

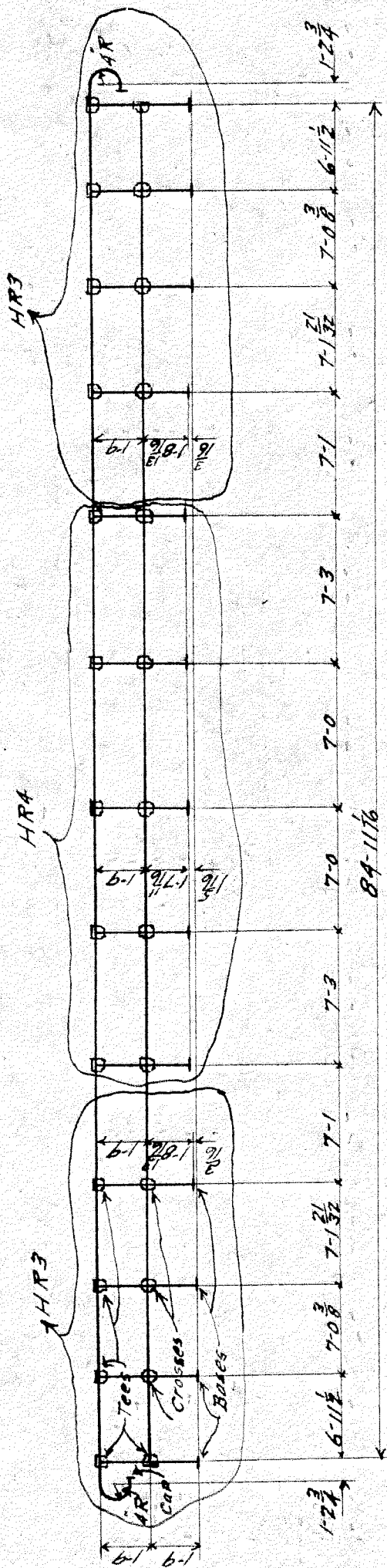
LACKAWANNA BRIDGE CO.

Contract No. 703 1st Extra

Made by Oertel 4-30-12.

Bill No. 112.

Checked by



3 Hand-Railings HR3
2 " " HR4

Material reqd for 1-HR3
Apt. 73 lin. ft. 2 1/2" W.I. Pipe.
5 Tees for 2 1/2" pipe.
3 Crosses " " "
1 Cap " " "
4 Bases " " " Patt # 689-5

Material reqd for 1-HR4
Apt. 75 lin. ft. 2 1/2" W.I. Pipe.
5 Tees for 2 1/2" pipe
5 Crosses " " "
5 Bases " " " Patt # 689-5

Approved

Chief Engr.

Grand Trunk Railway.
Bridge over Boulevard & Russel St.
Detroit Mich.
Railing for Girders G3, G1 & G3R

29th
30th
May 2/12

May 4/12

LACKAWANNA BRIDGE CO.

