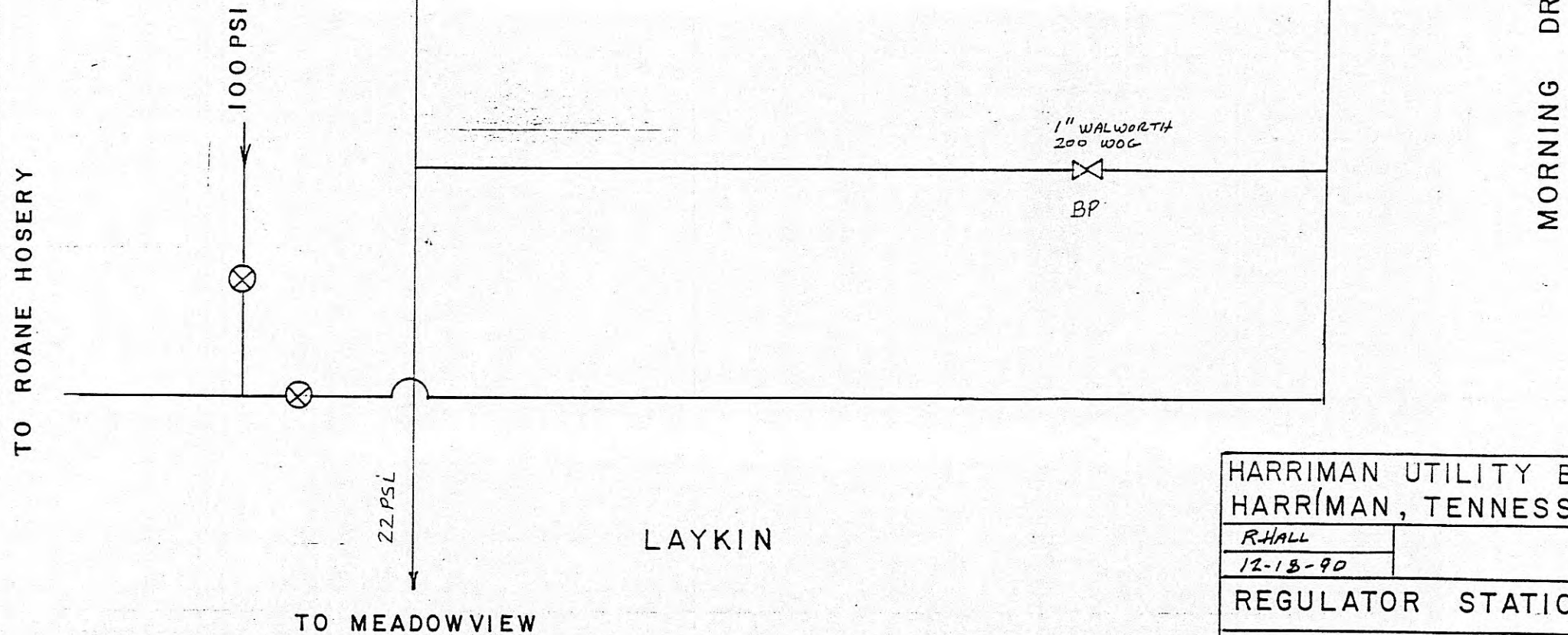


2" MAXWELL TEL
 TYPE 902L
 SN A 9696
 ORFICE 1.5"
 SPRING
 SETTING 25
 CAPACITY 696

CAPACITY 110
 2" RELIANCE
 TYPE
 SN
 ORFICE 1.25"

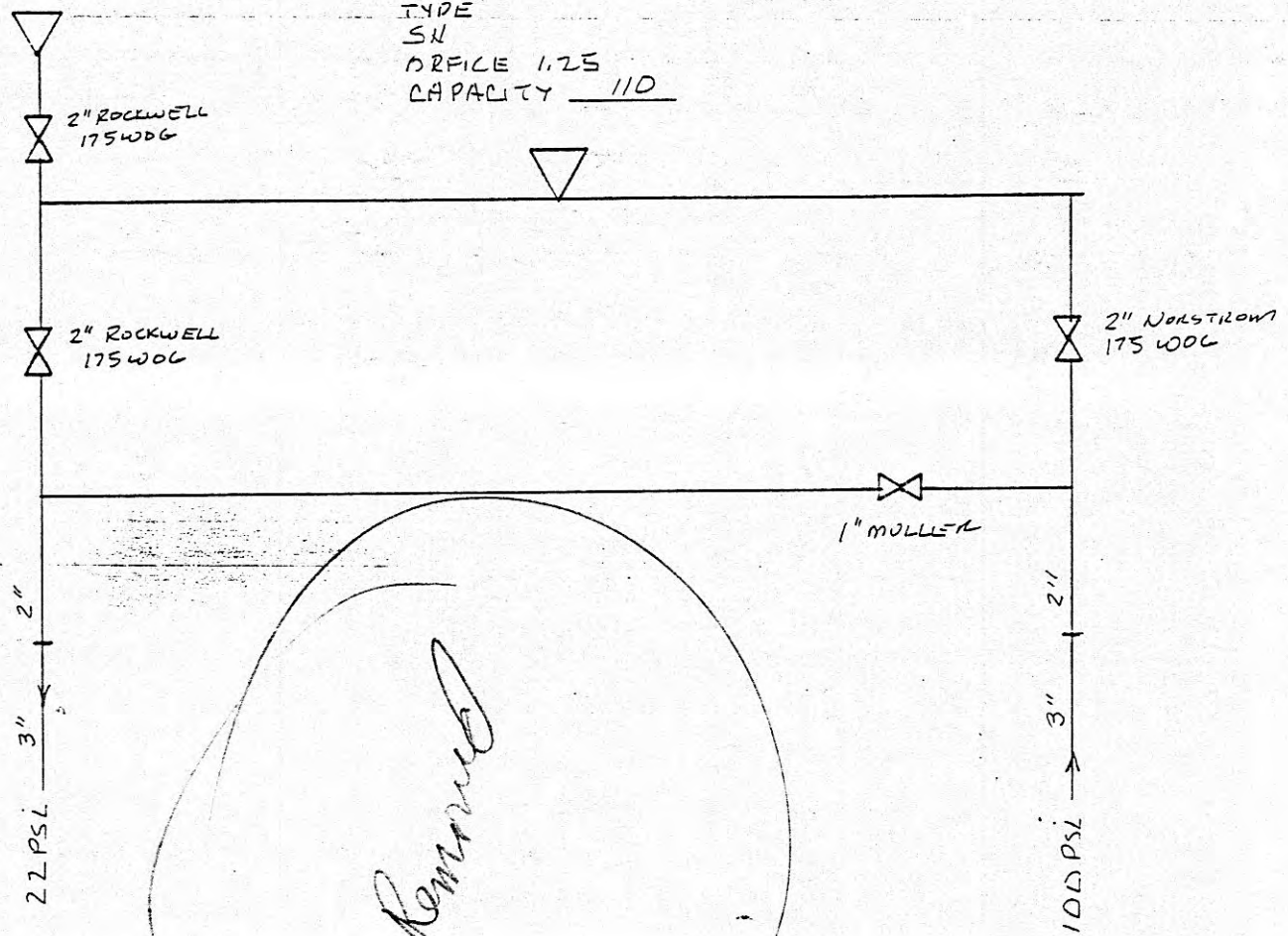


HARRIMAN UTILITY BOARD		
HARRIMAN, TENNESSEE		
RHALL		
12-18-90		
REGULATOR STATION NO. 3		
LAYKIN & MORNING DR.		G-198-B
ROANE HOSERY PARKING LOT		

2" ROCKWELL
 TYPE CF250
 SN D 16469
 ORFICE 1.75
 SPRING
 SETTING 25
 CAPACITY 201

2" RELIANCE
 TYPE
 SN
 ORFICE 1.25
 CAPACITY 110

PERRY DRIVE



FISK ROAD

HARRIMAN UTILITY BOARD		
HARRIMAN, TENNESSEE		
RHALL		
12-18-90		
REGULATOR STATION NO. 5		
PERRY DR. & FISK RD.		G-199-B

CRESENT

CITY
22 PSI
6"

4" WALWORTH
400 WOG

4" CONSOLIDATED
RELIEF VALVE
SETTING $\frac{22}{115}$ PSI
CAPACITY
SN 1571805
1601K

2" WALWORTH
400 WOG

2" RELIANCE
CBV MODEL 2D1
SN A-4015
ORFICE 1.0"
CAPACITY 15.6

2" WALWORTH
400 WOG

22 PSI

(chart)

4" SAFETY VALVE
CF 250 TYPE WL
D 27137
SETTING $\frac{22}{254}$ PSI
CAPACITY

4" ROCKWELL
400 WOG

4" WALWORTH
400 WOG

RELIANCE
A 4010
ORFICE $2\frac{3}{8}$ "
CBV 4" I
CAPACITY 445

4" WALWORTH
400 WOG

20 PSI

(G)

2"

BP

2" WALWORTH
400 WOG

WESCOTT
SN 103997
50/250 PSI

4"

4"

BP

2"

4"

2" WALWORTH
400 WOG

2" RELIANCE
CBV MODEL 2D1
SN A-4014
ORFICE 1.25"
CAPACITY 36

2" WALWORTH
400 WOG

2" ROCKWELL
175 WOG

ROCKWELL
CF 411 2"
SN E56868
ORFICE 1.5"
CAPACITY 244

2" ROCKWELL
175 WOG

BP

BP

SOUTH HARRIMAN
6"

50

SEWANEE

HARRIMAN UTILITY BOARD HARRIMAN, TENNESSEE		
12-14-30		
R. HALL		
REGULATOR STATION NO. 1		
SEWANEE & CRESCENT		G-196-B

Loody McDonald to SWICE 600 d Hill

see notes 3-19-80

DIETZEN CORPORATION
MADE IN U.S.A.

NO. 3400-10 DIETZEN GRAPH PAPER
10 X 10 PER INCH

1300

1200

1100

1000

85 GPM AVAILABLE AT
MCDONALD COR.

Flowing at
50 GPM (+ 35 GPM FROM
PUMP)

BALANCE
POINT 76'

Flowing at 30 GPM

E1 1205

T4 Tank

42 ft

60'

