# EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

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

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

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







This Field Book is manufactured of a High Grade **50%** Rag Paper having a **WATER RESISTING SURFACE,** and is sewed with Bing Special Enamel Waterproof thread.

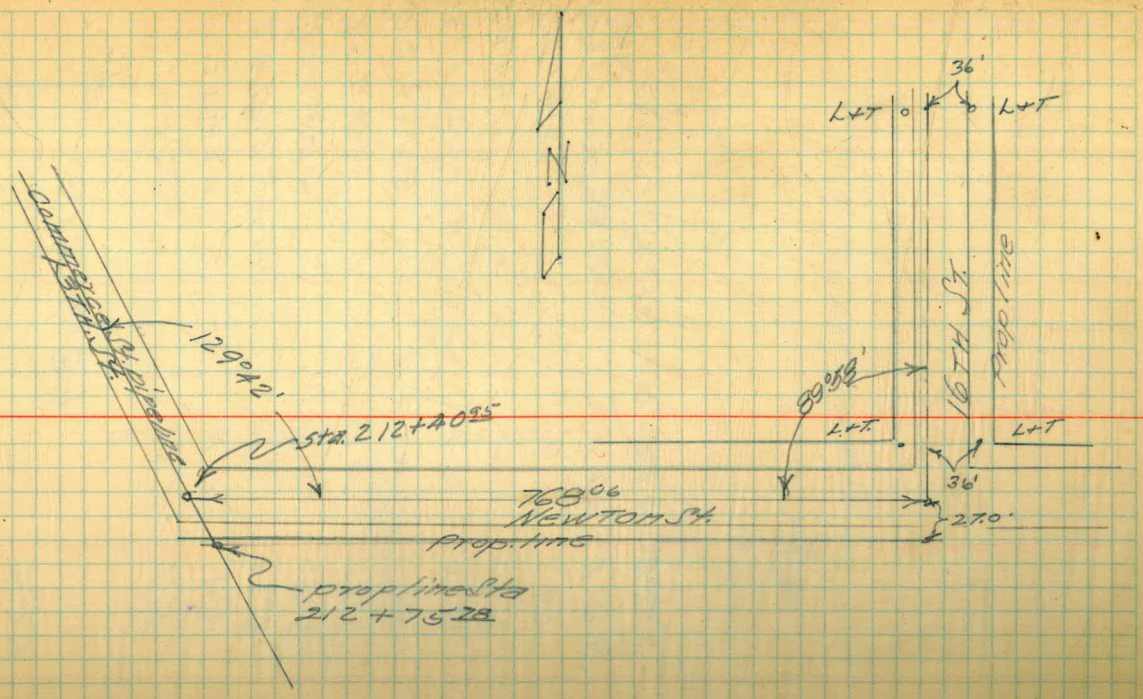
**Made in U. S. A.**

| Indexed To page | Date | By | Notes Plotted or Reduced page | Map # | date | By |
|---|---|---|---|---|---|---|
| 1-9-12 | 4/23 | MGD | | | | |
| 3-16 | 5/27 | MGD | | | | |
| 17-27 | 5/27 | MGD | | | | |
| 28 | 6/25 | M.P.V. | | | | |
| 34 | 9/12 | M.P.V. | | | | |
| 47 | 11/9/48 | MGD | | | | |
| 48-51 | 4/26/50 | MGD | | | | |
| 52-53 | 4/26/50 | MGD P.I. | | | | |

# Index

P

Commercial St. Apeline
Tie To Mean High Tide



# Commercial St. Pipeline
## End Profiles

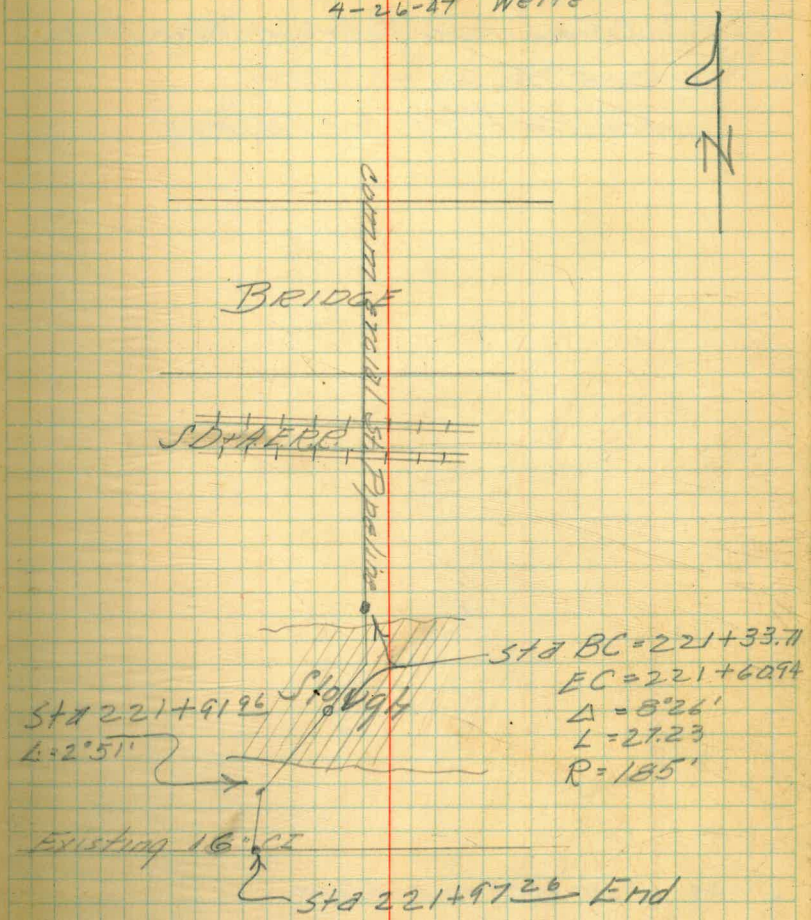
U.S.C.+G.S. BM # S734 — 3.27

3.12 — 6.39

| | | |
|---|---|---|
| 221+00 | 4.7 | 1.7 |
| 221+29 | 4.7 | 1.7 |
| 221+33.71 BC | 8.2 | -1.8 |
| 221+40 | 9.9 | -3.5 |
| 221+45 | 9.5 | -3.1 |
| 221+52 | 7.3 | -0.9 |
| 221+60.94 EC. | 9.2 | -2.8 |
| 221+71 | 10.3 | -3.9 |
| 221+83 | 4.7 | 1.7 |
| 221+97.26 END | 5.04 | 1.35 |
| U.S.C+G.S. BM S734 | 3.12 | 3.27 |



Rainey
clear-cold 4-22-47 King
4-23-47 Nielsow
4-26-47 Welte



3 cloudy cool

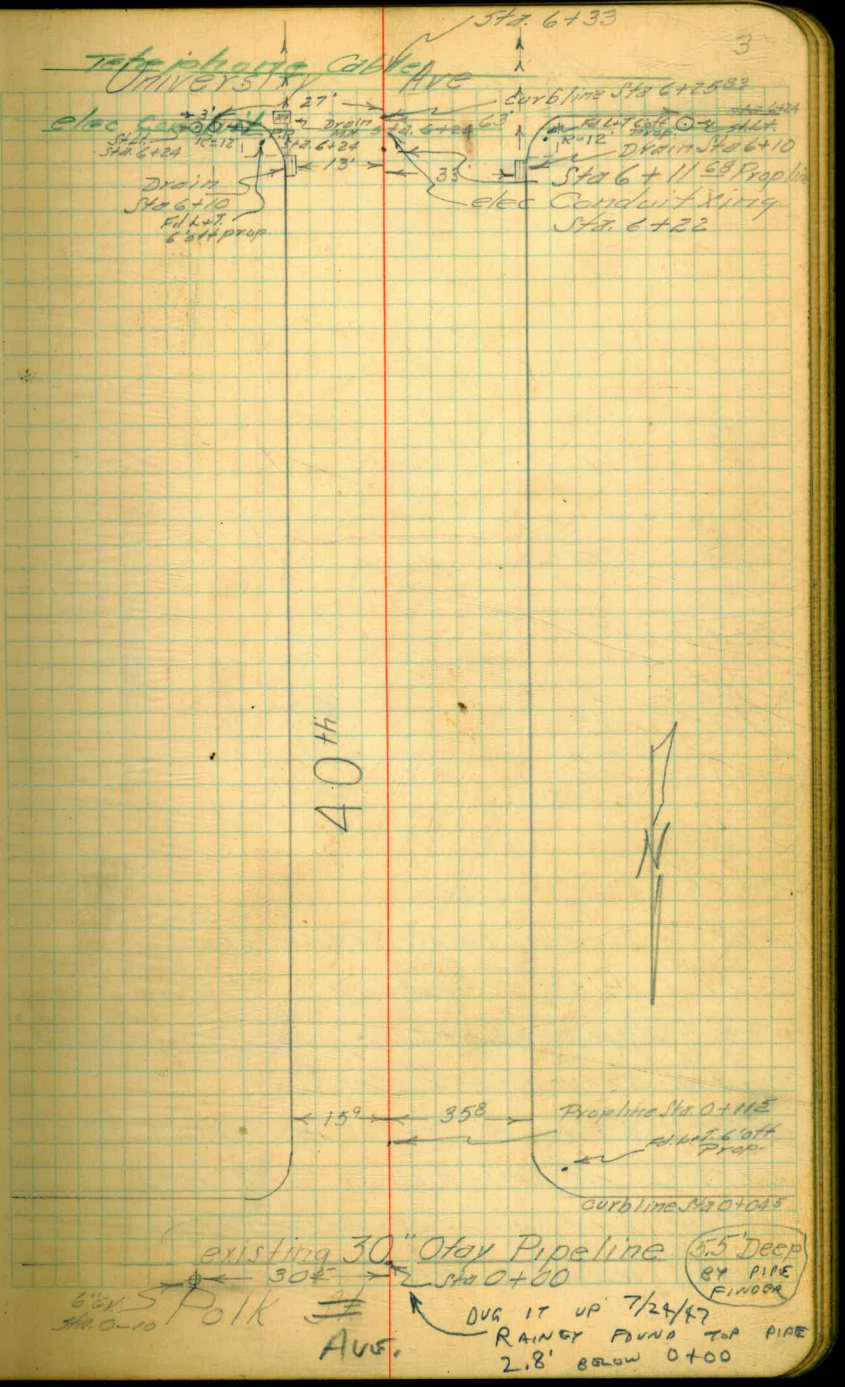
May 21, 1947
22, 1947

Rainey
King
Nichow
Welte

Sta. 40th St. Pipeline 16"
Line Located from Prop lines
Irregardless of Curb
For Profiles See Page 17

| | |
|---|---|
| 6+24 | Drain Mk. 13' E of Line |
| 6+24 | St. Lt. 63' W of Line |
| 6+24 | St. Lt. 30' E of Line |
| 6+24 | PP. 27' E of Line |
| 6+10 | Drains 13' E + 33' W of Line |
| 0+00 | Int. W/existing 30" Otay Line |
| 0+10 | 6" G.V. 30.5' E of Line |

3

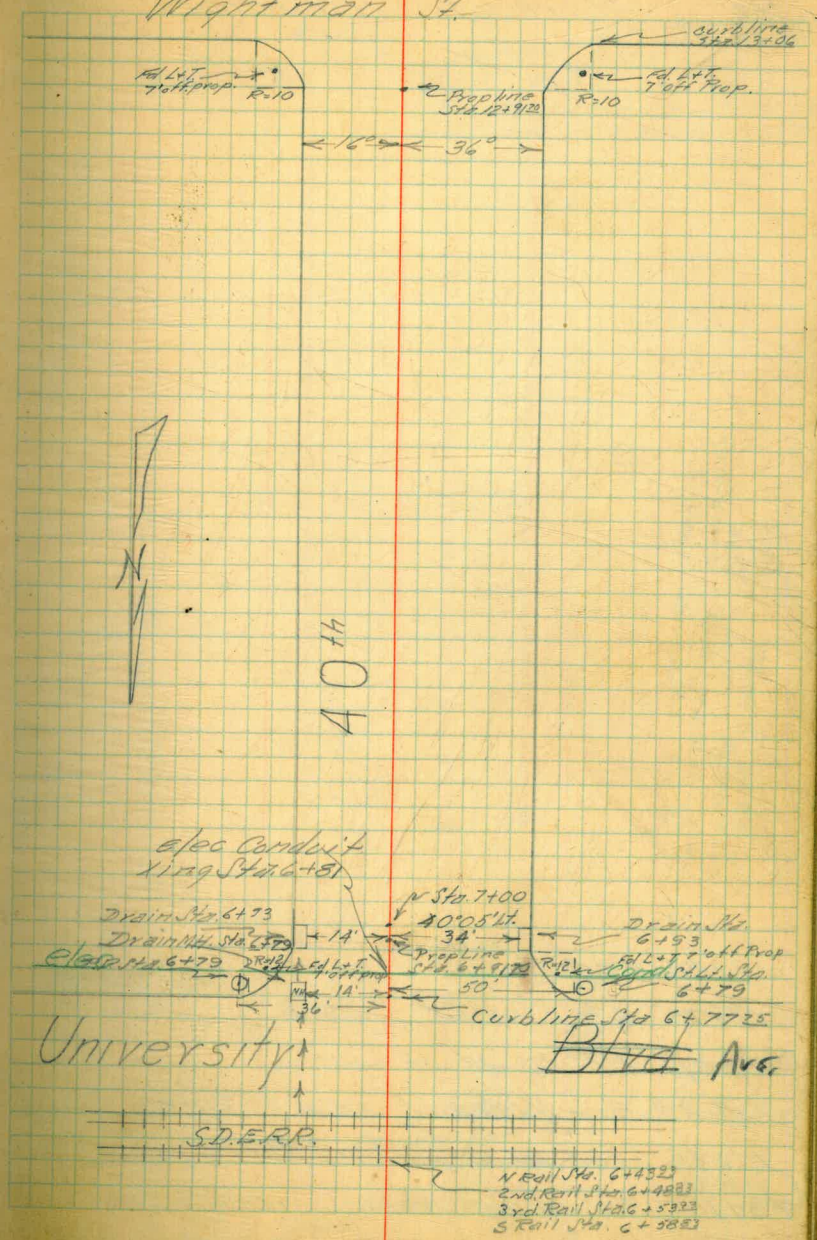


Sta. 40th St. Pipeline 16"

| | |
|---|---|
| 7+00 | 4Pt. 0°05' Lt |
| 6+93 | Drain 14' E + 34' W of Line |
| 6+79 | St. Lt. 50' W of Line |
| 6+79 | P.P. 36' E of Line |
| 6+79 | Drain MH. 14' E of Line |
| 6+58.83 | S Rail of Street Car Tracks |
| 6+53.93 | 3rd. Rail of Street Car Tracks |
| 6+48.83 | 2nd Rail of Street Car Tracks |
| 6+43.93 | N Rail of Street Car Tracks |



Wightman St.



5

Sta. 40th. St. Pipeline 16"

19+83 End Oil

19+78 ± 4Pt. 0°09' Rt.

13+59 P.P. 51' W of Line

13+59 Fire Hydrant 35' E of Line

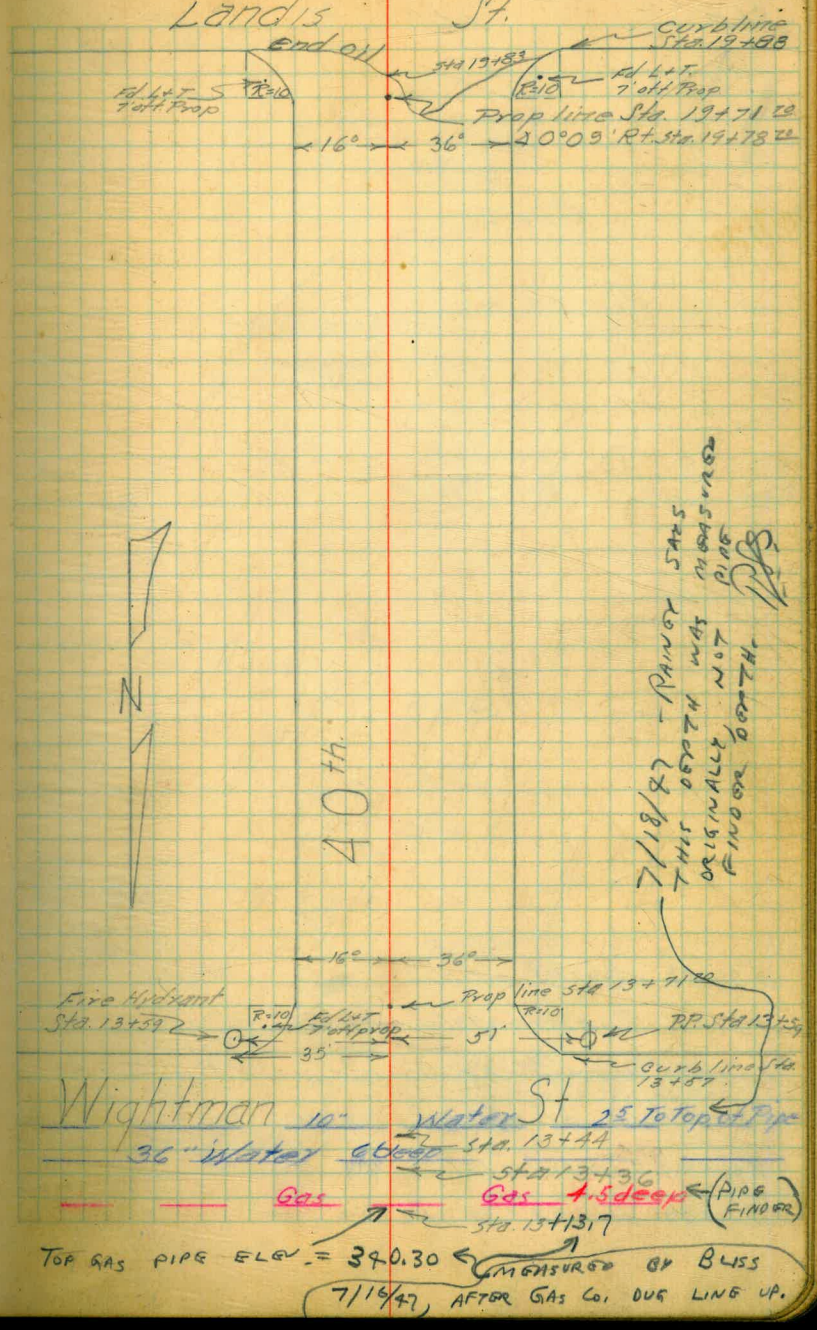
13+44 Int. w/ 10" Water Main 2.5 to top of pipe

13+13 Int w/ Gas Main (Unknown Size

Dirt

5

Lands St.

