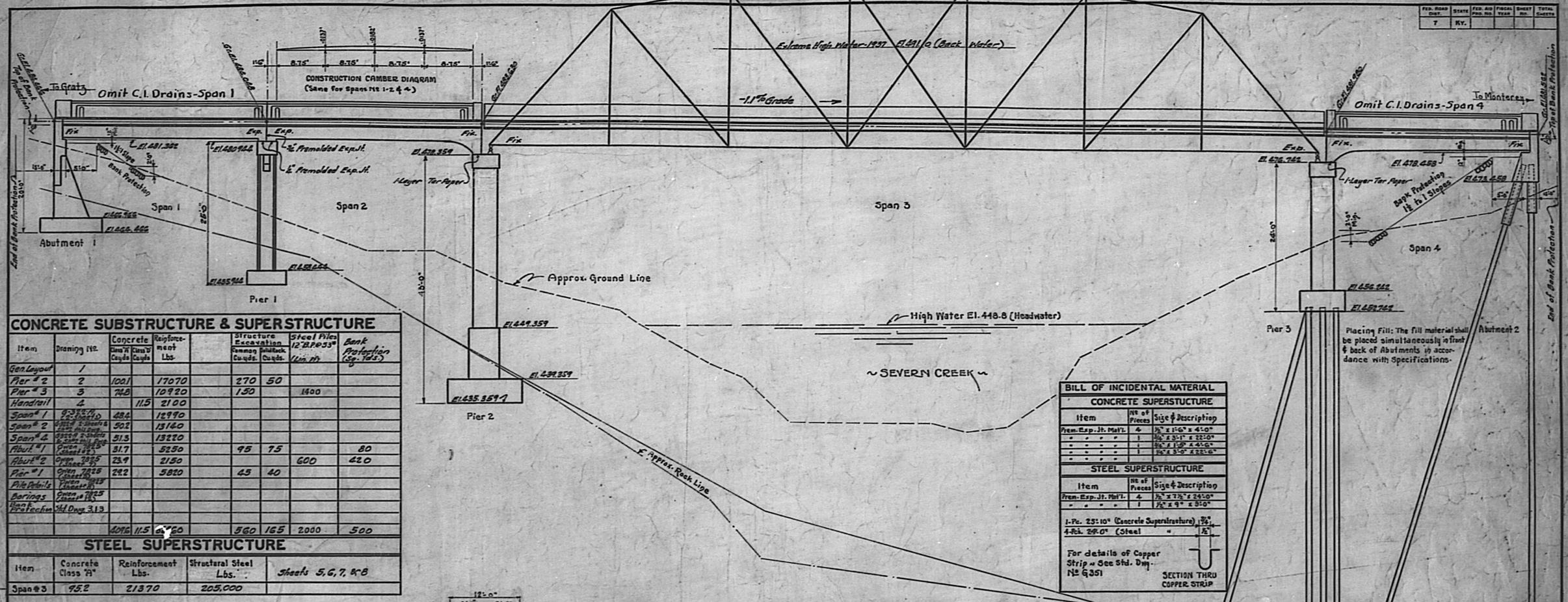
Fed. Road Dist.	State	Fed. Aid Proj. No.	Fiscal Year	Sheet No.	Total Sheets
7	Ky.				



CONCRETE SUBSTRUCTURE & SUPERSTRUCTURE

Item	Drawing No.	Concrete Class "A" Cu.yds	Concrete Class "D" Cu.yds	Reinforcement Lbs.		Structure Excavation Common Cu.yds.	Structure Excavation Rock Cu.yds.	Steel Piles 12" B.P.53# (Lin. ft)	Bank Protection (Sq. Yds.)
Gen Layout	1								
Pier #2	2	100.1		17070		270	50		
Pier #3	3	74.8		10920		150		1400	
Handrail	4		11.5	2100					
Span #1	9-3'x7'x7' Rahmen	48.4		12990					
Span #2	9-3'x7'x7' Rahmen	50.2		13140					
Span #4	9-3'x7'x7' Rahmen	51.3		13220					
Abut #1	Owen 7825 Sheet 2/3	31.7		5250		95	75		80
Abut #2	Owen 7825 Sheet 2/3	23.9		2150				600	420
Pier #1	Owen 7825 Sheet 2/3	24.2		5820		45	40		
Pile Details	Owen 7825 Sheet 2/3								
Borings	Owen 7825 Sheet 2/3								
Bank Protection	Std Dwg 3.13								
		401.6	11.5	67760		560	165	2000	500

STEEL SUPERSTRUCTURE

Item	Concrete Class "A"	Reinforcement Lbs.	Structural Steel Lbs.	Sheets 5, 6, 7, & 8
Span #3	95.2	21370	205,000	

BILL OF INCIDENTAL MATERIAL

CONCRETE SUPERSTRUCTURE

Item	No. of Pieces	Size & Description
Prem. Exp. Jt. Mat'l.	4	½" x 1'-6" x 4'-0"
" " " "	1	½" x 3'-1" x 22'-0"
" " " "	1	½" x 1'-6" x 4'-6"
" " " "	1	½" x 3'-0" x 22'-6"

STEEL SUPERSTRUCTURE

Item	No. of Pieces	Size & Description
Prem. Exp. Jt. Mat'l.	4	½" x 7½" x 24'-0"
" " " "	1	½" x 9" x 3'-0"

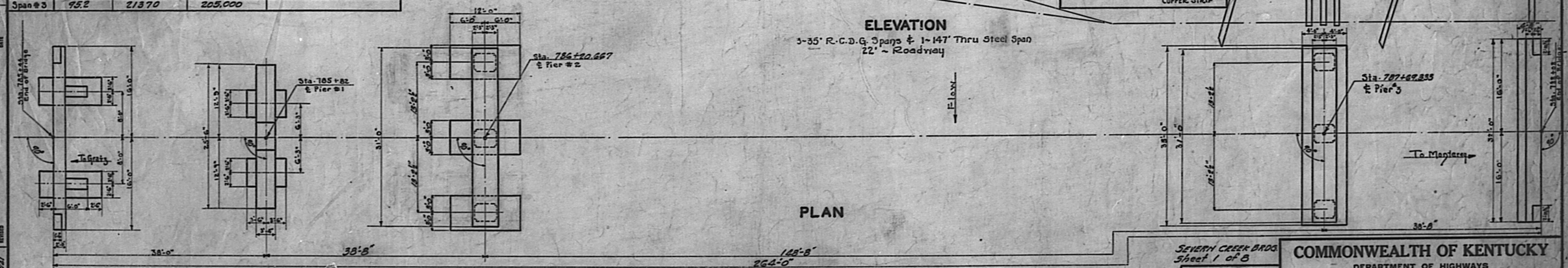
1-Pc. 23'-10" (Concrete Superstructure) 3/16"
4-Pc. 24'-0" (Steel " 1/8"

For details of Copper Strip see Std. Dwg. No. G351

SECTION THRU COPPER STRIP

ELEVATION

3-35' R.C.D.G. Spans & 1-147' Thru Steel Span
22' ~ Roadway



PLAN

GENERAL NOTE

Specifications:- Kentucky Department of Highways (1938 Standard with amendments.)
Design Load: Bridge Designed for H-15 loading as specified in A.A.S.H.O. Specifications 1935.
Concrete:- Class "A" concrete to be used throughout except in Handrail & pile encasement. Class "D" concrete to be used in Handrail & pile encasement.
Reinforcement: Dimension shown from face of concrete is clear distance. Bars of structural & intermediate grade new billet steel may be combined on this project, or bars of hard grade new billet steel & rail steel may be combined on this project, but a mixing of these two permissible combinations will not be allowed.
Beveled Edges: All exposed edges shall be beveled ¾ unless otherwise noted.
C.I. Drains:- Expansion Joint Material-Copper Strip & Tar Paper:- The cost of these items to be included in the unit price bid for Class "A" Concrete.
Tar Paper:- To be Commercial grade tar paper or roofing felt approximately ⅛ thick.
Bill of Incidental Material: The quantities shown in the bill of incidental material are approximate only & the contractor is responsible for furnishing enough material to complete the work in accordance with Plans & Specifications.
Roadway Approaches:- Construct transition in 50 ft. from normal 24' Roadway Section to 30' Roadway Section at Abutments.
Test Piles:- For location of test piles See Sheet 3, and Owen Co. 7825 Sh 7 of 12
Bank Protection: May be either Dry Rip Rap or Concrete Slope wall in accordance with Std. Dwg. No. 3.13

DESIGNED BY R.E. Archer DATE 1-41
TRACED BY W.D. Gray DATE 1-28-46
CHECKED BY W.D. Gray DATE 1-41
REVISED DATE
REVISED DATE
REVISED DATE

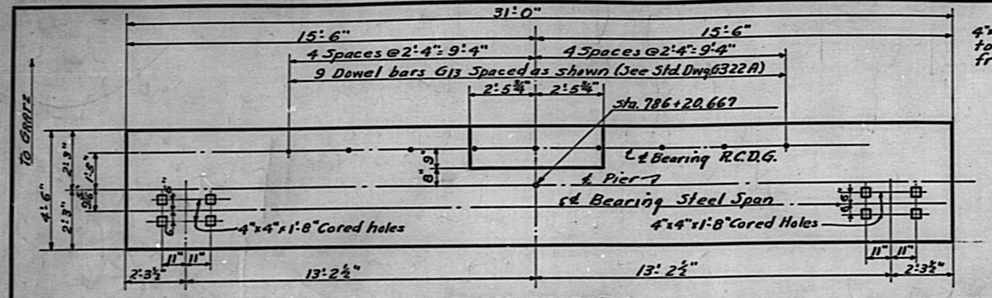
SEVERN CREEK BRDG.
Sheet 1 of 8

REFERENCE DRAWINGS
3.13
G-351
G-322-A (2-Sheet)
Owen 7825 Sh 2 of 12
" " Sh 3 " 12
" " Sh 7 " 12
" " Sh 8 " 12
" " Sh 12 " 12

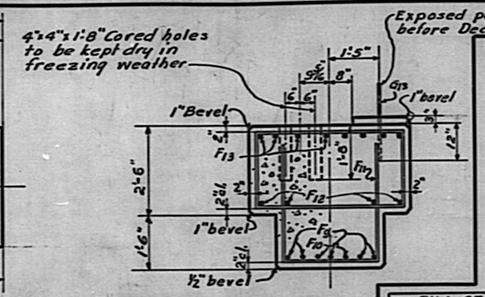
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ-MONTEREY
ROAD

STATION 786+76 PROJECT NO.
No 94-133-1
DRAWING No. 7834
INDEX

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

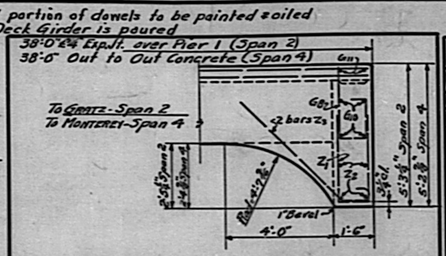


PLAN OF CAP



SECTION THRU CAP

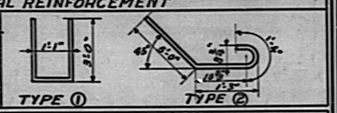
Note- Bearing Areas to receive steel Superstructure shall be finished perfectly Smooth and level at the Elevation shown on plans.



REVISION IN ENDWALL AND OUTSIDE BEAMS (Span 2 over Pier 2 and Span 4 over Pier 3)

BILL OF ADDITIONAL REINFORCEMENT

Mark	Type	Number			Size	Length Ft.	In.
		One End	Other End	Total			
Z1	1	21	21	42	½" ø	6	11
Z2	Str.	4	4	8	⅝" ø	21	5
Z3	2	4	4	8	⅝" ø	7	2

