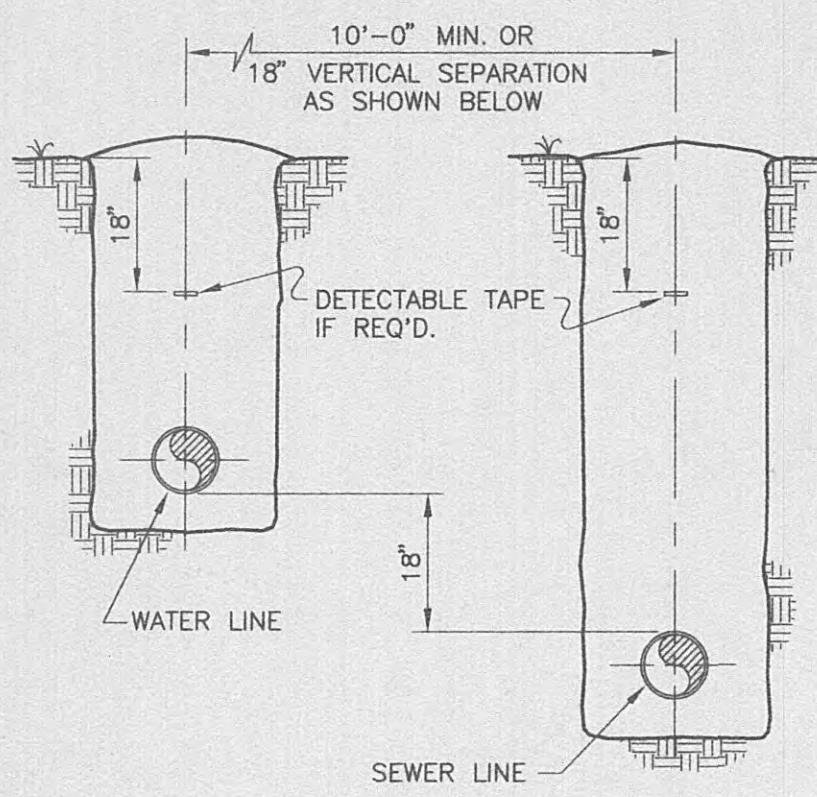
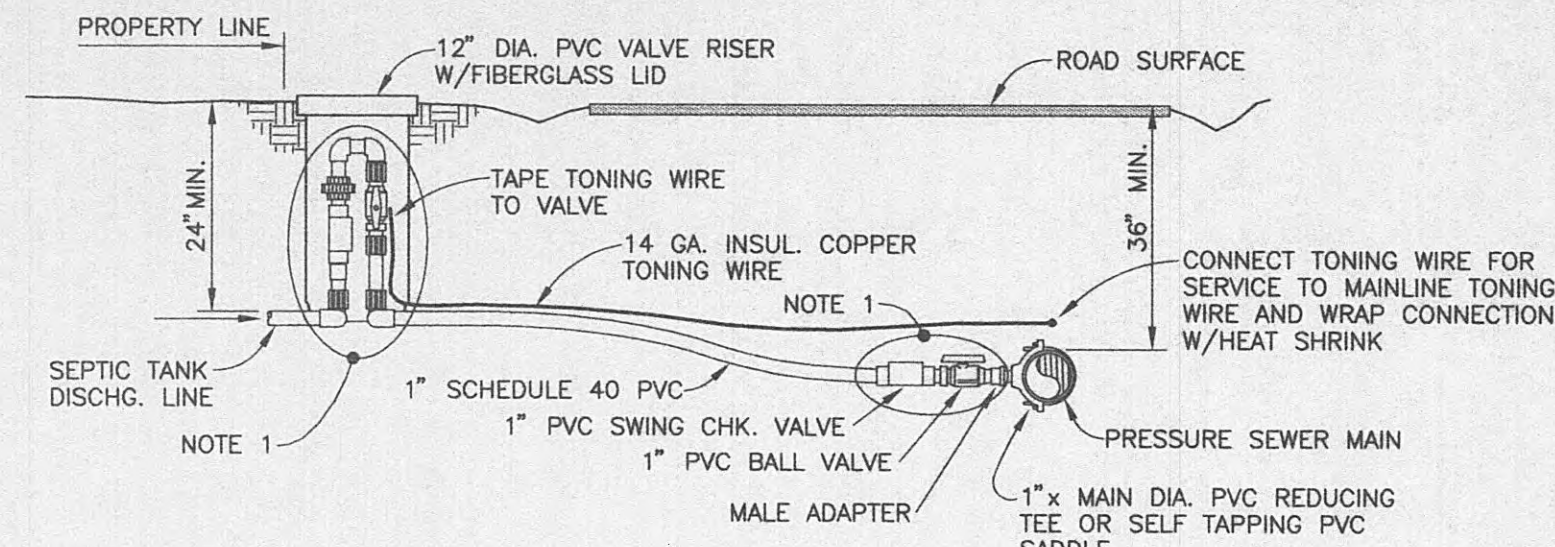


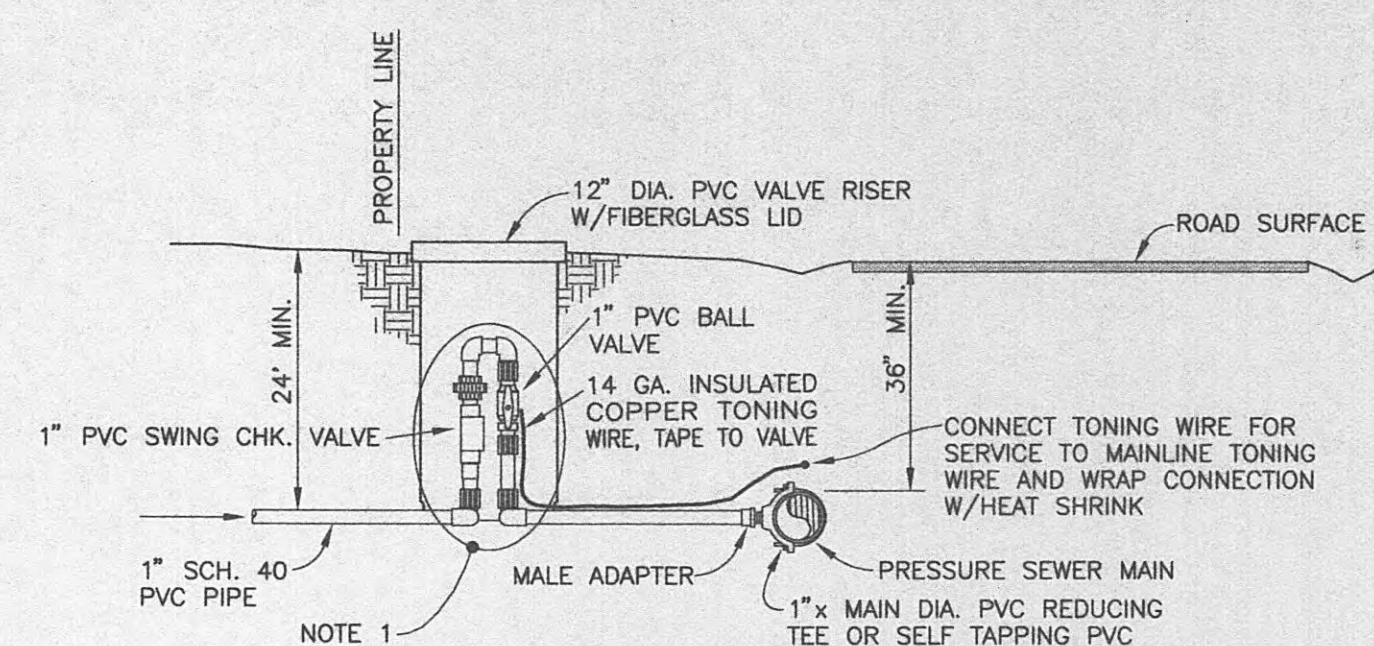


PIPELINE SEPARATION DETAIL
NOT TO SCALE



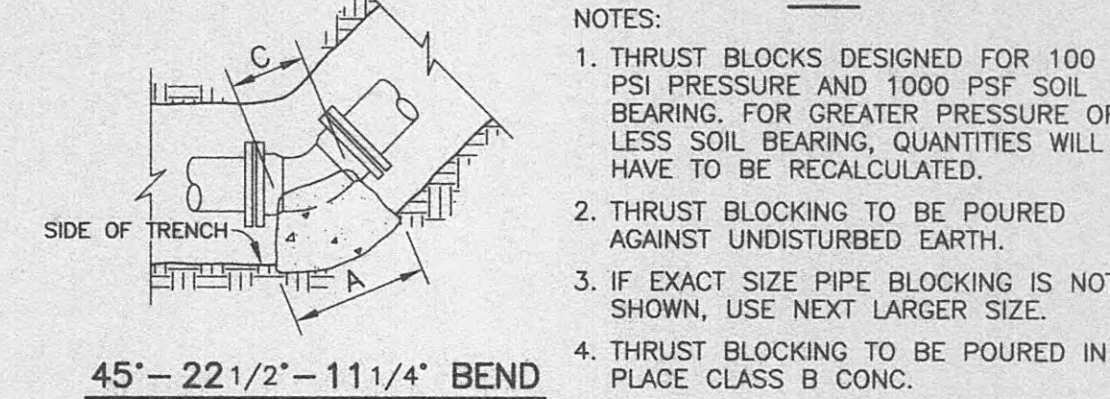
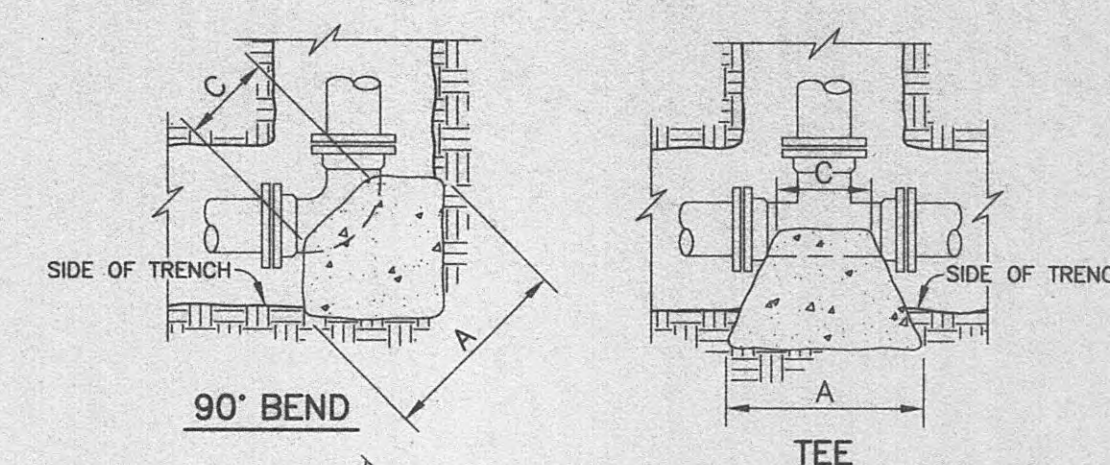
1. THESE ASSEMBLIES SHALL BE SUPPLIED AS AN ASSEMBLED UNIT TO THE CONTRACTOR.
2. ALL SERVICE LINE CONNECTIONS SHALL BE SOLVENT WELDED.
3. ALL SERVICE LATERALS FROM THE PRESSURE MAIN TO THE PROPERTY LINE SHALL BE PRESSURE TESTED PRIOR TO ANY BACKFILLING.
4. NOTCH RISER WHERE IT FITS OVER THE SERVICE LATERAL.
5. PLACE VALVE BOX ON 4" THK. GRAVEL BASE.

PRESSURE SERVICE CONNECTION (UNDER ROAD)
NOT TO SCALE



1. THIS ASSEMBLY SHALL BE SUPPLIED AS AN ASSEMBLED UNIT TO THE CONTRACTOR.
2. ALL SERVICE LINE CONNECTIONS SHALL BE SOLVENT WELDED.
3. ALL SERVICE LATERALS FROM THE PRESSURE MAIN TO THE PROPERTY LINE SHALL BE PRESSURE TESTED PRIOR TO ANY BACKFILLING.
4. NOTCH RISER WHERE IT FITS OVER THE SERVICE LATERAL.
5. PLACE VALVE BOX ON 4" THK. GRAVEL BASE.

PRESSURE SERVICE CONNECTION
NOT TO SCALE



THRUST BLOCKING DETAIL
NOT TO SCALE

SIZE	16"	12"	10"	8"	6"	4"	2"
A	64	50	40	33	26	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	9

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

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

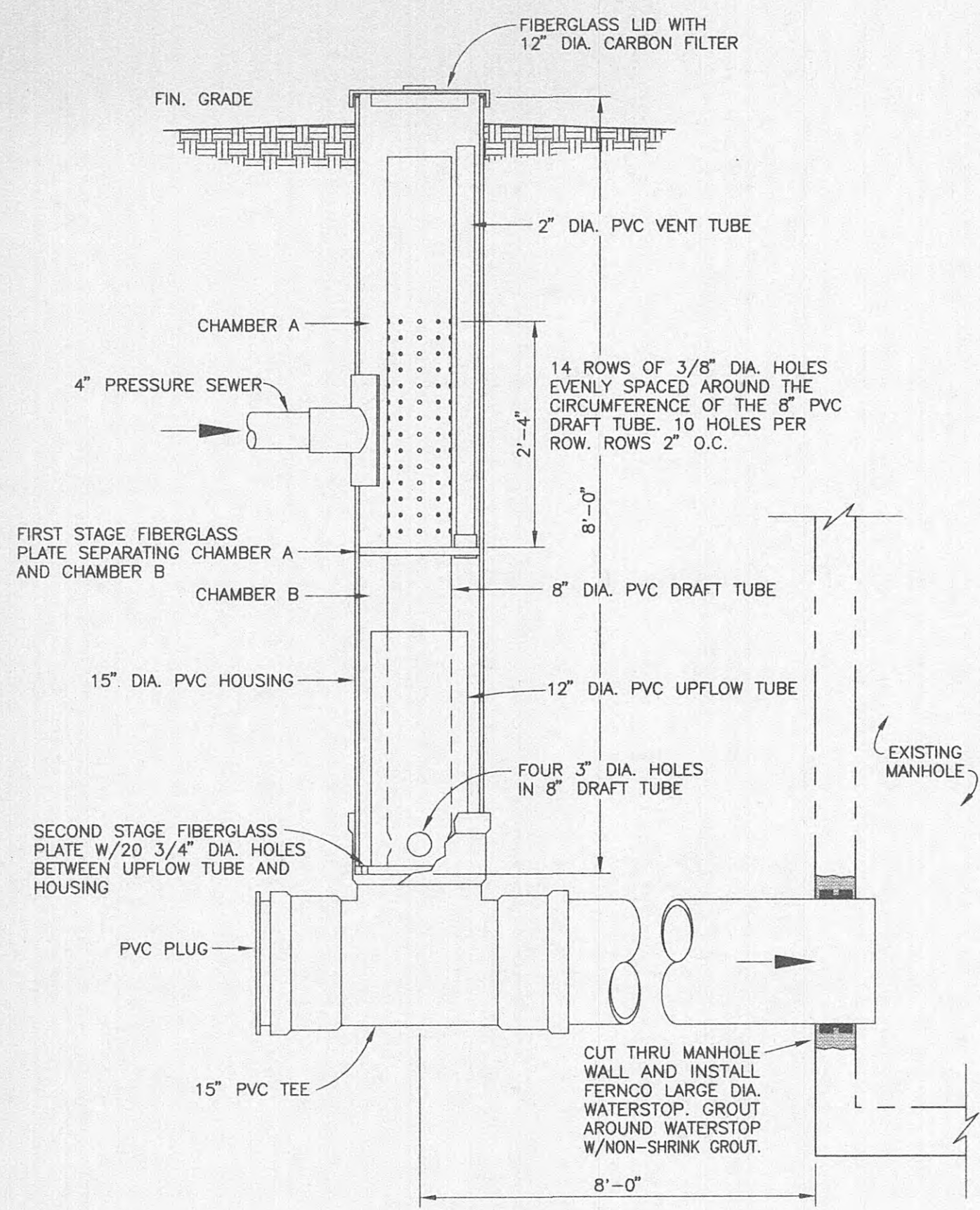
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B	48	37	31	24	18	12	12
C	18	16	14	12	10	8	8
D	22	18	15	12	9	6	6

