

15

ENGINEERS  
SD 525  
LEVEL BOOK

NO. 10

F.B. 525

WETZGEN  
TRADE MARK

# EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and  
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

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

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

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

Copyright, 1914, by Eugene Dietzgen Co.

3040

Daley - Sisson alley MH # 267 - F.T. 31.

Chisholm 2  
Brown 7-28-'22

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset North
0+00	From Page 68 Buck So. 6			329.40	325.00 .4995%	4.40	MH # 267
+25	5.32	334.72	5.14	329.58	325.12	4.46	
+50			5.07	329.65	325.25	4.40	
+75			5.07	329.65	325.37	4.28	Grade Sheet 372
1+00			5.01	329.71	325.50	4.21	
+25			5.05	329.67	325.62	4.05	
+50			4.84	329.88	325.75	4.13	
+75			4.69	330.03	325.87	4.16	
2+00 <sup>N.M.</sup>			4.55	330.17	326.00	4.17	MH # 266

Street Grade MH # 266 329.90

Contd on Page 2

Cont'd from Page 1

Chisholm  
Brown 7-28-22 2

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
N.W. 0+00		334.72	4.55	330.17	1.58% 326.00	4.17	MH # 266
+25			4.77	327.95	326.40	3.55	
+50 TP			3.26	331.46	326.79	4.67	
+75	11.09	342.55	8.25	334.30	327.19	7.11	
1+00			7.32	335.23	327.58	7.65	Grade Sheet # 373
+25			6.83	335.72	327.98	7.74	
+50			6.39	336.16	328.37	7.79	
+75			5.90	336.65	328.77	7.88	
2+00			5.20	337.35	329.16	8.19	
+25			4.85	337.70	329.56	8.14	
+50			3.93	338.62	329.95	8.67	
+75			3.67	338.88	330.35	8.53	
3+00			3.16	339.39	330.74	8.65	
+10			2.94	339.61	330.90	8.71	MH # 265

Cont'd on Page 3

Cont'd from Page 2

Chisholm }  
Brown } 7-20-23 } 3

Sta.	+	H.I.	-	Elev.	Grade 1587.	Cut	Staked on 6' offset West
0+00		342.55	2.94	339.61	330.90	8.71	MH # 265
+25 TP			2.40	340.15	331.30	8.85	
+50	8.19	348.34	7.70	340.64	331.69	8.95	
+75			7.00	341.34	332.09	9.25	
1+00			6.92	341.42	332.48	8.94	
+25			5.92	342.42	332.88	9.54	
+50			5.50	342.84	333.27	9.57	Grade Sheet 374
+75			5.23	343.11	333.67	9.44	
2+00			5.05	343.29	334.06	9.23	
+25			4.58	343.76	334.46	9.30	
+50			4.40	343.94	334.85	9.09	
+75			4.27	344.07	335.25	8.82	
3+00			4.03	344.31	335.64	8.67	
+10 <sup>1</sup> TP			4.33	344.01	335.80	8.21	MH # 264
B.M.	2.08	346.09	3.01	343.08	343.10		B.P. N.W. Klauber & Sisson

Cont'd on Page 4

Cont'd from Page 3

Chisholm  
Brom) 7-23-22 4

Sta.	+	H.I	-	Elev.	Grade .764%	Cut	Staked on 6' offset West
0+00		348.34	4.33	344.01	335.80	8.21	MH # 264
+25	2.08	346.09	5.35	340.74	335.99	4.75	
+50			5.25	340.84	336.18	4.66	
+75			5.02	341.07	336.37	4.70	
1+00			4.13	341.96	336.56	5.10	
+25			1.06	345.03	336.76	8.27	Grade Sheet # 375
+50 TP			0.67	345.42	336.95	8.47	
+75	3.78	349.20	3.18	346.02	337.14	8.88	
2+00			3.73	345.47	337.33	8.14	
+25			3.84	345.36	337.52	7.84	
+50			4.12	345.08	337.71	7.37	
+75			4.62	344.58	337.90	6.68	
3+00			4.70	344.50	338.09	6.41	
+25			4.94	344.26	338.28	5.98	
+40			4.86	344.34	338.40	5.94	MH # 263

Cont'd on Page 5

Cont'd from Page 4

Chas. B. Brown 7-25-25

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00		349.20	4.86	344.34	338.40 <sup>.765%</sup>	5.94	MH # 263
+25			4.59	344.61	338.59	6.02	
+50			4.27	344.93	338.78	6.15	
+75			3.73	345.47	338.97	6.50	
1+00			3.20	346.00	339.17	6.83	
+25 TP			3.15	346.05	339.36	6.69	
+50	6.68	352.73	6.67	346.06	339.55	6.51	Grade Sheet #376
+75			6.62	346.11	339.74	6.37	
2+00			6.24	346.49	339.93	6.56	
+25			5.58	347.15	340.12	7.03	
+50			5.20	347.53	340.31	7.22	
+75			4.98	347.75	340.50	7.25	
3+00			5.26	347.77	340.70	6.77	
+25			5.75	346.98	340.89	6.09	
+39 <sup>84</sup>			5.81	346.92	341.00	5.92	MH # 262

Cont'd on Page 6

Cont'd from Page 5

Christholm }  
 Brown } 7-28-22 **6**

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00	From Page 73 Book 506			353.40	1.555% 346.30	7.10	MH # 261
+25	7.23	360.63	6.54	354.09	346.69	7.40	
+50			6.16	354.47	347.08	7.39	
+75			5.77	354.86	347.47	7.39	
1+00			5.18	355.45	347.86	7.59	
+25			4.87	355.76	348.24	7.52	Grade Sheet # 378
+50			4.49	356.14	348.63	7.51	
+75			4.35	356.28	349.02	7.26	
2+00			4.22	356.41	349.41	7.00	
+25			3.64	356.99	349.80	7.19	
+50			3.05	357.58	350.19	7.39	
+75			2.88	357.75	350.58	7.17	
3+00 TP			1.70	358.93	350.97	7.96	
+25	6.68	365.61	6.45	359.16	351.35	7.81	
+40 <sup>68</sup>			6.04	359.57	351.60	7.97	MH # 260

Cont'd on Page 7



Cont'd from Page 6

Chisholm } 7-28-22  
Brown }

Sta.	+	H.I.	-	Elev.	Grade 1.369%	Cut	Staked on 6' offset West.
0+00		365.61	6.04	359.57	351.60	7.97	MH # 260
+30			7.20	358.41	352.01	6.40	
+50			6.96	358.65	352.28	6.37	
+75			5.30	360.31	352.63	7.68	
1+00			4.77	360.84	352.97	7.87	
+25			4.36	361.25	353.31	7.94	
+50			4.00	361.61	353.65	7.96	Grade Sheet #379
+75			3.68	361.93	354.00	7.93	
2+00			3.83	361.78	354.34	7.44	
+25			3.67	361.94	354.68	7.26	
+50 TP			3.31	362.30	355.02	7.28	
+75	5.92	368.22	5.61	362.61	355.36	7.25	
3+00			5.36	362.86	355.71	7.15	
+13 <sup>32</sup>			5.20	363.02	355.89	7.13	MH # 259

Cont'd on Page 8

Cont'd from Page 7

Cy 45.0m 27-28-22  
Brown

8

Sta.	+	H.I.	-	Elev.	Grade 1.368.90	Cut.	Staked on 6' offset West
0+00		368.22	5.20	363.02	355.89	7.13	MH # 259
+25			4.93	363.29	356.23	7.06	
+50			4.76	363.46	356.57	6.89	
+75			4.78	363.44	356.92	6.52	
1+00			4.74	363.48	357.26	6.22	
+25			4.24	363.98	357.60	6.38	Grade Sheet # 380
+50			3.99	364.23	357.94	6.29	
+75			4.02	364.20	358.28	5.92	
2+00			3.99	364.23	358.63	5.60	
+25 TP			3.53	364.69	358.97	5.72	
+50	4.72	369.41	4.51	364.98	359.31	5.59	
+75			4.24	365.17	359.65	5.52	
3+00 <sup>22</sup>			4.18	365.23	360.00	5.23	F.T. # 31
B.M.			4.83	364.58	364.55		B.P. N.W. Orange + Sisson

~ End of Sewer ~

Sta.	+	H.I.	-	Elev.	Grade
B.M.	From Book So. 6	Page 67		331.39	10.818%
TP	2.55	333.94	12.51	321.43	
0+00	8.68	330.11	11.32	318.79	311.20
+25			8.10	322.01	313.90
+50			7.65	322.46	316.61
+72 <sup>L</sup>			6.58	323.53	319.00

Cont'd on Page 10

Christman } 7-30-22 9  
Brown }

Cut Staked on 6' offset East.

