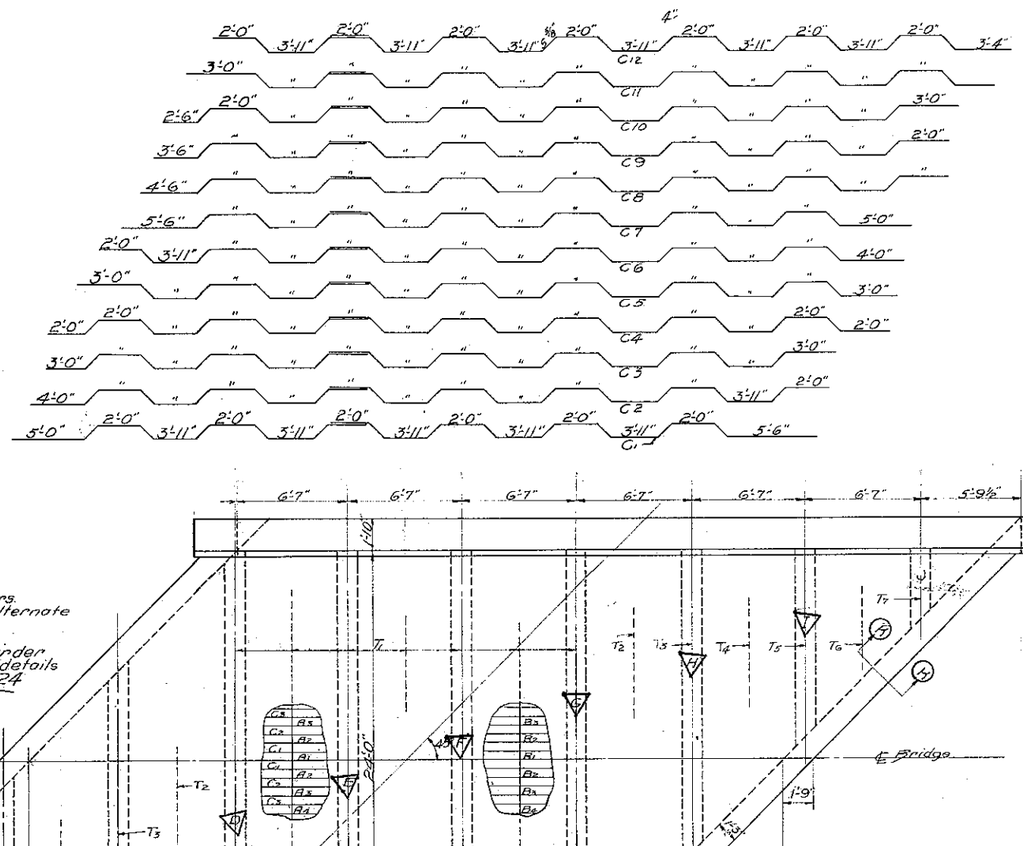
$f'_c = 2000$ psi
$f_y = 32\,000$ psi

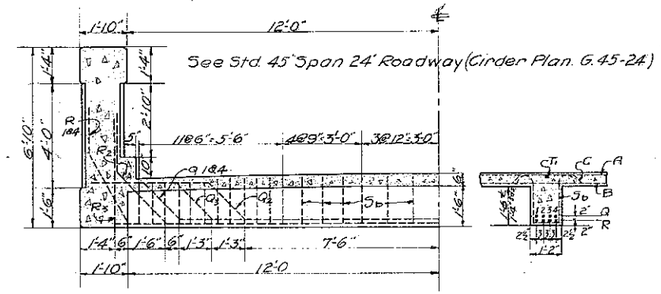
MEG-143 0152

5302102

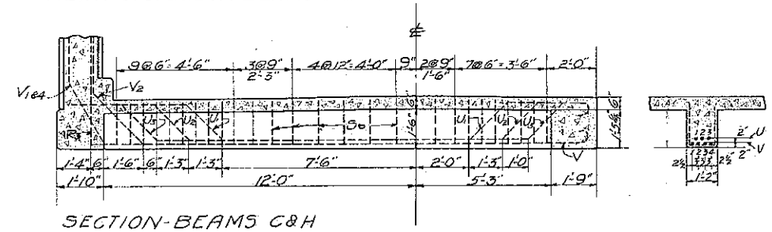
Lap	L1	L2
A 1	23'-0"	22'-9"
" 2	22'-0"	23'-9"
" 3	21'-0"	24'-9"
" 4	20'-0"	25'-9"
" 5	19'-0"	26'-9"
" 6	18'-0"	27'-9"
" 7	17'-0"	28'-9"
" 8	16'-0"	29'-9"
" 9	15'-0"	30'-9"
" 10	14'-0"	31'-9"
" 11	13'-0"	32'-9"
" 12	12'-0"	33'-9"

Lap	L1	L2
B 1	26'-3"	19'-6"
" 2	25'-3"	20'-6"
" 3	24'-3"	21'-6"
" 4	23'-3"	22'-6"
" 5	22'-3"	23'-6"
" 6	21'-3"	24'-6"
" 7	20'-3"	25'-6"
" 8	19'-3"	26'-6"
" 9	18'-3"	27'-6"
" 10	17'-3"	28'-6"
" 11	16'-3"	29'-6"
" 12	15'-3"	30'-6"