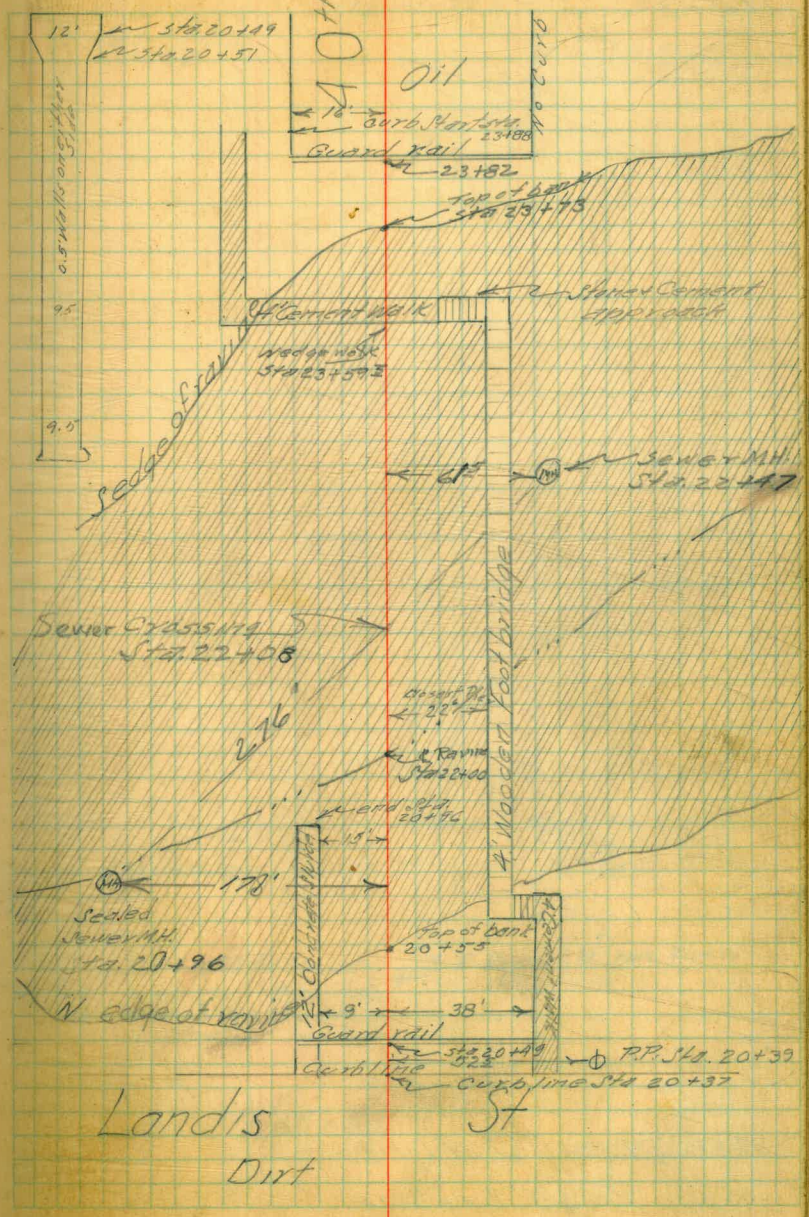


# 40th. St. Pipe line

Sta. 16"

23+83 Start of oil
23+82 Guard rail
23+59.5 N edge of concrete walk 4' wide
22+00 bottom of ravine
20+49 Guard rail
20+39 R.P. 52.5 W of Line





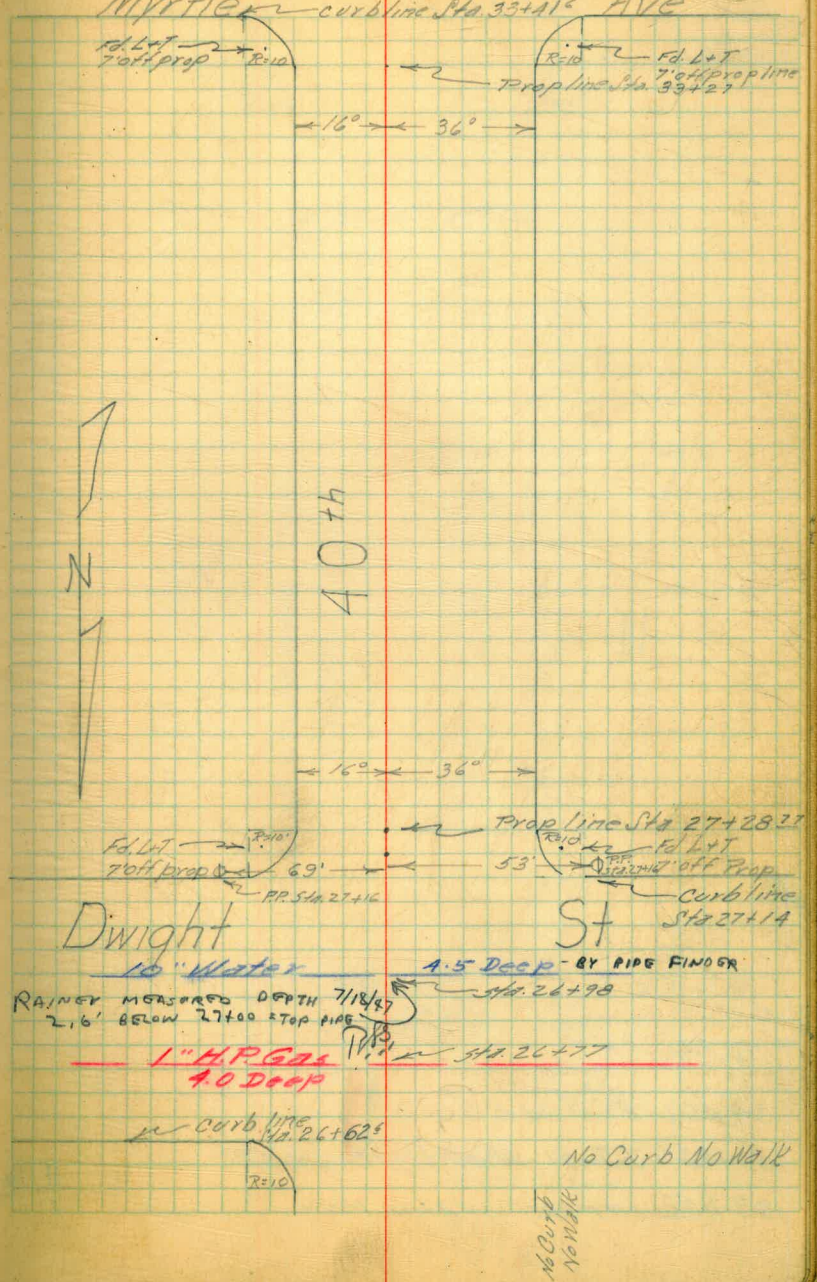
7

Sta. 40th. St. 16" Pipeline

27+16. P.P. 53' W of Line

27+16 P.P. 69' E of Line





8

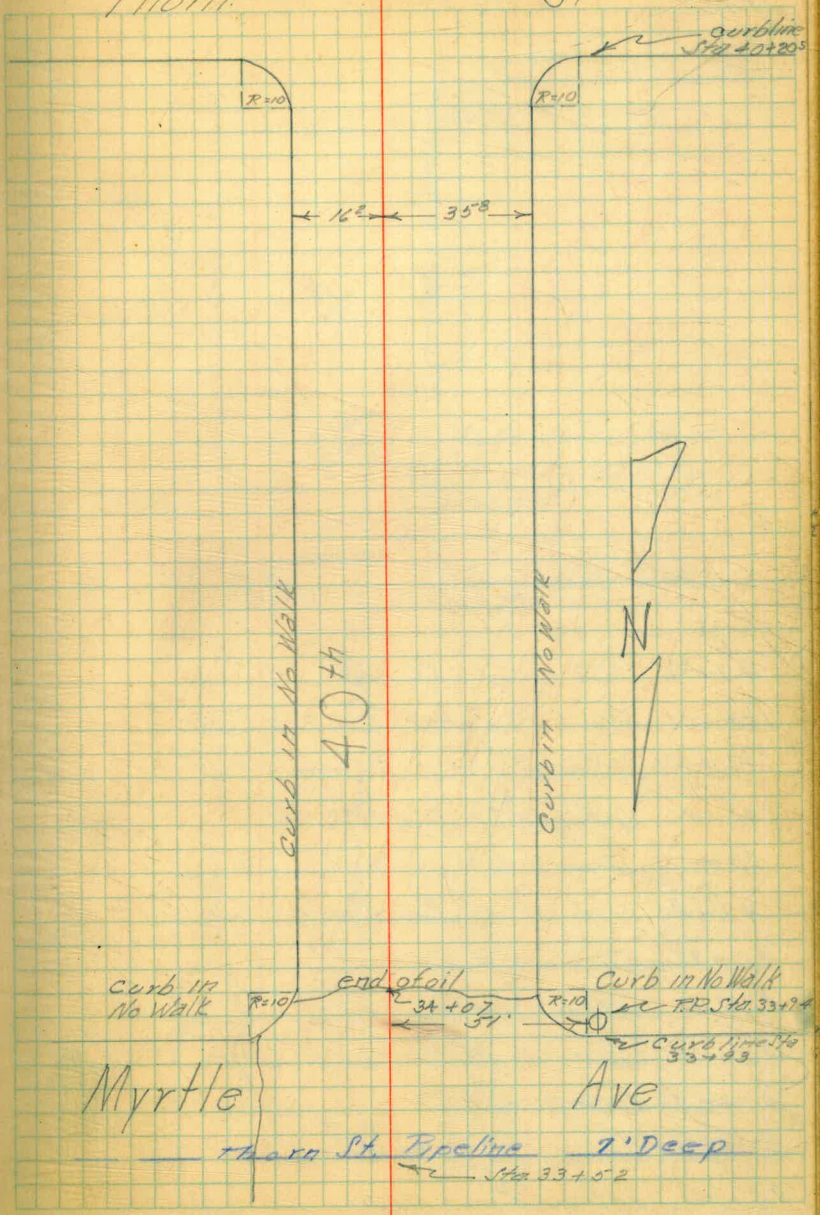
Sta. 40th St. 16" Pipeline

34+07 End of oil

33+94. P.P. 51' W of Line

33+52 Int w/ Water Main

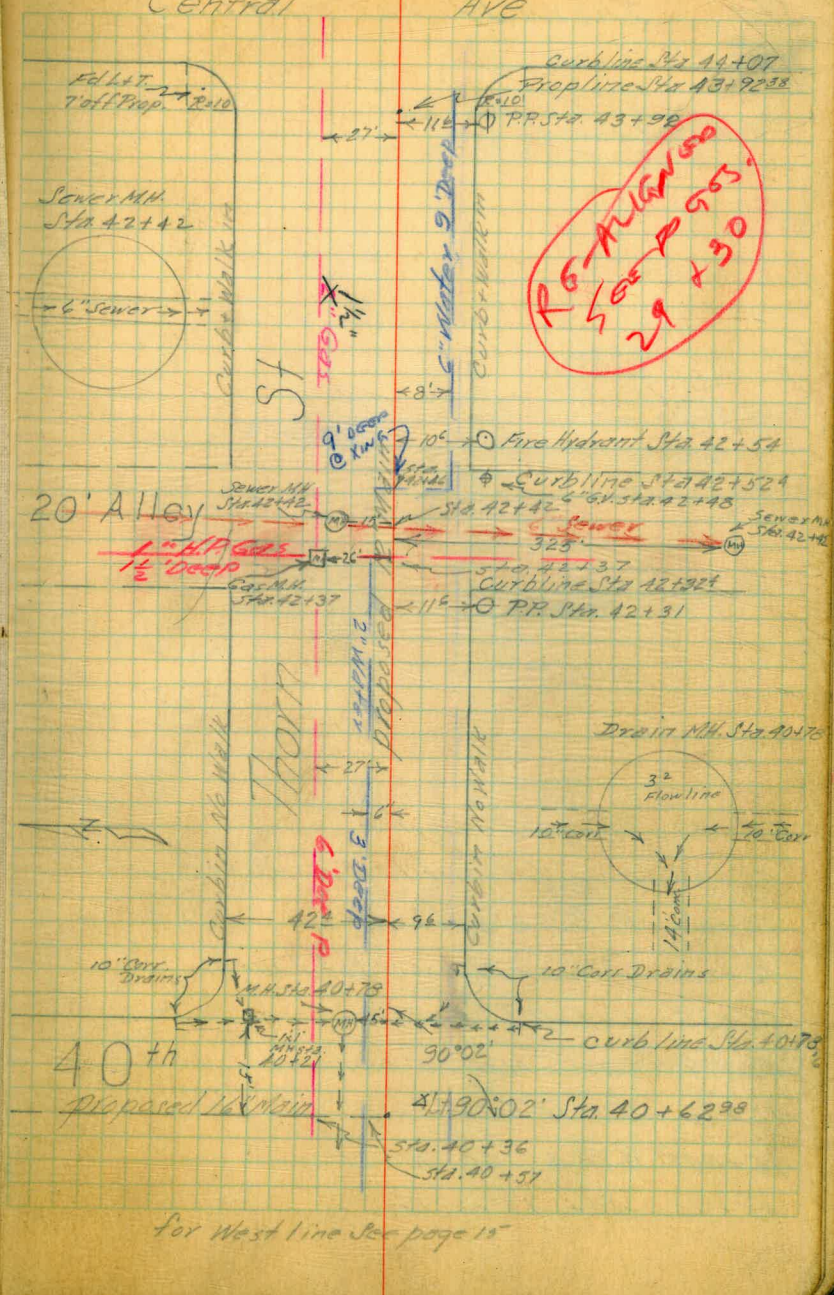
8



Sta. Thorn St 12" Pipeline

| | |
|---|---|
| 43+92 | P.R. 11⁶ S of Line |
| 42+54 | Fire Hydrant 10⁶ S of Line |
| 42+48 | 6" G.V. 10⁶ S of Line |
| 42+46 | Int. w/ 6" Water Main |
| 42+42 | Sewer M.H. 15' N of Line |
| 42+42 | Int. w/ 6" Sewer |
| 42+37 | Gas Co M.H. 26' N of Line |
| 42+31 | P.R. 11⁶ S of Line |
| 40+78 | Drain M.H. 15' N of Line |
| 40+62.98 | Δ 90°02' Lt. |
| 40+57 | Int. w/ 2" Water Main |
| 40+36 | Int. w/ 1½" Gas Main |
| 40+21 | 1'x1' Square Drain M.H. 15' E of Line |






