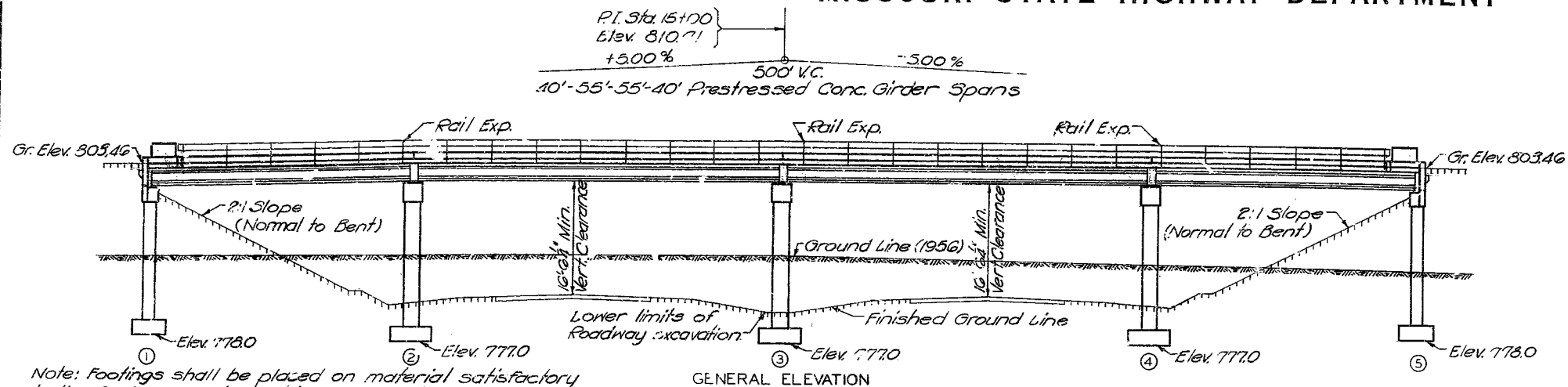


MISSOURI STATE HIGHWAY DEPARTMENT

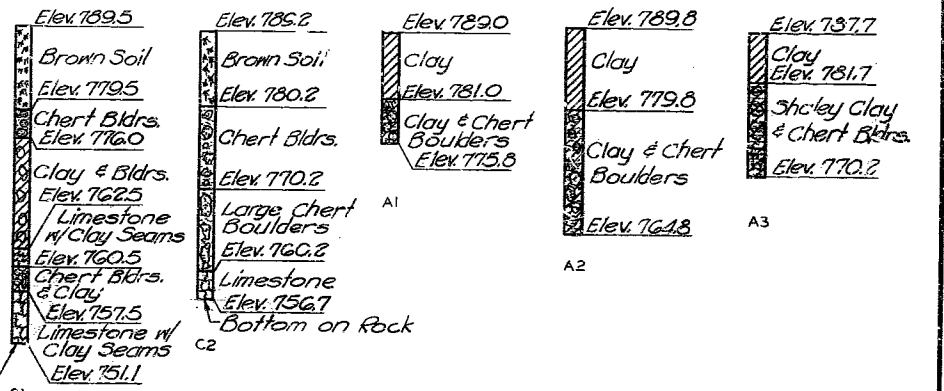
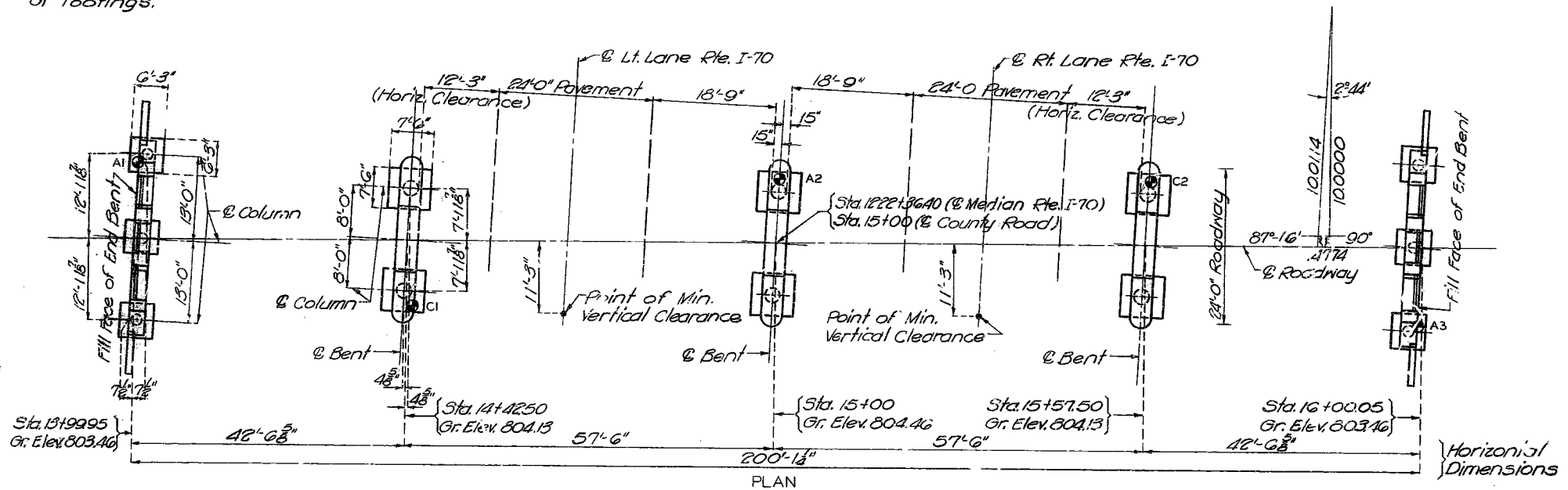
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	65	



Note: Footings shall be placed on material satisfactory to the Engineer and capable of supporting at least 5000 #/sq. Footings shall not be placed higher than elevations shown on these plans.
Bearing pressure of 5000 #/sq used in design of footings.

GENERAL NOTES:

For specifications and notes pertaining to prestressed members refer to Sheet No. 5 of 6.
Design Specifications AASHTO, 1957.
Loading H15-44 (Future Wearing Surface 15 #/sq).
Structural Steel: Stress 18,000 #/sq. inch.
Reinforcing Steel: Stress 20,000 #/sq. inch.
Concrete, Class B: Stress 1,800 #/sq. inch.
Concrete, Class B1: Stress 1,600 #/sq. inch.
Superstructure concrete, except for girders shall be Class B1 (Air Entrained).
Substructure concrete shall be Class B (Air Entrained).
Paint: Shop, none; Field, contact surfaces of bolted field connections, steel to steel one coat of red lead and surfaces of rail posts in contact with concrete, three coats of red lead. All other exposed surfaces first coat red lead, second coat brown, third coat aluminum. Payment for cleaning and painting such surfaces shall be included in price bid for items painted.
Where joint filler is specified on the plans it shall conform with the requirements of Section 157.24 of the Standard Specifications.
Permits must be obtained for all truck loads over legal length.
Qualification of welding operators will be required.

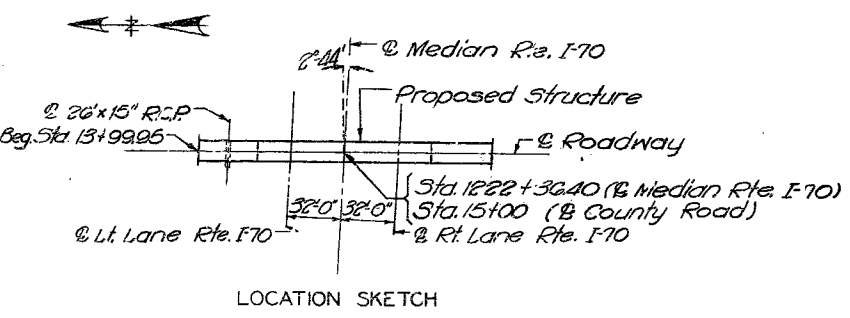


Note: Soundings C1 and C2 taken with a Core Drill.
Soundings A1, A2 and A3 taken by Auger with bottoms in Chert Material.
Soundings located on "Plan" thus \odot .

LOG OF SOUNDINGS
S.B.M. #97 Elev. 794.30 Nail in side of 10' Elm 110' Lt. Sta. 1222+55
BRIDGE: COUNTY ROAD UNDERPASS
STATE ROAD FROM EAST OF ROUTE 65 TO COOPER CO. LINE ABOUT 70 MILES S.W. OF BLACKWATER
PROJECT NO. I-70-2(10)(RTE. I-70) STA. 1222+36.40
SALINE COUNTY

ESTIMATED QUANTITIES			
Item	Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu.Yds.	350	350
Class B Concrete	Cu.Yds.	123.7	123.7
Class B1 Concrete	Cu.Yds.	157.1	157.1
40' Prestressed Concrete Members	Each	8	8
55' Prestressed Concrete Members	Each	8	8
Reinforcing Steel (Except Prest. Members)	Lbs.	16,215	39,775
Fabricated Structural Carbon Steel	Lbs.	13,140	13,140

Note: All excavation for bridge will be paid for as Class 1 Excavation for Structures.
Estimated quantity of Class 1 Excavation for Structures includes only amount of excavation below lower limits of roadway excavation.



178

Drawn JULY 1961 by C.D.W.
Checked JULY 1961 by [Signature]

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 6.