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

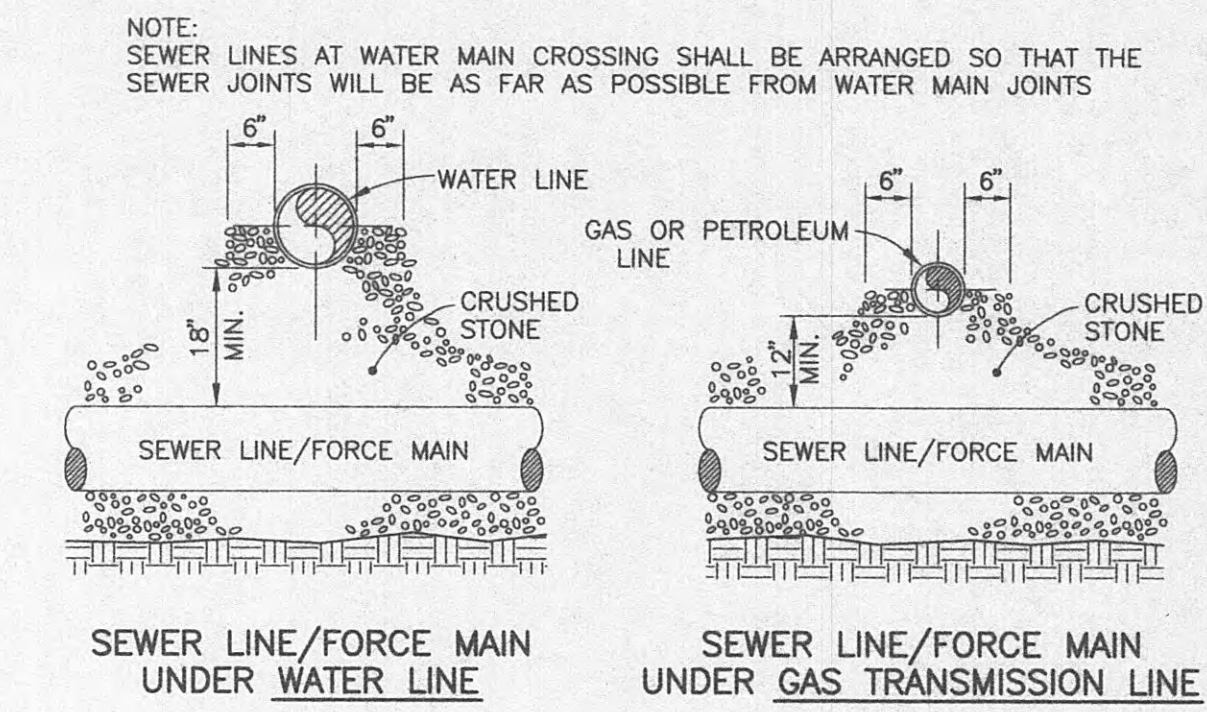
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A	48	37	31	24	18	12	12
B	48	37	31	24	18	12	12
C	18	16	14	12	10	8	8
D	22	18	15	12	9	6	6

NOTES:
1. THRUST BLOCKS DESIGNED FOR 100 PSI PRESSURE AND 1000 PSF SOIL BEARING. FOR GREATER PRESSURE OR LESS SOIL BEARING, QUANTITIES WILL HAVE TO BE RECALCULATED.
2. THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
3. IF EXACT SIZE PIPE BLOCKING IS NOT SHOWN, USE NEXT LARGER SIZE.
4. THRUST BLOCKING TO BE POURED IN PLACE CLASS B CONC.

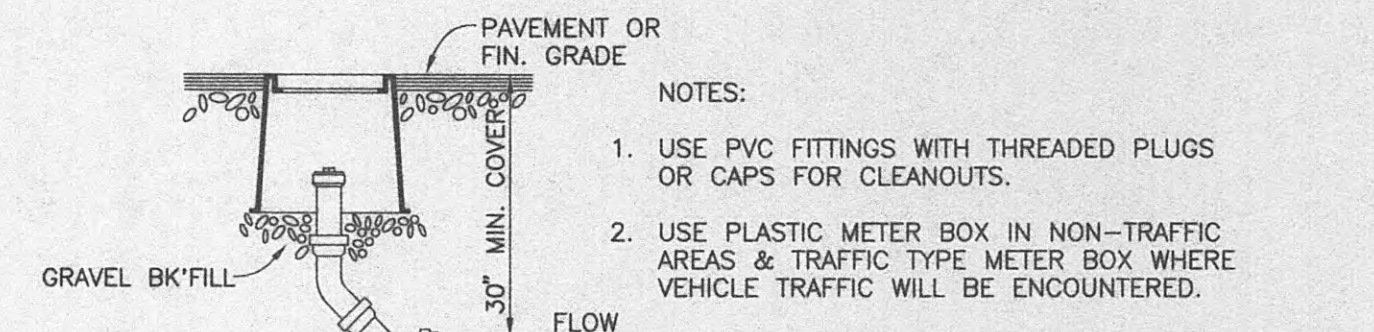
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NOT TO SCALE



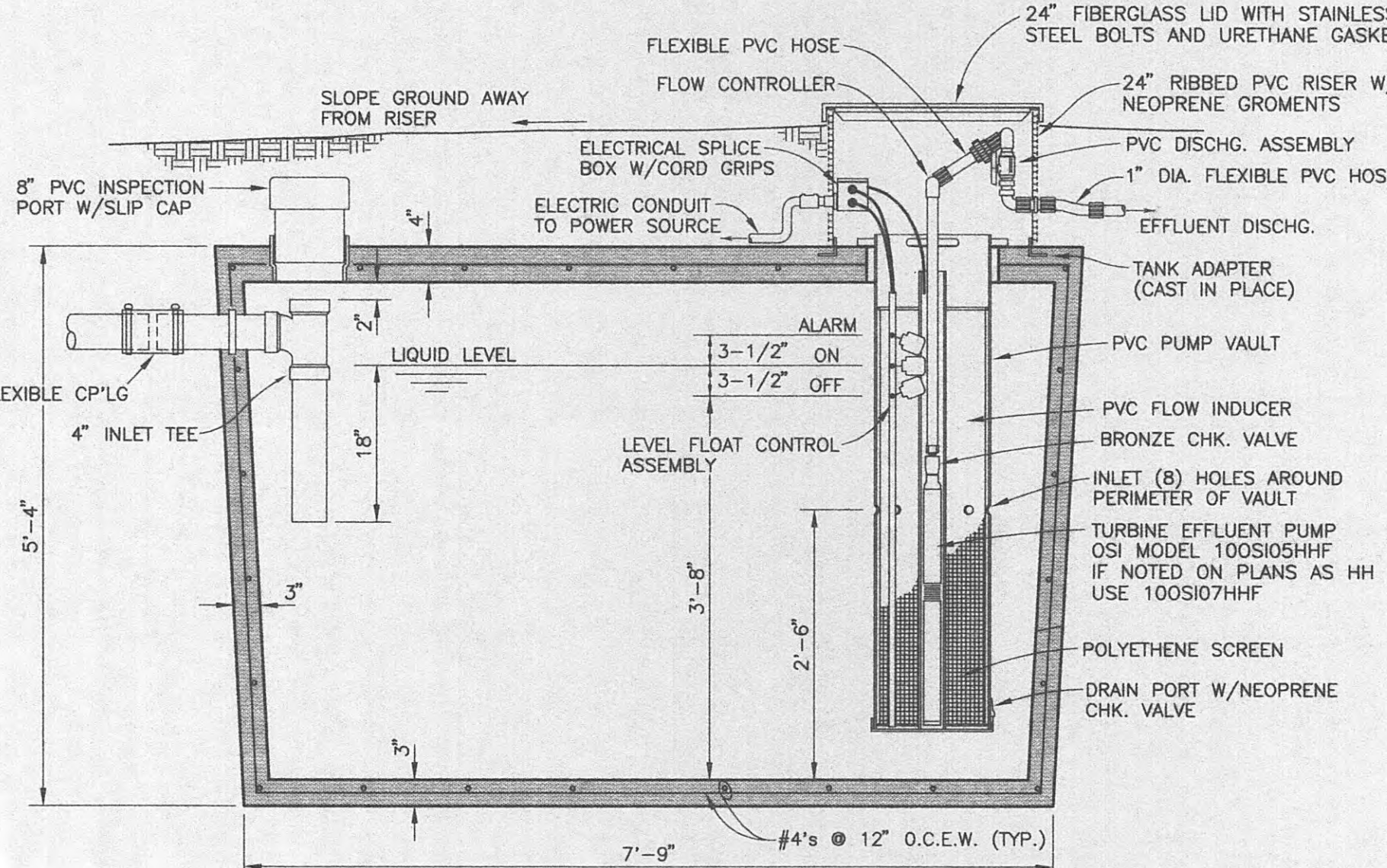
AERATOR ASSEMBLY
NOT TO SCALE



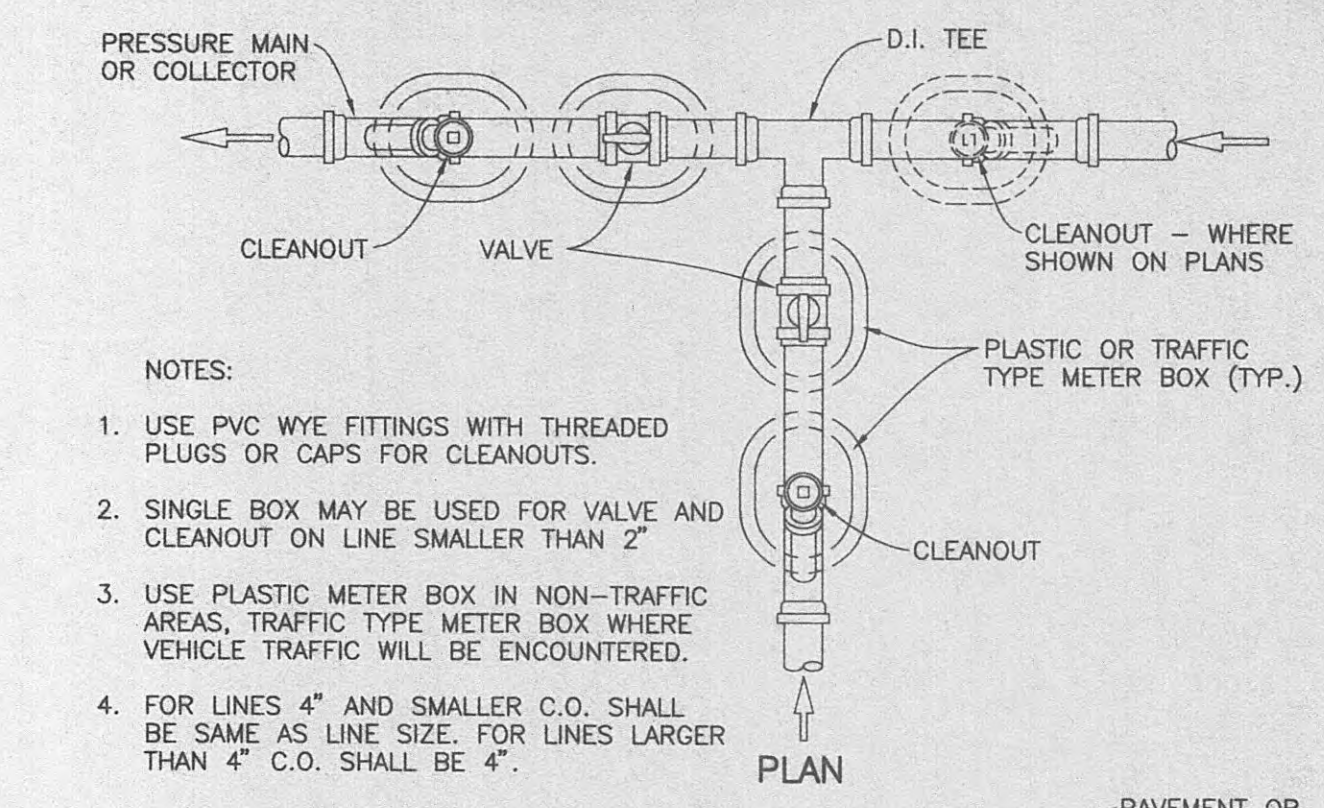
PIPE CROSSING FOR SEWER LINE/FORCE MAIN
NOT TO SCALE



