DEPARTMENT OF THE ARMY
LOUISVILLE DISTRICT, CORPS OF ENGINEERS
KY. 1274 OVER CAVE RUN RESERVOIR
MENIFEE - ROWAN COUNTIES

REFERENCE AND ESTIMATE OF QUANTITIES

ITEM / LOCATION	SHEET NO.	CONCRETE CU. YD. CLASS 'A'	CONCRETE CU. YD. CLASS 'AA'	REINF. STEEL LB.	STR. EXC. CU. YD. COM.	STR. EXC. CU. YD. S.R.	HIGH STRENGTH HANDRAIL LIN. FT.	STRUCTURAL STEEL LUMP SUM BID ①	LINSEED OIL PROT. COATING SQ. YD.	SHEAR CONNECTORS LUMP SUM BID ②
QUANTITIES	1									
NOTES	2									
LAYOUT	3-4									
SOUNDINGS	5-6									
ABUTMENT 1	7-8	37.0	33.4	9974	35	80				
ABUTMENT 2	7-8	46.0	33.4	9974	20	99*				
PIER 1	9/11	585.1		66,016	740	105				
PIER 2	9/11	634.5		73,905	1293	120				
PIER 3	10/11	354.1		42017	715	120				
SUPERSTRUCTURE	12-16		705.0	153,969			1444	①	2770	②
ELEVATIONS	17-18									
SUPERSTRUCTURE TOTALS*			705.0	153,969			1444	①	2770	②
SUBSTRUCTURE TOTALS		1262.6	771.8	339,797	2310	513				
TOTALS		1967.6	771.8	493,766	2310	513	1444	①	2770	②

① Approximate weight of Structural Steel is 341,000 lbs. (Est.)
② Shear Connectors: Approximate weight included in Lump Sum for this item.
Option 1 7/8" x 4" Stud — 8160#
Option 2 3/4" x 4" Spirals — 3816#
Option 3 1/2" Channel 8.5# — 3936#

* Bad Foundation (Soft Rock) 11/30/69

BILL OF INCIDENTAL MATERIAL

ITEM	NO.	SIZE & LOCATION
Joint Sealing Compound	2	1"x1"x28'-10" @ Exp. Joints

NOTE:
Quantities shown in Bill of Incidental Material are approximate only and the contractor is responsible for furnishing sufficient material to complete all work in accordance with Plans and Specifications.

STANDARD DRAWINGS

11E51-A	ANS-2
11W7-A	
11W20-B	

SPECIAL PROVISIONS

*13 = for Linseed Oil Protective Coating
*19 = for Aluminum Strand Cast Aluminum Bridge Railing (Type B)
*20 = for Joint Sealing Compound
*35 = for "Class 'AA' Concrete"

1B361

SHEET 1 OF 18

NO.	REVISION	PER AMDT. NO.	DATED	BY	APPD.

CULPEPPER CONSULTING ENGINEERS INCORPORATED LEXINGTON, KENTUCKY

U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS LOUISVILLE, KENTUCKY

OHIO RIVER BASIN
CAVE RUN RESERVOIR
LICKING RIVER, KY.
RELOCATION OF KY. 1274 (PART II)
BRIDGE OVER CAVE RUN RES.
QUANTITIES

DRAWN [illegible] DATE

LR-1-7-E-1471-6

GENERAL NOTES

SPECIFICATIONS: KENTUCKY DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS, CURRENT EDITION WITH REVISIONS.

DESIGN LOAD: BRIDGE IS DESIGNED FOR H20-44, LOADING AS SPECIFIED IN 1961 AASHO SPECIFICATIONS. SLAB DESIGNED FOR 16 KIP WHEEL LOAD.

DESIGN STRESSES:

FOR CLASS "AA" REINFORCED CONCRETE	FOR CLASS "A" REINFORCED CONCRETE	FOR STRUCTURAL STEEL
f'_c = 4,000 PSI	f'_c = 3,000 PSI	F_y = 33,000 PSI FOR A36 STEEL
f_c = 1,800 PSI	f_c = 1,200 PSI	
f_v = 100 PSI FOR EMBEDMENT	f_v = 200 PSI FOR EMBEDMENT	
f_v = 400 PSI FOR SUM OF PERIMETER	f_v = 800 PSI FOR SUM OF PERIMETER	
f_s = 20,000 PSI	f_s = 3,000 LBS	
n = 10	n = 10	

FOUNDATION PRESSURE: FOOTINGS ARE DESIGNED FOR A MAXIMUM PRESSURE OF 10,000 PSF. THESE MAXIMUMS ARE FOR GROUP I LOADING WITH INCREASES ALLOWED FOR OTHER LOADING GROUPS.

CONCRETE: CLASS "A" CONCRETE IS TO BE USED THROUGHOUT EXCEPT IN SUPERSTRUCTURE, PORTIONS OF ABUTMENTS ABOVE THE CONSTRUCTION JOINT AT BRIDGE SEAT ELEVATIONS, AND CONCRETE RAILING.
CLASS "AA" CONCRETE IS TO BE USED IN ROADWAY SLAB, CURBS, PLINTHS, AND IN ABUTMENTS ABOVE THE CONSTRUCTION JOINT AT BRIDGE SEAT ELEVATIONS.
CLASS "A" CONCRETE IS TO BE USED IN CONCRETE HANDRAIL.

REINFORCEMENT: DIMENSIONS SHOWN FROM FACE OF CONCRETE TO BARS ARE CLEAR DISTANCES. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS.

BEVELED EDGES: ALL EXPOSED EDGES SHALL BE BEVELED 7/8", UNLESS OTHERWISE NOTED.

JOINT SEALING COMPOUND: THE COST OF THIS ITEM IS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "AA" CONCRETE.

STRUCTURAL STEEL: LUMP SUM BID: FOR STRUCTURAL STEEL SHALL BE FULL PAYMENT FOR ALL STRUCTURAL STEEL, RIVETS, BOLTS, WASHERS, STEEL PINS, LEAD PLATES, MOLTEN LEAD, WELDING MATERIALS, WELDING MATERIALS, FLOOR DRAINS, PAINT, LINER TRACINGS OF SHOP DETAIL AND ERECTION DRAWINGS, AND ALL LABOR AND MATERIALS NECESSARY TO ERECT THE STEEL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

PAINT: ALL STRUCTURAL STEEL EXCEPT PINS AND PIN BEARING SURFACES SHALL BE GIVEN ONE SHOP COAT AND ONE FIELD COAT OF TYPE I RED LEAD PAINT AND TWO FIELD COATS OF ALUMINUM PAINT. EXPOSED SURFACES OF EXPANSION BANK, NOT ACCESSIBLE AFTER ERECTION, SHALL BE GIVEN TWO FIELD COATS OF ALUMINUM PAINT INSTEAD OF ONE. PINS AND PIN BEARING SURFACES SHALL BE COATED IN THE SHOP WITH A HOT MIXTURE OF WHITE LEAD AND TALLOW IN ACCORDANCE WITH THE SPECIFICATIONS. SHOP PAINT SHALL NOT BE APPLIED WITHIN 3" OF OPEN HOLES WHERE HIGH STRENGTH BOLTS ARE TO BE USED FOR FIELD CONNECTIONS AND SHALL NOT BE APPLIED TO STEEL SURFACES IN CONTACT WITH CONCRETE.

SHEAR CONNECTORS: LUMP SUM BID: FOR SHEAR CONNECTORS SHALL BE FULL PAYMENT FOR ALL SHEAR CONNECTORS, WELDING AND WELDING MATERIALS, PATENT ROYALTIES AND MATERIALS NECESSARY TO FIELD WELD THE SHEAR CONNECTORS IN PLACE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

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

WELDED STUDS: STUDS USED FOR COMPOSITE SHEAR DEVELOPERS SHALL BE WELDED WITH APPROVED WELDING EQUIPMENT.

MATERIALS: ASTM SPECIFICATIONS HEREINAFTER DESIGNATED SHALL GOVERN THE MATERIALS FURNISHED.

MATERIAL	ASTM DESIGNATION
STRUCTURAL STEEL	A36 - CURRENT
HIGH STRENGTH BOLTS, NUTS, & FLAT HARDENED WASHERS	A325 - CURRENT
LOW CARBON STEEL MACHINE BOLTS & NUTS	A307 - CURRENT
STRUCTURAL PIN STEEL	A21 - CURRENT
MILD STEEL ARC WELDING ELECTRODES	A233 - CURRENT
GRAY IRON CASTINGS	A48 - CURRENT
WELDED STEEL OR IRON PIPE	A72 - CURRENT
SHEET LEAD & PIG LEAD	B29 - CURRENT

CONNECTIONS: UNLESS OTHERWISE PROVIDED, SHOP AND FIELD CONNECTIONS SHALL BE 7/8" DIAMETER RIVETS OR HIGH STRENGTH BOLTS. OPEN HOLES SHALL BE 15/16" DIAMETER FOR 7/8" DIAMETER BOLTS.

MILL TEST REPORTS: NOTARIZED TEST REPORTS IN TRIPLICATE SHALL BE FURNISHED THE LOUISVILLE DISTRICT, CORPS OF ENGINEERS SHOWING THAT ALL MATERIALS FURNISHED CONFORM TO THE SPECIFICATIONS.

STEEL FINISH: STEEL BEARING SURFACES IN CONTACT SHALL BE FINISHED IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS.

DIMENSIONS: DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 60 DEGREES FAHRENHEIT. LAYOUT DIMENSIONS ARE HORIZONTAL MEASUREMENT.

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 WRITTEN CONSENT OF THE CORPS OF ENGINEERS, AND THEN ONLY IN THE MANNER AND AT THE LOCATIONS DESIGNATED IN THE AUTHORIZATION.

SHOP ASSEMBLY AND REAMING: GENERAL REAMING OF HOLES FOR EACH FIELD SPLICE SHALL BE REQUIRED WITH ALL PARTS FOR EACH SPLICE COMPLETELY SHOP ASSEMBLED, WITH PARTS ADJUSTED TO LINE AND CAMBER, FIT FOR DRILLING OR REAMING. THIS APPLIES TO FIELD SPLICES IN GIRDERS ONLY. GIRDERS SHALL REMAIN ASSEMBLED FOR INSPECTION BY THE CORPS OF ENGINEERS INSPECTOR AND ARE TO BE MATCH-MARKED WHILE ASSEMBLED. OTHER FIELD CONNECTIONS SHALL BE DRILLED OR REAMED IN THE SHOP WITH CONNECTING PARTS ASSEMBLED, OR SHALL BE DRILLED OR FRAMED TO A METAL TEMPLATE WITHOUT ASSEMBLY.

CHANGES IN STRUCTURAL STEEL QUANTITIES: IF THE EVENT THAT CHANGES IN STEEL QUANTITIES ARE REQUIRED DUE TO CHANGES BY THE ENGINEER IN PLANS, ADDITIONAL PAYMENTS THEREFOR SHALL BE MADE AT A UNIT PRICE WHICH WILL BE EQUAL TO THE CONTRACT LUMP SUM PRICE DIVIDED BY THE ESTIMATED TOTAL WEIGHT.

HIGH STRENGTH BOLTS: CONNECTIONS USING HIGH STRENGTH BOLTS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. ASSEMBLY AND DIMENSIONS OF HIGH STRENGTH STEEL BOLTS, NUTS AND WASHERS SHALL CONFORM TO "SPECIFICATIONS FOR STRUCTURAL JOINT USING A.S.T.M. A325 BOLTS," MARCH, 1960, APPROVED BY THE "RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS" OF THE ENGINEERING FOUNDATION. ALL JOINTS ARE DESIGNED AS FRICTION-TYPE CONNECTIONS. INSTALLATION SHALL BE PERFORMED BY TURN-OF-NUT METHOD. WHEN THE WIDTH OF HIGH-STRENGTH BOLT HEADS CORRESPONDS TO "TWO OF THE HEAVY CHAMFERED HEXAGON BOLTS, ONLY ONE WASHER PER BOLT IS REQUIRED.

WIND LOADS: THIS STRUCTURE IS DESIGNED USING WIND LOADS BASED ON WIND VELOCITY OF 64 M.P.H.

OPTIONAL TYPES OF HANDRAIL: THE CONTRACTOR SHALL PROVIDE THROUGHOUT THE PROJECT AT HIS OPTION, EITHER STANDARD HIGH STRENGTH ALUMINUM HANDRAIL IN ACCORDANCE WITH STANDARD DRAWING H119 OR STANDARD HIGH STRENGTH CONCRETE HANDRAIL IN ACCORDANCE WITH STANDARD DRAWING H150.

LINSEED OIL PROTECTIVE COATING; JOINT SEALING COMPOUND: THESE ITEMS ARE TO BE FURNISHED AND APPLIED IN ACCORDANCE WITH THEIR RESPECTIVE SPECIAL PROVISIONS.

CAMBER: WEB PLATES SHALL BE CUT TO PROVIDE FOR CAMBER OF THE GIRDER. GIRDER IS TO BE FABRICATED SO THAT TOP AND BOTTOM OF WEB PLATE WILL BE PARALLEL TO ROADWAY GRADE WITH FULL DEAD LOAD IN PLACE. GIRDERS WHICH DO NOT CONFORM TO PLAN CAMBER AND GRADE IN THE ERECTED POSITION SHALL BE CONSIDERED AS UNSATISFACTORY AND ADDITIONAL CONCRETE IN THE SLAB, EITHER AN ADJUSTMENT IN DEPTH OF THE CONCRETE SLAB HAUNCH OVER THE STEEL SUPPORTING MEMBERS OR A REMOVAL OF THE GIRDER CAMBER TO MEET THE PLAN GRADE AND SLAB THICKNESS.

