

# THE CITY OF ALEXANDER CITY

## 2021 CDBG WATER MAIN REPLACEMENT

### BID PROJECT 22 - 19

SEPTEMBER 2022

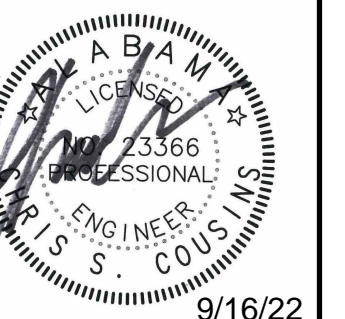


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Municipal  
Consultants,  
Inc. Birmingham, Alabama

**B I D   S E T**



9/16/22



9/16/22

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BAR = 1"

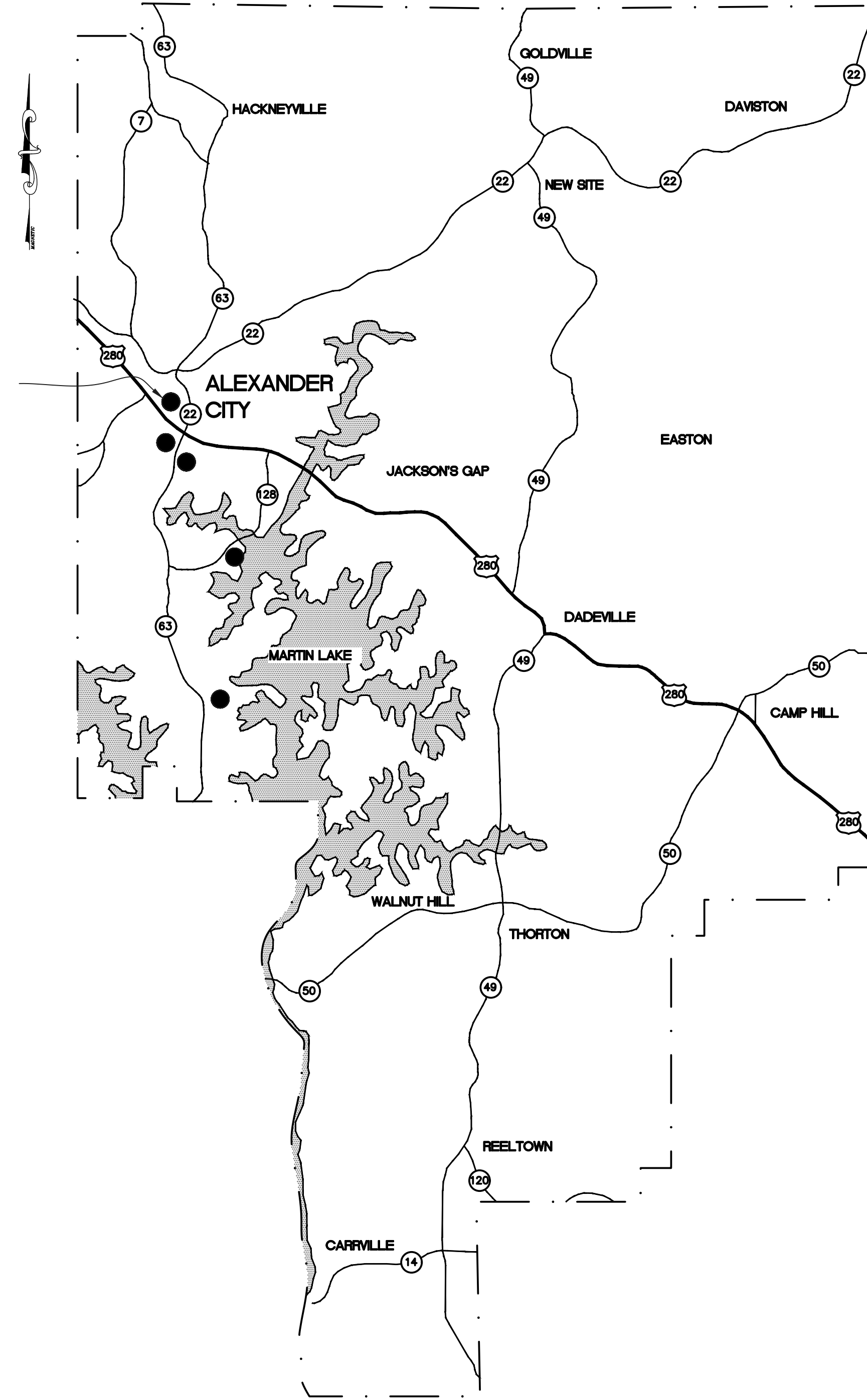
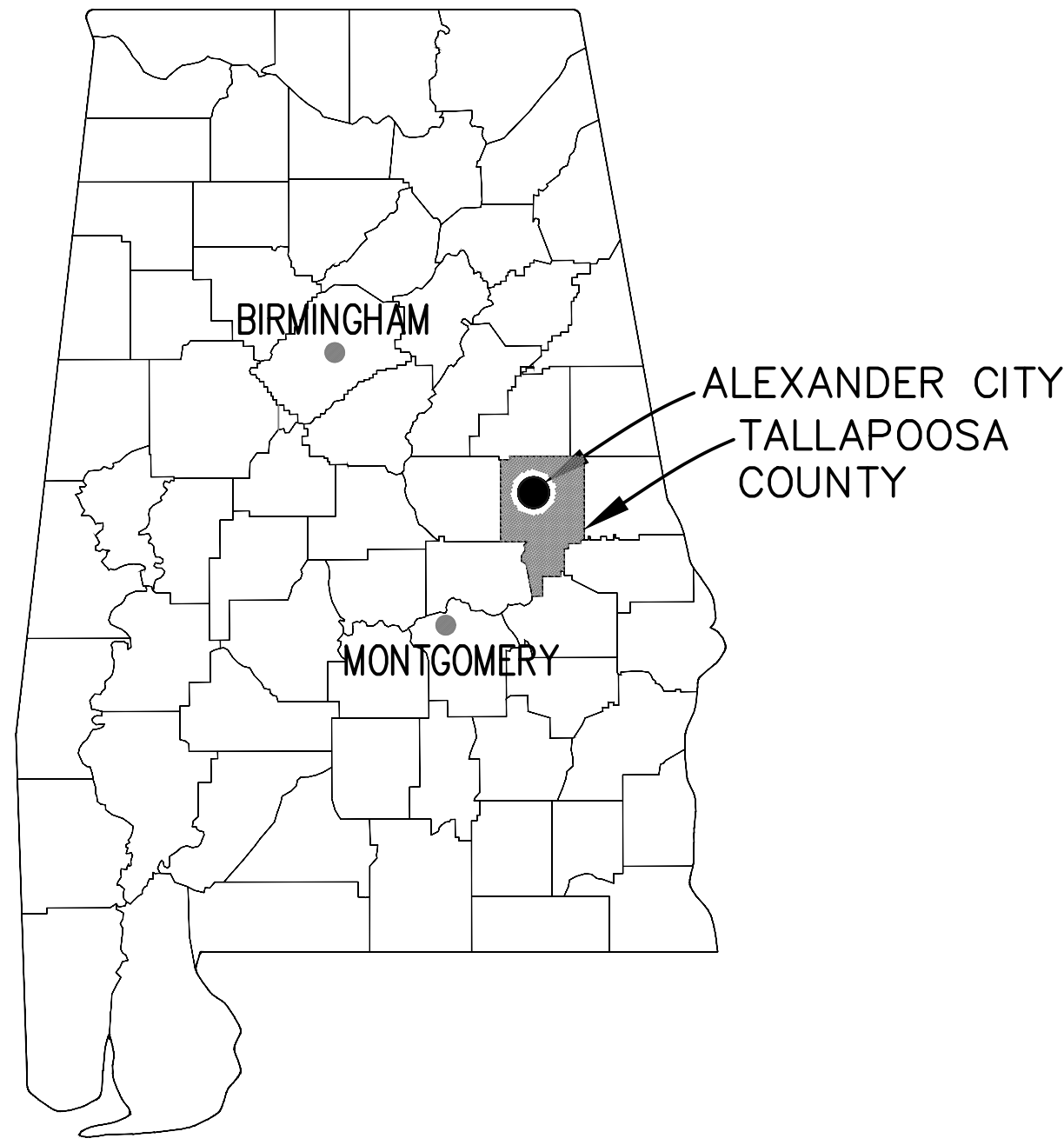
Title	
LOCATION MAP AND LEGEND	
Drawing	BID SET
Project No.	
Date	09 - 2022
Scale	1" = 30'
Sheet	2

**LEGEND**

	PROPOSED SEWER FORCE MAIN		ISOLATION VALVE ASSEMBLY
	PROPOSED WATER MAIN		PROPOSED AIR VALVE ASSEMBLY
	PROPOSED FIRE HYDRANT		LIGHT POLE
	PROPOSED VALVE		RAILROAD CROSSING
	EXISTING PROPERTY (PL)		EASEMENT MARKER
	EXISTING SANITARY SEWER		EXISTING WATER MANHOLE
	EXISTING WATER MAIN (EW)		EXISTING GAS VALVE (OR METER)
	EXISTING SANITARY SEWER FORCE MAIN		EXISTING WATER VALVE
	EXIST. UNDERGROUND FIBER OPTIC CABLE (FOC)		EXISTING FIRE HYDRANT
	EXIST. UNDERGROUND TELEPHONE		EXISTING WATER METER
	EXIST. UNDERGROUND GAS MAIN		BORE HOLE LOCATION
	EXIST. UNDERGROUND CABLE TV		TREE OR SHRUB
	ACQUIRED EASEMENT		SURVEY CONTROL POINT
	EXISTING RIGHT OF WAY		BENCH MARK
	EXISTING OVERHEAD ELECTRICAL		11.25' BEND
	BASE LINE (BL) FOR SFM CONST		22.5' BEND
	EXISTING EDGE OF PAVEMENT (EOP)		45' BEND
	SLOPE DIRECTION INDICATOR		90' BEND
	TREE LINE		TEE
	FENCE (TYPE VARIES)		WYE
	EXISTING STORM SEWER		CAP OR PLUG
	CONCRETE HEAD WALL		REDUCER
	EXISTING STORM SEWER INLET		PROPERTY PIN
	CATCH BASIN		ROW MONUMENT
	GUIDE WIRE ANCHOR		MAILBOX
	UTILITY POLE		ASPHALT ROAD OR DRIVE
	TELEPHONE PEDESTAL		GRAVEL ROAD OR DRIVE
	SIGN		CASING
			CONCRETE
			RIP RAP
			RAILROAD

**ABBREVIATIONS**

AL, ALUM	ALUMINUM	H, HGT, HT	HEIGHT	R, RAD	RADIUS
APPROX	APPROXIMATE	HORIZ	HORIZONTAL	RCF	REINFORCED CONC PIPE
ASPH	ASPHALT	HWL	HIGH WATER LEVEL	RED	REDUCER
ASSY	ASSEMBLY	HWY	HIGHWAY LEVEL	REINF	REINFORCING
		HZ	HERTZ	REQD	REQUIRED
				RJ	RESTRAINED JOINT
BL	BASILINE (SFM)	ID	INSIDE DIAMETER	ROW, R/W	RIGHT-OF-WAY
BLDG	BUILDING	IF	INSIDE FACE	RS	RESILIENT SEAT
BLK	BLOCK	IN	INCHES	RT	RIGHT
BM	BENCHMARK	INV	INVERT		
BOT, BTM	BOTTOM	JT	JOINT	S	SOUTH, SLUDGE
BS	BOTH SIDES	LEN	LENGTH	SCH	SCHEDULE
		LN	LENGTH, LINEAR	SECT	SECTION
CCP	CONCRETE CULVERT PIPE	LG	LONG	SF	SQUARE FEET
CI	CAST IRON	LOC	LOCATION	SFM	SEWER FORCE MAIN
CIP	CAST IRON PIPE	LT	LEFT	SHT	SHEET
CJ	CONSTRUCTION JOINT	MANUF	MANUFACTURER	SPECS	SPECIFICATIONS
CL	CENTER LINE	MAX	MAXIMUM	SQ	SQUARE
CMU	CONCRETE MASONRY UNIT	MGD	MILLION GALLONS PER DAY	SS	SANITARY SEWER
CL	CLASS	MH	MANHOLE	STA	STATION
CONC	CONCRETE	MIN	MINIMUM	STD	STANDARD
CONN	CONNECTION	MISC	MISCELLANEOUS	ST STL, SS	STAINLESS STEEL
CONT	CONTINUOUS	MJ	MECHANICAL JOINT	SS	SANITARY SEWER
		N	NORTH	T&B	TOP AND BOTTOM
DIA	DIAMETER	OC	ON CENTER	TBM	TEMPORARY BENCHMARK
DI	DUCTILE IRON	OD	OUTSIDE DIAMETER	TEMP	TEMPORARY, TEMPERED
DIP	DUCTILE IRON PIPE	OF	OUTSIDE FACE	THK	THICKNESS
DWN	DOWN	OHP	OVERHEAD POWER	TOC	TOP OF CURB
DWG	DRAWING	PE	PLAIN END	TOW	TOP OF WALL
		PH	PHASE	TYP	TYPICAL
EA	EACH	PI	POINT OF INTERSECTION	UH	UNIT HEATER
EF	EACH FACE	PL, PLS	PLATE, PLACES		
ELEC	ELECTRICAL	PO	PUSH ON	V	VALVE, VENTILATOR, VOLTS
EL, ELEV	ELEVATION	PP	POWER POLE	VERT	VERTICAL
EQ	EQUAL	PSI	POUNDS PER SQUARE INCH	VT	VENTILATOR
EW	EACH WAY	PV	PLUG VALVE		
EX, EXIST	EXISTING	PVC	POLYVINYL CHLORIDE	W	WEST, WIDTH, WINDOW, WATER
EXP	EXPANSION			W/	WITH
EXT	EXTINGUISHER			W/O	WITHOUT
				WL	WATER LINE
FH	FIRE HYDRANT			WS	WATERSTOP
FIN GR	FINISH GRADE			WTM	WATER TRANSMISSION MAIN
FL	FLOW LINE			WVF	WELDED WIRE FABRIC
FLG	FLANGED			WTP	WATER TREATMENT PLANT
FT	FOOT			WWTP	WASTEWATER TREATMENT PLANT
FTG	FOOTING				
				X	BY
GALV	GALVANIZED				
GL	GAS LINE				
GR	GRADE				
GRVL	GRAVEL				
GV	GATE VALVE				



**TALLAPOOSA COUNTY, ALABAMA**

**PROJECT SPECIFIC NOTES:**

1. BEFORE ANY MATERIALS ARE DELIVERED AND PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL VIDEO (IN THE PRESENCE OF THE FIELD ENGINEER) THE ENTIRE PROJECT SITE AND ANY OTHER AREAS WHICH MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES AND PROVIDE AN ACCEPTABLE HIGH DEFINITION QUALITY RECORDED VIDEO TO THE OWNER AND ENGINEER ON A DVD OR OTHER MEDIA ACCEPTABLE TO THE OWNER. VIDEO SHALL BE OF GOOD QUALITY AND BE TAKEN WITH VERY STEADY FRAME AND BE CLEAR AND EASILY WATCHABLE. COORDINATE WITH OWNER AND ENGINEER. NO PAYMENT WILL BE MADE FOR MOBILIZATION UNTIL ACCEPTABLE VIDEO HAS BEEN RECEIVED BY THE ENGINEER.
2. ALL PROPOSED GATE VALVES SHALL BE RESILIENT SEAT WITH A MINIMUM WORKING PRESSURE OF 250 PSI. ENDS FOR BURIED VALVES SHALL BE MECHANICAL JOINT (UNLESS CALLED FOR OTHERWISE) WITH MEGA-LUG RESTRAINING GLANDS (BY EBAA FOUNDRY OR EQUAL).
3. ALL PIPE FITTINGS SHALL BE COMPACT (AWWA C153), MECHANICAL JOINT, DUCTILE IRON WITH MEGA-LUG RESTRAINING GLANDS (BY EBAA FOUNDRY OR EQUAL) UNLESS INDICATED OTHERWISE. IN AREAS WHERE RESTRAINED JOINT PIPE IS NOT SPECIFICALLY CALLED FOR INTO OR OUT OF A FITTING, A FULL JOINT OF PUSH ON JOINT PIPE WILL BE REQUIRED OUT OF EACH END OF THE FITTING (PLAN AHEAD). CONTRACTOR SHALL COORDINATE AS REQUIRED IN FIELD AND WITH PIPE SUPPLIER AND FIELD ENGINEER. ALL PIPE FITTINGS AND VALVES SHALL BE RODDED TO THE NEAREST FITTING(S), VALVE(S), THRUST COLLARS(S), AND/OR CASING UNLESS INDICATED OTHERWISE. SEE THE ROD SCHEDULE IN DETAILS FOR SIZE AND REQUIREMENTS.
4. TESTING OF LINES AND APPURTENANCES SHALL BE AS SPECIFIED. CONTRACTOR MAY USE CLOSED VALVES OR TEMPORARILY PLUG LINES AT HIS OPTION TO SUCCESSFULLY TEST THE INSTALLED FACILITIES IN ACCORDANCE WITH HIS CONSTRUCTION SCHEDULE AND ACTIVITIES. ALL TEST SEGMENTS AND PRESSURES MUST BE APPROVED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL AIR FROM THE FACILITIES BEFORE ANY TESTING IS PERFORMED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL FLUSH POINTS, AIR RELEASE POINTS, ETC. (WITH ENGINEER'S APPROVAL) TO ADEQUATELY TEST AND DISINFECT THE NEW LINES. CONTRACTOR SHALL PROVIDE ALL NECESSARY AND REQUIRED ITEMS TO FILL FACILITIES, TEST, DISINFECT, ENSURE EXISTING FACILITIES CANNOT BE CONTAMINATED BY BACKFLOW WHILE FILLING AND TESTING, REMOVE AIR, ETC.
5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING EROSION, RUN-OFF, AND SEDIMENT CONTROL IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS, CODES AND REGULATIONS. THE CONTRACTOR SHALL ACQUIRE AN NPDES PERMIT FOR THE ENTIRE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING AND IMPLEMENTING ALL APPROPRIATE BEST MANAGEMENT PRACTICES (BMP'S) FOR THE PREVENTION AND CONTROL OF NONPOINT SOURCES OF POLLUTANTS DURING AND AFTER PROJECT IMPLEMENTATION. THE CONTRACTOR, AT A MINIMUM, MUST IMPLEMENT BMP'S AS PROVIDED IN THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL & STORMWATER MANAGEMENT ON CONSTRUCTION SITES & URBAN AREAS, AS AMENDED, AND ALL APPLICABLE EPA STORMWATER POLLUTION PREVENTION PLANS AND BEST MANAGEMENT PRACTICES PUBLICATIONS, AS AMENDED. ADDITIONAL DEVICES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER AS REQUIRED TO PREVENT SILTATION, EROSION, & OTHER DEGRADATION OR POLLUTION TO SITE OR ADJACENT PROPERTIES, STREAMS, DITCHES, PUBLIC ROADWAYS, ETC. CONTRACTOR IS RESPONSIBLE FOR THE RENEWAL OF ALL NPDES PERMITS AS REQUIRED FOR THE PROJECT. ALL COSTS ASSOCIATED WITH BMP PLANS, IMPLEMENTING BMP'S, PERMIT FEES, ETC. SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE INCLUDED IN THE BID.
6. AT ALL LOCATIONS WHERE THE SOIL IS REMOVED IN CLOSE PROXIMITY TO AN EXISTING CONCRETE KICKER OR THRUST BLOCK, FILL SHALL BE PLACED IN 8" LOOSE LIFTS AND COMPACTED TO 98% SPD.
7. THE CONTRACTOR SHALL INCLUDE ALL COSTS FOR HOLDING AND BRACING UTILITY POLES AS REQUIRED.
8. TOPSOIL REMOVED FROM SUBGRADE SHALL BE STOCKPILED AND REUSED FOR FINAL CLEANUP AND GRASSING.
9. PROPERTY LINES AND PROPERTY NAMES SHOWN IN THE DRAWINGS ARE FROM COUNTY TAX MAPS/RECORDS AND MAY NOT REFLECT ACTUAL PROPERTY LINE LOCATIONS AND/OR CURRENT PROPERTY OWNERS.
10. FORMED (I.E. PLYWOOD FORMS) CONCRETE THRUST BLOCKS ARE REQUIRED AGAINST ALL FITTINGS AND ARE TO BE POURED AGAINST UNDISTURBED EARTH. ALL FITTINGS SHALL BE WRAPPED IN PLASTIC BEFORE CONCRETE THRUST BLOCKS ARE POURED. ALL PIPE BRACING SHALL BE LEFT UNCOVERED UNTIL INSPECTED BY THE ENGINEER. CONCRETE THRUST BLOCKS AND COLLARS MUST BE CURED A MINIMUM OF 5 DAYS PRIOR TO CUTTING AN EXISTING LINE OR APPLYING TEST PRESSURES TO THE NEW LINE.
11. CONTRACTOR SHALL HAVE REPAIR MATERIALS ON SITE AT ALL TIMES FOR IMMEDIATE REPAIR OF ANY LINE BREAKS DURING CONSTRUCTION. LINE BREAKS SHALL BE FIXED IMMEDIATELY, NO EXCEPTIONS. ALL REPAIRS TO WATER MAINS AND/OR SERVICES SHALL BE ACCEPTABLE TO THE OWNER AND ENGINEER AND SHALL BE MADE AT NO ADDITIONAL COST. ANY LABOR, MATERIAL, EQUIPMENT PROVIDED BY THE OWNER ON THE PROJECT SHALL BE REIMBURSED TO THE OWNER, BY THE CONTRACTOR.
12. EXISTING WATER MAINS MAY NOT HAVE LOCATION TAPE OR WIRE AND THUS THE LOCATION IS UNKNOWN. CONTRACTOR SHALL POthOLE ALL EXISTING LINES AND SERVICES AS REQUIRED AND ADJUST PROPOSED FACILITIES AS REQUIRED AND APPROVED BY FIELD ENGINEER, AT NO ADDITIONAL COST.
13. CONTRACTOR IS FULLY RESPONSIBLE FOR PROTECTING ROADWAYS AND PROVIDING STABILIZATION AS REQUIRED TO PROTECT THE ROADWAY. STABILIZATION (I.E. SHORING, ETC.) SHALL BE AS APPROVED AND REQUIRED BY THE RESPECTIVE D.O.T. THE CONTRACTOR SHALL PROVIDE ANY DETAILS, PLANS OR DRAWINGS THE RESPECTIVE D.O.T. MAY REQUEST. ANY AND ALL SUCH COSTS SHOULD BE INCLUDED IN THE CONTRACTORS BID.
14. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING THE EXISTING R.O.W. LINES AND EASEMENTS SHOWN ON THE DRAWINGS FOR THE ENTIRE PROJECT. ALL WORK SHALL BE WITHIN EXISTING R.O.W. OR EASEMENTS.
15. THE CONTRACTOR AND CONTRACTORS SUBCONTRACTORS SHALL REVIEW ALL INSURANCE REQUIREMENTS AND CONTRACTOR SHALL ENSURE THAT HE HAS INCLUDED MONEY NECESSARY TO OBTAIN INSURANCE AS CALLED FOR IN THE SPECIFICATIONS.
16. ALL OPEN CUT TRAFFIC WAYS, ROADWAYS, PARKING LOTS, DRIVES, FUTURE DRIVES, ETC., AND ALL AREAS LYING WITHIN PRISM OF TRAFFIC WAYS SHALL BE BACKFILLED WITH #610 STONE AND COMPACTED TO 100% STANDARD PROCTOR DENSITY MINIMUM WITH VIBRATORY COMPACTOR (MAX. 6" LIFTS) FOR ITS ENTIRE TRENCH HEIGHT AND WIDTH TO PREVENT SETTLEMENT. ALL ASPHALT AND CONCRETE TO BE NEAT SAW CUT.
17. FOR ALL EXISTING VALVES REMOVED FROM SERVICE, REMOVE VALVE BOX, BACKFILL W/ CRUSHED STONE AND PAVE OVER.
18. PROVIDE TEMPORARY PIPING AS RESERVED TO MAINTAIN WATER SERVICE TO CUSTOMERS DURING CONSTRUCTION.

