W
367

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

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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Levels from Contour Map.

N 3640 - 3760 1 - 79.

Cont. from F. Book #366

N3640

E				
4360		554.7	✓ ✓	
70		54.4	✓ ✓	
80		54.3	✓ ✓	
90		54.6	✓ ✓	
4400		54.4	✓ ✓	
10		554	✓ ✓	
20		56.0	✓ ✓	
30		56.5	✓ ✓	
40		56.6	✓ ✓	
50		56.9	✓ ✓	
60		57.4	✓ ✓	
70		58.6	✓ ✓	
80		58.7	✓ ✓	
90		58.6	✓ ✓	
4500		58.4	✓ ✓	
10		58.2	✓ ✓	
20		58.2	✓ ✓	
30		58.5	✓ ✓	
40		58.6	✓ ✓	
50		58.7	✓ ✓	
60		59.0	✓ ✓	
70		59.2	✓ ✓	
80		59.0	✓ ✓	
90		58.8	✓ ✓	
4600	585	~~58.8~~	✓ ✓	

All Ele. in this book that are on Dam Stations are Check. for

Plotting 5-17-34 EOH

B 337 P 40

N3640

E				
4610		558.3	✓✓	
20		57.9	✓✓	
30		58.3	✓✓	
40		58.0	✓✓	
50		57.8	✓✓	
60		58.0	✓✓	
70		58.0	✓✓	
80		57.6	✓✓	
90		57.4	✓✓	
4700		57.2	✓✓	
10		55.8	✓✓	
20	555	~~55.8~~	✓✓	
30		55.6	✓✓	
40		55.2	✓✓	
50		54.4	✓✓	
60		54.3	✓✓	
70		53.8	✓✓	
80		54.5	✓✓	
50		53.7	✓✓	
4800		54.1	✓✓	
10		54.2	✓✓	
20		53.9	✓✓	
30		53.9	✓✓	
40		54.1	✓✓	
50		54.2	✓✓	✓

B 337 P.32

N 3670

E

4860	54.5	✓	✓
70	54.7	✓	✓
80	54.5	✓	✓
90	53.5	✓	✓
4900	53.6	✓	✓
10	54.0	✓	✓
20	53.9	✓	✓
30	54.2	✓	✓
40	54.1	✓	✓
50	54.3	✓	✓
60	54.7	✓	✓
70	55.2	✓	✓
80	54.6	✓	✓
90	55.2	✓	✓
5000	55.8	✓	✓
10	56.0	✓	✓
20	56.1	✓	✓
30	56.5	✓	✓
40	56.6	✓	✓
50	56.7	✓	✓
60	56.9	✓	✓
70	57.4	✓	✓
80	58.1	✓	✓
90	58.8	✓	✓
5100	60.7	✓	✓

N3640

E			
5110		561.0	✓✓
20		61.3	✓✓
30		61.1	✓✓
40		61.2	✓✓
50		60.2	✓✓
60		60.5	✓✓
70		58.8	✓✓
80		60.2	✓✓
90		60.4	✓✓
5200		59.0	✓✓
10		59.4	✓✓
20		59.4	✓✓
30		59.3	✓✓
40		59.5	✓✓
50		59.4	✓✓
60		60.0	✓✓
70		60.8	✓✓
80		61.0	✓✓
90		62.0	✓✓
5300		62.2	✓✓
10		62.3	✓✓
20		62.5	✓✓
30		62.5	✓✓
40		62.6	✓✓
50		62.6	✓✓

N3640

E		
5360	562.8	✓✓
70	63.0	✓✓
80	63.0	✓✓
90	63.2	✓✓
5400	63.1	✓✓
10	63.3	✓✓
20	63.2	✓✓
30	63.2	✓✓
40	63.2	✓✓
50	63.2	✓✓
60	63.6	✓✓
70	63.7	✓✓
80	63.9	✓✓
90	64.1	✓✓
5500	64.5	✓✓
10	64.5	✓✓
20	64.9	✓✓
30	64.9	✓✓
40	65.0	✓✓
50	65.2	✓✓
60	65.2	✓✓
70	64.9	✓✓
80	64.7	✓✓
90	64.6	✓✓
5600	64.3	✓✓

Checked Abstract for Bam. Sections
E.B.K.

N3640

E

5610	564.1	✓
20	63.9	✓
30	63.8	✓
40	63.3	✓
50	62.7	✓
60	62.2	✓
70	62.3	✓
80	61.3	✓
90	61.1	✓
5700	61.0	✓
10	61.3	✓
20	61.2	✓
30	59.6	✓
40	59.8	✓
50	59.9	✓
60	59.8	✓
70	59.3	✓
80	59.7	✓
90	62.1	✓
5800	61.6	✓
10	61.3	✓
20	61.2	✓
30	61.2	✓
40	61.3	✓
50	61.0	✓

Not on Dam Sec. 14

N3640

E

5860	561.9	✓	Not on Dam Seg.
70	61.3	✓	
80	60.3	✓	
90	59.1	✓	
5900			

N3650

E

4360	55.4	✓	✓
70	54.8	✓	✓
80	55.9	✓	✓
90	55.8	✓	✓
4400	54.0	✓	✓
10	56.8	✓	✓
20	58.0	✓	✓
30	58.3	✓	✓
40	59.0	✓	✓
50	59.0	✓	✓
60	59.3	✓	✓
70	59.1	✓	✓
80	59.2	✓	✓
90	59.1	✓	✓
4500	59.3	✓	✓
10	58.9	✓	✓
20	60.0	✓	✓
30	59.2	✓	✓
40	59.2	✓	✓
50	59.2	✓	✓
60	59.1	✓	✓
70	59.0	✓	✓
80	59.2	✓	✓
90	59.0	✓	✓
4600	58.9	✓	✓

✓

N3650

E

4610	558.7	✓ ✓
20	58.8	✓ ✓
30	58.4	✓ ✓
40	58.5	✓ ✓
50	58.3	✓ ✓
60	58.1	✓ ✓
70	58.4	✓ ✓
80	58.4	✓ ✓
90	57.8	✓ ✓
4700	57.6	✓ ✓
10	57.5	✓ ✓
20	58.2	✓ ✓
30	57.5	✓ ✓
40	56.5	✓ ✓
50	56.7	✓ ✓
60	55.1	✓ ✓
70	54.9	✓ ✓
80	54.3	✓ ✓
90	55.7	✓ ✓
4800	55.6	✓ ✓
10	54.6	✓ ✓
20	54.9	✓ ✓
30	55.2	✓ ✓
40	55.4	✓ ✓
50	54.5	✓ ✓