for West line See page 10

10

Sta. Thorn St. 12" Pipeline

47+73 P.P. 18± S of Line

46+39 Fire Hydrant 17.5 S of Line

46+29 8" G.V. 6' S of Line

46+25 Sewer M.H. 50' S of Line

46+25 Int. w/ 6" Sewer

46+19 Gas Co M.H. 20' W of Line

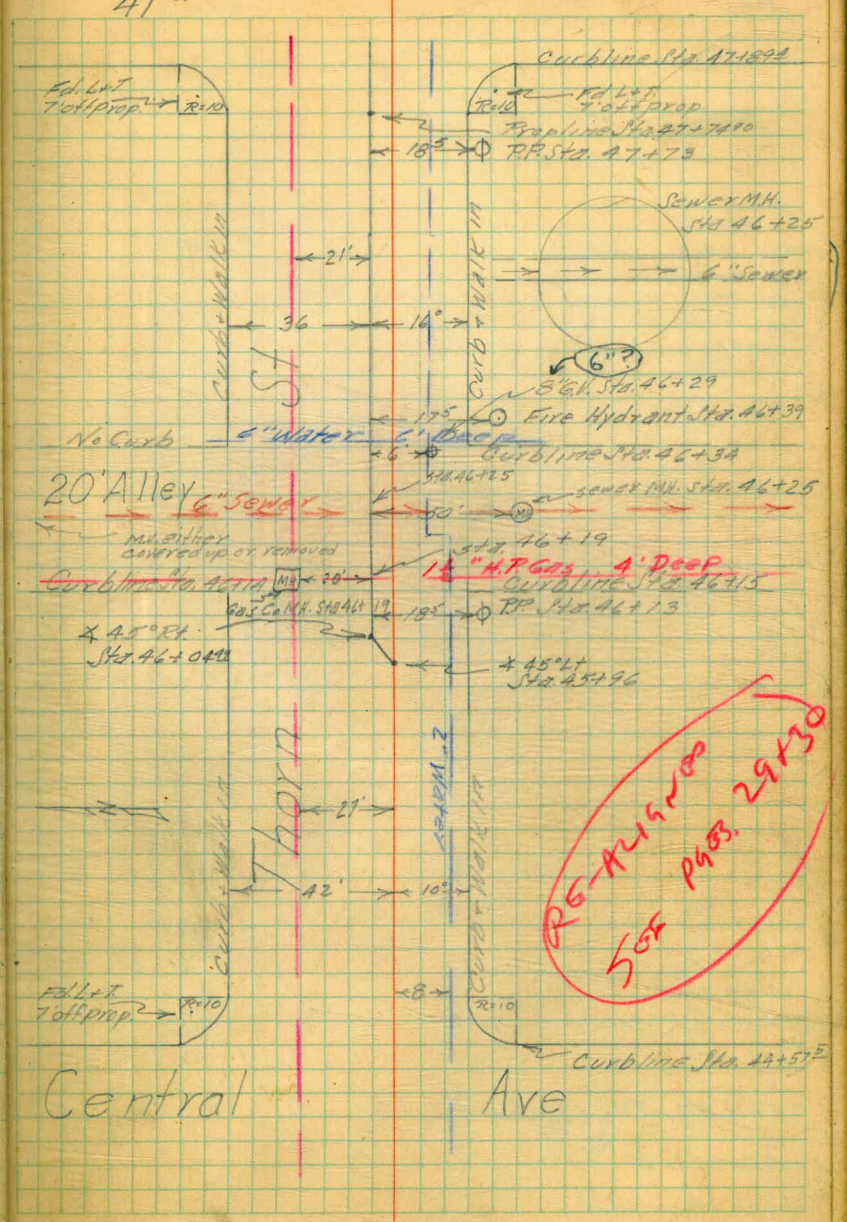
46+13 P.P. 18± S of Line

46+04.99 ∠ Pt. 45°00' Rt.

45+96 ∠ Pt. 45°00' Lt.



41st




RE-ALIGN 8" GV 5 GF pgs. 29+30

11

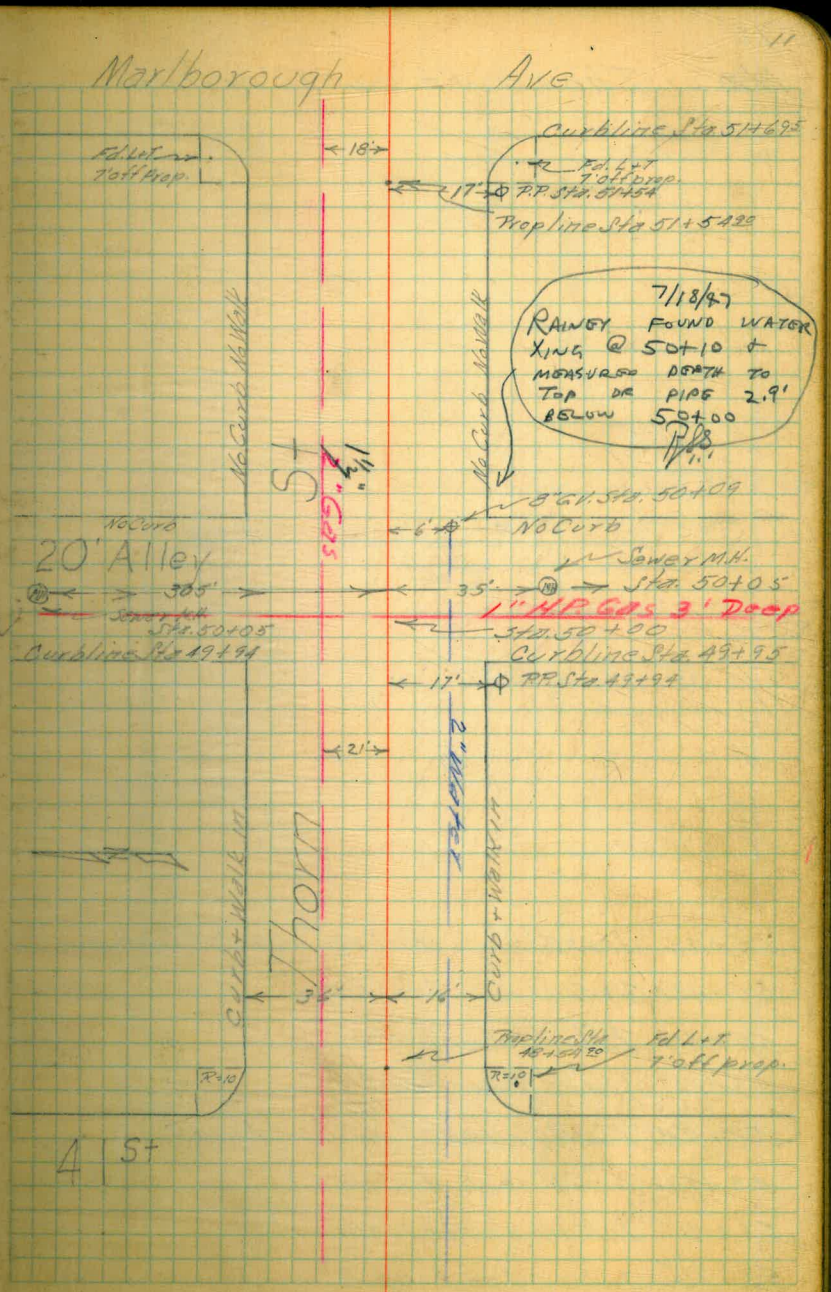
Sta. Thorn St. 12" Pipeline

51+54 P.P. 17' Softline

50+09 8" G.V. 6' Softline

49+94 P.P. 17' Softline

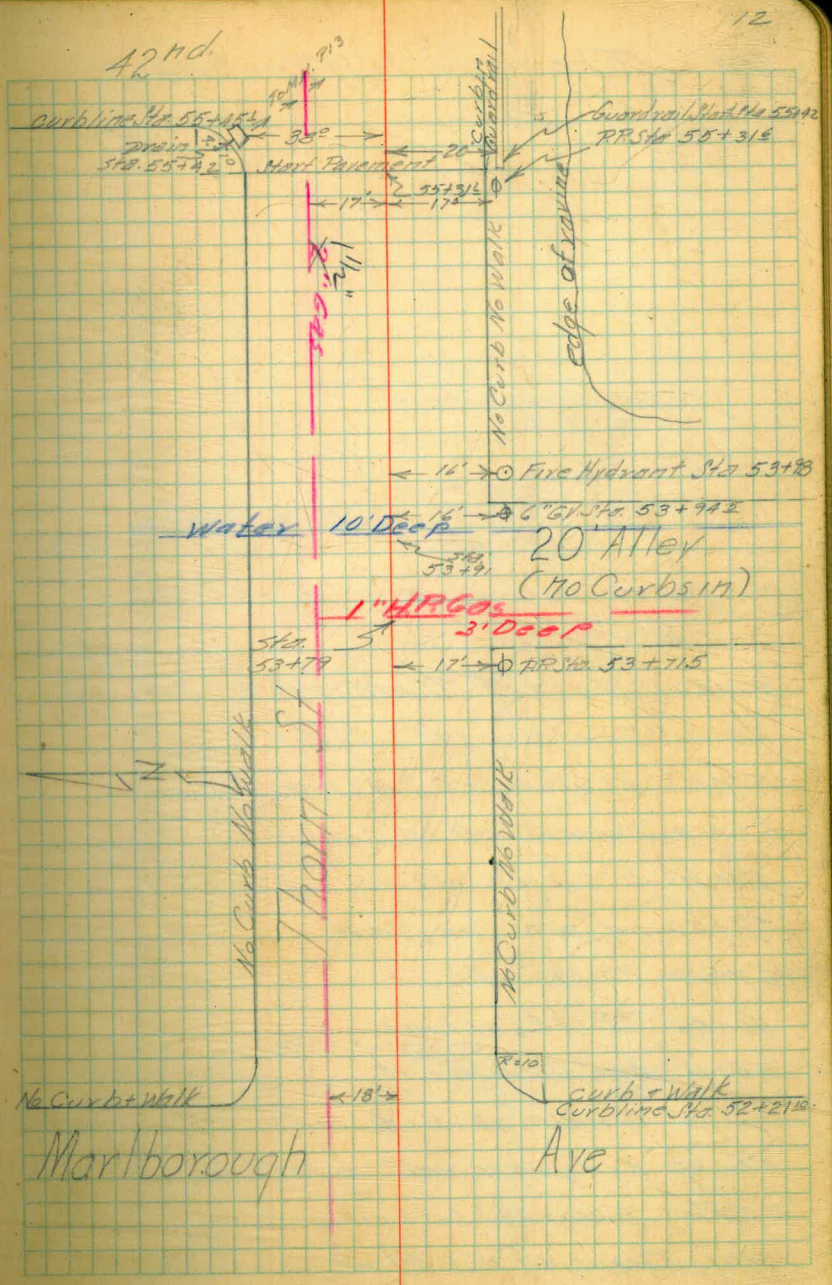




Sta. Thorn St. 12" P. pipeline

55+42 Start of guardrail 20' S of Line
55+42 Drain 38' N of Line
55+31½ P.P. 17' S of Line
55+31 Start pavement
53+98 Fire Hydrant 16' S of Line
53+94½ 6" G.V. 16' S of Line
53+91 Int. W/ Water Main
53+71½ P.P. 17' S of Line

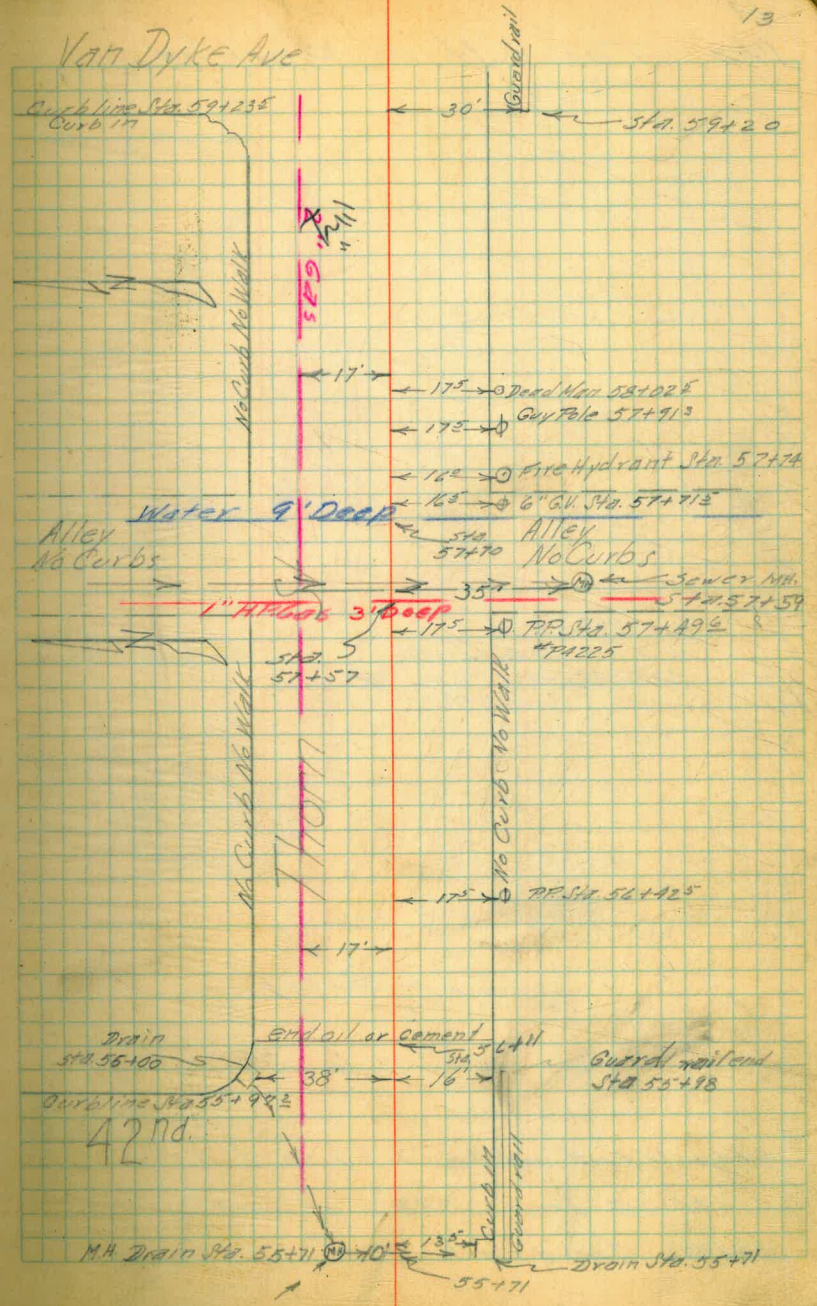




Sta. Thorn St 12" Pipeline

59+20 Start of Guardrail 30' S of Line
58+02⁵ Dead Man 17⁵ S of Line
57+91³ Guy Pole 17⁵ S of Line
57+74 Fire Hydrant 16' S of Line
57+71⁵ 6" G.V. 16⁵ S of Line
57+70 Int. W/ Water Main
57+49⁶ P.P. 17⁵ S of Line
56+42⁵ P.P. 17⁵ S of Line
56+11 End Pavement
56+00 Drain 38' N of Line
55+98 End guard rail 20' S of Line
55+71 Drain 13⁵ S of Line
55+71 Drain M.H. 10' N of Line





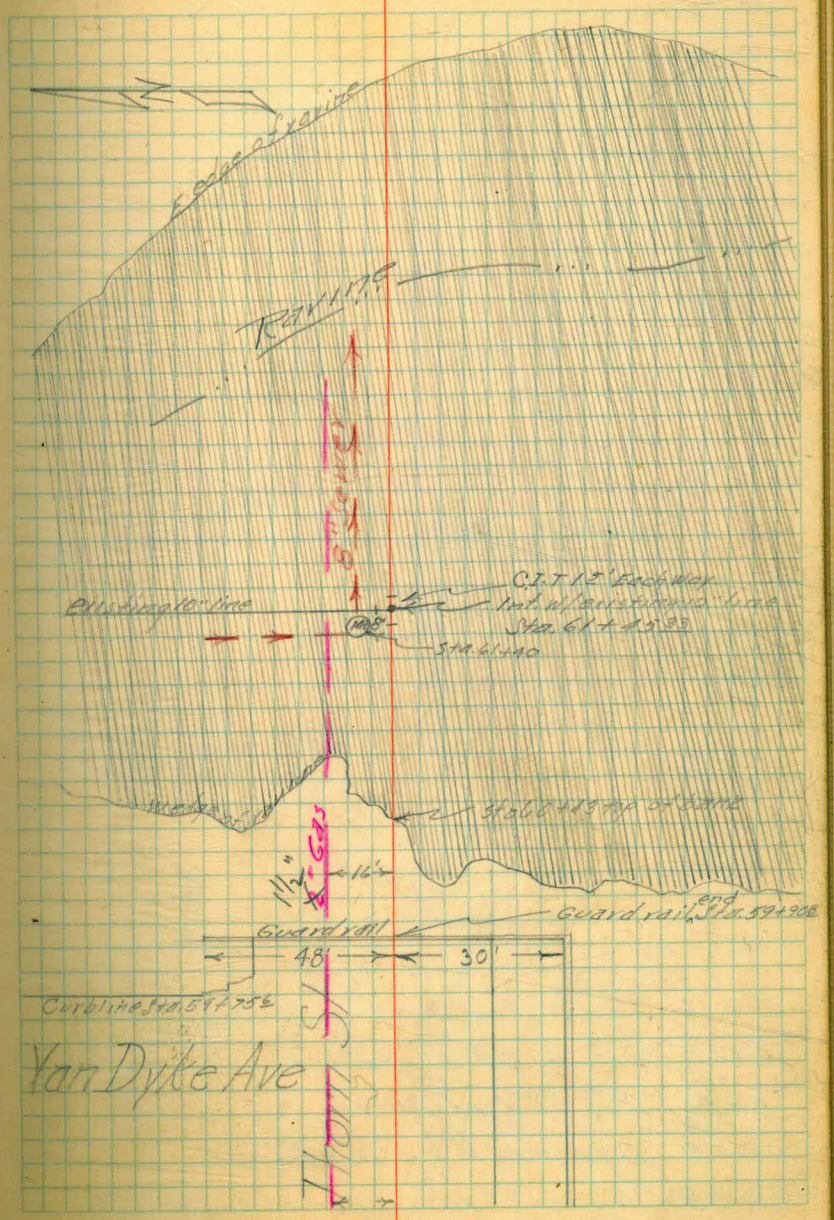
Sta. Thorn St. 12" Pipeline

61+43.33 Int. w/ exist'g 10" Line

61+40 8" Sewer MH 8' N of Line

59+90.8 Guard rail

14



Sta.

