FED. ROAD DIST. NO.	STATE	USWPH PROJ. NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
1	WASH.	WPMS 269-A	1936	7	16

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE
OVER SPOKANE RIVER
SPOKANE COUNTY

STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA WASHINGTON

APPROVED: MAY 21, 1936

BRIDGE ENGINEER — DIRECTOR OF HIGHWAYS

SHEET 6 OF 14 SHEETS

CONTRACT NUMBER -
TYPE OF CONSTRUCTION

CITY OF SPOKANE
DEPT. OF PUBLIC WORKS—ENGINEERING DIVISION

POST STREET BRIDGE
#814 WIDENING
ARCH AND ABUTMENTS

NOVEMBER 1935 — SCALE ¼" = 1'-0"
B.J. GARNETT, ENGINEER
APPROVED .... CITY ENGINEER

THESE PLANS WERE APPROVED AND ADOPTED BY THE CITY COUNCIL ON NOV. 22, 1935
CITY CLERK

Date	Revision	By	Ch'k'd
8-20-36	See sheet 6-A for arch rib hinges	A.M.B	W.T.R.

4 / 8

C-18 / 624

FED. ROAD DIST. NO.	STATE	USWPH PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	WASH.	WPMS-269-A	1936	12	16

BAR LIST

All Dimensions Out. to Out. — Angles = 45°

Mark	Location	No.	Size	Length	Bending Diagram
1	Handrail Top H to J	2	3/4" ϕ	39'-4"	
2	" " D to H	4	3/4" ϕ	37'-2"	
3	" " J to O	4	3/4" ϕ	32'-9"	
4	do	2	3/4" ϕ	32'-6"	Straight
5	" O to E. end	4	3/4" ϕ	35'-10"	
6	" W. end to D	4	3/4" ϕ	32'-10"	
7	do	2	3/4" ϕ	32'-8"	Straight
8	" Panel & Bottom H to J	4	1/2" ϕ	39'-4"	
9	" " D to H	8	1/2" ϕ	36'-8"	
10	" " J to O	8	1/2" ϕ	32'-4"	
11	" " "	4	1/2" ϕ	32'-2"	Straight
12	" " O to E. end	8	1/2" ϕ	35'-5"	
13	" " W. end to D	8	1/2" ϕ	32'-5"	
14	do	4	1/2" ϕ	32'-3"	Straight
15	" Main Posts Vert.	50	3/4" ϕ	11'-2"	
16	" " @ Exp. Jts.	4	3/4" ϕ	6'-7"	
17	" " Hoops	15	1/2" ϕ	5'-6"	
18	" Panel Posts Vert.	36	3/4" ϕ	5'-8"	
19	do	36	3/4" ϕ	5'-8"	
20	" Vert.	129	1/2" ϕ	4'-0"	
21	Coping H to J	1	3/8" ϕ	37'-8"	Straight
22	" D to H	2	3/8" ϕ	37'-9"	do
23	" J to O	3	3/8" ϕ	32'-4"	do
24	" O to E. end	2	3/8" ϕ	36'-0"	do
25	" W. end to D	3	3/8" ϕ	32'-0"	do
26	Girder under rail H to J	4	3/4" ϕ	38'-9"	
27	" D to H	8	3/4" ϕ	38'-3"	
28	" J to O	8	3/4" ϕ	33'-6"	
29	" "	4	3/4" ϕ	32'-6"	Straight
30	" O to E. end	8	3/4" ϕ	37'-0"	
31	" W. end to D	8	1" ϕ	34'-0"	
32	" "	4	1" ϕ	33'-0"	Straight
33	" "	2	1" ϕ	37'-6"	
34	" "	2	1" ϕ	39'-0"	
35	" D to H	2	3/4" ϕ	43'-0"	
36	" H to J	1	3/4" ϕ	42'-0"	
37	" J to O	2	3/4" ϕ	43'-0	
38	" "	1	3/4" ϕ	27'-2"	
39	" O to E. end	1	3/4" ϕ	43'-0"	
40	" "	1	3/4" ϕ	36'-0"	
41	" @ Posts	24	3/4" ϕ	9'-2"	
42	" @ Exp. Jts.	8	3/4" ϕ	7'-6"	
43	" Hoops	209	1/2" ϕ	4'-6"	
44	Sidewalk Longit. H to J	8	3/8" ϕ	37'-6"	Straight
45	" " D to H	16	3/8" ϕ	37'-0"	do
46	" " J to O	24	3/8" ϕ	32'-8"	do
47	" " W. end to D	24	3/8" ϕ	Varies	16 @ 32'-8" 8 (32'-8" to 28'-8")

Mark	Location	No.	Size	Length	Bending Diagram
48	Sidewalk Longit. O to E. end	16	3/8" ϕ	36'-2"	Straight
49	Curb Beam H to J	4	3/4" ϕ	37'-0"	do
50	" D to H	8	3/4" ϕ	38'-0"	do
51	" J to O	12	3/4" ϕ	32'-6"	do
52	" W. end to D	8	3/4" ϕ	33'-6"	do
53	" E. end to O	12	3/4" ϕ	37'-0"	do
54	Sidewalk Transv.	220	3/8" ϕ	7'-7"	
55	" " W. end	8	3/8" ϕ	Varies	do Ave. 3'-9"
56	" "	220	3/8" ϕ	7'-3"	
57	" " W. end	8	3/8" ϕ	Varies	do Ave. 3'-6"
58	" "	440	3/8" ϕ	9'-1"	
59	W.W.P. Girder W. end to D	12	1" ϕ	31'-6"	
60	" "	4	1" ϕ	32'-6"	
61	" "	2	1" ϕ	44'-9"	
62	" D to H	16	1" ϕ	41'-6"	
63	" "	2	1" ϕ	43'-3"	
64	" "	2	1" ϕ	43'-6"	
65	" H to J	8	1" ϕ	38'-0"	
66	" "	2	1" ϕ	40'-8"	
67	" J to O	16	1" ϕ	34'-7"	
68	" "	8	1" ϕ	33'-1"	Straight
69	" "	4	1" ϕ	43'-6"	
70	" "	2	1" ϕ	26'-4"	
71	" O to E. end	16	1" ϕ	27'-6"	
72	" "	2	1" ϕ	44'-8"	
73	" @ E, I, M, P	8	3/4" ϕ	12'-0"	Straight
74	" Hoops W. end to B	28	1/2" ϕ	Varies	Av. 11'-4"
75	" "	14	1/2" ϕ	Varies	Av. 11'-0"
76	" Hoops B to E. end	408	1/2" ϕ	10'-4"	
77	" " "	204	1/2" ϕ	10'-0"	
78	" @ Exp. Jts.	4	1" ϕ	12'-0"	Straight
79	" "	8	1" ϕ	14'-6"	
80	" " Hoops	52	1/2" ϕ	6'-2"	
81	Floor Beams C, E, F, G, I, K, L, M, N, P, Q D, H, J, O	30	1" ϕ	24'-3"	
82	" E, F, G, I, K, L, M, N, P, Q, D, H, J, O	14	1" ϕ	24'-9"	
83	do	28	1" ϕ	25'-4"	
84	do	28	1" ϕ	25'-6"	
85	D, H, J, O	4	1" ϕ	10'-0"	
86	do	4	1" ϕ	15'-3"	
87	Hoops C, E, F, G, I, K, L, M, N, P, Q, B	216	1/2" ϕ	9'-8"	
88	" " D, H, J, O @ back	16	1/2" ϕ	5'-0"	
89	do	16	1/2" ϕ	6'-0"	
90	do	16	1/2" ϕ	7'-0"	
91	do	16	1/2" ϕ	8'-0"	
92	Hoops E, F, G, I, K, L, M, N, P, Q, D, H, J, O front	14	1/2" ϕ	6'-6"	
93	do	14	1/2" ϕ	7'-2"	

Mark	Location	No.	Size	Length	Bending Diagram
94	Hoops E, F, G, I, K, L, M, N, P, O, D, H, J, O front	14	1/2" ϕ	8'-2"	
95	do	14	1/2" ϕ	8'-8"	
96	E, F, G, I, K, L, M, N, P, Q	10	1/2" ϕ	9'-2"	
97	do	10	1/2" ϕ	9'-6"	
98	Hoops D, H, J, O back to front	16	1/2" ϕ	10'-9"	
99	do	12	1/2" ϕ	10'-8"	
100	do	12	1/2" ϕ	10'-7"	
101	do	16	1/2" ϕ	10'-6"	
102	do	16	1/2" ϕ	10'-5"	
103	do	8	1/2" ϕ	10'-4"	
104	do	4	1/2" ϕ	9'-8"	
105	Beam B Longit.	2	1" ϕ	16'-6"	
106	do	2	1" ϕ	18'-0"	
107	do	3	1" ϕ	19'-0"	
108	Old Caps	68	1" □	4'-9"	
109	" Hoops	17	3/4" ϕ	6'-2"	
110	" "	17	3/4" ϕ	5'-10"	
111	" "	17	3/4" ϕ	5'-6"	
112	" "	17	3/4" ϕ	5'-2"	
113	Beam C	2	1" ϕ	27'-6"	
114	"	1	1" ϕ	27'-0"	
115	"	2	1" ϕ	28'-0"	
116	" Hoops front	7	1/2" ϕ	Varies	Ave. L. 9'-0"
117	do	4	1/2 ϕ	Varies	Ave. L. 6'-8"
118	do	1	1/2" ϕ	4'-10"	
119	Beam @ sect. D-D	2	1 1/4" □	36'-0"	
120	do	2	1" □	38'-0"	
121	do	3	1 1/4" □	24'-3"	
122	do	1	1 1/4" □	27'-3"	
123	do	1	1 1/4" □	21'-6"	
124	do	1	1 1/4" □	24'-0"	
125	do	1	1 1/4" □	26'-6"	
126	do	1	1 1/4" □	28'-6"	
127	" Hoops back to front	3	1/2" ϕ	Varies	Av. Lgth. 8'-0"
128	do	4	1/2" ϕ	12'-4"	
129	do	2	1/2" ϕ	12'-8"	
130	do	2	1/2" ϕ	13'-0"	
131	do	6	1/2" ϕ	Varies	Av. L. 13'-6"
132	do	6	1/2" ϕ	Varies	Av. L. 13'-3"
133	do	7	1/2" ϕ	Varies	Av. L. 12'-1"
134	do	3	1/2" ϕ	Varies	Av. L. 10'-4"
135	do	4	1/2" ϕ	Varies	Ave L. 6'-9"
136	Beam @ sect. E-E	2	1" □	40'-0"	
137	do	2	1" □	37'-2"	
138	do	2	1" □	38'-6"	
139	do	2	1" □	37'-0"	
140	do Hoops	28	1/2" ϕ	10'-0"	

Date	Revision	By	Chkd.
7-13-36	Changed Bars Nos. 15, 16, 18, 19 to 3/4" ϕ	D.I.Mc	

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE
OVER SPOKANE RIVER
SPOKANE COUNTY

STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED: MAY 21, 1936

Clark H. Eldridge, BRIDGE ENGINEER — L. D. Mumaw [signature], DIRECTOR OF HIGHWAYS

SHEET 11 OF 14 SHEETS
CONTRACT NUMBER

CITY OF SPOKANE
DEPT. OF PUBLIC WORKS — ENGINEERING DIVISION
POST STREET BRIDGE WIDENING
#814
BAR LIST
NOVEMBER 1935
B J GARNETT, ENGINEER
APPROVED .... CITY ENGINEER

9

C-18
624

8/303

FED. ROAD DIST. NO.	STATE	USWPH PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
1	WASH.	WPMS-269-A	1936	13	16

BAR LIST (CONT.)