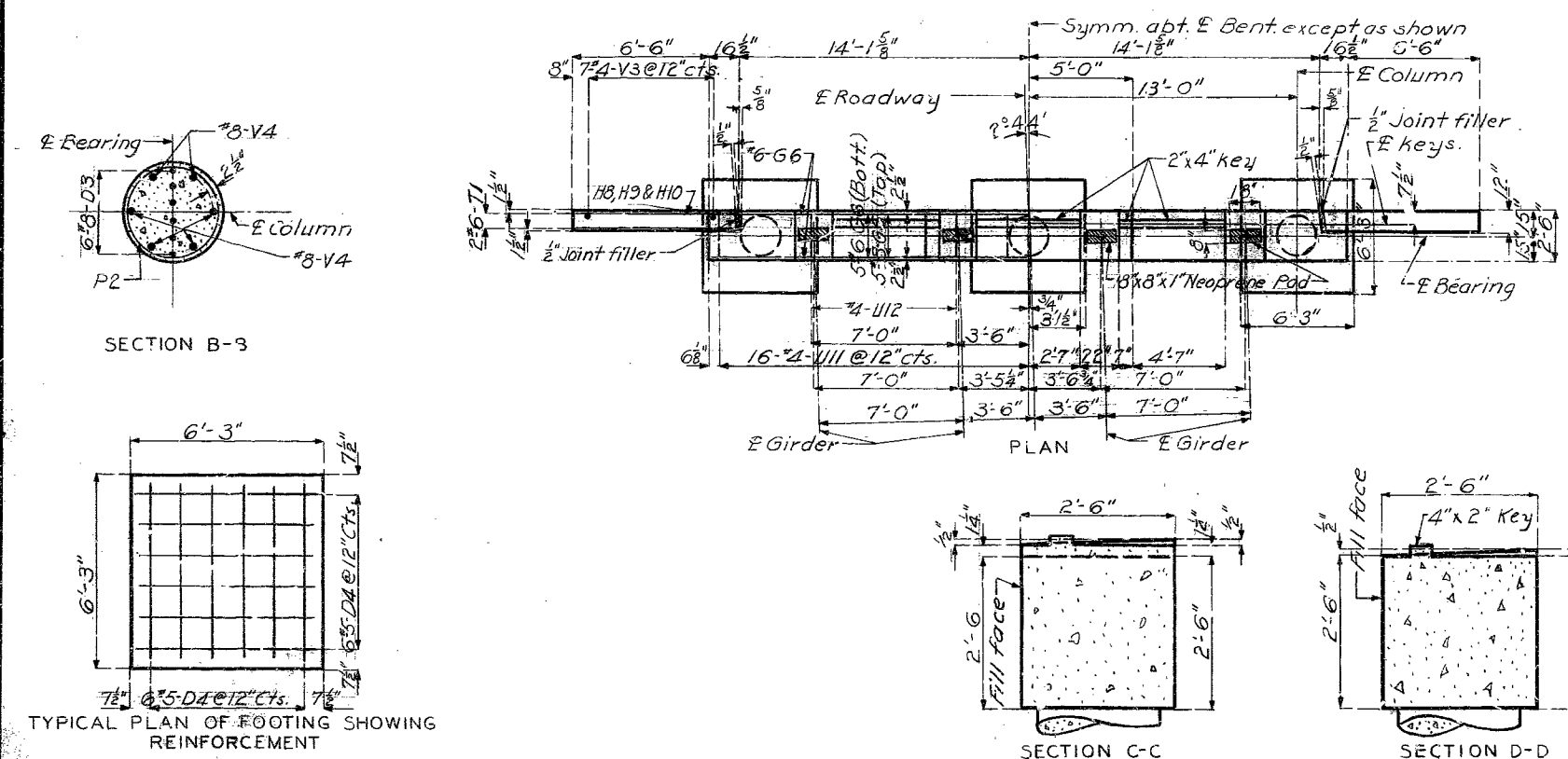
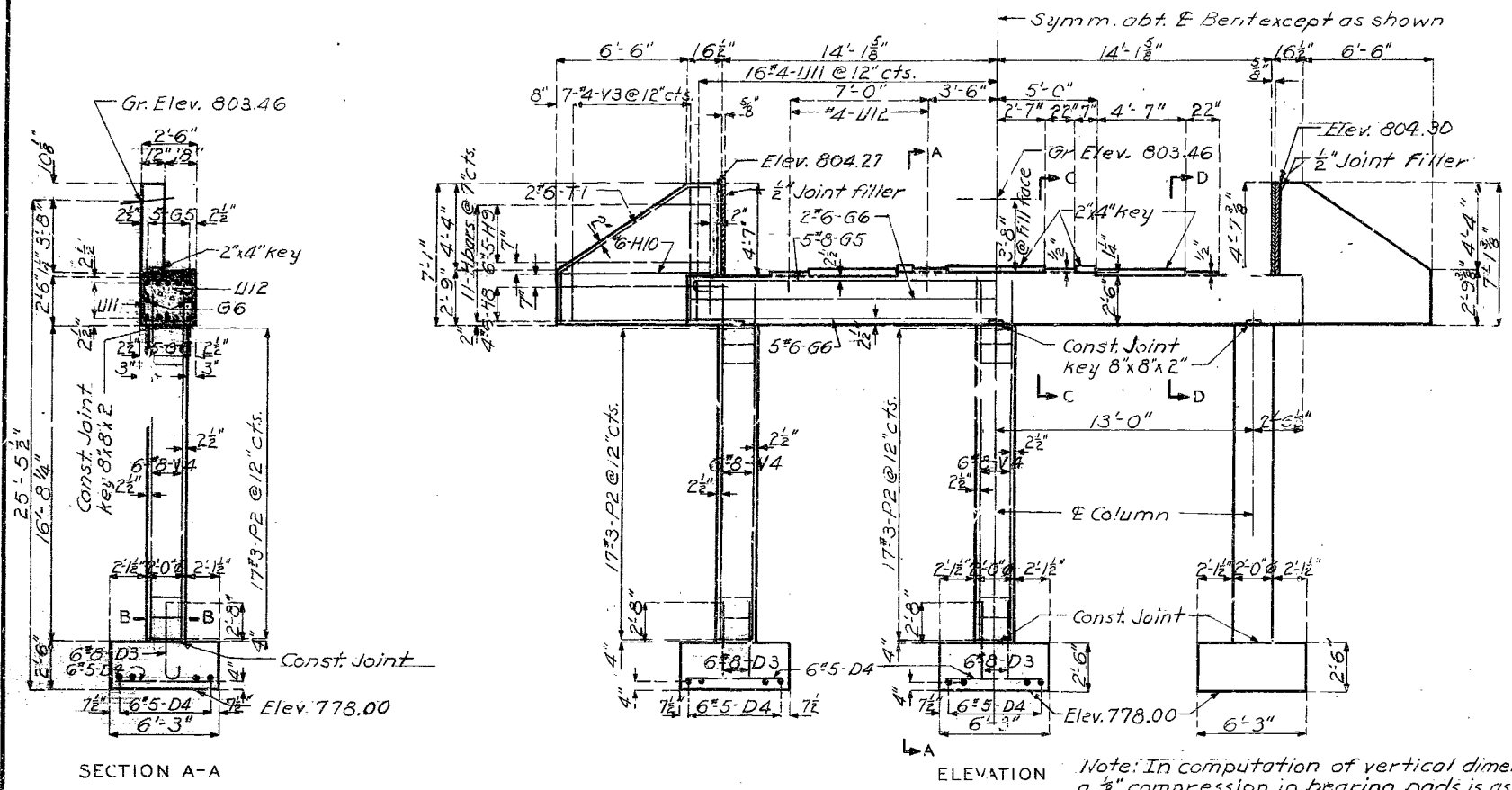
SEE FINAL PLANS BROWN-LINES

FINISHED
SUBMITTED BY D.B. [Signature] DATE 8-11-1961
APPROVED BY J. [Signature] DATE 8-11-1961

STD. 5400
A-132

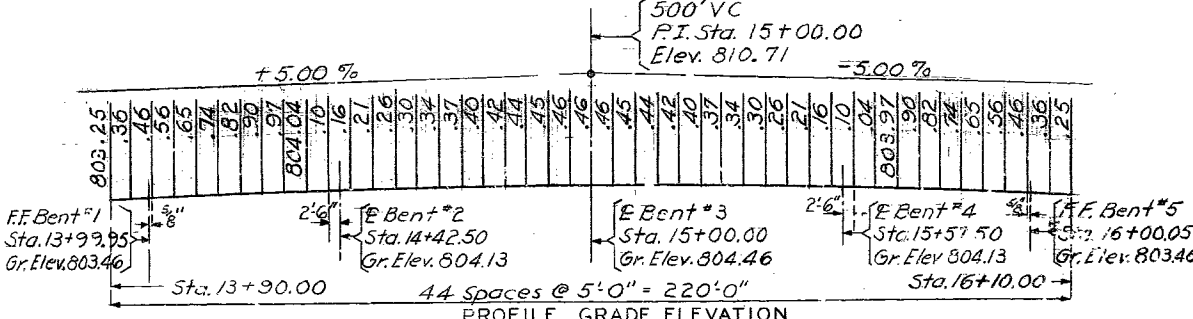
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	66	



BILL OF REINFORCING STEEL (Except Prestressed Members)

