KENTUCKY DEPARTMENT OF HIGHWAYS
DAVIESS COUNTY
OWENSBORO BELTLINE
RELOC. FIFTH ST. RD. OVER
OWENSBORO BELTLINE

REFERENCE AND ESTIMATE OF QUANTITIES

LOCATION / ITEM	SHEET NO.	CLASS "A" CONCRETE CU. YDS.	CLASS "AA" CONCRETE CU. YDS.	REINF. STEEL LBS.	STRUCTURE EXCAVATION (COMMON) CU. YDS.	STRUCTURAL STEEL LUMP SUM	SHEAR CONNECTORS LUMP SUM	HIGH STRENGTH HANDRAIL LIN. FT.	STYRENE-BUTADIENE PROTECTIVE COATING GAL.	CRUSHED AGGR. SLOPE PROTECTION SQ. YDS.	END BENT BACKFILL CU. YDS.	14" R.C. PILES LIN. FEET FURNISH	14" R.C. PILES LIN. FEET DRIVE
TITLE & QUANTITIES	1												
GENERAL NOTES	2												
STRUCTURAL STEEL NOTES	3												
SOUNDINGS	4												
LAYOUT AND ELEVATION	5												
PILE RECORD	6												
ABUTMENT 1 DETAILS	7, 8, 9	84.7	35.2	7961	110				1	160	60	1195	1195
PIER DETAILS	10	91.9		11903	95				3			1320	1320
ABUTMENT 2 DETAILS	11, 12, 13	77.1	34.5	7434	110				1	205	55	1195	1195
SUPERSTRUCTURE DETAILS	14-18		286.8	73394		①	②	466.3	8				
EXPANSION DAM & SHOES	19												
CONSTRUCTION ELEVS.	20												
SUBSTRUCTURE TOTALS		253.7	69.7	27298	315				5	365	115	3710	3710
SUPERSTRUCTURE TOTALS			286.8	73394		①	②	466.3	8				
STRUCTURE TOTALS		253.7	356.5	100692	315	①	②	466.3	13	365	115	3710	3710

① Approximate Weight of Structural Steel included in Lump Sum Bid = ~~205,590~~ lbs. (ASTM A-36 Steel) 208,111#
Approximate Weight of Structural Steel included in Lump Sum Bid = ~~64,230~~ lbs. (ASTM A-441 Steel) 67,976#
Total = ~~269,820~~ lbs. (Does not include Wt. of overrun or weld material) 276,087#

② Approximate Weight of Shear Connectors:
Option "D" = 3138 lbs.
Option "E" = 2485 lbs.
Option "F" = 3351 lbs.

BILL OF INCIDENTAL MATERIAL

ITEM	NO.	DESCRIPTION	LOCATION
FOUR-BOLT INSERT ASSEMBLIES	8	See Drwg. 1740	Abutment Wings
JOINT SEALING COMPOUND	2	1" x 3½" x 45'-6"	At 4" Exp. Dam

SPECIAL PROVISION FOR:

No. 77B for Styrene-Butadiene Protective Coating
No. 12 for Joint Sealing Compound Rev. (Used with ED-3).
No. 30A for Membrane Curing of Concrete Structures.
No. 35B for Class AA Concrete

REFERENCES

(Standard Drawings listed below are the Current Edition and are to be used with these Plans).

STANDARD DRAWINGS

H116C	P2
EL-3B	P20
AE-1B	P21A
SF-2A	1740
AWS-2	

JOHNSON, DEPP & QUISENBERRY
CONSULTING ENGINEERS
OWENSBORO, KENTUCKY

Signed [signature] P.E.
Date 7 Aug. 1969 #3686

Reloc. Fifth St. Road over Owensboro Beltline Sheet 1 of 20

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD

STATION [illegible] Fifth St. Road PROJECT NO. SP 30-257-C[illegible]

BRIDGE NUMBER U-556(6) [illegible] 17515 [illegible]

JOHNSON, DEPP & QUISENBERRY
CONSULTING ENGINEERS
OWENSBORO, KENTUCKY

GENERAL NOTES

SPECIFICATIONS: THE 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 1965 AASHO SPECIFICATIONS. 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.: (NOT IN BRIDGE SLAB)	FOR CLASS "A" REINF. CONC.:	FOR CLASS "AA" REINF. CONC.: (IN BRIDGE SLAB)
fc = 1,600 psi fs = 20,000 psi	fs = 20,000 psi	fs = 20,000 psi f'c = 4000 psi
u = 200 psi for embedment	fc = 1,200 psi	fc = 1,200 psi n = 8
u = 300 psi for summation of perimeters	u = 200 psi for embedment	u = 200 psi for embedment
f'c = 4,000 psi n = 8	u = 300 psi for summation of perimeters	u = 300 psi for Eo
	f'c = 3,000 psi n = 10	

STRUCTURAL STEEL:
fs = 20,000 psi (A-36); fs varies for A-441 (See AASHO)

FOUNDATION PRESSURE: PILES ARE DESIGNED FOR A MAXIMUM AXIAL LOAD OF 24.03 TONS PER PILE AND A MAXIMUM HORIZONTAL SHEAR OF 0 TONS PER PILE. THESE MAXIMUMS ARE FOR GROUP I LOADS WITH INCREASES ALLOWED FOR OTHER LOADING GROUPS.

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.

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 EXCEPT IN THE CONCRETE PILES. CLASS "D" CONCRETE IS TO BE USED IN THE CONCRETE PILES.

PILING: FRICTION PILING SHALL BE DRIVEN TO SUSTAIN A MINIMUM LOAD OF 30 TONS PER PILE. 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.

DRIVING PILES: CORED PILOT HOLES THROUGH THE END BENT EMBANKMENTS WILL BE REQUIRED FOR STARTING PILES. THE COST OF THIS WORK IS TO BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT FOR DRIVING PILES.

OPTIONAL TYPES OF PILES: THE CONTRACTOR SHALL USE ONE OF THE FOLLOWING OPTIONS THROUGHOUT THE STRUCTURE:
- OPTION "A" - STANDARD 14" REINFORCED CONCRETE PILE. SEE STAND. DRWG. P2, CURRENT EDITION.
- OPTION "B" - CAST IN PLACE CONCRETE PILE, SEAMLESS STEEL OR WELDED PIPE SHELL. SEE STANDARD DRAWING P20, CURRENT EDITION.
- OPTION "C" - CAST IN PLACE CONCRETE PILE, FLUTED STEEL SHELL. SEE STANDARD DRAWING P21, CURRENT EDITION.

BEARING PLATES: ALL BEARING PLATES MUST BE TRUE AND FREE OF WARP.

TYPE OF HIGH STRENGTH HANDRAIL: THE CONTRACTOR SHALL PROVIDE THROUGHOUT THE PROJECT HIGH STRENGTH ALUMINUM HANDRAIL IN ACCORDANCE WITH THE STD. DRWG. H116, CURRENT EDITION.

CONSTRUCTION IDENTIFICATION: THE NAMES OF THE PRIME CONTRACTOR AND THE SUBCONTRACTOR 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 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 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.

STRUCTURAL STEEL: SEE STRUCTURAL STEEL NOTES ON SHEET 3.

PAINT: SEE STRUCTURAL STEEL NOTES ON SHEET 3.

Reloc. Fifth St. Road over Owensboro Beltline — Sheet 2

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD F-556 (1)
STATION: 57+14.84 Fifth St. Road PROJECT NO. SP 30-257-61

GENERAL NOTES

BRIDGE NUMBER 17513

STRUCTURAL STEEL 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:- WELDING, WELDERS, WELDING MATERIALS AND WELDING PROCEDURES SHALL COMPLY WITH AMERICAN WELDING SOCIETY STANDARD SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES, AWS D2.0-66 AS MODIFIED OR ADDED THERETO BY KY. STD. DRWG., MODIFICATIONS AND ADDITION TO AWS D2.0-66 SPECIFICATIONS, CURRENT EDITION.

PAYMENT FOR STRUCTURAL STEEL:- THE LUMP SUM BID FOR STRUCTURAL STEEL SHALL BE FULL PAYMENT FOR ALL STRUCTURAL STEEL, BOLTS, WASHERS, STEEL PINS, LEAD PLATES, MOLTEN LEAD, WELDING AND WELDING MATERIALS, FLOOR DRAINS, 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.

CHANGES IN STRUCTURAL STEEL QUANTITIES:- IN THE EVENT THAT CHANGES IN STEEL QUANTITIES ARE REQUIRED DUE TO CHANGES BY THE ENGINEER IN THE 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.

PAINT:- ALL STRUCTURAL STEEL EXCEPT PINS AND PIN BEARING SURFACES SHALL BE GIVEN ONE SHOP COAT OF TYPE 1 RED LEAD PAINT, ONE FIELD COAT OF TYPE 1 RED LEAD PAINT AND TWO FIELD COATS OF ALUMINUM PAINT IN ACCORDANCE WITH CURRENT STANDARD SPECIFICATIONS. THE EXPOSED SURFACES OF EXPANSION DAMS AND ARMORED EDGES, NOT ACCESSIBLE AFTER ERECTION, SHALL BE GIVEN ONE FIELD COAT OF TYPE 1 RED LEAD PAINT AND TWO FIELD COATS OF ALUMINUM PAINT BEFORE ERECTION. THE PINS AND PIN BEARING SURFACES SHALL BE COATED IN THE SHOP WITH A MIXTURE OF WHITE LEAD AND TALLOW IN ACCORDANCE WITH THE SPECIF'S.

STEEL FINISH:- STEEL BEARING SURFACES IN CONTACT SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 408.3.1.H3 OF THE SPECIF'S.

PAYMENT FOR SHEAR CONNECTORS:- THE "LUMP SUM BID" FOR SHEAR CONNECTORS SHALL BE FULL PAYMENT FOR ALL SHEAR CONNECTORS, WELDING AND WELDING MATERIAL, AND MATERIALS NECESSARY TO FIELD WELD OR SHOP WELD THE SHEAR CONNECTORS IN PLACE ACCORDING TO THE PLANS AND SPECIFICATIONS.

OPTIONAL TYPES OF SHEAR CONNECTORS:-

(a) THE CONTRACTOR SHALL USE ONE OF THE FOLLOWING OPTIONS THROUGHOUT THIS STRUCTURE:-
OPTION "E" - 7/8" x 5" STUDS ; OPTION "F" - 5/8" x 4" ∅ SPIRALS ; OPTION "D" - 4" CHANNEL @ 5.4#

(b) IF THE CONTRACTOR WISHES TO USE OTHER THAN 7/8" x 5" STUD SHEAR CONNECTORS SHOWN ON THE PLANS, THE PROPOSED ARRANGEMENT SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP PLANS.

STUD WELDING:- STUDS SHALL BE WELDED WITH APPROVED WELDING EQUIPMENT.

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

MATERIAL	ASTM DESIGNATION CURRENT SPECS.
STRUCTURAL STEEL (BRACING, ANCHOR BOLTS, EXP. DAMS, STIFFENERS, WELDED SHOES, ROCKER ASSEMBLIES, BEARING PLATES AND SPLICES)	A36-67
STRUCTURAL STEEL (MAIN GIRDERS, FLANGES AND WEB)	A36-67 OR A441-66a
STEEL PINS	A108-61T (GRADE 1016-1030 INCL)
MOLTEN LEAD, LEAD PLATES	B29-55 (1966)
HIGH STRENGTH BOLTS, NUTS AND WASHERS	A325-66b
STUD SHEAR CONNECTORS	A108-61T GRADE 1015

SPECIFICATIONS FOR SURFACE FINISH OF STEEL:-

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

CAMBER:- WEB PLATES SHALL BE CUT TO PROVIDE FOR PAROBOLIC CAMBER OF THE GIRDER. PROVIDE FOR POSSIBLE WARPAGE DUE TO EXTRA HEAT IN TOP FLANGE BY VIRTUE OF SHEAR CONNECTORS. 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.

SHOP ASSEMBLY:- GENERAL REAMING OF HOLES FOR EACH BOLTED SPLICE AND CONNECTION OF THE CONTINUOUS GIRDERS SHALL BE REQUIRED. EACH CONTINUOUS GIRDER UNIT SHALL BE COMPLETELY SHOP ASSEMBLED WITH PARTS ADJUSTED TO LINE, ELEVATIONS, AND CAMBER, FIT FOR DRILLING OR REAMING.
OTHER BOLTED CONNECTIONS TO THE GIRDERS SHALL BE DRILLED OR REAMED IN THE SHOP WITH CONNECTING PARTS ASSEMBLED OR SHALL BE DRILLED OR REAMED TO A METAL TEMPLATE WITHOUT ASSEMBLY. GIRDERS SHALL REMAIN ASSEMBLED FOR INSPECTION BY THE DEPARTMENT OF HIGHWAYS INSPECTOR AND ARE TO BE MATCHMARKED WHILE ASSEMBLED.
CONNECTIONS FOR THE CROSS FRAMES, DIAPHRAMS, LONGITUDINAL BRACING, EXPANSION JOINTS AND OTHER MINOR MEMBERS MAY BE PUNCHED OR DRILLED FULL SIZE WITHOUT ASSEMBLY, SUBJECT TO THE REQUIREMENTS IN THE SPECIFICATIONS FOR GENERAL REAMING.

CONNECTIONS:- UNLESS OTHERWISE PROVIDED ON THE PLANS, ALL CONNECTIONS SHALL BE 1" DIAMETER HIGH STRENGTH BOLTS. OPEN HOLES SHALL BE 1 1/16" DIAMETER. ALL JOINTS ARE DESIGNED AS FRICTION TYPE CONNECTIONS. INSTALLATION SHALL BE BY THE TURN-OF-NUT METHOD. WHEN THE WIDTH OF HIGH-STRENGTH BOLT HEAD CORRESPONDS TO THAT OF THE HEAVY SEMIFINISHED HEXAGON BOLT, ONLY ONE WASHER PER BOLT IS REQUIRED.

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 THE FABRICATION.

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.

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

FABRICATION TOLERANCES:- FABRICATION TOLERANCES FOR WELDING SHOP FABRICATED MEMBERS SHALL BE LIMITED TO THE TOLERANCE OUTLINED IN SECTION 4 OF THE 1966 AWS 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 OF STEEL" ELEVATIONS.

ADDITIONAL FIELD SPLICIES:- IF ADDITIONAL FIELD SPLICES ARE PERMITTED THEY SHALL BE AT THE CONTRACTORS EXPENSE AND SHALL BE INCLUDED IN THE "LUMP SUM BID" FOR STRUCTURAL STEEL.

SHOP CONNECTIONS:- ALL WELDED SHOP SPLICES IN FLANGES OF GIRDERS OR FRAMES SHALL BE SHOWN ON THE SHOP DRAWINGS.

SHOP DETAIL DRAWINGS:- THE CONTRACTOR SHALL SUBMIT SHOP DETAIL DRAWINGS OF ALL STRUCTURAL STEEL TO THE BRIDGE ENGINEER FOR APPROVAL IN ACCORDANCE WITH THE SPECIFICATIONS. A SET OF LINEN TRACINGS OF APPROVED SHOP DETAILS SHALL BECOME THE PROPERTY OF THE DEPARTMENT OF HIGHWAYS WHEN THE CONTRACT IS COMPLETED AND BEFORE FINAL PAYMENT IS MADE. NO DIRECT PAYMENT SHALL BE MADE FOR RECORD DRAWINGS BUT THE COST SHALL BE INCLUDED IN "LUMP SUM BID" FOR STRUCTURAL STEEL. ANY MATERIALS ORDERED OR WORK DONE BY THE CONTRACTOR BEFORE THE SHOP DRAWINGS (INCLUDING THE WELDING PROCEDURES) ARE APPROVED, SHALL BE AT HIS OWN RISK. QUALIFICATION TESTS OF ALL WELDING PROCEDURES SHALL BE COMPLETED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO FINAL APPROVAL OF SHOP DRAWINGS AND START OF THE FABRICATION.

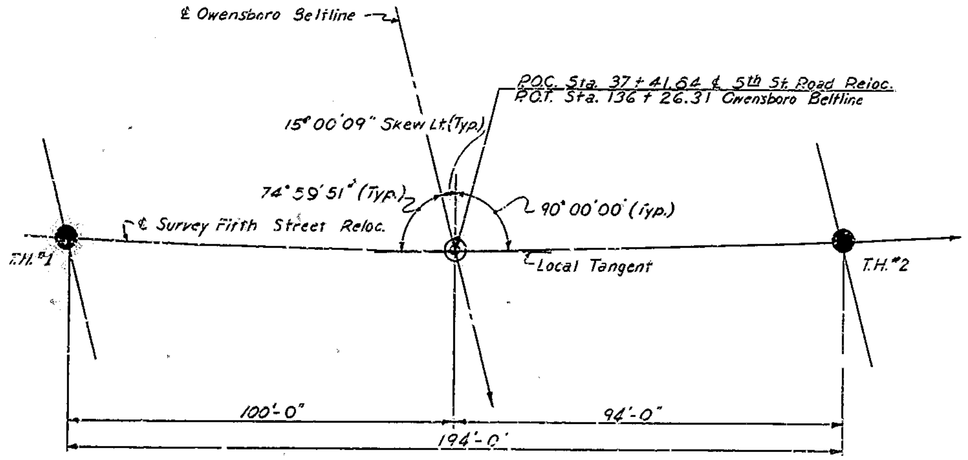
ADDITIONAL STRUCTURAL STEEL NOTES:- FOR ADDITIONAL NOTES SEE KY. STD. DRWG. MODIFICATIONS AND ADDITIONS TO AWS D2.0-66 SPECIFICATIONS, CURRENT EDITION.