N 36.50

E		
4860	54.5	✓✓
70	54.3	✓✓
80	54.8	✓✓
90	54.6	✓✓
4900	53.9	✓✓
10	53.4	✓✓
20	54.0	✓✓
30	54.1	✓✓
40	54.2	✓✓
50	54.2	✓✓
60	54.3	✓✓
70	55.0	✓✓
80	54.9	✓✓
90	54.6	✓✓
5000	55.1	✓✓
10	55.3	✓✓
20	55.7	✓✓
30	56.2	✓✓
40	56.2	✓✓
50	56.3	✓✓
60	56.6	✓✓
70	57.0	✓✓
80	57.6	✓✓
90	58.6	✓✓
5100	59.9	✓✓

N3650

E		
5110	562.4	✓✓
20	63.2	✓✓
30	62.1	✓✓
40	62.2	✓✓
50	62.0	✓✓
60	62.7	✓✓
70	60.4	✓✓
80	63.5	✓✓
90	61.7	✓✓
5200	61.7	✓✓
10	61.5	✓✓
20	62.1	✓✓
30	61.7	✓✓
40	61.6	✓✓
50	62.1	✓✓
60	62.5	✓✓
70	63.1	✓✓
80	63.3	✓✓
90	62.8	✓✓
5300	63.5	✓✓
10	63.5	✓✓
20	63.4	✓✓
30	63.7	✓✓
40	63.8	✓✓
50	63.9	✓✓

N 36 50

E			
5360		563.7	✓ ✓
70		64.0	✓ ✓
80		63.7	✓ ✓
90		64.0	✓ ✓
5400.		63.4	✓ ✓
10		63.6	✓ ✓
20		63.7	✓ ✓
30		63.7	✓ ✓
40		64.2	✓ ✓
50		64.5	✓ ✓
60		64.6	✓ ✓
70	64.6	~~64.7~~	✓ ✓
80		64.9	✓ ✓
90		64.7	✓ ✓
5500		64.4	✓ ✓
10		65.2	✓ ✓
20		65.3	✓ ✓
30		65.5	✓ ✓
40		65.6	✓ ✓
50		65.7	✓ ✓
60		65.1	✓ ✓
70		64.6	✓ ✓
80		64.6	✓ ✓
90		64.3	✓ ✓
5600		64.1	✓ ✓

B 334 P 61

N3650

E		
5610	563.8	✓
20	63.3	✓
30	62.9	✓
40	62.5	✓
50	62.2	✓
60	61.5	✓
70	61.0	✓
80	61.1	✓
90	60.8	✓
5700	61.7	✓
10	60.7	✓
20	59.3	✓
30	59.8	✓
40	59.9	✓
50	59.6	✓
60	59.6	✓
70	62.1	✓
80	61.1	✓
90	61.5	✓
5800	61.1	✓
10	60.9	✓
20	61.1	✓
30	61.4	✓
40	61.4	✓
50	61.2	✓

Not on Dam Bank

N3650

E			
5860	5608	✓	Notch Dam
70	60.5	✓	Loc. A
80	59.8	✓	

N3660

E			
4360		557.2	✓ ✓
70		55.3	✓ ✓
80		55.4	✓ ✓
90		55.4	✓ ✓
4400		54.8	✓ ✓
10		56.9	✓ ✓
20		59.8	✓ ✓
30		59.7	✓ ✓
40		59.6	✓ ✓
50		60.0	✓ ✓
60		59.8	✓ ✓
70		59.6	✓ ✓
80		59.8	✓ ✓
90		59.6	✓ ✓
4500		59.5	✓ ✓
10		59.6	✓ ✓
20		59.7	✓ ✓
30		59.9	✓ ✓
40		59.6	✓ ✓
50		59.7	✓ ✓
60		59.3	✓ ✓
70		59.4	✓ ✓
80		59.5	✓ ✓
90	59.4	~~59.5~~	✓ ✓
4600		59.3	✓ ✓

B 337 P41

N3660

E			
4610		559.1	✓ ✓
20		59.0	✓ ✓
30		58.9	✓ ✓
40		58.9	✓ ✓
50		58.6	✓ ✓
60		58.7	✓ ✓
70		58.4	✓ ✓
80		58.4	✓ ✓
90	58.3	~~58.8~~	✓ ✓
4700		57.9	✓ ✓
10		57.7	✓ ✓
20		57.8	✓ ✓
30		57.7	✓ ✓
40		57.7	✓ ✓
50		57.7	✓ ✓
60		57.4	✓ ✓
70		55.8	✓ ✓
80		54.5	✓ ✓
90		54.1	✓ ✓
4800		54.4	✓ ✓
10		54.7	✓ ✓
20		54.8	✓ ✓
30		54.9	✓ ✓
40		54.8	✓ ✓
50		55.3	✓ ✓

B 337 P 34

N 3660

E		
4860	55.8	✓ ✓
70	54.7	✓ ✓
80	54.3	✓ ✓
90	54.2	✓ ✓
4900	54.5	✓ ✓
10	53.7	✓ ✓
20	54.2	✓ ✓
30	54.0	✓ ✓
40	54.0	✓ ✓
50	54.2	✓ ✓
60	54.2	✓ ✓
70	54.6	✓ ✓
80	55.4	✓ ✓
90	55.0	✓ ✓
5000	54.6	✓ ✓
10	54.9	✓ ✓
20	55.1	✓ ✓
30	55.4	✓ ✓
40	56.5	✓ ✓
50	56.3	✓ ✓
60	56.4	✓ ✓
70	56.6	✓ ✓
80	56.5	✓ ✓
90	56.6	✓ ✓
5100	57.6	✓ ✓

E		11 36 60	
5110		558.8	✓ ✓
20		60.6	✓ ✓
30		62.0	✓ ✓
40		61.8	✓ ✓
50		63.0	✓ ✓
60		62.8	✓ ✓
70		62.2	✓ ✓
80		61.7	✓ ✓
90		60.9	✓ ✓
5200		62.7	✓ ✓
10		62.8	✓ ✓
20		64.6	✓ ✓
30	64.9	~~64.4~~	✓ ✓
40		65.2	✓ ✓
50		65.1	✓ ✓
60		65.0	✓ ✓
70		63.8	✓ ✓
80		63.9	✓ ✓
90		64.0	✓ ✓
5300		63.8	✓ ✓
10		64.2	✓ ✓
20		63.9	✓ ✓
30		63.8	✓ ✓
40		63.9	✓ ✓
50		63.8	✓ ✓

