GRADES

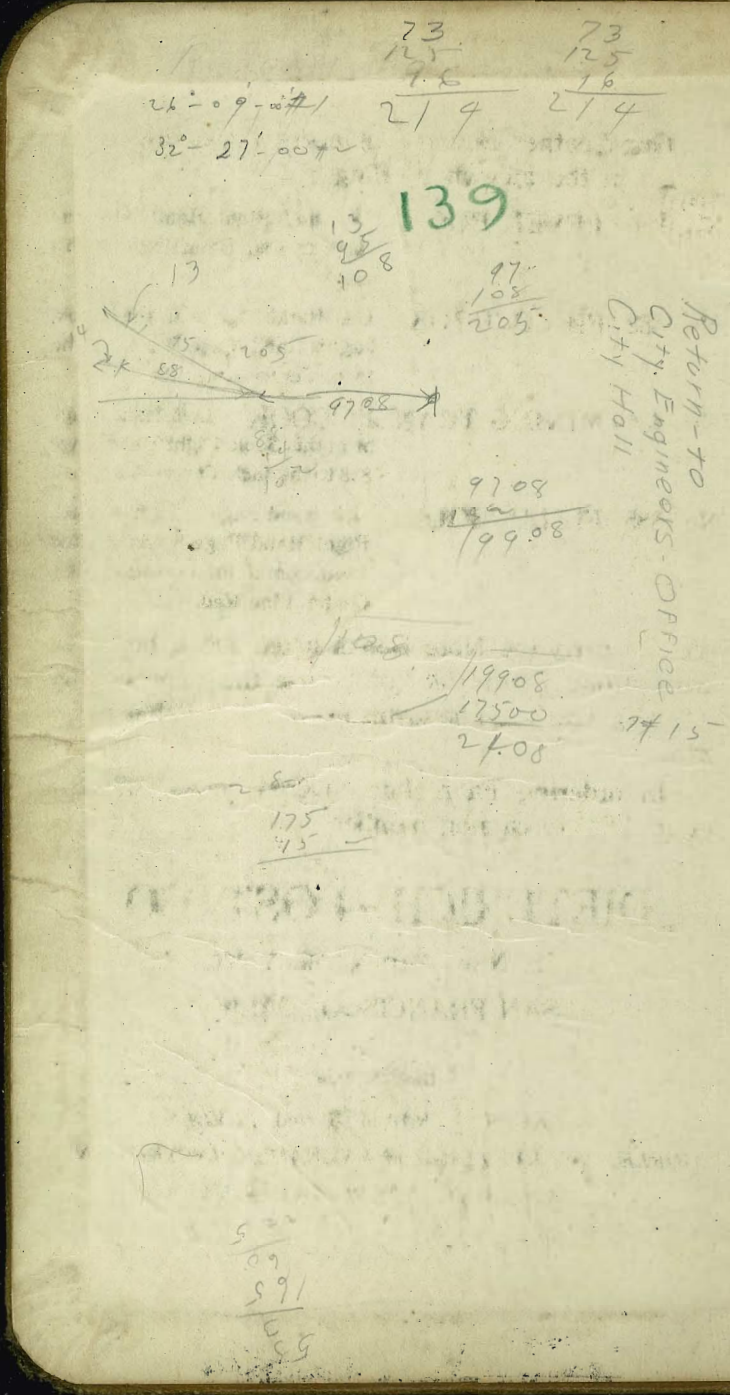
139

Pacific Beach Sewers

DEPO

FIELD BOOK

[illegible]



Brockman

139

Our Leather Bound Engineers Note Books are carried in the following rulings:

No. 380 LEVEL BOOK. Left and Right Hand Page the same as Left Hand Page of this Book.

No. 382 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 4 x 4 to the inch, Center Line Red.

No. 384 MINING TRANSIT BOOK. Left Hand Page as in this Book, Right Hand Page 8x8 to the inch, Center Line Red.

No. 385 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 8 vertical and 4 horizontal lines to the inch, Center Line Red.

We also carry the Note Books listed above, bound in extra strong Fabri-Hide (otherwise the same quality of book), which can be furnished at a somewhat lower price.

In ordering Fabri-Hide covered books, add the letter *"F"* to catalog number.

INDEX

139

	PAGE
EAST 12" Interceptor From Pump Plant #2	3-
BERYL. Bet. MH #669 + Ingram st	10-11
Alley North of Beryl From Lamont 460' East	12
Wilbur st. " " " "	12
Alley North of Wilbur " " " "	13
Emelene Bet. Beryl + Malden	13
Gollingwood Dr	18
Monmouth Dr.	19-22
MALDEN st	20
KENDALL St.	21
Alley North of Beryl Bet Jewell + Kendall	21
Jewell St North of Beryl	22
Alley West-Lamont-Bet Beryl + Law	23
Ingraham-S-350: From MH. 272	24
Law-W-of-Lamont-to-Ingraham	25
Alley-North-of-Chalcedony-Lamont-to Ingraham	26-27
Alley-North-of Missouri-West-of Lamont	28
Alley-West-of-Lamont-460'-Bet-Miss.+Diamond	29
Alley-1055' East-of-Ingraham-Bet Miss.+Dia.	30

Walker Ruplinger Shaw Shaw 6-29-38

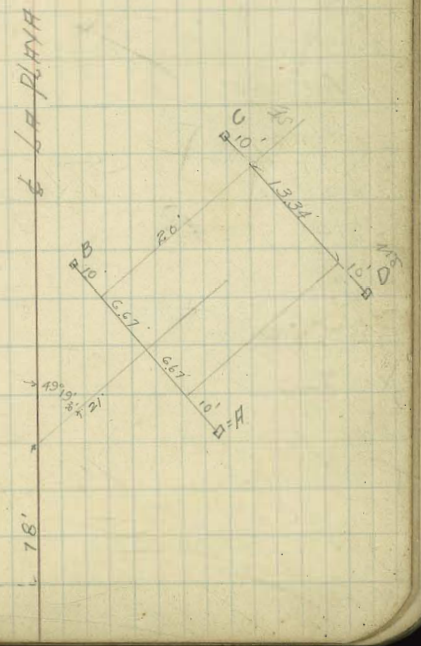
Pumping Plant #2

2

Grades For Roof

BM & Mon La Playa & Shasta Book 1139-108

2.96	30.42	27.46	
T.P. 118	24.10 7.50	22.97	
T.P. 101	13.23 11.88	12.22	
			cuts
A	6.60	6.63	0.00 + 6.63
B	5.97	7.76	0.00 + 7.26
C	17.05	- 3.82	0.00 - 3.87
D	17.17	- 3.94	0.00 - 3.94



℄ Alley Blk 28
Fortuna Park.

SEWER Grades

EAST 12" Interceptor From Pump Plant #2

Profile 3 - Plan 3

BM 8°N 0+50	3.17	N 13.52		Elev 10.35	Flow Line GRADES	
Pumping Plant #2						
= 0+00 (7-40')					-14.57	
0+40			6.23	7.29	-14.47	+21.78
+80			6.11	7.41	-14.38	+21.79
1+20			9.23	4.29	-14.28	+18.57
TP	2.92	6.16	9.78	3.74		
+60			8.93	-2.27	-14.19	+ 11.92
2+00			2.90	-3.74	-14.09	+ 10.35
+40			9.98	-3.52	-14.00	+ 10.18
= Δ 24°41'40" Rt. Δ 23°48' = Turned Lt.					-9.00 = North	+ 4.92 Drop Mh. Hole
+80 = ⊙ DMH #75 (8-38.82')			8.74	-2.58	-13.90 = Trunk	+ 11.32
3+18.82			9.79	-3.63	-13.81	+ 10.18
+57.64			9.99	-3.83	-13.72	+ 9.89
TP						
+96.46			8.44	-2.28	-13.63	+ 11.35
4+35.28			9.84	-3.68	-13.54	+ 9.86
TP	6.49	3.07	9.58	-3.42		
+74.1			6.19	-312	-13.44	+10.32
5+12.9			4.76	-1.69	-13.35	+ 11.66
+51.7			0.36	2.71	-13.25	+ 15.96 ~~+10.54~~
= Δ 61°04' Lt. 5+90.6 = MH #76 (4-39.37')	TP 5.96	5.12	5.97 3.41	-2.90 -0.34	-13.16	+10.26
6+26	7.32 5.96 12.915		1.59	3.53	-13.08	+16.61
+61.4			7.72	-2.60	-12.99	+10.39
+96.7			8.65	-3.53	-12.91	+ 9.38
= Δ 24°09'30" Rt. 7+32.1 = MH #77 (5-39.64')			3.49	1.63	-12.82	+19.45
7+71.7			5.53	-0.41	-12.73	+12.32
8+11.4			3.12	2.00	-12.63	+14.63
+51			4.35	0.77	-12.54	+ 13.31
+90.6			2.86	2.26	-12.44	+ 14.70
TP	5.82					
= Δ 12°18' Rt.		9.39	1.55	3.57	-6.00 = North	+ 10.59
9+30.3 = ⊙ MH #78 (9-38.89')			4.80	4.59	-12.34 = Trunk.	+ 16.93 Drop Mh. Hole

Cont. on - Page 4

9+30.3 − 7+32.1 = 1+97.2

6.16 / 8.13 / 2.27

EAST 12" Interceptor Cont.

	+	T	-	Elev		
		9.39				
9+69.2			6.95	2.44	-12.24	+14.68
10+08.1			7.47	1.92	-12.14	+14.06
10+46.9			6.84	2.55	-12.04	+14.59
+85.8			5.97	3.42	-11.95	+15.37
11+24.7			5.15	4.24	-11.86	+16.10
T.P. +63.6	4.32	8.29	5.42	3.97	-11.77	+15.74
12+02.5			3.69	4.60	-11.68	+16.28
+41.4			6.32	1.97	-11.59	+13.56
12+80.3 = P.O.T. = MH #79			4.10	2.19	-7.00 = Branch -11.50 = Trunk	+9.19 +13.69
(7-37.93')						
13+18.2			7.95	0.89	-11.40	+12.29
+56.2			7.00	1.29	-11.31	+12.60
+94.1			6.64	1.65	-11.22	+12.87
14+32			7.81	0.48	-11.13	+11.61
TP +69.9	6.94	5.79	9.44	-1.15	-11.04	+9.89
15+07.9			6.91	-1.12	-10.95	+9.83
= Δ 26°59' Rt. +45.8 = MH #80			4.69	-1.10	-10.86	+9.76
(5-42.1')						
15+87.9			7.09	-1.30	-10.76	+9.46
16+30			8.09	-2.30	-10.66	+8.36
= P.O.T. +72.1 = MH #81			7.74	-1.95	-7.00 = Branch -10.56 = Trunk	+5.05 +8.61
(5-35.52')						Drop Mh. Hole
17+07.6			9.51	-3.72	-10.48	+6.76
+43.1			3.32	2.47	-10.39	+12.86
+78.7			6.11	-0.32	-10.30	+9.98
TP 18+14.7	5.01	4.60	6.20	-0.41	-10.22	+9.81
= Δ 77°15' Lt. +49.7 = MH #82			8.10	-3.50	-10.13	+6.63
(8-38')						
18+87.7			5.23	-0.63	-9.97	+9.34
19+25.7			5.89	-1.29	-9.89	+8.60

Cont. on P-5

"EAST INTERCEPTOR"

12"

19+63.7		4.60	5.59	-0.99	-9.82	+8.83
20+01.7			7.90	-2.80	-9.74	+6.94
+39.7			8.92	-3.82	-9.66	+5.84
+77.7	10.57	7.94 +0.57	7.73	-3.13	-9.58	+6.45
21+15.7			9.91	-0.47	-9.49	+9.02
=Δ44°21'30"						
+53.7 = MH# 83			7.76	-0.32	-9.40	+9.08
(5-37.10')						
21+90.8			9.81	-2.37	-9.31	+6.94
22+27.9			9.94	-2.00	-9.22	+7.22
+65			9.14	-1.70	-9.13	+7.43
23+02.1			9.07	-1.63	-9.05	+7.42
=P.O.T.						
+39.2 = MH# 84			8.59	-1.15	-8.96	+7.81
(5-37.10')						
23+76.3			10.19	-2.75	-8.87	+6.12
24+13.4			11.31	-3.87	-8.78	+4.91
+50.5			11.12	-3.68	-8.69	+5.01
+87.6			11.77	-4.33	-8.60	+4.27
=Δ19°51'						
24+24.7 = MH# 85			11.92	-3.98	-8.51	+4.53
(1-57.10' 3-55.70')	10.97	7.82	10.59	-3.15		
25+81.70			8.92	-0.60	-8.88	+7.78
26+36.70			3.80	4.02	-8.25	+12.27
26+91.70			4.33	3.49	-8.12	+11.61
		27+46.7 25+24.7 +2.20				
=P.O.T.						
27+46.1 = MH# 86			5.62	2.20	-7.98	+10.18
(4-40')						
27+86.7			9.28	-1.96	-7.87	+6.91
28+26.7			10.02	-2.20	-7.78	+5.58
+66.7			10.52	-2.70	-7.69	+4.99
29+04.7 MH# =Δ75°RT			10.96	-3.19	-7.60	+4.46
00-50 87						
Chocken			4.45	3.37		
BM						

B.M. 3.36 + 1.59 = 4.95 +12 = 320.0 360.0

5

(7-41.43')	
29+46.13	
29+87.56	
30+29	
+70.42	
31+11.85	
+53.28	
+94.7 = MH#88	-6.90
(7-41.43')	
32+36.13	
+77.56	
33+19	
33+60.43	
34+01.86	
+43.3.	
+84.7 = MH 89	-6.20
(7-41.43')	
35+26.13	
+67.56	
36+09	
+50.43	
+91.86	
37+33.3	
+74.7 = MH#90	-5.51
(7-41.43')	
38+16.13	
38+57.56	
+99	
39+40.43	
+81.86	

40+23.3

+647 = MH #91 -4.81

Eastern Interceptor MnHl # 85

					cuts
	3.20	4.53	1.33		
0+00 MnHole #85				-8.51	
0+25			8.48	-3.95	-8.57	4.62
0+50			8.20	-3.67	-8.64	4.97
0+75			8.28	-3.75	-8.70	4.95
1+00			8.70	-4.17	-8.77	4.60
1+25			8.03	-3.50	-8.83	5.33
1+50			8.11	-3.58	-8.90	5.32
1+75			8.15	-3.62	-8.96	5.34
2+00			8.04	-3.51	-9.03	5.52
2+25			8.12	-3.59	-9.09	5.50
2+50			8.17	-3.64	-9.16	5.52
2+75			8.16	-3.63	-9.22	5.59
3+00 MnHole #83			8.15	-3.65	-9.29	5.64
3+25			8.04	-3.51	-9.35	5.84
3+50			8.27	-3.74	-9.41	5.67
3+75			8.20	-3.71	-9.48	5.77
4+00			8.20	-3.71	-9.54	5.83
4+25			8.27	-3.74	-9.61	5.87
4+50			8.34	-3.81	-9.67	5.86
4+75			8.19	-3.66	-9.74	6.08
5+00			8.42	-3.89	-9.80	5.91
5+25			8.27	-3.74	-9.87	6.13

	+	HI 4.53	-	Elev.
5+50			6.98	-1.95 -9.93
5+75			5.35	-0.82 -10.00
6+00			5.10	-.057 -10.06
6+25 Mn Hole			4.96	-0.43 -10.13
6+50			4.91	-0.38 10.19
6+75			4.83	-0.30 10.25
7+00	5.895	6.705	3.67	+0.86 10.31
7+25			10.32	-3.62 10.37
7+50			10.66	-3.96 10.93
7+75			10.805	-3.900 10.98
8+01 Mn Hole			10.61	-3.91 -7.00 -10.56
8+25			10.725	-4.02 10.62
8+50			10.89	-4.19 10.08
8+75			10.515	-3.81 10.72
9+00			10.93	-4.23 10.79
9+25			10.51	-3.81 10.85
9+50			10.39	-3.64 10.91
9+75			10.71	-4.01 10.98
10+00			9.25	-2.55 10.06
10+27.5 Mn Hole			6.05	+0.65 11.16
			3.280	3.925

Cuts

7.98 -
9.18 -
9.49 -
9.70 -
9.81 -
9.93 -
11.17
6.75
6.47 -
6.58 -
3.09 -
6.65 -
6.60 -
6.99 -
6.91 -
6.56 -
7.04 -
7.27 -
6.97 -
7.51 -
11.82

1150
1056
94 (109
0
90

1056
104
10664 -
104
10768 -
104
10872 -
104
10976 -
104
11080 -
104
11184 -
104
11288 -
104
11392 -
104
11496

30

1027.5
30/5
260

0.2
226 | 500
452
980
452
250

0.22
235
22
470
470
0.5170

275
22
550
550
0
2750

25
22
50
50
5

2.65

226 | 600
452
1480
1356
1240

26
235
1305
783
522
61335

0265
235
1325
795
530
62275

265
25
1325
530
6625

BM.	+	HI.	−	Elev	
	3.72	7.08		3.36	
0+00			7.51	−0.93	10.13
6-25					
#1			7.46	−0.38	10.19
#2			7.38	−0.30	10.25
#3			6.20	+0.89	10.31
#4			10.68	−3.61	10.37
#5			10.97	−3.90	10.43
#6			11.14	−4.06	10.98
1-26.50					7.00
Mn Hole #81			10.94	−3.86	10.56
1-23.50					
#1			11.06	−3.98	10.62
6-25					
#1	10.05	5.95	11.21	−9.13	10.68
#2			9.72	−3.77	10.73
#3			10.13	−4.19	10.79
#4			9.72	−3.77	10.85
#5			9.55	−3.60	10.91
#6			10.27	−4.32	10.98
1-27.50					
Mn Hole #80			1.27	+4.68	11.16
Check BM.			2.52	+3.43	

Note this is the construction Notes used from Mn. Hole 82 to Mn. Hole 80. These were destroyed. See Grade Book 151 Page 40

	+	HI.	−	Elev	
	3.70	7.06		3.36	
cuts					
0+00			7.50	−0.14	9.59
#1			7.45	−0.39	9.80
#2			7.38	−0.32	9.98
#3			6.20	+0.86	11.17
#4			10.67	−3.61	6.76
#5			10.97	−3.91	6.52
#6			11.13	−4.07	6.41
#1 Mn Hole			10.93	−3.87	3.13 6.60
#1			11.04	−3.98	6.64
#1 1063		+6.705	11.195	−4.135	6.55
#2			10.98	−3.78	6.85
#3			10.90	−4.20	6.59
#4			10.48	−3.78	7.07
#5			10.31	−3.61	7.30
#6			11.03	−3.38	6.65
#1 Mn Hole			2.02	+4.68	
Check on BM.			3.27	3.43	

Walker Ruplinger 7-28 Shaw Shaq

SEWER Const. E BERYL st.

