

Dr. 12 BK. 29

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Vicinity of Survey

Northwest Ave.

Also Stillwater St.

From To

Road Acc't. No.

Date Filed. 11-14-46

File

W.B.T.

2

Plan Survey

Drainage Situation
Vicinity Pacific + Northwest
North STA # 96

4/12/46

Index

Align 2 to 5
Topog 6 to 16
X Section 10 to 17

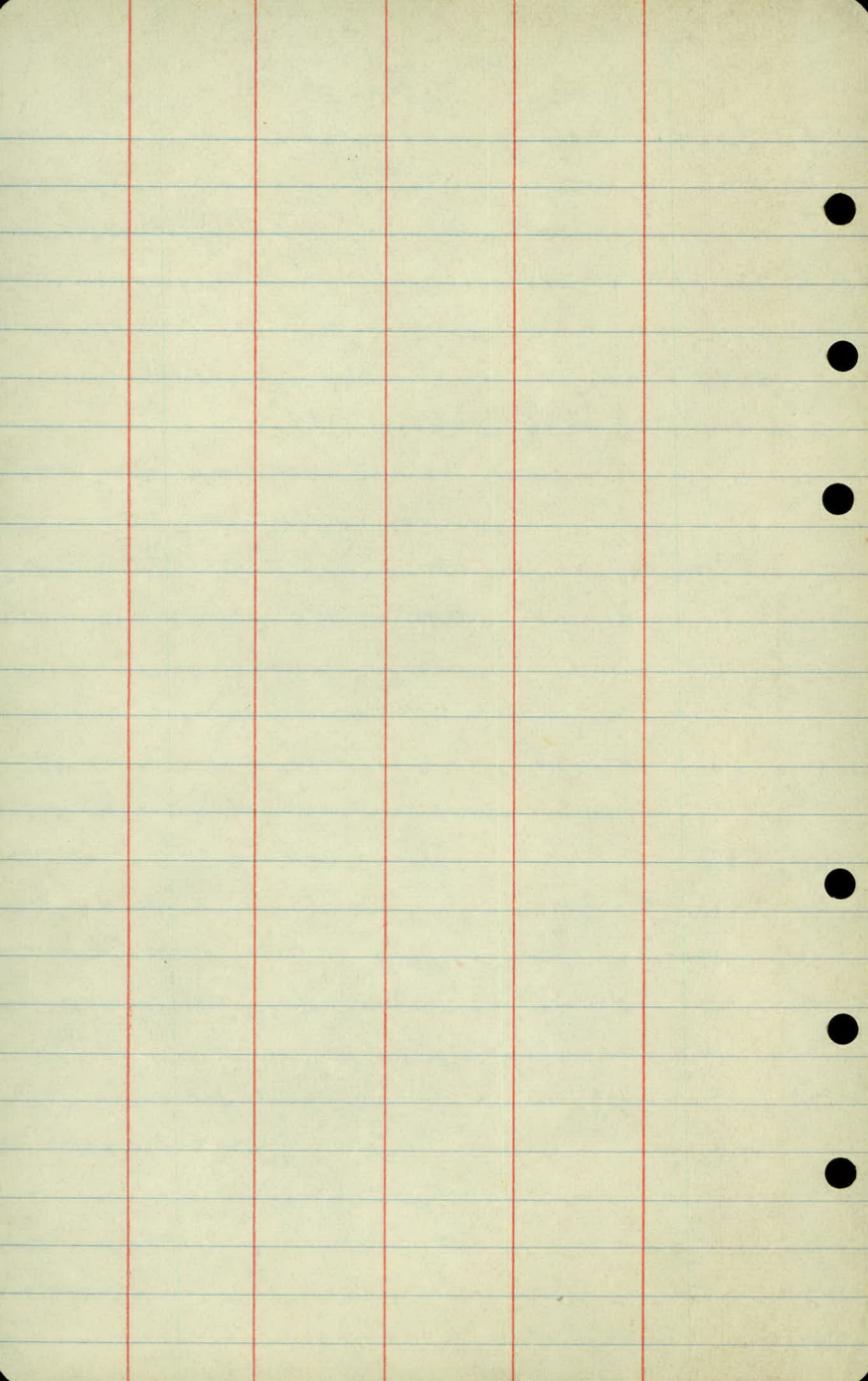
Drawn up
4-15-46

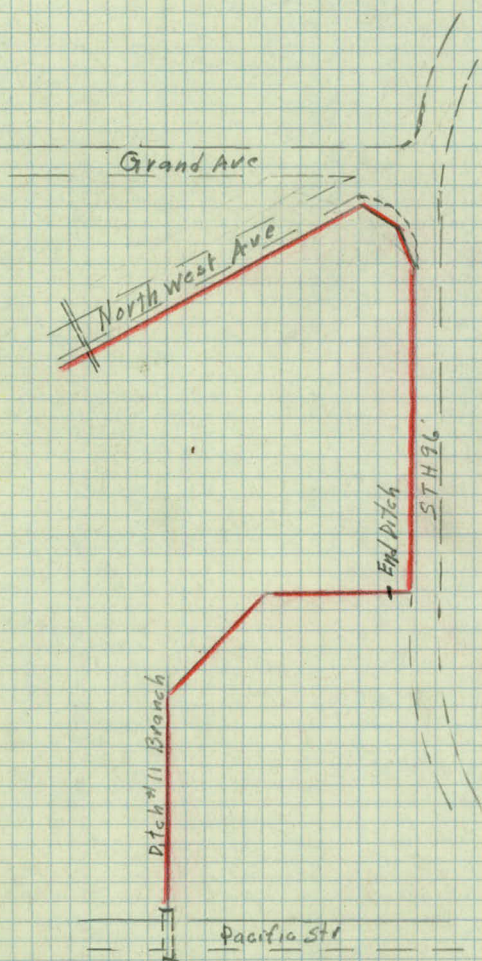
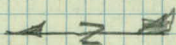
HW

