1765

1765

CITY ENGINEER'S OFFICE

MADE IN U.S.A.

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THE FREDERICK POST CO.

ENGINEERING and DRAFTING SUPPLIES

P. O. Box 803 **CHICAGO**

Pages

2-7 - Location Prop. R.O.W. Thru Navy Destroyer Base Main to 32nd

8-10 - Ties - for above Job.

Xsec Alley Blk 79 Park Villas P. 14 23

24-31 - X-Sect. Delta - 40th to 41st

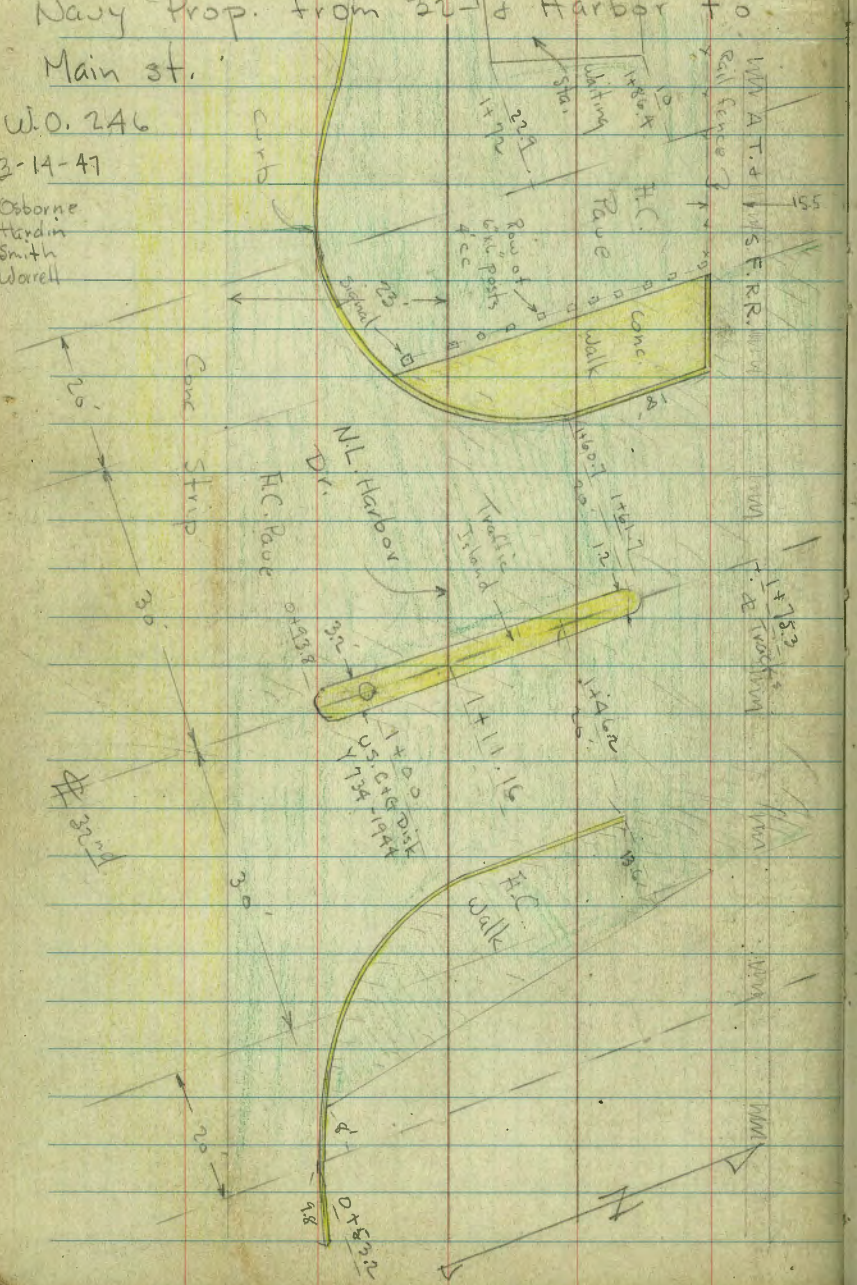
32-51 - X-Sect Law - Cass to Everts

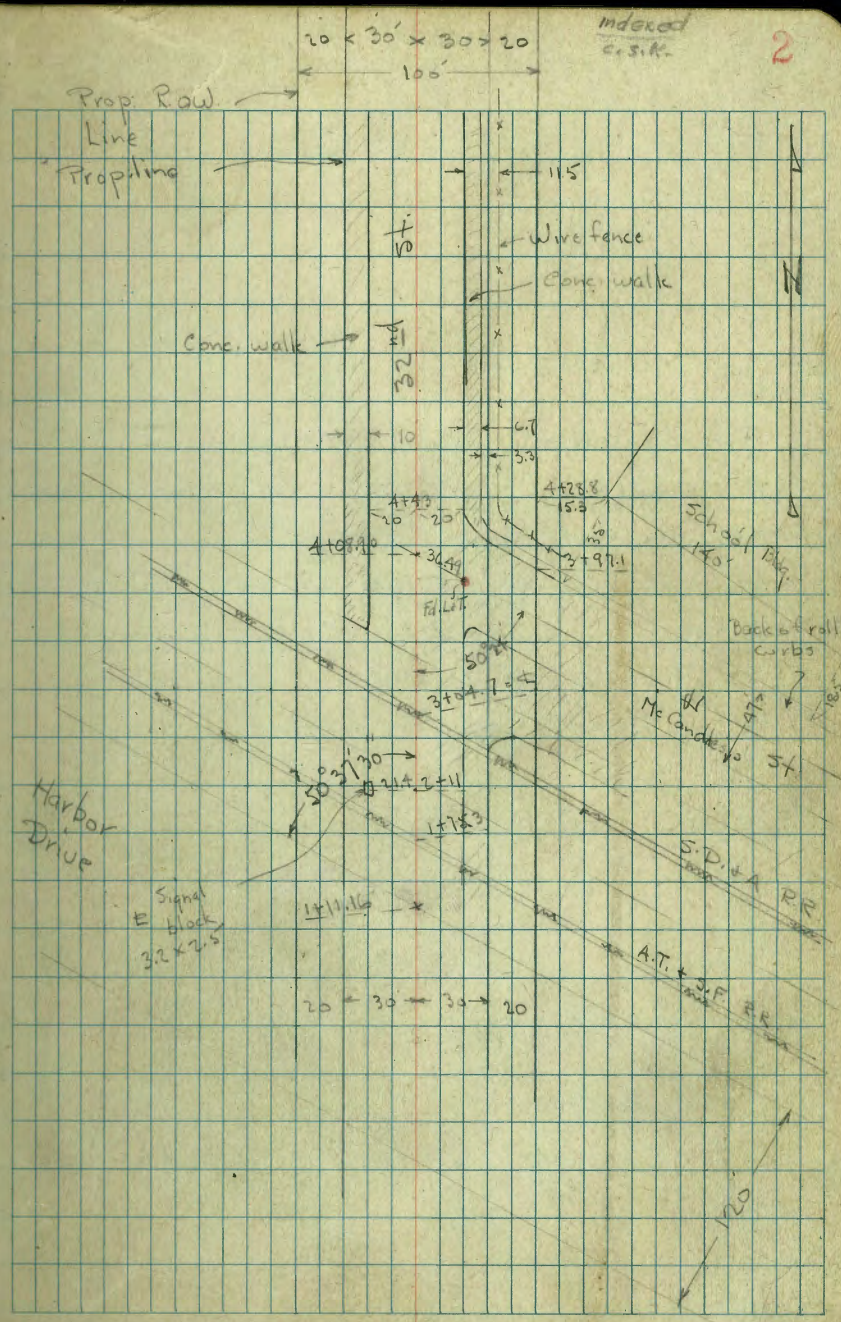
Location + Topo for Prop R.o.w. Thru Navy Prop. from 32nd & Harbor to Main St.

W.O. 246

3-14-47

Osborne
Hardin
Smith
Worrell





℄ Int. - c.t. in pave Sta 7+98.42 Ang. 29°37' Rt.

7+78 - Cross fence on Rt. - 7+84.5 - 32.6 Lt. - Cor Traffic office

7+38.23 = ℄ + Line in Norman Scott Rd.

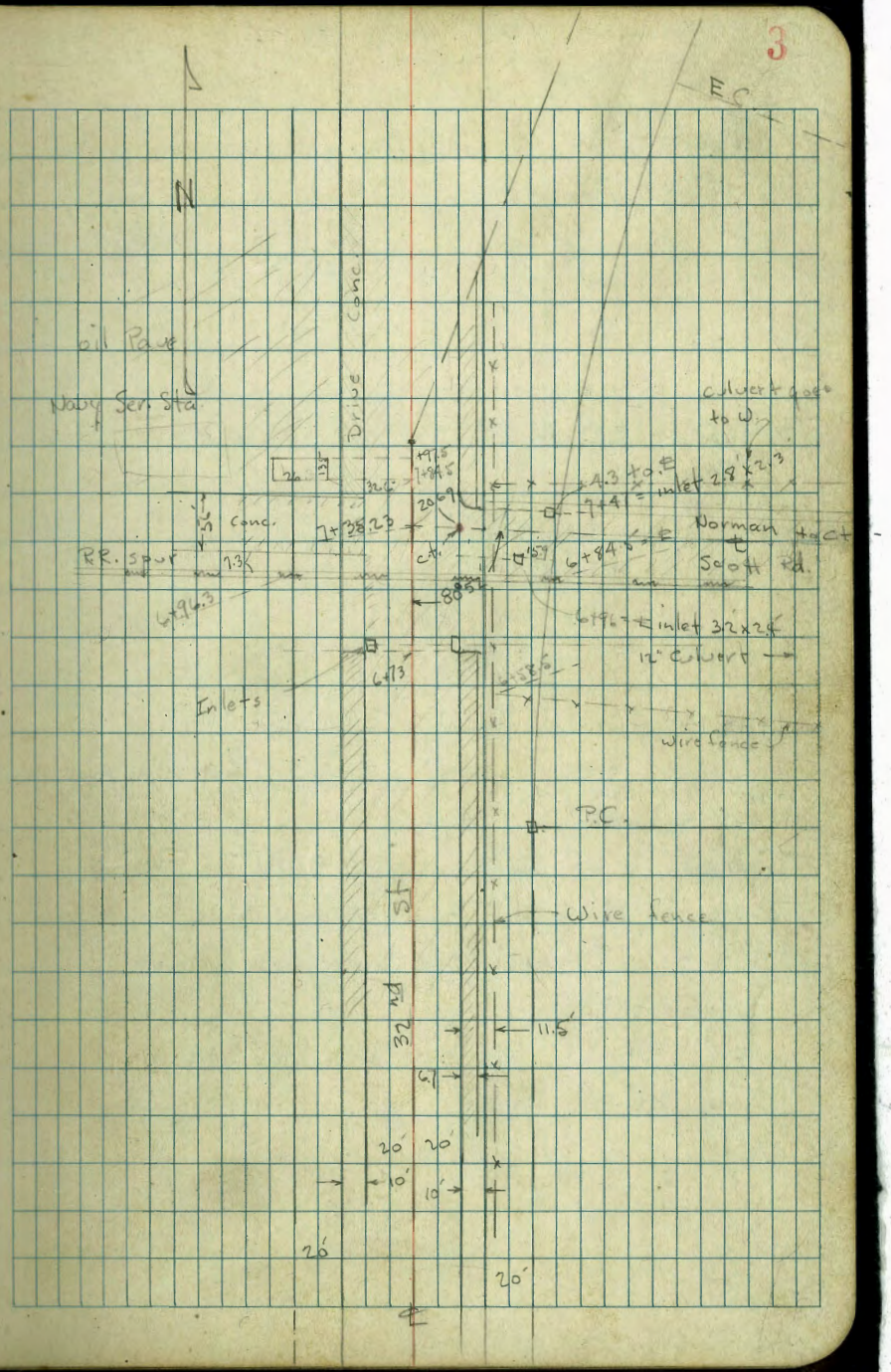
Δ = 29°37 - 6+96.3 = ℄ Tracks + W.L. - 6+84.5 = ℄ Tracks + E.L.

E.L. R = 950' 6+73 = S. side of 32'x2.5' Inlets + end of curbs

L = 491.06

T = 251.15

E.L. P.C. Sta 5+34.05



12+28 - 40.4 Rt = Cor. lattice fence + 24.3 E = end

10+25.11 = E.C. on E.L. = ℄ Sta. 10+62.79 : stub

10+21 - 13.8 Rt = W. side C.L. Road P.C.
10+17 - 42 Rt = Beg. lattice fence 6' High

9+47.14 = Int. W.L. R.O.W. + E.L. 32nd ±

8+90 = ℄ 5' walk
9+05.5 - ℄ 5' walk

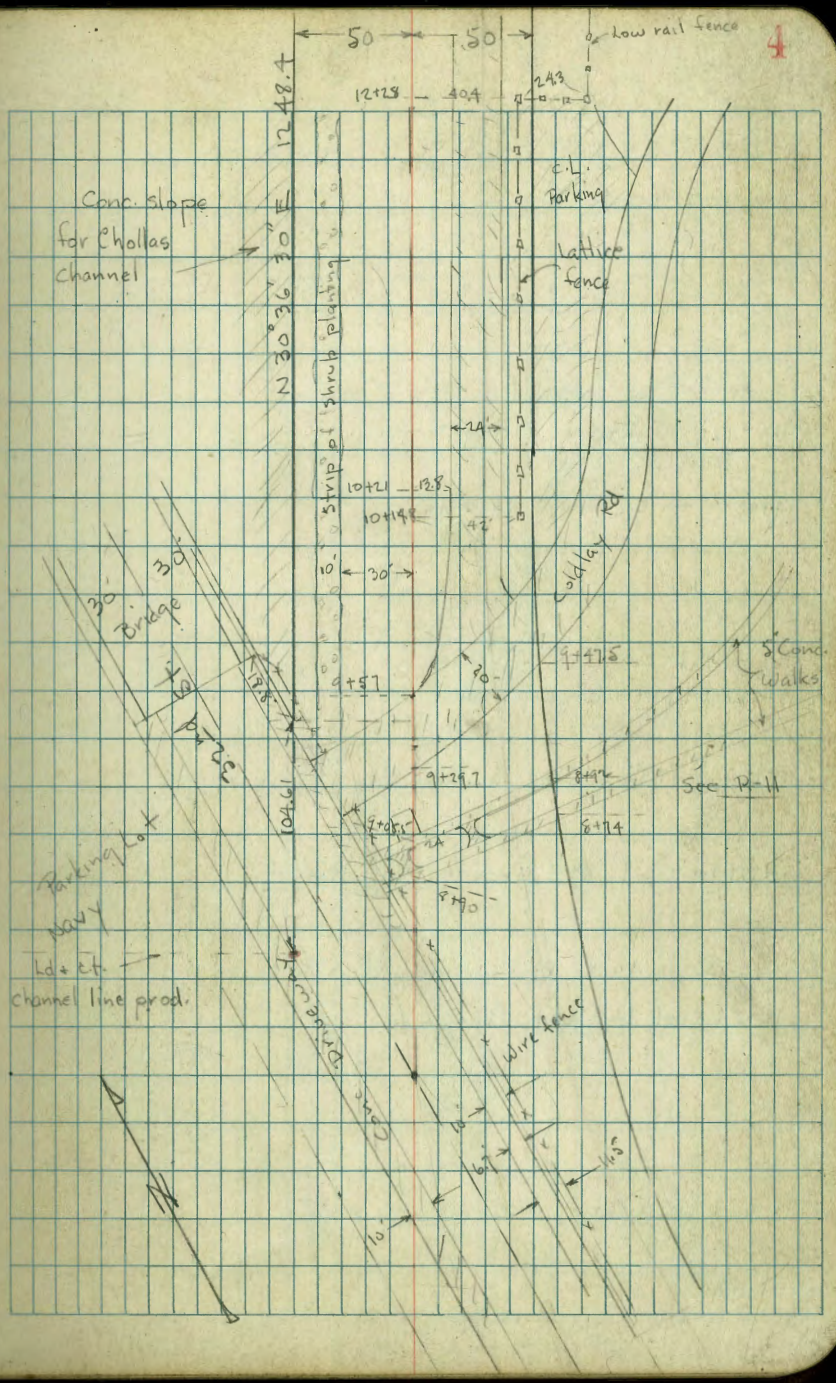
8+92 on E.L. = ℄ 5' walk
8+74 " " " "

9+09 = S. side small 10x10 Bldg. - on skids - on ℄

Bearing N. 30° 36' 30" E. 1248.4' to cross in curb at Main St. - from c.t. on W. cb. 32nd

Fd c.t. on Channel edge Line - Navy Cord. =
S 1543.92
E 3264.69 c.t. in ℄ int. sta. 7+98.42

Ang 29° 37' Rt



Δ = 13°04'30" ℄ R = 1000
L = 228.20 T = 114.60
16+25.40 = P.C.

16+00 - 32' Lt. = edge of 10' strip of planting
15+73 - 26' Rt = ℄ F.H.

14+83 - Int. E.L. ROW + W.L. Road

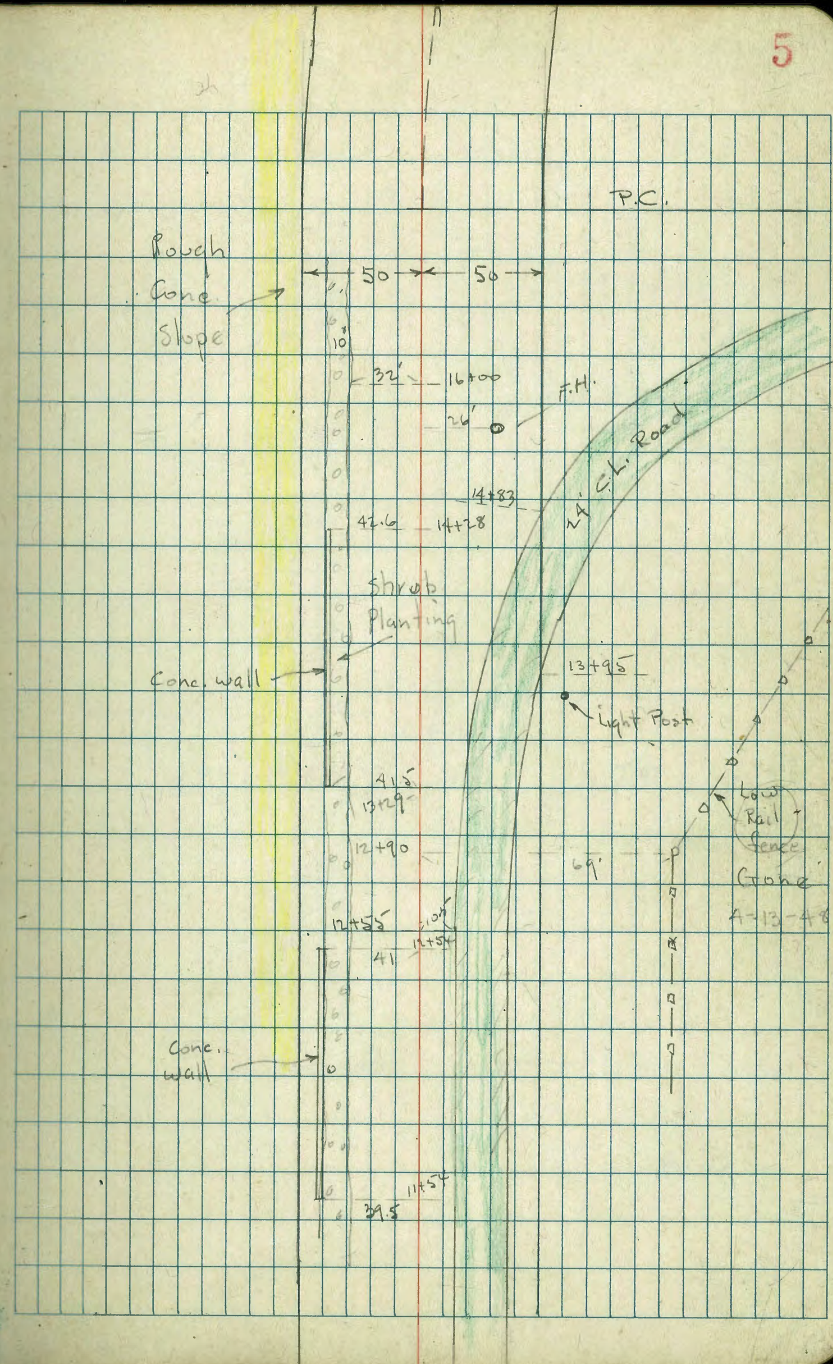
13+95 = Int. E.L. ROW. + E.L. Road.
13+82 - 54.7 Rt = ℄ Lamp post

13+29 - 41.5 Lt. = Beg. 6" Conc. wall

12+90 - 69' Rt = Ang. in Rail fence

12+55 - 10.5 Rt. = W. side Rd. - P.C.
12+54 - 41 Lt. = end Conc. wall

11+54 - 39.5 Lt. = Beg. 6" Conc. wall

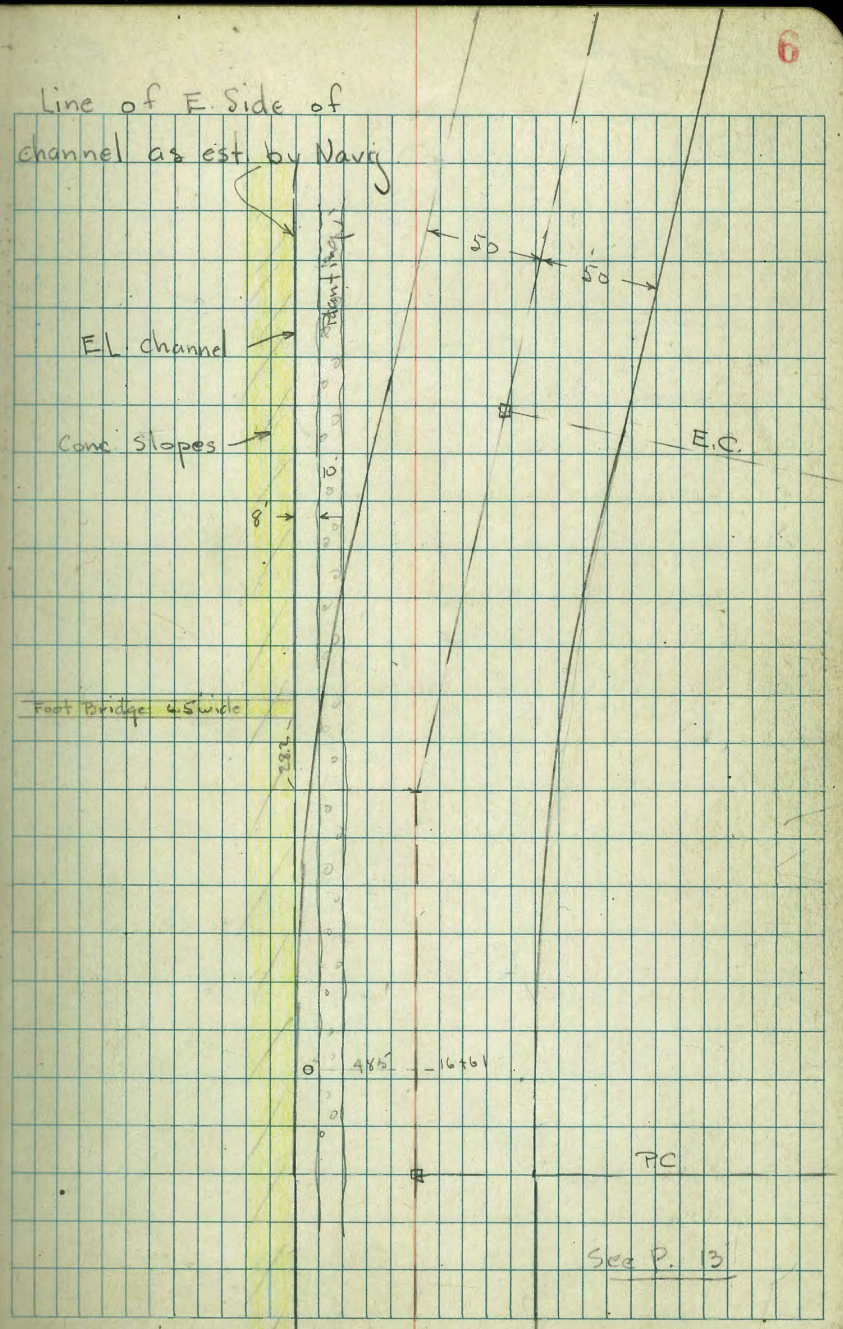


18+53.60 = E.C.

17+40 = P.I. Ang. 13° 04' 30" Rt.

16+61 = ~~485 Lt = L P. pole~~ Gone

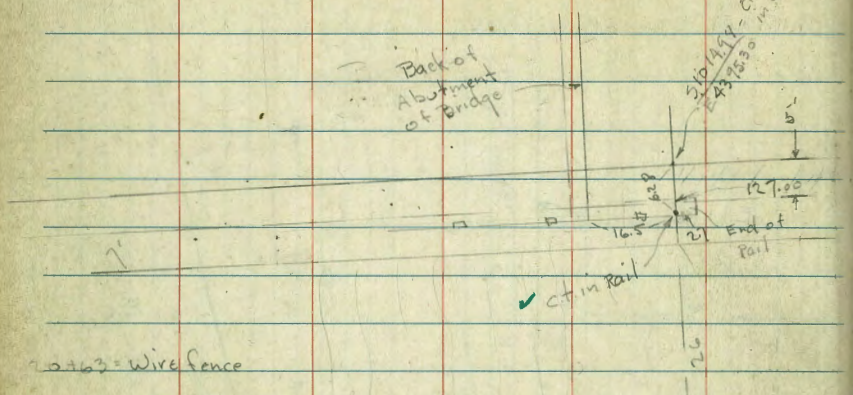
16+25.40 = P.C.



See P. 13

✓ = FD - 4-1-82 GR

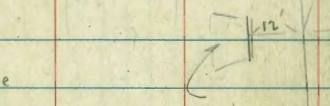
NOT FD.