**GENERAL NOTES:**

1. THE LOCATION AND TYPE OF EXISTING WATER LINES ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING LINE LOCATIONS, SIZES, AND MATERIALS OF PIPE BEFORE ORDERING MATERIALS FOR CONNECTIONS. SPECIAL TRANSITION GASKETS AND/OR ACCESSORIES MAY BE REQUIRED, NO EXTRA PAYMENTS SHALL BE MADE FOR SUCH MATERIALS AND WORK.
2. ALL CONNECTIONS TO EXISTING LINES OR SERVICES ARE TO BE COORDINATED WITH THE CITY OF ALEXANDER CITY (AND OWNERS OF SERVICES, IF APPLICABLE) TO MINIMIZE INTERRUPTION OF WATER SERVICE. CONTRACTOR TO COORDINATE WITH THE CITY OF ALEXANDER CITY AND INFORM ALL POTENTIAL USERS WHEN EXISTING MAINS WILL BE OUT OF SERVICE. AT THE CITY OF ALEXANDER CITY'S SOLE DISCRETION, CONNECTIONS MAY BE REQUIRED BETWEEN 10:00 PM AND 6:00 AM. CONNECTIONS ARE PROHIBITED ON FRIDAYS, WEEKENDS, AND HOLIDAYS. CONNECTIONS MAY ALSO BE PROHIBITED ON OTHER DAYS AT OWNER'S SOLE DISCRETION.
3. ALL EXISTING UTILITY LINE LOCATIONS ARE APPROXIMATE AND MAY NOT BE SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE AGENCY TWO WORKING DAYS BEFORE DIGGING COMMENCES TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES, DRAINAGE, AND OBSTRUCTIONS AS REQUIRED BY ALABAMA STATE LAW. ALABAMA ONE CALL, INC. MAY BE CONTACTED. CONTRACTOR SHALL REPAIR AND/OR REPLACE LIKE-KIND ANY SUCH ITEMS THAT ARE DAMAGED BY HIS CREWS DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES (WHETHER OR NOT THEY ARE SHOWN) AT LOCATIONS OF CONNECTIONS AND ROAD, DRIVEWAY, UTILITY, ETC. CROSSINGS PRIOR TO PERFORMING ANY WORK. ANYWHERE UTILITIES MIGHT CONFLICT WITH THE WORK, THE CONTRACTOR SHALL VERIFY THE DEPTH OF THE UTILITY BY EXCAVATION AND COORDINATE WITH FIELD ENGINEER AND LAYOUT PROPOSED FACILITIES IN A MANNER THAT WILL BE ACCEPTABLE TO THE CITY OF ALEXANDER CITY. DEEPEN THE PROPOSED FACILITIES AS REQUIRED TO AVOID THE CONFLICT. THERE SHALL BE NO EXTRA PAYMENT FOR DEEPENING THE FACILITIES. ALL ELEVATIONS SHALL BE FINALIZED BEFORE PIPE IS LAID IN THE VICINITY OF CONNECTIONS AND CROSSINGS (ROAD, DRIVEWAY, UTILITY, ETC.)
5. CONSULT WITH UTILITY COMPANIES WHEN WORKING CLOSE TO THEIR LINES.
6. FITTINGS REQUIRED IN THE FIELD BUT NOT SHOWN ON THE DRAWINGS MUST BE AUTHORIZED BY THE ENGINEER.
7. RIGHT OF WAYS AND EASEMENTS ARE SHOWN APPROXIMATELY ON DRAWINGS. ALL PIPE, FITTINGS, VAULTS, MARKERS, MANHOLES, VALVES, ETC. SHALL BE INSTALLED WITHIN RIGHT OF WAY OR PERMANENT EASEMENTS.
8. ALL RESTRAINED JOINT PIPE SHALL BE FULLY EXTENDED FROM THE ADJOINING PIPE BELL DURING INSTALLATION.
9. ANY PROPERTY (I.E. FENCING, LANDSCAPING, SHRUBBERY, DRIVEWAYS, ACCESS ROADS, STRUCTURES, ETC.) THAT IS DAMAGED, REMOVED, AND/OR DISTURBED DURING CONSTRUCTION SHALL BE REPLACED OR RESTORED LIKE-KIND (AS A MINIMUM) IN A TIMELY MANNER FOLLOWING COMPLETION OF CONSTRUCTION IN THAT AREA. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL SHRUBBERY, SOD, SPRINKLER HEADS, ETC. LIKE-KIND (WHETHER OR NOT THEY ARE SHOWN ON THE DRAWINGS) THAT IS DAMAGED, REMOVED, AND/OR DISTURBED DURING CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL REIMBURSE THE PROPERTY OWNER FOR THE VALUE OF ANY IRREPLACEABLE PROPERTY LOCATED ON PRIVATE PROPERTY (I.E. NOT WITHIN R.O.W. OR EASEMENTS) THAT HAS BEEN REMOVED OR DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES.
10. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ACCESS TO CONSTRUCTION SITES FOR MOVEMENT OF MATERIALS, CREWS, AND OTHER REQUIREMENTS TO CONSTRUCT THE PROJECT WHEN EXISTING EASEMENTS AND PUBLIC ACCESS DOES NOT SATISFY CONTRACTOR.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF ANY ROW MONUMENTS OR PROPERTY PINS DISTURBED DURING CONSTRUCTION.
12. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL STATUTES AND REGULATIONS GOVERNING BLASTING ON HIGHWAY RIGHTS-OF-WAY. SEE ALABAMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ANY BLASTING PERMITS REQUIRED FOR CONSTRUCTION. THERE IS NO GUARANTEE THAT THE CONTRACTOR WILL BE ABLE TO OBTAIN A BLASTING PERMIT AND THE OWNER WILL NOT BE PARTY TO A BLASTING PERMIT FOR THE CONTRACTOR. SEISMOGRAPH TESTING REQUIRED FOR ALL BLASTING EVENTS AND CONTRACTOR IS FULLY RESPONSIBLE FOR DESIGNING AND PERMITTING HIS BLASTING OPERATIONS TO PREVENT DAMAGE TO SURROUNDING PROPERTIES, UTILITIES, STRUCTURES, ETC. CONTRACTOR SHALL COORDINATE ALL BLASTING ACTIVITIES WITH THE OWNER AT LEAST 24 HOURS IN ADVANCE. BLASTING MAY BE PROHIBITED NEAR EXISTING WATER LINES AT THE DISCRETION OF THE OWNER AND/OR ENGINEER. SEE PROJECT SPECIFIC NOTE #20.
13. UNLESS SHOWN OTHERWISE, HIGHWAY DEPARTMENT REQUIRES MINIMUM OF 36" COVER FOR PIPE WITHIN ITS RIGHT OF WAY AND MINIMUM 48" COVER UNDER ROADWAYS WITHIN ITS RIGHT OF WAY.
14. CONTRACTOR SHALL CONTINUALLY MAINTAIN TRAFFIC FLOW AND MINIMIZE DISRUPTION OF ACCESS TO ALL BUSINESSES AND RESIDENCES. CONTRACTOR SHALL COORDINATE AS REQUIRED WITH PROPERTY OWNERS TO ENSURE UNOBSTRUCTED ACCESS DURING SPECIFIC/CRITICAL TIMES OF DAY IF NECESSARY.
15. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR SAFETY. THE ENGINEER IS NOT RESPONSIBLE FOR SAFETY. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA STANDARDS AND RECOMMENDATIONS, ETC., APPLICABLE TO ALL WORK AND COMPONENTS ASSOCIATED WITH THIS PROJECT. THE CONTRACTOR SHALL CONTINUOUSLY UTILIZE SAFETY PRACTICES THAT MAY BE NEEDED FOR THE FULL PROTECTION OF ALL PERSONS INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION PERSONNEL, THE OWNER'S PERSONNEL, INSPECTORS, AND THE GENERAL PUBLIC, ETC.
16. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE CITY OF ALEXANDER CITY RULES AND REGULATIONS, AS APPLICABLE.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL EXCESS MATERIALS RESULTING FROM THE WORK.
18. FINE GRADE ALL DISTURBED AREAS TO LEAVE THE AREA FREE OF DRAINAGE PROBLEMS.
19. DEEPENING OF WATER MAIN, WHERE REQUIRED, SHALL BE ACHIEVED BY DEFLECTION OF THE PIPE. NO VERTICAL BENDS WILL BE ALLOWED UNLESS SPECIFIED OTHERWISE, OR APPROVED BY ENGINEER.
20. RIP-RAP SHALL BE PLACED IN THE LOCATIONS SHOWN ON THE DRAWINGS, INFERRED FROM THE SPECIFICATIONS, OR AS DIRECTED BY THE ENGINEER. RIP-RAP SHALL BE THE SIZE INDICATED ON THE DRAWINGS. IF NO SIZE IS CALLED OUT, CLASS 1 SHALL BE USED.
21. THE WIDTH OF THE TRENCH FOR WATER LINE INSTALLATION SHALL BE SUFFICIENT TO INSTALL AND MAINTAIN PROPOSED WATER LINES AND PROPERLY BACKFILL AND COMPACT PER THE DRAWINGS AND SPECIFICATIONS. IN AREAS WHERE ROCK IS ENCOUNTERED, THE TRENCH SHALL BE AT LEAST 1 FOOT ON EACH SIDE OF THE PIPE BELL OUTSIDE DIAMETER WITH PIPE IN CENTER OF TRENCH (I.E. 1 FOOT + PIPE BELL O.D. + 1 FOOT).
22. KEEP PIPE CLEAN AND REMOVE ALL DEBRIS AND DIRT FROM INSIDE OF PIPE TO BE INSTALLED AND PREVIOUS PIPES INSTALLED IN ORDER TO MINIMIZE FLUSHING WATER REQUIRED WHEN PIPE INSTALLATION IS COMPLETE. WHEN PIPE LAYING IS NOT IN PROGRESS, INCLUDING BREAK PERIODS, THE OPEN ENDS OF THE PIPE SHALL BE CLOSED BY PLUGS OR APPROVED MEANS.
23. TRAFFIC CONTROL REQUIRED FOR DURATION OF PROJECT WITH SIGNAGE FURNISHED AS REQUIRED BY THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) AS A MINIMUM. CONTRACTOR'S TRAFFIC CONTROL PLAN AND ALL INCIDENTALS SHALL BE AS APPROVED BY THE TALLAPOOSA COUNTY ROADS AND TRANSPORTATION DEPARTMENT BEFORE ANY WORK CAN BEGIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PREPARING AND IMPLEMENTING A DETAILED AND CORRECT TRAFFIC CONTROL PLAN IN FULL ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IT SHALL BE THE RESPONSIBILITY SOLELY OF THE CONTRACTOR TO MAINTAIN TRAFFIC CONTROL AND SIGNS, ETC., TO PROVIDE SAFE CONDITIONS AND COMPLIANCE WITH ALL REQUIREMENTS, LAWS, AND REGULATIONS.
24. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS.

**ALEXANDER CITY ROADS AND TRANSPORTATION DEPARTMENT SPECIFIC NOTES:**

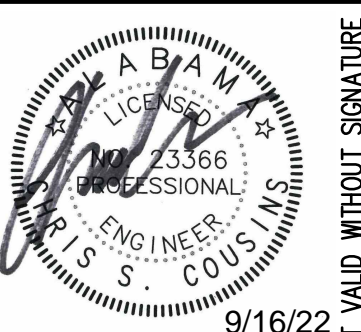
1. HOURS OF OPERATION SHALL BE LIMITED WHEN WORKING WITHIN THE ALEXANDER CITY RIGHT OF WAYS. WORK IS ONLY ALLOWED IN THE RIGHT OF WAY DURING DAYLIGHT HOURS MONDAY THROUGH FRIDAY (EXCEPT FOR NIGHT TIME CONNECTIONS WHEN REQUIRED BY THE OWNER AND COORDINATED WITH ALEXANDER CITY). SATURDAY WORK IN THE COUNTY RIGHT OF WAY IS ONLY ALLOWED WHEN APPROVED BY THE CITY WITH AT LEAST 48 HOURS NOTICE.
2. CONTRACTOR IS FULLY RESPONSIBLE FOR PROTECTING ROADWAYS AND PROVIDING STABILIZATION AS REQUIRED TO PROTECT THE ROADWAY. STABILIZATION (I.E. SHORING, ETC.) SHALL BE AS APPROVED AND REQUIRED BY ALEXANDER CITY. THE CONTRACTOR SHALL PROVIDE ANY DETAILS, PLANS, OR DRAWINGS THE CITY MAY REQUEST. ANY AND ALL SUCH COSTS SHOULD BE INCLUDED IN THE CONTRACTOR'S BID.
3. NO TRENCHES SHALL BE LEFT OPEN OVERNIGHT.
4. TRAFFIC CONTROL REQUIRED FOR DURATION OF PROJECT WITH SIGNAGE FURNISHED AS REQUIRED BY THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) AS A MINIMUM. CONTRACTOR'S TRAFFIC CONTROL PLAN AND ALL INCIDENTALS SHALL BE AS APPROVED BY THE TALLAPOOSA COUNTY ROADS AND TRANSPORTATION DEPARTMENT BEFORE ANY WORK CAN BEGIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PREPARING AND IMPLEMENTING A DETAILED AND CORRECT TRAFFIC CONTROL PLAN IN FULL ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IT SHALL BE THE RESPONSIBILITY SOLELY OF THE CONTRACTOR TO MAINTAIN TRAFFIC CONTROL AND SIGNS, ETC., TO PROVIDE SAFE CONDITIONS AND COMPLIANCE WITH ALL REQUIREMENTS, LAWS, AND REGULATIONS.
5. CONTRACTOR IS FULLY RESPONSIBLE FOR COMPLYING WITH ALL REQUIREMENTS OF ALEXANDER CITY RULES AND REGULATIONS, AS APPLICABLE.
6. METAL PLATES ARE NOT TO BE USED UNLESS SPECIFICALLY AUTHORIZED BY ALEXANDER CITY.

**PIPING NOTES:**

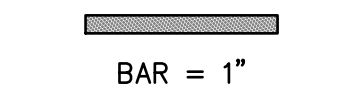
1. ALL PIPING 3" TO 12" TO BE HDPE DR9-IPS UNLESS CALLED OTHERWISE IN DRAWINGS.
2. ALL FITTINGS SHALL BE DUCTILE IRON.
3. MJ ADAPTORS AND STIFFENING RINGS REQUIRED ON ALL MJ CONNECTIONS.
4. TRACING WIRE REQUIRED. LOOP WIRE THROUGH VALVE BOXES. SEE DETAIL.
5. HDD PLAN REQUIRED. SEE SPECS.
6. CONTRACTOR SHALL EXPOSE ALL CONNECTIONS AND CONFIRM PIPE DIAMETER BEFORE ORDERING MATERIALS.

**SEQUENCING NOTES:**

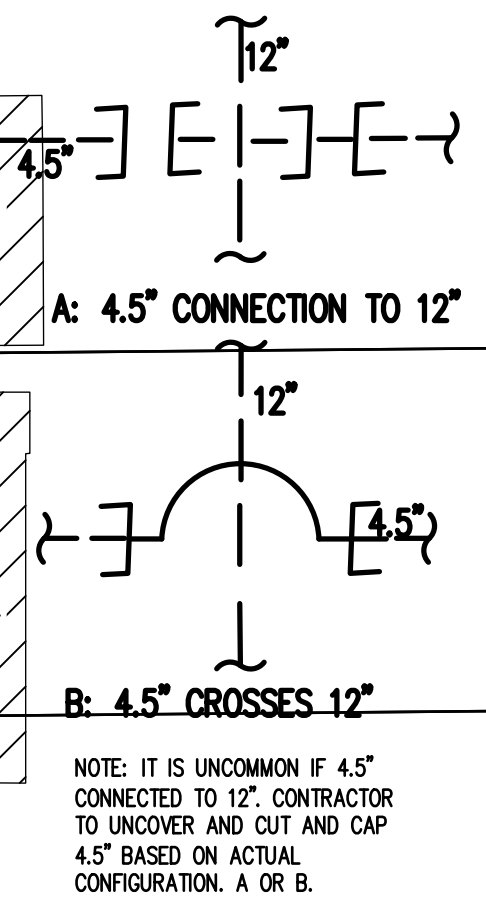
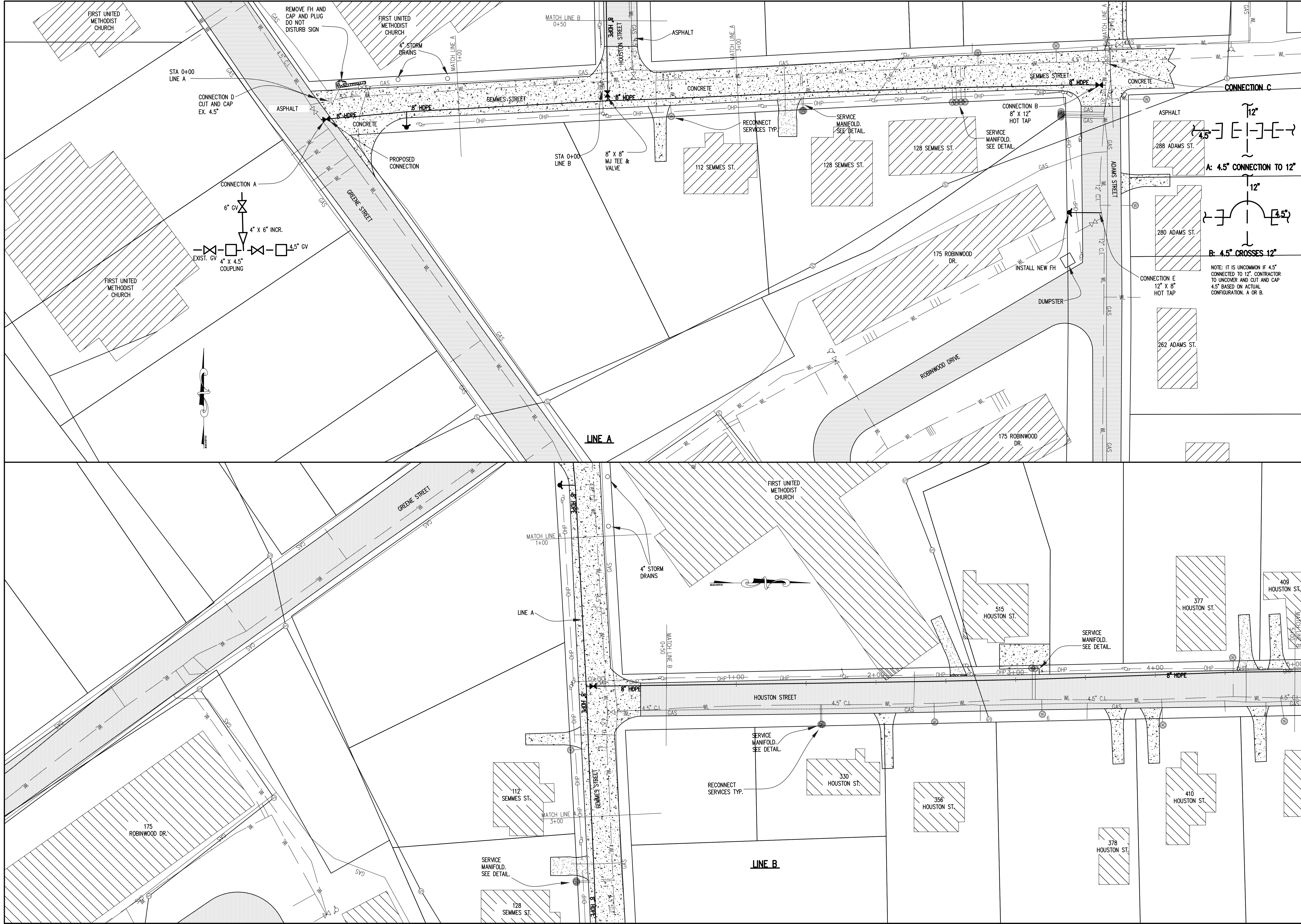
1. MAKE SYSTEM CONNECTIONS C, A, M, D, G. UTILIZE TO FILL, FLUSH, AND TEST NEW METERS.
2. MAKE OTHER CONNECTIONS AS DESIGNED WITHOUT RESULTING IN CUSTOMERS BEING OUT OF SERVICE.
3. SWAP SERVICE CONNECTIONS TO NEW MAIN ONCE ALL NEW MAINS HAVE PASSED ALL TESTS.
4. COMPLETE CONNECTIONS AND ABANDON EXISTING MAIN.



