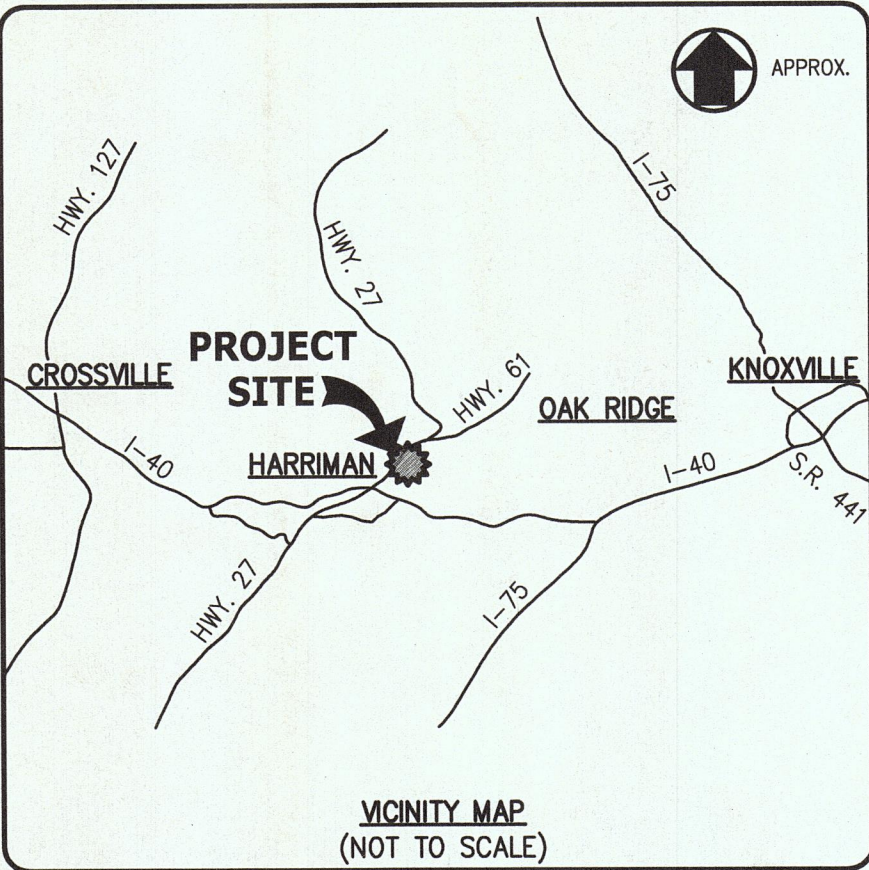


HARRIMAN UTILITY BOARD

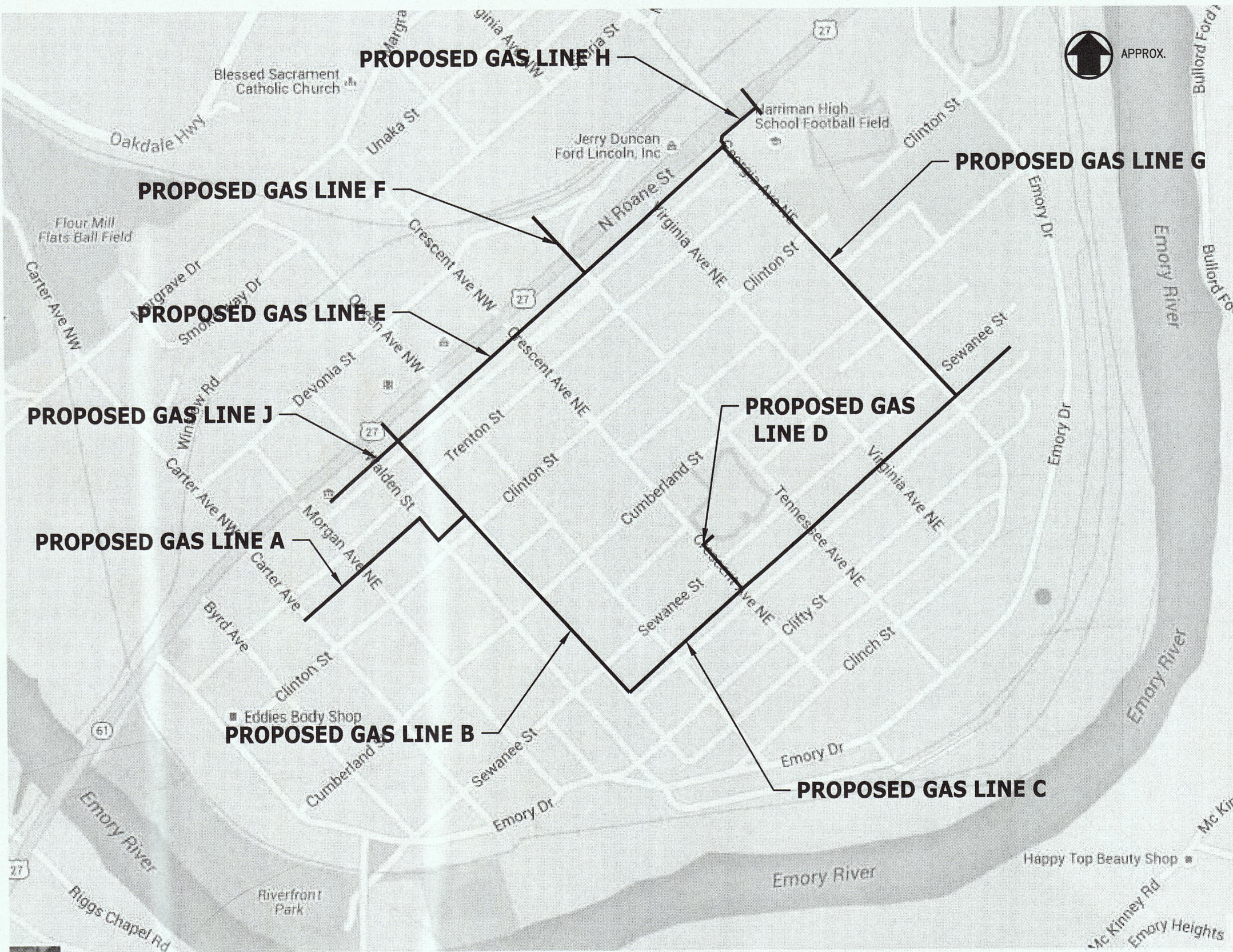
CAST IRON GAS MAIN REPLACEMENT PHASE II

HARRIMAN, TENNESSEE





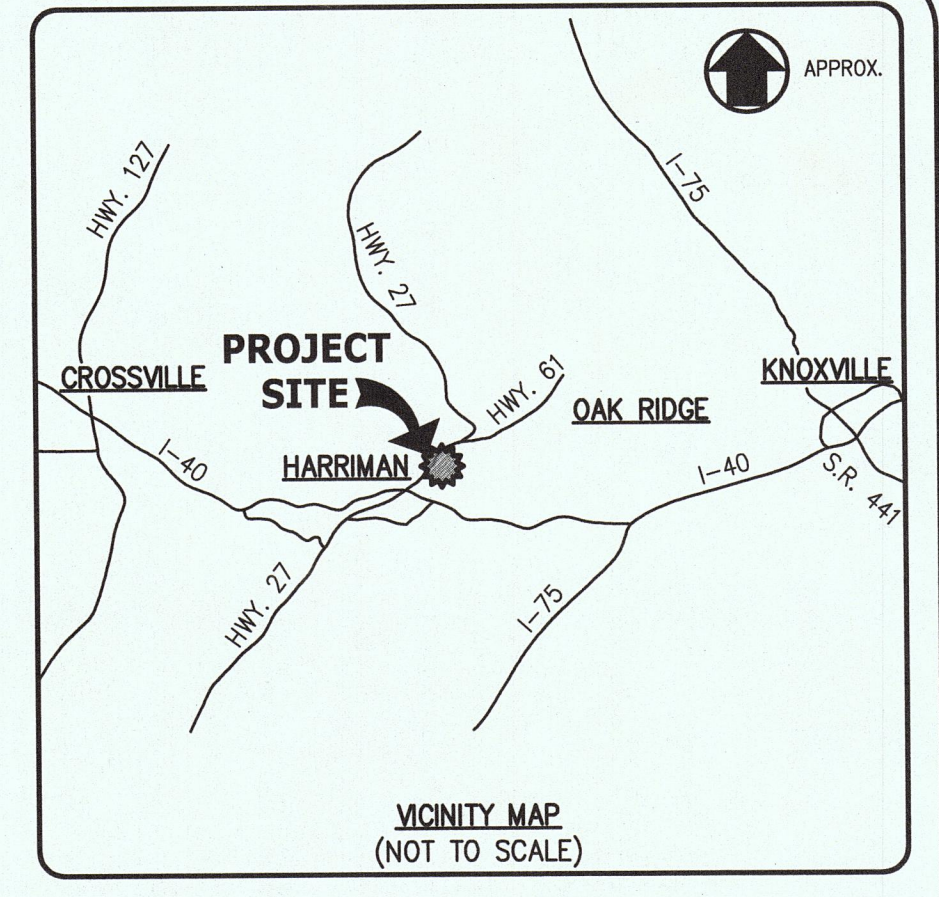
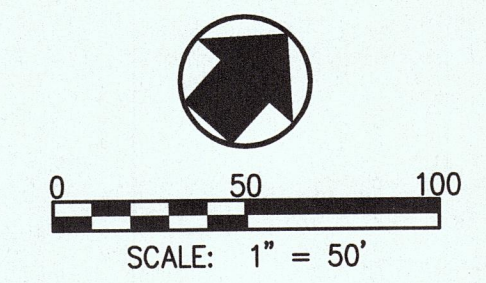
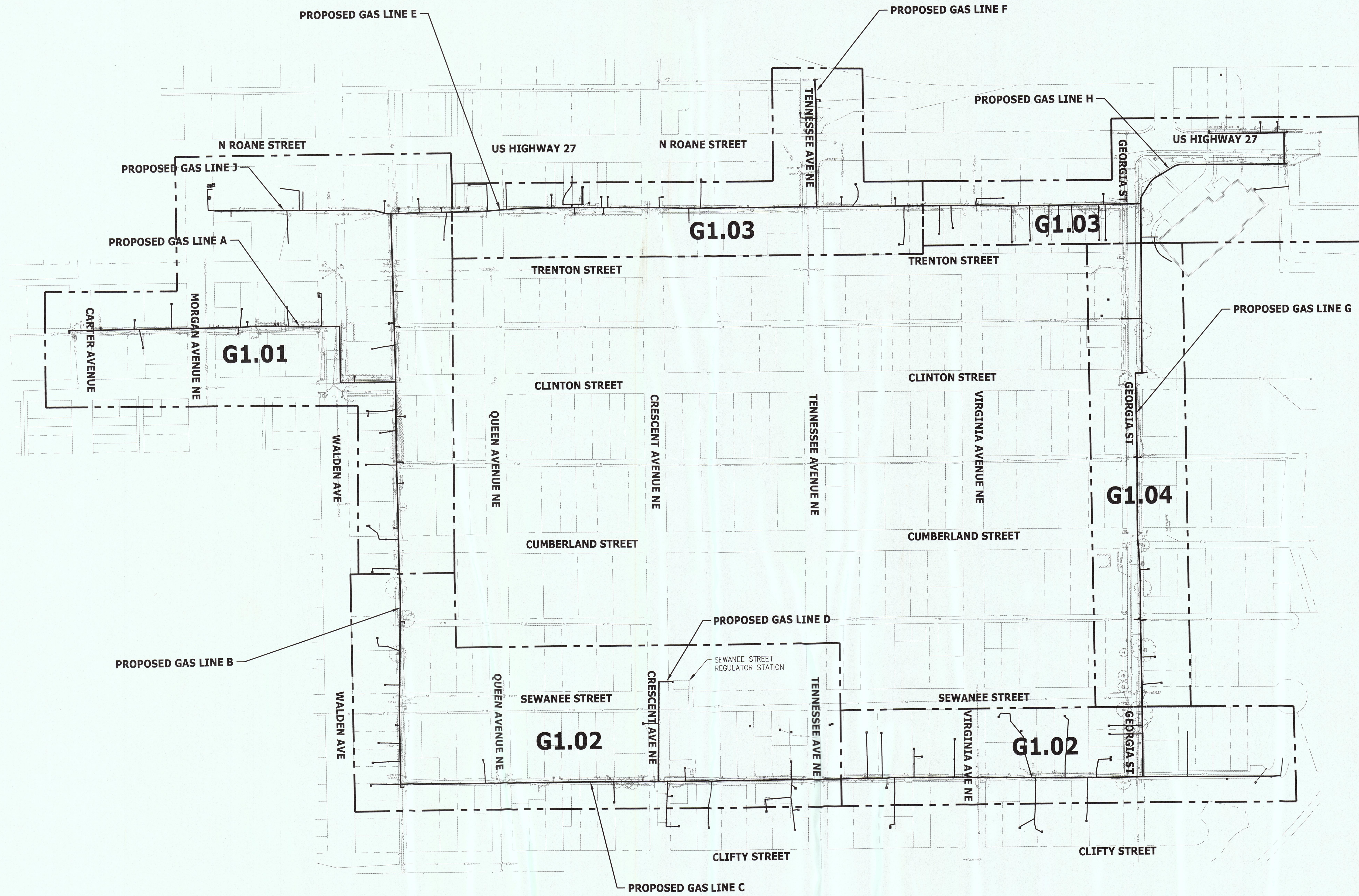
DRAWING INDEX