2x2 hub on 6' offset W. from center F.T. # 34

7.59

MH # 124J

8.11

5.85

4.53

MH # 288

Grade Sheet # 383

Cont'd from Page 9

Chisholm 2-7-30-22  
Brown

10

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West.
W. side 0+00		330.11	17.32	318.79	12.453% 311.00	7.79	MH# 1247
+25			6.13	323.98	314.11	9.87	
0 +50 TP			2.71	327.40	317.23	10.17	
+75	12.88	340.28	10.09	330.19	320.34	9.85	
1+00			7.17	333.11	323.45	9.66	Grade Sheet # 384
+25			5.09	335.19	326.57	8.62	
+50			2.14	338.14	329.68	8.46	
+75 TP			8.11	340.17	332.79	7.38	
+87 <sup>g</sup>	9.78	349.95	9.11	340.84	334.40	6.44	MH# 287

Cont'd on Page 11

Cont'd from Page 10

Chisholm 27-30-22 11  
Brown

Sta	+	H.I.	-	Elev.	Grade 1.868%	Cut	Staked on 6' offset West
0+00		349.95	9.11	340.84	334.40	6.44	MH # 287
+25			8.18	341.77	334.87	6.90	
+50			7.29	342.66	335.33	7.33	
+75			6.73	343.22	335.80	7.42	
1+00			5.98	343.97	336.27	7.70	
+25			5.56	344.39	336.74	7.65	Grade Sheet #521
+50			4.94	345.01	337.20	7.81	
+75			4.48	345.47	337.67	7.80	
2+00			4.00	345.95	338.14	7.81	
+25			3.28	346.67	338.60	8.07	
+50			2.83	347.12	339.07	8.05	
+75			2.74	347.71	339.54	8.17	
+99 <sup>13</sup>			2.03	347.92	340.00	7.92	MH # 286

Reed - Thomas alley

MH# 115T - MH# 311  
 MH# 115T - MH# 307

Chisholm } 8-3-22  
 Brown }

12

Sta.	+	H.I.	-	Elev.	Grade	Cut
B.M.				331.00	22.691%	
TP	4.45	335.45	8.98	326.47		2x2 at 6' offset E. from center of MH# 306 Sole P. 48
TP	0.10	326.57	10.72	315.85		
TP	0.26	316.11	13.08	303.03		Grade Sheet #385
TP	1.32	304.35	12.33	292.02		
TP	0.43	292.45	12.65	279.80		
W.S.						
0+00	3.11	282.91	9.22	273.69	268.00	5.69
+25 TP			0.33	282.58	273.67	8.91
+50	13.00	295.58	7.25	288.33	279.35	8.98
+75			1.61	293.97	285.02	8.95
TP			0.31	295.27		—
1+00	11.77	307.04	7.27	299.77	290.69	9.08
W.S.						
+27 <sup>B</sup>			5.61	301.43	297.00	4.43

MH # 115T

Staked on 6' offset W.

MH # 310

Cont'd on Page 13

Cont'd from Page 12

Chisholm  
Brown 28-3-22

13

Sta.	+	H.I.	-	Elev.	Grade	Cut	
W.S. 0+00		307.04	5.61	301.43	1.927% 297.00	4.43	MH# 310
+25			5.08	301.96	297.48	4.48	Staked on 6' offset E.
+50			3.61	303.43	297.96	5.47	
+75			3.62	303.42	298.45	4.97	
1+00			3.32	303.72	298.93	4.79	
+25			2.93	304.11	299.41	4.70	
+55 <sup>68</sup>			4.61	302.43	300.00	2.43	MH # 311
TP.			11.77	295.27			
TP	0.37	295.64	13.06	282.58			
B.M.	0.38	282.96	9.27	273.69	273.69		{ W.S. of MH ring at E E. & W. at MH# 115T From Page 12 This Book

Cont'd from Page 14

Cont'd from Page 13

W.S.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset East
0+00		282.96	9.27	273.69	22.641% 268.00	5.69	MH# 115T
+25 TP			6.35	276.61	273.66	2.95	
+50	12.65	289.26	2.29	286.97	279.32	7.65	
TP			0.66	288.60	284.98	—	
+75	12.37	300.97	6.33	294.64	284.98	9.66	
TP			0.45	300.52		—	Grade Sheet # 386
+100	11.44	311.96	9.97	301.99	290.64	11.35	
+20			5.03	306.33	295.17	11.16	
TP			0.13	311.83		—	
+150	11.07	322.90	10.03	312.87	301.96	10.91	
+75			6.58	316.32	307.62	8.70	
ES.							
+89 92			5.41	317.49	314.00	6.49	MH# 309

Cont'd on Page 15



Cont'd from Page 14

Chisholm }  
Brown } 8-3-22 15

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
ES 0+00		322.90	5.41	317.49	2.758% 311.00	6.49	MH # 309
+25			4.34	318.56	311.69	6.87	
+50			5.43	317.47	312.38	5.09	
+75			4.80	318.10	313.07	5.03	
1+00			4.98	317.92	313.76	4.16	Grade Sheet # 410
+25			2.83	320.07	314.45	5.62	
TP			1.56	321.34		—	
+50	10.37	331.71	9.03	322.68	315.14	7.54	
+75			7.76	323.95	315.83	8.12	
2+00			6.60	325.11	316.52	8.59	
+25			5.83	325.88	317.21	8.67	
+50			5.23	326.48	317.90	8.58	
+75			4.83	326.88	318.58	8.30	
+90			4.36	327.35	319.00	8.35	MH # 308

Cont'd on Page 16

Cont'd from Page 15

Chickering  
Brown 8-3-22 **16**

Sta.	+	H.I.	-	Elev.	Grade 2.758%	Cut	Staked on 6' offset West
0+00		331.71	4.36	327.35	319.00	8.35	MH# 308
+25			3.51	328.20	319.69	8.51	
+50			2.98	328.73	320.38	8.35	
+75			2.14	329.57	321.07	8.50	
1+00 TP			1.95	329.76	321.76	8.00	Grade Sheet # 411
+25	6.69	336.15	6.30	330.15	322.45	7.70	
+50			5.77	330.68	323.14	7.54	
+75			5.28	331.17	323.83	7.34	
2+00			4.97	331.48	324.52	6.96	
+25			4.66	331.79	325.21	6.58	
+50			4.29	332.16	325.90	6.26	
+75			3.95	332.50	326.58	5.92	
+90			4.10	332.35	327.00	5.35	MH# 307
B.M.			5.44	331.01	331.00		212 at 6' offset E. from center of MH# 306

Pueblo - Mission alley MH# 438 - MH# 433

Chisholm }  
Brown } 8-9-32

17

Sta.	+	H.I	-	Elev.	
B.M.				333.44	.551%
TP	8.88	342.32	6.21	336.11	
TP	0.44	336.55	11.62	324.93	
W.S.					
0 + 00	11.31	336.24	12.92	323.32	318.40
+25			13.04	323.20	318.54
+50			10.52	325.72	318.68
+75			8.99	327.25	318.81
1 + 00			5.66	330.58	318.95
+25			5.98	330.26	319.09
+50			5.47	330.77	319.23
+75			4.93	331.31	319.36
2 + 00			3.95	332.29	319.50
+25			2.92	333.32	319.64
+50			1.41	334.83	319.78
+75			1.59	334.65	319.92
3 + 00 TP			0.54	335.70	320.05
+25	6.60	342.30	6.18	336.12	320.19
+50			5.76	336.54	320.33
+75			5.90	336.40	320.47

Staked on 6 offset East

B.P. N.W. Pueblo + University

MH# 109T

Grade Sheet # 501

Cont'd on Page 18

Cont'd from Page 17

Chisholm  
Brown 8-9-22 18

	+	H.I	-	Elev.	Grade	Cut	Staked on 6' offset East
4+00		342.30	5.30	337.00	320.60	16.40	
+25			5.45	336.85	320.74	16.11	
+50			5.86	336.44	320.88	15.56	
+71 <sup>8</sup>			6.08	336.22	321.00	15.22	MH# 438 5195
B.M. (S.D.)			8.85	333.45	333.44		B.P. N.W. University + Pueblo.

Cont'd on Page 19

Cont'd from Page 18

Chisholm 28-9-22 19  
Blair

	+	H.I.	-	Elev.	Grade 6.986%	Grade 318.40	Cut	Staked on 6' offset West
0+00				323.32			4.92	MH # 109T N 145
+25	11.24	334.56	10.15	324.41	320.15		4.26	
+50			6.05	328.51	321.89		6.62	
+75			2.82	331.74	323.64		8.10	
1+00 TP			0.75	333.81	325.39		8.42	
+25	9.88	343.69	6.85	336.84	327.13		9.71	Grade Sheet # 502
+50			7.61	336.08	328.88		7.20	
+75			8.05	335.64	330.63		5.01	
+94 <sup>67</sup>			7.58	336.11	332.00		4.11	MH # 437

Cont'd on Page 20

Cont'd from Page 19

	H.I.	-	Elev.	
0+00	343.69	7.58	336.11	1.809% 332.00
+25		6.58	337.11	332.45
+50		5.28	338.41	332.90
+75		4.46	339.23	333.36
1+00		3.13	340.56	333.81
+25		2.07	341.52	334.26
+50		1.18	342.51	334.71
+75 TP		0.30	343.39	335.17
2+00	10.49	353.88	9.53	344.35 335.62
+25			9.10	344.78 336.07
+50			7.81	346.07 336.52
+75			7.19	346.69 336.97
3+00			6.20	347.68 337.43
+25			5.55	348.33 337.88
+50			5.10	348.78 338.33
+75			4.88	349.00 338.78
4+02 <sup>26</sup>			4.83	349.05 339.28

Chisley Brown 28-9-12 20  
 Staked on 6' offset West  
 MH# 437 520'

Grade Sheet #503

MH# 436

Cont'd on Page 21

Cont'd from Page 20

	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset North
0+00		353.88	4.83	349.05	342.70 2.7027%	6.35	MH# 436
+11 <sup>10</sup>			4.88	349.00	343.00	6.00	MH# 435

Street	Grade	MH#436	348.60
"	"	MH#435	348.80

Grade Sheet #504

Chapman 8-9-22  
Brown

21

Cont'd on Page 22

Cont'd from Page 21

Chisholm Brown 8-9-22 22

Sta. N.W.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00		353.88	4.88	349.00	2.467 343.00	6.00	MH # 435
+25			3.43	350.45	343.62	6.83	
+50			2.32	351.56	344.23	7.33	
+75 TP			1.49	352.39	344.85	7.54	
1+00	9.33	361.72	8.34	353.38	345.47	7.91	
+25			7.62	354.10	346.08	8.02	Grade Sheet #505
+50			6.78	354.94	346.70	8.24	
+75			6.41	355.31	347.32	7.99	
2+00			5.86	355.86	347.93	7.93	
+25			4.82	356.90	348.55	8.35	
+50			4.51	357.21	349.17	8.04	
+80			3.97	357.75	349.91	7.84	MH # 434