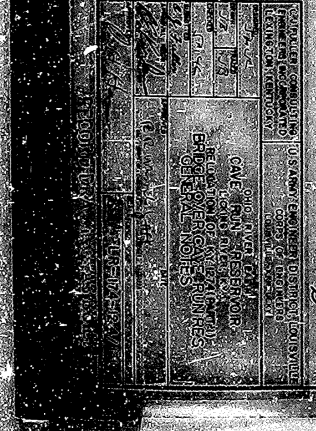
SHOP DETAIL DRAWINGS: THE CONTRACTOR SHALL SUBMIT SHOP DETAIL DRAWINGS OF ALL STRUCTURAL STEEL TO THE CORPS OF ENGINEERS FOR APPROVAL IN ACCORDANCE WITH THE SPECIFICATIONS. A SET OF LINEN TRACINGS OF APPROVED SHOP DETAILS SHALL BECOME THE PROPERTY OF THE CORPS OF ENGINEERS WHEN THE CONTRACT IS COMPLETED AND BEFORE FINAL PAYMENT IS MADE. NOTE DIRECT PAYMENT SHALL BE MADE FOR RECORD DRAWINGS, BUT THE COST SHALL BE INCLUDED IN THE "LUMP SUM BID" FOR STRUCTURAL STEEL. ANY MATERIAL ORDERED OR WORK DONE BY THE CONTRACTOR BEFORE THE SHOP DRAWINGS, INCLUDING THE WELDING PROCEDURES, ARE APPROVED SHALL BE AT HIS RISK. QUALIFICATION TESTS OF ALL WELDING PROCEDURES SHALL BE COMPLETED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO THE FINAL APPROVAL OF SHOP DRAWINGS AND START OF THE FABRICATION.

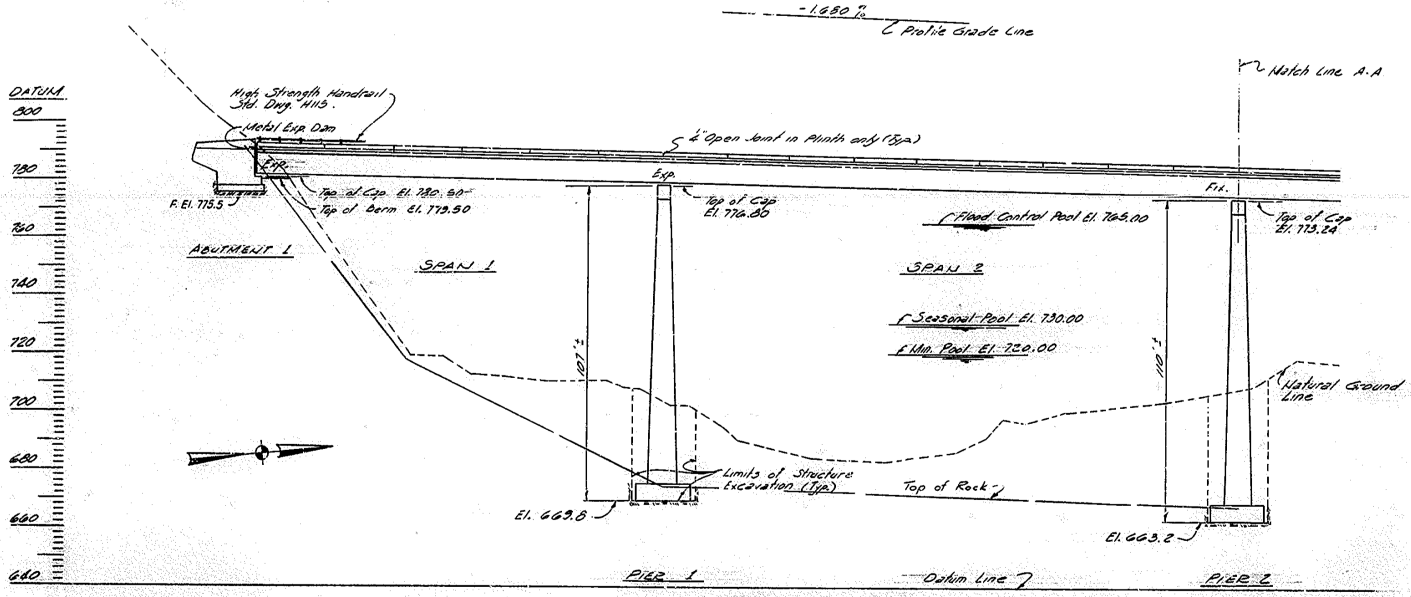
ADDITIONAL FIELD SPLICES: IF ADDITIONAL FIELD SPLICES ARE PERMITTED, THEY SHALL BE AT THE CONTRACTOR'S EXPENSE AND SHALL BE INCLUDED IN THE "LUMP SUM BID" FOR STRUCTURAL STEEL.

FIELD WELDING: WHERE FIELD WELDING IS INDICATED, WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS FOR WELDING MATERIALS AND WELDING. WELDING PROCEDURES SHALL BE SUBMITTED BY THE ERECTOR TO THE CORPS OF ENGINEERS FOR APPROVAL.

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.

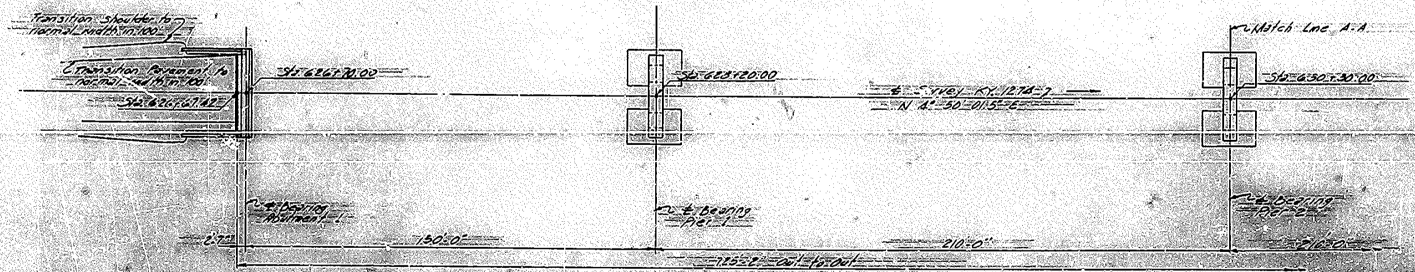
PLAN ELEVATIONS FOR FOOTINGS: WHEN SOLID LEDGE ROCK IS ENCOUNTERED AT DATUM ELEVATION HIGHER THAN PLAN ELEVATION, THE HIGHER ELEVATIONS MAY BE UTILIZED AS OUTLINED IN THE SPECIFICATIONS.



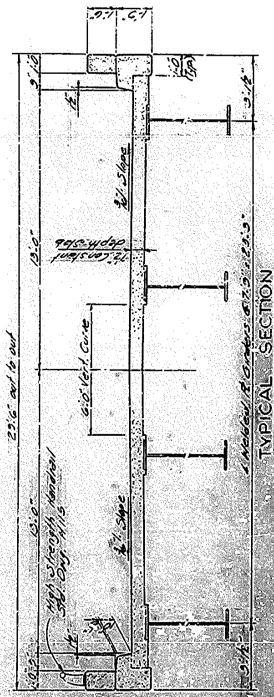


PART ELEVATION

150'-210'-210'-150' CONTINUOUS COMPOSITE R. GIRDER SPANS, NO SKEW
H20-44 LOADING, 26'-0" ROADWAY, 2-9" SAFETY CURBS
30" SHOULDERS AT BRIDGE.



PART PLAN
(Deck Removed)



CONTRACTOR OR CONSULTING ENGINEERS INCORPORATED LEXINGTON, KENTUCKY

U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS LOUISVILLE, KENTUCKY

CUMBERLAND RIVER BASIN
CAVE RUN RESERVOIR
ROWAN COUNTY, KENTUCKY
RELOCATION OF KY. 211 (PART II)
BRIDGE OVER CAVE RUN RES.
LAYOUT

DES. DRN. TR. CK. APP.

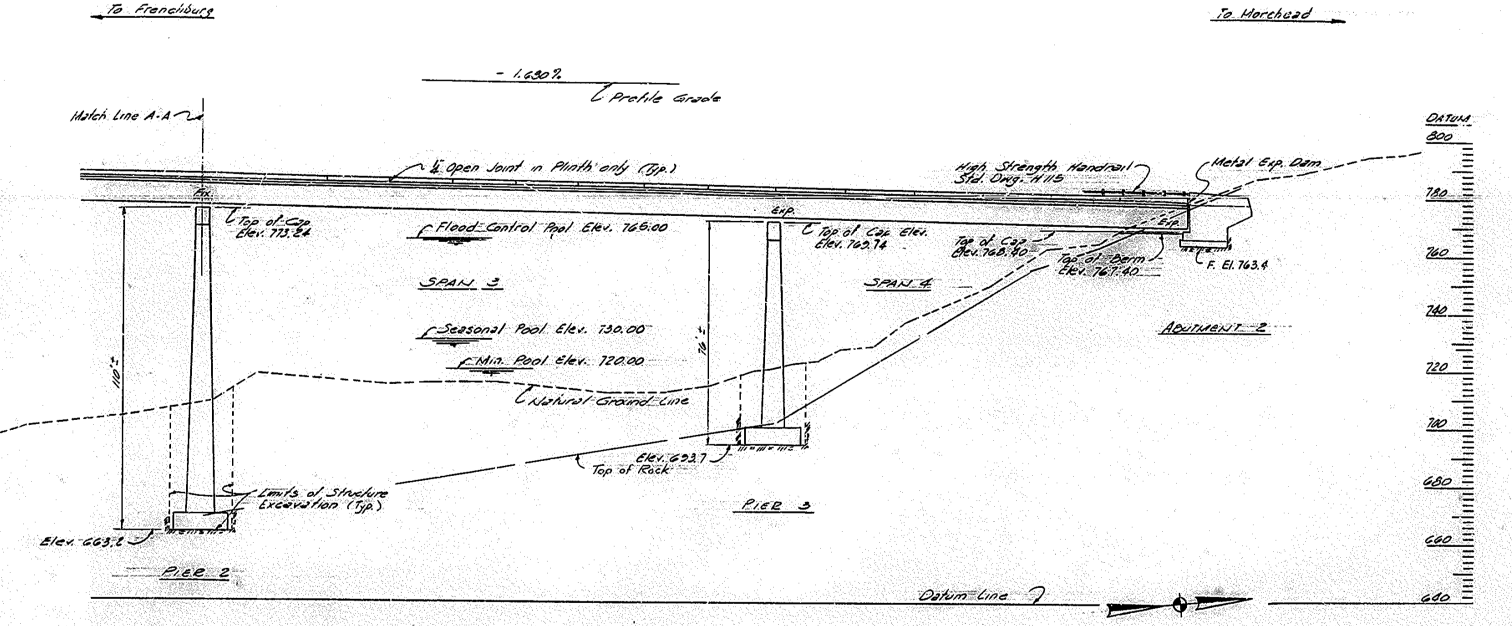
DATE

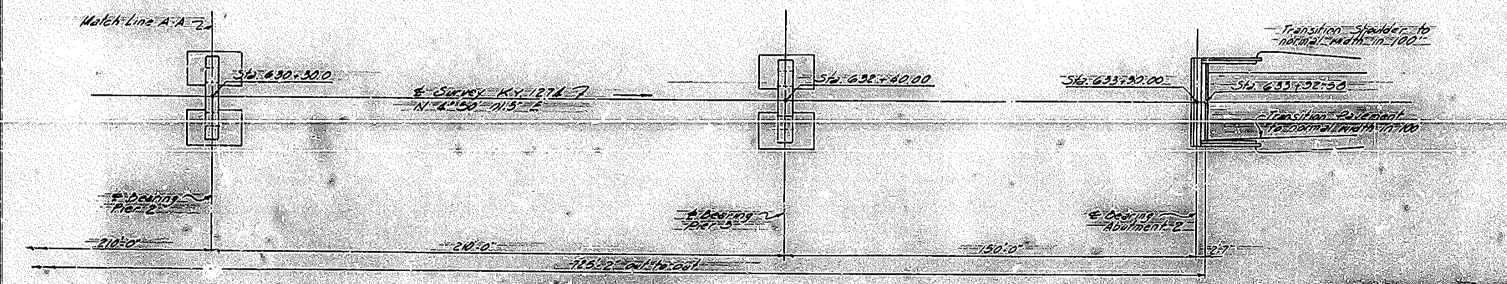
SUBMITTED

RECOMMENDED

APPROVED

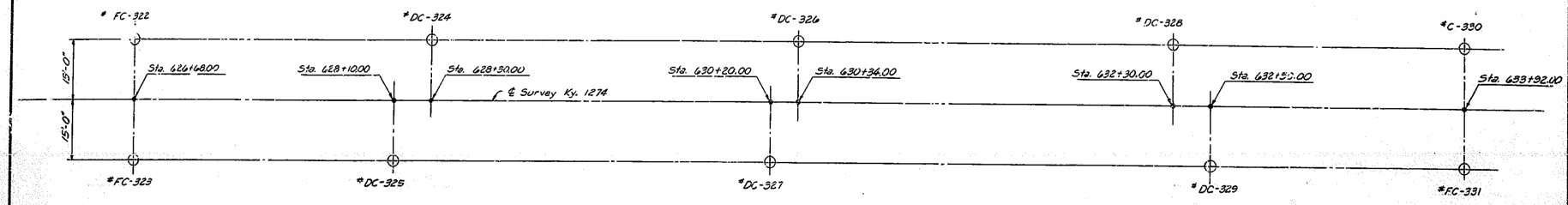
3



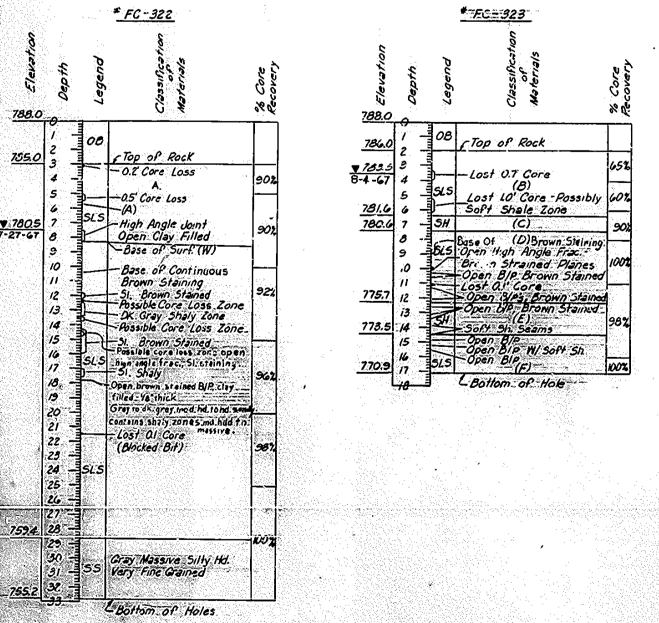


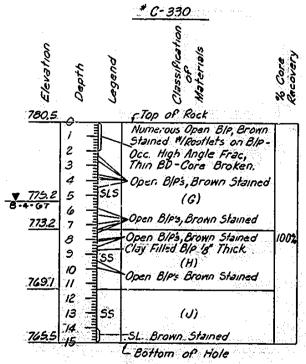
CO-WORKER CONSULTING ENGINEERS INCORPORATED LEXINGTON KENTUCKY	U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS	4
	CUMB. RIVER BASIN CAVE RUN RESERVOIR (LICKING RIVER BASIN) ROWAN COUNTY, KENTUCKY BRIDGE OVER CAVE RUN RES. LAYOUT	
	SCALE: 1"=10'-0"	