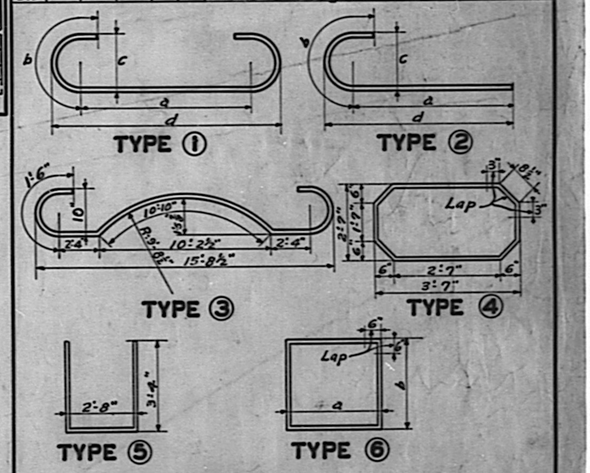


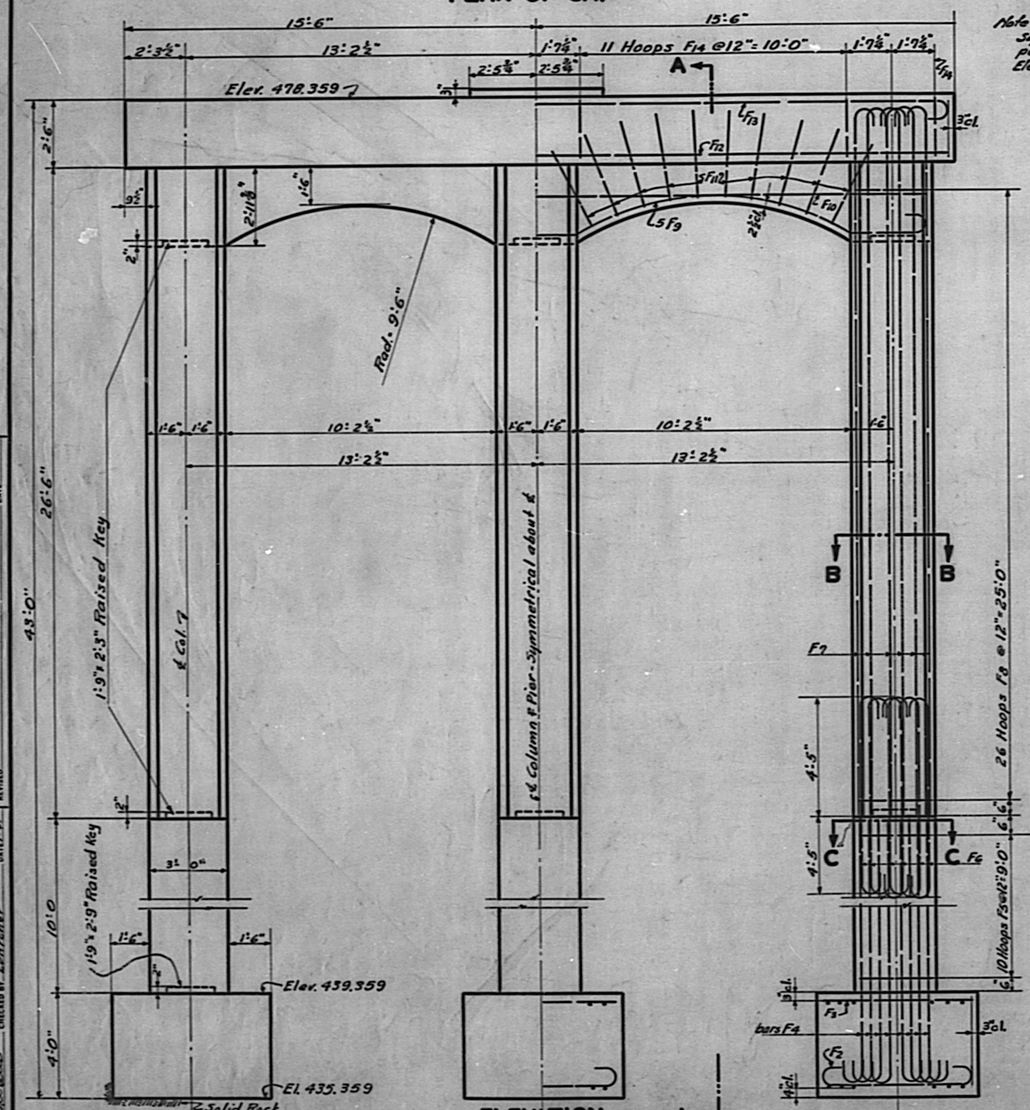
ESTIMATE OF ADDITIONAL QUANTITIES

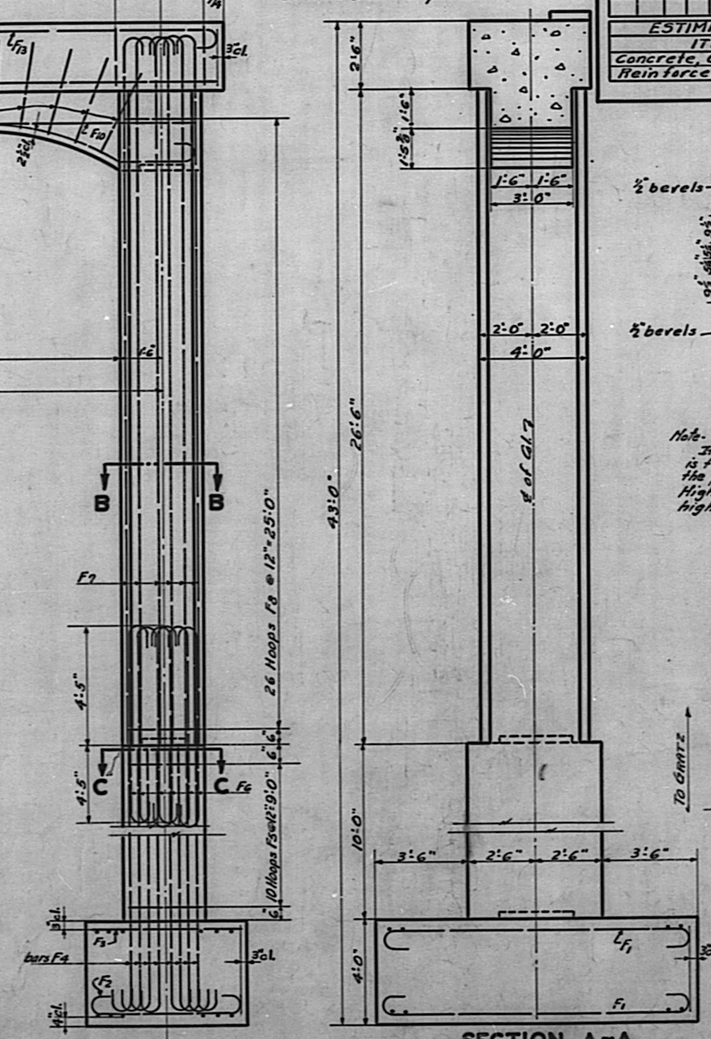
ITEM	SPAN 2	SPAN 4
Concrete, Class "A"	2.9 Cu. Yds.	2.9 Cu. Yds.
Reinforcement	230 Lbs.	230 Lbs.

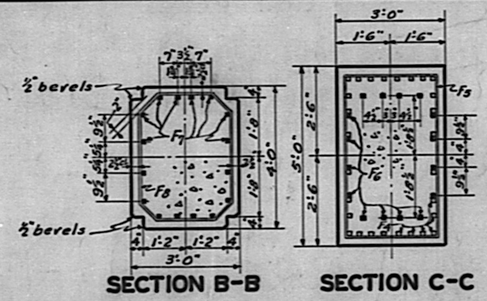
BILL OF REINFORCEMENT

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.
F1	1	66	¾" ø	13	2	Footing	10	10	1	2	0	7½	11	5½
F2	"	69	"	7	2	"	4	10	1	2	0	7½	5	5½
F3	Str.	69	"	5	6	"								
F4	2	84	1" ø	14	4	Pedestal	12	10	1	6	0	10	13	3
F5	6	30	½" ø	15	1	" Hoops	4	7	2	7				
F6	1	48	1" ø	11	0	Col. Dowels	8	0	1	6	0	10	8	10
F7	2	48	"	29	7	Columns.	28	1	1	6	0	10	28	6
F8	4	78	½" ø	12	4	Col. Hoops								
F9	3	10	1" ø	18	6	Arch								
F10	Str.	4	"	29	0	Cap								
F11	5	20	½" ø	9	2	"								
F12	Str.	4	1" ø	30	6	"								
F13	1	8	"	32	8	"	29	8	1	6	0	10	30	6
F14	6	24	½" ø	13	5	"	4	2	2	2				
G13						Listed on Std. Dwg. 322A								

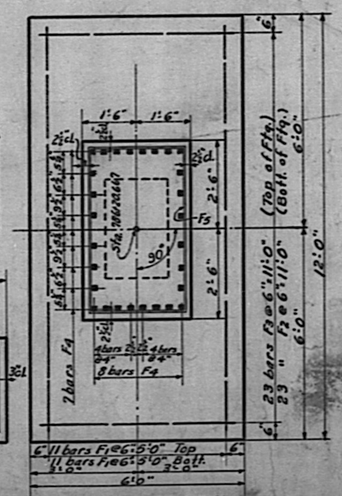








Note- If a satisfactory foundation for any footing is found at a higher elevation than that shown hereon, the plans will be revised by the Department of Highways and footing constructed at the higher elevation.



TYPICAL PLAN OF FOOTING

PIER 2

ESTIMATE OF QUANTITIES

Concrete, Class "A"	100.1	Cu. Yds.
Reinforcement	17070	Lbs.

Sheet 2 of 8

REFERENCE DRAWINGS

Bridge over Severn Creek

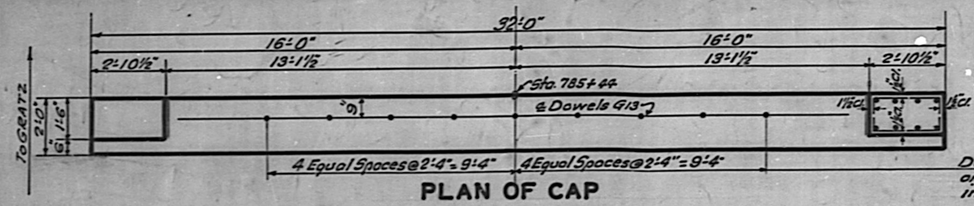
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ-MONTEREY
ROAD

STATION 786+76 PROJECT NO.

BRIDGE NUMBER 94-133-1 DRAWING NO. 7834 INDEX

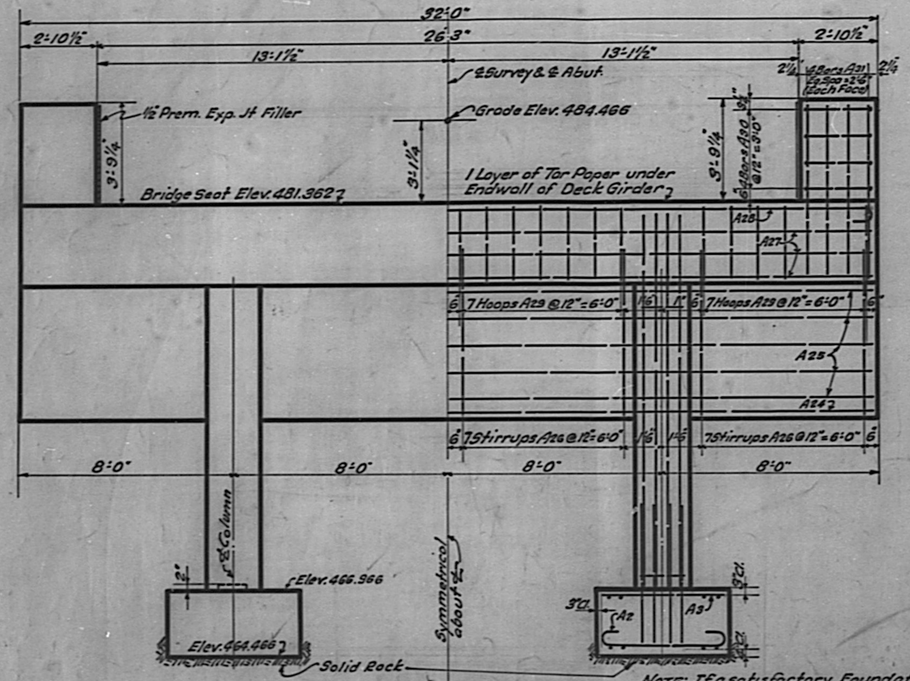
DESIGNED BY N.D. Gray CHECKED BY R.B. Fisher DATE 1-41 REVISED DATE
DETAILED BY R.B. Fisher CHECKED BY N.D. Gray DATE 1-41 REVISED DATE
TRACED BY E.W.D. Reed CHECKED BY R.B. Fisher DATE 2-41 REVISED DATE

Fed. Road Dist.	State	Fed. Aid Proj. No.	Fiscal Year	Sheet No.	Total Sheets
7	Ky.				



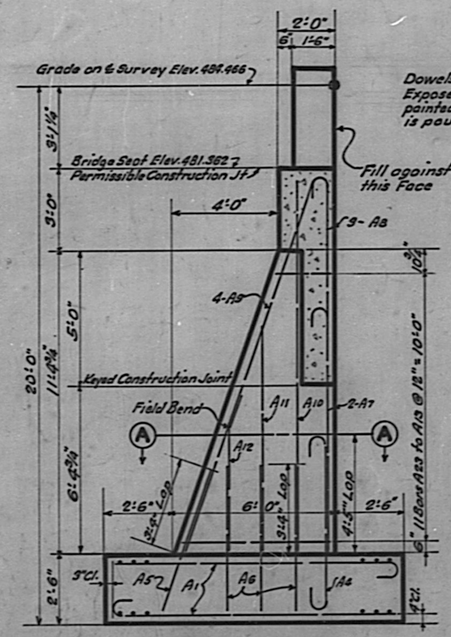
PLAN OF CAP

Dowel Bars G13 are listed with Deck Girder on Drwg. 322A but are required to be placed in Substructure.



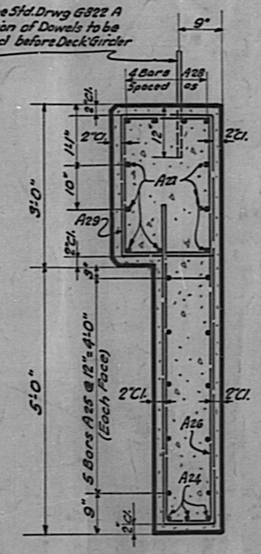
ELEVATION

NOTE: If a satisfactory Foundation for either footing is found at a higher elevation than that shown hereon, the plans will be revised by the Department of Highways and the footing constructed at the higher elevation.



SECTION ON ℄

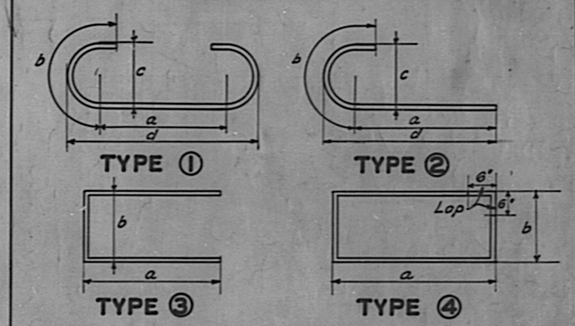
Dowels G13 See Std. Drwg G322 A Exposed Portion of Dowels to be painted & oiled before Deck Girder is poured.



