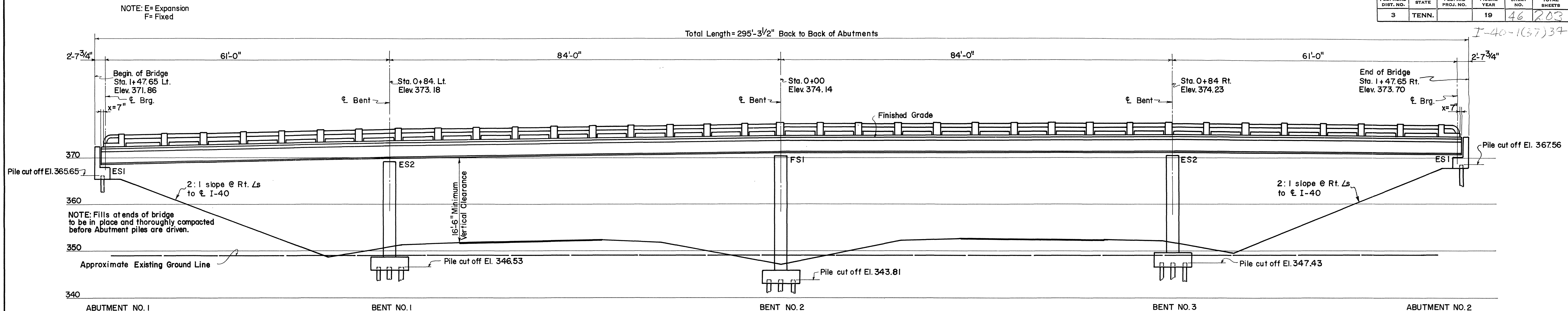


I-40-(37)37



ELEVATION AT RT. 814 TO STATE ROUTE 8114

GENERAL NOTES

SPECIFICATIONS: Standard Road & Bridge Specifications of the Tennessee Department of Highways.  
 LOADING: HS-44.  
 CONCRETE: To be Class "A".  
 REINFORCING STEEL: To be intermediate or hard grade. See Specifications. Standard hook details as recommended by C.R.S.I. shall apply.  
 STRUCTURAL STEEL: See notes on Dwg. No. K-4-108.  
 FORMS & FINISH: See Specifications.  
 PILES: To be Precast Concrete, Size I for Bents & Abutments.  
 HIGH TENSILE BOLTS: See AASHTO Specifications Article 2.10.20 with Amendments thereto.  
 STUD WELDING: See Special Provisions.  
 PRESTRESSED CONCRETE PILES: See Special Provisions.  
 PAINT: Basic Lead Silico Chromate: See Special Provisions regarding Section 132 Steel Structures (Painting)

SPECIAL NOTE-TEST PILES

Before any piles are ordered a Precast Concrete Test Pile 40' long shall be driven in its final location in the footings as designated on the plan this sheet. From the results obtained, Precast Concrete Piles shall be ordered of such length as to provide a minimum bearing of 30 tons for the Bents & Abutments.

LIST OF DRAWINGS

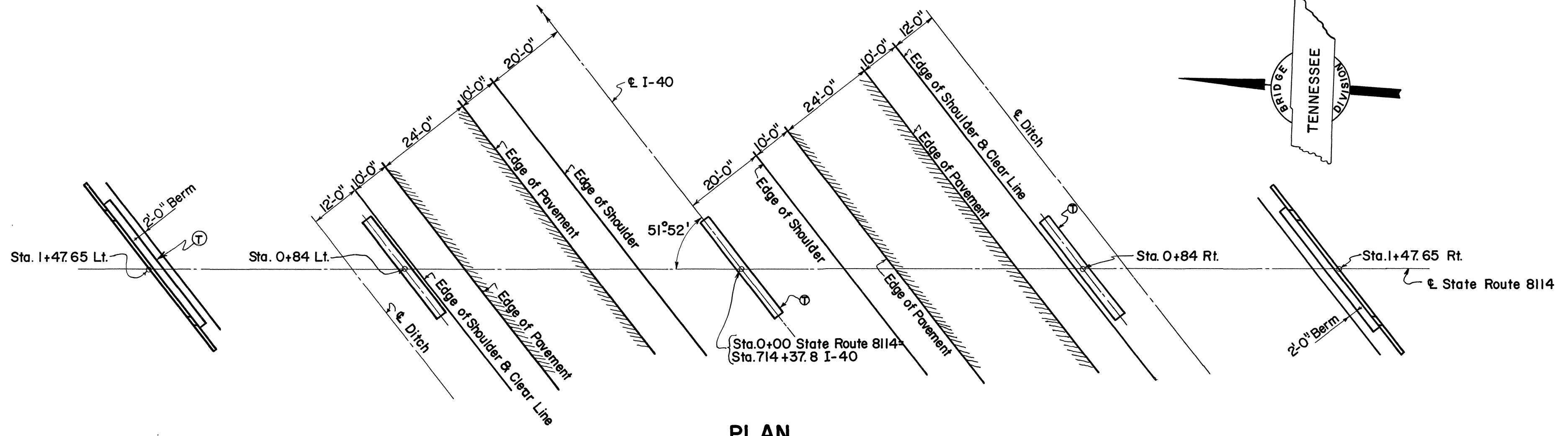
LIST OF DRAWINGS	DWG. NO.
HANDRAIL- See note this sheet	H-5-110
STRUCTURAL STEEL DETAILS	K-4-107, K-4-108
SLAB PLAN	K-4-109
ABUTMENTS NO. 1 & 2	K-4-110
BENTS NO. 1, 2 & 3	K-4-111
BEARING DEVICES & ROADWAY EXPANSION DEVICES	K-4-112
BILL OF STEEL	K-4-113
PILES	H-5-111

HANDRAIL NOTE

Build handrail according to Standard Dwg. H-5-110 with L=6'-10 1/8"±, Q=290'-11 1/2", x=0'-7". Dimensions shown are same for both sides of bridge.

TRAFFIC DATA

Estimated ADT (1975) = 576



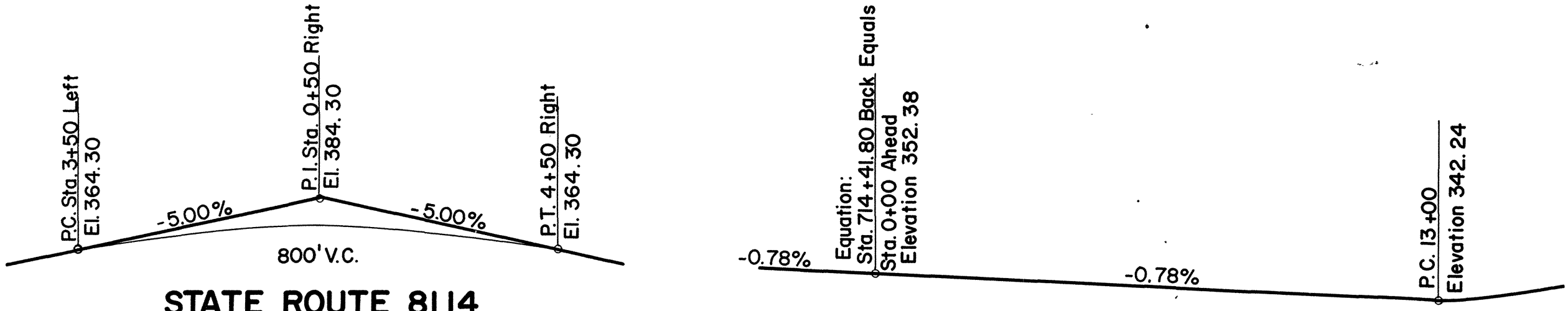
PLAN

Ⓢ Indicates Location of Test Piles

ESTIMATED QUANTITIES

ITEM	Excavation Cu.Yds. Dry**	Concrete Class "A" Cu.Yds.	Steel- Lbs.		Concrete Handrail Lin.Ft.	Size I Precast Concrete Piles Lin.Ft. *	Precast Concrete Test Piles Lin.Ft.
			Reinforcing	Structural			
Superstructure		191.9	36,604	Lump Sum			
Abutment No.1		21.5	2,206				
Bent No.1	43	28.2	4,117				
Bent No.2	41	30.1	4,431				
Bent No.3	46	28.1	4,132				
Abutment No.2		21.5	2,206				
Totals	130	321.3	53,696	Lump Sum	582	1,290	120

\* NOTE: The contractor may substitute Prestressed Concrete Piles for the Precast Concrete Piles.  
 \*\* Excavation based on Lower Road Profile.  
 \*\*\* Lump Sum Total Weight Structural Steel 181,900 lbs. includes Bearing Devices, Roadway Expansion Devices & Shear Connectors.



STATE ROUTE 8114

NOTE: Elevations shown are based on Finished Grade.

INTERSTATE 40

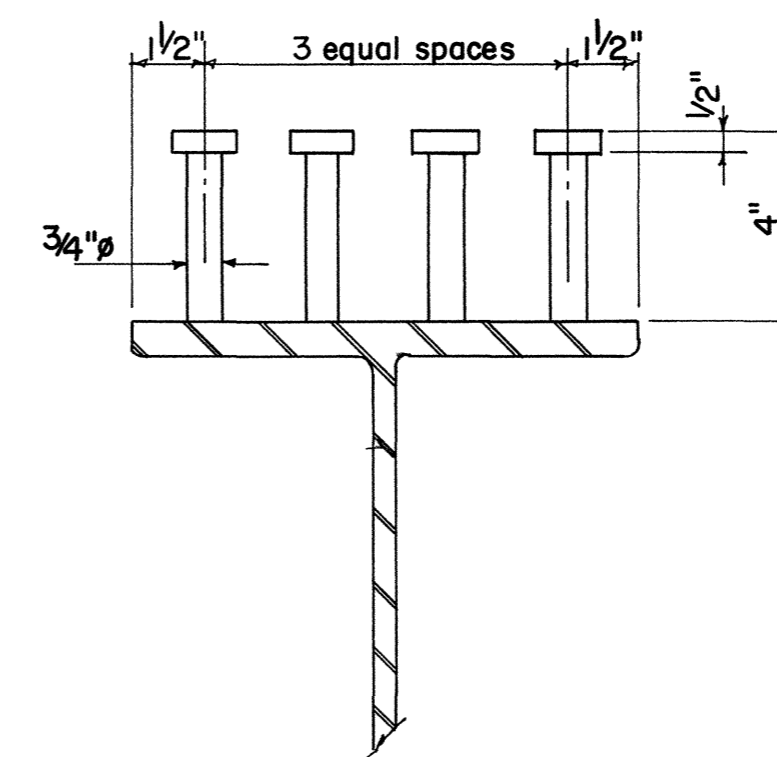
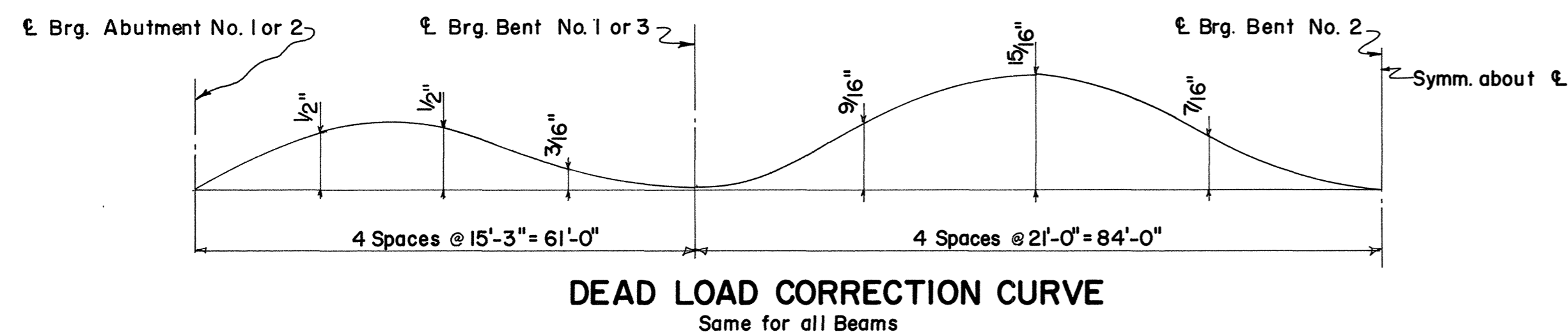
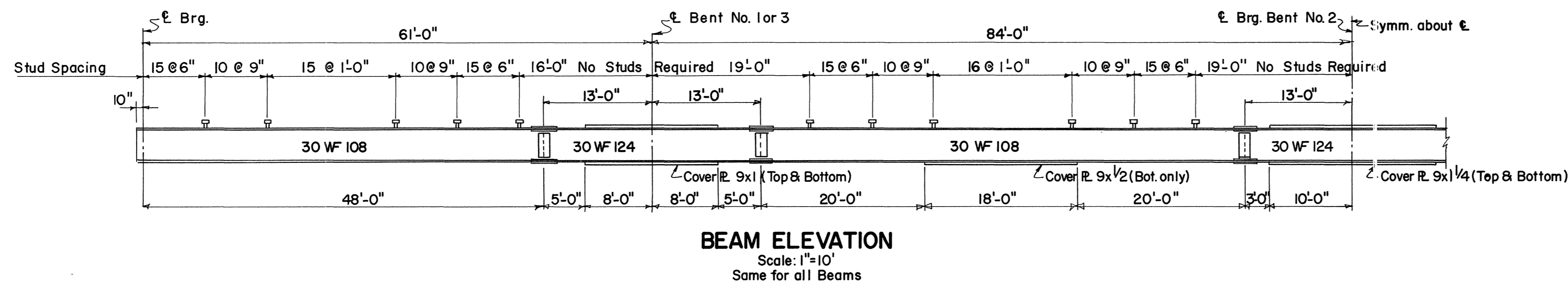
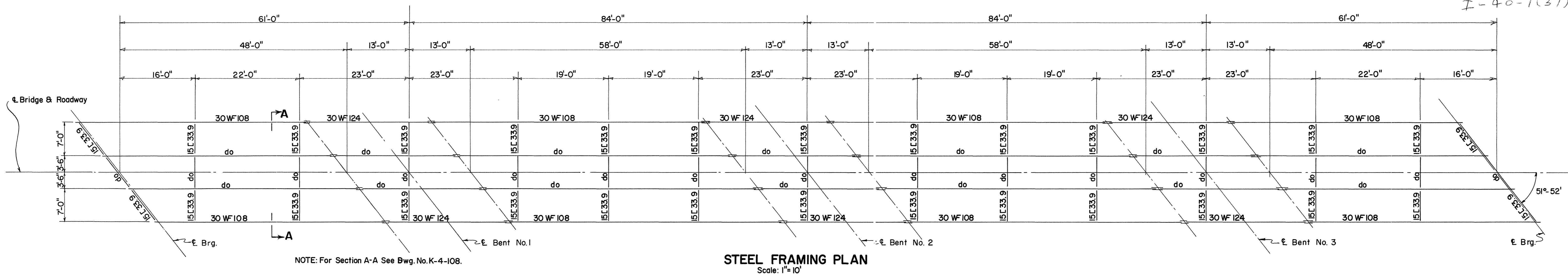
NOTE: Elevations shown are based on Finished Grade

