

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Profile Wood Ave. Birch Lake Ave. to

Survey
Park Ave. & Eagle Ave. Vicinity

Wood Ave, Birch Lake Ave. to Birch Lk. Blvd. No.

Mullally Prop. At Stillwater St. survey Sewer
Eagle Ave. from Buffalo St. to 1498' S.,
From Buffalo St. from Eagle Ave. to 591' East.

stating storm sewer 52 to 62
storm sewer thru Mullally Prop.

Road Acc't. No.

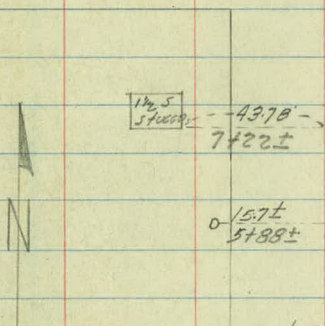
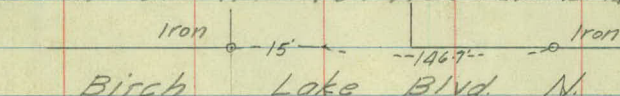
Date Filed. 11-14-46

File

Profile

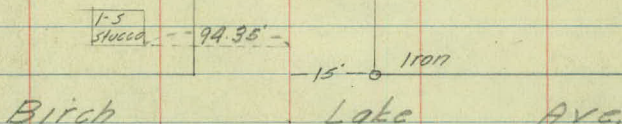
WOOD AVE.

Birch Lake Ave. to Birch Lake Blvd. N.



15 to 20 trees
10 stumps

6 Pages



Worked up
HAW 3/22/46

Sta.	+	π	-	Elev.
B.M.	1.61	936.41		934.80

0 +00 = E Birch Lake Ave 4.3

32.1

+15

31.5

+18

31.3

+21

31.7

+26

31.9

+33

31.6

+60

31.7

+70

31.2

3-20-46
K.A.
A.M.
C.F.

94-35

2

20 Lt

E

20 Rt

Top Hyd. 100'± W of Int. Wood + Birch Lake Aves.

49

51

47

45

31.7

4.7

48

31.7

4.7

47

31.7

4.7

52

31.6

4.8

Sta.	+	π	-	Elev.
		936.41		
1			4.9	31.5
	+50			32.0
2				31.6
	+25			31.5
	+60			32.2
3				33.5
	+50			32.7
	+80			32.4

20.6t

2

20.1t

31.6
4.8

4.9

31.5
4.9

4.4

4.8

4.9

4.2

33.2
3.2

2.9

34.2
2.2

3.7

4.0

Sta.	+	π	-	Elev.
		936.41		
4				32.3
+50				33.9
5				33.6
T.P.	3.50	937.94	1.97	934.44
+50				32.4
+88				32.3
6				32.1
+105	2 nd ditch 1 st .			32.3
+16	E street			32.2

20' Lt.

2

20' Rt.

4.1

34.1

2.3

2.5

33.3

3.1

2.8

5.5

5.6

5.8

6.1 6.2 6.2 6.0 5.6
200 100 60 20

53 54 53 53 57
100 60 25

Sta.	+	π	-	Elev.
		937.94		
6	+31			32.2
	+48			32.5
7				33.1
	+50			32.8
8				32.3
	+50			32.2
9				32.5
	+21.7	Edge Pav.		32.22

$$1122 = 43.78$$

5

20 Lt

E

20 Bk

6.2 6.2 6.2 6.1 57
200 100 60 25

4.7

5.4

3.9

4.8

3.6

5.1

4.9

5.6

5.6

5.6

5.7

5.4

5.72

sta + π - Elev.

937.94

9 +31.65 @ Birch Lake Blvd. N. 32.12

T.P. 1.37 936.26 3.05 934.89

B.M. 1.45 934.81

(934.80)

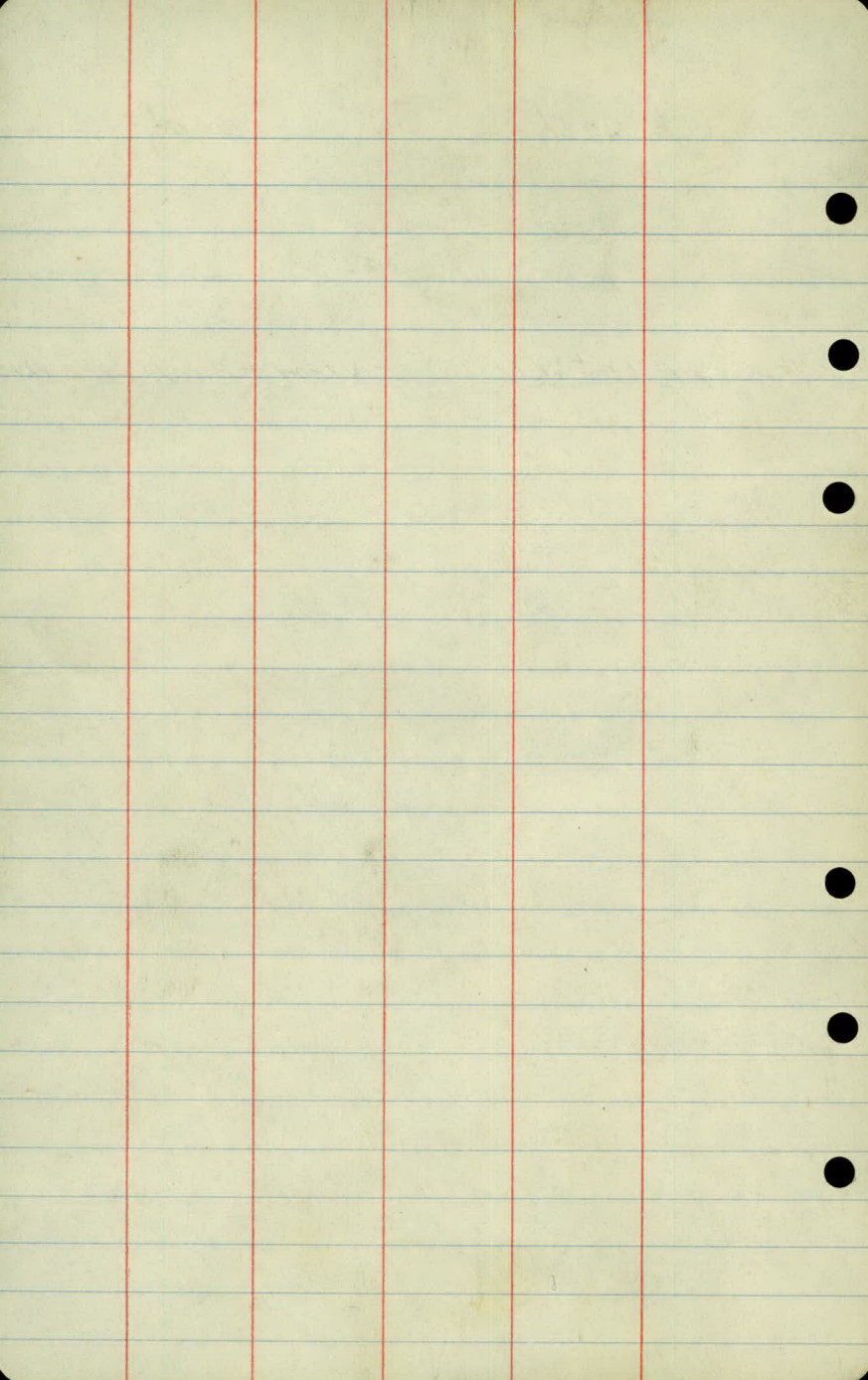
20' Lt

E

20' Rt.

582

Top Hyd 100'± W of Int. of Wood + Birch Lake Ave



Staking Notes

storm sewer

Wood Ave.

