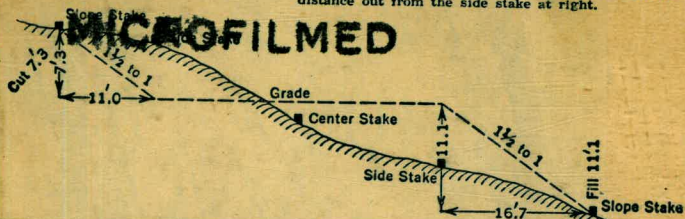


**DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING**  
 Roadway of any Width. Side Slopes 1 1/2 to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	Distance out from Side or Shoulder Stake									Cut or Fill	
	0	.1	.2	.3	.4	.5	.6	.7	.8		.9
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

KEUFFEL & ESSER CO., N. Y.

BOOK No. 50

LEVELS GRADES & SECTIONS

3.10 PROJECT No 40

15.25  
11.19  
4.11

N 52° 41' 10" W

11.69  
9.514  
13.65  
5.30  
10.35  
5.164  
15.81  
5.05  
10.46 REDHEAD  
3.95  
14.91  
14.91  
14.91  
3.10  
3.9  
11.31 HUB 18.92 + 18' W

10.46  
5.05  
10.51  
5.12  
10.35  
4.064  
15.25  
1.18  
11.15  
11.61  
7.98 - BASE W/1/1  
13.59  
11.57  
2.02  
2.02  
6.89  
7.02  
15.11

14 - F. 0.9  
142 - F. 2.0  
15 - F. 0.8  
152 - F. 1.2 17.00  
16 - F. 0.2  
10.56 F - F. 1.5

46.76 W Point  
Jama

The paper in this book No. 373A  
 is made of 50% high grade rag stock  
 with a WATER RESISTING surface sizing.

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## CONTROL LEVELS FOR MIDWAY DRIVE BRIDGE

STA	+	H.I.	-	ELEV
B.M.	4.93	16.70		11.77
T.B.M.			5.54	11.16
"	4.23	15.39		11.16
T.B.M.			4.61	10.78
"	3.46	14.24		10.78
T.B.M.			6.28	7.96
"	5.77	13.73		7.96
T.P.			3.64	10.09
"	5.27	15.36		10.09
T.P.	5.47		7.66	10.70
B.M.		16.17	4.40	11.77
T.B.M.	3.82	11.78		7.96
"			4.06	7.72
"			4.41	7.37
"			4.29	7.49
"			5.13	6.65
(T.P.)			4.47	7.31

## REMARKS

1/4" BRASS PLUG ON TRIPLE HEADWALL CULVERT ON WEST SIDE OF MIDWAY -- 200' NORTH OF P.I. MIDWAY & WEST POINT LOMA

CHISELED  $\frac{1}{2}$ " TOP OF CURB (WEST) MIDWAY & NASHVILLE

" " " " " " " " " " " "

NORTH OF BREAK IN CURB

CHISELED  $\frac{1}{2}$ " TOP OF EAST CURB OPPOSITE (OLD NURSERY BLDG) (NEW FENCE CO.)

" " " " " " " " " " " "

2'x2" R.P. 200' EAST - FOR PIER NO 10

T.P.<sup>2</sup> FOR CLOSURE

1/4" BRASS PLUG ON TRIPLE HEADWALL CULVERT ON WEST SIDE OF MIDWAY  $\pm$  200' NORTH OF P.I. OF MIDWAY & WEST POINT LOMA

2'x2" R.P. 200' E/ PIER NO 10

" " PIER NO 9

" " PIER NO 8

" " PIER NO 7

" " PIER NO 6

" " PIER NO 5

THESE POINTS  
HAVE BEEN  
REMOVED  
SEE PAGE 4 & 5

11-17-49  
CLEAR  
WARM  
CALM

BARRAGAN  
SHRIFTY

(2)

CONTROL LEVELS FOR MIDWAY DRIVE BRIDGE

STA	+	H.L.	-	ELEV	REMARKS
T.B.M.	3.67	10.98		7.31	2"x2" R.P. 200' EAST MIDWAY FOR & PIER 5
"			4.27	6.71	" " " PIER NO 4
"			4.30	6.68	" " " PIER NO 3
"			4.54	6.44	" " " PIER NO 2
"			4.57	6.41	" " " PIER NO 1
(T.P.)			4.80	6.18	2"x2" R.P. @ 90° To & AT NORTH ABUTMENT
"					" " " " " " " " " " " "
T.B.M.	5.30	11.48		6.18	(EAST)
T.P.			0.58	10.90	T.P. ON CURB BY LAMP POST NO 45
"	4.00	14.90		10.90	" " " " " " " " " " " "
T.P.			4.13	10.77	T.P. ON CURB BY - P.I. DETOUR & MIDWAY
"	4.67	15.44		10.77	" " " " " " " " " " " "
T.P.			4.47	10.97	T.P. ON CURB BY LAMP POST NO 45
"	4.07	15.04		10.97	" " " " " " " " " " " "
T.B.M.			3.60	11.44	(P.O.T.) LEAD PUGG STACK ON WEST CURB OF MIDWAY R.P. FOOT & OF BRIDGE (BETWEEN LIGHT POSTS)
T.P.			4.90	10.14	ON EAST CURB MIDWAY NEAR CURB W/LET (1565-1567)
"	4.90	15.04		10.14	" " " " " " " " " " " "
			EL -	10.69	1
			4.36	10.68	S/W CURB BASE OF LAMP POST NO 45 75' - E/MIDWAY CURB

THESE POINTS HAVE  
BEEN REMOVED  
SEE PAGE 7 (5)

## CONTROL LEVELS FOR MIDWAY DRIVE BRIDGE

STA	+ H.I.	-	ELEV	REMARKS		
T.P.	4.88	15.02	10.14	N/E COR OF CONC PAD OVER E/CURB INLET MIDWAY DR.		
T.P.			4.09	10.93	BY LAMP POST NO 4559 ON E/CURB	
"	4.33	<del>15.26</del> 15.29	10.93	10.72	CORR-	" " " NO 4559 " "
T.P.			4.59	<del>10.75</del>	10.69	BY LAMP POST NO 4551 (ON EAST CURB
SET				11.17	CORR-	
B.M.			4.09	<del>11.20</del>	11.14	ON W/CURB 15' N/E OF STA (END PROJ.)
T.P.	1.43	15.15 <del>15.18</del>		10.72	CORR-	
				<del>10.75</del>	10.69	BY LAMP POST NO 4551 (ON EAST CURB
(T.P)				11.07	CORR-	(CHISELED SQUARE)
B.M.			4.08	<del>11.07</del>	11.04	" " " " 43
"	3.97	15.04 <del>15.07</del>		11.07	CORR-	" " " " 45 39
"				<del>11.10</del>	11.04	" " " " "
(T.P)				10.36	CORR-	
B.M.			4.68	<del>10.36</del>	10.37	CHISELED SQUARE - LAMP POST NO 4535 (EAST CURB)
"	1.96	15.32 <del>15.35</del>		10.36	CORR-	" " " " " "
"				<del>10.39</del>	10.33	" " " " " "
T.B.M.			4.69	10.63	CORR-	CHISELED SQUARE - LAMP POST NO 4527 (EAST CURB)
"	1.25	11.88 <del>11.91</del>		10.63	CORR-	" " " " " "
"				<del>10.66</del>	10.60	" " " " " "
T.B.M.			3.89	7.99		2 1/2 (R.P) FOR E BEARING PIET NO 10 (200') EAST
				<del>8.02</del>		
				7.96		
				<del>10.03</del>		
B.M.	1.83	12.99		11.16		CHISEL T.O.P W/CURB MIDWAY @ P.I. WITH LA SALLE
			4.345	8.645		T.O.P CURB S/E COR LA SALLE & NASHVILLE ST

CHECK LEVELS ON B.M.<sup>s</sup> FOR MIDWAY DRIVE

BARRAGAN 11-25-49  
SHERRY  
COOL  
CALM  
CLEAR

(4)

STA	+	H.I.	-	ELEV	
T.B.M	3.88	11.84		7.96	2"x2" R.P. & OF BEARING PIER N <sup>o</sup> 10
T.P	4.68	15.28	1.24	10.60	T.B.M LIGHT POST N <sup>o</sup> 4527
T.B.M	4.08	15.06	4.30	10.98	T.B.M " " N <sup>o</sup> 4529
T.B.M	4.60	14.93	4.73	10.33	T.B.M " " N <sup>o</sup> 4535
T.B.M	0.53	11.33	4.13	10.80	T.B.M " " N <sup>o</sup> 4539
B.M	4.43	10.84	4.92	6.41	2"x2" R.P. & PIER N <sup>o</sup> 1
			4.39	6.45	" " " " N <sup>o</sup> 2
T.P	5.145	11.865	7.12	6.72	2"x2" R.P. & PIER N <sup>o</sup> 4
			4.56	7.305	" " " " N <sup>o</sup> 5
			5.22	6.645	2"x2" R.P. & PIER N <sup>o</sup> 6
T.P	4.50	11.99	4.375	7.49	" " " " N <sup>o</sup> 7
			4.62	7.37	2"x2" R.P. & PIER N <sup>o</sup> 8
			4.27	7.72	" " " " N <sup>o</sup> 9
CHECK B.M			4.03	7.96	2"x2" R.P. & BEARING PIER N <sup>o</sup> 10
			ELEV. = =	7.96	
				0.00	
T.B.M	4.19	14.99		10.80	T.B.M LIGHT POST N <sup>o</sup> 4539
"	4.13	15.17	3.95	11.04	" " " " N <sup>o</sup> 4543
T.B.M	4.26	15.04	4.39	10.78	" " " " N <sup>o</sup> 4547
"			4.35	10.69	" " " " N <sup>o</sup> 4551
			3.90	11.14	CORRECTED FL = 11.14 CHISELED SQUARE 15' N/ STA - 38 + 63.45



LEVELS FOR T.B.M. ON 2" X 2" ON EAST SIDE OF MIDWAY DRIVE

BARRAGAN  
SHERRY

12-7-49  
COOL  
CALM  
CLEAR

(5)

STA	+	H.I.	-	ELEV
B.M.	3.69	14.47		10.78
"	3.88	11.78	6.57	7.90
"			3.80	7.98
"			4.11	7.67
"			4.39	7.39
T.P.	3.65	11.18	4.25	7.53
"			4.50	6.68
"			3.83	7.35
T.P.	4.28	11.00	4.46	6.72
"			4.31	6.69
"			4.57	6.43
T.P.	4.53	10.96	4.57	6.43
"			4.53	6.43
"			4.27	6.69
T.P.	4.90	11.62	4.24	6.72
"			4.26	7.36
"			4.94	6.68
T.P.	4.24	11.77	4.09	7.53
"			4.38	7.39

STA	+	H.I.	-	ELEV
CHISELED				
TOP OF CURB MIDWAY IN FRONT OF NEW FENCE CO				
N <sup>o</sup> 10		11.77	3.87	7.90
P.P. @ (90°)			3.80	7.97
N <sup>o</sup> 9			4.10	7.67
N <sup>o</sup> 8				
N <sup>o</sup> 7				
N <sup>o</sup> 6				
N <sup>o</sup> 5				
N <sup>o</sup> 4				
N <sup>o</sup> 3				
N <sup>o</sup> 2				
N <sup>o</sup> 1				
N <sup>o</sup> 2				
N <sup>o</sup> 3				
N <sup>o</sup> 4				
N <sup>o</sup> 5				
N <sup>o</sup> 6				
N <sup>o</sup> 7				
N <sup>o</sup> 8				

8+43 <sup>25</sup>			10.60
8+53 <sup>25</sup>			10.61
9+00			10.63
9+50			10.66
10+00			10.69
B.C.			10.73
10+44 <sup>66</sup>	10.50	0.0	10.50
10+80			10.86
11+00			10.97
11+15			11.02
11+44.66	10.50	0.67	11.17
11+69 <sup>66</sup>	10.50	1.04	11.54
P.I.			
11+94 <sup>66</sup>	10.50	1.50	12.00
12+19 <sup>66</sup>	11.50	1.04	12.54
12+44 <sup>66</sup>	12.50	0.67	13.17
12+69 <sup>66</sup>	13.50	0.375	13.875
12+94 <sup>66</sup>	14.50	0.17	14.67
13+19 <sup>66</sup>	15.50	0.04	15.54
E.C.			
13+44 <sup>66</sup>	16.50	0.0	16.50
T A N	+ 4	?	
13+86 <sup>66</sup>	18.18	0	18.18

PROFILE GRADES 550' VERTICAL CURVE

STA.	TAN ELEV.	GRADE CORR.	CURVE ELEV.
13+86 <sup>66</sup>	18.18	0	18.18
14+11 <sup>66</sup>	19.18	0.02	19.16
14+36 <sup>66</sup>	20.18	0.08	20.10
14+61 <sup>66</sup>	21.18	0.17	21.01
14+86 <sup>66</sup>	22.18	0.305	21.875
15+11 <sup>66</sup>	23.18	0.48	22.70
15+36 <sup>66</sup>	24.18	0.69	23.49
15+61 <sup>66</sup>	25.18	0.935	24.245
15+86 <sup>66</sup>	26.18	1.22	24.96
16+11 <sup>66</sup>	27.18	1.55	25.63
16+36 <sup>66</sup>	28.18	1.91	26.27
P.I.			
16+61 <sup>66</sup>	29.18	2.31	26.87
16+86 <sup>66</sup>	29.34	1.91	27.43
17+11 <sup>66</sup>	29.50	1.55	27.95
17+36 <sup>66</sup>	29.66	1.22	28.44
17+61 <sup>66</sup>	29.82	0.935	28.885
17+86 <sup>66</sup>	29.98	0.69	29.29
18+11 <sup>66</sup>	30.14	0.48	29.66
18+36 <sup>66</sup>	30.30	0.305	30.00

PROFILE GRADES OF 550' VERTICAL CURVE

GRADE CURVE

STA TAN. EL. CORR. ELEV.

