

Hocking Hills State Park Water System
Mapping of Distribution System and
building interior plumbing
(per House Bill 512 requirements)

PWS ID OH3736411

Class 1 Ground Water Treatment Plant

Class 1 Distribution System

Nontransient Noncommunity

Population served: 3030

19852 State Route 664 South Logan, Ohio

Operator of Record: Eric Borchers 740-253-5865

Operator: Randy Caw

Operator in Training: Jeremy Kelber

Treatment Plant Operations Manager: Greg Masterson

Water/Wastewater Administrator: Victor Reverendo

Original date prepared: Feburary 2017

Report goal and user information:

The purpose of this report is to comply with House Bill 512, by identifying and locating the areas of the distribution system and the buildings connected to it that are known and likely to contain lead lines or provide proof of the absence of lead lines. The Hocking Hills State Park Water System is made up of cast iron pipe main distribution lines and copper pipe used as building interior plumbing with various types of plastic pipes used during repairs or additions to the water system. Proof of the use of both cast iron mains and interior copper pipes and not lead service lines are given throughout the plans provided. Particularly on page 4 in the distribution section, M.J.C.I.P (mechanical joint cast iron pipe) is being described as being used. Also highlighted field notes of water line breaks describe 3", 4", 6", and 8" cast iron pipes. In no cases has a lead main or service line been described in any plans, notes or known by any employee working directly with water line repair.

To locate an area of interest in the "Buildings" section of the report refer to the map in the beginning of "Buildings" section for areas labeled as A,B,C etc. You will find at the bottom and top of each page in the "Building" section a corresponding letter. Plumbing diagrams follow a short description of each building.

To locate areas of interest in the "Distribution" section of the report refer to the map in the beginning of the "Distribution" section for areas labeled with numbers 1,2,3 etc. You will find at the bottom of each page a corresponding number.

Note:

There is no significance of the colors used to delineate the water lines in the plans provided. All of the plans used are also used in the field and include notes and assorted highlighting colors from past uses. There were no lead lines found in the entire system and no records of any being installed.


**VERIFICATION FORM FOR COMMUNITY PUBLIC WATER SYSTEMS
CLAIMING NO LEAD SERVICE LINES**

The owner or operator of all community public water systems must identify and map areas of their distribution system that are known or are likely to contain lead service lines. Systems must submit a copy of the applicable map to the Ohio Department of Health and the Ohio Department of Job and Family Services. Systems must also submit a report to the director containing at least both of the following: (1) The applicable map with narrative, and (2) A list of sampling locations used to collect samples as required by Ohio Revised Code (ORC) Section 6109.121 and any rules adopted thereunder, including contact information for the owner and occupant of each sampling site.

Should a water system determine no lead service lines exist in their distribution system, they must provide information stating they reviewed, at the minimum, historical permit records and local ordinances, distribution maintenance records and information pertaining to installation dates or materials for all services lines. This information must be verified below.

I HEREBY CERTIFY THAT THE FOLLOWING METHOD(S) WERE USED TO DETERMINE NO LEAD SERVICE LINES EXIST IN THIS WATER SYSTEM'S DISTRIBUTION SYSTEM, AS REQUIRED BY ORC 6109.121(F):

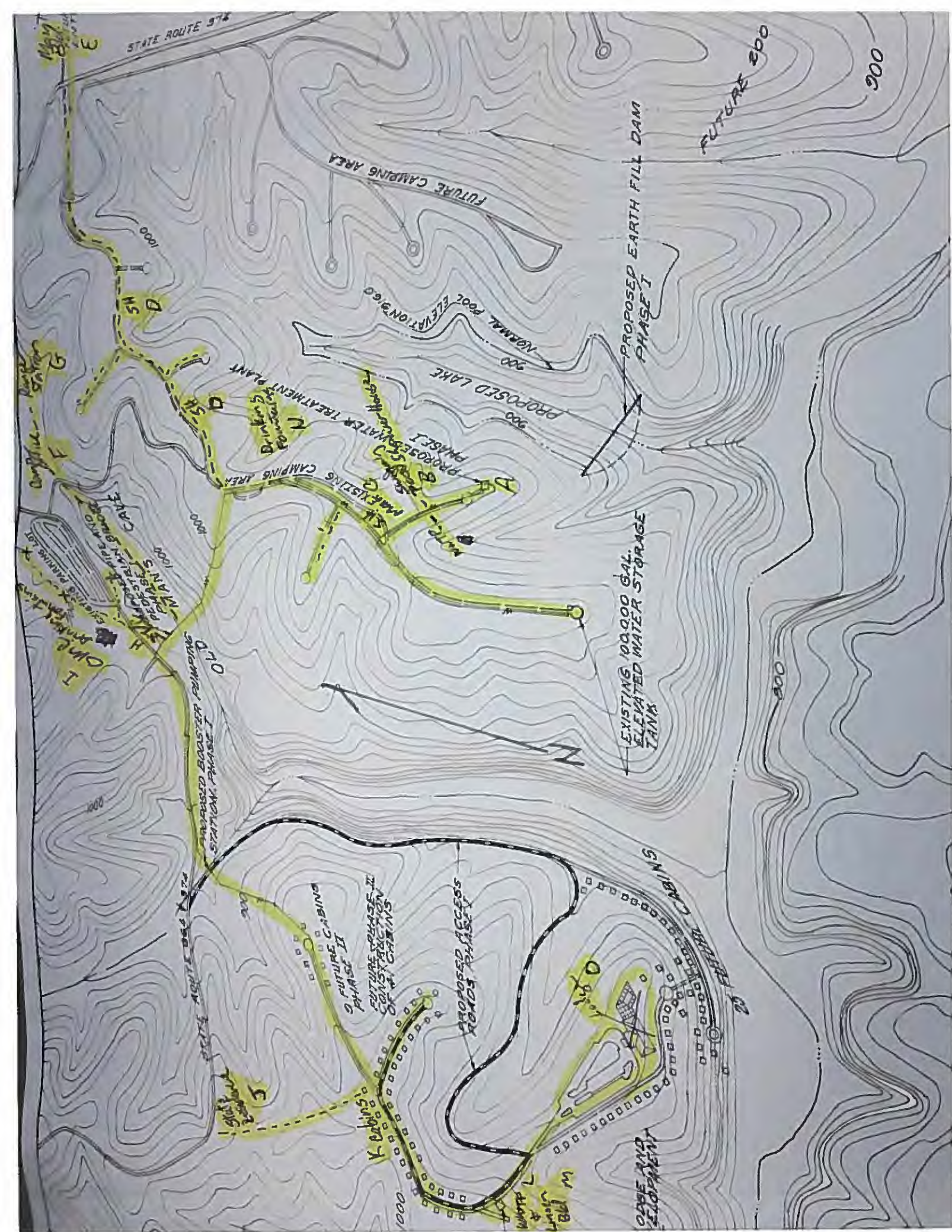
LEAD SERVICE LINE VERIFICATION
<p>This PWS states they have no lead service lines and has reviewed the following information (select one or more of the following):</p> <ul style="list-style-type: none"><input type="checkbox"/> Historical permit records and/or local ordinances<input checked="" type="checkbox"/> Distribution maintenance records (i.e. meter replacement, waterline break repairs)<input type="checkbox"/> Information pertaining to installation dates for all service lines (i.e. after 1986 when lead services lines were banned)<input type="checkbox"/> Service line material of all service lines is known (i.e. all service lines are known to be PVC)

<div style="text-align: center;"></div> <div style="border-top: 1px solid black; padding-top: 5px;">Signature of Responsible Person</div>	<div style="text-align: center;"><u>2/27/17</u></div> <div style="border-top: 1px solid black; padding-top: 5px;">Date</div>	<div style="border-top: 1px solid black; padding-top: 5px;">PWS NAME: <u>Hocking Hills State Park</u></div> <div style="border-top: 1px solid black; padding-top: 5px;">PWS ID: <u>OH 3736411</u></div> <div style="border-top: 1px solid black; padding-top: 5px;">COUNTY: <u>Hocking</u></div>
<div style="display: flex; justify-content: space-between;"><div>ERIC C. BORCHERS Treatment Plant Coordinator</div><div></div></div> <div style="border-top: 1px solid black; padding-top: 5px;">Printed Name and Title of Responsible Person</div>		

For Ohio EPA use only:

Date Verification Rec'd: _____

Buildings Section



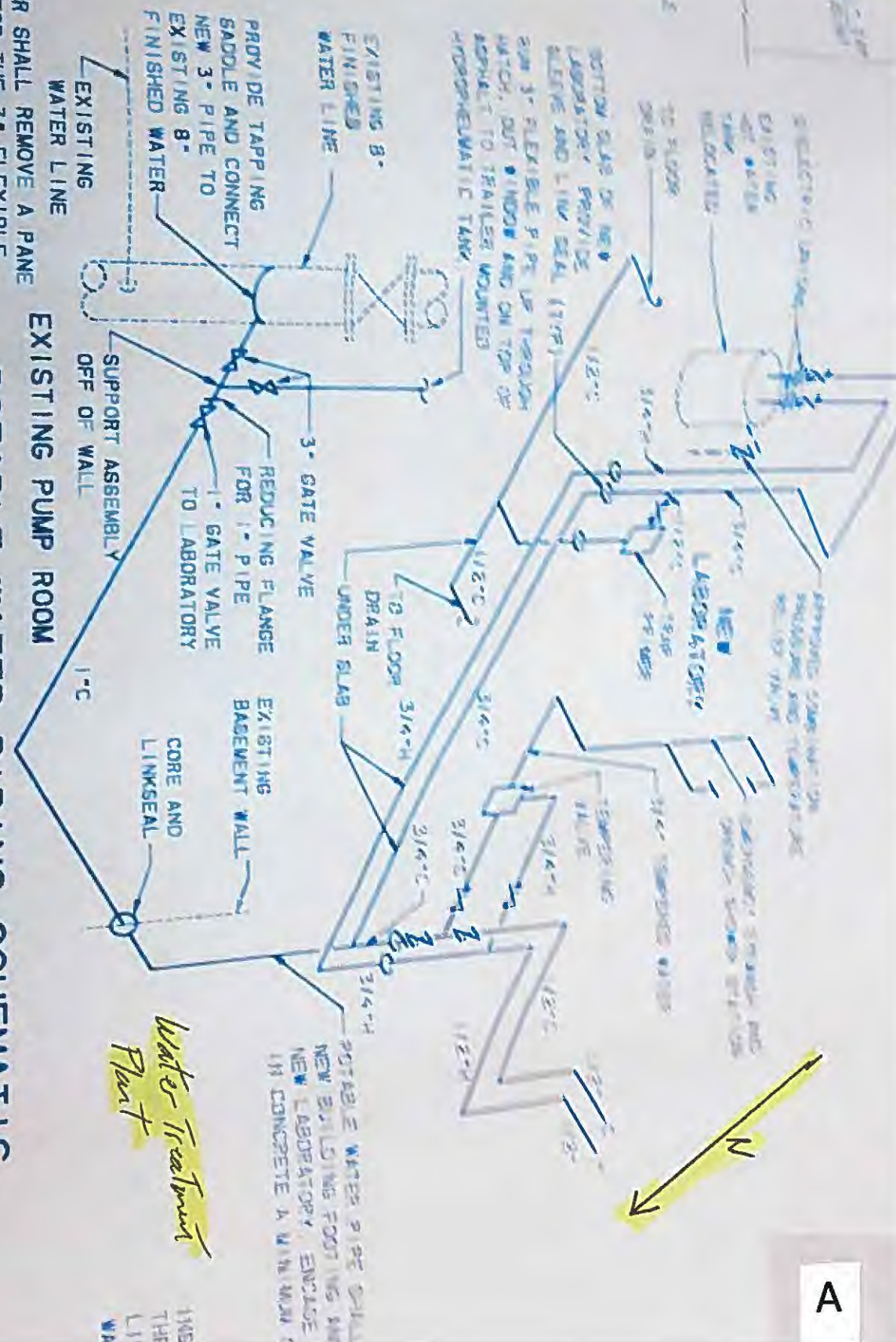
“A”

Hocking Hills Water Treatment Plant

- The water treatment plant was originally built around 1972 before any lead limits.
- In 1995 the water plant went through a major renovation including the pumping. Although some of the original plumbing is still intact.
- The plumbing is 100% copper pipe with some solder not specified as lead free and some installed after the 1986 lead limit.