SIDE VIEW
#1 VIEW

1160
1041.35
118.65 ft difference

E1 900

46+50

47+50

48+50

49+
50

50+
50

51+
50

52+50

53+50

54+50

55+50

56+50

57+50

58+50

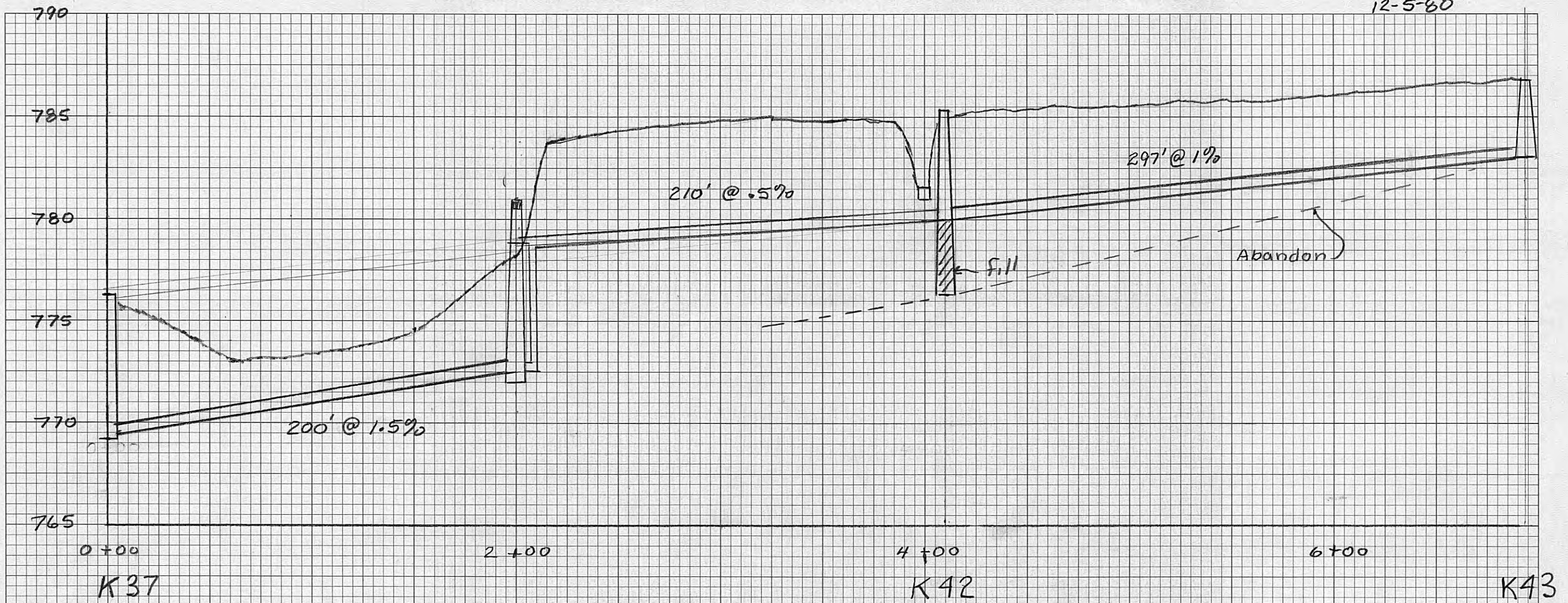
59+50

60+50

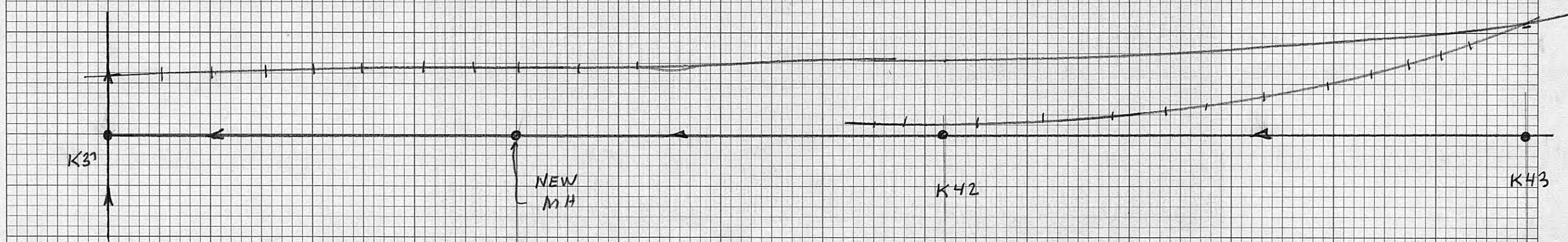
61+50

See Alterations 9/24/81

12-5-80



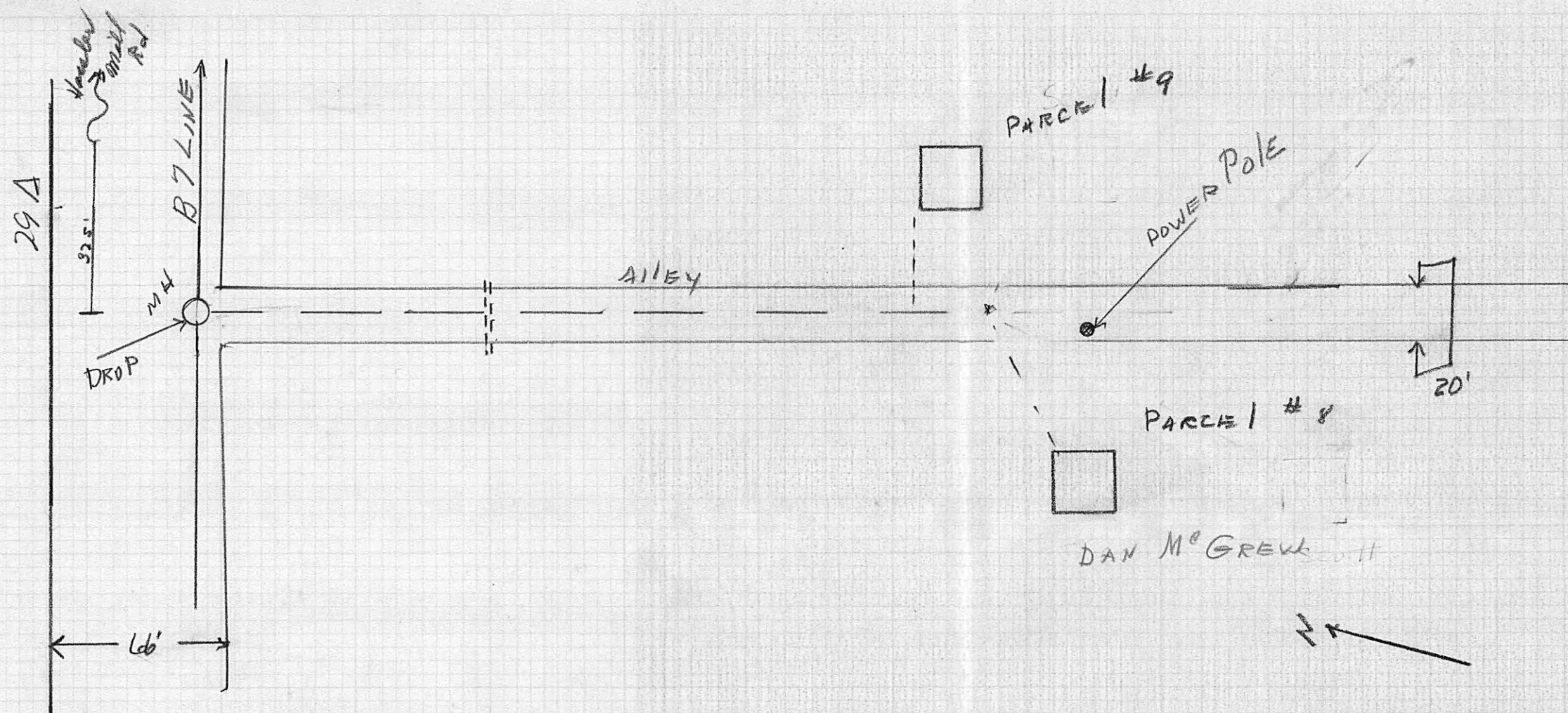
PROFILE



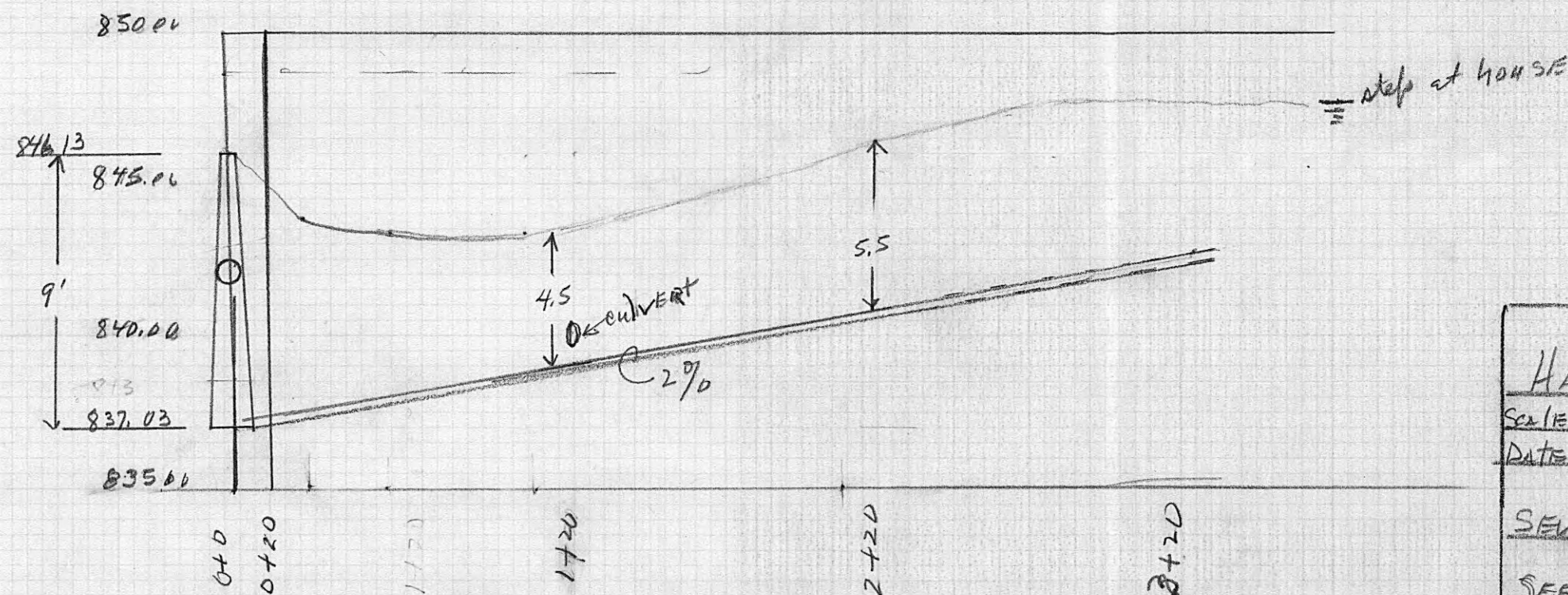
PLAN

ACME BLOCK REVAMP
S-166-B

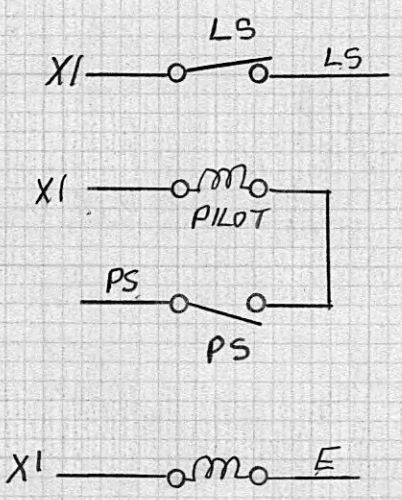
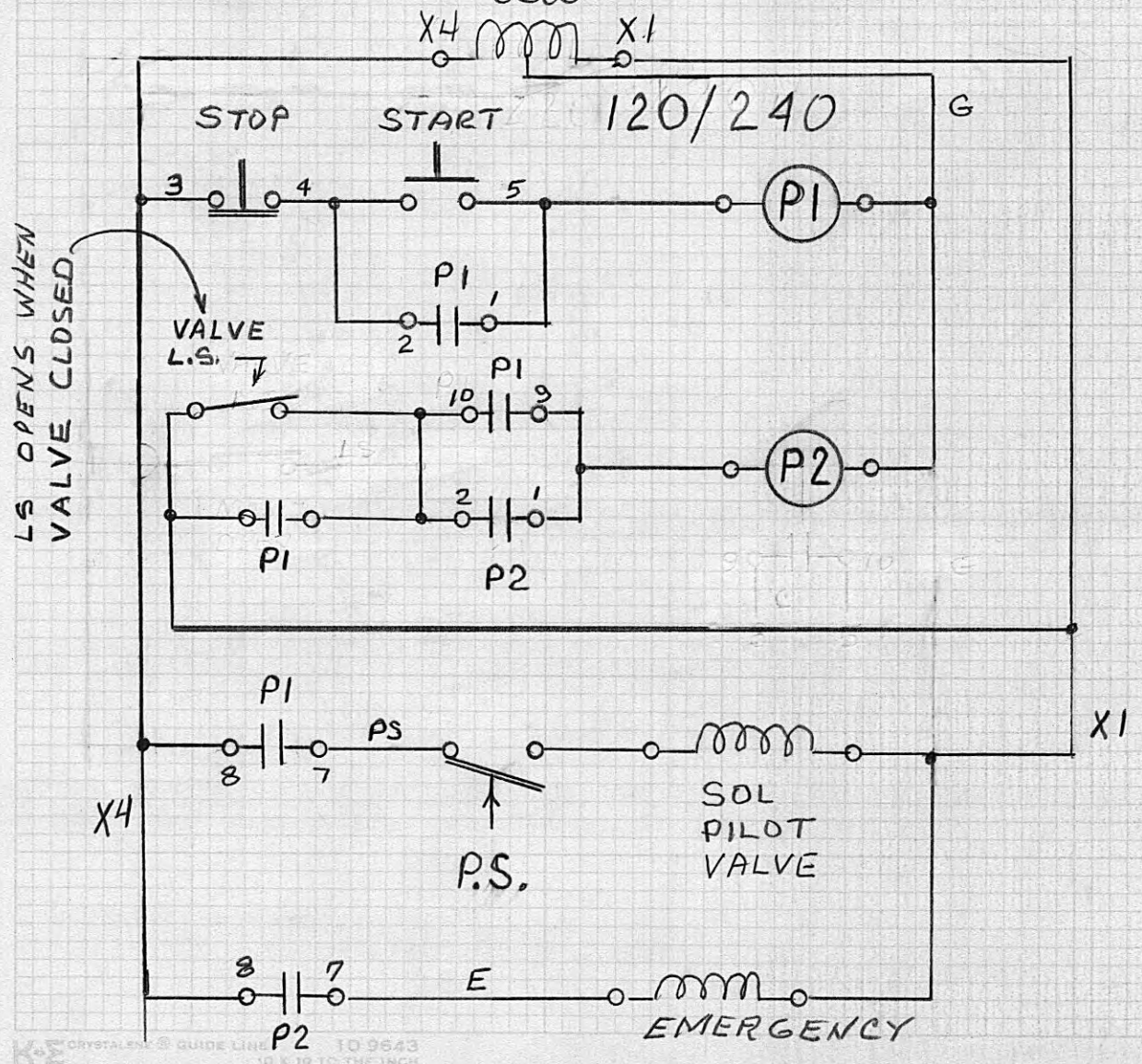
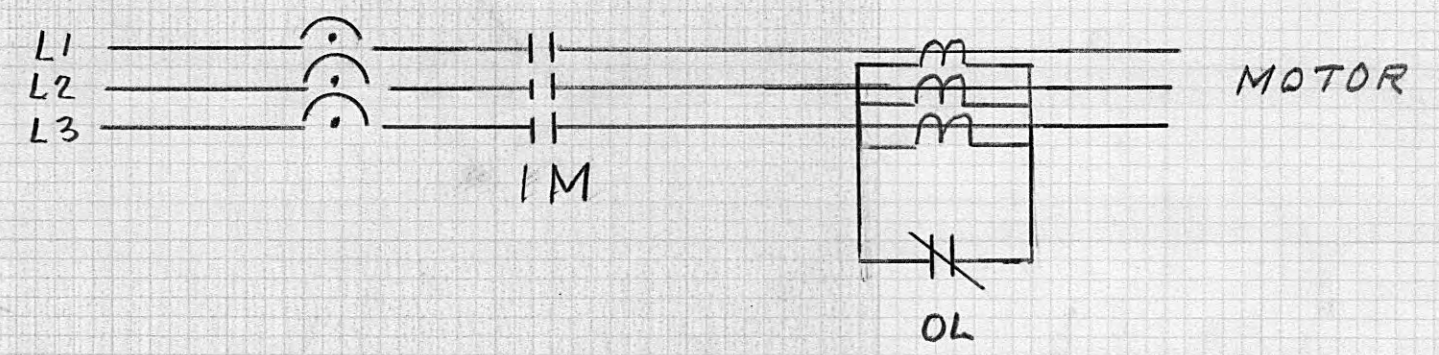
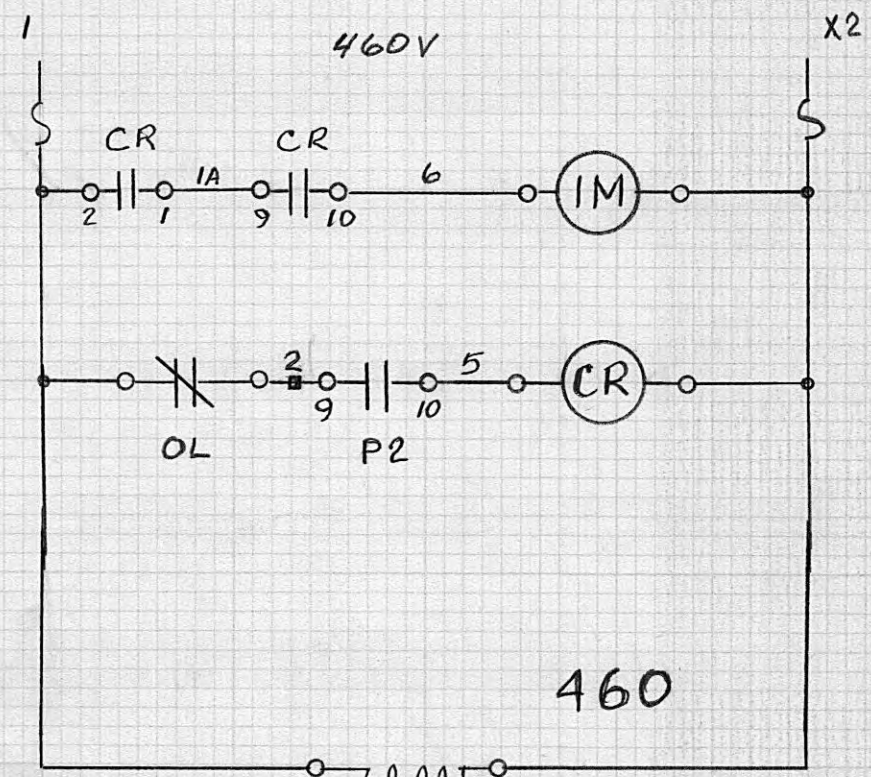
DIETZGEN CORPORATION
MADE IN U.S.A.
NO. 3400-10 DIETZGEN GRAPH PAPER
10 X 10 PER INCH



MATERIAL 802.20
LABOR 800.00

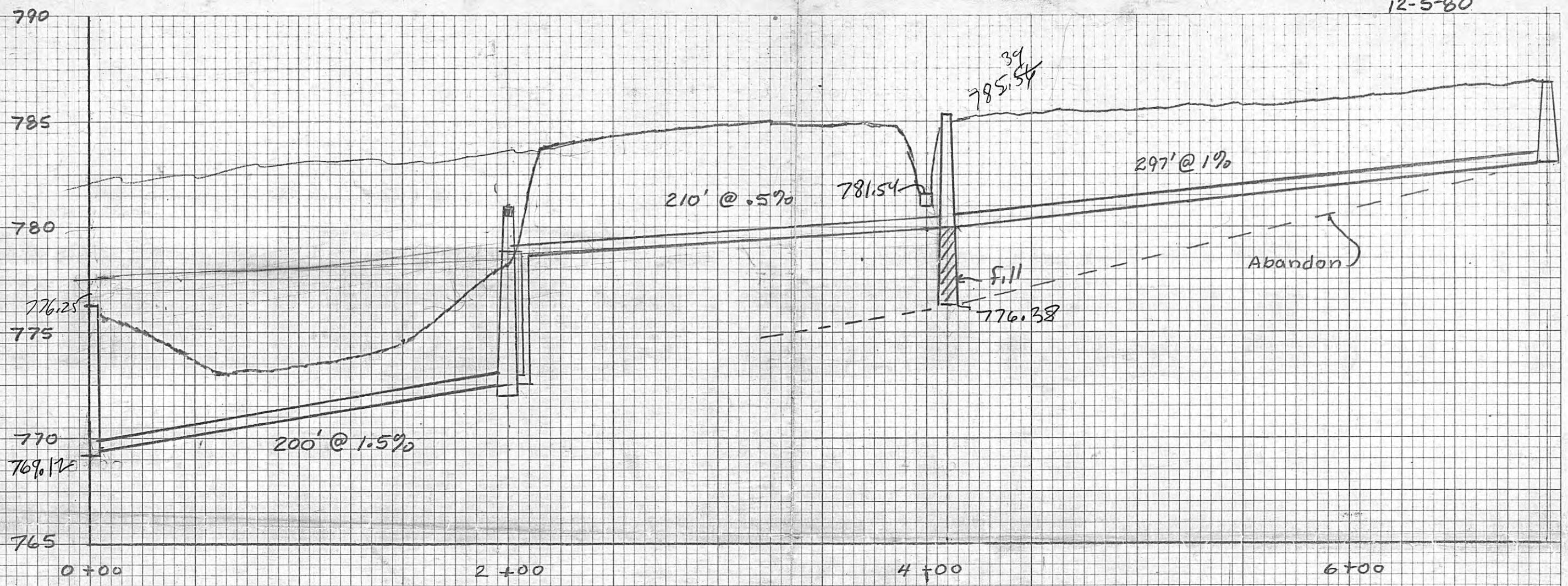


HARRIMAN Utility Board		
SCALE 1"=50' HORIZ	1"=5' VERT	DRAWN BY
DATE 5-9-83		
SEWER EXTENSION		
SEE MAP 36 G		DRAWING NO. S-172-B



WATER PLANT
2800 GPM
HIGH SERVICE PUMP
W-175-B

12-5-80



786.97
d = 43"

PROFILE

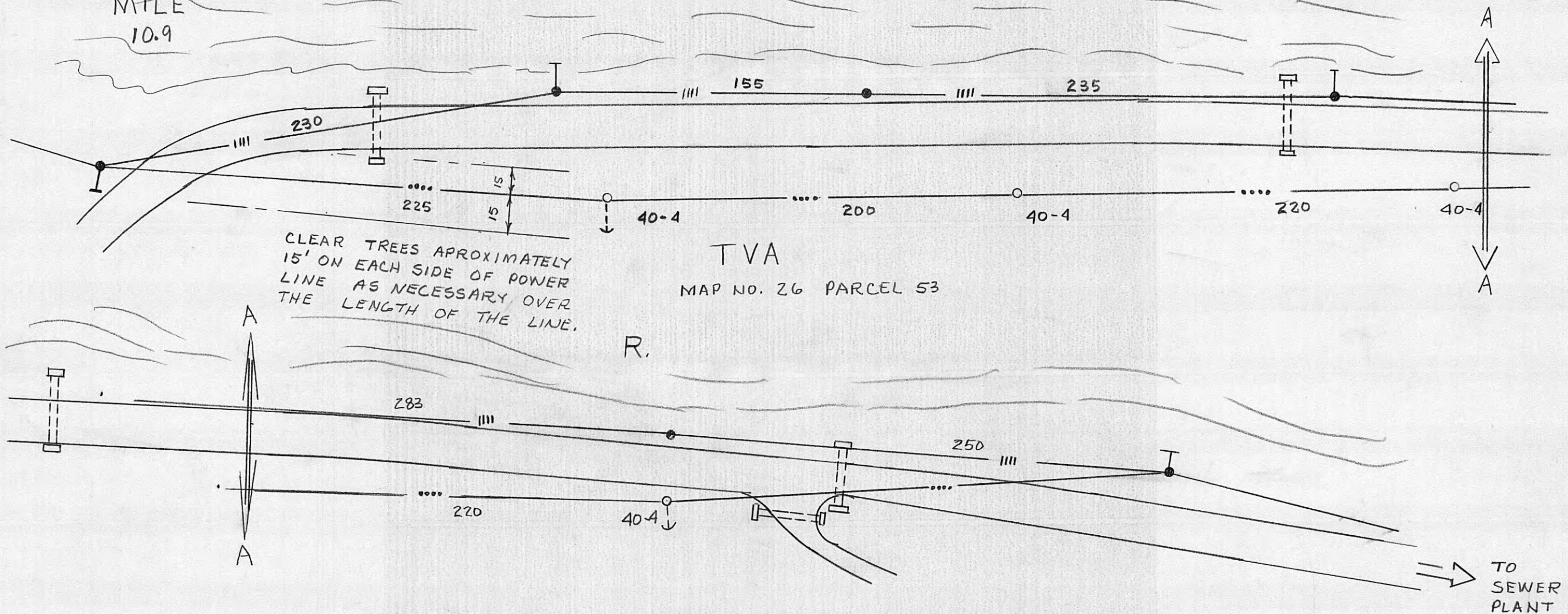


PLAN

S-182 B
ACME BLOCK REVAMP

RIVER
MILE
10.9

EMORY R.



CLEAR TREES APPROXIMATELY
15' ON EACH SIDE OF POWER
LINE AS NECESSARY OVER
THE LENGTH OF THE LINE.

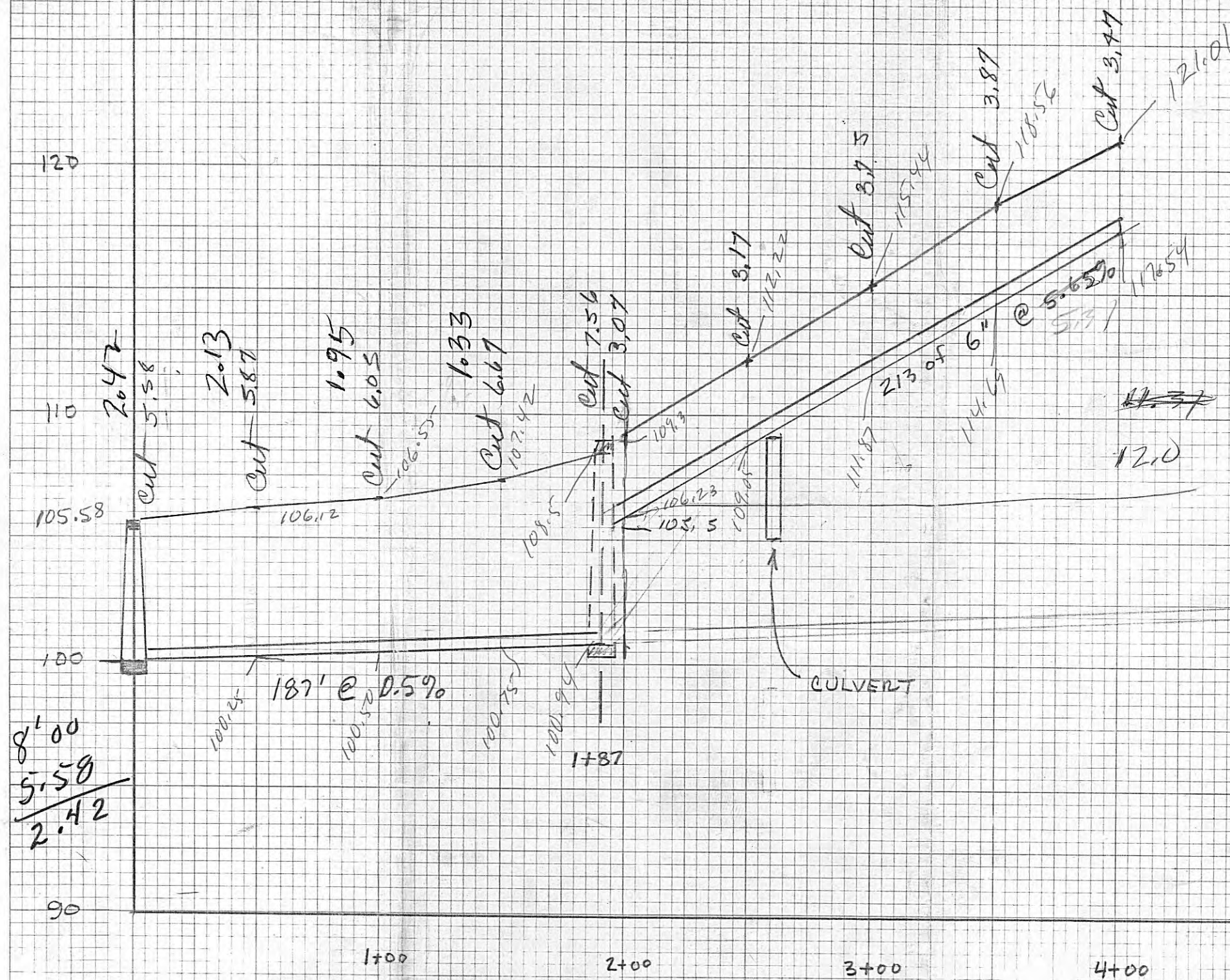
TVA
MAP NO. 26 PARCEL 53

LUCY SCOTT
MAP 26 PARCEL 52

HARRIMAN UTILITY BOARD
PROPOSED 13.2 KV LINE RELOCATION
ON SEWER PLANT ROAD

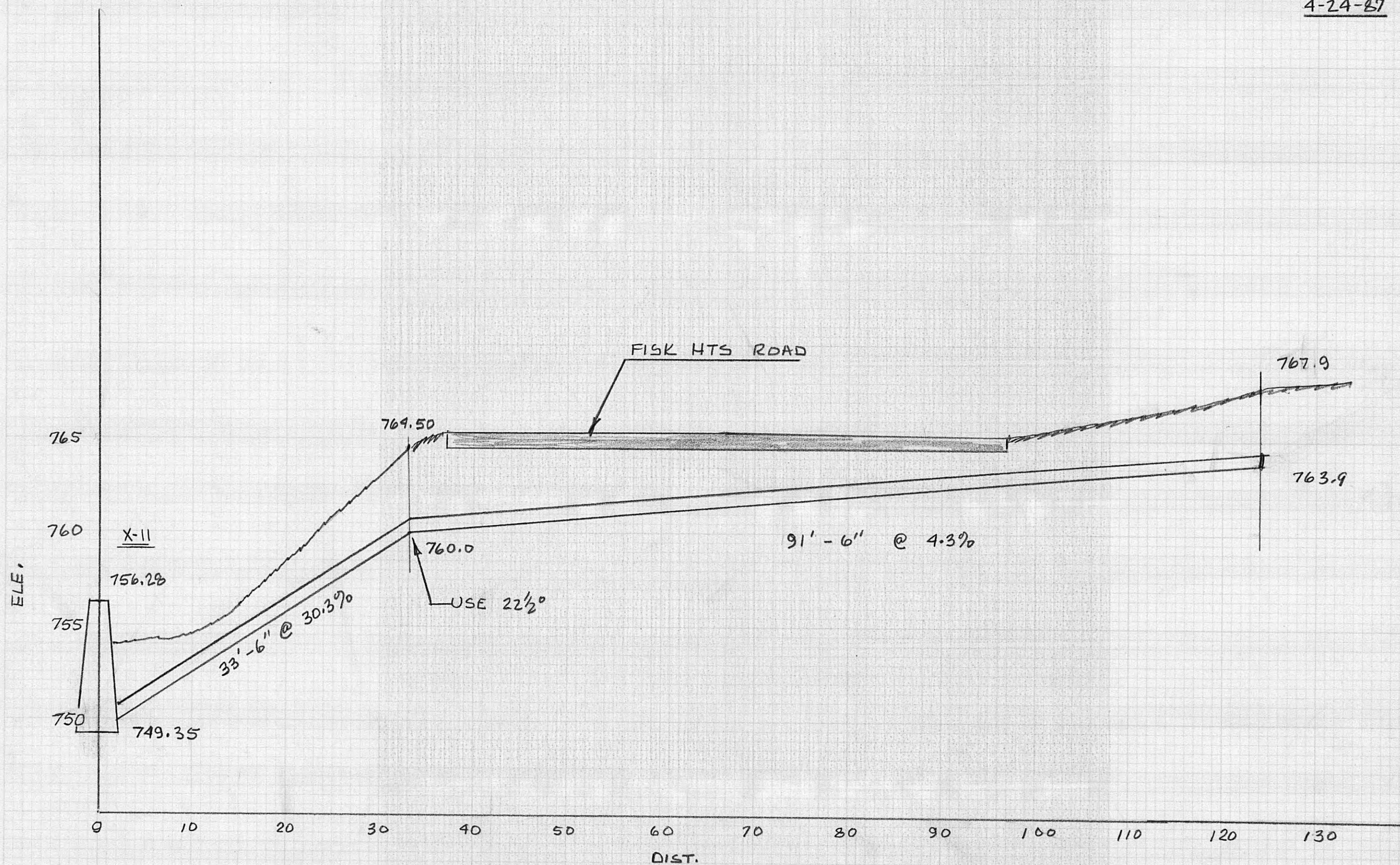
RHALL 11-3-77

DWG. NO. P 117-B



WALKER
ASH CABIN RD

4-24-87



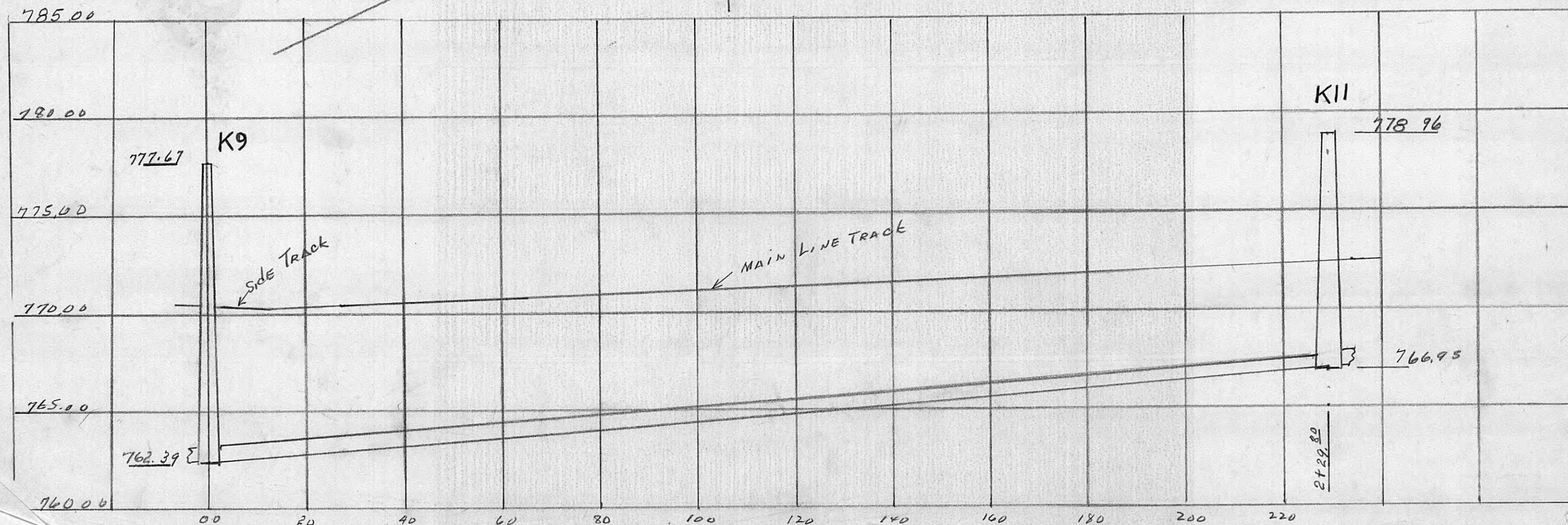
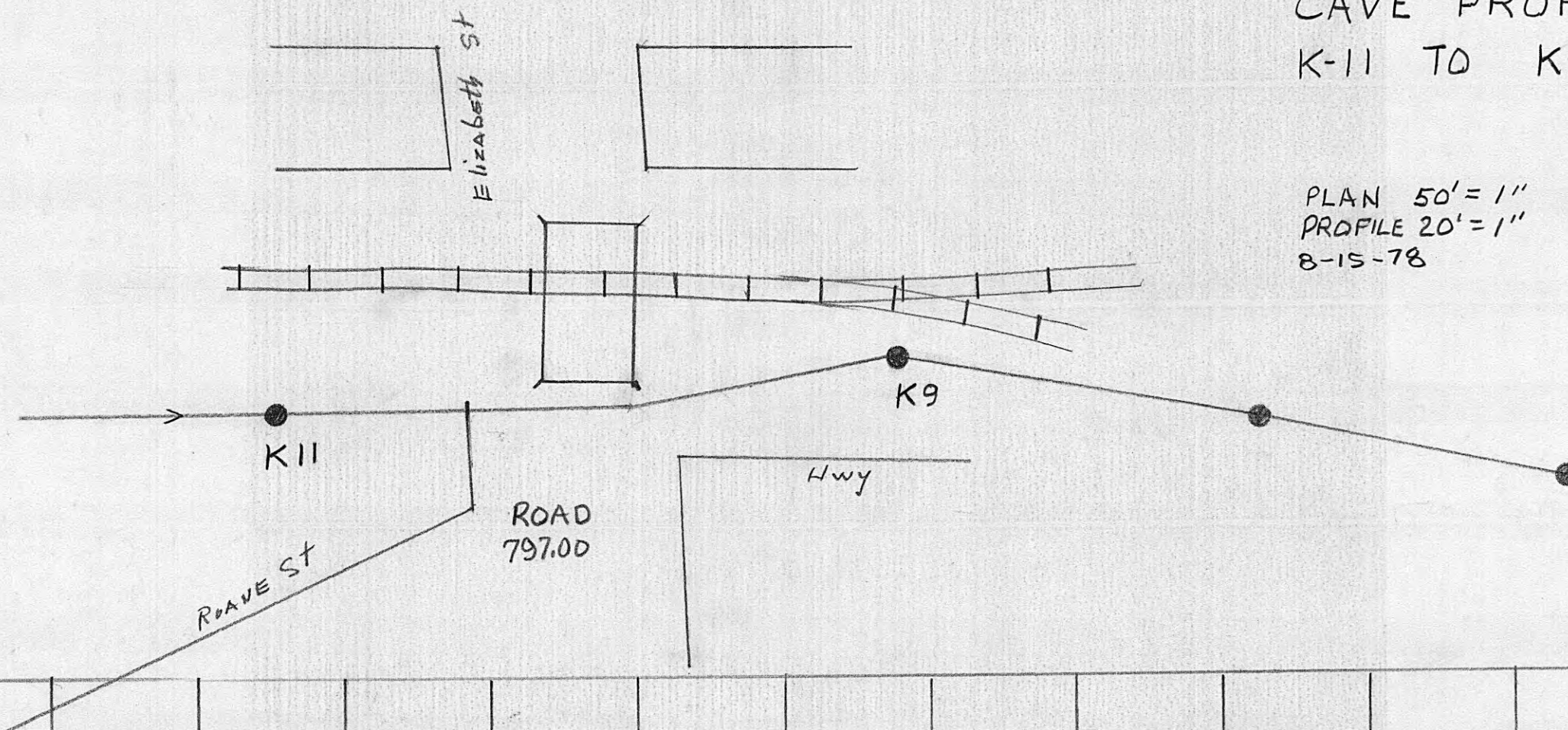
J. B. SOUTHER