ALTERNATE "S"  
 24'-0" ROADWAY WITH 1'-0" CURBS  
 STATE OF TENNESSEE  
 DEPARTMENT OF HIGHWAYS  
 AND PUBLIC WORKS  
 NASHVILLE  
 LAYOUT OF BRIDGE  
 STATE ROUTE 8114 OVER I-40  
 STA. 714+37.80  
 FAYETTE COUNTY  
 1960

DESIGNED BY: W.P. Greer  
 DRAWN BY: R.B. Gentry & J. D. G.  
 TRACED BY: J. D. G.  
 CHECKED BY: J. D. G.  
 DATE: 11/29/60

CORRECT: Fred Greer  
 BRIDGE ENGINEER  
 APPROVED: [Signature]  
 STATE HIGHWAY ENGINEER

I-40-1(37)34



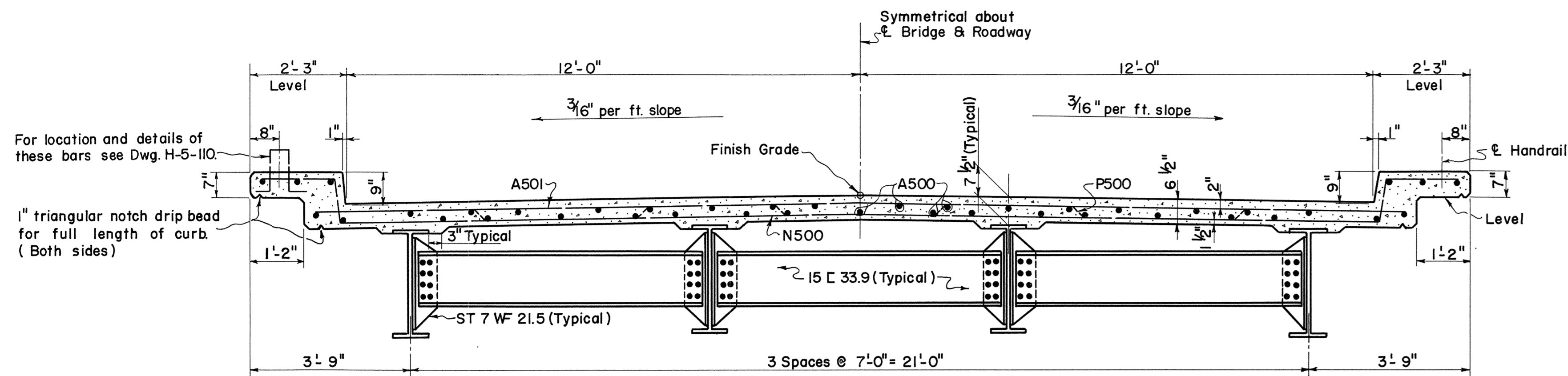
NOTE: Studs shall be placed in sets of 4 as shown this sheet. Studs shall be solid or granular fluxed and automatically end welded to the beams. See Special Provisions regarding Stud Welding.

**ALTERNATE "S"**  
STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE  
**STRUCTURAL STEEL DETAILS**  
STATE ROUTE 8114 OVER I-40  
STA. 714+37.80  
FAYETTE COUNTY  
1960

DESIGNED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
DRAWN BY: W.P. Greer DATE: \_\_\_\_\_  
TRACED BY: J. Williams DATE: 12/1/60  
CHECKED BY: J.D.G. DATE: \_\_\_\_\_

CORRECT *Fred Greer*  
BRIDGE ENGINEER  
APPROVED *ced*  
STATE HIGHWAY ENGINEER

I-40-1(37)34

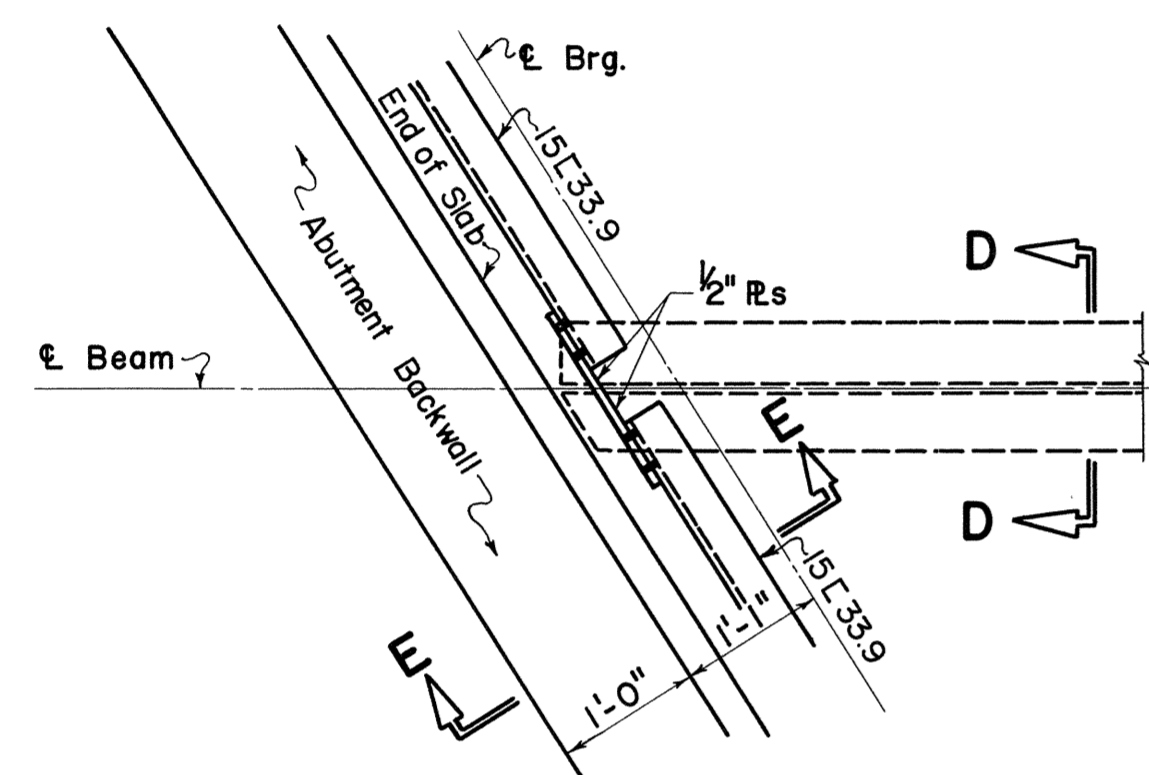


SECTION A-A

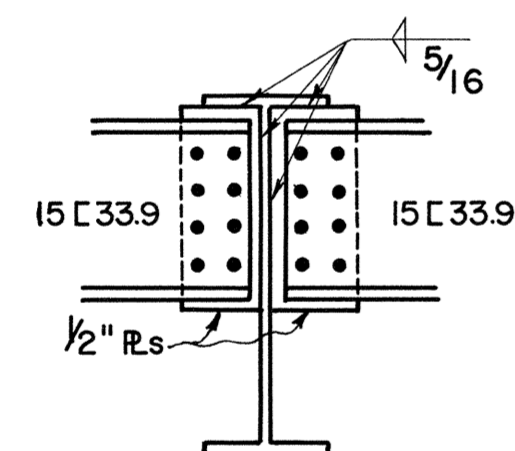
For location and details of these bars see Dwg. H-5-110.  
1\"/>

**NOTES**

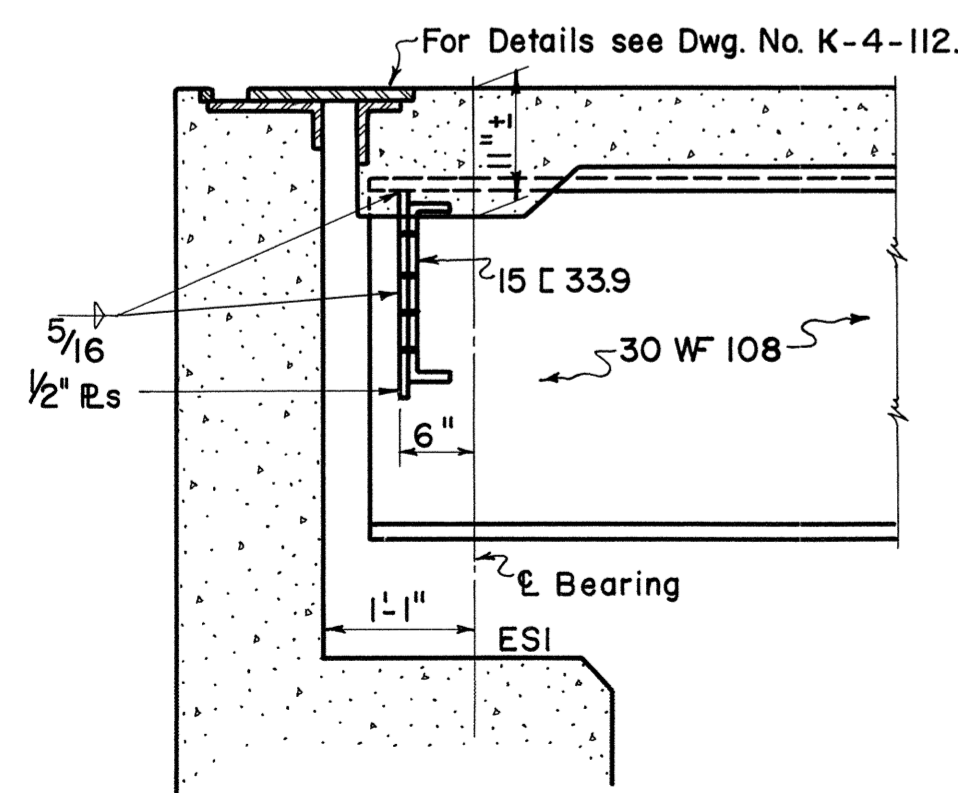
- Structural Steel for Beams, Cover Plates, Structural Tees and Bearings shall conform to A.S.T.M. A373. Structural Steel for Diaphragms and Roadway Expansion Devices shall conform to A.S.T.M. A7.
- Field connections to be made with 7/8\"/>