Mark	Location	No.	Size	Length	Bending Diagram
141	Beam @ E-E (cont.) Hoops front	2	½" Φ	Varies	1'-3"; 3'-4" & 3'-2"; Ave. L. 9'-6"
142	do	2	½" Φ	Varies	2'-10" & 2'-7"; Ave. L. 8'-5"
143	do	2	½ Φ	Varies	2'-3" & 1'-10"; Ave. L
144	Beam @ sect. A-A	4	1" Φ	40'-6"	39'-0"
145	do	4	1" Φ	39'-0"	Straight
146	do	2	1" Φ	49'-6"	4'-6", 2'-3", 13'-0", 2'-6", 10'-6", 2'-6", 10'-0"; 2'-3"
147	do	2	1" Φ	39'-3"	10'-0", 2'-6", 8'-0", 2'-6", 5'-9", 2'-6", 5'-0"
148	do	1	1" Φ	33'-3"	6'-9", 2'-3", 9'-0", 2'-3", 10'-0"; 2'-3"
149	do	2	1" Φ	38'-0"	9'-6", 2'-3", 14'-0", 2'-3", 9'-0"; 2'-3"
150	do Hoops	82	½" Φ	7'-8"	1'-0"; 2'-7"
151	Beam @ sect. B-B	4	1" Φ	25'-6"	24'-0"
152	do	4	1" Φ	24'-0"	Straight
153	do	2	1" Φ	25'-6"	4'-0", 2'-9", 6'-0", 2'-9", 6'-0"; 2'-9"
154	do	2	1" Φ	37'-0"	10'-0", 2'-6", 9'-0", 2'-6", 10'-0"; 2'-6"
155	do	2	1" Φ	39'-0"	8'-0", 2'-9", 13'-0", 2'-9", 10'-0"; 2'-9"
156	do Hoops	51	½" Φ	8'-2"	1'-0"; 2'-10"
157	Beam @ M.H.	4	1" Φ	17'-0"	Straight
158	Floor Slab Longit. H to J	15	½" Φ	37'-0"	Straight
159	do D to H	30	½" Φ	37'-4"	do
160	do J to O	45	½" Φ	31'-9"	do
161	do O to E. end	30	½" Φ	Varies	Ave. L. 30'-0"
162	do D to B	15	½ Φ	37'-0"	Straight
163	do B to W. end	30	½" Φ	Varies	Ave. L. 29'-0"
164	do	19	½" Φ	Varies	Ave. L. 35'-0"
165	Floor Slab Transv. O to E. end	350	½" Φ	16'-10"	16'-6"
166	do	175	½" □	18'-0"	2'-3", 5", 7'-6", 5", 1'-9", 5", 4'-0"; 6'-0" to 12'-0"
167	do B to C	12	½" □	Varies	Ave. L. 22'-0"
168	do	24	½" □	Varies	18'-0" to 26'-0"; Ave. L. 22'-0"
169	do W. end to B	33	⅝" Φ	Varies	Ave. L 21'-0"
170	do	66	⅝" Φ	Varies	5", 5", 5", 5"; Ave. L. 24'-0"
170	do	30	⅝" Φ	8'-0"	8'-0
172	Beam over arch B to D	4	¾" Φ	41'-6"	40'-0"
173	do D to H	8	¾" Φ	39'-0"	37'-6"
174	do H to J	4	¾" Φ	39'-0"	36'-6"
175	do J to O	12	¾" Φ	34'-0"	32'-6"
176	do O to E. end	4	¾" Φ	32'-6"	31'-0"
177	do	4	¾" Φ	31'-0"	Straight
178	do B to D	2	¾" Φ	42'-0"	4'-0", 2'-6", 8'-0", 2'-6", 6'-0", 2'-6", 8'-0", 2'-6", 2'-6"; 2'-6"
179	do D to H	2	1" Φ	27'-0"	2'-9", 9'-0", 2'-3", 10'-0"; 2'-3"
180	do	2	1" Φ	27'-0"	2'-9", 2'-3", 7'-6", 2'-3", 10'-0"
181	do	2	1" Φ	48'-0"	6'-0", 2'-6", 8'-0", 2'-6", 6'-0", 2'-6", 8'-0", 2'-6", 6'-0"; 2'-6"
182	do H to J	2	1" Φ	44'-6"	2'-9", 2'-4", 8'-0", 2'-4", 6'-0", 2'-4", 8'-0", 2'-4", 2'-9"; 2'-4"
183	do J to O	2	1" Φ	27'-0"	2'-9", 9'-0", 2'-3", 10'-0"; 2'-3"
184	do	2	1" Φ	27'-0"	2'-9", 2'-3", 7'-6", 2'-3", 10'-0"; 2'-3"
185	do	4	1" Φ	38'-6"	6'-0", 2'-6", 8'-0", 2'-6", 6'-0", 2'-6", 8'-0"; 2'-6"
186	do O to E end	2	1" Φ	35'-8"	2'-9", 2'-6", 8'-0", 2'-6", 6'-0", 2'-6", 8'-0"; 2'-6"
187	do	2	1" Φ	38'-6"	8'-0", 2'-6", 7'-0", 2'-6", 8'-0", 2'-6", 5'-0"; 2'-6"
188	do Hoops	213	½" Φ	7'-4"	9"; 2'-8"

Mark	Location	No.	Size	Length	Bending Diagram
189	Column @ W. end & Q	8	1" Φ	21'-0"	Straight
190	do	8	1" Φ	7'-0"	6'-0"
191	Column @ W. end & Q Hoops	34	½" Φ	Varies	1'-6", 2'-6"; 1'-6", 2'-6"; Ave. L. 8'-4"
192	Column @ B	4	1" Φ	28'-6"	Straight
193	do B & D	8	1" Φ	16'-0"	do
194	Column @ B Hoops	23	½ Φ	Varies	1'-9", 2'-9"; 1'-9", 2'-9"; Ave. L. 9'-4"
195	Column @ C	4	1" Φ	25'-0"	Straight
196	" @ C, D, E, M, N, O	24	1" Φ	7'-0"	do
197	" @ C Hoops	20	½" Φ	Varies	1'-6", 2'-6"; 1'-6", 2'-6"; Ave. L. 8'-4"
198	Column @ D	2	1" Φ	18'-0"	Straight
199	do	2	1" Φ	17'-0"	15'-6"
200	do Hoops	14	½" Φ	Varies	1'-6", 2'-2"; 1'-6", 2'-2"; Ave. L. 7'-8"
201	Column @ E	4	1" Φ	12'-6"	Straight
202	do Hoops	8	½" Φ	Varies	1'-6", 1'-9"; 1'-6", 1'-9"; Ave. L. 6'-10"
203	Column @ F	4	1" Φ	10'-6"	Straight
204	do Hoops	4	½" Φ	Varies	1'-6", 1'-8"; 1'-6", 1'-8"; Ave. L. 6'-8"
205	Columns @ G & K	8	1" Φ	9'-0"	Straight
206	do Hoops	4	½" Φ	6'-4"	1'-6"; 1'-6"
207	Columns @ H & J	4	1" Φ	7'-0"	Straight
208	do	4	1" Φ	5'-6"	4'-0"
209	Column @ I	4	1" Φ	6'-6"	Straight
210	Column @ L	4	1" Φ	12'-0"	do
211	do Hoops	6	½" Φ	Varies	1'-6", 1'-9"; 1'-6", 1'-9"; Ave. L. 6'-10"
212	Column @ M	4	1" Φ	15'-0"	Straight
213	do Hoops	10	½ Φ	Varies	1'-6", 1'-10; 1'-6", 1'-10; Ave. L. 7'-0"
214	Column @ N Hoops	17	½" Φ	Varies	1'-6", 2'-3; 1'-6, 2'-3; Ave. L. 7'-10"
215	Column @ N	4	1" Φ	21'-0"	Straight
216	Column @ O	2	1" Φ	28'-6"	do
217	do	2	1" Φ	27'-0"	25'-6"
218	do Hoops	23	½ Φ	Varies	1'-6", 2'-7; 1'-6, 2'-7; Ave. L. 8'-6"
219	Column @ P	4	1" Φ	33'-0"	Straight
220	do Hoops	28	½" Φ	Varies	1'-9"; 1'-9, 3'-0; Ave. L. 9'-10"
221	Cap Hoops @ W. end, C, D, E, F, G, H, I, J, K, L, M, N, O, Q	28	½" Φ	8'-4"	2'-0"; 2'-0
222	Cap Hoops @ B & P	4	½" Φ	10'-0"	2'-5"; 2'-5"
223	Arch @ abuts.	56	1" □	Varies	34 @ 14'-0"; 22 @ 17'-0"
224	Arch	168	1" □	"	22 @ 47'-6"; 34 @ 46'-0"; 56 @ 44'-0"; 28 @ 41'-6; 28 @ 51'-6
225	Arch Hoops B to C & P to O	56	½" Φ	Varies	2'-3"; 6'-8" to 6'-2"; Ave. L. 17'-8"
226	do C to D & O to N	104	½" Φ	Varies	6'-2" to 5'-5"; Ave. L. 16'-8"
227	do D to E & M to N	104	½" Φ	Varies	5'-5" to 5'-1"; Ave. L. 15'-4"
228	do E to F & L to M	104	½" Φ	Varies	5'-1" to 4'-11"; Ave. L. 14'-10"
229	do F to G & K to L	96	½" Φ	Varies	4'-11 to 4'-9"; Ave. L. 14'-6"
230	do G to H & J to K	96	½" Φ	Varies	4'-9 to 4'-8"; Ave L. 14'-3"
231	do H to J	84	½" Φ	Varies	4'-8" to 4'-7"; Ave. L. 14'-1"

