

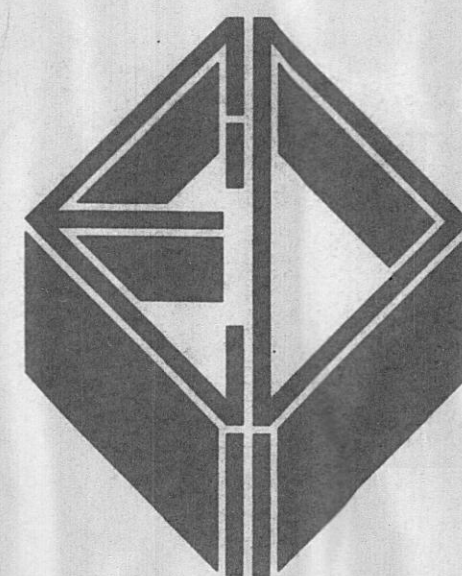
CONSTRUCTION PLANS
FOR
WATER SYSTEM IMPROVEMENTS
FOR

**HARRIMAN UTILITIES BOARD
HARRIMAN, TENNESSEE**

CONTRACT W00-01

**PINE RIDGE ROAD
WATER LINE RELOCATION**

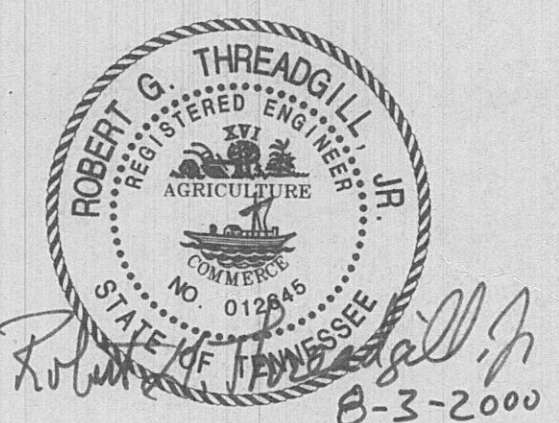
JULY, 2000



ELROD · DUNSON, INC.
CONSULTING ENGINEERS

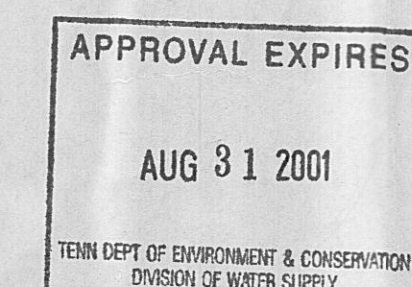
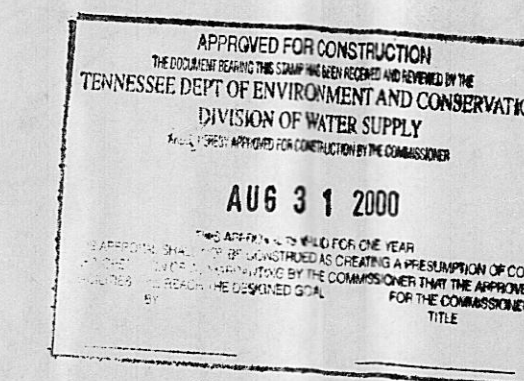
Nashville · Knoxville
Bowling Green, Ky.

