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MICROFILMED

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

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

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

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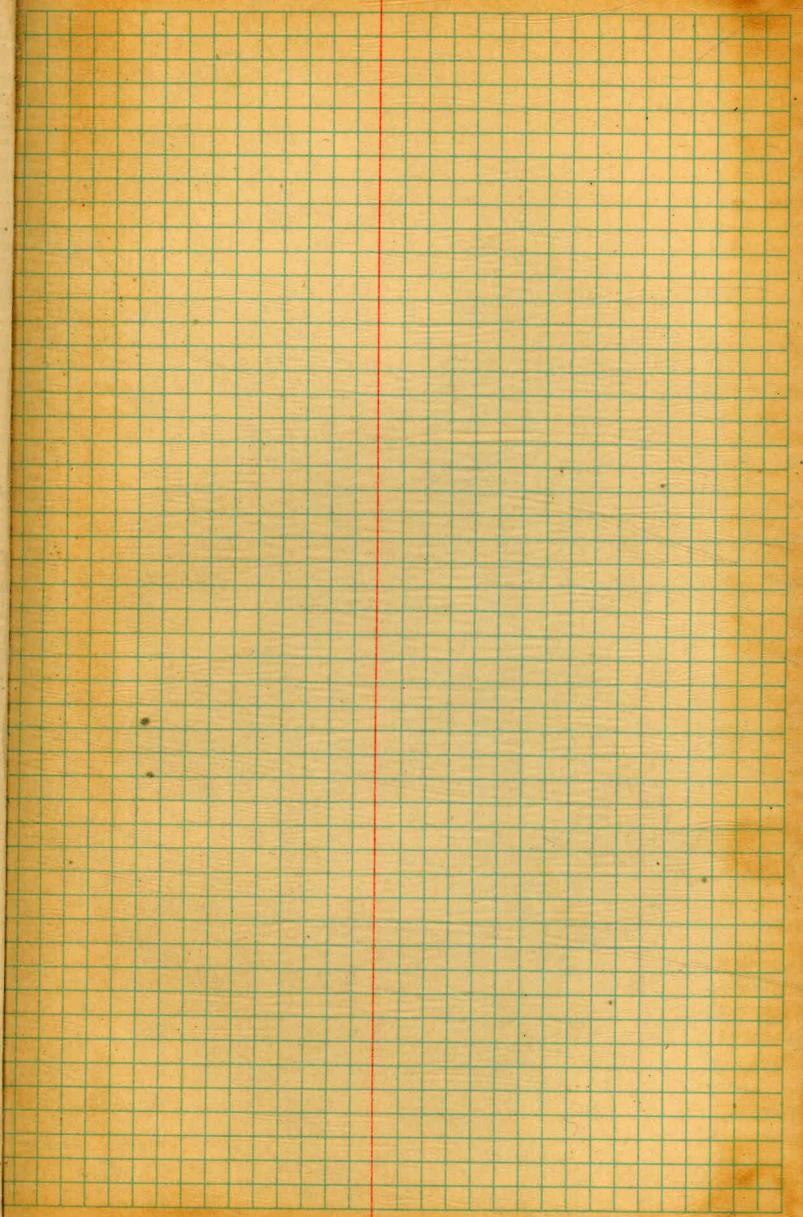
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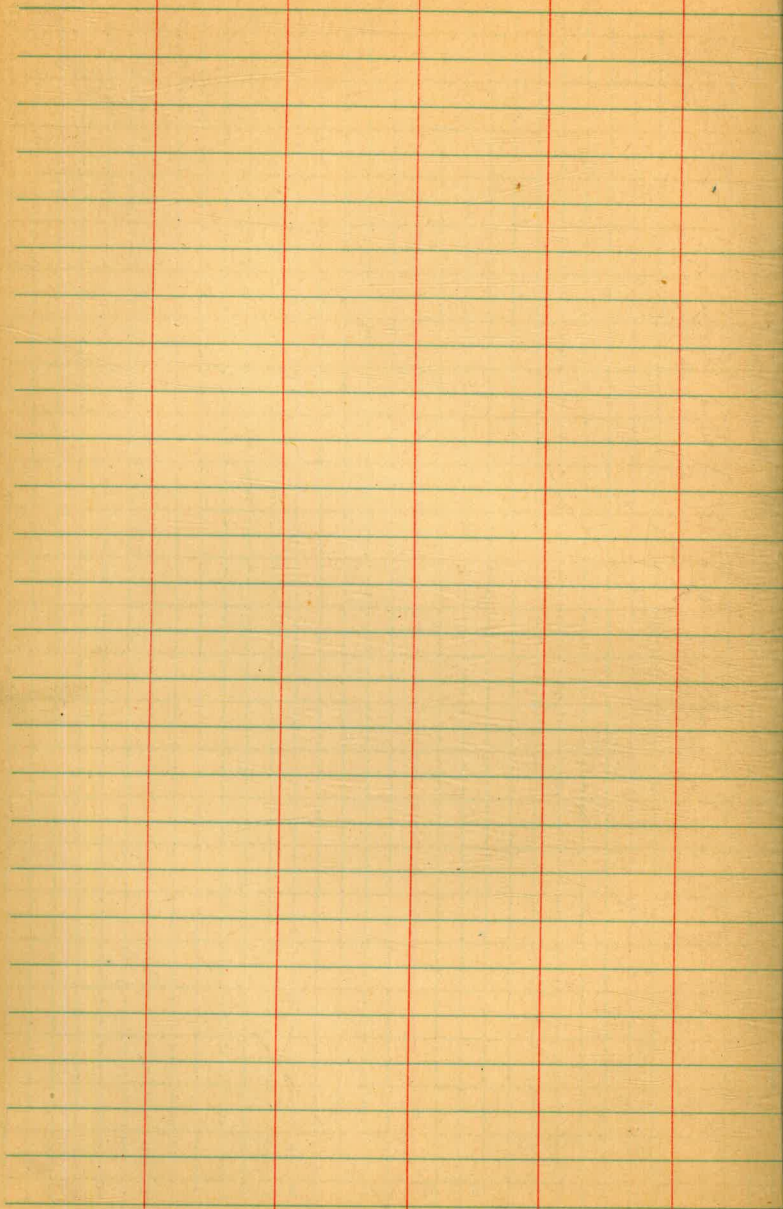
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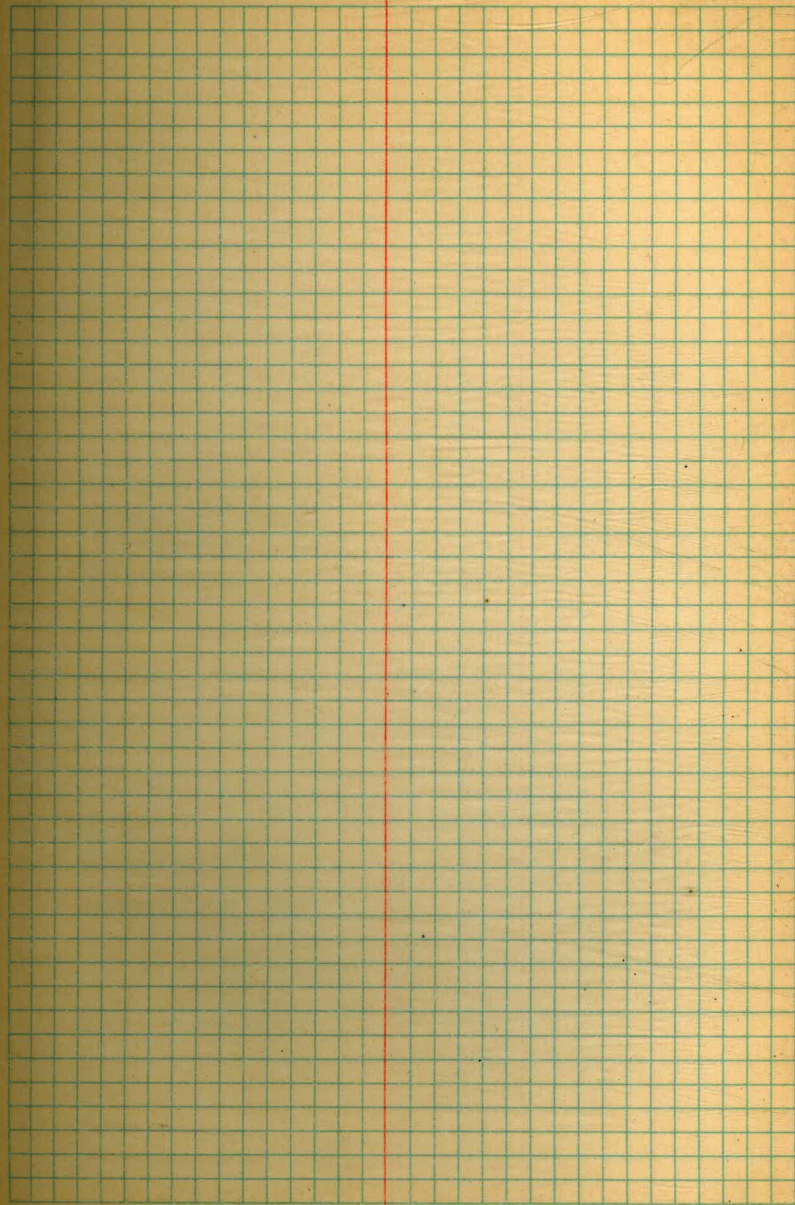
