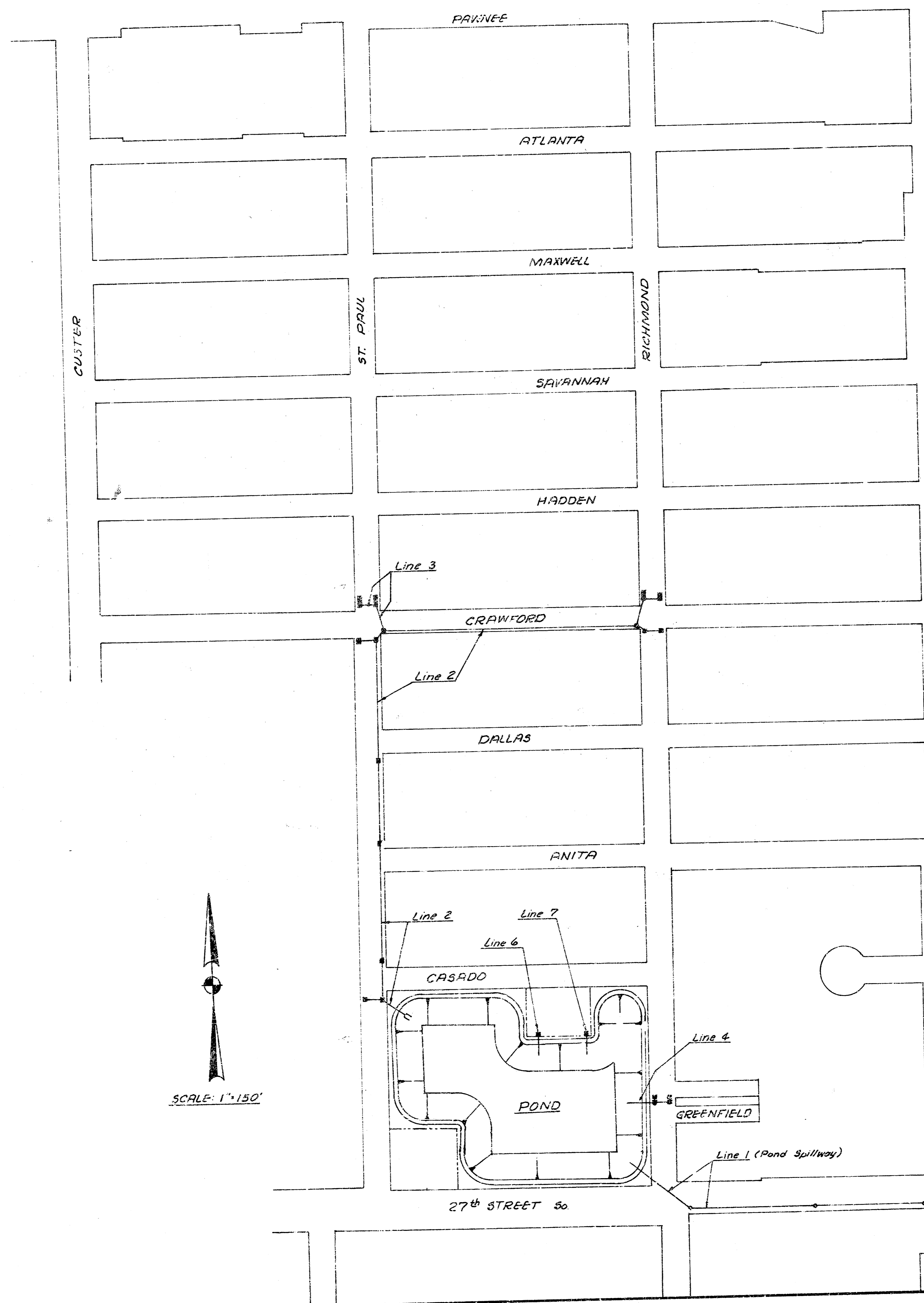


# STORM WATER SEWER NO. 194



- GENERAL NOTES**
1. ALL TREES, BRUSH, BUILDING, FENCES, UTILITY LINES, AND ALL EXISTING FACILITIES SHALL BE REMOVED FROM AND SITE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED BY THE FIELD ENGINEER. THE POND SHALL BE REMOVED FROM THE PROPERTY BETWEEN 27TH ST. SOUTH, E.L. ST. PAUL ST., AND MAXWELL ST. SOUTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE 150' PRIVATE PROPERTY SOUTH OF MAXWELL ST. AND 150' PRIVATE PROPERTY WEST OF ST. PAUL ST. AND 27TH ST. SOUTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE 150' PRIVATE PROPERTY SOUTH OF MAXWELL ST. AND 150' PRIVATE PROPERTY WEST OF ST. PAUL ST. AND 27TH ST. SOUTH.
  2. ALL EARTHWORK SHALL BE PAID FOR AS "EXCAVATION", AND ALL FILL REQUIRED AT THE LEVEL SHALL BE CONSIDERED "EXCAVATION" BY THE CONTRACTOR.
  3. FLAP GATES ON THIS PROJECT SHALL BE 18" X 18" GALVANIZED STEEL SHALL BE OF THE PROPER SIZE AND TYPE FOR DESCRIPTION TO SPEC. OF LAMP NO. 101. PAINTED FOR FLAP GATE, ITS INSTALLATION, AND THE 6" CONCRETE SLAB ON WHICH THE GATE IS TO BE SET SHALL BE PAID FOR AT BID PRICE FOR "FLAP GATE" AND "CONCRETE SLAB".
  4. ALL CORRUGATED METAL PIPE ON THIS PROJECT SHALL BE 18" DIA.
  5. CURB INLETS ON THIS PROJECT SHALL BE DESIGNED BY THE CONTRACTOR WITH REFERENCE TO THE CONSTRUCTION PLANS. ANY LIES OR PIPE WHICH CONFLICTS WITH EXISTING UTILITIES MAY BE ALTERED IF SUCH ALTERATION IS SATISFACTORY IN THE OPINION OF THE ENGINEER.
  6. CONTRACTOR SHALL COORDINATE WORK WITH WATER, ELECTRIC, TRAM & GAS, GAS, AND OTHER UTILITY COMPANIES OR AGENCIES EMPLOYED ALL UNDER A GENERAL PERMIT. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR REGULATION OF EXISTING SERVICES.
  7. MAN HOLES AND TRUNKS DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED BY THE CONTRACTOR.
  8. ALL CONCRETE SHALL BE "6-BAG CONCRETE" UNLESS OTHERWISE SPECIFIED.
  9. FIELD ENGINEER SHALL DETERMINE ALL TOLERANCE LIMITS. REMOVAL OF CONCRETE STRUCTURES TO BE AT NEAREST JOINT WHERE PRACTICABLE. ALL OTHER REMOVAL LIMITS TO BE AT JOINT.

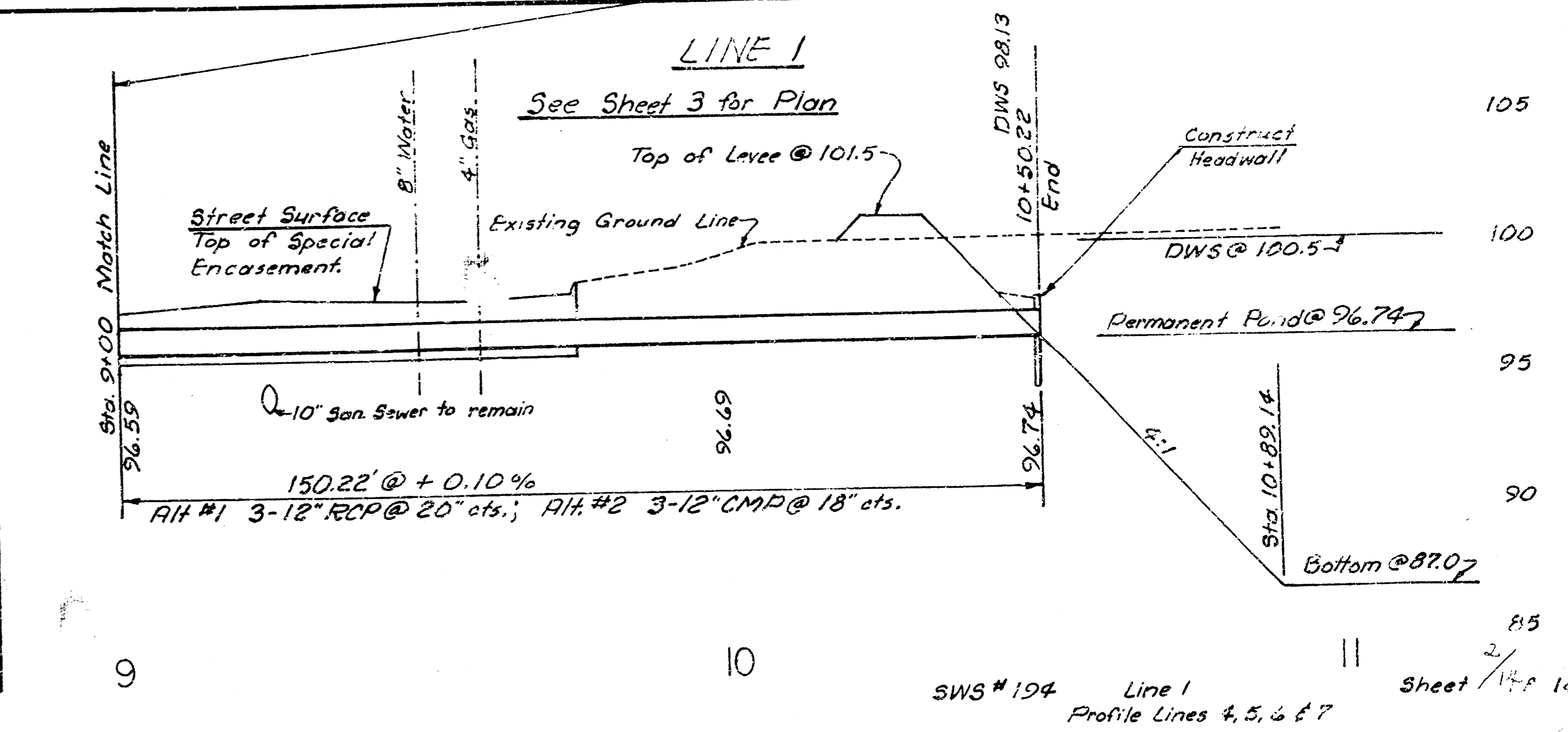
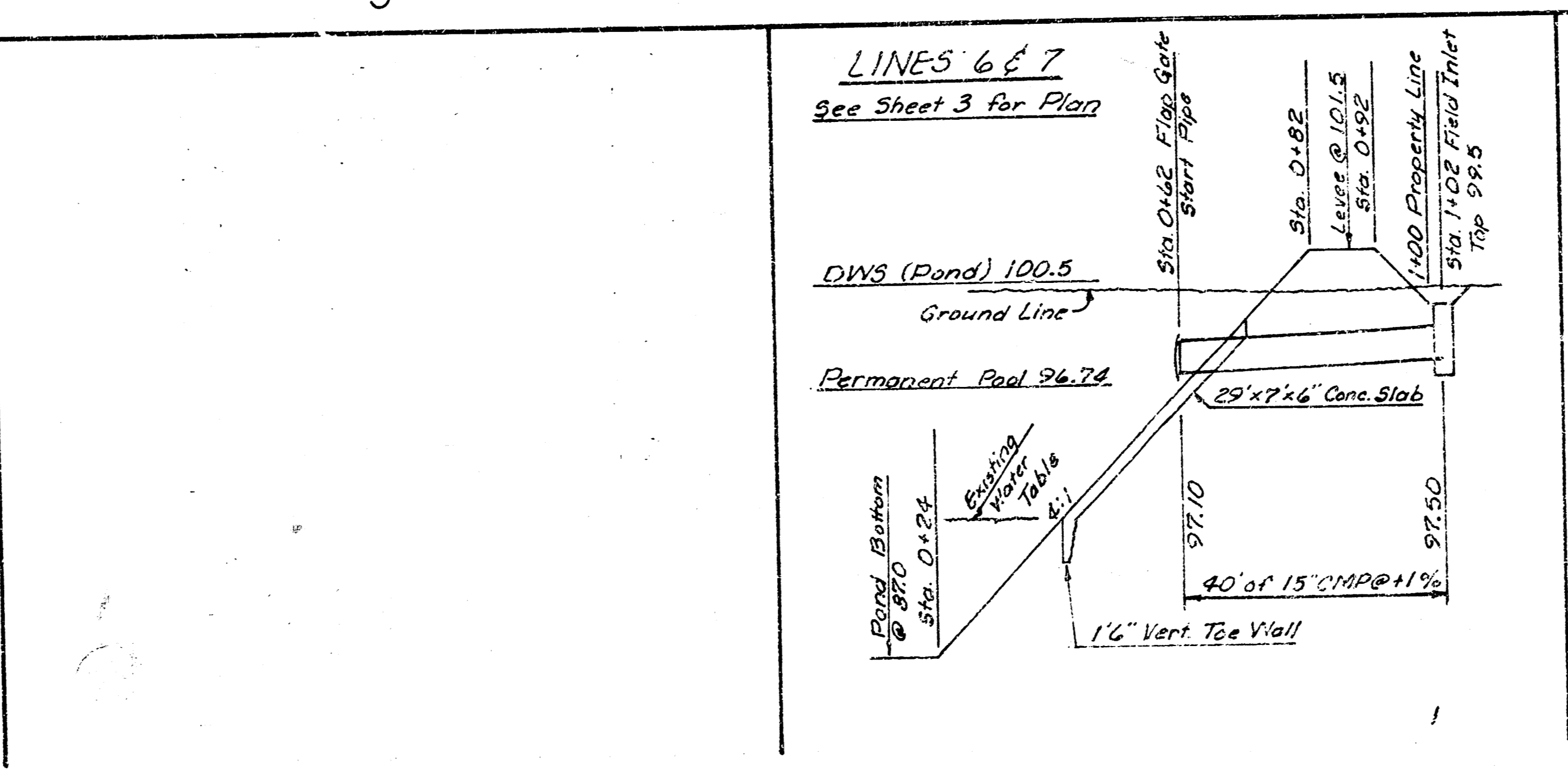
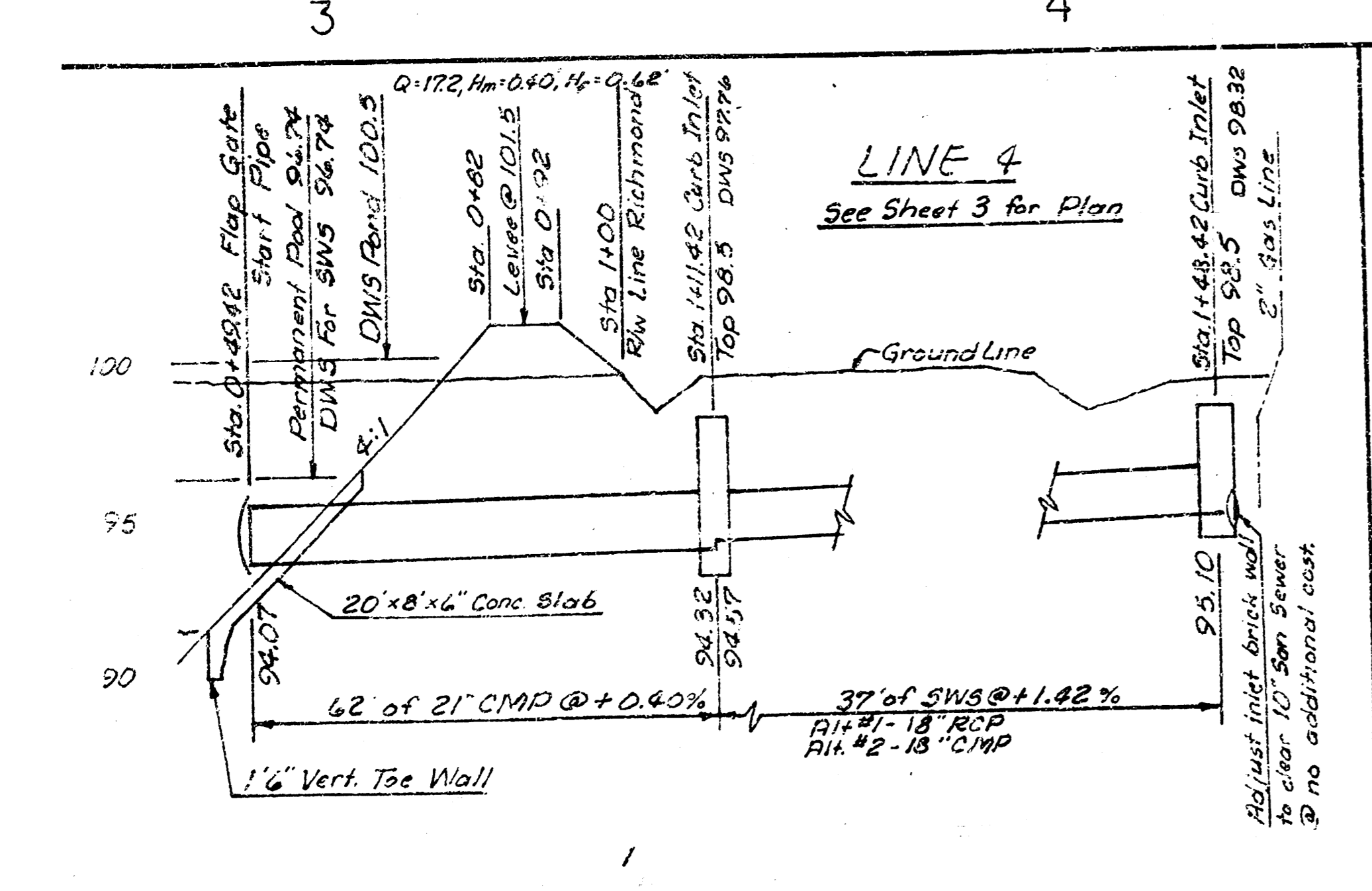
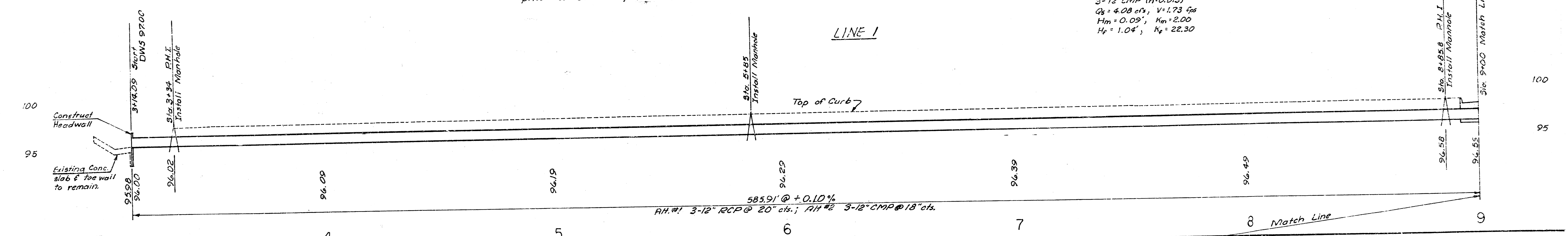
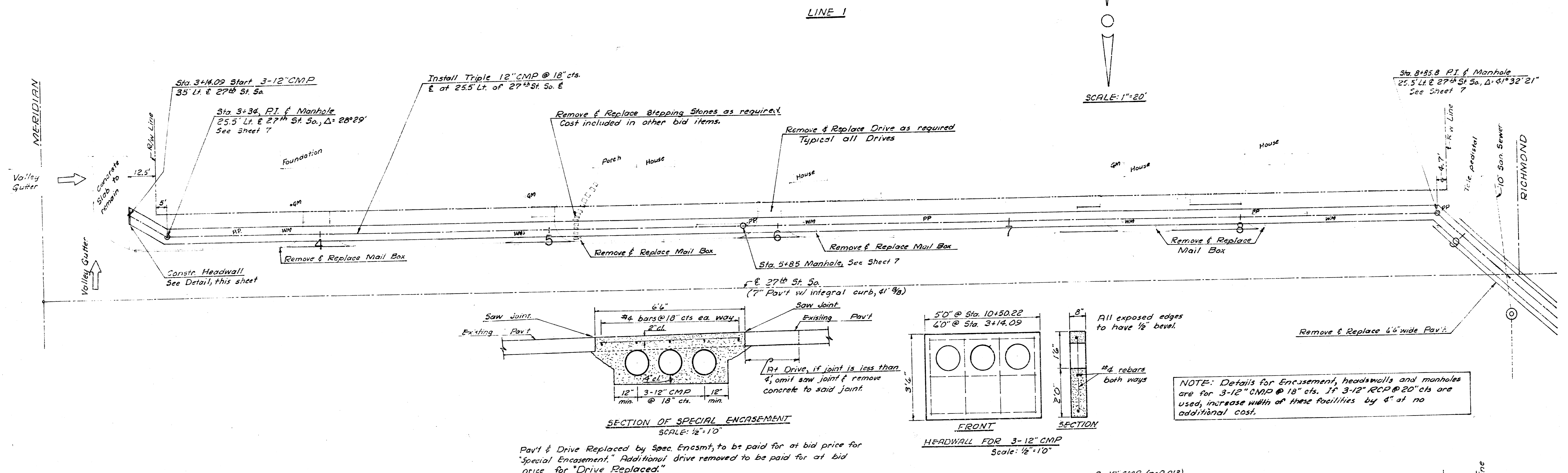
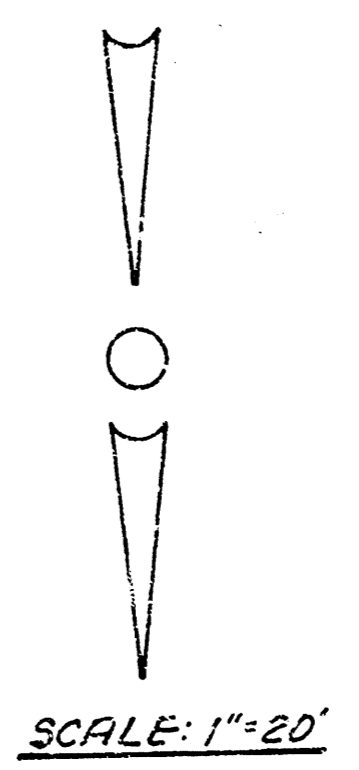
R. W. BRUGGEMAN, DIRECTOR OF ENGINEERING  
CITY OF WICHITA, KANSAS