WS 00 1204

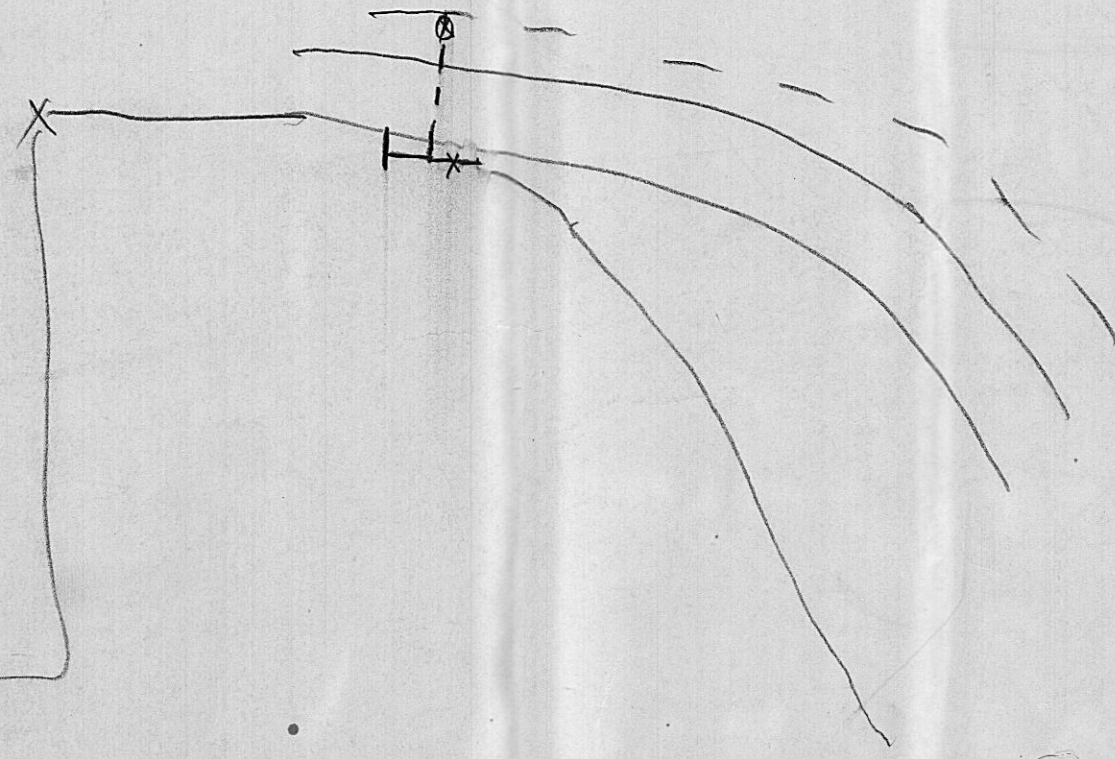


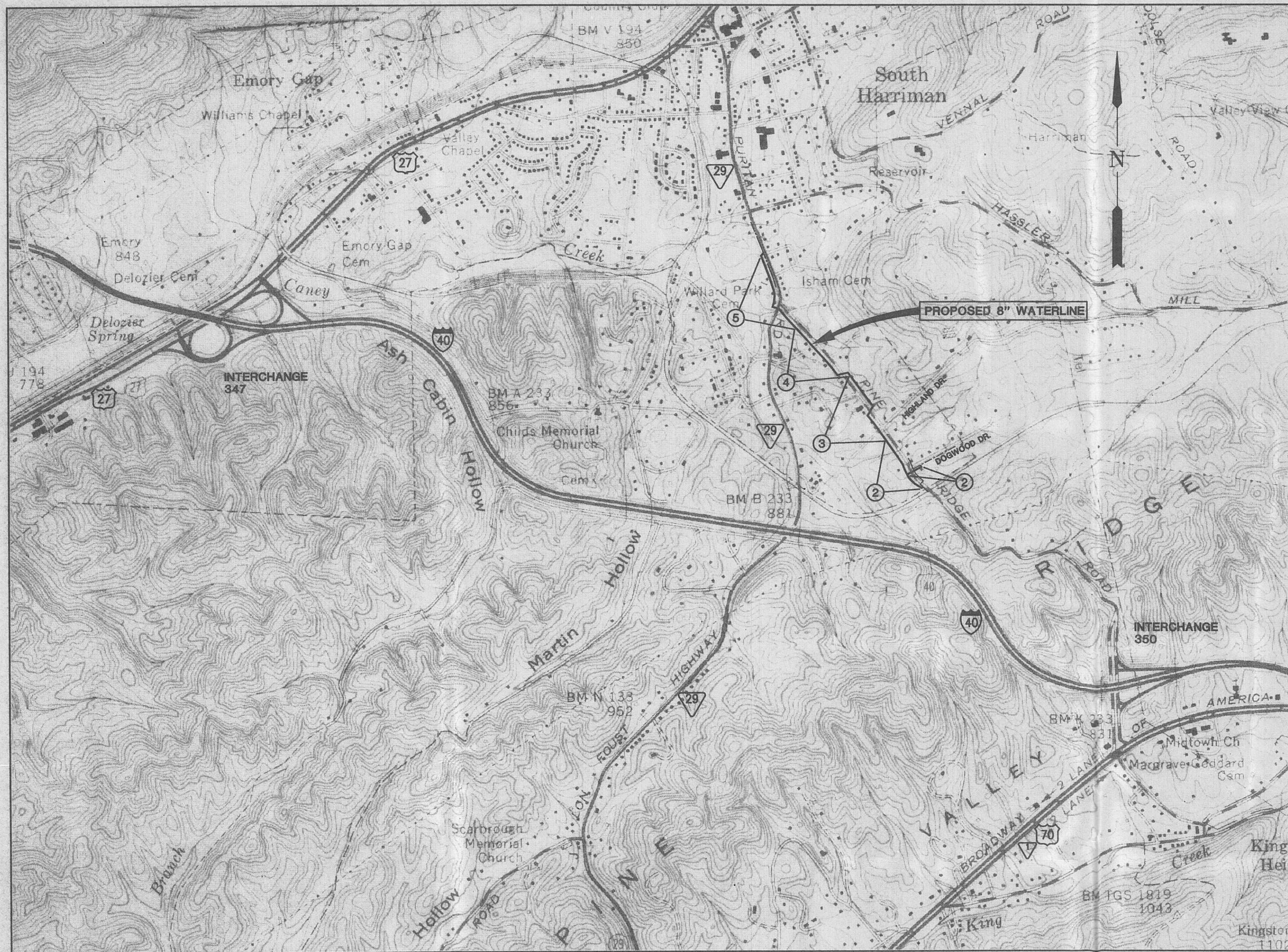
Accepted By: Richard G. Bell
Title: General Manager
For: Harriman Utility Board
Date: August 3, 2000

PROJECT NO. 0700
SET NO.

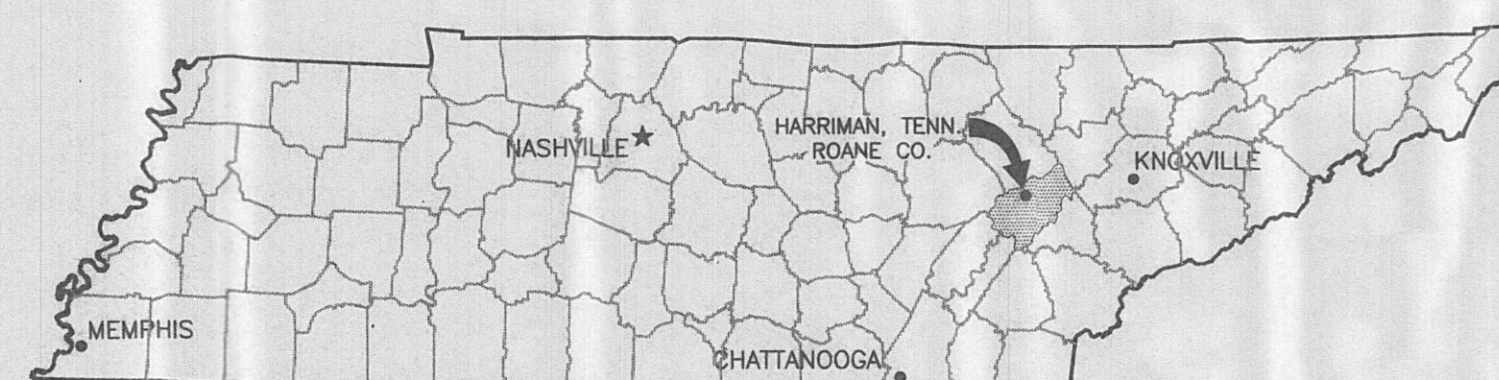


*SHOP PLAN
FRANKIE DAVIS
4-2002*





PROJECT LOCATION MAP
SCALE: 1"=1000'



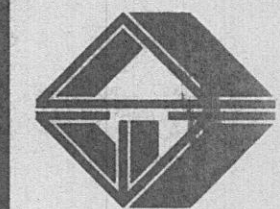
TENNESSEE VICINITY MAP
NOT TO SCALE

INDEX OF SHEETS

SHEET	DESCRIPTION
1	LEGEND, INDEX OF SHEETS, VICINITY MAP, PROJECT LOCATION MAP
2	8" D.I. - PINE RIDGE RD. - STA. 0+000 (0+00) TO STA. 0+253 (8+30) 6" D.I. - DOGWOOD DR. - STA. 0+000 (0+00) TO STA. 0+050 (1+64) E.O.L.
3	8" D.I. - PINE RIDGE RD. - STA. 0+253 (8+30) TO STA. 0+578 (18+96)
4	8" D.I. - PINE RIDGE RD. - STA. 0+578 (18+96) TO STA. 0+882 (28+94)
5	8" D.I. - PINE RIDGE RD. - STA. 0+883 (28+97) TO STA. 1+000 (32+81) E.O.L. 8" D.I. - PURITAN RD. (S.R. 29) STA. 0+000 (0+00) TO STA. 0+187 (6+14) E.O.L.
6	STANDARD WATER LINE CONSTRUCTION DETAILS

LEGEND

EXISTING	NEW	
SA MH		CASING PIPE
6"W		SEWER LINE & MANHOLE
		WATER LINE VALVE
WM		PLUG
FP		WATER METER
G		FIRE HYDRANT
GM		GAS LINE
OHE		GAS METER
		OVERHEAD ELECTRICAL LINE
		POWER POLE
		HEADWALL OR INLET WALL
		CREEK OR DITCH
		CULVERT PIPE
		FENCE ROW
		PROPERTY LINE
		EDGE OF HEAVY FOLIAGE
		TREE
		SHRUB
		SIGN





DIMENSION MARK	NEW WATER LINE LOCATION		SCHEDULE	
	METRIC	ENGLISH	METRIC	ENGLISH
A	22.0m	72.2'	7.0m	23.0'
B	41.5m	136.2'	11.9m	39.0'
C	61.7m	202.4'	14.9m	48.9'
D	82.9m	272.0'	13.6m	44.6'
E	117.7m	386.2'	7.1m	23.3'
F	123.2m	404.2'	7.7m	25.3'
G	128.6m	421.9'	8.4m	27.6'
H	209.0m	685.7'	8.6m	28.2'
I	214.0m	702.1'	5.5m	18.0'
J	220.8m	724.4'	2.2m	7.2'
K	243.3m	798.2'	2.0m	6.6'

