

EUGENE DIETZGEN CO.
 DRAWING MATERIALS, MATHEMATICAL and
 SURVEYING INSTRUMENTS
 Chicago New York San Francisco New Orleans Pittsburgh Toronto

Distances from Center of Roadway for Cross-Sectioning
 Roadway 16 feet wide. Side Slopes 1 on 1.
 For Single Track Embankment

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above Grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6+(20-16)+2 or 2 ft. added to 30.6-32.6. For slopes of 1 on 1 1/2 see inside of back cover.
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627-9

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INDEX

Page

Dwight ^{And} Landana Sewer Const	2-6
50th St. " "	7-9
Wrightman & Winona " "	11-15
Intercepting Sewer Const. North from ^{Winona, Landana}	16-19
48th St. " "	20
Sewer Const S.E. of Reno Drive	21
Wrightman St. Sewer Const	22-23
Sewer in Easement West of 52nd	24
Rex Ave Sewer " " "	25
Alladana St. Sewer Const.	26-27
Sterling Court " " West of Alladana	28
50th N of Sterling Ct. Sewer Const.	29
Univ. Ave Sewer from Oak Crest Drive, West	31
Oak Crest Sewer	32-39
Sterling Court " from Alladana to 51st	35
Landis St. " " " East	36
Lemona " " Landis St. South	37
No. of Landis & E. of Alladana (Sewer Const. Easement)	39
N of 52nd. No. of Landis (Sewer Const. Easement)	40
Alleys Block 36, 29, 24 (Fairmount Add.) Sewers	41
Estrella Ave. So. of Polk to So. of Univ. sewers	42
Univ. Ave. So. side from Estrella W. "	43
Block E Oak Park Easement	44
Univ Ave at 51st St. to South	45
Univ Ave at 51st St. to North and in 46.4 Block D and alley 13 block 25 Fairmount Add. (sewers)	

INDEX (Contd.)

Page

Polk Ave between 52nd & Alladana Sewers	48
51st St. So. of Polk Sewers	49
Alleys Block 26, 39, 42 Fairmount Add (Sewers)	50-52
51st St. North of Orange Sewers	53
Alley Block 40, 41 Fairmount Add. Sewers	54
" " 38 " " "	55-56
" " 28, 37 " " "	57, 58
" " 29, 36 " " "	59
" " 24, 29 " " "	60, 61
" " 24 " " "	62
Polk Ave (Winona & 49th St)	63
Alley Block 23 & 30 Fairmount Add Sewers	64, 65
" " 35 " " "	66
Polk Ave - Estrella to 49th.	67
50th St. So. of Orange Ave.	68
Alley Block 22, 31 Fairmount Add	69-70
52nd St E/Cajon to Trojan	71-72
Alley Block 2 Alhambra Park	73
Auburn Dr.	74-75
University Ave. W. 49th St.	76-78
Dwight St. Ext. (Grade Change)	79

Walker
Becker
Johnson
7-8-47
Dwight St. - Sewer Construction
from Euclid Ave
to Auburn Drive
Plan # 6757-1

			B.M. on Hub 1+44 FB 1678-71 E.I. Flow
6.25	337.88	331.63	
0+00 = D.F.	5.21	332.67	326.85
+35	5.41	332.47	326.50
+70	5.61	332.27	326.15
1+05	5.81	332.07	325.80
1+44 = MH # 1 = Δ Lt. 13° 57'	5.96	331.92	325.41
1+80	5.94	331.94	325.05
2+15	5.71	332.17	324.70
+50	5.31	332.57	324.35
+85	5.42	332.46	324.00
3+17 = MH # 2 = POT.	5.32	332.56	323.68
+50	5.62	332.26	322.66
+85	6.04	331.84	321.57
4+20	7.31	330.57	320.49
+55	8.51	329.37	319.40
4+90	11.47	326.41	318.32
T.P.	9.68	336.96	10.60 327.28
FB 1678-71 chk E stake	5+32.45	13.77	323.19
Back 5+32.45 = MH # 3 on 2° 02' 28"	13.19	323.77	317.00
6+00 Ahead			
T.P.	14.2	325.19	13.19 323.77
0+35	5.20	319.99	314.10
+70	7.27	317.92	311.20

Cont. P-5 Cont P-5-6

Luts	Offsets
5.82	6' 4"
5.97	"
6.12	"
6.27	"
6.51	"
6.89	"
7.47	6' 4"
8.22	"
8.46	"
8.88	"
9.60	"
10.27	"
10.08	"
9.97	"
8.09	"
+677	1138' lt on Bisector
+589	This Return Void - See P-5-6
+672	

INDEXED
WK
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Dwight St. Sewer Extension

Cont from P. 2 Page
 32519¹¹⁵ P-5-6
 Void - Sec 820 316.99 308.30

1+05					
T.P.	4.20	316.67	12.72	312.47	
1+40					
	Δ Lt	15°25'20"	1.03	315.64	305.40
1+80.98=MH#4			9.29	307.38	301.98
"			9.36	307.31	301.98
T.P.	0.24	305.11	12.50	304.17	
T.P.	0.19	293.39	11.91	293.20	
2+20.98=Bk			6.07	287.30	282.38
T.P.	0.62	280.98	13.03	280.36	263.98
2+50.98=Bk			9.08	271.90	255.98
T.P.	0.40	268.35	13.03	267.95	
2+79.8			6.01	262.34	257.70
	Δ Rt				
3+08.14=MH#5			12.73	255.62	241.41
"			14.71	253.64	241.41
T.P.	1.77	257.39	12.73	255.62	
			2.63	254.76	

8.69	6' Lt
10.24	4.78' Lt = Nail in both on South Side House
5.40	6.05' Lt on Bisector
5.33	6.05' Lt " "
+ 4.92	
7.92	
15.92	
4.64	
14.21	6.04' Lt on Bisector
12.23	6.04' R " "

Walker
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Johnson
7-9-47
LANTANA DRIVE
SEWER CONSTRUCTION
from DWIGHT ST. - North
Plan # 6757-L

π
336.96 = from P-2

Station		El. Flow Line	Cuts	offsets
0+00 - LNH #3	13.19	323.77	317.00	6.77' - 11.38' RT on Bisector
+34	11.06	325.70	318.26	7.64' C.R.
+69	7.15	329.81	319.56	10.25' "
1+04	5.61	331.35	320.85	10.50' "
+3643 - LNH #6	5.19	331.77	322.05	9.72' 608' RT diag. R.P. 12.16' RT on Bisector
1+60	4.15	332.81	322.92	9.89'
+95	2.63	334.33	324.22	10.11'
2+30	1.26	335.70	325.51	10.19'
+5643 - DE	0.28	336.68	326.49	10.19'

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WIC
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Johnson
7-9-47

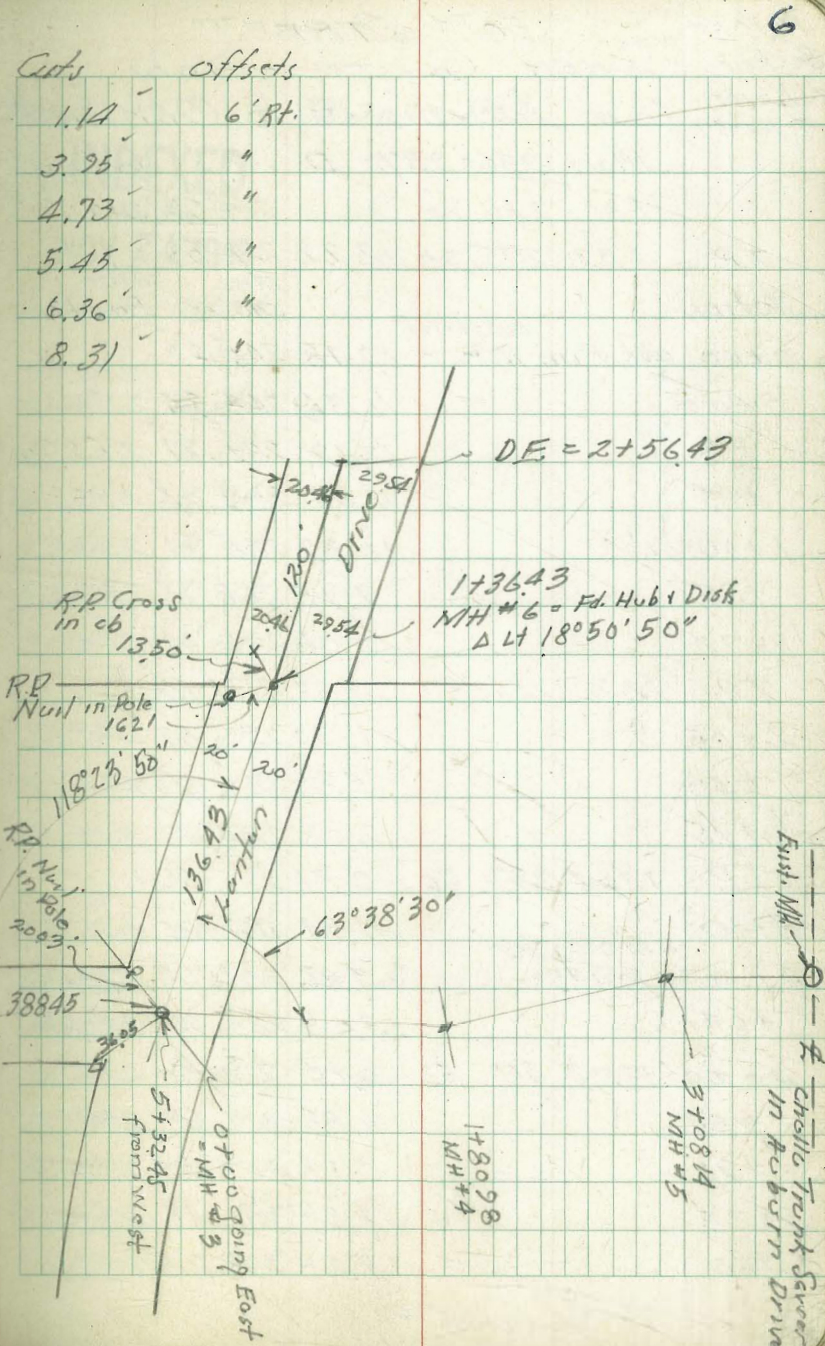
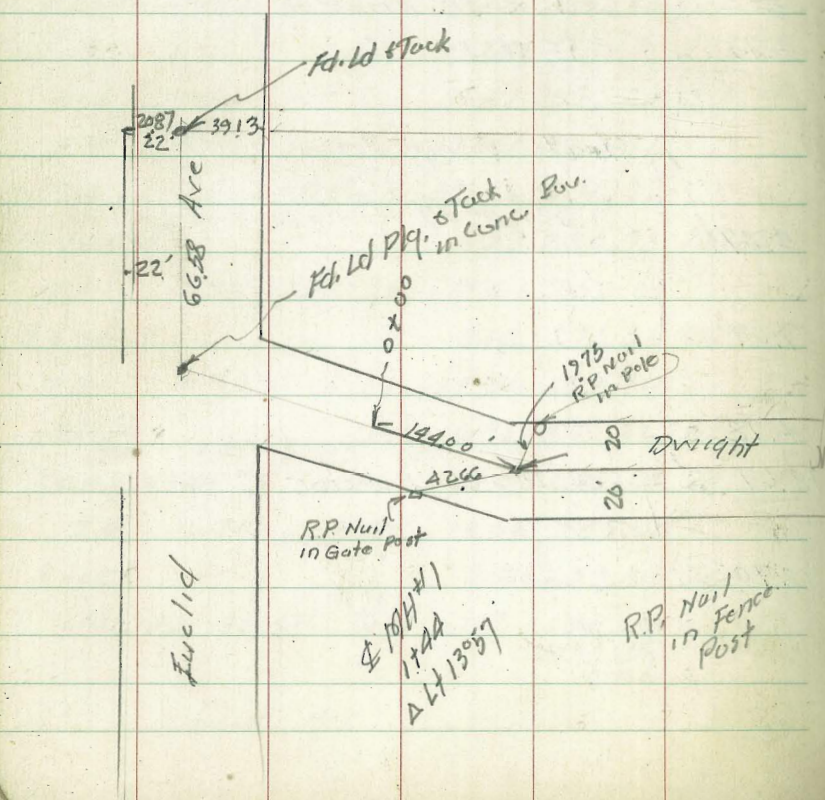
Dwight St. Sewer
Cont. from P-2
Plan # 6757-L

5+32.45 P-2	1.30	324.49	323.19	AM E Hub 5+32.49 P-2
= 0+00 = A.M.H.#3			0.73	323.76
+35			5.07	319.42
+70			7.13	317.36
1+05			8.06	316.43
TP	2.97	316.02	11.44	313.05
1+40			0.95	315.07
$\Delta 15^{\circ} 25' 20''$ Lt				
+80.98 M.H.#4			9.22	306.80
"			9.26	306.76
chk & stake			8.81	307.21
TP	1.93	304.74	13.21	302.81
TP	1.52	293.28	12.98	291.76
2+20.98			6.53	286.75
TP	0.93	280.98	13.23	280.05
2+50.98			9.62	271.36
TP	0.39	268.13	13.24	267.74
+79.56			6.91	261.82
$\Delta Rt 13^{\circ} 28'$				
3+08.14 - M.H.#5			13.05	255.08
TP	0.31	255.35	13.05	255.08
3+08.14			2.28	253.11
chk & Hub 3+08.14			1.17	254.22
				254.16
				0.06

Cont. P-6

6.76	11.78	Lt on Bisector
5.32		
6.16		
8.13		
9.67		
4.82	6.05	Lt on Bisector
4.78	6.05	Rt " "
Grade change from 1+80.98 To 3+08.14 See P-79 for New Grades		
4.37		
7.38		
4.12		
13.67	6.04	Lt on Bisector
12.70	"	Rt " "

	π Cont. from P-5	El. Stake	El. Flow Line	Cuts	Offsets
3+45	2.55	242.28	241.14	1.14	6' Rt.
+80		244.83	240.88	3.95	"
4+15		245.36	240.63	4.73	"
+50		245.82	240.37	5.45	"
+85		246.48	240.12	6.36	"
5+1306 = Existing MH	7.18	248.21	239.90	8.31	"
" Rinn " "	7.09	248.30			
" Flow " "	15.94	239.45	239.45		
		239.41	FB 1678		
		0.04	75		



Walker
Becker
Johnson
4-10-47

50TH STREET

SEWER CONSTRUCTION

from LANDIS ST. to OAK CREST DRIVE.

Plan 936-937-D

BM on stub
2+84.33 FB
1562.38

Station	Existing		Flev. Stakes	Flev. Flow Line
0+00	chk Rim N.H.	10.48	265.42	257.89
0+00		11.36	264.54	258.40
+36		12.19	263.71	258.79
+65		11.86	264.04	259.25
1+00	Bik	10.39	265.51	259.69
+35		7.75	268.15	262.31
1+70		5.06	270.84	264.94
T.P.	12.29	286.87	132	274.58
2+05		16.30	276.57	267.56
+40		5.80	281.07	270.19
2+75		2.08	284.79	272.81
T.P.	13.04	299.60	0.31	286.56
3+10		11.54	288.26	275.43
3+50	DR 0240 30' N.H. #33	7.86	291.74	278.44
+85		3.69	295.91	281.88
T.P.				
4+20		12.03	311.53	0.10 299.50 285.31
+55		2.85	301.68	288.75
+96		2.18	302.35	292.18
5+25		8.95	309.18	295.62
+60		7.28	304.25	299.06

Cont. on P. 8

Sketch P-9

INDEXED

WK

NOV 24 1948

Cuts offsets

6.14	6' Lt.
4.92	6' Lt.
4.79	6' Lt.
5.82	6' Lt.
5.84	6' Lt.
5.90	6' Lt.
2.01	6' Lt.
10.88	6' Lt.
11.98	6' Lt.
12.83	6' Lt.
13.30	6' Lt. on Bisector RP 12'
14.03	6' Lt.
14.19	6' Lt.
12.93	" "
10.17	" "
7.56	" "
+5.19	" "

50th St. Sewer - Cont. from p. 7
311.53

Station

6+00 - Bk		4.72	306.81	302.99
+30		1.69	309.84	304.55
TP	13.06 324.38	0.21	311.32	
6+65		10.71	313.67	306.37
	POT.			
7+00 - MH # 52		7.83	316.55	308.20
+35		5.64	318.74	309.88
+70		2.95	321.43	311.56
	TP			
8+05	2.62 333.57	0.43	323.25	313.24
+40		7.41	326.16	314.92
+75		5.76	327.81	316.60
9+15		4.39	329.18	318.52
+58.59 - MH # 51		4.19	329.38	320.61
chk. SW. B.P. Utility - 50 th		3.36	330.31	
FB. 1569 P-39			330.18	
			0.93	

			Above	
	11.75 341.23		330.18	BM. BP
10+00		11.82	330.11	322.30
+35		11.85	330.08	323.72
+70		10.89	331.04	325.14
11+05		8.81	333.12	326.56
+40		6.69	335.24	327.98
+75		4.61	337.29	329.40
12+10		2.28	339.65	330.82
	POT.			
12+28.59 MH # 50		1.05	340.88	331.57

Cont. P-9

Cuts offsets

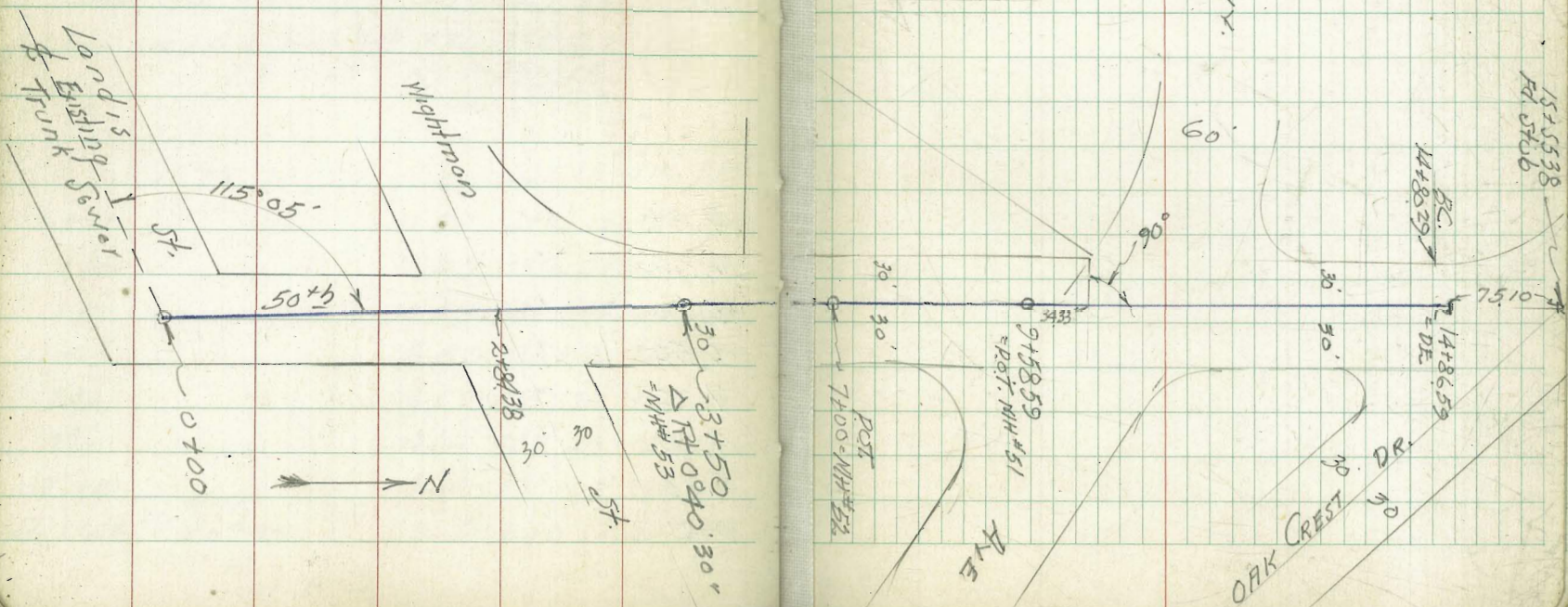
3.82'	6' Lt.
5.29'	"
7.30'	"
8.35'	"
8.86'	"
9.87'	"
10.71'	"
11.24'	"
11.21'	"
10.66'	"
8.77'	"

341.93

50th St. Sewer Cont.
from p. 8

9

Station	TP	10.06	350.94	10.5	340.88	El. Stokes	El. Flow line	Cuts	Offsets
12+65				8.49	342.45		332.82	9.63	6 Lt.
13+00				7.80	343.14		334.02	9.12	"
+35				7.13	343.81		335.23	8.58	"
+70				6.41	344.53		336.43	8.10	"
14+05				5.69	345.25		337.64	7.61	"
+40				5.24	345.70		338.84	6.86	"
+65				4.93	346.01		339.71	6.30	"
14+86.59 = D.F.				4.62	346.32		340.45	5.87	"
chk of oak Crest				3.66	347.28				
= 1855.38					347.30				
FB 1569					0.02				
33									



Ha

12

13

14

14

ca

~~14~~

Walker
Becker
Johnson
7-21-47

Sewer Construction

From MH #43 to Highways

And Winona thence North
on Winona to D.E. North of
Union Ave

Plan #

Profile #

Station	Plan #	Profile #	El. Stakes	El. Flow Line	Cuts	Offsets
	3.79	269.21	265.42	255.19		
0-1.46 = E MH #43						
0+00			260.07	255.69	4.38	
+35			260.29	256.94	3.35	
+70			260.63	258.19	2.44	
1+05			263.69	259.44	4.25	
+43' Brk.			267.69	260.80	6.89	
T.P. 13.08	281.74	0.55	268.66			
1+80			274.40	267.76	6.76	6.70
T.P. 13.12	274.25	0.61	281.13			
2+15			281.80	274.34	7.46	7.57
+50			288.95	280.32	8.63	
T.P. 12.93	306.63	0.55	293.70			
2+90.16			295.84	288.23	7.61	
1+75.63 MH 44			296.24	288.16	8.08	
2+05			297.77	290.07	7.70	
+40			304.85	292.26	12.59	
chk & Stake 1+78.31			295.36			
2+75			306.23	294.45	11.78	
3+10			305.33	296.63	8.70	

