

MISC SURVEY V 10-77
BOOK 2-77

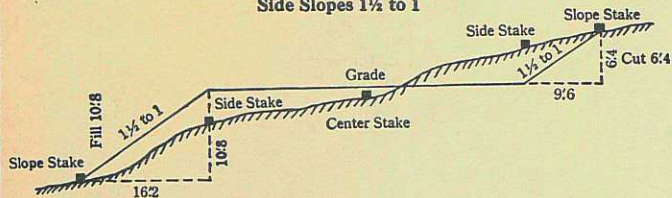
Full
JOB No. 2-77-001

TO

2-77-012

BOOK 2-77 JOB No. 2-77-001 to 012

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING
 Roadway of any Width
 Side Slopes 1½ to 1



In the figure above: Opposite 6 under "Cut or Fill" and under .4 read 9:6 the distance from the side stake to the slope stake at right. Opposite 10 under "Cut or Fill" and under .8 read 16:2, the distance from the side stake to the slope stake at the left.

Cut or Fill	Distance out from Side or Shoulder Stake										Cut or Fill
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

104.35
 99.33
 5.02

176.2
 33.82
 209.86

Property of CACHE CO ENGR

Address RM 210 COUNTY COURT HOUSE

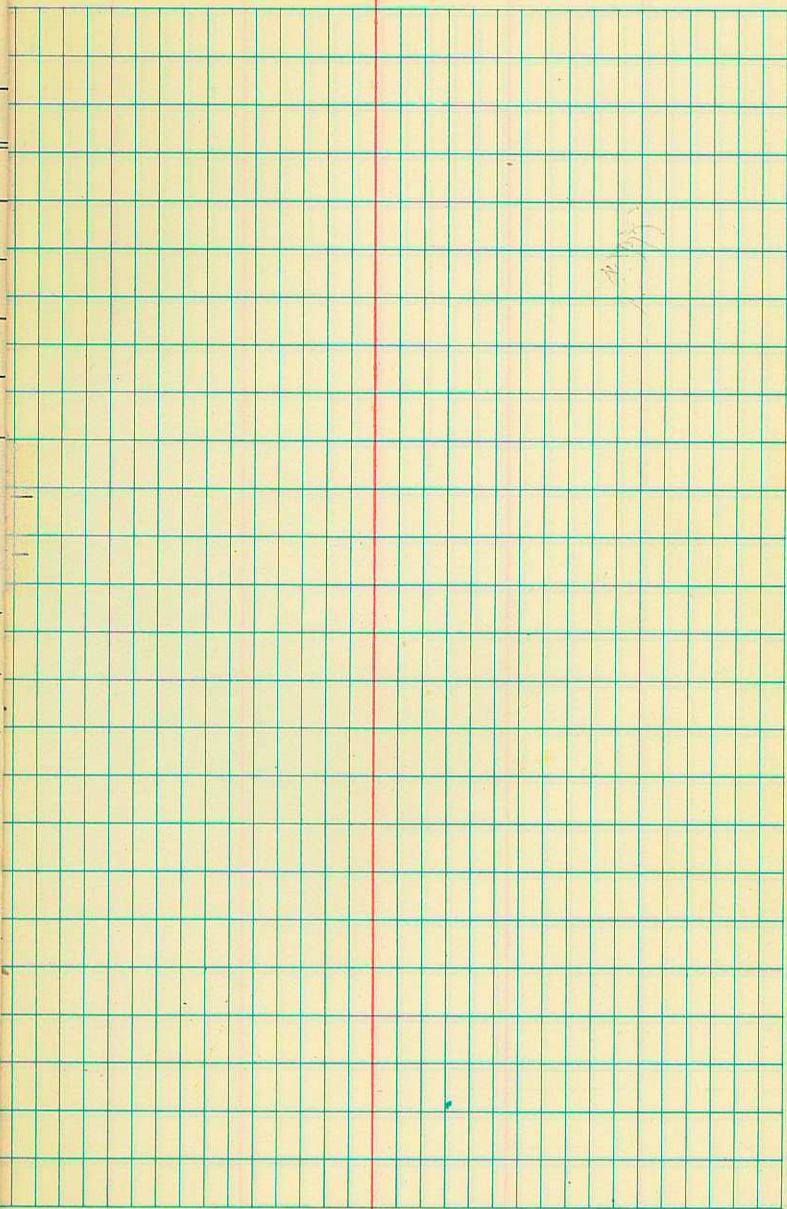
179 N MAIN LOGAN UTAH

Phone _____

This Field Book contains special paper which is impregnated with resin to make it substantially stronger as well as water resistant. Your field notes will come out sharp and clear even when the page is wet.

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91° 22' 10" R 997.47

21 SEPT 77

LOSAN CANYON SNOWMOBILE PARK

JOB 2-77-001

HUDSON NOTES

COOL SUNNY

WARD T

PPM 27

SET UP ON HIGHWAY AT FOREST BOUNDARY
AND SHOT & SAID DISTANCES UP TO SECTION
CORNER ON FOREST BOUNDARY FENCE
LINE.

SET UP ON SECT CORNER USED MAG BRNG AS
BACKSIGHT AND PLUNGED AND TURNED DOWN
LINE OF BRNG $N 89^{\circ} E$ SECTION CORNER

