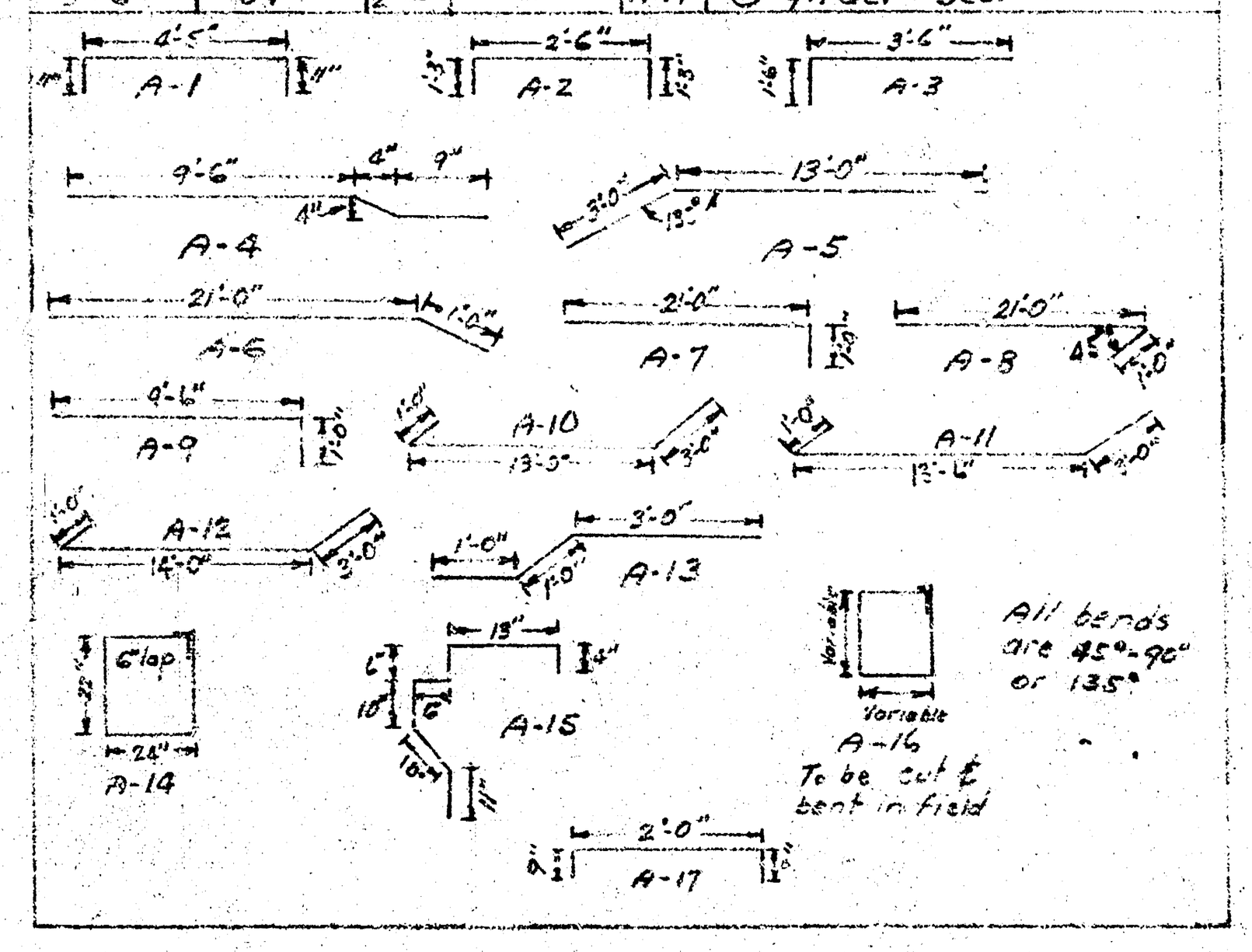
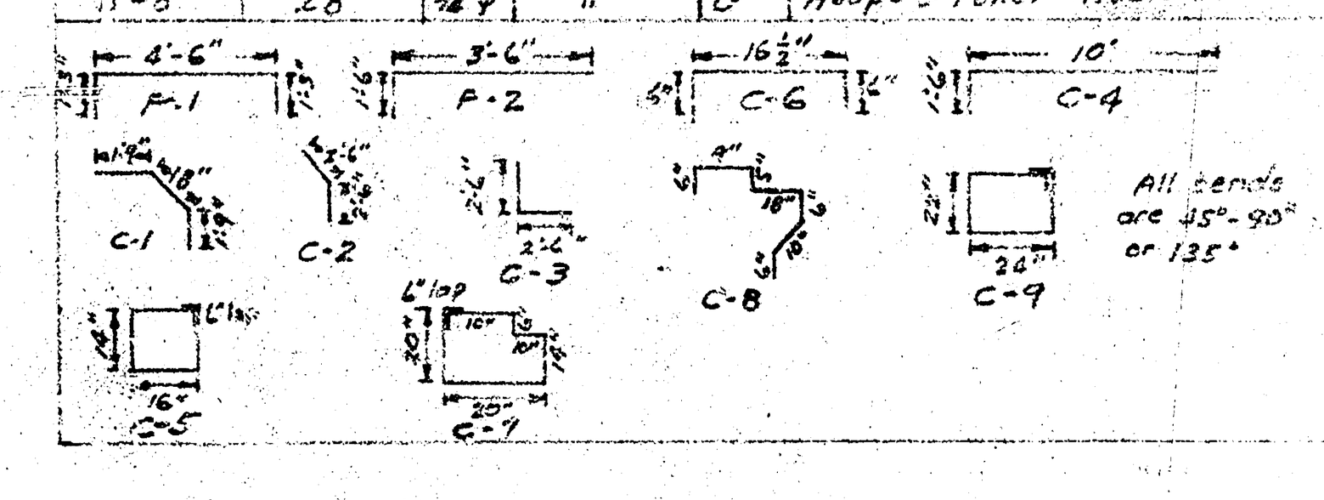
Abutment Steel