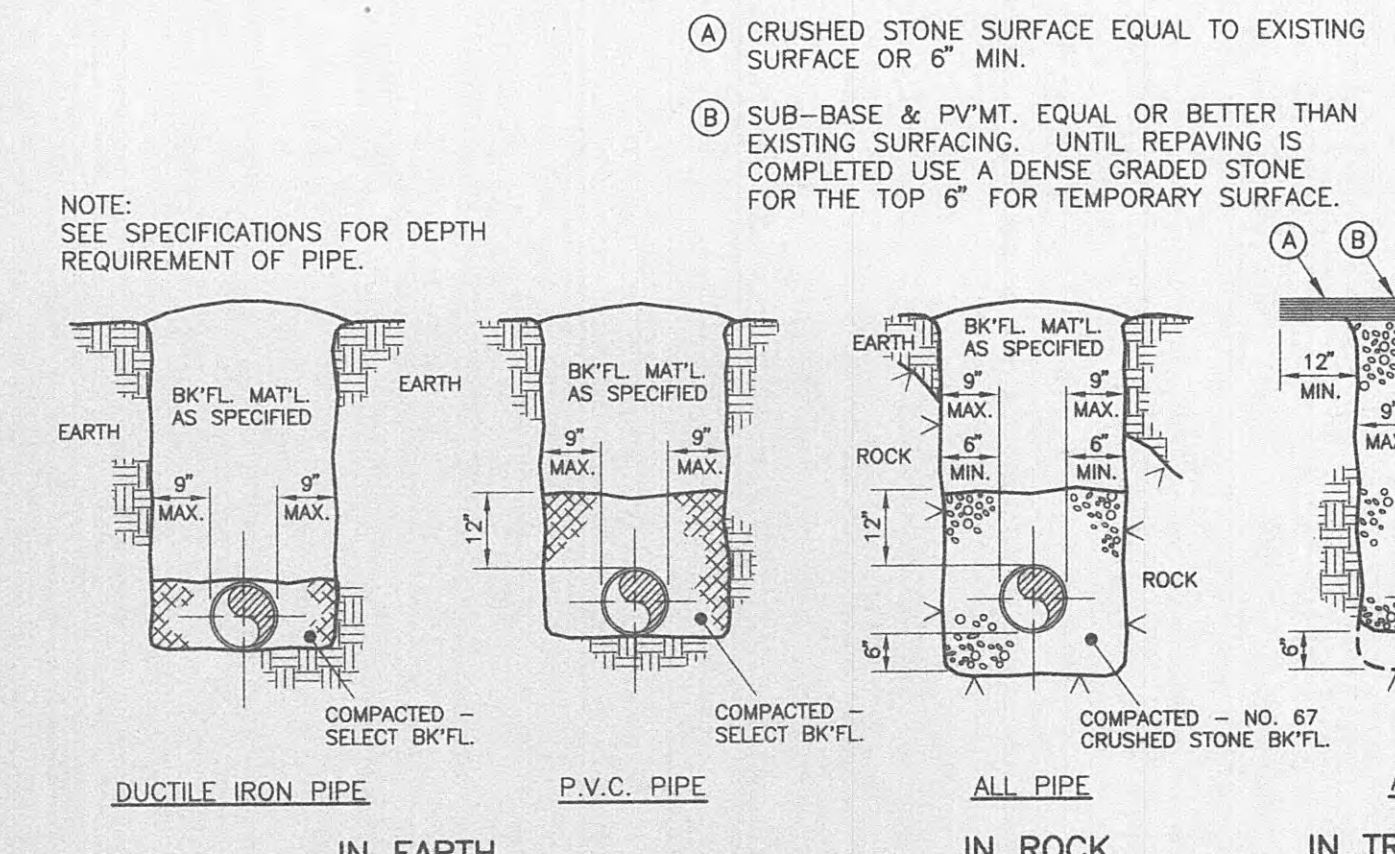
TERMINAL CLEANOUT & BOX
NOT TO SCALE



STEP (SEPTIC TANK EFFLUENT PUMP) SYSTEM
SIDE VIEW-TYPICAL PUMP TANK
NOT TO SCALE



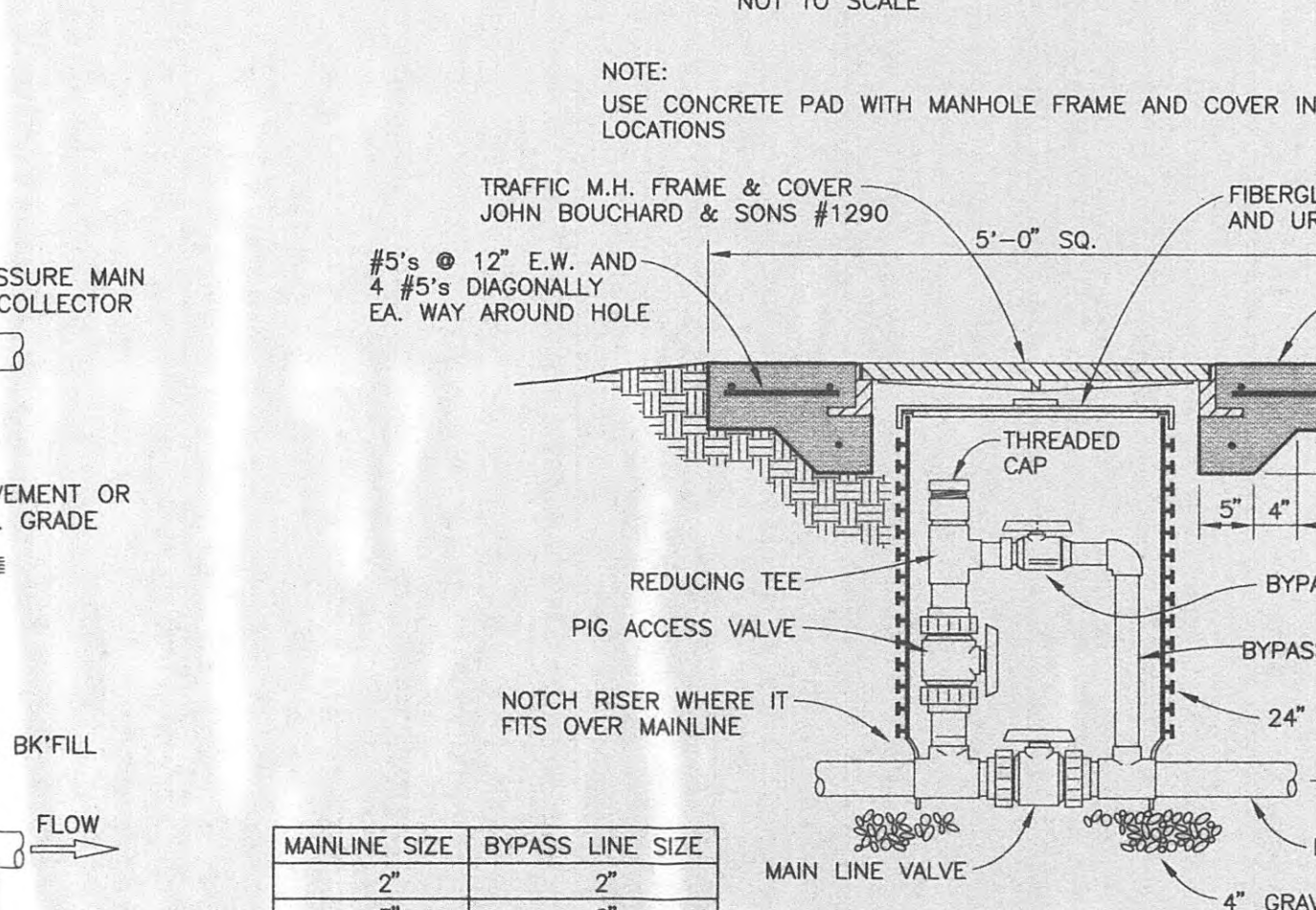
VALVE BOX & CLEANOUT ARRANGEMENTS AT JUNCTION OF PRESSURE MAINS
NOT TO SCALE



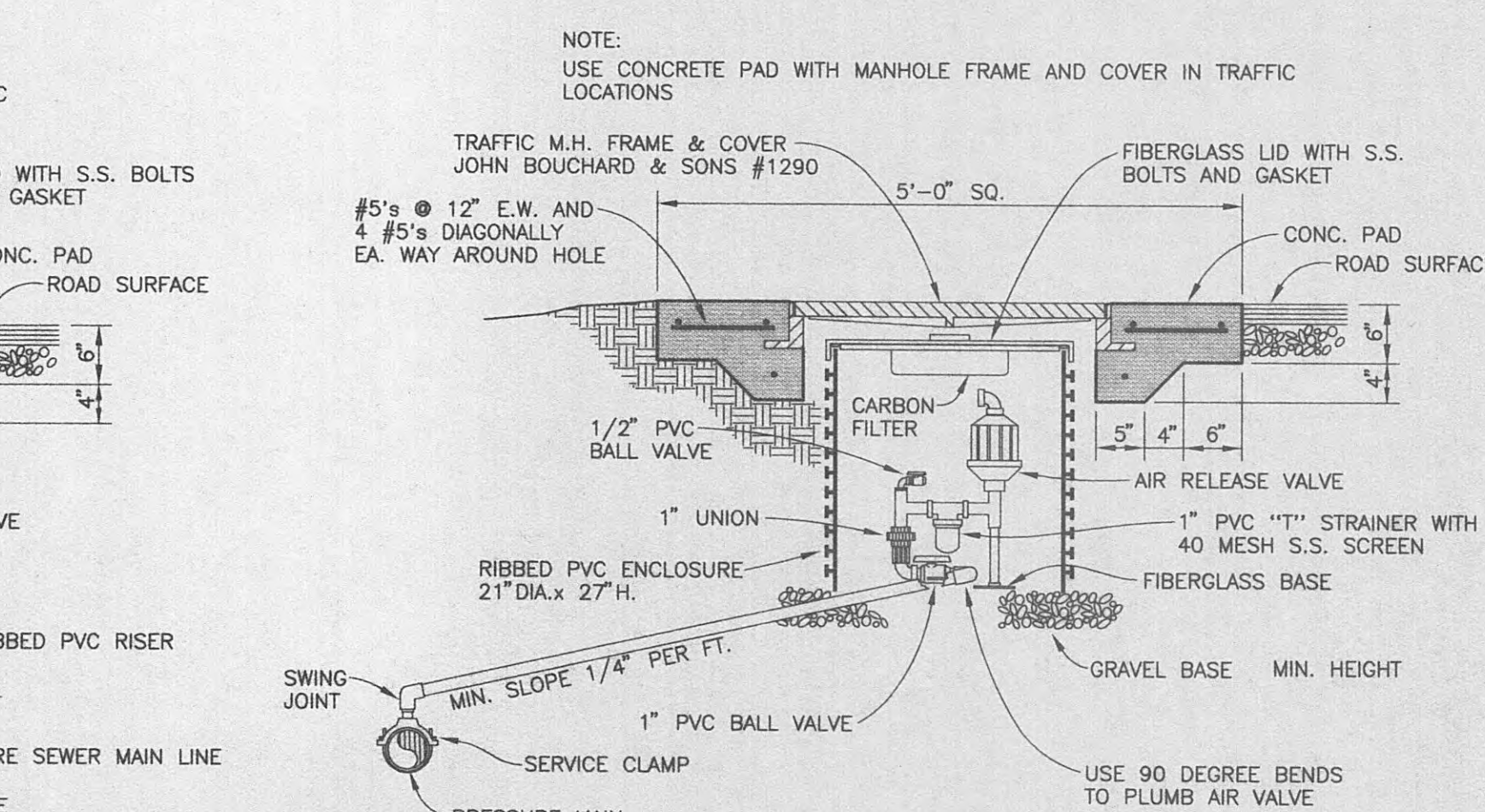
STANDARD FORCE MAIN BEDDING AND BACKFILLING
NOT TO SCALE



FORCE MAIN CONNECTION AT MANHOLE
NOT TO SCALE



PIGGING STATION
NOT TO SCALE



AIR RELEASE ASSEMBLY
NOT TO SCALE

ELROD • DUNSON INC.
CONSULTING ENGINEERS
NASHVILLE KNOXVILLE
LEXINGTON, KY



CONTRACT S96-01
HARRIMAN, TENNESSEE

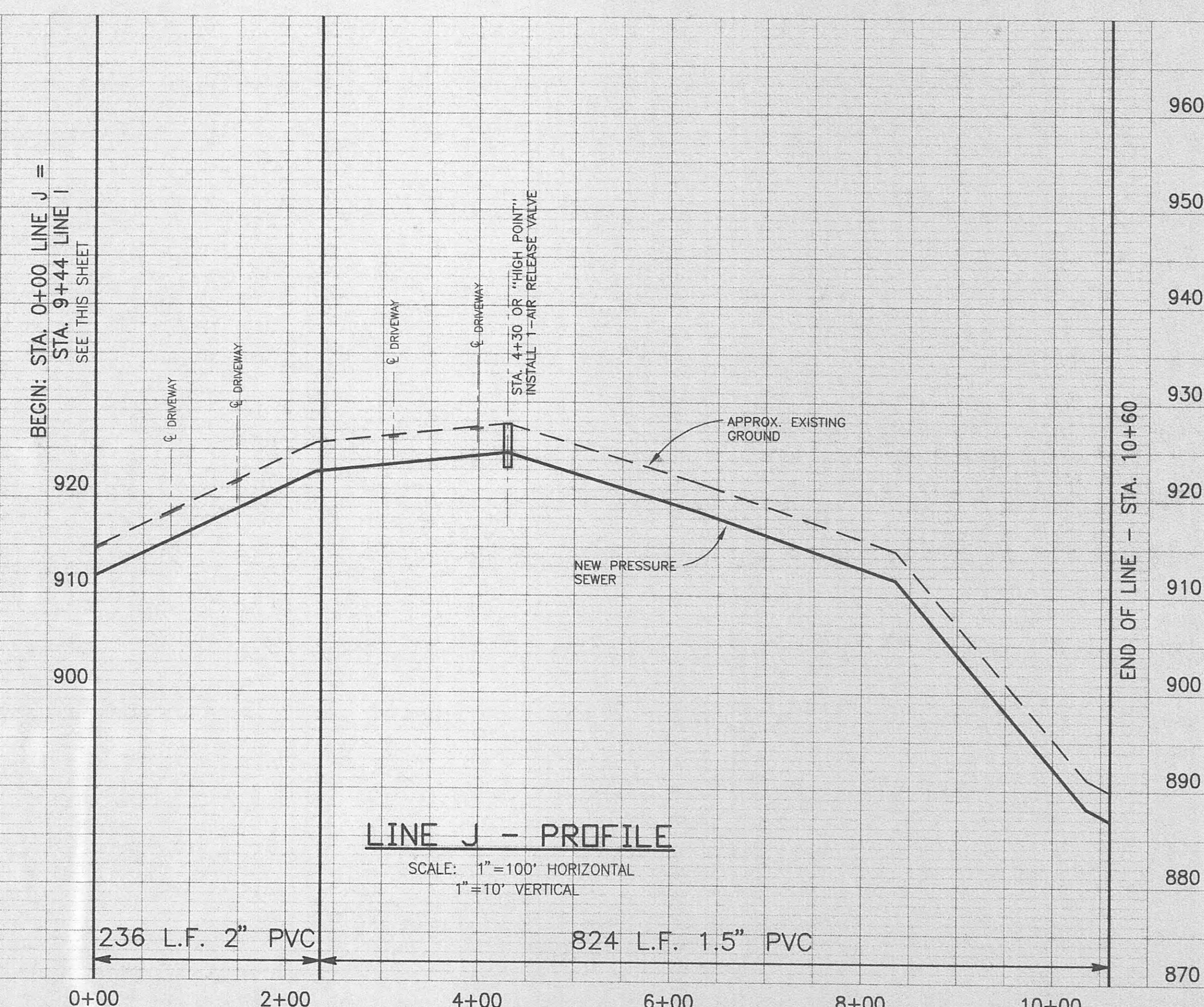