18+61<sup>66</sup> 30.46 0.17 30.29

18+86<sup>66</sup> 30.62 0.08 30.54

19+11<sup>66</sup> 30.78 0.02 30.76

19+36<sup>66</sup> 30.94 0 30.94

PROFILE GRADES OF 800' VERTICAL CURVE

STA	TAN. EL.	GRADE CORR.	CURVE ELEV.
19+36 <sup>66</sup>	30.94	0.0	30.94
19+61 <sup>66</sup>	31.10	0.005	31.09
19+86 <sup>66</sup>	31.26	0.02	32.24
20+11 <sup>66</sup>	31.42	0.045	31.38
20+36 <sup>66</sup>	31.58	0.08	31.50
20+61 <sup>66</sup>	31.74	0.125	31.62
20+86 <sup>66</sup>	31.90	0.18	31.72
21+11 <sup>66</sup>	32.06	0.245	31.82
21+36 <sup>66</sup>	32.22	0.32	31.90
21+61 <sup>66</sup>	32.38	0.405	31.98
21+86 <sup>66</sup>	32.54	0.50	32.04
22+11 <sup>66</sup>	32.70	0.605	32.10
22+36 <sup>66</sup>	32.86	0.72	32.14
22+61 <sup>66</sup>	33.02	0.85	32.17
22+86 <sup>66</sup>	33.18	0.98	32.20
23+11 <sup>66</sup>	33.34	1.12	32.22
(P. I.)			
23+36 <sup>66</sup>	33.50	1.28	32.22

(NEXT PAGE)

## PROFILE GRADES OF 800' VERTICAL CURVE

STA	TAB. EL.	GRADE CURVE CORR.	ELEV.
23+61 <sup>66</sup>	33.34	1.12	32.22
23+86 <sup>66</sup>	33.18	0.98	32.20
24+11 <sup>66</sup>	33.02	0.85	32.17
24+36 <sup>66</sup>	32.86	0.72	32.14
24+61 <sup>66</sup>	32.70	0.60	32.10
24+86 <sup>66</sup>	32.54	0.50	32.04
25+11 <sup>66</sup>	32.38	0.40	31.98
25+36 <sup>66</sup>	32.22	0.32	31.90
25+61 <sup>66</sup>	32.06	0.24	31.82
25+86 <sup>66</sup>	31.90	0.18	31.72
26+11 <sup>66</sup>	31.74	0.12	31.62
26+36 <sup>66</sup>	31.58	0.08	31.50
26+61 <sup>66</sup>	31.42	0.04	31.38
26+86 <sup>66</sup>	31.26	0.02	31.24
27+11 <sup>66</sup>	31.10	0.01	31.09
27+36 <sup>66</sup>	30.94	0.0	30.94

PROFILE GRADES OF 550' VERTICAL CURVE

STA	TAN. ELEV.	GRADE CORR.	CURVE ELEV.
27+36 <sup>66</sup>	30.94	0.0	30.94
27+61 <sup>66</sup>	30.78	0.02	30.76
27+86 <sup>66</sup>	30.62	0.08	30.54
28+11 <sup>66</sup>	30.46	0.17	30.29
28+36 <sup>66</sup>	30.30	0.30	30.00
28+61 <sup>66</sup>	30.14	0.48	29.66
28+86 <sup>66</sup>	29.98	0.69	29.29
29+11 <sup>66</sup>	29.82	0.93	28.88
29+36 <sup>66</sup>	29.66	1.22	28.44
29+61 <sup>66</sup>	29.50	1.55	27.95
29+86 <sup>66</sup>	29.34	1.91	27.43
(P.I.)			
30+11 <sup>66</sup>	29.18	2.31	26.87
30+36 <sup>66</sup>	28.18	1.91	26.27
30+61 <sup>66</sup>	27.18	1.55	25.63
30+86 <sup>66</sup>	26.18	1.22	24.96
31+11 <sup>66</sup>	25.18	0.93	24.24
31+36 <sup>66</sup>	24.18	0.69	23.49

550' VERTICAL CURVE  
GRADE CURVE

STA TANG. CORR. ELEV.

31+61 <sup>66</sup>	23.18	0.48	22.70
31+86 <sup>66</sup>	22.18	0.30	21.87
32+11 <sup>66</sup>	21.18	0.17	21.01
32+36 <sup>66</sup>	20.18	0.08	20.10
32+61 <sup>66</sup>	19.18	0.02	19.16
32+86 <sup>66</sup>	18.18	0.0	18.18



33+00	17.61	14.34
33+25	16.61	25.00
33+40	15.61	25.00

B.C. 300' VERT. NORTH (NEXT PAGE)



PROFILE GRADES OF 300' VERTICAL CURVE

STA.	TANEL.	GRADE CORR	CURVE ELEV.
33+40	16.05	0.0	16.05
33+65	15.05	0.05	15.10
33+90	14.05	0.19	14.24
34+15	13.05	0.44	13.49
34+40	12.05	0.77	12.82
34+65	11.05	1.21	12.26
(P.I.)			
34+78 <sup>66</sup>	10.50	1.49	11.99
34+90	10.50	1.29	11.79
35+15	10.50	0.89	11.39
35+40	10.50	0.57	11.07
35+65	10.50	0.32	10.82
35+90	10.50	0.14	10.64
36+15	10.50	0.04	10.54
36+40	10.50	0.0	10.50

END OF NORTH APPROACH  
AND PROFILE GRADES

STA

GRADE

36+50

+75

37+00

+25

+50

+75

38+00

+25

+50

38+63<sup>45</sup>

END OF PAYEMENT TRANSITION -

IN PAYEMENT ON LEFT SIDE,

52' TO 40'

12

CURVE 38+63<sup>86</sup>  
CENTER 38+63<sup>45</sup> → 40'

$\Delta = 4^{\circ} 59' 53''$   
 $R = 1000'$   
 $T = 43.63'$   
 $L = 87.23'$

PAYEMENT TRANSITION

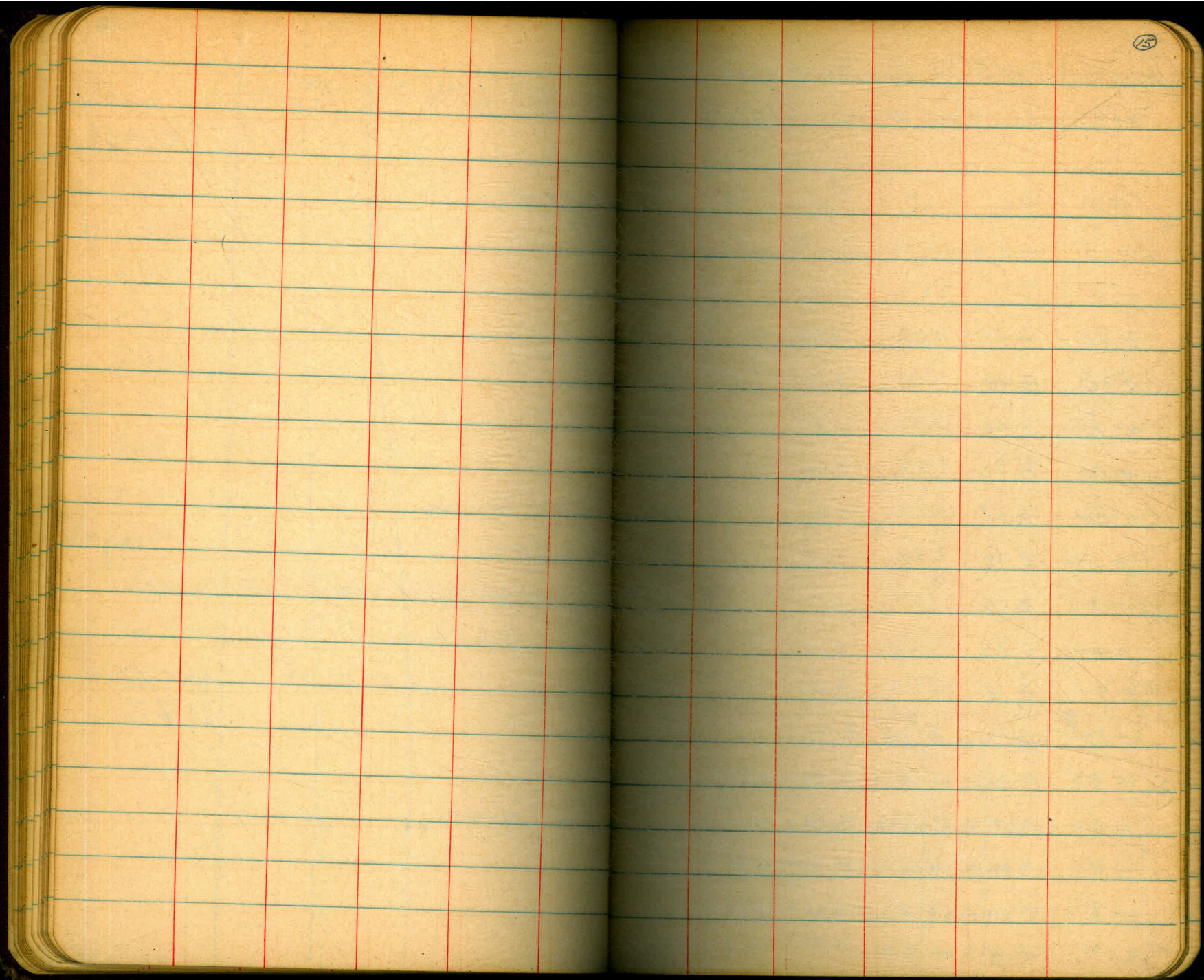
ON LEFT SIDE OF

APPROACH (WEST)

79.70

$\Delta = 4^{\circ} 59' 53''$   
 $R = 1000'$   
 $T = 43.63'$   
 $L = 87.23'$

36+90 → 52'



25

MIDWAY DRIVE DETOUR FINISH GRADE

0+00 = LEAD & JACK P.I. NASHVILLE ST. & MIDWAY

STA (cu. DISK)	LT	10'	5'	10'	RT
0+00	P.I. & OF MIDWAY DRIVE & NASHVILLE				
0+30			10.0		
+50	8.50		9.50	8.50	
+70	8.48		9.30	8.48	
1+00	8.45		9.27	8.45	
+50	8.40		9.22	8.40	
2+00	8.35		9.17	8.35	
+50	8.30		9.12	8.30	
3+00	8.25		9.07	8.25	
+50	8.20		9.02	8.20	
4+00	8.18		9.00 8.97	8.18	
+38 <sup>85</sup>	15'	12.5'	10'	8.93	10'
5+00	8.00	8.35	8.63	8.87	8.63
+50	7.90	8.27	8.58	8.82	8.58
6+00	7.80	8.17	8.52	8.77	8.52
+50	7.69	8.08	8.55	8.72	8.55
7+00	7.58	7.98	8.38	8.67	8.38

SUB GRADE

LT	10'	5'	10'	RT
				9.75
	8.25		9.25	8.25
	8.23		9.05	8.23
	8.20		9.02	8.20
	8.15		8.97	8.15
	8.10		8.92	8.10
	8.05		8.87	8.05
	8.00		8.82	8.00
	7.95		8.77	7.95
	7.90		8.72	7.90
INTERSECTION OF NASHVILLE & LA SALLE				
	12.5'	10'	8.68	10'
	7.75	8.10	8.38	8.62
	7.65	8.02	8.33	8.57
	7.55	7.92	8.27	8.52
	7.44	7.83	8.30	8.47
	7.33	7.75	8.13	8.42

FINISH GRADES

SUBGRADES

STA	LT	15'	12.5'	10'	℄	10'	12.5'	15'	Rt
7+50		7.47	7.90	8.32	8.62	8.32	7.90	7.47	
8+00		7.36	7.80	8.27	8.57	8.27	7.80	7.36	
+50		7.26	7.72	8.20	8.52	8.20	7.72	7.26	
9+00		7.15	7.63	8.15	8.47	8.15	7.63	7.15	
+48		7.05	7.53	8.08	8.42	8.08	7.53	7.05	
10+00		<del>8.35</del> 7.26		<del>8.24</del>	8.60	<del>8.24</del>		<del>8.35</del>	
+50		<del>8.64</del> 7.88		<del>8.57</del>	8.89	<del>8.57</del>		<del>8.64</del>	
11+00		<del>9.04</del> 8.65		<del>9.09</del>	9.29	<del>9.09</del>		<del>9.04</del>	
+50		<del>9.35</del> 9.35		<del>9.45</del>	9.60	<del>9.45</del>		<del>9.35</del>	
12+00		9.52		9.60	9.77	9.60		9.52	
+50		9.55		9.65	9.77			9.55	
13+00		9.57		9.82	9.82			9.57	
+50		9.62		9.87	9.87			9.62	
14+00		9.72		9.97	9.97			9.72	
+50		9.72		9.97	9.97			9.72	
15+00		9.77		10.02	10.02			9.77	
+50		9.82		10.07	10.07			9.82	
16+00		10.12		10.37	10.37			10.12	

STA	LT	15'	12.5'	10'	℄	10'	12.5'	15'	Rt-15'
		7.22	7.65	8.07	8.77	8.07	7.65	7.22	
		7.11	7.55	8.02	8.32	8.02	7.55	7.11	
		7.01	7.47	7.95	8.27	7.95	7.47	7.01	
		6.90	7.38	7.90	8.22	7.90	7.38	6.90	
		6.80	7.28	7.83	8.17	7.83	7.28	6.80	
		<del>8.10</del> 7.01		<del>7.99</del>	8.35	<del>7.99</del>		<del>8.10</del>	
		<del>8.39</del> 7.63		<del>8.32</del>	8.64	<del>8.32</del>		<del>8.39</del>	
		<del>8.79</del> 8.40		<del>8.84</del>	9.04	<del>8.84</del>		<del>8.79</del>	
		<del>9.10</del> 9.00		<del>9.20</del>	9.35	<del>9.20</del>		<del>9.10</del>	
		9.27		9.35	9.52	9.35		9.27	
		9.30		9.52				9.30	
		9.32		9.57				9.32	
		9.37		9.62				9.37	
		9.47		9.72				9.47	
		9.47		9.72				9.47	
		9.52		9.77				9.52	
		9.57		9.82				9.57	
		9.87		10.12				9.87	