Relo: Fifth St. Road over Owensboro Beltline — Sheet 3

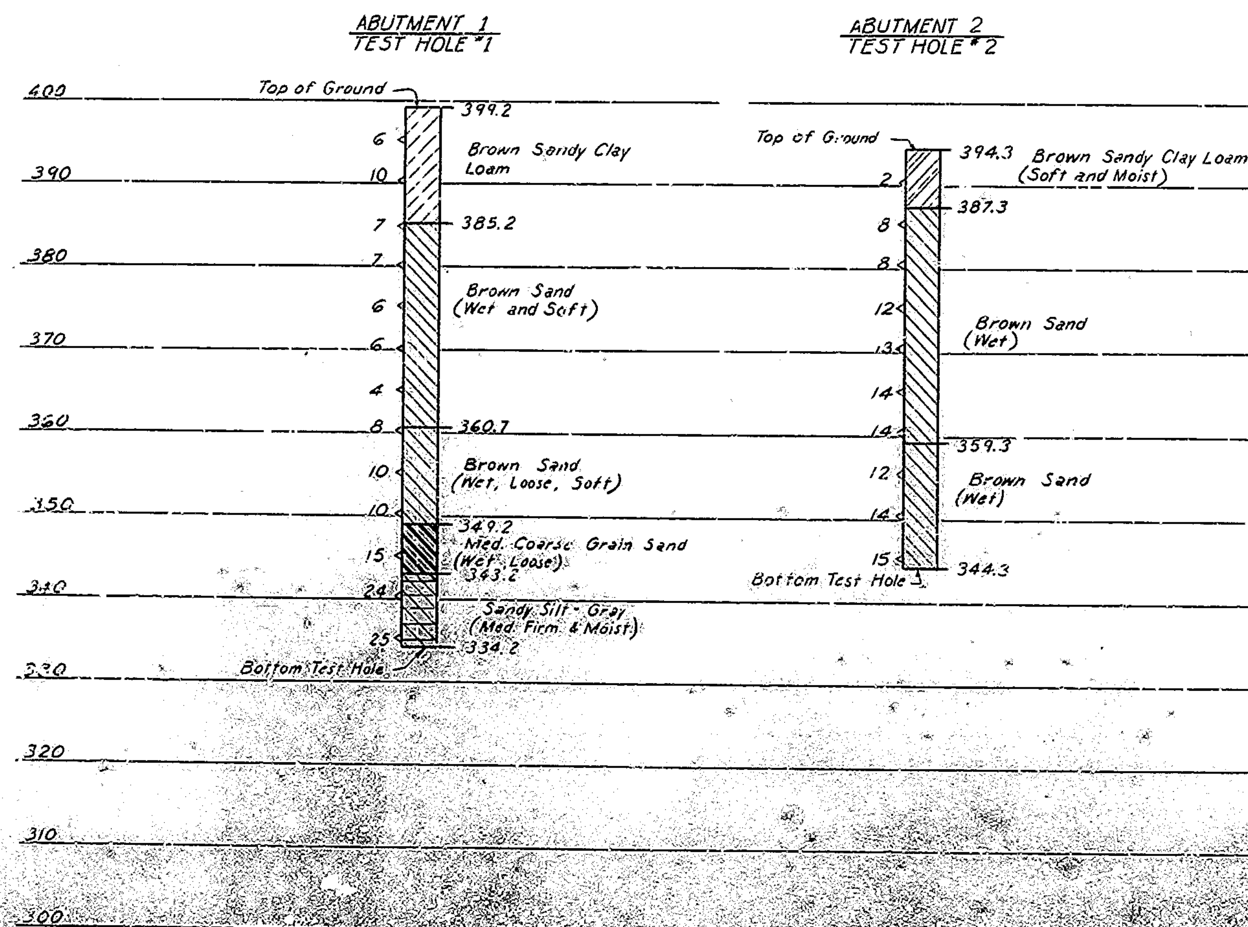
STRUCTURAL STEEL NOTES

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
STATION 57+14.84 Fifth St. Road — PROJECT NO. F-556(1) SP 30-257-6[illegible]
BRIDGE NUMBER 17573

7	KY.



PLAN



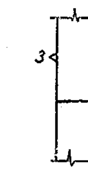
NOTE:

● Indicates Std. Penetration Test with Blow Counts @ 5' Intervals for 50' below Exist. Ground.

ELEV. DATUM:

Ground Elev.
Sta. 136+00 = 398.5

LEGEND

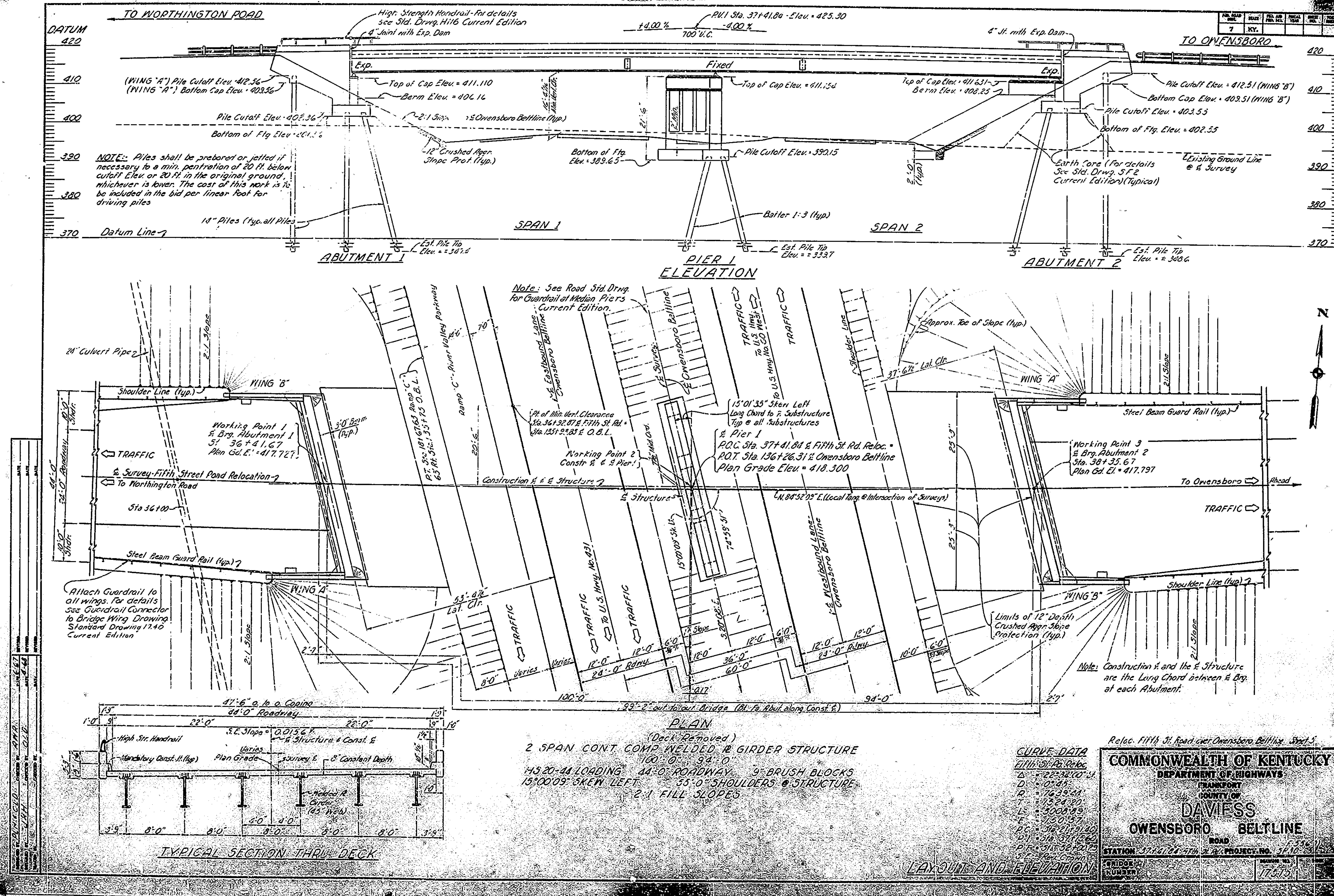


Indicates zone in which Standard Penetration Test was perforn d and resulting blow count v ill per foot.

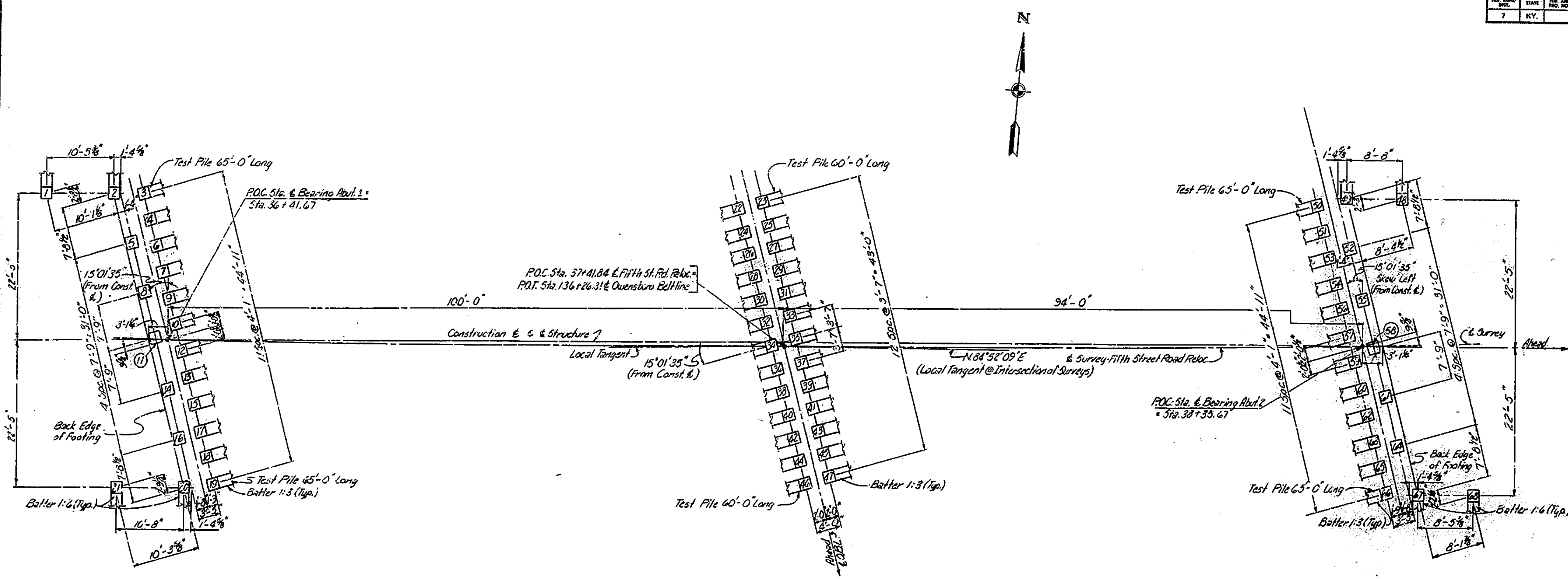
SOUNDINGS

Reloc. Fifth St. Road over Owensboro Beltline Sheet 4

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
STATION 37+41.64 Fifth St. Road PROJECT NO.
BRIDGE NUMBER
DRAWING NO. 17515



TO WORTHINGTON ROAD
TO OWENSBORO
DATUM
420
410
400
390
380
370
High Strength Handrail - For details See Std. Drwg. H16 Current Edition
4" Joint with Exp. Dam
P.V.I. Sta. 37+41.84 - Elev. = 425.30
+4.00 %
-4.00 %
700' V.C.
4" Jt. with Exp. Dam
Exp.
Fixed
Exp.
(WING "A") Pile Cutoff Elev. 412.56
(WING "A") Bottom Cap Elev. 403.56
Top of Cap Elev. = 411.110
Berm Elev. = 406.16
Top of Cap Elev. = 411.154
Top of Cap Elev. = 411.631
Berm Elev. = 406.25
Pile Cutoff Elev. = 412.51 (WING "B")
Bottom Cap Elev. = 403.51 (WING "B")
Pile Cutoff Elev. = 403.55
Bottom of Ftg. Elev. = 402.55
Pile Cutoff Elev. 403.36
2:1 Slope
℄ Owensboro Beltline (typ.)
Bottom of Ftg. Elev.
12" Crushed Aggr. Slope Prot. (typ.)
Bottom of Ftg. Elev. = 389.65
Pile Cutoff Elev. = 390.15
Earth Core (For details See Std. Drwg. SF 2 Current Edition) (Typical)
Existing Ground Line @ ℄ Survey
NOTE: Piles shall be prebored or jetted if necessary to a min. penetration of 20 ft. below cutoff Elev. or 20 ft. in the original ground, whichever is lower. The cost of this work is to be included in the bid per linear foot for driving piles
14" Piles (typ. all Piles)
Batter 1:3 (typ)
Datum Line
SPAN 1
SPAN 2
ABUTMENT 1
Est. Pile Tip Elev.
PIER 1
Est. Pile Tip Elev. = 333.7
ABUTMENT 2
Est. Pile Tip Elev. = 348.6
ELEVATION
Note: See Road Std. Drwg. for Guardrail at Median Piers Current Edition.
N
24" Culvert Pipe
WING "B"
WING "A"
Shoulder Line (typ.)
Approx. Toe of Slope (typ.)
Working Point 1
℄ Brg. Abutment 1
Sta. 36+41.67
Plan Gd. El. = 417.727
TRAFFIC
℄ Survey - Fifth Street Road Relocation
To Worthington Road
Sta 36+00
Steel Beam Guard Rail (typ.)
Attach Guardrail to all wings. For details see Guardrail Connector to Bridge Wing Drawing Standard Drawing 1746 Current Edition
Working Point 2
Constr. ℄ & ℄ Pier 1
℄ Pier 1
P.O.C. Sta. 37+41.84 ℄ Fifth St. Rd. Reloc. =
P.O.T. Sta. 136+26.31 ℄ Owensboro Beltline
Plan Grade Elev. = 418.300
15°01'35" Skew Left
Construction ℄ & ℄ Structure
℄ Structure
N 84°52'05" E (Local Tang. @ Intersection of Surveys)
Working Point 3
℄ Brg. Abutment 2
Sta. 38+35.67
Plan Gd. El. = 417.797
To Owensboro
Ahead
Steel Beam Guard Rail (typ.)
Shoulder Line (typ.)
℄ Eastbound Lane Owensboro Beltline
℄ Westbound Lane Owensboro Beltline
Ramp "C" - River Valley Parkway
To U.S. Hwy. No. 431
Limits of 12" Depth Crushed Aggr. Slope Protection (typ.)
Note: Construction ℄ and the ℄ Structure are the Long Chord between ℄ Brg. at each Abutment.
2:1 Slope
24'-0" Rdwy.
36'-0"
60'-0"
24'-0" Rdwy.
100'-0"
94'-0"
PLAN
(Deck Removed)
2 SPAN CONT. COMP. WELDED ℙ GIRDER STRUCTURE
100'-0" 94'-0"
HS 20-44 LOADING 44'-0" ROADWAY 9" BRUSH BLOCKS
15°00'09" SKEW LEFT 55'-0" SHOULDERS @ STRUCTURE
2:1 FILL SLOPES
47'-6" o. to o. Coping
44'-0" Roadway
22'-0"
22'-0"
High Str. Handrail
Plan Grade
Varies
Survey ℄
8" Constant Depth
Welded ℙ Girder (45" Web)
3'-9"
8'-0"
8'-0"
8'-0"
8'-0"
8'-0"
3'-9"
TYPICAL SECTION THRU DECK
CURVE DATA
Fifth St. Rd. Reloc.
Reloc. Fifth St. Road over Owensboro Beltline Sheet 5
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
LAYOUT AND ELEVATION
7
KY.