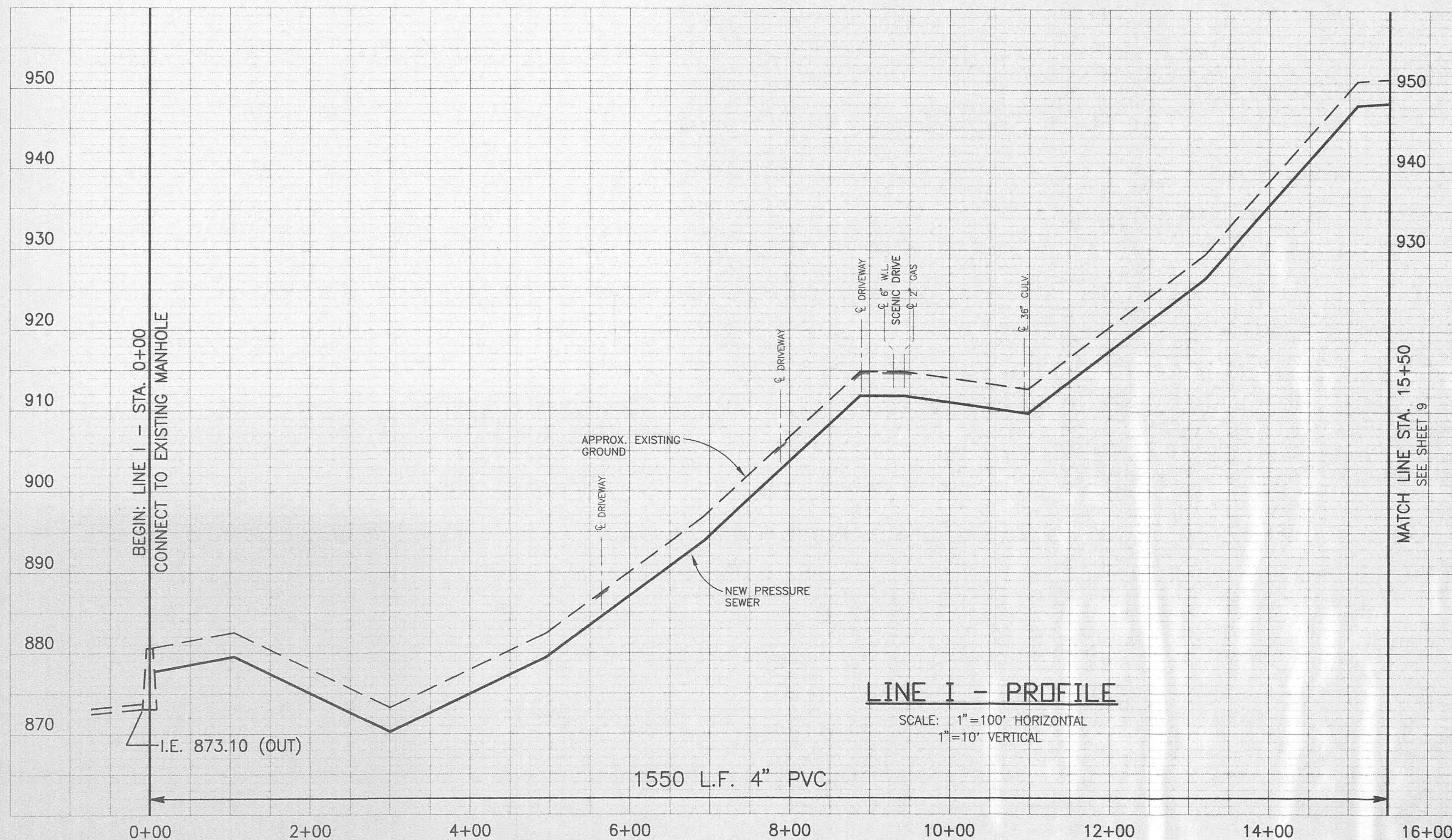
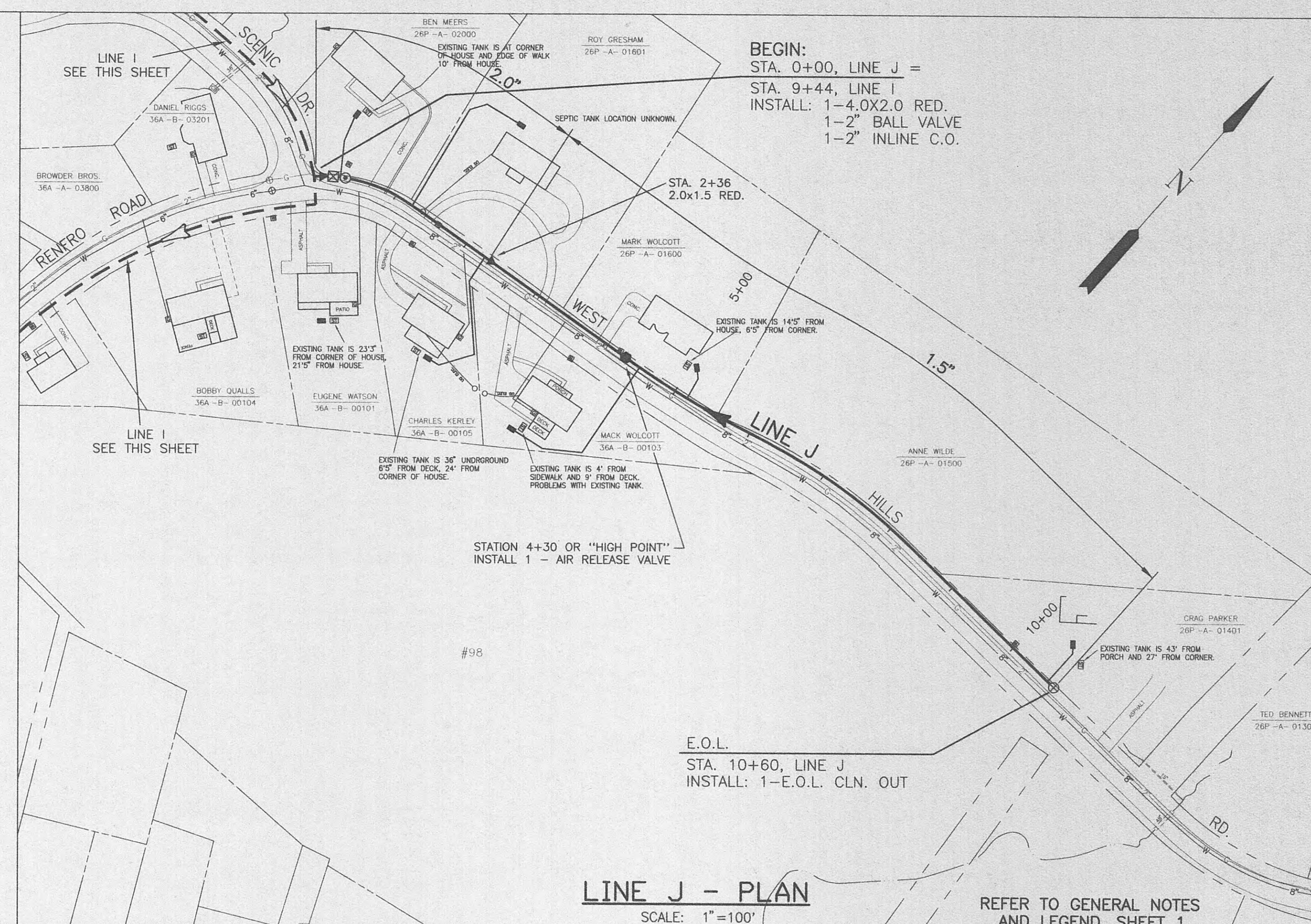
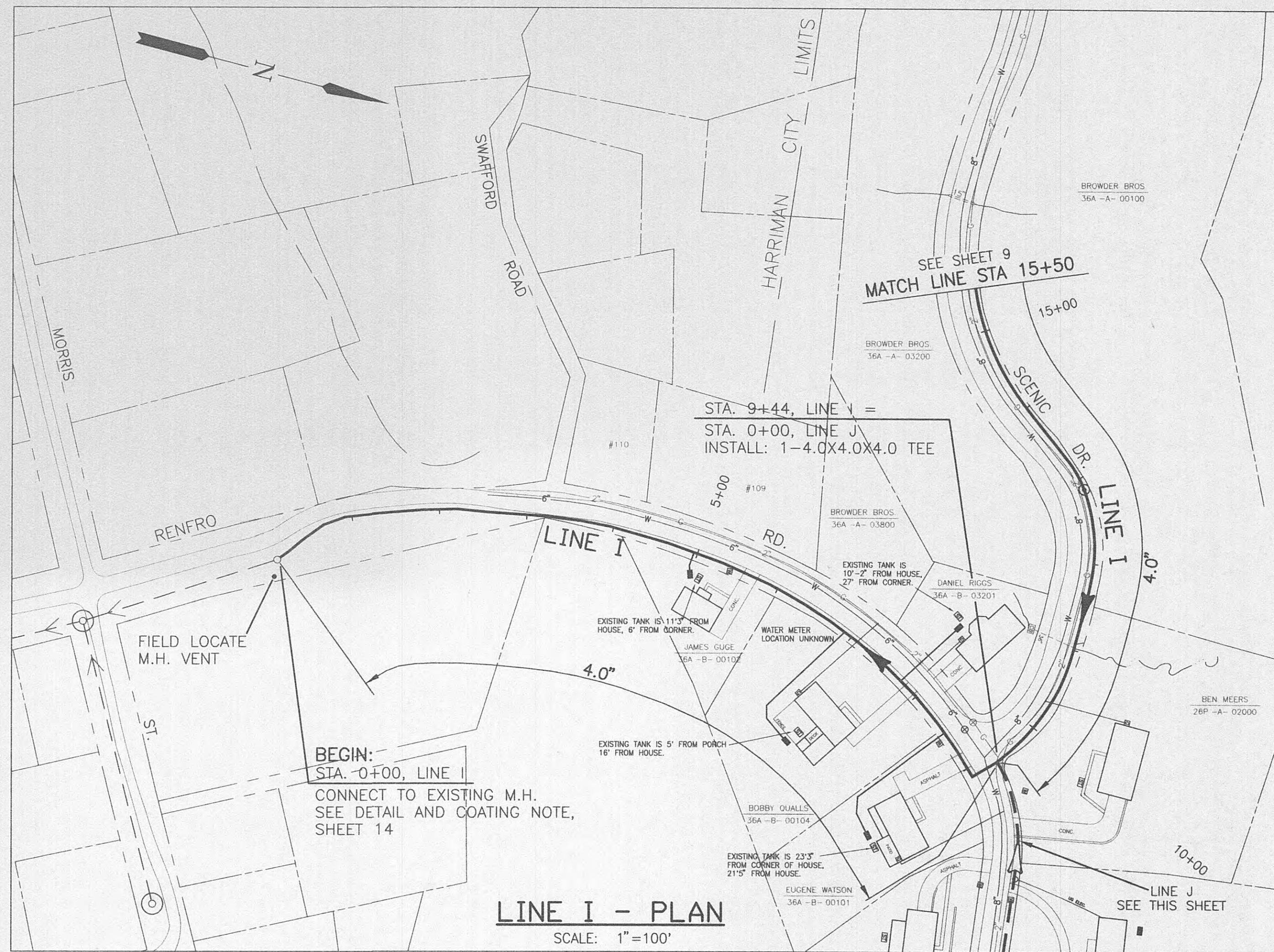
WEST HILLS SEWERS
MISCELLANEOUS CONSTRUCTION DETAILS
HARRIMAN UTILITY BOARD

REVISIONS



DESIGNED: R.G.T.
DRAWN: S.C.G.
CHECKED: R.G.T.
DATE: MAY, 1996
SCALE: AS NOTED
PROJECT NO: 0495

SHEET



ELROD · DUNSON INC.
CONSULTING ENGINEERS
NASHVILLE KNOXVILLE
LEXINGTON, KY

CONTRACT S96-01

WEST HILLS SEWERS

LINE I - STA. 0+00 TO STA. 15+50
LINE J - STA. 0+00 TO STA. 10+60 E.O.L.

HARRIMAN, TENNESSEE

HARRIMAN UTILITY BOARD

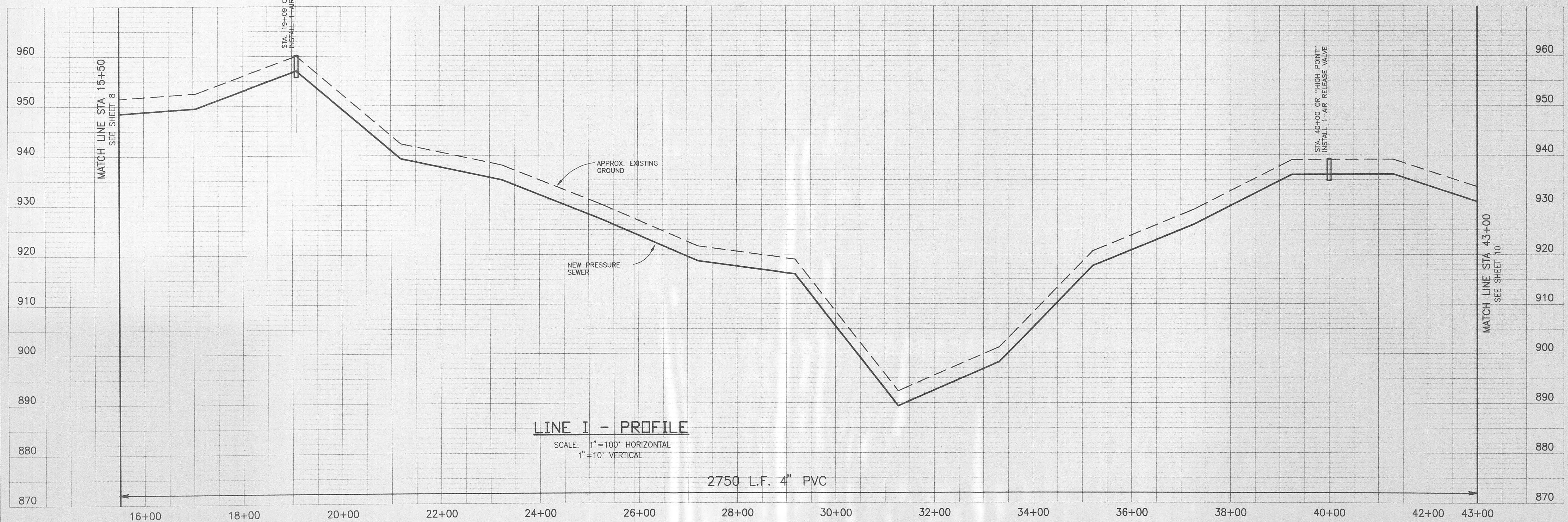
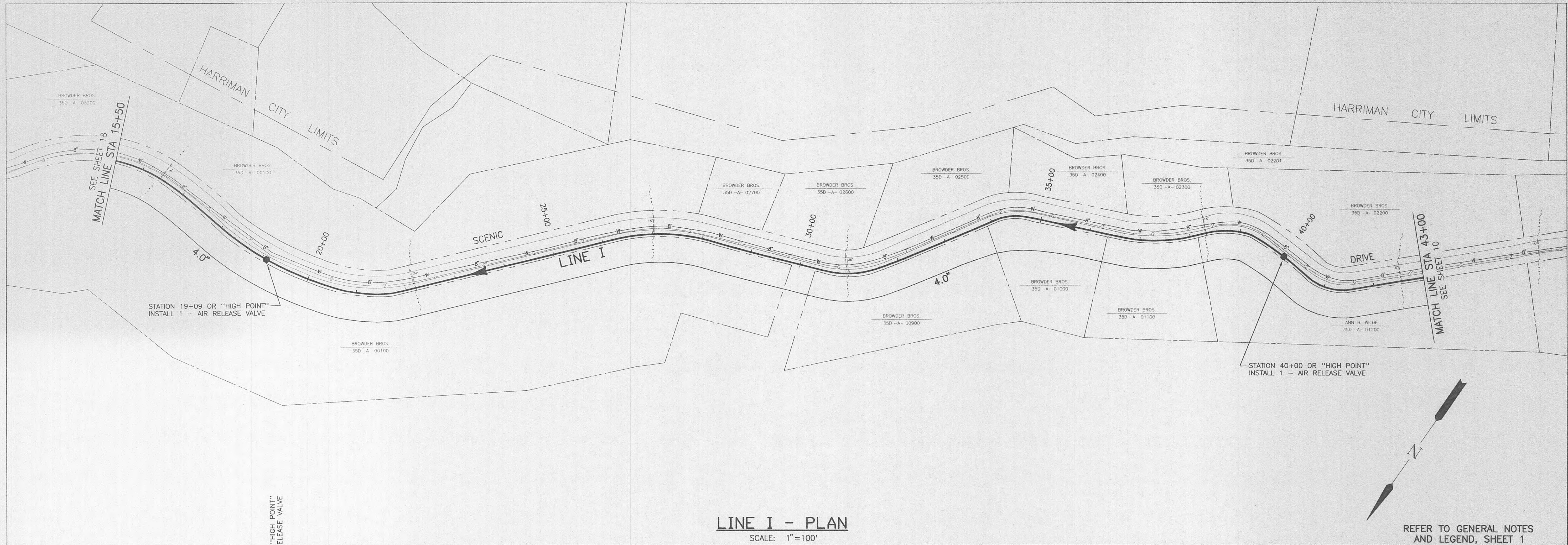
REVISIONS



