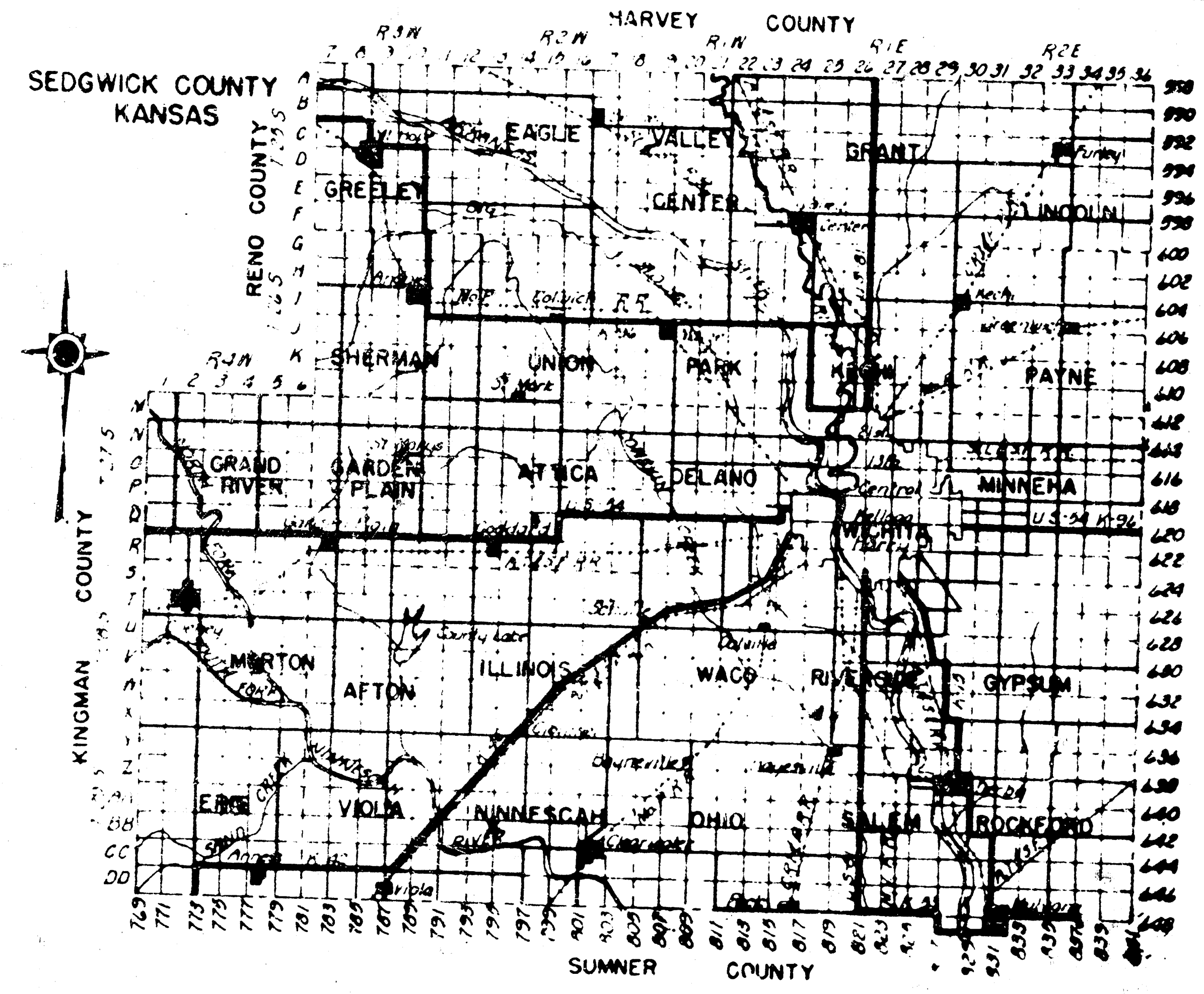

SEDGWICK COUNTY
KANSAS
HARVEY COUNTY
RENO COUNTY
KINGMAN COUNTY
SUMNER COUNTY
R 3 W
R 2 W
R 1 W
R 1 E
R 2 E
GREELEY
EAGLE
VALLEY CENTER
GRANT
LINCOLN
SHERMAN
UNION
PARK
KECHI
PAYNE
GRAND RIVER
GARDEN PLAIN
ATTICA
DELANO
MINNEHA
MORTON
AFTON
ILLINOIS
WACO
RIVERSIDE
GYPSUM
ERIE
VIOLA
NINNESCAH
OHIO
SALEM
ROCKFORD