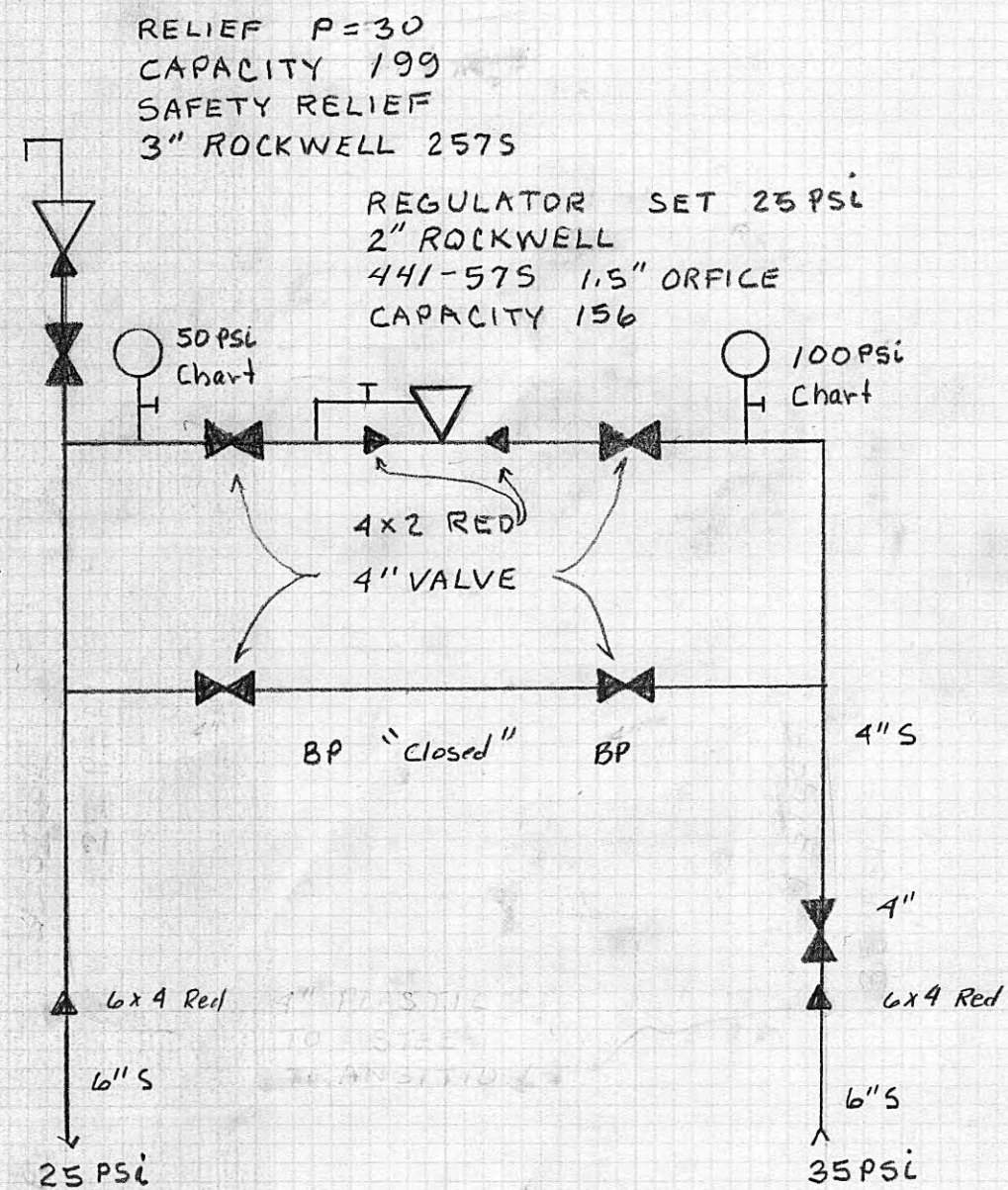
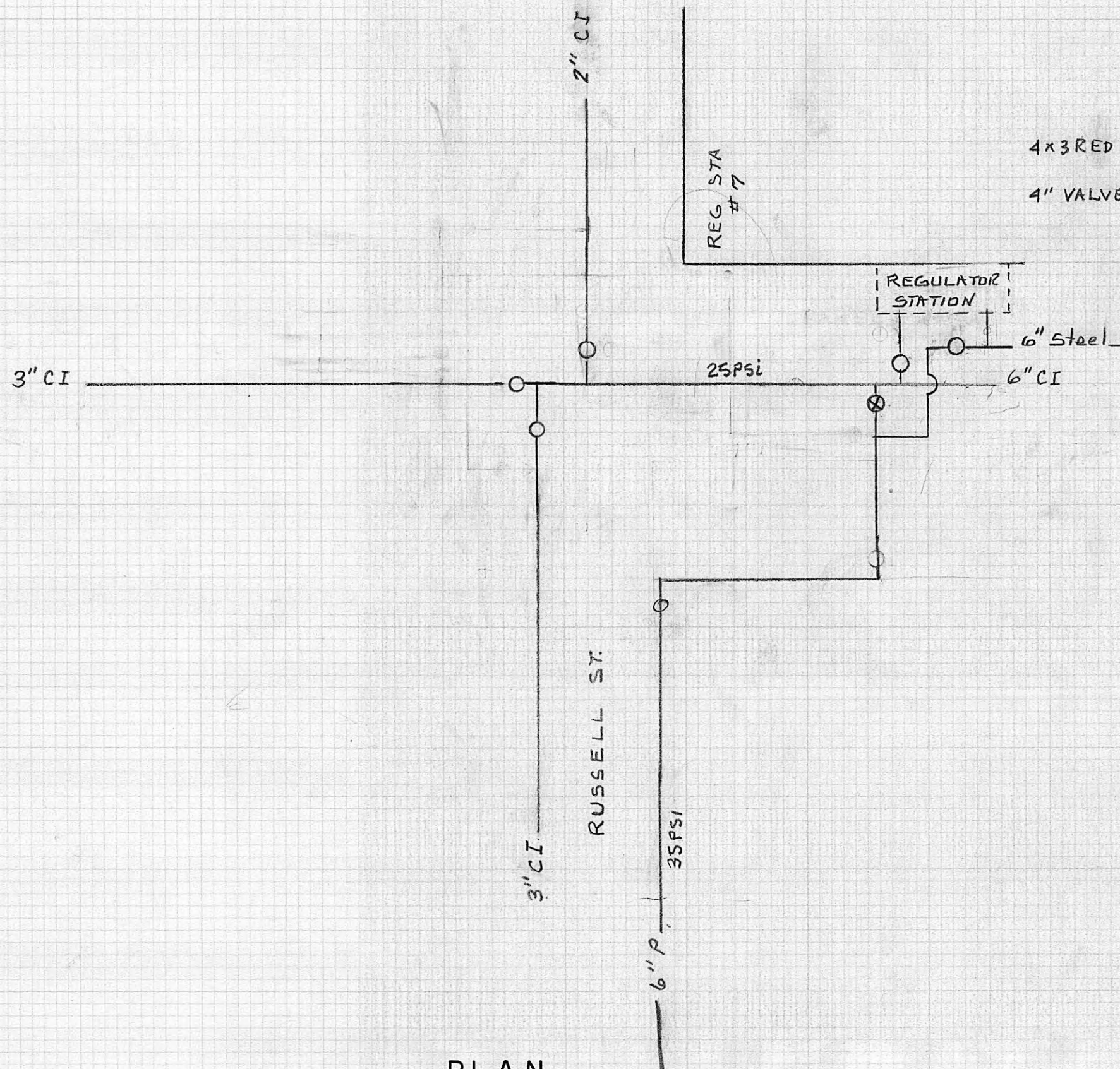
S-253-B

				HONEY CK	ONEIDA			
				128A NW	128A NE			
			BURRVILLE	RUGBY	ROBBINS			
			115 SE	128A SW	128A SE			
	JAMES	TWIN		PILOT MT	GOBEY	FORK MT	DUNCAN	
	116 NW	116 NE		122 NW	122 NE	129 NW	129 NE	
	KNOB	BRIDGES					FLATS	
	FOX CK.	OZONE		LANCING	CAMP	PETROS	WIND ROCK	CLINTON
	116 SW	116 SE		122 SW	122 SE	129 SW	129 SE	137 SW
		HERBERTS BURG			AUSTIN			
	DORTON	OZONE		CARDIFF	HARRIMAN	ELVERTON	BETHEL	LOVELL
	117 NW	117 NE		123 NW	123 NE	130 NW	130 NE	138 NW
							VALLEY	
	GRASSY	RODDY		ROCKWOOD	BACON	CAVE	LENOIR	CONCORD
	117 SW	117 SE		123 SW	123 SE	130 SW	130 SE	138 SW
	COVE				GAP	CREEK	CITY	
	PENNIE	SPRING		TEN MILE	PATTIE	PHILA - DELPHIA	LOUDON	
	118 NW	118 NE		124 NW	124 NE	131-NW	131 NE	
		CITY			GAP			

DRAINAGE AREA K CAVE PROFILE K-11 TO K-9

PLAN 50' = 1"
PROFILE 20' = 1" 5' = 1"
8-15-78

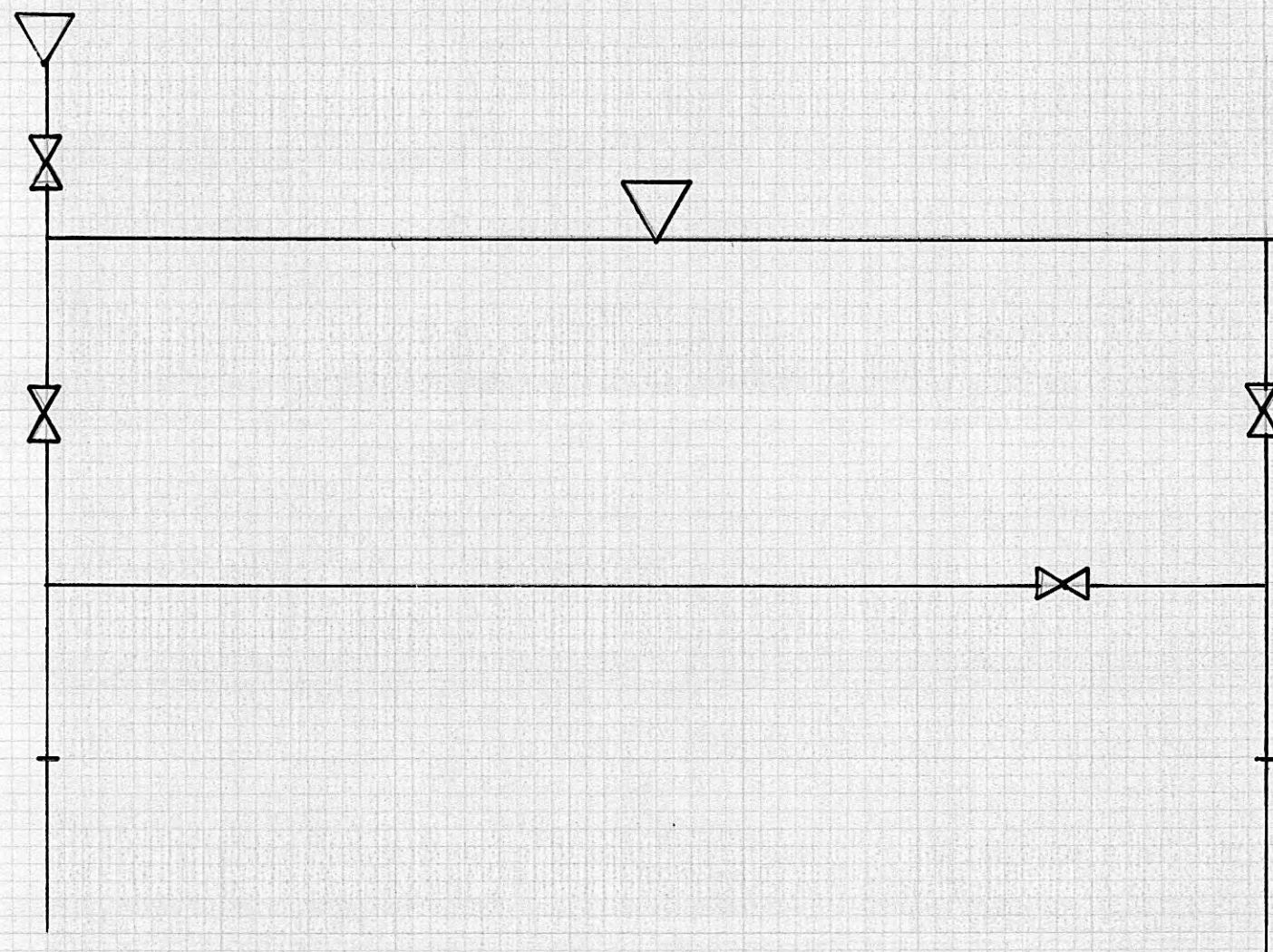




PROFILE

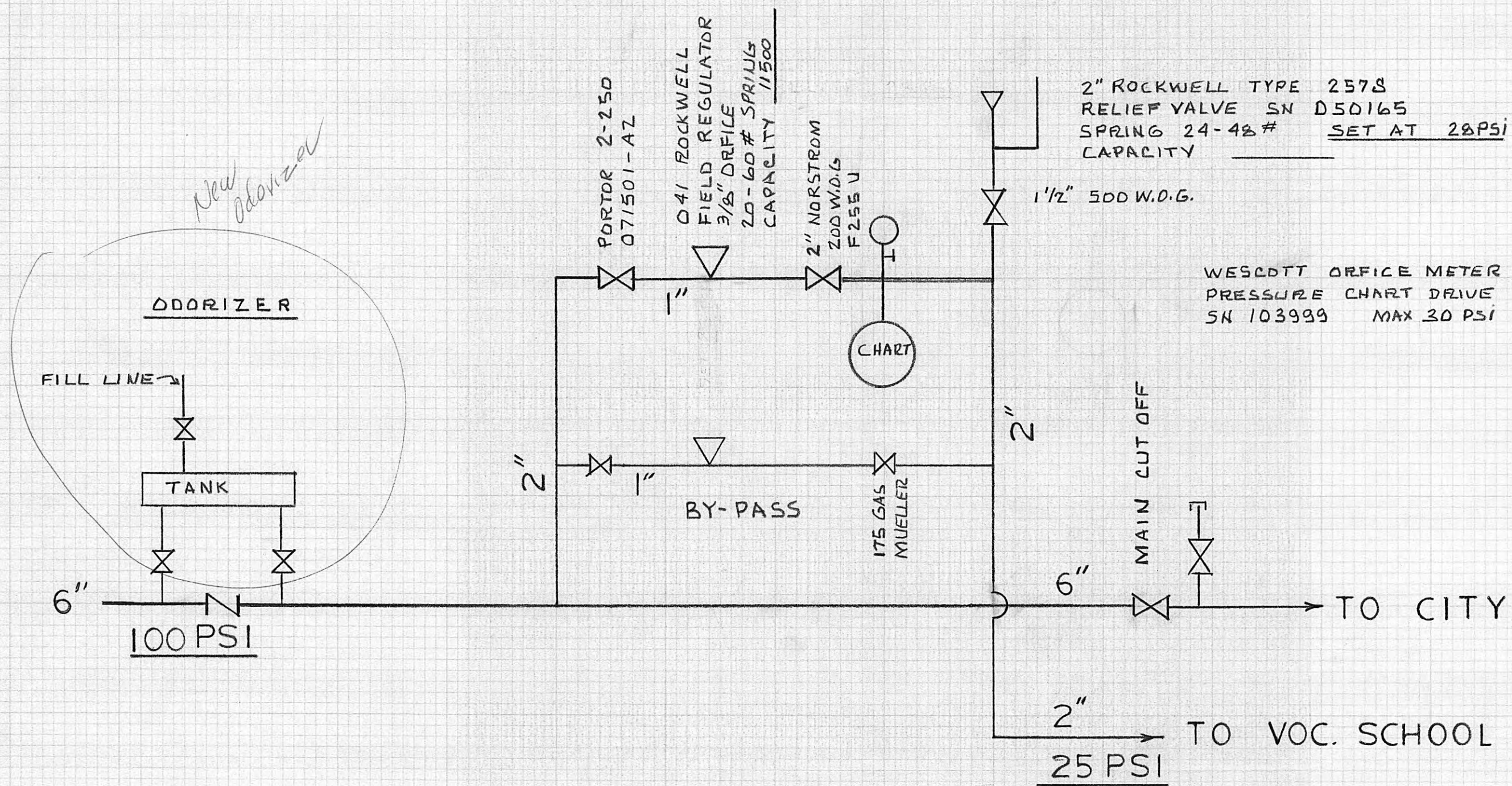
HARRIMAN UTILITY BOARD HARRIMAN, TENNESSEE		
R. HALL	N.T.S.	3-13-91
REGULATOR STATION NO. 6 RUSSELL ST. & PANSEY HILL		
REV 11-18-91 RWH		G-186-B

