

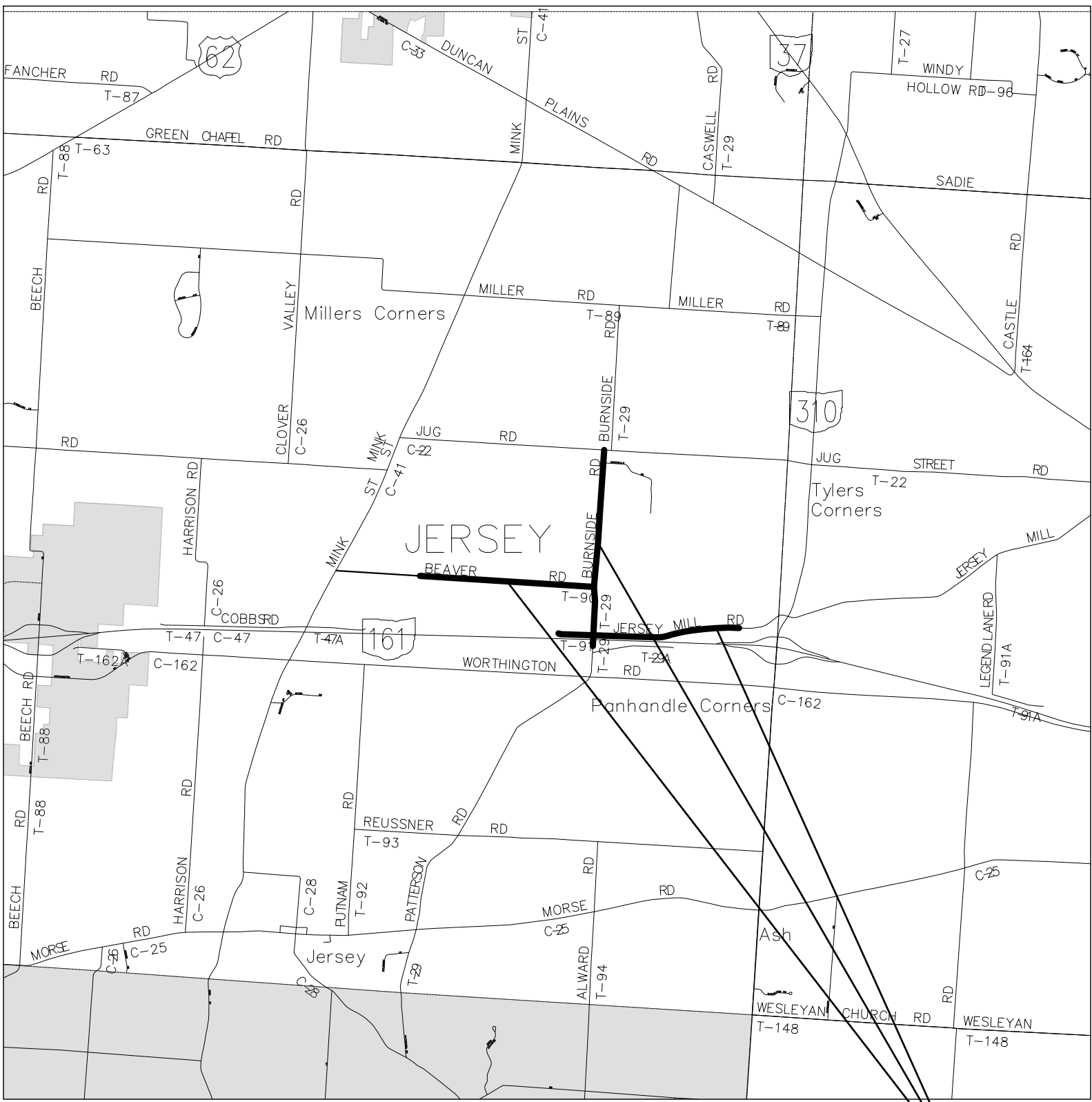
STATE ROUTE 161-MINK STREET WATERLINE EXTENSION

FOR THE

LICKING REGIONAL WATER DISTRICT

LICKING COUNTY, OHIO

AUGUST 2025



PROJECT LOCATION MAP
NO SCALE



PROJECT LOCATION

DRAWING LIST

SHEET NO.	SHEET TITLE
1	TITLE SHEET
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5-11	PLAN & PROFILE SHEETS
12-15	DISTRICT STANDARD CONSTRUCTION DRAWINGS

Strand Associates, Inc.
500 Neil Ave, Suite 110
Columbus, OH 43215
614-835-0460
www.strand.com

CONTRACT 1-2024

CERTIFIED BY: _____
HAROLD P. KARNES, P.E. _____ DATE
OHIO REGISTRATION NO. 77895

APPROVED BY: _____
CHRISTOPHER GILCHER _____ DATE
OPERATIONS DIRECTOR
LICKING REGIONAL WATER DISTRICT



100% DESIGN DRAWINGS

**SHEET
1**

NOTIFICATION

THE CONTRACTOR SHALL NOTIFY THE JERSEY TOWNSHIP TRUSTEES AT LEAST 48 HOURS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION.

JERSEY TOWNSHIP TRUSTEES: (740)–927–0331

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS.

ELECTRIC AEP OHIO PAUL PAXTON 777 HOPEWELL DRIVE HEATH, OH 43056 (740) 348–53322	TELEPHONE CHARTER COMMUNICATIONS TONY ADAMS 3760 INTERCHANGE ROAD COLUMBUS, OH 43204 (614) 496–3651	TELECOM BRIGHTSPEED INTERNET
THE ENERGY COOPERATIVE ETHAN BODE 1500 GRANVILLE ROAD NEWARK, OH 43055 (740) 344–2102	GAS ASPIRE ENERGY CHERYL LEMON 300 TRACY BRIDGE ROAD ORRVILLE, OH 44667 (330) 682–1659	
TRANSPORTATION ODOT DISTRICT RANDY HITE 9600 JACKSONTOWN ROAD SE JACKSONTOWN, OH 43030 3323–5129	MARATHON PIPELINE MICHAEL PRESTON 855 KELLER ROAD HEATH, OH 43056 (740) 258–4911	
JERSEY TOWNSHIP ROB PLATTE 1481 MINK STREET PATASKALA, OH 43062 (740) 927–0331	THE ENERGY COOPERATIVE ETHAN BODE 1500 GRANVILLE ROAD NEWARK, OH 43055 (740) 344–2102	

THE CONTRACTOR SHALL NOTIFY OUPS (1–800–362–2764) AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. NON-MEMBERS MUST CALL DIRECTLY.

UTILITY LOCATIONS: THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS ARE AS OBTAINED FROM THE OWNERS OF UTILITIES AS REQUIRED BY SECTION 153.64 ORC. LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITES AND STRUCTURES SHOWN IN THE DRAWINGS ARE APPROXIMATE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THEIR EXACT LOCATION AND ELEVATION WHEN WORKING IN THEIR VICINITY.

ALL ROCK EXCAVATION, AS DEFINED IN THE SPECIFICATIONS, SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS OF WORK. COST FOR ROCK EXCAVATION, IF ENCOUNTERED, SHALL BE INCLUDED IN THE PRICES BID FOR OTHER ITEMS OF WORK.

DISTRICT GENERAL NOTES

- GENERAL: THE CURRENT LICKING REGIONAL WATER DISTRICT CONSTRUCTION AND MATERIAL SPECIFICATIONS TOGETHER WITH THE O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS INCLUDING ALL SUPPLEMENTS THERETO IN FORCE ON THE DATE OF CONTRACT, SHALL GOVERN ALL MATERIALS, METHODS OF CONSTRUCTION AND WORKMANSHIP INVOLVED IN THE IMPROVEMENTS SHOWN ON THESE PLANS, EXCEPT AS SUCH SPECIFICATIONS ARE MODIFIED BY THE FOLLOWING SPECIFICATIONS OR BY THE CONSTRUCTION DETAILS SET FORTH HEREIN.
- WORK LIMITS: THE CONTRACTOR SHALL CONFINE HIS ACTIVITIES TO THE PROJECT SITE UNDER DEVELOPMENT, EXISTING RIGHTS-OF-WAY, CONSTRUCTION EASEMENTS AND PERMANENT EASEMENTS, AND SHALL NOT TRESPASS UPON OTHER PRIVATE PROPERTY WITHOUT THE WRITTEN CONSENT OF THE PROPERTY OWNER.
- MISCELLANEOUS WORK: ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR AND THE COST OF SAME SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS RELATED ITEMS.
- FIELD TILE: ALL FIELD TILE AND OTHER DRAINAGE TILE BROKEN DURING EXCAVATION SHALL BE REPLACED TO ITS ORIGINAL CONDITION AS DIRECTED BY THE DISTRICT REPRESENTATIVE.
- SURPLUS EXCAVATION: THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL SURPLUS EXCAVATION.
- EXISTING UTILITIES: THE INFORMATION SHOWN CONCERNING EXISTING UTILITIES IS NOT REPRESENTED, WARRANTED OR GUARANTEED TO BE COMPLETE OR ACCURATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PHYSICALLY LOCATE AND VERIFY IN THE FIELD, ALL UTILITY LOCATIONS AND ELEVATIONS, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO THE BEGINNING OF CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL SUPPORT, PROTECT, AND RESTORE ALL EXISTING UTILITIES AND ASSOCIATED ITEMS TO THE SATISFACTION OF THE UTILITY OWNER. THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS, IN ACCORDANCE WITH SECTION 153.64 OF THE OHIO REVISED CODE, AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO THE BEGINNING OF ANY WORK, TO REQUEST UTILITY LOCATIONS, TO COORDINATE THE WORK, AND TO KEEP THE UTILITY OWNERS APPRAISED OF THE CONSTRUCTION SCHEDULE AND REQUIREMENTS UNTIL ALL WORK IS COMPLETED. NOTICE SHALL BE GIVEN TO THE OHIO UTILITIES PROTECTION SERVICE (800–362–2764) FOR THE MEMBER UTILITIES.
- SAFETY OF CONSTRUCTION: COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED, AND APPLICABLE OSHA REGULATIONS IS REQUIRED OF ALL CONTRACTORS ON THE PROJECT. EACH CONTRACTOR AND SUBCONTRACTOR IS RESPONSIBLE TO IMPLEMENT, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

- NOTIFICATION: THE CONTRACTOR SHALL NOTIFY THE DISTRICT (740–927–0410) FORTY-EIGHT (48) HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO THE START OF CONSTRUCTION OF WATER AND/OR SANITARY SEWER UTILITIES. WHEN CONSTRUCTION IS SUSPENDED FOR MORE THAN SEVEN DAYS, THE CONTRACTOR SHALL NOTIFY THE DISTRICT FORTY-EIGHT (48) HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO RESUMING CONSTRUCTION. CONSTRUCTION SHALL NOT START PRIOR TO THE REQUIRED NOTICE BEING GIVEN.
- CLEAN-UP: THE TRACKING OF MUD, DIRT OR DEBRIS UPON ANY PUBLIC ROADWAY IS PROHIBITED AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL CLEAN UP ALL DEBRIS AND MATERIALS RESULTING FROM THE CONSTRUCTION OPERATION AND RESTORE ALL SURFACES, STRUCTURES, DITCHES, AND PROPERTY TO ITS ORIGINAL CONDITION AND TO THE SATISFACTION OF THE DISTRICT.
- PERMITS: THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS AND REQUIREMENTS.
- CROSSINGS: ALL WATER MAINS AND SERVICES SHALL BE CONSTRUCTED WITH AT LEAST 10 FEET HORIZONTAL SEPARATION AND AT LEAST AN 18-INCH VERTICAL SEPARATION FROM ALL SANITARY AND STORM SEWERS.
- TRAFFIC CONTROL: WHERE IT IS ANTICIPATED THAT THE UTILITY WORK WILL CLOSE A STREET, THE CONTRACTOR SHALL INFORM THE RESIDENTS TO BE AFFECTED, COUNTY SHERIFF'S OFFICE OR LOCAL POLICE DEPARTMENT, FIRE DEPARTMENT, THE DISTRICT, APPLICABLE SCHOOL DISTRICT, AND OTHER APPLICABLE ENTITIES AS TO THE EXTENT, NATURE, AND TIME OF THE ANTICIPATED WORK. ADEQUATE LIGHTS, SIGNS, AND BARRICADES SHALL BE USED, AS REQUIRED IN THE O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS AND OMUTCD, TO SAFEGUARD THE TRAVELING PUBLIC AT ALL TIMES. ALL TRENCHES SHALL BE BACKFILLED OR SECURELY PLATED WITHIN THE PUBLIC RIGHT-OF-WAY DURING NON-WORKING HOURS.
- CURB MARKINGS: THE DISTRICT REQUIRES THAT THE LETTERS "WV" FOR WATER MAIN VALVE, "W" FOR WATER SERVICE LINE, "S" FOR SANITARY SEWER SERVICE LINE, AND "MH" FOR SANITARY SEWER MANHOLE BE EMBEDDED IN THE CONCRETE CURB. FOR STANDARD CURBS, THE LETTER IS TO BE LOCATED IN THE CENTER ON THE TOP FLAT PORTION OF THE CURB. FOR ROLLED CURBS, THE TOP OF THE LETTER IS TO BE LOCATED ON THE FACE OF THE CURB WITHIN ONE AND ONE-HALF (1–1/2) INCHES OF THE CREST. THE LETTER IS TO BE AT LEAST TWO (2) INCHES WIDE, THREE (3) INCHES HIGH AND ONE QUARTER (1/4) INCH DEEP. THE LETTERS "WV" AND "MH" ARE TO BE LOCATED ON THE CURB IMMEDIATELY ADJACENT TO ALL WATER MAIN VALVES AND SANITARY SEWER MANHOLES. THE LETTERS "W" AND "S" ARE TO BE LOCATED DIRECTLY OVER THE HOUSE SERVICE LINES.
- SEDIMENT AND EROSION CONTROL: THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING NECESSARY AND ADEQUATE MEASURES FOR PROPER CONTROL OF EROSION AND SEDIMENT RUNOFF FROM THE SITE ALONG WITH PROPER MAINTENANCE AND INSPECTION IN COMPLIANCE WITH THE NPDES GENERAL PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY. ALL SEDIMENT AND EROSION CONTROL MEASURES REQUIRED IN THE PLANS, THE DISTRICT CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND THE OHIO EPA STORM WATER REGULATIONS AND GENERAL PERMIT SHALL BE IN PLACE AND OPERATIONAL PRIOR TO CONSTRUCTION BEGINNING IN THE WORK AREA.
- PROHIBITED CONSTRUCTION ACTIVITIES: THE FOLLOWING CONSTRUCTION ACTIVITIES ARE PROHIBITED ON THE PROJECT.
 - USING ANY SUBSTANCE OTHER THAN WATER TO CONTROL DUST.
 - TRACKING OF MUD, DIRT AND DEBRIS ONTO ANY PUBLIC ROADWAY.
 - OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE PERMIT OR DISPOSING OF THE TREES AND STUMPS.
 - PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM SEWERS.
 - DISCHARGING POLLUTANTS – SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE – AND OTHER HARMFUL WASTE INTO OR ALONGSIDE RIVERS, STREAMS, AND IMPOUNDMENTS OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO.
 - STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED FOR SAID PURPOSES.
 - DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOODPLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.
 - INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, WETLANDS, SURFACE WATERS, OR OUTSIDE THE EASEMENT AREA.
 - PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF A STREAM.
 - REMOVAL OF TREES AND BUSHES, OR DAMAGING VEGETATION OUTSIDE THE LIMITS OF THE CONSTRUCTION AREA.
 - DISPOSAL OF TREES, BRUSH AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS OR AT UNSPECIFIED LOCATIONS.
- AS-BUILTS: ALL BENDS, FITTINGS, MAINLINE VALVES, WATER SERVICE VALVES, FIRE HYDRANTS, MANHOLES, AND SANITARY SEWER SERVICES MUST BE GPS LOCATED AND SHOWN ON THE AS-BUILT DRAWINGS USING THE OHIO STATE PLANE COORDINATE

SYSTEM. COORDINATE TABLE SHALL BE PROVIDED IN EXCEL FORMAT. TWO (2) FULL SIZE (2'x3') AND TWO (2) HALF SIZE (1'x1.5') SETS OF AS-BUILT CONSTRUCTION DRAWINGS IN AUTOCAD AND PDF FORMAT SHALL BE PROVIDED TO THE LICKING REGIONAL WATER DISTRICT AS SOON AS ALL PUBLIC IMPROVEMENTS ARE COMPLETED AND PRIOR TO FINAL ACCEPTANCE. ALL DOCUMENTS SHALL BE UPLOADED INTO A SECURE, CLOUD-BASED FILE STORAGE SITE.

- SPECIFICATION DEVIATIONS: THE LICKING REGIONAL WATER DISTRICT RESERVES THE RIGHT TO DEVIATE FROM ITS' CONSTRUCTION MATERIAL SPECIFICATIONS ON A CASE-BY-CASE BASIS AT THE SOLE DISCRETION OF THE DISTRICT ADMINISTRATION. DEVIATIONS SHALL BE IN THE BEST INTEREST OF THE DISTRICTS' CUSTOMERS AND/OR PROVIDE A BETTER MEANS OF OPERATIONS AND MAINTENANCE.