PROJECT NO. 468-76-245-80962-000-000 001

DATE: \_\_\_\_\_

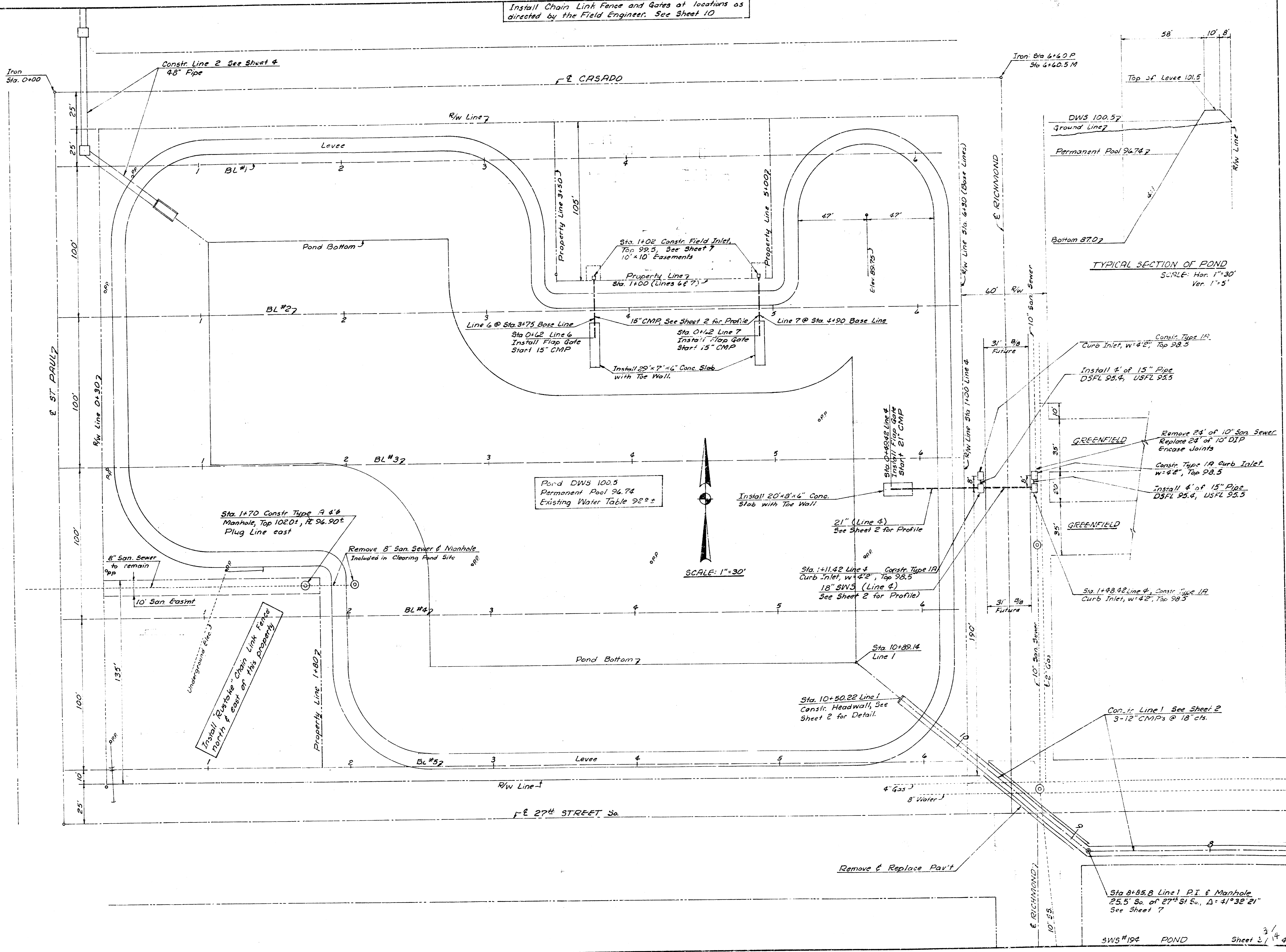
STORM WATER SEWER #194

BM 99.62 City Std. NE Cor. 27th St & Meridian  
42.5' N. & 44.0' E. & both



BM 101.72 RR Spk w-face Street Light Pole, S.E. Cor. Casado & St. Paul.  
 BM 98.98 "A" cut top w-G Richmond @ End of Road. S.L. 27th St.  
 BM 100.98 RR Spk N-face PP with civil defense whistle S.E. Cor. St. Paul & 27th St.

Install Chain Link Fence and Gates at locations as directed by the Field Engineer. See Sheet 10



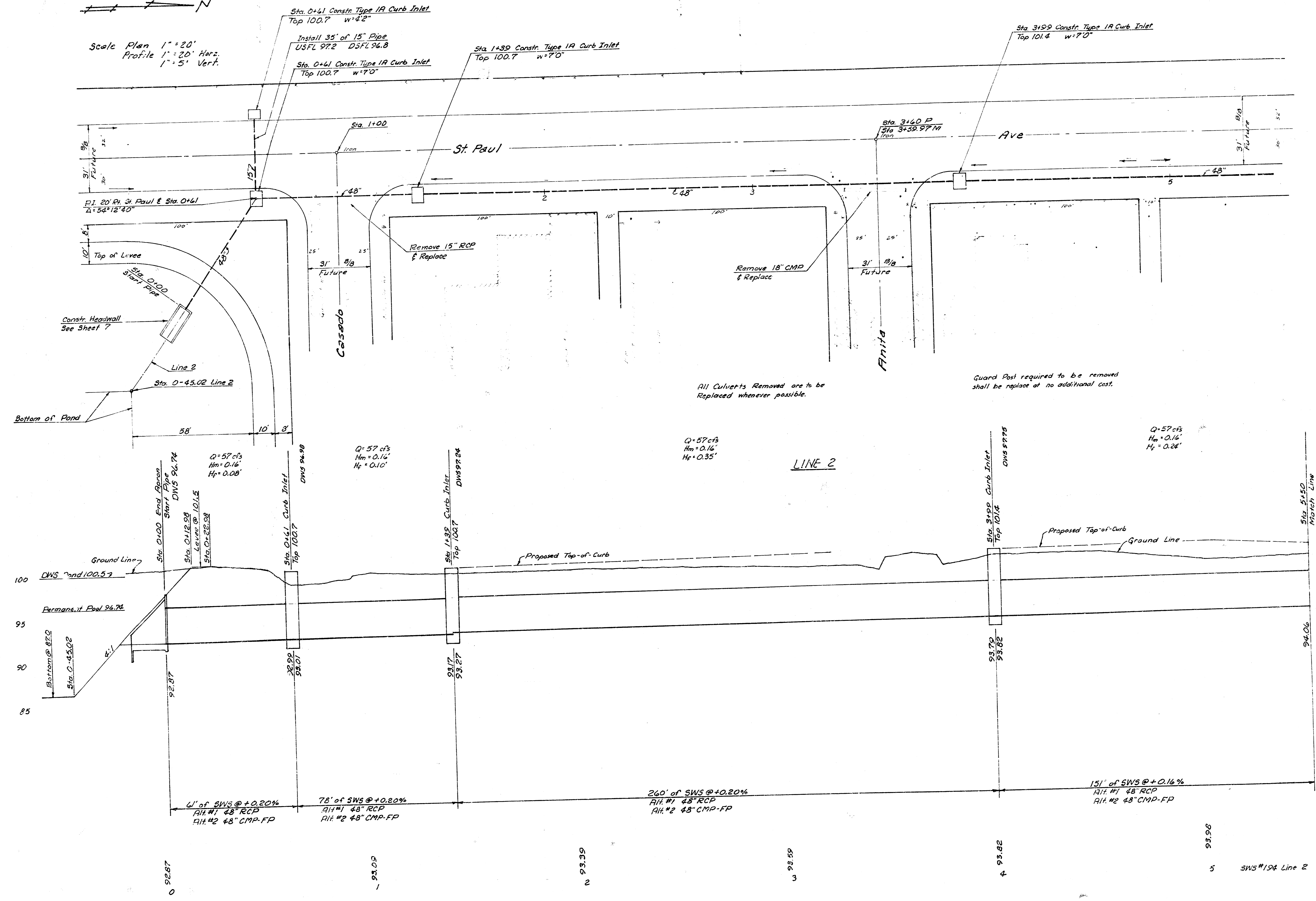
TYPICAL SECTION OF POND  
SCALE: Hor. 1"=30'  
Ver. 1"=5'

SCALE: 1"=30'

Scale Plan 1" = 20'  
 Profile 1" = 20' Horiz.  
 1" = 5' Vert.

BM 101.2 RR Spk w/face Street Light Pole  
 SE Cor. Casado & St. Paul

LINE 2



DWS-417

All Culverts Removed are to be Replaced whenever possible.

Guard Post required to be removed shall be replaced at no additional cost.