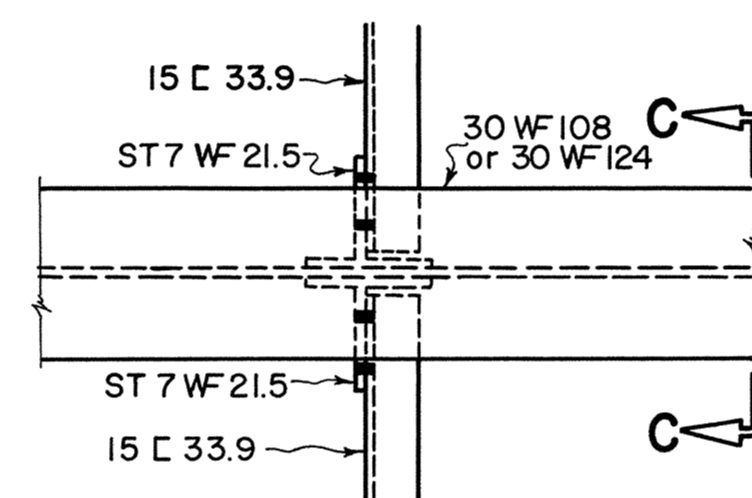
PLAN END DIAPHRAGM



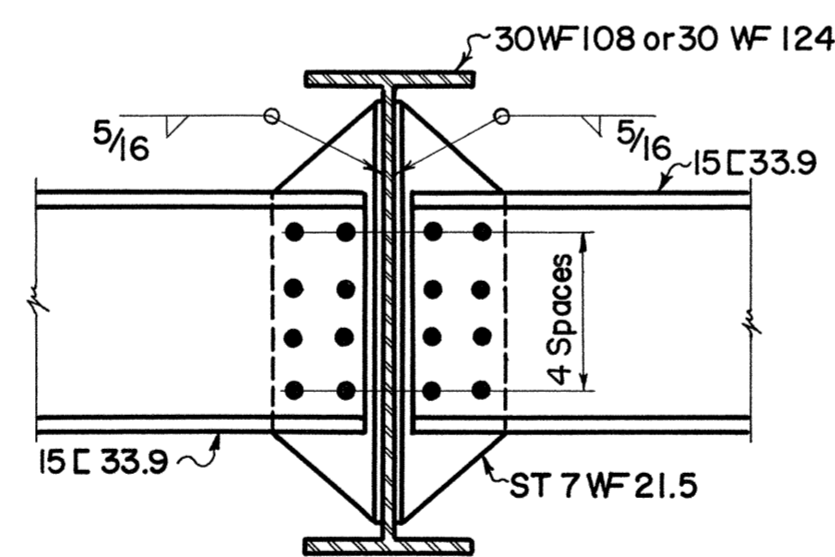
SECTION D-D  
END DIAPHRAGM



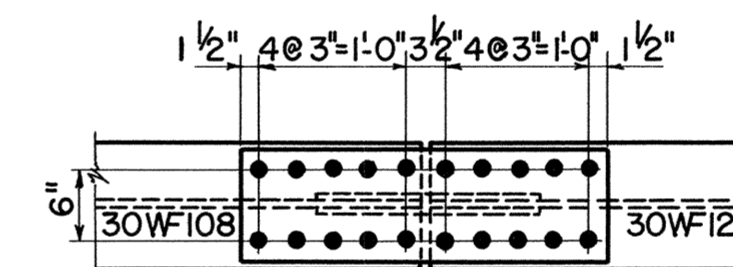
SECTION E-E  
END DIAPHRAGM



PLAN INTERMEDIATE DIAPHRAGM

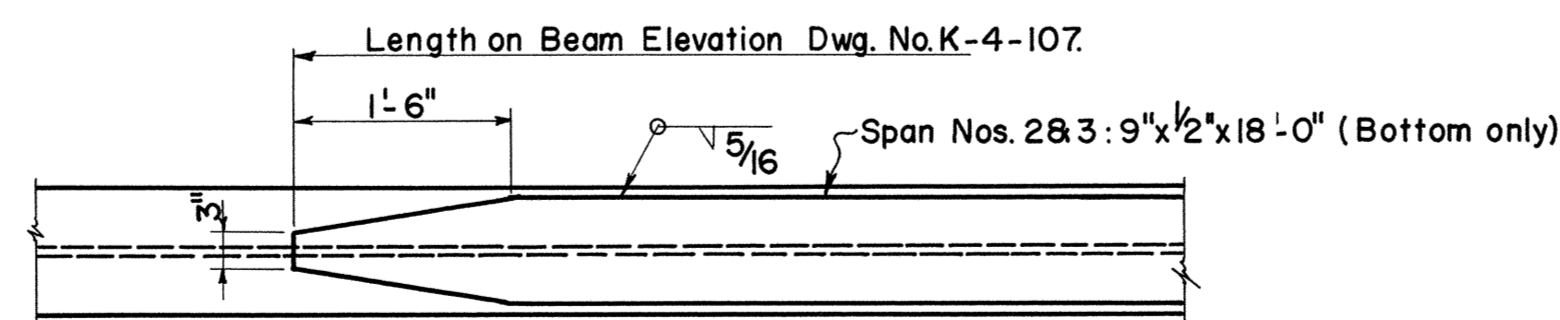


SECTION C-C

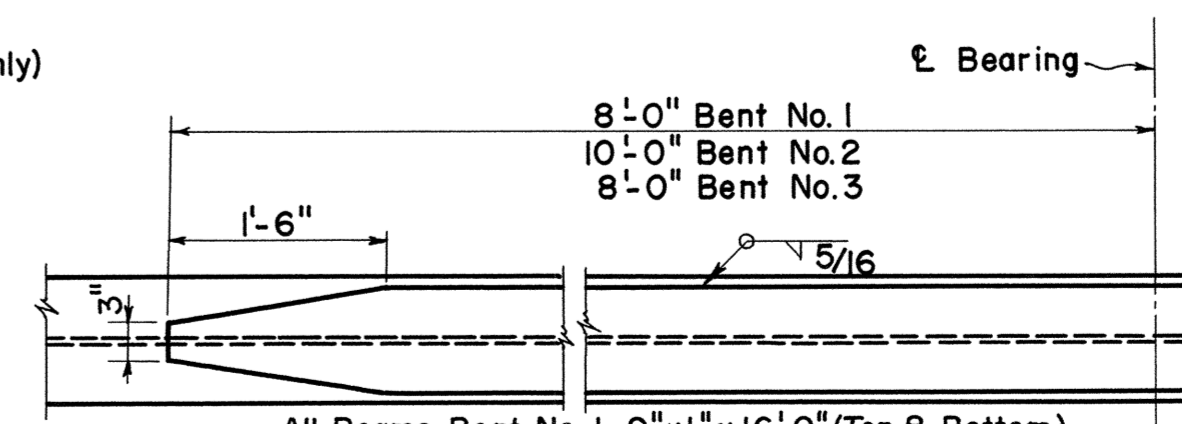


**SPlice DETAIL**

NOTE: Use fills as required.  
NOTE: Splices to be sub-punched 1/4\"/>



COVER PLATE WELDING DETAIL  
BOTTOM PLATES TO 30 WF 108



All Beams Bent No. 1: 9\"/>

COVER PLATE DETAIL

**ALTERNATE "S"**

STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE

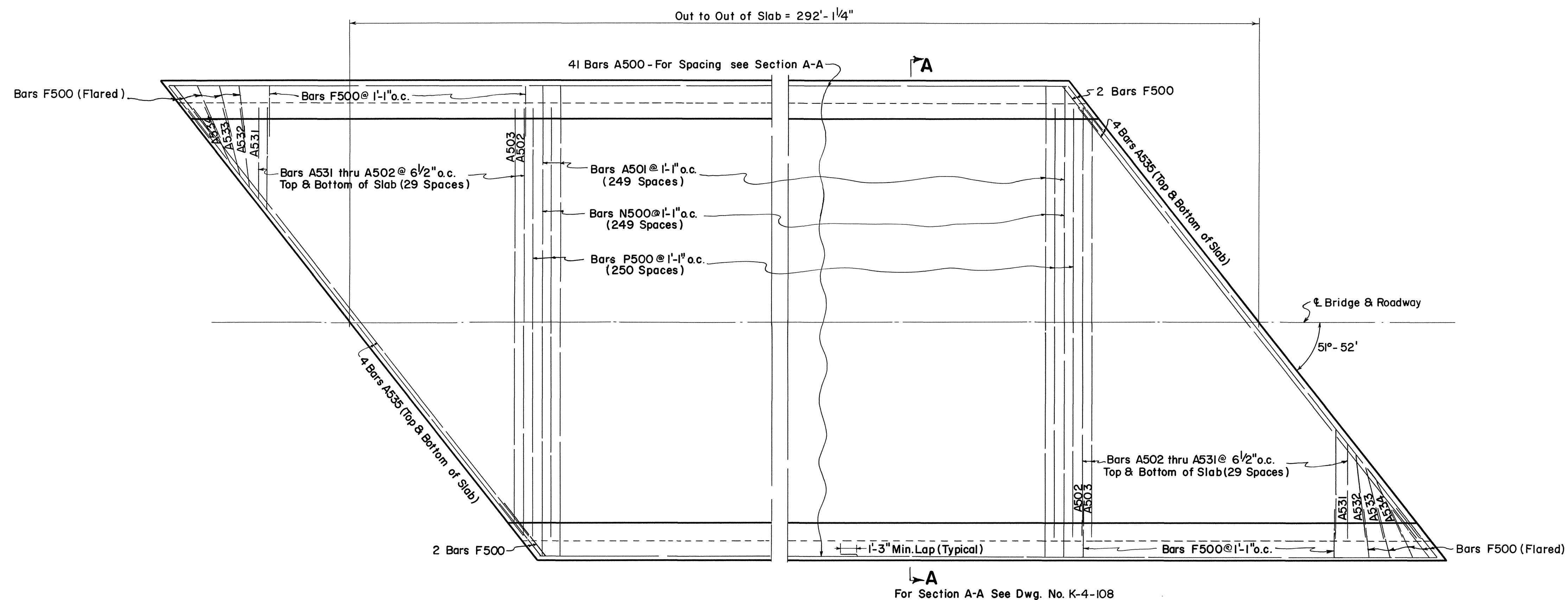
**STRUCTURAL STEEL DETAILS**  
STATE ROUTE 8114 OVER I-40  
STATION 714 + 37.80  
FAYETTE COUNTY  
1960

DESIGNED BY \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN BY R. B. Gentry DATE Dec. 8, 1960  
CHECKED BY J. D. G. DATE \_\_\_\_\_