A

FACTURER: P. H. BAKER
INC



NOTE

CONTRACTOR SHALL REMOVE A PANE OF GLASS FOR THE 3" FLEXIBLE PIPE TO GO THROUGH. MAKE OPENING WEATHERPROOF AND REPLACE GLASS AT END OF PROJECT

POTABLE WATER PIPING SCHEMATIC

NOT TO SCALE

Water Treatment Plant

SOURCES

HOCKING HILLS STATE PARK

UPGRADE POTABLE WATER SUPPLY SYSTEM

WATER TREATMENT AND DISTRIBUTION

DESIGNED BY	B & R	JOB NUMBER:	05
DRAWN BY	MR	SCALE:	AS SHD
CHECKED BY	GR	DATE:	3/31/84
APPROVED BY	GR	REVISED:	

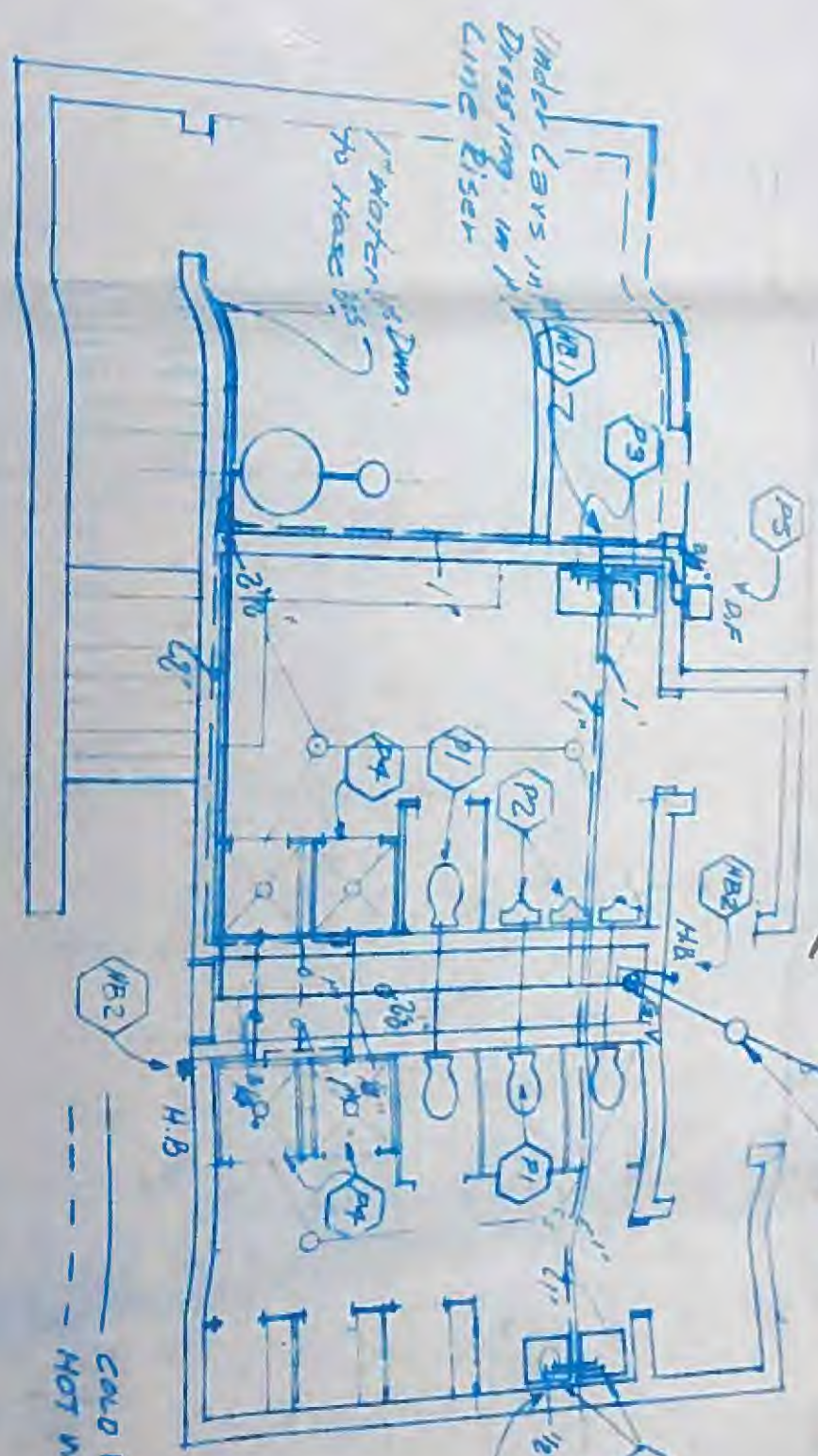
“B”

Hocking Hills State Park Campground Swimming Pool Shower House

- The Pool Shower House is located in the HHSP Campground off St. Rt. 664 in Benton Township, Hocking County.
- Built in 1972 before any lead limits.
- The plumbing consists of copper pipe with a mix of PVC used for repairs throughout the years.
- The solder used is not specified as lead free.

B

LA 1001 WASTE



4" Self Draining Valve By Condensate I
w/ 10 Co. Pt. Drains to pty. Drains

Under Lays
Womens Dressing
C.N. Line Eiser

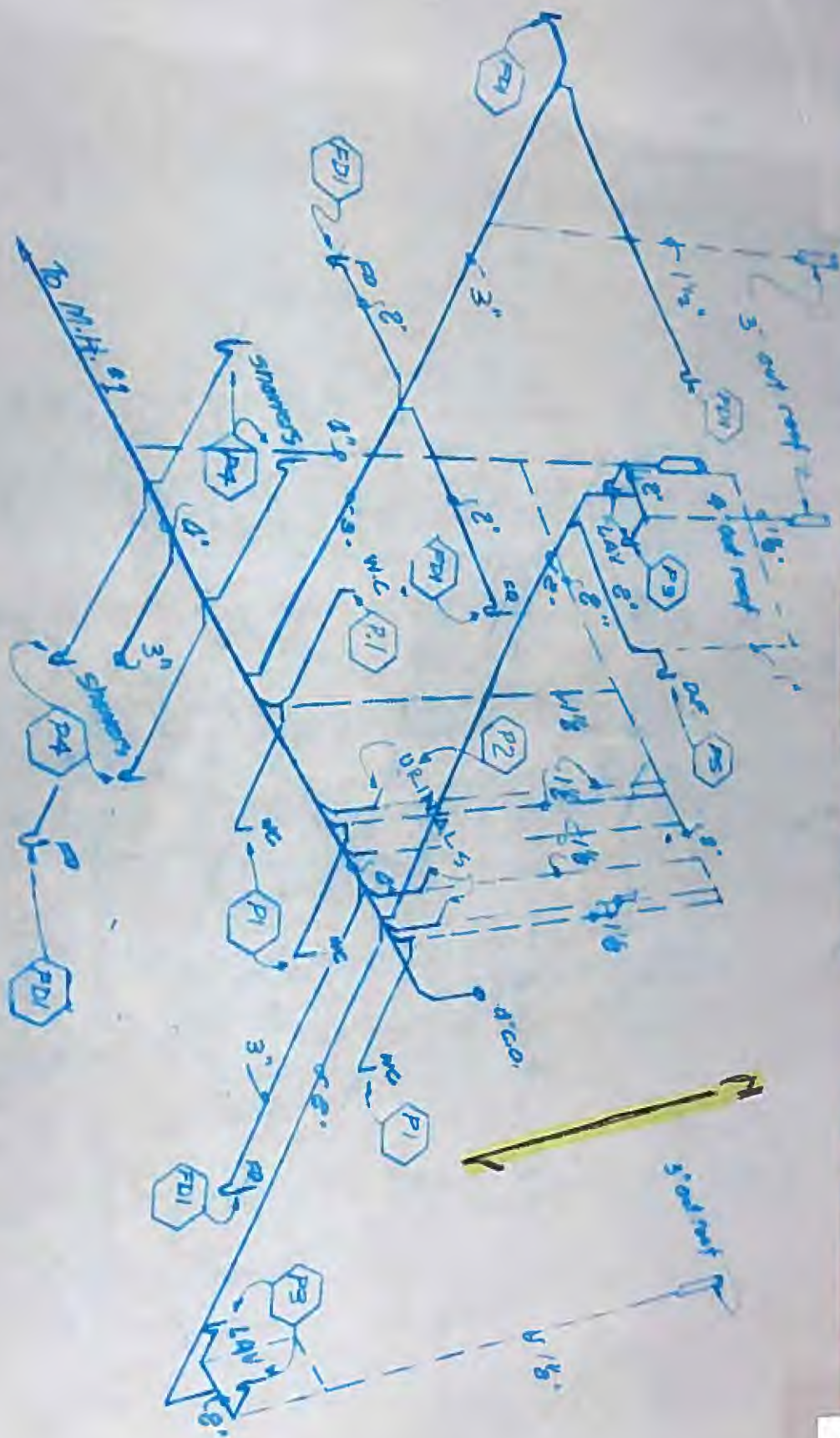
--- COLD WATER
--- HOT WATER

FLOOR PLAN

CAMP GELVIN ROL

Shower House

1001 - SUPPLY



PLUMBING RISER DIAGRAM WASTE & VENT

Cambridge Road
Shower House

“C”

Hocking Hills State Park Campground Main Shower House

- The Main Shower House is located in the HHSP Campground off St. Rt. 664 in Benton Township, Hocking County.
- Originally built in 1972 before any lead limits.
- The shower House went through an extensive renovation in 1988 removing most if not all of the original plumbing.
- The plumbing consists of copper pipe.
- The solder used is a possible mix of pre 1986 lead limit and post 1986 lead limit.

C

SCALE: $\frac{1}{4}" = 1'-0"$

1988



“D”

Hocking Hills State Park Campground Center and East Shower Houses

- The Center and East Shower Houses are located in the HHSP Campground off St. Rt. 664 in Benton Township, Hocking County.
- Built in 1988 after the 1986 Lead Limit.
- The plumbing consists of copper pipe.
- The solder used is post 1986 Lead Limit.
- The Center Shower House outdoor sink is being used as a Lead and Copper sampling location (LC203).

D

RISER DIAGRAM

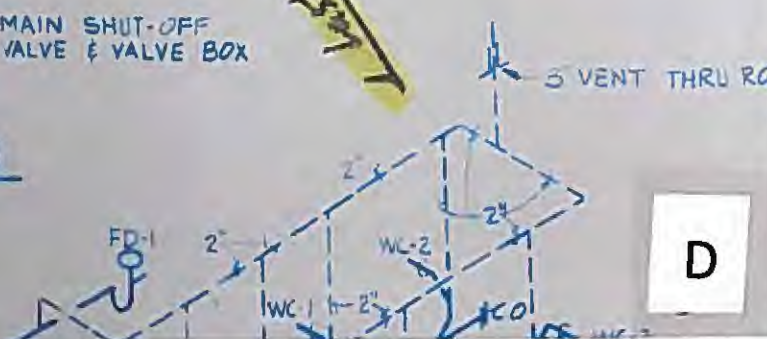
NTS

Shower House x2

E PARK
EMENT
OHIO

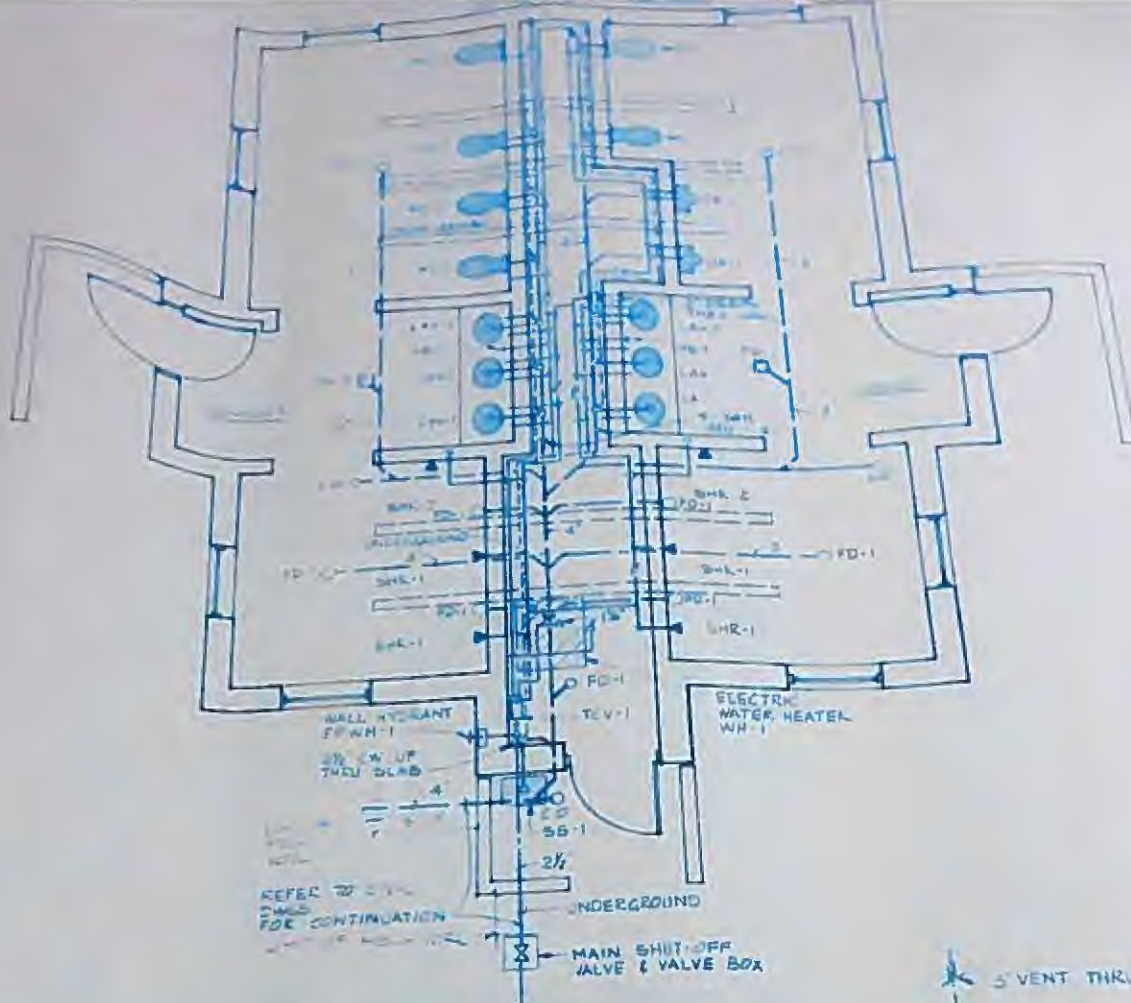
DESIGNED BY	HH	JOB NUMBER	8724301
DRAWN BY	LE	SCALE	1/4" = 1'-0"
CHECKED BY	JH	DATE	4-11-88
APPROVED BY	RF	REVISED	