# Thorn St. 8" Pipeline

2 + 12 P.P. 12' S of Line

2+00 Int. w/ C.I. 6" Sewer

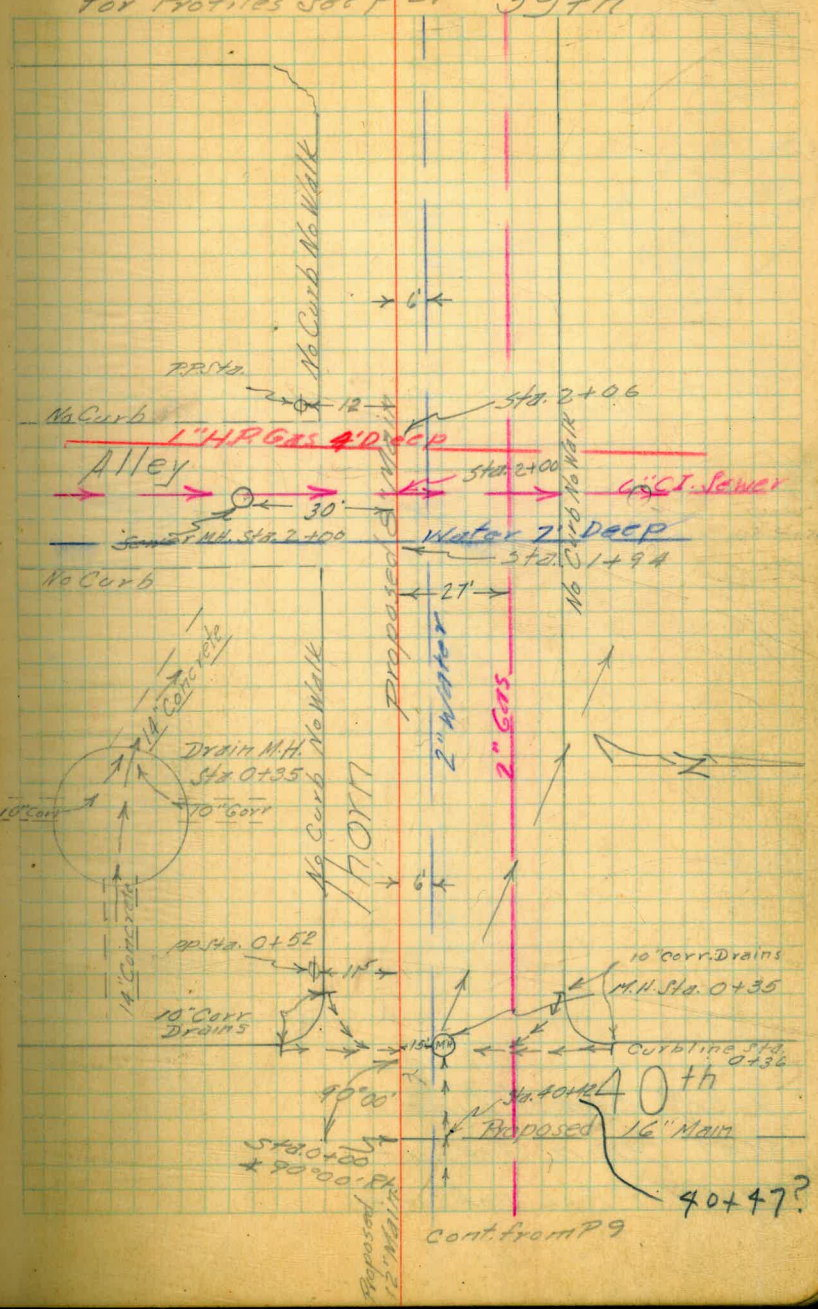
0+52 P.P. 11.5 S of Line

0+35. Drain M.H. 15' N of Line

0+00 = 40+62.98 16" Line Ahd 90°00' Rt



for Profiles see P 27



16

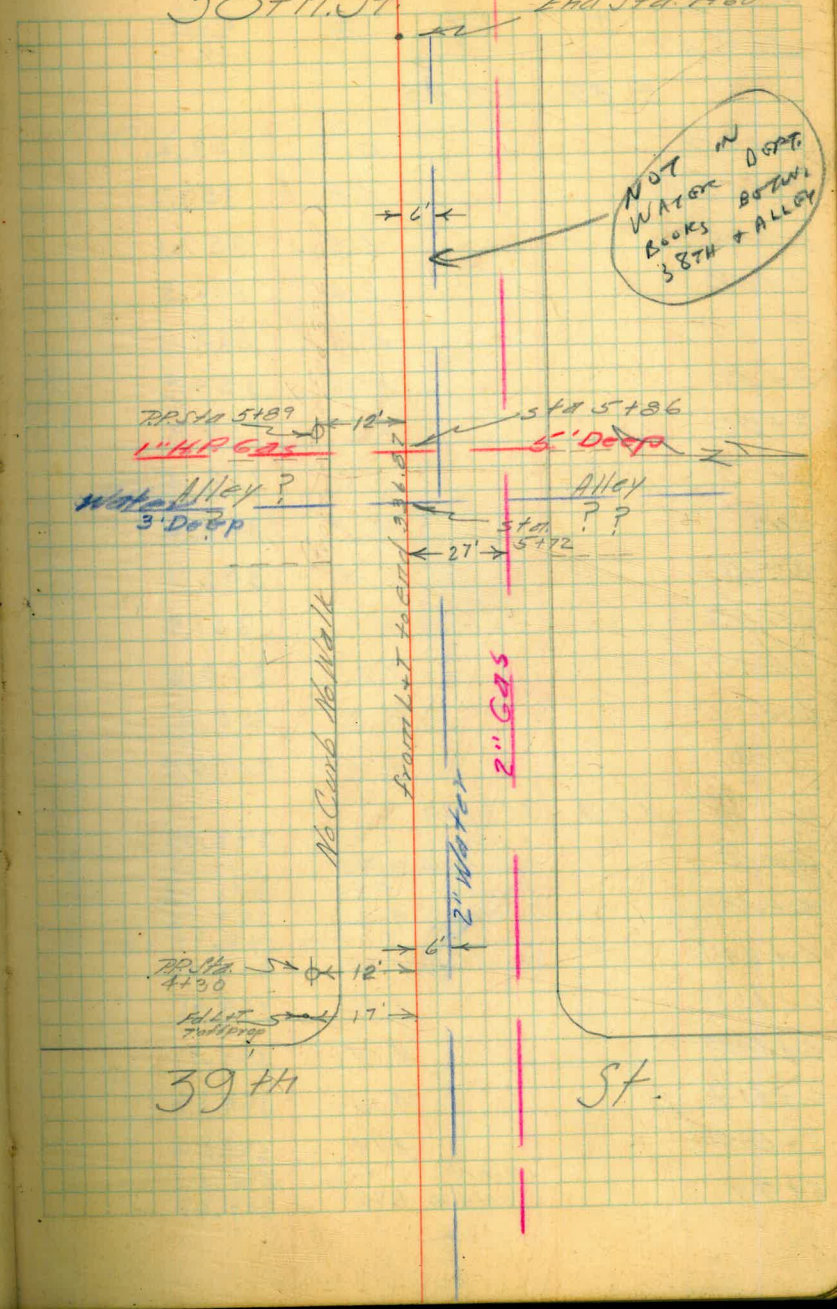
16
Sta.

Thorn St 8" Pipeline

7+60.34 End of Line
5+89 · P.P. 12' S of Line
4+30 P.P. 12' S of Line

38th. St.

End Sta. 7+60.34



Profiles
40th St. Pipeline

Rainier
King
Highway
Water

| Sta | ± | H.I. | = | Elev. | |
|---|---|---|---|---|---|
| B.M. N.W. Cor Utility + 40th | | | | 349.56 | |
| | 8.89 | 358.45 | | | |
| 0+00 | | | 0.3 | 358.2 | |
| 0+50 | | | 0.8 | 357.7 | |
| 1+00 | | | 1.4 | 357.1 | |
| 1+50 | | | 2.2 | 356.3 | |
| 2+00 | | | 2.9 | 355.6 | |
| 2+50 | | | 3.6 | 354.9 | |
| 3+00 | | | 4.2 | 354.3 | |
| 3+50 | | | 5.0 | 353.5 | |
| 4+00 | | | 5.7 | 352.8 | |
| 4+50 | | | 6.4 | 352.1 | |
| 5+00 | | | 7.1 | 351.4 | |
| 5+50 | | | 7.7 | 350.8 | |
| 6+00 | | | 8.2 | 350.3 | |
| T.P.#1 | | | 8.50 | 349.95 | |
| | 4.03 | 353.98 | | | |
| | | Invert | 4.96 | 349.02 | |
| 6+10 | | Top of Grate | 3.95 | 350.03 | |
| | | Invert | 5.23 | 348.75 | |
| 6+10 | | Top of Grate | 4.28 | 349.70 | |
| | | Invert | 5.09 | 348.89 | |
| 6+24 | | Top of Grate | 4.04 | 349.94 | |
| 6+13.93 | | | 4.02 | 349.96 | |
| 6+18.83 | | | 4.01 | 349.97 | |
| 6+53.93 | | | 4.14 | 349.84 | |
| 6+58.83 | | | 4.19 | 349.84 | |
| | | Invert | 6.45 | 348.53 | |
| 6+79 | | Top of Grate | 4.30 | 349.68 | |

RBDULCED 5/27/47

NOTES

Int. w/existing 30" O tap line

Drain 13' E of Line

Drain 33' W of Line

Drain Mh 13' E of Line

N. Rail

2nd Rail

3rd Rail

S. Rail

Drain Mh. 13' E of Line

Profile 10th St. Pipeline

| | + | HI | − | ELEV. |
|---|---|---|---|---|
| | | 353.98 | | |
| | | Invert | 5.40 | 348.58 |
| 6+93 | | Top of Grate | 4.40 | 349.58 |
| | | Invert | 5.97 | 348.01 |
| 6+93 | | Top of Grate | 4.92 | 349.06 |
| 7+00 | | | 4.4 | 349.6 |
| 7+50 | | | 5.1 | 348.9 |
| 8+00 | | | 5.6 | 348.4 |
| 8+50 | | | 6.1 | 347.9 |
| 9+00 | | | 6.5 | 347.5 |
| 9+50 | | | 7.0 | 347.0 |
| 10+00 | | | 7.6 | 346.4 |
| 10+50 | | | 8.2 | 345.8 |
| TP #2 | | | 8.17 | 345.81 |
| | 1.44 | 347.25 | | |
| 11+00 | | | 2.1 | 345.2 |
| 11+50 | | | 2.8 | 344.5 |
| 12+00 | | | 3.5 | 343.8 |
| 12+50 | | | 4.2 | 343.1 |
| 13+00 | | | 4.7 | 342.6 |
| 13+50 | | | 5.0 | 342.3 |
| 14+00 | | | 5.1 | 342.2 |
| 14+50 | | | 5.5 | 341.8 |
| 15+00 | | | 5.8 | 341.5 |
| 15+50 | | | 6.1 | 341.2 |
| 16+00 | | | 6.5 | 340.8 |
| 16+50 | | | 7.0 | 340.3 |

Bob's

5/17/47

NOTES REDUCED



Drain 14" Fot line

Drain 24" Wat line

Profile 40th St. Pipeline

| Sta. | + | HI. | − | ELEV. |
|---|---|---|---|---|
| | | 347.25 | | |
| 17+00 | | | 8.0 | 339.3 |
| 17+50 | | | 9.5 | 337.8 |
| T.P. #3 | | | 9.98 | 337.27 |
| | 0.59 | 337.86 | | |
| 18+00 | | | 1.7 | 336.2 |
| 18+50 | | | 3.4 | 334.5 |
| 19+00 | | | 5.0 | 332.9 |
| 19+50 | | | 6.6 | 331.3 |
| 19+83 | | | 7.6 | 330.3 |
| 20+00 | | | 7.9 | 330.0 |
| 20+37 | | | 9.0 | 328.9 |
| 20+37½ | | | 8.34 | 329.52 |
| 20+50 | | | 7.9 | 330.0 |
| 20+55 | | | 7.9 | 330.0 |
| 20+57½ | | | 9.5 | 328.4 |
| T.P. #4 | | | 12.97 | 324.89 |
| | 0.30 | 325.19 | | |
| 20+77 | | | 8.4 | 316.8 |
| T.P. #5 | | | 12.27 | 312.92 ~~312.82~~ |
| | 1.14 | 314.06 | | |
| 21+00 | | | 8.3 | 305.8 |
| 21+07 | | | 10.9 | 303.2 |
| 21+27 | | | 15.1 | 299.0 |
| T.P. #6 | | | 12.29 | 301.77 |
| | 2.61 | 304.38 | | |

Profile 5/28/87

REDUCED 5/28/87

NOTES



NOTES BY RAINEY 7/15/87

40TH ST. PIPE LINE

282.4 22+50

281.7 22+00

281.7
+ 11.1
HI. 292.8
− 0.88
Manhole ELEV. 291.92
Left of line +12.16
~~304.08~~

ENTER IN F.B. 711 PGE. 19

281.7
+ 7.05
H.I. 288.75
− 7.97
RIM 280.78
INV. 273.0

HI. 304.08
− 1.10
302.98
−292.5
RIM
INV.

LEFT OF LINE

61.5' Rt.
22+97

8"S 8' M.H. 178' Lt. of 20+96

Sewer M.H. 178 Lt. of 20+96 INV. 292.5

Profile 40th St. Pipeline

| Sta. | + | HI. | − | ELEV. |
|---|---|---|---|---|
| | | 347.25 | | |
| 17+00 | | | 8.0 | 339.3 |
| 17+50 | | | 9.5 | 337.8 |
| T.P. #3 | | | 9.98 | 337.27 |
| | 0.59 | 337.86 | | |
| 18+00 | | | 1.7 | 336.2 |
| 18+50 | | | 3.4 | 334.5 |
| 19+00 | | | 5.0 | 332.9 |
| 19+50 | | | 6.6 | 331.3 |
| 19+83 | | | 7.6 | 330.3 |
| 20+00 | | | 7.9 | 330.0 |
| 20+37 | | | 9.0 | 328.9 |
| 20+37± | | | 8.34 | 329.52 |
| 20+50 | | | 7.9 | 330.0 |
| 20+55 | | | 7.9 | 330.0 |
| 20+57± | | | 9.5 | 328.4 |
| T.P. #4 | | | 12.97 | 324.89 |
| | 0.30 | 325.19 | | |
| 20+77 | | | 8.4 | 316.8 |
| T.P. #5 | | | 12.27 | ~~312.92~~ 312.92 |
| | 1.14 | 314.06 | | |
| 21+00 | | | 8.3 | 305.8 |
| 21+07 | | | 10.9 | 303.2 |
| 21+27 | | | 15.1 | 299.0 |
| T.P. #6 | | | 12.29 | 301.77 |
| | 2.61 | 304.38 | | |

REDUCED 5/28/47

NOTES

End of

Gutter

Curb

Top of bank

CHECK BY RAINEY 7/15/47

Sewer M.H. 178' Lt. of 20+96 RIM 303.0 INV. 292.5

Profile 40th St Pipeline

| Sta. | + | H.I. | − | Elev. |
|---|---|---|---|---|
| | | 304.38 | | |
| 21+50 | | | 11.0 | 293.4 |
| 21+68 | | | 15.8 | 288.6 |
| 21+93 | | | 20.2 | 284.2 |
| 22+00 | | | 22.7 | 281.7 |
| 22+26 | | | 22.2 | 282.2 |
| 22+46 | | | 23.3 | 281.1 |
| 22+50 | | | 22.0 | 282.4 |
| 22+83 | | | 5.5 | 298.9 |
| T.P.#7 | | | 1.00 | 303.38 |
| | 12.58 | 315.96 | | |
| 23+00 | | | 7.1 | 308.9 |
| 23+04 | | | 4.5 | 311.5 |
| 23+23 | | | 2.0 | 314.0 |
| T.P.#8 | | | 0.59 | 315.37 |
| | 11.76 | 327.13 | | |
| 23+43 | | | 7.0 | 320.1 |
| 23+50 | | | 5.7 | 321.4 |
| 23+63.5 | | | 4.8 | 322.3 |
| 23+70 | | | 1.5 | 325.6 |
| T.P.#9 | | | 0.08 | 327.05 |
| | 6.20 | 333.25 | | |
| 23+83 | | | 4.6 | 328.7 |
| 24+00 | | | 4.7 | 328.6 |
| 24+50 | | | 4.8 | 328.5 |