No.	Size	Length	Mark	Location	Bending Sketches & Cutting Diagrams	No.	Size	Length	Mark	Location
Substructure										
End Bents No. 1 & No 5										
36	#8	5'-6"	D3	Footing		6	#5	34'-6"	H6	
72	#5	6'-0"	D4	"		6	#5	28'-0"	H7	
10	#8	33'-3"	G5	Beam		96	#4	5'-9"	U8	
14	#6	30'-6"	G6	"		Diaph. Bents No. 2, 3 & 4				
16	#6	8'-3"	H8	Wing		12	#5	21'-9"	H3	
12	#5	9'-0"	H9	"		36	#4	9'-6"	H4	
4	#6	7'-6"	H10	"		18	#4	8'-9"	U5	
102	#3	6'-3"	P2	Column		108	#4	6'-9"	U6	
6	#6	17'-9"	T1	Wing		36	#5	4'-0"	H11	
62	#4	9'-9"	U11	Beam		Diaph. Int.				
8	#4	3'-3"	U12	"		48	#4	6'-3"	H4	
14	#4	9'-6"	V3	Wing		24	#4	3'-6"	H5	
36	#8	18'-9"	V4	Column		72	#4	7'-6"	U7	
Int. Bents No. 2, 3 & 4										
48	#9	6'-0"	D2	Footing		20	#5	4'-3"	C1	
96	#5	7'-3"	D5	"		372	#5	3'-6"	C2	
9	#9	25'-3"	G1	Beam		24	#5	22'-0"	C3	
21	#9	22'-9"	G2	"		24	#5	29'-8"	C4	
24	#9	11'-3"	G3	"		4	#5	6'-0"	C5	
6	#6	22'-9"	G4	"		24	#4	3'-9"	R1	
4	#3	8'-0"	P1	Column		20	#5	7'-3"	R2	
24	#7	6'-3"	U9	Beam		Slab & Curb				
26	#5	10'-3"	U10	"		216	#4	34'-6"	S1	
32	#9	20'-6"	V1	Col. Bents 2 & 4		150	#5	34'-9"	S2	
16	#9	20'-9"	V2	" Bents 3		105	#5	16'-0"	S3	
Superstructure										
Diaph. Bents No. 1 & 5										
Diaph. Bents No. 2, 3 & 4										
Diaph. Int.										
Slab & Curb										



BRIDGE: COUNTY ROAD UNDERPASS
 STATE ROAD FROM EAST OF ROUTE 65 TO COOPER CO. LINE
 ABOUT 7.0 MILES S.W. OF BLACKWATER
 PROJECT NO. I-70-2(10)(RTE. I-70) STA. 1222+36.40

SALINE COUNTY

Drawn July 1961 by O.J.S.
 Checked July 1961 by B.

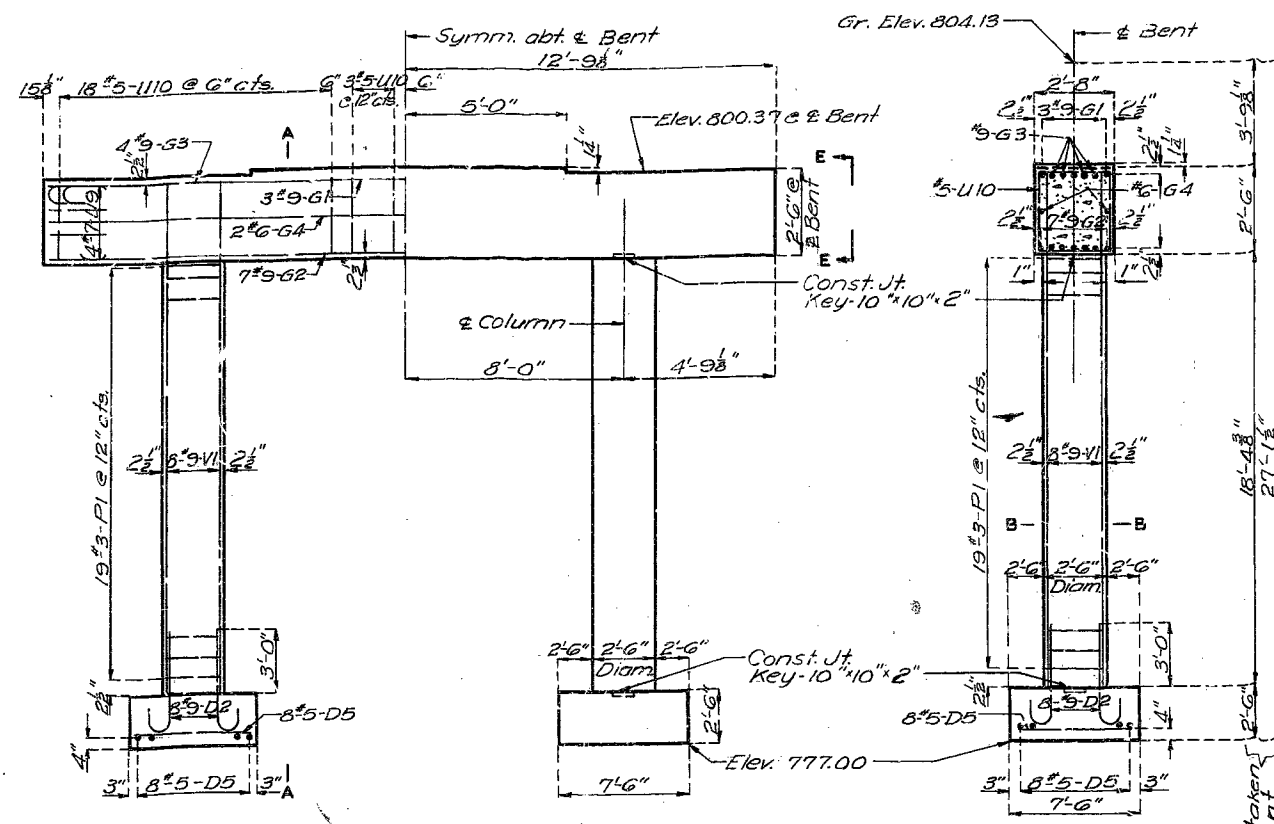
DETAILS OF END BENTS NO. 1 & 5
 Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 6

SEE FINAL PLANS BROWN-LINES

MISSOURI STATE HIGHWAY DEPARTMENT

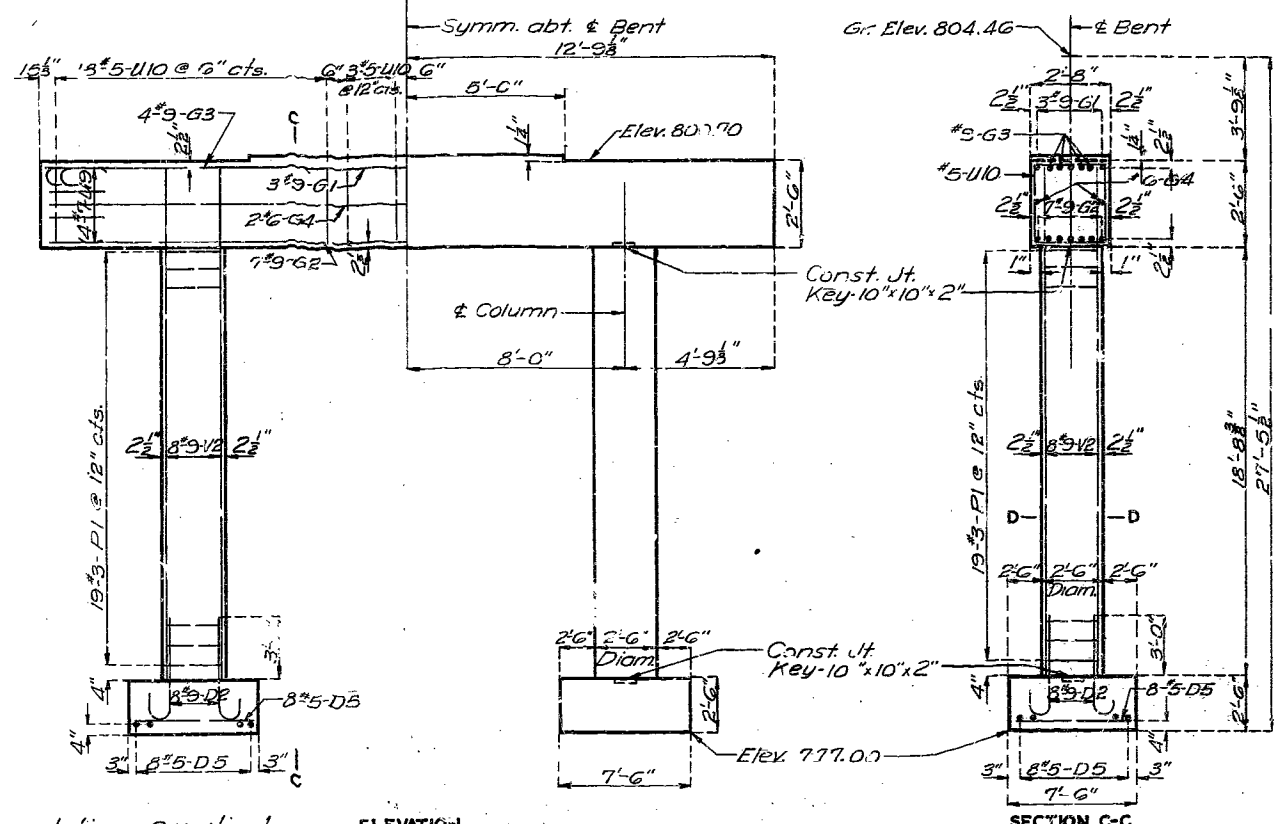
FED. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	67	



ELEVATION

SECTION A-A
(See Elev. E for slab of top of beam)

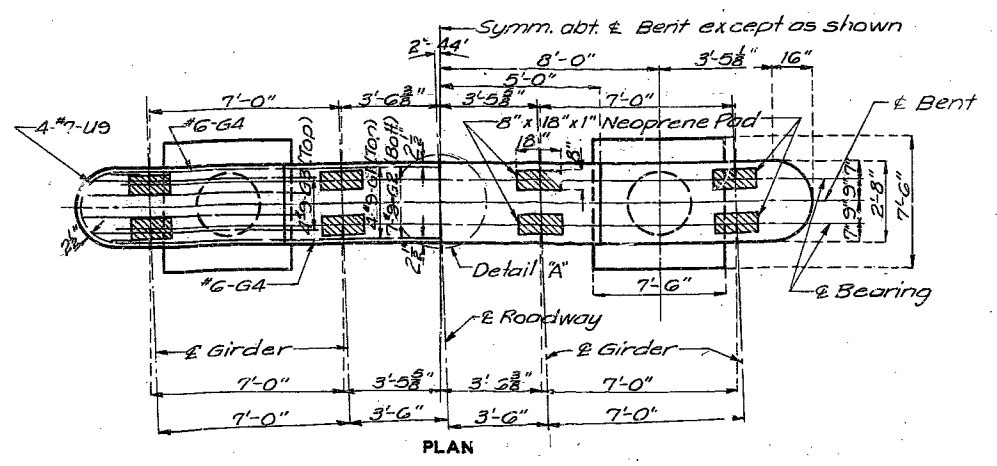
Dimensions taken along E Bent.