ABUTMENT 1 — PIER 1 — ABUTMENT 2

PLAN

ABUTMENT 1

Pile Number	Cutoff Elev. as shown on Plans	Tip Pile Elev. as Driven	Length of Pile in Place Lin. Ft.	Calc. Brg. Cap. Tons
1.	411.71			
2.	402.36			
3.	402.36			
4.	402.36			
5.	402.36			
6.	402.36			
7.	402.36			
8.	402.36			
9.	402.36			
10.	402.36			
11.	402.36			
12.	402.36			
13.	402.36			
14.	402.36			
15.	402.36			
16.	402.36			
17.	402.36			
18.	402.36			
19.	402.36			
20.	402.36			
21.	412.56			

PIER 1

Pile Number	Cutoff Elev. as shown on Plans	Tip Pile Elev. as Driven	Length of Pile in Place Lin. Ft.	Calc. Brg. Cap. Tons
22	390.15			
23	390.15			
24	390.15			
25	390.15			
26	390.15			
27	390.15			
28	390.15			
29	390.15			
30	390.15			
3[illegible]	390.15			
32	390.15			
33	390.15			
34	390.15			
35	390.15			
36	390.15			
37	390.15			
38	390.15			
39	390.15			
40	390.15			
41	390.15			
42	390.15			
43	390.15			
44	390.15			
45	390.15			
46	390.15			
47	390.15			

ABUTMENT 2

Pile Number	Cutoff Elev. as shown on Plans	Tip Pile Elev. as Driven	Length of Pile in Place Lin. Ft.	Calc. Brg. Cap. Tons
48	411.97			
49	403.55			
50	4[illegible].55			
51	403.55			
52	403.55			
53	403.55			
54	403.55			
55	403.55			
56	403.55			
57	403.55			
58	403.55			
59	403.55			
60	403.55			
61	403.55			
62	403.55			
63	403.55			
64	403.55			
65	403.55			
66	403.55			
67	403.55			
68	412.51			

NOTES:

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

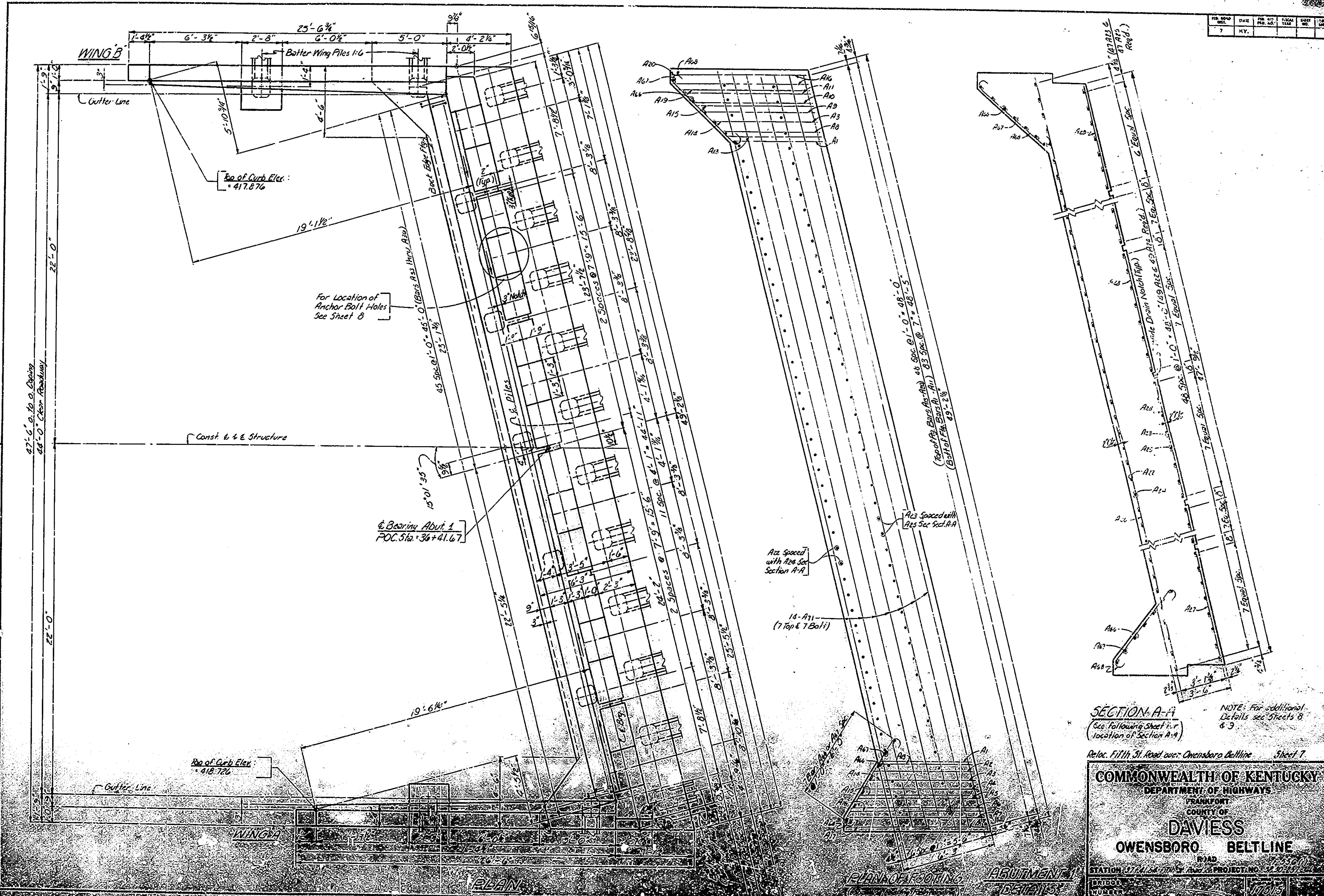
After all Piles have been driven, the Resident Engineer shall record the Tip of Pile Elevations as driven, Length of Pile in Place, and Calculated Bearing Capacity of each Pile and return one Blue Print copy of this sheet with this information to the Director of Bridges so that the record can be placed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

PILE RECORD

Reloc. Fifth St. Road over Owensboro Beltline. Sheet 6.

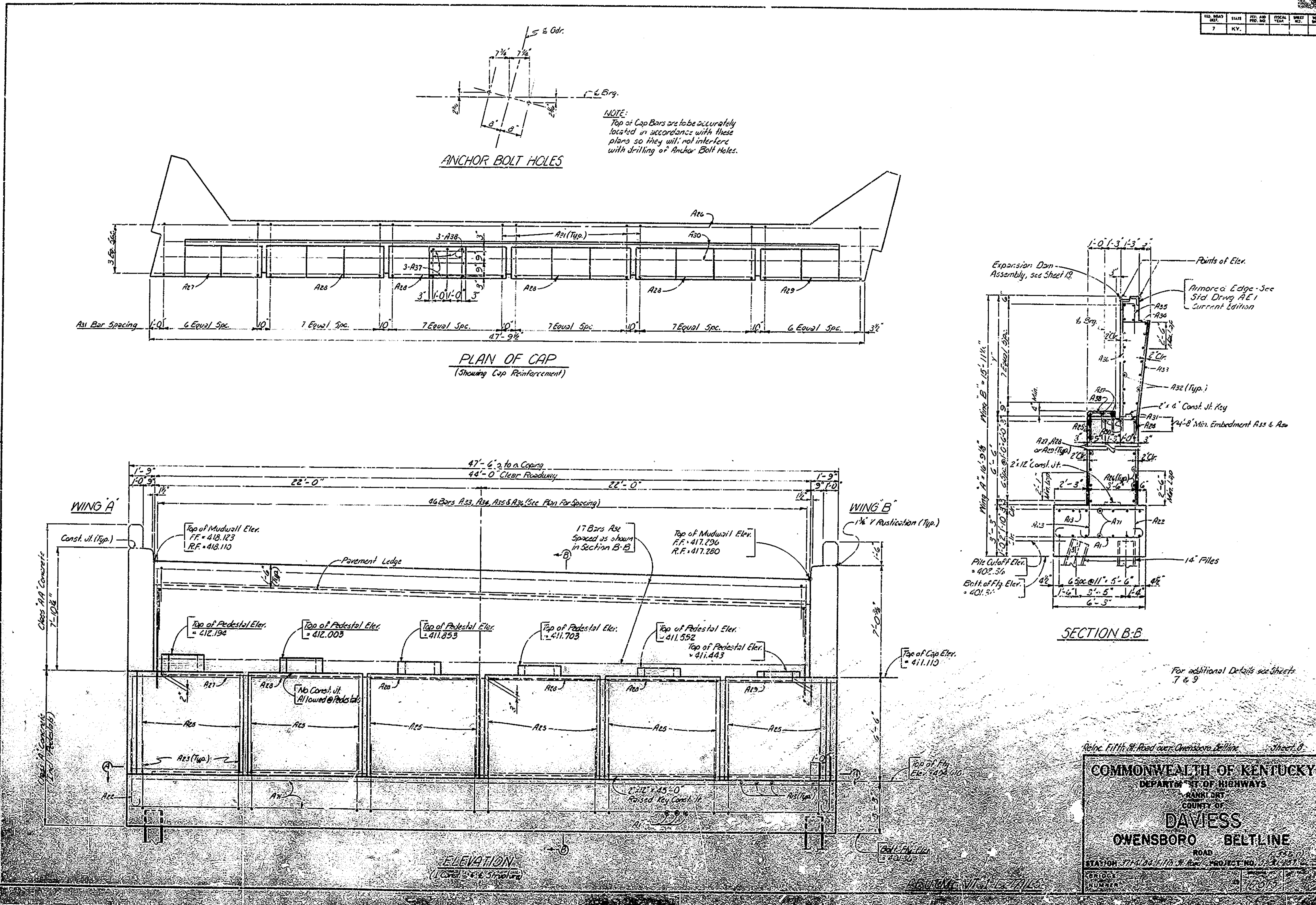
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
F-656(1)
STATION 37+41.84 Fifth St. Road PROJECT NO. SP 30-257-6L
BRIDGE NUMBER
DRAWING NO. 17515



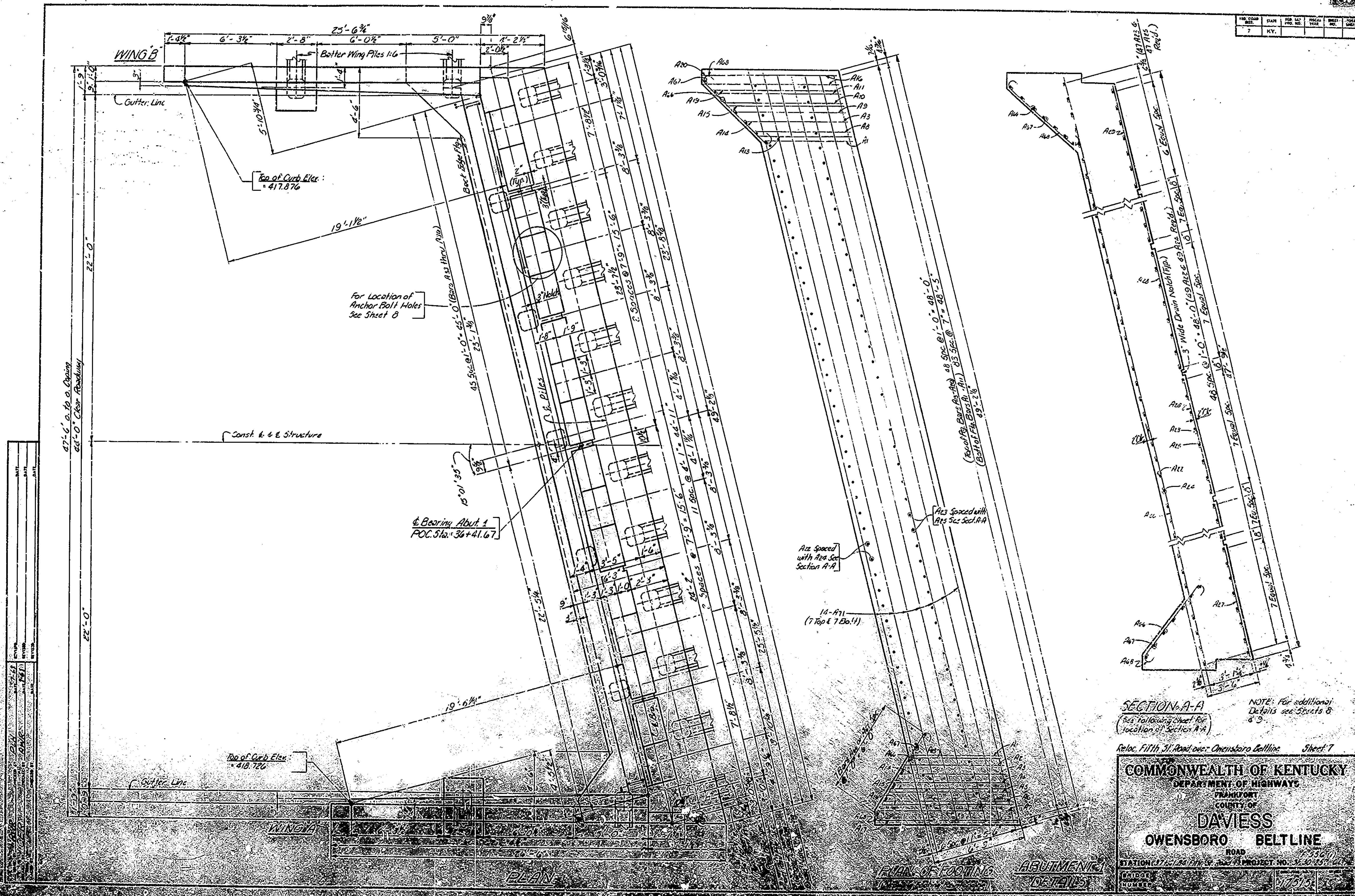
Reloc. Fifth St. Road over Owensboro Beltline Sheet 7

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



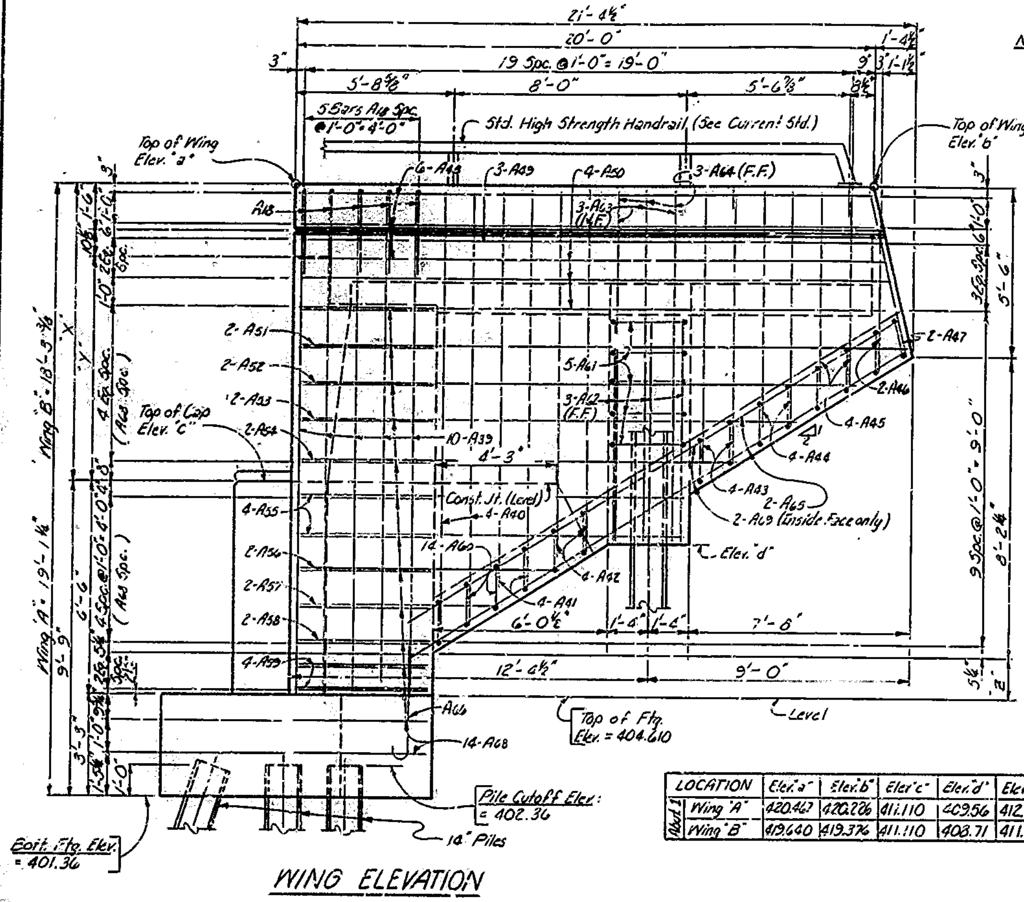
ANCHOR BOLT HOLES
NOTE: Top of Cap Bars are to be accurately located in accordance with these plans so they will not interfere with drilling of Anchor Bolt Holes.
PLAN OF CAP
(Showing Cap Reinforcement)
A31 Bar Spacing
6 Equal Spc.
7 Equal Spc.
47'-9½"
Expansion Dam Assembly, see Sheet 13.
Points of Elev.
Armored Edge - See Std Drwg AE1 Current Edition
2" x 4" Const. Jt. Key
4'-8" Min. Embedment A33 & A34
2" x 12" Const. Jt.
Pile Cutoff Elev. = 402.36
Bott. of Ftg. Elev. = 401.51
14" Piles
SECTION B-B
47'-6⅞" to ☐ Coping
44'-0" Clear Roadway
22'-0"
WING "A"
WING "B"
46 Bars A33, A34, A35 & A36 (See Plan For Spacing)
Const. Jt. (Typ.)
Top of Mudwall Elev. F.F. = 418.123 R.F. = 418.110
17 Bars A32 Spaced as shown in Section B-B
Top of Mudwall Elev. F.F. = 417.296 R.F. = 417.280
1½" V Rustication (Typ.)
Pavement Ledge
Top of Pedestal Elev. = 412.194
Top of Pedestal Elev. = 412.003
Top of Pedestal Elev. = 411.853
Top of Pedestal Elev. = 411.703
Top of Pedestal Elev. = 411.552
Top of Pedestal Elev. = 411.443
Top of Cap Elev. = 411.110
No Const. Jt. Allowed @ Pedestals
For additional Details see Sheets 7 & 9
ELEVATION
ABUTMENT 1 DETAILS
Relocated Fifth St. Road over Owensboro Beltline Sheet 8
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD


WING "B"
25'-6¾"
1'-4½"
6'-3½"
2'-8"
6'-0½"
5'-0"
1'-2½"
2'-0½"
9⅞"
Batter Wing Piles 1:6
Gutter Line
Top of Curb Elev. = 417.876
19'-1½"
5'-10¾"
4'-6"
Back Edge Ftg.
For Location of Anchor Bolt Holes See Sheet 8
45 Spc.@1'-0" = 45'-0" (Bars A33 thru A39)
23'-1⅜"
3" Notch
2 Spaces @ 7'-9" = 15'-6"
23'-7½"
23'-8⅝"
℄ Piles
47'-6" o. to o. Coping
44'-0" Clear Roadway
22'-0"
Const. ℄ & ℄ Structure
15°01'35"
℄ Bearing Abut. 1
POC. Sta. 36+41.67
11 Spc. @ 4'-1" = 44'-11"
49'-2⅛"
2 Spaces @ 7'-9" = 15'-6"
24'-2"
25'-5⅛"
19'-6½"
Top of Curb Elev. = 418.726
Gutter Line
WING "A"
PLAN
A20
A68
A67
A66
A19
A15
A14
A13
A16
A11
A10
A9
A3
A8
A1
(Top of Ftg. Bars A13-A20) 48 Spc. @ 1'-0" = 48'-0"
(Bott. of Ftg. Bars A1-A11) 83 Spc. @ 7" = 48'-5"
49'-2⅛"
A23 Spaced with A25 See Sect. A-A
A22 Spaced with A24 See Section A-A
14-A71 (7 Top & 7 Bott.)
PLAN OF FOOTING
(47 A25 & 47 A25 Req'd.)
6 Equal Spc.
3" Wide Drain Notch (Typ.)
48 Spc. @ 1'-0" = 48'-0" (49 A22 & 49 A24 Req'd.)
7 Equal Spc.
47'-9"
A28
A23
A25
A22
A24
A26
A27
SECTION A-A
(See following Sheet for location of Section A-A)
NOTE: For additional Details see Sheets 8 & 9.
ABUTMENT 1 DETAILS
Reloc. Fifth St. Road over Owensboro Beltline   Sheet 7
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
7 KY.
11513

FED. ROAD DIST.	STATE	FED. AID PRO. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

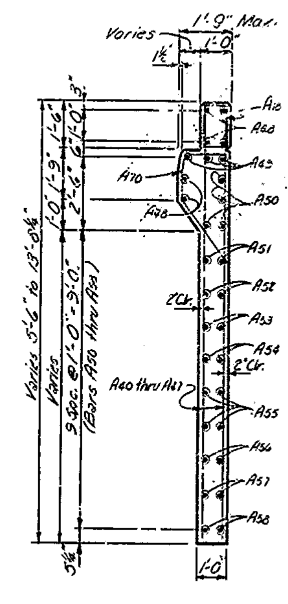
NOTE: Four Bolt Insert Assembly to be placed in inside face of Abutment Wings before concrete is poured.