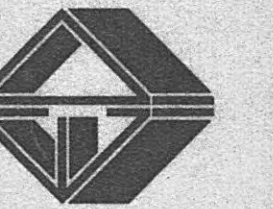
DESIGNED: R.G.T.
DRAWN: S.C.G.
CHECKED: R.G.T.
DATE: MAY, 1996
SCALE: AS NOTED
PROJECT NO: 0495

SHEET

8



ELROD · DUNSON INC.
CONSULTING ENGINEERS
NASHVILLE KNOXVILLE
LEXINGTON, KY



CONTRACT S96-01

HARRIMAN, TENNESSEE

WEST HILLS SEWERS

LINE I - STA. 15+50 TO STA. 43+00

HARRIMAN UTILITY BOARD

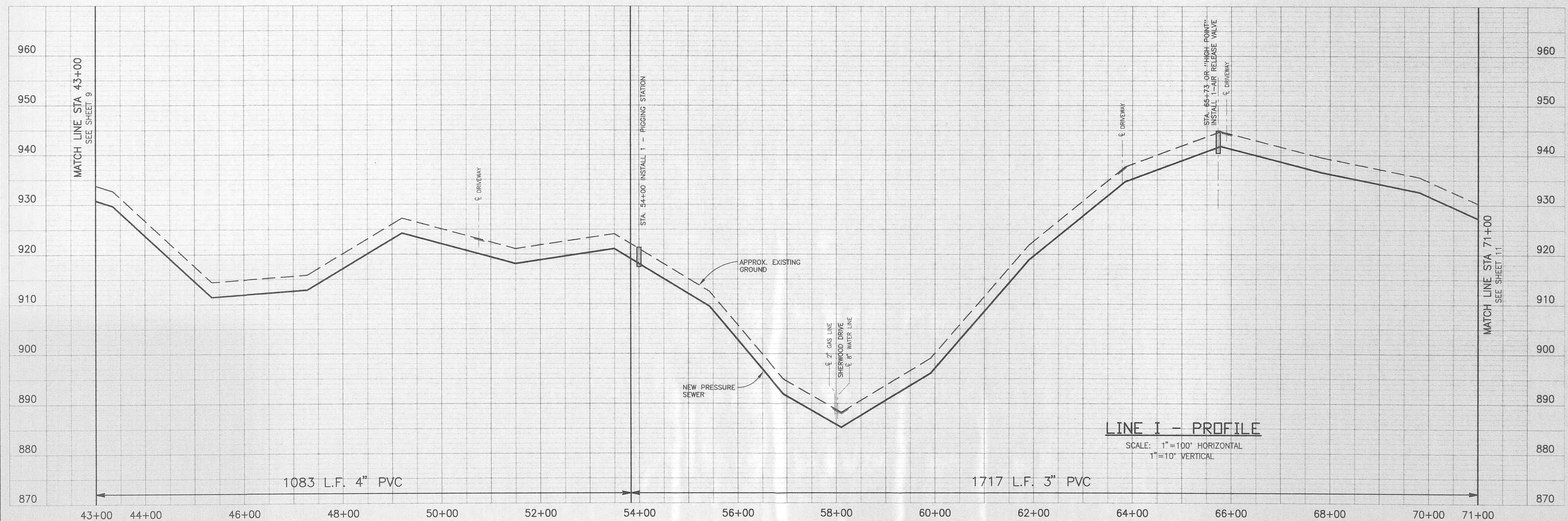
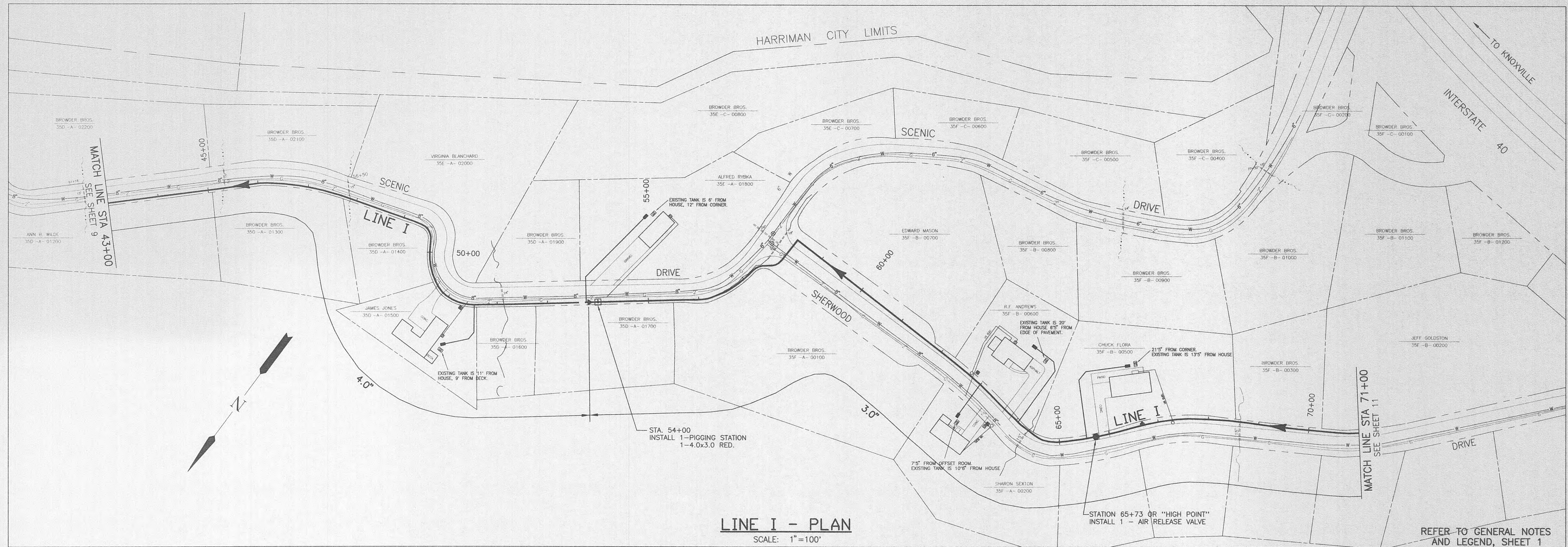
REVISIONS



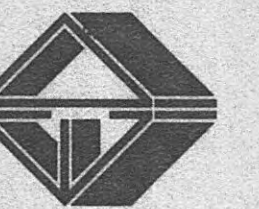
DESIGNED: R.G.T.
DRAWN: S.C.G.
CHECKED: R.G.T.
DATE: MAY, 1996
SCALE: AS NOTED
PROJECT NO: 0495

SHEET

9



ELROD DUNSON INC.
CONSULTING ENGINEERS
NASHVILLE KNOXVILLE
LEXINGTON, KY



CONTRACT S96-01

WEST HILLS SEWERS
LINE I - STA. 43+00 TO STA. 71+00

HARRIMAN, TENNESSEE

HARRIMAN UTILITY BOARD

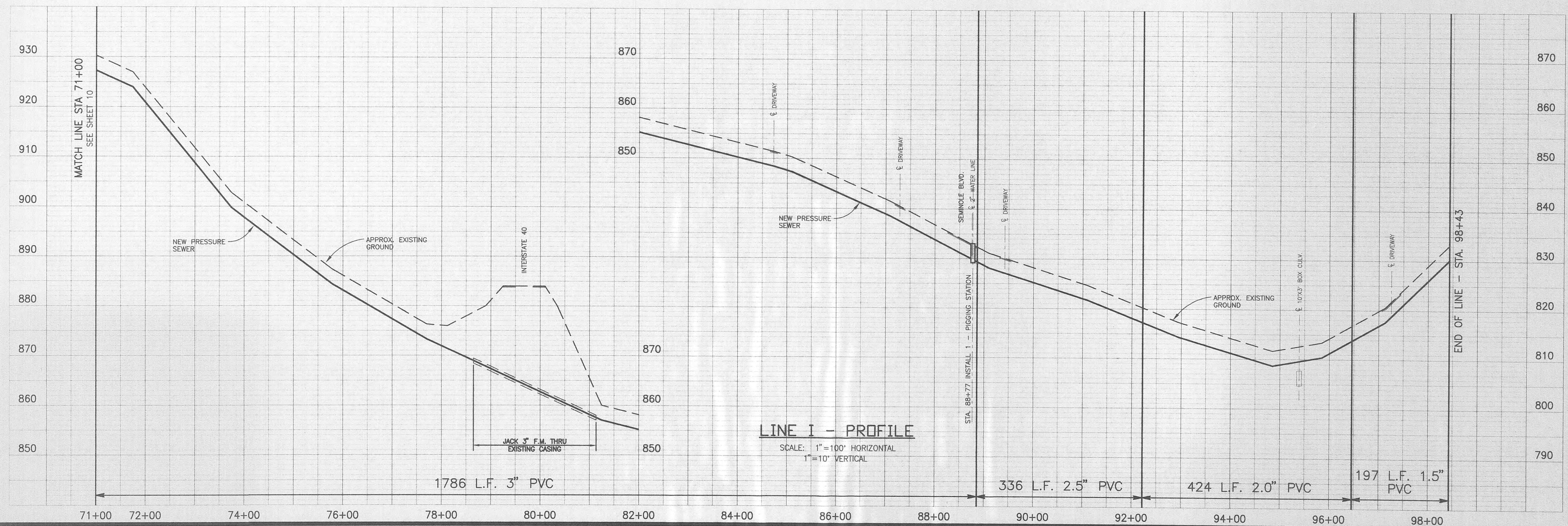
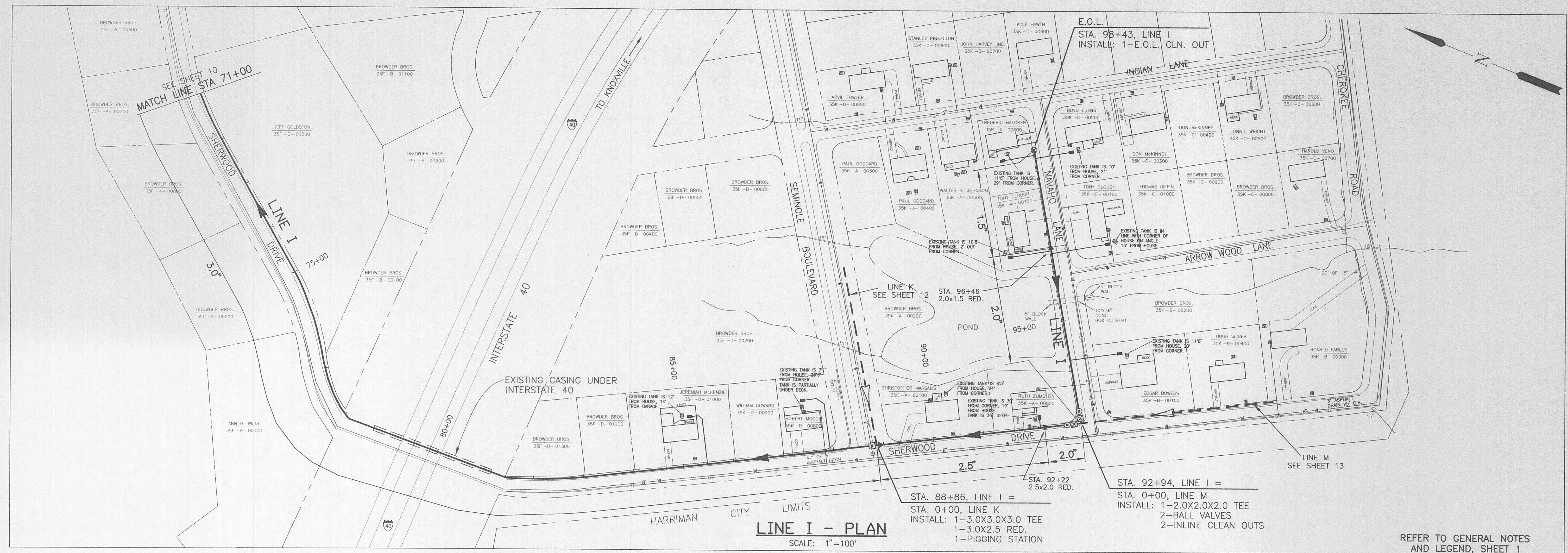
REVISIONS



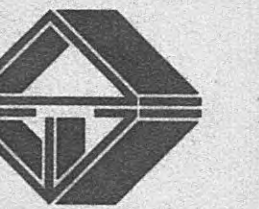
DESIGNED: R.G.T.
DRAWN: S.C.G.
CHECKED: R.G.T.
DATE: MAY, 1996
SCALE: AS NOTED
PROJECT NO: 0495

SHEET

10



ELROD • DUNSON INC.
CONSULTING ENGINEERS
NASHVILLE KNOXVILLE
LEXINGTON, KY

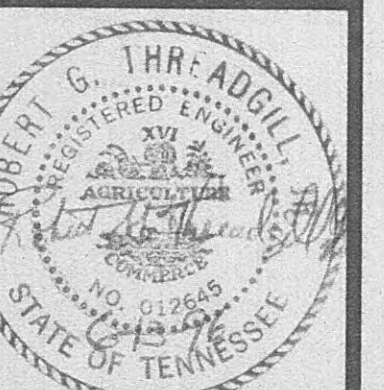


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-
3
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LINE 1 = SIA. 71+00 10 SIA. 98+43

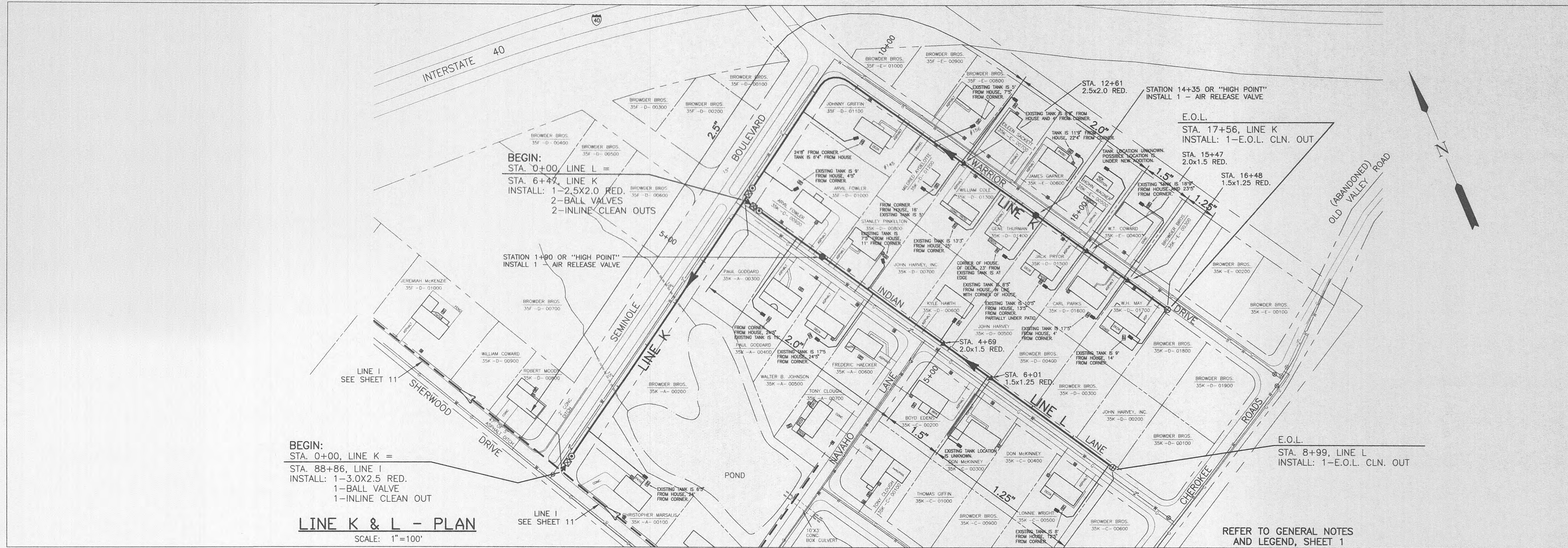
THE UNIVERSITY OF CHICAGO

REVISIONS

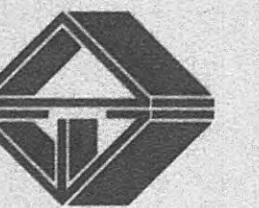


MEET

1



ELROD · DUNSON INC.
CONSULTING ENGINEERS
NASHVILLE KNOXVILLE
LEXINGTON, KY



CONTRACT S95-01

WEST HILLS SEWERS
LINE K - STA. 0+00 TO STA. 17+56 E.O.L.
LINE L - STA. 0+00 TO STA. 8+99 E.O.L.