Mark	Location	No.	Size	Length	Bending Diagram
232	Struts	48	1" Φ	13'-0"	Straight
233	do Hoops @ D & N	20	½" Φ	17'-4"	1'-0", 2'-6"; 5'-9", 1'-0"
234	do F & L	20	½" Φ	15'-10"	5'-0", 8"
235	do H & J	20	½" Φ	15'-2"	4'-8", 3"
236	Manhole @ W. end Sides	15	½" Φ	32'-0"	12'-6"; 9'-0"; 10'-6"
237	do Footing	3	¾" Φ	10'-0"	7'-6"
238	do "	3	¾" Φ	8'-6"	8'-0"
239	do "	3	¾" Φ	11'-0"	10'-6"
240	do	4	½" Φ	3'-9"	3'-6"
241	do vert. N. Wall	9	½" Φ	16'-6"	Straight
242	do End	3	½" Φ	13'-0"	do
243	do S. Wall	8	½" Φ	15'-6"	do
244	Manhole @ E. end Sides	21	½" Φ	30'-0"	8'-9"; 9'-0"; 11'-3"
245	do Footing	3	¾" Φ	13'-6"	13'-0"
246	do	3	¾" Φ	11'-6"	11'-0"
247	do	3	¾" Φ	12'-0"	11'-6"
248	do vert. S. Wall	8	½" Φ	22'-6"	Straight
249	do end	3	½" Φ	20'-0"	do
250	do N. Wall	7	½" Φ	23'-0"	do
251	Wall @ E. end vert.	18	½" Φ	22'-6"	do
252	do	1	½" Φ	23'-6"	do
253	do Horiz.	24	½" Φ	19'-0"	18'-6"
254	do	8	½" Φ	21'-6"	2'-0", 9", 4'-0", 9", 4'-0", 9", 4'-0", 9", 2'-0"; 9"
255	do	21	½" Φ	4'-0"	3'-6"
256	Coping @ W. End	8	1" Φ	30'-0"	Straight
257	Girder Bars at Exp. Joints	32	¾" Φ	3'-3"	2'-6"
258	Arch rib hinges	21	2" □	15-0"	Str.
259	do	24	2" □	17'-6"	3'-4", 4'-0½", 1'-6", 4'-0½", 3'-4"; 4'-8"; 4'-8"; 30°
260	do	12	2" □	14'-2"	3'-4", 2'-7", 1'-6", 2'-7", 3'-4"; 3'-0"; 3'-0"; 30°
261	Hinge stirrups	10	⅝" Φ	25'-10"	5'-9", 6", 6'-8" (261), 4'-9" (262)
262	do	5	⅝" Φ	22'-0"	
263	do	84	½" Φ	(Ave. 12'-6")	6", 1'-9", Varies (Ave 4'-0")
264	Hinge spirals	18	½" Φ	(Ave 99'-0")	Variable diam. to wrap bars 259 & 260.

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE
OVER SPOKANE RIVER
SPOKANE COUNTY

STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED: MAY 21, 1936

BRIDGE ENGINEER — DIRECTOR OF HIGHWAYS

SHEET 12 OF 14 SHEETS
CONTRACT NUMBER -

CITY OF SPOKANE
DEPT. OF PUBLIC WORKS – ENGINEERING DIVISION

POST STREET BRIDGE
WIDENING
#814
BAR LIST
NOVEMBER 1935
B. J. GARNETT, ENGINEER

APPROVED .... CITY ENGINEER

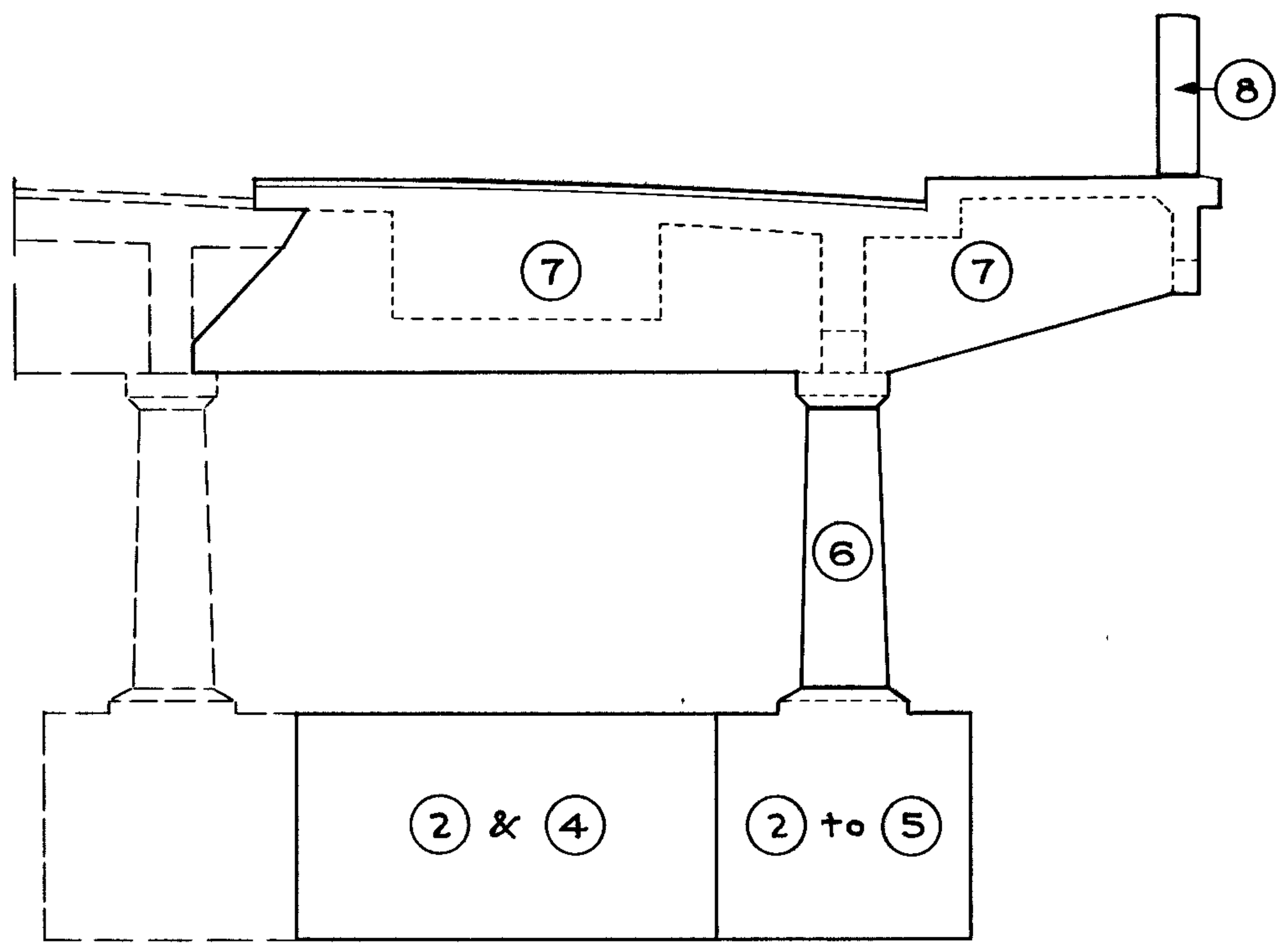
DATE	REVISION	BY	CHK'D.
8-20-36	Bars 223, 224, 231, & 258 to 264	A.M.B.	W.T.R.
7-13-36	Added Bar No. 257	D.I.Mc	

10

C-18 / 624

8/304

FED. ROAD DIST. NO.	STATE	USWPH PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	WASH.	WPMS-269-A	1936	14	16



TYPICAL SECTION

Design Data
H-15 Loading

Class "A" Concrete
fc = 1000 #/□"
Class "B" Concrete
fc = 750 #/□"
fs = 18000 #/□"

CONCRETE PLACING

Order	Location	Number
1	Abutments	①
2	Arch & Struts	②
3	Arch	③
4	Arch & Struts	④
5	Arch	⑤
6	Columns, Walls & M.H.	⑥
7	Roadway	⑦
8	Handrail	⑧

SECTION ON ℄ OF NEW ARCH

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE
OVER SPOKANE RIVER
SPOKANE COUNTY

STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED: MAY 21, 1936

BRIDGE ENGINEER — DIRECTOR OF HIGHWAYS

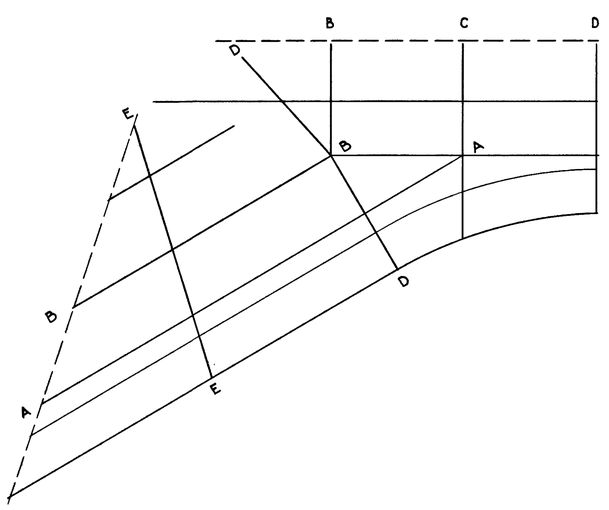
SHEET 13 OF 14 SHEETS
CONTRACT NUMBER-
CITY OF SPOKANE
DEPT. OF PUBLIC WORKS-ENGINEERING DIVISION
POST STREET BRIDGE
#814 WIDENING
CONCRETE PLACING
NOVEMBER 1935
B. J. GARNETT, ENGINEER
APPROVED .... CITY ENGINEER

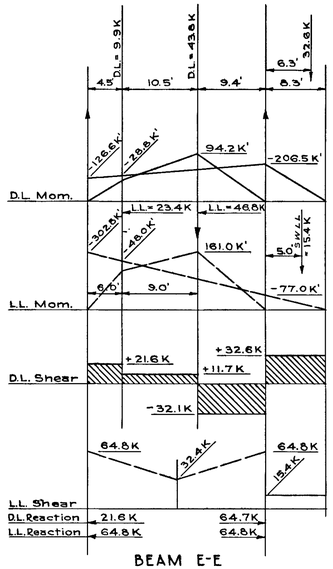
11

8-20-36	See sheet 6-A for pouring of arch rib	A.M.B.	W.T.R.
Date	Revision	By	Ch'k'd