NOTE:
N.F. denotes Near Face
F.F. denotes Far Face

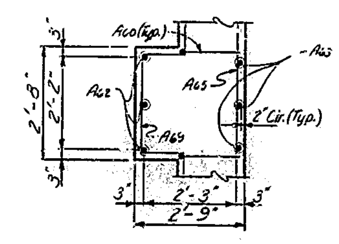


WING ELEVATION

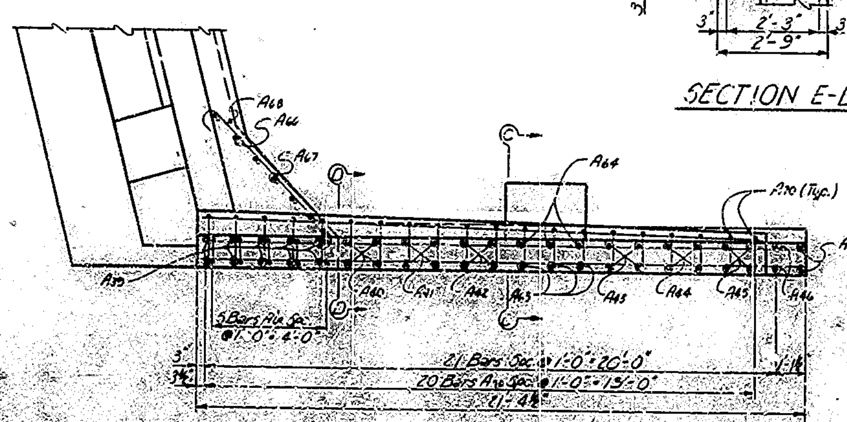
LOCATION		Elev. "a"	Elev. "b"	Elev. "c"	Elev. "d"	Elev. "e"	"x"	"y"	"z"
Abut. 1	Wing "A"	420.467	420.226	411.110	409.56	412.56	9'-4¼"	7'-0⅝"	1'-11⅝"
	Wing "B"	419.640	419.376	411.110	408.71	411.71	8'-6⅜"	6'-2¼"	1'-1"



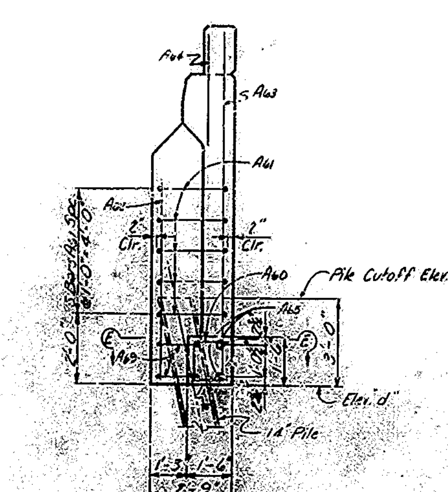
SECTION D-D



SECTION E-E

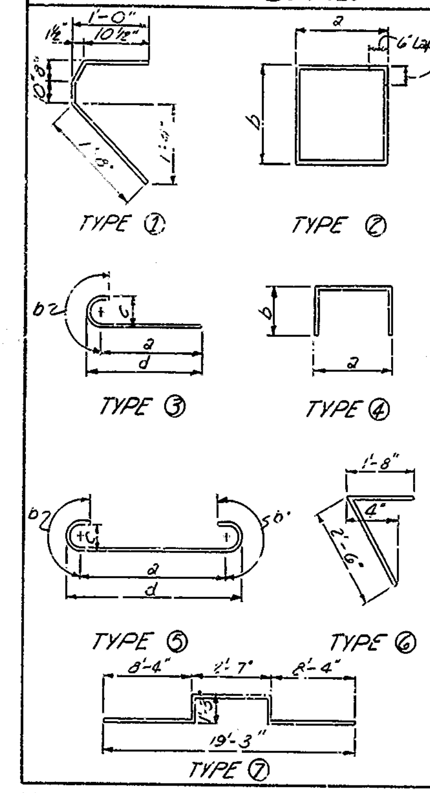


PLAN OF WING
(Showing Reinforcement)



SECTION C-C

BENT BAR DETAILS



ESTIMATED QUANTITIES

ITEM	QUANT.	UNIT
Class "A" Concrete	84.7	C.Y.
Class "AA" Concrete	35.2	C.Y.
Reinforcement	7961	Lbs
14" Piling (Furn. & Drive)	1135	L.F.
End Bent Backfill	60	C.Y.
Structure Excav. (Common)	110	C.Y.

BILL OF REINFORCEMENT

MARK	TYPE	NO.	SIZE	LENGTH Ft.	LENGTH In.	LOCATION	a Ft.	a In.	b Ft.	b In.	c Ft.	c In.	d Ft.	d In.
A1	⑤	70	#5	7	3	Footing	5	7	0	10	0	5	6	0
A2	⑤	1	#5	7	11	"	6	3	0	10	0	5	6	8
A3	⑤	2	#5	8	5	"	6	9	0	10	0	5	7	2
A4	⑤	1	#5	8	11	"	7	3	0	10	0	5	7	8
A5	⑤	1	#5	9	5	"	7	9	0	10	0	5	8	2
A6	⑤	3	#5	10	0	"	8	4	0	10	0	5	8	9
A7	⑤	2	#5	10	6	"	8	10	0	10	0	5	9	3
A8	⑤	1	#5	7	8	"	6	0	0	10	0	5	6	5
A9	⑤	1	#5	8	10	"	7	2	0	10	0	5	7	7
A10	⑤	1	#5	9	3	"	7	7	0	10	0	5	8	0
A11	⑤	1	#5	9	9	"	8	1	0	10	0	5	8	6
A12	NOT USED													
A13	Str.	41	#5	6	0	Footing								
A14	Str.	2	#5	7	2	"								
A15	Str.	2	#5	8	0	"								
A16	Str.	1	#5	9	0	"								
A17	Str.	1	#5	9	6	"								
A18	④	10	#4	6	6	Wings	0	8	3	0				
A19	Str.	1	#5	8	6	Footing								
A20	Str.	1	#5	8	10	"								
A21	NOT USED													
A22	③	49	#6	5	4	"	4	4	1	0	0	6	4	7
A23	③	47	#5	4	10	"	4	0	0	10	0	5	4	2½
A24	Str.	49	#6	6	4	Cap								
A25	Str.	47	#5	6	4	"								
A26	Str.	7	#5	48	6	"								
A27	Str.	7	#5	7	0	"								
A28	Str.	28	#5	7	8	"								
A29	Str.	7	#5	6	6	"								
A30	Str.	2	#4	47	6	"								
A31	④	46	#4	4	6	"	3	2	0	9				
A32	Str.	17	#4	45	3	Mudwall								
A33	Str.	46	#4	7	3	"								
A34	⑥	46	#4	4	1	"								
A35	④	46	#4	5	9	"	0	11	2	6				
A36	Str.	46	#4	8	6	"								
A37	④	18	#4	4	8	Pedestal	2	2	1	4				
A38	④	18	#4	4	2	"	1	8	1	4				
A39	Str.	20	#4	14	10	Wing								
A40	Str.	8	#4	13	0	"								
A41	Str.	8	#4	12	0	"								
A42	Str.	8	#4	11	0	"								
A43	Str.	8	#4	8	2	"								
A44	Str.	8	#4	7	2	"								
A45	Str.	8	#6	6	2	"								
A46	Str.	4	#4	4	2	"								
A47	Str.	4	#4	5	2	"								
A48	Str.	12	#4	19	9	"								
A49	Str.	6	#8	19	9	"								
A50	Str.	8	#4	20	5	"								
A51	Str.	4	#4	21	0	"								
A52	Str.	4	#4	19	0	"								
A53	Str.	4	#4	17	0	"								
A54	Str.	4	#4	15	0	"								
A55	Str.	8	#4	13	4	"								
A56	Str.	4	#4	9	4	"								
A57	Str.	4	#4	7	6	"								
A58	Str.	4	#4	5	6	"								
A59	Str.	8	#4	4	8	"								
A60	④	28	#4	3	6	"		2	1	3				
A61	②	10	#4	10	3	"	2	5	2	4				
A62	Str.	6	#4	6	3	"								
A63	Str.	6	#4	19	4	"								
A64	Str.	6	#4	3	0	"								
A65	Str.	4	#8	19	3	"								
A66	③	14	#5	4	10	"	4	0	0	10	0	5	4	2½
A67	Str.	14	#6	11	0	"								
A68	⑤	28	#6	7	0	"	5	8	0	8	0	4	6	0
A69	⑦	4	#8	21	7	"								
A70	①	40	#4	4	1	Curbs								
A71	Str.	14	#5	48	10	Footing								

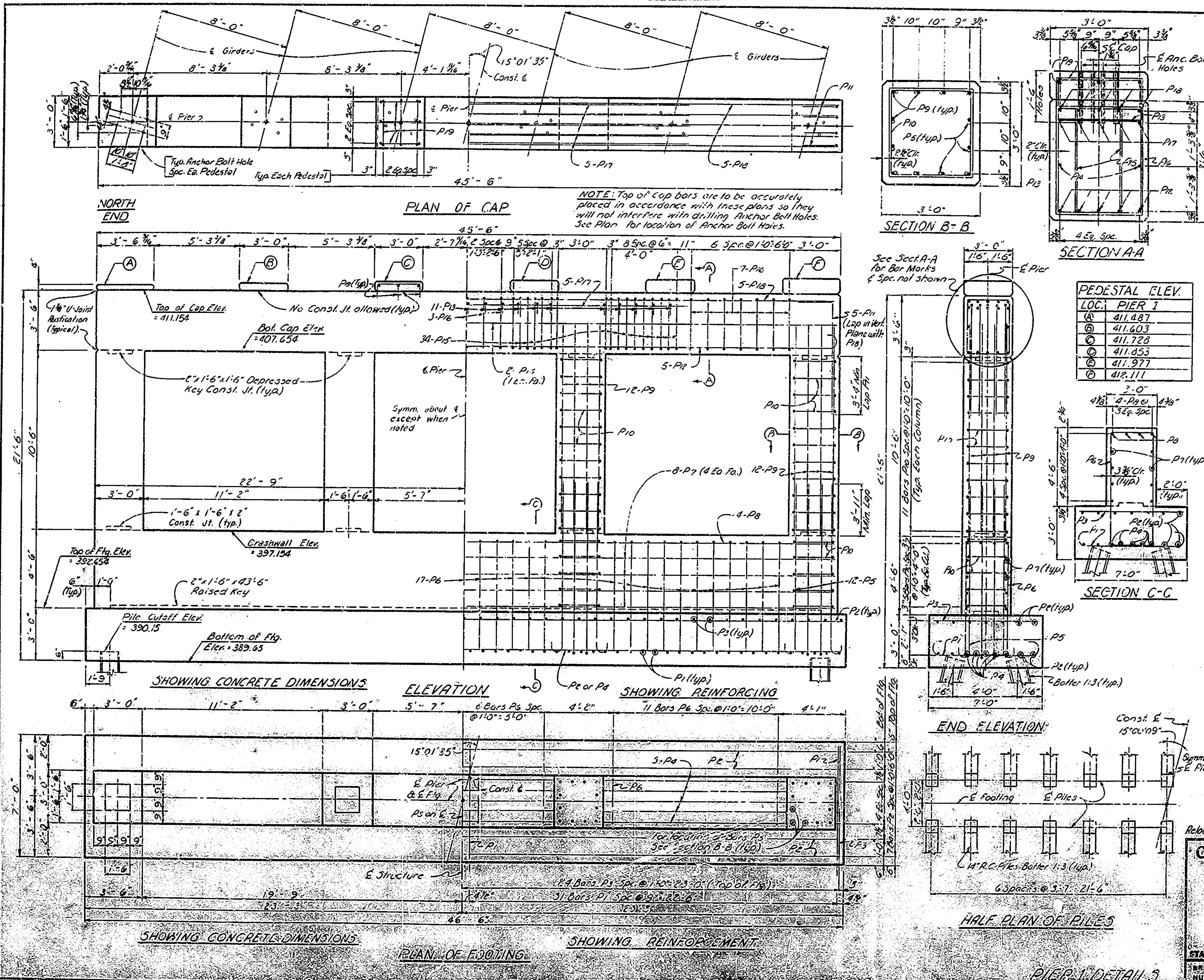
Reloc. Fifth St. Road over Owensboro Beltline — Sheet 9

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
F-556(1)
STATION 17+41.84 Fifth St. Road PROJECT NO. SP 30-257-LL

ABUTMENT 1 DETAILS

BRIDGE NUMBER — DRAWING NO. 17515

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



LOC.	PIER 1
Ⓐ	411.487
Ⓑ	411.603
Ⓒ	411.728
Ⓓ	411.853
Ⓔ	411.977
Ⓕ	412.111

PEDESTAL ELEV.

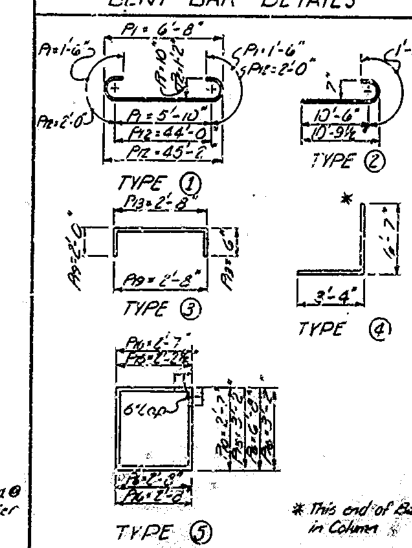
BILL OF REINFORCEMENT

MARK	TYPE	SIZE	NO.	LENGTH FT.	LENGTH IN.	LOCATION
P1	①	#8	62	8	10	Footing
P2	Str.	#5	11	46	2	"
P3	Str.	#5	47	6	8	"
P4	Str.	#8	5	46	2	"
P5	②	#7	48	11	8	"
P6	⑤	#4	33	19	5	Crashwall
P7	Str.	#4	8	45	2	"
P8	Str.	#9	4	45	2	"
P9	Str.	#7	48	12	4	Columns
P10	⑤	#4	64	11	1	"
P11	④	#8	10	9	9	"
P12	①	#11	5	48	0	Cap
P13	③	#4	21	3	6	"
P14	Str.	#6	2	45	2	Cap
P15	⑤	#5	68	11	6	"
P16	⑤	#5	19	12	5	"
P17	Str.	#11	5	27	0	"
P18	Str.	#11	5	45	2	"
P19	③	#4	36	6	6	Pedestals

ESTIMATED QUANTITIES

ITEM	QUANT.	UNIT
Concrete, Class A	91.9	C.Y.
Reinforcing Stee.	11903	Lbs.
Structure Excavation (Common)	95	C.Y.
14" Piling	1320	L.F.