REVISED



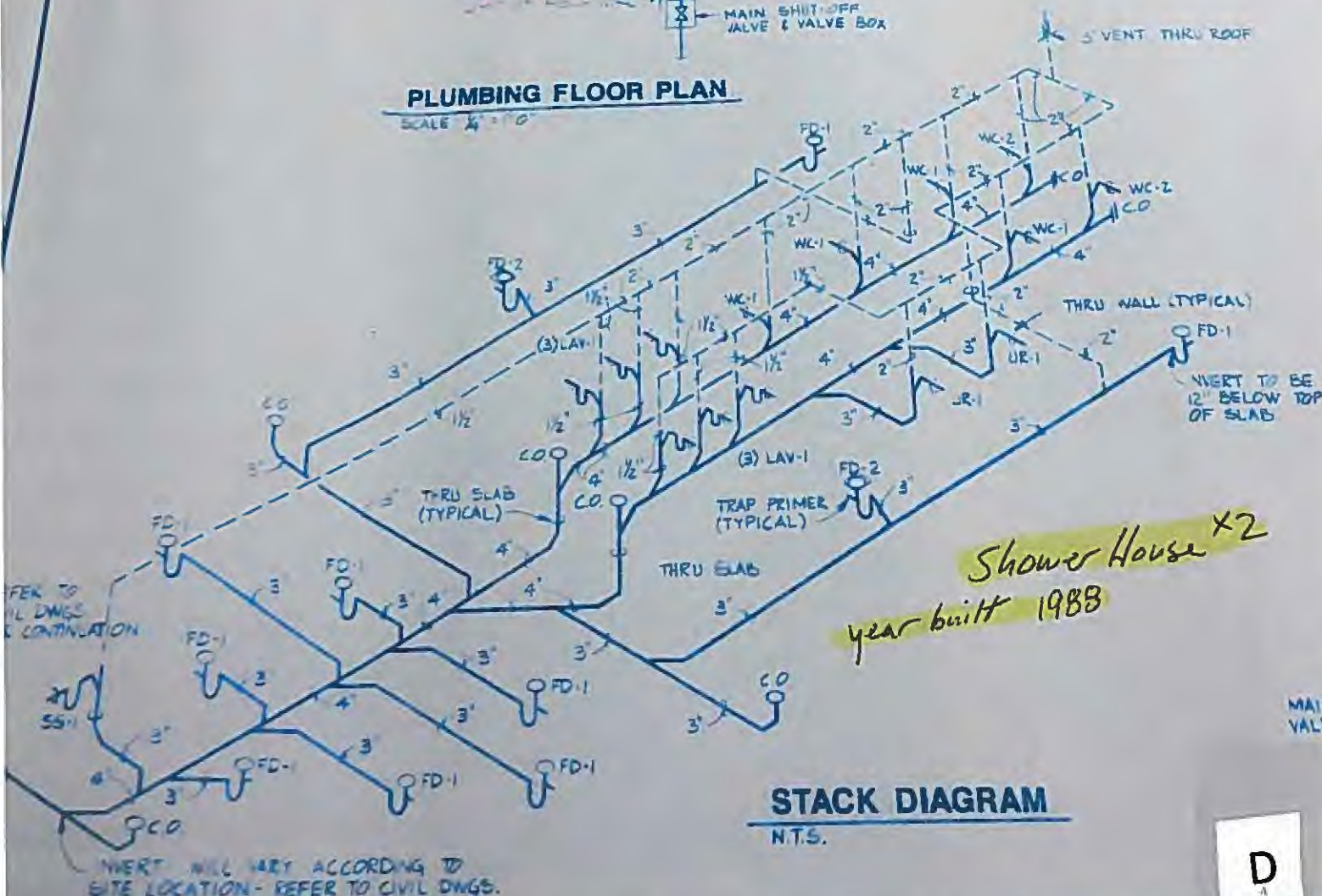
SCALE: $1\frac{1}{2}" = 10'$

D



PLUMBING FLOOR PLAN

SCALE 1/4" = 1'-0"



STACK DIAGRAM

N.T.S.

Shower House x2
year built 1988

D

MAIN VALVE

INVERT WILL VARY ACCORDING TO
SITE LOCATION - REFER TO CIVIL DWGS.

STATE OF

“E”

Hocking Hills State Park Maintenance Shop

- The Maintenance Shop is located just off State Rt. 374 in Benton Township, Hocking County
- Built in 1972 before any lead limits.
- The **Plumbing** consists of copper pipe with a mix of PVC used during repairs throughout the years.
- The solder used is not specified as lead free.
- The drinking fountain located in the mechanic's bay is currently being use as a Lead and Copper sampling location (LC202).

Scale

Scale: 1/4" = 1'-0"

Revised As Built 8-1-72

M-4

E

STATE OF OHIO
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CHIEF ENGINEER

HOCKING HILLS STATE PARK
HOCKING COUNTY
DINING LODGE AND CABINS

MAINTENANCE BUILDING - MECHANICAL

SHILLING-SMITH-BALKE-ROBINSON
ARCHITECTS - ENGINEERS

CINCINNATI, OHIO

SCALE:	As Shown
DATE:	3-23-70
AS BUILT:	10-12-72
JOB NUMBER:	

PLUMBING FIXTURE SCHEDULE

Mk.	Item	Trap Size	Remarks
P1	Elec. Water Htr.		W.L. JACKSON Model 621E-40.5 00 Gal. 6 kW. 240 Volt 1Ø w/interlock Thermostat
P2	Floor Drain	3"	5" gtr. ZURN # Z 415
P3	Urinal F.I.V.	3"	American std. # F 6281
P4	W.C. F.I.V.	3"	American std. # F 2109
P5	Lavatory	1 1/2"	American std. # F 350 20" x 18"
P6	Shower Drain	2"	Shower Unit - Mo's Mfg Co. "Washburn" 30" x 32" x 82" Cabinet
P7	Service Sink	3"	American std. # P 7705-1 24" x 20"
P8	Floor Drain	3"	ZURN # Z 673 w/ Sludgoc Bucket
P9	Sum p Pit		Deming 346613 1/2" 150 lbs. 42" Ø 3/4" HP. motor. 4000 RPM. 1/2" Solid Top
P10	Separator		OIL INTERCEPTOR ZURN # Z 1186-500
P11	Hose Bib		Non Freeze Zurn # Z 1395 1/2" x 3/4" x 1/2"
P12	Hose Bib		American std. # R 4421

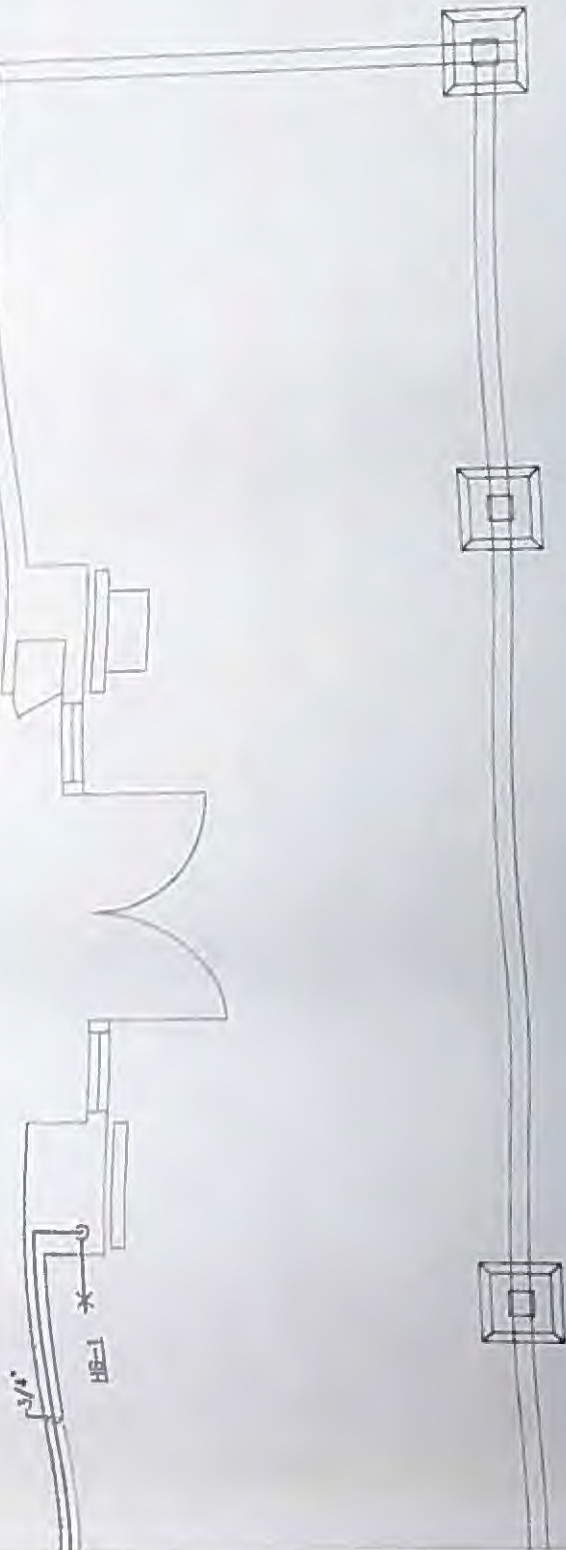
Maint Bld.

“F”

Hocking Hills State Park Commissary (Office)

- Located at 19852 St. Rt. 664 in Benton Township, Hocking County.
- Built in 2001 after the 1986 lead limit.
- The plumbing consists of copper pipe.
- The solder used according to date should be at the lower level set in 1986.
- The kitchen sink is currently being used as a Lead and Copper sampling location (LC204).

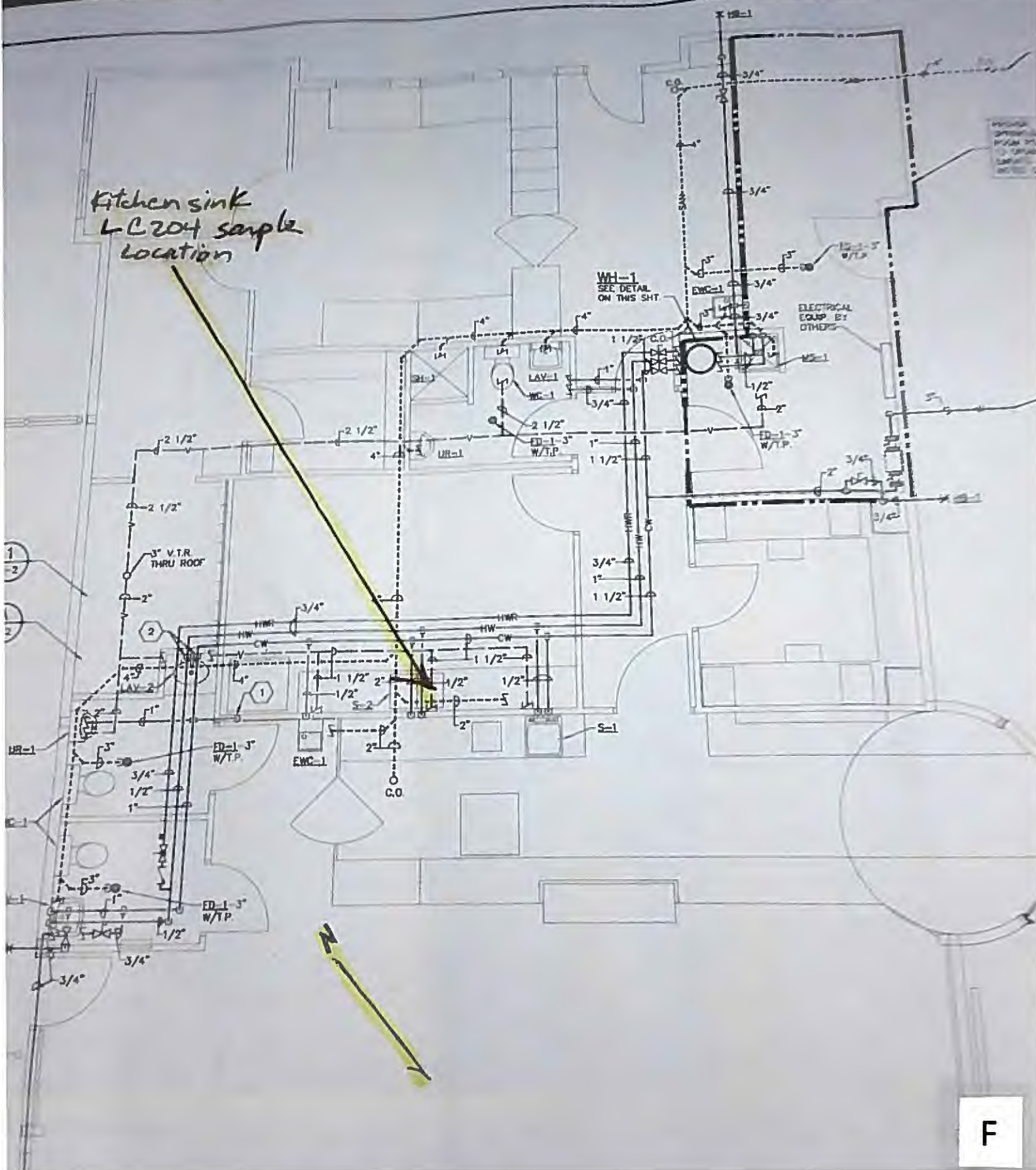
F



PLUMBING PLAN

SCALE: 1/4" = 1'-0"