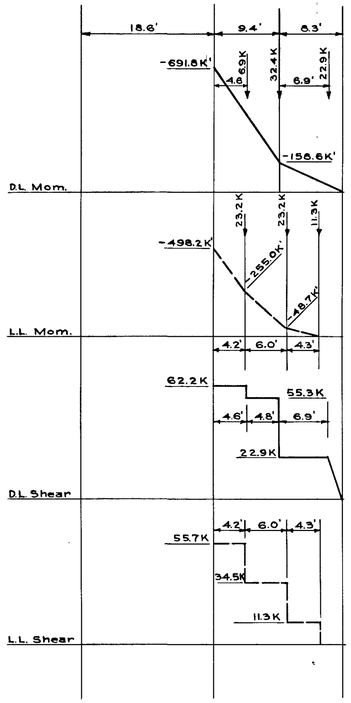
C-18
624

8/303

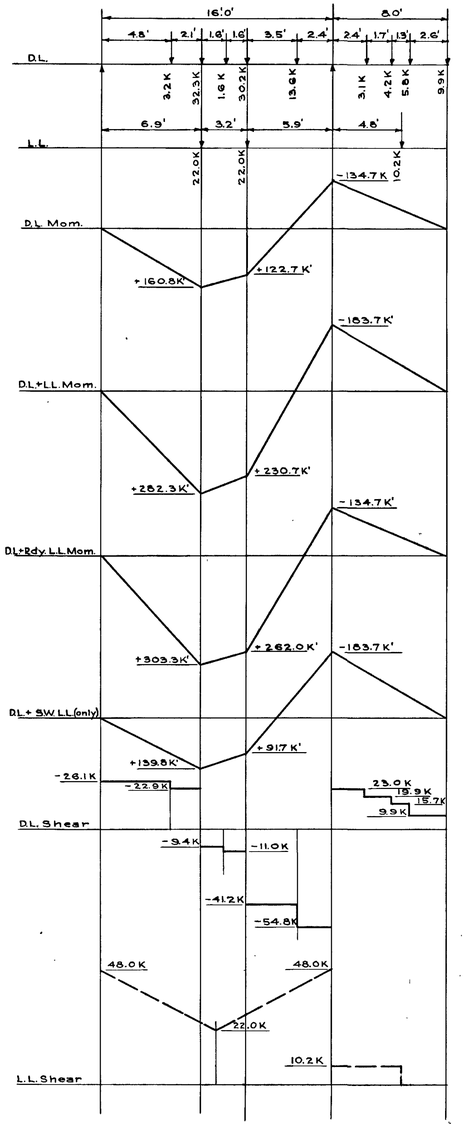




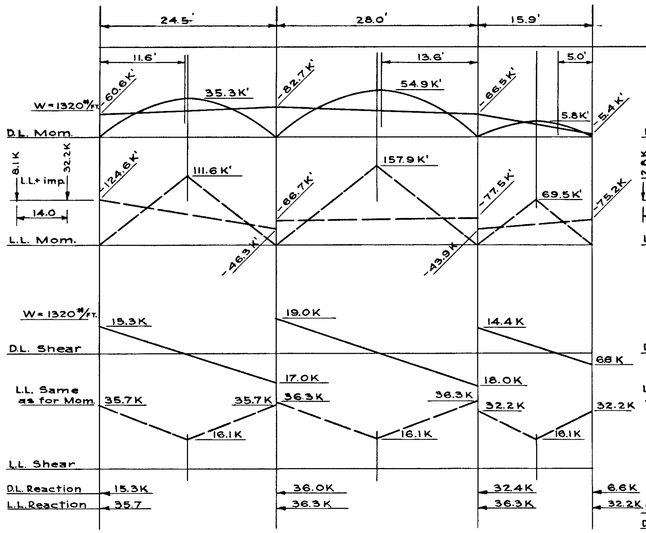
BEAM E-E



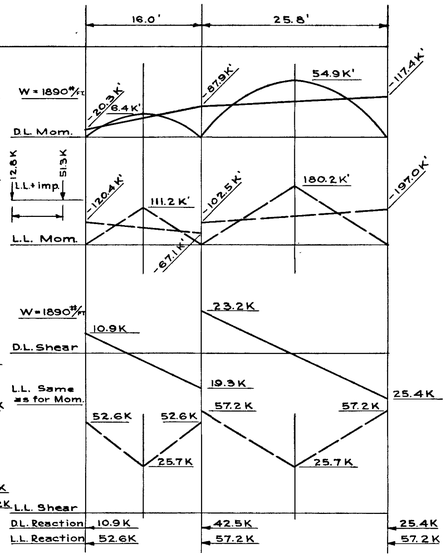
BEAM D-D



BENTS "C" TO "Q"



BEAM A-A



BEAM B-B

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE
OVER SPOKANE RIVER
SPOKANE COUNTY

STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED: 1936

Clark H. Eddinger
BRIDGE ENGINEER — DIRECTOR OF HIGHWAYS

SHEET OF SHEETS
CONTRACT NUMBER -

CITY OF SPOKANE
DEPT. OF PUBLIC WORKS - ENGINEERING DIVISION

#814

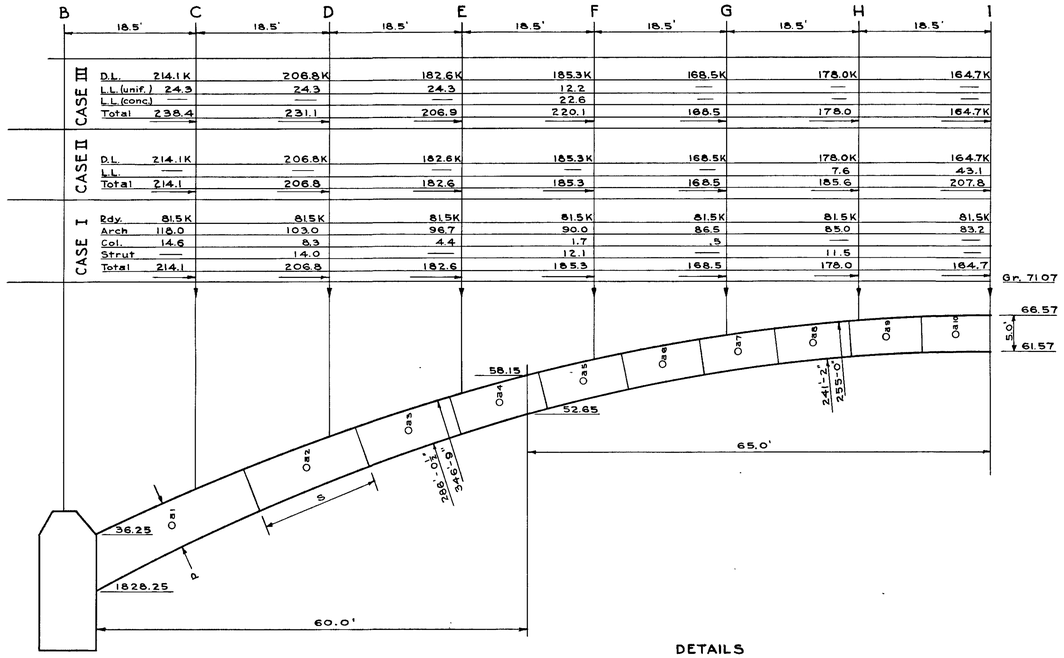
POST STREET BRIDGE
WIDENING
DESIGN DATA

NOVEMBER 1935

B. J. GARNETT ENGINEER

APPROVED ---------- CITY ENGINEER

8/306



DETAILS

Live Loads : Unif. L.L. @ 80#/FT. = 24.3K#/Panel.
Conc. L.L. 18.0K × 16.0 × 10.0 × 1.13/9 × 16.0
= 22.6K/Panel (imp. 13%).

Arch Analysis :
Plus values of stress represent compression.
Minus " " " " tension.
Plus values of ac show polygon below neutral axis.
Minus " " " " above " " .
Rib shortening taken as -12° F.

CASE I (Dead Load only) Crown Thrust = 2,350K.

PT.	THRUST	THRUST bd²/a'	ARM = ac (ft)	MOM. = H (ac) 1/48	STRESS lbs./sq.in. = M/bd² Int.	Ext.
1	2640K	462	+ .19	+447 K	+ 72	+534 +390
2	2550	498	- .15	-352	- 99	399 597
3	2480	514	- .10	-235	- 52	462 566
4	2430	526	- .08	-188	- 45	481 571
5	2430	538	- .06	-141	- 36	502 574
6	2390	540	+ .14	+339	+ 89	629 451
7	2370	540	+ .01	+ 23	+ 6	546 534
8	2370	543	+ .07	+164	+ 45	588 498
9	2350	543	- .04	- 94	- 26	517 569
10	2350	543	+ .01	+ 23	+ 7	550 536

CASE II (Dead Load + LL. on crown) C.T. = 2,460 K.

1	2750K	480	+ .12	+295K	+ 48	+ 528	+432
2	2660	520	- .14	-345	- 69	451	589
3	2590	538	- .06	-148	- 33	505	571
4	2530	548	+ .03	+ 74	+ 18	566	530
5	2530	560	+ .05	+123	+ 31	591	529
6	2500	563	+ .18	+492	+130	693	433
7	2470	563	+ .07	+173	+ 47	610	516
8	2470	567	+ .07	+173	+ 48	615	519
9	2460	568	- .11	- 271	- 75	593	643
10	2460	569	- .14	- 345	- 96	473	665

CASE III (Dead Load + LL. on C-D-E-F) C.T. = 2,460 K

1	2790K	488	+ .52	+1525K	+243	+ 731	+ 245
2	2690	526	- .21	- 516	- 102	424	628
3	2600	540	- .33	- 812	- 161	359	721
4	2540	550	- .32	- 788	- 191	359	741
5	2540	562	- .34	- 836	- 202	360	764
6	2490	563	- .02	- 49	- 13	549	575
7	2470	563	+ .02	+ 49	+ 13	576	550
8	2470	567	+ .18	+ 443	+121	686	446
9	2460	567	+ .21	+ 517	+143	710	424
10	2460	568	+ .35	+ 860	+239	807	329

CASE IV TEMP-RIB SH.			STRESS = 6M/bd²		
PT.	Arm (ka)	M = Ht (ka)/6	-40° F	+30° F	R.S. (-12°)
1	- 18.23	+ 34250	+ 223	- 167	+ 67
2	- 10.42	+ 19600	+ 156	- 117	+ 47
3	- 5.27	+ 9900	+ 89	- 67	+ 27
4	- 1.34	+ 2500	+ 25	- 19	+ 8
5	+ 1.73	- 3200	- 33	+ 25	- 10
6	+ 4.14	- 7800	- 83	+ 62	- 25
7	+ 5.91	- 11100	- 120	+ 90	- 36
8	+ 7.14	- 13400	- 148	+ 111	- 44
9	+ 7.96	- 14900	- 166	+ 208	- 62
10	+ 8.41	- 15800	- 178	+ 134	- 53

Ht = 1875 #/° F.

ARCH DATA b = 6'-0"								
PT.	S	Σ S	D	d	d²	d³	bd a"	bd²
1	23.6	23.6	11.8	6.62	43.8	290.1	5720	445K
2	16.6	40.2	31.9	5.92	35.0	207.5	5110	363
3	13.8	54.0	47.1	5.58	31.1	173.7	4820	323
4	12.6	66.6	60.3	5.35	28.6	153.1	4620	297
5	11.6	78.2	72.4	5.23	27.4	143.1	4510	284
6	11.0	89.2	83.7	5.13	26.3	135.0	4430	273
7	10.5	99.7	94.4	5.08	25.8	131.1	4390	268
8	10.3	110.0	104.9	5.03	25.3	127.3	4350	263
9	10.1	120.1	115.0	5.01	25.1	125.8	4330	261
10	10.0	130.1	125.1	5.00	25.0	125.0	4320	259

SUMMARY OF STRESS Note - All stresses comp. exc. as noted.