Cont P-12

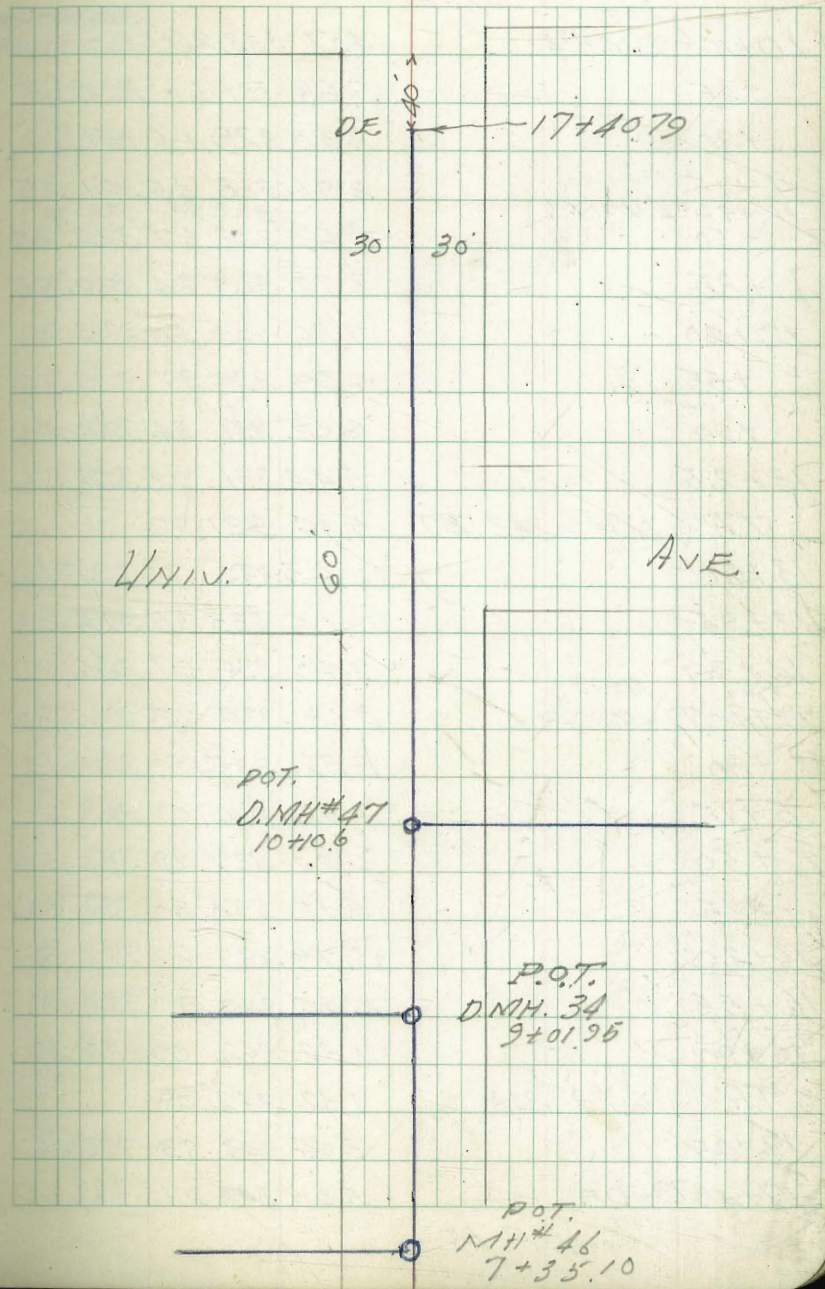
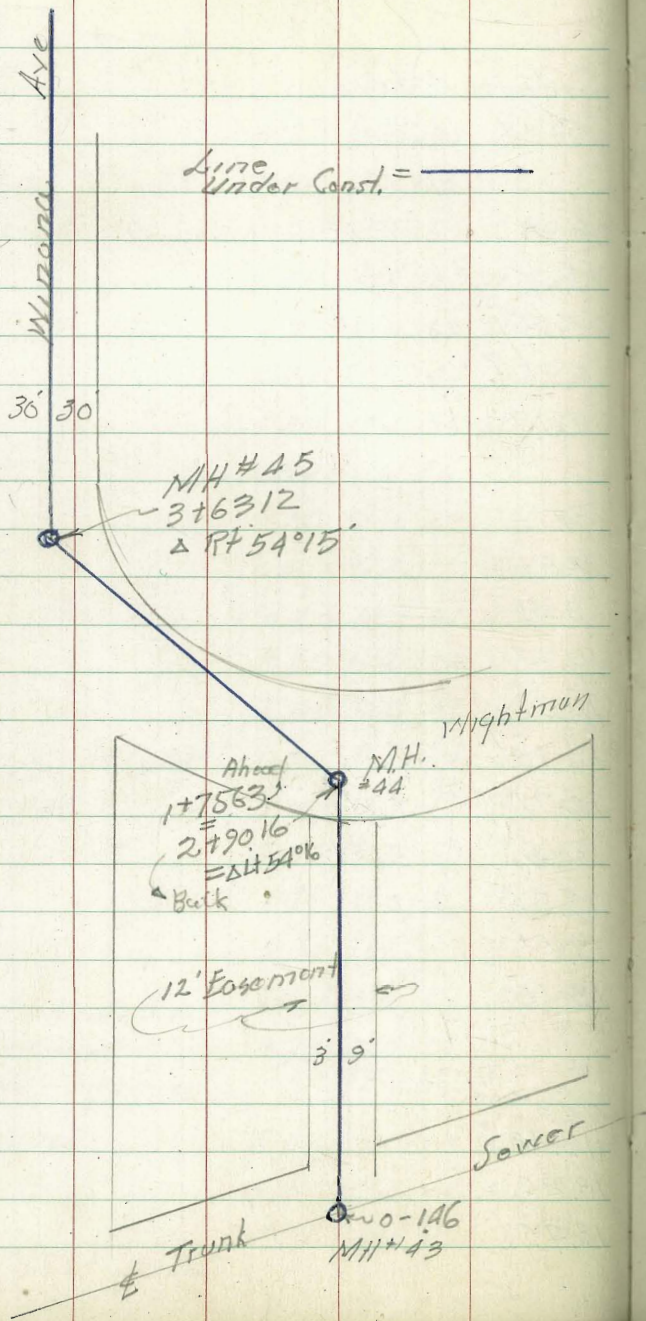
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Station		306.63	El. Stakes	El. Flow Line	Cuts	Offsets
3+35			0.62 305.94	2.98.20	7.74	6' Lt
3 T.P.	11.69	317.93	0.38 306.25			
3+63.12	2 Rt 54°15' MH #45		11.38 306.55	2.99.99	6.56	6.74 Rt on Diag. Bisector.
4+00			9.85 308.08	302.43	5.65	6' Lt.
+35			7.33 310.60	304.75	5.85	"
+70			4.49 313.44	307.07	6.37	"
5+05			1.37 316.56	309.39	7.17	"
TP	12.15	328.71	1.37 316.56			"
5+40			8.89 319.82	311.70	8.12	"
+68.10 = Bk.			6.60 322.11	313.56	8.55	"
6+00			5.20 323.51	314.02	9.49	"
+35			3.97 324.74	314.53	10.21	"
+70			2.25 326.46	315.04	11.42	"
TP						"
7+05	10.07	337.84	0.97 327.74	315.55	12.19	
+35.10 = MH #46	P&T.		9.15 328.67	315.98	12.71	6' Rt
+70			8.26 329.58	316.49	13.09	6' Lt.
8+05			7.48 330.36	317.00	13.36	"
+40			6.81 331.03	317.51	13.52	"
+75			6.17 331.67	318.02	13.65	"
chk Tack & Winona	N 7 Line Unr.		8.75 329.09			
	8.21	337.36	329.15 = FB 1869-31			
9+01.95 = DMH #34			5.13 332.23	318.40 = 1/4" South	→ 7.43	13.83
+40			4.52 332.84	318.98	13.86	
+75			4.12 333.24	319.49	13.75	

Cont. P-1A



Winton St. Sewer Const.

Cont. from P-13

337.36

Station	Point	Station	Point	Station	Point	Station	Point
10+10.6	POT. D.M.H#47	4.07	333.29	326.87=East	7.02	320.00=North	13.29
+45		5.68	331.68	320.55			11.13
+80		8.30	329.06	321.10			7.96
11+15		8.91	328.45	321.65			6.80
11+42	Point		328.94	322.07			6.87
+50		8.69	328.67	322.20			6.47
+85		8.72	328.64	322.75			5.89
12+20		7.86	329.50	323.30			6.20
+55		6.99	330.37	323.85			6.52
+90		6.02	331.34	324.40			6.94
13+25		5.44	331.92	324.95			6.97
TP	11.49 343.41	5.44	331.92				
13+60		10.65	332.76	325.50			7.26
13+95		10.16	333.25	326.06			7.19
14+30	POT.	9.40	334.01	326.62			7.39
14+40.79	M.H#48	9.18	334.23	326.80			7.43
+80		8.32	335.09	328.13			6.96
15+15		7.32	336.09	329.32			6.77
+50		6.22	337.19	330.51			6.68
+85		5.11	338.30	331.70			6.60
16+20		3.79	339.62	332.89			6.78
16+55		2.44	340.97	334.08			6.89
16+90		1.32	342.09	335.27			6.82
TP	6.88 348.97	1.32	342.09				
17+25		5.64	343.33	336.46			6.87
17+40.79	D.E.	5.00	343.97	337.00			6.97

Cont. P-15

Winona St. Sewer Const.
Cont. from P-14

348.97
T.P. 1.25 337.55 12.67 336.30
chk. Tack & Winona 8.39 329.16
325.15 P-14
0.01

Walker
Becker
Johnson
Winona St. Sewer Const. - Branch to
From MH 46 - West

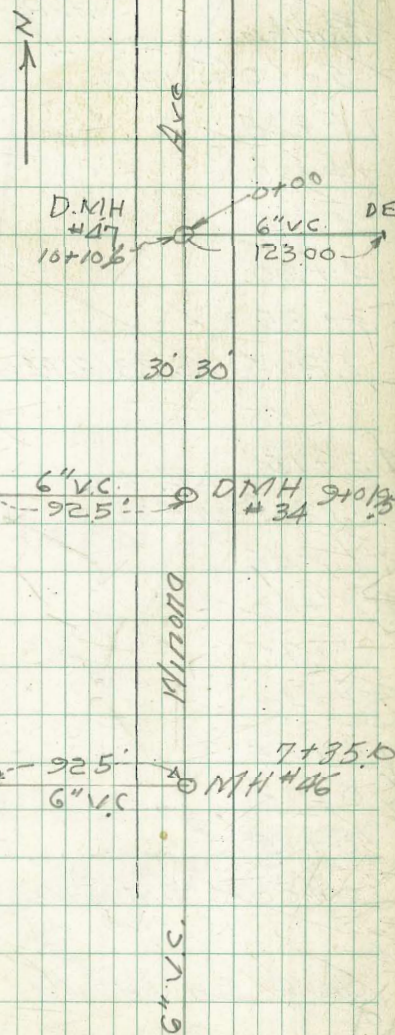
Station	2.83	Elev. Stakes	Fil. - Grade Flow Line	Cuts	Offsets
0+00 = L MH #46	331.52	328.65 P-12	315.98	12.71	6' East of L MH
+30.83	4.58	326.94	316.23	10.71	2' RH
+61.66	5.66	325.86	316.49	9.37	2' RH
+92.5 = DE	9.05	322.47	316.74	5.73	7' RH

From MH 34 - West

0+00		P-12			
L MH 34	5.29	332.23	325.00	7.23	7' E
+30.83	5.04	332.48	325.25	7.23	7' R
+61.66	6.19	331.33	325.50	5.83	7' R
+92.5 = DE	6.77	330.75	325.74	5.01	7' RH

Station	4.43	Elev. Stakes	Fil. - Grade Flow Line	Cuts	Offsets
L MH 47	337.72	333.29 P-14	326.27	7.02	7' W
+41	5.16	332.56	326.68	5.88	3' W
+82	5.73	331.99	327.09	4.90	7' W
1+23 = DE	5.89	331.83	327.50	4.33	7' W

UNIV. AVE

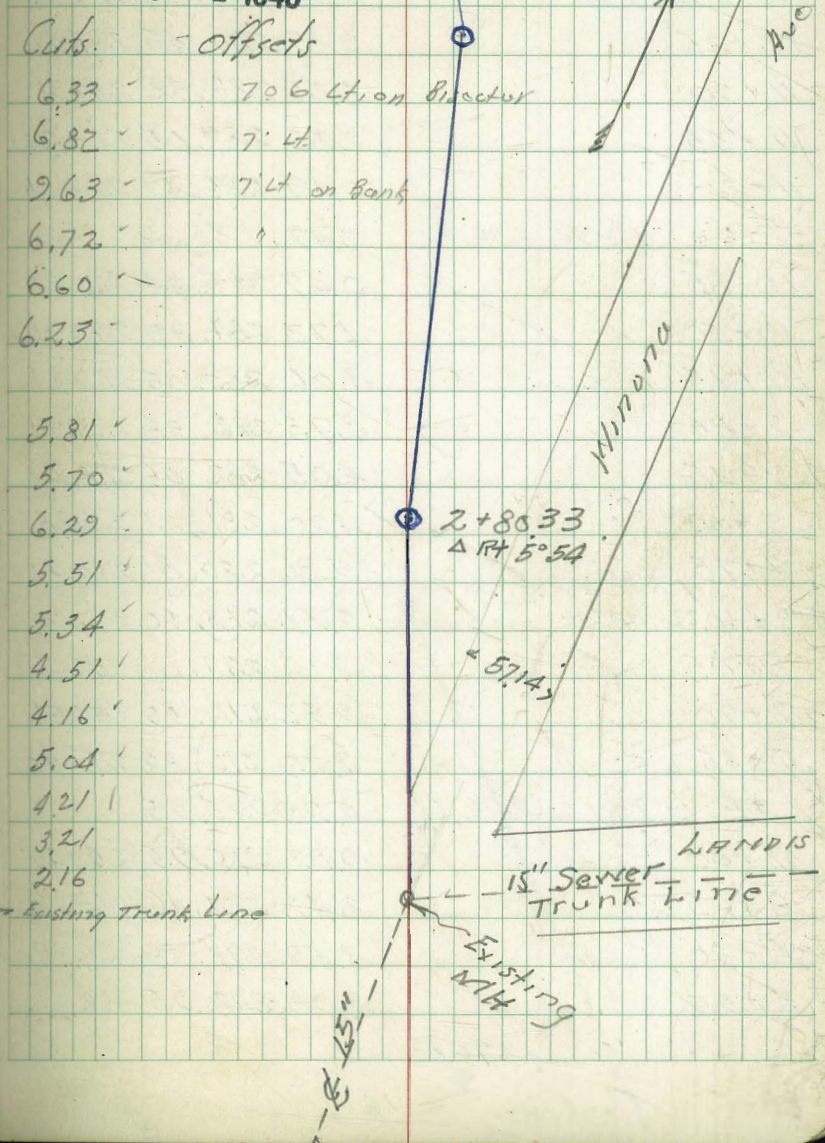


Walker
Johnson
Roberts

Intercepting Sewer Const.
Northwesterly from Winona & Landis
to 48th St. North of Univ. Ave
Drawing # 236-D, 237-D, Profile 238-D

INDEXED
WK
NOV 24 1948

Station	Cont. P-17 Δ = 14° 50' Lt.	El. Stakes	El. Grade Flow Line	Cuts	Offsets	
5+60	65-MH. #38	4.88	272.00	265.67	6.33	7.06 Lt. on Director
5+25		5.36	271.52	264.70	6.82	7' Lt.
4+90		3.51	273.37	263.74	9.63	7' Lt. on Bank
4+55		7.38	269.50	262.78	6.72	'
4+20		8.46	268.42	261.82	6.60	'
3+85		9.79	267.09	260.86	6.23	'
T.P.	10.33	276.88	0.51	266.55		
3+50		1.35	265.71	259.90	5.81	'
3+15	Δ Rt. 5° 54'	2.42	264.64	258.94	5.70	'
2+80.33	33-MH. #39	2.78	264.28	257.99	6.29	'
2+45		4.17	262.89	257.38	5.51	'
2+10		4.95	262.11	256.77	5.34	'
1+75		6.38	260.68	256.17	4.51	'
1+40		7.34	259.72	255.56	4.16	'
1+05		7.06	260.00	254.96	5.04	'
0+70		8.50	258.56	254.35	4.21	'
0+35		10.10	256.96	253.75	3.21	'
0+00	Existing MH	11.86	255.20	253.14	2.16	'
				252.47		Existing Trunk Line
chk & Run MH 0+00		8.40	258.66	M. on 4 Stike		
		2.68	267.06	278033		
			264.38	FB 2565		
				25		



Intercepting Sewer - Const.

Cont. on P-18

Station			El. Stakes	El. Grade Flow Line	Cuts	Offsets
T.P.	11.92	308.11	0.41	296.19		
12+45.22	POT. 22	MIH #31	5.58	291.02	286.05	4.97
12+25			6.15	290.45	285.41	5.04
11+90			8.28	288.32	284.31	4.01
11+55			9.55	287.05	283.21	3.84
11+20			10.43	286.17	282.11	4.06
T.P.	10.96	296.60	0.47	285.64		
10+85			0.47	285.64	281.01	4.63
10+50			1.72	284.39	279.91	4.48
10+15			3.06	283.05	278.81	4.24
9+80			3.73	282.38	277.71	4.67
9+45			4.05	282.06	276.61	5.45
9+10			4.90	281.21	275.51	5.70
8+75			5.80	280.31	274.41	5.90
8+40.22	Δ Rt. 23°25'	MIH #36	7.51	278.60	273.33	5.27
8+05			9.10	277.01	272.37	4.64
7+70			9.52	276.59	271.41	5.18
7+35			9.29	276.82	270.45	6.37
T.P.	10.16	286.11	0.93	275.95		
7+00			0.93	275.95	269.49	6.50
6+65			2.42	274.46	268.53	5.93
6+30			3.59	273.29	267.57	5.72
5+95			3.93	272.95	266.61	6.34

276.88

Cont. from P-16

Flow Branch Line to Northwest P-21
7.15' RT on Bisector

Intercepting Sewer Const.

Cont. on P-19

Station	El. Stake	El. Grade Flow Line	Cuts.	offsets	
Cont. P-19					
15+90.35 Chk & stake	FB 1589.48 13.18	304.64 304.65			
15+90.35 MH 29	11.49	306.34	296.57	9.77	
15+56.14	7.92	309.91	296.40	13.51	
15+21.92	11.25	306.58	296.23	10.35	
14+87.70 = Δ Lt 29942	5.85	311.98	296.06	15.92	
- P.O.T.			303.00 - E	621	
14+70.48 DMH #30	8.62	309.21	295.97	M+5 = 13.24	
14+30.65	4.70	313.13	295.82	17.31	
14+10.98	4.91	312.92	295.72	17.20	
13+85	5.77	312.06	295.54	16.52	
13+60	317.83	6.35	311.48	295.42	16.06
14/11/84 9-12-41	Reset MH #30	BH			
597	317.95	311.98			
14+70.98 = MH #30	9.09	308.86	295.97-3N	5.86 12.89	
	4.85	313.10		(Not set for hire use Elev. only.)	
12+98.29	6.06 317.83	6.75	311.77	295.11	16.66
chk & stake 12+98.29	6.42	318.52 - corrected	312.10 FB 1569 312.07 47		
12+90.22 - Brk.	9.56	308.93	295.07	13.86	
T.P.	10.51	318.49	0.13	307.98	
	308.11				

Cont. from P-17

Intercepting Sewer Const.

Station		E.L. Stakes	E.L. Flow Line	Cuts
20+87.4-1.3' RT 181569		0.01 326.42		
chk Cor Inlet Box	4.64	326.43	321.36 N 320.50 S	5.77-North 6.63-South 9.58-East
21+39.31 DD.MH #23	3.94	327.13	317.55 E	7' RT
21+04.84	4.39	326.68	315.22	11.46 7' LT
20+70.40	6.63	324.44	312.86	11.58 7' LT
T.P. 14.79 331.07	2.06	316.28		
20+35.96	5.41	312.23	310.49	2.44 7' RT
20+01.52	5.84	312.50	308.13	4.37 7' RT
T.P. 6.61 318.34	2.92	311.73		
19+67.08	2.92	311.73	305.77	5.96 7' LT
Δ 5°57' RT				
19+32.64=MH #24	5.64	309.01	303.41	5.60 7' LT on Brader
18+98.41	6.91	307.74	302.72	5.02 7' LT
18+64.19	6.91	307.74	302.03	5.71 7' LT
18+29.97	9.29	305.36	301.35	4.01 7' LT
17+25.57	2.96	311.69	300.67	11.02 7' LT
17+61.53=DNH #25	0.56	314.09	305.00=South 299.99	9.09=South 14.10=E+West 7' LT
T.P. 17+27.27 on stub 115 314.65	0.85	313.50		
17+27.27	0.85	313.50	299.30	14.20
16+93.64	12.56	301.79	298.62	3.17
16+58.81	13.45	300.90	297.93	2.97
16+24.58	13.72	300.63	297.25	3.38
15+90.35 NH #29 P.18			296.57	
chk 15+90.35 on RT	8.02	306.33		
2.70 314.35		304.65	15+90.35	-P.18

Cont. from P. 18

Walker
Becker
Johnson
8-20-47

48th St. - Sewer Const.
Between Polk and Union Ave

20

Profile 938-D

Station Ft. Ft. Cuts offsets
Stakes Flow Line

INDEXED
WIK
NOV 24 1948

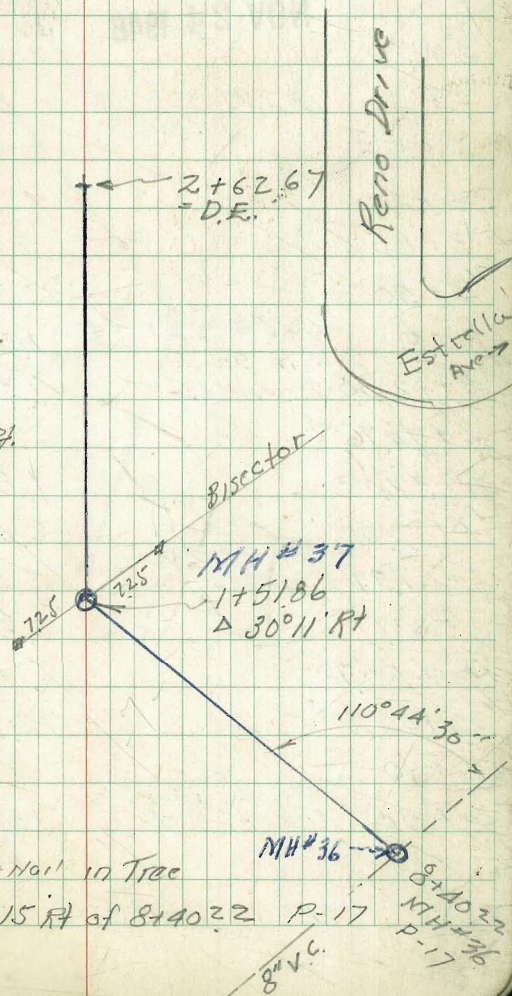
Station						
chk Poy. 7' line Univ.	Alley 151589	0.02	342.75			
	7.60		342.77			
3+70 = D.F.	4.66	345.71	341.00	4.71		2' Lt on walk
3+35	4.41	345.96	339.88	6.08		" "
3+00	5.05	345.32	338.76	6.56		" "
2+76.37 = Bk	6.05	344.32	338.00	6.32		" "
2+55	7.59	342.78	336.32	6.46		" "
T.P.	7.79	350.37	0.18	342.58		" "
2+20	3.28	339.48	333.58	5.90		" "
1+85	6.90	335.86	330.84	5.02		" "
1+50	10.62	332.14	328.10	4.04		" "
T.P.	11.75	342.76	0.06	331.01		" "
1+15	1.83	329.24	325.36	3.88		" "
0+80	3.72	327.35	322.62	4.73		" "
0+52.86 = DDM	3.99	327.08	320.30	6.58		" "
+26.43	3.07	328.00	321.77	5.72		" "
0+00 = D.F.	1.66	329.41	322.15	7.26		" "

331.07
K from P-19

Walker Sewer Construction
 Becker
 Johnson 117 Easement Northwesterly
 7-23-47 from MH #36 - Plan 937-D. Profile 939.