Q=57 cfs  
 Hm=0.16'  
 H<sub>2</sub>=0.08'

Q=57 cfs  
 Hm=0.16'  
 H<sub>2</sub>=0.10'

Q=57 cfs  
 Hm=0.16'  
 H<sub>2</sub>=0.35'

Q=57 cfs  
 Hm=0.16'  
 H<sub>2</sub>=0.28'

41' of SWS @ +0.20%  
 RH #1 48" RCP  
 RH #2 48" CMP-FP

78' of SWS @ +0.20%  
 RH #1 48" RCP  
 RH #2 48" CMP-FP

260' of SWS @ +0.20%  
 RH #1 48" RCP  
 RH #2 48" CMP-FP

131' of SWS @ +0.16%  
 RH #1 48" RCP  
 RH #2 48" CMP-FP

92.87

93.09

93.39

93.59

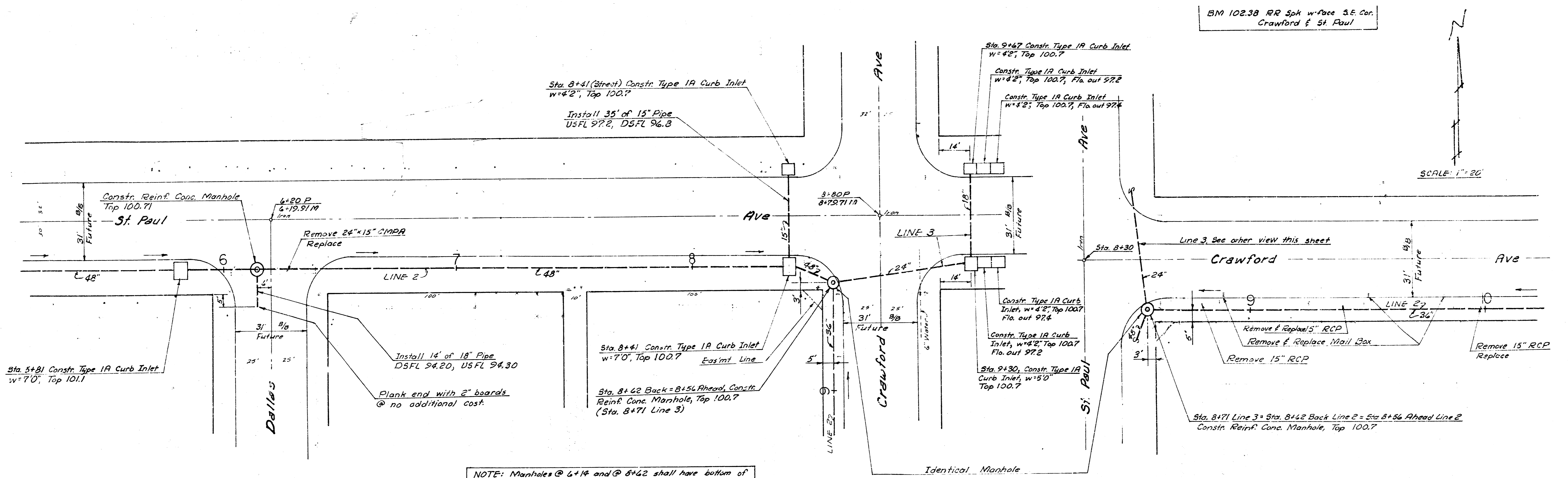
93.82

93.95

SWS #154 Line 2

Sheet 14 of 14

PRINTED FROM THE BEST



BM 102.38 RR Sph w/face S.E. Cor. Crawford & St. Paul

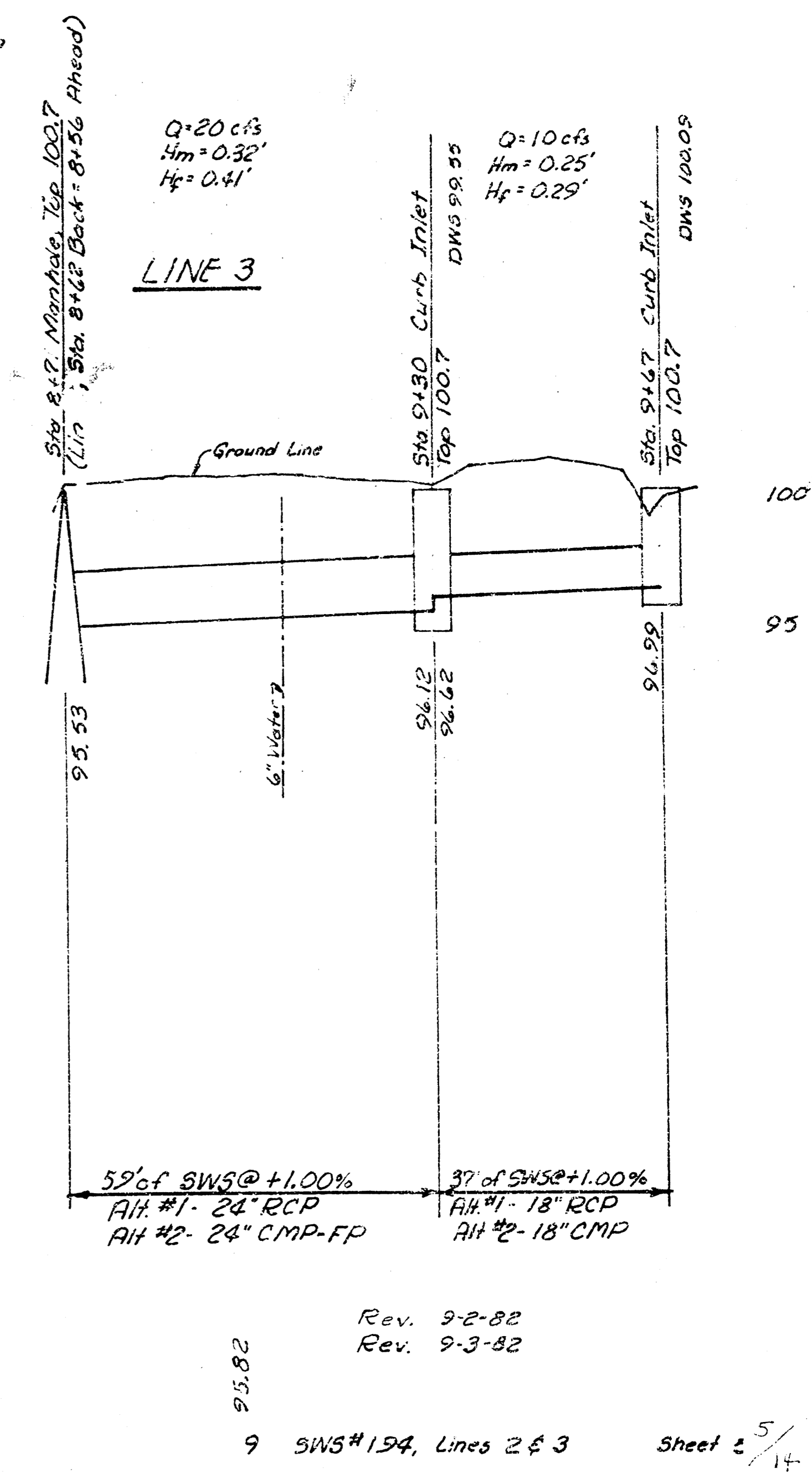
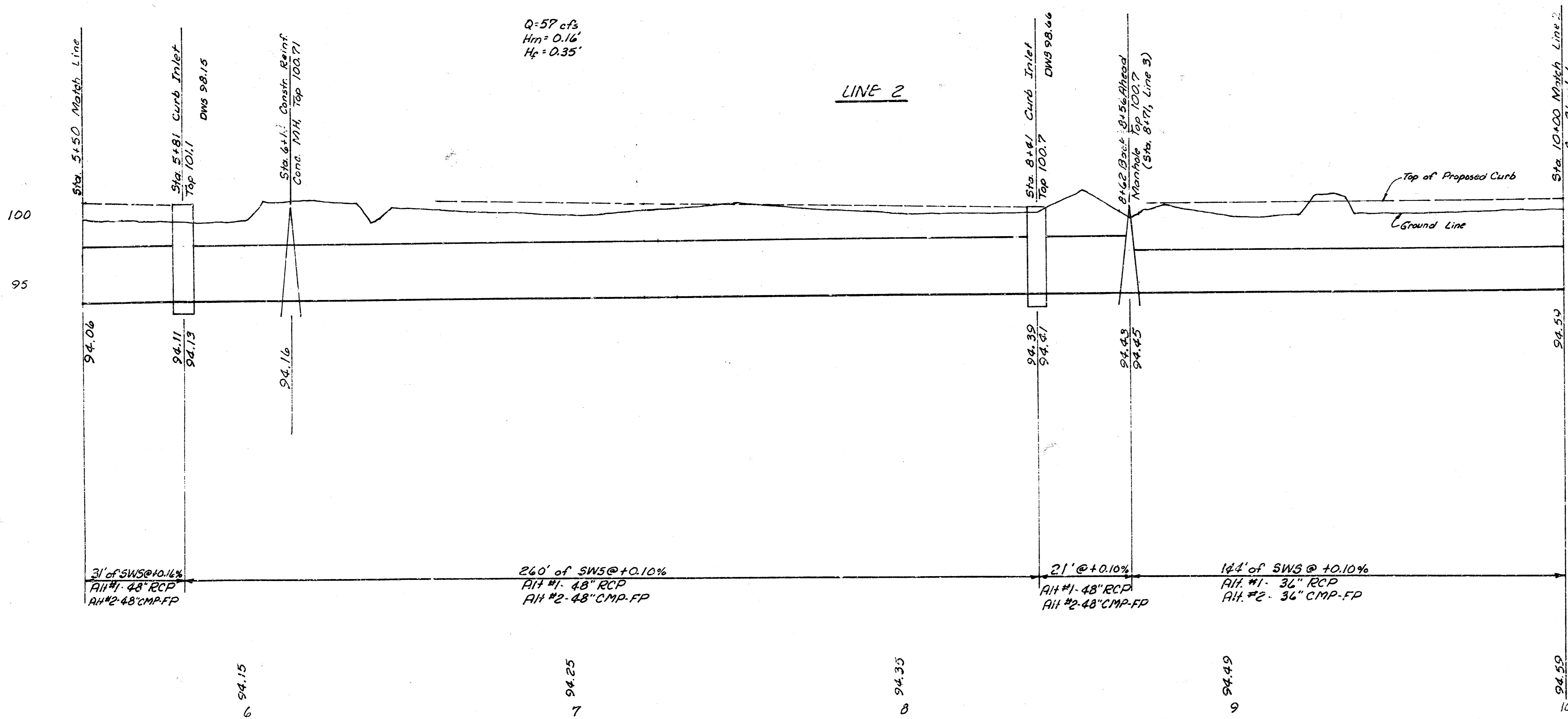
SCALE: 1"=20'

NOTE: Manholes @ 6+14 and @ 8+42 shall have bottom of reinf. conc. top slab at the top of 48" pipe opening.

Scale Plan 1"=20'  
Profile 1"=20' Horiz.  
1"=5' Vert.

Guard Posts required to be removed shall be replaced @ no additional cost.

NOTE: When inlets are shown contiguous, install 14" of 21" pipe at "Flo. out" elevation of each inlet so indicated. Cost to be included in price bid for inlet.

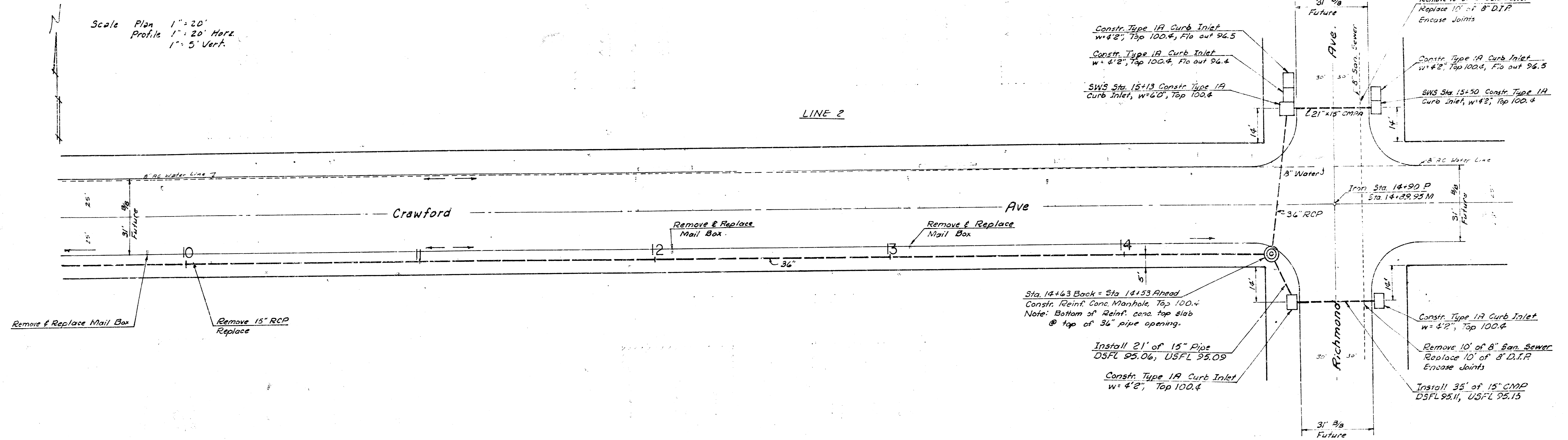


Rev. 9-2-82  
Rev. 9-3-82

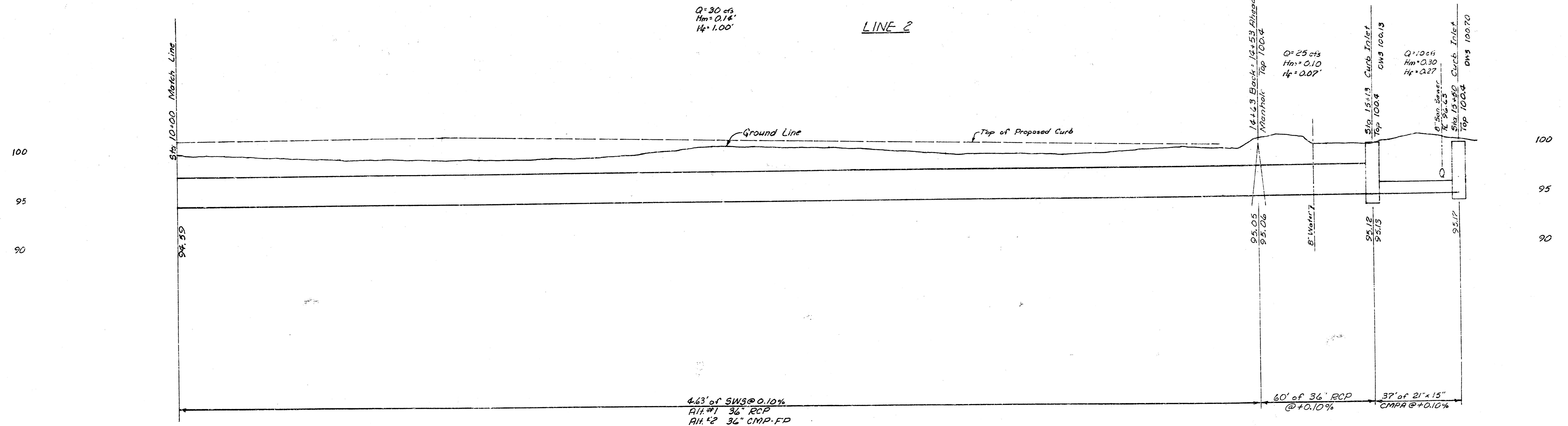
BM 104.49 NW Cor. Conc. Porch 2819 Crawford

BM 104.88 SE Cor. Conc. Porch, 2708 Crawford

Scale Plan 1" = 20'  
Profile 1" = 20' Horiz.  
1" = 5' Vert.



NOTE: When inlets are shown contiguous, install 1/4" of 21" pipe at "Flo out" elevation of each inlet as indicated. Cost to be included in bid price of inlet.



