
99
97
Limestone: 58%
Shale: 42%
130.5' Lt. ℄ at Sta. 164+50
Silty Clay Loam
Loam
Gray Silty Loam
Refusal
ABUTMENT 1
On ℄ of Bridge at Sta. 157+50
520
510
500
490
480
Brown Silty Clay
Brown Clay
Gray Clay
Weathered Shale
LEGEND:
Horizontal Not to Scale
Approximate Footing Elevation
Thin-walled Tube Sample
Standard Penetration Test
The allowable bearing capacity is:
Pier 2 20 KSF
Pier 3 20 KSF
Rock Description
Limestone: Hard, gray
Shale: Soft, gray, weathered
Hole 3
Hole 4
470
460
450
Silty Clay Loam
N=50+
% Rec.
100
100
Limestone: 52%
Shale: 48%
Silty Clay Loam
Silty Clay Loam
Silty Loam
% Rec.
100
100
Limestone: 59%
Shale: 41%
Licking River Bridge at Visalia
Sheet 4
COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON-CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD
STATION 160+90.00
P. E. PROJECT NO.
CONSTRUCTION PROJECT NO.
MAINTENANCE PROJECT NO.
DRAWING NO.
19305

SUMMARY OF DISTURBED TEST RESULTS

* See Subsurface Exploration Plan for Location

COUNTY OF	FISCAL YEAR	SHEET NO.	TOTAL SHEETS

Sample No.		Hole 1				Hole 2					Hole 3	Hole 4			Hole 5 and 6		Hole 5		Hole 6	Hole 7 and 8		Hole 7		Hole 8				
Location *																												
Depth		4.0-6.0'	9.0'-20.0	24.5'-25.0	25.0'-26.0'	4.5'-11.5'	19.5'-21.5'	21.3-23.3'	23.3'-24.5'	24.5-26.0'	9.0'-11.0'	4.0'-6.0'	14.0'-16.0'	19.0'-20.5'	14.0'-16.0'	14.0'-21.0'	20.0-21.5'	25.0'-26.0'	9.0'-11.0'	13.5'-16.5'	18.5'-21.5'	8.5'-10.5'	23.5-25.5'	4.5-6.5'	9.5'-11.5'	14.5'-16.5'	24.5'-26.5'	34.5'-36.5'
Composition of Total Sample	Gravel (-3" + No. 10)	0	0	0	52.3	0	0	22.4	7.1	14.2	0	0	0	0	0	0	41.3	33.2	0	0	0	0	0	0	0	0	0	0
	Coarse Sand (-No. 10 + No. 40)	0	2.8	3.8	8.5	0.2	1.3	4.2	1.9	9.9	0.3	0.7	0.4	0.3	0.3	0.7	10.6	5.9	0.3	0.2	0.3	0	0.2	0	0.4	1.3	0.3	0
	Fine Sand (-No. 40 + No. 200)	1.1	4.5	26.4	19.0	2.6	47.3	30.8	17.0	35.3	3.8	8.0	2.1	5.5	3.3	5.6	22.8	8.9	2.4	25.7	24.6	4.6	21.1	3.7	6.4	7.2	22.0	29.2
	Silt (-No. 200 + 0.005mm)	74.9	68.4	45.8	14.1	66.0	39.4	29.0	53.6	21.9	65.9	67.3	69.5	74.2	67.9	61.9	4.6	31.6	66.3	56.6	49.1	59.4	52.2	63.3	56.7	61.5	48.1	44.8
	Clay (-0.005mm)	24.0	24.3	24.0	6.1	31.2	12.0	13.6	20.4	18.7	30.0	24.0	28.0	20.0	28.5	31.8	3.3	20.4	31.0	17.5	26.0	36.0	26.5	33.0	36.5	30.0	29.6	25.0
Natural Moisture (%)		31.7				28.8	15.7		21.2		32.0	31.6	38.4	37.0	31.0				33.5	21.3	24.5	27.6	33.7	23.4	26.0	22.1	26.8	23.5
Liquid Limit		38.0	24.0	23.0	20.0	37.0	17.0	21.0	23.0	20.0	39.0	39.0	35.0	35.0	37.0	36.0	N.P.	30.0	37.0	26.0	28.0	41.0	26.0	36.0	35.0	36.0	27.0	24.0
Plastic Limit		25.0	14.0	15.0	16.0	23.0	14.0	14.0	15.0	14.0	24.0	26.0	24.0	23.0	24.0	23.0	N.P.	19.0	24.0	19.0	20.0	23.0	19.0	21.0	21.0	22.0	18.0	16.0
Plasticity Index		13.0	10.0	8.0	4.0	14.0	3.0	7.0	8.0	6.0	15.0	13.0	11.0	12.0	13.0	13.0	N.P.	11.0	13.0	7.0	8.0	18.0	7.0	15.0	14.0	14.0	9.0	8.0
Specific Gravity		2.67	2.70	2.70	2.65	2.70	2.69	2.69	2.69	2.71	2.69	2.67	2.67	2.68	2.70	2.68	2.66	2.71	2.69	2.69	2.70	2.71	2.69	2.71	2.71	2.71	2.70	2.69
Textural Classification		Sl. Cl. Loam	Sl. Cl. Loam	Clay Loam	Sandy Loam	Silty Clay	Loam	Loam	Sl. Cl. Loam	Sa. Cl. Loam	Sl. Cl. Loam	Sl. Cl. Loam	Sl. Cl. Loam	Silty Loam	Sl. Cl. Loam	Silty Clay	Sand	Clay	Silty Clay	Sl. Loam	Clay Loam	Silty Clay	Sl. Cl. Loam	Silty Clay	Silty Clay	Sl. Cl. Loam	Clay Loam	Clay Loam
AASHO Classification		A-6 (15)	A-6 (10)	A-4 (3)	A-4 (10)	A-6 (14)	A-4 (0)	A-4 (0)	A-4 (7)	A-4 (0)	A-6 (16)	A-6 (13)	A-6 (12)	A-4 (12)	A-4 (14)	A-6 (13)	A-2-4 (0)	A-6 (7)	A-6 (15)	A-4 (3)	A-4 (4)	A-7-6 (19)	A-4 (4)	A-6 (15)	A-6 (14)	A-6 (12)	A-4 (5)	A-4 (3)
Unified Classification		CL	CL	CL	SM	CL	ML	ML - CL	CL	SM - SC	CL	ML	CL	CL	CL	CL	SM	CL	CL	ML - CL	CL	CL	ML - CL	CL	CL	CL	CL	CL

Location		164+50	164+50	164+50	164+50	164+50	164+50
Depth		3.7 - 10.7	8.7 - 15.7	18.7 - 20.7	23.7 - 30.7	33.7' - 35.7	38.7' - 40.7
Composition of Total Sample	Gravel (-3" + No. 10)	0	0	0	0	0	0
	Coarse Sand (-No. 10 + No. 40)	0	0.4	0.8	0.4	0	0.6
	Fine Sand (-No. 40 + No. 200)	11.0	12.0	34.9	30.7	26.7	27.1
	Silt (-No. 200 + 0.005mm)	58.8	59.4	48.3	52.9	56.3	52.8
	Clay (-0.005mm)	30.2	28.2	16.0	16.0	17.0	19.5
Natural Moisture (%)		21.8	21.9	22.9	22.5	21.0	21.2
Liquid Limit		26.0	27.0	20.0	22.0	21.0	23.0
Plastic Limit		21.0	21.0	19.0	18.0	20.0	19.0
Plasticity Index		7.0	6.0	1.0	4.0	1.0	4.0
Specific Gravity		2.68	2.69	2.68	2.68	2.68	2.67
Textural Classification		Sl. Cl. Loam	Sl. Cl. Loam	Loam	Silty Loam	Silty Loam	Silty Loam
AASHO Classification		A-4 (5)	A-4 (4)	A-4 (0)	A-4 (0)	A-4 (0)	A-4 (1)
Unified Classification		ML - CL	ML - CL	ML	ML	ML	ML

Triaxial Test Results

Sample Location	Sample Depth	$\bar{\phi}$	$\bar{C}$ (KSF)
Hole 1	4.0-6.0	25.7	0.461
	9.0-11.0		
Hole 2	4.5-6.5	25.7	0.747
Hole 2	19.5-21.5	31.4°	0.0
Hole 3	11.5-13.5		
Hole 4	14.0-16.0		
Hole 7	23.5-25.5	33.7°	0.156
Hole 8	19.5-21.5		
Hole 8	24.5-26.5		
Hole 6	4.0-6.0	32.9°	0.171
	9.0-11.0		
	14.0-16.0		
164+50	8.7-10.7	30.5°	0.200
165+00	4.5-6.5		
165+00	12.0-14.0		
164+50	23.7-25.7	32.8°	0.291
	28.7-30.7		
	33.7-35.7		

UNCONFINED COMPRESSIVE STRENGTH

Location	Depth (ft)	Stress (Psf)	Moist (%)
Hole 1	4.0 - 6.0	1269	28.4
Hole 2	4.5-6.5	1483	29.9
	9.5-11.5	1917	24.3
	12.0-14.0	367	39.5
	19.5-21.5	1737	16.7
	23.3-24.5	304	22.8
Hole 3	6.8-8.5	286	32.7
	9.0-11.0	384	33.5
	11.5-13.5	335	33.5
	14.0-16.0	448	34.9
	14.0-16.0	528	30.5
	14.5-16.5	959	36.8
Hole 4	4.0-6.0	498	34.4
	9.0-11.0	353	35.1
	14.0-16.0	353	37.0
	19.0-20.5	328	35.4
Hole 5	4.0-6.0	528	34.2
	9.0-11.0	1024	32.8
	14.0-16.0	335	34.8
	14.0-16.0	403	31.2
	19.0-20.0	288	31.4
Hole 6	4.0-6.0	1002	24.9
	9.0-11.0	393	33.2
	14.0-16.0	432	33.8
	14.0-16.0	1742	30.9
	19.0-21.0	336	35.0
Hole 7	3.5-5.5	806	22.3
	8.5-10.5	478	28.2
	13.5-13.5	1093	22.8
	13.5-15.5	1633	22.0
	19.5-21.5	1564	17.0
	23.5-25.5	948	26.3
Hole 8	4.5-6.5	1734	24.7
	9.5-11.5	1598	23.9
	14.5-16.5	1667	22.9
	14.5-16.5	2108	22.7
	19.5-21.5	336	26.0

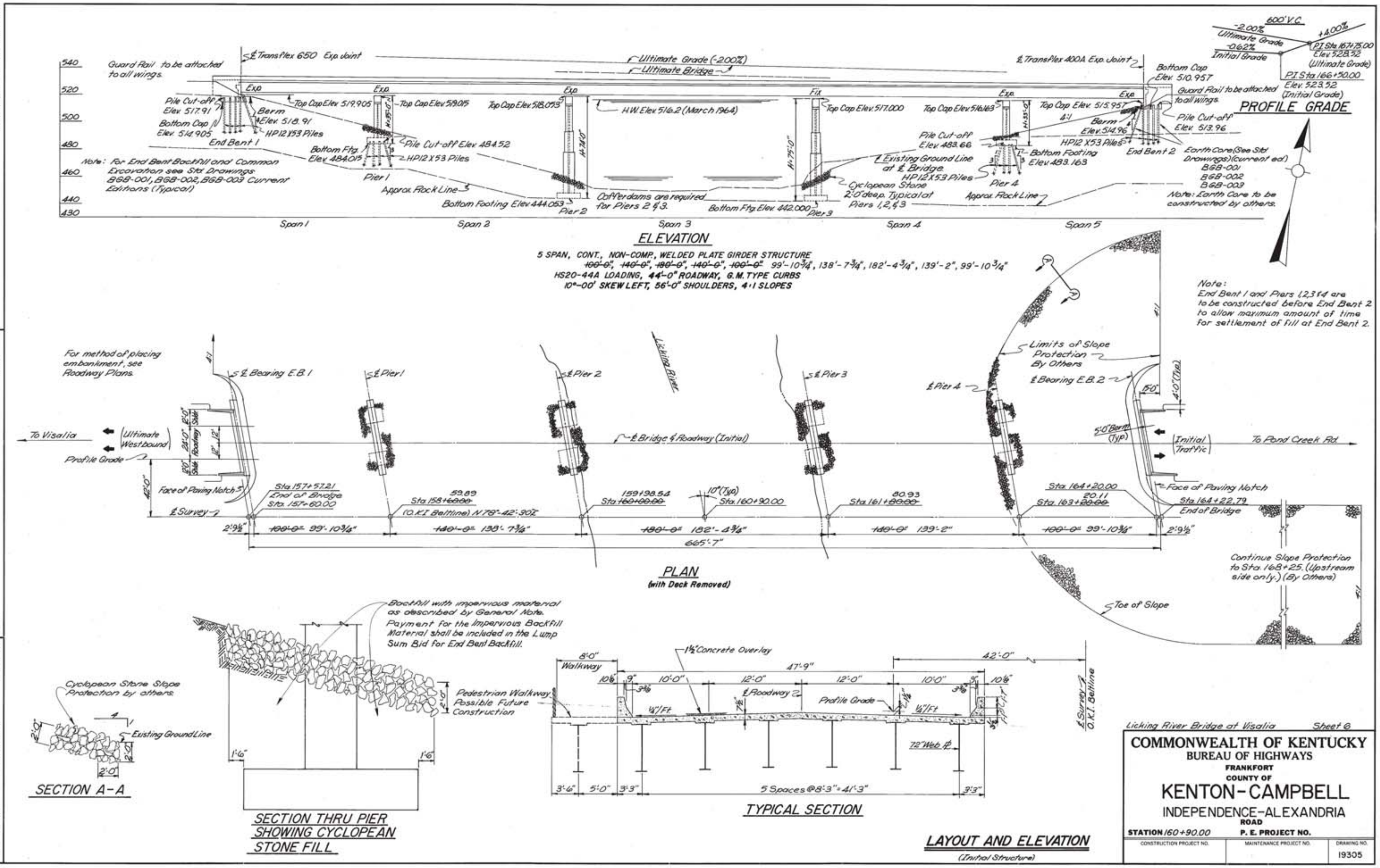
DIVISION OF MATERIALS

Drafted By Z. Pullen

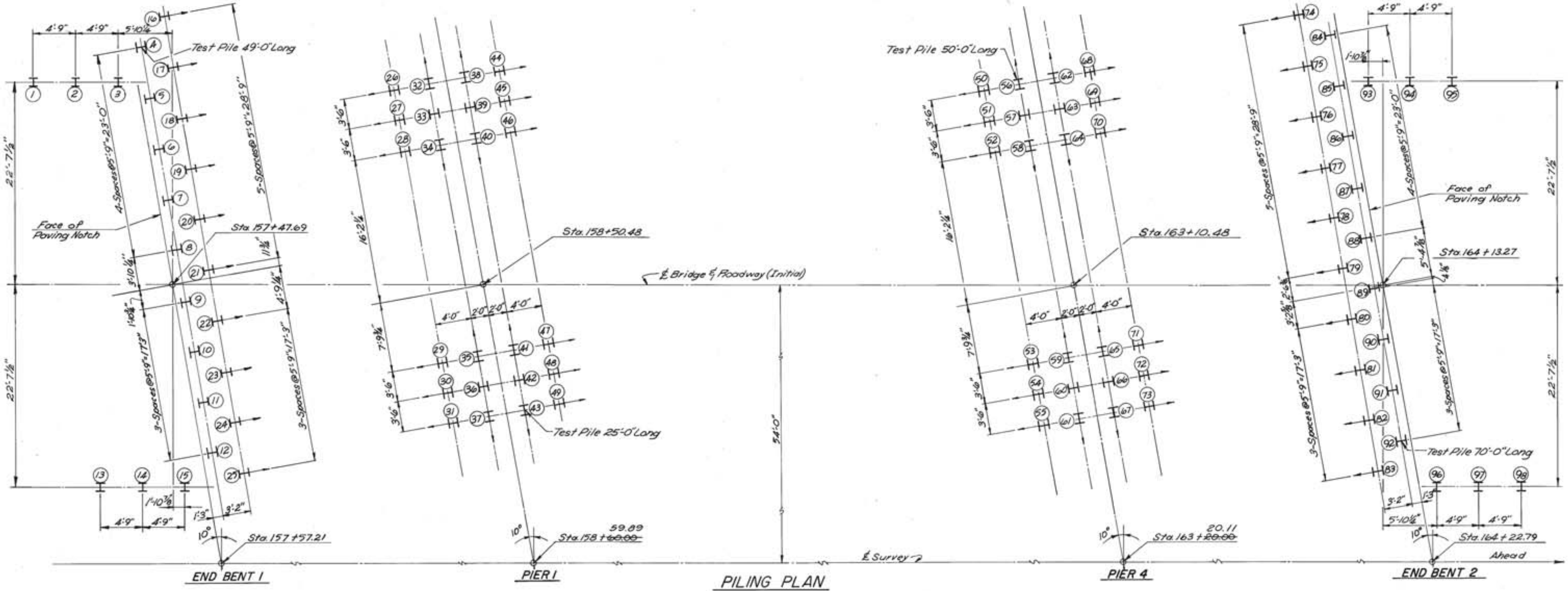
Licking River Bridge at Visalia — Sheet 5