NOT VALID WITHOUT SIGNATURE



Drawing Project No.	Title	
	9 - 22	PROJECT NOTES
Date	AS SHOWN	BID SET
Scale		
Sheet	3	

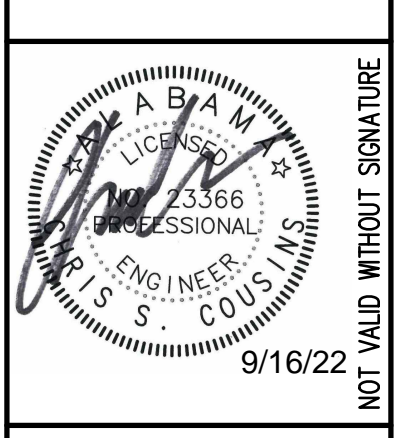


<p><b>Municipal Consultants, Inc.</b> 200 Cahaba Park, South, Suite 212 Birmingham, Alabama 35226 (205) 922-0387</p>		<p><b>ALEXANDER CITY</b> CITY OF ALEXANDER CITY 2021 CDBG WATER MAIN REPLACEMENT</p>	
		<p>2022</p>	
		<p>9/16/22 NOT VALID WITHOUT SIGNATURE</p>	
<p>BAR = 1"</p>		<p>Title <b>PLAN</b></p>	
<p>Drawing Project No. <b>9 - 22</b></p>		<p>Sheet <b>4</b></p>	
<p>Date <b>1" = 30'</b></p>		<p>BID SET</p>	



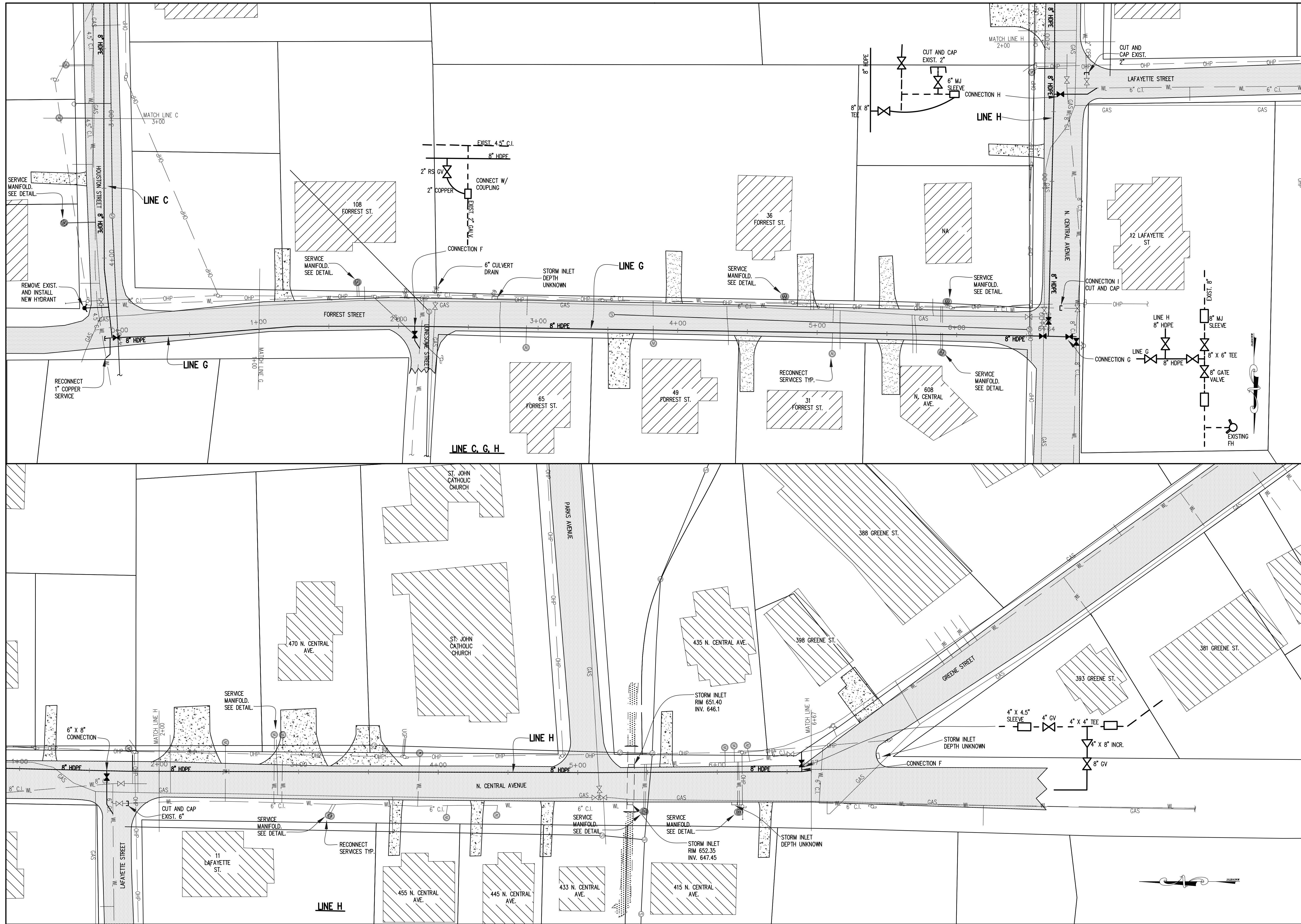
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 (205) 822-0387

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 2022



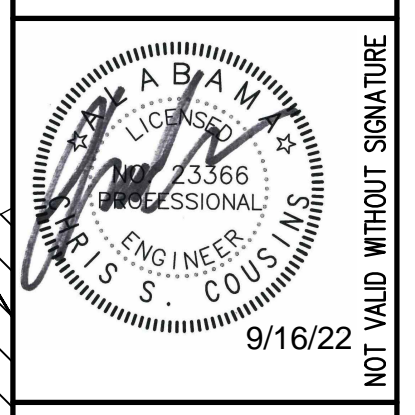
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Drawing Project No.	Title	
	PLAN	BID SET
Date	9 - 22	
Scale	1" = 30'	
Sheet	5	



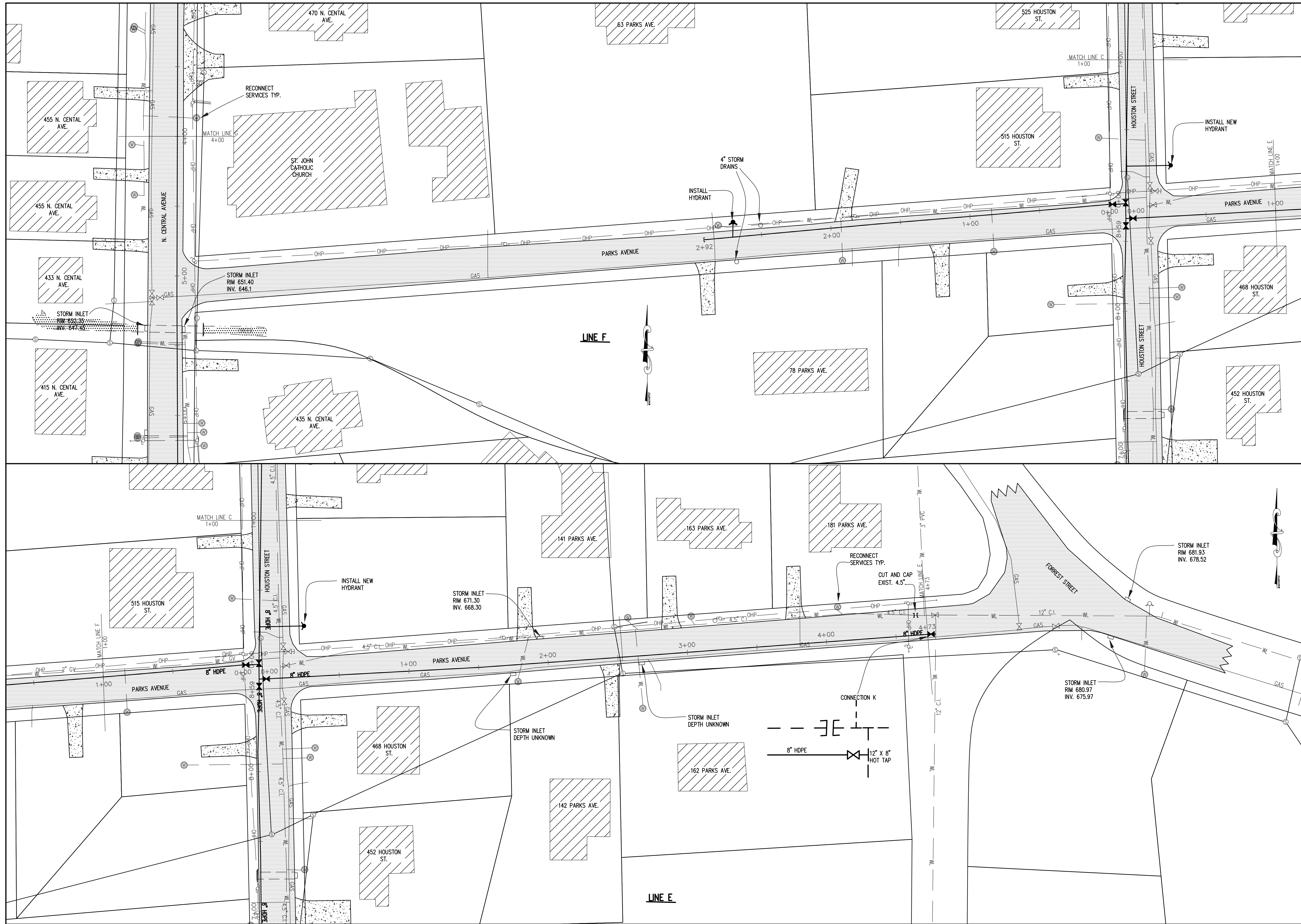
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 2022



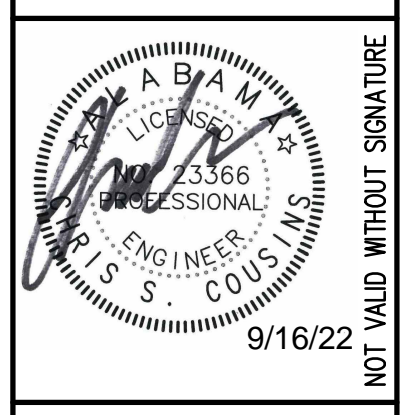
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Drawing Project No.	Title	
	9 - 22	PLAN
Date	Title	
Scale	1" = 30'	BID SET
Sheet	6	



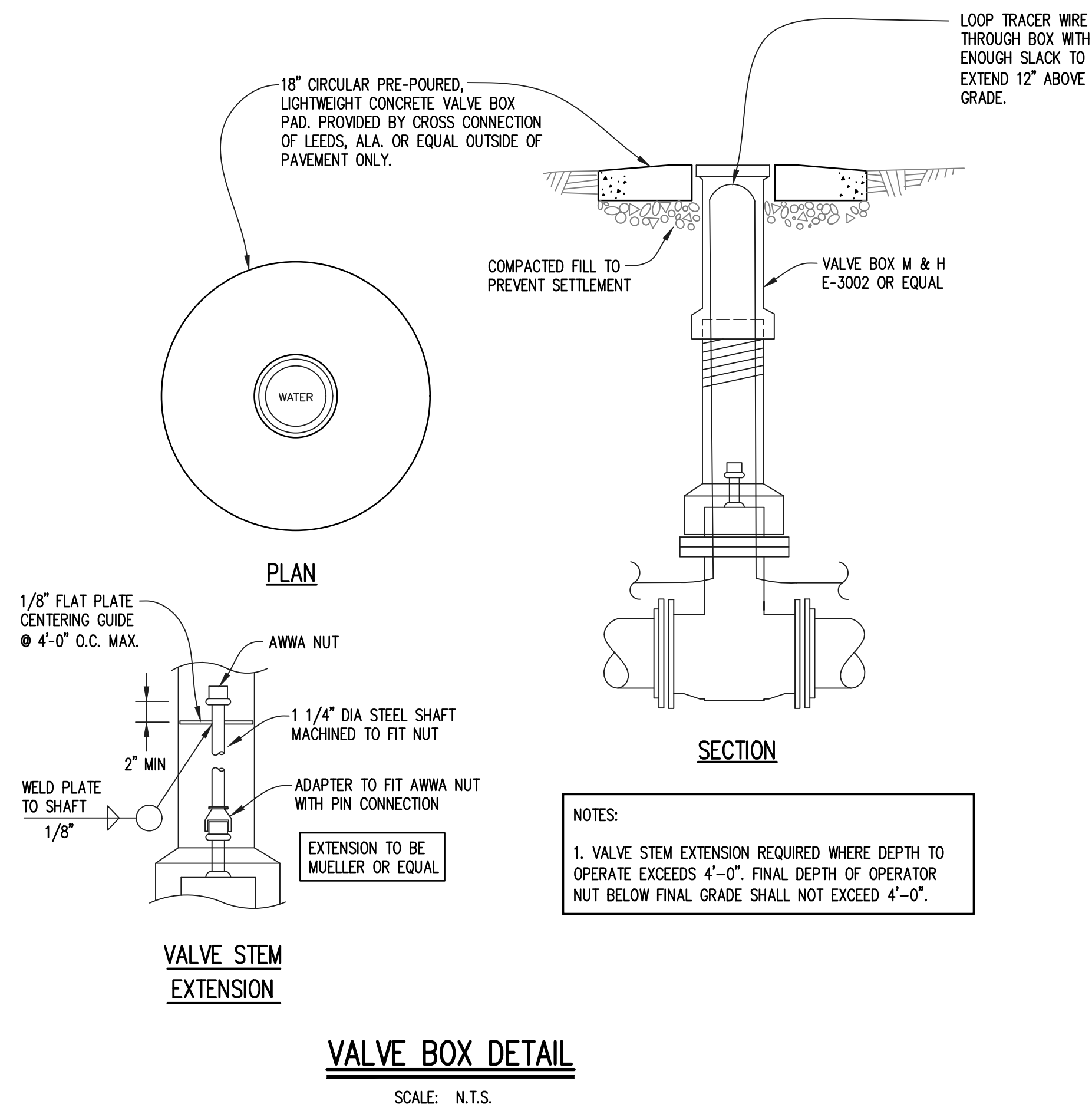
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**ALEXANDER CITY**  
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 2021 CDBG WATER MAIN REPLACEMENT  
 2022

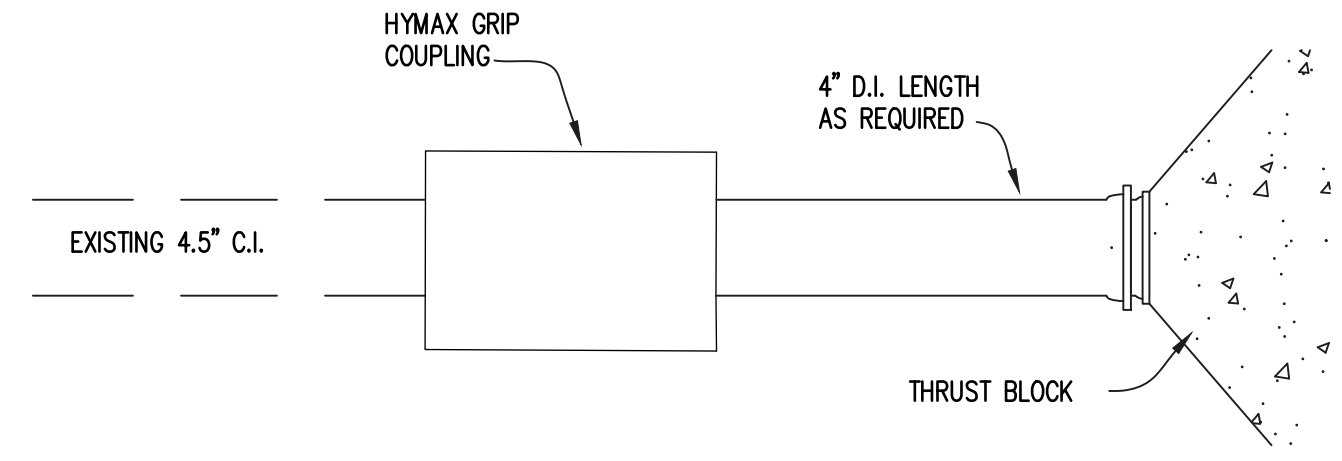


BAR = 1"

Drawing Project No.	Title	
	9 - 22	PLAN
Date	Title	
Scale	Title	
Sheet	Title	
	9 - 22	PLAN
	1" = 30'	
	7	BID SET



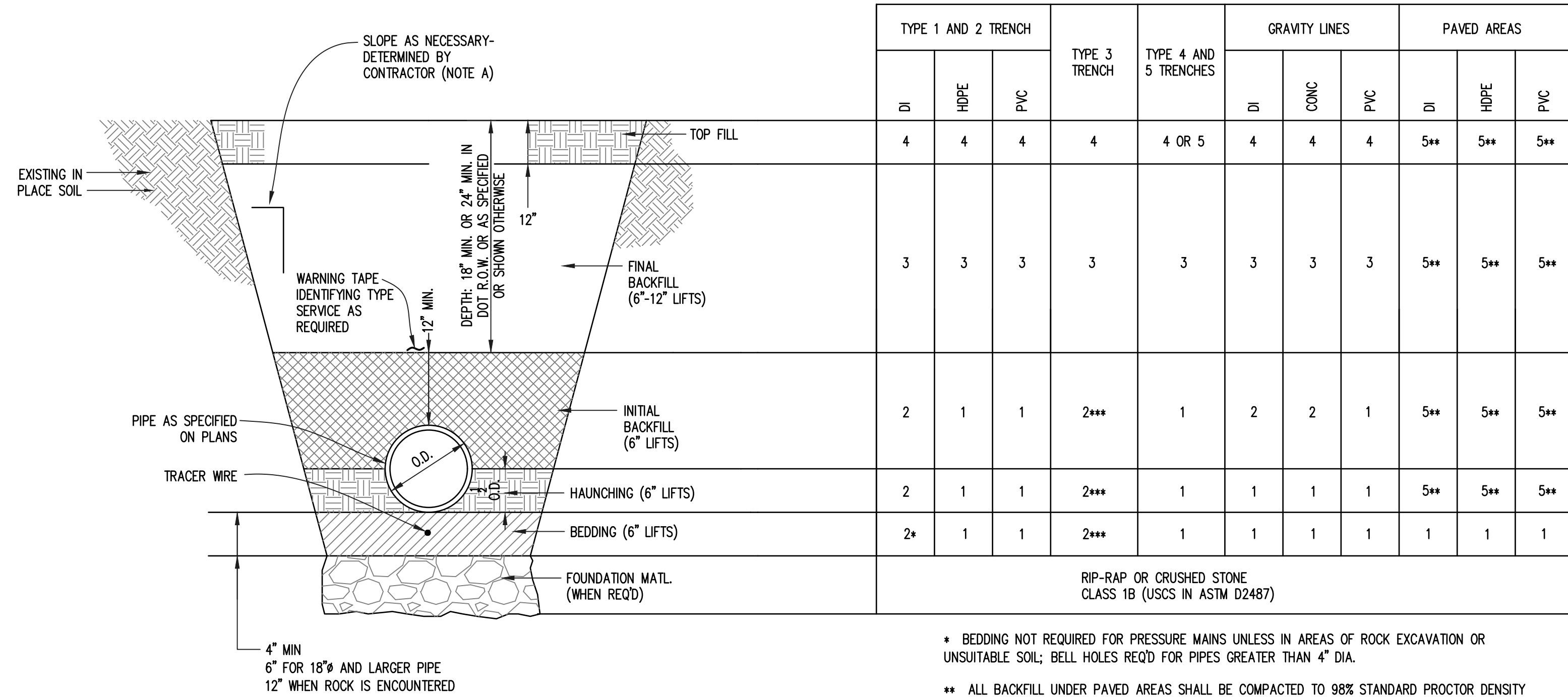
NOTES:  
1. VALVE STEM EXTENSION REQUIRED WHERE DEPTH TO OPERATE EXCEEDS 4'-0". FINAL DEPTH OF OPERATOR NUT BELOW FINAL GRADE SHALL NOT EXCEED 4'-0".



TIE ROD SCHEDULE		
TEST PRESSURE	250 PSI OR LESS	
PIPE DIA. (IN.)	TIE RODS	
	DIA. (IN.)	NO. REQD
2	5/8	2
3	5/8	2
6	3/4	2
8	3/4	2
10	3/4	4
12	3/4	4
14	3/4	5
16	3/4	6
18	3/4	6
20	3/4	7
24	3/4	8
30	1	8
36	1	10
42	1-1/4	10
48	1-1/4	12

NOTE:  
1. TIE RODS SHALL CONFORM TO ASTM A193 GRADE B7 AND NUTS SHALL CONFORM TO ASTM A194 GRADE 2H.

**TIE-ROD SCHEDULE**  
SCALE: N.T.S.



	TYPE 1 AND 2 TRENCH			TYPE 3 TRENCH	TYPE 4 AND 5 TRENCHES	GRAVITY LINES			PAVED AREAS		
	DI	HDPE	PVC			DI	CONC	PVC	DI	HDPE	PVC
TOP FILL	4	4	4	4	4 OR 5	4	4	4	5**	5**	5**
FINAL BACKFILL (6"-12" LIFTS)	3	3	3	3	3	3	3	3	5**	5**	5**
INITIAL BACKFILL (6" LIFTS)	2	1	1	2***	1	2	2	1	5**	5**	5**
HAUNCHING (6" LIFTS)	2	1	1	2***	1	1	1	1	5**	5**	5**
BEDDING (6" LIFTS)	2*	1	1	2***	1	1	1	1	1	1	1
FOUNDATION MATL. (WHEN REQ'D)	RIP-RAP OR CRUSHED STONE CLASS 1B (USCS IN ASTM D2487)										

\* BEDDING NOT REQUIRED FOR PRESSURE MAINS UNLESS IN AREAS OF ROCK EXCAVATION OR UNSUITABLE SOIL; BELL HOLES REQ'D FOR PIPES GREATER THAN 4" DIA.  
 \*\* ALL BACKFILL UNDER PAVED AREAS SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY (MINIMUM). FOR TEMPORARY PATCHES, PLACE COMPACTED COLD-MIX ASPHALT, THICKNESS TO MATCH EXISTING ASPHALT (BUT IN NO CASE LESS THAN 2" THICK), UNTIL THE HOT-MIX ASPHALT PATCH CAN BE PLACED. NO SHINGLES ALLOWED IN HOT-MIX.  
 \*\*\* PIPE BEDDED IN 6-INCH MINIMUM LOOSE SOIL UNDER THE PIPE. BACKFILL CONSOLIDATED TO TOP OF PIPE. ALL BACKFILL IS NATIVE MATERIAL FREE OF 1" & LARGER ROCKS AND FOREIGN MATERIAL (APPROXIMATELY 80% STANDARD PROCTOR, AASHTO T-99). WHEN ROCK IS ENCOUNTERED USE 12" STONE UNDER PIPE. BELL HOLE MUST BE EXCAVATED FOR EACH JOINT OF PIPE.