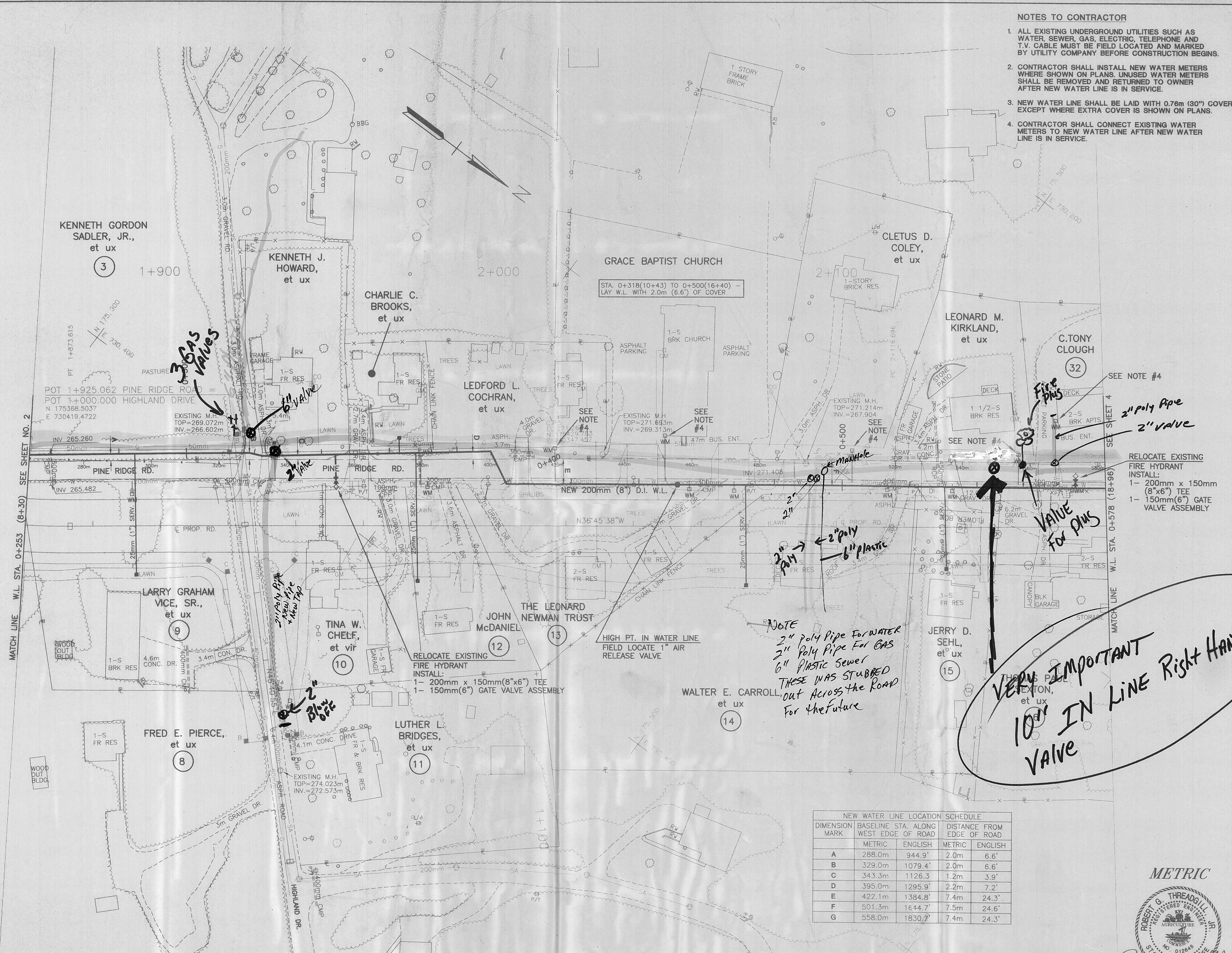
- NOTES TO CONTRACTOR
1. ALL EXISTING UNDERGROUND UTILITIES SUCH AS WATER, SEWER, GAS, ELECTRIC, TELEPHONE AND T.V. CABLE MUST BE FIELD LOCATED AND MARKED BY UTILITY COMPANY BEFORE CONSTRUCTION BEGINS.
 2. CONTRACTOR SHALL INSTALL NEW WATER METERS WHERE SHOWN ON PLANS. UNUSED WATER METERS SHALL BE REMOVED AND RETURNED TO OWNER AFTER NEW WATER LINE IS IN SERVICE.
 3. NEW WATER LINE SHALL BE LAID WITH 0.76m (30") COVER EXCEPT WHERE EXTRA COVER IS SHOWN ON PLANS.
 4. CONTRACTOR SHALL CONNECT EXISTING WATER METERS TO NEW WATER LINE AFTER NEW WATER LINE IS IN SERVICE.
 5. RAISE OR LOWER TOP OF MANHOLE BY ADDING OR REMOVING GRADE RINGS AND/OR M.H. BARRELS AS REQUIRED.

ELROD-DUNSON, INC.
CONSULTING ENGINEERS
NASHVILLE • KNOXVILLE
BOWLING GREEN

CONTRACT W00-01
8" D.I. - PINE RIDGE RD. - STA. 0+000 (0+00) TO STA. 0+253 (8+30)
6" D.I. - DOGWOOD DR. STA. 0+000 (0+00) TO STA. 0+050 (1+64) E.O.L.

DESIGNED: R.G.T.
DRAWN: S.C.G.
CHECKED: R.G.T.
DATE: JULY, 2000
SCALE: 1:500
PROJ. NO. 0700

SHEET 2
OF 6

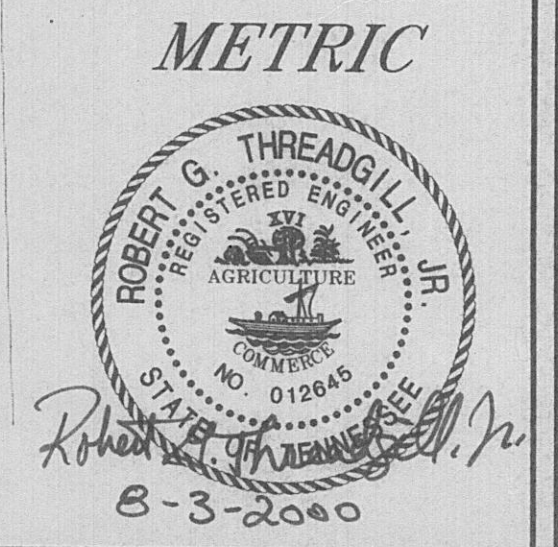


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NOTE
2" Poly Pipe For Water
2" Poly Pipe For Gas
6" Plastic Sewer
THESE WAS STUBBED
OUT ACROSS THE ROAD
FOR THE FUTURE

VERY IMPORTANT
10' IN LINE RIGHT HANDED
VALVE

NEW WATER LINE LOCATION SCHEDULE				
DIMENSION MARK	BASELINE STA. ALONG WEST EDGE OF ROAD		DISTANCE FROM EDGE OF ROAD	
	METRIC	ENGLISH	METRIC	ENGLISH
A	288.0m	944.9'	2.0m	6.6'
B	329.0m	1079.4'	2.0m	6.6'
C	343.3m	1126.3'	1.2m	3.9'
D	395.0m	1295.9'	2.2m	7.2'
E	422.1m	1384.8'	7.4m	24.3'
F	501.3m	1644.7'	7.5m	24.6'
G	558.0m	1830.2'	7.4m	24.3'



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CONTRACT W00-01

8" D.I. - PINE RIDGE RD. - STA. 0+253 (8+30) TO STA. 0+578 (18+96)

DESIGNED: R.G.T.
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REVISIONS

SHEET 3
OF 6

NEW WATER LINE LOCATION SCHEDULE				
DIMENSION MARK	BASELINE STA. ALONG WEST EDGE OF ROAD		DISTANCE FROM EDGE OF ROAD	
	METRIC	ENGLISH	METRIC	ENGLISH
A	595.8m	1954.8'	7.5m	24.6'
B	615.5m	2019.5'	3.8m	12.5'
C	652.4m	2140.5'	2.7m	8.9'
D	674.9m	2214.3'	3.2m	10.5'
E	687.5m	2255.7'	3.3m	10.8'
F	771.6m	2531.6'	4.7m	15.4'
G	784.6m	2574.3'	5.0m	16.4'
H	844.8m	2771.8'	5.4m	17.7'
I	865.1m	2838.4'	6.9m	22.6'

NOTES TO CONTRACTOR

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5. RAISE OR LOWER TOP OF MANHOLE BY ADDING OR REMOVING GRADE RINGS AND/OR M.H. BARRELS AS REQUIRED.