SECTION THRU CAP

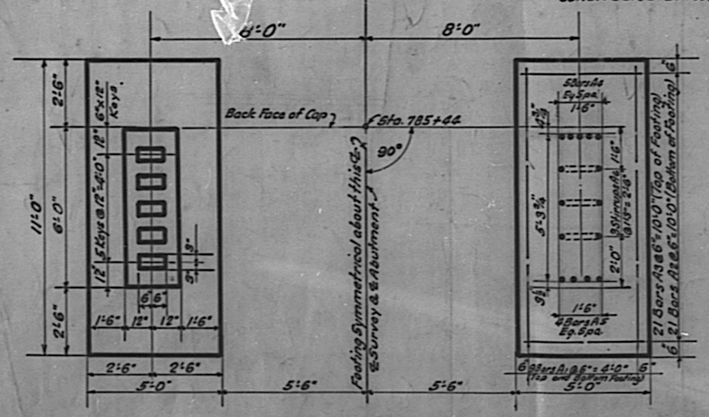
BILL OF REINFORCEMENT

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	2	36	3/4" ⌀	11	4	Ftg. Longitudinal	10	2	1	2	0	7½	10	5¾
A2	1	42	"	6	2	" Transverse	3	10	1	2	0	7½	4	5½
A3	Str.	42	"	4	6	" "	–	–	–	–	–	–	–	–
A4	1	10	1" □	8	7	Dowels-Ftg. into Col.	5	7	1	6	0	10	6	5
A5	Str.	8	3/4" ⌀	5	6	" " " "	–	–	–	–	–	–	–	–
A6	3	6	"	12	2	Stirrup - Dowels	5	5	1	6	–	–	–	–
A7	2	4	1" ⌀	10	3	Columns	8	9	1	6	0	10	9	2
A8	"	6	"	15	1	"	13	7	1	6	0	10	14	0
A9	Str.	8	3/4" ⌀	14	9	"	–	–	–	–	–	–	–	–
A10	"	4	"	14	0	"	–	–	–	–	–	–	–	–
A11	"	4	"	8	6	"	–	–	–	–	–	–	–	–
A12	"	4	"	5	6	"	–	–	–	–	–	–	–	–
A13	4	2	½" □	7	7	" Hoops	1	10	1	7	–	–	–	–
A14	"	2	"	8	3	" "	2	2	1	7	–	–	–	–
A15	"	2	"	8	11	" "	2	6	1	7	–	–	–	–
A16	"	2	"	9	8	" "	2	10½	1	7	–	–	–	–
A17	"	2	"	10	4	" "	3	2¾	1	7	–	–	–	–
A18	"	2	"	11	1	" "	3	6¾	1	7	–	–	–	–
A19	"	2	"	11	9	" "	3	11	1	7	–	–	–	–
A20	"	2	"	12	6	" "	4	3¼	1	7	–	–	–	–
A21	"	2	"	13	2	" "	4	7½	1	7	–	–	–	–
A22	"	2	"	13	11	" "	4	11¾	1	7	–	–	–	–
A23	"	2	"	14	7	" "	5	4	1	7	–	–	–	–
A24	Str.	3	7/8" ⌀	31	8	Curtain Wall	–	–	–	–	–	–	–	–
A25	"	10	3/4" ⌀	31	8	" "	–	–	–	–	–	–	–	–
A26	3	28	½" □	14	9	" " Stir.	7	0	0	11	–	–	–	–
A27	Str.	7	1" □	31	8	Cap	–	–	–	–	–	–	–	–
A28	1	4	"	33	10	" Top	30	10	1	6	0	10	31	8
A29	4	28	½" □	9	5	" Hoops	2	8	1	8	–	–	–	–
A30	"	8	"	8	6	Parapet-Hoops	2	7½	1	3	–	–	–	–
A31	Str.	16	"	5	3	"	–	–	–	–	–	–	–	–

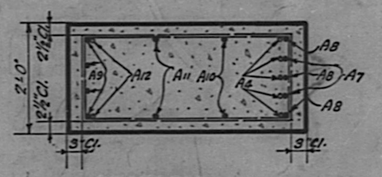


ESTIMATE OF QUANTITIES

Concrete, Class "A"	91.7 Cu. Yds.
Reinforcement	5250 Lbs.



PLAN OF FOOTING



SECTION A-A

NOTE: All exposed edges to be beveled 7/8" unless otherwise noted.

Do not destroy. See Dwg. # 7834.

VOID

BRIDGE OVER SEVERN CREEK — Sheet 2 of 2

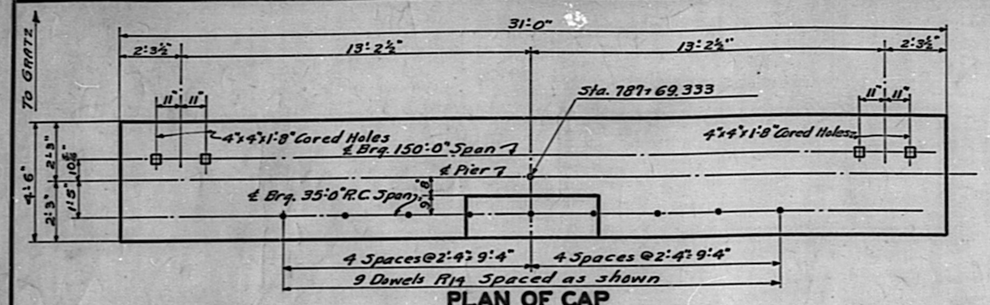
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ — MONTEREY
ROAD
STATION 786+76 PROJECT NO.

DRAWING NO. 7828 — SHEETS 7834

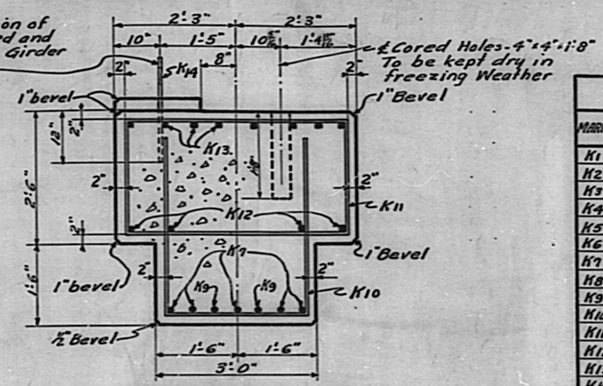
ABUTMENT 1

DESIGNED BY H.D. GRAY DATE 1941
TRACED BY G.D.S. DATE 1941
CHECKED BY DATE 1-41
REVISED DATE
REVISED DATE
REVISED DATE

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

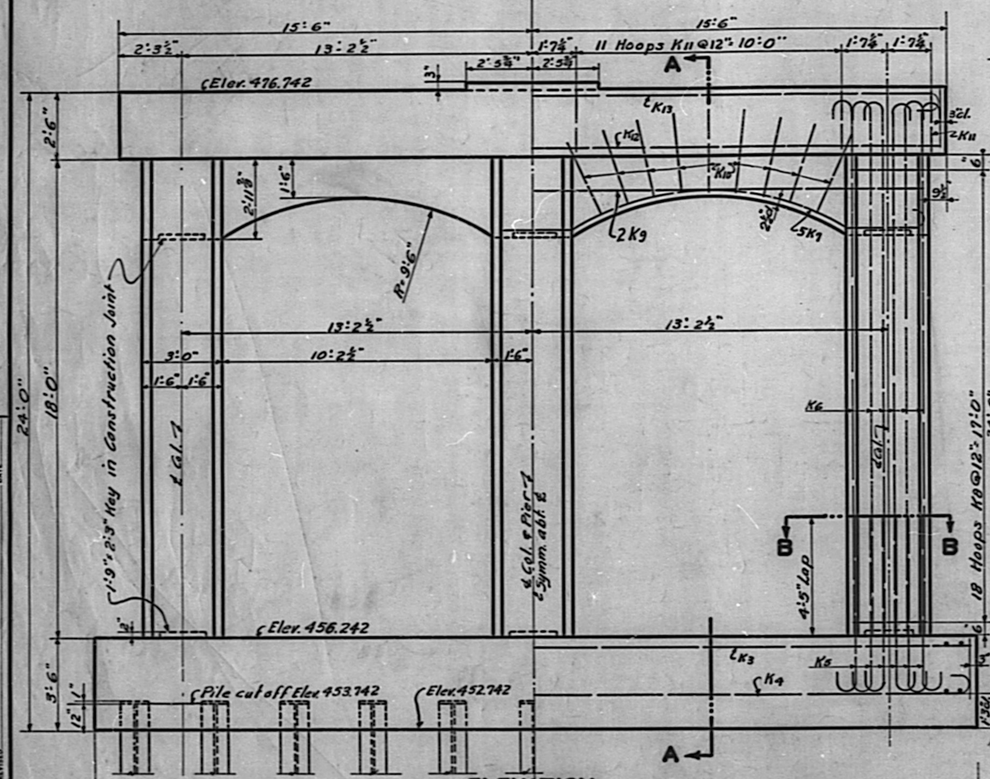


PLAN OF CAP

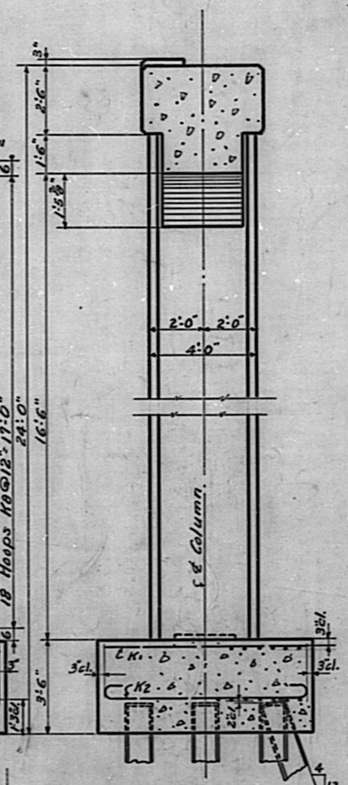


SECTION THRU CAP

Note:- Bearing areas of Cap to receive steel superstructure shall be finished perfectly smooth and level at the Elevation shown on plans.

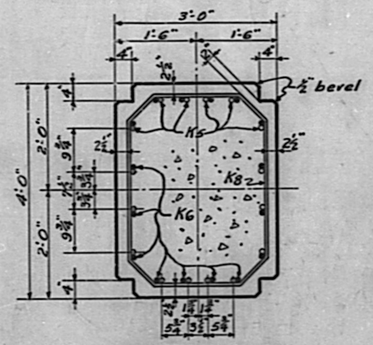


ELEVATION

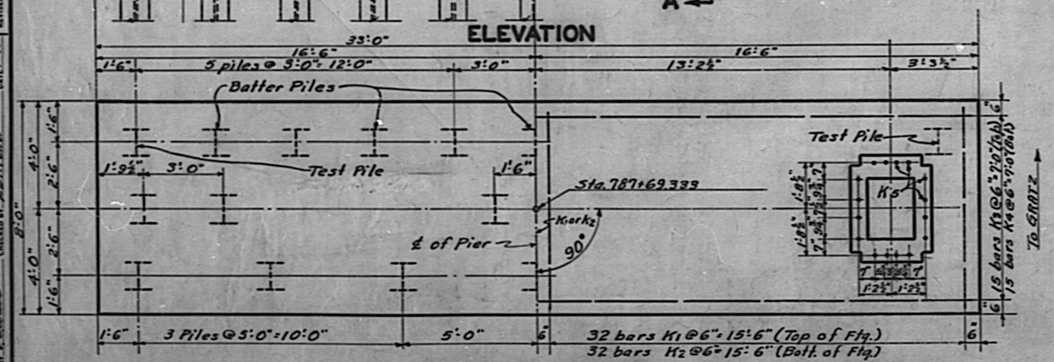


SECTION A-A

NOTE:-
For details of piles, see Owen Co. 7825-Sheet 8 of 12



SECTION B-B



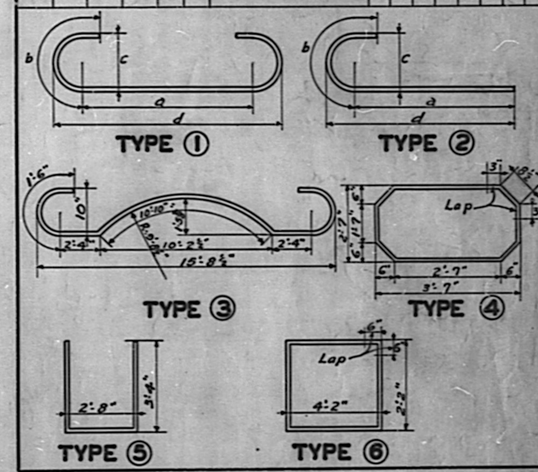
PLAN OF FOOTING

Showing Dimensions & Piles

Showing Reinforcement

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.
K1	Str.	65	⅝" ϕ	7	6	Footing-Transv.								
K2	①	65	"	9	2	" "	6	10	1	2	0	7½	7	5½
K3	Str.	15	"	32	6	" Longit.								
K4	①	15	1" □	34	8	" "	31	8	1	6	0	10	32	6
K5	②	48	1" ϕ	7	7	" Dowels	6	1	1	6	0	10	6	6
K6	"	48	"	21	1	Columns	19	7	1	6	0	10	20	0
K7	③	10	"	18	6	Cap								
K8	④	54	½" □	12	4	Column Hoops								
K9	Str.	4	1" ϕ	29	0	Cap								
K10	⑤	18	½" □	9	2	"								
K11	⑥	24	"	13	5	"								
K12	Str.	4	1" □	30	6	"								
K13	①	8	"	32	8	"	29	8	1	6	0	10	30	6
K14	Str.	9	⅝" ϕ	2	0	Dowels-Cap to R.C.D.G.								



ESTIMATE OF QUANTITIES

Concrete, Class "A"	74.8	Cu. Yds.
Reinforcement	10920	Lbs.
24 Steel Piles (12" BP @ 53#)	1340 / 1400?	Lin. Ft.

Sheet 3 of 8

REFERENCE DRAWINGS

Owen 7825-Sht. 8

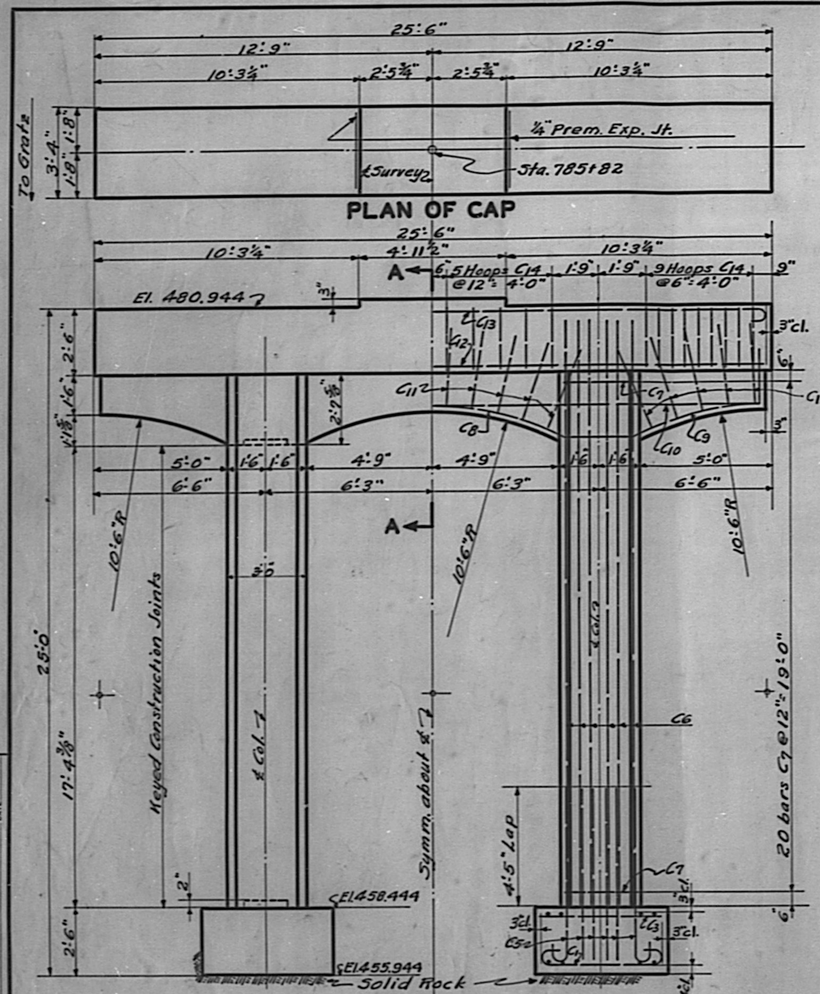
Bridge over Severn Creek

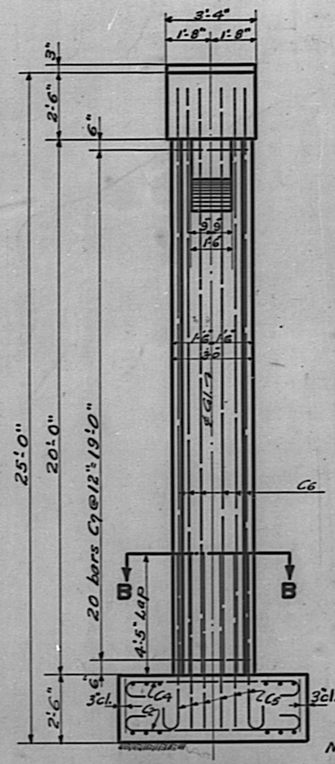
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ-MONTEREY
ROAD
STATION 786+76 PROJECT NO.
BRIDGE NUMBER 94-133-1
DRAWING NO. 7834
INDEX