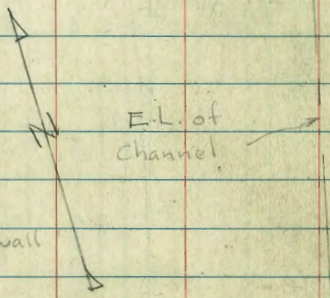


20+63 = Wire fence

20+58 = ℄ of Row of small Euc. Trees

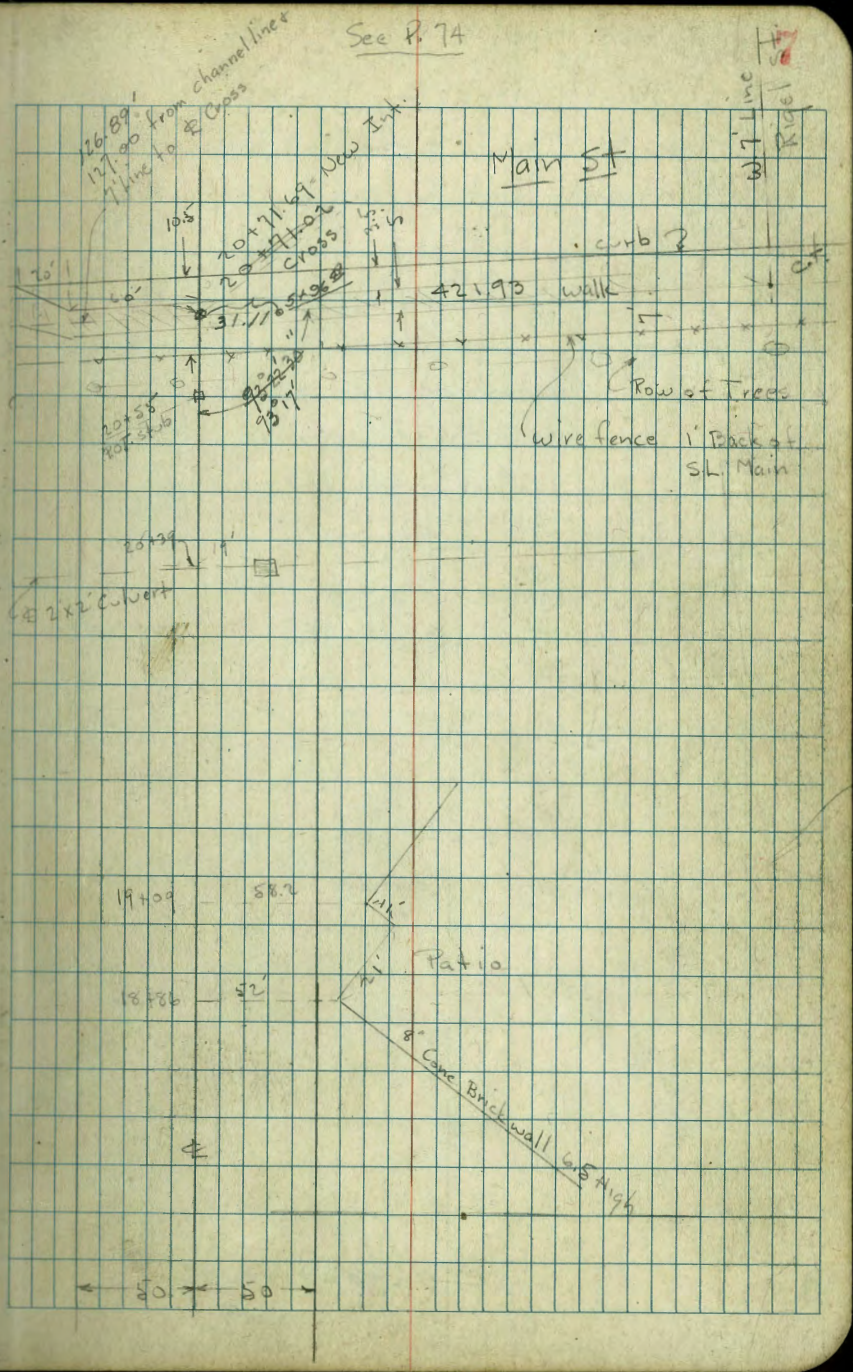
20+39 - 19' Rt. = ℄ 3'x3' Grate
Inlet for 2'x2' box Conc. Culvert





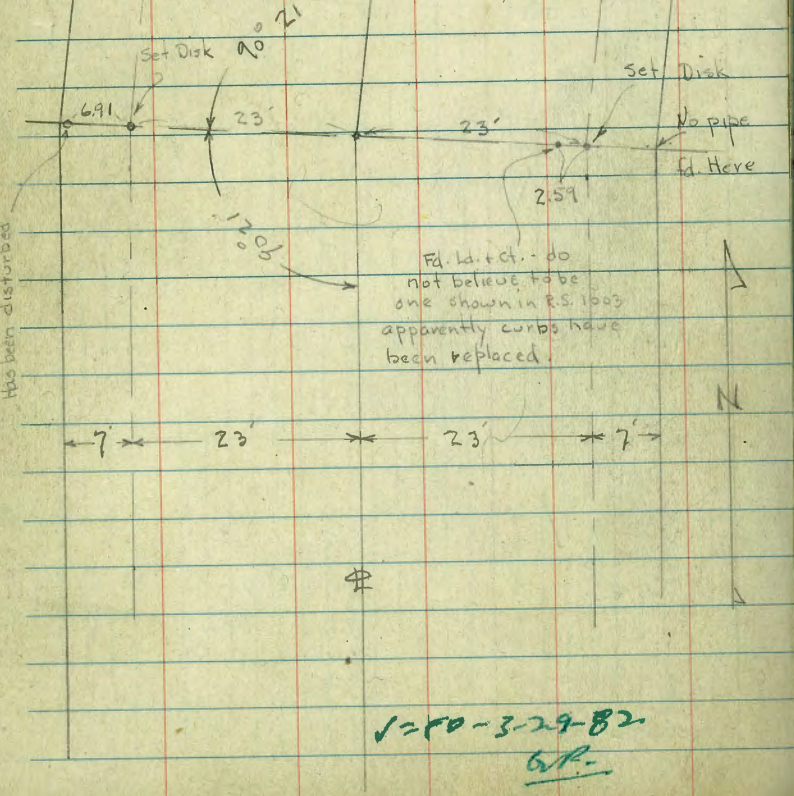
18+86 - 52' Rt. = Near Cor. Conc. wall

See P. 74



Ties for Prop R.O.W. along 32nd St.
Also Traverse along E. 7' Line of 32nd
To Main St. Thence along S.7' Line of Main
to Point of Int. with ℄ Prop. R.O.W.
See Page 2

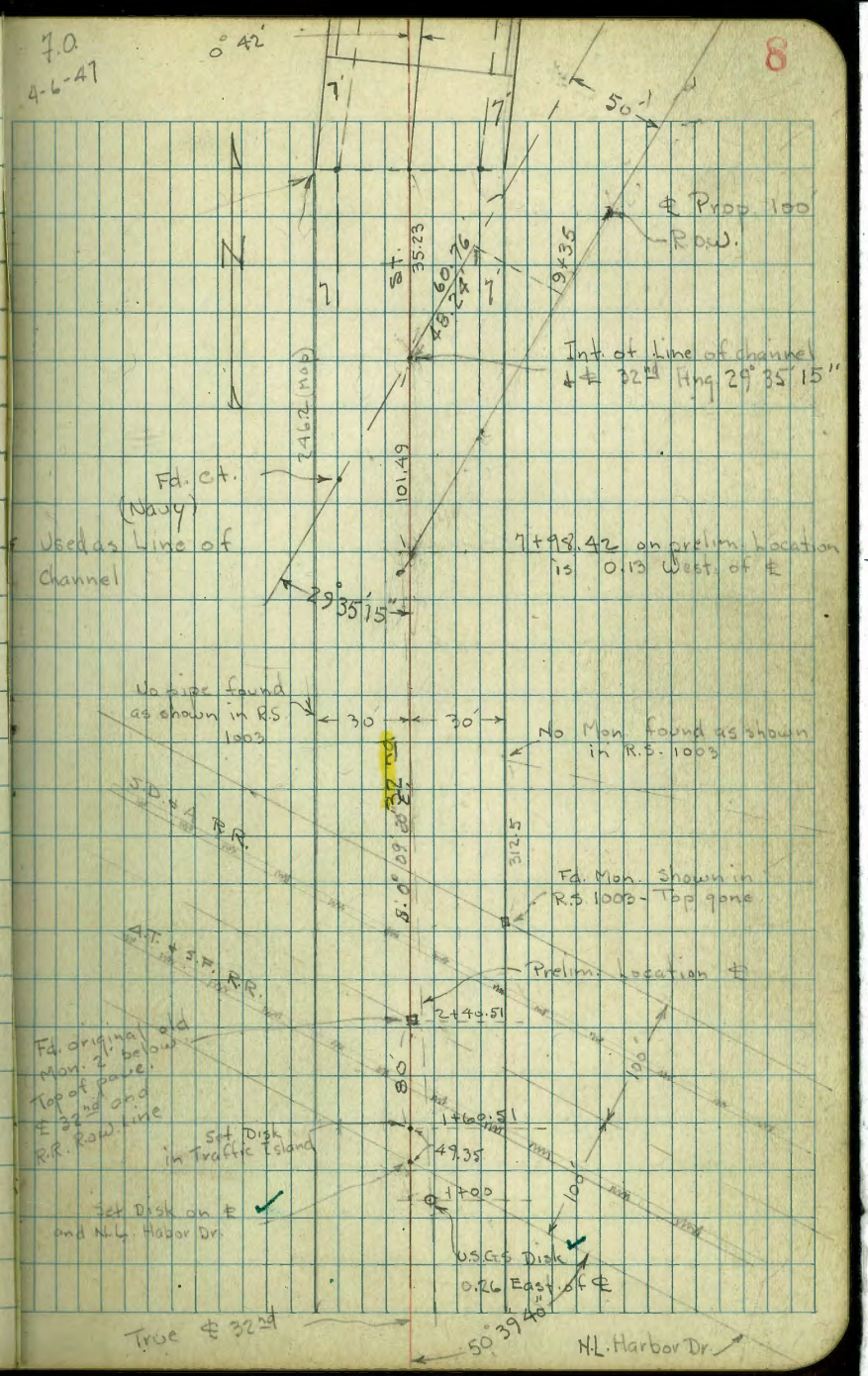
Detail of Ties at
Angle Shown opposite
Adj. to Meet improvements
and previously Noted Ties.



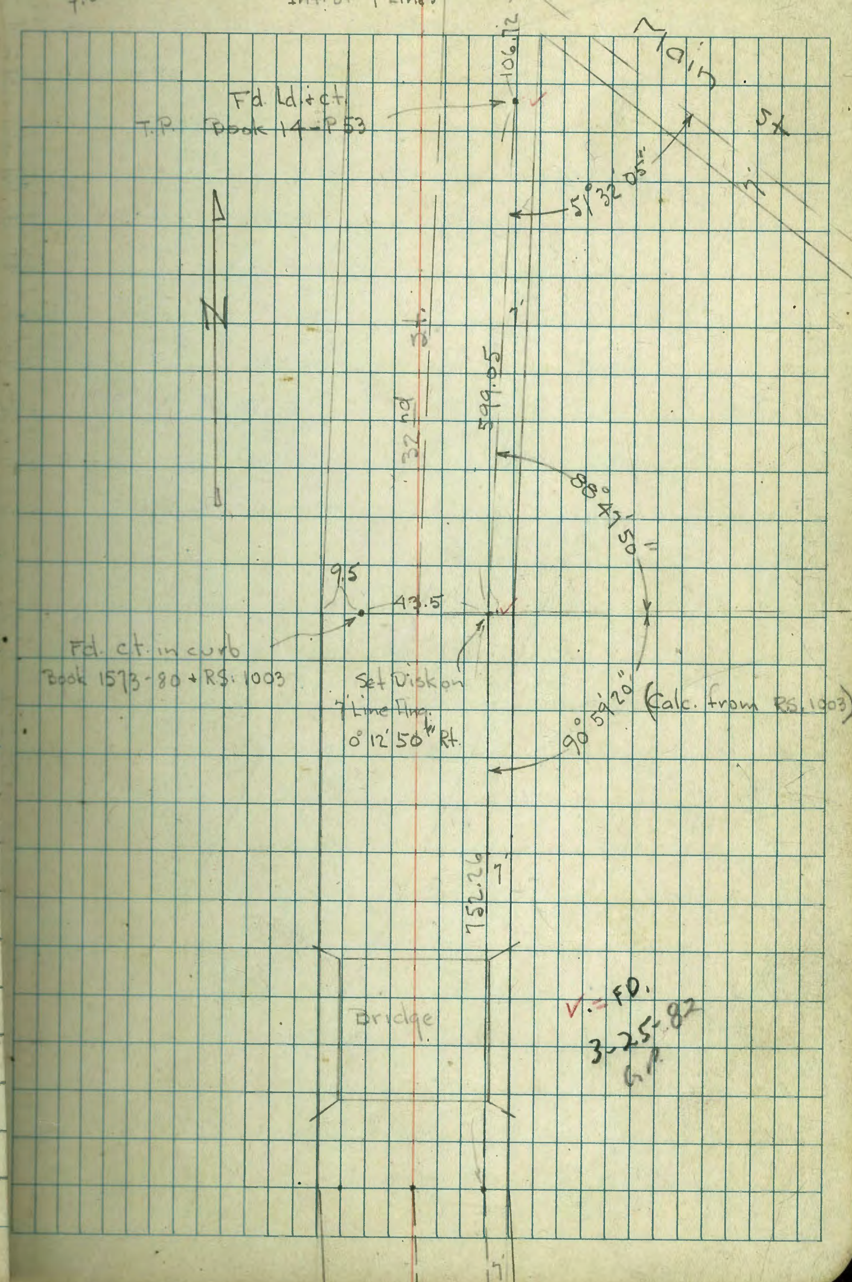
√=50-3-29-82
G.P.

7.0
4-6-47

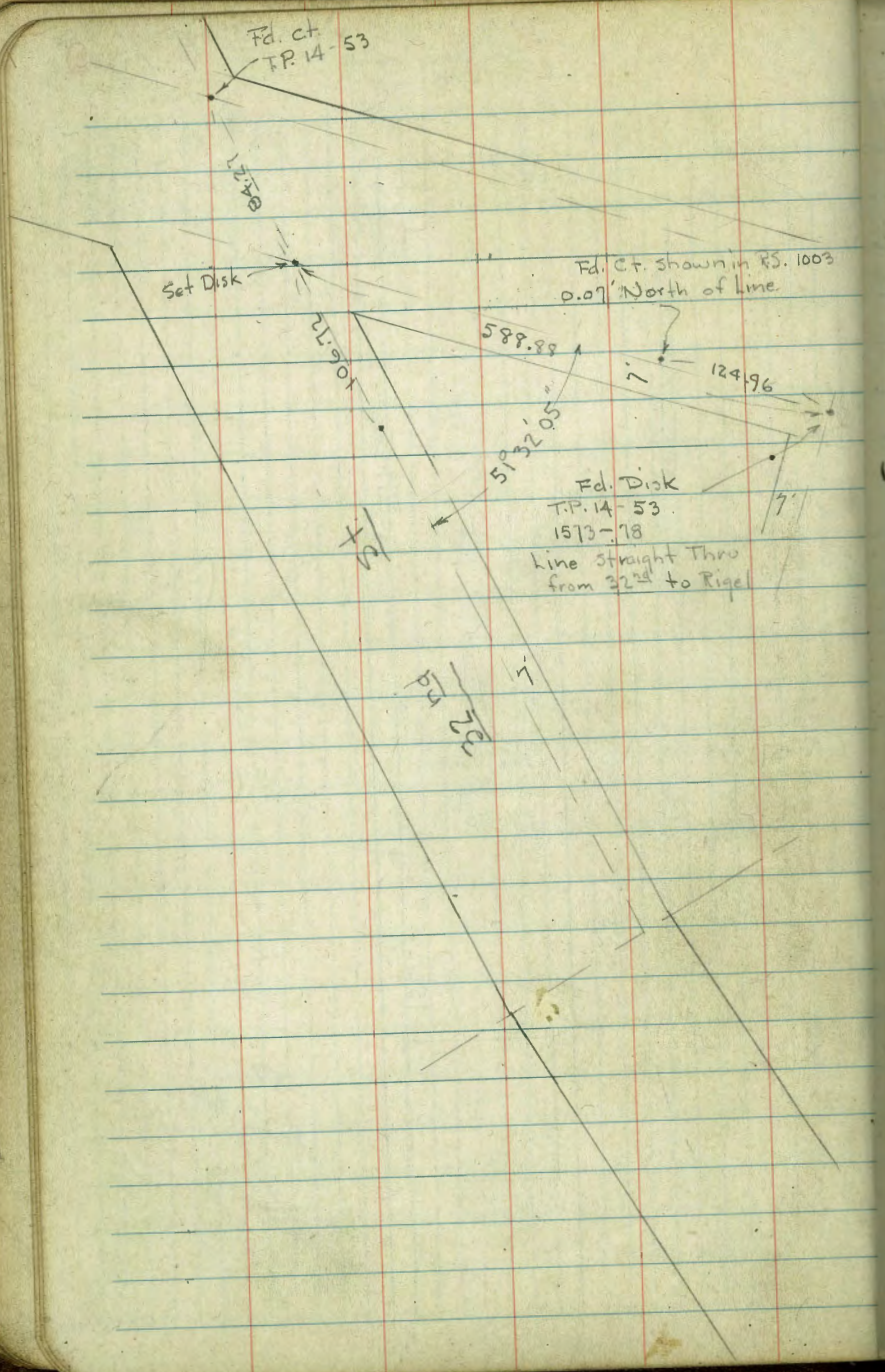
8

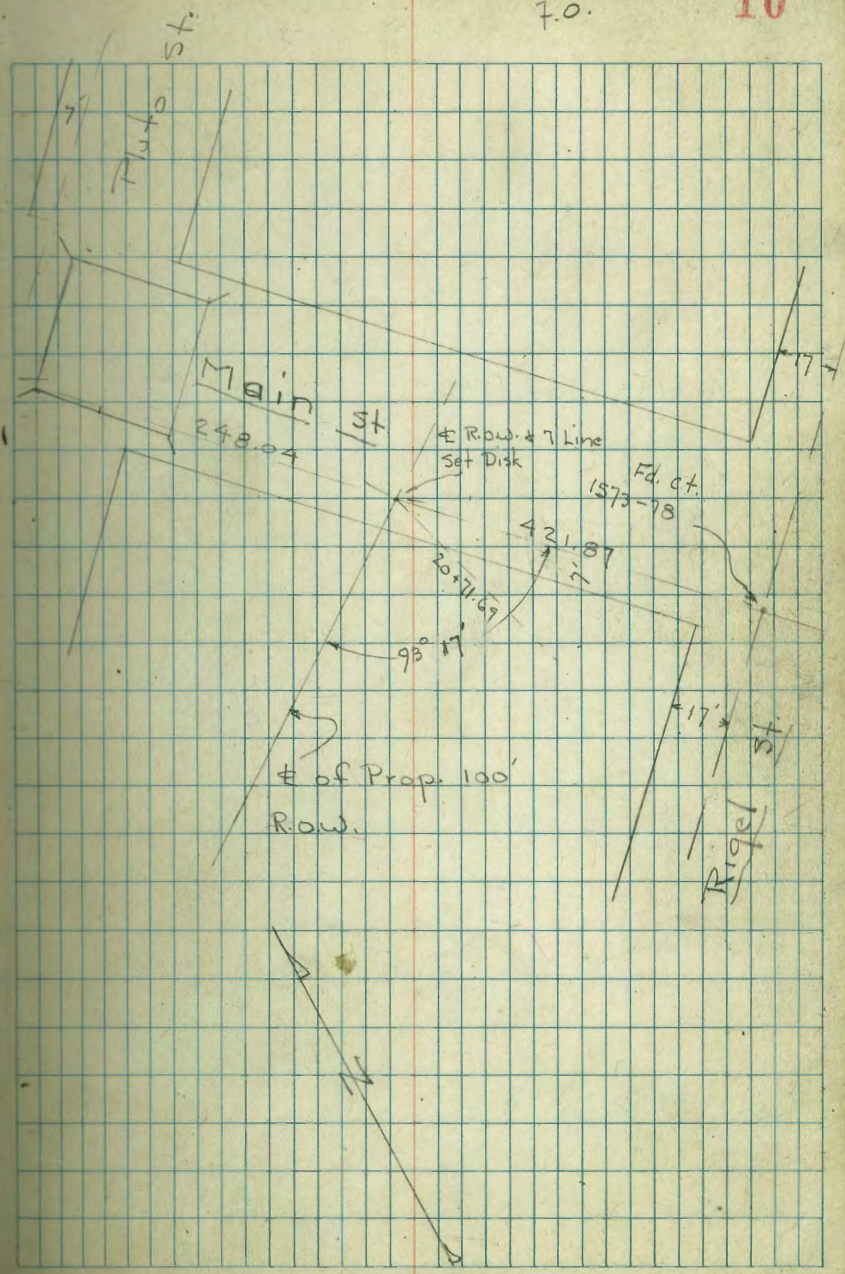


4-9-47
7.0.

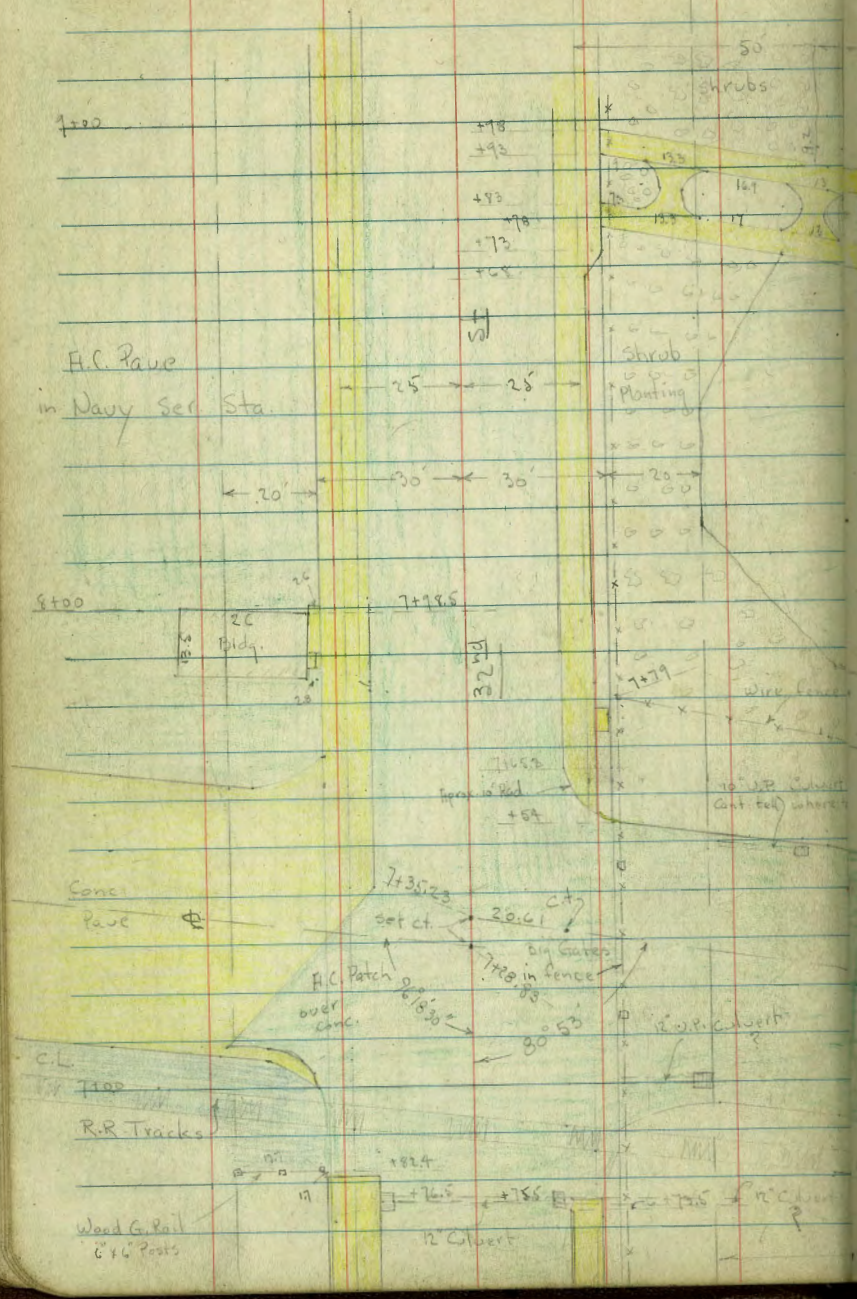

Set Disk
Int. of 7' Lines
84.27 To Ld.&ct. on N. 7' line
Main T.P. 14-53
Main
St.
Fd. Ld.&ct.
T.P. Book 14-P53
106.72
51°32'05"
N
32nd St.
599.05
88°47'50"
9.5
43.5
Fd. ct. in curb
Book 1573-80 + R.S. 1003
Set Disk on
7' Line Prod.
0°12'50" Rt.
90°59'20"
(Calc. from R.S. 1003)
752.26
7'
Bridge
✓ = FD.
3-25-82
G.P.

4-10-47
T.O.

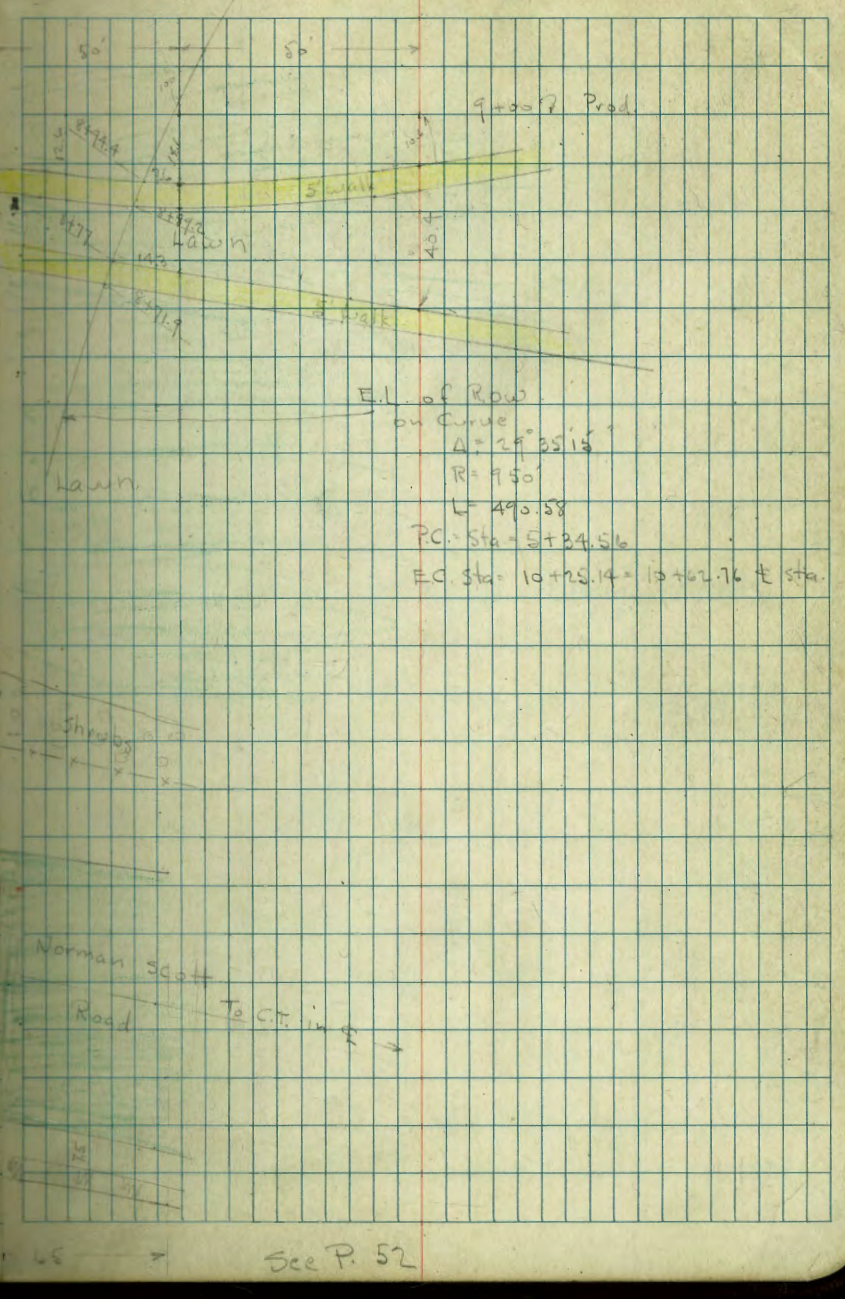

Fd. Ct.
T.P. 14-53
Set Disk
Fd. C.t. shown in R.S. 1003
0.07' North of Line.
588.88
124.96
51°32'05"
Fd. Disk
T.P. 14-53.
1573-78
Line Straight Thru
from 32nd to Rigel


Main St
248.04
℄ R.O.W. & ℄ Line
Set Disk
Fd. Ct.
1573-78
421.87
20x71.69
93° 47'
℄ of Prop. 100'
R.O.W.
Rigel

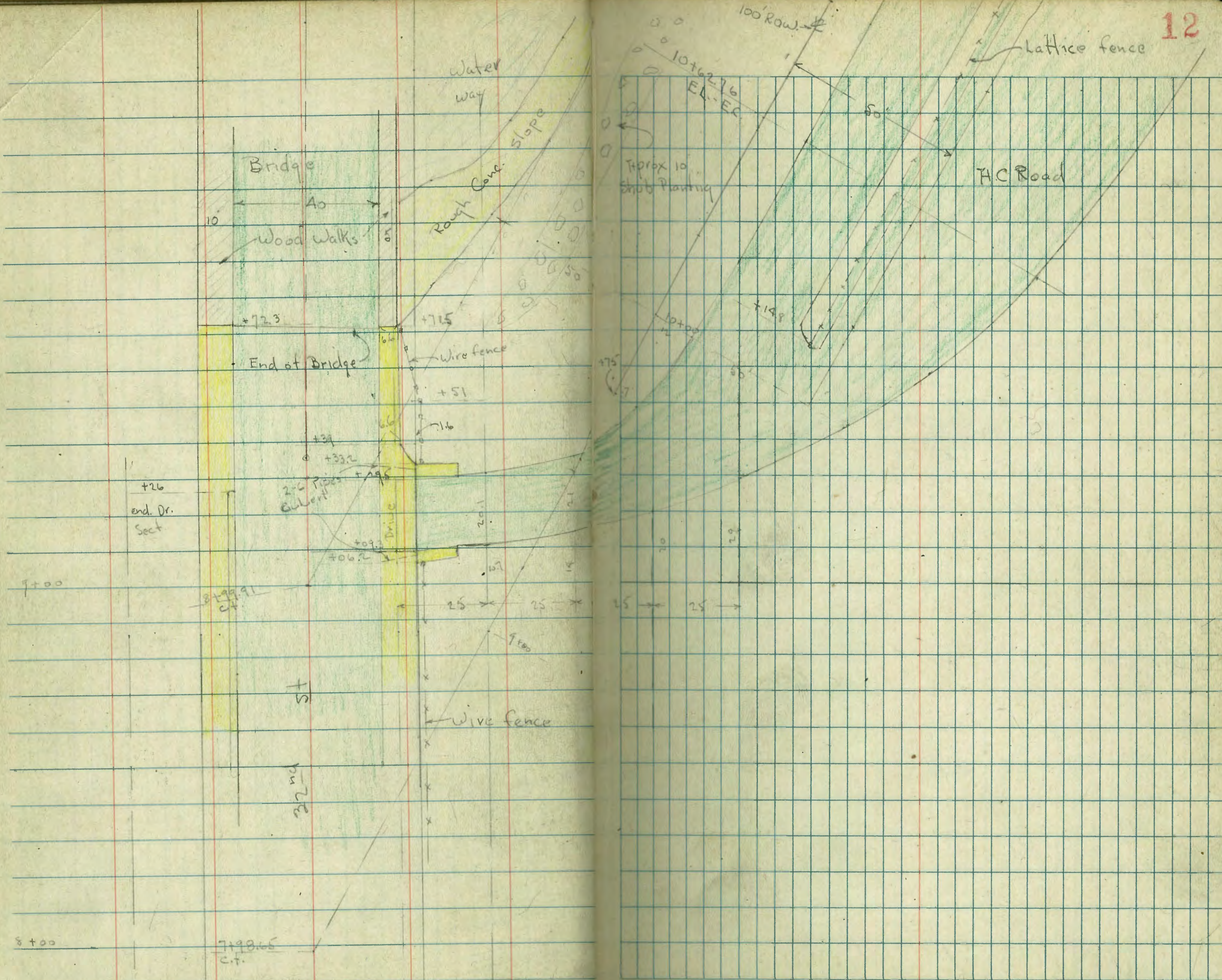
X-Sections of 100' R.O.W. - 32+ - S. of Bridge



Cont on P. 12



See P. 52


100' Row.
Lattice fence
Water way
Rough Conc. slope
Bridge
40
10'
Wood Walks
10+62.76 EL - EC
50'
Approx 10' Shrub Planting
HC Road
+72.3
+71.5
End of Bridge
Wire fence
+51
+39
+33.2
+26
end. Dr. Sect
2-6' Pipe Culvert
Drive
+06.2
9+00
8+99.91 C.T.
25
Wire fence
32 nd
8+00
7+98.65 C.T.
+148

See P. 11

℄ - 100' R.O.W.