HARRIMAN, TENNESSEE

HARRIMAN UTILITY BOARD

REVISIONS



DESIGNED: R.G.T.
DRAWN: S.C.G.
CHECKED: R.G.T.
DATE: MAY, 1996
SCALE: AS NOTED
PROJECT NO: 0495

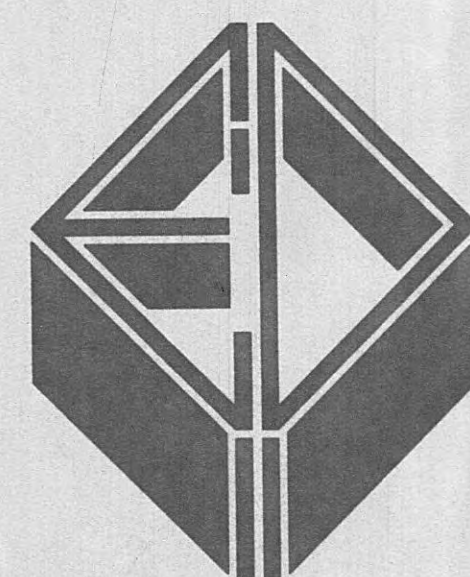
SHEET

12

CONSTRUCTION PLANS
FOR
WASTEWATER SYSTEM IMPROVEMENTS
FOR
HARRIMAN UTILITY BOARD
HARRIMAN, TENNESSEE
WEST HILLS SUBDIVISION
SEPTIC TANK EFFLUENT PRESSURE SEWERS

CONTRACT S96-01

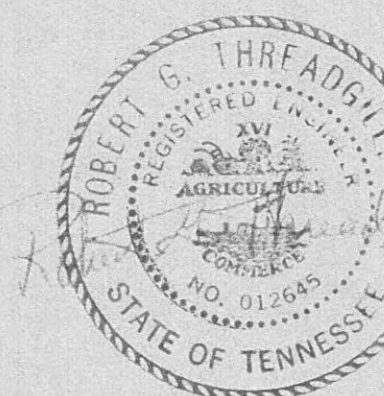
MAY, 1996



ELROD · DUNSON, INC.
CONSULTING ENGINEERS

Nashville · Knoxville
Lexington, KY

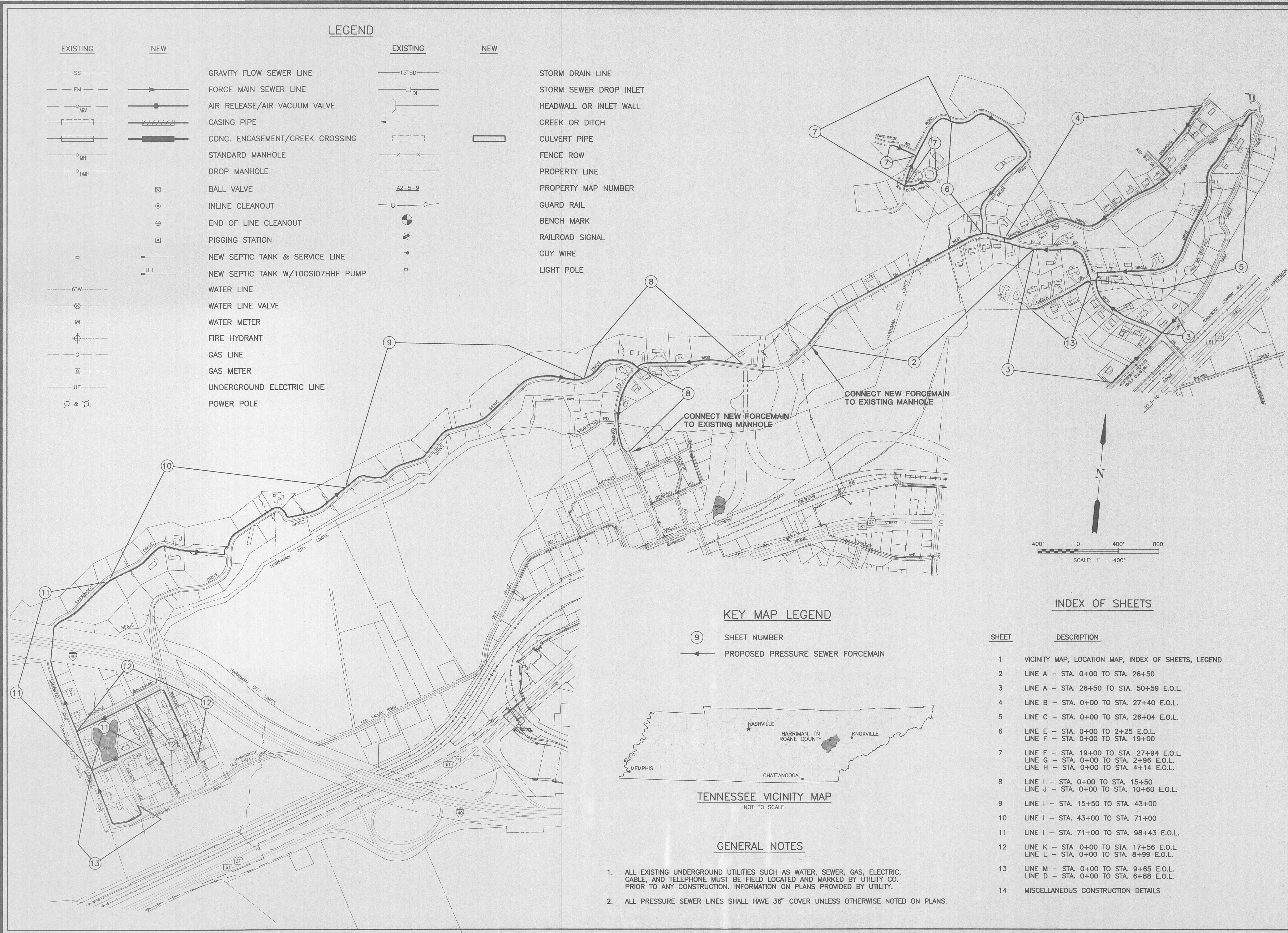
*Approved 8/2/96
WPC 96088 D
See file*



Accepted By: *Rdk*
Title: MANAGER
For: HARRIMAN UTILITY BOARD
Date: _____

PROJECT NO. 0495

SET NO.

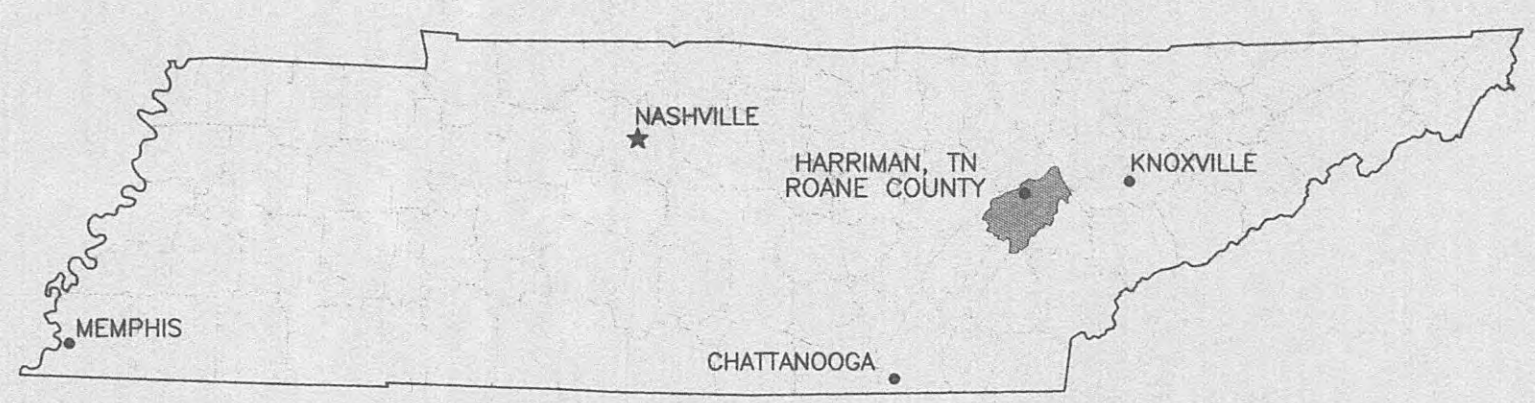


LEGEND

EXISTING	NEW	EXISTING	NEW
SS	GRAVITY FLOW SEWER LINE	15" SD	STORM DRAIN LINE
FM	FORCE MAIN SEWER LINE	DJ	STORM SEWER DROP INLET
ARY	AIR RELEASE/AIR VACUUM VALVE		HEADWALL OR INLET WALL
	CASING PIPE		CREEK OR DITCH
	CONC. ENCASMENT/CREEK CROSSING		CULVERT PIPE
MH	STANDARD MANHOLE		FENCE ROW
DMH	DROP MANHOLE		PROPERTY LINE
	BALL VALVE		PROPERTY MAP NUMBER
	INLINE CLEANOUT		GUARD RAIL
	END OF LINE CLEANOUT		BENCH MARK
	PIGGING STATION		RAILROAD SIGNAL
	NEW SEPTIC TANK & SERVICE LINE		GUY WIRE
	NEW SEPTIC TANK W/100SI07HHF PUMP		LIGHT POLE
	WATER LINE		
	WATER LINE VALVE		
	WATER METER		
	FIRE HYDRANT		
	GAS LINE		
	GAS METER		
	UNDERGROUND ELECTRIC LINE		
	POWER POLE		

KEY MAP LEGEND

- 9 SHEET NUMBER
- PROPOSED PRESSURE SEWER FORCEMAIN



TENNESSEE VICINITY MAP
NOT TO SCALE

GENERAL NOTES

- ALL EXISTING UNDERGROUND UTILITIES SUCH AS WATER, SEWER, GAS, ELECTRIC, CABLE, AND TELEPHONE MUST BE FIELD LOCATED AND MARKED BY UTILITY CO. PRIOR TO ANY CONSTRUCTION. INFORMATION ON PLANS PROVIDED BY UTILITY.
- ALL PRESSURE SEWER LINES SHALL HAVE 36" COVER UNLESS OTHERWISE NOTED ON PLANS.

INDEX OF SHEETS

SHEET	DESCRIPTION
1	VICINITY MAP, LOCATION MAP, INDEX OF SHEETS, LEGEND
2	LINE A - STA. 0+00 TO STA. 26+50
3	LINE A - STA. 26+50 TO STA. 50+59 E.O.L.
4	LINE B - STA. 0+00 TO STA. 27+40 E.O.L.
5	LINE C - STA. 0+00 TO STA. 26+04 E.O.L.
6	LINE E - STA. 0+00 TO STA. 2+25 E.O.L. LINE F - STA. 0+00 TO STA. 19+00
7	LINE F - STA. 19+00 TO STA. 27+94 E.O.L. LINE G - STA. 0+00 TO STA. 2+96 E.O.L. LINE H - STA. 0+00 TO STA. 4+14 E.O.L.
8	LINE I - STA. 0+00 TO STA. 15+50 LINE J - STA. 0+00 TO STA. 10+60 E.O.L.
9	LINE I - STA. 15+50 TO STA. 43+00
10	LINE I - STA. 43+00 TO STA. 71+00
11	LINE I - STA. 71+00 TO STA. 98+43 E.O.L.
12	LINE K - STA. 0+00 TO STA. 17+56 E.O.L. LINE L - STA. 0+00 TO STA. 8+99 E.O.L.
13	LINE M - STA. 0+00 TO STA. 9+65 E.O.L. LINE D - STA. 0+00 TO STA. 6+88 E.O.L.
14	MISCELLANEOUS CONSTRUCTION DETAILS

ELROD • DUNSON INC.
CONSULTING ENGINEERS
NASHVILLE KNOXVILLE CHATTANOOGA
LEXINGTON, KY

CONTRACT S96-01

WEST HILLS SEWERS

VICINITY MAP, KEY MAP, INDEX OF SHEETS, LEGEND

HARRIMAN UTILITY BOARD

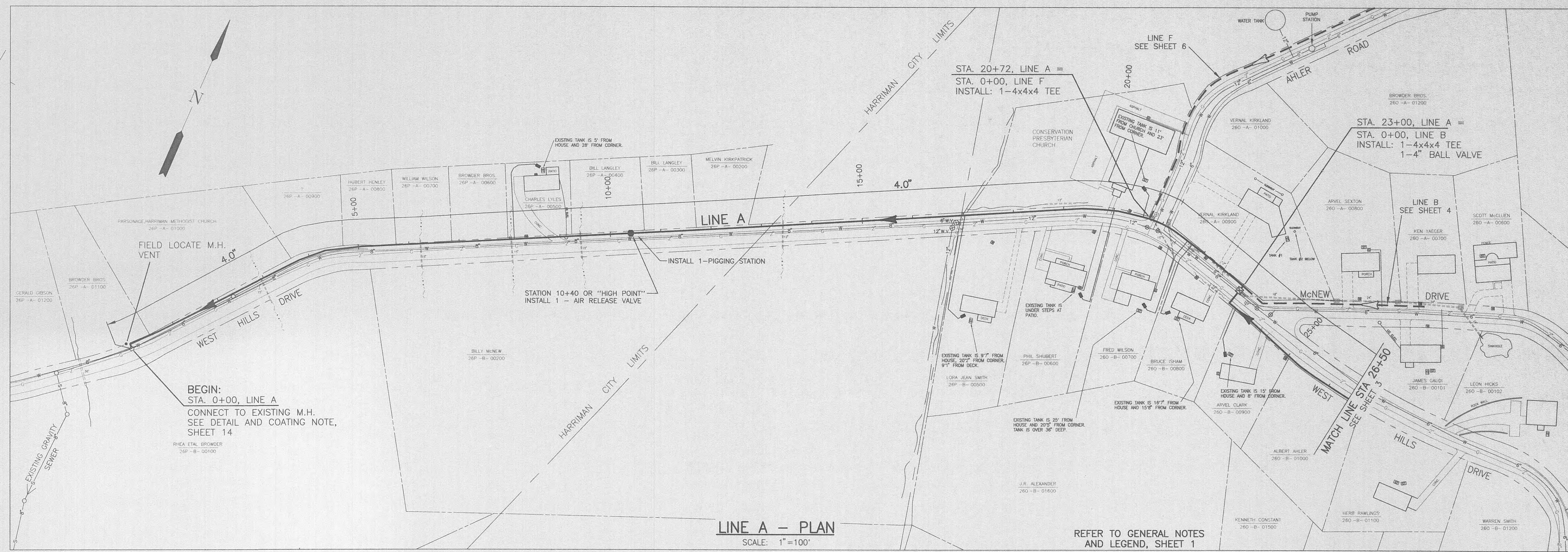
HARRIMAN, TENNESSEE

REVISIONS

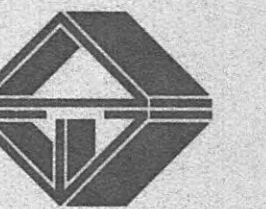
DESIGNED: R.G.T.
DRAWN: S.C.G.
CHECKED: R.G.T.
DATE: MAY, 1996
SCALE: AS NOTED
PROJECT NO: 0495