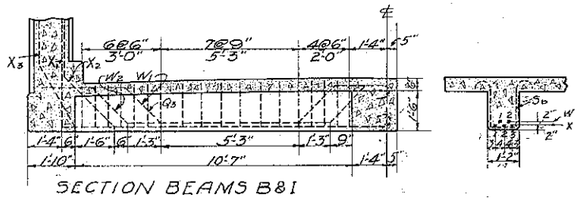




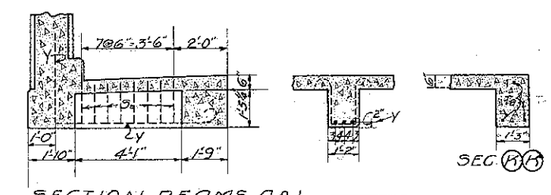
HALF CROSS-SECTION SHOWING REINF'G. STEEL IN BEAMS D-E-F & G



SECTION-BEAMS C&H



SECTION BEAMS B&I

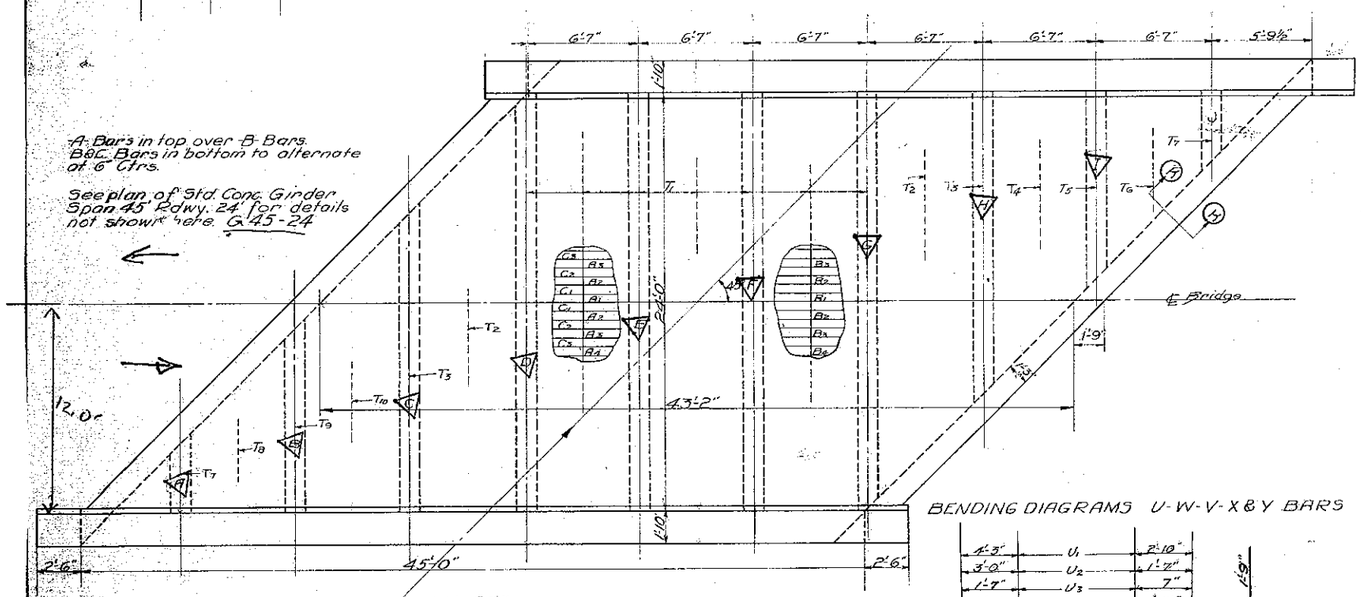


SECTION BEAMS A&J.

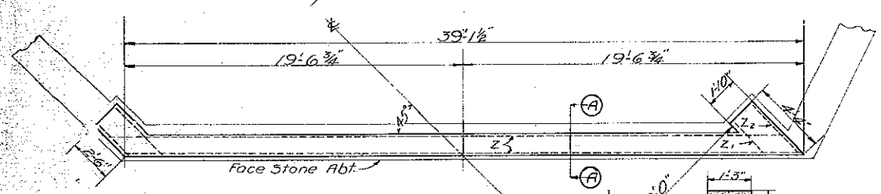
Mark	Size	No.	Length	Weight
SLAB				
T 1	½" Φ	7	24'-0"	122
" 2	"	2	23'-0"	31
" 3	"	"	19'-6"	26
" 4	"	"	16'-0"	21
" 5	"	"	13'-0"	17
" 6	"	"	10'-0"	13
" 7	"	"	6'-6"	9
" 8		6	320'-24'-0"	148
A 1	½" Φ	1	23'-9-23'-0"	41
" 2	"	2	24'-9-23'-9"	81
" 3	"	"	21'-9-21'-0"	"
" 4	"	"	20'-9-20'-0"	"
" 5	"	"	19'-9-19'-0"	"
" 6	"	"	28'-9-18'-0"	"
" 7	"	"	29'-9-17'-0"	"
" 8	"	"	30'-9-16'-0"	"
" 9	"	"	31'-9-15'-0"	"
" 10	"	"	32'-9-14'-0"	"
" 11	"	"	33'-9-13'-0"	"
" 12	"	"	34'-9-12'-0"	"
B 1	"	1	27'-6"-26'-3"	41
" 2	"	2	26'-6"-25'-5"	81
" 3	"	"	22'-6-24'-3"	"
" 4	"	"	23'-6-23'-6"	"
" 5	"	"	24'-6-22'-3"	"
" 6	"	"	25'-6-21'-3"	"
" 7	"	"	26'-6-20'-3"	"
" 8	"	"	27'-6-19'-3"	"
" 9	"	"	28'-6-18'-3"	"
" 10	"	"	29'-6-17'-3"	"
" 11	"	"	30'-6-16'-3"	"
" 12	"	"	31'-6-15'-3"	"
C 1	"	4	21'-2-28'-11"	85
" 2	"	4	20'-2-29'-5"	84
" 3	"	"	19'-2-30'-5"	84
" 4	"	"	18'-2-31'-11"	85
" 5	"	"	16'-0-32'-11"	84
" 6	"	"	15'-0-33'-11"	84
" 7	"	"	14'-0-34'-11"	85
" 8	"	"	13'-0-36'-3"	85
" 9	"	"	12'-0-36'-3"	84
" 10	"	"	11'-0-37'-3"	84
" 11	"	"	9'-0-39'-2"	84
" 12	"	"	8'-0-40'-1"	85
BEAMS				
Q 1	1" Φ	4	29'-6"	374
" 2	"	"	"	"
" 3	"	"	"	"
" 4	"	"	"	"
R 1	"	"	33'-0"	449
" 2	"	"	30'-0"	408
" 3	"	"	32'-0"	435
" 4	"	"	33'-0"	449
U 1	"	"	20'-3"	138
" 2	"	"	20'-3"	"
" 3	"	"	20'-3"	"
V 1	"	"	23'-6"	160
" 2	"	"	22'-3"	152
" 3	"	"	23'-3"	158
" 4	"	"	23'-6"	160
W 1	"	"	13'-9"	94
" 2	"	"	13'-9"	"
X 1	"	"	16'-9"	114
" 2	"	"	15'-9"	107
" 3	"	"	17'-3"	117
Y	"	6	10'-3"	209
Sh	½" Φ	254	3'-0"	849