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE - ALEXANDRIA
ROAD
STATION 160+90.00 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305


UPDATE DATE
LETTING DATE
℄ Transflex 650 Exp. Joint
Ultimate Grade (-2.00%)
Ultimate Bridge
℄ Transflex 400A Exp. Joint
Guard Rail to be attached to all wings.
Pile Cut-off Elev. 517.91
Bottom Cap Elev. 514.905
End Bent 1
Berm Elev. 518.91
HP12X53 Piles
Top Cap Elev. 519.905
Top Cap Elev. 519.015
Top Cap Elev. 518.075
H.W. Elev. 516.2 (March 1964)
Top Cap Elev. 517.000
Top Cap Elev. 516.165
Top Cap Elev. 515.957
Bottom Cap Elev. 510.957
Guard Rail to be attached to all wings.
Pile Cut-off Elev. 513.96
Berm Elev. 514.96
HP12 X53 Piles
End Bent 2
Pile Cut-off Elev. 484.52
Bottom Ftg. Elev. 484.015
HP12X53 Piles
Pier 1
Approx. Rock Line
Bottom Footing Elev. 444.053
Pier 2
Cofferdams are required for Piers 2 & 3.
Bottom Ftg. Elev. 442.000
Pier 3
℄ Existing Ground Line at ℄ Bridge
HP12X53 Piles
Cyclopean Stone 2'-0" deep. Typical at Piers 1, 2, & 3
Pile Cut-off Elev. 483.66
Bottom Footing Elev. 483.163
Pier 4
Approx. Rock Line
Earth Core (See Std. Drawings) (current ed.) BGB-001 BGB-002 BGB-003
Note: Earth Core to be constructed by others.
Note: For End Bent Backfill and Common Excavation see Std. Drawings BGB-001, BGB-002, BGB-003 Current Editions (Typical)
540 520 500 480 460 440 430
Span 1 Span 2 Span 3 Span 4 Span 5
600' V.C.
-2.00% Ultimate Grade
-0.62% Initial Grade
+4.00%
P.I. Sta. 167+75.00 Elev. 528.52 (Ultimate Grade)
P.I. Sta. 166+50.00 Elev. 523.52 (Initial Grade)
PROFILE GRADE
ELEVATION
5 SPAN, CONT., NON-COMP., WELDED PLATE GIRDER STRUCTURE
100'-0", 140'-0", 180'-0", 140'-0", 100'-0" 99'-10¾", 138'-7¾", 182'-4¾", 139'-2", 99'-10¾"
HS20-44A LOADING, 44'-0" ROADWAY, G.M. TYPE CURBS
10°-00' SKEW LEFT, 56'-0" SHOULDERS, 4:1 SLOPES
Note: End Bent 1 and Piers 1, 2, 3 & 4 are to be constructed before End Bent 2 to allow maximum amount of time for settlement of fill at End Bent 2.
For method of placing embankment, see Roadway Plans.
Licking River
℄ Bearing E.B. 1
℄ Pier 1
℄ Pier 2
℄ Pier 3
℄ Pier 4
℄ Bearing E.B. 2
Limits of Slope Protection By Others
To Visalia
Ultimate Westbound
Profile Grade
℄ Bridge & Roadway (Initial)
Initial Traffic
To Pond Creek Rd.
5'-0" Berm (Typ.)
Face of Paving Notch
Sta. 157+57.21 End of Bridge Sta. 157+60.00
Sta. 158+60.00 59.89
(O.K.I. Beltline) N 78°-42'-30" E
Sta. 160+00.00 159+98.54
10° (Typ.)
Sta. 160+90.00
Sta. 161+80.00 80.93
Sta. 163+80.00 20.11
Sta. 164+20.00
Sta. 164+22.79 End of Bridge
℄ Survey
2'-9½" 100'-0" 99'-10¾" 140'-0" 138'-7¾" 180'-0" 182'-4¾" 140'-0" 139'-2" 100'-0" 99'-10¾" 2'-9½"
665'-7"
PLAN
(with Deck Removed)
Continue Slope Protection to Sta. 168+25. (Upstream side only.) (By Others)
Toe of Slope
Backfill with impervious material as described by General Note. Payment for the Impervious Backfill Material shall be included in the Lump Sum Bid for End Bent Backfill.
Cyclopean Stone Slope Protection by others.
Existing Ground Line
SECTION A-A
SECTION THRU PIER SHOWING CYCLOPEAN STONE FILL
1½" Concrete Overlay
8'-0" Walkway
47'-9"
42'-0"
10'-0" 12'-0" 12'-0" 10'-0"
℄ Roadway
Profile Grade
¼"/Ft
Pedestrian Walkway, Possible Future Construction
72" Web ℄
℄ Survey O.K.I. Beltline
3'-6" 5'-0" 3'-3" 5 Spaces @ 8'-3" = 41'-3" 3'-3"
TYPICAL SECTION
LAYOUT AND ELEVATION
(Initial Structure)
SPAN LENGTHS & PIER LOCATIONS RQB/HMW 1-18-77
Licking River Bridge at Visalia
Sheet 6
COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON-CAMPBELL
INDEPENDENCE-ALEXANDRIA ROAD
STATION 160+90.00
P. E. PROJECT NO.
CONSTRUCTION PROJECT NO.
MAINTENANCE PROJECT NO.
DRAWING NO.
19305

UPDATE DATE
LETTING DATE



PILING PLAN

PILE RECORD

END BENT 1					PIER 1					PIER 4					END BENT 2				
Pile No.	Cut off Elev. as shown	Tip of Pile as Driven	Length of Pile in Place (L.F.)	Calc. Brg. Cap. (Tons)	Pile No.	Cutoff Elev. as shown	Tip of Pile as Driven	Length of Pile in Place (L.F.)	Calc. Brg. Cap. (Tons)	Pile No.	Cutoff Elev. as shown	Tip of Pile as Driven	Length of Pile in Place (L.F.)	Calc. Brg. Cap. (Tons)	Pile No.	Cutoff Elev. as shown	Tip of Pile as Driven	Length of Pile in Place (L.F.)	Calc. Brg. Cap. (Tons)
1	517.91				26	484.52				50	483.66				74	513.96			
2	517.91				27	484.52				51	483.66				75	513.96			
3	517.91				28	484.52				52	483.66				76	513.96			
4	517.91				29	484.52				53	483.66				77	513.96			
5	517.91				30	484.52				54	483.66				78	513.96			
6	517.91				31	484.52				55	483.66				79	513.96			
7	517.91				32	484.52				56	483.66				80	513.96			
8	517.91				33	484.52				57	483.66				81	513.96			
9	517.91				34	484.52				58	483.66				82	513.96			
10	517.91				35	484.52				59	483.66				83	513.96			
11	517.91				36	484.52				60	483.66				84	513.96			
12	517.91				37	484.52				61	483.66				85	513.96			
13	517.91				38	484.52				62	483.66				86	513.96			
14	517.91				39	484.52				63	483.66				87	513.96			
15	517.91				40	484.52				64	483.66				88	513.96			
16	517.91				41	484.52				65	483.66				89	513.96			
17	517.91				42	484.52				66	483.66				90	513.96			
18	517.91				43	484.52				67	483.66				91	513.96			
19	517.91				44	484.52				68	483.66				92	513.96			
20	517.91				45	484.52				69	483.66				93	513.96			
21	517.91				46	484.52				70	483.66				94	513.96			
22	517.91				47	484.52				71	483.66				95	513.96			
23	517.91				48	484.52				72	483.66				96	513.96			
24	517.91				49	484.52				73	483.66				97	513.96			
25	517.91														98	513.96			

NOTES:

This sheet does not replace other records on Piles required to be kept and submitted by the Resident Engineer.

After all Piles have been driven, the Resident Engineer shall record the Tip of Pile Elevations as driven, Length of Pile in Place and Calculated Bearing Capacity of each Pile and return one Blue Print copy of this sheet with this information to the Director of Bridges so that this record can be placed on the original plans.

Length of Pile in Place shown hereon is the actual length of Pile in the finished structure below Cutoff Elevation and is not necessarily the pay item.

The symbol ⌶ denotes battered Piles.

Batter Pier Piles 3" to 12".

Batter End Bent Piles 4" to 12".

PILE RECORD

Licking River Bridge at Visalia — Sheet 7

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE–ALEXANDRIA
ROAD

STATION 160+90.00 — **P. E. PROJECT NO.**

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305

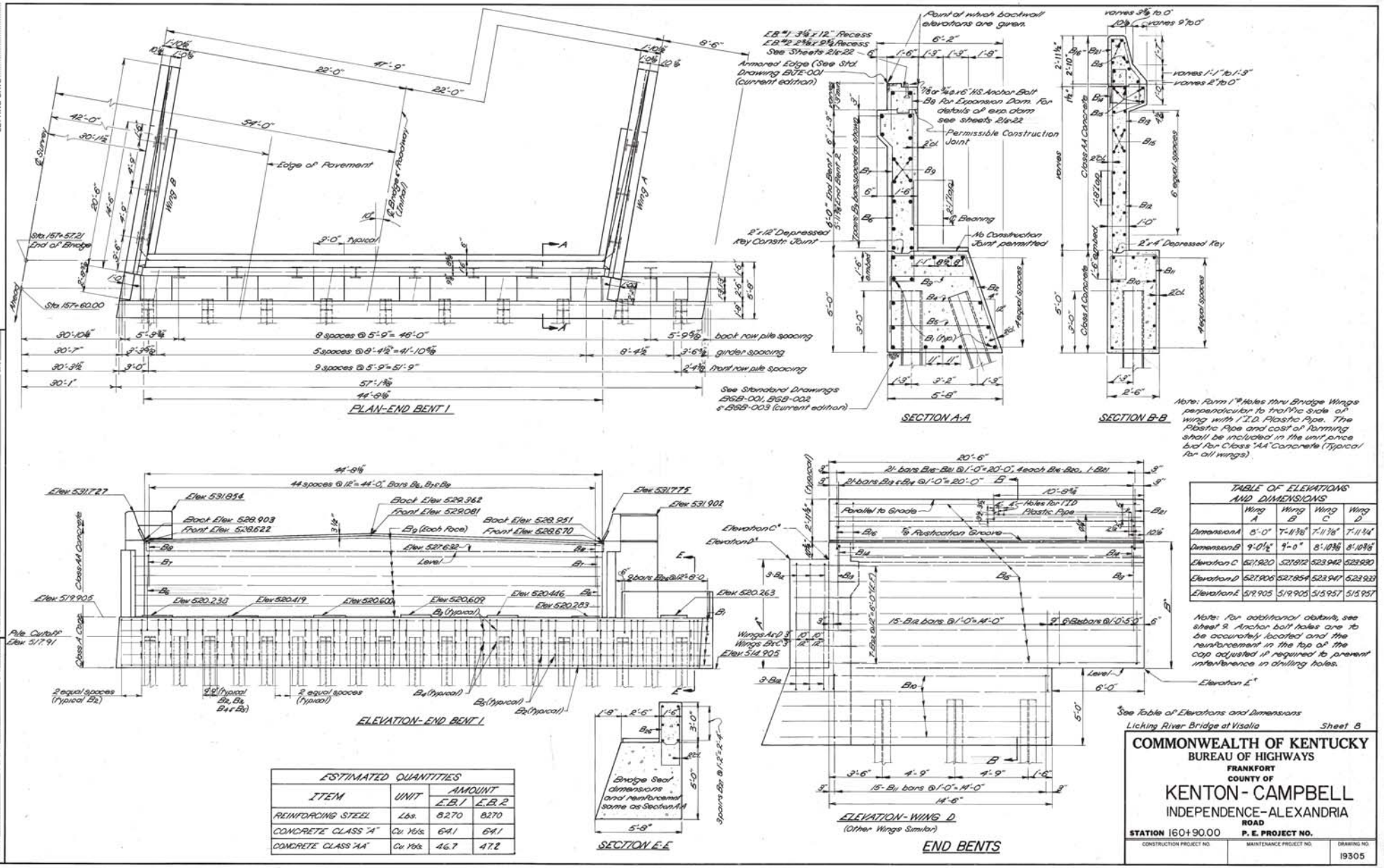


TABLE OF ELEVATIONS AND DIMENSIONS				
	Wing A	Wing B	Wing C	Wing D
Dimension A	6'-0"	7'-11 3/8"	7'-11 3/8"	7'-11 3/4"
Dimension B	9'-0 1/2"	9'-0"	8'-10 3/8"	8'-10 3/8"
Elevation C	521.920	521.912	523.942	523.930
Elevation D	521.906	521.854	523.947	523.933
Elevation E	519.905	519.905	515.957	515.957

ESTIMATED QUANTITIES			
ITEM	UNIT	AMOUNT E.B.1	AMOUNT E.B.2
REINFORCING STEEL	Lbs.	8270	8270
CONCRETE CLASS "A"	Cu. Yds.	64.1	64.1
CONCRETE CLASS "AA"	Cu. Yds.	46.7	47.2

Licking River Bridge at Visalia — Sheet 8

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD
STATION 160+90.00 **P. E. PROJECT NO.**

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305

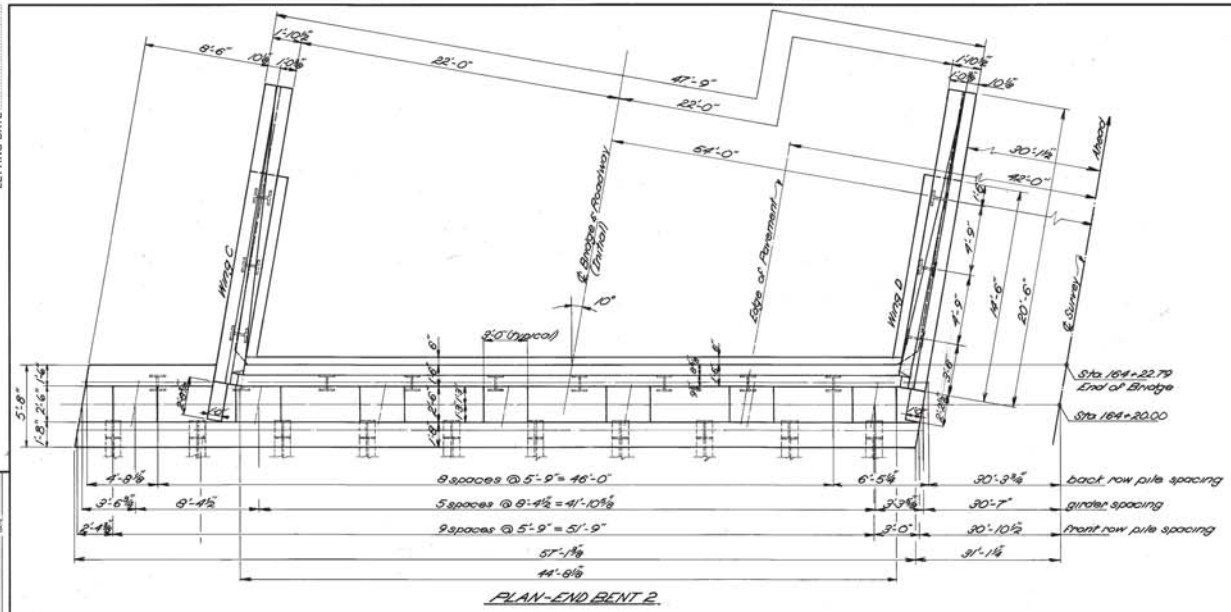
UPDATE DATE
LETTING DATE

DRAWN BY	CHECKED BY	DETAILED BY	CHECKED BY	TRACED BY	CHECKED BY
RDB	S.M.H.	RDB	S.M.H.	RDB	S.M.H.

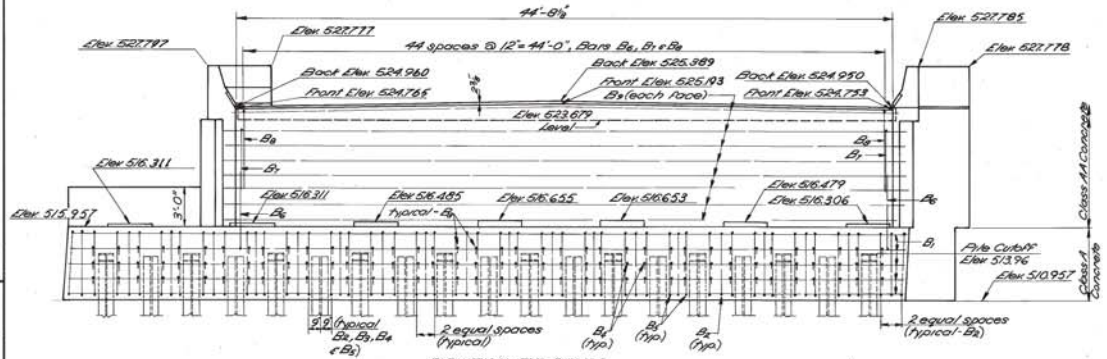
DATE	REVISED
3-25-75	
3-27-75	
5-22-75	

UPDATE DATE

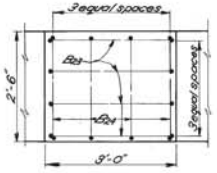
LETTING DATE



PLAN-END BENT 2.