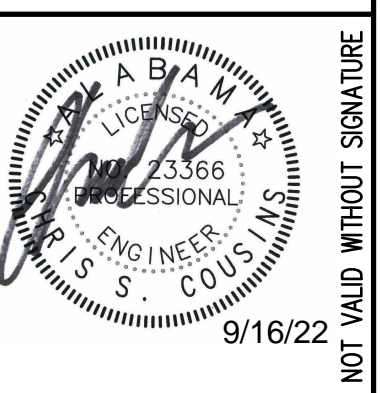
MATERIALS	DESCRIPTION
1	CRUSHED STONE, ASTM-448 NO. 610
2	SELECT EXCAVATED MATERIAL REASONABLY DRY (WITHIN LIMITS REQ'D FOR COMPACTION) NEAR OPTIMUM MOISTURE CONTENT ±2%, OR MAY USE DAMPENED #610 STONE (UNWASHED) NO STONES GREATER THAN 1" DIA.
3	EXCAVATED MATERIAL REASONABLY DRY (WITHIN LIMITS REQ'D FOR COMPACTION) NEAR OPTIMUM MOISTURE CONTENT ±2%, OR MAY USE DAMPENED #610 STONE (UNWASHED) NO STONES GREATER THAN 1 1/2" DIA.
4	SELECT TOPSOIL MATERIAL TO SUPPORT VEGETATION, NO STONES GREATER THAN 1/2" DIA.
5	CRUSHED STONE, DAMPENED #610 STONE (UNWASHED)

**JOB SPECIFIC NOTES**  
 A. FOR ALL PIPE: A PIPE TRENCH 1/2 IS SUFFICIENT EXCEPT IN PAVED AREAS OR IF SPECIFIED OTHERWISE. IN ALL AREAS WHERE DEPTH OF COVER EXCEEDS 10 FEET, A TYPE 3 TRENCH IS REQUIRED, UNLESS SHOWN TO BE A TYPE 4/5 TRENCH.  
 B. IF PIPE DEPTH IS INDICATED SUCH THAT TRENCH TYPE CHANGES FROM THAT SHOWN IN DRAWINGS (SEE PREVIOUS NOTES), THE CONTRACTOR SHALL USE THE CORRECT TRENCH AT NO ADDITIONAL COST TO THE OWNER.

NOTE: IN AREAS WHERE ROCK IS ENCOUNTERED, 12" MIN. CRUSHED STONE IS REQUIRED UNDER ALL TYPES/KINDS OF PIPE

**STANDARD NOTES:**

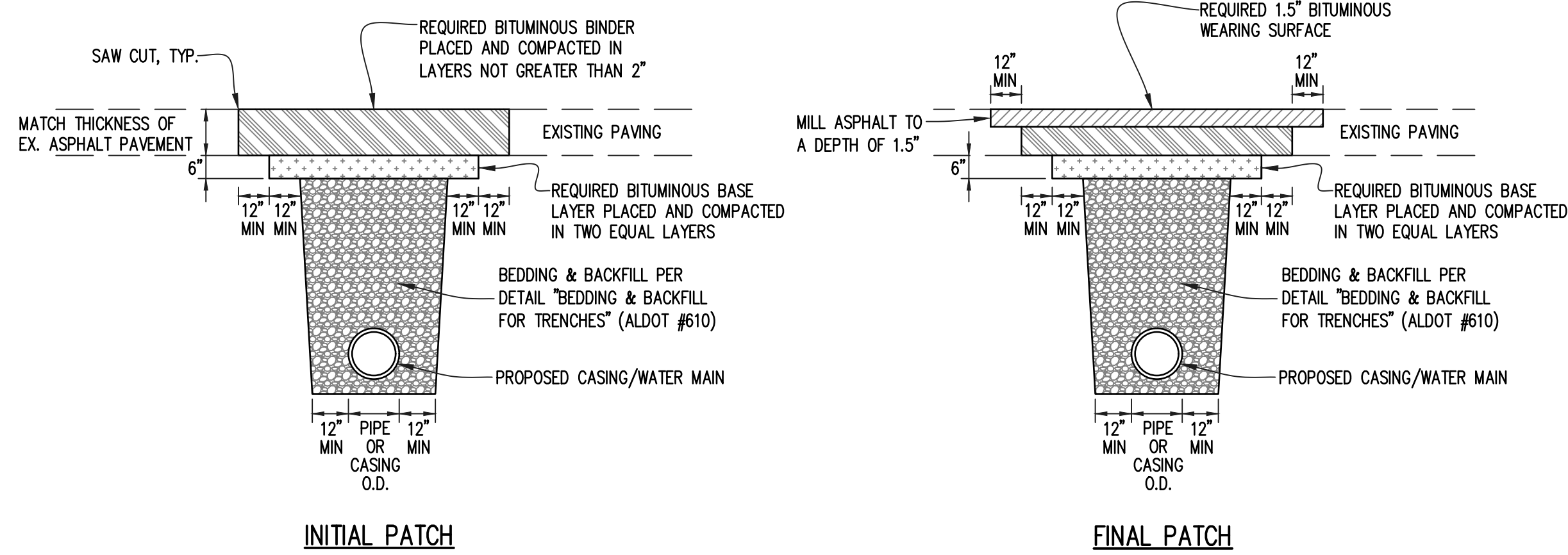
- A. SLOPE, BENCHING, SHORING, ETC. AS DETERMINED AND DESIGNED BY THE CONTRACTOR. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE OSHA REGULATIONS FOR "OPEN TRENCH EXCAVATIONS". ALSO, TO THE EXTENT POSSIBLE, AS DETERMINED BY THE CONTRACTOR, TRENCH WALL SHORING METHODS SHALL BE USED IN PAVED AREAS TO MINIMIZE PAVING REPAIR REQUIREMENTS.
- B. ALL MATERIALS SHALL BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY AT 2%± OPTIMUM MOISTURE CONTENT TO PREVENT SETTLEMENT, UNLESS STATED OTHERWISE. MATERIALS UNDER PAVING, CONCRETE, STRUCTURES, ETC. SHALL BE COMPACTED TO A MINIMUM 98-100% STANDARD PROCTOR DENSITY. MECHANICAL COMPACTION SHALL BE BY VIBRATORY SHEEPSFOOT OR OTHER EQUIPMENT SPECIFICALLY DESIGNED FOR THE COMPACTION OF EARTH. COMPACTION EQUIPMENT SHALL BE ON-SITE PRIOR TO BEGINNING OF WORK. MECHANICAL COMPACTION SHALL BE COMPLETED IN LOOSE LIFTS AS SHOWN ON DETAILS.
- C. BEDDING REQUIRED FOR ALL GRAVITY LINES, ALL PVC LINES, AND ALL CONCRETE LINES. BEDDING REQUIRED IN ALL AREAS OF ROCK EXCAVATION OR UNSUITABLE SOILS. BELL HOLES REQUIRED FOR PIPES GREATER THAN 4" DIAMETER.
- D. FOR DRIVEWAY, ROAD CROSSINGS, OR PAVED AREAS, COMPACTED #610 STONE BACKFILL IS REQUIRED TO THE DESIRED GRADE THEN TOPPED WITH COMPACTED COLD-MIX ASPHALT (THICKNESS TO BE EQUAL TO THE EXISTING PAVING, MINIMUM 2"). COLD-MIX ASPHALT SHALL BE MAINTAINED WITHIN 1" OF THE TRAVEL SURFACE). FOR AREAS TO BE GRASSED THAT #610 STONE BACKFILL IS REQUIRED OR USED, A MINIMUM OF 6" OF TOPSOIL IS REQUIRED.
- E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING AND UTILIZING APPROPRIATE MEANS AND METHODS OF CONSTRUCTION TO ENSURE THAT THE ENTIRE AREAS UNDER THE HAUNCHES OF THE PIPE ARE FILLED WITH THE REQUIRED MATERIALS AND COMPACTED APPROPRIATELY.
- F. ADDITIONAL AND/OR SPECIAL REQUIREMENTS MAY BE REQUIRED BY THE PLANS, SPECIFICATIONS, AND/OR CONTRACT DOCUMENTS. CONTRACTOR SHALL MEET REQUIREMENTS OF ALEXANDER CITY ROADS AND TRANSPORTATION DEPARTMENT (SEE NOTES).



BAR = 1"

Drawing Project No.	Title		Sheet
	9 - 22	DETAILS	
Date	AS SHOWN	BID SET	8

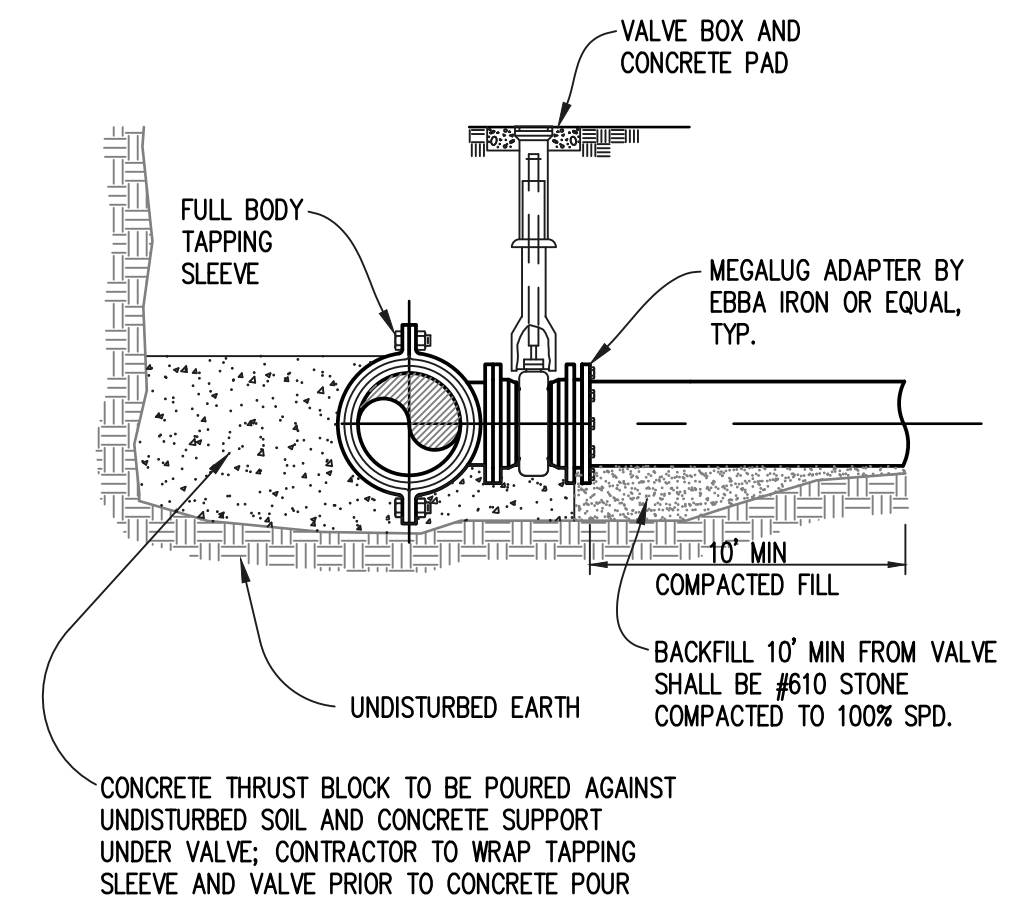




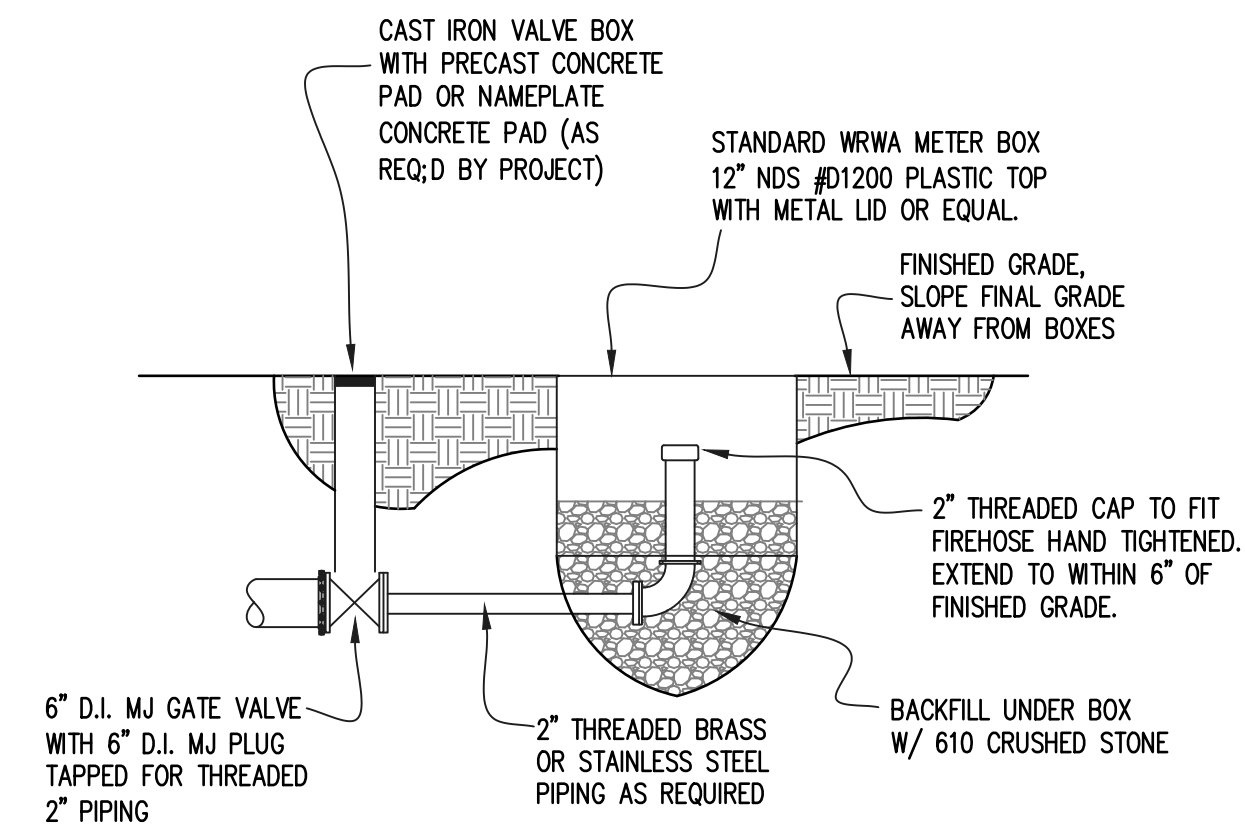
**TYP. ROAD CROSSING BY OPEN CUT DETAIL**  
SCALE: N.T.S.

**NOTES:**

1. TRAFFIC CONTROL SHALL BE REQUIRED FOR THE DURATION OF PROJECT, WITH SIGNS FURNISHED AS REQUIRED BY THE NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES - PART VI, THE ALDOT AND THE COUNTY. ONLY ONE LANE AT A TIME MAY BE CLOSED. ROAD PLATES SHALL BE USED ONLY IF ALLOWED BY ALEXANDER CITY. AT THE COMPLETION OF WORK EACH DAY, THE TRENCH SHALL BE BACKFILLED WITH 610 STONE LEVEL WITH THE ROAD AND ROAD PUT BACK INTO SERVICE UNLESS A DETOUR PLAN IS ALLOWED FOR THE CROSSING. CONTRACTOR SHALL PROVIDE PYLONS, LIGHTS, FLAGMEN, SIGNAGE, DETOURS, ESCORT TRUCK(S), ETC. AS REQUIRED. COORDINATE WITH OWNER AS REQUIRED.
2. CONTRACTOR SHALL MAINTAIN SAFE PUBLIC ACCESS FOR ROADS/DRIVEWAYS AT ALL TIMES. ONCE WORK WITHIN A ROADWAY IS INITIATED, CONTRACTOR SHALL WORK EXPEDITIOUSLY UNTIL ALL WORK IS COMPLETED. CONTRACTOR SHALL WAIT UNTIL OWNER APPROVES (30 DAYS MIN.) AFTER INSTALLATION OF INITIAL PATCH BEFORE MILLING AND INSTALLING FINAL WEARING SURFACE.
3. WHEN RETURNING TO PERFORM FINAL PAVING, CONTRACTOR SHALL MILL TEMPORARY PATCH AS REQUIRED TO FULL EXTENTS OF FINAL PAVING AREA AS DETERMINED BY THE ENGINEER (SEE PLANS). FULL PAYMENT FOR ALL WORK (BACKFILL, TEMPORARY PATCHING, MILLING, FINAL PAVING) WILL BE PAID BASED ON FINAL PAVED AREA ONLY OR SHALL BE INCLUDED IN LUMP SUM, AS APPLICABLE.
4. ALL COMPACTIONS SHALL BE IN ACCORDANCE WITH COUNTY SPECIFICATIONS.

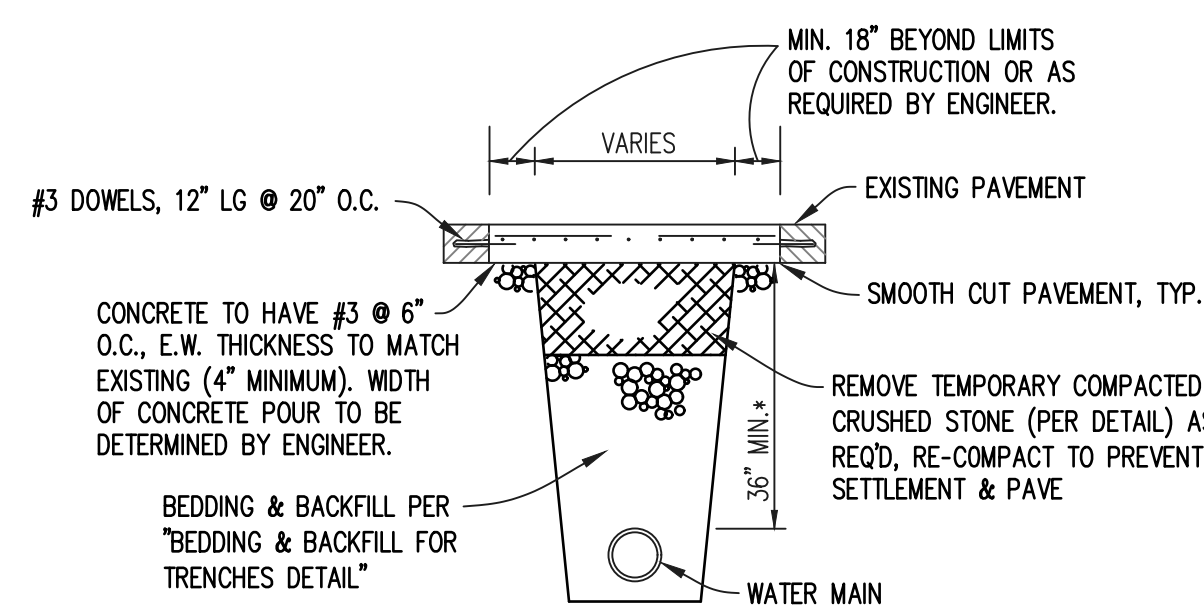


**TAPPING SLEEVE AND VALVE DETAIL**  
SCALE: N.T.S.



**2\"/>**

SCALE N.T.S.



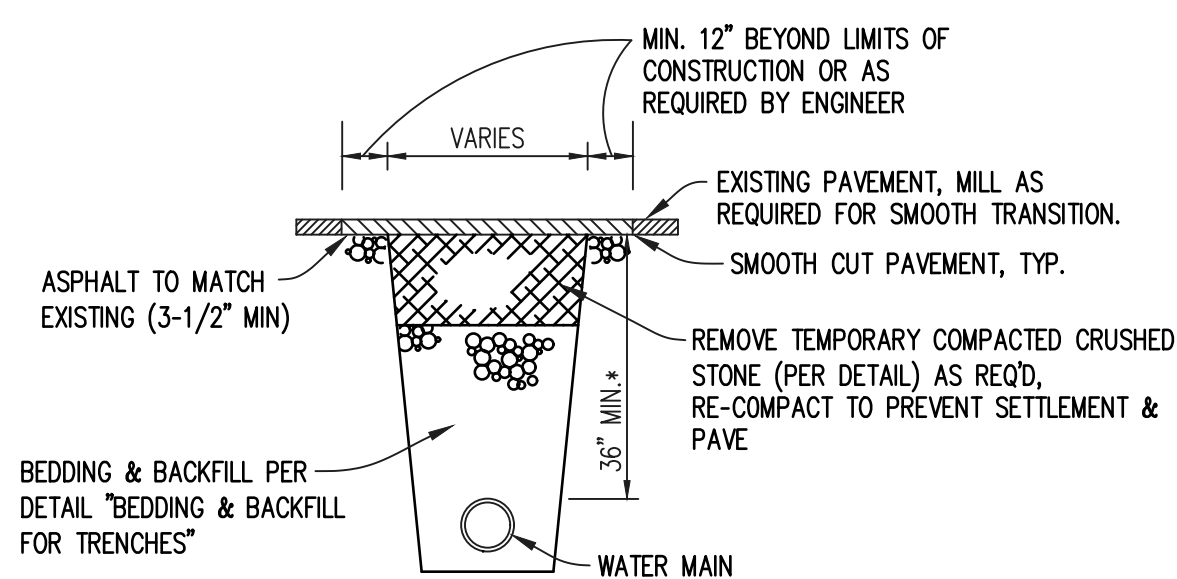
**CONCRETE PAVED AREAS AND DRIVEWAYS**

**NOTES:**

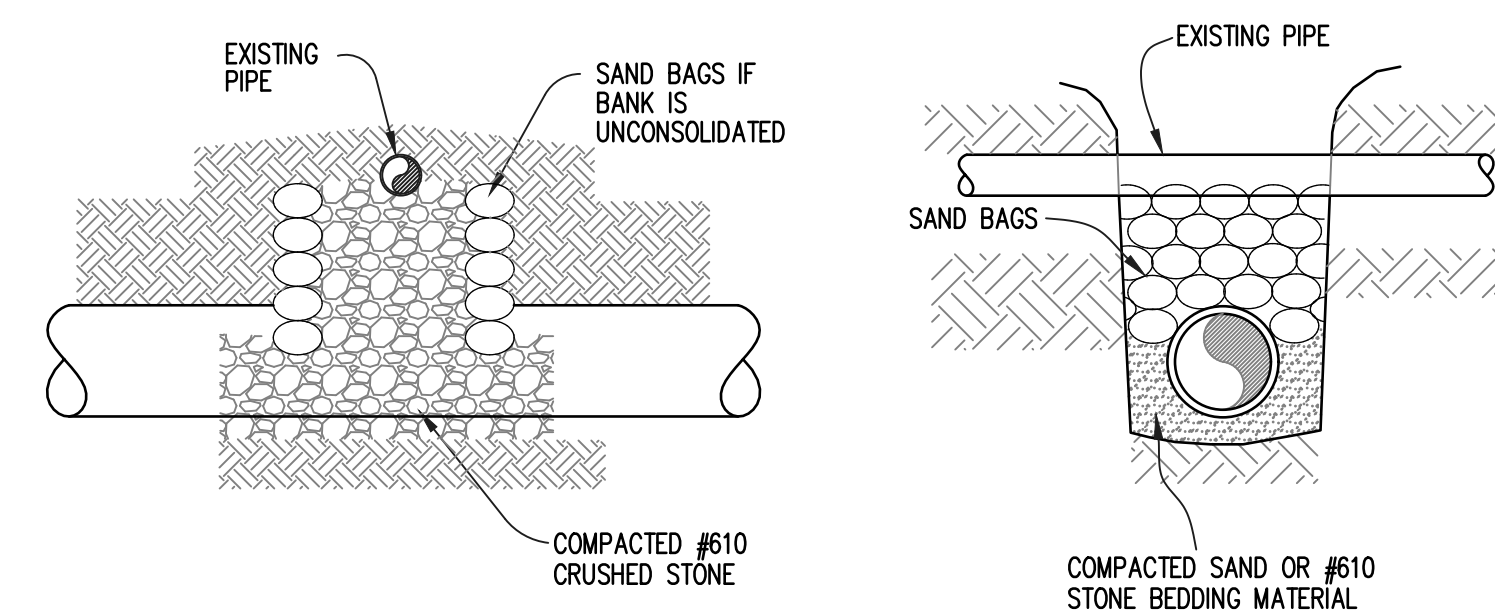
1. CONTRACTOR SHALL MAINTAIN SAFE PUBLIC ACCESS FOR ROADS/DRIVEWAYS AT ALL TIMES. TEMPORARY COMPACTED 610 BACKFILL REQUIRED UNTIL FINAL DRIVEWAY REPAIRS ARE INSTALLED. WORK SCHEDULE SHALL BE COORDINATED WITH AND APPROVED BY OWNER AND ENGINEER.
2. WHEN REPAVING DRIVEWAYS, NEW PAVING SHALL BE COMPLETED FROM THE ROAD TO 12\"/>

**TYP. DRIVEWAY CROSSING BY OPEN CUT DETAIL**

SCALE: N.T.S.