A-Bars in top over B-Bars.
B&C Bars in bottom to alternate at 6" Ctrs.

See plan of Std. Conc. Girder Span 45' Rdwy. 24' for ⊥ for details not shown here. G-45-24

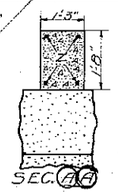


PLAN



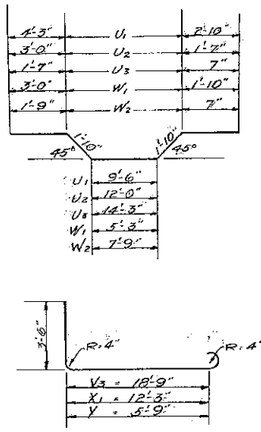
PLAN SHOWING CONCRETE BRIDGE SEAT ON STONE ABT'S.

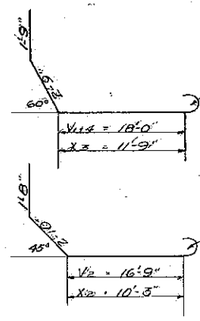
Bridge Seat Steel				
Mark	Size	No.	Length	Weight
Z	1" Φ	8	39'-8"	1032
Z1	"	8	2'-2"	59
Z2	"	8	4'-0"	109
				1220



SEC. AA

BENDING DIAGRAMS U-W-V-X & Y BARS





ESTIMATED QUANTITIES
1:2:4 Conc. 7492 Cu yds.
1:1½:3 " Wearing Course 123.1 Sq yds.
STEEL 1220.0 Lbs.

Note: Steel for Superstructure was bought by the Highway Dept and is on the ground at Bridge.

Mark	Size	No.	Length	Weight
GIRDERS				
M-1a	1" Φ	2	14'-9"	100
" -1b	"	"	38'-9"	264
" -2	"	4	26'-3"	357
" -3	"	2	40'-0"	272
" -4a	"	"	22'-9"	155
" -4b	"	"	30'-9"	209
" -5	"	"	40'-0"	272
" -6	"	"	40'-0"	"
" -7a	"	"	14'-9"	100
" -7b	"	"	38'-9"	264
N-1a	"	"	22'-9"	155
" -1b	"	"	30'-9"	209
" -2a	"	"	18'-9"	128
" -2b	"	"	34'-9"	236
" -3a	"	"	16'-6"	112
" -3b	"	"	40'-0"	272
" -4a	"	"	22'-9"	155
" -4b	"	"	30'-9"	209
" -5a	"	"	16'-6"	112
" -5b	"	"	40'-0"	272
" -6a	"	"	18'-9"	128
" -6b	"	"	34'-9"	236
" -7a	"	"	22'-9"	155
" -7b	"	"	30'-9"	209
S-1	½" Φ	8	12'-5"	83
S-2	"	"	13'-3"	90
S-3	"	"	14'-3"	97
S-4	"	10	15'-3"	130

14380 Lbs. Total

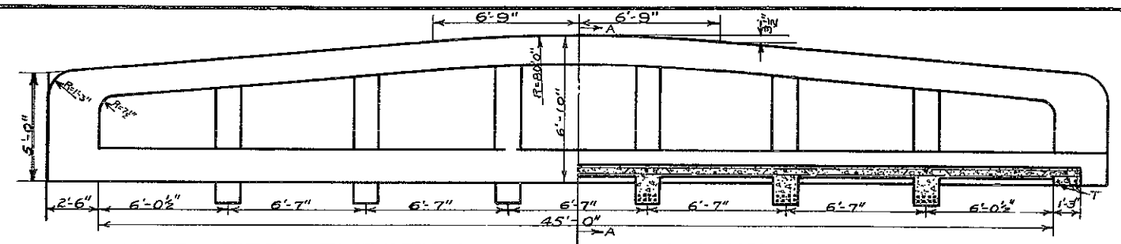
CONSTRUCTION BUREAU
SEP 26 1956
GROUND PHOTOLAB

STANDARD CONCRETE GIRDER
SPAN 45 FT. ROADWAY 24 FT.
POMEROY JACKSON ROAD
MEIGS CO. I.C.H. 163 Sec. N

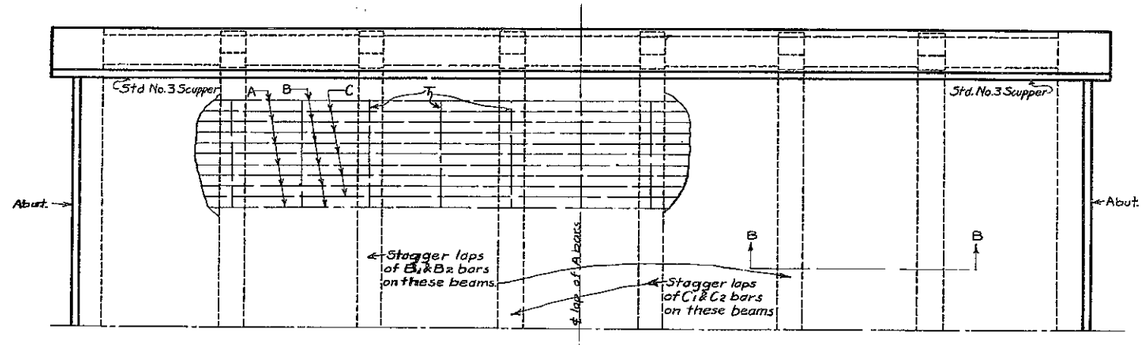
STATE OF OHIO
DEPT. OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS