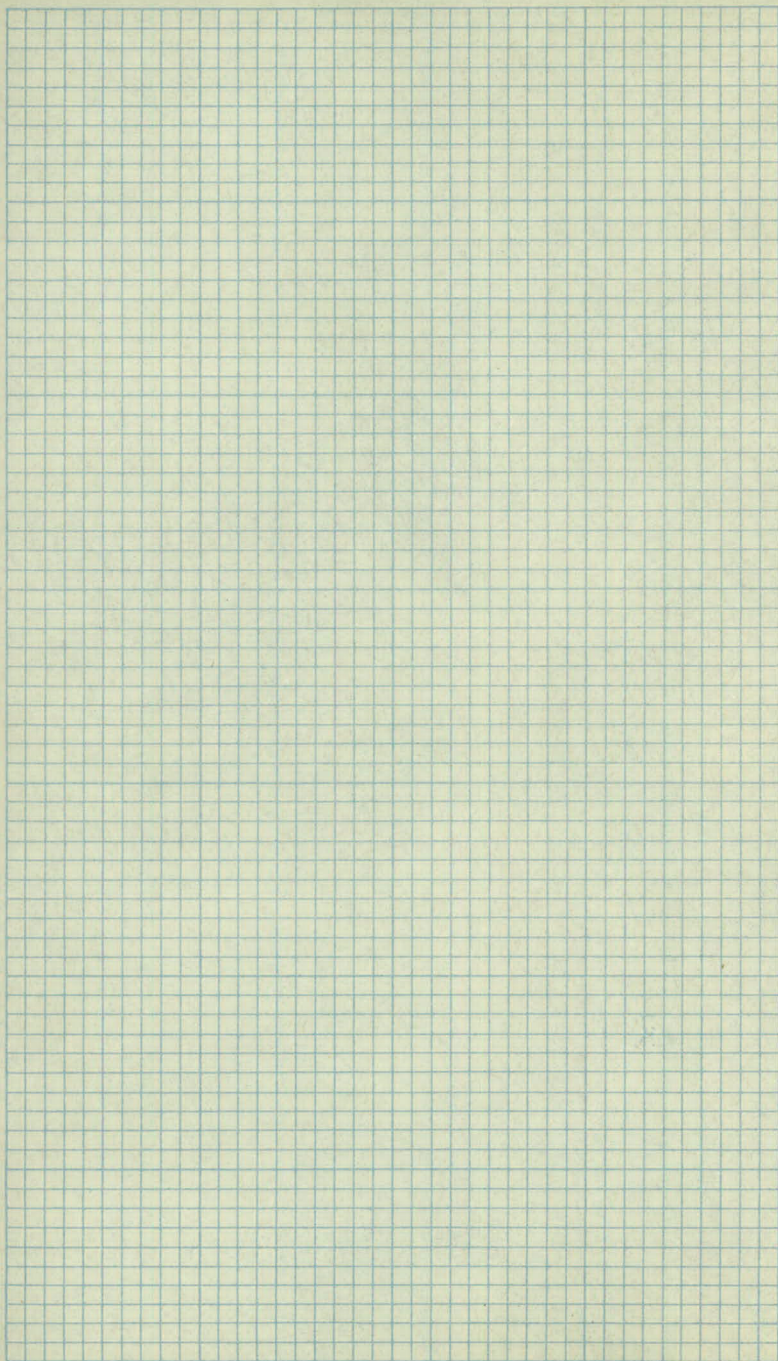
KA

AM

CF







AL1917

Sta	Pt	Δ Rt	Δ Lt
-----	----	------	------

5+44		65°58'	
------	--	--------	--

3+75	P.I	5°10'	
------	-----	-------	--

0+00

POT = East Inv 18" CM X Drain

Under Pacific Str Ditch #11 Branch

Description

1x2 Hub

← 90000 ↓

PACIFIC Str.

~~12~~

Sta	Pt.	ART	ALT
-----	-----	-----	-----

16+96.40	P1		41°40'
----------	----	--	--------

16+00	P1 = Edge Pave		19°58'
-------	----------------	--	--------

6+56.70			92°52'
---------	--	--	--------

Forward Tangent is No. Edge

Parameci

Sta

Pt

$\Delta R+$

$\Delta L+$

19+21.3

P.O.T

17+35.35

P.I

$42^{\circ} 12'$

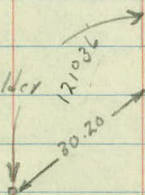
= X Drain Northwest Ave

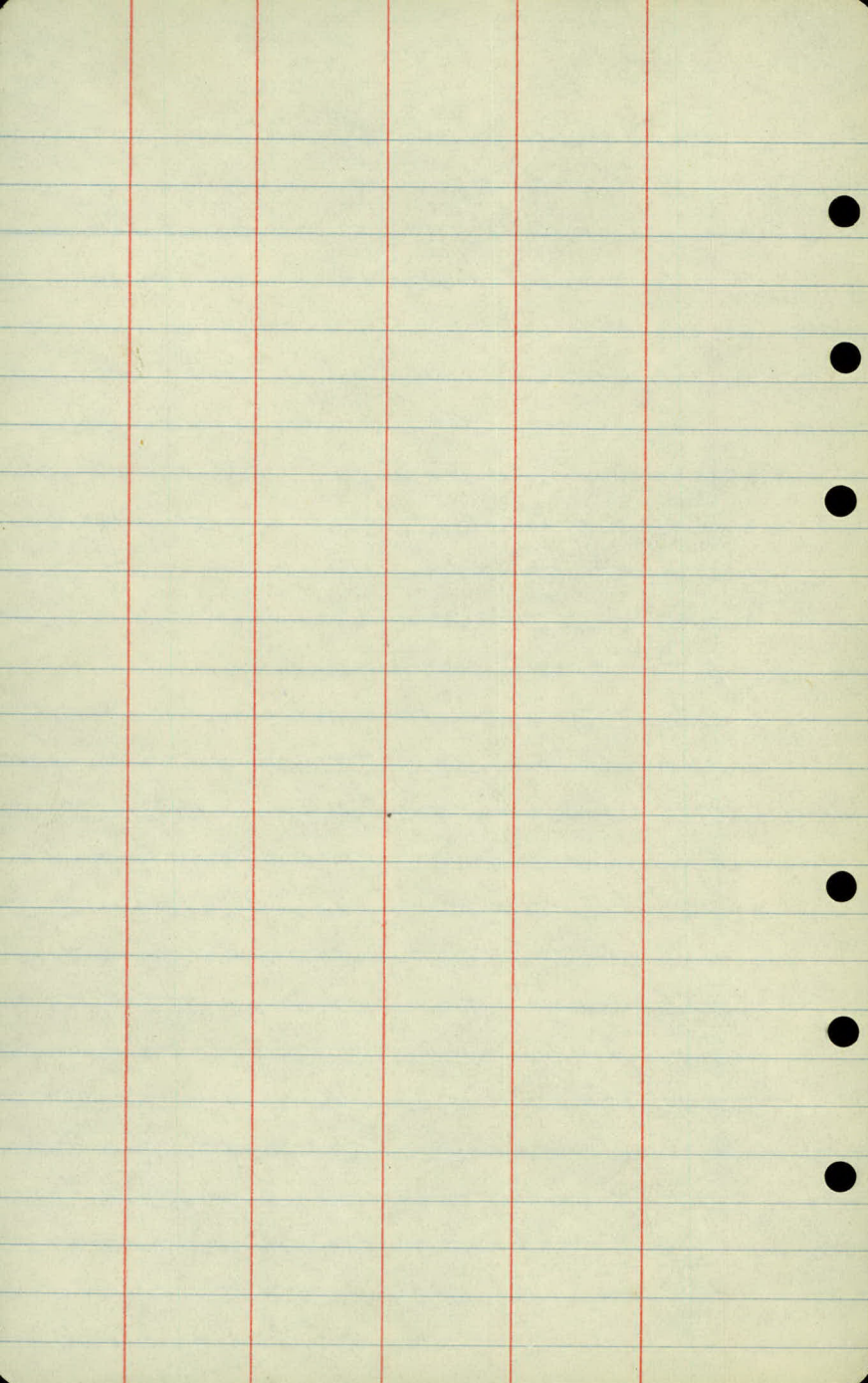
Forward is West Shoulder
Northwest Ave

Prop Iron

Northwest Cor. STH #96

to Northwest Ave





Topog

6

5

4

3

2

1

0

East End 18' CM
0-10 Shoulder Line
0-28 " "
0-34 West End 18" CM

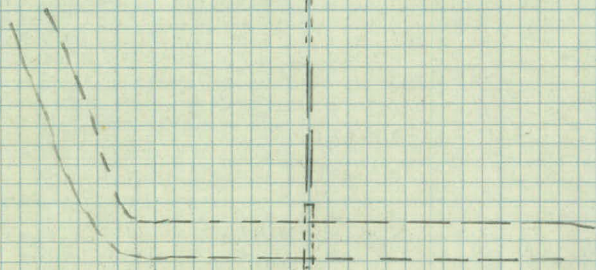
+75 End Brush Pt.