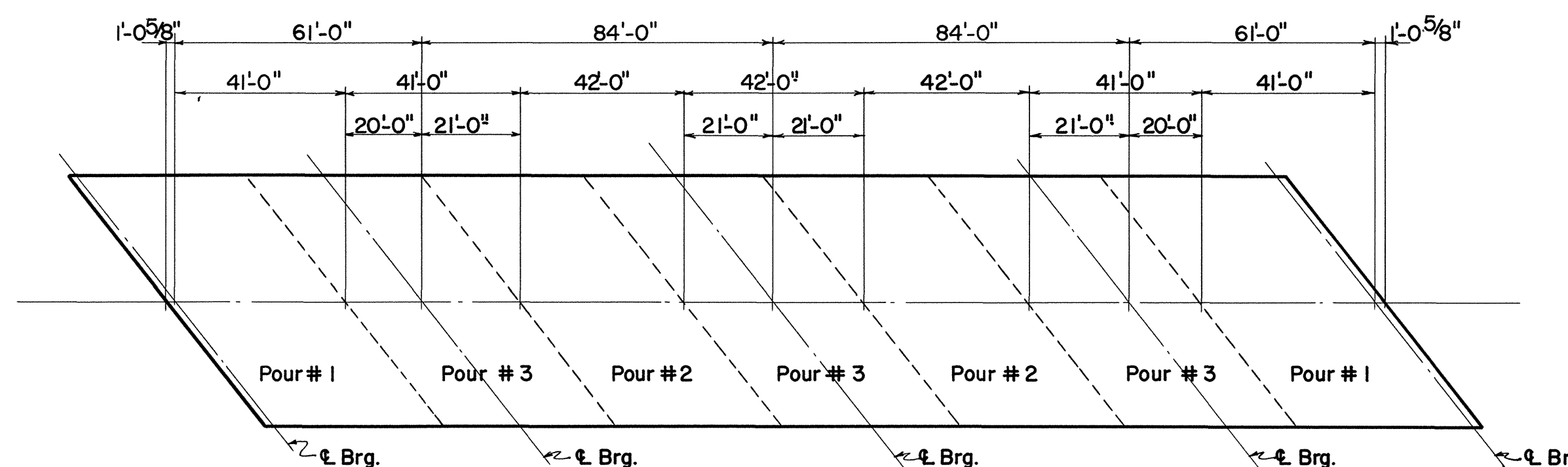
CORRECT Fred Greer  
BRIDGE ENGINEER  
APPROVED Carl Haug  
STATE HIGHWAY ENGINEER



I-40-(37)39



**PLAN OF ROADWAY SLAB**  
Scale: 1/4" = 1'-0"



**POURING DIAGRAM**

NOTE: Pours are to be made in numerical sequence. Pours with the same number designation may be made simultaneously.

**ESTIMATED QUANTITIES**

Concrete Class "A" 191.9 Cu. Yds.  
Reinforcing Steel 36,604 Lbs.

**ALTERNATE "S"**

STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE

**SLAB PLAN**  
STATE ROUTE 8114 OVER I-40  
STA. 714 + 37.80  
FAYETTE COUNTY  
1960

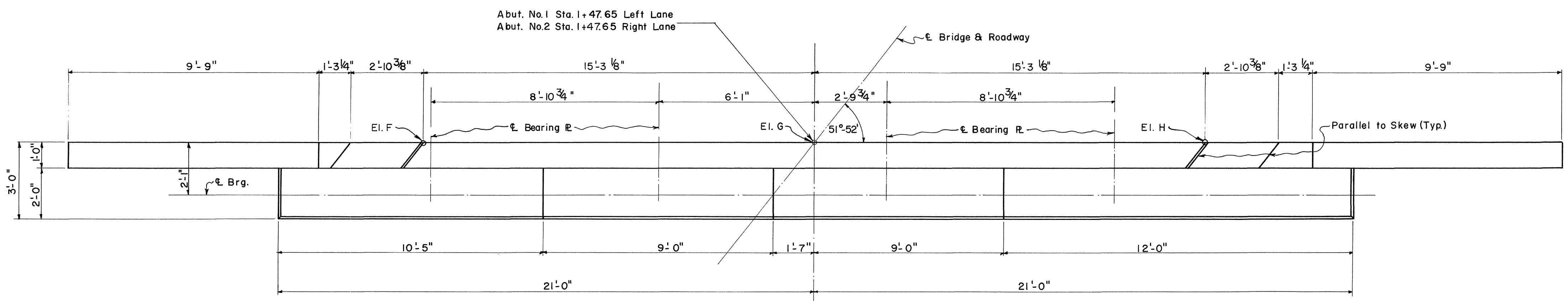
DESIGNED BY: W.P. G...  
DRAWN BY: J.D.G.  
TRACED BY: J.D.G.  
CHECKED BY: J.D.G.

DATE: 12-2-60

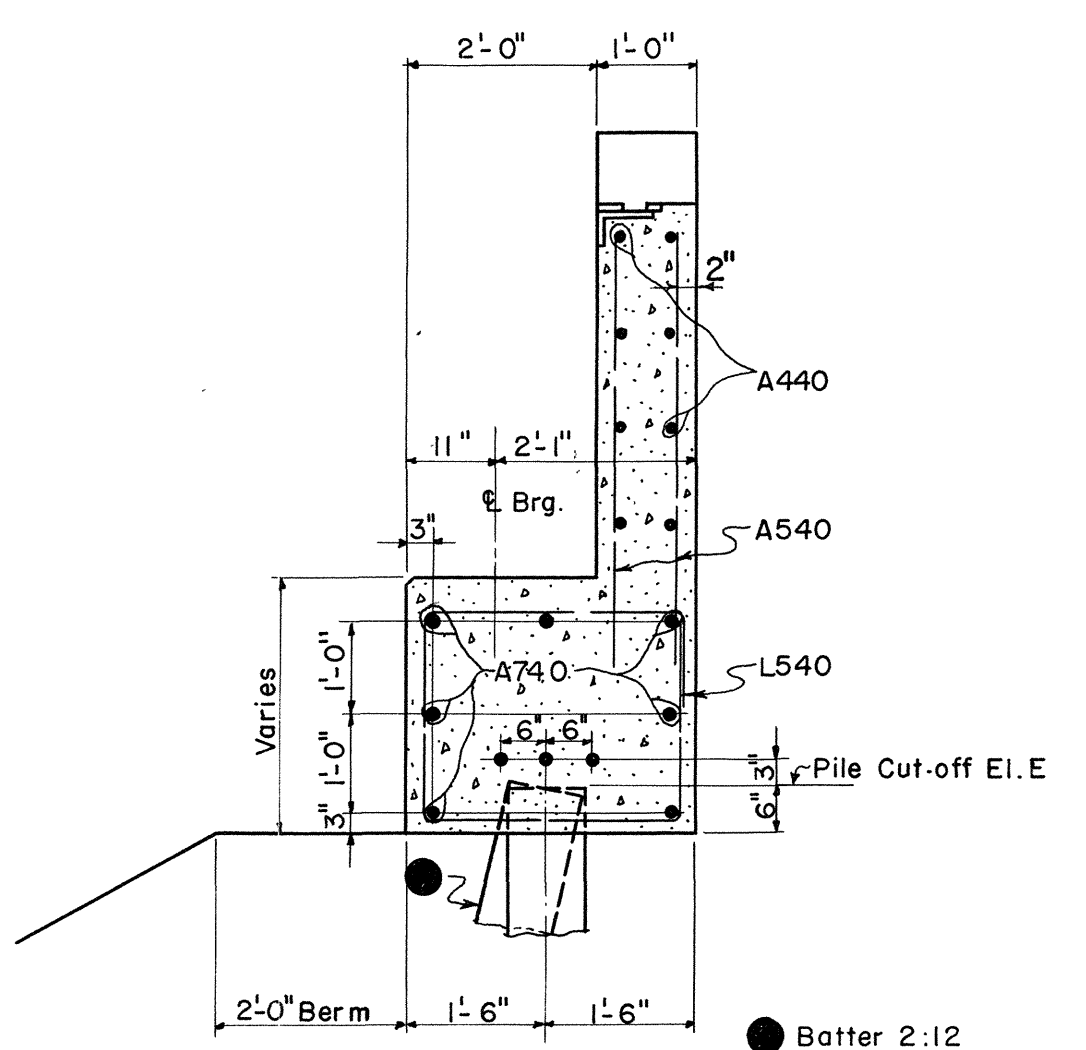
CORRECT: Fred Greve  
BRIDGE ENGINEER

APPROVED: [Signature]  
STATE HIGHWAY ENGINEER

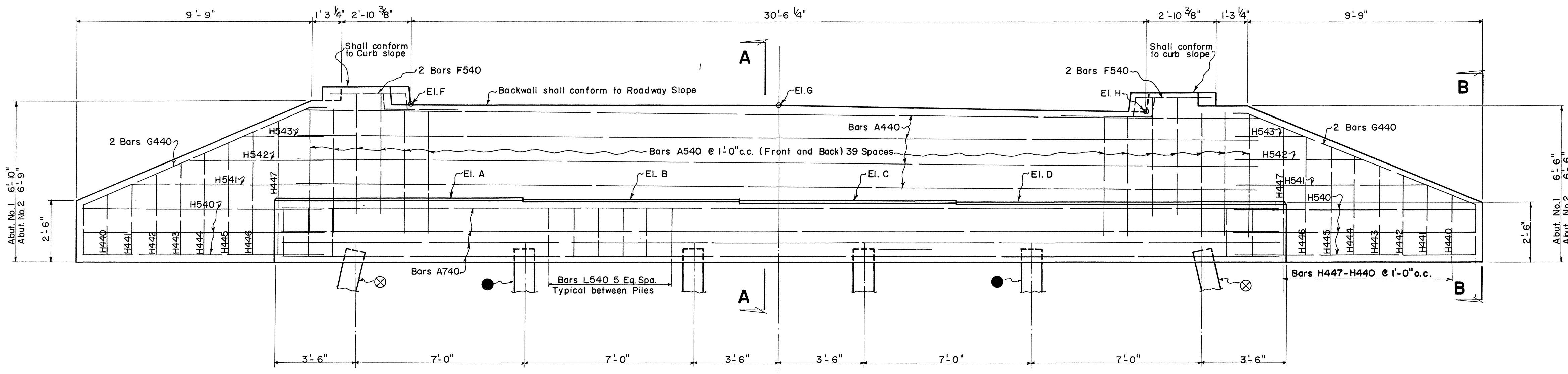
I-40-1(37)34



PLAN



SECTION A-A



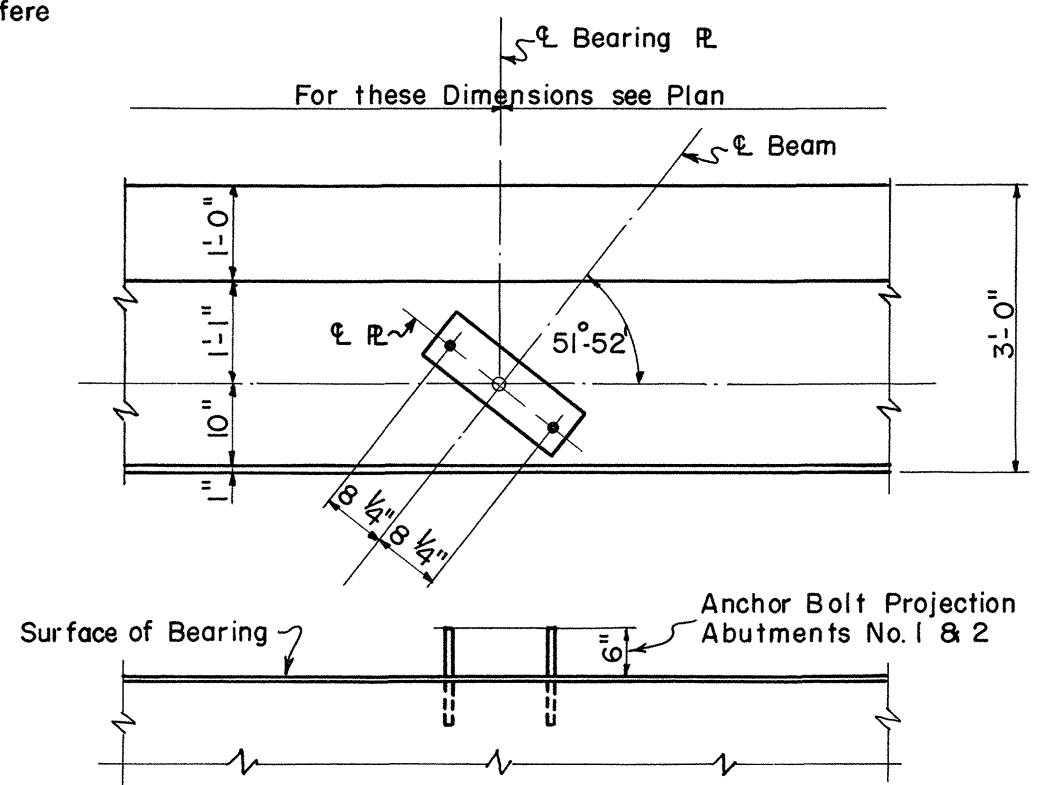
ELEVATION ABUTMENT NO. 1

Looking North  
Same for Abutment No. 2 Looking South

ESTIMATED QUANTITIES

ITEM	Concrete Class "A" Cu. Yds.	Reinforcing Steel Lbs.
Abutment No. 1	21.5	2 206
Abutment No. 2	21.5	2 206

NOTE: When pouring Abutment Beams, provisions shall be made for setting Anchor Bolts for Bearing Plates, location and projection shown in Sketch. If the contractor elects to drill the holes for the Anchor Bolts, the reinforcing steel shall be spaced so as not to interfere with the drilling.