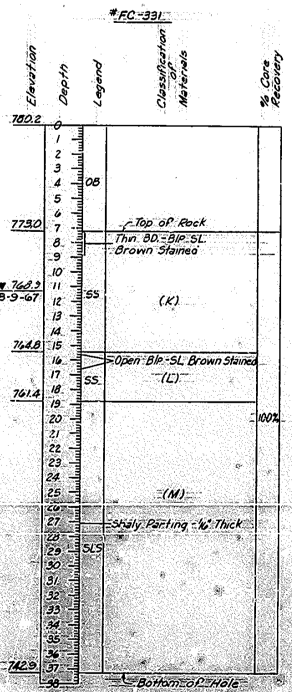
RECORD DRAWING AS BUILT



PLAN







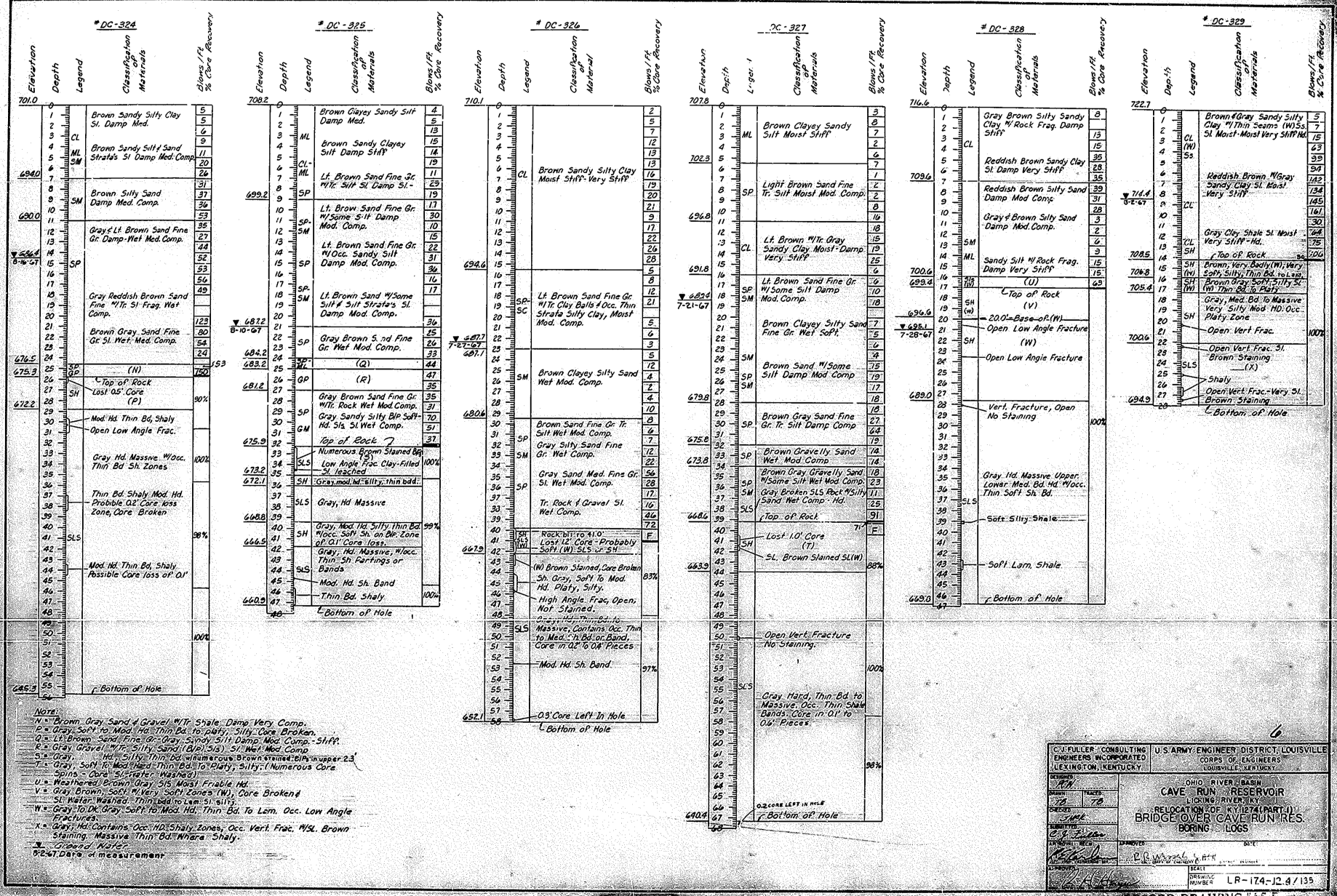
NOTE:

A = Open Brown Stained B/P. Gray Mod. Hd. Thin BD. (W) Core in 0.05' Occ. Places, Sandy w/ Occ. Shale Partings & Bands.
B = Brown Gray, SLS (W) Sandy Thin to Med. Bd.
C = Gray-Green, Soft, Platy, SL (W) Silty, Core Broken.
D = Gray, SL. Brown Stained, Hard, Sandy, Med. BD. Occ. Thin Sh. Partings & Brown Stained B/P.
E = Gray, DK Gray Hd. Silty, Med. BD.
F = Gray, Hard, SLS (W) Sandy, Med. BD. to Massive.
G = Brown, Hard, SLS (W) Thin to Med. BD. Occ. Shaly Zones, Numerous Open Brown Stained B/P.
H = Brown, Hd. Med. to Thin BD. Occ. SL. Shaly, SL. (W), Rootlets on B/P. in Upper Portion. Silty, Very Fine Grained.
J = Gray, Hd., Silty, Massive, Very Fine Grained.
K = Brown SL. Greenish, Thin to Med. BD. Upper to Massive Lower, Very Fine Gr. HD. SL. Silty to Silty, Occ. SL. Shaly Zones - SL. (W)
L = Gray, HD. Silty (Increasingly Silty Downward Grades into Siltstone) Med. to Thick BD. Very Fine Gr. occ. Very SL. Shaly.
M = Gray, HD. Med. BD. to Massive, SL. Sandy Occ. Thin (½" or Less Shaly Parting on B/P), SL. Shaly.

▼ Ground Water
8-4-67 Date of measurement



RECORD DRAWING AS BUILT



Note:
N = Brown Gray Sand & Gravel w/Tr. Shale Damp Very Comp.
P = Gray, Soft to Mod. Hd. Thin Bd. to platy, Silty Core Broken.
Q = Lt. Brown Sand Fine Gr. Gray Sandy Silt Damp Mod. Comp. - Stiff.
R = Gray Gravel w/Tr. Silty Sand (B/P) Sls) Sl. Wet Mod. Comp
S = Gray, Hd. Silty Thin Bd. w/numerous Brown stained B/Ps in upper 2.3'
T = Gray, Soft to Mod. Hard Thin Bd. to Platy, Silty. (Numerous Core Splits - Core Sl. Crater Washed)
U = Weathered Brown Gray SLS Moist Friable Hd.
V = Gray Brown, Soft w/Very Soft Zones (W), Core Broken & Sl. Water Washed. Thin bdd to Lam. Sl. silty.
W = Gray to Dk. Gray Soft to Mod. Hd. Thin Bd. To Lam. Occ. Low Angle Fractures.
X = Gray, Hd. Contains Occ. Hd. Shaly Zones, Occ. Vert. Frac. w/Sl. Brown Staining. Massive Thin Bd. Where Shaly.
▼ Observed Water 8-2-67 Date of measurement

6

C.V. FULLER CONSULTING ENGINEERS INCORPORATED
LEXINGTON, KENTUCKY

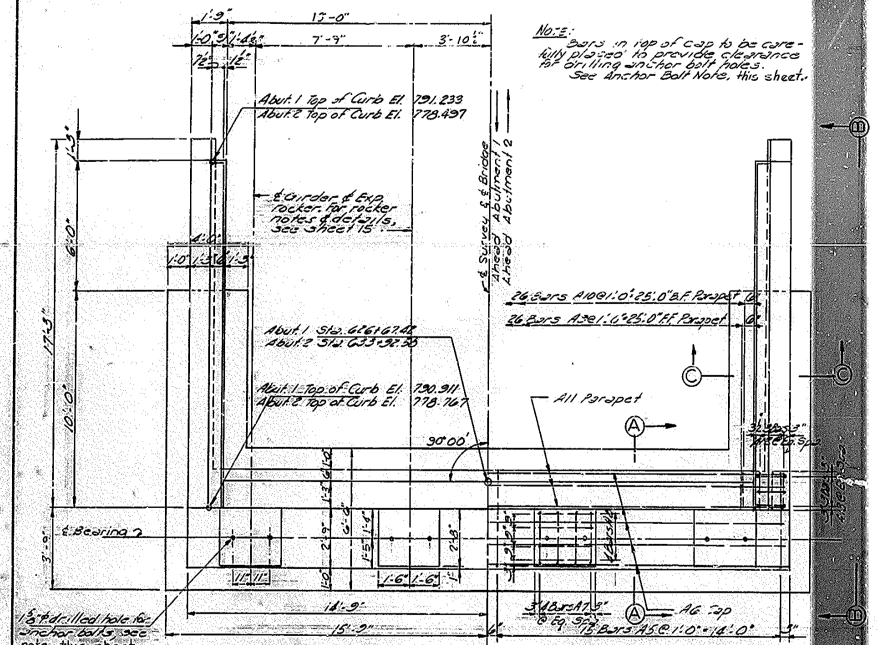
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE
CORPS OF ENGINEERS
LOUISVILLE, KENTUCKY

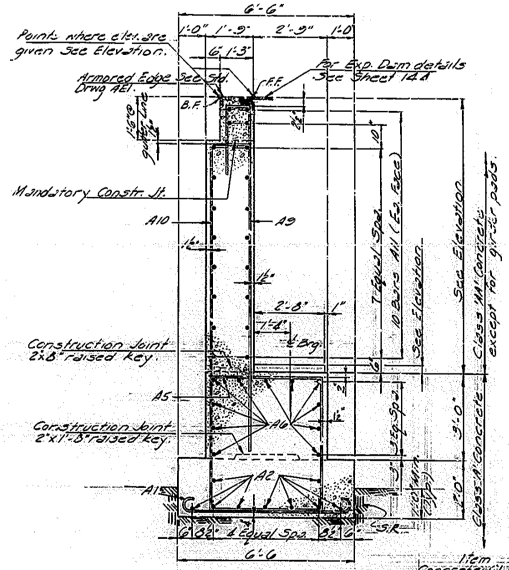
DESIGNED: A.H.
DRAWN: T.D.
TRACED: T.D.
CHECKED: S.M.L.
SUBMITTED: C.V. Fuller
APPROVED: C.V. Fuller
APPROVED: P.P. Wright Jr. Lt. Col. CE
APPROVED: L.H. Hayes
DATE:

OHIO RIVER BASIN
CAVE RUN RESERVOIR
LICKING RIVER, KY.
RELOCATION OF KY. 1274 (PART 1)
BRIDGE OVER CAVE RUN RES.
BORING LOGS

SCALE:
DRAWING NUMBER: LR-174-J2.4/135

RECORD DRAWING "AS BUILT"

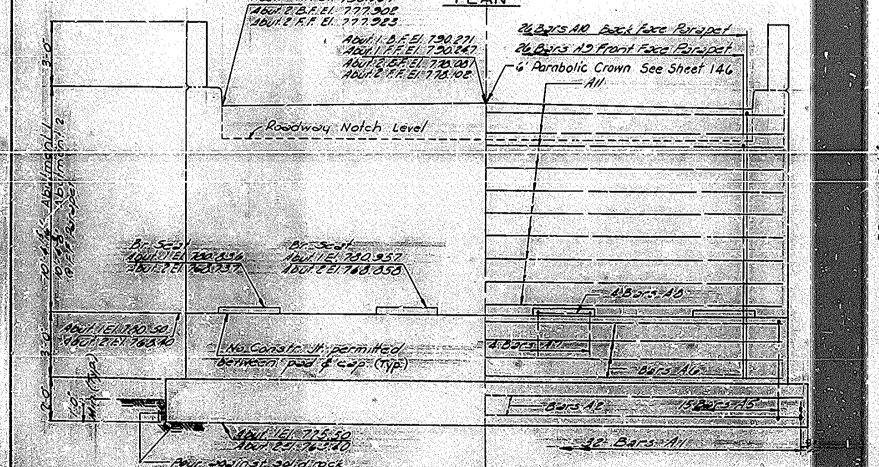




SECTION A–A

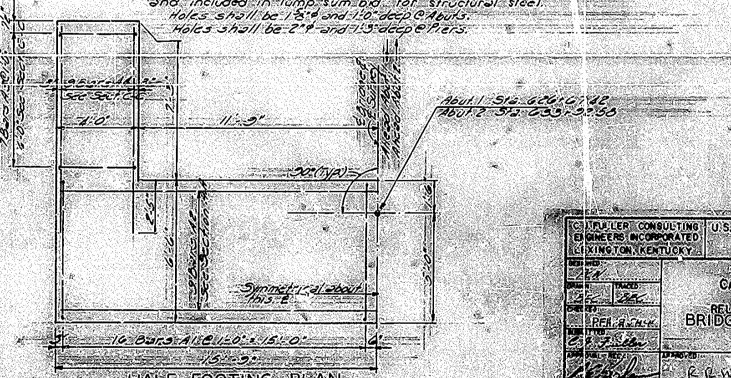
ESTIMATE OF QUANTITIES

Item	Unit	Abut. 1	Abut. 2
Concrete Class "A"	Cu Yds.	37.0	37.0
Concrete Class "AA"	Cu Yds.	33.4	33.4
Reinforcement	Lbs	9974	9974



