

STATE OF ARKANSAS
STATE HIGHWAY COMMISSION

FISCAL YEAR	Job No.	SHEET NO.	TOTAL SHEETS
1930	965	1	14

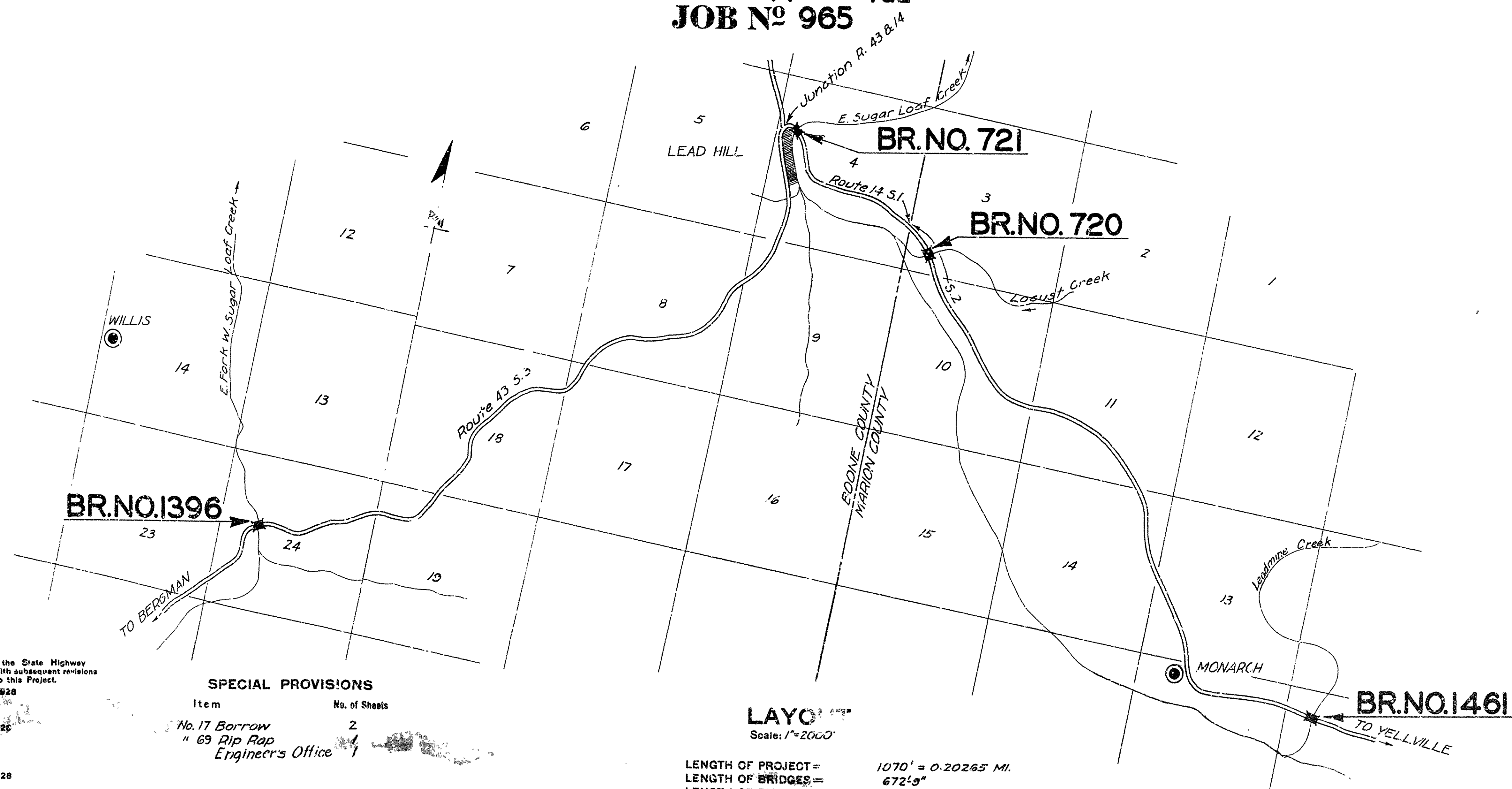
INDEX OF SHEETS

Sheet No.	Drwg No	Title Sheet
" 1	" 2530	" Title Sheet
" 2	" 2531	" Layout Br. No. 1396
" 3	" 2532	" Details of Substructure for Br. No. 1396
" 4	" 2235	" Details of Standard 35' R.C.D. (3 Gir.) Girder, 18' Rdwy, 10 Ldg.
" 5	" 2533	" Layout of Br. No. 721
" 6	" 2534	" Details of 90' R.C. Arch Span, 18' Roadway, 10 Loading.
" 7	" 2535	" Details of W. Abut. for 90' Arch Span.
" 8	" 2536	" Details of Bents for Br. No. 721
" 9	" 2233	" Details of Standard 30' R.C. D. (2 Gir.) Gir. Span, 18' Rdwy, 10 Ldg.
" 10	" 2537	" Layout of Br. No. 720
" 11	" 2533	" Details of Abutments for Br. No. 720
" 12	" 2539	" Details of Bents for Br. No. 720
" 13	" 2540	" Layout of Br. No. 1461
" 14	" 2541	" Details of Substructure for Br. No. 1461

PLAN OF PROPOSED BRIDGES
ON
LEAD HILL - BERGMAN ROAD
LEAD HILL - YELLVILLE ROAD
BOONE & MARION COUNTY
ROUTE 43 SEC. 3
14 1 & 2
JOB NO 965

QUANTITIES

Item No.	Description	Quantity	Unit
12	Common Excavation (Channel)	2,000	C. Yds.
13	Dry Excav. for Structures	389	" "
13	Wet " " "	690	" "
13	Rock " " "	278	" "
17	Borrow	1,350	" "
54	Class "A" Concrete	522.13	" "
54	" "S" "	633.43	" "
55	Reinforcing Steel	175,018	Lbs.
69	Rip Rap	45	C. Yds.
74	Concrete Railing	1,367	Lin. Ft.



SPECIAL PROVISIONS

Item	No. of Sheets
No. 17 Borrow	2
" 69 Rip Rap	1
Engineer's Office	1

LAYO
Scale: 1"=2000'

LENGTH OF PROJECT = 1070' = 0.20265 MI.
LENGTH OF BRIDGES = 672' 9"
LENGTH OF EMBANKMENT = 0.07524 MI.

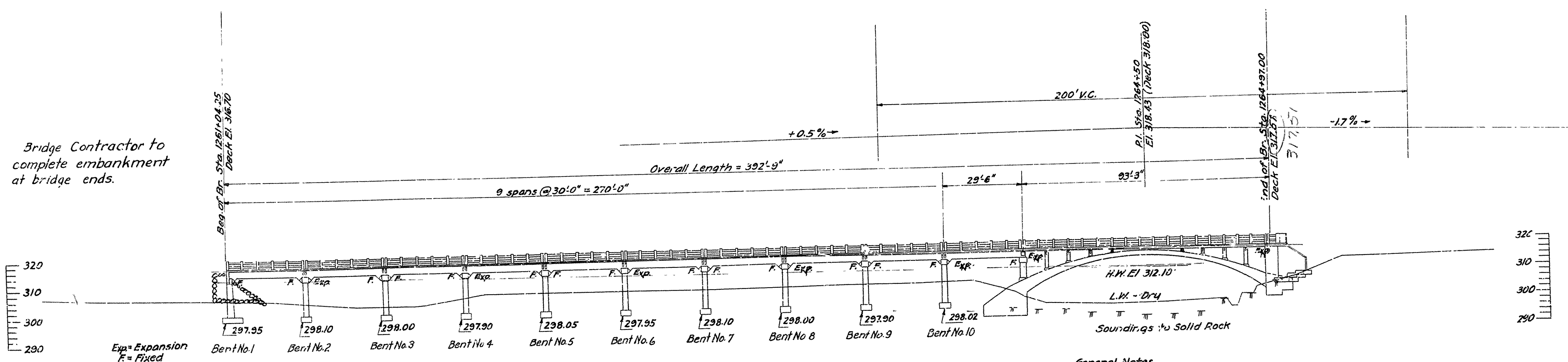
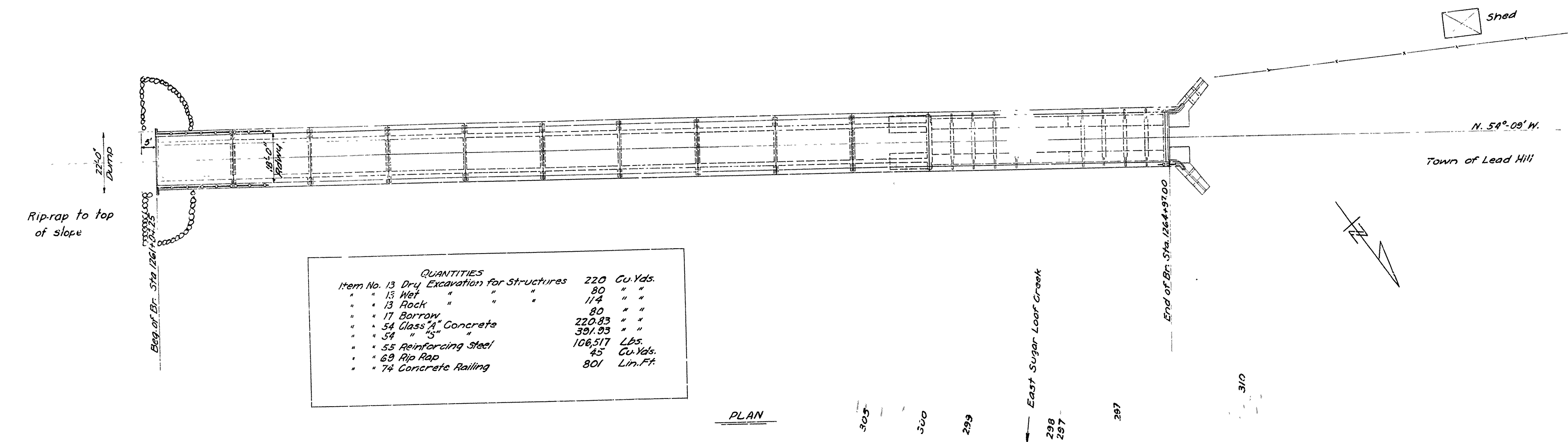
- Specifications adopted by the State Highway Commission, May 30th, 1925 apply with subsequent revisions.
- Revisions noted apply to this Project.
- A Revised Sept. 1st, 1928
- B
- C Revised July 1st, 1928
- D
- E
- F
- G
- H Revised Oct. 1st, 1928
- I
- J Revised Jan. 1st, 1929
- K
- L Revised Jan. 1st, 1929