Bet. MH# 669 And D.E. EAST of Kendall st.

Profile 25 - Plan -11-12

M.H.#669 =0+00 (5-49.2')		149.17	10.13	139.04	132.60	+6.44
0+49.2			8.36	140.81	134.91	+5.90
+98.4			3.54	145.63	137.22	+8.41
1+47.6			5.31	143.86	139.53	+4.33
+96.8			2.96	146.21	141.84	+4.37
2+46 = MH 670 (6-48.33')	T.P.		0.32	148.85	144.16	+4.69
2+94.33		161.32	9.80	151.52	145.46	+6.06
3+42.66			6.86	154.46	146.77	+7.69
+91.00			4.86	156.46	148.07	+8.39
4+39.33			3.72	157.60	149.38	+8.22
+87.66			1.95	159.37	150.68	+8.69
5+36 = MH#671 (5-50')			0.78	160.54	151.99	+8.55
5+86			2.74	158.58	152.34	+6.24
6+36			2.45	158.87	152.69	+6.18
+86			1.70	159.62	153.04	+6.58
7+36	TP	169.57	9.38	160.19	153.39	+6.80
+86 = Exist. Sewer E.L. Lamont			8.95	160.62	153.74	+6.88
Exist. Sewer W.L. Lamont =0+00 (6-43.33')			7.98	161.59	154.30	+7.29
0+43.33			5.35	164.22	154.60	+9.62
+86.66			5.25	164.32	154.90	+9.42
1+30			6.27	163.30	155.20	+8.10
+73.33			9.10	160.47	155.51	+4.96
2+16.66			8.72	160.85	155.81	+5.04
+60 = MH#673 = 0+00 (4-50')			7.28	162.29	156.12	+6.17
0+50			4.94	164.63	157.82	+6.81

Cont on Page 11

SW. BP Lamont + Diamond = 105.95
12.05 +
118.00 = π
0.12 -
117.88 = TP
12.53 +
130.41 = π
0.52 -
129.89 = TP
11.09 +
140.98 = π
0.20 -
140.78 = TP
8.39 +
149.17 = π
0.32 -
148.85 = TP
12.47 +
161.32 = π
1.70 -
159.62 = TP
9.95 +
169.57 = π

Book 1144-26
chk. on Sissons ℄ hub
149.17 = π
10.42
138.75 = Walkers
138.77 = Sissons

opp 0+00
Left BM. 50' tie N.W. ℄ Hub.
149.17
6.75 -
142.42 = BM

Elev. stub 7+36 = 160.19
6.20
166.39
4.22
162.17
162.09 = N.E. B.M. 7 Beryl + Lamont
0.08 = Error

BERYL ST. Cont. From P-10

Station		π	− Rods	Elev. stub.	Grade Flow Line	
		169.57				
1+00			313	166.44	159.52	+6.92
+50	TP	177.34	8.52	16882	161.22	+7.60
2+00 = DE. E. of Kendall			7.37	16997	162.92	+7.05
BERYL St. Cont. West of Kendall {Profile 9}						
DE. 40' W of Kendall = 0+00		175.97	5.53	170.44	163.97	+6.47
+42			8.80	167.17	162.00	+5.17
+84			10.54	165.43	160.02	+5.41
1+26			12.74	163.23	158.05	+5.18
+68			14.92	161.05	156.07	+4.98
2+10 = MH#307 (6-48.33')			16.51	159.46	154.10	+5.36
2+58.33			13.93	162.04	153.61	+8.43
3+06.66			11.72	164.25	153.13	+11.12
+55			11.80	164.17	152.65	+11.52
4+03.33	T.P.	165.71	3.16	162.55	152.16	10.39
+51.66			4.79	160.92	151.68	9.24
5+00 = DMH#306 (6-50')			6.66	159.05	154.00 = N 151.20	7.85 − N = 5.05
5+50			8.15	157.56	150.66	6.90
6+00			9.21	156.50	150.12	6.38
+50			10.04	155.67	149.59	6.08
7+00			9.83	155.88	149.06	6.82
+50			9.50	156.21	148.53	7.68
8+00 = MH#305 (6-43.33')			10.20	155.51	148.00	7.51
8+43.33	T.P.	156.80	3.05	153.75	143.66	10.09
+86.66			6.64	150.16	139.33	10.83
9+30			10.82	145.98	135.00	10.98
9+73.33	T.P.	143.88	2.25	141.63	130.66	10.97

169.57
3.13 −
166.44 = TP
10.90 +
177.34 = π
10.90 −
166.44 = TP
2.85 −
169.29 = π
9.67 −
159.62 = TP

Euc. Tree Beryl & Kendall
177.34
0.46 −
176.88 = Walker
175.97 = BM = ? = Private Engineers
0.91 = Error

Sta 2+00 opp. Page
Elev. cut stub D.E. → 169.97
6.00 +
175.97 = π
11.80 −
164.17 = TP
1.54
165.71 = π
10.20
155.51 = T.P.
+ 1.29
156.80 π
13.06
143.74 TP
0.14
143.88 π
12.41
131.47
1.59
133.06 π
11.27
121.79
2.39
124.18
7.27
116.91
116.88 = BM
0.03 = Error

3+55 on stake

8+00 " "

Rock

"

Rock

Nail in Pole
Chk. on B.M. W.L. Ingram Alley Bet. Lane & Beryl

BERYL Cont.	π	−	Elev stubs	GRADE Flow Line	Cuts
10+16.66	(Grans) 143.88	5.64	138.24	126.38	11.91
10+60 = Exist. Sewer. T.P.	133.06	5.12	127.94	122.00	5.94

Alley North of Beryl St.

From E.L. LAMONT 460' East.

Profile 25

E.L. Lamont = Exist. Sewer = 0+00	175.43	0.77	174.66	161.83	+12.83
5-42'					
0+42		1.70	173.73	162.12	+11.61
+84		2.87	172.56	162.41	+10.15
1+26		3.46	171.97	162.70	+9.27
+68		4.23	171.20	163.00	+8.20
2+10 = MH #684		5.88	169.55	163.30	+6.25
(5-50')					
2+60		5.65	169.78	163.65	+6.13
3+10		5.70	169.73	164.00	+5.73
+60		4.64	170.79	164.35	+6.44
4+10		4.94	170.49	164.70	+5.79
+60 = D.E.		5.80	169.63	165.05	+4.58

BM. NE. T'lock Beryl + Lamont = 162.09
12.32+
174.41 = π
0.21 −
174.20' T.P.
1.23+
175.43 = π
0.97 −
SEE Levels below for chk. on 174.46 = T.P.

WILBUR AVENUE

From LAMONT St. EAST. 460' Profile 25

E.L. Lamont = Exist. Sewer = 0+00	190.45	3.76	186.69	176.33	+10.36
5-42'					
0+42		3.86	186.59	176.62	+9.97
+84		4.03	186.42	176.91	+9.51
1+26		4.66	185.79	177.20	+8.59
+68		5.08	185.37	177.50	+7.87
2+10 = MH #685		5.81	184.64	177.80	+6.84
(5-50')					
2+60		5.96	184.49	178.15	+6.34
3+10		6.50	183.95	178.50	+5.45
+60		6.19	184.26	178.85	+5.41
4+10		5.97	184.48	179.20	+5.28
+60 = D.E.		7.99	182.46	179.55	+2.91

→ Above T.P. → 179.46

BM. SE T'lock. Lamont & Wilbur 186.06
4.39+
190.45 = π
6.50 −
183.95 = T.P.
1.16
185.11
10.65 −
chk. on Above T.P. → 174.46
179.46 = T.P.
0.00 = Exist.

Walker
Poplinger
Sharf
Shea 7-7-28

Alley North of Wilbur
From Lamont st East 460'
Profile 25

					offsets	
E.L. Lamont + Exist. Sewer =0+00	206.63	8.16	198.47	190.26	+8.21	6' North ℄
+42		5.10	201.53	190.55	+10.98	" " "
+84		6.27	200.36	190.84	+9.52	" " "
1+26		7.67	198.96	191.13	+7.83	" " "
+68		7.30	199.33	191.43	+7.90	" " "
2+10 = MH#686 (5-50')		6.27	200.36	191.73	+8.63	" " "
2+60		5.17	201.46	192.08 (35)	+9.38	" " "
3+10		5.40	201.23	192.43	+8.80	" " "
+60		4.76	201.87	192.78	+9.09	" " "
4+10		3.73	202.90	193.13	+9.77	" " "
+60 = DE.		6.33	200.30	193.48	+6.82	" " "

BM S.E. Lamont Wilbur 7' back = 186.06 BM
12.59 +
198.65 = x
3.90 -
194.75 = TP
11.88 +
206.63 = x
6.67
199.96 = Worthy
199.97 = Moores
0.01 = diff.

{chk. on Chas. Moore cut stub } 6' E Plug End on ℄ Sewer
Alley N of Wilbur on E.L. Lamont

EMELENE ST. {Profile 14}
From Beryl st. North to Walden st.

MH#673 = ℄ Beryl = 0+00	175.38	13.09	162.29	156.12	+6.17	
+50		8.93	166.45	159.92	+6.53	
1+00		4.71	170.67	163.72	+6.95	
+50		0.32	175.06	167.52	+7.54	
2+00 TP	187.64	7.56	180.08	171.32	+8.76	
+50		4.90	182.74	175.12	+7.62	
3+00 = MH# 704 (6-51.35')		2.62	185.02	178.92	+6.10	
3+51.35		0.83	186.81	181.59	+5.22	
4+02.7 TP	198.91	9.71	189.20	184.26	+4.94	
+54.05		7.13	191.78	186.93	+4.85	
5+05.4		4.34	194.57	189.60	+4.97	

← Cuts 0.08 Greater — Stubs 1' to Far Side
all cuts Cut Grader

Elev. cut. stub MH#673 Page 10 = 162.29
13.09 +
175.38 = x
0.32 -
175.06 = TP
12.58 +
187.64 = x
0.83
186.81
12.10 +
198.91 = x
0.94 -
197.97 = TP

S.E. Loring & Lamont
chk. on B.M. tack inch
197.97
12.72 +
210.69
3.72
206.97
206.90 = B.M.
0.07 = Error

EMELENE Cont. From opp Page

	198.91			Flow Grade	cuts
5+56.75	210.69	0.94	197.97	192.27	+5.70
6+08.10 (MH ℄ Walden)		8.24	202.45	194.94	+7.51

Bill Bliss
Jos. Duermit
J. Jacobszoon
P. Kiernan
March 18, 1929

Eastern Interceptor from Mn. Hole #80 South to Pump House #2

	+	−			
	7.76	11.21		Elev. 3.43 / 3.45	
Mn. Hole #80					
5.25			10.51	0.70	−10.86
#1			9.36	1.85	−10.97
#2			9.33		−11.08
#3			9.59		−11.19
#4			9.82		−11.30
#5			11.02		−11.41
1-23 Sq. Drop Mn. Hole #79 14-5		N.G.	8.99		−7.00 Branch −11.50 Trunk
#1			9.30		−11.56
#2			8.32		−11.62
#3			6.73		−11.68
#4			6.48		−11.74
#5			7.02		−11.80
#6			6.79		−11.86
#7			8.00		−11.92
#8			7.91		−11.98
#9			8.94		−12.04
#10	9.41	7.97	8.15	3.06	−12.10
#11			5.62		−12.16
#12			5.95		−12.22
#13			4.84		−12.28
Drop Mn. Hole #78 14-25			2.85		−6.00 Branch −12.34 Trunk
#1			5.51		−12.40
#2			5.62		−12.46
#3			5.93		−12.52
#4			5.27		−12.58

11.21 − 7.76 = 3.45

12.78 − 91 = 13.69 − 11.21 = 2.48

11.21 − 10.51 = 0.70

	+	HI 7.47	−	Elev	
#5			5.67		-12.64
#6			7.34		-12.70
#7			7.69		-12.77
1-23 Mn Hole #77 -25			5.80		-12.82
#1			10.64		-12.88
#2			10.93		-12.94
#3			7.93		-13.00
#4			3.97		-13.06
#5			7.27		-13.11
1-16 Mn Hole #76 12-25 88	1210	922	10.35	-2.88	-13.16
#1			7.91		-13.22
#2			8.87		-13.28
#3			10.89		-13.34
#4			11.75		-13.40
#5			12.44		-13.46
#6			12.87		-13.52
#7			12.96		-13.58
#8			11.65		-13.64
#9			12.98		-13.70
#10			12.82		-13.76
#11			12.28		-13.83
Drop Mn Hole #1 ~ #75 11-25 95	23°-35'-00 L		1093		-9.00 Branch -13.90 Trunk
#1			11.02		-13.96
#2			12.36		-14.02
#3			11.95		-14.08

629
662
-0.33

7.97 7805
7.970
-0.325

15

	+	HI	−	Elev		
		9.22				
#4			12.08		-19.14	
#5			10.76		-19.20	
#6			5.36		-19.27	
#7			3.13		-19.33	
#8			1.73		-19.39	
#9			2.33		-19.45	
#10 Pump P. House			2.61		-19.51	
#11 ± 2) 145 Short			9.20	+0.02	-19.57	1959
	681	13.70	2.33	6.89		
			3.35	10.35		

	2.96	6.385		3.425
# 10 ft's			572	0.65
			8915	-2530
			10.00	

8915
6385
2530

4.385
457
+1.815

10.00
6.385
3.615

10.37
6.385
3.985

Walter Kopplinger Shop at Shea 7-7-36

Collingwood Dr. Sewer Const.

From Monmouth Dr. West & North to 110' North Malden St.
Profile 9 - Plan 12

MH#310						188.83
=0+00	201.85			182.98		13.02 +
				1.75		201.85=T
+47.65		4.30	197.55	187.73	+9.82	042 -
=90° Lt. TP	213.07					201.43=TP
+95.3=MH#315=0+00		6.25	206.82	192.48	+14.34	11.64 +
(4-30')						213.07=T
0+50		6.28	206.79	195.65	+11.14	.211 -
						212.96=TP
1+00		4.21	208.86	198.82	+10.04	12.18 +
						225.14=T
+50		2.11	210.96	202.00	+8.96	2.99 -
TP						222.15=TP
2+00=MH#316	223.14	8.12	215.07	205.17	+9.85	12.36 +
(4-49.25')						234.51=T
2+49.25		7.62	215.52	207.63	+7.89	1.37 -
						233.14=TP
+98.50		4.87	218.27	210.09	+8.18	12.48 +
						245.62=T
3+47.75		3.56	219.58	212.55	+7.03	3.28
=Δ 53°25' Rt.						242.34
+97=MH#317		2.99	220.15	215.02	+5.13	240.36
(2-50') TP						0.02=Error
4+47	232.51	8.43	224.08	218.02	+6.06	
=Δ 36°29' Rt.						
+97=MH#318		5.92	226.59	221.02	+5.57	
(3-48.33')						
5+45.33 } 119.9' ok checked Sept. 1940		1.37	231.14	224.89	+6.25	
TP						
+93.66 } 119.9'	243.62	7.47	236.15	228.76	+7.39	
=℄ Malden ct.					+7.74=7.76 Page 20	
6+42=MH#319		3.28	240.34	232.60	+7.72	
(3-36.67')				37		
6+78.67		1.65	241.97	232.99	+8.98	
7+15.34		1.50	242.12	233.36	+9.76	
7+52=DE.		1.84	241.78	233.72	+8.06	

Cöt. on cut stub MH#319 Pg=20 → 24036

Monmouth Drive Con't from Page 22

MH# 309 Page 22					
=0+00	190.69	9.10	181.59	173.57	+8.02
+50		9.32	181.37	174.57	+6.80
1+00		10.24	180.45	175.57	+4.88
+50		10.23	180.46	176.57	+3.89
=Δ 17° Rt					
2+00 = MH# 313		7.86	182.83	177.57	+5.26
(0-45')					
2+45		4.14	186.55	178.47	+8.08
+90		1.36	189.33	179.37	+9.96
TP					
3+35	196.24	7.03	189.21	180.27	+8.94
=Δ 24°08' Rt. 26°40'					
+80 = MH# 314		9.58	186.66	181.17	+5.49
(4-38.75')					
4+18.75		9.38	186.86	181.63	+5.23
+57.5		10.10	186.14	182.10	+4.04
+96.25		8.52	187.72	182.56	+5.16
5+35 = D.E.		7.82	188.42	183.03	+5.39 ✓

Elev. Cut Stk MH# 309 - Page 22 = 181.59

9.10+

190.69 = K

1.36

189.33 = K

6.91+

196.24 = K

9.71 -

186.53

+186.56

0.03 = Error

Chk. on Sissons Preliminary Z Stk 4+00 Δ

= 38° Rt in Monmouth Dr. Bk 1144 - Page 19

Walker Ruppinger 7-6-28 Shown Thea

MALDEN St. SEWER Const.

Bet. Kendall & Collingwood Dr.

Profile 9 - Plan 12

				Flow GRADES
M.H. # 703				
= 0+00	22673	8.59	218.14	210.00
5-41.86				
0+41.86		7.61	219.12	210.84
+83.72		6.67	220.06	211.68
1+25.58		5.72	221.01	212.52
+67.44		7.01	219.72	213.36
2+09.3 = MH # 321		5.80	220.93	214.19
(5-42.)				
2+51.3		4.03	222.70	215.87
+93.3 TP	23568	11.41	224.27	217.55
3+35.3		9.84	225.84	219.23
+77.3		7.07	228.61	220.91
= ℄ Colling St				
4+19.3 = MH # 320		5.86	229.82	222.59
(5-51.4')				
4+70.7		4.72	230.96	224.27
5+22.1		2.60	233.08	227.35
+73.5 TP	24764	11.18	236.46	229.73
6+24.9		7.62	240.02	232.12
+76.3 = DE. 257' West ℄ Colma		4.49	243.15	234.50

MALEN ST. Cont.

DE. 120' E.E. Collingwood				
= 0+00	247.64	2.30	245.34	235.02
+40		3.56	244.08	234.22
+80		4.83	242.81	233.41
1+20 = MH # 319		7.28	240.36	232.60

TP on Elev. cut stub 3+99.9 page 21 = 218.14 = TP
8.59 +
22673 = R
4.03 -
222.70 = TP
12.98 +
235.68 = T
0.54 -
235.14 = TP
12.50 +
See below → 247.64 = T

+8.14			
+8.28			
+8.38	249.05		
	996		
+8.49	23909		
+6.36	249.05	See below →	247.64 = T
	622		
+6.74	23783	240.36	
		3.69	
+6.83		24405	
	249.05		
+6.72			
	24534		
+6.61	369		
	24903	249.03	
+7.70	996	622	
	24907	24681	
+7.23		249.03	
		848	
+5.99		240.35	
+5.73			
+6.73			
+7.90			
+8.65			

Used This in X Sec of Tuna Lane 3. Bliss 3/10/29

+10.32	checked this	Above H.I. =	247.64
			7.28 -
+9.86		Elev. cut stub MH 319	240.36
+9.40			
+7.76			

Walker Kiplinger

KENDALL ST. SEWER Const.