Length	No. of Pcs	Size	Shape	Bar No.	Location
25'-0"	48	3/4"φ	Straight		Front Footing
10'- "	46	"	"		Front Wall (Vertical)
12'-6"	20	"	"		Wing Footing
25'-0"	108	"	"		Front wall (Longitudinal)
14'-3"	28		"		Wing Wall (vertical)
6'-3"	132	"	bent	A-1	Footing
5'-0"	60		"	A-2	Wing Footing
5'-0"	120	"	"	A-3	Dowels
10'-9"	46	"	"	A-4	Front part of front wall
16'-0"	60	"	"	A-5	Horizontal bar in wing wall
11'-3"	4	"	Straight		" " " " "
12'-0"	20	"	"		" " " " "
22'-2"	48	"	"		Columns
22'-0"	12	"	bent	A-6	back row-outside tie beams
22'-0"	12	"	"	A-7	ctr " " " "
22'-0"	12	"	"	A-8	inside " " " "
16'-6"	36	"	"	A-9	bars in 1st inside tie beam
17'-0"	12	"	"	A-10	outside-in " " "
17'-6"	12	"	"	A-11	ctrs " " " "
18'-0"	12	"	"	A-12	inside " " " "
5'-0"	92	"	"	A-13	Back Wall
8'-8"	28	"	"	A-14	Hoop bars @ Roller nests
5'-0"	48	1/2"□	"	A-15	Coping on Wing Walls
5'-4"	88	1/4"φ	"	A-16	Hoop bars in Columns
3'-6"	84	1/2"□	"	A-17	@ girder seat



Steel for Piers

Length	No. of Pc's	Size	Shape	Bar No.	Location
25'-0"	192	3/4"φ	Straight		Longitudinals in pier footing
5'-0"	96	"	"		Splices for above bars
7'-0"	560	"	bent	F-1	Trans. bars in pier footing
5'-0"	672	"	"	F-2	Dowels
10'-0"	480	"	Straight		Vertical - inside Columns
5'-0"	320	"	bent	C-1	cap ties
5'-0"	266	"	"	C-2	Anchor bar in girders
22'-8"	40	"	Straight		Vert. outside Col. piers 1 & 8
9'-6"	8	"	"		" " " " "
11'-8"	8	"	"		" " " " "
5'-0"	8	"	bent	C-3	Dowels " "
23'-6"	40	"	Straight		Vert-outside Col. piers 2+7
9'-6"	8	"	"		" " " " "
12'-2"	8	"	"		" " " " "
5'-0"	8	"	bent	C-3	Dowels " "
25'-0"	40	"	Straight		Vert- outside Col " 3+6
9'-6"	8	"	"		" " " " "
12'-8"	8	"	"		" " " " "
5'-0"	8	"	bent	C-3	Dowels " "
25'-0"	40	"	Straight		Vert-outside Col " 4+5
8'-4"	40	"	"		" " " " "
9'-6"	8	"	"		" " " " "
18'-8"	8	"	"		" " " " "
5'-0"	8	"	bent	C-3	Dowels " "
25'-0"	80	"	"		Longitudinal in caps
25'-0"	40	"	"		3/4" " " "
12'-6"	40	"	"		Splice for above bars
5'-8"	300	1/4"φ	bent		Hoops - inside Col - use 1100' thin lbs
6'-0"	100	"	"		" - " " - " 600' " "
4'-8"	264	"	"		" - outside " - 1232' " "
6'-8"	120	"	"		" " " - 800' " "
11'-6"	112	1"□	"	C-4	in bottom of caps @ ends
6'-0"	60	1/2"□	"	C-5	Hoops @ sidewalk girders
2'-4 1/2"	180	"	"	C-6	in cap @ Rdwy
8'-0"	20	"	"	C-7	Hoops @ walk girders Pier 4+5
5'-0"	60	"	"	C-8	in Cap @ Rdwy girders
3'-8"	28	3/4"φ	"	C-9	Hoops @ roller nests



Steel for 30' Spans

Length	No. of Pc's	Size	Shape	Bar No.	Location
30'-6"	40	1"□	Hook		Rdwy Girder - lower layer
29'-6"	40	7/8"φ	"		" " Middle "
31'-0"	30	1"□	bent		" " Top "
32'-0"	10	"	"		" " " "
6'-8"	230	1/2"φ	"	G-1	" " Stirrups
30'-6"	12	1"φ	Hook		Sidewalk Girder - lower layer
29'-6"	4	7/8"φ	"		" " - Top "
30'-9"	8	"	bent		" " " "
8'-0"	88	1/2"φ	"	G-2	" " Stirrups
25'-0"	180	3/4"φ	Straight		Roadway - Trans. bar
8'-4"	180	"	"		31'-6" " "
8'-4"	120	"	"		Sidewalk " "
6'-3"	120	"	"		" " "
25'-0"	162	"	"		Rdwy - Long. bar
6'-3"	50	"	"		splice above bar
12'-6"	52	"	"		splice into next span