BENT BAR DETAILS

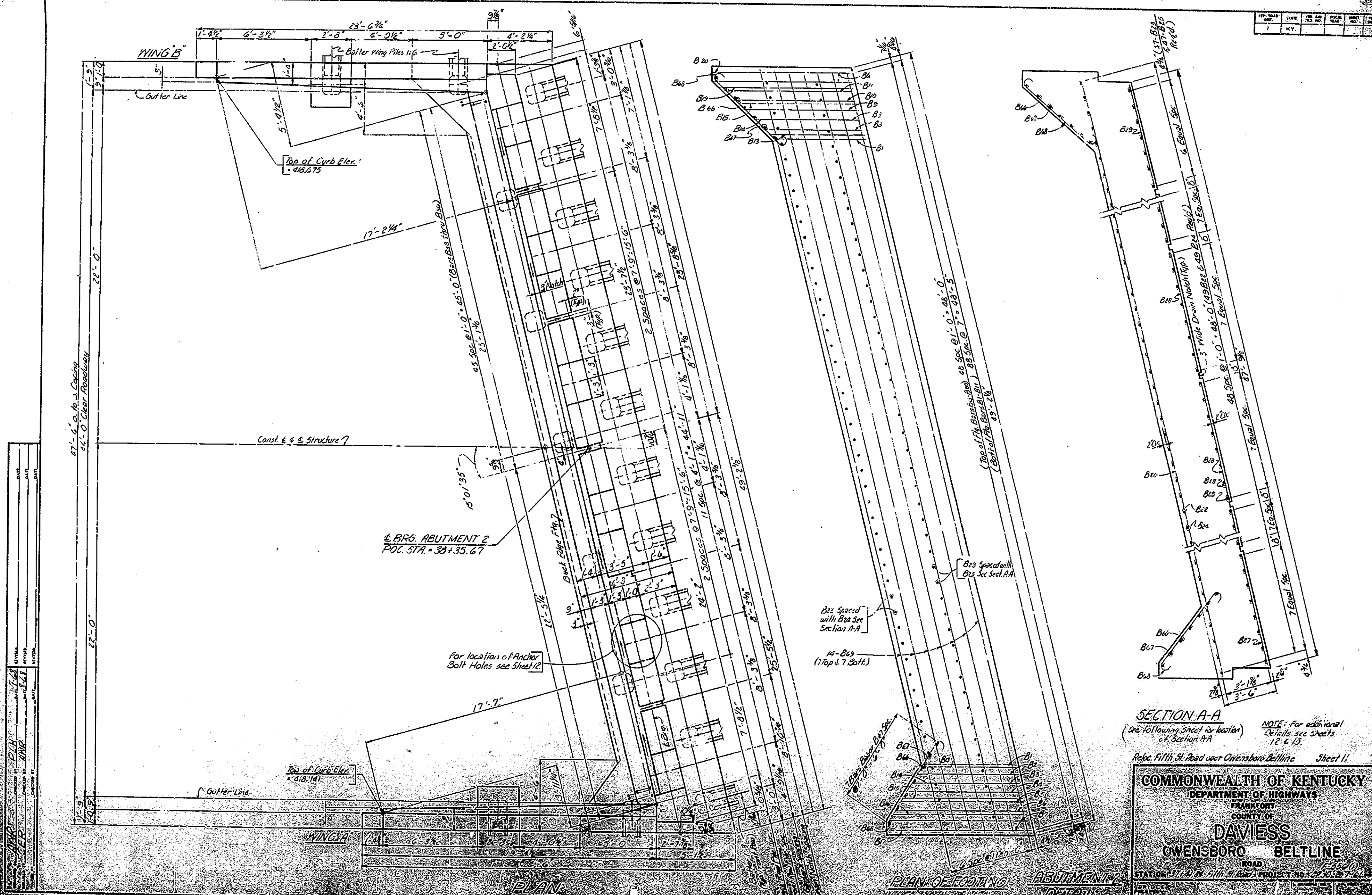


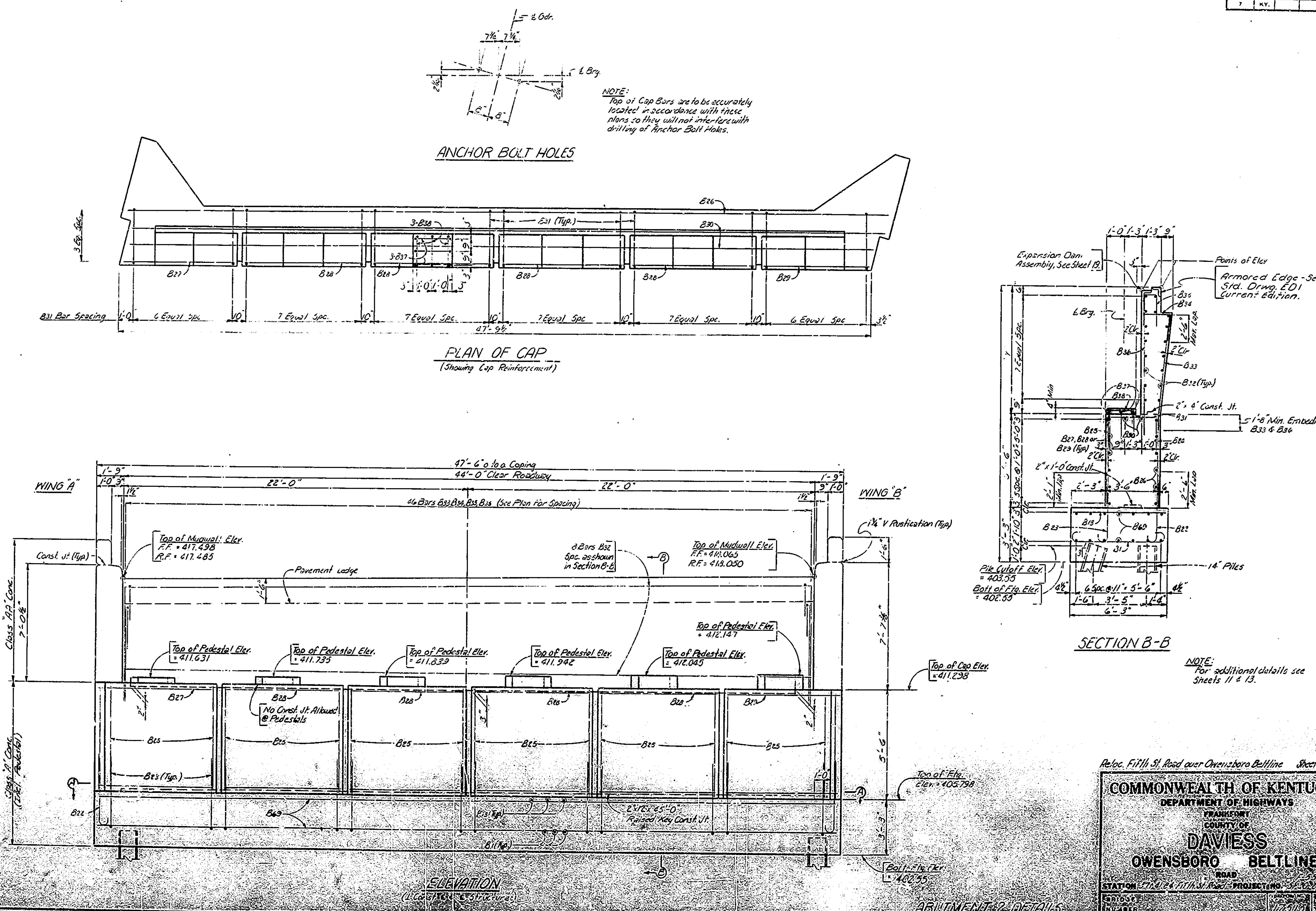
Reloc. Fifth St. Road over Owensboro Beltline Sheet 10

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
STATION 37+41.84 Fifth St. Road PROJECT NO. F-556 (1) SP 30-257-

BRIDGE NUMBER

DRAWING NO. 17515


WING "B"
Batter Wing Piles 1:6
Gutter Line
Top of Curb Elev. = 418.675
17'-2 1/4"
22'-0"
47'-6" c. to c. Coping
46'-0" Clear Roadway
Const. & & Structure
15°01'35"
& BRG. ABUTMENT 2
POC. STA. = 38+35.67
Back Edge Ftg.
For location of Anchor Bolt Holes see Sheet 12.
17'-7"
Top of Curb Elev. = 418.141
Gutter Line
WING "A"
PLAN
B22 Spaced with B20 See Section A-A
B23 Spaced with B25 See Sect. A-A
14-B69 (7 Top & 7 Bott.)
PLAN OF FOOTING (Showing Bottom Reinforcing)
ABUTMENT 2 DETAILS
3" Wide Drain Notch (Typ.)
SECTION A-A
(See following Sheet for location of Section A-A)
NOTE: For additional Details see Sheets 12 & 13.
Reloc. Fifth St. Road over Owensboro Beltline Sheet 11
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
F-556(0)
STATION 37+41.86 Fifth St. Road PROJECT NO. 5930-297-6L
BRIDGE NUMBER
17913

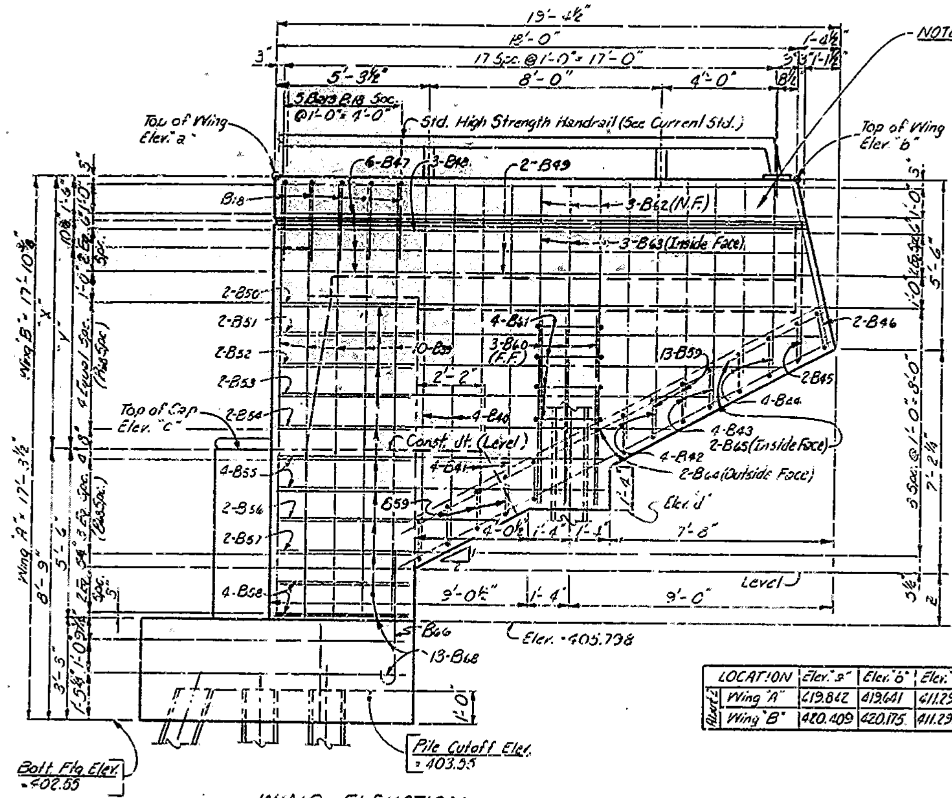


Reloc. Fifth St. Road over Owensboro Beltline Sheet 12

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
STATION 57+41.24 Fifth St. Road PROJECT NO. 5-35-60

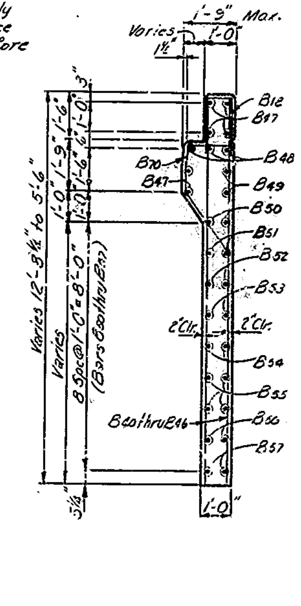
BRIDGE NUMBER | 17515

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

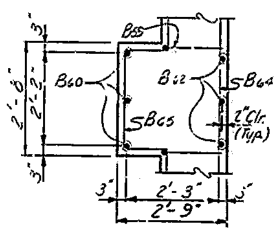


WING ELEVATION

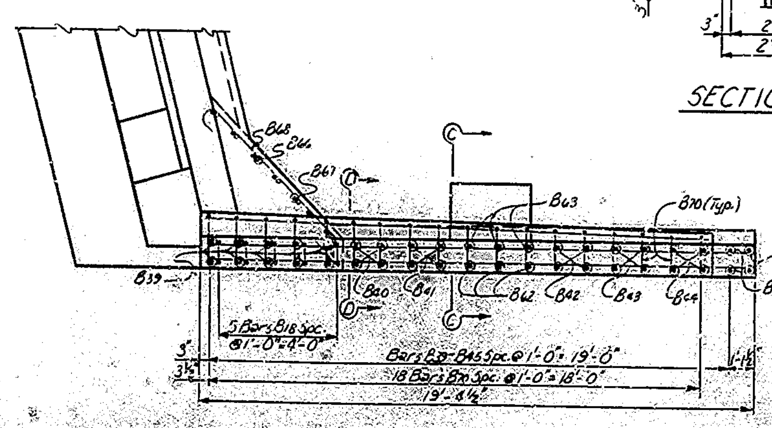
LOCATION		Elev. "a"	Elev. "b"	Elev. "c"	Elev. "d"	Elev. "e"	"X"	"Y"	"Z"
Abut. 2	Wing "A"	419.842	419.641	411.298	408.97	411.97	8'-6½"	6'-2⅜"	1'-1⅛"
	Wing "B"	420.409	420.175	411.298	409.51	412.51	9'-1⅞"	6'-9¼"	1'-8¼"



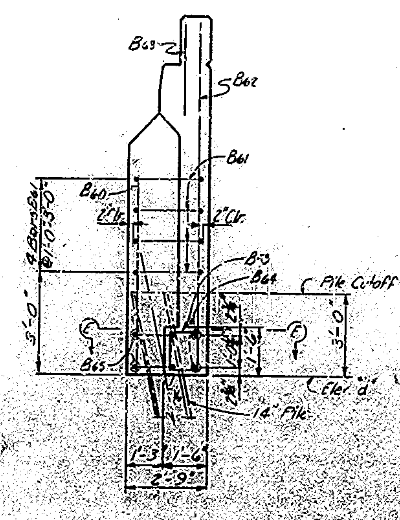
SECTION D-D



SECTION E-E

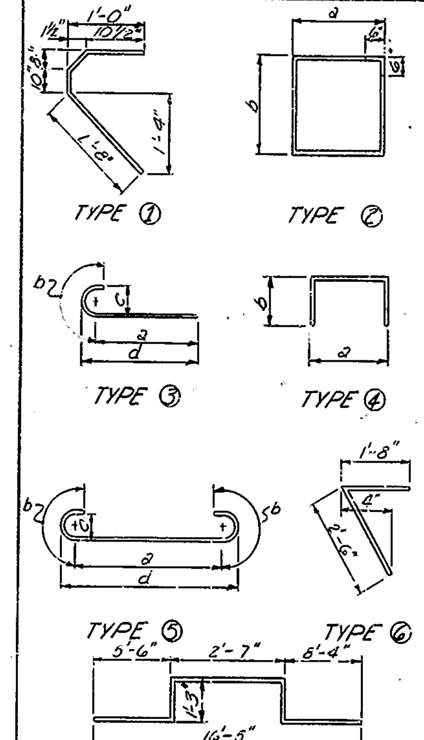


PLAN OF WING (Showing Reinforcement)



SECTION C-C

BENT BAR DETAILS



ESTIMATED QUANTITIES

ITEM	QUANT.	UNIT
Class "A" Concrete	77.1	C.Y.
Class "AA" Concrete	34.5	C.Y.
Reinforcement	7434	Lbs.
14" Piling (Furnish & Drive)	1195	L.F.
End Bent Backfill	55	C.Y.
Structure Excavation (Common)	110	C.Y.

