ENGINEERS'
SD 524.
LEVEL BOOK
No 4 0
524

F.B. 524

ITZGEN
TRADEMARK

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.

MICROFILMED
DEC 1 1964

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

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6+(20—16)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

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Sisson - Central alley - MH # T-37 To F.T. #29

Chisholm / Brown 6-29-22

1

Sta.	+	H.I.	—	Elev.	Grade	Cut	
BM-	From	Page 22	this book	294.40	31.08%		Staked on 6' offset W. -
							2x2 hub at MH # 225 - on 6' offset W. -
							MH # 37 T -
TP	9.47	303.87	0.44	303.43			
TP	6.18	309.61	7.75	301.86			
TP	0.58	302.44	12.20	290.24			
TP	0.63	290.87	12.15	278.72			
TP	1.26	279.98	12.68	267.30			
TP	1.03	268.33	12.71	255.62			
TP	0.42	256.04	12.77	243.27			
0+00	0.20	243.47	11.94	231.53	226.20	5.33	
+25			7.80	35.67	233.97	1.70	
TP			0.02	243.45	—	—	
+50	11.75	255.20	9.59	45.61	241.74	3.87	Grade Sheet #332 -
TP			0.31	254.89	—	—	
+75	12.30	267.19	9.20	57.99	249.51	8.48	
TP			0.41	266.78	—	—	
1+00	12.82	279.60	11.44	68.16	257.28	10.88	
+25			5.92	73.68	265.05	8.63	
TP			0.30	279.30	—		
1+50	13.01	292.31	12.62	79.69	272.82	6.87	
1+73 ⊥			7.77	284.54	280.00	4.54	MH # 250

Cont'd from Page 1 -

Sta.	+	H.I.	-	Elev.	Grade 2.843%	Cut	Staked on 6' offset W.
0+00		292.31	7.77	84.54	280.00	4.54	MH # 250
+25			3.87	88.44	80.71	7.73	
TP			0.10	292.21	—	—	
+50	13.02	305.23	12.05	93.18	81.42	11.76	
+75			8.41	96.82	82.13	14.69	
1			6.39	98.84	82.84	16.00	
+25			5.36	99.87	83.55	16.32	
+50			4.43	300.80	84.26	16.54	Grade Sheet # 333
+75			4.05	300.18	84.98	15.20	
2			3.44	301.79	85.69	16.10	
+25			2.93	302.30	86.40	15.90	
+50			2.70	302.53	87.11	15.42	
+75			2.07	303.16	87.82	15.34	
3			1.93	303.30	88.53	14.77	
+25 TP			1.62	303.61	89.24	14.37	
+50	7.11	310.72	6.67	304.05	89.95	14.10	
+80 W-			5.79	304.93	290.80	14.13	MH # 249 Note drop a/c line west-
S.E			5.67				

Cont'd on Page 3

Smale & Chisholms 6-30-22

Cont'd from Page 2

Sta.	+	H.I.	-	Elev.	Grade .4%	Cut	Staked on 6' offset W.
0+00 W		310.72	5.79	304.93	294.28	10.65	MH #249
+25			5.52	305.20	294.38	10.82	
+50			5.14	305.58	294.48	11.10	
+75			4.77	305.95	294.58	11.37	
1			4.78	305.94	294.68	11.26	
+25			4.52	306.20	294.78	11.42	
+50			4.31	306.41	294.88	11.53	Grade Sheet #334-
+75			4.21	306.51	294.98	11.53	
2			4.86	305.86	295.08	10.78	
+25	TP		5.26	305.46	295.18	10.28	
+50	3.40	308.86	4.14	304.72	295.28	9.44	
+75			4.47	304.39	295.38	9.01	
3			5.12	303.74	295.48	8.26	
+25			6.97	301.89	295.58	6.31	
+40			8.20	300.66	295.64	5.02	MH # 248-
			~~9.23~~				

Cont'd on Page 4

Smale / Chisholm 6-30-22

Cont'd from Page 3

Sta.	+	H.I.	–	Elev	Grade .4005%	Cut.	Staked on 6' offset W.
0+00		308.86	8.20	300.66	295.64	5.02	MH #248
+25			9.23	299.63	295.74	3.89	
+50			9.83	299.03	295.84	3.19	
+75			9.33	299.53	295.94	3.59	
1			9.91	298.95	296.04	2.91	
+25			9.24	299.62	296.14	3.48	
+50	TP		8.74	300.12	296.24	3.88	
+75	7.53	307.65	6.55	301.10	296.34	4.76	
2			6.25	301.40	296.44	4.96	Grade Sheet #335
+25			5.93	301.72	296.54	5.18	
+50			5.50	302.15	296.64	5.51	
+75			5.47	302.18	296.74	5.44	
3			5.75	301.90	296.84	5.06	
+25			5.72	301.93	296.94	4.99	
+39.5			5.23	302.42	297.00	5.42	MH #247
BM			7.64	300.01	S.B. 300.05		B.P. – N.W. Center & Sisson –
				287.76			
		Street Grade		302.41			

Cont'd on Page 5

Cont'd from Page 4

Sta.	+	H.I.	−	Elev.	Grade 2.493%	Cut				
0 + 00		307.65	5.23	302.42	297.00	5.42	MH # 247			
+ 25	10.25	312.67	10.60	302.07	297.62	4.45				
+ 50			7.87	304.80	298.25	6.55				
+ 75			6.30	306.37	298.87	7.50				
1 + 00			6.04	306.63	299.49	7.14				
+ 25			5.38	307.29	300.12	7.17				
+ 50			4.64	308.03	300.74	7.29	Grade	Sheet	# 336	
+ 75			3.98	308.69	301.36	7.33				
2 + 00			3.55	309.12	301.99	7.13				
+ 25			2.16	310.51	302.61	7.90				
+ 50			2.42	310.25	303.23	7.02				
+ 75			1.73	310.94	303.86	7.08				
3 + 00 TP			1.15	311.52	304.48	7.04				
+ 10	8.46	319.98	8.00	311.98	304.73	7.25	MH # 246			

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Cont'd from Page 5

Chisholm & Brown 7-1-22

Sta.	+	H.I	−	Elev.	Grade 2.501%	Cut			
0+00		319.98	8.00	311.98	304.73	7.25	MH # 246		
+25			7.46	312.52	305.36	7.16			
+50			6.75	313.23	305.98	7.25			
+75			6.31	313.67	306.61	7.06			
1+00			5.79	314.19	307.23	6.96			
+25			5.02	314.96	307.86	7.10			
+50			4.40	315.58	308.48	7.10	Grade	Sheet	# 337
+75			4.08	315.90	309.11	6.79			
2+00			3.42	316.56	309.73	6.83			
+25			2.80	317.18	310.36	6.82			
+50			2.21	317.77	310.98	6.79			
+75			1.66	318.32	311.61	6.71			
3+00 TP			1.14	318.84	312.23	6.61			
+09	7.81	326.65	7.75	318.90	312.46	6.44	MH # 245		
B.M.			8.44	318.21	318.24	B.P. N.W. Clark & Sisson			

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Cont'd from Page 6

Chisholm } 7-1-22
Brown }

Sta.	+	H.I.	−	Elev.	Grade 2.494 %	Cut		
0+00		326.65	7.75	318.90	312.46	6.44	MH # 245	
+25			7.97	318.68	313.08	5.60		
+50			7.48	319.17	313.71	5.46		
+75			7.46	319.19	314.33	4.86		
1+00			7.08	319.57	314.95	4.62		
+25			5.25	321.40	315.58	5.82		
+50			4.52	322.13	316.20	5.93	Grade Sheet # 338	
+75			4.06	322.59	316.82	5.77		
2+00			3.55	323.10	317.45	5.65		
+25			2.98	323.67	318.07	5.60		
+50			2.75	323.90	318.70	5.20		
+75			2.24	324.41	319.32	5.09		
3+00 TP			1.54	325.11	319.94	5.17		
+25	8.22	333.33	7.95	325.38	320.57	4.81		
+50			7.37	325.96	321.19	4.77		
+60			7.41	325.92	321.44	4.48	MH # 244	

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Chisholm } 7-1-'22
Brown }

Sta.	+	H.I.	−	Elev.	Grade .401 %	Cut					
0+00		333.33	7.41	325.92	321.44	4.48	MH # 244				
+25			6.72	326.61	321.54	5.07					
+50			6.39	326.94	321.64	5.30					
+75			5.54	327.79	321.74	6.05					
1+00			5.06	328.27	321.84	6.43					
+25			4.66	328.67	321.94	6.73					
+50			4.34	328.99	322.04	6.95					
+75			3.65	329.68	322.14	7.54		Grade Sheet # 339			
2+00			3.38	329.95	322.24	7.71					
+25			2.88	330.45	322.34	8.11					
+50 TP			2.45	330.88	322.44	8.44					
+75	3.01	333.89	3.14	330.75	322.54	8.21					
3+00			2.92	330.97	322.64	8.33					
+18 74			2.97	330.92	322.72	8.20	MH # 243				
B.M.			6.33	327.56	327.53	B.P.	S.W. Howard & Sisson				