See Bridge plans for bending of girder steel

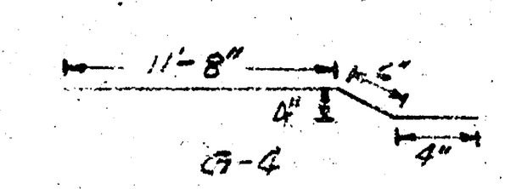
Handrail

No. of Pcs	Length	Size	Wt	Location
4	24'-6"	6" Channel	8.2"	Top rail 26' span
4	26'-6"	" "	"	" 28' "
4	28-6"	" "	"	" " 30' "
4	30'-3"	" "	"	" " 32' "
2	33'-0"	" "	"	" " 35' "
4	11'-3"	" "	"	" " Wing Wall
164	3'-0"	" "	"	Posts
4	24'-6"	1" Angle	0.8	cap on rail
4	26'-6"	" "	"	" " "
4	28'-6"	" "	"	" " "
4	30'-3"	" "	"	" " "
2	33'-0"	" "	"	" " "
4	11'-3"	" "	"	" " "
68	4'-9"	" "	"	Top bar angle
8	4'-6"	" "	"	" " "
8	5'-6"	" "	"	" " "
8	6'-6"	" "	"	" " "
4	6'-0"	" "	"	" " "
8	5'-3"	" "	"	" " "
68	4'-9"	" "	1.49	bottom " "
8	5'-9"	" "	"	" " "
8	6'-9"	" "	"	" " "
8	5'-0"	" "	"	" " "
4	6'-6"	" "	"	" " "
8	5'-3"	" "	"	" " "
68	0'-2"	2" angle	4.7	support
920	2'-8 1/2"	3/4"□ plain	1.91	rail bars (Smooth Bars)

Steel for 32' Spans

Length	No. of Pc's	Size	Shape	Bar No.	Location
32'-6"	40	1"φ	Hook		Rdwy Girder - lower layer
31'-6"	40	1 1/8"□	"		" " Middle "
33'-0"	30	1"φ	bent		" " Top "
34'-0"	10	"	"		" " " "
6'-8"	240	1/2"φ	"	G-1	" " Stirrups
32'-6"	12	1"φ	Hook		Sidewalk " lower layer
31'-6"	4	"	"		" " Top "
32'-9"	8	"	bent		" " " "
8'-0"	92	1/2"φ	"	G-2	" " Stirrups
25'-0"	192	3/4"φ	Straight		31'-6"
8'-4"	192	"	"		Roadway - Trans bar
8'-4"	128	"	"		Sidewalk " "
6'-3"	128	"	"		" " "
25'-0"	102	"	"		Roadway - Long. bar
8'-4"	50	"	"		splice - top layer
12'-6"	52	"	bent	G-4	" lower layer

See Bridge plans for bending of girder steel



Expansion Joint

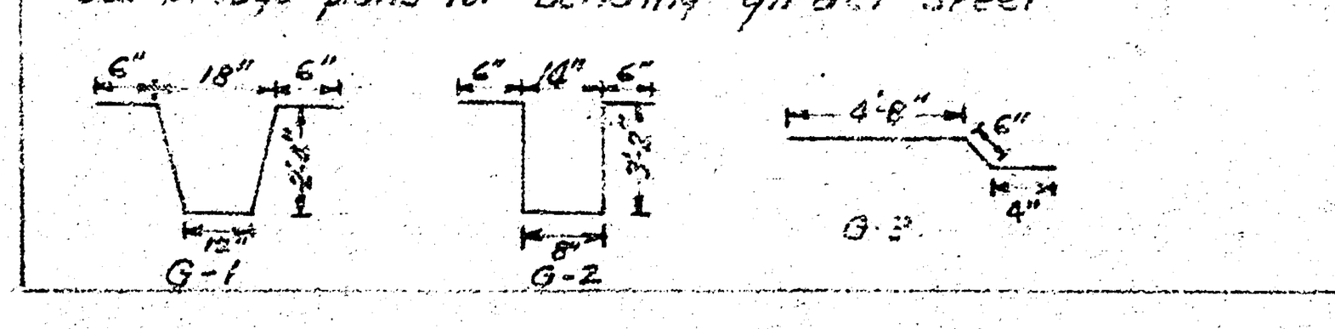
No. of Pcs	Length	Size	Location
4	7'-0"	4"x4"x1/2" L	Sidewalk
4	7'-3"	" " " "	"
56		1/2"φ x 6"	Anchors to be welded
4	30'-0"	4"x4"x1/2" L	Roadway
4	30'-0"	6"x4"x1/2" L	"
7	30'-8"	3/16"x10" plate	" bent
256		1/2"φ x 9"	Anchors to be welded

20 Roller Nests for 15" Gird
8 " " " 12" "

Steel for 26' Spans

Length	No. of Pc's	Size	Shape	Bar No.	Location
27'-2"	40	1"φ	Hook		Rdwy Girder - lower layer
26'-2"	40	7/8"φ	"		" " Middle "
27'-8"	30	1"φ	bent		" " Top "
28'-8"	10	"	"		" " " "
6'-8"	200	1/2"φ	"	G-1	" " Stirrups
27'-2"	12	7/8"φ	Hook		Sidewalk Girder - lower layer
26'-2"	4	"	"		" " Top "
27'-5"	8	"	bent		" " " "
8'-0"	80	1/2"φ	"	G-2	" " Stirrups
25'-0"	156	3/4"φ	Straight		31'-6" Roadway Trans. bar
8'-4"	156	"	"		" " "
8'-4"	104	"	"		Sidewalk " "
6'-3"	104	"	"		" " "
25'-0"	102	"	"		Roadway - long. bar
5'-6"	52	"	bent	G-3	Splice - lower layer next span
5'-0"	50	"	Straight		" top layer long. bar