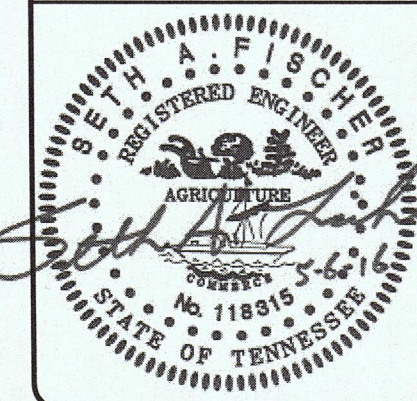
G0.01	COVER SHEET
G0.02	DRAWING SHEET INDEX
G0.03	GENERAL NOTES
G1.01	LINE A: STA. 0+00 TO 11+11 E.O.L. LINE B: STA. 0+00 TO STA. 9+55 LINE E: STA. 0+00 TO STA. 1+78 LINE J: STA. 0+00 TO STA. 5+09 E.O.L.
G1.02	LINE B: STA. 9+55 TO STA. 16+69 E.O.L. LINE C: STA. 0+00 TO STA. 25+61 E.O.L. LINE D: STA. 0+00 TO STA. 3+33 E.O.L. LINE G: STA. 0+00 TO STA. 1+90
G1.03	LINE E: STA. 1+78 TO STA. 21+69 E.O.L. LINE F: STA. 0+00 TO STA. 3+72 E.O.L. LINE G: STA. 15+64 TO STA. 16+80 E.O.L. LINE H: STA. 0+00 TO STA. 5+63 E.O.L.
G1.04	LINE G: STA. 1+90 TO STA. 15+64
G2.01	DETAILS



LOCATION MAP
NOT TO SCALE

REVISIONS		DATE
 CANNON & CANNON INC. CONSULTING ENGINEERS - FIELD SURVEYORS TEL: 865.670.8555 8550 Kingston Pike WWW.CANNON-CANNON.COM Knoxville, TN 37919		
CLIENT:		HARRIMAN UTILITY BOARD 300 NORTH ROANE STREET HARRIMAN, TN 37748 (865) 882-3242
PROJECT:		CAST IRON GAS MAIN REPLACEMENT PHASE II HARRIMAN, TN
COVER SHEET		
	CCI PROJECT NO.	00923-0008
	DRAWING DATE	MAY 6, 2016
	PM SAF QC TFT	
	DRAWN WWL CR	
G0.01		



REVISIONS		DATE
<div> CANNON & CANNON INC CONSULTING ENGINEERS - FIELD SURVEYORS TEL 865.670.8555 8550 Kingston Pike WWW.CANNON-CANNON.COM Knoxville, TN 37919</div>		
CLIENT: HARRIMAN UTILITY BOARD 300 NORTH ROANE STREET HARRIMAN, TN 37748 (865) 882-3242		
PROJECT: CAST IRON GAS MAIN REPLACEMENT PHASE II HARRIMAN, TN		
DRAWING SHEET INDEX		
<div></div>	CCI PROJECT NO. 00923-0008	
	DRAWING DATE	MAY 6, 2016
	PM SAF	QC TFT
	DRAWN WVVL	CR
G0.02		



GENERAL NOTES

1. CONSTRUCTION MATERIALS AND INSTALLATION MUST MEET PROJECT SPECIFICATIONS. MATERIAL SUBMITTALS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
2. SUBMIT WELDERS QUALIFICATION STATEMENTS & CERTIFICATES TO THE ENGINEER PRIOR TO START OF CONSTRUCTION FOR EVERY WELDER THAT MAY WORK ON THIS PROJECT.
3. THE CONTRACTOR SHALL STAKE THE PROPOSED GAS MAIN LAYOUTS TO ALLOW AMPLE TIME FOR THE ENGINEER TO INSPECT THE LAYOUTS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR INSPECTION AT LEAST FIVE (5) DAYS PRIOR TO START OF CONSTRUCTION.
4. ALL TIE-INS SHALL BE ACCOMPLISHED WITHOUT INTERRUPTION OF GAS SERVICE TO ANY CUSTOMER BY USING LINE STOPS AND TEMPORARY BYPASSES AS SHOWN ON PLANS AND AS APPROVED BY THE ENGINEER.
5. COORDINATE TRAFFIC CONTROL AND TIE-INS AROUND HARRIMAN HIGH SCHOOL AND HARRIMAN MIDDLE SCHOOL WITH THE CITY OF HARRIMAN AND THE SCHOOL DISTRICT. NO GAS OUTAGES TO THE SCHOOLS WILL BE ALLOWED. CONTACT SCHOOL PRINCIPALS AND THE CITY MANAGER FOR COORDINATION.

CONTACT INFORMATION:

HIGH SCHOOL PRINCIPAL: SCOTT CALLAHAN (865) 882-1821
MIDDLE SCHOOL PRINCIPAL: LESLIE SMITH (865) 882-1727
CITY MANAGER: KEVIN HELMS (865) 882-9414

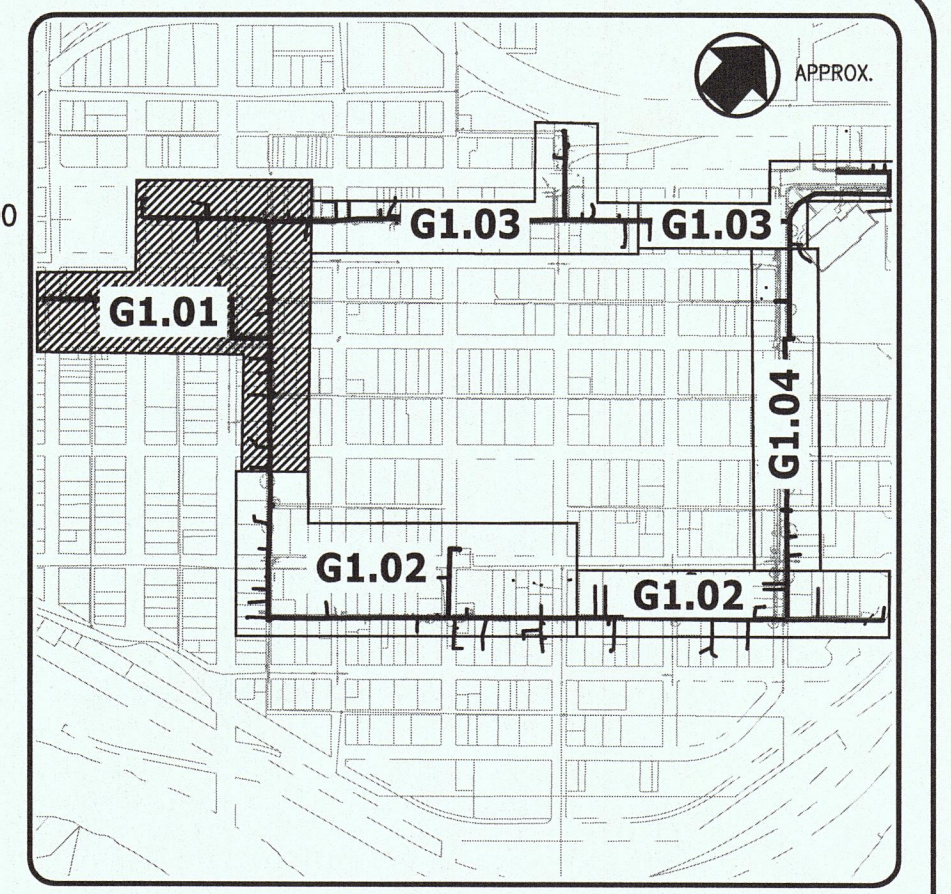
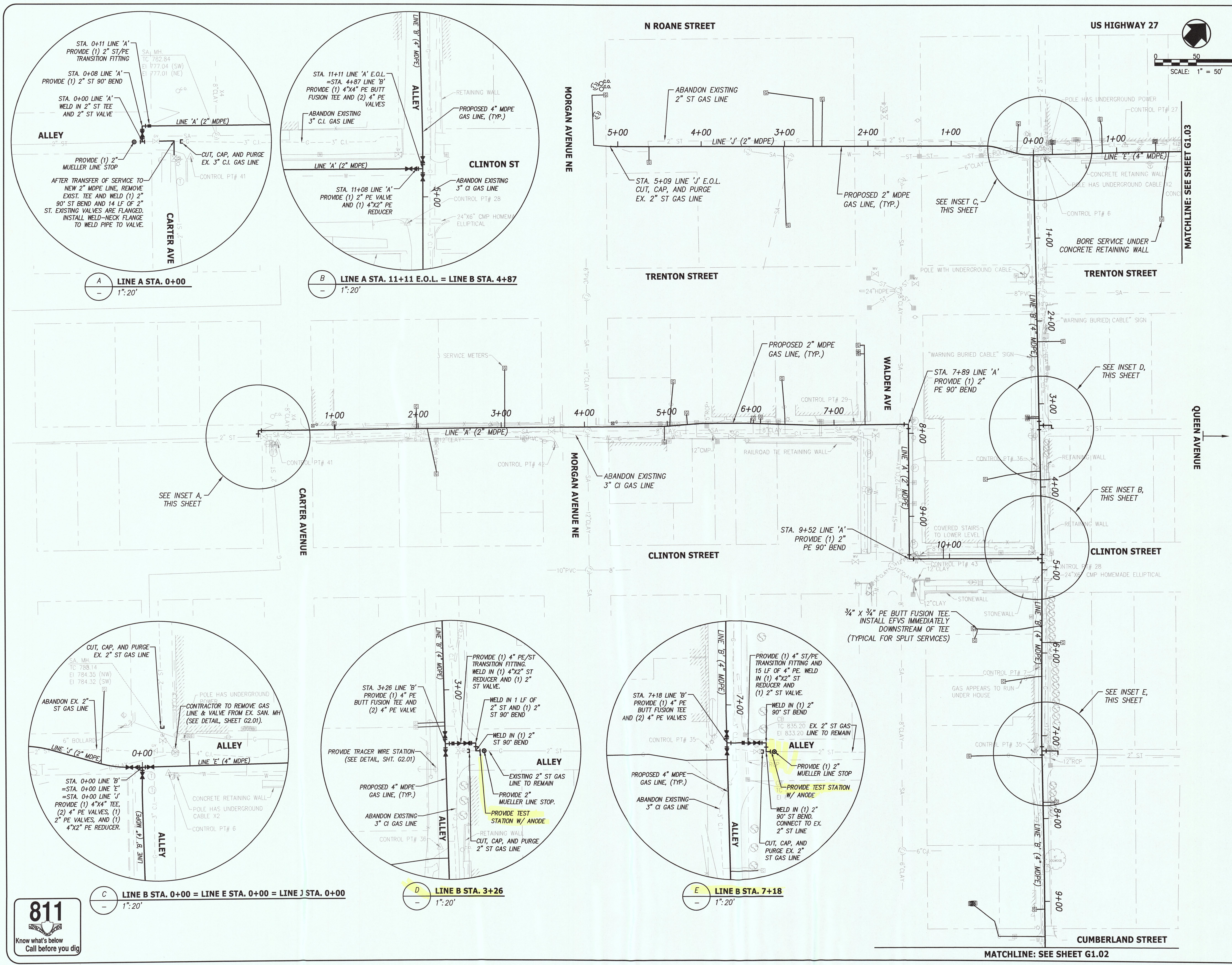
6. COORDINATE TRAFFIC CONTROL AND WORK IN N. ROANE STREET/ TN 61 WITH TDOT AND CITY OF HARRIMAN. COORDINATE ALL OTHER TRAFFIC CONTROL WITH CITY OF HARRIMAN. CONTACT CITY MANAGER KEVIN HELMS AT (865) 882-9414.
7. CONTRACTOR TO COORDINATE CONNECTIONS INTO EXISTING GAS MAINS WITH HUB'S GWS FOREMAN PRIOR TO MAKING TAPS. HUB APPROVAL REQUIRED PRIOR TO TAPS. CONTACT JEFF MIZE AT (865) 755-4173.
8. THE LOCATIONS OF THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND INCOMPLETE. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED AND POT-HOLING AS NECESSARY.
9. EXISTING GAS LINE DIAMETERS AND MATERIALS WERE OBTAINED FROM HISTORICAL RECORDS. CONTRACTOR SHALL VERIFY BY POT-HOLING PRIOR TO ORDERING MATERIAL FOR TIE-INS, CUT AND CAPS, ETC.
10. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR POT-HOLING EXISTING UTILITIES TO DETERMINE ELEVATION AND LOCATION. POT-HOLING SHALL BE CONDUCTED WITH THE LEAST INTRUSIVE MEANS SUCH AS A VACTRON, HAND DIGGING, OR THE USE OF OTHER SIMILAR EQUIPMENT. PAVEMENT RESTORATION AT POT-HOLE LOCATIONS SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND NO ADDITIONAL PAYMENT SHALL BE MADE.
11. PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD THE EXISTING UTILITIES FROM DAMAGE DURING THE CONSTRUCTION OF THIS PROJECT. FURNISH ANY SPECIAL EQUIPMENT REQUIRED TO WORK OVER AND AROUND THE UTILITIES WITHOUT CAUSING THEM DAMAGE. IF DAMAGE DOES OCCUR, IMMEDIATELY NOTIFY UTILITY OWNER AND WORK TO RESTORE SERVICE. COST OF REPAIR OR REPLACEMENT OF DAMAGED LINES SHALL BE CONTRACTOR'S RESPONSIBILITY.
12. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS TO NOTIFY THEM OF WORK IN THE AREA AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY. NOTIFICATION SHALL BE GIVEN AT LEAST THREE BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
13. UTILITIES SHALL BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, AT 811.
14. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
15. STONE BEDDING AND BACKFILL SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE PROJECT SPECIFICATIONS.
16. ALL GAS LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
17. CONTRACTOR TO COORDINATE FIELD LOCATIONS OF GAS SERVICES AND METERS WITH RESIDENT PROJECT REPRESENTATIVE.
18. VALVES AND METER ASSEMBLIES SHALL BE ORIENTED SO AS TO ASSURE GAS LINE APPURTENANCES ARE NOT LOCATED WITHIN SIDEWALK AND/OR CURB/CURB & GUTTER AREAS, UNLESS OTHERWISE APPROVED BY HUB.
19. CONTRACTOR SHALL INSTALL DETECTION WIRE WITH CONNECTORS AND WARNING TAPE PER PROJECT SPECIFICATIONS.
20. GAS MAIN MIN. COVER SHALL BE 30" AND MAX. COVER SHALL BE 48", UNLESS OTHERWISE APPROVED IN WRITING BY HUB.
21. PAVEMENT SHALL BE SAW CUT IN RECTANGULAR SECTIONS WITH NEAT SQUARED EDGES.
22. BACKFILL IN PAVED AREAS SHALL BE COMPACTED IN MAXIMUM 6" LIFTS USING "JUMPING JACK" STYLE COMPACTOR.
23. ALL INCIDENTAL WORK, INCLUDING LABOR AND MATERIALS, NECESSARY TO COMPLETE THE PROJECT AS SHOWN IN THE CONTRACT DOCUMENTS, FOR WHICH A SEPARATE PAY ITEM IS NOT SHOWN SHALL BE PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL COST TO HUB. THE COSTS FOR THIS WORK SHALL BE MERGED INTO THE UNIT PRICES FOR OTHER BID ITEMS.
24. BEFORE BEGINNING WORK ON ANY NEW PROPERTY, THE CONTRACTOR SHALL TAKE PHOTOS AND/OR VIDEO IN ORDER TO PROPERLY DOCUMENT PRE-CONSTRUCTION CONDITION OF THE SITE. THE SAID PHOTOS OR VIDEO SHALL BE SUBMITTED TO THE ENGINEER ALONG WITH PROPERTY RESTORATION RELEASE FORM BEFORE PAYMENT WILL BE MADE FOR PROPERTY RESTORATION. CONTRACTOR SHALL NOT BACKFILL ANY PART OF THE WORK (INCLUDING CONDEMNED SERVICE LINE) BEFORE THE RESIDENT PROJECT REPRESENTATIVE HAS VIEWED IT IN PERSON.
25. THE CONTRACTOR MUST MEET ALL NECESSARY REQUIREMENTS OF CFR 49 PART 192, SUBPARTS E AND N RELATED TO NATURAL GAS WORK INCLUDING BUT NOT LIMITED TO DRUG AND ALCOHOL TESTING, OPERATOR QUALIFICATION, FUSION QUALIFICATION, WELDER CERTIFICATION, ETC. AS A PREREQUISITE REQUIREMENT TO HUB EXECUTING A CONTRACT, THE CONTRACTOR SHALL FURNISH A LIST OF CREW MEMBERS THAT WILL BE SPECIFICALLY ASSIGNED TO THE WORK AND EVIDENCE OF THEIR QUALIFICATIONS UNDER THE REQUIRED PROGRAMS. UNQUALIFIED CREW MEMBERS WILL BE QUALIFIED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR MAY BE SUBJECT TO PENALTIES THAT COULD INCLUDE TERMINATION OF THE CONTRACT AS DETERMINED BY HUB FOR HAVING CREW MEMBERS PERFORMING TASKS FOR WHICH THEY ARE NOT QUALIFIED TO PERFORM.