Cont'd on Page 23



Cont'd from Page 22

Chisholm 28-9-22  
Brown 23

Sta.	+	H.I.	-	Elev.	Grade	Gut	Staked on 6' offset West
0+00		361.72	3.97	357.75	2.467 <sup>76</sup> 349.91	7.84	MH # 434
+25			3.37	358.35	350.53	7.82	
+50			3.02	358.70	351.14	7.56	
+75			2.73	358.99	351.76	7.23	
1+00 TP			2.15	359.57	352.38	7.19	
+25	7.26	366.83	7.02	359.81	352.99	6.82	Grade Sheet # 506
+50			6.90	359.93	353.61	6.32	
+75			6.37	360.46	354.23	6.23	
2+00			6.02	360.81	354.84	5.97	
+25			5.53	361.30	355.46	5.84	
+50			5.12	361.71	356.08	5.63	
+75			4.83	362.00	356.69	5.31	
+87 <sup>35</sup>			4.82	362.01	357.00	5.01	MH # 433
TP			5.20	361.63			
B.M.	7.70	369.33	2.68	366.65	366.60		B.P. N.W. Mission + Orange

End of Sewer

Annex sewer MH# 436 - MH# 432

Chisholm } 8-11-27  
Brown }

24

Sta N.W.	+	H.I.	-	Elev.	Grade	Cut	Staked on
0+00				349.05	339.28 .4%	9.77	MH# 436
+25	0.53	349.58	0.68	348.90	339.38	9.52	
+50			1.78	347.80	339.48	8.32	
+75			2.50	347.08	339.58	7.50	Grade Sheet #507
1+00			3.29	346.29	339.68	6.61	
+25			4.13	345.45	339.78	5.67	
+50			5.07	344.51	339.88	4.63	
S.W. +78			8.38	341.28	340.00	1.20	MH# 432

Street Grade 343.25

Cont'd on Page 25

Wisconsin Ave Sewer MH # 432 - MH # 429

Cont'd from Page 24

Chisholm 8-11-22  
Brown

25

Sta.	+	H.I.	-	Elev.	Grade	Cut
0+00		349.58	8.38	341.20	1.561% 340.00	1.20
+25			5.46	344.12	340.39	3.73
+50			4.95	344.63	340.78	3.85
+75			4.51	345.07	341.17	3.90
1+00			3.98	345.60	341.56	4.04
+25			3.46	346.12	341.95	4.17
+50 TP			2.98	346.60	342.34	4.26
+75	11.56	358.16	11.01	347.15	342.73	4.42
2+00			10.13	348.03	343.12	4.91
+25			9.17	348.99	343.51	5.48
+50			8.49	349.67	343.90	5.77
+75			7.45	350.71	344.29	6.42
3+00			6.66	351.50	344.68	6.82
+10			6.27	351.89	344.84	7.05

MH # 432

Staked on 6' offset W.

Grade Sheet # 508

MH # 431

Street Grade 350.15

Cont'd on Page 26

Christy  
Brown } 8-11-27

26

Sta.	+	H.I.	-	Elev.	Grade	Cut	
0 + 00		358.16	6.27	351.89	344.84 1.565%	7.05	MH # 431
+ 25			5.50	352.66	345.23	7.43	
+ 50			5.24	352.92	345.62	7.30	Staked on 6' offset West
+ 75			4.74	353.42	346.01	7.41	
1 + 00			4.50	353.66	346.41	7.25	
+ 25			4.20	353.96	346.80	7.16	
+ 50 TP			3.49	354.67	347.19	7.48	
1 75	7.68	362.35	7.91	354.44	347.58	6.86	Grade Sheet # 509
2 + 00			9.25	353.10	347.97	5.13	
+ 35			12.05	350.30	348.52	1.78	
+ 50			10.61	351.74	348.75	2.99	
+ 75			8.66	353.69	349.14	4.55	
3 + 00			7.14	355.21	349.54	5.67	
N.W. 27 + 16			6.93	355.42	349.80	5.62	MH # 429
		Street Grade		358.05			

Cont'd on Page 27

Orange Ave. sewer MH# 430 - MH# 417  
 Just E of Boundary.

Chisholm's  
 Brown 8-11-27

Sta.	+	H.I.	-	Elev	Grade	Cut	Staked on 6' offset South
0 + 00		362.35	6.93	355.42	3813% 350.00	5.42	MH# 429
+ 25			5.70	356.65	350.95	5.70	
+ 50			4.30	358.05	351.71	6.14	
+ 75			3.42	358.93	352.86	6.07	
1 + 00			2.34	360.01	353.81	6.20	Grade Sheet # 510
+ 25			1.55	360.85	354.77	6.08	
+ 50			0.84	361.51	355.72	5.79	
+ 83 <sup>54</sup>			0.92	361.43	357.00	4.43	MH# 430 Orange E of Boundary

Street Grade MH# 430 361.00

Cont'd on Page 28

Cont'd from Page 27

Orange Ave

Chisholm 28-11-22 28  
Brown

Sta.	+ H.I.	-	Elev.	Grade 1.483%	Ght	Staked on 6 offset North	
0+00	362.35	6.93	355.42	350.00	5.42	MH # 429 orange + Rucroff	
+25		7.16	355.19	350.37	4.82		
+50		5.65	356.70	350.74	5.96		
+75		3.32	359.03	351.11	7.92		
1+00 TP		1.56	360.79	351.48	9.31		
+25	6.42	367.21	5.28	361.93	351.85	10.08	Grade Sheet #511
+50		4.80	362.41	352.22	10.19		
+75		5.40	361.81	352.60	9.21		
2+00		5.79	361.42	352.97	8.45		
+25		5.44	361.77	353.34	8.43		
+50		4.97	362.24	353.71	8.53		
+75		4.52	362.69	354.08	8.61		
3+03 <sup>2</sup> 96		4.12	363.09	354.51	8.58	MH # 428	
			362.88				

Cont'd on Page 29

Cont'd from Page 28

Orange Ave  
3223 E 52 to 71 of 535

Chisholm  
Brown 28-11-22  
29

Sta.	+ H.I.	-	Elev.	Grade	Cut	Staked on 6' offset North	
0+00	367.21	4.12	363.09	354.51 1.489	8.58	MH# 428	
+25		3.66	363.55	354.88	8.67		
+50		3.26	363.95	355.25	8.70		
+75		3.07	364.14	355.63	8.57		
1+00 TP		2.88	364.33	356.00	8.33		
+25	6.60	370.93	6.32	364.61	356.37	8.24	Grade Sheet #512
+50			6.09	364.84	356.74	8.10	
+75			5.67	365.26	357.12	8.14	
2+00			5.43	365.50	357.49	8.01	
+25			4.98	365.95	357.86	8.09	
+50			4.66	366.27	358.23	8.04	
+75			4.30	366.63	358.60	8.03	
+98 <sup>72</sup>			4.11	366.82	358.96	7.86	MH# 427 orange + 33 to n.
B.M.			4.29	366.64	366.60	B.P. N.W.	Mission + Orange
	Street Grade			366.88			

Cont'd on Page 30

Cont'd from Page 29

Orange Ave

30 to Alley E.

Chisholm } 8-11-22  
Grown } 30

Sta.	+ H.I.	-	Elev.	Grade	Cut	
0+00	370.93	4.11	366.82	358.96 2.921%	7.86	Staked on 6' offset North MH # 427 5 of 33 St in Orange
+25		3.48	367.45	359.69	7.76	
+50		3.18	367.75	360.42	7.33	
+75		2.91	368.02	361.15	6.87	
1+00		2.54	368.39	361.88	6.51	Grade Sheet # 518
+25 TP		2.27	368.66	362.61	6.05	
+50 N.W.	6.62	375.28	6.36	368.92	363.34	5.58
+72 <sup>5</sup>			6.08	369.20	364.00	5.20
			4 Street Grade	369.20		MH # 417

Cont'd on Page 31



Chisholm & Brown 8-11-22 31

Sta N.W	+	H.I.	Alley Bl 40 Elev.	Grade .796%	GHT	Staked on 6' offset West	
0+00		375.28	6.08	369.20	364.00	5.20	MH # 417
+25			6.90	368.38	364.20	4.18	
+50			5.54	369.74	364.40	5.34	
+75			5.17	370.11	364.60	5.51	
1+00			4.62	370.66	364.80	5.86	
+25			4.06	371.22	365.00	6.22	
+50			2.97	372.31	365.19	7.12	Grade Sheet # 519
+75 TP			2.53	372.75	365.39	7.36	
2+00	4.93	377.68	5.23	372.45	365.59	6.86	
+25			5.01	372.67	365.79	6.88	
+50			5.01	372.67	365.99	6.68	
+75			4.86	372.82	366.19	6.63	
3+00			4.83	372.85	366.39	6.46	
+15			4.66	373.02	366.51	6.51	MH # 416.