See Bridge plans for bending girder steel



Steel for 28' Spans

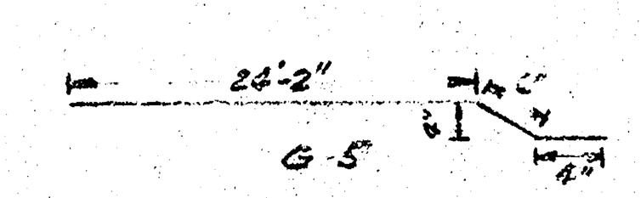
Length	No. of Pc's	Size	Shape	Bar No.	Location
28'-6"	40	1"φ	Hook		Rdwy Girder - lower layer
27'-6"	40	"	"		" " Middle "
29'-0"	30	"	bent		" " Top "
30'-0"	10	"	"		" " " "
6'-8"	220	1/2"φ	"	G-1	" " Stirrups
28'-6"	12	7/8"φ	Hook		Sidewalk Girder - lower layer
27'-6"	4	"	"		" " Top "
28'-9"	8	"	bent		" " " "
8'-0"	84	1/2"φ	"	G-2	" " Stirrups
25'-0"	168	3/4"φ	Straight		31'-6"
8'-4"	168	"	"		Roadway - Trans. bar
8'-4"	112	"	"		Sidewalk Trans. bar
6'-3"	112	"	"		" " "
25'-0"	102	"	"		Roadway - Long. bar
5'-0"	50	"	"		Splice Top layer long. bar
8'-4"	52	"	"		" lower layer next span

See Bridge plans for bending of girder steel

Steel for 35' Span

Length	No. of Pcs	Size	Shape	Bar No.	Location
35'-6"	20	1 1/8"□	Hook		Rdwy Girder - lower layer
34'-6"	20	1"□	"		" " Middle "
36'-0"	15	1 1/8"□	bent		" " Top "
37'-0"	5	"	"		" " " "
6'-8"	130	1/2"φ	"	G-1	" " Stirrups
35'-6"	6	1"□	Hook		Sidewalk " - lower layer
34'-6"	2	"	"		" " Top "
35'-9"	4	"	bent		" " " "
8'-0"	48	1/2"φ	"	G-2	" " Stirrups
25'-0"	108	3/4"φ	Straight		Rdwy - Trans. bar
8'-4"	108	"	"		34'-6" " " Splices
8'-4"	70	"	"		Sidewalk "
6'-3"	70	"	"		" " "
25'-0"	25	"	"		Rdwy - Long bar
12'-6"	25	"	"		" " "
12'-6"	26	"	bent	G-4	" " " lower layer
25'-0"	26	"	"	G-5	" " " " "

See Bridge plan for bending of girder steel



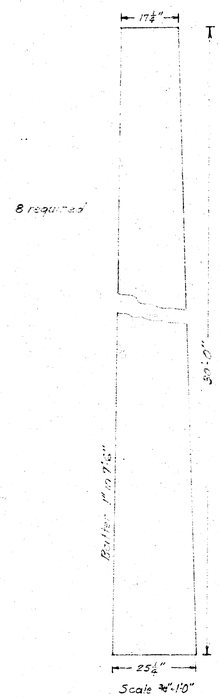
Bid on steel cut to length. 1/4"φ steel not to be cut but stock length. Do not bid on 3/4"φ steel.
Expansion Joint steel & Roller nests to be fabricated.
Holes to be drilled in Channels & angles.

Reinforcing Steel for CAMPBELL BRIDGE
Over The Little Arkansas River At 11th St.
Wichita Kansas

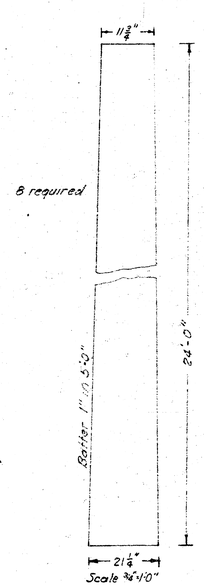
Engineering Department
City of Wichita, Kansas
P.L. Brockway City Engineer
September 1934

11th St.
& Little Ark. R.
Bridge 7

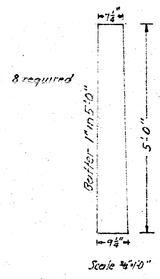
Form Design for Outside Columns
Campbell Bridge
Wichita Kansas.



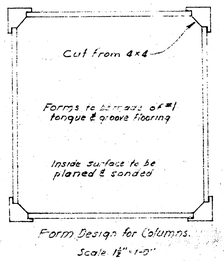
Scale ¾"-1'0"



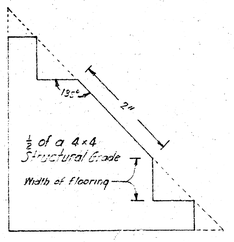
Scale ¾"-1'0"



Scale ¾"-1'0"



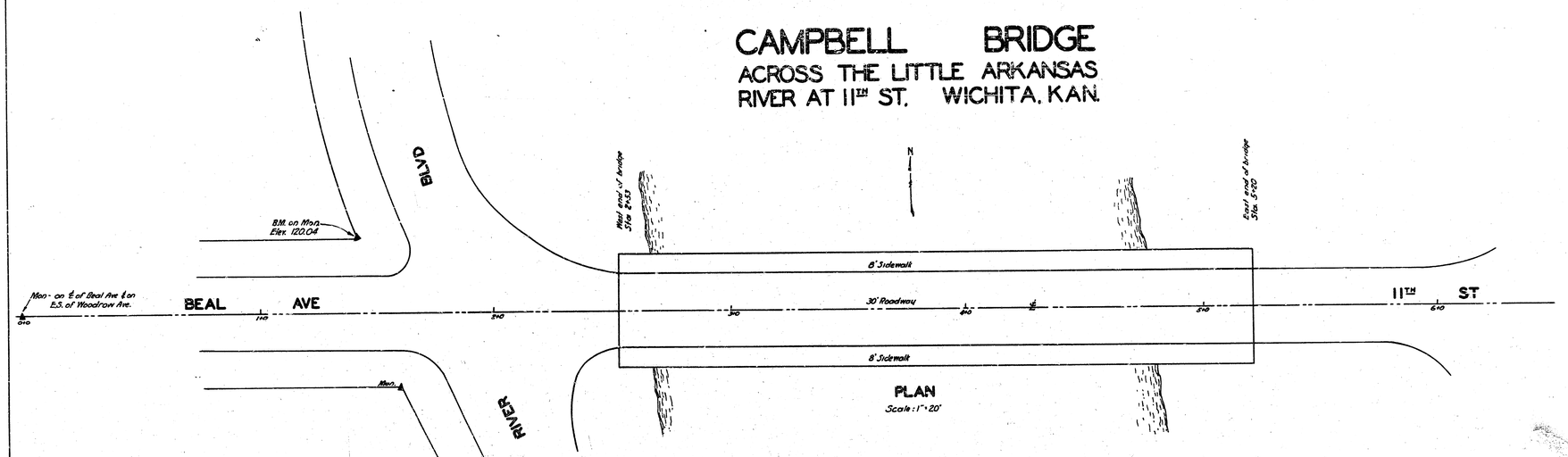
Form Design for Columns.
Scale 1½"-1'0"