5/28/47

NOTES REDUCED



CHECK BY RAINEY 7/15/47

Sewer M.H. 61.5' Rt. of 22+47 Rim 280.8 Inv. 273.0

3 edge sidewalk

edge of

Profile 40th St. Pipeline

| | + | H.I. | − | Elev. | |
|---|---|---|---|---|---|
| | | 333.25 | | | |
| 25+00 | | | 4.8 | 328.5 | |
| 25+50 | | | 5.0 | 328.3 | |
| 26+00 | | | 5.2 | 328.1 | |
| 26+50 | | | 5.4 | 327.9 | |
| 27+00 | | | 5.7 | 327.6 | |
| 27+50 | | | 6.2 | 327.1 | |
| 28+00 | | | 7.0 | 326.3 | |
| 28+50 | | | 8.0 | 325.3 | |
| 29+00 | | | 8.5 | 324.8 | |
| 29+50 | | | 9.3 | 324.0 | |
| T.P. #10 | | | 9.35 | 323.90 | |
| | 1.76 | 325.66 | | | |
| 30+00 | | | 2.6 | 323.1 | |
| 30+50 | | | 3.3 | 322.4 | |
| 31+00 | | | 4.1 | 321.6 | |
| 31+50 | | | 4.9 | 320.8 | |
| 32+00 | | | 5.5 | 320.2 | |
| 32+50 | | | 6.1 | 319.6 | |
| 33+00 | | | 6.8 | 318.9 | |
| 33+50 | | | 7.3 | 318.4 | |
| T.P. #11 B.P.N.W. Cor Myrtle + 40th | | | 7.48 | 318.18 | |
| | 0.76 | 318.94 | | | |
| 34+00 | | | 1.7 | 317.2 | |
| 34+04 | | | 1.7 | 317.2 | |

5/29/47

REDUCED NOTES



edge of oil

# Profile 40th St. Pipeline

| Sta. | + | H.I. | − | Elev. | |
|---|---|---|---|---|---|
| | | 318.94 | | | |
| 34+50 | | | 2.8 | 316.1 | |
| 35+00 | | | 3.8 | 315.1 | |
| 35+50 | | | 5.4 | 313.5 | |
| 36+00 | | | 6.8 | 312.1 | |
| 36+50 | | | 8.4 | 310.5 | |
| 37+00 | | | 9.9 | 309.0 | |
| 37+50 | | | 11.4 | 307.5 | |
| 38+00 | | | 12.9 | 306.0 | |
| T.P. #12 | | | 12.85 | 306.09 | 5/29/97 |
| | 1.48 | 307.57 | | | |
| 38+50 | | | 3.0 | 304.6 | |
| 39+00 | | | 4.4 | 303.2 | |
| 39+50 | | | 5.7 | 301.9 | |
| 40+00 | | | 6.9 | 300.7 | |
| 40+21 | | Invert | 9.0 | 298.6 | |
| | | Rim | 7.3 | 300.3 | |
| 40+50 | | | 7.6 | 300.0 | |
| 40+62.38 | | | 7.6 | 300.0 | |
| | | IMH | 10.4 | 297.2 | |
| 40+78 | | Rim | 7.2 | 300.4 | |
| 41+00 | | | 7.7 | 299.9 | |
| 41+50 | | | 7.1 | 300.5 | |
| 42+00 | | | 6.5 | 301.1 | |
| 42+50 | | | 5.5 | 302.1 | |
| Set T.B.M. Top F.H. at Alley between 40th & Central on Thorn | | | 3.00 | 304.57 | |
| | 6.31 | 310.88 | | | |

REDUCED NOTES SEE PG 33



1'x1' Square Drain M.H. 15' E of Line

A Pt. 90°02' Lt

Drain M.H. 15' N of Line

## Profile 40th St. Pipeline

| Sta. | + | H.I. | − | Elev. | |
|---|---|---|---|---|---|
| | | 310.88 | | | |
| | | Invert | 13.9 | 297.0 | |
| 42+42 | | Rim | 8.4 | 302.5 | |
| 43+00 | | | 8.1 | 302.8 | |
| 43+50 | | | 7.3 | 303.6 | |
| 44+00 | | | 6.7 | 304.2 | |
| 44+50 | | | 6.3 | 304.6 | |
| 45+00 | | | 5.8 | 305.1 | |
| 45+50 | | | 4.9 | 306.0 | |
| 45+96 | | | 4.0 | 306.9 | |
| 46+04.49 | | | 3.6 | 307.3 | |
| | | Inv. | 9.1 | 301.8 | |
| 46+25 | | Rim | 1.2 | 309.7 | |
| 46+50 | | | 2.7 | 308.2 | |
| 47+00 | | | 2.0 | 308.9 | |
| 47+50 | | | 1.2 | 309.7 | |
| 48+00 | | | 0.9 | 310.0 | |
| 48+50 | | | 1.2 | 309.7 | |
| 49+00 | | | 2.5 | 308.4 | |
| 49+50 | | | 3.8 | 307.1 | |
| T.P. #1A | | | 3.77 | 307.11 | |
| | 0.17 | 307.28 | | | |
| 50+00 | | | 1.7 | 305.6 | |
| 50+50 | | | 3.4 | 303.9 | |
| 51+00 | | | 4.6 | 302.7 | |
| 51+50 | | | 5.9 | 301.4 | |
| 51+70 | | | 6.8 | 300.5 | |

6/2/47 REF. DWG. 55 Sht. 3

NOTES REVISED

23

Sewer MH. 15' Nof line { Inv. 306.1 / Rim 311.3 } ?

INVERT CAN'T BE HIGHER THAN R.M.

4PH 45° Lt.

4Pt. 45° Rt.

Sewer M.H. 50' S of line

Sewer M.H. 35' S of Sta. 50+05 Inv. 299.6 Rim 306.4

Sewer MH. 305' N of Sta. 50+05 Inv. 303.9 Rim 311.9

1719 otter W Side Marlborough

Prof. le 40th St. Pipeline

| Sta. | + | H.I. | − | Elev. |
|---|---|---|---|---|
| | | 307.28 | | |
| 52+00 | | | 6.2 | 301.1 |
| 52+50 | | | 6.2 | 301.1 |
| 53+00 | | | 6.4 | 300.9 |
| 53+50 | | | 6.9 | 300.4 |
| 54+00 | | | 7.2 | 300.1 |
| T.B.M. Top F.H. Between Marlborough & 42nd on Thorn | | | 5.14 | 302.14 |
| | 5.50 | 307.64 | | |
| 54+50 | | | 7.7 | 299.9 |
| 55+00 | | | 7.8 | 299.8 |
| 55+27 | | | 8.5 | 299.1 |
| 55+42 | | | | |
| 55+50 | | | 9.4 | 298.2 |
| | | Invert | 18.4 | 289.2 |
| 55+71 | | Rim | 10.0 | 297.6 |
| | | Invert | 27.5 | 280.1 |
| 55+71 | | Grate | 9.4 | 298.2 |
| 56+00 | | | 9.0 | 298.6 |
| 56+11 | | | 9.0 | 298.6 |
| 56+50 | | | 7.5 | 300.1 |
| 57+00 | | | 5.5 | 302.1 |
| 57+50 | | | 4.3 | 303.3 |
| 58+00 | | | 2.7 | 304.7 |
| 58+50 | | | 1.6 | 306.0 |

Notes reduced 6/12/47 DM.



Wedge concrete — ?
← SHOWN AT 55+31.6 ON PAGE 12

Drain MH. 10' Rt of line

Drain outlet 13.5 of line

Edge concrete around

Sta 57+59 Sewer MH. 35.5 of line Inv. 298.8 Rim 304.4

25

Profile 10th St. Pipeline

| Sta. | + | H.I. | − | Elev. |
|---|---|---|---|---|
| | | 307.64 | | |
| 59+00 | | | 0.9 | 306.7 |
| T.P. #16 | | | 0.76 | 306.88 |
| | 303 | 309.91 | | |
| 59+33 | | | 2.6 | 307.3 |
| 59+37 | | | 2.1 | 307.8 |
| 59+42 | | | 2.8 | 307.1 |
| 59+50 | | | 2.1 | 307.8 |
| 60+00 | | | 2.2 | 307.7 |
| 60+17 | | | 2.8 | 307.1 |
| 60+22 | | | 3.0 | 306.9 |
| 61 | | | | |
| 60+33 | | | 3.4 | 306.5 |
| 60+51 | | | 4.3 | 305.6 |
| 60+62 | | | 14.1 | 295.8 |
| 60+73 | | | 14.6 | 295.3 |
| T.P. #17 | | | 13.03 | 296.88 |
| | 0.69 | 297.57 | | |
| 60+82 | | | 0.3 | 297.3 |

Notes reduced 6/12/47 DMZ.

25

Lt Rt

+0.3 00 −0.5 −1.0
25 10 10 25

+0.3 +0.2 00 −1.2 −7.5 −6.3
25 10 4 9 12 25

+0.4 +0.3 +0.3 −8.8 −11.0
25 10 10 12 25

+1.3 +1.0 −1.5 −8.7 −9.0 −6.0 −7.9 −10.1
25 10 4 6 14 15 17 25

on Gas line
+10.1 +10.4 +8.0 +9.6 +10.0 −4.9 7.0
43 26 18 15 11 11 25

Ditch open
Gas Pipe
+8.5 +7.3 +5.6 +5.4 +6.0 +5.6 −9.1 −8.1 −9.1
50 26 20 16 12 3 4 14 30

Gas Pipe
−0.1 −0.3 −1.3 +0.2 −6.3 −10.5 −12.2
50 24 22 13 3 11 25

Profile 40th St. Pipeline

| Sta. | + | H.I. | − | Elev. | |
|---|---|---|---|---|---|
| | | 297.57 | | | |
| 60+95 | | | 3.6 | 294.0 | |
| 61+00 | | | 5.3 | 292.3 | |
| 61+03 | | | 4.2 | 293.4 | |
| 61+45 | | | 11.1 | 286.5 | |
| 61+45 | On pipe | | 11.15 | 286.42 | |
| 61+85 | on Pipe | | 15.7 | 281.9 | |
| T.P. #18 | | | 0.69 | 296.88 | |
| | 12.38 | 309.26 | | | |
| T.P. #19 | | | 1.35 | 307.91 | |
| | 10.22 | 318.13 | | | |
| T.P. #20 | | | 0.31 | 317.82 | |
| | 11.93 | 329.75 | | | |
| B.M. B.P. NW Cor Myrtle + 42nd | | | 8.14 | 321.61 | Corr 321.62 |

Notes Reduced 6/12/47 DHL.



end of 12" Line

# Profile Thorn St. 8" Line

| | + | H.I. P22 | − | Elev. | |
|---|---|---|---|---|---|
| T.B.M. top Fire Plug 40th + Thorn | | | | 304.57 | |
| | 0.92 | 305.49 | | | |
| 0+00 + 40+62.48 | | 40th St. | 5.6 | 299.9 | |
| | | Invert | 9.2 | 296.3 | |
| 0+35 | | Rim | 5.6 | 299.9 | |
| 0+50 | | | 6.0 | 299.5 | |
| 1+00 | | | 6.0 | 299.5 | |
| 1+50 | | | 5.9 | 299.6 | |
| 2+00 | | | 5.2 | 300.3 | |
| 2+50 | | | 4.6 | 300.9 | |
| 3+00 | | | 3.5 | 302.0 | |
| 3+50 | | | 1.0 | 304.5 | |
| T.P. #1 | | | 0.14 | 305.35 | |
| | 5.17 | 310.52 | | | |
| 4+00 | | | 5.1 | 305.4 | |
| 4+50 | | | 4.5 | 306.0 | |
| 5+00 | | | 4.0 | 306.5 | |
| 5+50 | | | 3.7 | 306.8 | |
| 6+00 | | | 4.1 | 306.4 | |
| 6+50 | | | 5.1 | 305.4 | |
| 7+00 | | | 6.1 | 304.4 | |
| 7+60.32 | | | 7.9 | 302.6 | |
| T.B.M. F.H. 40th + Thorn | | | 5.97 | 304.55 | |

TWO 4"/12" REDUCERS ON 8" LINE

Drain M.H. 15' N of Line

6" C.I. Sewer Crossing 3.6 ±0.2 Deep No M.H.
Sewer M.H. 30' S of Sta. 2+00 Inv. 295.0 Rim 302.0

end of Line

# CROSS SECTIONS

## COMMERCIAL ST. PIPE LINE

B.M. HUB STA. 37+53.24 = 37+54.07

F.B. 1722 PGE. 23 ELEV. 60.21

| STA. | + | H.I. | − | ELEV. |
|---|---|---|---|---|
| B.M. | 4.90 | 65.11 | | 60.21 |
| 38+20 | | | 10.0 | 55.1 |
| 38+50 | | | 12.1 | 53.0 |
| T.P. #1 | | | 10.79 | 54.32 |
| | 12.06 | 66.38 | | |
| 39+00 | | | | |
| 39+50 | | | | |
| 40+00 | | | | |
| 40+50 | | | | |
| B.M. Hub | | | 6.17 | 60.21 |

THESE NOTES COPIED FROM PGE. 32 OF CROOKER'S SMALL FIELD BOOK (NO NUMBER) 6/25/47



| LT. | | ℄ | | RT. | |
|---|---|---|---|---|---|
| 53.7 | 55.1 | 54.3 | 61.7 | 61.1 | |
| −1.4 | 10.0 | −0.8 | +6.6 | +6.0 | |
| 20 | | 10 | 25 | 33 | EDGE CONCRETE |
| 53.2 | 53.0 | 54.6 | 63.0 | 62.3 | |
| +0.2 | 12.1 | +1.6 | +10.0 | +9.3 | |
| 20 | | 38 | 54 | 65 | CONC. |
| 53.2 | 53.3 | 54.7 | 64.0 | 64.0 | 62.5 |
| −0.1 | 13.1 | +1.4 | +10.7 | +10.7 | +9.2 |
| 20 | | 30 | 45 | 48 | 50 CONC. |
| 53.7 | 53.7 | 55.8 | 65.0 | 64.9 | 63.9 |
| 00 | 12.7 | +2.1 | +11.3 | +11.2 | +10.2 |
| 20 | | 29 | 45 | 48 | 50 CONC. |
| 53.5 | 53.7 | 55.5 | 66.5 | 66.2 | 65.1 |
| −0.2 | 12.7 | +1.8 | +12.8 | +12.5 | +11.4 |
| 20 | | 26 | 44 | 49 | 51 CONC. |
| 52.9 | 53.3 | 54.7 | 67.5 | 67.3 | 66.4 |
| −0.4 | 13.1 | +1.4 | +14.2 | +14.0 | +13.1 |
| 20 | | 29 | 44 | 48 | 51 |