26. IN ORDER FOR THE MOST CURRENT OPERATOR QUALIFICATION STATUS CHECKS OF CONTRACTOR OR CONTRACTOR EMPLOYEES TO BE PERFORMED, THE CONTRACTOR MUST COMPLY WITH 49 CFR PART 192, SUBPART N USING ONE OF THE TWO OPTIONS LISTED BELOW:
- 26.1. USE HIS OR HER OWN OPERATOR QUALIFICATION PLAN THAT HAS BEEN APPROVED BY HUB OR
- 26.2. USE A THIRD-PARTY OPERATOR QUALIFICATION PLAN THAT HAS BEEN APPROVED BY HUB.
27. THE CONTRACTOR SHALL HAVE ALL DOCUMENTATION DEMONSTRATING THAT PERSONNEL PERFORMING COVERED OQ TASKS ARE QUALIFIED TO PERFORM SUCH TASKS AND HAVE THAT DOCUMENTATION ELECTRONICALLY ACCESSIBLE BY HUB WITHIN 5 BUSINESS DAYS AFTER REQUEST BY HUB. HUB MAY CONSIDER THE CONTRACTOR IN DEFAULT IF THIS DOCUMENTATION IS NOT RECEIVED OR ELECTRONICALLY AVAILABLE WITHIN 5 BUSINESS DAYS AFTER THE REQUEST BY HUB.
28. CONTRACTOR WILL BE REQUIRED TO HAVE THE FOLLOWING SAFETY EQUIPMENT ON-SITE AS THE WORK IS PERFORMED.
- 28.1. FIRE EXTINGUISHER – CONTRACTORS WILL NEED TO POSSESS A 10-LB "PURPLE K" BC TYPE OR GREATER EXTINGUISHER.
- 28.2. A FIRE HOOD(S) FOR ALL PERSONNEL WORKING IN LIVE GAS WILL NEED TO PROVIDE COVERAGE FOR HEAD, FACE AND NECK AND BE CLASSIFIED AS FIRE RESISTANT.
- 28.3. A FIRE SUIT(S) FOR ALL PERSONNEL WORKING DIRECTLY IN LIVE GAS WILL NEED TO BE – INSULATED FLAME RESISTANT ONE PIECE COVERALL.
29. EACH CONTRACTOR EMPLOYEE, PERFORMING OR PARTICIPATING IN THE PERFORMANCE OF A COVERED TASK, SHALL ADHERE TO THE FOLLOWING GUIDELINES FOR FIRE RETARDANT CLOTHING WHEN WORKING IN CONDITIONS AS STATED BELOW:
- 29.1. INITIAL EXCAVATION ACTIVITIES – 100% COTTON UNDERWEAR, COTTON SOCKS, COTTON SHIRT, COTTON PANTS, LEATHER WORK BOOTS + APPROPRIATE PPE FOR TASK.
- 29.2. HAND EXCAVATION OF SERVICE TEE – 100% COTTON UNDERWEAR, COTTON SOCKS, COTTON SHIRT, COTTON PANTS, LEATHER WORK BOOTS + APPROPRIATE PPE FOR TASK.
- 29.3. SQUEEZE OFF OF PIPELINE – 100% COTTON CLOTHING PLUS HOODED FLAME RESISTANT 1 PIECE COVERALL, FLAME RESISTANT HEAD SOCK, + APPROPRIATE PPE FOR TASK.
- 29.4. BLOWING GAS ENVIRONMENT – 100% COTTON CLOTHING PLUS HOODED INSULATED FLAME RESISTANT ONCE PIECE COVERALL, FLAME RESISTANT HEAD SOCK AND LEATHER GLOVES.
30. CONTRACTOR SHALL COMPLETE BTU LOAD FORM (SECTION 33 51 15) FOR EACH SERVICE TO BE REPLACED OR OTHERWISE INSTALLED NEW. SUBMIT FORM TO ENGINEER. HUB WILL SIZE EFV FOR EACH SERVICE. CONTRACTOR TO PROVIDE AND INSTALL EACH EFV.
31. ALL STEEL GAS MAIN SHALL BE WELDED. FLANGES WILL NOT BE ALLOWED. WHERE CONNECTING TO EXISTING FLANGED VALVES, CONTRACTOR SHALL USE WELD NECK FLANGES.
32. GAS MAIN AND SERVICE LINE INSTALLATION SHALL BE OPEN CUT UNLESS SPECIFICALLY SHOWN OTHERWISE ON PLANS OR APPROVED IN WRITING BY ENGINEER. IN GENERAL, MAIN AND SERVICE LINE INSTALLATION IN ALLEYS AND CITY STREETS NEAR OTHER UTILITIES WILL BE BY OPEN CUT AND TRENCHLESS INSTALLATION WILL NOT BE APPROVED IN THESE AREAS.
33. TRACER WIRE SHALL PASS CONTINUITY TEST BY HUB PERSONNEL PRIOR TO PATCHING ASPHALT. TEST WILL CHECK FOR CONTINUITY OF SIGNAL ALONG MAIN, BETWEEN MAIN AND SERVICES, AND ALONG SERVICES. CONTACT JEFF MIZE OF HUB AT (865) 755-4173 FOR TESTING 72 HOURS PRIOR TO PATCHING.



LEGEND

	PROPOSED GAS MAIN
	PROPOSED GAS SERVICE
	EXISTING GAS TO REMAIN
	EXISTING GAS TO BE ABANDONED
	EXISTING WATER
	EXISTING WATER VALVE
	EXISTING SANITARY SEWER
	EXISTING SEWER MANHOLE
	EXISTING PROPERTY LINE
	EXISTING GAS METER
	EXISTING GAS VALVE
	EXISTING GAS MARKER
	EXISTING POWER MANHOLE
	EXISTING TELEPHONE/COMM. MANHOLE
	EXISTING STORM SEWER
	EXISTING STORM CATCHBASIN
	EXISTING LIGHT POLE
	EXISTING POWER POLE
	SURVEY CONTROL POINT
	EXISTING FENCE
	EXISTING BUILDING
	PROPOSED GAS VALVE
	PROPOSED TRANSITION COUPLING
	PROPOSED REDUCER
	PROPOSED LINE STOP

REVISIONS		DATE	
CANNON & CANNON INC CONSULTING ENGINEERS · FIELD SURVEYORS TEL 865.670.8555 8560 Kingston Pike WWW.CANNON-CANNON.COM Knoxville, TN 37919			
CLIENT:		HARRIMAN UTILITY BOARD 300 NORTH ROANE STREET HARRIMAN, TN 37748 (865) 882-3242	
PROJECT:		CAST IRON GAS MAIN REPLACEMENT PHASE II HARRIMAN, TN	
GENERAL NOTES			
		CCI PROJECT NO. 00923-0008	
		DRAWING DATE MAY 6, 2016	
		PM SAF	QC TFT
		DRAWN WWL	CR
		G0.03	

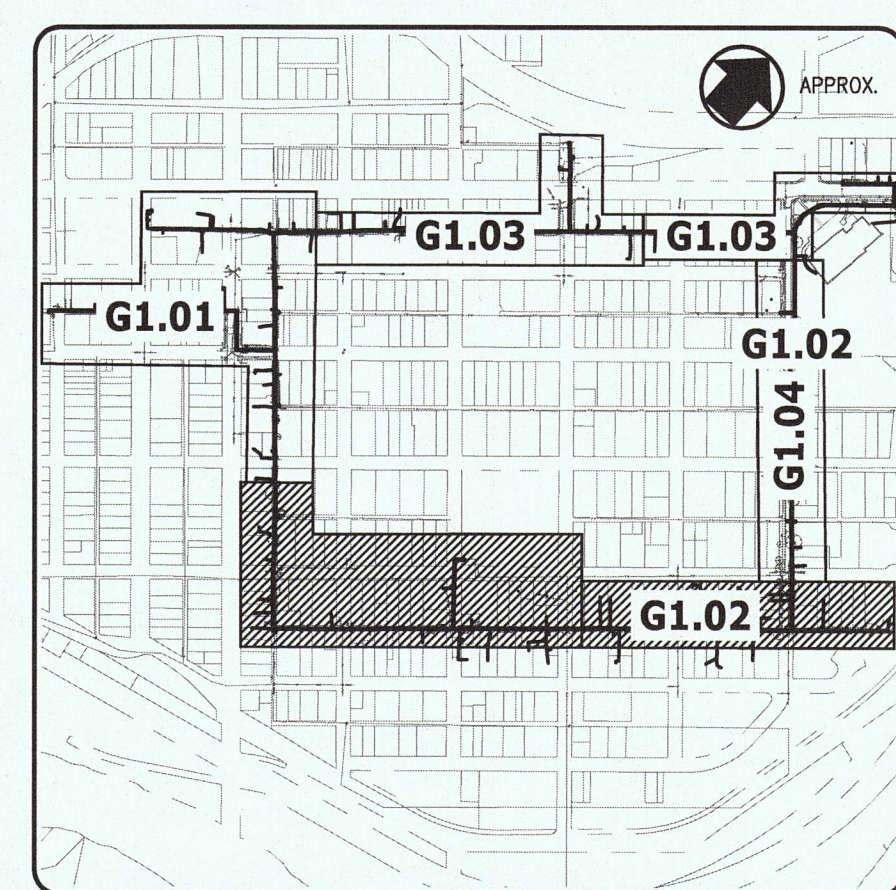
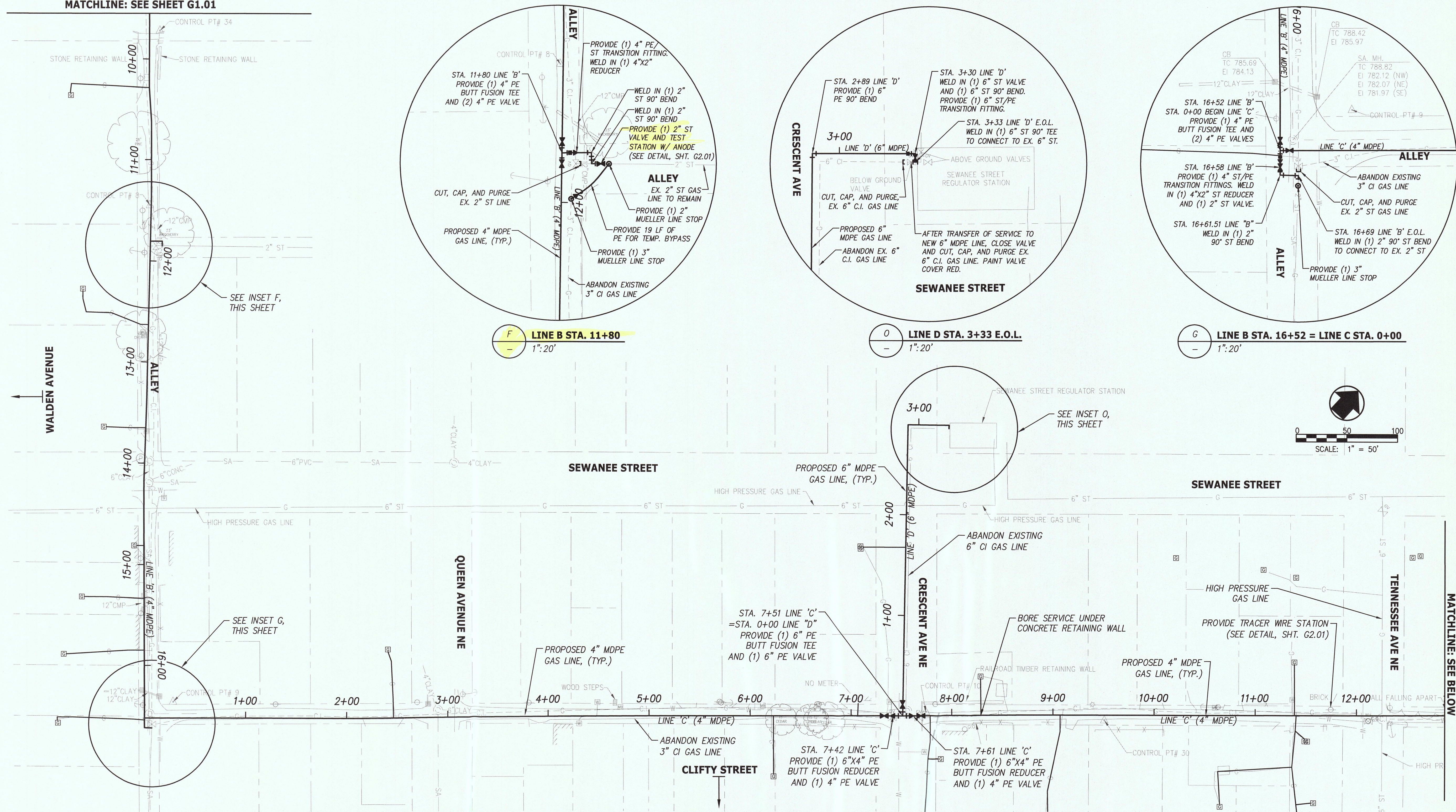