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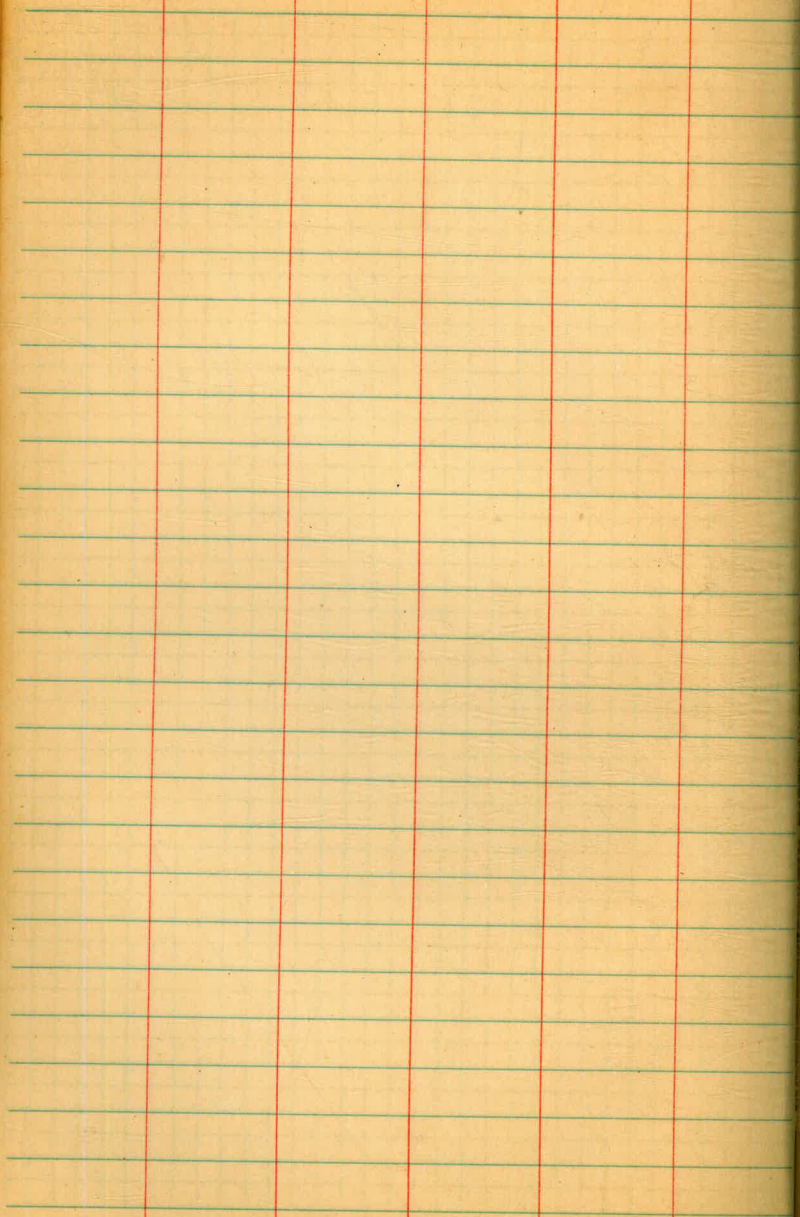
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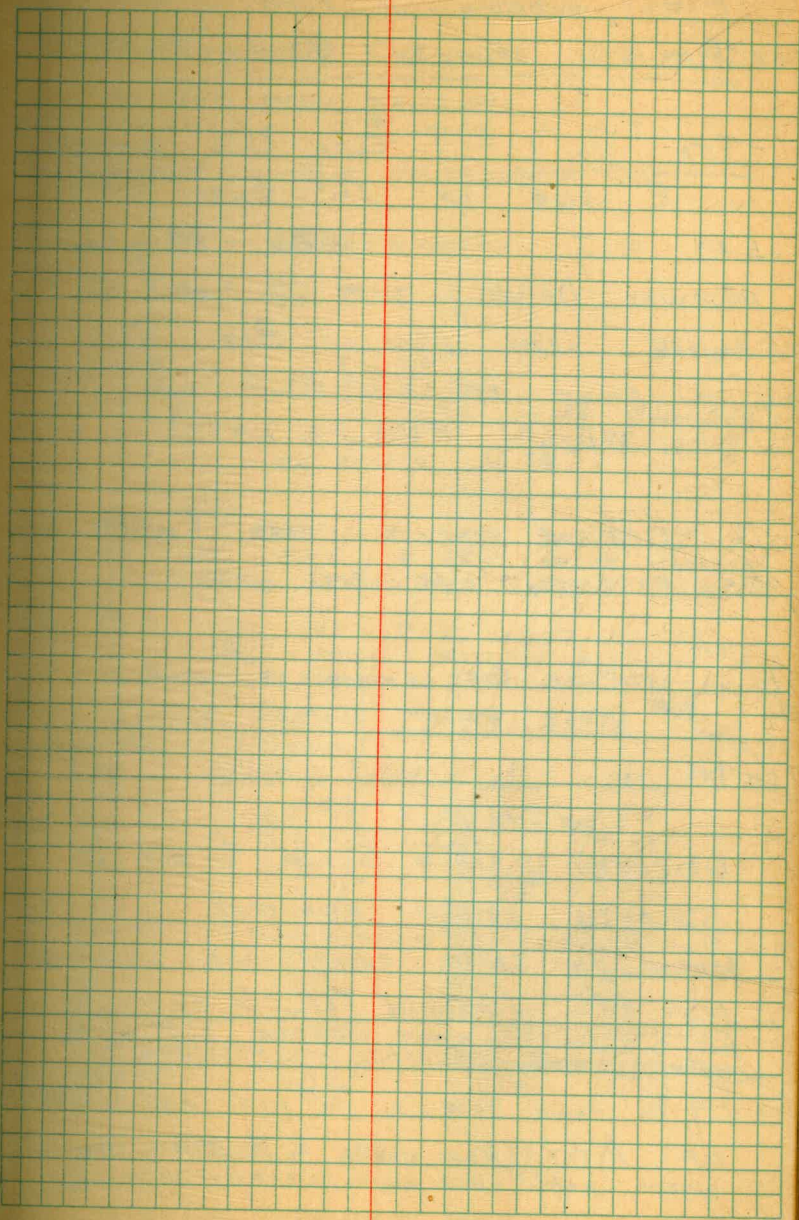
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3