PERRY DRIVE



FISK ROAD

HARRIMAN UTILITY BOARD HARRIMAN, TENNESSEE		
RHALL		
12-18-90		
REGULATOR STATION NO. 5		
PERRY DR. & FISK RD.		G-199-B



HARRIMAN UTILITY BOARD
HARRIMAN, TN

10-24-1990

RHALL

REGULATOR STATION NO. 4

NEXT TO ETNG METERING AT RDANE
HDSIER - OLD HWY 61

G-193-B

TO ROANE HOSERY

100 PSI

TO MEADOWVIEW

LAYKIN

MORNING DRIVE

HARRIMAN UTILITY BOARD
HARRIMAN, TENNESSEE

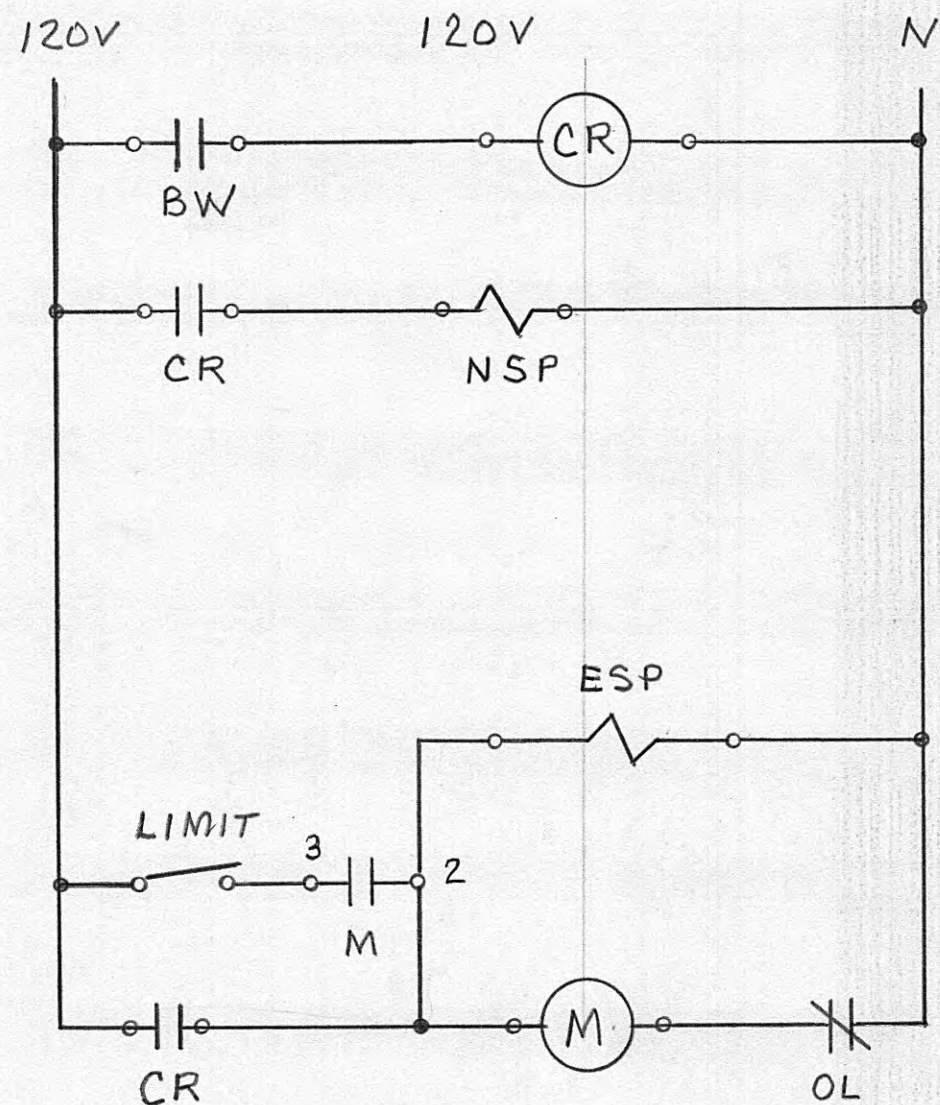
R-HALL

12-18-90

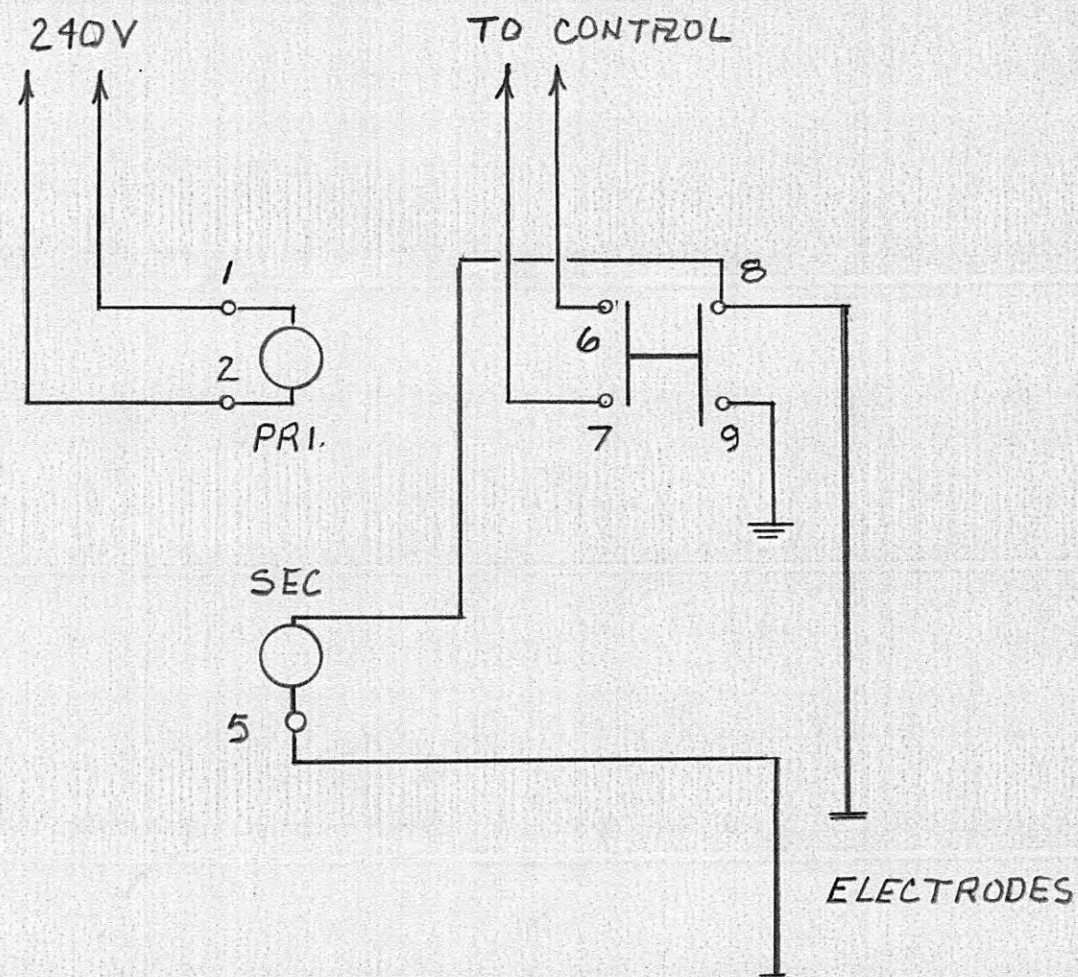
REGULATOR STATION NO. 3

LAYKIN & MORNING DR.
ROANE HOSERY PARKING LOT

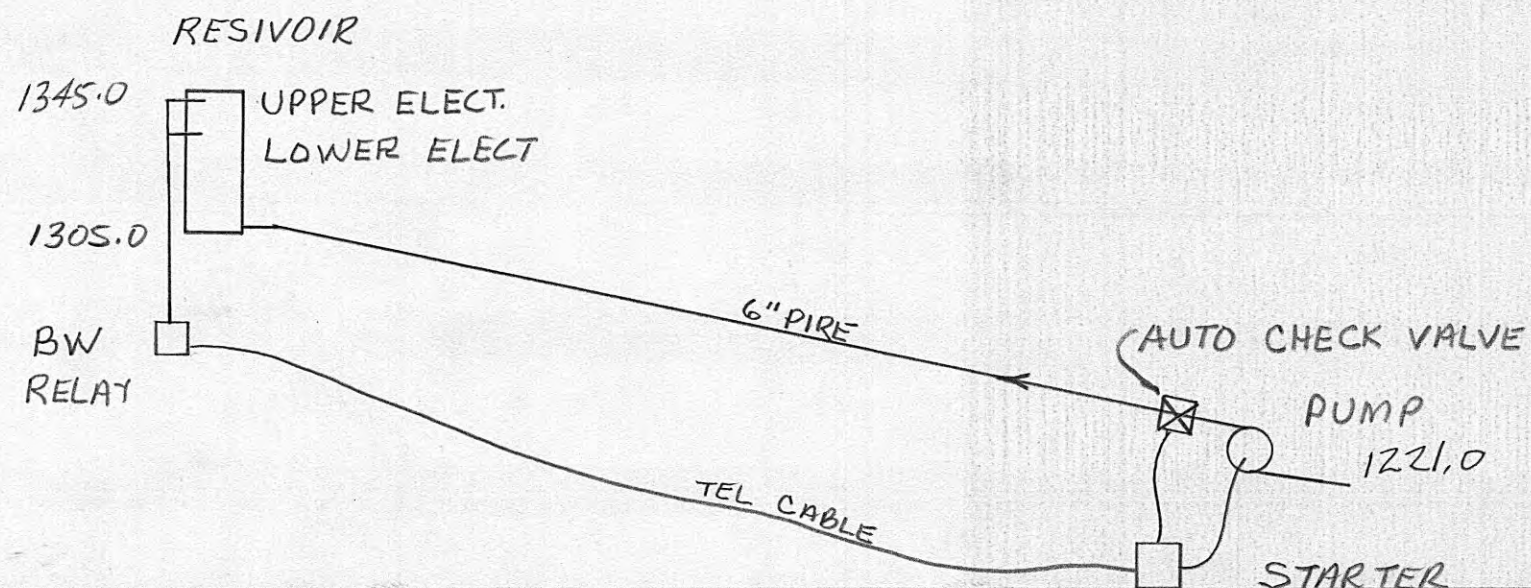
G-198B



ELEMENTARY DIAGRAM



BW RELAY



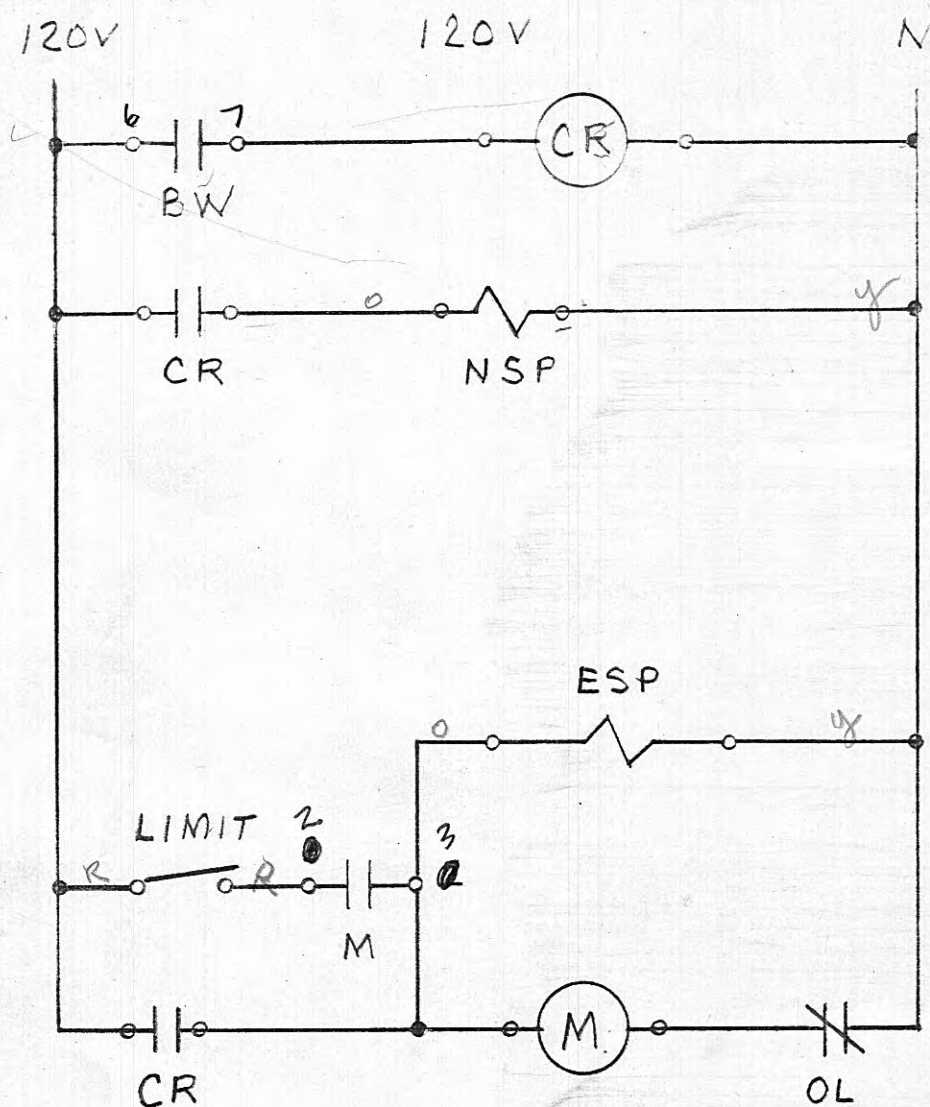
HARRIMAN UTILITY BOARD
HARRIMAN, TENNESSEE

8-29-79

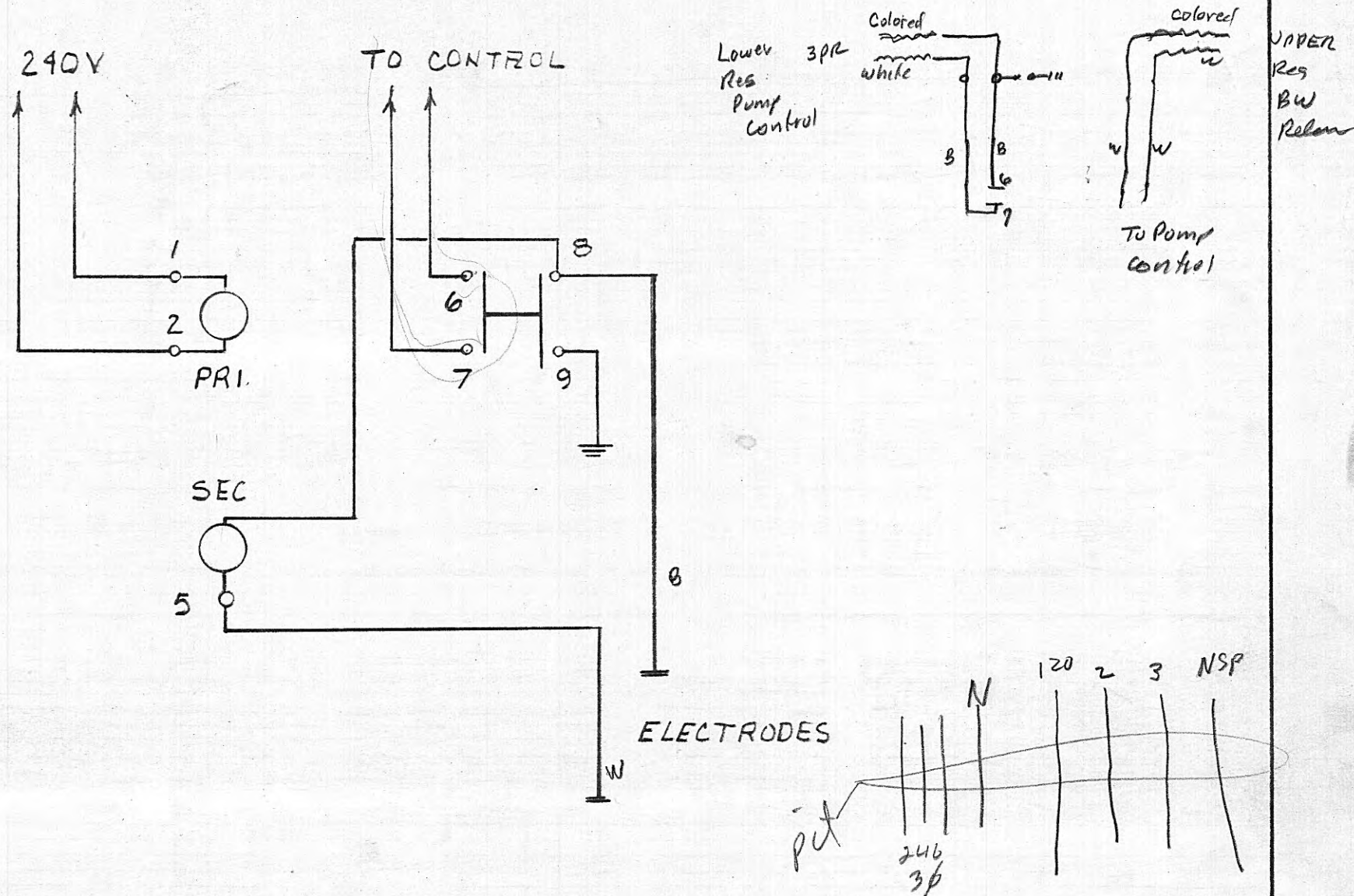
RHALL

WALDEN'S RIDGE RESIVOIR CONTROL
ELEMENTARY DIAGRAM

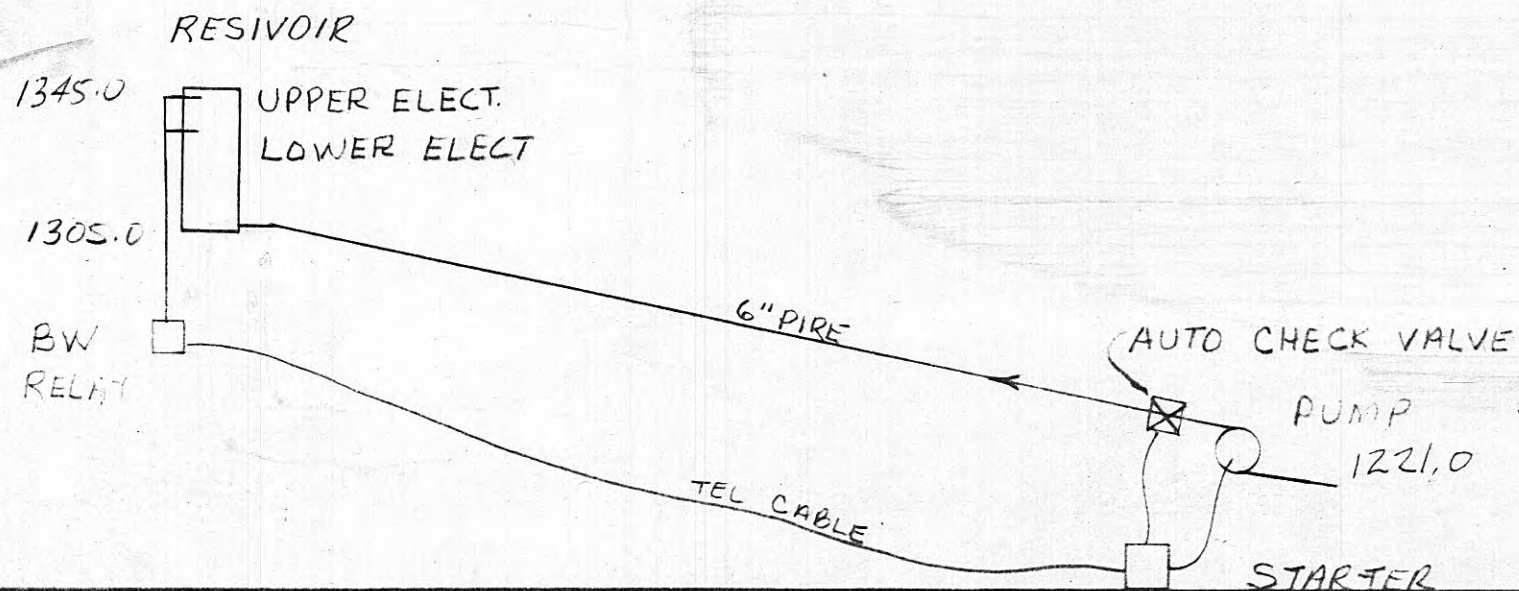
W135-B



ELEMENTARY DIAGRAM



BW RELAY



HARRIMAN UTILITY BOARD
HARRIMAN, TENNESSEE

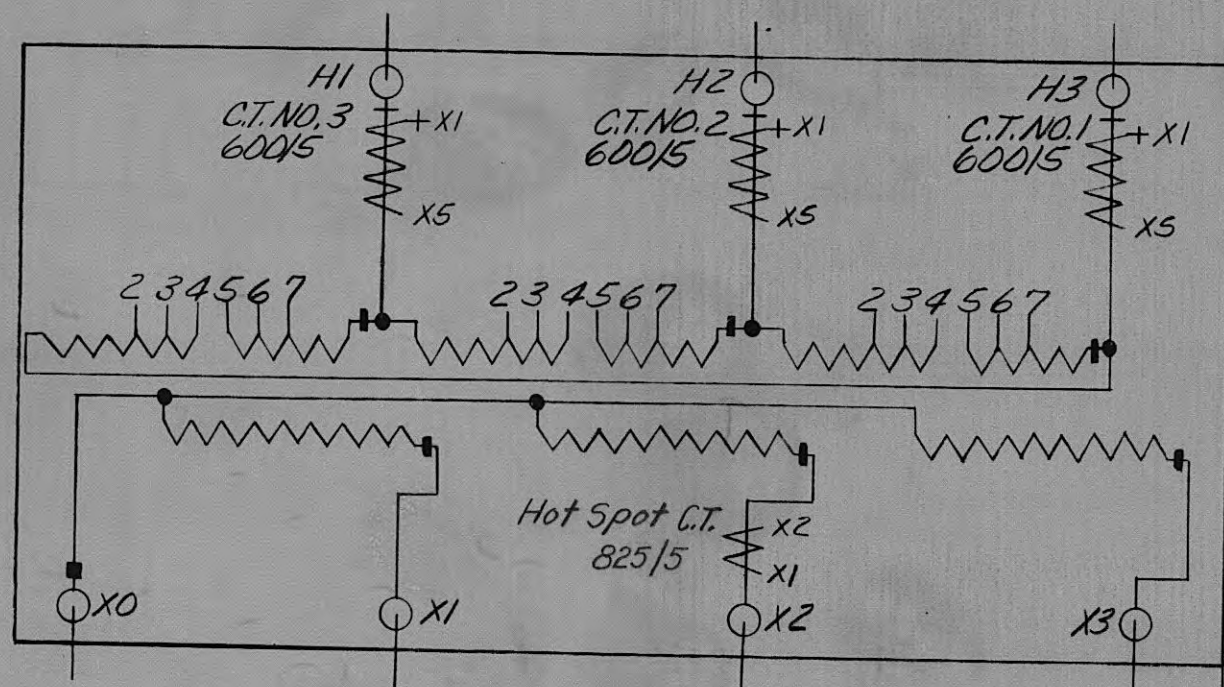
8-29-79

WALDEN'S RIDGE RESIVOIR CONTROL
ELEMENTARY DIAGRAM

135-B

WM-4548

HIGH VOLTAGE



LOW VOLTAGE

VOLTAGE CONNECTIONS									
VOLTAGE SETTING			VOLTS		AMPERES AT-KVA				TAP CHANGERS
NO.	BY	DATE			10001	13333	16667	18667	POSITIONS CONNECTS
HIGH VOLTAGE (LINES ON H1, H2, H3)									
A			72400	79.6	106	133	149		1 5-4
B			70600	81.6	109	136	153		2 4-6
C			68800	83.8	112	140	157		3 6-3
D			67000	86.1	115	144	161		4 3-7
E			65200	88.5	118	148	165		5 7-2
LOW VOLTAGE (LINES ON X1, X2, X3 NEUT. ON X0)									
F			13090	441	588	735	824		— —

ENGLISH ELECTRIC TRANSFORMER

SERIAL NO. 1854/0100

CLASS: 0A/FA/FA 60HZ.

RATING VOLTS: 68800-7560/13090Y THREE PHASE SUB. POLARITY

RATING KVA: 10001-0A/13333-FA/16667-FA, CONT.

55°C RISE

RATING KVA: 11200-FA/14900-FA/18667-FA, CONT.

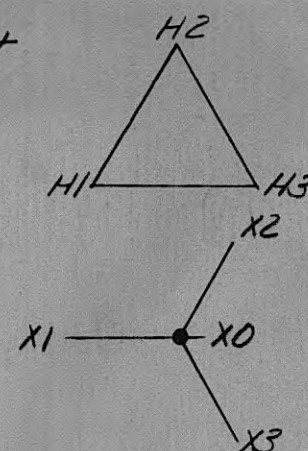
65°C RISE

MFR. L. SPEC. 30642

TVA REQ. NO. 68P2-8756

TEST DATA AT 75°C

KV	MVA	LOSSES IN K.W.			OWN BASE			100MVA 3Φ			% REGULATION		
		CORE	COPPER	TOTAL	%Z	%X*	%R*	%X*	%R*	I.O.P.F.	.9P.F.	.8P.F.	
68.8-13.09	10	10.76	40.10	50.86	7.0	6.99	0.4	69.90	4.000	0.64	3.59	4.66	
D.C. RESISTANCE		% EXEC. CURR.		BASIC INSL. LEVELS			TEMPERATURE TEST DATA- °C						
WINDING	OHMS	90%V	0.145	ITEM	FULL WAVE	KV	MVA	RISE BY RESIS.		AMB	TOPOIL		
H.V.	1.798	100%V	0.216	H WINDING	350			HV	LV	(ROOM)	RISE		
L.V.	.0588	110%V	0.341	X WINDING	110		10	31.5	33.5	—	29.5		
* Calculated by TVA								16.67	40.3	41.3	—	34.7	

Tap
ChangerCooler
Control
Cabinet

APPROXIMATE WEIGHT:

Core and Coils 28000 lbs.

Tank and Fittings 21200 "

Oil (2470 gals.) 17800 "

Total 67000 "

REFERENCE:

Transformer Acc. Diag.