SEDGWICK COUNTY ENGINEERING DEPARTMENT

PLAN AND PROFILE OF PROPOSED

13 TH. STREET STORM SEWER

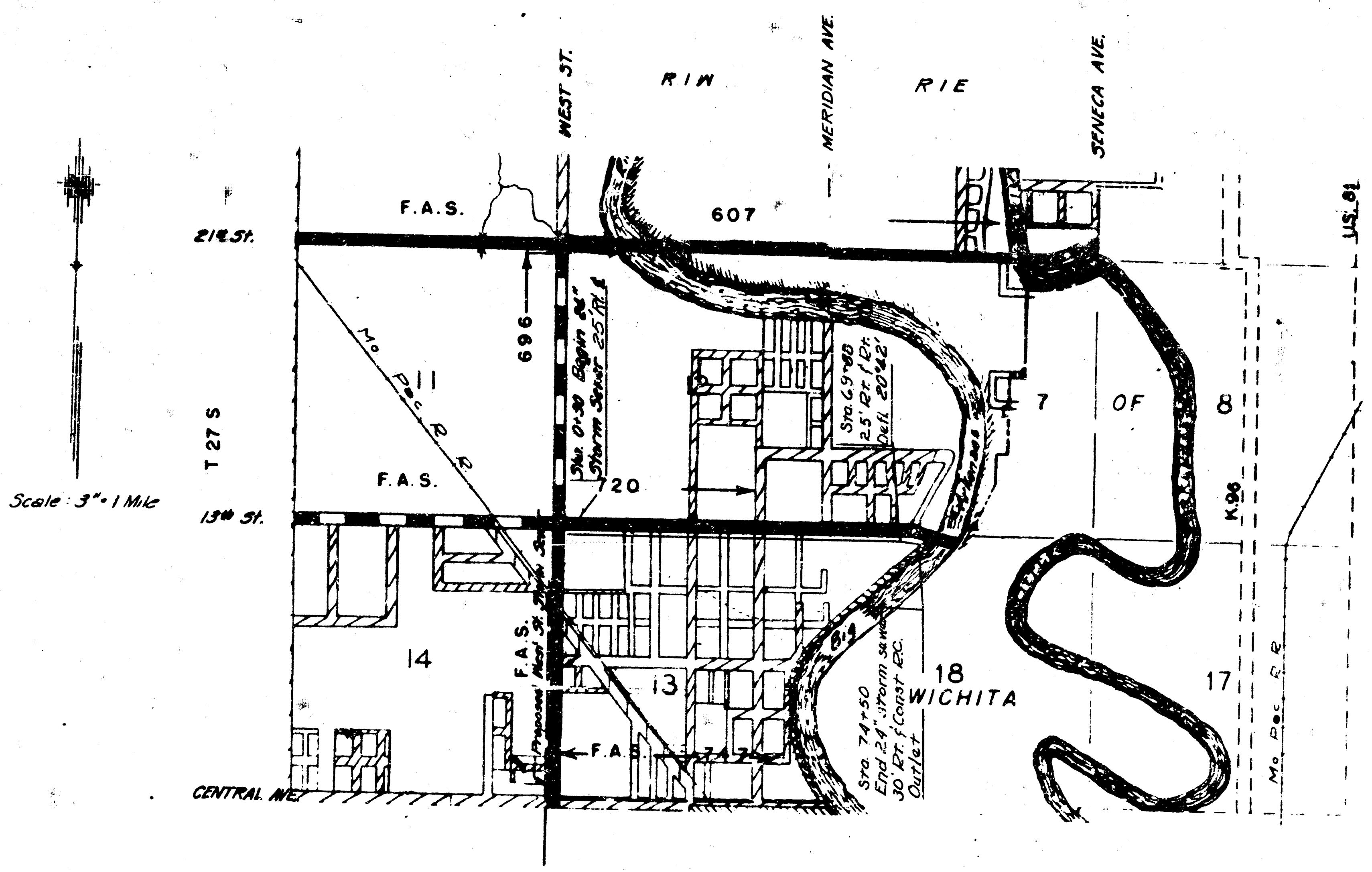
DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
4	KANS.		1	9

SHEET NO.	INDEX TO SHEETS
1	Title Sheet
2-3	Plan and Profile
4	Sewer Appurtenances

SUMMARY OF QUANTITIES		
Lay 24" R.C. Pipe	7475	L.F.
Lay 12" " "	156	L.F.
Construct Manholes (14)	84	V.F.
Construct Curb Inlets	8	Ea.
Install 12" R.C. Pipe	4	Ea.
Construct Conc. Outlet	1	Ea.
Install Manhole Steps	53	Ea.
Total Manhole Construction	84	L.F.
Install Concrete & brick inlet (cast iron grate)	1	Ea.
Drive 12"⌀ Piling (4)	80	L.F.