SHEET

1



ELROD • DUNSON INC.
CONSULTING ENGINEERS
NASHVILLE KNOXVILLE
LEXINGTON, KY



CONTRACT 330-01

WEST HILLS SEWERS

LINE A - STA. 0+00 TO STA. 26+50

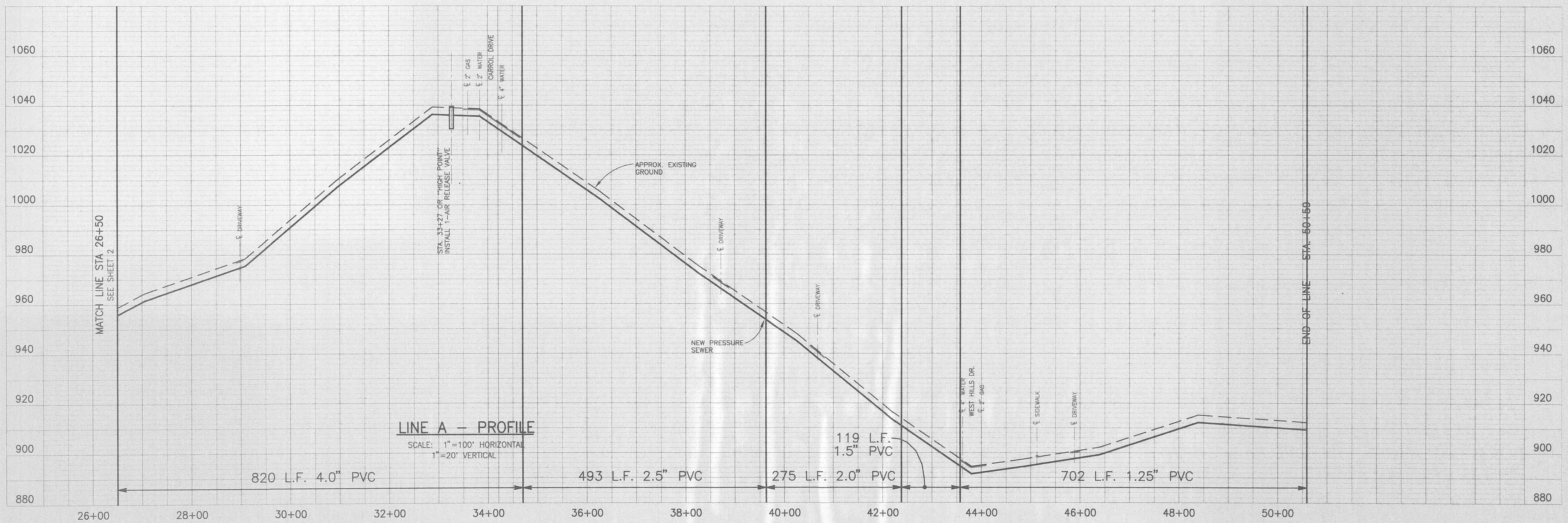
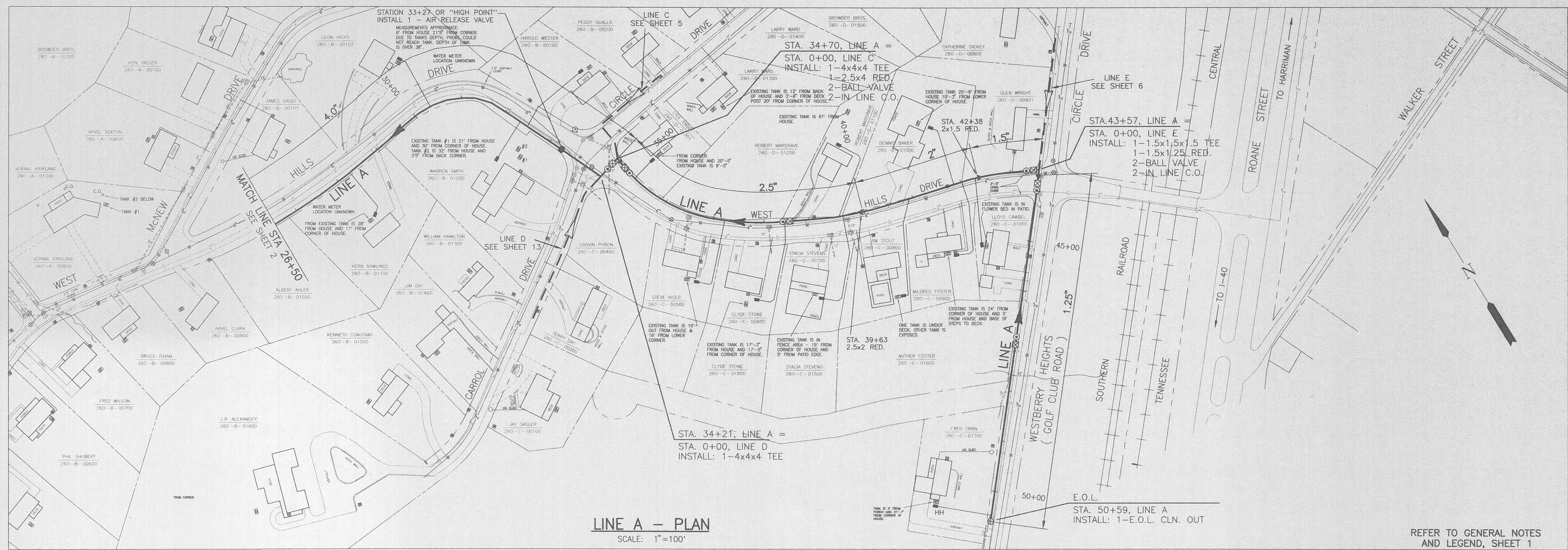
HAKKIMIAN UTILITY BOARD

REVISIONS

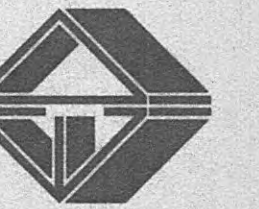


SHEET

2



ELROD · DUNSON INC.
CONSULTING ENGINEERS
NASHVILLE KNOXVILLE
LEXINGTON, KY



CONTRACT S95-01

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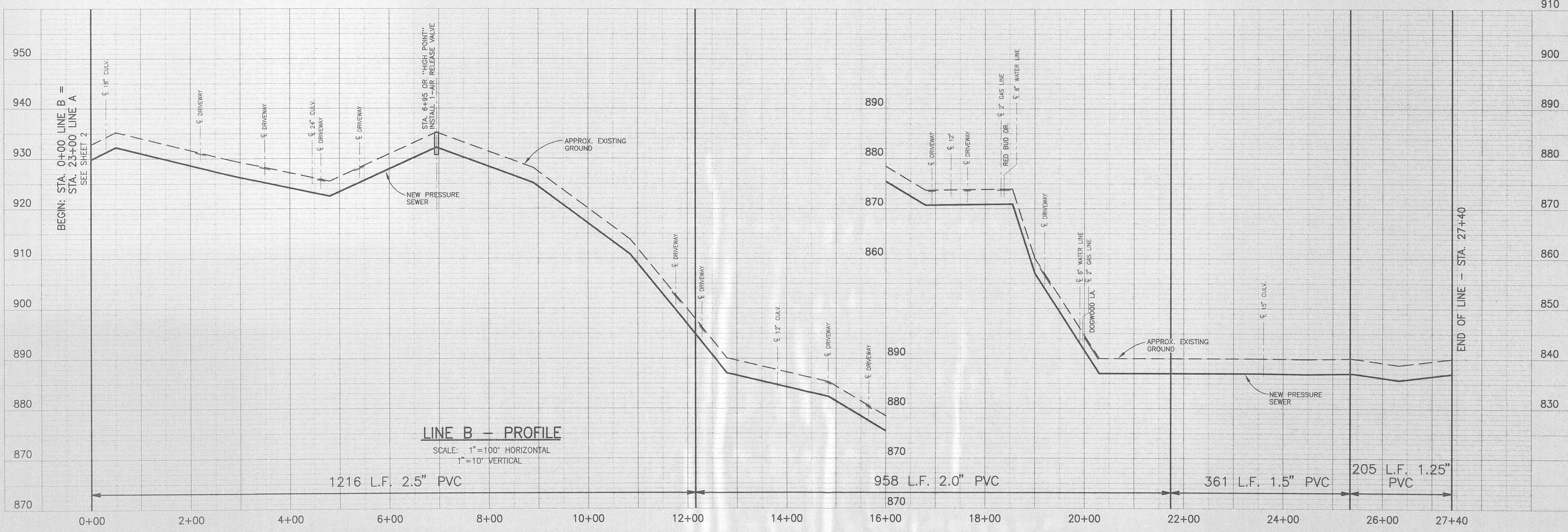
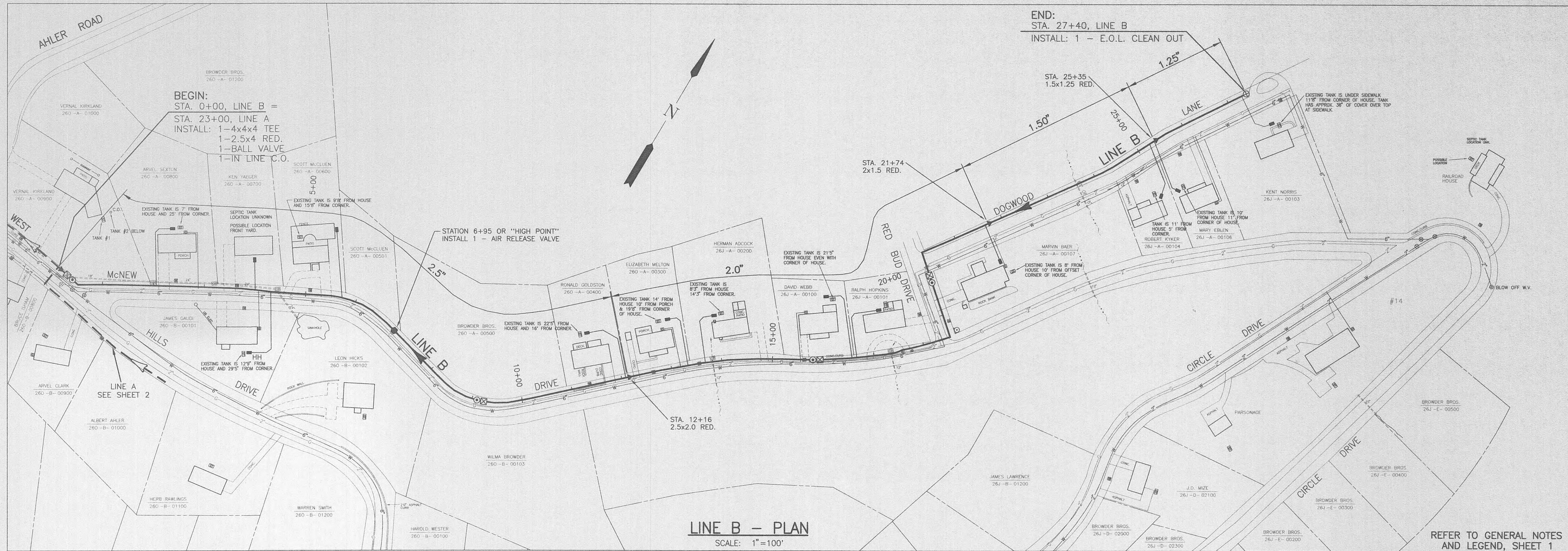
THE UNIVERSITY OF CHICAGO

REVISIONS



HEET

3



ELROD · DUNSON INC.
CONSULTING ENGINEERS
NASHVILLE KNOXVILLE
LEXINGTON, KY

CONTRACT S95-01

WEST HILLS SEWERS

LINE B - STA. 0+00 TO STA. 27+40

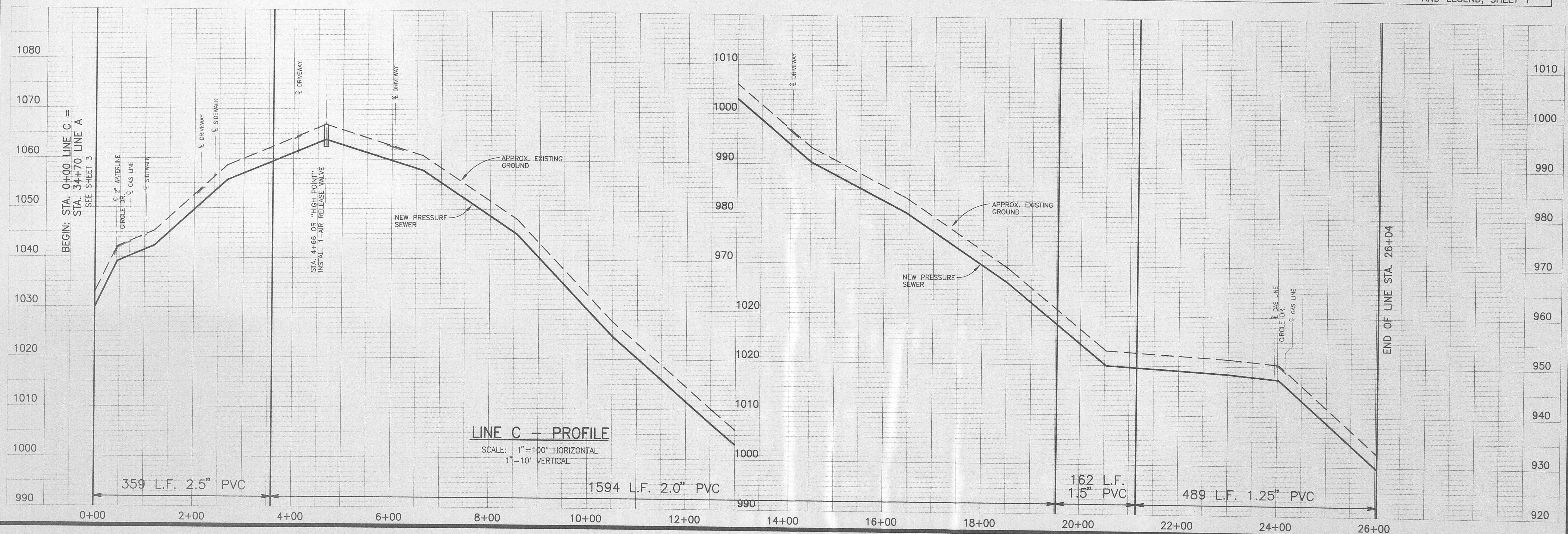
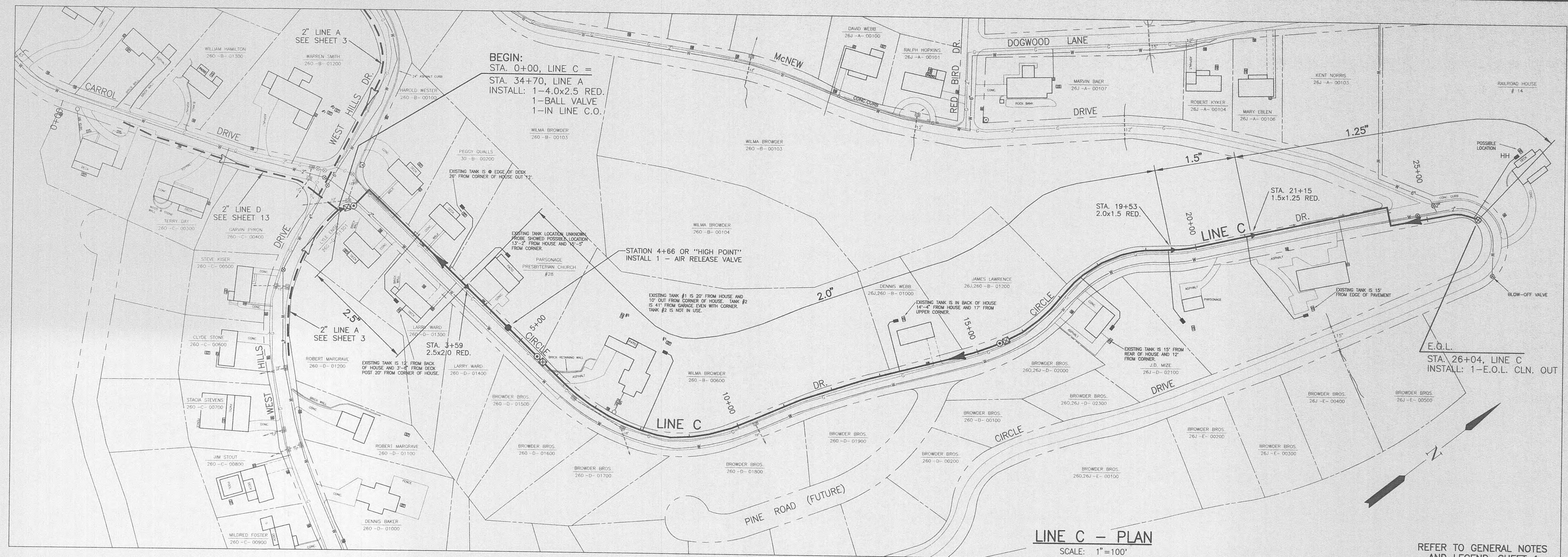
HARRIMAN UTILITY BOARD