FINISH GRADE

SUBGRADES

STA	LT.	1/4	3/4	RT.	LT.	1/4	3/4	RT.
	9.95		10.2	9.95	9.70		10.2	
16+50	10.12		10.37	10.12	9.87		10.12	9.87
	9.95		10.2	9.95			10.2	
17+00	10.12		10.37	10.12	9.87		10.12	9.87
	9.95		10.2	9.95			10.2	
+50	10.12		10.37	10.12	9.87		10.12	9.87
	9.95		10.2	9.95			10.2	
18+00	10.12		10.37	10.12	9.87		10.12	9.87
	9.95		10.2	9.95			10.2	
+50	10.12		10.37	10.12	9.87		10.12	9.87
	9.95		10.2	9.95			10.2	
19+00	10.12		10.37	10.12	9.87		10.12	9.87
	9.95		10.2	9.95			10.2	
+50	10.16		10.41	10.16	9.87		10.12	9.87
	9.95		10.2	9.95	9.87		10.12	9.87
	9.95		10.2	9.95	9.91		10.16	9.91
20+00	10.12		10.37	10.12	9.87		10.12	9.87
	9.95		10.2	9.95			10.2	
+50	10.08		10.33	10.08	9.83		10.08	9.83
	9.95		10.2	9.95			10.2	
21+00	10.04		10.29	10.04	9.79		10.04	9.79
	9.95		10.2	9.95			10.2	
+50	10.00		10.25	10.00	9.75		10.00	9.75
	9.95		10.2	9.95			10.2	
22+00	9.96		10.21	9.96	9.71		9.96	9.71
	9.95		10.2	9.95			10.2	
+50	9.95		10.20	9.95	9.70		9.95	9.70
	9.95		10.2	9.95			10.2	
23+00	9.95		10.20	9.95	9.70		9.95	9.70
	9.95		10.2	9.95			10.2	
+50	9.95		10.20	9.95	9.70		9.95	9.70
	9.95		10.2	9.95			10.2	
24+00	9.95		10.20	9.95	9.70		9.95	9.70
	9.95		10.2	9.95			10.2	
+50	9.95		10.20	9.95	9.70		9.95	9.70
	9.95		10.2	9.95			10.2	
25+00	9.95		10.20	10.35	9.70		9.95	10.10

Trans. Back To Non-us. K

FINISH			GRADES		
STA	LT	1/4	ℓ	1/4	RT
25+50	9.90	9.9	10.20	10.2	10.95
26+00	9.70	9.7	10.20	10.2	10.82
+50	9.40	9.4	10.20	10.2	11.4
B.C.		9.0		10.2	
27+04 <sup>88</sup>	9.00		10.20		11.5
+50	9.10	9.1	10.30	10.3	11.5
28+00	9.20	9.2	10.40	10.4	11.6
+50	9.20	9.2	10.40	10.4	11.6
29+00	9.10	9.1	10.30	10.3	11.5
E.C. 68					11.5
29+66	9.00		10.20		11.4
30+00	9.22		10.17		11.4
+50	9.54		10.12		10.82
31+00	9.60		10.07		10.7
+50	9.76		10.02		10.12
32+00	9.72		9.97		9.77
+50	9.68		9.92		9.62
33+00	9.63		9.87		9.67
+50	9.64		9.82		9.50
34+00	9.75		9.77		9.53
+50	9.85		9.72		9.46

SEE PAGE 21  
FOR REVISED GRADES

SUB GRADES					RT
LT	1/4	ℓ	1/4		RT
9.65		9.95			10.29
9.45		9.95			10.57
9.15		9.95			10.86
8.75		9.95			11.15
8.85		10.05			11.25
8.95		10.15			11.35
8.95		10.15			11.35
8.85		10.05			11.25
8.75		9.95			11.15
8.97	6.36	9.92	5.41	4.41	10.92
9.29	5.97	9.87	5.39	4.69	10.57
9.35	5.91	9.82	5.44	5.04	10.22
9.51	5.75	9.77	5.49	5.39	9.87
9.47	5.79	9.72	5.54	5.24	9.52
9.43	5.83	9.67	5.59	5.83	9.43
9.38	5.78	9.62	5.54	5.78	9.38
9.39	5.77	9.57	5.59	5.83	9.33
9.50	5.66	9.52	5.64	5.88	9.28
9.60	5.56	9.47	5.69	5.93	9.23

MIDWAY DETOUR FINISH GRADE

SUB GRADES (20)

STA	LT	1/4	1/2	3/4	RT
35+00	9.95		9.67		9.33
+50	10.05		9.62		9.18
B.C.					
35+70 <sup>0.9</sup>	10.10		9.60		9.15
36+00	10.10		9.69		9.25
+50	10.06		9.80		9.35
	10.10		9.84		9.40
37+00	10.10		10.00		9.65
+50			10.38		10.20
38+00					
38+31 <sup>0.9</sup>	END OF DETOUR (P.I. & DETOUR & MIDWAY)				

LT	1/4	1/2	3/4	RT
9.70		9.42		9.13
9.80		9.37		8.93
9.85		9.35		9.85
		9.44		9.23
		9.55		9.29
		<del>9.39</del>		<del>9.33</del>
9.81				
		9.75		9.65
		10.13		9.95

SEE PAGE 21 FOR REVISED GRADES



(AS OF 1-5-50)

1-6-50

(2)

MIDWAY DRIVE DETOUR FINISH GRADE

SUB GRADES

STA	LT.	1/4	℄	1/4	RT.	STA	LT.	1/4	℄	1/4	RT.
B.C.	68										
29+66	9.00		10.20		11.20						
30+00	9.28		10.22		11.22	9.03		9.97			10.97
+50	9.69		10.27		10.30	9.44		10.02			10.71
31+00	9.94		10.32		10.70	9.69		10.07			10.45
+50	10.10		10.36		10.70	9.85		10.11			10.19
32+00	10.12		10.40		10.10	9.87		10.15			9.93
+50	10.15		10.45		10.10	9.90		10.20			9.90
33+00	10.15		10.45		10.10	9.90		10.20			9.90
+50	10.15		10.45		10.10	9.90		10.20			9.90
34+00	10.15		10.45		10.10	9.90		10.20			9.90
+50	10.15		10.45		10.10	9.90		10.20			9.90
35+00	10.22		10.28		10.00	9.97		10.03			9.75
+50	10.30		10.12		9.80	10.05		9.87			9.60
B.C.											
35+70	10.33		10.05		9.80	10.08		9.80			9.55
36+00	10.23		9.95		9.70	9.98		9.70			9.45
36+25	10.14		9.88		9.60	9.89		9.63			9.39
36+50	10.06		9.80		9.50	9.85		9.55			9.29
36+75 TO	P.I. WITH MIDWAY BLEND TO EXISTING PAVEMENT										

REVISED GRADES FROM 9+48 TO 12+00

MIDWAY DRIVE FINISH GRADES <sup>1-8-54</sup>

SUBGRADES

STA	LT. 15'	10'	℄	10'	RT.
9+48-	7.05	8.10	8.45	8.10	7.65
10+00	7.26	8.24	8.60	8.24	7.26
+50	7.88	8.57	8.89	8.57	7.88
11+00	8.65	9.09	9.29	9.09	8.65
+50	9.25	9.45	9.60	9.45	9.25
12+00	9.52	9.60	9.77	9.60	9.52

STA	LT. 15'	10'	℄	10'	RT.
	6.80	7.85	8.20	7.85	6.80
	7.01	7.99	8.35	7.99	7.01
	7.63	8.32	8.64	8.32	7.63
	8.40	8.84	9.04	8.84	8.40
	9.00	9.20	9.35	9.20	9.00
	9.27	9.35	9.52	9.35	9.27

ORIGINAL  
CROSS SECTIONS OF MIDWAY DRIVE  
FROM OLLIE ST. NORTH

8+43.74

STA	+ H.I.	- ELEV
B.M	4.67	15.45
06 E		10.78
00		5.05
04 W		9.40
04 W		4.76
04 W		4.74
29 W		5.35
44 W		5.05
53 W		5.10
65 W		5.17
		5.45

CHISEL  
ON CURB  
OF S.D. 10.00

PX

MIDWAY

GUTTER  
LINE  
NO. 5.00

STA	+ H.I.	- ELEV
12 E		15.45
04 E		5.25
00		4.43
03 W		11.02
03 W		4.30
03 W		11.15
03 W		4.70
03 W		10.75
03 W		5.35
03 W		10.10
03 W		5.05
03 W		10.10
03 W		5.18
03 W		10.27
03 W		4.55
03 W		10.90
03 W		4.73
03 W		10.72
03 W		5.12
03 W		10.33

PX

MIDWAY

CURB  
GUTTER  
E  
GUTTER  
CURB

SEE F.R. NO 49 FOR G/L LAYOUT FOR X-SECTION

NOT PLOTTED FOR CITY

NOT PLOTTED FOR CITY

STA	T	H.I.	-	ELEV	
18 E		15.45	9.80	10.65	✓
03 E			9.8	10.7	✓
00			9.7	10.8	✓
03 W	PX CITY	1.76	4.68	10.77	CURB
03 W		1.12	5.32	10.13	GUT
23 W	MIDWAY	1.40	5.04	10.71	ℓ
43 W		1.27	5.17	10.28	GUT
43 W		1.88	4.56	10.89	CURB
71 W			4.90	10.55	

11.77

3.00

2.76

STA	T	H.I.	-	ELEV	
27 E		15.45	9.7	10.8	✓
00			9.55	10.80	✓
03.6W	PX CITY	1.76	4.68	10.77	CURB
03.6W		1.11	5.33	10.12	GUT
23.6W	MIDWAY	1.41	5.03	10.72	ℓ
43 W		1.27	5.20	10.25	GUT
43 W		1.83	4.61	10.84	CURB
71 W			4.95	11.00	

STA	+	H.I.	-	ELEV	
27 E		15.45	1.55	10.90	
00	PX		4.70	10.75	
03.7W			4.65	10.80	CURB
03.7W			5.31	10.14	GUT
23.7			4.96	10.49	R
24 W			5.21	10.24	GUT
43.7			4.82	10.63	
44 W			5.23		
60 W					
6					

STA	+	H.I.	-	ELEV	
29 E		15.45	4.8	10.7	
00			4.65	10.80	
00 W			1.82	4.62	10.83 CURB
04 W			1.21	5.23	10.22 GUT
10 W			1.48	4.96	10.49 &
19 W	MIDWAY		1.49	5.0	10.5 GUT
29 W			1.93	4.51	10.94 CURB
60 W			5.15	10.30	

11+15

STA	+	H.I.	-	ELEV	
28 E					
		15.45	5.05	10.40	
00					
			7.73	10.72	
29.5 W		CITY			
		1.18	5.26	10.19	GUT
29 W					
		1.46	7.98	10.47	ⓧ
49 W					
		1.31	5.13	10.32	GUT
49 W					
		1.90	4.54	10.91	CURB
58 W					
			4.5	11.5	
61 W					
			6.1	9.4	

MIDWAY

MIDWAY

12-5-49 (1) (26)

STA	+	H.I.	-	ELEV	
70 X E					
		15.45	5.5	10.0	
00					
			5.35	10.10	
09.5 W		CITY			
		1.09	5.35	10.10	GUT
29.5 W					
		1.41	5.05	10.42	ⓧ
49.5 W					
		1.22	5.22	10.23	GUT
49.5 W					
		1.82	4.62	10.83	CURB
51 W					
			4.6	10.9	
51 W					
			5.7	9.8	

.1

PX		13+00			
STA	+	H.I.	-	ELEV	
B.M.	1.07	14.85		10.78	
35 E			5.0	9.8	
00			7.3	10.5	
04.7w	CITY				
	1.59	4.25		10.60	CURB
04.7w					
	.95	4.83		9.96	CURB
24.7w					
	1.29	4.55		10.30	CURB
44.7w					
	1.00	4.84		10.01	CURB
49.7w					
	1.65	4.19		10.66	CURB
55w					
		4.0		10.8	
59w					
		5.9		8.9	
77w					
		6.4		8.1	

Midway

PX		14+00			
STA	+	H.I.	-	ELEV	
25 E					
		14.85	5.2	9.6	
00					
		7.83		10.02	
05 W					
	CITY				
	1.42	4.92		10.93	CURB
05 W					
	.78	5.06		9.79	GUT
25 W					
	1.15	4.69		10.16	CURB
45 W					
	.81	5.03		9.82	GUT
45 W					
	1.43	4.41		10.94	CURB
46 W					
		4.4		10.4	
61 W					
		5.5		9.3	
77 W					
		6.1		8.7	

PX 15+00				
STA	+	H.I.	-	ELEV
50 E		14.85	7.7	7.1
25 E			6.9	7.9
09 E			6.6	8.2
05 E			5.1	9.7
00			4.7	10.1
05.5 W		CITY		
		1.12	4.72	10.13
05.5 W				
		0.41	5.43	9.72
25.5 W		0.72	5.12	9.73
45.5 W		0.71	5.13	9.72
55 W		0.58	5.26	9.59
85 W			6.7	8.1

Midway

PX 16+00				
STA	+	H.I.	-	ELEV
30 E		14.85	7.9	6.9
27 E			7.8	7.0
11 E			7.4	7.4
07 E			4.9	9.9
00			4.6	10.2
05.5 W		CITY		
		1.14	4.70	10.15
05.5 W				
		0.49	5.35	9.50
25.5 W		0.75	5.09	9.76
45.5 W		0.64	5.20	9.65
45.5 W		1.35	4.49	10.36
60 W			4.5	10.3
62 W			5.5	9.3
75 W			6.0	8.8
80 W			7.2	7.6
90 W			7.2	7.6