SKETCH SHOWING ANCHOR BOLT LOCATION & PROJECTION

TABLE OF ELEVATIONS

ITEM	EI. A	EI. B	EI. C	EI. D	EI. E	EI. F	EI. G	EI. H
Abutment No. 1	368.05	368.03	367.90	367.65	365.65	371.90	371.86	371.43
Abutment No. 2	369.76	369.81	369.74	369.56	367.56	373.62	373.70	373.39

ALTERNATE "B"

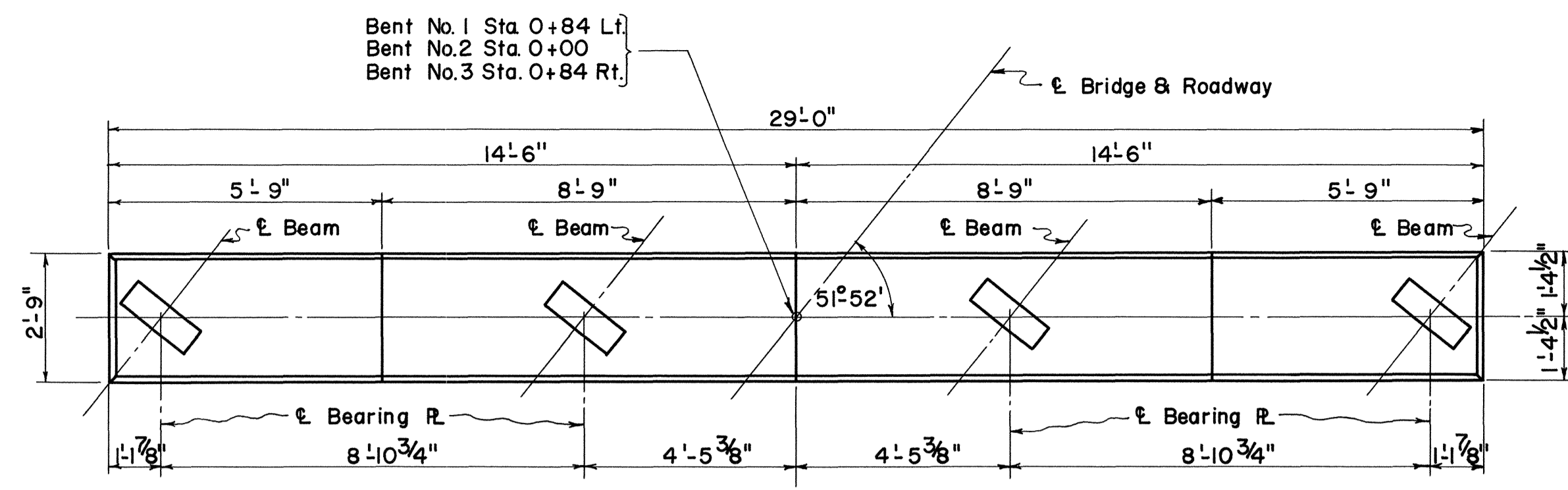
STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE

ABUTMENTS NO. 1 & 2  
STATE ROUTE 814 OVER I-40  
STATION 714+37.80  
FAYETTE COUNTY  
1960

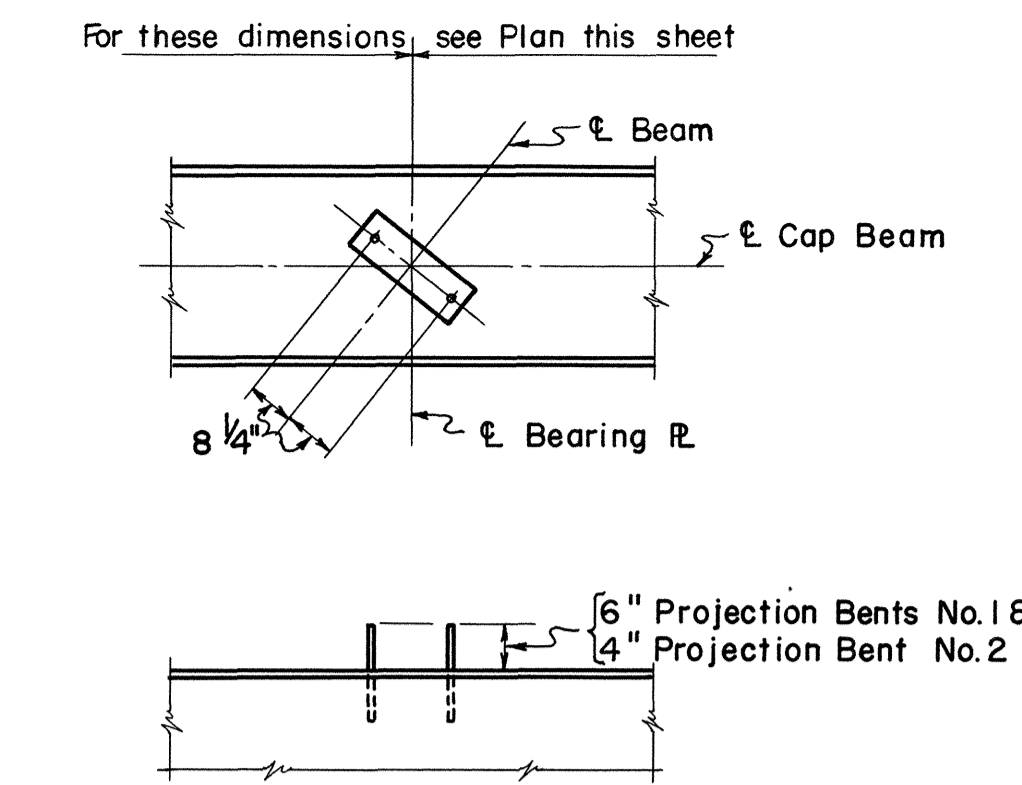
DESIGNED BY W. P. Greer DATE \_\_\_\_\_  
DRAWN BY J. W. Southland & R. B. Gentry DATE Nov. 30, 1960  
CHECKED BY J. D. G. DATE \_\_\_\_\_

CORRECTED Fred Greer  
BRIDGE ENGINEER  
APPROVED [Signature]  
STATE HIGHWAY ENGINEER

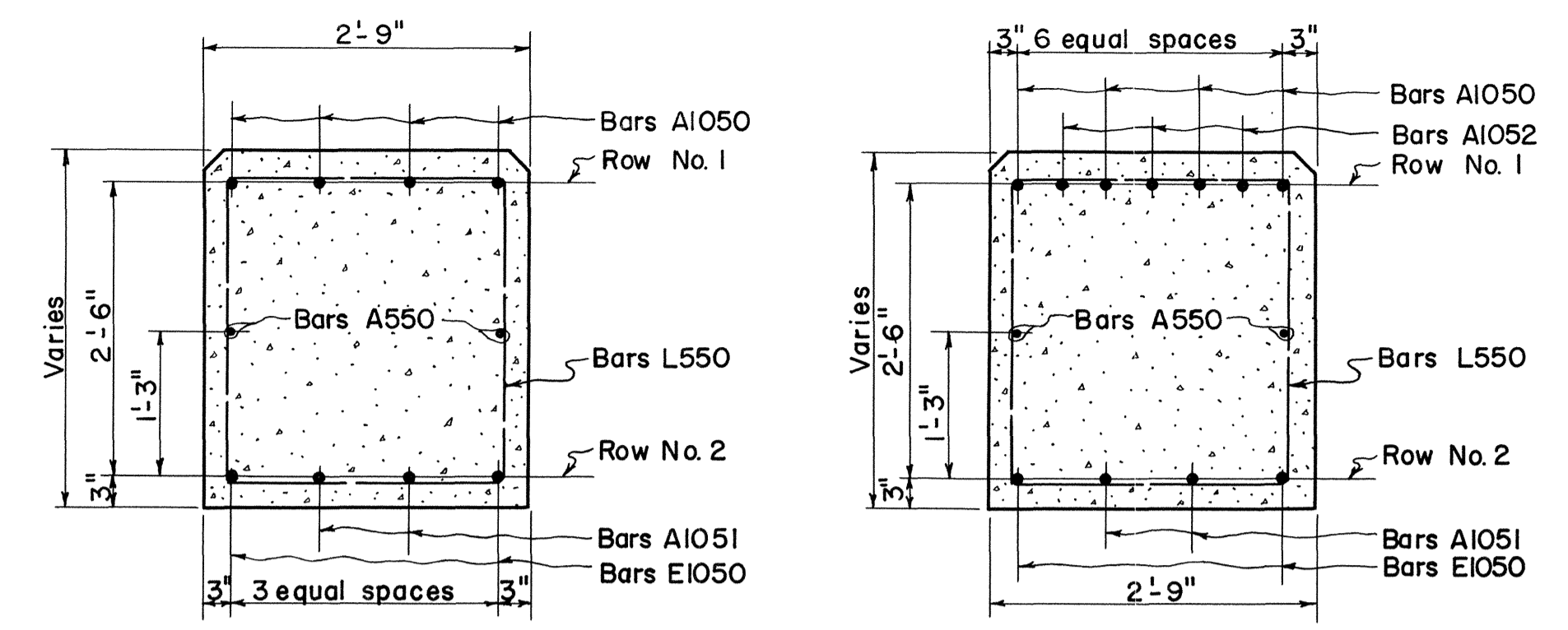
I-40-1(37) 34



**PLAN**  
NOTE: When pouring Cap Beams, provisions shall be made for setting Anchor Bolts for Bearing Plates, location & projection shown this sheet. If the Contractor elects to drill the holes for the Anchor Bolts the reinforcing steel shall be spaced so as not to interfere with the drilling.