$0^{\circ} 50' 30'' R$

CHAINED
209.86

A

$6^{\circ} 48' 30'' R$

CHAINED
67.44

C

C

$7^{\circ} 00' 30''$ $84' 12''$ 997.47 992.36

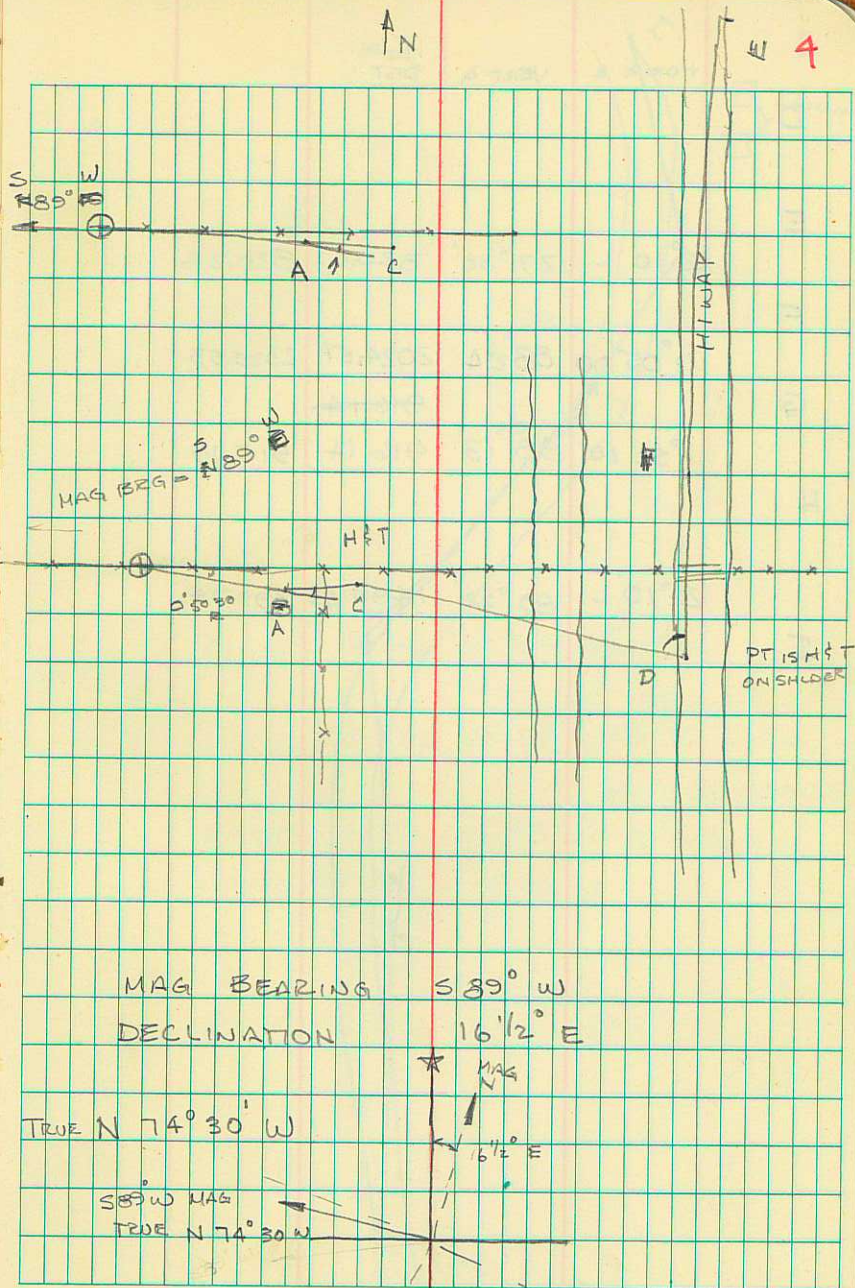
D

$25' 00''$
 $91^{\circ} 31' 30'' R$

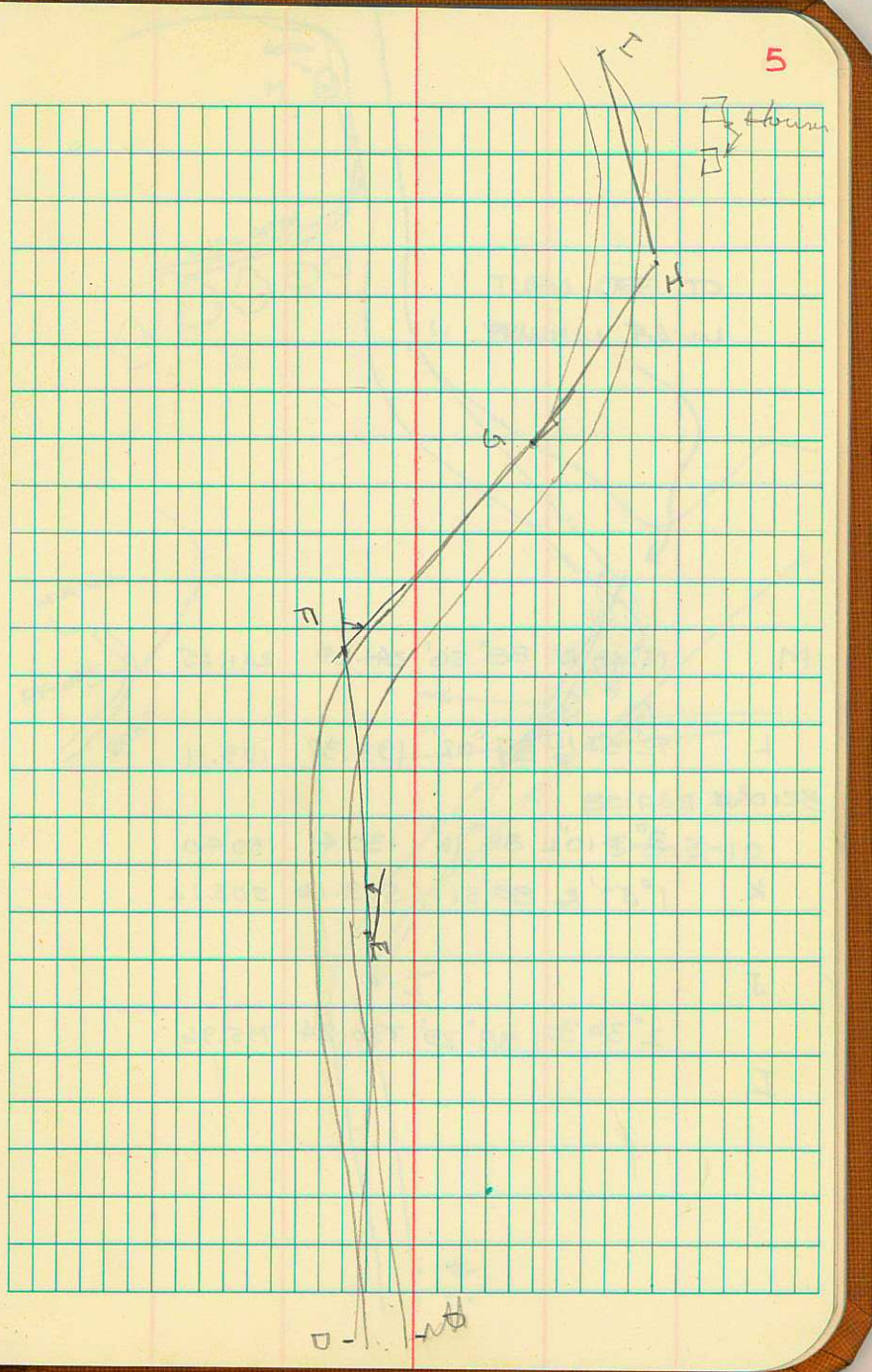
2777.09 $89' 20''$ 2776.90

E

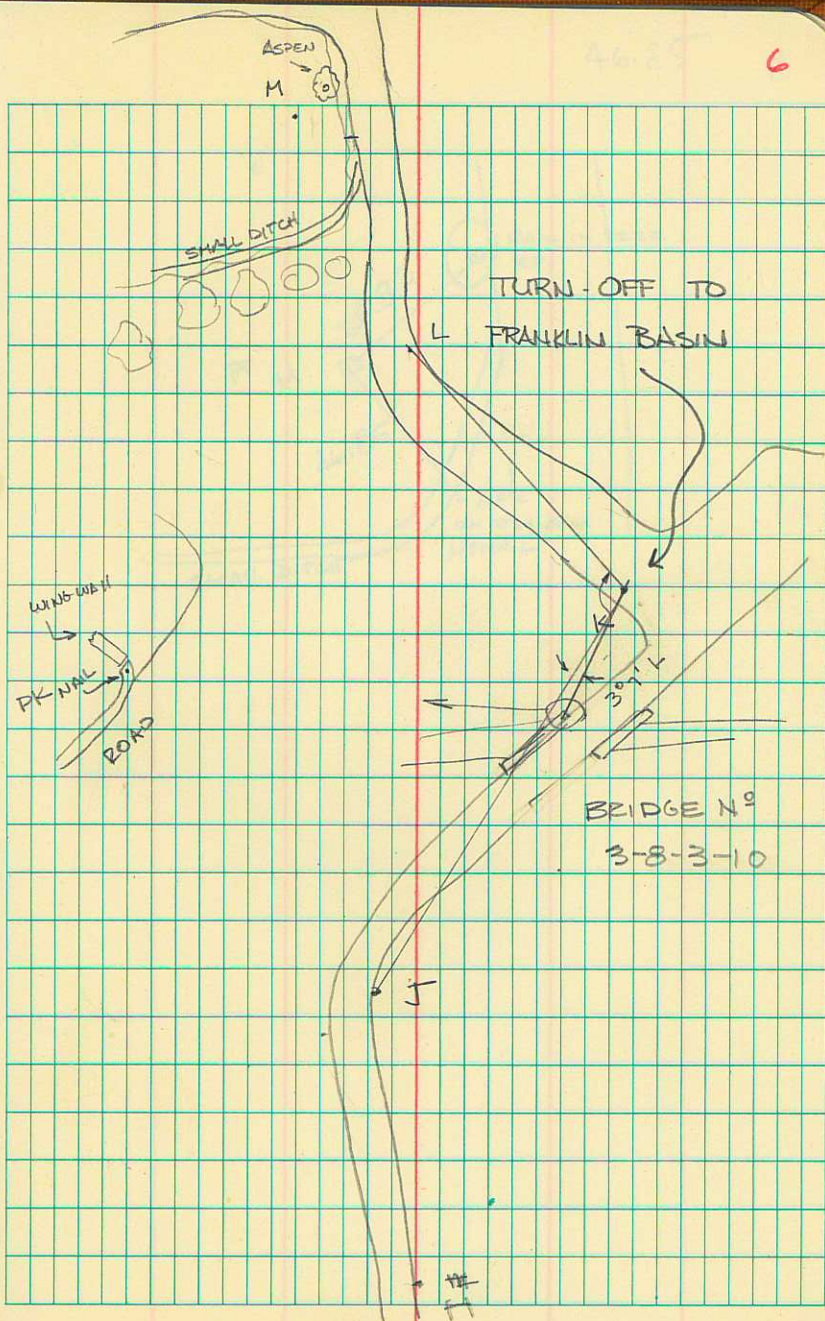
$91^{\circ} 31' 30'' R$



	HORIZ &	VERT &	SLOPE DIST	
D				
E	2° 10' L	271° 38'	820.61	820.28
F	11° 05' 00" R	88° 24'	2024.51	2023.53
G			916.74	
	1° 52' 10" L	88° 13'	916.14	915.70
H				
	21° 10' L	89° 22'	1494.03	1493.94
I				

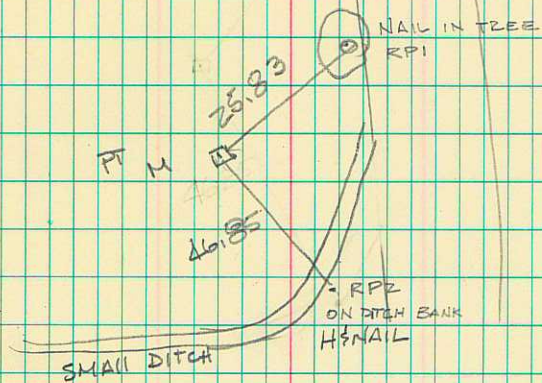


M	15° 40' R	88° 56'	241.69	241.65
L	72° 53' 10" R	87° 02'	193.37	193.11
BRIDGE	3° 7' 10" L	89° 16'	130.41	130.40
K	1° 57' R	89° 31'	503.16	503.14
J	2° 36' 30" L	88° 29'	796.24	795.96
I				



46.85

7



PARADISE CEMETARY

26 OCT 77

HUDSON NOTES, P

8 DEC 77
COOL, CLEAR 45°

WARD T

COLD CLEAR 30° PPM 20

FOUND OLD ROCK WITH NOTCHES ON CORNER
OF BRIDGER ST AND ST. SOUTH LINE
OF SECTION TWN. 10N R 1E. ELYDE
FIRST CEMETARY DISTRICT TOLD US IT
WAS THE CORNER. ALSO FOUND FENCE
POST 1 MILE EAST THAT IS THE REPORTED
CORNER. WE SET UP BETWEEN AND SHOT
TO EAST CORNER. SET UP ON B AND MEAS. DIST.

TO C AS 4485.11', CAL. 1/2 PT AND TURNED

4 AND SET HUB 1858.39' FROM PT B

A TO B 89°05' 1054.49 1054.36

B TO C 141°36'50" 267°33' 4489.21 4485.11

B TO D 141°36'50"

A TO C 5361.76

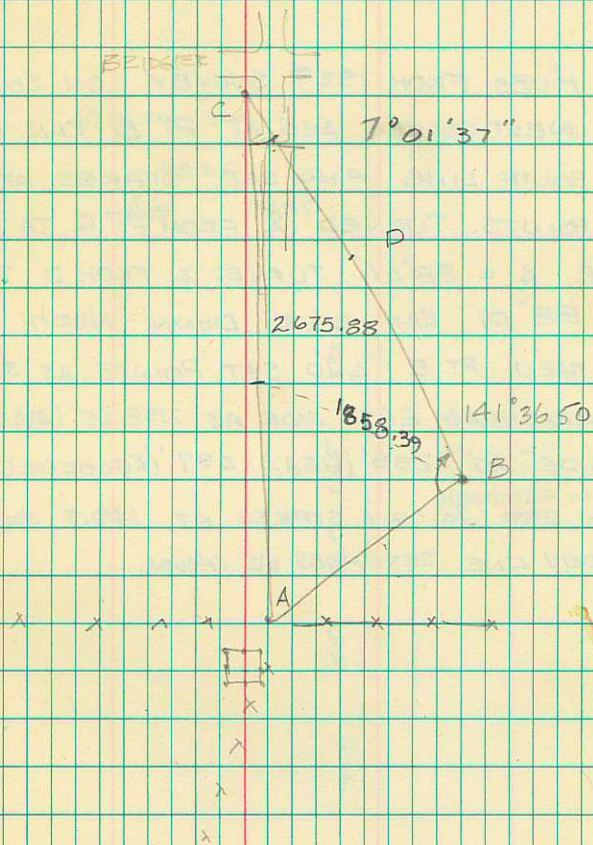
V4 89°05'

1054.49



10

10.0844



1858.39

1467.45

390.94

CALCULATIONS P.W.

CHECKED AM 9 DEC 77

PARADISE CEMETARY

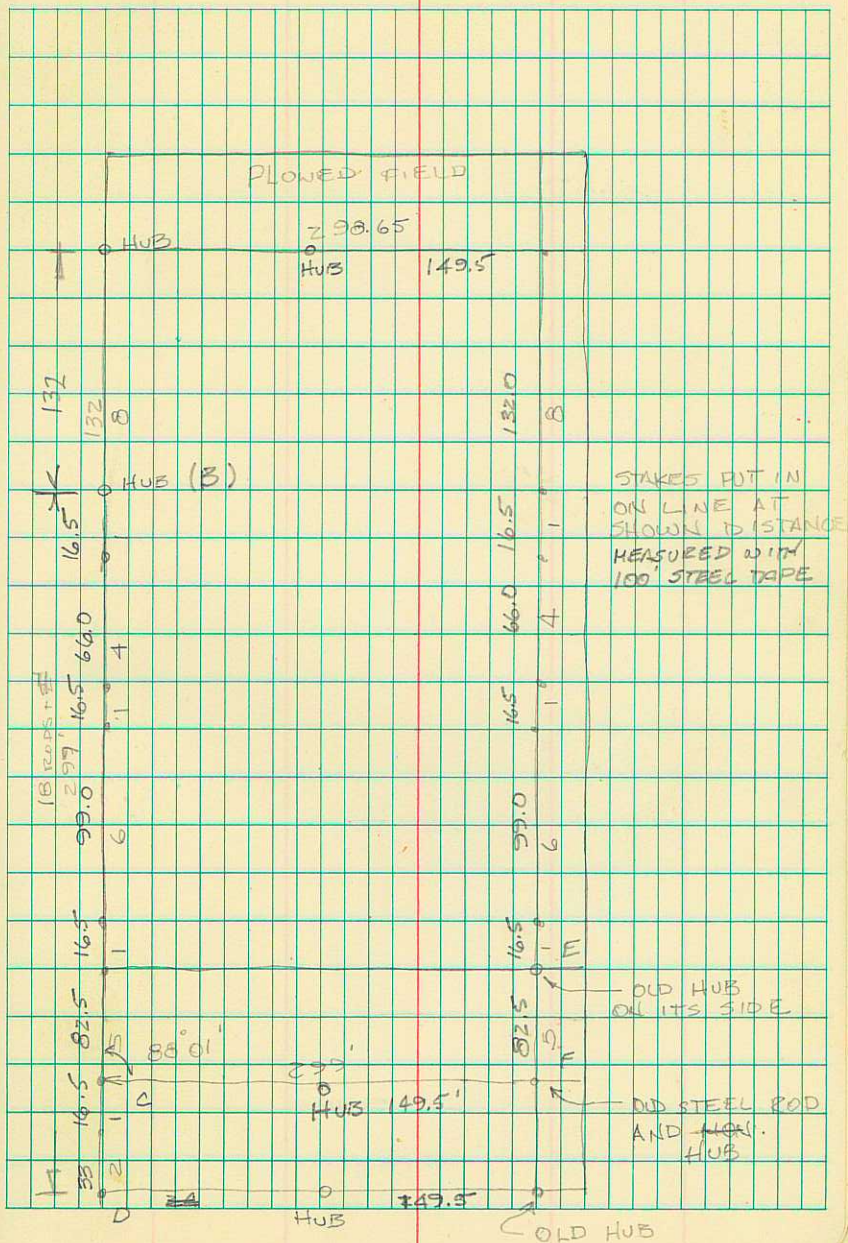
27 OCT 77

HUBS FROM 1929 SURVEY ON SOUTH SIDE WEST CORNER AND AT PT B RAN LINE DOWN SOUTH LINE AND SET STAKES AT SHOWN POINTS. TURNED \angle FROM PT G TO OLD HUB E $\angle = 88^{\circ}01'$ TURNED \angle FROM D TO F $\angle = 88^{\circ}01'$ RAN LINE DOWN NORTH SIDE THRU PT E AND SET POINTS AS SHOWN.