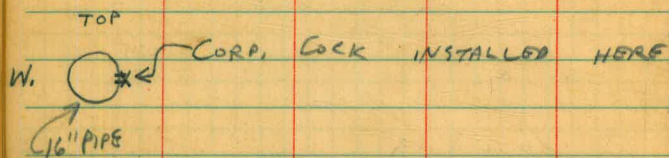
3



4 SIMPLEX PITOT EQUIPMENT
FIELD CHECK OF PIPE FLOW
PACIFIC BEACH PIPE LINE

STA. No. 1 - 1" CORP. COCK INSTALLED
IN E. SIDE OF 16" CLASS 250
B.I.S. C.I. CEMENT-LINED PIPE, ON
MIDWAY DRIVE, JUST S. OF S.
BRIDGE OVER MISSION BAY
(AT ABOUT STA. 229+20 ON
DWS. WD-691 FILE No. 2878)

16" PIPE IS LOCATED UNDER E. CURB
OF PAVEMENT AT THIS POINT.



OF STA. No. 1
LOCATION A 25.5' S. OF S. END OF
CONCRETE BRIDGE PAVEMENT

RECORDING GAUGE CHART OK. STARTING
1:30 P.M. (READING 4 1/2 - 5 FT./SEC.)

ADD 0.2' / SEC. TO CHART READINGS DUE TO TOO MUCH
~~INSUFFICIENT~~ MERCURY IN RECORDER

24 5/16" FROM FLGE. TO 1/4" PIPE AT S. END

OF PITOT ROD HEAD = ~~E~~ PIPE = STA. 0
WHEN ROD LEFT IN PLACE 1:30 P.M., 8/1/47

8/1/47 4
R. S. GOODWIN
J. W. REA

16" CLASS 250 C.I. PIPE O.D. = 17.80"

FED. SPEC. WALL THICKNESS OF
MONO-CAST C.I. PIPE = 0.75"