Mid



(USE THESE NOTES FOR 16+38 1/2 & 16+51 1/2)

16+50

PT

STA + H.I. - ELEV

50 E

14.85 7.7 9.1

35 E

7.9 6.9

12 E

7.9 6.9

08 E

3.5 9.3

00

City

9.8 10.0

06.2 W

0.14

4.70 10.15

CURB

06.2 W

0.53

5.31 9.54

GUT

26.2 W

0.96

4.88 9.97

ℓ

46.2 W

0.74

5.10 9.75

GUTTER

MIDWAY

46.2 W

1.29

4.35 10.30

CURB

60.70 W

4.26 10.59

62.25 W

6.4 8.4

96 W

6.9 7.9

(USE THESE NOTES FOR 17+09 3/8 & 16+90 3/4)

12-5-49

PX (29)

17+00

STA + H.I. - ELEV

50 E

14.85 7.5 7.3

25 E

7.9 6.9

10 E

8.0 6.8

06 E

5.5 9.3

00

City

9.8 10.0

06.2 W

1.19

4.65 10.20

CURB

06.2 W

.94

5.30 9.55

GUT

26.2 W

1.04

4.80 10.05

ℓ

46.2 W

0.85

5.00 9.85

GUTTER

60.70 W

1.48

4.36 10.49

CURB

62.25 W

4.3 10.5

96 W

6.9 8.0

RETAKES

4.95

7.5 7.3

46.9 W

15.11

4.60 10.16

T.B.M.-ROW

46.9 W

5.25 10.51

MKD. 10.16

61.9 W

4.3 10.8

CURB

61.9 W

5.8 9.3

GUTTER

80 W

7.7 7.4

96 W

7.8 7.3

17+50

STA	+ H.I.	-	ELEV	
50E			7.2	
25E	19.85	7.6	7.1	
10E		7.7	6.9	
06E		7.9	10.1	
00		1.7	10.4	
06.0W	City	7.4	10.4	
06.0W	City	7.42	10.4	CURB
06.0W	1.03	5.05	9.80	GUT
26.0W	0.79	4.71	10.14	█
Midway } 46W	1.13	5.00	9.85	GUT
46W	0.75	4.32	10.53	CURB
58W	1.52	3.9	10.0	
66W		7.2	7.6	
96W		7.6	7.2	
T.B.M		4.71	10.14	R.O.W. MARK 10.16

 12-5-49  
 (SOUTH ABUTMENT) 16+90<sup>01</sup> =  $\frac{1}{2}$  Sta

(30)

STA	+ H.I.	-	ELEV	
B.M	9.80	15.40	10.60	No 4527 L.P. Post

 PROFILE ALONG  $\frac{1}{2}$  OF BEARING  $\frac{1}{2}$  ABUTMENT  
 0+00 = POINT ON  $\frac{1}{2}$  OF BEARING 52.84' EAST  
 OF BRIDGE  $\frac{1}{2}$ .

50E	15.40	8.5	6.9	
10E		8.2	7.1	
10E		6.1	9.3	
10		5.3	10.1	
10.0W		5.25	10.15	
18.0W		5.85	9.55	
17.0W		5.53	9.87	
66.9W		9.88	10.52	
81.3W		5.8	9.6	
87W		7.9	10.7 <sup>(3)</sup>	
72		7.9	7.5	
98W		8.2	7.2	
116W		8.2	7.2	

 PAGES 30 TO 36 ARE PROFILES ALONG  $\frac{1}{2}$  OF  
 BEARING PIERS  $\frac{1}{2}$  ABUTMENTS

No 10 17+65 37

DIST	+	H.L.	-	ELEV
25 E		15.40	8.3	7.1
13 E			8.3	7.1
09 E			5.5	9.9
00			5.0	10.4
09.5 W			7.82	10.58
03.5 W			5.50	9.90
21.38 W			5.03	10.37
6.6 W			5.38	10.02
66 W			4.73	10.67
82 W			4.7	10.7
95 W			8.4	7.0
106 W			8.3	7.1

PX

12-5-49

(31)

PX No 9 18+84 37

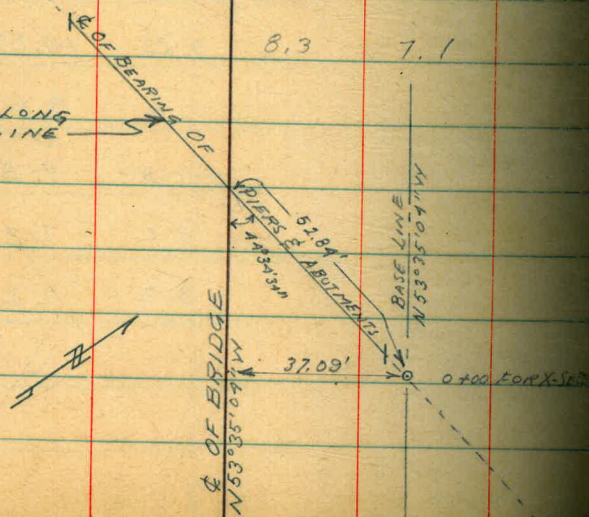
DIST	+	H.L.	-	ELEV
25 E		15.40	8.4	7.0
13 E			8.3	7.1
07 E			5.3	10.1
00			5.0	10.4
10.3 W			4.93	10.47
10.3 W			5.42	9.98
28.8 W			5.04	10.36
27.3 W			5.32	10.08
62.5 W			4.72	10.68
84 W			4.7	10.7
85 W			8.1	7.3
107 W			8.8	6.6

TOP CURB

GUTTER

± Rd.

PROFILES ALONG THIS LINE



Pier <sup>PX</sup> No 8 20 + 02<sup>22</sup>

DIST	+	H.I.	-	ELEV
B.M.	5.31	15.91		10.60
25 E			8.8	7.1
12 E			9.1	6.8
05 E			5.5	10.4
00			5.2	10.7
10.9W			5.07	10.84
10.9W			5.88	10.23
38.7W			5.32	10.59
68.9W			5.66	10.25
68.9W			5.00	10.90
81 W			5.0	10.9
98.8 W			8.2	7.7
108 W			8.5	7.4

Pier <sup>Q</sup> No 7 21 + 21 <sup>27</sup>

DIST	+	H.I.	-	ELEV
02 E			-15.91	9.07
27 E				9.1
13 E				8.2
07 E				5.2
00				4.9
11.7W				4.92
11.7W				5.58
7.2 W				5.20
68.7W				5.40
68.7W				4.8
81 W				4.9
102 W				10.0
116 W				10.2

PX

No 6

22+39<sup>27</sup>

DIST	+	H.I.	-	ELEV
25 E		15.91	8.9	7.0
10 E			8.6	7.3
09 E			5.7	10.2
00			5.3	10.6
11.7 W			5.03	10.88
11.7 W			5.56	10.35
40.2 W			5.60	10.31
678.7 W			5.88	10.03
678.7 W			5.38	10.53
86 W			5.8	10.1
94 W			8.7	7.2
106 W			9.1	6.8

M

PX

No 5

23+58<sup>27</sup>

33

DIST	+	H.I.	-	ELEV
25 E		15.91	9.6	6.3
12 E			9.4	6.3
05 E			6.1	9.8
00			5.6	10.3
11.8 W			5.27	10.67
11.8 W			5.87	10.04
9			5.55	10.36
88.8 W			5.90	10.01
67.5 W			5.25	10.66
81 W			5.3	10.6
100 W			9.0	6.9
105 W			9.5	6.4

5.28

PX

No 4

24476<sup>27</sup>

Dist + H.I. - ELEV

B.M. 5.06 15.39 10.33

25 E

8.8 6.6

11 E

8.3 6.5

04 E

5.4 10.0

00

5.00 10.4

11, 9W

4.81 10.58

11, 9W

5.42 9.97

4

80.5W

5.05 10.34

68.9W

5.45 9.94

68.9W

4.77 10.62

87. W

4.9 10.5

108 W

9.4 6.0

110 W

3.6 5.8

39

PX

No 3

25 + 95<sup>27</sup>

Dist + H.I. - ELEV

33 E 15.39 9.0 6.4

12 E

8.8 6.6

04 E

5.3 10.1

00

5.0 10.4

12, 0W

4.84 10.55

12 W

5.68 9.71 ?

~~5.80 9.59~~

20.5

10.30

5.2 9.70

69 W

5.41 9.98

69 W

4.73 10.66

85 W

4.4 11.0

100 W

2.7 7.7

108 W

8.9 6.5

PX N<sup>o</sup> 2 27 + 13<sup>27</sup>

DIST	+	H.I.	-	ELEV
30 E		15.39	9.2	6.4
11 E			9.1	6.3
03 E			5.1	10.3
00			7.8	10.6
12.6 W			4.70	10.69
12.6 W			5.33	10.06
41.1 W			4.99	10.95
69.6 W			5.30	10.09
69.6 W			4.63	10.76
88 W			4.4	11.0
106 W			10.7	4.7

MI

PX N<sup>o</sup> 1 28 + 32<sup>27</sup>

DIST	+	H.I.	-	ELEV
30 E		15.39	9.6	5.8
14 E			10.3	5.1
02 E			6.0	9.4
00			5.2	10.2
12.8 W			4.63	10.76
12.8 W			5.26	10.13
41.3 W			5.07	10.32
69.5 W			5.43	9.96
69.8 W			4.93	10.46
82 W			5.8	9.6
102 W			9.5	5.9
116 W			9.8	5.6

(NORTH ABUTMENT) 29 + 44 77

DIST	H.I.	ELEV
30 E	15.39'	
21 E		10.5
18 E		4.9
		10.8
		4.6
		9.2
		6.2
		8.7
		6.7
		5.2
		10.2
00		4.9
		10.5
12.8 W		7.85
		10.54
12.8 W		5.35
		10.04
41.3 W		5.05
		10.34
69.8 W		5.40
		9.99
69.8 W		4.73
		10.66
87 W		5.1
		10.3
100 W		9.4
		6.0
112 W		9.7
		5.7
T.B.M.		4.50
		10.81
EAST 66'	15.22	10.9
		4.3
69'		9.6
		5.6
93'		9.1
		6.1

FOR APPROACH FILL

PX

STA - 31 + 00 30°  
SECTIONS @ 90° TO MIDWAY DRIVE

12-5-49  
STAMPER  
BARRAGAN  
WATSON  
SHEPARD

STA	H.I.	ELEV
T.M.	4.92	15.96
		11.04
46 E		9.9
		6.1
42 E		12.3
		3.7
32 E		12.3
		3.7
22 E		11.6
		4.4
12 E		5.8
		10.2
00		5.5
		10.5
RIGHT 45 W		4.95
		11.00
RIGHT 45 W		5.58
		10.38
29 W		5.30
		10.66
LEFT 45 W		5
		10.21
GUTTER		3.13
		10.83
LEFT 45 W		5.5
		10.5
12 W		10.1
		5.9
100 W		10.2
		5.8

L.P. 5573  
CHISEA "H"

MIDWAY  
U.S.C.F.G.S.  
DATUM

SEE F.B. NO 49 FOR B/P LAYOUT  
X-SECTIONS OF MIDWAY DRIVE  
@ RT L'S TO EXISTING ROADWAY



STA	T	H.I.	-	ELEV
		33+00		
		16.0		
		15.96		
60	E		10.1	5.9
45	E		12.7	3.3
15	E		12.2	3.8
07	E		10.9	5.1
00			5.9	10.1
03	W		5.5	10.5
10.2	W		5.12	10.84
10.2	W		5.76	10.20
30.2	W		5.46	10.50
50.2	W		5.75	10.21
50.2	W		5.10	10.86
63	W		5.1	10.9
82	W		9.7	6.3
100	W		10.2	5.8

MIDWAY

STA	T	H.I.	-	ELEV
		34+00		
		16.0		
		15.96		
40	E		9.1	6.9
40	E		12.8	3.2
45	E		12.5	3.5
09	E		11.3	4.7
			5.9	10.1
			5.22	10.74
			5.85	10.11
			5.45	10.51
			5.80	10.16
			5.13	10.83
			5.5	10.5
			9.8	6.2
			7.2	
			10.1	5.9
			9.9	11.1

MIDWAY

RT.  
CURB

GUT

X

GUT

LT.  
CURB

L.P. 4543

28+50

STA	+	H.I.	-	ELEV	L.P.M.
B.M.	4.80	15.60		10.80	45
45E					
22E			10.1	5.5	
08E			10.8	4.8	
03E			9.3	6.3	
00			5.4	10.2	
00.8w			5.2	10.4	
08.8w			4.25	10.65	RT. CURB
28.8w			5.58	10.00	GUT
48.8w			5.21	10.4	K
48.8w			5.50	10.10	GUT
61w			4.85	10.75	LT. CURB
72w			5.1	10.5	
100w			10.2	5.4	
			9.5	6.1	

MIDWAY

12-6-49

38

29+00

STA	+	H.I.	-	ELEV	
50E					
15.60			9.7	5.9	
47E					
27E			11.1	4.5	
09E			11.0	4.6	
07E			10.5	5.1	
00			5.6	10.0	
09w			5.3	10.3	
09w			5.06	10.54	RT. CURB
09w			5.58	10.02	GUT
28w					
49w			5.50	10.10	K
49w			5.80	9.80	GUT
48w			5.36	10.24	LT. CURB
49w					
72w			6.0	9.6	
72w					
100w			9.8	5.8	
			9.9	5.7	

MIDWAY

USE THIS FOR — (30+14<sup>00</sup>)

12-6-49

(39)

PX

30+00

STA

+

H.I.

-

ELEV

15.60

PX

50 E

9.2 6.4

23 E

9.2 6.4

09 E

9.3 6.3

01 E

5.0 10.6

00

03 W

RT.