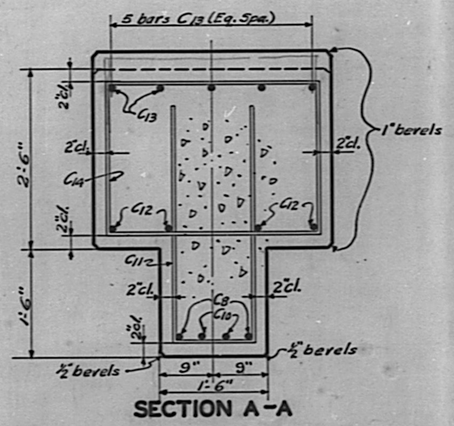
PIER 3

DESIGNED BY N.O. Geer — CHECKED BY R.A. Foster — DATE 1-46 — REVISED
DETAILED BY R.A. Foster — CHECKED BY N.O. Geer — DATE 1-46 — REVISED
TRACED BY [illegible] — CHECKED BY R.A. Foster — DATE 2-46 — REVISED

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



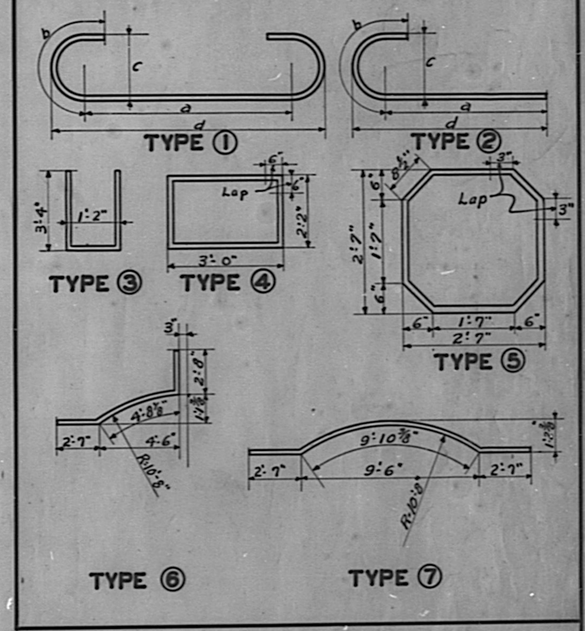


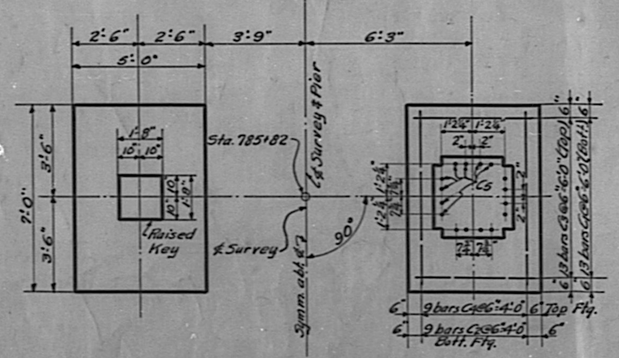


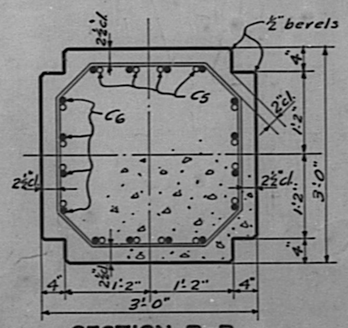
NOTE:- If a satisfactory foundation for either footing is found at a higher elevation than that shown hereon, the plans will be revised by the Department of Highways and the footing constructed at the higher elevation.

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.
C1	1	26	3/4" ϕ	6	2	Footing	3	10	1	2	0	7½	4	5½
C2	"	18	7/8" ϕ	8	5	"	5	9	1	4	0	8⅝	6	5⅝
C3	Str.	26	3/4" ϕ	4	6	"								
C4	1	18	"	8	2	"	5	10	1	2	0	7½	6	5½
C5	2	32	1" □	7	6	Dowels - Ftg. into Cols.	6	0	1	6	0	10	6	5
C6	Str.	32	1" ϕ	22	0	Columns								
C7	5	40	½" □	10	4	Columns - Hoops								
C8	1	2	1" □	15	0	Cap								
C9	6	4	"	9	11	"								
C10	Str.	2	"	24	6	"								
C11	3	20	½" □	7	8	"								
C12	Str.	4	1⅛" □	25	0	"								
C13	1	5	"	27	5	"	24	1	1	8	0	1½	25	0½
C14	4	28	½" □	11	1	"								







ESTIMATE OF QUANTITIES

Concrete, Class "A"	29.2	Cu. Yds.
Reinforcement	5820	Lbs.

Do not destroy
See Dwg. 7834

Sheet 3A of 12

REFERENCE DRAWINGS

Bridge over Severn Creek

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ-MONTEREY
ROAD

STATION 786+76 PROJECT NO.

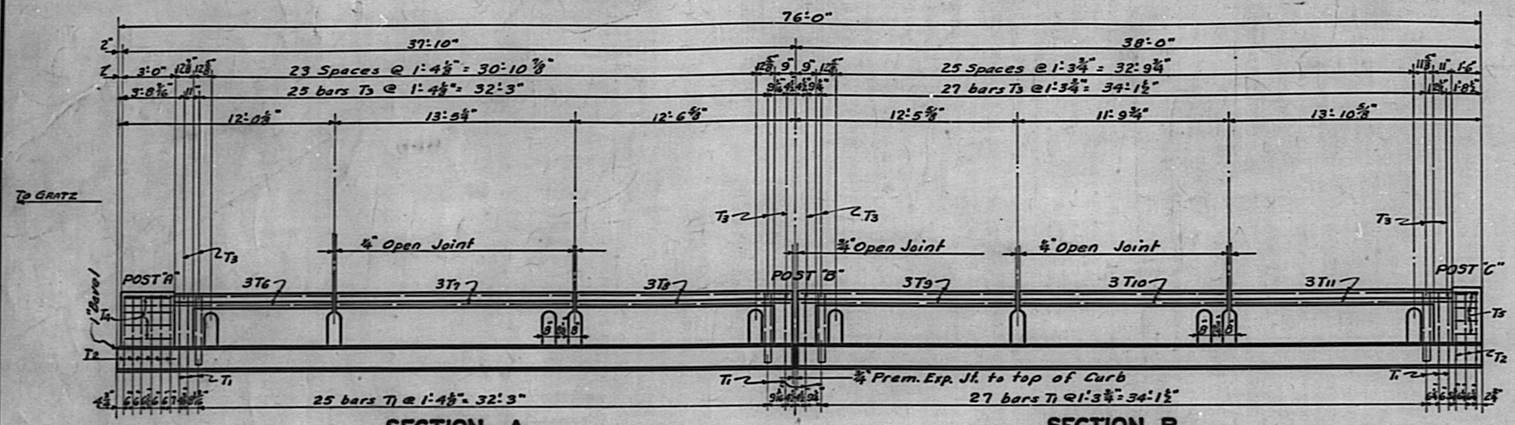
BRIDGE NUMBER

DRAWING NO. ~~7823~~ INDEX 7834

PIER I

DESIGNED BY H.L.O.BERRY DATE 1-41 REVISED DATE
DETAILED BY REVISED DATE
TRACED BY REVISED DATE
CHECKED BY DATE 1-41
CHECKED BY DATE 1-41
CHECKED BY

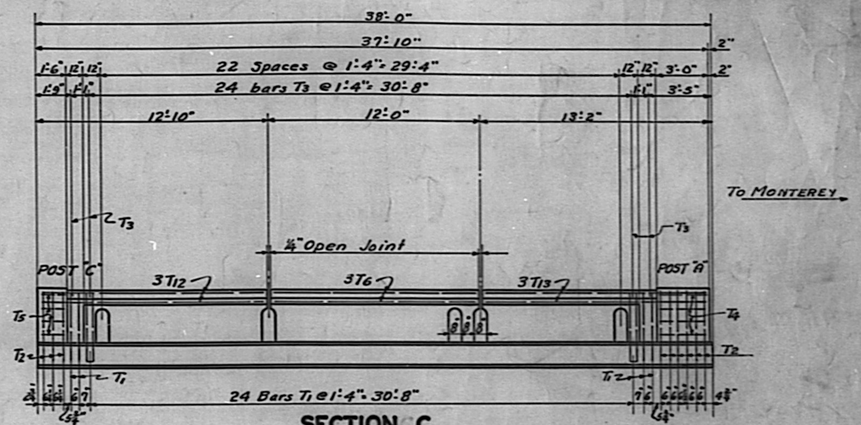
FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



SECTION A

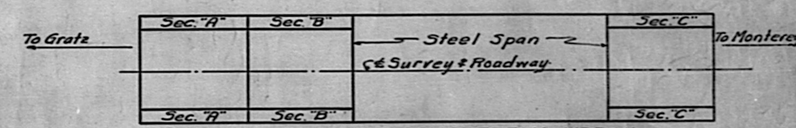
SECTION B

ELEVATION OF HANDRAIL

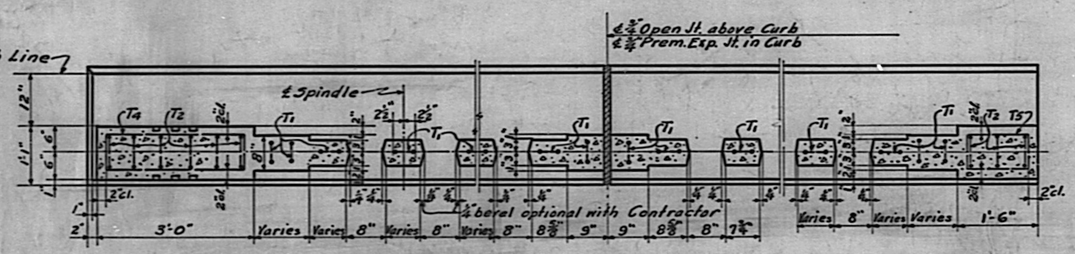


SECTION C

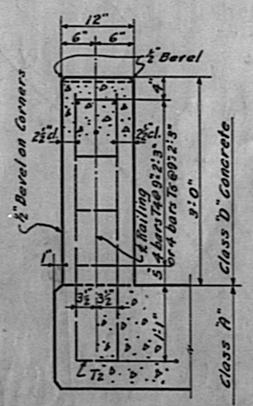
NOTE:- All bar dimensions are to ℄ of bars except as noted. All concrete corners of railing to be beveled 1/4" unless otherwise noted. Posts and Spindles to be vertical and top of Post and Handrail to be parallel to grade on ℄ Survey and top of Curb.



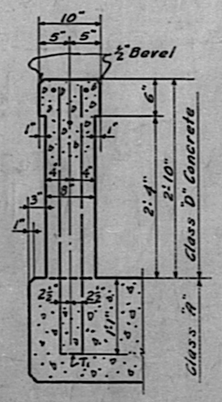
PLAN OF CONCRETE HANDRAIL



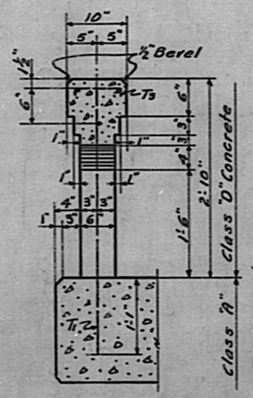
PART SECTIONAL PLAN



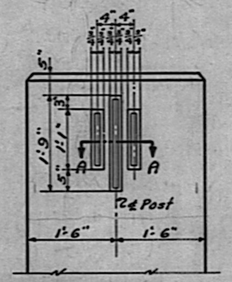
SECTION POST A & C



SECTION POST B

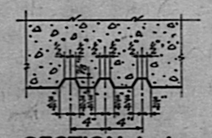


SECTION RAILING



ELEVATION POST A

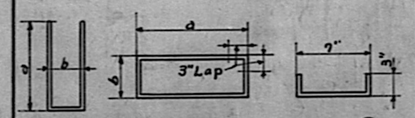
Showing Fluting (on both Sides of Post)



SECTION A-A

BILL OF REINFORCEMENT

MARK	TYPE	Nº	SIZE	LENGTH Ft.	LENGTH In.	LOCATION	a Ft.	a In.	b Ft.	b In.
T1	①	176	1/2" □	7	9	Post "B" & Spindles	3	9	0	5
T2	"	36	"	8	3	Post A & C	3	11	0	7
T3	③	164	3/8" φ	0	11	Top of Rail				
T4	②	16	"	6	11	Post A	2	8	0	8
T5	"	16	"	3	11	" C	1	2	0	8
T6	Str.	12	1/2" □	11	7	Rail				
T7	"	6	"	13	2	"				
T8	"	6	"	12	2	"				
T9	"	6	"	12	1	"				
T10	"	6	"	11	7	"				
T11	"	6	"	13	8	"				
T12	"	6	"	12	8	"				
T13	"	6	"	12	11	"				



TYPE ① TYPE ② TYPE ③

ESTIMATE OF QUANTITIES

Concrete, Class "D"	11.5	Cu. Yds.
Reinforcement	2100	Lbs.

Sheet 4 of 8

REFERENCE DRAWINGS

Bridge over Severn Creek

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ-MONTEREY
ROAD

STATION 786+76 PROJECT NO.