CEMENT LINING THICKNESS = 3/32"

$$2 \times 0.75" = 1.50"$$

$$2 \times \frac{3}{32}" = \frac{6}{32}" = 0.1875"$$

$$\begin{array}{r} 1.50 \\ - 0.19 \\ \hline 1.69 \end{array}$$

$$17.80"$$

$$- 1.69"$$

$$16.11" = \text{INSIDE DIAM.} = 16 \frac{176}{76}$$

OR APPROX. 16 1/8"

1. PUSH PITOT ROD IN UNTIL IT TOUCHES PIPE, + SET INDEX COLLAR 10" FROM TRAVERSE SCALE FLANGE
2. PULL ROD OUT TILL INDEX COLLAR IS 17 15/16" FROM FLANGE, + CLAMP ROD. THIS SETS ORIFICES AT CTR. PIPE = STA. 0

IMPACT ORIFICE FACING SOUTH

STA. No. = N	DISTANCE FLGE. TO INDEX	d	ds
NEAR SIDE OF PIPE → 6	25 5/8"	0 1/2"	13 1/4"
5	24 15/16"	0 1/2"	14 5/8"
4	24 1/8"	0 5/8"	15 1/2"
3	23 1/8"	0 5/8"	15 1/2"
2	21 5/16"	9 5/8"	14 1/2"
1	20 1/4"	11 1/2"	13 7/8"
-1	15 5/8"	15 1/4"	13 1/2"
-2	13 15/16"	14"	13 1/8"
-3	12 3/4"	13 1/2"	13 1/8"
-4	11 3/4"	12 5/8"	13 3/8"
-5	10 15/16"	12"	13"
FAR SIDE OF PIPE ← 6	10 1/4"	9 1/4"	11 1/4"

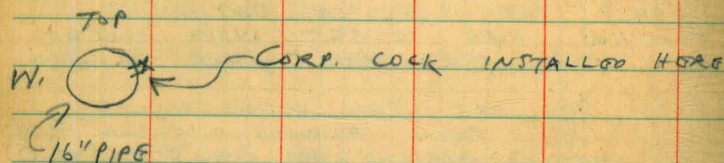
SPECIFIC GRAVITY BEFORE = 1.585
" " " AFTER = 1.585

9:40 A.M. } TRAVERSE TIME
10:10 A.M. }

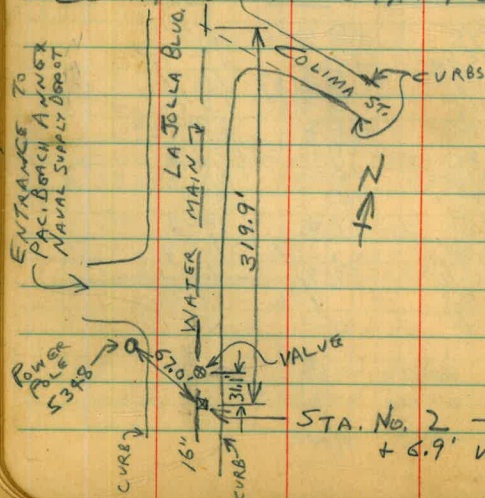
5 SIMPLEX PITOT EQUIPMENT
FIELD CHECK OF PIPE FLOW
LA JOLLA BLVD. PIPE LINE

STA. No. 2 - 1" CORP. COCK INSTALLED
IN E. SIDE OF 16" C.I. PIPE, ON LA
JOLLA BLVD., ABOUT 300' S. OF
S. LINE OF COLIMA ST.

16" PIPE IS LOCATED 8' W. OF
E. CURB OF COLIMA ST. AT THIS POINT



LOCATION OF STA. No. 2



8/21/47 5
J.W. REA

BY ROUGH CHECK WITH PITOT ROD
(PIPE CALIPER NOT YET RECEIVED), INSIDE
DIAM. OF PIPE = $16\frac{1}{4}$ " APPROX.

USE SAME STA. SETTINGS AS USED
FOR STA. NO. 1 ON PGE. 4.

SPECIFIC GRAVITY BEFORE = 1.585
" AFTER = 1.585
TRAVERSE TIME 10:38 AM - 10:57 AM.