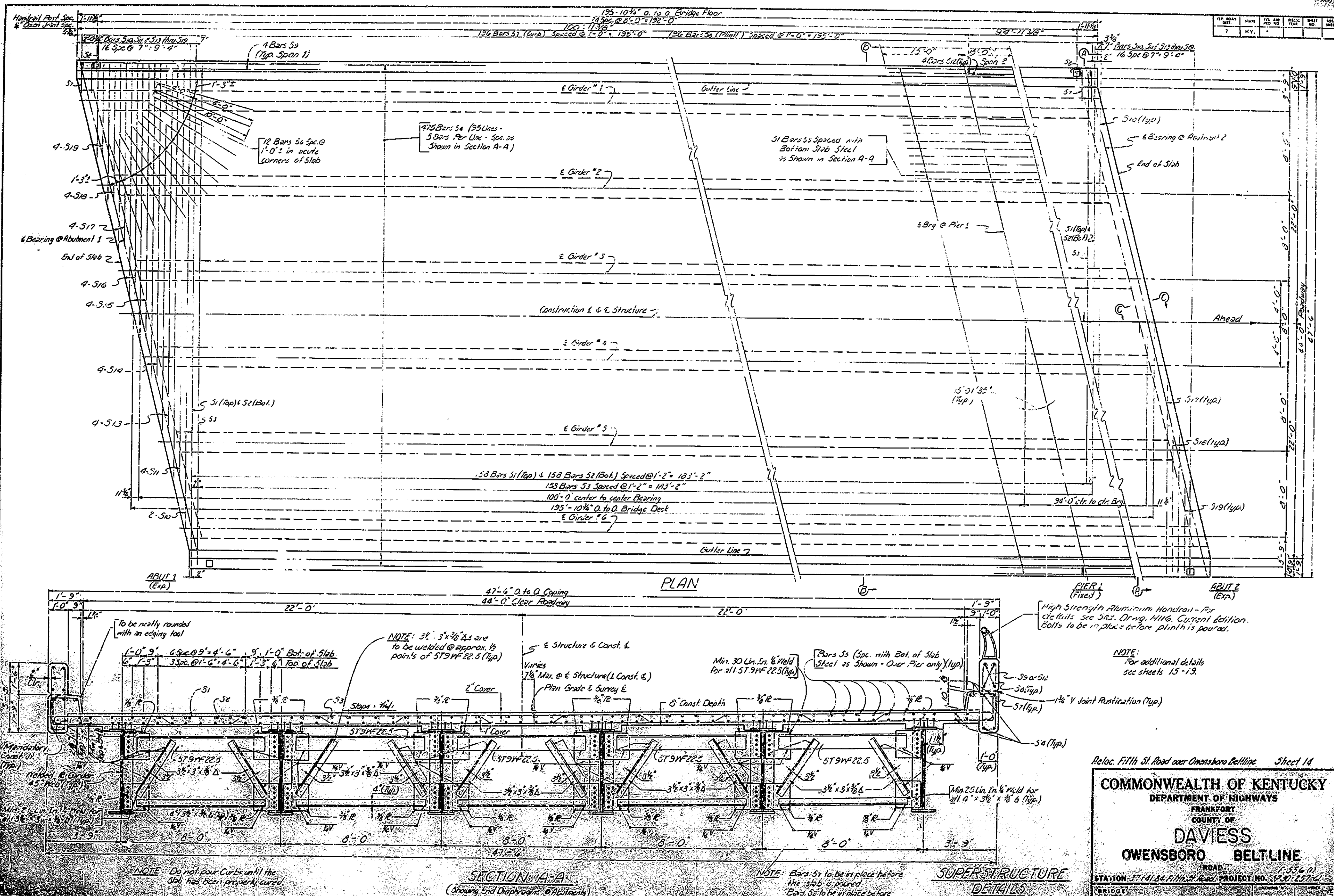
BILL OF REINFORCEMENT

MARK	TYPE	NO.	SIZE	LENGTH Ft.	LENGTH In.	LOCATION	a Ft.	a In.	b Ft.	b In.	c Ft.	c In.	d Ft.	d In.
B1	⑤	70	#5	7	3	Footing	5	7	0	10	0	5	6	0
B2	⑤	1	#5	7	11	"	6	3	0	10	0	5	6	8
B3	⑤	2	#5	8	5	"	6	9	0	10	0	5	7	2
B4	⑤	1	#5	8	11	"	7	3	0	10	0	5	7	8
B5	⑤	1	#5	9	5	"	7	9	0	10	0	5	8	2
B6	⑤	3	#5	10	0	"	8	4	0	10	0	5	8	3
B7	⑤	2	#5	10	6	"	8	10	0	10	0	5	9	3
B8	⑤	1	#5	7	8	"	6	0	0	10	0	5	6	5
B9	⑤	1	#5	8	10	"	7	2	0	10	0	5	7	7
B10	⑤	1	#5	9	3	"	7	7	0	10	0	5	8	0
B11	⑤	1	#5	9	9	"	8	1	0	10	0	5	8	6
B12	NOT USED													
B13	Str.	40	#5	6	0	Footing								
B14	Str.	2	#5	7	2	"								
B15	Str.	2	#5	8	0	"								
B16	Str.	1	#5	9	0	"								
B17	Str.	1	#5	9	6	"								
B18	④	10	#4	6	6	Wings	0	8	3	0				
B19	Str.	1	#5	8	6	Footing								
B20	Str.	1	#5	8	10	"								
B21	NOT USED													
B22	③	49	#6	5	4	Footing	4	4	1	0	0	6	4	7
B23	③	47	#5	4	10	"	4	0	0	10	0	5	4	2¼
B24	Str.	49	#6	5	4	Cap								
B25	Str.	47	#5	5	4	"								
B26	Str.	6	#5	48	6	"								
B27	Str.	6	#5	7	0	"								
B28	Str.	24	#5	7	8	"								
B29	Str.	6	#5	6	6	"								
B30	Str.	2	#4	47	6	"								
B31	④	46	#4	4	6	"	3	2	0	9				
B32	Str.	17	#4	45	5	Mudwall								
B33	Str.	46	#4	7	3	"								
B34	⑥	46	#4	4	1	"								
B35	④	46	#4	5	9	"	0	11	2	6				
B36	Str.	46	#4	8	6	"								
B37	④	18	#4	4	8	Pedestal	2	2	1	4				
B38	④	18	#4	4	2	"	1	8	1	4				
B39	Str.	20	#4	13	10	Wings								
B40	Str.	8	#4	11	10	"								
B41	Str.	8	#4	10	10	"								
B42	Str.	8	#4	8	3	"								
B43	Str.	8	#4	7	3	"								
B44	Str.	8	#4	6	3	"								
B45	Str.	4	#4	4	6	"								
B46	Str.	4	#4	5	4	"								
B47	Str.	12	#4	17	8	"								
B48	Str.	6	#8	17	8	"								
B49	Str.	4	#4	18	3	"								
B50	Str.	4	#4	18	10	"								
B51	Str.	4	#4	19	0	"								
B52	Str.	4	#4	17	8	"								
B53	Str.	4	#4	15	8	"								
B54	Str.	4	#4	13	8	"								
B55	Str.	8	#4	11	5	"								
B56	Str.	4	#4	7	6	"								
B57	Str.	4	#4	5	6	"								
B58	Str.	8	#4	4	8	"								
B59	④	26	#4	5	6	"	1	2	1	3				
B60	Str.	6	#4	6	0	"								
B61	②	8	#4	10	3	"	2	5	2	4				
B62	Str.	6	#4	10	4	"								
B63	Str.	6	#4	3	0	"								
B64	Str.	4	#8	16	6	"								
B65	⑦	4	#9	18	9	"								
B66	⑤	14	#5	5	10	Footing	4	0	0	10	0	5	4	2¼
B67	Str.	14	#4	10	0	Wing								
B68	⑤	76	#4	7	0		5	8	0	8	0	4	6	0
B69	Str.	14	#5	20	10	Footing								
B70	①	36	#4	5	1	Curbs								

Reloc. Fifth St. Road over Owensboro Beltline Sheet 13

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
STATION 51+41.82 Fifth St. Road PROJECT NO. SP 30-257 (6)
BRIDGE NUMBER
DRAWING NO. 17515

ABUTMENT 2 DETAILS



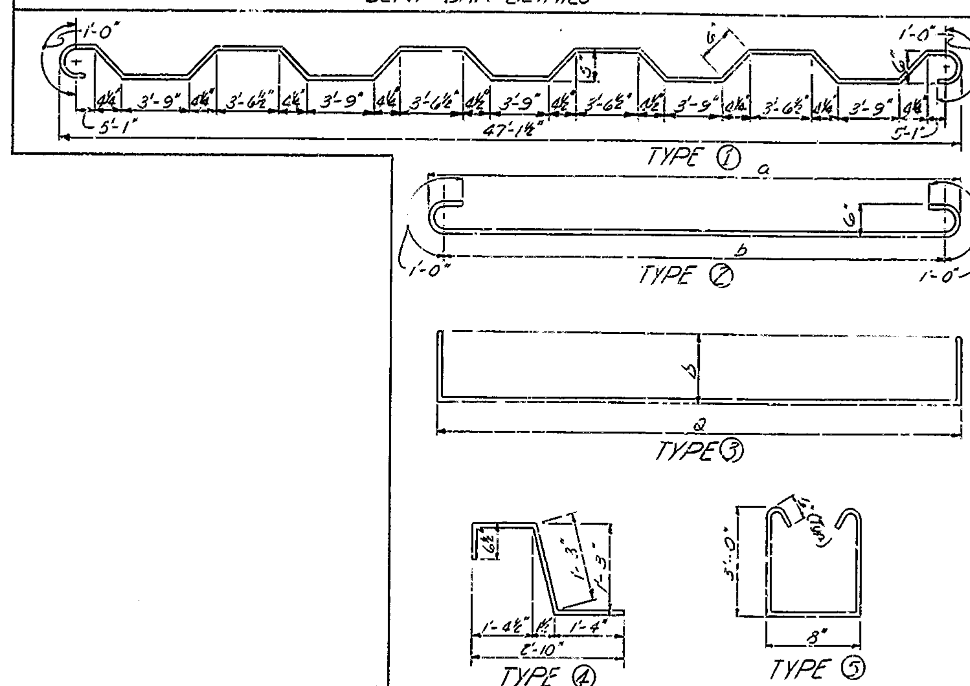
Reloc. Fifth St. Road over Owensboro Beltline   Sheet 14

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
STATION 37+41.84 Fifth St. Road PROJECT NO. F-556 (1) / S30-257-CL

BRIDGE NUMBER	DRAWING NO.	INDEX
	17515	

FED. ROAD DIST.	STATE	FED. AID PRO. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

BENT BAR DETAILS

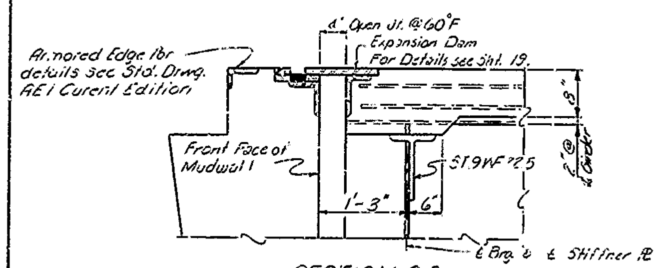


BILL OF REINFORCEMENT

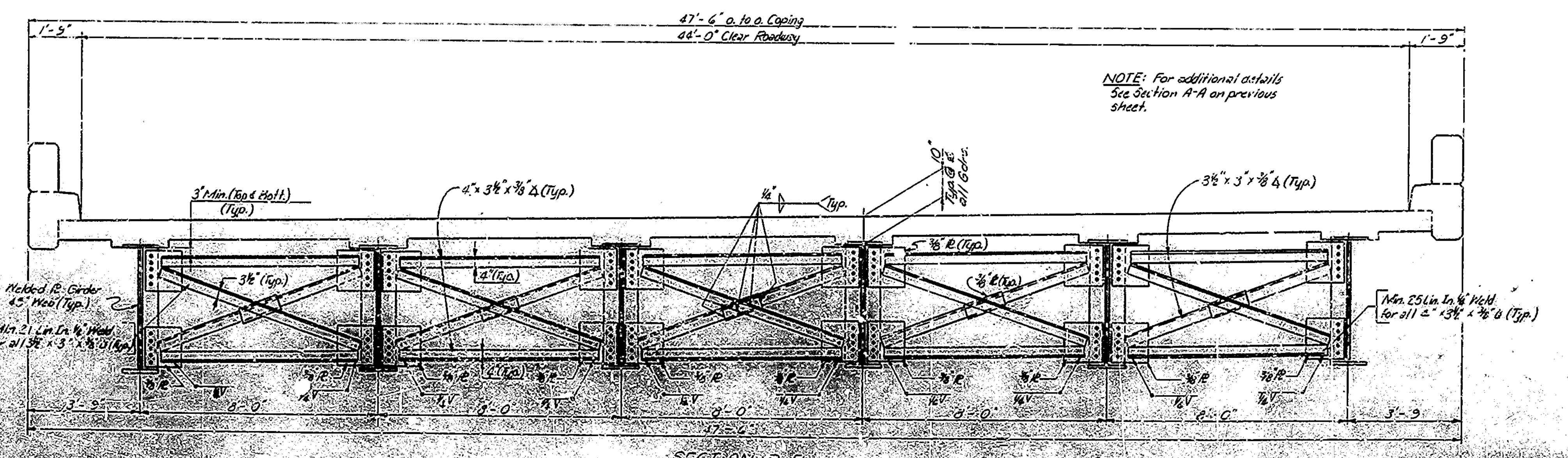
MARK	TYPE	NO.	SIZE	LENGTH Ft.	LENGTH In.	LOCATION	a Ft.	a In.	b Ft.	b In.
S1	②	158	#6	48	8	Slab	47	2	46	8
S2	③	158	#6	49	4	"	47	2	1	2
S3	①	158	#6	50	1	"				
S4	Str.	475	#6	41	2	"				
S5	Str.	51	#6	30	0	Slab over Piers				
S6	Str.	24	#6	10	0	Acute Corners of Slab				
S7	④	196	#5	4	3	Curbs				
S8	⑤	196	#5	7	6	Plinths				
S9	Str.	40	#4	26	0	"				
S10	②	4	#6	45	3	Slab	43	9	43	3
S11	②	8	#6	40	11	"	39	5	38	11
S12	Str.	24	#4	24	0	Plinths				
S13	②	8	#6	36	7	Slab	35	1	34	7
S14	②	8	#6	32	2	"	30	8	30	2
S15	②	8	#6	27	10	"	26	4	25	10
S16	②	8	#6	23	6	"	22	0	21	6
S17	②	8	#6	13	2	"	17	8	17	2
S18	②	8	#6	14	10	"	13	4	12	10
S19	②	8	#6	10	6	"	9	0	8	6

ESTIMATED QUANTITIES

ITEM	QUANT.	UNIT
Class "AA" Concrete	286.8	C.Y.
Reinforcement	73394	Lbs.
Structural Steel (A36)	204,905	Lbs.
Structural Steel (A441)	61,856	Lbs.
Shear Connectors (Option "D")	3138	Lbs.
Shear Connectors (Option "E")	2485	Lbs.
High Strength Aluminum Handrail	466.3	L.F.
Linseed Oil Protective Coating	1140	S.Y.



SECTION C-C



SECTION B-B (Showing Intermediate Diaphragms)

NOTE: Use ⅞" H.S. Bolts for all diaphragm connections

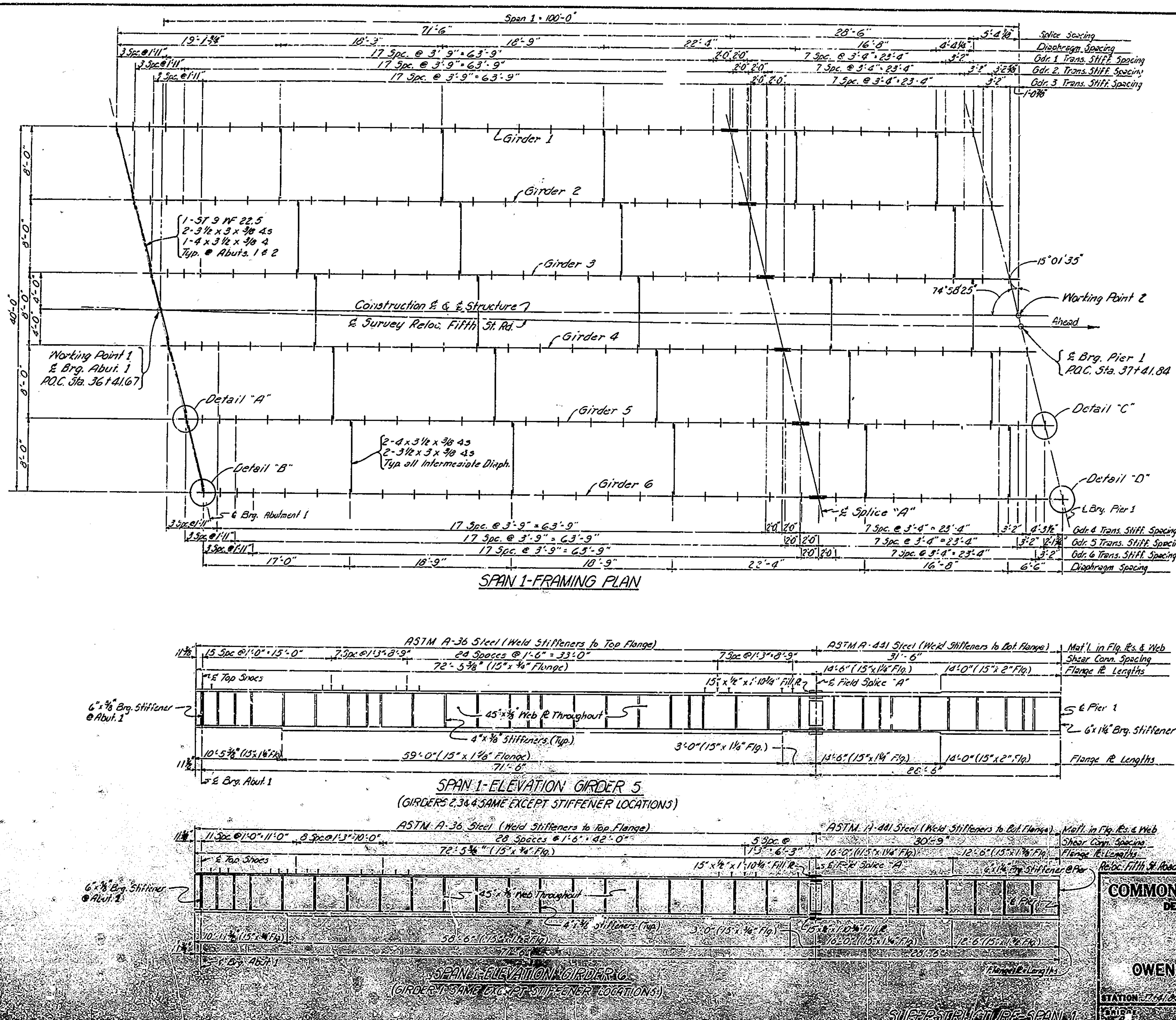
NOTE:- Use ⅞"ϕ High Strength Bolts for all diaphragm connections.