Rev. 9-2-82  
Rev. 9-3-82

94.59

94.60

94.79

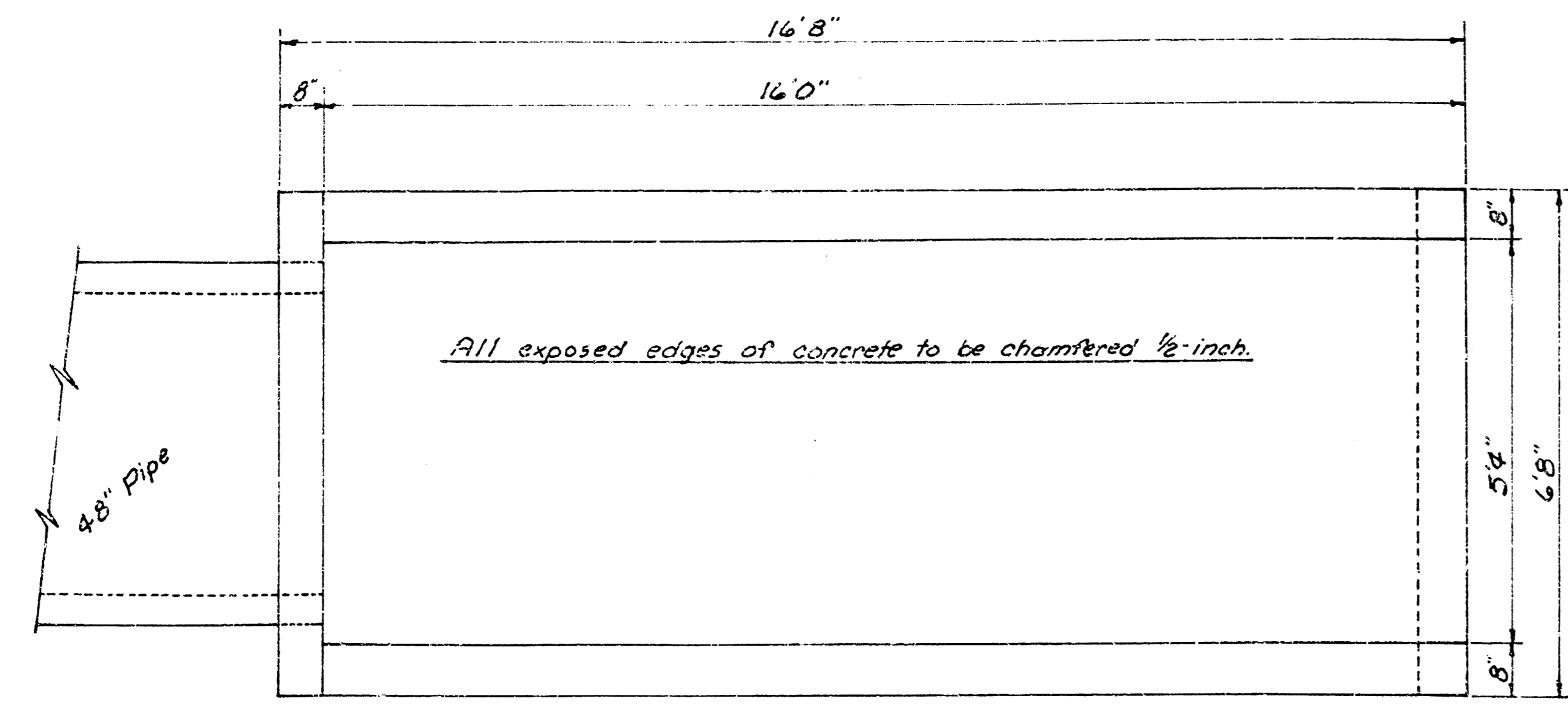
94.89

94.99

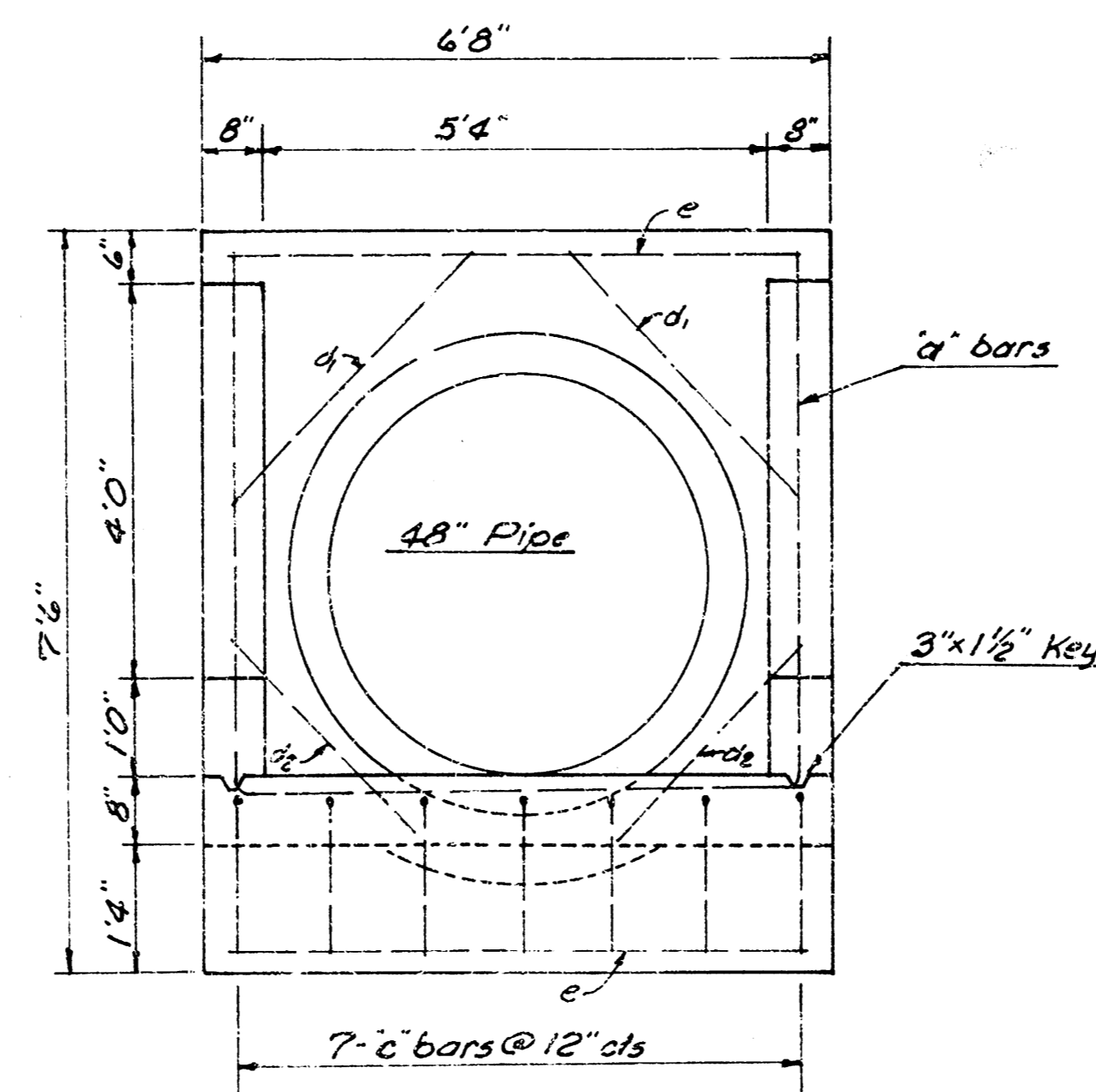
95.11

15 SWS#192, Line 2

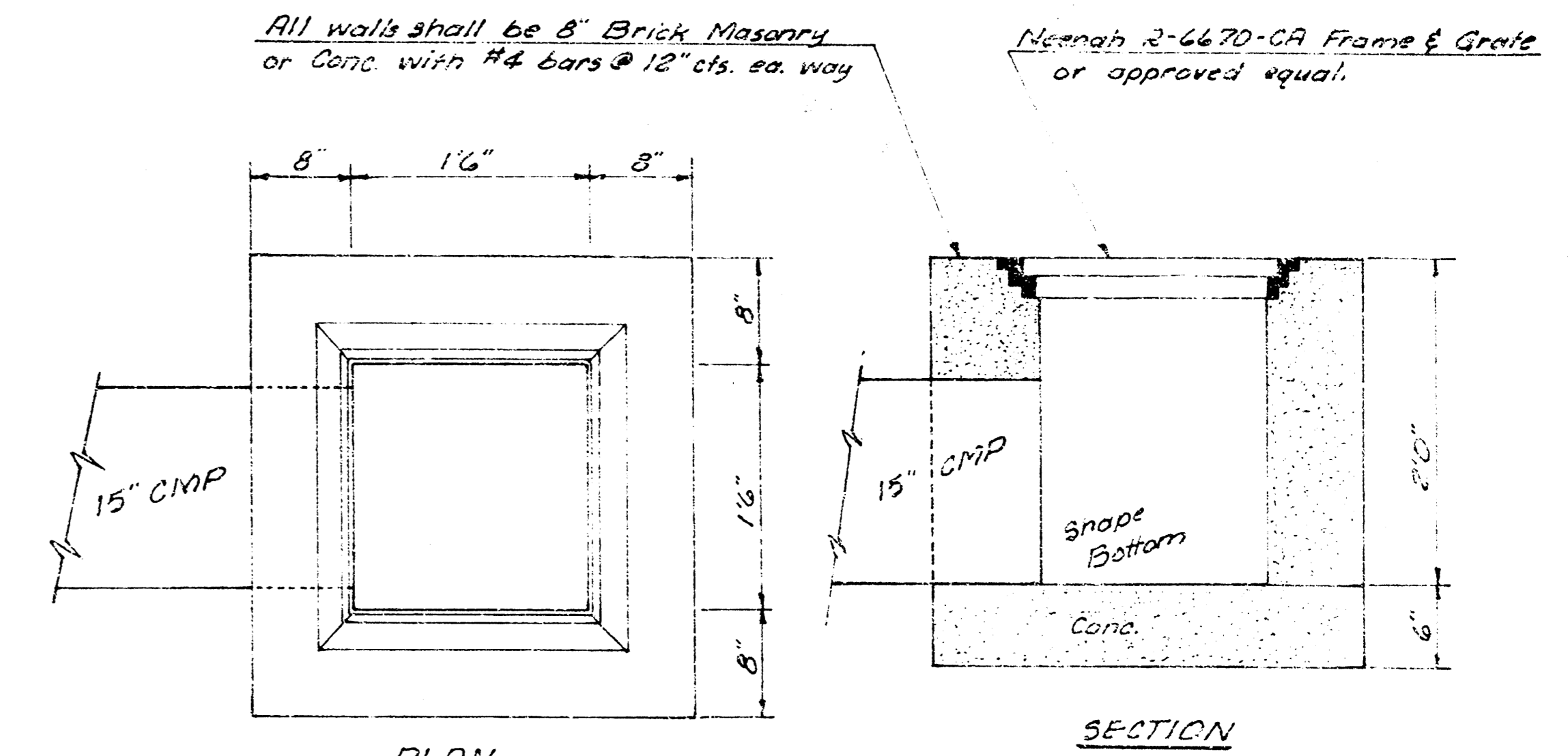
Sheet 14/14



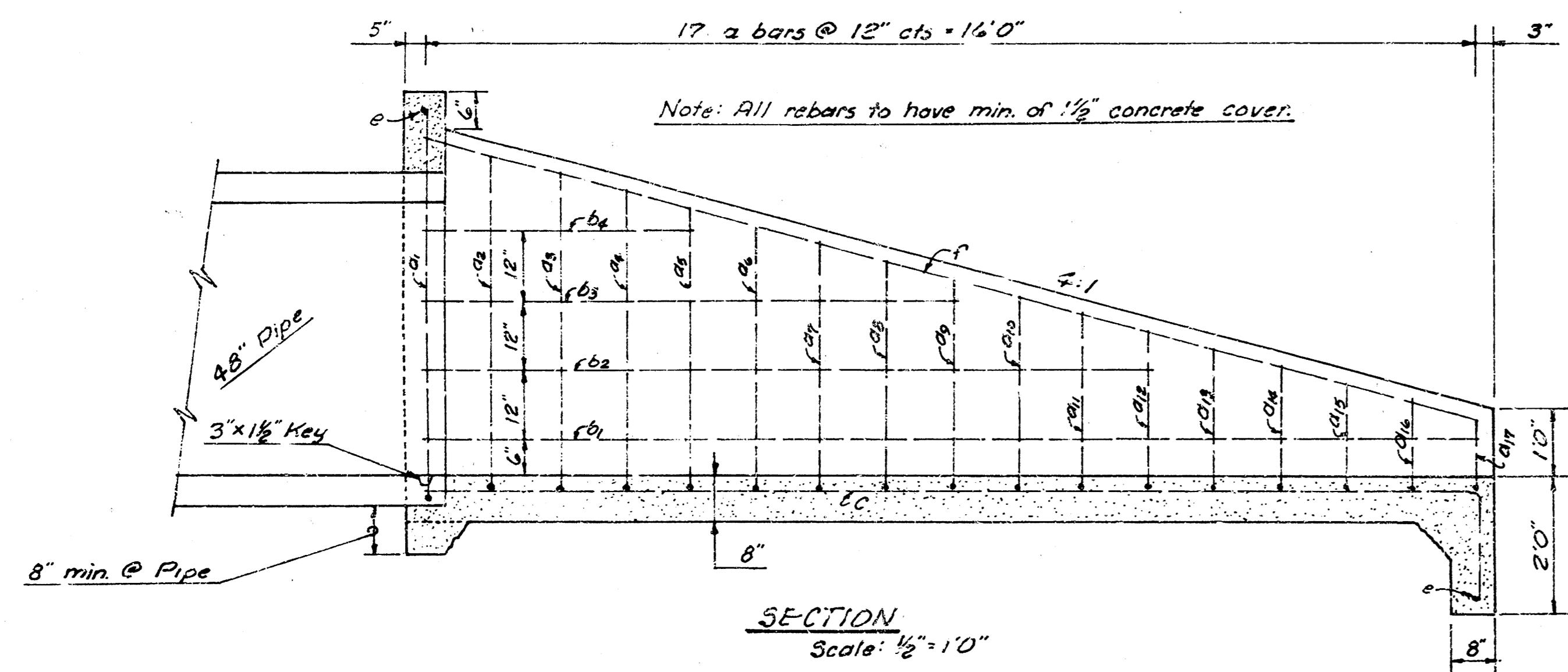
PLAN  
Scale: 1/2"=10"



FRONT  
Scale: 1/2"=10"



FIELD INLET, LINES 6 & 7  
Scale: 1"=10"

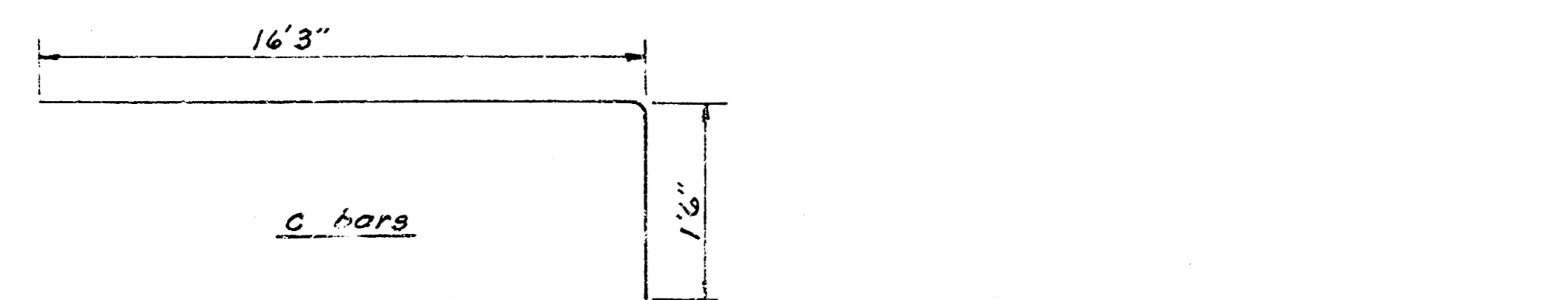
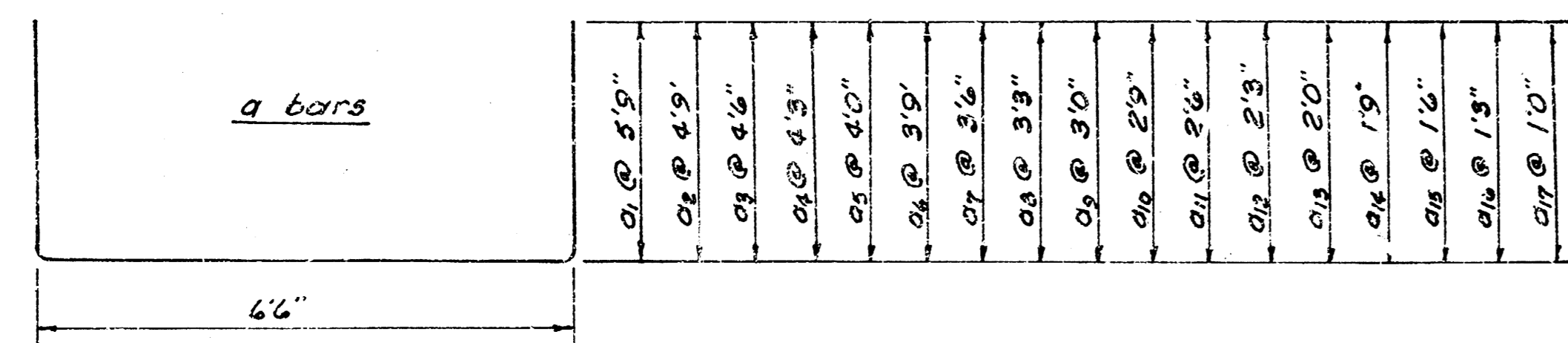


SECTION  
Scale: 1/2"=10"