MEASURED EAST SIDE AS 298.65 AND WEST SIDE AS 299' (MEAS.) 297' (RECORDED)

SET 1/2 WAY STAKES AT 149.5' SOUTH OF NORTH LINE. SET HUBS AS SHOWN.

$$\begin{array}{r} 316.5 \\ .5 \\ \hline 32.5 \end{array}$$



MENDON FIELD STREET

EAST HALF OF SEC. 17 T11N R1E

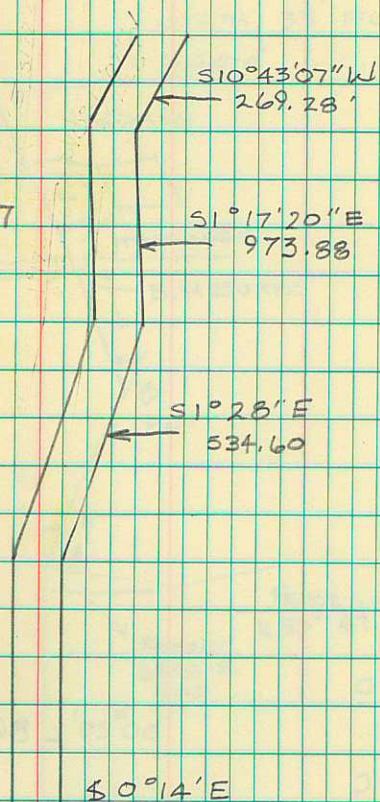
WARD

12-8-77

HUDSON

JOB NO. 2-77-003

SEE BOOK ENTITLED
MENDON FIELD STREET
1979



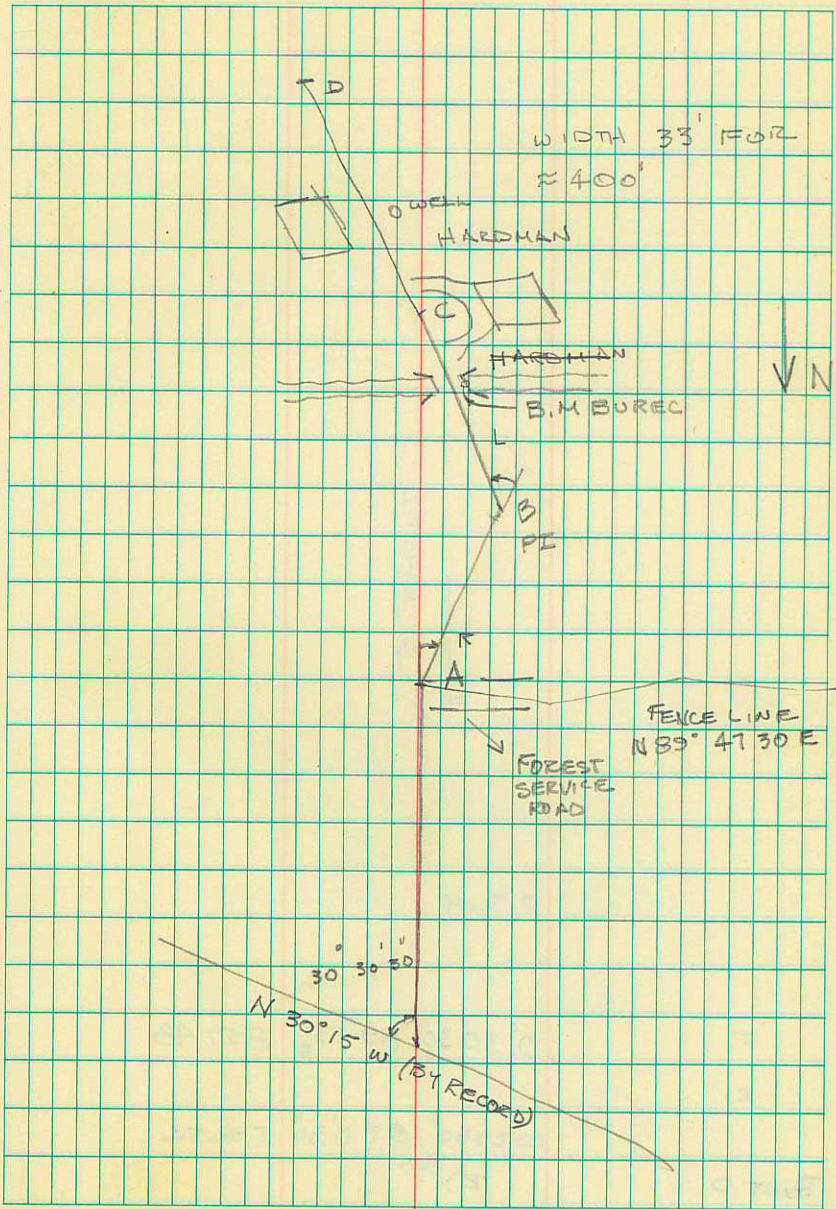
S10°43'07\"/>

S1°17'20\"/>

S1°28'E
534.60

S0°14'E

POINT D	00° 25' L	86° 25'	907.28	905.51
POINT C	10° 49' 45"	87° 04'	790.74	789.69
POINT B	9° 11' 45"	86° 26'	272.06	271.44
POINT A		86° 12'	507.63	
INTER. width 25.	30° 30' 30"	86° 12'	507.63	506.51



F $0^{\circ}30'30''$ $89^{\circ}33'$ 857.48

E

$00^{\circ}26'40''$ $67^{\circ}11'30''$ 1588.54

POINT D

(E) ~~(F)~~

PAVEMENT

10

POINT E

POINT D

TIE TO SEC CORNER -

FOUND A FENCE INTERSECTION WITH
 OLD POST ON LINE. FOREST SERVICE
 WITNESS MARKER 40' S OF OLD POST.
 RAN DOWN SECTION LINE (E/W) ON
 NORTH SIDE OF SEC. 17 TO ROAD

~~273' 12" 1198.87~~

NBA 874' 25" INSIDE R

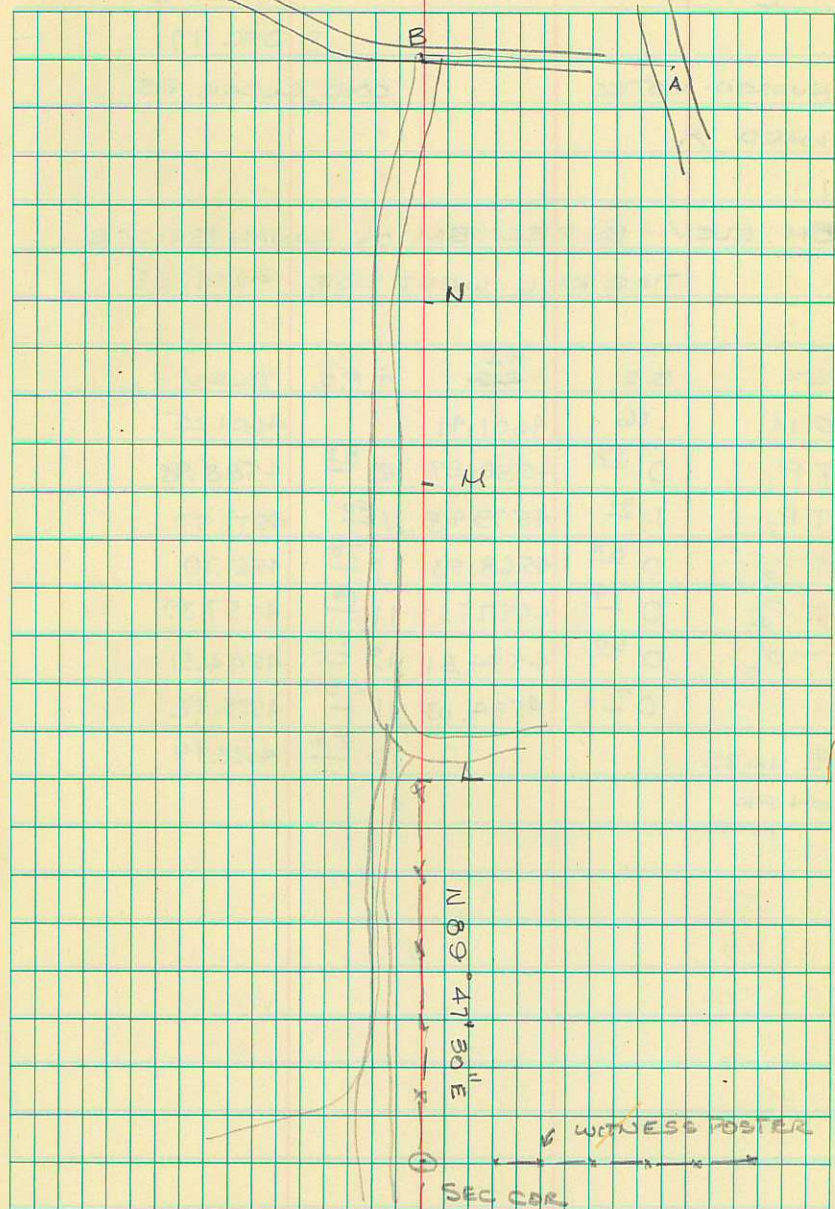
B 5° 25' R 96° 51' 1018.83 1011.56

N 4° 20' 00" 95° 39' 354.63 352.91
 Z

M 1° 41' 45" 246° 27' 606.44 605.28
 K

L 0° 00' 273' 12" 1198.87 1197.00

SEC COR



± PROFILE FIELD ROAD - MENDON

9 DEC 77

HUDSON-NOTES

COLD, CLEAR 28°

WARD A

BM ELEV BUREL BM ON CANAL BRIDGE

TIRE RAIL WEST SIDE 4601.25'

STA	B.S.	HI FS	I.F.S.	ELEV
B.M.	.16	4601.41		4601.25
TP ₁	0 ³⁹ / ₁	4588.87	12 ²³ / ₁	4588.48
TP ₂	1 ²¹ / ₁	4579.48	11 ³⁰ / ₁	4577.57
TP ₃	0 ⁸⁵ / ₁	4568.53	11 ⁷⁸ / ₁	4567.70
TP ₄	0 ¹⁴ / ₁	4557.53	11 ¹⁴ / ₁	4557.39
TP ₅	0 ⁵⁰ / ₁	4544.81	13 ²² / ₁	4544.31
	0 ⁷¹ / ₁	4534.03	11 ⁴⁹ / ₁	4533.32
± HW 23			10 ⁵⁴ / ₁	4523.49

