

DEERING

ENGINEERS'
LEVEL BOOK

No. 412 F

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 $30.6 + (20 - 16) \div 2$ or 2 ft. added to $30.6 = 32.6$. For slopes of 1 on $1\frac{1}{2}$ see inside of back cover.
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736 - UNDERGROUND PIPING,
ALVARADO FILTRATION PLANT, 1948-1949.

May 14, 1948
W.H. Golden Const Co.
Attention Mr. Anderson.

All grades set
for pipe lines will
indicate invert
elevations, unless
otherwise noted.

W.C. Brown
Res Engr

Copy to Larry Hall
" " Don Leonard

This Field Book is manufactured of a High
Grade 50% Rag Paper having a WATER
RESISTING SURFACE, and is sewed with
Bing Special Enamel Waterproof thread.

Made in U. S. A.

DISTANCES FROM CENTER OF ROADWAY

Roadway 16 feet wide.

For Single Track E

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

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 $30.6 + (20 - 16) \div 2$ or 2 ft. added to 30.6 = 32.6. For slopes of 1 on 1½ see inside of back cover.

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736 - UNDERGROUND PIPING,
ALVARADO FILTRATION PLANT, 1948-49.

CITY OF SAN DIEGO

RECD

MAY 17 1948

RESIDENT ENGINEER

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Made in U. S. A.

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CITY OF SAN DIEGO

REC'D
MAY 17 1951
RESIDENT ENGINEER

INDEXED con 1-30-51

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NOTE: SEE F.B. 794 FOR LAYOUTS OF STRUCTURES.

MAY 17, 1948. LEONARD, NIENOW
SHIPMAN. 2.

UNDERGROUND PIPING LYING IN ONE

OFFSET. HUB STA. H.S.	HUB ELEV.	8" SLOUGH LINE #116 ELEV.	8' OFFSETS CUT.
B.M. - MAX AT 0+00 AXES	538.04		
+ 0.34	538.38		
S/66.83			
E 0.00	-8.49	529.89	523.29 6.60
E 30.0	-8.58	529.80	
E 43.0	-8.51	529.87	523.50 6.37
E 49.0	-8.49	529.89	523.53 6.36
E 60.0	-8.52	529.86	523.59 6.27
E 100.0	-8.76	529.62	523.79 5.83
E 136.17	-8.99	529.39	523.97 5.42
E 150.0	-9.01	529.37	524.04 5.33
E 200.0	-9.35	529.03	524.29 4.74
E 218.5	-9.37	529.01	524.28 4.63
E 250.0	-9.23	529.15	
E 300.0	-8.97	529.41	
E 350.0	-8.40	529.98	
E 377.0	-8.42	529.96	
W 43.0	-8.30	530.08	523.07 7.01
W 110.0	-8.29	530.09	522.74 7.35
W 50.0	-8.30	530.08	523.04 7.04
CHECK B.M.	-0.34	538.04	

TRENCH E & W BETWEEN 174⁸³ & 180⁸³ S.

6" DRAIN LINE #110 ELEV. CUT	8" DRAIN LINE #117 ELEV. CUT	12" SALT DRAIN #115 ELEV. CUT
10' OFFSETS	12' OFFSETS	14' OFFSETS
518.50 11.39	518.50 11.39	518.50 11.39
521.39 8.49	522.07 7.80	524.09 5.71
521.80 8.09	522.58 7.31	524.29 5.60
	12' 10" OFFSETS 523.49 6.37	524.40 5.46
	10' OFFSETS 523.68 5.94	524.82 4.80
	523.86 5.53	525.20 4.19
	523.93 5.44	
	524.18 4.85	
	524.28 4.73	
	524.43 4.72	
	524.68 4.73	
	524.83 5.05	
	525.07 4.89	
90° BEND 521.39 8.69		

CK'd
5-17-48 con

COORDINATE POINT		8" SLUDGE LINE, #116, CONTO.	HUB ELEV.	CUT
+	GRADE	-		
5174.83				
W110.00	L 45°	522.74		
5191.0				
W148.83		522.50		
5107.17				
W177.66	L 45°	522.26		
5107.17				
W228.45		522.01		
5107.17				
W279.24		521.75		
5107.17				
W330.02		521.50		
555.94				
W330.02		521.24		
504.30				
W330.02		520.99		
N47.13				
W330.02		520.73		
N99.57				
W330.02		520.48		
N150.00	IN			
W330.02	M.H.	520.22		
"	OUT			
N172.85		517.12		
W330.02		516.91		
N235.70				
W330.02	L 20°35'	516.69		
N379.80				
W313.55	END	516.46		

Not used.
 See page 23. Pt.

COORDINATE POINT		6" DRAIN LINE #120, CONTO.	HUB ELEV.	CUT
+	GRADE	-		
5176.83				
W43.0		521.39		
5125.50				
W43.0		521.64		
510.42				
W267.75		527.16		
542.96				
W267.75		527.95		
575.50				
W267.75		528.55		
N79.50				
W267.00	M.H.	529.65		
N79.50				
W295.00		529.94		
N79.50				
W328.02		526.22		

Not used.

17" SALT DRAIN, #115, CONTD. 5-21-48
 LEONARD
 NIENOV
 SHIPMAN

COORDINATE POINT	+	GRADE	-	HUB ELEV.	CUT MON. AT
B.M.	+4.19	542.23		538.04	0+00 AXIS

E136.17					CUT
9180.83		525.20	-12.84	529.39	4.19
5142.23		525.29	-11.60	530.63	5.34
9121.83		528.53	-10.51	531.72	3.19
572.00		528.66	-8.27	533.96	5.30
622.00		528.78	-5.60	536.63	7.85
N28.00		528.91	-3.68	538.55	9.64
N78.00		529.03	-4.75	537.48	8.45
N128.00		529.15	-0.22	542.01	12.86
N146.47		529.20	NOT SET		

CHECK
 B.M. -4.19 538.04

NOTE: HUBS SET 10' OFF TO WEST.

CKD 5-21-48

CHECK	FORMS	IN SALT STORAGE	BASIN, EAST HALF		
	+	GRADE	-	ELEV.	ERROR.
R.M.	2.51	545.95		543.44	SPIKE IN P. POLE
T.B.M.			-11.52	534.43	IN Pt. STEEL ROD
	+4.63	n.d. 539.06			
SE COR.		532.00	7.06	32.00	O.K.
CENTER		32.00	7.07	31.99	-.01
N.E. COR.		32.00	-7.06	32.00	O.K.
SW COR.		32.00	7.06	32.00	O.K.
CENTER		32.00	7.05	32.01	+0.01
N.W. COR.		32.00			
S. END		31.50	-7.56	31.50	O.K.
CENTER		31.50	-7.55	31.51	+0.01
N. END		31.50	-7.56	31.50	O.K.
S. END		31.50	-7.56	31.50	O.K.
CENTER		31.50	-7.55	31.51	+0.01
N. END		31.50	-7.55	31.51	+0.01
S. END		30.92	-8.15	30.91	-.01
CENTER		30.92	-8.13	30.93	+0.01
N. END		30.92	-8.14	30.92	O.K.

5-18-48

LEONARD
NIENOW
SHIPMAN

5.

Top of floor at east edge of basin

" " " " "

" " " " "

Top of floor at west edge of basin.

" " " " "

" " " " "

Top of gutter, east side.

" " " " "

" " " " "

Top of gutter, west side.

" " " " "

" " " " "

Bottom of gutter

" " " "

" " " "

CHECK FORMS IN SALT STORAGE BASIN - cont'd

	+	GRADE	-	ELEV.	ERROR
		H. d. 589.06			
S. END		531.33	-1.74	31.32	-0.1
CENTER		31.33	-7.71	31.35	+0.02
N. END		31.33	-7.73	31.33	O.K.
S. END		31.33	-7.75	31.33	O.K.
CENTER		31.33	-7.75	31.33	O.K.
N. END		31.33	-7.75	31.33	O.K.

S.W. Cor.		30.05	-9.09	29.97	-0.11
S.E. Cor.		30.08	-9.10	29.96	-0.12

S.W. Cor.		30.08	-8.97	30.09	+0.01
S.E. Cor.		30.08	-8.98	30.08	O.K.

CHECK
T.B.M. -4.65 584.48
 C.K. d 5-21-48 con

ooting for tile over gutter, west side
" " " " " "
" " " " " "
" " " " " " west side
" " " " " "
" " " " " "

Overflow weir } To be corrected.
" " }

" " } after being raised,
" " }

CHECK FORMS IN SALT STORAGE BASIN - WEST HALF.

	+	x	-	Elevation	Corr. E) ad. Conc. Mon, 0+00 Axis
B.M.	7.11	545.15		538.04	
T.P.			12.36	532.79	
	4.10	536.89			
S.E. cor.			4.89	532.00	=532.00
Center			4.88	532.01	=532.00
N.E. cor.			4.89	532.00	=532.00
S.W. cor.			4.89	532.00	=532.00
Center			4.88	532.01	=532.00
N.W. cor.			4.89	532.00	=532.00
S. end			5.38	531.51	=531.50
Center			5.37	531.52	=531.50
N. end			5.38	531.51	=531.50
S. end			5.38	531.51	=531.50
Center			5.38	531.51	=531.50
N. end			5.38	531.51	=531.50
S. end			5.96	530.93	=530.92
Center			5.96	530.93	=530.92
N. end			5.96	530.93	=530.92

6-30-48

Leonard
Niemo
Shipman

71

Remarks

Top of floor at east edge of basin.

(do)

(do)

Top of floor at west edge of basin.

(do)

(do)

Top of gutter, east side.

(do)

(do)

Top of gutter, west side.

(do)

(do)

Bottom of gutter.

(do)

(do)

CHECK FORMS IN SALT STORAGE BASIN - WEST HALF, CONT'D.

	+	x	-	Elevation	Conn. Elev.
		536.89			
S. end		5.55	531.34	=	531.33
Center		5.54	531.35	=	531.33
N. end		5.55	531.34	=	531.33
S. end		5.55	531.34	=	531.33
Center		5.55	531.34	=	531.33
N. end		5.55	531.34	=	531.33
S.W. cor.		6.82	530.07	=	530.08
S.E. cor.		6.82	530.07	=	530.08
T.P.		3.16	533.73		
	10.13	543.86			
check B.M.		5.82	538.04	=	538.04

Remarks

Footings for tile over gutter, east side.

(do)

(do)

Footings for tile over gutter, west side.

(do)

(do)

Over flow weir

(do)

STA.	SEWAGE DISPOSAL - TILE FIELD	INVERT GRADE	HUR ELEV.	CUT
R.M.	+12.07	526.10	514.03	CONC. MON S. AXIS
	+5.59	528.70	523.11	ON HUR
E 15.00	SEPTIC TANK	525.25	527.83	2.58
S 216.83		522.76	525.44	2.68
S 265		520.23	523.11	2.88
S 314	BOX	517.70	520.89	3.19
S 363	IN	517.50	520.80	3.30
S 365	OUT	516.00		
S 384		514.50	517.43	2.93
S 364.00		517.50	520.85	3.35
E 26		517.40	520.36	2.96
E 56		517.30	520.22	2.92
E 87		517.20	519.79	2.59
E 149		517.10	519.87	2.77
E 175		517.07	520.32	3.25
S 384		516.95	518.82	1.87
E 175		516.85	519.85	3.10

STA.	INVERT GRADE	HUR ELEV.	CUT
	420-48	LEONARD SHIPMAN	9.
	528.70		
S 384			
E 113	516.75	519.96	3.11
E 82	516.65	520.24	3.59
E 51	516.55	520.32	3.77
E 35	END	520.36	3.86
S 404			
E 25	514.50	517.43	2.93
E 56	514.40	517.23	2.83
E 87	514.30	517.01	2.71
E 119	514.20	517.01	2.81
E 149	514.10	517.13	3.03
E 175	514.02	517.74	3.72
S 404			
E 175	513.25	516.37	2.42
E 144	513.85	517.18	3.33
E 113	513.75	517.00	3.25
E 82	513.65	517.03	3.38
E 51	513.55	517.20	3.65
E 35	END	517.26	3.76

CKD con 6-10-48

SEPTIC TANK ELEV'S.		5-20-48 LEONARD SHIPMAN DAVEY			
Sta.	+	GRADE H. d.	-	Elev. HUR	CUT
		522.70			
E 25.00	BOTTOM				
S 201.50	OF BOX	524.25	-0.25	528.95	4.20
S 203.50	TOP OF FLOOR	521.00	-0.33	529.37	7.37
S 216.83	OUTSIDE BOX	521.00	-0.92	527.78	6.78
S 216.83	BOX	524.75	-0.99	527.71	2.96
S 203.00	BOTTOM OF TANK	520.17	-0.33	528.37	8.20
S 216.83	"	520.17	-0.92	527.78	7.61
S 216.83	CENTER OF 4" DRAIN	519.00			

T.P.			-11.27	517.43	
	+4.90	522.33			
CHECK R.M.			-8.28	514.05 = 514.03	

SEE F.D. 734, PAGE 23 FOR LAYOUT.
CK'd 6-10-48 Com

SEE PAGE 22 FOR CHECK LEVELS ON SEPTIC TANK

18" DRAIN LINE, #113.		5-20-48 LEONARD SHIPMAN DAVEY		10.	
Sta.	+	INVERT GRADE H. d.	-	HUR ELEV.	CUT
R.M.	+3.03	546.47		543.44	SPINE IN P.P.O.
N 76.83		531.65 ⁵⁸	-6.48	539.99	7.34
E 223.00		531.48	-4.47	542.00	10.52
N 110.83		531.17	-4.65	541.82	10.65
E 243.00		531.07	-4.62	541.85	10.78
N 110.83		531.24	-4.90	541.57	10.33
E 243.00		531.48	-5.34	541.13	9.67
N 110.83		531.66	-5.92	540.55	8.37
E 144.00			-3.03	543.44	
N 77.83			+4.05	547.49	
E 144.00		530.82	-4.86	542.63	11.81
N 210.		530.57	-2.27	545.22	14.65
N 260		530.32	-5.05	542.44	12.12
N 285		530.20	-11.99	535.50	5.30
N 310		530.07			
N 322.83	END.	530.00			
	CK'd	5-21-48	Com		
CHECK R.M.			-4.05	543.44	

5-26-48.
LEONARD
NIENOW
SHIPMAN

CHECK FORMS IN EFFLUENT CONDUIT:

	+	GRADE	-	ELEV.	ERROR MON. AT
B.M.	2.21	540.25		538.04	2 AXIS
T.P.			-12.83	527.42	
	+0.51	^{H.S.} 527.93			
W181.67	2	523.08	-4.89	528.04	-.04
"	12' N	23.08	-4.87	23.06	-.02
"	12' S	23.08	-4.90	23.05	-.05
W199	12 N	22.99	-4.96	22.97	-.02
"	12 S	22.99	-4.96	22.97	-.02
W216	12 N	22.91	-5.07	22.86	-.05
"	12 S	22.91	-5.01	22.92	+0.01
W239	12 N	22.83	-5.15	22.78	-.05
"	12 S	22.83	-5.11	22.82	-.01
W250	5 S	22.75	-5.23	22.70	-.05
	5 N	22.75	-5.25	22.68	-.07
"	12 N	22.75	-5.23	22.70	-.05
"	12 S	22.75	-5.22	22.71	-.04
W260	4 S	24.00	-3.98	23.95	-.05
"	4 N	24.00	-3.97	23.96	-.04
T.P.	+13.05	540.29	-0.69	527.24	
CHECK B.M.			-2.25	538.04	

CK'd Con 5-26-48

6-2-48; LEONARD
NIENOW
SHIPMAN

SALT STORAGE BASIN - EAST HALF - CHECK FORMS.

B.M.	+3.94	547.38	543.44	IN POLE 76572 Mon. 0+00 LAVERT AXIS.
CHECK B.M.		-9.94	538.04	
TOP FORMS N.E. COR		-1.37	546.01 = 546.00	
N.W. COR.		-1.37	546.01 = 546.00	
S.E. COR.		-1.38	546.00 = 546.00	
S.W. COR.		-1.38	546.00 = 546.00	
E. END		-1.36	546.02 = 546.00	
W. END		-1.37	546.01 = 546.00	
CHECK B.M.		-3.94	543.44	
	CK'd com 6-10-48		6-3-48.	