HOCKING HILLS STATE PARK		DESIGNED BY:	RKT	JOB NUMBER: DNR 736 730-97-048
CAMPGROUND COMMISSARY		DRAWN BY:	RKT	SCALE:
BENTON TOWNSHIP, HOCKING COUNTY, OH.		CHECKED BY:	-	DATE: 15 AUGUST 2001
		APPROVED BY:	-	REVISED:

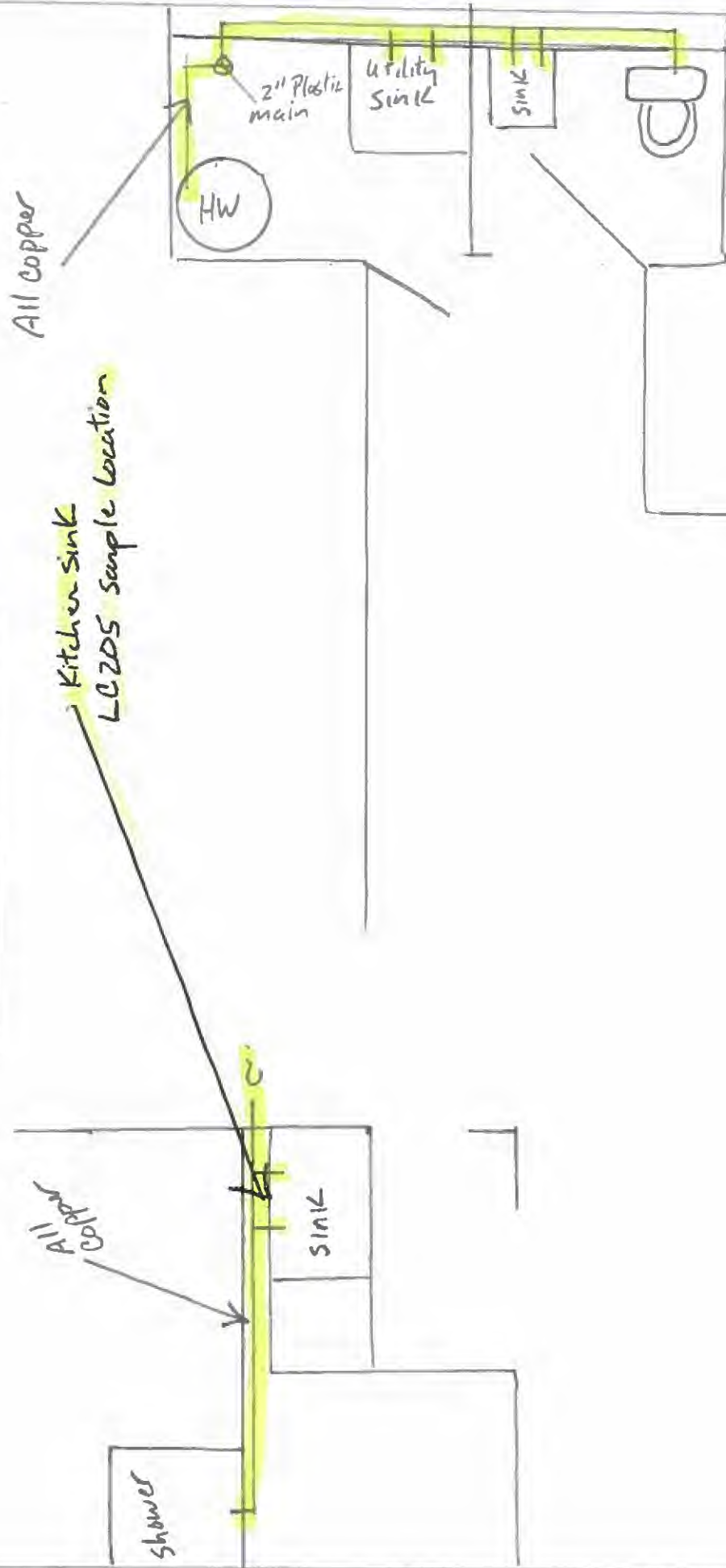


“G”

Ranger Station

- The Ranger Station is located North East of the intersection of Culp Road and St. Rt. 664, in Benton Township, Hocking County.
- Although no written information could be found about the Ranger Station, it was built in the late 90's as a convenient store after 1986 lead limit. The State purchased it in the early 2000's and changed the layout to be suited as the Ranger Station.
- All of the plumbing is copper.
- The Ranger Station kitchen sink is currently a Lead and Copper sampling site (LC205).

Ranger Station



“H”

Old Man’s Cave Visitors Center

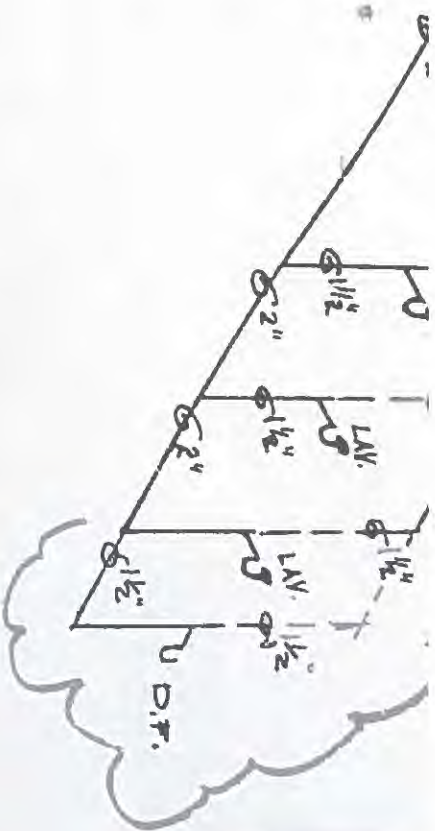
- The OMC Visitors Center is located off St. Rt. 664 near the intersection of Culp Rd. in Benton Township, Hocking County.
- Built in 1987 after the 1986 Lead limit.
- The plumbing consists of copper pipe.
- The solder used by date should be at the lower lead level set in 1986.

H

KING HILLS STATE PARK HOCKING COUNTY IS CAVE VISITOR CENTER

DESIGNED BY HGS
 DRAWN BY HGS
 CHECKED BY DRS
 APPROVED BY MJC

JOB NUMBER
 SCALE AS SHOWN
 DATE MARCH, 1987
 REVISED OCT, 1987



“I & N”

Old Man’s Cave State Park/Hocking Hills State Park Campground Drinking Fountains

- Located in the OMC picnic area and throughout the HHSP Campground on St. Rt. 664 near Culp rd intersection in Benton Township, Hocking County.
- Fountains installed in 1972 before any lead limits.
- The plumbing consists of copper pipe.
- The solder used is not specified as lead free.

I&N

Old mans Cave
Drinking Fountains

2

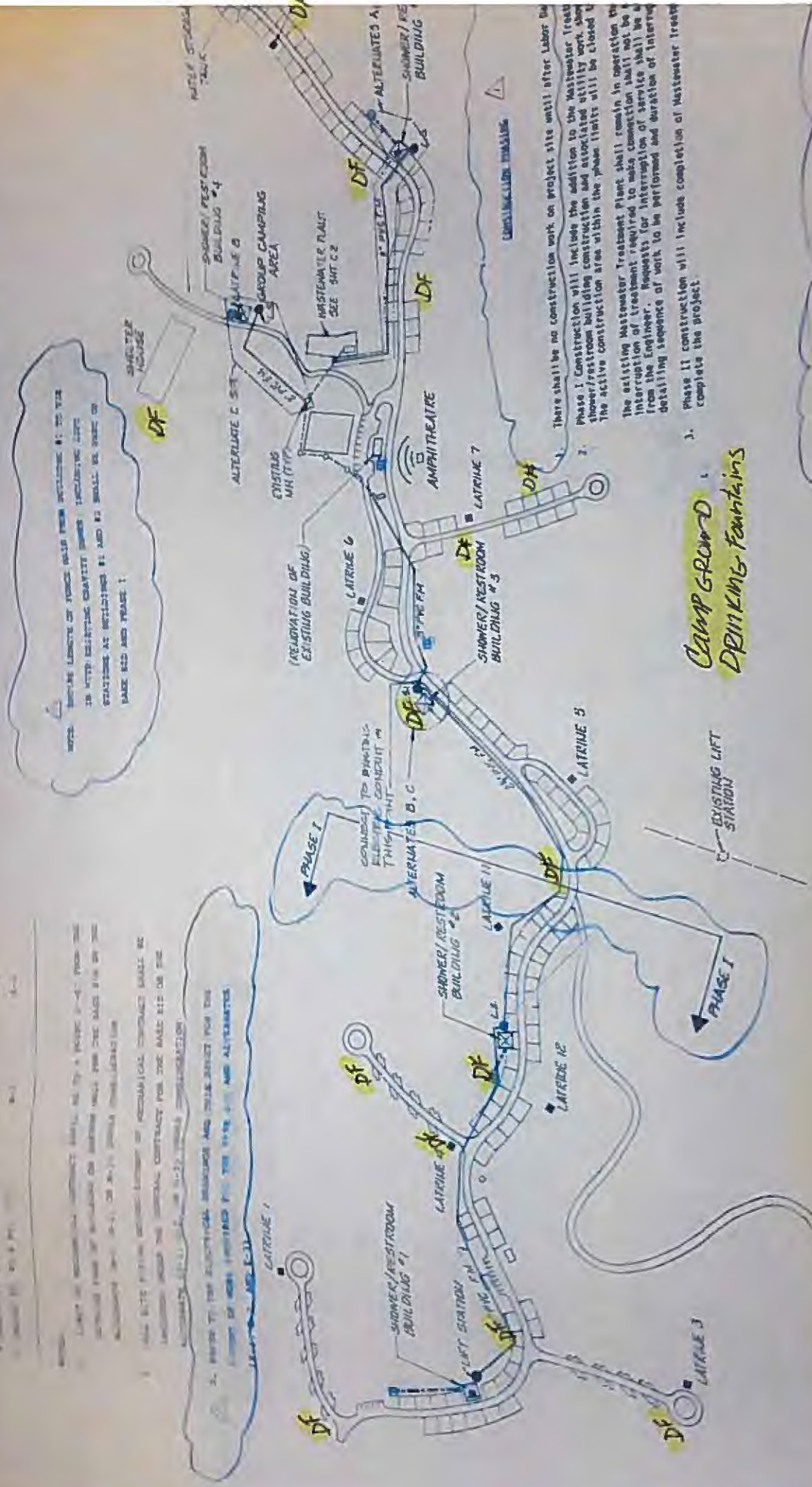
New Primary
Electric
1903

1000 ft. Primary
Electric
1903

8"

1000 ft. Primary
Electric
1903

PLEASE TO THE SUBMITTER: SUBMITTER AND DATE RECEIVED FOR THE
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION



CAMP GROUND :
DRINKING FOUNTAINS

3. There shall be no construction work on project site until after Labor Day.
4. Phase I Construction will include the addition to the Mastewater Treatment Plant of a new building for the storage of materials and associated utility work. Also, the active construction area within the phase limits will be closed to the public.
5. The existing Mastewater Treatment Plant shall remain in operation throughout the construction period. No interruption of treatment shall not be required for the duration of the project. Requests for interruption of service shall be approved by the Engineer. Requests for interruption of service shall be approved by the Engineer. Requests for interruption of service shall be approved by the Engineer.
6. Phase II construction will include completion of Mastewater Treatment Plant and completion of the project.

GENERAL NOTES

1. Vaults at Alternate and Base Bid Building locations will be the responsibility of the contractor. If Alternate Bid is selected, the contractor will be responsible for the commencement of such building work.
2. DOW will provide disposal area in part for excavated material.

2. PLUMBING CONTRACTOR WILL SOLDERED TO PLAIN PLUMBING CONTRACTOR WILL FURNISH CHAIN TO SOLDERING CONTRACTOR FOR EASY CASTING INTO PRECAST CONCRETE TOP



TOP VIEW

HALSEY-TAYLOR BUBBLER No. 3041

3/8" x 6" THREADED NIPPLE
WASHER & LOCKNUT
UNION (COPPER TO F.S.R.S.)
SOFT COPPER LINE

PRECAST CONCRETE TOP
ROUND ALL EXPOSED EDGES
OF CONCRETE 1/2" RAD
12 1/2" x 12 GA STAINLESS STEEL ACCESS PANEL TO COVER AN 8" x 8" OPENING IN CONCRETE BLOCK MOUNT PANEL WITH 8 STAINLESS STEEL SCREWS HAVING TAMPER-PROOF HEADS AND APPROVED ANCHORS BY PLUMBING CONTRACTOR

SHOCK ABSORBER JOSAM No. 1485-1

R-4442 RE-NU SELF-CLOSING FAUCET BY AMERICAN STANDARD

3' 0 3/8" PRECAST CONC. STEP
1'-0" TEE

SETTLEMENT LOOP

1" DRAIN PIPE

1'-0" UNION
1/2" COPPER PIPE
WEED HOLE EACH SIDE

CONCRETE SLAB WITH 6" x 6" 10/10 REINFORCING MESH

1/2" SLOPE ALL SIDES

COPPER SLEEVE

1/2" SUPPLY PIPE

7'-0" SQUARE

PROVIDE 3/4" MULLER, OR EQUAL, H-15214 STOP & DRAIN VALVE AND H-10350 CURB BOX. PROVIDE 3/4" x 1/2" REDUCERS ON BOTH SIDES OF CURB STOP AND 1 CU. YD. OF GRAVEL DRY WELL. CURB STOP TO BE LOCATED 5' BEYOND SLAB.