4.84 10.76 C-AB

09 W

5.47 10.13 G-UT

23 W

MIDWAY

5.29 10.36 K

49 W

5.57 10.03 G-UT

49 W

LT.

4.92 10.68 C-AB

60 W

5.4 10.2

70 W

9.8 5.8

100 W

10.1 5.5

M

31400

STA + H.I. - ELEV

ON PAGE (36)

PX

32400

STA + H.I. - ELEV

1 15.60

50 E

9.2 6.4

44 E

9.2 6.4

34 E

12.9 2.7

30 E

11.0 4.6

28 E

9.2 6.4

11 E

9.6 6.0

03 E

5.0 10.6

00

4.8 10.8

03.700

4.64 10.96 RT. CURB

03.750

5.20 10.40 GUT

03.750

Midway } 4.92 10.68 L.

03.750

5.20 10.30 GUT

03.750

4.64 10.94 RT. CURB

60 W

5.2 10.4

23 W

9.5 6.1

100 W

9.6 6.0

12-6-49

(70)

Mi

12-6-99

(9)

33400

34400

STA + H.I. - ELEV

STA + H.I. - ELEV

ON PAGE (37)

ON PAGE (37)

Mi.

Rx

35+00

STA	+	H.I.	-	ELEV	L.P.H.
B.M.	4.59	15.37		10.78	4.59
50 E					
			9.3	6.1	
10 E			9.3	6.1	
30 E			12.4	3.0	
25 E			9.4	6.0	
07 E			9.1	6.3	
00 I					
			5.2	10.2	
11 W					RT.
			4.81	10.54	CURB
11 W					
			5.46	9.91	GUT
31 W					
			5.07	10.30	♀
51 W					
			5.30	10.07	GUT
51 W					LT.
			4.69	10.60	CURB
63 W					
			4.9	10.5	
72 W					
			10.9	4.5	
110 W					
			12.6	2.8	

MIDWAY

Rx

36+00

12-6-19

92

STA	+	H.I.	-	ELEV	
B.M.	4.59	15.37		10.78	4.59
50 E					
			9.2	6.2	
30 E			9.2	6.2	
27 E					
31 E			12.3	3.1	
27 E					
			13.2	2.2	
32 E					
			11.5	3.9	
30 E					
			9.7	6.1	
30 E					
			9.1	6.3	
00					
			5.4	10.0	
11 W					RT.
			4.77	10.60	CURB
72 W					
			5.51	9.86	GUT
71 W					
			5.00	10.37	♀
51 W					
			5.30	10.07	GUT
51 W					WT.
			7.60	10.77	CURB
69 W					
			7.5	10.87	
50 W					
			9.5	5.9	
100 W					
			9.0	6.4	

MIDWAY

36740

37400

STA + H.I. - ELEV

STA - H.I. - ELEV

38 E

4  
15.37

15.37

35 E

12.9 2.5

50 E

9.3 6.0

29 E

12.9 2.5

25 E

9.4 5.9

23 E

11.5 3.9

06 E

9.3 6.0

10 E

10.4 5.0

00

9.2 10.2

00

5.2 10.2

1.6 W

4.69 10.68

PT.

02 W

4.8 10.6

11.6 W

5.20 10.1

CURB

9 UT

11.5 W

4.69 10.68

31.5 W

4.97 10.37

2

Mid

11.5 W

5.38 9.99

11.5 W

MIDWAY

5.20 10.17

9 UT

31.5 W

MIDWAY

5.02 10.35

11.5 W

4.53 10.84

LT. CURB

51.5 W

5.29 10.13

11.5 W

4.6 10.8

51.5 W

4.65 10.72

11.5 W

9.3 6.1

69 W

5.0 10.37

11.5 W

9.5 5.9

72 W

8.6 6.8

100 W

9.0 6.4

38+00

STA	+ H.I.	-	ELEV
	15.37		
50 E		9.8	5.6
25 E		9.8	5.6
05 E		9.8	5.6
00			
02 W		5.2	10.2
12.3 W		4.75	10.62
12.3 W		5.30	10.07
32.3 <del>22.3 W</del>	Midway	5.60	10.37
52.3 <del>42.3 W</del>		5.15	10.22
52.3 <del>42.3 W</del>		4.52	10.85
67 W		5.3	10.1
79 W		9.6	5.8
100 W		10.0	5.4

38+63<sup>25</sup>

STA	+ H.I.	-	ELEV
	15.37		
40 E		9.7	5.7
25 E		9.8	5.6
05 E		9.8	5.6
00			
02 W		5.6	9.8
12.3 W	Midway	4.53	10.84
12.3 W		5.20	10.17
32.3 W		7.80	10.57
52.3 W		4.92	10.45
52.3 W		4.23	11.14
65 W		7.2	11.2
79 W		9.8	5.6
100		9.9	5.5

4.551



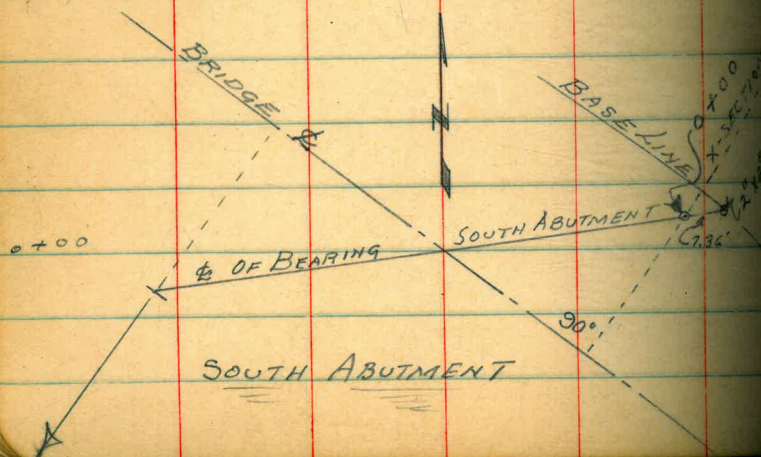
M

SECTION AT 90° TO BRIDGE R (ELY)

0+00 = PT. 7.36' WEST OF B/L. - ON R BEARING S/ABUT.

STA	+	H.I.	-	ELEV
T.B.M.	4.95	15.11		10.16

0+00		15.11	5.0	10.1
+ 11	E		5.4	9.7
+ 17	E		8.3	6.8
+ 50	E		7.9	7.2



(0+07.36)

PT

(NTHLY)

SECTION AT 90° TO R BEARING S/ABUTMENT -

0+00 = PT. 7.36' WEST OF B/L. - ON R BEARING S/ABUT

STA	+	H.I.	-	ELEV
-----	---	------	---	------

+ 15	S	15.11	5.31	9.80
+ 01.5	S		5.56	9.55
+ 01.5	S		4.95	10.16
+ 00			5.0	10.1
+ 10	N		3.5	9.6
+ 24	N		8.4	6.7
+ 50	N		8.0	7.1

(SEE PAGE (50) THIS BOOK)

(0+14.89)

SECTION AT 90° TO & BEARING, S/ABUTMENT

0+00 = PT 19.81 W/B/L ON E OF BEARING S/ABUTMENT

STA + H.I. - ELEV

(SEE PAGE (50))

+15 S	15.11	5.12	9.95
0+00		5.44	9.67
+05.3 N		5.53	9.58
+05.3 N		4.92	10.19
+21 N		5.6	9.5
+29 N		8.3	6.8
+50 N		8.1	7.0

(0+33.84)

12-7.49

PT (47)

SECTION AT 90° TO & BEARING, S/ABUTMENT

0+00 = PT 33.84 W/B/L ON E OF BEARING S/ABUTMENT

STA + H.I. - ELEV

(70)

+50 N	15.11	8.1	7.0	
+44 N		5.5	9.6	
+152 N		4.93	10.18	CLRB
+254 N		5.5	9.6	GUTTER
0+00		5.12	9.99	
+15 S		5.10	10.01	

(0+52.84)

SECTION AT 90° TO C. OF BEARING S/ABUTMENT

0+00 = 52.84' W/O.F.B/L. ON C. OF BEARING S/ABUT.

(70)

+ 63 N 15.11 9.7 10.4

+ 43 N 4.80 10.31

+ 43 N 5.45 9.66

+ 15 N 5.06 10.05

0+00 5.08 10.03

+ 14.5 S 5.25 9.86

+ 14.5 S 4.62 10.49

+ 20 S 4.5 10.6

(0+71.84)

12-7-49

94 (48)

SECTION AT 90° TO C. OF BEARING S/ABUTMENT

0+00 = 71.84' W/O.F.B/L. ON C. OF BEARING S/ABUT.

(70)

+ 50 N 15.11 5.06 10.05

+ 37 N 5.00 10.11

+ 26 N 5.21 9.90 GUTTER

+ 26 N 4.61 10.50 CURB

0+00 4.7 10.7

+ 14 S 4.6 10.5

+ 21 S 7.4 7.7

(0+90<sup>84</sup>)

SECTION AT 90° TO E. OF BEARING SOUTH ABUTMENT

0+00 = PT. -90.84' W/OE B/L. ON E. OF BEARING S/ABUT

STA + H.L. - ELEV

(D.O.)

+25 S 15.11 7.7 7.4

+07 S 7.2 7.9

0+00 5.7 9.4

+06 N 4.2 10.9

+23 N 4.00 10.51 CURB

+23 N 5.19 9.92 GUTTER

+50 N 4.92 10.19

0+98<sup>32</sup>

12-7-49

DX (43)

SECTION AT 90° TO E. OF BEARING S/ABUT.

0+00 = PT. 98.32' W/OE B/L. ON E. OF BEARING S/ABUT

STA + H.L. - ELEV

(D.O.)

+25 S 15.11 7.8 7.3

0+00 7.7 7.4

+05 N 7.3 7.8

+10 N 4.3 10.8

+20 N 4.55 10.56 CURB

+20 N 5.21 9.90 GUTTER

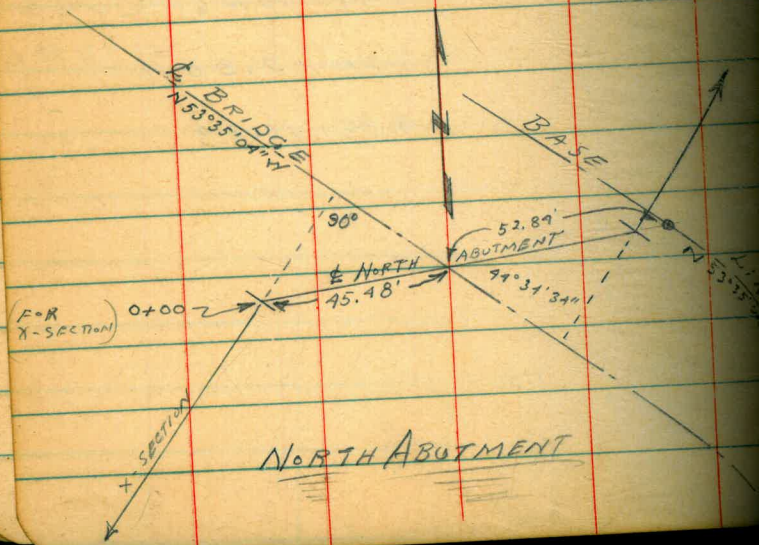
+50 N 4.88 10.23

SECTION AT 90° TO BRIDGE & (WLY)

0+00 = PT. 98.32' W/OE B/L - ON L BEARING - S/ABUT

STA + H.I. - ELEV

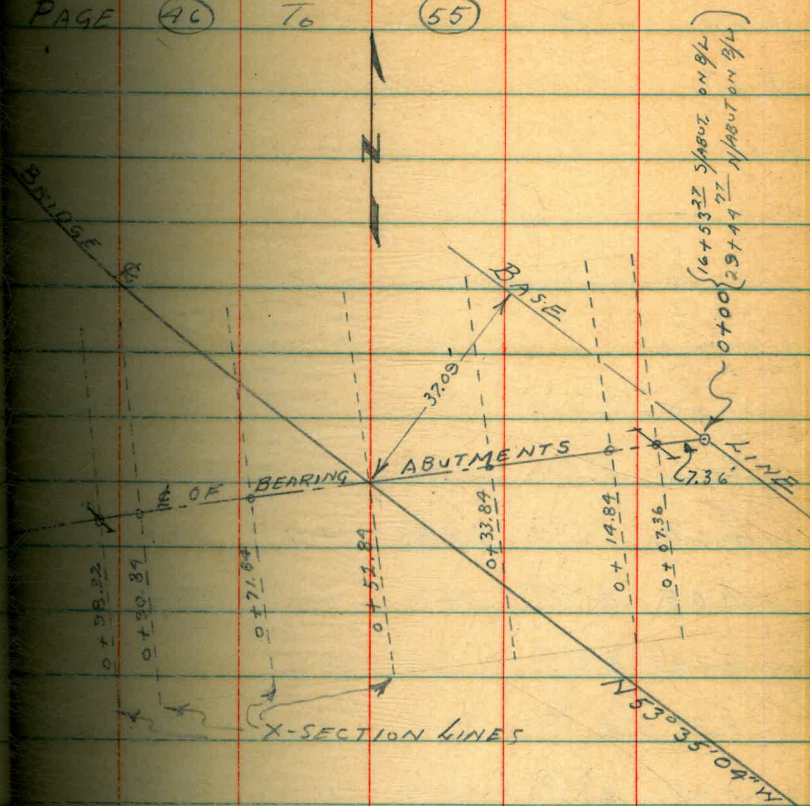
0+00	15.11	7.6	7.5
+25 W		7.8	7.3
+50 W		7.5	7.6



LAYOUT FOR ABUTMENT CROSS-SECTIONS

FOR NORTH & SOUTH ABUTMENTS

PAGE (46) TO (55)



(16+53.22 S/ABUT ON R/L)  
(29+44 N/ABUT ON R/L)

12-7-49

(51)