DISTRICT WATERLINE NOTES

- CONNECTING WATERLINES: THE CONNECTION OF PROPOSED WATERLINES TO EXISTING WATERLINES SHALL BE DONE IN A MANNER THAT WILL CAUSE A MINIMUM OF INCONVENIENCE TO THOSE WITH AFFECTED SERVICES.WORK CONCERNING THE DISCONNECTION AND RE-CONNECTION OF EXISTING WATERLINES SHALL BE DONE BETWEEN THE HOURS OF 10:00 P.M. AND 5:00 A.M., OR AS DIRECTED BY THE DISTRICT. NO SUCH WORK SHALL BEGIN UNTILTHE FIRE DEPARTMENT, DISTRICT, COUNTY SHERIFF'S OFFICE AND RESIDENTS WHOSE SERVICES WILL BE AFFECTED ARE ALL NOTIFIED AT LEAST ONE HUNDRED TWENTY (120) HOURS PRIOR TO THE CONNECTION, OF THE EXTENT, NATURE AND TIME OF THE ANTICIPATED WORK, NOR UNTIL THE METHOD AND SCHEDULE OF SUCH WORK HAS BEEN APPROVED BY THE DISTRICT.
- SERVICE LOCATIONS: ALL WATER SERVICES SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM THE SANITARY SEWER SERVICE AND IN A SEPARATE TRENCH. A PERMIT FOR EACH WATER SERVICE MUST BE OBTAINED FROM THE DISTRICT, PRIOR TO MAKING ANY CONNECTION FROM THE WATER MAIN OR WATER SERVICE BOX TO ANY EXISTING OR PROPOSED BUILDING.
- CONFLICTS: WHEN CONFLICTS IN GRADE BETWEEN WATERLINES AND SEWERS ARE FOUND DURING CONSTRUCTION, THE WATERLINES SHALL BE LOWERED, UNLESS DIRECTED OTHERWISE BY THE DISTRICT. A MINIMUM VERTICALSEPARATION OF 18 INCHES, MEASURED FROM THE OUTSIDE OF EACH PIPE, SHALL BE MAINTAINED.
- MINIMUM DEPTH: WATER LINES SHALL BE LAID AS SHOWN ON DRAWINGS AND WITH A MINIMUM OF FOUR (4) FEET OF COVER FROM THE FINAL PROPOSED GROUND OR PAVEMENT GRADE TO THE TOP OF THE WATERLINE.
- LINE CROSSINGS: AT ALL POINTS OF CROSSING OF WATER MAINS AND SEWERS, THE BACKFILL SHALL BE GRANULAR MATERIAL BETWEEN THE DEEPER AND SHALLOWER PIPE. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAINS AND ALL SEWERS SHALL BE TEN (10) FEET MEASURED FROM THE OUTSIDE OF EACH PIPE. THE MINIMUM VERTICAL SEPARATION AT CROSSINGS OF WATER MAINS AND ALL SEWERS SHALL BE 18 INCHES MEASURED FROM THE OUTSIDE OF EACH PIPE.
- DISINFECTION: ALL WATER MAINS SHALL BE CLEANED AND DISINFECTED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF AWWA SPECIFICATION C651. SPECIAL ATTENTION IS DIRECTED TO THE REQUIREMENTS OF FLUSHING AND CHLORINATING VALVES AND FIRE HYDRANTS. RESULTS OF THE DISINFECTION TESTS SHALL BE FURNISHED TO THE DISTRICT PRIOR TO ACCEPTANCE OF THE SYSTEM. TESTING FOR ACCEPTANCE TO BE CONDUCTED AFTER ALL OTHER UTILITIES LOCATED WITHIN THE RIGHT-OF-WAY ARE INSTALLED.
- TESTING: A HYDROSTATIC TEST, AS REQUIRED IN SECTION 7.3 OF AWWA SPECIFICATION C605 FOR PVC PIPE OR SECTION 5.2 OF AWWA SPECIFICATION C600 FOR DUCTILE IRON PIPE AS APPLICABLE, SHALL BE APPLIED TO THE WATER MAIN. IF THERE ARE INDICATIONS OF LEAKS UNDER THIS PRESSURE TEST, THE CONTRACTOR SHALL LOCATE AND REPAIR ALL LEAKS AT THE CONTRACTOR'S EXPENSE UNTIL THE LEAKAGE IS WITHIN THE SPECIFIED ALLOWANCE. ALL BENDS, JOINT DEFLECTIONS AND HYDRANTS SHALL HAVE CONCRETE BACKING, AND ALL VALVES SHALL HAVE CONCRETE SUPPORTS, IN ACCORDANCE WITH THE STANDARD CONSTRUCTION DRAWINGS. TESTING FOR ACCEPTANCE TO BE CONDUCTED AFTER ALL OTHER UTILITIES LOCATED WITHIN THE RIGHT-OF-WAY ARE INSTALLED.
- FIRE HYDRANTS: FIRE HYDRANTS SHALL BE AMERICAN FLOW CONTROL MODEL MK-73-5, MUELLER SUPER CENTURION 250 MODEL A-421 OR CLOW MEDALLION, AS SHOWN ON STANDARD DRAWING W-20, AND BE INSTALLED AS PER STANDARD DRAWINGS W-21, W-22, W-23, W-24 AND W-25. WEST LICKING FIRE DEPARTMENT REQUIRES ALL FIRE HYDRANTS TO HAVE A "SCREW ON" TYPE STORTZ FITTING. FIRE HYDRANTS SHALL BE PAINTED FIRE PROTECTION RED FROM THE MANUFACTURER AND THE LIDS OF WATCH VALVE BOXES PAINTED FIRE PROTECTION RED IN THE FIELD. FIRE HYDRANTS ON A PRIVATE WATER SYSTEM SHALL BE PAINTED FIRE PROTECTION RED WITH A BLUE BONNET. THE DISTRICT MAY REQUIRE SPECIFIC HYDRANTS TO MATCH EXISTING DEVELOPMENTS.
- CURB AND VALVE BOXES: CURB BOXES SHALL BE LOCATED 6 INCHES FROM THE FRONT PROPERTY LINE OR EASEMENT LINE, AND WITHIN 10 FEET OF THE SIDE PROPERTY LINE, UNLESS OTHERWISE SHOWN ON THE PLANS. ALL CURB BOX AND VALVE BOX TOPS SHALL BE ADJUSTED TO BE 3" ABOVE FINAL SURFACE GRADES. THE CONTRACTOR SHALL FURNISH AND PLACE, AS DIRECTED, A STAKE MADE OF 4" X 4" HARDWOOD LUMBER AT ALL CURB BOXES AND VALVE BOXES, EXTENDING A MINIMUM OF 3 FEET ABOVE FINAL SURFACE GRADES WITH THE TOP 2 FEET OF THE 4"x4" BEING PAINTED SAFETY BLUE. ALL CURB AND VALVE BOX LIDS SHALL BE PAINTED SAFETY BLUE.
- CURB BOX EXTENSION ROD: A FORD ROD-42 EXTENSION ROD WITH CENTERING RING SHALL BE INSTALLED ON ALL CURB BOXES.
- VALVE EXTENSION: IF THE TOP OF THE OPERATING NUT IS LOWER THAN 36 INCHES BELOW FINISHED GRADE, AN EXTENSION STEM SHALL BE FURNISHED TO BRING THE TOP OF THE OPERATING NUT TO BETWEEN 24 INCHES AND 36 INCHES OF FINISHED GRADE ELEVATION.

GENERAL NOTES AND LEGEND

STATE ROUTE 161 - MINK STREET WATERLINE EXTENSION
LICKING REGIONAL WATER DISTRICT
LICKING COUNTY, OHIO

DATE:						
REVISIONS						
NO.						

JOB NO.
4379.006

PROJECT MGR.
HPK



STRAND
ASSOCIATES®

SHEET
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DISTRICT WATERLINE NOTES (CONT.)

12. INSTALLATION IN EMBANKMENT: WHERE WATER MAINS ARE TO BE INSTALLED IN EMBANKMENT AREAS, THE EMBANKMENT SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS PRIOR TO THE INSTALLATION OF THE WATER MAIN. THE WATER MAIN SHALL BE INSTALLED WITH A MINIMUM OF FOUR (4) FEET OF COVER IN ALL DIRECTIONS.
13. VALVE OPERATION: EXISTING VALVES SHALL BE OPERATED BY DISTRICT PERSONNEL ONLY.
14. CONSTRUCTION AND MATERIAL SPECIFICATIONS: ALL MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE CURRENT LICKING REGIONAL WATER DISTRICT CONSTRUCTION AND MATERIAL SPECIFICATIONS, INCLUDING ALL SUPPLEMENTS THERETO (UNLESS TOWNSHIP, CITY, AND/OR COUNTY STANDARDS ARE MORE STRINGENT, IN WHICH CASE THOSE STANDARDS SHALL BE FOLLOWED). WATER MAIN PIPE SHALL BE PVC PLASTIC PIPE, AWWA C900 DR 18. DUCTILE IRON PIPE CLASS 52, AWWA C151, CEMENT LINED AWWA C104, WITH JOINTS CONFORMING TO AWWA C111 IS AN ACCEPTABLE ALTERNATE WATER MAIN PIPE. ALL BENDS, JOINT DEFLECTIONS AND FITTINGS SHALL BE BACKED WITH CONCRETE. BLUE METALLIC FIELD LOCATOR TAPE OF SIX (6) INCH WIDTH SHALL BE PLACED OVER ALL WATER MAINS, WITHIN 12 TO 18 INCHES OF FINISHED GRADE. TWELVE (12) GAUGE EXTRA HIGH STRENGTH TRACER WIRE SHALL BE LAID IN THE PIPE TRENCH IN ACCORDANCE WITH SWLCWS DISTRICT CMS SECTION 212.01(C). TRACER WIRE CONNECTIONS SHALL BE MADE WITH COPPERHEAD SNAKEBITE WATERPROOF DIRECT BURY LUGS #3WB-01 AND PROVIDED IN ACCORDANCE WITH LICKING REGIONAL WATER DISTRICT CMS SECTION 210.06.

THE MINIMUM LENGTH OF PIPE TO BE RESTRAINED SHALL BE AS SHOWN IN THE FOLLOWING TABLE:

REQUIRED LENGTH OF RESTRAINED PIPE BEYOND FITTING IN FEET:

FITTING (PIPE DIAMETER)	MINIMUM LENGTH (FT)
45 DEGREE BEND (≤ 8 INCHES)	18
45 DEGREE BEND (10 INCH TO 16 INCHES)	36
22 1/2 DEGREE BEND (≤ 16 INCHES)	18
11 1/4 DEGREE BEND (≤ 16 INCHES)	9
FIRE HYDRANT LEADS	ALL JOINTS
END OF LINE TEES (6 INCHES TO 8 INCHES)	36 (ALONG BRANCH)
END OF LINE TEES (14 INCHES TO 16 INCHES)	72 (ALONG BRANCH)

*RESTRAINED RUN LENGTH ON TEES ASSUMED 18 FEET ON EACH SIDE OF FITTING.

WATER MAIN VALVES SHALL BE AWWA C509, RESILIENT WEDGE WITH 250 PSI WORKING PRESSURE, NONRISING STEM, LEFT HAND OPEN VALVE WITH RUBBER "O" PACKING SEALS. ALL VALVE BONNET BOLTS SHALL BE STAINLESS STEEL.

WATER SERVICE LINE PIPE SHALL BE AWWA C901, PE 4710, DR9, CTS ASTM D2737 AND SHALL BE INSTALLED WITH A COVER OF FOUR (4) FEET.

15. WATER SYSTEM PRESSURE: ALL WATER MAINS INCLUDING THOSE NOT DESIGNED TO PROVIDE FIRE PROTECTION, SHALL BE SIZED AFTER A HYDRAULIC ANALYSIS BASED ON FLOW DEMANDS AND PRESSURE REQUIREMENTS. THE SYSTEM SHALL BE DESIGNED TO MAINTAIN A MINIMUM PRESSURE OF 20 PSI (140 KPA) AT GROUND LEVEL AT ALL POINTS IN THE DISTRIBUTION SYSTEM UNDER ALL CONDITIONS OF FLOW. THE NORMAL WORKING PRESSURE IN THE DISTRIBUTION SYSTEM SHALL BE AT LEAST 35 PSI (240 KPA) AND SHOULD BE APPROXIMATELY 60 TO 80 PSI (410 – 550 KPA) AND NOT LESS THAN 35 PSI (240 KPA).

16. CURB STOP: CURB STOP SHALL BE EQUIVALENT TO MUELLER H-15209 WITH A BOX EQUIVALENT TO BINGHAM AND TAYLOR NO. 4901, SIZE 94E. ALL CURB STOPS SHALL BE PROVIDED WITH VADLE CURB BOX LOCK.

17. CORPORATION STOP AND SADDLE: CORPORATION STOPS SHALL BE MUELLER H-15008 WITH A FORD STYLE "FS" SERIES 313 TAPPING SADDLE OR DISTRICT PRE-APPROVED EQUAL.

18. TAPPING SLEEVE: TAPPING SLEEVES SHALL BE STAINLESS STEEL AND SHALL BE EQUIVALENT TO MUELLER H-304 OR SMITH BLAIR 663.

19. BACKFLOW PREVENTERS: BACKFLOW PREVENTERS SHALL BE PROVIDED ON ALL COMMERCIAL CONNECTIONS AND ANY RESIDENTIAL CONNECTIONS WHERE AN AUXILIARY WATER SUPPLY IS AVAILABLE. ALL BACKFLOW PREVENTERS SHALL HAVE AN APPROVED EXPANSION TANK.

REDUCED PRESSURE BACKFLOW PREVENTERS SHALL BE PROVIDED FOR ALL AREAS DEEMED BY THE DISTRICT WHERE THERE IS A HIGH POTENTIAL HEALTH HAZARD FROM CONTAMINATION. ALL REDUCED PRESSURE BACKFLOW PREVENTERS SHALL MEET AWWA C511 AND BE FROM THE LATEST APPROVED LIST OF THE OEPA.

DOUBLE CHECK BACKFLOW PREVENTERS SHALL BE PROVIDED FOR ALL AREAS DEEMED BY THE DISTRICT WHERE THERE IS A LOW POTENTIAL HEALTH HAZARD FROM CONTAMINATION. ALL DOUBLE CHECK BACKFLOW PREVENTERS SHALL MEET AWWA C510 AND BE FROM THE LATEST APPROVED LIST OF THE OEPA.

20. BOOSTER PUMPS: NO PERSON SHALL INSTALL OR MAINTAIN A WATER SERVICE CONNECTION WHERE A BOOSTER PUMP HAS BEEN INSTALLED, UNLESS AN APPROVED METHOD IS IN PLACE AND OPERATIONAL TO MAINTAIN SUCTION PRESSURE IN ACCORDANCE WITH OHIO ADMINISTRATIVE CODE RULE 3745-95-07.

21. TOOLS AND SPARE PARTS: THE FOLLOWING TOOLS AND SPARE PARTS SHALL BE DELIVERED TO THE DISTRICT PRIOR TO FINAL ACCEPTANCE OF THE PROJECT: ONE (1) MAINLINE WRENCH, ONE (1) FORTY EIGHT INCH CURB BOX WRENCH (MUELLER H-10356), ONE (1) COMPLETE CURB BOX WITH EXTENSION ROAD AND CENTERING RING, ONE (1) FIRE HYDRANT WRENCH, AND ONE (1) STRAIGHT STORTZ FITTING (HARRINGTON HPHA50-45NH/CAP).

22. ALL WATER MAIN PLUGS, CAPS, TEES, HYDRANTS, BENDS, AND OTHER FITTINGS FOR WATER MAINS SHALL BE PROVIDED WITH RESTRAINED JOINTS IN ADDITION TO REACTION BACKING REQUIRED BY STANDARD DRAWINGS. REACTION BACKING SHALL BE PLACED SO THAT PIPE AND PIPE RESTRAINT ARE ACCESSIBLE FOR REPAIR. THE BEARING AREA BETWEEN THE FITTINGS, PIPE RESTRAINT, AND THE CONCRETE SHALL BE COVERED WITH MINIMUM 8 MIL POLYETHYLENE FILM TO BREAK THE BOND BETWEEN FITTING, PIPE RESTRAINT, AND CONCRETE. MECHANICAL JOINT RESTRAINT SHALL BE PROVIDED BASED ON TABLE IN NOTE 14, THIS SHEET, AND PROVIDED IN ACCORDANCE WITH LICKING REGIONAL WATER DISTRICT CMS SECTION 210.05.





























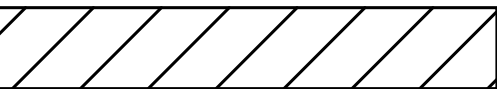





23. MAINTAINING MAIL SERVICE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING MAIL SERVICE IN THE CONSTRUCTION AREA. PRIOR TO DISTURBING ANY MAIL BOXES THE CONTRACTOR SHALL CONTACT THE POSTAL AUTHORITIES AND SHALL TEMPORARILY RELOCATE MAILBOXES IN ACCORDANCE WITH THE REQUIREMENTS THEREFORE. THE CONTRACTOR SHALL RESTORE MAILBOXES THEIR ORIGINAL CONDITION AND LOCATION. COST TO BE INCLUDED IN THE PRICE BID FOR THE VARIOUS WATER MAIN ITEMS.

24. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF MATERIALS USED IN AND CREATED BY HORIZONTAL DIRECTIONAL DRILLING ACTIVITIES IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS AT NO ADDITIONAL COST TO THE DISTRICT.

25. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF EXCESS EXCAVATED MATERIALS NOT USED AS OR SUITABLE FOR BACKFILL IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS AT NO ADDITIONAL COST TO THE DISTRICT.