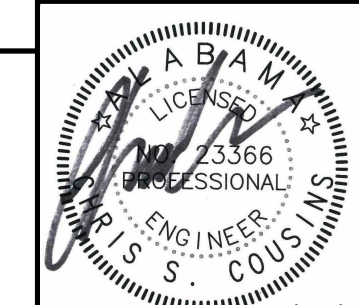
**ASPHALT PAVED AREAS AND DRIVEWAYS**



**TYPICAL METHOD OF PROTECTING UTILITIES OR OTHER PIPE CROSSINGS WHERE NOT LOCATED UNDER PAVING**

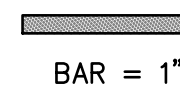
**EXISTING UTILITY PROTECTION**

SCALE N.T.S.



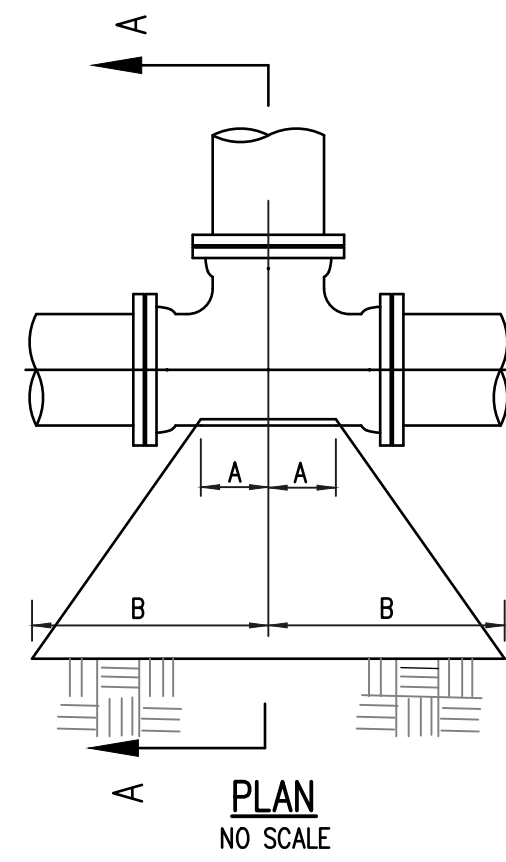
9/16/22

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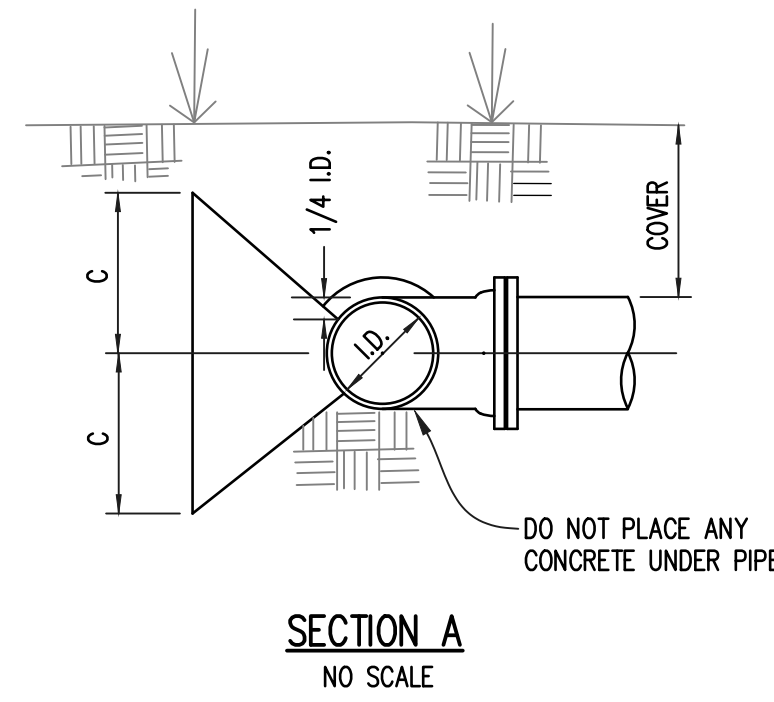


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Drawing Project No.	Title		BID SET
	DETAILS		
	Date	9 - 22	
	Scale	AS SHOWN	
	Sheet	9	



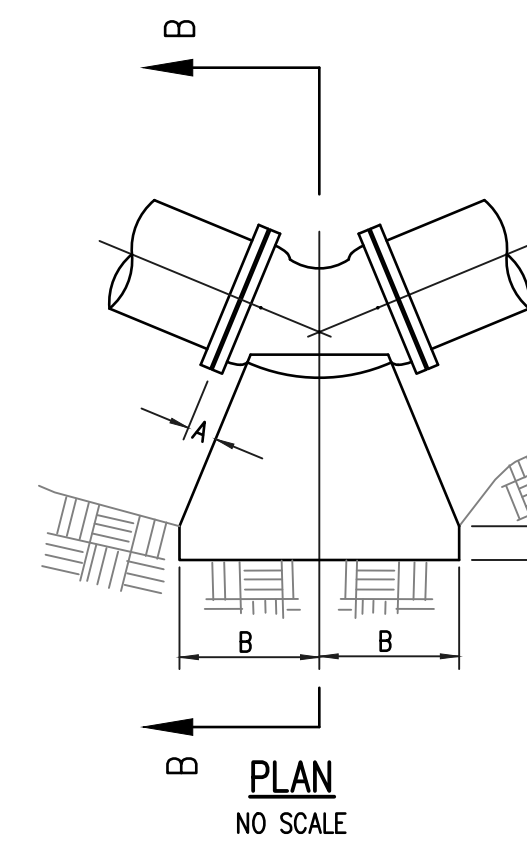
PLAN  
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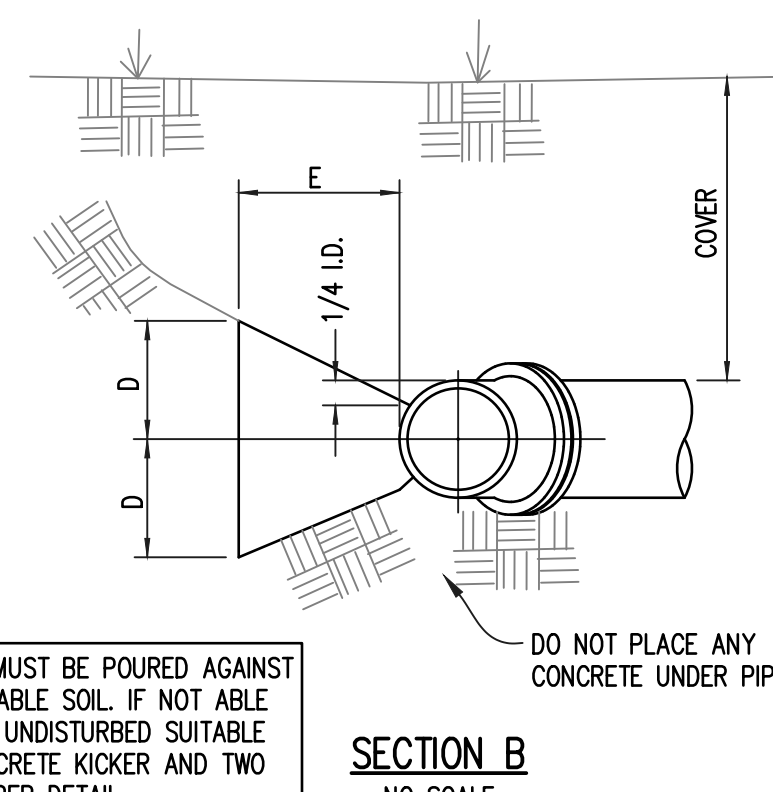
SECTION A  
NO SCALE

TYPICAL CONCRETE BRACING FOR TEES

PIPE DIA.	A	B	C	MIN. COVER
4"	5"	1'-0"	1'-0"	2'-6"
6"	6"	1'-0"	1'-0"	2'-6"
8"	8"	1'-6"	1'-6"	2'-6"
10"	10"	2'-0"	2'-0"	3'-0"
12"	10"	2'-0"	2'-0"	3'-0"
14"	1'-0"	2'-6"	2'-6"	3'-0"
16"	1'-0"	3'-0"	3'-0"	3'-0"
18"	1'-2"	3'-6"	3'-6"	3'-6"
20"	1'-4"	3'-6"	3'-6"	3'-6"
24"	1'-7"	4'-6"	3'-6"	3'-6"



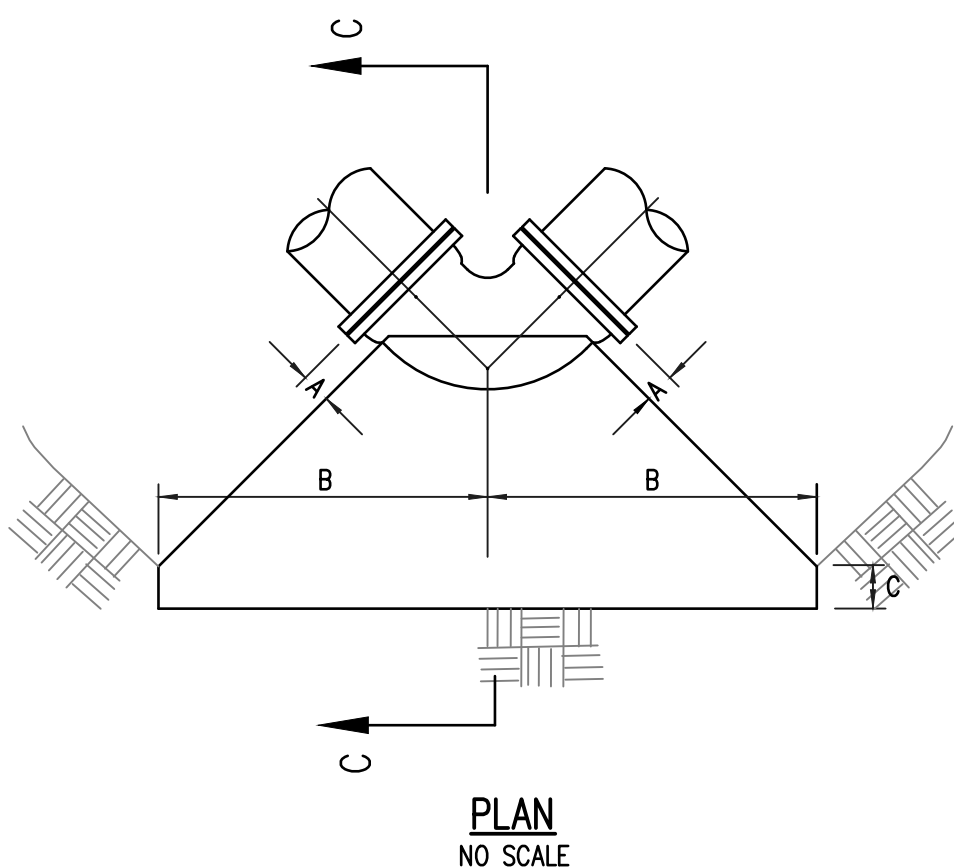
PLAN  
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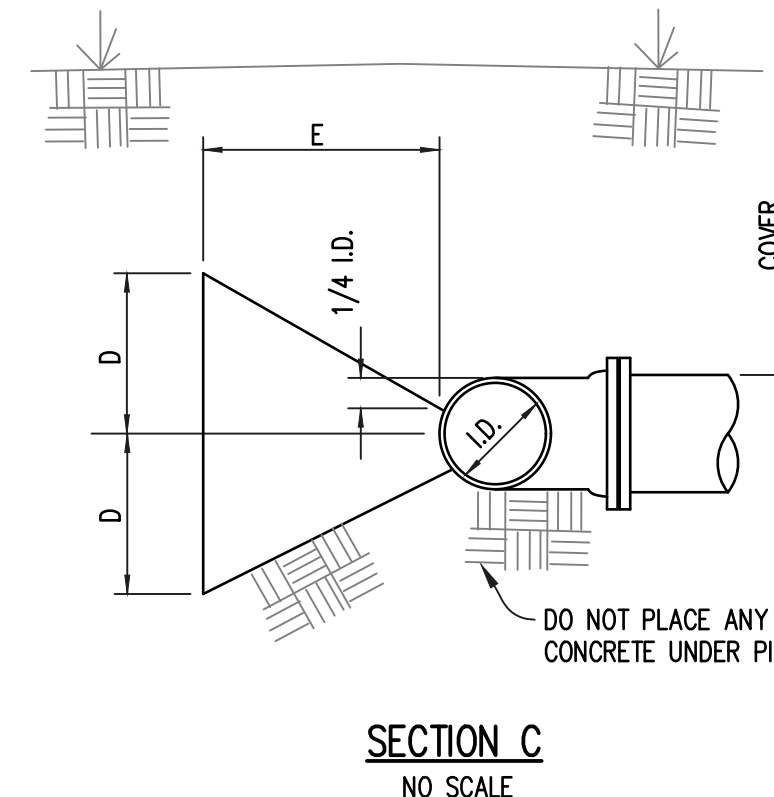
SECTION B  
NO SCALE

TYPICAL CONCRETE BRACING FOR 45° BENDS

PIPE DIA.	A	B	C	D	E	MIN. COVER
4"	4 1/2"	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"
6"	4 1/2"	1'-0"	9"	1'-0"	1'-2"	2'-6"
8"	4 1/2"	1'-6"	3"	1'-0"	1'-2"	2'-6"
10"	4 1/2"	1'-6"	-	1'-6"	1'-6"	3'-0"
12"	6"	2'-0"	-	2'-0"	2'-0"	3'-0"
14"	6"	2'-6"	-	2'-0"	2'-0"	3'-0"
16"	6"	2'-6"	-	2'-6"	2'-0"	3'-0"
18"	6"	3'-0"	-	2'-6"	2'-6"	3'-6"
20"	6"	3'-0"	-	3'-0"	2'-6"	3'-6"
24"	7"	3'-6"	-	3'-6"	2'-10"	3'-6"



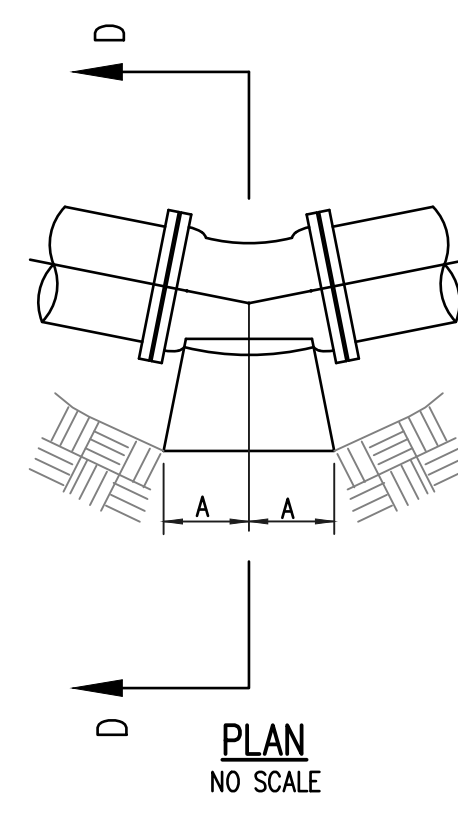
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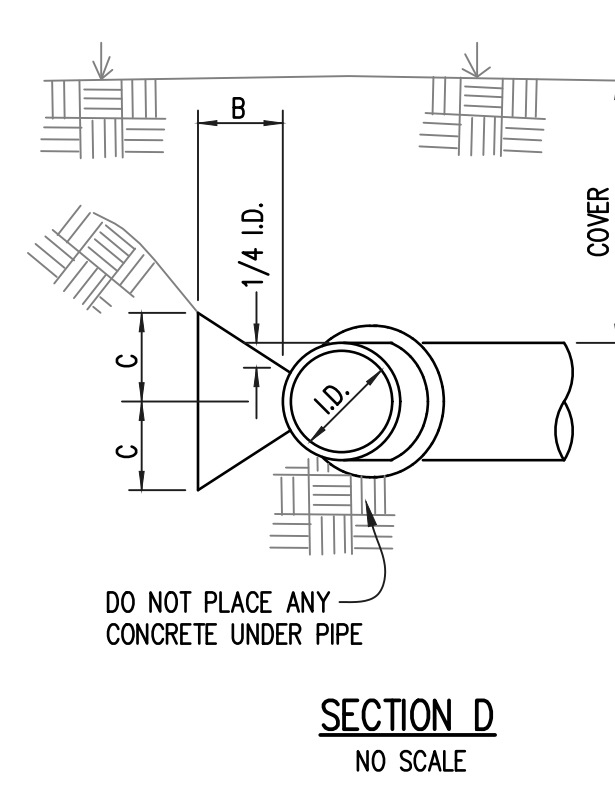
SECTION C  
NO SCALE

TYPICAL CONCRETE BRACING FOR 90° BENDS

PIPE DIA.	A	B	C	D	E	MIN. COVER
4"	4-1/2"	1'-0"	1'-8"	1'-0"	2'-0"	2'-6"
6"	4-1/2"	1'-6"	1'-7"	1'-0"	2'-0"	2'-6"
8"	4-1/2"	2'-0"	1'-6"	1'-6"	2'-6"	2'-6"
10"	4-1/2"	2'-0"	1'-1"	2'-0"	2'-6"	3'-0"
12"	4-1/2"	2'-6"	1'-0"	2'-6"	2'-6"	3'-0"
14"	6"	3'-0"	1'-2"	2'-6"	2'-6"	3'-0"
16"	6"	3'-6"	1'-0"	3'-0"	2'-6"	3'-0"
18"	6"	4'-0"	10"	3'-6"	3'-0"	3'-6"
20"	6"	4'-6"	11"	3'-6"	3'-0"	3'-6"
24"	7"	5'-6"	8"	3'-6"	3'-0"	3'-6"