Engineering Department
City of Wichita, Kansas.
P.L. Brockway City Engineer.

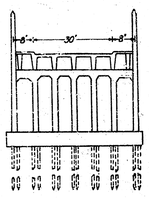
CAMPBELL BRIDGE

ACROSS THE LITTLE ARKANSAS RIVER AT 11TH ST. WICHITA, KAN.

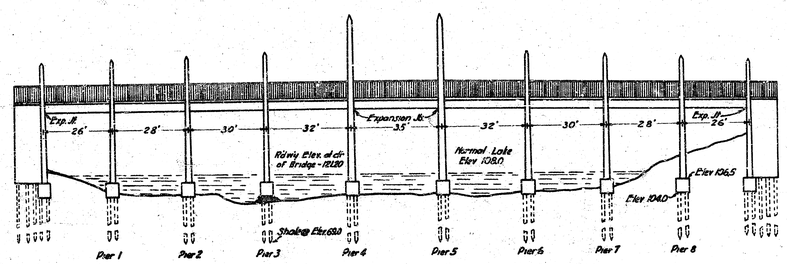


PLAN

Scale: 1" = 20'



CROSS-SECTION



ELEVATION

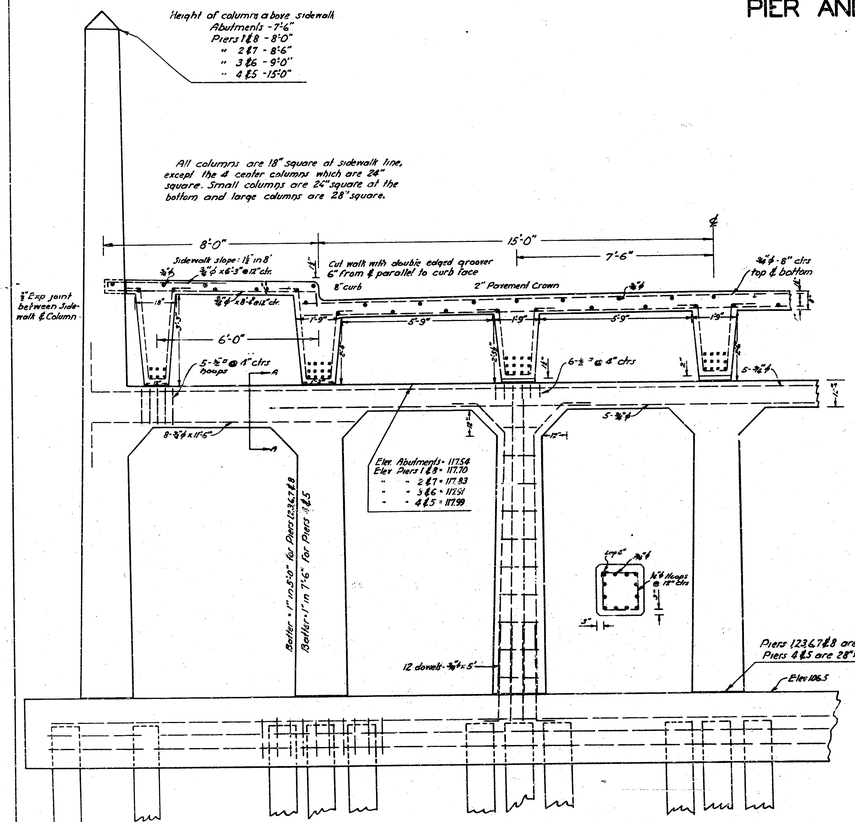
Scale: Horiz 1" = 20'
Vert 1" = 10'

REINFORCED CONCRETE DECK GIRDER

ENGINEERING DEPARTMENT
CITY OF WICHITA, KANSAS
P.L. BEGGERLY, CITY ENGINEER
AUGUST 1934
SHEET 1 7 SHEETS

D.D.W.