Station		Elev. Stakes	E.I. Elev. Lin	Cuts	Offsets	
2+62.67 = D.E.		1.37	323.12	309.38	13.74	7' Rt.
2+25.74		3.83	320.66	309.12	11.54	7' Rt.
1+88.8		4.84	319.65	308.86	10.79	7' Rt.
1+51.86 = 2' MH #37	$\Delta 30^\circ 11' \text{ Rt.}$	7.51	316.98	308.60	8.38	7.25 Lt.
Chk & Hub	1+51.86	5.86	318.62	318.63		
1+51.86 = 4' MH #37	$\Delta \text{Rt } 30^\circ 11'$	5.17	319.32	308.60	10.72	7.25 Rt.
1+31.86		8.82	315.67	306.80	8.87	7' Lt.
T.P.	11.81	324.49	1.64	312.68		
1+11.86		1.64	312.68	305.00	7.68	7' Lt.
T.P.	11.96	314.32	0.68	302.36		
0+75.93		7.40	295.64	290.00	5.64	7' Lt.
T.P.	12.08	303.04	0.81	290.96		
0+40 = Bk.		10.33	281.44	275.00	6.44	7' Lt.
+20		12.20	279.57	274.41	5.16	7' Lt.
0+00 = 4' MH #36		11.03	280.74	273.83	6.91	8' Lt. Rt. = Nail in Tree
	13.17	291.77	278.60			

Cuts Offsets

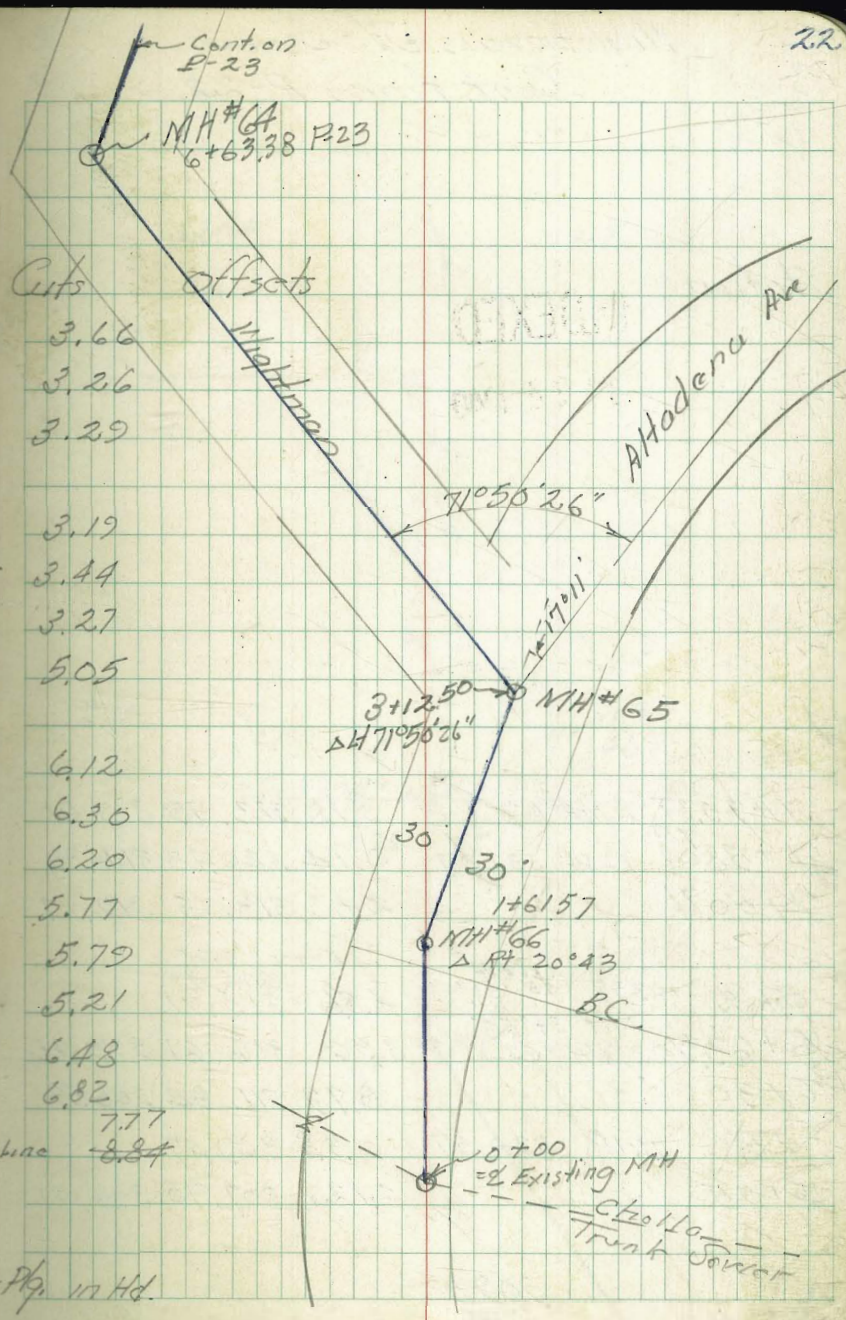


Walker
Becker
Johnson
7-25-47

Wrightman St. Sewer Const.
East of 50th to E. Eastment
to MH#63-25273 West of E. 52nd St

Plan #937-D Profile #941-D

Station	Cont. P-23	El.	Stakes	El. Flow Line
5+60	INDEXED WK NOV 24 1948	5.84	303.98	300.32
5+25		9.33	300.47	297.23
4+90		12.39	297.43	294.14
T.P.	13.22	309.82	0.53	296.60
4+55		2.90	294.23	291.04
4+20		5.75	291.38	287.94
3+85		9.02	288.11	284.84
3+50		10.34	286.79	281.74
T.P.	12.58	297.13	1.34	284.55
3+12.50 = L.M.H.#65	$\Delta H 71^{\circ}50'26''$	1.34	284.55	278.43
2+74.76		2.82	283.07	276.77
2+37.03		4.58	281.31	275.11
1+99.30 $\Delta H 20^{\circ}43'$		6.67	279.22	273.45
1+61.57 = L.M.H.#66		8.31	277.58	271.79
1+21.17		10.58	275.31	270.10
0+80.78		11.01	274.88	268.40
0+40.39		12.37	273.52	266.70
0+00		13.12	272.77	265.00
0+00	$\Delta H 28^{\circ}14'48''$ FB 1569	13.27	272.62	263.93 = True line
	chk R.M. MH			
	12.89	285.89	273.00	BM Brass



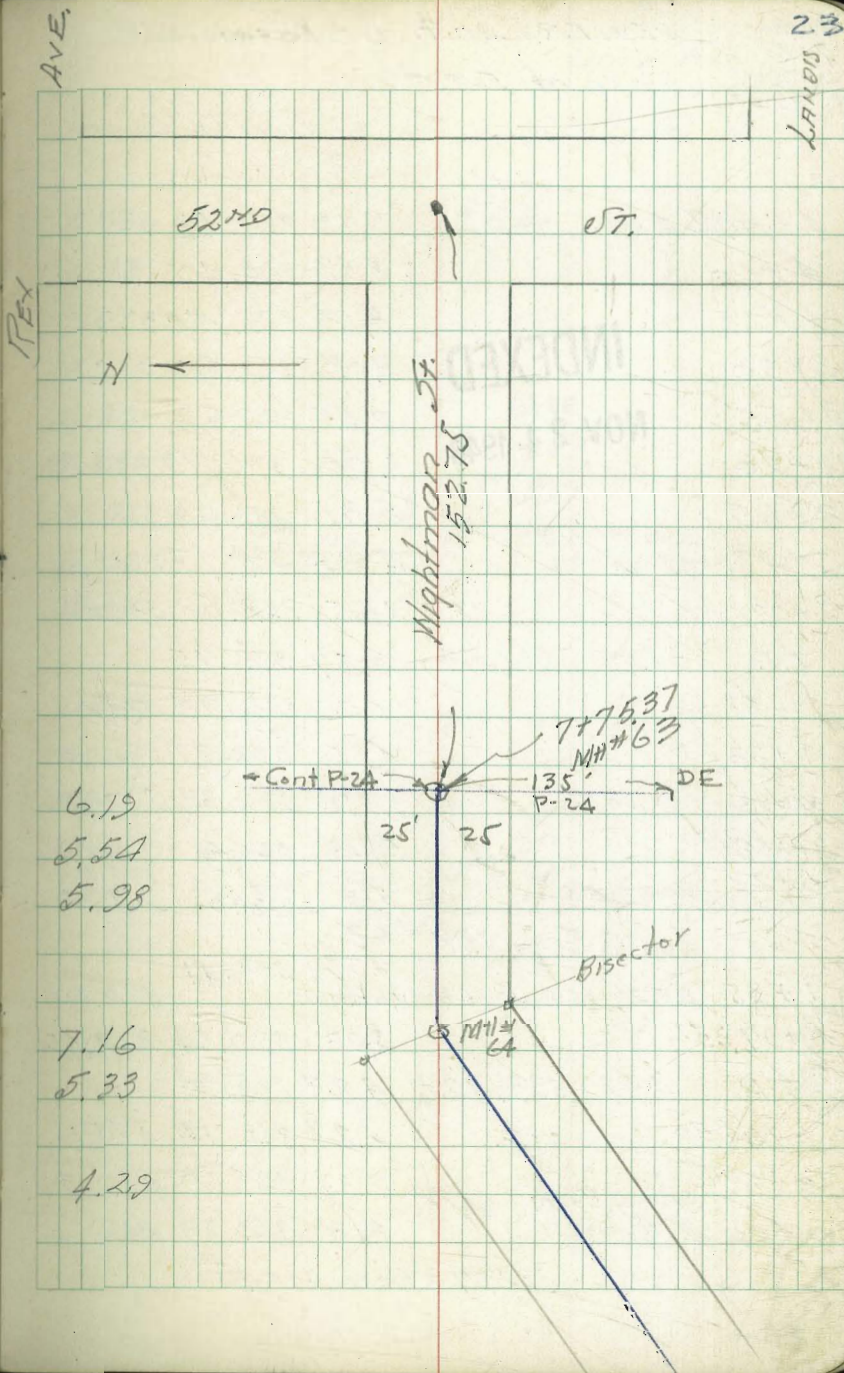
Nightman St. Sewer
Cont. from P-22

Station

7+75.37 = 2 MH#63	9.18	323.79	317.60	6.19
7+38.04 ^{T.P.} 12.54	0.14	320.43	314.89	5.54
7+00.71	2.42	318.15	312.17	5.98
	Error = 0.01			
chk 2 6+6338 ^{2,161.74} _{FB 155.9}	4.86	315.70	315.71	
6+6338 = MH#64 ^{ΔRT 34°56'}	3.96	316.61	309.45	7.16
6+30	8.73	311.84	306.51	5.33
T.P. 11.10	0.35	309.47		
5+95	2.12	307.70	303.41	4.29

309.82

Cont. from P-22



Walker
Becker
Johnson
5-25-47

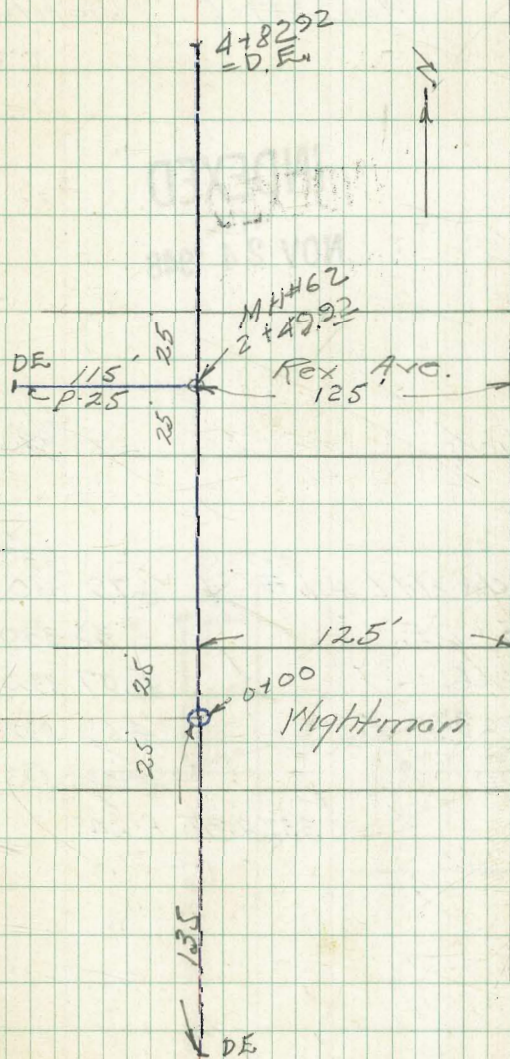
SEWER Const. in Easement
West of 52nd
Bet. Union Ave & Torlo Court

4+84.92 = D.E.	9.70	327.53	324.05	3.48
4+60	8.83	328.40	323.88	4.52
4+25	8.13	329.10	323.63	5.47
3+90	8.03	329.20	323.39	5.81
3+55	7.55	329.68	323.14	6.54
3+20	6.50	330.73	322.89	7.84
2+85	5.31	331.92	322.64	9.28
2+49.92 = E Rex St. = MH#62	4.08	333.15	322.40	10.75
2+03	3.65	333.58	321.49	12.09
T.P. 4.08. 337.23	0.57	333.15		
+68	0.99	332.73	320.82	11.91
1+33	1.35	332.37	320.15	12.22
0+98	3.39	330.33	319.48	10.85
+63	5.28	328.44	318.81	9.63
0+28 0+00 = MH#63	8.58 3.18	325.14 323.79	318.14 317.60	7.00 6.19
South from MH#63				
1+35 = D.E. 135' South of Wightman	1.31	332.41	326.00	6.41
0+97.25	3.08	330.64	323.65	6.99
T.P. 4.98 333.72	4.23	328.74		
0+64.50	4.23	328.74	321.61	7.13
0+33.75 going South	7.37	325.60	319.70	5.90
0+00 = MH#63	9.18	323.79	317.60	6.19

332.97 from P-23

24

Union Ave



Walker
Becker
Johnson
7-26-47

REV. AVE. Sewer Const.
from MH #62

Plan 937-D Profile 939-D

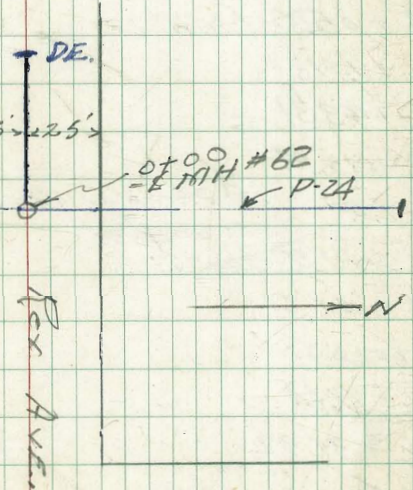
INDEXED
WK
NOV 24 1948

Stations E.I. E.I.
 Stakes Flow Line Cuts Offsets

Stations	E.I. Stakes	E.I. Flow Line	Cuts	Offsets
chk old E. Hub ^{2+72.5} FB 1569 ₇₆	6.79	^{0.09} 330.38 330.44		
1+15 = D.E.	6.34	330.89	323.55	7.34
+76.66	5.07	332.16	323.17	8.99
+38.33	4.69	332.54	322.78	9.76
0+00	4.08	333.15	322.40	10.75

337.237 P-24

52 MD



at.

Mulker Altadena St. Sewer Const.
 Becker from Wightman to D.E.
 Johnson
 7-29-47 South of Sterling Court on West

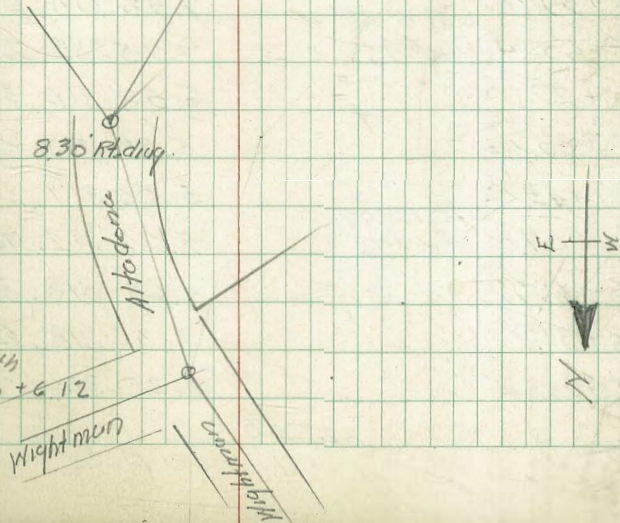
Plan 937-D

Profile 941-D

Station	Stake	E.I.	E.I. Flow line	Cut	offsets
			306.40	12.39 = East	
5 + 55.54 MH #73	4.21	318.79	300.20	18.59 = N + S	
5 + 19.75	4.45	318.55	299.95	18.60	
T.P. 4.83	323.00	0.58	318.17		
4 + 83.97	0.58	318.17	299.70	18.47	
4 + 48.19	2.50	316.25	299.45	16.80	
4 + 12.41	4.93	313.82	299.20	14.62	
3 + 76.63	7.00	311.75	298.95	12.80	
3 + 40.85	8.87	309.88	298.70	11.18	
T.P. 10.45	318.75	0.82	308.30		
3 + 05.07 - 1 MH #72	0.82	308.30	298.45	9.85	
2 + 74.18	3.72	305.40	296.08	9.32	
2 + 43.31	6.60	302.52	293.72	8.80	
2 + 12.44	9.25	299.87	291.36	8.51	
T.P. 12.00	309.12	0.20	297.12		
1 + 81.57 - 2 MH #67	1.13	296.19	289.00	7.19	
1 + 45.27	4.42	292.90	287.04	5.86	
1 + 08.95	7.43	289.91	285.08	4.83	
+ 72.64	9.42	287.90	283.12	4.78	
+ 36.32	10.88	286.44	281.16	5.28	
0 + 00.00 MH #65	12.77	284.55	279.20	5.35 = South	
			278.49	East + North + 6.12	
	12.77	297.32	284.55		

INDEXED

WK
 NOV 24 1948



Walker
Becher
Johnson
7-29-47

Altadena St. Sewer

Construction

Stations	El. Stakes	El. Flow Line	Cuts	Offsets
sv. Sterling Ct. & Altadena		0.02		
chk BM 3 Nails in Pole	7.31	317.15 + 18.89 13		
11+96.76 - D.E.	2.75	321.69	315.93	5.76
11+63.86	5.02	319.42	314.28	5.14
11+30.97 $\Delta 6^{\circ}16'24''$	6.26	318.18	312.64	5.54
10+98.08 - MH#77	7.42	317.02	304.01	6.02 = South 13.01 = North & West
10+58.41	8.90	315.54	303.73	11.81
10+18.74	10.13	314.31	303.45	10.86
9+79.06	10.58	313.86	303.17	10.69
T.P. 10.02	324.44	8.58	314.42	
9+39.39	8.58	314.42	302.89	11.53
8+99.71 $\Delta R 4^{\circ}48'$	7.93	315.07	302.61	12.46
8+60.04 - MH#75	7.75	315.25	302.34	11.91 = East 12.91 = N. by 7.08 ft.
8+22.00	6.52	316.48	302.07	14.41
7+83.96	5.99	317.01	301.80	15.21
7+45.92 $\Delta L 19^{\circ}07'$	5.66	317.34	301.54	15.80
7+07.88 - MH#74	5.26	317.74	301.27	16.47
6+69.79	4.69	318.31	301.00	17.31
6+31.71	4.36	318.64	300.73	17.91
5+93.62	4.29	318.71	300.46	18.25

323.00
Cont. from p. 26

Walker
Becker
Johnson

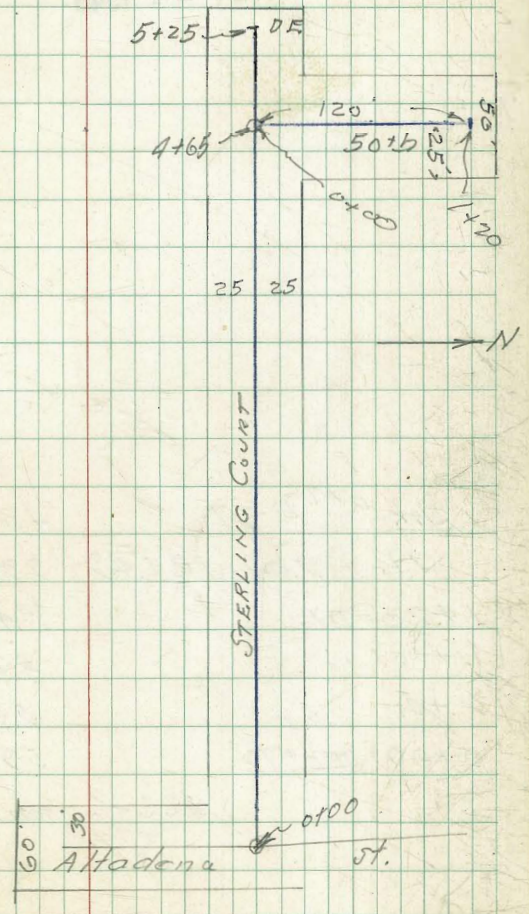
SEWER CONST - STERLING COURT
from Altadena St - West
8-19-47 Plan #937 Profile #941-D

Station El. El.
 Stokes Flow Line Cuts offsets

INDEXED

WIK
NOV 24 1948

TP		9.98	312.48			
5+25 = D.F.		8.40	314.06	307.68	6.38	
4+95		7.07	315.39	307.47	7.92	
4+65 DMH #79		5.90	316.56	307.26	9.30	
4+45		5.60	316.86	307.12	9.74	
4+10		4.73	317.53	306.88	10.65	
3+75		4.79	317.67	306.63	11.04	
3+40		5.65	316.81	306.39	10.42	
3+05		7.18	315.28	306.14	9.14	
TP	8.44	322.46	6.36	314.02		
2+70			6.36	314.02	305.90	8.12
2+35			7.91	312.47	305.65	6.82
pot.						
2+00 = MH #78			2.16	311.22	305.41	5.81
1+75			2.58	310.80	305.23	5.57
1+40			2.47	310.91	304.99	5.92
1+05			2.00	311.38	304.74	6.64
+70			7.39	312.99	304.50	8.49
+35			5.57	314.81	304.25	10.56
0+00 = DMH #77			3.34	317.04	304.01	13.01
			9-27	317.02	304.01	
	3.23	320.38	317.15			



North & West
7E.
Sterling Ct. P-27

Walker
Becker
Johnson
8-19-47

5th St Senior Const.
from Sterling Court
North for 120'

INDEXED
WK
NOV 24 1948

chk BM P-27	435	317.14	
T.P. 9.01	321.49	998	312.48
1+20=DE	347	318.99	313.16
+80	423	318.23	312.44
+40	505	317.41	311.72
0+00=DMH #79	590	316.56	307.26
			311.00
			5.83
			5.79
			5.69
			5.56
			9.30
	322.46	-from P-28	

Construction Grades - Sewer
Auburn & Pleasant

30

INDEXED
WK
NOV 24 1948

0+63.32 - First Sewer	1.18	310.16	297.20	12.96
0+31.66	6.13	305.21	290.29	14.92
T.P.	11.52	311.34	0.41	299.82
0+13.37	5.81	294.42	286.29	8.13
0+00 = MH #41-P-74	10.96	289.27	283.36	5.91

300.23
+ P-74

Walker
Becker
Johnson
Melton
8-13-47

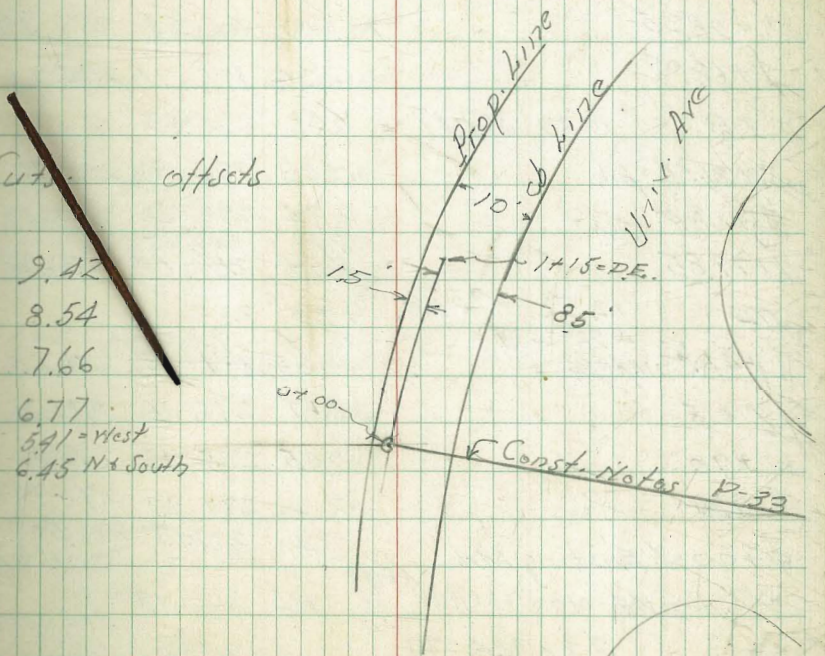
2/1/11. Ave Sewer Const.
from M.H. # 55 to D.E. 115 West

Plan # 936-D Profile # 939 D

INDEXED
WK
NOV 24 1948

	Elev.	Flow Line	
chk E 1+15	2.62		
1+15 = D.E.	2.70	321.56	312.14
+ 86.25	4.60	319.66	311.12
+ 54.5	6.62	317.64	309.98
+ 27.25	8.49	315.77	309.00
0+00 - M.H. # 55	10.85	313.41	308.00 - West 306.96 - H.S.
10.33	324.26	313.23	

Cuts offsets



Walker
Becker
Johnson
Melton
8-6-47

Oak Crest Drive - Sewer Const.
from Existing M.H. on Cholla Trunk Sewer
to D.E. West of 30th St.
Plan # 236-D Profile # 239-D