Swamp

Swamp

Swampy Brush

Swamp



13

12

11

10

9 Shoulder 4'

8

7

6

-133 End Pitch

Trees 26
SWP 12'

8

+63 PP 14' Tree 24'
+50 SWP 110'

SWP 114 93' Tree 28'

+50 Tree 32'

+40 SWP 14' 490'

+00 PP 24' 60'

SWP 15' 125' SH 15'

+71 PP 13'

+75 Bush 12'

+50 SWP 14' 1160' Trees 55'

+08 24" Cono Pipe 8'

SWP 125' SH 15'
Tree 50'

+08 24" X 36 SGP 28'

+75 SWP 60'

+45 Row Will Edge Pot hole 48'

+16 P.P. 13'

+00 Beg Pot hole 13' 445'

+94 Hedge 21'

+83 Rg. Tie Hedge

+75 Δ in Hedge 70'

+23 Stu 12'

+21 East Edge Cul 18' Yard

+19 X Hedge 28'

+15 Stu 12'

+07 Ent 15" X 20 CM

+93 West End 15" CM 17'

+90 Will 14'

+77 Cov Orchard Orchard

+36 P.P. 12'

+36 Cov Orchard 35'

Ditch 22' Shoulder 2

Edge Pave 2'

+96 18" Oak 9'

+79 18" Oak 10'

+68 15" Oak 9'

+57 Edge Pave 4'

20

19

18

17

16

15

14

13

+80 \$ Stillwater

+50 End Swp 9' + 160

+21 West End 15" K 40' CM 15'

+21 East 15" CM 25'

Swp 9' + 100'

+70 Swp 12'

+40 Swp 60' + 120

+11 Oak 27'
Shl 00

Shl 20'

+92 Oak 22'

+97 Oak 18'
+82 Oak 19'
+64 Oak 34'
+60 Oak 17'

Shl 2'

+47 Tree 31'
+25 Shl 1' YPPH

+75 Shl 3' Parc 28

+50 Shl 2' Parc 19

+25 Parc 10

Tree 39' Shl 6'

Parc 0.6'

Scattered Oaks

+50 Tree 40'

+60 Tree 1 no 75

+57 End Swp 14' + End Willows 22'

+39 PPH

+25 Trees 34'

Swp 12 + 120

Trees 95'

Willows

+20 Tree 80
Trees 26
Swp 13' + 180

X Sections

Sta	+	π	-	Elev.
B.M.	4.99	937.54		(932.55)
T.P.	4.87	934.30	8.11	929.43
B.M.			3.67	930.63
B.M. = 0+00			13.14	921.16 (921.17)
0 +20				20.9 ✓
1				20.6 ✓
2				21.2 ✓
3				21.6 ✓
4				22.4 ✓
5				22.9
+30				22.6 ✓

3-21-46
K.A.
A.M.
C.F.

12

Lt

E

Bl.

Spt. in P.P. NW Cor. Portland & S.T. H 96

Top M.C. of N.Y.S. & Sec 12 rt sta 6+

F.L. of E. End 18" C.M. Under Pacific Ave.

113 132 134 131 107 ✓
6 2 2 7

116 133 137 134 119 ✓
4 2 2 3

122 130 131 129 122 ✓
4 2 3 5

124 128 127 126 124 ✓
4 3 1 3

E
119 123 128 122 ✓
8 9 11

E
114 120 115 ✓
2 4

108 117 110 ✓
2 2

Sta	+	π	-	Elev.
-----	---	-------	---	-------

934.30

5 +60

23.8 ✓

6

24.2 ✓

+25

24.4 ✓

+70

29.7 ✓

7

29.6 ✓

+35

29.6 ✓

+55

29.6 ✓

+91

29.5 ✓

Lt.

E

Rt.

101 105 116 105 105 ✓
13 1 2 10

90 91 99 101 108 94 86 91 ✓
10 3 1 2 3 5 10

96 99 105 100 89 93 ✓
10 1 2 4 10

91 91 94 101 101 79 76 60 52 46 46 ✓
50 35 23 22 21 17 13 8 4 3

Edge
Par

84 87 97 92 91 74 61 47 47 46 ✓
50 24 22 21 18 11 8 2 2

84 89 95 95 90 87 52 47 ✓
50 25 23 21 20 16 4

85 89 94 93 90 50 47 ✓
50 28 25 16 13 4

FL. 15CM

79 84 90 95 82 80 51 48 ✓
50 33 19 17 16 12 4

Sta + π - Elev.

934.30

7 +95

29.4 ✓

8

29.4 ✓

+11

Ent.

29.4 ✓

+17

29.4 ✓

+22

29.4 ✓

+30

29.4 ✓

+70

29.4 ✓

9

29.3 ✓

Lt

E

Et

7.9 85 89 7.7 75 53 49 ✓
50 31 23 14 11 6

56 56 52 49 ✓
50 35 8

56 56 52 49 ✓
50 35 8

7.7 8.7 8.7 7.5 53 50 49 ✓
50 31 23 16 6 3

FL 150-M

7.4 86 94 97 95 85 78 52 49 ✓
60 23 20 18 16 14 11 4

76 86 84 96 94 86 51 49 ✓
50 37 18 16 13 12 4

7.4 8.4 8.5 9.4 8.4 52 49 ✓
50 31 15 14 12 4

80 83 84 92 82 52 50 ✓
50 24 16 16 14 13 5

Sta	+	π	-	Elev
		934.30		
9	+10			29.2 ✓
	+35			29.2 ✓
	+70			29.2 ✓
10				29.2 ✓
	+08	24" Conc. X Drains		29.2 ✓
	+15			29.2 ✓
	+50			29.3 ✓
11				29.4
T.P.	415	934.60	3.77	930.53

Lt.

E

Pt.

87 94 90 84 53 51 ✓
50 22 14 11 4

85 90 98 96 90 52 51 ✓
50 36 28 19 13 4

244
94 99 95 88 63 52 51 ✓
50 30 22 18 11 4

97 96 93 89 67 51 51 ✓
50 36 23 19 12 5

FL 24" Conc

FL 24" Conc

98 97 90 82 82 58 52 51 49 50 54 78 69 44 L.O. ✓
50 30 26 19 9 7 5 10 20 27 29 32 37

99 99 92 88 51 ✓ 51
50 37 29 19 6

242
101 97 93 87 73 51 50 ✓
50 36 30 19 12 5

100 97 90 86 50 49 ✓
50 36 27 15 5

Nail in PP #325

Sta.	+	π	-	Elev.
		934.68		

~~4 +50~~

T.P.	4.48	935.01	4.15	930.53
------	------	--------	------	--------

11 +50				29.4 ✓
--------	--	--	--	--------

12				29.4 ✓
----	--	--	--	--------

+50				29.5 ✓
-----	--	--	--	--------

13				29.4 ✓
----	--	--	--	--------

+50				29.4 ✓
-----	--	--	--	--------

14				29.5 ✓
----	--	--	--	--------

+50				29.9 ✓
-----	--	--	--	--------

15				30.2 ✓
----	--	--	--	--------

+40				30.5 ✓
-----	--	--	--	--------

+66				35.6 ✓
-----	--	--	--	--------

16				30.8 ✓
----	--	--	--	--------

LT.

2

RT.