NOTES REDUCED 6/24/47

29

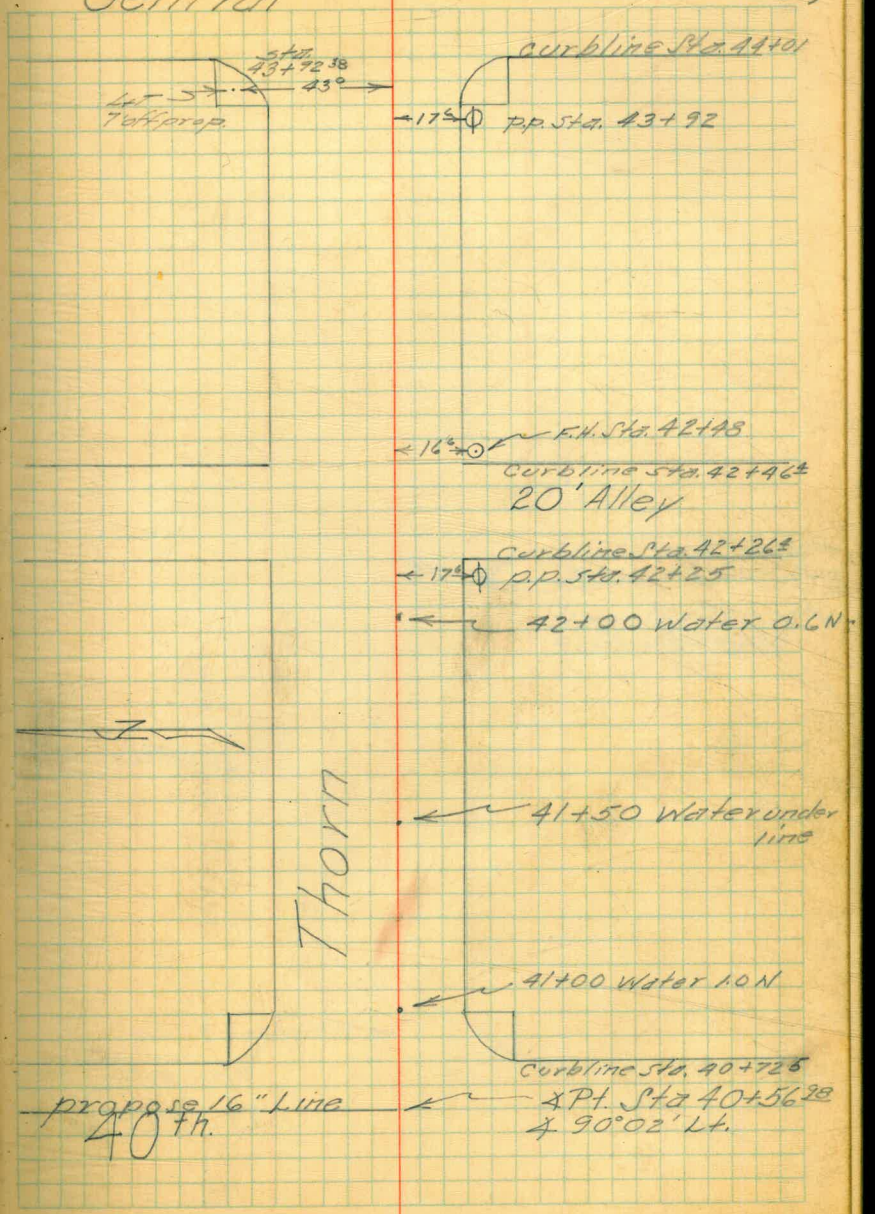
July 8, 1947

Rainey
Niemow
Baker

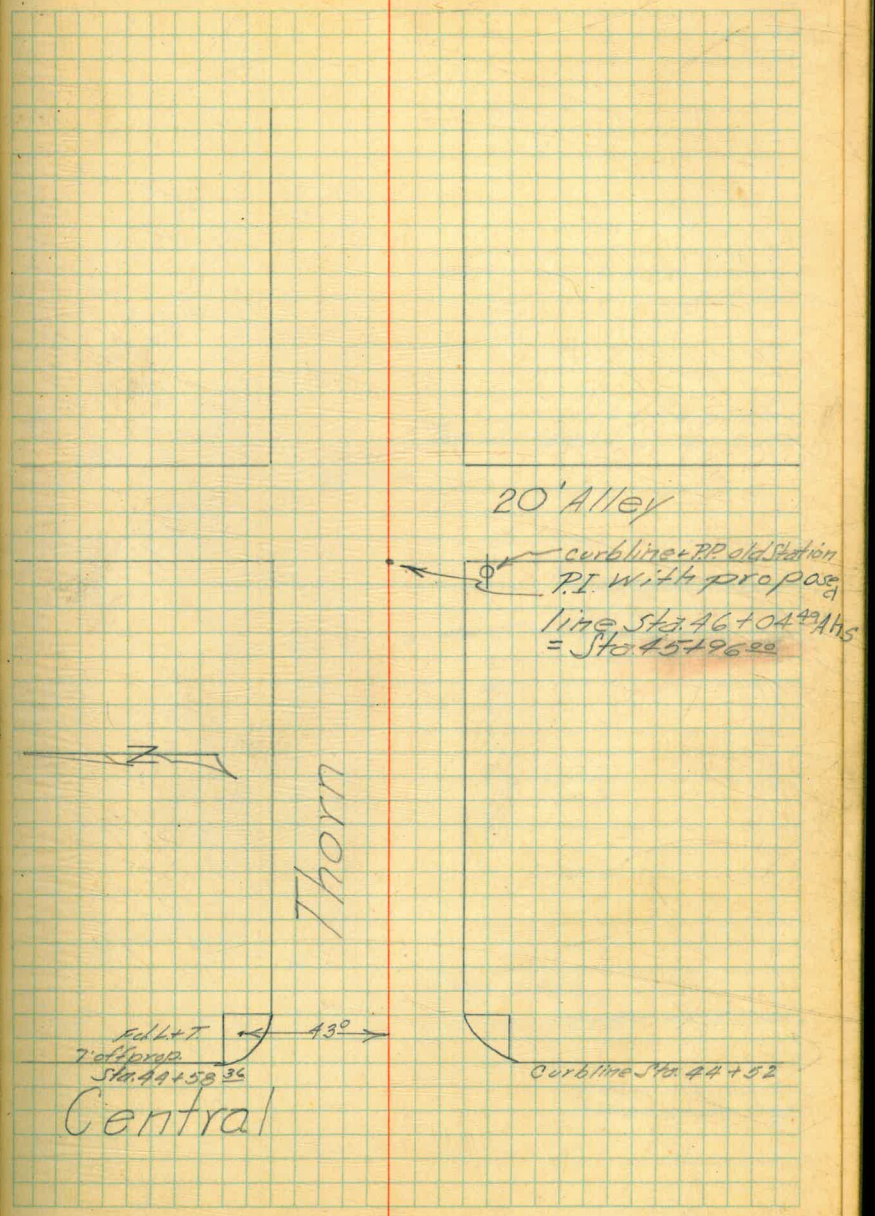
Realignment 40+Thorn Pipeline

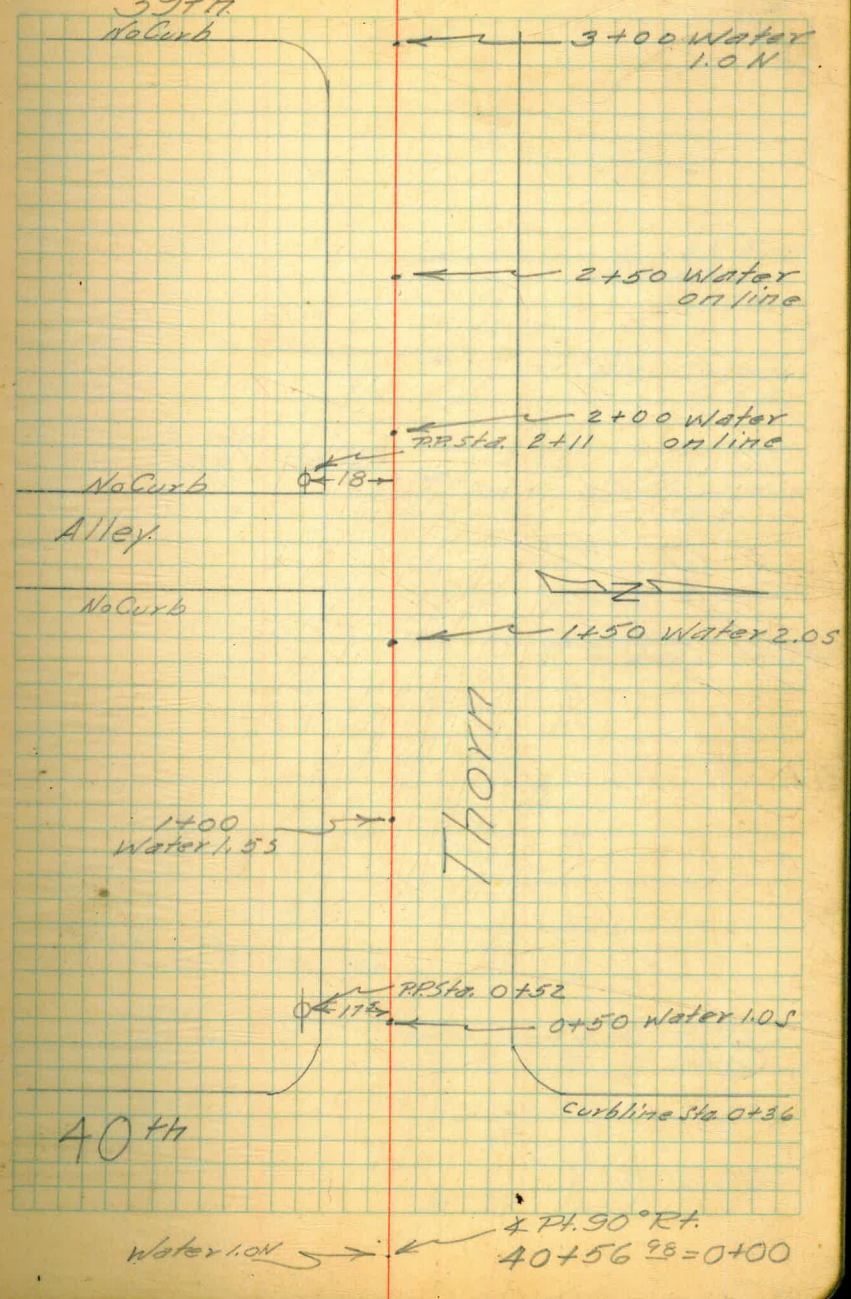
29

Central

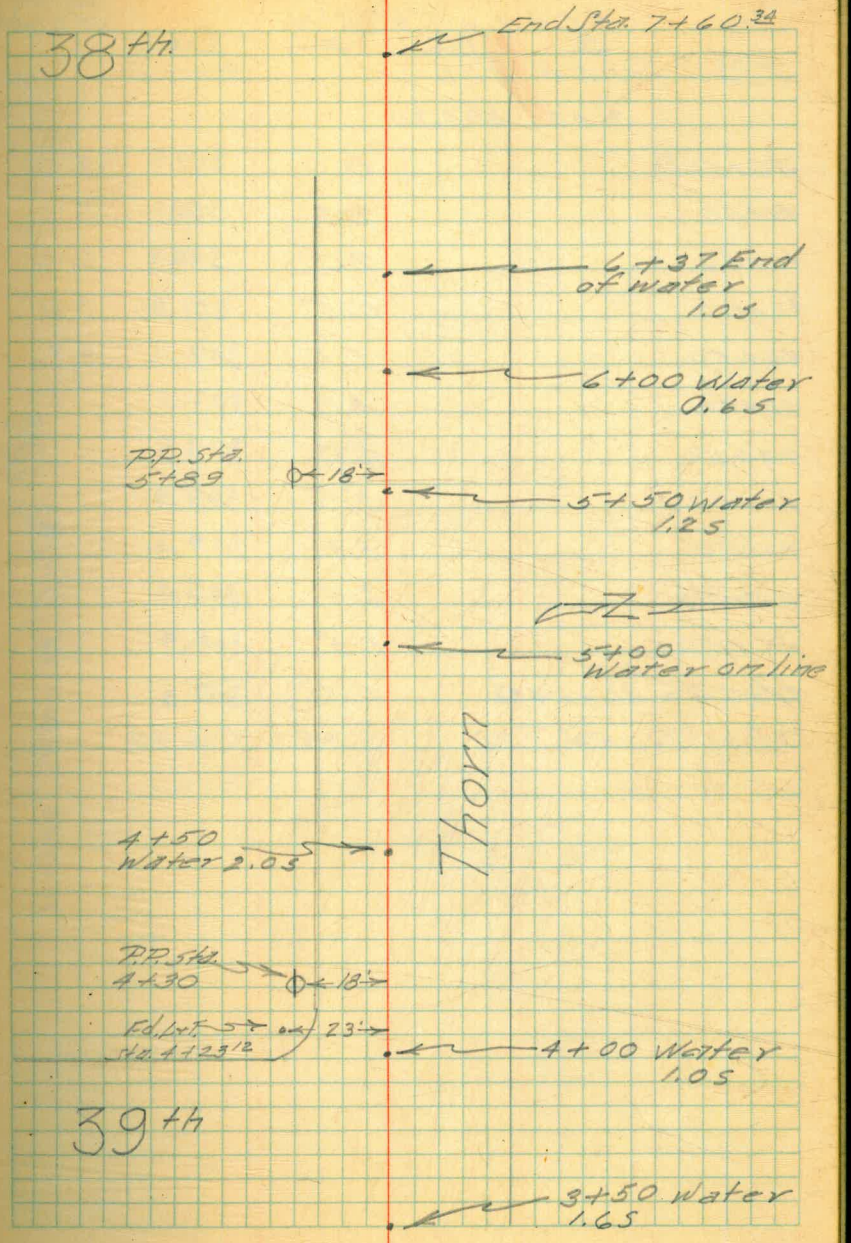


30


20' Alley
curbline RP old Station
P.I. with proposed
line Sta 346+04.93 Ahs
= Sta 457+96.00
Thorn
Full L+T
43°
7' off prop.
Sta. 44+58.36
Central
Curbline Sta. 44+52


39th
No Curb
3+00 Water
1.0 N
2+50 Water
on line
2+00 Water
on line
PP Sta. 2+11
18
No Curb
Alley
No Curb
1+50 Water 2.05
Thorn
1+00
Water 1.55
PP Sta. 0+52
17
0+50 Water 1.05
Curbline Sta. 0+36
40th
℄ PI. 90° Rt.
40+56 98 = 0+00
Water 1.0 N

32


38th
End Sta. 7+60.34
6+37 End of water 1.03
6+00 Water 0.65
P.P. Sta. 5+89
18"
5+50 Water 1.25
5+00 Water on line
Thorn
4+50 Water 2.05
P.P. Sta. 4+30
18"
Ed. of T 5" on Sta. 4+23.12
23"
4+00 Water 1.05
39th
3+50 Water 1.65

33 Profile New Alignment

| Sta. | + | H.I. | = | Elev. | Depth of 2" water |
|---|---|---|---|---|---|
| T.B.M. Top F.H. P22 | | | | 304.57 | |
| | 3.33 | 307.90 | | | |
| 40+56.28 | | | 8.0 | 299.9 | 3.0 |
| 41+00 | | | 7.8 | 300.1 | 3.6 |
| 41+50 | | | 7.0 | 300.9 | 3.2 |
| 42+00 | | | 6.5 | 301.4 | 3.0 |
| 42+50 | | | 5.6 | 302.3 | 3.1 |
| 43+00 | | | 4.8 | 303.1 | |
| 43+50 | | | 4.0 | 303.9 | |
| 44+00 | | | 3.5 | 304.4 | |
| 44+50 | | | 3.4 | 304.5 | |
| 45+00 | | | 2.5 | 305.4 | |
| 45+50 | | | 1.5 | 306.4 | |
| 45+96 = 46+04.28 | | | 0.6 | 307.3 | |
| T.B.M. Top F.H. P22 | | | 3.33 | 304.57 | |

Top of 8" Pipe 7/11/74

Notes

33

Profile New Alignment

40th + Thorn Pipeline

40th to 38th on Thorn

| | + | H.I. | = | Elev. | Depth of 2" Water |
|---|---|---|---|---|---|
| T.B.M. Top F.H. P22 | | | | 304.57 | |
| | 3.57 | 308.14 | | | |
| 0+00 = 40+56.26 | | | 8.2 | 299.9 | 3.2 |
| 0+50 | | | 8.5 | 299.6 | 3.6 |
| 1+00 | | | 8.5 | 299.6 | 3.6 |
| 1+50 | | | 8.4 | 299.7 | 4.1 |
| 2+00 | | | 7.8 | 300.3 | 3.3 |
| 2+50 | | | 7.3 | 300.8 | 3.0 |
| 3+00 | | | 6.3 | 301.8 | 2.2 |
| 3+50 | | | 3.9 | 304.2 | 2.5 |
| 4+00 | | | 2.8 | 305.3 | 2.4 |
| 4+50 | | | 2.1 | 306.0 | 2.5 |
| 5+00 | | | 1.7 | 306.4 | 2.4 |
| 5+50 | | | 1.3 | 306.8 | 2.6 |
| 6+00 | | | 1.8 | 306.3 | 3.5 |
| 6+50 | | | 2.8 | 305.3 (1.3 back) | 4.2 — end of 2" Water 6+37 |
| 7+00 | | | 3.6 | 304.5 | |
| 7+60.34 | | | 6.1 | 302.0 | |
| T.B.M. Top F.H. P22 | | | 3.57 | 304.57 | |

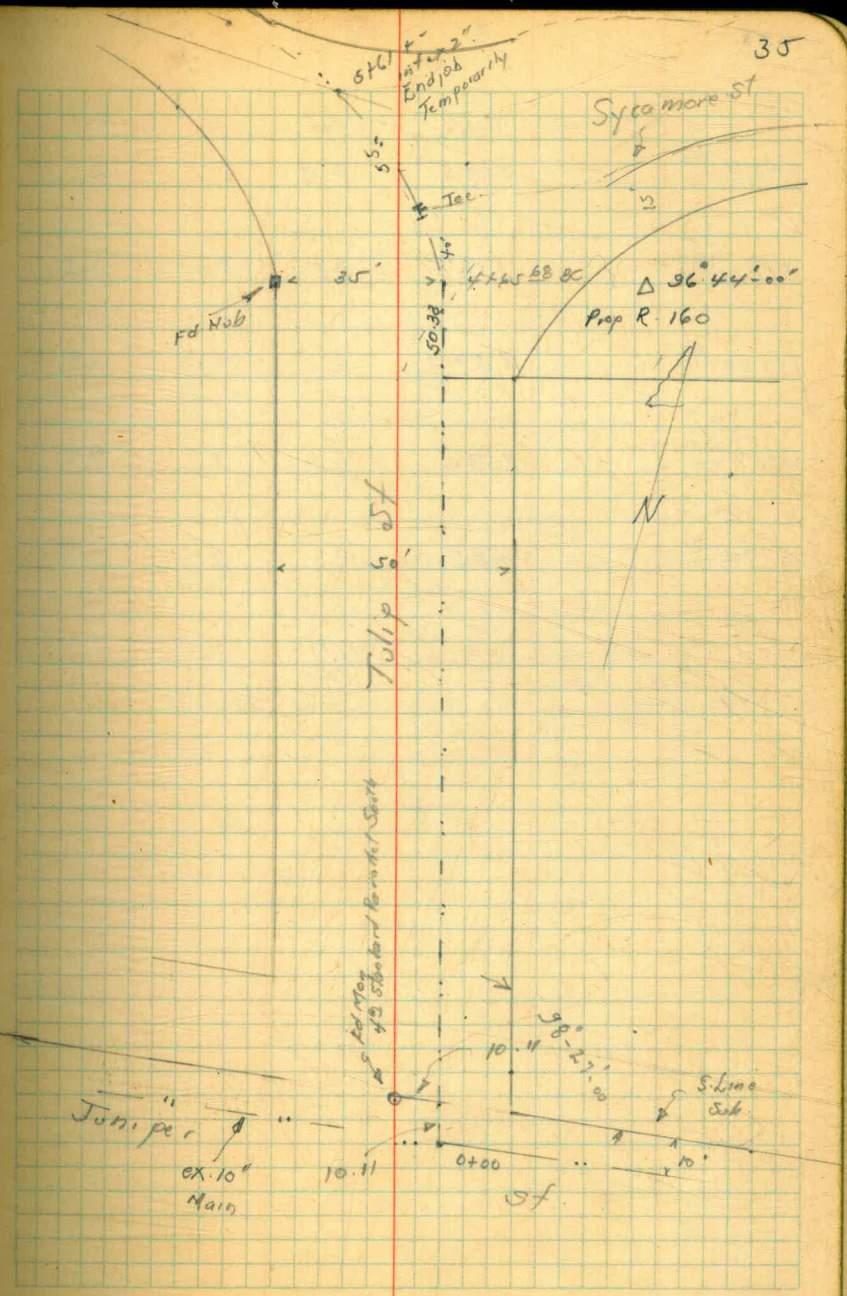
NOTES Roorda 7/11/47 T.P.S.