See P. 5

6" Conc Wall

+28

Aprox. 10' shrub Planting

13+00

50 50

+53.5

Rail fence

12+75

6' Lattice fence

6" Conc Wall

12+00

H.C. Pave

H.C. Pave

+54.5

2' R&L H.C. Curb

11+00

16+00

15+00

14+00

50 50

Indexed
C.S.K.

x sec alley 15' wide
Blk 79 Park Villas
W.O. #3106.5

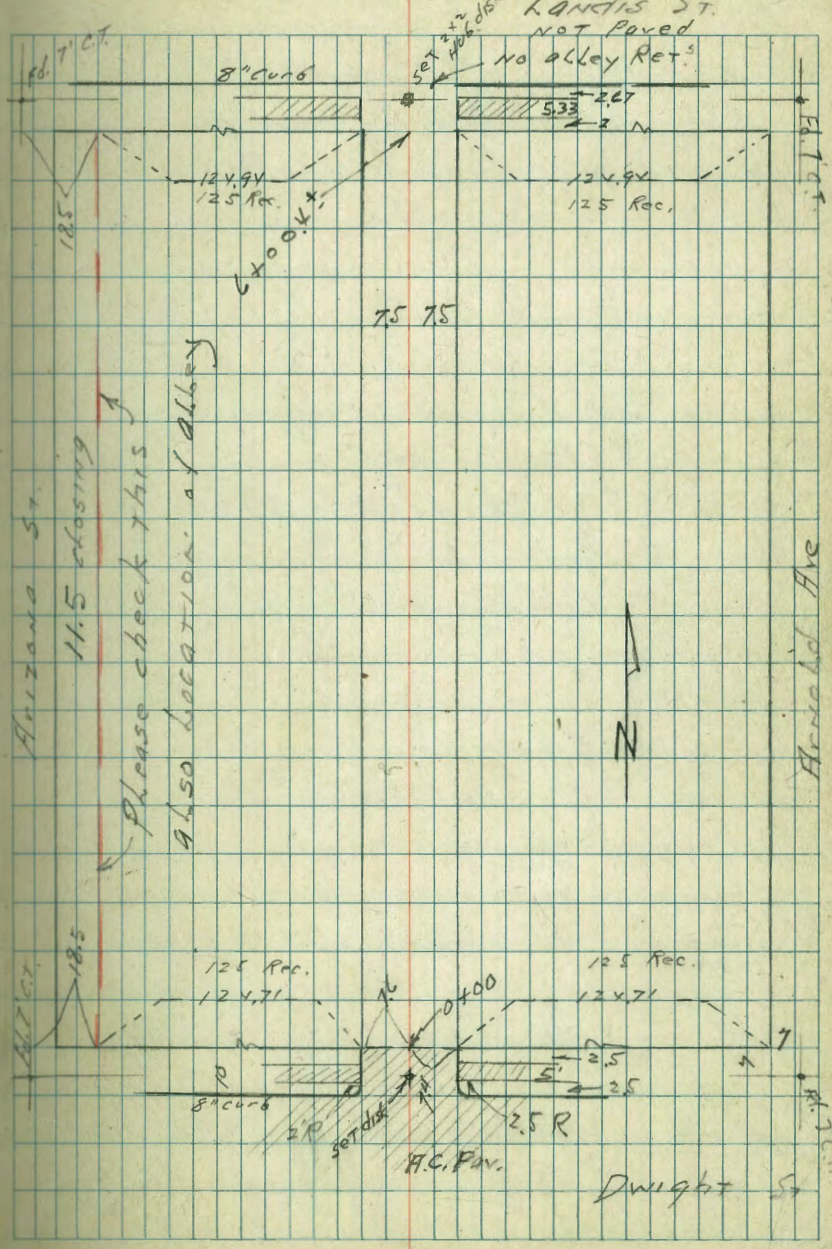
Moore
Begg
Greer
Roberts

Notes
Rod
Level

124.94
124.94
18.50
7.
275.38
15.
290.38 Berm. 7' C.T.'s

264.42
18.5
7.
289.92 berm. C.T.

264.42
13271
7.5
124.71



Alley Blk 79 Park Villas

0 + 24	6.4 R	Tel Pole 412393H			
	7.2 R	Beg of Loose Rock wall			
0 + 18	9.0 R	End of Hedge 5' wide			
0 + 10					
0 + 00	N L Dwight	pav. edge			
	8.5 Rt	Beg. hedge			
0 - 08	Power Pole	10.0 Lt.	2524		
0 - 10	N. c6. Dwight				
0 - 30	℄ Dwight				
Check to S.W. B.P.	Dwight + Arnold	3.44		285.05	My Book 285.84
T.P. BM.B.P. S.E. Cor. Arizona + Dwight	7.41	288.49	6.74	281.08	Rec. 281.09
T.P.	5.04	287.82	6.76	282.78	
S.E. B.P. Landis + Arizona	4.23	289.54		285.31	

→ check to profile office Bk. 285.84

Lt = West ℄ Rt

286.0 / 2.5 / 7.5 — 284.8 / 3.7 / 5 — 284.7 / 3.8 — 285.0 / 3.5 / 5 — 285.8 / 2.7 / 7.5

284.32 / 4.17 / 76 / c6 — 284.22 / 4.27 / 76 — 284.13 / 4.36 — 284.27 / 4.22 / 74 — 284.40 / 4.09 / 74 / c6

282.75 / 5.74 / 100 / c6 — 282.09 / 6.40 / 100 / 97 — 284.03 / 4.46 / 10 / c6 — 283.42 / 5.07 / 100 / 97 — 283.54 / 4.95 — 283.67 / 4.82 / 10 / 97 — 284.33 / 4.16 / 10 / c6 — 284.94 / 3.55 / 100 / 97 — 285.55 / 2.94 / 100 / c6

282.23 / 6.26 / 100 — 283.57 / 4.92 — 285.04 / 3.45 / 100

288.49

	Alley +	BLK 79 Park Villas HI	-	
0 + 79.5	12.5 L	S line Dbl garage conc		
0 + 79.5	7.5 R	℄ 3' walk conc		
0 + 77	6.3 R	N edge of apron		
+ 65	6.2 Rt	conc apron contd		
+ 55	7.9 Lt	A3615 Power Pole		
0 + 52.5	5.9 R	Conc Apron		
T.P.	5.73	292.73	1.49	287.00
0 + 48	5.8 R	South edge of 4½ conc walk		
0 + 30				
		288.49		

Lt ℄ Rt

287.87
4.86
12.5

288.33
4.40
7.5
288.14
288.39

4.59
6.3
4.34
19.5
garage conc

287.71
5.02
6.2 R
287.94
4.79
21
N side of garage

287.4
5.3
7.5
287.0
5.7
287.36
5.37
5.9
conc walk
287.51
5.22
5.9
conc apron
287.82
4.91
21
S side of garage

292.73

287.27
1.22
5.8
287.33
1.16
7.5

286.9
1.6
7.5
286.3
2.2
5.0
286.2
2.3
286.9
1.6
7.5
6.7 rock wall contd

288.49

	Alley	Blk 79	Park Villas
1 +53	6.6 R	end of board fence	
1 +48	6.2 R	Tel. Pole 412394 H	
1 +40	7.1 R	end of wire fence beg Board Fence	
+30			
+16	7.0 R	Beg wire fence	
1 +10	12.3 L	℄ Dbl garage 18' wide conc floor	
1 +07	18.3 R	℄ Single garage conc floor	
1 +00	7.6 R	N.W edge of Pier at N.W. frame Bldg	
0 +97	12.5 L	N edge of Dbl. garage	
0 +80	7.7 R	at 5'+- centers Base of conc piers S.W cor Frame Bldg	

292.73

Lt ℄ Rt

289.6 3.1 7.5 | 289.2 3.5 | 289.5 3.2 5 | 290.2 2.5 7.5

288.57 4.16 12.3

289.73 2.80 18.3

288.2 4.5 | 288.7 4.0 7.5 | 288.7 4.0 7.6 | 289.5 3.2 17

287.88 4.85 12.5

287.7 5.0 7.5 | 287.5 5.2 | 287.8 4.9 5 | 288.34 4.39 7.5

N side conc walk

292.73

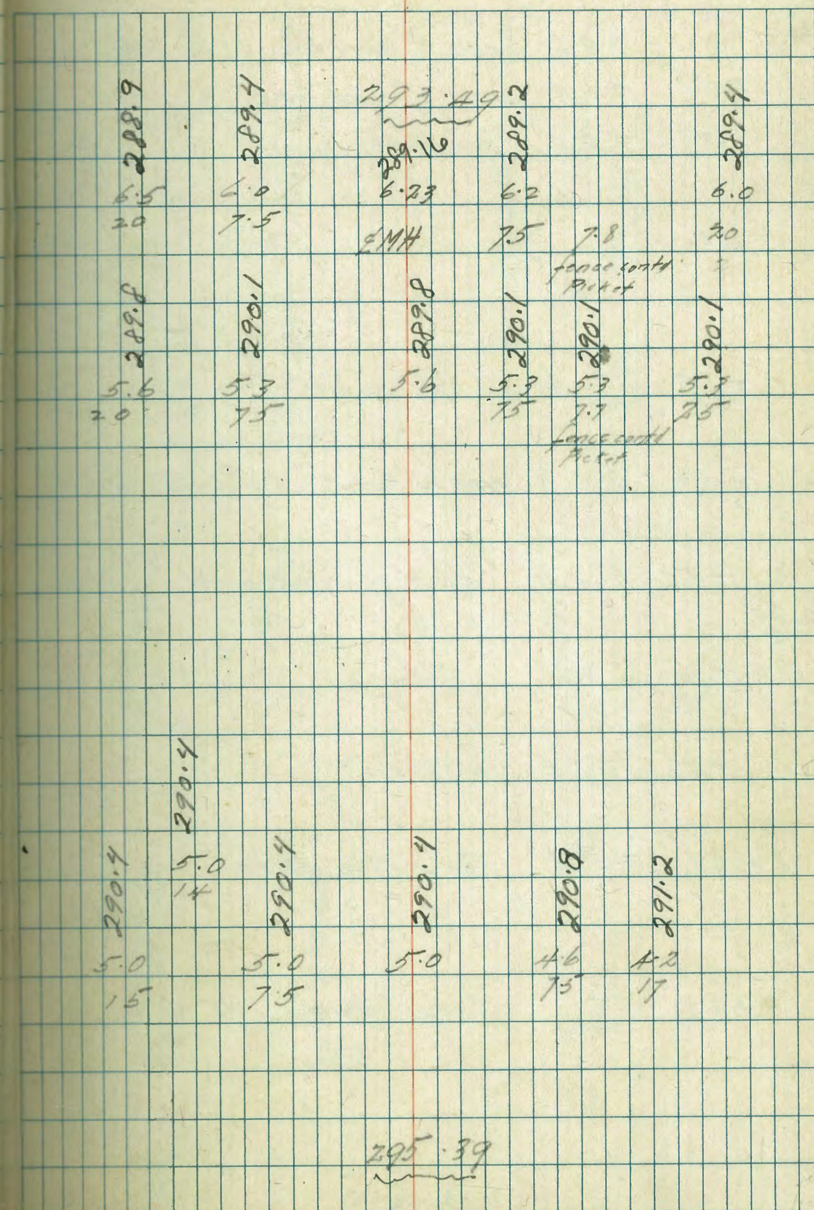
Alley 4 Blk 79 Park Villas 41

2 +42	15.5 R	℄ conc drive 10.5' wide			
+32	17 R	℄ Single garage conc floor			
+20	15 R apron	℄ Single garage 10' wide			
2 +17	15.0 Lt	℄ Single garage conc floor			
1 +97	9.2 Lt	℄ conc walk 9' wide			
1 +86	7.5 Lt	Power Pole A3637			
1 +75.5	13.6 R apron	℄ Dbl garge	16.9 R.	18' wide	
T.P.	4.75	295.39	2.09	290.64	
Lt 70	9.8 L	NE cor Dwelling			
1 +58	9.8 L	SE cor Dwelling			
		292.73			

Lt	℄	Rt.
	291.37	
	4.02	
	15.5	
		291.79
		3.60
		17
		291.64
		3.75
		17
		apron
		291.78
		3.41
		17
		garage floor
289.99		
5.40		
15.0		
floor		
290.10		
5.29		
9.2		
	290.1	
	5.3	
	7.5	
	290.3	
	5.1	
	290.5	
	4.9	
	7.5	
289.6		
5.8		
20		
	290.2	
	5.2	
	7.5	
	290.4	
	5.0	
	290.8	
	4.6	
	7.5	
	291.70	
	3.69	
	13.6	
	apron	
		291.98
		3.41
		16.9
		floor
	295.39	
290.30		
2.43		
9.8		
290.30		
2.43		
9.8		
To of conc. fill		
	292.73	

	Alley	Blk. 79 Park Villas		
	+	HI	-	
T.P.	4.68	293.49	6.58	288.81
3+00	7.5 Lt	end of board fence		
2+75				
2+74	8.3 Lt	beg. board fence		
2+70	7.8 L	NE cor. Shed		
+67	6.0 Rt	Tel Pole 412395 #		
+61	7.8 L	SE cor Shed		
+56	14.0 L single	garage		
2+50				
0+48	7.9 R	beg Picket fence		
		295.39		

Lt ℄ Rt



	Alley	Blk 79 Park Villas	
	+	HI	−
4+00	7.9 L	end of board fence SE cor garage	
+95	7.6 R	end of board fence	
+73	7.8 L	beg. Picket fence	
+70			
+59	13.0 L apron	Single garage 15.4 L floor	
+56	8.0 R	end of Picket & beg board fence	
+50	7.4 L	end of fence board	
3 +35			
+22	7.9 L	beg Picket	
3+21	7.0 Lt	Power Pole A3647	
3+09	12.5 apron	Single garage 15.5 L	
		293.49	

Lt ℄ Rt

286.9 / 6.6 / 25 — 286.9 / 6.6 / 8 — 287.9 / 5.6 / 7.5 — 288.4 / 5.1 / 5 — 288.4 / 5.1 — 288.4 / 5.1 / 7.5 — 7.6 fence — 288.4 / 5.1 / 17

287.3 / 6.2 / 25 — 287.3 / 6.2 / 12 — 288.1 / 5.4 / 10 — 288.1 / 5.4 / 7.5 — 288.5 / 5.0 / 5 — 288.4 / 5.1 — 288.3 / 5.2 / 7.5 — 288.1 / 5.4 / 20

288.10 / 5.39 / 15.4 — 287.94 / 5.55 / 13.0 apron

288.2 / 5.3 / 20 — 288.2 / 5.3 / 7.5 — 288.3 / 5.2 — 288.4 / 5.1 / 7.5 — 7.8 fence cont — 288.6 / 4.9 / 20

288.84 / 4.65 / 15.5 floor — 288.65 / 4.84 / 12.5 apron

293.49

	Alley +	Blk 79 Park Villas HI	–	
+77	9.0 R	beg board fence		
4+70				
+64	8.1 L	beg. lath fence		
+62	6.8 L	℄ 2' walk		
+56	7.0 L apron	Single garage	11° wide	
+40				
T.P.	5.48	293.66	5.31	288.18
4+18	7.9 Lt	N.E. cor of garage	N entrance 8.5L = east edge of door	
4+10	6.6 Lt	Power Pole # 3665		
4+0½	6.2 Rt	Tel Pole 03243T		
		293.49		

Lt ℄ Rt

288.2 5.5 15 | 288.6 5.1 25 | 288.4 5.3 | 289.0 4.7 7.5 | 289.4 4.3 25

288.01 5.65 11 | 288.50 5.16 7.5 | 288.52 5.14 6.8 | 288.59 5.07 10.8 floor | 288.40 5.26 7

287.1 6.6 25 | 287.3 6.4 10 | 287.6 6.1 7.5 | 288.2 5.5 5 | 288.2 5.5 | 288.5 5.2 7.5 | 288.7 5.0 20

293.66

286.96 6.53 floor Conc floor | 288.0 5.5 7.5 | 288.3 5.2 5 | 288.3 5.2 | 288.3 5.2 7.5 | 288.5 5.0 17

293.49

Alley Blk 79 Park Villas

	+	HI	-
+765	10 Rt	℄ of 4' wood Step	
+65			
+40			
+34	6.5 R	Tel Pole D32 H2 T	
+18	28 Lt	℄ Single garage N entrance	
+18	8.7 Rt	end of board fence	
+09	7.4 Lt	Power Pole A3685	
5+00	7.8 L	end of lath fence	
4+97.5	75 R	℄ 1½' conc Walk	
		293.66	

Lt		℄		Rt
				291.34
				2.32
				10
				top of step
			289.6	290.4
		289.3	4.1	3.3
	289.6	4.4	4	7.5
289.6	4.1		289.2	290.7
4.1	75		4.1	3.0
20			4	15
288.8	288.4	289.1	289.4	290.1
4.9	4.3	4.6	4.3	3.6
20	75		5	7.5
				290.4
				5.3
				25
288.74				
4.92				
29				
288.5	288.9	288.7	288.9	289.5
5.2	4.8	5	4.8	4.2
20	7.5		5	7.5
			289.33	
			4.83	
			7.5	
				8-7 Fence cont'd
		293.66		

Alley	+	Blk 79 H.I.	Park –	Villas	
check to SE BP Landis & Arnold			1.63	291.96	291.85 / 0.11
check to BM brass Plug	SE Arizona + Landis		8.26	285.33	285.31 / 0.02
6+10.40		S curb Landis			
+09	.88 L	East edge of P.Rble		25.25	
T.P.	5.23	293.59	5.30	288.36	
6+02.4	7.2 L / 7.5 R	conc Walk S edge			
6+00±		S line of Landis			
5+90					
		293.66			

Lt ℄ Rt

285.40 284.93 287.6 288.00 287.8 288.51 288.0 290.56 291.04
8.19 cb 8.66 6.0 5.59 5.8 5.08 5.6 3.03 2.55 cb
136.5 7.1 7.1 cb 7.7 curb end 7.7 gut. 9 132.5 AC Pav.
A.C.P.

288.38 288.74
293.59
5.28 Note! 4.92
7.2 No alley Returns 7.5

288.4 288.3 288.3 288.6 289.0
5.3 5.4 5.4 5.1 4.7
7.5 4 5 7.5

289.6 289.6 289.0 288.6 289.0 290.2 290.3
4.1 4.1 4.7 5.1 4.7 3.5 3.4
7.5 7.5 6 6 7.5 14

293.66

Walker
Becker
Johnson

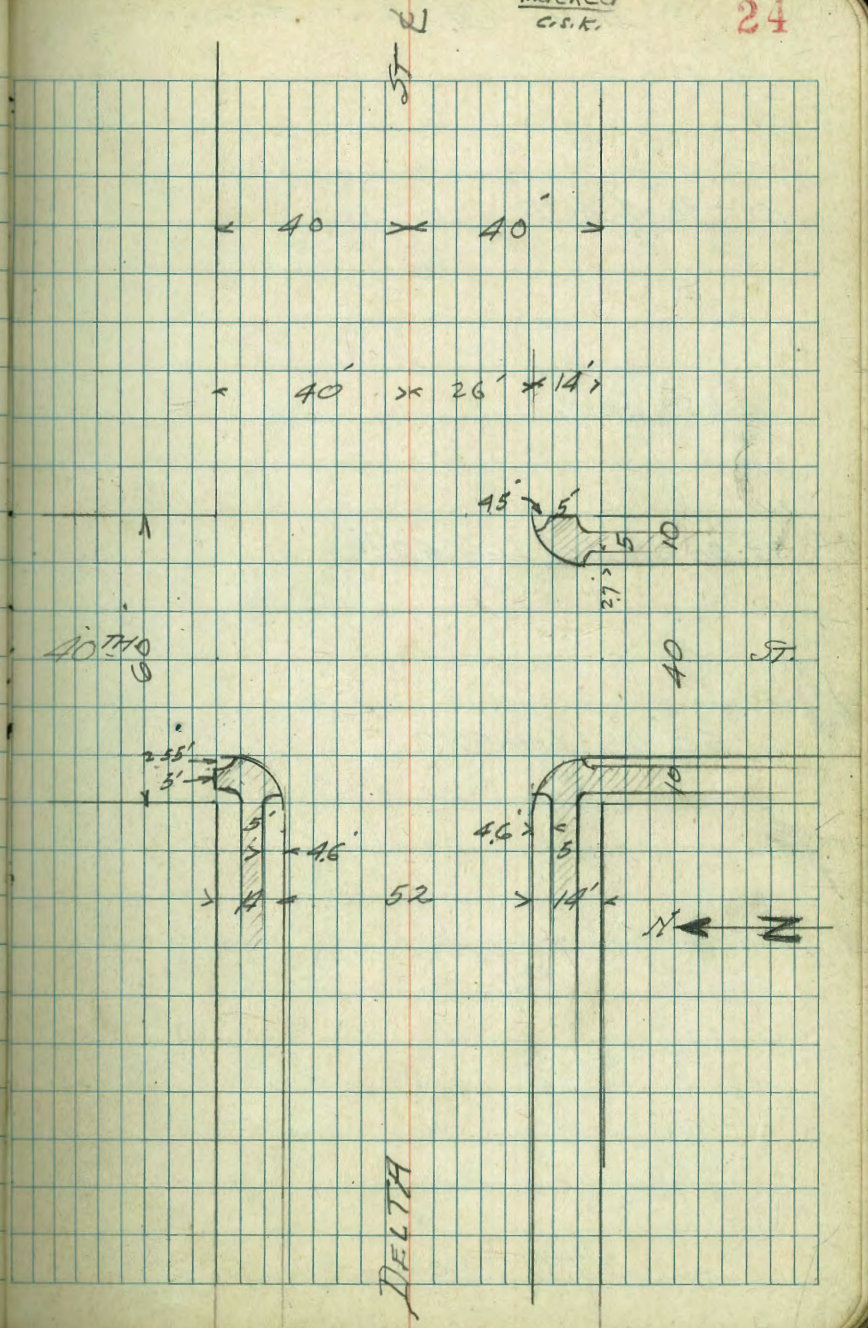
Cross Sections Delta St.

from 40th to 41st St

14.0. 31048

Indexed
C.S.K.

24



Delta St. X-Sections

0 - 30' = ℄ 40th

0 + 50 Cont.

0 + 50' = West cb Line 40th

0 - 60' = West Line 40th

0 - 110'

0 - 160'

9.73 73.02 6329

℄ ℄ Pl. 25

72.7 68.2 64.8 64.2 63.56 62.5 62.0 60.8 59.3
+0.3 1.8 8.7 8.8 9.46 10.5 11.0 12.2 13.7
140 90 40 26 Rim MH. 26 40 90 140

72.2 67.0 58.7 59.40
0.8 5.1 14.3 13.62
140 90 140 140
Cut cb

63.53 64.1 63.5 62.8 61.9 61.3 62.24 58.9 60.99
9.49 8.9 9.5 10.2 11.1 11.7 10.78 13.1 12.03
40 40 26 40 26 40 40 90 80
cb. Cut. 2 bars cb Cut. cb. Cut. cb

63.31 62.7 62.5 61.5 62.48
9.71 10.3 10.5 11.5 10.59
26 26 26 26
cb Cut. Cut. cb.

62.03 61.3 61.2 60.1 61.08
10.99 11.7 11.8 12.9 11.94
26 26 26 26 26
cb. Cut. Cut. cb.

60.76 60.0 59.8 58.7 59.66
12.26 13.0 13.2 14.3 13.36
26 26 26 26 26
cb Cut. 73.02 Cut. cb.

BM NW EP Delta ℄ 40th

Delta St. X-Sections

T.P. 10.04 76.06 7.00 66.02

1+00

1+24 = 28' Rt. = 2" Eugonia Tree

1+07 28' Rt = 2" " "

0+91 28' Rt = 2" " "

0+77 28' Rt = 2" " "

0+59.5 = ℄ 4' Conc. Walk

0+50

0+37 to 1+62.3 = 3' Wood Fence - 27' Rt

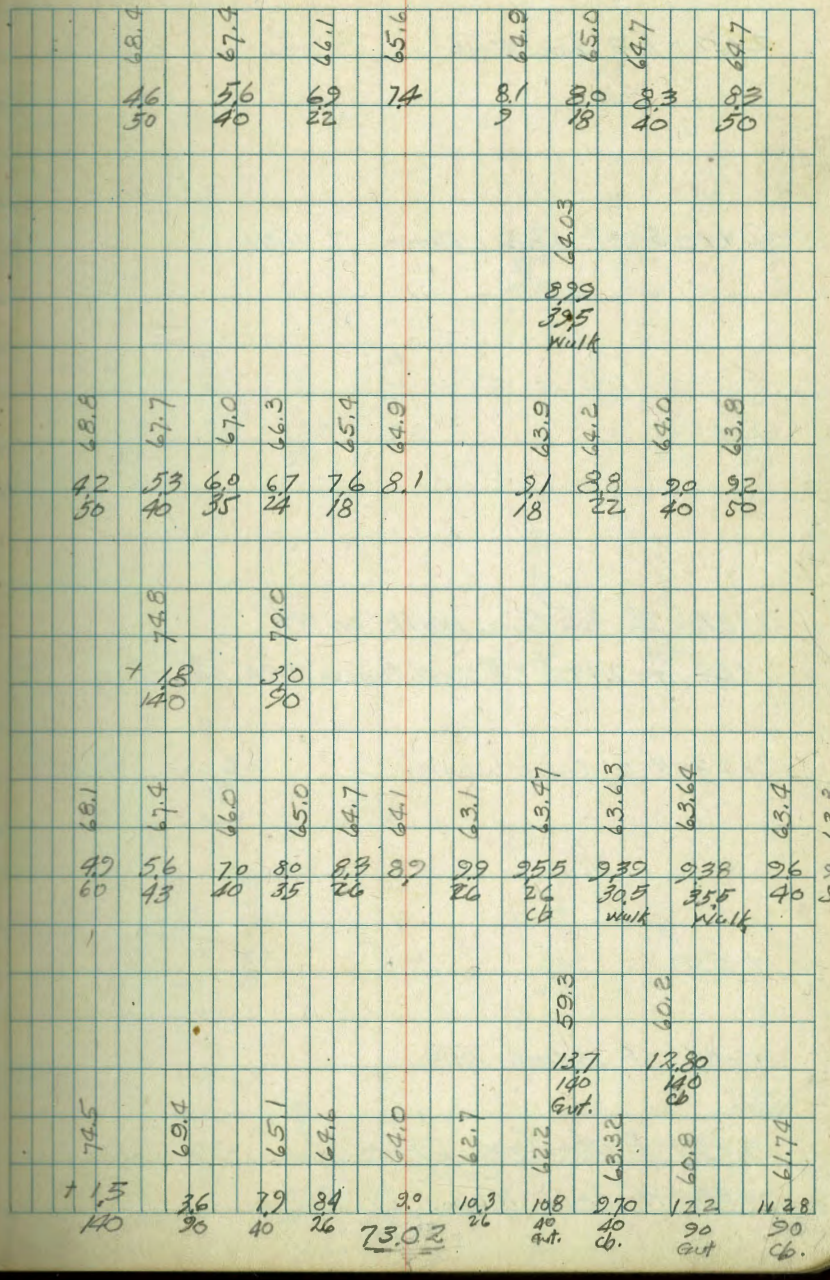
0+00 Cont.