SIDE VIEW

Drinking Fountain

6" GRAV
V-134-X JOSAM BE WITH HINGED GATE
4" C.I.P. TRAP

11 5/8"

1-75/8"

5"

I N

“J”

State Residence

- The state residence is located to the south west of lodge road off of St. Rt. 664 in Benton Township, Hocking County.
- (No information could be found) A typical two story farm house with recent updates, but most likely built in the early nineteen hundreds?
- The residence is supplied water through a two inch plastic main from the Cabin area. For the majority the residence has copper lines throughout the house although there is some Pex and PVC pipe used in the bathroom.
- The age of the copper pipe, solder and fixtures used are not known but would be considered pre 1982 before any lead limits.
- The residence is unoccupied at this time.

J

HW



Basement State Residence

up To Second Floor



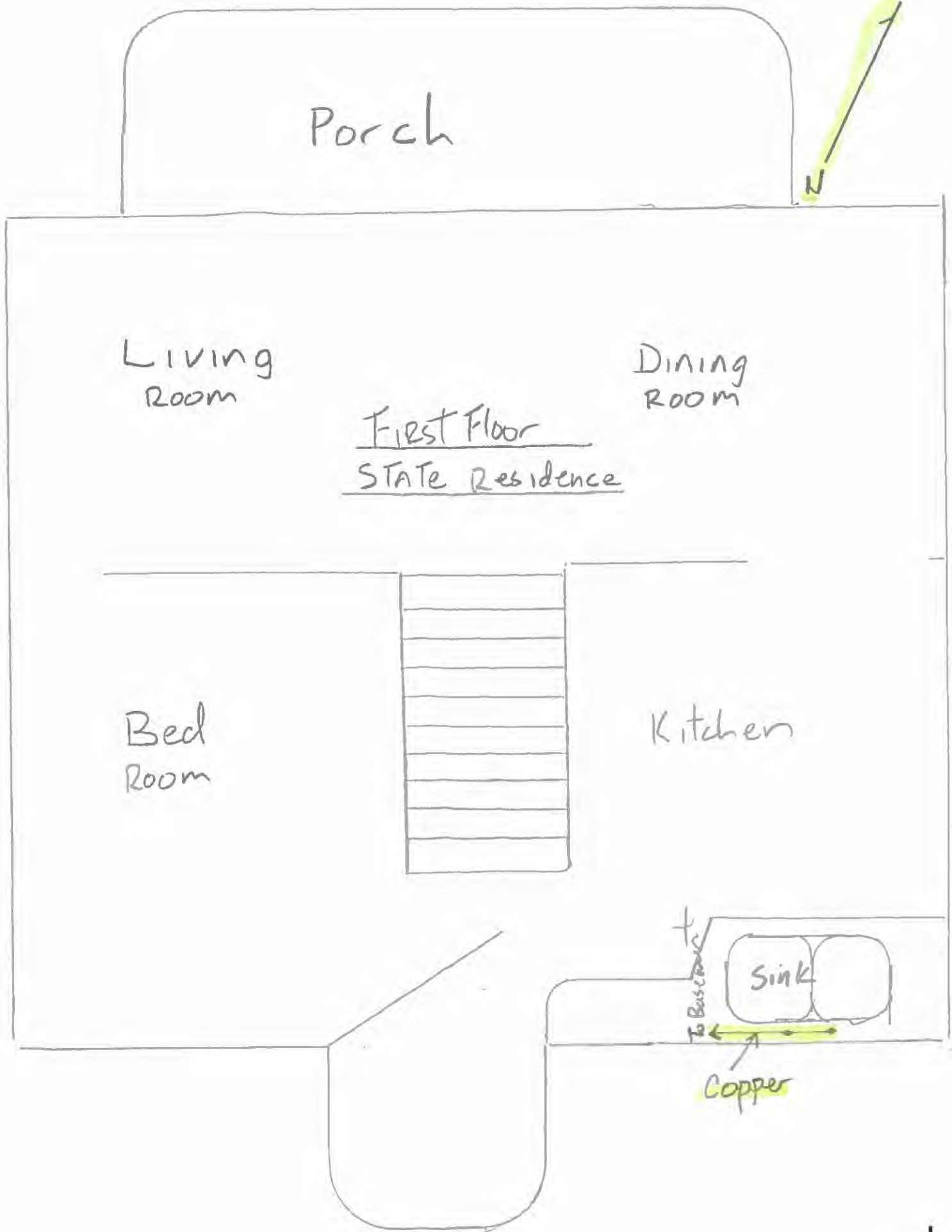
Laundry

up To Kitchen Sink

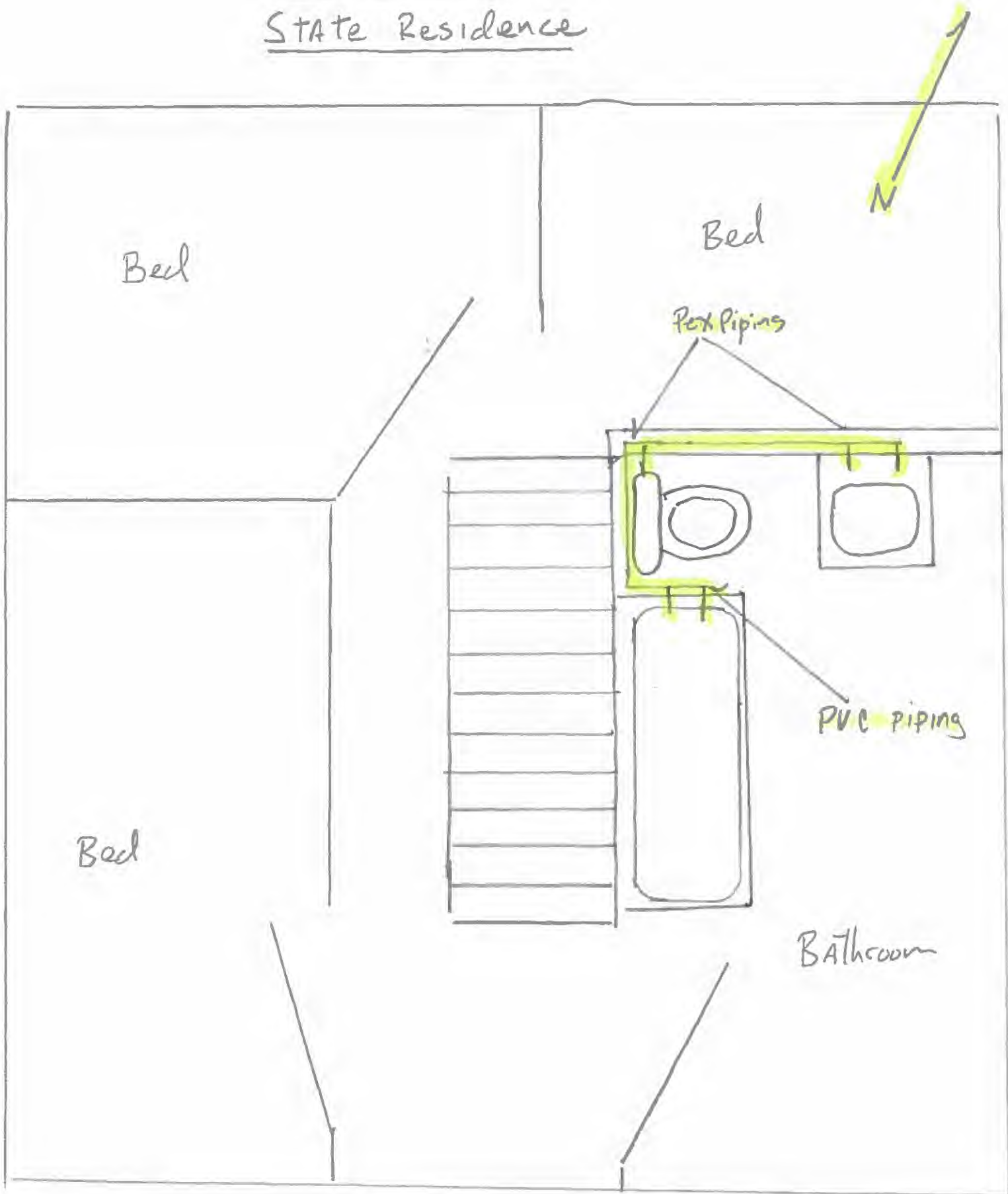
All copper

Hose Bib

2" plastic
main



Second Floor
State Residence



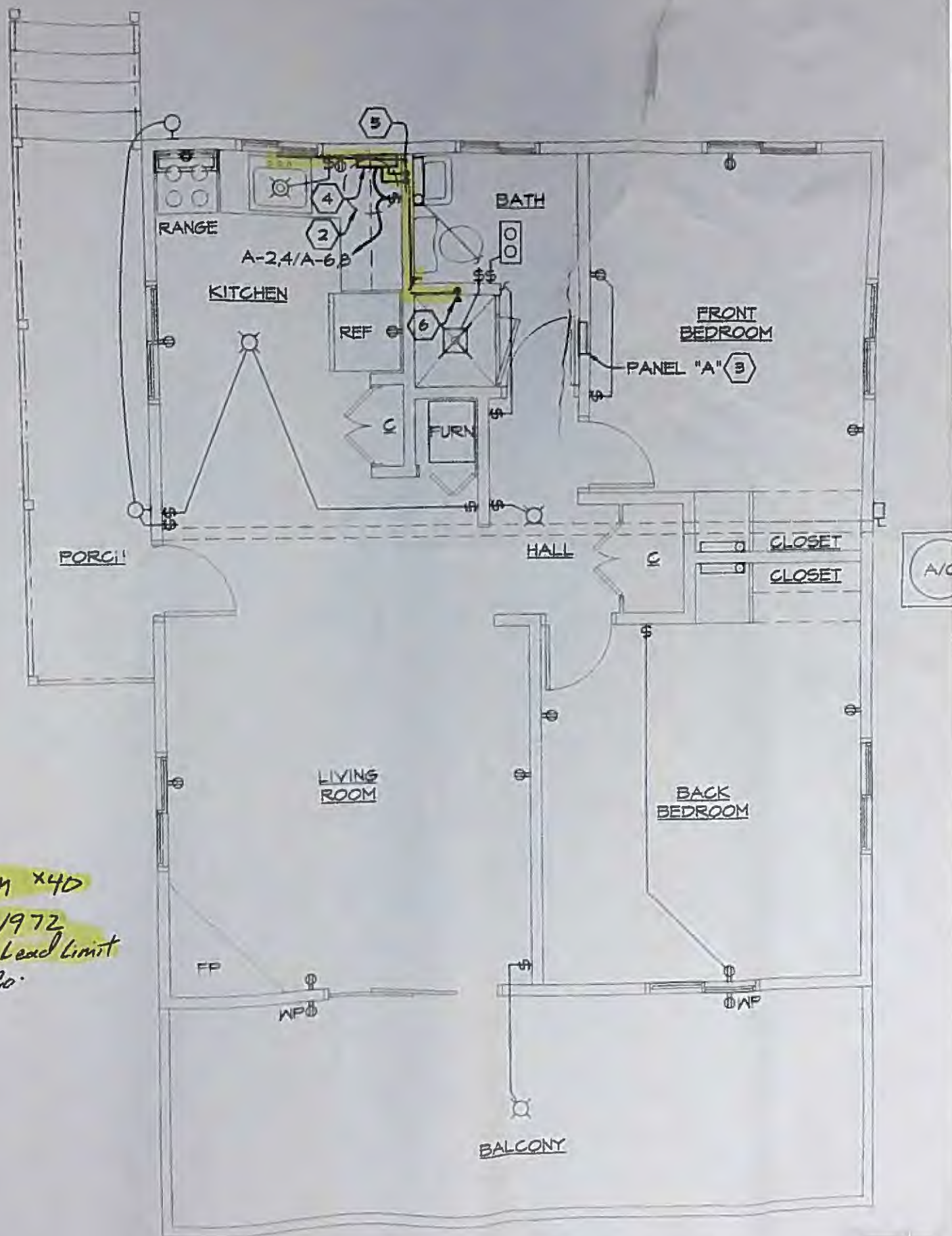
“K”

Hocking Hills State Park Cabins

- There are forty identical cabins in total.
- The cabins are located on Lodge Road off of St. Rt. 664 in Benton Township, Hocking County.
- Built around 1972 before any lead limits.
- The plumbing consists of copper pipe with a mix of PVC used during repairs throughout the years.
- The solder used is not specified as lead free.
- The cabins went through a major renovation in 2016 but the plumbing remained the same.

K

CABIN #40
 Built 1972
 Before Lead Limit
 1986. Co.