PT.	INTRADOS D.L. (only) I	DL+LL on crown II	DL+LL c-D-E-F III	TEMP.-R.S. IV -40°	+30°	R.S.	MAX.	MIN.	EXTRADOS D.L. (only) I	DL+LL crown II	DL+LL c-D-E-F III	TEMP.-R.S. IV -40°	+30°	R.S.	MAX.	MIN.
1	534	528	731	223	- 167	67	1021	361	390	432	245	- 223	167	- 67	599	- 45
2	399	451	424	156	- 117	47	654	274	597	589	628	- 156	117	- 47	745	380
3	462	505	359	89	- 67	27	621	292	566	571	721	- 89	67	- 27	788	450
4	481	566	359	25	- 19	8	599	340	571	530	741	- 25	19	- 8	760	497
5	502	591	360	- 33	25	- 10	616	317	574	529	764	33	- 25	10	807	504
6	629	693	549	- 83	62	- 25	755	441	451	433	575	83	- 62	25	683	371
7	546	610	576	- 120	90	- 36	700	390	534	516	550	120	- 90	36	706	426
8	588	615	688	- 148	111	- 44	799	396	498	519	446	148	- 111	44	711	335
9	517	593	710	- 166	208	- 62	918	289	569	643	424	166	- 208	62	871	216
10	550	473	807	- 178	134	- 53	941	242	536	665	329	178	- 134	53	898	195

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE OVER SPOKANE RIVER
SPOKANE COUNTY

STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED: 1936

Chas. H. Elderidge
BRIDGE ENGINEER — DIRECTOR OF HIGHWAYS

SHEET OF SHEETS
CONTRACT NUMBER -

CITY OF SPOKANE
DEPT. OF PUBLIC WORKS—ENGINEERING DIVISION

POST STREET BRIDGE
#814 WIDENING
DESIGN DATA
NOVEMBER 1935
B.J. GARNETT ENGINEER.

APPROVED .....
CITY ENGINEER.

8/306-A

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE
OVER SPOKANE RIVER
SPOKANE COUNTY

STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON
1936

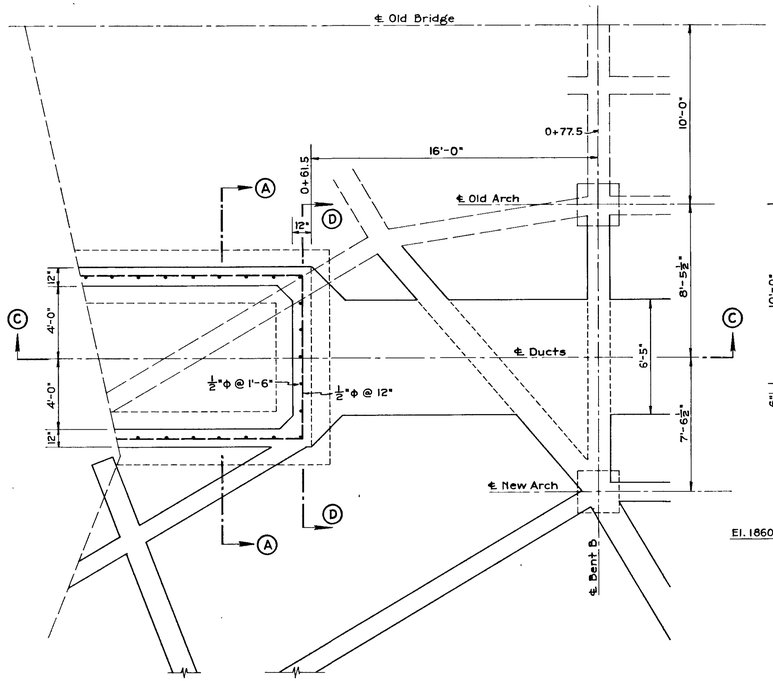
APPROVED:
BRIDGE ENGINEER
DIRECTOR OF HIGHWAYS
CONTRACT NUMBER
SHEET OF SHEETS

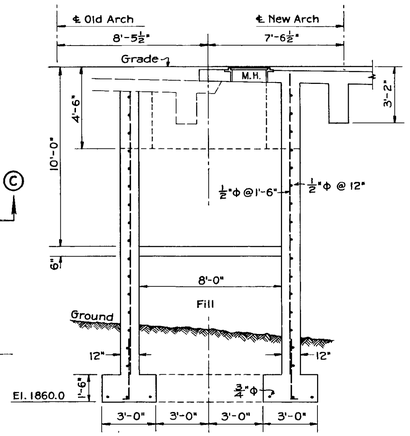
CONDUIT BEAM

CITY OF SPOKANE
DEPT OF PUBLIC WORKS—ENGINEERING DIVISION
POST STREET BRIDGE
#814 WIDENING
DESIGN DATA
NOVEMBER 1935
B.J. GARNETT, ENGINEER
APPROVED ________ CITY ENGINEER

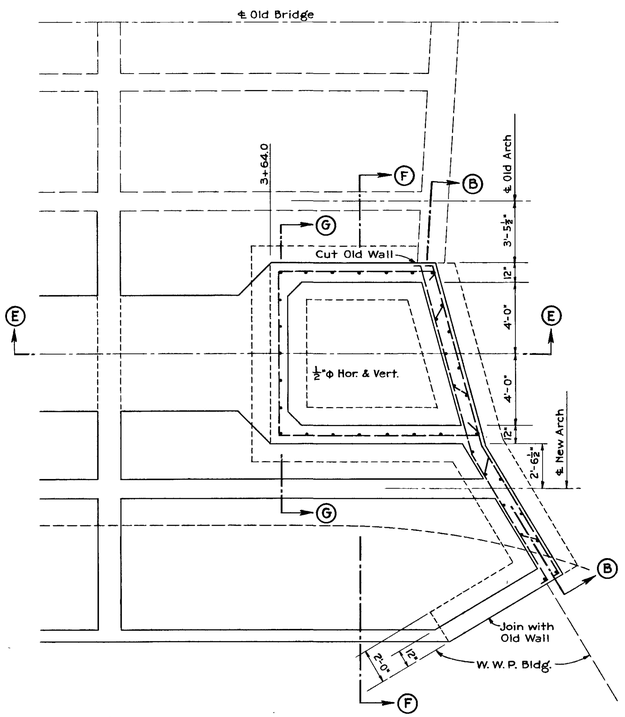
8/306-C

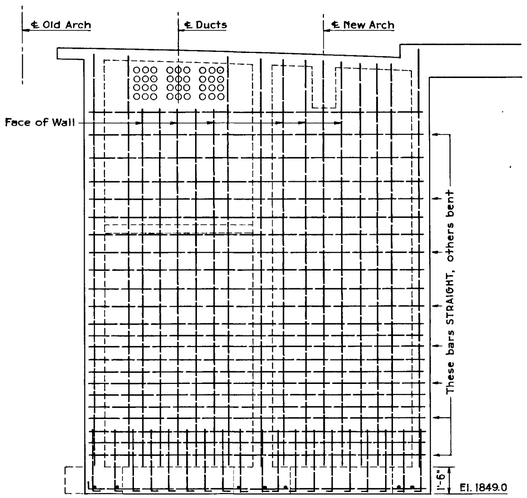
FED. ROAD DIST. No.	STATE	U.S.WPH PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
1	WASH	WPMS 269-A	1936	10	15



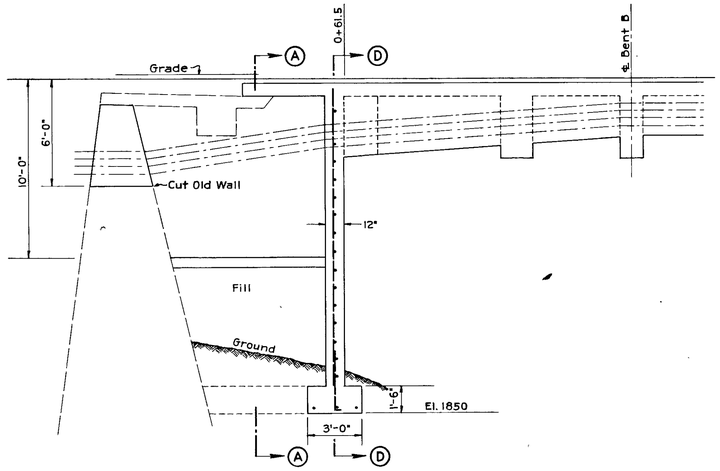


SECT. A-A

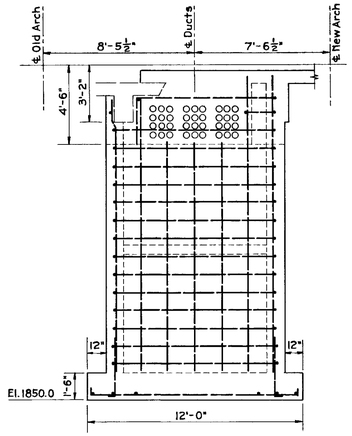




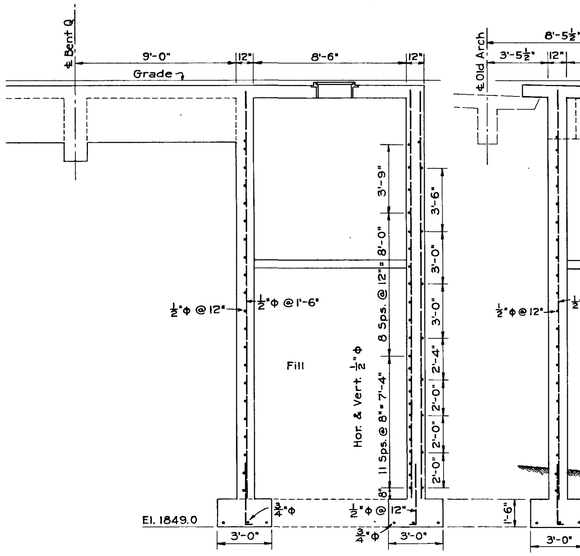
SECT. B-B



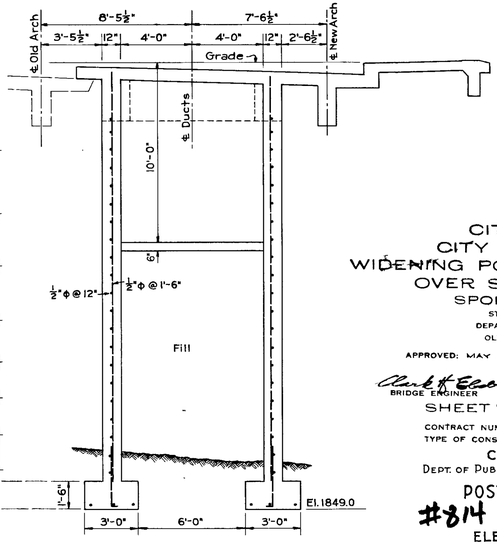
SECT. C-C



SECT. D-D
TYPICAL FOR G-G



SECT. E-E



SECT. F-F

THESE PLANS WERE APPROVED AND ADOPTED BY THE CITY COUNCIL ON Nov. 22, 1935
CITY CLERK

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE
OVER SPOKANE RIVER
SPOKANE COUNTY
STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED: MAY 21, 1936

BRIDGE ENGINEER — DIRECTOR OF HIGHWAYS

SHEET 9 OF 14 SHEETS

CONTRACT NUMBER -
TYPE OF CONSTRUCTION

CITY OF SPOKANE
DEPT. OF PUBLIC WORKS—ENGINEERING DIVISION

POST STREET BRIDGE
#814 WIDENING
ELECTRICAL MANHOLES

NOVEMBER 1935 — SCALE ¼"=1'-0"