MEIGS-163-N

MICROFILMED
FEB 07 1979
REPRODUCTION



HALF SIDE ELEVATION HALF LONGITUDINAL SECTION

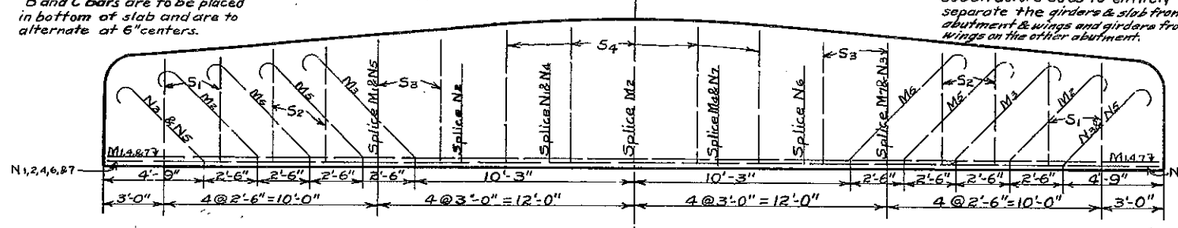


HALF PLAN

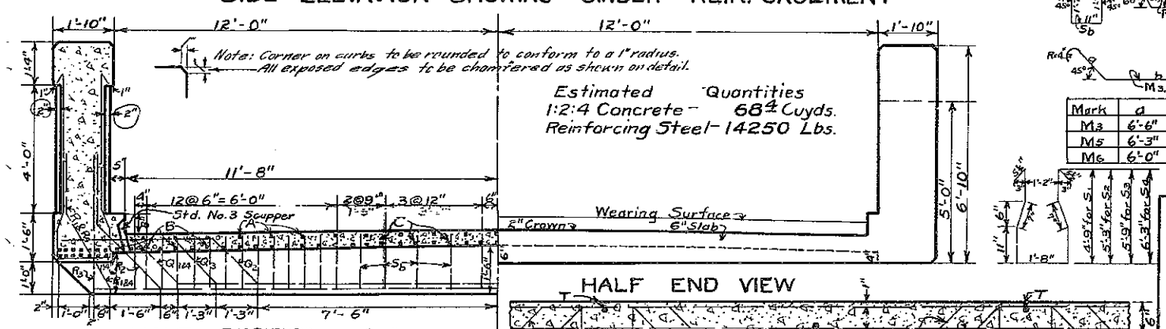
Note:- A bars are to be placed in top of slab over B bars. B and C bars are to be placed in bottom of slab and are to alternate at 6" centers.

Note:- All girder bars which are to be spliced are to be lapped 4'-0".

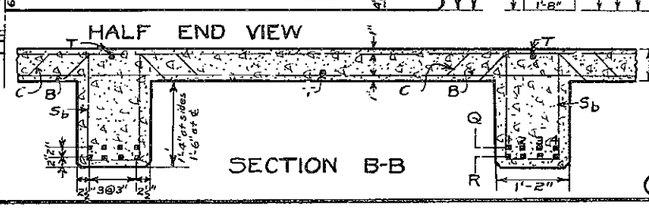
Note:- Four layers of tar paper are to be placed on one abutment and at each wing of the substructure so as to entirely separate the girders & slab from abutment & wings and girders from wings on the other abutment.



SIDE ELEVATION SHOWING GIRDER REINFORCEMENT



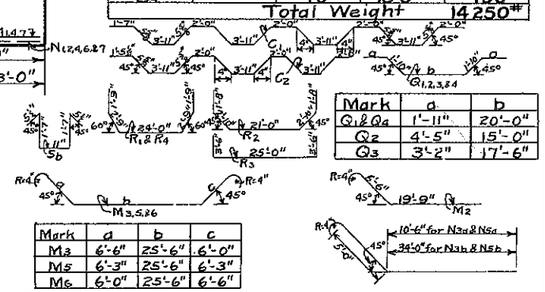
HALF SECTION A-A



HALF END VIEW

SECTION B-B

Mark	Size	Number	Length	Weight
Slab Bars				
T	½" ϕ	19	26'-0"	330#
A	½" □	46	24'-6"	960
B1	"	25	14'-9"	314
B2	"	25	34'-6"	733
C1	"	24	29'-0"	592
C2	"	24	22'-0"	450
Beam Bars				
Q1	1" □	6	27'-6"	561
Q2	"	6	27'-6"	561
Q3	"	6	27'-6"	561
Q4	"	6	27'-6"	561
R1	"	6	33'-0"	674
R2	"	6	30'-0"	612
R3	"	6	32'-0"	653
R4	"	6	33'-0"	674
Sb	½" ϕ	228	5'-0"	761
Girder Bars				
M1a	1" □	2	14'-9"	100
M1b	"	2	38'-9"	264
M2	"	4	26'-3"	357
M3	"	2	40'-0"	272
M4a	"	2	22'-9"	155
M4b	"	2	30'-9"	209
M5	"	2	40'-0"	272
M6	"	2	40'-0"	272
M7a	"	2	14'-9"	100
M7b	"	2	38'-9"	264
N1a	"	2	22'-9"	155
N1b	"	2	30'-9"	209
N2a	"	2	18'-9"	128
N2b	"	2	34'-9"	236
N3a	"	2	16'-6"	112
N3b	"	2	40'-0"	272
N4a	"	2	22'-9"	155
N4b	"	2	30'-9"	209
N5a	"	2	16'-6"	112
N5b	"	2	40'-0"	272
N6a	"	2	18'-9"	128
N6b	"	2	34'-9"	236
N7a	"	2	22'-9"	155
N7b	"	2	30'-9"	209
S1	½" □	8	12'-3"	83
S2	"	8	13'-3"	90
S3	"	8	14'-3"	97
S4	"	10	15'-3"	130
Total Weight				14250#