Bet. Beryl & MALDEN sts.

Profile 9 - Plan -12

				Flow Line GRADES
MH # 701				
=0+00	186.66	1.31	185.35	178.14
+48.6 TP	198.17	7.19	190.98	181.05
+97.2		4.15	194.02	183.97
1+45.8		2.28	195.89	186.89
+94.4 = MH # 702		0.26	197.91	189.80
(2-57.5') T.P.				
2+46.9	210.06	8.07	201.99	194.00
+99.4 = Brk.		3.99	206.07	198.20
(2-50') T.P.				
3+49.4	221.65	9.42	212.23	204.10
+99.8 = MH # 703		3.51	218.14	210.00

Alley Sewer Const. North of Beryl

Bet. Kendall & Jewell sts. Profile 9

					offsets
M.H. # 701					C.L.
-0+00	186.66	1.31	185.35	178.14	6' N
(5-45.06')					
0+45.06		1.63	185.03	176.51	"
+90.12		3.98	182.68	174.89	"
1+35.18		6.94	179.72	173.27	"
+80.24		10.21	176.45	171.65	"
2+25.3 = MH # 312		11.76	174.90	170.03	"
(7-48.57')					
2+73.9		10.49	176.17	169.69	"
3+22.4		9.27	177.39	169.35	"
+71.0		7.59	179.07	169.01	"
4+19.6		7.99	178.67	168.67	"
+68.2		8.11	178.55	168.33	"
5+16.7		8.75	177.91	167.99	"
+65.3 = DMH # 308		9.70	176.96	167.65	"
				169.15	

H.I. from Below = 186.66

	1.31 -
+ 7.21	185.35 = TP
	12.82 +
+ 9.93	198.17 = T
	.026 -
+ 10.05	197.91
	12.15 +
+ 9.00	210.06 = T
	.004 -
+ 8.11	210.02 = TP
	11.63 +
+ 7.99	221.65
	3.51 -
+ 7.87	on cut stub 3+99.4 = 218.14 = TP
+ 8.13	for continuation of Levels see Page 20
+ 8.14	

Elev. cut stub Dr. 2+00 Page 11 169.97

	13.03 +
	183.00 = T
	.010 -
	182.90 = TP
	3.76 +
Above for chk. cut see Continuation of Levels from this M.S.	+186.66 = T

Resetting - MH # 308

Stub 5+14.7	177.91
	3.22
	181.13
181.13	
M.H. stub 4.04	
" " 177.09	
177.09	177.09
167.45	169.15
Cut 9.44	Cut 7.94

Monmouth Dr. & Jewell St.
Bet Kendall & Beryl St.
Profile 9 - Plan 12

O.E. W. of Kendall					
=0+00	200.19	3.22	196.97	187.86	+9.11
+41		4.22	195.97	187.24	+8.73
+82		5.97	194.22	186.63	+7.59
= Δ 25°45' Lt.					
1+23 = MH# 311		5.76	194.43	186.02	+8.41
(4-50.65')					
1+73.65		8.52	191.67	185.26	+6.41
2+24.3		8.95	191.24	184.50	+6.74
+74.95		8.01	192.18	183.74	+8.44
3+25.6 = MH# 310		11.36	188.83	182.98	+5.85
(4-40.57')					
3+66.17		11.97	188.22	180.62	+7.60
4+06.74		12.83	187.36	178.27	+9.09
+47.3 T.P.	188.66	3.88	184.78	175.92	+8.86
+87.9 = MH# 309		7.07	181.59	173.57	+8.02

Note: Monmouth cont. Page 13

JEWELL ST.

Above MH# 309	= Above HS.				
=0+00	188.66	7.07	181.59	173.57	+8.02
				169.15 = N	+7.78
+33.2 = DMH# 308 T.P.	177.70	0.77	176.93	167.65 = S	9.28
(4-43.75')					
0+76.95		4.41	173.29	164.23	+9.06
1+20.7		8.08	169.62	160.82	+8.80
+64.65		10.84	166.86	157.41	+9.45
				154.00	+5.03) +5.05 ✓ = Page 11
2+08.2 = DM.H# 306 T.P.	168.87	9.84	159.03	151.20	+7.83) +7.85 ✓ = " "

Elev. cut stub MH# 702 Page 11 = 197.91
2.28 +
200.19 = π
12.99 -
187.20 = T.P.
1.46 +
188.66 = π
12.53 -
176.13 = T.P.
1.57 +
177.70 = π
10.84 -
166.86 = T.P.
2.01 +
168.87 = π
9.84 -
159.03
chk. on cut stub MH# 306 Page 11 → 159.05 ✓
0.02 = Error

208.2
33.10
175

Shed Brooks R. Plunger 4-9-28

Alloy - W. of Lamont - Bet. Low + Beryl

Pr 9 - Plan Sec. 6 + Sec. 10

D.E.W. - Lamont		Rod	Elev.	GRD	cuts
0+00	162.78	7.26	155.52	149.45	+ 6.07
+42		6.18	156.60	148.61	+ 7.99
+84		5.42	157.36	147.77	+ 9.59
1+26		6.19	156.59	146.93	+ 9.66
+68		8.71	154.07	146.09	+ 7.98
2+10 M.H.#282 48.33 ℄	T.P.	11.42	151.36	145.25	+ 6.11
2+58.33	157.05	4.45	152.60	144.82	+ 7.68
3+06.65		2.28	154.77	144.59	+ 10.18
3+54.98		2.58	154.47	144.25	+ 10.22
4+03.32		2.85	154.20	143.91	+ 10.29
+51.66		3.25	153.80	143.57	+ 10.23
5+00 M.H.#281 48.33 ℄		4.85	152.20	143.22	+ 8.98
+48.33		6.17	150.88	142.45	+ 8.43
+96.66		7.84	149.21	141.68	+ 7.53
6+44.94		9.20	147.85	140.91	+ 6.95
+93.28		10.29	146.76	140.13	+ 6.63
7+41.62	T.P.	11.26	145.79	139.34	+ 6.45
7+90.00 M.H.#280 48.33 ℄	148.75	3.69	145.06	138.58	+ 6.48
8+38.33		2.81	145.94	138.24	+ 7.70
+86.67		1.96	146.79	137.90	+ 8.89
9+35.00		2.82	145.93	137.57	+ 8.36
+83.34		3.98	144.77	137.23	+ 7.54
10+31.67		5.53	143.22	136.89	+ 6.33
10+80.00 M.H.#279		7.34	141.41	136.55	+ 4.86

MH#673 - Page 10 - Cuts

162.29
+ 0.49
162.78 T
-11.42
151.36
+5.69
157.05 T
11.26
T.P. on Sta. 7+41.62 = 145.79
2.96
148.75 = T

on MH. Sta. 6

Continued From 23

		π	Rod				
30.00 ℄							
11+30	(Trans)	148.75	5.45	143.30	136.20	+ 7.10	
+50			2.86	145.89	135.85	+ 10.04	
12+30			3.60	145.15	135.50	+ 9.65	
+80		T.P.	6.68	142.07	135.15	+ 6.92	
13+30		143.25	2.09	141.16	134.80	+ 6.36	
+80 MH #278			1.38	141.87	134.45	+ 7.42	
30.00 ℄							
14+30			3.44	139.81	130.80	+ 9.01	
+80			7.59	135.66	127.15	+ 8.51	
15+30		T.P.	11.55	131.70	123.50	+ 8.20	
+80		132.10	4.07	128.03	119.85	+ 8.18	
16+30		T.P.	7.96	124.14	116.20	+ 7.94	
16+80 MH #272		125.80	8.13	117.67	112.55	+ 5.12	

Plan-Sec 10 - Pg 9

Ingraham-350'-S-From MH #272

MH #272							
0+00		116.88			112.55		
+43.75			2.20	114.75	110.28	+4.50	
+87.50			4.38	112.60	108.00	+4.60	
1+31.25			6.29	110.69	105.73	+4.96	Reset. 4.96
1+75.00 M.H #271			7.61	109.37	103.45	+5.92	5.25
2+18.75			8.80	108.18	102.09	+6.09	
2+62.50			9.30	107.68	100.73	+6.95	
3+06.25			9.65	107.33	99.38	+7.95	
3+50.00 M.H #265			11.08	105.90	98.02	+7.88	

148.75 T
6.68
142.07
+1.18
143.25 = π
-11.55
131.70
.40
132.10 = π
7.96
124.14
+1.72
125.86 π
8.92
116.94

On B.M. Nail-Pole N½ on Ingraham 116.88

+116.88
+ 0.10
116.98 π

El. B.M. = 116.88
+7.92
125.80
8.13
117.67 = El MH #272

105.15

Reset.

105.89
9.15
115.04
6.34
108.70
103.45
5.25

115.04
4.35
110.69
105.73
4.96

9-10-28
Shod Blocks Replinger

Law - W. of - Lamont

Pr 9 - Sec - 6 + 10 - of Plans

D.E. W. of Lamont	℄	Rod				
0+00	153.90	7.47	146.43	140.84	+	5.59
+92		6.14	147.76	140.54	+	7.22
+84		4.22	149.68	140.25	+	9.43
1+26		8.24	150.66	139.96	+	10.70
+68		3.86	150.04	139.62	+	10.38
2+10 MH #277		3.85	150.05	139.37	+	10.68
48.33						
2+58.33		6.89	147.01	137.68	+	9.33
3+06.65		9.83	144.09	135.99	+	8.08
+54.98	T.P.	12.06	141.84	134.29	+	7.55
4+03.32	142.18	2.93	139.25	132.60	+	6.65
+51.66		4.02	138.16	130.92	+	7.24
5+00 MH #276		6.18	136.00	129.22	+	6.78
40.0						
+40		7.18	135.00	128.66	+	6.34
+80		8.10	134.08	126.50	+	5.58
6+20		8.08	134.10	128.14	+	5.96
+60	T.P.	7.63	134.55	127.78	+	6.77
7+00	142.21	7.13	135.08	127.42	+	7.66
+40		7.01	135.20	127.06	+	8.14
7+80 MH #275		6.97	135.24	126.70	+	8.54
50.6						
8+30		5.75	136.46	126.17	+	10.29
+80		4.88	137.33	125.65	+	11.68
9+30		5.68	136.53	125.13	+	11.41
+80		6.00	136.21	124.60	+	11.61
10+30		7.13	135.08	124.75	+	10.33
				123.53-EAST	-	7.30
+80 D.M.H #274	T.P.	11.36	130.85	122.05-West	+	8.80

T.P. on Stake 3+54.91

151.36
+2.54
153.90
-12.06
141.84
+0.34
142.18 ℄
-7.63
134.55
+7.66
142.21 = ℄

T.P. on Stake 6+60

Cont. From - 24

				122.05		
	π	Rod				
50' @						
11+30	134.61	6.52	128.09	121.55	+	6.54
+80		6.99	127.62	121.05	+	6.57
12+30		6.27	128.34	120.55	+	7.79
+80		6.61	128.00	120.05	+	7.95
13+30		8.55	126.06	119.55	+	6.51
+80 MH #273		8.99	125.62	119.05	+	6.57
50 @						
14+30		9.92	124.69	116.45	+	8.24
+80	T.P.	12.39	122.22	113.85	+	8.37
15+30	122.69	2.25	120.44	111.25	+	09.19
+80		4.59	118.10	108.65	+	9.45
16+30		8.49	114.20	106.05	+	8.15
+80 MH #271	T.P.	13.27	109.42	103.45	+	5.97 Cut - marked to here

Alley North of Chalcedony

Lamont - Ingraham - Pr - 8 - Plans 6-10

D.E. W. Lamont						
0+00	143.88	4.98	138.90	129.13	+	9.77
+42		4.61	139.27	128.83	+	10.44
+84		4.19	139.69	128.54	+	11.15
1+26		3.38	140.50	128.25	+	12.25
+68		3.27	140.61	127.95	+	12.66
2+10 MH #270		4.56	139.32	127.66	+	11.66
4833 @						
2+58.33		4.38	139.50	126.98	+	12.52
3+06.65		5.76	138.12	126.31	+	11.81
3+54.08		8.36	135.52	125.63	+	9.89
4+03.30	T.P.	9.33	134.55	124.95	+	9.60
4+51.66	134.82	1.60	133.22	124.28	+	8.94

(Trans) 142.21 = π
- 11.36
130.85
+ 3.76
134.61 = π
- 12.39
122.22 = El.
.47
122.69 = π
13.27
T.P. on MH #271. El. = 109.42

B.M. No. 7 (Iron Lamont - Bay)

142.09
+ .86
142.95
- 12.87
130.17
+ 0.73
130.35
- 12.58
117.77
+ 0.11
143.88 π
Stob 4+03.32
9.93
134.55
0.27
134.82 π

	(Trans)						(Trans) 134.82
5+00 M.H.# 269	134.82	3.51	131.31	123.60	+ 7.71	T.P. on Stub 7+41.62	8.20
48.33 G							126.62
+48.33		5.54	129.28	122.34	+ 6.94		+ 2.35
							128.97 = T
+96.66		7.15	127.77	121.09	+ 6.68		- 10.65
						T.P. on Sta. 11+80	118.32 = El
6+44.94		8.47	126.35	119.83	+ 6.52		1.16
							119.48 = T
6+93.28		8.60	126.22	118.57	+ 7.65		- 7.11
						T.P. on Sta 14+80	112.37 = El
7+41.62	T.P.	8.20	126.62	117.32	+ 9.30		6.74
							119.11 = T
7+90.00 M.H.# 268	128.97	3.56	125.41	116.06	+ 9.35		2.26
48.33 G							116.85 = El.
8+38.33		4.55	124.42	115.25	+ 9.17	Ck on B.M. in pole	116.58 = BM
							.03 = Diff.
+86.67		4.36	124.61	114.45	+ 10.16	in alley bet. Bdwy	
9+35.0		4.02	124.95	113.64	+ 11.31	and Kaw.	
+83.34		3.20	125.77	112.83	+ 12.94		
10+31.67		2.91	126.06	112.03	+ 14.03		
				111.22 - East			
10+80.00 D.M.H.# 267		4.79	124.18	109.72 - West	+ 12.96 + 14.46		
50 G							
11+30		6.95	122.02	108.87	+ 13.15		
+80	T.P.	10.65	118.32	108.02	+ 10.30		
12+30	119.48	3.32	116.16	107.17	+ 8.99		
+80		4.09	115.39	106.32	+ 9.07		
13+30		4.85	114.63	105.47	+ 9.16		
+80 M.H.# 266		5.81	113.67	104.62	+ 9.05		
14+30		6.24	113.24	103.52	+ 9.72		
+80	T.P.	7.11	112.37	102.42	+ 9.95		
15+30	119.11	7.94	111.17	101.32	+ 9.85		
+80		9.39	109.72	100.22	+ 9.50		
16+30		10.74	108.37	99.12	+ 9.25		
16+80 M.H.# 265	T.P.	13.21	105.90	098.02	+ 7.88		

Alley - North - of Missouri - West - of Lamont

Proj. Plans See 647

D.E. W-Lamont					
0+00	128.97	5.17	123.84	116.99	+ 6.90
+42		5.22	123.80	116.69	+ 7.16
+84		5.35	123.66	116.35	+ 7.31
1+26		4.34	129.63	116.05	+ 8.58
+68		4.26	129.71 (66)	115.76	+ 8.90
2+10 MH# 247		3.85	125.12	115.97	+ 9.65
48.33					
2+58.33		3.68	125.29	115.13	+ 10.16
3+06.65	T.P.	3.06	125.91	117.78	+ 11.13
+54.98	127.75	1.70	126.05	119.95	+ 11.60
4+03.32		2.30	125.95	119.11	+ 11.39
4+51.66		3.60	129.15	113.77	+ 10.38
5+00 MH# 246		5.10	122.63	113.44	+ 9.21
48.33					
+48.33		6.89	120.86	112.04	+ 8.82
+96.66		8.75	119.00	110.64	+ 8.36
6+42.84	T.P.	11.16	116.59	109.24	+ 7.35
+93.28	118.86	4.99	113.87	107.89	+ 6.03
7+41.62		6.95	111.91	106.44	+ 5.97
7+90.00 MH# 245		7.30	111.56	105.03	+ 6.53
48.33					
8+38.33		8.15	111.71	104.21	+ 7.50
+86.67	T.P.	8.62	110.24	103.39	+ 6.85
9+35.00	112.04	2.72	109.32	102.57	+ 6.75
9+83.34		3.86	108.18	101.75	+ 6.43
10+31.67		4.49	107.55	100.93	+ 6.62
10+80 MH# 244		4.34	107.70	100.10	+ 7.60

2.10

28

B.P.S.W. Lamont — 105A5
Diamond + 11.07
117.02
- 0.26
116.76
+ 12.21
128.97 T

T.P. on rock
5.18
123.79
3.96
127.75
-11.16
116.59
2.27
118.86
-8.62
110.24 = E1
+1.80
112.04 = T

129.63
483
129.58
480
123.66
115.76
8.91

129.37
437
125.13
129.51
571
123.80

123.80
293
126.73
3.07
123.66

126.73
-10
126.63

Cont - From 28

50					
11+30	(trans) 112.04	6.31	105.73	99.25	+6.48
+80		7.90	104.14	98.40	+5.74
12+30		8.30	103.74	97.55	+6.19
+80		8.47	103.57	96.70	+6.87
13+30		8.35	103.69	95.85	+7.84
+80 MH # 243	T.P	8.87	103.17	95.00	+8.17
14+30	103.61	0.80	102.81	93.70	+9.11
+80		1.23	102.38	92.40	+9.98
15+30		2.44	101.17	91.10	+10.07
+80		3.83	99.78	89.80	+9.98
16+30		4.70	98.91	88.50	+10.41
+80 M.H. # 242				87.20	

Pr. 24 - Plan - Sec 6

Alley - West - of - Lamont +60' - Bet - Miss. + Dia.

Connect - W - B - Lamont

0+00

+50

1+00

+50

2+00

2+50 M.H. # 662

42

2+92

3+34

+76

4+18

+60 D.E.

Acc pp 31

(trans) 112.04 = π

−8.57

T.P. on MH # 243 — 103.17 = El

+.44

103.61 = π

12.72

T.P — 90.89

+ 59

91.48

8.62

B.M. S.W. Pole - 82.80 — 82.86

Ingraham + Diamond

Alley - 1055' - East - Ingraham - Bet - Miss. + Okan.