✓

B 334 P 35

N3560

E			
5360		563.8	✓ ✓
70		63.9	✓ ✓
80		64.1	✓ ✓
90		63.9	✓ ✓
5400	64.0	~~64.9~~	✓ ✓ ✓
10		64.2	✓ ✓
20		64.6	✓ ✓
30		64.6	✓ ✓
40		64.9	✓ ✓
50		64.9	✓ ✓
60		65.3	✓ ✓
70		65.6	✓ ✓
80		65.8	✓ ✓
90		66.3	✓ ✓
5500		65.7	✓ ✓
10		66.4	✓ ✓
20		66.6	✓ ✓
30		66.0	✓ ✓
40		64.8	✓ ✓
50		64.6	✓ ✓
60		64.3	✓ ✓
70		64.0	✓ ✓
80		63.9	✓ ✓
90		63.7	✓ ✓
5600		63.4	✓ ✓

B334 P54

N3C60

E			
5610		563.0	✓
20		62.6	✓
30		62.3	✓
40		61.7	✓
50		61.3	✓
60		61.1	✓
70		61.2	✓
80		61.0	✓
90		60.9	✓
5700		59.5	✓
10		59.5	✓
20		59.6	✓
30		59.8	✓
40		59.5	✓
50		59.9	✓
60		61.5	✓
70		61.6	✓
80		61.5	✓
90		61.3	✓
5800		60.7	✓
10		61.1	✓
20		61.5	✓
30		61.8	✓
40		60.9	✓
50	60.5	60.9	✓ ✓

Not over Dam Sq. H.

B 339 - P41

N 3600

E

5860	561.0	✓	Motson Dam See A.
70	59.3	✓	
80	58.8	✓	
90			

N3670

E		
4360	560.0	✓
70	59.1	✓
80	58.9	✓
90	57.7	✓
4400	55.6	✓
10	56.6	✓
20	59.4	✓
30	59.8	✓
40	60.3	✓
50	60.1	✓
60	60.0	✓
70	60.2	✓
80	60.0	✓
90	60.0	✓
4500	59.9	✓
10	60.0	✓
20	59.9	✓
30	60.2	✓
40	60.0	✓
50	59.9	✓
60	60.0	✓
70	59.8	✓
80	59.8	✓
90	59.8	✓
4600	59.8	✓

✓

N3670

E			
4610	559.4	✓	
20	59.5	✓	
30	59.3	✓	
40	59.5	✓	
50	59.3	✓	
60	59.1	✓	
70	59.2	✓	
80	58.9	✓	
90	58.5	✓	
4700	58.9	✓	
10	58.9	✓	
20	58.9	✓	
30	58.9	✓	
40	59.0	✓	
50	58.4	✓	
60	58.4	✓	
70	57.7	✓	
80	57.3	✓	
90	56.7	✓	
4800	55.6	✓	
10	55.5	✓	
20	55.1	✓	
30	54.4	✓	
40	54.3	✓	
50	55.3	✓	

N3670

E		
4860	55.7	✓
70	55.9	✓
80	55.3	✓
90	54.8	✓
4900	54.7	✓
10	54.3	✓
20	54.2	✓
30	54.3	✓
40	54.3	✓
50	54.3	✓
60	54.1	✓
70	54.3	✓
80	54.1	✓
90	55.3	✓
5000	55.7	✓
10	55.7	✓
20	54.7	✓
30	55.1	✓
40	55.3	✓
50	55.9	✓
60	56.6	✓
70	56.4	✓
80	56.5	✓
90	56.7	✓
5100	56.7	✓

✓

N 3670

E			
5110		57.1	✓
20		58.0	✓
30		58.6	✓
40		61.5	✓
50		61.8	✓
60		61.6	✓
70	61.8	~~61.3~~	✓ ✓
80		61.3	✓
90		62.0	✓
5200		62.9	✓
10		65.2	✓
20		66.4	✓
30		66.4	✓
40		66.5	✓
50		66.5	✓
60		66.5	✓
70		66.4	✓
80		65.8	✓
90		65.5	✓
5300		64.8	✓
10		64.5	✓
20		64.9	✓
30		64.6	✓
40		64.8	✓
50		64.5	✓

✓

B 334 P 28

N3670

E		
5360	5643	✓
70	64.4	✓
80	64.4	✓
90	64.7	✓
5400	64.8	✓
10	64.9	✓
20	65.0	✓
30	65.3	✓
40	65.4	✓
50	66.2	✓
60	66.5	✓
70	67.2	✓
80	67.3	✓
90	66.7	✓
5500	66.3	✓
10	65.5	✓
20	65.7	✓
30	64.2	✓
40	64.1	✓
50	63.6	✓
60	63.6	✓
70	63.4	✓
80	63.4	✓
90	63.5	✓
5600	63.0	✓

N3670

E		
5610	5.62.2	✓
20	61.7	✓
30	61.6	✓
40	61.4	✓
50	61.3	✓
60	61.3	✓
70	60.8	✓
80	59.5	✓
90	59.5	✓
5700	59.5	✓
10	59.3	✓
20	59.3	✓
30	60.2	✓
40	61.2	✓
50	61.9	✓
60	61.9	✓
70	61.2	✓
80	60.9	✓
90	60.7	✓
5800.	60.7	✓
10	61.8	✓
20	61.6	✓
30	60.9	✓
40	60.3	✓
50	60.1	✓
60	58.7	✓

Not on Dam Sec. A.

N3680

E			
4360		561.9	✓
70		61.4	✓
80		60.2	✓
90		56.9	✓
4400		56.3	✓
10		59.3	✓
20		59.5	✓
30		60.0	✓
40		60.3	✓
50		60.4	✓
60		60.3	✓
70		60.2	✓
80		60.7	✓
90		60.6	✓
4500		60.3	✓
10		60.0	✓
20		60.2	✓
30		60.2	✓
40		60.1	✓
50		60.1	✓
60		60.2	✓
70		59.9	✓
80		60.0	✓
90		60.0	✓
4600		60.2	✓

✓

N3680

E

4610	560.0	✓
20	60.1	✓
30	59.8	✓
40	59.8	✓
50	59.7	✓
60	59.6	✓
70	59.7	✓
80	59.4	✓
90	59.4	✓
4700	60.5	✓
10	60.5	✓
20	59.9	✓
30	59.9	✓
40	59.5	✓
50	59.4	✓
60	59.4	✓
70	59.2	✓
80	58.8	✓
50	57.9	✓
4800	56.6	✓
10	56.1	✓
20	56.3	✓
30	55.3	✓
40	55.3	✓
50	54.3	✓