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Sta.	+	H.I.	−	Elev.	Grade .4%	Cut		
0+00		333.89	2.97	330.92	322.72	8.20	MH # 243	
+25			5.30	328.59	322.82	5.77		
+50			5.26	328.63	322.92	5.71		
+75			5.29	328.60	323.02	5.58		
1+00			4.92	328.97	323.12	5.85		
+25			2.08	331.81	323.22	8.59		
+50			2.29	331.60	323.32	8.28	Grade Sheet #340	
+75			2.41	331.48	323.42	8.06		
2+00			2.35	331.54	323.52	8.02		
+25 TP			2.00	331.89	323.62	8.27		
+50	4.60	336.49	4.43	332.06	323.72	8.34		
+75			4.74	331.75	323.82	7.93		
+85			4.66	331.83	323.86	7.97	MH # 242	

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Chisholm / Brown } 7-1-22

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Sta.	+	H.I	−	Elev.	Grade .4%	Cut				
0+ 00		336.49	4.66	331.83	323.86	7.97		MH # 242		
+ 25			4.46	332.03	323.96	8.07				
+ 50			4.81	331.68	324.06	7.62				
+ 75			4.48	332.01	324.16	7.85				
1 + 00			4.32	332.17	324.26	7.91				
+ 25			4.68	331.81	324.36	7.45				
+ 50			4.64	331.85	324.46	7.39		Grade Sheet # 341		
+ 75			4.89	331.60	324.56	7.04				
2+ 00			5.01	331.48	324.66	6.82				
+ 25			5.24	331.25	324.76	6.49				
+ 50			5.32	331.17	324.86	6.31		3.96		334.93
+ 75			5.78	330.71	324.96	5.75		4.22		334.93
+ 85			6.79	329.70	325.00	4.70		F.T. # 29		5.23 329.70
TP			4.60	331.89				5.23		
B.M.	4.40	336.29	8.74	327.55	327.53		B.P. S.W.	Howard + Sisson		

Lafayette — Sisson alley
MH #249 to FT. #32

Chisholm
Brown } 7-3-22

Sta.	+	H.I.	−	Elev.	Grade .4 %	Cut	
	From Page 3 This Book			304.93	[illegible]		MH # 249
0+00	4.19	309.72	4.07	305.05	291.00	14.05	
+25			4.71	304.41	291.10	13.31	
+50			5.03	304.09	291.20	12.89	
+75			5.44	303.68	291.30	12.38	
1+00			5.56	303.56	291.40	12.16	
+25			5.72	303.40	291.50	11.90	
+50			5.31	303.81	291.60	12.21	
+75			5.84	303.28	291.70	11.58	Grade Sheet # 342
2+00			6.03	303.09	291.80	11.29	
+25			5.85	303.27	291.90	11.37	
+50			5.83	303.29	292.00	11.29	
+75			6.15	302.97	292.10	10.87	
3+00	TP		6.25	302.87	292.20	10.67	
+25	2.76	305.63	3.04	302.59	292.30	10.29	
+50			4.71	300.92	292.40	8.52	
+79.5			9.56	296.07	292.52	3.55	MH # 274

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Chisholm } 7-6-22
Brown }

Sta.	+	H.I.	−	Elev.	Grade A	Cut	
0+00		305.63	9.56	296.07	292.52	3.55	MH #274
+25			5.00	300.63	292.62	8.01	
+50			4.58	301.05	292.72	8.33	
+75			3.43	302.20	292.82	9.38	
1+00			2.59	303.04	292.92	10.12	
+25			2.09	303.54	293.02	10.52	
+50			1.47	304.16	293.12	11.04	Grade Sheet #343
+75	TP		1.55	304.08	293.22	10.86	
2+00	5.52	309.60	5.65	303.95	293.32	10.63	
+25			5.60	304.00	293.42	10.58	
+50			5.56	304.04	293.52	10.52	
+75			5.40	304.20	293.62	10.58	
3+00			4.82	304.78	293.72	11.06	
+10			5.31	304.29	293.76	10.53	MH #273

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Sta.	+	H.I.	−	Elev.	Grade .4%	Cut		
0+00		309.60	5.31	304.29	293.76	10.53	MH #273	
+25			4.91	304.69	293.86	10.83		
+50			4.46	305.14	293.96	11.18		
+75			3.78	305.82	294.06	11.76		
1+00			3.71	305.89	294.16	11.73		
+25			3.73	305.87	294.26	11.61		
+50	TP		3.67	305.93	294.36	11.57	Grade Sheet # 344	
+75	0.56	306.48	0.83	305.65	294.46	11.19		
2+00			1.12	305.36	294.56	10.80		
+25			1.41	305.07	294.66	10.41		
+50			2.72	303.76	294.76	9.00		
+75			3.30	303.18	294.86	8.32		
3+00			3.93	302.55	294.96	7.59		
09 65			4.33	302.15	295.00	7.15	MH # 272	
B.M.			6.43	300.05	300.05	B.P.	N.W. Center & Sisson	

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MH #273

Smale
Brown } 6-17-22

Cont'd from Page 13 -

Sta.	+	H.I.	-	Elev.	Grade .4%	Cut	Staked on 6' offset W.
BM				300.05		BP- N.W. - Sisson at Centre -	
0+00	4.30	304.35	2.20	302.15	295.00	7.15	MH #272
+25			3.79	300.56	95.10	5.46	
+50			4.07	300.28	95.20	5.08	
+75			5.38	298.97	95.30	3.67	
1			7.40	296.95	95.40	1.55	
TP			12.16	292.19	—	—	Grade Sheet #331 -
+25	1.46	293.65	9.62	284.03	95.50	F 1.47	
+50			7.64	286.01	95.60	F 9.59	Grades to Hickey on copy 6-21
+75 TP			0.44	293.21	95.70	F 2.49	
2	12.69	305.90	8.27	297.63	95.80	1.83	
+25			7.09	298.81	95.90	2.91	
+50			5.52	300.38	96.00	4.38	
+80			5.25	300.65	296.12 S.B.	4.53	MH # 271
BM			5.85	300.05	300.05	BP- N.W. Sisson at Centre -	

Cont'd on Page 16 -

Cont'd from Page 15

Chisholm
Brown } 9-6-32

Sta.	+	H.I.	−	Elev.	Grade 2.477%	Cut		
0+00 TP		305.90	5.25	300.65	296.12	4.53	MH#271	
+25	10.52	301.17	9.55	301.62	296.74	4.88		
+50			8.53	302.64	297.36	5.28		
+75			7.61	303.56	297.98	5.58		
1+00			6.48	304.69	298.60	6.09		
+25			6.04	305.13	299.22	5.91		
+50			5.22	305.95	299.84	6.11	Grade Sheet #345	
+75			4.36	306.81	300.45	6.36		
2+00			3.74	307.43	301.07	6.36		
+25			3.04	308.13	301.69	6.44		
+50			2.27	308.90	302.31	6.59		
+75			1.32	309.85	302.93	6.92		
3+00			0.23	310.94	303.55	7.39		
+25	9.77	320.71	9.18	311.53	304.17	7.36		
+50			8.60	312.11	304.79	7.32		
+75			8.24	312.47	305.41	7.06		
+98.85			7.62	313.09	306.00	7.09	MH #270	

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Cont'd from Page 16

Chisholm } 7-6-22
Brown }

Sta.	+	H.I.	−	Elev.	Grade 2.47%	Cut		
0+00		320.71	7.62	313.09	306.00	7.09	MH #270	
+25			6.71	314.00	306.62	7.38		
+50			7.50	313.21	307.24	5.97		
+75			7.00	313.71	307.85	5.86		
1+00			5.32	315.39	308.47	6.92		
+25			4.31	316.40	309.09	7.31		
+50			3.77	316.94	309.71	7.23	Grade Sheet # 346	
+75			3.00	317.71	310.32	7.39		
2+00			2.19	318.52	310.94	7.58		
+25			1.12	319.59	311.56	8.03		
+50			0.27	320.44	312.18	8.26		
+75	8.00	328.44	7.49	320.95	312.79	8.16		
3+00			6.68	321.76	313.41	8.35		
+25			6.00	322.44	314.03	8.41		
+40			5.76	322.68	314.40	8.28	MH # 269	

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Cont'd from Page 17

Sta.	+	H.I	—	Elev.	Grade 2.487%	Cut				
0+00		328.44	5.76	322.68	314.40	8.28	MH#269			
+25			5.22	323.22	315.02	8.20				
+50			4.94	323.50	315.64	7.86				
+75			4.52	323.92	316.27	7.65				
1+00			4.40	324.04	316.89	7.15				
+25			3.87	324.57	317.51	7.06				
+50			3.11	325.33	318.13	7.20		Grade Sheet # 347		
+75			2.46	325.98	318.75	7.23				
2+00 TP			2.21	326.23	319.37	6.86				
+25	6.46	232.69	6.24	326.45	320.00	6.45				
+50			6.04	326.65	320.62	6.03				
+75			5.82	326.87	321.24	5.63				
3+00			5.48	327.21	321.86	5.35				
+25			5.17	327.52	322.48	5.04				
+87 72			5.33	327.36	322.80	4.56	F.T. #32			
B.M.			5.11	327.58	322.53	B.P. S.W. Howard & Sisson				

Smale
Brown } 6-21-22

Stockton - Copeland alley -
MH#T-46 to MH#174

Sta. -	+	H.I.	-	Elev.	Grade 6.89%	Cut	Staked on 6' offset W.
0+00	From Book No. 4		Page 26	280.95	276.20	4.75	MH#T46 - Take grade from W/S MH
+25	9.31	290.26	6.42	83.84	77.92	5.92	ring at ℄ E & W.
+50			3.67	86.59	79.65	6.94	
+75			3.91	86.35	81.37	4.98	
1			2.42	87.84	83.09	4.75	
+25 ℙ			0.34	89.92	84.81	5.11	
+50	12.49	302.41	5.34	97.07	86.54	10.53	Grade Sheet #320
+75			3.72	98.69	88.26	10.43	
2.			5.49	96.92	89.98	6.94	
+14.8			6.34	96.07	291.00 S.B	5.07	MH#174
B.M.			0.51	301.90	301.89		B.P. N.W. Center + Stockton.