Mfr's. Drawings

Mfr's. N.P. Diagram

WL-4549

XA-1775

5962F8492

Bk. #1

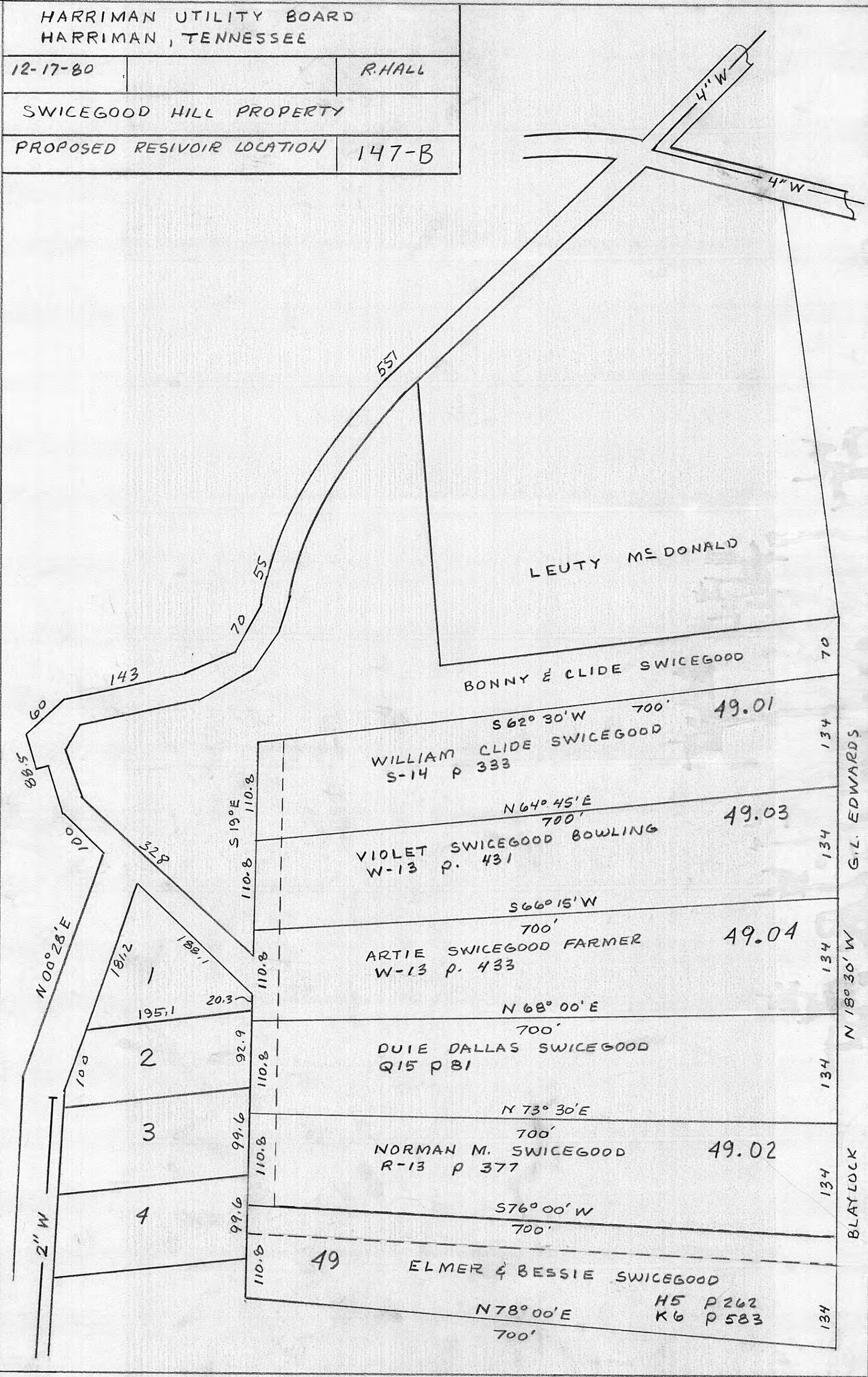
LOCATION	4	5	6
LOCATION	1 N.E. Harriman, Tenn. - 69KV	2	3

REV NO	DATE	DSGN	DRWN	CHKD	SUPV	APPD
DSGN	LMG					
DRWN	MFA					
CHKD	ERH - RE					

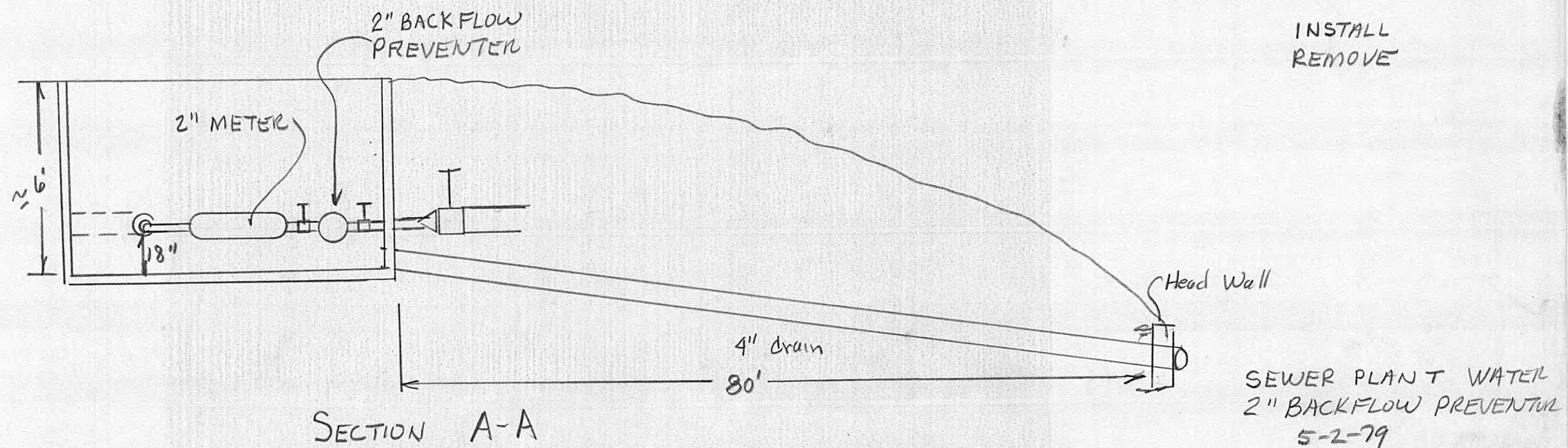
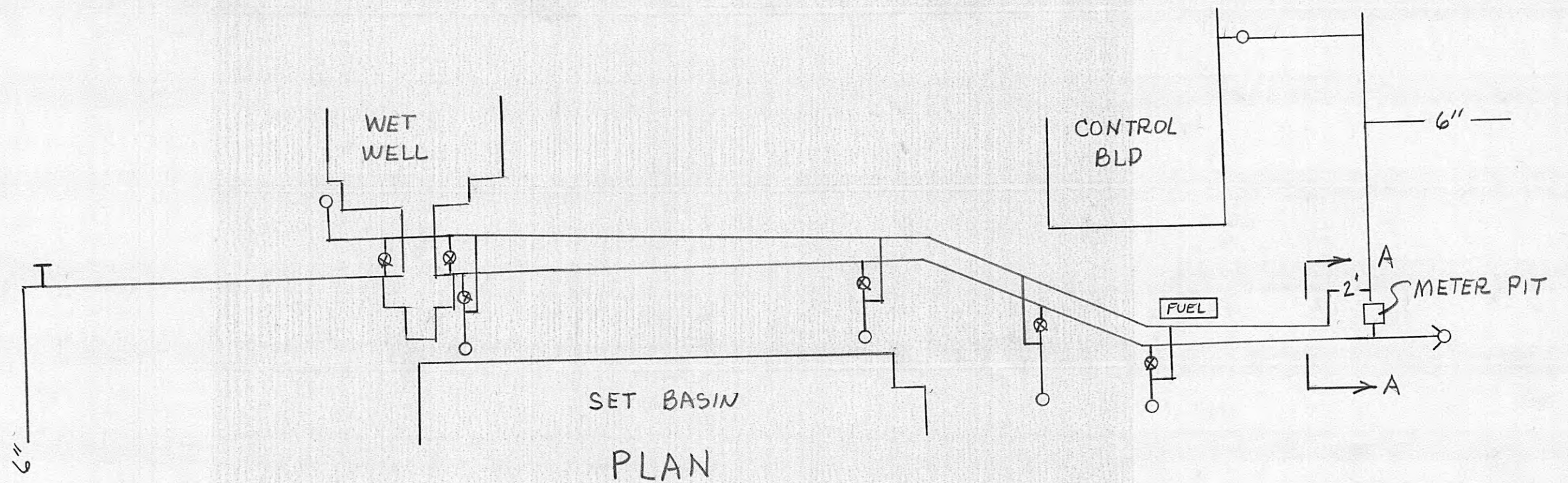
SUPV. 37174
W.O. 37174
PROJ ENGR

TENNESSEE VALLEY AUTHORITY									
DIVISION OF POWER PLANNING AND ENGINEERING									
TRANSFORMER NAMEPLATE DIAGRAM									
ENGLISH ELEC., 10001/13333/16667 KVA, 3Φ									
68.8-7.56/13.09YKV									
DATE	12-22-70	SUBMITTED	APPROVED						
SCALE	None	CLASS CODE	None						
None	None	None	None						
				WM-4548					

HARRIMAN UTILITY BOARD HARRIMAN, TENNESSEE		
12-17-80		R. HALL
SWICEGOOD HILL PROPERTY		
PROPOSED RESIVOIR LOCATION	147-B	

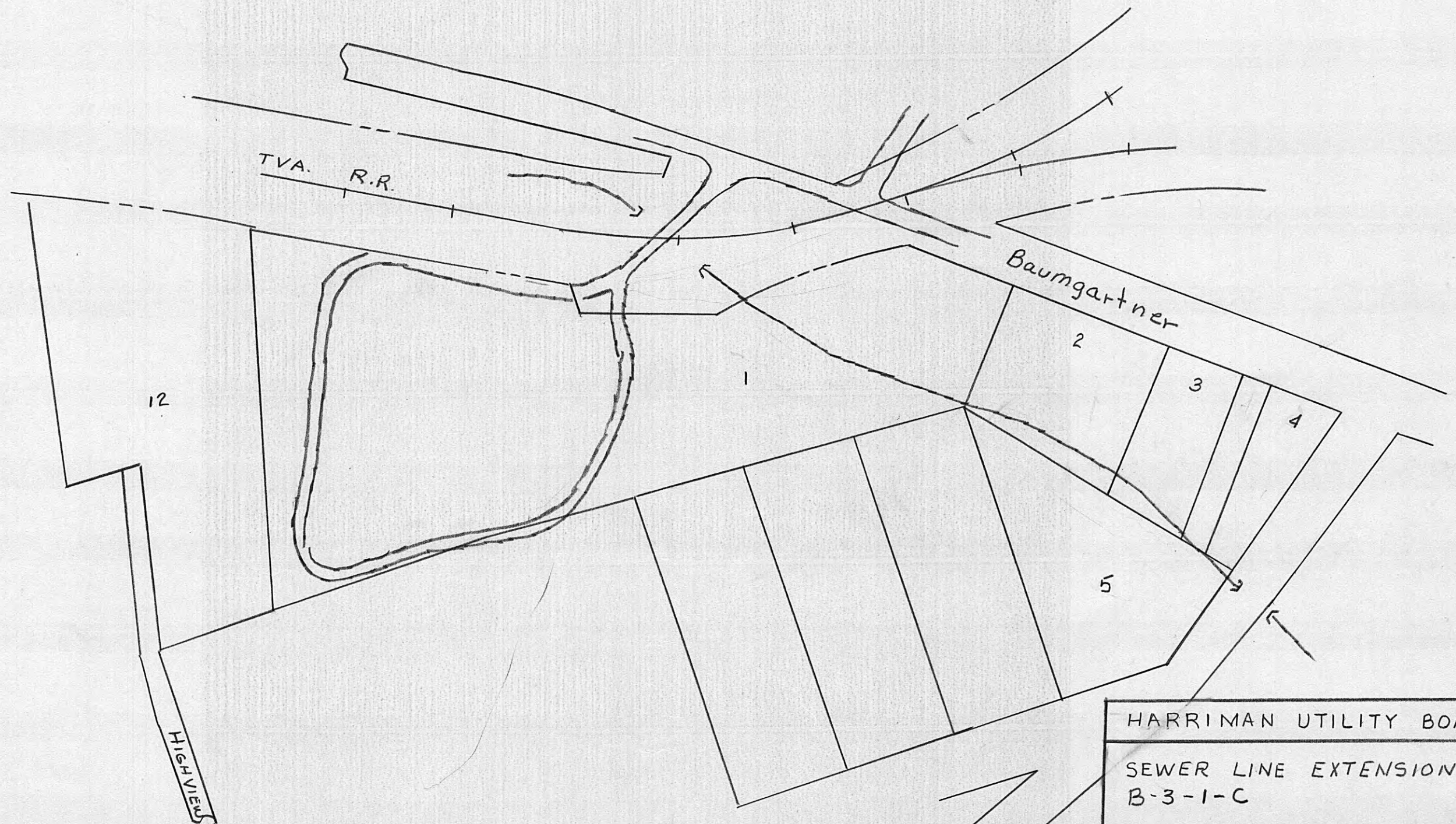


W-147-B



SEWER PLANT WATER
2" BACKFLOW PREVENTER
5-2-79

DW 129-B

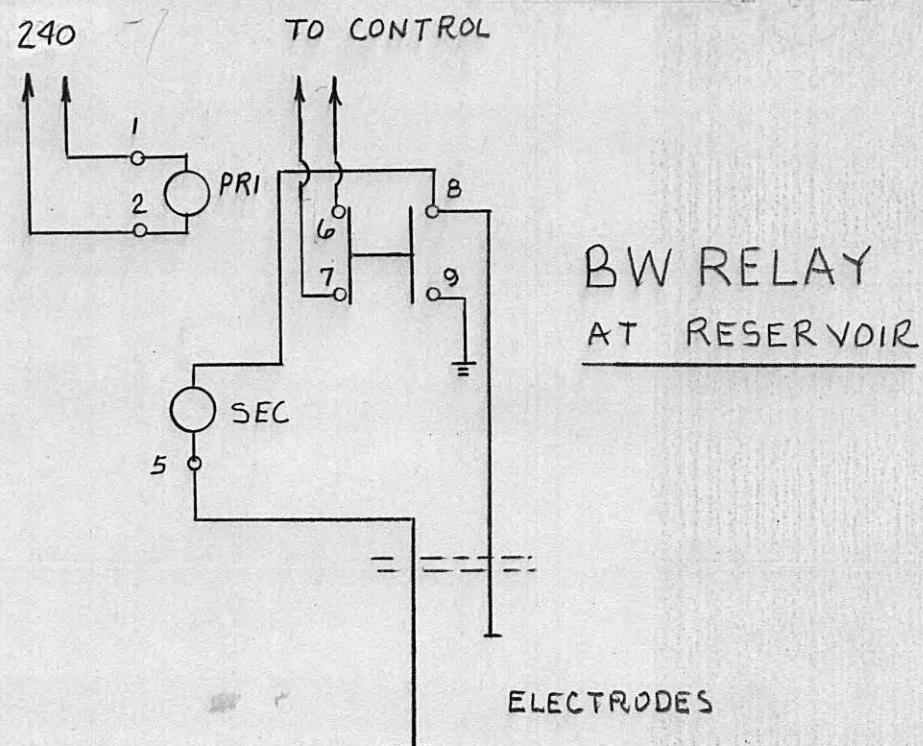
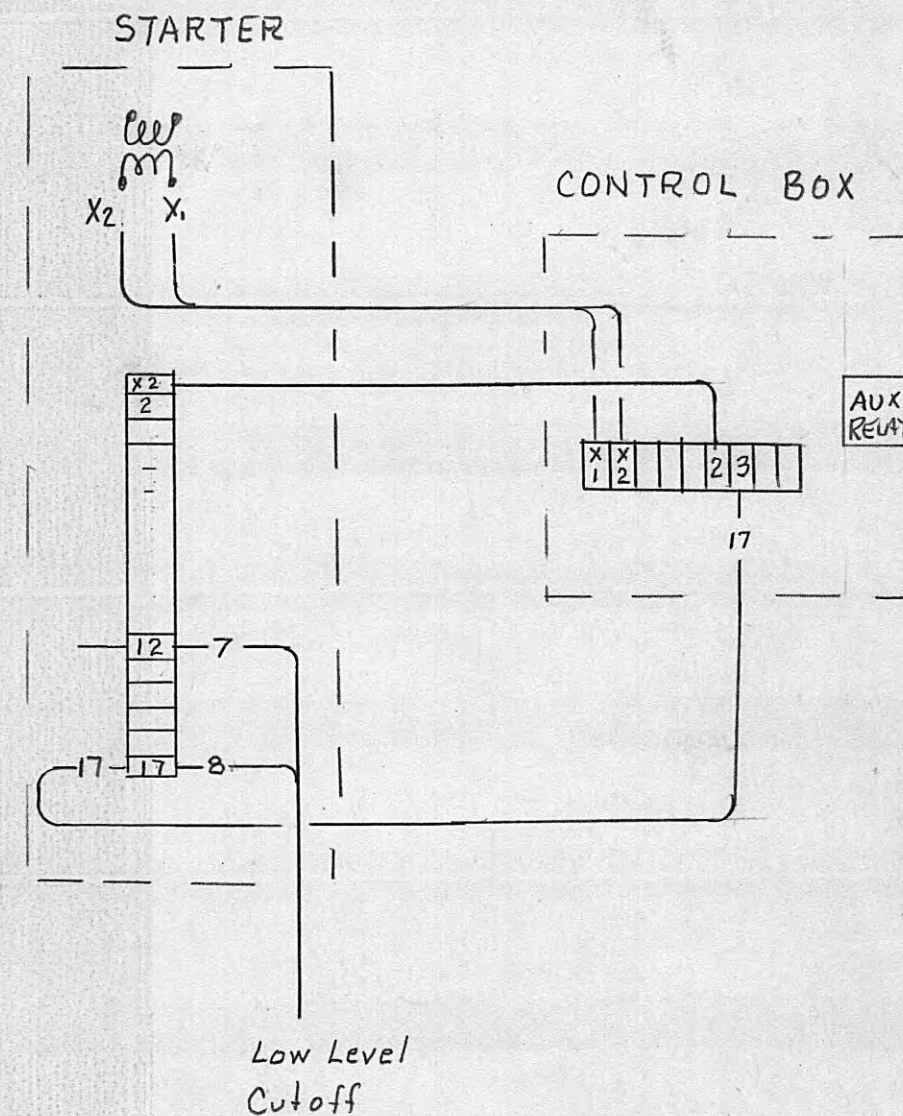
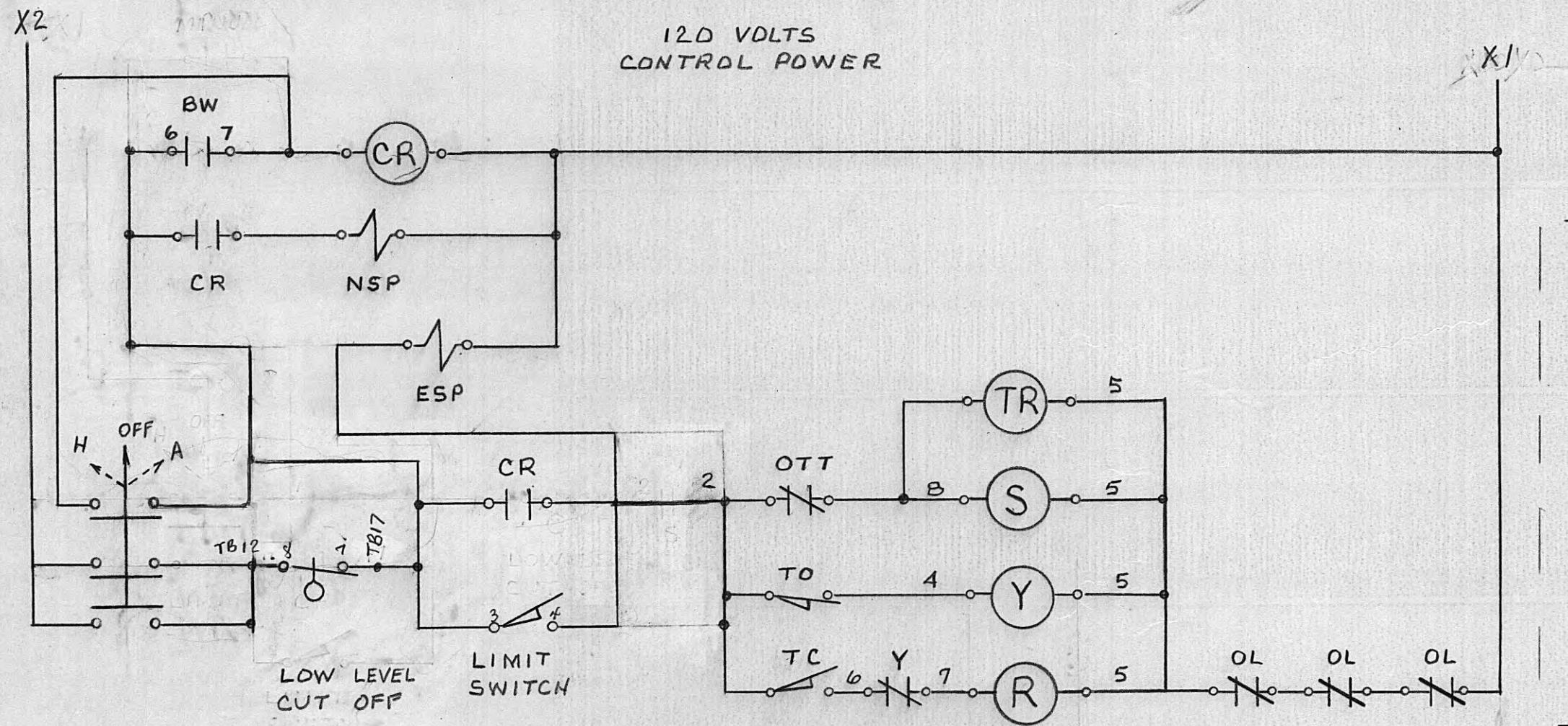


HARRIMAN UTILITY BOARD

SEWER LINE EXTENSION
B-3-1-C

RHALL 7-25-77

S-100-B

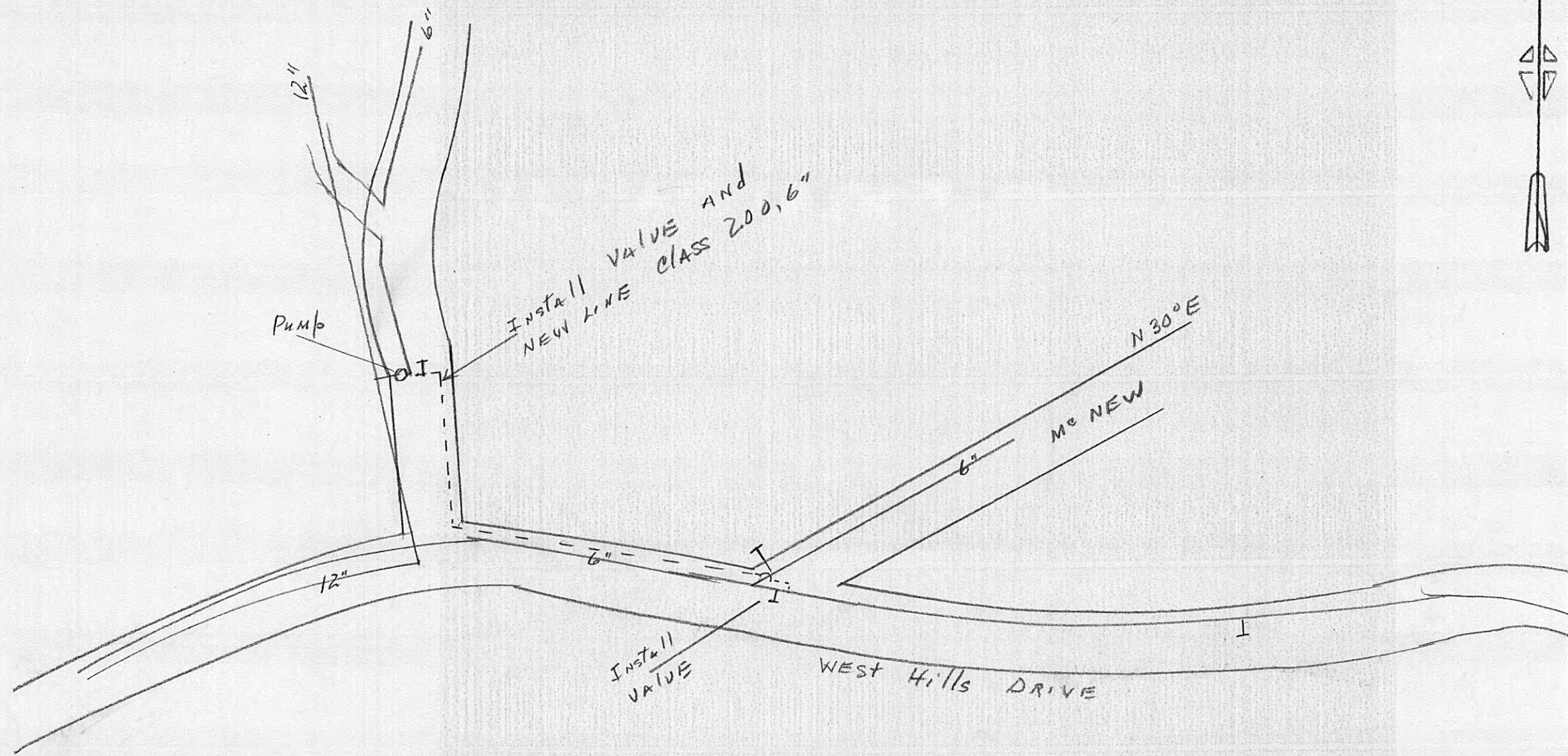


HARRIMAN UTILITY BOARD
WOLFE BRANCH PUMP CONTROL
WITH AUTOMATIC CHECK VALVE

RHALL 7-8-77

DWG NO. 98-B

W

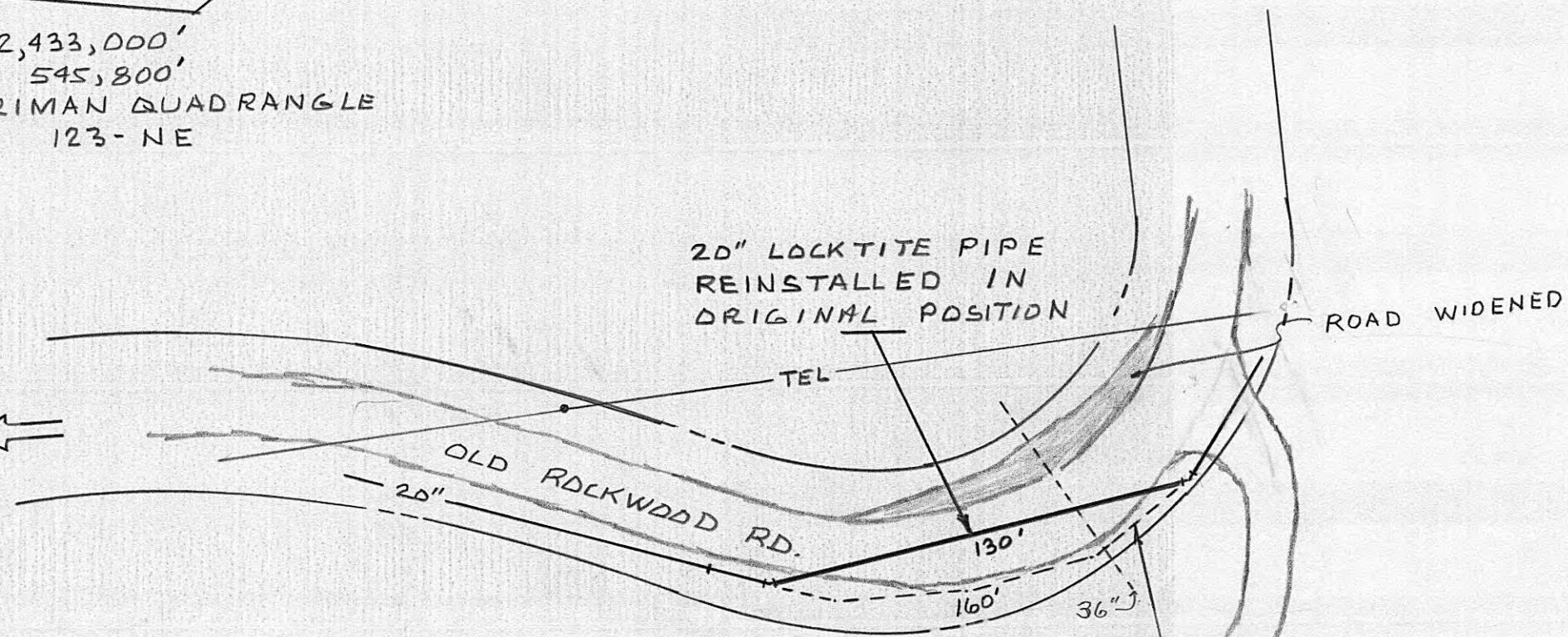


HARRIMAN Utility Board
WATER IMPROVEMENT
DRWG NO 94 B.