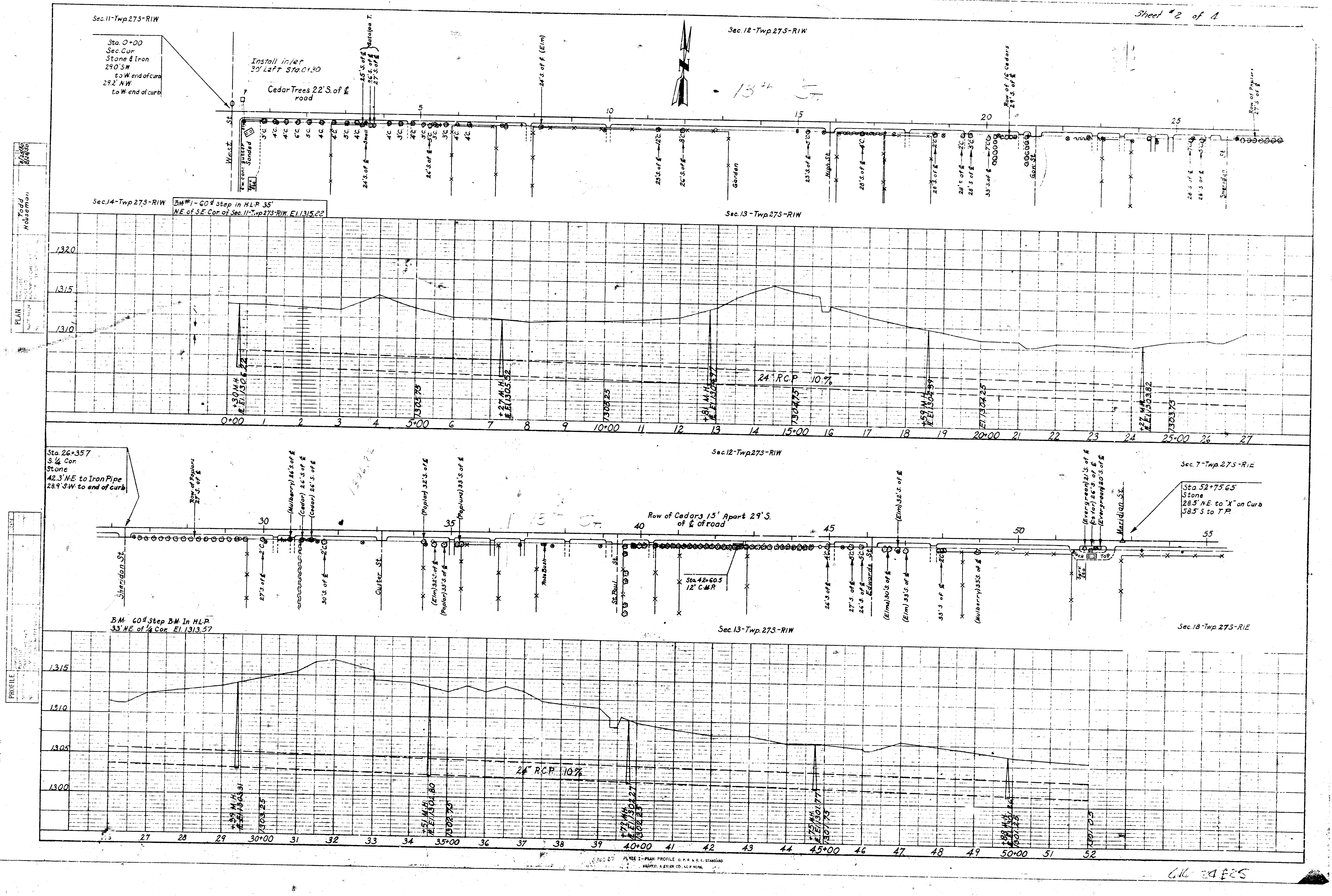
BILL OF MATERIAL		
12" R.C. Pipe	156	L.F.
24" " " "	7475	L.F.
Brick	14.380	Ea.
Manhole Covers (14)	980	Lbs.
Manhole Rings (14)	476	Lbs.
Mortar	13.6	C.Y.
Concrete in Manhole Bases	12.6	C.Y.
Concrete for Outlet	7.0	C.Y.
Concrete in Inlets	4.0	C.Y.
Reinforcing Steel (Inlets)	133	Lbs.
Reinforcing Steel (Outlet)	397	Lbs.
Curb and Gutter Stl. Plates	950	Lbs.
Total Cast Iron	1750	Lbs.
Total Concrete	37.2	C.Y.
Total Reinforcing Steel	531	Lbs.
Total Steel Plates	950	Lbs.
Total Steel Steps	287	Lbs.
		Lbs.
12"⌀ x 20' Treated Timber Piling	80	L.F.