Central - ~~Stockton~~ Conklin alley - MH# T-41 to FT# 27

Smale / Chisholm 6-23-'22

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset W.
BM				301.89	22.2%		BP - N.W. - Stockton at Centre - $\frac{52}{5}$
TP	2.71	304.60	6.85	297.75			
TP	2.41	300.16	11.70	288.46			
TP	4.23	292.69	12.57	280.12			
TP	0.46	280.58	12.85	267.73			
TP	0.34	268.07	12.42	255.65			
TP	1.77	257.42	12.47	244.95			
TP	0.43	245.38	12.67	232.71			MH# T-39
~~0+00~~ TP	12.93	245.64	0.32	245.32			
TP	12.04	257.36	0.19	257.17	—	—	
0+00	12.32	269.49	7.00	262.49	257.20	5.49	MH# T41
TP			0.54	268.95	—	—	
+25	6.77	275.72	11.63	64.09	262.75	1.34	
+50			3.64	72.08	268.30	3.78	
TP			0.10	275.62	—	—	Grade Sheet # 321
+75	12.37	287.99	7.94	80.05	273.85	6.20	
1			1.61	86.38	279.40	6.98	
TP			0.23	287.76	—	—	
+25	12.26	300.02	8.24	91.78	284.95	6.83	
+43.5			5.62	94.40	289.00	5.40	— MH # 225 -

Cont'd on Page 23

Smale
Chisholm } 6-23-22

Cont'd from Page 22 — 2.955%

Sta.	+	H.I.	−	Elev.	Grade	Cut	Staked on 6' offset W.
0+00		300.02	5.62	94.40	289.00	5.40	MH#225
+25			3.77	96.25	289.74	6.51	
+50			2.43	97.59	290.48	7.11	
+75			1.57	98.45	291.22	7.23	
1 TP			0.16	299.86	291.96	7.90	
+25	10.02	309.88	9.18	300.70	292.69	8.01	
+50			8.83	301.05	293.43	7.62	
+75			7.58	302.30	294.17	8.13	Grade Sheet # 322
2			6.52	303.36	294.91	8.45	
+25			5.69	304.19	295.65	8.54	
+50			5.14	304.74	296.39	8.35	
+75			4.14	305.74	297.13	8.61	
3			3.49	306.39	297.87	8.52	
+25			2.68	307.20	298.60	8.60	
+50			2.16	307.72	299.34	8.38	
+75			1.78	308.10	300.08	8.02	
4 TP			1.03	308.85	300.82	8.03	
+25	4.07	312.92	3.33	309.59	301.56	8.03	
+40			2.96	309.96	302.00	7.96	MH#224
TP	~~9.3~~		9.31	303.61	S.B.		
BM	3.12	306.73	6.66	300.07	300.05		

B.P. N.W. Sisson at Center – S2 – P5.

Smale
Chisholm } 6-24-22

Cont'd from Page - 23

Sta.	+	H.I.	-	Elev.	Grade 1.912%	Cut	Staked on 6' offset W.
0+00	From Page 23			309.96	302.00	7.96	M/ #224
+25	7.54	317.50	9.97	307.53	302.48	5.05	
+50			9.55	307.95	302.96	4.99	
+75			9.43	308.07	303.43	4.64	
1			8.17	309.33	303.91	5.42	
+25			5.25	312.25	304.39	7.86	
+50			4.57	312.93	304.87	8.06	Grade Sheet #323
+75			4.51	312.99	305.35	7.64	6.50
2			4.54	312.96	305.82	7.14	#78
+25			3.96	313.54	306.30	7.24	
+50			3.61	313.89	306.78	7.11	8.21
+75			3.30	314.20	307.26	6.94	
3 TP			2.82	314.68	307.74	6.94	
+25	7.07	321.75	6.74	315.01	308.21	6.80	
+40			6.62	315.13	308.50	6.63	M/ #223

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Cont'd from Page 24 -

-Smale
Chisholm } 6-24-22

Sta.	+	H.I.	-	Elev.	Grade 1.92%	Cut	Staked on 6' offset W.
0 +00		321.75	6.62	315.13	308.50	6.63	MH# 223
+25			6.17	15.58	308.98	6.60	
+50			5.84	15.91	309.46	6.45	
+75			5.36	16.38	309.94	6.44	
1			4.99	16.76	310.42	6.34	
+25			4.61	17.14	310.90	6.24	
+50			4.42	17.33	311.38	5.95	
+75			4.26	17.49	311.86	5.63	Grade Sheet # 324 -
2			3.78	17.97	312.34	5.63	
+25			3.58	18.17	312.82	5.35	
+50 TP			3.14	318.61	313.30	5.31	
+75	6.91	325.52	6.21	19.31	313.78	5.53	
3			5.50	20.02	314.26	5.76	
+25			4.81	20.71	314.74	5.97	
+38.5			4.47	21.05	315.00 S.B.	6.05	MH#222
B.M			3.91	321.61	321.55		BP - N.W. Conklin at Clark - B82-P8. (Checks +0.03 with B.M. N.W. Center + Sisson)

Cont'd on Page 26 -

Simple / Chisholm } 6-27-22

Cont'd from Page 25

Sta.	+	H.I.	-	Elev.	Grade	Cut	Staked on 6' offset W.
					1.4706%		
0+00				321.05	315.00	6.05	MH#222
+25	8.40	329.45	8.75	20.70	15.37	5.33	
+50			8.36	21.09	15.74	5.35	
+75			8.34	21.11	16.10	5.01	
1			7.99	21.46	16.47	4.99	
+25			5.86	23.59	16.84	6.75	
+50			4.98	24.47	17.21	7.26	
+75			4.44	25.01	17.57	7.44	Grade Sheet #325
2+00			4.16	25.29	17.94	7.22	
+25			4.01	25.44	18.31	7.13	
+50			3.79	25.66	18.68	6.98	
+75			3.27	26.18	19.04	7.14	
TP 3+00		326.17	3.28	326.17	19.41	6.76	
+25	7.07	333.24	6.92	26.32	19.78	6.54	
+40			6.70	26.54	320.00	6.54	MH#221

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320.00

Chisholm & Smale 6-28

Cont'd from Page 26 -

Sta.	+	H.I	-	Elev.	Grade 1.4706%	Cut	Staked on 6' offset W.
0+00		333.24	6.70	326.54	320.00	6.54	MH # 221
+25			6.42	26.82	20.37	6.45	
+50			6.07	27.17	20.74	6.43	330.57 / 6.07 / 336.64
+75			5.57	27.67	21.10	6.57	
1+00			5.19	28.05	21.47	6.58	
+25			4.96	28.28	21.83	6.45	
+50			4.48	28.76	22.21	6.55	
+75			4.11	29.13	22.57	6.56	
2+00			3.96	29.28	22.94	6.34	Grade Sheet # 326
+25			3.86	29.38	23.31	6.07	
+50			4.05	29.19	23.68	5.51	
P +75			3.44	329.80	24.04	5.76	
3+00	5.58	335.38	5.36	30.02	24.41	5.61	
+25			4.98	30.40	24.78	5.62	
+40			5.43	29.95	325.00	4.95	MH # 220
B.M.			4.76	330.62	S.B 330.57	B.P. N.W. Conklin at Howard	S2-4

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Chisholm
Smale } 6-28-22

Cont'd from Page - 27

Sta.	+	H.I	-	Elev.	Grade .4411%	Cut	Staked on 6' offset W.
0 + 00	From Page 27			329.95	325.00	4.95	MH #220
+ 25	6.84	336.79	7.03	329.76	325.11	4.65	
+ 50			6.62	330.17	325.22	4.95	
+ 75			6.63	330.16	325.33	4.83	
1 + 00			6.55	330.24	325.44	4.80	
+ 25			5.38	331.41	325.55	5.86	
+ 50			5.20	331.59	325.66	5.93	
+ 75			4.28	332.51	325.77	6.74	Grade Sheet #327
2 + 00			4.16	332.63	325.88	6.75	
+ 25			3.99	332.80	325.99	6.81	
450			3.55	333.24	326.10	7.14	
+ 75			3.27	333.52	326.21	7.31	
TP 3 + 00			3.17	333.62	326.32	7.30	
+ 25	6.38	340.00	6.23	333.77	326.43	7.34	
+ 40			6.14	333.86	326.50	7.36	MH # 219