5th to 6th

Sta.	P.G.	P.G.R	-	Elev.
B.M.	5.28	937.68		(932.90)

0 +00 Inv. South = 1458 923.10 ✓

0 +00 925.58 12.10

+25 25.68 12.00

+50 25.78 11.90

+75 25.88 11.80

1 25.98 11.70

+25 26.08 11.60

+50 26.18 11.50

K.A. 10-17-41
A.M.
M.B.

L

E

P

Top M.H. Bin at 5100100

10'0.5.

0.62 0.85 ✓
5.9 5.8

0.62 0.65 ✓
5.8 5.8

0.62 0.65 ✓
5.7 5.7

0.62 0.65 ✓
5.6 5.5

0.62 0.65 ✓
5.6 5.8

0.62 0.65 ✓
5.4 5.7

0.62 0.65 ✓
5.3 5.0

Sta.	P.G.	P.G.R	-	Elev
		93768		

1	+75	26.28	11.40
---	-----	-------	-------

2		26.38	11.30
---	--	-------	-------

	+25	26.48	11.20
--	-----	-------	-------

	+50	26.58	11.10
--	-----	-------	-------

	+75	26.68	11.00
--	-----	-------	-------

3		26.78	10.9
---	--	-------	------

	+30	26.90	10.78
--	-----	-------	-------

L

E

R

06.2 ✓
5.2

06.2 ✓
5.1

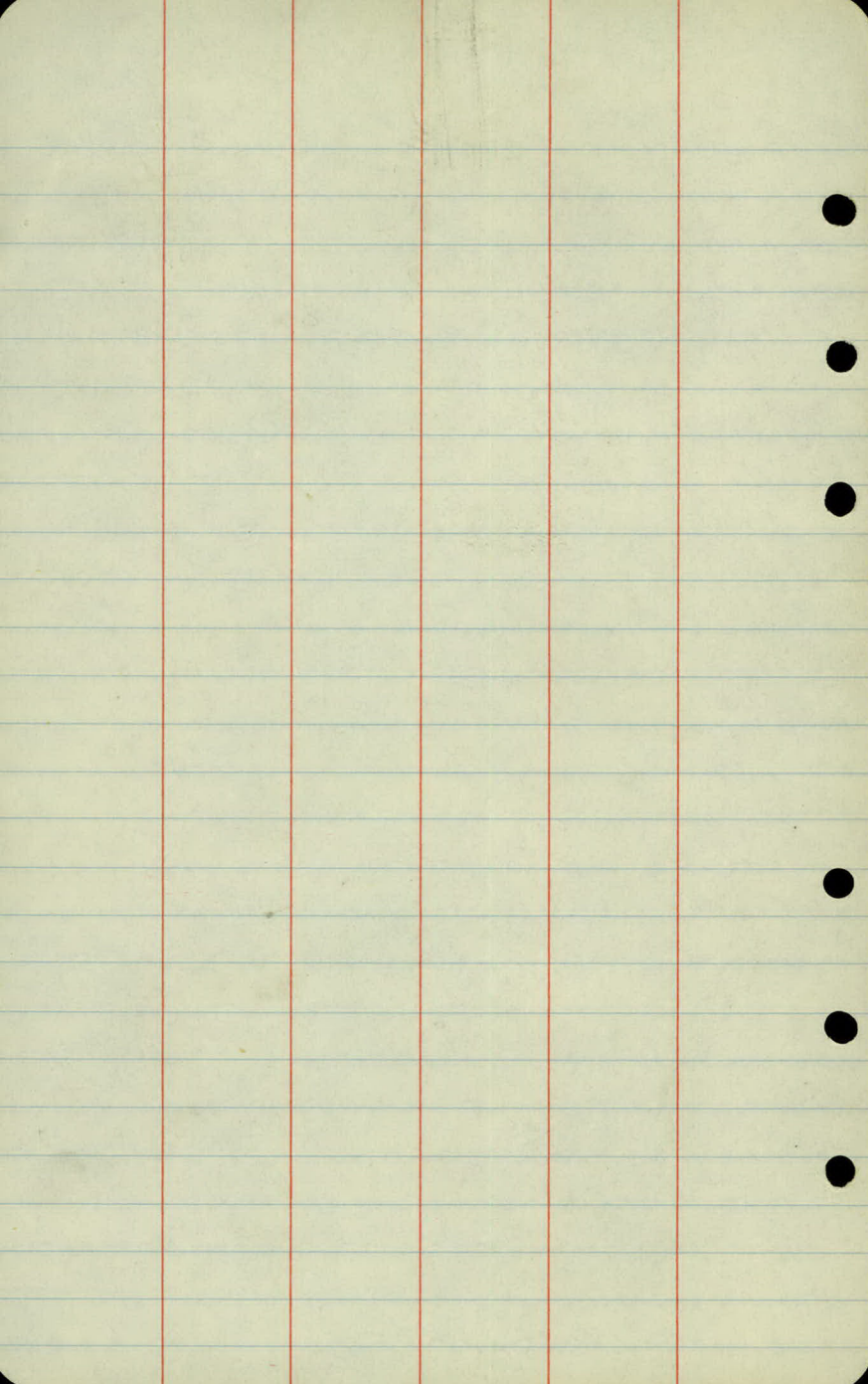
06.2 ✓
5.0

06.2 ✓
4.9

06.0 ✓
5.0

05.7 ✓
5.2

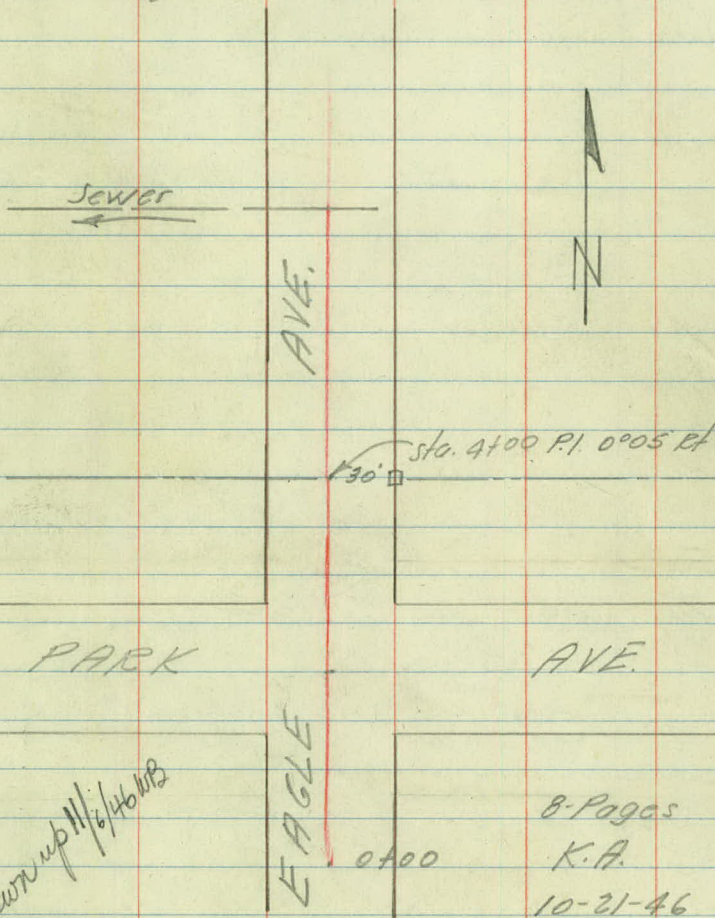
05.6 ✓
5.8



W.B.T.