## SECTION AT 90° TO BRIDGE &amp; NORTH ABUTMENT

## SECTION AT 90° TO &amp; BEARING N/ABUTMENT

0+00 = PT. 7.36' W/OFB/L - ON &amp; OF BEARING N/ABUTMENT

0+00 = PT. 7.36' W/OFB/L - ON &amp; BEARING N/ABUTMENT

STA	+	H.I.	-	ELEV	I.P.M.
B.M.	4.53	15.33		10.80	4.33

STA	+	H.I.	-	ELEV
				15.33

 P<sub>1</sub>  
 12-28-49

0+00		15.33	4.7	10.6
+08	E		5.3	10.0
+14	E		9.2	6.1
+37	E		9.3	6.0
+45	E		11.0	4.3

+15	N	15.33	5.3	10.0
0+00			4.7	10.6
+26.5			4.78	10.55
+26.5			5.30	10.03
+37			5.18	10.15
+50			5.42	9.91

SECTION AT 90° To E. OF BEARING NORTH ABUT

0+00 = PT. 14.84' W/OFB/L. ON E. BEARING N/ABUT

STA	+	H.I.	-	ELEV
-----	---	------	---	------

+ 50	S	15.33	5.6	9.7
------	---	-------	-----	-----

+ 26	S		5.10	10.23
------	---	--	------	-------

0+00			5.30	10.03
------	--	--	------	-------

+ 01.8	N		5.32	10.01
--------	---	--	------	-------

+ 01.8	N		4.78	10.55
--------	---	--	------	-------

+ 17	N		5.1	10.2
------	---	--	-----	------

SECTION AT 90° To E. OF BEARING N/ABUT

0+00 = PT. 33.84' W/OFB/L. ON E. OF BEARING N/ABUT

STA	+	H.I.	-	ELEV
-----	---	------	---	------

+ 50	S	15.33	5.9	9.4
------	---	-------	-----	-----

+ 31	S		5.04	10.29
------	---	--	------	-------

+ 24	S		5.51	9.82
------	---	--	------	------

+ 08	S		5.02	10.31
------	---	--	------	-------

0+00			5.05	10.28
------	--	--	------	-------

+ 17	N		5.22	10.11
------	---	--	------	-------



SECTION AT 90° TO E. OF BEARING N/ABUT.

0+00 = PT. 52.84 W/OE B/L. ON E. OF BEARING N/ABUT.

STA	+	H.L.	-	ELEV
-----	---	------	---	------

PT

43				
+ 50 S		15.33	9.9	5.4

+ 32 S			5.5	9.8
--------	--	--	-----	-----

+ 16.5 S			4.90	10.43
----------	--	--	------	-------

+ 16.5 S			5.49	9.84
----------	--	--	------	------

0+00			5.08	10.25
------	--	--	------	-------

+ 18 N			5.09	10.29
--------	--	--	------	-------

SECTION AT 90° TO E. OF BEARING N/ABUT.

0+00 = PT. 71.81 W/OE B/L. ON E. OF BEARING N/ABUT.

STA	+	H.L.	-	ELEV
-----	---	------	---	------

PT

+ 50 S		15.33	9.8	5.5
--------	--	-------	-----	-----

+ 32 S			9.7	5.6
--------	--	--	-----	-----

+ 17 S			5.1	10.2
--------	--	--	-----	------

+ 00			4.8	10.5
------	--	--	-----	------

+ 21.5 S			4.69	10.64
----------	--	--	------	-------

+ 15 S			5.33	10.00
--------	--	--	------	-------

+ 30 N			5.00	10.33
--------	--	--	------	-------

SECTION AT 90° To E OF BEARING N/ABUT

0+00 = PT. 90.84' W/OE B/L. ON E OF BEARING N/ABUT

STA + H.L. - ELEV

PX

+50 S	15.33	9.7	5.6
+08 S		9.5	5.8
0+00		6.8	8.5
+05 N		5.2	10.1
+17 N		5.0	10.3

SECTION AT 90° E BEARING NORTH ABUTMENT

0+00 = PT. 98.32' W/OE B/L. ON E OF BEARING N/ABUT

STA + H.L. - ELEV

PX

+30 S	15.33	9.7	5.6
+22 S		9.6	5.7
0+00		9.0	6.3
+11 N		5.1	10.2
+20 N		4.6	10.7

STAMPER  
BARRAGAN  
WATSON  
SHERRY

12-7-49

SECTION AT 90° T. & BRIDGE NORTH ABUTMENT

0700 = PT. 3832 W/OE B/N. ON E. OF BRIDGE

SEE PAGE (50)

0700		15.33	9.1	6.2
703	W		9.6	5.7
750	W.		9.7	5.6

X-SECTIONS FOR DRAINAGE - CURB E

PAVEMENT GRADES AT SOUTH APPROACH

EAST OF PRESENT MIDWAY E.

0+00 FOR X-SECTIONS = PT ON 3/4 37.00' E/OE PAVEMENT

STATIONS ALONG 3/4 = STATIONS ON PROPOSED E.

8+28<sup>29</sup> (DISC. P.L. ON LIE E MIDWAY)

STA	+	H.I.	-	ELEV
		16.0		11.16
B.M.	4.80	15.96		10.90

E Midway 29 W

GUTTER 09 W

CURB 09 W

00

07E

20E

45E

5.25 10.91

5.6 10.8

6.0 10.0

6.5 9.5

10.10

10.71

8+50

STA	+	H.I.	-	ELEV
10+23.2 W		15.96	5.52	10.99
10+16.32 W			5.85	10.11
10+3.2 W			5.29	10.72
00			4.9	11.6
05E			4.5	11.5
20E			5.29	11.5
17E			5.9	10.1
35E			6.3	9.7

8+75

STA	+	H.I.	-	ELEV
		15.96	5.55	10.91
10+23 W			5.85	10.11
10+16.32 W			5.85	10.11
10+3.2 W			5.21	10.75
00			5.1	10.9
07E			5.2	10.8
20E			5.8	10.2
30E			5.9	10.1

9+25

STA	T	H.I.	-	ELEV
		15.96		
2 M.D 23 W			5.50	10.46
GUTTER 03 W			5.62	10.34
00			5.3	10.7
WALK 02 E			5.14	10.82
DOOR (OUTSIDE) 27.4 E			1.82	11.14

9+50

STA	T	H.I.	-	ELEV
		15.96		
2 M.D 23.3 W			5.49	10.47
GUT. 03.3 W			5.82	10.14
CURB 03.3 W			5.18	10.78
00			5.15	10.81
10 E			5.9	10.6
GRAND 27 E			5.0	11.0

9+75

9-22-19

(57)

STA	T	H.I.	-	ELEV
		15.96		
M.D 23.5 W			5.52	10.44
02.5 W			5.80	10.10
02.5 W			5.21	10.75
10			4.9	11.1
12 E			3.2	10.8
27 E			5.2	10.8

BIDG. LINE  
GROUND

10+25

STA	T	H.I.	-	ELEV
		15.96		
M.D 23.7 W			5.48	10.48
03.7 W			5.78	10.18
03.7 W			5.16	10.80
10			5.1	10.9
10 E			5.1	10.9
27 E			5.1	10.9

9-22-49

STA	H.I.	-	ELEV
10+75			
10+75	15.26	5.43	10.53
2.5 W		5.25	10.21
3.5 W		5.12	10.84
00		5.1	10.9
12 E		5.1	10.9
28 E		5.1	10.9
10+65 28 E		4.98	10.98
11+43			
11+29 S/EDGE		5.66	10.30

40.3 HIG  
ELEVATION  
10.11  
S/S ELEV  
S/S ELEV  
TOP OF  
DOWN  
IN  
2 1/2  
MAIN VALVE  
VAULT

Box ABOUT 7'x7' OUTSIDE

WEST EDGE 8' EAST OF EAST CURB.

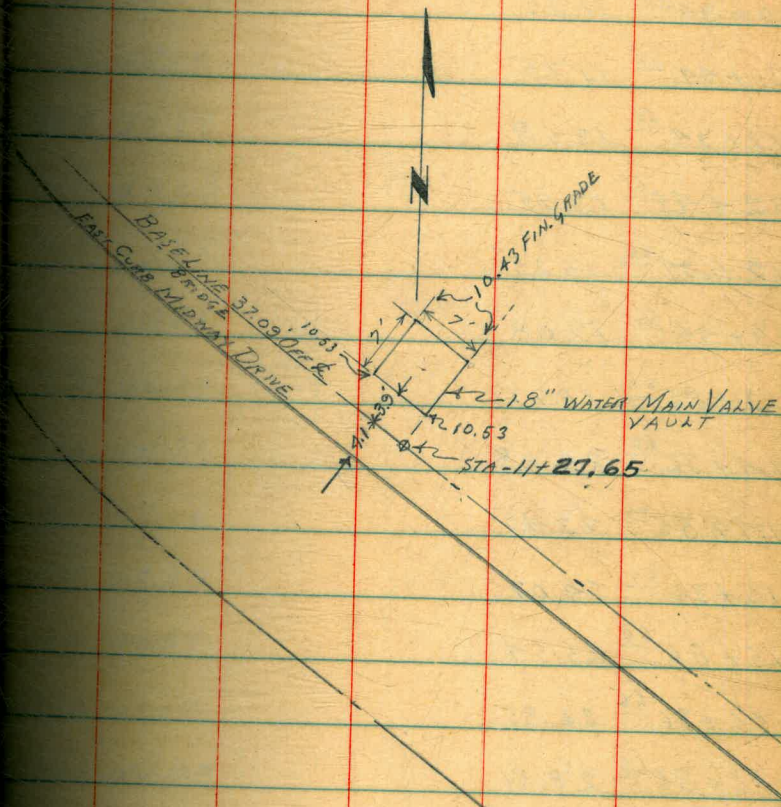
FIN. GRADE ON BOX = 10.43 S/E & N/E COR.  
= 10.53 S/W & N/W COR.

FINISH GRADES (VAULT)

T.B.M	4.49	15.27	10.98	VAULT
FINISH GRADE 18" WATER VALVE VAULT		4.81	10.43	S/E COR.
"		4.74	10.53	S/W COR.
		4.72	10.55	N/E COR.
T.B.M		4.50	10.77	T.B.M. ON IMP. POINT EAST POINT WELLS

9-22-49

58



FINISH GRADES AT EDGE OF SHOULDER  
OF SOUTH APPROACH

STATION	TOP OF SHOULDER FIN. GRADE
10+44 <sup>66</sup>	11.08
10+94 <sup>66</sup>	11.25
11+44 <sup>66</sup>	11.75
11+94 <sup>66</sup>	12.58
12+44 <sup>66</sup>	13.75
12+94 <sup>66</sup>	15.25
13+44 <sup>66</sup>	17.08
13+86 <sup>66</sup>	18.76
14+36 <sup>66</sup>	20.68
14+86 <sup>66</sup>	22.45
15+36 <sup>66</sup>	24.07
15+86 <sup>66</sup>	25.54
16+36 <sup>66</sup>	26.85
16+86 <sup>66</sup>	28.01

FINISH GRADES AT EDGE OF SHOULDER  
OF NORTH APPROACH

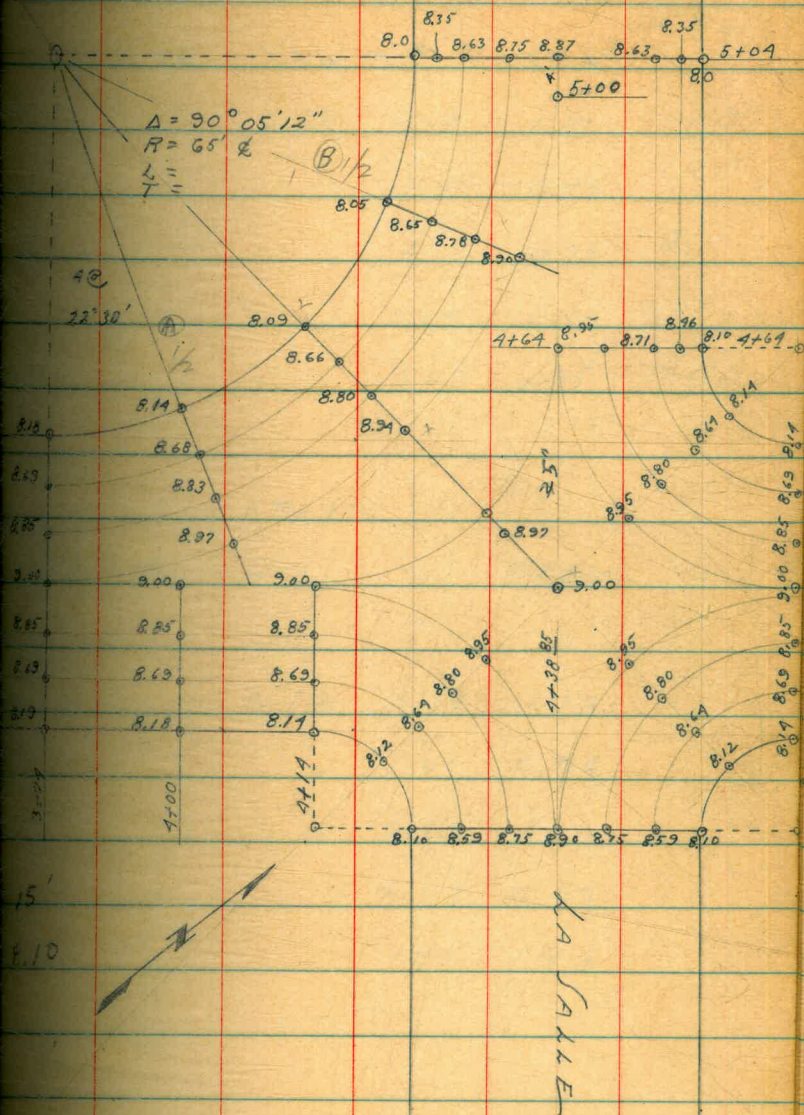
STATION	TOP OF SHOULDER FIN. GRADE
10+00	27.29
+50	26.53
11+00	25.17
+50	23.66
12+00	22.00
+50	20.19
13+00	18.23
+50	16.24
14+00	14.51
+50	13.16
15+00	12.20
+50	11.54
16+00	11.17
+50	11.08

FINISH GRADES AT INTERSECTION OF  
NASHVILLE & LA SALLE

STA	R=	R=	R=	R=	M=	R=
0°00'	50'	55'	60'	65'	80'	92'
3+24	8.18	8.69	8.85	9.00		
22°31'	8.14	8.68	8.83	8.97		
45°	8.09	8.66	8.80	9.24	8.97	9.24
67°31'	8.05	8.65	8.78	8.90		
5+04						
90°05'12"	8.00	8.63	8.75	8.87		
	15' 10'	5'	£	5'	10'	
3+74	8.19	8.69	8.85	9.0	8.85	8.69
4+00	8.18	8.69	8.85	9.0	8.85	8.69
4+14				9.0	8.85	8.69
4+64			8.95		8.71	8.10

1-21-49

(69)





CROSS SECTIONS MIDWAY  
 DRIVE SECS @ RT Ls TO  $\pm$  OF  
 EXISTING ROADWAY

12-5-49  
 16+00

STAMPER  
 BARAGAN  
 WATSON  
 SHERRY

(1)

STA	+	H.I.	-	ELEV	
5.06				1.32	LIP #4535
5-20'		6.38	5.24	1.14	CURB
5-20'			5.89	0.49	GUT
			5.63	0.75	L
5-20'			5.74	0.64	GUT
5-20'			5.03	1.35	CURB

17+00

STA	+	H.I.	-	ELEV	
5-20'		6.38	5.19	1.19	
5-20'			5.44	0.94	
			5.34	1.04	
5-20'			5.53	0.85	
5-20'			4.90	1.48	

12-5-49

18+00.