2,433,000'
545,800'
HARRIMAN QUADRANGLE
123-NE

0.9 MILE TO US70 ←



TEMP. 20" LINE SUPPORTED
WITH 35' POLES HAS BEEN
REMOVED.

HARRIMAN UTILITY BOARD

KINGSTON HTS. SLIDE AREA
130 FEET OF 20" LOCKTITE
PRESSURE SEWER.

RHALL 5-5-77

DWG. NO. S-87-B

850

845

840

835

830

825

820

827.85

824.8

0+00

0.6%

6"

833.45

827.11

3+85

8.00%

846.52

841.51

B-3

8+11

133°52'

8+00

S 76°09' W

6"

3+85

5+65

BOWERS

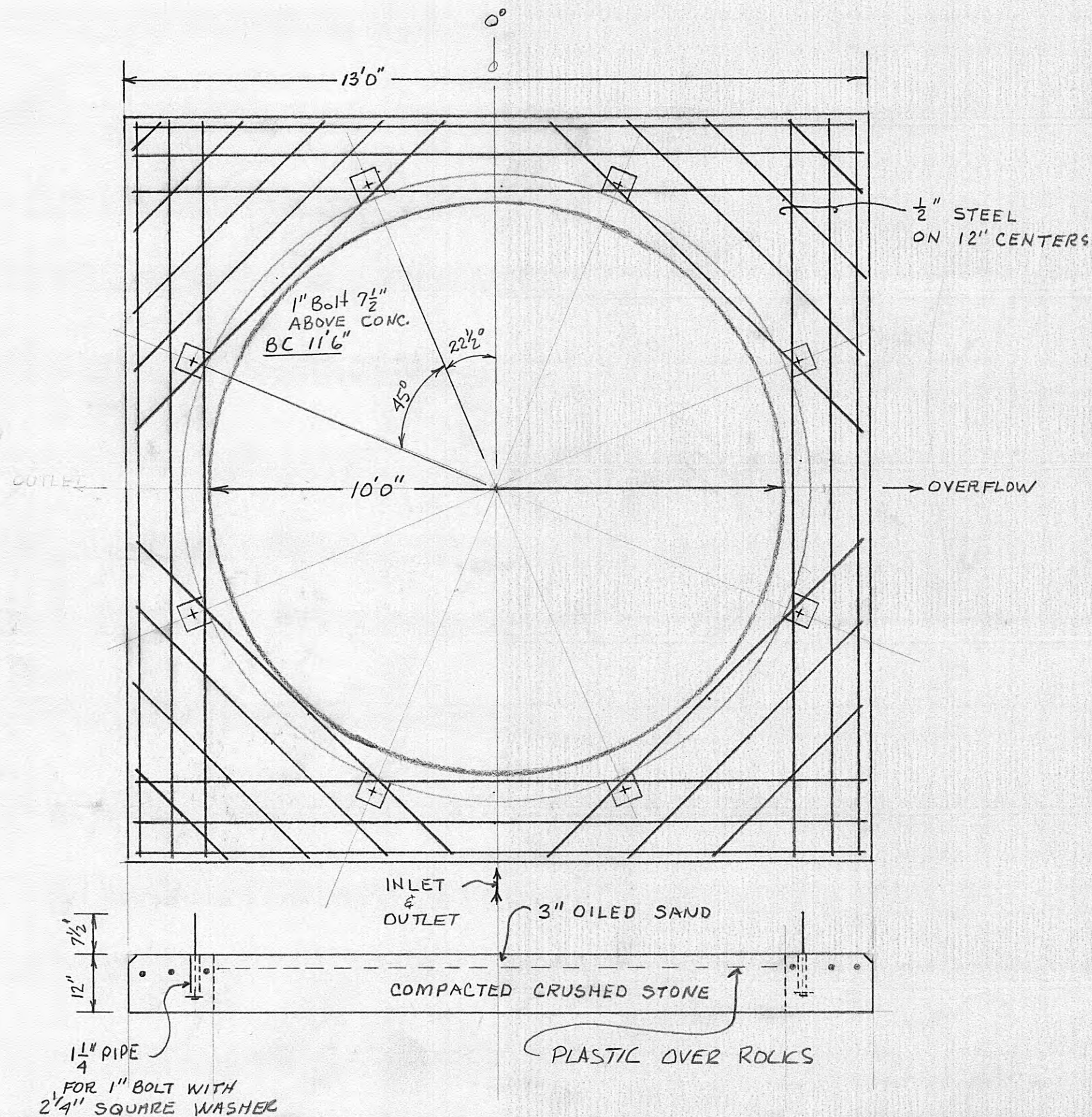
5+05
BULLINGTON
TAP

HARRIMAN UTILITY BOARD
SEWER LATERAL BOWERS &
BULLINGTON TENN 29

DATE 4-19-77

DWG. NO. 84-B

S-84-B



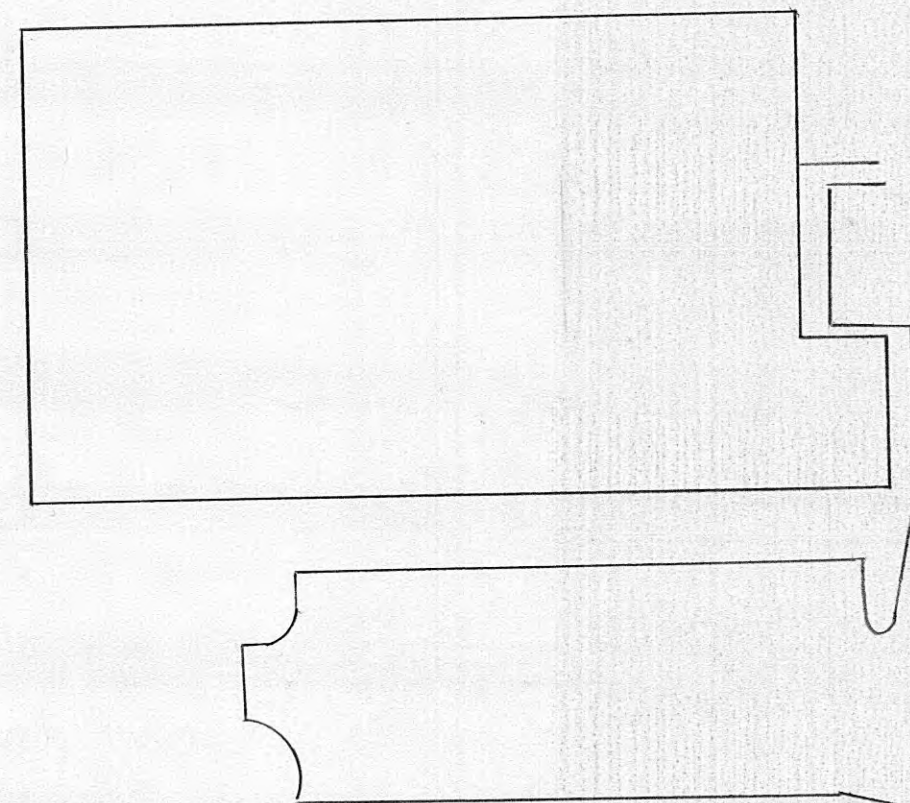
HARRIMAN UTILITY BOARD

BROWDER HILL RESIVOIR
BASE PREP. 25000 GAL

DWGN BY R.HALL CK BY A.G.S

DWG. NO. 70-B

P/L



SCALE
1"=50'

P/L

50'

GRAVITY TAP FOR ARMORY

8" W
4" SA

EASEMENT

15'

GAS R/W

RR R/W

RR

SOUTHERN

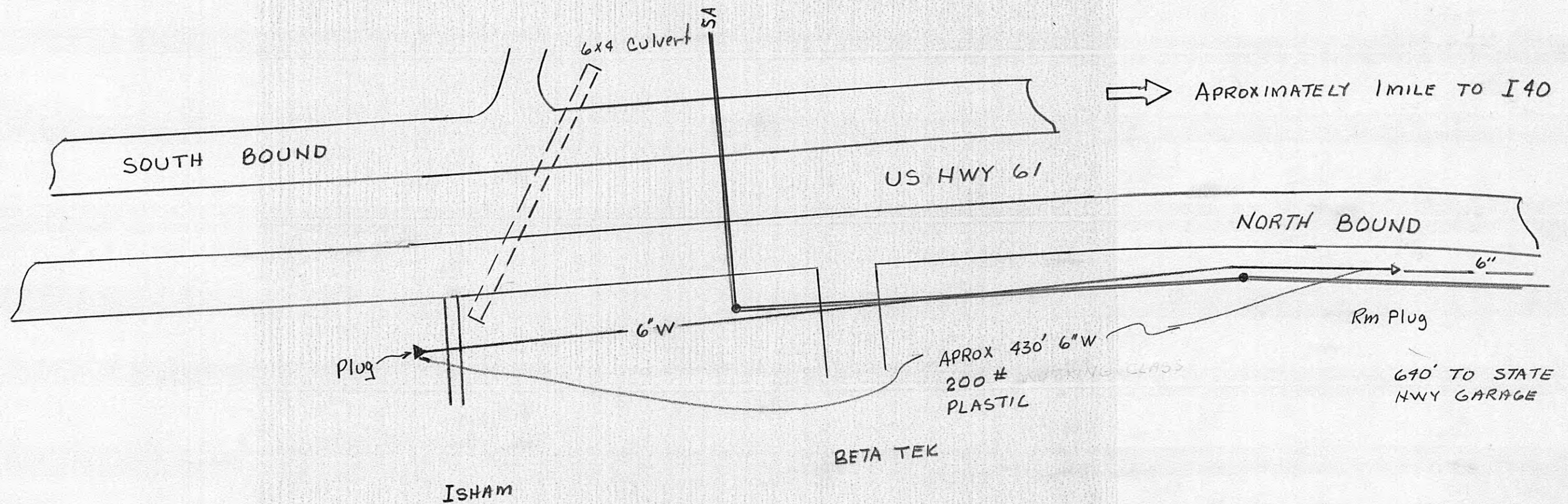
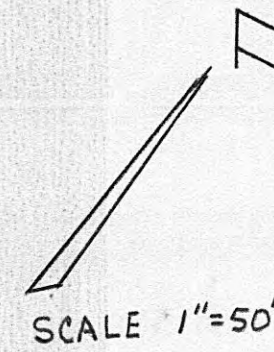
5.0'

INSTALL HYDROMATIC
PUMP STA. PER ATT.
SKETCHES
#50934

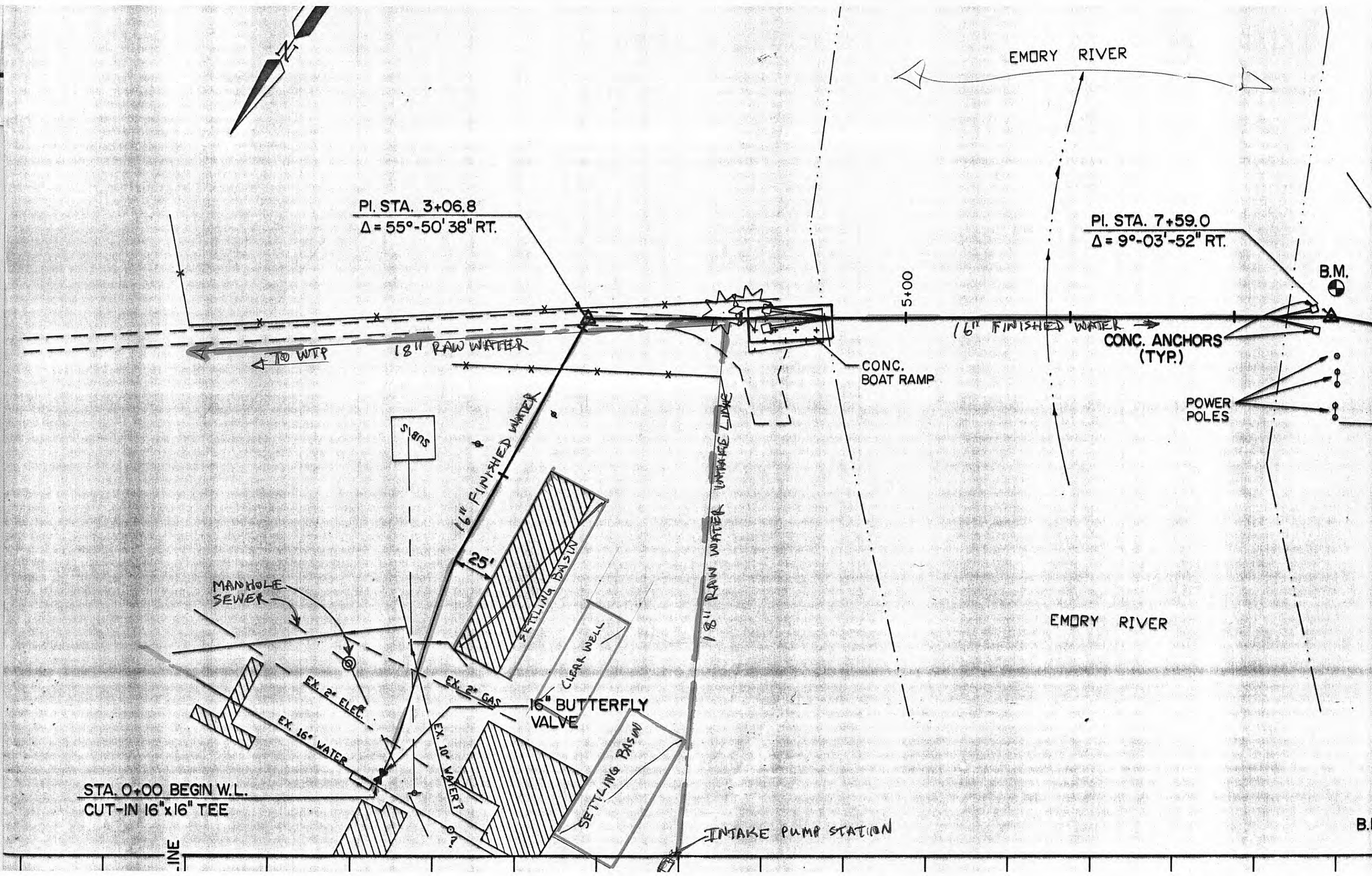
HARRIMAN UTILITY BOARD
RED KAPP PLANT
WATER AND SEWER EXTENSION

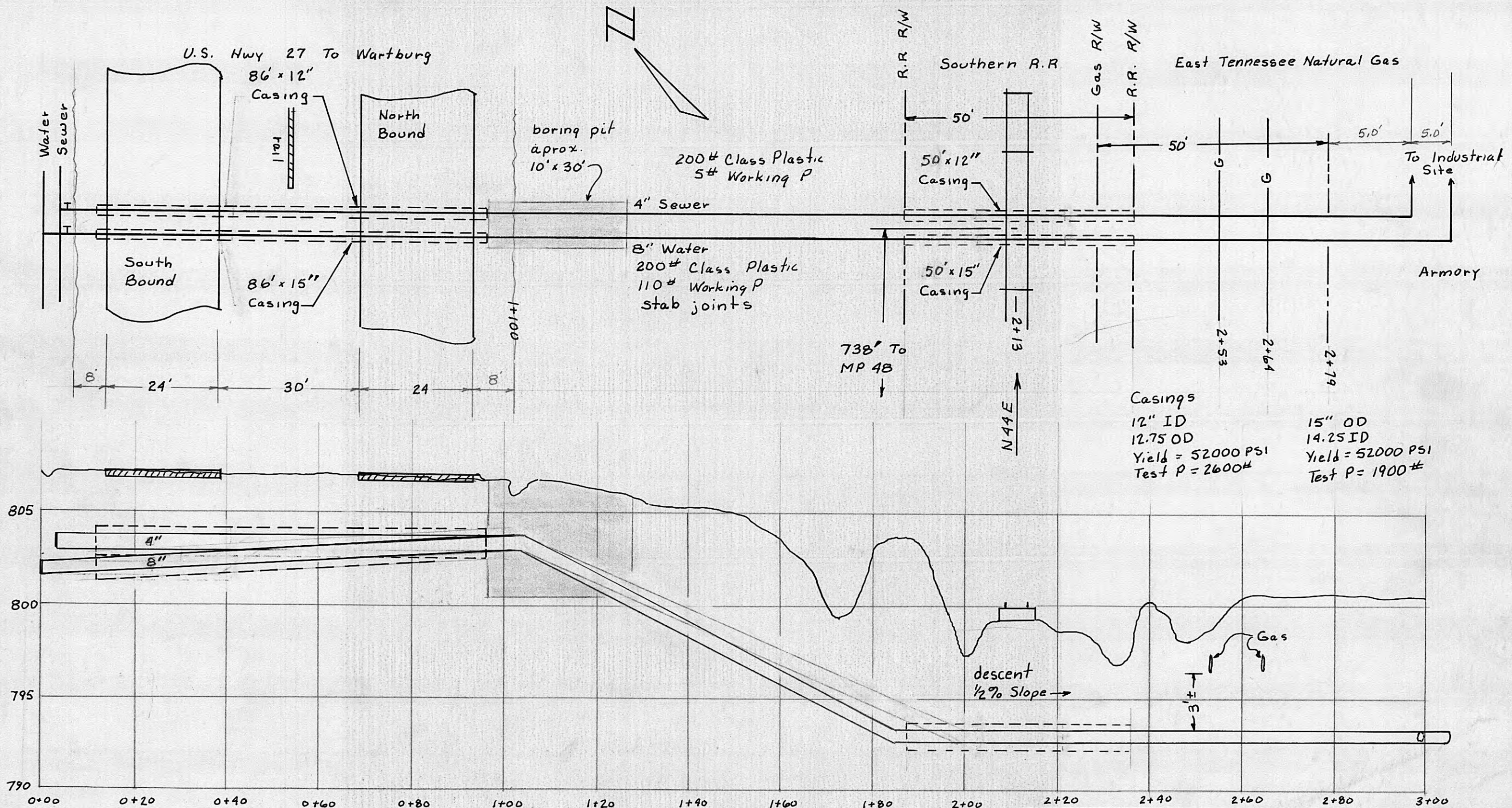
DATE 10-20-76	DWN. BY. RA	DWG. NO. 69-B
---------------	-------------	---------------

WS



HARRIMAN UTILITY BOARD		
WATER LINE EXTENSION TO SERVE ISHAM - S.R 61 - US 27 BEHIND BETA TEK		
	DWN. BY. RHALL	DWG. NO.
	DATE-9-21-76	62-B