CHECK OVER-FLOW WIER:

B.M.	3.66	547.10	543.44	
CENTER		-5.50	541.60	
3'8" EAST OF CENTER		-4.84	47.26	
10' " " "		-4.81	47.29	
20' " " "		-4.73	47.37	
30' " " "		-4.66	47.44	
41' " " "		-4.59	47.51	
CHECK B.M.		-3.66	543.44	

SALT STORAGE BASIN - EAST HALF

B.M.	+2.05	546.49	543.44	SPIKE IN POLE
DRAIN SOUTH SIDE		-14.80	530.69	02 HI
DRAIN WEST SIDE		74.81	530.68	01 HI

NOTE: INVERT ELEV of bell 0.41

below \pm of PIPE, therefore

Grade Elev = 530.67 E.O.W.

see sec 14 - 14 sheet 175 of Plans

CHECK TOP OF FORMS: 6-22-48

B.M.	+2.90	547.94	538.04	H.d. G. ROD
TOP TANK		546.67	-1.27	
TOP RAIL 2		546.00	-1.94	
ANGLE CORNER TOP FORM FOR RAIL BASE.		545.42	-2.52	
BOTTOM OF ARCHES		543.00	-4.94	

* TOP OF
1" PLATE. 545.59

* NOTE: RAIL IS $5\frac{1}{8}$ " HIGH.

6-8-48

LEONARD
NICHOL
SHIPMAN

PROFILE OVER 18" DRAIN LINE #113.

SPIKE IN
POLE.TOP OF
SLOPE

ROCK

B.M.	+2.75	546.19	543.44	
E2270				
N250		-2.1	544.1	
N258		-2.0	544.2	
N270		-6.3	539.9	
N285		10.8	535.4	
SET T.P.		-12.32	533.87	ROCK
	+3.68	537.55		
N300		-6.8	530.8	
SURFACE WATER		-7.46	530.09	11 th B.M.
	READINGS	BELOW	WATER SURFACE	
N310	530.1	-3.4	526.7	
N315		-5.0	525.1	
N323		-7.8	522.3	
N330		-9.9	520.2	
N335		-11.2	518.9	
N340		-12.6	517.5	
N343		-13.0	517.1	

CKD & PLOTTED
CON 6-8-48

6-7-48

LEONARD
NICHOL
SHIPMAN

13

GROUND

PROFILE OVER 54" RY-RESS LINE #104.

	+4.59	548.09	543.44	
E2275				
N149 ⁰⁸	ZERO POINT		-4.3	543.7
0+59			-4.4	543.6
0+61			-11.5	536.5
1+00			-11.9	536.1
T.P.			-11.66	536.57
	+3.72	540.09		
1+25			-4.9	535.2
1+50			-5.2	534.9
1+60			-7.0	533.1
1+75			-9.5	530.6
1+85	N309.29 = E2282.50		11.3	528.8
WATER SURFACE			-10.45	529.64
			BELOW WATER SURFACE	11.00 A.M.
1+95	529.6		-2.8	526.8
2+05			-4.8	524.8
2+15			-6.4	523.2
CHECK T.P.			-6.29	523.86 = 523.87

NOTE: BOTTOM OF DITCH BEYOND 1+60 IS POKED
WITH HOLES CAUSED BY WATER ACTION. SOME
ARE 1' TO 1.5' DEEP.
CKD & PLOTTED
CON 6-8-48

PROFILE OVER PART OF 48" WASTE #108 WASH WATER LINE:		6-4-48	LEONARD NIENOW SHIPMAN
B.M.	+6.96	H.d. ✓ 543.35	536.39 ON DAM.
N 322.56 W 95.24	ZERO POINT	PIPE INV. 536.26 -11.9	531.4
20'S		-9.6	533.7
40'S		-8.2	535.1 TOE OF FILL
70'S		-0.5	542.8 TOP OF FILL
10N		-13.1	530.2
T.P.		-12.34	531.01 HUB
	+4.17	535.18	
20N		-6.7	529.5
30N		-8.0	527.2
WATER SURFACE		-5.10	530.08 TAKEN AT H.A.M. see P-13
CHECK T.P. SET ON PLS.		-1.31	533.87 ROCK

21" WASTE BRINE LINE		6-7-48	LEONARD NIENOW SHIPMAN	14
	+ GRADE	H.d. ✓	HUB ELEV.	CUT
B.M.	0.40	538.44	538.04	0+00 CONC. MARK.
E 0+00				
5125.50		513.77	-6.68	531.76 17.99 ✓
5151.00		513.64	-8.01	530.43 16.79 ✓
5176.50	M.H. IN	513.51	-11.44	527.00 13.49 ✓
5181.50	M.H. OUT	513.49	-11.11	527.33 13.84 ✓
5199.50		513.40	-9.94	528.50 15.10 ✓
5219.50		513.30	-10.66	527.78 14.48 ✓
5239.50		513.20	-11.82	526.62 13.42 ✓
5259.50		513.10	-12.65	525.79 12.69 ✓
T.P.			-12.65	525.79 ON HUB
	+0.40	526.19		
5279.50		513.00	-1.56	524.63 11.63 ✓
5299.50		512.90	-2.51	523.68 10.78 ✓
5319.50		512.80	-3.41	522.78 9.98 ✓
5339.50		512.70	-4.26	521.93 9.23 ✓
5359.50		512.60	-5.30	520.89 8.29 ✓
5379.50		512.50	-6.43	519.76 7.26 ✓

21" WASTE DRINE LINE - CONTD.

	+	INV. GRADE H.d. ✓ 526.19	-	HUR.ELEV.	CUT
5397.50	GRADE BREAK	512.41	-7.65	518.54	6.19 ✓
5413.50		512.23	-8.97	517.27	5.04 ✓
5429.50	REDUCER BOX-IN.	512.05	-10.28	515.91	3.86 ✓
5432.50	OUT.	511.97	-10.46	516.73	3.76 ✓
CHECK R.M.			-12.16	514.03	514.03 ✓ RECORD
CK'd 6-10-98 con					
#112 6-11-98 LEONARD NIENOW SHIPMAN 4+505 CONC. MON.					
16" WASTE DRINE LINE: 8' OFFSETS.					
R.M.	+0.29	514.40		514.03	
5472.50		511.97	PREVIOUSLY SET.		3.76
5450		510.00	-0.1	514.3	4.3
5475		507.60	-2.7	511.7	4.1
5600		504.90	-5.2	509.2	4.3
5525		500.90	-9.2	505.2	4.3
T.P.			-12.98	501.47	
	+0.79	502.26			
5550		496.40	-1.3	501.0	4.6
5567.4		492.9	-5.4	496.9	4.0
5575.3		491.7	-8.1	494.2	2.5
5587.2		490.3	-8.9	495.4	3.1

	+	INV. GRADE H.d. 502.26	-	HUR.ELEV.	CUT
5600		485.8	-12.6	489.7	3.9
T.P.			-12.55	489.71	6005 ON HUR.
	+0.85	490.56			
5621.9		480.0	-6.3	484.3	4.3
T.P.			-11.65	478.91	
	+5.25	484.16			
5652.6	END.	470.3	-9.9	474.3	4.0
T.P.			-0.47	483.69	
	+11.94	495.63			
SET R.M.			-2.95	492.68	ON LEAD IN CONC. MON S. BANK S. MUMFORD BLVD.
	+9.35	502.03			
T.P.			-0.62	501.41	
	+13.06	514.47			
CHECK R.M.			-0.44	514.03	CONC. MON 4+505
SEE PAGE 42 FOR PROFILE OVER LINE AS LAID.					

6-11-48.

18" DRAIN LINE, CHECK LEVELS, CONTD. # 118.

B.M.	+0.32	543.76	543.44
N155		-12.88	530.98 = 530.95
N160		-12.96	530.80 = 530.87
N185		-13.03	530.73 = 530.70
N210		-13.16	530.60 = 530.57
N235		-13.29	530.47 = 530.45
N260		-13.43	530.33 = 530.32
N285		-13.59	530.17 = 530.20
N289	END OF PIPE	1 SECT. BOWS.	-13.58 530.18 530.18
CHECK B.M.		-0.32	543.44

Note: see page 22 after
for levels taken
trench flooding
6-25-48
Nieman

6-9-48

LEONARD
NIEMAN
SHIPMAN

16

INVERT ELEV'S
CHECK LEVELS ON 18" DRAIN LINE. #118

B.M.	+0.08	543.52	543.44	P. POLE	76572.
N76.95		-11.95	531.57		.01 LOW
E222.00		-11.52	532.00		
N78.85	6" SIDE	12.09	531.48		O.K.
E194.4 ±	INLET.	-12.11	531.41		.06 LOW
N110.85		-12.35	531.17		O.K.
E225	BEND	-12.43	531.09		.02 HIGH
E245	"TEE"	-12.43	531.09		.02 HIGH
E227	E. SIDE	-12.50	531.02		.05 LOW
"	W. SIDE	-12.30	531.22		.02 LOW
"	N. SIDE	-12.08	531.44		.04 LOW
E193		-12.08	531.44		.04 LOW
N110.83		-11.90	531.62		.04 LOW
E144	BEND	-12.70	530.87		O.K.
N74.33					
E144	END				
E227					
N160					

See page 10 for grades
as staked con.

CKD 6-10-48 con

NOTE: INVERT elev's deduced by
taking shots on top of pipe and
subtracting 1.68. con

8-13-48

LEONARD
WAKER
SHIPMAN

RESET BLUE-TOPS FOR MAN-HOLE TOPS.

COORDINATE:	NAME OF LINE:	NO. OF LINE	ELEV. OF BLUE TOP	SET HUB
R.M. +4.61		542.65	538.04	CONC. MON. ON+0 AXIS
SET T.B.M. +4.11	H.d.	534.72	530.61	SET HUB
5176.83				
E 972.0	8" DRAIN #117.	-3.92	530.8	
5176.83	"			
E 236.0	"	-5.22	529.5	
5174.83				
E 218.50	8" SLUDGE #116.	-5.12	529.6	
5176.83				
E 406.0	8" DRAIN #117.	-5.22	529.5	
5180.83				
E 136.17	12" SALT OVERFLOW #115.	-4.92	529.8	
5178.83				
E 60.0	8" DRAIN #117	-4.22	530.5	
5178.83				
O+0	21" SALT DRINE LINE.	-4.22	530.5	
5174.83		(-4.22)	(530.5)	
W 110.0	8" SLUDGE #116		538.16	FILL 7.66
5107.17		(-1.72)	(538.0)	
W 177.66	"		536.57	FILL 8.57
T.P. +5.36	H.d. ✓	538.36	533.0	ON HUB
5107.17				
W 302.47	8" SLUDGE #116	-3.86	534.5	
575.5				
W 267.75	6" DRAIN #120 B.	-3.56	534.8	
510.48				
W 267.75	"	-1.36	537.0	
T.P. +6.92		540.25	533.38	ON PIPE
	CONC. MON			
CHECK R.M. 3+75 W.		-4.16	536.09 = 536.00	Rec'd

CKD 8-13-48

6-11-48.

LEONARD
NIENOW,
SHIPMAN.

17

REPROFILE OVER A PART OF 16" SALT DRINE LINE

COORDINATE:	NAME OF LINE:	NO. OF LINE	ELEV. OF BLUE TOP	SET HUB
R.M. +0.27		514.40	514.03	ON MON.
O+0 AXIS				
54+75			-3.0	511.4
5+00			-5.7	508.7
5+25			-9.6	504.8
T.P.			-12.93	501.47
		+0.79	502.26	
5+50			-2.0	500.3
5+70			-6.2	496.1
5+80			-10.0	492.3
5+87			-10.0	492.3
T.P.			-12.55	489.71
		+0.85	490.56	
6+00			-1.4	489.2
6+25			-7.8	482.8
T.P.			-11.65	478.91
		+5.25	484.16	
6+50			-9.5	474.7
6+60			-13.0	471.2
6+75			-15.9	468.3
SEE PAGE 15 FOR CHECK LEVELS.				CKD & PLOTTED CON 6-11-48

7-12-48 LEONARD
SHIPMAN

SET REVE TOPS FOR M.H.'s ON 8" DRAIN LINE #117

8" Sanitary Sewer line M.H. Tops #118.

Coordinates	elev.
S 109.17 W 305.	534.51
S 109.17 W 172.83	536.66
S 181.83 W 100.17	538.14

8" Sludge line:

S 107.17 W 302.47	534.57
S 107.17 W 177.66	536.57
S 174.83 W 110.00	538.16

8" San. Sewer line Cont'd.

N 165.00 W 85.00	546.00
N 165.00 W 35.00	539.50

6-11-48 LEONARD
NIENOW
SHIPMAN

18

CHECK MANHOLE BASES ON 8" DRAIN LINE #117

R.M.	2.25	540.29	538.04	6+00	Reve. Mark.
T.P.			-10.67	529.67	HUG Reve Top
	+4.59	534.21			
5176.33					
E 377			-9.25	524.96 = 524.99	
E 221			-9.96	524.25 = 524.26	
E 218.50	8" Sludge Line #116		-10.17	524.04 = 524.05	
E 206			-10.10	524.11 = 524.14	
E 136.17	12" SALT DRAIN #115		-9.20	525.01 = 525.03	
T.P.			-4.60	529.61	
	+8.24	537.85			
T.P.			-3.50	534.35	
	+6.51	540.86			
CHECK					
R.M.			-2.84	538.02 = 538.04	
RECHECK M.H. BASES					JUNE 14, 1948:
T.P.	+ 4.28	538.90		529.67	Reve Top HUG.
5176.33					
E 387	8" Drain line #117		-8.92	524.98	
E 218.5	8" Sludge line #116		-9.86	524.04	
E 206	8" Drain line #117		-9.77	524.13	
E 136.17	12" SALT DRAIN #115		-8.87	525.03	

6-22-48 LEONARD NIENOW SHIPMAN

PROFILE OVER CONCRETE BACK-FILL OVER 12"

SALT DRAIN LINE #115			
B.M.	+0.88	H.d. 538.92	MON. 0+00 AXIS.
N136.7	START	-8.29	530.63
N98.7		-8.91	530.51
N70.3	START 5' WIRE BREAK	-8.48	30.44
"		-5.42	39.50
582	START OF BREAK.	-5.44	39.48
585		-5.58	39.34
590		-5.74	39.18
S100		5.97	32.95
S110		6.57	32.35
S120		7.33	31.59
S130		7.83	31.09
S142.8	BREAK	8.54	30.38
"		12.28	26.64
S157.1	BREAK	12.44	26.48
"		12.14	26.78
S173.8	END	12.25	26.67
CHECK B.M.		-0.88	538.04

6-11-48 LEONARD NIENOW SHIPMAN

19

CHECK ELEV. ON 12" SALT DRAIN LINE #115.

R.M.		+2.84		540.88		538.04		MON.	
T.P.				-6.51		534.37			
		+3.50		537.87		FLOW LINE		ACTUAL CORRECT	
N139		-8.75	529.12	=	529.18				
N128		-8.75	529.12	=	529.15				
N78		-8.87	529.00	=	529.03				
N28		-9.00	528.87	=	528.91				
S11		-9.07	528.80	=	528.78				
S72		-9.21	528.66	=	528.66				
T.P.		-4.16	533.71						
		+5.92	539.69						
CHECK B.M.		-1.57	538.04						0+00 MON.
		+0.45	538.49						JUNE 15, 1948
S121.83	VERTICAL CURVE CRITICAL POINT ENTER	-12.21	526.28	=	528.53				
S142.83	POINT ENTER	-13.23	525.26	=	525.29				
S180.83	M.H. START OF	-13.31	525.18	=	525.20				
S72	VERT. CURVE.	-9.89	528.60	=	528.66				
CHECK B.M.		-0.45	538.04	=	538.04				

NOTE: ELEV. ADJUSTED BY SUBTRACTING 1.17' FROM ROD READINGS ON TOP OF PIPE.

		H.d.		
W250		529.79		
12N		522.25	-7.57	522.22
4N		522.25	-7.56	522.23
4S		522.25	-7.56	522.25
12S		522.25	-7.56	522.23
W260	BOTTOM FORM	520.00	-9.81	519.95
W250	"		-7.59	522.20
W250	TOP FORM		-7.56	522.23
W260	"		-7.81	526.98

Forms reworked to correct low points. Rechecked after being reworked. See next page for checks.

L. Bernard.

		6-16-48	LEONARD NIENOW SHIPMAN	20
CHECK FLOOR ELEV. ON FORMS FOR EFFLUENT CONDUIT EXTENSION.				
B.M.	+2.21	540.25		538.04
T.P.	+2.00	529.79	12.46	527.79
W181.7				
12N		522.58	-7.23	522.56
4N		522.58	-7.23	522.56
4S		522.58	-7.23	522.56
12S		522.58	-7.22	522.57
W199				
12N		522.49	-7.32	522.47
4N		522.49	-7.37	522.48
4S		522.49	-7.39	522.40
12S		522.49	-7.30	522.49
W216				
12N		522.41	-7.41	522.38
4N		522.41	-7.43	522.36
4S		522.41	-7.43	522.36
12S		522.41	-7.38	522.41
W239				
12N		522.33	-7.46	522.33
4N		522.33	-7.52	522.29
4S		522.33	-7.50	522.29
12S		522.33	-7.46	522.33

CONT'D ON OPPOSITE PAGE.