ELEVATION

SECTION C-C

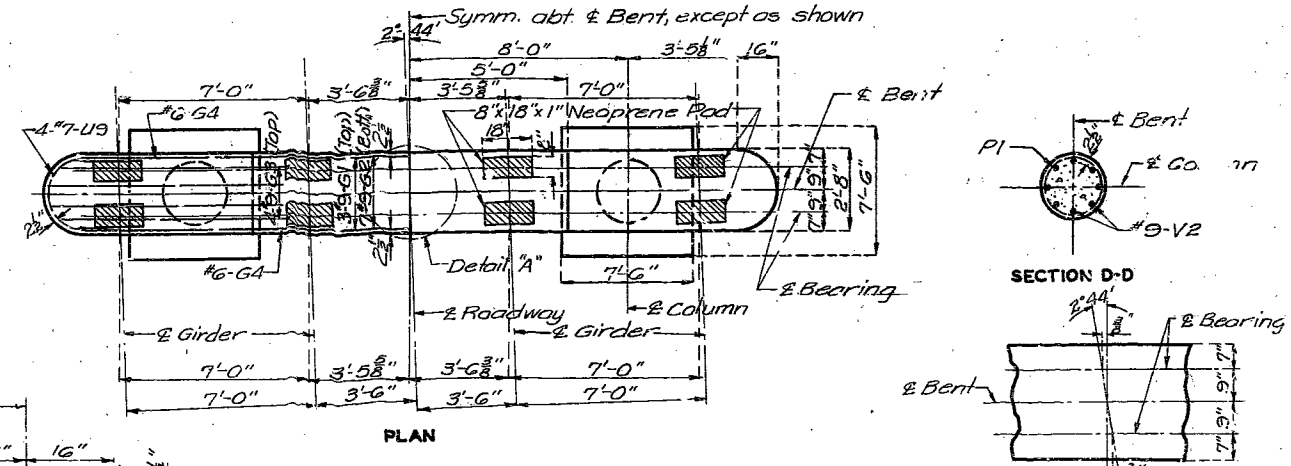
Note: In computation of vertical dimensions, a 3/4" compression in bearing pads is assumed.



PLAN

SECTION B-B

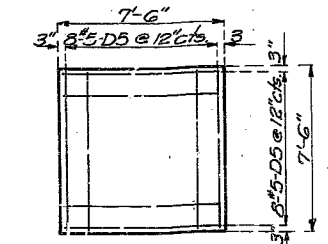
DETAILS OF INTERMEDIATE BENTS NO. 2 & 4



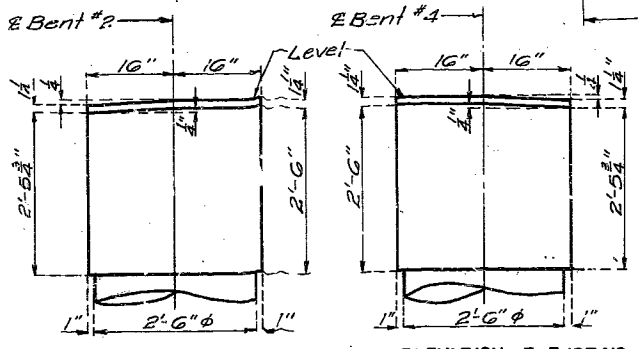
PLAN

SECTION D-D

DETAILS OF INTERMEDIATE BENT NO. 3



TYPICAL PLAN OF FOOTING SHOWING REINFORCEMENT



ELEVATION E-E (BT. NO. 2)

ELEVATION E-E (BT. NO. 4)

Note: Top of beam and step of bent #3 to be level.

BRIDGE: COUNTY ROAD UNDERPASS
 STATE ROAD FROM EAST OF ROUTE 65 TO COOPER CO. LINE
 ABOUT 7.0 MILES S.W. OF BLACKWATER
 PROJECT NO. I-70-2(10) (RTE. I-70) STA. 1222+36.40

FINISHED SALINE COUNTY FINISHED

Drawn July 1961 by O.J.S. & J.R.W.
 Checked July 1961 by [Signature]

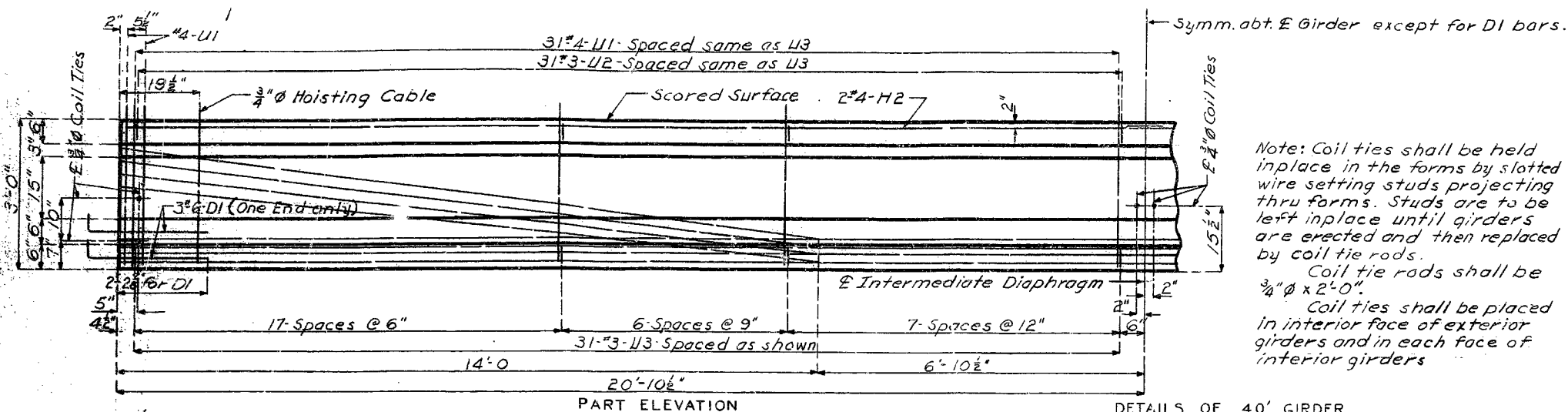
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 6

SEE FINAL PLANS BROWN-LINES

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	69	

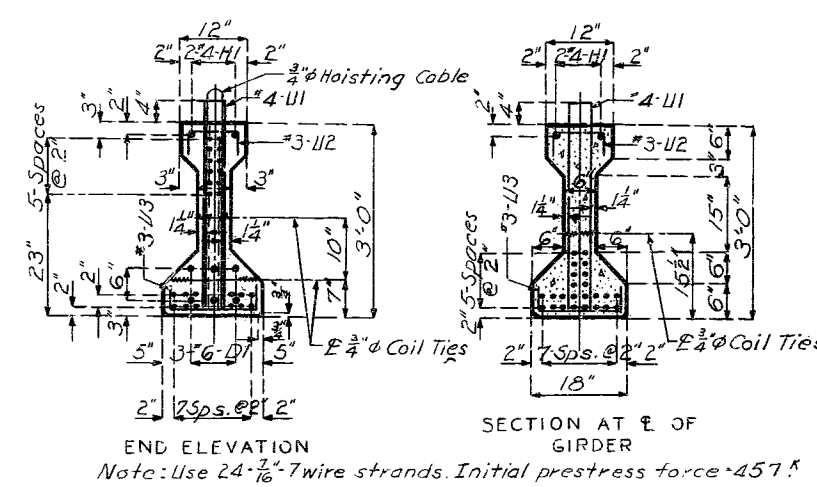
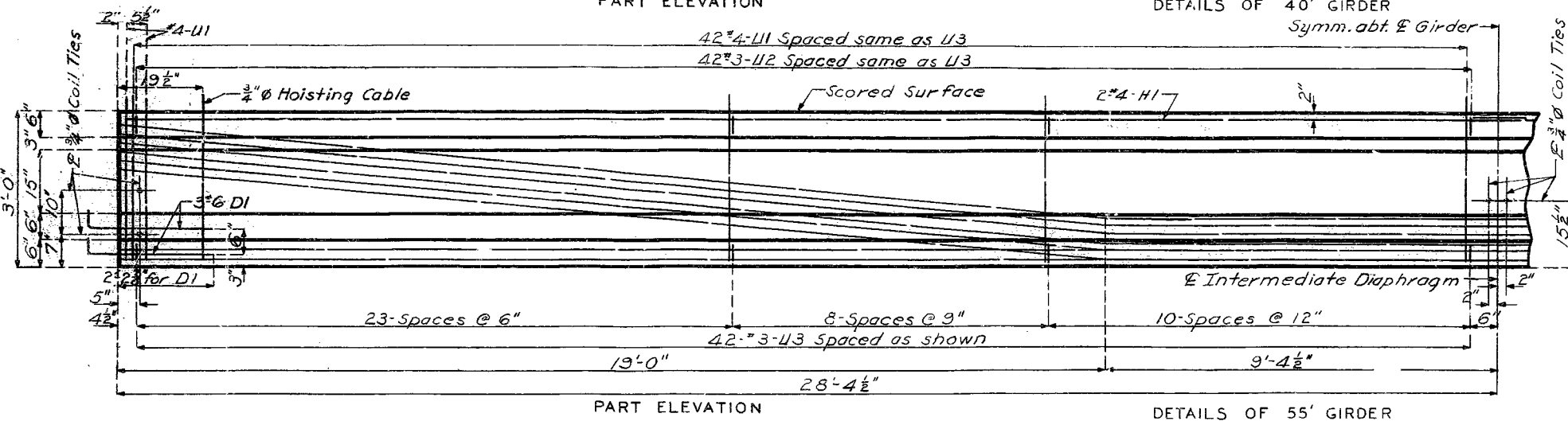
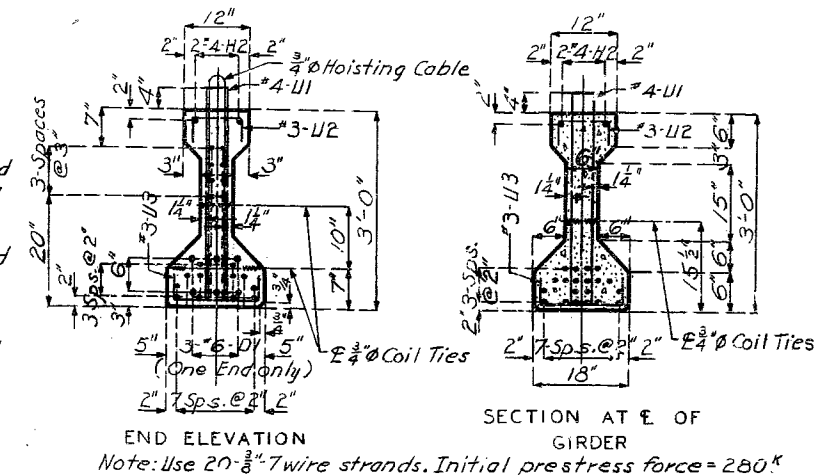