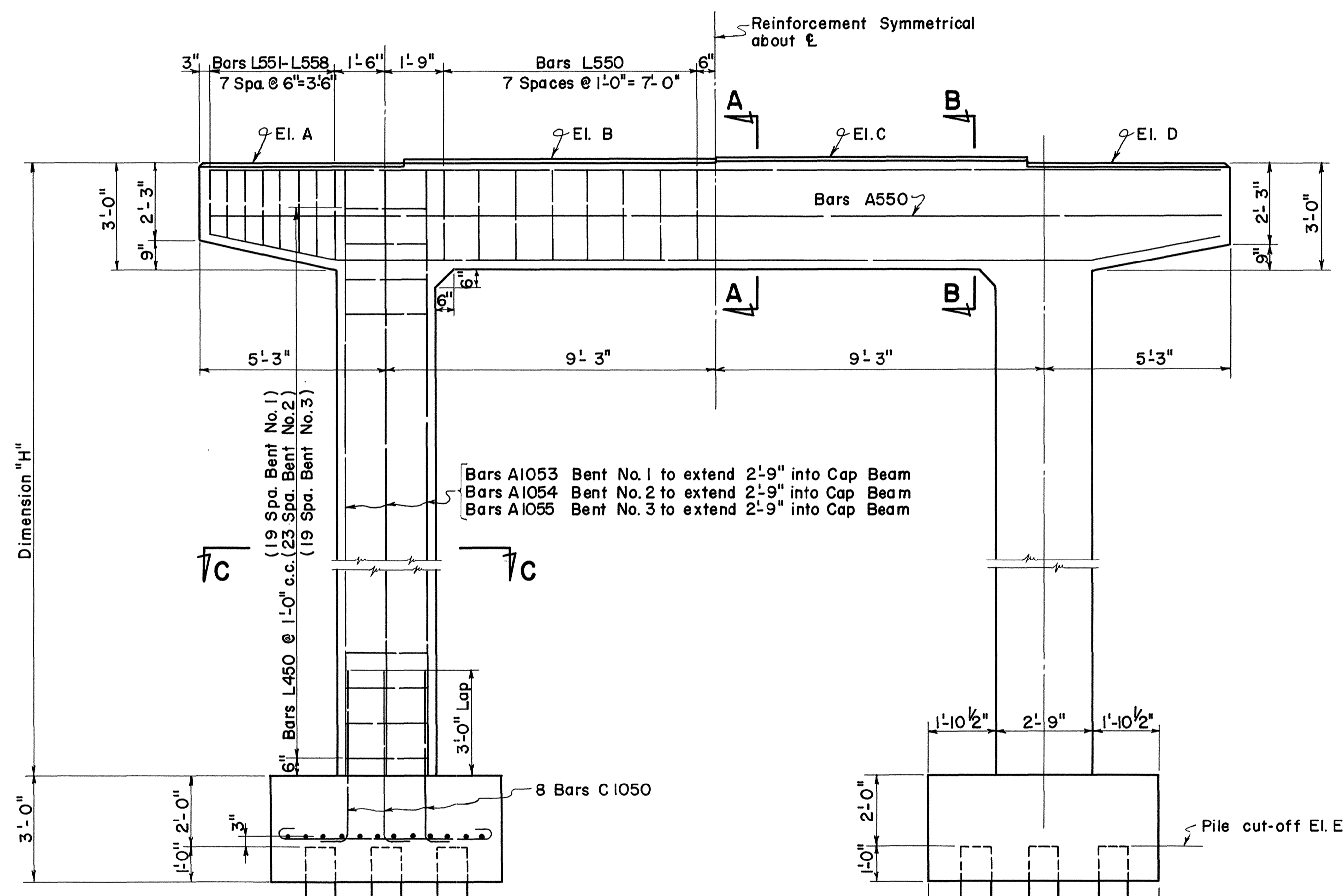


**SKETCH SHOWING LOCATION & PROJECTION OF ANCHOR BOLTS**

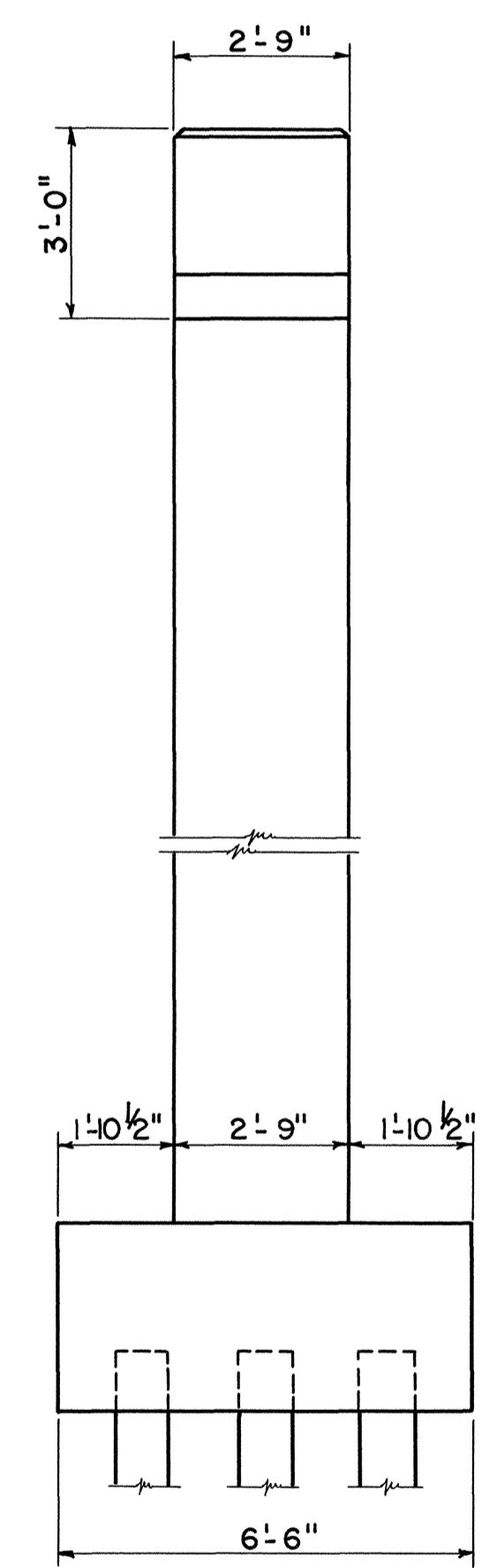


**SECTION A-A**

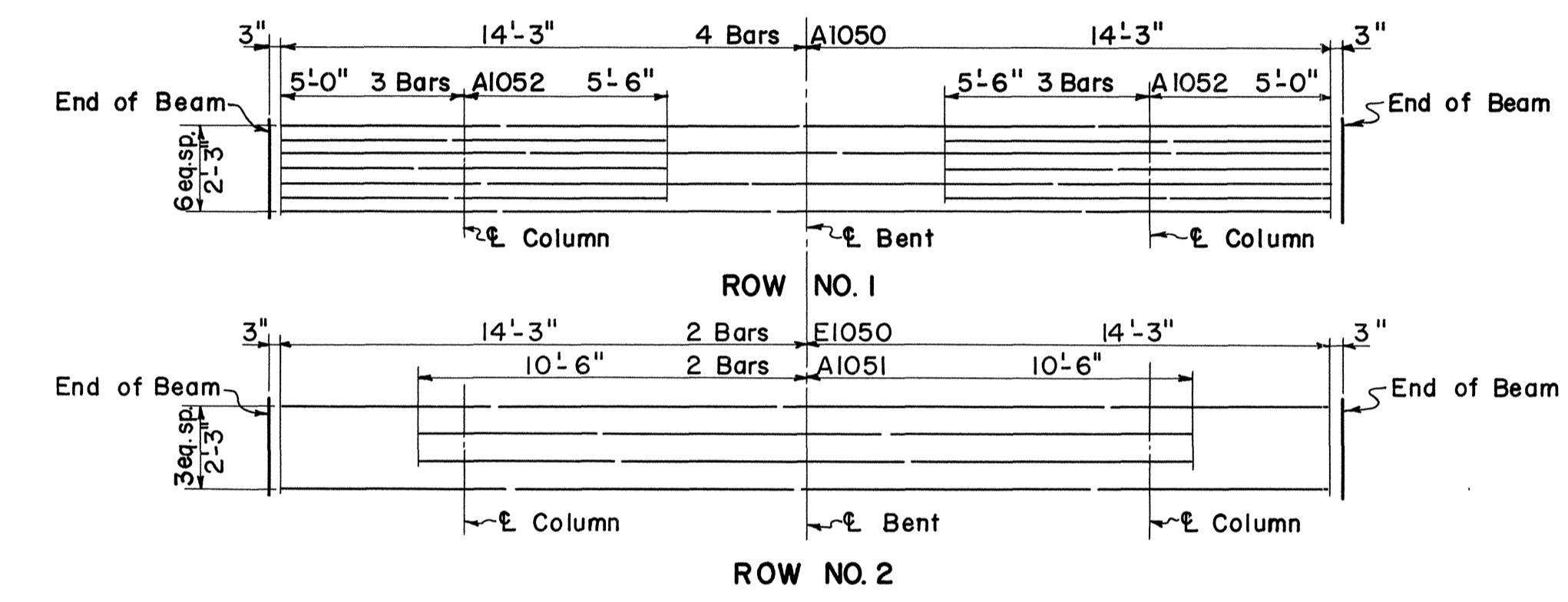
**SECTION B-B**



**BENT ELEVATION**  
Bents No. 1 & 2 Looking South  
Bent No. 3 Looking North



**END ELEVATION**



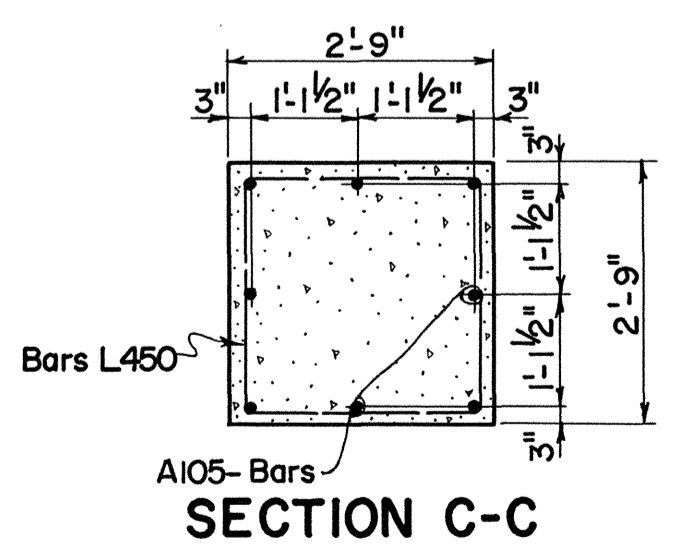
**PLAN OF MAIN REINFORCING STEEL - CAP BEAM**

**TABLE OF ELEVATIONS & DIMENSIONS**

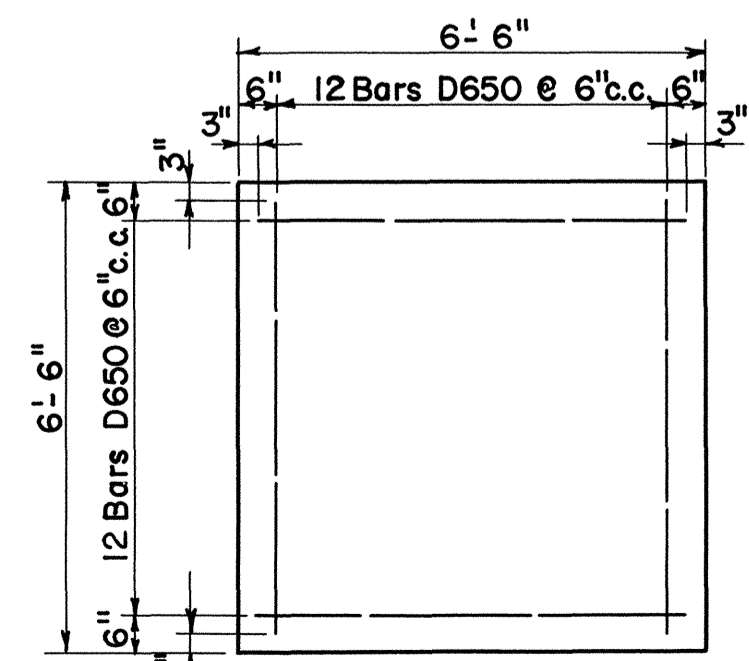
Location	Dimension "H"	Elevations				
		A	B	C	D	E
Bent No. 1	20'-3"	368.78	368.98	369.07	369.05	346.53
Bent No. 2	24'-0"	369.81	369.96	369.99	369.91	343.81
Bent No. 3	20'-6"	369.93	370.07	370.11	370.00	347.43

**ESTIMATED QUANTITIES**

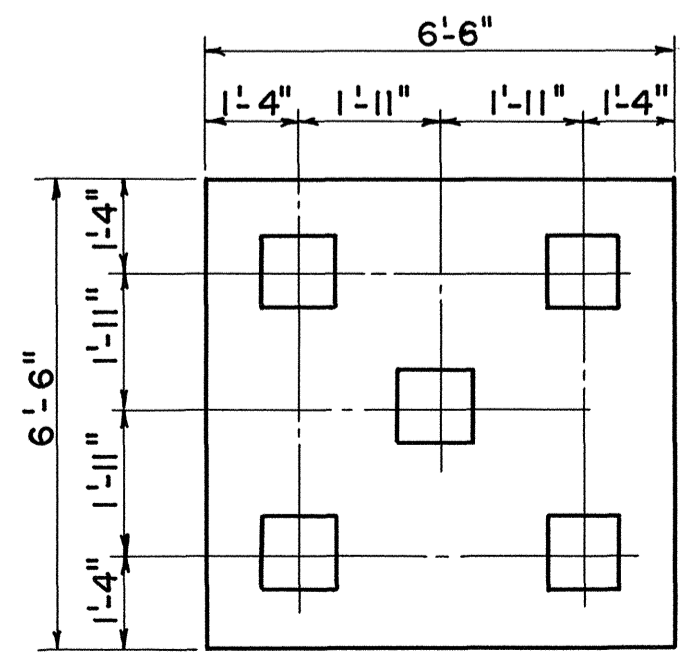
ITEM	Concrete Class "A" Cu. Yds.	Reinforcing Steel Lbs.
Bent No. 1	28.2	4,117
Bent No. 2	30.1	4,431
Bent No. 3	28.1	4,132