	H.d.			
W250	529.79			
12N	522.25	-7.55	22.24	-0.1
4N	22.25	-7.54	22.25	O.K.
4S	22.25	-7.54	22.25	O.K.
12S	22.25	-7.54	22.25	O.K.
T.P.		-2.09	527.76	
	+12.47	540.23		
CHECK B.M.		-2.19	538.04 = 538.04	

7-15-48 LEONARD SHIPMAN

BLANK FLANGES ON TOPS OF WALL FITTINGS
IN PLANT EFFLUENT CONDUIT EXT. STRUCTURE.

B.M. +3.98 542.02 538.04 MON. 0+00 L.O. AXIS

T.P. +2.38 533.28 -11.12 530.90

W198.75, N8.0
TOP OF BLANK FLANGE -4.94 528.94

TOP OF HIGHEST BOLT -4.78 528.50

W231.92, N8.0
TOP OF BLANK FLANGE -5.08 528.20

TOP OF HIGHEST BOLT -4.90 528.98

FLOOR GRADE 6-16-48. LEONARD SHIPMAN 21

RECHECK FORM ELEV. ON CONDUIT EXTENSION.

	H.d.			
W181.7	529.79			
N12	522.58	-7.22	22.57	-0.1
N4	22.58	-7.21	22.58	O.K.
S4	22.58	-7.21	22.58	O.K.
S12	22.58	7.22	22.57	-0.1
W199				
N12	22.49	-7.31	22.48	-0.1
N4	22.49	-7.29	22.50	+0.1
S4	22.49	-7.30	22.49	O.K.
S12	22.49	-7.29	22.50	+0.1
W216				
N12	22.41	-7.39	22.40	-0.1
N4	22.41	-7.38	22.41	O.K.
S4	22.41	-7.38	22.41	O.K.
S12	22.41	-7.38	22.41	O.K.
W239				
N12	22.33	-7.45	22.34	+0.1
N4	22.33	-7.47	22.32	-0.1
S4	22.33	-7.47	22.32	-0.1
S12	22.33	-7.46	22.33	O.K.

CHECK ON OPPOSITE PAGE.

6-25-48

Mellow
Shipman

18" Drain Line⁴¹¹⁸ - Check levels
after trench flooding

taken

	+	+	-	Elevation
B.M.	8.91	546.95		538.04
T.P.	1.75	543.14	5.56	541.39
N 135				
N 160	covered with concrete			
N 185				Elev. TOP of PIPE
N 202.50		10.83	532.31 =	532.31
N 210		10.86	532.28 =	532.28
N 235		10.99	532.15 =	532.15
N 260		11.13	532.01 =	532.01
N 285		11.31	531.83 =	531.85
N 289	End of pipe	11.28	531.86 =	531.86
T.P.	5.37	546.68	1.83	541.31
ck. B.M.		8.65	538.03 =	538.04

Note: Add inside diameter to thickness of
of wall (1.50 + .18 = 1.68) to ⁶⁻¹¹⁻⁴⁸~~6-18-48~~
elevations for column # 6.
see page 16

22

CHECK ELEV. ON SEPTIC TANK FLOOR

				Mon. S-AXIS
R.M.	+12.87	526.40	514.05	
T.P.			-2.72	523.68 ON HUB
	+5.94	529.60		
SW COR			-8.60	521.00 = 521.00
SE COR			-8.59	521.01 = 521.00
NE COR			-8.59	521.01 = 521.00
NW COR			-8.60	521.00 = 521.00
Check ELEV. on Septic Tank Top 7-21-48				
B.M.	12.90	533.41	520.51	ON TOP 3'x3' CON BOX
SE COR		527.53	5.88	527.53
NE COR		27.52	5.89	27.52
NW			5.89	27.52
SW			5.89	27.52
INLET BOX			5.23	28.18
N END				
INLET BOX			8.63	24.78
BOTTOM				
INLET PIPE			7.40	26.01
OUTLET PIPE			8.14	25.27
ON BENCH			12.90	526.59 ON 3'x3' CON BOX

8-13-48

LEONARD
BAYER
SHIPMAN

4" TILE DRAIN FROM SEPTIC TANK SUB-SOIL TO

		H.d.	ELEV. ON TOP OF TILE.	ON H.O.D. INV. ELEV.
T.R.M.	+2.85	583.46	530.61	SEC PAGE 17.
S 205.8				
E 20.8			-13.97	519.49 = 519.11
S 205.8				
E 12.5			-14.44	519.02 = 518.64
S 205.8				
E 4.2			-14.89	518.57 = 518.19

NOTE: THE LINE RUNS DOWN AT A STEADY SLOPE AND DROPS VERTICALLY INTO THE TOP OF THE 21" WASTE DRINE DRAIN LINE. TRENCH WAS BACKFILLED OVER 21" LINE AT TIME ABOVE READINGS WERE TAKEN, MAKING IT IMPRACTICAL TO SECURE AN ELEV. ON THE TOP OF THE VERTICAL RISER.

MAN-HOLE ELEV.	H.d.	CONTO FROM PAGE 24.	FILL	
N 21.25	529.00		1.35	
W 228.02 12" DRAIN	528.50	-5.38	527.65	
N 235.70	529.00			
W 230.02 8" SLUDGE	528.50	-6.07	526.96 2.04 REMOVE	
N 280.97				
W 309.92 12" DRAIN	527.00	-4.35	528.68 1.68 CONC. MIN. ON REG. REG. AXIS.	
T.P.	+8.47	537.69	-3.81	529.22
CHECK B.M. ON DAM			-1.25	536.44 .05 OFF

8" SLUDGE LINE #116, CONTO.

LEONARD
NIENOV
SHIPMAN23
JUNE 28, '48

		GRADE		HUB ELEV.	CUT
B.M.	+3.30	539.38		536.08	2 MON W. AXIS
S 141					
W 142.85		522.50			
S 107.17					
W 177.66	L	522.26	-6.15	533.23	10.97
S 107.17					
W 400.		522.15	-5.04	534.34	12.19
S 107.17					
W 225		522.02	-4.40	534.98	12.96
S 107.17 *					
W 250		521.90	-4.98	534.40	12.50
S 107.17					
W 275		521.77	-5.14	534.24	12.47
S 107.17					
W 302.46	L	521.64	-6.72	532.66	11.02
N 123		521.50	-5.45	533.93	12.43
N 148		521.34	-4.95	534.43	13.09
N 173		521.19	-4.07	535.31	14.14
S 16.58					
W 330.02	L	521.05	-3.50	535.88	14.83
B.M.	+4.57	540.65		536.08	C.L. MON W. AXIS
O+00					
W 330.02		520.97	-4.47	536.18	15.21
N 25.0					
W 330.02		520.84	3.86	536.79	15.95
N 50.0					
W 330.02		520.72	-3.23	537.42	16.70
N 75.0					
W 330.02		520.59	-3.57	537.08	16.49

* VALVE FOR 6" DRAIN FROM 48" WASTE WASH WATER LINE INTO SLUDGE LINE AT S 105.58, W 234.88 ELEV. 535.3±

Nov. 8, 1948

LEONARD
SHIPMAN
WEST.

ELEVATIONS FOR MAN-HOLE TOPS

Cone. Mon.

0+100 AXIS,

FILL

7.06

5.34

4.99

1.06

2.21

2.76

ON M.H. RIM.

2.86

4.98

3.11

6.73

2.27

4.39

ON M.H. RIM.

2.86

4.98

3.11

6.73

2.27

4.39

ON M.H. RIM.

2.86

4.98

3.11

6.73

2.27

4.39

ON M.H. RIM.

2.86

4.98

3.11

6.73

2.27

4.39

8" SLUDGE LINE, CONT'D.

7.7.48

LEONARD
NIENOW
SHIPMAN

24

CUT

B.M.	+0.80	H.d.	537.19	536.39	ON OAM
N100					
W330.02		520.47	-1.16	536.03	15.56
N175.					
W330.02		520.34	-2.09	535.10	14.76
N150	M.H.				
W330.02	IN	520.27	-3.79	533.40	13.18
N150	M.H.				
W330.02	OUT	517.12	-3.79	533.40	16.28
N175					
W330.02		517.00	-16.89	520.30	3.30
N100					
W330.02		516.87	-15.60	521.59	4.72
N175					
W330.02		516.75	-5.12	532.07	15.37
N175.7	L 20°35' R.				
W330.02	M.H.	516.69	-5.40	531.79	15.10
N259.0	(24.88)				
		516.57	-7.98	529.81	12.64
N279.8	(47.11)				
W330.55	END	516.46	-9.37	527.87	11.36

~~BLUE TAPS FOR MAN HOLES ON 8" SLUDGE LINES~~

B.M.	+13.00	533.51	530.51	636.50
8174.83				
E218.50	VOID.	-4.41	529.1	
8174.83				
W110.5		-3.01	530.5	

8-15-48

See page 17 for revised M.H. Elev. Record

CONT'D ON LEFT SIDE PAGE 23, LOWER HALF.

NOTE: POINTS SET ON RIMS OF MAN HOLES ALREADY PLACED WITH THE AMOUNT OF FILL KEELER ON EACH M.H.

#120
6" DRAIN PARALLEL TO 48" WASTE LINE:

R.M.	+1.91	539.95		538.04	
All					
W267.75					
575.50	M.H.	528.55	-4.99	534.96	6.41
555.50		28.12	-4.64	535.31	7.19
535.50		27.65	-2.70	537.25	9.57
520.67		27.36	-4.48	535.47	8.11
CHECK R.M.			-1.91	538.04	

8-31-48 LEONARD, BAKER.
2 P.M.

RESET S. END OF "T" ON 48" WASTE WASH WATER LINE.

R.M.	+2.27	538.66		536.39	ON DAM
T.P.	+4.94	H.d. 533.73	-9.87	528.79	ROCK.
N 90.67, W 179.0					
INV. OF STEEL RING.			-1.18	532.55	SET. OF HIGH
INV. OF CONC. AT PI.			-1.18	532.60	.07 HIGH
CHECK T.P.			-4.94	528.79	ROCK

7-7-48 LEONARD NIENOW SHIFFMAN 25

CUT STAKES FOR 48" WASTE WASH WATER LINE: 708.

R.M.	+1.91	H.d. 539.95		538.04	CUT 0+00 CONC. MON.
590.67		GRADE			
W179.00		527.67	-6.09	533.86	6.19
5100.67					
W179.00	L-90°	27.45	-6.02	533.98	6.48
5100.67					
W205.50		26.88	-5.46	534.49	7.61
5100.67					
W232.0	LOW POINT.	26.30	-5.06	534.89	8.59
5100.67					
W273.25	L-90°	27.05	-4.99	534.96	7.91
580.67					
W273.25		27.41	-4.80	535.15	7.74
580.67					
W273.25		27.78	-4.84	535.11	7.33
540.67					
W273.25		28.14	-1.90	538.05	9.91
520.67					
W273.25		28.51	-4.48	535.47	6.96
(NOTE: SEE PAGE 6R FOR CHECK LEVELS)					
CHECK R.M.			-1.91	538.04	
48" WASTE LINE - CONTD. 8-19-48 LEONARD SHIFFMAN MON					
R.M.	+7.18	543.26		536.08	3+85'± W. HUB. ELEV. CUT
0+00					
W273.25		28.89			
N 40					
W273.25		29.25			DITCH ALREADY DUG ON PREVIOUS WORK, CUT STAKES NOT NEEDED.
N 40					
W273.25		29.61			
N 60					
W273.25		29.98			
N 80					
W273.25		30.34	-5.18	538.08	7.74

8-30-48

LEONARD-NOTES
KARER-LEVEL
SHIPMAN-ROD

CHECK LEVELS OVER 48" WASTE WASH WATER LINE #108

				0+00 AXIS CONG. MARK		
R.M.	+4.11	542.15		538.04		
T.P.	+8.02	541.88	-8.84	538.81	ON PIPE	
W278.25		H.d.		ACTUAL	CORRECT:	
0+00 N.			-12.50	528.88	528.89	
20' N			-12.15	529.18	529.25	
40' N			-11.76	529.57	529.61	
60' N			-11.41	529.92	529.98	
80' N			-10.98	530.35	530.34	
N102.67						
W278.25	L 90°		-10.58	530.75	530.75	
N102.67						
W258.25			-10.31	531.02	531.12	
W288.25			-9.82	531.51	531.48	
W218.25			-9.57	531.76	531.85	
W198.25			-9.20	532.13	532.21	
N162.67						
W175.27	P.I.		-8.80	532.53	532.53	
T.P.			4.12	537.21		
	+8.91	545.52				

CONTINUED LEFT SIDE PAGE 27.

NOTE: 4.48' ADDED TO ROD READINGS TO SHOW INV. ELEV.

7-7-48

26

Cut stakes for 48" Waste Wash Water Line - Cont'd.

				H.d. <th></th> <th>HUB ELEV.</th> <th>CUT</th>		HUB ELEV.	CUT
				548.26			
N102.67	L 90°						
W278.25				530.75	-5.34	537.92	7.17
N102.67							
W258.25				31.12	-4.74	538.52	7.40
N102.67							
W288.25				31.48	-4.11	539.15	7.67
N102.67							
W218.25				31.85	-3.56	539.70	7.85
N102.67							
W198.25				32.21	-3.00	540.26	8.05
N102.67							
W175.27	INTER-SECTION			532.53	-2.77	540.49	7.96

CHECK R.M.

-7.19 536.08

ELEV. ON "T" IN 48" LINE. 10 A.M. 8-31-48 LEONARD
P.C. MARK L-13 KARER SHIPMAN

R.M.	+0.79	537.18		536.39	ON DIRT.
T.P.	+5.40	534.19	-8.39	528.79	ROCK.
N 90.67 - W179.				ACTUAL	CORRECT
INV. OF CONC. LINING			-1.70	532.49	532.69
" " " " .5' INSIDE			-1.65	532.54	
INV. OF STEEL RING			-1.84	532.55	532.55
TOP OF STEEL RING			+2.44	536.63	536.83
N102.67 - W175.27					
INV. OF CONC. LINING	P.I.		-1.66	532.53	532.53
N109.52					
N. END OF "T" SECT. INV. CONC.			-1.71	532.48	532.50

CHECK T.P.

-5.40 528.79

NOTE: SEE LEFT SIDE PAGES FOR RESET ELEV. ON "T"

7-30-48

LEONARD
SHIPMAN

CHECK LEVELS OVER		48" WASTE WASH WATER LINE	INVERT GRADE	
		H. I.	ACTUAL	CORRECT
		545.52		
N 90.67	END OF			
W 179	PIPE	-13.05	532.47	
N 102.67	START OF		(PAGE 26)	
W 175.27	STATIONING		532.53	532.53
20' NE		-13.16	532.36	532.43
40' NE		-13.24	532.28	532.33
60' NE		-13.35	532.17	532.23
80'		-13.42	532.10	532.13
100'		-13.50	532.02	532.03
120'		-13.58	531.94	531.93
140'		-13.69	531.83	531.93
160'		-13.82	531.70	531.73
180'		-13.91	531.61	531.63
200'		-13.98	531.54	531.53
220'		14.08	531.44	531.43
	N 322.56	N 322.56 *		
234' H.E.	W 96.24	W 96.26	14.21	531.31
N 325.53	END OF			
W 94.28	PIPE	14.24	531.28	531.34
				ON DAM
CHECK R.M.		-9.14	536.38	.01 LOW RECORD
				536.39

CUT STAKES FOR

7-13-48

LEONARD
SHIPMAN
#108.

27

48" WASTE WASH WATER LINE		CONTD.	
		H. I.	
R.M.	+7.65	544.04	536.39 ON DAM
N 90.67		GRADE	MURFLEY CUT
W 179.00		532.69	-4.15
N 102.67	START OF		
W 175.27	STATIONING	532.53	-3.54
0+20 NE		32.43	-3.17
0+40 NE		32.33	-2.76
0+60 NE		32.23	-2.01
0+80 NE		32.13	-1.52
1+00 NE		32.03	-1.75
1+20 NE		31.93	-0.89
1+40 NE		31.83	-1.16
1+60 NE		31.73	-0.34
1+80 NE		31.63	-4.70
2+00 NE		31.53	-8.77
2+20 NE		31.43	-10.30
2+34	N 322.56	31.36	-12.35
	W 96.24		
CHECK R.M.		-7.65	536.39

NOTE: 4.48' ADDED TO 100 READINGS TO SHOW INVERT ELEV.

* NOTE: N. END OF PIPE IS .12 WEST OF PLAN LINE.