347

~~100 99 96 52 52~~
~~50 21 14 5~~

Nail in PP 325

~~10.8 9.9 5.8~~
~~40 14 6 5.6~~ ✓

$\frac{11.2}{40}$ $\frac{11.2}{20}$ $\frac{10.2}{12}$ $\frac{6.0}{5}$ 5.6 ✓

$\frac{11.4}{40}$ $\frac{10.4}{14}$ $\frac{5.9}{6}$ 5.5 ✓

$\frac{11.8}{40}$ $\frac{11.8}{25}$ $\frac{10.6}{14}$ $\frac{9.8}{12}$ $\frac{5.8}{7}$ 5.6 ✓

$\frac{13.0}{40}$ $\frac{12.4}{27}$ $\frac{11.5}{18}$ $\frac{9.6}{13}$ $\frac{6.1}{7}$ 5.6 ✓

$\frac{11.8}{30}$ $\frac{11.1}{18}$ $\frac{10.0}{17}$ $\frac{8.3}{10}$ $\frac{5.7}{7}$ 5.5 ✓

$\frac{10.9}{40}$ $\frac{10.2}{36}$ $\frac{9.5}{14}$ $\frac{5.0}{7}$ 5.1 ✓

$\frac{8.1}{40}$ $\frac{9.1}{18}$ $\frac{8.7}{13}$ $\frac{4.8}{6}$ 4.8 ✓

$\frac{8.9}{43}$ $\frac{8.5}{28}$ $\frac{7.7}{13}$ $\frac{4.4}{6}$ 4.5 ✓

$\frac{7.6}{45}$ $\frac{7.4}{28}$ $\frac{6.5}{15}$ $\frac{4.0}{7}$ 4.4 ✓

$\frac{7.3}{50}$ $\frac{6.5}{27}$ $\frac{6.1}{14}$ $\frac{4.2}{8}$ 4.2 ✓

Sta	+	Σ	-	Elev
		935.01		
16+33				30.7 ✓
+66				30.9 ✓
T.P	3.33	934.26	408	930.93
17+00				30.9 ✓
+35				30.6 ✓
+70				30.1 ✓
18				29.6 ✓
+50				28.9 ✓
+75				28.7 ✓
19				28.5 ✓
+213		X Drain	15" X 40 C.M.	28.4 ✓
+40				28.5 ✓
T.P	6.89	937.82	3.33	930.93
B.M.			5.24	932.56 932.55 932.58

Lt

K

W.S. 950

$$\frac{7.4}{45} \quad \frac{6.8}{24} \quad \frac{5.1}{7} \quad 4.3 \quad \frac{4.1}{13} \quad \checkmark$$

$$\frac{7.1}{50} \quad \frac{5.1}{26} \quad \frac{4.6}{8} \quad 4.1 \quad \frac{4.0}{15} \quad \checkmark$$

$$\frac{6.6}{50} \quad \frac{5.6}{29} \quad \frac{4.8}{7} \quad \frac{3.7}{3} \quad 3.4 \quad \frac{3.9}{4} \quad \frac{2.9}{17} \quad \checkmark$$

$$\frac{6.6}{45} \quad \frac{5.8}{36} \quad \frac{6.1}{13} \quad \frac{5.7}{6} \quad 3.7 \quad \frac{3.1}{12} \quad \checkmark$$

K Northwest

$$\frac{7.0}{40} \quad \frac{6.6}{21} \quad \frac{7.0}{18} \quad \frac{6.2}{8} \quad \frac{4.6}{2} \quad 4.2 \quad \frac{3.7}{8} \quad \checkmark$$

$$\frac{6.2}{45} \quad \frac{6.3}{17} \quad \frac{6.9}{15} \quad \frac{6.7}{8} \quad \frac{4.7}{1} \quad 4.7 \quad \frac{4.1}{9} \quad \checkmark$$

$$\frac{8.5}{45} \quad \frac{8.1}{22} \quad \frac{7.2}{6} \quad 5.4 \quad \frac{4.8}{10} \quad \checkmark$$

$$\frac{10.0}{50} \quad \frac{9.8}{45} \quad \frac{8.4}{23} \quad \frac{8.0}{6} \quad 5.6 \quad \frac{5.0}{11} \quad \checkmark$$

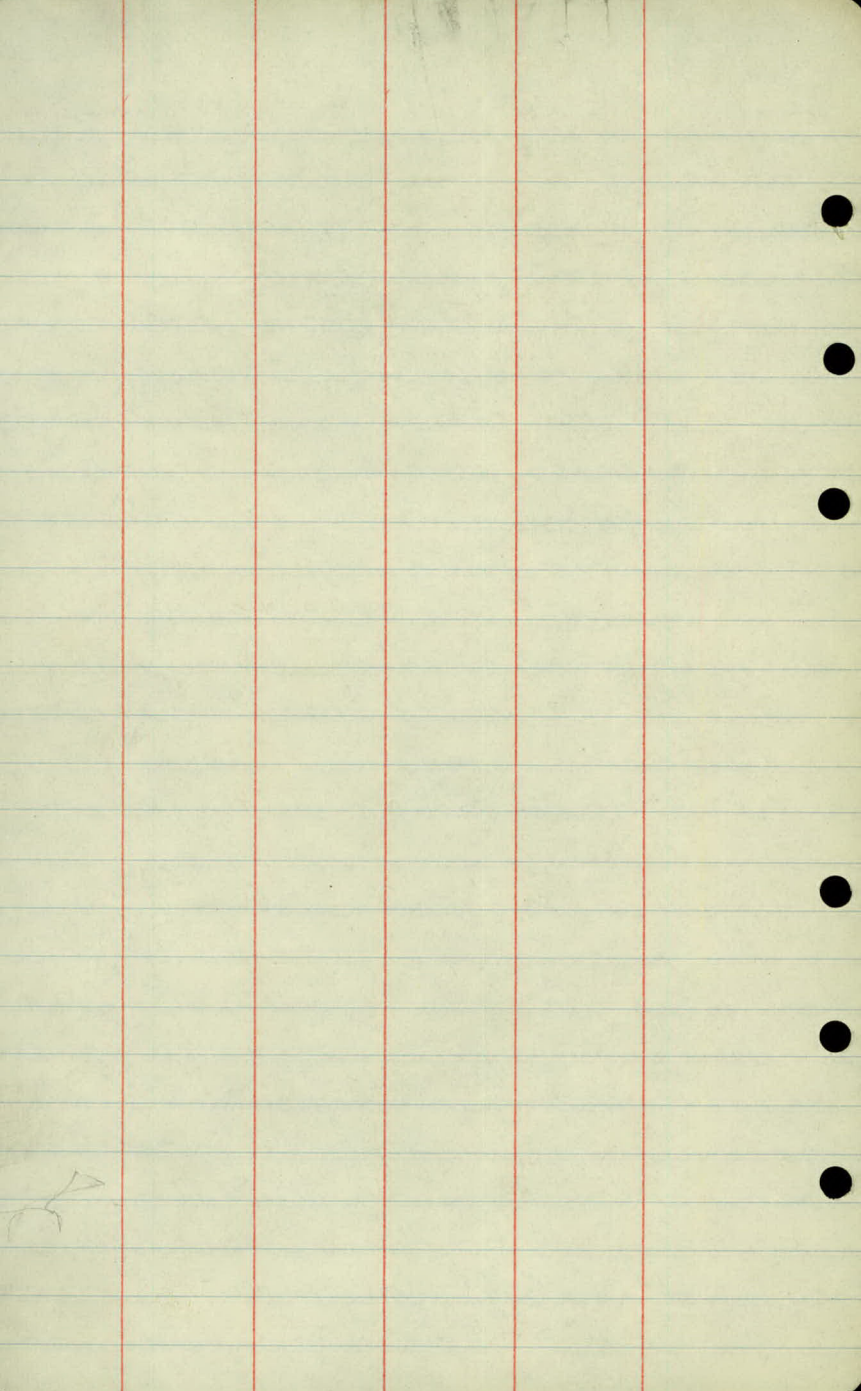
$$\frac{10.0}{50} \quad \frac{9.7}{40} \quad \frac{8.8}{18} \quad \frac{7.8}{6} \quad 5.8 \quad \frac{5.2}{10} \quad \checkmark$$