ABBREVIATIONS

APPROX – APPROXIMATE
CMP – CORRUGATED METAL PIPE
CP – CONTROL POINT
CPP – CORRUGATED PLASTIC PIPE
DIA. – DIAMETER
DR – DIMENSION RATIO
EX. – EXISTING
FH – FIRE HYDRANT
HDD – HORIZONTAL DIRECTIONAL DRILLING
HDPE – HIGH DENSITY POLYETHYLENE
LF – LINEAR FEET
MIN. – MINIMUM
PROP. – PROPOSED
PVC – POLYVINYL CHLORIDE
RCP – REINFORCED CONCRETE PIPE
RD – ROAD
RJB – RESTRAINED JOINT INTEGRAL BELL
R/W – RIGHT OF WAY
SR – STATE ROUTE
ST – STREET
STA. – STATION
WM – WATER MAIN
WS – WATER SERVICE
WV – WATER (GATE) VALVE









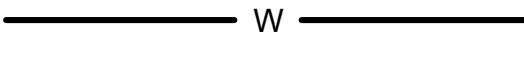






	R/W	EXISTING RIGHT OF WAY		CONTROL POINT
	P	EXISTING PROPERTY LINE		EXISTING BENCHMARK
	G	EXISTING GAS LINE		EXISTING DECIDUOUS/CONIFEROUS TREE
	SAN	EXISTING SANITARY SEWER		EXISTING TREE STUMP
	W	EXISTING WATER MAIN		EXISTING SEPTIC TANK
	ST	EXISTING STORM SEWER		EXISTING CATCH BASIN
		EXISTING CULVERT		EXISTING POWER POLE
	T	EXISTING TELEPHONE LINE		EXISTING GUY WIRE
	E	EXISTING UNDERGROUND ELECTRIC LINE		EXISTING LIGHT POLE
	OH	EXISTING OVERHEAD ELECTRIC LINE		EXISTING SIGN
	FO	EXISTING FIBER OPTIC LINE		EXISTING GAS LINE MARKER
	X	EXISTING FENCE		EXISTING GAS METER
		EXISTING ROAD CENTERLINE		EXISTING WATER VALVE
		EXISTING DITCH CENTERLINE		EXISTING FIRE HYDRANT
		EXISTING DRIVE		EXISTING WATER WELL
		EXISTING MAJOR CONTOUR LINE		EXISTING MANHOLE
		EXISTING MINOR CONTOUR LINE		EXISTING AIR CONDITIONING UNIT

BENCHMARKS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	757814.226	1915881.386	1221.76	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
101	758823.562	1915944.552	1205.60	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
102	759402.686	1915962.416	1213.68	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
103	760012.099	1915961.926	1222.63	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
104	760686.356	1916047.227	1229.55	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
105	761604.093	1916064.427	1207.20	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
106	762576.883	1916157.632	1185.00	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
107	763404.929	1916182.216	1194.80	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
108	761866.334	1916110.236	1204.08	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
109	763952.24	1916227.378	1197.37	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
110	759465.198	1915529.611	1234.02	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
111	759493.625	1915067.592	1248.24	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
112	759519.317	1914178.445	1235.55	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
113	759570.588	1913736.601	1239.23	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
114	759616.507	1912774.189	1221.16	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
115	759626.099	1912106.823	1222.57	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
116	759723.014	1911139.542	1212.51	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
117	757782.624	1916876.694	1212.68	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
118	757745.694	1917861.74	1205.33	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
119	757872.366	1918643.919	1194.39	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
120	757926.748	1918904.604	1193.02	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
121	758044.444	1919698.415	1179.06	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
122	758087.609	1920386.549	1155.89	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
123	757470.423	1915909.949	1215.94	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP
124	757116.952	1915860.316	1212.32	5/8" REBAR WITH YELLOW PLASTIC SURVEY CAP

SURVEY NOTES:

1. THE TOPOGRAPHIC SURVEY WAS CONDUCTED USING GPS SURVEY TECHNIQUES PERFORMED BY STRAND ASSOCIATES, INC. BASED ON FIELD WORK CONDUCTED AT THE SITE IN FEBRUARY 2024.
2. THE BENCHMARKS SHOWN HEREON WERE ESTABLISHED AT THE PROJECT SITE USING REAL-TIME KINETIC GPS OBSERVATIONS. THE REAL-TIME KINETIC GPS OBSERVATIONS WERE MADE USING A TRIMBLE, MODEL R12, DUAL FREQUENCY RECEIVER. THE PROJECT AND REFERENCE MERIDIAN IS BASED ON THE OHIO SOUTH ZONE STATE PLANE COORDINATE SYSTEM (3402), NORTH AMERICAN DATUM OF 1983 (2011)
3. THE VERTICAL CONTROL AND ALL ELEVATIONS SHOWN HEREON CORRESPOND TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88).

LEGEND

	EXISTING ROCK
	EXISTING POST
	EXISTING MAILBOX
	EXISTING TELEPHONE PEDESTAL
	ASHPALT DRIVE
	CONCRETE DRIVE
	GRAVEL DRIVE
	IRON PIN FOUND
PROPOSED	
	PROPOSED WATER MAIN
	PROPOSED WATER MAIN W/ CASING
	PROPOSED END CAP
	PROPOSED WATER VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED GRAVEL DRIVE REPAIR
	PROPOSED PAVEMENT REPAIR
EXISTING AIR CONDITIONING UNIT	

GENERAL NOTES AND LEGEND

STATE ROUTE 161 - MINK STREET WATERLINE EXTENSION

LICKING REGIONAL WATER DISTRICT

LICKING COUNTY, OHIO

JOB NO.
4379.006

PROJECT MGR.
HPK


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SHEET
3



NO.		REVISIONS		DATE	

SHEET INDEX

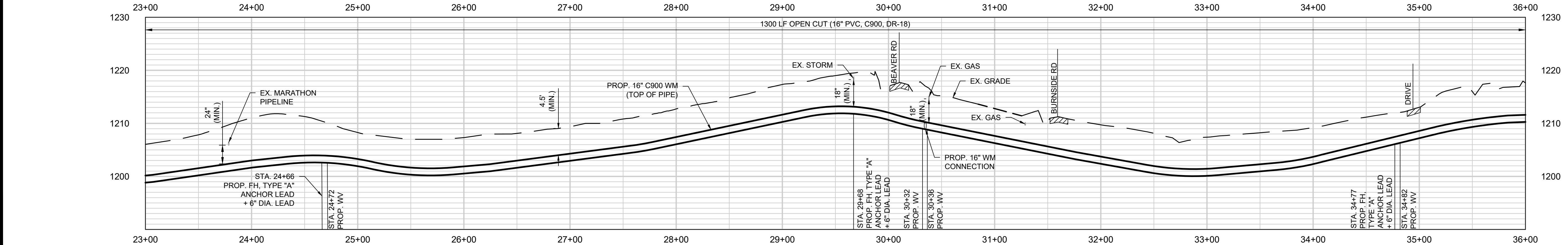
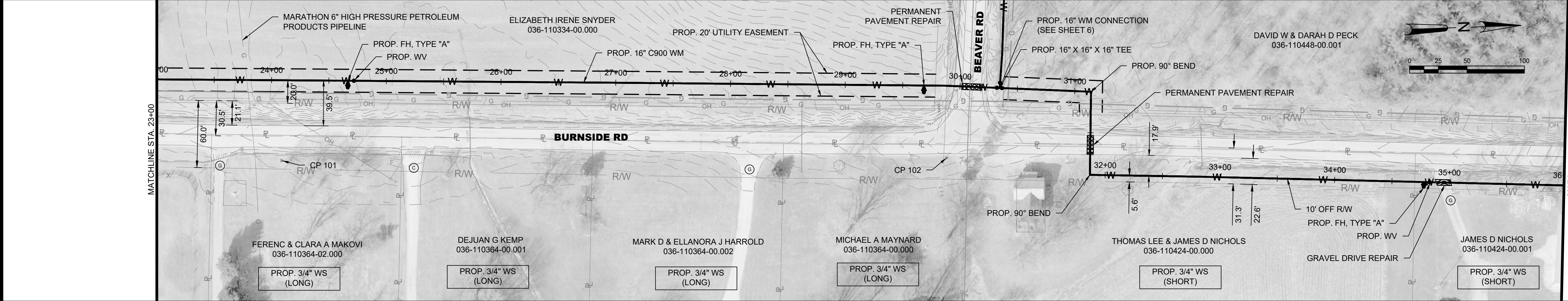
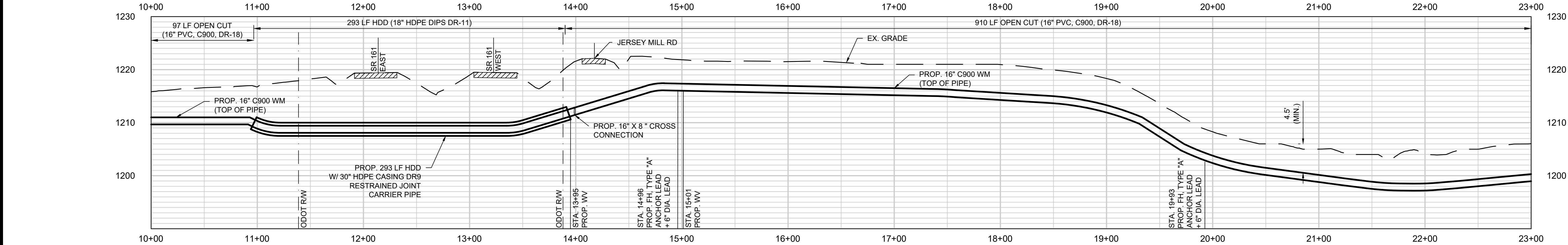
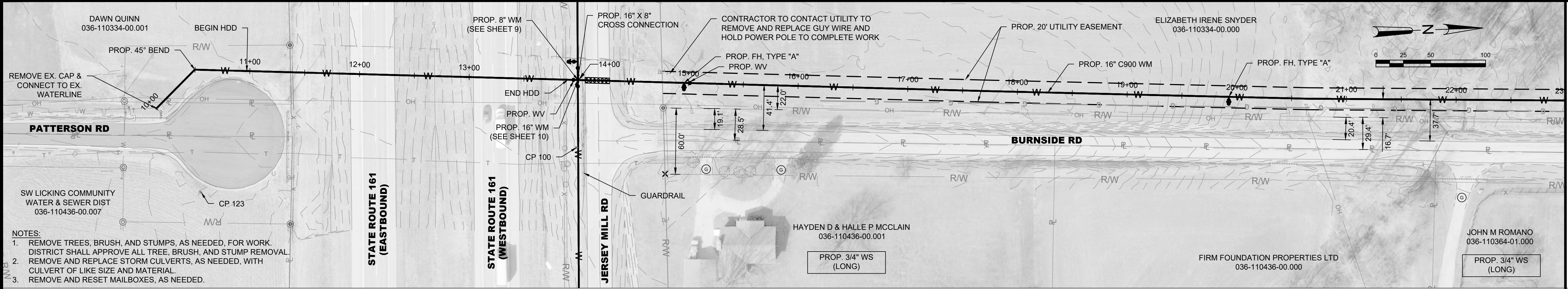
STATE ROUTE 161 - MINK STREET WATERLINE EXTENSION
LICKING REGIONAL WATER DISTRICT
LICKING COUNTY, OHIO

JOB NO.
4379.006

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SHEET
4



DATE:					
REVISIONS					
NO.					

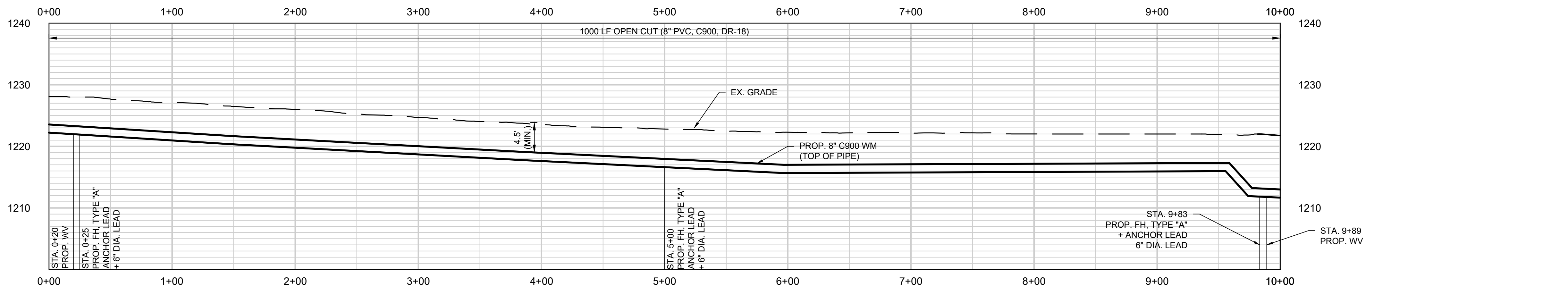
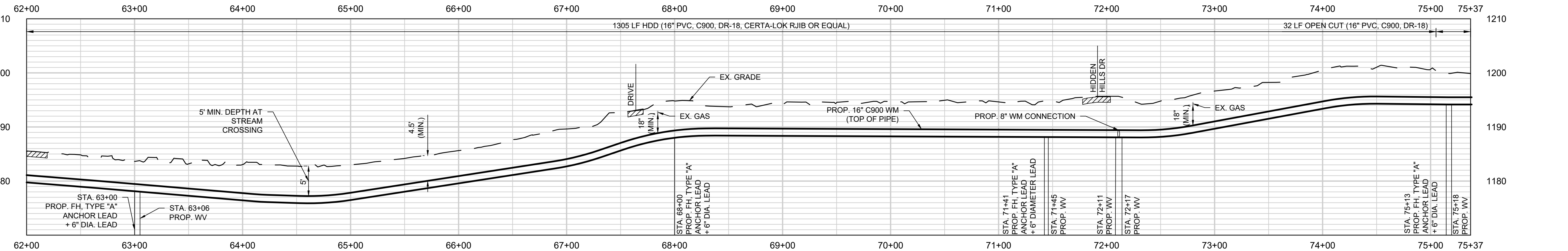
PLAN & PROFILE
BURNSIDE RD STA. 10+00 TO 36+00
STATE ROUTE 161 - MINK STREET WATERLINE EXTENSION
LICKING REGIONAL WATER DISTRICT
LICKING COUNTY, OHIO

JOB NO.
4379.006

PROJECT MGR.
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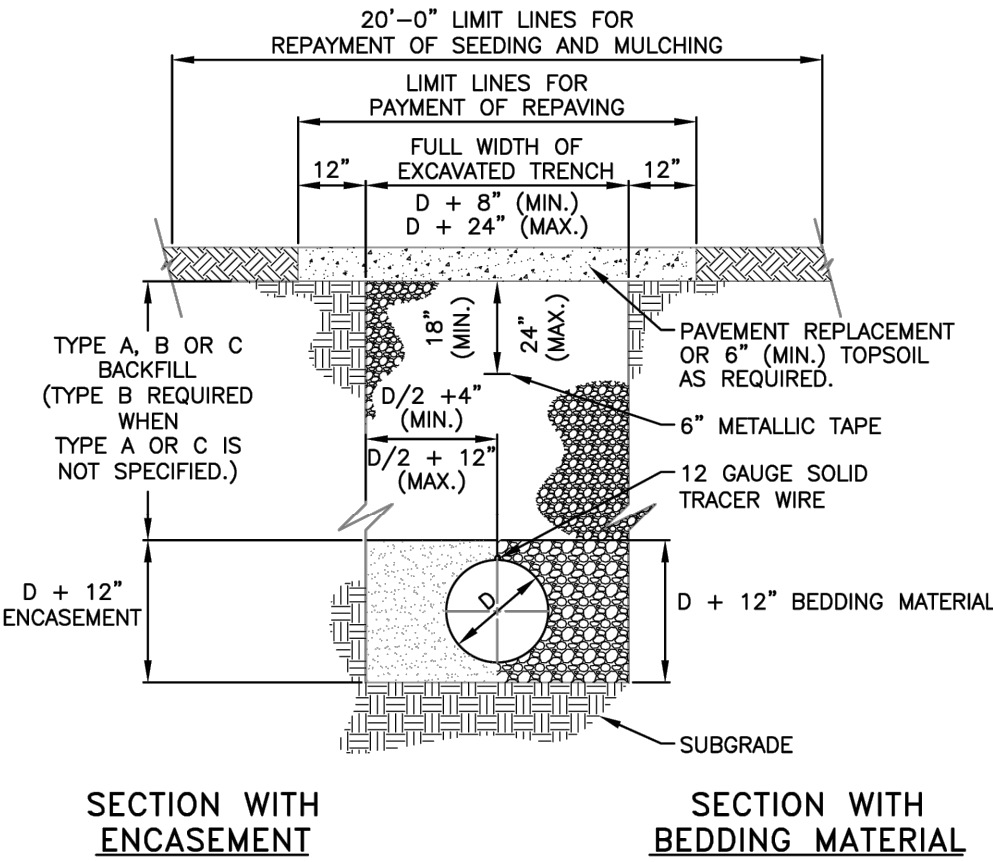
SHEET
7

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PLAN & PROFILE
BURNSIDE RD STA. 62+00 TO 75+37
& JERSEY MILL RD STA. 0+00 TO 10+00
STATE ROUTE 161 - MINK STREET WATERLINE EXTENSION
LICKING REGIONAL WATER DISTRICT
LICKING COUNTY, OHIO

JOB NO. 4379.006
PROJECT MGR. HPK
 STRAND ASSOCIATES®
SHEET 9

- NOTES:
- ITEM NUMBERS REFER TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.
 - AGGREGATE FOR BEDDING SHALL BE WASHED GRAVEL AND BE NO. 57 PER CMS 304.02.
 - TYPE A BACKFILL SHALL BE GRANULAR MATERIAL AS SPECIFIED IN ITEM 703.11, GRANULAR MATERIAL, TYPE 2. TYPE A BACKFILL SHALL BE USED WHEN THE TRENCH IS 5' OR LESS FROM ANY PAVED OR GRAVEL SURFACE OR BENEATH THE PAVEMENT OR GRAVEL. COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 203.
 - TYPE B BACKFILL SHALL BE NATURAL SOIL FREE FROM STONES LARGER THAN 2" ACROSS THEIR GREATEST DIMENSION, TOPSOIL, VEGETATION, DEBRIS, RUBBISH OR FROZEN MATERIAL, COMPACTED TO 95% OF ITS MAXIMUM LABORATORY DRY WEIGHT.
 - TYPE C BACKFILL SHALL BE NATURAL SOIL FREE FROM STONES LARGER THAN 6" ACROSS THEIR GREATEST DIMENSION, VEGETATION, DEBRIS, RUBBISH OR FROZEN MATERIAL, COMPACTED TO 90% OF ITS MAXIMUM LABORATORY DRY WEIGHT. WHEN APPROVED BY THE CONTRACT ADMINISTRATOR, STONES NO LARGER THAN ONE CUBIC FOOT MAY BE DEPOSITED AT LEAST 3' ABOVE THE TOP OF THE PIPE.
 - THE EXCAVATED TRENCH WIDTH 12" ABOVE THE CONDUIT MAY BE INCREASED WITHOUT ADDITIONAL COMPENSATION.
 - RIGID PIPE SHALL INCLUDE DUCTILE IRON.
 - ENCASEMENT SHALL BE CLASS C CONCRETE.
 - SECTIONS ARE SYMMETRICAL ABOUT THE CENTERLINE.