✓

N 3280

E		
4860	55.4	✓
70	54.9	✓
80	55.0	✓
90	55.5	✓
4900	55.1	✓
10	55.0	✓
20	53.9	✓
30	54.3	✓
40	54.5	✓
50	54.4	✓
60	54.3	✓
70	54.4	✓
80	54.1	✓
90	53.9	✓
5000	55.3	✓
10	55.3	✓
20	55.8	✓
30	55.1	✓
40	54.6	✓
50	55.2	✓
60	55.7	✓
70	56.2	✓
80	56.6	✓
90	56.7	✓
5100	56.7	✓

✓

N 3680

E		
5110	56.9	✓
20	56.9	✓
30	57.1	✓
40	57.3	✓
50	58.4	✓
60	60.5	✓
70	60.9	✓
80	61.5	✓
90	64.6	✓
5200	65.1	✓
10	65.8	✓
20	66.6	✓
30	67.1	✓
40	67.0	✓
50	66.8	✓
60	66.7	✓
70	66.9	✓
80	67.0	✓
90	66.8	✓
5300	66.4	✓
10	66.2	✓
20	66.4	✓
30	66.5	✓
40	66.7	✓
50	66.4	✓

N 3680

E	
5360	5 65.9 ✓
70	65.9 ✓
80	66.1 ✓
90	66.2 ✓
5400	66.4 ✓
10	66.6 ✓
20	66.5 ✓
30	66.6 ✓
40	66.7 ✓
50	66.8 ✓
60	67.3 ✓
70	66.7 ✓
80	66.2 ✓
90	64.9 ✓
5500	63.8 ✓
10	62.9 ✓
20	62.0 ✓
30	62.5 ✓
40	62.7 ✓
50	62.6 ✓
60	63.5 ✓
70	63.3 ✓
80	63.4 ✓
90	62.4 ✓
5600	62.0 ✓

N 3680

E	
5360	565.9 ✓
70	65.9 ✓
80	66.1 ✓
90	66.2 ✓
5400	66.4 ✓
10	66.6 ✓
20	66.5 ✓
30	66.6 ✓
40	66.7 ✓
50	66.8 ✓
60	67.3 ✓
70	66.7 ✓
80	66.2 ✓
90	64.9 ✓
5500	63.8 ✓
10	62.9 ✓
20	62.0 ✓
30	62.5 ✓
40	62.7 ✓
50	62.6 ✓
60	63.5 ✓
70	63.3 ✓
80	63.4 ✓
90	62.4 ✓
5600	62.0 ✓

N3680

E				
5610		561.4	✓	
20		61.1	✓	
30		61.3	✓	
40		61.6	✓	
50	61.0	~~61.6~~	✓ ✓	
60		60.0	✓	
70		59.3	✓	
80		59.3	✓	
90		59.4	✓	
5700		59.5	✓	
10		59.5	✓	
20		60.5	✓	
30		61.6	✓	
40		61.7	✓	
50		61.8	✓	
60		60.8	✓	
70		60.7	✓	
80		60.7	✓	
90		61.3	✓	
5800		61.4	✓	
10		61.8	✓	
20		60.9	✓	
30		60.0	✓	
40		60.2	✓	
50	58.7	~~68.7~~	✓	✓

Not on Barn See H

B 334 P 78

B 339 P 41

N3690

E		
4360	56.2.4	✓ ✓
70	61.2	✓ ✓
80	59.9	✓ ✓
90	57.5	✓ ✓
4400	58.3	✓ ✓
10	59.2	✓ ✓
20	60.0	✓ ✓
30	59.9	✓ ✓
40	60.5	✓ ✓
50	60.5	✓ ✓
60	60.7	✓ ✓
70	60.6	✓ ✓
80	60.5	✓ ✓
90	60.5	✓ ✓
4500	60.4	✓ ✓
10	60.5	✓ ✓
20	60.2	✓ ✓
30	60.4	✓ ✓
40	60.3	✓ ✓
50	60.2	✓ ✓
60	60.3	✓ ✓
70	60.3	✓ ✓
80	60.3	✓ ✓
90	60.2	✓
4600	60.3	✓ ✓

N3690

E			
4610	560.4	✓	✓
20	60.3	✓	✓
30	60.1	✓	✓
40	60.2	✓	✓
50	60.0	✓	✓
60	60.1	✓	✓
70	60.1	✓	✓
80	60.2	✓	✓
90	59.9	✓	✓
4700	60.1	✓	✓
10	60.4	✓	✓
20	60.1	✓	✓
30	60.3	✓	✓
40	60.1	✓	✓
50	60.1	✓	✓
60	60.1	✓	✓
70	60.2	✓	✓
80	59.9	✓	✓
90	59.1	✓	✓
4800	57.3	✓	✓
10	56.2	✓	✓
20	56.3	✓	✓
30	56.7	✓	✓
40	56.2	✓	✓
50	55.0	✓	✓

✓

N3690

E			
4860		55.4	✓ ✓
70		55.2	✓ ✓
80		54.7	✓ ✓
90		54.9	✓ ✓
4900		55.1	✓ ✓
10		55.2	✓ ✓
20		54.8	✓ ✓
30		53.9	✓ ✓
40		54.3	✓ ✓
50		54.4	✓ ✓
60		54.6	✓ ✓
70		53.9	✓ ✓
80		54.5	✓ ✓
90		54.4	✓ ✓
5000		53.6	✓ ✓
10		54.2	✓ ✓
20		54.5	✓ ✓
30		55.4	✓ ✓
40		55.5	✓ ✓
50		55.4	✓ ✓
60		55.0	✓ ✓
70		55.4	✓ ✓
80	55.8	~~54.8~~	✓ ✓ ✓
90		56.5	✓ ✓
5100		56.7	✓ ✓

B.334 P.20

N 3690

E				
5110		57.2	✓ ✓	
20		56.9	✓ ✓	
30		56.9	✓ ✓	
40		57.1	✓ ✓	
50		57.3	✓ ✓	
60		57.2	✓ ✓	
70		60.0	✓ ✓	
80		62.1	✓ ✓	
90		64.3	✓ ✓	
5200		64.4	✓ ✓	
10		65.0	✓ ✓	
20		66.3	✓ ✓	
30		66.6	✓ ✓	
40		67.0	✓ ✓	
50	66.9	~~66.1~~	✓ ✓ ✓	
60		67.2	✓ ✓	
70		67.0	✓ ✓	
80		67.0	✓ ✓	
90		67.0	✓ ✓	
5300		67.0	✓ ✓	
10		67.2	✓ ✓	
20		66.2	✓ ✓	
30		67.0	✓ ✓	
40		66.8	✓ ✓	
50		67.4	✓ ✓	