PROPOSED HIGHWAY CONSTRUCTION EASEMENT

EXISTING M.H.
TOP=261.373m
INV.=259.913m
LOWER M.H. 0.4m (1.3')
SEE NOTE 5

EXISTING M.H.
TOP=268.624m
INV.=264.874m

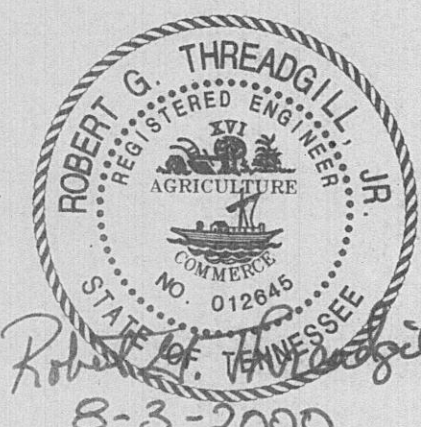
MATCH LINE W.L. STA. 0+578 (18+96) SEE SHEET 3

SEE SHEET 5
MATCH LINE W.L. STA. 0+882 (28+94)



RELOCATE EXISTING
FIRE HYDRANT
INSTALL:
1- 200mm x 150mm(8"x6") TEE
1- 150mm(6") GATE VALVE ASSEMBLY

METRIC



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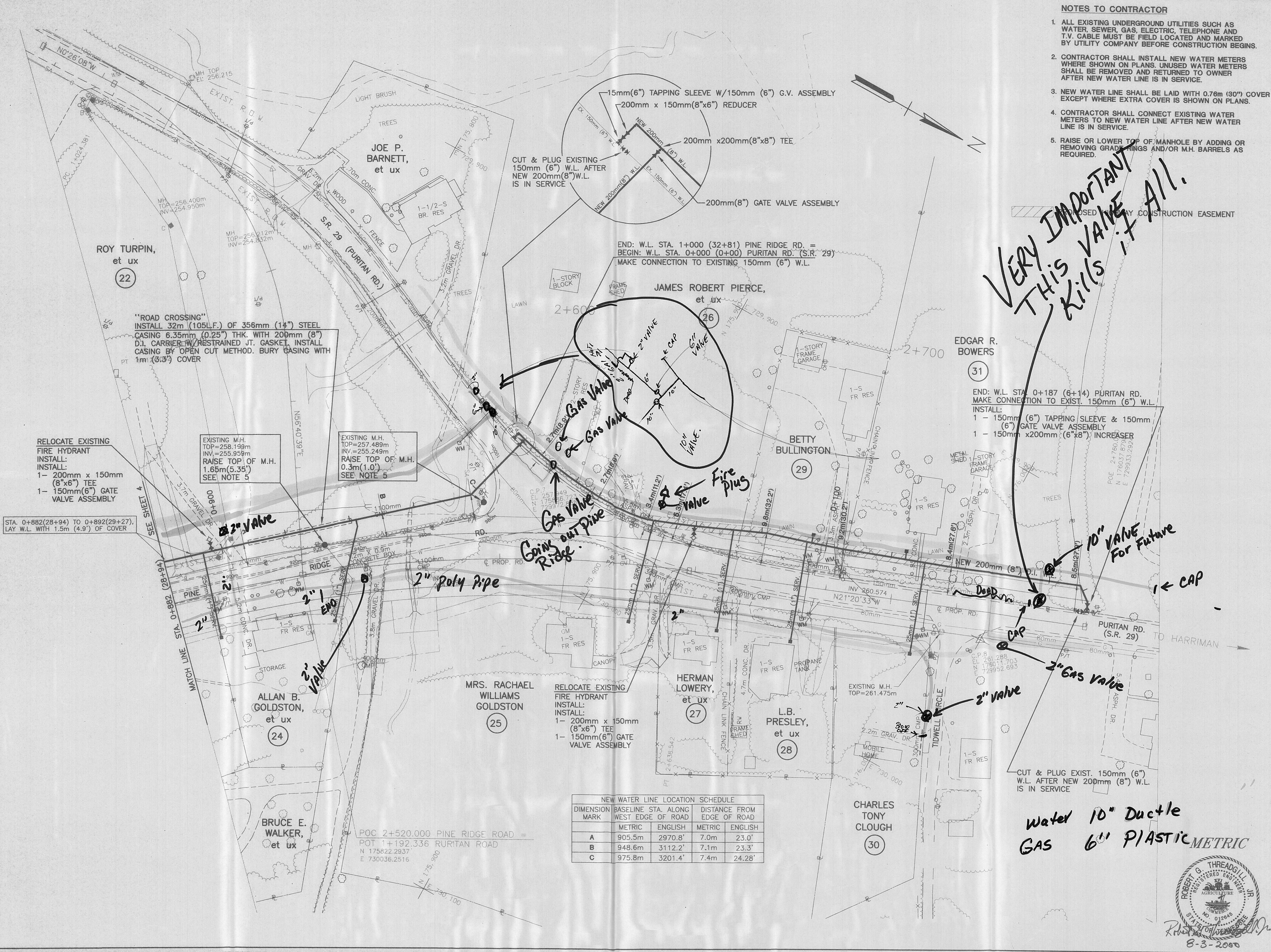
CONTRACT W00-01

HARRIMAN, TENNESSEE

REVISIONS

DESIGNED: R.G.T.
DRAWN: S.C.G.
CHECKED: R.G.T.
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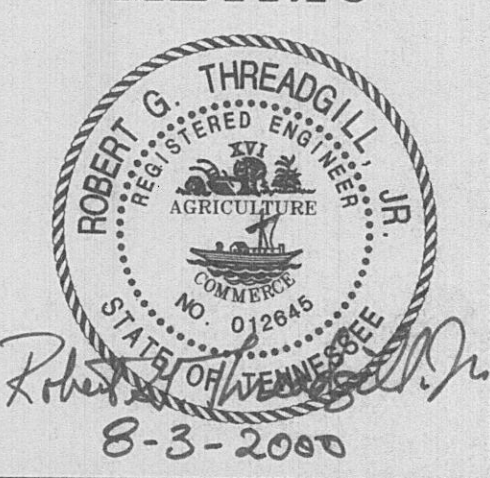
SHEET 4
OF 6



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NEW WATER LINE LOCATION SCHEDULE

DIMENSION MARK	BASELINE STA. ALONG WEST EDGE OF ROAD	DISTANCE FROM EDGE OF ROAD		
	METRIC	ENGLISH	METRIC	ENGLISH
A	905.5m	2970.8'	7.0m	23.0'
B	948.6m	3112.2'	7.1m	23.3'
C	975.8m	3201.4'	7.4m	24.28'



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HARRIMAN, TENNESSEE

8" D.I. - PINE RIDGE RD. - STA. 0+883 (28+97) TO STA. 1+000 (32+81) E.O.L.
6" D.I. - PURITAN RD. (S.R. 29) STA. 0+000 (0+00) TO STA. 0+187 (6+14) E.O.L.