Dec. 15, 1949 LEONARD, WEST, PAYNE

CUT STAKES FOR M.H. ON 17" DRAIN #119

R.M.	0.93	547.59		546.66	SALT STB. TANK S.E. COR.
	1.51	536.83	-12.77	535.32	T.P.
N289.9					End of Existing Pipe
E227.0		530.16	-6.67	530.16	
N294.8	CENTER	GRADE:		HIG. ELEV.	COT
E227	M.H.	530.15	-4.33	532.50	2.35
	END 1ST				COT
N303.9	1" PIPE	528.11	-8.05	528.78	0.67
	END 2ND				COT
N311.6	8" PIPE	526.07	-10.63	526.20	0.13
	H.d.				
T.P.	+4.25	530.47	-12.61	526.22	Rock
	END 3RD				FILL
N319.2	5" PIPE	524.03	-7.01	528.46	0.57'
	END OF				FILL
N326.8	PIPE	522.0	-9.05	521.42	0.58
	END OF				FILL
N332.8	APRON	519.8	-10.80	519.67	0.13
	GROUND ELEV. ON ♀ OF PIPE:				
	H.d. 530.47				
N294.8	M.H.		-2.04	528.83	
N303.9	END 1ST PIPE		-3.96	526.51	
N311.6	END 2ND PIPE		-4.62	525.85	
N319.2	END 3RD PIPE		-6.33	523.64	
N326.8	END 4TH PIPE		-9.12	521.35	
N332.8	END APRON		-10.61	519.86	
N338.2	SURFACE OF WATER		-12.48	517.99	

9-19-48 LEONARD
CARRER
SHIFFMAN

28

CUT STAKES FOR
42" FILTER WASH WATER LINE #109.

R.M.	+7.18	543.26		536.08	MON. AT 34857 W.
N162.0		H.d.			
W256.0		INV. GRADE			
N149.0		538.42	-5.74	537.57	F. 0.9
W256.0		534.41	-5.18	538.08	COT
N136.0	GRADE				3.67
W256.0	MARK	538.40	NOT SET		IN DITCH.
N123.0					
W256.0		528.80	-4.77	538.49	9.69
N110.0					
W256.0		527.19	-4.90	538.36	11.17
N97.0	GRADE				
W256.0	BOTTOM	525.58	-5.15	538.11	12.53
	CHECK R.M.		-7.18	536.08	
				9-3-48	LEONARD SHIFFMAN WEST
	+9.19	545.27			
N92.5					
W256.0		526.56	-6.92	538.35	11.79
N68.0					
W256.0		527.54	-6.66	538.61	11.07
N53.5					
W256.0		528.52	-6.28	538.99	10.47
N39.0					
W256.0	END	529.50	-7.35	537.92	8.42
	CHECK R.M.		-9.19	536.08	

8-27-48

LEONARD
BAKER
SHIPMAN

29

6" LABORATORY DRAIN #125

R.M.	+0.79	538.82		538.04	
		INVERT GRADE:	-	8' OFFSET HOR. ELEV	CUT
E 10.0					
* S127.0		529.0	-7.01	531.91	2.81
S150.0		527.77	-7.88	530.94	3.17
S175.0		526.53	-8.87	529.95	3.42
S200.0	GRADE BREAK	525.30	-10.27	528.55	3.25
E 10.0					
S224.5	L	524.63	-11.16	527.66	3.03
E 25.0					IN END OF
S229.5	END	524.07	-14.72	524.10	PIPE "Y"

10-7-48

CHECK ELEV. ON 1" BRASS PRESSURE LINE.

R.M.	+2.82	538.90		536.08	CING. MIN 385 TH W.
S 78'	BEND AT 1/2 GRADE				
W267.75	M.H.	526.64	-12.17	526.79	.09 HIGH.
S 10.0					
W278.75	11.0' W.	526.58	-12.29	526.61	.03 HIGH.
S 10.					
W325		526.25	-12.48	526.72	.07 HIGH.

6-29-48

LEONARD
NIENOW
SHIPMAN

30

JULY 2, 1948,
NOTE: 21" SALT DRAIN LINE CRADLED IN

CONCRETE FROM S+735 TO 4+28 SOUTH

LEONARD

AUG. 15, 1948:

NOTE: TOP OF CORRUGATED PIPE DRAIN LINE

AT N. END OF 21" SALT DRAIN LINE = 5116.87. E.O.O

ELEV. 526.04

21" DRAIN

DRAIN PIPE

CHECK ELEV. ON 21" SALT DRAIN LINE: 211.

R.M.	+ H.S.	H.S.	-	GRADE	CORRECT GRADE:
5145.5		527.06	-13.30	518.76	= 513.77
5151			-13.43	13.63	= 13.64
5176.5	M.H. IN		-13.56	13.50	= 13.51
5181.5	M.H. OUT		13.59	13.47	= 13.49
5199.5			-13.69	13.57	= 13.90
5219.5			-13.79	13.27	= 13.30
5239.5			-13.91	13.15	= 13.20
5259.5			-14.00	13.06	= 13.10
5279.5			-14.07	12.99	= 13.00
5299.5			-14.14	12.92	= 12.90
5319.5			-14.29	12.77	= 12.80
5339.5			-14.42	12.64	= 12.70
5359.5			-14.54	12.54	= 12.60
5379.5			-14.59	12.47	= 12.50
5397.5			-14.65	12.41	= 12.41
5415.50			-14.89	12.17	= 12.23
5429.50	REDUCER Box - 1/4		-15.03	512.03	= 512.05
	NOTE:	2.08' ADDED TO ACTUAL ROD READINGS TAKEN ON TOP OF PIPE TO GET FLOW-LINE ELEV.			
CHECK R.M.			-13.03	514.03	197

6-30-48

Leonard
Mienow
Shipman

31

Check Forms On Effluent Cond. Ext.

B.M.	2.51	540.55	538.04	0100	Arts
				Correct	Elevation
W 181.7	East End		11.95	528.60	528.58
	edge of				
10' N	slope		12.16	528.39	528.37
10.5' N	gutter		12.30	528.25	528.21
12' N	wall		11.98	528.57	528.58
	edge of				
10' S	slope		12.18	528.37	528.37
10.5' S	gutter		12.35	528.20	528.21
12' S	wall		11.98	528.57	528.58
W 199	East End		12.04	528.51	528.49
10' N			12.26	528.29	528.28
10.5' N			12.45	528.10	528.12
12' N			12.05	528.50	528.49
10' S			12.25	528.30	528.28
10.5' S			12.44	528.11	528.12
12' S			12.05	528.50	528.49
W 216	East End		12.13	528.42	528.41
10' N			12.37	528.18	528.20

(cont.)

Check Forms on	Effluent	Cond.	Ext. (continued)	32
+	↑	—	Elevation	Corri. Elev.
(W 216)	540.55			
10.5' N		12.54	528.01	=528.01
12' N		12.15	528.40	=528.41
10' S		12.34	528.21	=528.20
10.5' S		12.50	528.05	=528.04
12' S		12.13	528.42	=528.41
W 233, ♀		12.20	528.35	=528.33
10' N		12.43	528.12	=528.12
10.5' N		12.60	527.95	=527.96
12' N		12.22	528.33	=528.33
10' S		12.44	528.11	=528.12
10.5 S		12.60	527.95	=527.96
12' S		12.22	528.33	=528.33
W 250 ♀		12.29	528.26	=528.25
10' N		12.50	528.05	=528.04
10.5' N		12.68	527.87	=527.88
12' N		12.31	528.24	=528.25
10' S		12.51	528.04	=528.04
10.5 S		12.69	528.86	=527.88

(Cont.)

check	Forms	on	Effluent	Cond.	Ext. (continued)	33
		+	π	-	Elevation	Corr. Elev.
(W 250.)			540.55			
12' S				12.30	528.25 = 528.25	
5' N	Transition	Wall		12.41	528.14 = 528.15	
5' S	Transition	Wall		12.41	528.14 = 528.15	
W 260.4				12.55	528.00 = 528.00	
4' N				12.54	528.01 = 528.00	
4' S				12.57	527.98 = 528.00	
ck. B.M.				2.51	538.04 = 538.04	

7-9-48

LEONARD
NIENOW
SHIPMAN

34

T. ROCK SCALE: CHECK FORMS, OUTSIDE WALL.

			MON. L.D. ANG
R.M.	+9.07	547.64	538.47
HOUSE:			5+88 E.
SE COR		-1.45	546.09 = 546.08
S.W. COR.		-1.46	46.08 = 46.08
N.W. COR.		-1.46	46.08 = 46.08
S. WALL			
15' 2" FROM SW. COR.		-0.94	46.60 = 46.58
S.W.			
COR.		-0.94	46.60 = 46.58
"			
N.W.		-1.46	46.08 = 46.08
COR.		-1.45	46.09 = 46.08
N. WALL			
CENTER		-1.45	46.09 = 46.08
N.E.			
COR.		-1.46	46.08 = 46.08
S.E.			
COR.		-1.46	46.08 = 46.08
"			
S. WALL		-0.95	46.59 = 46.58
15' 2" FROM SE COR.		- .95	46.59 = 46.58
HOUSE			
N.W. COR.		-1.46	46.08 = 46.08
TOP OF			
DRAIN		-7.23	539.61 = 539.58
CHECK R. 17.		-9.07	538.47

7-22-48

SHIPMAN
BAKER

35

SALT STORAGE BASIN - WEST HALF - CHECK FORMS

	+	X	✓	-	Cor. mark
B.M.	10.56	548.60			0-0 AN'S
Top Form					
NE. Cor.			1.93	546.67	546.67
N.W. Cor.			1.93	546.67	546.67
SE. Cor.			1.93	546.67	546.67
SW. Cor.			1.93	546.67	546.67
♀				546.66	
W. END			1.94	546.67	546.67
Top Rail					
Angle Curb			2.60	546.00	546.00
Top Form					
For Rail Base			3.19	545.41	545.42
B.M.	10.56	538.04		538.04	

7-26-48 Baker
Shipman

36

TRUCK SCALE: CHECK FORMS

	+	^	-	MON L. AXIS
B.M	9.02	547.49		538.47 540.3E

ANCHOR
PLATESEAST WALL

S. SLOT

2.66 544.83 544.80

N. SLOT

2.68 544.81 544.80

NORTH WALL

20'5" E.

OF Q: SLOT

2.70 544.79 544.80

9'8 1/2" E.

OF Q: SLOT

2.73 544.76 544.80

9'8 1/2" W.

OF Q: SLOT

2.71 544.78 544.80

20'5" W.

OF Q: SLOT

2.69 544.80 544.80

WEST WALL

N. SLOT

2.69 544.80 544.80

S. SLOT

2.67 544.82 544.80

SOUTHWALL

20'5" W.

OF Q: SLOT

2.67 544.82 544.80

9'8 1/2" W.

OF Q: SLOT

2.69 544.80 544.80

9'8 1/2" E.

OF Q: SLOT

2.68 544.81 544.80

20'5" E.

OF Q: SLOT

2.65 544.84 544.80

TRUCK SCALE: CHECK FORMS

+	↑	-	ELEV.	CORR. ELEV.
	547.49			

PIER FOUNDATIONS

EAST WALL

SOUTH	4.85	542.64	542.58
-------	------	--------	--------

CENTER	4.89	542.60	542.58
--------	------	--------	--------

NORTH	4.91	542.58	542.58
-------	------	--------	--------

EAST OF CENTER

SOUTH	4.89	542.60	542.58
-------	------	--------	--------

CENTER	4.91	542.58	542.58
--------	------	--------	--------

NORTH	4.92	542.57	542.58
-------	------	--------	--------

WEST OF CENTER

SOUTH	4.92	542.57	542.58
-------	------	--------	--------

CENTER	4.91	542.58	542.58
--------	------	--------	--------

NORTH	4.91	542.58	542.58
-------	------	--------	--------

WEST WALL

SOUTH	4.89	542.60	542.58
-------	------	--------	--------

CENTER	4.89	542.60	542.58
--------	------	--------	--------

NORTH	4.90	542.59	542.58
-------	------	--------	--------

WASH WATER RATE CONTROL STR. CHECK LEVELS - CONT'D.				JAN 3, 1949		LEONARD WEST PAYNE:
R.M.	+6.35	544.96		538.61		EFFLUENT METER STR.
OUTER WALL		GRADE	G. ROD	ELEV.		
N.W. COR.	"		-3.44	541.52		102 H.
S.W. COR.	"		-3.46	541.50		
N.E. COR.	"		-3.46	541.50		
S.E. COR.	"		-3.46	541.50		
NORTH						
BEAM CENTER	BOTTOM	539.83	-5.13	539.83		O.K. E. END 11 H. CENTER O.K. W. END
BEAM SOUTH	"	540.42	-4.54	540.42		
BEAM WEST	"	539.83	5.13	539.83		.02 H. E. END CENTER O.K. O.K. W. END
BEAM HATCH		540.00	-4.96	540.00		
COPING N. WALL	TOP	541.83	-3.12	541.84		O.K.
42" PIPE S. WALL	BOX TOP	533.33	-12.70	532.26		.07' LOW
16" PIPE PIPE	TOP	536.75	-7.67	537.29		
36" PIPE 2" SUMP PUMP	TOP	532.75	-12.25	532.71		
DISCHARGE	TOP		-12.46	532.50		
CHECK BILL	ON DAM.		-8.57	536.39 = 536.39		

WASH WATER RATE CONTROL STR. CHECK LEVELS.				OCT. 29, 1948		LEONARD SHIPMAN WEST.	39
R.M.	+2.17	540.21		538.04			MON. 0+00 AXIS.
T.B.M.	+5.22	533.32	H. d.	-12.12	528.09		X CHISELED ON CONCRETE.
24" X 12" FOOT BLOCK	N. END	GRADE	G. ROD	REMARKS			
"	E. END	527.58	-5.74	O.K. +01'			
"	S. END	527.58	-5.74	ENTIRE LENGTH SET AT 527.46			
"	W. COR.	527.46	-5.86				
"	E. END	527.58	-5.74	O.K. 0 TO +02'			
"	W. SIDE	527.57	-5.74	ENTIRE LENGTH SET LEVEL AT 527.47.			
"	S. SIDE	527.46	-5.86				
"	UNDER			.17' LOW			
"	SUMP	525.62	-7.70	SET AT 525.48			
GROUND UNDER SUMP			-8.76	524.56		AVERAGE.	
CHECK T.O.M.			-5.23	528.09		X ON CONCR. +56 W.	
CHECK FORMS FOR FLOOR SLAB.				NOV. 3, 1948		LEONARD SHIPMAN WEST.	
T.B.M.	+4.88	532.97		528.09		X ON TOP CONDUIT AT 256 W.	
N.E. COR.		528.25	-4.72	528.25			
N.W. COR.		528.25	-4.71	528.26			
S.E. COR.		528.25	-4.77	528.25			
S.W. COR.		528.12	-4.85	528.12			
CENTER OF SUMP TOP		528.12	-4.89	528.08		PROVIDES A GULLY IN CENTER	
CHECK T.B.M.			-4.85	528.09			

7-12-48

LEONARD
SHIPMAN

40

CHECK LEVELS ON PART OF 12" SALT DRAIN #115			
		0+00	
R.M.	+0.74	538.78	538.04 Mon.
T.P.	+1.11	^{H.d.} 531.26	-8.63 530.15
2'E	IN BOX	-12.94	518.32
12'E		-11.26	520.00
22'E		-9.63	521.63
30'E	interpolated		522.63 522.63 1-25-54
32'E		-8.38	522.88
42'E		-7.53	523.73
52'E		-7.10	524.16
62'E		-6.97	524.29
72'E		-6.78	524.48
82'E		-6.66	524.60
92'E		-6.56	524.70
102'E		-6.44	524.82
112'E		-6.31	524.95
122'E		-6.19	525.07
132'E	END IN M.H.	-6.04	525.22

LEVELS CONTD ON NEXT PAGE.

NOTE: 1.16' ADDED TO ROD READINGS TO SHOW 14% ELEV.

7-12-48

LEONARD
SHIPMAN

41

CHECK LEVELS ON PART OF 8" DRAIN LINE #117.

	H. I.		INVERT ELEV. S
	591.26	(FROM PAGE 40)	
2' E.		IN BOX	-12.92 518.94
12' E			-12.03 519.29
22' E			-11.11 520.15
32' E			-10.17 521.09
42' E			-9.18 522.08
52' E			-8.27 522.99
58' E		IN M.H.	-7.84 523.42
NOTE: .75' ADDED TO ROD READINGS TO SHOW INV. ELEV.			
T.P.			-12.02 519.24
	+2.28	H.I. 521.52	
SET B.M.			-1.01 520.51
LEVELS CONT'D ON NEXT PAGE.			
CENTER OF SOUTH EDGE OF 3'x3' BOX ON SEWAGE DISPOSAL LINE AT ELEV. 525.04 5265.0			

7-12-48

LEONARD
SHIPMAN

42

PROFILE OVER TOP OF 16" WASTE BRINE LINE #112.