STA	+	H. I.	-	ELEV
HT-20		6.38	4.81	1.57
			5.49	
RF-20			5.49	0.89
Q			5.02	1.36
HT-20			5.37	1.01
HT-20			4.72	1.66

19+00

STA	+	H. I.	-	ELEV
HT-20		6.38	4.92	1.46
"			5.41	0.97
Q			5.03	1.35
HT-20			5.31	1.07
"			4.71	1.67

12-5-49

20+00

(2)

STA	+	H. I.	-	ELEV
HT-20		6.38	4.55	1.83
"			5.16	1.22
Q			4.80	1.58
HT-20			5.14	1.24
"			4.49	1.89

21+00

STA	+	H. I.	-	ELEV
HT-20		6.38	4.40	1.98
"			5.05	1.33
Q			4.72	1.66
HT-20			4.88	1.50
"			4.29	2.09

12-5-49

22+00

STA	T	H.I.	-	ELEV
RT-20		6.38	4.51	1.87
"			5.04	1.34
£			4.96	1.42
LT-20			5.36	1.02
"			4.86	1.52

23+00

STA	T	H.I.	-	ELEV
RT-20		6.38	4.51	1.87
"			5.04	1.34
£			5.00	1.38
LT-20			5.36	1.02
"			4.86	1.52

12-5-49

24+00

(63)

STA	T	H.I.	-	ELEV
RT-20		6.38	4.72	1.66
"			5.25	1.03
£			5.03	1.35
LT-20			5.38	1.00
"			4.73	1.65

25+00

STA	T	H.I.	-	ELEV
RT-20		6.38	4.81	1.57
"			5.42	0.96
£			5.05	1.33
LT-20			5.44	0.94
"			4.77	1.61

12-5-49

26+00

STA	T	H.I.	-	ELEV
RT-20		6.38	4.89	1.59
"			5.68	0.70
£			5.08	1.30
LT-20			5.91	0.97
"			4.73	1.65

27+00

STA	T	H.I.	-	ELEV
RT-20		6.38	4.70	1.68
"			5.33	1.05
£			4.87	1.51
LT-20			5.30	1.08
"			4.63	1.75

12-5-49

28+00

(27)

STA	T	H.I.	-	ELEV	
RT-20			4.79		
		6.38	4.9	1.59	6 WTB
"			5.39	0.99	CUT.
£			4.76	1.62	£
LT-20			5.29	1.09	CUT
"			4.59	1.79	C-9B

STA + H.L. - FLEV

T.D.M 5.83  
3.97  
9.80

11.30  
3.51  
14.81  
3.80  
5.00

3.97

X-SECTIONS OF NORTH APPROACH

MIDWAY DRIVE BRIDGE AS OF APRIL 20-1950  
 (ORIGINALS FOR SUB-CONTRACT ATKINSON TO ROBERTS)

R4

STA- 36+0.0

C. BARBAGAN  
 E. WATSON  
 A. SHEPHERD  
 H. BROWN

4-20-50

(60)

STA- 37+0.0

DIST + H.I. - ELEV

DIST + H.I. - ELEV 50' 15.14 8.9 6.2

CHISEL BIT WEST CURB MARK

T.B.M. 4.00 15.14 11.14 40' 8.4 6.7

E-34' 5.1 10.0 35' 6.5 8.6

E-29' 4.7 10.4 30' 4.3 10.8

E-25' 5.7 9.4 17' 4.4 10.7

E-19' 3.6 11.5 15' 5.0 10.1

E-16' 4.8 10.3 4' 4.8 10.3

OB  $\frac{1}{2}$  4.7 10.4 10' 4.9 10.2

W-14' 4.8 10.3 18.5' 6.5 ~~8.6~~

W-14' 4.3 10.8 24' 6.0 9.1

W-27' 4.7 10.4 31' 5.0 10.1

W-37' 9.2 5.9 45' 8.2 6.9

W-50' 9.2 5.9 51' 9.5 5.6

Rx

STA. 35+00

STA	H.I.	-	ELEV
F-50	15.14	8.7	6.4
F-45'		8.7	6.4
F-38'		8.2	11.9
F-37'		9.9	10.7
F-25'		5.7	9.4
F-19'		6.5	8.6
F-18'		5.0	10.7
op E		9.9	10.2
W-14 <sup>5</sup>		4.8	10.3
W-14 <sup>5</sup>		9.4	10.7
W-35'		9.2	10.9
W-44'		11.0 70.0	4.1 5.1

(67)

Rx

STA 34+00

DIST	H.I.	-	ELEV
552'	15.14	9.2	5.9
38'		3.0	12.1
14		9.3	10.8
14'		9.8	10.3
1		9.7	10.4
12		9.8	10.3
13		6.3	8.8
19		3.9	11.2
18'		10.5	4.6
56'		10.8	4.3

9-20-50

RX

STA- 33+00

DIST	+	H. L.	-	ELEV
E- 53		15.4	10.8	4.3
E- 94			4.3	10.8
E- 34			4.1	11.0
20 E- 24			7.1	8.0
E- 19			4.8	10.3
o/p &			4.7	10.4
W- 13			4.8	10.3
W- 13			4.3	10.8
W- 22			3.0	12.1
W- 41'			1.6	13.5
W- 52			8.9	6.2
W				

9-20-50

RX

STA- 32+00

DIST	+	H. L.	-	ELEV
57		15.4	8.9	6.2
48			3.7	11.4
32			2.7	12.4
10			4.3	10.8
12			4.9	10.2
11			4.5	10.6
			4.6	10.5
17			2.3	1.8
22 30			6.7	8.4
35'			4.7	10.4
41			4.6	10.5
53			3.7	9.4
53			8.9	6.2



Rx

STA - 31 +00

STA - 30 +58

STA	+ H.I.	-	ELEV
T.B.M	10.49	12.97	1.98
E-59' <sup>6'</sup>	12.51	2.9	4.6
E-53'		1.0	11.4
E-34'		1.2	11.2
E-21.		4.2	8.2
E-17'		1.9	10.6
o/p k		2.0	10.5
W-11.		2.3	10.2
W-29'		2.9	9.6
W-60'		3.1	9.4
W-65		6.2	6.3
W-73		6.2	6.3
T.P		1.78	10.63

CONC. N/A  
DIP 12.5%  
N/AZUT.

DIST	+ H.I.	-	ELEV	TEMP
T.P	1.88	15.57	10.69	T.P
94	15.6	9.9	5.7	
79		2.8	12.8	
75		2.3	8.3	
73		6.8	8.8	
71		5.5	10.1	
6		5.3	10.3	
17		5.1	10.5	
37		4.6	11.0	
48		3.6	12.0	
53		5.0	10.0	
57		8.5	7.1	
77		10.4	5.2	

7-20-50

30+46

DIST	+	H.L.	-	ELEV
E-77		15.57	10.4	5.2
E-66		15.6	9.6	6.0
E-58			7.9	7.7
E-50			4.0	11.1
E-41			3.6	12.0
E-24			3.7	10.2
ofo-k			5.4	10.2
W-7'			5.6	10.0
W-20.			12.8	3.8
W-37			12.3	3.3
W-52			7.5	8.1
W-77			7.5	8.1
W-85			4.9	10.7
W-97			5.8	9.8
W105			9.1	6.5
W125			9.3	6.3

7-20-50

Ry

30+10

DIST	+	H.L.	-	ELEV
E-88			9.0	6.5
E-73		15.57	9.0	6.6
E-70		15.6	9.0	6.6
E-60			5.9	9.7
E-50			5.9	9.7
E-25			5.8	9.8
E-6			5.4	10.2
E-4			5.7	9.9
W-9			6.9	8.7
W-15			13.8	1.8
W-16			11.8	0.0
W-29			3.1	-1.3
W-31			3.1	-1.3
W-39			7.0	+0.8
T.P			9.06	6.51

WATER  
LEVEL  
+1.8

SOUND 1.8

SOUND 3.1

SOUND 3.1

SOUND 7.0

2" V2" HUB  
RE-EDGE  
PIEN #1

30  
15.6  
13.8

4-20-50

29+87

0+00 = PT. 70' EAST OF Q BRIDGE @ 90°

DIST	H.L.	ELEV
T.P.	5.35	11.86
E-15'	11.7	5.5
0+00		5.3
W-12'		5.6
W-31'		3.9
W-45'		2.9
W-61		13.0
W-82		13.6
W-96		12.6
W-98		9.8
W-1+17		4.7
W-1+98		4.2
W-1+55		2.0
W-1+65		3.5
W-1+70		1.3
W-1+80		6.0

2" X 2" HUB RE  
E/EDGE PIER  
# 1

4-20-50

4-20-50

13.6 (71)

29+72

0+00 = PT. 70' EAST OF R

DIST	H.L.	ELEV
T.P.	5.08	11.59
E-1+72		5.6
E-1+55		1.1
E-1+39		3.8
E-0+99		3.5
E-0+85		4.1
E-0+83		12.0
E-0+70		12.9
E-0+51		13.0
E-0+40		12.3
E-0+21		13.7
E-0+10		12.5
E-0+09		8.4
E+00		5.2
E-0+8		4.0
E-0+13		5.3
E-0+25		5.7

2" X 2" HUB RE  
E/EDGE PIER  
# 1

116  
27  
8.3

3.3

18 29+63

0+00 = PT. 70' EAST OF R

DIST + H.I. - ELEV

T.P. 3.57 10.08 6.51

E-014 4.4

E-045 2.9

E-01  
~~0+00~~ 3.8

0+00 5.4

W-10' 7.1  
7.4

W-12' 8.8

W-21' 11.6

W-44' 11.6

W-70' 11.0

W-84' 0.3

W-114' 1.6

W-134' 1.2

W-

9-20-50

9-20-50

(72)

29+99

0+00 = PT. 70' EAST OF R

DIST + H.I. - ELEV

T.P. 8.70 15.21 6.51

W-124 6.2

W-2465 5.6

W-50 10.6

W-28 8.5

W-6' 9.9

06 7.0

E-27 6.5

E-44 9.9

2" X 2" HUB  
RE-EDGE  
DIR #1

1-20-50

29 + 37

0+00 = PT. 70' EAST OF R

DIST + H.I. - ELEV

E-42 15.21 3.8

E-12<sup>5</sup> 3.0

E-0/0 6.5

W-06' 8.0

W-30' 6.1

W-4.9' 6.6

W-59 5.4

W-92 6.0

W-120 6.5

DARRACAN  
SHEPHERD

1-20-50

(23)