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SHEET 5 OF 6



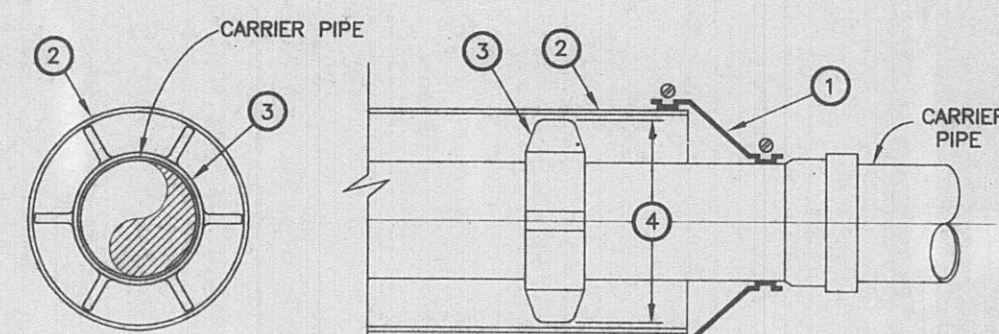
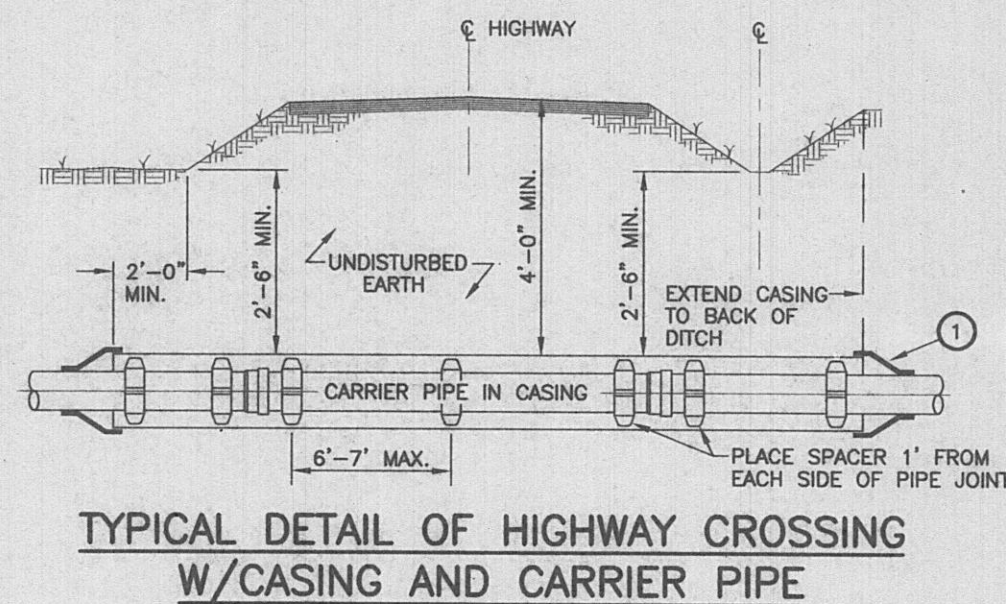
CONTRACT W00-01

HARRMAN, TENNESSEE
STANDARD WATER LINE CONSTRUCTION DETAILS

REVISIONS

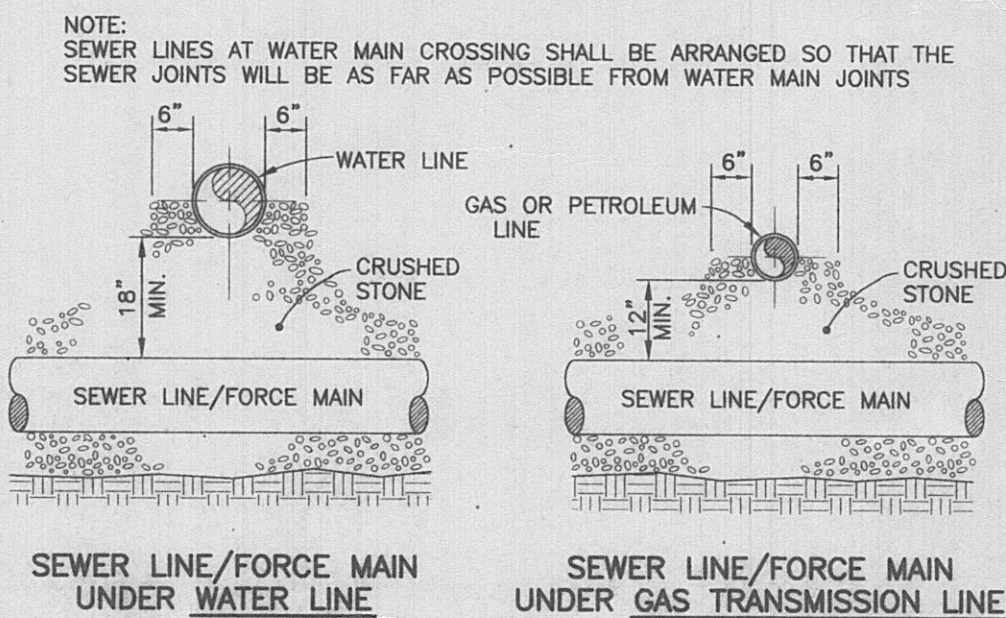
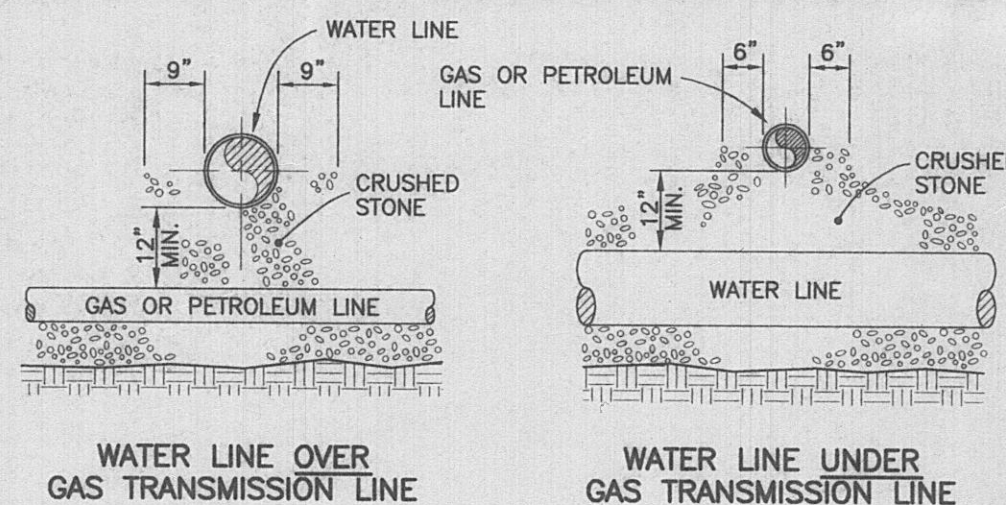
DESIGNED: R.G.T.
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CHECKED: R.G.T.
DATE: JULY, 2000
SCALE: AS NOTED
PROJ. NO. 0700