1
2

PLUMBING AND ELECTRICAL PLAN
 SCALE 1/4" = 1'-0"

K

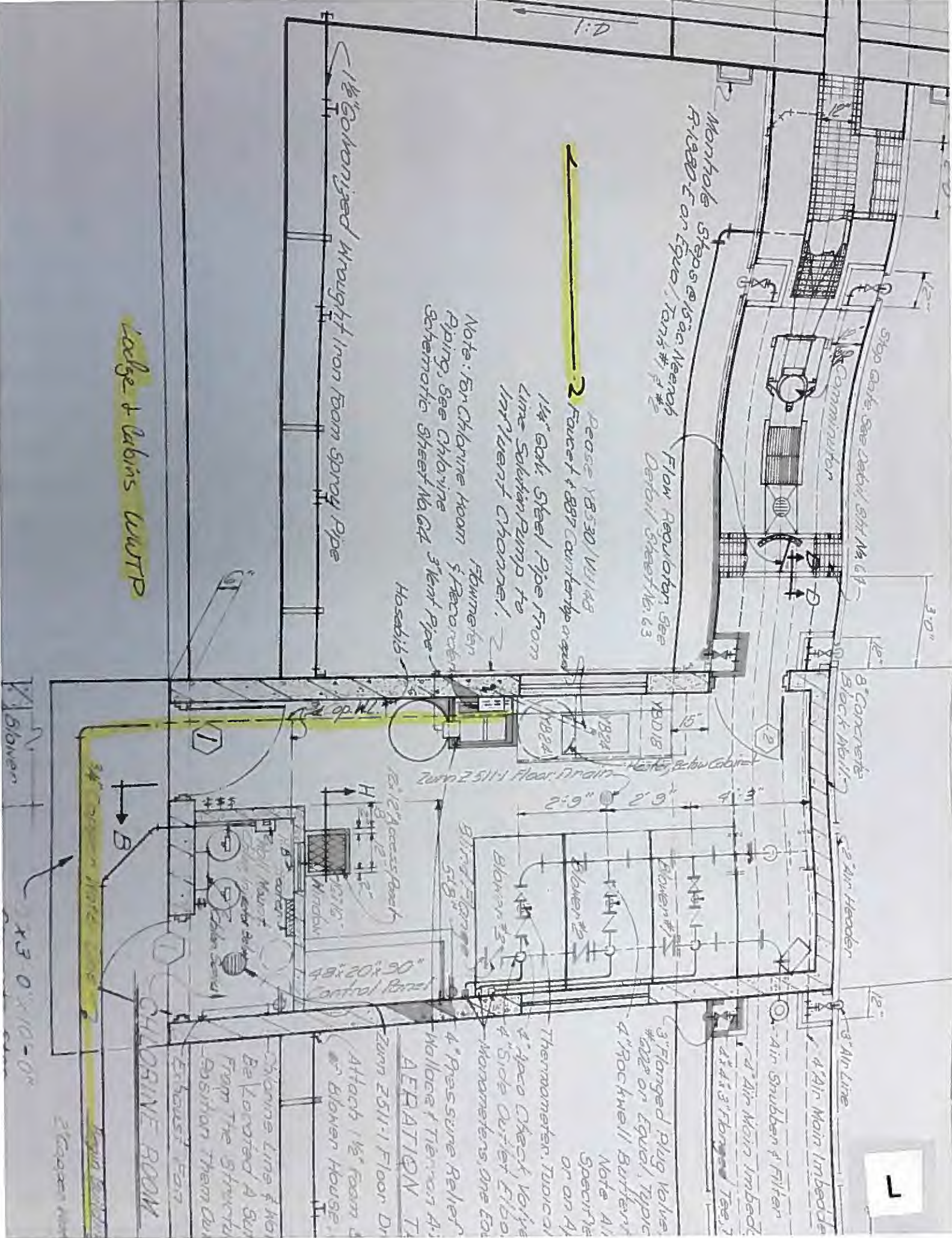
“L”

Hocking Hills State Park Lodge and Cabins Wastewater Treatment Plant

- The L and C WWTP is located on Lodge Rd off of St. Rt. 664 in Benton Township, Hocking County.
- Built in 1972 before any lead limits.
- The plumbing consists of copper pipe with a mix of PVC used for repairs throughout the years.
- The solder used is not specified as lead free.

L

Loefer & Rabins WWTTP



“M”

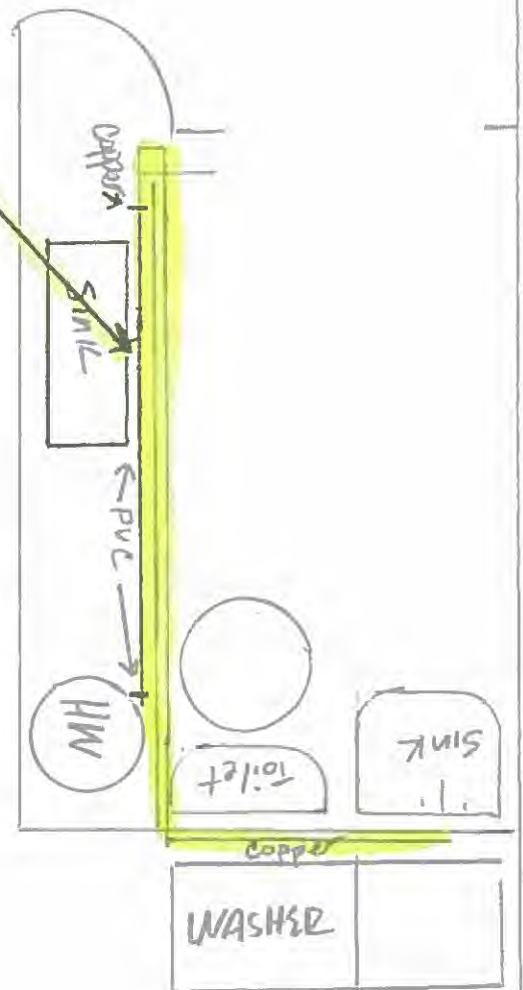
Linen Building

- The Linen Building is located in the cabin area on Lodge Road off of St. Rt. 664 in Benton Township, Hocking County.
- Built around 1972 before any lead limits.
- The plumbing consists of copper pipe with a mix of PVC used during repairs throughout the years.
- The solder used is not specified as lead free.
- The linen Building is currently being used as a lead and copper sampling location (LC201).

M

Sink LC201
Sample Location

Linen building



“O”

Hocking Hills Dining Lodge

-The Lodge was destroyed in December of 2016, any information that is currently available will not likely reflect the plumbing plans for the future building.

O

Distribution Section



1
2

1-45° Bend
1-11 1/4° Bend
Sta. 15+32

Store
Shelter

125°30'

road

under 171' from back
road 200' 2' E. of road
to 171' from road
to 171' from road

1-22 1/2° Bend
1-11 1/4° Bend

15/20

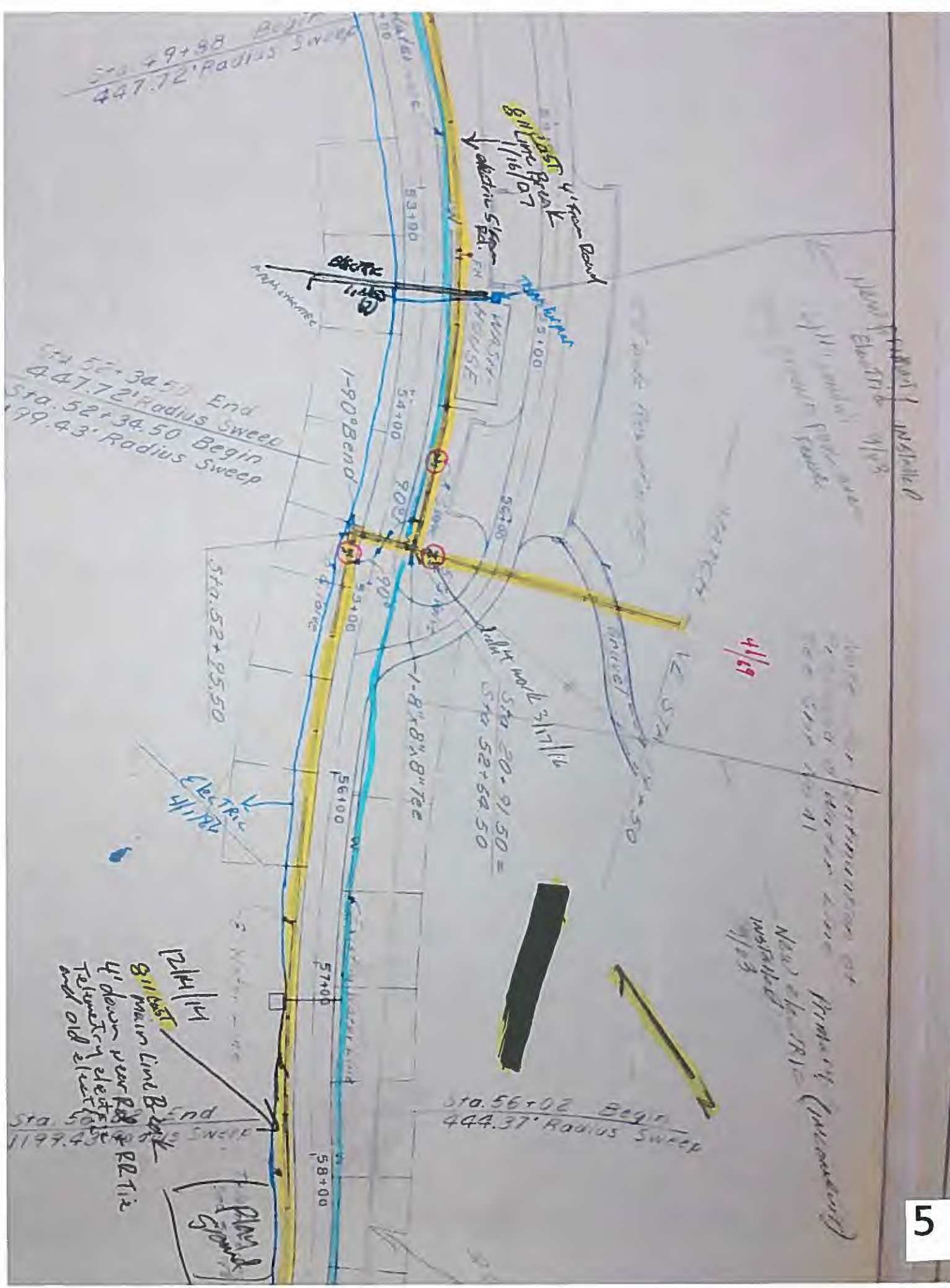
NOTE: This is a rough sketch
of the proposed road
and should not be used
for any other purpose.



Sta. 49+98 Begin
447.72' Radius Sweep

Sta. 52+34.50 End
447.72' Radius Sweep
Sta. 52+34.50 Begin
99.43' Radius Sweep

Sta. 50+00 End
1199.43' Radius Sweep



Sta 58+30.50 Begin
195.89' Radius Sweep

Match Line
Sta 58+00

41/106

Sta 60+39.00 End
195.89' Radius Sweep

Sta 60+80.00 Begin
833.74' Radius Sweep

Sta 61+77.00 End
833.74' Radius Sweep

Center of Gravity (CG)
41/106

2

Top View
of
Sweep

Sta. 61+77.00 End
833.74' Radius Sweep

N

See plan for details of
sweep area

Sta. 65+81.00 Begin
512.75' Radius Sweep

Sta. 66+83.50 End
512.75' Radius Sweep



1-90' SW
Sta. 68

Sta 65+81.00 Begin
512.75' Radius SWE

Sta 66+83.50 End
512.75' Radius NE

3/4" Service 8" with for
Tapped to Sta 66+82.52
Four 1/2" 11/16"

Function

1-90° Bend

Tower

1-90° Bend

Sta 68+30

Sta 68+82

8" Valve & Box

1-8x8x8" Tee

8" Valve & Box

TENT RIDGE - ROAD IV

HOCKING STATE PARK - CAMPING

Non Street



Camp Pond

Sta 37+50
1-8" x 6"
1-Plug

at right
of road

HC

3" gas line leak 11/21/70

Note to Outboard
Moped & Water Line

See sketch of 11/25

A Frame

Sta 37+50 Begin
Combination Radius
Sweep

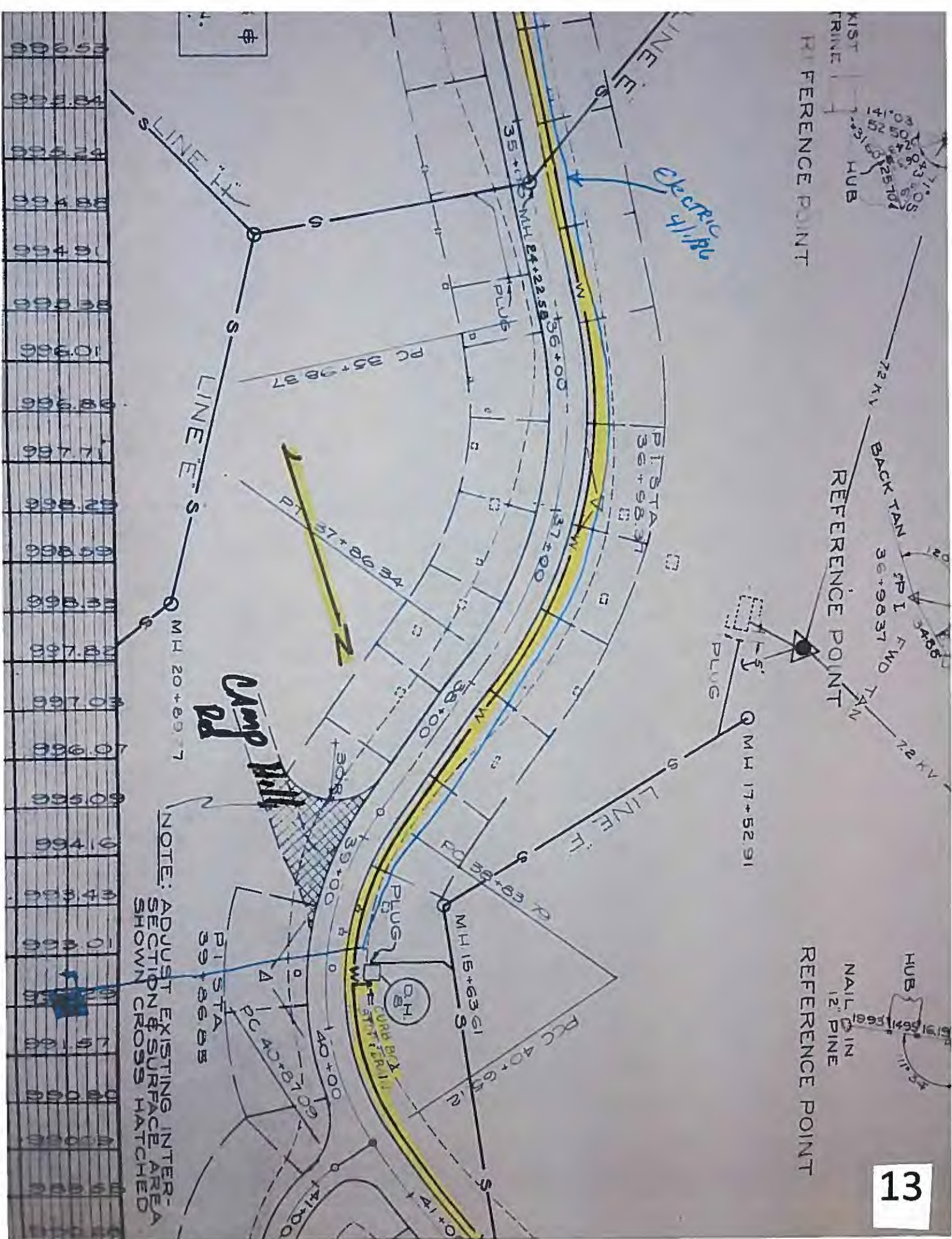
Sta 40+71.50 End
Combination Radius
Sweep