LEGEND	
	PROPOSED GAS MAIN
	PROPOSED GAS SERVICE
	EXISTING GAS TO REMAIN
	EXISTING GAS TO BE ABANDONED
	EXISTING WATER
	EXISTING WATER VALVE
	EXISTING SANITARY SEWER
	EXISTING SEWER MANHOLE
	EXISTING PROPERTY LINE
	EXISTING GAS METER
	EXISTING GAS VALVE
	EXISTING GAS MARKER
	EXISTING POWER MANHOLE
	EXISTING TELEPHONE/COMM. MANHOLE
	EXISTING STORM SEWER
	EXISTING STORM CATCHBASIN
	EXISTING LIGHT POLE
	EXISTING POWER POLE
	SURVEY CONTROL POINT
	EXISTING FENCE
	EXISTING BUILDING
	PROPOSED GAS VALVE
	PROPOSED TRANSITION COUPLING
	PROPOSED REDUCER
	PROPOSED LINE STOP

REVISIONS		DATE	
<div><div></div><div><div>CANNON & CANNON INC</div><div>CONSULTING ENGINEERS - FIELD SURVEYORS</div></div></div> <div><div>TEL 865.670.8555</div><div>8550 Kingston Pike Knoxville, TN 37919</div></div> <div>WWW.CANNON-CANNON.COM</div>			
CLIENT:		HARRIMAN UTILITY BOARD 300 NORTH ROANE STREET HARRIMAN, TN 37748 (865) 882-3242	
PROJECT:		CAST IRON GAS MAIN REPLACEMENT PHASE II HARRIMAN, TN	
LINE A: STA. 0+00 TO 11+11 E.O.L. LINE B: STA. 0+00 TO STA. 9+55 LINE E: STA. 0+00 TO STA. 1+78 LINE J: STA. 0+00 TO STA. 5+09 E.O.L.			
<div><div><div>THE GREAT SEAL OF THE REGISTERED ENGINEERS ASSOCIATION OF THE STATE OF TENNESSEE</div><div></div></div></div>		<div><div>CCI PROJECT NO.</div><div>00923-0008</div></div> <div><div>DRAWING DATE</div><div>MAY 6, 2016</div></div> <div><div>PM</div><div>SAF</div><div>QC</div><div>TFT</div></div> <div><div>DRAWN</div><div>WWL</div><div>CR</div></div> <div><div>G1.01</div></div>	



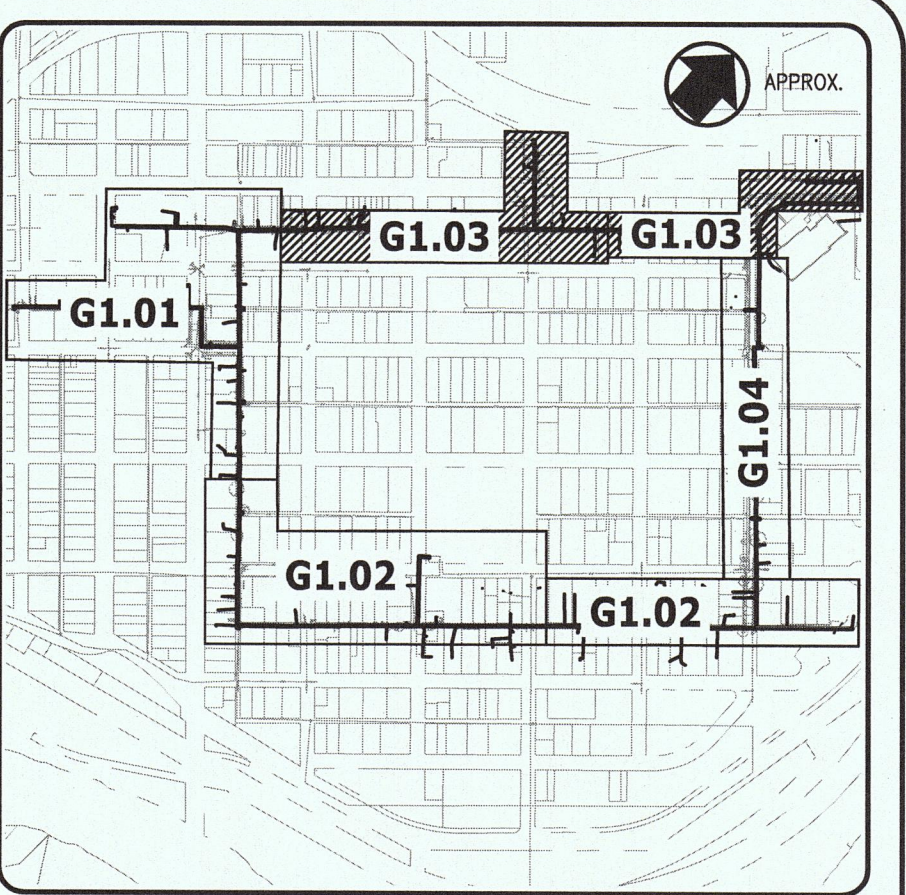
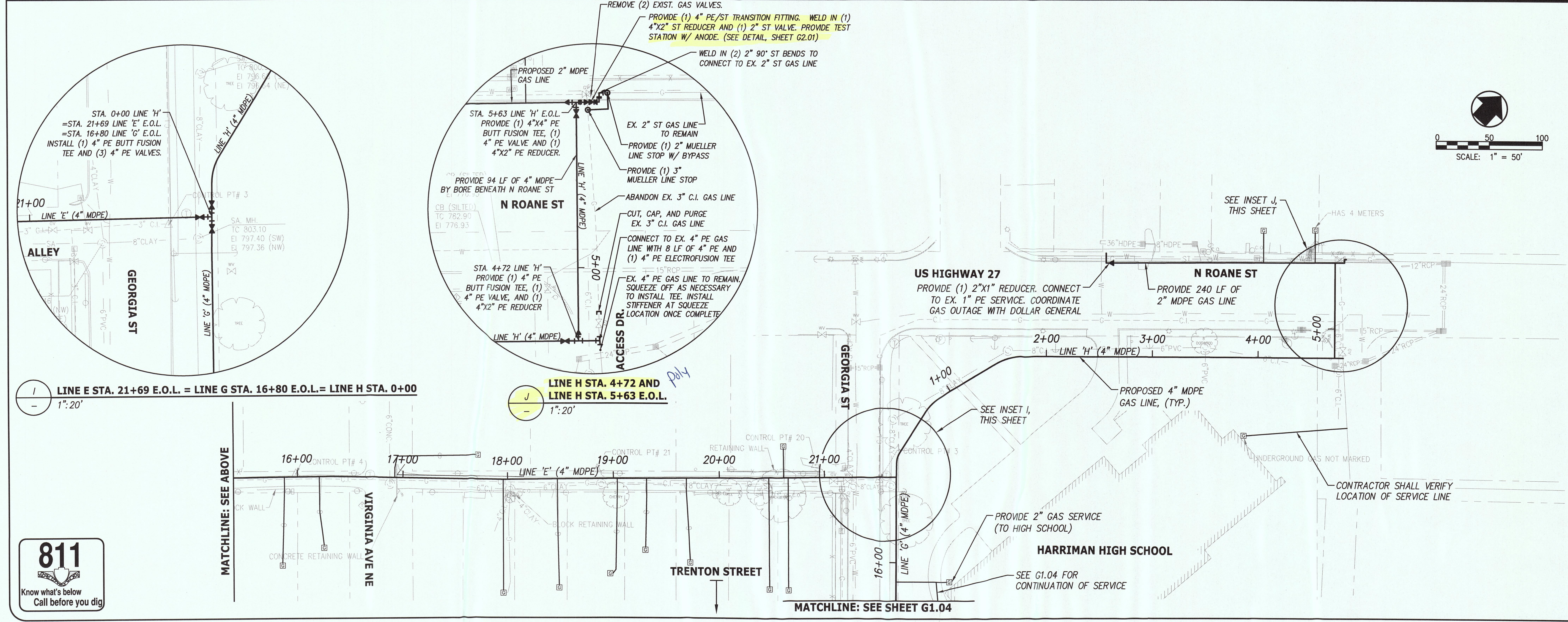
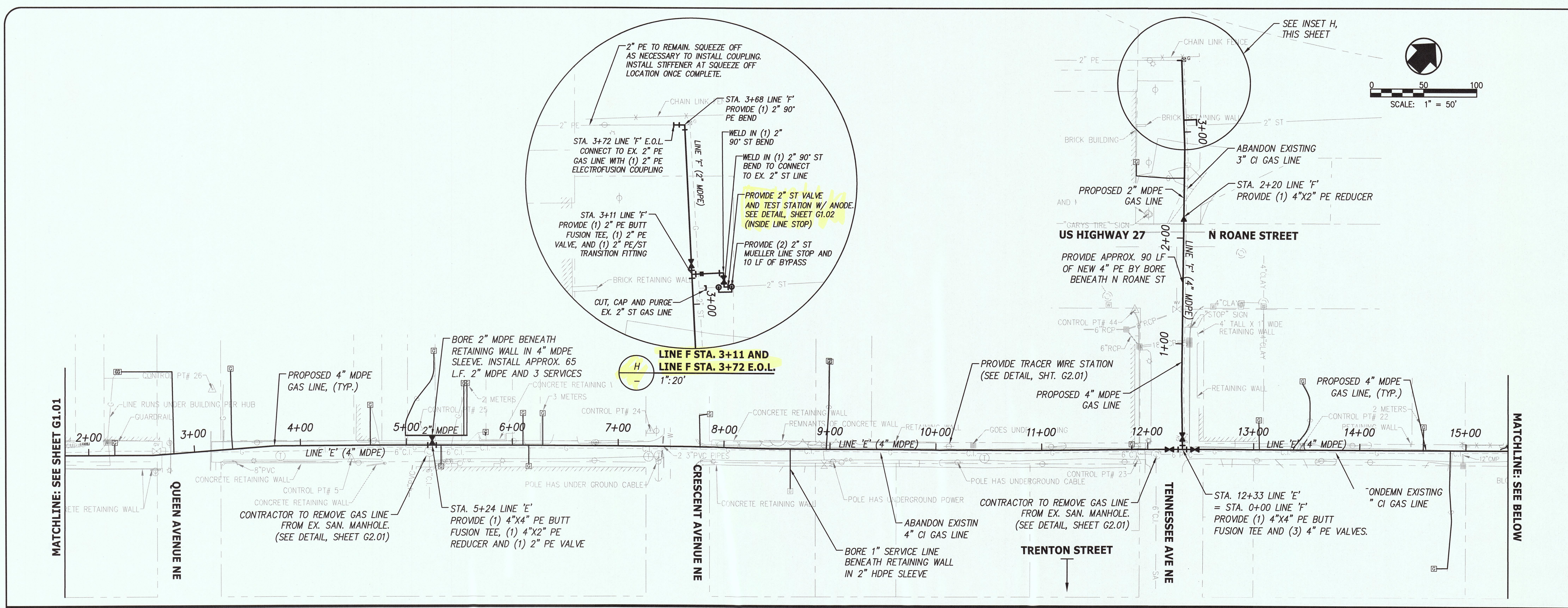
MATCHLINE: SEE SHEET G1.01



- LEGEND**
- PROPOSED GAS MAIN
 - PROPOSED GAS SERVICE
 - - - EXISTING GAS TO REMAIN
 - - - EXISTING GAS TO BE ABANDONED
 - - - EXISTING WATER
 - - - EXISTING WATER VALVE
 - - - EXISTING SANITARY SEWER
 - - - EXISTING SEWER MANHOLE
 - - - EXISTING PROPERTY LINE
 - - - EXISTING GAS METER
 - - - EXISTING GAS VALVE
 - - - EXISTING GAS MARKER
 - - - EXISTING POWER MANHOLE
 - - - EXISTING TELEPHONE/COMM. MANHOLE
 - - - EXISTING STORM SEWER
 - - - EXISTING STORM CATCHBASIN
 - - - EXISTING LIGHT POLE
 - - - EXISTING POWER POLE
 - - - SURVEY CONTROL POINT
 - - - EXISTING FENCE
 - - - EXISTING BUILDING
 - - - PROPOSED GAS VALVE
 - - - PROPOSED TRANSITION COUPLING
 - - - PROPOSED REDUCER
 - - - PROPOSED LINE STOP

REVISIONS	DATE
<p>CANNON & CANNON INC. CONSULTING ENGINEERS - FIELD SURVEYORS TEL 865.670.8555 8560 Kingston Pike Knoxville, TN 37919 WWW.CANNON-CANNON.COM</p>	
<p>CLIENT: HARRIMAN UTILITY BOARD 300 NORTH ROANE STREET HARRIMAN, TN 37748 (865) 882-3242</p>	
<p>PROJECT: CAST IRON GAS MAIN REPLACEMENT PHASE II HARRIMAN, TN</p>	
<p>LINE B: STA. 9+55 TO STA. 16+69 E.O.L. LINE C: STA. 0+00 TO STA. 25+61 E.O.L. LINE D: STA. 0+00 TO STA. 3+33 E.O.L. LINE G: STA. 0+00 TO STA. 1+90</p>	
<p>CCI PROJECT NO. 00923-0008 DRAWING DATE MAY 6, 2016 PM SAF QC TFF DRAWN WWL CR</p>	<p>G1.02</p>

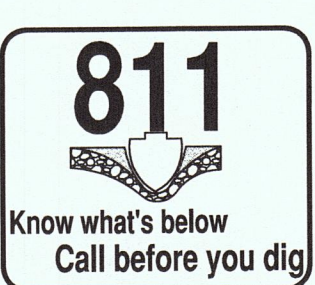
811
Know what's below
Call before you dig