0+00 = E. Line 40th

0-10 Cont.

0-10 = E. Cb. Line 40th

73.02



Delta St. X-Sections

2+32 = ℄ 3' Conc. Walk

2+10.5 = ℄ Conc. Drive 7' Wide

2+00

1+87.5 = ℄ 2.5' Conc. Walk on Rt.

1+64 to 2+00 = 3' Wood Fence 38' ~~Rt.~~

1+63 = ℄ 2' Conc Walk

1+50

1+45 = ℄ 18' Conc. Walk

0+99 = E. edge Conc. Drive

0+93 = West edge Ribbon Conc. Drive

76.06 / 2

℄ ℄ Rt. 27

67.22 9.84 38 Walk

66.74 9.32 35 on Drive

66.86 9.20 37 Drive

66.87 9.19 40 Drive

66.69 9.37 50 Drive

67.8 8.3 50

67.3 8.8 40

67.1 9.0 36

66.9 9.2

66.6 9.5 15

66.1 10.0 10

65.9 10.2 50

65.85 10.21 35

65.84 10.22 40

65.46 10.60 37.5 Walk

68.9 7.2 50

67.9 8.2 40

67.3 8.8 37

66.1 10.0

65.2 10.9 40

65.3 10.8 50

65.24 10.82 37.5 Walk

67.51 8.57 40

67.49 8.57 40

76.06

Delta St. X-Sections

Station	BS	HI	FS	Elev.	Notes
T.P.	8.40	82.08	2.38	73.71 / 73.68	SW 13' Mon.
4+00					
3+99 = ℄ 32' Conc. Walk					
3+83.6 = ℄ 7' Conc. Drive					
3+69.5 = ℄ 35' Conc. Walk					
3+50					
3+28					
3+25					
3+00					
2+70 = ℄ Sewer MH Rim			7.68	68.38	
2+50					

76.06

Lt — ℄ — Rt.

Delta & 41

Each reading is elevation, then rod reading / distance from ℄.

Station	Lt					℄	Rt			
4+00	72.9 3.2/40	72.5 3.6/25	71.7 4.4/16			71.5 4.6			71.2 4.9/40	71.3 4.8/50
3+99	73.45 2.61/50 walk	73.13 2.93/40 walk								
3+83.6							71.28 4.78/40	71.15 4.91/50		
3+69.5									71.39 4.67/40.1 walk	71.29 4.77/50 walk
3+50	72.1 4.0/50	71.8 4.3/40	71.2 4.9/19	70.7 5.4/17		70.9 5.2	70.8 5.3/13	71.1 5.0/23	71.5 4.6/40	71.4 4.7/50
3+28	71.5 4.6/50	71.1 5.0/40	70.5 5.6/20	70.0 6.1/18	70.2 5.9/12	70.3 5.8	70.2 5.9/13	70.8 5.3/21	70.8 5.3/40	71.0 5.1/50
3+00	70.6 5.5/50	69.9 6.2/40	69.5 6.6/19	69.1 7.0/13	69.3 6.8/16	69.4 6.7	69.4 6.7/8	69.9 6.2/40	70.1 6.0/50	
2+50	69.3 6.8/50	68.7 7.4/40	68.1 8.0/26	67.5 8.6/16	67.9 8.2/13	67.9 8.2	68.0 8.1/16	67.7 8.4/40	67.9 8.2/50	

76.06

Delta St. X-Sections

5+62.5 = ℄ 2" Conc. Walk

5+50

5+00

4+77 to 5+26 Fence on 39.5' Lt of ℄

4+50

4+22

4+16 = ℄ Conc. Apron

4+17 = ℄ Garage on Lt

82.08

5+62.5: 71.14 — 10.94 / 40.3 Walk; 70.80 — 11.28 / 50 Walk

5+50: 73.5 — 2.6 / 50; 78.4 — 3.7 / 40; 75.4 — 6.7 / 19; 74.1 — 8.0 / 17; 73.9 — 8.2; 73.7 — 8.4 / 4; 72.5 — 9.6 / 12; 71.1 — 11.0 / 40; 70.6 — 11.5 / 50

5+00: 76.4 — 5.7 / 50; 75.3 — 6.8 / 39; 74.1 — 8.0 / 25; 73.1 — 9.0 / 18; 72.8 — 9.3; 72.4 — 9.7 / 10; 71.9 — 10.2 / 21; 71.0 — 11.1 / 40; 70.4 — 11.7 / 50

4+50: 72.2 — 7.9 / 50; 73.4 — 8.7 / 40; 73.1 — 9.0 / 28; 72.6 — 9.5 / 19; 72.1 — 10.0; 71.7 — 10.4 / 13; 70.6 — 11.5 / 40; 70.3 — 11.8 / 50

4+22: 73.65 — 8.43 / 40 on Drive

4+16: 73.54 — 8.54 / 40 on Drive

4+17: 74.35 — 7.73 / 80?

Floor 82.08

Delta St X-Sections

6+37

90.1	92.7	90.1	85.6	80.7	75.8	72.9	70.3	66.4	63.3
+8.0	+8.6	+8.0	+3.5	1.4	6.3	9.2	11.8	15.7	18.8
150	130	115	75	40		20	40	90	140

6+30.5 = ℄ 41st St.

89.6	90.1	89.7	85.4	80.7	75.7	70.4	66.6	63.3
+7.5	+8.0	+7.6	+3.3	1.4	6.4	11.7	15.5	18.8
150	130	115	75	40		40	90	140

6+18

89.2	89.7	89.1	84.9	80.7	75.6	72.7	69.8	66.0	63.1
+7.1	+7.6	+7.0	+2.8	1.4	6.5	9.4	12.3	16.1	19.0
150	130	115	75	40		20	40	90	140

6+10.5

88.6	89.2	87.8	86.5	83.0	82.2	81.6	77.7	75.5	74.7	74.0	71.0	69.7	66.8	63.8
+6.5	+7.1	+5.7	+4.4	+0.9	+0.1	0.5	4.4	6.6	7.4	8.1	11.1	12.4	15.3	18.3
150	125	100	90	50	40	35	20		9	15	40	50	90	140

6+00.50 = ℄ 41st

88.6	89.8	88.5	86.0	82.1	79.9	76.7	75.8	75.3	74.7	71.9	71.0	69.9	68.6	66.6	63.8
+6.5	+7.7	+6.4	+3.9	0.0	2.2	5.4	6.3	6.8	7.4	10.2	11.1	12.2	13.5	15.5	18.3
150	125	100	75	40	26	18	12		11	29	40	50	75	100	150

5+80

82.0	80.2	76.9	75.1	74.8	74.3	72.3	70.9	70.3
0.1	1.9	5.2	7.0	7.3	7.8	9.8	11.2	11.8
50	40	20	16		9	24	40	50

82.08

82.08

Delta St. X-Sections

Chk 13' Mon Delta & 41st   8.40   73.68   73.7 (-0.03 Error)

Lt   ℄   Rt.

7+60 = End conc. Ret wall on Rt.

3.5/50 (78.6)   4.0/40 (78.1)   6.1/36 (76.0)   9.0/17 (73.1)   9.6/15 (72.5)   10.3 ℄ (71.8)   11.1/12 (71.0)   11.9/17 (70.2)   12.77/33' Wall (69.31)   13.7/50 (68.4)

7+10.5 = Beg. Conc. Ret. Wall on Rt. 38.5' Rt of ℄

11.79/38.5 on Wall (70.29)

7+10

0.0/50 (82.1)   1.4/40 (80.7)   6.6/15 (75.5)   7.8 ℄ (74.3)   8.6/10 (73.5)   10.5/22 (71.6)   12.0/40 (70.1)   12.8/50 (69.3)

6+85

+1.1/50 (83.2)   0.7/40 (81.4)   2.9/25 (79.2)   5.6/14 (76.5)   6.8 ℄ (75.3)   7.5/11 (74.6)   11.3/37 (70.8)   12.0/40 (70.1)   12.9/50 (69.2)

6+60.5 = East Line 41st

+2.2/50 (84.3)   +0.6/40 (82.7)   2.6/23 (79.5)   4.6/16 (77.5)   6.5 ℄ (75.6)   7.7/15 (74.4)   11.1/40 (71.0)   12.3/50 (69.8)

6+50.5 = E Line curb 41st St.

+18.6/150 (100.7)   +9.2/130 (91.3)   +8.4/115 (90.5)   +5.2/75 (87.3)   +1.3/40 (83.4)   1.3/29 (80.8)   4.7/15 (77.4)   6.4 ℄ (75.7)   8.7/21 (73.4)   11.3/40 (70.8)   15.6/90 (66.5)   18.3/140 (63.8)

6+40.5

+8.3/150 (90.4)   +9.1/130 (91.2)   +8.5/115 (90.6)   +4.4/75 (86.5)   0.7/40 (81.4)   6.3 ℄ (75.8)   9.1/20 (73.0)   11.4/40 (70.7)   15.0/90 (67.1)   18.5/140 (63.6)

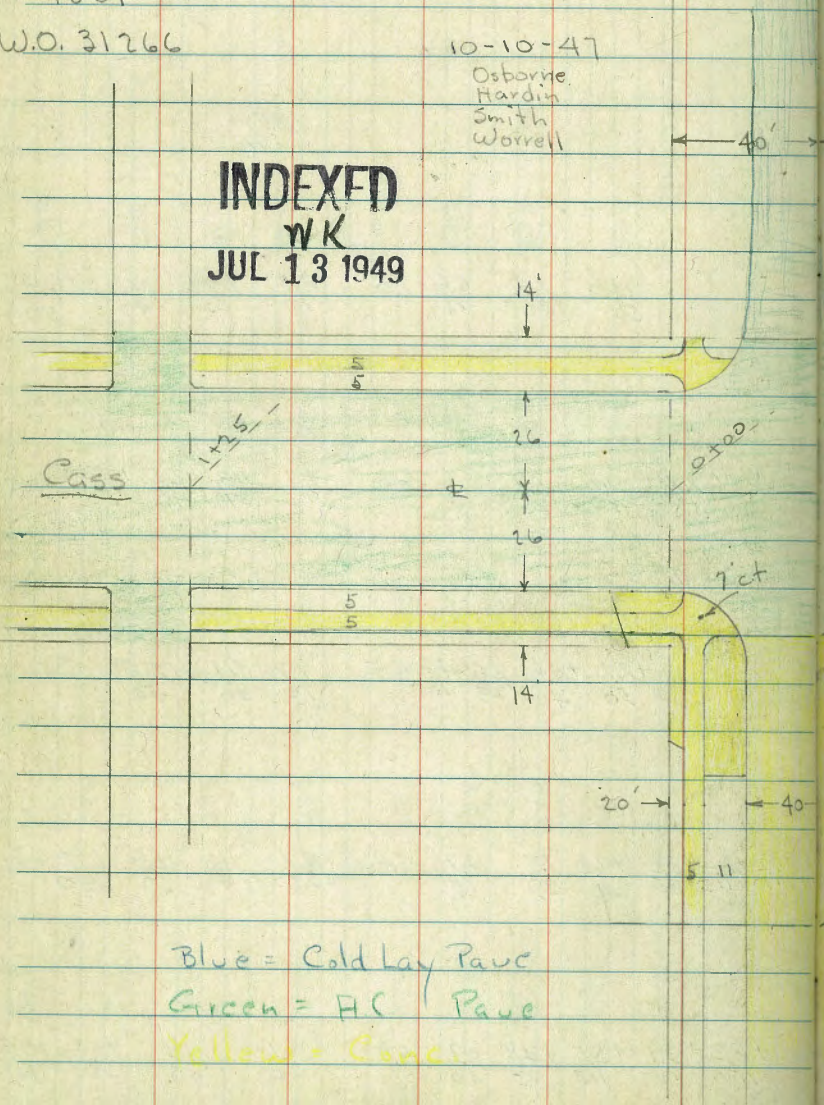
82.08

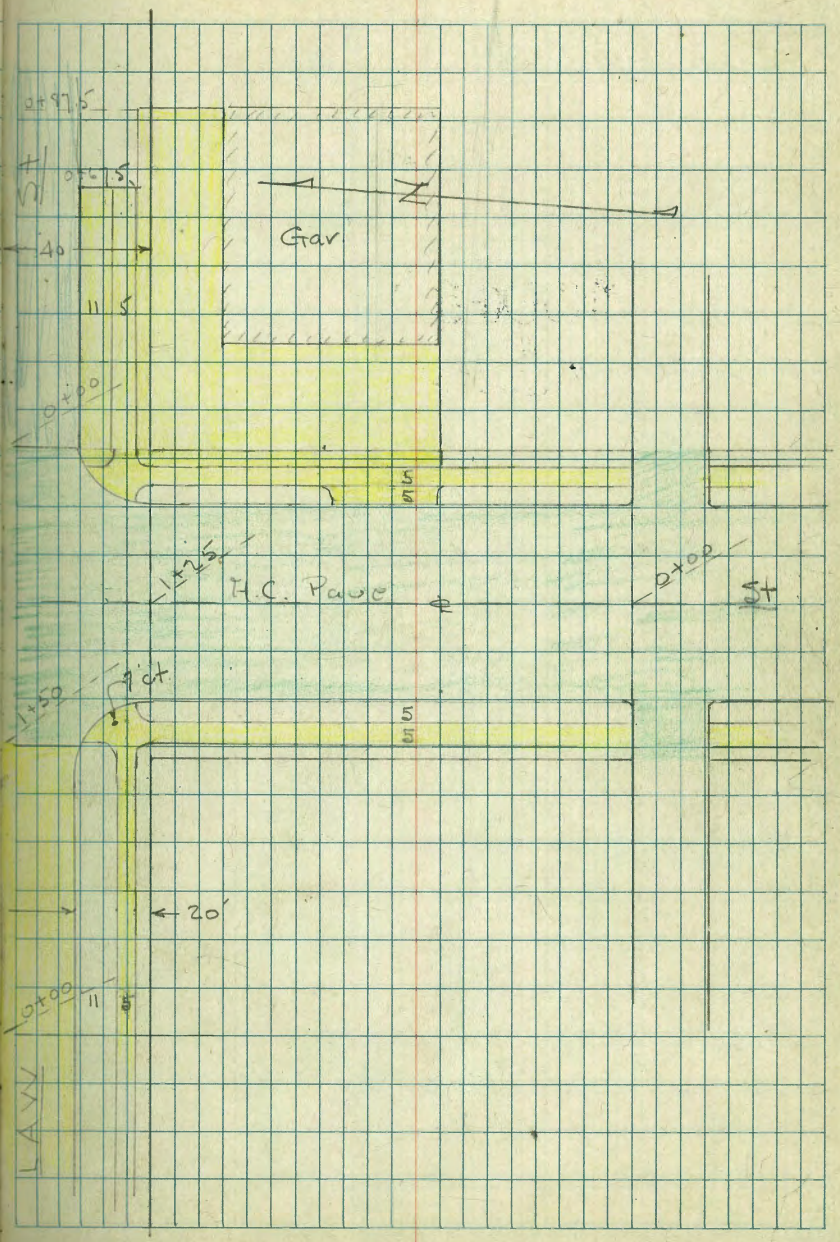
X-Sect. Law St. from Cass to Everets
With Rods on Intersections + Cross Sts

1831

W.O. 31266

10-10-47
Osborne
Hardin
Smith
Worrell





Dawes St

4+28.12

40' 40'

Cold Lay Pave

N

2+00

100' of cb. & Walk in

5.11

1+00

0+00

Cass St

Everts See P. 35 for Int. St

33

4+29.77 P.C. 30 Rad.

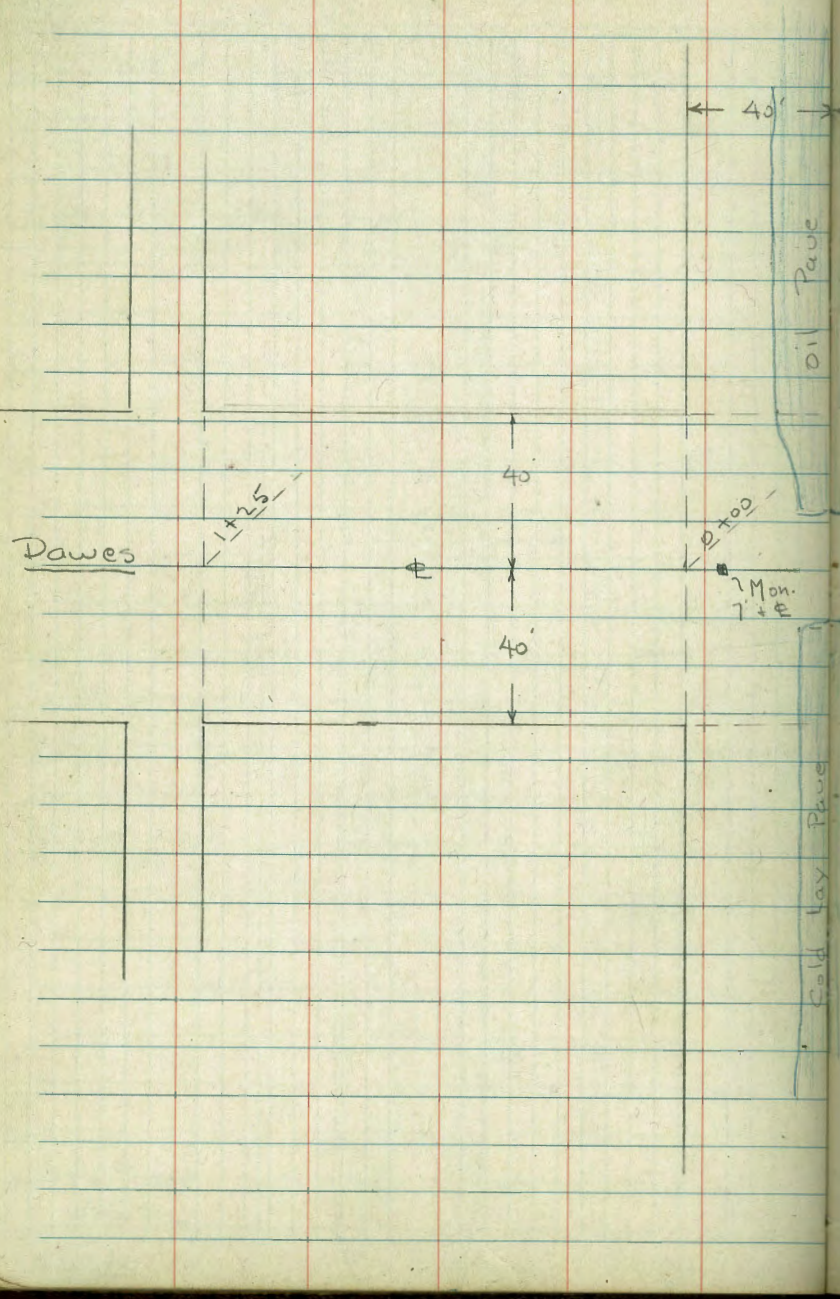
4+13.1

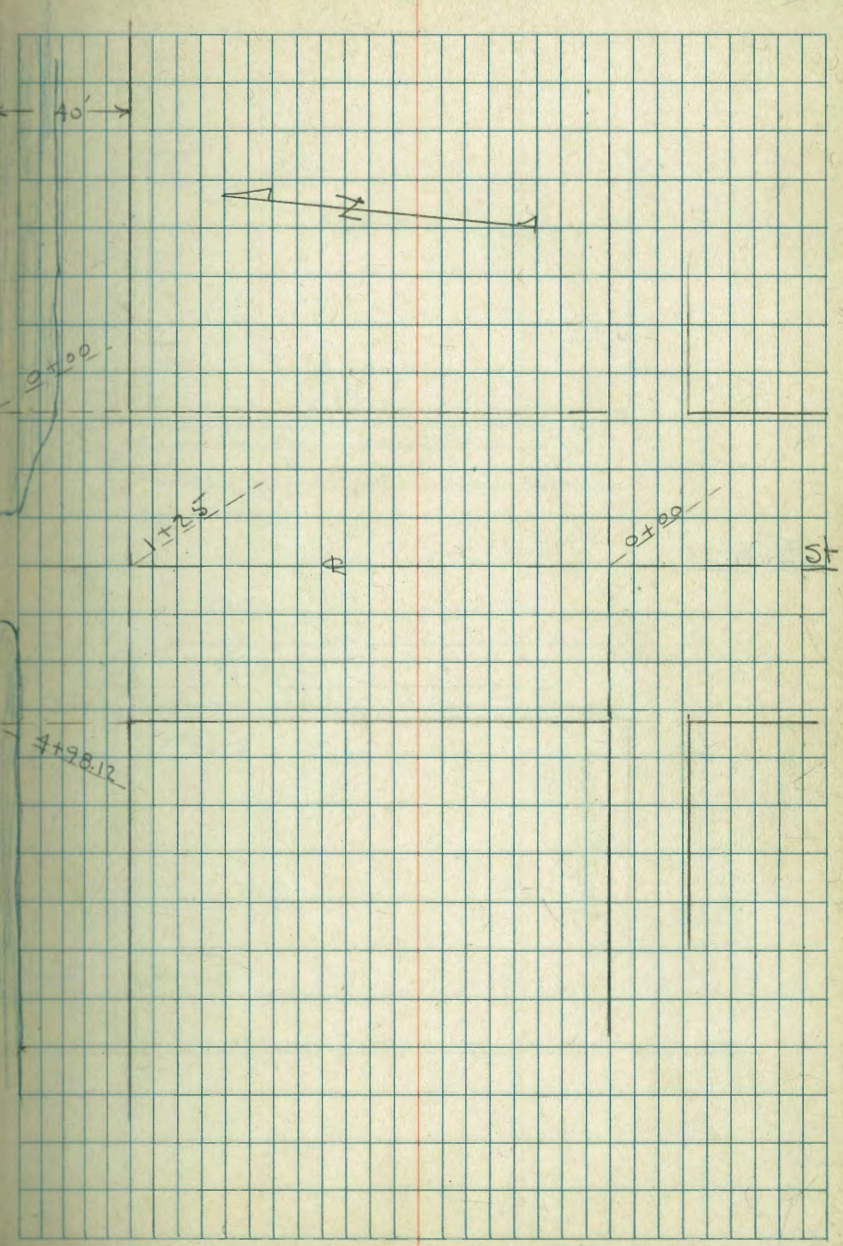
40' 40'

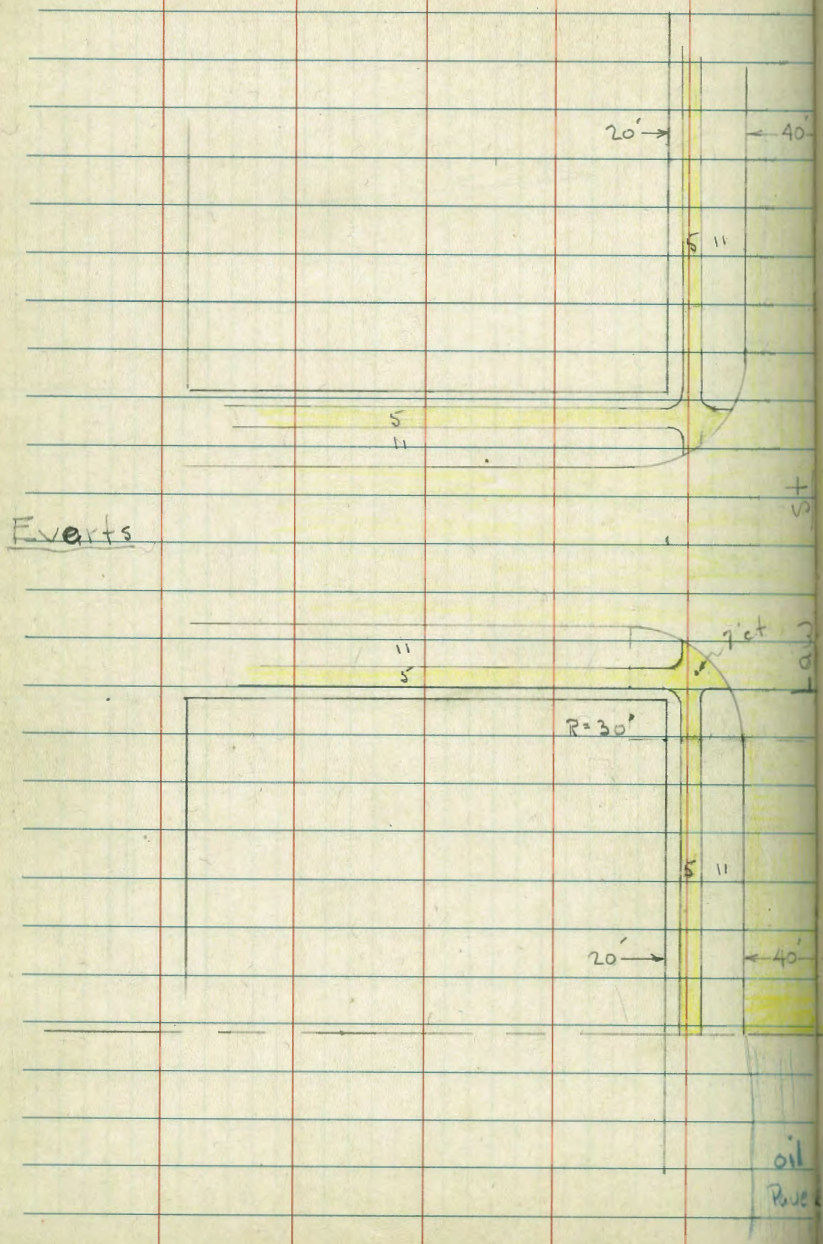
Pave

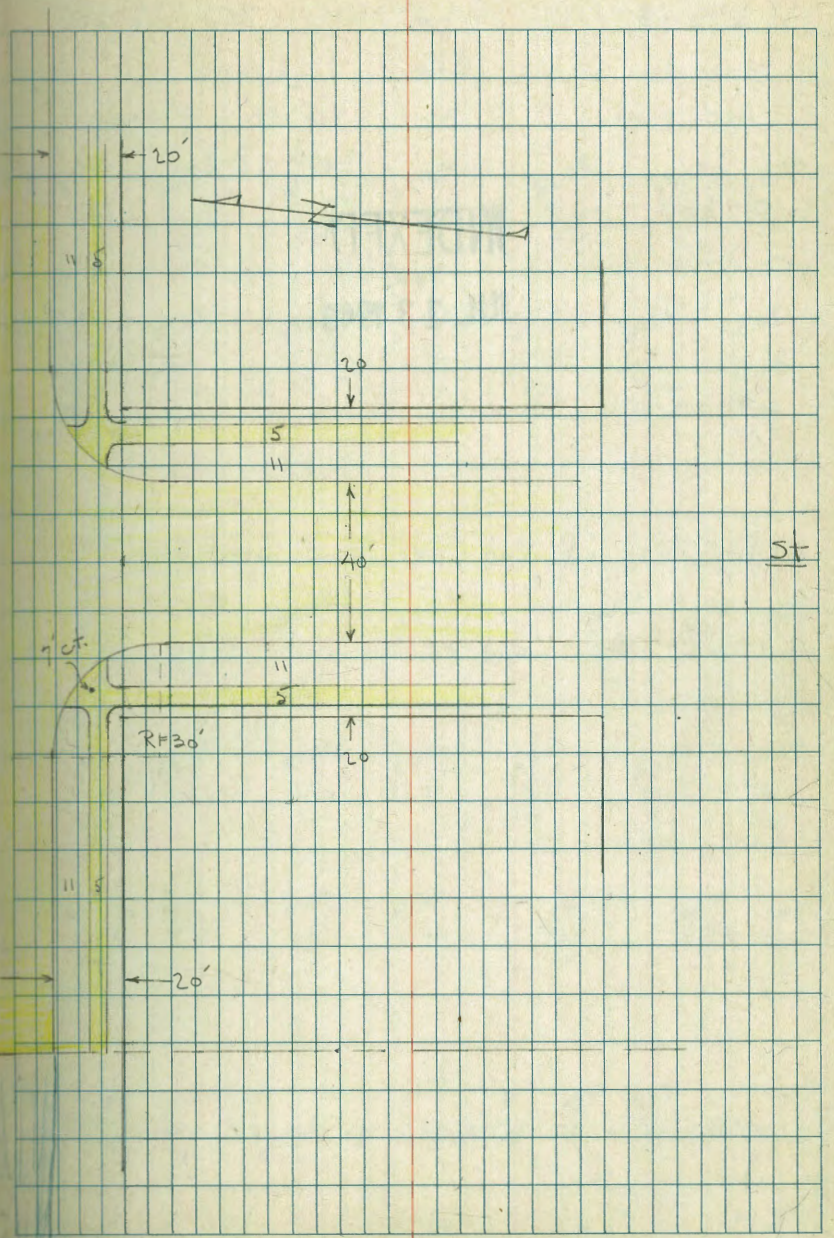
See P. 34 for Int.