B 334 P 37

N 3690

E		
5360	566.9	✓ ✓
70	66.2	✓ ✓
80	66.4	✓ ✓
90	66.4	✓ ✓
5400	66.5	✓ ✓
10	66.3	✓ ✓
20	66.1	✓ ✓
30	66.1	✓ ✓
40	66.0	✓ ✓
50	65.0	✓ ✓
60	64.9	✓ ✓
70	64.2	✓ ✓
80	63.5	✓ ✓
90	62.1	✓ ✓
5500	61.0	✓ ✓
10	60.8	✓ ✓
20	60.9	✓ ✓
30	62.9	✓ ✓
40	63.6	✓ ✓
50	63.2	✓ ✓
60	63.0	✓ ✓
70	62.7	✓ ✓
80	62.2	✓ ✓
90	62.0	✓ ✓
5600	61.3	✓ ✓

N 3690

E		
5610	561.5	✓
20	61.3	✓
30	61.1	✓
40	60.7	✓
50	59.8	✓
60	59.1	✓
70	59.3	✓
80	59.5	✓
90	59.5	✓
5700	59.4	✓
10	61.0	✓
20	61.8	✓
30	61.3	✓
40	60.6	✓
50	60.6	✓
60	60.7	✓
70	60.6	✓
80	60.7	✓
90	61.5	✓
5800	61.1	✓
10	60.2	✓
20	60.0	✓
30	58.7	✓
40	58.8	✓

Not run Down Sec. H.

N 3700

E		
4360	559.9	✓
70	59.0	✓
80	58.3	✓
90	60.2	✓
4400	60.0	✓
10	60.3	✓
20	59.4	✓
30	60.4	✓
40	60.5	✓
50	60.7	✓
60	60.7	✓
70	60.9	✓
80	60.7	✓
90	60.7	✓
4500	60.6	✓
10	60.4	✓
20	60.2	✓
30	60.3	✓
40	60.1	✓
50	60.0	✓
60	59.8	✓
70	60.0	✓
80	60.3	✓
90	60.1	✓
4600	60.3	✓

N 3700

E		
4610	560.2	✓
20	60.1	✓
30	60.1	✓
40	60.0	✓
50	60.1	✓
60	60.0	✓
70	60.0	✓
80	59.9	✓
90	59.8	✓
4700	59.8	✓
10	59.7	✓
20	60.0	✓
30	60.1	✓
40	60.0	✓
50	59.9	✓
60	59.9	✓
70	59.6	✓
80	59.2	✓
90	59.3	✓
4800	58.4	✓
10	56.6	✓
20	55.9	✓
30	56.1	✓
40	56.1	✓
50	54.9	✓

N 3700

E		
4860	55.4	✓
70	55.2	✓
80	55.4	✓
90	55.6	✓
4900	56.1	✓
10	56.5	✓
20	56.7	✓
30	55.4	✓
40	54.1	✓
50	54.2	✓
60	54.1	✓
70	54.1	✓
80	54.3	✓
90	54.1	✓
5000	54.5	✓
10	54.5	✓
20	54.5	✓
30	54.1	✓
40	54.4	✓
50	55.5	✓
60	55.3	✓
70	55.5	✓
80	55.7	✓
90	55.5	✓
5100	55.8	✓

N3700

E			
5110	556.1	✓	
20	57.1	✓	
30	57.4	✓	
40	56.9	✓	
50	57.0	✓	
60	57.2	✓	
70	57.5	✓	
80	58.9	✓	
90	62.6	✓	
5200	63.8	✓	
10	64.2	✓	
20	64.7	✓	
30	66.6	✓	
40	67.0	✓	
50	67.0	✓	
60	67.0	✓	
70	67.1	✓	
80	67.1	✓	
90	67.1	✓	
5300	67.0	✓	
10	67.2	✓	
20	66.0	✓	
30	67.0	✓	
40	66.6	✓	
50	67.0	✓	

✓

N3700

E					
5360		567.5	✓		
70		66.9	✓		
80		66.2	✓		
90		66.0	✓		
5400		65.6	✓		
10		64.8	✓		
20		64.7	✓		
30		64.8	✓		
40		63.9	✓		
50		63.3	✓		
60		62.5	✓		
70	62.1	~~67.0~~	✓	✓	
80		61.9	✓		
90		61.6	✓		
5500		62.7	✓		
10		64.1	✓		
20		63.5	✓		
30		62.7	✓		
40		62.5	✓		
50		62.7	✓		
60		62.2	✓		
70		61.9	✓		
80		61.4	✓		
90	60.9	~~60.4~~	✓	✓	
5600		61.3	✓		✓

B 334 P 61

B 334 P 73

N3700

E		
5610	561.1	✓
20	60.0	✓
30	59.3	✓
40	59.2	✓
50	59.3	✓
60	58.9	✓
70	59.4	✓
80	59.5	✓
90	60.3	✓
5700	61.1	✓
10	60.9	✓
20	60.6	✓
30	60.3	✓
40	60.4	✓
50	60.5	✓
60	60.3	✓
70	60.4	✓
80	60.4	✓
90	59.6	✓
5800	59.9	✓
10	58.7	✓
20	58.7	✓
30		

Not on Stam. Doc.

N3710

E			
4360		59.8	✓
70		61.2	✓
80		61.0	✓
90		60.5	✓
4400		61.0	✓
10		60.9	✓
20		60.0	✓
30		60.1	✓
40		60.4	✓
50		60.5	✓
60		60.7	✓
70		60.8	✓
80		60.8	✓
90		60.8	✓
4500		60.8	✓
10		60.7	✓
20		60.7	✓
30		60.5	✓
40		60.3	✓
50		60.0	✓
60		59.9	✓
70		60.0	✓
80		60.0	✓
90		60.0	✓
4600		60.0	✓

N3710

E		
4610	560.1	✓
20	60.1	✓
30	60.0	✓
40	60.0	✓
50	59.9	✓
60	59.9	✓
70	59.7	✓
80	59.7	✓
90	59.6	✓
4700	59.5	✓
10	59.7	✓
20	59.7	✓
30	59.7	✓
40	59.7	✓
50	59.7	✓
60	59.8	✓
70	59.8	✓
80	59.8	✓
90	59.9	✓
4800	60.1	✓
10	60.3	✓
20	59.7	✓
30	59.1	✓
40	59.4	✓
50	58.9	✓