PIER AND DECK DETAILS



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Engineering Department
City of Wichita, Kansas
R.L. Stuckey City Engineer
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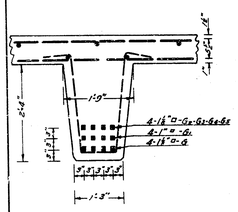
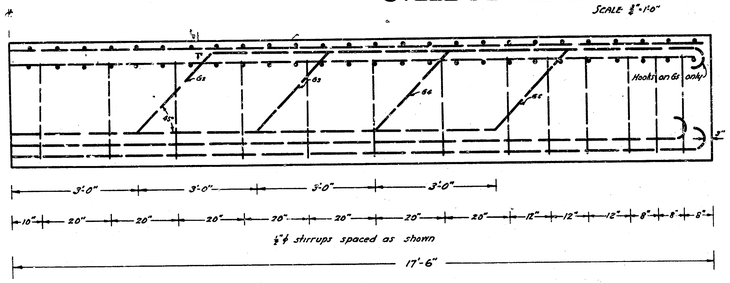
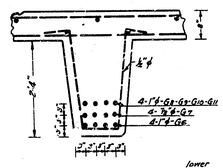
STEEL DETAIL OF ROADWAY GIRDERS

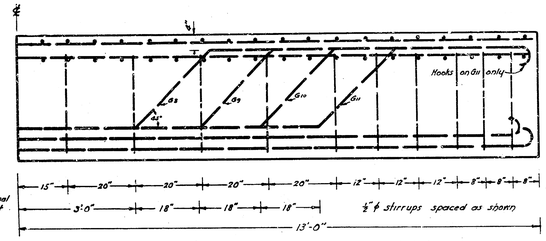
SCALE ¾"=1'0"





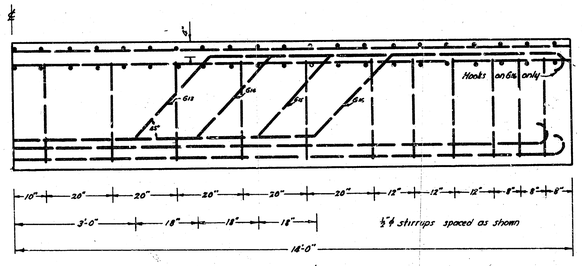


lower
At fixed ends longitudinal bars in floor lap next span bars 2 ft.

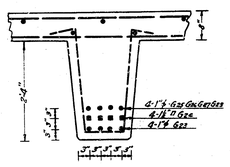


Add 8" at abutment end on all longitudinal steel.
Add one stirrup.

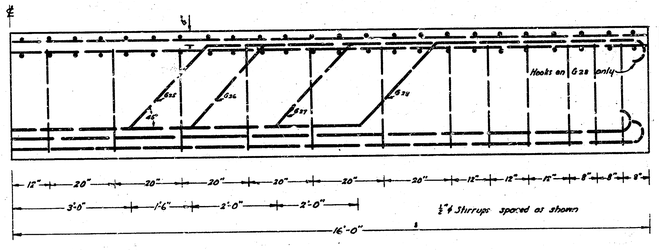
Longitudinal bars in floor lap next span bars 2 ft.

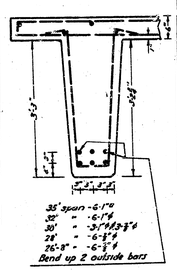


Longitudinal bars in floor lap next span bars 2 ft.

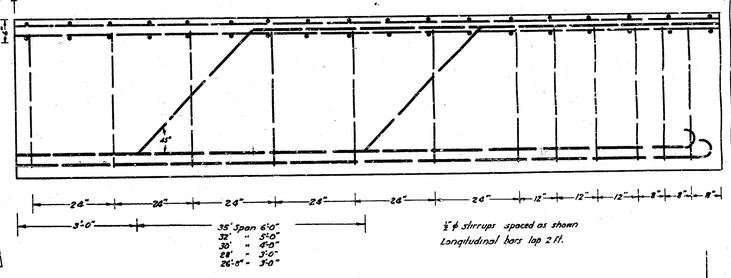


Longitudinal bars in floor lap next span bars 2 ft.





Bend up 2 outside bars



STEEL DETAIL OF SIDEWALK GIRDER

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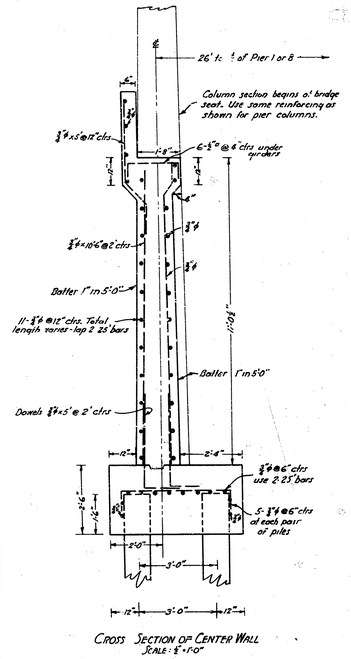
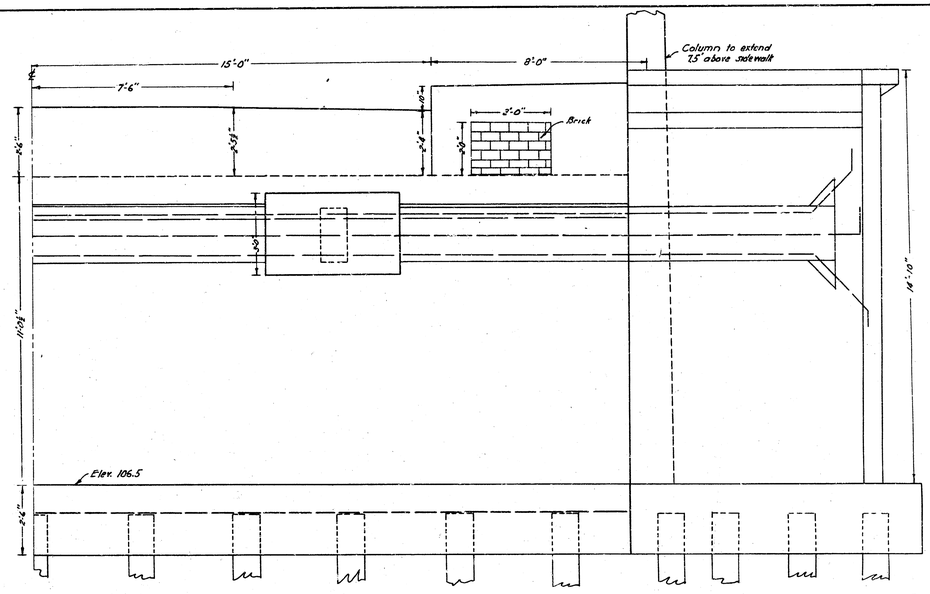
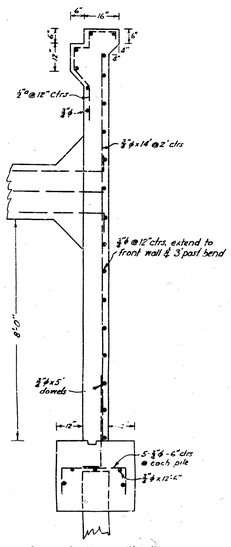
Engineering Department
City of Wichita, Kansas
R.L. Brockway City Engineer
Sheet 3 7 Sheets