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Chisholm
Smale } 6-28-22

Cont'd from Page 28 -

Sta.	+	H.I.	-	Elev	Grade .442%	Cut	Staked on 6' offset W.
0+00		340.00	6.14	333.86	326.50	7.36	M#219
+25			6.20	33.80	26.61	7.19	
+50			5.88	34.12	26.72	7.40	
+75			5.30	34.70	26.83	7.87	
1+00			4.73	35.27	26.94	8.33	
+25			5.08	34.92	27.05	7.87	
+50			4.15	35.85	27.16	8.69	
+75			4.96	35.04	27.27	7.77	
2+00			4.01	35.99	27.38	8.61	Grade Sheet # 328-
+25			4.17	35.83	27.49	8.34	
TP +50			4.09	335.91	27.61	8.30	
+75	5.20	341.11	5.21	35.90	27.72	8.18	
3+00			5.01	36.10	27.83	8.27	
+25			5.63	35.48	27.94	7.54	
+39.8			6.84	34.27	328.00	6.27	F.T.# 27-
BM			3.82	337.29	337.26	B.P.- N.W. Conklin at Castle	
	End of Sewer -						

Central - Conklin alley - MH # T-127 to MH # 218

Sta.	+	H.I.	-	Elev.	Grade
BM	From Book		50.5 R41	307.46	17.59%
0+00	10.81	318.27	10.80	307.47	301.20
+25			8.49	309.78	305.60
+50	TP		1.48	316.79	310.00
+75	12.91	329.70	4.55	324.15	314.39
	TP		0.36	329.34	—
1+00	9.35	338.69	8.55	330.14	318.79
+25			5.04	333.65	323.19
54 1			4.47	334.22	328.40

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Chisholm / Brown } 6-29-22

Cut - Staked on 6' offset E.

W/S M ring at ℄ E & W. - MH # T-127 -

6.27 MH # T-127 - Take grade from
4.18 E/S M ring at ℄ E & W. Take
6.79 line from 1x2 hub & tack 5'
9.76 north of M center on 6' offset E.

11.35 Grade Sheet # 286 -
10.46
5.82 MH # 217

Cont'd from Page 30

Chisholm } 6-29-22
Brown }

Sta.	+	H.I.	−	Elev.	Grade .81%	Cut	Staked on 6' offset E.
0+00		338.69	4.47	334.22	328.40	5.82	MH #217 -
+25			3.85	34.84	28.60	6.24	
+50			3.64	35.05	28.81	6.24	Grade Sheet #287 -
+74.8			3.15	35.54	329.00	6.54	MH #218 -
	TP		8.40	330.29			
B.M.	8.68	338.97	1.72	337.25	337.26	B.P.	N.W. Castle + Conklin
	End of sewer -						

Pacific – Wilson alley MH # 99T – F.T. # 45

Chisholm } 7-6-22 32
Brown }

Sta.	+	H.I.	–	Elev.	Grade	Cut.	
B.M.				326.40	16.39%	B.P. N.W.	Pacific & Castle
TP	8.42	334.82	12.25	322.57			
TP	0.95	323.52	12.52	311.00			Staked on 6' offset West
TP	0.42	311.42	12.98	298.44			
TP	0.39	298.83	12.38	286.45			
0+00	5.52	291.97	12.09	279.88	274.40	5.48	M.H. # 99T.
+25			7.81	284.16	278.50	5.66	
+56.25			2.55	289.42	282.80	6.62	MH # 370

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Grade Sheet # 348

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Sta.	+	H.I	-	Elev.	Grade 40.25%	Cut	
0+08		291.97	2.55	289.42	282.80	6.62	MH # 370
TP	12.96	302.38					
+25 TP			1.34	301.04	292.86	8.18	Staked on 6' offset West
+50 TP	12.12	313.16	0.42	312.74	302.93	9.81	
+80	12.87	325.61	5.85	319.76	315.00	4.76	MH # 369

Grade Sheet # 349

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Chisholm & Brown 7-6-22

Sta.	+	H.I.	−	Elev.	Grade 3.535%	Cut		
0+00		325.61	5.85	319.76	315.00	4.76		MH # 369
+25			3.03	322.58	315.88	6.70		
+50			1.54	324.07	316.77	7.30		Staked on 6' offset West
+75 TP			0.04	325.57	317.65	7.92		
1+00	11.47	337.04	10.31	326.73	318.54	8.19		
+25			9.04	328.00	319.42	8.58		
+50			7.73	329.31	320.30	9.01		Grade Sheet # 350
+75			6.52	330.52	321.19	9.33		
2+00			5.35	331.69	322.07	9.62		
+25			4.62	332.42	322.95	9.47		
+50			7.93	329.11	323.84	5.27		
+75			7.07	329.97	324.72	5.25		
3+00			6.97	330.07	325.61	4.46		
+25			3.54	333.50	326.49	7.01		
+39 42			1.23	335.81	327.00	8.81		MH # 368
TP			6.89	330.15				
B.M.	3.42	333.57	7.16	326.41	326.40	B.P.	N.W.	Pacific & Castle

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Chisholm } 7-19-22
Brown }

Sta.	+	H.I.	−	Elev.	Grade 6.666%	Cut	
0 + 00		337.04	1.23	335.81	327.00	8.81	MH # 368.
+ 25	12.83	348.64	10.07	338.57	328.67	9.90	Staked on 6' offset West
+ 50			8.20	340.44	330.33	10.11	
+ 75			7.42	341.22	332.00	9.22	Grade Sheet # 356
1 + 00			6.66	341.98	333.67	8.31	
+ 25			5.56	343.09	335.33	7.76	
+ 50			5.35	343.29	337.00	6.29	
+ 80			4.24	344.40	339.00	5.40	MH # 367

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Cont'd from Page 35

Chisholm } 7-19-22
Brown }

Sta.	+	H.I.	−	Elev.	Grade 1.577%	Cut				
0+00		348.64	4.24	344.40	339.00	5.40		MH # 367		
+25			3.82	344.82	339.39	5.43		Staked on 6' offset West		
+50			3.15	345.49	339.79	5.70				
+75			2.46	346.18	340.18	6.00				
1+00			1.94	346.70	340.58	6.12				
+25 TP			1.46	347.18	340.97	6.21		Grade Sheet # 357		
+50	7.35	354.53	6.69	347.84	341.37	6.47				
+75			6.59	347.94	341.76	6.18				
2+00			5.84	348.69	342.15	6.54				
+25			5.91	348.62	342.55	6.07				
+50			5.20	349.33	342.94	6.39				
+75			5.05	349.48	343.34	6.14				
3+00			4.56	349.97	343.73	6.24				
+25			3.62	350.91	344.13	6.78				
+50			3.52	351.01	344.52	6.49				
+80 26			3.12	351.41	345.00	6.41		MH # 366		

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Sta.	+	H.I.	−	Elev.	1.176%		
0+00		354.53	3.12	351.41	345.00	6.41	MH # 366
+25			3.85	350.68	345.29	5.39	Staked on 6' offset West
+50 TP			3.51	351.02	345.59	5.43	
+75	7.18	358.20	7.07	351.13	345.88	5.25	
1+00			6.62	351.58	346.18	5.40	
+25			5.69	352.51	346.47	6.04	
+50			5.39	352.81	346.76	6.05	
+75			5.50	352.70	347.06	5.64	Grade Sheet # 358
2+00			5.04	353.16	347.35	5.81	
+25			4.40	353.80	347.65	6.15	
+50			3.87	354.33	347.94	6.39	
+75			3.45	354.75	348.23	6.52	
3+00			3.28	354.92	348.53	6.39	
+25			2.92	355.28	348.82	6.46	
+40			3.03	355.17	349.00	6.17	MH # 365

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Sta.	+	H.I.	−	Elev.	Grade 1.176%	Cut	
0+00		358.20	3.03	355.17	349.00	6.17	MH # 365
+25 TP			2.70	355.50	349.29	6.21	Staked on 6' offset West.
+50	7.00	362.50	6.54	355.96	349.59	6.37	
+75			6.64	355.86	349.88	5.98	
1+00			6.17	356.33	350.18	6.15	
+25			6.18	356.32	350.47	5.85	
+50			5.39	357.11	350.76	6.35	
+75			4.90	357.60	351.06	6.54	Grade Sheet # 359
2+00			4.32	358.18	351.35	6.83	
+25			3.66	358.84	351.65	7.19	
+50			3.41	359.09	351.94	7.15	
+75			3.18	359.32	352.23	7.09	
3+00			3.14	359.36	352.53	6.83	
+25			2.73	359.77	352.82	6.95	
+39.89			2.75	359.75	353.00	6.75	MH # 364

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Cont'd from Page 38

Chisholm } 7-22-22
Brown }

Sta.	f	H.I	—	Elev.	Grade 1.383 %	Cut		
0+00	From Page 76 This Book			364.24	357.70	6.54	MH # 363	
+25	7.18	371.42	6.80	364.62	358.05	6.57	Staked on 6' offset West	
+50			6.13	365.29	358.39	6.90		
+75			6.06	365.36	358.74	6.62		
1+00			5.44	365.98	359.08	6.90		
+25			5.35	366.07	359.43	6.64		
+50			4.98	366.44	359.77	6.67		
+75			4.61	366.81	360.12	6.69	Grade Sheet # 360	
2+00			4.11	367.31	360.47	6.84		
+25			3.77	367.65	360.81	6.84		
+50			3.38	368.04	361.16	6.88		
+75			2.57	368.85	361.50	7.35		
3+00 TP			2.50	368.92	361.85	7.07		
+25	7.66	376.58	7.11	369.47	362.19	7.28		
+39.63			6.82	369.76	362.40	7.36	MH # 362	