SHEET 6
OF 6

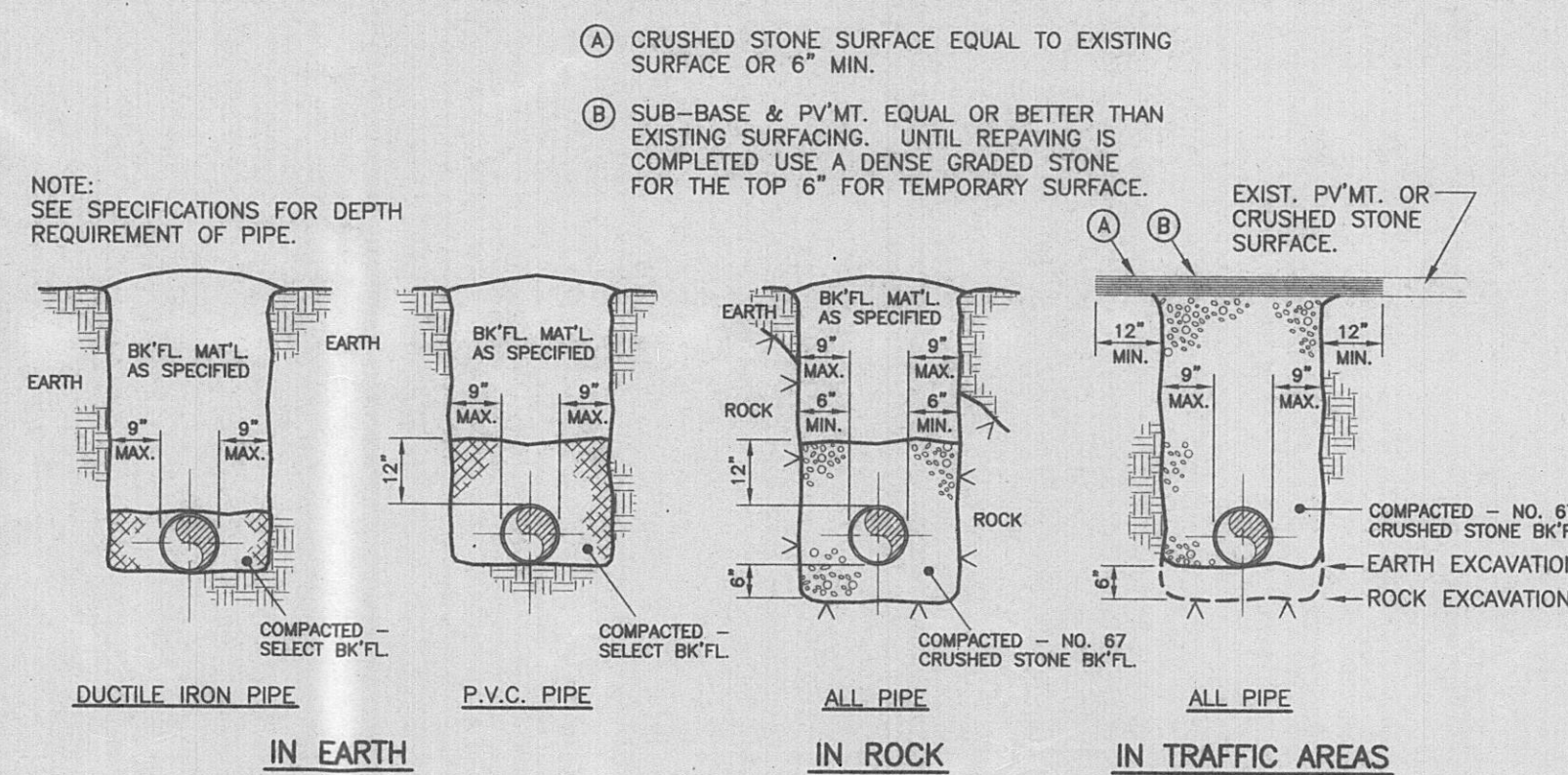
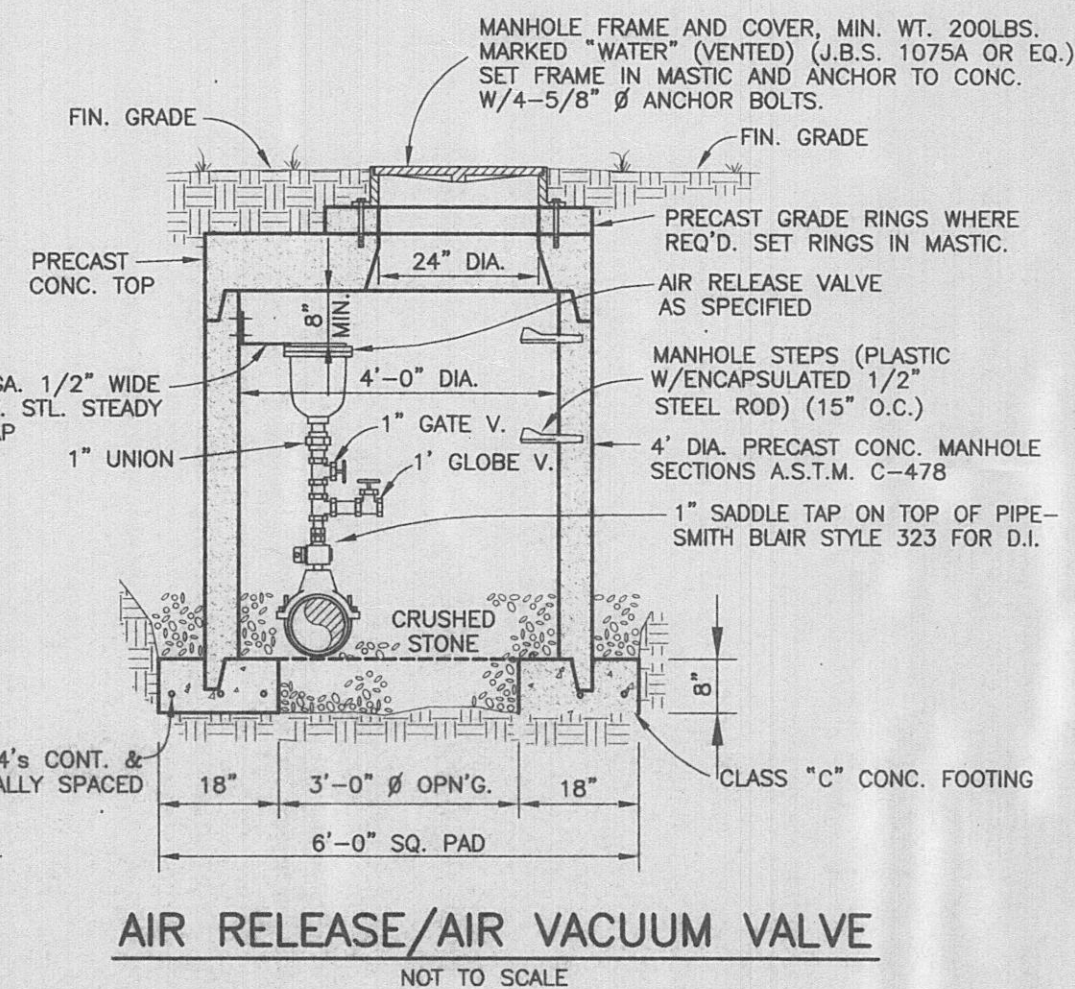


- USE WATERTIGHT WRAP AROUND END SEALS WITH STAINLESS STEEL BANDS.
- SMOOTH WALL STEEL CASING PIPE BITUMINOUS COATING INSIDE & OUT.
- USE PSI RANGER AZ CASING SPACERS FOR 4" THRU 12" DIA. CARRIER PIPE. USE PSI RANGER GZK CASING SPACERS FOR 14" THRU 24" DIA. CARRIER PIPE.
- SPACER SKIDS SHALL BE SIZED AND TRIMMED TO MAINTAIN 1/2" MAXIMUM CLEARANCE BETWEEN SKID AND CASING PIPE.
- RESTRAIN PIPE IN ALL CASING OVER 60 FEET IN LENGTH.

CASING PIPE W/CARRIER PIPE DETAIL
NOT TO SCALE



- NOTES:
- USE TRAFFIC MANHOLE FRAME & COVER WHEN IN ROADWAY (J.B.S. 1311 OR EQUAL).
 - PIPE GRADE SHALL BE LOWERED, IF REQUIRED, WHEN APPROACHING AIR RELEASE VALVE TO GIVE VERTICAL SPACE FOR AIR RELEASE APPURTENANCES. (SEE SHOP DWGS.)
 - SEAL PIPE THROUGH MANHOLE OPENINGS W/ NON-SHRINK GROUT.