APPROVED
[Signature] CHAIRMAN - STATE HIGHWAY COMMISSION

APPROVED
[Signature] STATE HIGHWAY ENGINEER

BRIDGE ENGINEER
BRIDGES No. 1396-721-720-1461
DRAWING No. 2530

FISCAL YEAR	JOB No.	SHEET No.	TOTAL SHEETS
1930	965	5	14



B.M. El. 308.03
Nail in root of 24" Elm
40' Lt. Sta. 1262+00

West Abutment to be Class "A" Concrete. East Arch Abutment to be Class "A" Concrete. to Skewback. Remainder of Arch Span and Pier over East Arch Abutment, except Hand Rails, to be Class "S" Concrete.
East Arch Abutment to be Carried at Least 2'-6" into Sound, Undisturbed Rock.
West Arch Abutment to be Carried at Least 3'-0" into Sound, Undisturbed Rock.
Excavation to be done in a manner that will avoid shattering the rock faces in contact with the footings.

Drainage Area = 48 Sq. Miles.
Mountainous.

General Notes
All exposed corners to have 3/4" chamfer unless noted otherwise.
Precast concrete hand rails to be 1:1:2 mix; max. aggregate 3/8".
All concrete above top of bent caps in approach, except hand rails, to be Class "S".
Reinforcing steel to be deformed bars of structural or intermediate grade.
Shop List and Bending Diagrams must be submitted by Contractor before fabrication is begun.
Roadway Drains and Expansion Devices to be paid for at unit price bid for reinforcing steel.
Unit Stresses: $f_c = 750 \text{ lbs./sq. in.}$, $f_s = 16,000 \text{ lbs./sq. in.}$, $n = 15$. No loading.
Specifications: Arkansas Road & Bridge Specifications, adopted May 30, 1925 & Revised.

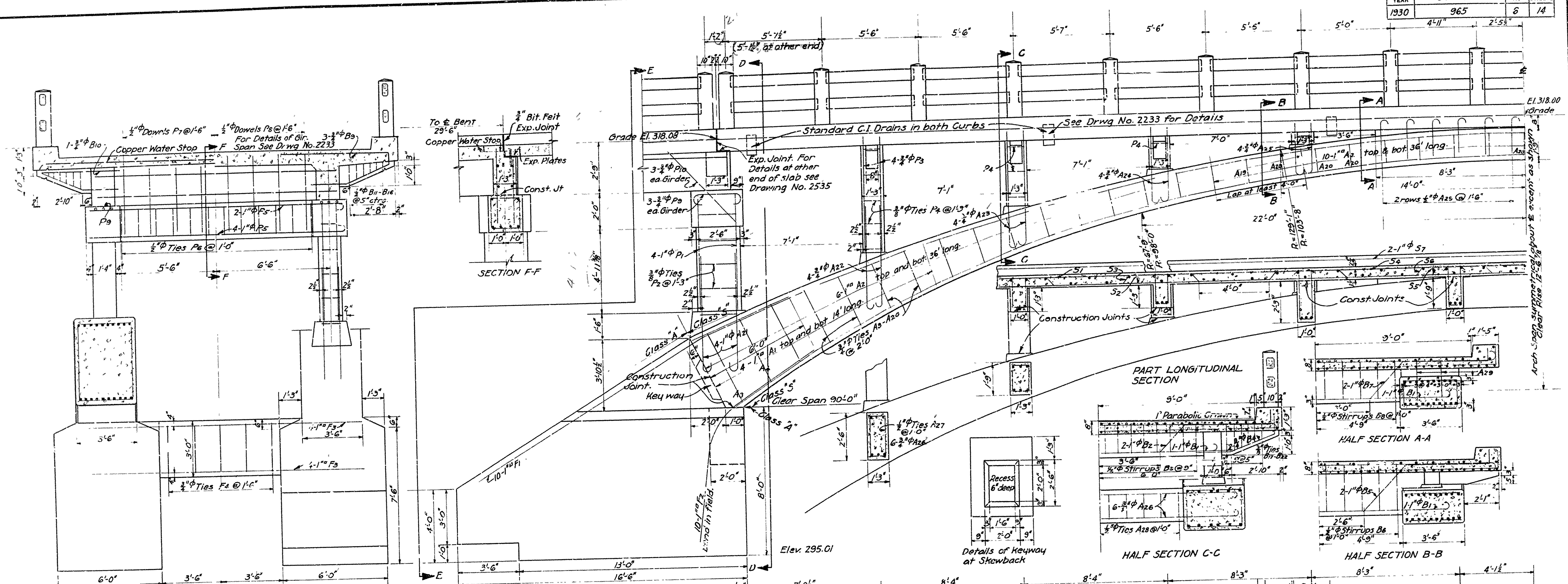
Revised A-10-30
Elevations
G.S.V.

M.B. Harris
BRIDGE ENGINEER

LAYOUT
BRIDGE OVER EAST SUGAR LOAF CREEK
NEAR LEAD HILL, BOONE COUNTY
ROUTE 14 SEC. 1-A
ARKANSAS STATE HIGHWAY DEPARTMENT
LITTLE ROCK, ARK.
Scale: 1/4" = 20'
DRAWING NO. 2533

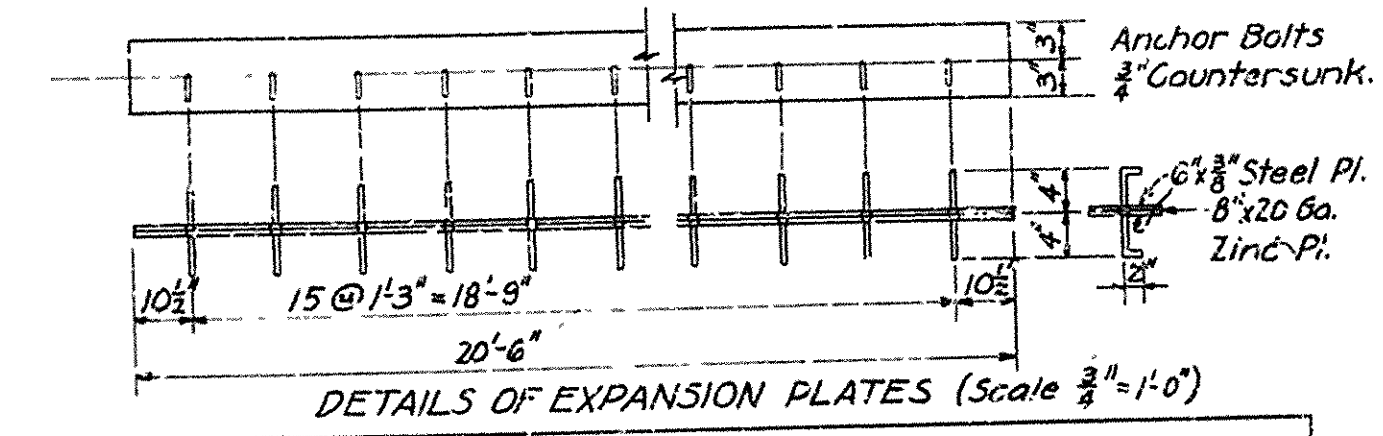
Drawn By: G.S.V. Date: 1-30-30
Traced By: G.S.V. Date: 2-21-30
Checked By: G.S.V. Date: 2-28-30
BRIDGE NO. 721