B.J. GARNETT, Engineer

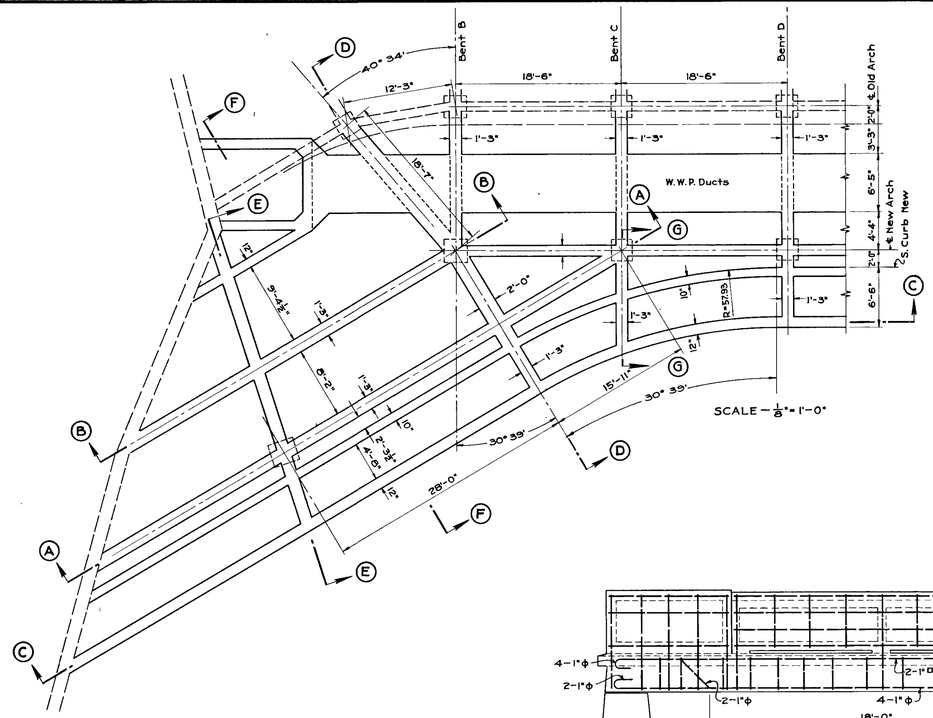
APPROVED ..... CITY ENGINEER

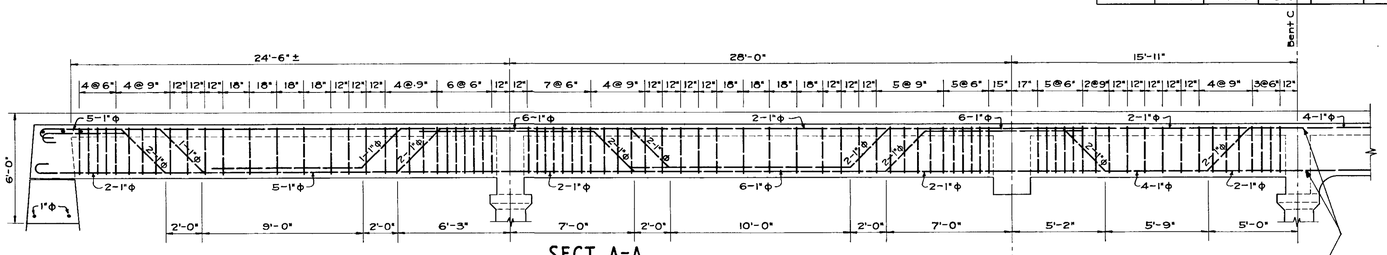
7/8

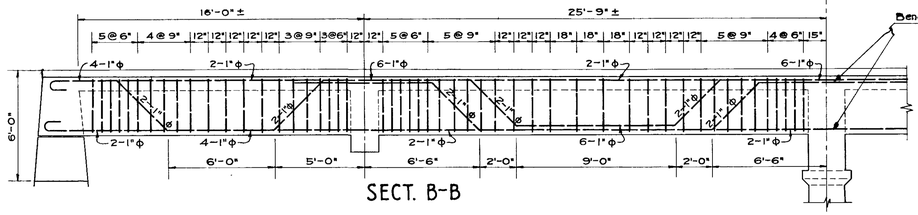
C-18
62.4

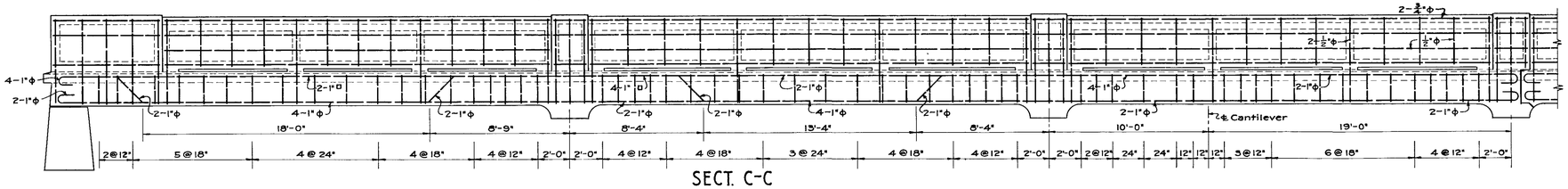
8/30

FED. ROAD DIST. No.	STATE	U.S.W.P.H. PROJ. No.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
1	WASH	WPHS 269-A	1936	9	16

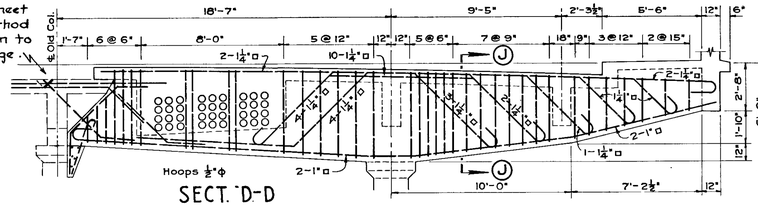


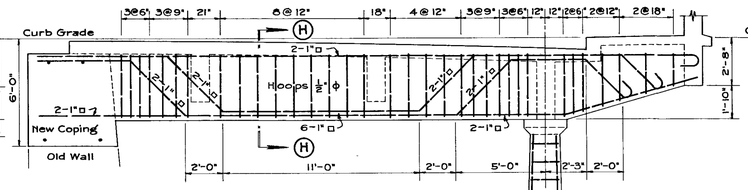


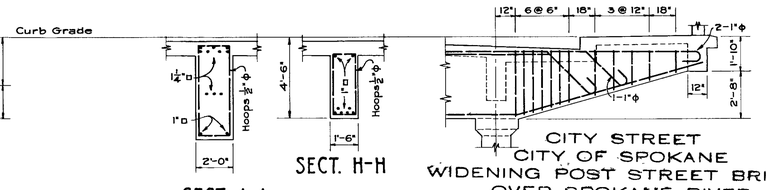


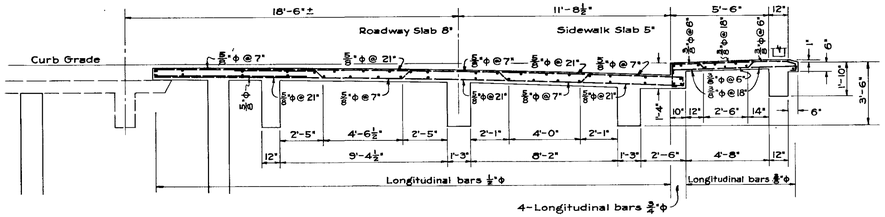


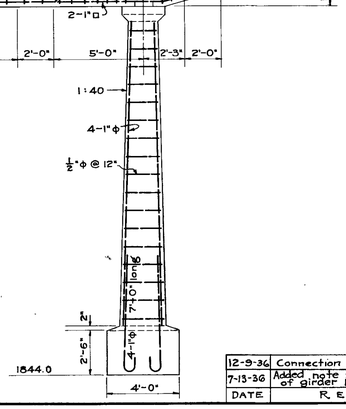
See detail, Sheet No. 7, for method of connection to existing bridge











DATE	REVISION	BY	CH'KD
12-9-36	Connection to existing bridge	D.J.M.	R.L.F.
7-15-36	Added note regarding bending of girder bars	D.J.M.	R.L.F.

THESE PLANS WERE APPROVED AND ADOPTED BY THE CITY COUNCIL ON Nov. 22, 1935
CITY CLERK

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE OVER SPOKANE RIVER
SPOKANE COUNTY
STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED: MAY 21, , 1936

Chas. H. Eldridge — BRIDGE ENGINEER
[illegible] — DIRECTOR OF HIGHWAYS

SHEET 8 OF 14 SHEETS

CONTRACT NUMBER -
TYPE OF CONSTRUCTION -

CITY OF SPOKANE
DEPT. OF PUBLIC WORKS—ENGINEERING DIVISION

POST STREET BRIDGE
#814 WIDENING
FLOOR DETAILS-WEST END

NOVEMBER 1935 —— SCALE 1/2" = 1'-0"