H.I.
521.57 (FROM PAGE 41)

S4+34.5 -8.27 519.25

S4+50 -9.89 511.69

S4+75 -12.59 509.13

T.P. +0.46 ^{H.I.} 509.10 -12.88 508.64

S5+00 -2.77 506.33

S5+25 -6.48 502.62

S5+50 -11.34 497.76

T.P. +0.11 ^{H.I.} 497.44 -11.77 497.33

S5+75 -4.33 493.11

S6+00 -9.79 487.65

T.P. +0.77 ^{H.I.} 486.48 -11.73 485.71

S6+25 -5.79 480.69

S6+54.6 ^{END OF} WORK. -14.94 471.54T.P. +9.54 ^{H.I.} 493.23 -2.79 483.69CHECK R.M. MON. S. MURRAY BLVD. -0.56 492.67 = 492.68 RECORD. ^{SEE PAGE 15.}

NOTE: DUE TO STEEP GRADE OF LINE, THE DISTANCE FROM TOP OF
PIPE TO INVERT WOULD VARY TOO MUCH TO GIVE
A CORRECT DEDUCED INVERT ELEV. THEREFORE,
THE PROFILE SHOWN IS FOR TOP OF PIPE.

Leonard

54" BY-PASS	LINE #105.	CUT STAKES: 8' OFFSETS.	MON. AT	
R.M.	H.d.		538.04	0+00 L.O.AXIS.
	INV. ELEV.	-	HOLE ELEV.	CUT
N124.5				
E 54	538.00	3.87	543.54	5.54
N134.5				
E 54	P.I. 37.35	3.81	43.55	6.20
E 46.66	PIPE E.C. 36.56	3.17	44.19	7.63
E 34	36.06	3.51	43.85	7.79
E 14	34.77	2.96	44.40	9.63
W 6	33.48	3.16	44.20	10.72
W 26	32.19	3.12	44.24	12.05
W 46	30.89	4.05	43.31	12.42
W 66	29.60	4.70	42.66	13.06
W 86	28.31	4.74	42.62	14.31
W 106	27.02	5.06	42.30	15.28
W 126	GRADE CHANGE 25.72	5.50	41.86	16.14
CHECK R.M.		-10.97	536.39	ON DAM.

7-23-46 Shipman
Baker 44

54" Bypass Line #105 cut stakes: 10' OFF SETS.

B.M.	8.24	544.63		536.39	ON DAM
		INV. ELEV.		HUB ELEV.	CUT
N 134.5					
W 146		525.48	2.74	541.89	16.71
W 166		525.25	4.16	540.47	15.22
W 186		525.01	4.63	540.00	14.99
W 206		524.78	5.36	539.27	14.49
W 226		524.54	5.59	539.04	14.50
W 246		524.30	6.11	538.52	14.22
W 266		524.07	6.75	537.88	13.81
B.M.			8.24	536.39	ON DAM

7-29-48 Baker
SHIPMAN

54" Bypass Line #105 Reset cut stakes

B.M.	8.21	544.60		536.39	10' OFF SETS CUTS
		INV. ELEV.		HUB ELEV.	
W 186		525.01	4.62	539.98	14.97
W 206		524.78	5.38	539.22	14.44
W 226		524.54	5.55	539.05	14.51
B.M.			8.21	536.39	536.39

8-3-48 Baker
Shipman

9-1-48

LEONARD
SHIPMAN
WEST.

45

54" BY-PASS LINE #105		CUT STAKES 10' OFFSET	
+	+	-	-
B.M.	3.91	540.30	536.39
		INV. ELEV	HUB. ELEV
			CUTS
A N134.50			
W 275.40		523.96	2.63 537.77 13.81
A + 20		523.72	3.54 536.86 13.14
A + 40		523.48	4.22 536.16 12.70
A + 60		523.24	4.64 535.76 12.52
A N183.45			
W 324.35		523.14	5.02 535.38 12.24
B.M.		3.91	536.39 536.39

54" BY-PASS LINE #105		CHECK LEVELS:	
B.M.	+2.67	539.06	536.39
			ON DAM.
N134.50			
W 167.5		-13.82	525.24 525.29
W186		-14.08	524.98 525.01
W306		-14.26	524.80 524.78
W226		14.53	524.53 524.54
W246		14.77	524.29 524.30
W266		14.93	524.13 524.07
W275.4	4.45° Pt	15.07	523.99 523.96
NW 20'		15.34	523.72 523.72
NW 40'		15.58	523.48 523.48
NW 60'		15.85	523.21 523.24
NW 66.2		15.99	523.17
CHECK B.M.		-2.67	536.39

NOTE: 5.00 ADDED TO ROD READINGS ON TOP OF PIPE
TO SHOW INVERT ELEV.

8-4-48 Baker
shigman 46

54" Bypass LINE #105 CHECK LEVELS

	+	-	MON AT
B.M.	10.28	548.32	538.04 0400 AT R
N 1345			
E 41.66		536.56	11.80 536.52 -.04
E 34		536.06	12.29 536.03 -.03
E 14		534.77	13.55 534.77 O.K.
W 6		534.48	14.90 533.42 -.06
W 26		532.19	16.18 532.14 -.05
W 46		530.89	17.46 530.86 -.03
T.P. #1			12.88 535.44 ON ROCK
	5.63	541.07	
W 66		529.60	11.50 529.57 -.03
W 86		528.31	12.77 528.30 -.01
W 106		527.02	14.05 527.02 O.K.
W 126		525.72	15.29 525.78 +.06
W 146		525.48	15.63 525.44 -.04
W 166		525.25	15.80 525.27 +.02
T.P. #2	10.84	548.36	3.55 537.52 ON HUB
B.M.			10.34 548.02 548.04

7-27-48 Baker
Shipman 47

SALT STORAGE - EAST HALF - CHECK FORMS

OVERFLOW WEIR			ELEV.	CORRECT ELEV.
	+ X	-		CON. MON. G-O AXIS
B.M.	10.40	548.44	538.04	
T.P. ¹	0.59	536.84	-12.19	536.25
West End			+ 7.92	544.76 544.75
Center			+ 7.91	544.75 544.75
East End			+ 7.91	544.75 544.75
T.P. ²	12.03	548.28	- 0.59	536.25
B.M.			-10.24	538.04 538.04

8-18-48 LEONARD, BAKER, SHIPMAN

CHECK LEVELS ON M.H. AT CENTER S. SIDE SALT STORAGE.

R.M.	9.66	541.70		538.04
		GRADE		ACTUAL
GROUND IN PIT		528.20	-13.60	528.1
TOP OF FLOOR		529.24	-12.45	529.25
12" DRAIN INV. ELEV.		529.20	-12.56	529.14 .06 Low
8" DRAIN, E. SIDE, INV.		529.24	-12.46	529.24 O.K.
" W. " "		529.24	-12.48	529.22 .02 Low.
12" PIPE F. " "		542.75	+ 1.05	542.75 O.K.
12" " W. " "		542.75	+ 1.01	542.71 .04 Low

check level on 54" overflow

ELEV'S ON TOP OF PIPE:		9-20-48	
+	HJ	-	ELEV
B.M.	2.06	538.45	536.39 ON DAM
T.P.	4.19	533.93	8.71 529.74
N 199.57			
W 352.11		7.91	526.02
N 271.81	PI OF		
W 346.31	54" PIPE.	8.95	524.98
N 25'		10.55	523.38
N 50'		11.90	522.03
N 286.91	END OF		
W 317.43	54" PIPE.	13.09	520.84
T.P.	0.35	521.29	12.99 520.94
PI.	N 400.51 W 343.58		
	OF DITCH,	12.85	508.44
T.P.	12.22	533.07	0.44 520.85
T.P.	9.36	537.80	2.63 530.44
B.M.		1.40	536.40 ON DAM

SUBTRACT 5.00' TO SHOW INVERT GRADE.

54" OVERFLOW TO ALVARADO CANYON #106. LEONARD BARKER SHIPMAN 48

SLOPE = 0.558 8-10-48

	+	INVERT GRADE	-	HUB ELEV.	CUT
B.M.	+1.98	538.39		536.39	ON DAM.
T.P.	+0.59	532.86	-6.60	531.77	ON HUB.
N 199.57					
W 352.11	(13.17)	521.00	-10.95	521.41	0.41
N 271.81	PI.				
W 346.31	10' 56" PT.	519.96	-2.88	529.48	9.57
N 25'		518.56	-0.97	531.44	12.88
N 50'		517.17	-4.26	528.10	10.93
N 286.91	(13.17)				
W 317.43	END	515.78	-6.10	526.26	10.48
T.P.			-2.67	529.69	ON DASH TOP.
	+8.92	538.61			
CHECK B.M.			-2.22	536.39	ON DAM.
				N 287.18	
				NOTE: END OF PIPE LAID AT W 317.08	

SEE NEXT PAGE FOR DITCH CUT STAKES.

		JAN. 31, 1949		LEONARD WEST PRYNE.	
DITCH AT END OF 54"			OVERFLOW TO RLY. CANYON.		
R.M.	+0.36	H.d. 536.75		536.89	ON DAM CUT
0+00		GRADE 515.84	-10.05	526.70	10.36
0+25		514.44	-10.09	526.66	12.28
0+41 ¹⁶		513.55	-11.14	525.61	12.06
0+50		513.05	-12.88	523.87	10.82
T.P.			-12.88	523.87	ON HUC
	+0.47	H.d. 524.34			
		GRADE			
0+75		511.65	-4.68	519.66	8.01
1+00		510.26	-9.25	515.09	4.88
1+25		508.86	-12.99	511.35	2.99
T.P.			-12.99	511.35	ON HUC
	+0.45	H.d. 511.80			
		GRADE			
1+32 ²¹		508.45	-1.56	510.24	1.79
1+50		507.46	-4.34	507.46	GRADE.
T.P.	+13.05	524.48	-0.92	511.38	
T.P.	+12.11	526.46	-0.08	524.35	
CHECK R.M.			-0.07	536.39	536.39

		OCT. 19, 1948		LEONARD SHIPMAN WEST.		79
8" BRINE LINE #10.		CUT STAKES -10' OFF				
STATION	+	INV. GRADE H.d.	-	HUC ELEV.	CUT.	
R.M.	+12.54	550.58		538.04	0+00 AXIS.	
N 118.00						
W 45.25	END	536.67	-6.62	543.95	7.28	
N 134.5				(10' OFF)		
W 45.25	CROSSES 210 S.	536.57	-6.39	544.19	7.67	
N 143.42						
W 45.25	P.d.	536.28	-4.25	545.33	9.55	
W 25.25		535.58	-5.66	544.92	9.34	
W 03.25		534.89	-5.86	544.72	9.83	
E 14.75		534.20	-6.76	543.82	9.62	
E 34.75		533.51	-7.19	543.59	9.88	
E 54.75		532.83	-7.29	543.29	10.46	
E 74.75		532.14	-7.98	542.60	10.46	
E 94.75		531.46		OPEN DITCH		
E 115.17	END	530.75		" "		
CHECK R.M.			-12.54	538.04		

9-7-98

LEONARD
WEST

50

CHECK LEVELS ON EFFLUENT VENTURI METER FORMS

				FORMS CONC. MON. W 385.78
B.M.	+6.35	542.49	536.08	
T.P.	+1.23	537.98	-5.68	536.75
N. END OF (TOP)				TOP OF STEEL ROD
VENTURI TUBE:				ACTUAL: CORRECT
TOP OF VENTURI TUBE		-11.03	526.95	527.00
10' FROM N. END		-11.52	526.46	526.49
20' FROM N. END		-12.02	525.95	525.98
N. EDGE OF THROAT SECT.				
30' FROM N. END OF TUBE.		-12.51	525.47	525.49
S. EDGE OF THROAT SECT.				
TOP OF FORM 7' FROM THROAT		-12.44	525.54	525.55
N. EDGE OF				
MAIN CASTING.		-11.01	526.97	527.00
S. EDGE OF				
MAIN CASTING.		-11.02	526.96	527.00
TOP OF AIR VENT PIPE				
ON MAIN CASTING.		-9.69	528.29	528.28
N.E. CORNER OF STR.				
TOP OF 6" PIPE CASTING		-2.84	535.14 =	534.5 Inv. Elev.
(UNDER 6" PIPE)				
TOP OF 3/4" COPPER TUBE		-4.18	533.80	
S.E. COR. OF STR.				
1" PIPE TO LAMP HOLE, OUTER END.		-18.21	519.77	Inv. Elev.

72" EFFLUENT LINE "109.

LEVELS INSIDE PIPE AS LAID.

B.M.	+2.49	538.88	536.39	ON DAM
T.P.	+105.5' N. OF L.P. ON BASELINE.			ENTER CONTROL VENTURI METER.
T.P.	ON TOP OF PIPE AT OPEN END	-11.30	527.58	
T.P.	+1.02	528.60	-6.54	522.06
	+2.66	524.72		Inv. Elev.
1st JOINT	ELBOW.	-3.77	520.95	
2nd "	12' NW.	-3.79	20.95	
3rd "	28' NW.	-3.80	20.97	
4th "	44' NW.	-3.85	20.87	
5th "	60' NW.	-3.86	20.86	
6th "	76' NW.	-3.79	20.93	
END.	92' NW.	-3.75	20.97	
T.P.		-1.98	522.74	
	+11.60	534.34		
T.P.		-2.33	531.01	
	+9.77	538.78		
CHECK B.M.		-2.39	536.39	ON DAM.

CHECK LEVELS ON BASE OF EFFLUENT VENTURI METER STRUCTURE

	H.S.	GRADE	ROD	ON PIPE
T.R.M.	+4.84	525.62	520.78	ON PIPE
TOP OF FLOOR	OUTER EDGE	GRADE: 519.85	-5.87	O.K. WITHIN ±.01
"	SUMP.	519.67	-5.95	O.K. WITHIN ±.01
"	IN SUMP	519.42	-6.20	O.K. WITHIN ±.01
TOP OF DRAIN.		519.42	-6.20	519.42 O.K.
GROUND - N. END		518.75	AVERAGE -7.02	518.60
"	S. END	"	AVERAGE -7.00	518.6
"	UNDER SUMP	518.92	AVERAGE -7.61	518.0
"	UNDER DRAIN	APPROX. 2' WIDE	AVERAGE -7.92	517.7
SUMP OUTLET, INV. ELEV.		-6.95	518.67	
6" STEEL DRAIN LINE 6' N. OF SUMP.		-7.05	518.57	INV. ELEV.
" N. EDGE METER STG.		-7.04	518.58	INV. ELEV.
CHECK T.R.M.		-4.84	520.78	PIPE BELL, INV. OF 72"
CHECK ELEV. ON TOP OF FORMS FOR WALLS:			9-7-48	LEONARD WEST.
R.M.	+6.35	542.43	536.08	CONC. MIN. W. 885.75
TOP OF FLOOR, N. END		GRADE: 537.00	GRADE ROD -5.43	O.K. ± .01
" " " S. END		537.12	-5.31	O.K. ± .02
" " M.H. CURB		538.67	-3.81	O.K.

8-19-48

LEONARD BAKER SHIPMAN

7-21-48

SHIPMAN BAKER DARTBY

51

	H.S.	GRADE	ROD	ON PIPE
ELEV ON 8" Sanitary Drain SUPPORT ON TOP 3A3				
B.M.	12.90	533.41	520.51	CON. BOX
T.P.	2.56	526.19	9.78	523.63
AT CENTER OF ROW			-10.50	515.69
ON 6" Sewer DRAIN SUPPORT				526.01
T.P.	10.50	526.19		
AT 10' E			9.78	533.41
180.835			-2.56	523.63
10' E			12.15	521.26
176.5			11.36	522.05
B.M.			6.82	526.59

8-30-48 LEONARD BAKER SHIPMAN

CUT STAKES FOR 8" SANITARY SEWER # 118.

	H.S.	GRADE	ROD	ON PIPE
R.M.	+0.78	588.82	588.04	CONC. MON
5408				ON AXIS
E21.0			526.0	-12.75
25' W			526.80	-9.65
50' W			526.89	-8.99
75' W			526.59	-8.75

CONC. MON ON AXIS OPEN END EXISTING CUT

8" SANITARY SEWER - CUT STAKES - CONT'D.

STA.	+	GRADE	-	HUR.FLEV.	CUT.
		H.d. 538.82			
100' W		526.78	-9.03	529.79	3.01
W100.17	35°22'30" R.	(SET AT 526.99)			
612.85	L.M.H.	526.99	-8.92	529.90	2.91
25' NW		527.12	-8.33	530.49	3.37
50' NW		527.24	-7.40	531.42	4.18
75' NW		527.37	-6.63	532.19	4.82
5109.17	(SET AT 527.44)				
W172.85	L.M.H.	527.50	-5.88	532.94	5.44
CHECK R.M.			-0.77	538.05	LEVEL SETTL 50.01'

NOTE: M.H. AT (W172.85) WAS MOVED EAST TO (W169.40) TO PROVIDE A FIRM FOOTING. LINE FROM (W100.17) M.H. WAS MOVED RADIIALLY BETWEEN THE TWO M.H.'s TO FORM A STRAIGHT LINE BETWEEN THEM.