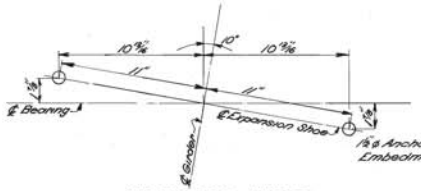
ELEVATION-END BENT 2



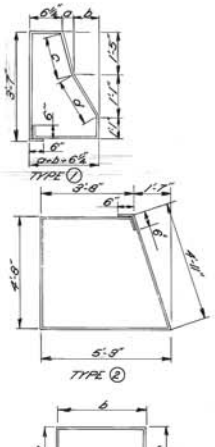
PLAN

ELEVATION

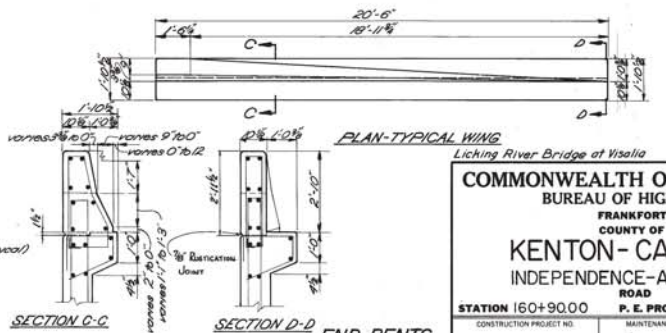
PAD DETAILS



ANCHOR BOLT LAYOUT



RUSTICATION JOINT



PLAN-TYPICAL WING

END BENTS

Notes: For other notes and details see sheet 8. For guardrail attachment see Std. Dwg. "Guardrail Connector to Bridge End Type A-2."

BILL OF REINFORCEMENT

Mark	Type	Size	Number EB1	Number EB2	Length Ft.	Length In.	Location	a Ft.	a In.	b Ft.	b In.	c Ft.	c In.	d Ft.	d In.
B1	Str.	6	34	34	29	8	Cap								
B2	2	4	60	60	19	3	Cap								
B3	3	4	38	38	4	11	Cap	0	6	4	0	0	6		
B4	3	4	38	38	5	5	Cap	0	6	4	6	0	6		
B5	3	4	38	38	5	10	Cap	0	6	4	11	0	6		
B6	3	6	45	45	11	9	Backwall	5	4	1	2	5	4		
B7	6	5	45	45	8	0	Backwall								
B8	3	5	45	45	10	4	Backwall	1	9	1	2	7	6		
B9	Str.	4	92	92	24	11	Backwall								
B10	Str.	6	22	22	16	5	Wing Flg.								
B11	4	4	30	30	14	5	Wing Flg.	2	2	4	8				
B12	3	5	42	42	10	5	Wing	4	11	0	8	4	11		
B13	3	4	12	12	17	3	Wing	8	4	0	8	8	4		
B14	2	4	12	12	4	2	Wing								
B15	Str.	4	52	52	20	2	Wing								
B16	○	4	8	8	10	3	Parapet	0	2⅝	0	9	1	5⅛	1	3⅛
B17	○	4	8	8	10	0	Parapet	0	2⅛	0	7⅛	1	5⅛	1	2⅛
B18	○	4	8	8	9	8	Parapet	0	1½	0	5⅞	1	5	1	2
B19	○	4	8	8	9	6	Parapet	0	1	0	5¾	1	5	1	1½
B20	○	4	8	8	9	3	Parapet	0	0⅞	0	1⅝	1	5	1	1
B21	4	4	2	2	9	0	Parapet	0	6⅜	3	7				
B22	Str.	4	28	28	3	9	Toewall								
B23	3	4	28	28	6	7	Pad	1	6	2	8	1	6		
B24	3	4	28	28	5	1	Pad	1	6	2	2	1	6		
B25	3	5	12	12	7	3	Wing	3	4	0	8	3	4		
B26	3	6	9	9	9	9	Future Brkt.	4	4	1	2	4	4		
B27	Str.	4	6	6	8	4	Future Brkt.								

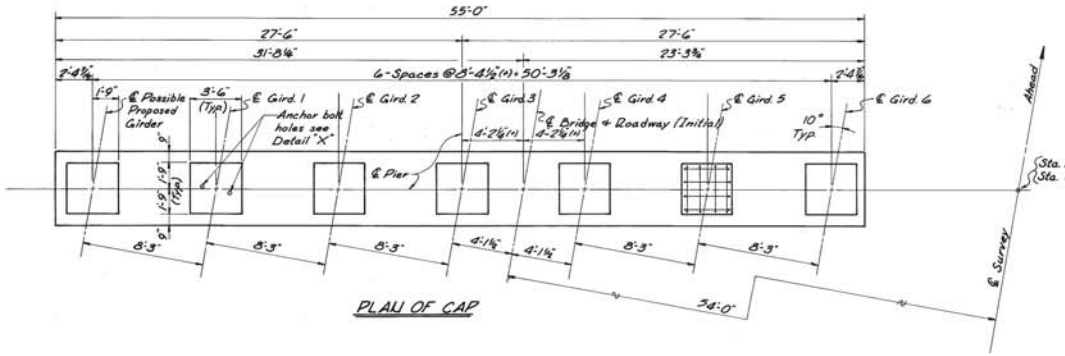
Sheet 9

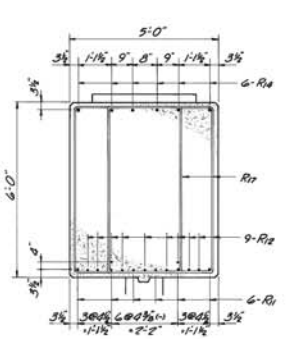
Licking River Bridge at Visalia

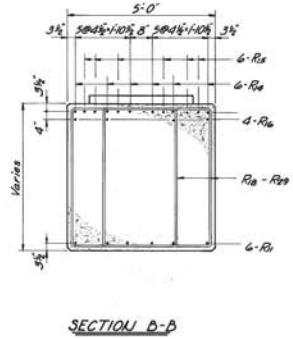
COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE - ALEXANDRIA
ROAD
STATION 160+90.00 **P. E. PROJECT NO.**

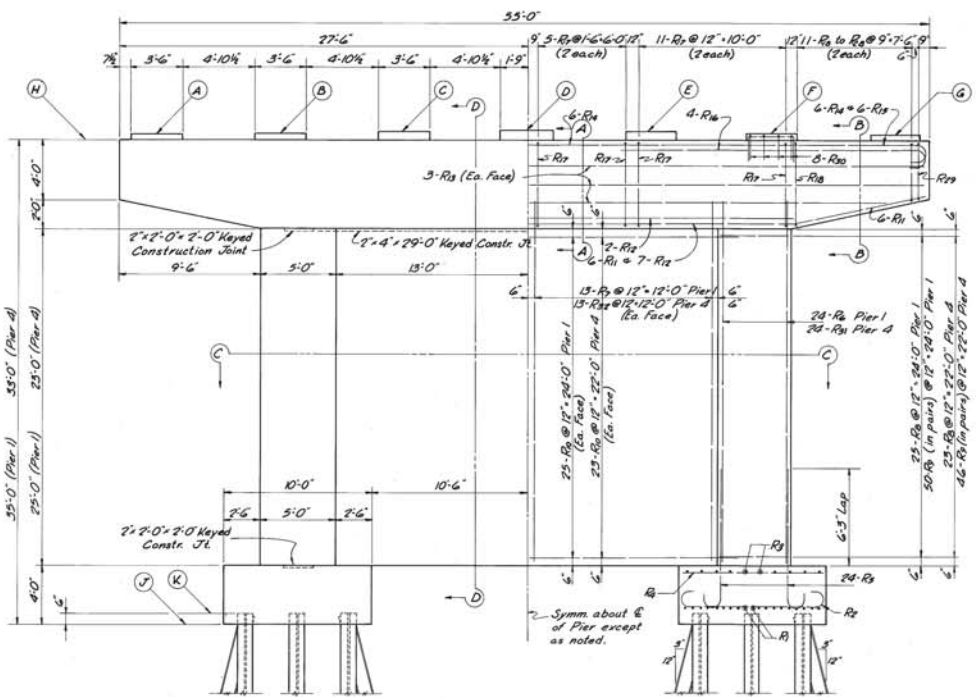
CONSTRUCTION PROJECT NO. | MAINTENANCE PROJECT NO. | DRAWING NO. 19305

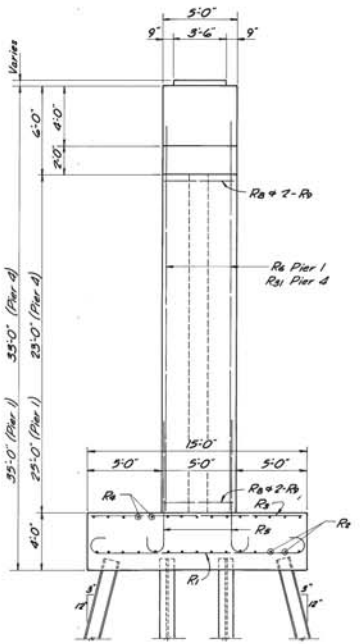
DESIGNED BY ROB CHECKED BY SMW DATE 3-16-75 REVISED
DRAWN BY ROB CHECKED BY SMW DATE 3-23-75 REVISED
TRACED BY ROB CHECKED BY SMW DATE 3-23-75 REVISED











Note: Bars in top of cap to be set accurately in accordance with these plans so they will not interfere with drilling Anchor Bolt holes.

TABLE OF ELEVATIONS - PIER 1					
LOCATION	(A)	(B)	(C)	(D)	(E)
ELEVATION	519.373	519.393	519.536	519.718	519.709
LOCATION	(F)	(G)	(H)	(J)	(K)
ELEVATION	519.528	519.348	519.015	484.015	484.515

TABLE OF ELEVATIONS - PIER 4					
LOCATION	(A)	(B)	(C)	(D)	(E)
ELEVATION	516.521	516.541	516.704	516.866	516.857
LOCATION	(F)	(G)	(H)	(J)	(K)
ELEVATION	516.676	516.496	516.163	483.163	483.663

Note: For Section C-C & D-D & other details of Piers 1 & 4, see sheet 11.

PIERS 1&4

Licking River Bridge at Visalia — Sheet 10

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD
STATION 160+90.00 **P. E. PROJECT NO.**

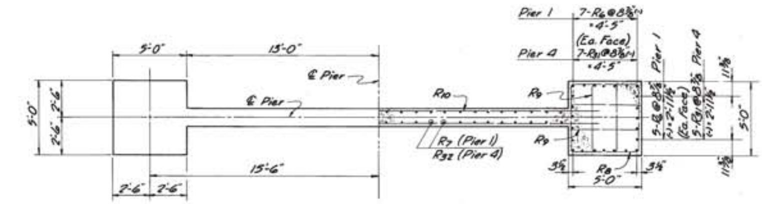
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305

UPDATE DATE
LETTING DATE

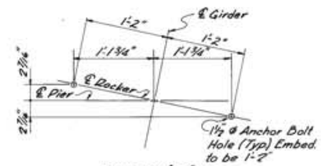
DESIGNED BY SMK	CHECKED BY JAW	DATE 3-1-75	REVISED Pier Stations	DATE 2-25-75	DATE FILED
DETAILED BY CWB	CHECKED BY SMK	DATE 3-8-75	REVISED	DATE	DATE
TRACED BY CWB	CHECKED BY SMK	DATE 3-9-75	REVISED	DATE	DATE

UPDATE DATE

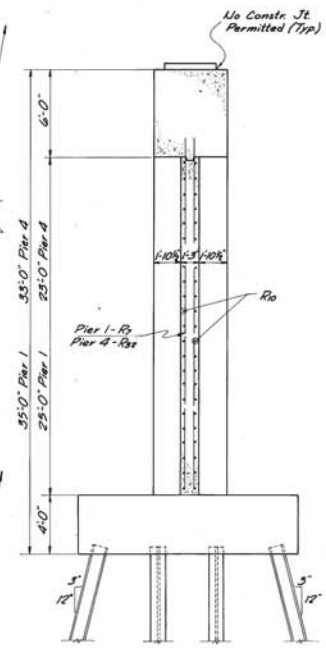
LETTING DATE



SECTION C-C



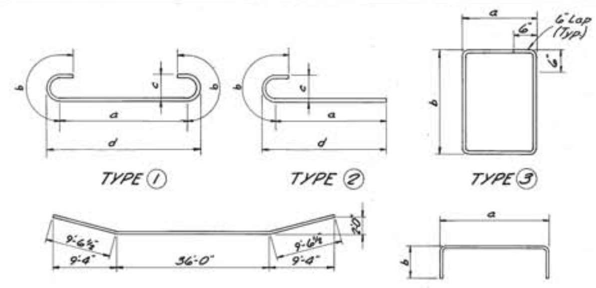
DETAIL "X"

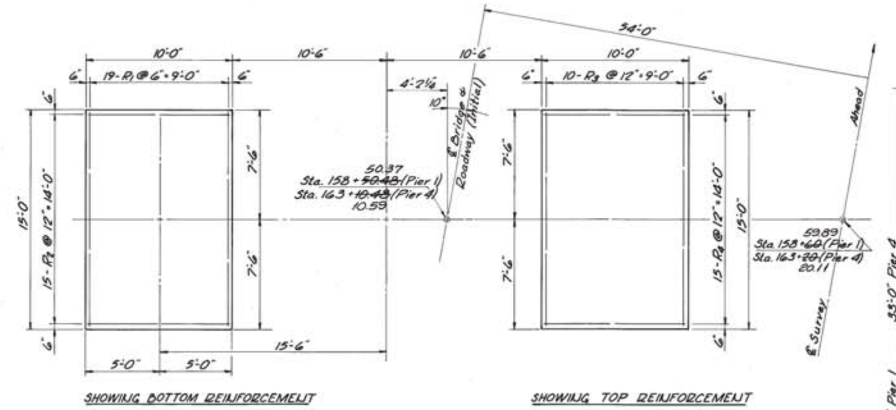


SECTION D-D

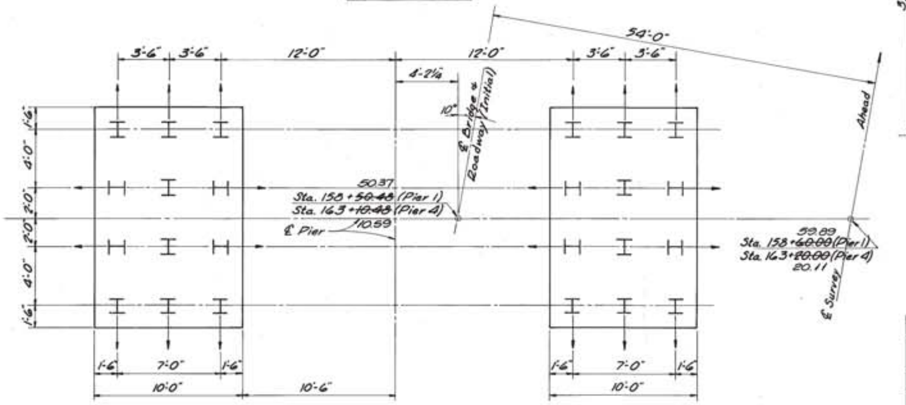
BILL OF REINFORCEMENT

MARK	TYPE	SIZE	NUMBER PIER 1	NUMBER PIER 4	LENGTH FT.	LENGTH IN.	LOCATION	a FT.	a IN.	b FT.	b IN.	c FT.	c IN.	d FT.	d IN.
R1	①	10	38	38	17	3	Footing	13	7	1	10	1	0½	14	7½
R2	①	9	30	30	12	0	"	8	8	1	8	0	11¼	9	7¼
R3	Str.	7	20	20	14	8	"	—	—	—	—	—	—	—	—
R4	Str.	6	30	30	9	8	"	—	—	—	—	—	—	—	—
R5	②	11	48	48	11	1	Column dowels	9	1	2	0	1	2	9	8
R6	Str.	11	48	—	28	0	Column	—	—	—	—	—	—	—	—
R7	Str.	5	52	—	26	3	Web wall	—	—	—	—	—	—	—	—
R8	③	4	50	46	19	5	Column ties	4	8	4	8	—	—	—	—
R9	③	4	100	92	13	7	" "	1	9	4	8	—	—	—	—
R10	Str.	5	50	46	28	6	Web wall	—	—	—	—	—	—	—	—
R11	④	11	6	6	55	1	Cap.	—	—	—	—	—	—	—	—
R12	Str.	11	9	9	35	0	"	—	—	—	—	—	—	—	—
R13	Str.	5	12	12	28	0	"	—	—	—	—	—	—	—	—
R14	①	11	6	6	57	6	"	53	6	2	0	1	2	54	8
R15	②	11	12	12	22	0	"	20	0	2	0	1	2	20	7
R16	②	9	8	8	21	8	"	20	0	1	8	0	11¼	20	5⅝
R17	③	5	64	64	19	2	"	3	6½	5	8	—	—	—	—
R18	③	5	4	4	18	10	"	3	6½	5	6	—	—	—	—
R19	③	5	4	4	18	6	"	3	6½	5	4	—	—	—	—
R20	③	5	4	4	18	2	"	3	6½	5	2	—	—	—	—
R21	③	5	4	4	17	11	"	3	6½	5	0½	—	—	—	—
R22	③	5	4	4	17	7	"	3	6½	4	10½	—	—	—	—
R23	③	5	4	4	17	3	"	3	6½	4	8½	—	—	—	—
R24	③	5	4	4	16	11	"	3	6½	4	6½	—	—	—	—
R25	③	5	4	4	16	8	"	3	6½	4	5	—	—	—	—
R26	③	5	4	4	16	4	"	3	6½	4	3	—	—	—	—
R27	③	5	4	4	16	0	"	3	6½	4	1	—	—	—	—
R28	③	5	4	4	15	8	"	3	6½	3	11	—	—	—	—
R29	③	5	4	4	15	4	"	3	6½	3	9	—	—	—	—
R30	⑤	5	56	56	6	0	Cap	3	2	1	6	—	—	—	—
R31	Str.	11	—	48	26	0	Column	—	—	—	—	—	—	—	—
R32	Str.	5	—	52	28	3	Web wall	—	—	—	—	—	—	—	—