SUPERSTRUCTURE DETAILS

Reloc. Fifth St. Road over Owensboro Beltline   Sheet 15

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
STATION 371+84 Fifth St. Road   PROJECT NO. SP 30-257-61 F 556 (1)

BRIDGE NUMBER | DRAWING NO. 17515

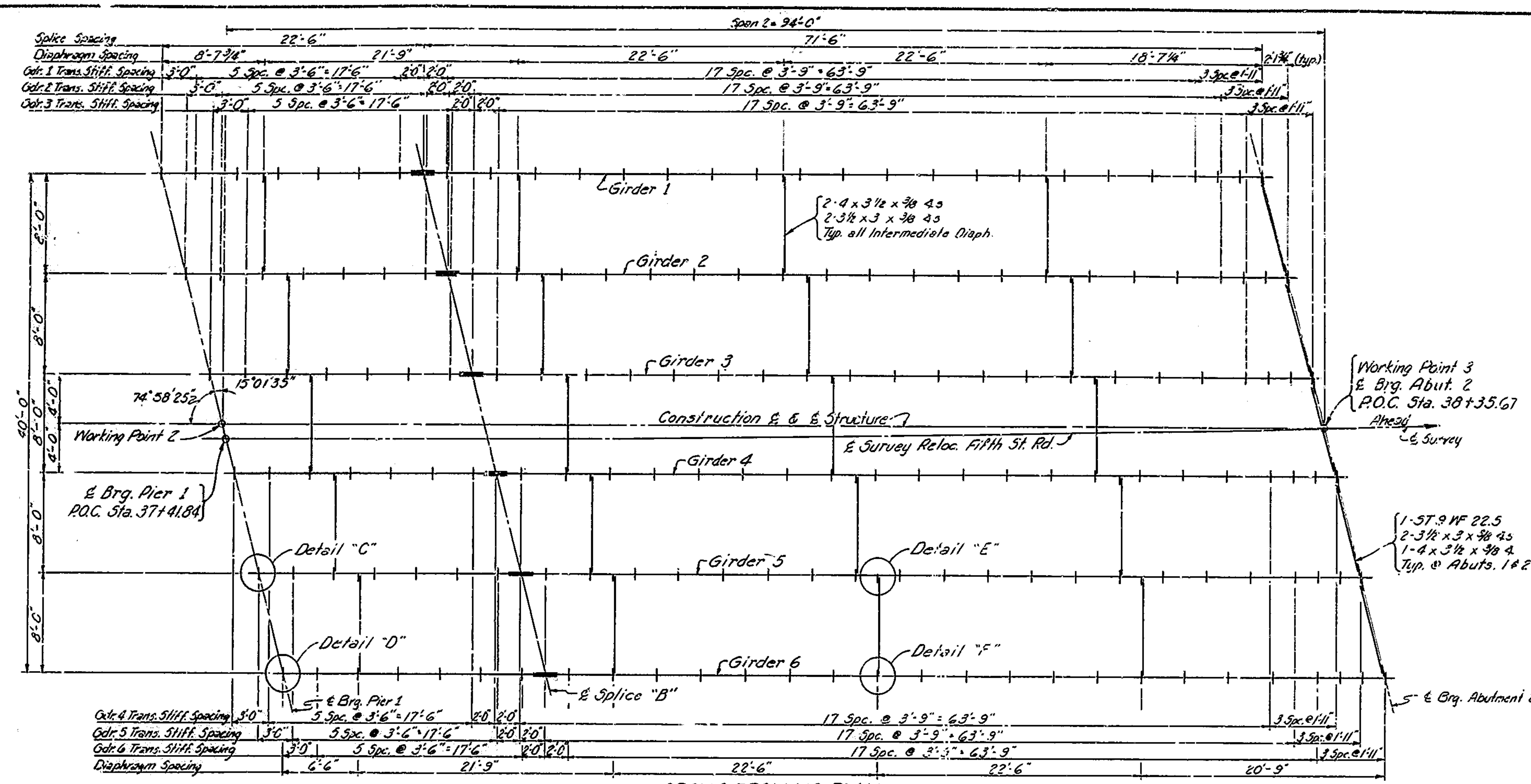


NOTE: See next sheet for Span 2 Details. For additional Details see sheets 17, 18 & 19. All Stiffeners are A36 Steel.

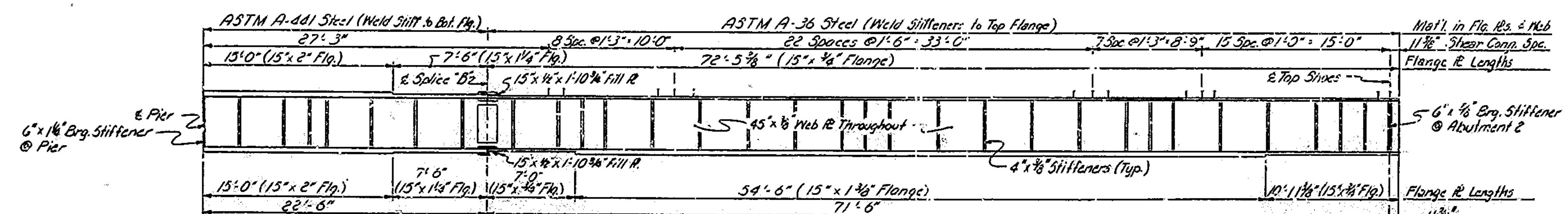
Reloc. Fifth St. Road over Owensboro Beltline Sheet 16

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD

SUPERSTRUCTURE - SPAN 1

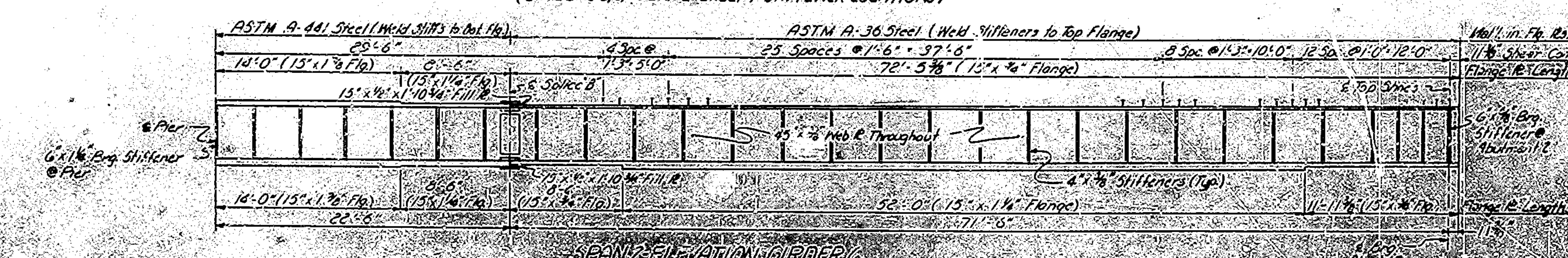


SPAN 2-FRAMING PLAN



SPAN 2-ELEVATION GIRDER 5
(GIRDERS 2, 3 & 4 SAME EXCEPT STIFFENER LOCATIONS)

NOTE:- For Span 1 Details and additional Details see previous sheet.

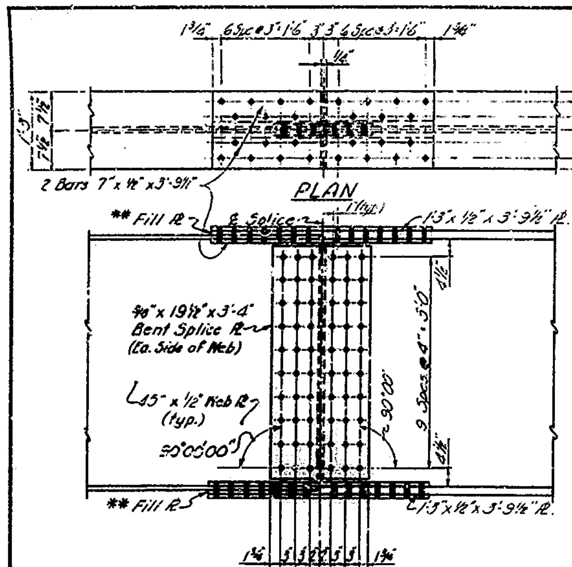


SPAN 2-ELEVATION GIRDER 6
(GIRDER 1 SAME EXCEPT STIFFENER LOCATIONS)

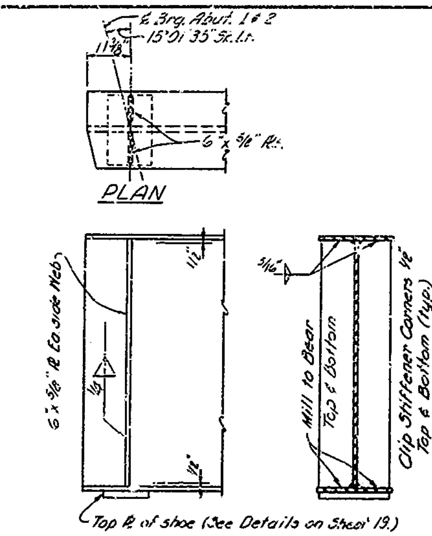
Reloc. Fifth St. Road over Owensboro Beltline Sheet 17

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD

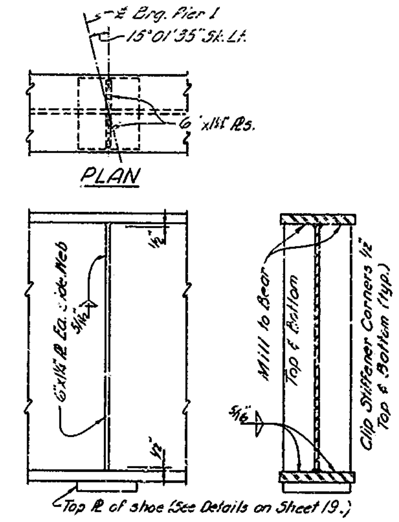
SUPERSTRUCTURE-SPAN 2



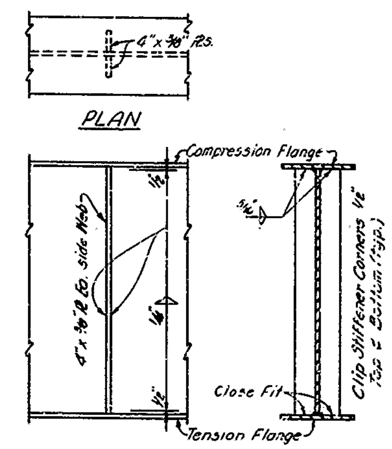
ELEVATION
TYPICAL FIELD SPLICE
(Use 1" φ H.S. Bolts for all Splice Connections)
** See Sheets 16 & 17 for Location and Size of Fill Pls.



BEARING STIFFENER DETAIL
ABUT. 1 & 2



BEARING STIFFENER DETAIL
PIER 1

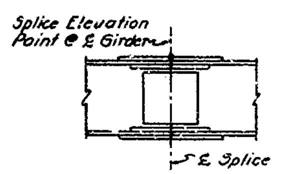


TYPICAL INTERMEDIATE
STIFFENER DETAIL

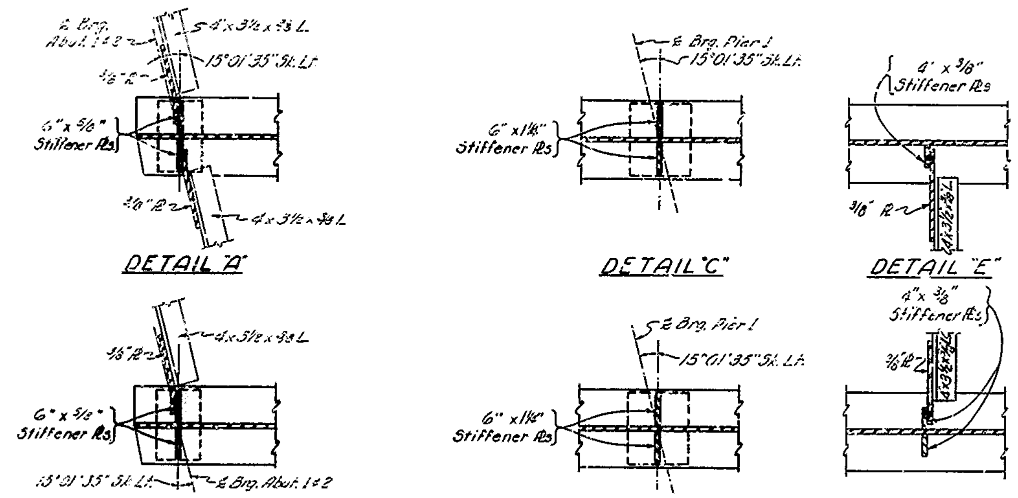
DEAD LOAD DEFLECTIONS (Ft.)				
Section		Steel D.L. Defl.	Concrete D.L. Defl.	
			Ext. Gdr.	Int. Gdr.
Abutment 1		0	0	0
SPAN 1	.2L1	0.0179	0.0930	0.0991
	.4L1	0.0255	0.1322	0.1412
	.6L1	0.0202	0.1050	0.1116
	.8L1	0.0072	0.0385	0.0400
Pier 1		0	0	0
SPAN 2	.2L2	0.0037	0.0145	0.0207
	.4L2	0.0130	0.0637	0.0719
	.6L2	0.0178	0.0896	0.0985
	.8L2	0.0150	0.0657	0.0718
Abutment 2		0	0	0

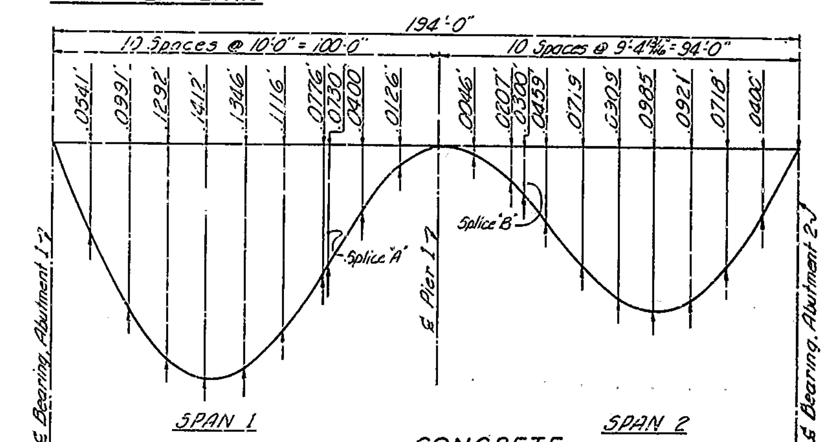
* TABLE OF SPLICE ELEVATIONS						
SPLICE \ GIRDER	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6
"A"	417.257	417.390	417.522	417.654	417.785	417.916
"B"	417.212	417.345	417.478	417.610	417.741	417.872

* See Splice Elev. Point Location detail this sheet.
For Splice Locations see Sheets 16 & 17.
Splice "A" is in Span 1.
Splice "B" is in Span 2.



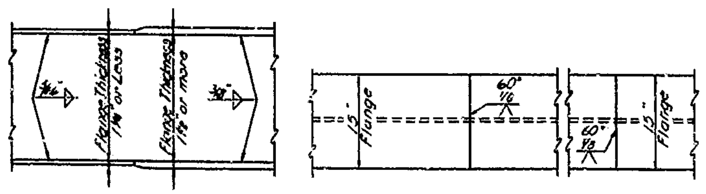
SPLICE ELEV. POINT
LOCATION

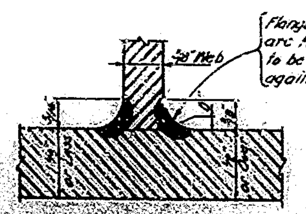




CONCRETE
DEAD LOAD DEFLECTION DIAGRAM
Scale: (Vert.) 1" = .05'; (Horiz.) 1" = 20'
(Interior Girder Shown)

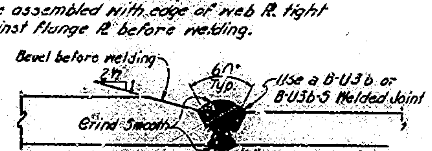
NOTES:
For Location of Details "A" thru "F", See Sheets 16 & 17.
All plates must be true and free of warp.



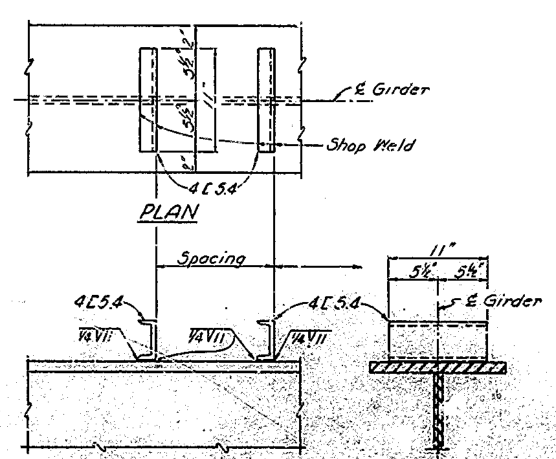


Flange to web Welds to be single pass submerged arc fillet welds in the flat position. Parts are to be assembled with edge of web Pl. tight against Flange Pl. before welding.