8" SANITARY SEWER - CONT'D.

				10-1-48	LEONARD WAXER SHIPMAN WEST.
R.M.	+0.62	538.66		538.04	CONC. MON 0+00 AXIS.
	5109.17				AS LAID FLOOR FLEV.
CHECK M.H.	W169.40	527.50	-11.22	527.44	
5109.17					
W190.0		527.60	-4.20	534.41	6.81
W210.0		527.70	-5.70	532.96	5.26

SEE PAGE 57 FOR REALIGNMENT.

8" SANITARY SEWER - CUT STAKES - CONT'D

STA.	+	GRADE	-	HUR.FLEV.	CUT.
		H.d. 538.66			
5109.17					
W230.0		527.80	-5.74	532.94	5.14
W250.0		527.90	-6.23	532.43	4.53
W270.0		528.00	-6.09	532.57	4.57
W290.0		528.10	-5.50	533.16	5.06
5109.17	M.H.				
W305.0	73°05' R.	528.16	-5.39	533.27	5.11
		H.d.			Steel R.D.
T.P.	+6.62	541.13	-4.15	534.51	
(FROM P.T.)					
N20'		528.25	-6.31	534.82	6.54
N40'		528.41	-6.44	534.69	6.28
N60'		528.55	-6.94	534.19	5.66
N80'		528.66	-6.49	534.64	5.98
520.33	M.H.				
W332.02	16°55' R.	528.74	-5.91	535.22	6.48
0+00 AXIS		528.84	-5.25	535.93	7.04
N20.0		528.94	-5.69	535.44	6.50
N40.0		529.04	-5.09	536.04	7.00
W333.02	M.H.				
N66.57	45° R.T.	529.18	-4.83	536.30	7.12
(FROM P.T.)					
N78.00'		529.28	-5.45	535.68	6.40
N.C. 40'		529.38	OPEN DITCH - NOT SET		

Side	+	INV. GRADE	-	HOB ELEV.	C.U.T.
NE 60'		541.18		537.91	8.43
NE 80'		529.49	-2.02	537.91	8.43
NE 80'		529.50	-2.01	538.29	8.71
Min. 843528 W.					
CHECK P.M.			-5.04	536.09	536.09

LEONARD

NOV. 8, 1948 SHIPMAN WEST

BLUE TAPS FOR MANHOLES ON SAN. SEWER.

B.M.	+7.65	544.04		536.39	ON DAM,
N 165.0					FILL
W 85.0		546.0	-1.26	542.78	3.22
N 165.0					
W 135.0		539.50	-10.04	534.00	5.50
CHECK P.M.			-7.65	536.89	

CHECK LEVELS: 72" INFLUENT LINE

B.M.	+	X		MON. LO AXIS
	8.61	547.08	538.47	5+83 E
		INV. ELEV.		

E 235.13	538.00	9.06	538.02	+0.2
E 260.00	538.00	9.06	538.02	+0.2
E 285.00	538.00	9.08	538.00	O.K.
E 310.00	538.00	9.08	538.00	OK
E 332.25	538.00	9.07	538.01	+0.1
B.M.		8.61	538.47	538.47

8-4-48 Baker Shipman

CHECK LEVELS: 54" RETURN LINE

B.M.	+	X		MON. LO AXIS
	8.61	547.08	538.47	5+83 E
		INV. ELEV.		

E 165.37				
E 171.00	537.68	9.41	537.67	-0.1
E 175.00	537.66	9.42	537.66	O.K.
E 200.00	537.58	9.53	537.55	-0.3
E 225.00	537.50	9.58	537.50	OK.
E 250.00	537.42	9.65	537.43	-0.1
E 275.00	537.34	9.71	537.37	+0.3
E 298.60	537.27	9.78	537.30	+0.3

CHECK LEVELS: 54" RETURN LINE (Cont)

	+	-		
	547.08			
	INV. ELEV.			
E 314.60	537.22	9.88	537.20	-.02
E 332.25	537.16	9.93	537.15	-.01
B.M.		8.61	538.47	538.47

INFLUENT VENTURI METER STR.		9-13-48		LEONARD SHIPMAN WEST CONC. MON.	
CHECK LEVELS ON WALL FORMS:					
R.M.	+12.90	550.94	538.04	0+00 AXIS.	
		GRADE:		ACTUAL	
TOP OF WALL S.W. COR.		547.83	-3.12	547.86	.01 Low
" " " N.W. COR.			-3.10	547.84	.01 Hi.
" " " N.E. COR.			-3.10	547.84	.01 Hi
" " " S.E. COR.			-3.09	547.85	.02 Hi
TOP BOX S.E. COR.		550.00	-0.93	550.01	.01 Hi
CHECK R.M.			-12.89	538.05	

9-18-48

LEONARD
HARPER
SHIPMAN

54

CHECK LEVELS ON INFLUENT CHANNEL.

		GRADE		CONC. MON
R.M.	+7.84	545.88	538.04	0+00 AXIS.
		ROD.	ACTUAL	
TOP OF FLOOR IN CHANNEL.		538.00	-7.88	FROM OR TO .06 Low.
BREAK IN WALL		538.50	-7.38	O.K. ± .04
GROUND IN CENTER OF CHANNEL		537.93	-8.95	536.90
TOW OF SLOPE S. SIDE CHANNEL		536.23	-9.39	536.49
BOTTOM OF S. WALL		539.75	-12.19	533.69
STEP ON OUTSIDE OF S. WALL, 6" WIDE.		537.50	-8.38	536.12
GROUND IN CHANNEL		536.75	-9.25	536.63
TRANSITION AREA TOP OF FLOOR IN 54" OVERFLOW.		537.72	-8.20	537.68
BOTTOM OF (GROUND) FLOOR IN 54" OVERFLOW		537.05	-8.87	537.01
TOP OF FLOOR W. END OF INF. VENTURI METER STR.		537.25	-8.63	536.62
GROUND, W. END OF METER STR.		536.26	-9.83	536.05
TOP OF FLOOR E. END OF METER STR.		537.17	-8.91	536.26
TOP OF FLOOR IN TRENCH, S. END		536.25	9.67	536.21
TOP OF FLOOR IN TRENCH, N. END		536.17	9.75	536.15
TOP OF FLOOR IN SUMP		535.25	10.68	535.20
GROUND - E. END		536.17	-9.85	536.03
" IN TRENCH.		535.17	-10.92	534.96
" " SUMP.		534.25	-11.77	534.11
CHECK R.M.			-7.84	538.04

8-30-48

LEONARD
BAKER
SHIPMAN

CHECK LEVELS ON BY-PASS FLUME:

	H.d.	550.66	538.04	MON. 0400
R.M.	+12.62	550.66	538.04	L.O. AXIS.
		GRADE 6. ROD		
TOP OF WIER.	N. EDGE	549.00	-1.66	0.11 ± .01'
S. EDGE OF WIER.		548.86	-1.80	0.11 ± .01'
TOP N. WALL, SEC. FF.		549.81	-0.85	0.11 ± .02'
" " "	SEC. DD SEC. CC	547.83	-2.83	0.11 ± .02'
TOP OF COUNTERPART		545.33	-5.33	.02' HIGH
TOP OF TENSION BARS		545.33	-5.33	
(HOLES FOR STEEL)			-5.45	546.21
CHECK R.M.		-12.62	538.04	

CHECK LEVELS ON BY-PASS FLUME: CONTD

				9-13-48	LEONARD SHIPMAN & WEST BANG. MON.
R.M.	+12.90	550.94	538.04		0400 AXIS
TOP OF WIER N. EDGE		549.00	-1.94	0.11 ± .01	
" " " S. EDGE		548.86	-2.08	0.11 ± .01	
TOP OF WALL, N. SIDE		549.81	-1.13	0.11 ± .02	
" " " S. SIDE		550.00	-0.94	0.11 ± .01	
" " " E. END		550.00	-0.94	0.11 ± .01	.01 Low.
CHECK R.M.		-12.89	538.05 = 538.04		

7-22-48

BAKER
SHIPMAN 55CHECK LEVELS ON ACTIVATED
CARBON TANK, WEST HALF

	+	+	-	Correct Grade
	11.82	550.29	538.47	
Bot. of CON. SLAB				
Center	1.36	548.93	548.92	
East:	1.35	548.94	548.92	
W. Edge	1.39	548.90	548.92	
N. "	1.38	548.91	548.92	
S. "	1.37	548.92	548.92	
Top of CON. Slab				
Box Center	0.06	550.23	550.21	
Box East	0.54	549.75	549.75	
Box West	0.55	549.74	549.75	
Box North	0.57	549.72	549.75	
Box South	0.55	549.74	549.75	
Safety Coating	0.30	549.99	550.00	
R.M.	11.82	538.47	538.47	

SEE NEXT PAGE FOR EAST HALF

CHECK ELEV. ON FORMS FOR TOP OF
ACTIVATED CARBON TANKS - EAST HALF

8-27-48

LEONARD
BAKER
SHIPMAN

Mon. on L.O. Ave
5+55E

R.M.	+12.72	551.19	538.47	
		GRADE	G. ROD	
OUTER RIM		550.00	-1.19	O.K. ±.01
"				
CENTER W. SIDE		550.04	-1.15	.01' LOW
BOTTOM OF SUPPORT CHANNELS		548.92	-2.27	O.K. ±.02
TOP OF BOXES (UNDER SIDE OF ROOF)		549.75	-1.44	O.K. +.01 - .03
RIM ON M.H.		550.02	-1.17	FROM .01 TO .05 HIGH
TOP OF CENTER PANEL		550.21	-0.98	O.K. +.02 - 0
CHECK R.M.			-12.72	538.47

LEONARD
BAKER
SHIPMAN

56

12" DRAIN LINE # 114.

R.M.	+3.71	540.10	536.39	ON DAM.
		GRADE	-	HOLE ELEV. CUT.
N 780.97	L 27° 51' Lt.			
W 309.97	M.H.	517.87	-9.97	530.13 12.26
25.75		518.00	-10.90	529.20 11.20
N 332.75	L 70° 05' Rt.			
W 328.02	M.H.	518.13	-8.31	531.79 13.66
CHECK R.M.			-3.71	536.39

THIRD RELOCATION.

Oct. 7, 1948

LEONARD
SHIPPYMAN
WEST.

57

→ 8" SANITARY SEWER # 118.

B.M.	+5.35	548.89		538.04	0+00 L.D. Cone. Man
	✓	GRADE	-	HUB. ELEV.	CUT
S109.17	} P.I. & M.H.	527.50		527.44	AS LAID.
W169.40					
W190		527.60	-9.26	534.13	6.53
W210		527.70	-10.44	532.95	5.25
W230		527.80	-10.50	532.89	5.09
W250		527.90	-10.74	532.45	4.55
W270		528.00	-10.88	532.51	4.51
W290		528.10	-9.49	533.90	5.80
S111.17	} P.I. & M.H.	528.18	-8.89	534.50	6.32
W305.44					
20'		528.50	-8.59	534.80	6.50
40'		528.42	-8.77	534.62	6.20
60'		528.54	-9.31	534.09	5.54
80'		528.66	-8.95	534.44	5.78
S117.19	} P.I. & M.H.	528.77	-8.32	535.07	6.30
W334.02					
N. 2.8		528.87	-7.89	535.50	6.63
N. 22.8		528.97	-7.30	536.09	7.12
N. 42.8		529.07	-7.53	535.86	6.79

See BOOK 734 P 37
for revised layout

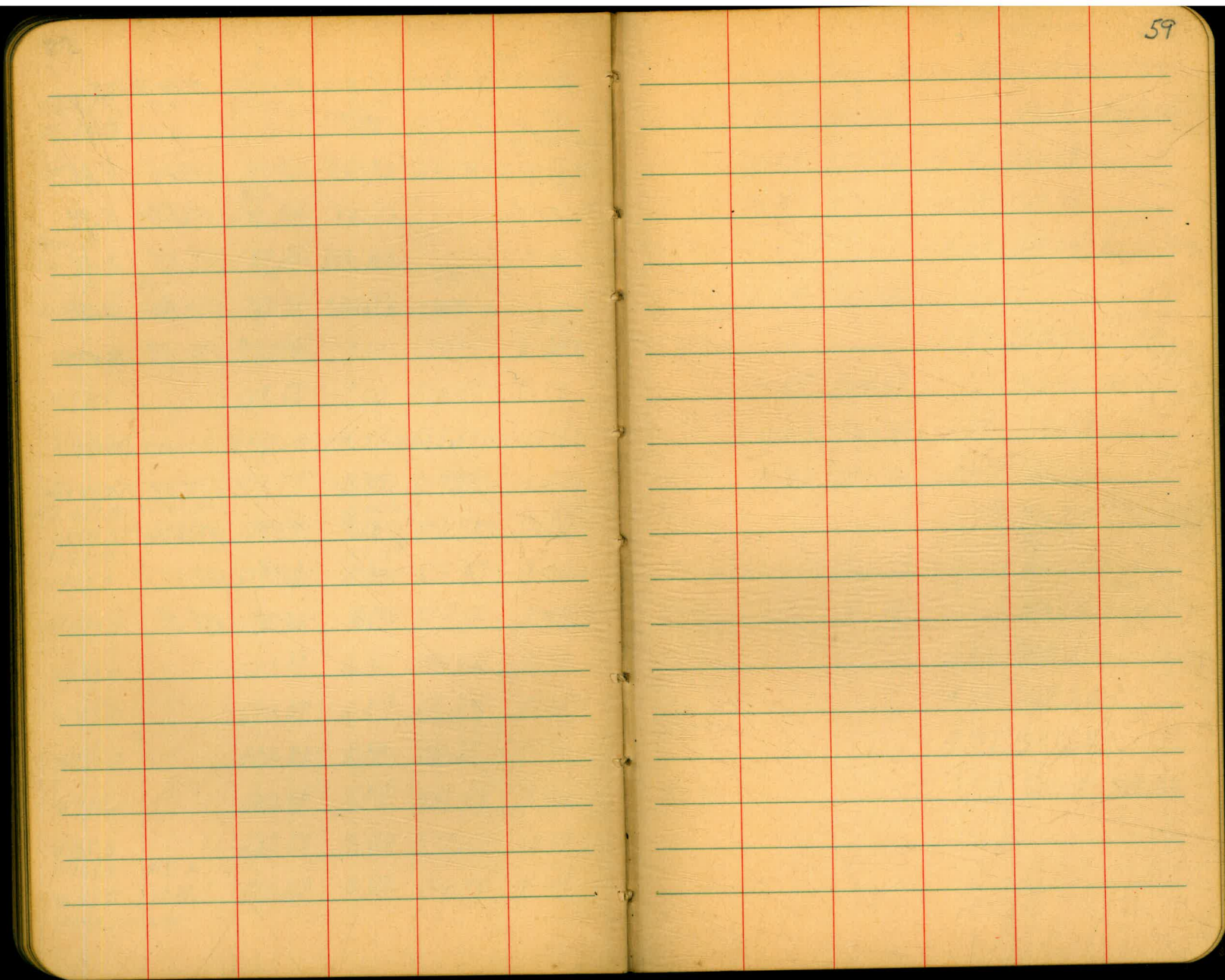
	H.d.	-	HUR. ELEV.	CUT.
N64.57 ✓ + P.I. 45 R. GRADE.	543.39			
W334.02 M.H.	529.18	-7.79	735.60	6.42
T.P.		-4.80	538.59	6.42
	+8.38			
FROM P.I.	H.d.			
NE 20'	529.28			
NE 29.7' TO CONC. SUPPORT.	529.38			
NE 60'	529.48	-9.20	537.77	8.29
NE 70'	529.58	-9.00	537.97	8.44
NE 90'	529.68	-8.46	538.51	8.88
NE 120'	529.78	-7.48	539.49	9.71
P.I. & M.H. N165.00	529.89	8.16	538.81	8.92
NE 140.0' W 230.59	529.98	8.04	538.95	9.00
N165.00				
W 225.0	530.05	7.35	539.62	9.59
W 205.0	530.19	6.55	540.42	10.29
W 185.0	530.28	5.69	541.28	11.05
W 165.0	530.33	4.92	542.15	11.82
W 145.0	530.43	4.09	542.98	12.45
W 125.0	530.53	3.40	543.57	13.04
N165.0 P.I. &	530.62	2.72	544.25	13.62
W 85.0 M.H.				
LINE CANCELLED.				

8" PIPE.
SANITARY SEWER CONNECTION TO HEAD HOUSE.