Inv

$$\frac{9.7}{40} \quad \frac{7.3}{27} \quad \frac{8.75}{15} \quad \frac{9.0}{11} \quad \frac{7.6}{5} \quad 5.9 \quad \frac{5.3}{9} \quad \frac{6.1}{21} \quad \frac{8.75}{25} \quad \frac{8.7}{26} \quad \checkmark$$

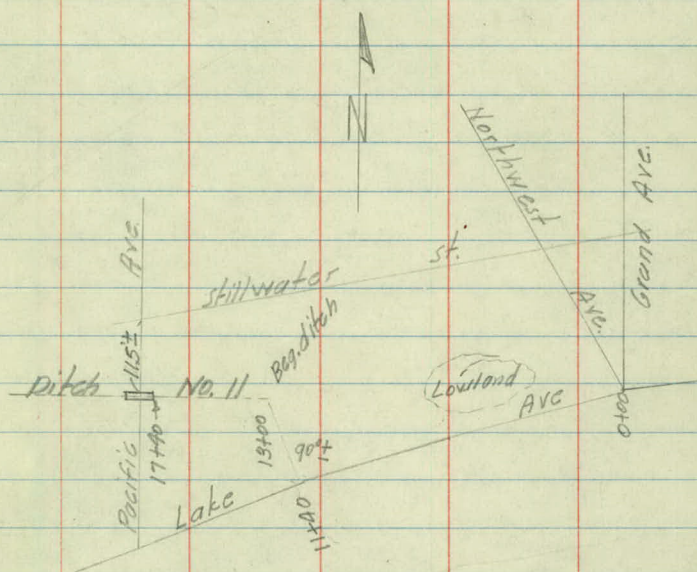
$$\frac{8.3}{50} \quad \frac{8.4}{28} \quad \frac{8.5}{18} \quad \frac{7.6}{6} \quad \frac{5.9}{2} \quad 5.8 \quad \frac{5.2}{9} \quad \checkmark$$

Spk in PP N.W. Cor Portland + S.H. #96



Levels

Potholes west of Northwest Ave. + S.T.H. 96



Worked w. HAW
2/2/46

Sta	+	π	-	Elev.
B.M.	3.77	936.32		(932.55)

& Int. Portland S.T.H. 96			4.82	931.50
------------------------------	--	--	------	--------

0+00 = & Grand & S.T.H. 96 going west.

Elev. White Bear Lake		11.15		25.17
-----------------------	--	-------	--	-------

75' S.W. stillwater + Northwest		10.7		25.6
------------------------------------	--	------	--	------

3			11.0	
---	--	--	------	--

4		road = 6.4		
		12.2		24.1

T.P.

5			12.1	
---	--	--	------	--

T.P.	4.98	934.43	6.87	929.45
------	------	--------	------	--------

9		& road = 4.9		
		7.5		

+20 = & Kasper Drive way 9.5

10			9.4	
----	--	--	-----	--

2-25-46
K.A.
A.M.
C.F.

2

Spk in PP NW. Cor Portland & S.T.H 96

75' North of road.

75' North of road

FL. 15" G.M.

road ditch

Sta.	+	π	-	Elev.
		934.43		

11 +40 beg. of ditch #11 160 north

13	Beg. ditch		12.5	21.9
----	------------	--	------	------

15			130	
----	--	--	-----	--

17 +40			13.25	21.18
--------	--	--	-------	-------

T.P.	6.35	935.98	4.80	929.63
------	------	--------	------	--------

B.M.			3.44	932.54
------	--	--	------	--------

11.75
1.5
13.25

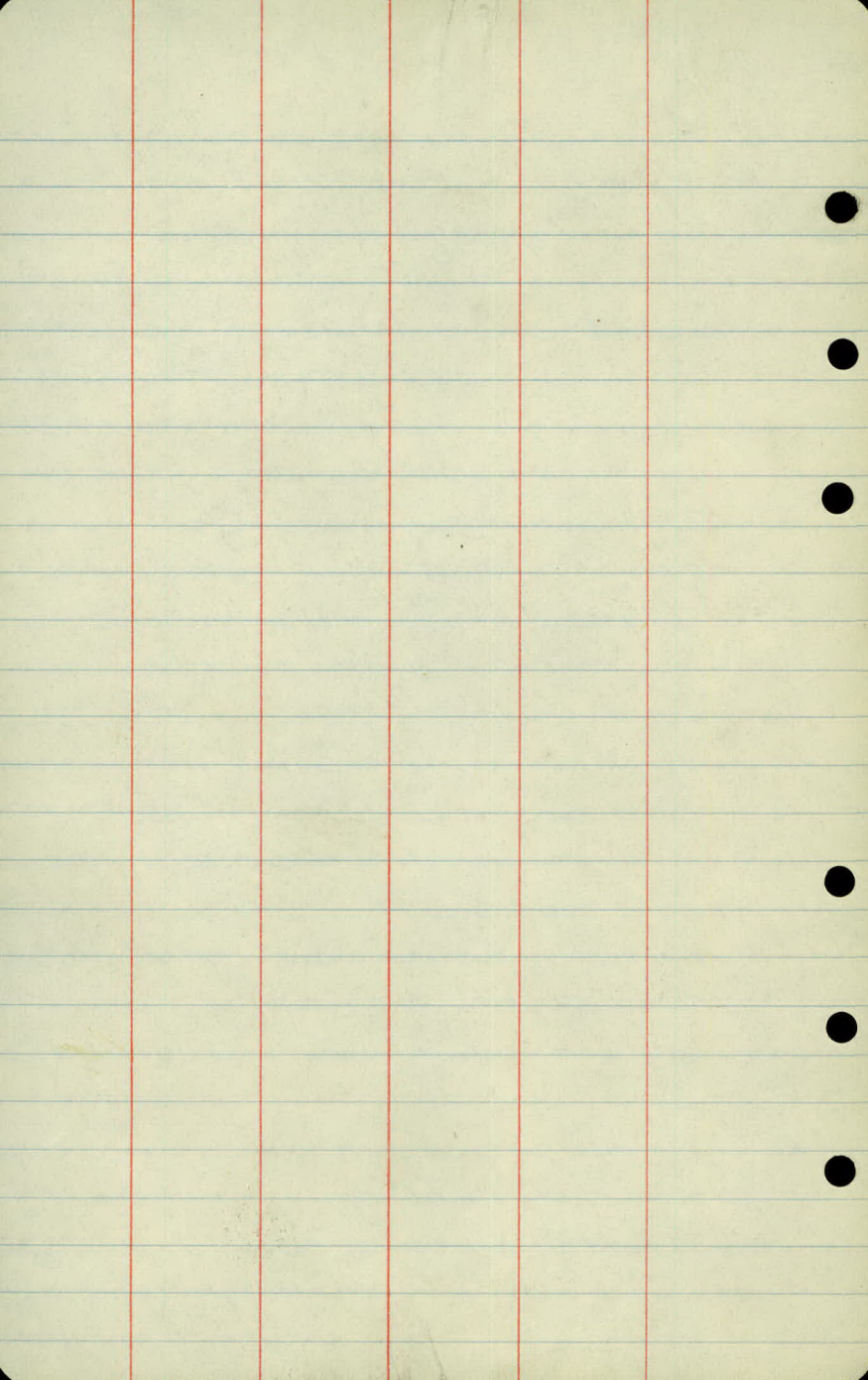
11.40
11.75 Top Cuts
115' South.