BRIDGE NUMBER

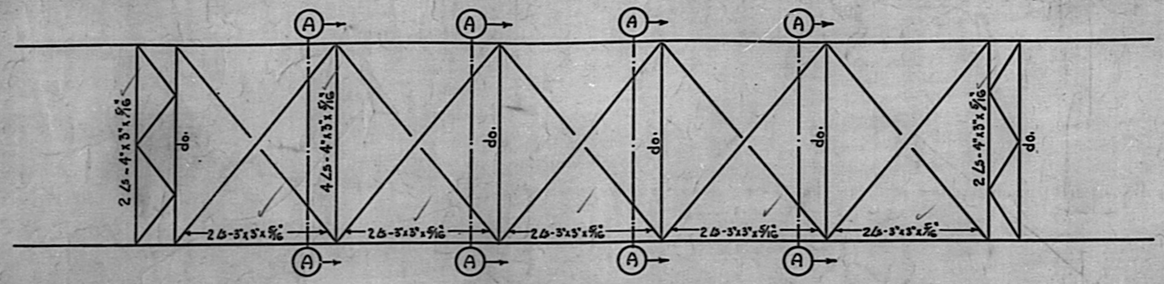
DRAWING NO. 7834

INDEX

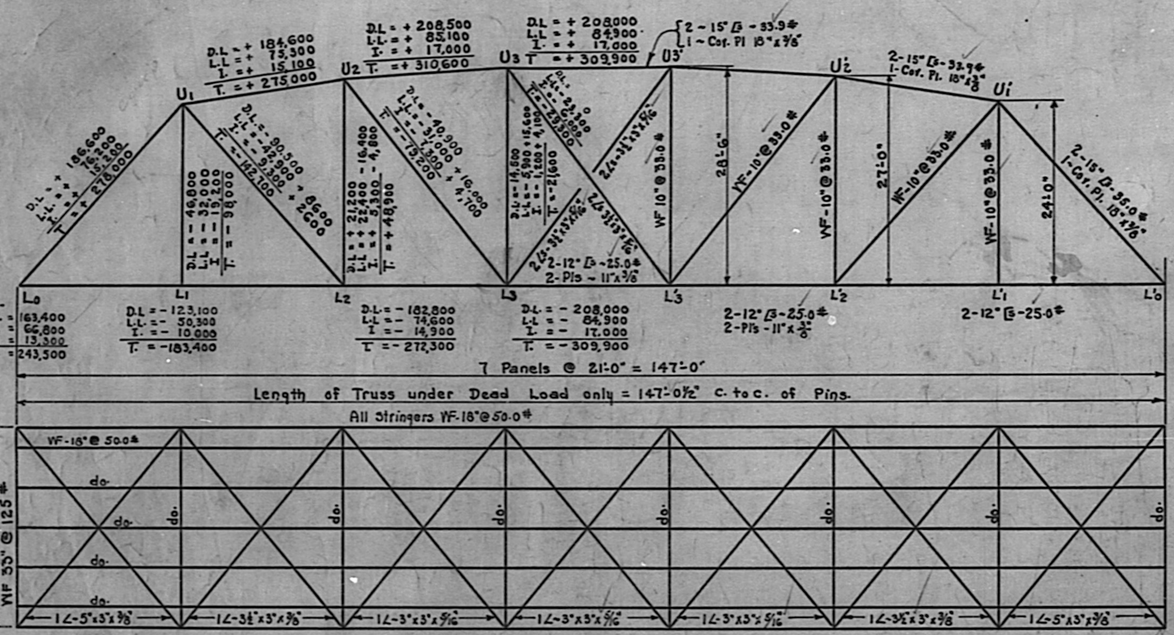
DESIGNED BY — DATE — REVISED
DETAILED BY — CHECKED BY — DATE — REVISED
TRACED BY — CHECKED BY — DATE — REVISED

HANDRAIL

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



PORTALS AND TOP LATERALS



BOTTOM LATERALS AND FLOOR SYSTEM

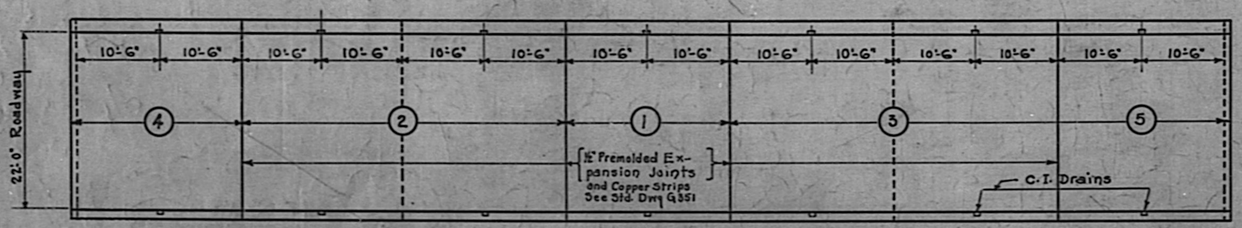
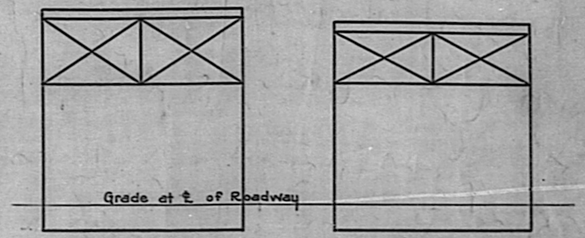


DIAGRAM SHOWING LOCATION OF EXPANSION JOINTS and CAST IRON DRAINS IN CONCRETE FLOOR

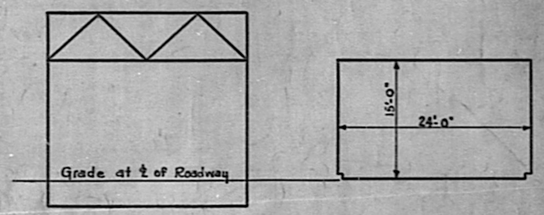
Sections of Concrete Floor to be placed in the order shown working from the center toward the ends of the span
Section 3 may be placed before Section 2 & Section 5 may be placed before Section 4

CAMBER OR BLOCKING DIAGRAM

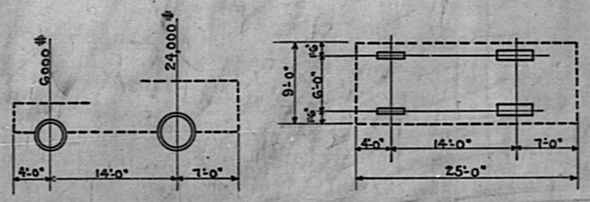


U3-U3-U3'-U3' U2-U2-U2'-U2'

TOP STRUT AND SWAY BRACING



PORTAL CLEARANCE DIAGRAM



TYPICAL 15 TON TRUCK

ASSUMED LOADING

Dead Load :- 4350 Lbs per. lin. ft. of Span including an allowance of 15 lbs. per. sq. ft. of roadway for future surfacing.

Live Load:- 1776 lbs per. lin. ft. of Span or 74 lbs per sq. ft. of roadway for span fully loaded

Impact:- $\frac{L+250}{10L+500}$, where L = loaded length except as provided in Specifications

GENERAL NOTE

SPECIFICATIONS:- Kentucky Department of Highways (1945 Standard) with amendments.
LOADING:- Loading H-15 - 15 Ton Trucks. Two lanes of traffic. A.R.S.H.O. 1941
CONCRETE:- Class "A" in floor slab and curbs.
WEARING SURFACE:- Top of concrete slab to be finished in accordance with specifications for Monolithic Wearing Surfaces.
RIVETS:- 3/4"ϕ except as noted - to be countersunk, flattened or chipped as may be required for clearance - Open holes 13/16"ϕ
[redacted]
Painting:- Materials & workmanship for one shop & two field coats to be in accordance with specifications. Shop coat - 1 coat of Red Lead or Basic Sulphate Blue Lead. Field Coat - 2 Coats of Aluminum paint.
Structural Steel:- To comply with A.S.T.M. Spec. A7-42
Rivets to comply with A.S.T.M. Specifications A141-39.
For purpose of payment structural steel shall include Structural Steel, *Lead Plates*, Cast Steel & Forged Steel.
Shop Assembly, Reaming & Match Marking: See Specifications.

Sheet 5 of 8

REFERENCE DRAWINGS
G 351

ESTIMATE OF QUANTITIES
[For One Span Only]

Structural Steel	203,900*	Lbs.
Cast Steel	3,300	Lbs.
Forged Steel	500	Lbs.
Lead Plates (Commercial Grade)	300	Lbs.
	208,000	Lbs.
Concrete Class "A"	95.2	Cu. yds
Steel Reinforcement	24815	Lbs.

SPAN

*Includes 1 1/2% additional steel to prevent overrun.

Bridge over Severn Creek

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ - MONTEREY
ROAD
STATION 786 + 76 PROJECT NO.
BRIDGE NUMBER DRAWING No. 7834 INDEX

REVISED General Note & Quantities E.D.S. DATE 3-21-46
REVISED DATE
REVISED DATE
REVISED DATE
DATE 2-5-46
DATE
DATE
DESIGNED BY S.T.G. Rex CHECKED BY
DETAILED BY CHECKED BY
TRACED BY CHECKED BY

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

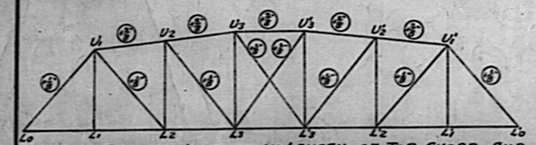


DIAGRAM SHOWING INCREASE IN LENGTH OF TOP CHORD AND DIAGONAL MEMBERS IN ORDER TO PROVIDE CAMBER SHOWN ON SHEET 1.

Mill to bearing

Tie Pl. 17½"x5/16"x1'-9" 5. Lac. 2¼"x3/8" Tie Pl. 17½"x5/16"x1'-9" Spl. Pl. 3"x5/16"

Tie Pl. 17½"x5/16"x1'-9" 5. Lac. 2¼"x3/8" Tie Pl. 17½"x5/16"x1'-9" Spl. Pl. 3"x5/16"

Tie Pl. 17½"x5/16"x1'-9" 5. Lac. 2¼"x3/8"

3/8" Pl. N.S.
5/16" Pl. F.S.

2-15" [- 33.9#
1 Cov. Pl. 18"x3/8"

2-Spl. Pls. 12"x5/16"

U1 U2 U3

Gusset Pls.

HANDRAIL MATERIAL
2-3" ∠s - 11.6#
1 L-3"x3"x5/16"
2"x¼" Lacing bars.- 5/16" rivets.
Field connections bolted with ¾" ø hex. head bolts with hex. nuts & lock washers.

W.F. 10"-33.0"

14 Tie Pls. 7½"x5/16"

2 Lb.-3"x3"x5/16"

Symmetrical about ℄ Top & Bottom Laterals symmetrical by rotation

11 Spa. @ 1'-9½" = 19'-8½"

7 Tie Pls. 7½"x5/16"

2 Lb.-3"x3"x5/16"

End Floor Beam

14'-6"x4"x3/8"

Diaph. {4 Lb.-3"x3"x3/8" / 1 Pl. 8"x3/8"}

Field Rivets F.S.

2-5/16" Pls.

1 Spl. Pl. 5"x5/16"

Tie Pl. 17½"x5/16"x1'-9"

5. Lac. 2¼"x3/8"

2-15" [- 33.9#
1 Cov. Pl. 18"x3/8"

Grade

Diaph. {2 Lb.-4"x3"x3/8" / 1 Pl.-9"x3/8" / 1 L-5"x3"x3/8"}

2 Lb.-4"x3"x3/8"
1 Pl.-10"x3/8"
1 L-5"x3"x3/8"

2 Lb.-4"x3"x3/8"
2 Fill Pls. 4½"x3/8"

Hole for 5" Pin.

½" Gusset Pls.

Cut flange of [here
½" Bearing Pls.

Top of Bridge Seat

2-12" [- 25.0#

2-Spl. Pls. 11"x5/16" (Inside)
2 " " 10"x5/16" (Outside)
2 Fill Pls. 10"x3/8" (")

2-Spl. Pls. 11"x½" (Inside)
2 " " 10"x½" (Outside)

2-12" [- 25.0#
2 Pls. 11"x3/8"

2-12" [- 25.0#
2 Pls. 11"x3/8"

FIELD NOTE:
Remove outside side splice plates while driving vert. rivets in splice.

3'-4" ±

3'-4" ±

9" 21'-0" 21'-0" 21'-0" 21'-0"

2 Tie Pls. 17"x5/16"x1'-8" 10 Int. Tie Pls. 10"x5/16"x1'-5" 10 Int. Tie Pls. 10"x5/16"x1'-5" 2-Spl. Pls. 18"x5/16" 2 Tie Pls. 18"x5/16"x1'-9½" 10 Int. Tie Pls. 10"x5/16"x1'-6" 2 Spl. Pls. 18"x5/16" 2 Tie Pls. 18"x5/16"x1'-9½" 10 Int. Tie Pls. 10"x5/16"x1'-6"

56" ø Hole 56" ø Hole

5/16" Pl. Diaph {2 Lb.-4"x3"x3/8" / 1 Pl.-9"x3/8" / 1 L-5"x3"x3/8"} 2 5/16" Pl. 1 L-3½"x3"x3/8" 2 5/16" Pl. 1 L-3"x3"x5/16" 5/16" Pl. 1 L-3"x3"x5/16"

Shoes to be set on ¼" Lead plates 19"x29" extending 2" outside of shoes or base plate