Station

INDEXED

WK
NOV 24 1948

Cont. p. 33

Elev. Stakes Elev. Flow Line

3+50.2			4.73	313.41	308.00 = west 306.96 = N.S. 6.45
3+24.3			8.50	309.64	303.38
TP	11.56	318.14	119	306.58	
2+98.35			1.19	306.58	299.79
+68.05			6.06	301.71	295.61
TP	12.29	307.77	0.08	295.48	
2+31.55 = Bk			0.08	295.48	290.58
2+08.0			2.34	293.22	285.63
			8.51	286.05	
1+77.85			8.51	287.05	279.27
TP	12.52	295.56	1.73	283.04	
1+41.53	Δ 98° 24' RH = MH # 54		10.07	274.70	
			10.25	274.52	271.63
1+05			8.61	276.16	271.34
+70			2.65	275.12	271.06
+35			12.98	271.79	270.78
0+00 = Existing M.H.			7.64	277.13	270.50
chk. Rim MH 0+00	-2791.9	FB 159 42	7.64	277.13	269.71 = Existing Trunk Line
	2.20	284.77		275.57	BM. on Hub 0+00 FB 159-16

Cuts

Offsets

6.45	203 ft
6.26	203 ft
6.79	227 ft
6.10	226 ft
4.90	210 ft
7.59	215 ft
6.78	Reset 5.16 ft
7.78	216 ft
3.07	Reset
2.89	7 ft
4.82	7 ft RH
4.06	
+1.01	
6.63	= on Rim MH

14' Lt. C 221

Walker
Becker
Johnson
Melton
8-6-47

Oak Crest Drive - Sewer Const.
from Existing M.H. on Chalk Trunk Sewer
to P.E. West of 30th St.
Plan # 236-D Profile # 239-D

Station INDEXED
WK
NOV 24 1948

Cont. p. 33

Station		Elev. Stakes	Elev. Flow Line
3+50.2		4.73 313.41	308.50 = West 306.96 = N.S. on 6.45
3+24.3		8.50 309.64	303.38
TP	11.56 318.14	119 306.58	
2+98.35		1.19 306.58	299.79
+68.05		6.06 301.71	295.61
TP	12.29 307.77	0.08 295.48	
2+31.55 = Bk		0.08 295.48	290.58
2+08.0		2.34 293.22	285.63
		9.51 286.05	
1+77.85		8.51 287.05	279.27
TP	12.52 295.56	1.73 283.04	
1+41.53	Δ 98° 24' RH = MH # 54	10.07 274.70	
		10.25 274.52	271.63
1+05		8.61 276.16	271.34
+70		2.65 275.12	271.06
+35		12.98 271.79	270.78
0+00 = Existing M.H.		7.64 277.13	270.50
chk. Rim MH 0+00	- 2791.9	7.64 277.13	269.71 = Existing Trunk Line
	2.20 284.77	275.57	BM. on Hub 2+00 281.58-16

Cuts	Offsets
6.26	203 ft
6.79	227 ft
6.10	226 ft
4.90	210 ft
7.59	215 ft
6.78	Reset 5.16 ft
7.78	216 ft
3.07	Reset
2.89	7 ft
4.82	7 ft RH
4.06	
+1.01	
6.63	= on Rim MH

14' Lt. c 221

Oak Crest Drive Sewer

Cont. on P-34

Station		Fl. Stakes	Fl. or. Line	Cuts	offsets
9+30		1.67 345.01	336.77	8.24	7' RR
8+95		2.03 344.65	336.11	8.54	
8+60		2.49 344.19	335.46	8.73	
8+25		2.88 343.80	334.81	8.99	
7+90		3.30 343.38	334.16	9.22	
+55		3.99 342.69	333.51	9.18	
7+20		4.68 342.00	332.86	9.14	
6+85		5.70 340.98	332.21	8.77	
6+50		7.18 339.50	331.56	7.94	
6+20.85	LI 45°12 MH	8.52 338.16	331.02	7.12 North	
6+20.85	chk & Hub 1569-440915 SS	8.78 337.90	325.00	13.16 South	
T.P.	10.21 346.68	0.12 336.47			
5+87.51		1.14 335.45	324.34	11.11	
5+54.18		4.12 332.47	323.67	8.80	
5+20.85 = Bk		7.88 328.71	323.00	5.71	
T.P.	13.07 336.59	0.75 323.52			
4+83.96		0.75 323.52	318.14	5.38	
4+47.09		6.51 317.76	313.27	4.49	
4+10.22	p.o.T. MH 55-A	11.55 312.72	308.40	4.32	
+80.22		10.93 313.34	307.68	5.66	
3+50.22	MH 55 Δ RA 849	10.86 313.41	306.96	6.45	N of South
chk. & Hub	FB 1569-55 2+0867	10.34 313.93			
		10.49 324.27	313.78		
			BM. on South cb 2+1717		
			FB 1569 55		

Cont. from P. 32

Oak Crest Drive Sewer Const.

34

Station			Fl. Stakes	Fl. Flow line
13+64.17 -DE			3.36	348.07 341.00
13+50			3.41	348.02 340.88
13+15			3.57	347.86 340.60
+80			3.80	347.63 340.32
12+45			3.97	347.46 340.04
chk E stake pot.	7+96.37 1569 44		4.09	347.32
12+08.87			4.32	347.11 339.75
11+75			4.49	346.94 339.48
11+40			4.87	346.56 339.20
11+05			5.18	346.25 338.92
10+70			5.53	345.90 338.64
10+35			5.86	345.57 338.36
10+00.85 MH			6.15	345.28 338.09
9+65			6.27	345.16 337.42
TP	642	351.43	1.67	345.01
		346.68		

Cuts offsets

7.07

7.14

7.26

7.31

7.42

7.36

7.46

7.36

7.33

7.26

7.21

7.19

7.74

Walker STERLING COURT SEWER CONST.
 Becker
 Johnson from Altadena St. to 51st
 8-20-47 And 51st from Altadena South.
 Plan 937-D Profile 941-D

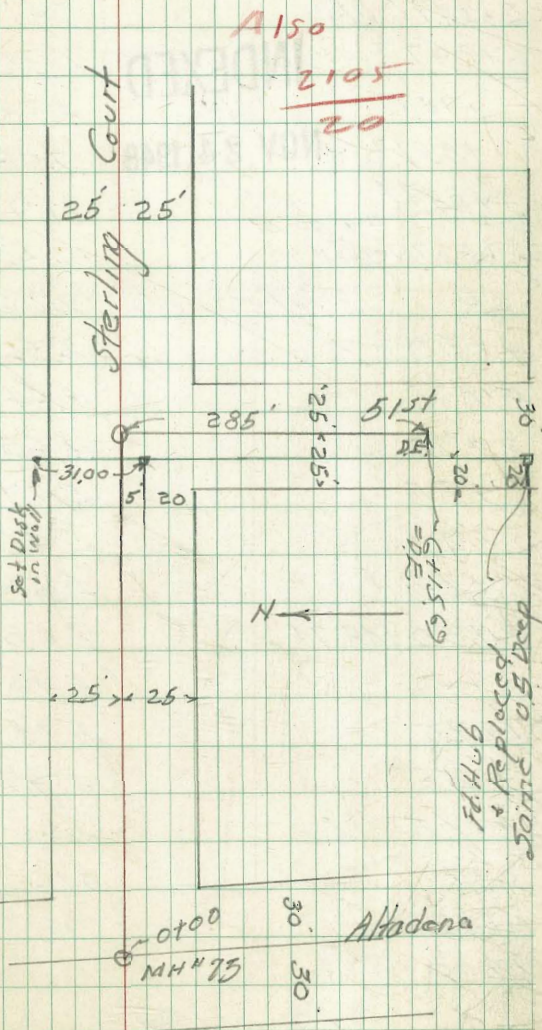
Station	El. Stakes	El. Flow line	Cuts	offsets
6+15.69=DE	11.95	318.16	311.98	6.18
5+95	10.50	319.61	311.66	7.95
+70	7.76	322.35	310.98	11.37
+35	5.47	324.64	310.20	14.44
5+00	5.80	324.31	309.42	14.89
T.P.	7.30	330.11	0.53	322.81
4+65	0.53	322.81	308.64	14.17
4+30	5.49	317.85	307.86	9.99
3+95	2.38	313.96	307.08	6.88
3+60	12.73	310.61	306.60	4.01
3+30.69	14.56	309.28	305.65	3.63
T.P.	11.76	323.34	10.72	311.58
3+10	12.10	310.20	305.51	4.69
2+80	10.91	311.39	305.30	6.09
2+45	2.98	312.32	305.06	7.26
2+10	8.72	313.58	304.81	8.77
1+75	6.78	315.52	304.56	10.96
1+40	5.14	317.16	304.32	12.84
1+05	5.08	317.22	304.07	13.15
0+70	5.37	316.93	303.83	13.10
0+35	5.78	316.52	303.58	12.94
0+00	315.25	303.34-E	303.34-N.Y.S.	11.91-E
		302.34-N.Y.S.	302.34-N.Y.S.	12.91-N.Y.S.
				P-27
	7.05	322.30	315.25	

INDEXED

WIK
 NOV 24 1948

T = 330.11
 586
 on Curve Wall T.P. 324.25
 chkd. P-36

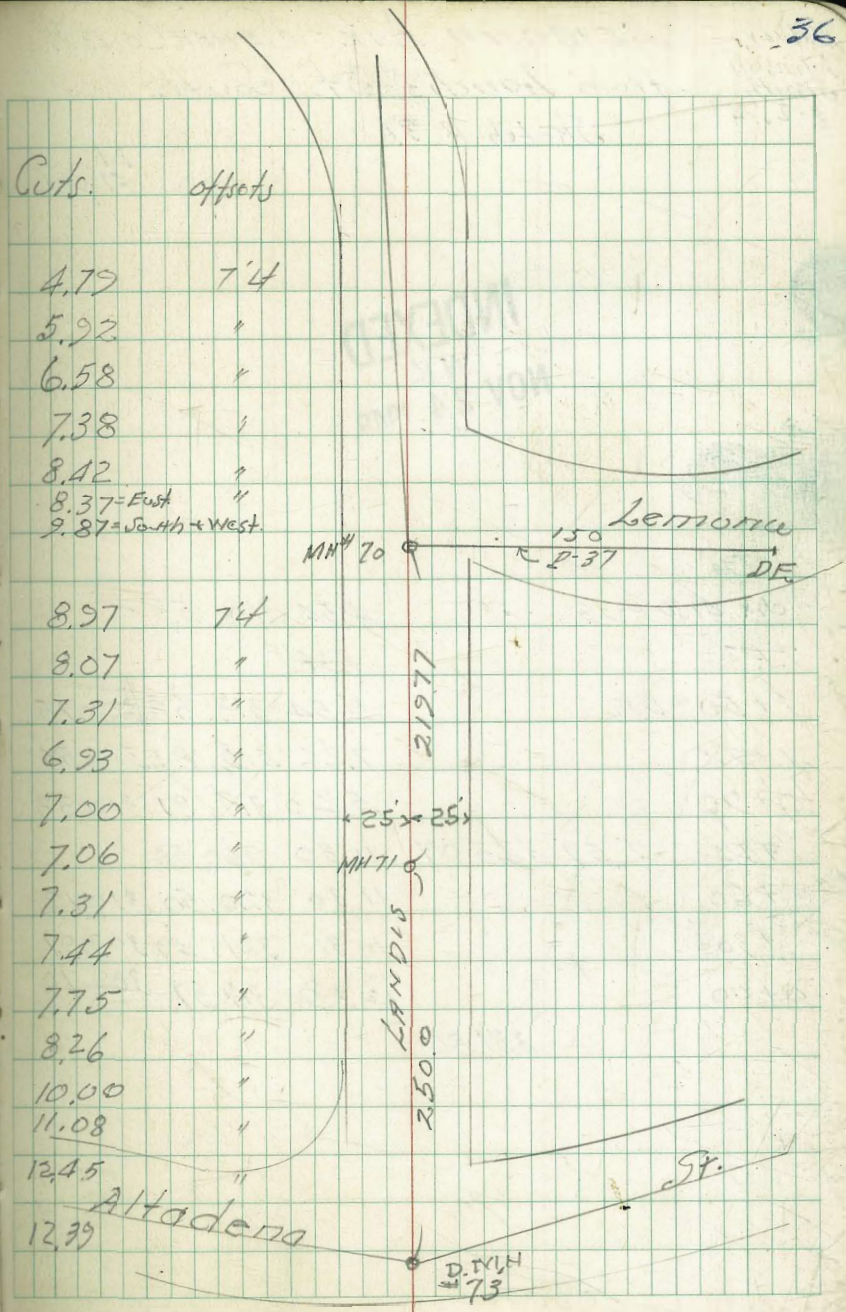
Cuts offsets



Walker
Johnson
Smith
LANDIS ST. SEWER CONST.
from Altadena East.
8-25-47 Plan 937-D Profile 941-D

Stations		Elev. Flow Line	Cuts	Offsets	
chk. T.P. on Conc. W. 11-P-31	P-35-324.25 7.56	324.24			
6+4477=DE	0.41	331.39	326.60	4.79	7'4"
6+09.77	2.36	329.44	323.52	5.92	"
+7477	4.78	327.02	320.44	6.58	"
+3977	7.06	324.74	317.36	7.38	"
5+09.77	9.10	322.70	314.28	8.42	"
4+6977=M.H.#70	12.23	319.57	309.70	8.37=East 9.87=South+West	"
T.P. 13.27	331.80	2.56	318.53		
4+50	2.56	318.53	309.56	8.97	7'4"
4+25	3.64	317.45	309.38	8.07	"
3+90	4.65	316.44	309.13	7.31	"
+55	5.27	315.82	308.89	6.93	"
3+20	5.45	315.64	308.64	7.00	"
+85	5.63	315.46	308.40	7.06	"
2+50 M.H. 71	5.63	315.46	308.15	7.31	"
2+10	5.78	315.31	307.87	7.44	"
1+75	5.72	315.37	307.62	7.75	"
1+40	5.45	315.64	307.38	8.26	"
1+05	3.96	317.13	307.13	10.00	"
0+70	3.12	317.97	306.89	11.08	"
0+35	2.00	319.09	306.64	12.45	"
0+00- ^{M.H.} 73		318.79	306.40	12.39	"
	2.30	321.09	318.79		

INDEXED
WIK
NOV 24 1948



P.M. on 5/1/48
57.55.54
P-26

Walker
Johnson
Smith
8-25-47

LEMONA AVE - SEWER CONST.
from Landis St. South.

Sketch P-36

37

Fl.
Flow Line

Cuts

offsets

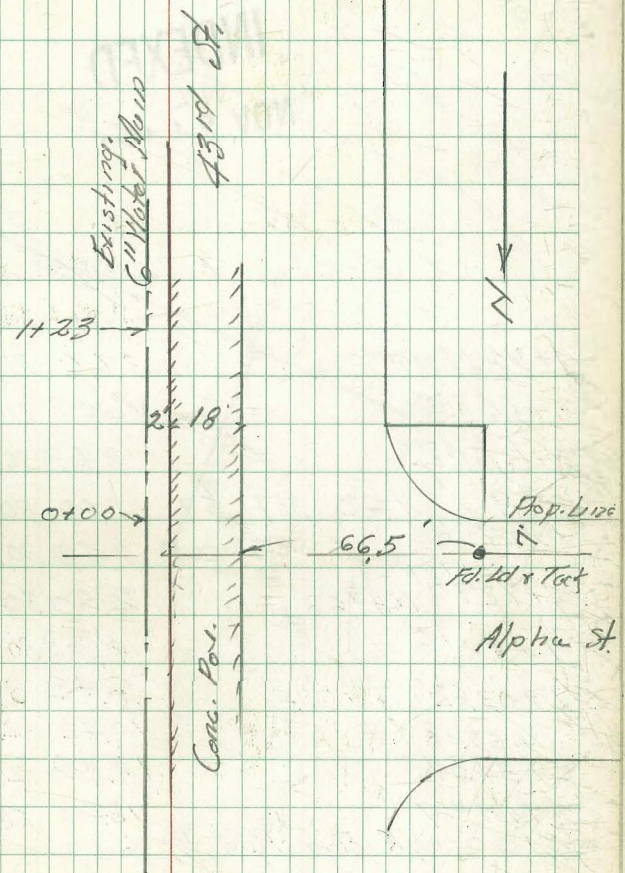
INDEXED
WK
NOV 24 1948

chk 4+00 P-36	4.54	318.53	-		
T.P.	1.58				
1+50 = D.E.	2.54	313.53	310.75	2.78	7' 4"
1+20	7.26	315.81	310.54	5.27	"
0+90	5.20	317.87	310.33	7.54	"
T.P.	2.57	323.07	11.30	320.50	
+60	11.30	320.50	310.12	10.38	"
+30	10.31	321.49	309.91	11.58	"
0+00	12.23	319.57	309.70	9.87	7' North.
	331.80				

Walker
 Johnson
 Pope
 Crawford
 8-18-49

Iterations on ^{Top} Existing
 6" Water Main on 4319
 South of Alpha

1+23	on Top 6" Main	7.30	
0+63.5	" " " "	7.22	
0+14.5	" " " "	8.26	
0+00 = St. Alpha			
5.77	95.93		90.16



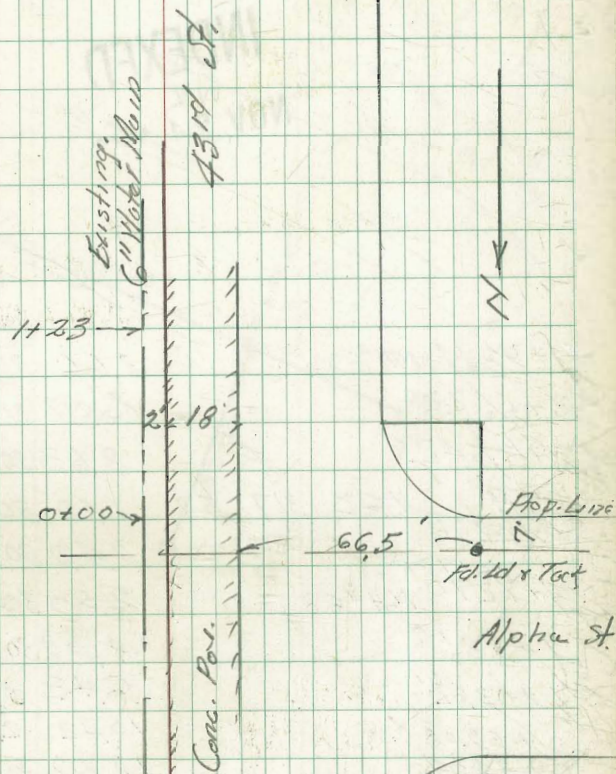
BM direct Mark on Cb Return
 S.W. of Alpha & 4319

Walker
 Johnson
 Pope
 Crawford
 8-18-47

Top Existing

Alterations on 6" Water Mains on 4319
 South of Alpha

1+23	on Top 6" Main	7.30	
0+63.5	" " " "	7.22	
0+14.5	" " " "	8.26	
0+00	St. Alpha		90.16
	577	95.93	

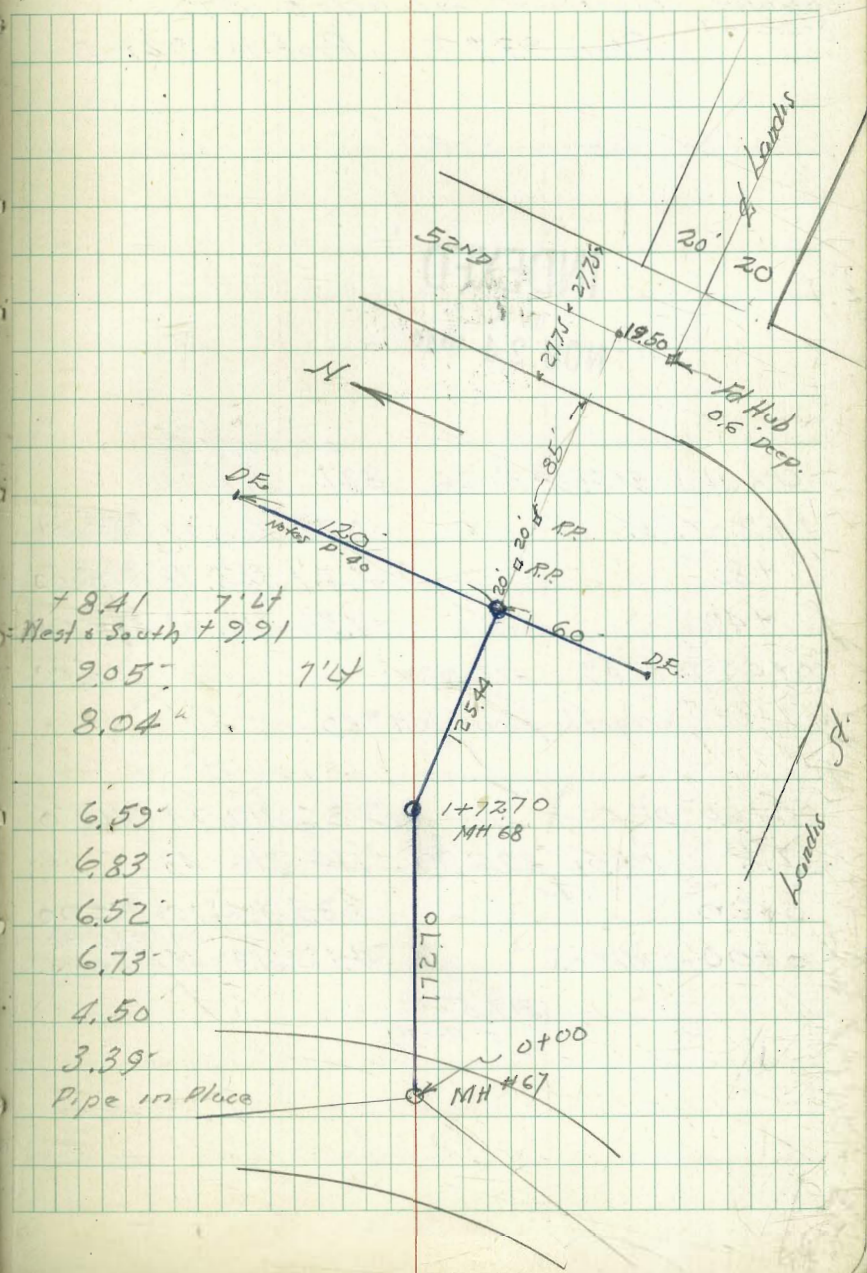


BM chisel Mark on cb returns
 S.W. of Alpha & 4319

Walker SEYER CONST. - Easement
 Becker North of Landis And East of Altadena
 Johnson 8-22-47 Plan 937 Profile 941-D

INDEXED
 WK
 NOV 24 1947

2+98.14-MH#69	3.66	313.91	305.50-N 304.00	+8.41	7'4"
2+66.78	6.07	311.50	302.45	9.05'	7'4"
2+35.42	8.63	308.94	300.90	8.04'	
T.P. 11.62	317.57	1.49	305.95		
2+04.06	1.49	305.95	299.36	6.59'	
Δ 17° R					
1+72.70 MH#68	2.80	304.64	297.81	6.83'	
1+38.16	4.88	302.56	296.04	6.52'	
1+03.62	6.43	301.01	294.28	6.73'	
0+69.08	10.42	297.02	292.52	4.50'	
0+34.54	13.29	294.15	290.76	3.39'	
± MH#67	18.43	289.01	289.00		
± 0+00 ch. floor Pipe P-26			B.M. 844 2+12.44 P-26		
7.57	307.44	299.87			



Walker
Becker
Johnson
8-22-47

SEWER CONST. - Easement
West of 52ND
North of Landis St.
Plan 937-D Profile 941-D

Sketch P-39

INDEXED

WK
NOV 24 1948

chk stub 5+55.54 P-26	821	^{0.01} 318.79 318.78		
1+20 = D.E.	0.72	326.27	320.01	6.26
+80	4.21	322.78	315.00	7.78
+40	7.36	319.63	310.00	9.63
0+00 = MH#69	326.99		305.00	

North from MH#69

0+60 = D.E.	7.26	317.73	311.50	6.23
T.P.	10.56	326.99	316.43	

0+20	8.85	308.72	305.00	3.72
0+00 = MH#69	4.12	313.45	305.50	

West + South + 9.45
= North + 7.95 7'E

317.57
* P-39

Walker
Johnson
Smiths

SEWER CONSTRUCTION

Alleys Blocks 36, 29, 24.
49th St And Easements
to SW in Resubdivisions 1-12 Front Add.