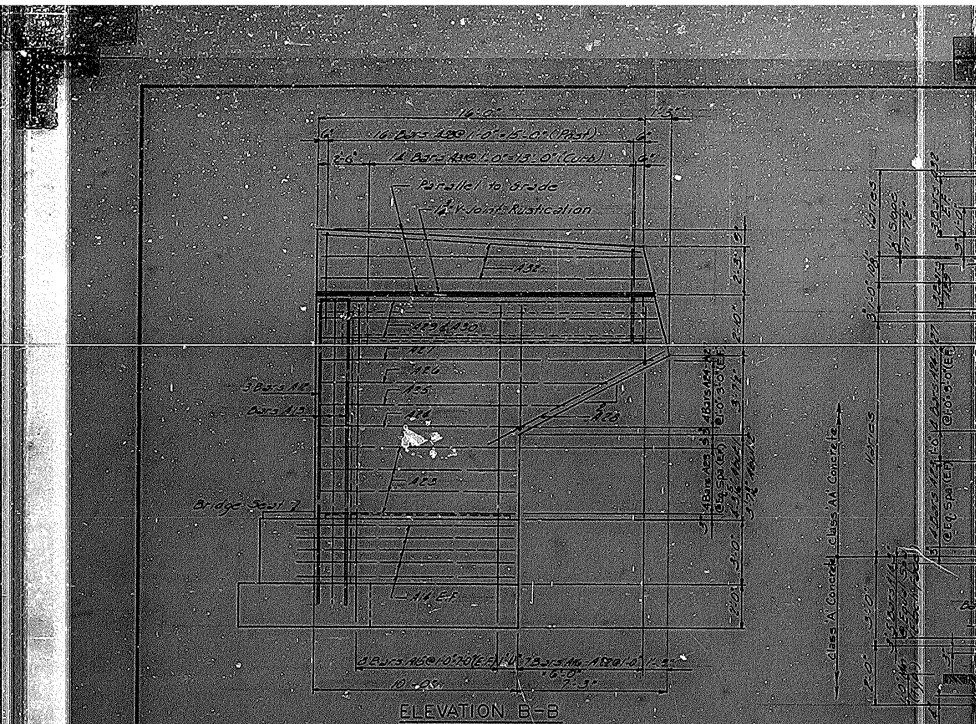
ANCHOR BOLT NOTE

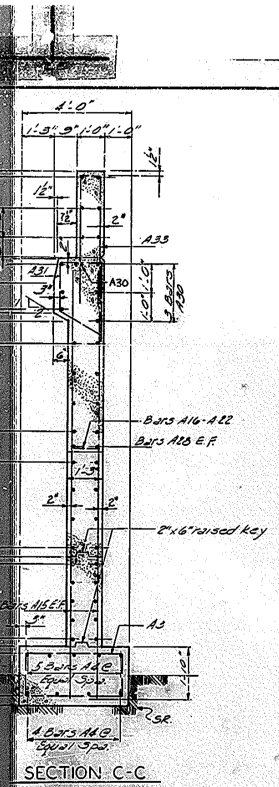
Holes of depth and dimensions shown shall be drilled for anchor bolts or dowels by the superstructure contractor who shall be responsible for keeping holes dry in freezing weather. After the base plates are properly set and anchor bolts are placed in drilled holes, molten lead shall be poured in holes and packed until holes are completely filled flush to top of 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.
Holes shall be 1" ø and 12" deep @ Abuts.
Holes shall be 2" ø and 15" deep @ Piers.



FULLER CONSULTING ENGINEERS INCORPORATED LEXINGTON, KENTUCKY	U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS LOUISVILLE, KENTUCKY	
DESIGNED	OHIO RIVER BASIN	
DRAWN	CAVE RUN RESERVOIR	
TRACED	LICKING RIVER, KY.	
CHECKED	RELOCATION OF KY. 174 (PART 1)	
APPROVED	BRIDGE OVER CAVE RUN RES.	
SUBMITTED	ABUTMENTS	
APPROVED	SUPERVISING ENGINEER	DATE
	SCALE	
	DRAWING NO. LR-174-12.4/1.90	

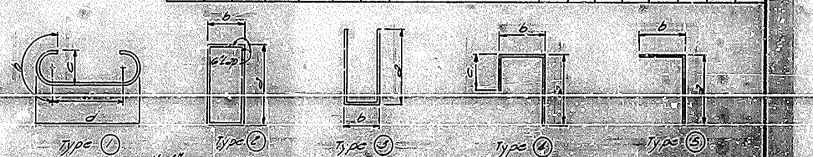
RECORD DRAWING AS BUILT

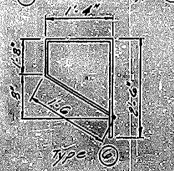




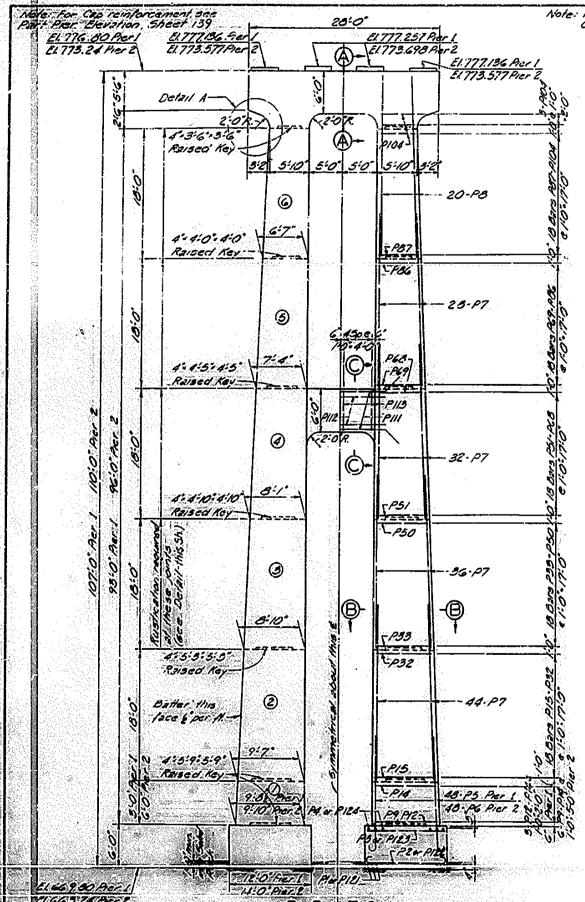
BILL OF REINFORCEMENT

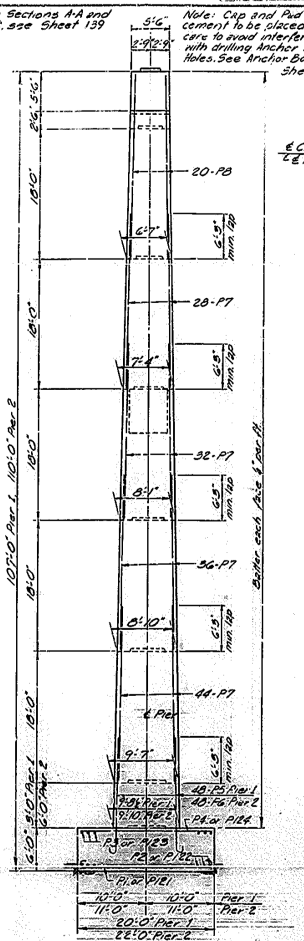
Mark	Type	No. Abut. 1	No. Abut. 2	Bar Size	Length Ft.	Length In.	Location	d Ft.	d In.	b Ft.	b In.	c Ft.	c In.	d Ft.	d In.
A1	(1)	32	32	6	7	9	Footing	3	3	1	0	0	0	0	8
A2	Str.	9	9	5	5	2	"								
A3	(2)	14	14	7	10	7	"	1	3	3	6				
A4	Str.	13	13	5	3	6	"								
A5	(3)	30	30	6	10	3	Cap & Footing	4	6	4	3				
A6	Str.	11	11	7	29	8	"								
A7	(3)	16	16	4	3	2	Br. Seat Pad	1	6	2	4				
A8	Str.	16	16	4	2	8	" " "								
A9	(4)	24	24	6	14	2	Parapet	11	6	1	0	2	3		
A10	(6)	26	26	7	11	2	"	5	10	1	6				
A11	Str.	20	20	5	20	2	"								
A12	(5)	6	6	9	26	6	Wing	12	3	1	6				
A13	(5)	6	6	7	25	1	"	12	0	1	4				
A14	Str.	20	20	6	11	0	"								
A15	Str.	32	32	7	14	3	"								
A16	(5)	2	2	6	12	0	"	3	1	0	11				
A17	(5)	2	2	6	11	0	"	3	2	0	11				
A18	(5)	2	2	6	10	0	"	4	3	0	11				
A19	(5)	2	2	6	9	0	"	4	2	0	11				
A20	(5)	2	2	6	8	0	"	3	3	0	11				
A21	(5)	2	2	6	7	0	"	3	2	0	11				
A22	(5)	2	2	6	6	0	"	2	3	0	11				
A23	Str.	16	16	6	6	3	"								
A24	Str.	4	4	6	3	3	"								
A25	Str.	4	4	6	11	3	"								
A26	Str.	4	4	6	15	0	"								
A27	Str.	4	4	6	14	3	"								
A28	Str.	4	4	6	13	10	"								
A29	Str.	6	6	9	15	8	"								
A30	Str.	8	8	9	16	2	"								
A31	(6)	20	20	9	6	10	"								
A32	Str.	12	12	5	15	8	"								
A33	(5)	32	32	6	9	5	Wing	4	6	0	8				

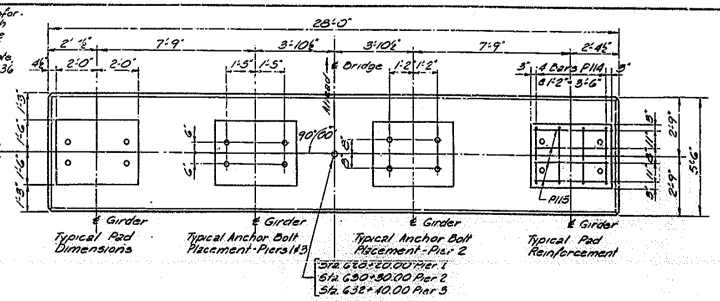




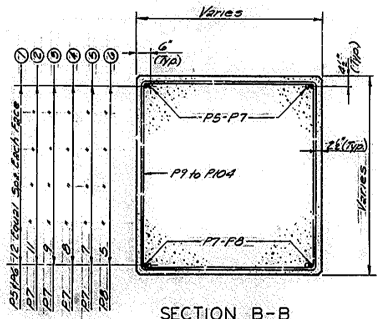


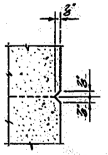




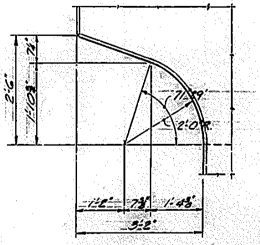


PLAN OF CAP

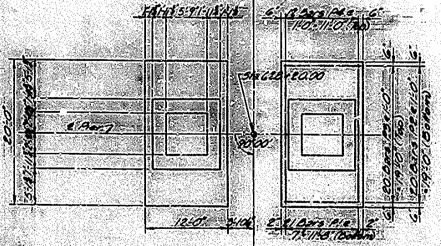




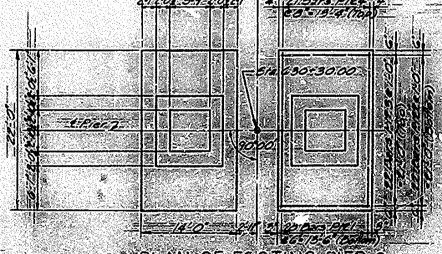
RUSTICATION DETAIL



DETAIL A



PLAN OF FOOTING-PIER 1



PLAN OF FOOTING-PIER 2

ESTIMATE OF QUANTITIES

	Unit	Pier 1	Pier 2	Pier 3
Concrete Class "A"	C.Yds.	585.1	630.6	364.1
Reinforcement	Lbs.	66,618	73,305	42,017