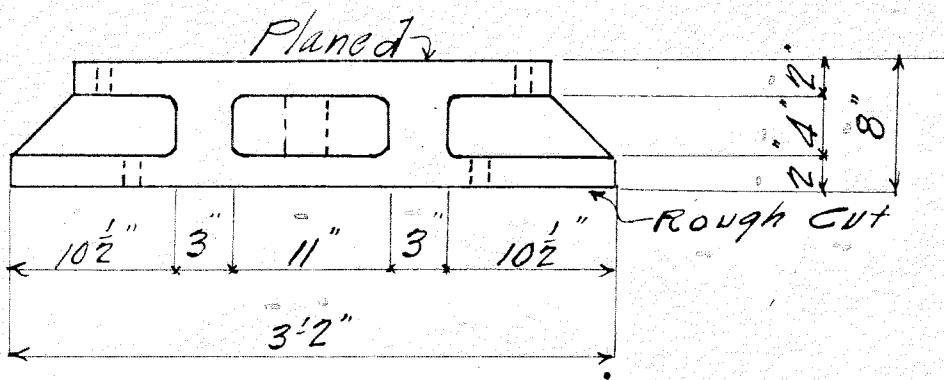
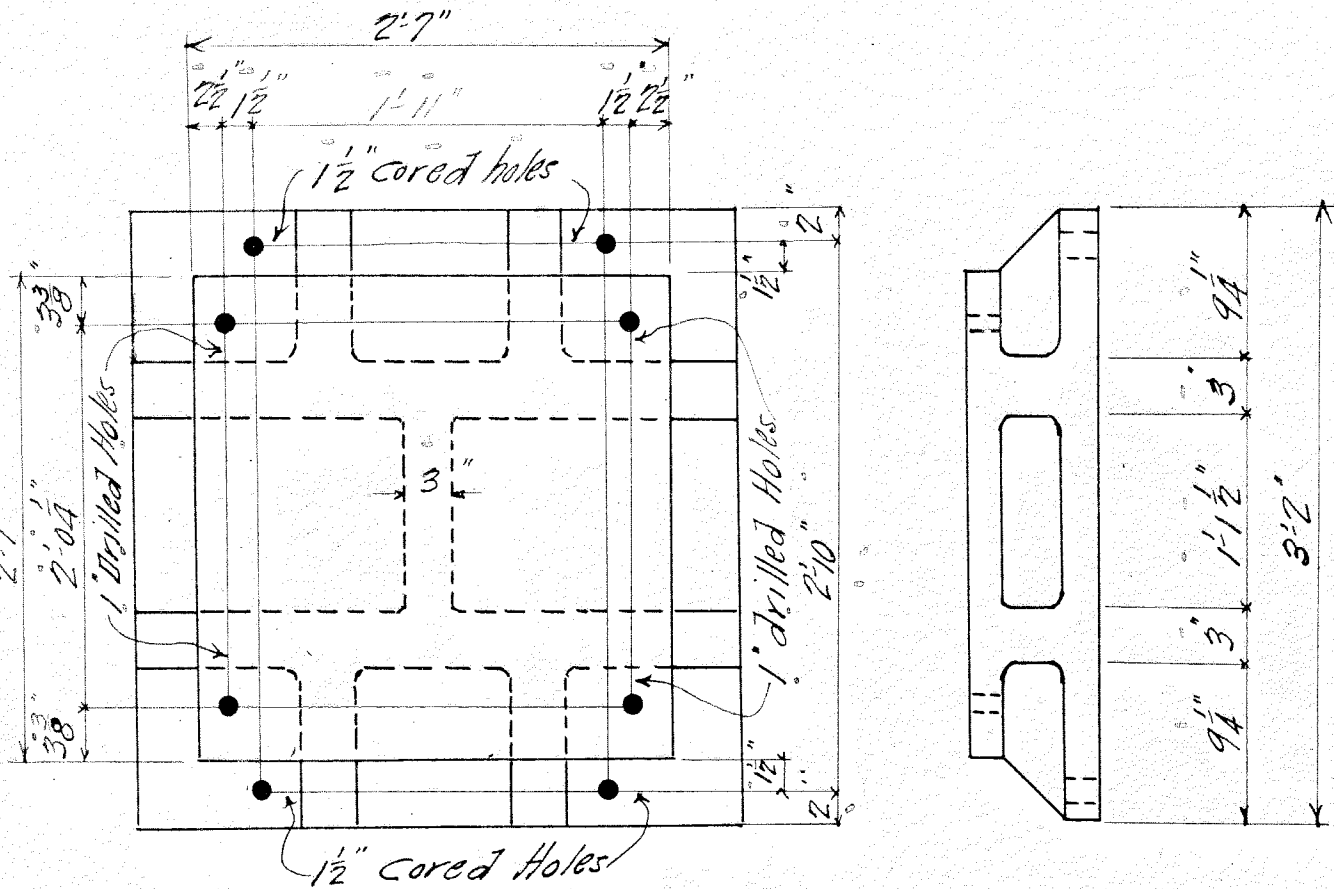
Contract No. 703

Made by F.J.C. 12-16-11

Bill No. D-1

Checked by A.S.P. 12-16-11

Patt 688-1 20 Req'd
Cast steel



20 Pedestals P-1

Western 29th
Pg Sec. 26/11

G. T. Ry.
Bridge over Boulevard + Russel St.
DETROIT MICH

Sec 27/11

Approved
Chief Engineer.