TYPICAL TRENCH FOR RIGID PIPE

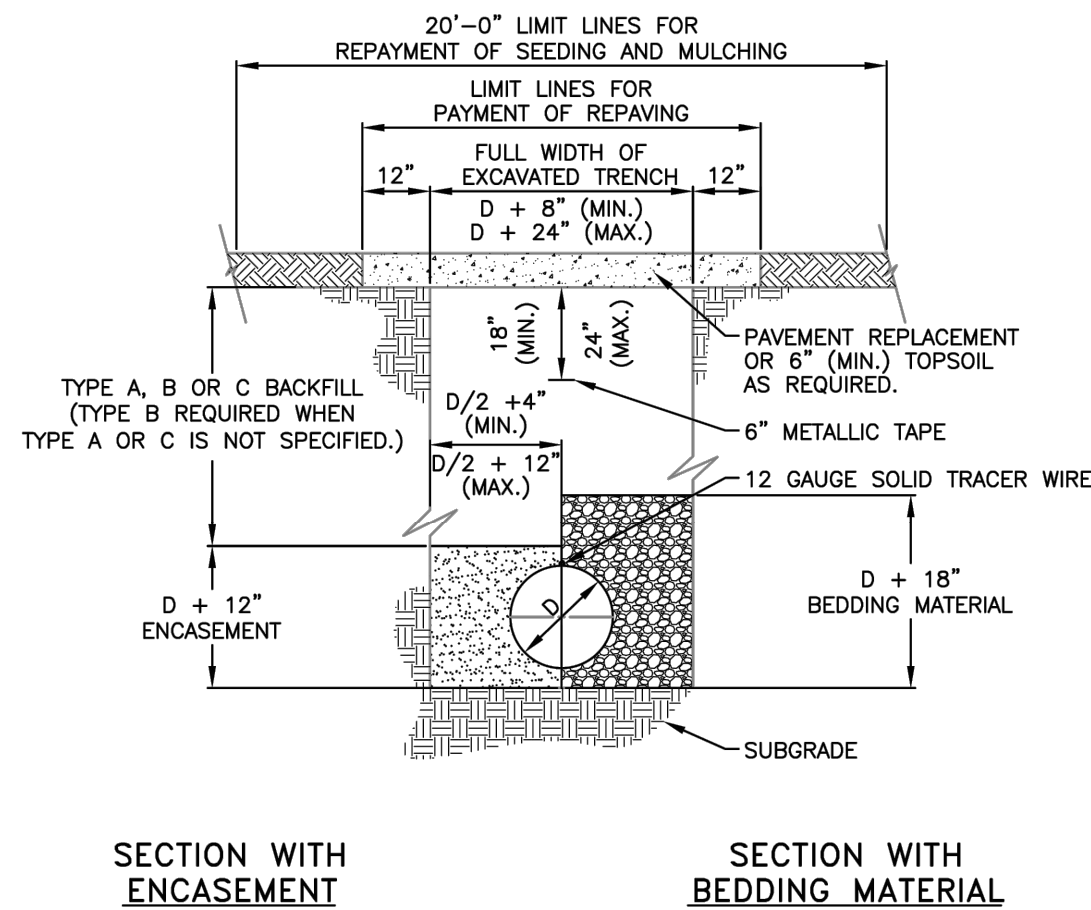
SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT

STANDARD CONSTRUCTION DWG.

REVISIONS: 06/2024

DRAWING NO. W-1A
1 OF 2

- NOTES:
- ITEM NUMBERS REFER TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.
 - AGGREGATE FOR BEDDING SHALL BE WASHED GRAVEL AND BE NO. 57 PER CMS 304.02.
 - TYPE A BACKFILL SHALL BE GRANULAR MATERIAL AS SPECIFIED IN ITEM 703.11, GRANULAR MATERIAL, TYPE 2. TYPE A BACKFILL SHALL BE USED WHEN THE TRENCH IS 5' OR LESS FROM ANY PAVED OR GRAVEL SURFACE OR BENEATH THE PAVEMENT OR GRAVEL. COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 203.
 - TYPE B BACKFILL SHALL BE NATURAL SOIL FREE FROM STONES LARGER THAN 2" ACROSS THEIR GREATEST DIMENSION, TOPSOIL, VEGETATION, DEBRIS, RUBBISH OR FROZEN MATERIAL, COMPACTED TO 95% OF ITS MAXIMUM LABORATORY DRY WEIGHT.
 - TYPE C BACKFILL SHALL BE NATURAL SOIL FREE FROM STONES LARGER THAN 6" ACROSS THEIR GREATEST DIMENSION, VEGETATION, DEBRIS, RUBBISH OR FROZEN MATERIAL, COMPACTED TO 90% OF ITS MAXIMUM LABORATORY DRY WEIGHT. WHEN APPROVED BY THE CONTRACT ADMINISTRATOR, STONES NO LARGER THAN ONE CUBIC FOOT MAY BE DEPOSITED AT LEAST 3' ABOVE THE TOP OF THE PIPE.
 - THE EXCAVATED TRENCH WIDTH 12" ABOVE THE CONDUIT MAY BE INCREASED WITHOUT ADDITIONAL COMPENSATION.
 - FLEXIBLE PIPE SHALL INCLUDE PVC AND POLYETHYLENE.
 - ENCASEMENT SHALL BE CLASS C CONCRETE.



TYPICAL TRENCH FOR FLEXIBLE PIPE

SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT

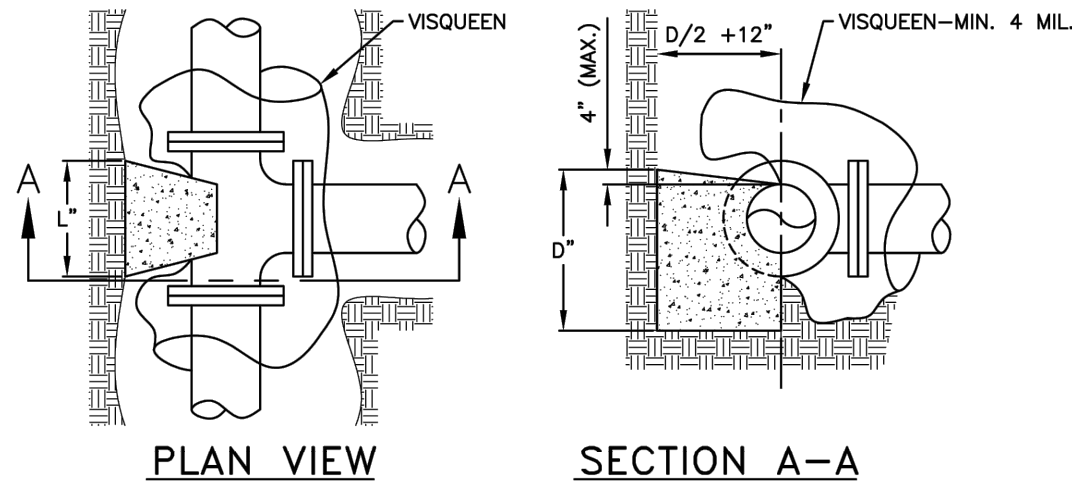
STANDARD CONSTRUCTION DWG.

REVISIONS: 06/2024

DRAWING NO. W-1B
2 OF 2

RUN	BRANCH											
	3"			4"			6"			8"		
	L	D	V	L	D	V	L	D	V	L	D	V
3"	12	5	0.5	11	8	0.8						
4"	10	6	0.5	11	8	0.8						
6"	9	7	0.5	11	8	0.8	18	12	1.9			
8"	8	8	0.5	10	9	0.7	18	12	1.9	23	16	3.5
12"	6	12	0.6	8	12	0.8	18	12	1.9	23	16	3.5
16"	6	16	0.8	6	16	0.8	14	16	2.0	20	18	3.3
20"	6	20	1.0	6	20	1.0	11	20	1.9	18	20	3.3
24"	6	24	1.2	6	24	1.2	9	24	1.9	15	24	3.3

V = VOLUME OF CONCRETE IN CUBIC FEET



BACKING FOR TEES

SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT

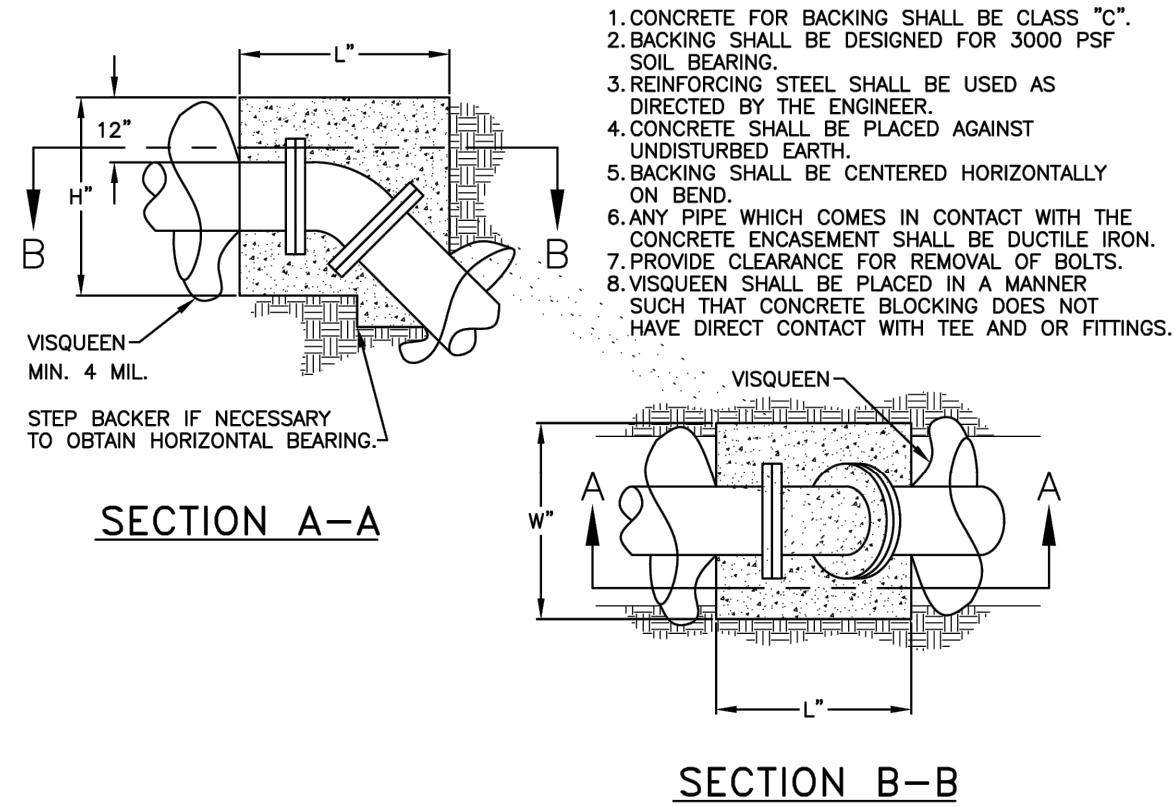
STANDARD CONSTRUCTION DWG.

REVISIONS: 06/2024

DRAWING NO. W-3

PIPE SIZE	DEGREE OF BEND															
	11 1/4"			22 1/2"			45°			90°						
	L	D	V	L	D	V	L	D	V	L	D	V				
3"	12	18	1.5	13	25	16	3.0	18	30	19	5.9	25	30	24	10.4	
4"	12	24	1.6	2.6	16	30	18	5.0	22	36	24	11.0	27	48	25	18.7
6"	12	48	1.8	6.0	15	43	36	13.4	30	55	24	22.9	37	54	36	41.6
8"	12	63	2.4	10.5	18	57	34	20.2	36	57	33	39.2	47	60	46	75.0
12"	20	54	3.6	22.6	37	62	37	48.0	48	62	51	87.9	66	66	66	166.4
16"	31	65	3.8	44.3	60	65	39	88.1	65	65	65	159.2	72	96	72	288.0
20"	45	70	4.0	72.8	56	70	60	136.2	72	76	78	247.3	86	108	84	451.8
24"	41	72	5.4	92.3	67	74	69	198.0	88	84	84	359.1	96	120	96	640.0

V = VOLUME OF CONCRETE IN CUBIC FEET



BACKING FOR VERTICAL BENDS (OVER BENDS ONLY)

SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT

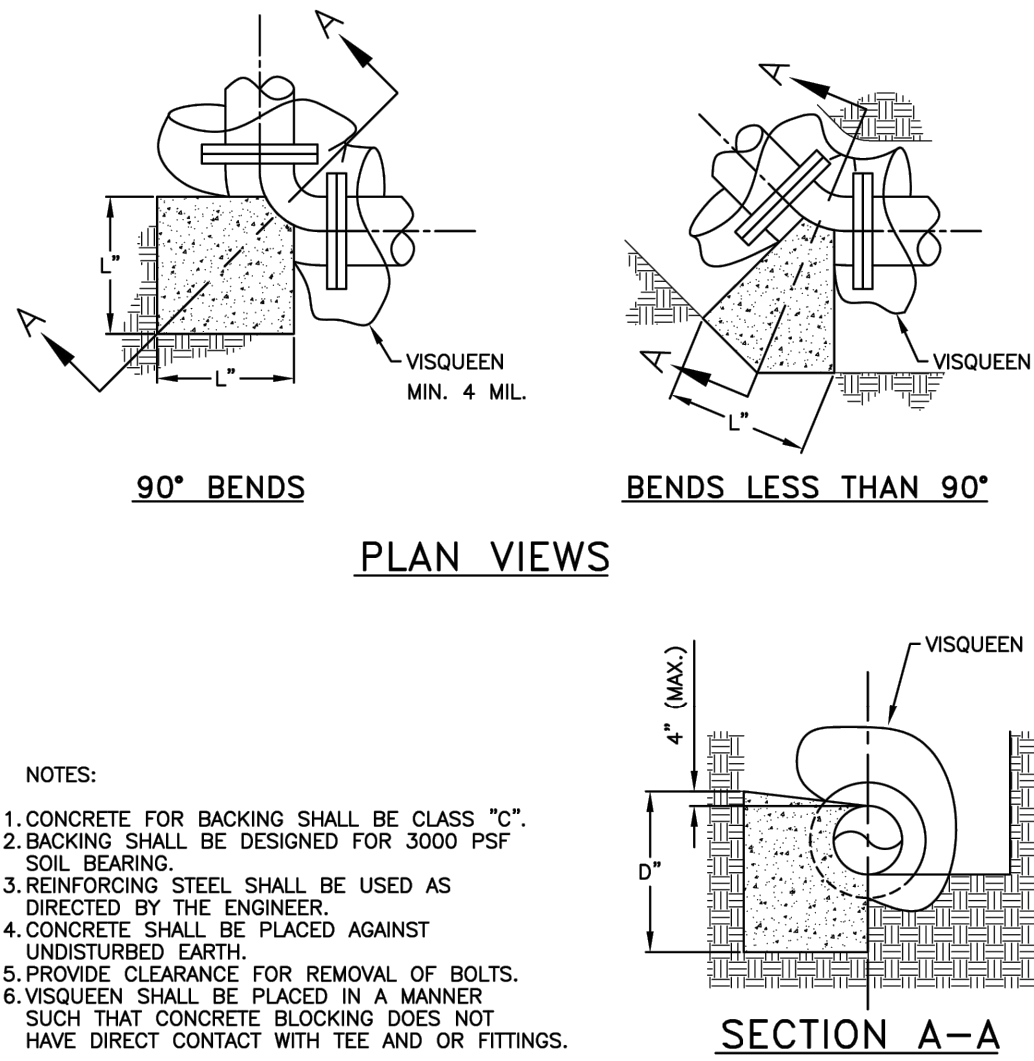
STANDARD CONSTRUCTION DWG.

REVISIONS: 06/2024

DRAWING NO. W-5

PIPE SIZE	DEGREE OF BEND											
	11 1/4"			22 1/2"			45"			90"		
	L	D	V	L	D	V	L	D	V	L	D	V
3"	4	3	0.1	6	4	0.2	10	4	0.3	10	4	0.3
4"	5	4	0.2	9	5	0.4	14	5	0.6	14	5	0.6
6"	8	6	0.5	12	7	0.7	20	8	1.4	18	9	1.7
8"	9	8	0.7	16	9	1.4	24	12	2.7	25	11	4.0
12"	14	12	1.8	24	14	3.6	36	18	6.8	32	18	10.7
16"	18	16	3.4	32	18	6.7	36	32	13.4	41	26	25.4
20"	25	20	6.4	30	30	11.5	49	36	20.5	50	32	46.5
24"	27	24	9.0	39	34	18.4	60	42	35.0	58	40	77.7

V = VOLUME OF CONCRETE IN CUBIC FEET



BACKING FOR BENDS

SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT

STANDARD CONSTRUCTION DWG.

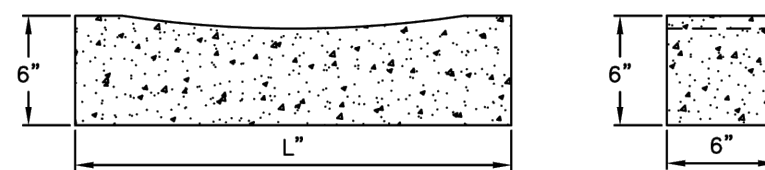
REVISIONS: 06/2024

DRAWING NO. W-4

	SIZE	L		V
		L	V	
GATE VALVES	3"	15	0.31	
	4"	16	0.33	
	6"	17	0.36	
	8"	20	0.42	
	12"	24	0.50	
BUTTERFLY VALVES	16"	30	0.63	
	20"	36	0.75	
	24"	42	0.88	
	30"	48	1.00	

V = VOLUME OF CONCRETE IN CUBIC FEET

- NOTES:
- CONCRETE FOR SUPPORTS SHALL BE CLASS C.
 - BACKING SHALL BE DESIGNED FOR 3000 PSF SOIL BEARING.
 - CONCRETE SHALL BE PLACED AGAINST UNDISTURBED EARTH.
 - PROVIDE CLEARANCE FOR REMOVAL OF BOLTS.
 - VISQUEEN SHALL BE PLACED IN A MANNER SUCH THAT CONCRETE BACKING DOES NOT HAVE DIRECT CONTACT WITH VALVE.



CONCRETE VALVE SUPPORTS

SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT

STANDARD CONSTRUCTION DWG.

