

BILL NO. 2026-008

ORDINANCE NO.

**A GENERAL ORDINANCE OF THE CITY OF NEVADA, MISSOURI, AMENDING ARTICLE III OF CHAPTER 36 – WATER, OF THE CODE OF ORDINANCES TO ADD SECTION 36-17(d)(2)(a) FIRE HYDRANT INSTALLMENT REQUIREMENTS**

**WHEREAS**, the City Council desires to regulate the requirements as it relates to the installment of fire hydrants within city limits; and

**WHEREAS**, the City Council finds that it is in the public interest to establish standards and regulations for the installation of fire hydrants within City limits; and

**WHEREAS**, the City Council desires to amend Article III – Standard of Waterline Construction Specifications in Chapter 36 – Water, which shall include a new section, Section 36-17(d)(2)(a) – Fire Hydrant Installment Requirements

**NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF NEVADA, MISSOURI AS FOLLOWS:**

**Section 1.** That Chapter 36 -Water is hereby amended to include a new section, Section 36-17(d)(2)(a) – Fire Hydrant Installment Requirements, which reads as follows:

**ARTICLE III. - STANDARD WATERLINE CONSTRUCTION SPECIFICATIONS**

**Sec. 36-17. - Materials.**

(a) *Water distribution lines.* Water distribution lines shall be PVC or ductile iron pipe meeting the following specifications:

1. *PVC pipe.* PVC pipe shall be solid wall meeting the requirements of ASTM D2241, latest revision, with wall thickness DR 18, C900 (Class 150). All pipe must bear the National Sanitation Foundation seal for potable water pipe. **All water main piping shall be installed with a continuous 12-gauge solid copper tracing wire. The tracing wire shall be installed parallel to the water main and shall be extended up each valve box to a point not less than ten (10) inches above the top of the valve box.** Pipe shall have an integral bell with a lock-in, solid cross section elastomeric gasket that meets the requirements of ASTM F477, latest revision. Provisions must be made for contraction and expansion at each rubber ring bell and spigot joint. Pipe shall be made from clean, virgin, NSF-approved PVC material conforming to ASTM D1784, latest revision.
  - a. Physical and chemical tests. Pipe shall meet the following physical and chemical test requirements of AWWA C900: All

physical and chemical tests shall be conducted at 73 degree F. plus-or-minus 3.6 degrees F.

2. *Ductile iron pipe.* Ductile iron pipe shall be pressure class 350 and shall conform to the latest revision of ANSI A21.51 (AWWA C151) "Standard for Ductile Iron Pipe Centrifugally Cast in Metal Molds and Sand Lined Molds, for Water or Other Liquids." The pipe shall be standard asphaltic varnish coated on the outside. Pipe shall be cement mortar lined in conformance with ANSI A21.4-90 (AWWA C104) unless specified otherwise.
    - a. Joints for ductile iron pipe that is to be buried shall be push-on type consisting of a single neoprene gasket which are "Tyton" as manufactured and licensed by the U.S. Pipe and Foundry Company; "Fastite" as manufactured and licensed by the American Cast Iron Pipe Company; and "Bell-Tite" as manufactured and licensed by James B. Clow and Son, Inc. All required joint materials including the neoprene gasket and the lubricant shall be furnished with the pipe.
  3. *Water line fittings.* **If any water distribution lines are four (4) inches or larger, the fittings shall be made of ductile iron.** ~~Fittings to be used with water distribution lines larger than four inches in diameter shall be ductile iron,~~ and shall conform to the requirements of ANSI/AWWA C110/A21.10-93 or C153/A21.53-94. All mechanical joint fittings shall be pressure class 350 ductile iron. Fittings shall be standard asphaltic varnish coated on the outside. Fittings shall be cement mortar lined in conformance with ANSI A21.4-80 (AWWA C104). Fittings shall be mechanical joint or push-on joint and shall meet all applicable requirements of ANSI 2.11-85 (AWWA CX111).
    - a. Fittings for water distribution lines four inches in diameter and smaller shall be of the same material as that of the pipe.
  4. *Water main design.* All proposed water mains shall be a minimum of six inches in diameter, constructed in a looped manner such that there are no dead end main water lines. A waiver from the city must be obtained if these conditions cannot be met.
- (b) *Water service line and appurtenances.* Water service line shall be solvent-weld PVC pipe **or HDPE Pipe** ~~brass or copper tubing~~ meeting the following specifications, **all fittings shall be brass and lead free:**
1. *PVC pipe.* PVC pipe for water service lines shall be solvent weld PVC pressure pipe, schedule 80, meeting the requirements of ASTM D1785, latest revision. All pipe shall bear the National Sanitation Foundation seal for potable water pipe. **All water service piping shall be installed with a continuous 12-gauge solid copper tracing wire. The tracing wire shall be installed parallel to the water service and shall be extended up each meter pit to a point not less than ten (10) inches above the top of the meter pit.** Pipe shall be made from clean, virgin, NSF-approved material conforming to ASTM D1784, latest revision. All connections shall be joined by primer and PVC solvent cement conforming to ASTM D2564, latest revision.