Pr 7 - Plan - Sec. 10

D.E. 415' E. Jewell
0+00
+41.25
+82.50
1+23.75
1+65.00 MH #224
48.33'
2+13.33
2+61.66
3+10
+58.33'
4+06.66
4+55. MH #223
50'
5+05
5+55
6+05
+55
7+05
7+55 MH #222
8+05
+55
9+05
+55
10+05
10+55 M.H #221

Alley North of Diamond from W. Line of Lamont West 460'

BM SW & Dia & Lamont	11.82	117.69	105.82	
				cuts
0+00 W Line Lamont		6.49	111.15 - 101.94	9.71 -
5-50 #1		3.74	113.90 - 101.79	12.11 -
#2		4.65	112.99 - 102.14	10.85 -
#3		4.93	112.71 - 102.49	10.22 -
#4		5.10	112.54 - 102.84	9.70 -
#5 #662		5.03	112.61 - 103.19	9.42 -
9-52 50 #1		5.25	112.39 - 103.56	8.83 -
#2		6.06	111.58 - 103.93	7.65 -
#3		6.76	110.88 - 104.30	6.58 -
#4 DE		7.17	110.47 - 104.67	5.80 -

Eastern Interceptor from Manhole # 85 to Mn Hole #80 Relocation

Station	+	×	- Rod	Elev.	I.G (M.H 85, I.G 402-D)	Cuts
BM 60' S.W. of Mn Hole # 85 set on location of Interceptor RW Hub Surrounded by Basket of stakes	2.34	+3.67		+1.33		
Mn Hole #85 0+00			7.68	-4.01	-8.51	4.50
0+25			7.60	-3.93	-8.57	4.64
0+50			7.33	-3.66	-8.64	4.98
0+75			7.41	-3.74	-8.70	4.96
1+00			7.84	-4.17	-8.77	4.60
1+25			7.16	-3.49	-8.83	5.34
1+50			7.25	-3.58	-8.90	5.32
1+75			7.29	-3.62	-8.96	5.34
2+00	6.00 / 3.93		7.17	-3.50	-9.03	5.53
2+25			7.26	3.59	-9.09	5.50
2+50			7.30	3.63	-9.16	5.53
2+75			7.28	-3.61	-9.22	5.61
Mn Hole #83 3+00			7.31	-3.64	-9.29	5.65
3+25			7.17	-3.50	-9.35	5.85
3+50	8.04	4.31	7.40	-3.73	-9.41	5.68
3+75			8.00	-3.69	-9.48	5.79
4+00			8.01	-3.70	-9.54	5.84
4+25			8.04	-3.73	-9.61	5.88
4+50			8.11	-3.80	-9.67	5.87
4+75			7.96	-3.65	-9.74	6.09
5+00			8.19	-3.88	-9.80	5.92
5+25			8.04	-3.73	-9.87	6.14
5+50			6.26	-1.95	-9.93	7.98
5+75			5.13	-0.82	-10.00	9.18
6+00			4.89	-0.58	-10.06	9.48

			~~4.31~~ 432			[illegible] 40' D
6+24	85 # 82 Mid Hole			4.72	−0.40 ✓	−10.13
6+50				4.67	−0.35 ✓	
6+75				4.59	−0.27 ✓	
7+00				343	+0.89 ✓	
7+25				7.90	−3.58 ✓	
7+50				8.23	−3.91 ✓	
7+75				8.37	4.05 ✓	
8+01[5]	Mn Hole # 81			817	3.85 ✓	
8+25				829	3.97 ~~3.88~~ ✓	
+50				8.44	4.12 ✓	
+75				8.07	3.75 ✓	
9+00				850	4.18 ✓	
+25				8.07	375 ✓	
+50				789	−3.57 ✓	
+75				8.27	395 ✓	
10+00		10.09	+7.60 ✓	681	−2.49 ✓	
10+27	50 #80			−690	+0.70 ✓	
check on BM. opposite 13+80				4.14	3.46 ✓	

cuts

9.73

Sewer Alley Blocks 11-1
from Mn Hole #62 Eastern Interceptor East to
Mn Hole # 493 and then then North to 494 & D.E.

						Cuts
0+00 Mn Hole #62	12.94	23.75		10.81	3.45	7.36
3-45.33 #1			10.64	13.11	6.66	6.45
#2			7.66	16.09	9.87	6.22
1+36 Mn Hole # 493 #3			1.77	21.98	13.07	8.91
4-53.27 #1			2.86	20.89	14.13	6.76
#2	12.33	33.46	2.62	21.13	15.20	5.93
#3			10.95	22.51	16.26	6.25
3+49.10 Mn Hole # 494 #4			9.01	24.45	17.33	7.12
4-53.27 #1			7.20	26.26	19.24	7.02
#2			5.40	28.06	21.16	6.90
#3			3.45	30.01	23.08	6.93
5+62.20 #4 Mn Hole # 495	9.67	41.20	1.93	31.53	25.00	6.53
5-52.50 #1			8.51	32.69	26.21	6.48
#2			7.33	33.87	27.41	6.46
#3			6.44	34.71	28.62	6.09
#4			4.40	36.30	29.83	6.47
8+24.70 #5 Mn Hole # 496			3.10	38.10	31.04	7.06
5-52 #1	8.04	47.74	1.50	39.70	32.23	7.47
#2			6.37	41.37	33.43	7.94
#3			4.99	42.75	34.63	8.12
#4			4.52	43.22	35.82	7.40
10+86.70 #5 D.E.			4.64	43.10	37.02	6.08
2' Extra feet T.P.	2.12	37.73	12.13	35.61		
			175 South of Mn Hole #493 to DE			
4-93.25	4.64	26.61	4.64	21.97	13.07	8.90
#1			5.36	21.25	14.38	6.87
#2			4.63	21.98	15.69	6.29
#3	13.12	36.58	3.15	23.46	17.01	6.45
#4 D.E. 1+75			10.19	26.39	18.32	8.07

Sewer: Alley Block 21, 2nd
Fortuna Park Addition Haines + Frontera
La Playa + Roosevelt

	+	+	−	Elev	Cuts
0+00 Mn Hole #67 6-56 35c	8.99	32,06		23.07	16.00 — 7.07
#1			8.79	23.27	16.73 — 6.54
#2			7.97	24.09	17.46 — 6.63
#3			7.29	24.82	18.19 — 6.63
#4			6.35	25.71	18.92 — 6.79 7.00
#5			5.91	26.65	19.65 — 7.27
#6 3+37 50 Mn Hole #997 5-52 5			9.25	27.81	20.39 × 7.92
#1			3.09	28.97	20.75 — 8.22
#2	6.44	36.58	1.93 2	30.14	21.11 — 9.03
#3			5.92	31.16	21.98 — 9.68
#4			9.71	31.87	21.84 — 10.03
#5 5+99 50 O.K.			9.82	31.76	22.21 — 9.55

Sewer Alley · Block 31 South of La Playa

0+00 Mn Hole 6-90	3.94	27.01		23.07	12.39 — 10.73
#1			9.63	22.38	12.79 — 9.59
#2			9.75	22.26	13.29 — 9.02
#3			9.75	22.26	13.69 — 8.57
#4			9.83	22.18	14.14 — 8.04
#5			5.17	21.84	14.59 — 7.25
#6 3700 #998 6-50.83			5.90	21.61	15.04 — 6.57
#1			5.66	21.35	15.61 — 5.74
#2			5.56	21.45	16.19 — 5.26
#3			5.45	21.56	16.76 — 4.80
#4	4.24	26.69	4.56	22.45	17.34 — 5.11
#5 connect			2.81	23.88	17.92 — 5.96
#6			0.28	26.41	18.50 — 7.91

Between Mn Hole 5094 508. First Alley W of Kendall

36.58
4.71
31.87
21.84
10.03

10.73
12.39
−1.66

22.21
20.75
1.46 L = 95
10
96
95
10

21.11
295
21.405
295
21.700

22.21
21.39
−.82 L = 364
15
32
30

20.39
295
20.685
295
20.980
295
21.275

20.39
369
20.758
369
21.127
369
21.496
369
21.865

3 1 2 - 9
40.1

Frontera Street from La Plaza Street South to connection with Crown Point Sewer

						cuts
0+00 Mm Hole #66	4.2	23.23		19.01	5.30	13.71
5-98[3]						
#1				9.70	18.53	5.99	13.04
#2				9.77	18.46	5.68	12.78
#3				9.92	18.31	5.87	12.44
#4				5.14	18.09	6.07	12.02
2+90							
#5 #491				5.93	17.80	6.26	11.54
5-98[3]						
#1				5.63	17.60	6.95	11.15
#2				5.99	17.24	6.64	10.60
#3	9.72	26.69		6.26	16.97	6.84	10.13
#4				9.93	16.76	7.03	9.73
4+80							
#5 #492				10.08	16.61	7.22	9.39
3-90 10 to						
#1				10.01	16.68	7.38	9.30
#2				9.98	17.21	7.54	9.67
6+00 90							
#3 connect to existing sewer				9.32	17.37	7.70	9.67

Frontera Street North of Estrella

0+00	8.36	19.17		10.82	3.45	7.37
4-53 27[5]						
#1				7.24	11.93	5.16	6.77
#2				6.04	13.13	6.86	6.27
#3				4.44	14.73	8.56	6.17
#4 #488 2+13.20	11.95	28.51	2.61	16.56	10.27	6.29
4-53 27[5]						
#1				10.04	18.47	11.97	6.50
#2				8.28	20.23	13.68	6.55
#3				6.86	21.65	15.38	6.27
4+60 20							
#4 #489	& Sunset			5.63	22.88	17.09	5.79
6-50[3]						
#1				4.67	23.84	18.09	5.75

28*51

						cuts
#2			3.67	24.84	19:09	5:75
#3	11.94	37.73	2.72	25.79	20:09	5:70
#4			11.11	26.62	21:09	5:53
#5			10 00	27.73	22:09	5:64
7+26 20						
#6 #490			·901	28.72	23:09	5:63
.6-52 50 s						
#1			8.12	29.61	23.95	6.16
#2			7.59	30.19	23.83	6.31
#3			7.20	30 53	24.19	6.34
#4			6.87	30 86	24.56	6.30
#5			681	30.92	24.93	5:99
10+41 20						
#6 D.E.			6.95	30.78	25:30	5:98

Frontera from My Hole #66 Eastern Interceptor To D.E 160' North.

0+00 My Hole #66	422	23.23		19.01	11:90	7.11
3-95 3						
#1			393	19.30	12.35	.6:95
#2			3.51	1972	12.80	6.92
#3	7.69	27. 90	302	20.21	13.25	6.96
1-25						
#1 D.E			7.41	20:49	1350	6.99

Frontera from My Hole # 65 E. Inter.

N. 135' to D.E 27.90

0+00			6.51	4..39	15.00	6:39
3-95 3						
#1			6.03	4. 87	15.45	6.42
#2			542	22.48	15.90	6.58
#3			987	23.03	16.35	6.68

Frontera Continued Bottom Next Page 38

Sewer & of Gresham from Mn Hole # 58 Southern Interceptor to D.E 300' North

						cuts
0+00 Mn Hole # 58	9.54	26.13		21.59	13.00	8.59
6-50						
#1			5.03	21.10	13.35	7.65
#2			5.35	20.78	13.70	7.08
#3			5.89	20.29	14.05	6.24
#4			5.89	20.29	14.40	5.89
#5			5.51	20.62	14.75	5.87
#6			5.28	20.85	15.10	5.75

Sewer & of Gresham from Mn Hole #59 Eastern Interceptor North 165' to D.E

0+00 # 59	7.61	25.86		18.25	11.86	6.39
3-99.20						
#1			6.66	19.20	12.80	6.40
#2			5.78	20.08	13.73	6.35
#3			5.14	20.72	14.67	6.05
1-17 #0						
#1 D.E			9.98	20.88	15.00	5.88
check			9.25	21.61		

Frontera from #64 H I from Page 37 to Interceptor X' 60' to D.E.

		27.90				
0+00			4.85	23.05	15.50	7.55
1-95			5.62	22.28	15.95	6.33
#1						
1-15						
#1 O.K			6.07	21.83	16.10	5.73

Fanuel from Mn Hole #55 Eastern In. 105' North to D.E

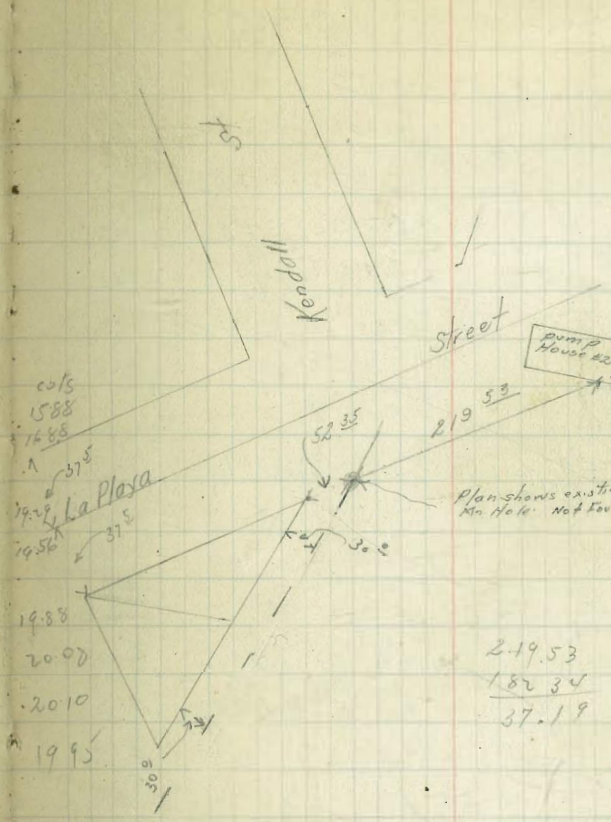
	+ 18.01	- Elev		Grade Cut
0+00		6.06	11.95	6.00 5.95
252.50				
#1		4.99	13.04	7.05 5.99
#2		3.90	19.11	8.10 6.01
#3				

Sewer S Line of La Plaza from Pump House #2 to 2+19.53 West connect with existing Mh Hole

BM NW Top of Spike

	+			Elev	
0+00 Pump House #2	5.07	28.12		23.05	
1-36.58					36.58
#1					219.48
#2		void	11.29	22.12	
#3		see Below	6.00	22.73	
#4			5.89	23.46	
#5			9.60	24.01	
#6			9.11	24.05	4.10
			9.07		
	2.39	HI 2.07		-0.27	
0+00 Pump House #2	8.76	13.60	6.89	-4.82	-11.00
TP			0.99	1.08	
0+20				12.98	-4.40
0+40 vertex of 6d Curve			7.13	18.29	-1.00
E.Y.C.					
0+60			3.99	21.98	2.42
0+72.69			3.29	22.13	2.55
1+09.15			2.69	22.73	2.85
1+45.16			1.96	23.46	3.38
1+82.39			1.44	24.00	3.90
2+19.53			1.37	24.05	4.10

BM Set on Pump House on Wall	2.39	2.07		-0.27	
0+00			6.89	-4.82	-11.00
TP	7.23	8.31	0.99	1.08	
0+20			8.59	-0.28	-4.40
TP	10.98	18.95	0.39	7.97	
0+40 vertex	9.23	27.51	0.67	18.28	+0.60
0+60			5.54	21.97	2.40
0+72.60			5.91	22.10	2.54
1+09.18			4.79	22.72	2.93
1+45.16			4.07	23.34	3.52



Pump House #1

Class "B" 10" Cast Iron overflow pipe from Mn Hole #98 N Line of Pacific to pump house

BM Pok NE Cor Pump House #1 — Mn Hole #98 9.10 — N Line of Pacific 9.10 — Pump House 0.00

0+00 Mn Hole #98 6-33		6.59	-2.94	-9.85	+1.91
#1		5.19	-1.09	-9.29	+3.20
#2		5.75	-1.65	-9.23	+2.58
#3		6.52	-2.42	-9.17	+1.75
#4		5.44	-1.34	-9.11	+2.77
#5		6.20	-2.10	-9.06	+1.96
#6 entrance into Pump House				-9.00	

Void see page 41

Class "B" 10" Cast Iron Hooped Pipe

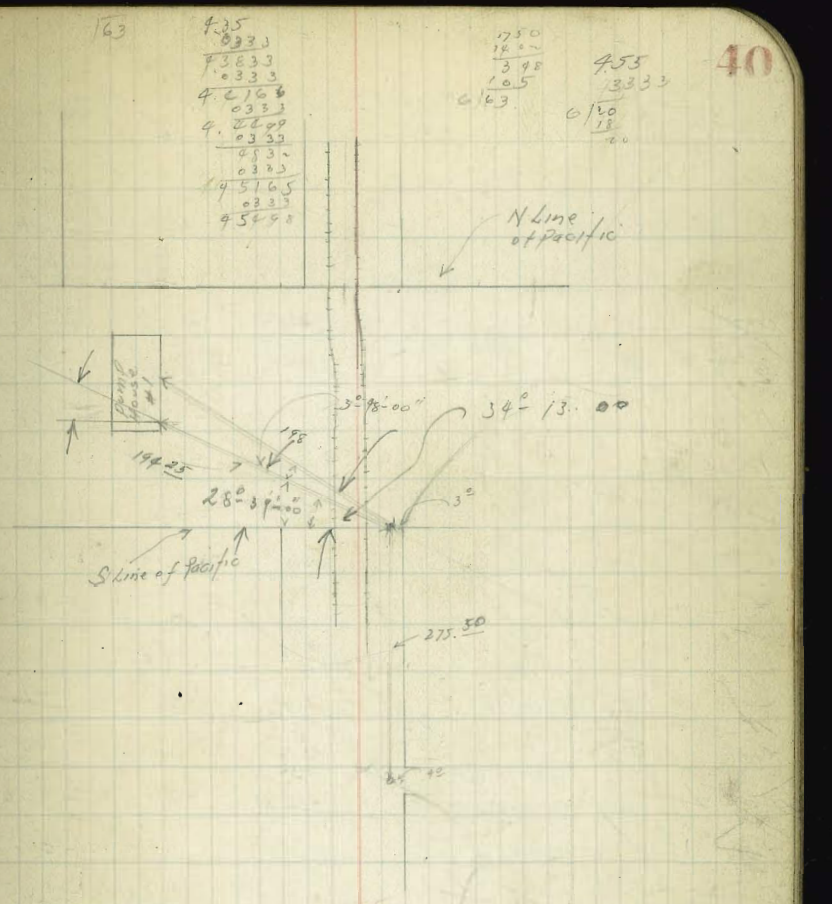
9.10

0+00 Mn Hole #98 6-32.37		6.59	-2.94	-3.85	+1.41
#1		5.28	-1.18	-9.04	+2.86
#2		6.19	-2.09	-9.23	+2.14
#3		6.83	-2.73	-9.42	+1.69
#4		9.67	-0.57	-9.61	+4.04
#5		6.23	-2.13	-9.81	+2.68
#6 Entrance into Pump House				-5.00	