REVISIONS: 06/2024

DRAWING NO. W-6

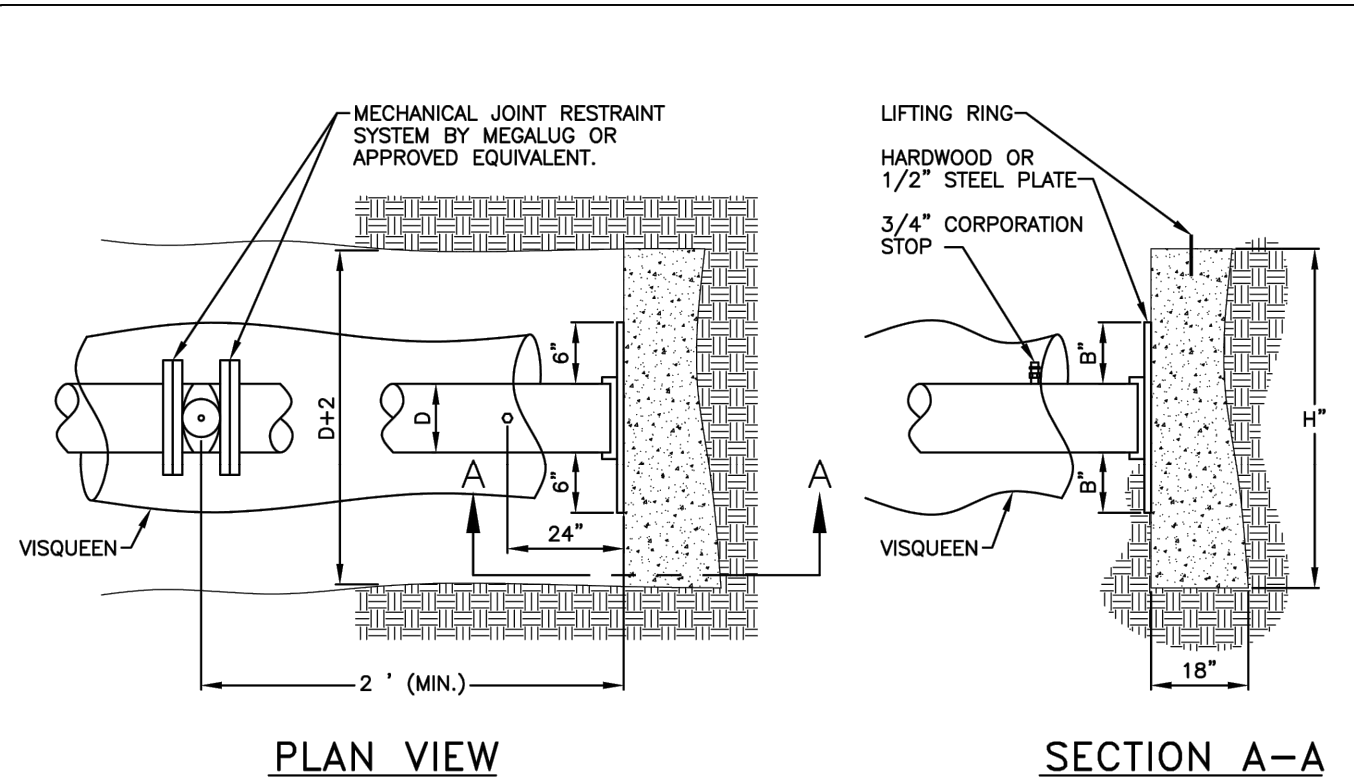
DISTRICT STANDARD CONSTRUCTION DRAWINGS

STATE ROUTE 161 - MINK STREET WATERLINE EXTENSION
LICKING REGIONAL WATER DISTRICT
LICKING COUNTY, OHIO

JOB NO.
4379.006
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12

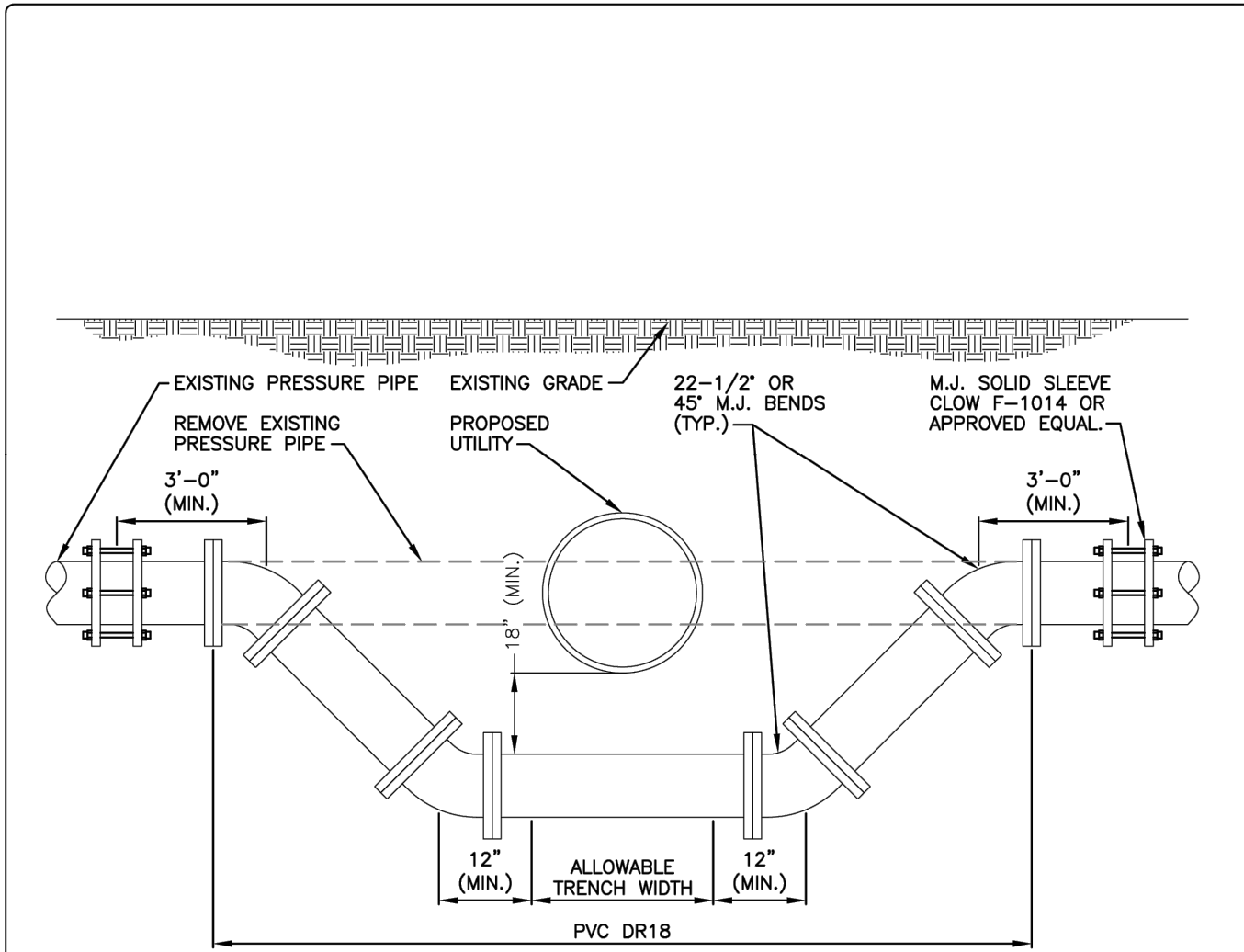


- NOTES:
1. CONCRETE FOR BACKING SHALL BE CLASS "C".
 2. BACKING SHALL BE DESIGNED FOR 3000 PSF SOIL BEARING.
 3. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED EARTH.
 4. PROVIDE CLEARANCE FOR REMOVAL OF BOLTS.
 5. VISQUEEN SHALL BE PLACED IN A MANNER SUCH THAT CONCRETE BLOCKING DOES NOT HAVE DIRECT CONTACT WITH TEE AND OR FITTINGS.
 6. END OF PIPE SHALL BE CAPPED OR PLUGGED.
 7. STEEL PLATE SHALL BE GREASED WHERE IN CONTACT WITH CONCRETE BACKING.
 8. PLUG POLES SHALL BE INSTALLED AT ALL END-OF-LINE STUBS AT THE THRUST BLOCK.

SIZE OF PIPE	H	B	L (PVC)	L (DIP)	V
6"	8	1	20	18	2.52
8"	12	1	20	18	4.00
12"	23	3	20	18	8.64
16"	37	3	20	18	15.39

V = VOLUME OF CONCRETE IN CUBIC FEET.

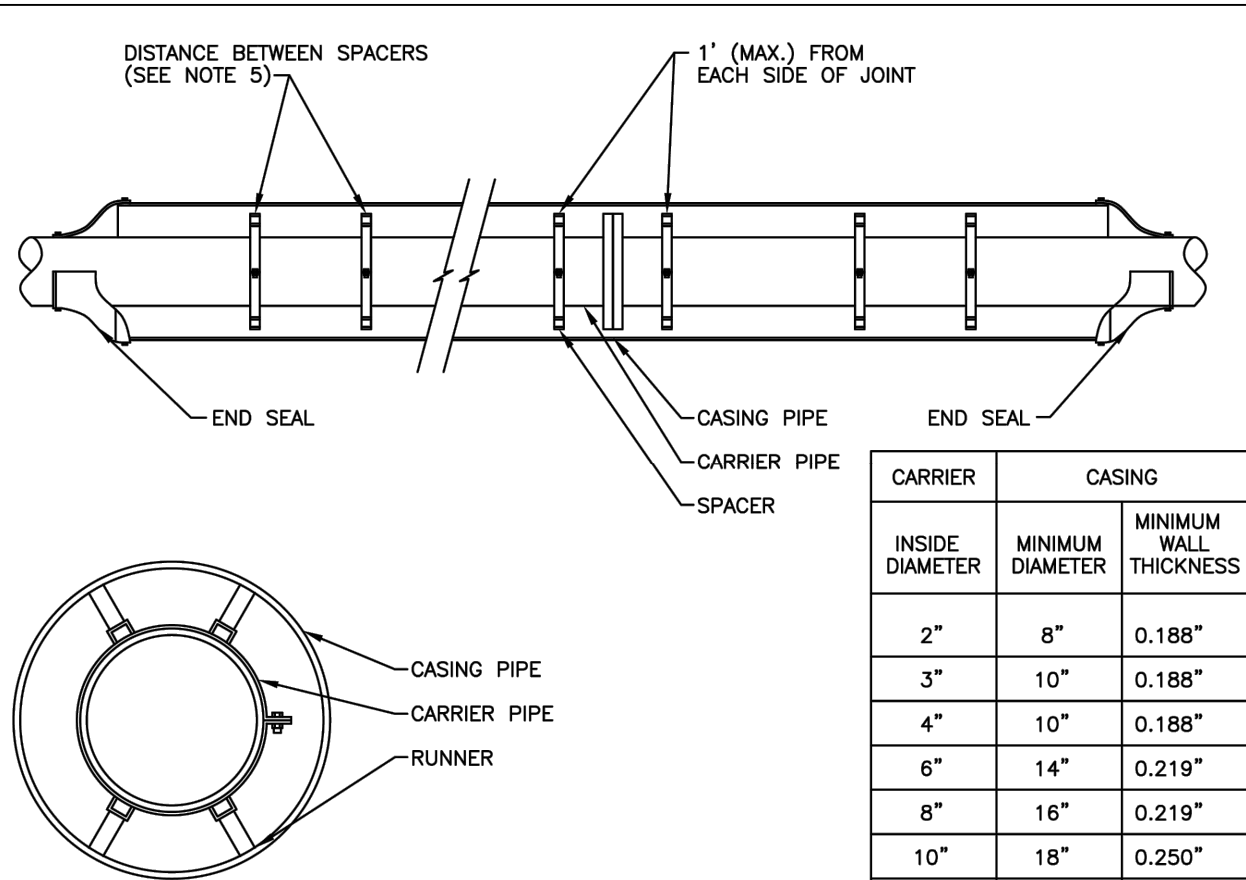
APPROVED: 6-13-24	THRUST BLOCK DETAIL	SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT	
		STANDARD CONSTRUCTION DWG.	
		REVISED: 06/2024	DRAWING NO. W-7



NOTES:

1. TIME AND DURATION OF SHUTDOWN SHALL BE DETERMINED OR APPROVED BY THE DISTRICT.
2. THE CONTRACTOR SHALL NOTIFY ANY CUSTOMERS AFFECTED BY THE PROPOSED WORK AT LEAST 48 HOURS IN ADVANCE OF SHUTDOWN.
3. ALL SLEEVES AND BENDS SHALL BE SECURED BY RESTRAINING GLANDS, RODDING OR OTHER METHODS AS APPROVED BY THE ENGINEER TO RESTORE MAIN SERVICE AS SOON AS POSSIBLE.
4. THE RELOCATED LINES SHALL BE LAID TO THE NEW LINE AND GRADE, TESTED AND DISINFECTED AS REQUIRED PRIOR TO THE SHUTDOWN OF EXISTING MAIN AND CONNECTION OF THE RELOCATED LINES TO THE EXISTING MAIN.
5. ALL WATER LINES SHALL BE DISINFECTED BY A SWABBING WITH A 5% HYPOCHLORITE SOLUTION IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF AWWA C651.

APPROVED: 6-13-24	TYPICAL PRESSURE PIPE LOWERING	SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT	
		STANDARD CONSTRUCTION DWG.	
		REVISED: 06/2024	DRAWING NO. W-10



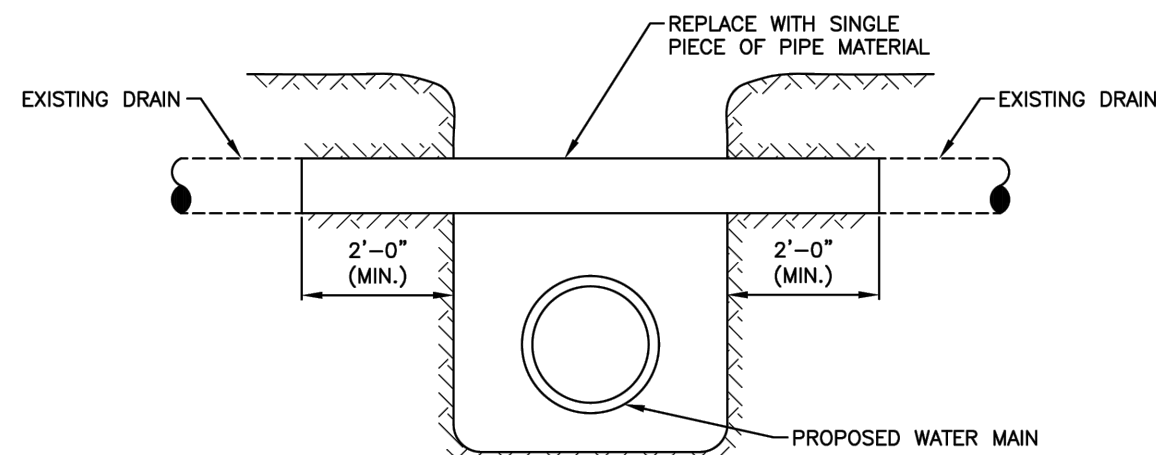
NOTES:

1. CARRIER PIPE SHALL BE CERTA-LOK C900 (DR18) OR HPDE (DR11)
2. CASING PIPE SHALL BE INSTALLED BY JACKING OR DIRECTIONAL DRILL WITH A MINIMUM WALL THICKNESS AS SHOWN IN THE TABLE OR MEETING THE REQUIREMENTS OF THE RECEIVING AUTHORITY.
3. CASING SPACERS AND END SEALS SHALL BE ADVANCE PRODUCTS & SYSTEMS, INC. OR APPROVED EQUIVALENT.
4. WHEN HPDE PIPE IS USED, THE PIPE SHALL BE DR11 WITH AN INTERNAL DIAMETER EQUAL TO OR GREATER THAN THAT OF THE OPEN CUT EXCAVATION MATERIAL IN WHICH THE CONNECTION WAS MADE.
5. DIMENSIONS BETWEEN SPACERS FOR PVC PIPE SHALL BE 6 FEET MAXIMUM.
6. THE QUANTITY OF RUNNERS IS IN ACCORDANCE WITH THE SIZE OF THE CARRIER PIPE AS FOLLOWS:
TO 14\"/>
7. WITH HPDE, MECH. RESTRAINTS MUST BE USED 3 JOINTS FROM BOTH ENDS OF THE BORE.

APPROVED: 6-13-24	CASING PIPE	SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT	
		STANDARD CONSTRUCTION DWG.	
		REVISED: 06/2024	DRAWING NO. W-11

MINIMUM ROAD AND CURB UNDERDRAIN REPLACEMENT MATERIAL SHALL BE:
PERFORATED CONCRETE: ITEM 706.06 (ODOTCMS)
CONCRETE DRAIN TILE: ITEM 706.07 (ODOTCMS)
PERFORATED PVC: ITEM 707.41 (ODOTCMS)
HEAVY DUTY CORRUGATED POLYETHYLENE SLOTTED DRAIN: ITEM 707.32 (ODOTCMS)

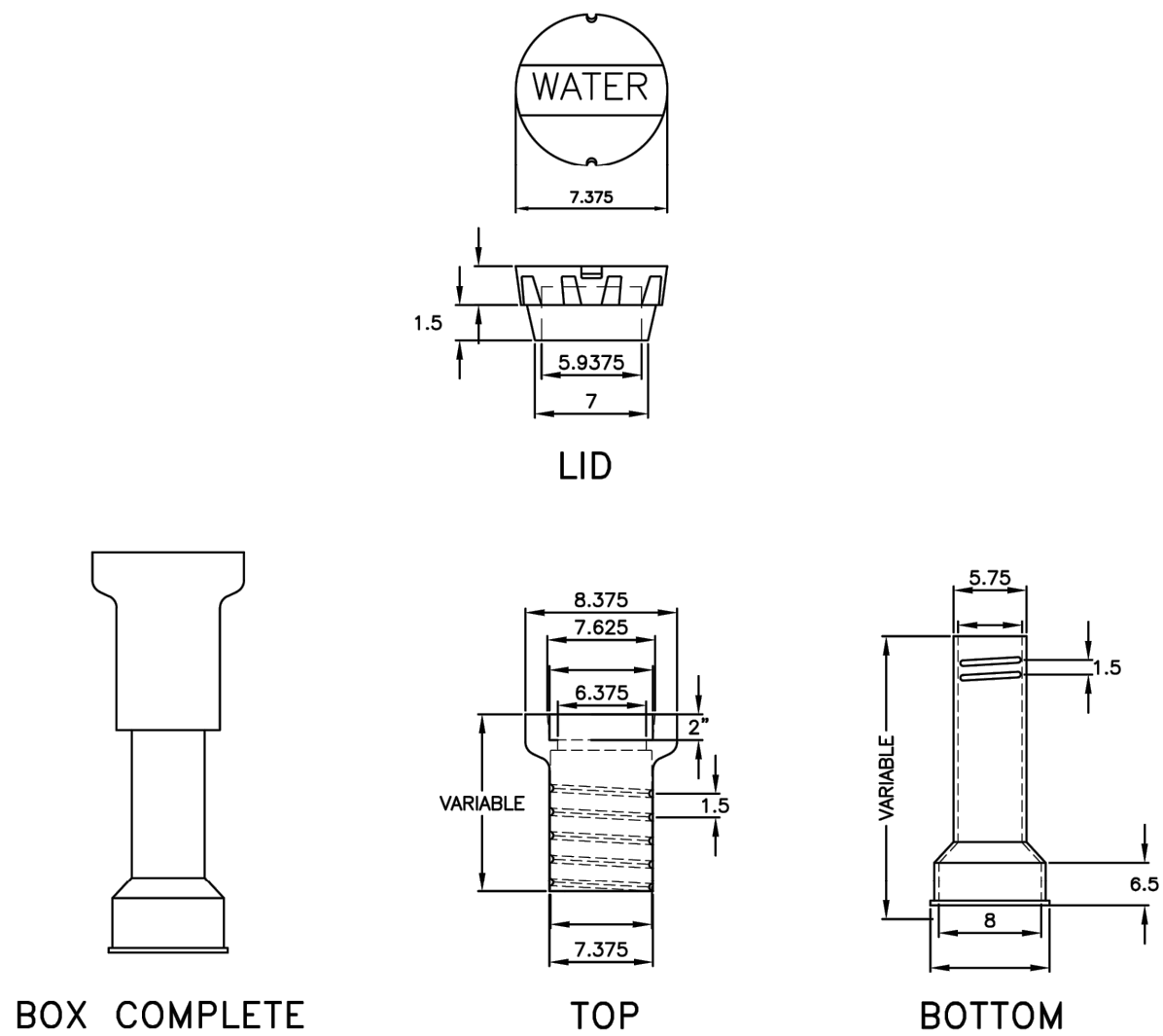
MINIMUM DRAIN TILE REPLACEMENT MATERIAL SHALL BE:
PVC: C900 DR18
CONCRETE: ITEM 706.02 (ODOTCMS)
POLYETHYLENE: ITEM 707.33 (ODOTCMS)