9

C.T. FULLER CONSULTING ENGINEERS INCORPORATED LEXINGTON, KENTUCKY

U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS LOUISVILLE, KENTUCKY

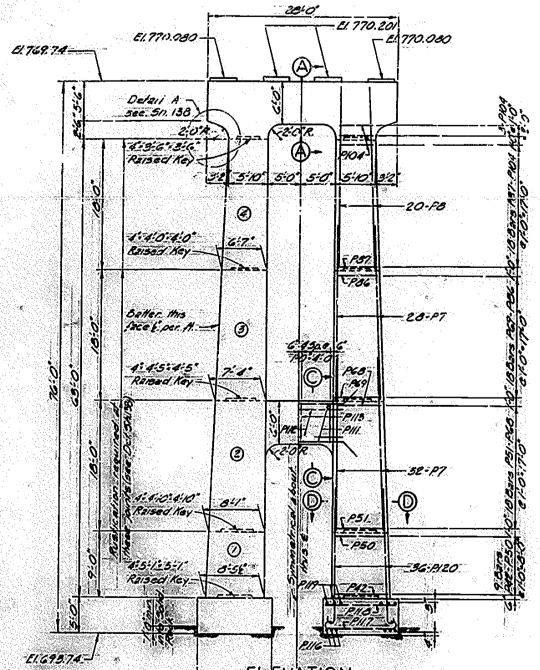
OHIO RIVER BASIN
CAVE RUN RESERVOIR
LICKING RIVER, KY.
RELOCATION OF KY. 174 (PART 1)
BRIDGE OVER CAVE RUN RES.
PIERS 1 & 2

LB. 174-12.4

RECORD DRAWING

Note: For Cap reinforcement, see Part Pier Elevation (This Sheet)

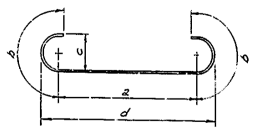
Note: For Plan of Cap and Pad Reinforcement, see Sh. 138



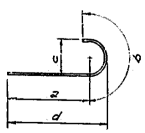
BILL OF REINFORCEMENT

Mark	Type	Pier 1	Pier 2	Pier 3	Bar Size	Length Ft.	Length In.	Location	a Ft.	a In.	b Ft.	b In.	c Ft.	c In.	d Ft.	d In.
P1	(1)	42	-	-	8	21	10	Footings	16	10	1	6	0	10	19	8
P2	•	40	-	-	6	13	2	•	11	2	1	0	0	6	11	8
P3	Str.	40	-	-	5	11	8	•								
P4	•	24	-	-	5	19	8	•								
P5	(2)	96	-	-	11	16	2	Footings & Columns	14	2	2	0	1	2	14	9
P6	•	"	96	-	11	19	2	" "	17	2	2	0	1	2	17	9
P7	Str.	280	280	120	11	24	3	Columns								
P8	•	40	40	40	11	25	6	Columns & Cap								
P9	(3)	-	2	-	5	38	4	Column Ties	9	4⅜	9	4⅜				
P10	•	-	2	-	5	38	2	" "	9	4¼	9	4¼				
P11	•	-	2	-	5	38	0	" "	9	3⅞	9	3⅞				
P12	•	2	2	-	5	37	10	" "	9	3½	9	3½				
P13	•	2	2	-	5	37	8	" "	9	2⅞	9	2⅞				
P14	•	2	2	-	5	37	6	" "	9	2¼	9	2¼				
P15	•	2	2	-	5	37	4	" "	9	1⅝	9	1⅝				
P16	•	2	2	-	5	37	2	" "	9	1	9	1				
P17	•	2	2	-	5	37	0	" "	9	0⅜	9	0⅜				
P18	•	2	2	-	5	36	10	" "	9	0¼	9	0¼				
P19	•	2	2	-	5	36	8	" "	8	11⅞	8	11⅞				
P20	•	2	2	-	5	36	6	" "	8	11¼	8	11¼				
P21	•	2	2	-	5	36	4	" "	8	10⅝	8	10⅝				
P22	•	2	2	-	5	36	2	" "	8	10¼	8	10¼				
P23	•	2	2	-	5	36	0	" "	8	9⅞	8	9⅞				
P24	•	2	2	-	5	35	10	" "	8	9¼	8	9¼				
P25	•	2	2	-	5	35	8	" "	8	8⅝	8	8⅝				
P26	•	2	2	-	5	35	6	" "	8	8¼	8	8¼				
P27	•	2	2	-	5	35	4	" "	8	7⅞	8	7⅞				
P28	•	2	2	-	5	35	2	" "	8	7¼	8	7¼				
P29	•	2	2	-	5	35	0	" "	8	6⅝	8	6⅝				
P30	•	2	2	-	5	34	10	" "	8	6¼	8	6¼				
P31	•	2	2	-	5	34	8	" "	8	5⅝	8	5⅝				
P32	•	2	2	-	5	34	6	" "	8	5¼	8	5¼				
P33	•	2	2	-	5	34	4	" "	8	4⅞	8	4⅞				
P34	•	2	2	-	5	34	2	" "	8	4¼	8	4¼				
P35	•	2	2	-	5	34	0	" "	8	3⅝	8	3⅝				
P36	•	2	2	-	5	33	10	" "	8	3¼	8	3¼				
P37	•	2	2	-	5	33	8	" "	8	2⅞	8	2⅞				
P38	•	2	2	-	5	33	6	" "	8	2¼	8	2¼				
P39	•	2	2	-	5	33	4	" "	8	1⅝	8	1⅝				
P40	•	2	2	-	5	33	2	" "	8	1¼	8	1¼				
P41	•	2	2	-	5	33	0	" "	8	0⅝	8	0⅝				
P42	•	2	2	2	5	32	10	" "	8	0¼	8	0¼				
P43	•	2	2	2	5	32	8	" "	7	11⅞	7	11⅞				
P44	•	2	2	2	5	32	6	" "	7	11¼	7	11¼				
P45	•	2	2	2	5	32	4	" "	7	10⅝	7	10⅝				
P46	•	2	2	2	5	32	2	" "	7	10¼	7	10¼				
P47	•	2	2	2	5	32	0	" "	7	9⅞	7	9⅞				
P48	•	2	2	2	5	31	10	" "	7	9¼	7	9¼				
P49	•	2	2	2	5	31	8	" "	7	8⅝	7	8⅝				
P50	•	2	2	2	5	31	6	" "	7	8¼	7	8¼				
P51	•	2	2	2	5	31	4	" "	7	7⅝	7	7⅝				
P52	•	2	2	2	5	31	2	" "	7	7¼	7	7¼				
P53	•	2	2	2	5	31	0	" "	7	6⅞	7	6⅞				
P54	•	2	2	2	5	30	10	" "	7	6¼	7	6¼				
P55	•	2	2	2	5	30	8	" "	7	5⅝	7	5⅝				
P56	•	2	2	2	5	30	6	" "	7	5¼	7	5¼				
P57	•	2	2	2	5	30	4	" "	7	4⅞	7	4⅞				
P58	•	2	2	2	5	30	2	" "	7	4¼	7	4¼				
P59	•	2	2	2	5	30	0	" "	7	3⅝	7	3⅝				
P60	•	2	2	2	5	29	10	" "	7	3¼	7	3¼				
P61	•	2	2	2	5	29	8	" "	7	2⅞	7	2⅞				
P62	•	2	2	2	5	29	6	" "	7	2¼	7	2¼				
P63	•	2	2	2	5	29	4	" "	7	1⅝	7	1⅝				
P64	•	2	2	2	5	29	2	" "	7	1¼	7	1¼				
P65	•	2	2	2	5	29	0	" "	7	0⅝	7	0⅝				
P66	•	2	2	2	5	28	10	" "	7	0¼	7	0¼				
P67	•	2	2	2	5	28	8	" "	6	11⅞	6	11⅞				
P68	•	2	2	2	5	28	6	" "	6	11¼	6	11¼				
P69	•	2	2	2	5	28	4	" "	6	10⅝	6	10⅝				
P70	•	2	2	2	5	28	2	" "	6	10¼	6	10¼				
P71	•	2	2	2	5	28	0	" "	6	9⅞	6	9⅞				
P72	•	2	2	2	5	27	10	" "	6	9¼	6	9¼				
P73	•	2	2	2	5	27	8	" "	6	8⅝	6	8⅝				
P74	•	2	2	2	5	27	6	" "	6	8¼	6	8¼				
P75	•	2	2	2	5	27	4	" "	6	7⅞	6	7⅞				
P76	•	2	2	2	5	27	2	" "	6	7¼	6	7¼				
P77	•	2	2	2	5	27	0	" "	6	6⅝	6	6⅝				
P78	•	2	2	2	5	26	10	" "	6	6¼	6	6¼				
P79	•	2	2	2	5	26	8	" "	6	5⅝	6	5⅝				

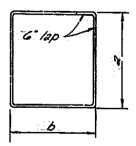
Mark	Type	Pier 1	Pier 2	Pier 3	Bar Size	Length Ft.	Length In.	Location	a Ft.	a In.	b Ft.	b In.	c Ft.	c In.	d Ft.	d In.
P80	(3)	2	2	2	5	26	6	Column Ties	6	5⅛	6	5⅛				
P81	•	2	2	2	5	26	4	" "	6	4⅝	6	4⅝				
P82	•	2	2	2	5	26	2	" "	6	4¼	6	4¼				
P83	•	2	2	2	5	26	0	" "	6	3⅞	6	3⅞				
P84	•	2	2	2	5	25	10	" "	6	3¼	6	3¼				
P85	•	2	2	2	5	25	8	" "	6	2⅝	6	2⅝				
P86	•	2	2	2	5	25	6	" "	6	2¼	6	2¼				
P87	•	2	2	2	5	25	4	" "	6	1⅞	6	1⅞				
P88	•	2	2	2	5	25	2	" "	6	1¼	6	1¼				
P89	•	2	2	2	5	25	0	" "	6	0⅝	6	0⅝				
P90	•	2	2	2	5	24	10	" "	6	0¼	6	0¼				
P91	•	2	2	2	5	24	8	" "	5	11⅞	5	11⅞				
P92	•	2	2	2	5	24	6	" "	5	11¼	5	11¼				
P93	•	2	2	2	5	24	4	" "	5	10⅝	5	10⅝				
P94	•	2	2	2	5	24	2	" "	5	10¼	5	10¼				
P95	•	2	2	2	5	24	0	" "	5	9⅞	5	9⅞				
P96	•	2	2	2	5	23	10	" "	5	9¼	5	9¼				
P97	•	2	2	2	5	23	8	" "	5	8⅝	5	8⅝				
P98	•	2	2	2	5	23	6	" "	5	8¼	5	8¼				
P99	•	2	2	2	5	23	4	" "	5	7⅞	5	7⅞				
P100	•	2	2	2	5	23	2	" "	5	7¼	5	7¼				
P101	•	2	2	2	5	23	0	" "	5	6⅝	5	6⅝				
P102	•	2	2	2	5	22	10	" "	5	6¼	5	6¼				
P103	•	2	2	2	5	22	8	" "	5	5⅝	5	5⅝				
P104	•	8	8	8	5	22	6	" "	5	5¼	5	5¼				
P105	(4)	10	10	10	11	30	6	Cap	26	6	2	0	1	2	27	8
P106	(4)	7	7	7	8	27	10	•	25	4	1	3	0	4⅜	1	24
P107	Str.	10	10	10	6	27	8	•								
P108	(3)	34	34	34	6	19	9	•	5	8	3	10				
P109	•	4	4	4	6	19	3	•	5	5	3	10				
P110	•	4	4	4	6	18	11	•	5	3	3	10				
P111	(4)	20	20	20	11	18	0	Strut	12	0	3	0	2	3½	2	3½
P112	Str.	10	10	10	6	14	0	•								
P113	(3)	20	20	20	6	19	3	•	5	8	3	7				
P114	(5)	16	16	16	5	6	6	Pad								
P115	Str.	16	16	16	5	3	9	•								
P116	(1)	-	-	34	7	17	5	Footings	15	1	1	2	0	7	15	8
P117	•	-	-	32	6	11	2	•	9	2	1	0	0	6	9	8
P118	Str.	-	-	32	5	9	8	•								
P119	•	-	-	20	5	15	8	•								
P120	(2)	-	-	72	11	21	2	Footings & Columns	19	2	2	0	1	2	19	9
P121	(1)	-	54	-	10	24	4	Footings	20	8	1	10	1	0½	21	6½
P122	•	-	44	-	6	15	2	•	13	2	1	0	0	6	13	8
P123	Str.	-	44	-	6	13	8	•								
P124	•	-	42	-	6	21	8	•								



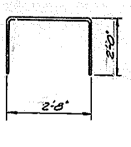
Type (1)



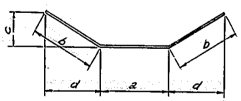
Type (2)



Type (3)



Type (5)

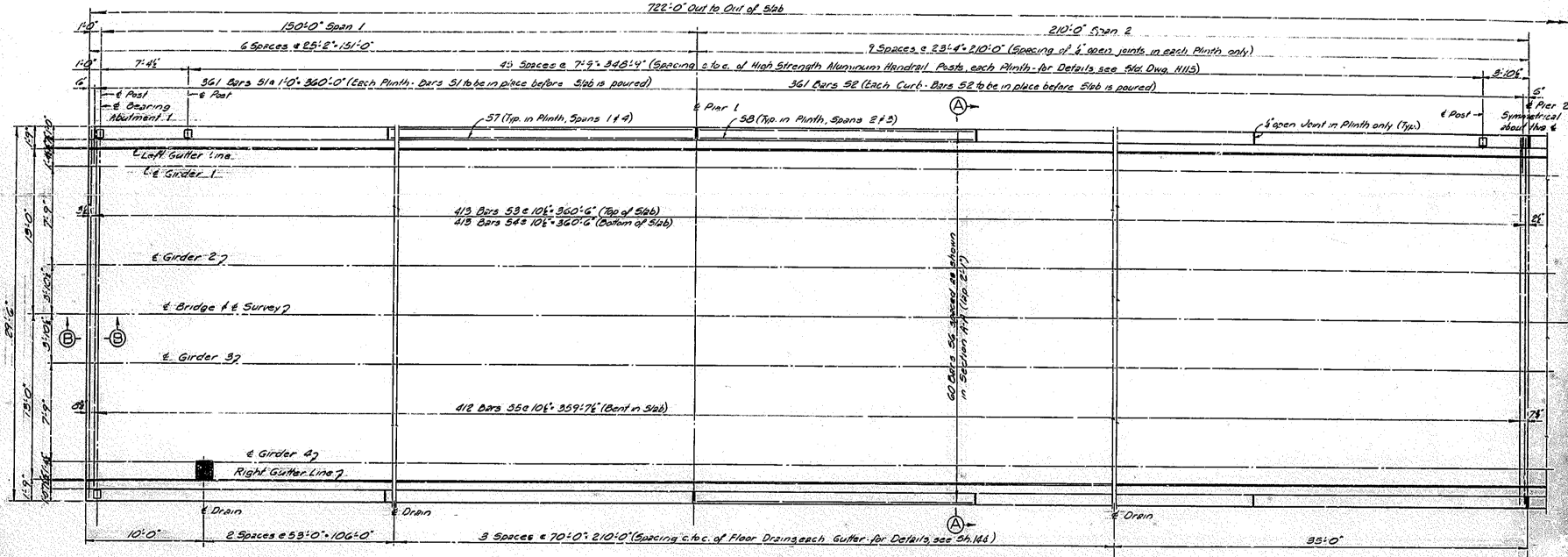


Type (4)