B.J. GARNETT, ENGINEER
APPROVED ..... CITY ENGINEER

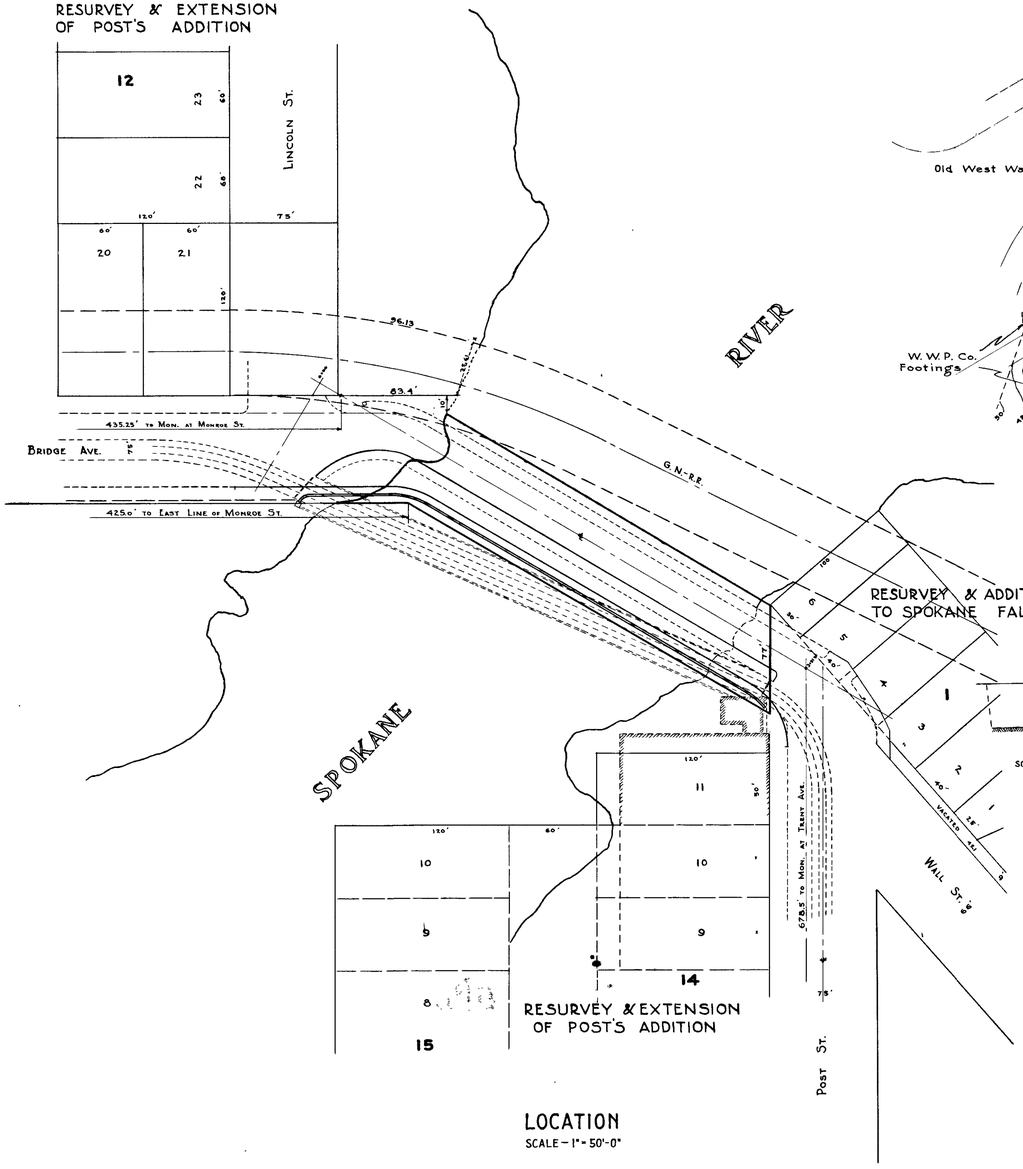
6/8

C-18
624

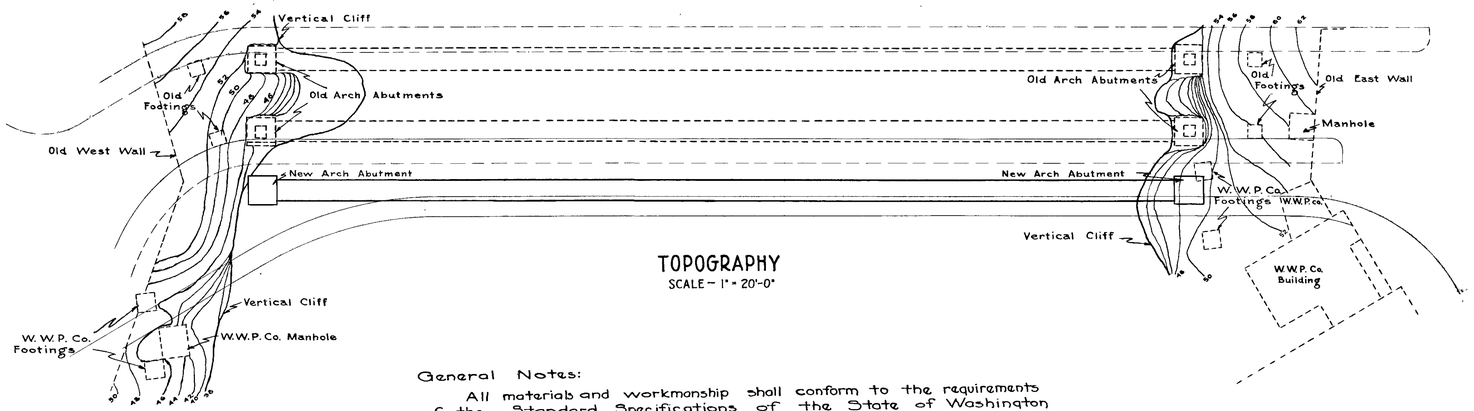
8/3

FED. ROAD DIST. No. 1
STATE WASH.
US WPH PROJ. No. WPMS 269-A
FISCAL YEAR 1936
SHEET No. 6
TOTAL SHEETS 16
℄ Old Bridge
℄ Old Arch
℄ Ducts
℄ New Arch
Old Wall
W.W.P. M.H.
Abutment
New Coping
South Curb Old Bridge
W.W.P. Ducts
Exp. Joint
Curb New Work
New Wall
W.W.P. Bldg.
SECT. A-A
SECT. C-C
SECT. B-B
Old Arch
New Arch
Bot. F.B. - Top. Col.
7 Sps. @ 18'-6" = 129'-6"
El. 1871.07
El. 1866.57
El. 1861.57
El. 1858.15
El. 1852.65
El. 1844.0
El. 1839.50
El. 1836.25
El. 1828.25
El. 1824.50
El. 1820.0
El. 1849.50
El. 1824.25
Ground Line Outer Str.
Ground Line on ℄ Arch
Ground Line (Rock)
Exc. Line
Join to W.W.P. Bldg.
WEST ABUTMENT
EAST ABUTMENT
CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE
OVER SPOKANE RIVER
SPOKANE COUNTY
STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON
APPROVED: MAY 21, 1936
BRIDGE ENGINEER
SHEET 5 OF 14 SHEETS
CONTRACT NUMBER
THESE PLANS WERE APPROVED AND ADOPTED BY THE CITY COUNCIL ON NOV. 22, 1935
CITY CLERK
CITY OF SPOKANE
DEPT. OF PUBLIC WORKS - ENGINEERING DIVISION
#814
POST STREET BRIDGE WIDENING
GENERAL DETAILS
NOVEMBER 1935
SCALE - 1/8" = 1'-0"
B.J. GARNETT, ENGINEER
APPROVED
CITY ENGINEER
3
8
C-18
624
8/297

FED. ROAD DIST. NO.	STATE	U.S.W.P.H. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	WASH	WPM.S.2694	1936	4	16



LOCATION
SCALE – 1" = 50'-0"



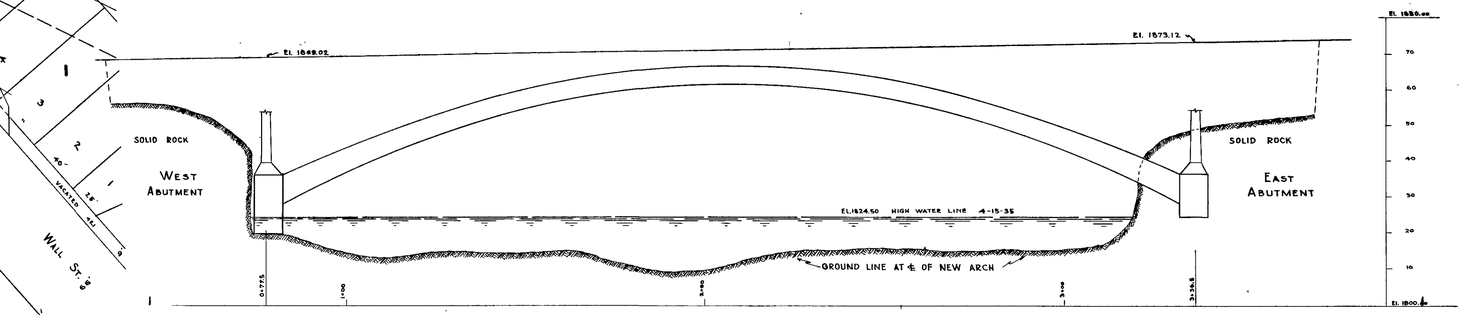
TOPOGRAPHY
SCALE – 1" = 20'-0"

General Notes:

All materials and workmanship shall conform to the requirements of the Standard Specifications of the State of Washington Department of Highways dated April 1935.

All Concrete in arch abutments shall be of Class "B" mix with 3" maximum size of coarse aggregate.

All other concrete shall be of Class "A" mix with 3" maximum size of coarse aggregate except that in sidewalk slabs and handrailings the maximum size of coarse aggregate shall be 1½".



PROFILE
SCALE – 1" = 20'-0"

APPROXIMATE QUANTITIES

Structure Excavation	172 Cu.Yds.
Special Embankment	300 " "
Concrete Class "A" in place	975 " "
" " "B" " "	95 " "
Steel Reinforcing Bars in place	107,000 Lbs.
Expansion Joints	Lump Sum
Temporary Wood Walk and Railing	11 M.B.M.
Removing Existing Steel Bridge	Lump Sum
" " " " Pier	" "
Removing portion of Concrete Wall	" "
" portions " " Bridge	" "
Asphaltic Concrete Pavement Type I-1, Class E	177 Tons
" " " " I-1 " F	40 "
" " " " I-1 " C	74 "

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE
OVER SPOKANE RIVER
SPOKANE COUNTY
STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED: MAY 21, 1936

Clark H. Eldridge — BRIDGE ENGINEER
L. H. Morrow — STATE HIGHWAYS

SHEET 3 OF 14 SHEETS

CONTRACT NUMBER –
TYPE OF CONSTRUCTION

THESE PLANS WERE APPROVED AND ADOPTED BY THE CITY COUNCIL ON Nov. 22, 1935
CITY CLERK

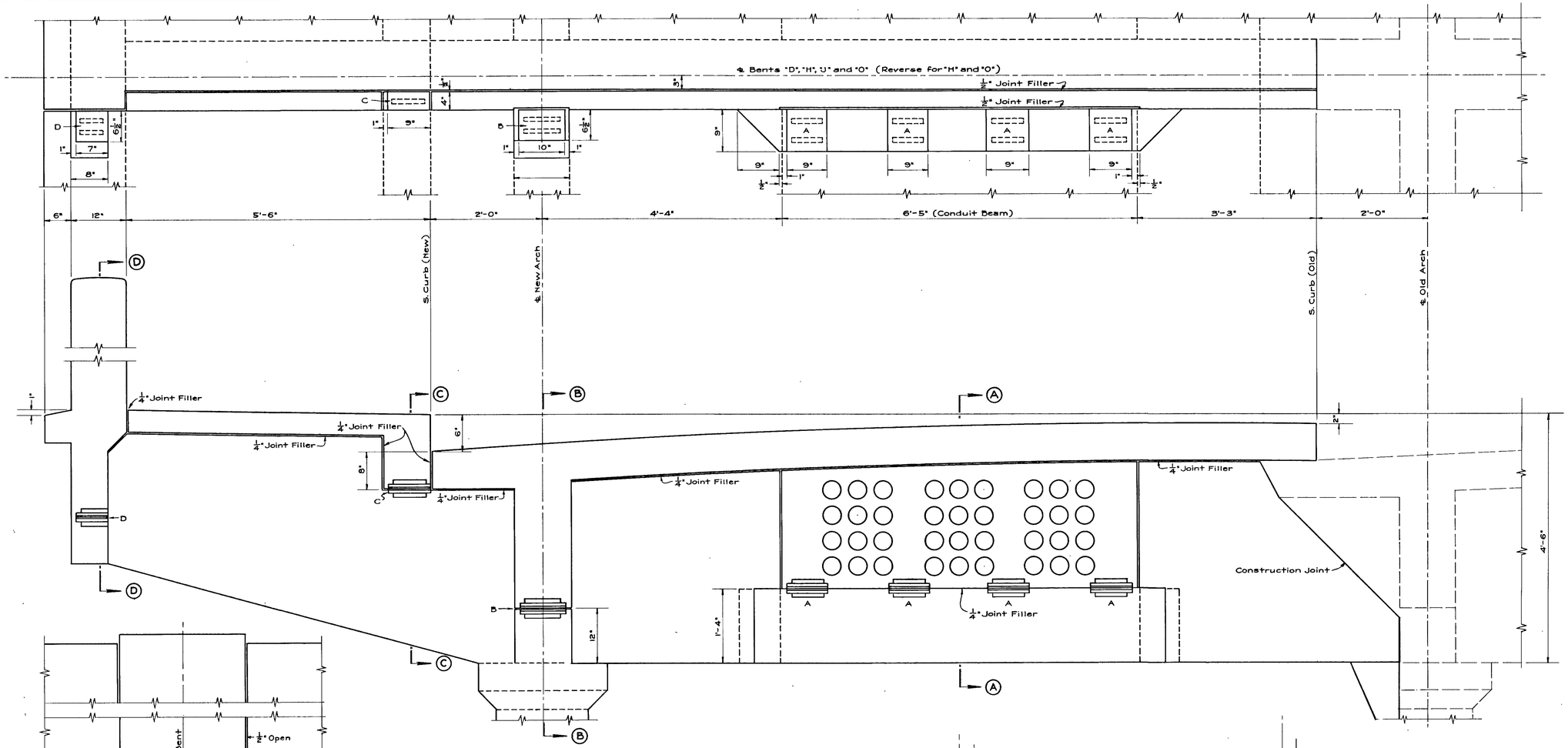
CITY OF SPOKANE
DEPT. OF PUBLIC WORKS – ENGINEERING DIVISION
POST STREET BRIDGE
#814 WIDENING
LOCATION
NOVEMBER 1935 —— SCALE – AS SHOWN
B.J. GARNETT, ENGINEER
APPROVED ..... CITY ENGINEER