NOTE:

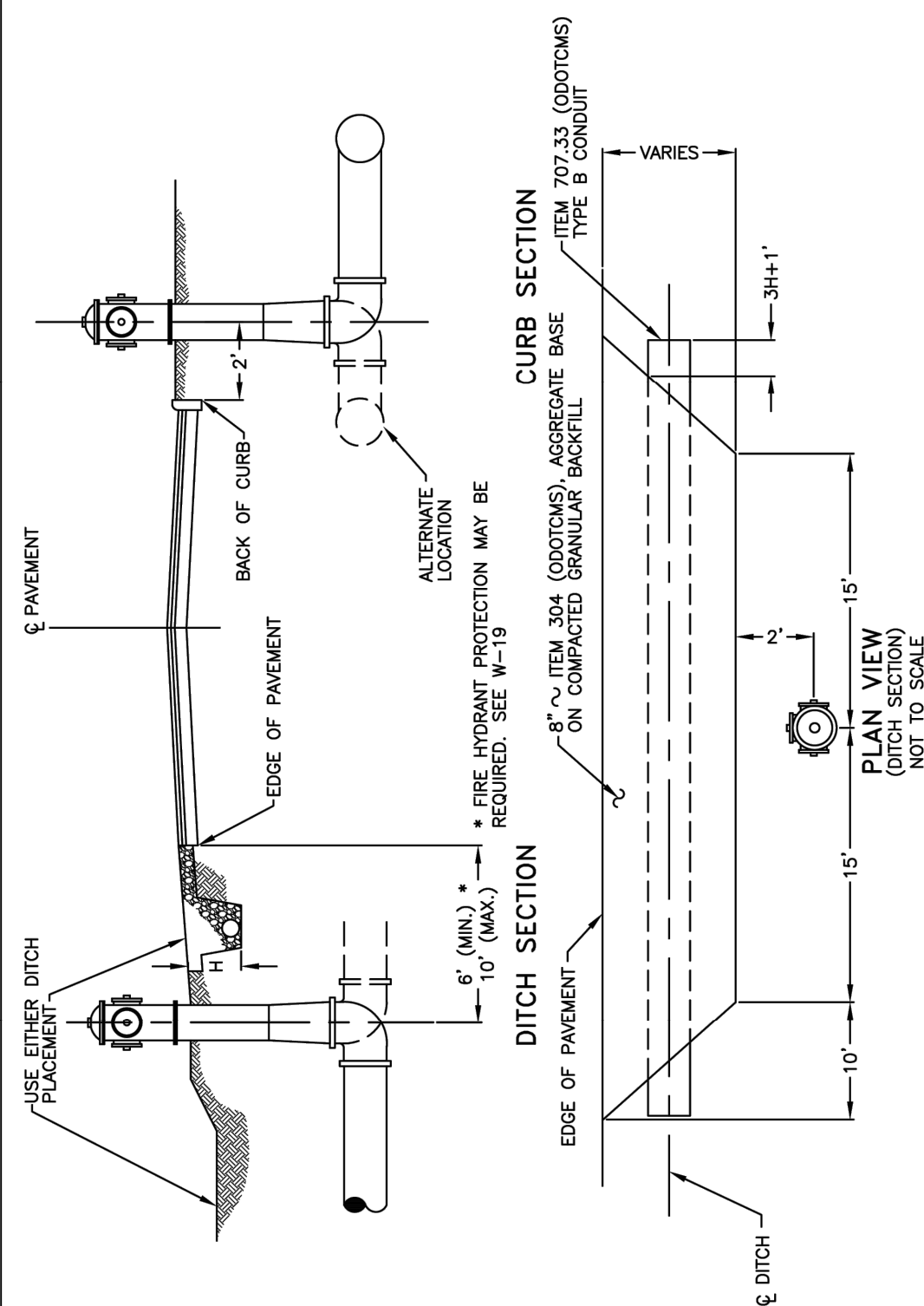
1. INSIDE DIAMETER OF REPLACEMENT PIPE SHALL BE EQUAL TO OR GREATER THAN INSIDE DIAMETER OF EXISTING TILE OR UNDERDRAIN.
2. REPLACEMENT MATERIAL USED SHALL BE EQUAL TO OR BETTER THAN THE EXISTING TILE OR UNDERDRAIN AS DIRECTED BY THE ENGINEER.
3. PROVIDE FERNOCO FITTING OR APPROVED EQUIVALENT WHERE EXISTING TILE OR UNDERDRAIN HAS WATER TIGHT JOINTS. PROVIDE 30# FELT OR CONCRETE MORTAR OVER THE UPPER HALF OF THE JOINT WHERE OPEN JOINTS ARE ENCOUNTERED.
4. BACKFILL BETWEEN WATER MAIN AND REPLACEMENT TILE OR UNDERDRAIN SHALL BE PER SLOWSD OMS SECTION 304.02.

APPROVED: 6-13-24	DRAIN TILE AND UNDERDRAIN REPLACEMENT	SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT	
		STANDARD CONSTRUCTION DWG.	
		REVISED: 06/2024	DRAWING NO. W-12



NOTE:
VALVE BOX TO BE STAR ITEM NO VB664A, BINGHAM & TAYLOR NO. 8000 CIP 22 OR DISTRICT APPROVED EQUAL.

APPROVED: 6-13-24	STANDARD VALVE BOX	SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT	
		STANDARD CONSTRUCTION DWG.	
		REVISED: 06/2024	DRAWING NO. W-14



NOTES:

1. THIS DETAIL IS TO BE USED IN CONJUNCTION WITH THE FOLLOWING SLOWSD STANDARD DRAWINGS AS SHOWN IN THE LISTED SLOWSD SECTION. THE DETAIL SHALL BE MODIFIED TO REFLECT THE TYPICAL HYDRANT SETTING (TYPE A MODIFIED), AND W-23 TYPICAL HYDRANT SETTING (TYPE B AND TYPE B MODIFIED).
2. NO FIRE HYDRANT SHALL BE LOCATED WITHIN SIX (6) FEET OF THE EDGE OF ANY RESIDENTIAL DRIVE, APPROACH NOR SHALL ANY HYDRANT BE LOCATED WITHIN EIGHT (8) FEET OF ANY ALLEY, COMMERCIAL DRIVE, OR ACCESS ROAD.

APPROVED: 6-13-24	FIRE HYDRANT LOCATION DETAIL	SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT	
		STANDARD CONSTRUCTION DWG.	
		REVISED: 06/2024	DRAWING NO. W-18

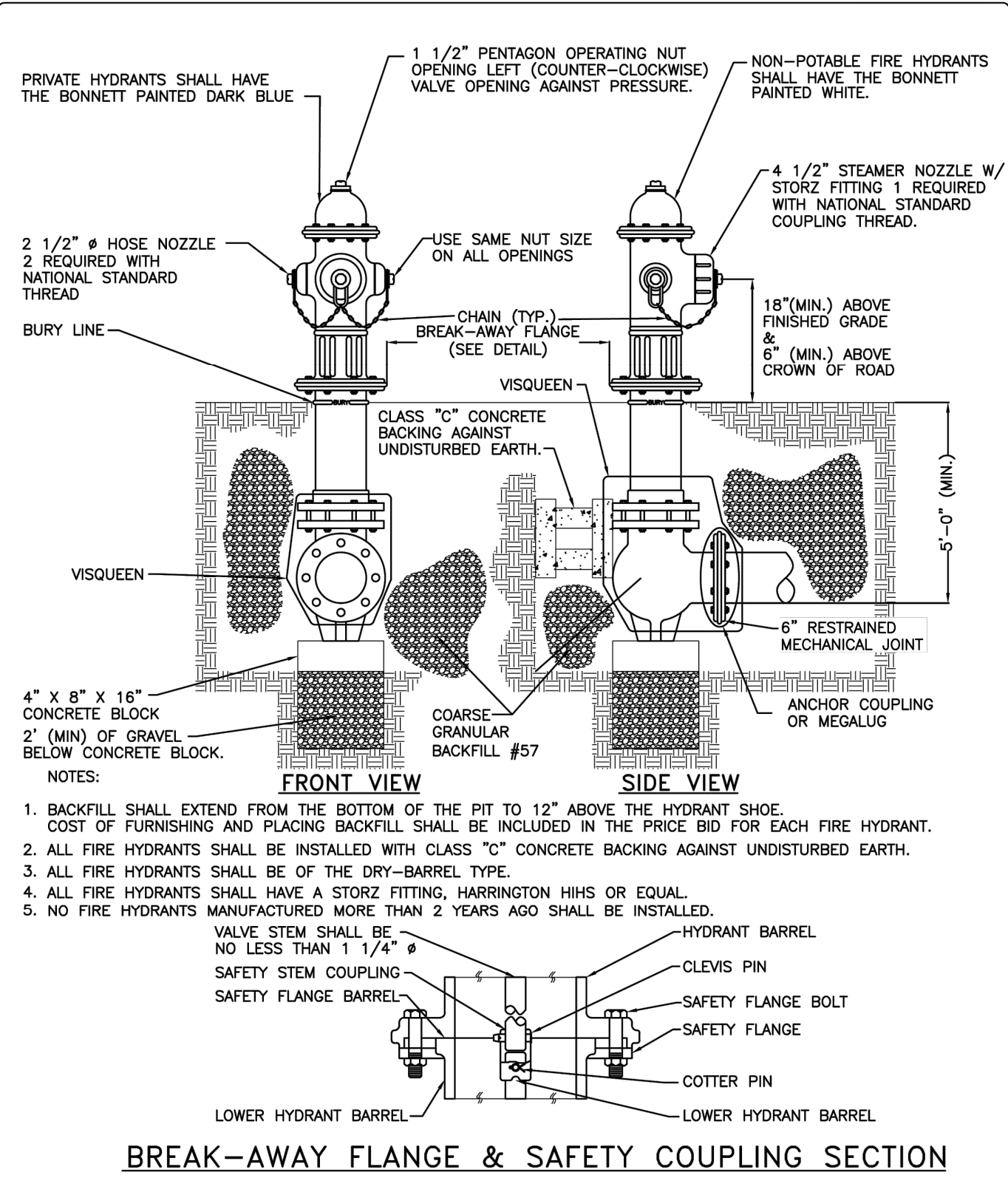
DISTRICT STANDARD CONSTRUCTION DRAWINGS

STATE ROUTE 161 - MINK STREET WATERLINE EXTENSION
LICKING REGIONAL WATER DISTRICT
LICKING COUNTY, OHIO

JOB NO.
4379.006
PROJECT MGR.
HPK

STRAND ASSOCIATES

SHEET
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APPROVED: 6-13-24


REGISTERED ENGINEER

STANDARD FIRE HYDRANT DETAIL

SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT

STANDARD CONSTRUCTION DWG.

REVISED: 06/2024 DRAWING NO. W-20A 1 OF 3

FIRE HYDRANT NOTES

TYPE OF HYDRANT: THE HYDRANT SHALL BE THE POST TYPE TRAFFIC MODEL MADE OF CAST IRON AS SHOWN HEREON, AMERICAN FLOW CONTROL MK 73-5 CLOW MEDALLION, MUELLER SUPER CENTURION 250 MODEL 4-421. IT SHALL HAVE A BREAKING CONNECTION THAT PREVENTS LOSS OF WATER WHEN THE UPPER AND LOWER SECTIONS ARE SEPARATED BY A SMASHING IMPACT. THE HYDRANT SHALL BE OF THE COMPRESSION TYPE WITH THE VALVE OPENING IN A COUNTERCLOCKWISE DIRECTION AGAINST THE PRESSURE AND CLOSING WITH THE PRESSURE. THE VALVE END OF THE STEM OR VALVE ROD SHALL BE SO CONSTRUCTED AS TO ELIMINATE CONTACT OF DISSIMILAR METALS IN THE PRESENCE OF MOISTURE.

THE STEM OR VALVE ROD SHALL BE CONSTRUCTED IN ONE CONTINUOUS LENGTH FROM THE VALVE TO THE BREAKING COUPLING OR TO THE BOTTOM OF THE EXTENSION PIECE WHERE EXTENSIONS ARE REQUIRED. THE STEM OR VALVE ROD BETWEEN THE VALVE AND OPERATING NUT SHALL BE MADE OF STEEL STOCK AND HAVE A 1 1/4 INCH MINIMUM DIAMETER AFTER MACHINING. THE BREAKING COUPLING SHALL FIT OVER THE VALVE ROD AND BE LOCATED AT THE PROPER POINT TO CONFORM TO THE BREAKING CONNECTION IN THE STANDPIPE.

THE BARREL SHALL HAVE AN AREA OF NOT LESS THAN 120 PERCENT OF THE VALVE OPENING. THE TYPE OF VALVE SEAL SHALL BE RUBBER WITH THE DIAMETER OF THE PORT IN THE SEAL RING BEING A MINIMUM OF 4 1/4 INCH.

ALL INTERIOR WORKING PARTS OF THE HYDRANT INCLUDING THE VALVE AND VALVE SEAT SHALL BE SUCH THAT THEY CAN BE REMOVED THROUGH THE TOP OF THE STANDPIPE WITHOUT EXCAVATION. THE UPPER SECTION OF THE STANDPIPE ABOVE THE GROUND LINE SHALL BE ADJUSTABLE SO THAT THE NOZZLES CAN BE ROTATED TO ANY DESIRED POSITION.

REFERENCE SPECIFICATIONS: ALL FIRE HYDRANTS SHALL CONFORM TO THE LATEST AMERICAN WATER WORKS ASSOCIATION SPECIFICATIONS C502, THE REQUIREMENTS OF THE DISTRICT AND APPLICABLE LOCAL FIRE DEPARTMENT. ALL SPECIFICATIONS SHALL BE THE LATEST EDITION IN EFFECT ON THE DATE THE CONSTRUCTION DRAWINGS ARE APPROVED (SIGNED) BY THE DISTRICT, UNLESS OTHERWISE NOTED.

APPROVALS AND CERTIFICATION: THE SUPPLIER OR MANUFACTURER SHALL SUBMIT TO THE DISTRICT SIX (6) COPIES OF THE RESULTS OF CERTIFIED FLOW TESTS RUN BY AN INDEPENDENT TESTING LABORATORY AND SHOP DRAWINGS WITH DIMENSIONS, MATERIALS AND NOMENCLATURE OF PARTS FOR EACH TYPE OR MODEL OF HYDRANT PROPOSED FOR USE IN THE PROJECT AREA.

UPON APPROVAL OF THE ABOVE INFORMATION BY THE DISTRICT, IT SHALL REMAIN ON FILE WITH THE DISTRICT. SUBMISSION OF THE ABOVE MATERIALS WITH EACH ORDER OF FIRE HYDRANTS IS NOT NECESSARY IF APPROVED MATERIAL IS ALREADY ON FILE. SUBMISSION OF NEW MATERIAL IS REQUIRED WHEN A DEVIATION IN THE PRODUCT, ITS MANUFACTURER, OR THE STANDARDS IS REQUESTED.

ANY FIRE HYDRANTS DELIVERED TO A PROJECT WHICH FAIL TO CONFORM TO THE APPROVED INFORMATION ON FILE WITH THE DISTRICT SHALL BE REJECTED.

WITH EACH DELIVERY SHIPMENT OF FIRE HYDRANTS, THE HYDRANT MANUFACTURER SHALL CERTIFY THAT THE HYDRANTS CONFORM TO THE INFORMATION APPROVED AND ON FILE WITH THE DISTRICT. THIS CERTIFICATE SHALL INCLUDE THE MODEL OR IDENTIFICATION NUMBERS OF THE HYDRANTS BEING DELIVERED AND THE APPROVAL DATE OF THE INFORMATION ON FILE WITH THE DISTRICT. THIS DOCUMENTATION DOES NOT CONSTITUTE APPROVAL OF FINAL ACCEPTANCE OF THE SPECIFIC HYDRANTS DELIVERED.

APPROVED: 6-13-24


REGISTERED ENGINEER

STANDARD FIRE HYDRANT DETAIL

SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT

STANDARD CONSTRUCTION DWG.

REVISED: 06/2024 DRAWING NO. W-20B 2 OF 3

FIRE HYDRANT NOTES (CONTINUED)

INSPECTION: PRIOR TO INSTALLATION, ALL FIRE HYDRANTS SHALL BE INSPECTED BY THE DISTRICT AND BY THE CHIEF OF THE APPLICABLE FIRE DEPARTMENT OR HIS REPRESENTATIVE. THE HYDRANTS SHALL RECEIVE EITHER A CONDITIONAL ACCEPTANCE OR A REJECTION. CONDITIONAL ACCEPTANCE SHALL MEAN THAT THE HYDRANTS MAY BE INSTALLED.