FOOTING PLAN



PILING PLAN

ESTIMATED QUANTITIES

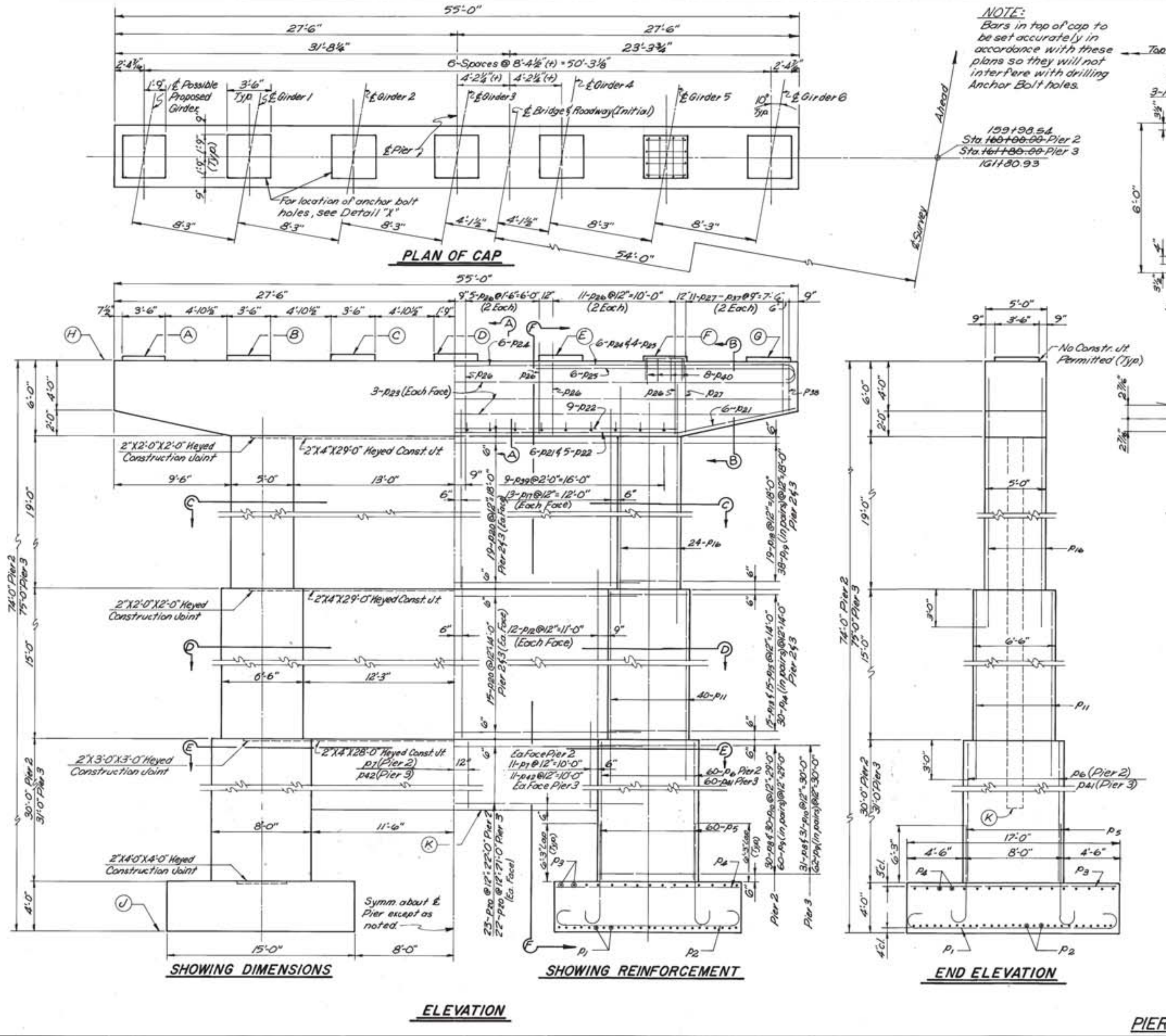
ITEM	UNIT	AMOUNT PIER 1	AMOUNT PIER 4
REINFORCING STEEL	Lbs.	29,600	28,740
CONCRETE CLASS "A"	Cu. Yds.	180.0	173.9

PIERS 1&4

Licking River Bridge at Visalia — Sheet 11

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE - ALEXANDRIA
ROAD
STATION 160+90.00 — P. E. PROJECT NO.
CONSTRUCTION PROJECT NO. — MAINTENANCE PROJECT NO. — DRAWING NO. 19305

Designed by S.M.K. — Checked by T.A.W. — Date 3-1-75
Detailed by C.W.B. — Checked by S.M.K. — Date 3-8-75
Traced by C.W.B. — Checked by S.M.K. — Date 3-8-75
Revised: Pier Stations — R.O.B. / H.M.W. — 1-18-77



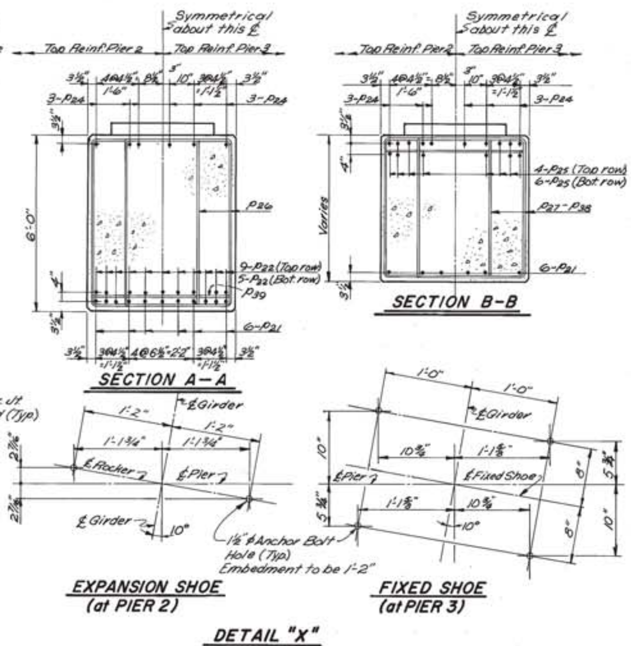


TABLE OF ELEVATIONS PIER 2

Location	(A)	(B)	(C)	(D)	(E)
Elevation	518.420 (518.~~411~~)	518.440 (518.~~431~~)	518.603 (518.~~594~~)	518.766 (518.~~757~~)	518.757 (518.~~748~~)
Location	(F)	(G)	(H)	(J)	(K)
Elevation	518.576 (518.~~567~~)	518.395 (518.~~386~~)	518.053	444.053	455.053

TABLE OF ELEVATIONS PIER 3

Location	(A)	(B)	(C)	(D)	(E)
Elevation	517.352 (517.~~358~~)	517.372 (517.~~378~~)	517.535 (517.~~541~~)	517.697 (517.~~703~~)	517.688 (517.~~694~~)
Location	(F)	(G)	(H)	(J)	(K)
Elevation	517.507 (517.~~513~~)	517.327 (517.~~333~~)	517.000	442.000	455.000

NOTE:
For Sections C-C, D-D, E-E, & F-F & other details of Piers 2 & 3, see sheet 13.

Licking River Bridge at Visalia — Sheet 12

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON-CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD

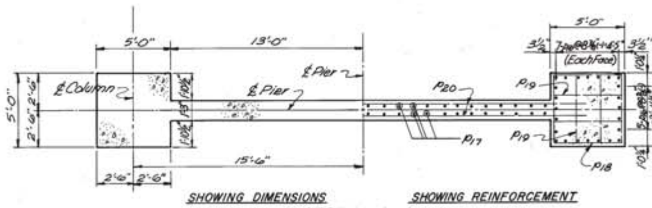
STATION 160+90.00 — P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305

PIERS 2 & 3

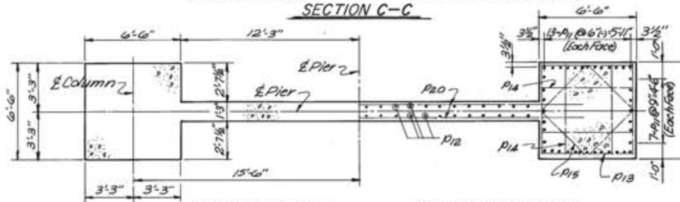
UPDATE DATE
LETTING DATE

Designed by S.M.K. — Date 9-25-75
Detailed by B.M.M. — Date 3-27-75
Traced by B.M.M. — Date 3-27-75
Checked by T.A.W.
Checked by S.M.K.
Checked by S.M.K.
Revised: Pier Stations & Bridge Seat Elev. — RGB - HMW — 1-18-77



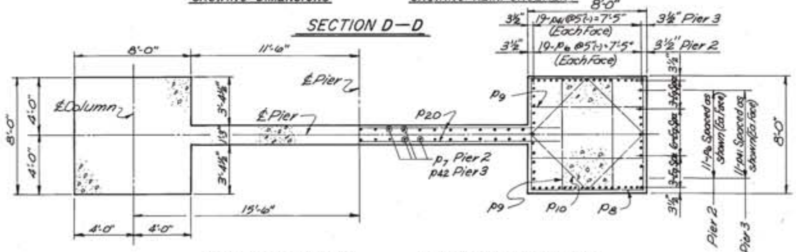
SHOWING DIMENSIONS SHOWING REINFORCEMENT

SECTION C—C



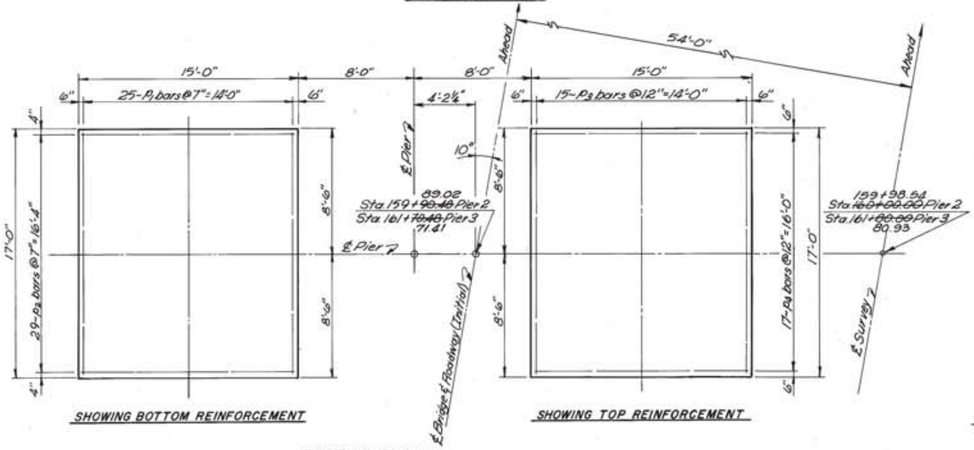
SHOWING DIMENSIONS SHOWING REINFORCEMENT

SECTION D—D



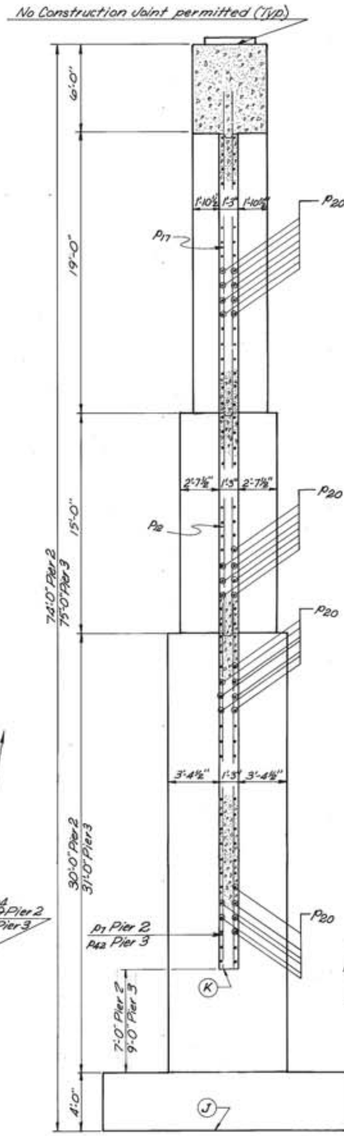
SHOWING DIMENSIONS SHOWING REINFORCEMENT

SECTION E—E



SHOWING BOTTOM REINFORCEMENT SHOWING TOP REINFORCEMENT

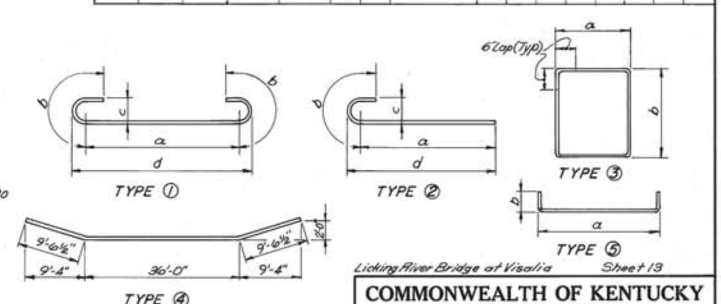
FOOTING PLAN



SECTION F—F

BILL OF REINFORCEMENT

MARK	TYPE	SIZE	NUMBER PIER 2	NUMBER PIER 3	LENGTH FT.	LENGTH IN.	LOCATION	a FT.	a IN.	b FT.	b IN.	c FT.	c IN.	d FT.	d IN.
P_{1}	(1)	10	50	50	19	3	Footing	15	7	1	10	1	0½	16	7½
P_{2}	(1)	10	58	58	17	3	Footing	13	7	1	10	1	0½	14	7½
P_{3}	Str.	8	30	30	16	8	Footing								
P_{4}	Str.	7	34	34	14	8	Footing								
P_{5}	(2)	11	120	120	11	1	Col. Dowels	9	1	2	0	1	2	9	8
P_{6}	Str.	11	120	—	29	10	Column								
P_{7}	Str.	5	46	—	24	3	Web Wall								
P_{8}	(3)	4	60	62	31	5	Col. Ties	7	8	7	8				
P_{9}	(3)	4	120	124	23	3	Col. Ties	3	7	7	8				
P_{10}	(3)	4	60	62	22	11	Col. Ties	5	6½	5	6½				
P_{11}	Str.	11	80	80	17	10	Column								
P_{12}	Str.	5	48	48	16	3	Web Wall								
P_{13}	(3)	4	30	30	25	5	Col. Ties	6	2	6	2				
P_{14}	(3)	4	60	60	19	7	Col. Ties	3	3	6	2				
P_{15}	(3)	4	30	30	18	7	Col. Ties	4	5½	4	5½				
P_{16}	Str.	11	48	48	25	0	Column								
P_{17}	Str.	5	52	52	20	3	Web Wall								
P_{18}	(3)	4	38	38	19	5	Col. Ties	4	8	4	8				
P_{19}	(3)	4	76	76	13	7	Col. Ties	1	9	4	8				
P_{20}	Str.	5	114	112	28	6	Web Wall								
P_{21}	(4)	11	6	6	55	1	Cap								
P_{22}	Str.	11	14	14	35	0									
P_{23}	Str.	5	12	12	28	0									
P_{24}	(1)	11	6	6	57	6		53	6	2	0	1	2	54	8
P_{25}	(2)	11	20	20	22	0		20	0	2	0	1	2	20	7
P_{26}	(3)	5	64	64	19	2		3	6½	5	8				
P_{27}	(3)	5	4	4	18	10		3	6½	5	6				
P_{28}	(3)	5	4	4	18	6		3	6½	5	4				
P_{29}	(3)	5	4	4	18	2		3	6½	5	2				
P_{30}	(3)	5	4	4	17	11		3	6½	5	0½				
P_{31}	(3)	5	4	4	17	7		3	6½	4	10½				
P_{32}	(3)	5	4	4	17	3		3	6½	4	8½				
P_{33}	(3)	5	4	4	16	11		3	6½	4	6½				
P_{34}	(3)	5	4	4	16	8		3	6½	4	5				
P_{35}	(3)	5	4	4	16	4		3	6½	4	3				
P_{36}	(3)	5	4	4	16	0		3	6½	4	1				
P_{37}	(3)	5	4	4	15	8		3	6½	3	11				
P_{38}	(3)	5	4	4	15	4		3	6½	3	9				
P_{39}	(5)	5	18	18	5	6		4	8	0	6				
P_{40}	(5)	5	56	56	6	0	Cap	3	2	1	6				
P_{41}	Str.	11	—	120	30	10	Column								
P_{42}	Str.	5	—	46	23	3	Web Wall								