Void see page 41

10" Concrete Pipe from Mn Hole #45 to Existing Mn Hole #44 Ky 275.50 S. of N Line of Pacific

0+00 #45 6-45.91	9.10	9.10	6.59	-2.94	-4.35	+1.91
#1	4.84	3.20	5.74	-1.64	-4.38	+2.74
#2			4.92	-1.72	-4.42	+2.70
#3			5.39	-2.19	-4.45	+2.26
#4			5.57	-1.54 -2.37	-4.48	+2.41
#5			5.04	-1.94 -1.64	-4.51	+3.06 +2.70
#6 check Rod How Line of existing Sewer			9.67	-1.97	-4.54	+5.07
			7.74	-4.54		



Pump House #1

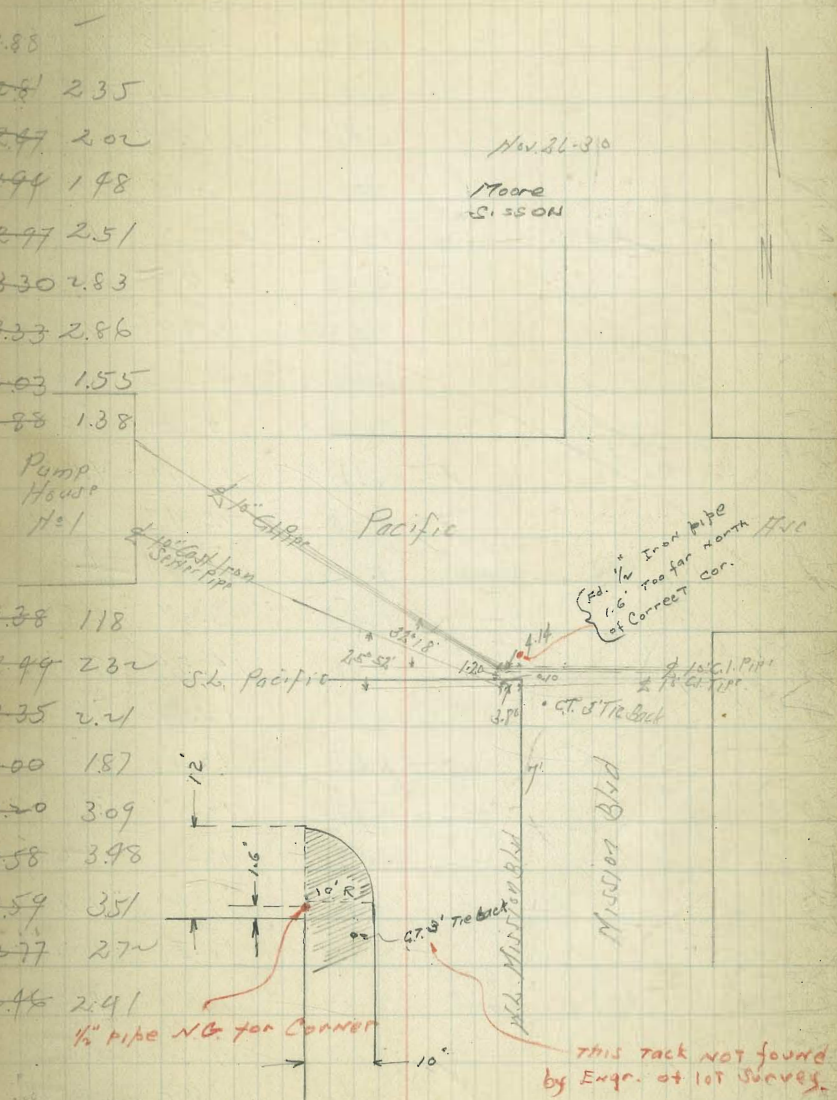
Relocation

Class "B" 10" Cast Iron overflow pipe

B.M. R.R. Spike + 3.72		3.72		0.00			
Pole N.E. Cor Pump House ℄ 1 in pole 0+00			6.19	-2.97	-4.35	1.88	
0+26 = 00	℄ Water Main	↑	5.22	-1.50	-3.85	~~2.8~~	2.35
0+24			5.51	-1.79	-3.81	~~2.47~~	2.02
0+49			6.00	-2.28	-3.76	~~1.94~~	1.48
0+71 08 Δ			4.93	-1.21	-3.72	~~2.97~~	2.51
0+99		0.265%	4.56	-0.84	-3.67	~~3.30~~	2.83
1+24			4.48	-0.76	-3.62	~~3.33~~	2.86
1+49			5.74	-2.02	-3.57	~~2.03~~	1.55
1+64			5.87	-2.15	-3.53	~~1.88~~	1.38
2+06 = H80 Pump House		↓			-3.50		

Class "B" 10" Cast Iron flanged pipe

	H.I. 3.72					
0+00		6.19	-2.97	-3.65	~~1.38~~	1.18
0+25		5.22	-1.50	-3.84	~~2.49~~	2.32
+50		5.51	-1.79	-4.00	~~2.35~~	2.21
+75		6.00	-2.28	-4.15	~~2.00~~	1.87
0+97 05 Δ		4.93	-1.21	-4.30	~~3.20~~	3.09
1+25		4.71	-0.99	-4.47	~~3.58~~	3.48
1+50		4.85	-1.13	-4.64	~~3.59~~	3.51
1+75		5.81	-2.09	-4.81	~~2.77~~	2.72
1+90		6.21	-2.99	-4.90	~~2.46~~	2.41
1+99 08 Pump House				-5.00		



S.W. COR of

Pac. Ave + Mission Blvd.

Flow Line Mh Hole & Dawes + Pacific — Sewer — Alley Blocks 299, 300, 301 — Fwd. plus 49.26

302, 303 & unsubdivided lot

	−4.90	+ 10.72	± 5.82	−	EIN	Grade	Cut
0+00 Ex. Stub Mh Hole & Dawes				9.04	−3.22	−3.29	9.91
5-58							
#1				4.69	1.13	−2.88	4.01 —
#2				4.75	1.07	−2.98	3.55 —
#3				4.09	1.73	−2.07	3.80 —
#4				2.97	2.85	−1.67	4.52 —
#5 2+90 Mh Hole #478		10.88 ~~9.59~~	15.05 ~~13.76~~	1.65	4.17	−1.26	5.43 —
5+58 5							
#1				9.28	5.77	−0.10	5.57 —
#2				7.62	7.43	1.06	6.37 —
#3				6.19	8.66	2.22	6.44 —
#4				5.30	9.75	3.38	6.37 —
#5 5+80 Mh Hole #479 & 2 Vents				4.11	10.94	4.54	6.40 —
5-58							
#1				2.58	12.47	5.18	7.29 —
#2		7.58	21.54 ~~20.25~~	1.09	13.96 ~~12.67~~	5.81	8.15 —
#3				7.67	13.87	6.45	7.42 —
#4				7.00	14.54	7.09	7.45 —
#5 8+70 #480				6.12	15.42	7.73	7.69 —
5-58 5							
#1				5.41	16.13	8.37	7.76 —
#2				4.97	16.57	9.01	7.56 —
#3				4.83	16.71	9.65	7.06 —
#4				4.05	17.49	10.29	7.20 —
#5 11+60 & Fan 01 #481				3.33	18.21	10.92	7.29 —
5-58 5					1893		
#1		10.51	29.44 ~~28.15~~	2.61	~~17.64~~	11.56	7.37 —
#2				8.88	20.56	12.19	8.37 —
#3				7.54	21.90	12.83	9.07 —
#4				6.24	23.20	13.47	9.73
#5 14+50 #482				5.10	24.34	14.11	10.23 —

	+			Elv	Grade	cuts
		29.44 ~~28.15~~				
5-58						
#1			5.17	24.27	14.75	9.52 ✓
#2			5.20	24.24	15.38	8.86 ✓
#3			5.23	24.21	16.02	8.19 ✓
#4			5.24	24.20	16.66	7.54 ✓
	17+40 & Gresham	30.40		23.99		
#5 #983	641	~~29.11~~	5.45	~~22.70~~	17.30	4.69 ✓
5-58						
#1			6.44	23.96	17.92	6.04 ✓
#2			5.80	24.60	18.54	6.06 ✓
#3			4.80	25.60	19.16	6.44 ✓
#4		40.57		27.82		
	1275	~~39.28~~	2.58	~~26.53~~	19.78	8.04 ✓
	20+30 Prop Manhole				20.90	10.33 ✓
#5 #984			9.84	30.73 ✓	25.00	5.73 ✓ Drop Mn Hole
5-58						
#1			6.45	34.12 ✓	27.73	6.39 ✓
#2		49.44		37.42 ✓		
	1202	~~48.15~~	3.15	~~36.13~~	30.45	6.97 ✓
#3			8.63	40.81 ✓	33.18	7.63 ✓
#4			5.78	43.66 ✓	35.90	7.76 ✓
	23+20 & Haines					
#5 #985			3.10	46.34 ✓	38.63	7.71 ✓
5-58		58.69		48.84		
#1	985 ✓	~~57.40~~	0.60	~~44.65~~ ✓	38.86	9.98 ✓
#2			7.93	50.76 ✓	39.09	11.67 ✓
#3			6.70	51.99 ✓	39.32	12.67 ✓
#4			5.72	52.97 ✓	39.56	13.41 ✓
	26+10					
#5 #986			4.89	53.80 ✓	39.79	14.01 ✓
5-50						
#1			4.97	54.22 ✓	39.99	14.23 ✓
#2			4.83	53.86 ✓	40.19	13.67 ✓
#3			5.90	52.79 ✓	40.39	12.40 ✓
#4	1.12	52.41		51.29 ✓		
	connect 28+60	~~51.12~~	7.40	~~50.00~~	40.59	10.70 ✓
#5	existing sewer		4.22	48.19 ✓	40.79	7.40 ✓

	+	↑	−	El.	Grade	Cuts
		5112 5241				
5-50^{s} connect existing sewer Ehine of Ingraham						
29+60			457	47.89	41.19	6.65
"						
#1			5.00	47.41	41.39	6.02
#2			5.45	46.96	41.59	5.37
#3			5.64	46.77	41.79	4.98
#4			5.80	46.61	41.49	4.62
32+90						
#5 # 967			5.55	46.86	42.19	4.67
4-52 50		54.09		4661		
#1	7.48	~~52.80~~	5.80	~~45.32~~	42.40	4.21
#2			7.35	46.74	42.61	4.13
#3			6.89	47.20	42.82	4.38
34+80						
#4 D.E			5.90	48.19	43.03	5.16
B.M on Hyd. Pacific + Jewell			4.80	4929 4926		
				Error .03		

Sewer Alley North of Oliver. Iron Brahmer East

	+	T	-	Elev	Elev Grade	Cuts
BM SW Pacific + Davis	8.08	8.37		0.29		
Existing Sewer 0+00 & Davis			6.10	2.27	2.38	4.38
5-58³ TP	6.43	13.63	1.17	7.20		
#1			5.95	7.68	2.78	4.90
#2			5.61	8.02	3.19	4.83
#3			5.32	8.31	3.60	4.71
#4			4.48	9.15	4.00	5.15
2790 #5 #966			3.46	10.17	4.41	5.76
5-58³ #1	8.92	20.87	1.68	11.95	5.45	6.50
#2			7.97	12.90	6.50	6.40
#3			6.60	14.27	7.54	6.73
#4			5.95	14.92	8.59	6.33
5180 & Elev 8 #5 #967			9.97	15.90	9.63	6.27
5-58³ #1			3.68	17.19	10.67	6.52
#2			2.65	18.22	11.72	6.50
#3	7.17	26.81	1.23	19.64	12.76	6.88
#4			6.41	20.40	13.81	6.59
8470 #5 #968			5.68	21.13	14.85	6.28
5-58³ #1			4.95	21.86	15.43	6.43
#2			5.29	21.57	16.01	5.56
#3			4.03	22.78	16.59	6.19
#4			3.39	23.42	17.17	6.25
11460 & Elev 1 #5 #969			2.86	23.95	17.75	6.20
5-58³ #1	7.20	32.23	1.78	25.03	18.21	6.82
#2			6.19	26.04	18.68	7.36
#3			5.36	26.87	19.14	7.73
#4			5.06	27.17	19.61	7.56
19+50 #5 #970			4.37	27.86	20.07	7.79

		H.I. 32.23				
5-58³						
#1			3.11	29.12	20.53	8.59 ✓
#2	4.86	34.73	2.36 / 2.35	29.87	21.00	8.87 ✓
#3			4.77	29.96	21.96	8.50 ✓
#4			5.10	29.63	21.93	7.70 ✓
#5 #471 17+90 ℄Evesham			5.51	29.22	22.39	6.83 ✓
5-58³						
#1			6.24	28.49	22.85	5.64 ✓
#2			6.57	28.16	23.32	4.84 ✓
#3			5.87	28.86	23.78	5.08 ✓
#4			4.93	29.80	24.24	5.56 ✓
#5 #472 20+30	12.49	49.60	2.62	32.11	24.71 / 26.21	7.40 ✓ 5.90 ✓ Drop Mn Hole
5-58³						
#1			8.97	35.63	27.82	7.81 ✓
#2			9.29	40.36	29.92	10.94 ✓
#3	6.92	50.29	1.23	43.37	31.03	12.34 ✓
#4			5.41	44.88	32.64	12.24 ✓
#5 #473 23+20			4.47	45.82	34.25	11.57 ✓
5-58³						
#1			5.29	45.00	34.48	10.52 ✓
#2			5.29	45.00	34.71	10.29 ✓
#3			4.95	45.34	34.94	10.90 ✓
#4	6.47	52.48	4.28	46.01	35.18	10.83 ✓
#5 #479 26+10			5.48	47.00	35.41	11.59 ✓
5-50³						
#1			4.91	47.57	35.61	11.96 ✓
#2			4.64	47.84	35.81	12.03 ✓
#3			4.39	48.09	36.01	12.08 ✓
#4			5.22	47.26	36.21	11.05 ✓
#5 connect existing Sewer 28+60	6.42	52.43	6.47	46.01	36.41	9.60 ✓

H.I.
52.43

2+60 Connect existing sewer			5.47	46.96	38.00	8.96 ✓
5-50						
#1			5.39	47.04	39.15	7.89 ✓
#2			4.65	47.78	40.30	7.48 ✓
#3			3.37	49.06	41.45	7.61 ✓
#4	10.37	60.71	2.09	50.34	42.60	7.74 ✓
32+10						
#5 #475			9.05	51.66	43.75	7.91 ✓
0-52.50 S.						
#1			8.67	52.09	44.96	7.08 ✓
#2			8.13	52.58	46.16	6.42 ✓
#3			6.91	53.80	47.37	6.93 ✓
34+20						
#4 D.E			5.52	55.19	48.58 12"	6.61 ✓
			2.19	58.52	58.46 Reed & Jewell	

Alley West of Bayard Between Reed & Thomas from existing Sewer S Line of Thomas South to Mh Hole # 9137 and Then East 152.50 to Connect existing Sewer Brahmar

BM SE Corner of Alley Return S Line Thomas W of Bayard	7.69	3.28		Elev 3.59		
0+00 S Line Thomas			2.14	+ 3.14	- 9.00	7.14
3-45 S						
#1			4.01	+ 1.27	- 4.18	5.45
#2			5.74	- 0.46	- 4.36	3.90
1435						
#3 Mh Hole #9138			4.89	+ 0.39	- 4.54	4.93
9-43 75 S						
#1			6.18	- 0.90	- 4.71	3.81
#2			6.90	- 1.62	- 4.89	3.27
#3			6.07	- 0.79	- 5.06	4.27
3+10						
#4 #9137 A 90°	5.26	4.74	5.80	- 0.61	- 5.24	4.63
3-50 63 S						
#1			4.96	- 0.22	- 5.44	5.22
#2			4.16	+ 0.58	- 5.65	6.23
4785 Connect						
#3 existing Sewer			2.96	+ 1.78	- 5.85	7.63
Check on flow						

Sewer Alley North of Reed from Mn Hole # 438 East to D.E. West of Haines

B.M. Tel-cut-stone Mn Hole # 438	+	H.I.	−	Elev		cuts
0+00 # 438	7.63	8.02		0.39	−4.54	4.93 −
5-57³ #1			8.60	−0.58	−4.08	3.50 −
#2			6.91	1.11	−3.63	4.74 −
set South of ℄ #3			5.75	2.27	−3.17	5.44 −
#4			3.88	4.14	−2.72	6.86 −
2+85 #5 connect			2.94	5.08	−2.26	7.34 −
E Line 3+65 Bayard			2.89	5.13	−1.62	6.75 −
5-505 #1	7.22	13.89	1.35	6.67	−1.22	7.89 −
#2			6.84	7.05	−0.82	7.87 −
#3			6.19	7.70	−0.42	8.12 −
#4			5.75	8.14	−0.02	8.16 −
6+15 #5 # 455			5.43	8.46	+0.38	8.08 −
4-58³ #1			4.71	9.18	0.84	8.34 −
#2			4.26	9.63	1.31	8.32 −
#3			4.11	9.78	1.77	8.01 −
#4			3.50	10.39	2.24	8.15 −
1-17⁶⁵ #5 W Line Cess			3.37	10.52	2.38	8.14 −
0+00 1-	6.15	16.78	3.26	10.63	3.02	7.61 −
1-18 −			6.18	10.60	3.16	7.44
4-			5.67	11.11	3.61	7.50 −
			5.03	11.75	4.07	7.68 −
#			4.70	12.08	4.55	7.53 −
11+95 #5 # 457			4.57	12.21	5.02	7.19 −
5-58³ #1			4.09	12.69	5.48	7.21 −
#2			3.72	13.06	5.95	7.11 −
#3			4.55	12.23	6.41	5.82 −
#4			4.98	11.80	6.88	4.92 −