UPON INSTALLATION, EACH HYDRANT SHALL BE TESTED FOR OPERATION AND LEAKS WITH A MEMBER OF THE APPLICABLE FIRE DEPARTMENT PRESENT DURING THE TEST AND SHALL RECEIVE EITHER OPERATIONAL ACCEPTANCE OR A REJECTION.

THE DISTRICT RESERVES THE RIGHT TO REJECT ANY AND ALL FIRE HYDRANTS FOUND TO BE IN NON-COMPLIANCE WITH ANY OF THE REQUIREMENTS STATED HEREIN AT ANY TIME DURING THE ACCEPTANCE OR ABOVE DESCRIBED APPROVAL PROCESS. ANY HYDRANTS WHICH ARE REJECTED AND WHICH CANNOT BE BROUGHT INTO COMPLIANCE WITH THE REQUIREMENTS AS STATED HEREIN SHALL BE REMOVED FROM THE PROJECT SITE, STORAGE SITE OR THE WORK SITE AT NO EXPENSE TO THE DISTRICT.

THE FINAL FIELD ACCEPTANCE SHALL GOVERN OVER ANY DOCUMENT APPROVAL AND SHALL BE BASED ON ALL WORK BEING COMPLETED INCLUDING INSTALLATION, TESTING, OPERATION, PAINTING AND LUBRICATION.

INSTALLATION: THE FIRE HYDRANTS SHALL BE INSTALLED AS SPECIFIED HEREIN AND IN ACCORDANCE WITH STANDARD DRAWING W-20, STANDARD FIRE HYDRANT DETAIL, W-21, TYPICAL HYDRANT SETTING (TYPE "A"); W-22, TYPICAL HYDRANT SETTING (TYPE "A" MODIFIED); W-23, TYPICAL HYDRANT SETTING (TYPES "B" AND "B" MODIFIED); W-24, 6"-90° HYDRANT BEND OR AS SPECIFIED BY THE DISTRICT.

THE BASE SECTION OF ALL FIRE HYDRANTS SHALL BE SET TO AN ELEVATION WHICH WILL BE CORRECT FOR THE PROPOSED GRADE OF THE STREET. THE ELEVATION OF THE TOP BARREL SECTION SHALL BE SET SO THAT THE GRADE LINE OF THE HYDRANT IS AT THE ESTABLISHED OR PROPOSED FINISHED GRADE AS INDICATED ON THE CONSTRUCTION DRAWINGS, THROUGH THE INSTALLATION OF HYDRANT EXTENSION SECTIONS AS NEEDED.

PRIOR TO OPERATIONAL ACCEPTANCE, THE HYDRANT NOZZLES SHALL BE TURNED AWAY FROM THE STREET. UPON RECEIVING OPERATIONAL ACCEPTANCE, THE HYDRANT SHALL BE TURNED WITH THE STEAMER NOZZLE FACING THE ROAD OR STREET AND THE HYDRANT EXEROISED TO CHECK THE OPERATION AND FOR LEAKS.

PAINTING: FINAL PAINT COLOR SHALL BE FIRE PROTECTION RED ENAMEL FROM THE MANUFACTURE. PRIOR TO PAINTING, SAMPLES SHALL BE SUBMITTED TO THE DISTRICT FOR APPROVAL. AFTER OPERATIONAL ACCEPTANCE, ALL HYDRANT SURFACES ABOVE THE GROUND LINE SHALL BE CLEANED, WASHED AND WIRE BRUSHED. ALL SURFACES OR SPOTS THAT REQUIRE TOUCHING UP SHALL HAVE TWO (2) COATS OF ZINC CHROMATE PRIMER. WHEN ALL THE SURFACES HAVE BEEN PRIMED AND ARE DRY, ALL HYDRANT SURFACES SHALL RECEIVE ONE (1) COAT OF THE APPROVED ENAMEL.

MATERIALS AND WORKMANSHIP: ALL MACHINED PARTS SHALL BE TRUE TO GAUGE SO THAT THEY WILL BE INTERCHANGEABLE. BETWEEN HYDRANTS OF THE SAME MAKE AND SIZE. WHEN REQUIRED, NON-ADJUSTABLE HYDRANT WRENCHES, PROPERLY SIZED TO THE SPECIFIED OPERATING NUT DIMENSIONS AND FABRICATED BY THE HYDRANT MANUFACTURER, SHALL BE SUPPLIED.

LUBRICATION: ALL HYDRANT NOZZLE THREADS SHALL BE LUBRICATED WITH A FDA APPROVED FOOD GRADE LUBRICANT (PERMATEX SUPER LUBE OR EQUAL).

APPROVED: 6-13-24

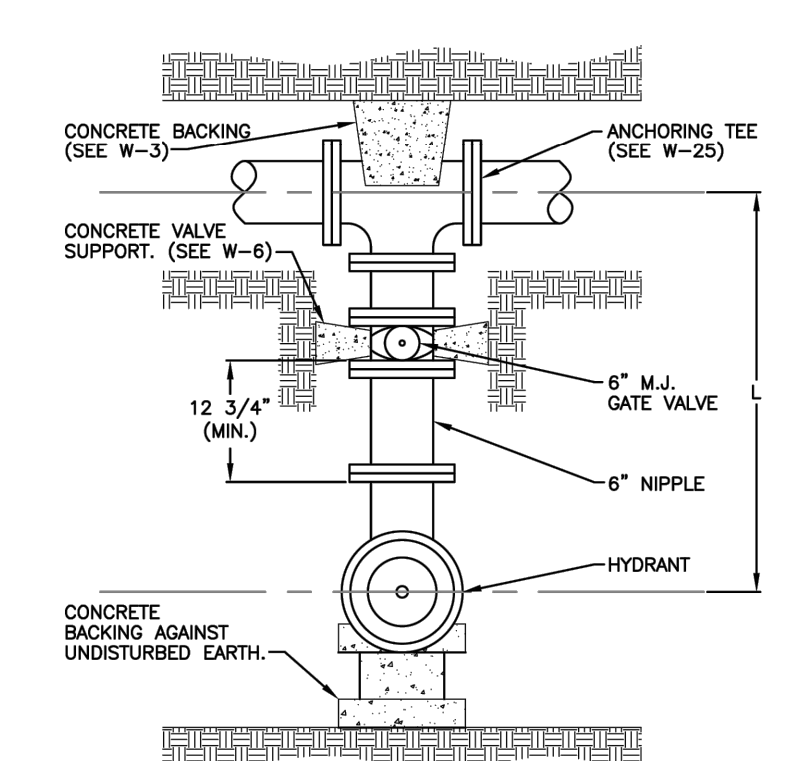

REGISTERED ENGINEER

STANDARD FIRE HYDRANT DETAIL

SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT

STANDARD CONSTRUCTION DWG.

REVISED: 06/2024 DRAWING NO. W-20C 3 OF 3



SIZE OF PIPE	MINIMUM L
6"	35"
8"	36"
10"	39"
12"	42"

PLAN VIEW

NOTES:

1. TYPE B: LONG SIDE OF BEND TO TEE. TYPE B MODIFIED: SHORT SIDE OF BEND TO TEE.

2. FIRE HYDRANTS SHALL HAVE A MAXIMUM BURY OF 7'-0". MODIFICATION OF THE HYDRANT LEAD TO MEET THIS REQUIREMENT SHALL BE IN THE SECTION FROM THE VALVE TO THE HYDRANT PER W-22.

3. ALL JOINTS TO BE RESTRAINED WITH MEGALUG RESTRAINED JOINT FITTINGS.

APPROVED: 6-13-24

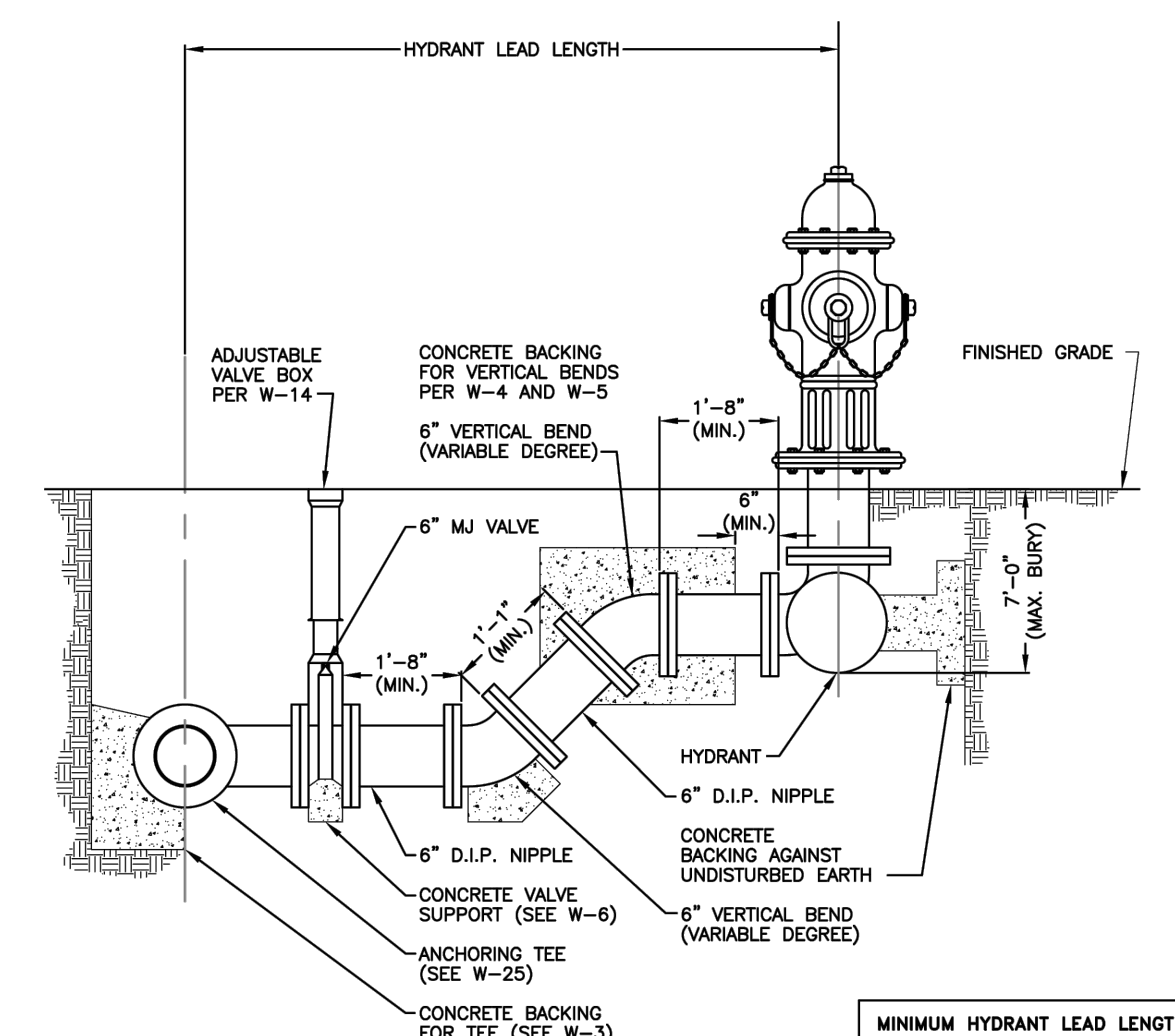

REGISTERED ENGINEER

TYPICAL HYDRANT SETTING (TYPE "A")

SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT

STANDARD CONSTRUCTION DWG.

REVISED: 06/2024 DRAWING NO. W-21



SIZE OF MAIN	11'-1/4"	22'-1/2"	45'
6"	8'-2"	8'-1"	7'-8"
8"	8'-3"	8'-2"	7'-9"
10"	8'-4"	8'-3"	8'-0"
12"	8'-6"	8'-5"	8'-0"
16"	8'-9"	8'-8"	8'-3"

SECTION VIEW

NOTES:

1. VERTICAL BENDS SHALL NOT EXCEED 45°.

2. WHERE APPLICABLE AND APPROVED BY THE ENGINEER, A COMMERCIAL OFFSET MAY (CLOW F-982 OR APPROVED EQUIVALENT) BE USED IN LIEU OF THE TWO VERTICAL BENDS AND THE INCLINED NIPPLE.

3. CONCRETE BACKING FOR VERTICAL BENDS SHALL BE PROVIDED PER W-4 AND W-5.

4. ALL JOINTS TO BE RESTRAINED WITH MEGALUG RESTRAINED JOINT FITTINGS.

APPROVED: 6-13-24

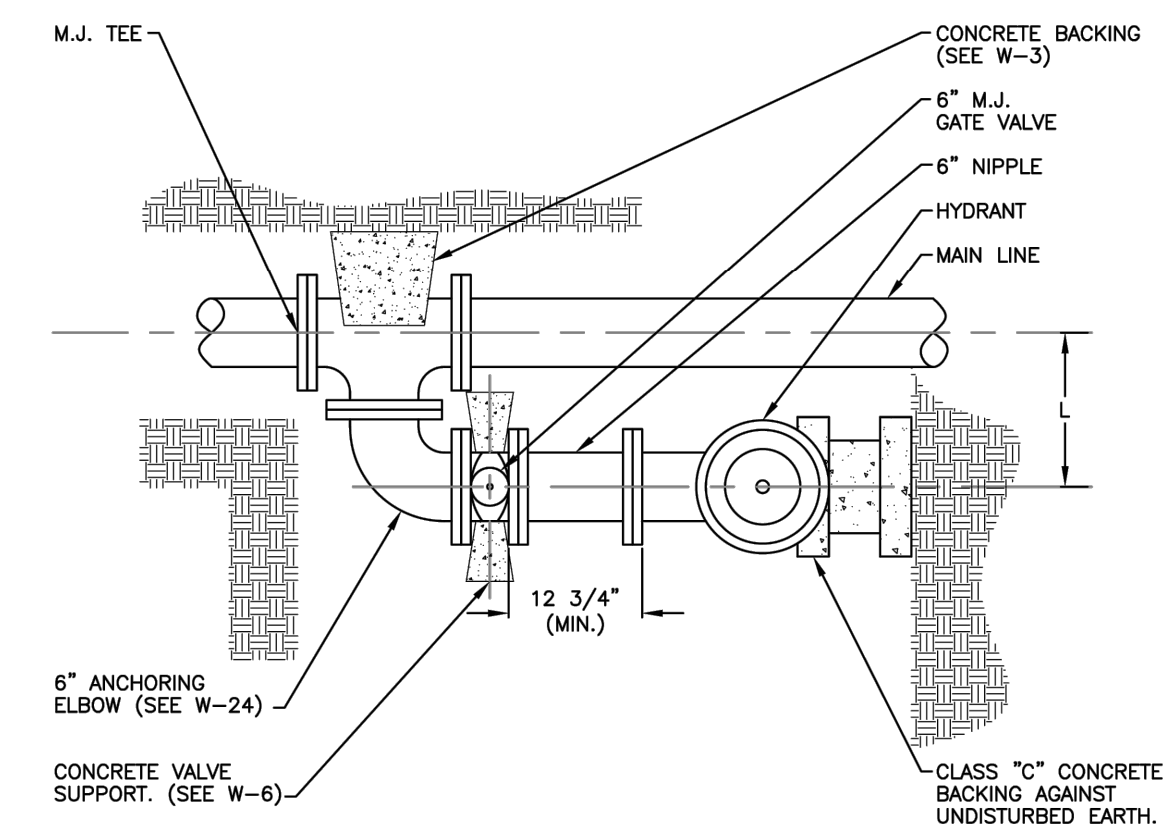

REGISTERED ENGINEER

TYPICAL HYDRANT SETTING (TYPE "A" MODIFIED)

SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT

STANDARD CONSTRUCTION DWG.

REVISED: 06/2024 DRAWING NO. W-22



MAIN LINE	MINIMUM L	
	TYPE B	TYPE B MODIFIED
6"	24"	19"
8"	25"	20"
10"	26"	21"
12"	28"	23"
16"	31"	26"

NOTES:

1. TYPE B: LONG SIDE OF BEND TO TEE. TYPE B MODIFIED: SHORT SIDE OF BEND TO TEE.

2. FIRE HYDRANTS SHALL HAVE A MAXIMUM BURY OF 7'-0". MODIFICATION OF THE HYDRANT LEAD TO MEET THIS REQUIREMENT SHALL BE IN THE SECTION FROM THE VALVE TO THE HYDRANT PER W-22.

3. ALL JOINTS TO BE RESTRAINED WITH MEGALUG RESTRAINED JOINT FITTINGS.

APPROVED: 6-13-24


REGISTERED ENGINEER

TYPICAL HYDRANT SETTING (TYPES "B" AND "B" MODIFIED)

SOUTHWEST LICKING COMMUNITY WATER AND SEWER DISTRICT

STANDARD CONSTRUCTION DWG.

REVISED: 06/2024 DRAWING NO. W-23

DATE:									
REVISIONS									
NO.									