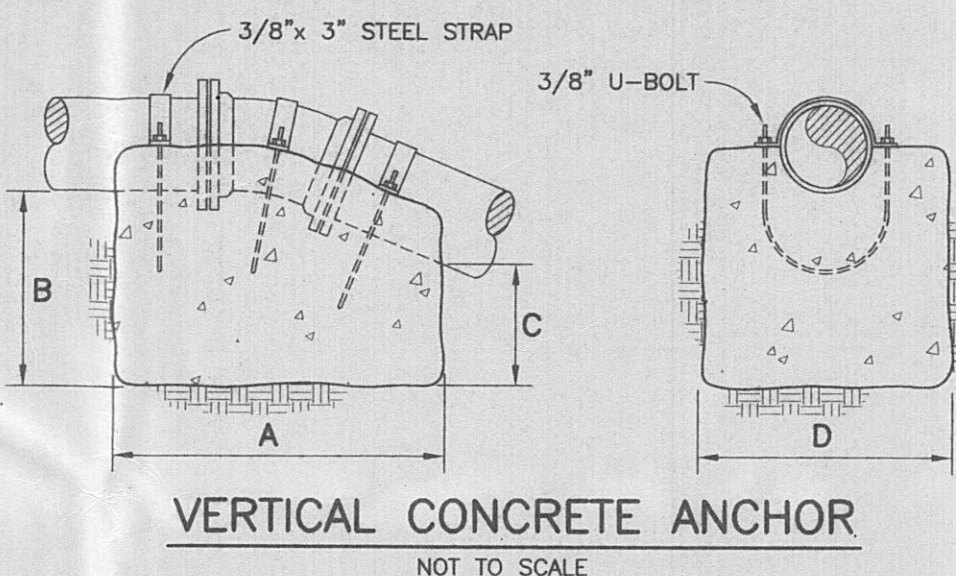


90° BEND							45° BEND								
SIZE	18"	12"	10"	8"	6"	4"	2"	SIZE	18"	12"	10"	8"	6"	4"	2"
A	60	54	48	42	36	30	22	A	56	50	44	38	32	28	22
B	48	42	36	30	22	12	8	B	42	38	32	26	20	12	8
C	44	38	32	26	18	8	4	C	38	34	28	22	16	8	4
D	46	40	34	28	20	12	8	D	40	36	30	24	18	10	6

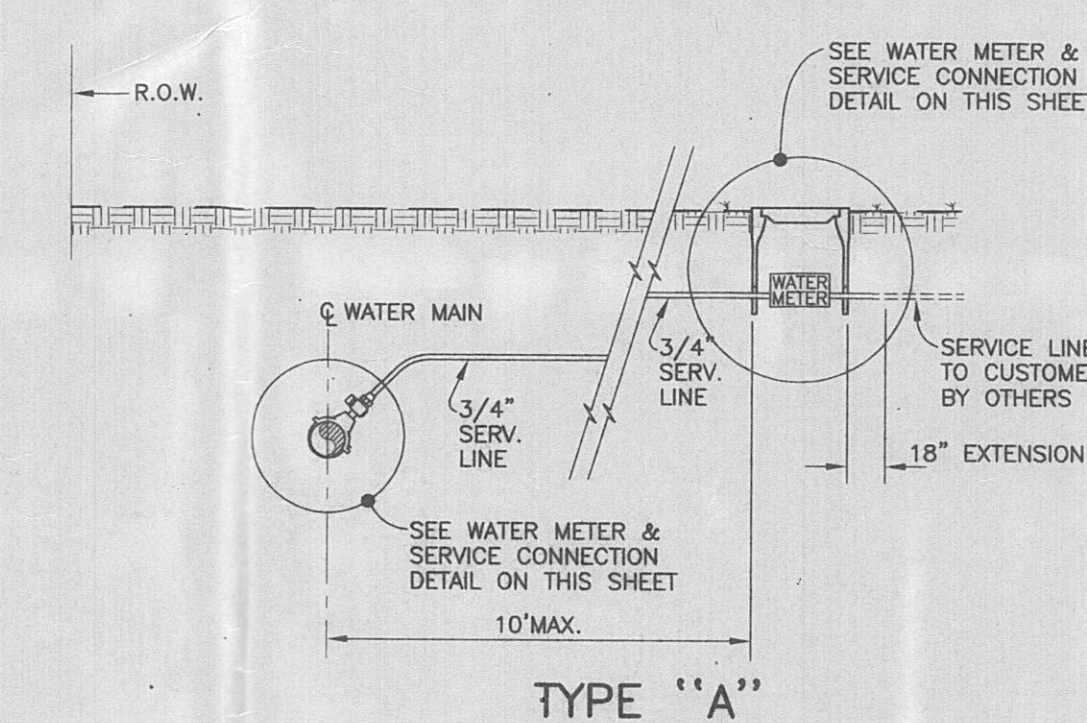
221/2° BEND							111/4° BEND								
SIZE	18"	12"	10"	8"	6"	4"	2"	SIZE	18"	12"	10"	8"	6"	4"	2"
A	50	44	38	34	30	22	A	34	30	26	24	22	18	12	8
B	34	30	26	22	16	12	B	26	24	18	16	12	8	4	2
C	36	28	22	18	12	8	C	26	24	18	16	12	8	4	2
D	38	32	24	20	14	10	D	30	26	24	18	12	10	6	4