Dawes St


40'
40'
Oil Pave
0+00
40
1+25
Dawes
℄
0+00
7 Mon.
7' ± ℄
40'
Cold Lay Pave
4+98.12


1+25
℄
0+00
St


20'
40'
5
11
Everts
7'ct
R=30'
20'
40'
oil


20'
20
40'
7'ct.
R=30'
20
20'
St

X-Sect Cass from N.L. Alley S of Law to S.L. of Alley N. of Law
See sketch = P. 32 - 80' st. 14' cbs.
Paved - A.C.

0+25

0+00 = N.L. Law.

for rest of Int See Law Sections.

1+25 = S.L. Law

1+00

0+50

0+00 = N.L. 20' Alley - S. of Law.

B.M. 7.62 74.02 66.40 Law + Cass S.W.B.P.

Lt. = W ℄ Rt = E

68.25 5.77 26 Top	67.85 6.17 26 gut	68.36 5.66 13	68.67 5.40	68.38 5.64 13	68.04 5.98 26 gut	68.76 5.26 26 Top
67.96 6.06 26 Top P.C. 25' Rad.	67.65 6.37 26 gut	68.08 5.94 13	68.73 5.79	68.10 5.92 13	67.71 6.31 26 gut	68.47 5.55 26 Top P.C.
66.69 7.33 24 Top - P.C. 20' Rad. Ret.	66.30 7.72 26 gut	66.63 7.39 13	66.78 7.24	66.67 7.40 13	66.36 7.66 26 gut	67.05 6.97 26 Top PC
66.12 7.90 26 Top	65.63 8.39 24 gut	66.16 7.86 13	66.31 7.71	66.19 7.83 13	65.87 8.15 26 gut	66.47 7.55 26 Top
65.09 8.93 24 Top	64.65 9.37 26 gut	65.15 8.87 13	65.25 8.77	65.11 8.91 13	64.78 9.24 26 gut	65.50 8.52 26 Top
64.07 9.95 40 gut	64.10 9.92 26 Top 3' Rad. Ret	63.75 10.27 26 gut	64.15 9.87 13	64.28 9.74	64.11 9.91 13	73.87 10.26 26 gut	64.39 9.63 26 Top 3' Rad. Ret	64.30 9.72 40 gut	64.50 9.52 40 Top End Ret

74.02

End.

1+25 = S.L. of 20' Alley - N. of Law.

0+75

℄

Lt. Rt.

69.97	69.85	69.75	69.34	69.86	70.09	69.98	69.70	70.37	70.36	70.49
4.10	4.17	4.27	4.68	4.16	3.93	4.04	4.32	3.65	3.66	3.53
40	40	26	26	13		13	26	26	40	40
Top Ca. end Alley Ret	Gut	Top 3' Rad. Ret	Gut				Gut.	Top 3' Radl. Ret.	Gut.	Top end Ret.

69.00	68.55	69.17	69.37	69.94	68.83	69.54		
5.02	5.47	4.90	4.70	4.78	5.19	4.48		
26	26	13		13	26	26		
Top	Gut.				Gut.	Top		

74.02

H.I. 74.02 - P.37

Rods around Returns at Law & Cass.

N.W. Ret - 317 around - 5 parts - 6.3' each

Beg. - P.C. = 6'W of W.L. on N. ch. Law	6.72	67.30	T = Top
	7.21	66.81	q = qt
6.3' E = W.L. Cass	6.65	67.37	T
	7.03	66.99	q
6.3'	6.44	67.58	T
	6.91	67.11	q
"	6.33	67.69	T
	6.71	67.31	q
"	6.23	67.79	T
	6.53	67.49	q
6.13' = E.C. = N.L. Law	6.06	67.96	T
	6.36	67.66	q

N.E. Ret. = 252 around - 4 - 6.3 each. Ret is not Complete - stops on E.L. of Cass

Beg. = P.C. = N.L. law	5.55	68.47	T
	6.31	67.71	q
6.3 - S	5.65	68.37	T
	6.33	67.69	q
"	5.70	68.32	T
	6.33	67.69	q
"	5.66	68.36	T
	6.26	67.76	q
6.3 = end. = E.L. Cass	5.55	68.47	T
	6.13	67.89	q

S.E. Ret - 25.3' around - 4 - 6.3 each

74.02

Beg. - E.L. Cass	6.54	67.48	T
	6.98	67.04	q
6.3' W.	6.67	67.35	T
	7.24	66.78	q
"	6.86	67.16	T
	7.41	66.61	q
"	6.95	67.07	T
	7.54	66.48	q
6.3 = P.C. = S.L. Law	6.97	67.05	T
	7.66	66.36	q

S.W. Ret - 317' - 5 - 6.3 each

Beg. - S.L. Law	7.33	66.69	T
	7.72	66.30	q
6.3 W	7.40	66.62	T
	7.72	66.30	q
"	7.43	66.59	T
	7.76	66.26	q
"	7.42	66.60	T
	7.79	66.23	q
6.3 = W.L. Cass	7.52	66.50	T
	7.78	66.24	q
6.3 = E.C.	7.58	66.44	T
	7.96	66.06	q

X-Sect. Law St. - 80' 20' cbs
from 150' W. of W.L. Cass - Conc.
Pave W. of Cass - See sketch - P.32

27' E.

14' E. = W. cb. Cass

1+50 = W.L. Cass

1+44 = P.C. 20 Rad. Ret

1+00

0+50

0+00 = 150 W. of W.L. Cass

℄

Lt: N. Rt. S

68.08 5.94 40	67.76 6.26 20	67.62 6.40 10	67.49 6.53	67.28 6.74 10	67.03 6.99 20	66.63 7.39 40	
67.96 6.06 40	67.66 6.36 40 gut.	67.34 6.68 20	67.36 6.66 10	63.31 6.71	67.06 6.96 10	66.67 7.35 20	66.30 7.72 40 gut.	66.69 7.33 40 Top
67.37 6.65 20.9 Top	66.99 7.03 20.9 gut	67.07 6.95 10	67.07 6.95	66.76 7.26 10	66.23 7.79 20.9 gut.	66.50 7.52 20.9 Top	
67.24 6.78 20 Top	66.81 7.21 20 gut	66.93 7.09 10	66.94 7.10	66.66 7.36 10	66.06 7.96 20 gut	66.44 7.58 20 Top	
66.65 7.37 20 Top	65.97 8.05 20 gut	66.09 7.93 10	66.05 7.97	65.83 8.19 10	65.29 8.73 20 gut	65.77 8.30 20 Top	
65.89 8.13 20 Top	65.19 8.83 20 gut.	65.35 8.67 10	65.29 8.73	64.98 9.04	64.57 9.50 20 gut.	64.96 9.06 20 Top	
65.02 9.00 20 Top	64.37 9.65 20 gut	64.50 9.52 10	64.48 9.54	64.19 9.83 10	63.7 10.31 20 gut.	64.17 9.85 20 Top	

7402 - P.36

21' Rt.

0+67.5 = End Conc. Dr. - Level edge - no rise

0+53 - 3.98 Lt. = ℄ 7' Conc. Dr.

0+50

0+25

0+02 - 20.9 Rt. = Beg. Low edge of Conc. Dr. to Ser. Sta. - See sketch P. 32

80' E. = E.L. Cass = **0+00** ahead - edge of A.C. pave + Beg. Cold Lay Pave Strip.

66' E. = E.cb.

53' E.

40' E. = ℄

Lt. ℄ Rt.

						68.18		68.78	68.78	68.61
						5.84		5.24	5.24	5.41
						21		31	36	40
						Cor. Dr.			Cor. Dr.	
69.77										
4.30										
3.98 = Dr.										
69.44	69.1	68.6	68.7	68.7	68.5	67.95	68.40		68.29	
4.6	4.9	5.4	5.3	5.3	5.5	6.07	5.62		5.73	
40	21	19	10		10	21	31		40	
		edge					conc.			
69.3	69.1	68.4	68.3	68.3		68.1	67.56	67.794	67.844	
4.7	4.9	5.6	5.7	5.7		5.9	6.46	6.10	6.18	
40	21	19	10			10	21	31	40	
	edge							conc.		
	CL									
							67.07		67.444	
							6.95		6.58	
							20.9		31	
							gut in Dr.		walk	
68.78	68.66	68.47	67.89	67.84	67.67	67.37	67.04	67.49	67.36	
5.24	5.36	5.55	6.13	6.18	6.35	6.65	6.98	6.53	6.67	
36	31	21	2	10		10	20.9	20.9	40	
edge walk		Top	gut				gut	Top end cb	on Conc	
	68.47		67.71	67.46	67.24	67.05	66.85	66.67	66.36	67.03
	5.55		6.31	6.56	6.78	6.97	7.17	7.35	7.66	6.97
	40		40	20	10		10	20	40	40
	Top P.C.		gut						gut	Top P.C.
	68.10		67.72	67.55	67.34		67.19		67.01	66.67
	5.92		6.30	6.47	6.68		6.83		7.01	7.40
	40		20	10			10		20	40
	68.23		67.84	67.67	68.02		67.36	67.16	66.78	
	5.79		6.18	6.35	6.50		6.66	6.86	7.24	
	40		20	10			10	20	40	

74.02

2+00 = end cb. + walk on Lt.

1+90 = ℄ 10' Conc. Dr. on Lt. - Cold Lay runs into Drive

1+67 = ℄ 3' Conc. walk on Lt.

1+50

1+25 = ℄ 3' Conc. walk on Lt

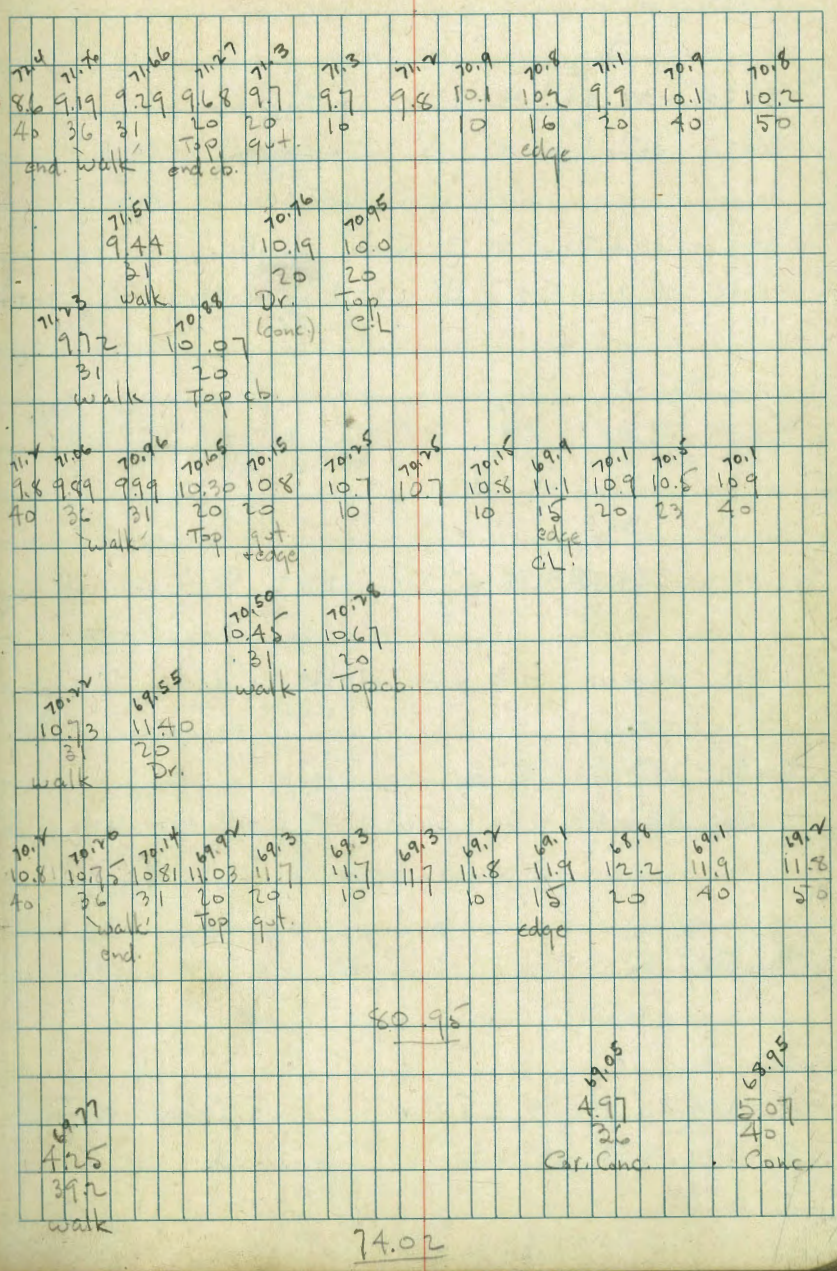
1+06 = ℄ 11' Conc. Dr. on Lt.

1+00 - Beg cb. + Walk on Lt.

T.P. 10.00 80.95 4.07 69.95

0+87.5 - 36' Rt. = End Conc Slab.

0+74 - 39.2 Lt. = ℄ 3' Conc walk



3+42 - 39' Rt. = ℄ 7' Dr. - 2-2' Conc. strips

3+24 - 35.6 Lt. = ℄ 3' Conc. walk

3+17 - 39.4 Rt. = ℄ 3' Conc. walk

3+05 - 35.7 Lt. = ℄ 7' Dr. - 2-2' Conc. strips

3+00

2+93 - 39.8 Rt. = ℄ 6.7 Dr. - 2-2' Conc. strips

2+75 - 35.6 Lt. = ℄ 3' Conc. walk

2+67

2+72 - 39.7 Rt. = ℄ 3' Conc. walk

2+56 - 35.6 Lt. = ℄ 7' Dr. - 2-2' conc. strips

2+50

2+41 - 40' Rt. = ℄ 6.5 Dr. - 2-1.5' Conc. strips

2+17 - 40.1 Rt. = ℄ 4' Conc. Walk

Lt. ℄ Rt.

74.37 6.58 40 walk

74.27 6.68 35.6 end walk

73.75 7.76 = level 39' Dr.

74.17 6.83 40 awe

74.11 6.84 35.7 Ely.

74.05 6.90 39.7 = wly.

73.04 7.91 39.4 = walk

73.9 7.0 50 | 73.7 7.2 40 | 73.6 7.4 24 | 73.1 7.8 20 | 73.0 7.9 10 edge | 73.0 7.9

73.7 8.2 9 edge | 73.6 8.4 16 | 73.7 8.2 20 | 73.7 8.2 40 | 73.7 8.2 50

72.57 8.43 = level 39.8 Dr.

73.60 7.35 40 on walk

73.53 7.42 35.6 walk

72.37 8.63 39.7 walk

73.77 7.68 40 on Dr.

73.73 7.72 35.6 Dr. - level

72.8 8.1 40 | 72.7 8.2 22 | 72.3 8.6 20 edge | 72.1 8.8 10 | 71.9 9.0

71.7 9.2 10 | 71.6 9.3 16 edge | 71.7 9.2 20 | 71.9 9.0 22 | 71.7 9.2 40

71.66 9.29 40 Ely. strip

71.63 9.32 40 wly. str.p

71.36 9.59 40.1 walk

80.95

4+87 - 34.7 Lt. = ℄ 3.5' Conc. walk
4+81 - 39.7 Rt. = ℄ 3' Conc. walk

4+50

4+43 - 40.8 Rt. = ℄ 7' Dr - 2 - 2' Conc strips
4+27 - 35.2 Lt. = ℄ 3' Conc. walk

4+18 - 40.1 Rt. = ℄ 3' Conc. walk
4+08 - 35.3 Lt. = ℄ 2' Conc. walk

4+00

3+94 - 39.3 Rt. = ℄ 7' Conc. Dr.

3+84 - 35.1 Lt. = ℄ 3' Conc. walk
3+69 - 40' Rt. = ℄ 3' Conc. walk
3+59 - 35' Lt. = ℄ 8.7 Conc. Dr.

3+50

Lt. ℄ Rt.

76.78
4.17
40
walk

76.60
4.35
34.7
end walk

74.80
6.15
39.7 - walk

76.0 75.1 74.8 74.7 74.5 74.4 74.6 74.5
4.9 5.8 6.1 6.2 6.4 6.5 6.3 6.4
40 20 10 9 20 23 40
edge edge

74.70
6.25 - Level
40.8
Dr.

75.73
5.22
40
walk

75.64
5.31
35.2
end walk

75.39
5.56
40.1
walk

75.43
5.52
40
walk

75.38
5.87
35.3
end walk

75.3 75.4 74.8 75.5 74.4 74.3 74.1 74.0 74.7 74.3 73.9
5.6 5.8 6.1 6.4 6.8 6.6 6.8 6.9 6.7 6.8 7.0
50 40 23 20 10 9 20 25 40 50
edge edge

74.03
6.92
39.3
Dr.

75.14
5.81
40
walk

75.09
5.86
35.1
end walk

73.87
7.08
40
walk

74.63
6.30
40
Dr.

74.59
6.36
35
Dr.

74.6 74.3 73.9 73.8 73.8 73.6 73.4 73.7 73.3
6.3 6.6 7.0 7.1 7.1 7.3 7.5 7.2 7.6
40 23 20 10 9 20 22 40
edge edge

40.95

Cont. on Page 47

80' E. = E.L. Dawes = 0+00 ahead.

60' E. = E. cb.

55' E. = Cross gutter + Beg Oil (poor Cond.) pave strip

50' E.

40' E. = ℄

30' E.

25' E. = end cold lay + Cross Dirt gutter

20' E. = W. cb.

4+98.12 = W.L. Dawes

Lt. ℄ Rt.

77.9 3.1 40	77.1 3.9 20	76.5 4.5 16 edge	76.7 4.3 10	76.6 4.4	76.4 4.6 10	75.9 5.1 20 edge		76.0 5.0 40	
77.8 3.2 40	77.2 3.8 20	76.00 5.0 10 edge	75.9 5.1			75.6 5.4 10 edge	75.4 5.6 20	75.1 5.9 40	
76.7 4.8 40	75.9 5.1 20	75.9 5.1 10 edge oil	75.8 5.2		75.5 5.5 10 edge oil		75.7 5.8 20	74.5 6.5 40	
76.7 4.3 40	76.3 4.7 20	76.1 4.9 10	75.8 5.2		75.6 5.4 10	75.3 5.7 20		74.8 6.2 40	
77.0 4.0 40	76.4 4.6 20	76.1 4.9 10	75.9 5.1		75.7 5.3 10	75.5 5.5 20		75.7 5.8 40	
76.7 4.3 40	76.1 4.9 20	75.8 5.2 10	75.6 5.4		75.4 5.6 10	75.7 5.8 20		74.8 6.2 40	
76.3 4.7 40	75.8 5.2 20	75.6 5.4 10 edge end	75.4 5.6		75.7 5.8 9 edge-end	74.9 6.1 20		74.4 6.6 40	
76.7 4.2 40	76.0 5.0 20	75.8 5.2 10 edge	75.5 5.5			75.7 5.8 9 edge	74.8 6.2 20	74.7 6.3 40	
76.8 4.2 40	75.9 5.1 20	75.6 5.4 10 edge	75.4 5.6		75.1 5.9 5 edge	74.9 6.1 20		74.9 6.1 40	

80.95

X-Sect. Dawes St. from N.L. of Alley (20')
125' S. of S.L. Law to S.L. of 20' Alley
125' N. of N.L. of Law. - 80' St. 20 cbs.

0+25

0+19 - 28.7 Rt. = ℄ Tel. Pole # 89

0+00 = N.L. of Law.

See P. 44 for Int.

1+25 = S.L. Law

1+00

0+73 - 28.5 Rt. = ℄ Tel. pole # 88
0+61 - 39.5 Lt. = ℄ 15' Conc. Dr.

0+50

0+00 = N.L. 20' Alley S. of Law.

Lt. = W ℄ Rt. = E.

77.6	77.7	76.9	77.6	77.7		77.4	76.7	78.4	78.6
3.4	3.8	4.1	3.4	3.3		3.6	4.3	2.6	2.4
40	20	16	10			10	17	20	40
76.8	76.7	76.3	76.7	77.0	76.7	76.7	77.8	77.9	
4.2	4.3	4.7	4.3	4.0	4.3	4.8	3.2	3.1	
40	20	15	10		10	15	20	40	
74.9	74.7	74.4	74.8	75.7	74.8	74.5	75.1	76.0	
6.1	6.3	6.6	6.2	5.8	6.2	6.5	5.9	5.0	
40	20	15	10		10	15	20	40	
74.5	74.3	74.0	74.4	74.8	74.6	74.7	74.8	75.4	
6.5	6.7	7.0	6.6	6.2	6.4	6.8	6.2	5.6	
40	20	14	10		10	16	20	40	
73.98									
6.97									
39.5									
Dr.									
73.8	73.8	73.3	73.6	74.1	73.9	73.6	74.5	74.8	
7.2	7.2	7.7	7.4	6.9	7.1	7.4	6.5	6.2	
40	20	13	10		10	15	20	40	
73.0	73.9	73.7	73.9	73.3	73.3	73.9	73.8	74.1	
8.0	8.1	8.3	8.1	7.7	7.7	8.1	7.2	6.9	
40	20	13	10		10	16	20	40	

80.95 - P. 44

End.

1+25 - 29.1 Rt. = Tel. pole ℄ 90 & S.L. of 20' Alley

" " 38.4 Lt. = ℄ P. pole ℄ J.P.A. 1090

0+75 - 38' Lt. = ℄ 15' Conc. Dr.

" " 42.4 Rt. = ℄ 9' Conc. Dr.

Lt. ℄ Rt

79.6	79.7	79.3	79.6	80.1	79.9	79.5	80.4	80.8	
1.4	1.3	1.7	1.4	0.9	1.1	1.5	0.6	0.2	
40	20	15	10		10	17	20	40	

78.76	78.62	78.5	78.4	78.7	78.9	78.8	78.3	79.2	79.9	80.28
2.9	2.33	2.5	2.8	2.3	2.1	2.2	2.7	1.8	1.1	0.67
48	38	20	15	10		10	17	20	40	42.4
floor Gar.	edge Dr.									Dr.

80.95

Cont from. Page 44

1+00

T.P. 8.07 88.71 0.31 80.64

0+78 - 38.7 Lt. = ℄ 4' Conc. walk

0+78 - 18.7 Lt. = Nly. of 3' wide - 3 Conc. Steps

0+75

0+58

~~0+38~~ 38.8 Lt. = ℄ 7.5' Conc. Dr.

0+50

0+27 - 40 Rt. = ℄ 3' Conc walk

0+25

0+18 - 38.7 Lt. = ℄ 4' Conc. walk

0+00 - E.L. of Dawes - 41.8 Rt. = Nly. of 11' Conc. Dr. on Diagonal

Lt. ℄ Rt.

87.7	87.1	80.9	79.4	79.6	79.7	79.3	78.7	79.6	79.7	78.9
6.5	6.6	7.8	9.3	9.1	9.0	9.4	10.0	9.1	9.5	9.8
50	40	22	18 edge	10		10	21 edge	24	40	50

88.71

80.79
0.16
38.7
walk

80.39
0.56
23.2
Top-edge Nly.

79.30
1.65
18.7
Bottom step

80.8	79.9	78.7	79.0	79.0	78.8	78.3	79.1	78.7
0.2	1.1	2.3	2.0	2.0	2.2	2.7	1.9	2.3
40	20	18 edge	10		10	20 edge	23	40

79.85
1.10
38.8
Dr

79.4	78.9	77.9	78.7	78.7	78.0	77.4	78.0	77.6
1.6	2.1	3.1	2.8	2.8	3.0	3.6	3.0	3.4
40	21	18 edge	10		10	20	25	40

76.59
4.36
to walk

78.5	77.9	77.1	77.4	77.4	77.7	76.7	76.8
2.5	3.1	3.9	3.6	3.6	3.8	4.3	4.5
40	20	17 edge	10		10	20 edge	40

78.35
2.60
38.7
walk

75.93
5.02
41.8

80.95

2+50

2+41 - 35.5 Lt. = ℄ 6' Dr. - 2-18" Conc. strips

2+22 - 31.7 Lt. = ℄ 3' Conc. walk

2+06 - 31.6 Rt. = ℄ 3' Conc. walk

2+00

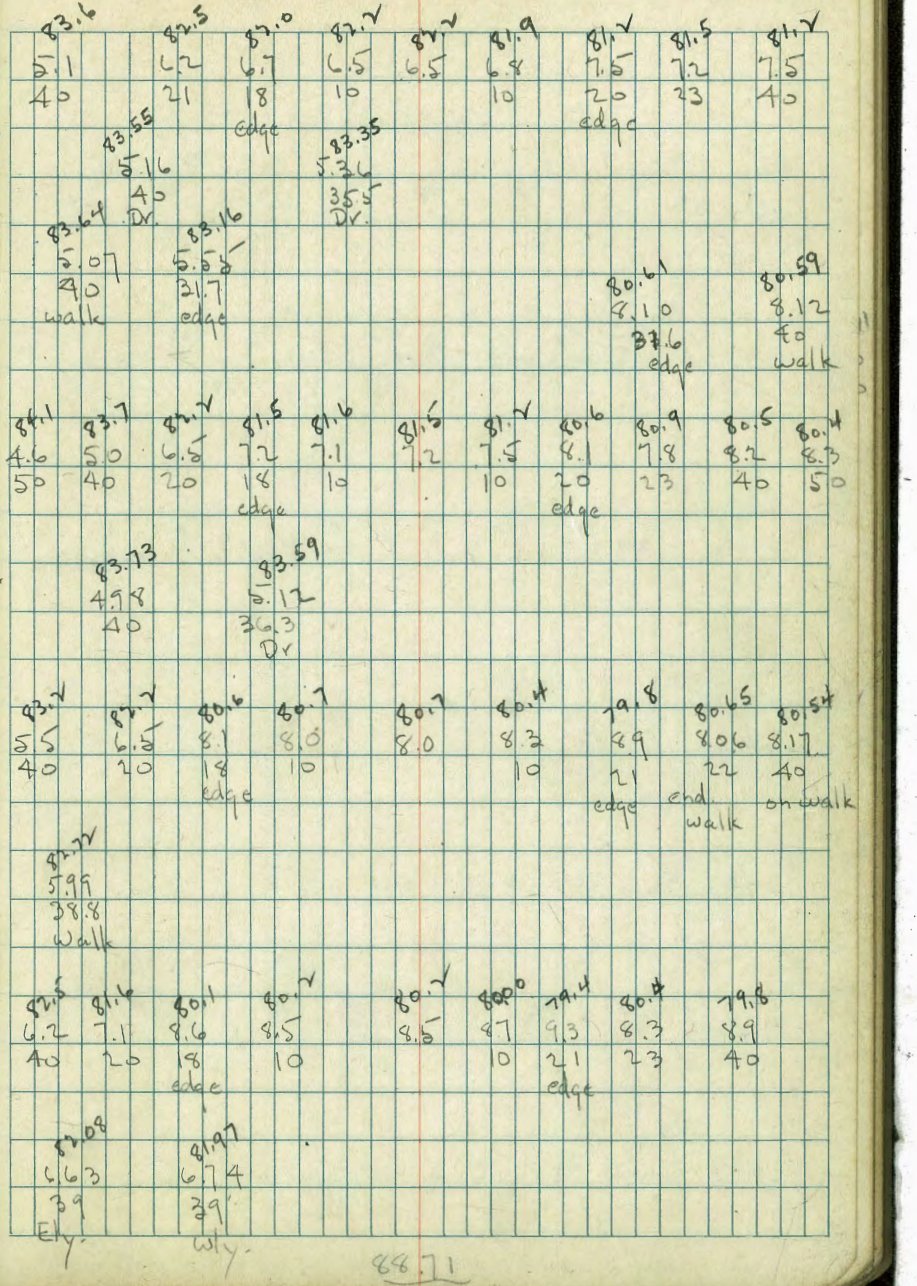
1+96 - 36.3 Lt. = ℄ 7' Conc. Dr.

1+50 - 22' Rt. = ℄ 3' Conc. walk

1+32 - 38.8' Lt. = ℄ 3' Conc. walk.