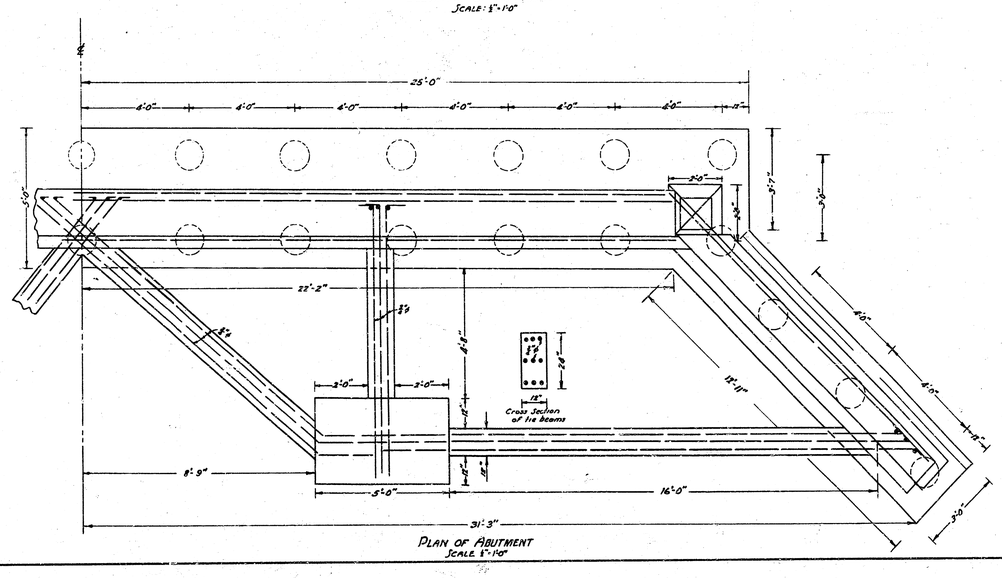
CROSS SECTION OF CENTER WALL
SCALE: 1/2" = 1'-0"



ELEVATION OF ABUTMENT
SCALE: 1/2" = 1'-0"



CROSS SECTION OF WING WALL
SCALE: 1/2" = 1'-0"



PLAN OF ABUTMENT
SCALE: 1" = 1'-0"

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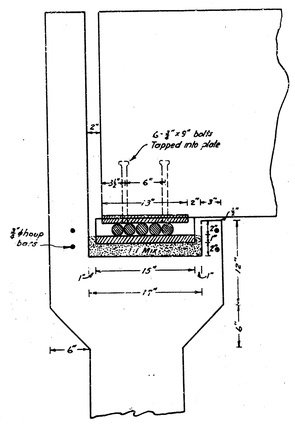
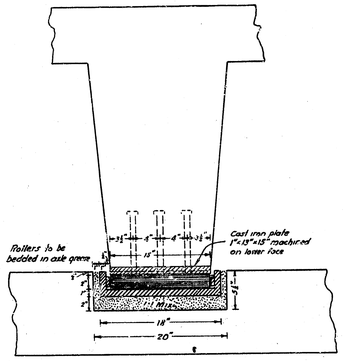
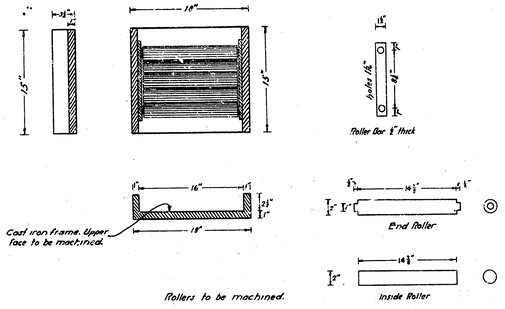
City of Wichita, Kansas
Pt. Brockway, City Engineer
Sheet 4 7 Sheets.







ROLLER NESTS FOR 15" GIRDERS

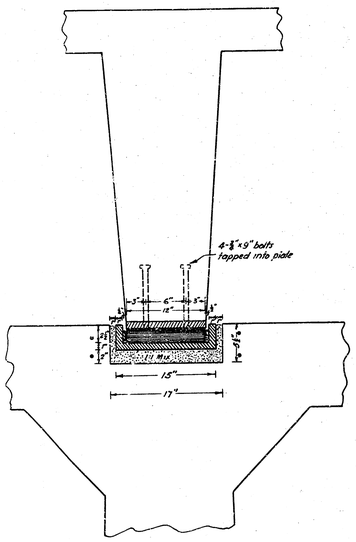
NUMBER REQUIRED	
20 plates 1"x 13"x 15"	20 Sets
20 frames 12"x 18"	
40 end rollers	
60 inside rollers	
40 roller bars	
120 bolts ¾"x 9"	