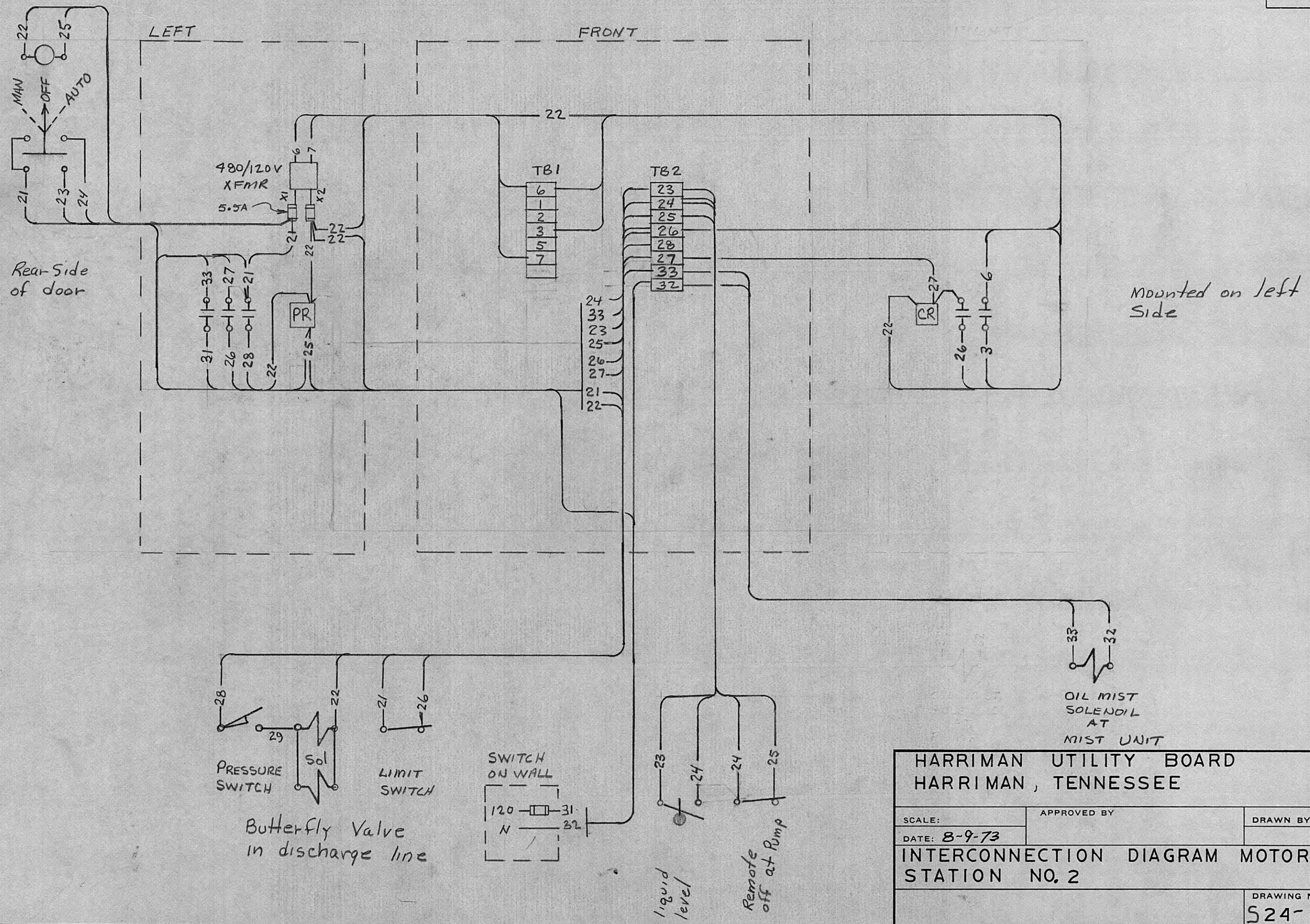


HARRIMAN UTILITY BOARD HARRIMAN, TN
WATER AND SEWER EXTENSION

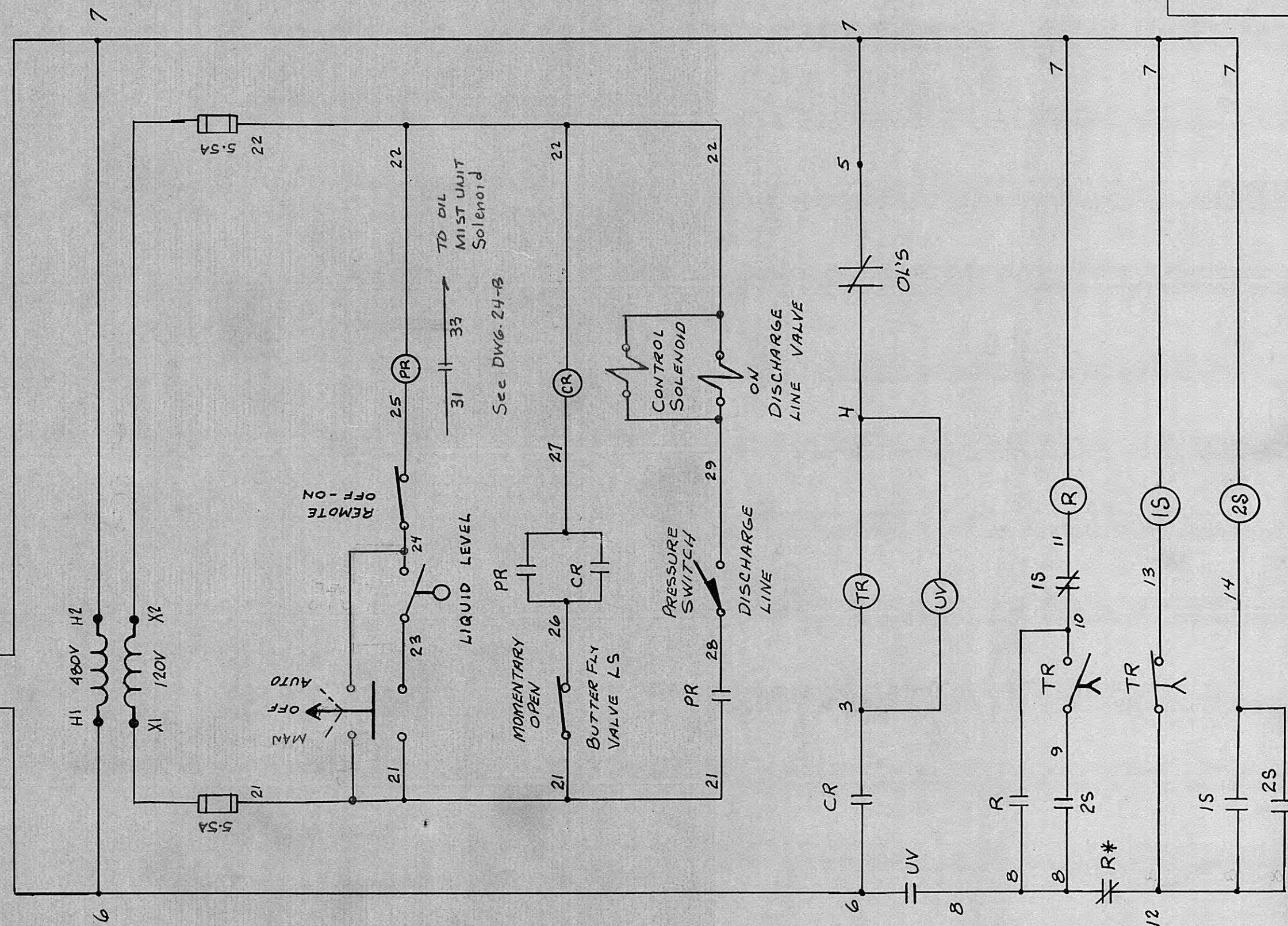
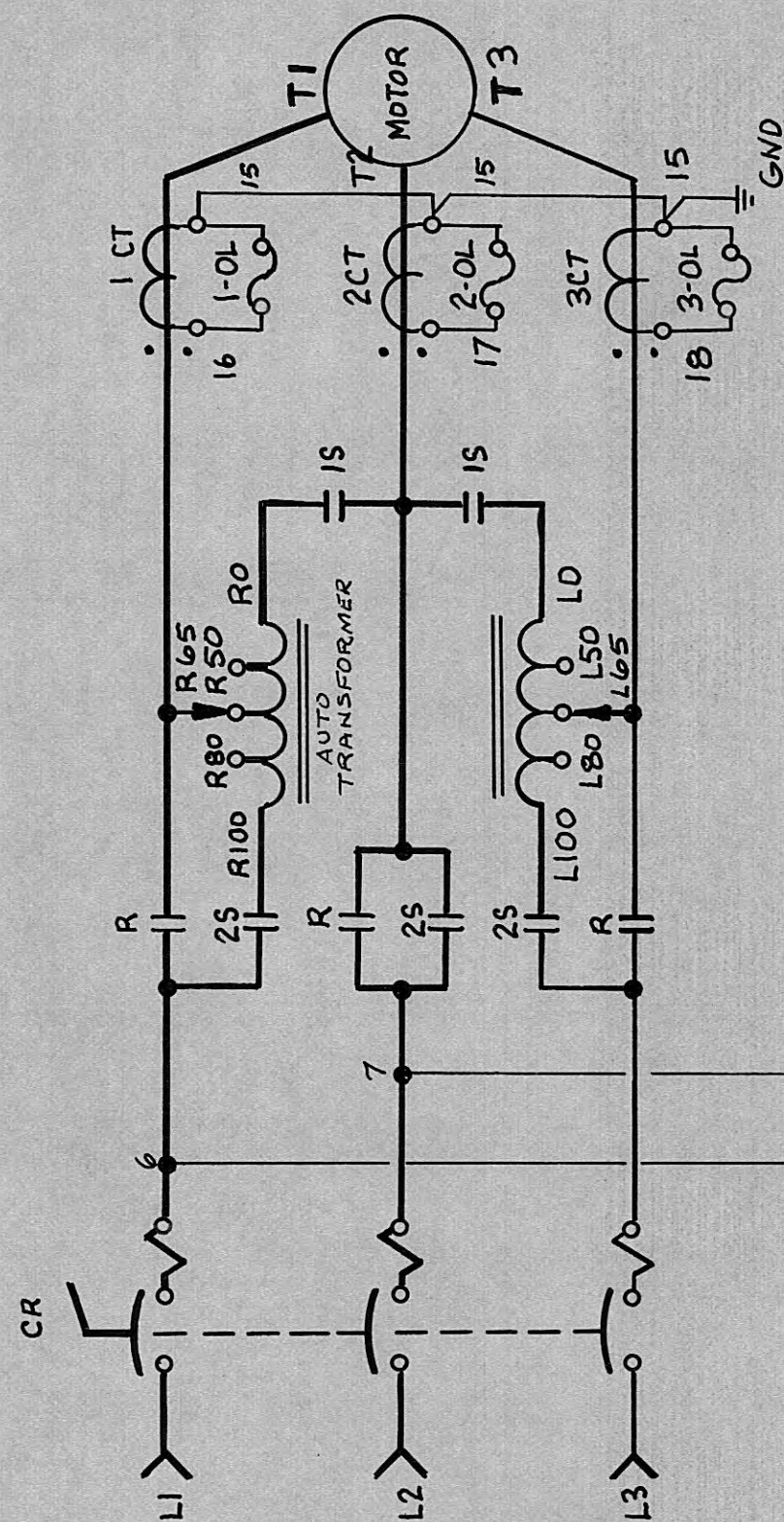
Scale 1" = 20'
1" = 5'

Dwg. By R.HALL
Date 2-27-76

DWG. NO.
WS-52-B



HARRIMAN UTILITY BOARD HARRIMAN, TENNESSEE		
SCALE:	APPROVED BY	DRAWN BY <i>RHALL</i>
DATE: 8-9-73		
INTERCONNECTION DIAGRAM MOTOR NO. 1 STATION NO. 2		
		DRAWING NUMBER 524-B



HARRIMAN UTILITY BOARD HARRIMAN, TENNESSEE		
SCALE:	APPROVED BY	DRAWN BY <i>R. HALL</i>
DATE: 7-20-73		
ELEMENTARY DIAGRAM MOTOR NO. 1 STATION NO. 2		
		DRAWING NUMBER S 23- B

* DELAYED BREAK CONTACT

TO
ROCKWOOD

US 27 SOUTH

HWY STA. NO.'S

269

270

271

TO
HARRIMAN

EXISTING
MANHOLE

TEXACO
PAVED
DRIVE

R/W

PVT. DR.
GRAVEL

US 27 NORTH

29'

PROPOSED
MANHOLE

R/W

STA. 0+00

STA. 0+36

STA. 0+97

STA. 1+42

STA. 2+64

STA. 2+82

STA. 3+45

100.00

92.50

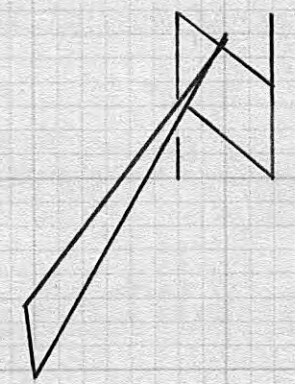
345' - 8" @ 0.4%

0+00

1

2

3



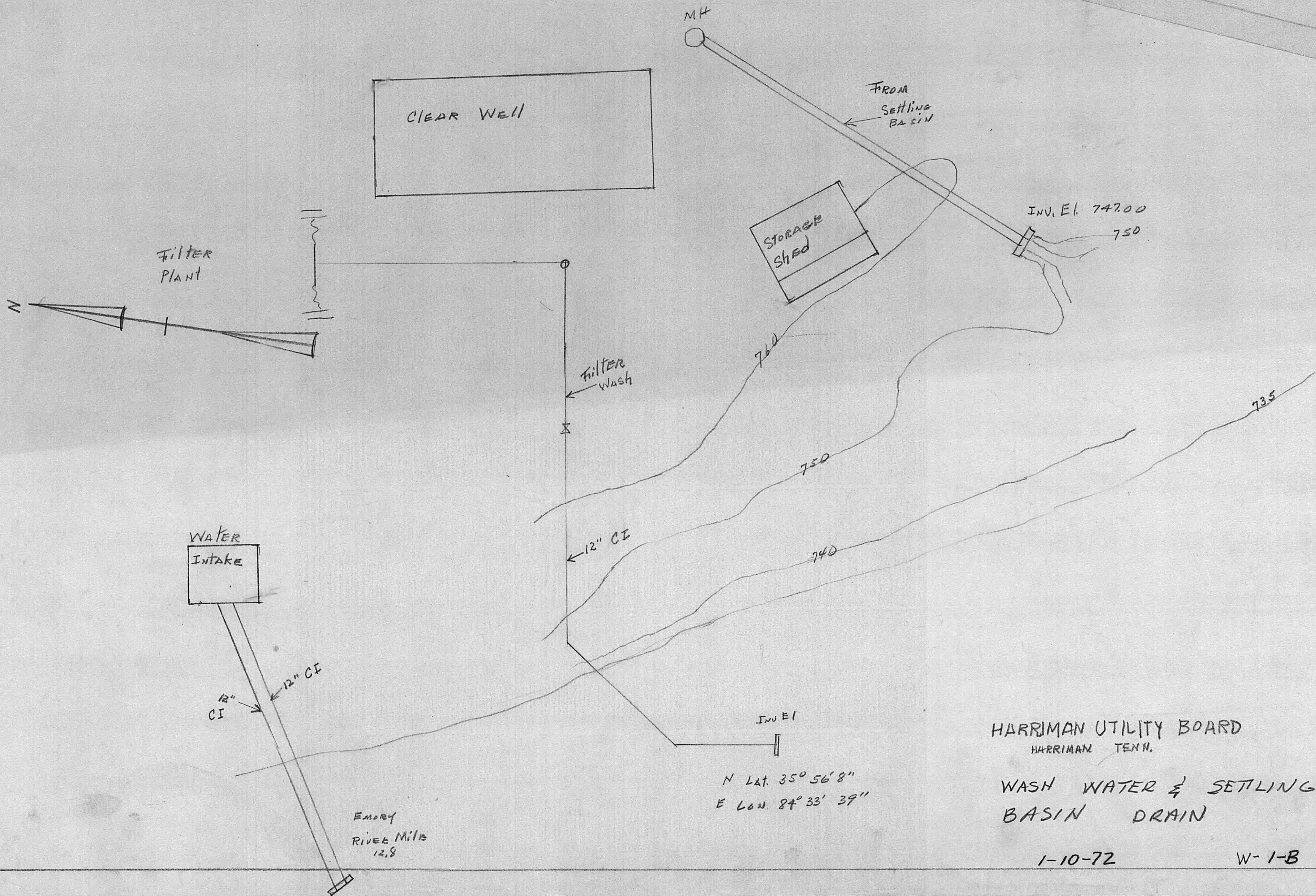
SCALE
1" = 50' HORIZ.
1" = 5' VERT.

HARRIMAN UTILITY BOARD
HARRIMAN TENNESSEE

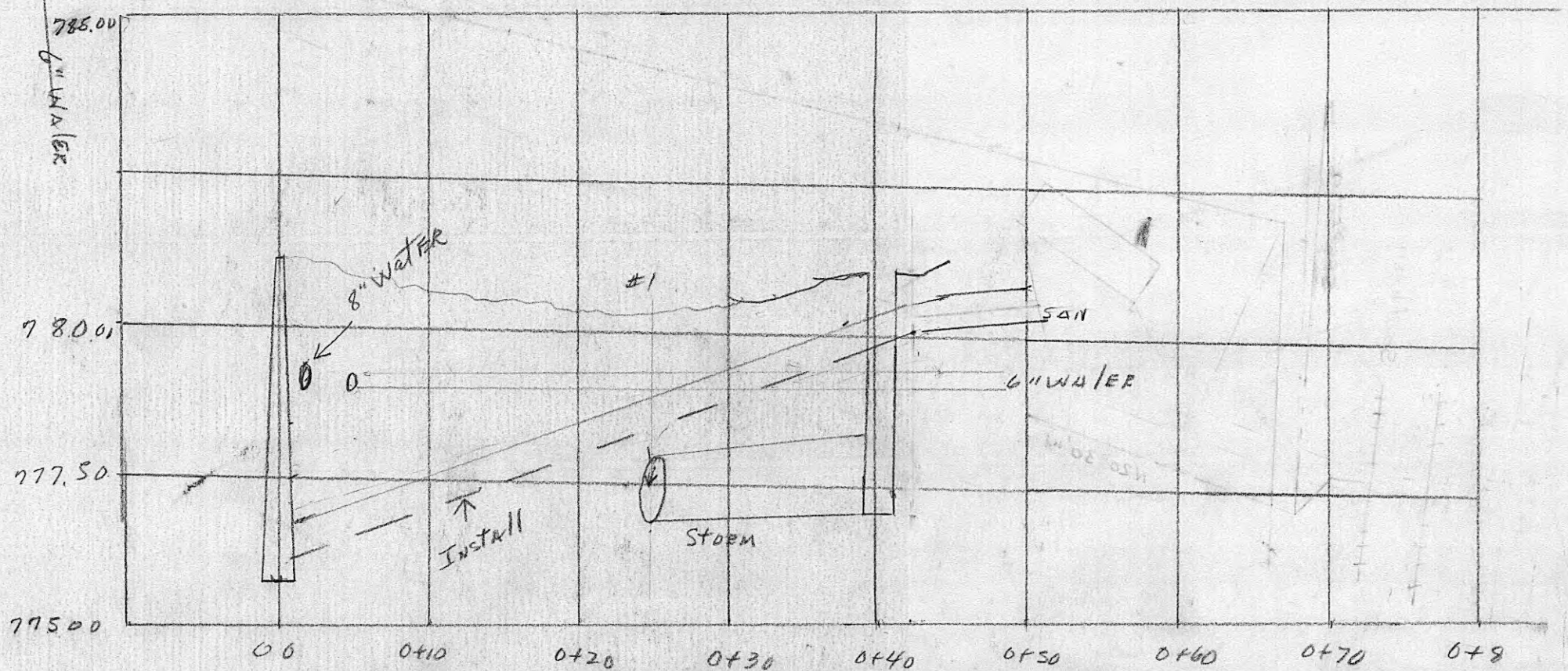
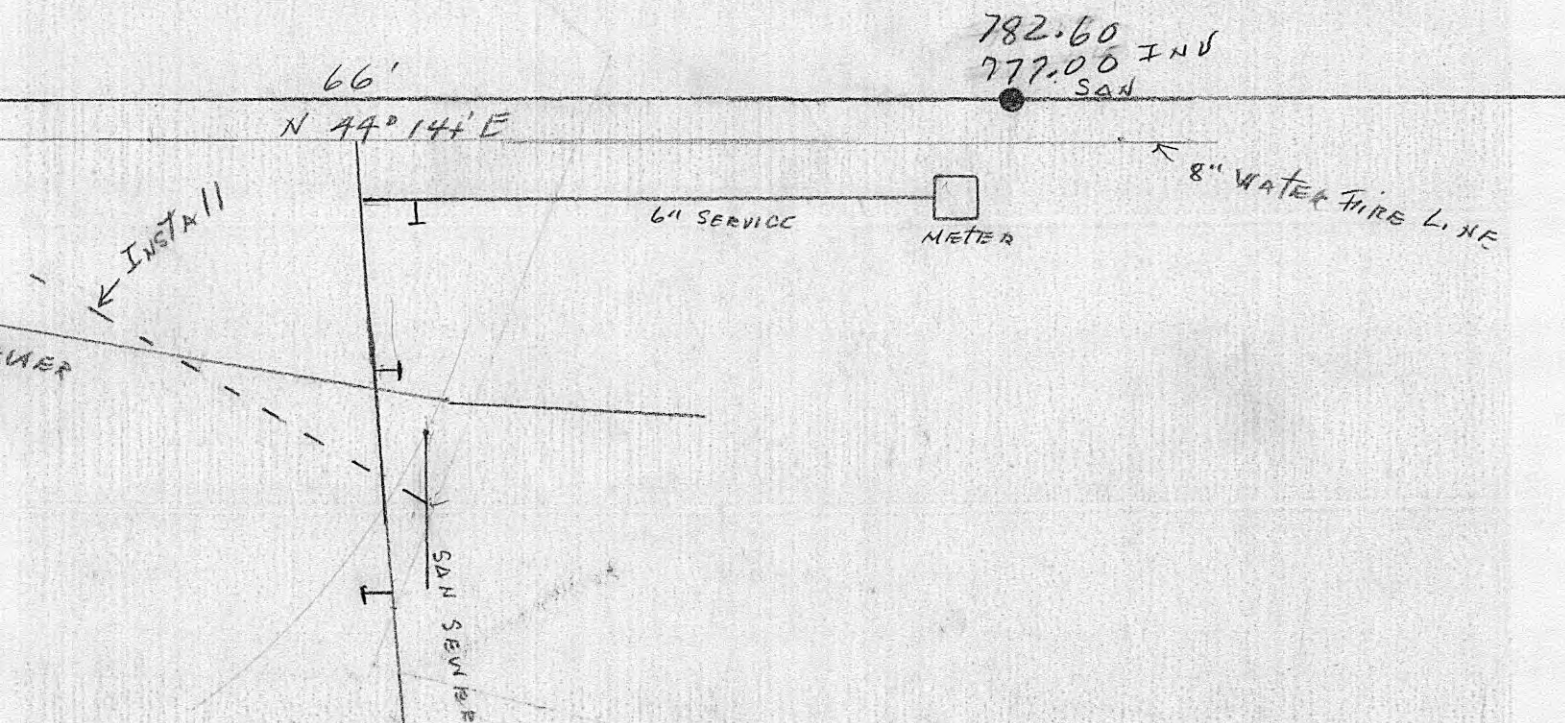
SEWER LINE EXTENSION TO
STANLEY COOK RES. AND
BRYSON SERVICE STATION

10-2-72 RAH

DWG. 18-7-B



HARRIMAN BYRR Mill
SEWER



35

36

ROY & MAE LARGEN
35-41

29Ac

36-1

3

36-2

5

I-40

GERALD LARGEN

35-40

44Ac

10Ac

PAUL
McCARROL

35-42

ELMER & RHODA
HAMILTON

36-8

15.5

36-9

4.5Ac

City limits

County Rd

JAMES ALLEN CALL

36-10

78.5Ac

GERALD LARGEN

45-43

89Ac

JOHN & BETTY

SISK

46-1

44Ac

45

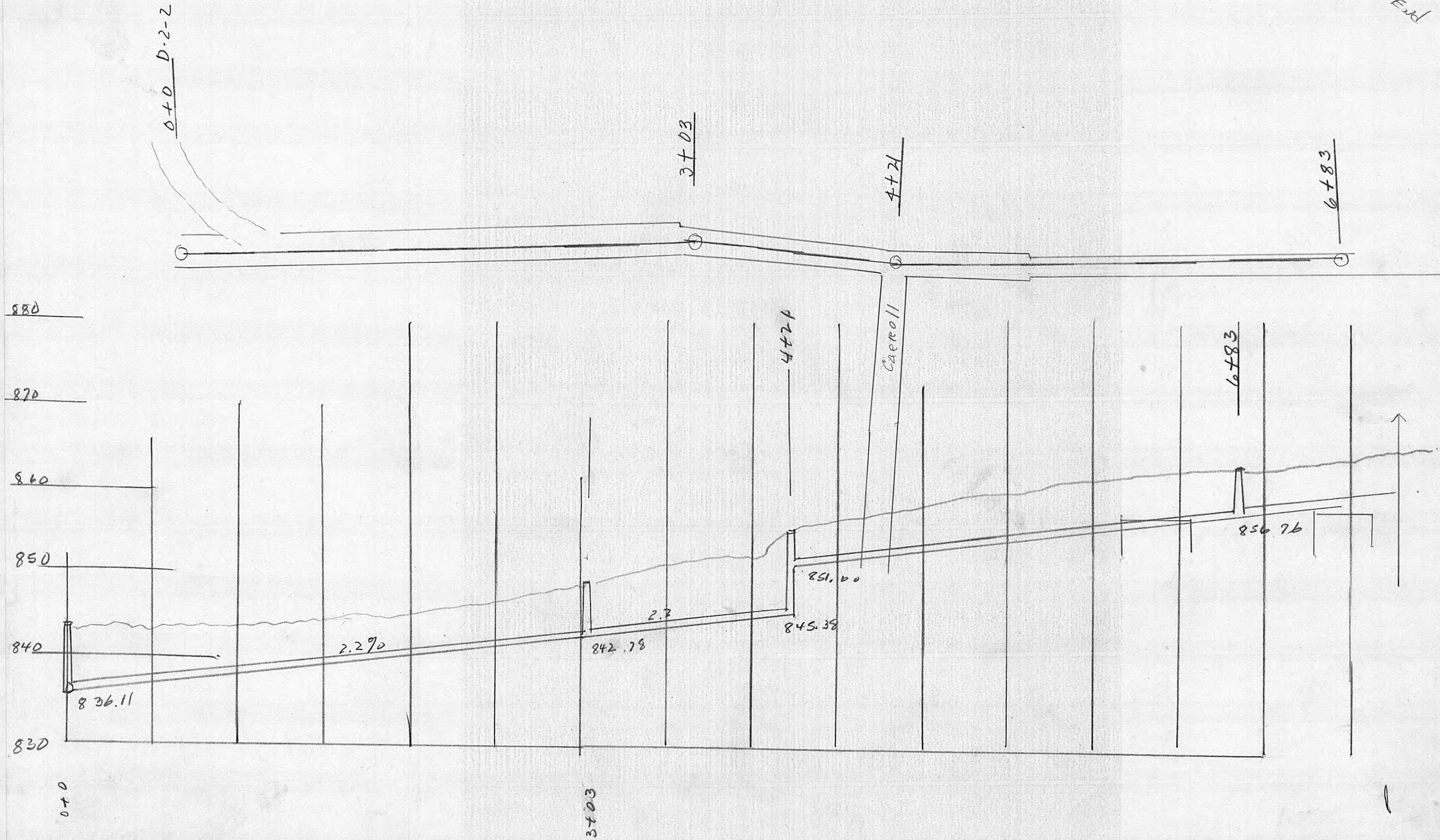
46

Chasteen
cut only flagged
trees - Trim others
See 203

A hand-drawn map or field sketch. At the top left, there's a vertical line labeled "203". To its right is a cloud-like shape containing the handwritten text: "Chasteen cut only flagged trees - Trim others See 203". Below this, a horizontal line runs across the middle. Above it, a wavy line is labeled "210" and has two small circles below it. Below the horizontal line, another wavy line is labeled "220" and also has two small circles below it. In the center, there's a point labeled "45-4" with a triangle above it. A dashed line goes down from "45-4" through a point labeled "40" to a point labeled "35-5" which has a downward arrow next to it. To the right of "45-4", there's a diagonal line segment labeled "10 AC" with several dots along it. Further right, there's a scribbled area labeled "YONG" and some more dots. At the bottom right, there's a circle containing a triangle symbol, with the word "Relocate" written below it.