	H.d.			CUT.
N165.0 P.I. 45 R.	546.97			
W 85.0 M.H.	535.58	-2.72	544.25	9.67
FROM P.I.				
SE 20.0'	535.68	-2.75	544.22	8.54
SE 40.0'	535.78	-8.92	538.05	2.27
END. SE 66.47	N118.0	W 88.0	535.90	-1.05
CHECK				
B.M.		-10.58	536.39	ON DAM.

CHECK ELEV. ON CONC. SUPPORT FOR 8" SANITARY SEWER

B.M.	+1.35	539.94	538.59	T.P. ON BOX.
N.C.		GRADE.		
29.7 FROM P.I.		529.89	-11.06	528.88
		PIPE INV.		
NE 40.0		529.38	-10.99	529.05
NE 56.0		529.46	-10.86	529.08



7-27-48 Baker
Shipman

60

72" RESERVOIR INLET		INVERT	ELEV.	OF EAST END
+	+	-		
B.M.	0.77	537.16		536.39 ON DAM.
T.P.#1	0.77	524.96	12.97	524.19
T.P.#2	2.16	514.64	12.48	512.48
SET B.M.			4.60	510.04 ON INLET STR.
T.P.#3	1.68	511.72		
EAST END OF 72" PIPE			3.26	508.46 INVERT ELEV. ON INLET STR.
	4.55	514.59		510.04
T.P.#4	12.32	526.57	0.34	514.25
T.P.#5	11.28	537.36	0.49	526.08
B.M. ON DAM			0.97	536.39 = 536.39

72" RESERVOIR INLET		INVERT	ELEV.	OF JOINTS
+	+	-	ELEV.	B.M. ON
B.M.	1.71	511.75		510.04 INLET STR.
16' WEST OF E. END			3.65	508.10
33' WEST OF E. END			4.09	507.66
50' WEST OF E. END			4.57	507.18
B.M.			1.71	510.04 510.04

8-4-48 Baker
Shipman

LEVELS ON BLUE TOPS: TOP OF REGULATING
RESERVOIR.

	+	π	-	
B.M.	0.76	537.15		536.39 ON DAM
N0787				
7+68.5			6.72	530.43 Hub
N1+06				
7+15.2			6.59	530.56 Hub
N1+06				
7+01.3			6.59	530.56 Hub
T.P. #1			6.42	530.73 on Rock
	4.86	535.59		
N1+06				
6+50			4.98	530.61 Hub
N1+06				
5+49.7			4.97	530.62 Hub
N1+06				
3+99			5.03	530.96 Hub
N1+06				
1+20			5.12	530.47 Hub
N 97				
0+98			5.12	530.47 Hub
N1+04				
1+08			5.10	530.49 Hub
N0787				
0+90			5.10	530.49 Hub
T.P. #2			4.79	530.80 on Rock
	6.01	536.81		
B.M.			.44	536.37 536.39

8-4-48 Shipman
Baker

CHECK LEVELS: 48" WASTE WASH WATER #108

	+	+	-		62
B.M.	0.56	538.60		538.04	0+00 CORRECT ELEV. 527.67
S 90.67					
W 179.30			10.91	527.69	527.67
S 100.67					
W 179.00			11.32	527.28	527.45
W 205.50			11.82	526.78	526.88
W 232.0			12.15	526.45	526.30
W 273.25			11.66	526.94	527.05
T.P. #1			7.28	531.32	ON PIPE
		9.07	540.39		
S 80.67					
W 273.25			12.97	527.42	527.41
S 60.67					
W 273.25			12.60	527.79	527.78
S 40.67					
W 273.25			12.26	528.13	528.14
S 20.67					
W 273.25			11.87	528.52	528.51
B.M.			2.34	538.05	538.04

CHECK LEVELS
8" SLUDGE LINE #116

8-6-48

Baker
Shipman

64

B.M.	+	x	-	CONC. COVER 36" DRAIN
	2.48	529.07		526.59
		GRADE	4.03	
		INV. ELEV		
S174.88				
E 218.5		524.38	4.74	524.33 - .05
E 200.0		524.29	4.82	524.25 - .04
E 150.0	covered			
E 136.17		523.97	5.16	523.91 - .06
E 100.0	covered			
E 60.0		523.59	5.53	523.54 - .05
E 49.0		523.53	5.57	523.50 - .03
E 43.0	covered			
E 30.0		523.44	5.70	523.37 - .07
W 43.0		523.07	6.12	522.95 - .12
W 50.0		523.04	6.10	522.97 - .07
S174.88				
W 110.0	4 PT	522.74	6.30	522.77 + .03
T.P.			5.59	523.49

CHECK LEVELS
8" SLUDGE LINE # 116 (cont)

3.61

65

T.P.	+	+	-		
	3.61	527.09		523.48	
W143.83		522.50	4.67	522.42	-0.8
S107.17					
W177.66	4 Pt.	522.26	4.89	522.20	-0.06
W 200		522.15	5.00	522.09	-0.06
W 225		522.02	5.14	521.95	-0.07
W 250		521.90	5.24	521.85	-0.05
W 275		521.77	5.34	521.75	-0.02
S107.17					
W302.46	4 Pt.	521.64	5.44	521.65	+0.01
T.P.			3.34	523.75	
	13.02	536.77			
T.P.			3.89	532.88	
	0.88	539.74			
B.M.	0+00 A115		1.73	538.03	538.04
B.M.	+ 2.32	528.91		526.59	
S174.83					
0+00		523.29	5.61	523.30	+0.01
W 80		522.89	6.03	522.88	-0.01
B.M.			2.32	526.59	526.59

Oct. 25, 1948.

LEONARD
SHIPPAN
WEST.

CHECK LEVELS ON TOP OF RY-PASS STR.

LOCATION.	GRADE:	G. ROD	REMARKS
R.M. +11.94	550.41	598.47	CONC. 170N 585'E. X ON TOP OF
T.R.M.	-0.99	550.02	CARRON TANK,
+5.09	H.S. 555.05		
WALL #2 N. EDGE	545.00	-10.05	OR HI TO O.K.
" S. EDGE	544.89	-10.22	OK.
WALL #3 N. EDGE	550.25	-4.80	O.K. TO O.K. HI.
" S. EDGE	550.08	-4.97	O.K. TO O.K. HI.
WALL #9 N. EDGE	552.00	-3.05	01' HI.
" S. EDGE	551.83	-3.22	OK.
WALL #10 W. EDGE	552.00	-3.05	O.K.
" E. EDGE	551.89	-3.22	O.K.
WALLS #1, 4, 5	552.50	-2.55	0.10 LOW TO .05' HI.
" TOP 6" CURB	553.00	-2.05	O TO .02' HI.
WALLS #1, 4, 8, 6, 7 E. END	554.00	-1.05	O. TO .02' HI.
" TOP 6" CURB	554.50	-0.55	O.K. TO O.K.
NOTCH FOR			
FUTURE 3.25 W. END	551.71	-3.84	
" E. END	552.21	-1.84	
CHECKT. R.M.		-5.03	550.02

Nov. 22, 1948

LEONARD
WEST
PAYNE

66

RY-PASS STR. CHECK WIER WALL ELEV.

WALL #	GRADE	W. END	ELEV.	REMARKS
T.R.M.	5.07	555.09	550.02	X ON TOP OF CARRON STR.
W. END	545.0	-10.09	545.00	
CENTER	"	-10.08	545.01	
E. END	"	-10.09	545.00	
W. END	550.25	-4.82	550.27	
CENTER	"	-4.84	550.25	
E. END	"	-4.83	550.26	
CORNER #10	552.00	-3.08	552.01	
S. END #9	"	-3.07	552.02	
AT BEAM 1.	"	-3.09	552.00	RING S. SIDE
SET R.M.		-5.09	550.00	EAST CARRON TANK

9-2-48 LEONARD SHIPMAN WEST. 67

CUT STAKES FOR
36" PUMPING PLANT FORCE MAIN # 110.

R.M. +8.66 547.13 538.47 CONC. MON
5+85 E.

N 74.42 INV. GRADE - HUB ELV. CUT

E 364.50 START 532.10 -11.28 535.85 9.75

N 104.42 532.20 -11.28 535.85 9.65

N 124.42 532.30 -4.30 542.83 10.58

E 364.50 P.I.

N 144.50 45° LT 532.40 -9.42 542.91 11.81

N 158.64

E 350.36 532.50 -9.14 542.99 11.49

N 172.78

E 336.22 532.60 -3.63 542.50 10.90

N 186.92

E 322.07 532.70 -4.50 542.62 9.92

N 201.08

E 307.92 532.80 -4.66 542.47 9.67

N 206.75 P.I.

E 302.25 45° LT 532.84 -4.53 542.60 9.76

CHECK R.M. -8.66 538.47

9-2-48 LEONARD SHIPMAN WEST

R.M. +8.97 547.44 538.47

N 206.75 42° OFFSET

E 302.25 90° TO FWD TANGENT 532.84 -4.85 542.59 9.75

E 282.25 532.94 -4.16 542.28 10.34

E 262.25 533.04 -3.55 542.89 10.85

E 242.25 533.14 -3.48 542.96 10.32

9-2-48.

65'

CUT STAKES FOR	36" FORCE MAIN - CONTO	H.d.		HUB ELEV.	CUT
N 206.75		547.44			
E 222.25		533.24	-3.09	544.35	11.11
E 202.25		533.34	-3.03	544.41	11.07
E 182.25		533.44	-2.90	544.54	11.10
E 162.25		533.54	-2.53	544.91	11.37
E 142.25		533.64	-2.35	545.09	11.45
E 122.25		533.74	-2.28	545.16	11.47
E 102.25		533.84	-2.29	545.15	11.31
E 82.25		533.94	-2.13	545.31	11.37
CASEN R.M.			-8.97	536.97	

CONT'D.

9-21-48

LEONARD
SIMPSON
WEST.

R.M.	12.28	H.d.			
N 206.75		548.77		536.39	ON DAM.
E 62.25		534.04	-2.75	546.02	11.98
E 42.25		534.14	-3.03	545.74	11.60
E 22.25		534.24	-2.83	545.94	11.70
E 02.25		534.34	-2.05	546.72	12.38
W 21.73	GRADE BREAK	534.46	-1.28	547.49	13.03

9-27-48

69

CUT STAKES FOR 36" FORCE MAIN - CONT'D					
	+	INVERT GRADE	-	HUB ELEV.	CUT
N206.75		548.77			
W41.73	GRADE	534.98	-1.84	546.93	11.95
W61.73	GRADE	535.50	-2.24	546.53	11.03
W81.73		536.02	-3.68	545.09	9.07
W101.73		536.54	-4.69	544.08	7.54
W121.73		537.06	-5.71	543.06	6.0
W133.76	GRADE BREAK.	537.38	-8.00	545.77	3.39
W136.86	TOP OF 48" WASTE LINE.		-12.38	536.44	
CHECK P.M.			-12.38	536.39	ON DAM
			9-28-48.	LEONARD - BAKER SHIPMAN - WEST.	
R.M.	+8.39	544.78		536.39	
RESET. W133.76	GRADE BREAK.	537.38	-2.69	542.09	4.71
W149.65	"	537.20	-3.19	541.59	4.39
W174.65		535.40	-4.90	539.88	4.48
W197.33		533.76	-6.22	538.56	4.30
CHECK R.M.			-8.39	536.39	

Down, Please get
 ties to W. end of 36"
 force main, in just as
 shown on drawing.
 Model of
 N 265.92 } Elev. m top of pipe at
 W 242.02 } and = 531.50 City Datum.
 W.S.P.

10-1-48 LEONARD, BAKER,
SHIPMAN, WEST 70

CUT STAKES FOR 36" FORCE MAIN - CONT'D.

B.M.	+2.84	539.28		536.89
P.T.	{ N 206.75	L 59015' RT.		
	{ W 207.08	GRADE	-	HUR ELEV. CUT.
20' NW.		536.61	-1.72	537.51 5.90
40' NW.		530.17	-2.94	536.29 6.14
67.82 NW. END.		528.09	-5.35	533.98 5.79

Ties to lower end as built
and Elevation.

N 265.92
W 242.02 (Elev top of pipe

at end = 531.50 city datum

PIPE shell = 4³/₄"

C.O.N. 8-2-1950

		12-14-48	LEONARD WEST PRYNE	
CHECK ELEV. ON APRON AT END OF 54" RY-PASS LINE				
R.M.	+0.98	547.04	546.66	SALT BASIN
T.P.	+0.79	534.81	-12.96	504.08 ON PIPE
PIPE ENDS 196.32 FROM P.I. .6' RT.				
PIPE INVERT,			-7.19	527.62
GROUND, PIPE END			-8.50	526.31
"	4' FROM PIPE	STA 200.8	-9.20	525.61
"	9.5' " "	STA 205.8	-10.45	524.36
INV. FORM - END			-9.20	526.61 <small>524.90</small>
T.P.			-4.84	530.47
	+0.57	H.d. 531.04	G. Rod	
END OF APRON				
INV. GRADE APRON		524.80	-6.24	
CORNERS 5' BACK FROM		524.97	-6.07	
END OF APRON, SIDES		526.58	-4.46	
CHECK HOR ON 18" LINE, PAGE 28,				
	+5.75	525.42		
SET HIGH FOR 18" LINE				
		519.60	-5.62	
INV. 18" LINE ⁴ / ₁₆ AS LIND.				
			-3.61	521.81
NOTE: PIPE END AS LIND IS .62 LONGER AND .6' TO RIGHT OF THEORETICAL END PER PLAN, SHEET 50 U.				

		9-3-48	LEONARD SHIPMAN WEST	
CUT STAKES FOR 54" RY-PASS TO MURRAY RES. # 104				
R.M.	+8.97	H.d. 547.14	538.47	CONC. MON
N104.58		INV. GRADE	535.85	E583
E375.0	+0.00	535.00	-11.59	HUB ELEV. CUT
N126.95				0.85
E375.0		534.90	-4.45	542.99
N149.08				8.09
E375.0	+0.44 @	534.80	-3.48	543.96
(NOTE: SLOPE CHANGED ON 9-28-48)				
CHECK R.M.			-8.97	538.47
	+10.42	548.89		
1+44 ⁵⁰	RESET	534.78	-4.29	544.50
0+64 ⁵⁰		534.68	-4.85	544.04
0+74 ⁵⁰		534.59	-5.40	543.49
1+04 ⁵⁰		534.49	-5.40	543.49
1+24 ⁵⁰		534.39	-5.87	543.02
1+44 ⁵⁰		534.29	-8.94	539.25
1+64 ⁵⁰		533.91	-10.13	538.76
1+78 ⁵⁰		533.29	-10.92	537.97
T.P.	+7.82	H.d. 545.96	-10.85	538.14
1+92 ⁵⁰		532.25	10.57	535.39
2+08 ⁴⁰		530.97	12.49	533.47
T.P.	+4.92	548.92	-1.96	544.00
CHECK R.M.			-10.45	538.47 = 538.47

CHECK LEVELS ON BY-PASS STR. - CONT'D FROM OPP. PAGE

	H. I.		
	545.21		
INV. OF 54" RETURN LINE.	-8.05	537.16	
INV. OF 68" F. MONTE LINE.	-7.26	537.95	
INV. OF 54" OVERFLOW.	-10.24	534.97	
INV. OF 72" INFLUENT	-7.20	538.01	
72" INFLUENT LINE.			
INV. OF GATE FRAME.	-7.23	537.98	

9-28-48 LEONARD
BANKER
SHAWMAN
WEST.

72

CHECK LEVELS ON BY-PASS STR.