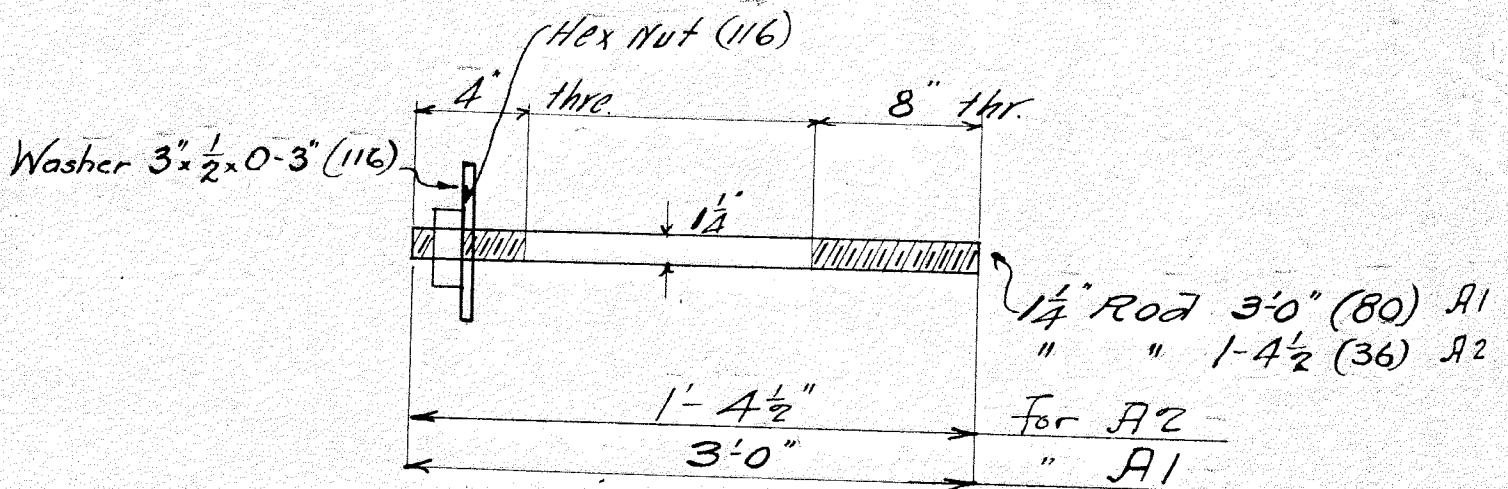
LACKAWANNA BRIDGE CO.

Contract No. 703

Made by F.J.C. 1-3-12

Bill No. D-3

Checked by [Signature]



80 - Anchor Bolts - A1
 36 " " - A2

Western 29th
P.S. Feb 7/12

Feb 8 12

G.T.R.Y.
 BRIDGE OVER BOUVELARD +
 RUSSEL ST.
 DETROIT MICH

Approved
 CHIEF ENGINEER.