Symm. abt. E Girder except for DI bars.

Note: Coil ties shall be held in place in the forms by slotted wire setting studs projecting thru forms. Studs are to be left in place until girders are erected and then replaced by coil tie rods.

Coil tie rods shall be 3/4" ϕ x 2'-0".

Coil ties shall be placed in interior face of exterior girders and in each face of interior girders.



GENERAL NOTES - PRESTRESSED GIRDERS

Design Specifications A.A.S.H.O. 1957 and tentative revisions, T.1(58) and T.1(59)

Loading H15-44 (15" future wearing surface).

Non-prestressed Reinforcing Steel: Stress 20,000 psi.

Prestressing Strands: 7 wire uncoated strands, stress relieved after stranding of the size indicated on details.

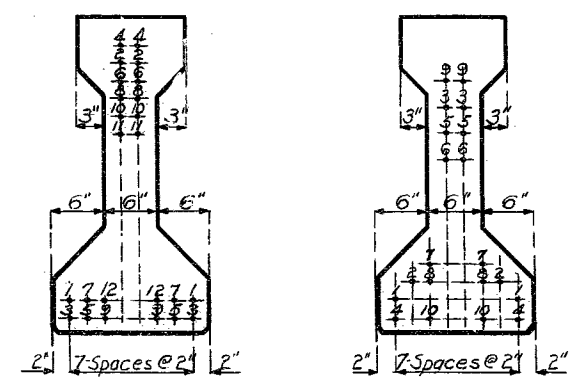
Concrete for prestressed girders shall be Class A (air-entrained), Ultimate Compressive Stress 5,000 psi.

Minimum Compressive stress at transfer 4,000 psi.

Prestressed Concrete: Ec 4,000,000 psi.

Prestressing: Details of proposed method of manufacture of prestressed girders including casting beds, jacks, temporary anchorage devices, method of producing drape in strands, transfer of stress and forms are to be submitted to the Engineer for approval. As the operations of manufacture proceed the contractor is to submit to the Engineer records of the jacking forces, elongation of strands, compressive stress of concrete at transfer, camber of girders and any other information as requested by the Engineer. The transfer of stress shall be carried out in the order as shown on the plans and before the concrete is allowed to dry out after curing.

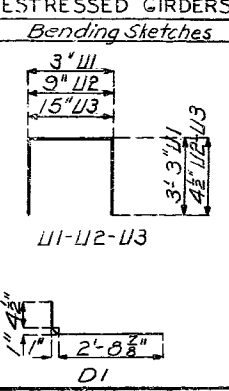
Bearings: Bearings shall be Neoprene Pads (70 durometer) 8" x 18" x 1" and shall conform to specifications of A.A.S.H.O. T.1(59). Cost of Neoprene Pads shall be included in price bid for Prestressed Concrete Members. See Special Provisions.



55' GIRDER 40' GIRDER
STRESSING SEQUENCE

Note: Strands shall be cut in pairs in the sequence shown above.

BILL OF REINFORCING STEEL - PRESTRESSED GIRDERS				
No	Size	Length	Mark	Location
40' Girder				
48	#6	3'-3"	DI	Bott. Flange
32	#4	21'-6"	H2	Top Flange
528	#4	6'-9"	U1	Web
496	#3	18"	U2	Top Flange
496	#3	2'-0"	U3	Bott. Flange
55' Girder				
96	#6	3'-3"	DI	Bott. Flange
32	#4	29'-0"	H1	Top Flange
104	#4	6'-9"	U1	Web
672	#3	18"	U2	Top Flange
672	#3	2'-0"	U3	Bott. Flange



FINISHED

BRIDGE: COUNTY ROAD UNDERPASS

STATE ROAD FROM EAST OF ROUTE 65 TO COOPER CO. LINE
ABOUT 7.0 MILES S.W. OF BLACKWATER
PROJECT NO. 1-70-2(10) (RTE. 1-70) STA. 1222+36.40

FINISHED SALINE COUNTY

Drawn July 1961 by O.V.S. & J.R.W.
Checked July 1961 by [Signature]

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 6.

FINISHED
A-132

NO CONSTRUCTION CHANGES

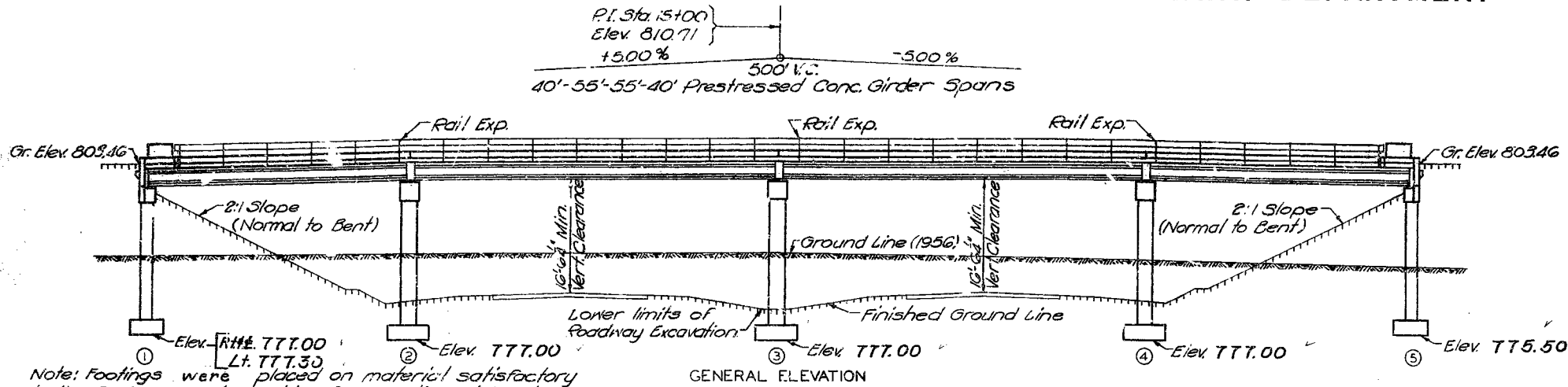
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	65	

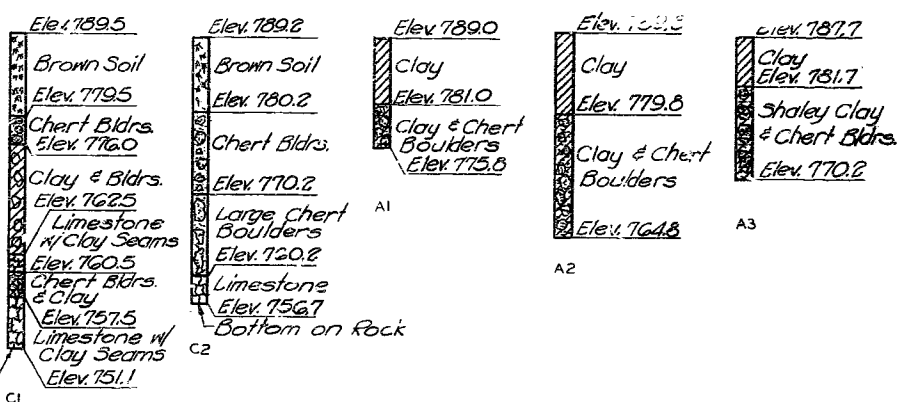
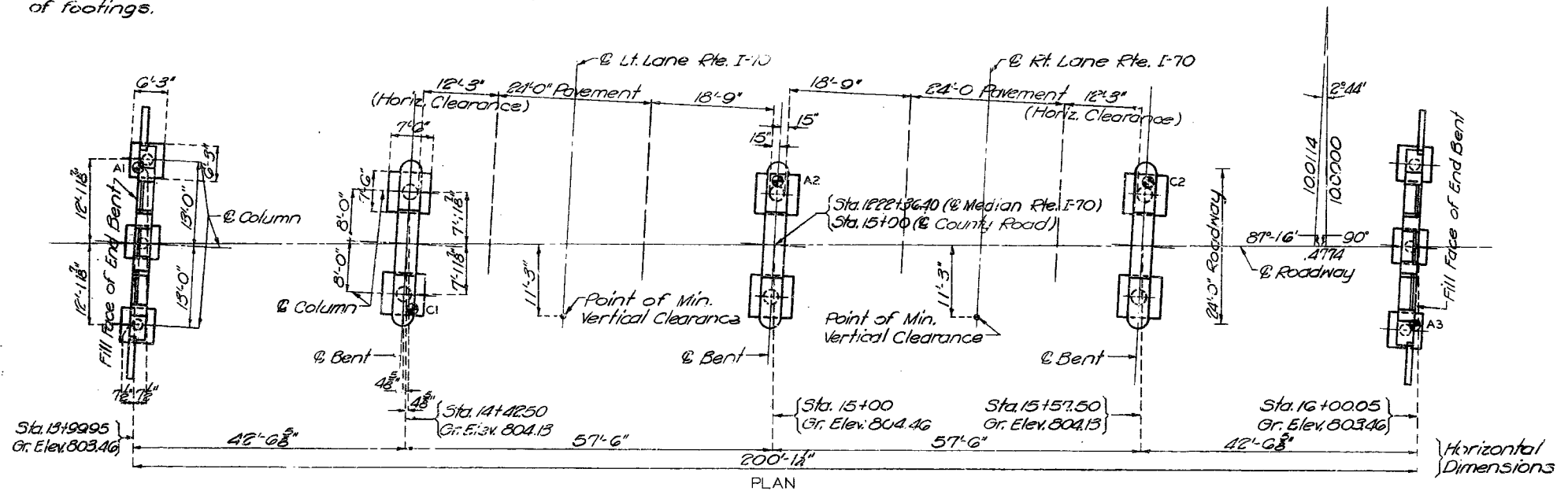
FINAL PLAN