Revised July-1950 W.J.F.
Sept.-1950
Oct. 2-1950

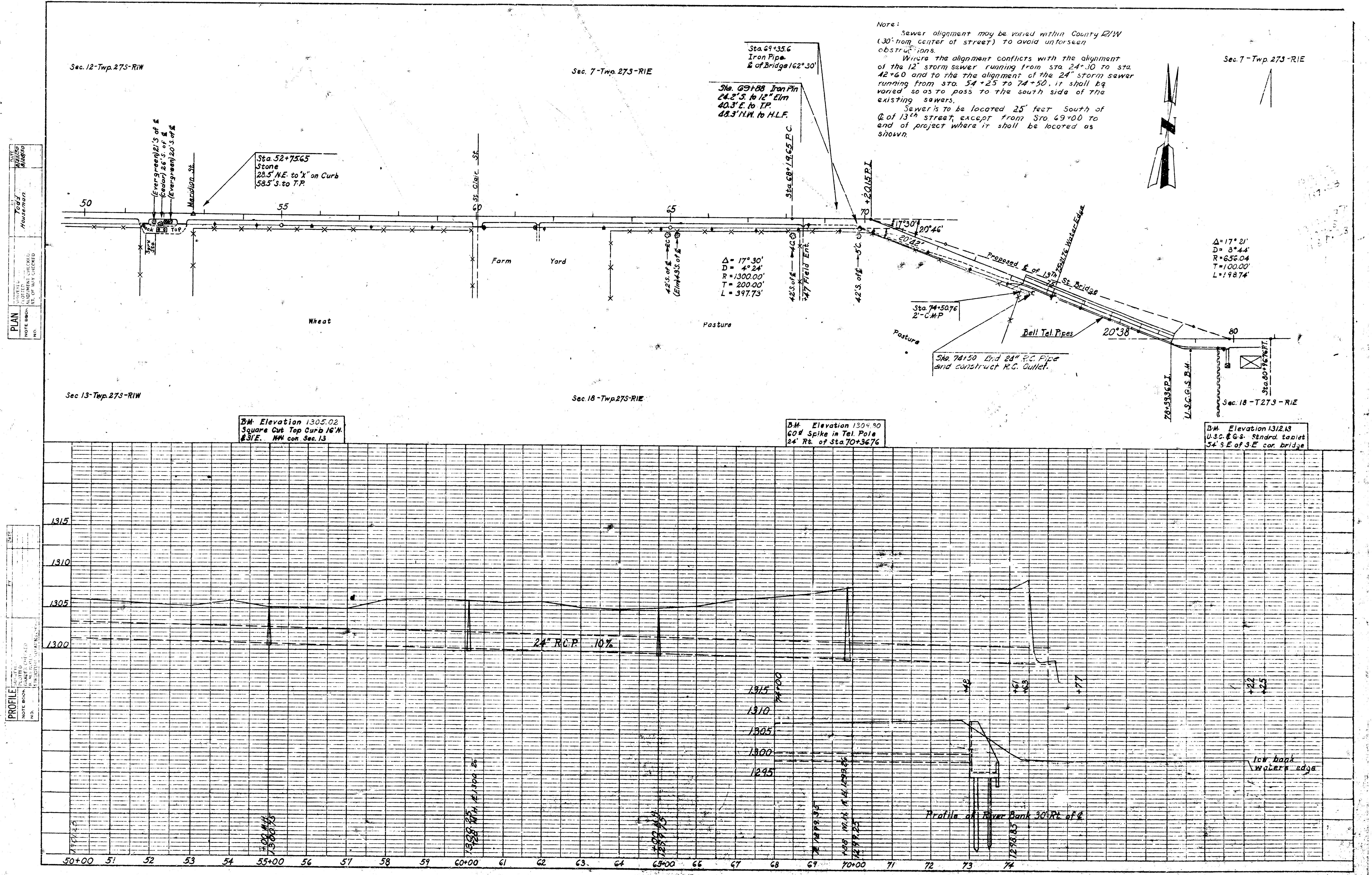

Scale: 3" = 1 Mile
WEST ST.
MERIDIAN AVE.
SENECA AVE.
R 1 W
R 1 E
21st St.
13th St.
CENTRAL AVE.
F.A.S.
607
696
720
747
T 27 S
11
13
14
7 OF 8
18
17
WICHITA
Mo. Pac. R.R.
K 96
US 81
Sta. 0+30 Begin 24" Storm Sewer 25' Rt. ℄
Sta. 69+80 25' Rt. ℄ Rt. Defl. 20°42'
Sta. 74+50 End 24" Storm Sewer 30' Rt. ℄ Const. R.C. Outlet
Proposed West St. Storm Sewer

	FEET	MILES
Gross Length of Project	7,475	1.416
Exceptions	None	None
Additions	None	None
Net Length of Project	7,475	1.416

616 24 & 25 4 sheets


Sheet #2 of 4
Todd
Houseman
8/25/50
8/28/50
PLAN
PROFILE
DATE
Sec.11-Twp.27S-R1W
Sta. 0+00
Sec. Cor.
Stone & Iron
29.0' S.W. to W. end of curb
29.2' N.W. to W. end of curb
Install inlet 30' Left Sta. 0+30
Cedar Trees 22' S. of ℄ road
25' S. of ℄
26' S. of ℄
27' S. of ℄
Catalpa T.
24' S. of ℄ (Elm)
Sec.12-Twp.27S-R1W
13th St.
West St.
S.W. conc. gutter
Sanded
Serv. Sta.
3'C. 4'C. 4'C. 6'C. 5'C. 4'C. 4'C. 5'C. 4'C. 4'C. 3'C. 4'C. 3'C. 5'C. 3'C. 3'C. 4'C. 4'C.
Small
24' S. of ℄
26' S. of ℄
23' S. of ℄ 12'C.
26' S. of ℄ 8'C.
Garden
23' S. of ℄ 5'C.
High St.
28' S. of ℄ 4'C.
28' S. of ℄ 2'C.
28' S. of ℄ 2'C.
28' S. of ℄ 5'C.
33' S. of ℄ 7'C.
Row of 16 Cedars 29' S. of ℄
Gov. St.
28' S. of ℄ 7'C.
28' S. of ℄ 5'C.
Sheridan St.
Row of Poplars 27' S. of ℄
5 10 15 20 25
Sec.14-Twp.27S-R1W
BM #1 - 60d step in H.L.P. 35' N.E. of S.E. Cor. of Sec.11-Twp.27S-R1W. El. 1315.22
Sec.13-Twp.27S-R1W
1320 1315 1310
+30 M.H. ℄ El. 1306.22
1305.75
+27 M.H. ℄ El. 1305.52
1305.25
+81 M.H. ℄ El. 1304.97
1304.75
24" R.C.P. .10%
+59 M.H. ℄ El. 1304.39
El. 1304.25
+27 M.H. ℄ El. 1303.82
1303.75
0+00 1 2 3 4 5+00 6 7 8 9 10+00 11 12 13 14 15+00 16 17 18 19 20+00 21 22 23 24 25+00 26 27
Sta. 26+35.7
S. 1/4 Cor.
Stone
42.3' N.E. to Iron Pipe
28.9' S.W. to end of curb
Sec.12-Twp.27S-R1W
Row of Poplars 27' S. of ℄
(Mulberry) 26' S. of ℄
(Cedar) 26' S. of ℄
(Cedar) 26' S. of ℄
(Poplar) 32' S. of ℄
(Poplars) 33' S. of ℄
1306.22
13th St.
Row of Cedars 15' Apart 29' S. of ℄ of road
Sheridan St.
27' S. of ℄ 2'C.
30' S. of ℄ 2'C.
Custer St.
(Elm) 32' S. of ℄
(Poplar) 33' S. of ℄
Rose Bush
St. Paul St.
Sta. 42+60.5
12" C.M.P.
26' S. of ℄ 4'C.
27' S. of ℄ 5'C.
26' S. of ℄ 5'C.
Edwards St.
(Elm) 32' S. of ℄
(Elm) 30' S. of ℄
(Elm) 33' S. of ℄
33' S. of ℄ 2'C.
(Mulberry) 33' S. of ℄
(Evergreen) 21' S. of ℄
(Cedar) 26' S. of ℄
(Evergreen) 20' S. of ℄
Black Top
Serv. Sta.
Meridian St.
Sta. 52+75.65
Stone
28.5' N.E. to "X" on Curb
58.5' S. to T.P.
Sec.7-Twp.27S-R1E
30 35 40 45 50 55
B.M. 60d Step B.M. In H.L.P. 33' N.E. of 1/4 Cor. El. 1313.57
Sec.13-Twp.27S-R1W
Sec.18-Twp.27S-R1E
1315 1310 1305 1300
+39 M.H. ℄ El. 1303.31
1303.25
+51 M.H. ℄ El. 1302.80
1302.75
24" R.C.P. .10%
+72 M.H. ℄ El. 1302.27
1302.25
+75 M.H. ℄ El. 1301.77
1301.75
+88 M.H. ℄ El. 1301.26
1301.25
1301.03
27 28 29 30+00 31 32 33 34 35+00 36 37 38 39 40+00 41 42 43 44 45+00 46 47 48 49 50+00 51 52
PLATE 2 - PLAN - PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK
GK 24 E25