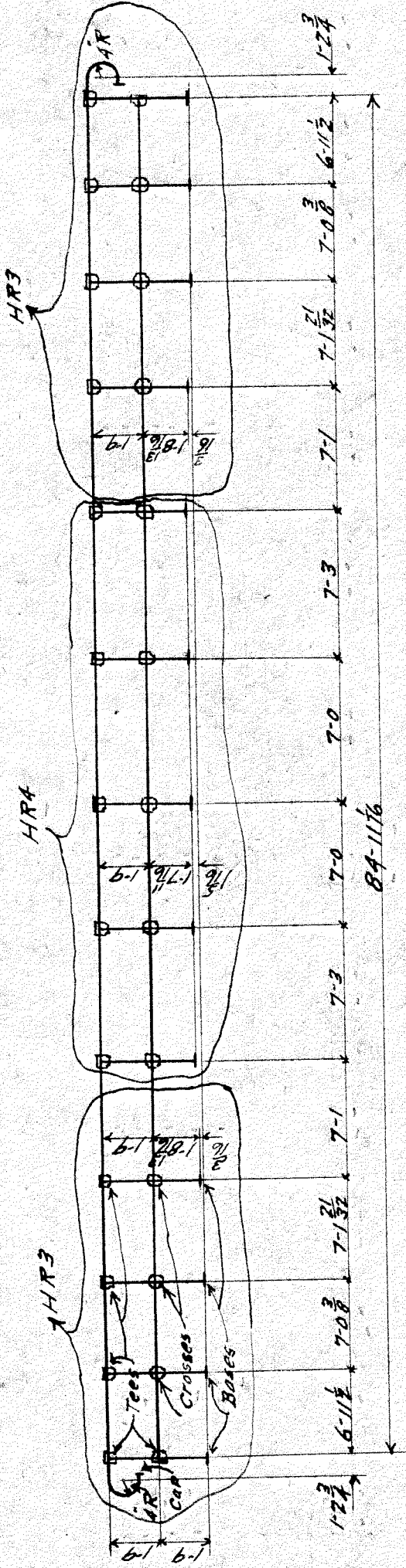
LACKAWANNA BRIDGE CO.

Contract No. 703 1st Extra

Made by Oertel 4-30-12.

Bill No. 112.

Checked by



3 Hand-Railings HR3
2 " " HR4

Material reqd for 1-HR3
Apt. 73 lin. ft. 2 1/2" W.I. Pipe.
5 Tees for 2 1/2" pipe.
3 Crosses " " "
1 Cap " " "
4 Bases " " Patt # 689-5

Material reqd for 1-HR4
Apt 75 lin. ft. 2 1/2" W.I. Pipe.
5 Tees for 2 1/2" pipe
5 Crosses " " "
5 Bases " " Patt # 689-5

Approved

Chief Engr.

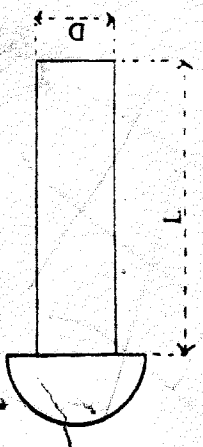
Grand Trunk Railway.
Bridge over Boulevard & Russel St.
Detroit Mich.
Trailing for Girders 63", 61" & 63"

29th
30th
May 2/12

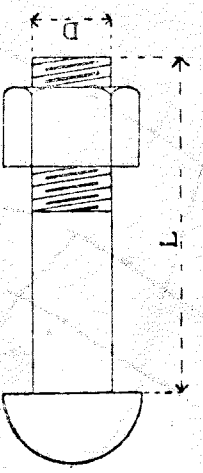
May 4 1912

LACKAWANNA BRIDGE CO.