Sheet 6 of 8

REFERENCE DRAWINGS

Bridge over Severn Creek

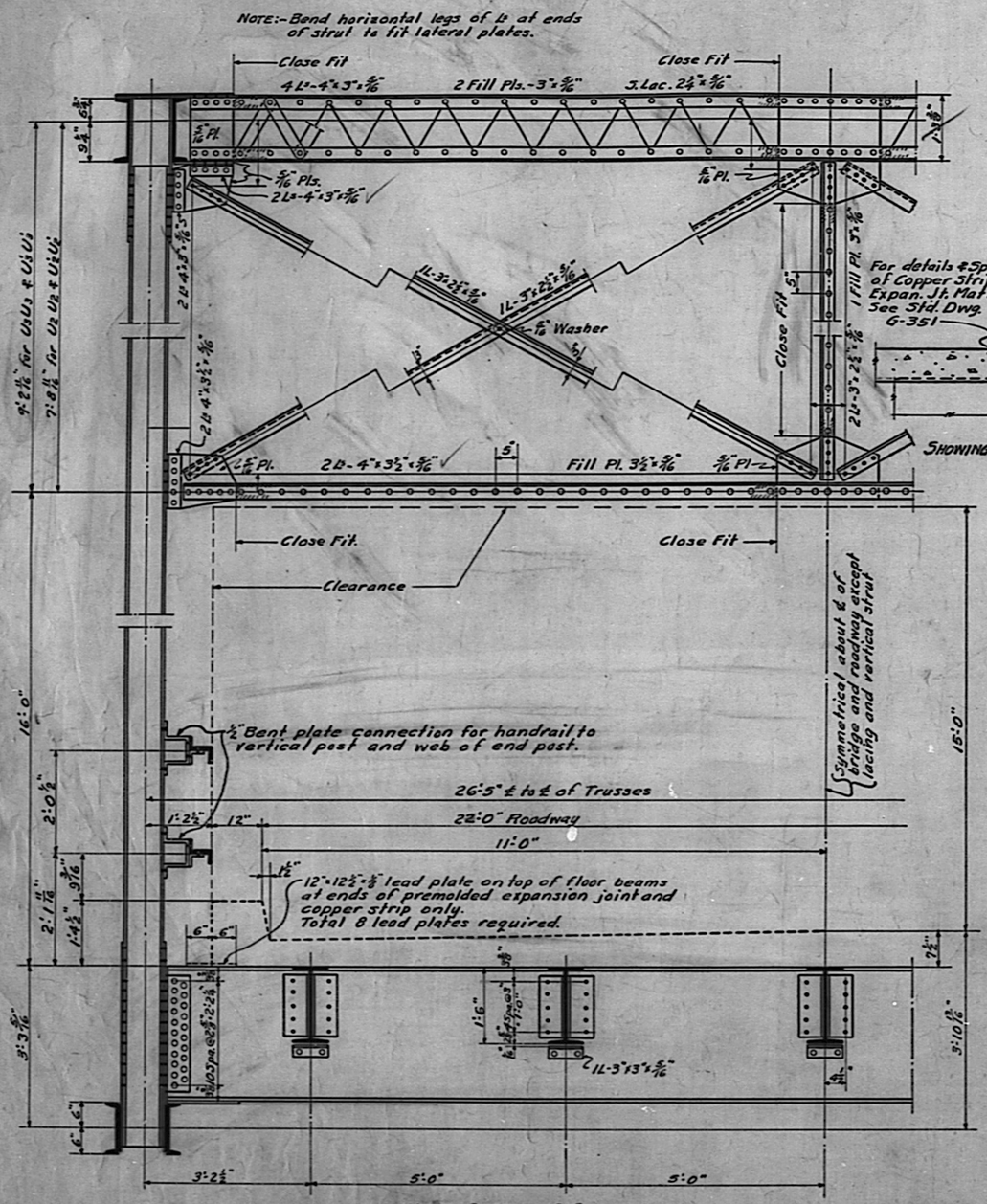
NOTE:-
Rivets in top and bottom chord splices may be changed from field to shop rivets or Vice Versa if more convenient for erection.

SPAN

DESIGNED BY 579 Rev. DETAILED BY TRACED BY CHECKED BY CHECKED BY CHECKED BY REVISED REVISED REVISED DATE DATE DATE DATE DATE 2-4-41

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ-MONTEREY
ROAD
STATION 786+76 PROJECT NO.
BRIDGE NUMBER DRAWING NO. 7834 INDEX

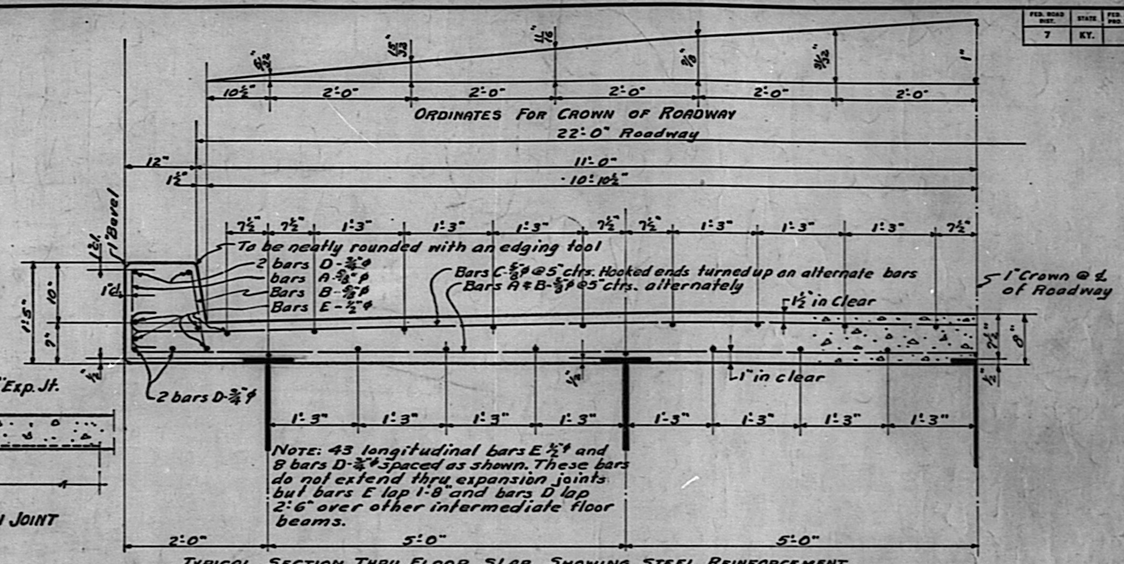
FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



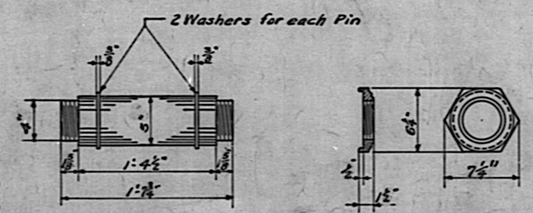
HALF SECTION A-A

SHOWING DETAILS OF TOP STRUT, SWAY BRACING AND FLOOR SYSTEM

ALL FLOOR BEAMS - W.F. 33" 125.0# END CONN ∠s 6"x4"x½" 2'-4¾"
ALL STRINGERS W.F. 18" 50.0# END CONN. ∠s 6"x6"x⅜" 1'-2½"



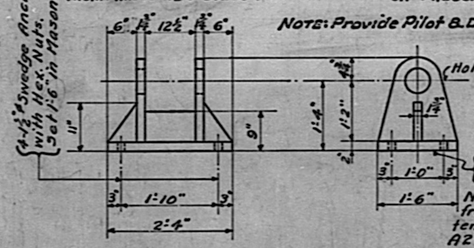
TYPICAL SECTION THRU FLOOR SLAB SHOWING STEEL REINFORCEMENT



FORGED STEEL PIN
A.S.T.M. A235-42 T Class F

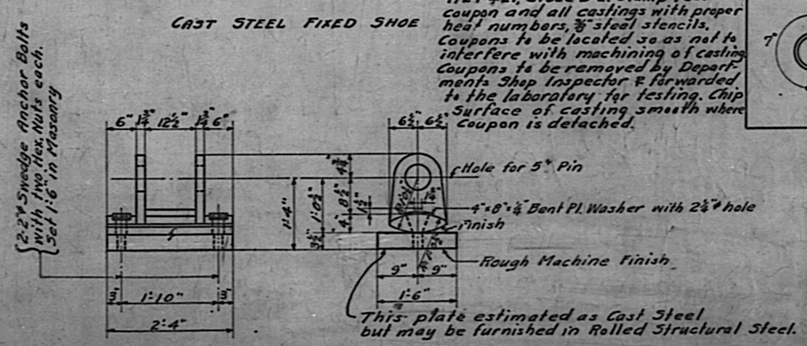
CAST STEEL NUT
OR PRESSED STEEL NUT

NOTE: Provide Pilot & Driving Nuts (See Specifications)



CAST STEEL FIXED SHOE

NOTE: Cast two Coupons on one piece from each heat 1¼"x2"x6" to make tensile tests as per A.S.T.M. Spec. A27-42T, Grade B-2. Stamp test coupon and all castings with proper heat numbers, ⅜" steel stencils. Coupons to be located so as not to interfere with machining of casting. Coupons to be removed by Department's Shop Inspector & forwarded to the laboratory for testing. Chip surface of casting smooth where coupon is detached.



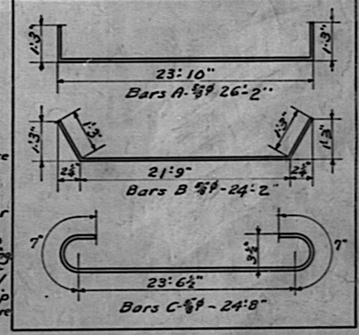
This plate estimated as Cast Steel but may be furnished in Rolled Structural Steel.

CAST STEEL EXPANSION ROCKER

SPAN

BILL OF STEEL REINFORCEMENT IN FLOOR SLAB AND CURB

MARK	No.	SIZE	LENGTH Ft.	LENGTH In.	TYPE	LOCATION
A	179	⅝"ϕ	26	2	Bent	Bottom of Slab
B	179	"	24	2	"	" " "
C	358	"	24	8	"	Top " "
D	8	¾"ϕ	20	10	Str.	Curb Sec. 1
D	32	"	22	2	"	" " " 2-3
D	16	"	22	0	"	" " 4-5
E	43	½"ϕ	20	10	"	Slab-Sec. 1
E	172	"	21	9	"	" " 2-3
E	86	"	22	0	"	" " 4-5



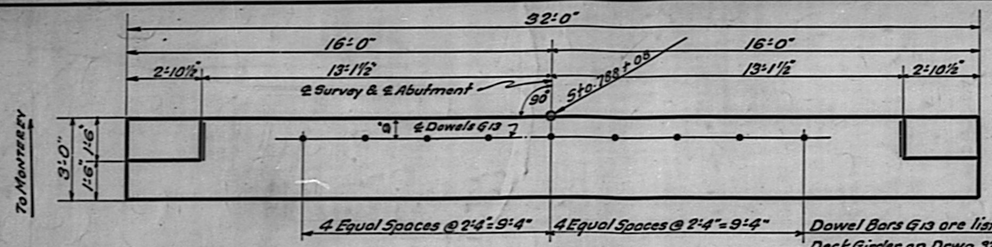
Sheet 7 of 8
REFERENCE DRAWINGS

Bridge over Severn Creek

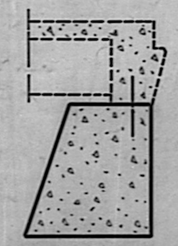
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ-MONTEREY
ROAD
STATION 786+76 PROJECT NO.
BRIDGE NUMBER DRAWING No. 7834 INDEX

DESIGNED BY S-79 Rev. CHECKED BY DATE REVISED Stringer Connection Angles DATE 2-25-46
DETAILED BY CHECKED BY DATE REVISED Bent Angles changed to ∠s DATE 3-21-46
TRACED BY CHECKED BY DATE 2-4-41 REVISED

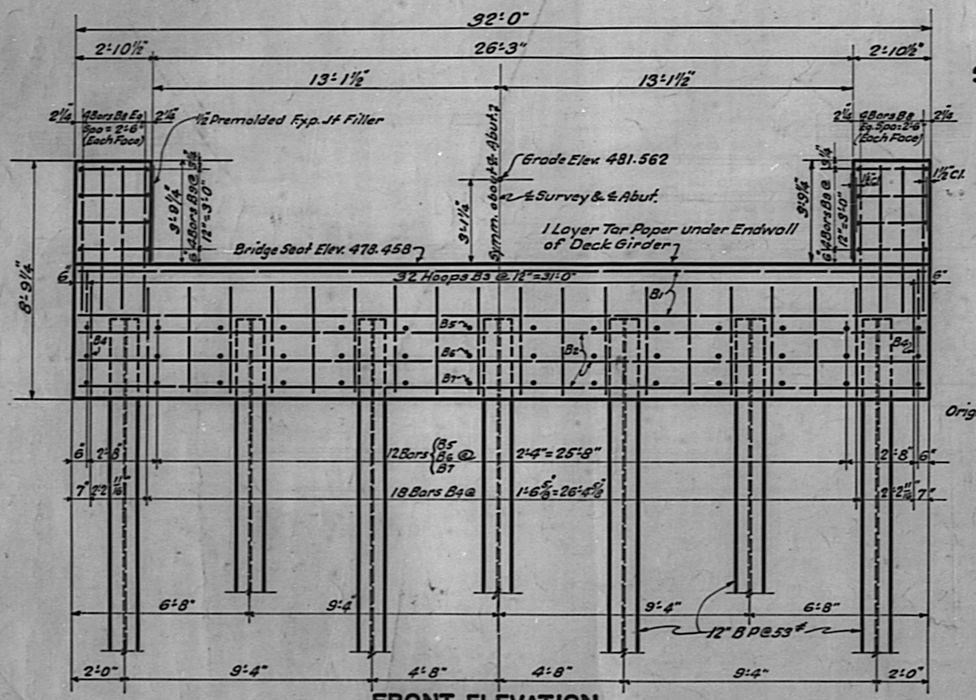
Fed. Road Dist.	State	Fed. Aid Proj. No.	Fiscal Year	Sheet No.	Total Sheets
7	Ky.				