Cont'd on Page 32

Cont'd from Page 31

Chisholm  
Brown 8-11-22 32

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00		377.68	1.66	373.02	366.51	6.51	MH # 416
+25			4.97	372.71	366.71	6.00	
+50			4.99	372.69	366.91	5.78	
+75			5.01	372.67	367.11	5.56	
1+00			4.99	372.69	367.31	5.38	
+25			5.19	372.49	367.51	4.98	
+50 TP			5.33	372.35	367.71	4.64	Grade Sheet # 520
+75	5.37	377.72	4.94	372.78	367.91	4.87	
2+00			5.25	372.37	368.11	4.26	
+25			4.49	373.23	368.31	4.92	
+50			4.93	372.79	368.51	4.28	
+75			4.32	373.40	368.70	4.70	
3+00			3.57	374.15	368.90	5.25	
+11 <sup>8</sup>			3.38	374.34	369.00	5.34	F.T. # 50 Alley PC 40
TP			5.78	371.94			
B.M.	2.54	374.48	7.85	366.63	366.60		B.P. N.W. Mission & Orange

— End of Sewer —

First St + Howard - El Cajon alley sewer

Christholm 8-19-22  
Hall

Sta.	+ H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West	
0+00	From Page 29 This Book		366.82	358.96 .399%	7.86	MH# 427	
+25	5.84	372.66	5.60	367.06	359.06	8.00	
+50			5.36	367.30	359.16	8.14	
+75			5.11	367.55	359.26	8.29	
1+00			4.89	367.77	359.36	8.41	
+25			4.57	368.09	359.46	8.63	Grade Sheet #513
+50			4.27	368.39	359.56	8.83	
+75			3.99	368.67	359.66	9.01	
2+00			3.73	368.93	359.76	9.17	
+25			3.36	369.30	359.86	9.44	
+50			3.08	369.58	359.96	9.62	
+60 <sup>25</sup>			2.98	369.68	360.00	9.68	MH# 426
	Street Grade		369.72				

Contd on Page 34

Cont'd from Page 33

Chickholm Hall 7-8-19-22 34

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00		372.66	2.98	369.68	360.00 +4%	9.68	MH # 426
+25			2.63	370.03	360.10	9.93	
+50 TP	1		2.21	370.45	360.20	10.25	
+75	6.66	377.11	6.30	370.81	360.30	10.51	
1+00			6.11	371.00	360.40	10.60	
+25			5.86	371.25	360.50	10.75	Grade Sheet #514
+50			5.59	371.52	360.60	10.92	
+75			5.21	371.90	360.70	11.20	
2+00			4.86	372.25	360.80	11.45	
+25			4.46	372.65	360.90	11.75	
SW. +49 <sup>88</sup>			4.29	372.82	361.00	11.82	MH # 425
Street Grade				372.52		0.10	

Cont'd on Page 35

Cont'd from Page 34

Sta.	+	H.I.	-	Elev.	Grade	Cut
0+00		377.11	4.29	372.82	361.00 .4%	11.82
+25			5.33	371.78	361.10	10.68
+50			4.95	372.16	361.20	10.96
+75			6.11	371.00	361.30	9.70
1+00			6.41	370.70	361.40	9.30
+25			6.67	370.44	361.50	8.94
+50 TP			7.11	370.00	361.60	8.40
+75	3.54	373.54	3.28	370.26	361.70	8.56
2+00			3.36	370.18	361.80	8.38
+25			3.91	369.63	361.90	7.73
+50			4.17	369.37	362.00	7.37
+75			4.70	368.84	362.10	6.74
3+00			5.09	368.45	362.20	6.25

Chisholm 28-19-22 35  
Hall

Staked on 6' offset South  
in Hillside Park BL1  
MH # 425 - Alley + 33' S.

Grade Sheet #515

MH # 424

Cont'd on Page 36

Cont'd from Page 35

Christoph Hall 8-19-22 36

Sta.	+	H.I.	-	Elev.	Grade 4%	Cut	Staked on 6' offset South
0+00		373.54	5.09	368.45	362.20	6.25	MH# 424
+25			5.81	367.73	362.30	5.43	
+50			6.16	367.38	362.40	4.98	
+75			7.05	366.49	362.50	3.99	
1+00			7.72	365.82	362.60	3.22	
+25			9.27	364.27	362.70	1.57	Grade Sheet # 516
+50 TP			8.28	365.26	362.80	2.46	
+75	8.76	374.02	7.78	366.24	362.90	3.34	
2+00			6.94	367.08	363.00	4.08	
+25			6.25	367.77	363.10	4.67	
+50			5.33	368.69	363.20	5.49	
+75			4.80	369.22	363.30	5.92	
3+00			4.43	369.59	363.40	6.19	MH# 423

Cont'd on Page 37

Contd from Page 36

Chisholm Hall 8-19-22 37

Sta	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset South
0+00		374.02	4.43	369.59	363.40 .4%	6.19	MH # 423
+25			4.45	369.57	363.50	6.07	
+50			4.32	369.70	363.60	6.10	
+75			3.77	370.25	363.70	6.55	
1+00 TP			3.46	370.56	363.80	6.76	
+25	6.05	376.61	5.58	371.03	363.90	7.13	Grade Sheet #517
+50			5.09	371.52	364.00	7.52	
+75			4.86	371.75	364.10	7.65	
2+00			4.17	372.44	364.20	8.24	
+25			3.84	372.77	364.30	8.47	
+50			3.41	373.20	364.40	8.80	
+75			3.24	373.87	364.50	8.87	
3+00			2.90	373.71	364.60	9.11	F.T. 52
TP			10.91	365.70			
TP	6.50	372.20	1.40	370.80			
B.M.	2.84	373.64	6.97	366.67	366.60		B.P. N.W. Orange + Mission

End of Sewer

Sta.	#17	+	H.I.	-	Elev.
0+00					
+25					
+50					
+75					
1+00					
+25					
+50					
+75					
2+00					



Mentone - Menlo alley sewer MH#24 - MH#23

Chisholm Hall } 8-12-22 39

Sta.	+	H.I.	-	Elev.	Grade 3%	Cut	
0+00	From Book	So. 2	Page 9	346.73	337.45	9.28	MH#24
+25	9.04	355.77	8.16	47.61	337.53	10.08	
+50			7.38	48.39	337.60	10.79	
+75			6.34	49.43	337.68	11.75	
1+00			5.31	50.46	337.75	12.71	Grade Sheet #399
+25			4.21	51.56	337.83	13.73	
+50			3.51	52.26	337.90	14.36	
+75			4.13	51.64	337.98	13.66	
2+00			4.28	51.49	338.05	13.44	
+25			4.34	51.43	338.13	13.30	
+50 TP			4.64	351.13	338.20	12.93	
+75	1.82	352.95	2.43	350.52	338.28	12.24	
3+00			3.25	49.70	338.35	11.35	
+25			3.58	49.37	338.43	10.94	
+50			4.37	48.58	338.50	10.08	
+75			4.86	48.09	338.58	9.51	
4+00			5.28	47.67	338.65	9.02	MH#23
B.M.			1.83	351.12	351.18		B.P. N.W. University + Mentone

Thomas - Daley alley sewer MH# 285 - MH# 282

Chisholm 8-11-22

40

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on
0+00	From Page 74 Book Sob			354.39	1614% 345.50	8.89	MH# 285
+25	6.87	361.26	5.99	355.27	345.90	9.37	
+50			5.61	355.65	346.31	9.34	
+75			5.64	355.62	346.71	8.91	
1+00			5.42	355.84	347.11	8.73	
+25			5.22	356.04	347.52	8.52	
+50			4.84	356.42	347.92	8.50	Grade Sheet # 523
+75			4.68	356.58	348.32	8.26	
2+00			5.00	356.26	348.73	7.53	
+25			4.23	357.03	349.13	7.90	
+50			4.38	356.88	349.54	7.34	
+75			4.01	357.25	349.94	7.31	
3+00 TP			3.91	357.35	350.34	7.01	
+25	6.41	363.76	5.82	357.94	350.75	7.19	
+40 <sup>60</sup>			5.94	357.82	351.00	6.82	MH# 284

Cont'd on Page 41

Cont'd from Page 40

Chisholm  
Crown } 8-11-22

41

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6 offset West
0+00		363.76	5.94	357.82	351.00 .904%	6.82	MH # 284
+30		Stake out					
+50			5.59	358.17	351.45	6.72	
+75			4.86	358.90	351.68	7.22	
1+00			4.35	359.71	351.90	7.51	
+25			4.66	359.10	352.13	6.97	Grade Sheet # 524
+50			4.61	359.15	352.36	6.79	
+75			3.79	359.97	352.58	7.39	
2+00			3.76	360.00	352.81	7.19	
+25			3.41	360.35	353.03	7.32	
+50 TP			3.13	360.63	353.26	7.37	
+75	7.40	368.03	6.90	361.13	353.49	7.64	
3+00			6.66	361.37	353.71	7.66	
+32 <sup>81</sup>			6.04	361.99	354.01	7.98	MH # 283

Cont'd on Page 42

Cont'd from Page 41

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00		368.03	6.04	361.99	354.01 9.02%	7.98	MH # 283
+25			5.98	362.05	354.24	7.81	
+50			5.17	362.86	354.46	8.40	
+75			5.34	362.69	354.69	8.00	
1+00			5.27	362.76	354.91	7.85	
+25			5.20	362.83	355.14	7.69	Grade Sheet # 525
+50			4.71	363.32	355.36	7.96	
+75			4.04	363.99	355.59	8.40	
2+00			4.00	364.03	355.81	8.22	
+25 TP			3.68	364.35	356.04	8.31	
+50	6.66	371.01	6.12	364.89	356.27	8.62	
+75			5.42	365.59	356.49	9.10	
3+00			4.66	366.35	356.72	9.63	
+25			4.94	366.07	356.94	9.13	
+40			4.35	366.66	357.08	9.58	MH # 282
TP			3.29	367.72			
B.M.	3.74	371.46	3.34	368.12	368.12		B.P. N.W. Orange + Thomas
		Street Grade		366.52			