GENERAL NOTES:

For specifications and notes pertaining to prestressed members refer to Sheet No. 5 of G.
 Design Specifications AASHTO, 1957.
 Loading H15-44 (Future Wearing Surface 15"±).
 Structural Steel Stress 18,000 #/sq. inch.
 Reinforcing Steel Stress 20,000 #/sq. inch.
 Concrete, Class B Stress 1,200 #/sq. inch.
 Concrete, Class B1 Stress 1,600 #/sq. inch.
 Superstructure concrete, except for girders was Class B1 (Air Entrained).
 Substructure concrete was Class B (Air Entrained).
 Paint: Shop none; Field, contact surfaces of bolted field connections, steel to steel one coat of red lead and surfaces of rail posts in contact with concrete, three coats of red lead. All other exposed surfaces first coat red lead, second coat brown, third coat aluminum. Payment for cleaning and painting such surfaces was included in price bid for items painted.
 Joint filler was specified on the plans if conformed with the requirements of Section 157.2.4 of the Standard Specifications.
 Permits were obtained for all truck loads over legal length.
 Qualification of welding operators was required.



Note: Footings were placed on material satisfactory to the Engineer and capable of supporting at least 5000 #/ft. Footings were not placed higher than elevations shown on these plans.
 Bearing pressure of 5000 #/ft used in design of footings.

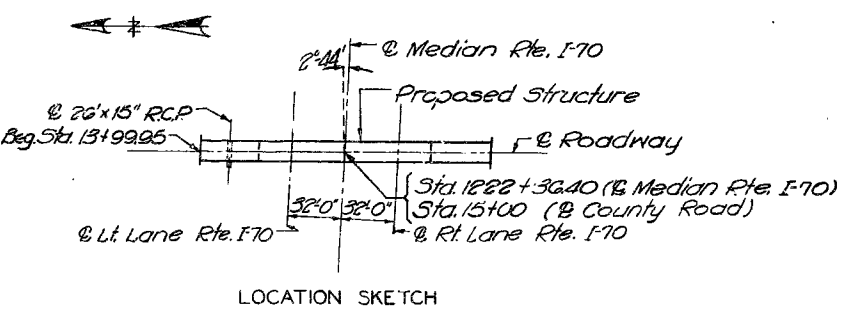


Note: Soundings C1 and C2 taken with a Core Drill.
 Soundings A1, A2 and A3 taken by Auger with bottoms in Chert Material.
 Soundings located on "Plan" thus ⊙.
 LOG OF SOUNDINGS

N.B.M. Elev. 804.27 Conc. nail in top of wing-wall N.W. corner Br. #A-132
BRIDGE: COUNTY ROAD UNDERPASS
 STATE ROAD FROM EAST OF ROUTE 65 TO COOPER CO. LINE ABOUT 70 MILES S.W. OF BLACKWATER
 PROJECT NO. I-70-2(10)(RTE. I-70) STA. 1222 + 36.40
SALINE COUNTY

Item	QUANTITIES		
	Substr.	Superstr.	Total
Class I Excavation for Structures Cu.Yds.	309		309
Class B Concrete Cu.Yds.	124.9		124.9
Class B1 Concrete Cu.Yds.		157.1	157.1
40' Prestressed Concrete Members Each		8	8
55' Prestressed Concrete Members Each		8	8
Reinforcing Steel (except Prest. Members) Lbs.	16,662	39,775	56,440
Fabricated Structural Carbon Steel Lbs.		12,980	12,980
Class I Excavation for Structures Plus 25%	20		20

Note: All excavation for bridge was paid for as Class I Excavation for Structures.
 Quantity of Class I Excavation for Structures includes only amount of excavation below lower limits of roadway excavation.



Drawn JULY 1961 by CDW.
 Checked July 1961 by [Signature]

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1A of 3

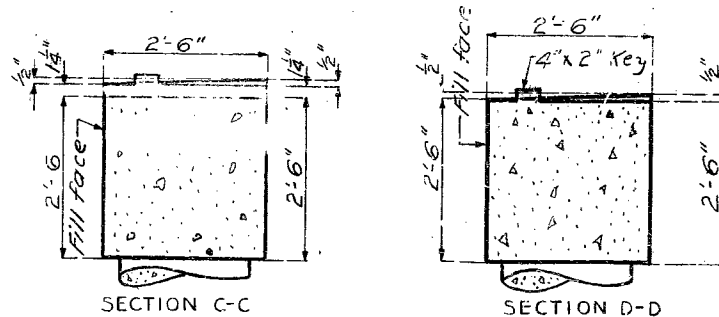
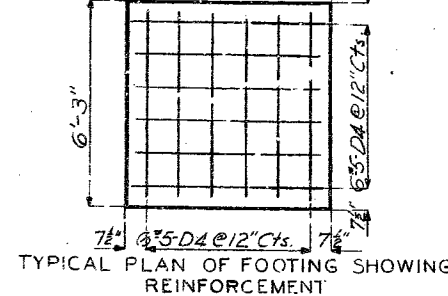
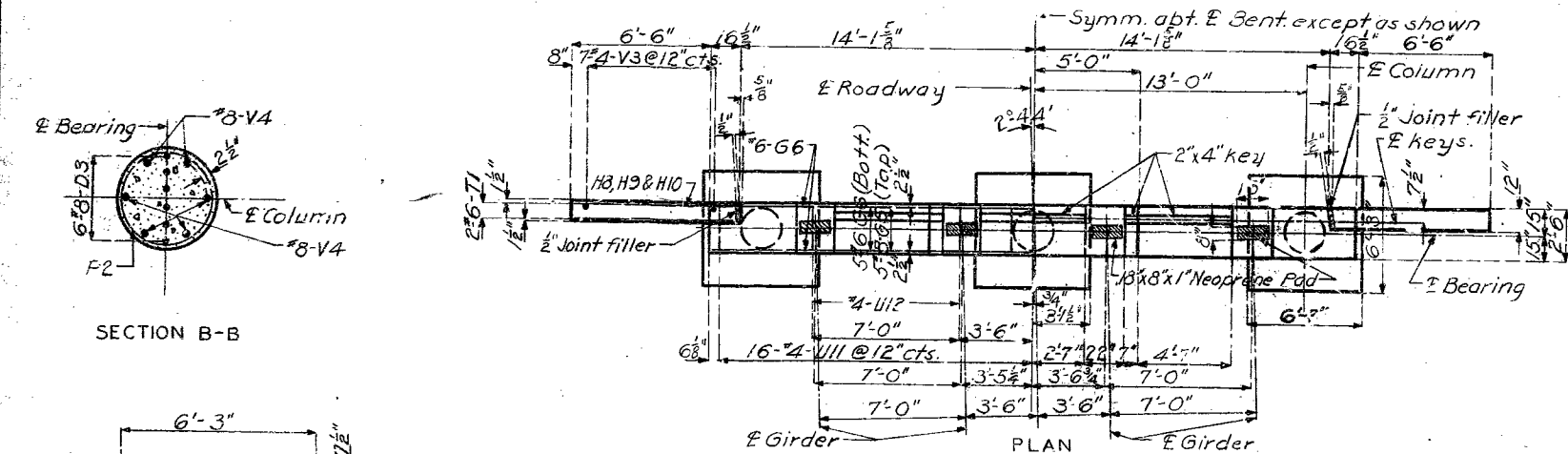
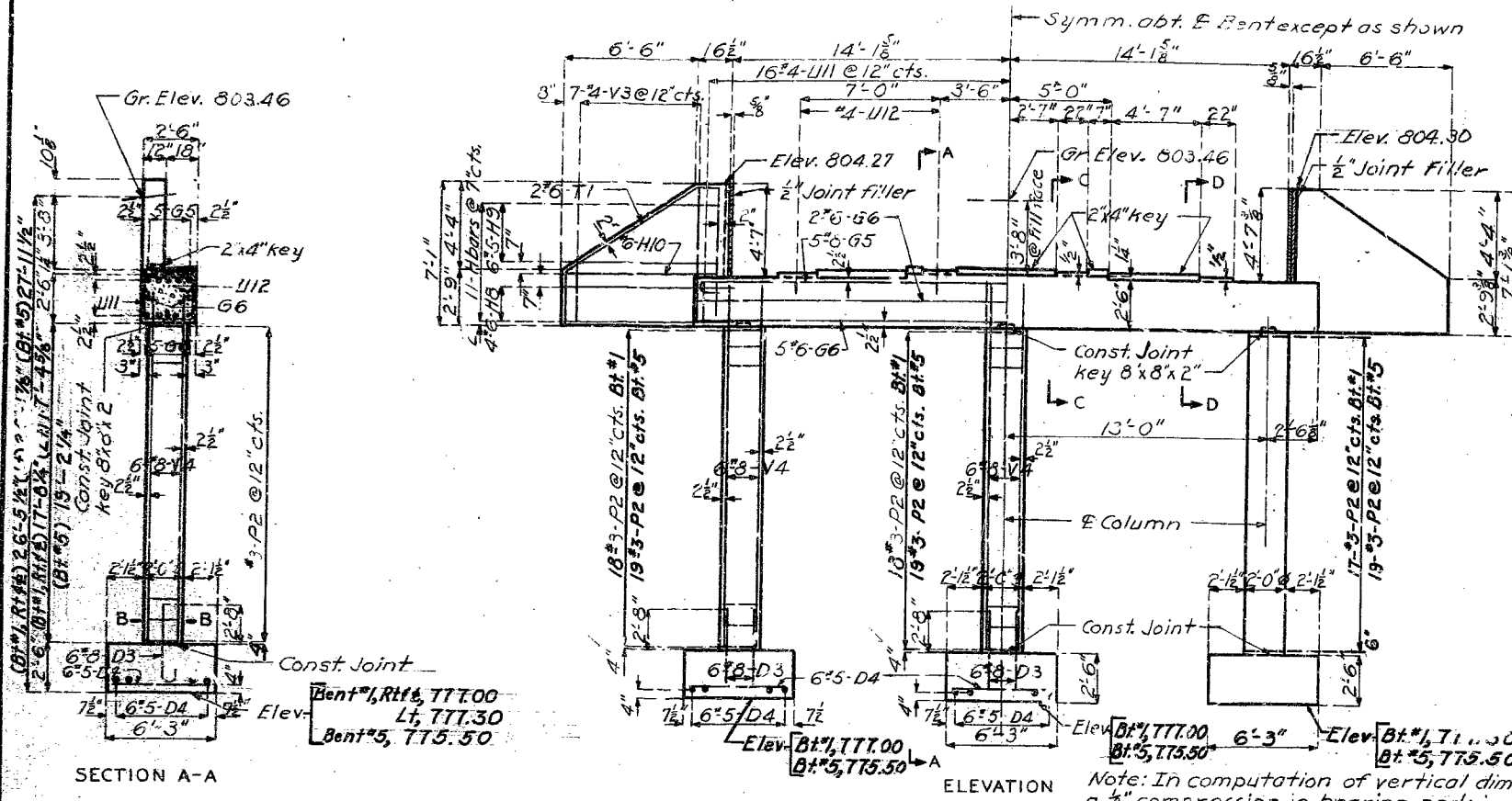
FINAL PLANS