PLAN  
NO SCALE



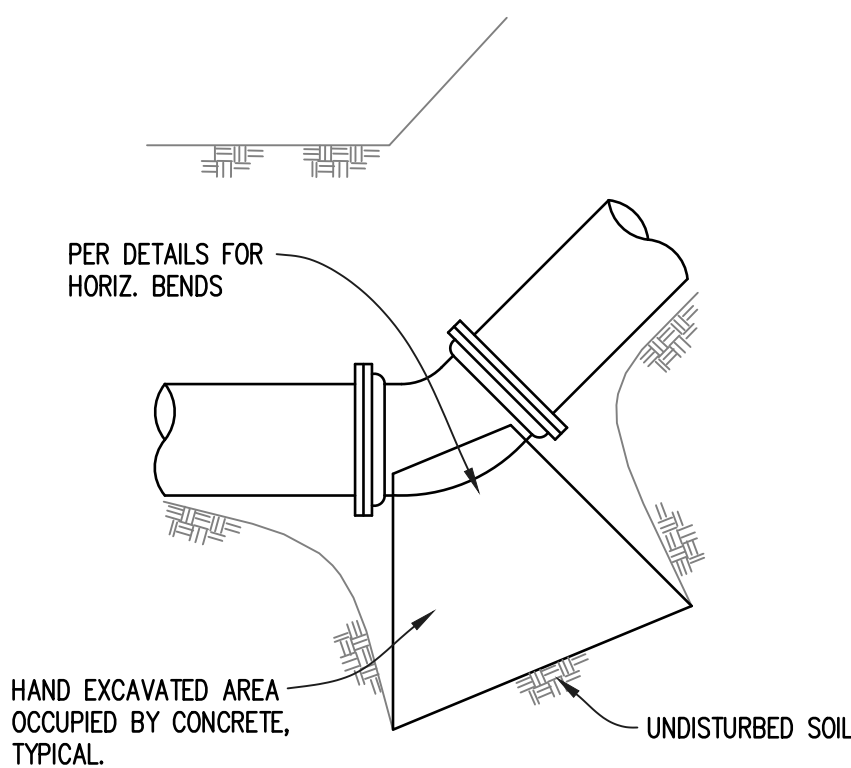
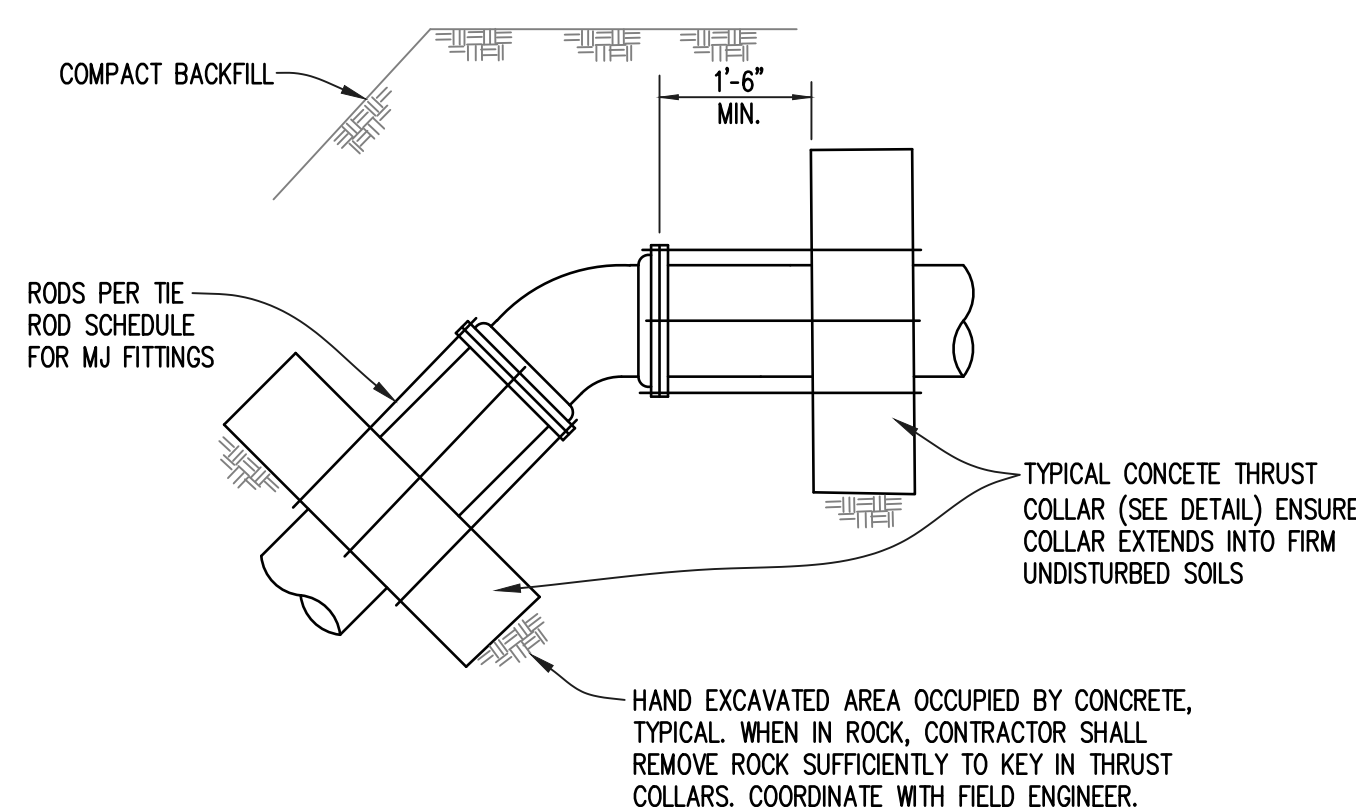
SECTION D  
NO SCALE

TYPICAL CONCRETE BRACING FOR 11 1/4° & 22 1/2° BENDS

PIPE DIA.	22 1/2° BENDS				11 1/4° BENDS			
	A	B	C	MIN. COVER	A	B	C	MIN. COVER
4"	6"	1'-0"	6"	2'-6"	6"	1'-0"	6"	2'-6"
6"	1'-0"	1'-0"	6"	2'-6"	1'-0"	1'-0"	6"	2'-6"
8"	1'-0"	1'-0"	1'-0"	2'-6"	1'-0"	1'-0"	1'-0"	2'-6"
10"	1'-0"	1'-6"	1'-0"	3'-0"	1'-0"	1'-0"	1'-0"	3'-0"
12"	1'-6"	2'-0"	1'-0"	3'-0"	1'-0"	1'-6"	1'-0"	3'-0"
14"	1'-6"	2'-0"	1'-6"	3'-0"	1'-6"	1'-6"	1'-0"	3'-0"
16"	2'-0"	2'-0"	1'-6"	3'-0"	1'-6"	1'-6"	1'-0"	3'-0"
18"	2'-0"	2'-6"	2'-0"	3'-6"	1'-6"	2'-0"	1'-6"	3'-6"
20"	2'-6"	2'-6"	2'-0"	3'-6"	1'-6"	2'-0"	1'-6"	3'-6"
24"	2'-6"	3'-0"	2'-6"	3'-6"	2'-0"	2'-0"	2'-0"	3'-6"

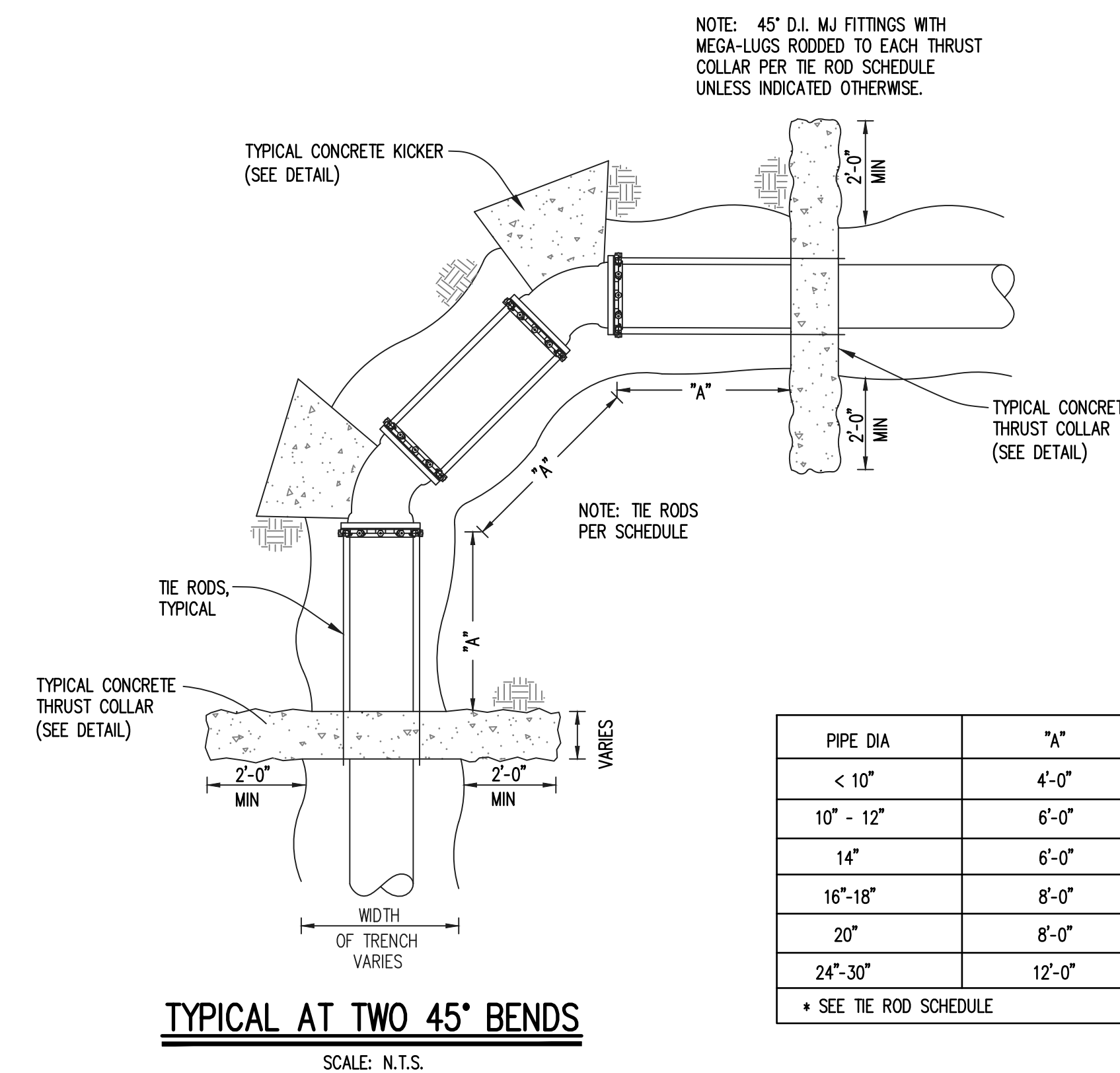
TYPICAL CONCRETE KICKER DETAILS

SCALE: N.T.S.



CONCRETE BRACING FOR VERTICAL BENDS DETAIL

SCALE: N.T.S.

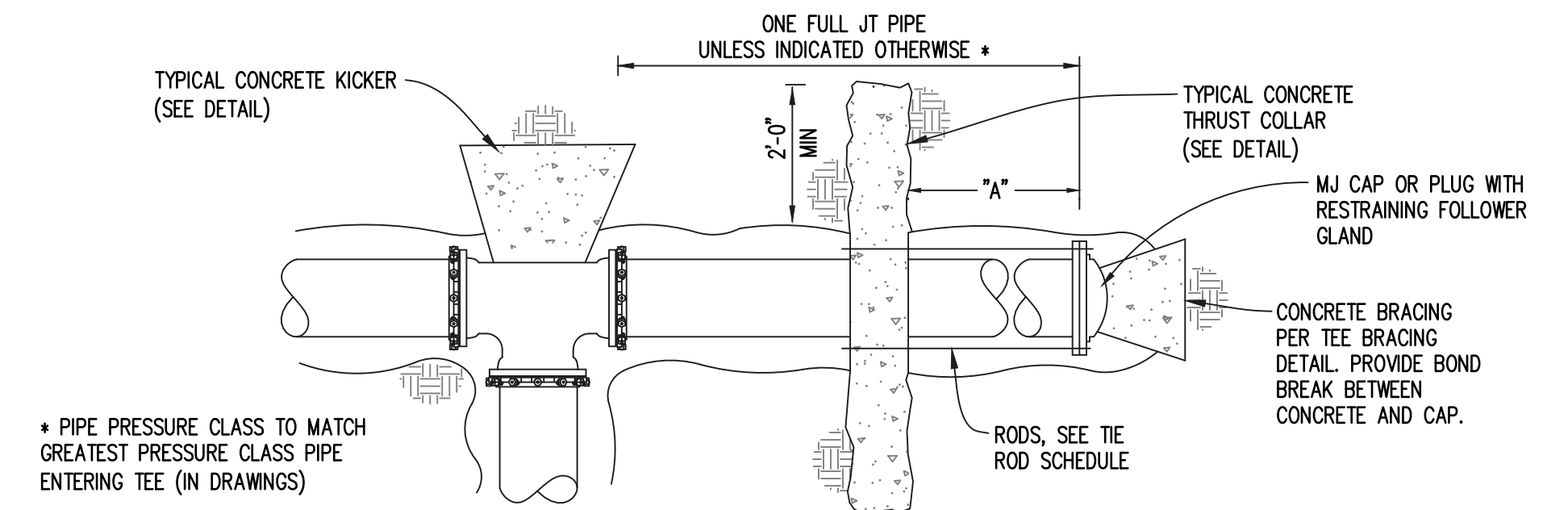


TYPICAL AT TWO 45° BENDS

SCALE: N.T.S.

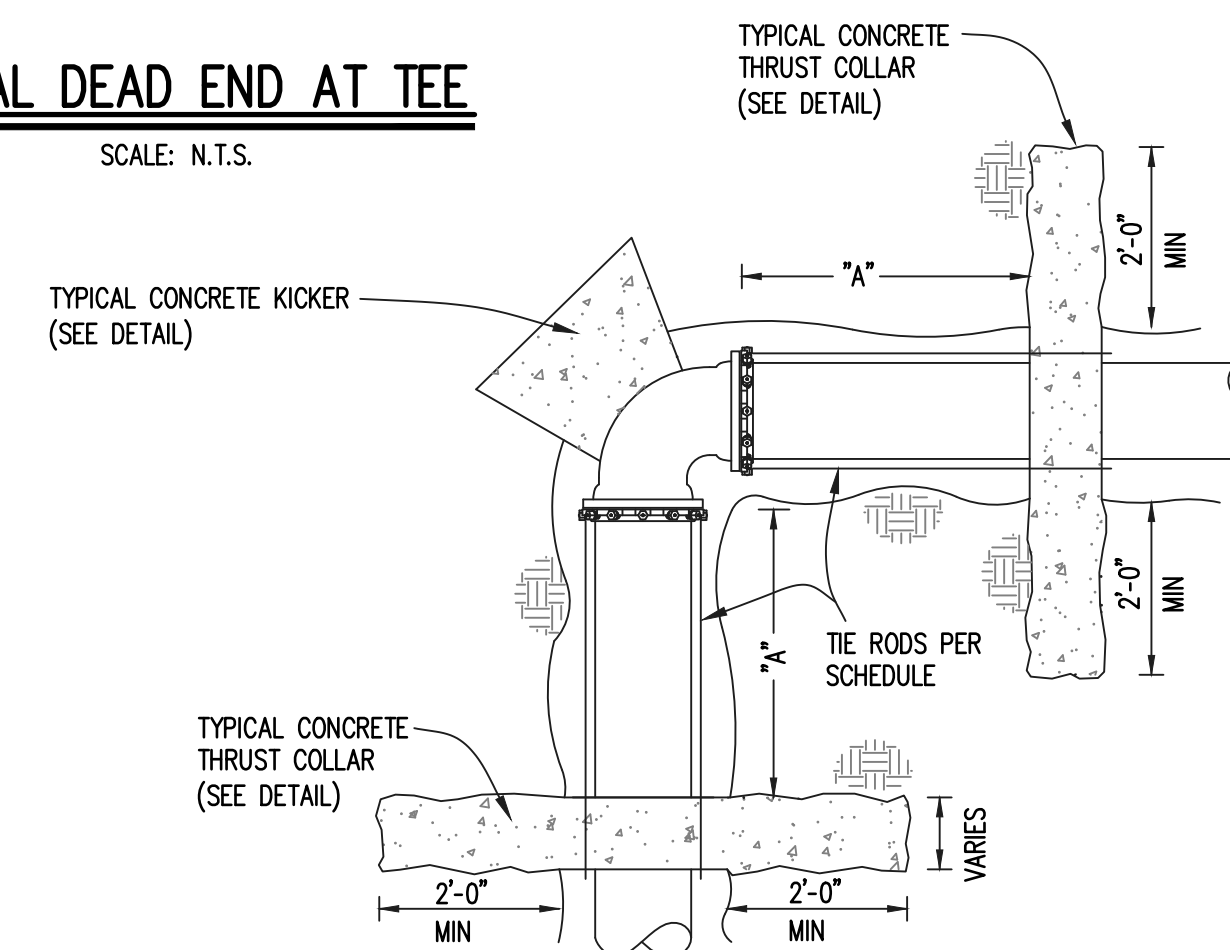
PIPE DIA	"A"	# RODS*
< 10"	4'-0"	2
10" - 12"	6'-0"	4
14"	6'-0"	5
16" - 18"	8'-0"	6
20"	8'-0"	7
24" - 30"	12'-0"	8

\* SEE TIE ROD SCHEDULE



TYPICAL DEAD END AT TEE

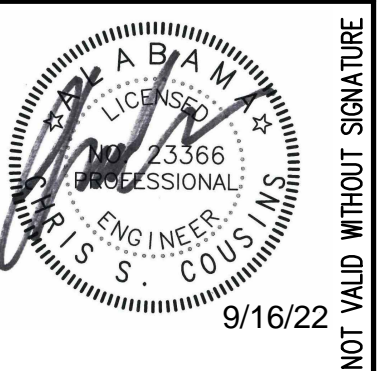
SCALE: N.T.S.



TYPICAL 90° BEND

SCALE: N.T.S.

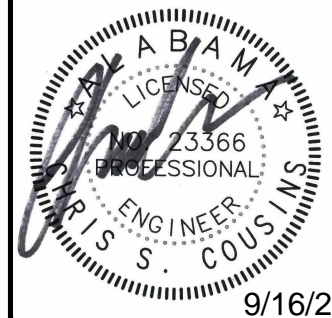
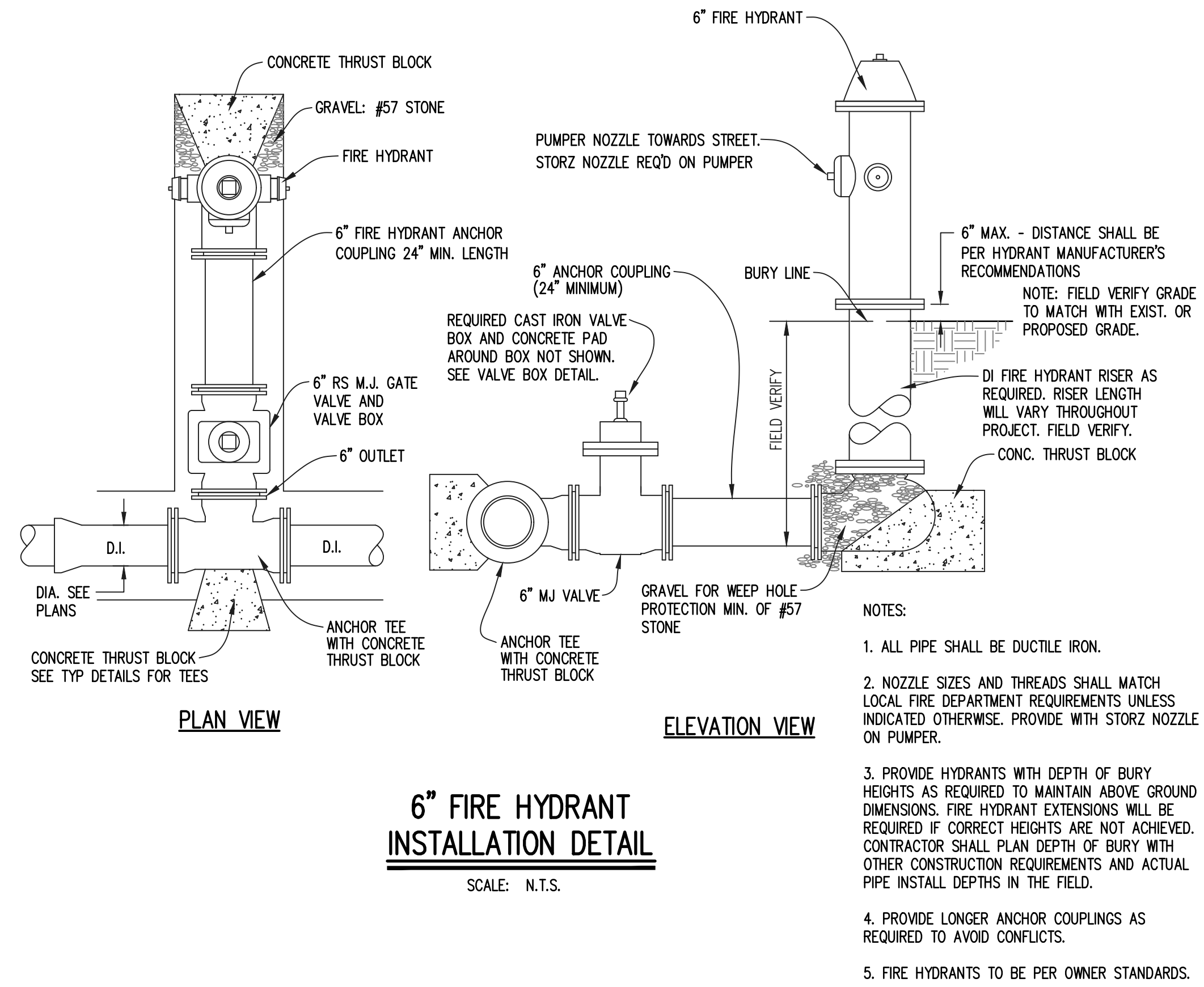
- GENERAL NOTES:
- GENERAL DIMENSIONS SHALL BE CONSIDERED AS MINIMUMS, CONTRACTOR SHALL BE RESPONSIBLE FOR INCREASING DIMENSIONS AS REQUIRED FOR ACTUAL FIELD CONDITIONS ENCOUNTERED. CONTRACTOR TO ENSURE ALL THRUST RESTRAINT IS ADEQUATE.
  - ALL CONCRETE FOR THRUST RESTRAINT SHALL BEAR AGAINST FIRM UNDISTURBED SOILS.
  - CONTRACTOR SHALL WRAP ALL ACCESSORIES BOLTS, NUTS, CONNECTIONS, ETC. IN PLASTIC SUCH THAT THEY CAN BE REMOVED WITHOUT THE NEED FOR CONCRETE REMOVAL.
  - UNLESS INDICATED OTHERWISE IN PLANS, ALL FITTINGS SHALL BE MJ WITH RESTRAINING FOLLOWER GLANDS. RESTRAINING FOLLOWER GLANDS SHALL BE MEGA-LUG OR EQUAL. RETAINER GASKETS NOT ALLOWED.
  - ALL CONCRETE KICKERS SHALL BE FORMED WITH PLYWOOD.