ON PK
NAIL

STA	BS	HI	FS	EL
7+50			8 ³	4572.29
7+88			6 ^L	4574.49
8+00			5 ⁴	4575.19
8+50			3 ^L	4577.49
TP	13 ⁰⁵	4592.56	1 ⁰⁸	4579.51
9+00			13 ⁰	4579.50
9+50			10 ⁸	4581.76
10+00			8 ²	4584.36
10+50			5 ⁰	4587.56
11+00			1 ⁷	4590.86
TP	13 ⁰⁰	4604.44	1 ¹²	4591.44
11+50			9 ⁷	4594.14
12+16			4 ⁴	4600.04
			B.M.	3.26
		B.M.	3.26	4601.18 4601.25
12+16 ^{B.M.}	12.87	4614.12		4601.25
12+50			12 ⁰	4602.12
13+00			9 ⁵	4604.62
14+00			5 ²	4608.92
15+00			0 ⁴	4613.72
TP	13 ²⁶	4626.69	0 ⁶⁹	4613.43
PT C ¹⁵⁺⁵⁹			10 ⁸	4615.89
16+00			8 ⁸	4617.89
17+00			3 ³	4623.39

TEL. POLE 20' L X (PI)

CANAL BRIDGE 45° SKEW TO ROAD

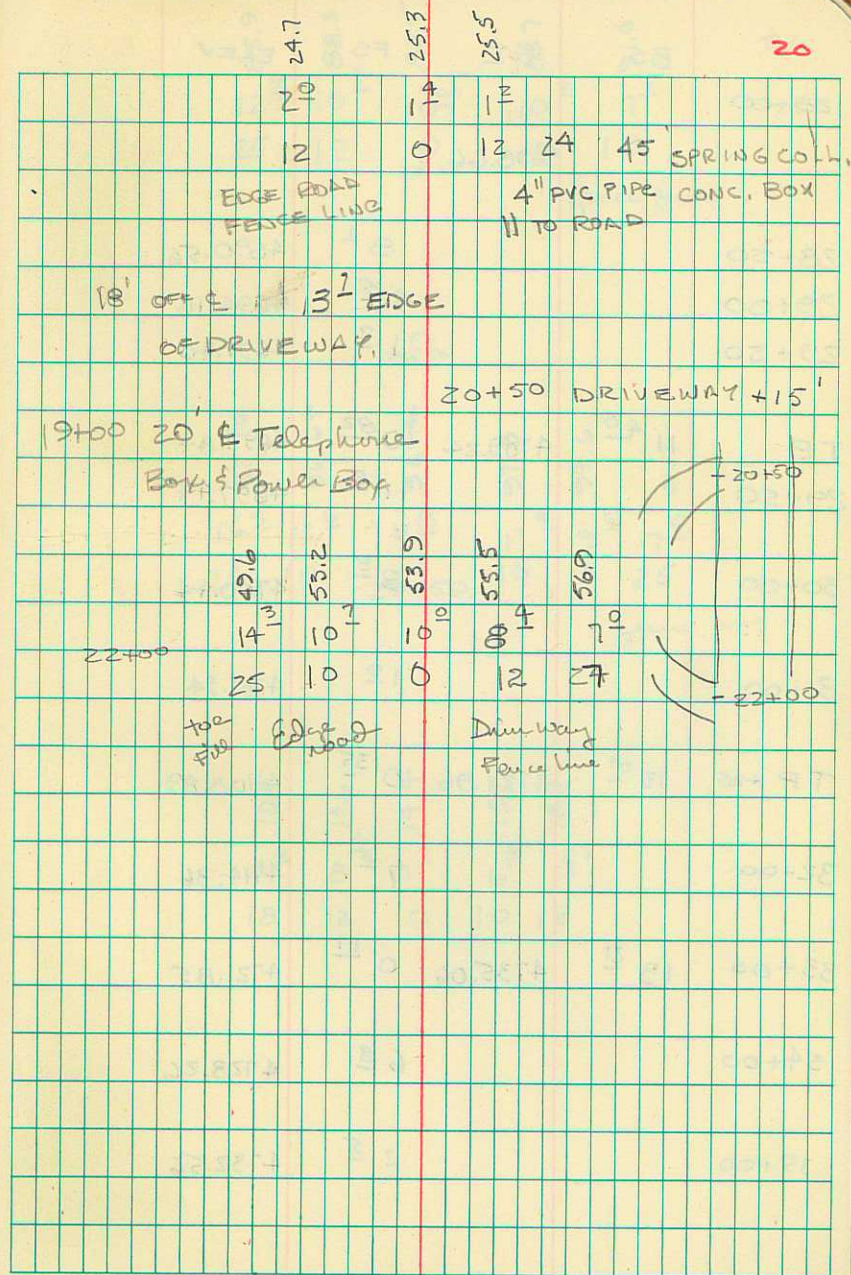
Sta	Dist	Point	EL
25	0	WALL TOP	00.00
20	4	FACE GUARD TOP	00.20
15	8	WING WALL	01.25
14	13	FL #	00.20
13	16	FL #	00.10
13	30	FL #	06.0

→ WING WALL FL AT FENCE LINE
TRASH RACK THIS SIDE
WING WALL AT FENCE EL. 4599.50
TEL. CONDUIT AT 13.5'

House	Dist	Point	EL
	12.1	15.5	15.9
	14.9	11.2	10.8
	15	9	10
			10.4
			14.8
			12
			14

Fence line
DITCH

		HI		
17+50		4626.49	1 ⁴	4625.29
18+00			0 ²	4626.49
TP	12 ⁵⁹	4639.06	0 ²²	4626.47
19+00			9 ³	4629.86
19+50			7 ³	4631.76
20+00			4 ⁰	4635.06
+50			0 ⁸	4638.26
TP	12 ⁹⁵	4651.26	0 ⁷⁵	4638.31
21+00			8 ³	4642.96
21+50			3 ⁰	4648.26
TP	12 ⁹⁰	4663.94	0 ²²	4651.04
22+00			10 ⁰	4653.94
+50			4 ⁹	4659.04
23+00			0 ³³	4663.61
TP	12 ⁶³	4676.24	0 ³³	4663.61
24+00			4 ⁷	4671.54
+25 PTD			3 ⁴	4672.84
TP+50	12 ⁸⁵	4688.62	0 ⁴⁷	4675.77
25+00			10 ⁵	4678.12
26+00			5 ¹	4683.52
27+00			3 ⁰	4685.62
28+00			0 ²	4688.42
TP	10 ²⁰	4698.66	0 ¹⁶	4688.46



	BS	HI	FS	ELEV
28+00		4698.66		
28+50			8 ¹	4690.56
29+00			4 ⁵	4694.16
29+50			1 ²	4697.46
TP	11 ⁴⁰	4709.24	0 ⁸²	4697.84
29+50			11 ⁸	4697.44
30+00			8 ⁸	4700.44
31+00			1 ²	4707.34
TP +25	13 ⁰⁷	4721.96	0 ³⁵	4708.89
32+00			7 ⁶	4714.36
33+00	13 ²¹	4735.06	0 ¹¹	4721.85
34+00			6 ⁸	4728.26
35+00			2 ⁵	4732.56

	BS	HI	FS	ELEV
28+00		4698.66		
28+50			8 ¹	4690.56
29+00			4 ⁵	4694.16
29+50			1 ²	4697.46
TP	11 ⁴⁰	4709.24	0 ⁸²	4697.84
29+50			11 ⁸	4697.44
30+00			8 ⁸	4700.44
31+00			1 ²	4707.34
TP +25	13 ⁰⁷	4721.96	0 ³⁵	4708.89
32+00			7 ⁶	4714.36
33+00	13 ²¹	4735.06	0 ¹¹	4721.85
34+00			6 ⁸	4728.26
35+00			2 ⁵	4732.56

21

12¹⁹ 85.9
 25 12 88.3
 10²⁰ 88.5
 10⁰ 88.7
 10 18 91.6
 fence line

92.74
 96.64
 97.44
 97.8
 99.6
 01.7
 16⁵ 12⁶ 11¹⁸ 10¹⁹ 13¹⁰ 7⁵
 25 10 29+50 10 18 25
 fence line

10.4
 13.6
 14.4
 15.2
 18.9
 11¹⁰ 8¹⁴ 7¹⁰ 6¹⁸ 5¹
 18 12 0 10 18

See Next Page

22

	BS	HI	FS	ELEV
35+65	12 ³⁹ / ₁	4747.45	0 ⁰⁰ / ₀	4735.06
35+75				
36+00			10 ⁰⁸ / ₀	4736.65
37+00			5 ⁰ / ₀	4741.85
38+00	13 ²⁰ / ₀	4760.62	0 ⁰⁰ / ₀	4747.42
PT E				
38+85			8 ₁	4752.52
39+00			7 ⁰ / ₀	4753.02
39+80				
40+00			4 ⁷ / ₀	4755.92
41+00			3 ⁷ / ₀	4756.92
42+00			3 ⁴ / ₀	4757.22
43+00			3 ⁰ / ₀	4757.62
44+00			2 ² / ₀	4758.42
45+00			2 ⁰ / ₀	4758.62

33.05	14 ¹⁴ / ₀	34.65	35.45	38.0
20	0	12 ⁰⁸ / ₀	10 ¹⁷ / ₀	25 ⁴ / ₀
		+ 10 ¹⁵ / ₀	10 ¹⁷ / ₀	25 ⁴ / ₀
				DRIVEWAY
				Force line

52.1	54.2	55.2	56.4	58.8
20 ¹⁰ / ₀	10 ¹⁴ / ₀	0 ¹⁴ / ₀	4 ² / ₀	1 ⁸ / ₀
				DRIVEWAY

	BS	HI	FS	ELEV
46+00		4760.62	1 ³	4759.32
46+75			1 ⁴	4759.22
PT F				

BENSON MARINA SURVEY FOR PLOT

14 DEC 77

COOL, CLOUDY

HODSON NOTES

42° PDM 22

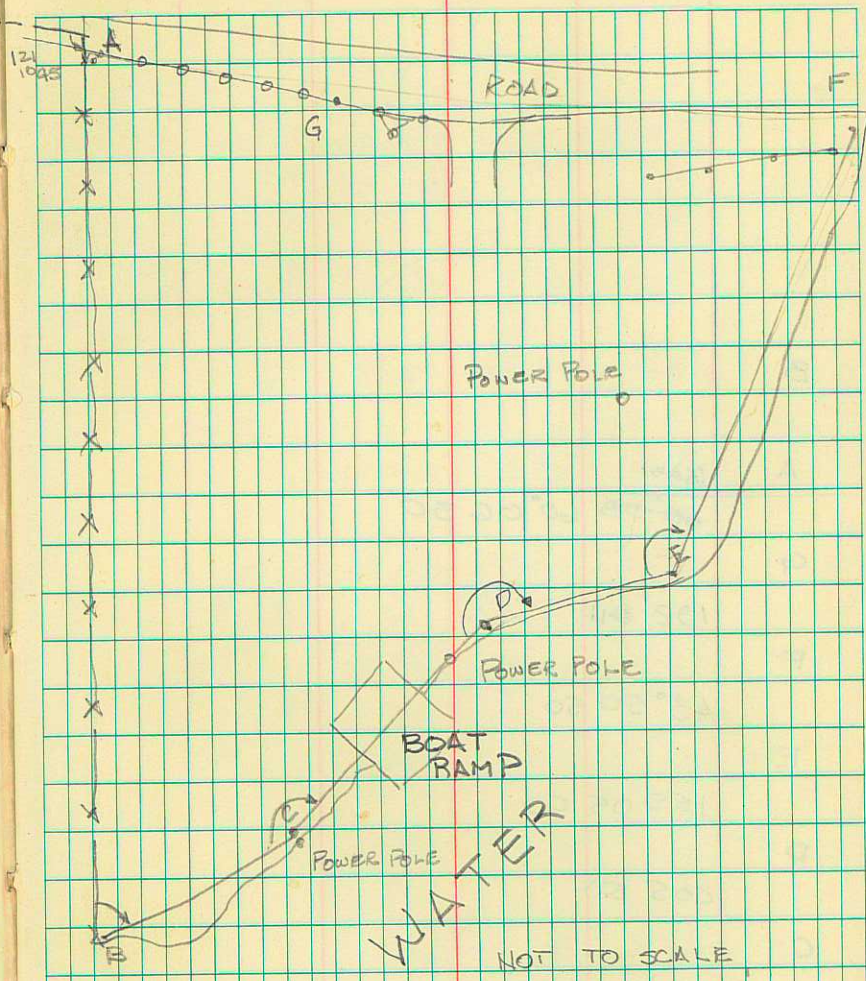
WARD \uparrow

JOB 2-77-004

SET ON EAST FENCE LINE

STATION	HORZ \angle	VERT \angle	S DIST	H DIST
A	60°06'55"			
G	192°11'	90°14'	229.29	229.28
F	43°51'00"	90°08'	248.05	248.04
E	159°06'30"	89°19'	146.64	146.62
D	205°49'20"	90°33'	85.38	85.37
C	192°06'45"	90°04'	167.38	167.37
B	46°49'19"			
	49°46'14"	90°03'	103.01	103.00
A	121°10'45"	90°21'	418.96	418.95