Sheet # 3 of 4


Sec. 12-Twp. 27S-R1W
Sec. 7-Twp. 27S-R1E
Sec. 7-Twp. 27S-R1E
Sec. 13-Twp. 27S-R1W
Sec. 18-Twp. 27S-R1E
Sec. 18-T27S-R1E
PLAN
NOTE BOOK
ALIGNMENT CHECKED
RT. OF WAY CHECKED
Todd
Houseman
50
55
60
65
70
75
80
(Evergreen) 21'S of ℄
(Cedar) 26'S. of ℄
(Evergreen) 20'S. of ℄
Meridian St.
Back Top
Serv. Sta.
Sta. 52+75.65
Stone
28.5' N.E. to "X" on Curb
58.5' S. to T.P.
St. Clair St.
Farm
Yard
Wheat
Pasture
Pasture
42'S. of ℄ → 2C
(Elm) 43'S. of ℄
42'S. of ℄ → 4C
+47 Field Ent.
42'S. of ℄ → 5'C
Δ = 17° 30'
D = 4° 24'
R = 1300.00'
T = 200.00'
L = 397.73'
Sta. 68+19.65 P.C.
+20.15 P.I.
Sta. 69+35.6
Iron Pipe
℄ of Bridge 162° 30'
Sta. 69+88 Iron Pin
24.2' S. to 12" Elm
40.3' E. to T.P.
48.3' N.W. to H.L.F.
17° 30'
20° 46'
20° 42'
Proposed ℄ of 13th St. Bridge
75+21.76 Water Edge
Sta. 74+50.76
2'-C.M.P
Sta. 74+50 End 24" R.C. Pipe and construct R.C. Outlet.
Bell Tel. Pipes
20° 38
Δ = 17° 21'
D = 8° 44'
R = 656.04
T = 100.00'
L = 198.74'
78+39.36 P.I.
U.S.C.G.S. B.M.
Sta. 80+96.76 P.T.
N
B.M. Elevation 1305.02
Square Cut Top Curb 16' N. & 31' E. NW cor. Sec. 13
B.M. Elevation 1309.80
60d Spike in Tel. Pole
24' Rt. of Sta. 70+36.76
B.M. Elevation 1312.13
U.S.C. & G.S. Stndrd. tablet
54' S.E. of S.E. cor. bridge
PROFILE
1315
1310
1305
1300
24" R.C.P. .10%
+00 M.H.
1300.75
M.H. 1300.25
+00 M.H.
1299.75
1299.35
+88 M.H. 1298.26
1299.25
1298.85
74+00
1315
1310
1305
1300
1295
+48
+61
+63
+77
+22
+25
low bank
waters edge
Profile at River Bank 30' Rt. of ℄
50+00
51
52
53
54
55+00
56
57
58
59
60+00
61
62
63
64
65+00
66
67
68
69
70+00
71
72
73
74

Note:

Sewer alignment may be varied within County R/W (30' from center of street) to avoid unforseen obstructions.

