

CITY OF ANN ARBOR UTILITY MATERIAL REQUIREMENTS		CONTRACTOR TO PROVIDE	DELIVERED YES/NO
WATER			
Ductile Iron Pipe	Pressure Class 350 or Greater; Thickness Class 50 or Greater (w/ polywrap)		
Polywrap	AWWA C105/A21.5-18. Thickness = 8 mil, min. Color = black. Size: per Table 1 of current AWWA C105 specification (16" for 6" pipe, 20" for 8" pipe, 27" for 12" pipe, etc).		
Polypig	Blue, soft		
HDPE Water Main Pipe	HDPE SDR 7.0; AWWA C906 and approved for use with potable water under ANSI/NSF Standard 14. AWWA C906 and NSF 14 identifications must appear on exterior wall print line.		
HDPE Pipe & Fittings	HDPE pipe, restraining collar, reducer and ductile iron to HDPE transition adaptor shall be industrial polyethylene pipe size (IPS) and meet AWWA C906 and ANSI/NSF Standard 14.		
	HDPE restraint		
	Pipe stiffener		
Push-On Restrained Joint Gaskets	American Pipe "Fast Grip" Gasket System Griffin Pipe "Field Lok 350" Gasket System U.S. Pipe "Field Lok 350" Gasket System McWane Ductile "Sure Stop" Gasket for Tyton Joint		
Fire Hydrants	EJIW5-BR/ WaterMaster 5BR 250 w/ 5" Stortz Connection, 1-3/8" pentagon operating nut, one 3-3/8" AA pumper connection, push-on joint, no barrel drain, product #55931D. Waterous Model TVC-5 with Traffic Flanges American Flow Control 5-1/4" Pacer, WB 67-250 (Non-High Density)		
Fire Hydrant Extensions	East Jordan Iron Works Hydrant Model 5-BR Extension Kit Waterous Part #F1-K562-6		
Tapping Sleeves	Clow No. F-5205 Ford Meter Box Co. Style FTSS Mueller Co. No. H-615 Power Seal Model No. 3490 AS Smith Blair Model No. 622 (if existing main is not pitted) Smith Blair Model No. 663 Waterous Series 800 JCM 432 All Stainless Steel Tapping Sleeve Price Brothers Company Tapping Sleeve for Prestressed Concrete Steel Cylinder Pipe (concrete mains) EJIW MJ Tapping Sleeve & EJIW FlowMaster RW Valve Tyler/Union D.I. MJ Tapping Sleeve Ford Meter Box Co. Style FAST (only allowed if proven nothing else is available; not a preferred product)		
Gate Valves <i>(open to the right, push-on only)</i>	American Flow Control Double Disc American Flow Control Series 2500 Single Resilient Wedge Clow Model 2639/2640 (2" through 12"), F-6112 EJIW FlowMaster Resilient Wedge Valve Kennedy AWWA 571X Double Disc Mueller Series 4"-12" A-2360-38 Resilient Wedge - SL. x SL. Tyler Series DRS 250-22 Double Resilient Wedge U.S. Pipe Metroseal Series 250-5460 Single Resilient Wedge (w/out Lock Nuts on Bonnet Bolts) U.S. Pipe & Foundry Tyton Joint, Resilient Wedge Seated Gate Valve, Meeting AWWA C509, AWWA C550 & ASTM D2794 Waterous Series 300 and T300 NRS Double Disc Gate Valve		
Tapping Valves <i>(open to the right, tap x M.J.)</i>	American Flow Control Double Disc American Flow Control Series 2500 Single Resilient Wedge Clow Model 2639/2640 (2" through 12"), F-6112 EJIW FlowMaster Resilient Wedge Valve Kennedy AWWA 571X Double Disc Mueller Series 4"-12" A-2360-38 Resilient Wedge - SL. x SL. Tyler Series DRS 250-22 Double Resilient Wedge U.S. Pipe Metroseal Series 250-5460 Single Resilient Wedge (w/out Lock Nuts on Bonnet Bolts) U.S. Pipe & Foundry Tyton Joint, Resilient Wedge Seated Gate Valve, Meeting AWWA C509, AWWA C550 & ASTM D2794 Waterous Series 300 and T300 NRS Double Disc Gate Valve		
Butterfly Valves	Henry Pratt "Groundhog" Mueller "Linesal III" DeZURIK AWWA 16" Butterfly Valve (MJ)		
Solid Sleeves	Shall be long sleeves		
Fittings	ANSI/AWWA C110/A21.10 or C153/A21.53 w/ Cement Mortar Lining & Asphaltic Seal Coat per ANSI/AWWA C104/A21.4 & Asphaltic Coating on Outside per ANSI/AWWA C110/A21.10 or C153/A21.53		
Mechanical Joints for Hydrants & Solid Sleeves	EBAA Mega Lug Series 1100 Joint Restraint System; Bolts to be High Strength, Low Alloy Steel Ford Meter Box Company, Uni-Flange Retainer (UFR1400-D-x style)		
Mechanical Joint Gasket	ANSI/AWWA C111/A21.11		
Mechanical Joint Bolts	High Strength, Low Alloy Steel		
Valve Boxes	Tyler 32U, Heavy Duty, Screw Type, size D, screw type 3-piece, 5 1/4 inch shaft and a #6 base for a valve 8 inches or less and #8 base for 10 and 12 inch valves (6860 components)		