Roland Marlow
CUT flogged free
trim others

Relocate

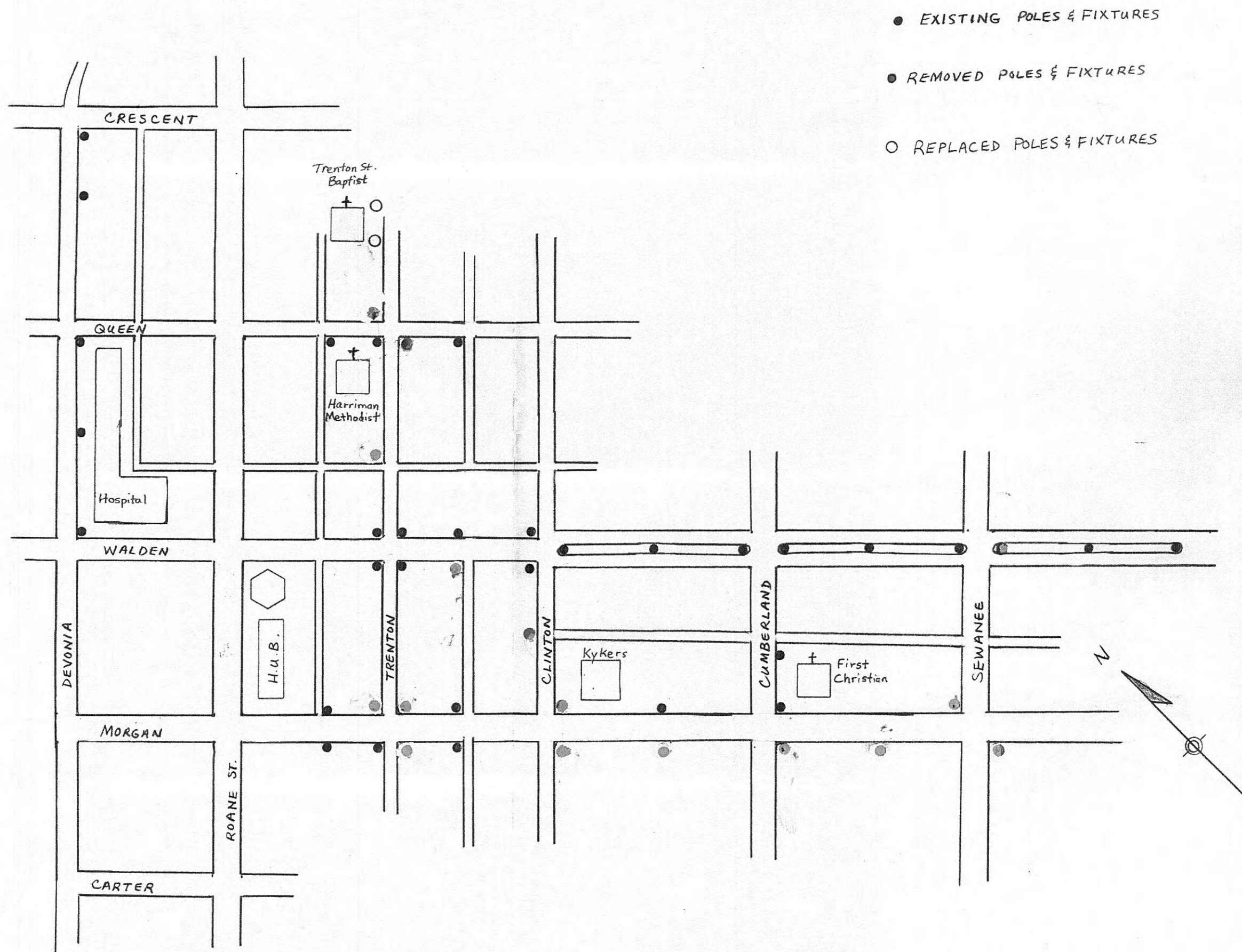


11+88 End

Material Required

STRUCTURE NO.	POLE	8'OA	795 DE	795 LUG	795 SLEV.	INS 2-6"	INS 3-6"	INS 6-10"	INS PIN	TIE 795	TIE 1/2 ACSR	10"ANC 1/2" GUY	SPAN GUY	3/0 ACSR D.E.	3/0 GD 951A DE	3/0 CCL LUG	3/0-3/0 CONN.	2-1000 255 LUG	1000-1000 CONN	1000-1/0 CONN	2-1000 DE CLAMP	200A C.O.	400A CO	1/2 ACSR D.E.	C.T. 2000 3	P.T. 2400 120	795 AAC	1000 CU	3/0 ACSR	1/0 ACSR		
10		3	3	6																												
1	50-3	1	6	6			6						2																			
2	50-3	2	6	6			6		2	2		4																				
3	-	3				6			8	6	2														6							
16	-	1				3							1												3							
4	50-3	3	6	6		6	6		2	1	1	3											3		6							
5	40-3	2	3	3		9							1	3							3											
12	30-4											1	1																			
6	50-3	2	6	6		6			1	1		2	2											3								
7	50-3	1	6	6									2																			
11	-		3	3		3																										
13 L	-					3																3				2	2					
14 L	-		3	12			3																									
14 H	-		3	6				3																								
8	60-2		3					9				1		6		6	6															
9	60-2							9				1		9			9															
13 H								3				1		3		3	3															
15																		45	12	12	6											
		15	48	60	15	36	21	24	13	10	3	13	9	18		9	18	45	12	12	12	3	3	15	2	2	3300'	1000'	300'	1000'		

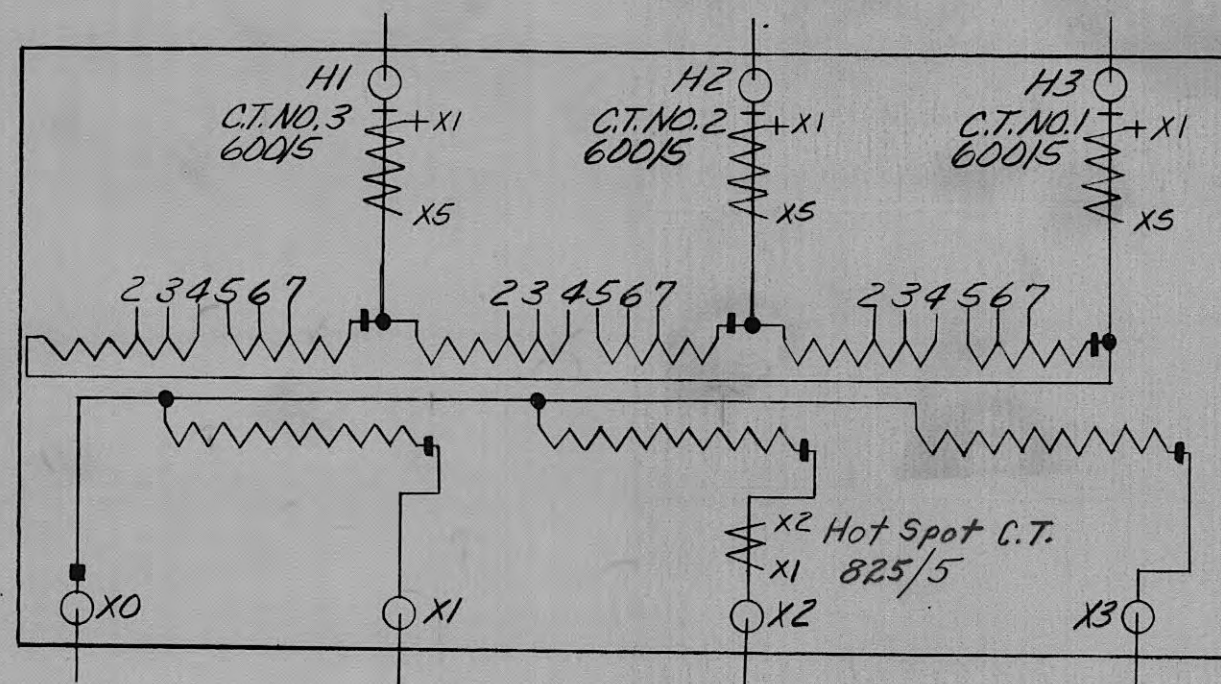
Tennessee Forging Steel



WHITEWAY LIGHTING SYSTEM

WM-4550

HIGH VOLTAGE



LOW VOLTAGE

VOLTAGE CONNECTIONS									
VOLTAGE SETTING NO. BY DATE			VOLTS	AMPERES AT-KVA				TAP CHANGERS	
				10001	13333	16667	18667	POSITIONS	CONNECTS
HIGH VOLTAGE (LINES ON H1, H2, H3)									
A			72400	79.6	106	133	149	1	5-4
B			70600	81.6	109	136	153	2	4-6
C			68800	83.8	112	140	157	3	6-3
D			67000	86.1	115	144	161	4	3-7
E			65200	88.5	118	148	165	5	7-2
LOW VOLTAGE (LINES ON X1, X2, X3 NEUT. ON X0)									
F			13090	441	588	735	824	—	—

Bk. #2

LOCATION	4	5	6
LOCATION	1 N.E. Harriman, Tenn. 69KV	2	3

ENGLISH ELECTRIC TRANSFORMER

SERIAL NO. 1854/0200

CLASS: 0A/FA/FA 60 HZ.

RATING VOLTS: 68800-7560/13090Y THREE PHASE SUB. POLARITY

RATING KVA: 10001-0A/13333-FA/16667-FA, CONT.

55°C RISE

RATING KVA: 11200-FA/14900-FA/18667-FA, CONT.

65°C RISE

MFR. L. SPEC. 30642

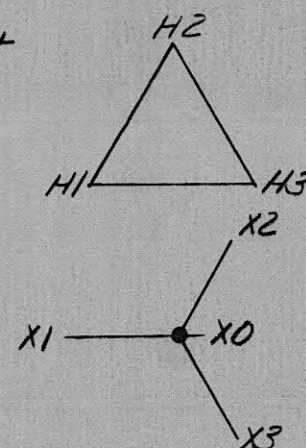
TVA REQ. NO. 68P2-8756

TEST DATA AT 75°C

KV	MVA	LOSSES IN KW			OWN BASE			100MVA 3Φ			% REGULATION		
		CORE	COPPER	TOTAL	%Z	%X*	%R*	%X*	%R*	I.O.P.F.	.9P.F.	.8P.F.	
68.8-13.09	10	11.10	40.42	51.52	7.0	6.99	0.4	69.90	4.000	0.64	3.60	4.66	
D.C. RESISTANCE % EXEC. CURR. BASIC INSL. LEVELS TEMPERATURE TEST DATA- °C													
WINDING	OHMS	90%V	0.157	ITEM	FULL WAVE	MVA	RISE BY RESIS.		AMB	TO OIL			
H.V.	1.81	100%V	0.246	H WINDING	350		HV	LV	ROOM	RISE			
L.V.	.0594	110%V	0.387	X WINDING	110		10	31.5	33.5	-	29.5		
* Calculated by TVA							16.67	40.3	41.3	-	34.7		

Tap
Changer

Cooler
Control
Cabinet



APPROXIMATE WEIGHT:

Core and Coils 28000 lbs.
Tank and Fittings 21200 "
Oil (2470 gals.) 17800 "
Total 67000 "

REFERENCE:

Transformer Acc. Diag.
Mfr's. Drawings
Mfr's. N.P. Diagram

WL-4551
XA-1775
5962F8492

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PLANNING AND ENGINEERING

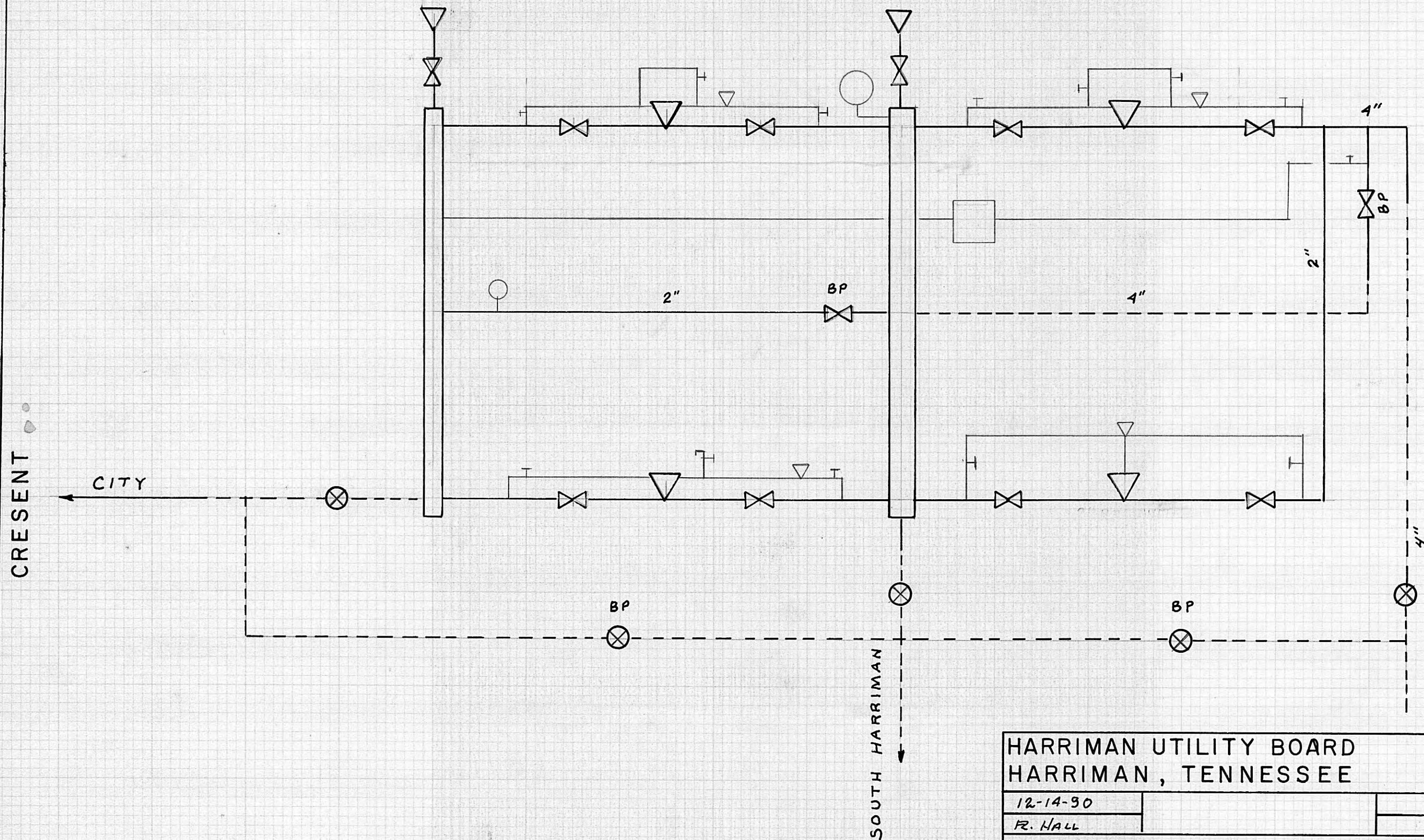
TRANSFORMER NAMEPLATE DIAGRAM
ENGLISH ELEC, 10001/13333/16667 KVA, 3Φ
68.8-7.56/13.09YKV

REV NO	DATE	DSGN	DRWN	CHKD	SUPV	APPD
DSGN	LMG					
DRWN	MFA					
CHKD	ERH - RE					

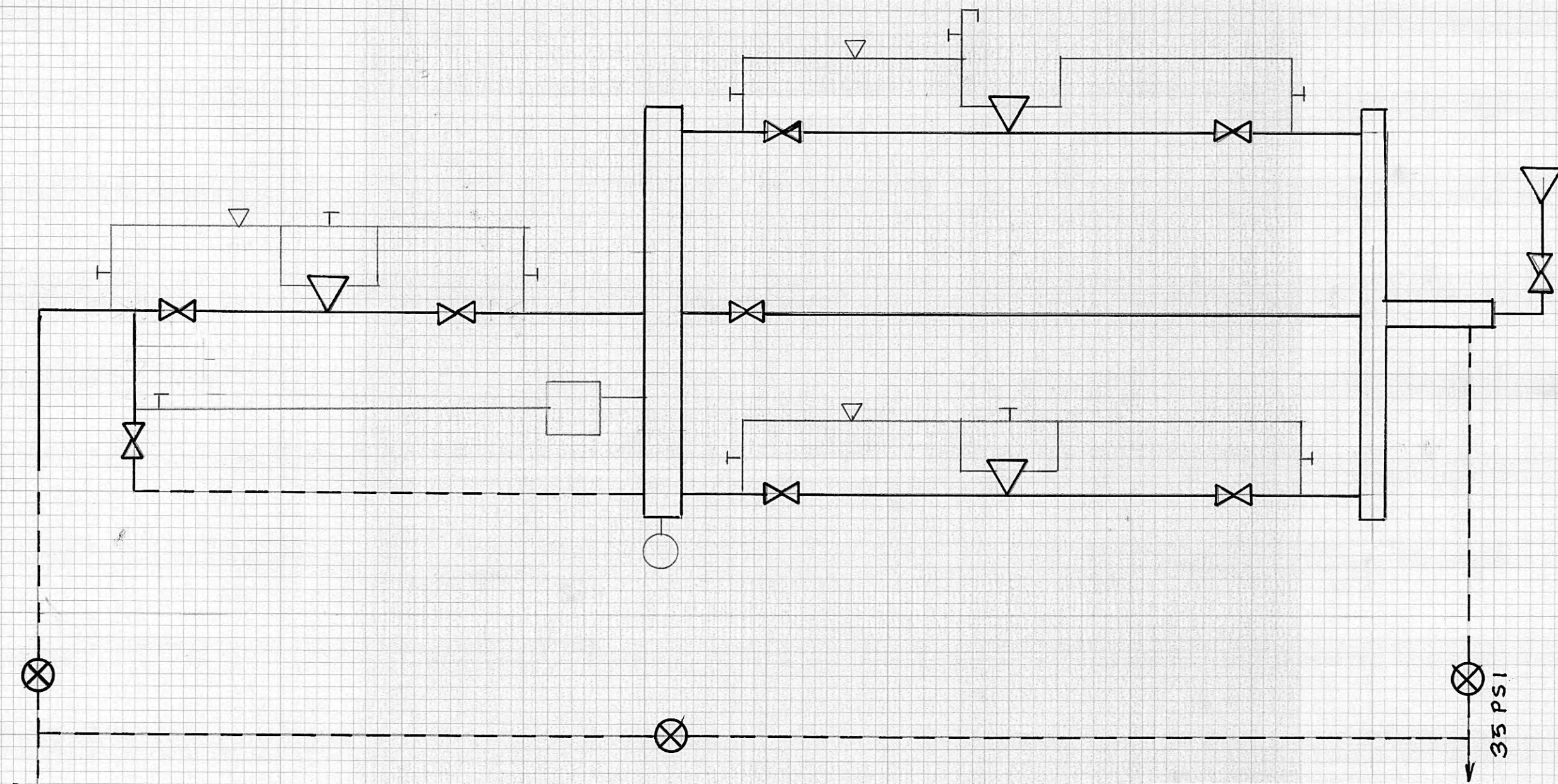
DATE	12-22-70	SUBMITTED	APPROVED	SHEET 1 OF 1 SHEETS
SCALE	None	CLASS CODE	WM-4550	

MICROFILMED 0

OK



HARRIMAN UTILITY BOARD		
HARRIMAN, TENNESSEE		
12-14-90		
R. HALL		
REGULATOR STATION NO. 1		
SEWANEE & CRESCENT		G-196-B



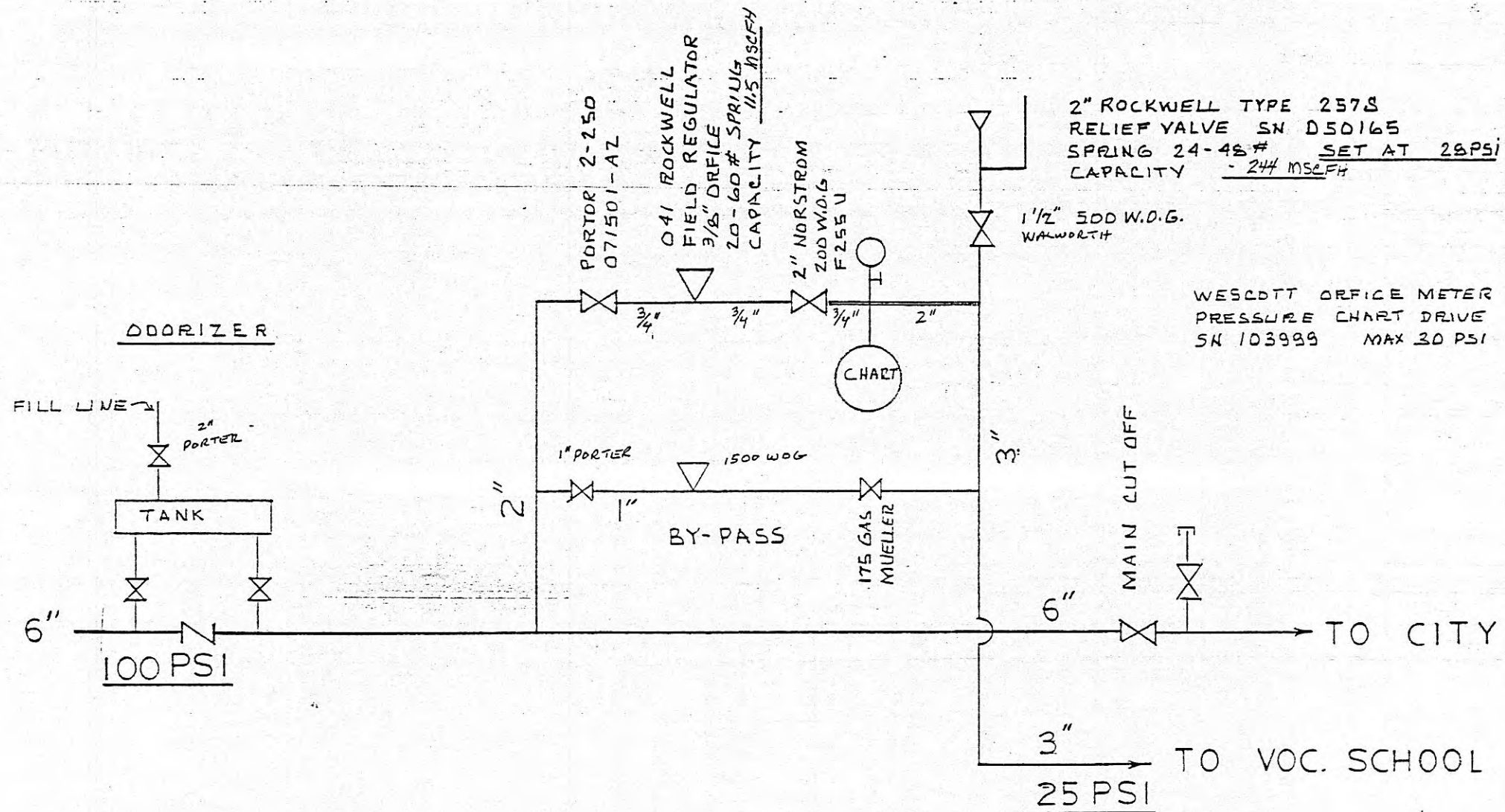
ALLEY

HARRIMAN UTILITY BOARD
HARRIMAN, TENNESSEE

REGULATOR STATION NO. 2

SEVIER & ROANE AVE.
WALNUT HILL

G-197-B



HARRIMAN UTILITY BOARD
HARRIMAN, TN

10-24-1990

RHALL

REGULATOR STATION NO. 4

NEXT TO ETNG METERING AT ROANE
WDSIERY - OLD HWY 61

G-193-B