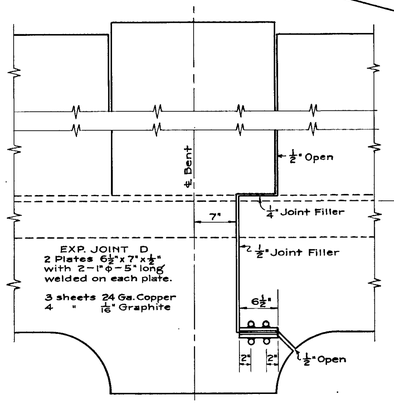
1/8

C-18/624

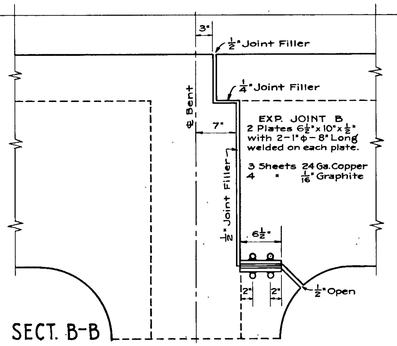
9/295

FED. ROAD DIST. NO.	STATE	US WPH. PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
1	WASH.	WPMS 269-A	1936	11	16

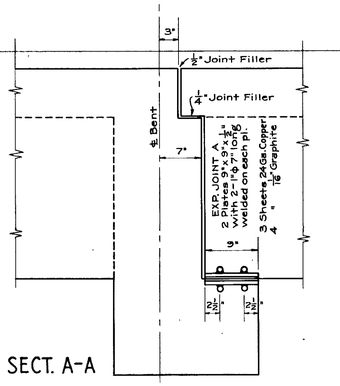




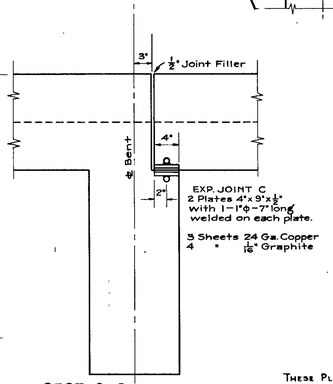
SECT. D-D



SECT. B-B



SECT. A-A



SECT. C-C

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE OVER SPOKANE RIVER
SPOKANE COUNTY
STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED: MAY 21, 1936

BRIDGE ENGINEER — DIRECTOR OF HIGHWAYS

SHEET 10 OF 14 SHEETS

CONTRACT NUMBER -
TYPE OF CONSTRUCTION

CITY OF SPOKANE
DEPT. OF PUBLIC WORKS—ENGINEERING DIVISION

POST STREET BRIDGE
#814 WIDENING
EXPANSION JOINTS

NOVEMBER 1935 — SCALE 1" = 1'-0"

B.J. GARNETT, ENGINEER

APPROVED: CITY ENGINEER

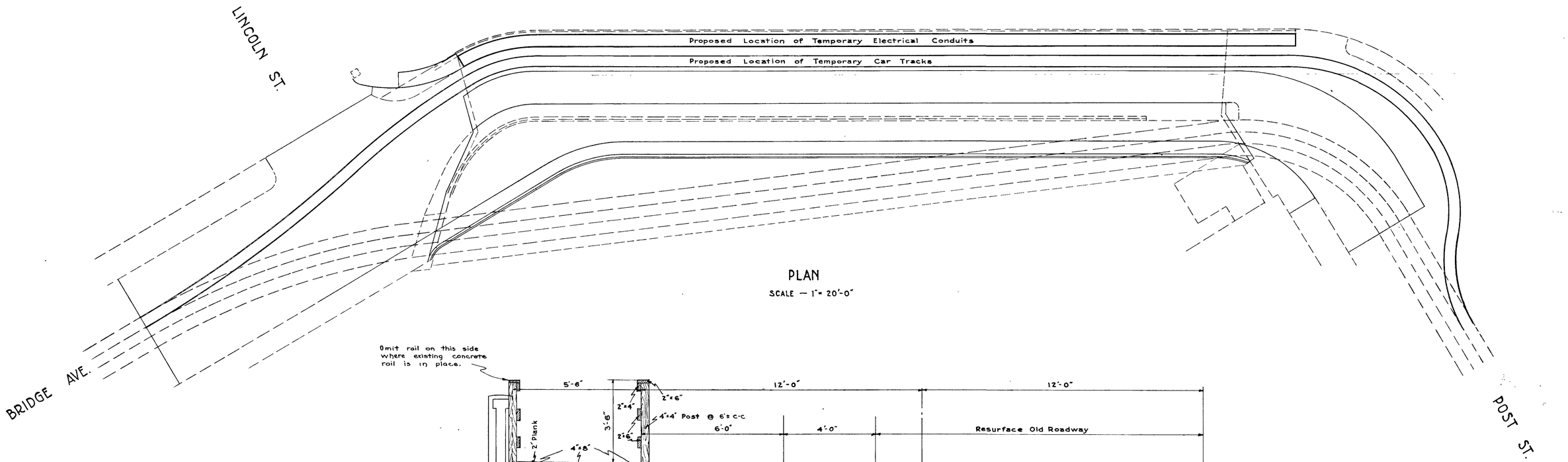
8/8

THESE PLANS WERE APPROVED AND ADOPTED BY THE CITY COUNCIL ON Nov. 22, 1935
CITY CLERK

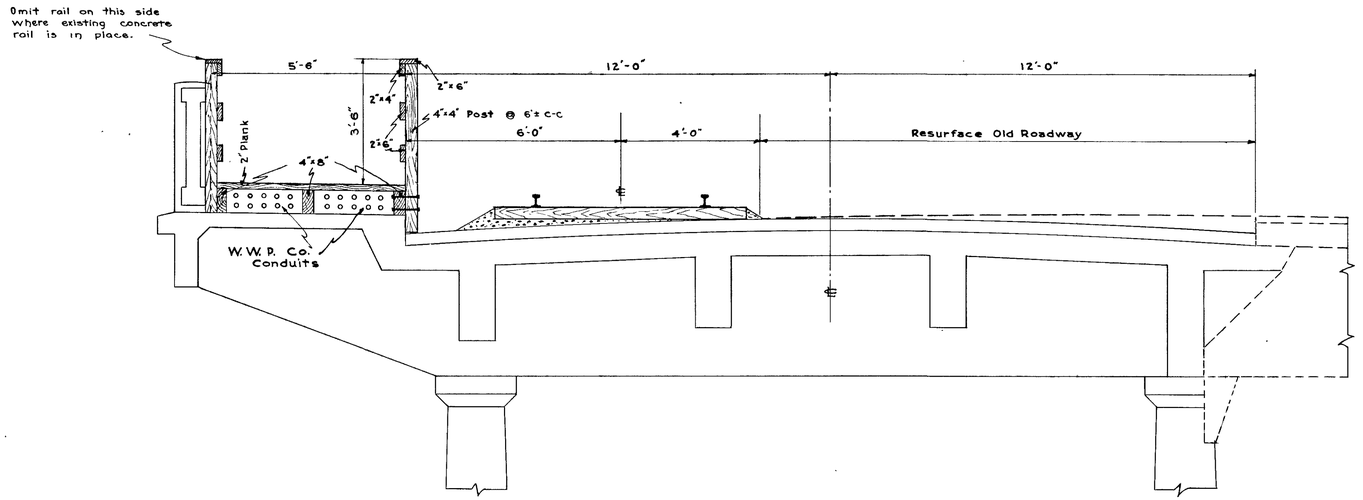
C-18
624

8/302

FED. ROAD DIST. NO.	STATE	U.S.W.P.M. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	WASH.	WPMS-2694	1936	15	16



PLAN
SCALE — 1" = 20'-0"



TYPICAL SECTION
SCALE — ½" = 1'-0"

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE
OVER SPOKANE RIVER
SPOKANE COUNTY

STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED: MAY 21, 1936

Clark K. Eddinger
BRIDGE ENGINEER

DIRECTOR OF HIGHWAYS

SHEET 14 OF 14 SHEETS
CONTRACT NUMBER -

CITY OF SPOKANE
DEPT. OF PUBLIC WORKS - ENGINEERING DIVISION

POST STREET BRIDGE
#814 WIDENING
TEMPORARY LOCATION OF
CAR TRACKS & ELECTRICAL CONDUITS

NOVEMBER 1935 —— SCALE-AS SHOWN

B.J. GARNETT, ENGINEER

APPROVED _____
CITY ENGINEER

12

C-18
624

9/506

FED. ROAD DIST. NO.	STATE	USWPH PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
1	WASH.	WPMS 269-A	1936	8	16

CITY STREET
CITY OF SPOKANE
WIDENING POST STREET BRIDGE
OVER SPOKANE RIVER
SPOKANE COUNTY
STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED: MAY 21, 1936

BRIDGE ENGINEER

SHEET 7 OF 14 SHEETS
CONTRACT NUMBER -
TYPE OF CONSTRUCTION

DATE	REVISION	BY	CHKD.
12-8-36	Revised Connection to Exist. Br.	D.I.M.	C.E.
7-13-36	Changed Vert. Rail Bars to 3/4" φ	D.I.M.	
7-13-36	Added Bars No. 257	D.I.M.	

THESE PLANS WERE APPROVED AND ADOPTED BY THE CITY COUNCIL ON Nov. 22, 1935
CITY CLERK

CITY OF SPOKANE
DEPT. OF PUBLIC WORKS—ENGINEERING DIVISION

#814

POST STREET BRIDGE WIDENING
TYPICAL ROADWAY DETAILS

NOVEMBER 1935 — SCALE - AS SHOWN

B. J. GARNETT, ENGINEER

APPROVED .... CITY ENGINEER

5/8

C-18/624