Fairmount Add.

Profile # 939-D

Station

Flow line

Cuts

offsets

INDEXED

NIC

NOV 24 1948

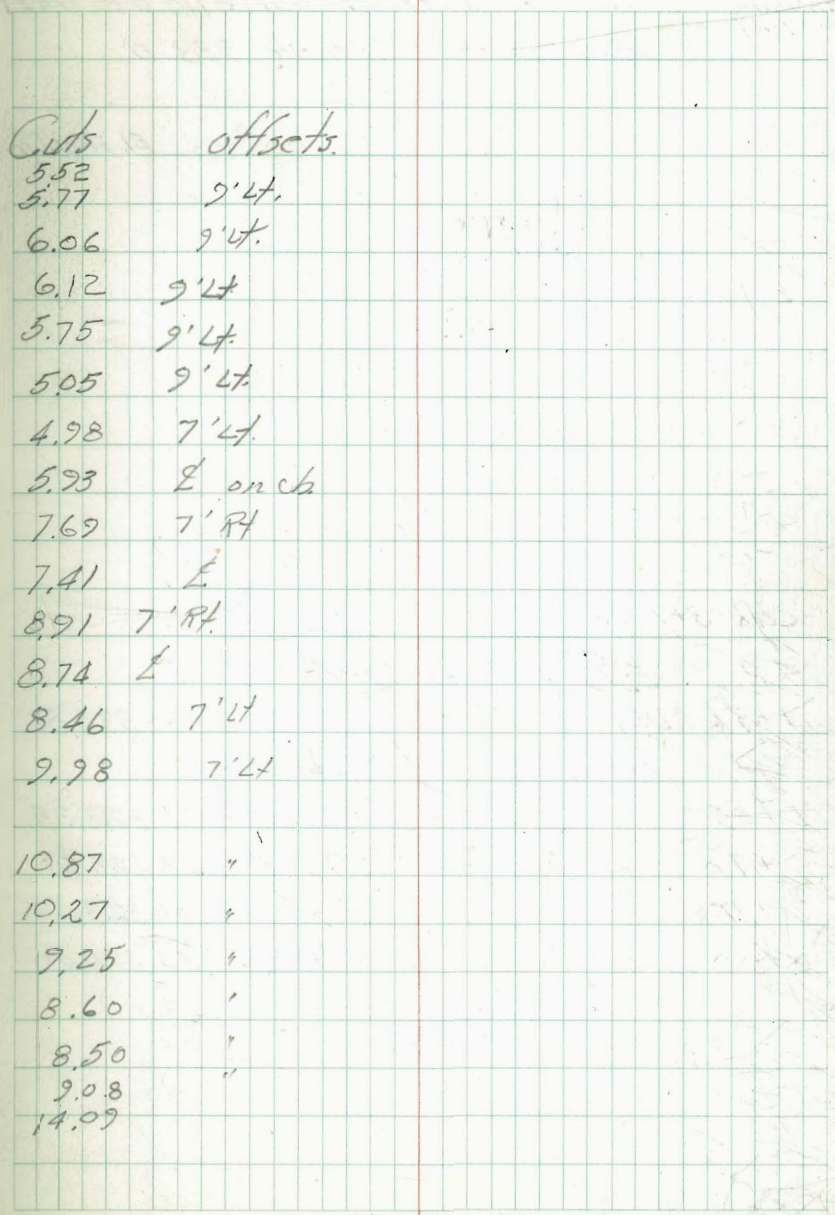
cht & stake 12+98.29 P-18	10.28	312.10	✓
2+64.65 MH #33	0.59	321.79	313.13
2+45	2.20	319.48	312.74
2+20	3.02	319.36	312.19
1+85	4.17	318.21	311.42
1+50	4.15	318.23	310.66
1+17.65	4.91	317.97	309.94
1+17.65	4.74	317.64	309.94
0+99.65	5.03	317.35	309.54
0+99.65	5.40	316.98	309.54
0+81.65	5.80	316.58	309.15
0+81.65	5.40	316.98	309.15
0+55.65	4.85	317.53	308.58
0+29.65 = Bk.	4.65	317.73	308.01
0+00 = DMH #30	13.17	309.21	303.00 = E 295.97 = H DMH #30 14+70.08 P-18
13.17	322.38	309.21	

8.66	7' RT to East
6.74	7' RT
7.17	7' RT
6.79	7' RT
7.57	7' RT
8.03	6' LT
7.70	£ on cb
7.81	7' LT
7.44	£ on Pav.
7.43	£ on cb
7.83	7' LT
8.95	7' LT
9.72	7' LT
6.21	
13.24	

Walker
Johnson
D. Smith
8-27-47

Estrella Ave. Sewer Const.
South of Polk Ave to E. of Union Ave
Plan 936-D Profile #938-D

Station			Fl.	Flow Line	Cuts	Offsets
4 + 76.96 = DE			4.43	329.88	5.52	
4 + 56.96			4.60	329.71	5.77	9' Lt.
4 + 31.96			5.05	329.26	6.06	9' Lt.
+ 86.96			5.72	328.59	6.12	9' Lt.
3 + 51.96			6.83	327.48	5.75	9' Lt.
3 + 16.96	Δ RT MH # 27		8.26	326.05	5.05	9' Lt.
3 + 05.25			8.57	325.74	4.98	7' Lt.
3 + 05.25			7.62	326.69	5.93	E on ch
2 + 79.55			6.35	327.96	7.69	7' Rt.
2 + 79.55			6.63	327.68	7.41	E
2 + 38.15			5.93	328.38	8.91	7' Rt.
2 + 38.15			6.10	328.21	8.74	E
2 + 12.25 = MH	Δ 130.58 Lt.		6.86	327.45	8.46	7' Lt.
1 + 75			7.84	326.47	9.98	7' Lt.
T.P.	9.25	334.31	0.77	325.06		
1 + 40			0.77	325.06	10.87	"
1 + 05			3.67	322.16	10.27	"
0 + 70			6.99	318.84	9.25	"
0 + 35			9.94	315.89	8.60	"
0 + 09.18			11.75	314.08	8.50	"
0 + 00			11.75	314.08	9.08	"
				299.99	14.09	
				BM Stake 17+27.27 P19		
	12.33	325.83		313.50		



Walker
Johnson
D. Smith
8-27-47

Univ. Ave Sewer Const.
South Side from Estrella Ave West
Plan 936-D Profile 938-D

El. Flow Line

Cuts

offsets

				0.01		
chk 3+70 P-70		5.32	345.71	345.72		
T.R. 5.79	351.04	1.45	345.25			
1+96 DE.		10.32	336.38	330.52	5.86	10.5' R.
T.P. 1263	346.70	0.24	334.07		"	
1+05		0.24	334.07	328.35	5.72	"
+70		2.73	331.58	325.90	5.68	"
+35		5.30	329.01	323.45	5.56	"
0+00		7.77	326.54	321.00	5.54	10.5' R.
	334.31					
	X P-42					

Walker
Johnson
Smith
8-26-47

SEWER CONST. - Easement Block E
in Oak Park.
Plan #936-D Profile 940-D

Station El. El.
 Stakes Flow Line

INDEXED
WK
NOV 24 1948

BM					
Chk NW 8 P. Univ & 52nd	1.52	315.58			
T.P. 11.92	317.10	0.14	305.18		
4+28 = 1 MH #61	12.36	292.96	288.40		
4+10	4.49	300.83	287.94		
3+85	5.23	300.09	287.30		
T.P. 12.05	305.32	2.63	293.27		
3+50		2.63	293.27	286.40	
3+15		5.09	290.81	285.50	
2+80		5.93	289.97	284.60	
2+45		6.62	289.28	283.70	
2+10		7.79	288.11	282.80	
1+75		8.80	287.10	281.90	
1+40		9.72	286.18	281.00	
1+05		10.89	285.01	280.10	
0+70		11.59	284.31	279.20	
0+35		12.60	283.30	278.30	
0+00		10.78	285.12	277.40	
			276.36 =		
	295.90				
10.78			285.12		

BM. Rim MH
0+00
1576-19



Trunk line

on River
0+00
Cholla Trunk Sewer
51st St.

Walker
Becker
Johnson
9-3-47

SEWER CONST. in Easement
N.E. from Existing M.H. South of Union Ave
at 51st St.

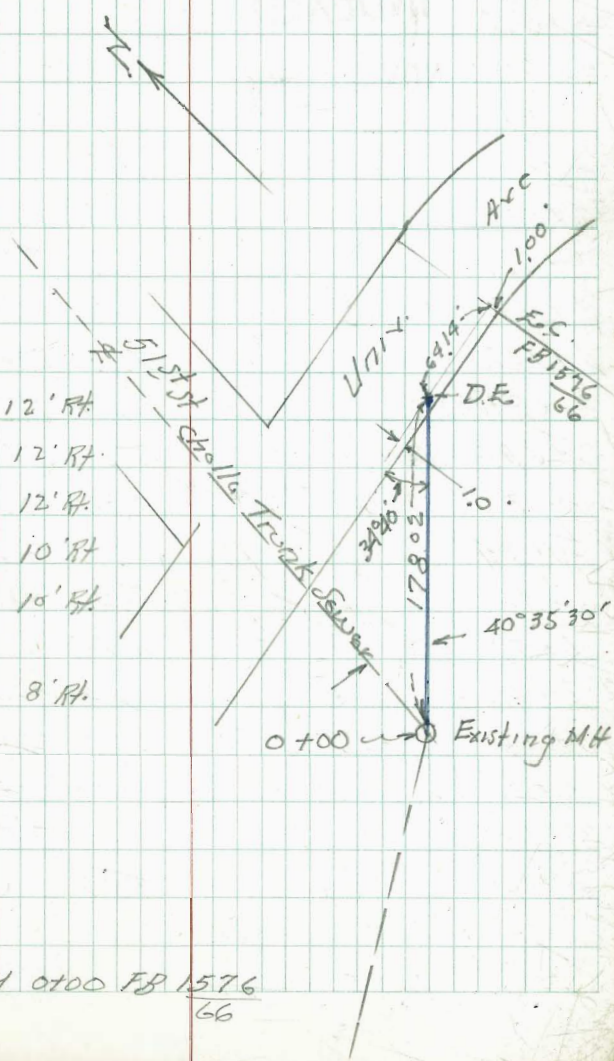
Plan 936-D Profile 941-D

			0.02		
	FB. 1576-66		303.23		
Chk & Stake	1+78.02	3.80	303.21		
	1+78.02	+0.05	307.06	299.13	7.93
	1+50	3.27	303.74	294.55	9.19
	1+20	5.96	301.05	289.63	11.42
	0+90	11.02	295.99	284.71	11.28
	0+60	7.90	299.11	279.79	19.32
TP	13.49	307.01	1.04	293.52	
	0+26 = Bk	7.23	287.33	274.20	13.13
	0+00 = Existing M.H.	12.75	281.81	273.60	8.21

12.75 294.56

281.81

B.M. Rim MH 0+00 FB 1576
66

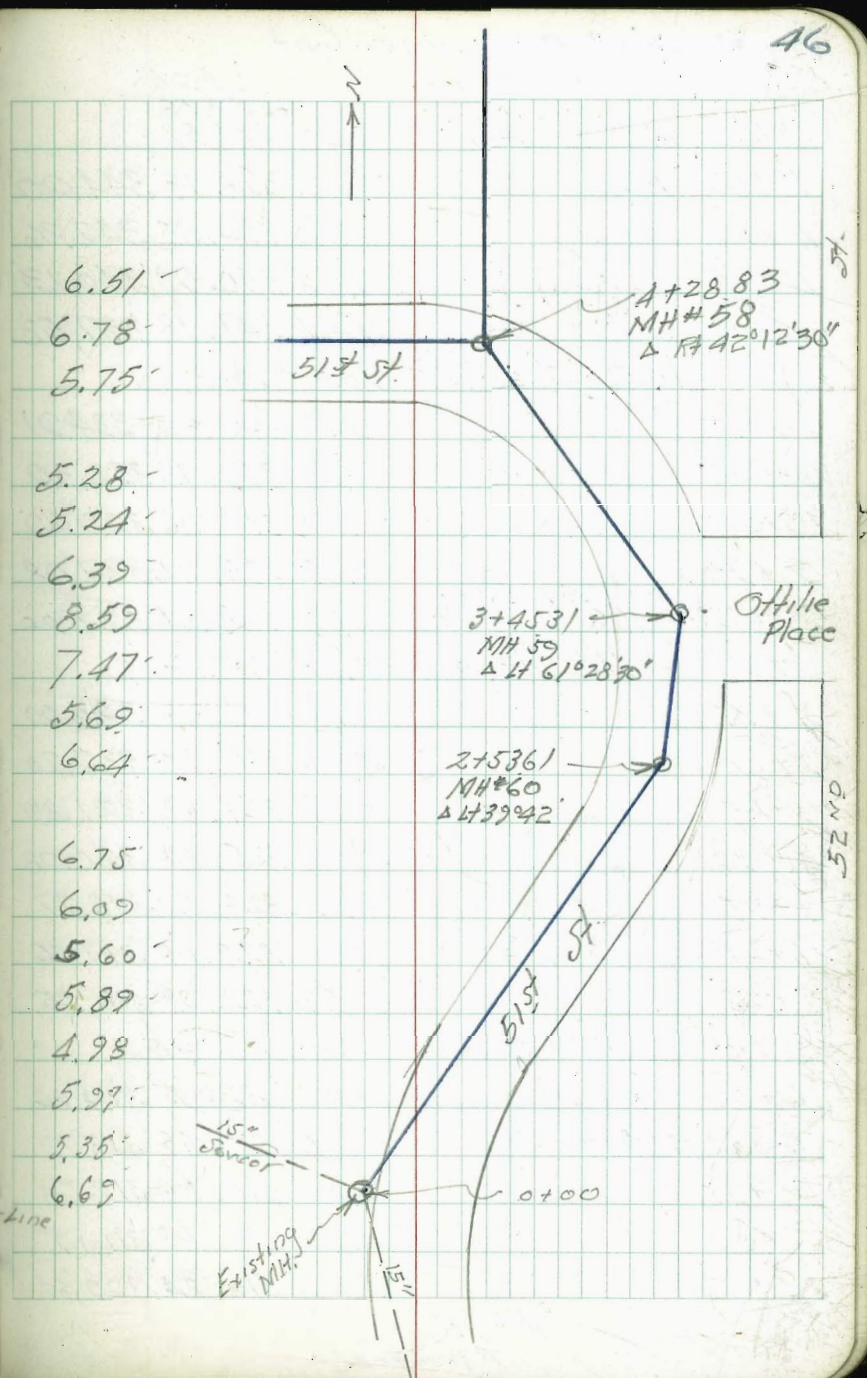


Walker
Hendricks
Becker
Johnson
9-8-47

SEWER CONST. IN 51st St
North of Univ. Ave
And in Basement Block "D" OAK PARK
And Alley Blk 25 Fairmount Add.
Plan #936-D Profile 940-D

Cont. P-47

5+30	INDEXED	6.85	314.61	308.10	6.51
4+95	WK	8.09	313.37	306.59	6.78
4+60	NOV 24 1948	10.63	310.83	305.08	5.75
TR	12.09 321.46	2.39	309.37		
4+28.83	NH #58 $\Delta L 42^{\circ} 12' 30''$	2.74	309.02	303.74	5.28
4+00.99		4.36	307.40	302.16	5.24
3+73.15	$\Delta L 61^{\circ} 28' 30''$	4.79	306.97	300.58	6.39
3+45.31	NH #59	4.17	307.59	299.00	8.59
3+14.75		7.03	304.73	297.26	7.47
2+84.18	$\Delta L 39^{\circ} 42'$	10.54	301.22	295.53	5.69
2+53.61	NH #60	11.33	300.43	293.79	6.64
TR	12.21 311.76	0.39	299.55		
2+35		0.39	299.55	292.80	6.75
2+10		2.39	297.55	291.46	6.09
1+75		4.76	295.18	289.58	5.60
1+40		6.34	293.60	287.71	5.89
1+05		9.13	290.81	285.83	4.98
0+70		10.01	289.93	283.96	5.97
0+35		12.51	287.43	282.08	5.35
0+00		13.05	286.89	280.20	6.69
			279.57 - True Line		
13.05	299.94	286.89	8th Rm MA 12-132.05 18-1576 23		



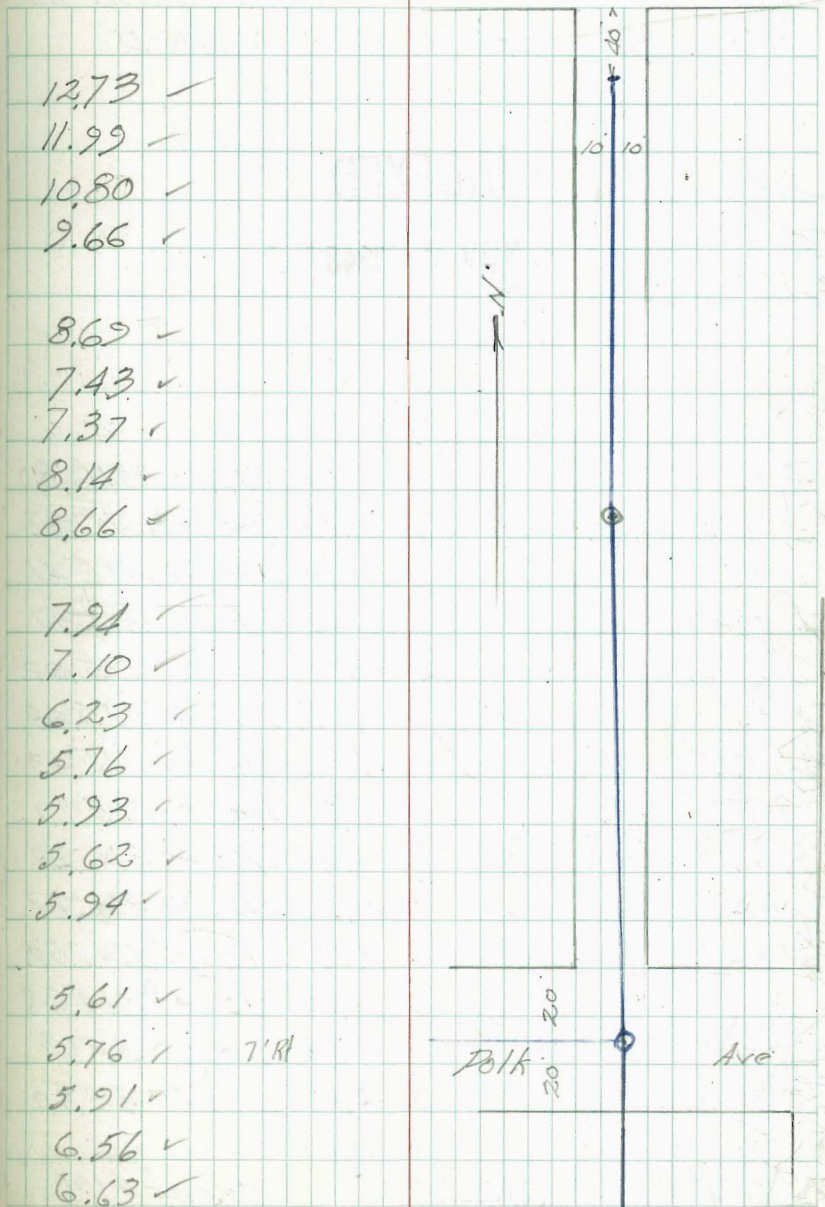
Sewer Const. Cont.
from P-46

Station	Dist	Const	Accum	Total
chk & stub	0.00	F81576 P-17	0.28	358.58 358.57
12+17.05	DR		2.12	356.73 344.00
11+25			4.50	354.35 342.36
11+65			7.22	350.93 340.13
11+30			11.67	347.18 337.52
TR	15.25	358.85	10.5	343.60
10+25			1.05	343.60 334.91
10+60			4.22	339.73 332.30
10+25			7.59	337.06 329.69
9+20			9.43	335.22 327.08
9+62.65	MH#6	$\Delta 0^{\circ} 57' 20''$ RT	10.99	333.66 325.00
TR	12.71	344.65	0.98	331.24
9+35			0.98	331.24 324.00
9+00			3.12	329.80 322.70
8+65			5.30	327.62 321.39
8+30			7.08	325.84 320.08
7+95			8.22	324.70 318.77
7+60			9.84	323.08 317.46
7+25			10.83	322.09 316.15
TR	12.47	332.92	1.01	320.45
6+20			1.01	320.45 314.84
6+62.05	MH#7	$\Delta 1^{\circ} 58' 45''$	1.91	319.55 313.79
6+35			2.92	318.54 312.63
6+00			3.78	317.68 311.12
5+65			5.22	316.24 309.61

321.46
K from P-46

orange

Ave 47



Walker
Hendricks
Johnson
9-11-47

Polk Ave - Sewer Const.
Between 52nd & Alameda Ave
Plan 936-D Profile 240-D

48

INDEXED
WK
NOV 24 1948

4+30 D.E.	11.06	319.18	316.80	2.38
4+05	8.56	321.68	316.62	5.06
3+75	6.04	324.20	316.41	7.79
3+40	3.92	326.32	316.17	10.15
3+05	2.85	327.39	315.92	11.47
2+70	2.79	327.45	315.68	11.77
2+35	4.00	326.24	315.43	10.81
2+00	6.17	324.07	315.19	8.88
1+70 P.O.T. NH#8	8.84	321.40	314.98	6.42
+40	10.59	319.65	314.77	4.88
1+05	11.79	318.45	314.52	3.93
+70	11.81	318.43	314.28	4.15
+35	11.34	318.90	314.03	4.87
0+00 NH#7	10.67	319.57	313.79	5.78

9.79 330.24

32045 ^{314.90}
P-47

Walker
Hendricks
Johnson
9-11-47

Sewer Const. 51st St.
South of Polk Ave
Plan 936-D Profile 940-D

chk & Joke	FB 1576 25	0.69	$\frac{0.01}{329.54}$ 329.55		
1+75=DE		1.13	329.11	321.98	7.13
+35		3.80	326.44	320.38	6.06
1+00	INDEXED WK NOV 24 1948	5.50	324.74	318.98	5.76
+65		7.46	322.78	317.58	5.20
+35		8.78	321.46	316.38	5.08
0+00		8.84	321.40	314.98	6.42
		330.24 P. 48			

chk & Joke	FB		$\frac{0.02}{328.54}$ 328.52		
1+44.86		3.36	328.46	317.01	11.45
1+20		5.64	326.18	314.74	11.44
TP	11.23	331.82	1.57	320.59	
0+90		1.57	320.59	311.99	8.60
0+60		7.28	314.88	309.24	5.64
0+30		11.29	310.87	306.49	4.38
0+17.64	1279	322.16	2.39	309.37	305.36
0+00		311.76		303.74	4.01
		x from 12-46			

Walker
Hendricks
Johnson
9-11-97

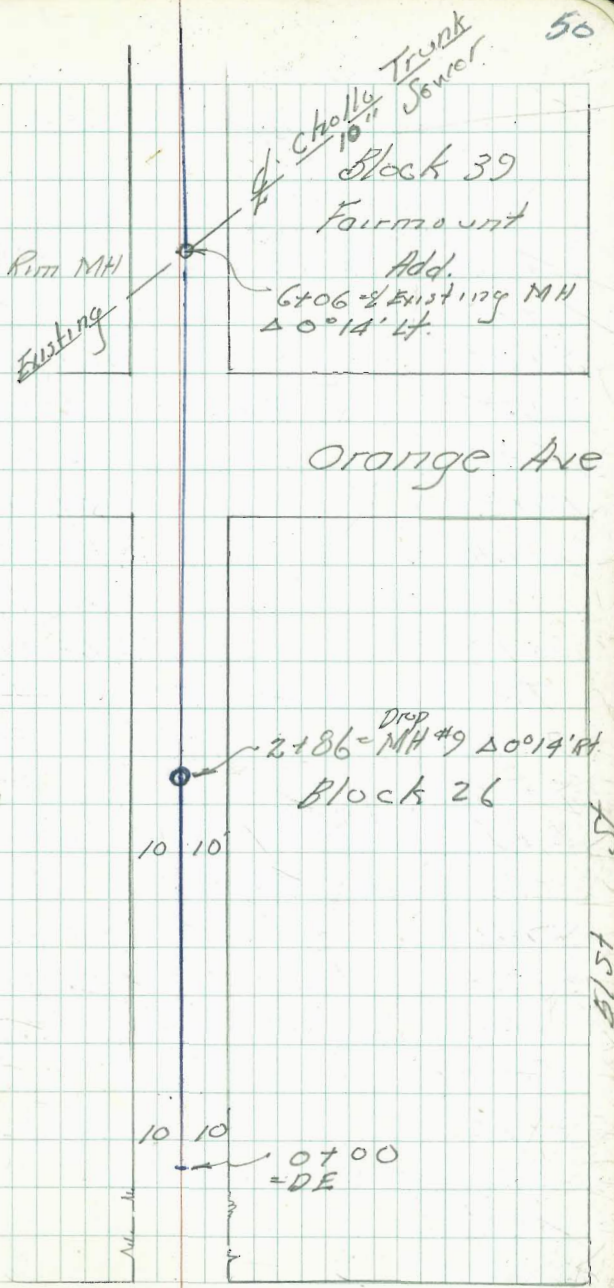
Sewer Const. in Alleys
Blocks 26, 39, 42, Fairmount Add.
Profile 940-D