✓

N3710

E

4860	558.2	✓
70	56.6	✓
80	56.4	✓
90	55.8	✓
4900	56.2	✓
10	56.8	✓
20	56.3	✓
30	56.4	✓
40	56.6	✓
50	55.3	✓
60	54.7	✓
70	54.3	✓
80	54.4	✓
90	54.2	✓
5000 ✓	54.5 ~~55.4~~	✓ ✓
10	54.5	✓
20	54.5	✓
30	54.6	✓
40	54.6	✓
50	54.3	✓
60	54.6	✓
70	54.9	✓
80	54.9	✓
90	55.2	✓
5100	55.2	✓

✓

N3710

E			
5110		55.0	✓
20		56.0	✓
30		57.2	✓
40		57.7	✓
50		57.4	✓
60		57.2	✓
70		57.3	✓
80		57.4	✓
90		58.0	✓
5200		58.8	✓
10		63.7	✓
20		63.4	✓
30		64.6	✓
40		66.4	✓
50		67.0	✓
60		67.0	✓
70		67.1	✓
80		67.4	✓
90		67.1	✓
5300		66.3	✓
10		66.9	✓
20		65.8	✓
30		66.0	✓
40		65.2	✓
50		65.0	✓

N37 10

E			
5360		565.0	✓
70		64.7	✓
80	64.8	~~64.6~~	✓ ✓
90		64.7	✓
5400		64.8	✓
10		~~64.4~~	✓
20		63.5	✓
30		62.9	✓
40		62.1	✓
50		61.9	✓
60		61.9	✓
70		62.2	✓
80		62.2	✓
90		62.5	✓
5500		62.2	✓
10		61.4	✓
20		62.0	✓
30		61.3	✓
40		61.2	✓
50		61.1	✓
60		61.2	✓
70		61.0	✓
80		60.6	✓
90		60.0	✓
5600		59.2	✓ ✓

B 334 P 52

N 37 10

E

5610	59.4	✓
20	58.8	✓
30	58.9	✓
40	58.7	✓
50	58.9	✓
60	59.3	✓
70	59.1	✓
80	58.6	✓
90	58.5	✓
5700	58.7	✓
10	59.7	✓
20	59.1	✓
30	59.4	✓
40	59.2	✓
50	58.9	✓
60	58.8	✓
70	59.0	✓
80	58.6	✓
90	58.7	✓
5800	58.5	✓

Not on Dam Sec.

N3720

E			
4360		561.3	✓
70		61.4	✓
80		61.3	✓
90		61.3	✓
4400		60.9	✓
10	61.2	~~61.3~~	✓ ✓
20		60.6	✓
30		60.5	✓
40		60.4	✓
50		60.5	✓
60		60.7	✓
70		60.8	✓
80		60.7	✓
90		60.7	✓
4500		61.0	✓
10		60.8	✓
20		60.5	✓
30		60.8	✓
40		60.5	✓
50		60.4	✓
60		60.5	✓
70		60.2	✓
80		60.2	✓
90		60.1	✓
4600		60.1	✓

B 337 P 55

N3720

E		
4610	559.9	✓
20	59.8	✓
30	59.8	✓
40	59.7	✓
50	59.7	✓
60	59.7	✓
70	59.7	✓
80	59.7	✓
90	59.7	✓
4700	59.7	✓
10	59.7	✓
20	59.7	✓
30	59.6	✓
40	59.6	✓
50	59.6	✓
60	59.7	✓
70	59.8	✓
80	59.9	✓
90	60.2	✓
4800	60.6	✓
10	61.1	✓
20	61.4	✓
30	61.1	✓
40	61.2	✓
50	61.1	✓

✓

N3720

E				
4860		561.2 ~~551.2~~	✓	✓
70		60.5 ~~50.5~~	✓	✓
80		58.8	✓	
90.		57.2	✓	
4900		55.8	✓	
10		55.9	✓	
20		55.8	✓	
30		56.2	✓	
40		56.4	✓	
50		56.5	✓	
60		55.2	✓	
70		55.8	✓	
80		55.8	✓	
90		53.7	✓	
5000		54.3	✓	
10		54.2	✓	
20		54.4	✓	
30		54.6	✓	
40		54.5	✓	
50		54.8	✓	
60		54.5	✓	
70		54.9	✓	
80		54.7	✓	
90		55.0	✓	
5100		55.5	✓	

✓

B37 P 24

B 337 P 24

N3720

E		
5110	555.3	✓
20	55.3	✓
30	55.8	✓
40	56.4	✓
50	57.0	✓
60	57.2	✓
70	56.5	✓
80	56.9	✓
90	56.9	✓
5200	57.0	✓
10	57.8	✓
20	58.5	✓
30	59.3	✓
40	62.4	✓
50	64.2	✓
60	66.3	✓
70	66.7	✓
80	66.2	✓
90	64.9	✓
5300	65.4	✓
10	65.2	✓
20	64.5	✓
30	64.4	✓
40	64.2	✓
50	64.5	✓

✓

N3720

E		
5360	564.7	✓
70	64.8	✓
80	63.2	✓
90	62.7	✓
5400	62.6	✓
10	62.2	✓
20	62.0	✓
30	61.9	✓
40	62.0	✓
50	61.9	✓
60	61.3	✓
70	61.0	✓
80	61.1	✓
90	61.4	✓
5500	61.9	✓
10	62.1	✓
20	60.3	✓
30	60.5	✓
40	61.0	✓
50	60.4	✓
60	59.0	✓
70	57.8	✓
80	57.6	✓
90	57.7	✓
5600	57.3	✓

N 3720

E				
5610		557.5	✓	
20		57.6	✓	
30		57.8	✓	
40	57.8	~~57.7~~	✓	✓
50		57.5	✓	
60 ✓		57.5	✓	
70		57.8	✓	
80		57.8	✓	
90		57.8	✓	
5700		58.1	✓	
10		58.4	✓	
20		58.3	✓	
30		57.6	✓	
40		58.6	✓	
50		58.3	✓	

Not on Dam Sec. 15

B 334 P 77

N3730

E		
4360	561.3	✓
70	61.3	✓
80	61.4	✓
90	61.4	✓
4400	61.2	✓
10	61.3	✓
20	61.0	✓
30	60.7	✓
40	60.6	✓
50	60.4	✓
60	60.3	✓
70	60.4	✓
80	60.6	✓
90	60.8	✓
4500	60.6	✓
10	60.6	✓
20	60.7	✓
30	60.6	✓
40	60.6	✓
50	60.6	✓
60	60.3	✓
70	60.4	✓
80	60.2	✓
90	60.1	✓
4600	60.0	✓