DRAINAGE SURVEY

Vicinity of Park Ave + Eagle Ave

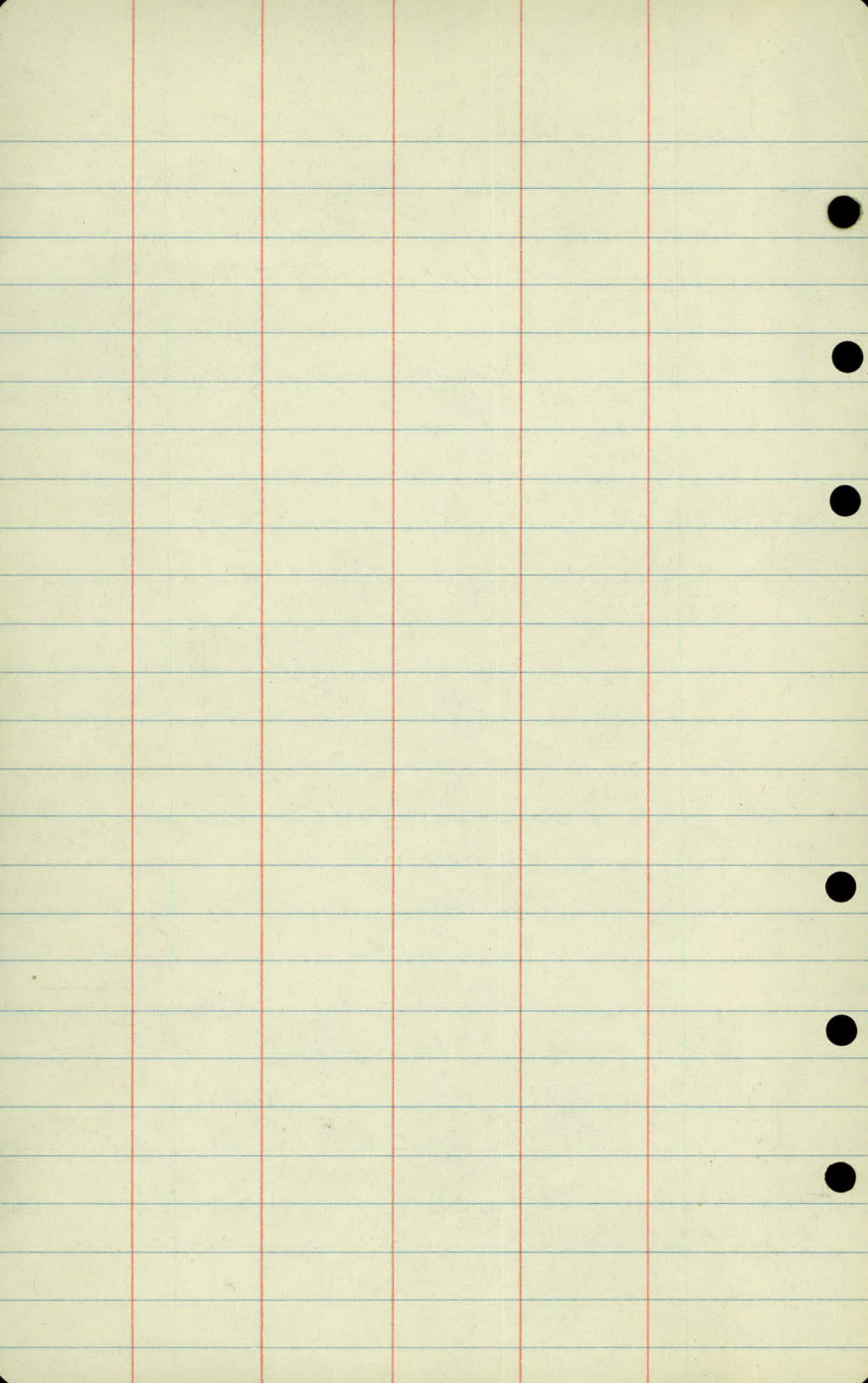


Drawn up 11/2/46 W.B.

8 Pages

K.A.

10-21-46



Topography

+76-PP-27'

+48-Ent.-18"X26'CM
25'

5 +04-15'X46'CM X DND-23-23'
10' 11'

4 +09-NE Cor Ho-51'
+07-15' Elm-20'

+35-PP-27'

+64-16"BE-20

+77-Ent/Hedge-26'

+36-Ent.

+33-NE Cor Ho-52'

+26-Asa Hedge-26'

+09-PP-27'

3 10' 11'

+82-SW Cor Ho-32'

+78-Ent/Fe-29'

+60-Fe Cor-29-52'

Rad=36' → +46.5-Edge Max. Pot Rad=34'

+26.5-Edge Max. Pot Rad=46'

+13-PP-29'

2 10' +09-St Sign-25' 106-St Sign-26'

+85-Rad-10'

+53-S.E. Cor Store-39'

+53-Woods-47'

+04-2' Camp Walk-17'

10' 10'

+99-SE Cor Ho-58'

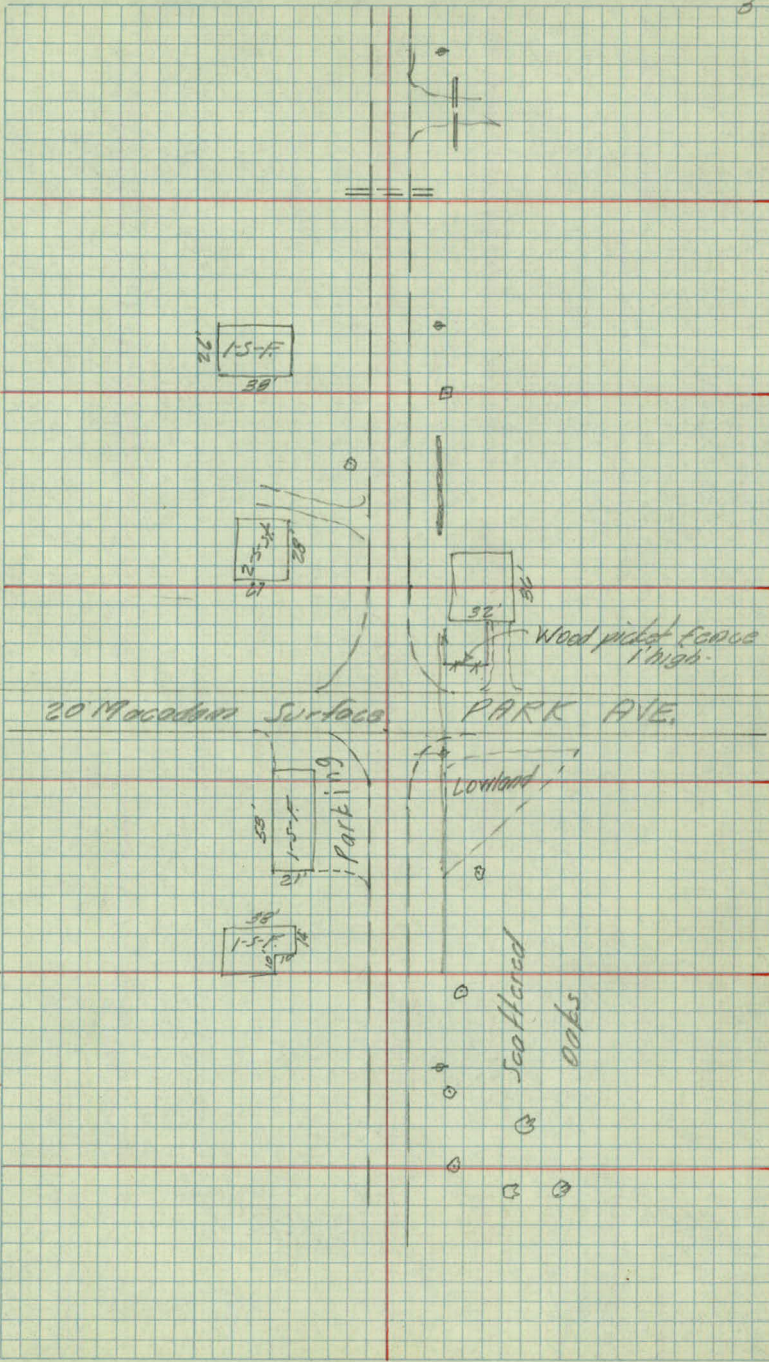
+90-18"O-39'

+67-Ent.