51' x 12' 12"
Concert
Circular

Tower

(20)

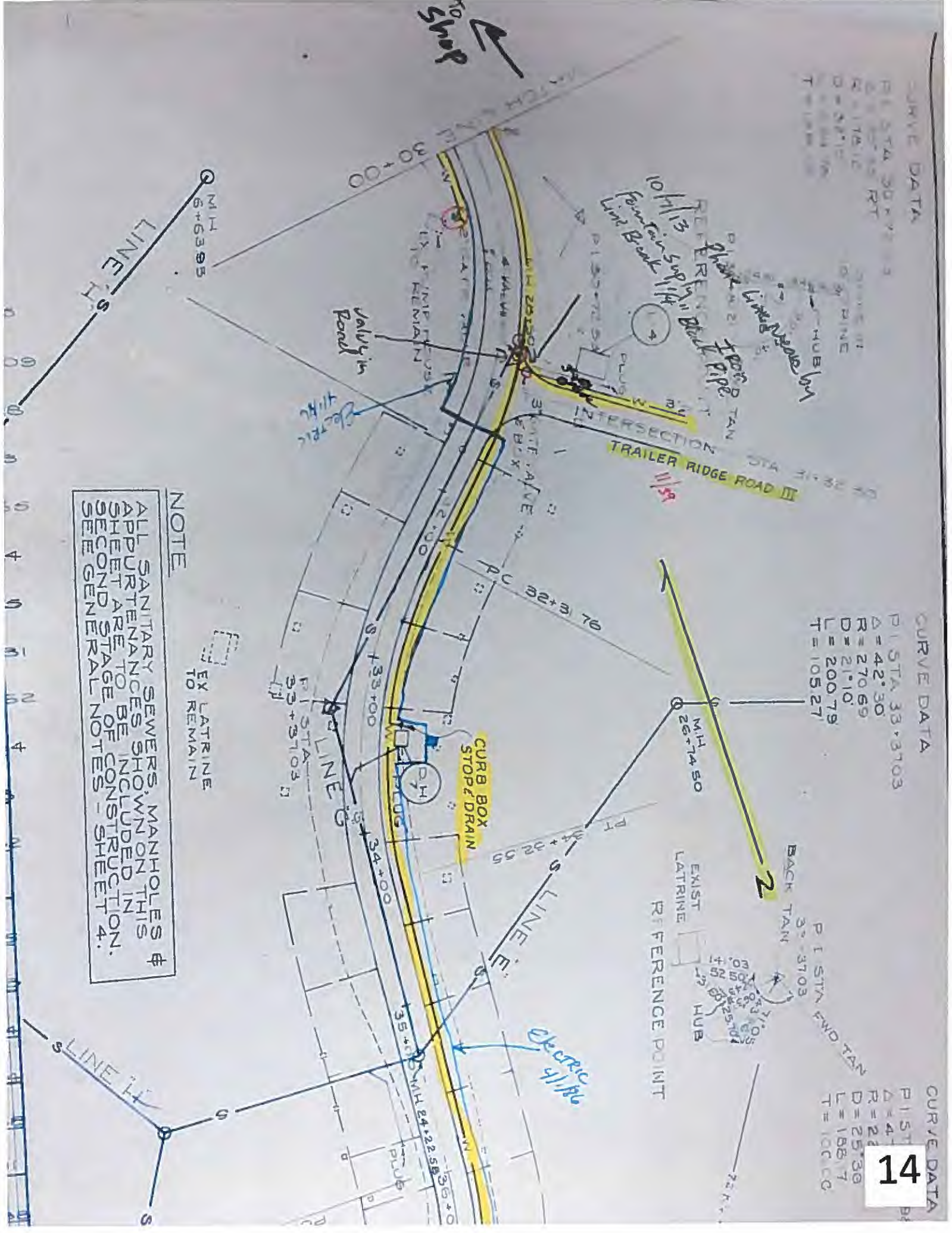
Non Shelt



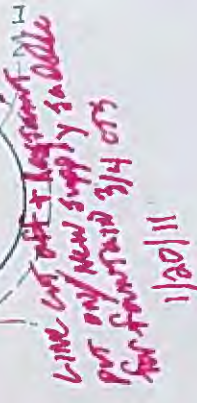
CURVE DATA
 P1 STA 30+72.5
 Δ = 42°30'
 R = 270.69
 D = 21°10'
 L = 200.79
 T = 105.27