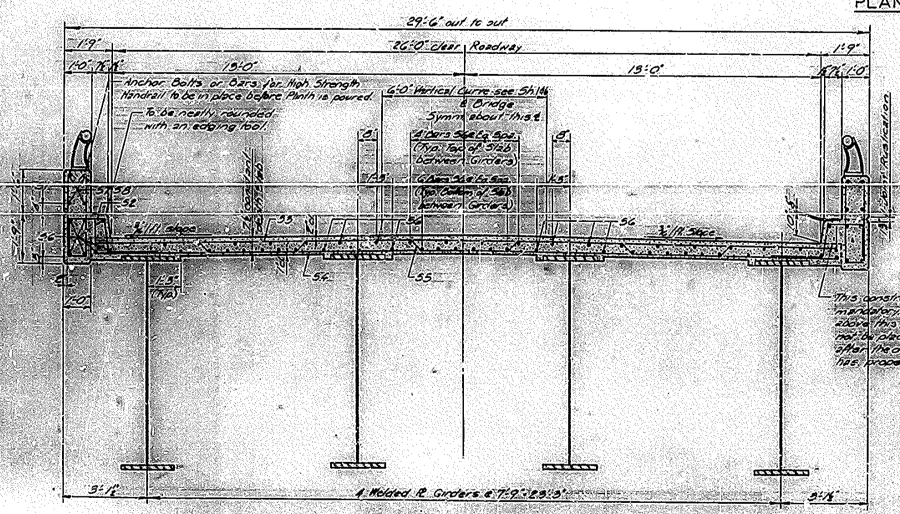
11

C. J. FULLER CONSULTING ENGINEERS INCORPORATED LEXINGTON, KENTUCKY	U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS LOUISVILLE, KENTUCKY
DESIGNED: R.C.W. DRAWN: J.M.M. TRACED: J.M.M. CHECKED: J.M.K. SUBMITTED: C. J. Fuller APPROVAL REC'D: APPROVED: DATE: APPROVED:	OHIO RIVER BASIN CAVE RUN RESERVOIR LICKING RIVER, KY. RELOCATION OF K.Y. 1274 (PART 1) BRIDGE OVER CAVE RUN RES. PIERS SCALE: DRAWING NUMBER: LR-174-12 4/140

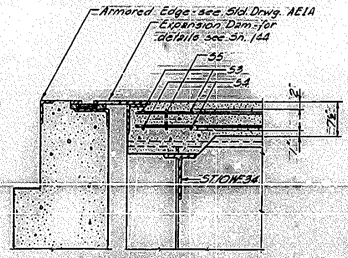
RECORD DRAWING - AS BUILT



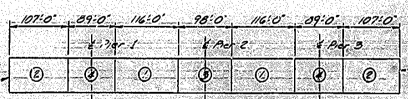
PLAN



SECTION A-A



SECTION B-B



POURING ORDER

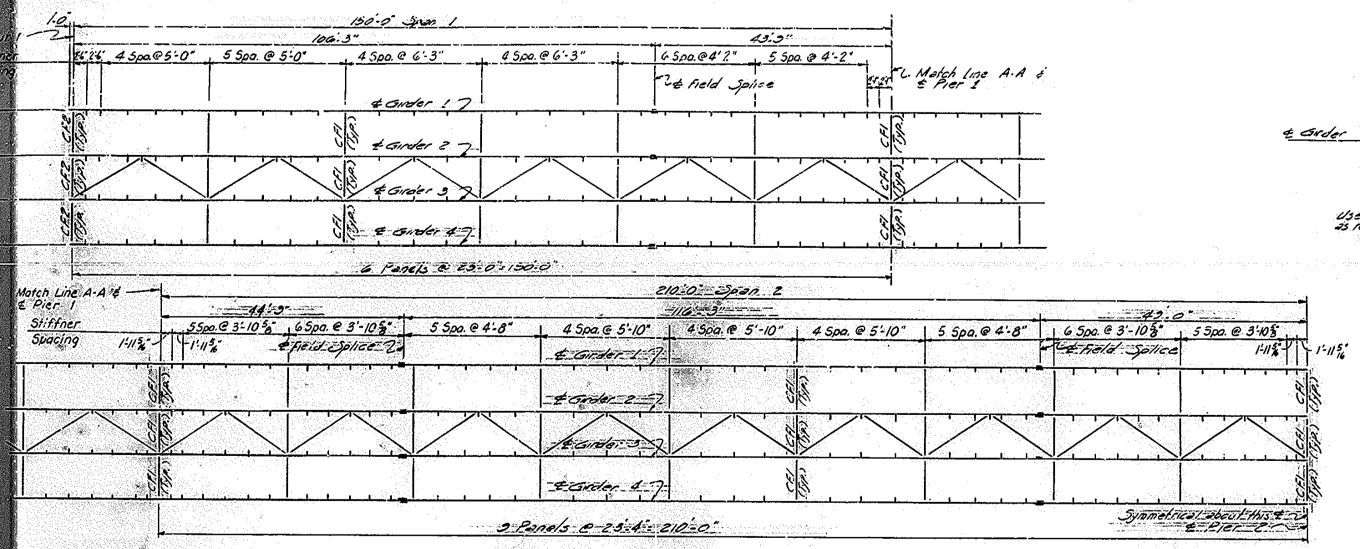
The pouring sequence of the slab may be changed with the written approval of the Engineer.

ESTIMATE OF QUANTITIES

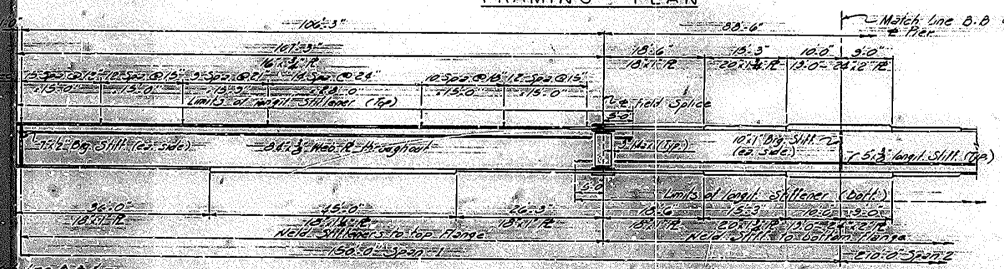
Concrete Class AA	705.0 Cu. Yds.
Reinforcement	153,799 Lbs.

12	8 JUNE 65	REVISED PER AMDT. NO. 1 DATED 10 MAY 1965			FB
C.U. FULLER CONSULTING ENGINEERS INCORPORATED LEXINGTON, KENTUCKY		U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS LOUISVILLE, KENTUCKY			
DESIGNED PCN	OHIO RIVER BASIN CAVE RUN RESERVOIR LICKING RIVER, KY.				
DRAWN PCN MAY 1964	RELOCATION OF KY. 164 (PART 1) BRIDGE OVER CAVE RUN RES. SUPERSTRUCTURE				
CHECKED JWH					
SUBMITTED C.U. Fuller	APPROVED P. R. W. Smith (CONST. ENGR.)	DATE			
APPROVED	SCALE	DRAWING NO. LR-1.4-12.4 (14)			

RECORD DRAWING - AS BUILT



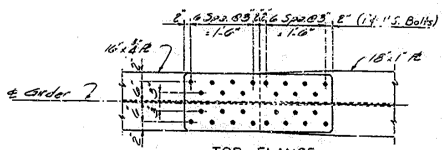
FRAMING PLAN



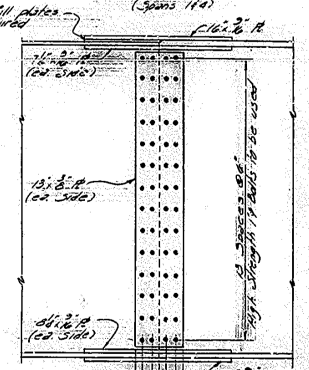


HALF GIRDER ELEVATION

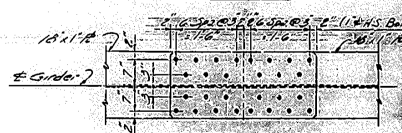
Note: Place longitudinal stiffeners on exterior face of exterior girder, and exterior face of interior girder.



TOP FLANGE
(Spans 1 & 2)



ELEVATION



BOTTOM FLANGE
(Spans 1 & 2)
(Also all flanges Spans 2 & 3)

SPLICE DETAILS

MUELLER CONSULTING ENGINEERS INCORPORATED LEXINGTON, KENTUCKY
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS LOUISVILLE, KENTUCKY