Curb Boxes	Tyler 6500 Bibby Ste. Croix B-2000		
Sampling Station	Elipse No. 88 Sampling Station		
Gate Well	5' Dia. for 12" pipe		
Tapping Well	7' Dia. for 16" x 8" connection 7' Dia. for 20" x 12" connection 7' Dia. for 16" x 12" connection		
Well Structure Cover	East Jordan 1040 Ann Arbor "art" cover, lettered "WATER"		
Well Structure Casting	East Jordan 1040		

SEWER/DRAINAGE			
Concrete Pipe	Reinforced ASTM Designation C-76 Class IV Reinforced Elliptical - ASTM Designation C-507 Non-Reinforced ASTM Designation C-14		
Concrete Pipe Joints	ASTM C-443		
HDPE Pipe	ADS N-12 Hancor Titeline Meeting AASHTO M-294 or ASTM F-892		
HDPE Sewer Pipe Joints	ASTM D-3212		
Steel Casing Pipe	Diameter of Pipe --> Wall thickness (minimum) Under 14" --> 0.250" 14", 16", 18" --> 0.312" 18" --> 0.375" 20", 22" --> 0.375" 24", 26", 28", 30" --> 0.500" 32", 34" --> 0.563" 36", 38", 40", 42" 48" --> 0.625" non-spiral, minimum yeild strength 35,000psi, leakproof joints, continuous welds; ASTMA53; Type E or S; Grade B Midway Structural Pipe and Supply ASTM A-139, Grade B, 35,000 PSI Minimum Yelid Strength		
Casing Pipe Spacers	HDPE.		
Vitrified Clay Pipe	ASTM C700, Extra Strength		
Vitrified Clay Pipe Joints	ASTM C-425		
Vitrified Clay Pipe Fittings	ASTM C700, Extra Strength, Compression		
Ductile Iron Sewer Pipe	Griffin H2Sewer Safe American Pipe with Protecto 401 Lining		
PVC Pipe	ASTM D3034-83 Mininum SDR-35		
PVC Pipe Joints	ASTM D 3212-81		
PVC Fittings	ASTM D3034-83 Mininum SDR-35, Push-On		
Edgedrain/Underdrain	except PVC plastic, shall conform with ASTM D3033; Geotextile wrapping		
Precast Manholes	ASTM C-478 Storm ASTM C-478 Sanitary		
Concrete Masonry Units	ASTM C139 (only for use on storm sewer manholes)		
Concrete Brick	ASTM C-55, Grade N-1		
Sanitary Covers	EJ 1040 Ann Arbor "art" cover or 1040WT (if in low-lying area), lettered "SANITARY" Neenah R-1642C		
Sanitary Manhole Frames	EJ 1040EZ (may be used for storm and water manholes)		
Storm Frames	Cast Iron ASTM A 48, Class No. 30 per Casting Schedule (SD-GU-5 in PSSS); Note: 2 Pick holes allowed, not 3		
Storm Covers	EJ 1040 Ann Arbor "art" cover, stamped "STORM" EJ 7045 Type M1 EJ 5000M1		
Flexible Sewer Pipe Connectors	Flexible neoprene rubber boot. Fernco, or equal.		
Flexible Sewer Pipe to Manhole Boot	Kor-n-Seal, or equal.		
Manhole Adjustment Rings	Concrete, or HDPE		
Manhole Adjustment Brick	Concrete meeting ASTM C139		
Manhole Steps	ASTM C-478, 1500 lbs pull-out resistance, copolymer or polypropylene, encapsulating 1/2" DIA. grade 60 steel reinforcing bar		
AGGREGATES/BACKFILL MATERIAL			
City of Ann Arbor Class II Sand	Conforms to MDOT Class II with exceptions: 100% Passes 2" Sieve, Uniformity Coefficient = 6.0 or Greater		
21AA	Conforms to MDOT Sec. 8.02, Except Max. Loss by Wash is 8%		
6A Crushed Limestone	Required Bedding & Initial Backfill for PVC Sewer Pipe		
2NS	Required Bedding & Backfill for Road Underdrain/Edgedrain		
Additional Items:			
Concrete	Mix design and sieve analysis on aggregates Class A for thrustblock Drives and walks Concrete road base Curb and gutter		
Bituminous Paving Materials	Mix design and sieve analysis on aggregates		
Concrete Pipe	Pipe certification letter		
Concrete Manhole	Component part cut sheet for precast structures 48" Sanitary Manhole Sections Precast stormwater filtration pre-treatment manhole 48" Storm outlet control manhole		
Sanitary Sewer Pipe	Pipe certification letter - SDR 35		
Sanitary Sewer Fittings	Accessories certification letter		
Water Pipe	Pipe certification letter Accessories certification letter		
Silt Fence	Catalogue cut sheet		
Inlet Filters	Catalogue cut sheet		
Aggregates	Each gradation for drainage system (3 different material certifications)		
Porous Paver Blocks	Catalogue cut sheet and sample		
Perforated Pipe	Catalogue cut sheet		
Underdrain	Catalogue cut sheet		
Plant materials	Seed source certification		
Underground Storage	Oversized detention pipe and header system		
LAST UPDATED: 02/11/2020 NW			