CURVE DATA
 P1 STA 33+37.03
 Δ = 42°30'
 R = 270.69
 D = 21°10'
 L = 200.79
 T = 105.27

CURVE DATA
 P1 STA 36+72.5
 Δ = 42°30'
 R = 270.69
 D = 21°10'
 L = 200.79
 T = 105.27

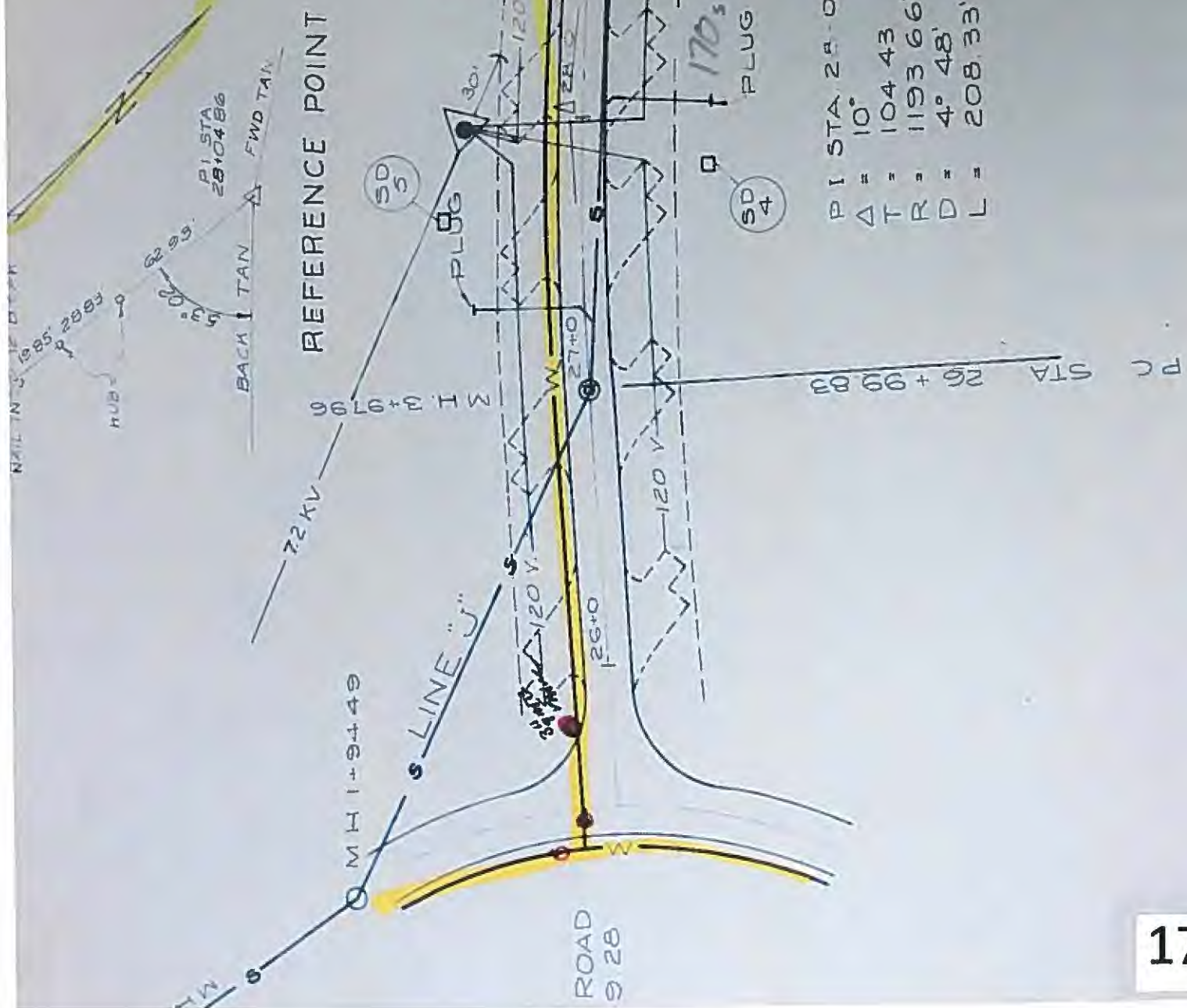


PA RIDGE - HOME



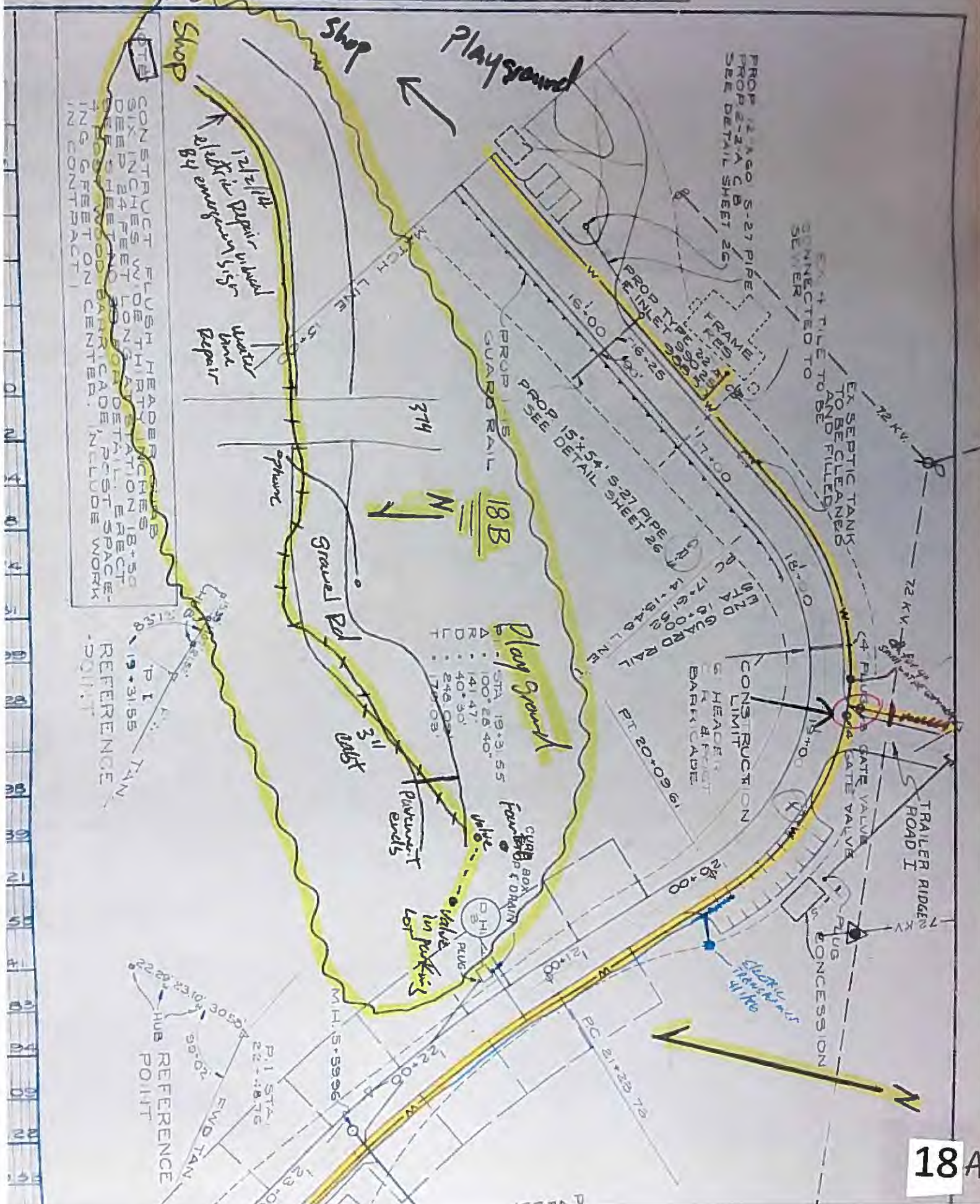


Trailer II Ridge Road

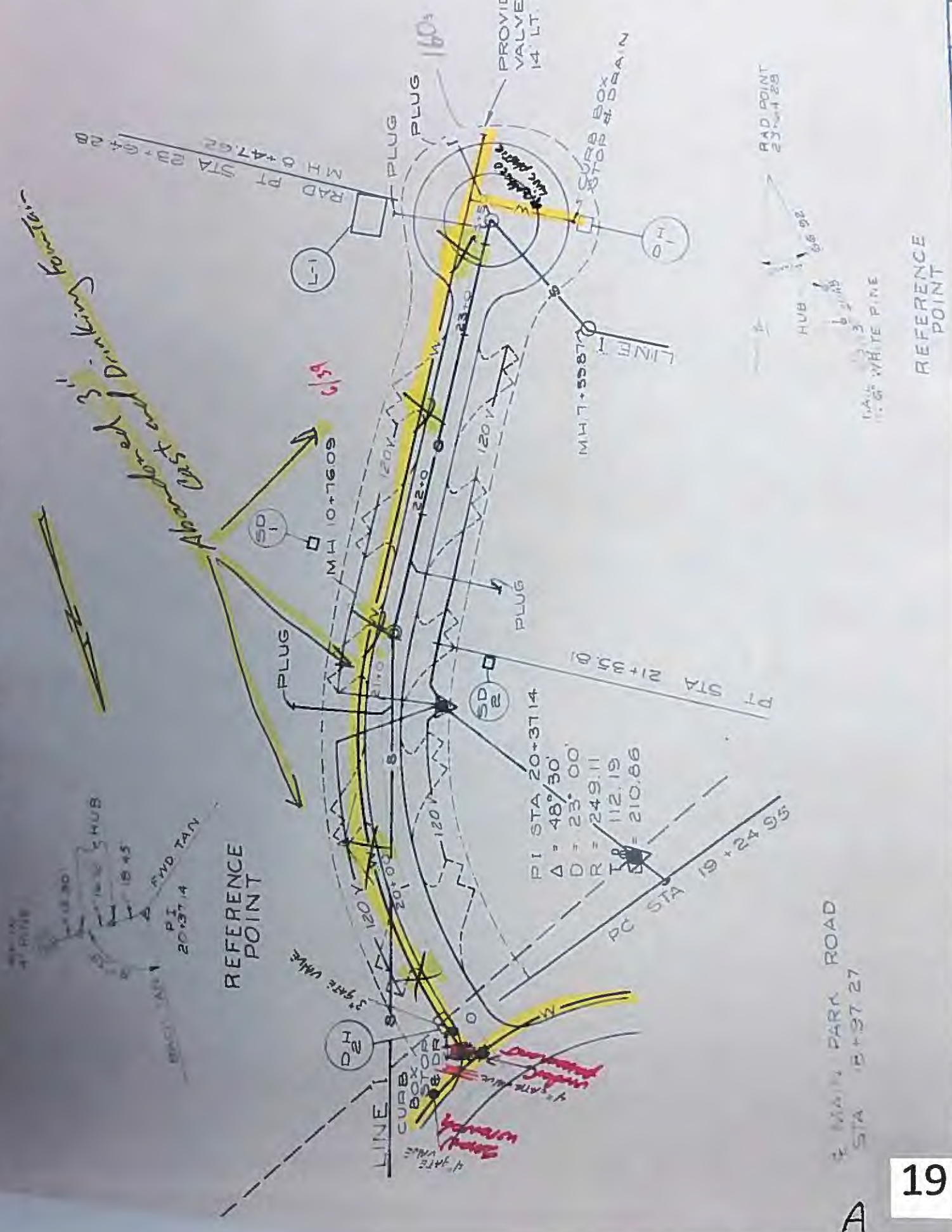


P I STA. 28+04.86
 $\Delta = 10^\circ$
 T R = 104.43
 D = 1193.66'
 L = 208.33'

NOTE BOOK	PLOTTED		
NO	ALIGNMENT CHECKED		
	RT OF WAY CHECKED		



TRAILER RIDGE - ROAD I





Camp



Van
Office
Randy
Station

2" plastic
face plate
back of office
table
- 1/4" x 1/4" x 1/4"

See Br. 402 (a)
See Sh. 113: 1786

$\frac{1}{2} \times 4 = 2$
 $2 - 2 = 0$

1989-1990

$$5 + 29 + 47.50$$
$$F_0 + F_1 + F_2 + \dots$$

5886
2475 white plastic
1/2 cts water
2105
unstacked

10. $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

10/24/11
no det.
phone in/did
31 Line break
811 test

811 BIKC
Path

9062
9062

2004-05-05
2004-05-05
2004-05-05
2004-05-05

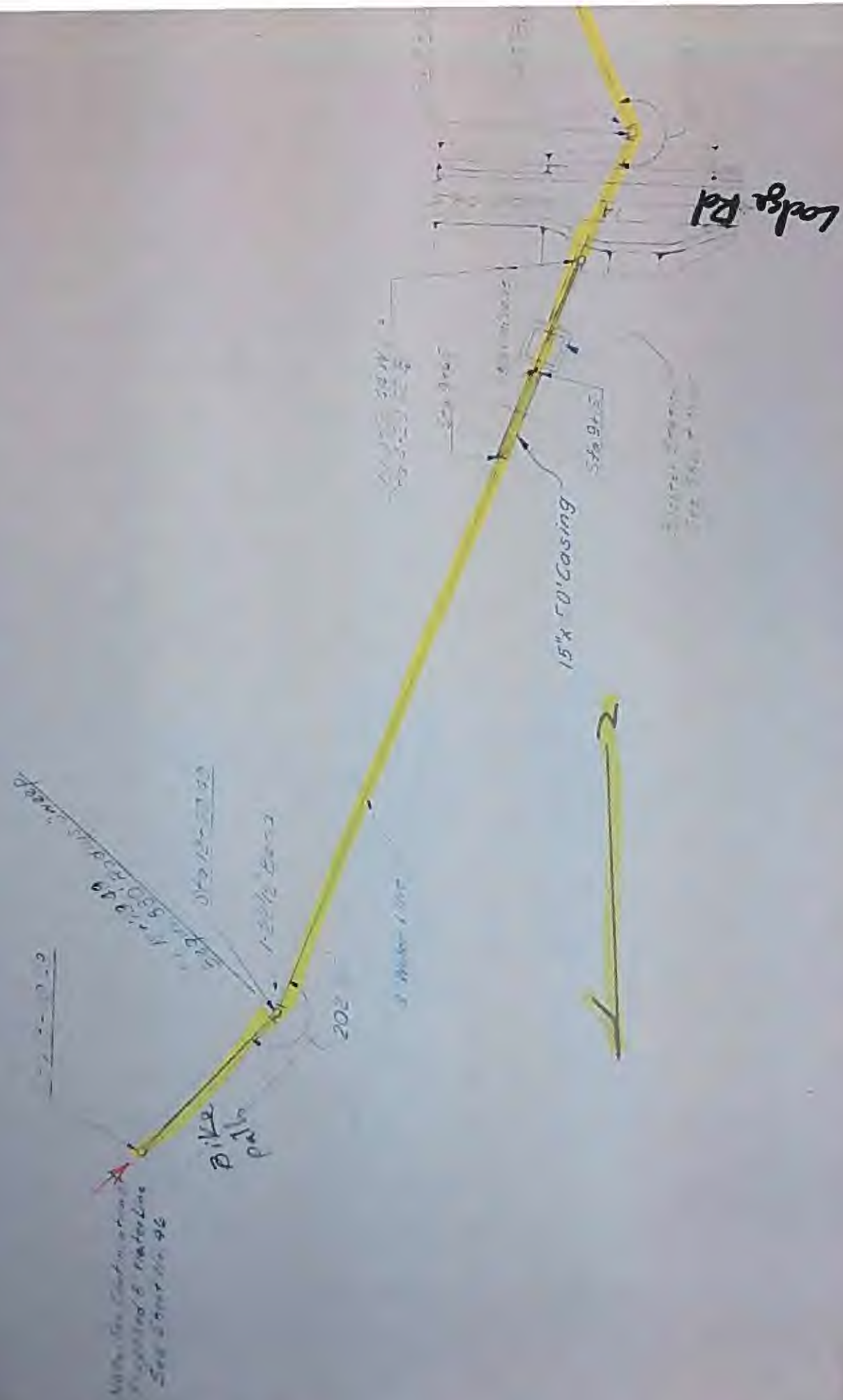
21

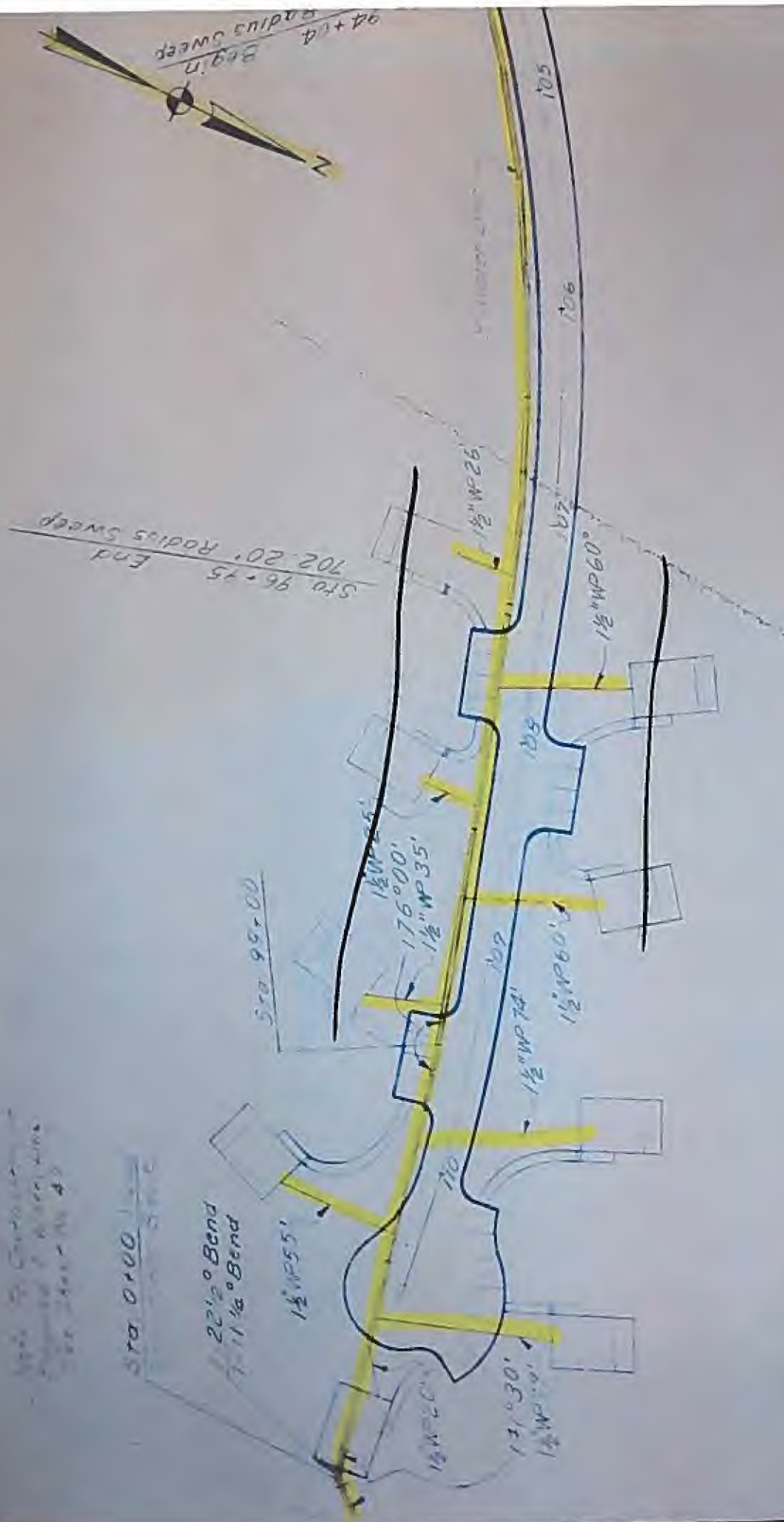
2004-05-05

2004-05-05

no det. no det. no det.
no det. no det. no det.
no det. no det. no det.







NOTE FOR CONTINUATION OF
4" & 8" PRO WATER LINES
SEE SHT. NO. 29

4/1/18

Break in 4" 1/06
Force main

1 1/2" WP 55'

Sta 94+64
702.20' Radius Sweep
Begin

Sta 2+10
702.20' Radius Sweep
End

20' 10" 1030
Sewer
Main

1-8" 8' Tee
1 1/2" WP 48'

Sta 90+91
702.20' Radius Sweep
End

Play
Ground





Note: For Continuation of
Proposed 8" Water Line
See Sheet No. 40.

Sta. 84+30.50 End
218.63' Radius Sweep

Sta. 76+73 Begin
300.48' Radius Sweep

Sta. 79+19 End
300.48' Radius Sweep

Sta. 81+10 Begin
218.63' Radius Sweep