+50-PP-26'

+39-18"O-32'

0 9' 11' Beg Woods-35'



8

7

10 10'

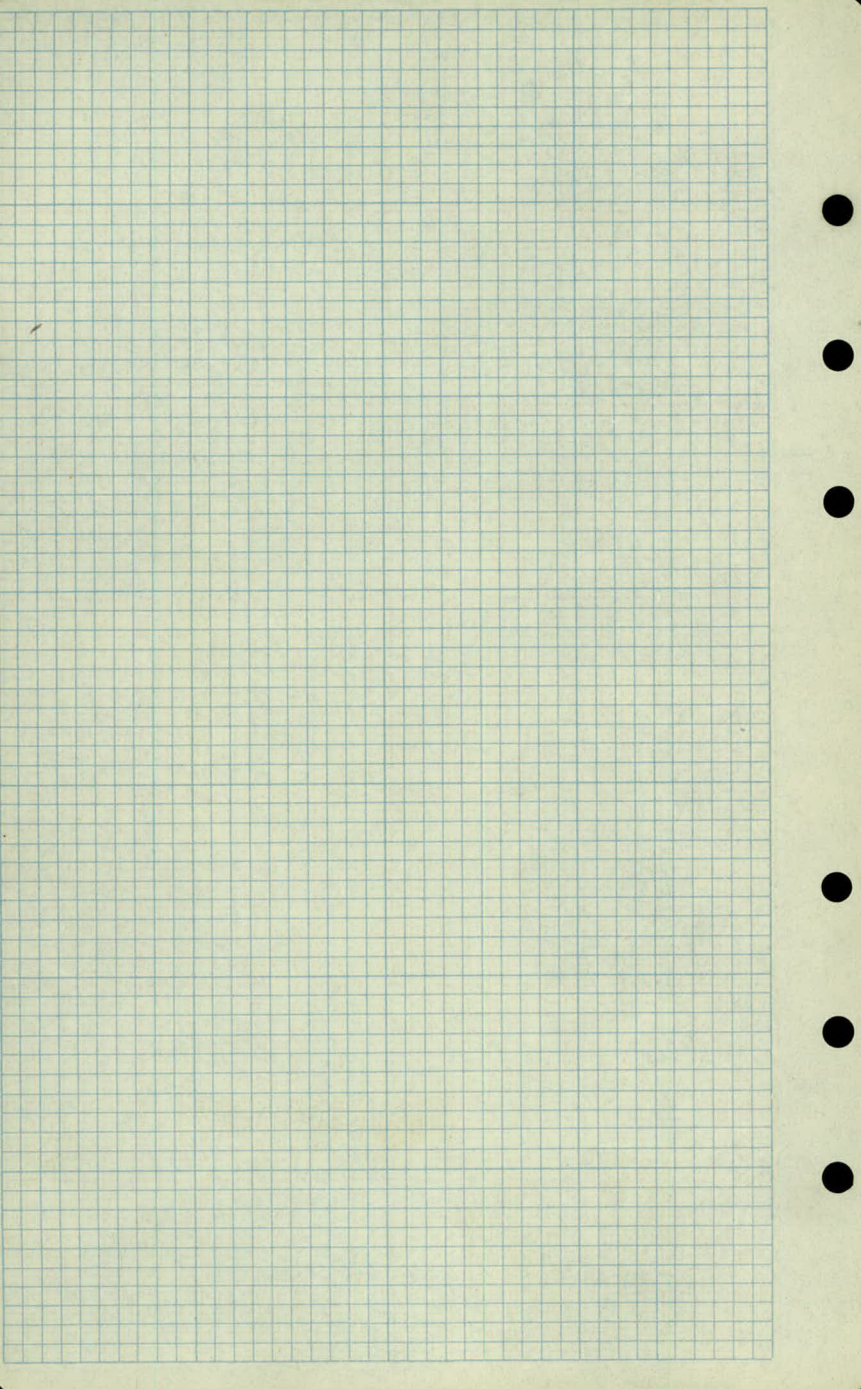
+51-Ent.

+62-Beg 24" Sewer-23.5'

6

10' 11'

24" S.G. Seward
(clean)



Xsections

Sta	+	π	-	Elev.
B.M.	6.26	928.76		922.50

0	+00			25.0
---	-----	--	--	------

	+50			24.4
--	-----	--	--	------

1				24.2
---	--	--	--	------

	+23			24.1
--	-----	--	--	------

	+50			24.1
--	-----	--	--	------

	+75			24.0
--	-----	--	--	------

2				24.2
---	--	--	--	------

T.P.	3.04	928.10	370	925.06
------	------	--------	-----	--------

	+08			24.3
--	-----	--	--	------

Lt.

E

Rt.

Top Mount rt. sta 4100

59 59 59 45 41 38 41 44 56 52 51 ✓
50 41 15 11 9 10 14 19 36 50

62 61 51 48 44 46 49 54 51 38 ✓
50 14 11 9 10 15 17 26 50

40 46 53 49 46 48 53 46 42 31 ✓
50 26 14 9 11 15-17 19 34 50

44 44 50 53 51 47 50 54 48 53 50 ✓
50 27 18 16 9 13 14-17 19 30 50

64 59 56 53 49 47 50 54 59 40 58 ✓
78 50 28 11 8 10 17 22 34 50

at bldg
49 53 51 49 48 51 58 63 69 68 ✓
39 16 11 8 9 13 17 29 50

49 48 50 48 46 49 50 75 77 70 ✓
39 30 21 10 8 17 25 35 50

38 38 43 39 38 43 42 68 71 71 ✓
41 41 23 9 17 21 28 42 50
50
45

Sta	+	π	-	Elev
		928.10		

2 +20

24.5

+26.5

Road Ave

24.7

+36.5

24.8

+46.5

24.7

+80

23.9

3

23.5

+50

23.2

4

23.0

B.M.

422

926.72

5.60

922.50

Lt

E

Rt

39 41 40 36 36 39 36
50 36 27 11 32 50

✓

37 36 34 34 334
50 22 12 50

✓

35 33 31
50 50

✓

37 34 34
50 50

✓

42 47 55 50 49 44 42 48 49 45 42
50 16 14 13 10 7 11 20 33-50

✓

38 50 56 52 50
50 17 14-13 11 9

46 51 53 54 = 1/10g.
10 11 31

✓

54 58 60 53 49 56 63 67 67 62 58 61
50 22 15 10 11 17 20 22 24 33 50

✓

55 66 67 61 55 51 51 55 61 70 79 70 61 56 64
50 31 17 10 9 4 11 17 20-21 22 25 30 50

✓

Top Mont.

Sta	+	π	-	Elev.
		926.72		

4	+50			22.6
---	-----	--	--	------

5				22.1
---	--	--	--	------

+04 FL. 15" CM X Drain

+36 FL. S. End 18" Side Drain

+62 FL. N. End 18" Side Drain

+63				22.2
-----	--	--	--	------

6				22.4
---	--	--	--	------

+50				22.1
-----	--	--	--	------

+62 FL. E. End 24" Sewer

B.M.	4.22	922.50	922.50
------	------	--------	--------

Lt.

4

Pt.

60 6.8 45 47 46 41 4.7 51 64 6.4 53 5.3
50 35 19 15 10 12 18 22 24 27 50

✓
134
1.25
8.59

72 7.5 77 5.5 5.0
50 32 21 16 10

46 52 57 8.3 81 71 6.5
11 17 23 28 31 46

✓
63
h.c.