34

Bliss
Leonard
Baker
10/28/27

# Grades for 8" Water Main. Tulip St
## Juniper to Sycamore

| | + | T | − | | |
|---|---|---|---|---|---|
| BM. | 8.04 | 261.25 | | 253.21 | |
| | | Grade | G. Rod | | |
| 0+00 | | 247.7 | 13.5 | 9.4 | C 4.1 ✓ |
| 0+50 | | 248.7 | 12.5 | 7.7 | C 4.8 ✓ |
| 1+00 | | 249.8 | 11.4 | 7.6 | C 3.8 ✓ |
| +50 | | 250.8 | 10.4 | 6.6 | C 3.8 ✓ |
| 2+00 | | 251.9 | 9.3 | 6.1 | C 3.2 ✓ |
| +50 | | 252.9 | 8.3 | 5.0 | C 3.3 ✓ |
| 3+00 | | 253.9 | 7.3 | 3.3 | C 4.0 ✓ |
| +50 | | 255.0 | 6.2 | 2.4 | C 3.8 ✓ |
| 4+00 | | 256.0 | 5.1 | 1.2 | C 3.9 ✓ |
| T.P. | 7.29 | 267.32 | 12.2 | 260.03 | |
| +50 | | 257.1 | 10.2 | 7.5 | 2.6 ✓ |
| +65.68 | B.C. | 257.4 | 9.9 | 6.8 | 3.1 ✓ |



| | | 𝒯 26732 | | | |
|---|---|---|---|---|---|
| | | Grade | G. Rod | – | Cut |
| 4+88.46 | | 258.5 | 8.8 | 6.1 | 2.7 ✓ |
| 5+10.06 | | 258.8 | 8.5 | 5.0 | 3.5 ✓ |
| 5+28.72 | | 259.3 | 8.0 | 4.2 | 3.8 ✓ |
| 5+53.28 | | 259.0 | 8.3 | 3.8 | 4.5 ✓ |
| 5+74.83 | | 258.5 | 8.8 | 2.1 | 6.7 ✓ |
| check Ground at Prop BC on West | | | 3.8 | 2635 – | |
| | | | 5.5 ℄ | 2618 – | |
| Set BM ✱ | T Pole (M) | NE Cor K88 on Sycamore | 2.86 | 264.46 | |

# 40th + Thorn St. for Construction

Dec. 1, 1947

Rainey
King
Nielsen

| | | | | | | Cuts |
|---|---|---|---|---|---|---|
| T.B.M. Top F.H. | | | | 302.14 | | |
| | 5.60 | 307.74 | | | | |
| 55+00 | | | 7.8 | 299.9 | 296.2 | 3.7 |
| 55+50 | | | 9.3 | 298.4 | 294.6 | 3.8 |
| 56+00 | | | 9.0 | 298.7 | 294.9 | 3.8 |
| 56+25 | | | 8.6 | 299.1 | 295.0 | 4.1 |
| 56+50 | | | 7.4 | 300.3 | 296.3 | 4.0 |
| 56+75 | | | 6.1 | 301.6 | 297.6 | 4.0 |
| 57+00 | | | 5.4 | 302.3 | 297.7 | 4.6 |
| 57+63 | | | 3.7 | 304.0 | 298.0 | 6.0 |
| 57+65 | | | 3.6 | 304.1 | 300.0 | 4.1 |
| 58+00 | | | 2.6 | 305.1 | 300.9 | 4.2 |
| 58+50 | | | 1.6 | 306.1 | 302.2 | 3.9 |
| 58+75 | | | 1.2 | 306.5 | 302.8 | 3.7 |
| 59+25 | | | 0.5 | 307.2 | 303.3 | 3.9 |
| T.P. #1 | | | 0.49 | 307.25 | | |
| | 2.20 | 309.45 | | | | |
| 59+75 | | | 2.5 | 307.0 | 303.0 | 4.0 |
| 60+00 | | | 4.1 | 305.4 | 299.7 | 5.7 |
| 60+50 | | | 9.7 | 299.8 | 293.1 | 6.7 |
| T.P. #2 | | | 10.99 | 298.46 | | |
| | 0.29 | 298.75 | | | | |
| 61+00 | | | 5.8 | 293.0 | 289.1 | 3.9 |
| 61+43 | | | 11.5 | 287.2 | 285.6 | 1.6 |
| T.P. #3 | | | 0.29 | 298.46 | | |
| | 12.68 | 311.14 | | | | |
| BM | | | 9.01 | 302.13 | | |

End

# 40th + Thorn St.
## for Construction

B.M. Top F.H. between 42nd, Maxl. 302.14

| | | | | | |
|---|---|---|---|---|---|
| | 4.00 | 306.14 | | | |
| 54+50 | | | 6.1 | 300.0 | 296.3 |
| 54+00 | | | 5.9 | 300.2 | 296.4 |
| 53+50 | | | 5.6 | 300.5 | 296.6 |
| 53+00 | | | 5.2 | 300.9 | 296.7 |
| 52+50 | | | 5.0 | 301.1 | 296.8 |
| 52+00 | | | 4.9 | 301.2 | 296.9 |
| 51+75 | | | 5.5 | 300.6 | 297.0 |
| 51+25 | | | 3.5 | 302.3 | 298.3 |
| 50+75 | | | 2.6 | 303.5 | 299.7 |
| 50+25 | | | 1.4 | 304.7 | 301.5 |
| 50+00 | | | 0.5 | 305.6 | 302.2 |
| T.P.#1 | | | 0.52 | 305.62 | |
| | 7.67 | 313.29 | | | |
| 49+50 | | | 6.1 | 307.2 | 303.5 |
| 49+00 | | | 4.8 | 308.5 | 304.8 |
| 48+50 | | | 3.5 | 309.8 | 305.9 |
| 48+00 | | | 3.2 | 310.1 | 306.3 |
| 47+50 | | | 3.7 | 309.6 | 306.0 |
| 47+00 | | | 4.4 | 308.9 | 305.2 |
| 46+50 | | | 5.1 | 308.2 | 304.5 |
| 46+04.2 = 45+96.00 | | | 5.8 | 307.5 | 303.7 |
| 45+50 | | | 6.8 | 306.5 | 302.8 |
| T.P.#2 | | | 6.75 | 306.54 | |
| | 2.28 | 308.82 | | | |

| | |
|---|---|
| 3.7 | |
| 3.8 | |
| 3.9 | |
| 4.2 | |
| 4.3 | |
| 4.3 | |
| 3.6 | |
| 4.0 | |
| 3.8 | |
| 3.2 | |
| 3.4 | |
| 3.7 | |
| 3.7 | |
| 3.9 | |
| 3.8 | |
| 3.6 | |
| 3.7 | |
| 3.7 | |
| 3.8 | |
| 3.7 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 308.82 | | | | |
| 45+00 | | | 3.2 | 305.6 | 301.8 | 3.8 |
| 44+50 | | | 4.2 | 304.6 | 300.8 | 3.8 |
| 44+00 | | | 4.1 | 304.7 | 300.7 | 4.0 |
| 43+50 | | | 4.9 | 303.9 | 300.0 | 3.9 |
| 43+00 | | | 5.6 | 303.2 | 299.3 | 3.9 |
| 42+50 | | | 6.3 | 302.5 | 298.6 | 3.9 |
| 42+00 | | | 7.3 | 301.5 | 298.0 | 3.5 |
| 41+60 | | | 7.8 | 301.0 | 297.3 | 3.7 |
| 41+10 | | | 8.5 | 300.3 | 296.6 | 3.7 |
| 40+75 | | | 8.5 | 300.3 | 294.9 | 5.4 |
| 40+60 | | | 8.7 | 300.1 | 294.9 | 5.2 |
| 40+56.98 = 0+00 | | | 8.8 | 300.0 | 294.7 | 5.3 |
| 0+50 | | | 8.9 | 299.9 | 294.5 | 5.4 |
| 1+00 | | | 9.0 | 299.8 | 295.1 | 4.7 |
| T.P. #3 | | | 9.07 | 299.75 | | |
| | 10.08 | 309.83 | | | | |
| 1+50 | | | 10.0 | 299.8 | 295.6 | 4.2 |
| 2+00 | | | 9.5 | 300.3 | 296.2 | 4.1 |
| 2+50 | | | 9.2 | 300.6 | 296.9 | 3.7 |
| 3+00 | | | 8.2 | 301.6 | 297.6 | 4.0 |
| 3+50 | | | 5.6 | 304.2 | 298.6 | 5.6 |
| 3+83 | | | 4.8 | 305.0 | 298.7 | 6.3 |
| 4+00 | | | 4.5 | 305.3 | 299.2 | 6.1 |
| 4+50 | | | 3.8 | 306.0 | 299.5 | 6.5 |

X's

| | | | | | | C.Y.s |
|---|---|---|---|---|---|---|
| | | 309.83 | | | | |
| 5+00 | | | 3.4 | 306.4 | 300.3 | 6.1 |
| 5+50 | | | 3.0 | 306.8 | 300.4 | 6.4 |
| 5+75 | | | 3.2 | 306.6 | 300.4 | 6.2 |
| 6+00 | | | 3.5 | 306.3 | 299.9 | 6.4 |
| 6+50 | | | 4.5 | 305.3 | 299.0 | 6.3 |
| 7+00 | | | 5.3 | 304.5 | 297.2 | 7.3 |
| 7+25 34 | End | | 6.2 | 303.6 | 296.3 | 7.3 |
| | | | | Corr 304.57 | | |
| BM. Top | E.H. 40th & Thorn | | 5.24 | 304.59 | | |
| | | | | | | |
| No. 20+37.5 | P.I. 9 | | | 329.52 | | |
| | 1.36 | 330.88 | | | | |
| 20+50 | | | 0.8 | 330.1 | 324.1 | 6.0 |
| 20+85 | | | 13.1 | 317.8 | 306.6 | 11.2 |
| T.P. #1 | | | 13.09 | 317.79 | | |
| | 0.76 | 318.55 | | | | |
| 21+00 | | | 6.6 | 312.0 | 298.8 | 13.2 |
| T.P. #2 | on Rock | | 12.44 | 306.11 | | |
| | 0.27 | 306.38 | | | | |
| 21+25 | | | 2.8 | 303.6 | 291.3 | 12.3 |
| 21+50 | | | 10.0 | 296.4 | 284.9 | 11.5 |
| T.P. #3 | | | 12.00 | 294.38 | | |
| | 0.30 | 294.68 | | | | |
| 21+94 | | | 9.6 | 285.1 | 275.5 | 9.6 |
| 22+50 | | | 12.6 | 282.1 | 277.0 | 5.1 |

40+44 + Thorn

| | | | | | | Cuts |
|---|---|---|---|---|---|---|
| | | 294.68 | | | | |
| T.P.#4 | | | 0.58 | 294.10 | | |
| | 12.42 | 306.52 | | | | |
| 23+00 | | | 0.0 | 306.6 | 303.4 | 3.2 |
| T.P.#5 | | | 0.20 | 306.32 | | |
| | 12.11 | 318.43 | | | | |
| | | | 0.03 | 318.40 | | |
| | 11.20 | 329.60 | | | | |
| 23+50 | | | 10.0 | 319.60 | 314.6 | 5.0 |
| 23+95 | | | 1.2 | 328.4 | 324.6 | 3.8 |
| 24+50 | check | | 1.15 | 328.45 | | |
| | | | | | | |
| T.B.M. Top F.H. P 22 | | | | 304.57 | | |
| | 4.36 | 308.93 | | | | |
| 40+40 | | | 8.8 | 300.1 | 294.7 | 5.4 |
| 40+00 | | | 8.4 | 300.5 | 296.3 | 4.2 |
| 39+50 | | | 7.1 | 301.8 | 297.7 | 4.1 |
| 39+00 | | | 5.9 | 303.0 | 299.1 | 3.9 |
| 38+50 | | | 4.6 | 304.3 | 300.5 | 3.8 |
| 38+00 | | | 2.9 | 306.0 | 302.0 | 4.0 |
| 37+50 | | | 1.6 | 307.3 | 303.5 | 3.8 |
| T.P.#1 | | | 0.27 | 308.66 | | |
| | 12.95 | 321.61 | | | | |
| 37+00 | | | 12.7 | 308.9 | 305.0 | 3.9 |
| 36+50 | | | 11.1 | 310.5 | 306.3 | 4.0 |

40th + Thorn
for Construction

| | | | | | |
|---|---|---|---|---|---|
| | | 321.61 | | | |
| 36+00 | | | 9.5 | 312.1 | 308.0 |
| 35+50 | | | 8.0 | 313.6 | 309.5 |
| 35+00 | | | 6.6 | 315.0 | 311.0 |
| 34+50 | | | 5.6 | 316.0 | 312.1 |
| 34+00 | | | 4.3 | 317.3 | 313.1 |
| 33+50 | | | 3.5 | 318.1 | 314.2 |
| 33+00 | | | 3.1 | 318.5 | 314.8 |
| 32+50 | | | 2.3 | 319.3 | 315.4 |
| 32+00 | | | 1.6 | 320.0 | 316.1 |
| 31+50 | | | 1.0 | 320.6 | 316.7 |
| 31+00 | | | 0.3 | 321.3 | 317.5 |
| T.P. #2 | | | 0.10 | 321.51 | |
| | 10.34 | 331.85 | | | |
| 30+50 | | | 9.7 | 322.2 | 318.3 |
| 30+00 | | | 9.0 | 322.9 | 319.1 |
| 29+50 | | | 8.2 | 323.7 | 319.9 |
| 29+00 | | | 7.4 | 324.5 | 320.7 |
| 28+50 | | | 6.7 | 325.2 | 321.5 |
| 28+00 | | | 5.8 | 326.1 | 322.3 |
| 27+50 | | | 5.1 | 326.8 | 323.1 |
| 27+00 | | | 4.6 | 327.3 | 323.8 |
| 26+50 | | | 4.1 | 327.8 | 323.9 |
| 26+00 | | | 3.8 | 328.1 | 324.1 |
| 25+50 | | | 3.7 | 328.2 | 324.2 |