1+25

1+08 - 39' Lt. = ℄ 7' Dr. - 2-2' Conc. strips



T.P.	7.13	92.60	3.24	85.47
4+50				
4+13.1 = Sub. Line - Beg. Conc. Pave - curb + walks				
3+90 - 38.8 Rt. = ℄ 3' Conc. walk				
3+50				
3+47 - 36.6' Rt. = ℄ 3' Conc. walk				
3+00				
2+94 - 21.4' Rt. = ℄ 3' Conc. walk				

92.60

85.77	85.54	84.78	84.97	84.90	84.55	84.04	84.48						
2.94	3.17	3.93	3.74	3.81	4.16	4.67	4.23						
31	25	19.9 in Dr.	10		10	20.1 gut	20.1 Top						
87.8?	86.3?	84.99	84.91?	84.83?	84.19?	84.34	84.25?	83.91	83.34	83.88	83.94	83.93	84.71?
.09	2.4	3.72	3.80	3.88	4.52	4.37	4.46	4.80	5.37	4.83	4.77	4.78	4.0
50	40	35.8 end walk	34.8	19.8 gut	19.8 Top	10		10	20.2 gut	20.2 Top	31.2	36.2 end walk	40
87.7?	86.1	85.7?	84.0	84.1	84.1	83.8	83.7	84.1	84.85	84.87			
1.5	2.6	3.5	4.7	4.6	4.6	4.9	5.5	4.6	3.86	3.84			
50	40	21	18 edge	10		10	20 edge	23	38.8 end	40 walk			
86.4?	85.7	84.4	83.5	83.6	83.6	83.7	82.6?	83.3	83.7				
2.3	3.5	4.3	5.2	5.1	5.1	5.5	6.1	5.4	5.5				
50	40	21	18 edge	10		10	20 edge	22	40				
83.26	83.28												
5.45	5.43												
36.6 end	40 walk												
84.7?	83.9	83.7	82.7	82.9	82.9	82.5	81.8	82.4?	82.6	82.6			
4.0	4.8	5.5	6.0	5.8	5.8	6.2	6.9	6.3	6.1	6.1			
50	40	20	18 edge	10		10	20 edge	22	40	50			
82.26	82.55												
6.45	6.16												
21.4 end walk	40 walk												

88.71

Check Starting B.M.		9.18	66.41	66.40
	2.12	75.59	7.47	73.47
T.P.	0.06	80.94	11.72	80.88

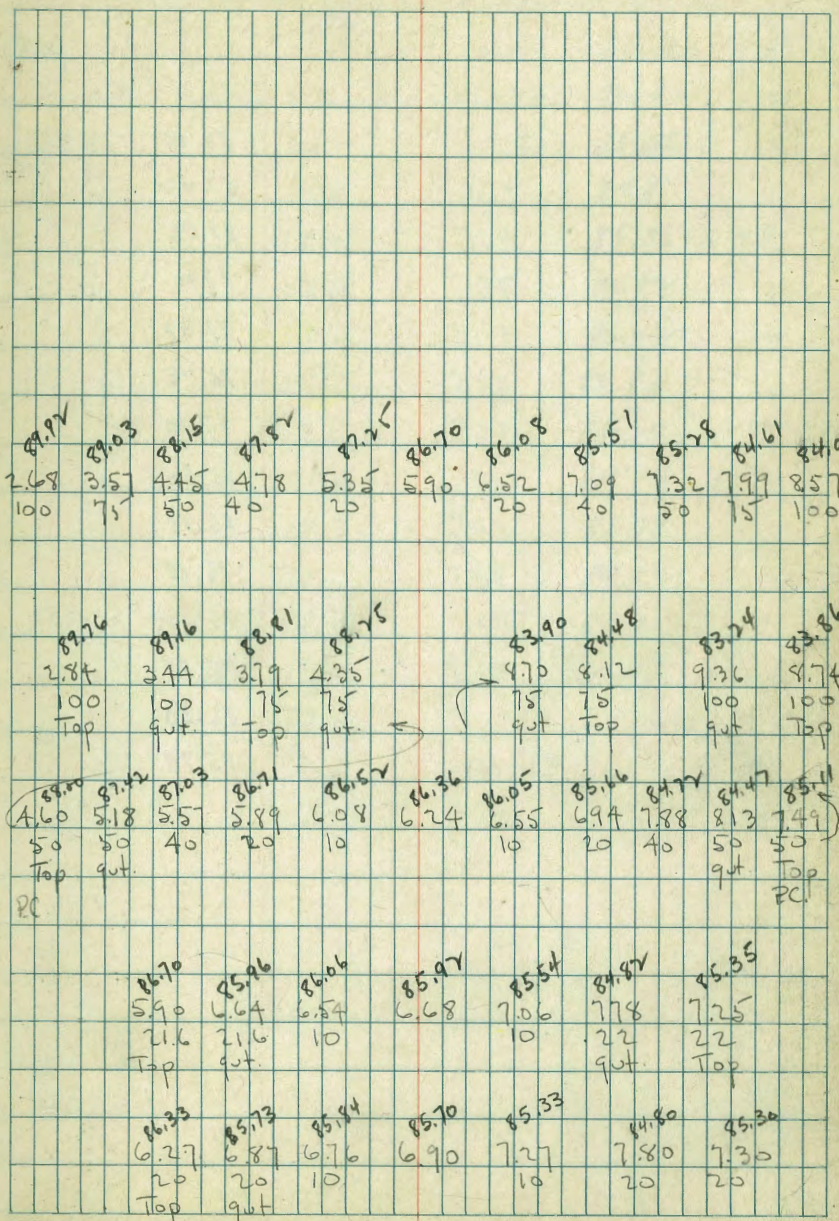
4+39.77 = ℄ Everets

5+19.77 Cont.

5+19.77 = W.Cb.

4+99.77 = W.L. Everts

4+89.7 = P.C. 30' Rad. Returns



92.60 = H.I. - P. 50

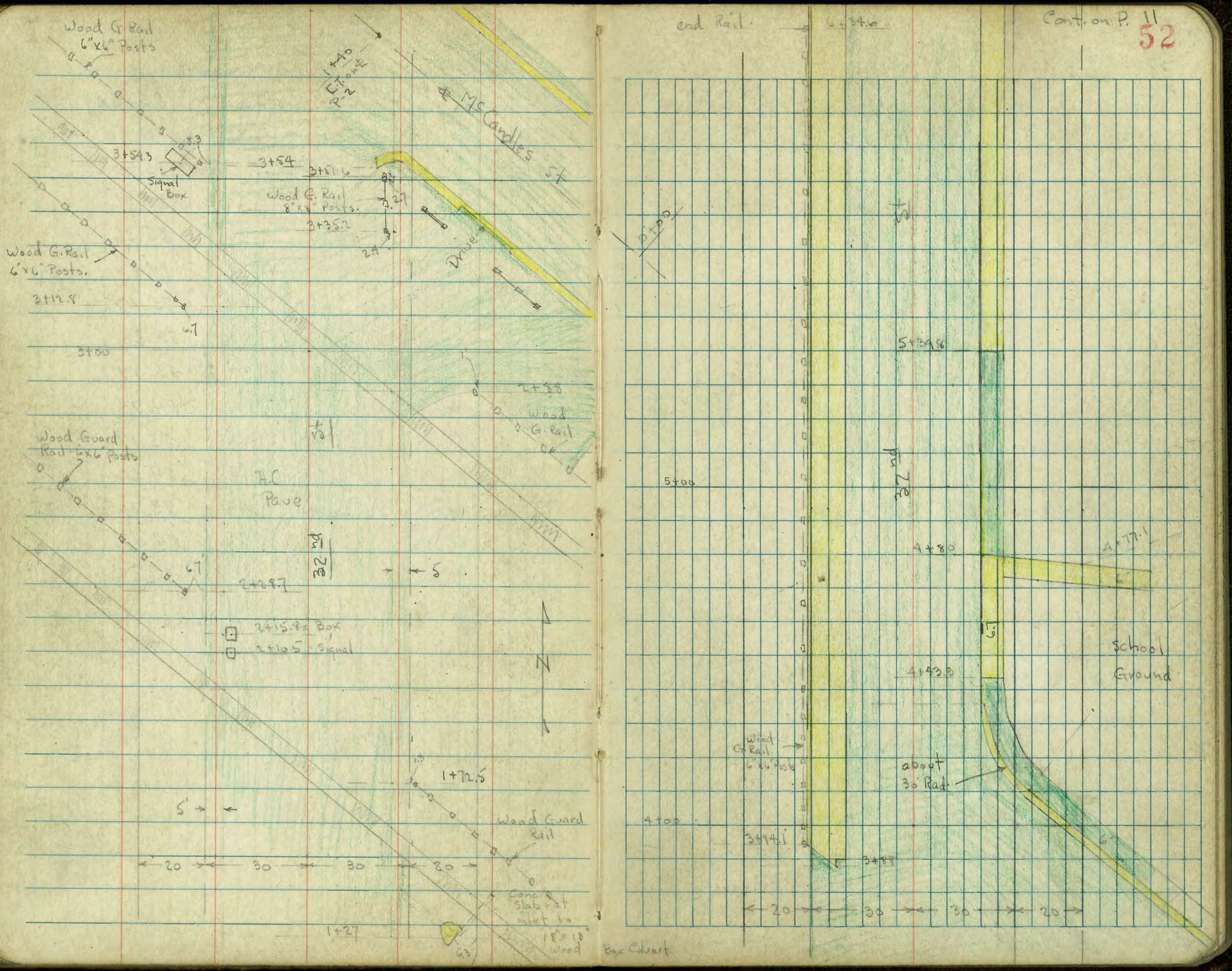
Rods around N.W. & S.W. Returns at Law & Everetts

N.W. Ret 47.4 around - 6 parts - 7.9 each.

N.L. Law Beg. - N end. 10' N of	4.60	88.00	T = Top
	5.18	87.42	q = gut.
7.9 S.	4.97	87.63	T
	5.50	87.10	q
"	5.21	87.39	T
	5.82	86.78	q
"	5.50	87.10	T
	6.10	86.50	q
"	5.81	86.79	T
	6.45	86.15	q
"	5.98	86.62	T
	6.71	85.89	q
7.9 = end = P.C.	6.27	86.33	T
10' W of W.L. Everets	6.87	85.73	q

S.W. Ret. - 47.4 around - 6 - 7.9 each.

Beg. - W. end - 10' W. of W.L. Everts	7.30	85.30	T.
	7.80	84.80	q
7.9 E	7.25	85.35	T
	7.79	84.81	q
"	7.24	85.36	T
	7.78	84.82	q
"	7.18	85.42	T
	7.80	84.80	q
"	7.31	85.29	T
	7.86	84.74	q
"	7.43	85.17	T
	7.98	84.62	q
7.9 = P.C. = 10' S. of S.L. Law	7.49	85.11	T
	8.13	84.47	q


Wood G. Rail
6"x6" Posts
1+40
E.T. on ℄
P-2
℄ MS Candles 5℄
3+54.3
3+54
3+51.6
Signal Box
Wood G. Rail
8"x8" Posts.
3+35.2
Drive
Wood G. Rail
6"x6" Posts.
3+12.5
3+00
2+80
Wood G. Rail
Wood Guard Rail - 6"x6" Posts
H.C. Pave
2+28.7
2+15.8± Box
2+10.5 Signal
1+72.5
Wood Guard Rail
20
30
30
20
Concr. slab at inlet to 18"x18" Wood Box Culvert
1+27
end Rail
4+34.6
Cont. on P. 11
5+39.8
5+00
4+80
4+77.1
4+43.3
School Ground
Wood G. Rail 6"x6" Posts
about 30' Rad.
4+00
3+94.1
3+83
20
30
30
20

X-Sect. of 32nd from N.L. of Harbor Dr. to Bridge & New Prop. R.o.w. 100' wide Thru base to Main St.

Indexed 93

1+25 Cont.

1+25 - Normal to 32nd

1+14.5 - 21.5 Rt. of ℄ P. pole # 453404 H

1+11.16 Cont.

N.L. of Harbor Dr.

1+11.16 = ℄ 32nd & N.L. Harbor Dr. - Sect. on

	5.35	13.59 ~~14.44~~			
Set B.M. on C&G. Disk			5.38	8.24 ~~9.09~~	See P.LL
T.P. # 3	9.32	13.62 ~~14.47~~	3.82	4.30 ~~5.15~~	
T.P. # 2	2.84	8.12 ~~8.97~~	5.91	5.28 ~~6.13~~	
T.P. # 1	3.32	11.19 ~~12.04~~	4.56	7.87 ~~8.72~~	
B.M.	3.04	12.43 ~~13.28~~	0.30	10.24	S.W. B.P. Bridge on
	1.15	10.54		9.39 ←	Main

Lt. = W ℄ Rt. = E

4.90 / 39.6 edge of Conc. Slabs at Inlet — 8.69	5.43 / 42 Conc. — 8.16	6.1 / 50 in Ditch — 7.49	5.2 / 60 on R.R. — 8.39

7.04	7.03	7.28	7.53	7.75	8.28	8.31	7.81	7.97	8.14	8.81	8.69
6.55	6.56	6.31	6.06	5.84	5.31	5.28	5.78	5.62	5.45	4.78	4.90
53.5	50	30	20	1.6	1.2	13	16	11	20	20	35.6
N. edge Conc Strip				gut	Island		gut		gut	Top	edge AC

8.64	8.79
4.95	4.8
52.7	64.64 =
E. edge AC Walk	E.L. 100' Ro.W.

7.75	7.92	7.30	7.56	7.69	8.23	8.25	8.24	7.69	7.87	7.87	8.49
5.84	5.67	6.29	6.03	5.90	5.36	5.34	5.35	5.90	5.72	5.72	5.10
64.6	44.6	44.6	25	1.9	14	Disk on Island	24	2.6	16	26.6	26.6
W.L. 100' Row.	Top Cb.	gut		gut	edge Conc Island		edge	gut		gut	Top Cb.

~~14.44~~ 13.59

Elev. of B.P. Read as Diff. } Elevations 10.24 & 9.39 are on two different benches on same bridge

1+78.4 - opp. PC Curb on Lt

1+78 5.79 60

1+61.7 - end of Conc. Island

1+60.7 - 20' Lt. - PC. curb on Lt. - S. end of Dr.

1+50 - Cont.

1+50

1+45 - 31.7 Lt. - ℄ 10" base to Signal Light.

1+46 - 20 Rt. = end of cb.

1+40.5 - 55.5 Rt. = inlet of 12"x12" Wood Culvert.

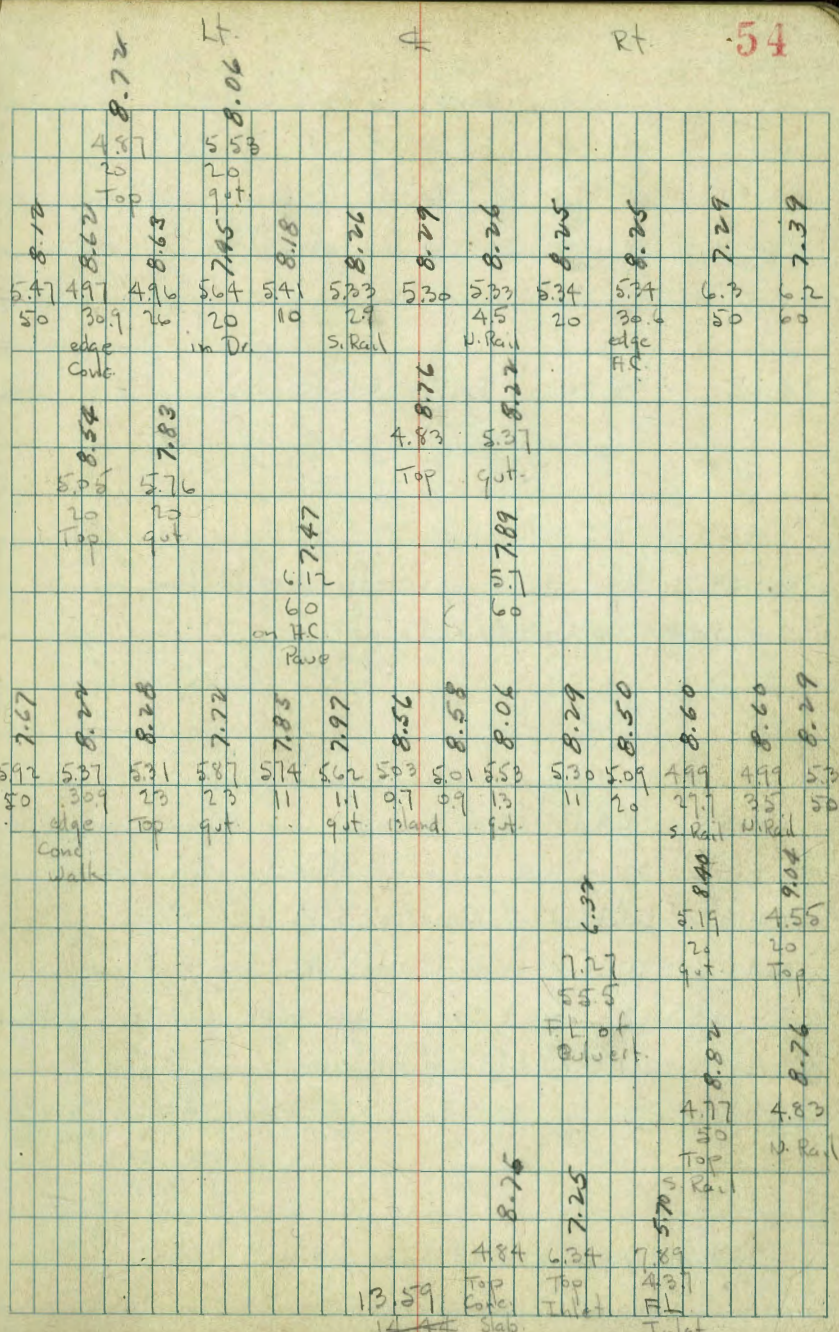
1+39.5 - 41.2 Lt. = ℄ P pole # 3194

Rail is at 90° across the Tracks

1+31.3 = E.L. R.O.W + Gauge of S. Rail - Rod on N.

No outlet visable to Tracks Culvert along

1+27 - 43.7 Rt. = ℄ of Inlet to 18"x18" Wood box Culvert along R.R. Tracks - to W. also 12"x12" across Tracks - Rough Conc. Slab - See sketch P. 52



T.P. 3.10 9.67 10.52 7.02 6.57 7.42

2+77 - 46.5 Lt. = ℄ P. pole

2+75

2+60.8 - 50' Rt. = S. Rail + E.L. R.O.W.

2+50

2+34.3 - 22.7 Lt. = ℄ 2'x2' Meter box - in Conc

2+31.4 - 21.3 Lt. = ℄ P. pole # 1798

2+25

2+15.8 - 22.8 Lt. = ℄ of 4.2'x3.3' Conc. Signal box

2+14.6 - 22' Rt. = ℄ 6"x8" Post.

2+13.6 = 50' Lt. = W.L. Row. + S. Rail - N. Rail at 90°

2+11.6 - 21.5' Rt. = ℄ P. pole # 82280 H

2+10.5 - 22.6 Lt. = ℄ 3'x2.5' Conc. base for R.R. Signal

2+07.2 - 22' Rt. = ℄ 8"x8" R.R. sign

2+00

1+88.5 = opp end of Conc walk on Lt

Lt. ℄ Rt.

3+88.4 - 21.9 Lt. = ℄ P. pole # 17.48

3+88 - 23' Lt. = Sly. Cor. Conc. Walk

3+75

✓ 3+64.5 - 37' Rt. = ℄ Sewer MH. 5.34 on Rim

3+56.6 - 20' Rt. = end of Bottom of Roll cb.

✓ 3+54 - 20' Rt. = end of Top of Roll cb.

✓ 3+54.3 - 38.3 Lt. = ℄ of 3.3'x 8.7' Signal Box.

3+52.4 - 23' Rt. = ℄ 2½" Pipe post.

✓ 3+51.5 - 27.2' Rt. = ℄ Tel. MH. 491 on Rim

3+50

✓ 3+43.3 - 50' Lt. = S. Rail on W.L. R.O.W.

✓ 3+42.7 - 21.9' Lt. = ℄ RR Signal with 4'x4.5' Conc. base

✓ 3+39.7 - 50' Rt. = Bottom of Roll cb.

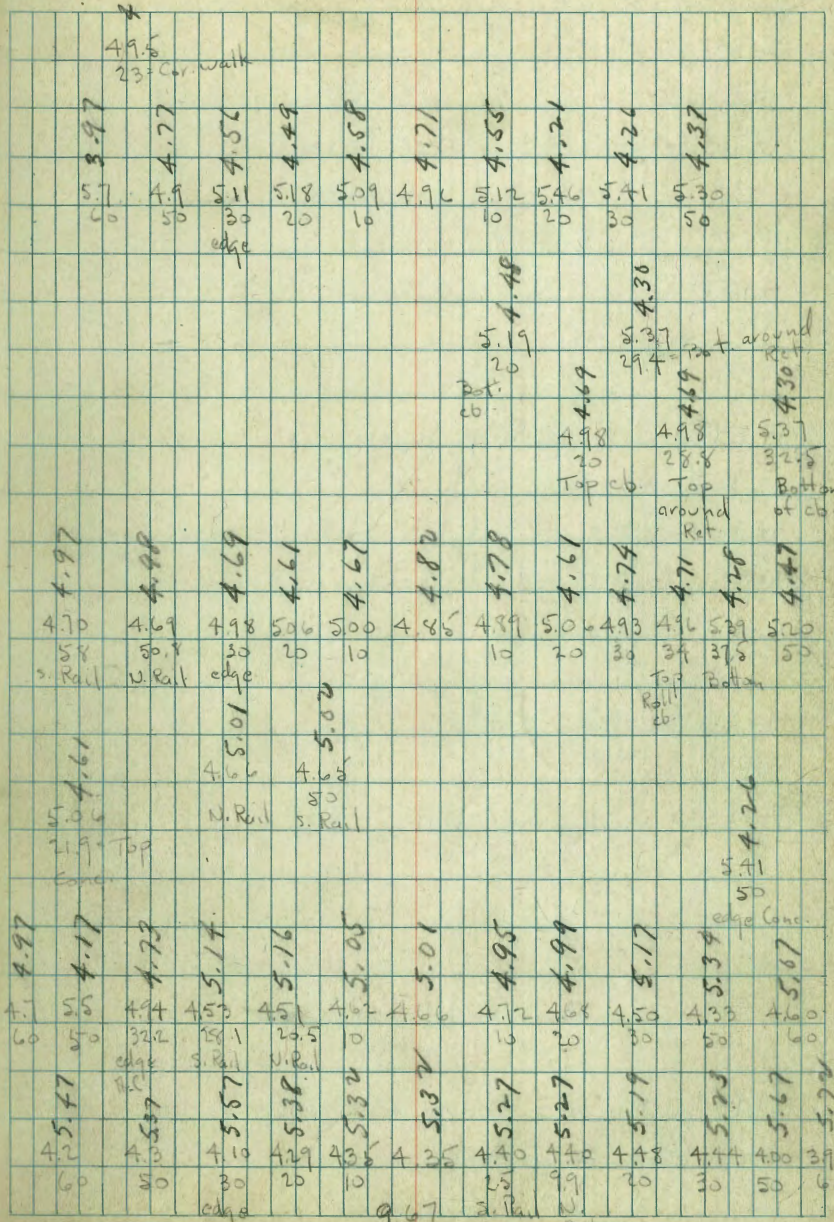
✓ 3+33 - 50.8 Lt. = ℄ 16"x16" Conc. base for signal switch

3+33 - 22.3' Rt. = ℄ P. pole # D 12323

3+25

✓ 3+02.8 - 33.6 Lt. = ℄ Tel. pole.

3+00



Cont. on P. 59

5+00

4+70.7 - 23' Rt. = ℄ Water Meter

4+68.2 - 22.5' Rt = ± 6" Gas Valve

4+52.6 - 22.5 Rt = ℄ Tel. pole

4+50

4+41.2 - Beg. Reg. cb. on Rt

Roll to Reg. curb.

4+36.2 = opp P.C. of Ret on Rt. - changing from

4+26 - 26' Lt. = end Dr. Sect. in cb.

4+25

4+22 - 33' Rt = ℄ Sewer M.H. 5.38 on Rim.

4+00

3+97.2 - 50' Rt = Top of Roll cb.

3+96.3 - 22' Lt = ± 5' x 8" R.R. Crossing sign.

3+94.1 - 50' Rt = Bottom of Roll cb.

3+94.1 - 31' Lt. = Back Cor. of Walk

Lt. ℄ Rt.

X-Sections for Grade - on Mc Candless St.

1+40 = opp. P.C. of Ret. on Rt. = end.

1+11.5 - opp. P.C. of Ret. on Lt.

0+80

0+40

0+00 = 140' S.E. of ct. Near E. cb. Line 32nd along ℄ of Mc Candless - See sketch P. 52 also 2

Lt. ℄ Rt.

				5.09	5.58	5.36	4.37	5.59	4.08	5.60	4.07	5.51	4.16	5.20	4.47	5.10	4.57
				20		10				10		20.4		22.9		28.9	
												Bot		Top		edge	
																H.C.	
		4.98	4.49	5.38	4.29	5.33	4.34	5.35	4.32	5.41	4.26	5.45	4.12	5.20	4.47	5.08	4.59
		24		21.6		10				10		20.7		23		29	
		Top		Bot								Bot		Top			
	4.81	4.86	4.27	5.40	4.28	5.39	4.57	5.09	4.38	5.24	4.43	5.56	4.11	5.23	4.44	5.01	4.26
		28		23		21.3		10		10		20.9		23.2		27	
		on		edge	Conc	Bot						Bot		Top		edge	walk
		AC.			in Dr.												
	5.03	4.64	4.47	5.20	4.45	5.22	4.73	4.94	4.76	4.91	4.65	5.02	4.14	5.53	4.49	5.18	4.81	4.86
		28		23		21		10				10		21		23.4		29.4
		on		edge	Conc	Bot								Bot		Top		edge
		Ft.			in Dr.													AC
	5.03	4.65	4.91	4.76	4.57	5.10	4.83	4.84	4.81	4.86	4.72	4.95	4.38	5.29	4.81	4.86	4.97	4.70
		27.2		23.1		20.7		10				10		21		23.5		27.8
		edge		Top		Bot								Bot		Top		edge
		AC	Walk	Roll	cb.	Roll	cb.							Roll	cb.	Roll	cb.	AC.	walk

10+52 - P. 57

Cont. from P. 57

T.P. 5.05 ~~8.47~~ ~~9.52~~ 5.31 3.42 ~~4.27~~ 7' Disk E Hwy Pk

6+75.5 = ℄ Inlet on Rt. over 12" Culvert across 32nd

32x26 Grate - 3'x2 Box on Rt.

6+75 = 0.6' N. of S. edge of 3'x2' Grate to inlet

6+73.5 = end of cb on Rt.

6+70.5 + 22' Rt. = ℄ 5"x8" R.R. Sign

6+51 - 21.7 Rt. = ℄ Tel pole # 453593-H

6+40

6+32.5 = Beg. Dr. Sect in cb on Lt.

6+31 - 22' Lt. = ℄ 2" Pipe sign Post

6+00

T.P. 4.42 ~~8.73~~ ~~4.58~~ 5.36 4.31 ~~5.16~~

5+70

5+50.5 - 22.5 Rt. = ℄ Tel. pole # 465947-H

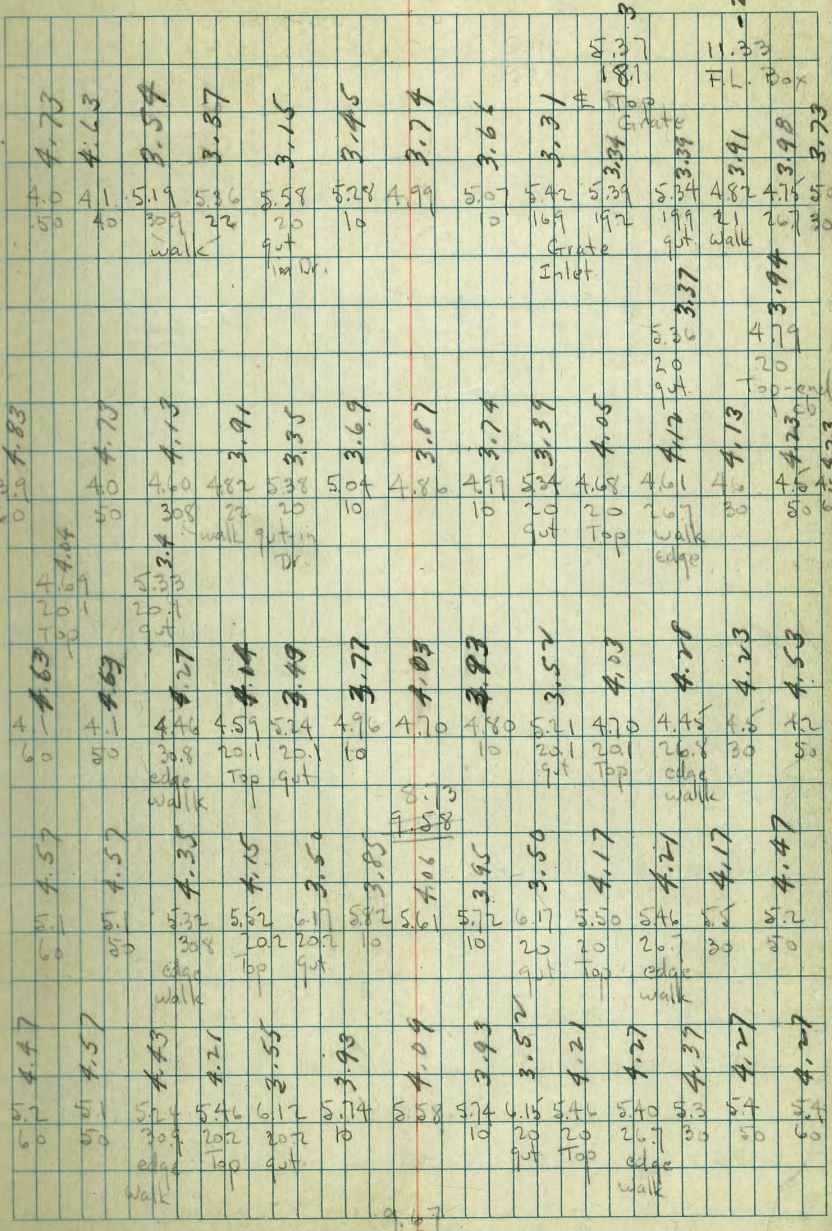
Will Cont. Sections along 32nd for Profile

5+34.05 = P.C. - New R.O.W.