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Chisholm
Brown } 7-22-22

Sta.	+	H.I.	−	Elev.	Grade 1.462 %	Cut	
0+00		376.58	6.82	369.76	362.40	7.36	MH # 362
+30			6.94	369.64	362.84	6.80	Staked on 6' offset West
+50			6.44	370.14	363.13	7.01	
+75			4.98	371.60	363.50	8.10	
1+00			4.92	371.66	363.86	7.80	
+25			4.54	372.04	364.23	7.81	
+50			3.70	372.88	364.59	8.29	
+75			3.69	372.89	364.96	7.93	Grade Sheet # 361
2+00			3.60	372.98	365.32	7.66	
+25			3.26	373.32	365.69	7.63	
+50 TP			2.97	373.61	366.06	7.55	
+75	6.10	379.71	5.71	374.00	366.42	7.58	
3+00			5.58	374.13	366.79	7.34	
+25			5.32	374.39	367.15	7.24	
+35			5.53	374.18	367.30	6.88	MH # 361

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Chisholm / Brown } 7-22-22

Sta.	+	H.I.	−	Elev.	Grade 1.461 %	Cut	/	
0+00		379.71	5.53	374.18	367.30	6.88		MH # 361
+25			5.22	374.49	367.67	6.82		Staked on 6' offset West
+50			4.49	375.22	368.03	7.19		
+75			4.86	374.85	368.40	6.45		
1+00			4.76	374.95	368.76	6.19		
+25			4.43	375.28	369.13	6.15		
+50			4.09	375.62	369.49	6.13		Grade Sheet # 362
+75			4.05	375.66	369.86	5.80		
2+00			3.80	375.91	370.22	5.69		
+25 TP			3.36	376.35	370.59	5.76		
+50	5.88	382.23	5.73	376.50	370.95	5.55		
+75			5.59	376.64	371.32	5.32		
3+05			5.73	376.50	371.75	4.75		
S.W. +35 3			5.18	377.05	372.20	4.85		MH # 360
B.M.			5.27	376.96	376.93	B.P. N.W.		Wilson & Orange

Street Grade at MH # 360 377.07

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Cont'd from Page 41

Sta.	+	H.I.	−	Eley.			
0+00		382.23	5.18	377.05	372.20	4.85	MH # 360
+10 93			5.20	377.03	372.50	4.53	MH # 359

Street Grade at MH # 359 377.03

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Chisholm / Brown } 7-22-22

Staked on 6' offset North

Grade Sheet # 363

Cont'd from Page 42

Chisholm / Brown } 7-22-'22

Sta.	+	H.I.	−	Elev.	.4%		
0+00		382.23	5.20	377.03	372.50	4.53	MH # 359 orange
+25			5.47	376.76	372.60	4.16	Staked on 6' offset. West.
+50			4.47	377.76	372.70	5.06	
+75			4.14	378.09	372.80	5.29	
1+00			3.87	378.36	372.90	5.46	
+25			3.36	378.87	373.00	5.87	
TP			3.95	378.28	[illegible]	—	Grade Sheet # 364
+50	4.40	382.68	4.22	378.46	373.10	5.36	
+75			4.23	378.45	373.20	5.25	
2+00			4.16	378.52	373.30	5.22	
+25			4.07	378.61	373.40	5.21	
+50			4.46	378.22	373.50	4.72	
+75			4.54	378.14	373.60	4.54	
3+00			4.67	378.01	373.60	4.41	
+20			5.02	377.66	373.78	3.88	MH # 358 center

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Chisholm } 7-22-22
Brown }

					.401%		
0+00		382.68	5.02	377.66	373.78	3.88	MH #358
+25			5.00	377.68	373.88	3.80	Staked on 6' offset West
+50			4.72	377.96	373.98	3.98	
+75			4.79	377.89	374.08	3.81	
1+00			4.96	377.72	374.18	3.54	
+25 TP			5.01	377.67	374.28	3.39	
+50	5.32	382.99	4.98	378.01	374.38	3.63	Grade Sheet #365
+75			5.30	377.69	374.48	3.21	
2+00			4.68	378.31	374.58	3.73	
+25			4.18	378.81	374.68	4.13	
+50			3.88	379.11	374.78	4.33	
+75			3.54	379.45	374.88	4.57	
3+00			3.08	379.91	374.98	4.93	
+06 72			3.05	379.94	375.01	4.93	F.T. 45 and
TP			4.42	378.57			
B.M.	3.71	382.28	5.34	376.94	376.93		B.P. N.W. Wilson + Orange

Mission – Wabash alley MH# 106T – MH# 421

Chisholm
Brown } 7-11-22

Sta. B.M.	+	H.I.	–	Elev	Grade	Cut	
				333.44	7.491 %		B.P. N.W. University & Pueblo
TP	3.10	336.54	5.26	331.28			
TP	1.61	332.89	8.70	324.19			Staked on 6' offset West.
TP	3.78	327.97	9.75	318.22			
TP	0.54	318.76	12.09	306.67			
0+00	6.86	313.53	13.03	300.50	293.00	7.50	MH# 106T
+25			12.35	301.18	294.87	6.31	
+50			7.09	306.44	296.75	9.69	
+75			2.25	311.28	298.62	12.66	
1+00 TP			0.11	313.42	300.49	12.93	
+25	12.38	325.80	12.65	313.15	302.36	10.79	Grade Sheet # 354.
+50			12.54	313.26	304.24	9.02	
+75			10.45	315.35	306.11	9.24	
2+00			7.59	318.21	307.98	10.23	
+25			6.67	319.13	309.85	9.28	
+50			5.88	319.92	311.73	8.17	
+75			3.10	322.70	313.60	9.10	
3+06 9			1.23	324.57	316.00	8.57	MH# 422

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Cont'd from Page 45

Sta.	+	H.I.	−	Elev.	Grade 3.817%	Cut	
0+00 TP		325.80	1.23	324.57	316.00	8.57	MH # 422
+20	8.74	333.31	7.30	326.01	316.76	9.25	Staked on 6' offset West.
1+00			6.60	326.71	319.82	6.89	
+25			6.27	327.04	320.77	6.27	
+50			5.57	327.74	321.73	6.01	
+75			4.16	329.15	322.68	6.47	Grade Sheet #355
2+00			2.99	330.32	323.63	6.69	
+25			2.20	331.11	324.59	6.52	
+50 TP			1.19	332.12	325.54	6.58	
+80	3.40	335.52	1.89	333.63	326.69	6.94	MH # 421
TP			12.11	323.41			
TP	4.57	327.98	1.13	326.85			
TP	6.76	333.61	2.34	331.27			
B.M.	5.26	336.53	3.10	333.43	333.44		B.P. N.W. University & Pueblo

Reed – Thomas alley MH# 121T – MH# 306
MH# 121T – MH# 304

Chisholm } 7-13-22
Brown }

Sta.	+	H.I.	–	Elev.	Grade 1.391%	Cut	
B.M.				351.97		B.P.	N.W. University & Reed
TP	0.72	352.69	8.14	344.55			Staked on 6' offset West
TP	1.56	346.11	7.40	338.71			
TP	2.33	341.04	12.80	328.24			
TP	1.03	329.27	12.48	316.79			
0+00	6.18	322.97	12.85	310.12	304.00	6.12	MH# 121T – Take grade from W/S MH ring on ℄ E. & W. Take line from 1x2 hub 5' No. of MH center on 6' offset West.
+25			10.73	312.24	304.35	7.89	
+50			12.34	310.63	304.70	5.93	
+75			7.85	315.12	305.04	10.08	Grade Sheet # 351
1+00			1.66	321.31	305.39	15.92	
+25			1.93	321.04	305.74	15.30	
+50			5.08	317.89	306.09	11.80	
+75 TP			8.57	314.40	306.43	7.97	
2	9.39	321.79	12.02	309.77	306.78	2.99	
W. +15 65			9.44	312.35	307.00	5.35	MH# 305

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Cont'd from Page 47

Chisholm } 7-13-22
Brown }

Sta.	+	H.I.	−	Elev.	Grade 7.307%	Cut	
W. 0+00		321.79	9.44	312.35	307.00	5.35	MH # 305 — Take grade from hub on 6' offset West.
+25			6.78	315.01	308.83	6.18	
+50			3.60	318.19	310.65	7.54	Staked on 6' offset East.
+75 TP			1.21	320.58	312.48	8.10	
1	12.34	332.92	9.10	323.82	314.31	9.51	
+25			8.72	324.20	316.13	8.07	
+50			6.83	326.09	317.96	8.13	Grade Sheet # 352
+75			5.74	327.18	319.79	7.39	
2			4.79	328.13	321.61	6.52	
+25			3.16	329.76	323.44	6.32	
+50			2.30	330.62	325.27	5.35	
+60			1.92	331.00	326.00	5.00	MH # 306
TP			12.34	320.58			
0+00	2.16	322.74	12.63	310.11			

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Sta.	+	H.I.	—	Elev.	Grade 5.981%	Cut
0+00	From Page 47			310.12	304.00	6.12
+25	9.74	319.86	7.89	311.97	305.50	6.47
+50			5.95	313.91	306.99	6.92
+75			6.90	312.96	308.49	4.47
1			5.55	314.31	309.98	4.33
+25			4.11	315.75	311.48	4.27
+50			2.86	317.00	312.97	4.03
+75 TP			1.61	318.25	[illegible]	—
+75	13.06	331.31	11.82	319.49	314.47	5.02
2			9.63	321.68	315.96	5.72
+25			7.62	323.69	317.45	6.24
+50			5.91	325.40	318.95	6.45
84 23			4.18	327.13	321.00	6.13
TP			0.35	330.96		
TP	10.00	340.96	0.08	340.88		
TP	7.70	348.58	1.31	347.27		
B.M.	6.20	353.47	1.49	351.98	351.97	

Chisholm } 7-13-22
Brown }

MH # 121T – Take grade from W/S MH ring on E. + W. Take line from 1x2 hub 5' So. of MH center on 6' offset West.