Mark	a	b
Q1 & Q4	1'-11"	20'-0"
Q2	4'-5"	15'-0"
Q3	3'-2"	17'-6"

Mark	a	b	c
M3	6'-6"	25'-6"	6'-0"
M5	6'-3"	25'-6"	6'-3"
M6	6'-0"	25'-6"	6'-6"

Recommended for Approval:-
Date:-
Acting Chief Engineer of Bridges.

Approved:-
Date:- 7-25-21
Director of Highways and Public Works.

STANDARD CONCRETE GIRDER

SPAN 45 FT ROADWAY 24 FT

LOADING T-15

STATE OF OHIO
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS

JULY 1921 BUREAU OF BRIDGES

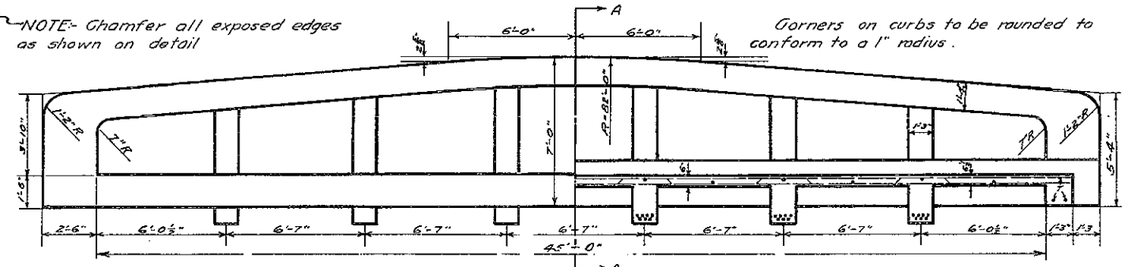
G 45 24

Des & Dr by WF
Ck by H.H.R.

MICROFILMED
FEB 07 1979
REPRODUCTION

NOTE- Chamfer all exposed edges as shown on detail

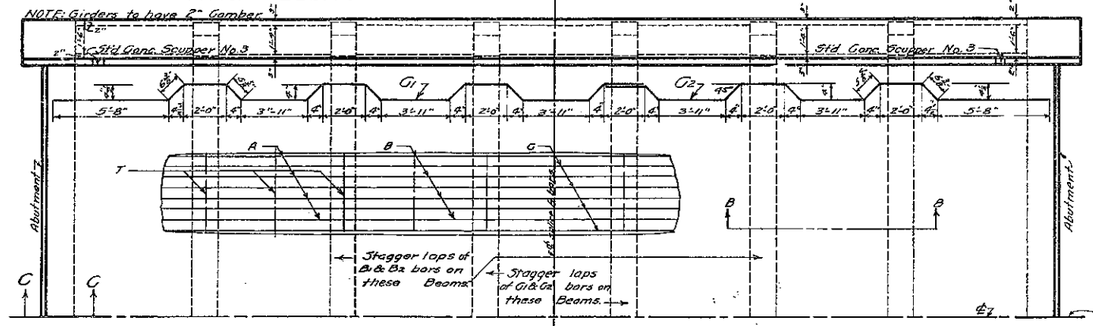
Corners on curbs to be rounded to conform to a 1" radius.



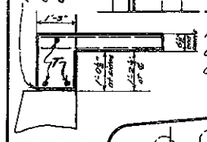
HALF ELEVATION

HALF LONGITUDINAL SECTION

NOTE- Girders to have 2" Camber



NOTE- It is unable to pour superstructure continuously, make a construction joint along the centerline of roadway and pour one-half continuously including slab, beams and girder.

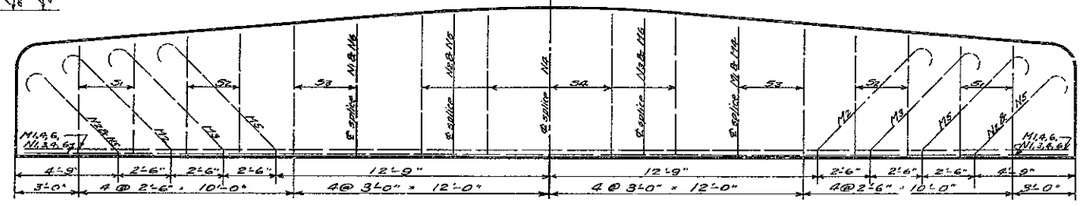


SEC. G-G

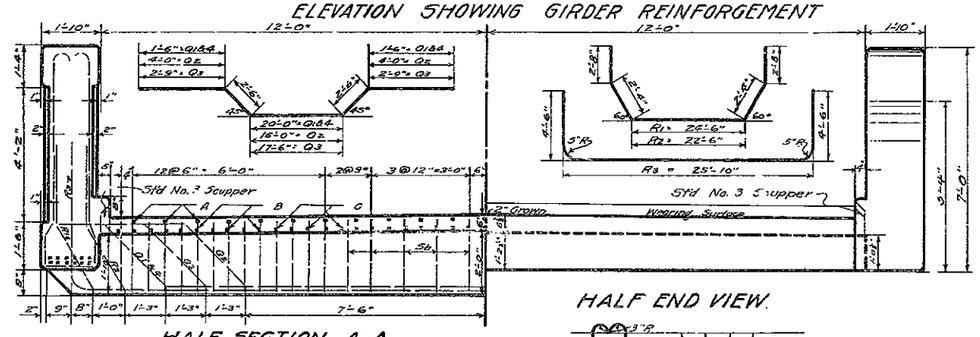
NOTE: Place A bars over B bars in top of slab. B & C bars are placed alternately at 6" centers in bottom of slab.