3

& ditch

— ditch #11

FL. East End 18' C.M. Under Pacific Ave. drains west



Levels.
Stillwater St.
Pacific Ave East.

Sta.	+	π	-	Elev.
B.M.	10.35	931.53		921.18
T.P.	4.78	932.99	3.32	928.21

0 +00 = @ Int Pacific + Stillwater

6 5.8 27.2

7 4.8 28.2
26.7

9 = @ road 5.5 27.5

10 " 5.2 27.8

13 + 60 " 5.8 27.2

T.P. 6.57 934.74 4.82 928.17
5.3 29.4

14 + 85 = @ Stillwater + North west Ave's

in ditch N.E. cor
Stillwater + North west 8.3 26.4

FL. 15' C.M.A. X Drain 9.1 25.6

Pothole 6.8 27.9

T.P. 7.33 941.47 0.60 934.14

B.M. 8.92 932.55

9.26-46
K.A.
A.M.
C.F.

East end.
F.L. 18" C.M. X Drain Under Pacific Ave.

} E road in cut

24.2

8.8

Swamp 100' north

24.4

8.6

Swamp 100' north

24.4

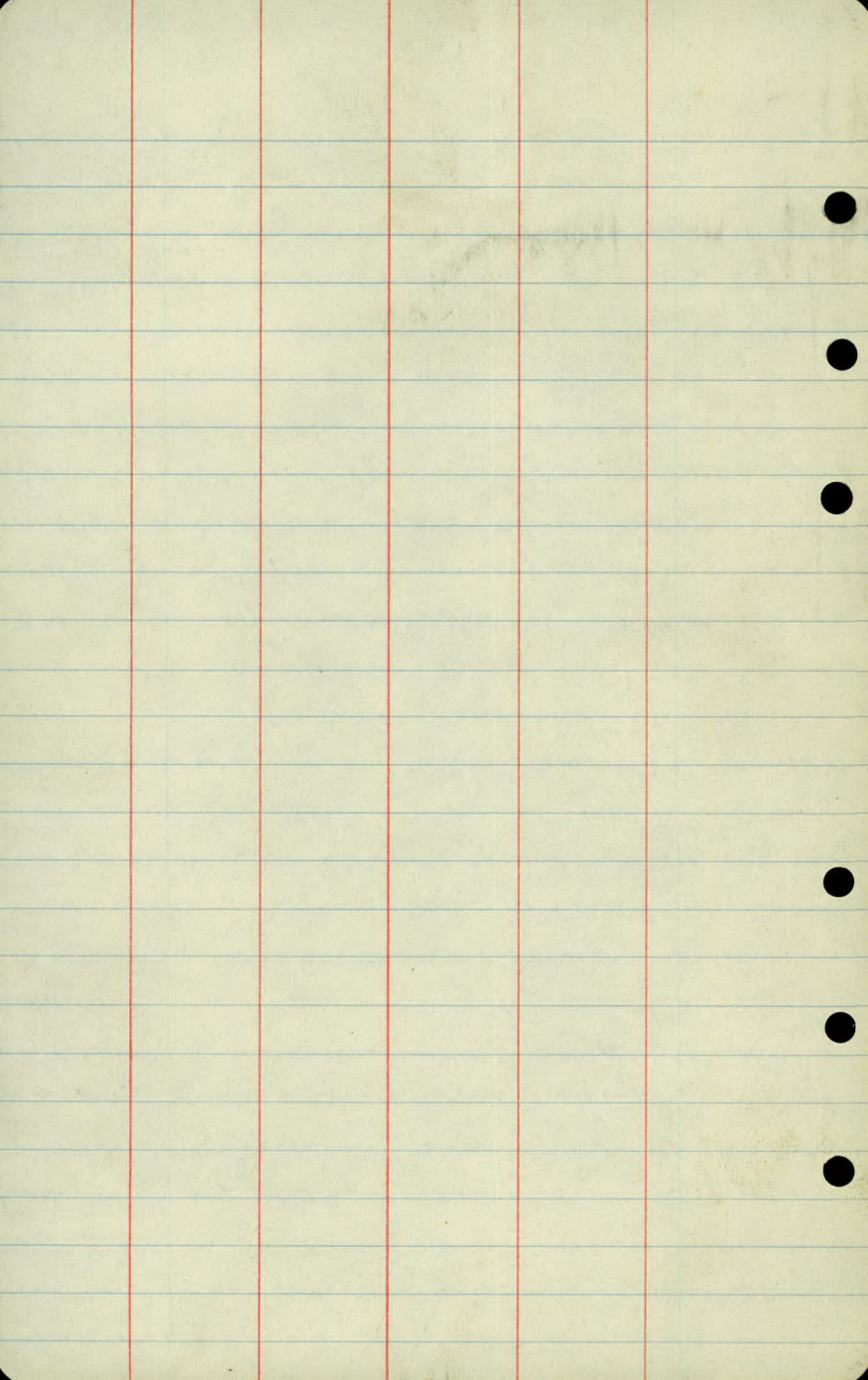
8.6

Pothole 100' north

885
15
1035

Under Northwest Ave. (SE. Cor. Northwest Ave + Stillwater

200' N + 30' E of Stillwater + Grand Ave's.



Levels

Lake Ave.

Grand Ave. East

Sta	+	π	-	Elev.
B.M.	413	936.68		932.55

0 +00 = E Grand + Lake 5.2

1 4.7

+55

2 4.7

3 5.0

+78 = E Portland Ave. 5.22

4 5.4

5 5.6

+50 = Beg Swamp.

6 6.4

7 in swamp lt 6.8

8 6.5

9 +55 = End of swamp

2-27-46
K.A.
A.M.
C.F.

Lt.

E

Rt.