29 + 27

0+00 = PT. 70' EAST OF R

DIST + H.I. - ELEV

E-42 15.21 9.2

E-15 1.2

0/0 3.8

W-21' 5.0

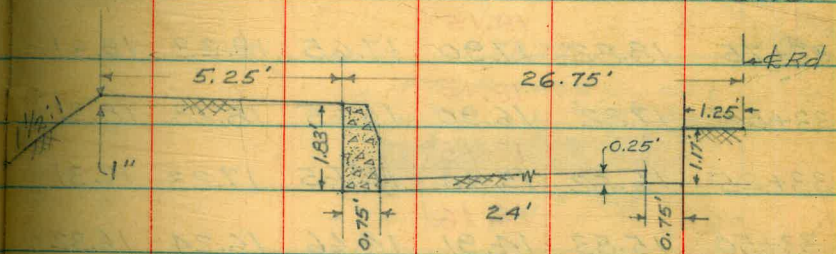
W-49 5.3

W-80 5.8

~~W-92 5.2~~

SUBGRADE ELEVATIONS SOUTH APPROACH - Sta

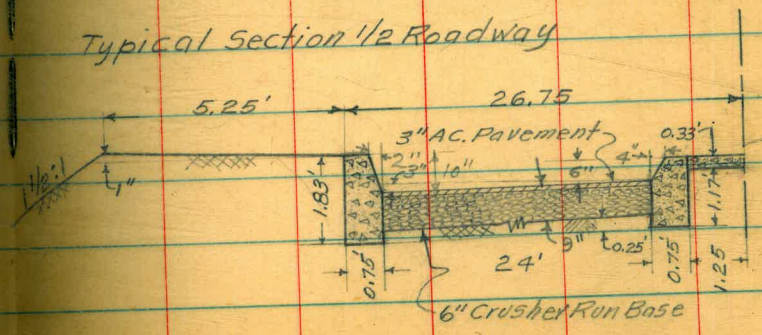
Sta	SUBGRADE ELEVATIONS SOUTH APPROACH		SUBGRADES		Sta	SUBGRADES		Gutter	Inside Top Shldr	Outside Top Shldr	
	±Rd	±Profile	±Profile	Gutter		±Rd	±Profile				
Sta	±Rd	±Profile	Gutter	Inside Top Shldr	outside Top Shldr	14+00	18.88	19.21	17.71	19.29	19.37
8+43.75		10.60	10.25			14+25	19.84	20.17	18.67	20.25	20.33
8+53.75		10.61	10.27			14+50	20.76	21.09	19.84	21.17	21.25
9+00		10.63	10.32	75.00		14+75	21.64	21.97	20.47	22.05	22.13
9+50		10.66	10.35	56.36		15+00	22.49	22.82	21.57	22.90	22.98
10+00		10.69	10.44	18.69 v		15+25	23.30	23.63	22.38	22.13	23.71
10+45		10.73	10.50	56.36		15+50	24.07	24.40	23.15	22.90	24.48
10+80		10.86	10.61	33.36		15+75	24.80	25.13	23.88	23.63	25.21
11+00		10.95	10.70	23.00		16+00	25.48	25.81	24.58	24.38	25.89
11+15		11.02	10.78			16+33.36	26.35	26.68	25.88	25.68	26.89
11+15	11.19	10.27	10.03	11.50	11.88	16+56.36	26.81	27.24	25.89	25.74	27.32
11+45	11.43	10.51	10.26	11.84	11.92	16+75	27.34	27.67	26.77	26.77	27.82
11+70	11.74	10.82	10.57	12.15	12.23	16+87.41	27.61	27.94	26.77	26.77	27.95
11+95	12.17	11.25	11.00	12.58	12.66	17+00.22			26.77	26.77	28.02
12+25	12.83	11.91	11.66	13.24	13.32	17+18.46			26.72	26.72	28.30
12+50	13.48	12.56	12.31	13.89	13.97				26.72	26.72	28.38
12+75	14.20	13.28	13.03	14.61	14.69				26.72	26.72	28.38
13+00	15.01	14.09	13.84	15.42	15.50				26.72	26.72	28.38
13+25	15.91	14.99	14.74	16.32	16.40				26.72	26.72	28.38
13+50	16.88	15.96	15.71	17.29	17.37				26.72	26.72	28.38
13+75	17.88	16.96	16.71	18.29	18.37				26.72	26.72	28.38



Typical Section 1/2 Roadway

5-10-50 T.A.S.						SUBGRADES		Inside	outside <sup>(26)</sup>		
SUBGRADE ELEVATIONS NORTH APPROACH						Sta	± Road	± Profile	Gutter	Top Shldr	Top Shldr
						34+00	14.10	14.43 13.18	12.93	14.51	14.59
Sta	± Road	± Profile	Gutter	Inside Top Shldr.	outside Top Shldr.			13.71			
Abut. Face E. Side 29+54.86					28.75	34+25	13.38	12.46	12.21	13.79	13.87
N. End W. Wall E. Side 29+73.10			26.72	28.30	28.38	34+50	12.75	11.83	11.58	13.16	13.24
Abut. Face ± Rd. 29+85.91	27.61	27.94 26.69	26.44	28.02	28.10	34+75	12.23	11.31	11.06	12.64	12.72
		27.63 26.38	26.13	27.71	27.79	35+00	11.79	10.87	10.62	12.20	12.28
30+00	27.30							11.76			
Abut. Face W. Side 30+16.96	26.91	27.24 25.99	25.74	27.32	27.40	35+25	11.43	10.51	10.26	11.84	11.92
N. End W. Wall W. Side 30+39.96	26.36	26.69 25.44	25.19	26.77	26.85	35+50	11.13	10.21	9.96	11.54	11.62
		25.78 24.53	24.28	25.86	25.94	35+75	10.91	9.99	9.74	11.32	11.40
30+75	25.45							11.09			
		25.09 23.84	23.59	25.17	25.25	36+00	10.76	9.84	9.59	11.17	11.25
31+00	24.76							11.01			
		24.35 23.10	22.85	24.43	24.51	36+25	10.68	9.76	9.51	11.09	11.17
31+25	24.02							11.00			
		23.58 22.33	22.08	23.66	23.74	36+40	10.67	9.75	9.50	11.08	11.16
31+50	23.25										
		22.77 21.52	21.27	22.85	22.93						
31+75	22.44										
		21.92 20.67	20.42	22.00	22.08						
32+00	21.59										
		21.03 19.78	19.53	21.11	21.19						
32+25	20.70										
		20.11 19.15	18.61	20.19	20.27						
32+50	19.78										
		18.82 17.90	17.65	19.23	19.31						
32+75	18.82										
		18.15 16.90	16.65	18.23	18.31						
33+00	17.82										
		17.15 15.90	15.65	17.23	17.31						
33+25	16.82										
		16.16 14.91	14.66	16.24	16.32						
33+50	15.83										
		15.24 13.99	13.74	15.32	15.40						
33+75	14.91										

NOTE: Elevations in Red are top of Curb grades along Median Strip



C. BARRASAN  
A. HENRY  
M. BROWN  
4-21-50  
COOL CREEK  
CALIF.  
NS 204  
©

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CHECK LEVELS FROM WATER MAIN HOLE

NORTH END OF MIDWAY BRIDGE (STA- 367 40±)

STA	+	H.I.	-	ELEV	
B.M.	4.62	15.38		10.76	CONC NAIL @ S/W CORN OF VAULT 26+95
T.P.	3.33	14.86	3.85	11.53	2" x 2" 9' 0" S/W
CHECK T.B.M.			12.895	1.965	CONC NAIL ON FOOTING W/WALK
T.P.	5.233	13.678	6.415	8.445	W 2" x 2" OF ABUT
T.P.	5.88	15.068	4.190	9.188	2" x 2" E OF PIER (3)
T.P.	4.110	15.358	3.82	11.248	2" x 2" BETWEEN PIER 6 & 7
T.P.	4.40	14.528	5.23	10.128	TEMP TP
T.P.	4.91	15.388	4.05	10.478	TEMP TP
T.P.	4.45	15.226	4.612	10.776	TEMP TP
			4.08	11.196	CHECKED N. ON WEST END PIER @ INTERSECTION WITH MAINWALK
				EL. = 11.16	



STA	+	H.I.	-	EL EY
B.M.	3.70	14.84		11.14
SET				
T.B.M.			4.08	10.76
T.P.	4.33	15.13	4.09	10.80
T.P.	0.93	11.36	4.50	10.63
T.B.M.			9.62	1.975 7.945
T.P.	3.34	14.10	0.80	10.76
T.P.	4.785	14.965 15.03	3.92	10.18
T.P.	4.02	14.925	4.06	10.905
T.P.	4.545	14.84	4.63	10.235
	4.02	14.83	4.03	10.81
	4.235	14.895	4.17	10.66
			3.775	11.120

CHISEL EL ON W/ CURB MIDWAY APPROX

SW COR VALVE VAULT @ N END DETAILS

CORRECTED USING GAUGURE BELOW

SW COR VALVE VAULT @ N END CONC. CHAN

CHISEL EL. NASHVILLE MIDWAY

EL=11.16

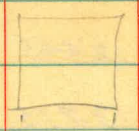
- 1' W/OE M 2" COPPER - N  
@ DANA - 2' W/OE M 2" COPPER - 1  
1' W/OE M 2" COPPER - 1

Q 1'E

Q 2'E

Q 1'E

11.14	11.56
3.70	0.80
14.84	10.76
4.09	3.34
10.80	14.10
4.33	3.92
15.13	10.18
9.52	7.785
10.63	14.965
0.93	4.06
11.56	10.905
9.62	4.02
1.94	14.925
	4.63
	10.295
	7.575
	14.840
	4.03
	10.81
	4.02
	14.83



INTERSECTION

(WATER LINE REMOVAL)  
PAYEMENT BROKEN FROM 11+36 TO 36+95

14.895  
11.16  
3.735

33  
44  
45  
23

145' } AMT. OF CURB NOT IN (EAST)

WEST 70'

11+36 START BREAKING } PAVEMENT & CURB (WATER LINE)  
36+95 END BREAKING



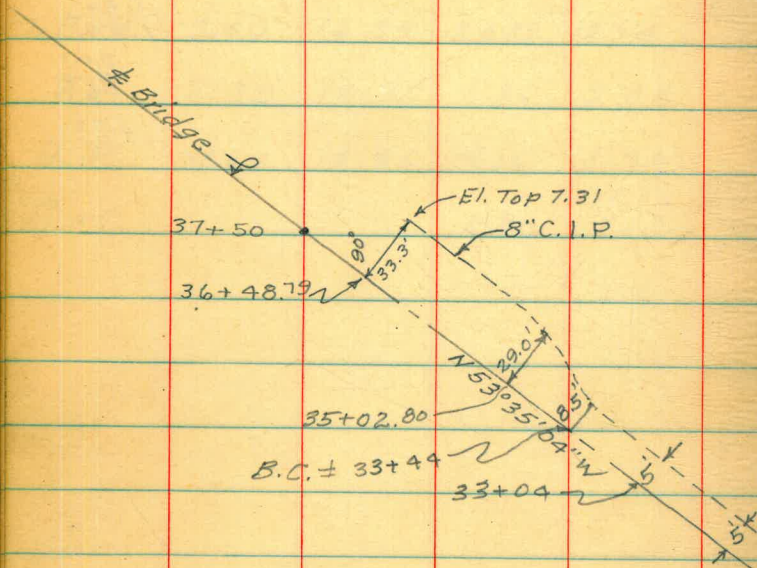
80

Nov. 1, 1950

TIE OF 8" CAST IRON SEWER

MIDWAY DRIVE BRIDGE PROJ #40

H. Brown  
A. Sherry  
W. Carvel



BM. 10.47  
5.34  
+ 15.81

B)  
-B)  
by the  
19.4 ft.  
10' =  
slope  
h the  
ollow-  
=.0041.  
e dist-  
=14 ft.,  
8 ft.  
J. S. A.

10. - 6.07 - 8.8 - 9.25  
 105 5.6 9.2 12.5 1.39 9.15  
 4.8 .79 1.0 2.95 25  
 7.7 1.40 8.17 - 9.50 .81  
 4.55 .96 8.80 - 10  
 9.2 - 10.5  
 9.2 - 11

#3 T. MARST.  
 S 87° 51' 27" E  
 BEARING E  
 N 29° 26' E

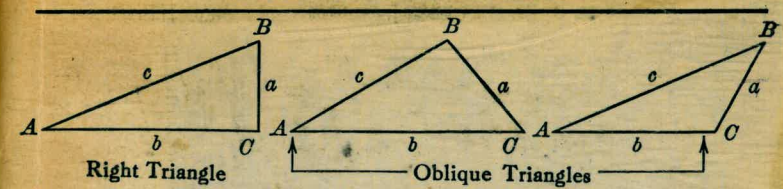
13.21  
 1.89 8.95 = 7.83  
 8.37 8.60 = 9.00  
 6.95 8.35 = 7.83  
 17.82

14.82  
 8.52  
 6.30 - 10  
 8.17 - 9.5  
 35  
 8.52 - 10.0  
 35  
 8.87 - 10.5  
 35  
 9.22 - 11  
 7.05  
 25  
 6.70

F. HYD @ NASH. & LA SALLE = 10.75  
 21' 15" NORTH OF END OF RAIL = 11.14

11.94 / 11.975  
 8.00 / 8.000  
 3.94 / 3.975

TRIGONOMETRIC FORMULÆ



Solution of Right Triangles

For Angle A.  $\sin = \frac{a}{c}$ ,  $\cos = \frac{b}{c}$ ,  $\tan = \frac{a}{b}$ ,  $\cot = \frac{b}{a}$ ,  $\sec = \frac{c}{b}$ ,  $\operatorname{cosec} = \frac{c}{a}$

Given	Required	Formula
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B$ , $c = \sqrt{a^2 + b^2} = a \sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B$ , $b = \sqrt{(c+a)(c-a)} = c \sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90^\circ - A$ , $b = a \cot A$ , $c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90^\circ - A$ , $a = b \tan A$ , $c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90^\circ - A$ , $a = c \sin A$ , $b = c \cos A$

Solution of Oblique Triangles

Given	Required	Formula
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A}$ , $C = 180^\circ - (A + B)$ , $c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}$ , $C = 180^\circ - (A + B)$ , $c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180^\circ - C$ , $\tan \frac{1}{2}(A - B) = \frac{(a - b) \tan \frac{1}{2}(A + B)}{a + b}$ , $c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a + b + c}{2}$ , $\sin \frac{1}{2}A = \sqrt{\frac{(s - b)(s - c)}{bc}}$ , $\sin \frac{1}{2}B = \sqrt{\frac{(s - a)(s - c)}{ac}}$ , $C = 180^\circ - (A + B)$
a, b, c	Area	$s = \frac{a + b + c}{2}$ , $\text{area} = \sqrt{s(s - a)(s - b)(s - c)}$
A, b, c	Area	$\text{area} = \frac{bc \sin A}{2}$
A, B, C, a	Area	$\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL

Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = 5° 10'. From Table, Page IX.  $\cos 5^\circ 10' = .9959$ . Horizontal distance =  $319.4 \times .9959 = 318.09$  ft.  
 Horizontal distance also = Slope distance minus slope distance times (1 - cosine of vertical angle). With the same figures as in the preceding example, the following result is obtained.  $\cos 5^\circ 10' = .9959$ .  $1 - .9959 = .0041$ .  $319.4 \times .0041 = 1.31$ .  $319.4 - 1.31 = 318.09$  ft.  
 When the rise is known, the horizontal distance is approximately: - the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance =  $302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$  ft.