INDEXED

WIC
NOV 24 1948

6+06 = Existing MH	8.77	309.37	303.00 302.37 303.80	6.27 = North Existing FL. 5.57 = South on Rim MH
5+85	2.93	308.71	304.18	4.53
5+65	4.27	313.87	304.54	9.33
5+30	4.20	313.94	305.16	8.78
4+95	5.64	312.50	305.78	6.72
4+60	5.84	312.30	306.41	5.89
4+25	6.22	311.92	307.02	4.90
3+90	3.70	314.44	307.64	6.80
3+55	0.67	317.47	308.27	9.20
3+20	0.48	317.66	308.89	8.77
T.P. 0.67 318.14 $\Delta 0^{\circ}14'$	11.77	317.97		
2+86 = MH (Drop) #9	11.77	317.47	309.50 311.00	7.97 = North +6.47 South
2+45	11.12	318.12	312.10	6.02
2+10	9.29	319.25	313.03	6.22
1+75	8.55	320.69	313.96	6.73
1+40	7.66	321.58	314.90	6.68
1+05	7.17	322.07	315.84	6.23
+70	6.95	322.29	316.78	5.51
+35	6.04	323.20	317.72	5.48
0+00	5.37	323.87	318.66	5.21
	2.22	329.24		

B.M. Sub
3+10 P. 13



Polk Ave

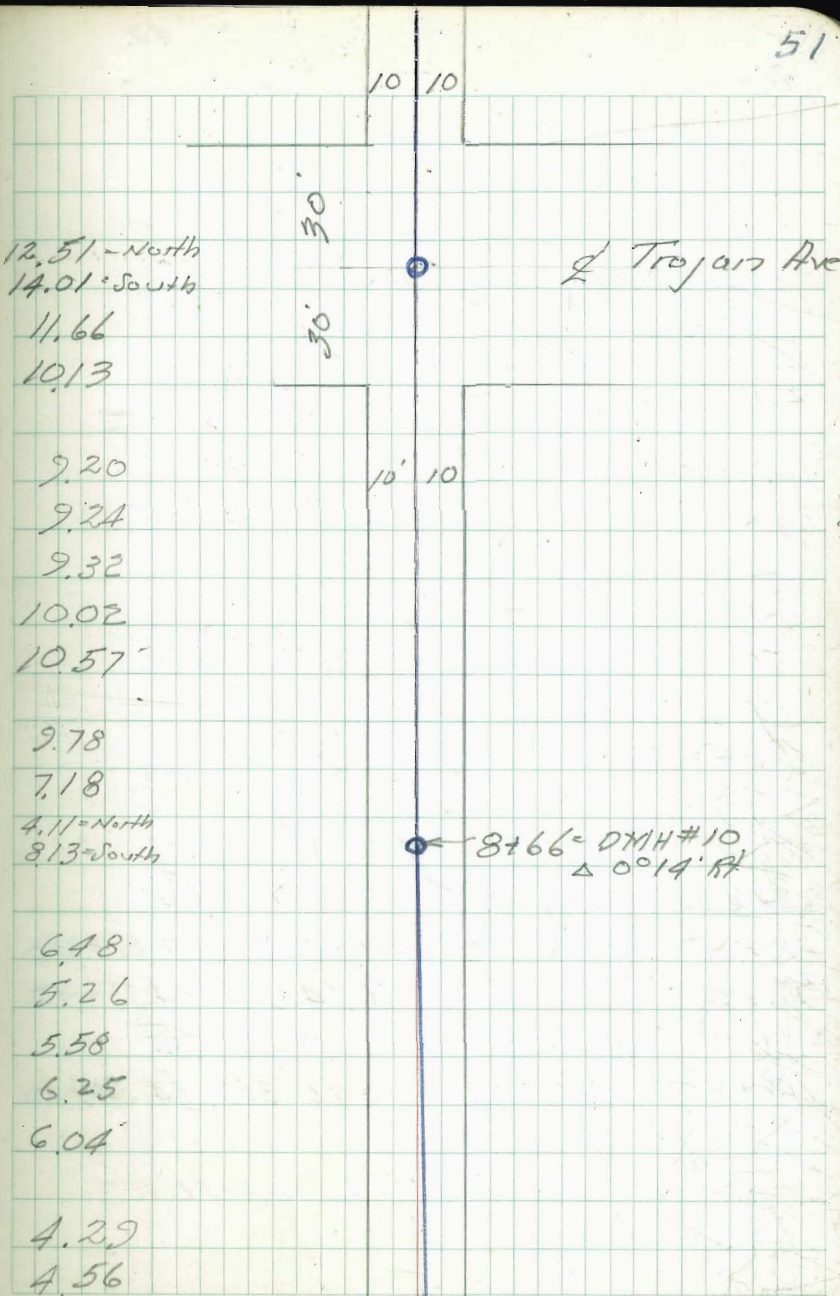
Sewer Const. Alleys ^{810/26} 26, 39, 42
 Fairmount Add.
 Cont. from P-50

Continuation P-52

11+96	DMH #10 A	2.59	356.01	343.50 N 342.00 S
11+70		6.68	351.92	340.26
11+45		9.87	348.73	338.60
TR	13.13	358.60	1.28	345.47
11+10		1.28	345.47	336.27
10+75		3.57	343.18	333.94
10+40		5.82	340.93	331.61
10+05		7.45	339.30	329.28
9+70		9.23	337.52	326.95
TR	12.35	346.75	0.09	334.40
9+35		0.09	334.40	324.62
9+00		5.02	329.47	322.29
8+66	DMH #10 Δ # 0°14'	10.36	324.13	320.02 N 316.00 S
TR	13.01	334.49	1.07	321.48
8+46		1.07	321.48	315.00
8+21		3.54	319.01	313.75
+86		4.97	317.58	312.00
+51		6.05	316.50	310.25
7+16		8.01	314.54	308.50
TR	9.15	322.55	4.74	313.40
6+75		7.40	310.74	306.45
6+40		8.88	309.26	304.70

318.14

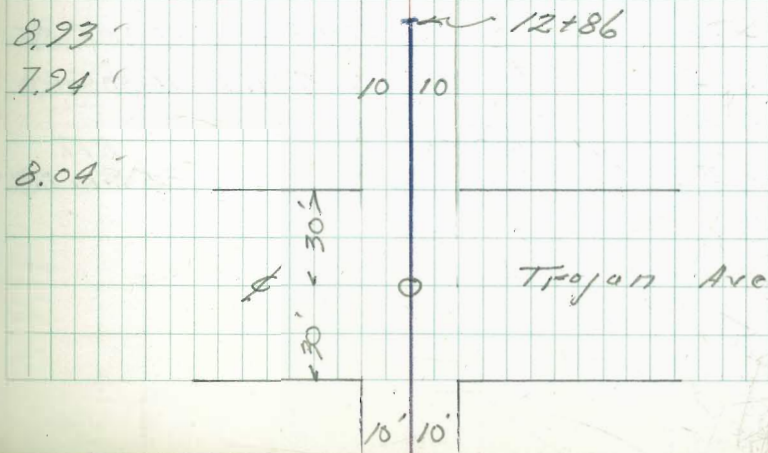
Cont. from P-50



Sewer in Blocks 26, 39, 42
 Fairmount Add.
 Cont. from P-51

				0.07	
	FB 1576		369.13		
chk & sub 12+56	9	1.92	362.06		
12+86=DE		1.035	371.33	362.40	
12+56		6.94	364.04	356.10	
TP	13.14	370.98	0.76	357.84	
12+26		0.76	357.84	349.80	
			358.60		
					Cont. from P-51

Block 42
 Fairmount
 Add.



Walker
Hendricks
Johnson
9-16-47.

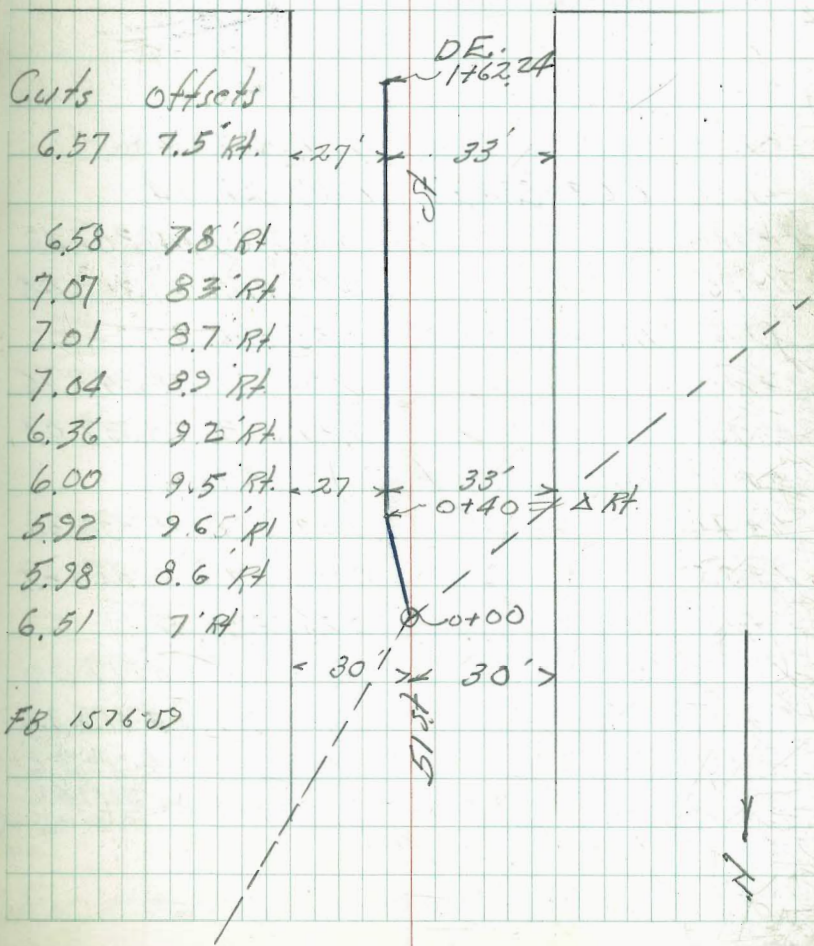
Sewer Grades - 51st
North of Orange Ave.

INDEXED
WIK
NOV 24 1948

Sta	Notes	1448	313.87	313.90	El. Stakes	El. Flow Line
1+62.24	= DE	3.01	325.37	318.80		
T.P.	6.64	328.38	0.62	321.74		
1+36		0.62	321.74	315.16		
1+10	E.L.C.	3.73	318.63	311.56		
0+95	Bk	5.63	316.73	309.72		
0+80	"	6.26	315.40	308.36		
+65	"	8.51	313.85	307.49		
0+50	= P.V.C.	9.26	313.10	307.10		
0+40	= Δ Pt.	9.44	312.92	307.00		
0+25		9.53	312.83	306.85		
0+00		9.25	313.11	306.60		
182.24	N.N.L. Orange Ave	9.31	322.36		B.M.	
					313.05	Rim MH

Orange

Ave.



Walker
Hendricks
Johnson
9-16-47

Sewer Grades Alleys
Blk 40, 41. Fairmount Add.

Plan 935-D Profile 940-D

INDEXED

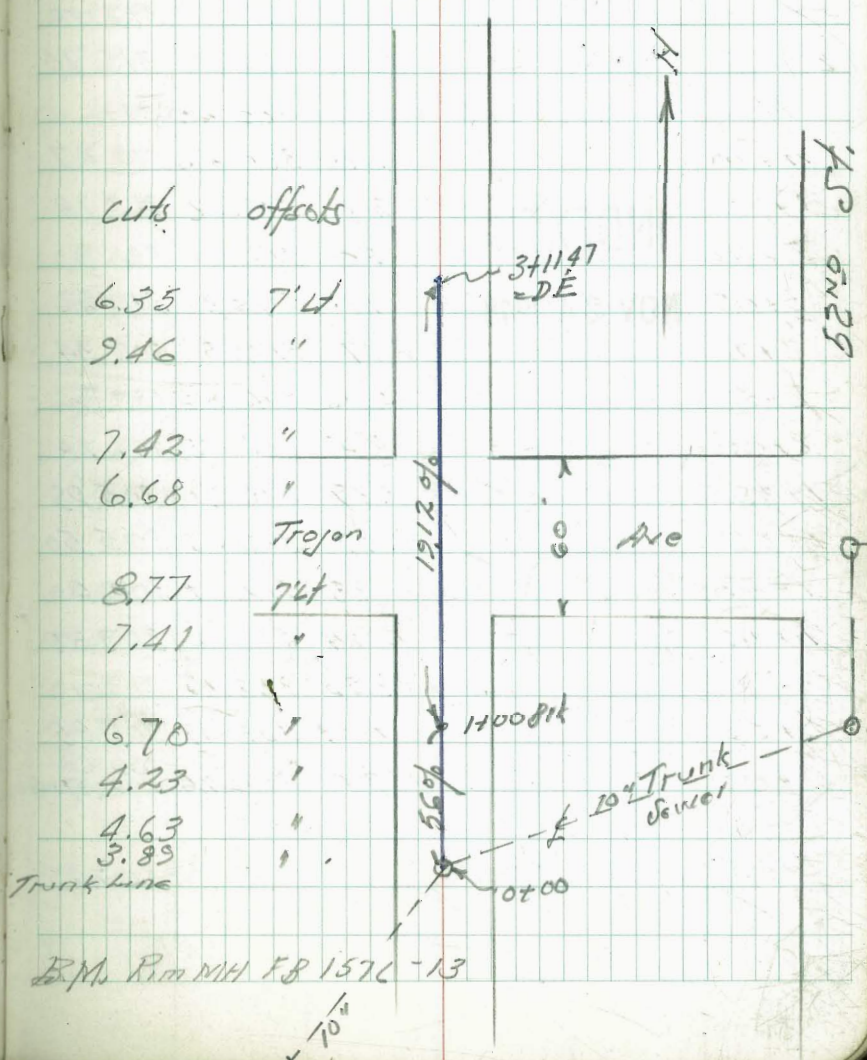
WIK

NOV 24 1948

El. Stokes Elev. Flow Line

Cuts

			0.10	
			332.32	
chk old Estub	181576-12 142847	8.64	332.42	
T.P.	1.86	341.06	12.97	339.20
T.P.	0.03	352.17	12.49	352.14
3+1147=DE.		0.85	363.78	357.43
2+75		4.72	359.91	350.45
T.P.	11.74	364.63	0.35	352.89
2+40		2.06	351.18	343.76
2+05		9.49	343.75	337.07
T.P.	12.08	353.24	0.12	341.16
1+70		2.13	339.15	330.38
1+35		10.18	331.10	323.69
T.P.	12.77	341.28	0.20	328.51
1+00 Pit		5.01	323.70	317.00
+70		9.16	319.55	315.32
+38		10.72	317.99	313.36
0+00		13.42	315.29	311.40
				310.65 =
	11.09	328.71		317.62

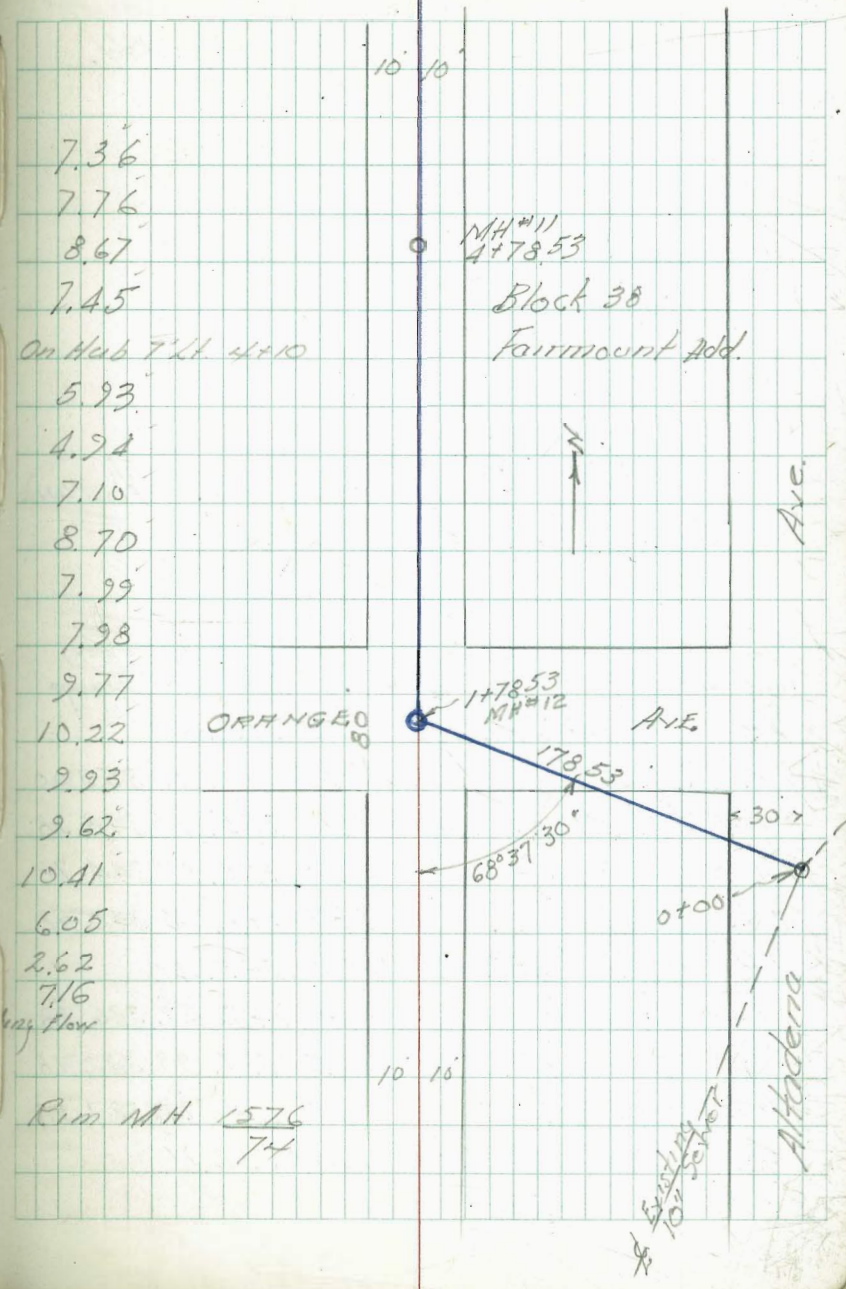


Walker
Headricks
Becker
Johnson 9-17-47

Sevier Const. Alley Blk 38 - Fmt. Add.
Profile 940-D
Plan 935-D

Sta.		H.L.	-	Elev. States	Elev. Grade
5 +35				1.45 331.14	323.78
5 +00				5.25 327.34	319.58
4 +78.53	P.O.T. = MH #11			6.92 325.67	317.00
4 +45				9.38 323.21	315.76
TP	12.19	332.59	0.10	320.40	314.34
4 +10				0.10	320.40 314.47
3 +75				2.38	318.12 313.18
3 +40				1.50	319.00 311.90
3 +05				1.18	319.32 310.62
2 +70				2.17	317.53 309.34
2 +35				4.46	316.04 308.06
2 +00				3.95	316.55 306.78
1 +78.53	Δ RT 68°37'30" M.H. #12			4.29	316.21 305.99
1 +65				5.07	315.43 305.50
1 +40				6.28	314.22 304.60
1 +05				6.74	313.76 303.35
0 +70				12.35	308.15 302.10
0 +35				17.03	303.47 300.85
0 +00				13.74	306.76 299.60 298.97 - from flow
0 +00	13.21	320.50			307.29

INDEXED
WK
NOV 24 1948



Sewer Const.

Alley Block 38 Fairmount - Add.

Cont. from P-55

Est. Flow Line

Cuts offsets

Trojan

60

Ave.

465

7+78.53 - D.E.

Block 38
Fairmount
Add.

10 10

Atop

chk L. Sub 12+58	FB 1276 9	4.65	$\frac{0.05}{369.13}$	369.08	Alley St. Orange
TR	7.84	373.73	2.53	365.89	
7+78.53 - D.E.			7.33	361.09	353.00
7+45	13.07	368.42	0.48	355.35	348.28
7+10			4.90	350.93	344.78
6+75			9.37	346.46	340.58
TR	12.37	355.83	0.62	343.46	
6+40			1.86	342.22	336.38
6+05			6.15	337.93	332.18
5+70			9.31	334.77	327.98
TR	11.97	344.08	0.48	332.11	
					332.59

Walker
Hendricks
Becker
Johnson
2-18-47

SEWER CONSTRUCTION
in Alleys Blocks 2, 8 ^{11th 37} Fairmount
Additions
From South of Polk to North of Orange Ave.
Plan 935, 36, D Profile 939-D

Station INDEXED Elev. Flow Line

Station	INDEXED	Elev.	Flow Line
4k E MH Rim	WK NOV 24 1948	1.33	306.12
3+74 = A. East M.H.		12.15	305.30
3+47		7.95	309.50
T.P.	5.84	317.45	12.08
3+20		11.33	312.36
2+94 = Bk		8.46	315.23
2+80		6.12	317.57
T.P.	0.65	323.62	13.03
2+45		13.03	323.04
2+10		7.89	328.18
1+75		1.81	334.26
T.P.	0.04	336.07	12.89
1+40		9.89	339.03
1+04 = Bk		5.50	343.42
0+70		2.55	346.37
0+38		0.98	347.94
0+00 = D.E.		0.68	348.24
T.P.	0.68	348.92	4.84
T.P.	6.85	353.08	7.13
T.P.	9.63	353.36	0.60
	11.38	344.33	332.25

Cuts offsets.

5.45' 4.70'

6.41'

6.78'

7.23'

7.57'

8.07'

8.24'

9.35'

9.15'

8.42'

9.15'

8.40'

6.38'

10' 10'

3+74

15" Sewer
Fairmount
Add.