Cont'd on Page 43

Cont'd from Page 42  
 Orange Ave sewer MH#282 - MH#258

Chisholm } 8-19-22 43  
 Hall }

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset North
0+00				366.66	357.08 301%	9.58	MH# 282
+25	4.09	370.75	4.27	366.48	357.16	9.32	
+50			4.42	366.33	357.23	9.10	
+75			4.46	366.29	357.31	8.98	
1+00			4.62	366.13	357.38	8.75	Grade Sheet #526
+25			4.72	366.03	357.46	8.57	
+50			4.75	366.00	357.53	8.47	
+75			4.77	365.98	357.61	8.37	
2+00			4.83	365.93	357.68	8.25	
+25			4.94	365.81	357.76	8.05	
N.W. +65 <sup>15</sup>			4.90	365.85	357.88	7.97	MH# 258
Street Grade				365.70			

Cont'd on Page 44

Cont'd from Page 43  
 Rexmore Pr. Sewer MH# 258 - MH# 256

Christina Hall } 8-19-22

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00		370.75	4.90	365.85	357.88 .3%	7.97	MH# 258
+25 TP			5.01	365.74	357.96	7.78	
+50	5.31	371.05	5.43	365.62	358.03	7.59	
+75			5.22	365.83	358.11	7.72	
1+00			5.05	366.00	358.18	7.82	Grade Sheet #527
+25			5.12	365.93	358.26	7.67	
+50			4.76	366.29	358.33	7.96	
+75			4.68	366.37	358.41	7.96	
2+00			4.50	366.55	358.48	8.07	
+25 SW			4.25	366.80	358.56	8.24	
+43			4.17	366.88	358.61	8.27	MH# 257

Street Grade MH# 257 367.13

F. 0.25

Cont'd on Page 45

Cont'd from Page 44

Ch 156 0.1m  
H 11 8-19-22 45

Sta.	+	H.I.	-	Elev.	Grade 3%	Cut	Staked on 6' offset West
0+00		371.05	4.17	366.88	358.61	8.27	MH <sup>#</sup> 257
+25			4.04	367.01	358.69	8.32	
+50			4.05	367.00	358.76	8.24	
+75			3.93	367.12	358.84	8.28	
1+00 TP			3.81	367.24	358.91	8.33	
+25	4.81	372.05	4.76	367.29	358.99	8.30	Grade Sheet #528
+50			4.80	367.25	359.06	8.19	
+75			4.66	367.39	359.14	8.25	
2+00			4.70	367.35	359.21	8.14	
+25			4.67	367.38	359.29	8.04	
+50			4.69	367.36	359.36	8.00	
+75			4.52	367.53	359.44	8.09	
3+00			4.44	367.61	359.51	8.02	
+25			4.54	367.51	359.59	7.92	
+50			4.57	367.54	359.66	7.88	
+75			4.59	367.46	359.74	7.72	
4+00 TP			4.63	367.42	359.81	7.61	
+25	4.59	372.01	4.93	367.08	359.89	7.19	

Cont'd on Page 46

Contd from Page 45

Chisholm Hill 8-19-22 46

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
4+50 S.W. + 64		372.01	4.43	367.58	359.96	7.62	
			4.28	367.73	360.00	7.73	MH # 256
							Grade Sheet # 528

Contd on Page 47



Contd from Page 46  
 El Cajon Ave. Sewer MH#256 - MH#255

Christo Inj 28-19-22  
 Hall

47

Sta. S.W.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset North
0+00		372.01	4.28	367.73	360.00 464%	7.73	MH# 256
+25			4.42	367.59	360.12	7.47	
+50			4.49	367.52	360.23	7.29	
+75			4.54	367.47	360.35	7.12	
1+00			4.56	367.45	360.46	6.99	
+25			4.57	367.44	360.58	6.86	Grade Sheet #529
+50			4.48	367.53	360.70	6.83	
+75			4.62	367.39	360.81	6.58	
2+00			4.77	367.24	360.93	6.31	
+25			4.78	367.23	361.04	6.19	
+50			4.78	367.23	361.16	6.07	
+75			4.81	367.20	361.28	5.92	
S.W. 3+08 <sup>10</sup>			4.97	367.04	361.43	5.61	MH# 255

Contd on Page 48

Cont'd from Page 47  
 Sisson Ave + Daley - Sisson alley MH# 255 - F.T. # 30

Epishalm Hall 8-19-22

48

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00		372.01	4.97	367.04	361.43 3%	5.61	MH# 255
+25 TP			5.36	366.65	361.51	5.14	
150	4.29	370.94	4.42	366.52	361.58	4.94	
175			4.43	366.51	361.66	4.85	
1+00			4.45	366.49	361.73	4.76	Grade Sheet # 530
+25			4.40	366.54	361.81	4.73	
150			4.29	366.65	361.88	4.77	
+75 S.W.			4.35	366.59	361.96	4.63	
2+09 <sup>5</sup>			4.23	366.71	362.06	4.65	MH# 254
B.M.			4.95	365.99	366.00	B.P N.W.	Sisson + El Cajon
Street Grade				366.53		0.18	

Cont'd on Page 49

Cont'd from Page 48

Chisholm  
Hall } 8-21-22 49

Sta	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset South
0+00		370.94	4.23	366.71	362.06 .3%	4.65	MH # 254
+25	4.47	371.18	5.15	366.03	362.14	3.89	
+50			4.98	366.20	362.21	3.99	
+75			4.63	366.55	362.29	4.26	Grade Sheet # 531
1+00			4.75	366.43	362.36	4.07	
+25			5.00	366.18	362.44	3.74	
+50			4.85	366.33	362.51	3.82	
+72 <sup>5</sup>			4.87	366.31	362.58	3.73	MH # 253

Cont'd on Page 50

Cont'd from Page 49

Chisholm 2  
Hall 8-21-22 50

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00		371.18	4.87	366.31	362.58 3%	3.73	MH# 253
+25			4.29	366.89	362.66	4.23	
+50			4.83	366.35	362.73	3.62	
+75			4.58	366.60	362.81	3.79	
1+00			4.36	366.82	362.88	3.94	
+25			3.85	367.33	362.96	4.37	
+50			5.01	366.17	363.03	3.14	Grade Sheet # 532
+75 TP			4.31	366.87	363.11	3.76	
2+00	5.47	372.34	5.85	366.49	363.18	3.31	
+25			5.66	366.68	363.26	3.42	
+50			4.50	367.84	363.33	4.51	
+75			4.63	367.71	363.41	4.30	
3+00			4.89	367.45	363.48	3.97	
+25			4.02	368.32	363.56	4.76	
+50			4.96	367.38	363.63	3.75	
+80			4.62	367.72	363.72	4.00	MH# 252

Cont'd on Page 51

Cont'd from Page 50

Chisholm Hall 8-21-22

51

Sta	+	H.I.	-	Elev.	Grade	Cut
0+00		372.34	4.02	367.72	363.72 4%	4.00
+25			4.40	367.94	363.82	4.12
+50			4.22	368.12	363.92	4.20
+75			4.24	368.10	364.02	4.08
1+00 TP			4.11	368.23	364.12	4.11
+25	7.43	375.66	6.35	369.31	364.22	5.09
+50			6.03	369.63	364.32	5.31
+75			6.14	369.52	364.42	5.10
2+00			5.79	369.87	364.52	5.35
+25			5.15	370.51	364.62	5.89
+50			5.02	370.64	364.72	5.92
+75			4.51	371.15	364.82	6.33
3+00			4.20	371.46	364.92	6.54
+25			4.06	371.60	365.02	6.58
+50			3.73	371.93	365.12	6.81
+70			3.74	371.92	365.20	6.72
B.M.			5.97	369.69	369.67	B.P. N.W. Olive & Daley

MH # 252

Grade Sheet # 533

MH # 251

Cont'd on Page 52

Contd from Page 51

Chisholm 28-21-22  
Hall 52

Sta.	+	H.I.	-	Elev.	Grade 4%	Cut	Staked on 6' offset West
0+00		375.66	3.74	371.92	365.20	6.72	MH # 251
+25 TP			3.23	372.43	365.30	7.13	
+50	4.93	377.36	4.59	372.77	365.40	7.37	
+75			4.86	372.50	365.50	7.00	
1+00			4.92	372.44	365.60	6.84	
+25			5.00	372.36	365.70	6.66	
+50			4.79	372.57	365.80	6.77	Grade Sheet #534
+75			4.78	372.58	365.90	6.68	
2+00			4.78	372.58	366.00	6.58	
+25			4.84	372.52	366.10	6.42	
+50			4.83	372.53	366.20	6.33	
+75			4.99	372.37	366.30	6.07	
3+00			5.18	372.18	366.40	5.78	
+25			5.06	372.30	366.50	5.80	
+50			4.70	372.66	366.60	6.06	
+69 <sup>79</sup>			4.53	372.83	366.68	6.15	F.T. #30
TP			5.67	371.69			
B.M.	3.43	375.12	5.43	369.69	369.67		B.P. N.W. Olive + Daley

End of Sewer ~

Orange Ave Sewer MH# 282 - F.T.# 39

Christiano Hill 8-23-22

53

Sta. NW	+	H.I.	-	Elev.	Grade 4%	GOT
0+00				366.66	362.00	4.66
+25	5.14	371.80	5.20	366.60	362.10	4.50
+50			5.03	366.77	362.20	4.57
+75			4.98	366.82	362.30	4.52
1+00			4.86	366.94	362.40	4.54
+25			4.75	367.05	362.50	4.55
+50			4.61	367.19	362.60	4.59
+75			4.38	367.42	362.70	4.72
2+00			4.18	367.62	362.80	4.82
+25			4.12	367.68	362.90	4.78
+50			4.22	367.58	363.00	4.58
+75			4.38	367.42	363.10	4.32
3+00			4.11	367.69	363.20	4.49
+30 TP			4.02	367.78	363.32	4.46