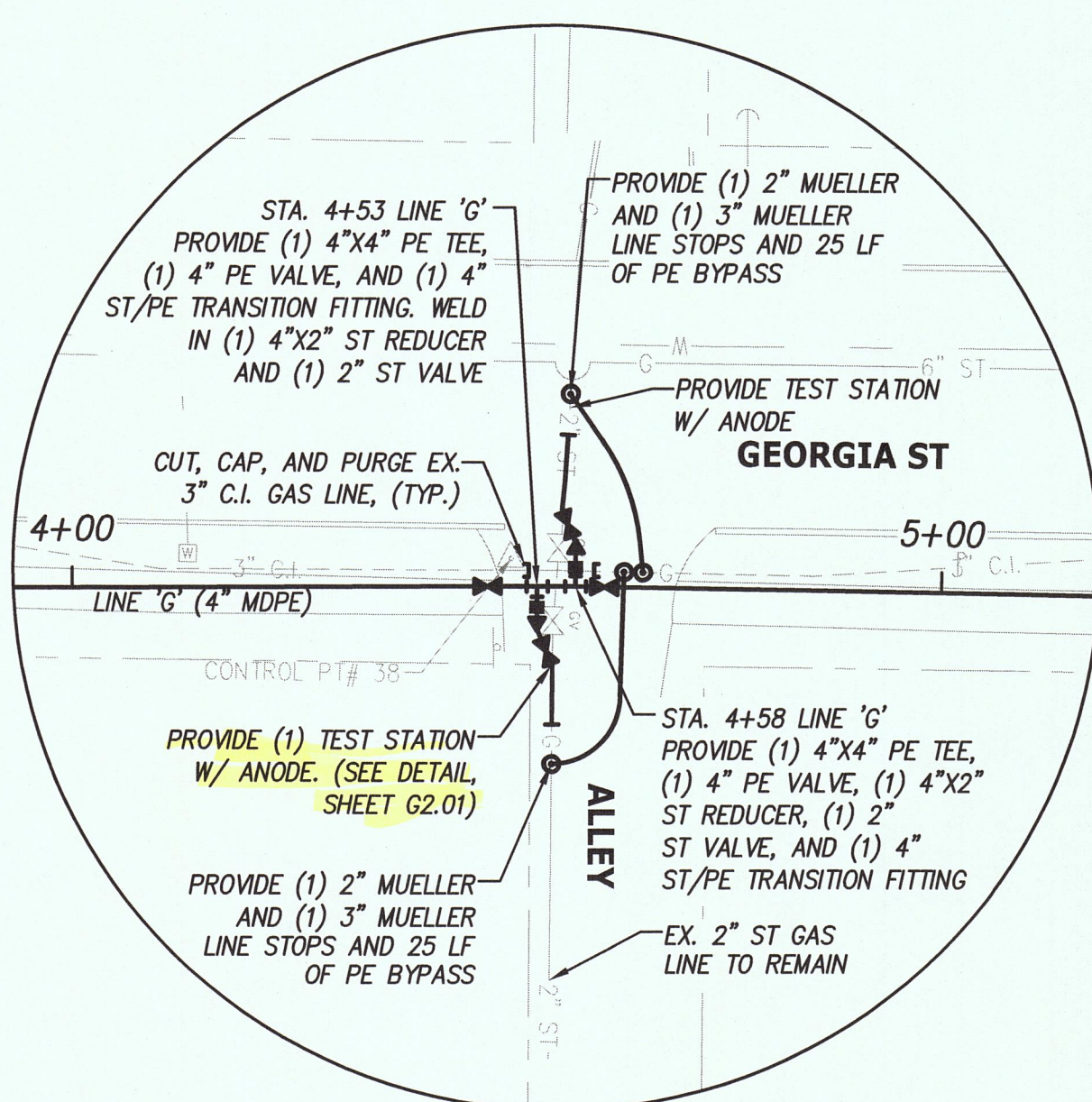
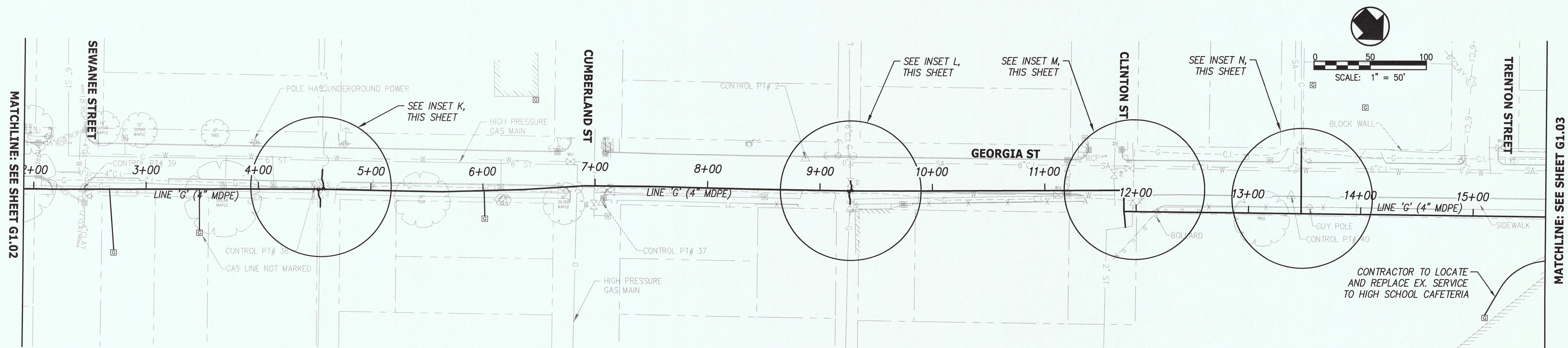


LEGEND

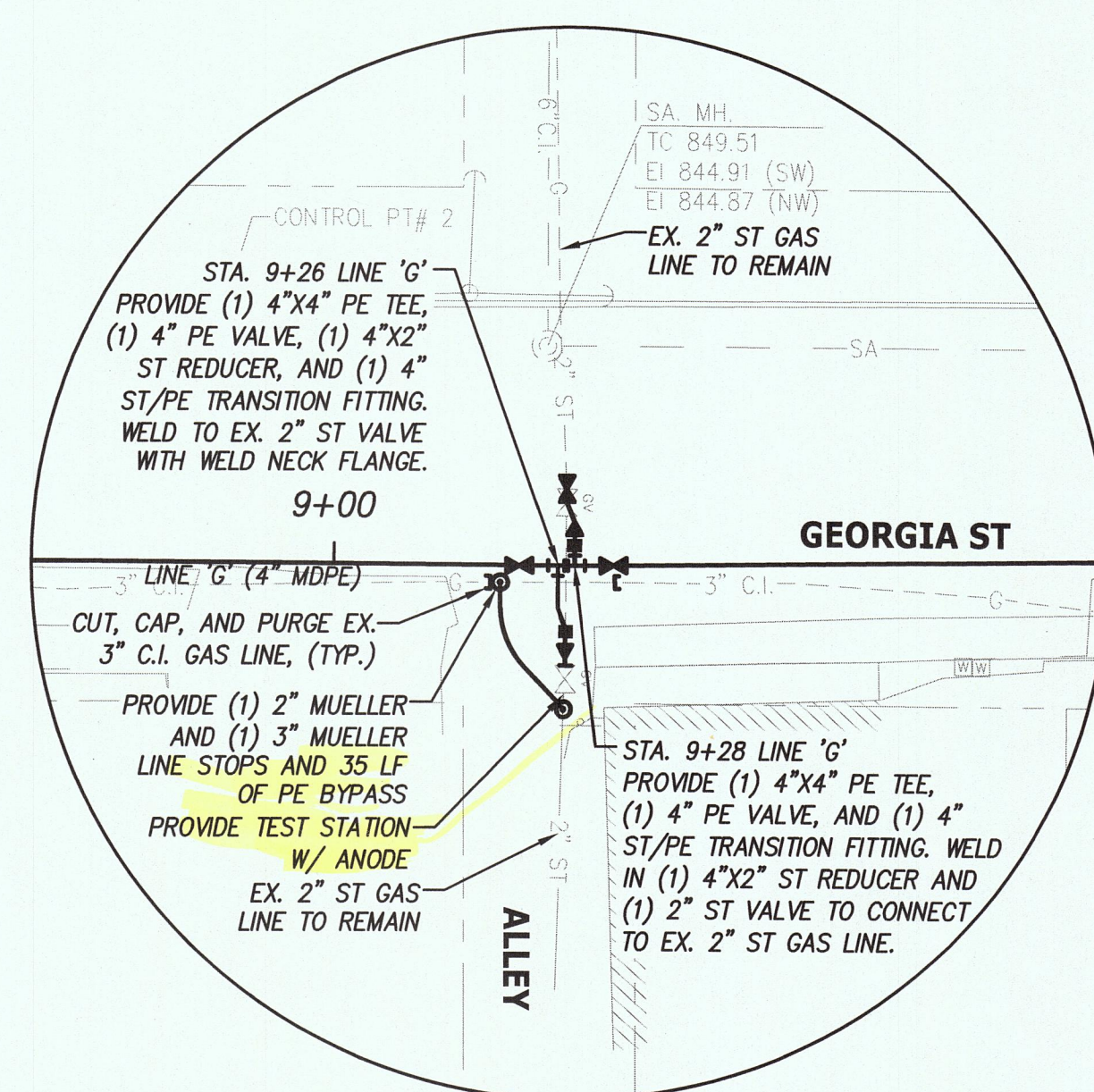
	PROPOSED GAS MAIN
	PROPOSED GAS SERVICE
	EXISTING GAS TO REMAIN
	EXISTING GAS TO BE ABANDONED
	EXISTING WATER
	EXISTING WATER VALVE
	EXISTING SANITARY SEWER
	EXISTING SEWER MANHOLE
	EXISTING PROPERTY LINE
	EXISTING GAS METER
	EXISTING GAS VALVE
	EXISTING POWER MANHOLE
	EXISTING STORM SEWER
	EXISTING STORM CATCHBASIN
	EXISTING LIGHT POLE
	EXISTING POWER POLE
	SURVEY CONTROL POINT
	EXISTING FENCE
	EXISTING BUILDING
	PROPOSED GAS VALVE
	PROPOSED TRANSITION COUPLING
	PROPOSED REDUCER
	PROPOSED LINE STOP

REVISIONS		DATE
CANNON & CANNON INC. CONSULTING ENGINEERS - FIELD SURVEYORS TEL 865.670.8555 8550 Kingston Pike WWW.CANNON-CANNON.COM Knoxville, TN 37919		
CLIENT: HARRIMAN UTILITY BOARD 300 NORTH ROANE STREET HARRIMAN, TN 37748 (865) 882-3242		
PROJECT: CAST IRON GAS MAIN REPLACEMENT PHASE II HARRIMAN, TN		
LINE E: STA. 1+78 TO STA. 21+69 E.O.L. LINE F: STA. 0+00 TO STA. 3+72 E.O.L. LINE G: STA. 15+64 TO STA. 16+80 E.O.L. LINE H: STA. 0+00 TO STA. 5+63 E.O.L.		
	CCI PROJECT NO. 00923-0008 DRAWING DATE MAY 6, 2016 PM SAF QC TFT DRAWN WWL CR	G1.03