STD. 5400
A-132

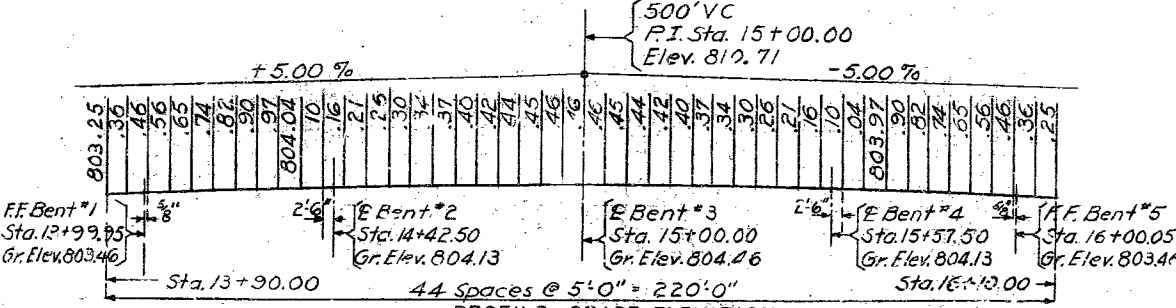
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	66	

FINAL PLANS



BILL OF REINFORCING STEEL (Except Prestressed Members)						
No.	Size	Length	Mark	Location	Bending Sketches & Cutting Diagrams	
SUBSTRUCTURE						
End Bents No. 1 & 5						
36	#8	5'-6"	D3	Footings		
72	#5	6'-0"	D4	"		
10	#8	33'-3"	G5	Beam		
14	#6	30'-6"	G6	"		
16	#6	8'-3"	H8	Wing		
12	#5	9'-0"	H9	"		
4	#6	7'-6"	H10	"		
110	#3	6'-3"	P2	Column		
12	#8	3'-9"	T1	Beam		
8	#6	17'-9"	T1	Wing		
62	#4	9'-9"	U11	Beam		
8	#4	3'-3"	U12	"		
6	#4	3'-6"	V3	Wing		
14	#4	7'-6"	V3	Wing		
36	#8	18'-9"	V4	Column		
18	#8	5'-3"	V4	Column		
Int. Bents No. 2, 3 & 4						
48	#9	6'-0"	D2	Footings		
96	#5	7'-3"	D5	"		
9	#9	25'-3"	G1	Beam		
21	#9	22'-9"	G2	"		
24	#9	11'-3"	G3	"		
6	#6	22'-9"	G4	"		
114	#3	8'-0"	P1	Column		
24	#7	6'-3"	U9	Beam		
126	#5	10'-3"	U10	"		
32	#9	20'-6"	V1	Col. Bt. 284		
16	#9	20'-9"	V2	" Bt. #3		
Superstructure						
Diaph. Bents No. 1 & 5						
6	#5	34'-6"	H6	"		
96	#4	28'-0"	H7	"		
96	#4	5'-9"	U8	"		
Diaph. Bents No. 2, 3 & 4						
12	#5	21'-9"	H3	"		
36	#4	9'-6"	U4	"		
18	#4	8'-9"	U5	"		
108	#4	6'-9"	U6	"		
36	#5	4'-0"	H11	"		
Diaph. Int.						
48	#4	6'-3"	H4	"		
24	#4	5'-6"	H5	"		
72	#4	7'-6"	U7	"		
Slab & Curb						
216	#4	34'-6"	S1	Slab		
150	#5	34'-9"	S2	"		
105	#5	16'-0"	S	"		
800	#5	26'-3"	S	"		
32	#5	2'-6"	S5	"		
20	#5	4'-3"	C1	CURB		
372	#5	3'-6"	C2	"		
24	#5	22'-0"	C3	"		
24	#5	29'-0"	C4	"		
4	#5	6'-0"	C5	"		
24	#4	3'-9"	R1	End Post		
20	#5	7'-3"	R2	"		



BRIDGE COUNTY ROAD UNDERPASS FINISHED

STATE ROAD FROM EAST OF ROUTE 65 TO COOPER CO. LINE
ABOUT 7.0 MILES S.W. OF BLACKWATER

PROJECT NO. I-70-2(10)(RTE. I-70) STA. 1222+36.40

SALINE COUNTY

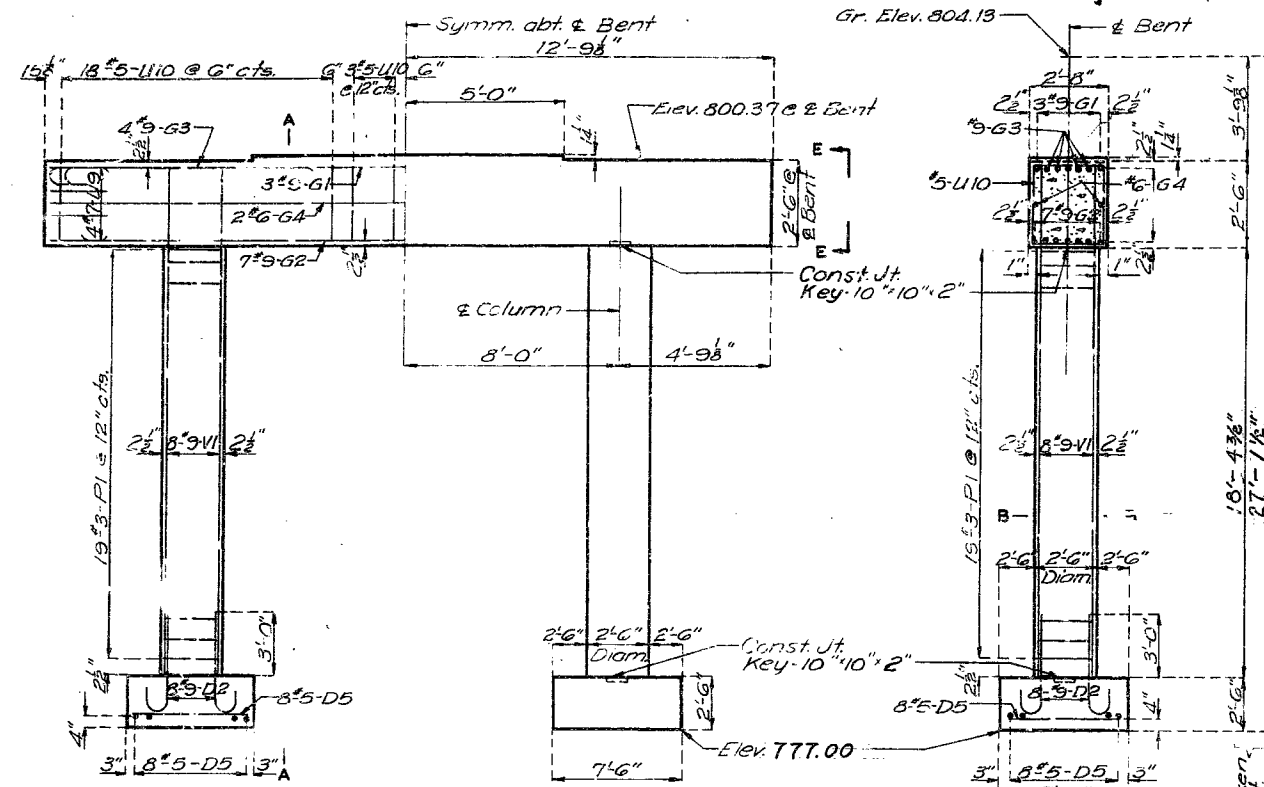
Drawn July 1961 by O.J.S.
Checked July 1961 by TB

Note: This drawing is not to scale. Follow dimensions.