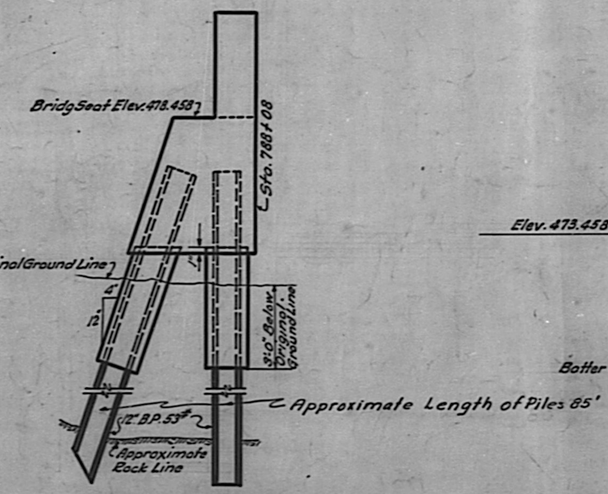
PLAN OF CAP



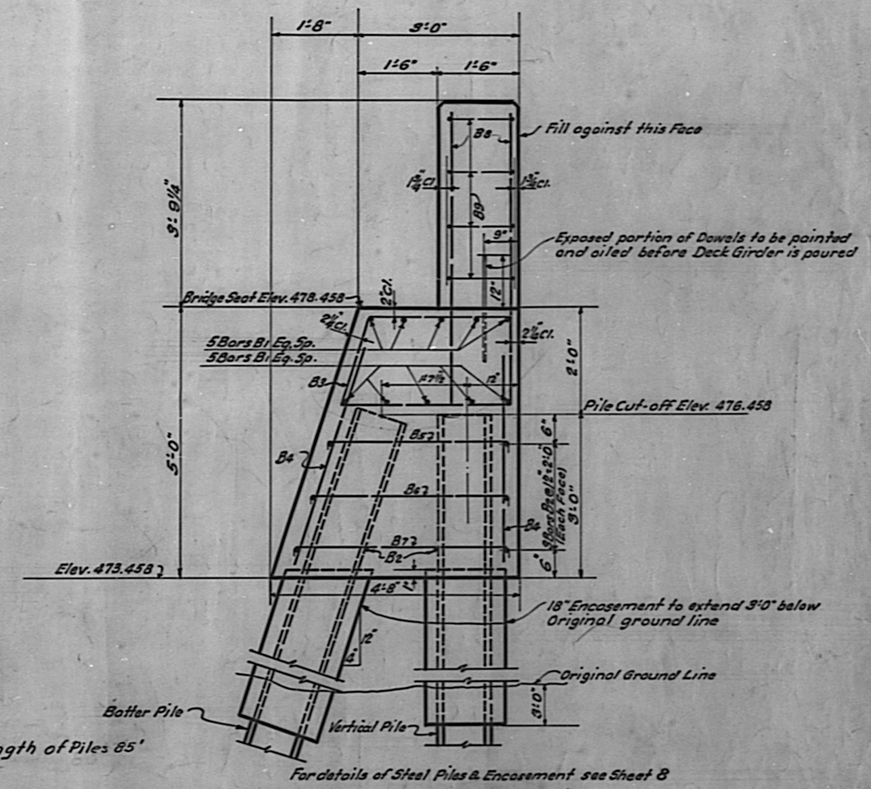
SECTION THRU CAP & R.C.D.G. SPANS



FRONT ELEVATION



END ELEVATION



SECTION THRU CAP AT ℄

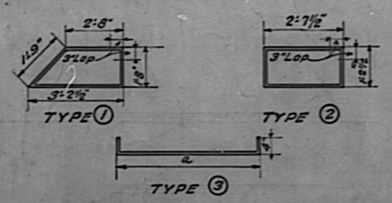
ESTIMATE OF QUANTITIES

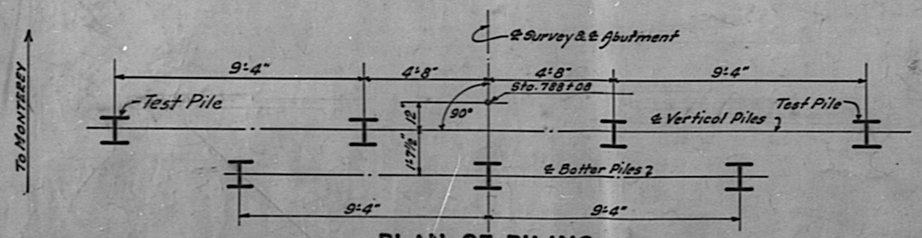
ABUTMENT NO. 2

Concrete Class "A"	23.9 Cu. Yds.
Reinforcement	2150 Lbs
7 Steel Piles 12" B.P. - 53#	600 Lin. Ft.

BILL OF REINFORCEMENT

MARK	TYPE	NO	SIZE	LENGTH FT.	LENGTH IN.	LOCATION	a FT.	a IN.
B1	Str.	10	1" ⌀	91	8	Cap - Long	-	-
B2	"	8	¾" ⌀	31	8	" "	-	-
B3	(1)	32	½" □	9	6	Cap - Hoops	-	-
B4	Str.	40	⅝" ⌀	4	6	Cap - Vertical	-	-
B5	(3)	14	"	3	10	" - Trans	3	4
B6	"	14	"	4	2	" "	3	8
B7	"	14	"	4	6	" "	4	0
B8	Str.	16	½" □	5	6	Parapet - Vertical	-	-
B9	(2)	8	"	7	10	" - Hoops	-	-





PLAN OF PILING

Cap Removed - Piles shown at Cut-off Elev.

Do not destroy. See Dwg. #7834.

ABUTMENT 2

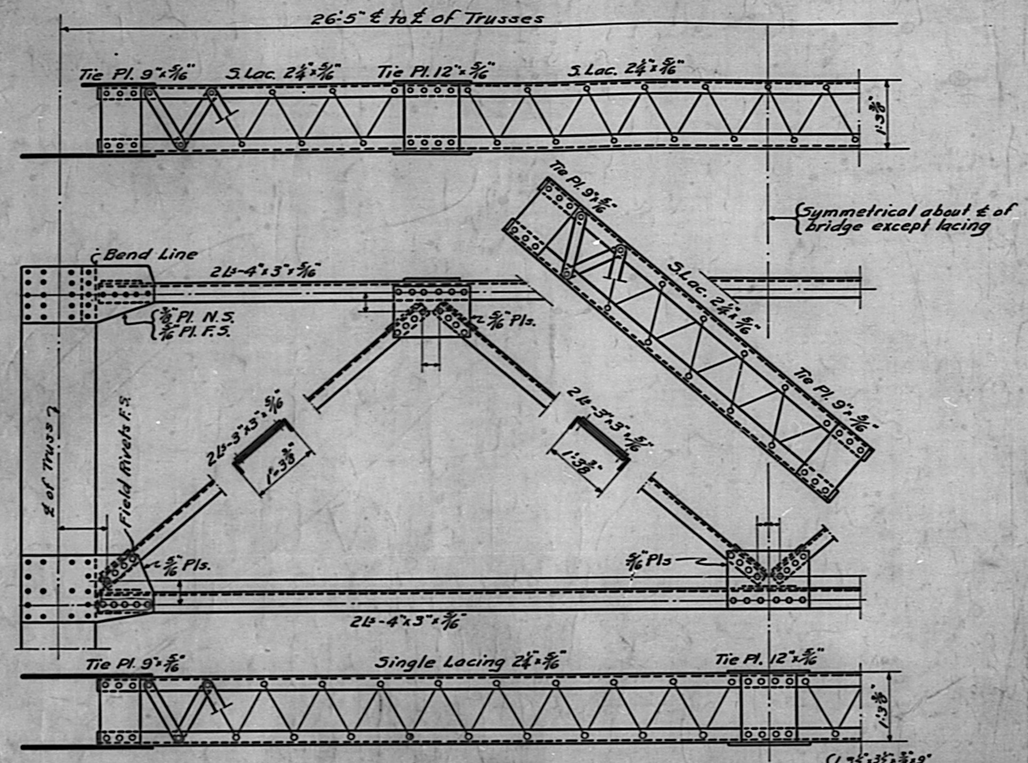
Bridge over Severn Creek — Sheet 7A of 12

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ — MONTEREY
ROAD
STATION 786+76 PROJECT NO.

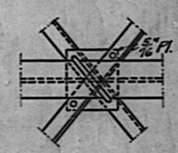
Drawing No. 7823 — Index 7834

Designed by	Gibbs	Date	Revised	Date	Revised	Date
Traced by		Date 1/16/47				
Checked by	CRJS	Date 1-41				

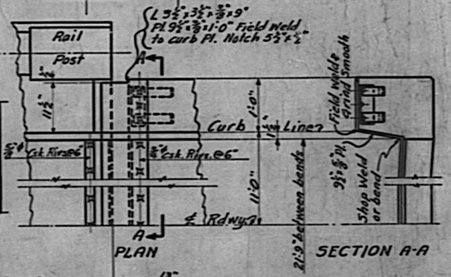
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



DETAILS OF PORTAL

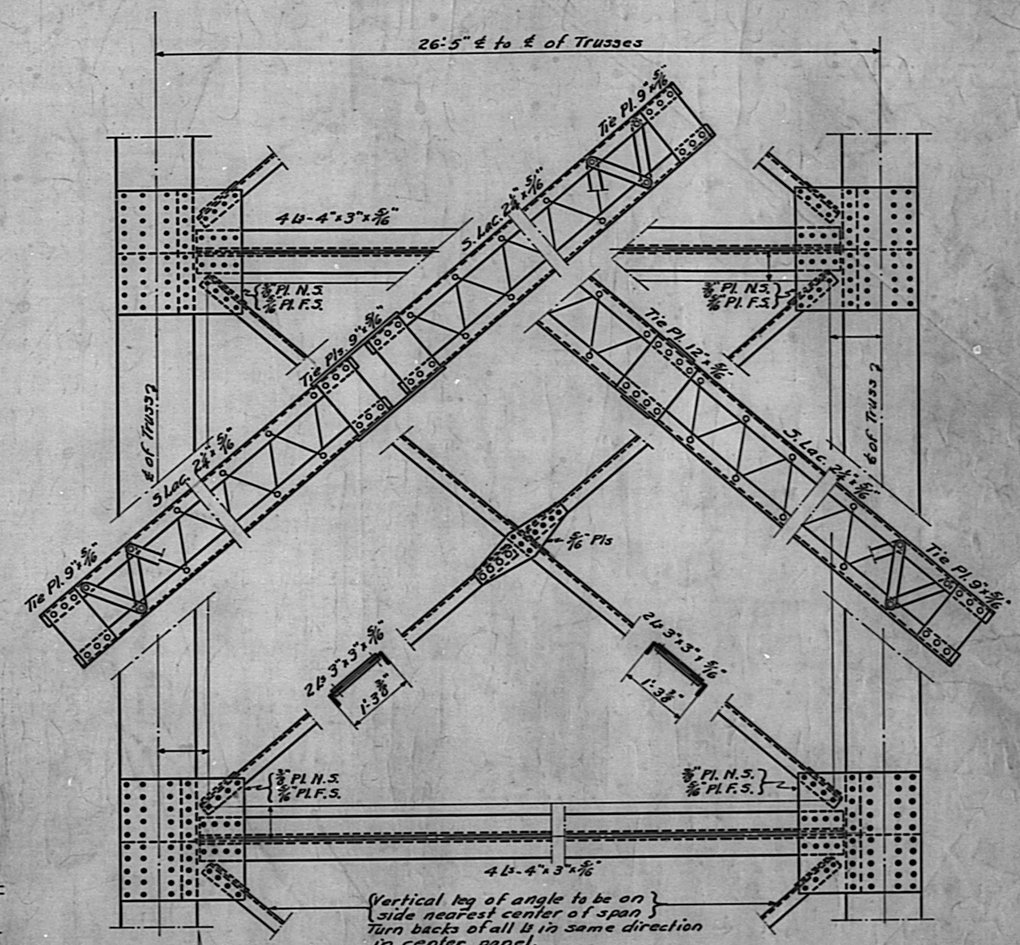


TYPICAL DETAIL OF BOTTOM LATERAL HANGER

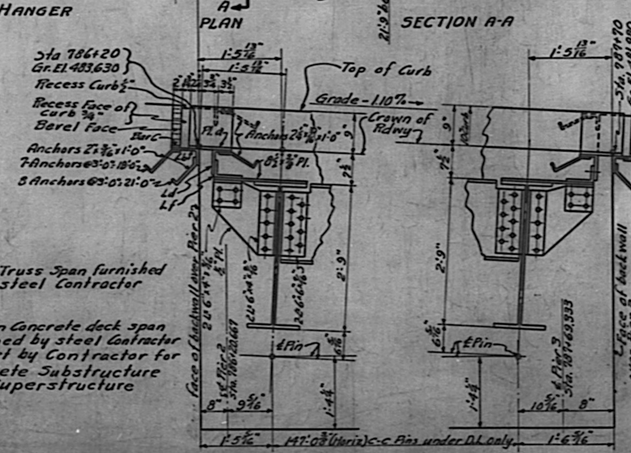


PLAN

SECTION A-A



DETAILS OF TOP LATERALS

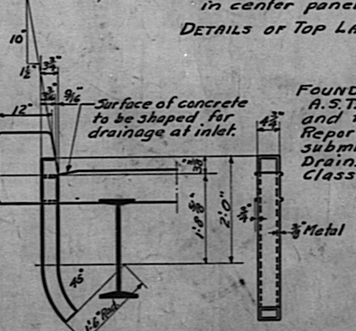


EXPANSION DAM DETAILS AT ENDS OF 147'-10" SPAN
Material Same for Both Dams

MATERIAL

Pl. a - 9½"x⅜" Bent to Crown - ¾" csk. Rivets @ 6"
L d - 6"x4"x½"x21'-9" Bent to crown. Vert. leg field drilled for ¾" ϕ Rivets @ 4" ctrs.
L f - 6"x4"x½"x23'-10" Shop holes @ 4" in Vert. leg, horiz. leg drilled in field.
} Dam on Truss Span furnished + set by steel Contractor

L b - 6"x4"x⅜"x21'-9" Bent to crown. 5-13/16" ϕ holes @ 4'-0" ctrs. in vert. leg for bolting to forms
bar c - 2"x⅜"x21'-9" - ⅝" csk Rivets @ 6" ctrs
} Dam on Concrete deck span furnished by steel Contractor but set by Contractor for concrete Substructure and Superstructure



DETAILS OF CAST IRON DRAINS
14 Reqd. @ Approx. 57# Ea.

FOUNDRY NOTE:- All drains to be gray iron castings. A.S.T.M. Specifications A-48-41 except that tensile and transverse tests are not required. Form T-521, Report of Field Inspection of Castings, is to be submitted to the Laboratory. The cost of Cast Iron Drains is to be included in the unit price bid for Class "A" Concrete.

Sheet 8 of 8
REFERENCE DRAWINGS

BRIDGE OVER SEVERN CREEK

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ-MONTEREY
ROAD

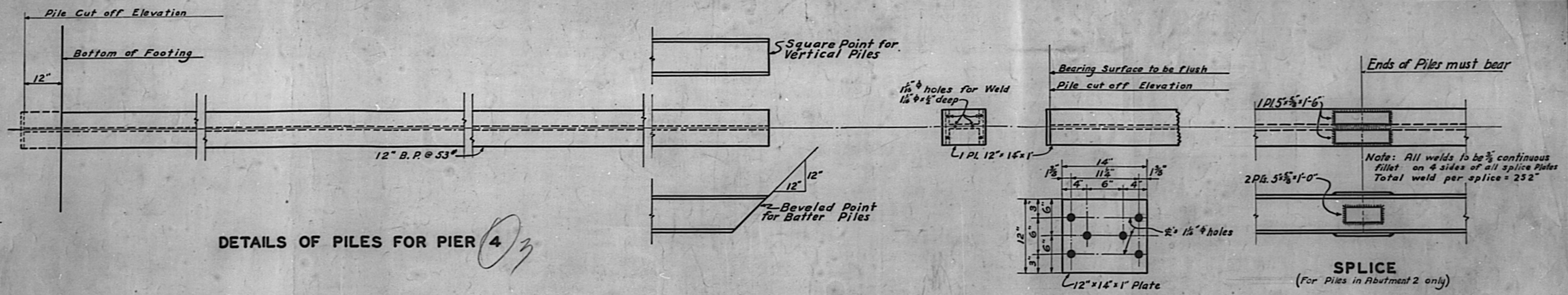
STATION 786+76 PROJECT NO.