Staked on 6' offset West

Grade Sheet #353

MH # 304

B.P. N.W. University & Reed

Mission – Wabash alley MH #421 – F.T. 51

Chisholm } 7-20-22
Brown }

Sta.	+	H.I.	–	Elev.	Grade 3.747%	Cut	
0+00	From Page 46 This Book.			333.63	326.69	6.94	MH # 421
+25	10.45	344.08	9.51	334.57	327.63	6.94	Staked on 6' offset West
+50			8.24	335.84	328.56	7.28	
+75			7.14	336.94	329.50	7.44	
1			5.86	338.22	330.44	7.78	
+25			5.43	338.65	331.37	7.28	Grade Sheet #366
+50			5.21	338.87	332.31	6.56	
+75			4.44	339.64	333.24	6.40	
2+00			4.98	339.10	334.18	4.92	
+25			3.88	340.20	335.12	5.08	
+50			3.64	340.44	336.05	4.39	
+75 23			2.32	341.76	337.00	4.76	MH # 415

Street Grade 341.72

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Chisholm } 7-20-22
Brown }

Sta.	+	H.I.	−	Elev.	Grade	Cut	
					2.03		
0+00		344.08	2.32	341.76	337.20	4.56	MH # 415
+25 TP			2.10	341.98	337.71	4.27	Staked on 6' offset West
+50	10.54	352.52	9.72	342.80	338.22	4.58	
+75			9.18	343.34	338.72	4.62	
1+00			7.53	344.99	339.23	5.76	
+25			6.67	345.85	339.74	6.11	Grade Sheet # 367
+50			5.60	346.92	340.25	6.67	
+75			4.82	347.70	340.75	6.95	
2+00			4.12	348.40	341.26	7.14	
+25			4.39	348.13	341.77	6.36	
+50			3.80	348.72	342.28	6.44	
+65			3.56	348.96	342.58	6.38	MH # 420

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Chisholm } 7-20-22
Brown }

Sta.	+	H.I.	−	Elev.	Grade 2.067%	Cut	
0+00		352.52	3.56	348.96	342.58	6.38	MH #420
+25			2.73	349.79	343.10	6.69	Staked on 6' offset West.
+50 TP			1.85	350.67	343.61	7.06	
+75	9.33	360.00	8.03	351.97	344.13	7.84	
1+00			7.65	352.35	344.65	7.70	
+25			6.71	353.29	345.16	8.13	Grade Sheet #368
+50			5.91	354.09	345.68	8.41	
+75			5.48	354.52	346.20	8.32	
2+00			5.02	354.98	346.71	8.27	
+25			4.57	355.43	347.23	8.20	
+50			6.12	353.88	347.75	6.13	
+62 10			5.22	354.78	348.00	6.78	MH #419

Street Grade 355.04

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Sta.	+	H.I.	−	Elev.	Grade 2.114	Cut	
0+00		360.00	5.22	354.78	348.00	6.78	MH # 419
+25			3.94	356.06	348.53	7.53	Staked on 6' offset West
+50			2.84	357.16	349.06	8.10	
+75			2.33	357.67	349.59	8.08	
1+00 TP			2.47	357.53	350.11	7.42	
+25	8.28	365.81	7.27	358.54	350.64	7.90	Grade Sheet # 369
+50			6.71	359.10	351.17	7.93	
+75			6.81	359.00	351.70	7.30	
2+00			5.98	359.83	352.23	7.60	
+25			5.36	360.45	352.76	7.69	
+50			5.04	360.77	353.29	7.48	
+80			4.46	361.35	353.92	7.43	MH # 418

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Sta.	+	H.I.	−	Elev.	Grade 2.111%	Cut	
0+00		365.81	4.46	361.35	353.42	7.43	MH # 418
+25			3.85	361.96	354.45	7.51	Staked on 6' offset West.
+50			3.53	362.28	354.98	7.30	
+75			4.03	361.78	355.50	6.28	
1+00			3.13	362.68	356.03	6.65	
+25 TP			2.62	363.19	356.56	6.63	
+50	6.90	370.09	6.83	363.26	357.09	6.17	Grade Sheet # 370
+75			6.52	363.57	357.61	5.96	
2+00			6.07	364.02	358.14	5.88	
+25			5.42	364.67	358.67	6.00	
+50			5.12	364.97	359.20	5.77	
+75			4.94	365.15	359.73	5.42	
+87 94			4.45	365.64	360.00	5.64	F.T. 51
B.M.			3.45	366.64	366.60		B.P. N.W. Mission + Orange

End of Sewer

Steiner St. – Scott Ave. Sewer

MH 415 – MH 397

Chisholm, Brown } 7-20-22

Sta.	+	H.I	–	Elev.	Grade .68617	Cut	Staked on 6' offset North
B.M.	From Page 50 This Book			341.76			2X2 hub on 6' offset W. from center of MH. #415
0+00	6.61	348.37	6.38	341.99	337.00	4.99	MH # 415
+25			5.93	342.44	337.17	5.27	
+50			5.67	342.70	337.34	5.36	
+75			5.42	342.95	337.51	5.44	
1+00			5.25	343.12	337.69	5.43	Grade Sheet # 387
+25			5.08	343.29	337.86	5.43	
+50			4.87	343.50	338.03	5.47	
+75			4.65	343.72	338.20	5.52	
2+00			4.57	343.80	338.37	5.43	
+25			4.46	343.91	338.54	5.37	
+50			4.37	344.00	338.72	5.28	
+62 35			4.52	343.85	338.80	5.05	MH # 400
				343.82			Street Grade – MH # 400

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Chisholm } 7-20-22
Brown }

Sta.	+	H.I.	−	Elev.	Grade 2.944%	Cut	Staked on 6' offset North
0+00		348.37	4.52	343.85	339.00	4.85	MH # 400
+25			4.23	344.14	339.74	4.40	
+50 TP			4.05	344.32	340.47	3.85	
+75	11.34	355.66	9.10	346.56	341.21	5.35	Grade Sheet # 388
1+10			7.32	348.34	342.24	6.10	
+40			6.18	349.48	343.12	6.36	
+69.8			5.55	350.11	344.00	6.11	MH # 399

Street Grade – MH # 399 350.07

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Chisholm } 7-20-22
Brown }

Sta.	+	H.I.	−	Elev.	Grade 2.303%	Cut	Staked on 6' offset West
0+00		355.66	5.55	350.11	344.00	6.11	MH # 399
+25			5.22	350.44	344.58	5.86	
+50			4.58	351.08	345.15	5.93	
+75			4.06	351.60	345.73	5.87	
1+00			3.53	352.13	346.30	5.83	
+25			2.94	352.72	346.88	5.84	Grade Sheet # 389
+50 TP			2.34	353.32	347.45	5.87	
+75	9.06	362.38	8.44	353.94	348.03	5.91	
2+00			7.88	354.50	348.61	5.89	
+25			7.22	355.16	349.18	5.98	
+50			6.66	355.72	349.76	5.96	
+85			5.93	356.45	350.45	6.00	MH # 398
				356.41			Street Grade MH # 398

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Chisholm } 7-20-22
Brown }

Sta.	+	H.I.	−	Elev.	Grade	Cut	
					2.303		
0+00		362.38	5.93	356.45	350.45	6.00	MH # 398
+25			5.29	357.09	351.03	6.06	Staked on 6' offset West
+50			4.72	357.66	351.60	6.06	
+75			4.08	358.30	352.18	6.12	
1+00			3.49	358.89	352.75	6.14	
+25			3.06	359.32	353.33	5.99	Grade Sheet # 390
+50			2.28	360.10	353.90	6.20	
+75 TP			1.72	360.66	354.48	6.18	
2+00	8.08	368.74	7.53	361.21	355.06	6.15	
+25			6.93	361.81	355.63	6.18	
+50			6.36	362.38	356.21	6.17	
+84 4			5.71	363.03	357.00	6.03	MH # 397 ~~Cole~~ 34th
TP			2.11	366.63			
TP	7.48	374.11	1.65	372.46			
B.M.	4.58	377.04	5.89	371.15	371.11		B.P. N.W. Wabash & Orange
				363.05			Street Grade MH # 397