FISCAL YEAR	Job No.	SHEET NO.	TOTAL SHEETS
1930	965	6	14



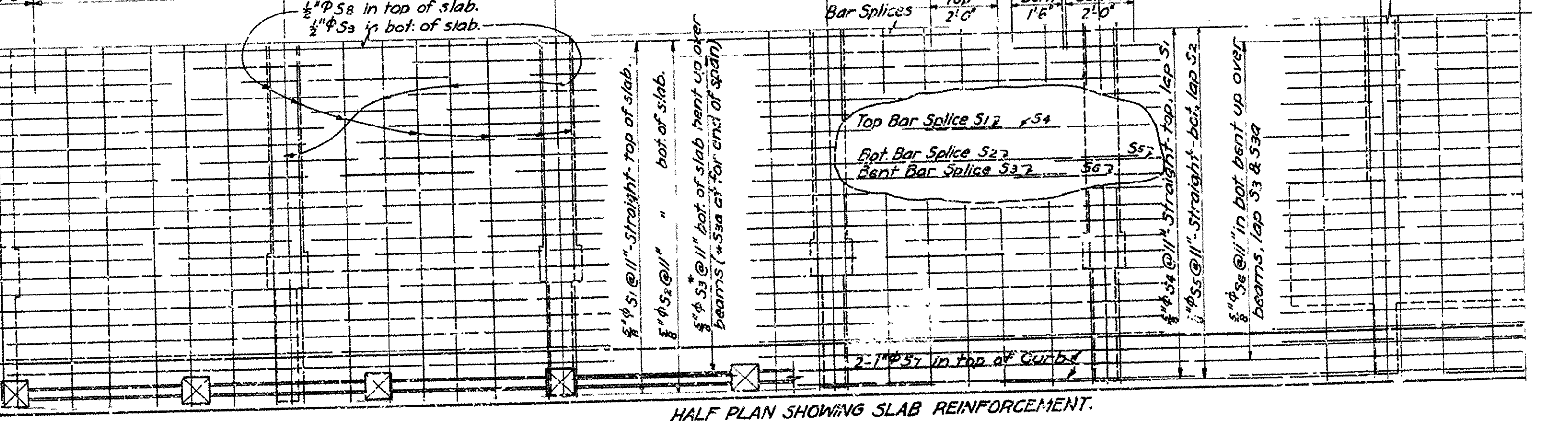
BENDING DIAGRAM

Mark	Size	Length	H	A
A21	1" φ	7'-9"	8"	6'-9"
A22	3/4" φ	6'-3"	6"	5'-6"
A23	"	6'-9"	6"	6'-0"
A24	"	4'-9"	6"	4'-0"
A25	"	3'-6"	6"	2'-8"
A26	3/4" φ	2'-6"	4"	2'-0"
B1	1" φ	17'-0"	8"	15'-0"
P5	"	16'-6"	8"	14'-6"
P6	3/4" φ	4'-0"	6"	2'-6"
S8	3/4" φ	21'-2"	9"	15'-8"
S9	"	22'-6"	1'-0"	20'-6"
S3	3/4" φ	33'-11"		
S4	3/4" φ	33'-5"	5'-8"	30'-7"
S5	3/4" φ	33'-5"	6'-7"	30'-7"
S6	3/4" φ	31'-4"		
S7	3/4" φ	31'-1"	4"	30'-7"
S2	"	35'-2"	4"	34'-8"
B2	1" φ	22'-8"	5'-2"	14'-2"
B5	"	22'-6"	5'-2"	14'-2"
B7	"	23'-2"	5'-2"	14'-2"



BENDING DIAGRAM

Mark	Size	Length	A	B	C
F4	3/4" φ	9'-0"	1'-6"	2'-6"	6"
A3-Acc	"	11'-8" Ave. Var. Ave. 2'-2"	3'-2"	6"	
A27	3/4" φ	7'-0"	11 1/2"	2'-2 1/2"	4"
A28	"	5'-6"	11 1/2"	1'-5 1/2"	4"
P2	3/4" φ	7'-2"	1'-0 1/2"	2'-2 1/2"	4"
P4	"	4'-0"	8 1/2"	11 1/2"	4"
P6	3/4" φ	7'-6"	1'-8 1/2"	1'-8 1/2"	4"
P7-B2	3/4" φ	3'-7"	Var. Ave. 1"	11 1/2"	3"
P7-B2a	"	3'-10" Ave.	5"	Var. Ave. 1'-3"	3"
B3	3/4" φ	4'-4 1/2"	1'-6"	8 1/2"	
B6	"	6'-4 1/2"	2'-6"	8 1/2"	
B8	"	5'-4 1/2"	2'-0"	8 1/2"	
B4	3/4" φ	6'-1"			
B9	3/4" φ	11'-5"			
B10	3/4" φ	9'-0"			



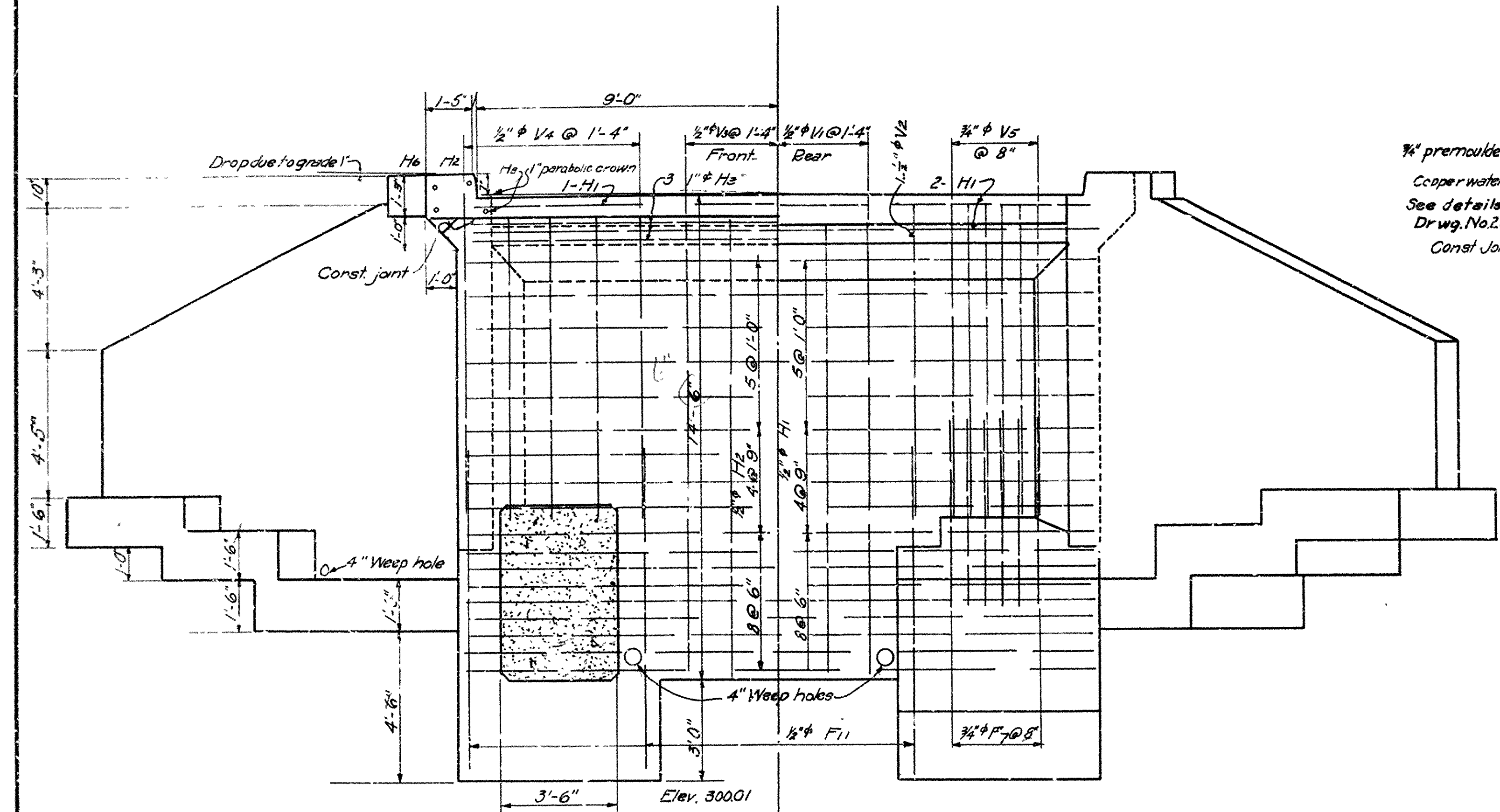
Notes:
 For General Notes see Drwg No. 2233
 For Details of M. Abutment see Drwg No. 2535
 For Details of Approach Spans, Water Stop, Drains and Handrail, see Drwg No. 2233
 Design: H 10 Loading, $f_s = 16,000$ per sq. in., $f_c = 750$ per sq. in., $n = 15$
 All Concrete above Construction Joint at skewback, except in Handrails, to be Glass "5". Concrete in Arch Abutment to be Glass "4".
 Arch Footings to be set at least 2'-6" into Sound, Undisturbed Rock. Excavation to be done in a manner that will avoid shattering the rock in contact with the footing.