18.61
8.11

18.12
8.60

17.93
8.79
25'

17.60
9.12
25'

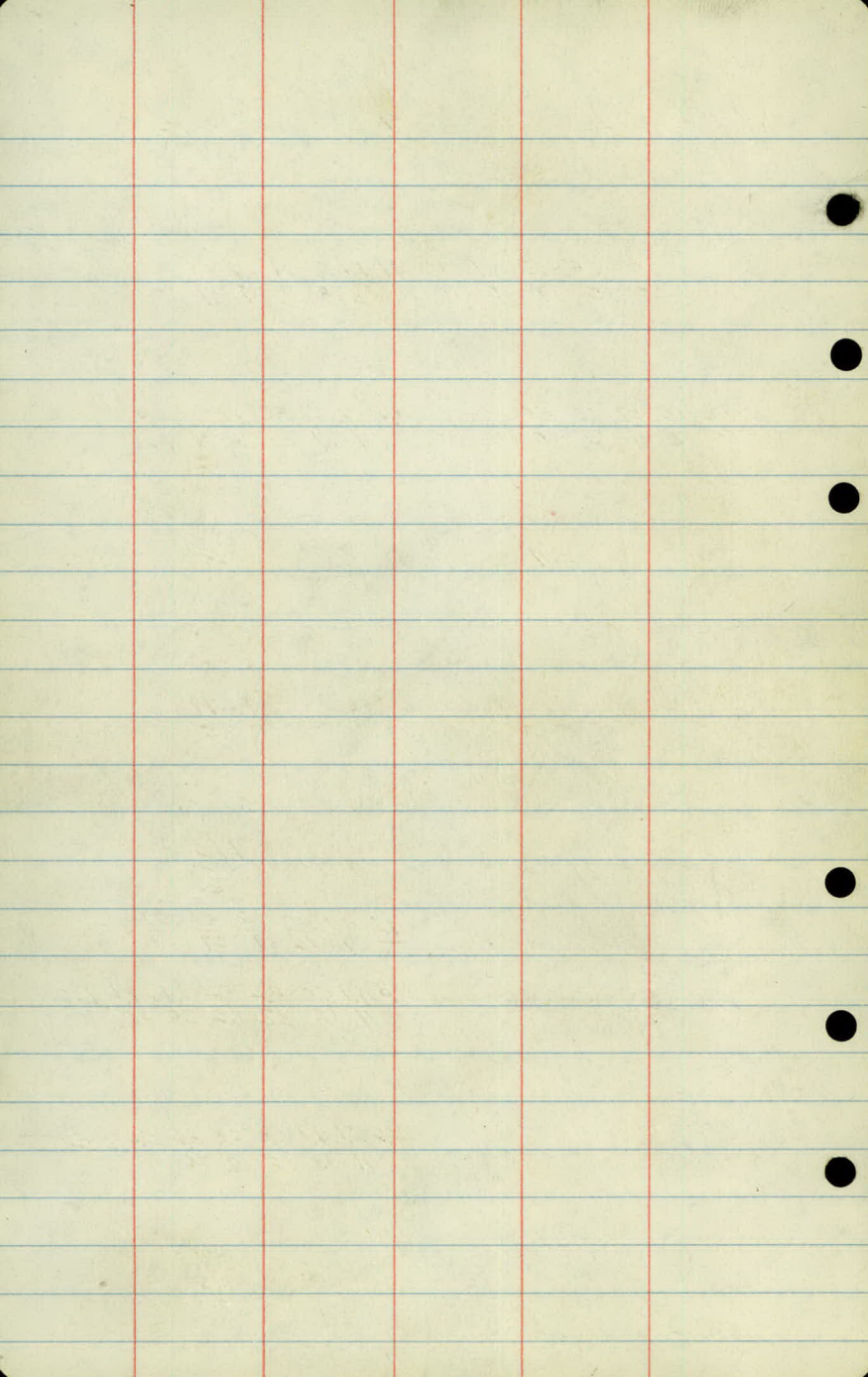
45 49 53 7.9 81 57 L.O. ✓
11 16 21 27 31

43 49 5.0 82 8.3 74 47 L.O. ✓
11 16 22 26 28 30

46 51 49 6.0 83 84 5.6 L.O. ✓
11 13 18 22 26 30

17.57
9.15
23.5'

Top Mont.



Storm Sewer
thru
Mullally Property

Sta	PG	PCR
B.M.	2.79	928.09

925.30

0 -18	21.8 27	6.29
-------	------------	------

0 +00	21.53	6.66
-------	-------	------

+25	21.15 38	6.94
-----	-------------	------

+50	20.77	7.32
-----	-------	------

+75	20.4	7.69
-----	------	------

1	20.02	8.07
---	-------	------

+15	19.79	8.30
-----	-------	------

+25	19.64	8.46
-----	-------	------

K.A.
A.M.
M.B.
C.F.

Rain, cold & windy

9-24-96

B.T.

6

8

8

Spt. in 18" Elm S.W. Cor of Sewer & Stillwater St.

B.M. $\frac{92.30}{5.53}$ C.P.

+2.0

430

Ht = 980.88

9.03

+4.8

2.18

Corroded grade stakes
9.14.96

+3.0

394

Batter B. 366

9.68

+2.8

452 8.30

Corroded grade

+2.6

509

Batter B. 4.43

1043

+2.0

607

+2.0

630

M.H. #1

2.50

598

Sta	PG	PGR		
		92809		
1	+50	19.26	8.83	
	+75	18.89	9.20	
2		18.51	9.58	
	+25	18.13	9.85	
	+50	17.75	10.33	
	+80	17.30	10.79	
T.P	3.69	923.99	7.79	920.30
3	17.00	6.99		
	+25	16.62	7.37	

L

E

~~4~~

+3.5

533

+2.5

67

+3.0

658

+3.0

685

+3.0

7.33

+3.0

7.79 M.H. 3

+2.80

4.19 6.99

5.69

+3.00

4.37

sta. PG PGR -
923.99

3 +50 16.24 7.75

+75 15.87 8.12

4 15.49 8.50

+25 15.11 8.88

+44.4 14.81 9.18

T.P. 7.62 92 8.83 ✓ 2.78 921.21 ✓

3.54 925.29 (925.30)