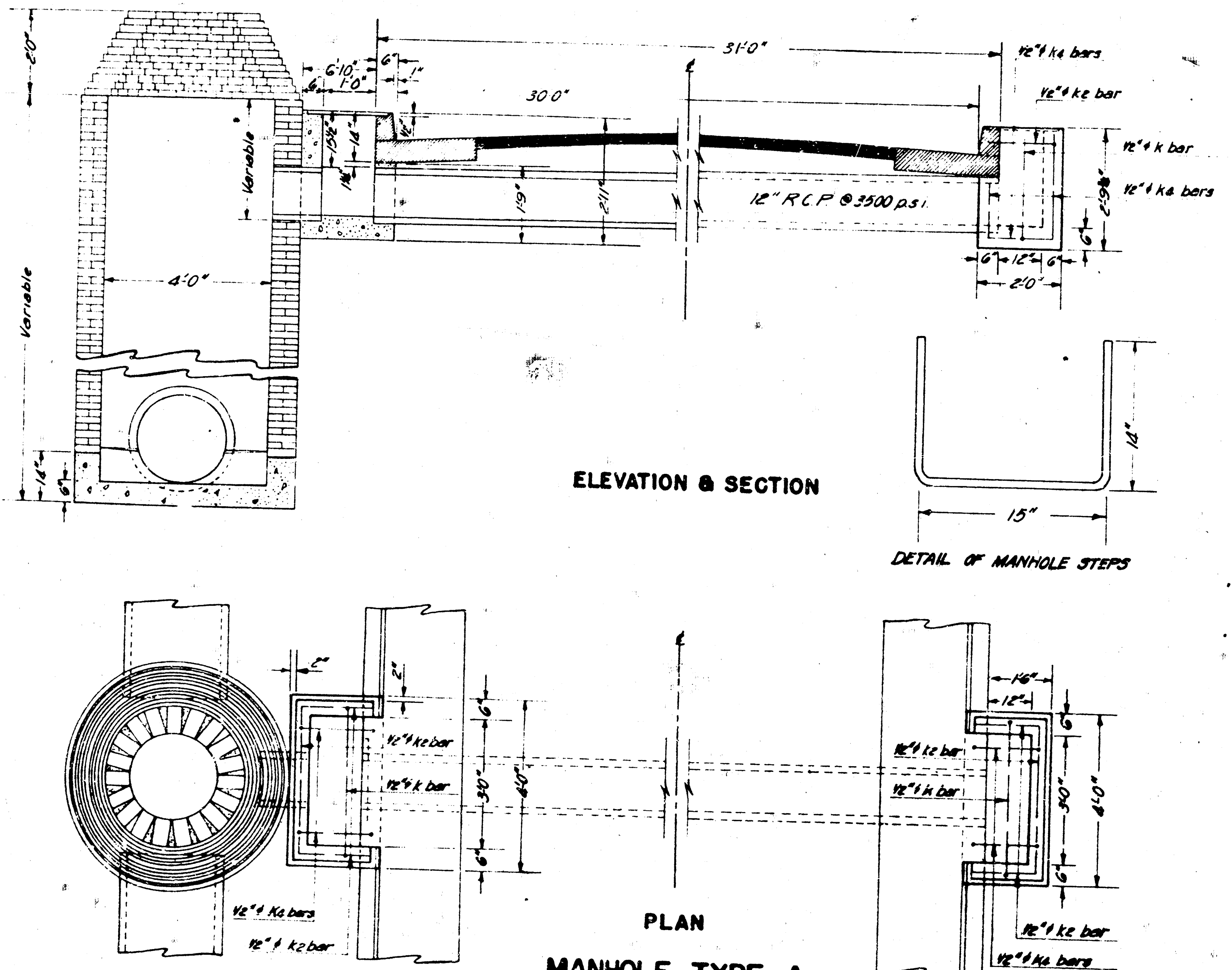
Where the alignment conflicts with the alignment of the 12" storm sewer running from sta. 24+30 to sta. 42+60 and to the the alignment of the 24" storm sewer running from sta. 54+25 to 74+50, it shall be varied so as to pass to the south side of the existing sewers.

Sewer is to be located 25' feet South of ℄ of 13th street, except from Sta. 69+00 to end of project where it shall be located as shown.

PLATE 1 - PLAN - PROFILE C. P. R. & P. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK

G14-24 #25

Sheet #4 of 4


2'0"
6'10"
1'0"
6"
1"
30'0"
31'0"
Variable
4'0"
14"
6"
15½"
1½"
19"
2'1½"
12" R.C.P. @ 3500 p.s.i.
½"φ k4 bars
½"φ k2 bar
½"φ k bar
2'9½"
6" 12" 6"
2'0"
14"
15"
2"
½"φ k2 bar
½"φ k bar
½"φ K4 bars
6"
3'0"
4'0"
1'6"
12"