	H. I.		ELEV.	COND. MON.
B.M.	6.74	545.21	538.47	538 E.
TOP OF FLOOR;		GRADE	G. ROD.	
BETWEEN WALLS #1 & 2.	W. END	537.25	-7.96	N. SIDE .02 LOW.
"	E. END	537.15	-8.06	S. SIDE .02 LOW
BETWEEN WALLS #2 & 3.	W. END	537.25	-7.96	N. SIDE .01 LOW
"	E. END	537.15	-8.06	S. SIDE O.K.
BETWEEN WALLS #3 & 4.	W. END	538.00	-7.21	O.K.
"	E. END	537.90	-7.31	E. END .03 LOW.
BETWEEN WALLS #4 & 5.	W. END	538.00	-7.21	W. END .03 LANG.
"	E. END	537.90	-7.31	.01 LOW S. SIDE
BETWEEN WALLS #5 & 6.	W. END	537.25	-7.96	.02 LOW N. SIDE
"	E. END	537.15	-8.06	.02 LOW N. SIDE
BETWEEN WALLS #6 & 7.	W. END	538.00	-7.21	.01 LOW S. SIDE
"	E. END	537.90	-7.31	S. SIDE
BETWEEN WALLS #7 & 8.	W. END	538.00	-7.21	N. SIDE .02 HIGH
"	E. END	537.90	-7.31	.02 LOW.
BETWEEN WALLS #8 & 9.	W. END	538.00	-7.21	S. SIDE O.K.
"	E. END	537.90	-7.31	N. SIDE O.K.
BETWEEN WALLS #9 & 10.	W. END	538.00	-7.21	O.K.
"	E. END	537.90	-7.31	.04 LOW E. END.
BETWEEN WALLS #10 & 11.	W. END	538.10	-8.11	.02 LOW W. END.
"	E. END	537.90	-7.31	S. SIDE .05 LOW
BETWEEN WALLS #11 & 12.	W. END	537.90	-7.31	N. SIDE .06 LOW
"	E. END	538.00	-7.21	O.K.
BETWEEN WALLS #12 & 13.	W. END	538.00	-7.21	N. END .02 HI.
"	E. END	537.90	-7.31	S. END .03 LOW.
END OF 6" DRAIN, OUTSIDE WALL		-13.13	532.08	INV. ELEV.
54" RETURN LINE.				
INV. OF STEEL RING IN WALL.		-8.23	536.98	
(RING IS 0.18' LOWER THAN COND. IN PIPE)				

Oct. 18, 1948 LEONARD SHIPMAN WEST.

RESERVOIR INLET STR.
CHECK LEVELS ON FLOOR SLAB AT 521 ELEV.

R.M.	+0.85	527.22		526.39	ON DAM.
T.P.	+1.29	527.50	-11.21	526.01	ON PIPE.
OUTER EDGE		H.d. ELEV. 521.00	6. Rod. -6.30	O.K. $\pm .01$	
BETWEEN WALLS 1 & 2	CENTER N. END	521.00	-6.30	O.K. $\pm .01$	
"	OUTER EDGES	521.10	-6.20	O.K. $\pm .01$	
BETWEEN WEST 2 nd WALL	N. END	521.00	-6.30	O.K. $\pm .01$	
"	S. END	520.90	-6.40	O.K. $\pm .01$	
BETWEEN WALLS 2 & 3	N. END	521.00	-6.30	O.K. $\pm .01$	
"	S. END	520.90	-6.40	O.K. $\pm .01$	
BETWEEN WALLS 3 & 4	E. SIDE	522.00	-4.50	O.K. $\pm .02$	
"	1/2 OF 12" DRAIN	522.90	-4.40	O.K. $\pm .01$	
BETWEEN WALLS	S. END, OUTER EDGE	521.00	-6.30	O.K. $\pm .01$	
"	1/2 OF 12" DRAIN	520.90	-6.40	O.K. $\pm .01$	
GROUND UNDER	S. END AVERAGE	519.92	-7.42	519.88	
GROUND UNDER	N. END AVERAGE	519.92	-7.44	519.86	
KEYWAY	S. END GROUND UNDER	519.79	-7.59	519.71	
KEYWAY	N. END	519.79	-7.54	519.76	
T.P.	+11.08	527.04	-1.29	526.01	
CHECK R.M.			-0.65	526.39	

9-29-48 LEONARD SHIPMAN WEST. 73

CHECK LEVELS ON RESERVOIR INLET STR.

R.M.	+2.05	528.44		526.39	ON DAM.
54" BY-PASS LINE		-10.51	527.93		ON TOP OF PIPE .06 LOW
SUBTRACT 4.99' TO INV. GRADE			522.94	=	523.00 ON TOP
72" EFFLUENT LINE		-10.80	527.64		ON PIPE .05 HIGH
SUBTRACT 6.61' TO INV. GRADE			521.03	=	521.00 ON TOP
54" OVERFLOW		-12.42	526.02		ON PIPE .03 HIGH
SUBTRACT 4.99' TO INV. GRADE			521.03	=	521.00
CHECK R.M.		-2.05	526.39		ON DAM.
CHECK WALL ELEV'S. OF FORMS		11-3-48	LEONARD SHIPMAN WEST.		
T.R.M.	+6.47	535.64		529.17	CONC. MEM. RES.
INNER FORMS					
OUTSIDE WALL	W. SIDE	535.58	-0.06'		
"	E. SIDE	535.33	-0.31'		
SOUTH WALL	W. END	535.58	-0.06'	O.K.	-0.01'
"	E. END	535.33	-0.31'	O.K.	.01' HIGH
NORTH WALL	W. END	535.58	-0.06'		
"	E. END	535.33	-0.31'		
BOTTOM OF BEAM 0.4	W. END	534.42	-1.22		2" LOW
"	E. END	534.17	-1.47		.03 HIGH
		.12	-1.52		O.K. .02'

RESERVOIR INLET STR.

11-3-48

CHECK FORMS - CONTD

G. Pop

		H. d.				
		535.64				
WIER	HIGH SIDE	GRADE			+ 0	
WALL	S. END	528.00	-7.64	O.K.	-.01'	
"	LOW SIDE					
"	S. END	527.83	-7.81	O.K.	± 0.	
"	#1 HIGH SIDE	530.00	5.64	O.K.	+ 0	
"	#1 LOW SIDE	529.88	5.81	O.K.	-0.2' max	
"	#2 HIGH SIDE	530.00	5.64	O.K.	+ 0	
"	#2 LOW SIDE	529.88	5.81	O.K.	-0.2' max	
"	#3 HIGH SIDE	532.00	-3.64	O.K.	+ 0	
"	#3 LOW SIDE	531.88	-3.81	O.K.	-0.1'	
BOTTOM OF BEAM B1 N. END.		534.80	-1.34	15' LOW	O.K.	
BOTTOM OF BEAM B2 S. END.		534.59	-1.05	16' LOW	O.K.	
BOTTOM OF BEAM B3 S. END.		534.69	0.95	16' LOW	O.K.	
CHECK B.M.			-6.47		529.17	

11-10-48

LEONARD
SHIPMAN
WEST.

74

RESERVOIR INLET STR.

CHECK FORMS

		H. d.				
B.M. +9.69		538.86			529.17	CONC. MON.
TOP OF ROOF:		GRADE				± PAS.
N.W. COR.		536.25	-2.59		536.27	
N.E. COR.		536.00	-2.84		536.02	
S.W. COR.		536.25	-2.62		536.24	
S.E. COR.		536.00	2.85		536.01	
TOP OF CURBS.						
AROUND OPENINGS		536.33	-2.52		536.34	
BOTTOM OF ROOF						
WEST SIDE		535.58	-3.28		535.58	
EAST SIDE		535.33	-3.52		535.34	
TOP OF 2'x9' DOOR			-2.65		536.21	AFTER MOVING
CENTER S. END		536.21	-2.66		536.20	
TOP OF 2'x9' DOOR			-2.63		536.23	
CENTER N. END		536.21	-2.61		536.25	"
CHECK B.M.			-2.77		536.08	CONC. MON ± AXIS.

ELEVATION OF STEEL RODS SET ALONG
 NORTH RIM OF RESERVOIR AT ALYARROO
 FILTRATION PLANT. SET APPROX 116.85 N. 8-10-48.

LEONARD
 BAKER
 SURVEYOR 75

NOTE: PINS ARE $\frac{5}{8}$ " RODS WITHIN 3" PIPES EMBEDDED IN CONC.
 H. I. ELEV.

B.M.	+1.98	538.87	536.89	ON DAM.
T.P.			-6.60	531.77 ON HUB
	+0.59	532.86		
T.P.			-2.67	529.69 PIN AT 7+50
	+5.58	535.27		
			-5.42	529.85 PIN AT 6+75
T.P.			-5.32	529.95 PIN AT 5+50
	+5.49	535.44		
			-5.67	529.77 PIN AT 4+00
T.P.			-5.58	529.86 PIN AT 2+50
	+5.58	535.39		
			-5.64	529.75 PIN AT 1+00
T.P.			-5.60	529.79 PIN AT 0+80 50' N.
	+5.21	535.00		
CHECK (SET BY RAINEY)			-0.60	534.40 HUB AT SW. CORNER = 534.28
T.P.			-4.72	530.28 ROCK
	+4.98	535.26		

T.P. 535.26 -5.02 530.24 ROCK
 +4.76 535.00

T.P. -1.77 530.23 ROCK
 +7.87 538.10

CHECK ON DAM
 B.M. -1.70 536.40 = 536.89

CHECK ELEV. ON STEEL ROOS IN N. BANK OF RESERVOIR, LEONARD WEST FAYNE.
 DEC. 23, 1948

B.M. +0.16 536.55 536.89 ON DAM SET.

PIN AT 7+50 -6.88 529.67 = 529.69

T.P. B.M. #8 -6.65 529.90 = 529.90

+5.49 535.39

PIN AT 6+75 -5.56 529.83 = 529.85 SET.

" " 5+50 -5.45 529.94 = 529.95 SET

" " 4+00 -5.63 529.76 529.77

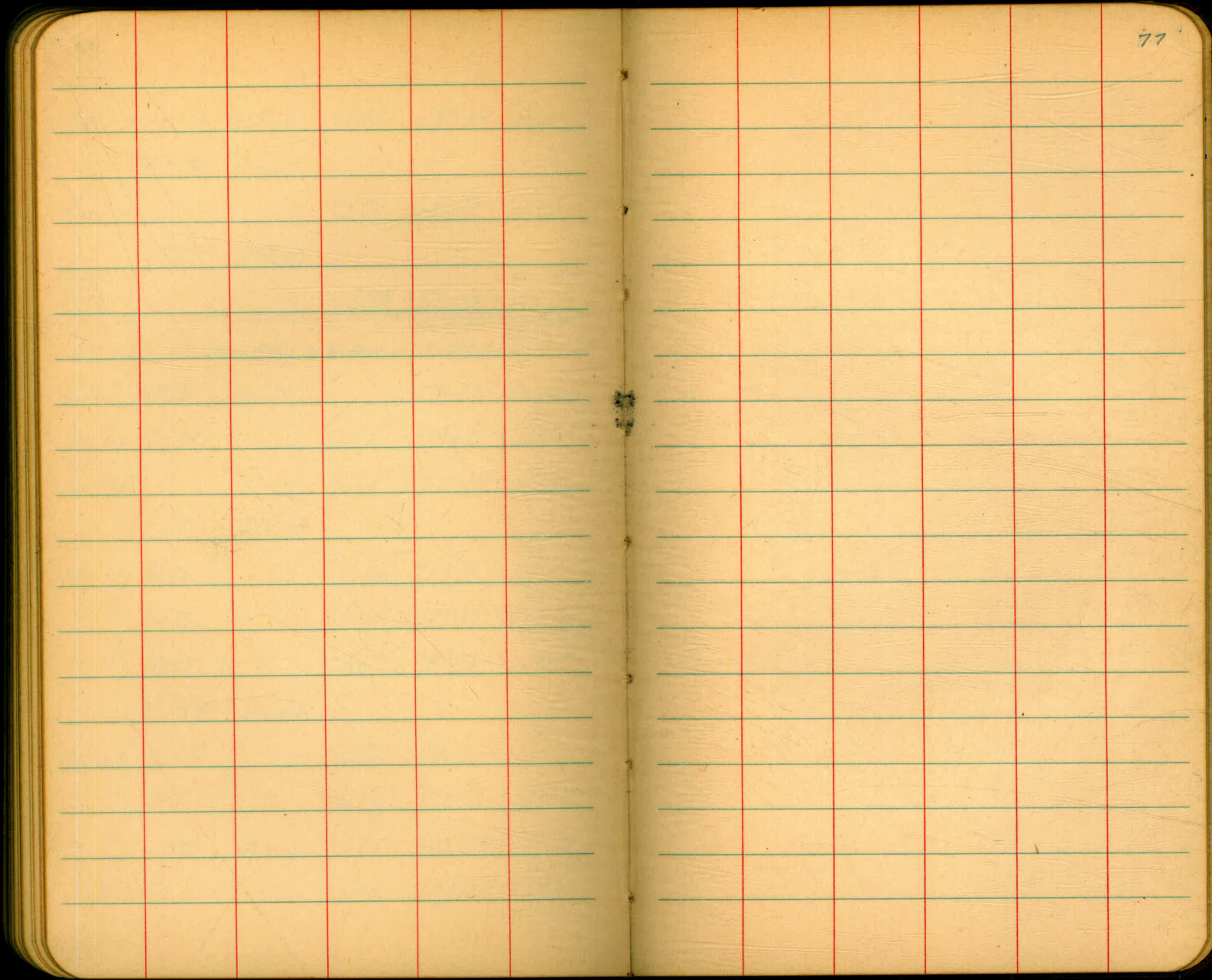
+5.48 535.24

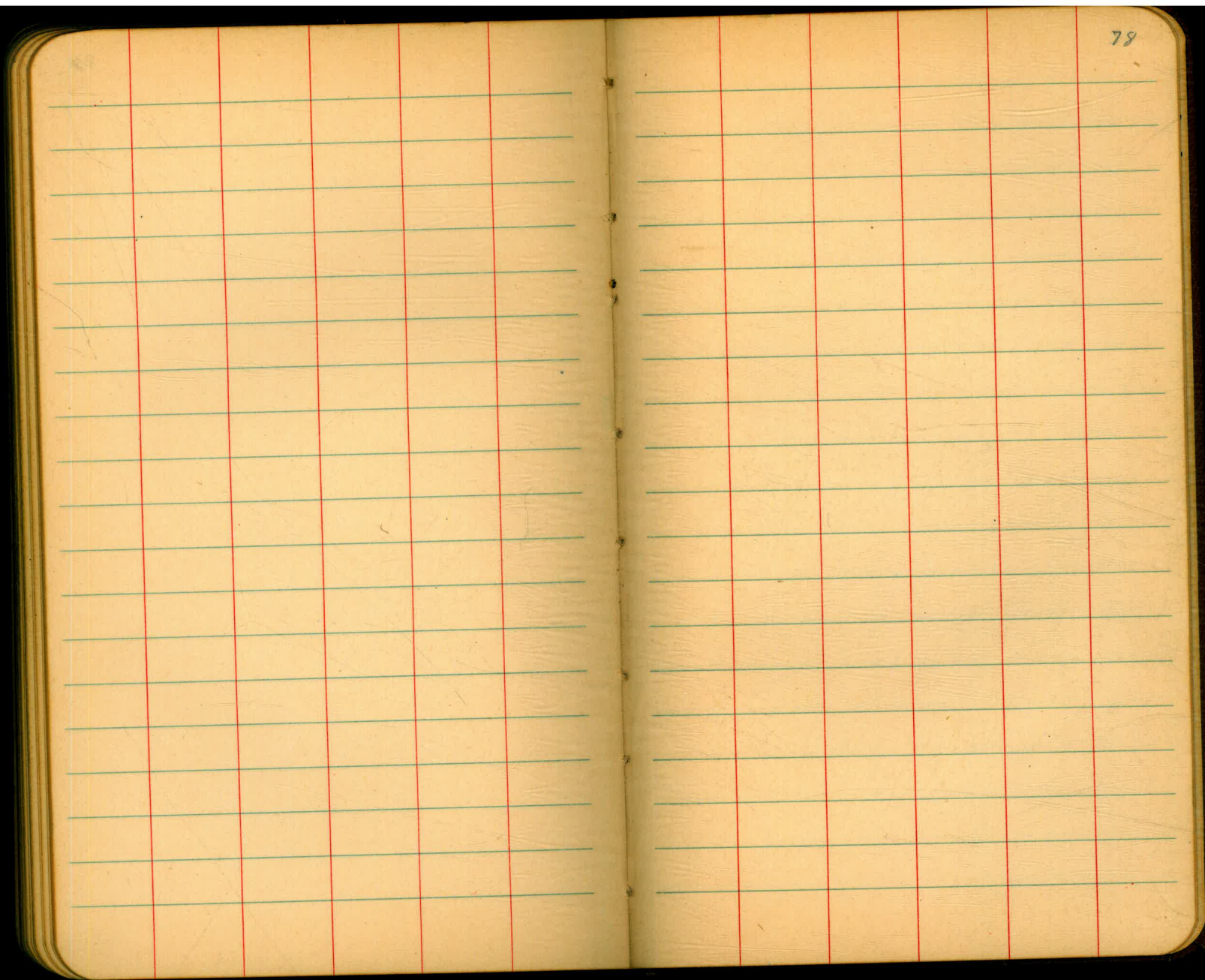
PIN AT 2+50 -5.85 529.855 = 529.86 SET

" " 1+00 -5.50 529.74 = 529.75

" " 0+80 50 H. -5.46 529.78 = 529.79

CHECK B.M. #5 -5.60 529.64 = 529.64 RECORD.





CITY OF SAN DIEGO

REED

MAY 17 1948

RESIDENT ENGINEER

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 $41.9 + (20 - 16) \div 2$ or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.

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544.19
- 6.25
537.94

6.61
.59
7.20