2. **HDPE Pipe ASTM F714 or ASTM D3035** ~~Copper tubing.~~ **HDPE pipe for water service lines shall have a maximum pressure of 200 psi and it shall be blue in color.** ~~Copper tubing shall be type K conforming to ASTM B88, latest revision.~~ **All HDPE pipe shall be installed with a continuous 12-gauge solid copper tracing wire. The tracing wire shall be installed parallel to the water service and shall be extended up each meter pit to a point not less than ten (10) inches above the top of the meter pit.**
3. *Service saddles.* Service saddles shall be double-strap type suitable for installation on PVC pipe. The body and straps shall be brass and the gasket shall be of suitable material to provide a leakproof installation. The outlet shall be three-quarter inch minimum.
4. *Corporation stops.* Corporation stops shall be designed and manufactured to conform to AWWA standard C800-84, and shall be designed to withstand working pressures up to 250 psi.
  - a. *Inlet threads.* Inlet threads shall be AWWA Taper Direct Tap thread, unless otherwise approved.
  - b. *Outlet threads.* Outlet threads shall be suitable for water service line subject to approval of the public works director.

(c) *Water service meters and appurtenances.*

1. *Water meters.* Water meters shall be purchased from the city.
2. *Coppersetters.* Coppersetters shall be provided for each water service meter. Coppersetters shall have a brace eye for installation of a cross-brace, and shall have an inlet and outlet compatible for the size and type of water service line. An inverted key valve with padlock wings shall be provided at the meter inlet, and a dual angle check valve shall be provided at the meter outlet.
3. *Meter pits and covers.* Meter pits shall be ribbed and of type 1, grade 2 PVC conforming to ASTM D1784, latest revisions, or reinforced concrete pipe. Pits shall be a minimum 18 inches diameter by 24 inches deep. Two-piece raised lid meter pit covers of cast iron and of the size required to fit the meter pits shall be provided. Covers shall be stamped "Water meter."

(d) *Valves and hydrants.*

1. *Gate valve and box.*
  - a. *Construction.* All gate valves shall be iron body, nonrising stem with O-ring gaskets. The valves shall be equipped with a two-inch square operating nut.
  - b. *Conformance to standard.* Gate valves shall conform to AWWA C500-93 (Metal Seated Gate Valves) or AWWA C509-94 (Resilient Seated Gate Valves) for design working water pressures of 200 pounds-force per square inch gauge (psig) for valves 12 inches NPS in diameter or smaller, and 150 psig for valves with diameter 16 inches NPS and larger.
  - c. *Valve boxes.* Valve boxes shall be required for all buried valves, and shall be cast iron. The valve box shall have a round top with open base. A top cover will be provided, marked "water." The

valve box shall be of the two-piece screw type with top piece capable of adjustment to final grade.

2. *Fire hydrants and appurtenances.*

a. **Fire Hydrant Installment Requirements.**

- I. **The installment of fire hydrants shall meet or exceed the requirements set forth in the International Fire Code (IFC) and NFPA standards.**
- II. **All engineered plans shall include all necessary information as it relates to the installment of fire hydrants.**
- III. **The Authority having Jurisdiction (AHJ) may, at its sole discretion, require changes to the proposed plan, including but not limited to adding additional fire hydrants, at the sole cost of the builder/developer.**

b. *Materials.*

- I. *Gate valve and box.* Gate valves and boxes shall be located adjacent to each fire hydrant for isolation of the hydrant for repairs. Gate valves and boxes shall be as specified in **Section 36-17(d)(1).**
- II. **Fire hydrants. All fire hydrants purchased for use within City limits shall be the A423 4'0" 3WAY OR RED manufactured by Mueller.** ~~Fire hydrants shall meet or exceed requirements set forth in AWWA Standard C502-94 or latest revision. Hydrants shall be dry barrel traffic model with break flange construction. Outlets shall be three-way and as required for the fire department's pumper and/or hose sizes and threads. Operating nut shall also be of the type in use by the city. Contractor shall be solely responsible for ensuring compatibility of city's equipment and hydrants. Inlets shall be a mechanical joint type and main valve size shall be 5¼ inches. Hydrants manufactured by Mueller are preferred by the city.~~

c. *Location and spacing.* Hydrants shall be provided at each street intersection and at intermediate points between intersections, such that hydrants are spaced no greater than 500 feet apart.

(e) *Pipe bedding material.*

- 1. *Granular stone.* Granular stone pipe bedding material shall be crushed limestone consisting of aggregate particles meeting the requirements of ASTM C-33, latest revision, gradation 67, one-inch to No. 8 size as follows:

Sieve size	Percent passing
1"	100
¾"	90-100
⅜"	20-55
No. 4	0-10
No. 8	0-5

2. *Sand*. All sand used for bedding shall be clean, graded from fine to coarse, not lumpy or frozen, and free from slag, cinders, ashes, rubbish or other material that, in the opinion of the public works director, is objectionable or deleterious. It should not contain a total of more than ten percent, by weight, of loam and clay, and all material must be capable of being passed through a three-quarter inch sieve. Not more than five percent shall remain on a No. 4 sieve.

(f) *Steel casing pipe*. Steel pipe for casing at highway and railroad crossings shall conform to AWWA C209-91.

**SECTION 2.** If any section, subsection, sentence, clause, phrase, or portion of this ordinance is, for any reason, held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity of the remaining portions hereof.

**SECTION 3.** That the City Clerk is authorized by this Ordinance to correct any scrivener's errors identified within this Ordinance.

**SECTION 4.** That this ordinance shall take effect and be in force from and after its passage and approval.

**SECTION 5.** All ordinances or parts of ordinances in conflict herewith are hereby repealed.

**PASSED, APPROVED AND ADOPTED** by the City Council of the City of Nevada, Missouri, this \_\_\_\_\_ day of February, 2026.

(seal)

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CAROL BRANHAM, MAYOR

ATTEST:

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CYNTHIA DYE, CITY CLERK

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