CAVE RUN RESERVOIR
LICKING RIVER BASIN
RELOCATION OF KY. 173 (PART 1)
BRIDGE OVER CAVE RUN RES.
SUPERSTRUCTURE

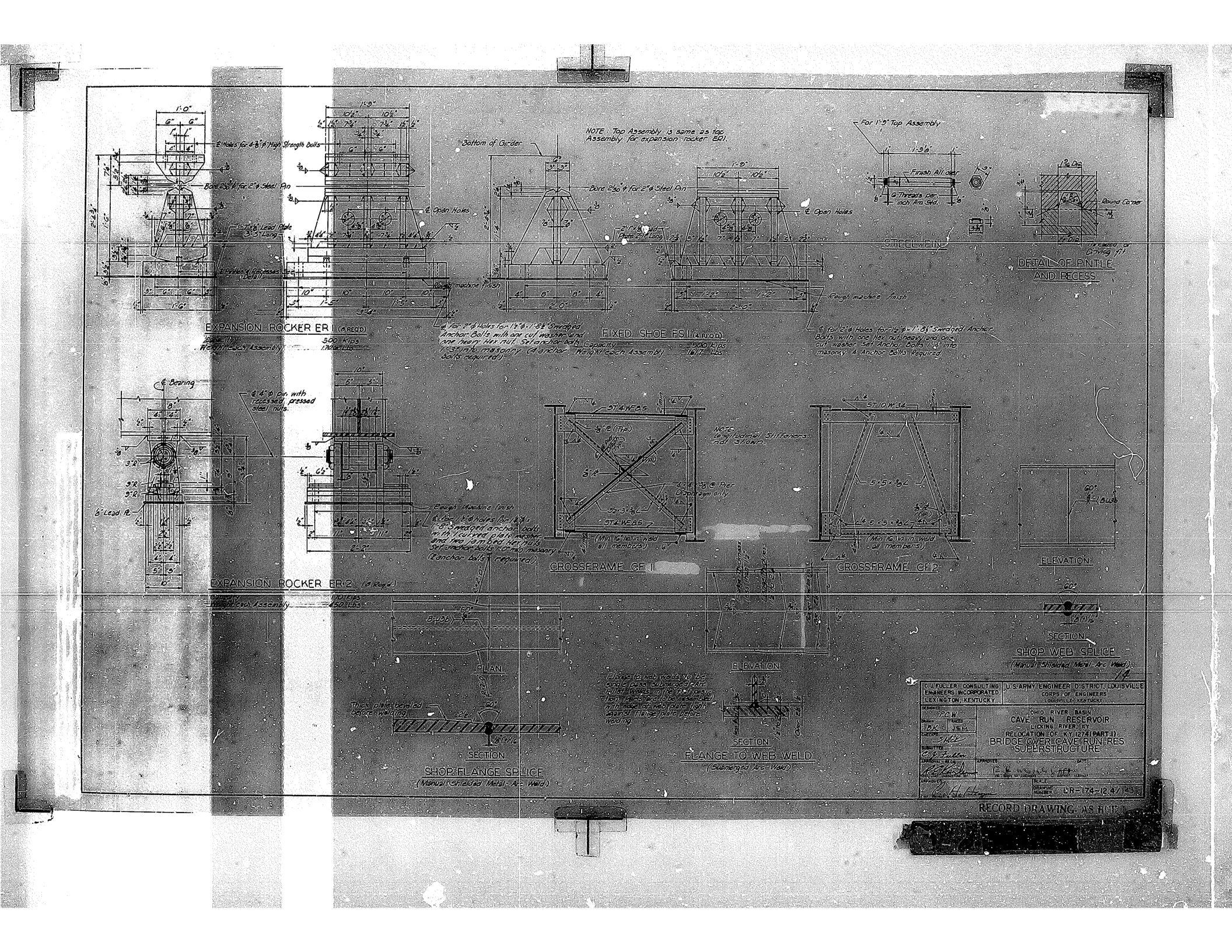
DESIGNED
DRAWN
CHECKED
APPROVED
APPROVED
APPROVED

DATE

SHEET 13

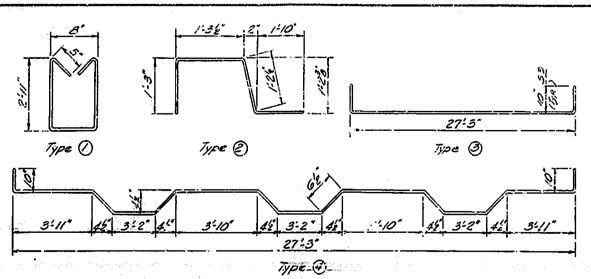
CONTRACT NO. DACW 27-74-C-0047

RECORD DRAWING AS BUILT

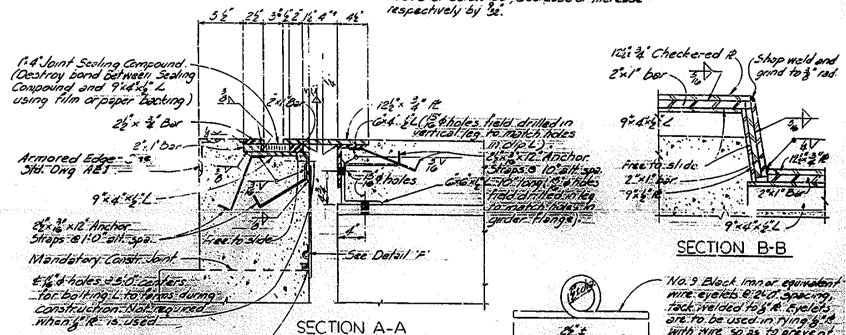

EXPANSION ROCKER ER 1 (4 REQ'D)
Capacity 300 Kips
Weight each Assembly 1100 Lbs
FIXED SHOE FS 1 (4 REQ'D)
Capacity 300 Kips
Weight each Assembly 1100 Lbs
NOTE: Top Assembly is same as top Assembly for expansion rocker ER1.
STEEL PIN
DETAIL OF PINTLE AND RECESS
EXPANSION ROCKER ER 2 (4 Req'd)
Capacity 110 Kips
Weight each Assembly 450 Lbs
CROSSFRAME CF 1
CROSSFRAME CF 2
ELEVATION
SECTION
SHOP WEB SPLICE
(Manual Shielded Metal-Arc Weld)
PLAN
SECTION
SHOP FLANGE SPLICE
(Manual Shielded Metal-Arc Weld)
ELEVATION
SECTION
FLANGE TO WEB WELD
(Submerged Arc Weld)
MULLER CONSULTING ENGINEERS INCORPORATED LEXINGTON, KENTUCKY
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS LOUISVILLE, KENTUCKY
OHIO RIVER BASIN
CAVE RUN RESERVOIR
LICKING RIVER, KY.
RELOCATION OF KY 1274 (PART 1)
BRIDGE OVER CAVE RUN RES.
SUPERSTRUCTURE
DR-174-12.4/143
RECORD DRAWING AS BUILT

BILL OF REINFORCEMENT

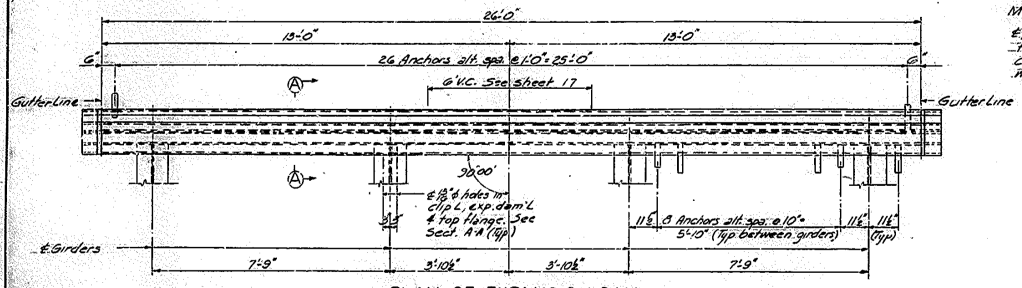
Mark	Type	No.	Bar Size	Length Ft.	Length In.	Location
S1	①	1444	5	7	1	Plinths
S2	②	1444	7	5	4	Curbs
S3	③	826	5	28	9	Slab - Transverse - Top
S4	S/c	826	5	29	6	" " - Bottom
S5	④	824	5	27	3	Slab - " - Bent
S6	S/c	1140	5	42	1	Slab - Longitudinal
S7	"	96	4	24	11	Plinths
S8	"	144	4	25	1	"



* This dimension to be maintained at normal temperature of 60° Fahrenheit. For each 10° above or below 60°, decrease or increase respectively by 3/32".

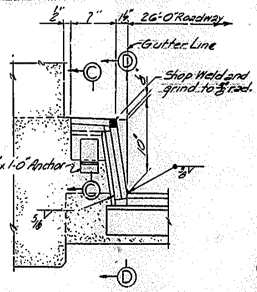


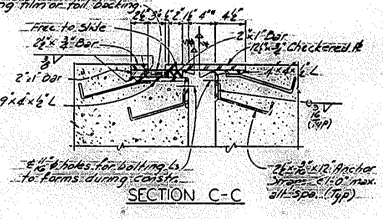
Use of 1¼"ø R is optional; weight of this plate is not included in approximate weight of Structural Steel shown and if used shall be included in the lump sum bid for Structural Steel. Details of plate, if used, shall be incorporated in shop plans submitted for approval.

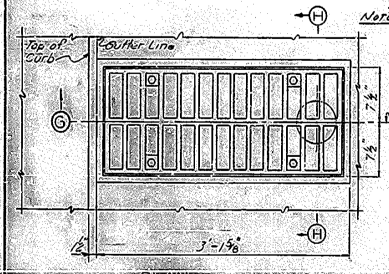


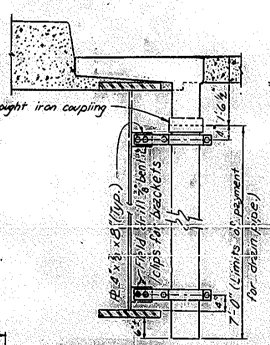
PLAN OF EXPANSION DAM

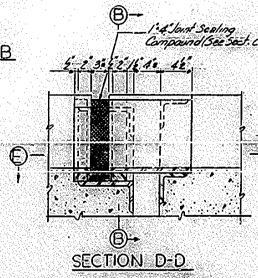
Note: For elevations, see Abutment details and elevation sheet.

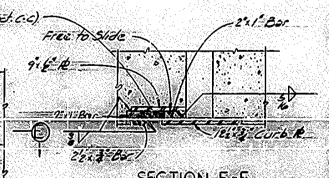


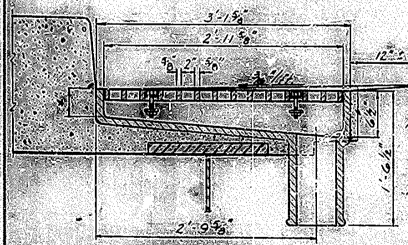












ELEVATION

NOTES

FOUNDRY NOTE -

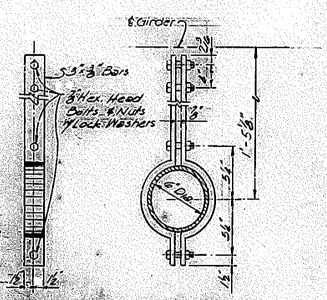
All drains to be gray iron castings ASTM A48, Class 20. Except as noted, inspection of castings is the option of the Division of Materials and Tests and by the Superintendent of Construction and the cost of furnishing and placing same is to be included in the lump sum bid price for structural steel.

WROUGHT IRON PIPE - Wrought iron pipe is to be of standard weight 3.0" bar. Wrought iron pipe and fittings shall conform to ASTM A72. All threads and connections shall be included in the unit price bid for structural steel complete in place.

Contractor to furnish and place concrete around drain pipe and fittings. Concrete shall be placed in such a manner as to prevent damage to the drain pipe and fittings. Drain pipe and fittings to be placed in position before the floor slab and the four courses of adjacent pier in accordance with the specifications.

DRAIN DETAILS

24 Required - Meeker Sack drain 330 lbs. Kornhaus 401 or equal

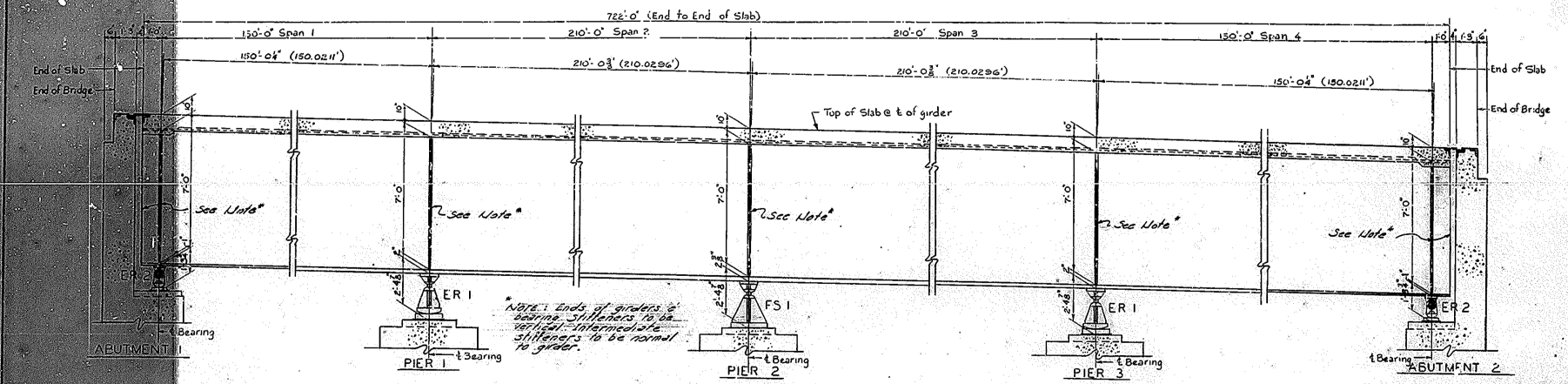


DRAIN PIPE BRACKETS

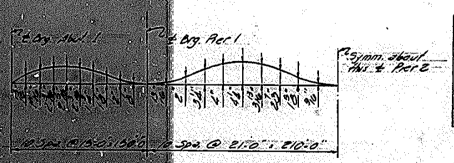
15

C. FULLER CONSULTING ENGINEERS INCORPORATED LEXINGTON, KENTUCKY	U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS LOUISVILLE, KENTUCKY
DESIGNED BY: [illegible]	OHIO RIVER BASIN
DRAWN BY: [illegible]	CAVE RUN RESERVOIR
CHECKED BY: [illegible]	KENTUCKY RIVER BASIN
APPROVED BY: [illegible]	RELOCATION OF KY. 801 & PART OF KY. 11
DATE: [illegible]	BRIDGE OVER CAVE RUN RES. SUPERSTRUCTURE
	CONTRACT NO. [illegible]

RECORD DRAWING - AS BUILT



BLOCKING DIAGRAM

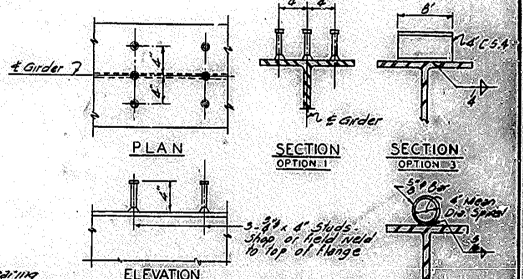


TOTAL D.L. CAMBER DIAGRAM

(Concrete D.L. 15.3 % of total)

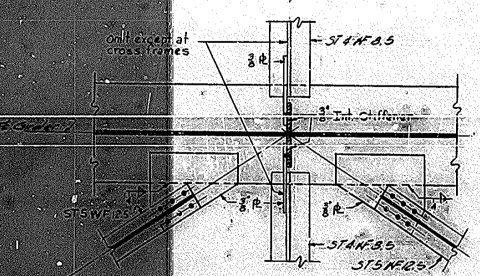
TABLE OF BRIDGE SEAT ELEVATIONS

	Abutment 1	Pier 1	Pier 2	Pier 3	Abutment 2
Girder 1	780.836	777.136	773.577	770.080	768.737
Girder 2	780.957	777.257	773.698	770.201	768.858
Girder 3	780.957	777.257	773.698	770.201	768.858
Girder 4	780.836	777.136	773.577	770.080	768.737

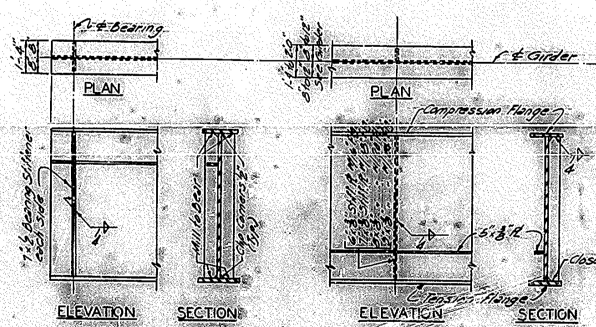


SHEAR CONNECTORS DETAILS

See General Note, Sheet 131

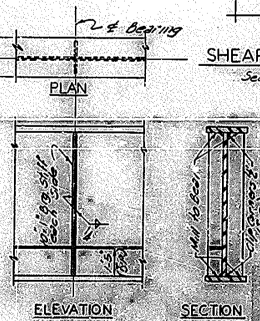


LATERAL BRACING CONNECTION



BEARING STIFFENER AT ABUT.

TYP. INTERMEDIATE STIFFENER DETAILS



BEARING STIFFENER AT PIER

NOTE: The Contractor may use one of the methods shown in Section 505.03(c) of the Kentucky Department of Highways Standard Specifications, Road and Bridge Construction, 1988 Edition, to determine the shear capacity of the shear connectors. The Contractor shall submit the method he intends to use and the calculations for the shear capacity of the shear connectors to the Engineer for approval.