4.1

4.1
4.1
4.0
3.9
4.2
3.9
3.7
3.9
3.9
3.9
3.8

3.9
3.8
3.8
3.8
3.7
3.8
3.7
3.5
3.9
4.0
4.0

3 5 0
1.5 8

| | | | | | | cuts |
|---|---|---|---|---|---|---|
| | | 331.85 | | | | |
| 25+00 | | | 3.5 | 328.4 | 324.3 | 4.1 |
| 24+50 | | | 3.4 | 328.5 | 324.5 | 4.0 |
| 23+95 | 6' E of line | | 3.3 | 328.6 | 324.6 | 4.0 |
| 24+50 | | | 3.38 | 328.47 | 328.45 Corr. | |
| Regrading 40th St. Steep Slope | | | | | | |
| Sof Landis St. | | | | | | |
| | | | | 329.52 | | |
| | 1.45 | 330.97 | | | | |
| 20+50 | | | 0.9 | 330.1 | 324.1 | 6.0 |
| 20+85 | | | 13.2 | 317.8 | 306.5 | 11.3 |
| T.P.#1 | | | 11.97 | 319.00 | | |
| | 0.70 | 319.70 | | | | |
| 20+92 | | | 4.7 | 315.0 | 303.0 | 12.0 |
| 21+10 | | | 11.0 | 308.7 | 296.4 | 14.3 |
| T.P.#2 | | | 12.89 | 306.81 | | |
| | 0.88 | 7.69 306.89 | | | | |
| 21+28 | | | 4.9 | 302.8 | 290.6 | 12.2 |
| 21+46 | | | 9.7 | 298.0 | 285.6 | 12.4 |
| T.P.#3 | | | 11.09 | 296.60 | | |
| | 1.68 | 298.28 | | | | |
| 21+64 | | | 5.3 | 293.0 | 281.4 | 11.6 |
| 21+82 | | | 9.9 | 288.4 | 278.0 | 10.4 |
| 22+00 | | | 13.6 | 284.7 | 275.4 | 9.3 |
| 22+50 | | | | | 277.0 | 5.1 |

| | | | | | |
|---|---|---|---|---|---|
| | | 298.28 | | | |
| T.P. #4 | | | 1.22 | 297.06 | |
| | 10.33 | 307.39 | | | |
| 22+90 | | | 6.7 | 300.7 | 297.6 |
| 22+96 | | | 2.9 | 304.5 | 299.6 |
| T.P. #5 | | | 1.04 | 306.35 | |
| | 12.84 | 319.19 | | | |
| 23+14 | | | 6.9 | 312.2 | 304.8 |
| T.P. #6 | | | 0.76 | 318.43 | |
| | 12.84 | 331.27 | | | |
| 23+50 | | | 11.6 | 319.7 | 313.6 |
| 23+68 | | | 9.6 | 321.7 | 318.8 |
| 23+86 | | | 2.9 | 328.3 | 324.6 |
| 23+95 | check | | 2.85 | 328.42 | |

| | |
|---|---|
| 3.1 | |
| 4.9 | |
| 7.4 | |
| 6.1 | |
| 2.9 | |
| 3.7 | |

Dec. 26, 1947 Rainey King Vernon

40th Thorn for Construction

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | 329.52 | | |
| | 9.22 | 338.74 | | | | |
| 20+00 | | | 9.0 | 329.7 | 325.7 | 4.0 |
| 19+50 | | | 7.7 | 331.0 | 327.3 | 3.7 |
| 19+00 | | | 6.1 | 332.6 | 328.9 | 3.7 |
| 18+50 | | | 4.4 | 334.3 | 330.4 | 3.9 |
| 18+00 | | | 2.8 | 335.9 | 332.0 | 3.9 |
| 17+50 | | | 1.2 | 337.5 | 333.6 | 3.9 |
| T.P. #1 | | | 0.36 | 338.38 | | |
| | 8.94 | 347.32 | | | | |
| 17+00 | | | 8.2 | 339.1 | 335.2 | 3.9 |
| 16+50 | | | 7.3 | 340.0 | 336.3 | 3.7 |
| 16+00 | | | 6.8 | 340.5 | 336.9 | 3.6 |
| 15+50 | | | 6.4 | 340.9 | 337.2 | 3.7 |
| 15+00 | | | 6.1 | 341.2 | 337.5 | 3.7 |
| 14+50 | | | 5.8 | 341.5 | 337.8 | 3.7 |
| 14+00 | | | 5.4 | 341.9 | 338.1 | 3.8 |
| 13+75 | | | 5.2 | 342.1 | 338.2 | 3.9 |
| 13+50 | | | 5.3 | 342.0 | 338.6 | 3.4 |
| 13+40 | | | 5.2 | 342.1 | 338.6 | 3.5 |
| 13+20 | | | 5.1 | 342.2 | 337.7 | 4.5 |
| 13+00 | | | 5.0 | 342.3 | 337.7 | 4.6 |
| 12+50 | | | 4.4 | 342.9 | 338.8 | 4.1 |
| 12+00 | | | 3.7 | 343.6 | 339.5 | 4.1 |
| 11+50 | | | 9.1 | 344.2 | 340.2 | 4.0 |

# 40th + Thorn St. Line for Construction

| | | | | | | Cuts |
|---|---|---|---|---|---|---|
| | | 347.32 | | | | |
| 11+00 | | | 2.4 | 344.9 | 340.9 | 4.0 |
| 10+50 | | | 1.7 | 345.6 | 341.6 | 4.0 |
| T.P. #2 | | | 1.29 | 346.03 | | |
| | 7.73 | 353.76 | | | | |
| 10+00 | | | 7.5 | 346.3 | 342.3 | 4.0 |
| 9+50 | | | 6.8 | 347.0 | 342.4 | 4.6 |
| 9+00 | | | 6.3 | 347.5 | 342.5 | 5.0 |
| 8+50 | | | 5.9 | 347.9 | 342.6 | 5.3 |
| 8+00 | | | 5.5 | 348.3 | 342.7 | 5.6 |
| 7+50 | | | 5.0 | 348.8 | 342.8 | 6.0 |
| 7+00 | | | 4.4 | 349.4 | 342.9 | 6.5 |
| Top Grade 13' Roadline | | | 3.73 | 350.03 | | |
| | 8.89 Not 2 min. | 358.92 | | | | |
| 6+50 | | | 8.8 | 350.1 | 343.0 | 7.1 |
| 6+25 | | | 8.9 | 350.0 | 343.0 | 7.0 |
| 6+00 | | | 8.9 | 350.0 | 344.0 | 6.0 |
| 5+50 | | | 8.4 | 350.5 | 346.1 | 4.4 |
| 5+25 | | | 8.1 | 350.8 | 347.1 | 3.7 |
| 5+00 | | | 7.7 | 351.2 | 347.4 | 3.8 |
| 4+50 | | | 7.0 | 351.9 | 348.1 | 3.8 |
| 4+00 | | | 6.3 | 352.6 | 348.8 | 3.8 |
| 3+50 | | | 5.6 | 353.3 | 349.5 | 3.8 |
| 3+00 | | | 4.9 | 354.0 | 350.2 | 3.8 |
| 2+50 | | | 4.1 | 354.8 | 350.8 | 4.0 |

| | | | | | cuts |
|---|---|---|---|---|---|
| | 358.92 | | | | |
| 2+00 | | 3.4 | 355.5 | 351.5 | 4.0 |
| 1+50 | | 2.8 | 356.1 | 352.2 | 3.9 |
| 1+00 | | 2.1 | 356.8 | 352.9 | 3.9 |
| 0+50 | | 1.5 | 357.4 | 353.0 | 4.4 |
| Top of grate | 13.2 of Inv. | 8.90 | 350.02 | | |

Profile 40th & Thorn St
Pipeline after Backfill

| | | | | | |
|---|---|---|---|---|---|
| 20+37.5 Curb | | | | 329.52 | |
| | 2.86 | 332.38 | | | |
| 20+50 | | | 2.6 | 329.8 | |
| 20+58 | | | 3.0 | 329.4 | |
| T.P. #1 | | | 12.86 | 319.52 ~~319.42~~ | Bill |
| | 0.76 | 320.28 ~~320.18~~ | | | |
| 20+85 | | | 7.6 | 312.7 | |
| 20+92 | | | 10.2 | 310.1 | |
| T.P. #2 | | | 11.47 | 308.81 ~~308.71~~ | |
| | 1.16 | 309.97 ~~309.87~~ | | | |
| 21+00 | | | 3.0 | 307.0 | |
| 21+10 | | | 5.9 | 309.1 | |
| 21+28 | | | 10.9 | 299.1 | |
| 21+46 | | | 14.3 | 295.7 | |

NOTES REDUCED 3-1-48

| | | | | |
|---|---|---|---|---|
| | | 309.97 ~~309.87~~ | | |
| T.P.#3 | | | 13.04 | 296.93 ~~296.83~~ |
| | 0.35 | 297.28 ~~297.18~~ | | |
| 21+64 | | | 6.1 | 291.2 |
| 21+82 | | | 10.2 | 287.1 |
| 22+00 | | | 13.3 | 284.0 |
| 22+50 | | | 13.8 | 283.5 |
| T.P.#4 | | | 0.61 | 296.67 ~~296.57~~ |
| | 11.99 | 308.56 ~~308.46~~ | | |
| 22+90 | | | 6.4 | 302.2 |
| 22+96 | | | 3.0 | 305.6 |
| 23+00 | | | 0.0 | 308.6 |
| T.P.#5 | | | 1.28 | 307.28 ~~307.18~~ |
| | 12.33 | 319.61 ~~319.51~~ | | |

S.P. 8+1-3 Culvert Station

| | | | | |
|---|---|---|---|---|
| | | 319.61 ~~319.51~~ | | |
| 23+14 | | | 6.5 | 313.1 |
| 23+50 | | | +0.1 | 319.7 |
| T.P. #6 | 10.32 ~~10.22~~ | 329.23 ~~329.15~~ | 0.70 | 318.91 ~~318.81~~ |
| 23+68 | | | 5.7 | 323.5 |
| 23+74 | | | 4.0 | 325.2 |
| 23+81 | | | 3.2 | 326.0 |
| 23+86 | | | 1.3 | 327.9 |
| check | 23+95 | | 0.56 | 328.47 ~~328.37~~ |

NOTES REVISED 3-1-48

40th & Thorn St. Profile
Cont. after Backfill

| | | | | |
|---|---|---|---|---|
| 56+00 | | | | 298.7 |
| | 10.66 | 309.36 | | |
| 59+90 | | | 1.8 | 307.6 |
| 60+00 | | | 2.5 | 306.9 |
| 60+50 | | | 9.9 | 299.5 |
| T.P. #1 | | | 12.93 | 296.43 |
| | 1.90 | 298.33 | | |
| 61+00 | | | 5.9 | 292.4 |
| 61+27.5 | end of dirt | | 9.9 | 288.4 |
| | end of pipe | P26 | 11.9 | 286.43 |

NOTES REVISED 3-1-48

# RELOCATION 40TH ST. PIPELINE

| | 40TH | AT AND | LANDIS | ℄ SOUTHERLY | |
|---|---|---|---|---|---|
| B.M. | 3.49 | 333.76 | | 330.29 | BR. PIN NW CURB RET. 40TH & LANDIS |
| 0+00 | (=STA 19+28.7 SEE PAGE 5) | | 2.07 | | |
| +48 | | | 4.07 | | IN GUTTER |
| +48.2 | | | 3.53 | | TOP CURB |
| +50 | | | 3.53 | | " " |
| +57 | | | 3.54 | | " " |
| +57.2 | | | 4.1 | | |
| 1+00 | | | 4.8 | | |
| +11 | | | 5.4 | | |
| +20 | | | 4.5 | | |
| +25 | | | 5.1 | | |
| +29 | | | | | |
| CK Pan Curb | | | 4.60 | 329.18 | =329.52 |
| P | 0.27 | 321.18 | 12.87 | 320.91 | |
| +50 | | | 6.9 | | |
| P | 1.45 | 309.60 | 13.03 | 308.15 | |
| +69 | | | 6.4 | | |
| P | 0.47 | 297.36 | 12.69 | 296.91 | |
| P | 9.26 | 295.13 | 11.53 | 285.85 | (SE COR S.O. |
| CK B.M. | | | 11.69 | 283.44 | CONC. M.H. MRK WITH YELLOW PAINT |
| +83 | | | +1.3 | | |
| +93 | | | 4.0 | | |
| 2+00 | | | 6.5 | | |
| +09 | | | 8.6 | | |
| 2+13° | ℄ PT. | | 8.4 | | |
| +19 | | | 9.3 | | |
| +41 | | | 7.4 | | |
| +45 | | | 8.3 | | |

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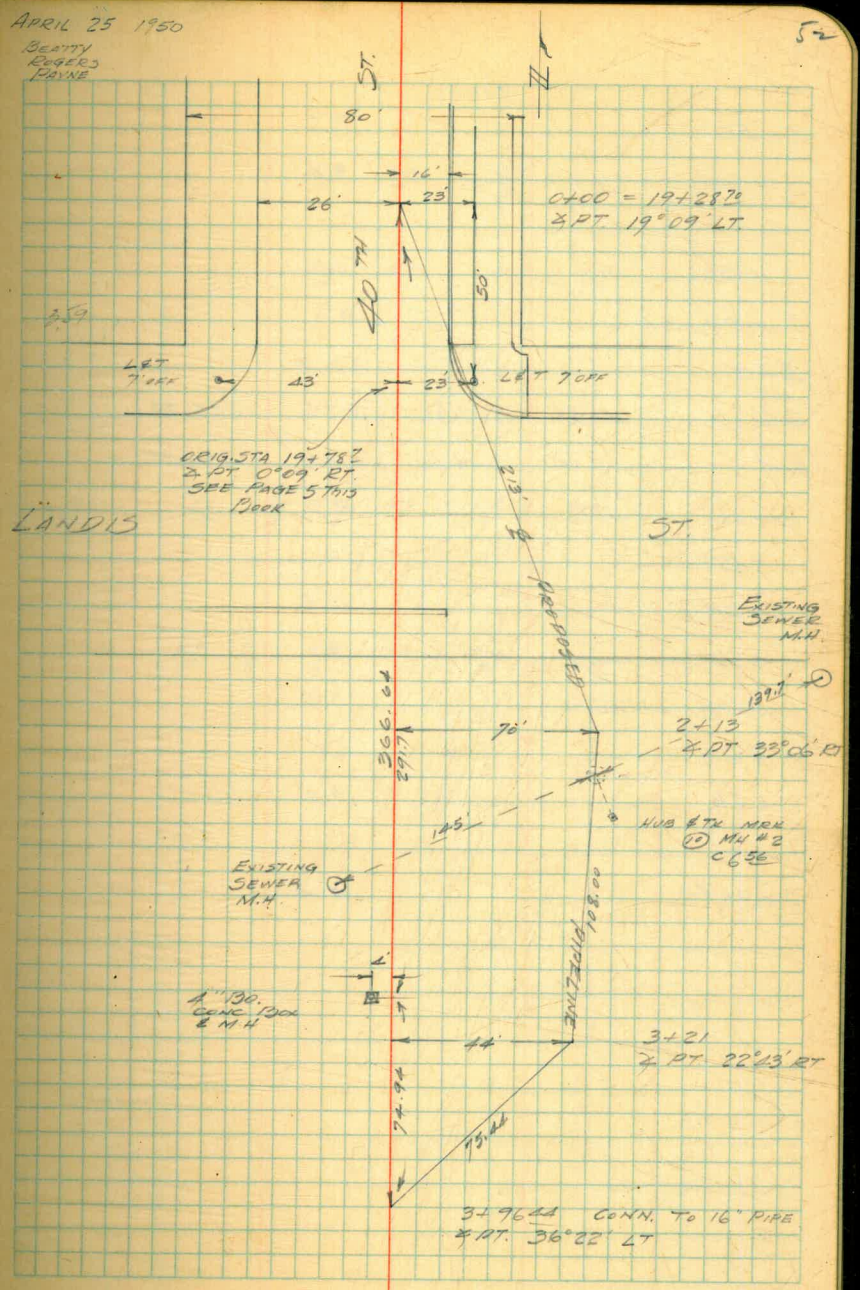
5-2



| | | | | |
|---|---|---|---|---|
| | | 295.13 | | |
| 2+50 | | | 8.5 | |
| +60 | | | 9.4 | |
| +68 | | | 6.3 | |
| +91 | | | 4.9 | |
| 3+00 | | | +0.4 | |
| (4) | 11.53 | 297.38 | 9.28 | 285.85 |
| (11) | 12.69 | 309.60 | 0.47 | 296.91 |
| +21° | 4 PT. | | 9.3 | |
| +37 | | | 10.1 | |
| +39 | | | 10.8 | |
| +50 | | | 9.0 | |
| +74 | | | 5.9 | |
| +80 | | | 5.0 | |
| +86 | | | 3.5 | |
| 3+96 44 | | | 4.4 | |



2.8/11 9.4/c 9.9/10

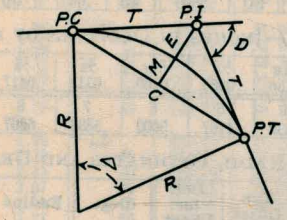
1.5/10 6.3 10.0/7 10.0/12

(RT & TR DR TON) 8.1/10 8.0/5 7.6/4 9.3/c 15.1/9

5.3/10 5.7/8 5.4/5 9.0 16.0/10

# DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES






## 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)=Rvers $\frac{\Delta}{2}$ (6)

External=E=T tan $\frac{\Delta}{4}$ (7)=R ÷ cos. $\frac{\Delta}{2}$—R (8)=R exsec $\frac{\Delta}{2}$ (9)

Long Chord=C=2 R sin. $\frac{\Delta}{2}$ (10) $\Delta$=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 $(54.50 \div 100)^2$=2.16 ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus $(54.50)^2 \div (2 \times 688.26)$=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 115.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6 ÷8⅓=115.27 and from Table V correction=.10 or E=115.37 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′.

20 + 50
20 + 85
20 + 92
21 + 10
21 + 28
21 + 46
21 + 64
21 + 82
22 + 00
22 + 50
22 + 90
22 + 96
23 + 14
23 + 50
23 + 68
23 + 86



## 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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