7.34
5.02
2.32
464

6.41
5.82
11.23

6.41
5.82
12.23

4.92
6.88
11.80

5.02
464
5.48
464
5.94
464
6.41
464
6.87
464
7.34

		HI 16.78				cuts
14+85						
#5 #458 & Bowles	6:35	19.38	3.75	13.03	7.34	5.69 –
5-58[5]						
#1			6.37	13.01	7.82	5.19 –
#2			5.90	13.98	8.29	5.19 –
#3			5.68	13.70	8.77	4.93 –
#4			5.04	14.34	9.24	5.10 –
17+75						
#5 #459			3.89	15.99	9.72	5.77 –
5-58[5]						
#1	10.89	28.22	2.05	17.33	10.94	6.39 –
#2			7.02	21.20	12.16	9.04 –
#3			5.94	22.28	13.37	8.91 –
#4			4.29	23.93	14.59	9.39 –
20+65						
#5 #460			9.64	23.58	15.81	7.77 –
5-58[5]						
#1			5.29	22.93	16.95	6.48 –
#2			5.48	22.74	17.08	5.66 –
#3			5.06	23.16	17.72	5.44 –
#4			4.20	24.02	18.36	5.66 –
23+55						
#5 #461			3.69	24.53	19.00	5.53 –
5-58[5]						
#1	7.85	33.14	2.93	25.29	19.64	5.65 –
#2			7.35	25.79	20.27	5.52 –
#3			6.61	26.53	20.91	5.62 –
#4			5.96	27.68	21.55	6.13 –
26+95						
#5 #462			4.74	28.40	22.19	6.21 –
5-58[5]						
#1			4.16	28.98	22.83	6.15 –
#2			3.20	29.94	23.96	6.48 –
#3	8.09	38.82	2.41	30.73	24.10	6.63 –
#4			7.13	31.69	24.74	6.95 –
29+35						
#5 #463			6.00	32.82	25.38	7.44 –

		H.I. 38.82				cuts
5-58[3]						
#1			4.77	34.05	26.02	8.03
#2			4.26	39.56	26.65	7.91
#3			3.97	34.85	27.29	7.56
#4			3.66	35.16	27.93	7.23
32735 #5 #469	Gresham		4.00	34.82	28.57	6.25
5-58[3]						
#1			4.11	34.71	29.21	5.50
#2	9.93	44.30	3.95	34.87	29.84	5.03
#3			8.31	35.99	30.48	5.51
#4			6.50	37.80	31.12	6.68
35715 #5 #465			4.39	39.91	31.76	8.15
9-52.50[5]						
#1			2.45	41.85	34.91	6.94
#2	11.21	54.46	1.05	43.25	38.06	5.19
#3			8.45	46.01	41.21	4.80
37425 #4 D.E.			4.91	49.55	44.36	5.19
T.P.	10.79	60.34	4.91	49.55		
Set BM 5/8" Spike Pole. Alloy Sat Guard Nails	1.70	59.20	1.84	57.50		

Sewer Alley South of Grand
North of Thomas from Alley W of Bayard to
DE West of Heritage

	+	HI	–	Elev 3.59	Grade	cuts
3M SE Return S side Thomas 0+00	7.86	11.95				
N. Line of Thomas 3-95			7.09	4.41	-1.88	6.29 –
#1			7.15	4.30	-1.25	5.55 –
#2	8.94	13.88	6.01	5.44	-0.63	6.07 –
1+35 #3 #44 90°-00-00" R 4-46 S			7.21	6.67	0.00	6.67 –
#1			7.59	6.29	0.41	5.88 –
#2			7.18	6.70	0.83	5.87 –
#3			6.98	7.40	1.24	6.16 –
#4 3+20 connect 4+00 5-50S			6.12	7.76	1.66	6.10 –
#1			6.01	7.87	2.47	5.40 –
#2			5.31	8.57	2.92	5.65 –
#3			5.02	8.86	3.37	5.49 –
#4			4.95	9.43	3.82	5.61 –
#5 6+50 #443 5-50S	7.76	18.76	3.54	10.39	4.27	6.07 –
#1			2.88	11.00	4.72	6.28 –
#2			7.22	11.54	5.17	6.37 –
#3			6.56	12.20	5.62	6.58 –
#4			5.96	12.80	6.07	6.73 –
#5 9+00 connect			5.54	13.22	6.52	6.70 –
9+80 E. Line Cass 5-50S			5.38	13.38	6.97	6.41 –
#1			4.61	14.15	7.69	6.46 –
#2			4.37	14.39	8.14	6.25 –
#3			3.84	14.92	8.59	6.33 –
#4	7.93	23.96	3.43	15.33	9.04	6.29 –
#5 10+30 #495 5-58S			2.73	16.03	9.99	6.54 –
#1			7.42	16.54	9.94	6.60 –
#2			7.08	16.88	10.46	6.42 –
			6.69	17.27	10.98	6.29 –

			2396				
							cuts
#3				6.00	17.96	11.51	69.5 ~
#4				5.10	18.86	12.03	6.83 ~
	15+40						
#5	#496 & Covers			4.19	19.77	12.55	7.22 ~
5-58							
#1				4.23	19.73	12.96	6.77 ~
#2				4.56	19.40	13.36	6.04 ~
#3				4.55	19.41	13.77	5.64 ~
#4				4.08	19.88	14.17	5.71 ~
	18+10						
#5	#497	12.63	32.78	3.81	20.15	14.58	5.57 ~
5-58							
#1				11.65	21.13	15.86	5.27 ~
#2				10.28	22.50	17.13	5.37 ~
#3				6.95	25.83	18.41	7.42 ~
#4				4.87	27.91	19.68	8.23 ~
	21+00						
#5	#498			3.11	29.67	20.96	8.71 ~
5-58							
#1				1.51	31.27	21.37	9.90 ~
#2				1.31	31.47	21.77	9.70 ~
#3		3.25	35.13	0.90	31.88	22.18	9.70 ~
#4				3.37	31.76	22.58	9.18 ~
	23+90						
#5	#499			4.33	30.80	22.99	7.81 ~
5-58							
#1				5.41	29.72	23.39	6.33 ~
#2				5.65	29.48	23.80	5.68 ~
#3				5.55	29.58	24.21	5.37 ~
#4				4.47	30.66	24.61	6.05 ~
	26+80						
#5	#450 & Fan wol			3.78	31.35	25.02	6.33 ~
5-58							
#1				3.14	31.99	25.89	6.10 ~
#2				2.25	32.88	26.76	6.12 ~
#3		10.30	44.08	1.35	33.78	27.63	6.15 ~

		44.08 ↑				
#4			9.03	35 05	28.50	6.55 ✓
29+70						
#5 #451			8.34	35.64	29.37	6.27 ✓
5-58						
#1			7.15	36.93	30.24	6.69 ✓
#2			5.98	38.10	31.11	6.99 ✓
#3			5.03	39 05	31.98	7.07 ✓
#4			4.93	39.15	32.85	6.30 ✓
32+60						
#5 #452 Grade			4.99	3959	33.72	5.87 ✓
5-58						
#1			4.20	3988	34.59	5.29 ✓
#2			3.29	40 84	35.96	5.38 ✓
#3	11.33	53.21	2.20	41 88	36.33	5.55 ✓
#4			9.42	43.79	37.20	6.59 ✓
35+50						
#5 #453			6.56	46 65	38.07	8.58 ✓
4-52 59						
#1			5.18	48.03	40.27	7.76 ✓
#2			3.50	49 71	42 98	7.23 ✓
#3	7.70	59.20	1.71	51.50	44.68	6.82 ✓
37+60						
#4 DE			6.29	52.91 58.96	46.89	6.02 ✓
0+00	4.29	62.75				
DE East of Int	1.45	54.74	9.99	53.26	43.80	9.96 ✓
5-97						
#1			6.70	47.98	42.86	5.12 ✓
#2			9.94	44.80	41.92	2.88 ✓
#3	3.57	46.14	12.17	42.57	40.98	1.59 ✓
#4			4.83	41.31	40.04	1.27 ✓
#5 #477			5.41	40.73	39.10	1.63 ✓
4 56 55						
#1			5.66	40 48	38.90	1.58
#2			5.21	40.93	38.70	2.23
#3	11.70	54.55	3.29	42.85	38.50	4.35
#4 Connect EXISTING			8.22	46 33	38.28	8.13 ✓

continued on Page 58 Bottom Left Page

Server Alley North of Grand from Alley West of Allison to DE

BM.				Elev 3.59		cuts
TP	7.86 7.37	11.95 14.62	4.20	2.25		
0+00 #47			5.44	9.18	1.59	7.59
4-9c						
#1			5.21	9.41	1.79	7.62
#2			4.99	9.63	1.99	7.64
#3			3.83	10.79	2.19	8.60
#4 connect existing sewer 1+60			6.82	7.80	2.39	5.41
1+00 Elmo & Alley connect sewer	No fore poured				2.41	
5-50'						
#1			6.05	8.57	3.29	5.28
#2			9.58	10.04	3.67	6.37
#3			3.64	10.98	4.06	6.92
#4			2.96	11.66	4.44	7.22
4+90 #5 #118			2.97	11.65	4.82	6.83
5-50'						
#1			2.41	12.21	5.20	7.01
#2	8.39	21.39	1.67	12.95	5.59	7.36
#3			1.99	13.40	5.98	7.42
#4			7.38	13.96	6.36	7.60
#5 7+40 connect existing sewer 8+20 Elmo Connect Beyond			7.99	13.35	6.75	6.60
			7.99	13.85	7.67	6.18
5-50						
#1			5.31	16.03	8.17	7.86
#2			4.86	16.48	8.67	7.81
#3			5.30	16.04	9.17	6.87
#4			4.81	16.53	9.67	6.86
1+70 #5 #120			4.63	16.71	10.17	6.54
5-50						
#1			3.49	17.85	10.66	7.19
#2	6.80	24.74	3.40	17.94	11.15	6.79
#3			6.56	18.18	11.64	6.54
#4			5.87	18.87	12.13	6.74

	+	HI 24.74	−	Elev	
					cuts
13+20 Connect Existing Sanitary Manhole			5.29	19.95	6.83
14+00 Existing Grade			5.10	19.64	6.25
5-50 #1			5.06	19.68	5.94
#2			4.69	20.05	5.76
#3			4.20	20.54	5.80
#4			3.74	21.00	5.81
16+50 #5 #122			3.61	21.13	5.49
5-58 #1			3.97	21.27	5.11
#2	9.93	31.12	3.05	21.69	5.01
#3			8.71	22.41	5.20
#4			7.91	23.21	5.48
19+90 #5 #123 & Down			7.12	24.00	5.75
5-58 #1			6.36	24.76	5.81
#2			5.74	25.38	5.74
#3			4.76	26.36	6.02
#4			3.89	27.23	6.20
22+30 #5 #124			3.50	27.62	5.89
5-58 #1			3.08	28.04	5.61
#2	10.64	38.91	2.85	28.27	5.15
#3			10.28	28.63	9.81
#4			9.27	29.64	5.13
25+20 #5 #125 & Ends			7.53	31.38	6.17
5-58 #1			5.80	33.11	7.03
#2			4.30	34.61	7.66
#3			3.41	35.50	7.68
#4			2.38	36.53	7.84

		H.I. 38.91				Cuts
28710						
#5 #126			1.15	37.76	29.56	8.20
5-58						
#1	6.09	44.55	0.45	38.46	30.02	8.44
#2			6.07	38.48	30.44	7.99
#3			5.96	39.09	30.95	8.19
#4			5.14	39.41	31.42	7.99
31700						
#5 #127	¢ Tan oil		5.31	39.24	31.88	7.36
5-58						
#1			5.88	38.67	32.34	6.33
#2			5.95	38.60	32.81	5.79
#3			5.21	39.34	33.27	6.07
#4			4.97	39.58	33.74	5.84
#128						
#5 33790	8.75	49.30	4.00	40.55	34.20	6.35
5-58						
#1			8.89	40.41	35.13	5.28
#2			7.80	41.50	36.06	5.44
#3			7.16	42.14	36.98	5.16
#4			5.76	43.34	37.91	5.63
36780						
#5 #129	¢ Gas		3.93	45.37	38.84	6.53
5-58						
#1			3.43	45.87	40.12	5.75
#2			2.50	46.80	41.39	5.41
#3	1.63	59.72	1.21	48.09	42.67	5.42
#4			9.99	50.23	43.94	6.29
39470						
#5 #130			6.81	52.91	45.22	7.69
5-58						
#1			4.08	55.69	46.99	9.15
#2			1.99	57.73	47.77	9.96
#3	4.68	63.78	0.62	59.10	49.05	10.05
#4			3.78	60.00	50.32	7.68
42760						
#5 #131	¢ Asphalt		4.31	59.47	51.60	7.87

		H.I. 63.78	—	Elev Stake	Grade	Cuts
5-53						
#1			9.34	59.99	52.01	7.98
#2			5.58	58.20	52.41	5.79
#3			5.53	58.45	52.82	5.63
#4			3.65	60.13	53.22	6.91
45+50 #5 #132	7.26	69.55	1.99	62.29	53.63	8.66
9-52-50 #1			5.21	64.39	54.00	10.39
#2			4.98	65.07	54.36	10.71
#3			5.42	64.13	54.73	9.40
47+60 #4 DE			6.26	63.29	55.10	8.19
T1	9.85	65.71	8.66	60.89		
Check on BM SW Bolt Garnet			3.18	62.53		

Continued from (Page 59)

From Connection W Line of Irrig Waste to D.E. Alley North of Reed

59.55

0+00 Conn 5-50			7.16	47.39	41.26	6.13
#1			4.69	49.86	41.61	8.25
#2			3.83	50.72	41.96	8.76
#3			3.47	51.08	42.31	8.77
#4			3.81	50.74	42.66	8.08
#5 #976	6.51	56.89	9.17	50.38	43.01	7.37
9-52-50 #1			6.76	50.13	43.36	6.77
#2			6.91	49.98	43.72	6.26
#3			6.56	50.33	44.07	6.26
#4 DE			5.60	51.29	44.43	6.86
Set BM			7.25	49.64		

Sewer Alley North of Hornblende

from Alley West of Allison east to Haines

				Elev		Cuts
1st stake E My Hob #7 Westerly Interceptor	3.91	18.32		9.41		
					Inv.	
0+00 #9 Wyest Interceptor			960	13.72	5.79	7.93
9-40S						
#1			505	13.27	5.99	7.28
#2			490	13.42	6.19	7.23
#3			552	12.80	6.39	6.41
#4 1+60 connect			651	11.81	6.59	5.22
2+90 E Line Connect of Allison	Zero mark				7.2	
5-50						
#1			682	11.50	7.71	3.79
#2			641	11.91	8.21	3.70
#3	9.32	23.11	553	12.79	8.70	4.09
#4			768	14.43	9.20	5.23
#5 #134 4+90			685	15.26	9.69	5.57
5-50S						
#1			624	15.87	10.19	5.68
#2			533	16.78	10.69	6.09
#3			487	17.24	11.19	6.05
#4			429	17.82	11.69	6.13
#5 7+40 Illinois connect Bayard			357	18.54	12.19	6.35
8+20 E Line connect Bayard			290	19.21	12.99	6.22
5-50S						
#1	7.25	27.55	181	20.30	13.49	6.81
#2			698	20.57	13.99	6.58
#3			660	20.95	14.99	6.96
#4			596	21.59	14.99	6.60
#5 #136 10+70			564	21.91	15.49	6.42
5-50S						
#1			489	22.66	15.99	6.67
#2			437	23.18	16.99	6.69

		27.55			cuts
#3			4.12	23.93 / 16.99	6.94 –
#4			3.63	23.92 / 17.99	6.93 –
#5 13+20 Nine Cuts connect 14+00 E. Line cuts connect	6.39	31.99	2.60	24.95 / 17.99	6.96 –
5-56 #1			2.45	25.10 / 18.65	6.45 –
#2			6.03	25.96 / 18.97	6.99 –
#3			585	25.64 / 19.30	6.34 –
#4			528	26.21 / 19.62	6.59 –
#5 16+50 #138			507	26.92 / 19.94	6.98 –
5-58 #1			506	26.93 / 20.27	6.16 –
#2			499	26.50 / 20.67	5.83 –
#3			957	26.92 / 21.08	5.84 –
#4			398	27.51 / 21.99	6.02 –
#5 14+40 #139			395	28.08 / 21.89	6.15 –
5-58 #1			2.26	29.23 / 22.30	6.93 –
#2	7.72	37.61	160	29.89 / 23.07	6.82 –
#3			6.99	30.62 / 23.84	6.78 –
#4			6.27	31.39 / 24.62	6.77 –
#5 22+20 #140			569	31.92 / 25.39	6.53 –
5-58 #1			496	32.45 / 26.16	6.29 –
#2			438	33.23 / 26.91	6.32 –
#3			386	33.75 / 27.67	6.08 –
#4			3.22	34.39 / 28.42	5.97 –
#5 25+20 #141	8.65	45.09	274	34.87 / 29.17	5.70 –
5-58 #1			1.17	36.44 – 29.93	6.51 –
			7.77	37.32 – 30.68	6.64 –

H.I.
95.09

cuts

61

#-			6.55	38.54	31.99	7.10 - Check Profile against this
#3			5.72	39.37	32.19	7.18 -
#4			4.80	40.29	32.95	7.34 -
#5 - 28+10 #192			4.75	40.34	33.70	6.64 +
5-58 S						
#1			4.16	40.93	34.45	6.98 -
#-			3.87	41.22	35.21	6.01 -
#3			2.73	42.36	35.96	6.40 -
#4			1.78	93.31	36.72	6.59 -
31+00 Estimate						
#5 #193	7.79	51.55	1.33	43.76	37.97	6.29 -
5-58 S						
#1			6.92	94.63	38.05	6.58
#-			6.16	95.39	38.63	6.76 -
#3			5.82	95.73	39.21	6.52 -
#4			5.33	46.22	39.79	6.43 -
33+90						
#5 #194			9.76	96.79	40.37 -	6.42
5-58 S						
#1			4.64	96.91	40.95	5.96 -
#-			4.44	97.11	41.53	5.58 -
#3			3.98	47.57	42.11	5.46 -
#4			2.27	49.28	42.69	6.59 -
36+80						
#5 #145	8.97	59.62	0.90	50.65	43.27	7.38 -
5-58 S						
#1			8.07	51.55	45.01	6.54 -
#-			6.90	52.72	46.75	5.97 -
#3			5.91	54.21	48.49	5.72 -
#4			3.39	56.23	50.23	6.00 -
39+70						
#5 #146	11.37	70.56	0.93	59.19	51.97	7.22 -
4-52 50 S						
#1			9.36	61.20	53.97	7.23 -

HI
70.56

						cuts
#2			7.37	63.19	55.96	7.23
#3			5.70	64.86	57.96	6.90
#4 4x420 DE			4.68	65.88	59.95	5.93
Check out on BMN & Lamont & Haines Brass Plug			2.14	68.42		
TP	2.67	71.09	2.14	68.42		
TP.	4.64	67.40	8.33	62.76		
Check on BN	3E Inj & Lamont		4.88	62.52		