N ↓ 25



BASIS OF BEARING FOR

B

A

(6AB)

 $60^{\circ}08'60''$

G

 $192^{\circ}01'$

F

 $43^{\circ}50'50''$

E

 $159^{\circ}05'50''$

D

 $205^{\circ}50''$

C

 $192^{\circ}06'15''$

B

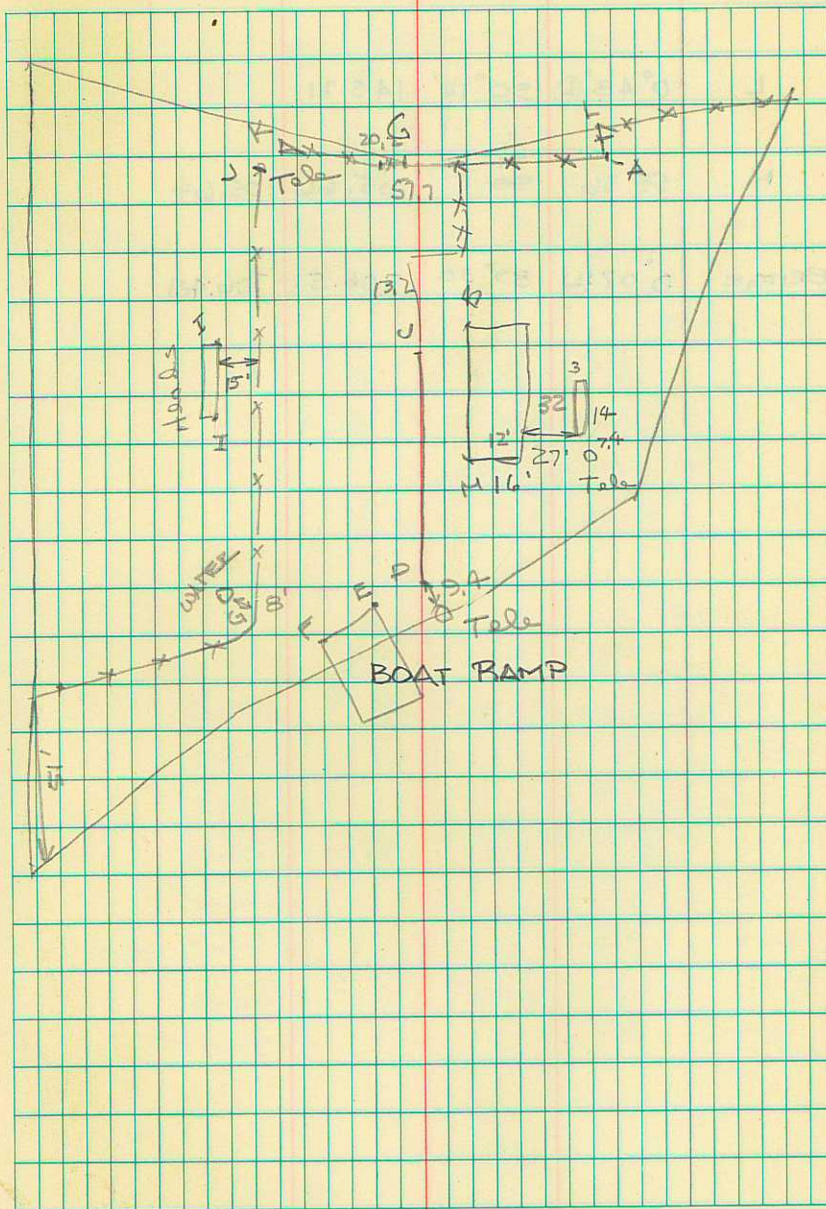
 $46^{\circ}50'45''$

A

G	12°07'30"	90°24'	139.86	139.86
A				
G-B	37°55'	90°13'	87.29	87.27
B				
G-C	48°53'30"	90°53'	73.01	
G-D	80°31'	90°41'	165.70	
G-E	89°12'	90°48'	186.24	
-F	96°59'30"	90°43'	209.21	
-G	105°54'	90°39'	196.59	
-H	147°10'	90°34'	158.99	
I	152°52'	90°34'	161.02	
J	186°45'	90°16'	196.16	
K	191°50'	90°16'	146.69	

Sigx 51.6

27



L	0°48'E	90°14'	145.71	
---	--------	--------	--------	--

M	53°36'	91°04'	105.66	105.64
---	--------	--------	--------	--------

BRIDGE	0°07'W	89°30'	706.51	706.48
--------	--------	--------	--------	--------

POULTRY SITED AT FAIRGROUNDS

JOB 2-77-005
 EACH 1'10" x 4'6" FOR 2 pens
 X 2'3" Hi

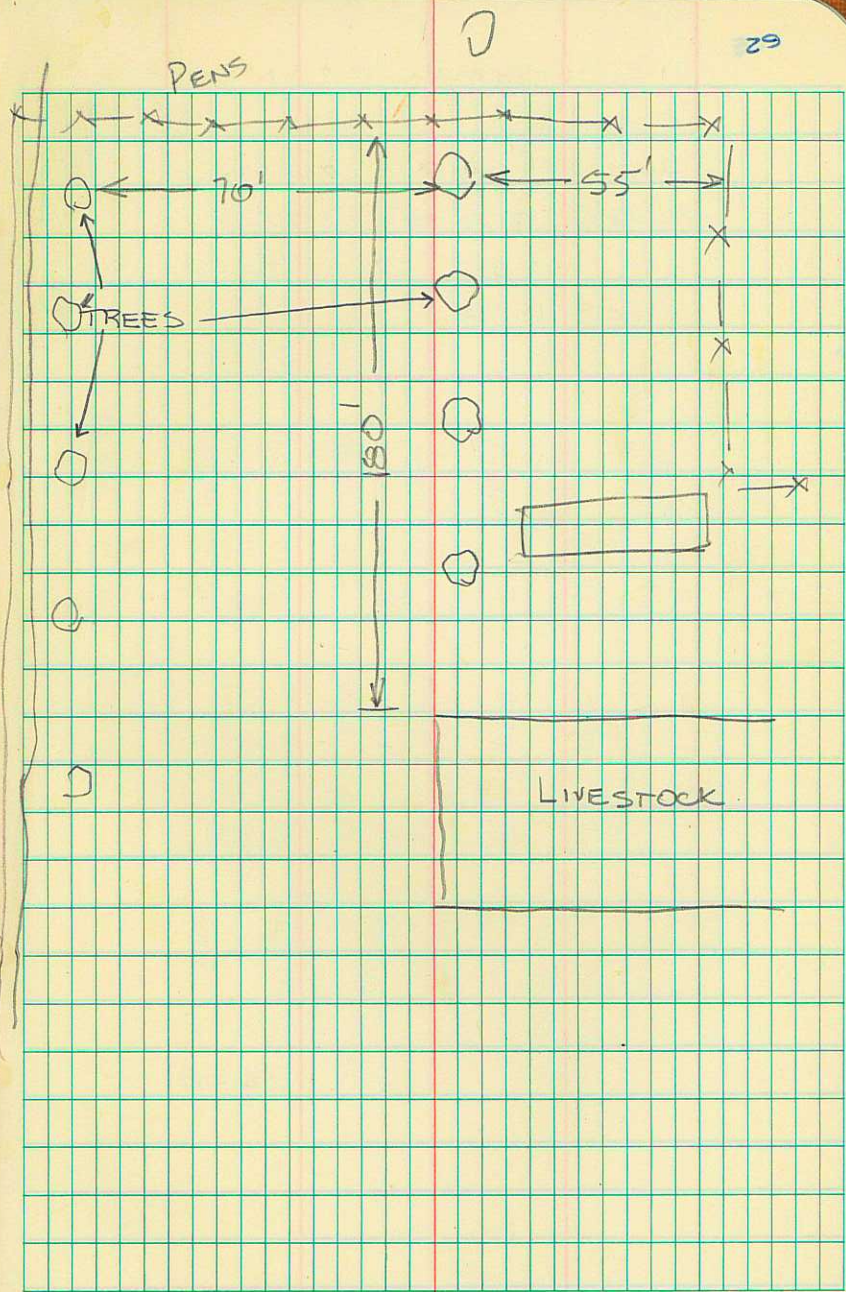
CAICKENS 77 + 38 + 137
 RABBITS 200 @ 2' x 2' x 18"

BRIDGES

35 2x6x6
 2 TIMBERS 1"6" x 12"
 4x4 HAND RAILS
 SPAN 15' x 6'

CULVERT -

	FS	HZ	B.S.	
BRIDGE		108.0	8 ²	100.0
+50	8 ²			99.7
1+00	8 ⁵			99.5
TP	6 ⁰	107.5	5 ⁵	102.5 99.0
1+50	8 ²			98.6 96.1
2+00	9 ²			95.8 98.3
TP	6 ¹	108	5 ⁶	101.9 99.4
2+50	8 ³			96.6 99.1
30 ⁰				



1683

NIBLEY GRAVEL PIT X SECTION

15 MAR 78

COLD, CLOUDY

HUDSON, WARD

JOB No. ↓

(SEE 1-74-009, 2-77-001) 2-77-006

B.M.	+	HI	-	ELEV
	16.88	116.83		100.0

Low PT
IN PIT

+29

8¹

108.7

+15

8⁶

108.20

+0 +0

12³

104.50

Q

A UP
HILL

31

108.70	108.70	111.80	111.80	108.7	103.0	101.30	101.4	101.1
00 ¹	00 ¹	07 ¹⁰	07 ¹⁰	00 ¹	12 ¹⁰	15 ¹⁰	15 ⁴	15 ⁷
00	43	21	01		15	28	36	100
	108.10	110.0	110.6	108.20	104.3	101.0		
	08 ⁷	06 ¹⁰	06 ¹¹	00 ⁶	12 ¹⁵	15 ¹⁰⁰		
	00	40	1	00	18	100		
	107.60	111.50	06.10	04.50				
	09 ⁷	05 ¹⁰	07 ¹					
	100	31	18	12		100		

0¹ + 14³

+ 44

+ 198

(+76)

+ 122

1³ 200 23³ 3+22 ONE EYE 5²/₀

76
8

(+48)

198

+ 72

122

+ 34

+ 38

6¹⁰

128.5

125.1

160.5

160.8

UP HILL (EAST)

100.50

32

+ 117
100

+ 81
58
76

+ 37
+ 26

+ 44

17¹⁰
100 SLOPE
50 VERT.