L

C

R

+3.3

445

7.75

+3.4

472

8.12

+2.9

560

8.50

+2.3

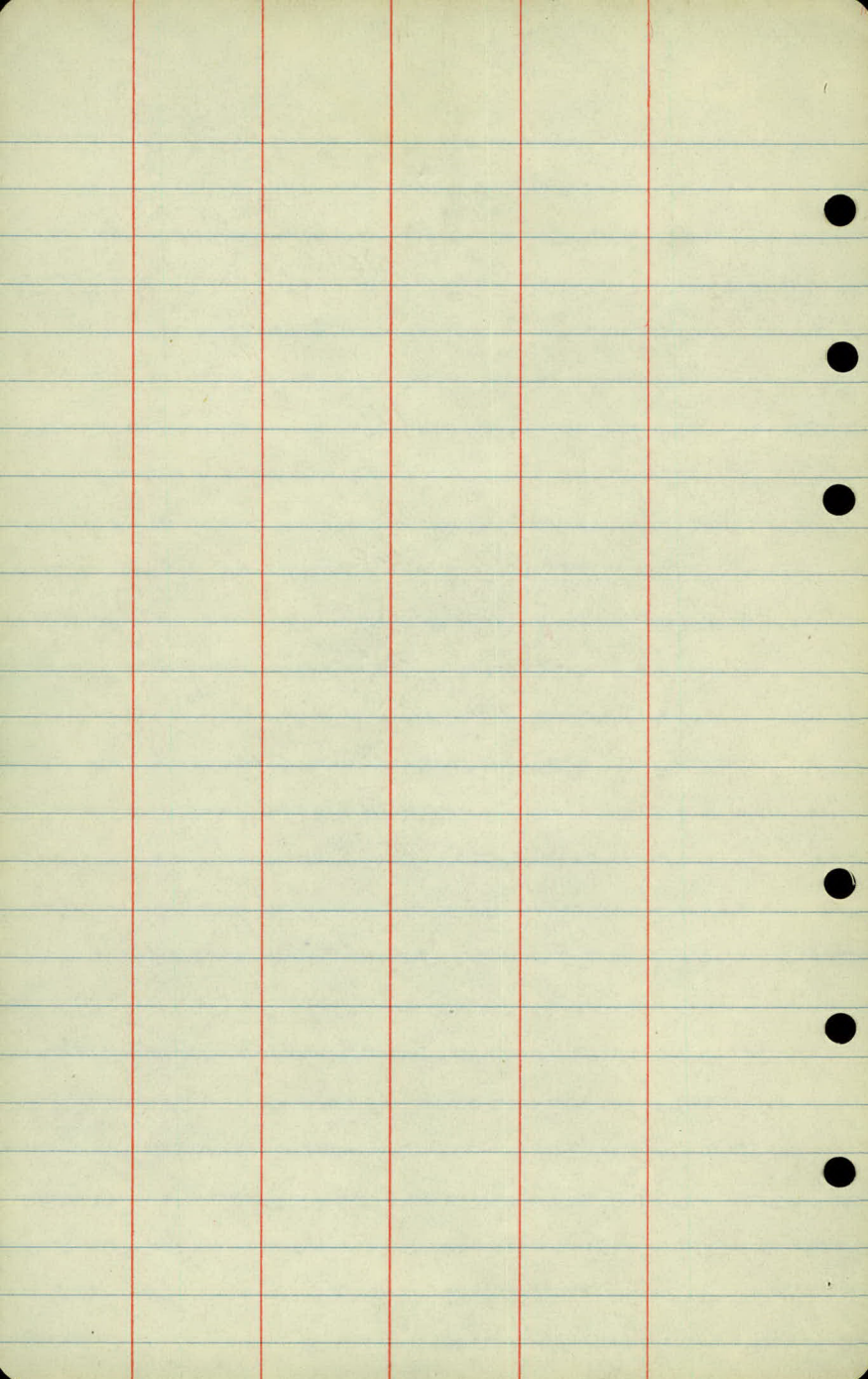
658

+2.0

718

(140)

867

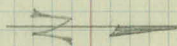


SEWER SURVEY
Stillwater St.
at
Mulally Prop.

9-Pages

Recd
June 4-46

Worked up
June 1946



Stillwater St

4+47.2 = }
End 125' }
6' 12 1/2" }
P.I. 4+19.5
 $\Delta - 31^{\circ}55'$
10.78'
607'
12" Willow

Street
(Vocated)

P.I. 2+80
 $\Delta - 41^{\circ}40' Lt.$

59+71.7
Stillwater St

50.48'

0+00

30.42'

R.P.

P.I. 1+15

$\Delta - 44^{\circ}00' Lt.$

Cor.
Ho

Profile of Sewer Line

Sta	+	π	-	Elev	
B.M.	3.33	934.33			931.00
T.P.	4.49	930.93	7.89	926.44	
B.M.			5.71	925.22	(925.30)
B.M.	1.78	931.01	1.78	929.15	(929.23)

0 -10 FL. End 12" C.M. 9.2 21.8

-09 5.5 25.5

0 +00 5.1 25.9

+11 5.2 25.8

+17 5.6 25.4

+28 6.5 24.5

+37 7.8 23.7

Lt.

E

Pt.

Spk. in PP NW Cor Bald Eagle Ave + Stillwater St.

Spk 18" Elm S.W. Cor Sewer + Stillwater St.

Spk. in 24' Oak N.E. Cor. Beaver and Stillwater Sts.

21.8

9.19

1

Sta.	+	π 931.01	-	Elev
0	+70		8.2	22.8
	+98		8.6	22.4
	+98	FL. 8" Tile	11.21	19.8
1	+05	FL. 8" Tile	11.20	19.8
	+07		8.7	22.3
	+15	P.I.	8.8	22.2
T.P.	2.20	924.53	8.68	922.33
	+58		2.6	21.9
2	-		3.1	21.4

Lt.

←

Rt.

18.8 + 50 - Reg. Trees
10'
5.70 = F.L. 8" Tile
5.7

20.8
3.7
6

Trees
11

Sta	+	π	-	Elev
		924.53		

2	+40		4.2	20.3
---	-----	--	-----	------

	+74		4.9	19.6
--	-----	--	-----	------

	+74 F.L. 8" Tile		7.4	17.1
--	------------------	--	-----	------

	+80 P.I.		5.1	19.4
--	----------	--	-----	------

3			5.2	19.3
---	--	--	-----	------

	+50		4.9	19.6
--	-----	--	-----	------

4			6.6	17.9
---	--	--	-----	------

	+195 P.I.		7.5	17.0
--	-----------	--	-----	------

	+43		8.0	16.5
--	-----	--	-----	------

Lt.

E

Et.

Trees
15'193 - $\frac{30'' \text{ Ash}}{7'}$

Sta	+	Δ	-	Elev.
		924.53		

4	+47.2	FL. 2 End 12" C.M.	9.22	15.31
---	-------	-----------------------	------	-------

	+47.2	Ground	10.5	14.0
--	-------	--------	------	------

	+61		9.9	14.6
--	-----	--	-----	------

T.P.	3.28	919.65	8.16	916.37
------	------	--------	------	--------

5			5.3	14.4
---	--	--	-----	------

	+31	Angle in ditch	5.5	14.2
--	-----	----------------	-----	------

	+65		5.6	14.1
--	-----	--	-----	------

	+98	Angle in ditch		
6			5.8	13.9

	+50		6.0	13.7
--	-----	--	-----	------

17

2

17

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

919.65

7			6.7	13.0
---	--	--	-----	------

+52.5	Beg. 6" Double Tile	6.22'	13.43	✓
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T.P.	Tile 9.33	922.76	6.22	913.43 ✓
	Covered			

+84	= End 6" Double Tile	10.09	12.67	
-----	----------------------	-------	-------	--

+85	Beg. 20" Vit. under	10.2	12.56	✓
-----	---------------------	------	-------	---

Bald Eagle Blvd.

T.P.	5.21	923.05	4.92	917.84 ✓
------	------	--------	------	----------

B.M.			2.33	920.72
------	--	--	------	--------

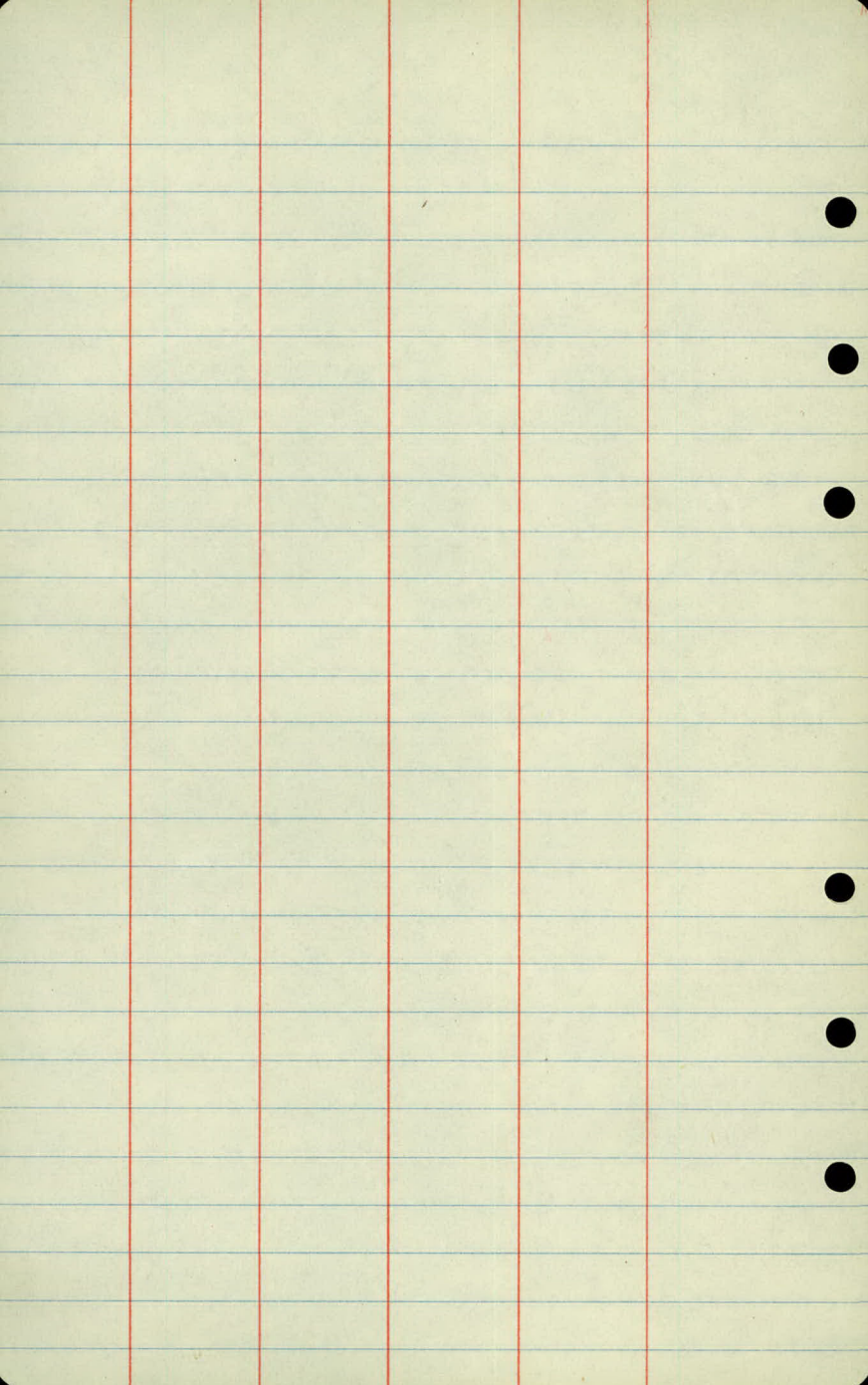
(92069)