5+20.5 - 22' Lt. = ℄ P. pole # 1722

5+10 - 22' Rt. = ℄ Fire Hyd.

Lt. ℄ Rt.



7+50

7+46.9 - 69.5 Rt. = ℄ Inlet to 10" UP. Culvert - dont know where to - 2.2' x 2.7' Grate - + 2 x 2.5' Box.

7+25

7+00 Cont.

7+00 = edge of Conc on Lt. & ℄ Inlet on Rt. - 2.4' x 3.4' Grate - 2' x 3' Box - 12" pipe to W. - Cant tell where to

6+88.6 = S. Rail at ℄ - will take Sect along S. Rail

6+82.4 - 22.5 Lt. = ℄ P. pole # 1690

6+76.2 = end of Conc. walk on Rt.

6+81.4 = end of Walk and Dr. Sect. co. on Lt.

6+76.5 = ℄ Inlet on Lt. = W. end of 12" Culvert across 32nd - 2.2' x 2.5' Grate - 3' x 2' Box along 32nd

7+89.5 - 29.7 Lt = ± 4 Conc. Steps to Bldg.

7+84.5 = Beg Reg Dr. Sect in cb. on Lt.

7+76 - 28' Rt. = ± 2'x2' Gas Gate 4.66 M.H. on Top

7+76 = ± Sewer M.H. 4.66 on Rim

7+75

what it is.

clean out - over 8' of water in bottom - don't know

7+72.3 - 18.9 Rt. = ± of 2'x2' Conc. Box - must be a

7+68.2 - 30' Lt. = W. edge of walk at edge of Pave

7+67.4 - 21.4 Rt. = ± Tel pole # 45 35 92-H

7+65.4 - 33.1 Rt. = ± Tel. pole

7+65.2 = P.C. of Ret on Rt. - approx 10' Rad.

7+63.7 - 22' Rt. = ± 2" Pipe - sign

7+62.7 - W.L. R.O.W. ± N edge of Conc. Pave

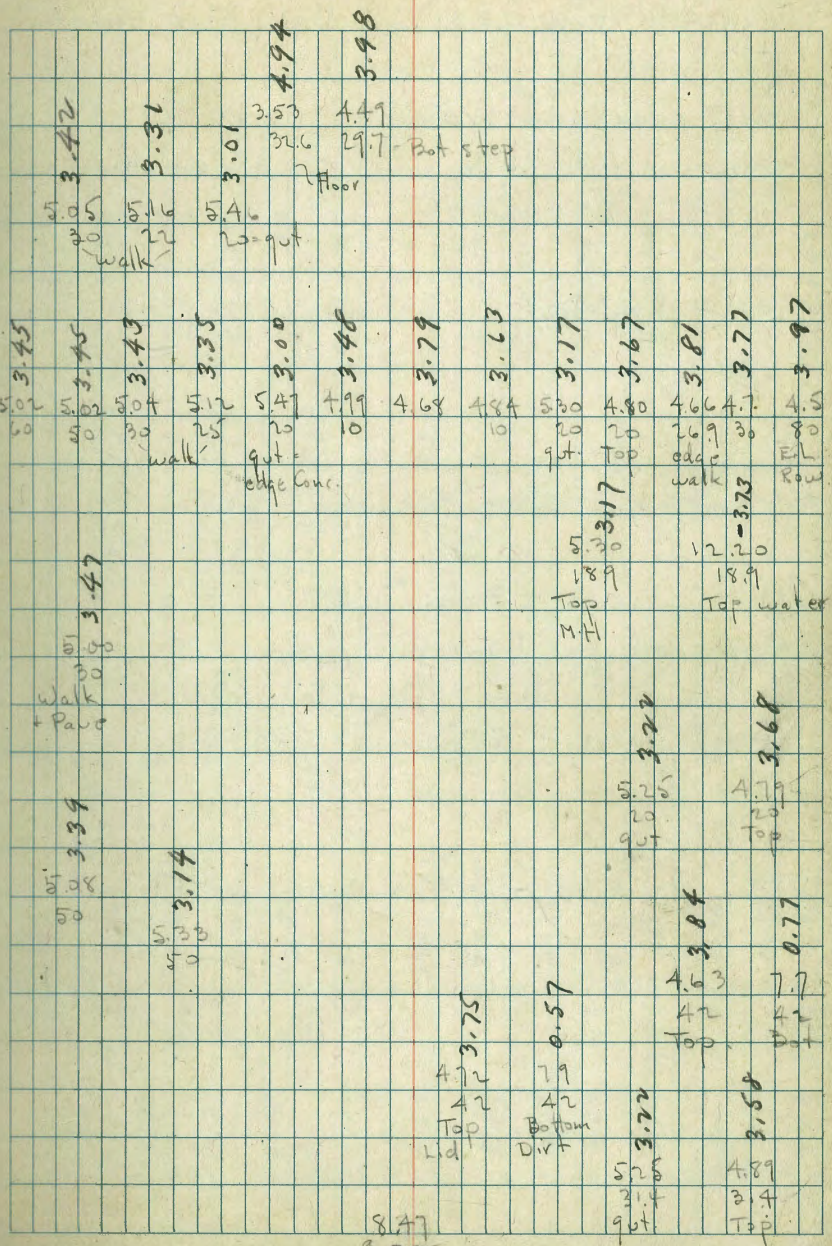
7+59.5 - W.L. R.O.W. in Conc. Gut

7+59.8 - 42' Rt. = ± 2'x2' Wood Water meter box - gone

7+59.2 - 70.2 Rt. = ± F.H. with 3 - Rails Set in Conc.

7+57 - 42' Rt. = ± 2'x2' Wood box - was for Water Meter

7+54 - 31.4 Rt. = end of cb. at Ret. on Rt.



Cont. on P. 65

Road

9+08 - 30 Rt. = ℄ of 3.1' Conc. Dip gutter. along F.C.

steel pipes under the walk

9+06 = end of cb. at Dr. on Rt = gut. = outlet of 2-6"

✓ 9+00 Reg. Sect

walk below - Note walk is curved.

✓ 8+95.5 = 30' Rt = ℄ N. 5' Conc walk - same profile as

✓ 8+84.5 - 21.5 Lt = ℄ P. pole # 1648

Curve of the R.O.W. Hits - See P. 11

along walk + show both sides where the E.L.

8+80.5 - 30' Rt - ℄ 5' Conc walk - Will take ℄ Profile

T.P. 5.60 9.02 (~~9.87~~) 5.05 3.42 (~~4.27~~) = Disk by Bridge

✓ 8+50

✓ 8+00

9+08

Elev.	Rod	Dist. / Note
3.54	5.48	30 Top
2.94 (~~2.99~~)	6.08	30 gut. F.L. 6" pipes

9+06

Elev.	Rod	Dist. / Note
2.74	6.28	20 gut.
3.43	5.59	20 Top
3.52	5.50	30 edge walk

9+00

Elev.	Rod	Dist. / Note
3.52	5.50	60
3.39	5.63	50
3.23	5.79	30 walk
3.24	5.78	22
2.83	6.19	20 gut
3.26	5.76	10
3.43	5.59	℄
3.20	5.82	10
2.72	6.30	20 gut.
3.38	5.64	20 Top
3.55	5.47	30 edge walk
3.72	5.3	50
4.52	4.5	123.5 EL Row.
4.92	4.1	150

8+95.5 (℄ This Sect)

Elev.	Rod	Dist. / Note
3.56	5.46	30 Beg. ℄ walk
3.76	5.26	16.5 opp ℄ Cross Conc.
4.05	4.97	46 opp ℄ Cross Conc.
4.39	4.63	= 8+89.2 S. edge on curve; 87 approx Curve
4.39	4.63	= 8+94.4 N. edge on Curve
4.79	4.23	135 ℄ Walk

8+80.5 (℄ for this sect)

Elev.	Rod	Dist. / Note
3.57	5.45	30 Rt. Beg. 5' walk ℄ walk
3.71	5.31	13.5 opp ℄ Cross Conc.
4.04	4.98	43 opp ℄ Cross Conc.
4.45	4.57	= 8+71.92 = S. edge; 81 Rt = Row. Curve
4.46	4.56	= 8+77 = N. edge on Curve
5.02	4.00	130 Rt ℄ walk

8+50 (9.02, ~~9.87~~)

Elev.	Rod	Dist. / Note
3.52	4.95	60
3.45	5.02	50
3.35	5.12	30 walk
3.29	5.18	22
2.86	5.61	20 gut
3.27	5.20	10
3.43	5.04	℄
3.26	5.21	10
2.76	5.71	20 gut
3.54	4.93	20 Top
3.65	4.82	26.7 edge walk
3.77	4.7	30
4.17	4.3	50
4.57	3.9	105 E.L. Row

8+00

Elev.	Rod	Dist. / Note
3.69	4.78	50
3.41	5.06	30 walk
3.31	5.16	22
3.03	5.44	20 gut
3.44	5.03	10
3.64	4.83	℄
3.43	5.04	10
3.02	5.45	20 gut
3.60	4.87	20 Top
3.75	4.72	26.7 edge walk
3.67	4.8	30
3.77	4.7	50
4.17	4.3	86 E.L. Row

8.47
9.32

X-Sections along ℄ of Norman Scott Rd.
0+00 = 200' E. of Int of ℄ & ℄ of 32nd
See sketch. P. 11

2+00 = ℄ & 32nd = Sta. 7+35.23 on 32nd

1+50

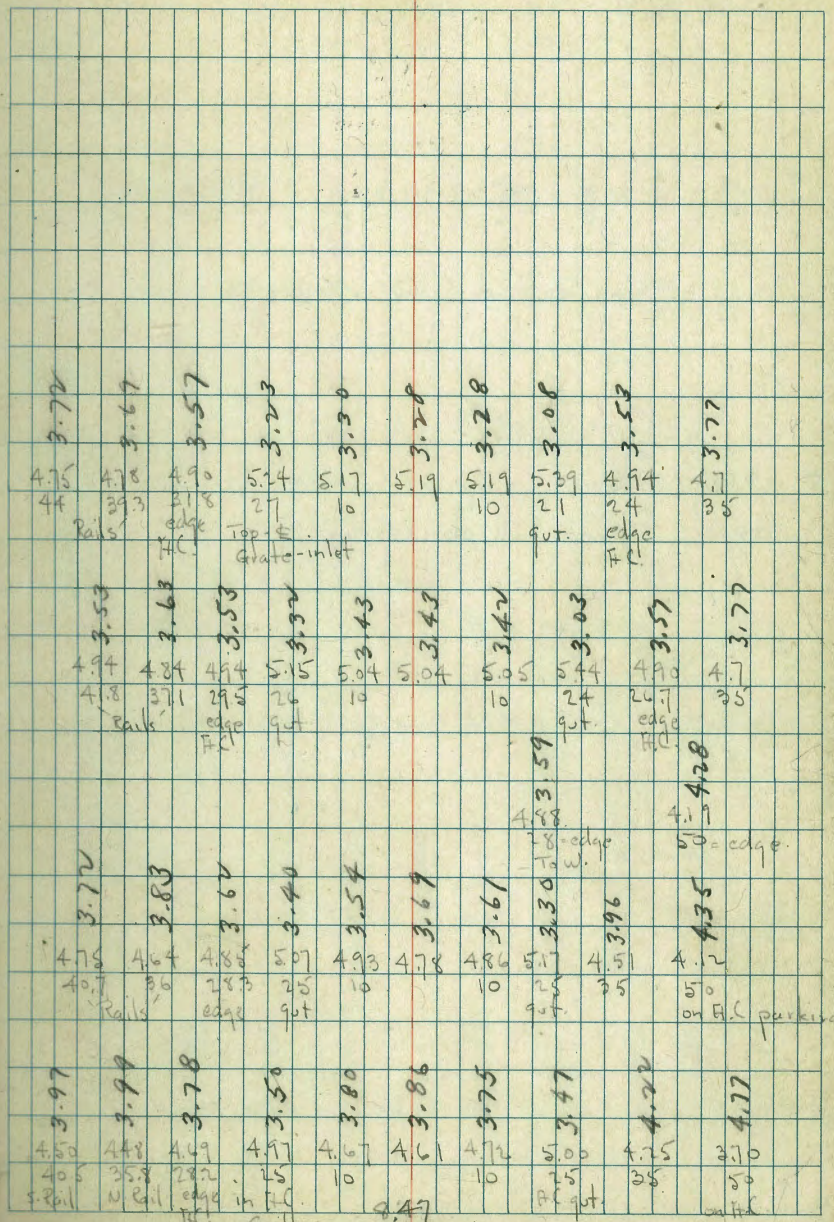
1+00

0+71.5 = end of Wide H.C. Parking on Rt

0+50

0+00 = 200' E of ℄ 32nd - H.C. Pave

Lt. - S ℄ Rt. - N 63



X-Sections along ℄ of Conc Road opp. Norman Scott Rd. - W. of 32nd 0+00 = 150' W. of ℄ 32nd - See sketch - P. 11

1+50 = ℄ 32nd = Sta. 7+28.83

1+21.1 = opp. end of Conc on Rt = end

1+10 = P.C. of edge of Conc on Rt

1+01.5 = P.C. of Roll ch. Ret on Lt.

1+00

0+50

0+00 = 150' W. of ℄ 32nd. - Conc. Pave

B.M. 5.18 8.60 9.45 3.42 4.27 Disk by Bridge

Lt. = W ℄ Rt. = E

	3.35	3.06	3.12	3.18	3.16	3.23	3.31	3.42	3.69	3.69		
5.26	5.54	5.48	5.42	5.44	5.37	5.29	5.18	4.91	4.91			
47	38	25	10		10	24	32.2	35.5	40.2			
Top + Walk	gut						Cor. = end Conc	Rails				
	3.33	3.10					3.17	3.44				
5.27	5.50						5.43	5.16				
28	25						24	28				
edge	gut						gut	edge				
	3.40	3.36	3.17	3.13	3.10	3.08	3.14	3.43	3.60	3.63		
5.20	5.24	5.48	5.47	5.50	5.52	5.46	5.17	5.00	4.97			
35	28	25	10		10	24	28	35.4	40.1			
	edge	gut				gut	edge	Rails				
	3.59	3.40	3.10	3.18	3.25	3.18	3.24	3.40	3.75	3.75		
5.01	5.20	5.50	5.42	5.35	5.42	5.39	5.20	4.85	4.85			
35	28	25	10		10	24	28	35.4	40.1			
A.C.	edge	gut				gut	edge	Rails				
	3.54	3.40	3.14	3.35	3.41	3.38	3.35	3.45	3.80	3.76		
5.06	5.20	5.46	5.25	5.19	5.22	5.35	5.15	4.80	4.84			
35	28	25	10		10	24	28	35.4	40.1			
on A.C. Pave	edge Conc.	gut Dip Sect.		8.60 9.45		gut Dip Sect	edge Conc	Rails				

Cont. from P. 62

✓ 9+40 Cont.

✓ 9+40

9+37.6 – 37.2 Rt. = ℄ Lamp post – 3 x 3 base

9+32.5 = end Dr. & Beg. cb. on Rt

9+31.7 – 42.3 Rt = ℄ – end Conc. gutter

= inlet of 2-6" steel pipes

9+31.2 – 30' Rt = ℄ of Conc. Dip gutter along A.C Road

✓ 9+26 = end of Dr. Sect. on Lt.

✓ 9+20 Cont.

9+20 = approx ℄ of Conc Dr. to A.C. Road on Rt.

9+09.1 – 42' Rt = ℄ – end Conc. Dip gutter.

Lt. ℄ Rt.

3.92 / 5.10 / 84.5 edge A.C. — 4.08 / 4.93 / 100 — 4.74 / 4.28 / 141 = E.L. Row — 4.74 / 4.28 / 147 edge A.C.

3.33 / 5.69 — ~~4.00~~ 3.10 / 5.92 / 10 — 2.72 / 6.30 / 20 gut. — 3.37 / 5.65 / 20 Top — 3.46 / 5.56 / 26.6 edge walk — 3.62 / 5.4 / 30 — 3.72 / 5.3 / 50

3.62 / 5.40 / 37.2 base lamp

2.71 / 6.31 / 20 gut. — 3.37 / 5.65 / 20 Top — 3.56 / 5.46 = edge walk / 30

F.L. 6" outlet pipes

3.30 / 5.72 / 42.3 ℄ = F.L — 3.54 / 5.48 / 42.3 Top

3.27 / 5.75 / 20 Top — 2.74 / 6.28 / 20 gut.

3.56 / 5.46 / 30 ℄ Top. — 2.91 / 6.11 / 30 = F.L pipes

3.98 / 5.04 / 100.7 edge A.C — 4.62 / 4.4 / 131.5 E.L. Row

3.49 / 5.53 / 60 — 3.40 / 5.62 / 50 — 3.28 / 5.74 / 29.9 walk — 3.19 / 5.83 / 22 — 2.76 / 6.26 / 20 gut — 3.18 / 5.84 / 10 — 3.38 / 5.64 — 3.13 / 5.89 / 10 — 2.62 / 6.40 / 20 gut. — 3.63 / 5.39 / 30.5 edge Conc. — 3.67 / 5.35 / 50 on A.C — 3.82 / 5.20 / 75

3.28 / 5.74 / 42 ℄ = F.L — 3.52 / 5.50 / 42 ave. of Tops

9.02

~~9.8~~

Bench Levels from BM. at Sewer Treatment Plant

B.M.	7.56	17.56		10.00	BM in Tank #2
	4.85	17.61	4.80	12.76	
	3.72	13.20	7.63	9.98	
Check C+G Mon. at 32nd + Harbor.			4.96	8.24 ~~9.09~~ Diff	= 8.24 ~~9.09~~

Check BM at Rigel
S.W. □ in cb.

	3.04	12.43 ~~13.28~~		9.39 ~~10.24~~	= BM in Bridge
			6.27	6.46 ~~7.01~~	
				6.28 = Bench Book elev.	
				12	

✓9+71.9 Cont. = end of 32nd Sections

✓9+71.9 = ℄ of edge of Bridge

9+56.8 - 21.4 Rt - ℄ Tel pole # 460778 - H

✓9+45 - 0.5 Rt = ℄ Sewer M.H. 5.61 on Rim

Lt. ℄ Rt.

from Main St Bridge

							3.62		3.82			
							5.4 / 30		5.2 / 50			
3.37	3.42	3.38	2.75	3.06	3.26	3.07	2.81	3.47	3.56	3.45
5.65	5.60	5.64	6.27	5.96	5.76	5.95	6.21	5.55	5.56	5.57
30	30	20	20	10		10	20	20	25	26.6
edge Conc walk	edge wood walk	Top wood cb.-steel flange	gut				gut	Top wood cb. steel flange	edge wood walk	edge Conc. walk

9.02
~~9.87~~

Beg. X-Sections along ℄ of 100' R.O.W. Paralell to Chollas Channel. ℄ is Tang. - only E.L. is on a curve - Sections Normal to ℄

Beg at Sta. 9+00 - Believe to be as far back as necessary

Lt = W. ℄ Rt = E

✓ 9+60.7 - 8.5 Lt. ℄ Sewer M.H. 5.22 on Rim

✓ 9+50

2.72	3.29	3.41	4.02	3.72	3.61	3.78	3.86	4.22	4.42	4.52	4.72
6.30	5.73	5.61	5.0	5.3	5.41	5.24	5.16	4.8	4.6	4.5	4.3
62.3 gut.	62.3 Top cb.	54.7 edge Conc walk	50 Int W.L. Row + E.L. 32nd	25	6 edge H.C		23.7 edge H.C	35	50	57.5 E.L. R.O.W	75

✓ 9+29.3 = ℄ at S. edge of H.C. Road. 5.43

✓ 9+25

3.38	2.71	3.38	3.56	3.69	3.57	3.82	4.12	4.23	4.34	4.52	4.78
5.64	6.31	5.64	5.46	5.33	5.45	5.2	4.9	4.79	4.68	4.5	4.24
72 ℄ 32nd	48.6 gut.	48.6 Top cb.	36.5 edge Conc.	25	5.3 edge H.C		25	43 N. edge walk	55.7 S. edge walk	60.3 E.L. R.O.W.	88.6 N. edge walk

✓ 9+08.2 = ℄ at N edge of walk 5.17

✓ 9+02.6 = ℄ at S. edge of Conc. walk 5.19

✓ 9+00

3.27	2.7[illegible]	3.30	2.76	3.39	3.56	3.82	3.82	4.05	4.13	4.42	4.42	4.62
5.75	6.28	5.72	6.26	5.63	5.46	5.20	5.2	4.97	4.89	4.6	4.6	4.4
80.5 Top cb.	80.5 gut.	50	34.6 gut.	34.6 Top cb.	23 edge walk along 32nd	1.8 edge Conc walk		20.3 edge Conc. Walk	35.3	50	62 E.L. R.O.W	75

9.02

~~9.87~~ = P. 66

T.P.	6.73	12.01	3.74	~~6.13~~ 5.28	check T.P. #2 - P.53

10+62.76 Cont.

10+62.76 = P.C. of E.L. Curve

10+25 - Cont.

10+25

10+20.4 - 43.3 Rt. = ℄ 3'x3' base to Lamp Post

2' A.C. Roll curb along E. side of fence

10+14.8 - 42' Rt. = Beg. Lattice fence - 6' High - with

10+00

~~9+75~~

Lt. ℄ Rt.

Station	Readings (Elev. / Rod / Dist. / Note)
10+62.76 Cont.	12.01; 5.96 / 3.06 / 44.6 Top cb; 5.12 / 3.90 / 45.4 gut.; 5.15 / 3.87 / 56; 5.03 / 3.99 / 58 gut.; 5.70 / 3.32 / 67.4 Brk.
10+62.76 P.C.	-5.58 / 14.6 / 65 Mud; -3.13 / 12.16 / 60 Bot. Conc.; 3.41 / 5.61 / 50; 4.38 / 4.64 / 48 edge Conc.; 4.72 / 4.3 / 47 Top slope; 5.02 / 4.0 / 30; 4.92 / 4.1 / 21; 5.09 / 3.93 / on stub; 5.26 / 3.76 / 13 edge A.C.; 5.42 / 3.60 / 25; 5.26 / 3.76 / 37.1 edge A.C.; 5.02 / 4.0 / 41.8 at fence; 5.96 / 3.06 / 47.6 Top cb.
10+25 Cont.	4.94 / 4.08 / 45.6 gut.; 4.82 / 4.20 / 50 in gutter in A.C.; 5.08 / 3.94 / 53.5 Brk.; 5.26 / 3.76 / 74.8 edge A.C.
10+25	-5.38 / 14.4 / 66 water edge Mud.; -3.57 / 12.59 / 62 end Conc.; 4.45 / 4.57 / 50 edge Conc. Slope; 4.62 / 4.4 / 30; 4.42 / 4.6 / 23; 4.62 / 4.4; 4.91 / 4.11 / 13.8 edge A.C.; 5.08 / 3.94 / 25; 4.93 / 4.09 / 37.1 edge A.C.; 4.82 / 4.2 / 42; 5.71 / 3.31 / 42.8 Top cb.; 5.72 / 3.30 / 44.8 Top
10+14.8	5.68 / 3.34 / 42.8 Top A.C. cb.; 5.68 / 3.34 / 44.8; 4.81 / 4.21 / 45.6 gut.
10+00	-5.58 / 14.60 / 73 water edge; 4.30 / 4.72 / 54 edge Conc. Top; 3.92 / 5.1 / 50; 4.02 / 5.0 / 25; 4.32 / 4.7; 4.53 / 4.49 / 12 edge A.C.; 4.76 / 4.26 / 25; 4.64 / 4.38 / 36 gut. in [illegible]; 4.88 / 4.14 / 52 E.L. Row; 4.86 / 4.16 / 61.7 edge A.C.
9+75	0.17 / 8.85 / 70.7 Conc. Slope at Bridge; 3.47 / 5.55 / 59.5 Beg. Conc. Top Slope; 3.72 / 5.3 / 50; 3.92 / 5.1 / 25; 4.22 / 4.8; 4.17 / 4.85 / 7 edge A.C.; 4.27 / 4.75 / 25; 4.39 / 4.63 / 45.6 edge A.C.; 4.62 / 4.4 / 50; 4.62 / 4.4 / 54.6 E.L. Row; 4.92 / 4.1 / 75

9.02 ~~9.47~~

Smith ⊼
Johnson
Allen rod

Bench Levels from 32nd & Main to 32nd & Harbor Dr.

B.M.	1.42	40.07		38.65	NE B.P. 32nd & Main
	2.24	29.06	13.25	26.82	
	1.08	17.10	13.04	16.02	
	4.80	8.99	12.91	4.19	
	6.23	9.32	5.90	3.09	7.01
	6.78	13.79 ~~13.39~~	2.31	7.01 ~~6.61~~	.4 off
			5.10	8.69 ~~8.29~~	CG B.M. @ 32nd + Harbor

P. 68 .45 off

12+00 - Cont

12+00

11+97 - 43.2' Rt = ℄ 6" Lamp Post

11+54.5 - 39.5' Lt = Beg. 6" Conc wall

11+50 Cont

11+50

11+00 Cont.

11+00

Lt. ℄ Rt.

12+00 (Rt, outer): 5.88 (6.13 / 45.1 gut), 5.75 (6.26 / 58), 6.05 (5.96 / 80)

-6.39	-4.49	5.51	6.01	5.41	5.71	5.51	5.61	5.74	6.01	5.89	5.81	6.79	6.75
18.4	16.5	6.5	6.00	6.6	6.3	6.5	6.4	6.27	6.00	6.12	6.2	5.22	5.26
72	66	50	40.1	40.1	25	20		11.3	25	35.9	41	41.8	43.8
Mud	edge Conc		Top wall					edge	AC	edge		Top AC Cb.	

6.07 — 5.94 — 39.5; 5.51 — 7.0 — 39.5 Top ground

11+50 (Rt, outer): 5.69 (6.32 / 45 gut), 5.61 (6.40 / 58), 5.47 (6.54 / 59), 5.95 (6.06 / 80)

-6.79	-4.19	5.11	4.81	6.01	5.21	5.41	5.59	5.28	5.61	5.51	6.49	6.45
18.8	16.2	6.9	7.2	6.0	6.8	6.6	6.42	6.23	6.40	6.5	5.52	5.5
73	65	50	35	25	20		23	25	36.7	41.1	41.9	43.9
Mud	Conc.	edge					edge	AC	edge	fence	Top AC cb.	

11+00 (Rt, outer): 5.53 (6.48 / 45.3 gut), 5.41 (6.60 / 50), 5.23 (6.78 / 58 gut), 6.09 (5.92 / 78.8 Brk)

-5.99	-3.49	5.11	4.81	5.11	5.31	5.49	5.65	5.40	5.21	6.19	6.20
18.0	15.5	6.9	7.2	6.9	6.7	6.52	6.36	6.61	6.8	5.82	5.81
68	43	48	35	20		12.7	25	37	41.4	42.2	44.2
Mud		edge conc.				edge AC		edge AC	along fence	Top cb AC	

12 01

14+50

14+29 - 42.6 Lt. = end Conc. wall

14+00

13+86 - 84.6 Rt. ℄ 6" Lamp Post.