16⁰¹
+ 50 ALONG
BOTTOM

108.0

108.0

133.10

99.90

100.40

98

54

+ 16¹³

16¹⁰
+ 54

16¹¹
96

108.60

108.0

114.4

112.30

115.20

115.70

100.10

100.30

100

38

25

20

15

11

34

100

109.0

108.20

112.50

113.60

110.80

103.50

100.50

100.90

7¹⁰

8⁶

4³

3²

6⁰

13⁵

16³

15⁹

00

10

14

3

6

22

43

100

25

16 MAR 78

NIBLEY GRAVEL PIT

RAN LEVELS FROM BOTTOM OF PIT TO
B.M. ON TOP OF BANK. SET STAKES
AT DETERMINED POINTS TO FOR AMOUNTS
OF MATERIAL TO TAKE.

ESTART	+	HI	-	ELEV
BOTTOM OF PIT ON L.J. SIDE	15.20	115.20		100.0 ASSUMED

TP1	17.06	125.46	6.80	108.40
-----	-------	--------	------	--------

TP2	20.15	144.51	1.04	124.42 127.51
-----	-------	--------	------	------------------

TP3	23.28	150.79	0.92	143.65 149.87
-----	-------	--------	------	------------------

TP4	8.93	166.93 158.80	1.09	165.84 157.71
-----	------	------------------	------	------------------

BM #1			4.58	BY SHORT SKINNY POST ALONG FENCE LINE
-------	--	--	------	--

BM #2			5.42	154.22' 170.19' NORTH 75' OF #1
-------	--	--	------	--

153.38

169.38⁵

31 MAR 78

(2000 WEST)
FIELD STREET N&S

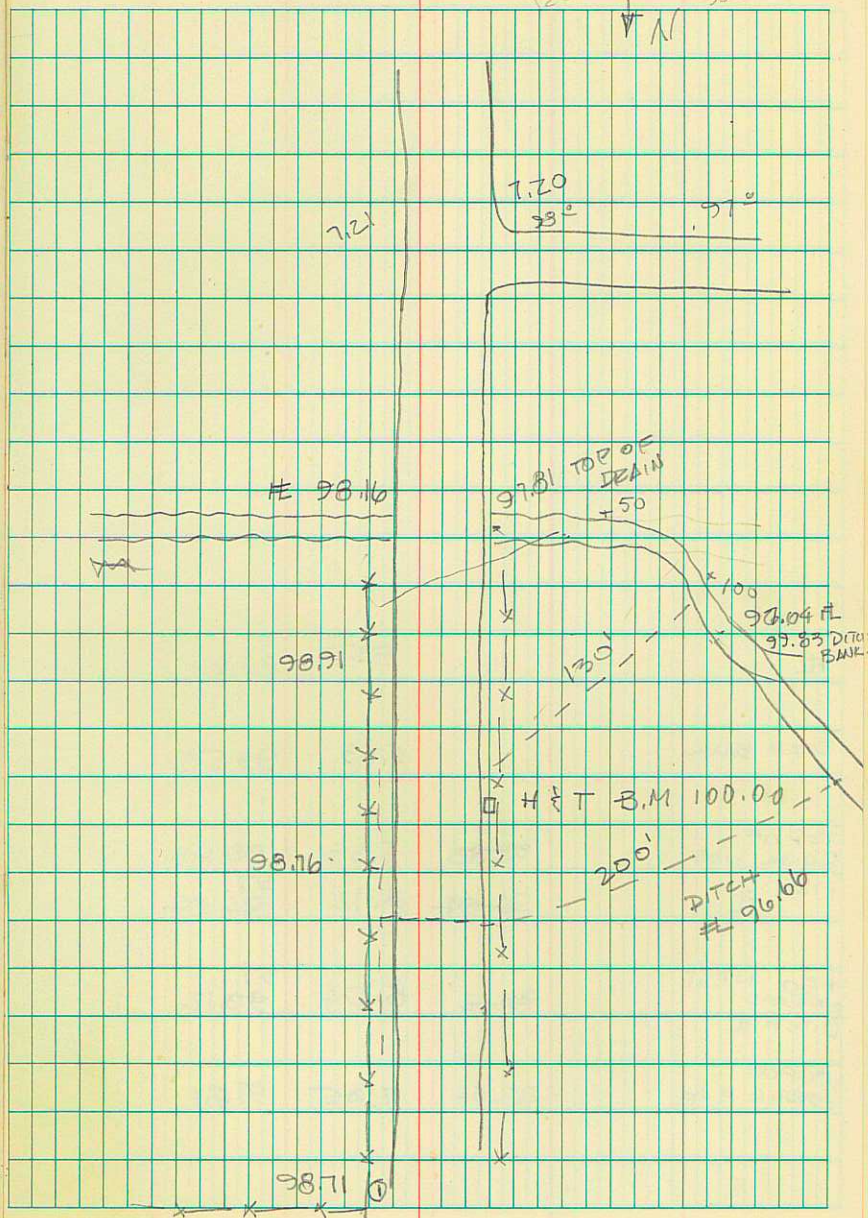
LEVELS TO DETERMINE

FALL FROM KUNZLER FIELD TO DITCH

JOB No 2-77-007 SEE 2-77-012
SEE 1-79-001

ASSUMED B.M. ELEV 100.00

	+	HI	-	ELEV
+ 330 SO		105.16	7.06	98.16
# D EAST SIDE				
+ 250 SO		105.16	6.25	98.91
+ 200 SO		105.16	6.24	98.92
+ 150 SO		105.16	6.40	98.76
+ 100 SO		105.16	6.54	98.62
5 50'		105.16	6.62	98.54
NORTH END KUNZ. FIELD ①		105.16	6.45	98.71
BM	+ 5.16	105.16		100.00



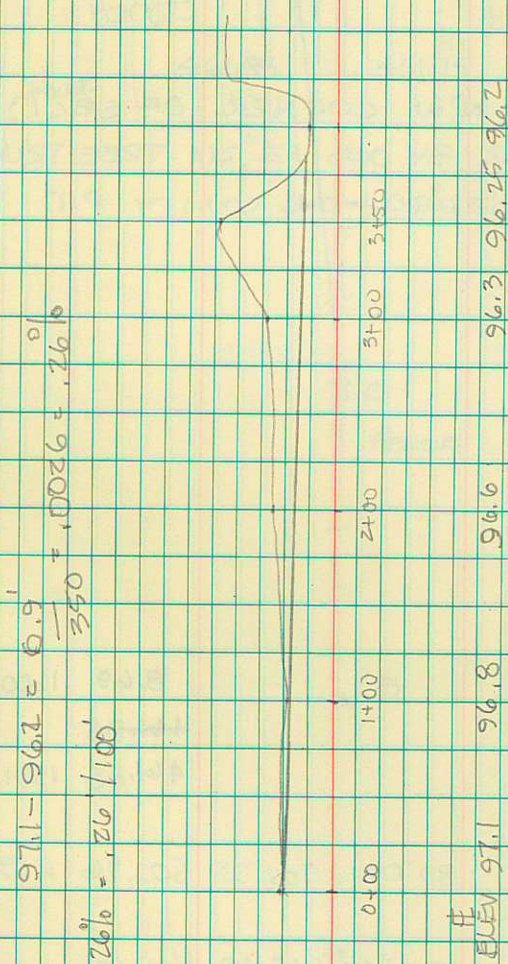
4-3
12/9
105.16
7.06
98.16
36

FL		8.50	96.66
DITCH BANK		5.63	99.53
TOP OF BANK +100	97.83	5.33	99.83
+100' FL	96.04	8.12	96.04 97.
+50 WEST OF ROAD DITCH FL	96.12	8.04	97 98.12
TOP OF DRAIN PIPE	97.81	7.35	97.81

20 MARCH 78 FIELD ST N/S
 RECON LEVELS ON EAST SIDE TO
 DETERMINE GRADE OF BORROW PIT
 TO RUN OFF KUNZLEL GROUND.

	+	HI	-	ELEV	CUT
# DITCH			6 ⁸	96.2	0
3+50			3 ²	99.8	3 ²
3+00			5 ²	97.8	1 ²
2+00			5 ²	97.5	0 ²
1+00			6 ¹	96.9	0.1
0+00			5 ²	97.1	-0-
BH	3 ⁰	103.0			
ASSUMED				100.00	

HUB BY T.P. NORTH BANK OF CANAL



98
97
96

4 APRIL 78 COVE, RUNNING SOUTH ALONG

JOB 2-77-008 SECTION LINE FROM NW

CORNER SEC 13 T14N R1E

HUDSON NOTES

TEMP 55°

WARD T

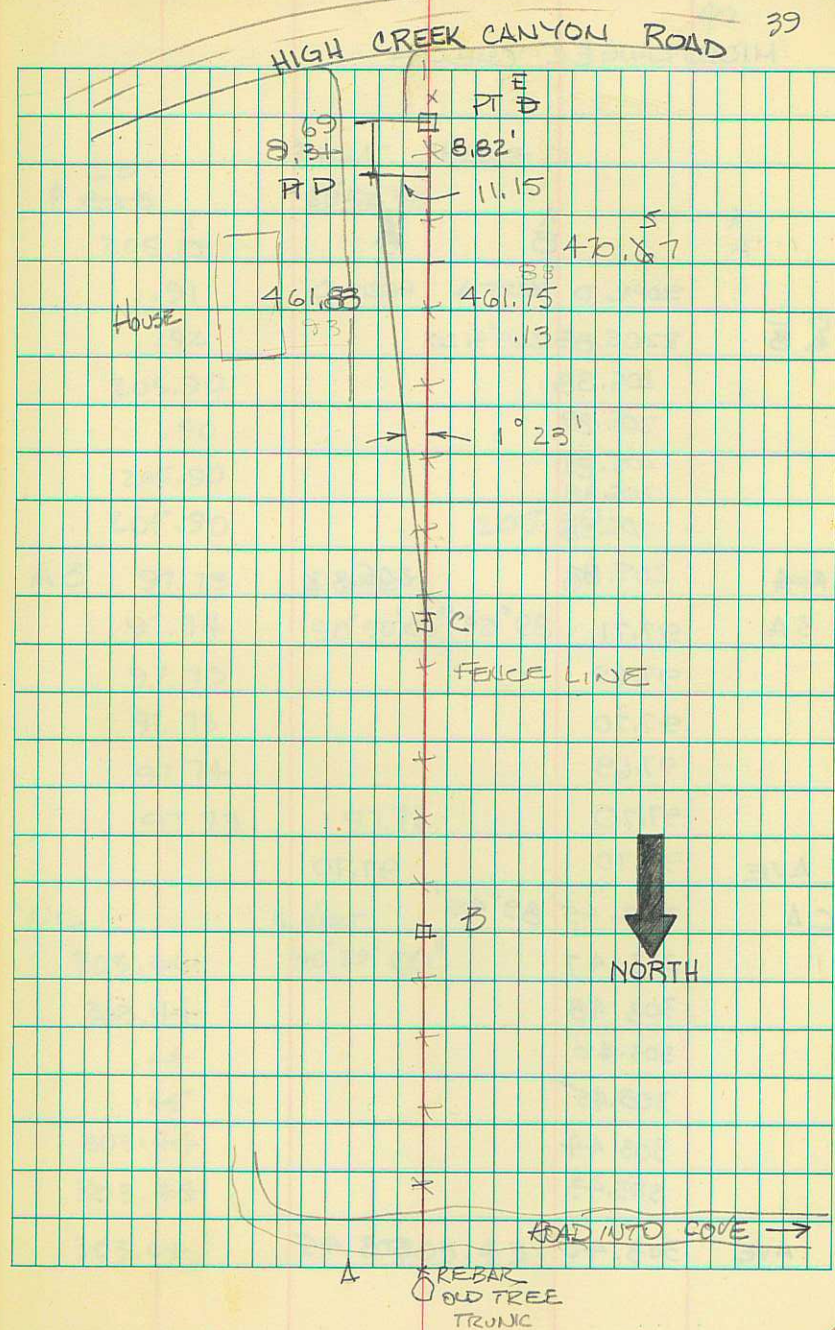
CLOUDY

SET UP ON NW CORNER OF SEC 13

AT 1/2" REBAR BY OLD 12" DIA TREE TRUNK

BESIDE ROAD INTO OLD COUNTY PIT

E			8.69	1600.50
D			461.88	
			461.88	1591.81
C				
	89°02'	502.33	502.26	1129.93
B				
	0°	264'40"	630.40	627.67
A				



MICRO RANGER CHECK

	A	B	C
BC			
AB	205.89	269°31'20"	
	205.88		
	205.89		
	205.81		
	205.88		
	205.88		
BA	205.88		205.87
BA	97.71	89°55'	
	97.69		
	97.70		
	97.69		
	97.70		
Ave	97.70		97.70
CA	303.45	89°45'	
	303.47		
	303.48		
	303.46		
	303.45		
	303.44		
	303.43		
Ave	303.45		303.45