Lt.

e

rt.

Top of Elbow Pipe at Bald Eagle Pump Ho.



Stadia of Ditch
South of Stillwater St.

6-3-46

Object	Azimuth	Dist	Rod	Elev.
--------	---------	------	-----	-------

H.I. = 931.01 ft

B.M.

5.71

(925.30)

North = $0^{\circ}00'$ $90^{\circ}00' = \text{East}$ E Stillwater St = $270^{\circ}00' = \text{West}$

End 12" C.M.	$184^{\circ}50'$	180	9.2	21.8
--------------	------------------	-----	-----	------

Ang. in ditch	$221^{\circ}30'$	56	9.4	21.6
---------------	------------------	----	-----	------

" " "	$219^{\circ}10'$	69	9.3	21.7
-------	------------------	----	-----	------

" " "	$223^{\circ}30'$	98	9.2	21.8
-------	------------------	----	-----	------

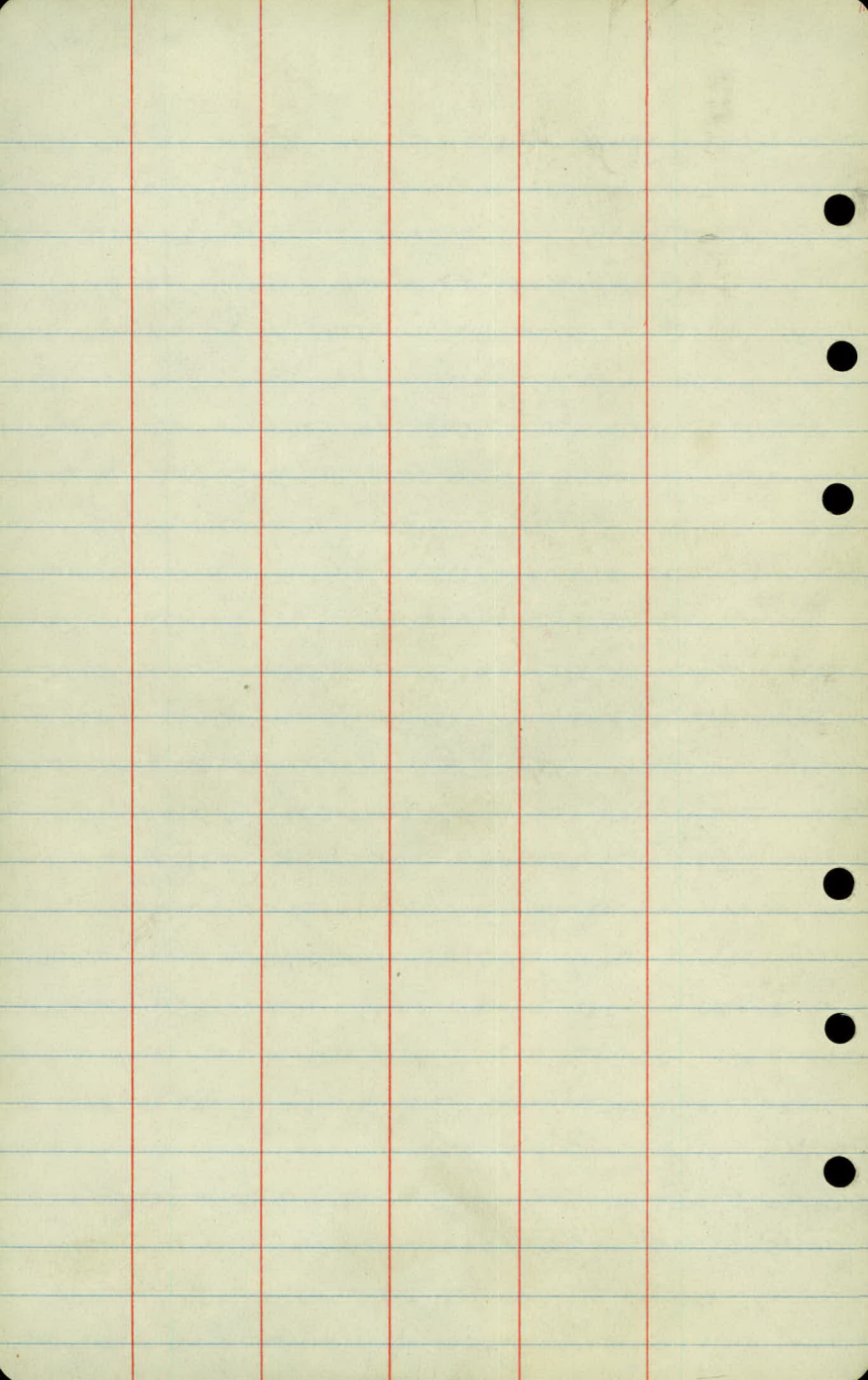
" " "	$203^{\circ}15'$	174	9.0	22.0
-------	------------------	-----	-----	------

" " "	$204^{\circ}-$	190	9.1	21.9
-------	----------------	-----	-----	------

End of ditch	$211^{\circ}35'$	200	8.3	22.7
--------------	------------------	-----	-----	------

Ditch begins about 50' south and

cont. to R.R. Culv.



1

PROFILE LEVELS DITCH
EAST-SIDE OF EAGLE-AVE NO.
FROM PARK TO BUFFALO

5-22-46

L.C

A.M

M.B

Rec'd 11/22/46

STA + π - ELEV

B.M 3.95 926.45 922.50

0+00 24" CONC-CULVT. 17.57

+50 18.3

1 18.3

+50 18.4

2 18.5

+50 18.8

+63 50 END 15" CM 18.76

+83 NO EN 15" CM 18.94

3 19.4

+50 19.9

T.P. 5.08 927.62 3.91 922.54

~~E~~
DITCH

Top MT. NO OF EAGLE + PARK

F.L.

8.88

8.2

8.2

8.1

8.0

7.7

F.L.

7.69

F.L.