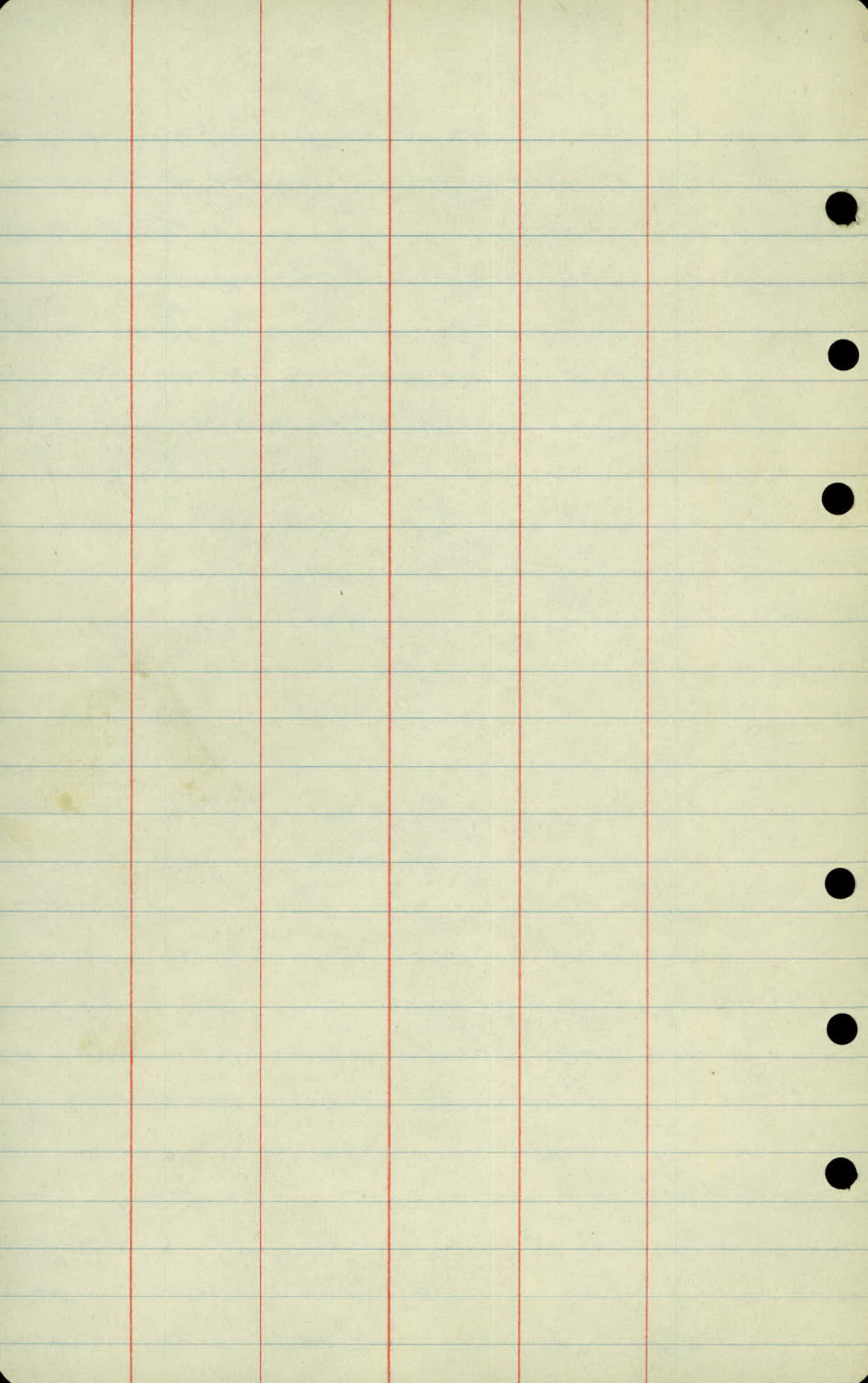
Spk in P.P. N.W. Cor. Portland + Lake

47 59 47
62 30

9.8
Top of ice

26.8
10.4
75

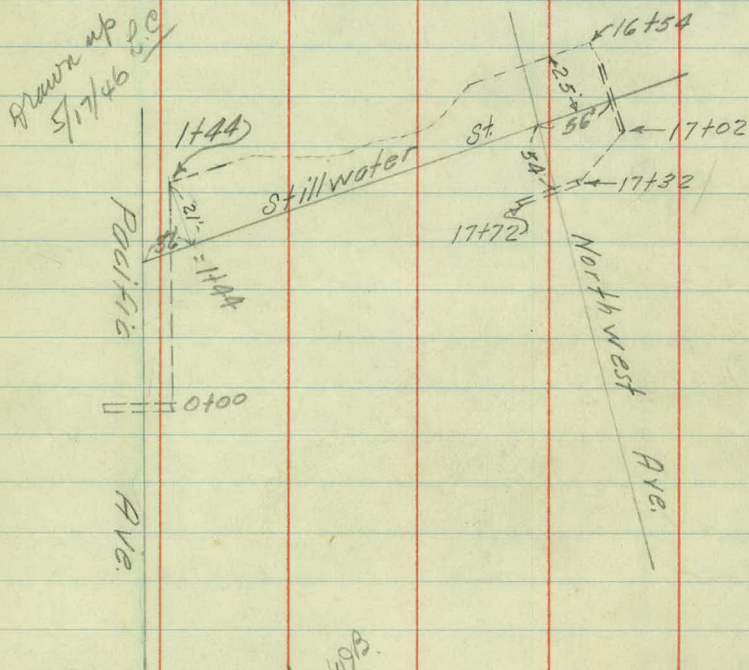
26.0
10.7
35
26.1
10.6
50



Ditch Levels

STILLWATER ST

Pacific Ave. to Northwest Ave.



Reid 4/25/46 W.B.
no mesh

6 pages

Sta	+	π	-	Elev.
B.M	6.23	927.40		(921.17)
0 +00 = E. End	18" C.M.		6.3	21.1
	+50		6.5	20.9
1	+91		6.1	21.3
	+98		5.0	22.4
1	+21		4.8	22.6
	+34		5.0	22.4
	+38		5.8	21.6
	+44		7.1	20.3
2			7.0	20.4
3			6.7	20.7
4			5.5	21.9
	+50		5.4	22.0

4-24-46

K.A.

A.M.

C.F.

2

Lt.

road

£

Et.

FL. E. End 18" C.M. under Pacific Ave.

Δ in ditch on N. side of Stillwater St.

Sta	+	π	-	E/er
		927.40		
5			5.2	22.2
T.P.	8.73	932.74	3.39	924.01
+75			10.3	22.4
+77			7.0	25.7
6 +05			6.6	26.1
+07			9.6	23.1
+50			9.3	23.4
7			8.9	23.8
+50			8.7	24.0
8			8.4	24.3
+50			8.1	24.6
9			7.9	24.8
+03	X Drain			

Lt.

road
E

Rt.

FL. W. End 12" C.M. 23' N of E

71

FL. E. End 12" C.M. 24' N. of E

4.0
R/W

1.8
R/W

5.7

1.5
R/W

4.7

5.5
R/W

5.4

FL.
25.3
7.4
18'

10" X 26' C.M.

FL.
25.9
6.8
8

Sta	+	π	-	Elev
		932.74		
10			8.1	24.6
11			7.7	25.0
12			7.5	25.2
T.P	5.88	933.01	5.61	927.13
13			8.1	24.9
+49 X Drain				
14			7.5	25.5
+50			7.2	25.8
15			6.5	26.5
+63			5.8	27.2
+70			4.5	28.5
+77			3.8	29.2
+86			3.4	29.6

Lt.

Q

Et.

25.4

W.S. = 7.3

+35 Approx rod in ctr. of pot hole

5.4

5.5

6.4

25.4

F.L.

25.2

7.6
W.S.

7.8
13

10" X 24' C.M.

25.2

7.8
11

6.0

5.1

Approx E Northwest Ave.

Sta	+	π	-	Elev.
		933.01		
16			4.1	28.9
+07			6.2	26.8
+54			6.6	26.4
+61			6.8	26.2
+70			4.3	28.7
+79			3.9	29.1
+94			4.4	28.6
17 +02			7.2	25.8
+32			7.5	25.5
+36			4.7	28.3
+47			4.0	29.0
+58			4.6	28.4

angle in ditch

F.L. N. End 15" C.M.

& Stillwater Ave.

F.L. S. End 15" C.M.

F.L. E End 15" C.M.

& Northwest Ave.