N3730

E			
4610		559.8	✓
20		59.8	✓
30		59.7	✓
40		59.5	✓
50		59.6	✓
60		59.5	✓
70		59.5	✓
80		59.6	✓
90		59.4	✓
4700		59.6	✓
10		59.8	✓
20		59.6	✓
30		59.8	✓
40		60.1	✓
50		60.4	✓
60		61.8	✓
70		63.1	✓
80		62.3	✓
90		62.2	✓
4800		62.0	✓
10		62.5	✓
20		63.1	✓
30		63.2	✓
40		63.3	✓
50		63.2	✓

N 3730

E		
4860	563.6	✓
70	63.7	✓
80	63.7	✓
90	63.3	✓
4900	62.3	✓
10	60.9	✓
20	58.4	✓
30	56.7	✓
40	56.2	✓
50	55.9	✓
60	56.1	✓
70	55.1	✓
80	55.3	✓
90	55.5	✓
5000	55.2	✓
10	54.6	✓
20	54.8	✓
30	54.4	✓
40	54.7	✓
50	54.7	✓
60	54.9	✓
70	54.7	✓
80	54.6	✓
90	54.8	✓
5100	54.6	✓

N 3720

E				
5110		554.7	✓	
20		~~55.1~~ 55.0	✓	
30		~~55.1~~ 55.0	✓	
40		54.9	✓	
50	55.4	~~54.4~~	✓	✓
60		56.3	✓	
70		56.5	✓	
80		56.6	✓	
90		56.7	✓	
5200		56.7	✓	
10		56.8	✓	
20		57.1	✓	
30		57.0	✓	
40		57.3	✓	
50		58.3	✓	
60		60.8	✓	
70	61.3	~~61.4~~	✓	✓
80		60.2	✓	
90		60.3	✓	
5300		60.9	✓	
10		62.2	✓	
20		62.9	✓	
30		61.8	✓	
40		61.5	✓	
50		61.2	✓	

✓

B 334 P 26

B 334 P 39

N3730

E			
5360		561.8	✓
70		61.2	✓
80		61.5	✓
90		61.1	✓
5400		61.4	✓
10		61.5	✓
20		61.5	✓
30		61.5	✓
40		61.0	✓
50		61.2	✓
60		61.5	✓
70		62.2	✓
80		62.3	✓
90		62.1	✓
5500		60.8	✓
10		60.6	✓
20		60.9	✓
30		60.7	✓
40		59.5	✓
50		57.2	✓
60		57.2	✓
70		57.5	✓
80		57.7	✓
90		57.6	✓
5600		57.5	✓

N3730

E

5610	557.6	✓
20	57.7	✓

N3740

E			
4360	561.5	✓	
70	61.5	✓	
80	61.4	✓	
90	61.5	✓	
4400	61.4	✓	
10	61.3	✓	
20	61.2	✓	
30	61.0	✓	
40	61.2	✓	
50	61.2	✓	
60	60.7	✓	
70	60.5	✓	
80	60.4	✓	
90	60.5	✓	
4500	60.5	✓	
10	60.4	✓	
20	60.5	✓	
30	60.4	✓	
40	60.3	✓	
50	60.3	✓	
60	60.3	✓	
70	60.1	✓	
80	60.0	✓	
90	60.0	✓	
4600	60.0	✓	✓

N3740

E		
4610	560.0	✓
20	59.9	✓
30	59.6	✓
40	59.7	✓
50	59.7	✓
60	59.8	✓
70	60.4	✓
80	60.0	✓
90	60.1	✓
4700	60.5	✓
10	62.3	✓
20	62.5	✓
30	61.9	✓
40	63.1	✓
50	63.5	✓
60	63.5	✓
70	63.7	✓
80	63.5	✓
90	63.8	✓
4800	64.6	✓
10	66.4	✓
20	65.3	✓
30	64.9	✓
40	65.3	✓
50	64.4	✓

N 37 40

E		
4860	564.3	✓
70	64.3	✓
80	63.9	✓
90	64.1	✓
4900	64.0	✓
10	63.9	✓
20	62.5	✓
30	61.1	✓
40	60.3	✓
50	57.7	✓
60	58.1	✓
70	57.3	✓
80	56.8	✓
90	56.5	✓
5000	55.7	✓
10	55.8	✓
20	53.9	✓
30	54.6	✓
40	54.5	✓
50	54.8	✓
60	54.8	✓
70	54.8	✓
80	54.9	✓
90	54.9	✓
5100	55.0	✓

N3740

E

5110	55.2	✓
20	55.2	✓
30	55.2	✓
40	55.0	✓
50	55.3	✓
60	54.9	✓
70	55.1	✓
80	56.0	✓
90	56.4	✓
5200	56.2	✓
10	56.5	✓
20	56.6	✓
30	56.4	✓
40	56.6	✓
50	56.5	✓
60	56.6	✓
70	56.8	✓
80	56.6	✓
90	57.1	✓
5300	58.2	✓
10	58.8	✓
20	59.6	✓
30	59.7	✓
40	59.9	✓
50	59.9	✓

✓

N3740

E		
5360	560.2	✓
70	60.5	✓
80	61.0	✓
90	61.2	✓
5400	61.2	✓
10	60.7	✓
20	59.9	✓
30	60.2	✓
40	60.8	✓
50	61.4	✓
60	60.0	✓
70	59.9	✓
80	59.6	✓
90	59.4	✓
5500	59.4	✓
10	59.0	✓
20	58.8	✓
30	57.2	✓
40	57.2	✓
50	57.5	✓
60	57.5	✓
70	57.6	✓
80	57.6	✓
90	57.6	✓
5600	57.7	✓

✓

N3740

E

5610 557.7 ✓

20 57.8 ✓

30

N3750

E			
4360		561.7	✓
70		61.6	✓
80		61.7	✓
90		61.6	✓
4400		61.8	✓
10		61.6	✓
20		61.4	✓
30		61.3	✓
40		61.3	✓
50		61.3	✓
60		61.2	✓
70		61.0	✓
80		60.5	✓
90		60.5	✓
4500		60.6	✓
10		60.4	✓
20		60.4	✓
30		60.1	✓
40		60.2	✓
50		60.2	✓
60	60.0	~~60.6~~	✓ ✓
70		60.1	✓
80		60.0	✓
90		60.1	✓
4600		60.6	✓