	VERT	HORIZ
CB		
AB	89°52'30"	
	205.89	
	.91	
	.92	
	205.90	
	.90	
	205.90	
	205.90	205.90
AB	97.73	X VERT
	97.74	90°50'00"
	97.73	
	97.73	
	97.74	
	97.73	97.72
AC		
	303.44	X VERT
	303.44	90°29'00"
	.44	
	.45	
	303.44	
	303.44	
	303.44	
	303.44	303.43

6 APRIL 78 MICRORANGER ADJUSTMENT

OFF SET = 0

$200''$ $100''$
 A MEASURED B MEASURED C

AB BA
 199.13 89° 51' 30"
 .14
 .13
 .12
 .13
 .14
 .12
~~13~~ 13
 .12
 .12

199.13 199.13

BC
 99.19 90° 42' = 99.18

$$\frac{199.13 + 199.10}{2} = 199.115$$

AC
 299.11
 299.10 90° 28' 299.10

AB
 199.11 90° 36' = 199.10

CB
 99.19
 99.17 90° 02' 30" = 99.17

CA 299.09 89° 44' = 299.09
 AVE A DISTANCE = $\frac{AB + BA}{2} = \frac{199.13 + 199.10}{2} = 199.115$

AVE B DIST. = $\frac{BC + CB}{2} = \frac{99.18 + 99.17}{2} = 99.175$

AVEC = $\frac{299.09 + 299.10}{2} = 299.095$

$C - (A+B) = -k_0$
 $299.095 - (99.175 + 199.115) = .81$

.81 FT = 9.72"

$2.54 \frac{CM}{IN} \times 9.72 IN \times 10 \frac{MM}{CM} = 247$

247 MM + 40 MM = 287 MM = TOC

MICRORANGER. ADJUSTMENT
CALIBRATION BASELINE.

CM/IN x 1000 x 2.75
CM

- C_i = HT OF INSTRUMENT ABOVE PIER
- C_k = HT OF REFLECTOR ABOVE PIER
- H_i = ELEVATION OF INSTRUMENT
- H_k = ELEVATION OF REFLECTOR

$$C_i - C_k = \Delta E$$

$$C_k - C_i = \Delta F$$

1ST TEST 149.996
D = 49.972 150.035 M

PIER 1 TO PIER 3

$$H_i - H_k = -4.001$$

$$C_k = 2 \frac{3}{4}'' = 69.85 \text{ mm} = .06985 \text{ M}$$

$$C_i = 1'3.5 = 393.7 \text{ mm} = .39437$$

$$C_i - C_k = +.3239 \quad K = 2.1601 \quad \text{---} .699$$

$$C_k - C_i = -.3239 \quad M = .5478 \quad \text{---} .1774$$

$$(H_i - H_k) = -4.001 \times 2.1601 = 8.642 =$$

$$- .008642 \text{ M}$$

$$M = .0005478$$

150.035 149.996

- .0086

- .0005

149.987 M

TEST #2

599.928

42

PIER 1 TO 5

PPM = +30

TOC = +257

$\Delta H = -10.757$

MARK TO MARK = 599.954

$$C_i = 15.5'' = .3937 \text{ M} = 3$$

$$C_k = 2.75'' = .06985 \text{ M}$$

599.954

$$K = .54 \times \Delta H = -10.757 = 5.81 = -10058$$

M = .10

.10 .0001

599.9483

599.928

.020

Δ ELEVATION BETWEEN END OF
RUNWAY AND PT B

24 APRIL 1978

WARM, OVERCAST

HUDSON-NOTES

JOB 2-77-009

WARD - T

STA + HI - ELEV

END OF
R.W 35 5.60

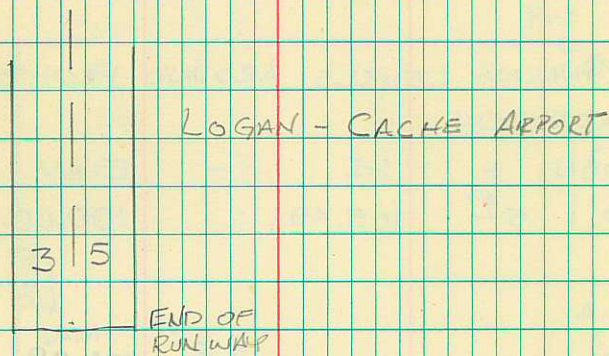
PT B 4.60

DIFFERENCE IN ELEVATION = 1 FT

A. Hudson
Amint Corp

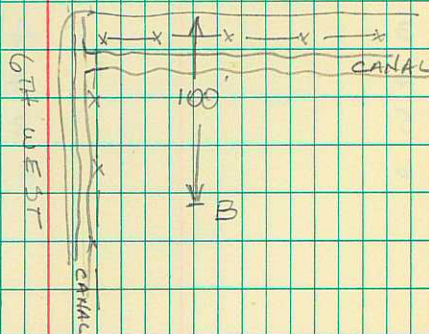
M

44



CANAL

AIRPORT ROAD



CENTER

25 MAY 1978 BRIDGERLAND SENIOR CITIZEN
 WARD K (BOSTROM LEVEL) WARM, CLEAR
 HUDSON & NOTES Job No 2-77-010

RUNNING LEVELS AROUND PROPOSED
 ADDITION

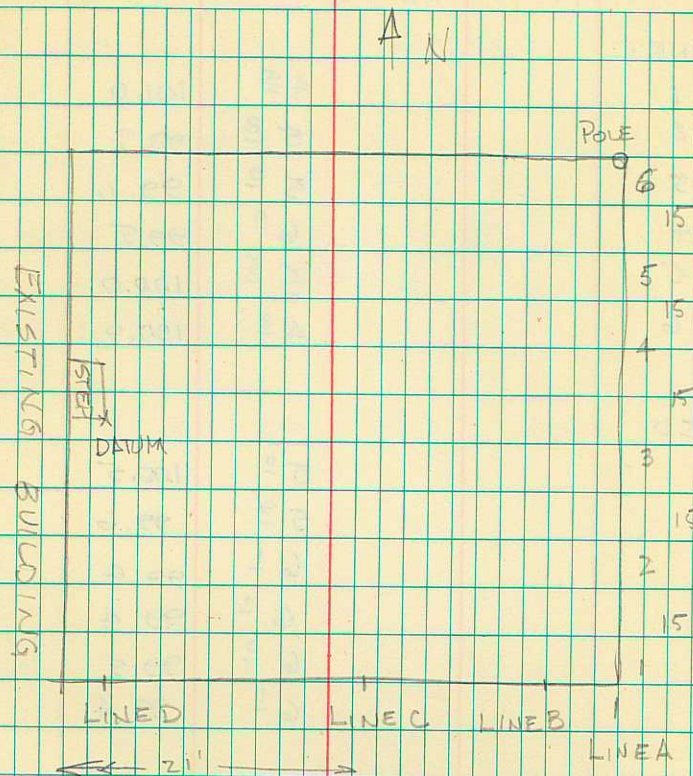
STATION	+	HI	-	ELEV
STEP	5 ⁴⁹	105.49		100.00

LINE A

1		2 ⁶		102.89
2		3 ⁰		102.49
3		3 ⁰		102.49
4		3 ¹		102.39
5		2 ⁷		102.79
6		3 ³		102.19

LINE B

1		3 ⁸		101.69
2		4 ⁵		100.99
3		4 ⁸		100.69
4		4 ⁵		100.99
5		2 ⁰		103.5
6		3 ⁷		101.8



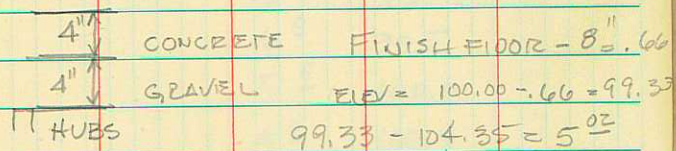
	+	HI	-	ELEV
LINE C				
1			4 ⁵	101.0
2			5 ⁸	99.7
3			5 ⁹	99.6
4			6 ⁹	99.5
5			5 ⁵	100.0
6			4 ⁹	100.9

LINE D				
1			5 ⁹	100.5
2			5 ⁹	99.6
3			6 ¹	99.4
4			6 ¹	99.4
5			6 ⁹	99.5
6			6 ¹	99.4

A Hudson
 Const Eng

25 JULY 79 SETTING RP TO SUBBASE
ELEVATION SENIOR CITIZEN CENTER

SET HUBS AT ^{BASE} SUBGRADE
FINISH FLOOR = ELEV OF STEP ON EXIST. BUILDING



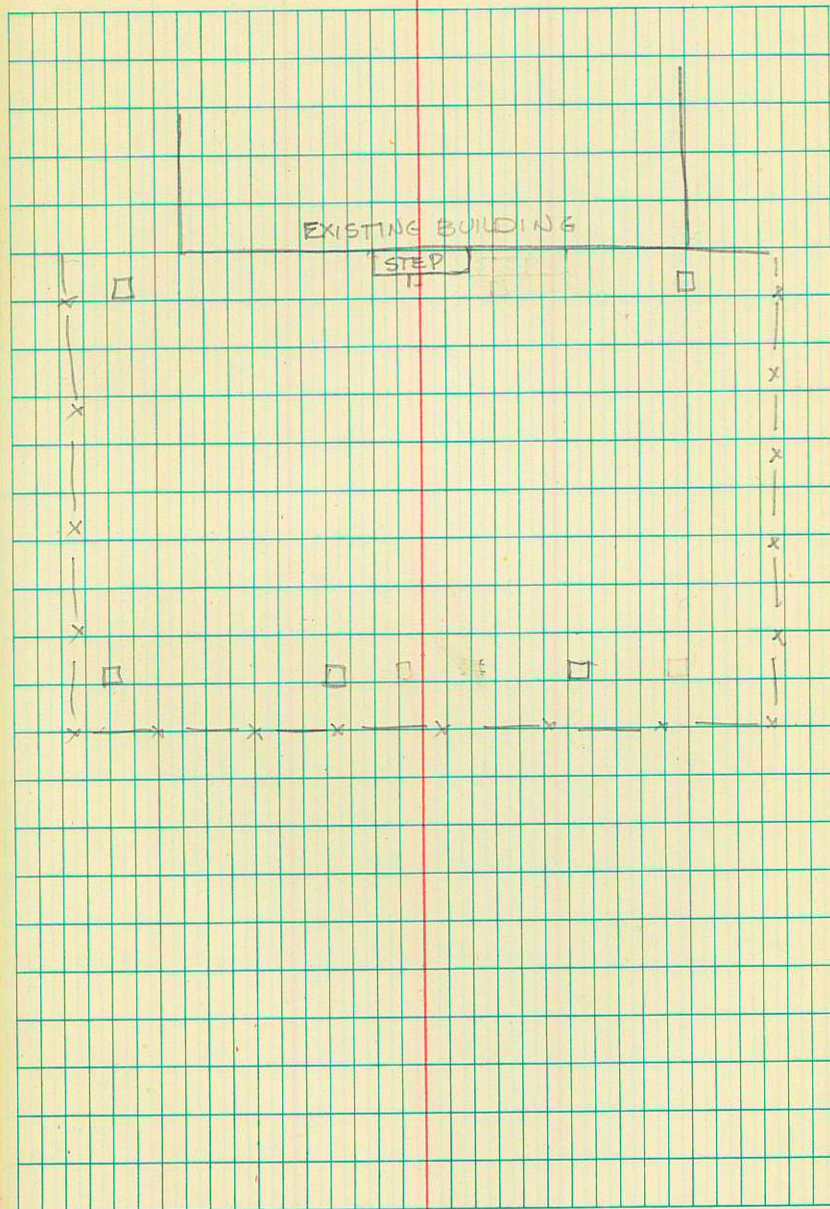
B.S. HI FS ELEV

5.02

4.35 104.35

100.00

TOP OF BACK
STEP EL. 100
= FINAL
FLOOR ELEV



RERUN OF LEVELS AT HIBBLEY GRAVEL
PT.