End of Sewer

Wabash Ave — Wabash-Scott alley sewer.
MH#400 — MH#408

Sta.	+	H.I.	-	Elev.	Grade
B.M. S.W.	From Page 55 This Book			343.85	1.446%
0 +00	7.35	351.20	7.10	344.10	339.00
+25			7.00	344.20	339.36
+50			6.87	344.33	339.72
+75			6.51	344.69	340.08
1 +00			6.27	344.93	340.45
+25			5.88	345.32	340.81
+50			5.29	345.91	341.17
+75			4.82	346.38	341.53
2 +00			4.22	346.98	341.89
+25			3.78	347.42	342.25
+50			3.33	347.87	342.62
+75			2.80	348.40	342.98
3 +00			2.27	348.93	343.34

Cont'd on Page 60

Chisholm } 7-28-22
Brown }

Cut	Staked on 6' offset West
	{2x2 at P.I. of 6' offsets North from ℄ between MH#415 + MH#400 + between MH#400 + MH#399
5.10	MH # 400 — 2x2 at center
4.84	+ at P.I. of 6' offsets So. + W. +
4.61	at P.I. of 6' offsets No. + E. Take
4.61	grade from hub at So. W. P.I.
4.48	
4.51	Grade Sheet #391
4.74	
4.85	
5.09	
5.17	
5.25	
5.42	
5.59	MH # 414

Cont'd from Page 59

Sta.	+	H.I.	−	Elev.	Grade 1.447%	Cut	
0+00 TP		351.20	2.27	348.93	343.34	5.59	MH # 414
+25	8.30	357.23	7.85	349.38	343.70	5.68	Staked on 6' offset West
+50			7.24	349.99	344.06	5.93	
+75			6.73	350.50	344.43	6.07	
1+00			6.30	350.93	344.79	6.14	
+25			5.74	351.49	345.15	6.34	
+50			5.28	351.95	345.51	6.44	Grade Sheet # 392
+75			4.68	352.55	345.87	6.68	
2+00			4.16	353.07	346.23	6.84	
+25			3.80	353.43	346.60	6.83	
+50			3.42	353.81	346.96	6.85	
+75			2.84	354.39	347.32	7.07	
3+00			2.36	354.87	347.68	7.19	
N.W. +21			2.38	354.85	348.00	6.85	MH # 413

Cont'd on Page 61

Cont'd from Page 60

Chisholm } 7-28-22
Brown }

Sta.	+	H.I.	−	Elev	Grade 3.828%	Cut	Staked on 6' offset North
N.W. 0+00		357.23	2.38	354.85	348.00	6.85	MH # 413
+25	7.82	362.67	7.48	355.19	348.96	6.23	
+50			6.94	355.73	349.91	5.82	
+75			6.15	356.52	350.87	5.65	Grade Sheet # 393
1+00			5.36	357.31	351.83	5.48	
+25			4.80	357.87	352.79	5.08	
S.W. +56 72			4.41	358.26	354.00	4.26	MH # 412

Cont'd on Page 62

Chisholm } 7-28-22
Brown }

Cont'd from Page 61

S.W.	+	H.I.	−	Elev.	Grade 2.067%	Cut	Staked on 6' offset West
0+00		362.67	4.41	358.26	354.00	4.26	MH # 412
+25			3.10	359.57	354.52	5.05	
+50			1.46	361.21	355.03	6.18	
+75 TP			0.93	361.74	355.55	6.19	
1+00	8.29	370.03	7.35	362.68	356.07	6.61	
+25			6.95	363.08	356.58	6.50	
+50			6.17	363.86	357.10	6.76	Grade Sheet # 394
+75			5.61	364.42	357.62	6.80	
2+00			5.17	364.86	358.13	6.73	
+25			5.13	364.90	358.65	6.25	
+50			4.66	365.37	359.17	6.20	
+75			4.26	365.77	359.68	6.09	
3+00			3.69	366.34	360.20	6.14	
+10			3.56	366.47	360.41	6.06	MH # 411

Cont'd on Page 63

Cont'd from Page 62

Chisholm } 7-28-'22
Brown }

Sta.	+	H.I.	−	Elev.	Grade 2.068	Cut	Staked on 6' offset West
0+00		370.03	3.56	366.47	360.41	6.06	MH # 411
+25			2.94	367.09	360.93	6.16	
+50 TP			2.57	367.46	361.44	6.02	
+75	7.40	374.86	6.83	368.03	361.96	6.07	
1+00			6.34	368.52	362.48	6.04	
+25			5.92	368.94	363.00	5.94	
+50			6.11	368.75	363.51	5.24	Grade Sheet # 395
+75			5.53	369.33	364.03	5.30	
2+00			4.73	370.13	364.55	5.58	
+25			4.42	370.44	365.06	5.38	
+50			4.01	370.85	365.58	5.27	
+75			3.88	370.98	366.10	4.88	
3+00			4.64	370.22	366.61	3.61	
N.W. +18 53			3.59	371.27	367.00	4.27	MH # 410
	Street Grade MH # 410			371.17			

Cont'd on Page 64

Cont'd from Page 63

	+	H.I.	−	Elev.	.666%		
N.W. 0+00		374.86	3.59	371.27	367.00	4.27	MH # 410
+25	6.31	377.58	5.83	371.75	367.17	4.58	
+50			5.50	372.08	367.33	4.75	
+75			5.34	372.24	367.50	4.74	Grade Sheet # 396
1+00			5.04	372.54	367.67	4.87	
+25			4.74	372.84	367.83	5.01	
+50.08			4.55	373.03	368.00	5.03	MH # 409
B.M.			6.45	371.13	371.11	B.P. N.W. Wabash & Orange	

Street Grade MH # 409 372.74

Cont'd on Page 65

Cont'd from Page 64

Sta.	+	H.I.	−	Elev.	.638%
0+00		377.58	4.55	373.03	368.00
+25			5.44	372.14	368.16
+50			3.60	373.98	368.32
+75			3.05	374.53	368.48
1+00 TP			2.92	374.66	368.64
+25	7.60	382.26	7.16	375.10	368.80
+50			6.75	375.51	368.96
+75			6.03	376.23	369.12
2+00			5.51	376.75	369.28
+25			5.85	376.41	369.44
+50			5.39	376.87	369.60
+75			5.65	376.61	369.75
3+00			5.56	376.70	369.91
+15			5.28	376.98	370.01

Cont'd on Page 69

Chisholm
Brown } 7-28-22

Staked on 6' offset West

5.03	MH # 409
3.98	
5.66	
6.05	
6.02	
6.30	
6.55	Grade Sheet # 397
7.11	
7.47	
6.97	
7.27	
6.86	
6.79	
6.97	MH # 408

Thomas – Daley alley MH # 268 – F.T. 34.

Chisholm } 7-26-22
Brown }

Sta.	+	H.I.	–	Elev.	Grade 11.41%	Cut	Staked on 6' offset West
B.M.				330.52			B.P. N.W. Castle & Sisson
TP	4.61	335.13	5.92	329.21			
TP	0.98	330.19	12.32	317.87			
TP	0.67	318.54	12.39	306.15			
0+00	4.35	310.50	13.01	297.49	296.00	1.49	MH # 268
+25			9.07	301.43	298.85	2.58	
TP			0.53	309.97	—	—	
+50	12.74	322.71	7.11	315.60	301.71	14.89	
+75			2.56	320.15	304.56	15.59	Grade Sheet # 381
1+00 TP			0.11	322.60	307.42	15.18	
+25	13.06	335.66	10.64	325.02	310.27	14.75	
+50			8.38	327.28	313.12	14.16	
+75			6.73	328.93	315.98	12.95	
2+00			5.19	330.47	318.83	11.64	
+25			3.94	331.72	321.69	10.03	
+40			3.95	331.71	323.40	8.31	MH # 289

Cont'd on Page 67

Chisholm } 7-26-22
Brown }

Cont'd from Page 66

Sta.	+	H.I.	−	Elev.	Grade ·421	Cut	Staked on 6' offset West
0+00		335.66	3.95	331.71	323.40	8.31	MH #289
+25			3.30	332.36	323.51	8.85	
+50			2.77	332.89	323.61	9.28	
+75			2.30	333.36	323.72	9.64	
1+00 TP			1.73	333.93	323.82	10.11	
+25	5.53	339.46	5.25	334.21	323.93	10.28	
+50			5.24	334.22	324.03	10.19	
+75			4.81	334.65	324.14	10.51	Grade Sheet #382
2+00			4.96	334.50	324.24	10.26	
+25			4.94	334.52	324.35	10.17	
+50			5.08	334.38	324.45	9.93	
+75			5.26	334.20	324.56	9.64	
3+00			5.45	334.01	324.66	9.35	
+25			6.07	333.39	324.77	8.62	
+50			6.45	333.01	324.87	8.14	
+80 TP			8.07	331.39	325.00	6.39	F.T. 34
TP.	10.65	342.04	2.61	339.43			
B.M.	6.93	346.36	3.29	343.07	343.10		B.P. N.W. Klauber + Sissom