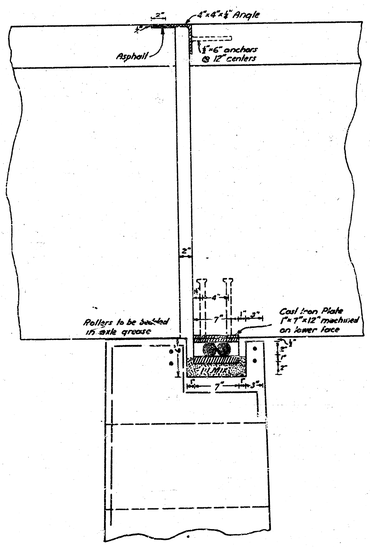
ROLLER NESTS FOR 12" GIRDERS

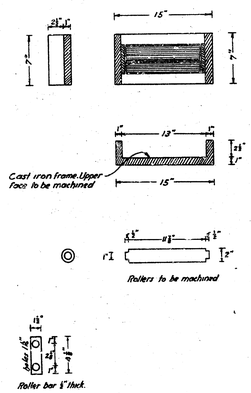
NUMBER REQUIRED	
8 plates 1"x 7"x 12"	8 Sets.
8 frames 7"x 15"	
16 rollers	
16 roller bars	
32 bolts ¾"x 9"	

DETAIL OF ROLLER NESTS FOR 15" GIRDERS

Scale 1½"=1'0"







DETAIL OF ROLLER NESTS FOR 12" GIRDERS

Scale 1½"=1'0"

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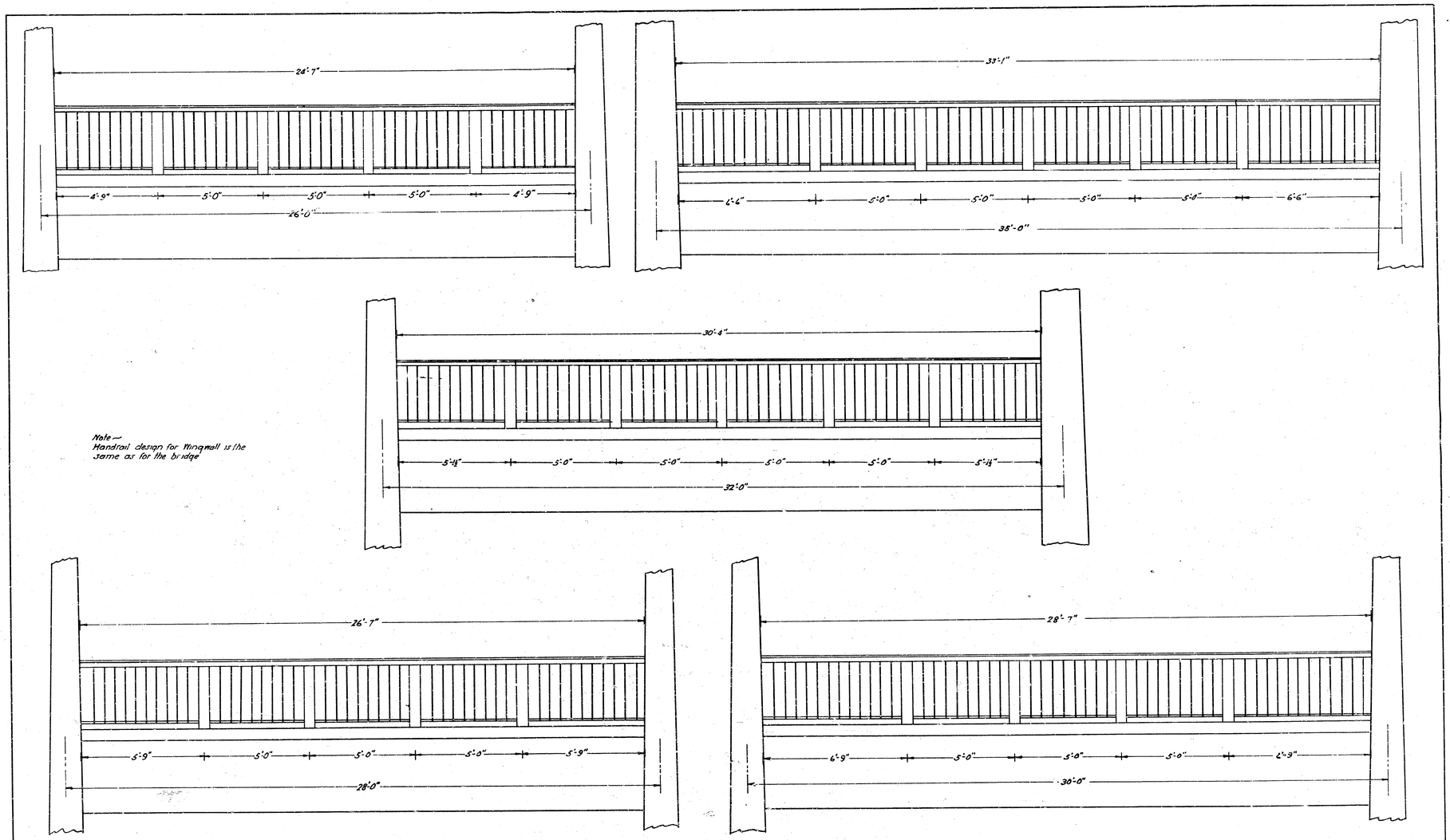
Sheet 5 7 Sheets



Note —
Handrail design for Wingwall is the same as for the bridge

HANDRAIL PANELS

Scale: ½"=1'0"

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Engineering Department
City of Wichita Kansas
P.L. Brockway City Engineer
Sheet 7 7 Sheets