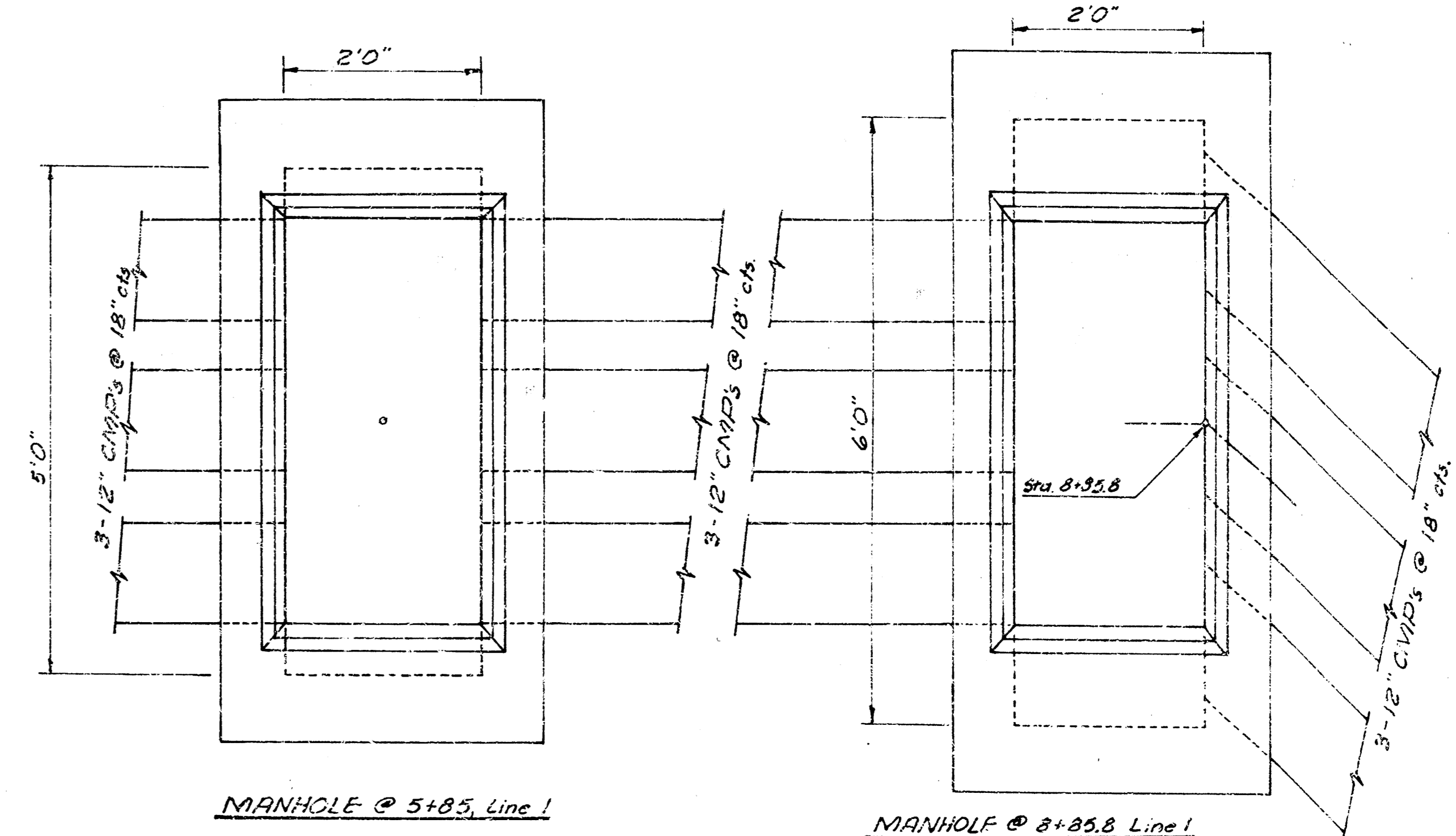
Note: All Conc Reinforcement to be #4 Rebars.

REBAR SCHEDULE

Bar	Shape	No. & Length	Weight
a <sub>1</sub>		1 @ 18'0"	12.0 lbs
a <sub>2</sub>		1 @ 16'0"	10.6
a <sub>3</sub>		1 @ 15'6"	10.4
a <sub>4</sub>		1 @ 15'0"	10.0
a <sub>5</sub>		1 @ 14'6"	9.7
a <sub>6</sub>		1 @ 14'0"	9.4
a <sub>7</sub>		1 @ 13'6"	9.0
a <sub>8</sub>		1 @ 13'0"	8.7
a <sub>9</sub>		1 @ 12'6"	8.4
a <sub>10</sub>		1 @ 12'0"	8.0
a <sub>11</sub>		1 @ 11'6"	7.7
a <sub>12</sub>		1 @ 11'0"	7.3
a <sub>13</sub>		1 @ 10'6"	7.0
a <sub>14</sub>		1 @ 10'0"	6.7
a <sub>15</sub>		1 @ 9'6"	6.3
a <sub>16</sub>		1 @ 9'0"	6.0
a <sub>17</sub>		1 @ 8'6"	5.7
b <sub>1</sub>		2 @ 16'3"	21.7
b <sub>2</sub>		2 @ 11'3"	15.0
b <sub>3</sub>		2 @ 8'3"	11.0
b <sub>4</sub>		2 @ 4'3"	5.7
c		7 @ 17'5"	83.0
d <sub>1</sub>		2 @ 3'6"	4.7
d <sub>2</sub>		2 @ 2'9"	3.7
e		2 @ 4'2"	8.2
f		2 @ 14'5"	22.4
Total Rebars			319 lbs.
Conc.			6 1/2 C.Y.

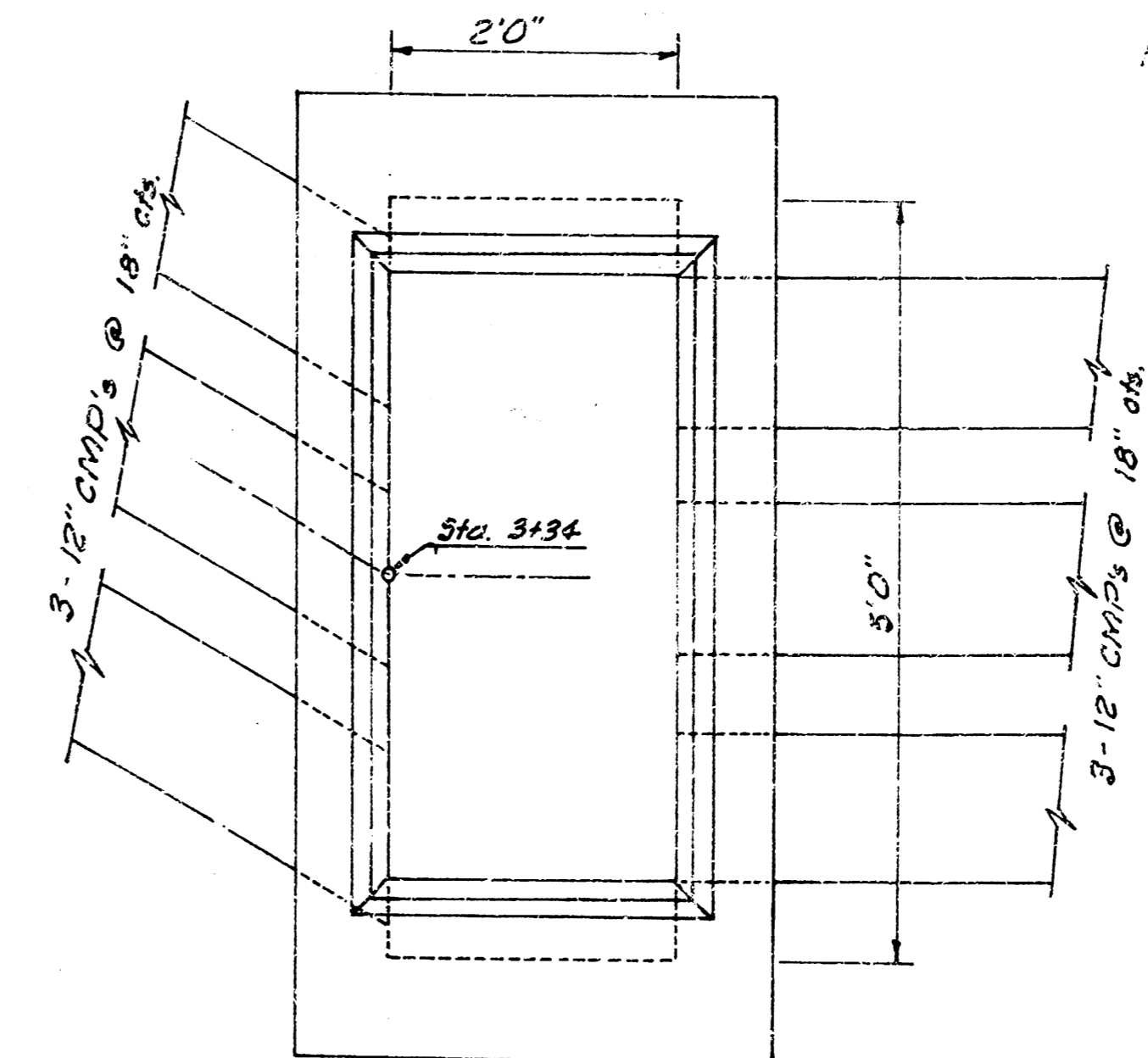


HEADWALL @ STA. 0+00 LINE 2

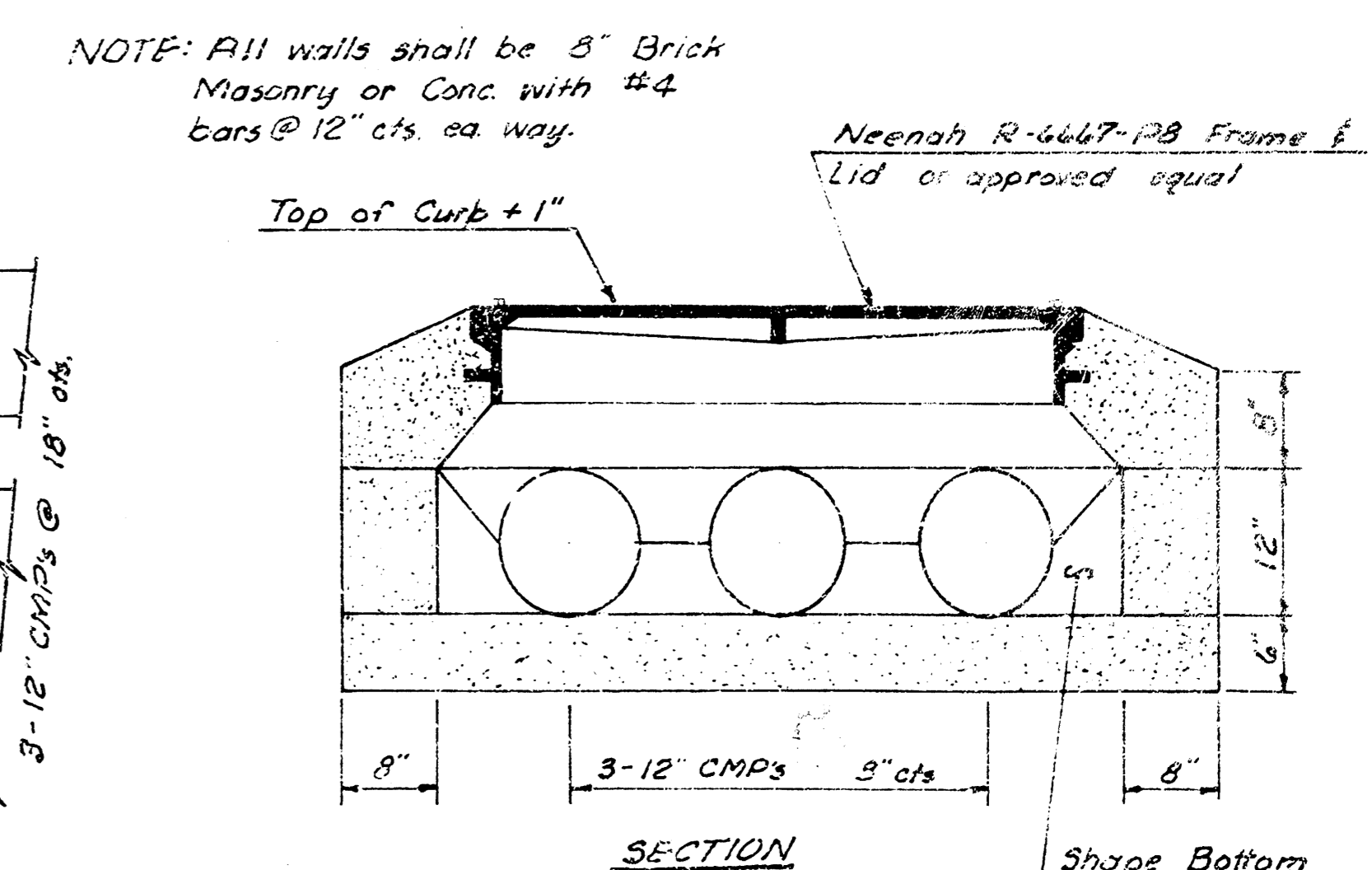


MANHOLE @ 5+85, Line 1

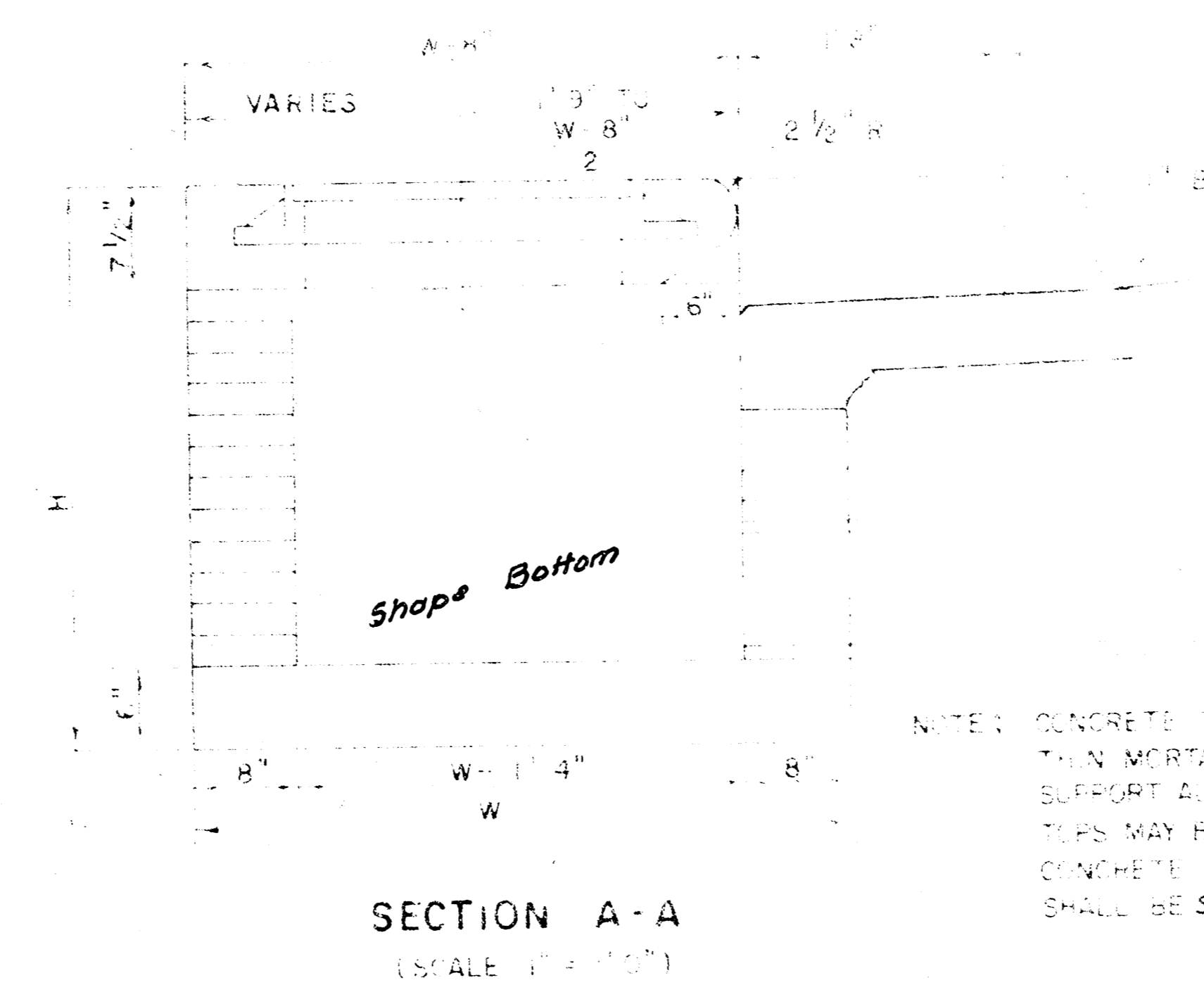
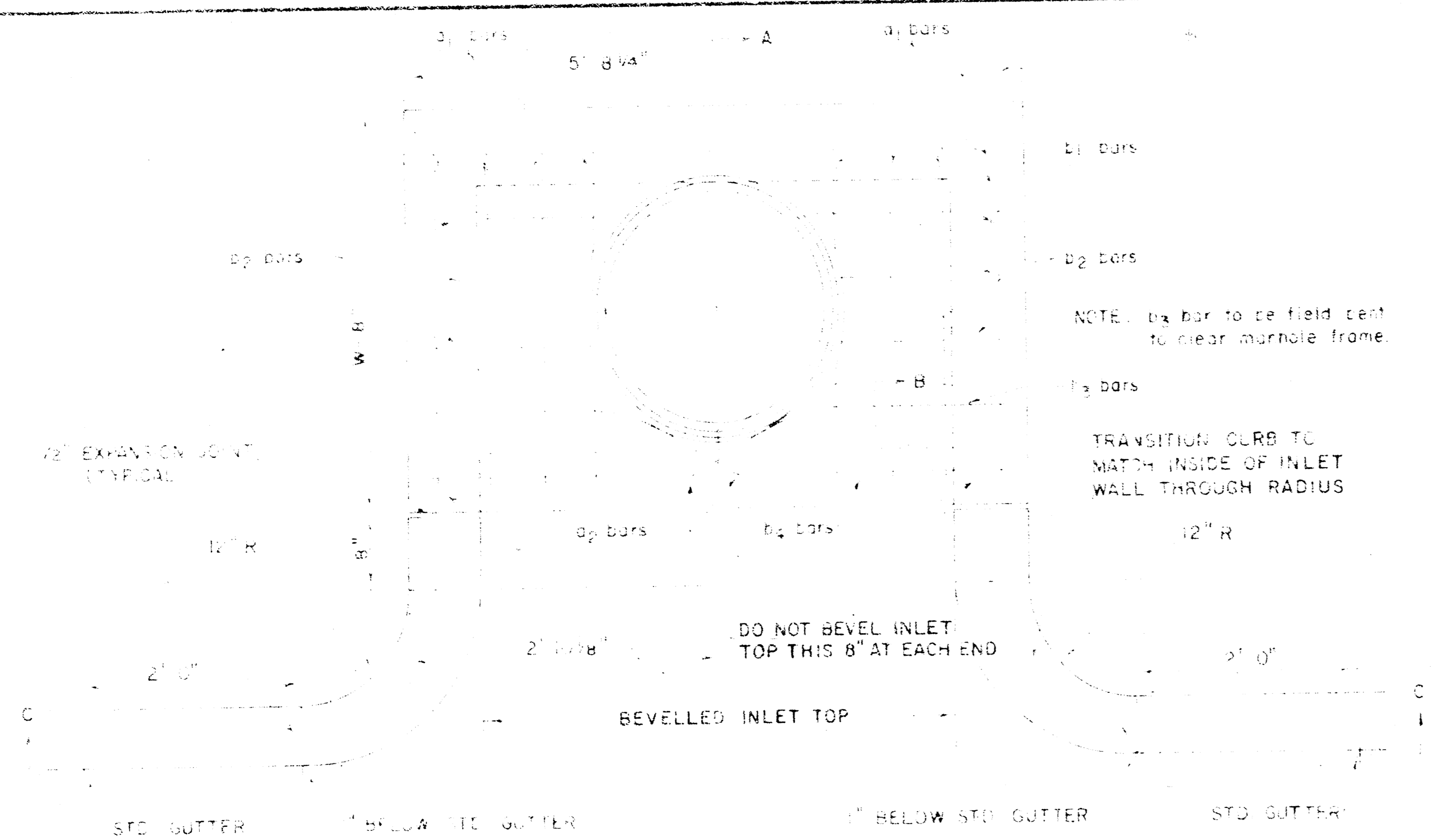
MANHOLE @ 8+85.8 Line 1  
Δ = 4'28"21"