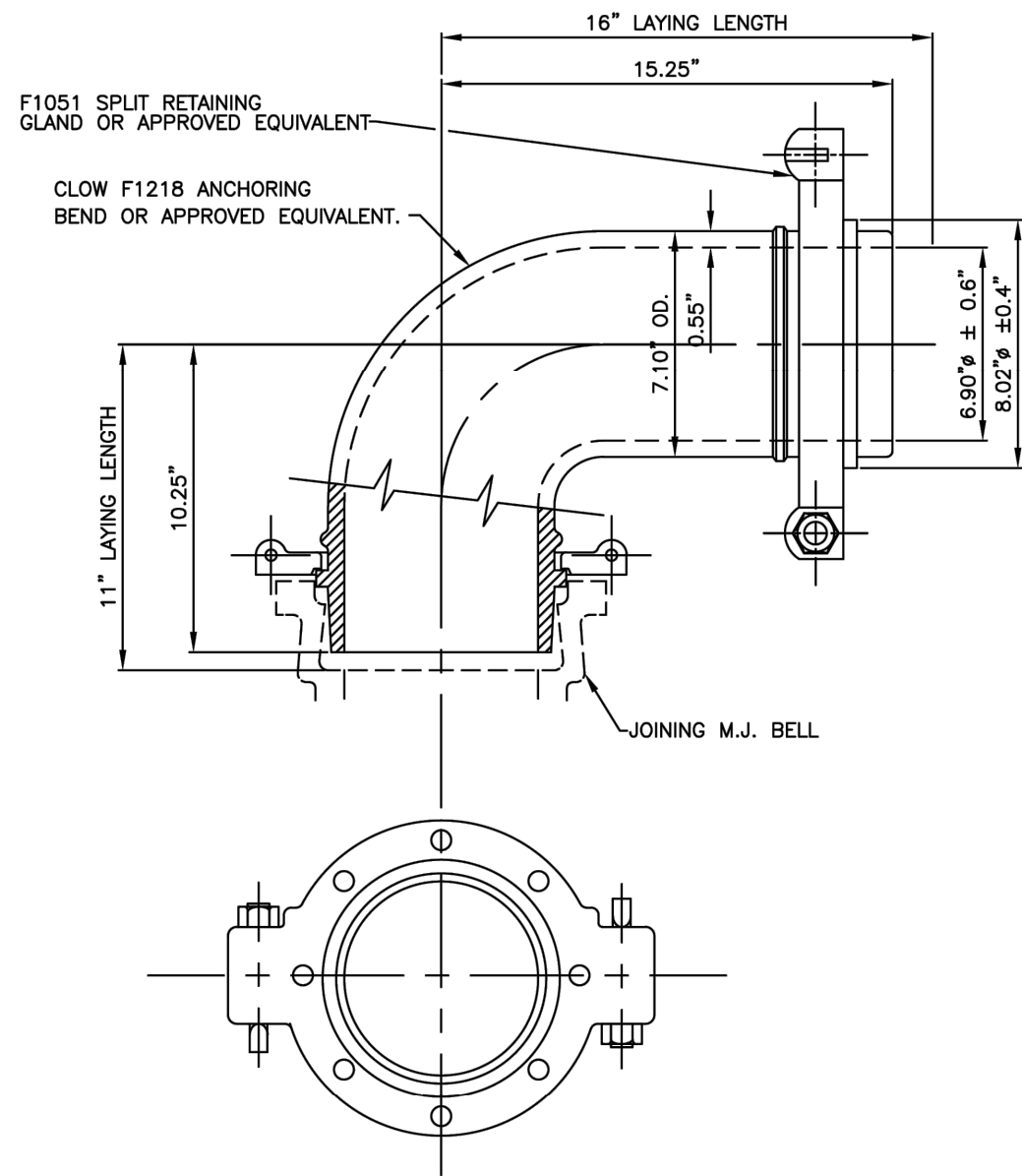
DISTRICT STANDARD CONSTRUCTION DRAWINGS

STATE ROUTE 161 - MINK STREET WATERLINE EXTENSION
LICKING REGIONAL WATER DISTRICT
LICKING COUNTY, OHIO

JOB NO.
4379.006
PROJECT MGR.
HPK

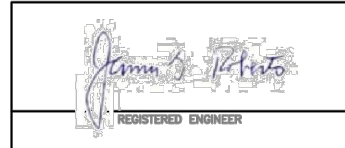


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THIS BEND IS TO BE USED WITH TYPE B AND TYPE B MODIFIED FIRE HYDRANT INSTALLATIONS. SEE W-23.

APPROVED: 6-13-24
DATE



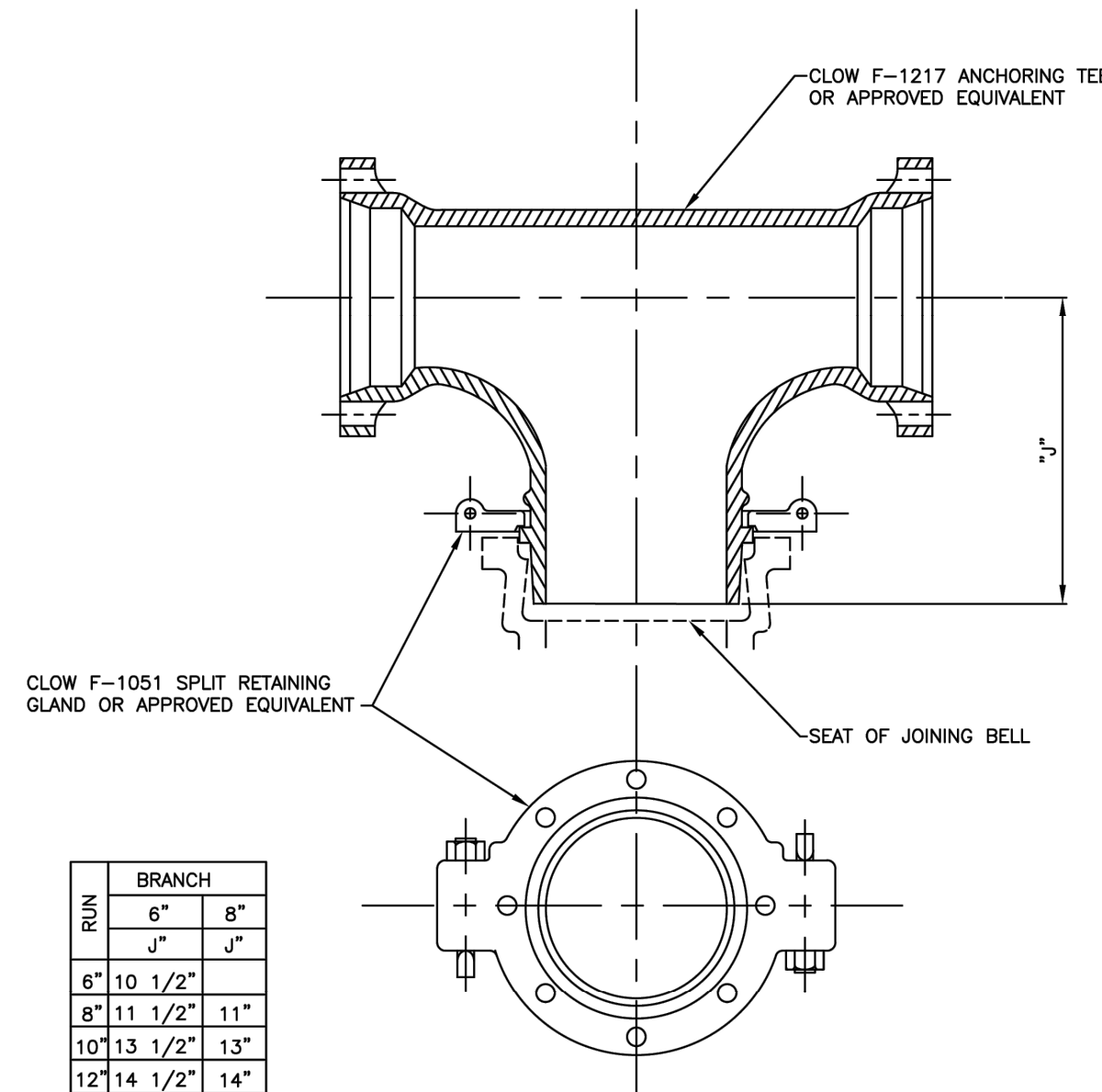
6"~90° HYDRANT BEND

SOUTHWEST LICKING COMMUNITY
WATER AND SEWER DISTRICT

STANDARD
CONSTRUCTION DWG.

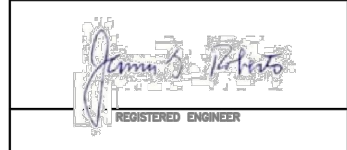
REVISED:
06/2024

DRAWING NO.
W-24



RUN	BRANCH	
	6"	8"
6"	10 1/2"	11"
8"	11 1/2"	13"
10"	13 1/2"	14"
12"	14 1/2"	17"
16"	17"	17"

APPROVED: 6-13-24
DATE



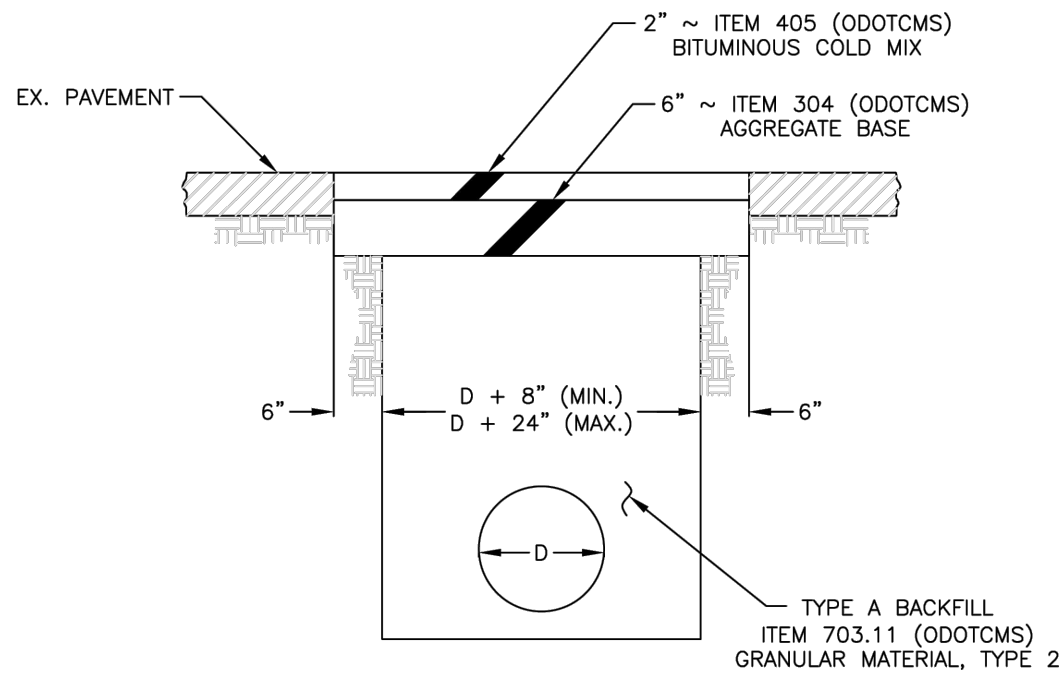
ANCHORING TEE

SOUTHWEST LICKING COMMUNITY
WATER AND SEWER DISTRICT

STANDARD
CONSTRUCTION DWG.

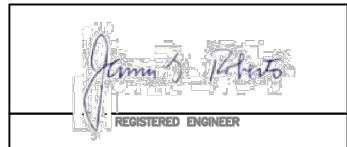
REVISED:
06/2024

DRAWING NO.
W-25



NOTE:
UNLESS OTHERWISE APPROVED BY THE ENGINEER TEMPORARY
PAVEMENT IS TO BE PLACED ON THE SAME DAY THE EXISTING
PAVEMENT IS REMOVED.

APPROVED: 6-13-24
DATE



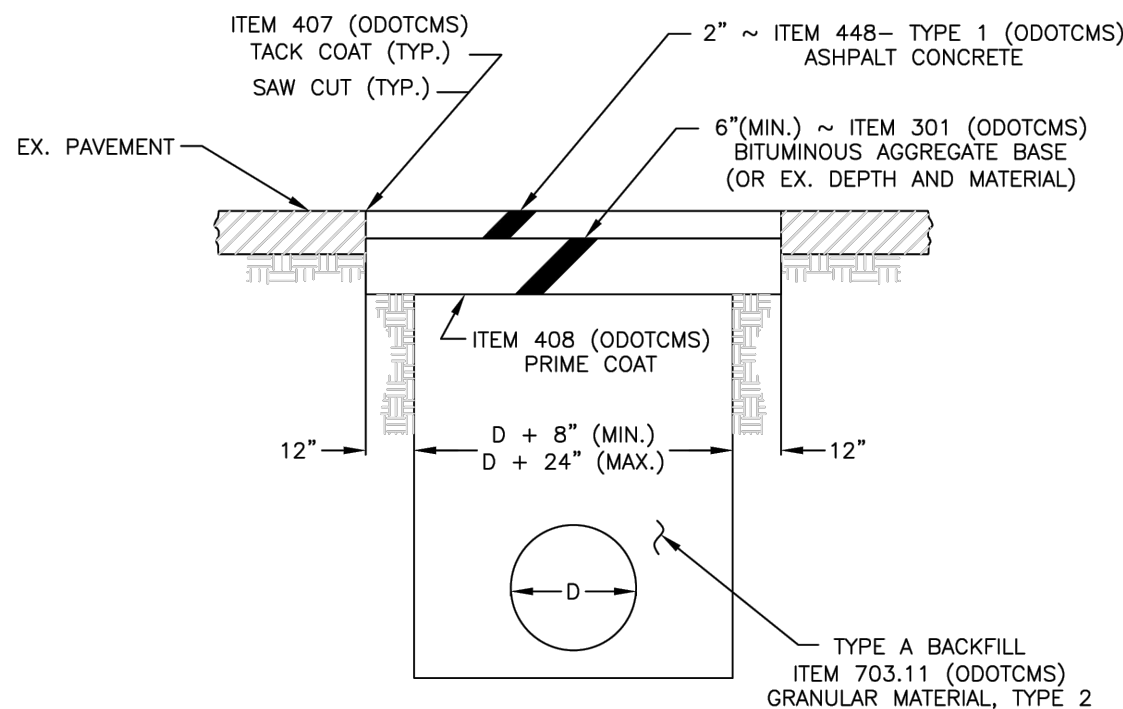
TEMPORARY PAVEMENT REPLACEMENT

SOUTHWEST LICKING COMMUNITY
WATER AND SEWER DISTRICT

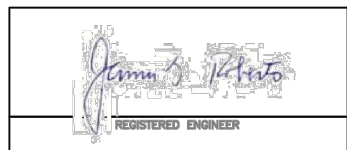
STANDARD
CONSTRUCTION DWG.

REVISED:
06/2024

DRAWING NO.
P-1



APPROVED: 6-13-24
DATE



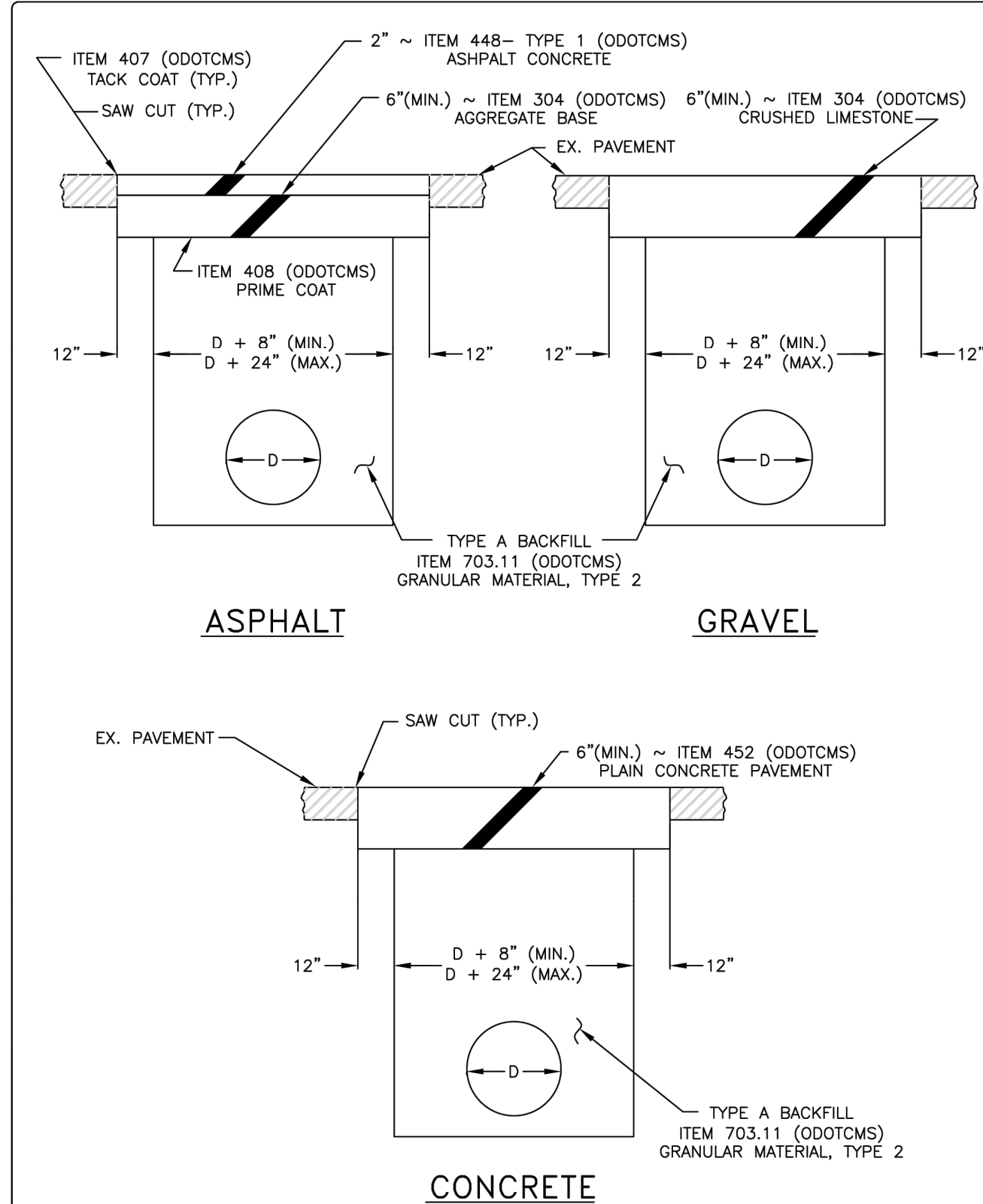
PERMANENT PAVEMENT REPLACEMENT

SOUTHWEST LICKING COMMUNITY
WATER AND SEWER DISTRICT

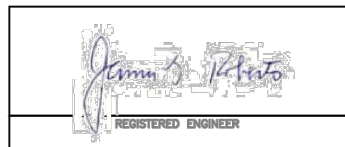
STANDARD
CONSTRUCTION DWG.

REVISED:
06/2024

DRAWING NO.
P-2



APPROVED: 6-13-24
DATE



DRIVEWAY PAVEMENT REPLACEMENT

SOUTHWEST LICKING COMMUNITY
WATER AND SEWER DISTRICT

STANDARD
CONSTRUCTION DWG.

REVISED:
06/2024

DRAWING NO.
P-3

DISTRICT STANDARD CONSTRUCTION DRAWINGS

STATE ROUTE 161 - MINK STREET WATERLINE EXTENSION
LICKING REGIONAL WATER DISTRICT
LICKING COUNTY, OHIO

JOB NO.
4379.006

PROJECT MGR.
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SHEET
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