4-10-30
 Elevations
 G.S.

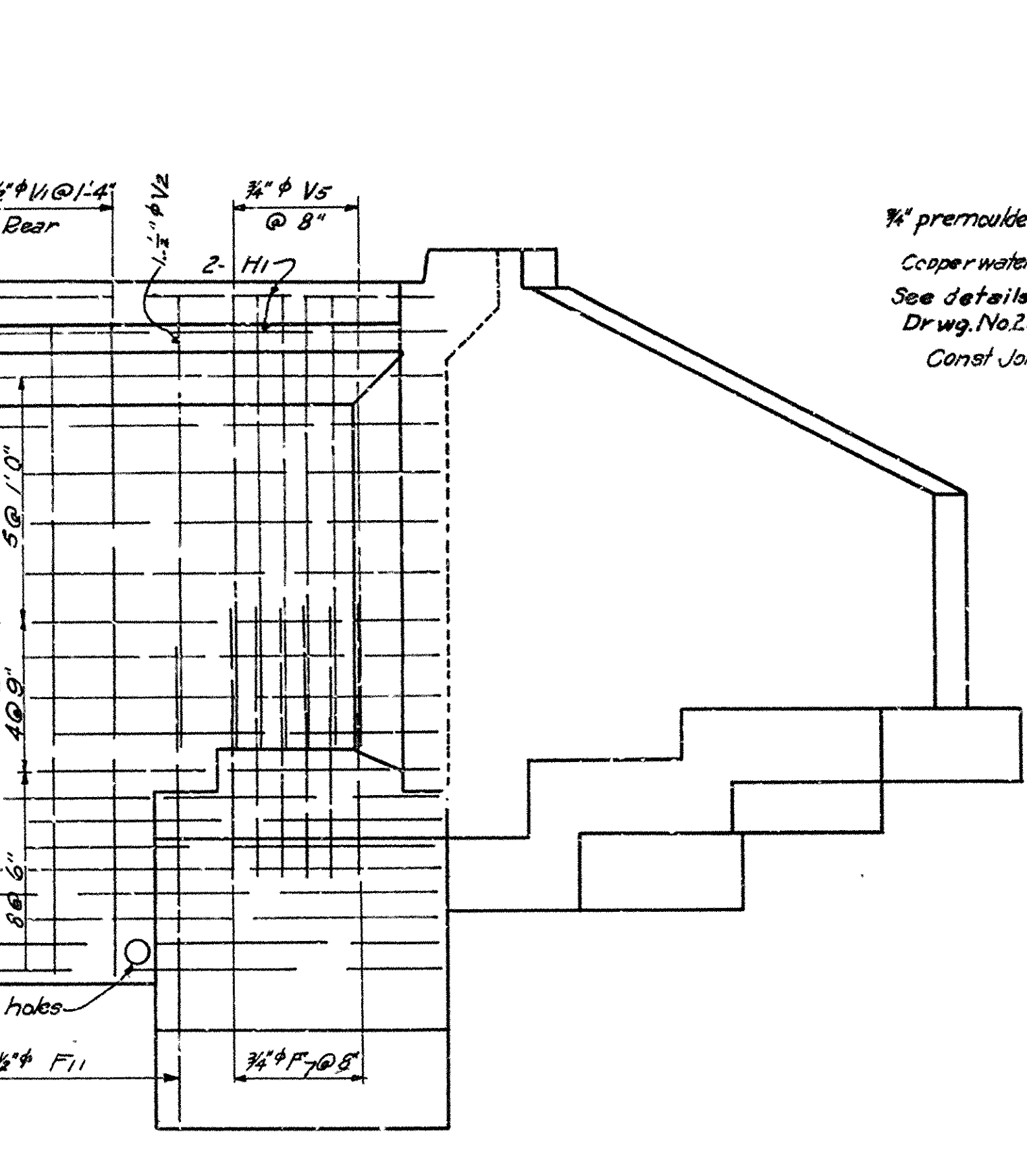
DETAILS OF 90' R.C. ARCH SPAN
 BRIDGE OVER EAST SUGAR LOAF CREEK
 BOONE COUNTY
 ROUTE 14 SEC. 1-A
ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 Drawn By: *[Signature]* Date: 2-6-30
 Traced By: *[Signature]* Date: 2-20-30
 Checked By: *[Signature]* Date: 2-22-30
 Bridge No. 721
 Scale: 3/8" = 1'-0" except as noted
DRAWING NO. 2534

[Signature]
 BRIDGE ENGINEER

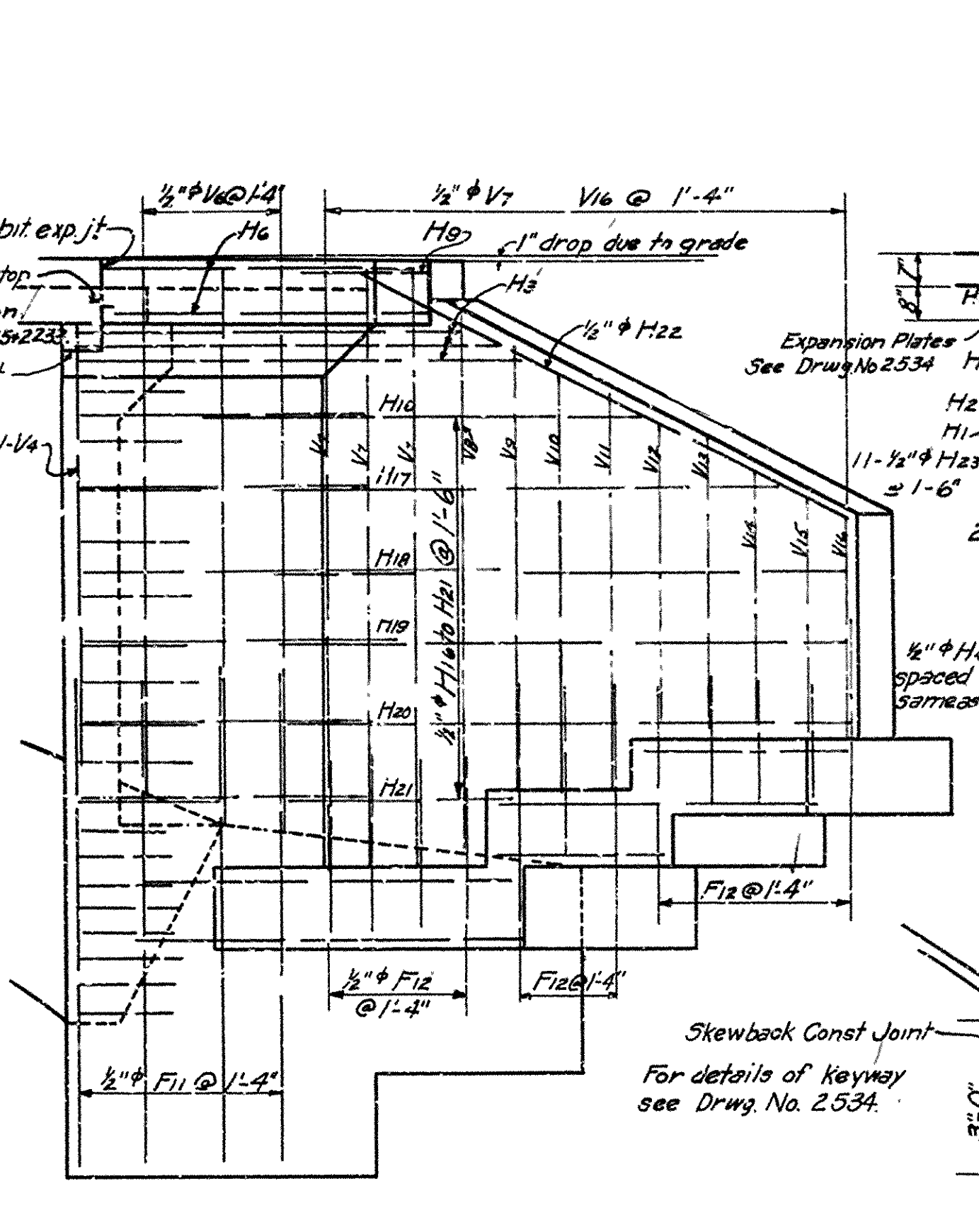
FISCAL YEAR	Job No	SHEET NO	TOTAL SHEETS
1930	965	7	14