End of Sewer

Castle St. MH# 268 - MH# 267

Sta.	+	H.I.	—	Elev.	Grade 16.111%	Cut	Staked on 6' offset North
0+00	From Page 66			297.49	296.00	1.49	MH # 268
+00	8.30	305.79	10.14	295.65	[illegible]	—	
TP.			0.83	304.96		—	
+25	12.82	317.78	4.90	312.88	300.03	12.85	
+50 TP			1.10	316.68	304.06	12.62	
+75	12.93	329.61	10.00	319.61	308.08	11.53	Grade Sheet # 371
1+00			6.71	322.90	312.11	10.79	
+25			4.33	325.28	316.14	9.14	
+50			1.02	328.59	320.17	8.42	
+80 TP			0.21	329.40	325.00	4.40	MH # 267
B.M.	5.65	335.05	4.52	330.53	330.52	B.P. N.W.	Castle + Sisson

Street Grade MH# 267 329.16

[illegible]

5.54

Cont'd from Page 65 Wabash - Scott alley
M# 408 - F.T. #49

Sta.	+	H.I.	−	Elev.	.637 %		Staked on 6' offset West
0+00		382.26	5.28	376.98	370.01	6.97	MH # 408
+25			4.94	377.32	370.17	7.15	
+50			5.04	377.22	370.33	6.89	
+75			5.00	377.26	370.49	6.77	
1+00 TP			4.85	377.41	370.65	6.76	
+25	3.91	381.32	4.09	377.23	370.81	6.42	Grade Sheet #398
+50			3.92	377.40	370.97	6.43	
+75			4.63	376.69	371.12	5.57	
2+00			4.51	376.81	371.28	5.53	
+25			4.47	376.85	371.44	5.41	
+50			4.46	376.86	371.60	5.26	
+75			4.30	377.02	371.76	5.26	
3+00			4.46	376.86	371.92	4.94	
+12½			4.18	377.14	372.00	5.14	F.T. 49
TP.			6.90	374.42			
B.M.	4.31	378.73	7.60	371.13	371.11		B.P. N.W. Wabash & Orange

Swift – Pacific alley MH #378 – MH #377

Sta.	+	H.I.	–	Elev.	1.361%
B.M.				361.48	
0+00	6.73	368.21	8.11	360.10	353.00
+20			8.36	359.85	353.27
1+00			7.74	360.47	354.36
+25			6.04	362.17	354.70
+50			5.15	363.06	355.04
+75			4.71	363.50	355.38
2+00			4.59	363.62	355.72
+25			4.84	363.37	356.06
+50			3.82	364.39	356.40
+75			3.91	364.30	356.74
3+00			3.51	364.70	357.08
+25			2.67	365.54	357.42
+50			2.66	365.55	357.76
+60			2.56	365.65	357.90
B.M.			6.73	361.48	361.48

Chisholm / Brown 7-30-22

Staked on 6' offset West

B.P. N.W. Pacific + University		
7.10		MH # 378
6.58		
6.11		
7.47		
8.02		Grade Sheet #400
8.12		
7.90		
7.31		
7.99		
7.56		
7.62		
8.12		
7.79		
7.75		MH # 377
B.P. N.W. Pacific + University		

Daley - Sisson #16 alley - MH # 262 to MH # 261

Smale
Chisholm } 6-30-22

Sta.	+	H.I.	−	Elev.	Grade	Cut	Staked on 6' offset W.
BM-				349.62		B.P.	N.W. University & Sisson
0+00	3.92	353.54	6.62	346.92	341.00	5.92	MH # 262
+20			5.28	348.26	341.31	6.95	
1			4.87	348.67	342.56	6.11	
+25			6.29	347.25	342.95	4.30	
+50 TP			5.73	347.81	343.34	4.47	
+75	6.82	354.63	6.29	348.34	343.73	4.61	
2			5.96	348.67	344.12	4.55	
+25			4.91	349.72	344.51	5.21	Grade Sheet # 377
+50			4.06	350.57	344.90	5.67	
+75			3.00	351.63	345.28	6.35	
3			2.28	352.35	345.67	6.68	
+25			1.56	353.07	346.06	7.01	
+40			1.23	353.40	346.30	7.10	MH # 261
TP			5.08	349.55			
BM	2.53	352.08	4.76	347.32	?		B.P. N.W. - Daley at Univ. -
0+00 TP #17			4.16	347.92			2x2 at MH #286 - on 6' offset W.

Alley #17 Cont'd on Page 74.

6.21

Thomas — Daley alley #17
MH # 286 — MH # 285

Chisholm, Brown } 8-5-22

Sta.	+	H.I.	—	Elev.	Grade 1.6189%	Cut	Staked on 6' offset W.
0+00	From Page		73	347.92	340.00	7.92	MH # 286
+20	3.44	351.36	5.06	46.30	40.32	5.98	
1			4.56	46.80	41.62	5.18	
+25			1.20	50.16	42.02	8.14	
+50	7.48	57.64	6.61	51.03	42.43	8.60	
+75			6.01	51.63	42.83	8.80	Grade Sheet # 522
2+00			5.64	52.00	43.24	8.76	
+25			5.04	52.60	43.64	8.96	
+50			4.81	52.83	44.05	8.78	
+75			4.46	53.18	44.45	8.73	
3+00			3.75	53.89	44.85	9.04	
+25			3.25	54.39	45.26	9.13	
+40			3.25	54.39	45.50	8.89	MH # 285
TP			10.81	46.83			
TP	5.28	52.11	4.52	47.59			
B.M.	5.72	53.31	3.69	349.62	349.62	B.P. N.W	University & Sissin

Reed - Thomas alley #18 - MH# 301 to MH# 300

Smale
Chisholm } 6-29-

Sta.	+	H.I.	−	Elev.	Grade 1.56%	Cut	Staked on 6' offset W.
BM				351.97			B.P. - N.W. - Reed at Univ. 61/51
0+00 ℙ	2.85	354.82	7.75	347.07	340.00	7.07	MH# 301 -
+20	6.68	353.75	5.61	48.14	40.31	7.83	
1+00			5.05	48.70	41.56	7.14	
+25			5.15	48.60	41.95	6.65	
+50			4.60	49.15	42.34	6.81	
+75			4.35	49.40	42.73	6.67	
2			4.31	49.44	43.12	6.32	
+25			4.08	49.67	43.51	6.16	Grade Sheet #330
+50			3.63	50.12	43.90	6.22	
+75			3.57	50.18	44.29	5.89	
3			2.89	50.86	44.68	6.18	
+25			1.91	51.84	45.07	6.77	
+40			1.33	52.42	345.30	7.12	MH# 300
BM-ℙ			8.06	345.69	?		BP - N.W. Reed at Univ. ?
ℙ	5.77	351.46	4.24	347.22			
BM-	5.94	353.16	5.89	347.27	?		BP - N.W. - Daley at Univ. ?
BM-			3.60	349.56	S.B. 349.62		BP - N.W. Sisson at University - 82/7

525-6
301-S

Pacific - Wilson alley - #22 MH# 364 to MH# 363.

Smale / Chisholm 6-28-22

Sta.	+	H.I.	−	Elev.	Grade	Cut	Staked on 6' offset W.
BM				360.45	1.382 %	B.P. N.W.	Univ. + Wilson −
0+00	5.92	366.37	6.72	59.65	353.00	6.65	MH #364
+20			5.84	60.53	53.28	7.25	
1			5.50	60.87	354.38	6.49	
+25			5.04	61.33	54.73	6.60	X
+50			4.85	61.52	55.07	6.45	
+75			4.99	61.38	55.42	5.96	
2			4.84	61.53	55.76	5.77	Grade Sheet #329
+25			4.19	62.18	56.11	6.07	
+50			4.07	62.30	56.46	5.84	
+75			3.73	62.64	56.80	5.84	
3			2.60	63.77	57.15	6.62	
+25			2.60	63.77	57.49	6.28	
+40			2.13	64.24	357.70	6.54	MH #363
BM			4.96	61.41	S.B. 361.48	B.P. − N.W. Pacific at Univ. − 61/51	
B.M			5.92	360.45	S.B. 360.45	✓ ✓ Wilson at ✓ ✓	

BM-				300.05	
	7.47	307.52	2.49	305.03	
	12.05	317.08	7.14	309. ~~310~~.94	
			2.42	314.66	14.68 +5.01
	7.27	321.93	2.65	219.28	
2+50			3.34	318.59	18.61
	7.36	325.95	4.37	321.58	321.55

				322.57	
	0.95	323.52	12.52	311.00	
	0.42	311.42	12.98	298.44	
	0.39	298.83	12.38	286.45	
	5.52	291.97	2.55	289.42	
	12.96	302.38	1.34	301.04	
	12.12	313.16	0.42	312.74	
	12.87	325.61	3.03	322.58	
0+00				347.07	
~~+65.69~~	+5.90	352.97	4.25	348.72	41.01
		4			7.7 k

156
65
780
936
101.40

5.49
4.22
1.27

4.67
3.876
1.294
1.27
24

4.67
1.27
3.40

467
1.27
3.40

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	.07	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.09	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6	.11	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55	1.67
7	.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.17	.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	.18	.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	.20	.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	.22	.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	.24	.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	.26	.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	.28	.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	.30	.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	.31	.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	.33	.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	.35	.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	.37	.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	.39	.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	5.33
22	.41	.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	.43	.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	.44	.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	.46	.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	.48	.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	.50	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	.52	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	.54	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	.56	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	.57	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	.59	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	.61	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	.63	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+.028+.089 =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 ½ 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 1½.

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	25.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

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

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