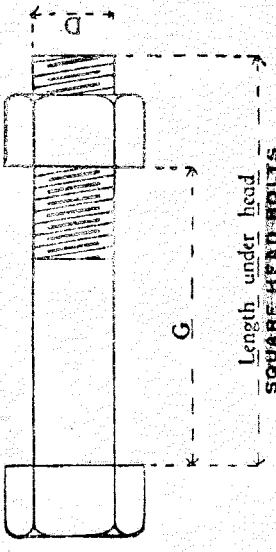
Contract No. 22865
 Bill No. 22865



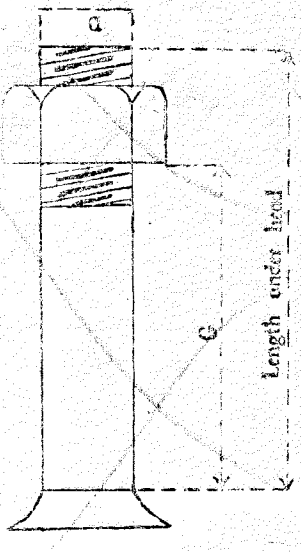
RIVETS



ROUND HEAD BOLTS



SQUARE HEAD BOLTS



COUNTERSUNK BOLTS

No. Pcs.	"L"	POSITION	"D"	"L"	No. Pcs.	POSITION	"D"	"L"	No. Pcs.	POSITION	"D"	"L"	No. Pcs.	POSITION	WASHERS	No.	Kind
----------	-----	----------	-----	-----	----------	----------	-----	-----	----------	----------	-----	-----	----------	----------	---------	-----	------

Bolts - Railway Gdts. {
 D1

D2

D3

4	HR1 to G7R		3/8	12 24	8		3/8	12 24									
4	HR1 to G7L		3/8	12 24	4		3/8	12 24									
8	" to G5		1/2	22	8		1/2	22									
8	HR2 to G5		1/2	34	8		1/2	34									
6	HR3 to G3L		1/2	24	6		1/2	24									
6	HR3 to G3R		1/2	24	6		1/2	24									
4	HR3 to G1		1/2	24	4		1/2	24									
10	HR4 to G1		3/8	4	10		3/8	4									
6	HR3 to G3R		1/2	24	6		1/2	24									
2	HR3 to G1		1/2	24	2		1/2	24									
10	HR4 to G1		3/8	4	10		3/8	4									
2	HR5 to G1		1/2	24	2		1/2	24									
4	HR5 to G1		1/2	24	4		1/2	24									
4	HR6 to G1		1/2	24	4		1/2	24									
2	HR6 to G5		1/2	24	2		1/2	24									
8	HR7 to G5		1/2	34	8		1/2	34									
2	HR1 to G5		1/2	22	2		1/2	22									
4	HR1 to G3R		1/2	24	4		1/2	24									

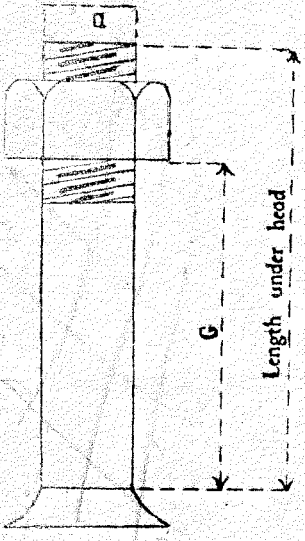
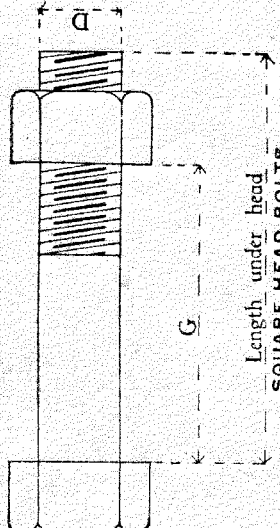
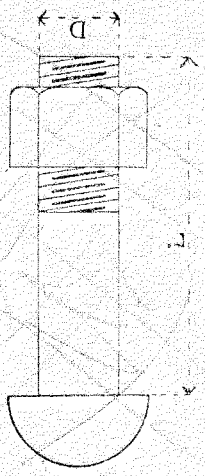
29th 30th
 JG May 3/12

May 12

LACKAWANNA BRIDGE CO.