Licking River Bridge at Visalia Sheet 13

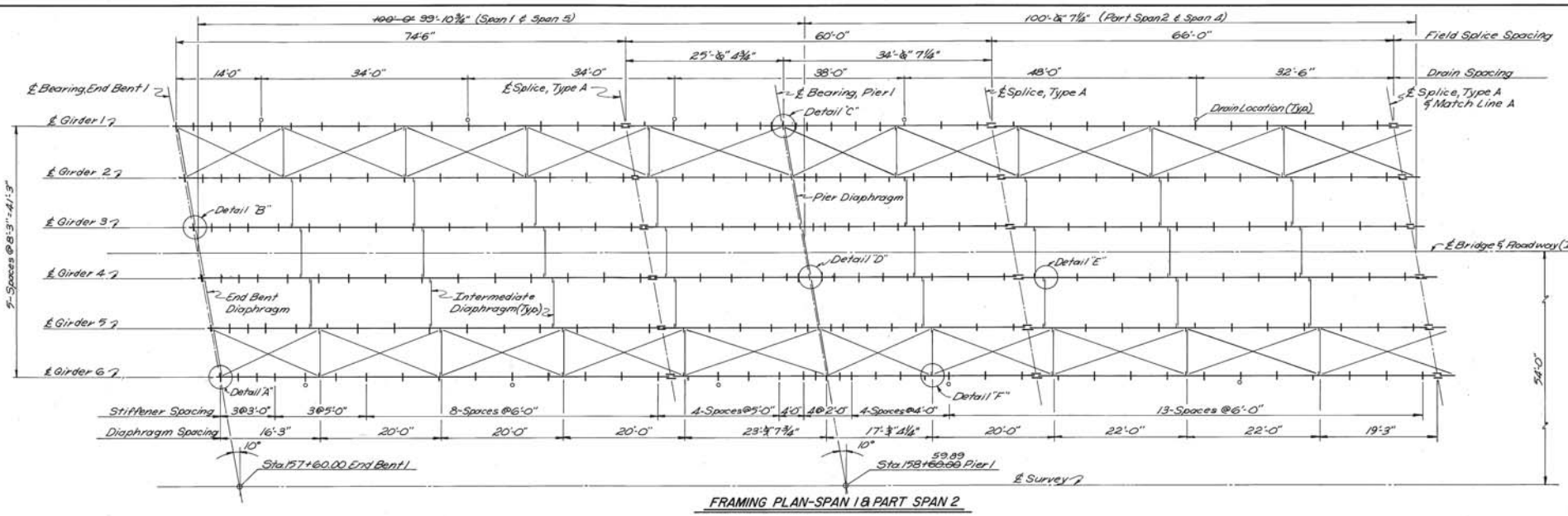
ESTIMATED QUANTITIES

ITEM	UNIT	AMOUNT PIER 2	AMOUNT PIER 3
CONCRETE, CLASS 'A'	CU. YDS.	423.5	427.1
REINF. STEEL	LBS.	75670	76330

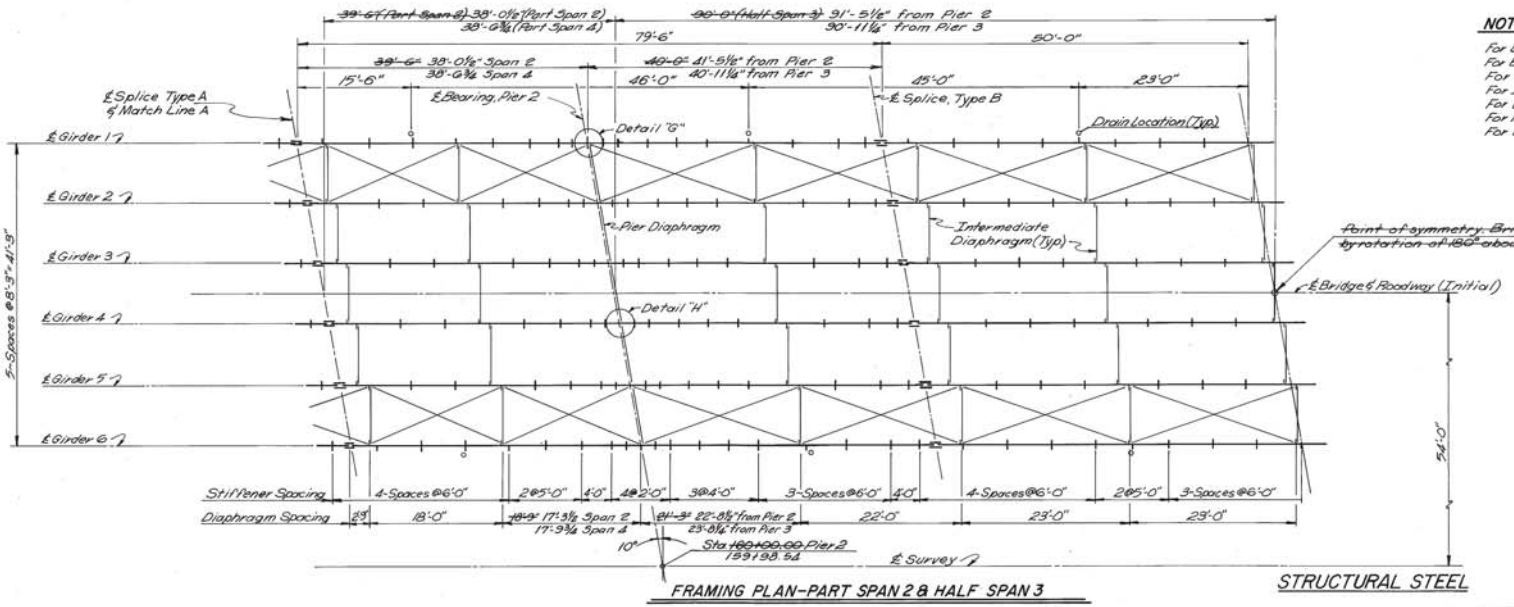
PIERS 2 & 3

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD
STATION 160+90.00 P. E. PROJECT NO.
CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO. 19305

UPDATE DATE
LETTING DATE
DESIGNED BY S.M.K. DATE 3-29-75 CHECKED BY T.W.W.
DETAILED BY B.M.M. DATE 4-1-75 CHECKED BY S.M.K.
TRACED BY B.M.M. DATE 4-1-75 CHECKED BY S.M.K.
REVISED Pier Stations RQB / HWW DATE 1-18-77



FRAMING PLAN-SPAN 1 & PART SPAN 2



FRAMING PLAN-PART SPAN 2 & HALF SPAN 3

STRUCTURAL STEEL

NOTES:

For Lateral Bracing Details see sheet 16
For End Bent Diaphragm Details see sheet 19
For Pier Diaphragm Details see sheet 18
For Intermediate Diaphragm Details see sheet 18
For Details "A" thru "H" see sheet 16
For Field Splice Details see sheet 16
For Drain Supports see sheet 19

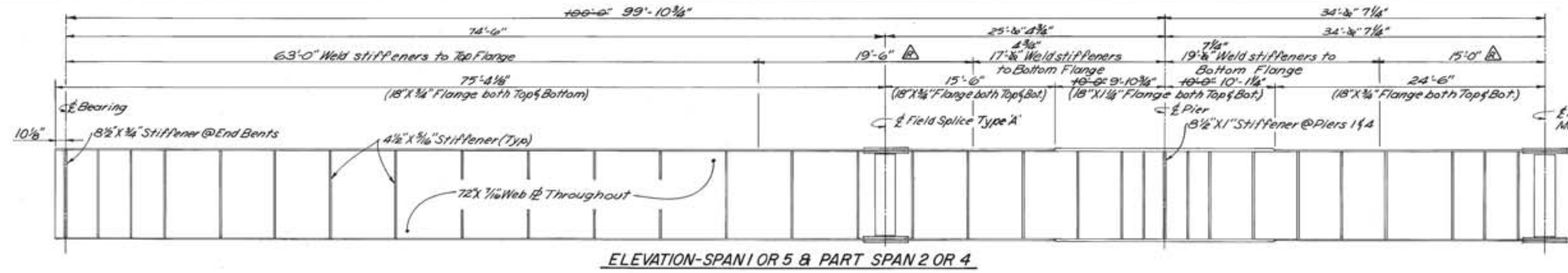
UPDATE DATE
LETTING DATE

DESIGNED BY	T.A.W.	CHECKED BY	S.M.H.	REVISED: Span Lengths & Detail Dimensions	DATE 1-18-77
DETAILED BY	B.M.M.	CHECKED BY	S.M.H.	REVISED:	DATE 4-10-75
TRACED BY	B.M.M.	CHECKED BY	S.M.H.	REVISED:	DATE 4-10-75

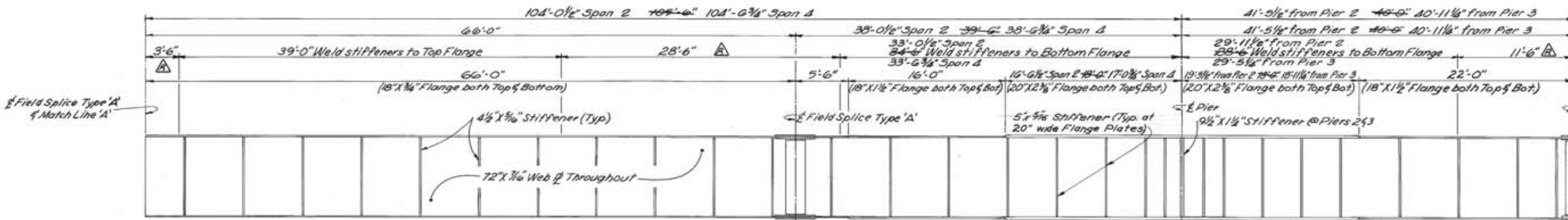
Licking River Bridge at Visalia Sheet 14

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD
STATION 160+90.00 **P. E. PROJECT NO.**

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305



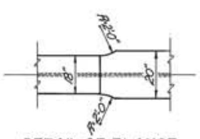
ELEVATION-SPAN 1 OR 5 & PART SPAN 2 OR 4



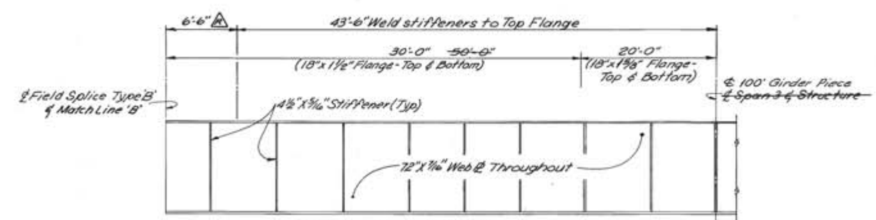
ELEVATION-PART SPAN 2 OR 4 & PART SPAN 3

NOTE:

Ⓐ designates area of possible stress reversal. Do not weld stiffeners to top or bottom girder flanges in this area.



DETAIL OF FLANGE WIDTH TRANSITION



ELEVATION-PART SPAN 3

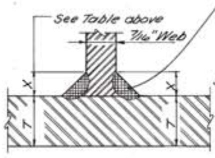
FLANGE-TO-WEB FILLET WELD SIZE

T	X
¾"	¼"
1¼"	5/16"
1½"	5/16"
2⅜"	½"

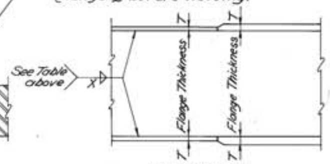
NOTES:

~~Disposition of flange plates is symmetrical about ℄ Structure.~~
See Framing Plan (Sheet 14) for spacing of stiffeners, diaphragms and lateral bracing.
Intermediate stiffeners are perpendicular to flanges. Ends of girders and bearing stiffeners are vertical.

Flange to Web welds to be single-pass submerged arc fully automatic fillet welds in the flat position. Parts are to be assembled with the edge of the web ℗ tight against flange ℗ before welding.



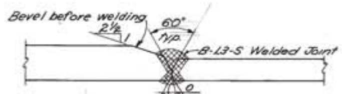
SECTION



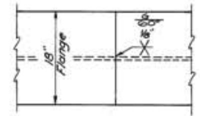
ELEVATION

GIRDER WEB-TO-FLANGE WELD DETAIL

(Showing Joint Preparation for Automatic Submerged Arc Welding)



ELEVATION



PLAN

SHOP FLANGE SPLICE

(Showing Joint Preparation)

STRUCTURAL STEEL

Licking River Bridge at Visalia — Sheet 15

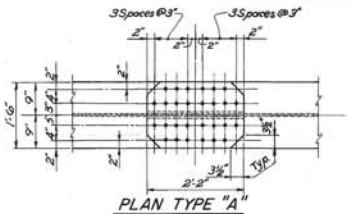
COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON-CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD

STATION 160+90.00 — P. E. PROJECT NO.

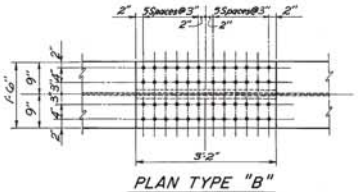
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305

UPDATE DATE ....
LETTING DATE ....

DESIGNED BY MHM	CHECKED BY SMK	DATE 1-25-75	REVISED Span Lengths & Detail Dimensions RGB/HMW DATE 1-18-77
DETAILED BY BMM	CHECKED BY SMK	DATE 2-22-75	REVISED DATE
TRACED BY BMM	CHECKED BY SMK	DATE 3-27-75	REVISED DATE



PLAN TYPE "A"

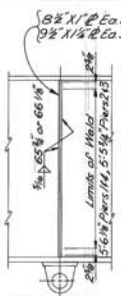


PLAN TYPE "B"

ELEVATION

SECTION

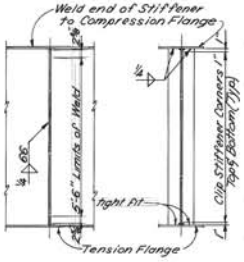
END BENT 1 & 2



ELEVATION

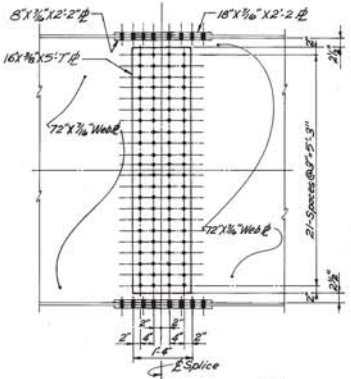
SECTION

PIER

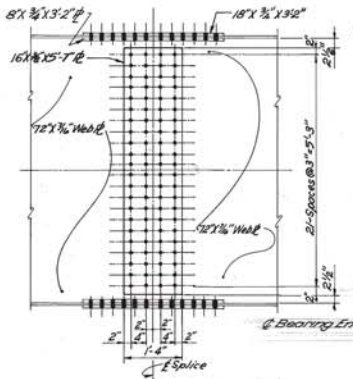


ELEVATION SECTION

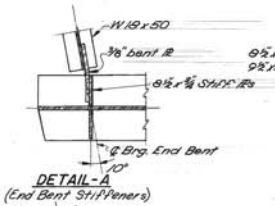
INTERMEDIATE STIFFENER



ELEVATION SPLICE TYPE "A"

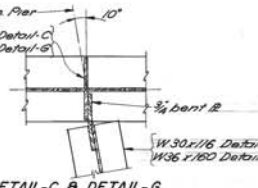


ELEVATION SPLICE TYPE "B"



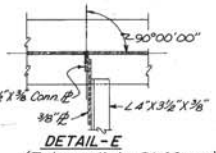
DETAIL-A

(End Bent Stiffeners)



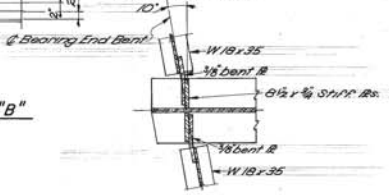
DETAIL-C & DETAIL-G

(Pier Bearing Stiffeners)



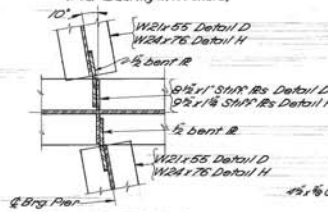
DETAIL-E

(Intermediate Stiffeners)



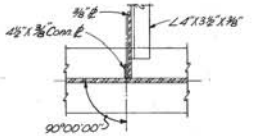
DETAIL-B

(End Bent Stiffeners)



DETAIL-D & DETAIL-H

(Pier Bearing Stiffeners)

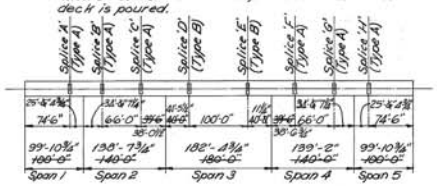


DETAIL-F

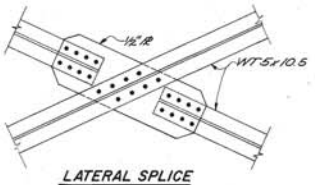
(Intermediate Stiffeners)

TABLE OF SPLICE ELEVATIONS						
Splice	1	2	3	4	5	6
"A"	527.667	527.830	527.992	527.983	527.803	527.622
"B"	527.289	527.452	527.614	527.605	527.425	527.244
"C"	526.855	527.018	527.180	527.171	526.991	526.810
"D"	526.565	526.728	526.890	526.881	526.701	526.520
"E"	525.945	526.108	526.270	526.261	526.081	526.900
"F"	525.249	525.412	525.574	525.565	525.385	525.204
"G"	524.865	525.028	525.190	525.181	525.001	524.820
"H"	524.499	524.662	524.824	524.815	524.635	524.454

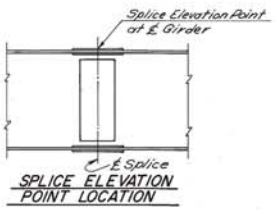
NOTE: See Splice Elevation Point Location, this sheet. The splice elevations listed above are calculated elevations with all structural steel in place and before the deck is poured.