10' 10'

0+00

5' Subdivision line

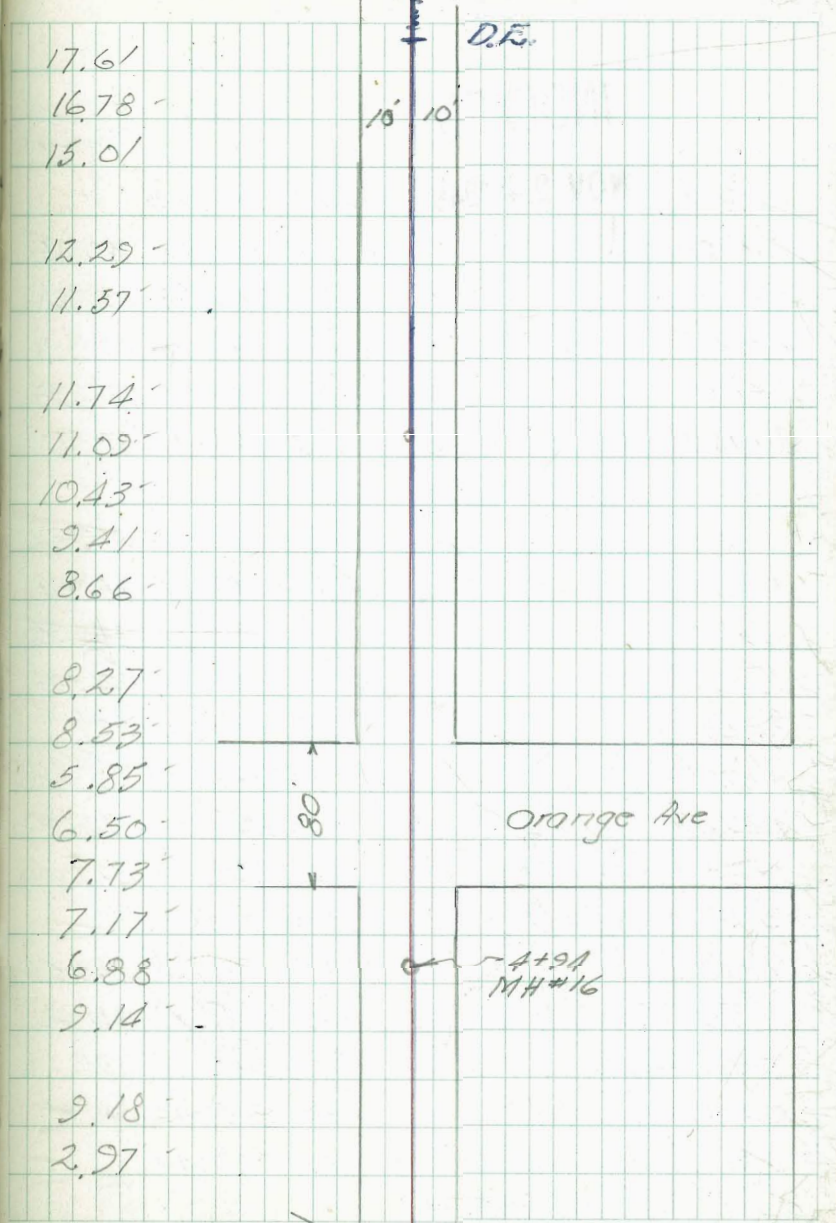
Oak Crest

B.M. S.E. BP Orange 4915 1576

F.B. 1576

5 Drive

Stations	Sewer Const.	Alto	8K 28, 37	Cont. from P-57	Fairmount add	003	351.94
10+09.32=DK				5.27	361.37		
9+90				0.55	366.63	349.02	17.61
9+55				3.85	363.33	346.55	16.78
T.P.	12.97	367.18		10.10	357.08	342.07	15.01
9+20				0.75	354.21		
8+85				5.08	349.88	337.59	12.29
T.P.	13.22	354.96		10.28	344.68	333.11	11.57
8+50				0.60	341.74		
8+14=MH#15				1.97	340.37	328.63	11.74
8+00				7.23	335.11	324.02	11.09
7+70				8.26	334.08	323.65	10.43
7+35				10.09	332.25	322.84	9.41
T.P.	13.12	342.34		11.79	330.55	321.89	8.66
7+00				0.06	329.22		
6+65				0.06	329.22	320.95	8.27
6+30				0.75	328.53	320.00	8.53
5+25				4.37	324.91	319.06	5.85
5+60				4.67	324.61	318.11	6.50
5+25				4.38	324.90	317.17	7.73
4+94 MH#16				5.89	323.39	316.22	7.17
4+70				7.02	322.26	315.38	6.88
T.P.	12.36	329.28		7.87	321.41	312.27	9.14
4+35				0.53	316.22		
4+00				0.53	316.92	307.74	9.18
				11.27	306.18	303.21	2.97
		317.45					



Walker
Hendricks
Becker
Johnson

Grades - Sewer Alleys Blk 29, 36
Fairmount Add.

INDEXED
WIK
NOV 24 1948

El.
Flow Line

Cuts offsets

T.P.	1441	339.02				
5+02 = DE	+0.05	353.48	342.17	11.31	7' Lt.	
4+70	3.70	349.73	339.28	10.45	"	
4+35	7.40	346.03	336.13	9.90	"	
4+00	10.30	343.13	332.98	10.15	"	
3+75.7 Brk	12.65	340.78	330.80	9.98	"	
T.P.	1441	353.43	0.70	339.02		
3+60	0.70	339.02	329.86	9.16	"	
3+30	4.41	335.31	328.06	7.25	"	
2+95	7.00	332.72	325.96	6.76	"	
2+60	9.76	329.96	323.86	6.10	"	
2+25	10.32	329.40	321.76	7.64	"	
1+95.7	Drop (Exist) D.H.	10.39	329.33	320.00 N 311.50 317.00 S	9.33 = N 12.33 = South	Existing Flow Line 7' Lt
1+70.7		10.06	329.66	319.00	10.66	"
1+45.7 Brk		6.46	333.26	321.00	12.26	"
T.P.	0.94	339.72	12.73	338.78		
1+05		12.73	338.78	326.55	12.23	"
0+70		2.65	341.86	331.32	10.54	"
0+35		5.52	345.99	336.10	9.89	"
0+00 = DE		2.48	349.03	340.87	8.16	"
T.P.	7.77	351.51	1.59	343.74		
	12.38	345.33		332.95		

SE Cor Orange + 49th
S.M.B.P. F.B. - 1576
4

Hendricks
Becker
Johnson
SEPT 19, 1947

Grades Sewer Alley Blk 24829
Fairmount Add.

Sta.		H1	-	Elev. Stakes	Elev. Grade	Cut	Offset	DE 11+44
							7'4"	
8+20		1.61		344.22	337.15	7.07		
7+89.68	M.H. #17	2.50 2.46		343.33 343.37	336.43	6.90 6.94		
+67		2.74		343.09	335.85	7.24		
+45		3.14		342.69	335.30	7.39		
7+10	INDEXED	3.48		342.35	334.42	7.93		
+75	WK	4.19		341.64	333.55	8.09		
+40	NOV 24 1948	4.92		340.91	332.67	8.24		
6+05		5.61		340.22	331.80	8.42		
+70		6.98		338.85	330.92	7.93		
5+35		7.77		338.06	330.05	8.01		
192.65	M.H. #32	9.55		336.27	329.00	7.27		
4+75		9.89		335.94	327.78	8.16		
T.P.	11.09 345.83	0.90		334.74				
4+40		0.90		334.74	325.34	9.40		
4+05		3.06		332.58	322.90	9.68		
+70		5.28		329.86	320.46	9.40		
155		8.27		328.37	318.02	9.35 10.35		
3+00		11.11		324.53	315.58	8.95		
T.P.	11.72 335.64	0.12		323.92				
2+64.65	M.H. #33	2.23		321.81	313.13	8.68		
11.94	324.04			312.10				

INDEXED
WK
NOV 24 1948

T.R.T
Sta. carried from p. 41 this Book

E State 12+98.29 FB 1569
47

St.

Block

29

Polk

M.H. #17 Ave

0+60

0+70

49+4

Block

M.H. #32

29

0+100

2+64.65 No.
0+100 South
M.H. #33
0+52 DE

University

Ave.

Ave

Winona

Hendricks
Johnson
Becker
Sept 19, 1947

Grades Sewer Alley Block 24
from MH # 33 to South

62

				Elev. Stakes	Elev. Grade	Cuts	Offset
--	--	--	--	-----------------	----------------	------	--------

see p. 60 for sketch

		1194	312.10	ck start - 109 B. 17			
0+52	DE	2.73	321.31	314.53	6.78	7' R+	
0+26		2.50	321.54	313.83	7.71	7' R+	
0+00	MH # 33	2.23	321.81	313.13	8.68	7' R+	

1194 324.04

312.10

£ Stake 12+98.29 FB 1569
47

Sewers on Polk Ave. MH 17 to
D.E. East & West

63

Sta.	+ H.I.	-	Elev. stakes	Elev. Grade	Cuts	offset.
------	--------	---	--------------	-------------	------	---------

See P. 60 for sketch

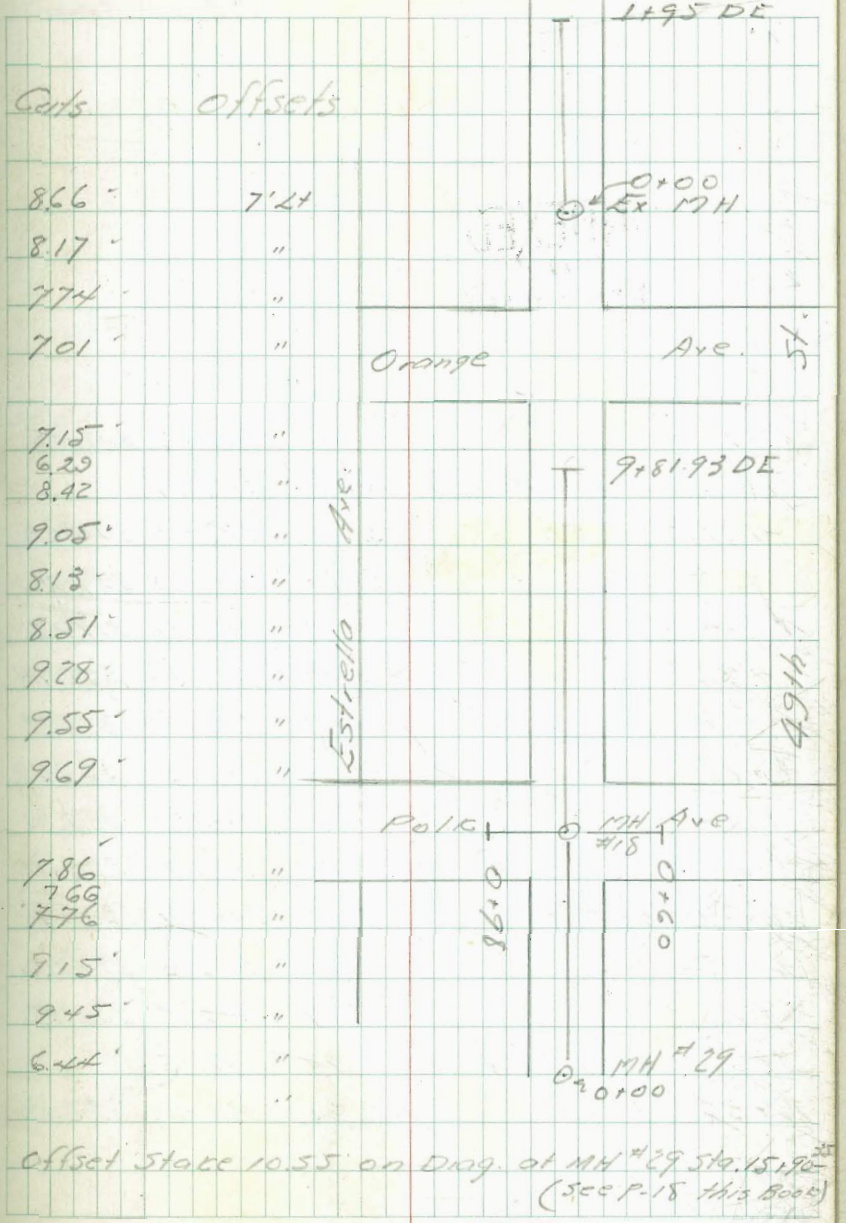
0+60 DE		7.33	341.40	336.85	4.55'	7' L
0+30		6.00	342.73	336.64	6.09	7' L
0+00	MH #17 going West	5.40	343.33	336.43	6.90	9.77 Diag
0+70 DE		3.75	344.98	337.29	7.69	7' L
0+35		4.31	344.42	337.54	6.88	7' L
0+00	MH #17 going East	5.40	343.33	336.80	6.53	7' L
		5.6	345.73			
				343.09		

Hendricks
Becker
Johnson
Sept. 22, 1947

Jenners Alley in Blocks 23 & 30
Fairmount Add.

Sta	+	H1	-	Elev. States	Elev. Grade
6+00			2.06	329.03	330.37
+65			5.24	336.85	328.68
5+30			7.36	334.72	326.99
4+95			9.78	332.21	325.30
TP.	11.33	342.09	0.58	330.76	
4+60			0.58	330.76	323.61
					322.01
4+26.93	MH #18	Polk	3.04	328.30	319.88
+85			4.00	327.34	318.29
+50			6.25	325.09	316.96
3+15			7.20	324.14	315.63
+80			7.76	322.58	314.30
+45			8.82	322.52	312.97
2+10			10.01	321.33	311.64
TP.	13.17	331.34	0.63	318.17	
1+75			0.63	318.17	310.31
1+40	MH #28		2.16	316.74	308.98
1+05			3.78	315.02	305.87
0+70			6.58	312.22	302.77
0+35			12.69	306.11	299.67
0+00	MH #29				296.57
	12.46	318.80			306.34

INDEXED
WIK
NOV 24 1948



Hendricks Sewer Grades Alley Block 35
 Johnson Fairmount + Add. Ex. M.H. to North.
 Bexter
 Sept. 22, 1947

Sta.	+	H.I.	-	Elev. States	Elev. Grade.
------	---	------	---	--------------	--------------

INDEXED
 WK
 NOV 24 1948

B.M.			+ 0.57	348.48	348.45
1+95	DE		1.42	346.49	340.00
1+58	BrK		2.64	345.27	336.95
1+35			3.29	344.62	334.19
1+00			7.47	340.44	329.99
TP.	1210	347.91	1.03	335.81	
0+70			5.77	331.07	326.39
0+35			7.45	325.39	322.19
0+00	Ex. M.H.		11.21	325.63	317.99
	10.19	336.84			326.65

SEBP Church Steps
 Estrella & Orange

6.49 -

8.32 -

10.43 -

10.45 -

4.68

5.68

3.20

7.64

Rim Ex. M.H.

Cuts offsets
 7' left

Sewer Grades on Poik Ave
from MH #18 to DE East & West

Sta.	H.I.	Stake Elev	Elev. Grade
------	------	------------	-------------

Cuts offsets

		2.91	330.76	330.76
0+98 DE.		10.07	324.60	320.67
0+70		8.87	325.80	320.47
0+35		7.61	327.06	320.22
0+00	going West	6.33	328.34	319.98
0+60 DE		4.44	330.23	323.81
0+30		5.40	329.27	322.91
0+00	going East	6.33	328.34	322.01

ck on Hub 7'x1.4+60 P.64

3.93' 7' R1

5.33' "

6.84' "

8.26' 9.77' on Diag.

6.42' 7' L1

6.36' "

6.33' "

6.37 334.67

328.30 Hub 7'x1.4
Sta 4+24.93

Sept
1947
Walker
Hendricks
Jacker
Johnson

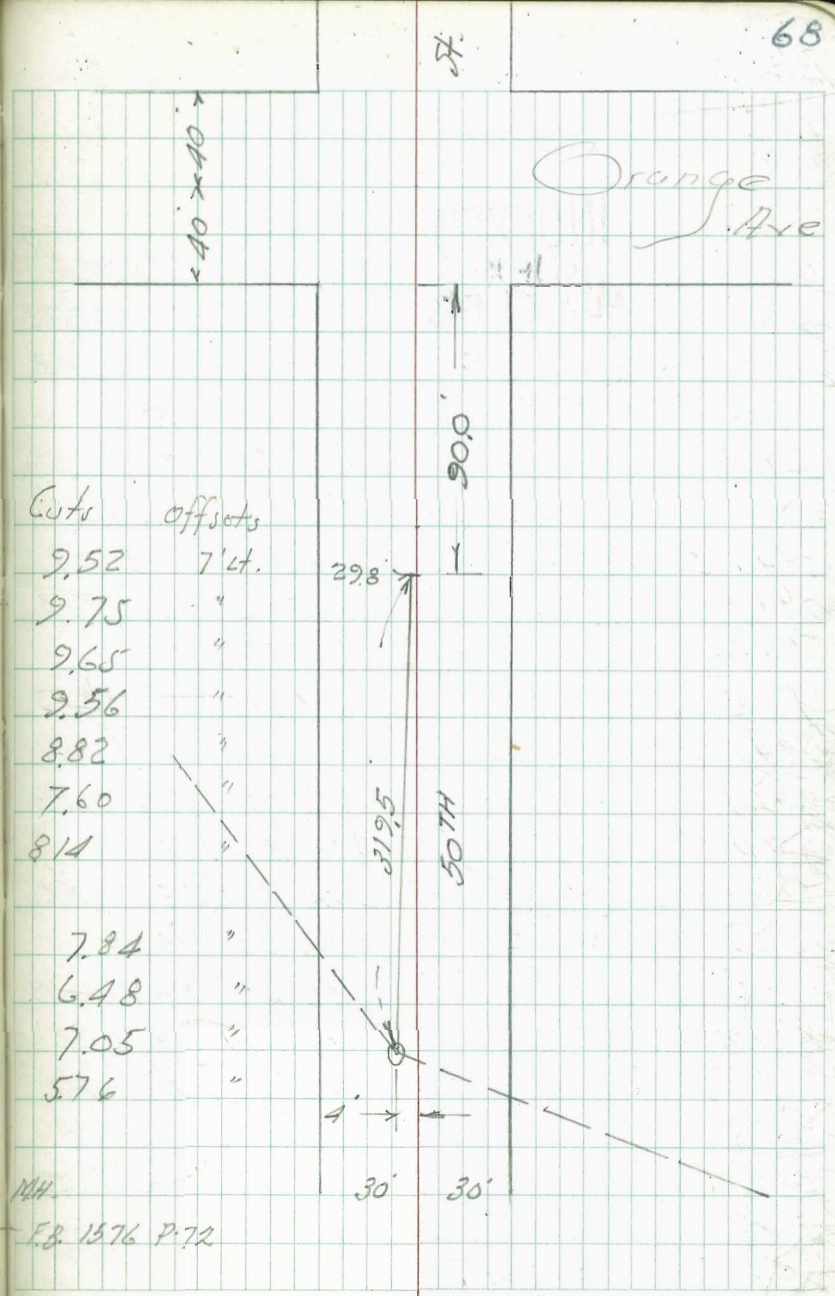
Sewer Grades - 50th St.
South of Orange Ave.
Plan 985, 36 D Profile 941 D

INDEXED
WK
NOV 24 1948

Sta	1576 72	5.26	319.46 319.49	Fl. Flow Line	Cuts	Offsets
3+19.5 = D.F.		1.82	322.93	313.41	9.52	7' Lt.
3+05		1.93	322.82	313.07	9.75	"
+70		2.85	321.90	312.25	9.65	"
+35		3.77	320.98	311.42	9.56	"
2+00		5.33	319.42	310.60	8.82	"
1+64.5 = Bk		7.38	317.37	309.77	7.60	"
1+40		9.20	315.55	307.41	8.14	"
T.P.	12.89	324.75	0.18	311.86		
1+05		0.18	311.86	304.02	7.84	"
+70		4.93	307.11	300.63	6.48	"
+35		7.75	304.29	297.24	7.05	"
0+00 Existing MH		12.43	299.61	293.85	5.76	"

12.12 312.04

g.M. on Rim MH
299.92 4+49.5 - F.B. 1576 P. 72



Walker
 Hendricks
 Becker
 Johnson
 10-6-47

Sewer Grades

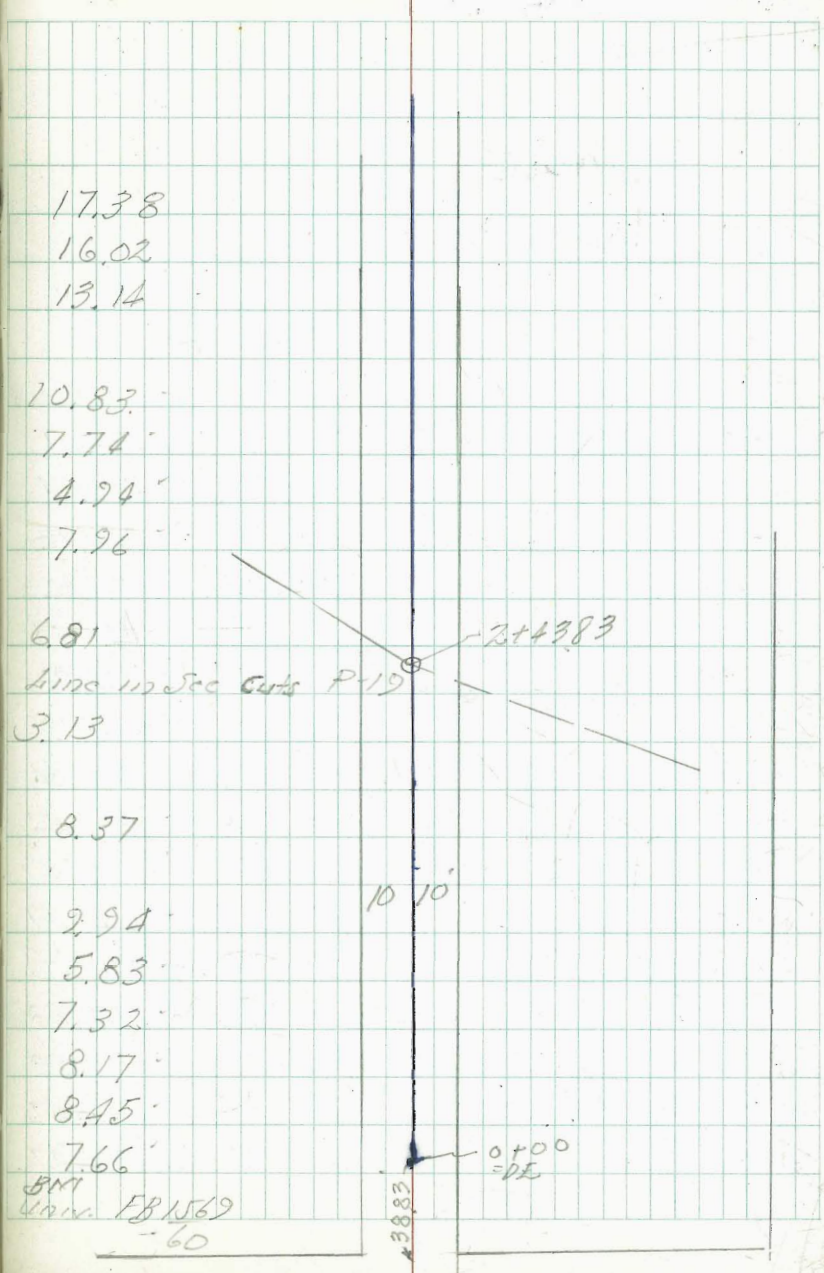
Alley 8th 22-31 Fairmount Add.