Contract No. 708

Bill No. 581



RIVETS				ROUND HEAD BOLTS				SQUARE HEAD BOLTS				COUNTERSUNK BOLTS					
No. Pcs.	POSITION	"L"	"D"	No. Pcs.	POSITION	"L"	"D"	No. Pcs.	POSITION	"L"	"D"	No. Pcs.	POSITION	"L"	"D"	No.	Kind
96	51 to 66	2 1/2	3/8	60	Bms. to G9	3	42	42	G1 to G32	3	7/8	4	G1 to C1	2	59	3	
96	52 "	2 1/2	"	10	"	2 1/2	"	14	" G9	2 1/2	"	4	" "	2 1/2	"	3 1/2	
820	Diap. to "	2 1/2	"	6	" G1 to G10	3 1/2	"	84	G2 to G40	1	"	3	G32 "	1 1/2	"	2 1/2	
320	"	2 1/2	"	640	G1	2 1/2	"	33	G5 to G7	2 1/2	"	3	" "	1 1/2	"	2 1/2	
220	"	2 1/2	"	20	"	5 1/2	"	11	" G9	2	"	1	G9 "	1 1/2	"	2 1/2	
420	Bms. to FB24	2 1/2	"	20	"	2 1/2	"	48	G8 to G6	5	"	1	" "	1 1/2	"	3	
140	Bent Pts. to FB24	3	"	230	" G32	2 1/2	"	232	Hex. nuts	28	"	6	G49 "	1 1/2	"	2 1/2	
245	APR to FB24	2 1/2	"	80	"	2 1/2	"	80	Cob. to Pds.	2 1/2	"	6	" C2	1 1/2	"	2 1/2	
189	" FB24	2 1/2	"	420	" G49	3 1/2	"	34	"	3 1/2	"	6	G2 "	2	"	3 1/2	
15	FB24 to CM	2 1/2	"	60	FB24	2 1/2	"	34	"	2 1/2	"	6	" "	2 1/2	"	3 1/2	
6	"	2 1/2	"	930	" G2	3 1/2	"	58	"	5 1/2	"	2	G9 "	1 1/2	"	3	
460	Bms. to G5	3 1/2	"	60	"	3 1/2	"	7 1/2	"	7 1/2	"	8	G5 "	1 1/2	"	2 1/2	
690	" G6	5 1/2	"	300	" G8	3 1/2	"	4	"	4	"	6	G49 "	1 1/2	"	2 1/2	
150	" G7 1/2	3	"	120	" G8	2 1/2	"	24 1/2	"	24 1/2	"	12	G49 to C4	1 1/2	"	2 1/2	
30	"	2 1/2	"	60	" G4	2 1/2	"	28	"	28	"	12	G66 "	2	"	3	
15	CM to G4	2 1/2	"	15	CM to G4	2 1/2	"	140	FB24 to G1	2 1/2	"	80	Hex. Nuts	1 1/2	"	2 1/2	
15	AP6 to CP2	2 1/2	"	30	CM to G4	2 1/2	"	30	"	30	"	130	Bms. to G1	1 1/2	"	2 1/2	
65	" G9	2 1/2	"	140	FB24 to G1	2 1/2	"	140	FB24 to G1	2 1/2	"	140	CM to G1	1 1/2	"	2 1/2	
5	"	3 1/2	"	30	FB24 to G1	3 1/2	"	110	"	110	"	140	CM to G1	1 1/2	"	2 1/2	
6	AP6 to CP2	2 1/2	"														

Western
L. O. G. R. April 17/12

4/11 12

LACKAWANNA BRIDGE CO.