MANHOLE @ 3+34, Line 1  
Δ = 28'29"



SPECIAL MANHOLE  
SCALE: 3/4"=10"



STEEL SCHEDULE

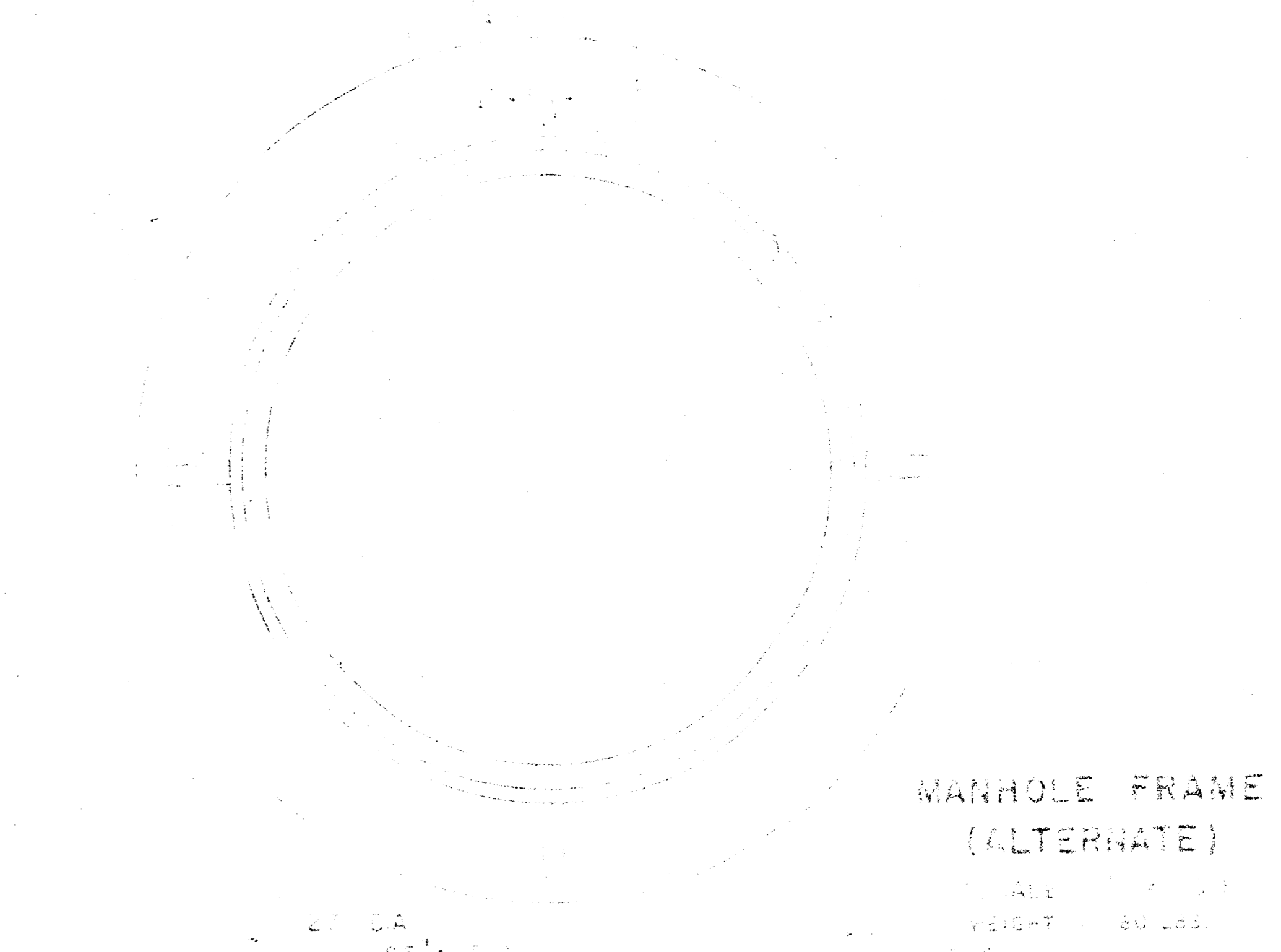
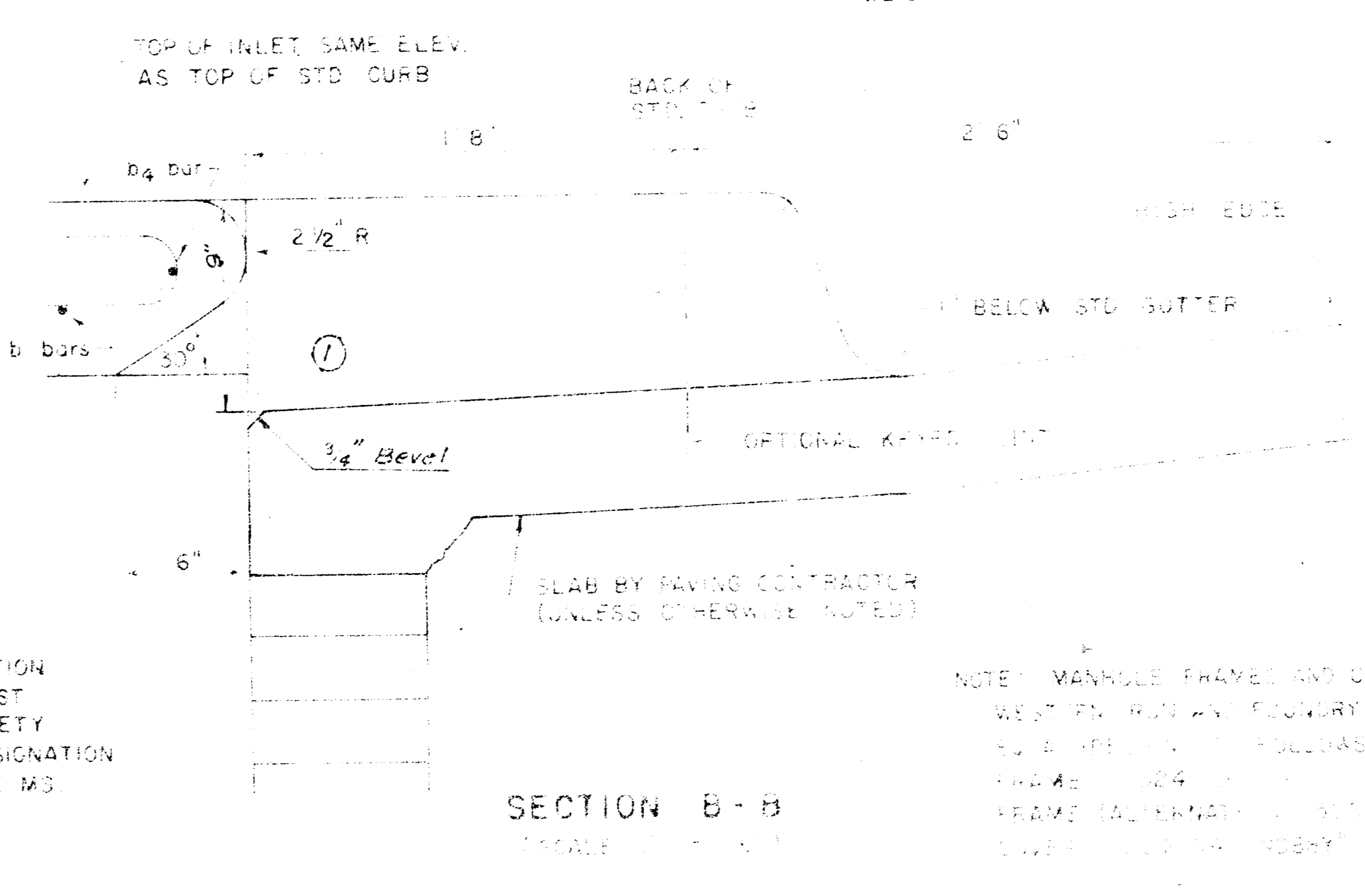
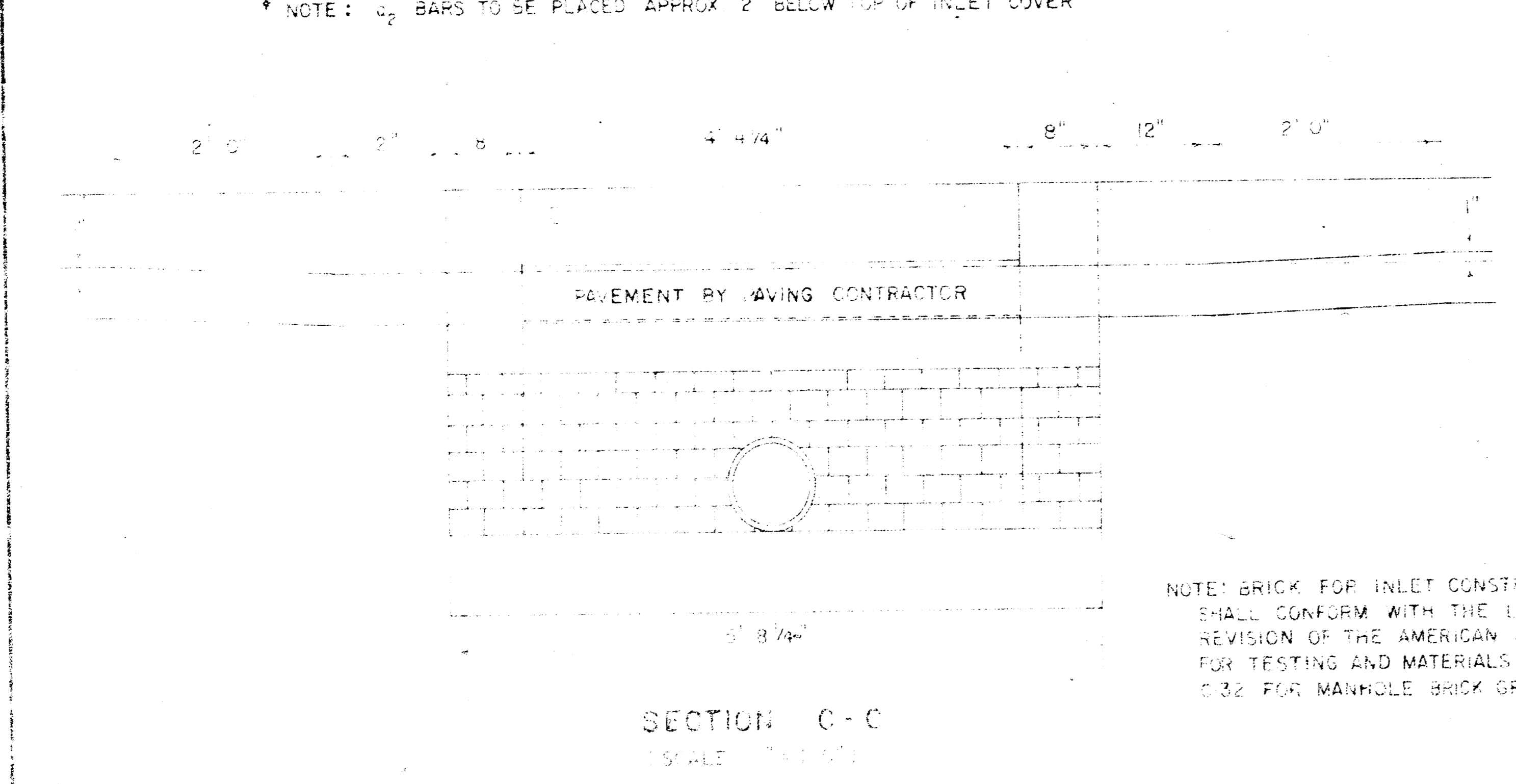
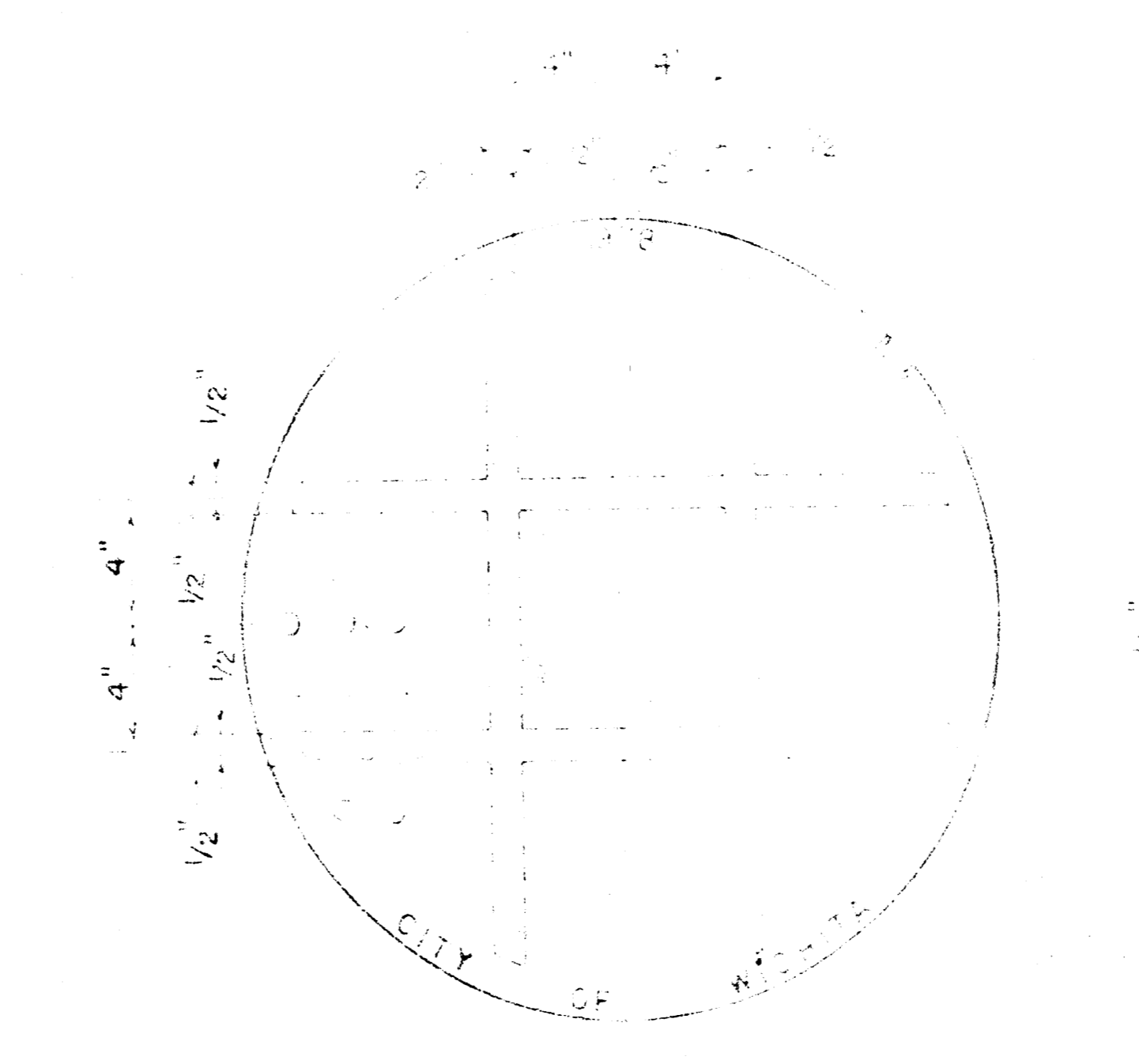
BAR NUMBER	SIZE	W	D	W	D	W	D	W	D	WT. LBS.
1	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
2	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
3	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
4	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
5	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
6	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
7	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
8	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
9	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
10	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
11	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
12	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
13	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
14	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
15	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
16	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
17	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
18	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
19	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
20	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
21	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
22	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
23	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
24	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
25	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
26	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
27	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
28	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
29	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
30	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
31	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
32	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
33	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
34	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
35	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
36	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
37	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
38	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
39	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
40	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
41	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
42	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
43	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
44	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
45	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
46	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
47	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
48	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
49	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
50	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
51	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
52	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
53	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
54	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
55	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
56	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
57	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
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59	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
60	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
61	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
62	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
63	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
64	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
65	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
66	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
67	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
68	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
69	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
70	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
71	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
72	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
73	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
74	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
75	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
76	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
77	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
78	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
79	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
80	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
81	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
82	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
83	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
84	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
85	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
86	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
87	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
88	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
89	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
90	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
91	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
92	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
93	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
94	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
95	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
96	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
97	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
98	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
99	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'
100	1/2"	42"	5' 2"	34"	5' 5"	-	-	-	-	60'