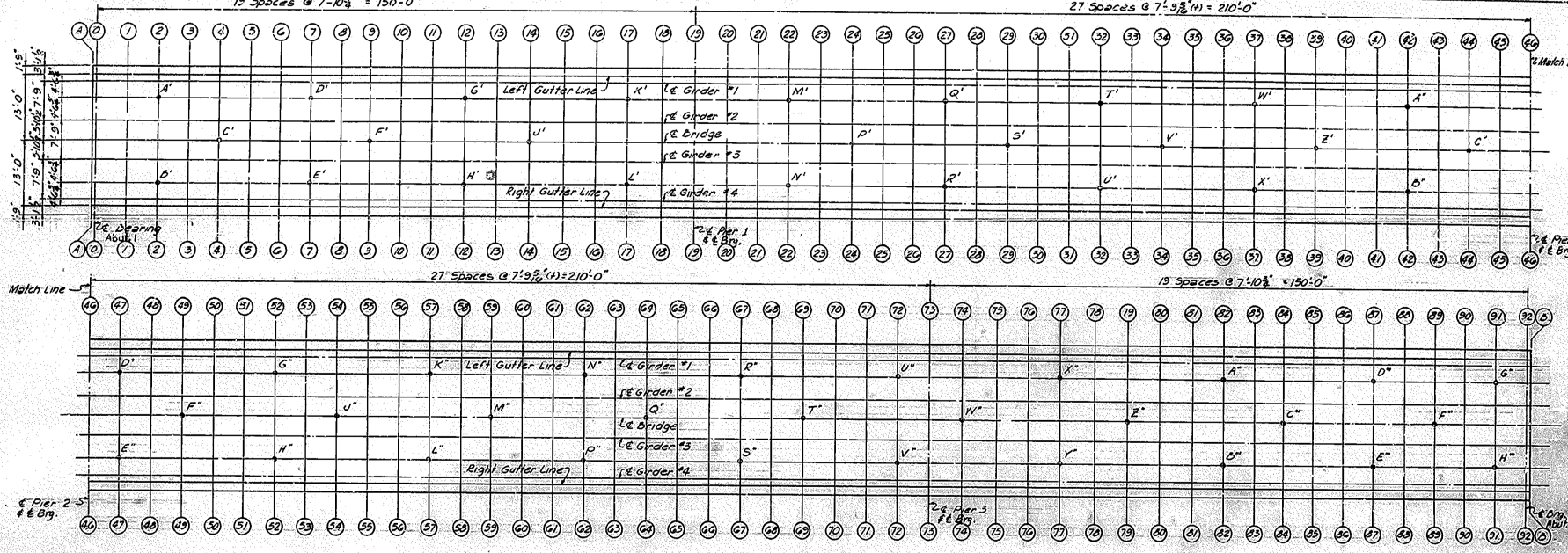
16

CONTRACTOR	CAVE RUN RESERVOIR
DESIGNED	LICKING RIVER BASIN
DRAWN	RELOCATION OF KY. 801
CHECKED	BRIDGE OVER CAVE RUN RES.
APPROVED	SUPERSTRUCTURE

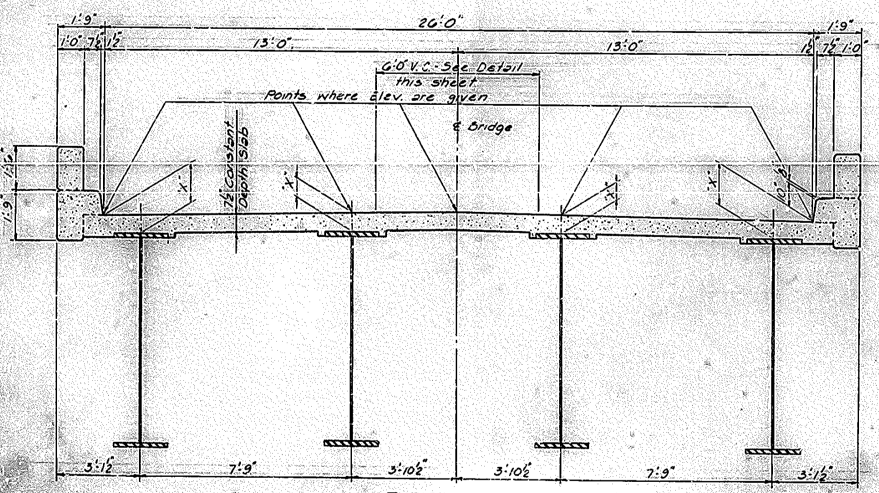
CONTRACTOR: CAMPBELL CONTRACTING ENGINEERS, INCORPORATED, LEXINGTON, KENTUCKY

U.S. ARMY ENGINEER DISTRICT, LOUISVILLE, CORPS OF ENGINEERS, LOUISVILLE, KENTUCKY

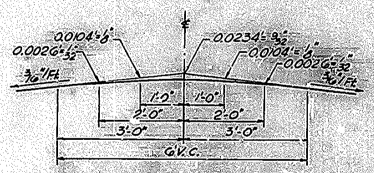
RECORD DRAWING AS BUILT



PLAN



TYPICAL SECTION



PARABOLIC CROWN

CONSTRUCTION NOTES

Lay out Sections 0-0 to 92-92 as shown in plan on this sheet (Center punch marks on top of beams for elevation points.)

Take elevations on top of steel at points indicated after cross frames and lateral bracing are in place and after all false work has been removed, but before forms for concrete slabs have been put in place. Read elevations to three decimals using a target rod and enter readings in table under top of steel.

Compute dimension 'X' as follows: Construction Elevation minus Top of Steel equals Dimension 'X'. Construction Elevations include camber due to weight of concrete slab, plinth, handrail and future surfacing.

For setting templates measure Dimension 'X' above top of steel for top of template. Do not set template by elevations.

Construct handrail plinth to curb grade. Do not add camber to handrail plinth.

Grade elevation tolerances are based on delivery to the bridge site of fabricated steel having dimension and sweep tolerances meeting the requirements of A.W.S. Spec., current edition, par. 4.27 for welded girders, and are based on erection of steel undamaged.

17

J. FULLER CONSULTING ENGINEERS INCORPORATED LEXINGTON, KENTUCKY	U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS LOUISVILLE, KENTUCKY
DESIGNED JRO	OHIO RIVER BASIN
DRAWN JRO TRACED JRO	CAVE RUN RESERVOIR
CHECKED JRO APPROVED JRO	LOCKS & DAMS
	RELOCATION OF KY. 174 (PART 1)
	BRIDGE OVER CAVE RUN RES.
	ELEVATIONS
	APPROVED DATE
	SCALE AS NOTED
	CONTRACT DACW 27-67-C-0174 (247)

RECORD DRAWING AS BUILT

TABLE OF ELEVATIONS

Section	Left Gutter Line Const El.	Top of Steel	Dim. 'X'	Girder #2 Const El.	Top of Steel	Dim. 'X'	℄ Bridge Const El.	Girder #3 Const El.	Top of Steel	Dim. 'X'	Right Gutter Line Const El.	Top of Steel	Dim. 'X'
A-A	790.061						790.231				790.061		
0-0	790.043			790.186			790.225	790.186			790.043		
1-1	789.338			.081			.118	.081			789.338		
2-2	.838			789.981			.018	789.981			.838		
3-3	.732			.875			789.912	.875			.732		
4-4	.620			.763			.800	.763			.620		
5-5	.503			.646			6.83	.646			.503		
6-6	.383			.526			.563	.520			.383		
7-7	.256			.395			.436	.395			.256		
8-8	.124			.267			.304	.267			.124		
9-9	788.987			.129			.167	.130			788.987		
10-10	.844			788.987			.026	788.987			.844		
11-11	.697			.840			788.877	.840			.697		
12-12	.544			.687			.734	.687			.544		
13-13	.390			.533			.570	.533			.390		
14-14	.237			.380			.417	.380			.237		
15-15	.087			.230			.267	.230			.097		
16-16	787.938			.081			.118	.081			787.938		
17-17	.795			787.938			787.975	787.938			.795		
18-18	.655			.796			.833	.796			.655		
19-19	.521			.664			.701	.664			.521		
20-20	.404			.547			.584	.547			.404		
21-21	.294			.437			.474	.437			.294		
22-22	.189			.332			.369	.332			.189		
23-23	.085			.228			.265	.228			.085		
24-24	786.982			.125			.162	.125			786.982		
25-25	.880			.023			.060	.023			.880		
26-26	.777			786.920			786.957	786.920			.777		
27-27	.675			.818			.855	.818			.675		
28-28	.575			.718			.755	.718			.575		
29-29	.455			.598			.635	.596			.455		
30-30	.336			.479			.516	.479			.336		
31-31	.215			.357			.394	.357			.215		
32-32	.087			.230			.267	.230			.087		
33-33	785.955			.098			.135	.098			785.955		
34-34	.816			785.959			783.996	785.959			.816		
35-35	.671			.814			.851	.814			.671		
36-36	.523			.666			.703	.666			.523		
37-37	.373			.516			.553	.516			.373		
38-38	.216			.359			.396	.359			.216		
39-39	.057			.200			.237	.200			.057		
40-40	784.896			.039			.076	.039			784.896		
41-41	.738			784.881			.918	784.881			.738		
42-42	.580			.723			784.760	.723			.580		
43-43	.426			.569			.606	.569			.426		
44-44	.277			.420			.457	.420			.277		
45-45	.132			.275			.312	.275			.132		
46-46	783.994			.134			.173	.136			783.994		
47-47	.870			.013			.050	.013			.870		
48-48	.755			783.897			783.934	783.897			.755		
49-49	.643			.785			.822	.785			.643		
50-50	.536			.678			.715	.678			.536		
51-51	.432			.574			.611	.574			.432		
52-52	.329			.471			.508	.471			.329		
53-53	.228			.370			.407	.370			.228		
54-54	.126			.268			.305	.268			.126		
55-55	.022			.164			.201	.164			.022		
56-56	782.911			.053			.090	.053			782.911		
57-57	.797			782.959			782.976	782.959			.797		
58-58	.681			.923			.960	.823			.681		
59-59	.559			.701			.738	.701			.559		
60-60	.429			.571			.608	.571			.429		
61-61	.295			.437			.474	.437			.293		
62-62	.156			.298			.335	.298			.156		
63-63	.015			.155			.192	.155			.015		
64-64	781.872			.014			.051	.014			781.872		
65-65	.711			781.853			781.890	781.853			.711		
66-66	.551			.693			.730	.693			.551		
67-67	.393			.535			.572	.533			.393		
68-68	.234			.376			.413	.376			.234		
69-69	.075			.217			.254	.217			.075		
70-70	780.918			.060			.097	.060			780.918		
71-71	.762			780.904			780.941	780.904			.762		
72-72	.610			.752			.789	.752			.616		
73-73	.460			.608			.645	.608			.460		
74-74	.355			.477			.518	.477			.335		
75-75	.209			.331			.368	.331			.209		
76-76	.090			.232			.269	.232			.090		
77-77	779.971			.113			.150	.113			779.971		

Section	Left Gutter Line Const El.	Top of Steel	Dim. 'X'	Girder #2 Const El.	Top of Steel	Dim. 'X'	℄ Bridge Const El.	Girder #3 Const El.	Top of Steel	Dim. 'X'	Right Gutter Line Const El.	Top of Steel	Dim. 'X'
78-78	779.855			779.997			780.034	779.997			779.855		
79-79	.740			.880			779.923	.886			.740		
80-80	.633			.774			.811	.774			.632		
81-81	.520			.663			.699	.662			.520		
82-82	.402			.546			.581	.546			.402		
83-83	.279			.423			.458	.421			.279		
84-84	.151			.293			.330	.293			.151		
85-85	.018			.160			.197	.160			.018		
86-86	778.879			.021			.058	.021			778.879		
87-87	.735			778.877			778.914	778.877			.735		
88-88	.586			.728			.765	.728			.586		
89-89	.432			.574			.611	.574			.432		
90-90	.273			.416			.453	.416			.273		
91-91	.108			.250			.287	.250			.108		
92-92	777.946			.085			.125	.085			777.946		
6-6	777.928						778.108				777.928		

TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS

Slab Check Point	Top of Slab Elevation	Bottom of Slab Elevation	Computed Slab Thickness	Slab Check Point	Top of Slab Elevation	Bottom of Slab Elevation	Computed Slab Thickness	Slab Check Point	Top of Slab Elevation	Bottom of Slab Elevation	Computed Slab Thickness
A'	789.910			V'	785.996			R"	781.464		
B'	.910			W'	.445			S"	.464		
C'	.800			X'	.445			T"	.254		
D'	.328			Z'	.237			U"	780.681		
E'	.328			A"	784.652			V"	.681		
F'	.167			B'	.652			W"	.514		
G'	788.616			C'	.457			X"	.083		
H'	.616			D'	783.942			Y"	.062		
J'	.417			E'	.942			Z"	779.923		
K'	787.667			F'	.823			A"'	.473		
L'	.867			G'	.900			B"'	.473		
M'	.201			H'	.900			C"'	.350		
N'	.261			J'	.505			D"'	778.806		
P'	.162			K'	782.868			E"'	.806		
Q'	786.747			L'	.868			F"'	.611		
R'	.747			M'	.738			G"'	.179		
S'	.635			N"	.227			H"'	.179		
T'	.159			P'	.227						
U'	.159			Q'	.051						

NOTE:

SLAB THICKNESS CONTROL - After the slab forms are erected and before the slab reinforcement is placed, the Resident Engineer shall take field elevations at 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 ½" from the plan thickness, allowing 1/360 of the slab span for deflection of the form work, the form shall be adjusted until the computed slab thickness is within the tolerance allowed.

18

C. J. FULLER CONSULTING ENGINEERS INCORPORATED LEXINGTON, KENTUCKY	U.S. ARMY ENGINEER DISTRICT, LOUISVILLE CORPS OF ENGINEERS LOUISVILLE, KENTUCKY
DESIGNED JRQ	OHIO RIVER BASIN
DRAWN JEW TRACED J.E.W.	CAVE RUN RESERVOIR
CHECKED PCW & PFH	LICKING RIVER, KY.
SUBMITTED C. J. Fuller	RELOCATION OF KY. 1274 (PART I)
APPROVAL REC'D	BRIDGE OVER CAVE RUN RES.
APPROVED	ELEVATIONS
APPROVED	SCALE
	DRAWING NUMBER LR-174-12-4/147

RECORD DRAWING AS BUILT