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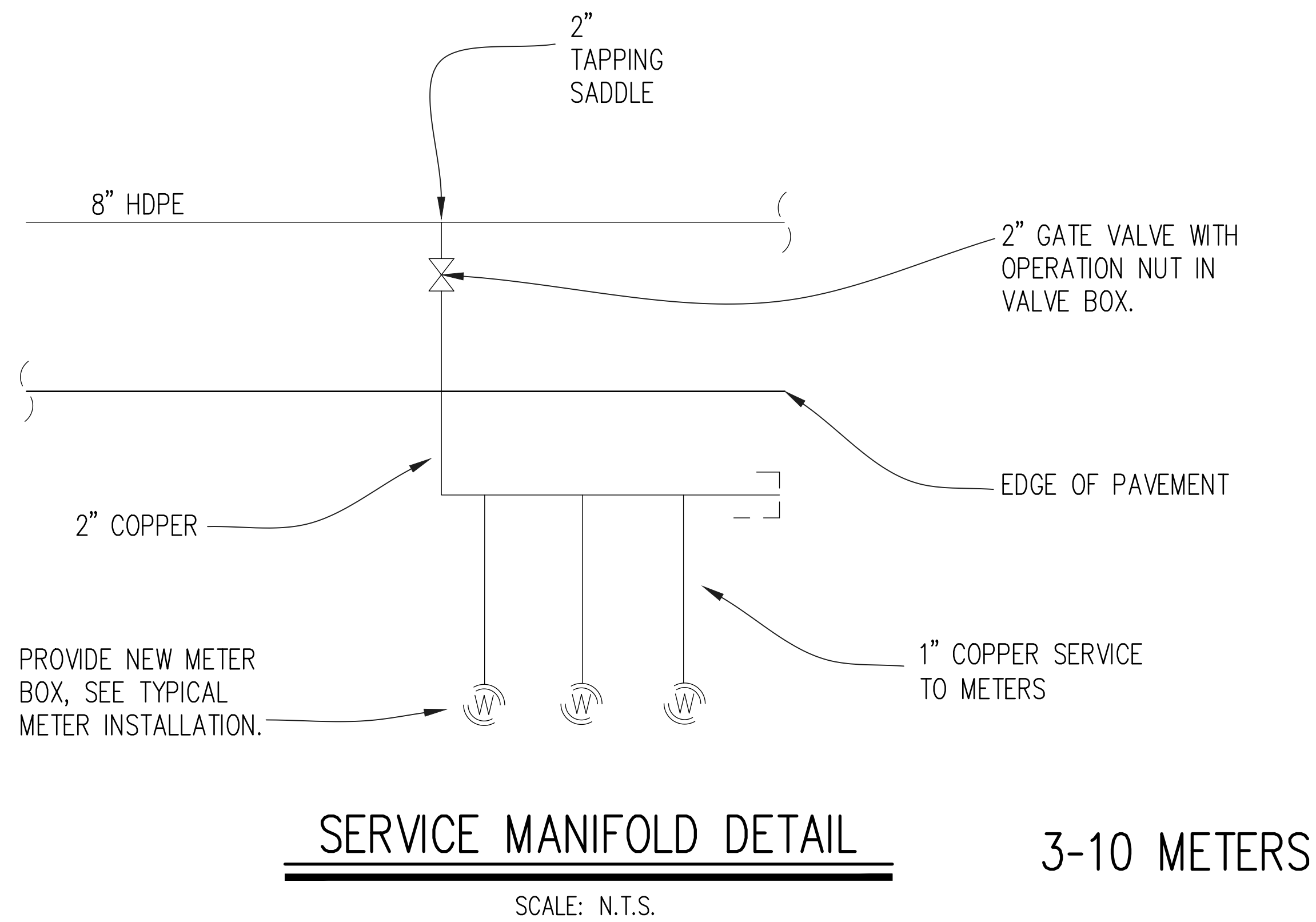
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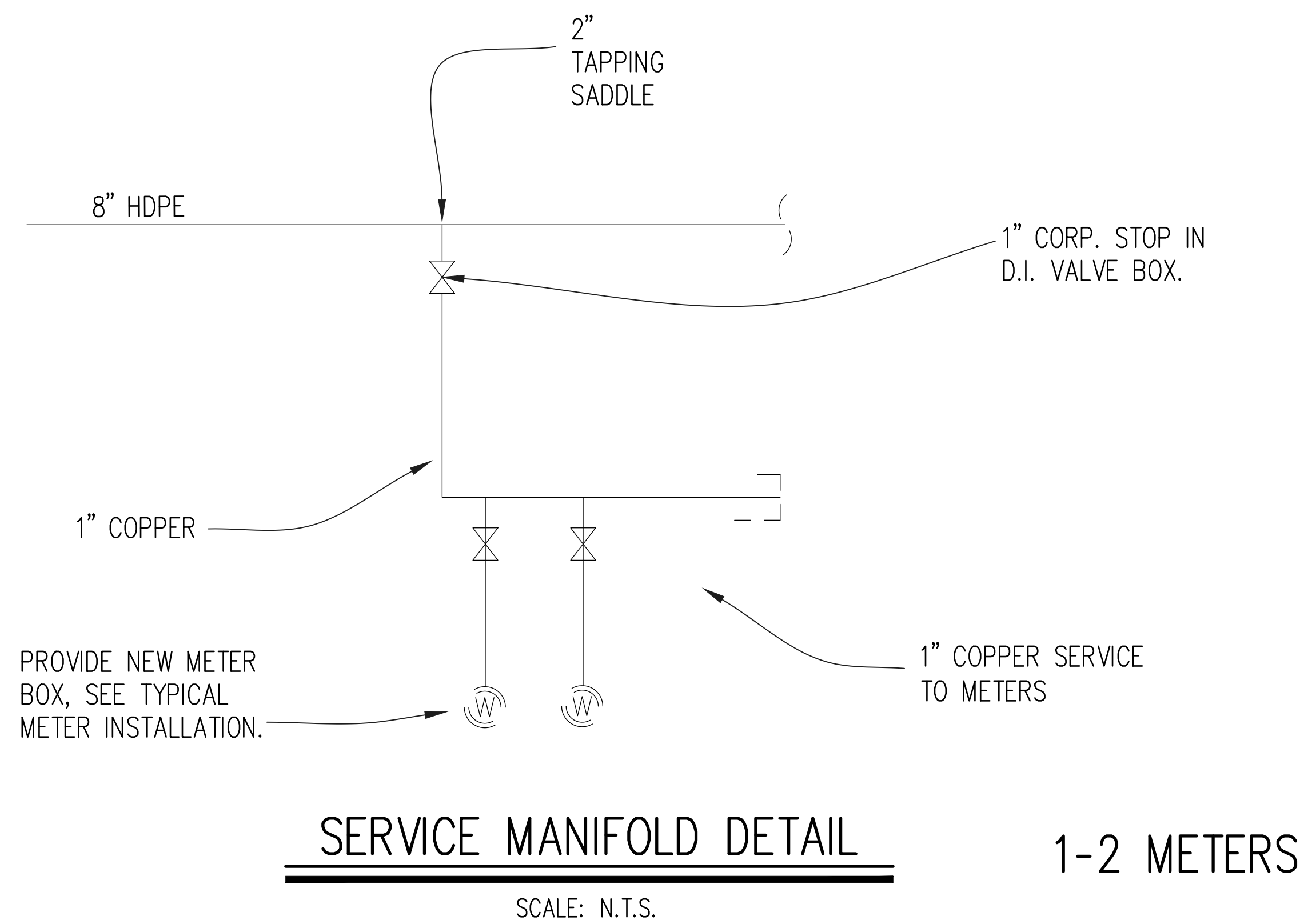
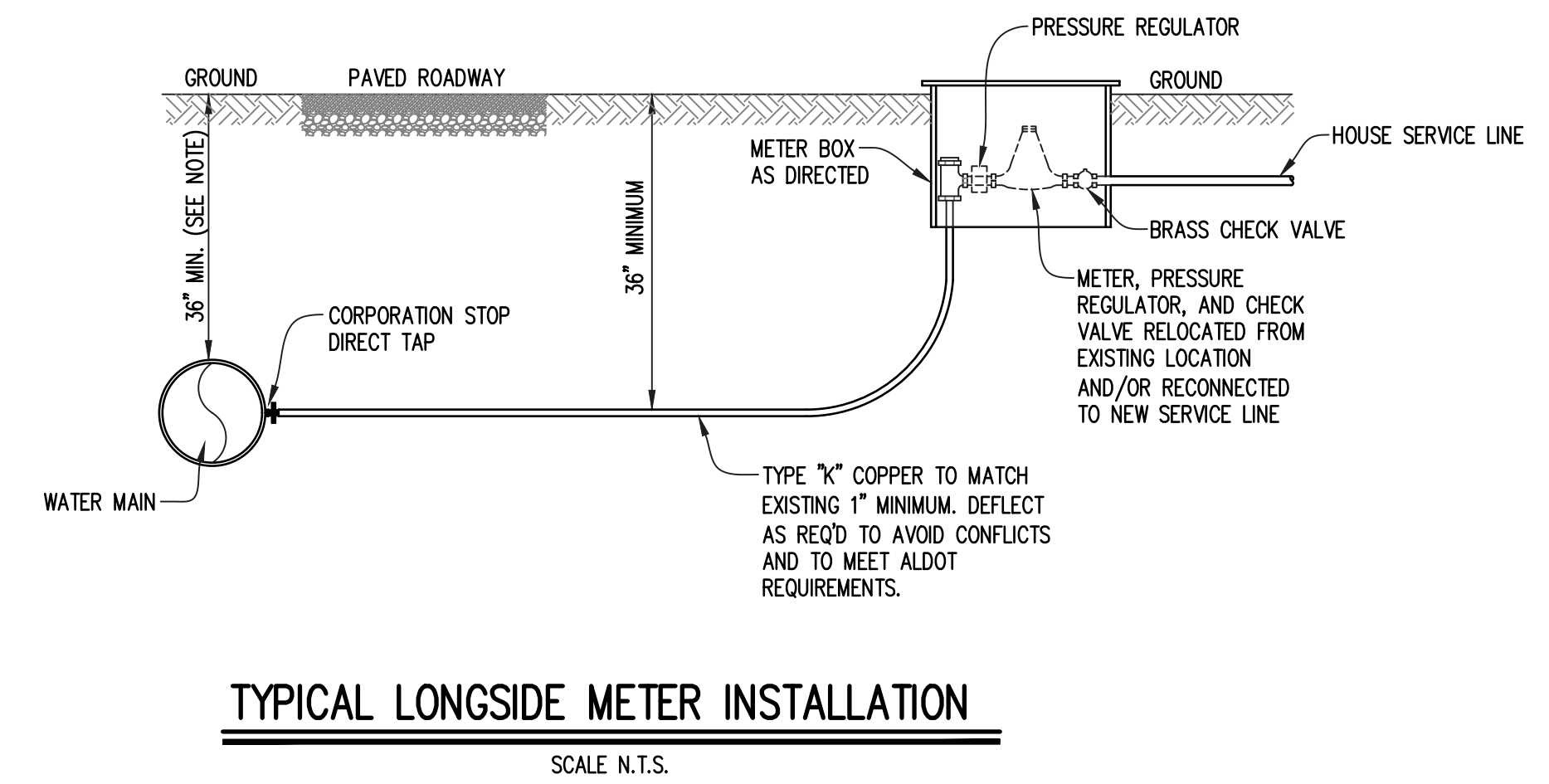
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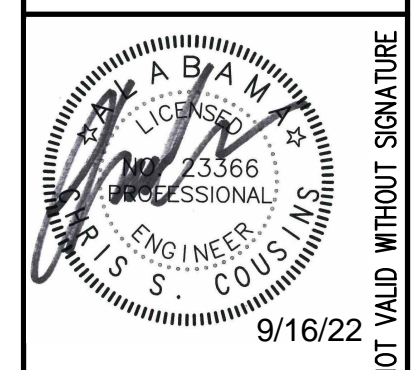
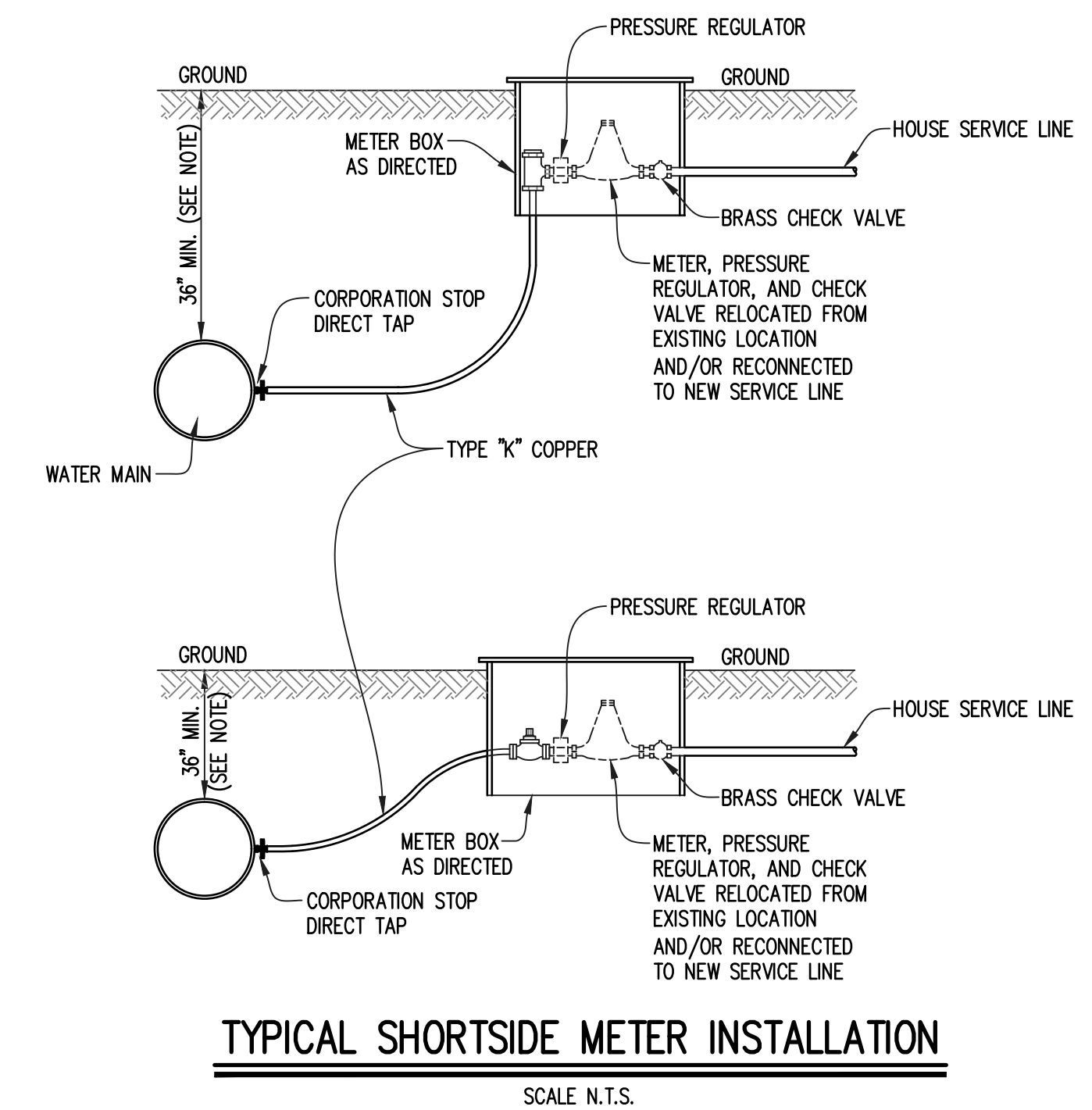
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- NOTES:**
- METERS WILL BE SET OFF RIGHT OF WAY.
  - SERVICE MATERIAL SHALL BE 1" TYPE K COPPER TUBING.
  - NO JOINTS ALLOWED IN SERVICES. TYPICAL OF ALL SERVICES.
  - PIPE DEPTH SHALL BE MINIMUM 36".
  - DIRECTIONAL BORES FOR CASINGS SHALL BE AT A MINIMUM DEPTH OF 48". CASINGS SHALL EXTEND A MINIMUM 2' BEYOND EDGE OF PAVEMENT OR CURB.
  - USAGE OF ANGLED AND STRAIGHT CURB STOPS SHALL BE AT THE DIRECTION OF OWNER.



- PARTIAL MATERIALS LIST:**
- CORP STOPS: 1" BRASS BALL TYPE CORPORATION STOP - FORD FB10004.
- CURB STOPS: 1/2" ANGLE CURB STOP - FORD BA43-332W\*  
1" ANGLE CURB STOP - FORD BA43-444W\*  
1/2" STRAIGHT CURB STOP - FORD B43-332W\*  
1" STRAIGHT CURB STOP - FORD B43-444W\*
- BALL VALVES: 1/2" BRASS BALL VALVE SCREW JOINT - NIBCO T580  
1" BRASS BALL VALVE SCREW JOINT - NIBCO T580
- METER ADAPTORS: 1/2" METER ADAPTOR - FORD A-14  
1" METER ADAPTOR - FORD A-34
- METER COUPLINGS: 1/2" BRASS METER COUPLING - FORD C38-23-2.5  
1" BRASS METER COUPLING - FORD C38-44-2.625
- METER BOXES: 18" x 24" RECTANGULAR METER BOX - POLYPLASTIC NDS D-1500 DICR