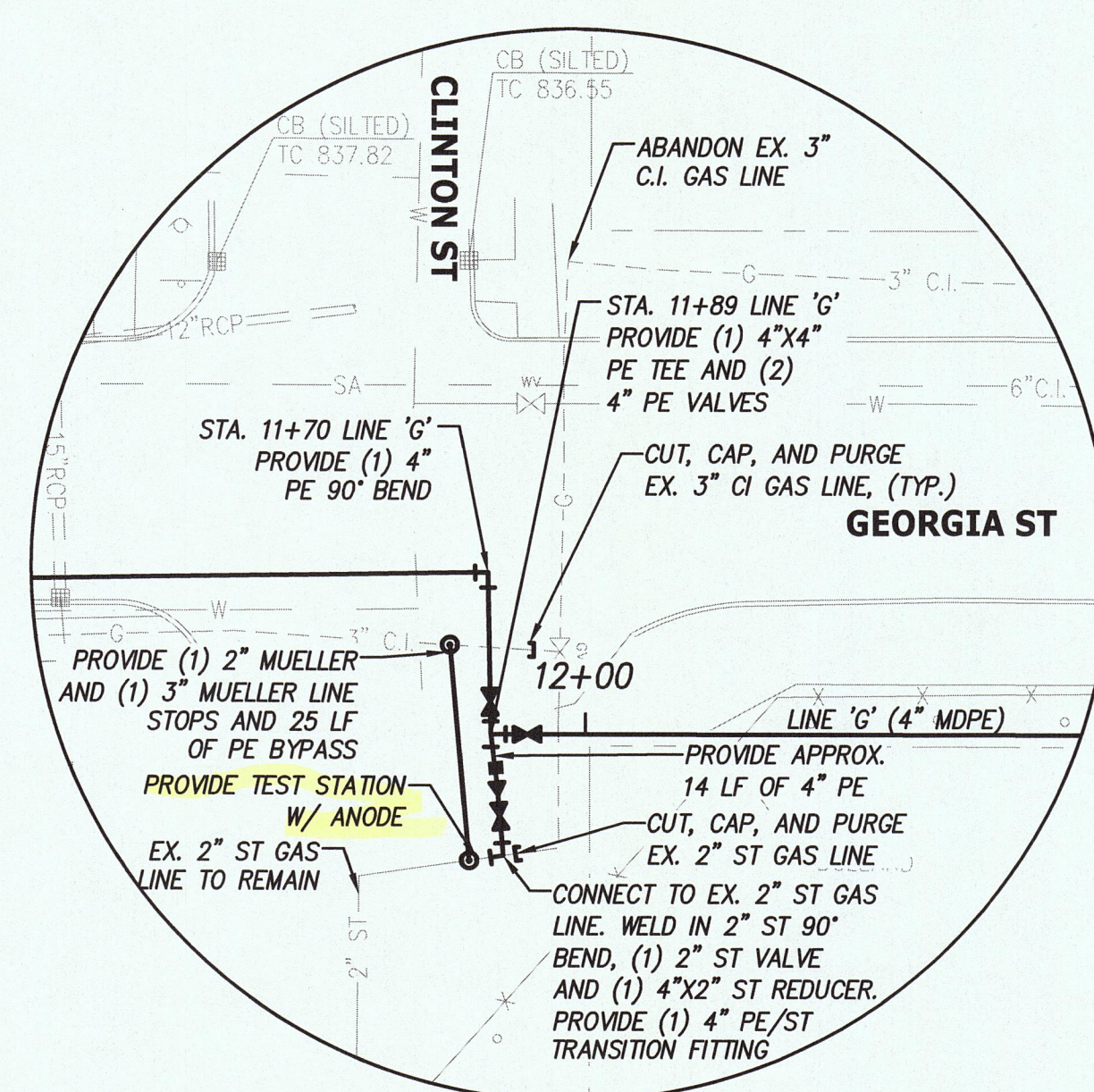




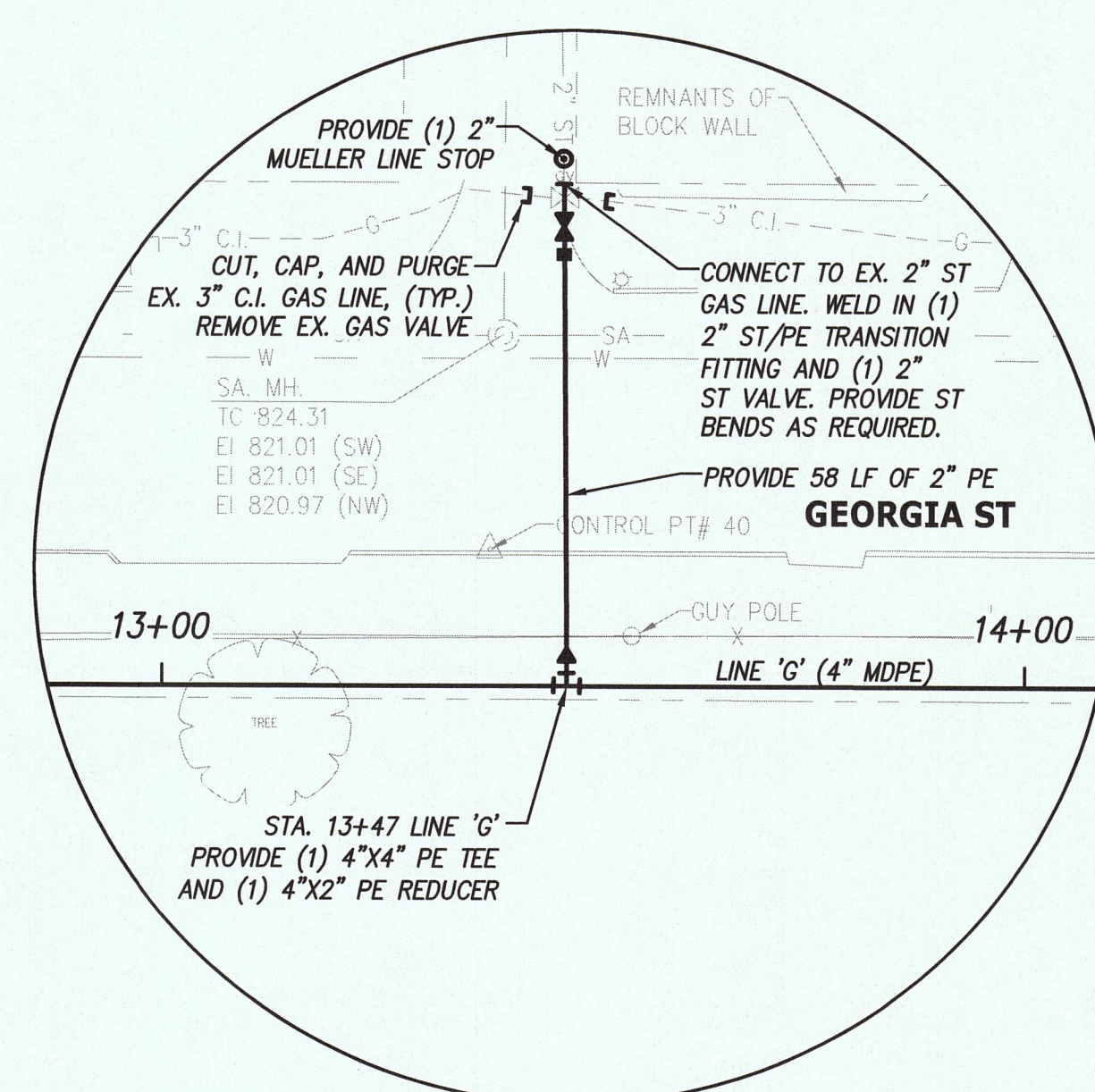
K LINE G STA 4+53
1\"/>



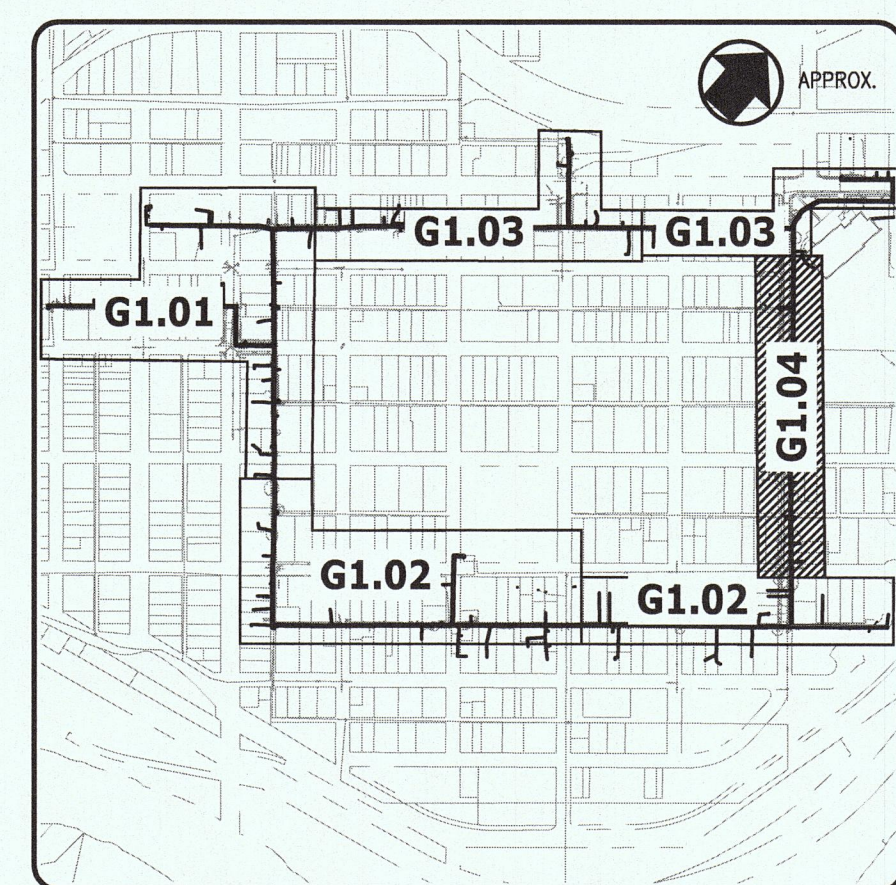
L LINE G STA 9+26
1\"/>



M LINE G STA 11+89
1\"/>



N LINE G STA 13+47
1\"/>

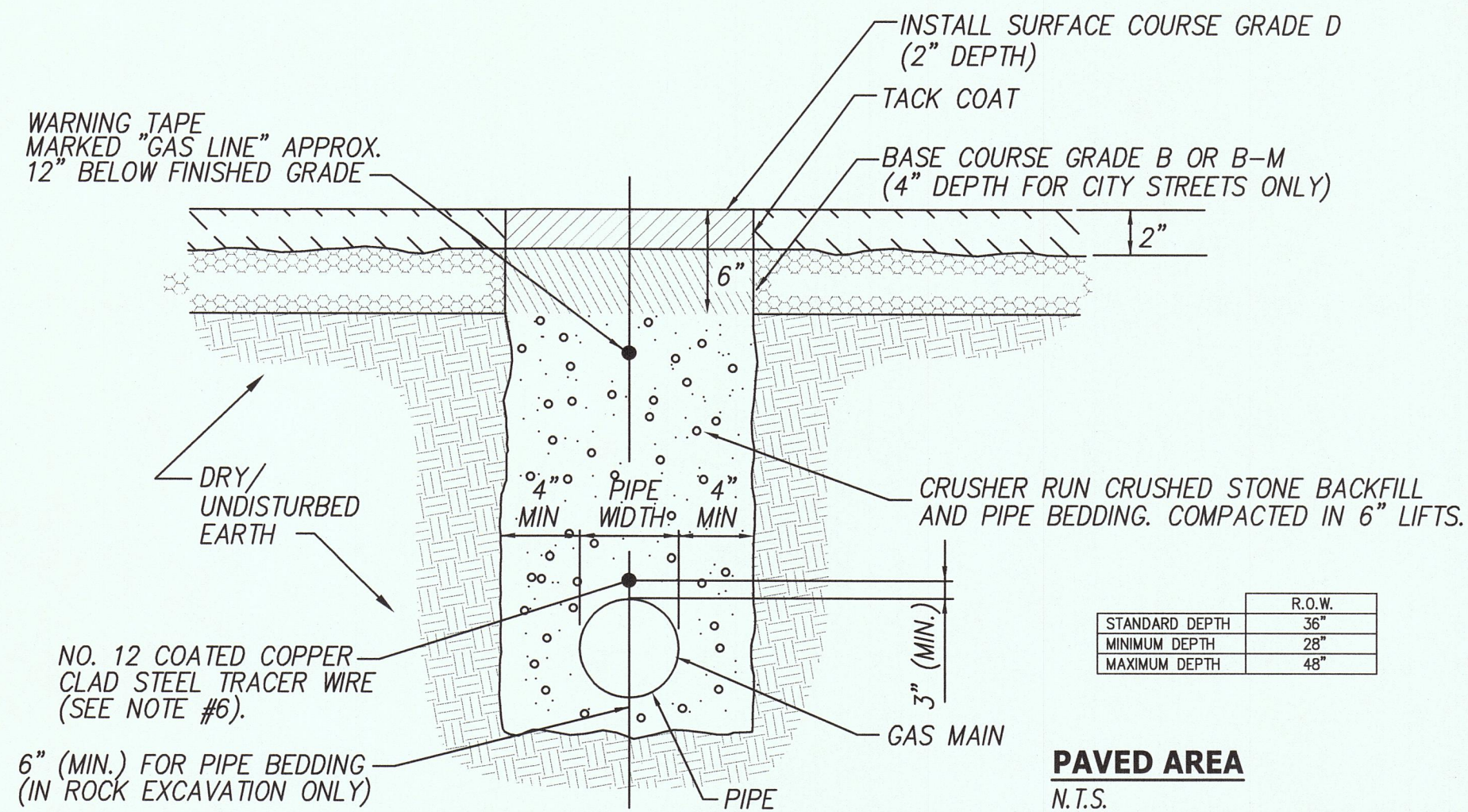


- LEGEND**
- PROPOSED GAS MAIN
 - PROPOSED GAS SERVICE
 - - - EXISTING GAS TO REMAIN
 - - - EXISTING GAS TO BE ABANDONED
 - - - EXISTING WATER
 - - - EXISTING WATER VALVE
 - - - EXISTING SANITARY SEWER
 - - - EXISTING SEWER MANHOLE
 - - - EXISTING PROPERTY LINE
 - - - EXISTING GAS METER
 - - - EXISTING GAS VALVE
 - - - EXISTING GAS MARKER
 - - - EXISTING POWER MANHOLE
 - - - EXISTING TELEPHONE/COMM. MANHOLE
 - - - EXISTING STORM SEWER
 - - - EXISTING STORM CATCHBASIN
 - - - EXISTING LIGHT POLE
 - - - EXISTING POWER POLE
 - - - SURVEY CONTROL POINT
 - - - EXISTING FENCE
 - - - EXISTING BUILDING
 - - - PROPOSED GAS VALVE
 - - - PROPOSED TRANSITION COUPLING
 - - - PROPOSED REDUCER
 - - - PROPOSED LINE STOP

REVISIONS		DATE
CANNON & CANNON INC. CONSULTING ENGINEERS - FIELD SURVEYORS TEL 865.670.8555 8560 Kingston Pike WWW.CANNON-CANNON.COM Knoxville, TN 37919		
CLIENT:		HARRIMAN UTILITY BOARD 300 NORTH ROANE STREET HARRIMAN, TN 37748 (865) 882-3242
PROJECT:		CAST IRON GAS MAIN REPLACEMENT PHASE II HARRIMAN, TN
LINE G: STA. 1+90 TO STA. 15+64		
		CCI PROJECT NO. 00923-0008 DRAWING DATE MAY 6, 2016 PM SAF QC TFT DRAWN WWL CR
		G1.04

NOTES:

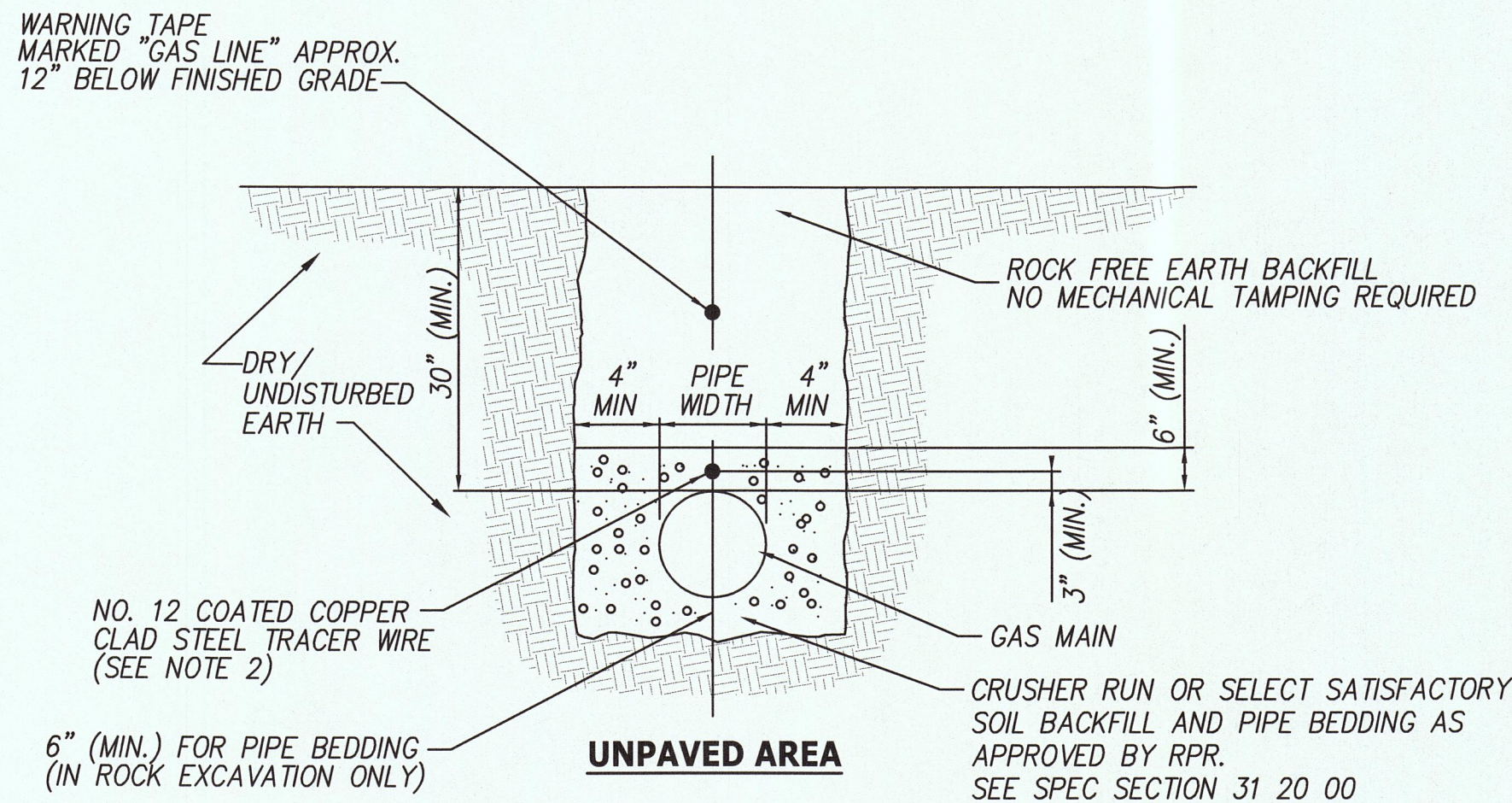
- EDGE TO BE SAWED WITH A CONCRETE SAW TO A NEAT SQUARED EDGE. ALL PATCHES SHALL BE SQUARE OR RECTANGULAR PARALLEL TO CURB. CUTS SHALL BE BROOM-SWEPT CLEAN OF DUST BEFORE TACK COAT IS APPLIED.
- EDGES TO BE TACKED WITH EMULSIFIED ASPHALT TACK CRS-I OR CRS-II.
- CUTTING AND REPAIRING EXISTING PAVEMENT CONCRETE OR GRAVEL SHALL BE IN ACCORDANCE WITH OWNER'S REQUIREMENTS
- BACKFILL AND BEDDING MATERIAL SHALL BE COMPACTED IN 6" LIFTS WITH JUMPING JACK COMPACTOR TO 95% DENSITY PRIOR TO PLACING SUCCEEDING LIFTS.
- MINIMUM TRENCH WIDTH SHALL BE 12" EACH SIDE OF PIPE IN ROCK EXCAVATION.
- WIRE CONNECTOR: DRY CONN® DRY BURY LUG YELLOW OR PRE-APPROVED EQUAL.
- ALLEY AND DRIVEWAY PATCHING SHALL CONSIST OF 2" DEPTH SURFACE COURSE ONLY ON AGGREGATE BASE. NO BASE COURSE



PAVED AREA
N.T.S.

NOTES:

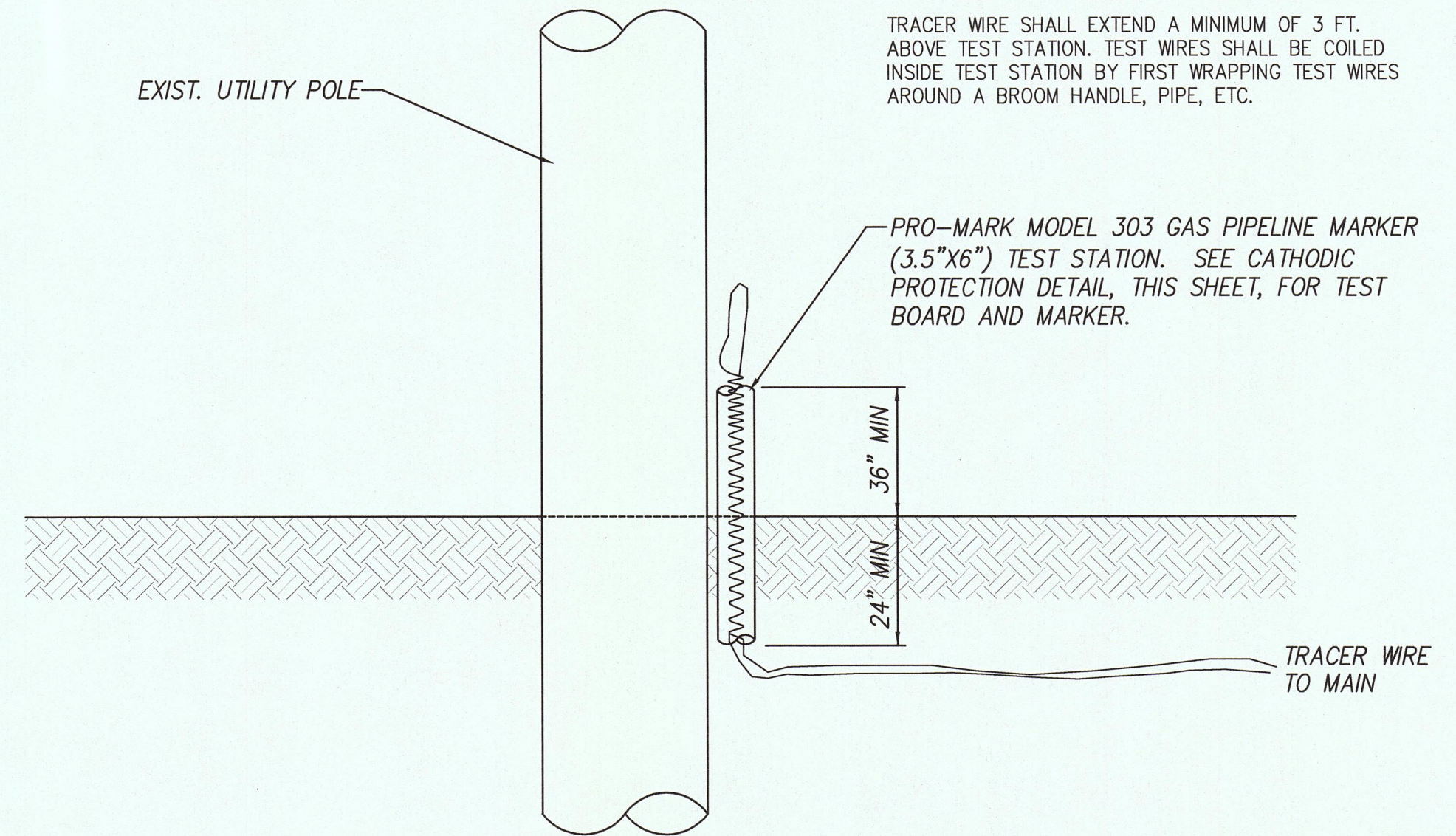
- MINIMUM TRENCH WIDTH SHALL BE 12" EACH SIDE OF PIPE IN ROCK EXCAVATION.
- WIRE CONNECTOR: DRY CONN® DRY BURY LUG YELLOW OR PRE-APPROVED EQUAL.



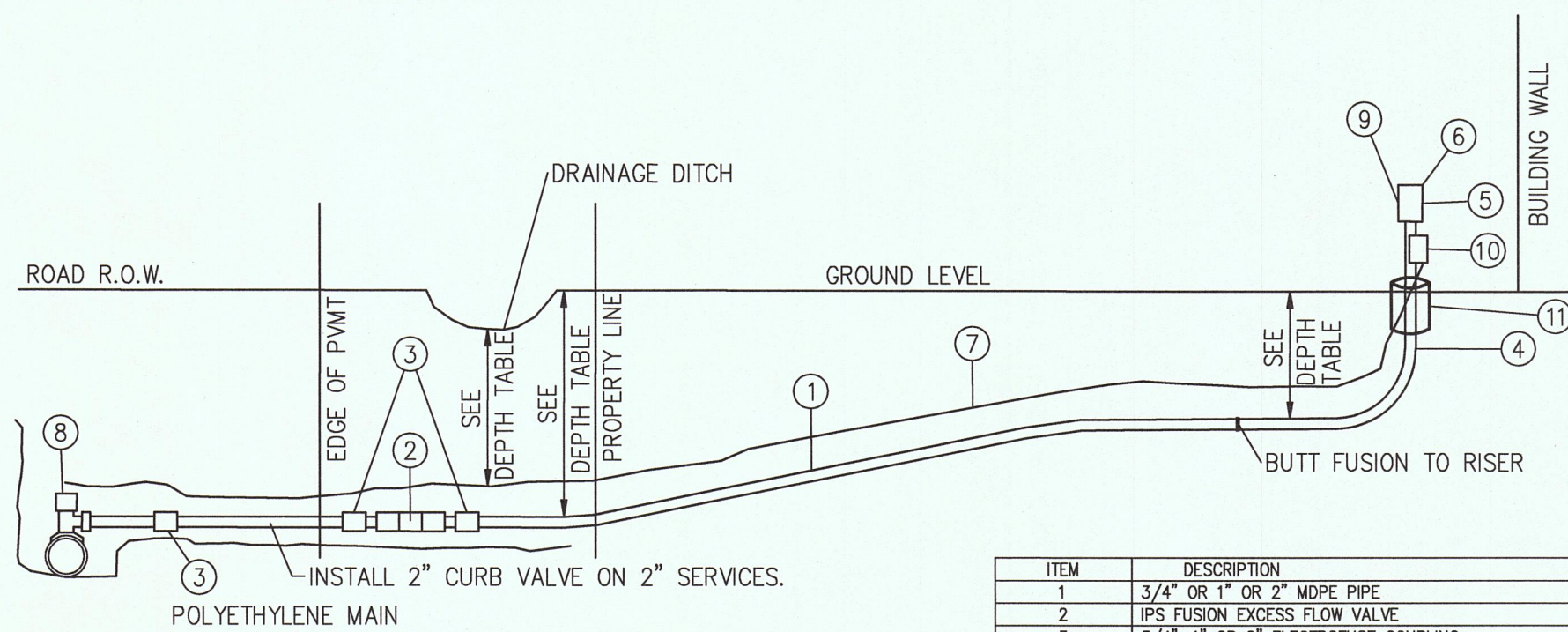
TYPICAL BACKFILL & BEDDING METHOD
N.T.S.

STANDARD DEPTH	R.O.W.
36"	
MINIMUM DEPTH	28"
MAXIMUM DEPTH	48"

EXIST. UTILITY POLE



TRACER WIRE STATION DETAIL
N.T.S.

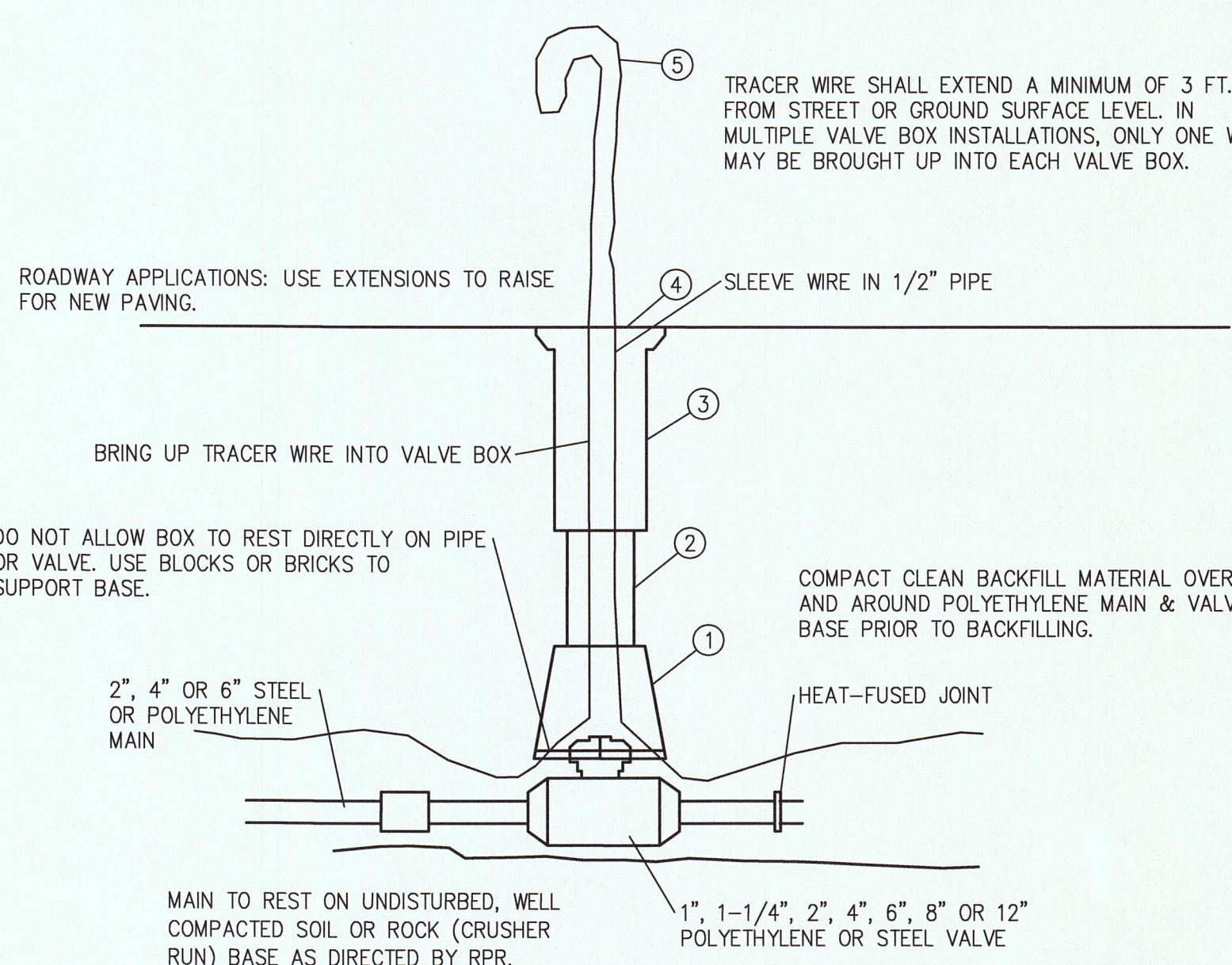


NOTES:

- COMPACT SIDEFILLS AROUND AND UNDER SERVICE CONNECTION.
- TEST COMPLETE SERVICE LINE PRIOR TO TAPPING MAIN.
- EFV TO BE INSTALLED OUTSIDE OF ASPHALT, CONCRETE PAVEMENT, CURB & GUTTER, ETC, BUT AS CLOSE AS PRACTICAL TO MAIN.
- SERVICE LINE TRACER WIRE SHALL BE CONNECTED TO MAIN LINE TRACER WIRE TO ENSURE CONTINUITY OF SERVICE.
- WIRE CONNECTOR: DRY CONN® DRY BURY LUG YELLOW, WC-10 RED LOW VOLTAGE BY WADE CONNECTORS OR PRE-APPROVED EQUAL.
- INSTALL NEW RISER & CUTOFF VALVE TIE-INTO EX. METER.
- INSTALL 2 INCH PE CURB VALVE ON 2 INCH SERVICES BETWEEN MAIN AND EFV.
- INSTALL WARNING TAPE ON SERVICE LINES INSTALLED BY OPEN CUT.
- VERIFY DIAMETER OF SERVICES PRIOR TO ORDERING MATERIALS.