NOTE: d<sub>2</sub> BARS TO BE PLACED APPROX 2" BELOW TOP OF INLET COVER

BENDING DIAGRAM

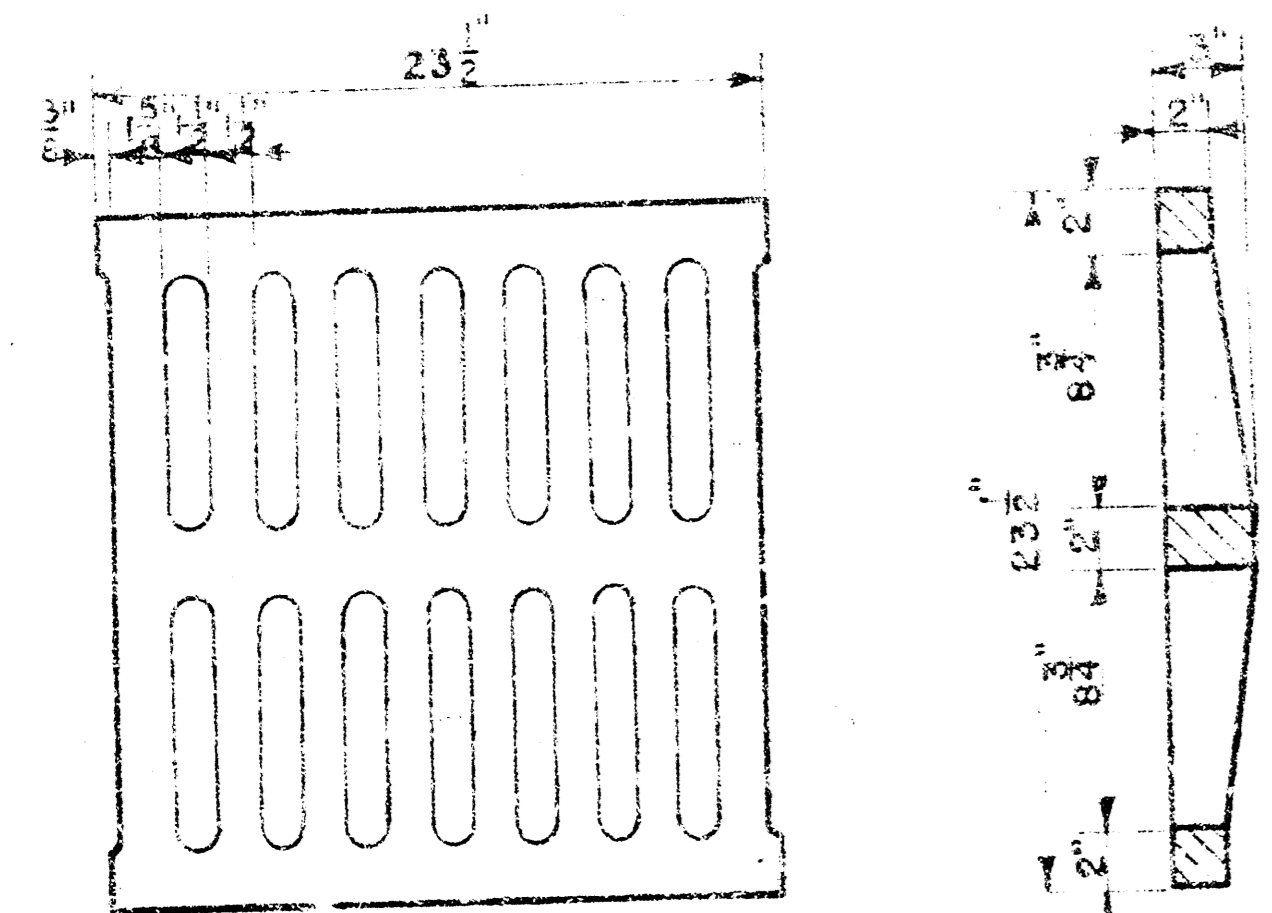
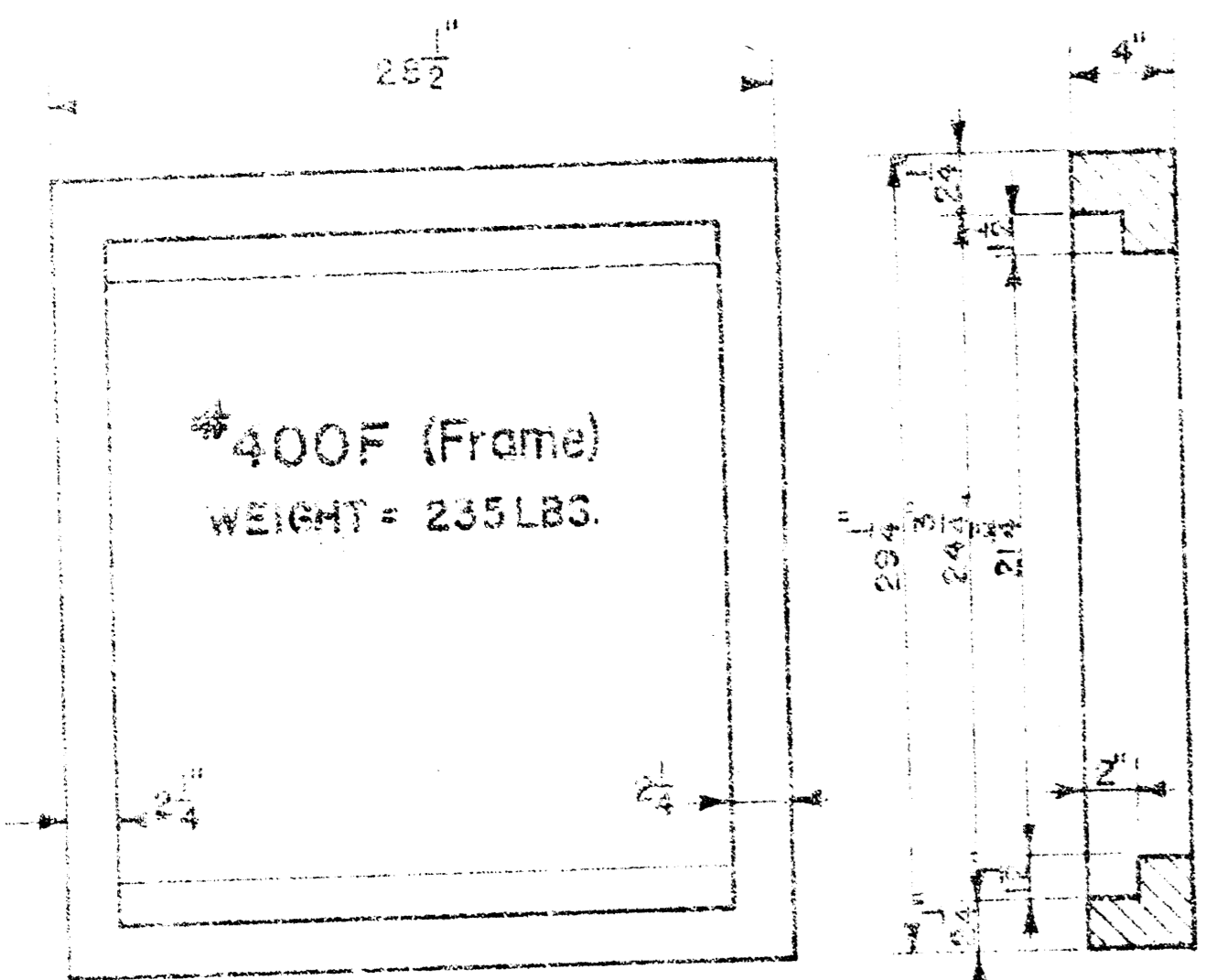
W	PRECAST TOP SIZE	PIPE SIZE	CU YD. CONC.
4' 2"	36" x 5' 8 1/4" x 7 1/2"	21" B SMALLER	0.46 *
5' 0"	44" x 5' 8 1/4" x 7 1/2"	24" B 30"	0.51 *
6' 0"	54" x 5' 8 1/4" x 7 1/2"	36" B 42"	0.71 *
7' 0"	64" x 5' 8 1/4" x 7 1/2"	48" B 54"	0.84 *
8' 0"	74" x 5' 8 1/4" x 7 1/2"	60" B 66"	0.97 *

\* GROSS VOLUME



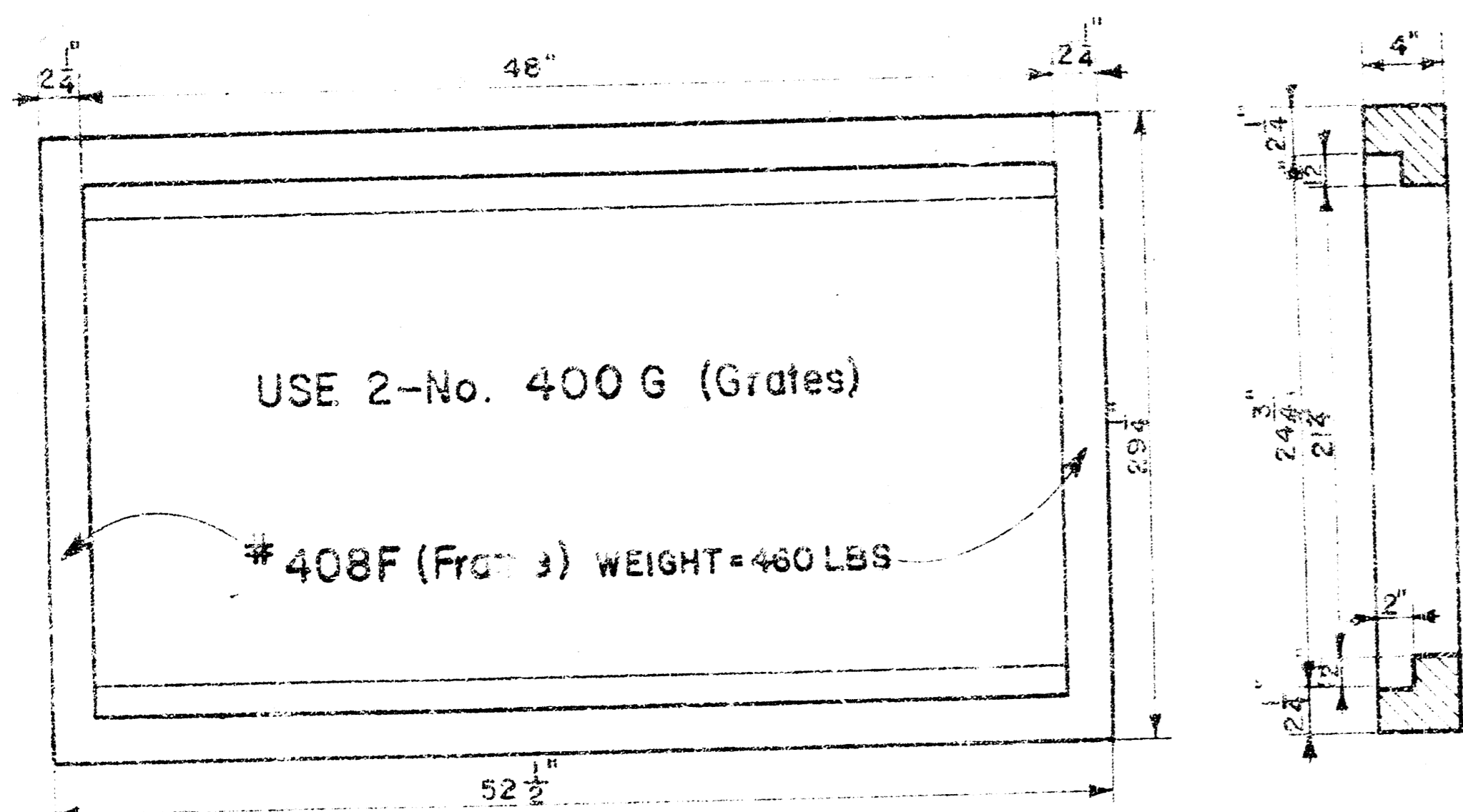
DETAIL STANDARD TYPE 1A CURB INLET  
 CITY OF WICHITA, KANSAS  
 R.W. BRUGGEMAN, DIRECTOR OF ENGINEERING/  
 CITY ENGINEER  
 JUNE, 1981  
 SWS # 194  
 Sheet 14 of 14

NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be used only if approved by the engineer.