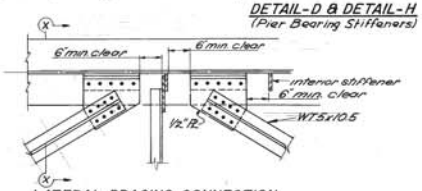
GIRDER ELEVATION SHOWING SPLICE LOCATION



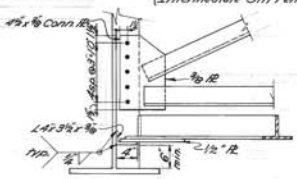
LATERAL SPLICE



SPLICE ELEVATION POINT LOCATION



LATERAL BRACING CONNECTION



SECTION X-X

NOTES:

See Framing Plan (Sheet 14) for location of all diaphragms, splices, lateral bracing and Details "A" thru "H".

STRUCTURAL STEEL

Licking River Bridge at Visalia — Sheet 16

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD
STATION 160+90.00 — P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305

UPDATE DATE

LETTING DATE

REVISED — Span Lengths & Detail Dimensions — DATE 2/28/75 — HMW

REVISED — DATE 5/21/75 — S.M.K.

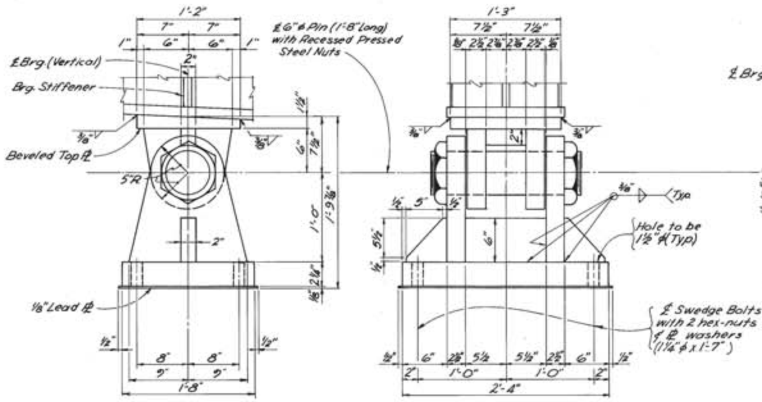
REVISED — DATE 3/21/75 — S.M.K.

REVISED — DATE 1/25/75 — HMW

DESIGNED BY S.M.K. — CHECKED BY

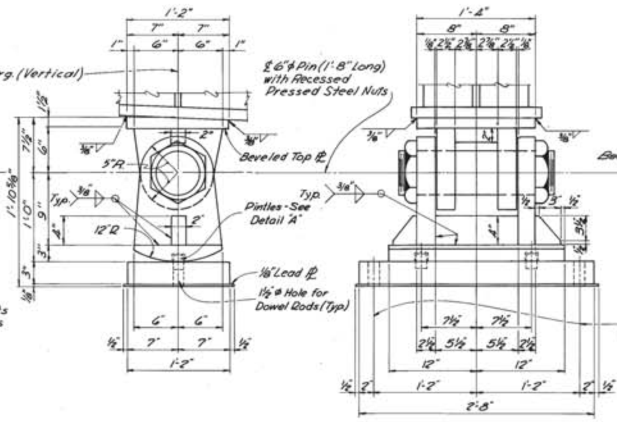
DETAILED BY B.M.M. — CHECKED BY

TRACED BY B.M.M. — CHECKED BY



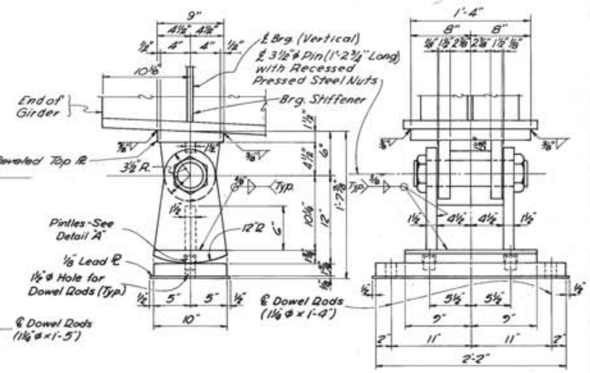
DETAIL OF FIXED SHOE AT PIER 3

No. Req'd. – 6
Wt. Each – 1082 Lbs.



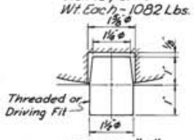
DETAILS OF EXPANSION ROCKER AT PIERS 1, 2, & 4

No. Req'd. – 18
Wt. of Each – 1197 Lbs.

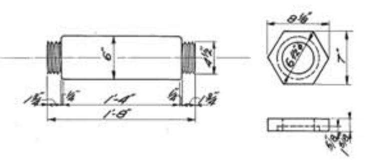


DETAIL OF EXPANSION ROCKER AT END BENTS 1 & 2

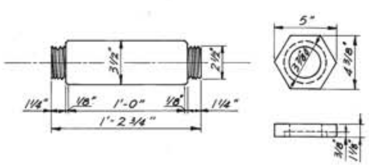
No. Req'd – 12
Wt. of Each – 468 Lbs.



DETAIL "A"

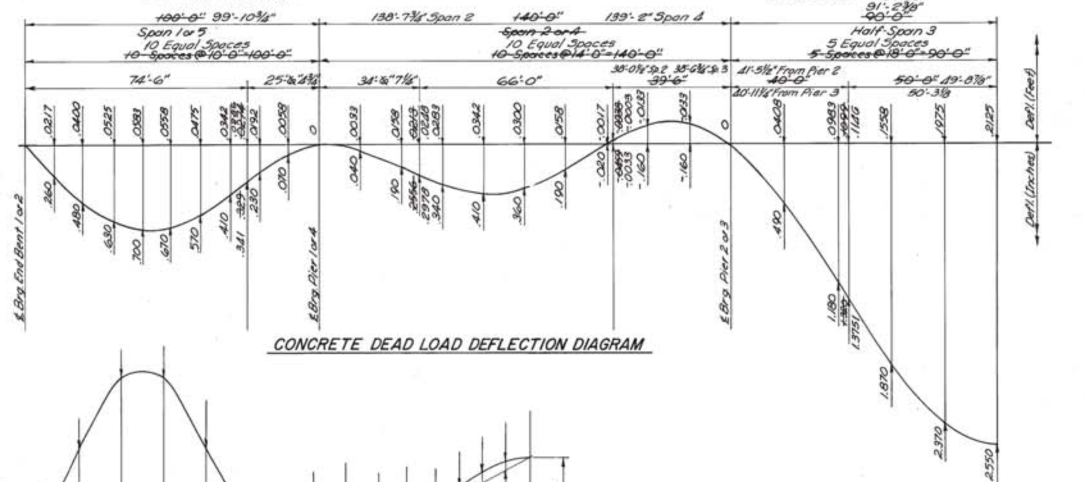


DETAIL OF PIN & RECESSED NUT AT PIER

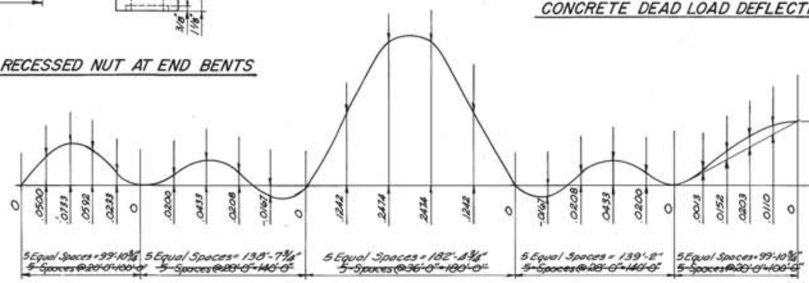


DETAIL OF PIN & RECESSED NUT AT END BENTS

CAMBER (FT.)					
Location		Vert. Curve Corr.	Steel D.L. Defl.	Concrete D.L. Defl.	Total Camber
Span 1	End Bent 1	0	0	0	0
	.2 Span 1	0	.0100	.0400	.0500
	.4 Span 1	0	.0150	.0583	.0733
	.6 Span 1	0	.0117	.0475	.0592
	.8 Span 1	0	.0041	.0192	.0233
	Pier 1	0	0	0	0
Span 2	.2 Span 2	0	.0042	.0158	.0200
	.4 Span 2	0	.0091	.0342	.0433
	.6 Span 2	0	.0050	.0158	.0208
	.8 Span 2	0	-.0034	-.0133	-.0167
	Pier 2	0	0	0	0
Span 3	.2 Span 3	0	.0259	.0983	.1242
	.4 Span 3	0	.0499	.1975	.2474
	.6 Span 3	0	.0499	.1975	.2474
	.8 Span 3	0	.0259	.0983	.1242
	Pier 3	0	0	0	0
Span 4	.2 Span 4	0	-.0034	-.0133	-.0167
	.4 Span 4	0	.0050	.0158	.0208
	.6 Span 4	0	.0091	.0342	.0433
	.8 Span 4	0	.0042	.0158	.0200
	Pier 4	0	0	0	0
Span 5	.2 Span 5	-.022	.0041	.0192	.0013
	.4 Span 5	-.0440	.0117	.0475	.0152
	.6 Span 5	-.0530	.0150	.0583	.0203
	.8 Span 5	-.0390	.0100	.0400	.0110
	End Bent 2	0	0	0	0



CONCRETE DEAD LOAD DEFLECTION DIAGRAM



CAMBER DIAGRAM (FT.)

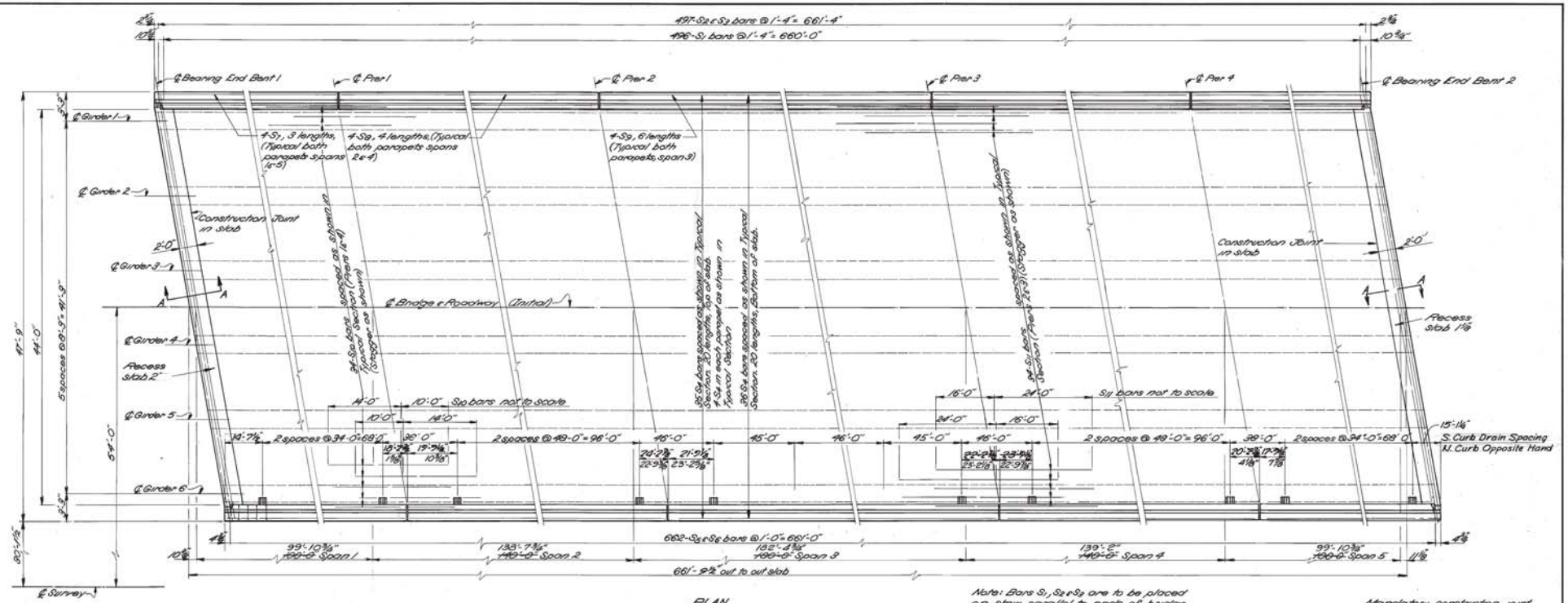
(For checking camber with web horizontal)

STRUCTURAL STEEL

Licking River Bridge at Visalia — Sheet 17

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON-CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD
STATION 160+90.00 — P. E. PROJECT NO.
CONSTRUCTION PROJECT NO. — MAINTENANCE PROJECT NO. — DRAWING NO. 19305

Camber & Deflection Diagrams — RQB / HMW — 1-18-77
DESIGNED BY S.M.K. — CHECKED BY T.A.W. — DATE 3/7/75
DETAILED BY B.M.M. — CHECKED BY S.M.K. — DATE 3/10/75
TRACED BY B.M.M. — CHECKED BY S.M.K. — DATE 3/10/75
UPDATE DATE
LETTING DATE



ESTIMATED QUANTITIES		
ITEM	UNIT	AMOUNT
REINFORCING STEEL	Lbs.	194 880
CONCRETE CLASS "AA"	Cu. Yds.	962 6

SUPERSTRUCTURE

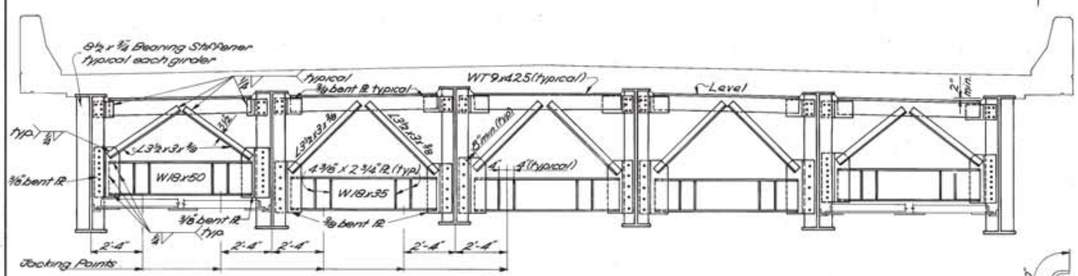
UPDATE DATE
LETTING DATE

Span Lengths & Drain Dimensions	REVISED	DATE	1-19-77
	REVISED	DATE	
	REVISED	DATE	
DRAWN BY ROB	CHECKED BY SMYK	DATE 4-8-75
DETAILED BY ROB	CHECKED BY SMYK	DATE 4-10-75
TRACED BY ROB	CHECKED BY SMYK	

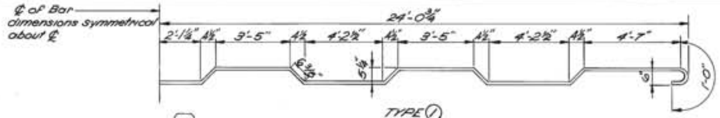
Licking River Bridge at Visalia — Sheet 18

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE-ALEXANDRIA ROAD
STATION 160+90.00 **P. E. PROJECT NO.**