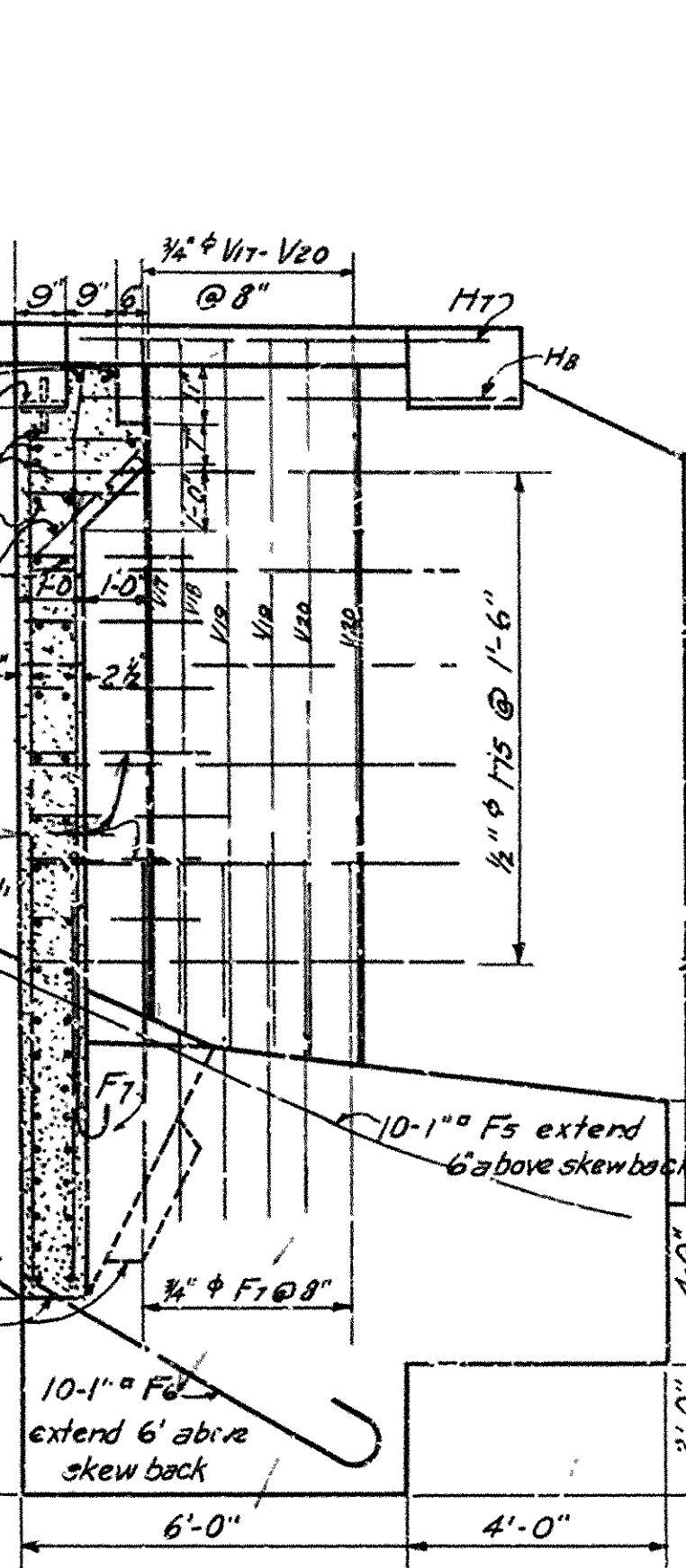
HALF FRONT ELEVATION
Showing Reinforcement in front of Breastwall



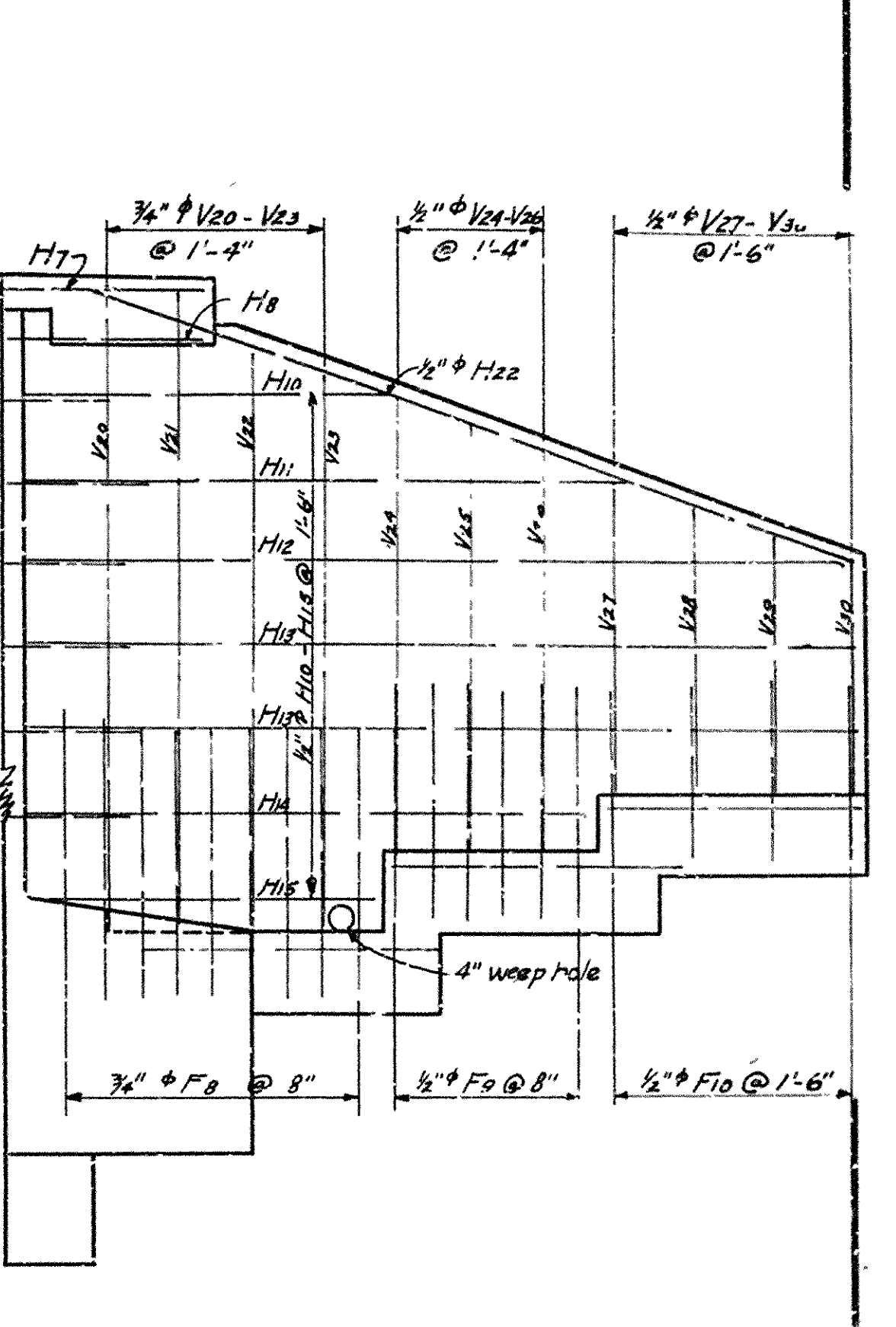
HALF REAR ELEVATION
Showing Reinforcement in rear face of Breastwall.



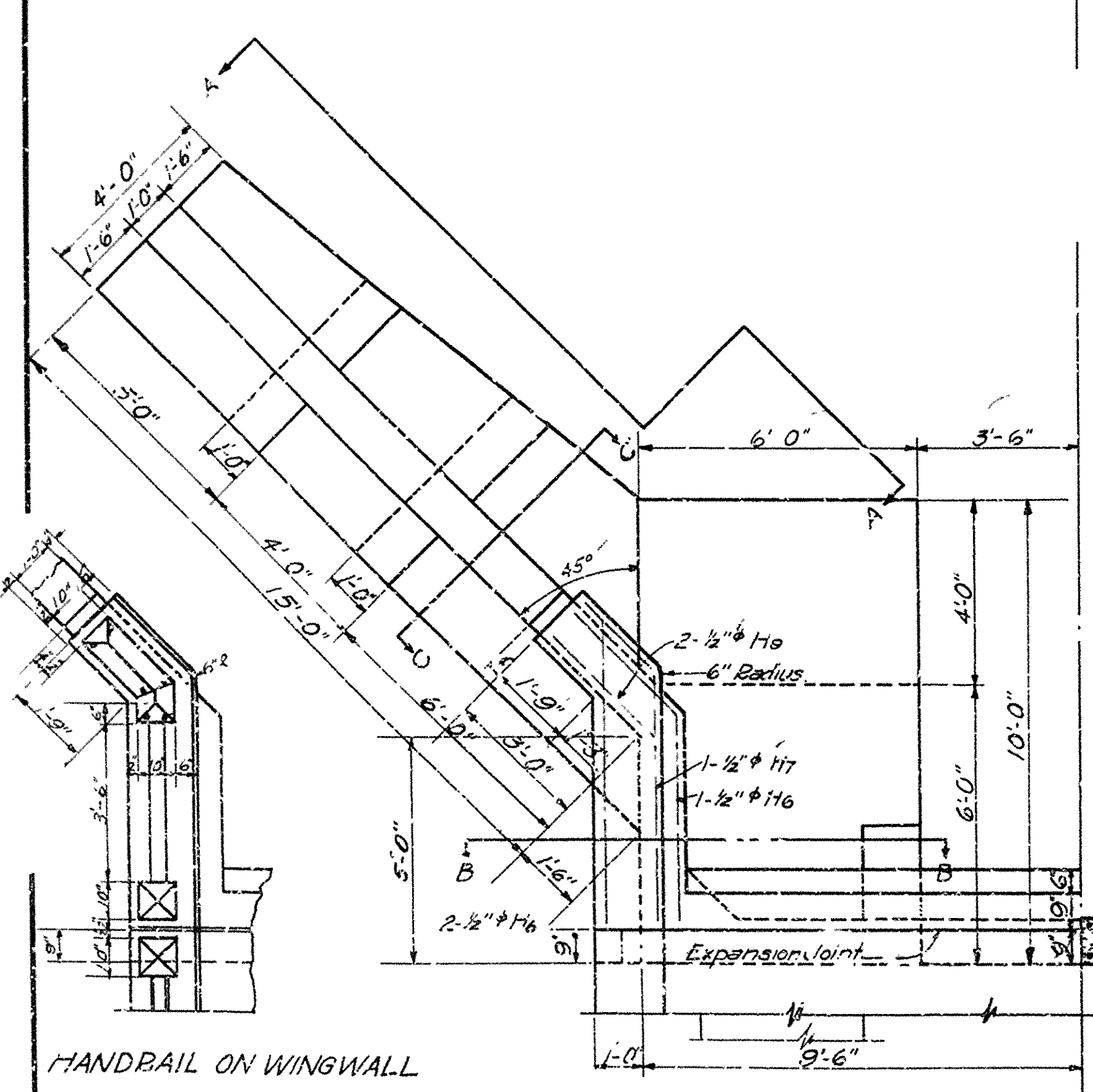
SIDE ELEVATION
Showing Reinforcement in Front Face of Wing Wall.