Alley North of Garnet from Alley West of Allison East to & Jewell Street

	+	HI	−	Elev	Elev Flow Line	Cuts
	8.07	21.79		13.72		
Field 12 West #						
0+00 West Intersection			4.06	17 73	10.00	7.73 −
4-4 6 25 S			4.28	17.51	10 18	7,33 −
#1			4.25	17.54	10 37	7.17 −
#2			4.94	16 85	10.55	6.30 −
#3 1785 connect N Line Allison 2+65 E Line Allison connect			5.44	16,35	10.74	5 61 −
	Left out				11.06	
5-50S #1			6.81	14.98	11.26	3.72 ✓
#2	9.89	25.89	5.79	16.00	11.46	4.54 ✓
#3			8.99	16 90	11.66	5.24 −
#4			7.91	17 98	11.86	6.12 −
#5 #148 5+15			7.28	18.61	12.06	6.55 ✓
5-50S #1			6.29	19.60	12 76	6.84 −
#2			5.38	20.51	13 96	7.05 ✓
#3			4.93	20 96	1416	6.80 ✓
#4			3.79	22.10	1486	7.24 ✓
#5 7+65 connect N Line Bayard 8+95 E Line Bayard			3.40	22.49	15.56	6.93 ✓
5-50S #1			2.43	23.46	16.64	6 82 ✓
	7.81	33.14	0.56	25.33	17.29	8.04 ✓
#2			703	26 11	17.94	8.17 −
#3			6.58	26 56	18.59	797 ✓
#4			6.48	26 66	19.24	7.42 −
#5 10+95 #150			5.37	27.77	19.89	7.88 ✓
5-50S #1			5.34	2780	20.52	7.28 ✓
#2			4.44	28 70	21.16	7 54 ✓

		H.I. 33.14			cuts
#3			4.72	28.42 – 21.79	6.63 –
#4			4.60	28.54 – 22.42	6.12 –
13+95 #5 IN Line Cass Connect 14+25			3.35	29.79 – 23.06	6.73 –
E Line Cass Connect 5-50's #1	7.25	37.98	2.41	30.73 – 23.54	7.19 – ← check off Profile
#2			7.24	30.74 – 23.95	6.79 –
#3			6.51	31.47 – 24.36	7.11 –
#4			5.65	32.33 – 24.78	7.55 –
16+75 #5 #152 5-58's #1			5.45	32.53 – 25.19	7.34 –
#2			5.20	32.78 – 25.60	7.18 –
#3			4.59	33.39 – 26.01	7.38 –
#4			4.34	33.64 – 26.41	7.23 –
19+65 #5 #153 5-58's #1	8.52	44.58	3.81	34.17 – 26.82	7.35 –
#2			3.05	34.93 – 27.22	7.71 –
#3			1.92	36.06 – 27.63	8.43 –
#4			7.47	37.11 – 28.56	8.55 –
22+55 #5 #154 5-58's #1			6.77	37.81 – 29.48	8.33 –
#2			6.72	37.86 – 30.41	7.45 –
#3			5.78	38.80 – 31.34	7.56
#4			5.20	39.38 – 32.27	7.11 –
25+45 #5 #155 5-58's #1	8.51	51.37	4.76	39.82 – 33.20	6.62 –
#2			4.16	40.42 – 34.13	6.29 –
#3			3.61	40.97 – 35.05	5.92 –
#4			3.05	41.53 – 35.98	5.55 –
#5 #156 5-58's #1			1.72	42.86 – 36.91	5.95 –
#2			7.78	43.59 – 37.37	6.22 –
			6.64	44.73 – 37.84	6.89 –

		H.I. 51.37				cuts
#3			6.14	45.23	38.30	6.93 —
#4			5.67	45.70	38.76	6.94 —
#5 28+35 #156			5.22	46.15	39.23	6.92 —
5-50 #1			4.86	46.51	39.63	6.88 —
#—			4.36	47.01	40.03	6.98 —
#3			4.06	47.31	40.43	6.88 —
#4			4.02	47.35	40.83	6.52 —
#5 30+85 Wilmot Funnel connect			3.60	47.77	41.23	6.54 —
31+45 Rhino Funnel connect	7.14	55.90	2.61	48.76	41.87	6.89 —
5-50S #1			6.99	48.91	42.27	6.64 —
#—			6.46	49.44	42.67	6.77 —
#3			5.92	49.98	43.07	6.91 —
#4			5.87	50.03	43.47	6.56 —
#5 34+15 #158			5.34	50.56	43.87	6.69 —
5-58S #1			4.32	51.58	44.80	6.78 —
#—			3.51	52.39	45.73	6.66 —
#3			2.74	53.16	46.65	6.51 —
#4			2.12	53.78	47.58	6.20 —
#5 37+05 6 #159 Ell 34m	10.57	65.63	0.84	55.06	48.51	6.53
5-58S #1			8.76	56.87	49.90	6.97 —
#—			6.74	58.89	51.29	7.60
#3			4.25	61.38	52.68	8.70 —
#4	11.23	75.47	1.39	64.24	54.08	10.16
#5 39+95 #160			9.01	66.46	55.47	10.99 —
5-58 #1			7.09	68.38	55.70	11.68 —
#—			5.39	70.08	55.93	14.15 —

H. I.
1947

						Cuts
#3	Set South of & 6e		9.39	71.08	56.17	14.91
#4			9.65	70.82	56.90	13.92
#5	42785 #161 & Homes		5.53	69.94	56.63	13.31
5-58S						
#1			6.41	69.06	56.86	12.20
#2			6.97	68.50	57.09	11.41
#3	9.03	73.14	6.36	69.11	57.32	11.79
#4			9.17	68.97	57.56	11.41
#5	45775 #162		9.59	68.55	57.79	10.76
5-50S						
#1			9.87	68.27	57.99	10.28
#2			5.19	67.95	58.19	9.76
#3			6.23	66.91	58.39	8.52
#4			7.28	65.86	58.59	7.27
#5	48725 W Line Ingraham connect 49725 E Line Ingraham		7.65	65.49	58.79	6.70
5-50S						
#1	5.99	72.98	6.86	66.28	59.38	6.90
#2			6.15	66.99	59.73	7.26
#3			5.65	67.35	60.08	7.25
#4			5.55	67.43	60.93	7.00
#5	51775 #163		5.05	67.93	60.78	7.15
5-58			9.70	68.28	61.13	7.15
#1			9.56	68.42	61.54	6.88
#2			9.90	68.08	61.99	6.14
#3			9.44	68.54	62.35	6.19
#4			9.22	68.76	62.75	6.01
#5	54765 #164 & Jewell 2 Eng. BM.		3.27	69.71	63.16	6.55
Check on SW Cor Jewell & Ingraham Brass Plug			9.23	68.75		

52.50
210.00

Alley North of Felspar: from Alley West of Allison East to Mn Hole #11

BM Mn Hole # 11		26.69			Cuts
Mn Hole #13					
0+00 Western Interceptor			5.57	21.12 – 15.64	5.98 –
4-52 50					
#1			4.77	21.92 – 15.85	6.07 –
#2			4.58	22.11 – 16.06	6.05 –
#3			4.46	22.23 – 16.27	5.96 –
connect existing Sewer					
#4 W Line of Allison			4.38	22.31 – 16.48	5.83 –
2+80 Connect existing Sewer & Line Allison				16.80	
	Left out				
5-50 3					
#1	7.26	29.67	4.28	22.41 – 17.00	5.41 –
#2			6.67	23.00 – 17.20	5.80 –
#3			6.42	23.25 – 17.40	5.85 –
#4			6.07	23.60 – 17.60	6.00 –
5+30					
#5 #16.6			5.53	24.14 – 17.80	6.34 –
5-50 5					
#1			4.92	24.75 – 18.54	6.21 –
#2			4.03	25.64 – 19.28	6.36 –
#3			3.44	26.23 – 20.03	6.20 –
#4			2.88	26.79 – 20.77	6.02 –
7+80 connect existing Sewer					
#5 W Line Bayard			2.75	26.92 – 21.51	5.91 –
8+60 E Line Bayard					
connect existing Sewer E Line Bayard	9.99	37.94	2.22	27.45 – 22.59	4.86 –
5-50 5					
#1			7.97	29.47 – 23.19	6.28 –
#2			7.40	30.04 – 23.79	6.25 –
#3			6.72	30.72 – 24.39	6.33 –
#4			6.25	31.19 – 24.99	6.20 –
11+10					
#5 #16.8			5.58	31.86 – 25.59	6.27 –
5-50 5					
#1			4.93	32.51 – 26.19	6.32 –
#2			4.18	33.26 – 26.79	6.47 –

			FI. 3744			
				3.60	33.84 – 27.39	6.45 –
#3						
#4				2.79	34.65 – 27.99	6.66 –
#5 CASS 13760 existing connect existing W. line				2.31	35.13 – 28.59	6.54 –
19740 & Line Cass. Connect existing sewer	7.77	44.93		0.78	36.66 – 29.55	7.11 –
5-50'				7.50	36.93 – 30.15	6.78 –
#1				6.87	37.56 – 30.75	6.81 –
#2				6.39	38.04 – 31.35	6.69 –
#3				5.87	38.56 – 31.95	6.61 –
#4				5.55	38.98 – 32.55	6.43 –
16790 #5 #170				4.90	39.53 – 33.24	6.29 –
5-58'				4.25	40.18 – 33.94	6.24 –
#1				3.30	41.13 – 39.64	6.49 –
#2				2.75	41.68 – 35.33	6.35 –
#3				2.03	42.40 – 36.03	6.37 –
#4				0.98	43.45 – 36.73	6.72 –
19780 #5 #171 & Payne				8.69	44.12 – 37.42	6.70 –
5-58				7.84	44.97 – 38.12	6.85 –
#1	9.36	52.81		7.05	45.76 – 38.81	6.95 –
#2				6.00	46.81 – 39.51	7.30 –
#3				5.24	47.57 – 40.21	7.36 –
#4				4.94	47.87 – 40.90	6.97 –
22770 #5 #172				4.43	48.38 – 41.60	6.78 –
5-58'				4.35	48.46 – 42.29	6.17 –
#1				3.35	49.46 – 42.99	6.47 –
#2				2.64	50.17 – 43.51	6.66 –
#3				1.73	51.08 – 44.03	7.05 –
25760 #5 #173 & Eyer &						
5-58						
#1						
#2	8.09	59.17				

cuts

		Ft. I 5917				cu/s
#3			7.29	51.88	49.55	7.33 –
#4			6.84	52.33	45.08	7.25 –
#5 #176 28+50 5-50			6.25	52.92	45.60	7.32 –
#1			5.93	53.24	46.05	7.19 –
#2			5.38	53.79	46.50	7.29 –
#3			4.69	54.48	46.95	7.53 –
#4			4.89	54.28	47.40	6.88 –
#5 Senior Alkire Fanuel 31+00 connect 31+80 Kline cancel connect existing Senior 5-44-88			4.96	54.21	47.85	6.36 –
#1			4.64	54.53	48.57	5.96 –
#2	7.89	63.76	3.51	55.66	49.02	6.64 –
#3			3.30	55.87	49.47	6.90 –
#4			7.05	56.71	49.92	6.79 –
#5 #176 34+42 5-58'			6.95	56.81	50.37	6.44 –
#1			6.67	57.09	50.82	6.27 –
#2			6.45	57.31	51.52	5.79
#3			5.61	58.15	52.21	5.94 –
#4			5.03	58.73	52.91	5.82 –
#5 #177 87+19.2 5-58'			4.32	59.44	53.60	5.84 –
#1			3.01	60.75	54.30	6.95 –
#2	13.26	76.45	2.42	61.34	55.40	5.94 –
#3			0.57	63.19	56.50	6.69 –
#4			10.84	65.61	57.61	8.00 –
#5 #178 40+09 5-58'			8.45	68.00	58.71	9.29 –
#1			6.43	70.02	59.81	10.21 –
#2			4.54	71.91	60.21	11.70 –
			3.81	72.64	60.62	12.02 –

		H.I. 76.45				Cuts
#3			3.65	72.80	61.03	11.77
#4			3.80	72.65	61.43	11.22
92+99 40 #5 #179	4.78	77.11	4.12	72.33	61.84	10.49
5-58³ #1			4.83	72.28	62.24	10.04
#2			5.06	72.05	62.65	9.40
#3			5.32	71.79	63.06	8.73
#4			5.42	71.69	63.46	8.23
95+89 40 #5 #180			5.23	71.88	63.87	8.01
5-50 #1			4.65	72.46	64.22	8.24
#2			4.70	72.41	64.57	7.84
#3			4.77	72.34	64.92	7.42
#4			4.99	72.12	65.27	6.85
98+39 40 #5 connect sewer W line Ing.	0.51	71.97	5.65	71.46	65.62	5.84
49+39 40 ℄ Line Check on BM Ing. connect Sewer - S ℄ Ing & Gavnel			9.43	62.54		
5-50³ #1						
#2						
#3						
#4						
51+89 40 #5 #181						
5-58³ #1						
#2						
#3						
#4						
54+79 40 #5 #182 ℄ Jewel / Δ 90°00..						

Alley North of Emerald from Alley West of Allison to Mh Hole #203 & Haynes

	+	HI.	−	Elev		Cuts
Mh Hole						
0+00 #15	6.58	33.88		27.30	21.20	6.10 −
4-52 S03						
#1			6.05	27.83	−21.56	6.27 −
#2			5.75	28.13	−21.93	6.20 −
#3			5.90	28.48	−22.30	6.18 −
#4 2+10. connect existing			5.15	28.73	−22.67	6.06 −
2+90 connect existing Sewer E Line Allison			5.20	28.68	−23.23	5.45 −
5-50S						
#1			4.32	29.56	−23.58	5.98 −
#2			3.83	30.05	−23.93	6.12 −
#3	8.08	38.24	3.72	30.16	29.28	5.88 −
#4			7.19	31.05	−29.63	6.42 −
#5 5+40 #190			6.88	31.36	−29.98	6.38 −
5-50						
#1			6.05	32.19	−25.34	6.85 −
#2			4.80	33.44	−25.70	7.74 − Looxout
#3			5.00	33.24	−26.06	7.18 −
#4			4.26	33.98	−26.42	7.56 −
#5 7+90 connect existing Sewer N Line Bayard			5.91	32.83	−26.78	6.05
8+70 connect Sewer E Line at Bayard			4.97	33.27	−27.48	5.79 −
5-50S						
#1			3.07	35.17	−28.08	7.09 −
#2	7.91	43.28	2.37	35.87	28.68	7.19 −
#3			6.71	36.57	−29.28	7.29 −
#4			6.70	36.58	−29.88	6.70 −
#5 11+20 #192			6.12	37.16	−30.48	6.68 −
5-50S						
#1			5.16	38.12	−31.08	7.04 −
#2			4.88	38.40	−31.68	6.72 −

		HI 93.28				
						cuts
#3			4.29	38.99	-32.28	6.71 -
#4			3.23	40.05	-32.88	7.17 -
#5 13770 connect sewer W. Line Cass			2.97	40 81	- 33.98	7.33 -
19450 connect Sewer E Line Cass	8:89	50.28	1.89	41.39	- 34.52	6.87 -
5-30S						
#1			8.47	41 81	- 35.22	6.59 -
#2			8.02	42.26	-35.93	6.33 -
#3			7.22	43.06	-36.69	6.42 -
#4			6.19	44.09	-37.34	6.75 -
17400 #5 # 194			5.49	44 79	- 38.05	6.74 -
5-58						
#1			4.74	45.54	-38.86	6.68 -
#2			4.02	46.26	-39.67	659 -
#3			2.79	47.49	-40.48	7.01
#4			2.17	48.11	-41.30	6.81 -
19490 #5 # 195 & Downes	8:43	57.01	1.70	48.58	-42.11	6.97 -
5-58						
#1			7.70	49.31	-42.92	6.39 - ← Check This 13Y profile
#2			8.63	98.38	-43.73	4.65 -
#3			8.08	98.93	-44.54	4.39 -
#4			5.68	51.33	-45.36	5.97 -
22480 #5 # 196			3.90	53.61	-46.17	7.99 -
5-58						
#1			2.35	54.66	-46.98	7.68 -
#2			1.37	55.64	-47.79	7.85 -
#3	6.59	63.32	0.28	56.73	-48.61	8.12 -
#4			5.71	57.61	-49.42	8.19 -
25470 & Eyers #5 197			5.09	58.23	-50.23	8.00 -
5-58						
#1			5.04	58.28	-50.75	7.53 -
#2			5.28	58.04	-51.27	6.77 -

H.I.
63.32

					Cuts
#3			5.04	58.28 – 51.79	6.49 –
#4			9.77	58.55 – 52.31	6.24 –
28+60					
#5 #198			3.70	59.62 – 52.83	6.79 –
5-50					
#1			3.05	60.27 – 53.28	6.99 –
#2	7.93	68.50	2.45	60.87 – 53.73	7.14 –
#3			7.13	61.37 – 59.18	7.19 –
#4			6.51	61.99 – 59.63	7.36 –
31+10					
#5 Connect existing sewer N line			6.75	61.75 – 5508	6.67 –
31+90					
R line of tunnel			6.39	62.16 – 5580	6.36 –
5-50					
#1			5.13	63.37 – 56.25	7.12 –
#2			5.20	63.30 – 56.69	6.61 –
#3			5.17	63.33 – 57.14	6.19 –
#4			4.84	63.66 – 57.59	6.07 –
34+90					
#5 #200			4.32	64.18 – 5804	6.14 –
5-58					
#1	7.78	72.08	4.20	69.30 – 5856	5.74 –
#2			7.42	64.66 – 59.08	5.58 –
#3			6.74	65.39 – 59.61	5.73 –
#4			6.91	65.67 – 60.13	5.54
37+30					
#5 #201 & Gresham			5.39	66.69 – 60.65	6.04 –
5-58'					
#1			4.93	67.15 – 61.81	5.34 –
#2			3.57	68.51 – 62.97	5.54 –
#3			2.78	69.30 – 64.13	5.17 –
#4	8.98	79.16	1.90	70.18 – 65.29	4.89 –
40+20					
#5 #202			6.97	72.19 – 66.95	5.74 –
5-58'					
#1			5.67	73.49 – 66.97	6.52 –

H.I.
7916

73.00
68.92
.64

71

					Cuts
#2			5.32	73.84 – 67.99	6.35 –
#3			5.13	74.03 – 68.02	6.01 –
#4			4.86	74.30 – 68.54	5.76 –
#5 93710 #203 & Haines End.			4.75	74.91 – 69.06 –	5.85 –
T.P.	2.60	75.00	6.76	72.40	
T.P.	4.54	73.06	6.48	68.52	
Check on BM NR Rail Garnet & Haines			4.60	68.46 –	

Sewer Alley North of Emerald from E Line of Ingraham to ℄ of Jerrell

510 / 40 / 470

1075 / 5729 / 4802

B.M.							
						[	Cuts
BM Sewer stub W. Side Ing. South of Emerald	10.89	82.32		71.43			
0+00 ℄ Line Ing Connect	7.89	87.83	2.38	79.94	73.92		6.02
5-52 #1			6.50	81.33	74.33		7.00
#2			5.52	82.31	74.75		7.56
#3			4.96	82.87	75.17		7.70
#4			3.82	84.01	75.58		8.43
#5 #187			3.12	84.71	76.00		8.71
6-50 #1	12.49	98.02	2.30	85.53	76.40		9.13
#2			12.00	86.02	76.80		9.22
#3			11.55	86.47	77.20		9.27
#4			10.78	87.24	77.60		9.64
#5			10.15	87.87	78.00		9.87
#6 #188 ℄ Jerrell End			10.18	87.84	78.40		9.44
			0.63	97.39	check out on Mn Hole stub ℄ Jerrell's alley North of Dia.		

