CONTRACTOR TO PROVIDE

DELIVERED YES/NO

**WATER**

Ductile Iron Pipe
Pressure Class 350 or Greater; Thickness Class 50 or Greater (w/polywrap)

Polyprop
AWWA C105/A21.5-1B; Thickness = 8 mil, min. Color = black, Size per Table 1 of current AWWA C105 specification (16” for 6” pipe; 20” for 8” pipe, 24” for 12” pipe, etc.)

Polyethylene
ROPE PIPET / AWWA C606 and approved for use with potable water under ANSI/NSF Standard 14. AWWA C606 and ANSI/NSF Standard 14

ROPE restraints
Pipe fittings

Push-On Restrained Joint Gaskets
American Pipe "Fast Grip" Gasket System

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 ANSI/NSF Standard 14

Fire Hydrants

Fine Hydrant Extensions
East Jordan Iron Works Hydrant Model S-BR Extension Kit

Valves

Tapping Valves

Gate Wells

Curb Boxes

Sampling Station

Water Well Structure Cover
East Jordan 1040 Ann Arbor "art" cover, lettered "WATER"

Well Structure Casting
East Jordan 1040

**CITY OF ANN ARBOR UTILITY MATERIAL REQUIREMENTS**

<table>
<thead>
<tr>
<th>CONTRACTOR TO PROVIDE</th>
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<tbody>
<tr>
<td>WATER</td>
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<td>Gate Wells</td>
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<td>Tapping Valves</td>
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<td>Butterfly Valves</td>
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<td>Integral Sleeves</td>
<td></td>
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<tr>
<td>Fittings</td>
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<tr>
<td>Mechanical Joint Gasket</td>
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<td>Mechanical Joint Bolts</td>
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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-445
HDPE Pipe ANSI N-12
Ranco Training Meeting AASHTO M-294 or ASTM F-892
HDPE Sewer Pipe Joints ASTM D-3212
Steel Casings Pipe Diameter of Pipe --> Wall Thickness (minimum)
            "14", "16", "18" -> .323"            "18", "20", "22" -> .375"            "24", "26", "28", "30" -> .500"
            "32", "34", "36", "38", "40", "42", "44" -> .625"
            Nominal, minimum yield strength 35,000ps., leakproof joints, continuous
            seal, ASTM A533, Type E or S, Grade B
Midway Structural Pipe and Supply ASTM A-139, Grade B, 35,000 PSI
Minimum Yield Strength

Concrete Pipe Spacers HDPE
Vitrified Clay Pipe ASTM C-700, Extra Strength
Vitrified Clay Pipe Joints ASTM C-425

Ductile Iron Sewer Pipe
            Griffin H2 Sewer Safe
            American Pipe with Protecto 401 Lining
PVC Pipe
            ASTM D3034-83 Minimum SDR-35
PVC Pipe Joints ASTM D 3212-81

Edgeura/Edgerain except PVC plastic, shall conform with ASTM D3033; Geotextile wrapping
Precast Manholes
            ASTM C-479 Storm
            ASTM C-478 Sanitary
Concrete Masonry Units
            ASTM C-478 only (for use on storm sewer manholes)
Concrete brick
            ASTM C-39, Grade N-1
Sanitary Covers
            EJ 1040 Ann Arbor "art" cover or "1040WT" (if in low-lying area) labeled
            "SANITARY"
            Neenah R-1642C
Sanitary Manhole Frames
            EJ 1045/EZ (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 1045 Ann Arbor "art" cover, stamped "S100MM"
            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 C-119
Manhole Steps
            ASTM C-478, 1500 lbs pull-out resistance, copolymer or polypropylene,
            encapsulating 1/2" DI, 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
HMA
            Conforms to MDOT Sec. 6-61, Enrich Mat. Loss by Wash is 8%
6A Crushed Limestone
            Required Bedding & Initial Backfill for PVC Sewer Pipe
3VS
            Required Bedding & Backfill for Road Underdrain/Edgerain

Additional Items:

Concrete Mix design and sieve analysis on aggregates
            Class A for thrustblock
            Gravel and sand
            Concrete test base
            Curb and gutter
Bituminous Paving Materials
            Mix design and sieve analysis on aggregates
Concrete Pipe
            Pipe certification letter
Concrete Manhole
            Compound part cut sheet for precast structures
            K# Sanitary Manhole Sections
            Precast concrete fiberized precast平淡件
            M# Storm outlet control manhole
Sanitary Sewer Pipe
            Pipe certification letter - SD-35
Sanitary Sewer Fittings
            Accessories certification letter
Water Pipe
            Pipe certification letter
            Accessories certification letter
Silt Fence
            Catalogue cut sheet
Felt Filters
            Catalogue cut sheet
Aggregates
            Each gradation for drainage system of different materials certifications
Porous Panel Blocks
            Catalogue cut sheet and sample
Hatch cover
            Catalogue cut sheet
Driveways
            Catalogue cut sheet
Plant materials
            Seed source certification
underground drainage
            Overhead detention pipe and header system

LAST UPDATED:  02/11/2020 NW