Sto.	+	π	-	Elev.
		933.01		
17 +63			7.0	26.0
+72			7.6	25.4
T.P.	4.31	936.51	0.81	932.20
B.M.			3.90	932.61

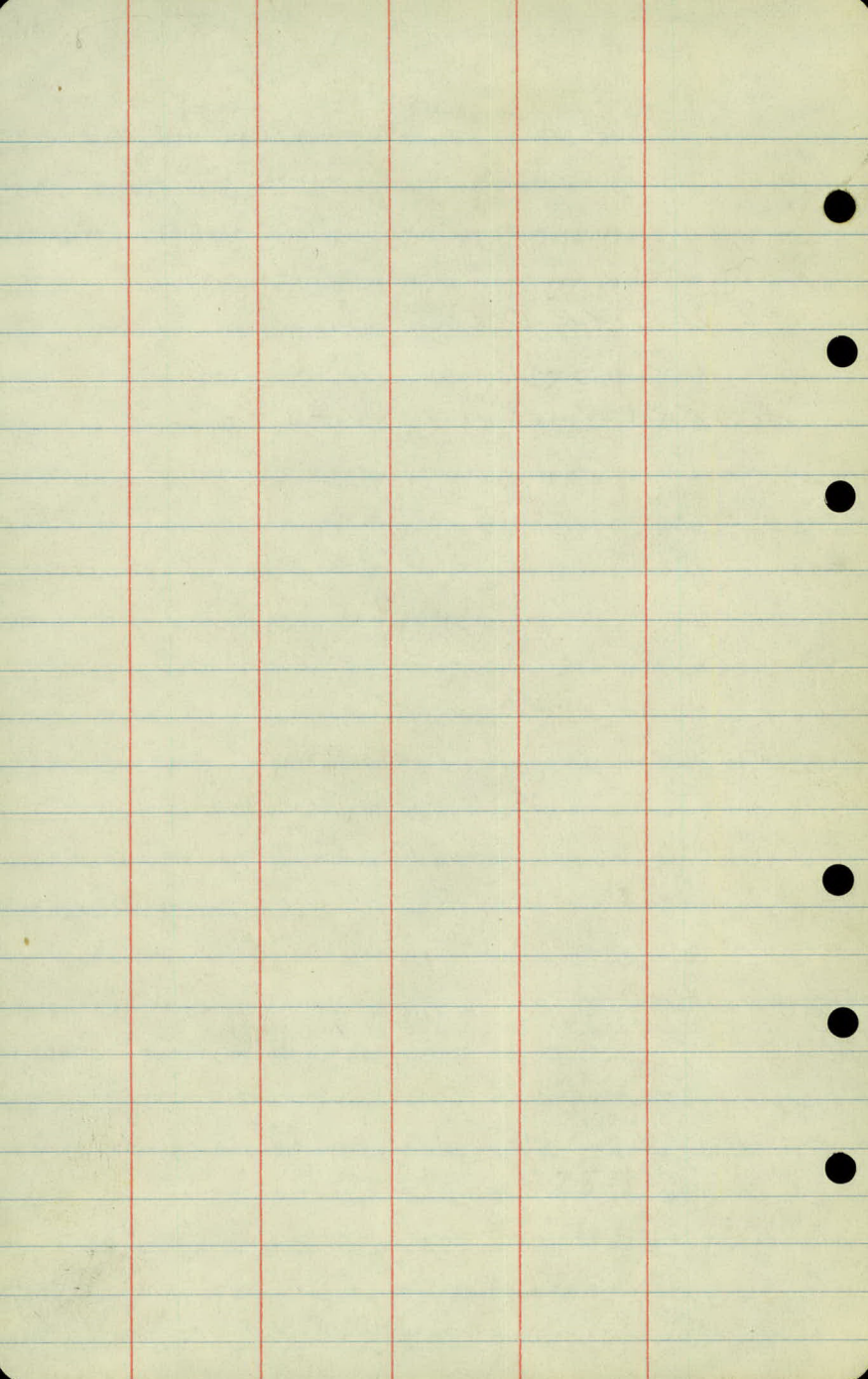
Lt.

C

Rt.

Fl. W. End 15" C.M.

Spk. in P.P. N.W. Cor. Portland + S.T.H. 96



Ditch Levels
North Ditch S.T.H. 96
Vicinity of Northwest Ave.

Worked up 3/13/46
HAR

7 Pages

N Edge
Prov.

Sta	+	π	-	Elev
B.M.	2.73	935.28		932.55

0	100		30.4	
			4.9	

+15

+40

+91

+60

1

31.1
4.2

+15

+40

North
Ditch

3-13-46
15-A.
AM.
CF.

Spk in P.A. N.W. Cor Portland + 96

25.9

7.4

29.9

5.4

20.2

5.1

28.9

6.4 FL. VI. End 15" Ent. Culv.

28.9

6.4

30.0

5.3

30.9

4.4

21.6

3.8

Sta	+	π	-	Elev.
		935.28		

1 +58

+85

2			3.9	31.4
---	--	--	-----	------

+08

+10

+50

T.P	1.77	936.50	0.55	934.73
-----	------	--------	------	--------

3			4.9	
---	--	--	-----	--

+50

North
ditch

2

30.1
4.6

31.6
3.7 = E Portland Ave.

31.4
3.9

30.9
4.4 shoulder

30.73
4.55 W. End 15" G.M. Under Portland

29.9
5.4

30.2
6.3

30.4
6.1

North
Edge
Pav.

Sta.	+	π	-	Elev.
		936.50		

4			4.6	
---	--	--	-----	--

+50

5			4.8	
---	--	--	-----	--

+72

6			5.2	931.3
T.P.	4.01	935.33	5.18	931.32

+30

+70

7			4.5	
---	--	--	-----	--

North
ditch

3

30.1

5.8

30.9

5.6

31.0

5.5

31.7

4.8

= E Grand Ave.

31.4

5.1

30.8

4.5

30.6

4.8

28.8

6.5

North
EDGE
POV -

Sta	+	T	Elev
-----	---	---	------

935.33

7 +50

8

5.1

30.2

+50

+60

9

5.7

29.6

10

5.8

T.P.

4.75

934.23

5.85

929.48

11

4.7

29.5

12

4.9

29.3

North
ditch

4

28.4
6.9

26.3
9.0

26.9
9.4

24.3
11.0

= Beg. Swamp

24.3
11.0

24.2
11.1

24.2
10.0

24.1
10.1

North
Edge
Pav.
—

sta + π
934.23

12 +98

13 5.0 29.2

14 5.0

T.P 505 934.26 5.02 929.21

14 +50

+86

+97

15 48 29.4⁵

+07

North
ditch

5

26.1

8.1

FL. 24" X Drain North End.

24.6

9.7

24.6

9.7

End Swamp.

25.3

9.0

24.8

9.5

FL. 15" L.M. ENT Culv.

28.7

5.6

28.7

5.6

Sta	+	π	-	Elev.
		934.26		

15 116

16			46	296 ⁷
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17

18

T.P.	507	934.33	5.00	929.26
T.P.	505	934.61	4.77	929.56
T.P.	5.87	936.71	3.77	930.84
T.P.	4.72	936.62	4.81	931.90
B.M.			4.06	932.56

North
ditch

6

24.8

9.5 F.L. 15" C.M. Ent Cul.

24.9

9.4 Ditch begins to meander N.W

24.0

10.3

22.8

11.5 = Approx. begin of ditch 11

Spk. in P.R.N.W. Cor. Portland & 96