SERVICE CONNECTION 3/4", 1" OR 2"
N.T.S.

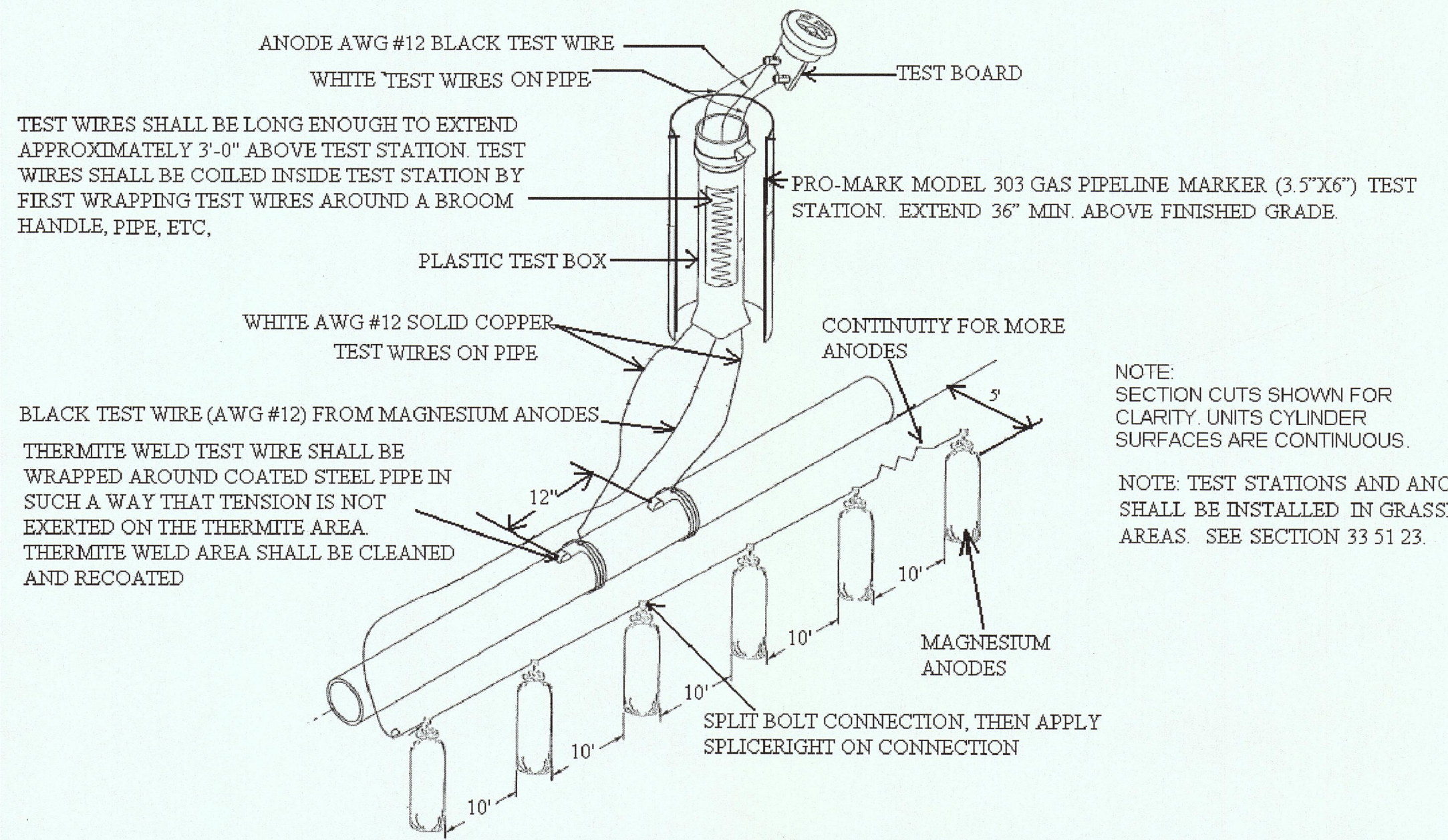
STANDARD DEPTH	R.O.W.
36"	
MINIMUM DEPTH	28"
MAXIMUM DEPTH	48"



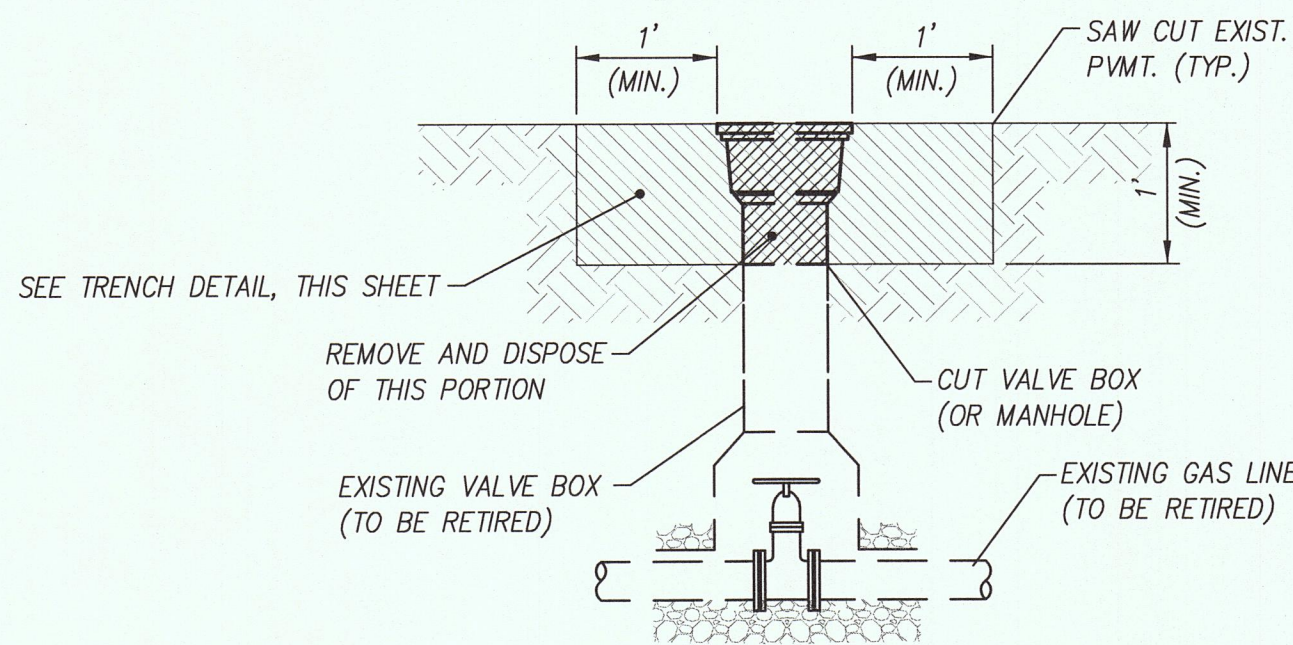
TYPICAL VALVE SETTING
N.T.S.

ITEM	QUANTITY	DESCRIPTION
1	1	VALVE BOX BASE SECTION
2	1	VALVE BOX MIDDLE SECTION
3	1	VALVE BOX TOP SECTION
4	1	VALVE BOX LID
5	1-LOT	#12 COATED COPPER CLAD STEEL TRACER WIRE
6	1-LOT	BRICKS TO SUPPORT VALVE BOX (NOT SHOWN)

- DO NOT ALLOW VALVE JACKET TO REST DIRECTLY ON PIPE. USE BLOCKS TO SUPPORT BASE.



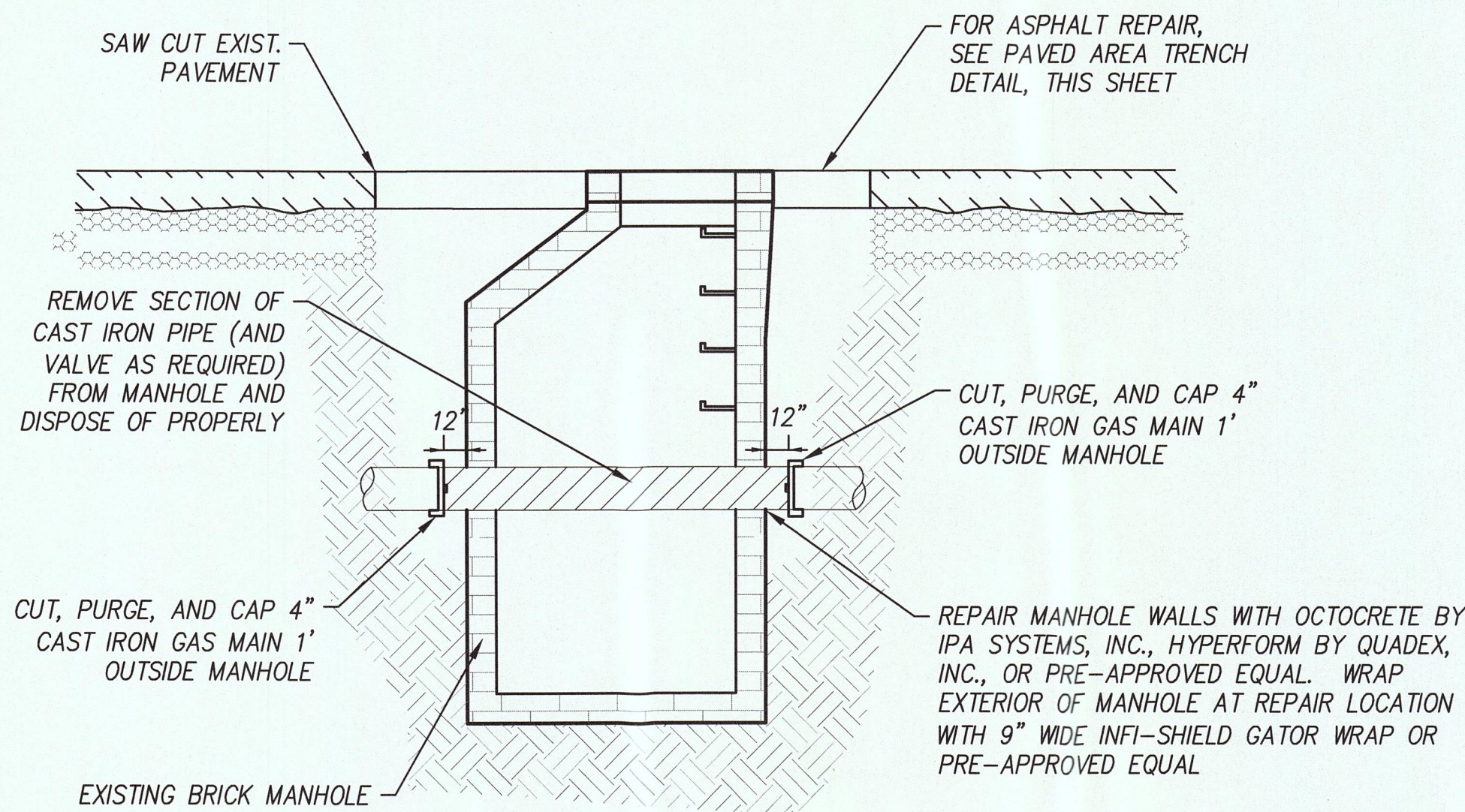
CATHODIC PROTECTION TEST STATION & ANODE INSTALLATION
N.T.S.



NOTES:

- AFTER EXISTING GAS LINE(S) HAVE BEEN RETIRED, SAW CUT EXISTING PAVEMENT A MINIMUM OF 1 FOOT BEYOND THE OUTSIDE EDGE OF VALVE TO A MINIMUM DEPTH OF 1 FOOT.
- CUT VALVE BOX AT 1 FOOT BELOW GRADE, REMOVE TOP PORTION, AND DISPOSE OF REMOVED MATERIAL PROPERLY. CONTRACTOR MAY REMOVE ENTIRE TOP SECTION OF VALVE BOX (OR MANHOLE) WITHOUT CUTTING IF APPROPRIATE, AT NO ADDITIONAL COST TO OWNER.
- PROVIDE CRUSHER RUN FOR LEVELING COURSE TO 1 FOOT BELOW GRADE.

TYPICAL VALVE BOX RETIREMENT DETAIL
N.T.S.



GAS LINE REMOVAL FROM SEWER MANHOLE DETAIL
N.T.S.