13+50

13+28 - 41.5 Lt. = Beg 6" Conc wall

13+00

12+53.5 - 40.6 Lt. = end Conc. wall

12+50

12+28 - end of fence & HC Roll cb & Pave on Rt.

12+20 - 11' Lt. = ℄ Sewer M.H. 6.62 on Rim

Lt. ℄ Rt.

12.01

18+00

✓ 17+64 - 60.2 Lt. - ℄ Wood Footbridge - See sketch - Conc. Deck 5.11 62 on Deck

17+50

T.P. 4.76 12.12 4.65 7.36

17+00

16+50 = Sect. Radial

16+25.40 = P.C. - See P. 5 for sketch

✓ 16+00

✓ 15+73 - 26' Rt. = ℄ F.H. - 4 - RR. Rail - Guards

✓ 15+70 - 29.6 Rt. = ℄ 6" Water Valve

✓ 15+50

✓ 15+01 - 13.8 Lt. = ℄ Sewer M.H. 5.72 on Rim

✓ 15+00

						Lt.	℄		Rt.			
18+00			6.62 (5.5 / 66) edge Conc.	6.82 (5.3 / 50)	7.62 (4.5 / 30)	7.42 (4.7 / 20)	7.42 (4.7)	7.52 (4.6 / 20)	7.62 (4.5 / 35)	7.72 (4.4 / 50)		7.92 (4.2 / 75)
17+50	-6.18 (18.3 / 8.7) 5.28 602 end	-3.48 (15.6 / 79) Mud	6.42 (5.7 / 59.7) Conc.	6.52 (5.6 / 53)	7.32 (4.8 / 35)	7.22 (4.9 / 20)	7.32 (4.8)	7.22 (4.9 / 20)	7.32 (4.8 / 35)	7.42 (4.7 / 50)		7.52 (4.6 / 75)
17+00		-5.09 (17.9 / 77) Mud	-4.79 (16.8 / 73) Conc.	6.11 (5.9 / 52)	6.81 (5.2 / 30)	7.11 (4.9 / 20)	7.11 (4.9) 12.12	7.21 (4.8 / 20)	7.11 (4.9 / 35)	7.41 (4.6 / 50)		7.41 (4.6 / 75)
16+50		-6.29 (18.3 / 75) Mud	-6.49 (16.5 / 70) Conc.	6.11 (5.9 / 50)	6.91 (5.1 / 30)	7.01 (5.0 / 20)	6.81 (5.2)	6.91 (5.1 / 20)	7.01 (5.0 / 35)	6.91 (5.1 / 50)		7.11 (4.9 / 75)
16+25.40		-6.29 (18.3 / 74) Mud	-4.69 (16.7 / 70) Conc.	5.61 (6.4 / 50)	6.21 (5.8 / 30)	6.11 (5.1 / 20)	6.78 (5.23) on Stub	6.71 (5.3 / 20)	7.01 (5.0 / 35)	7.01 (5.0 / 50)		7.11 (4.9 / 75)
16+00		-6.29 (18.3 / 76) Mud	-4.09 (16.1 / 69) Conc.	6.41 (5.6 / 49)	6.01 (6.0 / 30)	6.71 (5.3 / 20)	6.61 (5.4)	6.81 (5.2 / 20)	6.81 (5.2 / 35)	7.01 (5.0 / 50)		7.31 (4.7 / 75)
15+50		-6.19 (18.2 / 75)	-4.29 (16.3 / 70) Conc.	6.01 (6.0 / 50)	6.31 (5.7 / 30)	6.51 (5.5 / 20)	6.51 (5.5)	6.61 (5.4 / 20)	6.81 (5.2 / 35)	6.81 (5.2 / 50)		7.13 (4.88 / 81.7) edge A.C.
15+00		-6.49 (18.5 / 75) Mud	-4.29 (16.3 / 70) Conc.	6.11 (5.9 / 50)	6.31 (5.7 / 30)	6.41 (5.6 / 20)	6.51 (5.5) 12.01	6.71 (5.3 / 20)	6.81 (5.2 / 35)	6.91 (5.1 / 50)	6.95 (5.06 / 67.5) edge	7.15 (4.86 / 70) A.C.

See Sketch - P 74

20+64.7 = S.L. Main St. - Sect along S.L.

Fence - Parallell to Main

20+63 = Top of Bank along fence - Sect along

20+40

inlet - over 24" Culvert

20+38.5 - 19' Rt. = ℄ 3x3' Conc. Box - with Grate

20+00

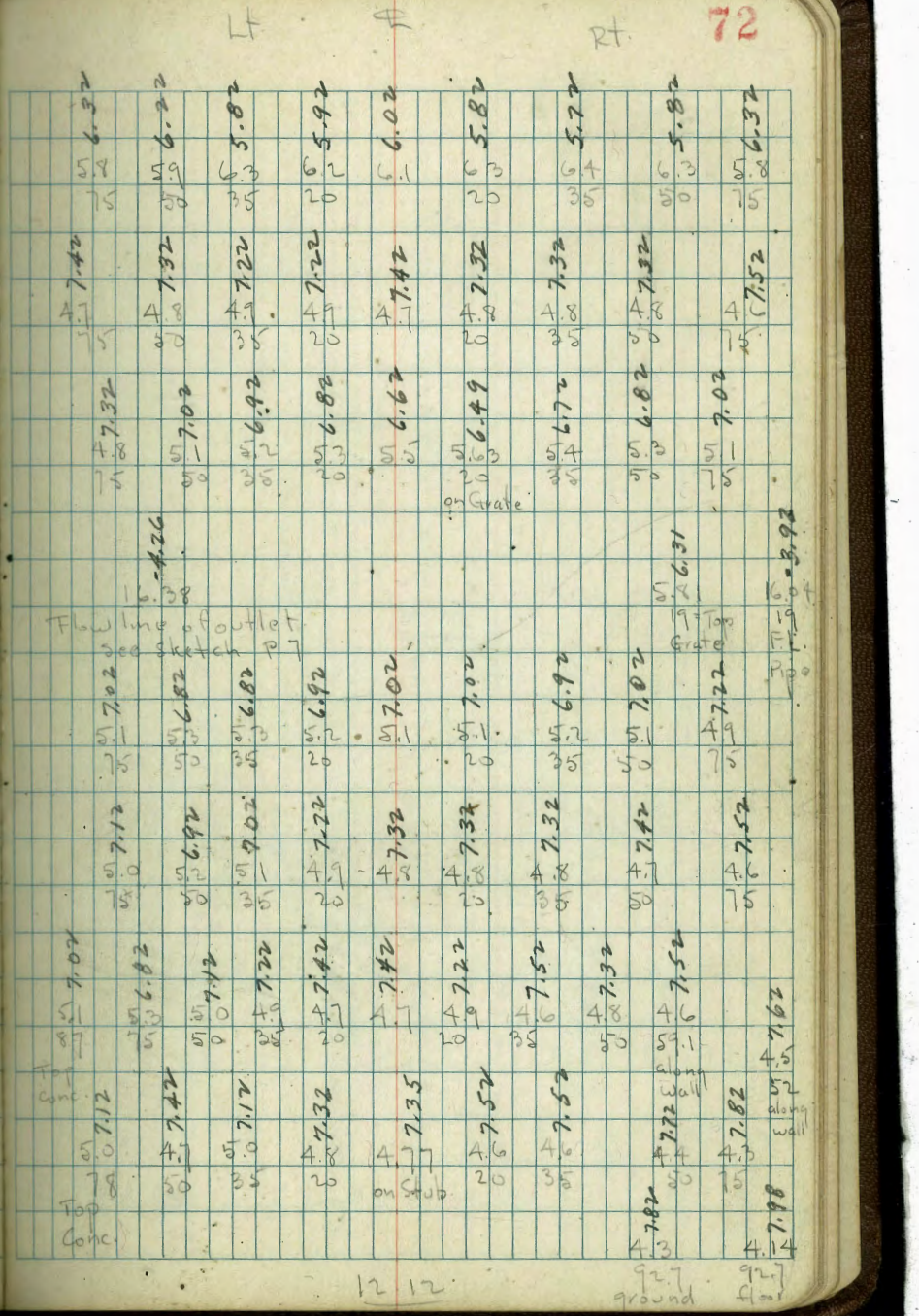
19+50

19+00

+8+86 - 52' Rt. = Near Cor. Conc Wall - 6' High

18+53.60 = E.C.

18+25 - 92.7 Rt. = Cor Doub Gar - Conc floor

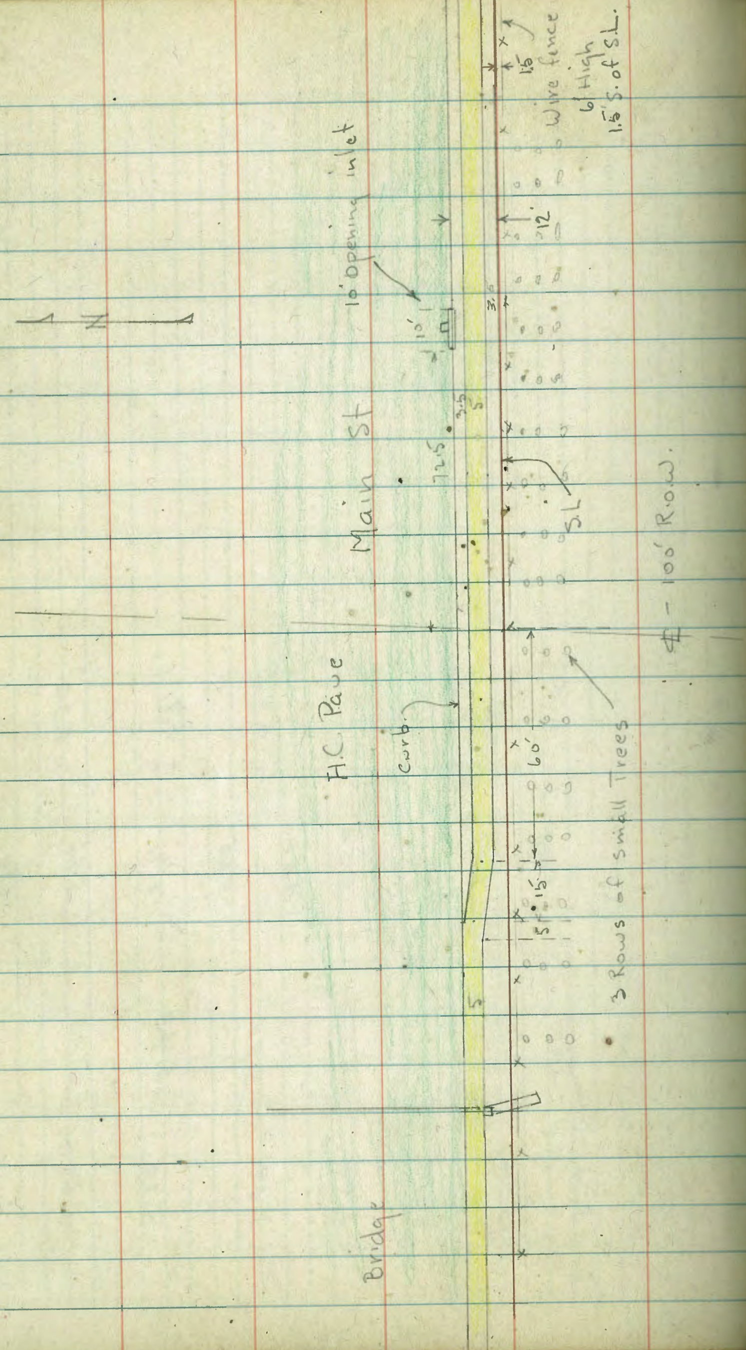


check B.P. in Bridge			0.77	10.23 ✓	10.24
BM = sq. inch.	5.47	~~11.00~~ ~~10.00~~ ?	6.59	5.53	
20+76 = Cont.					4.21 5.91 100 Gut.
20+76 = ℄ S. cb. Main St					
20+74.4 - 4' Rt = ℄ P. pole # 3335					
20+73.1 = N.L. of Walk					
20+68.1 = S.L. of Walk - Scat. along edge					

Lt ℄ Rt

12 12

Brk in Walk


N
10' Opening inlet
Wire fence
6' High
1.5' S. of S.L.
1.5'
12'
10'
72.5
Main St
SL
℄ - 100' R.O.W.
H.C. Pave
curb
60'
15'
3 Rows of small Trees
Bridge

W/O 31048

Moore
Begg
Sheen Cuts for Ex W.M. on Delta St
Sisson
7-12-49 40th to 41 St.

So. Curb
0+00 c6 EC at 41 St

N c6

5+56			6400 10.04 9.96 c0.08	
5+31	6434 9.70 9.80 F0.10			
4+76		6508 8.96 8.46 c0.50		
4+26			6575 8.29 8.62 F0.33	
4+06	6602 8.02 8.16 F0.14			
3+64		6660 7.34 7.15 c0.19		
2+49			7404 6814 590 27 C3.2	
1+98	7404 6878 526 255 C2.71			
1+15		7404 6995 409 23 C1.8		
0+20			7404 7123 281 221 C.60	
HW BP 40th Delta	10.75	74.04	63.29	

5+76		6471 5.74 4.84 C0.90			
5+15			6555 4.90 3.60 C1.3		
T.P.	1.59	70.45		10.01	68.86
3+17					6822 10.65 10.05 C0.60
1+82		7005 8.82 6.02 C2.8			
0+78			7145 7.42 4.2 C3.22		
0+04					72.45 6.42 0.50 C5.92
T.P.	6.02	78.87 74.04	1.19		72.85

Cross Section 58th St.
N.L. Island to S.L. Market St.

Feb 2-54
R.S. Iverson Chipman
Garber Parks
Kelley

3+29.7 = North Market			
+74 = Top South Slope	8.8 / 30	7.7	6.5 / 30
+50	6.8 / 30	6.0	5.4 / 30
2+0	4.5 / 30	5.0	5.3 / 30
+50	4.3 / 30	4.5	5.5 / 30
1+0	5.1 / 30	4.9	5.3 / 30
+50	6.0 / 30	5.5	6.0 / 30
0+00 = N.L. Island	6.7 / 30	6.3	6.9 / 30

BM 6.50 128.67 122.17 Pipe 99 ft 23+18.94 Market St. 128.67

Level National Ave At Wabash Ave.
Old Paving

March 16 54
A Sisson
Garber
Chipman
Parks
Kelley

Lt = N | 2 | Rt = South

+75						6.57 / 6.71
+50						6.05 / 7.23
+25						6.01 / 7.27
9+0						5.92 / 7.36
+75						5.85 / 7.42 Old Pav.
8+50						5.83 / 7.45 Old Pav.
					D Conc Walk #3865	13.28
BM	6.98	13.28		6.30	National Ave	

+50

+25

11+10.83

+90 E. end Island

10+37.80 W. end Island

13.28

13.23 / 0.05	12.34 / 0.94 / 26	
11.82 / 1.46	10.93 / 2.35 / 26	
11.01 / 2.27	10.31 / 2.97 / 22	10.32 / 2.96 G / 25 / Hew Gutter
9.78 / 3.50	9.07 / 4.21 / 23	
7.38 / 5.90 / old Pav.	5.97 / 7.31 / 25	

13.28

Cross Section "G" Line Sta
N.Y End Imperial Ave Overpass

+75					
+50					
+25					
9+15					
TP	0.30	61.78 ~~51.78~~	10.64	61.48	
+95					
+80					
8+50					
BM	3.03	72.12 ~~68.12~~		68.79 ~~58.79~~	N.Y. B.P. Imperial Overpass

March 17. 54
Sisson
Garber
Chipman
Parks
Kelley

Lt = North ℄

51.7 / 4.1 / 50.2 = S/Conc. Wall — 51.2 / 4.6 / 38.0 = S/Conc. Wall — 45.7 / 16.1 / 25.7 — 40.0 / 20.9 / 0.0

51.7 / 4.1 / 47.7 = S/Conc. Wall — 56.1 / 5.7 / 38.0 — 45.7 / 16.1 / 26 — 41.1 / 20.7 / 0.0

59.50 / 2.28 / 41.5 = Top of Footing — 58.5 / 3.3 / 39.0 — 57.0 / 4.8 / 38.6 — 49.6 / 12.2 / 30.7 = S/Hwy — 45.2 / 16.6 / 25 — 42.0 / 18.8 / 0.0

60.47 / 1.31 / 40.4 = S/Top Footing — 59.5 / 2.3 / 38.3 — 55.9 / 5.9 / 35.8 — 48.2 / 13.6 / 28.6 = S/Hwy — 44.8 / 17.0 / 24 — 41.8 / 20.0 / 0.0

61.78
~~51.78~~

56.5 / 5.25 / 37.0 = Top Fdg — 52.5 / 9.6 / 37.0 = B/S/Wall — 50.1 / 12.0 / 33 — 48.2 / 13.9 / 28 — 43.4 / 18.7 / 23 — 40.1 / 21.4 / 0.0

61.8 / 10.3 / 37 — 60.7 / 11.4 / 30 = Top Cut — 40.7 / 21.4 / 21 — 39.4 / 22.7 / 0.0

61.8 / 10.3 / 39 — 60.2 / 11.9 / 31 = Top Cut — 39.3 / 32.8 / 20 — 38.0 / 34.1 / 0.0

~~72.12~~

IMPROVED TABLES AND INFORMATION

HORIZONTAL STADIA CORRECTIONS

2°—00′	— 0.1	21°—00′	— 12.8	33°—00′	— 29.7
3°—00′	— 0.3	21°—30′	— 13.4	33°—15′	— 30.1
4°—00′	— 0.5	22°—00′	— 14.0	33°—30′	— 30.5
5°—00′	— 0.8	22°—30′	— 14.7	33°—45′	— 30.9
6°—00′	— 1.1	23°—00′	— 15.3	34°—00′	— 31.3
7°—00′	— 1.5	23°—30′	— 15.9	34°—15′	— 31.7
8°—00′	— 1.9	24°—00′	— 16.5	34°—30′	— 32.1
9°—00′	— 2.5	24°—30′	— 17.2	34°—45′	— 32.5
10°—00′	— 3.0	25°—00′	— 17.9	35°—00′	— 32.9
10°—30′	— 3.3	25°—30′	— 18.6	35°—15′	— 33.3
11°—00′	— 3.6	26°—00′	— 19.2	35°—30′	— 33.7
11°—30′	— 4.0	26°—30′	— 19.9	35°—45′	— 34.1
12°—00′	— 4.3	27°—00′	— 20.6	36°—00′	— 34.6
12°—30′	— 4.7	27°—30′	— 21.3	36°—15′	— 35.0
13°—00′	— 5.1	28°—00′	— 22.0	36°—30′	— 35.4
13°—30′	— 5.5	28°—30′	— 22.8	36°—45′	— 35.8
14°—00′	— 5.9	29°—00′	— 23.5	37°—00′	— 36.2
14°—30′	— 6.3	29°—30′	— 24.3	37°—15′	— 36.6
15°—00′	— 6.7	30°—00′	— 25.0	37°—30′	— 37.1
15°—30′	— 7.2	30°—15′	— 25.4	37°—45′	— 37.5
16°—00′	— 7.6	30°—30′	— 25.8	38°—00′	— 37.9
16°—30′	— 8.1	30°—45′	— 26.2	38°—15′	— 38.3
17°—00′	— 8.5	31°—00′	— 26.5	38°—30′	— 38.7
17°—30′	— 9.0	31°—15′	— 26.9	38°—45′	— 39.1
18°—00′	— 9.5	31°—30′	— 27.3	39°—00′	— 39.6
18°—30′	— 10.1	31°—45′	— 27.7	39°—15′	— 40.0
19°—00′	— 10.6	32°—00′	— 28.1	39°—30′	— 40.5
19°—30′	— 11.2	32°—15′	— 28.5		
20°—00′	— 11.7	32°—30′	— 28.9		
20°—30′	— 12.3	32°—45′	— 29.3		

Chains to Feet	
1	66
2	132
3	198
4	264
5	330
6	396
7	462
8	528
9	594
10	660

Feet to Chains	
100	1.515
200	3.030
300	4.545
400	6.060
500	7.575
600	9.090
700	10.606
800	12.121
900	13.636
1,000	15.151

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope 1½ to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

TABLE No. 9.

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections.

Degree of curve with a given I may be found by dividing tangent, (or external), opposite I by given tangent, (or external).

The distance from a point on the tangent to the curve is very nearly the square of the tangent lenth divided by twice the radius.

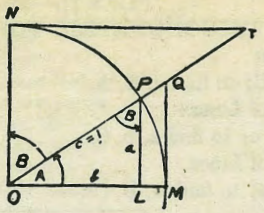


TABLE II

TRIGONOMETRIC FORMULÆ.

$\angle A = \angle MOP \qquad \angle B = \angle PON = \angle OPL$

$R = OB = c = 1$

$$\sin A = \frac{a}{c} = \frac{a}{1} = a = \cos B = LP$$

$$\cos A = \frac{b}{c} = \frac{b}{1} = b = \sin B = OL$$

$$\tan A = \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ$$

$$\cot A = \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT$$

$$\sec A = \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ$$

$$\csc A = \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT$$

$$\text{vers } A = \frac{LM}{OP} = LM = \text{covers } B \#$$

$$\text{covers } A = \frac{OP - LP}{OP} = OP - LP = \text{vers } B$$

$$\text{exsec } A = PQ = \text{coexsec } B$$

$$\text{coexsec } A = PT = \text{exsec } B$$

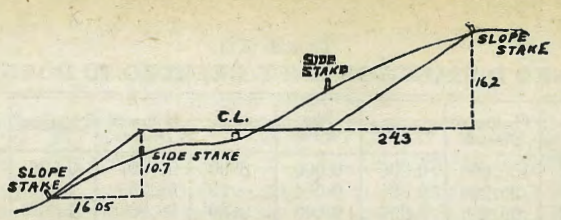
$$\sin \tfrac{1}{2} A = \sqrt{\frac{1 - \cos A}{2}} \qquad \cos \tfrac{1}{2} A = \sqrt{\frac{1 + \cos A}{2}}$$

$$\sin 2A = 2 \sin A \cos A \qquad \cos 2A = \cos^2 A - \sin^2 A$$

$$\text{Law of Lines} \quad \frac{\sin A}{a} = \frac{\sin B}{B} = \frac{\sin C}{C}$$

$$\text{Law of Cosines} \quad c^2 = a^2 + b^2 - 2ab \cos C$$

$$\text{Law of Tangents} \quad \frac{a+b}{a-b} = \frac{\tan \tfrac{1}{2}(A+B)}{\tan \tfrac{1}{2}(A-B)}$$



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

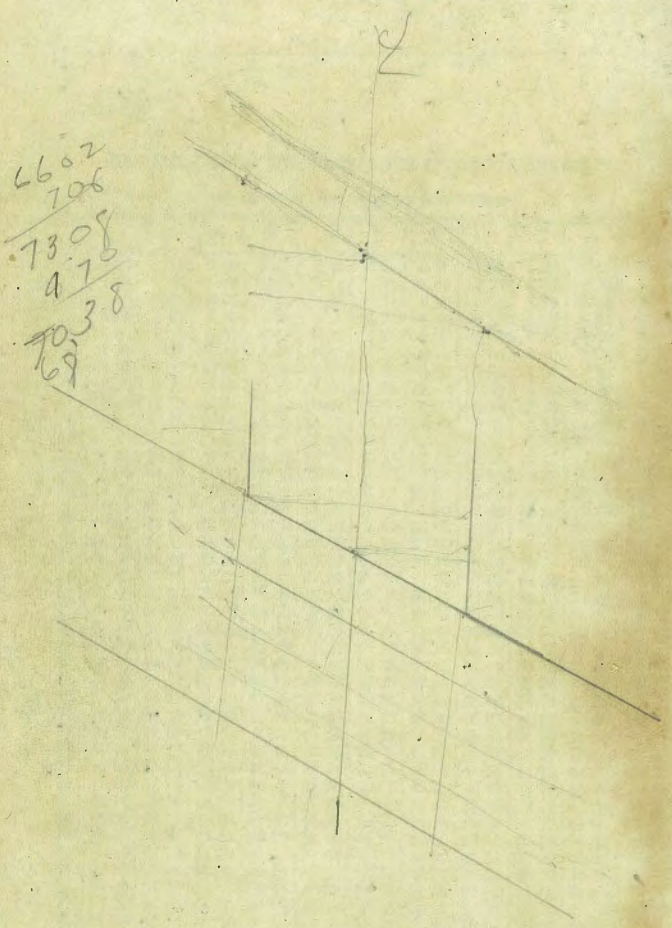
SLOPE 1½ TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0 00	0 15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1 65	1 80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3 45	3.60	3 75	3.90	4.05	4.20	4 35	2
3	4.50	4 65	4.80	4.95	5.10	5 25	5 40	5.55	5.70	5.85	3
4	6.00	6 15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7 50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9 00	9 15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10 65	10.80	10.95	11.10	11.25	11.40	11.55	11 70	11.85	7
8	12.00	12 15	12.30	12.45	12.60	12.75	12.90	13 05	13.20	13.35	8
9	13 50	13.65	13 80	13 95	14.10	14.25	14.40	14 55	14.70	14.85	9
10	15.00	15 15	15 30	15 45	15.60	15.75	15.90	16.05	16.20	16 35	10
11	16 50	16 65	16 80	16.95	17 10	17.25	17.40	17.55	17.70	17.85	11
12	18 00	18.15	18.30	18 45	18.60	18 75	18.90	19.05	19.20	19 35	12
13	19 50	19 65	19.80	19.95	20.10	20.25	20 40	20.55	20.70	20.85	13
14	21.00	21 15	21.30	21.45	21 60	21.75	21.90	22 05	22 20	22 35	14
15	22 50	22 65	22 80	22 95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24 15	24 30	24 45	24.60	24.75	24 90	25 05	25.20	25.35	16
17	25.50	25 65	25.80	25 95	26.10	26 25	26 40	26.55	26.70	26.85	17
18	27.00	27 15	27.30	27 45	27.60	27.75	27.90	28.05	28 20	28.35	18
19	28 50	28 65	28 80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30 00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31 50	31 65	31.80	31.95	32 10	32 25	32.40	32.55	32 70	32 85	21
22	33 00	33 15	33 30	33 45	33.60	33 75	33.90	34.05	34.20	34.35	22
23	34 50	34 65	34.80	34.95	35.10	35 25	35 40	35.55	35.70	35 85	23
24	36.00	36 15	36.30	36 45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37 80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39 00	39 15	39.30	39 45	39 60	39.75	39.90	40.05	40.20	40.35	26
27	40 50	40 65	40 80	40.95	41.10	41.25	41 40	41.55	41.70	41.85	27
28	42 00	42 15	42.30	42.45	42.60	42 75	42.90	43.05	43.20	43.35	28
29	43 50	43 65	43.80	43 95	44.10	44 25	44 40	44.55	44.70	44 85	29
30	45 00	45 15	45.30	45 45	45.60	45.75	45.90	46.05	46 20	46.35	30
31	46.50	46.65	46.80	46 95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48 00	48.15	48.30	48 45	48.60	48 75	48.90	49.05	49 20	49.35	32
33	49.50	49 65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51 00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52 50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54 00	54.15	54.30	54 45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55 50	55 65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57 45	57.60	57.75	57.90	58.05	58.20	58 35	38
39	58 50	58.65	58 80	58.95	59.10	59 25	59.40	59 55	59.70	59.85	39
40	60 00	60.15	60 30	60 45	60 60	60.75	60 90	61.05	61 20	61.35	40
41	61.50	61 65	61 80	61 95	62 10	62 25	62.40	62 55	62 70	62.85	41
42	63 00	63.15	63 30	63 45	63 60	63 75	63 90	64 05	64 20	64.35	42
43	64.50	64 65	64 80	64.95	65.10	65 25	65 40	65.55	65.70	65.85	43
44	66 00	66 15	66 30	66.45	66.60	66 75	66.90	67.05	67.20	67.35	44
45	67 50	67 65	67 80	67.95	68.10	68.25	68 40	68.55	68.70	68.85	45
46	69 00	69 15	69 30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70 65	70 80	70 95	71.10	71.25	71 40	71.55	71.70	71.85	47
48	72.00	72 15	72.30	72.45	72.60	72.75	72.90	73 05	73.20	73 35	48
49	73 50	73 65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

Computed by L. Leland Locke.

10.00 = B.P. in Plant
7.56
17.56
4.80
12.76
4.85
17.61
7.63
9.98
3.22
13.20
4.96
8.24 C+G Mon.

9.13
859
17.72
8.86



9.09 Disk
5.35
14.44
7.02
7.42
3.10
10.52
5.36
5.16
4.42
9.58
5.31
4.27
5.05
9.32

9.47
.85
8.62

4.27
5.18
9.45

4.27
5.60
9.87

9.24 9.09
9.51 8.24
.73 .85

13.17
.17

12.53
.09
13.62

60.51
49.35
11.16