INDEXED

WIK

NOV 24 1948

5+15		0.30	339.35	321.97	17.38
4+80		1.20	337.75	321.73	16.02
4+45		5.03	334.62	321.48	13.14
T.P.	6.35	339.65	0.57	333.30	
4+10		1.81	332.06	321.23	10.83
3+75		5.15	328.72	320.98	7.74
3+43.83	MH 22	8.17	325.70	320.76	4.94
3+10		11.05	322.82	314.86	7.96
T.P.					
3+10	12.53	333.87	1.27	321.34	
2+75		7.01	315.60	308.79	6.81
2+43.83	MH#24-P-19			303.41	Line in Sec Cuts P-19
2+25		12.15	310.46	307.33	3.13
T.P.	2.55	322.61	12.11	320.06	
1+90		9.24	322.23	314.56	8.37
T.P.	0.44	332.17	12.99	331.73	
1+55		12.99	331.73	321.79	9.94
1+23.83	Bit	10.68	334.04	328.21	5.83
1+05		7.98	336.74	329.42	7.32
+70		4.89	339.83	331.66	8.17
+35		2.37	342.35	333.90	8.45
0+00	DE. 38.83 N.N.L. Univ.	0.92	343.80	336.14	7.66
	5.06	344.72	339.66	336.14	BM Univ. FB 1569



Sewer Grades

Alley 81k 22-31

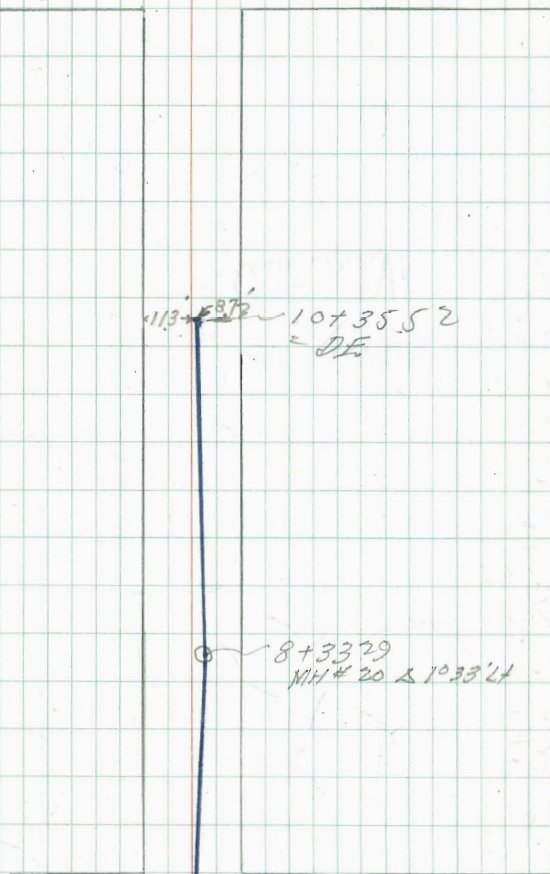
Oct 6-97 Fairmount Add.
Cord. from P. 67

10+35.52 = DE.	1.17	338.48	332.97	5.51
10+05	2.24	337.41	331.64	5.77
9+70	3.67	335.98	330.12	5.86
9+40	4.50	335.15	328.82	6.33
9+05	5.58	334.07	327.30	6.77
8+70	7.28	332.37	325.78	6.59
8+33.29 <small>Δ 1°33'24"</small> MH#20	10.94	328.71	324.19	4.52
8+10	13.32	326.33	324.64	2.29
7+85	13.83	325.82	323.86	1.96
7+50	12.93	326.72	323.61	3.11
7+15	10.82	328.83	323.37	5.46
6+80	9.23	330.42	323.12	7.30
6+45	7.16	332.49	322.88	2.61
6+10	5.49	334.16	322.63	11.53
5+80.29 <small>Δ 0°51'17"</small> MH#21 Polk	7.42	332.23	322.42	9.81
5+50	1.97	337.68	322.21	15.47

332.65

Orange

Ave



8+33.29
MH#20 Δ 1°33'24"

MH#21 Polk
5+80.29 - Δ 0°51'17"

L. S. H. Co. Ave

Walker
Hendricks
Becker
Johnson
10-6-47

SEWER GRADES.

52ND ST. - Trojan to Fullerton

5+65		3.97	360.92	354.96
5+3631	$\Delta 0^{\circ} 29' 30''$ MH #3	4.65	360.24	354.11
5+00		5.07	359.82	353.52
4+65		4.97	359.92	352.96
4+30	INDEXED	4.06	360.83	352.39
3+95	WK NOV 24 1948	2.99	361.90	351.83
3+60		2.25	362.64	351.26
3+25		1.02	363.87	350.69
2+90		0.85	364.04	350.13
TR	113 364.89	0.15	363.76	
2+55		2.47	361.44	349.56
2+20 = MH #4		7.03	356.88	348.99
2+00		10.41	353.50	346.19
TR	12.83 363.91	0.23	351.08	
1+75		1.94	349.37	342.69
1+40		7.56	343.75	337.79
TR	13.06 351.31	0.54	338.25	
1+05		0.54	338.25	332.89
+70		5.88	332.91	327.99
+35		10.27	328.52	323.09
0+00		12.96	325.83	318.19
	12.96 338.79	325.83	315.05 = Existing B.M. Rim Exist	

5.96	
6.13	
6.30	+30' $\Delta 0^{\circ} 29' 30''$ MH #3
6.96	
8.44	
10.07	
11.38	
13.18	
13.91	
	52ND
11.88	
7.89	
7.31	
6.68	
5.96	
5.36	
4.92	
5.43	
7.64	
	Flowed into
	MH $\frac{1}{2}$ Trojan x 52ND FB 15.76
	44
	Trojan Ave

52ND St Sewer Grades

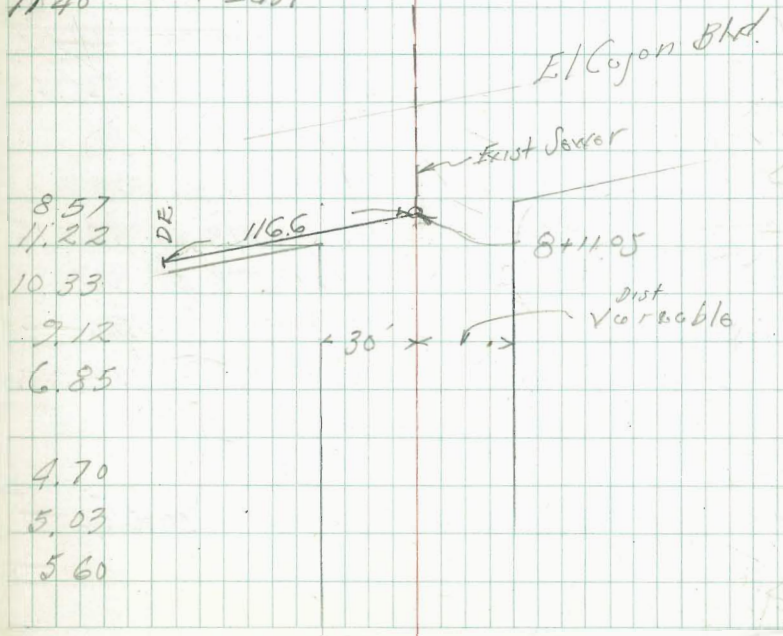
Cont. from P-71

Walker
Hendricks
Becher
Johnson
10-14-97

And on El Cajon Blvd. from Drop MH #2
to D.E. 116.6 West.

1+16.6 = DE	2.32	377.07	370.99
0+77.7A	4.01	375.38	369.00
0+38.81	5.38	374.01	367.00
0+00 = Drop MH #2	5.64	373.75	365.00
			362.35
5.82	379.39	373.57	8+11.95
		0.86	
2 52nd Alley N of El Cajon		377.07	
chk Rm. MH. FB 1576-46	0.47	377.01	
11.05 Drop MH #2			365.60
8+60 Existing Sewer	3.91	373.57	362.35
7+75	5.89	371.59	361.26
7+40	8.15	369.33	360.24
7+05	11.47	366.01	359.16
T.P.	13.28	377.48	0.69
		364.20	
6+70	2.08	362.81	358.11
6+35	2.80	362.09	357.06
6+00	3.28	361.61	356.01
			364.89

6.08	4' North	chisel cross on walls
6.38	4' North	" " "
7.01	4' North	" " "
8.75	7' East	
11.40		



8.57
11.22
10.33
9.12
6.85
4.70
5.03
5.60

Walker
Becker
Johnson
10-7-47

Sewer Const. Alley Blk 2
Alhambra Park
Profile sheet 3

INDEXED
WK
NOV 24 1948

1+20 = Existing Sewer	6.13	377.81	372.48
+80 $\frac{2.99\%}{}$	6.56	377.38	371.32
+40 $\frac{2.99\%}{}$	7.25	376.69	370.16
0+00 = 4" MH #1	8.98	374.96	369.00

North from MH #1:

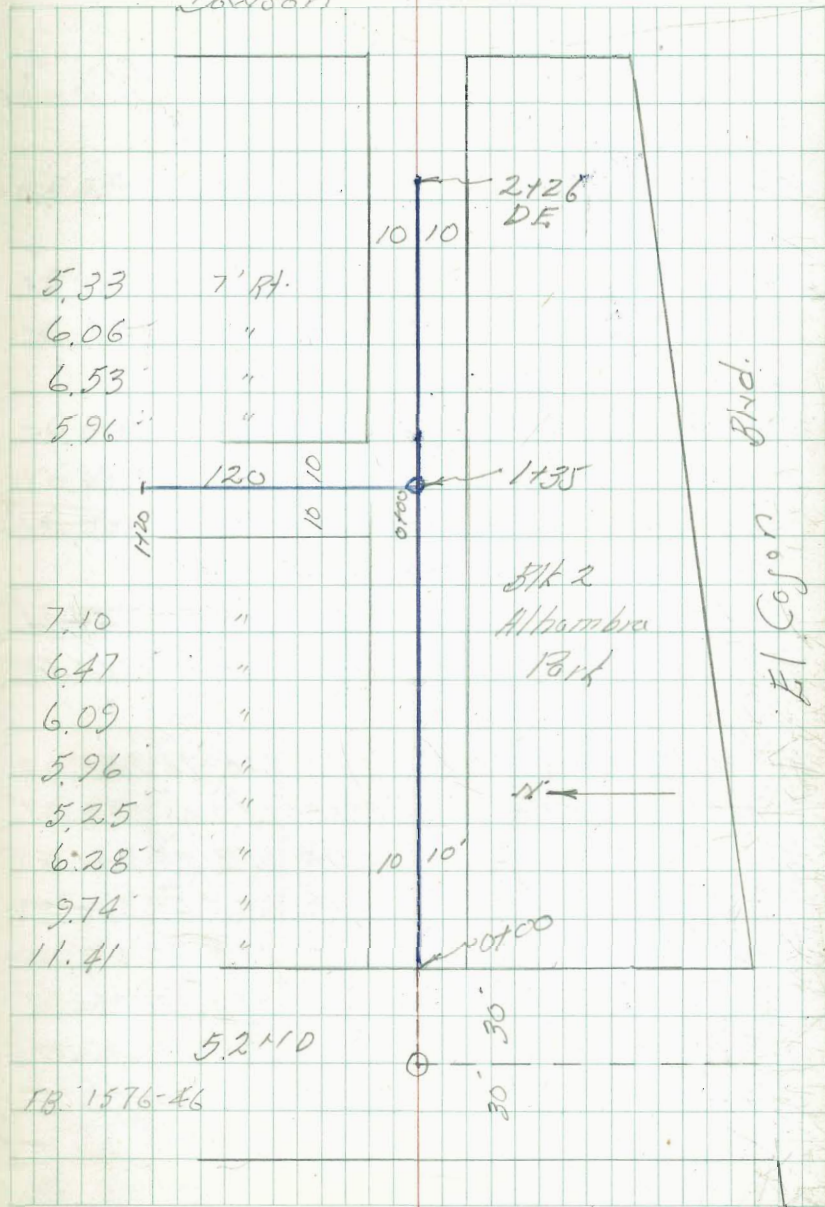
Chk & Stub 1+65	8.96	374.98	
2+26 = DE	0.89	383.11	376.01
2+05 $\frac{2.99\%}{}$	3.07	380.87	374.40
1+70 $\frac{2.99\%}{}$	6.15	377.79	371.70
1+35 = 4" MH #1	8.98	374.96	369.00
1+05	10.53	373.41	368.16
0+70 $\frac{2.98\%}{}$	12.47	373.47	367.19
0+35 $\frac{2.98\%}{}$	7.98	375.96	366.22
0+00 = 5" line 52nd	7.28	376.66	365.25

7.38 383.94

376.56

52nd
Pvt.
0+30

Dawson



5.33	7' ft.
6.06	"
6.53	"
5.96	"
7.10	"
6.47	"
6.09	"
5.96	"
5.25	"
6.28	"
9.74	"
11.41	"

52nd
FB 1576-46

				E.I. Flow Line	Cuts	offsets
5+25			9.66	301.68	293.03	8.65'
TR	11.52	311.34	0.41	299.82		
4+90			4.27	295.96	288.38	7.58'
4+52.31	MH#01		10.96	289.27	283.36	5.91' ✓
TR	13.05	300.23	0.57	287.18		
4+36			1.77	285.98	279.95	6.03'
3+95			7.02	280.73	274.58	6.15'
3+60			12.21	275.54	269.21	6.33'
TR	13.13	287.75	0.30	274.62		
3+25			4.62	270.30	263.84	6.46'
2+90			9.80	265.12	258.46	6.66'
TR	13.03	274.92	0.01	261.89		
2+54.52	MH#12		1.12	260.78	253.02	7.76'
2+32			2.82	259.08	252.36	6.82' ✓
2+10			4.15	257.75	251.52	6.23' ✓
1+75			6.10	255.80	250.37	5.43' ✓
1+40			8.15	253.75	249.22	4.53' ✓
1+05			10.38	251.52	248.07	3.45' ✓
0+70			13.53	248.37	246.92	1.45'
0+35			11.06	250.84	245.77	5.07
0+00	End of MH		11.39	250.51	244.62	5.89
	10.54	261.90		251.36	From MH	FR 1569:67

Auburn Drive
Cont. from p. 74

				0.01		
	FB. 1569 '68		328.86			
8+74.25	chk Rivs	4.12	328.85			
8+74.25	Exst. MH. End of line	3.39	329.58	320.00		9.58 ✓
8+50		4.39	328.58	318.78		9.80 ✓
8+15		6.86	326.11	317.03		9.08 ✓
7+80		8.98	323.99	315.28		8.71 ✓
		9.49				
T.P.	9.49	332.97	6.17	323.48		
7+45		1.74	321.91	313.53		8.38 ✓
7+10		3.73	319.92	311.78		8.14 ✓
6+75		6.08	317.57	310.03		7.54 ✓
6+39.50	NH #40	9.54	314.11	308.26		5.85 ✓
6+17		11.93	311.72	305.25		6.47 ✓
T.P.	12.37	323.65	0.06	311.28		
5+95		2.12	309.22	302.33		6.89 ✓
5+60		5.01	306.33	297.68		8.65 ✓
		311.34				
		* from p. 74				

Walker
Becker
Johnson
8-20-47

Intercepting Sewer
Grades for Change in Grade
as shown in Sketch Page 78

chk

5.16 ^{300.90 p-19}
300.93

14+70.48

14+19.33
13+98.57

713 298.96 295.71

3.25 Nail & on Timber

715 298.94 295.61

3.33 Nail & " Timber

T.P. 5.67 306.09 + 304 300.42

13+78

+0.88 298.26 295.50

2.76 Nail Header & Tunnel

13+72.3 = Brk

0.06 297.32 295.47

1.85 Nail " "

13+11

13+63.7 = Brk

+0.15 297.53 294.12

3.41 Nail West side Tunnel

-3.04 297.38

300.42

Nail Timber
13+78
p-77

0.50 %

12+93.5

2.58 297.32 293.75

3.57 on Timber
Nail & Ditch on Face Tunnel

12+83.7 = Brk

3.84 296.06 293.71

2.35

T.P. 0.00 299.90

17.42 299.90

Nail Stake
12+98.29
p-131

5.22 317.32

312.10

12+45.22 MH P-17

Walker ^{check} Levels on Existing Chart
 Becker 2/11/11. Ave West of 49th
 Johnson To determine change of
 Grade in 8" Sewer Line
 Sketch P-78

INDEXED
 WIK
 NOV 24 1948

13+78 Nail in Timber +3.02 300.42
 Near Head Tunnel 300.43 P-78

13+60.7 Bottom of Culvert 2.54 294.86

13+60.7 Top Conc. Culvert 0.79 296.61

T.P. -7.31 297.40 12.52 304.71

12+85.3 on Flood = Head
 P-78 Recent laid Pipe 23.20 294.03 294.03
 5.13 317.23 312.10 B.M. Stake
 12+98.29 FB156947

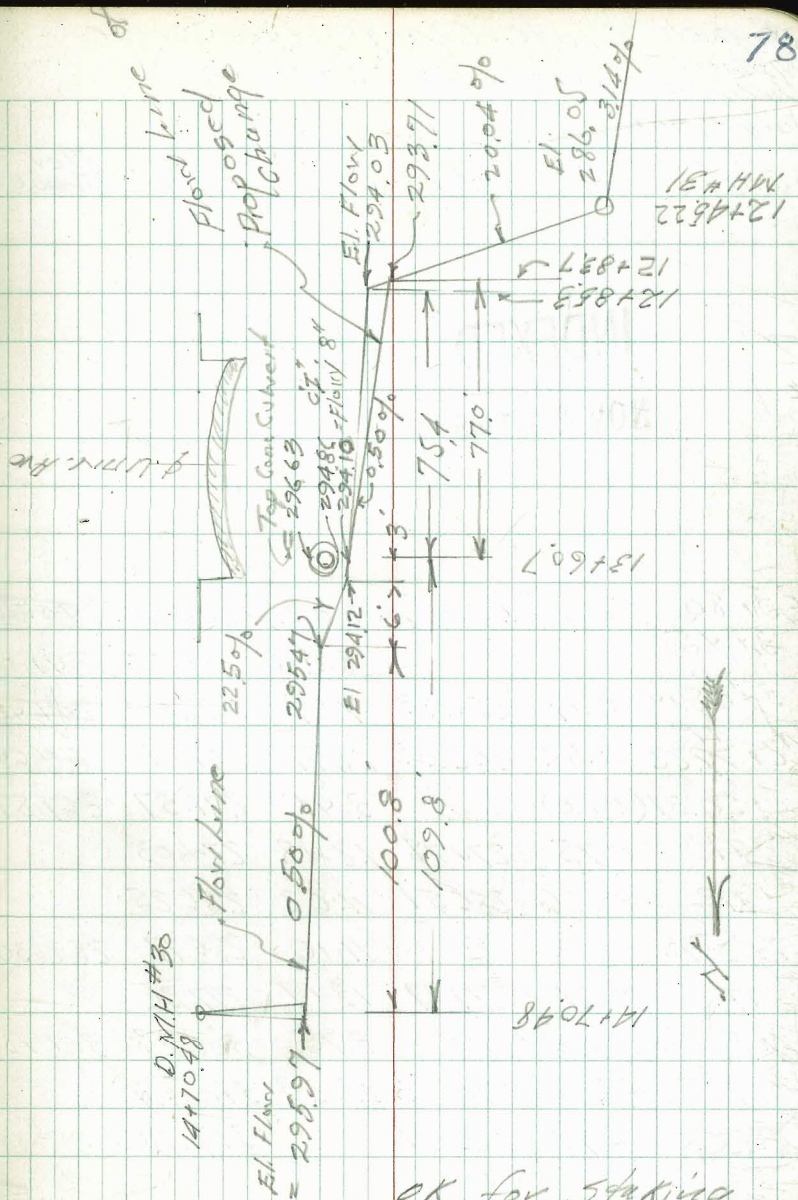
Walker
Becker &
Johnson
Melton
8-13-47

Locals on East Culvert
on Univ. Ave West of 49th
To Determine change of Grade
in Sewer (Under Const. By Dennis
Const. Co.) To clear said culvert

	2.13	311.34		309.21	on stub 14+70.98 9.18
TP	1.71	301.27	11.78	299.56	
TP	3.10	297.33	0.84	300.43	missed
13+60.7			0.70	296.63	
= Top 15" Culvert outside				294.86	
13+60.7					Bottom culvert

14+70.48
D.M.H. #30

312.10



OK for staking
E. Gabrielson
Field Engr.
8/19/47.

Hendricks
W. Moore
Sherman
July 17, 1947

Grade Change for Sewer
Dwight St. Extension

Sta		H.I	-	Elev	Elev. Grade
-----	--	-----	---	------	----------------

Cuts 6' offset

INDEXED
WK
NOV 24 1948

CK 3+80			8.02	244.81	240.88
3+45			8.28	244.55	241.14
TP 3+08.14	0.19	252.83	9.69	252.64	241.41
TP 2+79.22	0.52	262.33	12.97	261.81	254.64
2+50.31 (B.K)			3.41	271.37	267.87
TP	0.75	274.78	12.48	274.03	
TP	0.26	286.51	11.62	286.25	
2+20.98			11.10	286.77	282.30
TP	0.51	297.87	13.17	297.26	
1+80.98	M.H #4		3.75	306.78	301.98
TP	-0.15	310.53	13.23	310.68	
0+00	6.91	323.91		317.00	

C.394 CK
C.395 (p 6 this Book)

C.3.41

C.11.23

C.7.17

C.3.5

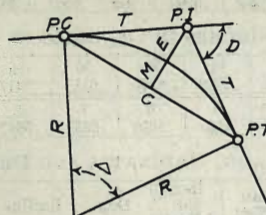
4.47

4.80

M.H #3

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

Copyright, 1914, by Eugene Dietzgen Co., New York City



CURVE FORMULAS

Radius $= R = \frac{50}{\sin \frac{D}{2}}$ (1) Degree of Curve $= D$ and $\sin \frac{D}{2} = \frac{50}{R}$ (2)

Tangent $= T = R \tan \frac{\Delta}{2}$ (3) Length of Curve $= L = 100 \frac{\Delta}{D}$ (4)

Middle ordinate $= M = R(1 - \cos \frac{\Delta}{2})$ (5) $= R \text{vers} \frac{\Delta}{2}$ (6)

External $= E = T \tan \frac{\Delta}{4}$ (7) $= R \div \cos \frac{\Delta}{2} - R$ (8) $= R \text{exsec} \frac{\Delta}{2}$ (9)

Long Chord $= C = 2 R \sin \frac{\Delta}{2}$ (10) $\Delta =$ Central Angle

EXPLANATION AND USE OF TABLES

Stations.—Given P. I. = Sta. 161 + 60.35 to find Sta. of P. C. and P. T. $\Delta = 62^\circ 10'$ $D = 8^\circ 20'$. From Table IV for 1° curve $T = 3454.1$ and $\div 8\frac{1}{2} = 414.49$ ft. From Table V correction = .36 or $T = 414.85$ ft. P. C. = Sta. P. I. $- T = 157 + 45.50$. Also from (4) $L = 746.00$ and P. T. = Sta. P. C. $+ L = 164 + 91.50$.

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft. = 7.27 ft. Distance = 158 $-$ Sta. P. C. = 54.50, hence offset = $7.27 (54.50 \div 100)^2 = 2.16$ ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus $(54.50)^2 \div (2 \times 688.26) = 2.16$ ft.

Deflections.—Deflection angle = $\frac{1}{2} D$ for 100 ft., $\frac{1}{4} D$ for 50 ft., etc. For c ft. = (in minutes) $.3 \times C \times D^\circ$ or = defl. for 1 ft. from Table III $\times C$. For Sta. 158 of above curve = $.3 \times 54.5 \times 8\frac{1}{2} = 136.2'$ or $2^\circ 16.2'$, or = $2.50 \times 54.5 = 136.2'$ from Table III. For Sta. 159 deflection angle = $2^\circ 16.2' + 8^\circ 20' \div 2 = 6^\circ 26.2'$, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 115.37. For from Table IV for 1° curve $E = 960.6$ for $8^\circ 20' = 960.6 \div 8\frac{1}{2} = 115.27$ and from Table V correction = .10 or $E = 115.37$ ft. Or suppose $\Delta = 32^\circ$ and E is measured and found to be 42 ft. What is D ? From Table IV $E = 230.9$ and $\div 42 = 5.5$ or $D = 5^\circ 30'$.

$$\begin{array}{r} 14+10 \times 8 \\ \underline{51 \ 50} \\ 13+59 \end{array}$$
$$\begin{array}{r} 14+10 \times 8 \\ \underline{50} \\ 13+60 \end{array}$$
$$\begin{array}{r} 14+10 \times 8 \\ \underline{25 \ 48} \\ 13+8 \ 500 \end{array}$$
$$\begin{array}{r} 28 \ 75 \\ 4 \overline{) 115} \\ \underline{112} \end{array}$$

115.00

$$\begin{array}{r} 329.33 \\ \underline{530} \\ 334.63 \pi \\ \underline{2940} \\ 5.23 \end{array}$$
$$\begin{array}{r} 135 \\ \underline{91} \\ 226 \end{array}$$
$$\begin{array}{r} 11.25 \\ \underline{3.54} \\ 14.79 \end{array}$$
$$\begin{array}{r} 331.07 \\ \underline{464} \\ 326.43 \end{array}$$
$$\begin{array}{r} 76 \checkmark \\ \underline{59} \\ 8.23 \\ \underline{10 \ 18} \\ 18 \ 41 \\ \underline{307 \ 44} \\ 289.04 \end{array}$$

0-100
+28.75
57.50

115.00
28.75
86.25
31.75
54.5

231.55 = 9
118.67
3150.22
39.86
3118.67
23
246

11.79
1.93
13.72

143.25
24.6
177.8
10.2
2408.0

244
102
116
348.73
540
343.33

2431.58
36.5
2468.0
30.3
2498.3
26
2472.3

3 290
1160
677
38
385
231
2495

278
35
1390
834
9730

77
21
77
154
1617

1003
591
1594

1196
116
1372

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1 1/2
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9 + (20 - 16) * 2 or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.

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