**SECTION C-C**



**PLAN SHOWING FOOTING REINFORCEMENT**



**PLAN SHOWING PILE ARRANGEMENT**

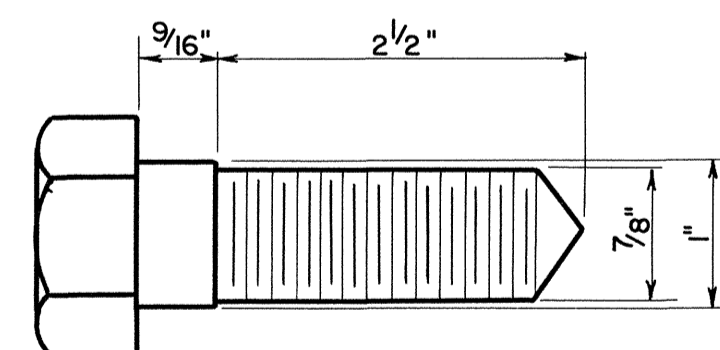
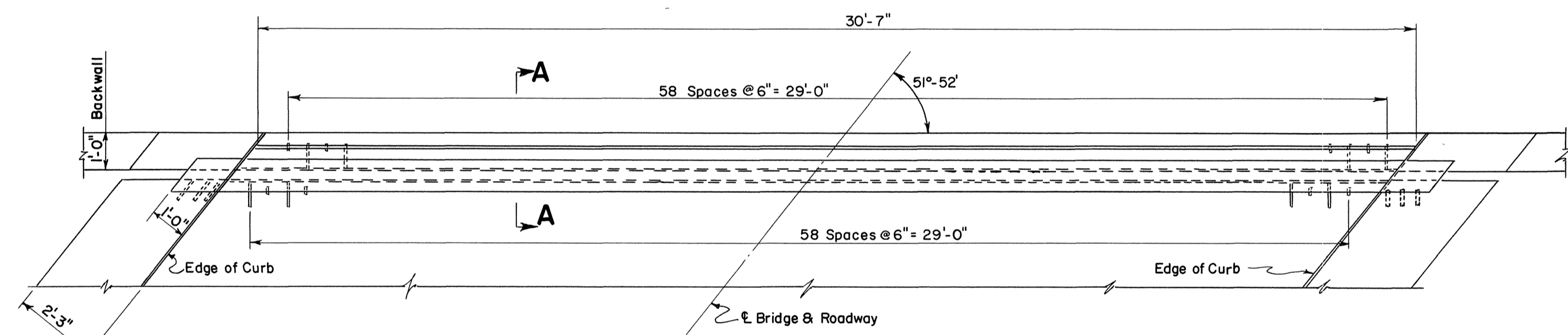
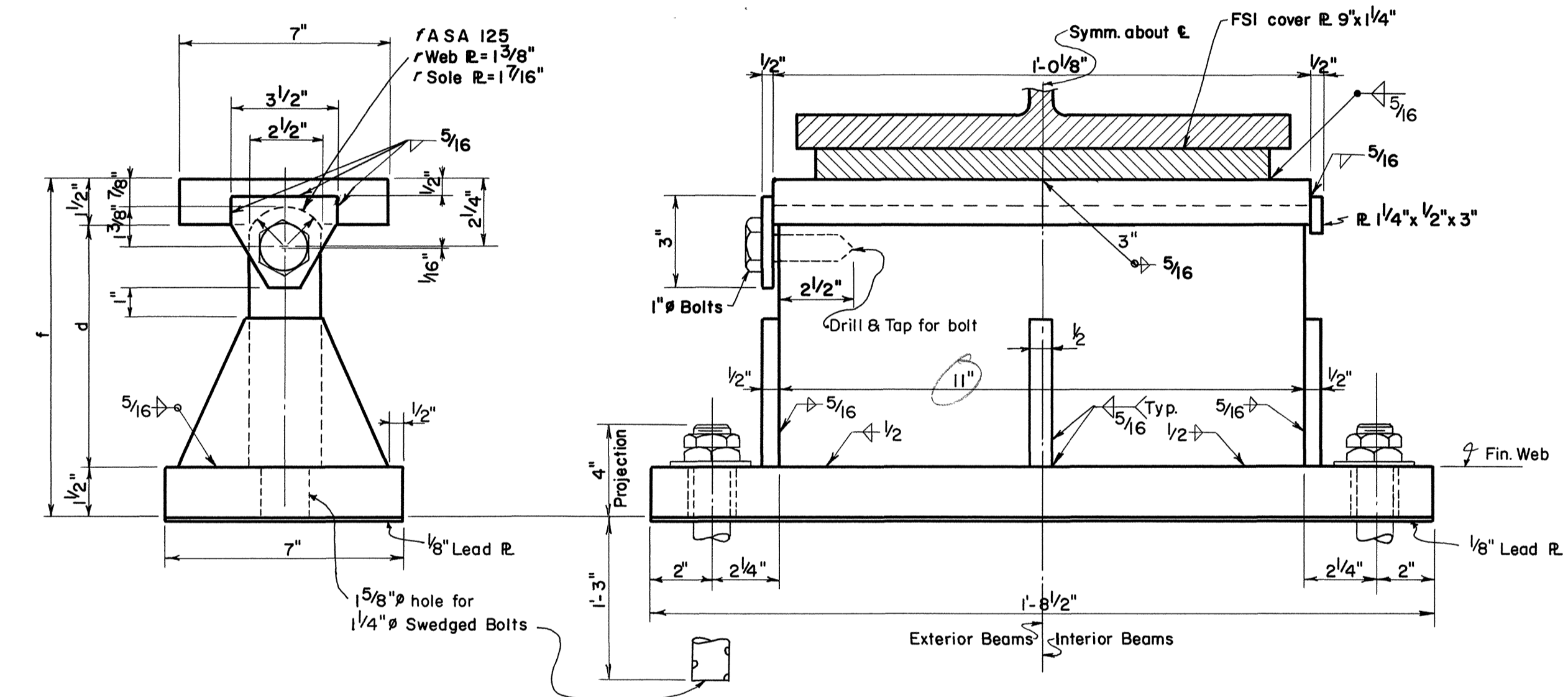
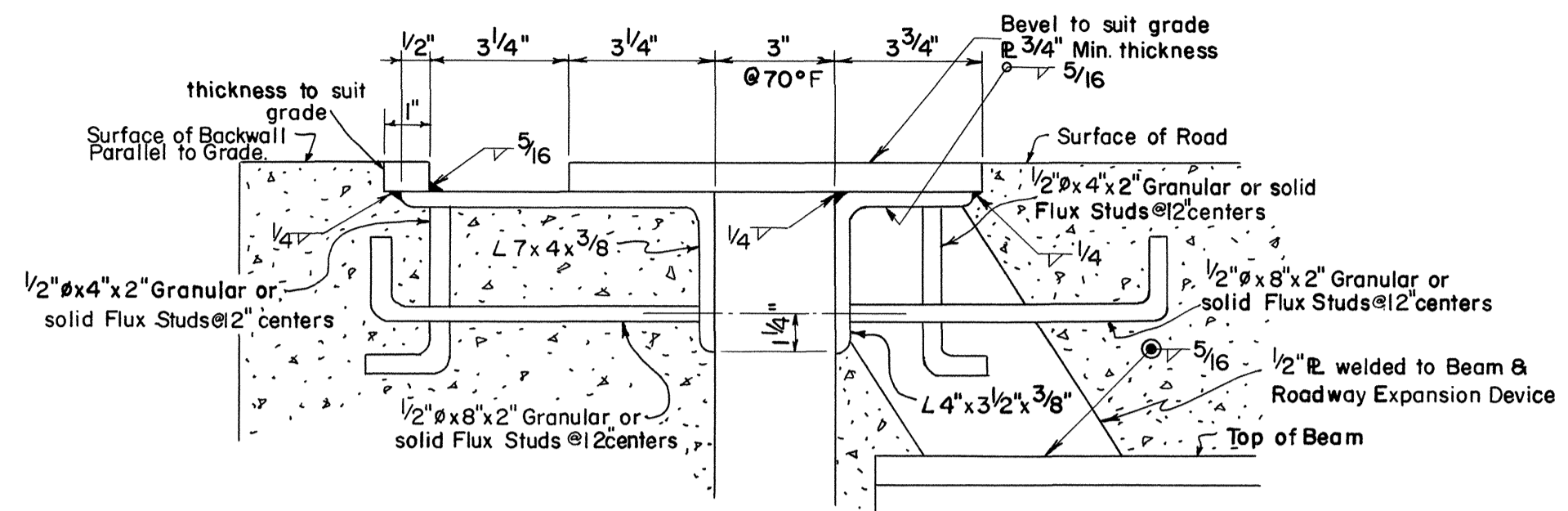
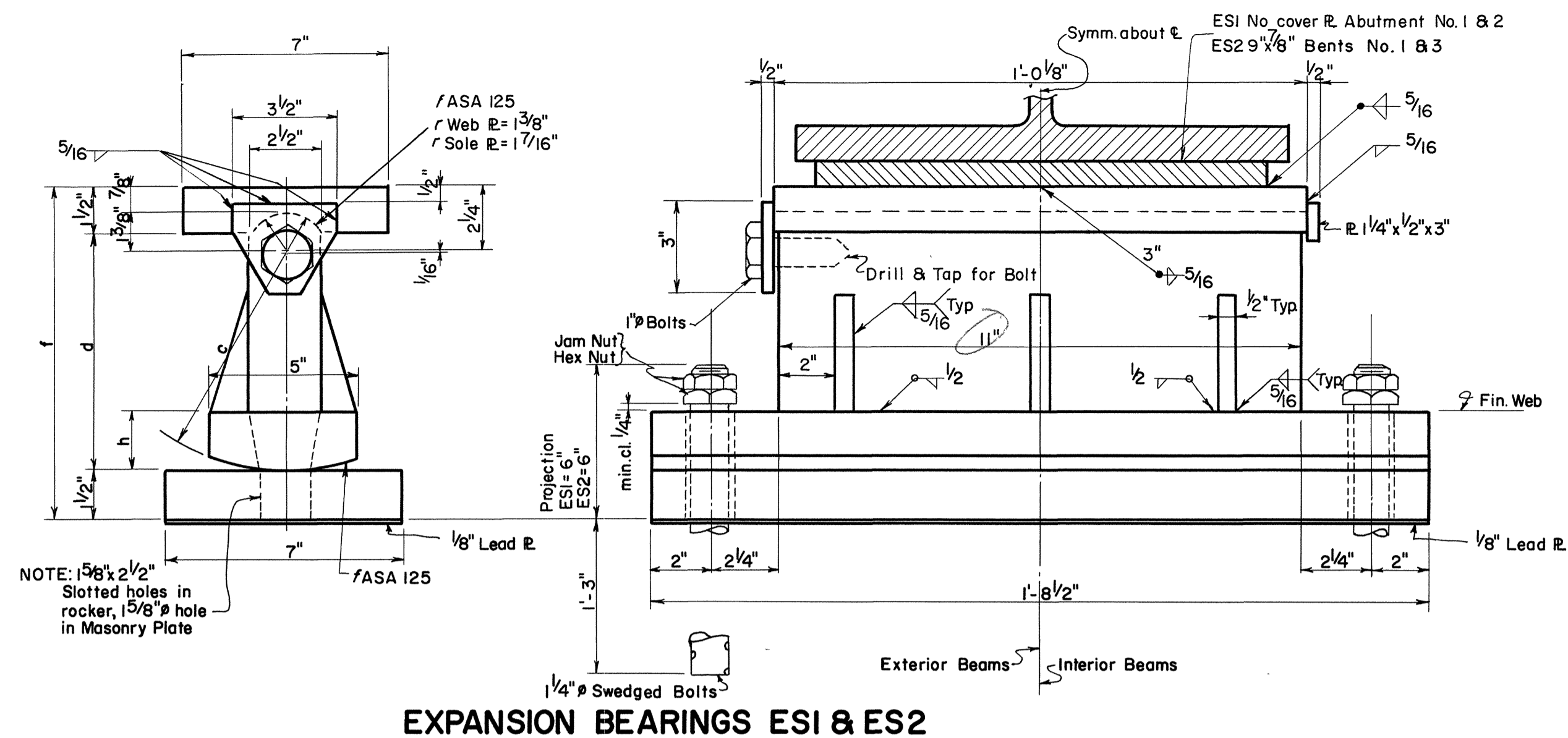
DESIGNED BY W. P. Greer DATE \_\_\_\_\_  
 DRAWN BY R. B. Gentry DATE Dec. 3, 1960  
 CHECKED BY J. D. G. DATE \_\_\_\_\_