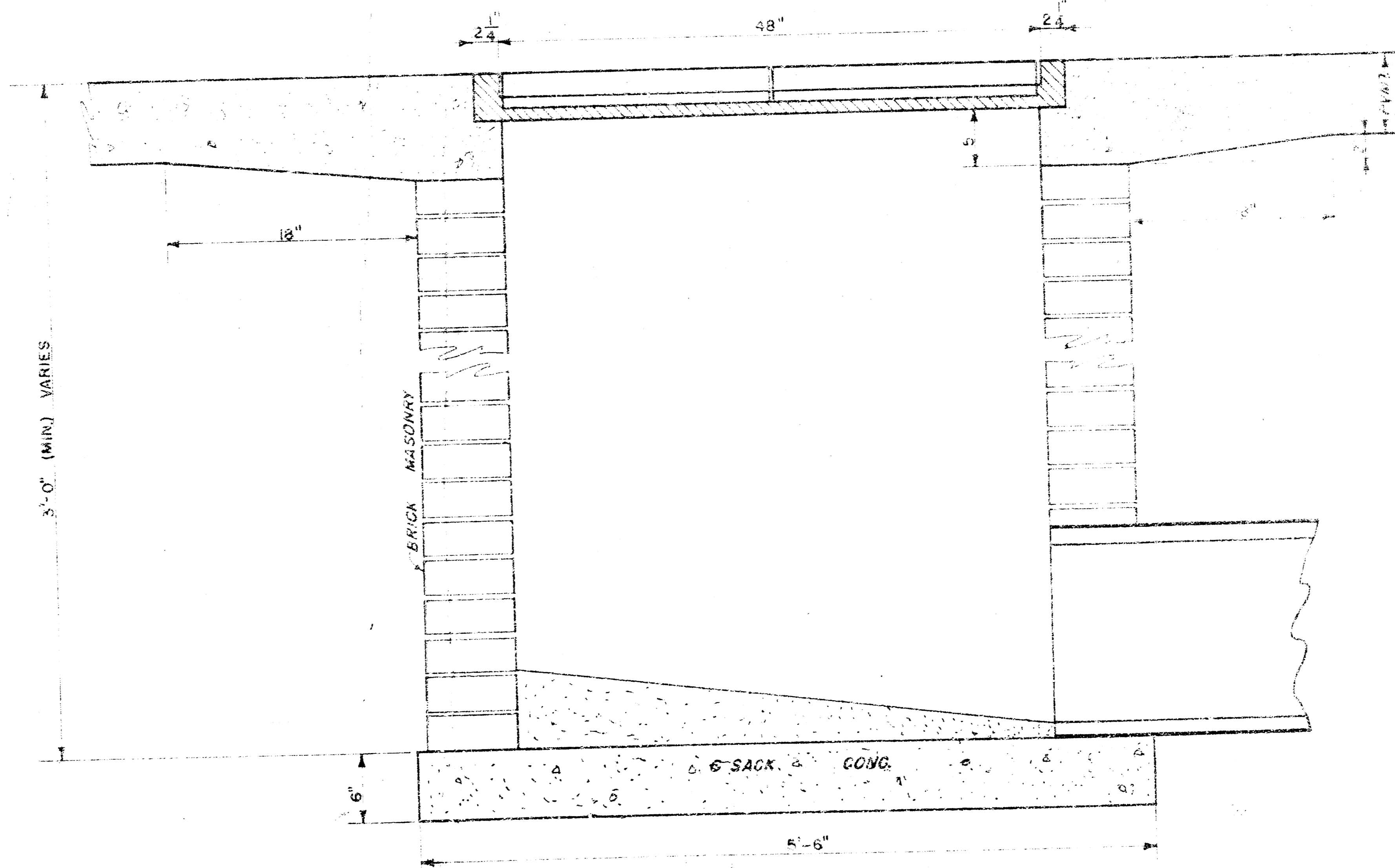
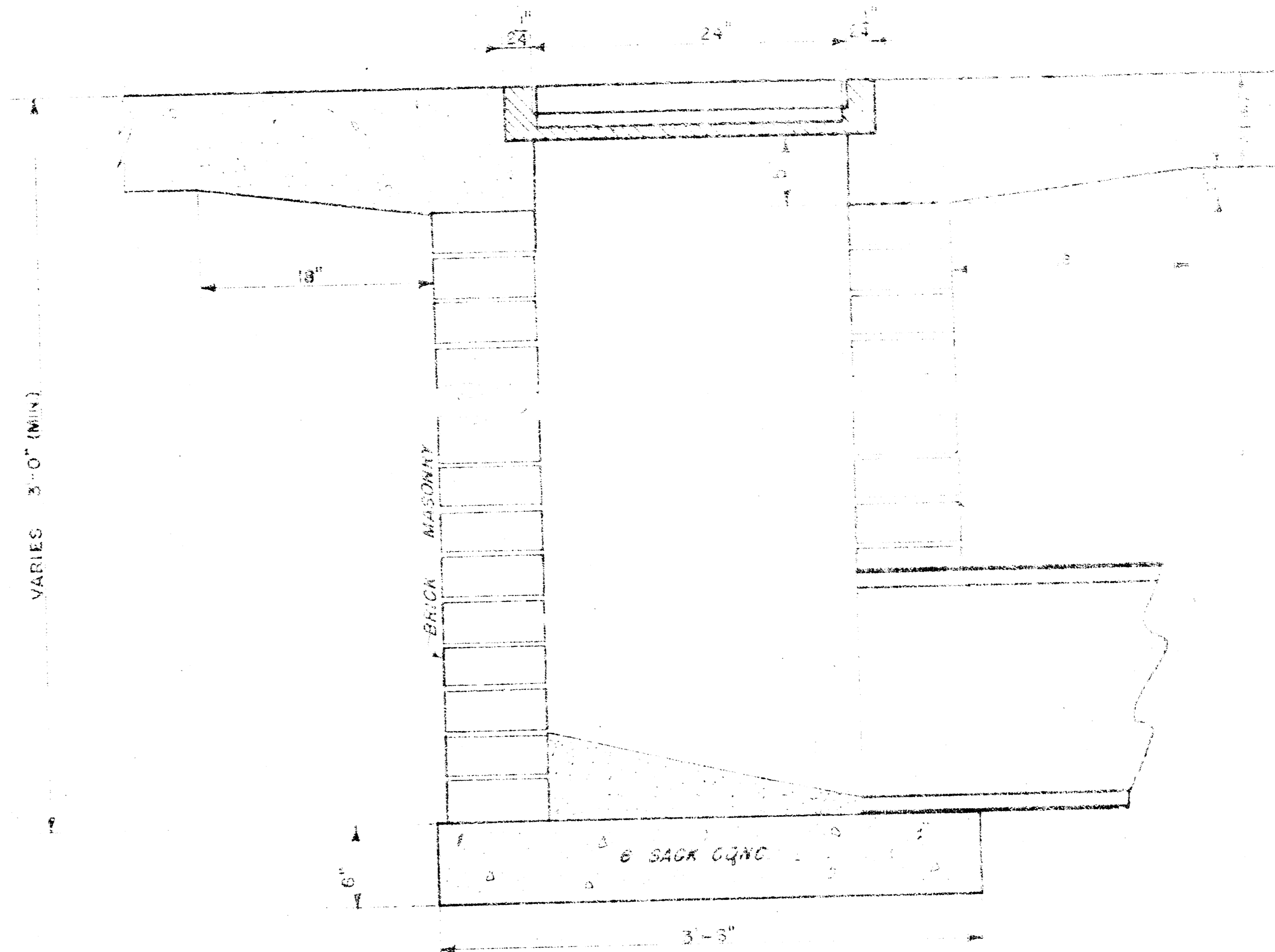
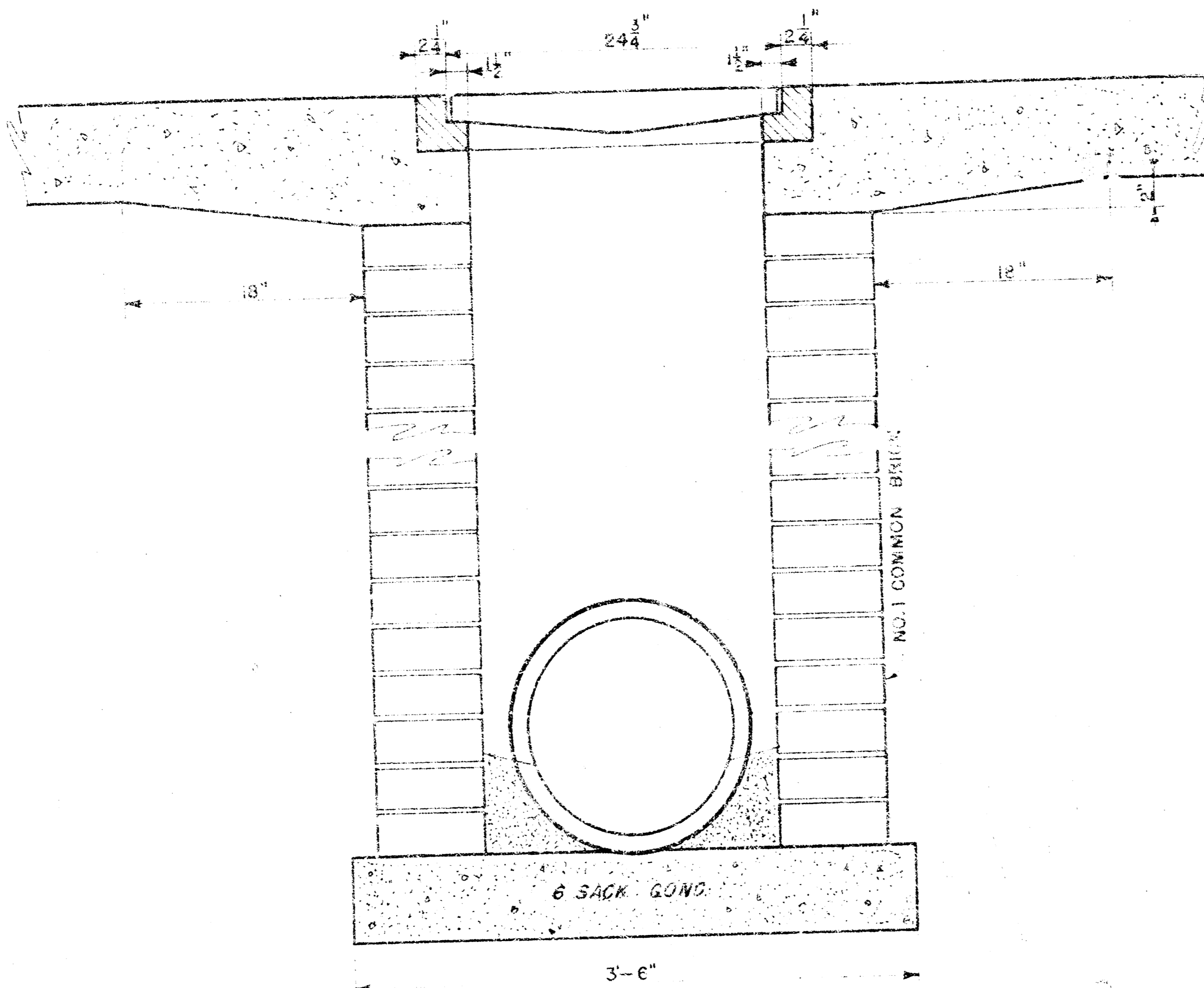


# 400G (Grate)  
WEIGHT = 235 LBS

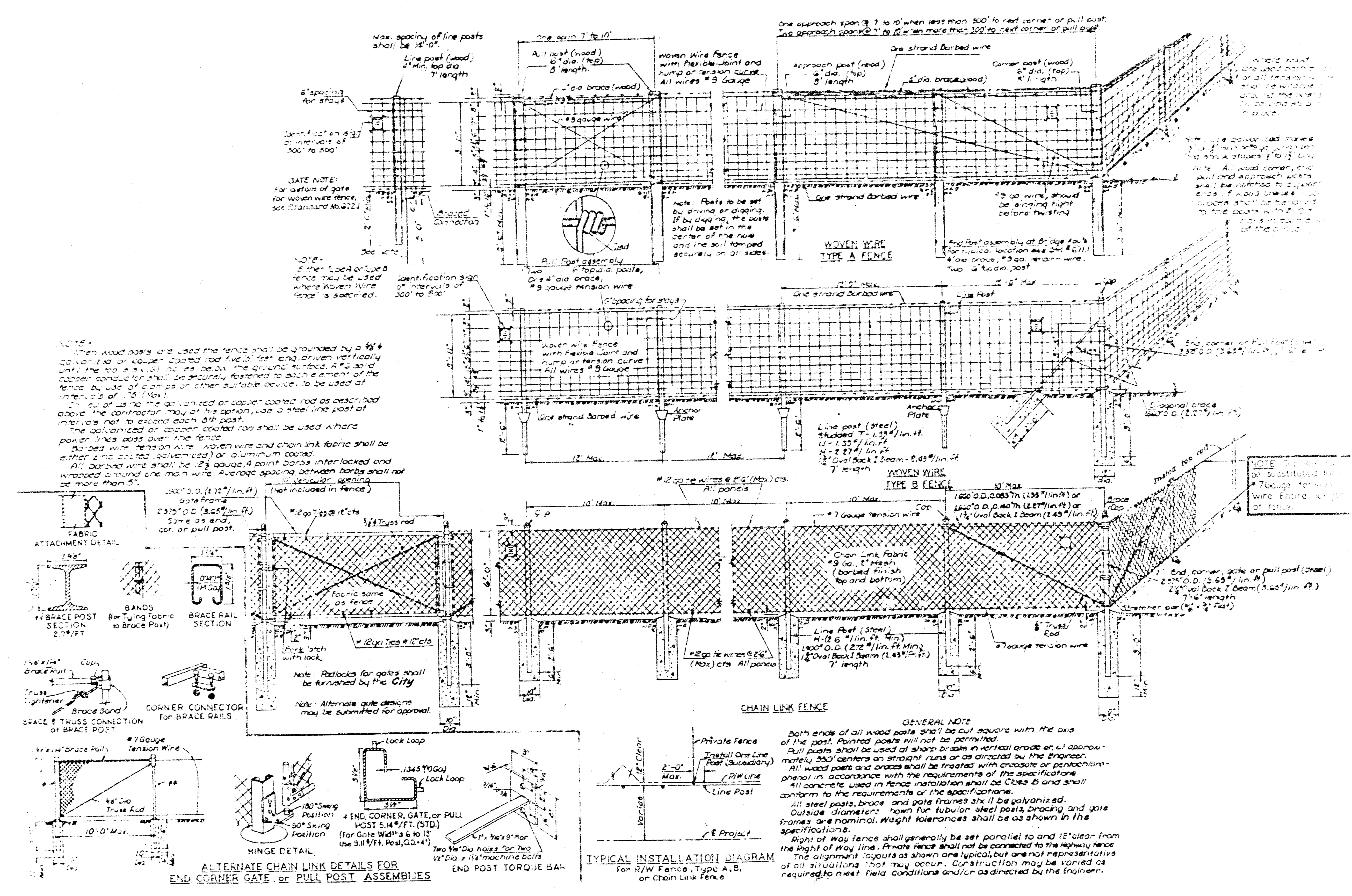
24"x24" Frame & Grate Detail



Double 24"x24" Frame Detail



DROP INLET DETAILS



NOTE: When wood posts are used the fence shall be grounded by a #8 copper rod or galvanized rod five feet long driven vertically into the top of the post below the ground surface. A #8 galvanized copper conductor shall be securely fastened to each element of the fence by use of clamps or other suitable device, to be used at intervals of 15'.

NOTE: In lieu of the galvanized or copper coated rod as described above the contractor may, at his option, use a steel line post of intervals not to exceed 200' or 300'.

NOTE: The galvanized or copper coated rod shall be used where power lines pass over the fence.

NOTE: Galvanized wire tension wire and chain link fabric shall be attached and fastened to galvanized rod or aluminum coated.

NOTE: All barbed wire shall be #2 gauge, 4 point bars interlocked and wrapped around one main wire. Average spacing between bars shall not be more than 3".

**GENERAL NOTE**

Both ends of all wood posts shall be cut square with the axis of the post. Pointed posts will not be permitted.

Pull posts shall be used at sharp breaks in vertical grade or at approach points, 250' centers on straight runs and as directed by the Engineer.

All wood posts and braces shall be treated with creosote or pentachlorophenol in accordance with the requirements of the specifications.

All concrete used in fence installation shall be Class B and shall conform to the requirements of the specifications.

All steel posts, brace and gate frames shall be galvanized.

Outside diameters shown for tubular steel posts, bracing and gate frames are nominal. Weight tolerances shall be as shown in the specifications.

Right of Way fence shall generally be set parallel to and 12' clear from the right of way line. Private fence shall not be connected to the right of way fence.

The alignment layouts as shown are typical, but are not representative of all situations that may occur. Construction may be varied as required to meet field conditions and/or as directed by the Engineer.

PROJECT DESCRIPTION
SWS # 194
PROJECT NUMBER
448-76-245-80962-000-000-001



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50		
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Section #60  
 22,744 CF  
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