REVISIONS

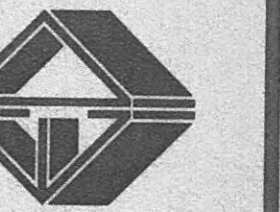
DESIGNED: R.G.T.
DRAWN: S.C.G.
CHECKED: R.G.T.
DATE: MAY, 1996
SCALE: AS NOTED
PROJECT NO: 0495

SHEET

4



ELROD • DUNSON INC.
CONSULTING ENGINEERS
NASHVILLE KNOXVILLE
LEXINGTON, KY



CONTINUED 390-01

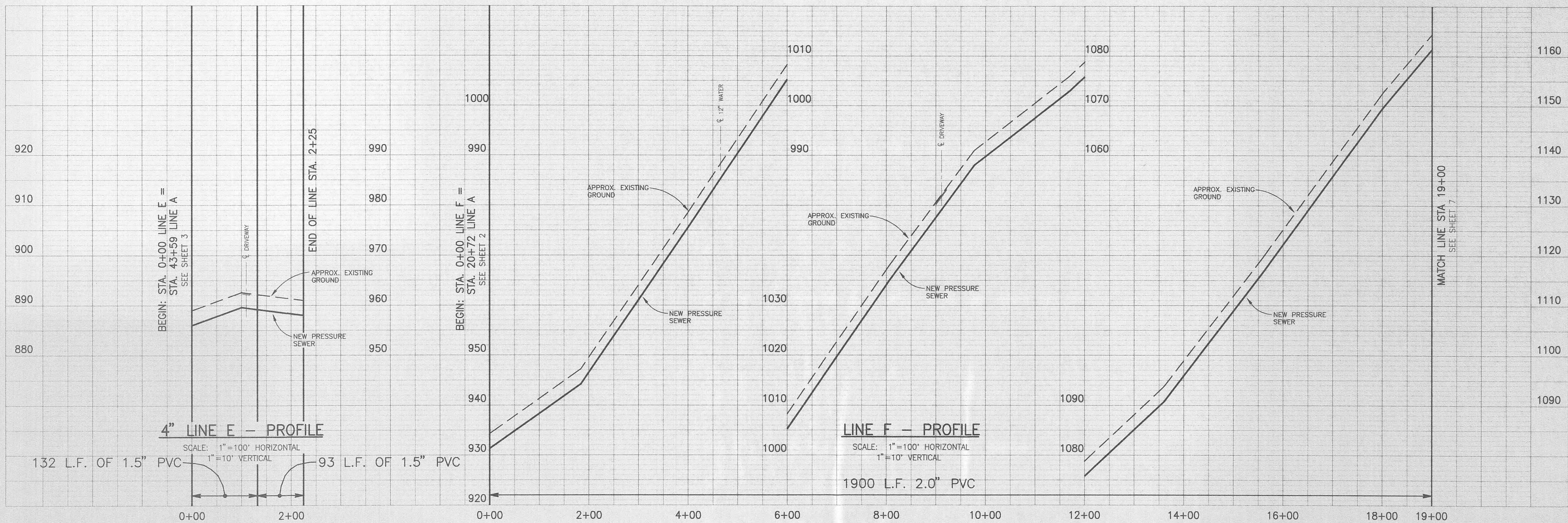
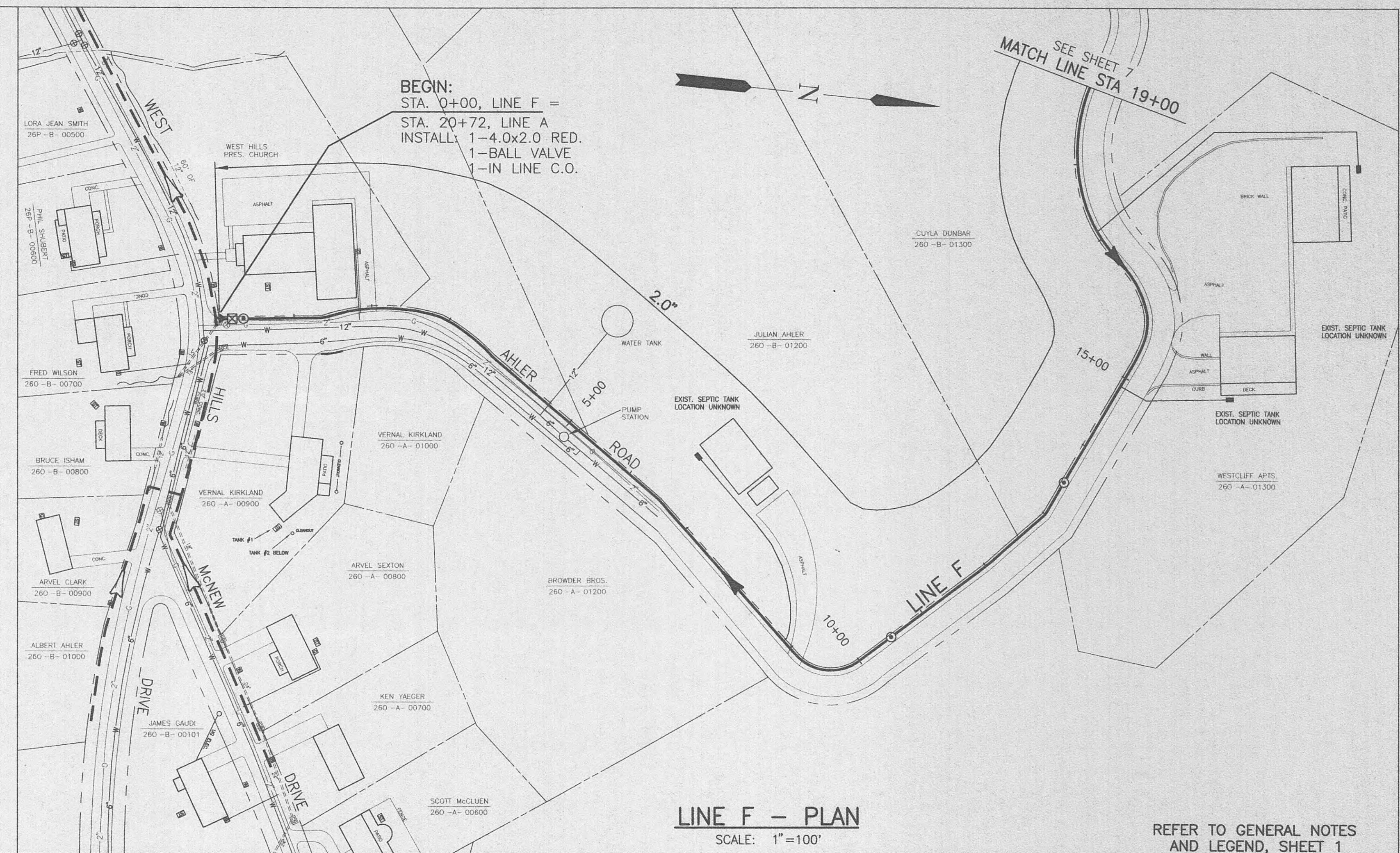
LINE C - SIA. 0+00 TO SIA. 26+04 E.O.L.

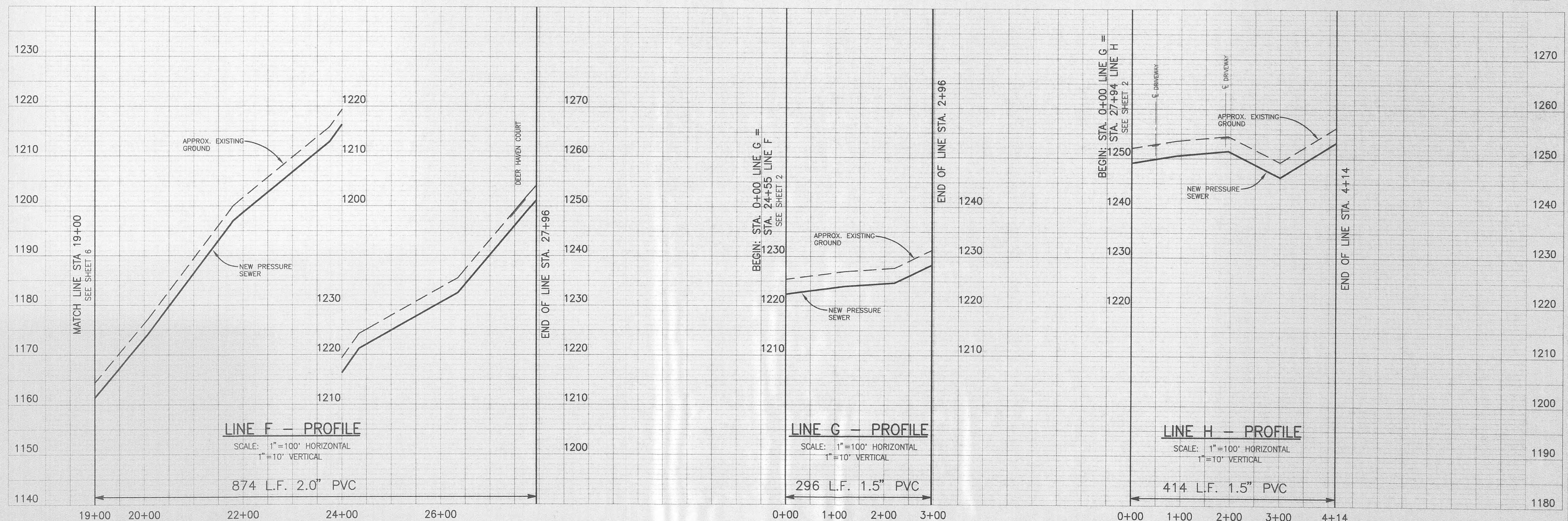
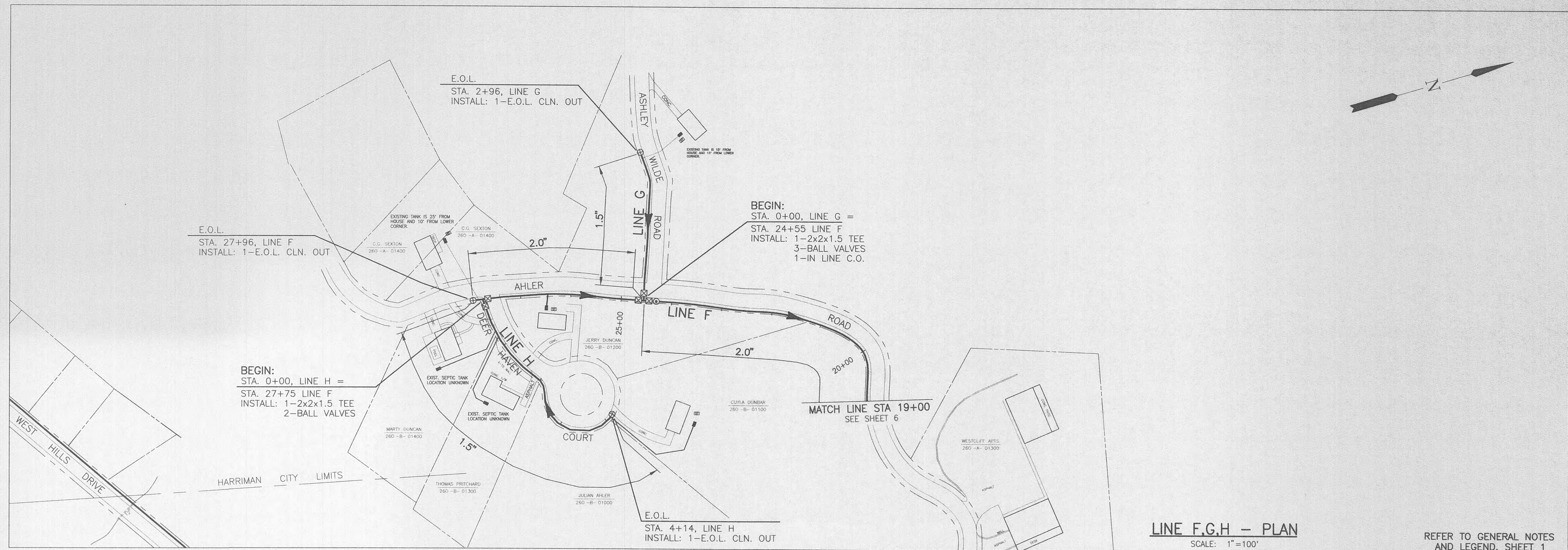
REVISIONS



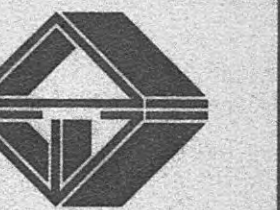
SHEET

5





ELROD • DUNSON INC.
CONSULTING ENGINEERS
NASHVILLE KNOXVILLE
LEXINGTON, KY



CONTRACT S96-01

WEST HILLS SEWERS
LINE F - STA. 19+00 TO STA. 27+96 E.O.L.
LINE G - STA. 0+00 TO STA. 2+96 E.O.L.
LINE H - STA. 0+00 TO STA. 4+14 E.O.L.

HARRIMAN, TENNESSEE

HARRIMAN UTILITY BOARD

REVISIONS



DESIGNED: R.G.T.
DRAWN: S.C.G.
CHECKED: R.G.T.
DATE: MAY, 1996
SCALE: AS NOTED
PROJECT NO: 0495

SHEET

7