Staked on 6' offset South

MH# 282

Grade Sheet # 535

MH# 297

Street Grade 367.78

Cont'd on Page 54

Cont'd from Page 53

Chisholm Hall 8-23-22

54

Sta.	+	H.I.	-	Elev.	Grade	Cut
0+00		371.80	4.02	367.78	363.32 .4%	4.46
+25	4.56	372.34	4.51	367.83	363.42	4.41
+50			4.21	368.13	363.52	4.61
+75			4.29	368.05	363.62	4.43
1+00			4.12	368.22	363.72	4.50
+25			4.21	368.13	363.82	4.31
+50			4.20	368.14	363.92	4.22
+75			4.12	368.22	364.02	4.20
2+00			3.96	368.38	364.12	4.26
+25			3.79	368.55	364.22	4.33
+50			3.55	368.79	364.32	4.47
+75			3.41	368.93	364.42	4.51
3+00			3.38	368.96	364.52	4.44
+25			3.38	368.96	364.62	4.34
+36 <sup>70</sup>			3.29	369.05	364.67	4.38
B.M.			4.24	368.10	368.12	

Staked on 6' offset South

MH# 297

Grade Sheet #536

F.T. #39

Street Grade F.T. #39 368.95

End of Sewer ~



Achilles Dr. Sewer MH# 257 - F.T. #38

Chisholm 28-23-72  
Hall

55

Sta. S.W.	+	H.I.	-	Elev.	Grade 1.175%	Cut	Staked on 6' offset South
0+00				366.88	358.81	8.07	MH# 257
+25	6.07	372.95	5.71	367.24	359.10	8.14	
+50			5.69	367.26	359.40	7.86	
+75			5.50	367.45	359.69	7.76	
1+00			5.40	367.55	359.99	7.56	Grade Sheet #537
+25			5.25	367.70	360.28	7.42	
+50			5.10	367.85	360.57	7.28	
+75			4.98	367.97	360.87	7.10	
2+00			4.87	368.08	361.16	6.92	
+25			4.73	368.22	361.45	6.77	
+51			4.63	368.32	361.76	6.56	MH# 281

Street Grade MH# 281 368.51

E.O.T.

Cont'd on Page 56

Contd. from Page 55

Chisholm Hall 8-23-22

56

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset South
0+00		372.95	4.63	368.32	1176. 361.76	6.56	MH# 281
+25			4.55	368.40	362.05	6.35	
+50 TP			4.39	368.56	362.35	6.21	
+75	5.90	374.46	5.72	368.74	362.64	6.10	
1+00			5.70	368.76	362.94	5.82	
+25			5.56	368.90	363.23	5.67	Grade Sheet # 538
+50			5.36	369.10	363.52	5.58	
+75			5.33	369.13	363.82	5.31	
2+00			5.20	369.26	364.11	5.15	
+25			5.02	369.44	364.41	5.03	
S.W. +50			4.91	369.55	364.70	4.85	MH# 280
Street Grade				369.51			

Contd on Page 57

Cont'd from Page 56

Chisholm 8-27-22  
Hall

57

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset South
0+00		374.46	4.91	369.55	364.70 .356%	4.85	MH # 280
+25			5.14	369.32	364.79	4.53	
+50			5.05	369.41	364.88	4.53	
+75			4.92	369.54	364.97	4.57	Grade Sheet # 539
1+00 TP			4.62	369.84	365.06	4.78	
+25	6.00	375.84	5.73	370.11	365.15	4.96	
+50			5.52	370.32	365.23	5.09	
+75			5.53	370.31	365.32	4.99	
2+00			5.42	370.42	365.41	5.01	
+25			5.11	370.73	365.50	5.23	MH # 296

Street Grade 370.97 F.O. 24

Cont'd on Page 58

Cont'd from Page 57

Chholm 28-22-22  
Hall

58

Sta.	+	H.I.	-	Elev.	Grade.	Cut	Staked on 6' offset South
0+00		375.84	5.11	370.73	365.50 .442	5.23	MH # 296
+25			4.97	370.87	365.61	5.26	
+50			4.88	370.96	365.72	5.24	
+75			4.86	370.98	365.83	5.15	
1+00			5.02	370.82	365.94	4.88	Grade Sheet # 540
+25			5.13	370.71	366.05	4.66	
+50			5.10	370.74	366.16	4.58	
+75			5.31	370.53	366.27	4.26	
2+00			5.27	370.57	366.38	4.19	
+26 <sup>15</sup>			5.43	370.41	366.50	3.91	F.T. # 38
TP			6.06	369.84			
B.M.	5.16	375.00	5.46	369.54	369.55		2x2 hub at P.I. of 6' offsets S. & W. of MH # 280

Street Grade 370.51

0.10

Thomas Ave sewer MH# 280 - F.T. # 37

Chapman 8-23-22  
Hall

59

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00	From Page 56			369.55	364.70	4.85	MH# 280
+25	5.46	375.01	5.32	369.69	364.80	4.89	
+50			5.29	369.72	364.90	4.82	
+75			5.18	369.83	365.00	4.83	
1+00			5.09	369.92	365.10	4.82	
+25			4.86	370.15	365.20	4.95	
+50			4.70	370.31	365.30	5.01	Grade Sheet # 541
+75			4.57	370.44	365.40	5.04	
2+00			4.38	370.63	365.50	5.13	
+25			4.23	370.78	365.60	5.18	
+50			4.03	370.98	365.71	5.27	
+75			3.88	371.13	365.81	5.32	
3+00			3.73	371.28	365.91	5.37	
+23 <sup>04</sup>			3.67	371.34	366.00	5.34	F.T. # 37
TP			5.79	369.22			
B.M.	4.18	373.40	5.28	368.12	368.12		B.P.N.W. Orange + Thomas
Street Grade				371.50		0.16	

El Cajon Ave. Sewer MH# 256 - F.T. # 36

Christophers 8-27-22  
Hall

Staked on 6' offset South **60**  
MH# 256

Sta.	+	H.I.	-	Elev.	Grade	Cut
0+00				367.73	360.00	7.73
+25	6.00	373.73	5.94	367.79	360.10	7.69
+50			5.76	367.97	360.20	7.77
+75			5.48	368.25	360.30	7.95
1+00			5.28	368.45	360.40	8.05
+25			4.99	368.74	360.50	8.24
+50			4.79	368.94	360.80	8.34
+75			4.64	369.09	360.70	8.39
2+00			4.42	369.31	360.80	8.51
+25			4.19	369.54	360.90	8.64
+50			4.05	369.68	360.00	8.68
+75			3.80	369.93	361.10	8.83
3+00 TP			3.66	370.07	361.20	8.87
+25 SW.	5.96	376.03	5.75	370.28	361.30	8.98
+51 E			5.49	370.54	361.40	9.14
Street Grade				370.44		0.10

Grade Sheet # 542

MH# 279

Cont'd on Page 61

Cont'd from Page 60

Cpsholm Hall 8-27-22 61

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset South
0+00		376.03	5.49	370.54	1.532% 361.60	8.94	MH# 279
+25			5.32	370.71	361.98	8.73	
+50			5.18	370.85	362.37	8.48	
+75			4.99	371.04	362.75	8.29	
1+00			4.76	371.27	363.13	8.14	
+25			4.46	371.57	363.52	8.05	
+50			4.27	371.76	363.90	7.86	Grade Sheet # 543
+75			4.03	372.00	364.28	7.72	
2+00			3.80	372.23	364.67	7.56	
+25			3.68	372.35	365.05	7.30	
+50 TP			3.51	372.52	365.43	7.09	
+75	5.74	378.26	5.60	372.66	365.82	6.84	
3+00			5.35	372.91	366.20	6.71	MH# 295

Street Grade MH# 295 372.83

Cont'd on Page 62

Cont'd from Page 61

Chisholm  
Hall 8-27-22

62

Staked on 6' offset South

MH # 295

Grade Sheet # 544

F.T. # 36

B.P. S.W. El Cajon & Reed

Sta.	+	H.I.	-	Elev.	Grade	Cut
0+00		378.26	5.35	372.91	366.20 <sup>.598</sup>	6.71
+25			5.19	373.07	366.35	6.72
+50			5.06	373.20	366.50	6.70
+75			5.01	373.25	366.65	6.60
1+00			4.91	373.35	366.80	6.55
+25			4.81	373.45	366.95	6.50
+50			4.53	373.73	367.10	6.63
+75			4.36	373.90	367.25	6.65
2+00			4.13	374.13	367.40	6.73
+25			3.94	374.32	367.55	6.77
+50			3.71	374.55	367.70	6.85
+75			3.65	374.61	367.84	6.77
3+00 <sup>94</sup>			3.40	374.86	368.00	6.86
B.M.			4.80	373.46	373.46	



Thomas Ave + Thomas + Daley alley MH # 279 - Ft. # 33

Chisholm 8-28-22  
Hall

63

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00				370.54	361.60 4%	8.94	MH # 279
+25	3.83	374.37	4.43	369.94	361.70	8.24	
+50			5.14	369.23	361.80	7.43	
+75			5.02	369.35	361.90	7.45	
1+00			4.82	369.55	362.00	7.55	Grade Sheet # 545
+25			4.71	369.66	362.10	7.56	
+50			4.50	369.87	362.20	7.67	
+75			4.32	370.05	362.30	7.75	
S.W. 2+09 <sup>E</sup>			4.13	370.24	362.44	7.80	MH # 278

Street Grade

370.08

0.16

Cont'd on Page 64

Cont'd from Page 63

Chisholm 8-28-22  
Hall

64

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset North
SW 0+00		374.37	413	370.24	362.44 4%	7.80	MH # 278
+25			435	370.02	362.54	7.48	
+50			5.59	368.78	362.64	6.14	
+75			5.98	368.39	362.74	5.65	Grade Sheet # 546
1+00			6.08	368.29	362.84	5.45	
+25 SW			6.34	368.03	362.94	5.09	
+618 TP			6.46	367.91	363.09	4.82	MH # 277