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	67	

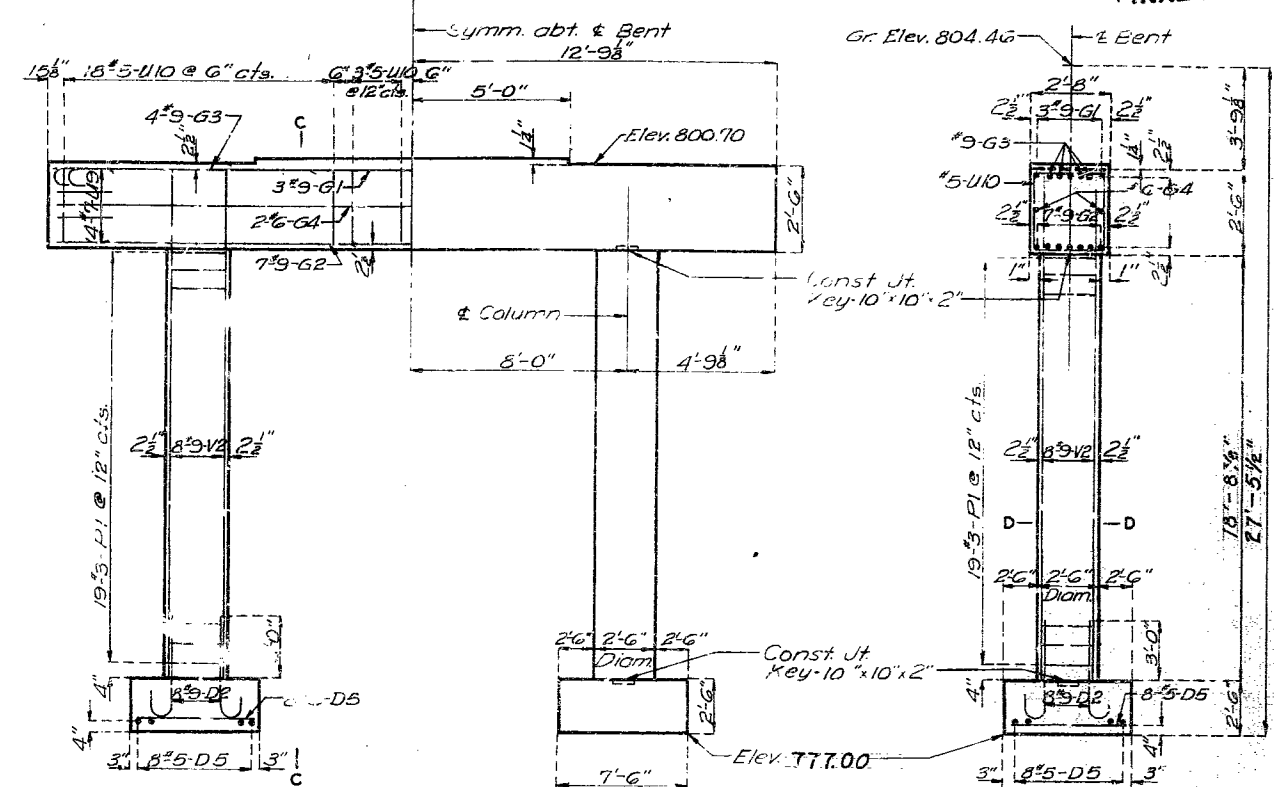
FINAL PLANS



ELEVATION

SECTION A-A
(See Elev. Et. for slope of top of beam)

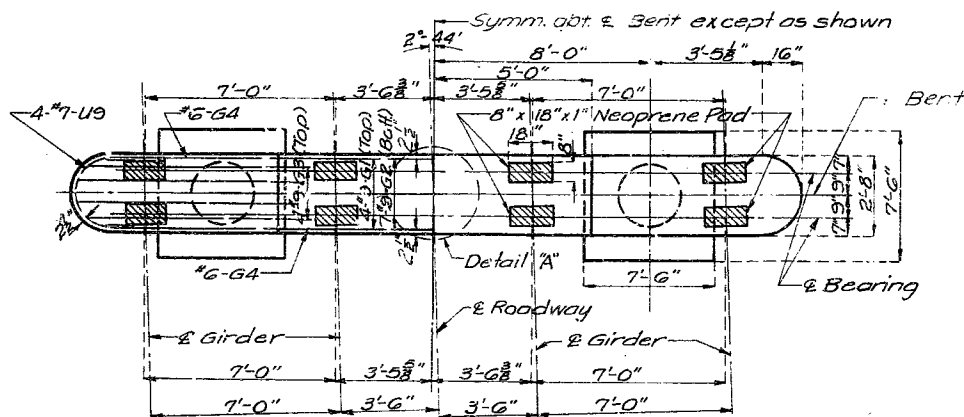
Dimensions taken along Bent



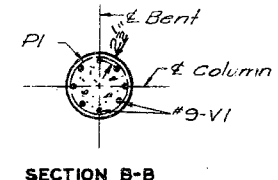
ELEVATION

SECTION C-C

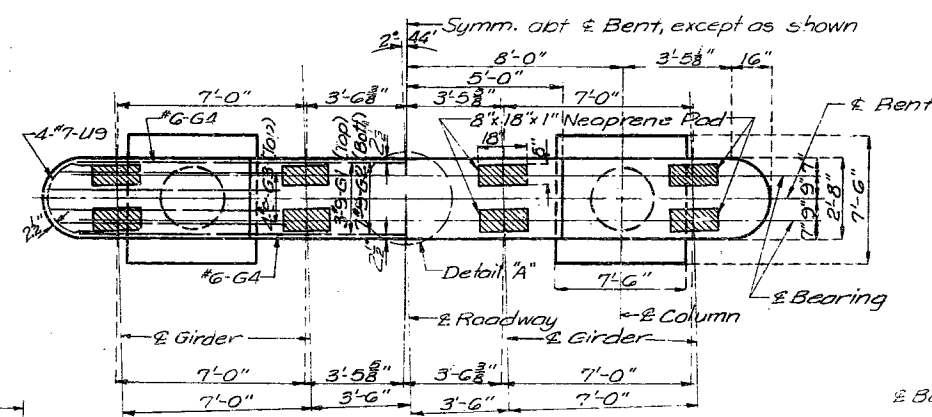
Note: In computation of vertical dimensions, a compression in bearing pads is assumed.



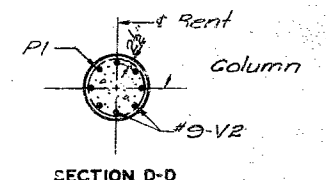
PLAN



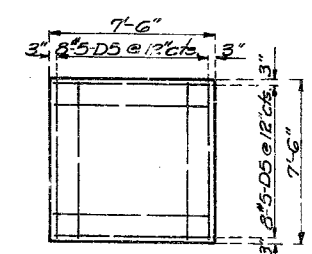
SECTION B-B



PLAN

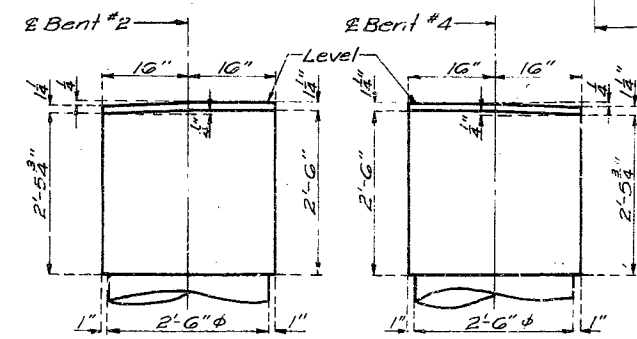


SECTION D-D



TYPICAL PLAN OF FOOTING SHOWING REINFORCEMENT

DETAILS OF INTERMEDIATE BENTS NO. 2 & 4

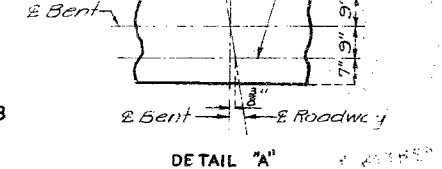


ELEVATION E-E (BT. NO. 2)

ELEVATION E-E (BT. NO. 4)

Note: Top of beam and step of bent #3 was level.

DETAILS OF INTERMEDIATE BENT NO. 3



DETAIL "A"

BRIDGE: COUNTY ROAD UNDERPASS

STATE ROAD FROM EAST OF ROUTE 65 TO COOPER CO. LINE
ABOUT 7.0 MILES S.W. OF BLACKWATER
PROJECT NO. I-70-2(10) (RTE. I-70) STA. 1222+36.40

SALINE COUNTY

FINISHED

FINISHED

Drawn July 1961 by O.J.S. & J.R.W.
Checked July 1961 by J.B.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3A of 3

FINAL PLANS

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