SEC. ON & OF ABUTMENT
Showing Reinforcement in Rear Face of Wing Wall.

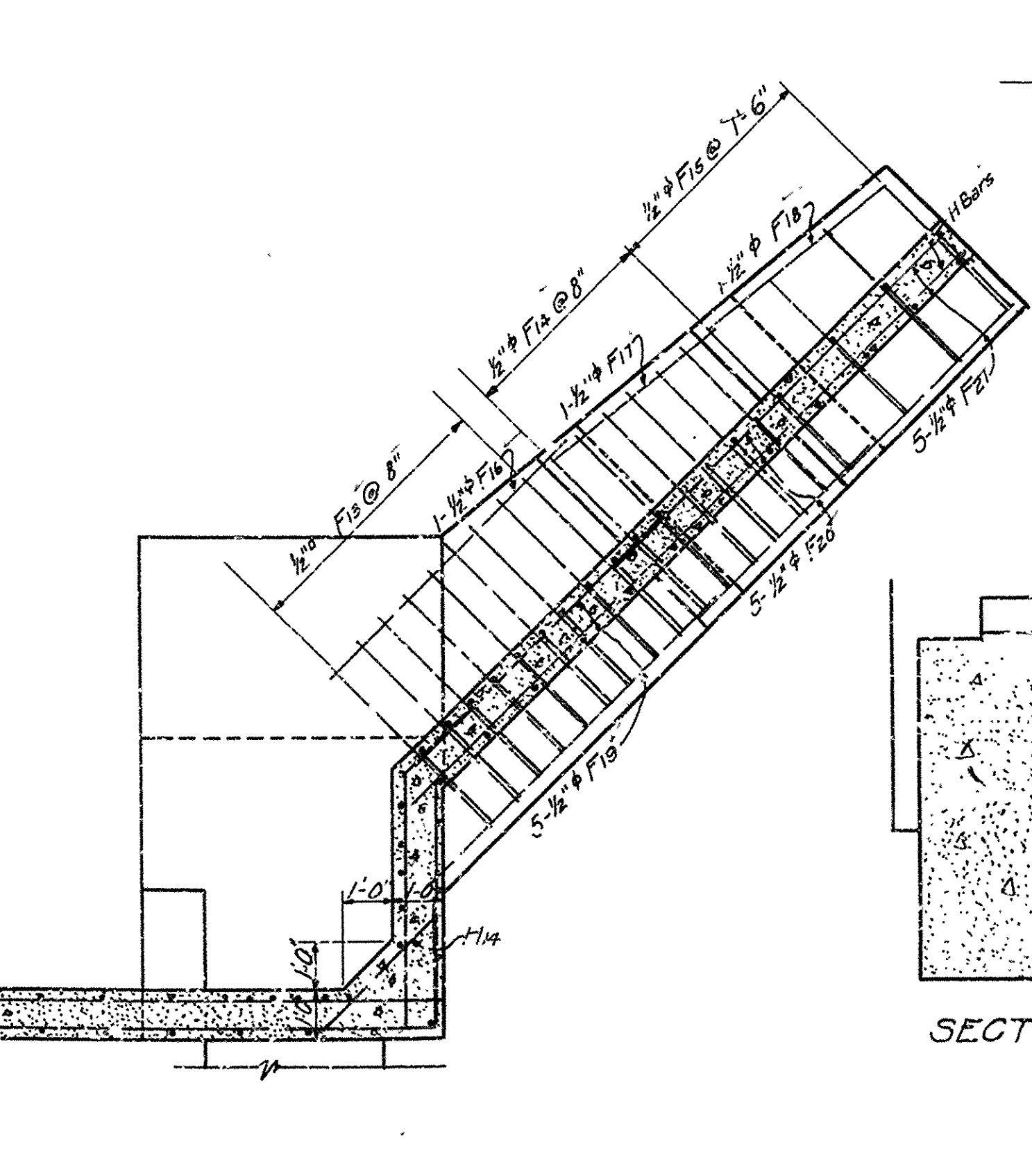


ELEVATION A-A OF WING WALL
Showing Reinforcement in Rear Face

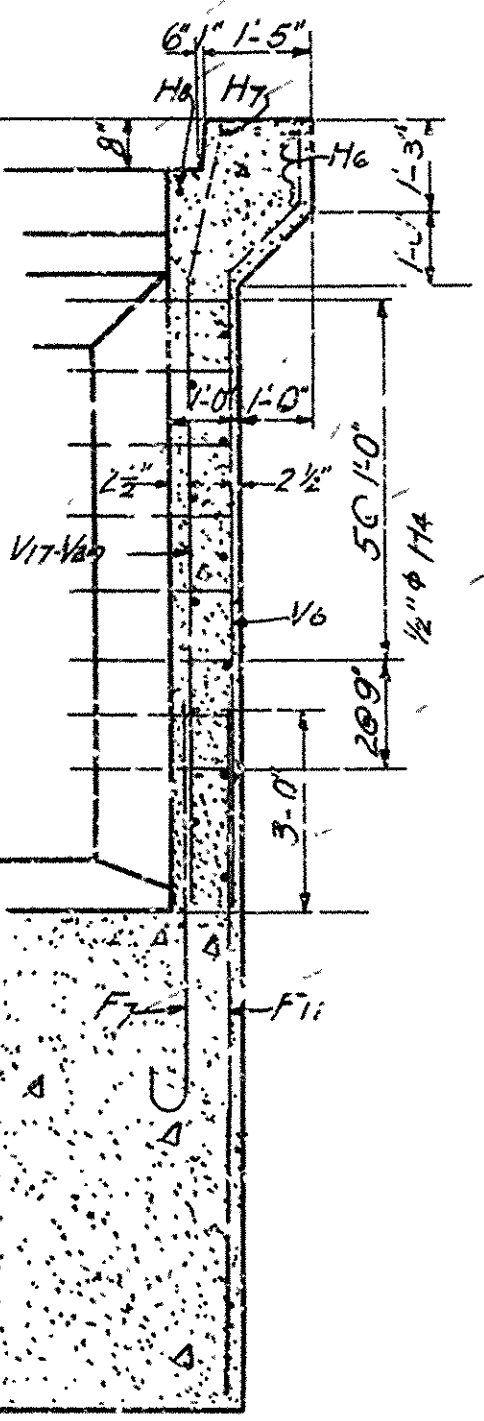


HANDBAIL ON WINGWALL
For Details not shown See Dup. No. 2233.