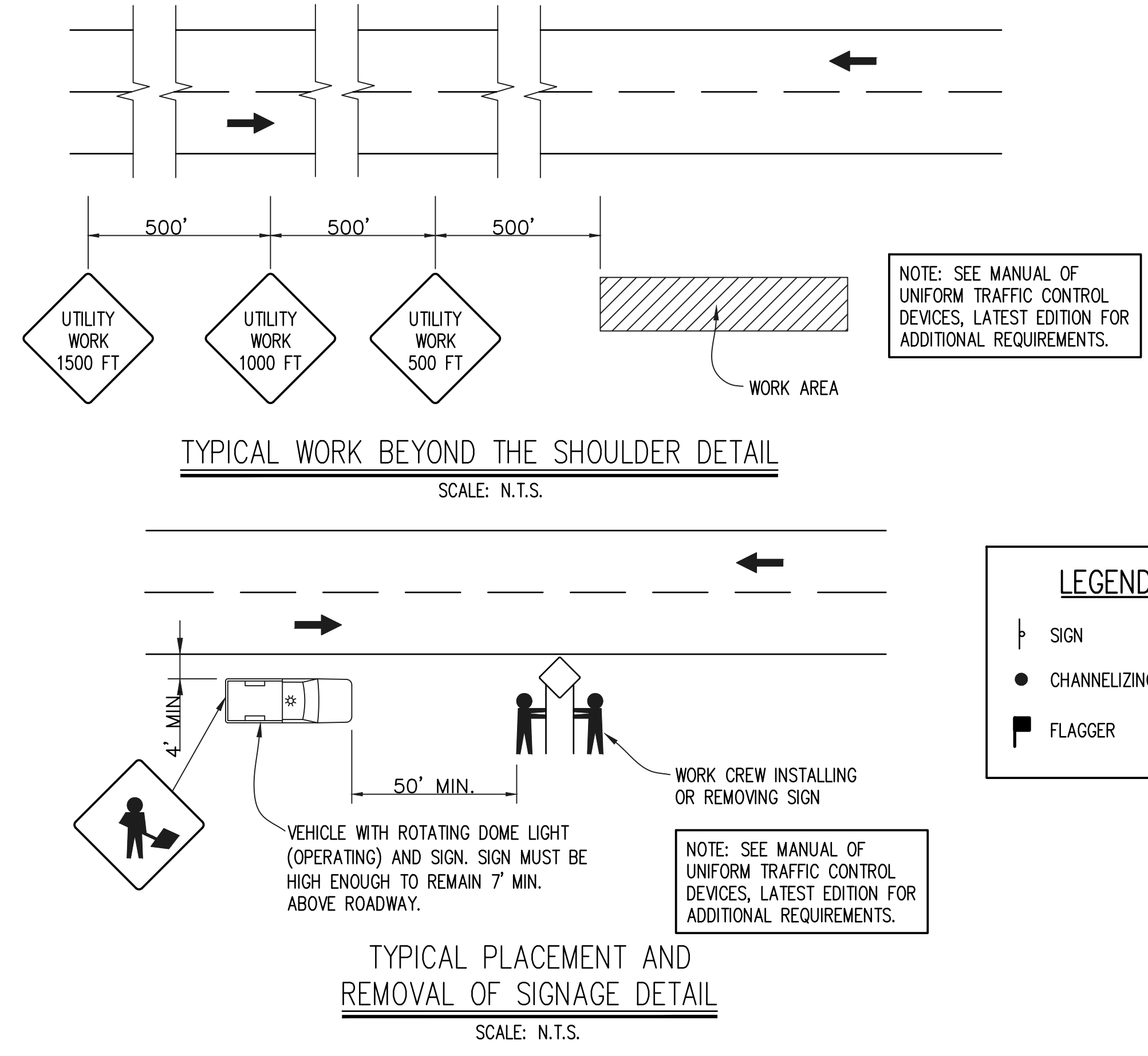
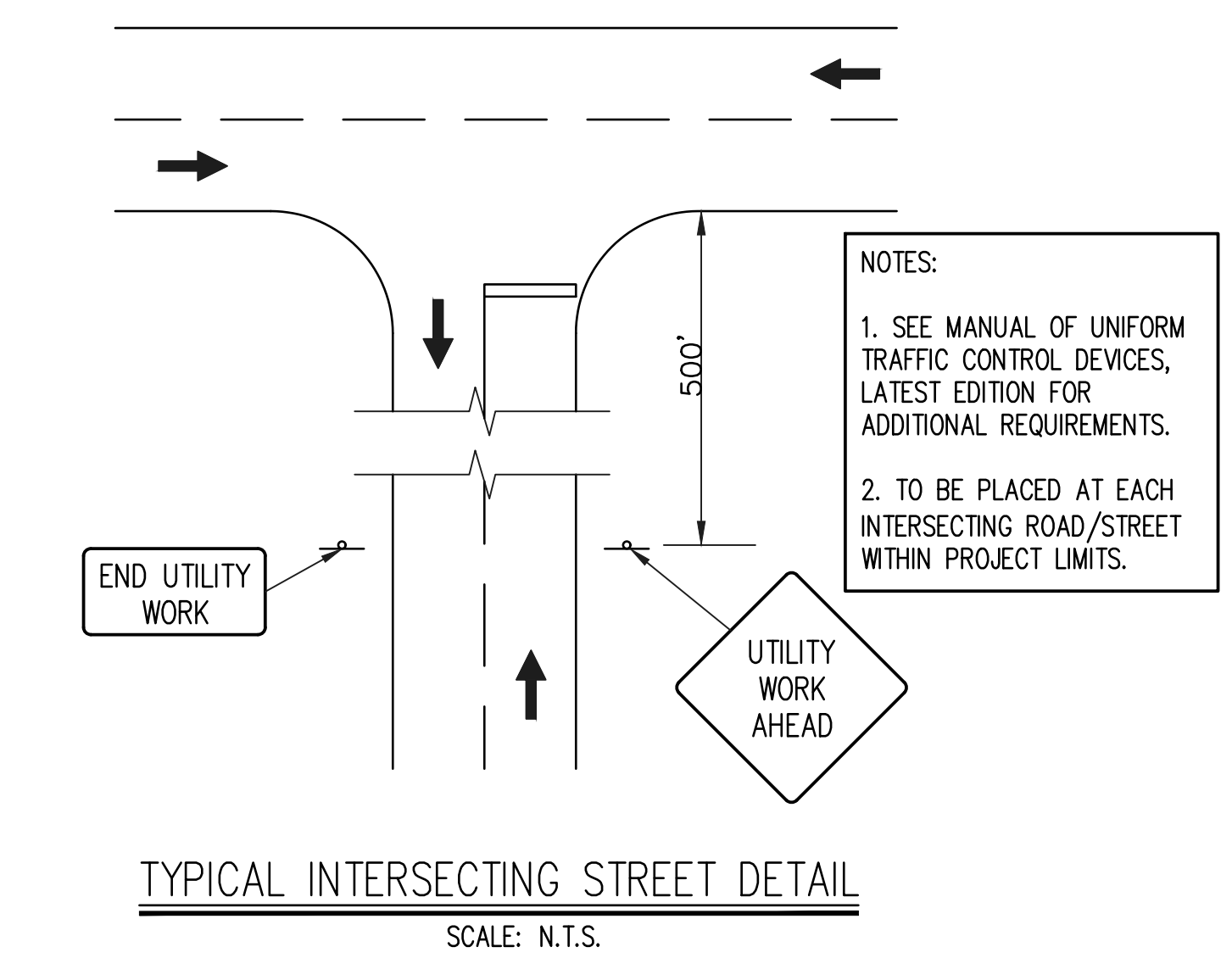
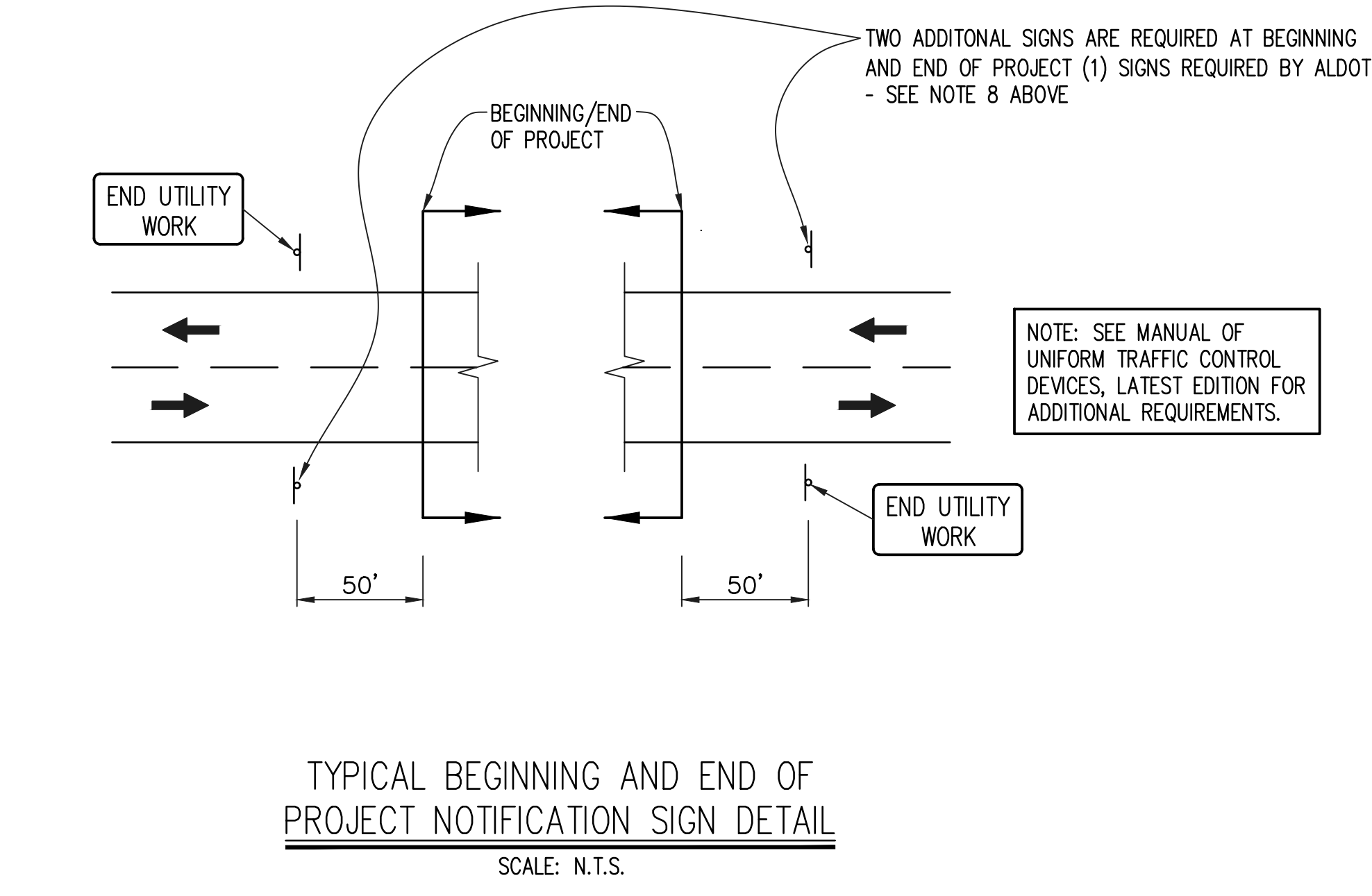
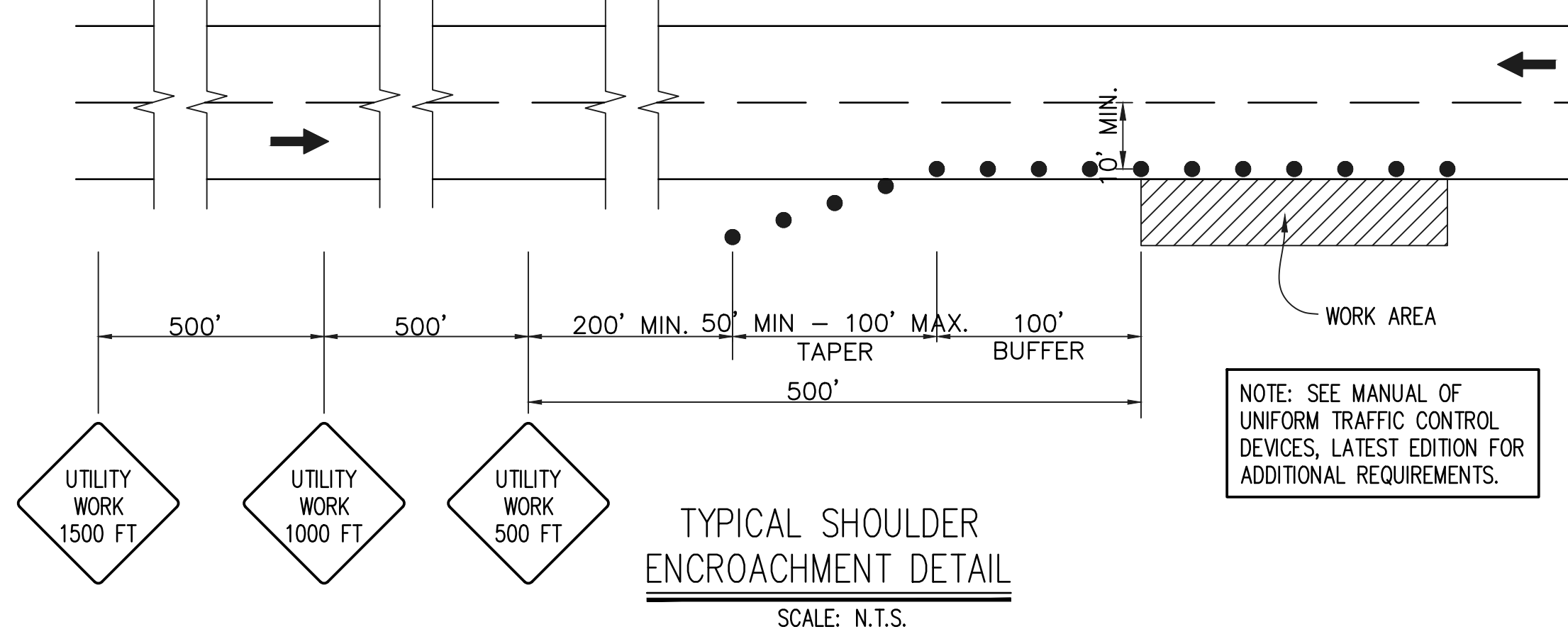
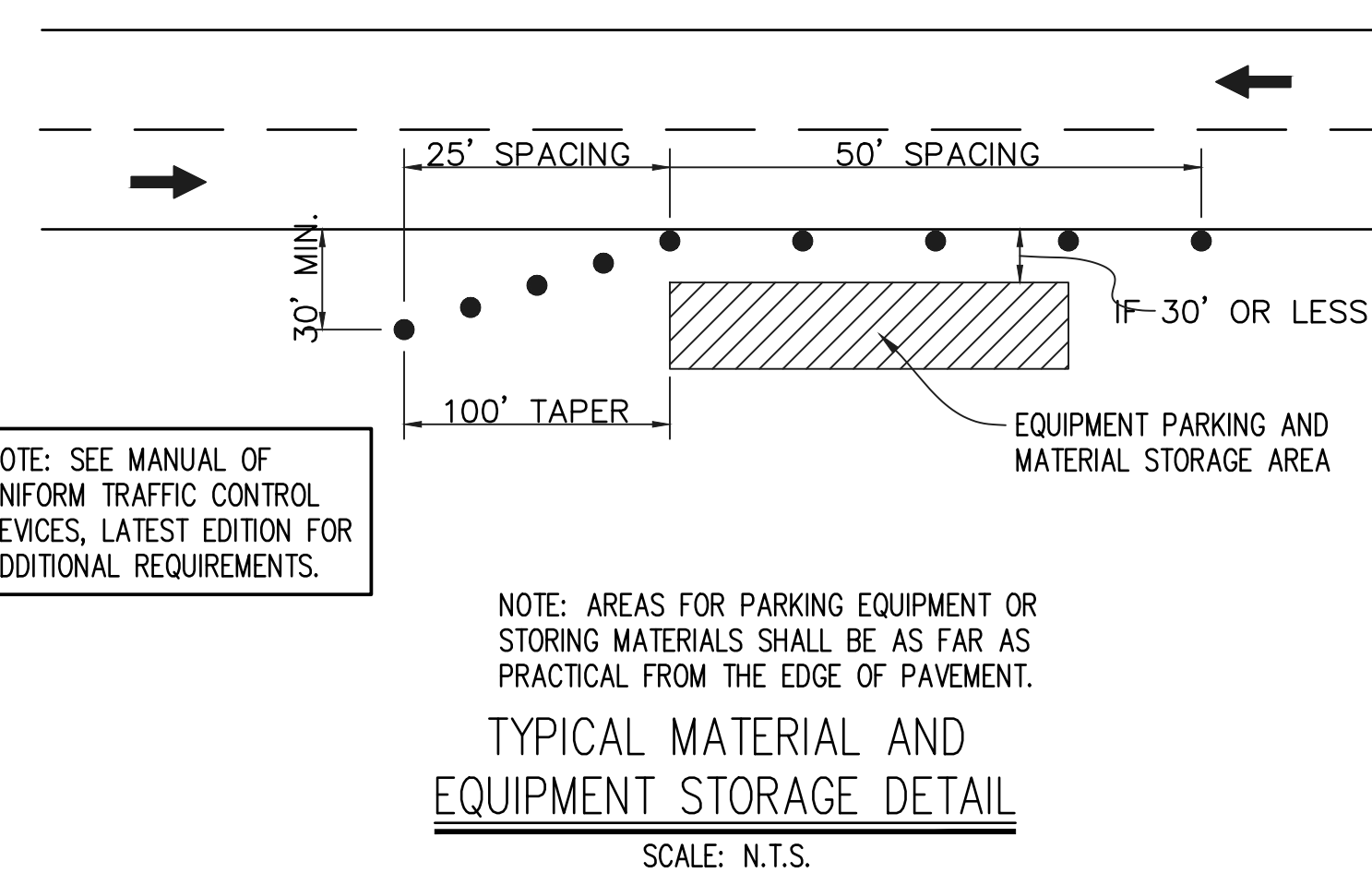
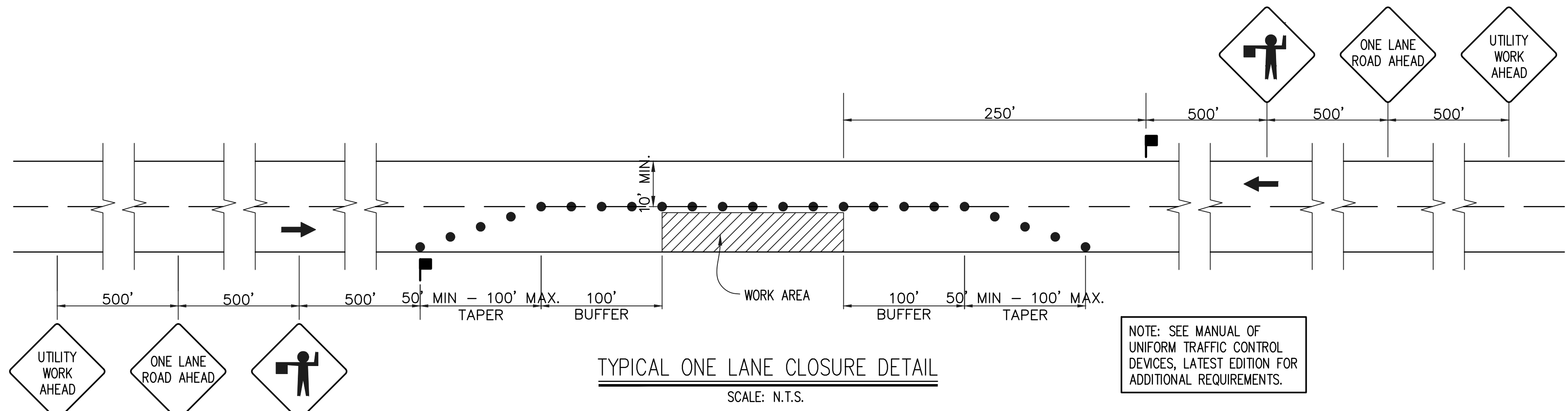


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**TRAFFIC CONTROL NOTES:**

1. NO ONE SET OF TEMPORARY TRAFFIC CONTROL (TTC) DEVICES CAN SATISFY ALL CONDITIONS FOR A GIVEN PROJECT OR INCIDENT. AT THE SAME TIME, DEFINING DETAILS THAT WOULD BE ADEQUATE TO COVER ALL APPLICATIONS IS NOT PRACTICAL. INSTEAD, THESE DETAILS DISPLAY TYPICAL APPLICATIONS THAT DEPICT COMMON APPLICATIONS OF TTC DEVICES. THE TTC SELECTED FOR EACH SITUATION DEPENDS ON MANY FACTORS SUCH AS: THE TYPE OF HIGHWAY, ROAD USER CONDITIONS, DURATION OF OPERATION, PHYSICAL CONSTRAINTS, THE NEARNESS OF THE WORK SPACE OR INCIDENT MANAGEMENT ACTIVITY TO ROAD USERS, ETC. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PLANNING AND COORDINATING ALL TRAFFIC CONTROL DETAILS AND THEIR SUCCESSFUL IMPLEMENTATION IN ACCORDANCE WITH THE ALDOT REQUIREMENTS AND THE MOST CURRENT EDITION OF PART 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS A MINIMUM.
2. THE CONTRACTOR SHALL PREPARE HIS OWN SPECIFIC DETAILED TTC PLAN, PREPARED BY PERSON(S) TRAINED AND CERTIFIED IN PROPER TTC PRACTICES AND PRINCIPLES. PLAN SHALL HAVE DETAILS OF PLANNED WORK AND TTC MEASURES TO BE EMPLOYED BASED ON THE CONTRACTOR'S PLANNED MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR'S PLAN SHALL BE SUBMITTED TO THE ALDOT FOR REVIEW AND APPROVAL BEFORE BEGINNING ANY WORK ON THE PROJECT. ANY CHANGES IN THE FINAL APPROVED TTC PLAN SHOULD BE APPROVED BY THE ALDOT.
3. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR SAFETY. THE ENGINEER IS NOT RESPONSIBLE FOR SAFETY. THE CONTRACTOR SHALL CONTINUOUSLY UTILIZE SAFETY PRACTICES THAT MAY BE NEEDED FOR FULL PROTECTION OF ALL PERSONS INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION PERSONNEL, THE OWNER'S PERSONNEL, FIELD ENGINEERS, INSPECTORS, THE GENERAL PUBLIC, ETC.
4. ALL WORKERS SHOULD BE TRAINED ON HOW TO WORK NEXT TO MOTOR VEHICLE TRAFFIC IN A WAY THAT MINIMIZES THEIR VULNERABILITY. WORKERS HAVING SPECIFIC TTC RESPONSIBILITIES SHOULD BE TRAINED IN TTC TECHNIQUES, DEVICE USAGE, PLACEMENT, ETC.
5. TO PROVIDE ACCEPTABLE LEVELS OF OPERATIONS, ROUTINE DAY AND NIGHT INSPECTIONS OF TTC ELEMENTS SHOULD BE PERFORMED BY THE CONTRACTOR. INDIVIDUALS THE CONTRACTOR EMPLOYS FOR TTC SHOULD BE KNOWLEDGEABLE (FOR EXAMPLE, TRAINED AND/OR CERTIFIED) IN THE PRINCIPLES OF PROPER TTC AND SHOULD BE ASSIGNED RESPONSIBILITY FOR SAFETY IN TTC ZONES. THESE INDIVIDUALS SHOULD CHECK THAT ALL TTC DEVICES OF THE PROJECT ARE CONSISTENT WITH THE TTC PLAN; ARE EFFECTIVE FOR MOTORISTS, BICYCLISTS, PEDESTRIANS, AND WORKERS; MEET ALDOT REQUIREMENTS; CONDUCT HAZARD ASSESSMENTS; DETERMINE WHETHER ENGINEERING, ADMINISTRATIVE, OR PERSONAL PROTECTION MEASURES SHOULD BE IMPLEMENTED; ENSURE CONFORMANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AS A MINIMUM; ENSURE CONFORMANCE WITH OSHA REQUIREMENTS; ETC.
6. SPECIAL PLANS PREPARATION AND COORDINATION WITH HIGHWAY AGENCIES, LAW ENFORCEMENT AND OTHER EMERGENCY UNITS, UTILITIES, SCHOOLS, TRUCKING COMPANIES, INDUSTRIES, OSHA, ETC. MIGHT BE NEEDED TO REDUCE UNEXPECTED AND UNUSUAL ROAD USER OPERATION SITUATIONS.
7. ALL PERSONS WHO ARE EXPOSED EITHER TO TRAFFIC OR WORK VEHICLES AND CONSTRUCTION EQUIPMENT WITHIN THE TTC ZONE SHALL WEAR HIGH VISIBILITY SAFETY APPAREL AS SPECIFIED BY THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AS A MINIMUM.
8. PROJECT NOTIFICATION SIGNS ARE REQUIRED AT EACH END OF THE SITE, STATING THE SPONSOR, TYPE OF CONSTRUCTION, START DATE, AND DURATION, PLACED A MINIMUM OF ONE WEEK IN ADVANCE OF COMMENCING CONSTRUCTION. SIGN AND PLACEMENT OF SIGN SHALL BE AS APPROVED BY THE ALDOT.
9. RESERVED.
10. ROADS MUST REMAIN OPEN AT ALL TIMES DURING THE ENTIRE CONSTRUCTION PROJECT. SINGLE LANE CLOSURES SHALL BE COORDINATED WITH ALDOT WHEN NECESSARY FOR CONSTRUCTION ACTIVITIES. THESE LOCATIONS AND PLANNED DETAILS SHOULD BE SHOWN IN THE CONTRACTOR'S TRAFFIC CONTROL PLANS SUBMITTED TO THE ALDOT. LANE CLOSURES ARE NOT ALLOWED AT NIGHT OR DURING THE MORNING AND AFTERNOON PEAK TRAVEL TIMES.
11. DURING NON-WORKING HOURS NO EQUIPMENT OR MATERIAL SHALL BE PARKED OR STORED CLOSER THAN 30 FEET FROM THE EDGE OF ANY ROADWAY CARRYING TRAFFIC IF POSSIBLE. CHANNELIZING DRUMS ARE TO BE LOCATED ALONG THE EDGE OF THE ROADWAY (SEE TYPICAL MATERIAL AND EQUIPMENT STORAGE DETAIL THIS SHEET) WHEN EQUIPMENT OR MATERIAL IS STORED LESS THAN 30' FROM ROADWAY. ALL CONTRACTOR'S EMPLOYEES' PERSONAL VEHICLES, AND CONTRACTOR'S EQUIPMENT NOT IN OPERATION, SHALL BE PARKED A MINIMUM OF 30 FEET FROM THE TRAVELED ROADWAY DURING WORKING HOURS, AS NOT TO CREATE A HAZARD.
12. WHERE THE LOCATION OF A REQUIRED SIGN FALLS IN A DRIVEWAY, SIDEWALK, BRIDGE, ETC., OR WHERE THE VISIBILITY OF A SIGN IS LIMITED TO THE TRAVELING PUBLIC, THE LOCATION SHALL BE ADJUSTED AS APPROVED BY THE ALDOT.
13. WHEN FLAGGERS ARE REQUIRED TO BE USED THEY SHALL BE TRAINED AND MEET ALL REQUIREMENTS AND FOLLOW ALL PROCEDURES OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AS A MINIMUM AND THE HAND SIGNALING DEVICES AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE PER THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AS A MINIMUM.
14. ALL TRAFFIC CONTROL DEVICES (SIGNS, SIGNALS, MARKINGS, CHANNELIZING DEVICES, LIGHTS, TEMPORARY TRAFFIC BARRIERS, AND OTHER DEVICES); THERE PLACEMENTS; AND THERE MAINTENANCE SHALL BE PER THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AS A MINIMUM.
15. ANYTIME PIPE IS STRUNG OUT WITHIN 10 FEET OF THE ROAD, TRAFFIC DRUMS, ACCEPTABLE TO ALDOT ARE REQUIRED TO BE PLACED BETWEEN THE ROAD AND THE PIPE AT SPACING APPROVED BY ALDOT.



**LEGEND**

- ▬ SIGN
- CHANNELIZING DRUM
- FLAGGER

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**ALEXANDER CITY**  
 CITY OF ALEXANDER CITY  
 2021 CDBG WATER MAIN REPLACEMENT

Professional Engineer  
 S. COUS  
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BAR = 1"

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