Sewer & Frontera from La Playa

1/30/29 — 54 North to 60' N of Mn Hole #64

Bliss	+	HI	−	Elev Stake	Elev Horiz Line Grade	Cuts
BM S.E. Top Hy						
La Playa & Ingraham	0.12	28 55		28 93		
TP	6.49	34.94	0.60	27.95		
T.P.	5.91	27.50	12.85	21.59		
0+00 Mn Hole #66			8 03	19.47	11.90	7.57 −
4-40						
#1			8 07	19.43	12 30	7.13 −
#2			7.60	19.90	12 70	7.20 −
#3			7 09	20.41	13.10	7.31 −
#4 D.End.			6 59	20.41	13 50	7.41 −
0+00 Mn Hole #65			5.87	21.63	15 00	6.63 −
3-45						
#1			5.10	22.40	15 45	6.95 −
#2			9 61	22.89	15.90	6.99 −
#3 DEAD			9 13	23.37	16 35	7.02 −
0+00 Mn Hole #64			9.08	23.42	15 50	7.92 −
2-30						
#1			9.39	23.11	15 80	7.31 −
#2			5 53	21.97	16 10	5.87 −
Set B.M. Rim of Mn Hole & Frontera + La Playa			8 57	18.93		
T.P.	11.25	39.96	3.79	23.71		
Check on Starting BM			6.53	28.43		

1031/86/117

1765
55
20

Sewer West of Mn Hole #441

Thomas St Grand
West of Bayard
cuts

77

B.M.S.E.B.P. Thomas St Bayard 5.555	+ 4.00	HI 11.88	−	Elev 5.88	Elev Grade	
0+00			5.21	6.67	0.00	6.67
0+55			6.07	5.81	0.27	5.54
1+10			6.36	5.52	0.55	4.97
1+65			7.11	4.77	0.82	3.95
2+20			8.09	3.79	1.10	2.69
2+75			8.88	3.00	1.38	1.62

Bench Levels for Eastern Interceptor

BM. NW BP. Olney & Garnet	0.65	95.75		95.10
Set BM Intersection Walk			9.67	36.08
T.P.	0.32	33.37	12.70	33.05
Set B.M. NW 7° Mon Grand & Bradford			2.85	30.52
T.P.	2.17	22.74	12.80	20.57
T.P.	1.17	10.95	12.96	9.78
T.P.	3.66	6.01	8.60	2.35
T.P.	4.03	9.94	5.10	0.91
T.P.	9.60	9.13	5.41	-0.47
Set BM NW Bradford Prop Hub & Oliver			4.89	-0.76
T.P.	4.89	3.51	5.51	-1.38
Set BM, SW Olney & Prop Hub Oliver			5.44	-1.93
T.P.	7.08	9.73	5.86	-2.35
Set BM SW Prop Hub Nails & Oliver	7.03	10.39	1.37	3.36
T.P.	8.64	18.16	0.87	9.52
T.P.	6.41	23.84	.073	17.93
Check on BM S.E. Prop Hub Reed & Olney			10.26	13.58
T.P.	9.97	25.88	7.93	15.91
Set BM. S.E. Thomas Prop Hub & Olney				
T.P.	12.64	-37.92	0.6-	25.26
Set BM. S.E. Telephone Pole Ivy & Olney Cluster of Nails			10.93	27.99
T.P.	10.06	46.86	1.32	36.60
Set BM. Mon N. line of Grand & Olney check on BM			8.83	37.83
			1.55	95.10
BM. SW Prop Hub Oliver Wire	1.59	4.93		3.36

T.P.	3.56	7.32	1.99	3.96
Set BM	5.64	6.97	5.96	1.33
T.P.	7.74	9.62	10.09	-3.12
Set BM Step of Mansion			1.24	3.38
T.P.	3.87	5.25	3.29	1.38
Set BM. 13+39.12	5.12	8.55	1.8-	3.43
T.P.	7.37	5.19	10.78	-2.23
Set BM 20 PP			5.98	-0.34
T.P.	4.27	0.66	8.75	-3.61
T.P.	8.86	6.60	2.92	-2.26
T.P.	9.89	16.12	0.37	6.23
Set BM 7° NW offset of 80			5.77	10.35
TP	12.15	22.50	5.77	10.35
T.P.	5.07	26.41	1.16	21.34
check on BM Nails	6.94	29.99	3.36	23.05 22.92 .013
check on BM W 72 line at Mendocino & Via Plaza	8.97	32.94	5.52	23.97
check on BM & La Playa W 75 Line Alameda			5.32	27.62 27.46 .16

Levels for Sewer Profile
In Alley Between Grand & Thomas
West of Bayard + Mn. Hole # 991

	+	HI	−	Elev.
	SG. BP			
BM Thomas & Bayard	6.00	11.88		5.88
0+00			5.6	6.3
0+55.			6.0	5.9
1+07			6.4	5.5
1+10			7.2	4.7
1+16			7.7	4.2
1+28			6.7	5.2
1+96			7.5	4.4
1+58			6.9	5.0
1+65			7.2	4.7
1+86			7.9	4.0
1+98			7.5	4.4
2+20			8.0	3.9
2+45			9.5	2.4
2+60			9.2	2.7
2+65			8.6	3.3
2+75 ±			8.7	3.2

1.49
5.91
7.40

Grades for Flow Line Elev
Pump House # 1

	+	HI	−	Elev	Elev Grade
BM	1.49	1.49		0.00	
			E side		
Elev Box Pump Line Flow			6.99	−5.00	−5.00
Nail for overflow			4.99	−3.50	−3.50
Inlet from East			11.80	−10.31	−10.31
Inlet from N.W. 10" Line			7.90	−5.91	−5.91

Levels on Ground on line from
from existing Mn Hole to Pump House

	+	HI	−	Elev
BM	2.37	25.42		23.05
0+00			1.3	24.1
0+37			1.6	23.8
0+74			2.2	23.2
1+10			2.8	22.6
1+43			3.4	22.0
1+54			3.7	21.7
1+59			4.6	20.8
1+70			8.0	17.4
1+72			10.1	15.3
1+80			11.6	13.8
TP	1.16	13.64	12.94	12.48
1+88			4.2	9.4
1+92			6.5	7.1
2+00			10.0	3.6
TP	2.24	7.12	8.76	4.88
2+06			5.1	2.0
2+08			8.3	−1.2
2+14			12.2	−5.1
2+19 Pump House			12.0	−4.9
check out on BM set on Construction of Pump House			7.39	−.27 ✓

BM. ℄ Cass + Hornblende 21.81
Cass + Grand 16.65
Cass 16.01

From 1.00 Tie Hot Allison to RW Hole 62.95
1.35 West 1°04'00 Left from Mn Hole

IMPROVED TABLES

AND

INFORMATION

132.91
30.00
162.91

Table II—Continued
TRIGONOMETRIC FORMULAE (continued)

In any triangle:

Given a, b, C; to find c, B, A.

Use Law of Tangents.

Given A. B. c; to find a, b, C.

Use Law of Sines.

Given a, b, c; to find A, B, C.

$$\text{Let } \frac{a+b+c}{2} = s, \quad \sqrt{\frac{(s-a)\ (s-b)\ (s-c)}{s}} = r$$

$$\cos \tfrac{1}{2} A = \sqrt{\frac{s(s-a)}{bc}}$$

$$\tan \tfrac{1}{2} A = \frac{r}{s-a}$$

$$\tan \tfrac{1}{2} B = \frac{r}{s-b}$$

$$\tan \tfrac{1}{2} C = \frac{r}{s-c}$$

Area of a triangle:

Area $= \tfrac{1}{2}$ ab Sin C

Area $= \sqrt{s\,(s-a)\,(s-b)\,(s-c)}$

PRISMOIDAL FORMULA.

$$\text{Vol.} = \frac{h}{6}(B+b+4M)$$

h = altitude; b, B = bases; M = midsection

Table III
INCHES AND FRACTIONS OF AN INCH IN DECIMALS OF A FOOT

	0	1	2	3	4	5	6	7	8	9	10	11	
1/16	.0052	.0885	.1719	.2552	.3385	.4219	.5052	.5885	.6719	.7552	.8385	.9219	1/16
1/8	.0104	.0938	.1771	.2604	.3438	.4271	.5104	.5938	.6771	.7604	.8438	.9271	1/8
3/16	.0156	.0990	.1823	.2656	.3490	.4323	.5156	.5990	.6823	.7656	.8490	.9323	3/16
1/4	.0208	.1042	.1875	.2708	.3542	.4375	.5208	.6042	.6875	.7708	.8542	.9375	1/4
5/16	.0260	.1094	.1927	.2760	.3594	.4427	.5260	.6094	.6927	.7760	.8594	.9427	5/16
3/8	.0313	.1146	.1979	.2813	.3646	.4479	.5313	.6146	.6979	.7813	.8646	.9479	3/8
7/16	.0365	.1198	.2031	.2865	.3698	.4531	.5365	.6198	.7031	.7865	.8698	.9531	7/16
1/2	.0417	.1250	.2083	.2917	.3750	.4583	.5417	.6250	.7083	.7917	.8750	.9583	1/2
9/16	.0469	.1302	.2135	.2969	.3803	.4635	.5469	.6302	.7135	.7969	.8802	.9635	9/16
5/8	.0521	.1354	.2188	.3021	.3854	.4688	.5521	.6354	.7188	.8021	.8854	9688	5/8
11/16	.0573	.1406	.2240	.3073	.3906	.4740	.5573	.6406	.7240	.8073	.8906	.9740	11/16
3/4	.0625	.1458	.2292	.3125	.3958	.4792	.5625	.6458	.7292	.8125	.8958	.9792	3/4
13/16	.0677	.1510	.2344	.3177	.4010	.4844	.5677	.6510	.7344	.8177	.9010	.9844	13/16
7/8	.0729	.1563	.2396	.3229	4063	.4896	.5729	.6563	.7396	.8229	.9063	.9896	7/8
15/16	.0781	.1615	.2448	.3281	.4115	4948	.5781	.6615	.7448	.8281	.9115	.9948	15/16
1	.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167	1.000	1
	0	1	2	3	4	5	6	7	8	9	10	11	

Table IV
USEFUL RELATIONS.

Lineal feet	×.00019	= miles
Lineal yards	×.0006	= miles
Square inches	×.007	= square feet
Square feet	×.111	= square yards
Square yards	×.0002067	= acres
Acres	×4840	= square yards
Cubic inches	×.00058	= cubic feet
Cubic feet	×.03704	= cubic yards
Links	×.22	= yards
Links	×.66	= feet
Feet	×1.5	= links

360° = 21600′ = 1296000″

Radius = arc of 57.2957790°

Arc of 1° (radius = 1) = .017453292

Arc of 1′ (radius = 1) = .000290888

Arc of 1″ (radius = 1) = .000004848

$\pi = 3.141592654$

$\sqrt{\frac{1}{4}} = 0.564190$

$\frac{\pi}{4} = 0.785398163$

$\sqrt[3]{\frac{6}{\pi}} = 1.240700982$

$\frac{\pi}{6} = 0.523598776$

$\pi^2 = 9.869604401$

$\sqrt{\frac{4}{\pi}} = 1.128379167$

$\frac{1}{\pi^2} = 0.101321184$

$\frac{\pi}{6} = 0.523598776$

$\sqrt{\pi} = 1.772453851$

$\frac{4.\pi}{3} = 4.188790205$

$\frac{1}{\pi} = 0.3183099$

Curvature of Earth's surface = about 0.7 feet in 1 mile

Curvature in feet = 0.667 (Dist. in miles)²

Difference between arc and chord length, 0.05 feet in 11½ miles

Probable error of a single observation $= 0.6754\sqrt{\frac{\Sigma v^2}{n-1}}$

Error in chaining of 0.01 feet in 100 feet:

Due to—

1. Length of tape error of 0.01 feet
2. Alignment. One end 1.4 feet out of line
3. Sag of tape at centre of 0.61 feet.
4. Temperature difference of 15°
5. Difference of pull of 15 lbs.

STADIA REDUCTION FORMULÆ.

Horizontal Distance $= R - R \sin^2 a + C \cos a$

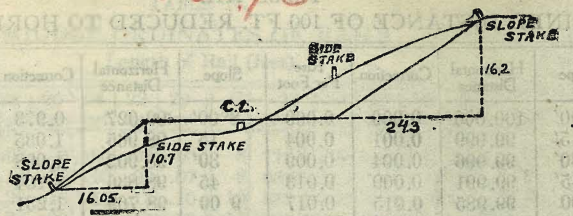
Vertical Distance $= R\ \tfrac{1}{2} \sin 2a + C \sin a$

$$R = \text{Reading} \times \frac{\text{distance from Object glass to cross hairs}}{\text{distance between cross hairs}}$$

C = distance from Object glass to cross hairs + distance from Object glass to center of instrument.

a = angle of elevation for mid Reading

SW D.a & Allison 30.9



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1½ TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0 00	0 15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1 65	1 80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3 45	3.60	3 75	3.90	4.05	4.20	4 35	2
3	4.50	4 65	4.80	4.95	5 10	5 25	5 40	5.55	5.70	5.85	3
4	6.00	6 15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7 50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9 00	9 15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10 65	10.80	10.95	11.10	11.25	11.40	11.55	11 70	11.85	7
8	12.00	12 15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13 50	13 65	13 80	13 95	14.10	14.25	14.40	14 55	14.70	14.85	9
10	15.00	15 15	15 30	15 45	15.60	15.75	15.90	16.05	16.20	16 35	10
11	16 50	16 65	16 80	16.95	17 10	17.25	17.40	17.55	17.70	17.85	11
12	18 00	18.15	18.30	18 45	18.60	18 75	18.90	19.05	19.20	19 35	12
13	19 50	19 65	19.80	19.95	20.10	20.25	20 40	20.55	20.70	20.85	13
14	21.00	21 15	21.30	21.45	21 60	21.75	21.90	22 05	22 20	22 35	14
15	22 50	22 65	22 80	22 95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24 15	24 30	24 45	24.60	24.75	24 90	25 05	25.20	25.35	16
17	25.50	25 65	25.80	25 95	26.10	26 25	26 40	26.55	26.70	26.85	17
18	27.00	27 15	27.30	27 45	27.60	27.75	27.90	28.05	28 20	28.35	18
19	28 50	28 65	28 80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30 00	30 15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31 50	31 65	31.80	31.95	32 10	32 25	32.40	32.55	32 70	32 85	21
22	33 00	33 15	33 30	33 45	33.60	33 75	33.90	34.05	34.20	34.35	22
23	34 50	34 65	34.80	34.95	35.10	35 25	35 40	35.55	35.70	35 85	23
24	36.00	36 15	36.30	36 45	36.60	36.75	36.90	37.05	37 20	37.35	24
25	37.50	37.65	37 80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39 00	39 15	39.30	39 45	39 60	39.75	39.90	40.05	40.20	40.35	26
27	40 50	40 65	40 80	40.95	41.10	41.25	41 40	41.55	41.70	41.85	27
28	42 00	42 15	42.30	42.45	42.60	42 75	42.90	43.05	43.20	43.35	28
29	43 50	43 65	43.80	43 95	44.10	44 25	44 40	44.55	44.70	44 85	29
30	45 00	45 15	45.30	45 45	45.60	45.75	45 90	46.05	46 20	46.35	30
31	46.50	46.65	46.80	46 95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48 00	48.15	48.30	48 45	48.60	48 75	48.90	49.05	49 20	49.35	32
33	49.50	49 65	49.80	49.95	50.10	50.25	50.40	50.55	50 70	50.85	33
34	51 00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52 50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54 00	54 15	54.30	54 45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55 50	55 65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57 45	57.60	57 75	57.90	58.05	58.20	58 35	38
39	58 50	58.65	58 80	58 95	59.10	59 25	59.40	59 55	59.70	59.85	39
40	60 00	60 15	60 30	60 45	60 60	60.75	60 90	61.05	61 20	61.35	40
41	61.50	61 65	61 80	61 95	62 10	62 25	62.40	62 55	62 70	62.85	41
42	63 00	63.15	63 30	63 45	63 60	63 75	63 90	64 05	64 20	64.35	42
43	64.50	64 65	64 80	64.95	65.10	65 25	65 40	65.55	65.70	65.85	43
44	66 00	66 15	66 30	66.45	66.60	66 75	66.90	67.05	67.20	67.35	44
45	67 50	67 65	67 80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69 00	69 15	69 30	69.45	69.60	69.75	69.90	70.05	76.20	70.35	46
47	70 50	70 65	70 80	70 95	71.10	71.25	71 40	71.55	71.70	71.85	47
48	73.00	72 15	72.30	72.45	72.60	72.75	72.90	73 05	73.20	73 35	48
49	73 50	73 65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

Computed by L. Leland Locke.

58.96
Reed & Jewell.

27.48
532
32.78
990
22.88

27.7

2 9+ 0 9 20
2 5+ 2 0 70
3+80.90

1251
436
1717

3237
6 | 194.25
18
14
12
18
45

Cass
BMs cp TK & Hornblende 21.81
cp TK & Cass N 7° E Ind. and 16.65
cp TK N. W 7° E Ft. Thomas 1 Cass 12.01

Thomas 1 Bayard SEBP 5.88
Alley Return SE Westlot Bayard 3.59
Garnet Cass N.E. B.P. 28.54
Allison SEBP 14.08
Diamond & Events SEBP 6.05

Field Books

Taken

7-9-28

Tie-Pts - #380

Sew-Lov. #1144

1143

1134

1123

Returned.

139

Subdivision - Maps

Taken

7-9-28

Blk 53+66 - Poc. Beach

Add'n - Lots

57-60

P. 1A

F 14

C 40

D 5½

S 32e

F 13

Returned.

139