Cont'd on Page 65

Cont'd from Page 64

Chisholm 8-28-22  
Hall

65

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00 TP		374.37	6.46	367.91	363.09 4%	4.82	MH # 277
+25	5.38	373.29	5.34	367.95	363.19	4.76	
+50			5.51	367.78	363.29	4.49	
+75			5.23	368.06	363.39	4.67	
1+00			5.12	368.17	363.49	4.68	
+25			4.63	368.66	363.59	5.07	
+50			4.85	368.44	363.69	4.75	Grade Sheet #547
+75			4.70	368.59	363.79	4.80	
2+00			4.23	369.06	363.89	5.17	
+25			4.08	369.21	363.99	5.22	
+50			4.22	369.07	364.09	4.98	
+75			4.03	369.26	364.19	5.07	
3+60 TP			3.77	369.52	364.29	5.23	
+25	6.41	375.93	6.12	369.81	364.39	5.42	
+50			5.71	370.22	364.49	5.73	
+75 E			5.50	370.43	364.60	5.83	MH # 276
B.M.			6.22	369.71	369.67		B.P N.W Daley + Olive

Cont'd on Page 66

Cont'd from Page 65

Chisholm 8-25-22  
Hall

66

Sta.	+	H.I.	-	Elev.	Grade +%	Cut	Staked on 6' offset West
0+00		375.93	5.50	370.43	364.60	5.83	MH # 276
+25			5.23	370.70	364.70	6.00	
+50			4.97	370.96	364.80	6.16	
+75			4.62	371.31	364.90	6.41	
1+00			5.31	370.62	365.00	5.62	
+25			4.40	371.53	365.10	6.43	Grade Sheet # 403
+50			4.55	371.38	365.20	6.18	
+75			3.85	372.08	365.30	6.78	
2+00 TP			3.90	372.03	365.40	6.63	
+25	5.72	377.75	5.44	372.31	365.50	6.81	
+50			5.34	372.41	365.60	6.81	
+75			4.99	372.76	365.70	7.06	
3+00			4.66	373.09	365.80	7.29	
+25			4.96	372.79	365.90	6.89	
+50			4.59	373.16	366.00	7.16	
+80			4.31	373.44	366.12	7.32	MH # 275

Cont'd on Page 67

Cont'd from Page 66

Orisholm 20-20-32  
Hall

67

Sta.	+	H.I.	-	Elev.	Grade 4%	Cut	Staked on 6' offset West
0 + 00		377.75	4.31	373.44	366.12	7.32	MH # 275
+ 25			3.82	373.93	366.22	7.71	
+ 50			3.82	373.93	366.32	7.61	
+ 75			3.78	373.97	366.42	7.55	
1 + 00			3.80	373.95	366.52	7.43	
+ 25			3.40	374.35	366.62	7.73	
+ 50 TP			3.73	374.02	366.72	7.30	Grade Sheet # 404
+ 75	5.05	379.07	4.06	374.21	366.82	7.39	
2 + 00			4.50	374.57	366.92	7.65	
+ 25			4.75	374.32	367.02	7.30	
+ 50			4.87	374.20	367.12	7.08	
+ 75			4.94	374.13	367.22	6.91	
3 + 00			5.36	373.71	367.32	6.39	
+ 25			5.93	373.14	367.42	5.72	
+ 50			5.85	373.22	367.52	5.70	
+ 60 <sup>I</sup>			6.18	372.89	367.56	5.33	F.T. # 33
TP			5.12	373.95			
B.M.	2.98	376.93	7.22	369.71	369.67		B.P. N.W. Daley + Olive

End of Sewer

Reed-Thomas alley. MH# 278 - F.T.# 35

Chapman? 9-2-22  
Hall

68

Sta.	+	H.I.	-	Elev.	Grade	Out	
SW					2.179%		
0+00	From Page 63	This Book		370.24	362.44	7.80	Staked on 6' offset South MH# 278
+25	4.80	375.04	4.76	370.28	362.98	7.30	
+50			5.61	369.43	363.53	5.90	
+75			5.44	369.60	364.07	5.53	Grade Sheet # 405
1+00			5.23	369.81	364.62	5.19	
+25			5.04	370.00	365.16	4.84	
+50			4.67	370.37	365.71	4.66	
+63 <sup>37</sup>			4.46	370.58	366.00	4.58	MH# 294

Contd on Page 69

Cont'd from Page 68

Chisholm 29-2-22  
Hall

69

Sta.	+	H.I.	-	Elev.	Grade 716%	Cut	Staked on 6' offset West
0+00		375.04	4.46	370.58	366.00	4.58	MH # 294
+25			4.69	370.95	366.18	4.77	
+50			3.72	371.32	366.36	4.96	
+75			3.75	371.29	366.54	4.75	
1 +00			3.02	372.02	366.72	5.30	
+25			3.01	372.03	366.90	5.13	
+50 TP			2.89	372.15	367.07	5.08	Grade Sheet # 406
+75	5.71	377.86	5.26	372.60	367.25	5.35	
2 +00			5.07	372.79	367.43	5.36	
+25			5.13	372.73	367.61	5.12	
+50			4.81	373.05	367.79	5.26	
+75			4.70	373.16	367.97	5.19	
3 +00			4.89	372.97	368.15	4.82	
+25			4.57	373.29	368.33	4.96	
+50			4.17	373.69	368.51	5.18	
+70			4.11	373.75	368.65	5.10	MH # 293

Cont'd on Page 70

Cont'd from Page 69

Chisholm Hall 9-2-22

Sta.	+	H.I.	-	Elev.	Grade 71.3%	Cut	Staked on 6' offset West.
0+00		377.86	4.11	373.75	368.65	5.10	MH# 293
+25			3.94	373.92	368.83	5.09	
+50			4.04	373.82	369.01	4.81	
+75			3.12	374.74	369.18	5.56	
1 +00 TP			3.43	374.43	369.36	5.07	
+25	6.76	381.19	5.93	375.26	369.54	5.72	
+50			6.26	374.93	369.72	5.21	Grade Sheet #407
+75			5.74	375.45	369.10	5.55	
2 +00			5.59	375.60	370.08	5.52	
+25			5.19	376.00	370.25	5.75	
+50			4.95	376.24	370.43	5.81	
+75			4.90	376.29	370.61	5.68	
3 +00			4.76	376.43	370.79	5.64	
+25			4.49	376.76	370.97	5.73	
+50			4.30	376.89	371.15	5.74	
+70			4.27	376.92	371.29	5.63	MH# 292

Cont'd on Page 71



Contd from Page 70

Chisholm 9-2-72  
Hall

71

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
0+00		381.19	4.27	376.92	371.29 <sup>.716</sup>	5.63	MH # 292
+25			3.98	377.21	371.47	5.74	
+50 TP			3.93	377.26	371.65	5.61	
+75	5.49	382.75	5.41	377.34	371.83	5.51	
1+00			5.42	377.33	372.01	5.32	
+25			5.10	377.65	372.19	5.46	
+50			4.82	377.93	372.36	5.57	Grade Sheet # 408
+75			4.83	377.92	372.54	5.38	
2+00			4.92	377.83	372.72	5.11	
+25			4.46	378.29	372.90	5.39	
+50			4.35	377.90	373.08	4.82	
+75			4.80	377.95	373.26	4.69	
3+00			4.82	377.93	373.44	4.49	
+25			4.89	377.86	373.62	4.24	
+50			4.72	378.03	373.80	4.23	
+78 <sup>10</sup>			4.73	378.02	374.00	4.02	Fit. # 35
TP			7.09	375.66			
B.M.	4.03	379.69	5.30	374.39	374.35		B.P. N.W. Olive + Thomas

End of Sewer

Wilson - Storey alley MH # 357 - MH # 356

Chickering  
Hall 8-30-22

72

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset East
B.M.	.			326.40	22.367%		B.P. N.W. Castle + Pacific
TP	8.62	335.02	2.42	332.60			
TP	3.43	336.03	12.82	323.21			
TP	0.30	323.51	10.93	312.58			
W/S 6+00	7.89	320.47	11.82	308.65	303.40	5.25	MH # 100T
+25			7.89	312.58	308.99	3.59	
+TP			0.40	320.07			
+50	9.57	329.64	3.78	325.86	314.58	11.28	
+79±			0.49	329.15	321.16	7.99	MH # 357
TP			12.46	317.18			
B.M.	0.09	317.27	8.64	308.63	308.65		W/S ring at MH 100T
							Grade Sheet # 401

Cont'd on Page 73

Cont'd from Page 72

Chisholm  
Hall 8-30-22

73

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West
W.S. 0+00				308.65	42.07% 303.40	5.25	MH # 160T
TP	6.40	315.05	1.07	313.98			
+25	12.67	326.65	6.85	319.80	313.92	5.88	
TP			1.09	325.61			
+50	12.24	337.85	4.68	333.17	324.44	8.73	Grade Sheet # 402
+60 <sup>35</sup>			5.20	332.65	329.00	3.65	MH # 356
TP	1		5.25	332.60			
B.M.	213	334.73	8.33	326.40	326.40		B.P.N.W. Castle + Pacific

Wilson - Storey alley MH<sup>#</sup>352 - MH<sup>#</sup>351Christy  
Hall } 9-6-22