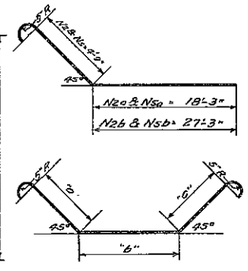
HALF PLAN

NOTE: 1⅛" girder bars to be spliced shall be lapped four feet, six inches, 1½"-5'-0"



ELEVATION SHOWING GIRDER REINFORCEMENT

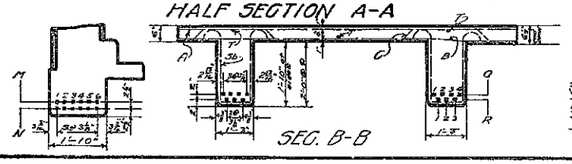




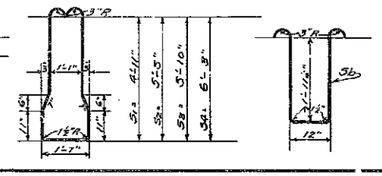
MARK	"a"	"b"	"c"
M2	6'-3"	30'-6"	6'-9"
M3	6'-6"	30'-6"	6'-6"
M5	6'-9"	30'-6"	6'-3"

HALF END VIEW.

HALF SECTION A-A



SEC. B-B



MARK	SIZE	NUMBER	LENGTH	WEIGHT
SLAB BARS				
T	½" ϕ	19	26'-0"	330
A	½" □	46	24'-6"	960
B1	"	25	14'-9"	314
B2	"	25	34'-6"	733
G1	"	24	28'-9"	587
G2	"	24	22'-0"	450
BEAM BARS				
Q1	1⅛" □	6	28'-0"	722
Q2	"	6	28'-0"	722
Q3	"	6	28'-0"	722
Q4	"	6	28'-0"	722
R1	"	6	34'-6"	890
R2	"	6	32'-6"	839
R3	"	6	34'-6"	890
S6	½" ϕ	228	6'-4"	966
GIRDER BARS				
M1a	1⅛" □	2	36'-0"	310
M1b	"	2	18'-0"	155
M2	"	2	46'-0"	395
M3	"	2	46'-0"	395
M4a	"	2	36'-0"	310
M4b	"	2	18'-0"	155
M5	"	2	46'-0"	395
M6a	"	2	31'-6"	271
M6b	"	2	22'-6"	194
N1a	1¼" □	2	36'-3"	385
N1b	"	2	18'-3"	195
N2a	"	2	24'-3"	257
N2b	"	2	33'-3"	352
N3a	"	2	31'-9"	336
N3b	"	2	22'-9"	241
N4a	"	2	27'-3"	289
N4b	"	2	27'-3"	289
N5a	"	2	24'-3"	257
N5b	"	2	33'-3"	352
N6a	"	2	36'-3"	385
N6b	"	2	18'-3"	195
S1	½" □	8	13'-0"	89
S2	"	8	14'-0"	95
S3	"	8	15'-0"	102
S4	"	10	15'-9"	134
TOTAL WEIGHT				16380#

NOTE: Bridge is designed for maximum weight of wearing surface on slab to be 65 pounds per sq. foot.

Wearing Surface shall be full width between curbs and entire length of slab.

ESTIMATED	QUANTITIES
1:2:4 Concrete	77.0 cu.yds.
Reinforcing steel	16380 lbs.
Wearing surface	123.1 sq. yds.

STANDARD CONCRETE GIRDER.
SPAN 45 FT. ROADWAY 24 FT.
LOADING T-15
STATE OF OHIO
DEPT OF HIGHWAYS AND PUBLIC WORKS
DIVISION OF HIGHWAYS
JANUARY 1924 BUREAU OF BRIDGES.

G45-24-1

Designed by W.E.
Drawn & Trac. D.H.B.
Rev. & Ckd by W.H.R.

Approved by A.H. Geiger

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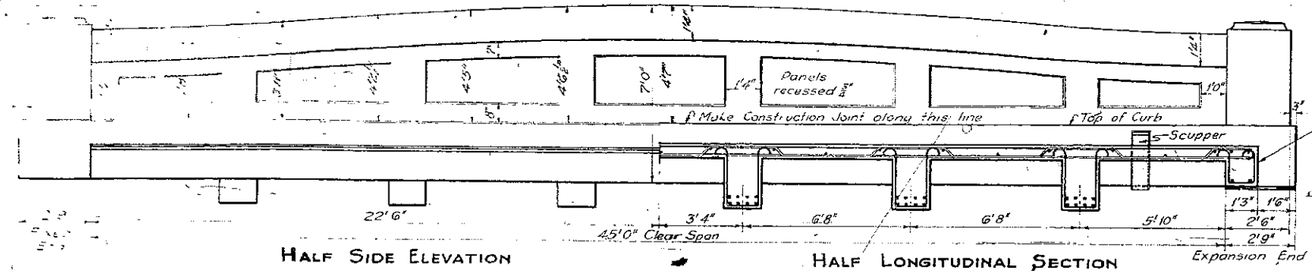
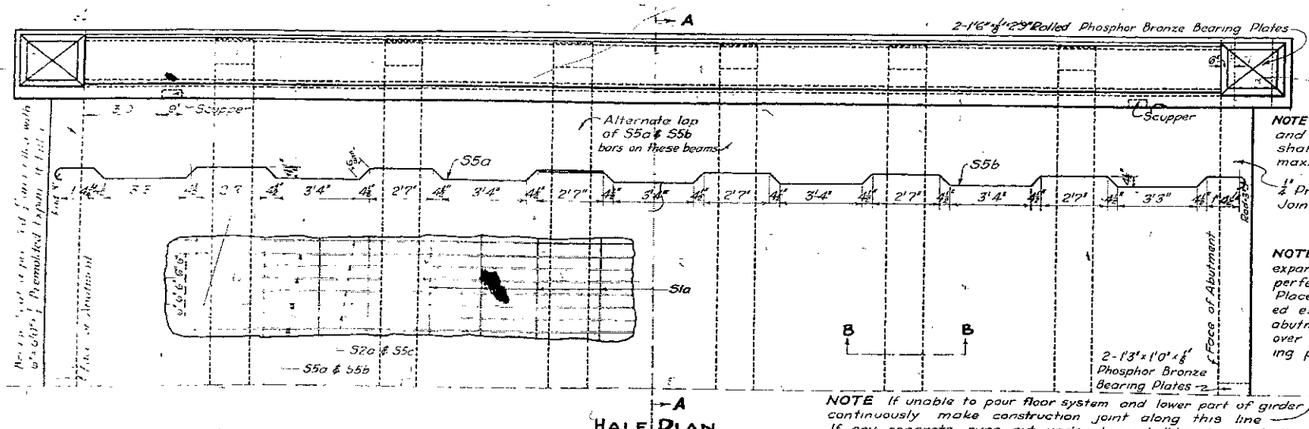
10	OHIO		