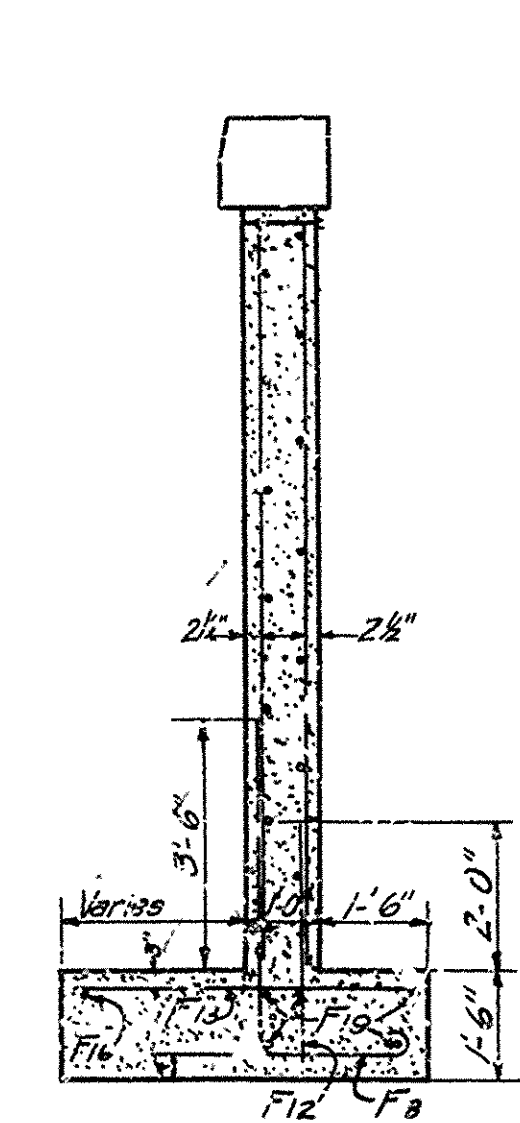
HALF PLAN



HALF SECTION ABOVE FOOTING
Showing Reinforcement



SECTION B-B



SECTION C-C

MARK	SIZE	LENGTH	BENDING DIAGRAM		
F6	1"φ	13'-0"	A	H	
F7	3/4"φ	6'-3"	A	H	
F8	3/4"φ	7'-5"	A	B	
F9	1/2"φ	6'-8"	A	H	
F10	1/2"φ	5'-8"	A	H	
V6	1/2"φ	11'-2"	A	H	
V17-160	3/4"φ	10'-10 1/2"	A	H	
H2	1/2"φ	22'-6"	A	H	
H3	1"φ	34'-10"	A	H	
H5	1"φ	7'-0"	A	B	
H7	1"φ	7'-3"	A	B	
H8	1/2"φ	7'-0"	A	B	
H23	1/2"φ	3'-0"	A	B	
			A	B	

Note:-
For Details of Archspan see Dwg. No. 2534
For General Notes see Dwg. No. 2533
For Handrail Details see Dwg. No. 2233
All concrete to be Class 'A' except Arch Rib and Handrails
Arch footings to bear against sound undisturbed rock for a depth of at least 3'-0" at the back face.

DETAILS OF WEST ABUTMENT
BRIDGE OVER
EAST SUGAR LOAF CREEK
BOONE CO.

ROUTE 14 SEC. 1-A

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

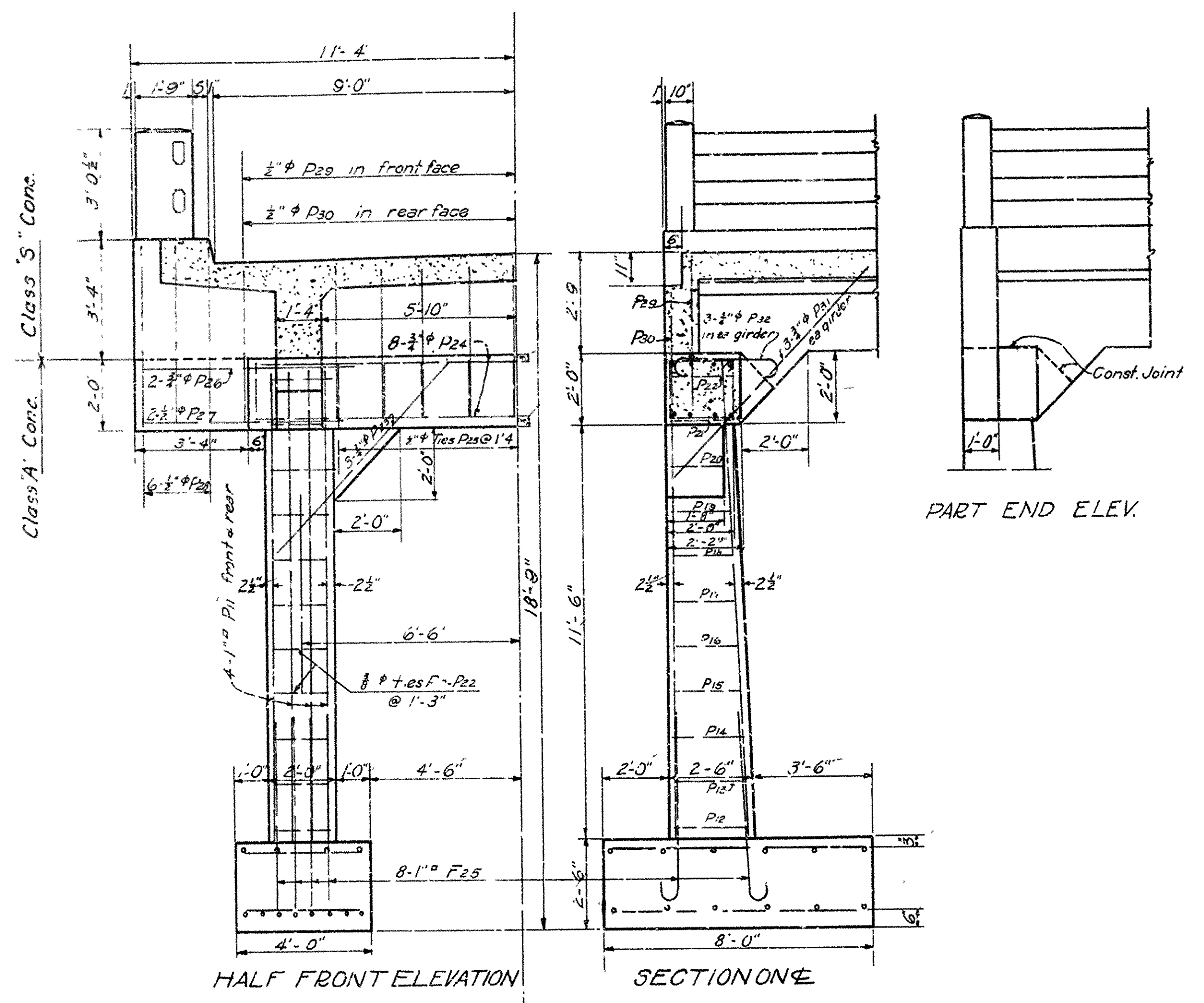
Drawn By: G.S.V. Date: 2-22-30
Traced By: F.M.M. Date: 2-23-30
Checked By: G.S.V. Date: 2-26-30
Scale: 1/4" = 1'-0"
BRIDGE NO. 721 DRAWING NO. 2535

Revised 4-10-30
Height of Abut.
G.S.V.

Rev. 4-10-30
Elevation of
Height of Abut.

G.S.V.
BRIDGE ENGINEER

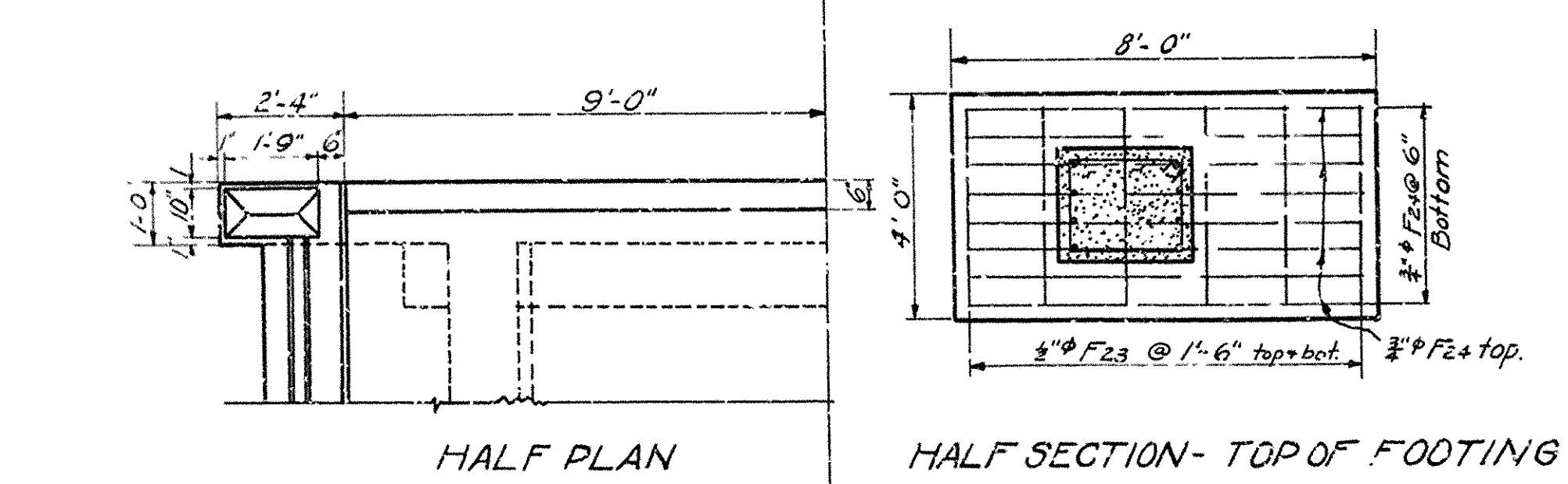
FISCAL YEAR	Job No	SHEET No	TOTAL SHEETS
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HALF FRONT ELEVATION