74

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West.
B.M.				360.45	1.25% <sup>o</sup>		B.P. N.W. University & Wilson
0+00	5.03	365.48	6.43	359.05	353.00	6.05	MH <sup>#</sup> 352
+20			6.32	359.16	353.25	5.91	
1+00			5.58	359.90	354.25	5.65	
+25			5.33	360.15	354.56	5.59	Grade Sheet #450
+50			4.73	360.75	354.88	5.87	
+75			4.30	361.18	355.19	5.99	
2+00			4.67	360.81	355.50	5.31	
+25			4.05	361.43	355.81	5.62	
+50			4.11	361.37	356.13	5.24	
+75			3.55	361.93	356.44	5.49	
3+00			3.59	361.89	356.75	5.14	
+25			3.68	361.80	357.06	4.74	
+40			3.23	362.25	357.25	5.00	MH <sup>#</sup> 351
B.M.			5.03	360.45	360.45		B.P. N.W. University & Wilson

Storey - Cherokee alley. MH# 335 - MH# 334

Chisholm Hall 9-5-22

75

Sta.	+	H.I.	-	Elev	Grade	Cut	
B.M.				359.37	1.588%	B.P. N.W. University & Storey	
0+00	4.94	364.31	6.39	357.92	351.00	6.92 MH# 335	
+20			6.51	357.80	351.32	6.48 Staked on 6' offset West.	
+50			5.99	358.32	351.79	6.53	
+80			5.86	358.45	352.27	6.18	
1+00			5.85	358.46	352.59	5.87	
+25			5.40	358.91	352.99	5.92	
+50			4.96	359.35	353.38	5.97	Grade Sheet #409
+75			4.71	359.60	353.78	5.82	
2+00			4.44	359.87	354.18	5.69	
+25			4.06	360.25	354.57	5.68	
+50			3.63	360.68	354.97	5.71	
+75			3.33	360.98	355.37	5.61	
3+00			3.03	361.28	355.76	5.52	
+25			2.86	361.45	356.16	5.29	
+40			2.50	361.81	356.40	5.41 MH# 334	
B.M.			4.94	359.37	359.37	B.P. N.W. University & Storey	

Scott - Swift alley MH# 395 - MH# 394

Chisholm }  
Hall } 8-24-77 76

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset West.
B.M.				361.48	1.6767		B.P. N.W. Pacific + University
TP	3.92	365.40	5.59	359.81			
0+00	2.72	362.53	8.01	354.52	347.00	7.52	MH# 395
+20			9.51	353.02	347.34	5.68	
1+00			8.13	354.40	348.68	5.72	
+25			6.45	356.08	349.10	6.98	
+50			5.30	357.23	349.51	7.72	
+75			4.44	358.09	349.93	8.16	Grade Sheet # 548
2+00			3.78	358.75	350.35	8.40	
+25			2.66	359.87	350.77	9.10	
+50			2.08	360.45	351.19	9.26	
+75			2.08	360.45	351.61	8.84	
3+00			1.63	360.90	352.03	8.87	
+25			0.97	361.56	352.45	9.11	
+40			1.42	361.11	352.70	8.41	MH# 394
TP			2.72	359.81			
B.M.	5.49	365.30	3.82	361.48	361.48		B.P. N.W. Pacific + University

Cherokee - Reed alley. MH # 318 - MH # 317

Christopher Hall 8-15-22

Sta.	+	H.I.	-	Elev.	Grade
B.M.				351.97	1029
0+00	7.20	359.17	5.67	353.50	347.40
+20			5.16	354.01	347.21
1+00			4.55	354.62	348.43
+25			4.44	354.73	348.69
+50			4.44	354.73	348.94
+75			4.06	355.11	349.20
2+00			3.83	355.34	349.46
+25			2.88	356.29	349.72
+50			2.23	356.94	349.97
+75			1.45	357.72	350.23
3+00			0.98	358.19	350.49
+25			0.76	358.41	350.74
+40			0.82	358.35	350.90
B.M.		7.20		351.97	351.97

Cut Staked on 6' offset West

B.P. N.W. University & Reed	
MH # 318	
6.10	
6.80	
6.19	
6.04	
5.79	
5.91	Grade Sheet # 550
5.88	
6.57	
6.97	
7.49	
7.70	
7.67	
7.45	MH # 317
B.P. N.W. University & Reed.	

3118	24900 21826 30740 28062 26780 24944 23030 1899	5.63 5.17 46 23 5.40	5.44 4.19 1.21 60 489	39 663 551 112 56 107
464	1390 928 462 4176 1110 1170 10640 1995 798 230 1899	49 49	330.17 9.52 334.69 4.79 329.90	25 35 43 40 4.51
M40	5.97	5.82 6.43 5.51		
MH <sup>#</sup> 409	4.22	4.44 N 4.19 4.71		75 36 364 22 173 87 137
MH <sup>#</sup> 412	393 307 511 86	364 287 2.12		80 58 27
MH <sup>#</sup> 413	7.30 F.110.24	7.06		438
MH <sup>#</sup> 414	9.40 F.002	4.67 4.09	438	

8.3986  
3512 / 1.4000  
1.0536

54640  
31608  
30320  
28096  
2224

8974



CALCULATION OF EARTHWORK.

Width	HEIGHT														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	.02	.04	.06	.07	.09	.11	.13	.15	.17	.18	.20	.22	.24	.26	.28
2	.04	.07	.11	.15	.18	.22	.26	.30	.33	.37	.41	.44	.48	.52	.56
3	.06	.11	.17	.22	.28	.33	.39	.44	.50	.56	.61	.67	.72	.78	.83
4	.09	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.12	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6	.15	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55	1.67
7	.18	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.21	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.24	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
10	.27	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59	2.78
11	.30	.41	.61	.82	1.02	1.22	1.43	1.63	1.83	2.04	2.24	2.44	2.65	2.85	3.06
12	.32	.44	.67	.89	1.11	1.33	1.56	1.78	2.00	2.22	2.44	2.67	2.89	3.11	3.33
13	.34	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.41	2.65	2.89	3.13	3.37	3.61
14	.36	.52	.78	1.04	1.30	1.55	1.81	2.08	2.33	2.59	2.85	3.11	3.37	3.63	3.89
15	.38	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89	4.17
16	.40	.59	.89	1.18	1.48	1.78	2.07	2.37	2.67	2.96	3.26	3.56	3.85	4.15	4.44
17	.41	.63	.94	1.26	1.57	1.89	2.20	2.52	2.83	3.15	3.46	3.78	4.09	4.41	4.72
18	.43	.67	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00
19	.45	.70	1.06	1.41	1.76	2.11	2.46	2.82	3.17	3.52	3.87	4.22	4.57	4.92	5.28
20	.46	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44	4.81	5.18	5.56
21	.48	.78	1.17	1.55	1.94	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.44	5.83
22	.49	.81	1.22	1.63	2.04	2.44	2.85	3.26	3.67	4.07	4.48	4.89	5.30	5.70	6.11
23	.51	.85	1.28	1.70	2.13	2.56	2.98	3.41	3.83	4.26	4.68	5.11	5.54	5.96	6.39
24	.52	.89	1.33	1.78	2.22	2.67	3.11	3.56	4.00	4.44	4.89	5.33	5.78	6.22	6.67
25	.54	.92	1.39	1.85	2.31	2.78	3.24	3.70	4.17	4.63	5.09	5.56	6.02	6.48	6.94
26	.56	.96	1.44	1.92	2.41	2.89	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74	7.24
27	.57	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
28	.58	1.04	1.55	2.07	2.59	3.11	3.63	4.15	4.67	5.18	5.70	6.22	6.74	7.26	7.78
29	.59	1.07	1.61	2.15	2.68	3.22	3.76	4.30	4.83	5.37	5.91	6.44	6.98	7.52	8.06
30	.60	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.55	6.11	6.67	7.22	7.78	8.33
31	.61	1.15	1.72	2.30	2.87	3.44	4.02	4.59	5.17	5.74	6.32	6.89	7.46	8.04	8.61
32	.62	1.18	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.92	6.52	7.11	7.70	8.30	8.89
33	.63	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50	6.11	6.72	7.33	7.94	8.55	9.17
34	.64	1.26	1.89	2.52	3.15	3.78	4.40	5.04	5.67	6.29	6.93	7.56	8.18	8.81	9.44
35	.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83	6.48	7.13	7.78	8.42	9.08	9.72
36	.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.67	7.33	8.00	8.67	9.33	10.00
37	.68	1.37	2.06	2.74	3.42	4.11	4.79	5.48	6.17	6.85	7.54	8.22	8.91	9.59	10.28
38	.70	1.41	2.11	2.82	3.52	4.22	4.92	5.63	6.33	7.03	7.74	8.44	9.15	9.85	10.56
39	.72	1.44	2.17	2.89	3.61	4.33	5.05	5.78	6.50	7.22	7.95	8.67	9.39	10.11	10.83
40	.74	1.48	2.22	2.96	3.70	4.44	5.18	5.92	6.67	7.41	8.15	8.89	9.63	10.37	11.11

Table gives cu. yds. in 1 ft. of a triangle of given width and height. Corrections for tenths of width are one tenth the values found under each height considering the widths from 1 to 9 as tenths and similarly the corrections for tenths of height are one tenth the figures opposite width considering the heights from 1 to 9 as tenths. Thus if  $w=16.2$  and  $h=5.3$ , cu. yds.  $=1.48 \times .028 + .039 = 1.597$  cu. yds. or practically 160 cu. yds. per 100 ft. If  $w$  exceeds 40 ft., use one half and multiply result by 2, if both  $w$  and  $h$  are large use one half of each and multiply result by 4. Any cross-section may be divided into triangles by the following rule. To the triangle of the sum of the outside cuts (or fills)  $=h$ , and  $\frac{1}{2}$  the roadbed  $=w$ , add the triangles formed by taking the distance out to each break in turn ( $=w$ 's) by the difference between the cuts (or fills) on each side of it ( $=h$ 's) always subtracting the outer from the inner.

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	II
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.