COUNTY ICH SEC



HALF SIDE ELEVATION

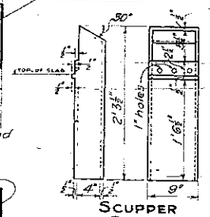
HALF LONGITUDINAL SECTION



HALF PLAN

NOTE

All exposed edges not otherwise shown shall be chamfered thus



SCUPPER DETAIL

Cast Iron 3/8" thick

CAMBER This bridge shall be provided with a permanent camber under full dead load, amounting to approximately 3/4" at the center and following a true parabolic curve

APPROACH SLABS Approach slabs shall be provided at both ends of superstructure in case of paved approaches For details see Dr. No A512430 1" Prem Exp Jt Filler between ends of Bridge Slab and Approach Slab at expansion end only Payment included with Approach Slab

BENDING DIAGRAM NOTE All steel dimensions are measured along center-line of bar

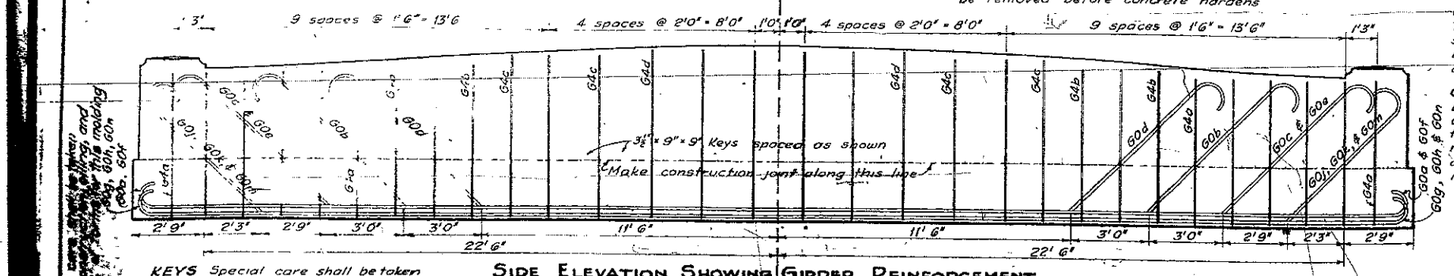
BENDS All bends not otherwise shown shall have a minimum radius of 4 1/2"

NOTE Wearing surface at, and adjacent to, scupper shall be depressed a maximum of 3/8"

1" Premolded Expansion Joint Filler (two layers)

NOTE Top of abutment at expansion end to be finished perfectly smooth Place two layers of 1/2" premolded expansion joint filler between abutment and superstructure over area unoccupied by bearing plates, as shown

NOTE If unable to pour floor system and lower part of girder continuously make construction joint along this line — If any concrete runs out under beam bulkheads it shall be removed before concrete hardens



SIDE ELEVATION SHOWING GIRDER REINFORCEMENT

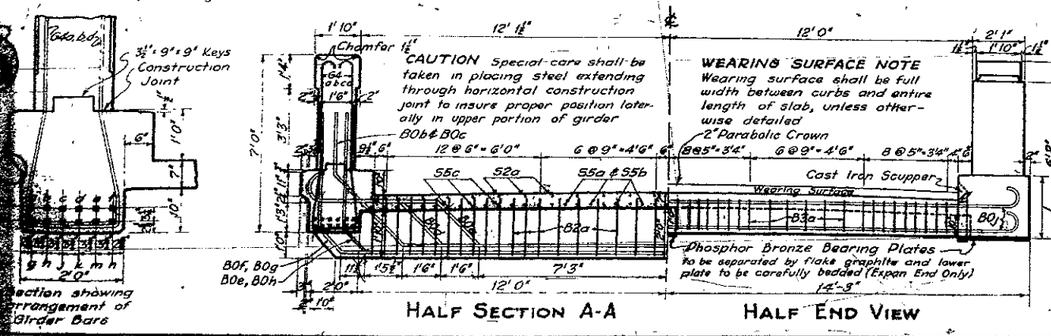
CONSTRUCTION JOINT The surface of girder construction joint shall be left rough and free from all laitance and debris

CURING Special care shall be exercised in the curing of concrete, and all concrete from which forms have been removed shall be kept wet as per construction specifications

KEYS Special care shall be taken to insure keys being monolithic with lower part of girder

SPECIFICATIONS: Construction specifications in force on date of contract shall govern

SURFACE FINISH The tops, inside faces, and ends of girders shall be given special rubbed surface finish, and the complete outside faces of girders and the tops and sides of curbs, ordinary surface finish as per construction specifications The payment for this is included in the price per cubic yard of concrete