CONNECTIONS ARE 1/2" NPT

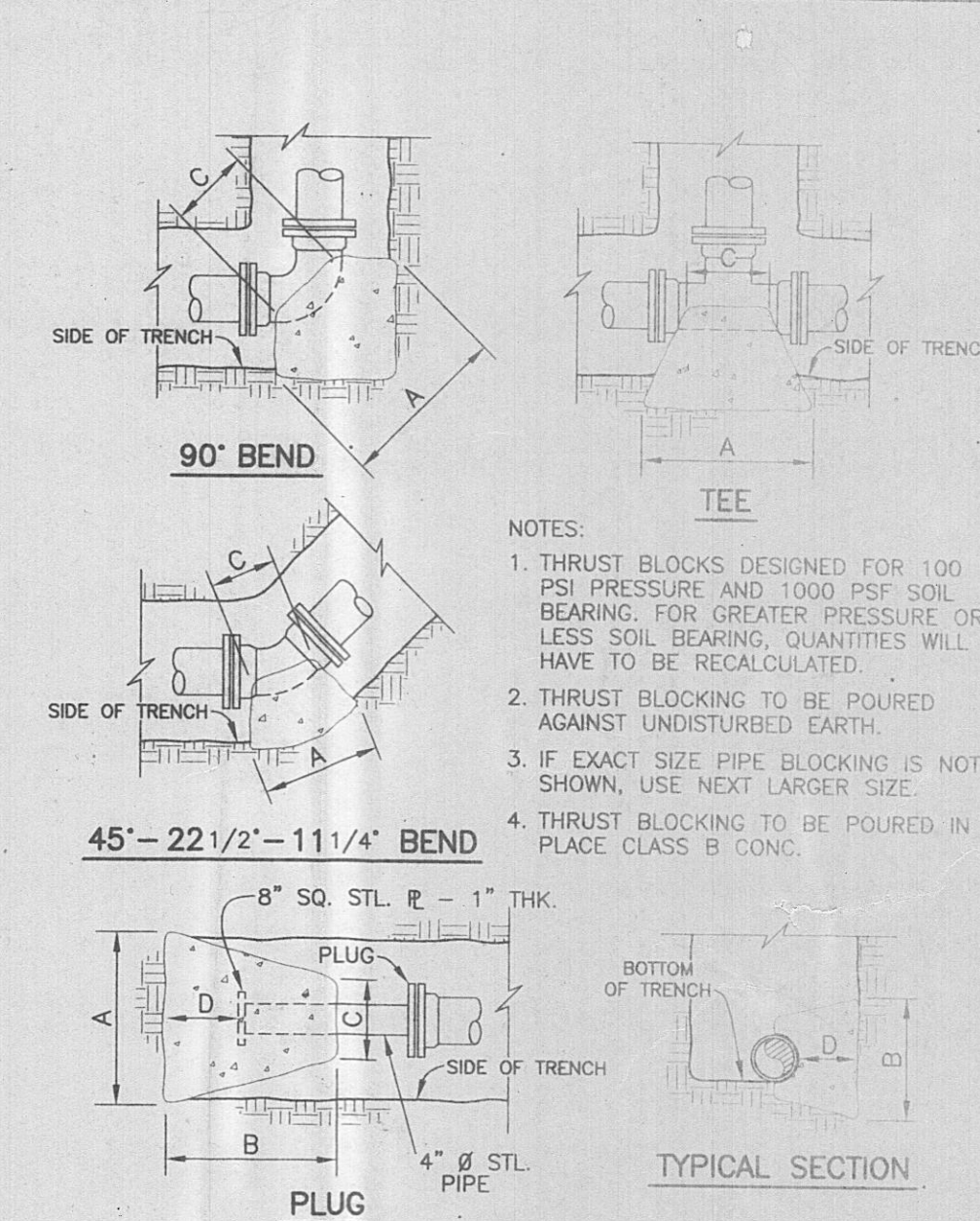
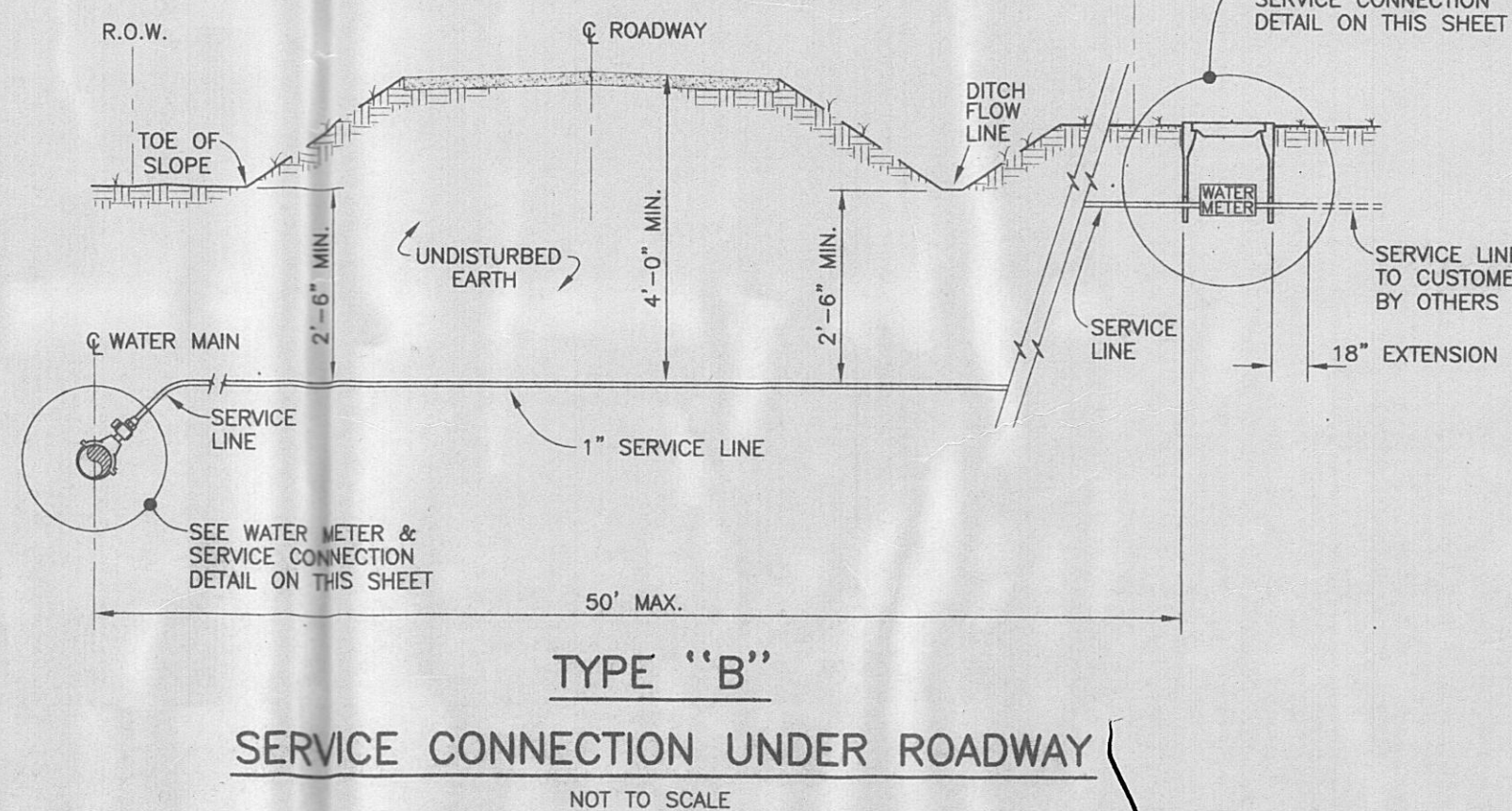
- NOTES:
- POUR CLASS B CONCRETE ANCHOR AGAINST UNDISTURBED EARTH OR ROCK.
 - IF EXACT SIZE PIPE IS NOT SHOWN, USE NEXT LARGER SIZE.



- SERVICE CONNECTION NOT UNDER ROADWAY LUMP SUM BID ITEM INCLUDES:
- METER BOX INSTALLATION AND APPURTENANCES
 - WATER MAIN CONNECTION AND APPURTENANCES



- SERVICE CONNECTION UNDER ROADWAY LUMP SUM BID ITEM INCLUDES:
- METER BOX INSTALLATION AND APPURTENANCES
 - BORE & JACK UNDER ROADWAY NO CASING REQUIRED
 - WATER MAIN CONNECTION AND APPURTENANCES



90° BEND												
SIZE	16"	12"	10"	8"	6"	4"	2"					
A	64	50	40	33	28	16	16					
B	64	50	40	33	24	16	16					
C	30	16	15	12	12	9	9					
D	32	25	20	16	12	8	8					

45° BEND												
SIZE	16"	12"	10"	8"	6"	4"	2"					
A	48	37	31	24	18	12	12					
B	48	37	31	24	18	12	11					
C	18	16	14	12	12	8	8					
D	22	18	15	12	9	6	6					

22 1/2° BEND												
SIZE	16"	12"	10"	8"	6"	4"	2"					
A	34	26	23	18	13	9	9					
B	34	26	23	18	13	9	8					
C	18	16	14	12	10	8	8					
D	16	13	11	9	6	4	4					

11 1/4° BEND												
SIZE	16"	12"	10"	8"	6"	4"	2"					
A	24	18	16	13	11	9	9					
B	24	18	16	13	11	9	8					
C	18	16	14	12	10	8	8					
D	12	9	8	6	5	4	4					

PLUG												
SIZE	16"	12"	10"	8"	6"	4"	2"					
A	54	52	43	34	26	26	21					
B	54	52	43	34	26	26	20					
C	30	12	12	12	12	12	12					
D	44	32	22	15	11	11	11					

TEE												
SIZE	MAN. BRANCH	16"	12"	10"	8"	6"	4"	2"				
A	54	52	42	26	43	26	21	21				
B	54	52	43	26	43	26	21	20				
C	30	12	12	12	12	12	12	12				
D	30	26	21	13	21	13	13	13				

DIMENSIONS ARE IN INCHES