7.51

7.1

6.6

STA + Δ - ELEV

927.62

3+99 SO END 15" C.M. 20.12

4+27 NO-END 15" C.M. 20.52

+50 20.7

+96 SO END 15" C.M. 20.89

5+10 NO END 15" C.M. 20.91

+50 21.0

+80 SO END 15" C.M. 20.93

6 NO END 15" C.M. 20.98

+22 EAST-END 10" X 35 CM X DIFIK 19.90

+22 WEST " " " " " 19.08

+50 21.3

+57 SO END 15" C.M. 21.03

+77 NO END 15" C.M. 21.07

8.
DITCH

F.L.
7.50

F.L.
7.10

6.9

F.L.
6.73

F.L.
6.71

6.6

F.L.
6.69

F.L.
6.64

F.L.
7.72
F.L.
8.54

6.3

F.L.
6.59

F.L.
6.55

STA + π - ELEV

927.62

7+00

21.5

+40 SO. END 15" C.M

21.63

+60 NO. END 15" C.M

21.68

8

22.3

+10 SO. END 15" C.M

22.27

+16 NO. END 15" C.M

22.30

+46 SO. END 15" C.M

22.53

+66 NO. END 15" C.M

22.68

9

22.8

+50

23.6

+70 SO. END 15" C.M

25.01

+76 NO. END 15" C.M

25.17

10

24.5

2
DITCH

6.1

F.L.
5.99

F.L.
5.94

5.3

F.L.
5.35

F.L.
5.32

F.L.
5.09

F.L.
4.94

4.8

4.0

F.L.
2.61

F.L.
2.45

3.1

STA	+	π	-	ELEV
-----	---	-------	---	------

927.62

T.P	7.08	932.68	2.02	925.60
-----	------	--------	------	--------

10+30

10+50

25.0

10+65 So END 18" C.M X DRAIN 24.71

+73

26.8

+98 & BUFFALO ST 27.3

10+10

26.8

+12 No END 18" C.M X DRAIN 25.23

+23 So END 12" C.M 25.37

+68 No END 12" C.M 25.65

Q
DITCH

3' RT. 15" OAK

7.7

F.L.
7.97

5.9

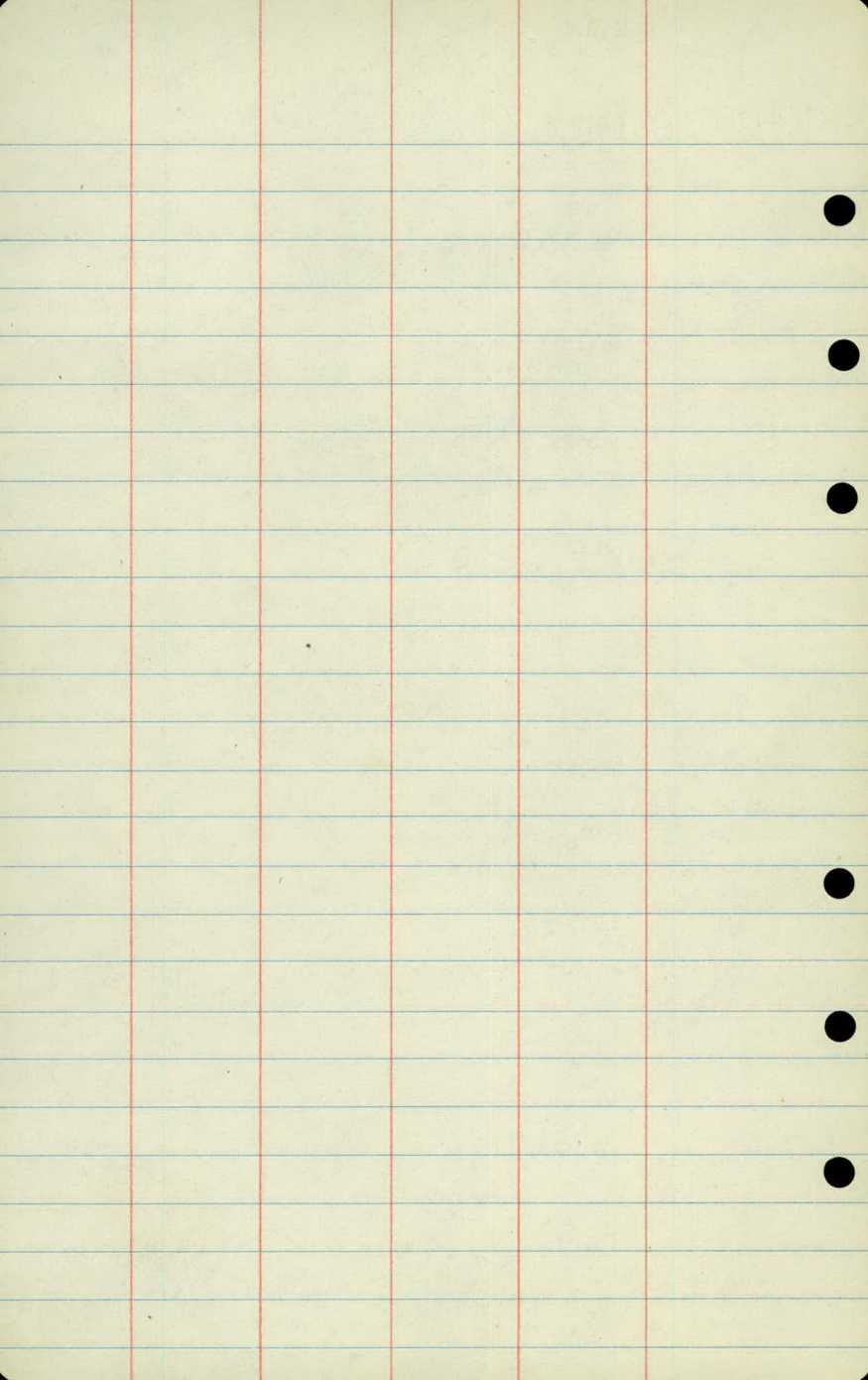
5.4

5.9

F.L.
7.45

F.L.
7.31

F.L.
7.03



PROFILE DITCH
NO. SIDE BUFFALO
FROM EAGLE AVE EAST

STA	+	+	-	ELEV
				932.68

0+00	= NO END 18" X DRAIN	25.23
------	----------------------	-------

+50		25.9
-----	--	------

1		26.2
---	--	------

+30	WEST END 12" C.M	26.30
-----	------------------	-------

+50	EAST END 12" C.M	26.57
-----	------------------	-------

+50	& 1' HAND DITCH NO	26.58
-----	--------------------	-------

+77		
-----	--	--

2		28.7
---	--	------

+08	WEST-END 12" C.M	28.70
-----	------------------	-------

+18	EAST " " "	29.10
-----	------------	-------

+50		30.3
-----	--	------

+79	WEST END 12" C.M	30.95
-----	------------------	-------

+99	EAST END 12" C.M	31.49
-----	------------------	-------

F.L.
7.45

6.8

6.5

F.L.
6.38

F.L.
6.11

$\frac{6.1}{50}$

6.1

15" P.O.P
~~6~~

4.0

F.L.
3.98
F.L.
3.58

2.4

F.L.
1.73

F.L.
1.19

STA + ∇ - ELEV

932.68

T.P 11.20 943.69 0.19 932.49

3+07

+18 WEST END 12" CM 31.94

+28 EAST " " 32.11

+50 33.2

+65

4 34.1

+33 WEST END 12" CM 35.04

+53 EAST " " " 35.68

+69

5 38.5

+05 $\pm$ 3' wooden steps 12 Risers

+50 40.5

+70 41.2

+91 Approx $\pm$ Rd. Lt. 41.5

4

8" TWIN DIRCK
3.0 LT

F.L.
 11.75
 F.A.
 11.58

10.5

15" OAK
1' LT

9.6

F.L.
 8.65
 F.L.
 8.01

12" OAK
8' LT

15" OAK
15' LT

5.2

3.2

2.5

2.2

STA	+	π	-	ELEV
		943.69		
T.P	2.40	933.88	12.21	931.48
	3.20	927.60	9.98	923.90
B.M			5.14	922.46 922.50

L

Top MT. No. PARK AVE + E 66 E