ELEVATION & SECTION

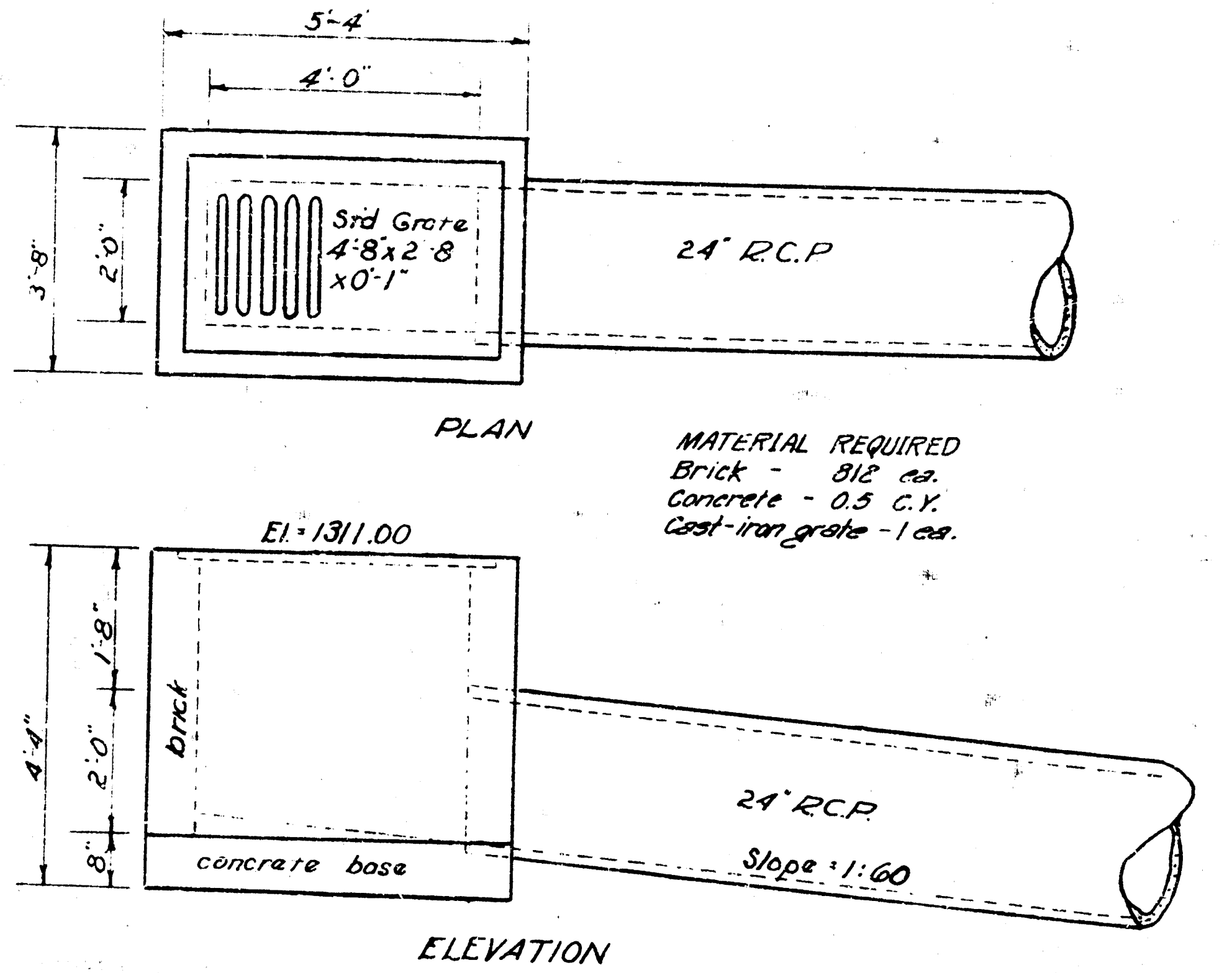
DETAIL OF MANHOLE STEPS

PLAN

MANHOLE TYPE A

No Scale

Note:
Manhole Covers along 13th St. to be Cistern Type Ring and Cover @ 104 lbs. Brick openings in all Manholes to be 22" in diameter. ¾"φ steel to be used for steps. Spacing between steps to be 15". 53 required.


5'-4"
4'0"
3'8"
2'0"
Std Grate 4'8"x2'8"x0'-1"
24" R.C.P
El. = 1311.00
4'4"
1'8"
2'0"
8"
brick
concrete base
24" R.C.P.
Slope = 1:60

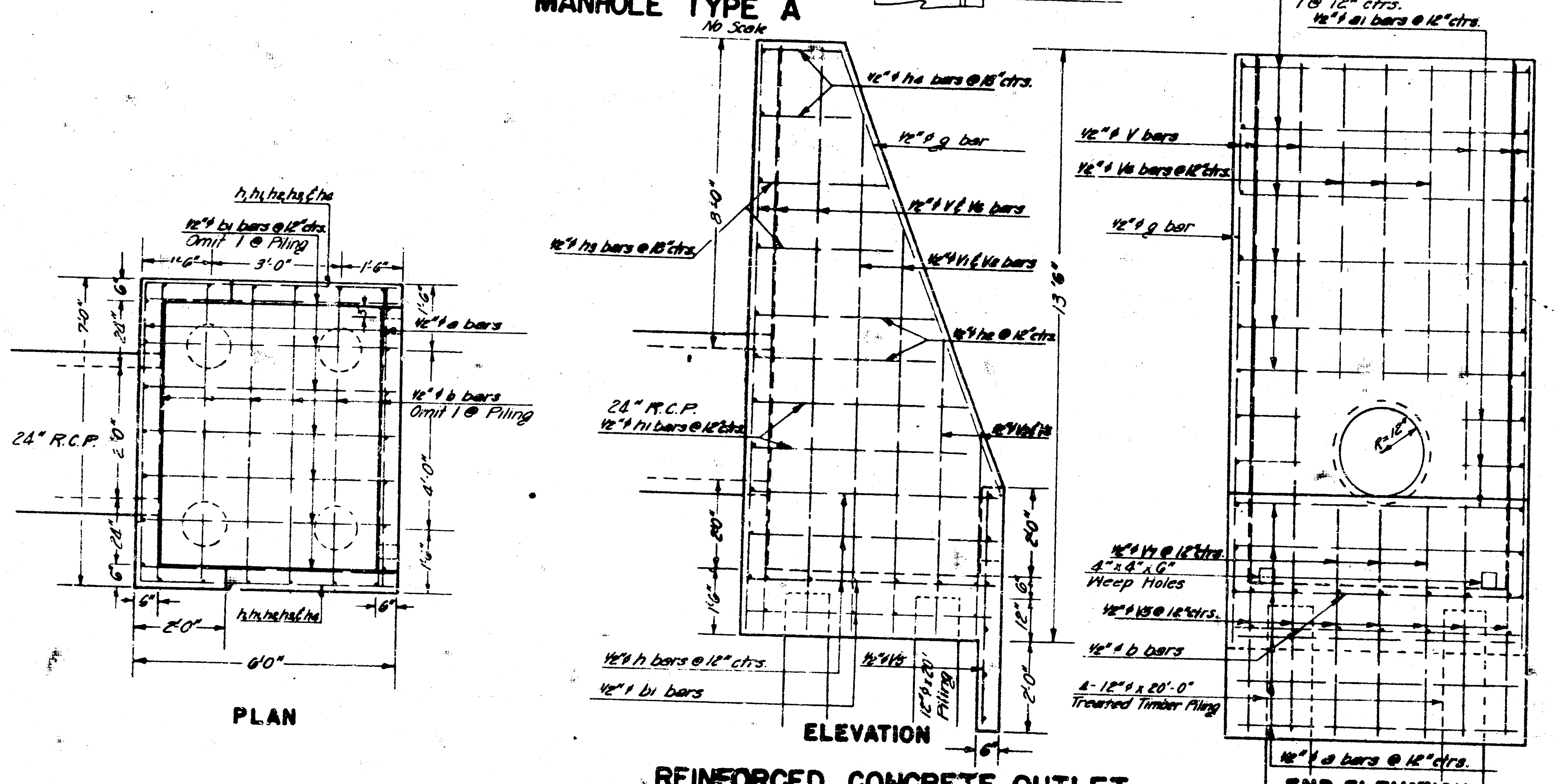
PLAN

MATERIAL REQUIRED
Brick - 812 ea.
Concrete - 0.5 C.Y.
Cast-iron grate - 1 ea.