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305



END BENT DIAPHRAGMS



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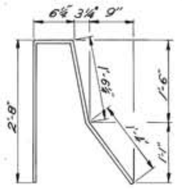
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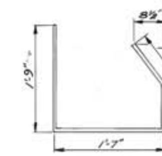
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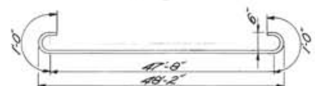
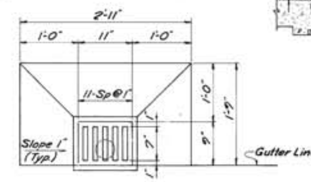
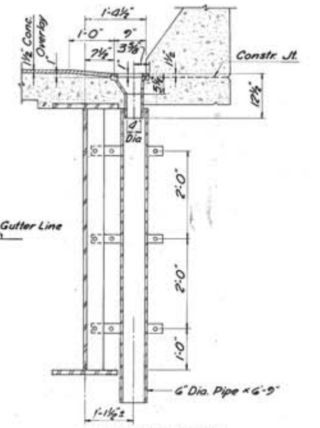


TYPE ④

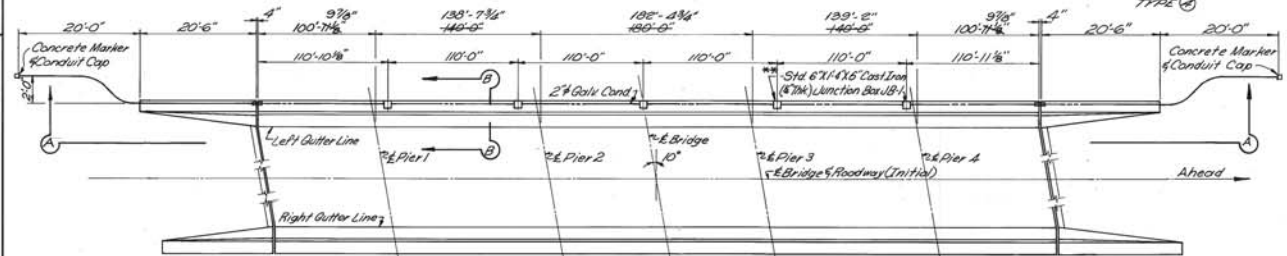
BILL OF REINFORCEMENT						
MARK	TYPE	SIZE	NO.	LENGTH Ft.	LENGTH In.	LOCATION
S1	①	6	496	51	2	Slab
S2	④	6	497	49	8	Slab
S3	Str.	6	497	48	2	Slab
S4	Str.	5	1580	35	1	Slab
S5	③	5	1324	5	2	Barrier Wall
S6	②	5	1324	5	11	Parapet
S7	Str.	4	48	34	8	Parapet
S8	Str.	4	64	36	2	Parapet
S9	Str.	4	48	31	4	Parapet
S10	Str.	6	68	28	0	Slab
S11	Str.	6	68	40	0	Slab



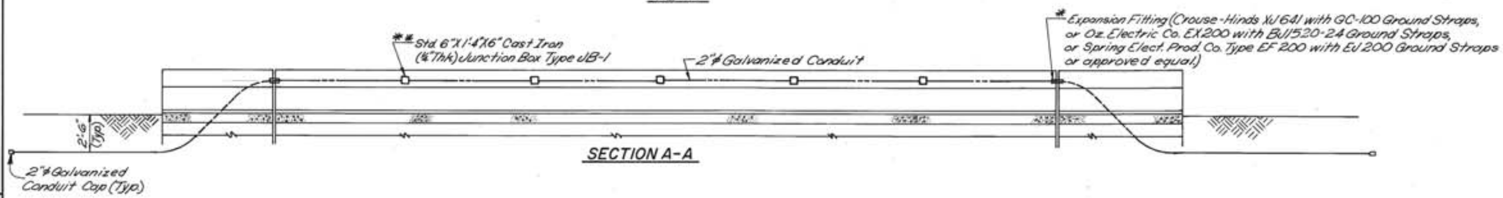
DRAINAGE DETAIL
(32-Drains Required Approx. Wt. 60 Lbs. Each)



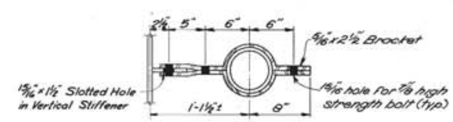
SCUPPER DETAIL



PLAN



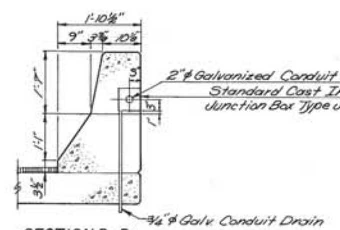
SECTION A-A



BRACKET DETAIL

** Standard Junction Box Type JB-1 (Oz. Elect. Co. Type YU, or Spring Elect. Prod. Co. Type I.R, or Hope Elect. Prod. Co. Type H6200 or approved equal.)

ELECTRICAL BILL OF MATERIALS		
ITEM	QTY.	UNIT
2"⌀ Rigid Galvanized Conduit	745	Lin. Ft.
Std. 6"X1'-4"X6" C.I. (⅝"Thk) Junction Box **	5	Each
2"⌀ Conduit Connections	10	Each
2"⌀ Galvanized Conduit Caps	2	Each
Expansion Fittings *	2	Each
Reinforced Concrete Marker	2	Each
¾"⌀ Rigid Galvanized Conduit Drain	12	Lin. Ft.



SECTION B-B

NOTE:

Concrete Markers shall consist of 4"X4"X3'6" reinforced concrete posts with 4-½"⌀ deformed reinforcing steel rods per post; and a 2" brass disc cast in the end of the post inscribed "End of Duct." Markers to be 2" above grade with disc exposed.

SUPERSTRUCTURE AND ELECTRICAL CONDUIT

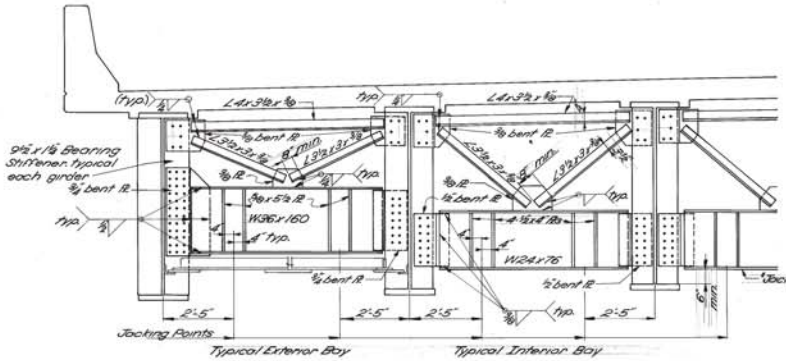
Licking River Bridge at Visalia — Sheet 19

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON-CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD
STATION 160+90.00 — P. E. PROJECT NO.
CONSTRUCTION PROJECT NO. — MAINTENANCE PROJECT NO. — DRAWING NO. 19305

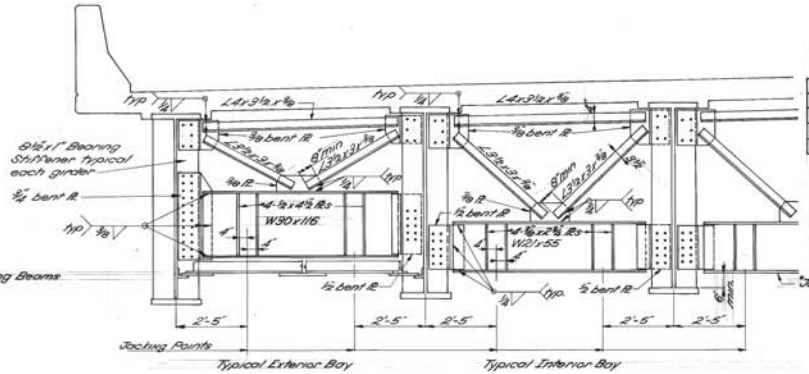
UPDATE DATE
LETTING DATE
RQB / HMW — 1-18-77
Span Lengths
DESIGNED BY RQB — CHECKED BY SMFK — DATE 4-9-75
DETAILED BY RQB & BMM — CHECKED BY SMFK — DATE 4-10-75
TRACED BY RQB & BMM — CHECKED BY SMFK — DATE 4-10-75

UPDATE DATE

LETTING DATE



DIAPHRAGMS AT PIERS 2 & 3



DIAPHRAGMS AT PIERS 1 & 4

*JACKING BEAM DESIGN LOADS

	INTERIOR GIRDER	EXTERIOR GIRDER
End Bents	22.39*	60.02*
Piers 1 & 4	73.17*	196.69*
Piers 2 & 3	111.31*	290.39*

*Note: The jacking beams are designed for the deadload reactions applied at the jacking points.

STRUCTURAL STEEL

Licking River Bridge at Visalia — Sheet 20

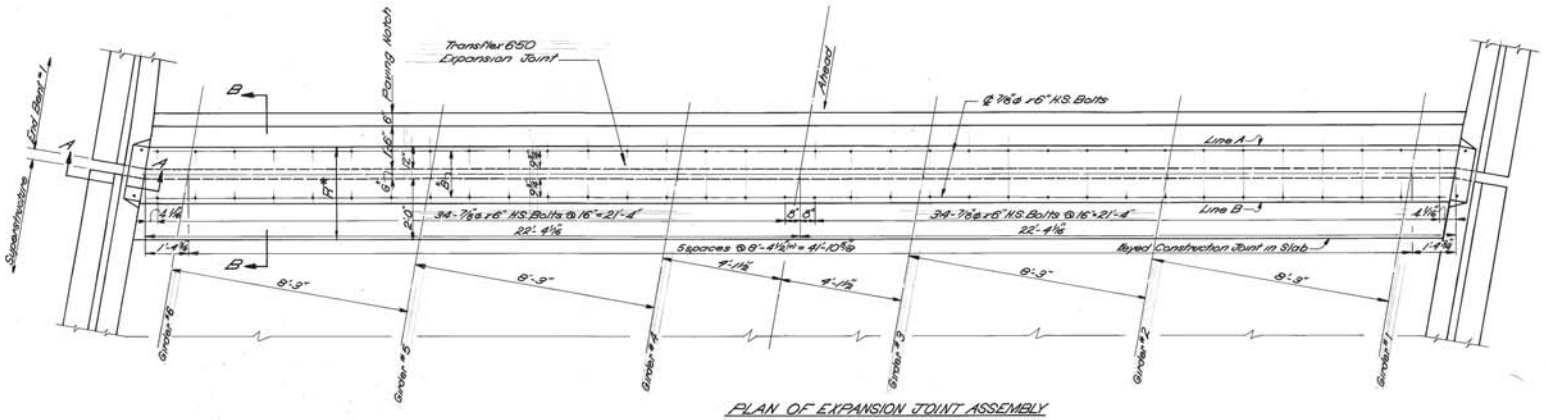
COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE - ALEXANDRIA
ROAD
STATION 160+90.00 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305

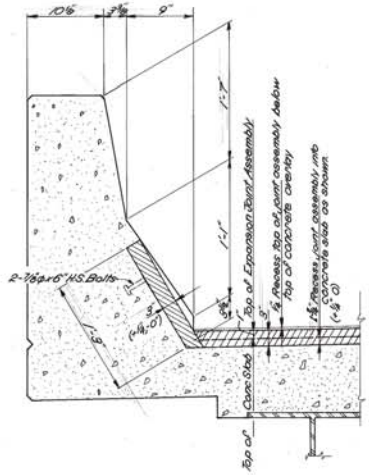
DESIGNED BY ... CHECKED BY ... DATE ...
DETAILED BY ... CHECKED BY ... DATE ...
TRACED BY ... CHECKED BY ... DATE ...
REVISED ... DATE ...
REVISED ... DATE ...
REVISED ... DATE ...

UPDATE DATE

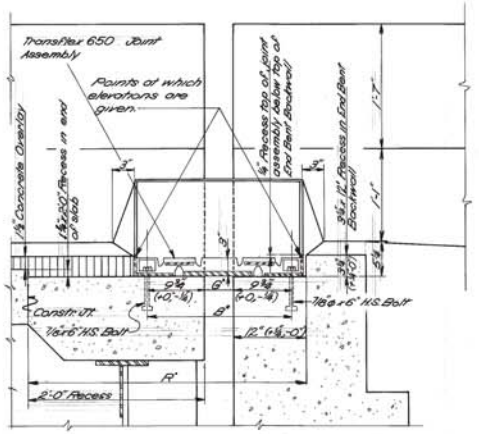
LETTING DATE



PLAN OF EXPANSION JOINT ASSEMBLY
END BENT #1



SECTION A-A
(End Bent #1)



SECTION B-B
(End Bent #1)

"Note: For dimensions and tolerances see Sections A-A & B-B and Table of "Forming and Installation Dimensions For Various Temperatures" on this sheet.

TABLE OF ELEVATIONS

LOCATION		Lt Gutter	℄ Girder 1	℄ Girder 2	℄ Girder 3	℄ Bridge	℄ Girder 4	℄ Girder 5	℄ Girder 6	Rt Gutter
End Bent 1	Line A	529.926	529.953	529.116	529.279	529.337	529.270	529.089	529.908	529.878
	Line B	529.914	529.941	529.104	529.267	529.324	529.258	529.077	529.896	529.866
End Bent 2	Line A	524.940	524.968	525.138	525.308	525.369	525.306	525.132	524.959	524.930
	Line B	524.944	524.972	525.141	525.311	525.372	525.308	525.134	524.961	524.932

Note: Elevations shown are to the top of the Expansion Joint Assembly which is recessed 1/4 below the top of the End Bent backwall & the top of the concrete overlay.

FORMING AND INSTALLATION DIMENSIONS FOR VARIOUS TEMPERATURES

TEMP. (°F)	END BENT 1 G	B	R +1/2" -0"	END BENT 2 G	B	R +1/2" -0"
120°	2 1/8"	21 9/16"	38 1/16"	2 1/8"	18 1/2"	36 5/16"
104°	2 1/16"	22 5/16"	38 13/16"	3 1/4"	18 7/8"	37"
88°	3 1/2"	23"	39 1/2"	3 1/2"	19 1/8"	37 1/4"
72°	4 1/4"	23 3/4"	40 1/4"	3 3/8"	19 3/8"	37 1/2"
60°	4 7/8"	24 1/2"	40 3/4"	4"	19 5/8"	37 3/4"
48°	5 1/4"	24 3/4"	41 1/4"	4 1/8"	19 7/8"	38"
32°	6"	25 1/2"	42."	1/2"	20 1/8"	38 1/4"
16°	6 1/16"	26 3/8"	42 1/16"	4 3/8"	20 3/8"	38 1/2"
0°	7 3/8"	26 7/8"	43 3/8"	5 1/8"	20 3/4"	38 7/8"

NOTE: The manufacturer shall submit shop drawings to the Director, Division of Bridges for Approval. The General Contractor shall not set anchor bolts until the shop drawings have been approved, and then all work shall be in accordance with the Approved drawings.