BRIDGE NUMBER | DRAWING NO. 7834 | INDEX

SPAN ●

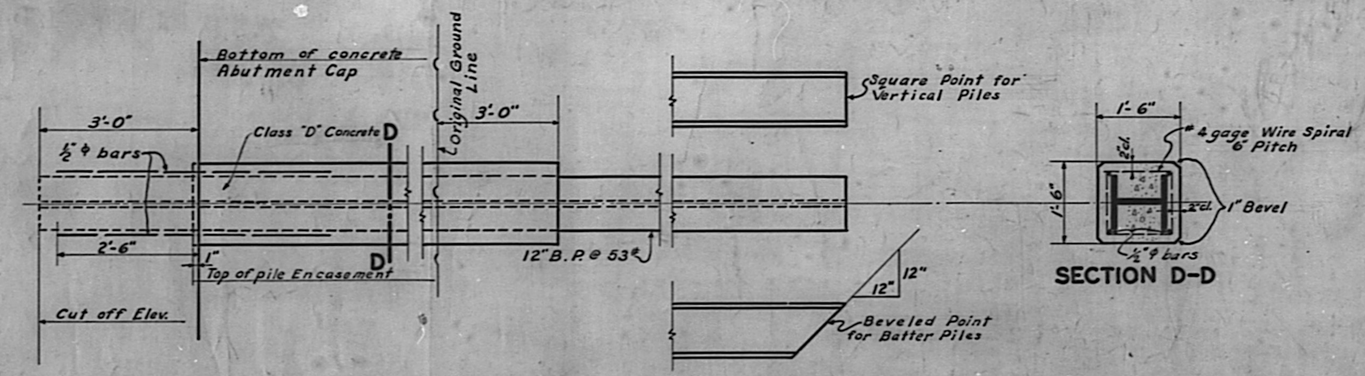
DESIGNED BY S-79 Rev. DATE REVISED
DETAILED BY CHECKED BY DATE REVISED
TRACED BY CHECKED BY DATE REVISED
E.D.S. DATE 3-21-46
DATE DATE

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



DETAILS OF PILES FOR PIER 4 ~~0~~ 3

SPLICE
(For Piles in Abutment 2 only)



DETAILS OF PILES FOR ABUTMENT 2

SECTION D-D

PILING NOTE

Test Piles to determine the length of piling required shall be driven at the Locations shown on the plans. Test Piles shall be accurately located so as to be used in the finished structure. The test piles shall be 12" B.P. @ 53#. Payment for test piles shall be in accordance with Specifications.

Structural Steel Piles to be made from material conforming to the requirements of the Standard Specifications of the A.S.T.M. Serial Designation A-7-39 with a minimum copper content of two tenths per cent (0.2%).

All piles to be driven to refusal or 50 Tons bearing per pile in rock.

Where shown on plans, piles shall be encased as shown on plans before pouring cap.

Material in #4 gage wire spiral to conform to A.S.T.M. Specifications A82-34.

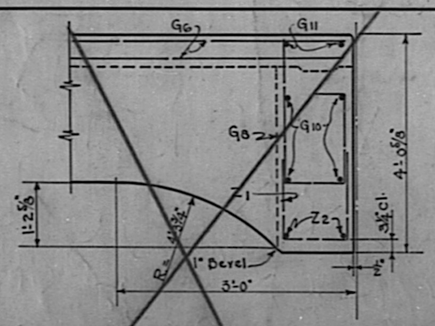
Payment for piles shall be made at the rate of the unit price bid per linear foot of piles remaining in the completed structure in accordance with the plans and Specifications, with no additional compensation for encasement, reinforcement, steel caps, welding, splice plates or other incidental work.

Welding shall conform to requirements of 1938 Amended Standard Specifications paragraph 5.2.3-A-9a.

No paint required on steel Piles.

The Steel Plates shall be made from material conforming to the same specifications as for steel piles.

Steel Piles shall be driven full length except that for Abutment 2 the contractor shall have the option of driving one length of pile and splice the pile in accordance with details shown hereon before driving to final bearing.



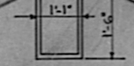
REVISION IN ENDWALL AND OUTSIDE BEAMS

(Spans 2 over Pier # 2
" 5 " " # 4

NOTE:-
The above revision is not to be used in connection with Drawing 7834
2-4-41

BILL OF EXTRA REINFORCEMENT ~

Mark	Type	No.	Size	Length Ft.	Length In.	Location
Z1	①	42	1/2" □	3	11	Endwall of Spans #2 & 5 over Piers #2 & 4
Z2	Str	4	1/2" ϕ	21	5	" " " #2 & 5 " " #2 & 4



TYPE ①

ESTIMATE of EXTRA QUANTITIES ~		
Item	Span #2	Span #5
Concrete Class "A"	1.3 Cu.yds.	1.3 Cu.yds.
Reinforcement	100 Lbs.	100 Lbs.

Do not destroy
See Dwg. 7834

DETAILS OF PILING

Sheet 8 of 12

REFERENCE DRAWINGS

BRIDGE over SEVERN CREEK

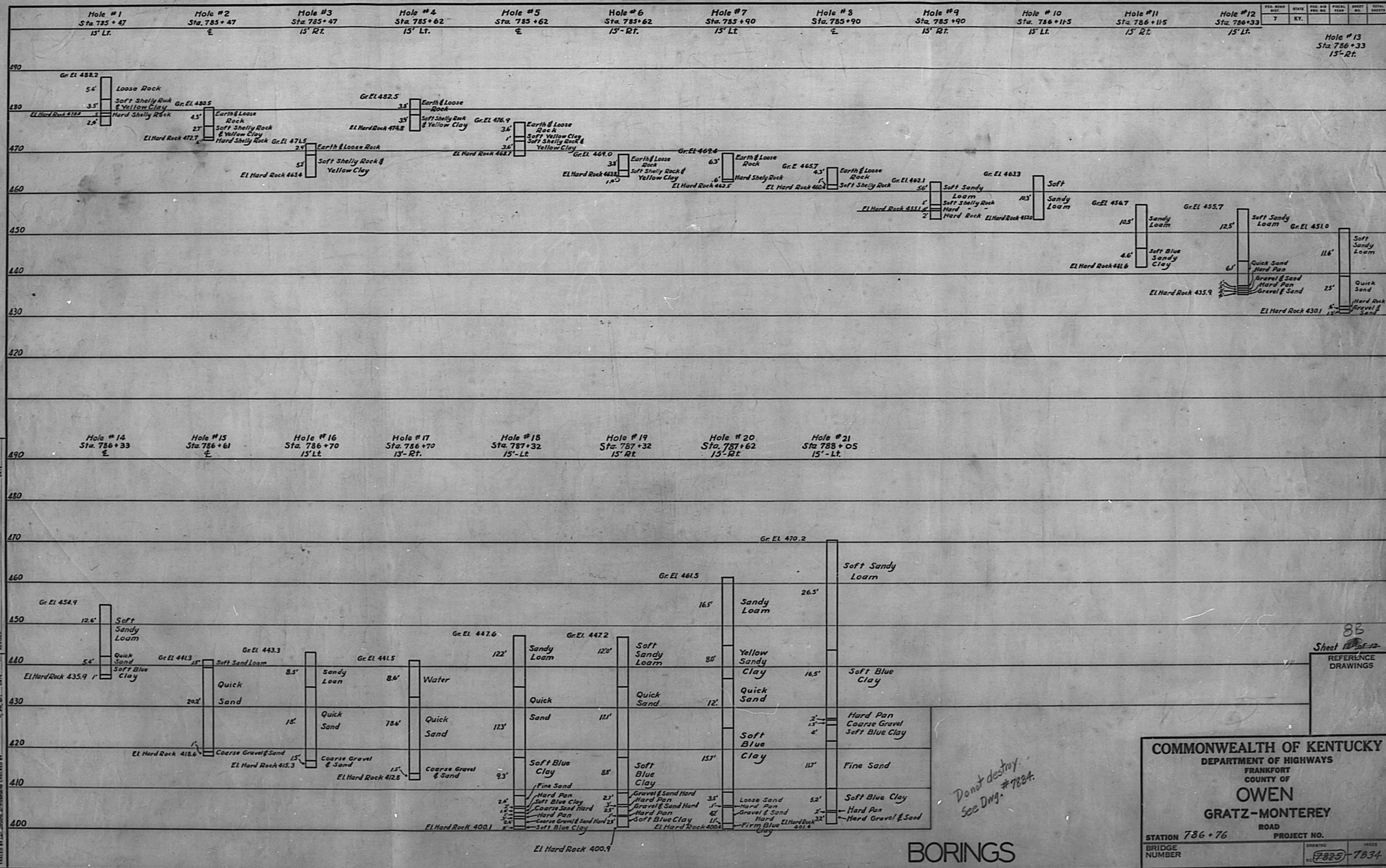
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ — MONTEREY
ROAD

STATION 786 + 76 PROJECT NO.

BRIDGE NUMBER

DRAWING NO. 7825 INDEX 7834

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


Hole #1 Sta. 785+47 15' Lt.
Gr. El 488.2
5.4' Loose Rock
3.5' Soft Shelly Rock & Yellow Clay
El Hard Rock 479.2
.8' Hard Shelly Rock
2.8'
Hole #2 Sta. 785+47 ℄
Gr. El 480.5
4.5' Earth & Loose Rock
2.7' Soft Shelly Rock & Yellow Clay
El Hard Rock 472.7
.6' Hard Shelly Rock
Hole #3 Sta. 785+47 15' Rt.
Gr. El 471.5
2.9' Earth & Loose Rock
5.2' Soft Shelly Rock & Yellow Clay
El Hard Rock 463.4
Hole #4 Sta. 785+62 15' Lt.
Gr. El 482.5
3.5' Earth & Loose Rock
3.9' Soft Shelly Rock & Yellow Clay
El Hard Rock 474.8
Hole #5 Sta. 785+62 ℄
Gr. El 476.9
3.6' Earth & Loose Rock
1' Soft Yellow Clay
3.6' Soft Shelly Rock & Yellow Clay
El Hard Rock 468.7
Hole #6 Sta. 785+62 15' Rt.
Gr. El 469.0
3.8' Earth & Loose Rock
El Hard Rock 461.8
1.0' Soft Shelly Rock & Yellow Clay
Hole #7 Sta. 785+90 15' Lt.
Gr. El 469.4
6.3' Earth & Loose Rock
.6' Hard Shely Rock
El Hard Rock 462.5
Hole #8 Sta. 785+90 ℄
Gr. E 465.7
4.3' Earth & Loose Rock
1' Soft Shelly Rock
El Hard Rock 460.4
Hole #9 Sta. 785+90 15' Rt.
Gr. El 462.1
5.6' Soft Sandy Loam
1' Soft Shelly Rock
El Hard Rock 455.1
2' Hard Rock
Hole #10 Sta. 786+11.5 15' Lt.
Gr. El 463.3
10.3' Soft Sandy Loam
El Hard Rock 453.0
Hole #11 Sta. 786+11.5 15' Rt.
Gr. El 454.7
10.5' Sandy Loam
4.6' Soft Blue Sandy Clay
El Hard Rock 441.6
Hole #12 Sta. 786+33 15' Lt.
Gr. El 455.7
12.5' Soft Sandy Loam
6.1' Quick Sand Hard Pan
Gravel & Sand
Hard Pan
Gravel & Sand
El Hard Rock 435.9
Hole #13 Sta. 786+33 15' Rt.
Gr. El 451.0
11.6' Soft Sandy Loam
7.5' Quick Sand
Hard Rock
Gravel & Sand
El Hard Rock 430.1
Hole #14 Sta. 786+33 ℄
Gr. El 454.9
12.6' Soft Sandy Loam
5.4' Quick Sand
Soft Blue Clay
El Hard Rock 435.9
Hole #15 Sta. 786+61 ℄
Gr. El 441.3
15' Soft Sand Loam
20.2' Quick Sand
1' Coarse Gravel & Sand
El Hard Rock 418.6
Hole #16 Sta. 786+70 15' Lt.
Gr. El 443.3
8.5' Sandy Loam
18' Quick Sand
15' Coarse Gravel & Sand
El Hard Rock 415.3
Hole #17 Sta. 786+70 15' Rt.
Gr. El 441.5
8.6' Water
78.6' Quick Sand
1.5' Coarse Gravel & Sand
El Hard Rock 412.8
Hole #18 Sta. 787+32 15' Lt.
Gr. El 447.6
12.2' Sandy Loam
12.3' Quick Sand
9.3' Soft Blue Clay
Fine Sand
Hard Pan
Soft Blue Clay
Coarse Sand Hard
Hard Pan
Coarse Gravel & Sand Hard
Soft Blue Clay
El Hard Rock 400.1
Hole #19 Sta. 787+32 15' Rt.
Gr. El 447.2
12.0' Soft Sandy Loam
12.1' Quick Sand
8.5' Soft Blue Clay
Gravel & Sand Hard
Hard Pan
Gravel & Sand Hard
Hard Pan
Soft Blue Clay
El Hard Rock 400.9
Hole #20 Sta. 787+62 15' Rt.
Gr. El 461.5
16.5' Sandy Loam
8.0' Yellow Sandy Clay
12.' Quick Sand
15.7' Soft Blue Clay
Loose Sand
Hard Pan
Gravel & Sand
Hard
Firm Blue Clay
El Hard Rock 400.4
Hole #21 Sta. 788+05 15' Lt.
Gr. El 470.2
26.5' Soft Sandy Loam
16.5' Soft Blue Clay
Hard Pan
Coarse Gravel
Soft Blue Clay
11.7' Fine Sand
Soft Blue Clay
Hard Pan
Hard Gravel & Sand
El Hard Rock 401.4
Donot destroy See Dwg. #7834.
BORINGS
Sheet 8B of 12
REFERENCE DRAWINGS
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
OWEN
GRATZ-MONTEREY
ROAD
STATION 786+76
PROJECT NO.
BRIDGE NUMBER
DRAWING 7825
INDEX 7834
DESIGNED BY
DETAILED BY
TRACED BY
CHECKED BY
CHECKED BY
CHECKED BY
REVISED
REVISED
REVISED
DATE
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DATE
FED. ROAD DIST. 7
STATE KY.
FED. AID PROJ. NO.
FISCAL YEAR
SHEET NO.
TOTAL SHEETS