SECTION ON X-X

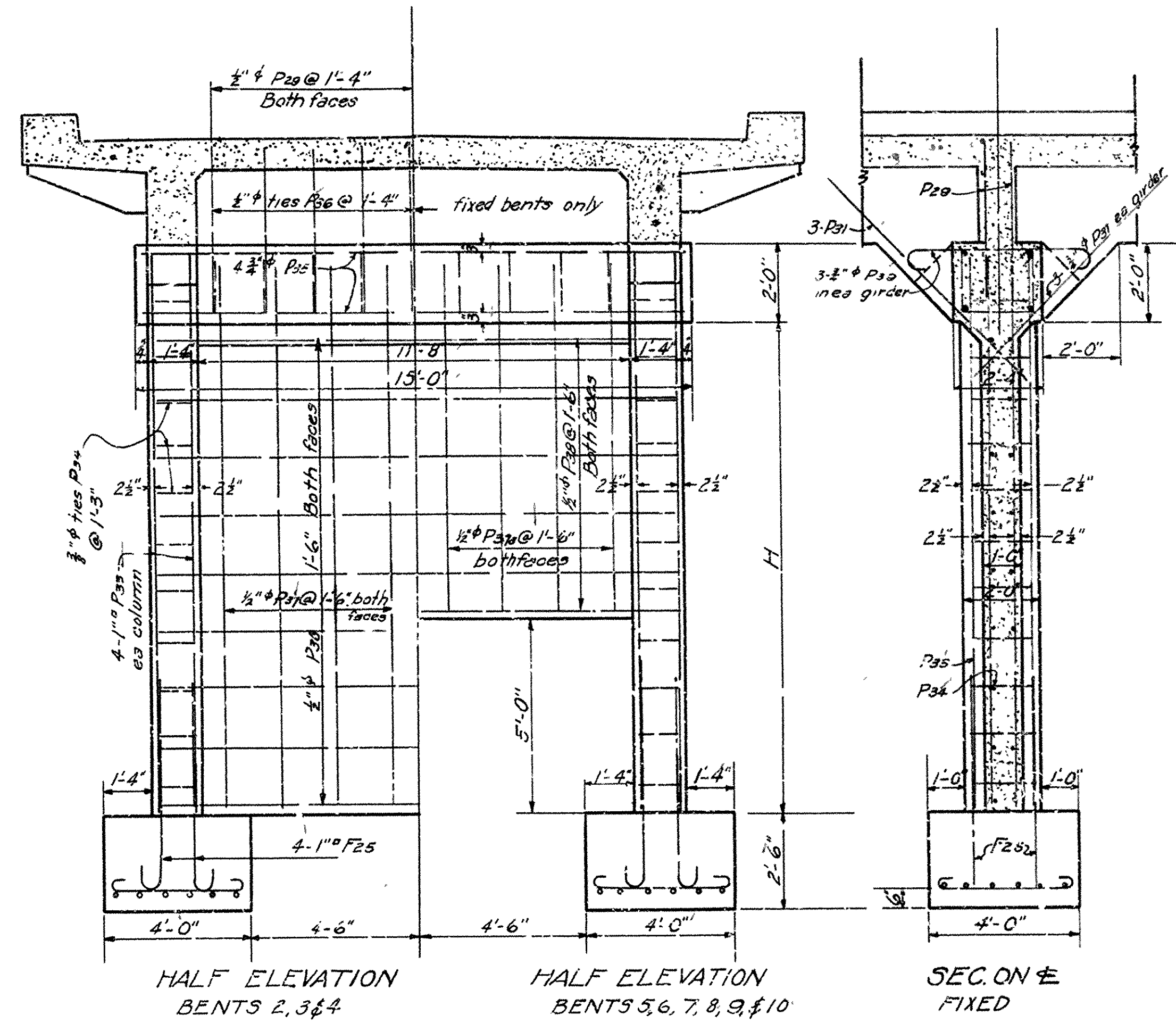
PART END ELEV.



HALF PLAN

HALF SECTION - TOP OF FOOTING

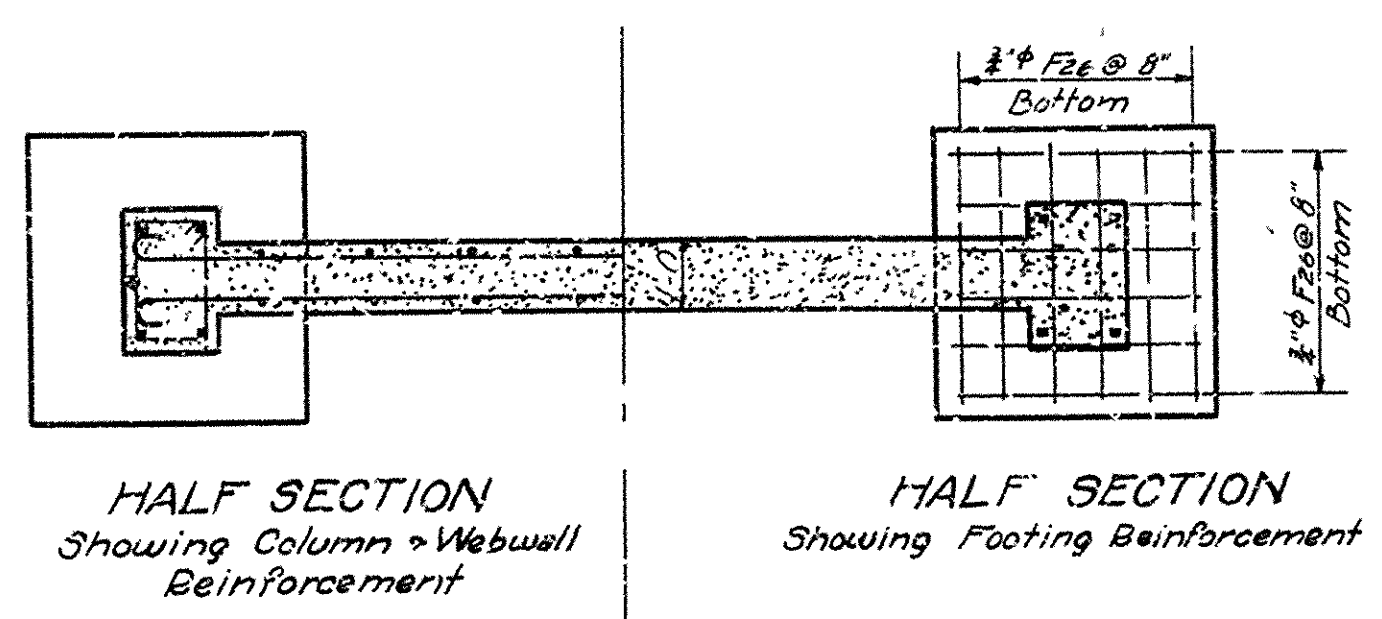
DETAILS OF BENT No. 1



HALF ELEVATION BENTS 2, 3 & 4

HALF ELEVATION BENTS 5, 6, 7, 8, 9 & 10

SECTION ON X-X FIXED



HALF SECTION Showing Column & Webwall Reinforcement

HALF SECTION Showing Footing Reinforcement

DETAILS OF BENTS 2 TO 10

CAP DETAIL EXPANSION BENT
For Details of Construction and Expansion Joints see Superstructure Details

BENT No	H
2	11'-6"
3	11'-9"
4	12'-0"
5	12'-0"
6	12'-3"
7	12'-3"
8	12'-6"
9	12'-9"
10	12'-9"

MARK	SIZE	LENGTH	BENDING DIAGRAM	
F25	1"Ø	6'-7"		
F26	3/4"Ø	5'-0"		
P12-22	3/8"Ø	4'-8"-0"	A	B
P25	1/2"Ø	7'-10"	1'-10 1/2"	1'-8 1/2"
F34	3/8"Ø	6'-2"	1'-8 1/2"	1'-0 1/2"
P36	1/2"Ø	8'-2"	2'-0 1/2"	1'-8 1/2"
P32	3/8"Ø	4'-6"	3'-0"	6"
P38	1/2"Ø	14'-10"	13'-10"	4"
P39	3/8"Ø	6'-2"	4'-8"	6"
P40	3/8"Ø	8'-0"		

Note - For Details of Superstructure see Dwg No 2233
For General Notes see Dwg No. 2533

DETAILS OF BENTS NO. 1 TO 10
BRIDGE OVER EAST SUGAR LOAF CREEK
AT LEAD HILL
BOONE COUNTY

ROUTE 14 SEC. 1-A
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
Drawn By: G.S.V. Date: 2-19-30
Traced By: E.M.M. Date: 2-21-30
Checked By: G.S.V. Date: 2-21-30
Scale: 3/4" = 1 ft.
BRIDGE NO. 721 DRAWING NO. 2536

N.B. Lewis
BRIDGE ENGINEER