Section showing arrangement of Girder Bars

HALF SECTION A-A

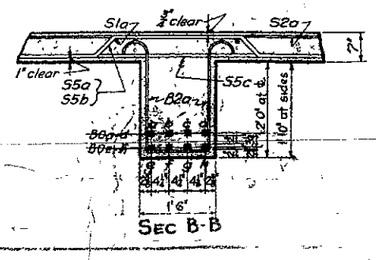
HALF END VIEW

CAUTION Special care shall be taken in placing steel extending through horizontal construction joint to insure proper position laterally in upper portion of girder

WEARING SURFACE NOTE Wearing surface shall be full width between curbs and entire length of slab, unless otherwise detailed

2" Parabolic Crown

NOTE Place two layers 1/2" premolded expansion joint filler between girder & wing at four corners of bridge



SEC B-B

Concrete Mix 1:5

SCALE OF FEET

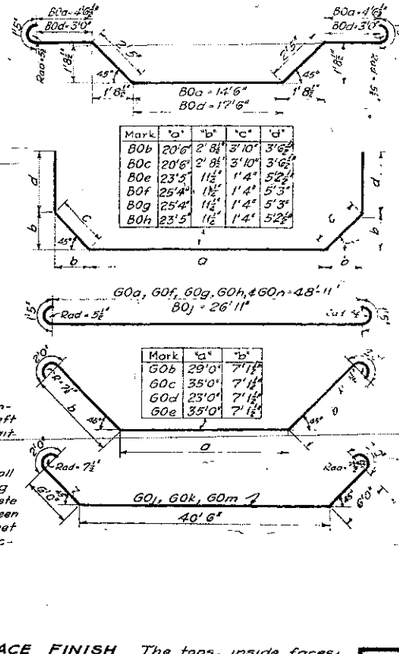
BAR LEGEND

Mark	Sizes	
G0a	3/8" O	1
B3b	3/8" O	2
S5c	3/8" □	3
	3/8" O	4
	3/8" O	5
	3/8" O	6
	1" O	7
	1" □	8
	1 1/8" □	9
	1 1/8" □	0

Location Size Mark Ind Mark

G-Girders B-Beams S-Slab etc

Thus 3 in Marking System B3b is a beam, B indicating that the bar is located on the beam, 3 indicating that the bar is a □ as shown in table of sizes, b indicating on non-short bar in the beam



Mark	"a"	"b"	"c"	"d"
B0b	20'6"	2'8 1/2"	3'10"	3'6 1/2"
B0c	20'6"	2'8 1/2"	3'10"	3'6 1/2"
B0e	23'5"	1 1/2"	1'4"	5'2 1/2"
B0f	25'4"	1 1/2"	1'4"	5'3"
B0g	25'4"	1 1/2"	1'4"	5'3"
B0h	23'5"	1 1/2"	1'4"	5'2 1/2"

Mark	"a"	"b"
G0b	29'0"	7'1 1/2"
G0c	35'0"	7'1 1/2"
G0d	25'0"	7'1 1/2"
G0e	35'0"	7'1 1/2"

STEEL LIST

Mark	Size	Bent	No.	Length	Wgt.
S5a	3/8" O	Bent	75	23'0"	[illegible]
S5b	3/8" O	Bent	45	30'0"	[illegible]
S5c	3/8" O	Bent	24	4'10"	[illegible]
S2a	3/8" O	Bent	24	47'0"	[illegible]
S1a	3/8" O	Bent	21	20'0"	300
B0a	1 1/2" □	Bent	[illegible]	31'3"	334
B0b	1 1/2" □	Bent	[illegible]	29'3"	1171
B0c	1 1/2" □	Bent	6	29'3"	1171
B0e	1 1/2" □	Bent	6	31'0"	996
B0e	1 1/2" □	Bent	6	34'6"	1165
B0f	1 1/2" □	Bent	6	38'6"	1227
B0g	1 1/2" □	Bent	6	38'6"	1227
B0h	1 1/2" □	Bent	6	36'6"	1165
B0j	1 1/2" □	Bent	8	29'9"	1261
B2a	3/4" O	Bent	240	6'7"	1060
B3a	3/4" □	Bent	88	4'4"	324
G0a	1 1/2" □	Bent	2	61'9"	550
G0b	1 1/2" □	Bent	2	47'3"	501
G0c	1 1/2" □	Bent	2	53'3"	565
G0d	1 1/2" □	Bent	2	41'3"	437
G0e	1 1/2" □	Bent	2	53'3"	565
G0f	1 1/2" □	Bent	2	51'9"	550
G0g	1 1/2" □	Bent	2	51'9"	550
G0h	1 1/2" □	Bent	2	51'9"	550
G0j	1 1/2" □	Bent	2	56'6"	600
G0k	1 1/2" □	Bent	2	56'6"	600
G0m	1 1/2" □	Bent	2	56'6"	600
G0n	1 1/2" □	Bent	2	51'9"	550
G0o	[illegible]	Bent	24	14'3"	341
G0p	[illegible]	Bent	12	14'9"	[illegible]
G3a	[illegible]	Bent	[illegible]	15'3"	194
G3d	[illegible]	Bent	[illegible]	16'0"	202
				TOTAL	23650

ESTIMATED QUANTITIES

Concrete 1:5 mix	895	Cu Yds.
Reinforcing Steel	23690	Lbs.
1" Prem Exp Jt Filler	128.0	Sq Ft
Wearing Surface	121.5	Sq Yds.
1/8" Phosphor Bronze Plates	108.7	Lbs.
Cast Iron Scuppers	4	Pcs.

REVISIONS Date
January 4, 1927 by KHR
February 6, 1929

STANDARD CONCRETE THROUGH GIRDER

SPAN 45 FT. ROADWAY

H-15 LOADING

STATE HIGHWAY DEPARTMENT DIVISION OF BRIDGES

MARCH 1926

G-45-24-2

MICROBOX