Contract No. 703 1st. Extra

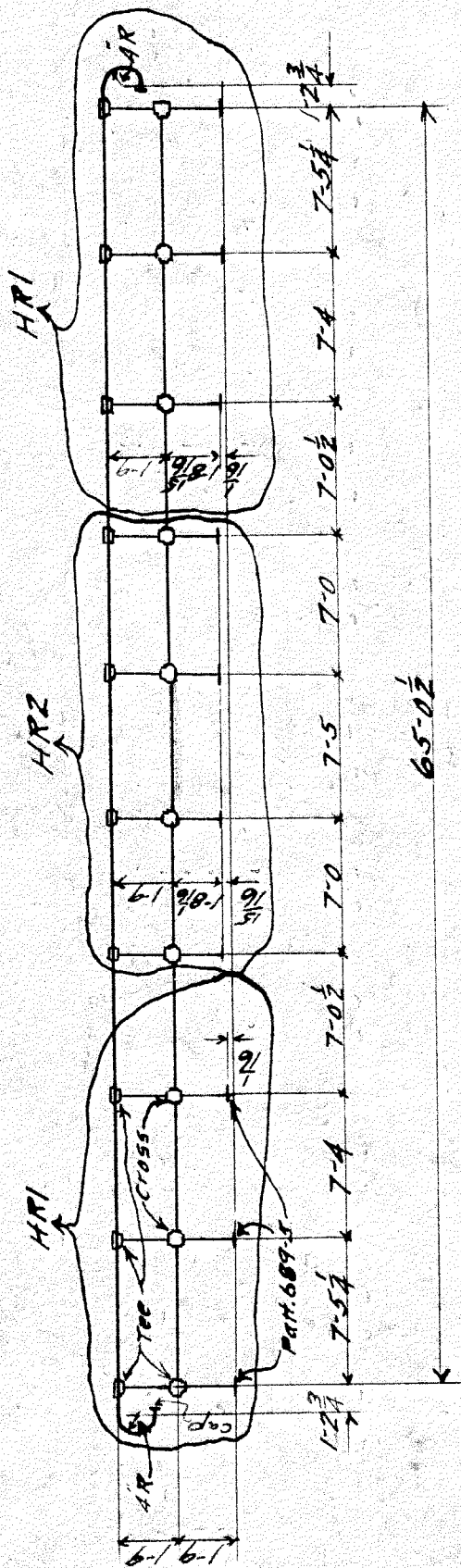
Made by Oertel 4-30-12

Bill No. II.

Checked by

29th 30th
P.G. May 2/12

May 11 12



3 Hand-Rails HRI
2 " " HRZ

Material reqd. for 1-HRI

Abt. 57 lin. ft. 2 1/2 φ W.I. Pipe.

4 Tees for 2 1/2 φ Pipe

2 Crosses " " "

3 Bases " " "

1 Cap " " "

Part # 689-5

Material reqd for 1-HRZ

Abt 57 lin. ft. 2 1/2 φ W.I. Pipe.

4 Tees for 2 1/2 φ pipe.

4 Crosses " " "

4 Bases " " "

Part # 689-5

Approved

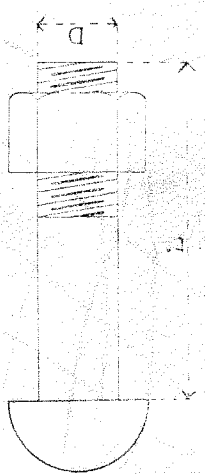
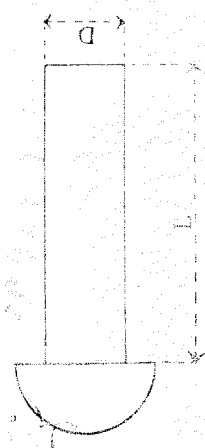
Chief Engr.

Grand Trunk Railway
Bridge over Boulevard & Russell St.
Detroit, Mich.
Railing for Girders G7, G5, G7L.

LACKAWANNA BRIDGE CO.