JOB No. 2-77-011 SEE 1-74-009 2-77-000

10 OCT 78 COOL, CLOUDY,
HUDSON, WARD, SPIDMORE

FROM B.M. #1 (DEEP) RAN DOWN TO BEG.
THEN RAN X SECTIONS UPHILL

+ HI - ELEV

TP 4 0²² 0²² 104.83

TP 3 1³⁸ 105.62 24²⁶ 104.24

TP 2 0³⁵ 128.50 19.86² 138.15

TP 1 0³⁹ 148.01 23.46 147.62

BM .89 171.08 10/70.19

	X SECTIONS +	HI	-	ELEV
BM	9 ²⁷	114.10		104.83
1+54 33			14 ²	5 ² (108 ⁹⁰) +17 ⁰ on eye
1+18 36			15 ⁴	
+29			12 ⁵	
+20			11 ¹²	
0+00 E ROAD ON R		114.10	9 ⁷	104.40

107.0	126.0	100.0	99.2	100.2
7 ¹	6 ¹	14 ¹	14 ³	13 ³
154	61	32		100
	108.10	108.5	100.4	
	6 ¹²	5 ¹⁰	13 ⁷	15 ⁴
	100	59	48	15 ¹⁶
				48
	103.6	109.4	103.0	
	4 ⁵	4 ⁷	11 ¹	12 ⁵
	100	65	52	12 ¹⁰
				59
				11 ¹³
				6
	108.0	110.2	103.5	102.9
6 ¹¹	3 ⁹	10 ⁶	11 ⁷	11 ¹⁰
100	62	49	5	50
	107.6	106.4	103.1	
	6 ¹⁴	7 ⁷	9 ⁷	11 ⁷
	92	50	50	
				102.4
				102.4

$$\begin{array}{r} 2+25 \\ +34 \\ \hline \end{array}$$

$$2+39$$

$$2+25$$

+12² on eye

$$11^2$$

TP 2

$$3^{78}$$

131.21

$$0^{43}$$

128.13

+7 on eye

$$2+25$$

$$11^2$$

$$8^2$$

$$+2+14.3$$

128.56

$$10^2$$

TP 3

24.34

~~128.56~~
14.10

$$9^{88}$$

104.22

+7²

$$1+87$$

$$+26$$

$$4^1$$

+16 on eye

$$135.3$$

$$+1^4$$

$$135$$

$$+2^6$$

$$117$$

$$-4^0$$

$$139.76$$

$$-11^2$$

$$115$$

$$-22^4$$

$$160$$

$$0^4$$

$$112$$

$$128.2$$

$$126.76$$

$$1^8$$

$$65$$

$$122.56$$

$$120.26$$

$$6^2$$

$$27$$

$$120.26$$

$$114.86$$

$$8^2$$

$$41$$

$$110.06$$

$$109.96$$

$$13^2$$

$$100$$

$$109.96$$

$$109.96$$

$$18^2$$

$$106$$

$$111.3$$

$$109.96$$

$$17^2$$

$$109$$

$$111.3$$

$$109.96$$

$$25^2$$

$$140$$

$$150.86$$

$$119.56$$

$$-22^2$$

$$75$$

$$106.26$$

$$118.56$$

$$-9^2$$

$$154$$

$$107$$

$$118.56$$

$$-10^0$$

$$149$$

$$107$$

$$121.36$$

$$+1^2$$

$$107$$

$$107$$

$$128.26$$

$$0^3$$

$$87$$

$$107$$

$$118.36$$

$$10^2$$

$$100$$

$$107$$

$$114.06$$

$$14^5$$

$$44$$

$$107$$

$$107.86$$

$$18^7$$

$$100$$

$$108.2$$

$$0^9$$

$$+4^6$$

$$125.6$$

$$11^8$$

$$96$$

$$124.2$$

$$+0^1$$

$$51$$

$$113.30$$

$$0^8$$

$$43$$

$$105.30$$

$$8^0$$

$$25$$

$$100.00$$

$$14^1$$

$$3$$

$$100.00$$

$$14^1$$

$$3$$

$$100.2$$

$$13^2$$

$$63$$

$$101.4$$

$$12^1$$

$$88$$

$$101.4$$

$$12^2$$

$$100$$

BM #1

Z⁰⁰

170.17

Z+65
TOP

12

Z+63

172.17

Z¹³

TP1

24.57

172.17

Z³⁶

147.60

TP 2

21.83

149.96

Z⁷⁸

128.13

Z+34

131.91

162.0

10¹²

48

165.2

7⁰

39

164.0

7⁴

31

167.2

5⁰

12

170.3

19

168.5

3¹

6

167.47

9¹

9

~~510~~

140.47

25¹

83

154.7

17³

58

160.8

11⁴

44

158.3

13⁹

34

159.2

13⁰

7^E

164.3

7¹

7^E

130.3

16

100

142.62

+10^Z

67

143.2

+11¹⁰

87

142.91

+11

34

141.9

+10

40

134.4

+2⁵

40

114.57

17⁴

57

109.9

22⁰

101

109.2

22¹

116

+10⁰

18

32

72

+29

+15

COLLEGE WARD FIELD STREET

29 MARCH 79

SEE PAGE 36, 38

HUDSON

JOB NO.

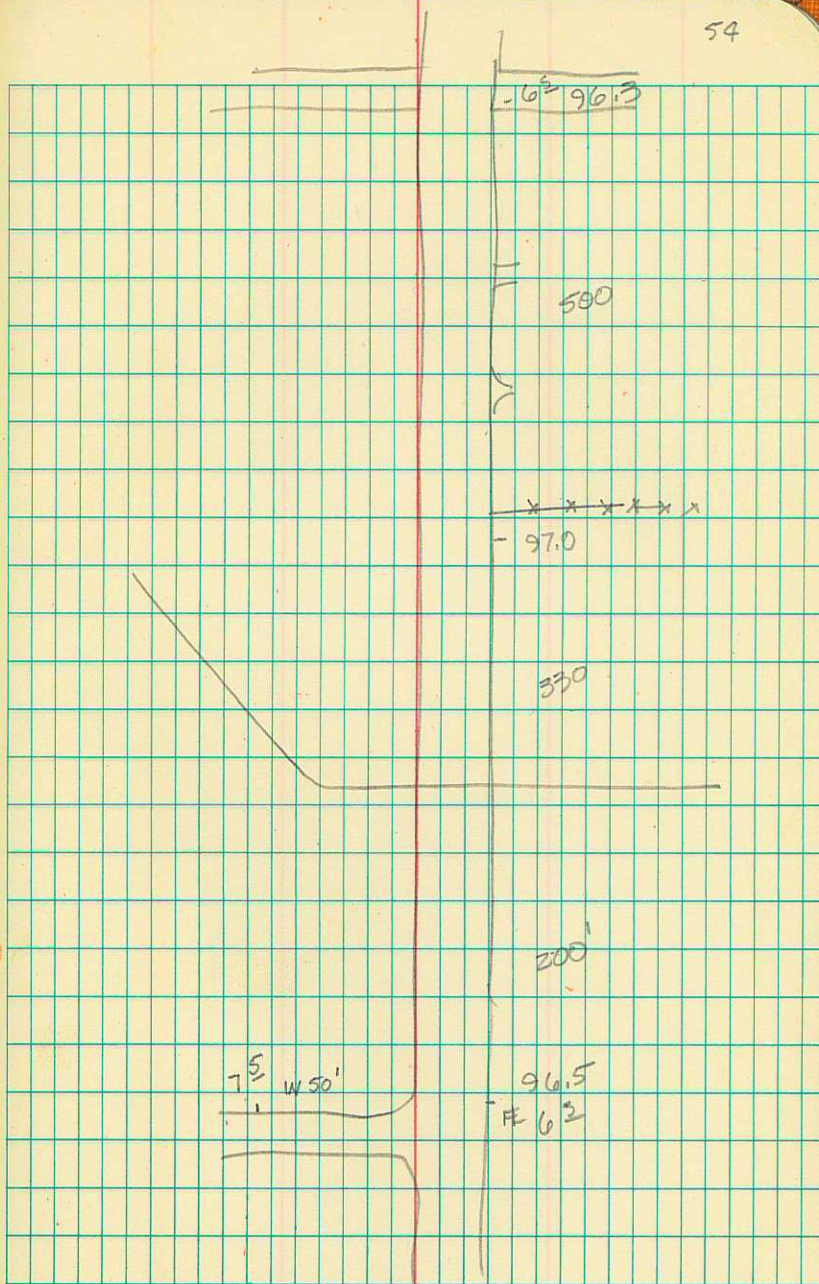
2-77-012

SEE 2-77-007

WARD

STATION	BS	HI	FS	I FS	ELEV
FE CANAL			6 ⁵		96.3
+840			3 ⁰		99.8
+730			3 ⁰		99.2
+630			4 ⁵		98.3
+530			4 ¹		98.1
+430			4 ⁸		98.0
+330			5 ⁸		97.0
W			6 ¹		96.1
E ^B			6 ³		96.5
-200 #					
EW			4 ⁹		97.9
SE			6 ⁰		96.8
-100 SOUTH					
FE					
-10 (SOUTH)			6 ⁰		96.8
BM #	2.84	102.84			100.00

HUB ON NORTH SIDE CANAL BY T.P.



	FS	HL	BS	ELEV
B.M. BS	9.77	4690.69	9.77	4680.92
23.8	4.3		4.3	<u>4686.39</u>
	6.70	4687.49	9.3	4681.39

+20

LOWER 9'
 UPPER - IN AT 9'
 BOTTOM - 12'

93 ⁸	90 ⁴	86 ⁴	81 ⁴	80 ²	75 ⁸	73 ⁵
3 ⁴ TP	0 ³³	4 ²	9 ³	10 ⁵	4 ²	17
65	41	¢	38	44 ⁵	100	115
		LAMPLIGHTER	SEWER			END OF BIT. GUT.

38 BOX SIGN
 24⁵ P³ ¢ CURB
 15² 13² 11 17.5 8⁴
 6 10² 9⁴
 30 BOX SIGN

23.30
15.20

39.20
98

37.22
-8.44

45.66
.81

44.80
14

59.65
192
13

100.00

15.20

115.20

6.80

108.40

17.06

125.46

1.04

124.42

20.15

144.57

92

143.65

23.28

166.93

1.09

165.84

8.93

174.77

174.77

4.58

170.19

174.77

5.42

169.35

115.20
6.80

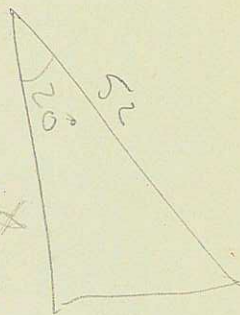
108.40
17.06

125.46
1.04

114.42

166.93
4.58

1.35



108.40
17.06
125.46
1.04

124.42
20.15
144.57
92

143.65
23.28

166.93
1.09
165.84