**ALTERNATE "S"**  
 STATE OF TENNESSEE  
 DEPARTMENT OF HIGHWAYS  
 AND PUBLIC WORKS  
 NASHVILLE  
**BENTS NO. 1, 2 & 3**  
**STATE ROUTE 8114 OVER I-40**  
**STATION 714+37.80**  
**FAYETTE COUNTY**  
**1960**

CORRECT Fred Greer  
 BRIDGE ENGINEER  
 APPROVED cedhang  
 STATE HIGHWAY ENGINEER

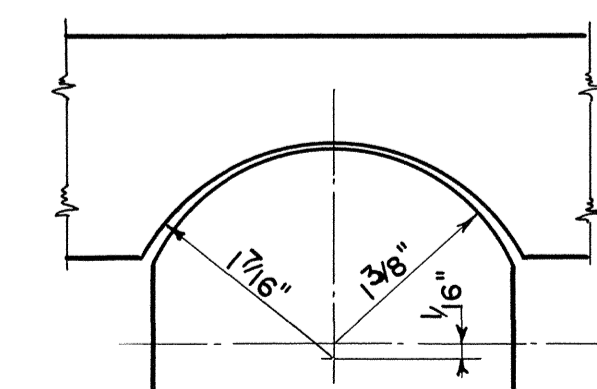


I-40-1(37)-1



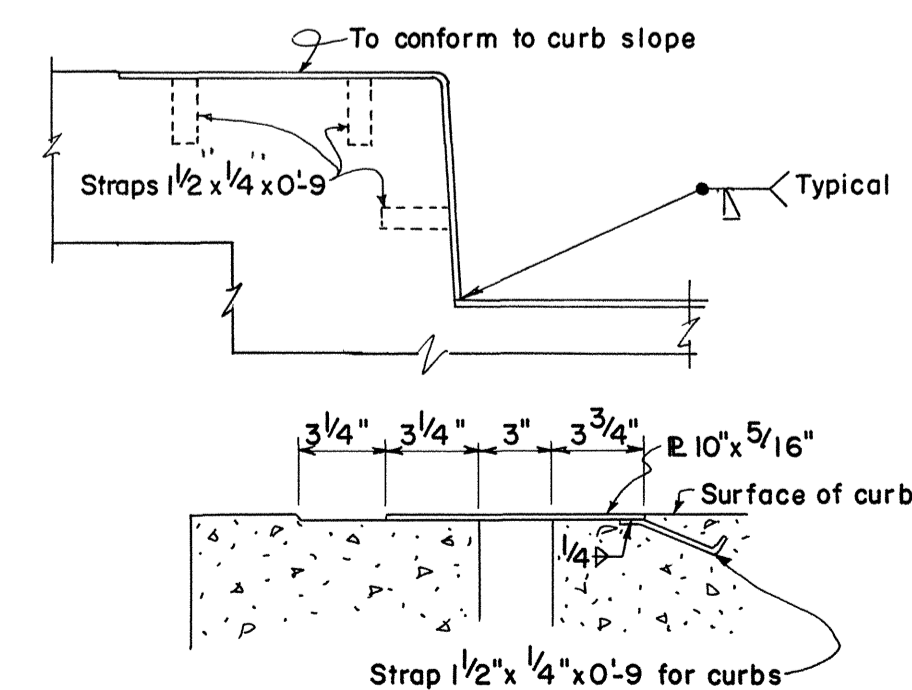
**TABLE OF DIMENSIONS**

	ESI	ES 2	FSI
f	9 1/2"	10 1/2"	10 1/2"
d	6 1/2"	7 1/2"	7 1/2"
h	1 3/4"	2"	—
c	5 3/4"	6 3/4"	—



**ESTIMATED WEIGHT**

DEVICE	LOCATION	NO. REQ'D	WEIGHT Lbs.	TOTAL Wt in Lbs.
ESI	Abutments No. 1 & 2	8	215	1,720
ES2	Bents No. 1 & 3	8	228	1,824
FSI	Bent No. 2	4	195	780
Total Weight Bearing Devices				4,324



**ALTERNATE "S"**

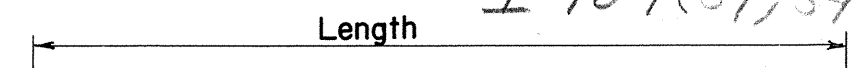
STATE OF TENNESSEE  
DEPARTMENT OF HIGHWAYS  
AND PUBLIC WORKS  
NASHVILLE

**STRUCTURAL STEEL DETAILS**  
STATE ROUTE 814 OVER I-40  
STA. 714+37.80  
FAYETTE COUNTY  
1960

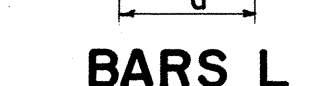
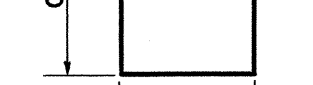
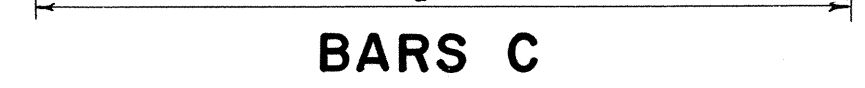
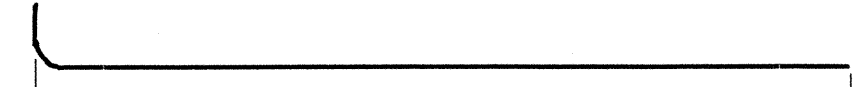
DESIGNED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_ DATE: 12-5-60  
TRACED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
CHECKED BY: L.D.G. DATE: \_\_\_\_\_

CORRECT: Fred Greve  
BRIDGE ENGINEER  
APPROVED: \_\_\_\_\_  
STATE HIGHWAY ENGINEER

I-40-1(37)34



SUPERSTRUCTURE BILL OF STEEL										ABUTMENTS NO. 1 & 2 BILL OF STEEL									
Bar	Location	Size	No. Req'd	Bending Dimensions				Length	Bar	Location	Size	No. Req'd	Bending Dimensions				Length		
				a	b	c	d						a	b	c	d			
A500	Slab & Curb	5	369					33'-9"	A440		4	16					40'-0"		
A501	Slab	5	250					25'-6"	A540		5	160					5'-0"		
A502	"	5	4					25'-6"	A740		7	20					41'-6"		
A503	"	5	4					24'-9"	F540		5	8	2'-0"	1/2"	2'-3"	9"	5'-0"		
A504	"	5	4					24'-0"	G440		4	8	6"	9'-6"	2'-0"	3'-9"	12'-9"		
A505	"	5	4					23'-6"	H440		4	4	6"	2'-6"			5'-6"		
A506	"	5	4					22'-9"	H441		4	4	6"	2'-9"			6'-0"		
A507	"	5	4					22'-0"	H442		4	4	6"	3'-3"			7'-0"		
A508	"	5	4					21'-3"	H443		4	4	6"	3'-9"			8'-0"		
A509	"	5	4					20'-9"	H444		4	4	6"	4'-0"			8'-6"		
A510	"	5	4					20'-0"	H445		4	4	6"	4'-6"			9'-6"		
A511	"	5	4					19'-3"	H446		4	4	6"	5'-0"			10'-6"		
A512	"	5	4					18'-6"	H447		4	4	6"	5'-3"			11'-0"		
A513	"	5	4					18'-0"	H540		5	12	7"	10'-0"			20'-7"		
A514	"	5	4					17'-3"	H541		5	4	7"	8'-0"			16'-7"		
A515	"	5	4					16'-6"	H542		5	4	7"	5'-0"			10'-7"		
A516	"	5	4					15'-9"	H543		5	4	7"	3'-0"			6'-7"		
A517	"	5	4					15'-0"	L540		5	72	2'-7"	1'-0"	2'-1"		10'-4"		
A518	"	5	4					14'-6"											
A519	"	5	4					13'-9"											
A520	"	5	4					13'-0"											
BENTS NO. 1, 2 & 3 BILL OF STEEL																			
A521	"	5	4					12'-3"	A550	Cap Beam	5	6					28'-6"		
A522	"	5	4					11'-9"	A1050	"	10	12					28'-6"		
A523	"	5	4					11'-0"	A1051	"	10	6					21'-0"		
A524	"	5	4					10'-3"	A1052	Cap Beam	10	18					10'-6"		
A525	"	5	4					9'-6"	A1053	Columns Bent No. 1	10	16					20'-0"		
A526	"	5	4					9'-0"	A1054	Columns Bent No. 2	10	16					23'-9"		
A527	"	5	4					8'-3"	A1055	Columns Bent No. 3	10	16					20'-3"		
A528	"	5	4					7'-6"	C1050	Footings	10	48	4'-9"				5'-5"		
A529	"	5	4					6'-9"	D650	Footings	6	144	6'-0"				7'-4"		
A530	"	5	4					6'-0"	E1050	Cap Beam	10	6	2'-6"	3'-6"	9"		28'-6"		
A531	"	5	4					5'-6"	L450	Column	4	128	2'-4"	1'-0"	2'-4"		10'-4"		
A532	"	5	4					5'-0"	L550	Cap Beam	5	48	2'-4"	1'-0"	2'-7"		10'-10"		
A533	"	5	4					4'-6"	L551	"	5	6	2'-4"	1'-0"	2'-0"		7'-8"		
A534	"	5	4					4'-0"	L552	"	5	6	2'-4"	1'-0"	2'-1"		7'-10"		
A535	Slab	5	8					32'-6"	L553	"	5	6	2'-4"	1'-0"	2'-2"		8'-0"		
F500	Curb	5	44	2'-0"	1/2"	1'-9"	1'-0"	4'-10"	L554	"	5	6	2'-4"	1'-0"	2'-3"		8'-2"		
N500	Slab	5	250	28'-0"	1'-9"	24'-0"	1'-0"	29'-8"	L555	"	5	6	2'-4"	1'-0"	2'-4"		8'-4"		
P500	Slab	5	251	25'-8"	3'-11"	3'-4"	3'-2"	26'-4"	L556	"	5	6	2'-4"	1'-0"	2'-5"		8'-6"		
									L557	"	5	6	2'-4"	1'-0"	2'-6"		8'-8"		
									L558	Cap Beam	5	6	2'-4"	1'-0"	2'-7"		8'-10"		



REINFORCING STEEL CODE

TYPE	SIZE	SERIES
A	5	06

ALTERNATE "S"  
 STATE OF TENNESSEE  
 DEPARTMENT OF HIGHWAYS  
 AND PUBLIC WORKS  
 NASHVILLE  
 BILL OF STEEL  
 STATE ROUTE 814 OVER I-40  
 STA. 714+37.80  
 FAYETTE COUNTY  
 1960

CORRECT: *Fred Greer*  
 BRIDGE ENGINEER  
 APPROVED: *W.D.G.*  
 STATE HIGHWAY ENGINEER

MICROFILMED

DESIGNED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DRAWN BY: *W.P. Greer* DATE: \_\_\_\_\_  
 TRACED BY: *W.D.G.* DATE: 12-2-60  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_