ELEVATION

CONCRETE AND BRICK INLET WITH GRATE AND CROSS-ROAD PIPE

No Scale


h, h1, h2, h3 & h4
½"φ b1 bars @ 12" ctrs.
Omit 1 @ Piling
1'6"
3'0"
7'0"
6"
2'0"
½"φ a bars
½"φ b bars
Omit 1 @ Piling
24" R.C.P.
4'0"
1'6"
6'0"
½"φ h4 bars @ 18" ctrs.
½"φ g bar
½"φ V & V6 bars
½"φ h3 bars @ 18" ctrs.
½"φ V1 & V2 bars
½"φ h2 @ 12" ctrs.
24" R.C.P.
½"φ h1 bars @ 12" ctrs.
8'0"
13'6"
½"φ h bars @ 12" ctrs.
½"φ b1 bars
12"φ x 20' Piling
½"φ V3
½"φ V4 & V5
2'0"
12"
½"φ V bars
½"φ V6 bars @ 12" ctrs.
½"φ V7 @ 12" ctrs.
4"x4"x6" Weep Holes
½"φ V5 @ 12" ctrs.
½"φ b bars
4-12"φ x 20'-0" Treated Timber Piling
R=12"
½"φ a bars @ 12" ctrs.

PLAN

ELEVATION

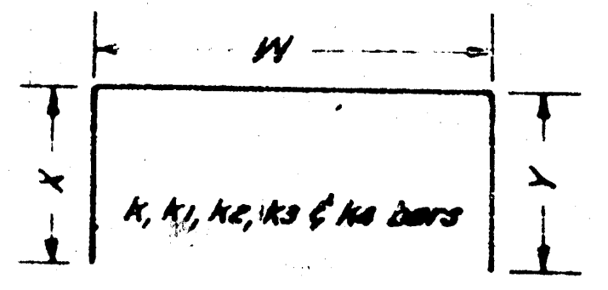
REINFORCED CONCRETE OUTLET

No Scale

END ELEVATION

½"φ a bars @ 18" ctrs.
1 @ 12" ctrs.
½"φ a1 bars @ 12" ctrs.

BILL OF MATERIAL FOR BASINS


W
X
Y
k, k1, k2, k3 & k4 bars

BAR	DIMENSIONS		
	W	X	Y
k	3'6"	2'4"	2'4"
k1	3'6"	1'10"	1'10"
k2	3'6"	1'6"	1'6"
k3	1'10"	2'5"	1'5"
k4	1'6"	1'9"	2'4"

BAR	K	k1	k2	k3	k4
NO.	8		8		16
SIZE	½"φ	½"φ	½"φ	½"φ	½"φ
LENGTH	8'2"	7'2"	6'6"	5'8"	5'1"
TOTAL LBS. RE-STEEL 133					

BILL OF MATERIAL FOR CONCRETE OUTLET

BAR	a	a1	b	b1	h	h1	h2	h3	h4
NO.	14	6	10	12	8	4	4	4	4
SIZE	½"φ	½"φ	½"φ	½"φ	½"φ	½"φ	½"φ	½"φ	½"φ
L'GTH.	6'9"	1'11"	6'5"	5'2"	5'5"	4'11½"	4'1½"	2'11½"	2'0"
BAR	V	V1	V2	V3	V4	V5	V6	V7	Q
NO.	8	2	2	2	2	7	3	3	2
SIZE	½"φ	½"φ	½"φ	½"φ	½"φ	½"φ	½"φ	½"φ	½"φ
L'GTH.	13'3"	12'0"	9'6"	7'0"	4'6"	5'5"	7'5"	2'11"	10'6"
TOTAL LBS. RE-STEEL 397									
TOTAL YDS. CLASS "A" CONCRETE 7.0									
TREATED PILING 4-12"φ x 20' TOTAL 80 L.F.									

GENERAL NOTES

All concrete to be Class "A". Bevel all exposed edges with a ¾" triangular molding. Tongue and Groove Reinforced Concrete Pipe @ 3500 p.s.i. to be used thruout.
19" x 44" x ½" steel plate covers to be used on curb inlets. 8 required.
Manhole Type "A" with Curb Inlets to be constructed 25' Rt. of ℄ 13th St. @ Sta. 7+27, 24+27, 55+00, and 65+00. Construct Manhole Type "A" omitting Curb Inlets and Cross-Road Pipes 25' Rt. ℄ 13th St. @ Sta. 0+30, 12+81, 18+59, 29+39, 34+51, 39+79, 44+75, 49+88, 60+28, 69+00.
Construct Concrete and Brick Inlet with Grate and Cross-Road Pipe 30' Lt. ℄ 13th St. @ Sta. 0+30.
End Reinforced Concrete Pipe and construct Reinforced Concrete Outlet on 12"φ Timber Piling 30' Rt. ℄ Present 13th St. Bridge @ Sta. 74+50.

SEWER APPURTENANCES

PREPARED BY
SEDGWICK COUNTY ENGINEERING DEPT.
RUFUS S. KIRK — COUNTY ENGINEER

REVISED	SCALE	DESIGNED	TRACED	CHECKED	SHEET NO.
July 18, 1950 W.J.F. Sept. 5-50 W.J.F.	Noted		Freund		4
	DATE		4-24-50		
	PLANFILE		TOTAL SHEETS		

G16-20825