Contract No. 703

Bill No. 27



RIVETS

ROUND HEAD BOLTS

SQUARE HEAD BOLTS

COUNTERSUNK BOLTS

No. Pcs.	POSITION	"D"	"L"	No. Pcs.	POSITION	"D"	"L"	No. Pcs.	POSITION	"D"	"L"	WASHERS	
												No.	Kind
770	WT# 1502	3/8	2 1/2	1200	Erecting Bolt	3/8	2 1/2	245	Bolts	1/2	2 1/2	272	W
1050	"	1/2	2 1/2	265	"	1/2	2 1/2	95	"	1/2	2 1/2	357	"
1430	"	3/4	2 1/2	465	"	3/4	2 1/2	340	Hex. Nuts	3/4	2 1/2	33	"
480	"	1 1/4	2 1/2	130	"	1 1/4	2 1/2	438	"	1 1/4	2 1/2	10	"
285	"	1 1/2	3	240	"	1 1/2	3	500	Hex. Nuts	1 1/2	3	165	"
420	"	1 3/4	3 1/2	386	"	1 3/4	3 1/2	80	"	1 3/4	3 1/2	44	"
180	"	2	4	12	"	2	4	2760	Washers	2	4	559	"
325	"	2 1/4	4	12	"	2 1/4	4	2760	Hex Nuts	2 1/4	4		
30	"	2 1/2	4 1/2	2760	Washers	2 1/2	4 1/2	1380	"	2 1/2	4 1/2		
760	"	3	5 1/2	2760	Hex Nuts	3	5 1/2	1380	"	3	5 1/2		
30	"	3 1/2	5 1/2			3 1/2	5 1/2			3 1/2	5 1/2		
1080	"	4	6 1/2			4	6 1/2			4	6 1/2		
80	"	4 1/2	6 1/2			4 1/2	6 1/2			4 1/2	6 1/2		
570	"	5	7 1/2			5	7 1/2			5	7 1/2		

Western 29th
L.O.P.P. April 1912

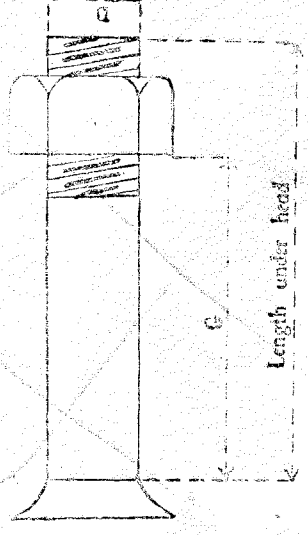
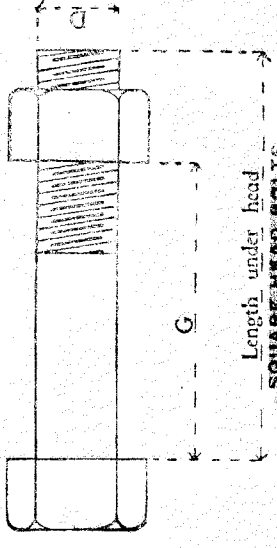
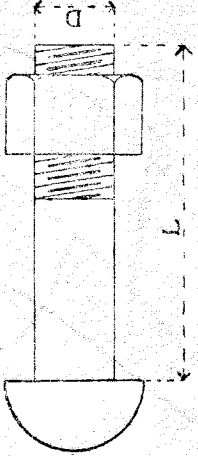
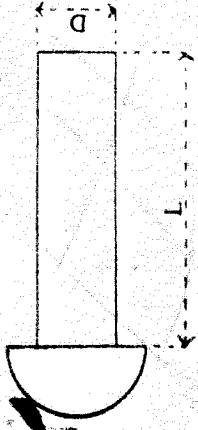
3/4 1/2

O.R. W.B.
Aug 28 Dr 63

LACKAWANNA BRIDGE CO.

Contract No. 10000

Bill No. 10000



No. Pcs.	"L"	"D"	POSITION	No. Pcs.	"L"	"D"	POSITION	WASHERS	No.	Kind
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Bolts - Tailing to Girders

45 Bolts
 - 10 "
 - 10 "
 - 20 "
 - 5-25

50 "
 24 "
 24 "
 24 "
 24 "
 24 "

110 Hex Nuts 5/16"

29 sh 20 lb
 29 sh 20 lb
 29 sh 20 lb

July 1911

May 4 12