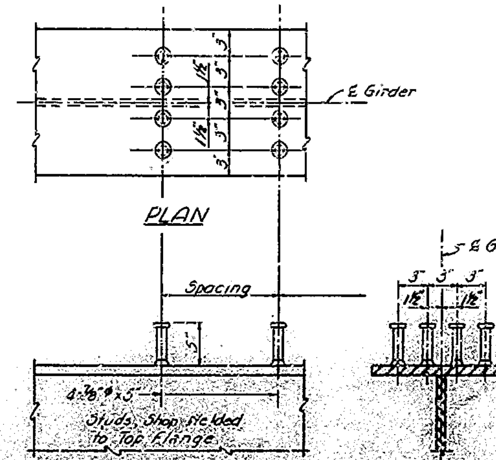
SECTION
GIRDER WEB TO FLANGE WELD DETAIL
(Showing Joint Preparation for Automatic Submerged Arc Welding)



See Par. 214 (b) of Std. Drwg. Modifications and Additions to AWS D2.0-66 Specs. Current Edition.
ELEVATION
SHOP FLANGE SPLICE
(Showing Joint Preparation for Manual Shielded Metal Arc Welding)



OPTION "D"



OPTION "E"

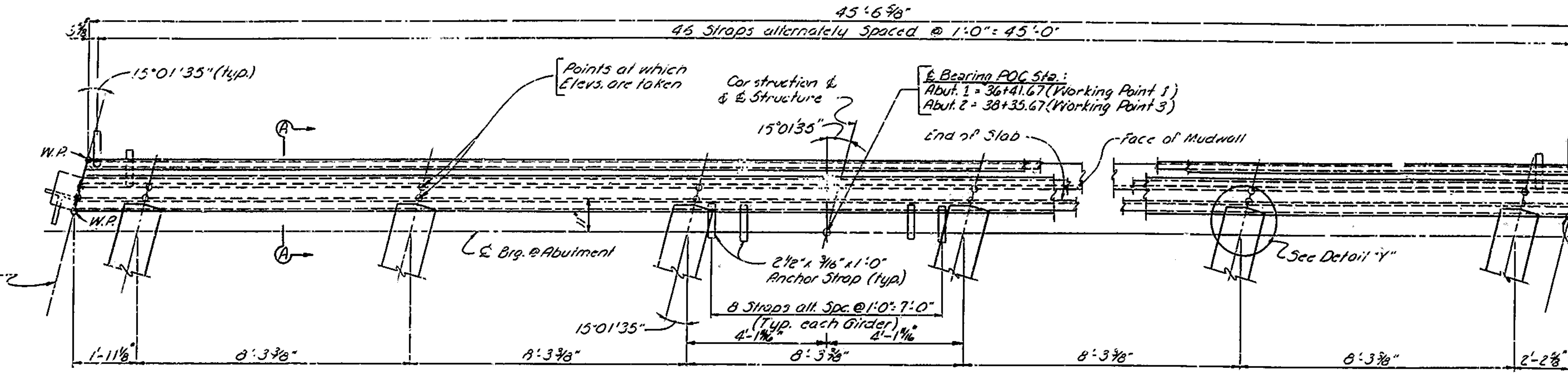
SHEAR CONNECTOR DETAILS

SUPERSTRUCTURE

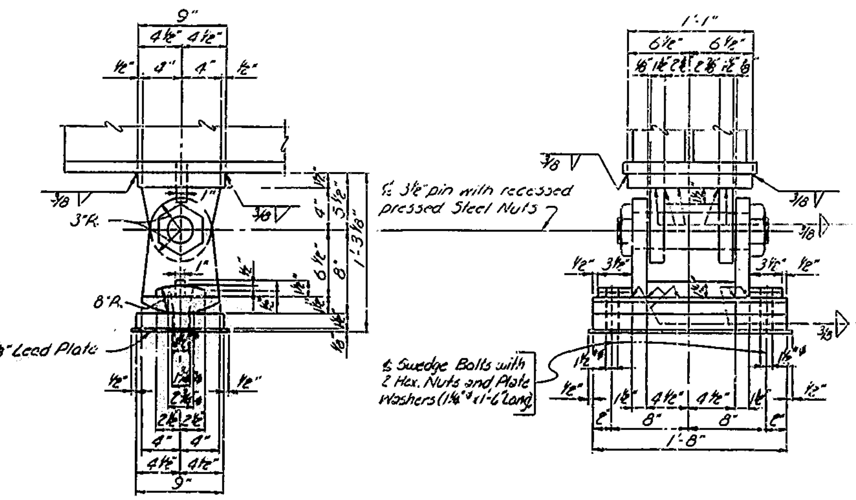
Filler Pl. added @ Splice

Rck. c. Fifth St. Rd. over Owensboro Beltline Sheet 18

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD F-556(1)
STATION 37+41.84 Fifth St. Rd. PROJECT NO. SF 30-257-CI
BRIDGE NUMBER
DRAWING NO. 17515

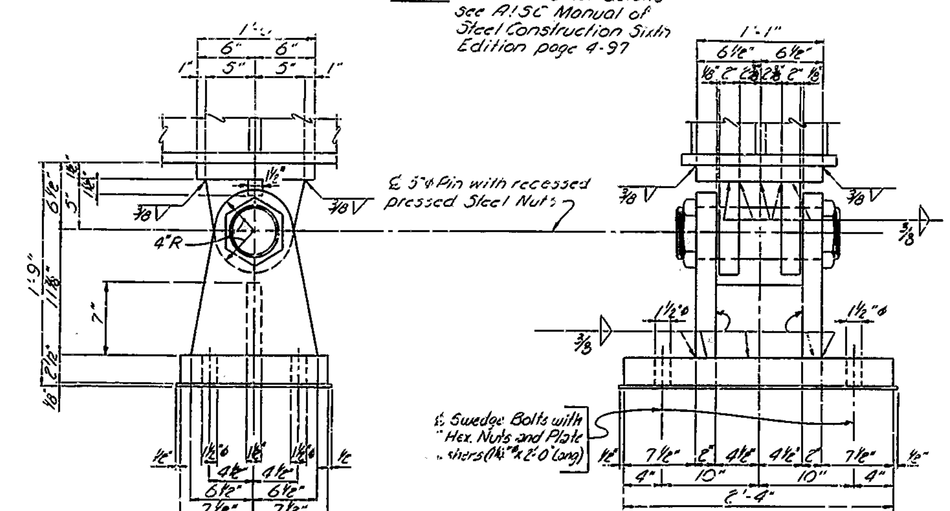


PLAN OF EXPANSION DAM

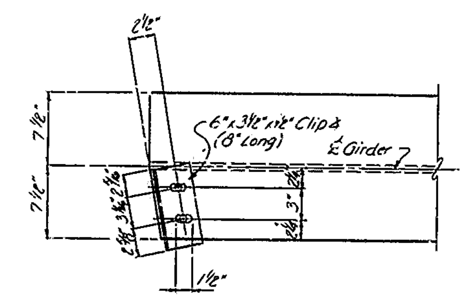


DETAIL OF EXPANSION ROCKER AT ABUTMENTS 1 AND 2

NOTE: For Pin and Nut details see A.I.S.C. Manual of Steel Construction Sixth Edition page 4-97



DETAIL OF FIXED SHOE AT PIER 1



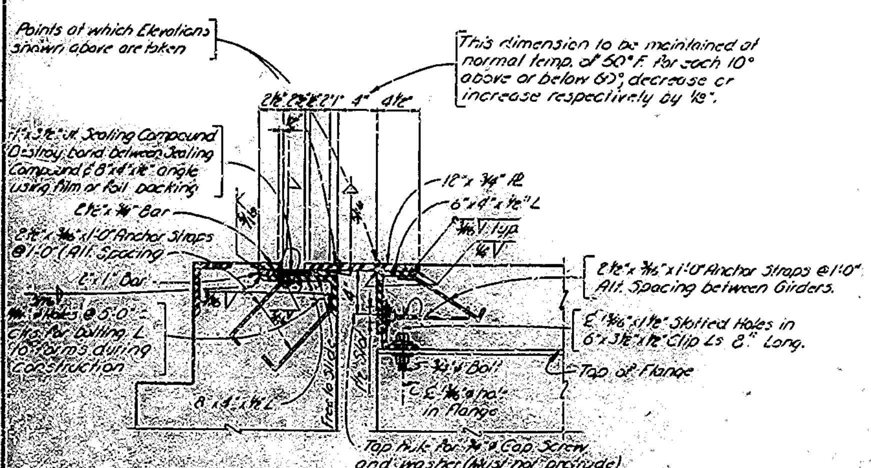
DETAIL "Y"

NOTES:
Use 3/8" Fillet Welds for fabricating bearing devices, except as noted.
Plates must be true and free of warp.
For applicable notes, A.S.T.M. Specifications and surface finish specifications for the Shoes and Rockers see Structural Steel Note Sheet 3.
For additional details see Section C-C, Section D-D and Section E-E Standard Expansion Dam For Concrete Spans With Curbs, Current Edition.

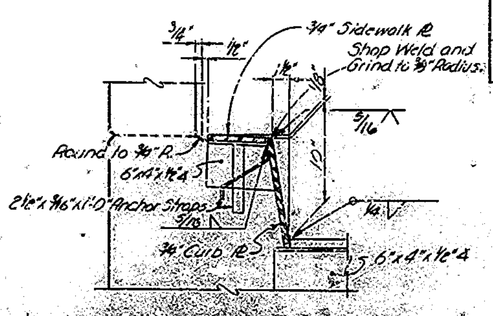
TABLE OF ELEVATIONS *

LOCATION		Lt. Gutter	Gdr. 1	Gdr. 2	Gdr. 3	Gdr. 4	Gdr. 5	Gdr. 6	Rt. Gutter
Abut. 2	End of Slab	417.502	417.528	417.632	417.735	417.838	417.941	418.043	418.069
	Fa. of Mudwall	417.498	417.524	417.628	417.732	417.835	417.937	418.039	418.065
Abut. 1	Fa. of Mudwall	417.300	417.338	417.490	417.641	417.791	417.941	418.090	418.127
	End of Slab	417.296	417.334	417.486	417.637	[illegible]	417.937	418.086	418.123

(* For Location of Gdrs. see Sheets 15, 16 & 17)



SECTION A-A

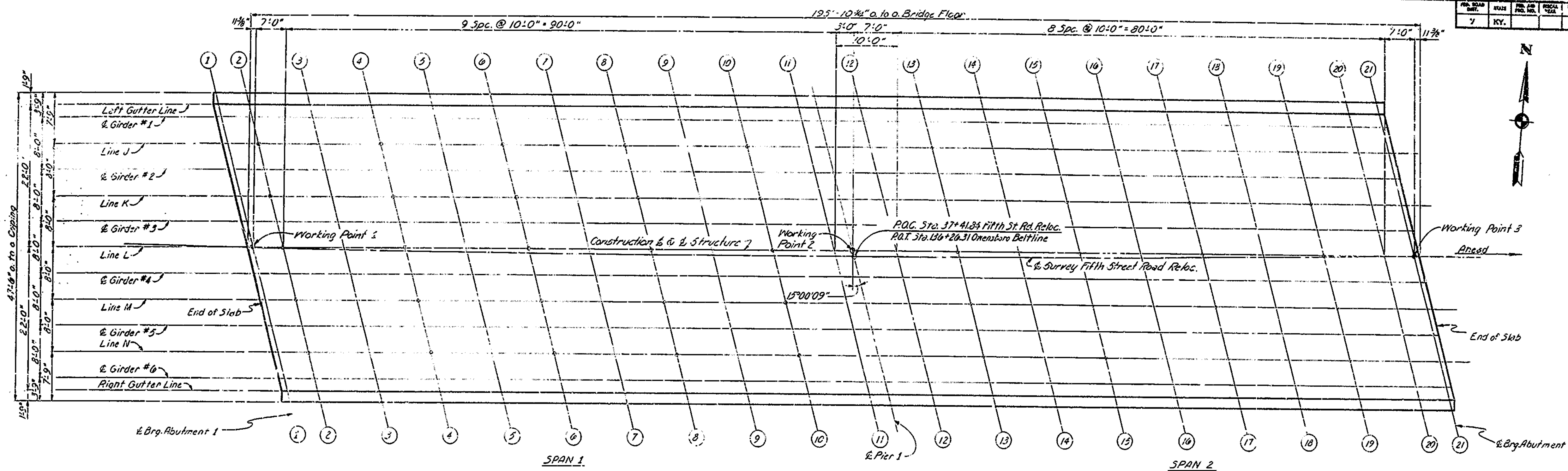


TYPICAL SECTION THRU CURBS AT ABUTMENTS

EXPANSION DAM AND SHOE DETAILS

Reloc. Fifth St. Road over Owensboro Beltline Sheet 19

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
STATION 37+41.84 Fifth St. Road PROJECT NO. F 556 (1)
BRIDGE NUMBER
17515



PLAN

TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS																						
SLAB CHECK POINT	J-2	J-4	J-6	J-8	J-10	J-13	J-15	J-17	J-19	K-2	K-4	K-6	K-8	K-10	K-13	K-15	K-17	K-19	L-2	L-4	L-6	L-8	L-10
Top of Slab Elev.	417.542	417.824	417.991	418.050	418.016	418.050	418.033	417.984	417.812	417.691	417.968	418.130	418.184	418.172	418.172	418.170	418.096	417.919	417.840	418.111	418.268	418.317	418.301
Bot of Slab Elev.																							
Computed Slab Thk.																							
SLAB CHECK POINT	L-13	L-15	L-17	L-19	M-2	M-4	M-6	M-8	M-10	M-13	M-15	M-17	M-19	N-2	N-4	N-6	N-8	N-10	N-13	N-15	N-17	N-19	
Top of Slab Elev.	418.293	418.286	418.208	418.026	417.983	418.254	418.406	418.450	418.426	418.413	418.402	418.319	418.133	418.135	418.396	418.543	418.582	418.556	418.533	418.517	418.430	418.240	
Bot. of Slab Elev.																							
Computed Slab Thk.																							

TABLE OF ELEVATIONS

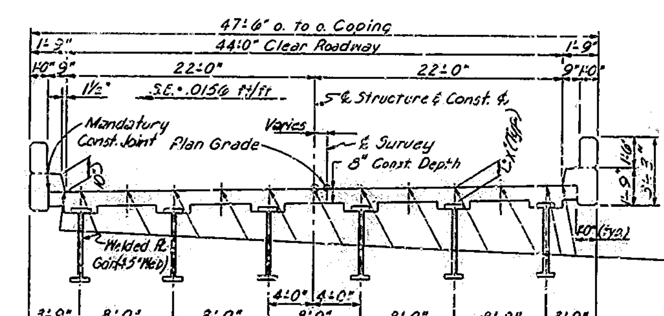
SECTION	LEFT GUTTER LINE			℄ GIRDER #1			℄ GIRDER #2			℄ GIRDER #3			℄ GIRDER #4			℄ GIRDER #5			℄ GIRDER #6			RIGHT GUTTER LINE		
	Const. El.	Top of Steel	Dim. "X"	Const. El.	Top of Steel	Dim. "X"	Const. El.	Top of Steel	Dim. "X"	Const. El.	Top of Steel	Dim. "X"	Const. El.	Top of Steel	Dim. "X"	Const. El.	Top of Steel	Dim. "X"	Const. El.	Top of Steel	Dim. "X"	Const. El.	Top of Steel	Dim. "X"
1-1	417.311			417.349			417.521			417.651			417.802			417.951			418.102			418.137		
2-2	417.430			417.467			417.617			417.765			417.914			418.061			418.208			418.245		
3-3	417.582			417.623			417.770			417.916			418.081			418.206			418.351			418.387		
4-4	417.716			417.752			417.896			418.040			418.183			418.325			418.467			418.503		
5-5	417.817			417.853			417.995			418.136			418.276			418.416			418.555			418.590		
6-6	417.887			417.922			418.061			418.199			418.337			418.475			418.511			418.640		
7-7	417.931			417.965			418.102			418.238			418.373			418.508			418.542			418.676		
8-8	417.950			417.983			418.111			418.25			418.384			418.516			418.648			418.681		
9-9	417.945			417.952			418.114			418.245			418.375			418.505			418.635			418.667		
10-10	417.947			417.979			418.108			418.237			418.365			418.492			418.619			418.651		
11-11	417.966			417.977			418.104			418.230			418.356			418.481			418.605			418.636		
12-12	417.950			417.981			418.105			418.229			418.352			418.475			418.597			418.628		
13-13	417.959			417.989			418.111			418.231			418.353			418.473			418.594			418.623		
14-14	417.964			417.998			418.112			418.232			418.351			418.469			418.586			418.616		
15-15	417.965			417.995			418.111			418.228			418.344			418.460			418.575			418.603		
16-16	417.944			417.973			418.087			418.222			418.315			418.429			418.542			418.570		
17-17	417.920			417.928			418.040			418.152			418.264			418.375			418.485			418.513		
18-18	417.828			417.836			417.968			418.075			418.184			418.294			418.402			418.429		
19-19	417.731			417.733			417.865			417.973			418.080			418.187			418.291			418.319		
20-20	417.607			417.633			417.739			417.844			417.959			418.054			418.157			418.183		
21-21	417.511			417.537			417.641			417.745			417.848			417.951			418.054			418.079		

TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS

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 1/4" 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.

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 slabs have been put in place. Read elevations to three place decimals using a target rod and enter reading in table under Top of Steel Elevations
2. Compute Dimension "X" as follows: Construction Elevation minus Steel Elevation equals Dimension "X". Construction Elevations include camber due to weight of concrete slab, plinth, handrail and future surfacing.
3. For setting templates measure Dimension "X" above top of steel for top of template. Do not set templates by elevations.
4. Construct handrail plinth to sidewalk grade. Do not add camber to handrail plinth.
5. For Exp. Dam Elevations see Sheet 19.



TYPICAL SECTION THRU DECK

Reloc. Fifth St. Road over Owensboro Beltline Sheet 20

CONSTRUCTION ELEVATIONS

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
DAVIESS
OWENSBORO BELTLINE
ROAD
STATION 37+41.84 Fifth St. Road PROJECT NO. F-556 (1) SP30-252-6L
BRIDGE NUMBER
DRAWING NO. 17515