B 337 P 13

N3750

E			
4610	560.8	✓	
20	60.9	✓	
30	60.9	✓	
40	61.2	✓	
50	61.0	✓	
60	62.1	✓	
70	62.5	✓	
80	62.8	✓	
90	63.5	✓	
4700	66.5	✓	
10	70.8	✓	
20	66.8	✓	
30	64.0	✓	
40	64.6	✓	
50	64.5	✓	
60	65.8	✓	
70	67.7	✓	
80	67.8	✓	
90	70.2	✓	
4800	71.2	✓	
10	71.8	✓	
20	71.5	✓	
30	72.2	✓	
40	69.9	✓	
50	66.9	✓	

✓

N3750

E		
4860	567.4	✓
70	68.2	✓
80	69.9	✓
90	68.6	✓
4900	69.0	✓
10	63.4	✓
20	63.9	✓
30	63.6	✓
40	63.2	✓
50	62.5	✓
60	60.7	✓
70	58.9	✓
80	58.8	✓
90	57.3	✓
5000	57.1	✓
10	56.3	✓
20	55.9	✓
30	55.4	✓
40	54.7	✓
50	53.4	✓
60	54.4	✓
70	55.1	✓
80	54.9	✓
90	54.1	✓
5100	55.1	✓

N 3750

E		
5110	55.1	✓
20	56.1	✓
30	55.1	✓
40	55.3	✓
50	55.1	✓
60	55.2	✓
70	55.4	✓
80	54.6	✓
90	55.0	✓
5200	55.0	✓
10	55.5	✓
20	56.0	✓
30	55.4	✓
40	56.7	✓
50	56.7	✓
60	~~56.4~~ 55.9	✓
70	56.3	✓
80	56.5	✓
90	56.5	✓
5300	56.6	✓
10	57.0	✓
20	57.9	✓
30	58.2	✓
40	58.7	✓
50	58.9	✓

B 334 P 39

N 3750

E			
5360		59.7	✓
70		59.4	✓
80		59.5	✓
90		59.0	✓
5400		58.7	✓
10	584	~~58.7~~	✓ ✓
20		57.9	✓
30		56.6	✓
40		56.4	✓
50		57.0	✓
60		56.2	✓
70		57.3	✓
80		57.3	✓
90		57.0	✓
5500		57.1	✓
10		57.1	✓
20		56.8	✓
30		57.3	✓
40		57.3	✓
50		57.3	✓
60		57.3	✓
70		57.4	✓
80		57.3	✓
90		57.4	✓
5600		57.5	✓

✓

B 334 P 66

N 3750

E

56 10	558.0	✓
20	57.5	✓

N3760

E		
4360		562.0
70		61.9
80		61.9
90		61.9
4400		62.0
10		61.9
20		61.7
30		61.7
40		61.6
50		61.6
60		61.5
70	61.1	~~61.9~~
80		61.0
90		60.8
4500		60.4
10		60.2
20		60.2
30		60.4
40		60.5
50		61.0
60		61.3
70		61.9
80		62.0
90		62.4
4600		62.2

B337 P50

N 37 60

E		
4610	562.3	✓
20	62.5	✓
30	63.0	✓
40	63.3	✓
50	63.7	✓
60	64.2	✓
70	64.3	✓
80	65.4	✓
90	66.2	✓
4700	71.4	✓
10	76.4	✓
20	70.6	✓
30	69.1	✓
40	70.9	✓
50	72.0	✓
60	71.0	✓
70	74.0	✓
80	73.8	✓
90	73.7	✓
4800	75.2	✓
10	77.6	✓
20	77.6	✓
30	77.4	✓
40	75.7	✓
50	75.8	✓

✓

N 3760

E			
4860		5754	✓
70		73.5	✓
80		73.9	✓
? 90		73.9	✓
4900		74.2	✓
10		64.9	✓
20		64.7	✓
30		64.6	✓
40		64.5	✓
50		63.9	✓
60		62.2	✓
70		62.2	✓
80		61.7	✓
90		60.5	✓
5000		58.7	✓
10		57.9	✓
20		57.4	✓
30		56.7	✓
40		56.1	✓
50		56.1	✓
60		55.4	✓
70		55.2	✓
80		54.7	✓
90		55.1	✓
5100		55.2	✓

✓

N3760

E

5110	55.2	✓	
20	55.2	✓	
30	55.2	✓	
40	55.2	✓	
50	55.1	✓	
60	55.2	✓	
70	55.4	✓	
80	55.3 ~~55.4~~	✓	
90	55.3	✓	
5200	55.1	✓	
10	55.4	✓	
20	55.5	✓	
30	55.5	✓	
40	55.5	✓	
50	55.7	✓	
60	55.7 ~~55.5~~	✓	
70	55.8 ~~55.5~~	✓	
80	56.7 ~~56.6~~	✓	
90	56.7	✓	
5300	56.6	✓	
10	56.4	✓	
20	56.8	✓	
30	56.9	✓	
40	56.9	✓	
50	57.0	✓	

All E6 in this book cf for Plotting on Rail Section Book

Plotting cf by E6

Cont. in E Book #368

D 334 P39
" P39
" P41

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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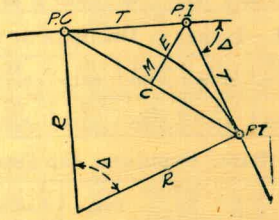

CURVE FORMULAS

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

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

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

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

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

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.=Sta. 161 +60.35 to find Sta. of P. C. and P. T. $\Delta=62°\ 10'$ $D=8°\ 20'$. From Table IV for 1° curve T=3454.1 and ÷8⅓=414.49 ft. From Table V correction=.36 or T=414.85 ft. P. C.=Sta. P.I.—T=157 +45.50. Also from (4) L=746.00 and P. T.=Sta. P. C. +L=164 +91.50.

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft.=7.27 ft. Distance=158—Sta. P. C.=54.50, hence offset=7.27 $(54.50\div100)^2$=2.16 ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus $(54.50)^2\div(2\times688.26)$=2.16 ft.

Deflections.—Deflection angle=½ D for 100 ft., ¼ D for 50 ft., etc. For c ft.=(in minutes) .3 x C x D° or=defl. for 1 ft. from Table III x C. For Sta. 158 of above curve=.3 x 54.5 x 8⅓=136.2′ or 2° 16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflection angle=2° 16.2′ +8° 20′ ÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 91.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6÷8⅓=91.27 and from Table V correction=.10 or E=91.37 ft. Or suppose $\Delta=32°$ and E is measured and found to be 42 ft. What is D? From Table IV E=230.9 and ÷42=5.5 or D=5° 30′.

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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