IMPACT DRIFILE FACING SOUTH

(DIRECTION OF FLOW TO NORTH)

STA. No. = N	d	dc
6	0 $\frac{1}{2}$ "	4 $\frac{1}{4}$ "
5	1 $\frac{3}{4}$ "	4 $\frac{1}{4}$ "
4	2 $\frac{3}{16}$ "	4 $\frac{3}{8}$ "
3	2 $\frac{3}{4}$ "	4 $\frac{3}{8}$ "
2	3 $\frac{1}{16}$ "	4 $\frac{1}{2}$ "
1	3 $\frac{3}{4}$ "	4 $\frac{3}{8}$ "
-1	6 $\frac{1}{4}$ "	5 $\frac{7}{8}$ "
-2	4 $\frac{3}{16}$ "	4 $\frac{3}{8}$ "
-3	3 $\frac{1}{4}$ "	4 $\frac{1}{4}$ "
-4	2 $\frac{1}{2}$ "	4"
-5	2	4 $\frac{1}{4}$ "
-6	1 $\frac{3}{8}$ "	4 $\frac{3}{8}$ "

NEAR SIDE OF PIPE
FAR SIDE OF PIPE

BY CHECK WITH PIPE CALIPER 11 SEPT. '47
INSIDE DIAM. OF PIPE = $16\frac{1}{4}$ "

6 SIMPLEX PITOT EQUIPMENT

FIELD CHECK OF PIPE FLOW
LA JOLLA BLVD. 16" PIPE LINE

STA. No 2 SEE PAGE 5

9/3/48
R.S. GOODWIN
J.W. PEA
G.R. SAUNDERS

DIA PIPE 16 3/16"

SPECIFIC GRAVITY 1.585

TRAVERSE TIME 1:20 P.M. - 1:29 P.M.

IMPACT ORIFICE FACING SOUTH
DIRECTION OF FLOW TO NORTH

STA No	d	d _c
= n		
NEAR SIDES OF PIPE →		
6	3/4"	7/8"
5		1 1/2"
4		1 3/8"
3		1 5/8"
2		2"
1		2 1/2"
0		
-1		3 1/8"
-2		2 7/8"
-3		2 3/4"
-4		2 5/8"
-5		1 7/8"
-6		1 1/4"
FAR SIDES OF PIPE →		
		4"
		3 1/2"
		3 5/16"
		3 1/8"
		3"
		3"
		3 3/8"
		3 3/8"
		3 1/8"
		3 3/8"
		3 1/4"
		3 1/2"

LEFT RECORDER WITH CHART O.K.,
STARTING ABOUT 4:30 P.M., WITH
PITOT IMPACT ORIFICE IN CTR. OF
PIPE.

HAWES ST. - BEST LOCATION
IS 300' N. OF LA PLAZA AVE.

LA TULLA BLVD.
PROFILE BROW 120' S. OF
S. LIND COLIMA ST. ON E

DITTO 460' S. OF
S. LIND COLIMA ST. ON E

DITTO 1160' S. OF
S. LIND COLIMA ST. ON E

(, E) DWG. 1113-L

~~TOL O'NEILL~~
O.K. FROM 200' S. OF S. RINE
COLIMA TO 380' S. " " "
OR 540' S. TO 1080' S.

STA. 2

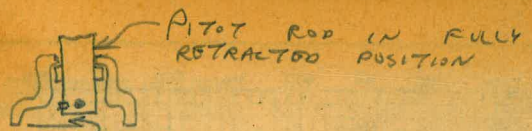
APPR. S.

294

OF COLIMA

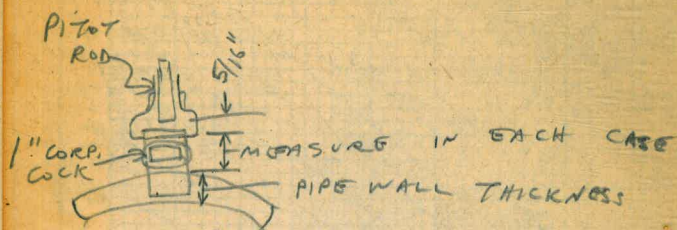
$$\begin{array}{r} 2 \frac{7}{16}'' \\ + 5/16 \\ + 12/16 \\ \hline 3 \frac{1}{2}'' \end{array}$$

$$\begin{array}{r} 19 \frac{3}{4}'' \\ 3 \frac{1}{2}'' \\ \hline 16 \frac{1}{4}'' \end{array}$$



PITOT ROD IN FULLY
RETRACTED POSITION

5/16" BETWEEN END OF ROD
& BOTTOM OF SCREW FLANGE



PITOT
ROD

5/16"

1" CORP.
COCK

MEASURE IN EACH CASE

PIPE WALL THICKNESS

Please Return to
 City of San Diego Water Dept.
 Room 268 Civic Center
 Telephone Main 5161

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	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

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