EXPANSION DAM

Licking River Bridge at Visalio — Sheet 21

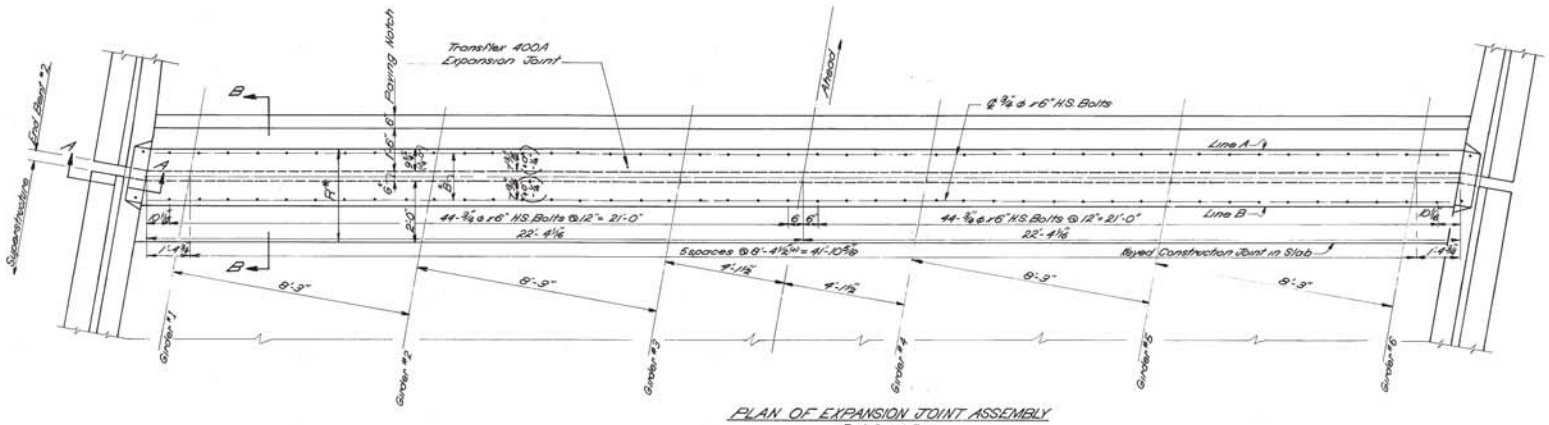
COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON-CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD
STATION 160+90.00 **P. E. PROJECT NO.**

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305

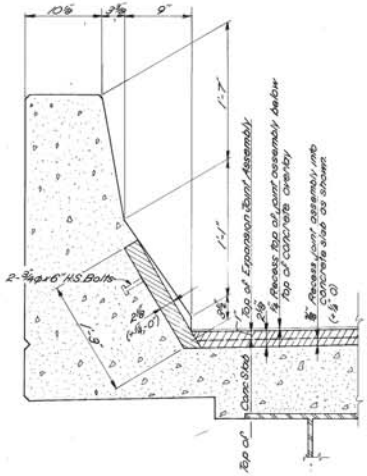
	DATE	REVISED
DESIGNED BY Staff	DATE 4-1-75	
DETAILED BY Staff	DATE 4-1-75	
TRACED BY Staff	DATE 4-1-75	
CHECKED BY RJB		

UPDATE DATE

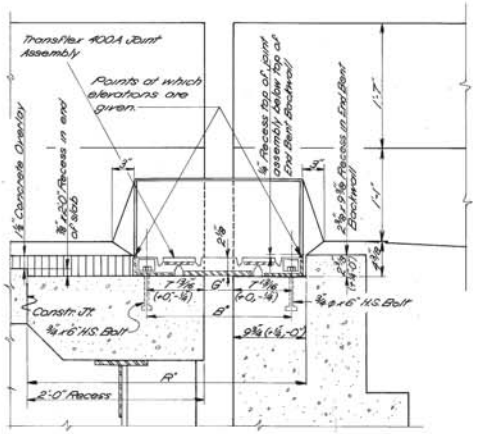
LETTING DATE



PLAN OF EXPANSION JOINT ASSEMBLY
End Bent #2



SECTION A-A
(End Bent #2)



SECTION B-B
(End Bent #2)

*Note: For dimensions and tolerances see Sections A-A & B-B and Table of "Forming and Installation Dimensions For Various Temperatures" on Sheet #21

EXPANSION DAM

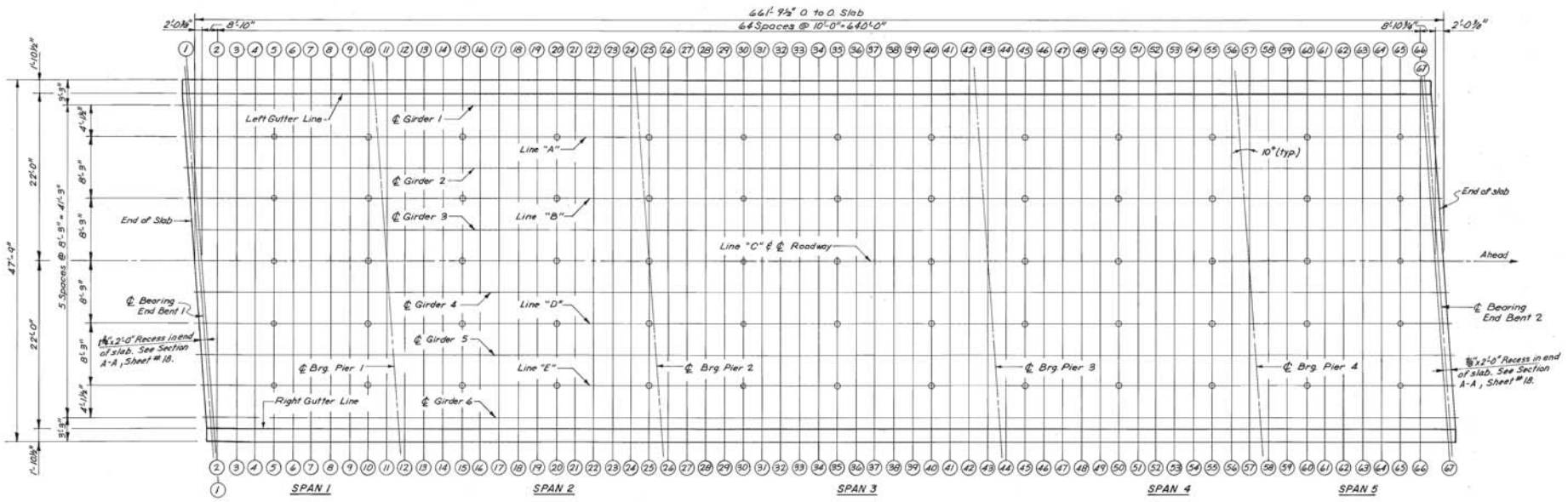
Licking River Bridge at Visalia — Sheet 22

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON-CAMPBELL
INDEPENDENCE-ALEXANDRIA
ROAD

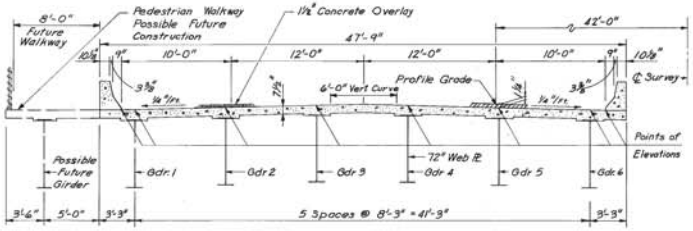
STATION 160+90.00 **P. E. PROJECT NO.**

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305

DESIGNED BY: Staff	CHECKED BY: Staff	REVISED:	DATE:
DETAILED BY: Staff	CHECKED BY: Staff	REVISED:	DATE:
TRACED BY: RDB	CHECKED BY: Staff	REVISED:	DATE:



PLAN



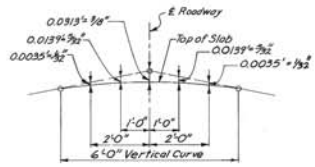
TYPICAL SECTION

TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS *

SLAB CHECK POINT	A5	B5	C5	D5	E5	A10	B10	C10	D10	E10	A15	B15	C15	D15	E15	A20	B20	C20	D20	E20	A25	B25	C25	D25	E25
Top of Slab Elevations	528.710	528.882	529.030	528.881	528.709	528.545	528.518	528.648	528.531	528.350	528.061	528.232	528.379	528.229	528.056	527.726	527.899	528.050	527.903	527.733	527.417	527.586	527.732	527.581	527.407
Bot of Slab Elevations																									
Computed Slab Thickness																									

SLAB CHECK POINT	A30	B30	C30	D30	E30	A35	B35	C35	D35	E35	A40	B40	C40	D40	E40	A45	B45	C45	D45	E45	A50	B50	C50	D50	E50
Top of Slab Elevations	527.253	527.421	527.565	527.412	527.236	526.996	527.170	527.320	527.173	527.002	526.548	526.724	526.877	526.733	526.546	526.156	526.328	526.477	526.328	526.157	525.893	526.064	526.211	526.062	525.899
Bot of Slab Elevations																									
Computed Slab Thickness																									

SLAB CHECK POINT	A55	B55	C55	D55	E55	A60	B60	C60	D60	E60	A65	B65	C65	D65	E65
Top of Slab Elevations	525.557	525.730	525.880	525.732	525.562	525.280	525.450	525.597	525.446	525.271	525.080	525.204	525.355	525.209	525.039
Bot of Slab Elevations															
Computed Slab Thickness															



PARABOLIC CROWN

* NOTE:
After the slab forms are erected and before the slab reinforcement is placed the Resident Engineer shall take field elevations of the slab thickness check points and enter them in the table in the space provided. The slab thickness shall then be computed. If the computed slab thickness varies more than ¼" from the plan thickness, allowing ½ of the slab span for deflection of the formwork, the form shall be adjusted until the computed slab thickness is within the tolerance allowed.

NOTE:
For steel and concrete deflections, see Sheet # 17.
For elevations at splice points, see Sheet # 16.
See Sheet # 24 for all elevation tables.
For expansion dam elevations, see Sheet # 21.
Elevations shown are Top of Class 'AA' Concrete.

CONSTRUCTION ELEVATIONS

Licking River Bridge at Visalia — Sheet 23

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE - ALEXANDRIA
ROAD
STATION 160+90.00 P. E. PROJECT NO.

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305

UPDATE DATE
LETTING DATE

DESIGNED BY S.L.M. CHECKED BY S.M.K. DATE 3-5-75
DRAWN BY S.L.M. CHECKED BY S.M.K. DATE 3-11-75
TRACED BY S.L.M. CHECKED BY S.M.K. DATE 3-11-75

UPDATE DATE

LETTING DATE

TABLE OF ELEVATIONS **

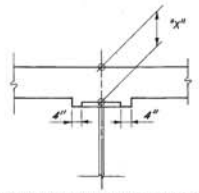
SECTION	LEFT GUTTER LINE			℄ GIRDER 1			℄ GIRDER 2			℄ GIRDER 3			℄ GIRDER 4			℄ GIRDER 5			℄ GIRDER 6			RIGHT GUTTER LINE		
	Const. Elev.	Top of Steel	Dimen. "X"	Const. Elev.	Top of Steel	Dimen. "X"	Const. Elev.	Top of Steel	Dimen. "X"	Const. Elev.	Top of Steel	Dimen. "X"	Const. Elev.	Top of Steel	Dimen. "X"	Const. Elev.	Top of Steel	Dimen. "X"	Const. Elev.	Top of Steel	Dimen. "X"	Const. Elev.	Top of Steel	Dimen. "X"
End of Slab	528.669			528.696			528.859			529.022			528.813			528.832			528.651			528.621		
1-1	528.802			528.829			528.992			529.155			529.146			528.965			528.784			528.754		
2-2	528.752			528.780			528.949			529.118			529.115			528.940			528.765			528.736		
3-3	528.706			528.734			528.904			529.074			529.072			528.897			528.723			528.694		
4-4	528.654			528.683			528.853			529.024			529.023			528.850			528.676			528.647		
5-5	528.595			528.624			528.796			528.968			528.967			528.795			528.622			528.594		
6-6	528.528			528.557			528.730			528.903			528.904			528.732			528.561			528.532		
7-7	528.456			528.484			528.658			528.832			528.833			528.663			528.492			528.464		
8-8	528.379			528.408			528.582			528.757			528.759			528.589			528.419			528.391		
9-9	528.302			528.331			528.505			528.679			528.682			528.512			528.342			528.314		
10-10	528.229			528.258			528.431			528.604			528.606			528.435			528.265			528.237		
11-11	528.165			528.193			528.365			528.537			528.537			528.365			528.194			528.166		
12-12	528.106			528.134			528.305			528.477			528.476			528.303			528.131			528.103		
13-13	528.052			528.080			528.251			528.421			528.421			528.247			528.074			528.045		
14-14	528.000			528.028			528.199			528.369			528.368			528.194			528.021			527.992		
15-15	527.946			527.975			528.146			528.317			528.316			528.142			527.969			527.940		
16-16	527.889			527.917			528.089			528.261			528.260			528.087			527.915			527.886		
17-17	527.826			527.855			528.027			528.200			528.200			528.028			527.856			527.827		
18-18	527.757			527.786			527.959			528.132			528.133			527.962			527.791			527.763		
19-19	527.684			527.713			527.887			528.060			528.062			527.892			527.721			527.693		
20-20	527.610			527.639			527.812			527.986			527.988			527.818			527.648			527.620		
21-21	527.537			527.566			527.739			527.912			527.914			527.744			527.574			527.545		
22-22	527.469			527.497			527.669			527.842			527.843			527.672			527.501			527.473		
23-23	527.406			527.435			527.606			527.778			527.778			527.606			527.434			527.406		
24-24	527.351			527.379			527.550			527.720			527.719			527.546			527.374			527.345		
25-25	527.304			527.332			527.501			527.671			527.668			527.494			527.320			527.291		
26-26	527.265			527.292			527.461			527.630			527.626			527.450			527.275			527.246		
27-27	527.230			527.258			527.425			527.593			527.589			527.413			527.238			527.209		
28-28	527.198			527.226			527.393			527.561			527.556			527.380			527.204			527.174		
29-29	527.172			527.199			527.365			527.532			527.527			527.349			527.173			527.143		
30-30	527.142			527.169			527.337			527.505			527.500			527.324			527.147			527.117		
31-31	527.106			527.134			527.302			527.471			527.467			527.291			527.115			527.086		
32-32	527.069			527.091			527.261			527.431			527.428			527.253			527.078			527.049		
33-33	527.012			527.040			527.211			527.382			527.380			527.207			527.033			527.004		
34-34	526.951			526.979			527.151			527.323			527.323			527.151			526.979			526.951		
35-35	526.880			526.909			527.083			527.256			527.258			527.087			526.916			526.888		
36-36	526.801			526.830			527.005			527.180			527.183			527.013			526.843			526.815		
37-37	526.714			526.743			526.919			527.095			527.099			526.930			526.762			526.734		
38-38	526.621			526.651			526.828			527.004			527.009			526.841			526.673			526.646		
39-39	526.523			526.553			526.729			526.907			526.912			526.745			526.579			526.552		
40-40	526.430			526.460			526.636			526.812			526.817			526.649			526.482			526.454		
41-41	526.341			526.370			526.545			526.721			526.725			526.557			526.390			526.362		
42-42	526.254			526.283			526.458			526.634			526.638			526.469			526.300			526.273		
43-43	526.175			526.204			526.378			526.552			526.555			526.385			526.216			526.188		
44-44	526.105			526.134			526.306			526.479			526.480			526.310			526.139			526.111		
45-45	526.042			526.070			526.242			526.414			526.414			526.242			526.071			526.042		
46-46	525.985			526.013			526.184			526.355			526.354			526.181			526.009			525.981		
47-47	525.933			525.962			526.132			526.302			526.300			526.127			525.954			525.925		
48-48	525.884			525.912			526.082			526.252			526.250			526.076			525.903			525.874		
49-49	525.839			525.861			526.032			526.202			526.200			526.027			525.853			525.824		
50-50	525.779			525.807			525.978			526.149			526.148			525.975			525.802			525.773		
51-51	525.719			525.748			525.920			526.092			526.092			525.919			525.747			525.718		
52-52	525.654			525.683			525.855			526.028			526.029			525.857			525.685			525.657		
53-53	525.584			525.613			525.786			525.960			525.961			525.790			525.619			525.590		
54-54	525.512			525.541			525.714			525.888			525.889			525.719			525.548			525.520		
55-55	525.441			525.470			525.643			525.817			525.817			525.647			525.476			525.448		
56-56	525.375			525.403			525.575			525.748			525.749			525.577			525.406			525.378		
57-57	525.314			525.342			525.513			525.685			525.685			525.513			525.341			525.313		
58-58	525.261			525.289			525.459			525.630			525.628			525.455			525.282			525.253		
59-59	525.218			525.247			525.412			525.582			525.579			525.405			525.231			525.202		
60-60	525.187			525.195			525.365			525.535			525.533			525.358			525.184			525.155		
61-61	525.176			525.184			525.315			525.485			525.484			525.310			525.136			525.108		
62-62	525.065			525.093			525.264			525.436			525.435			525.262			525.089			525.060		
63-63	525.014			525.042			525.215			525.387			525.388			525.216			525.044			525.015		
64-64	524.962			524.992			525.166			525.339			525.340			525.169			524.998			524.970		
65-65	524.913			524.942			525.117			525.291			525.293			525.123			524.953			524.925		
66-66	524.866			524.895			525.070			525.245			525.248			525.079			524.910			524.882		
67-67	524.842			524.870			525.039			525.209			525.206			525.032			524.858			524.829		
End of Slab	524.765			524.794			524.963			525.137			525.131			524.957			524.783			524.756		

NOTE:
For steel and concrete deflections, see Sheet #17.
For expansion dam elevations, see Sheet #21.
For elevations at splice points see Sheet #16.
See Sheet #23 for location of elevation points.

CONSTRUCTION ELEVATIONS

** CONSTRUCTION NOTES:

1. Take elevations on top of steel at points indicated after cross frames and lateral bracing are in place and after all falsework has been removed, but before forms for concrete slab have been put in place. Read elevations to three decimals using a target rod and enter reading in table under "Top of Steel Elevations."
2. Compute Dimension "X" as follows: Construction Elevations minus Steel Elevations equals Dimension "X". Construction Elevations include camber due to weight of concrete slab, barrier, and concrete overlay.
3. For setting templates measure Dimension "X" above top of steel for top of template. Do not set template by elevations.
4. Construct barrier curb to slab grade. Do not add camber to barrier.



STANDARD FILLET DETAIL

	DESIGNED BY	CHECKED BY	TRACED BY	DATE
	S.M.K.	T.A.W.	S.L.M.	9-5-75
	S.L.M.	T.A.W.	S.L.M.	3-14-75
	S.L.M.	T.A.W.	S.L.M.	5-14-75

REVISED

REVISED

REVISED

DATE

DATE

DATE

Licking River Bridge at Visalia — Sheet 24

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
KENTON - CAMPBELL
INDEPENDENCE - ALEXANDRIA
ROAD
STATION 160+90.00 **P. E. PROJECT NO.**

CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO.
		19305