

**ORDINANCE NO. 2630**

AN ORDINANCE OF THE COMMON COUNCIL OF THE TOWN OF GILBERT, ARIZONA, AMENDING THE CODE OF GILBERT, ARIZONA, CHAPTER 10 BUILDINGS AND CONSTRUCTION REGULATIONS, ARTICLE VI PUBLIC WORKS, SECTION 10-202 ADOPTION OF TOWN OF GILBERT'S PUBLIC WORKS AND ENGINEERING STANDARDS, THE SUPPLEMENT TO MAG UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, AND THE SUPPLEMENT TO MAG UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, RELATED TO STANDARDS OF PUBLIC WORKS CONSTRUCTION IN THE TOWN; PROVIDING FOR THE REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY; AND PROVIDING PENALTIES.

WHEREAS, the Town Council previously adopted the Public Works and Engineering Standards Manual, the Supplement to MAG Uniform Standard Details for Public Works Construction, and the Supplement to MAG Uniform Standard Specifications for Public Works Construction, as amended; and

WHEREAS, Town staff is recommending various minor revisions to these documents to clarify and improve certain elements of these documents and to remove a type of street seal coat product that is no longer commercially available;

NOW THEREFORE, BE IT ORDAINED by the Common Council of the Town of Gilbert, Arizona, as follows:

**Section 1.** The Code of Gilbert, Arizona, Chapter 10 Buildings and Construction Regulations, Article VI Public Works, Section 10-202 Adoption of Town of Gilbert's public works and engineering standards; supplement to MAG uniform standard details for public works construction; and supplement to MAG uniform standard specifications for public works construction., is hereby amended to read as follows (additions in ALL CAPS; deletions in ~~strikeout~~):

**Sec. 10-202. - Adoption of Town of Gilbert's public works and engineering standards; supplement to MAG uniform standard details for public works construction; and supplement to MAG uniform standard specifications for public works construction.**

These certain documents, three copies of which are on file in the office of the clerk, being marked and designated as Town of Gilbert's "Public Works and Engineering Standards" (EFFECTIVE NOVEMBER 20, 2017); "Supplement to MAG Uniform Standard Details for Public Works Construction" (EFFECTIVE NOVEMBER 20, 2017); and "Supplement to MAG Uniform Standard Specifications for Public Works Construction", ~~September 21, 2015~~ (EFFECTIVE NOVEMBER 20, 2017), published by the town, together with all appendices thereto, are hereby adopted as the engineering standards of the town, and as a supplement to the standard specifications and details for public works construction of the town, and such code

supplement is hereby referred to, adopted and made a part of this chapter as though set forth fully in this section.

**Section 2.** The Town Engineer is hereby authorized to take all actions necessary to implement these standards and to make reasonable interpretations in accordance with the Public Works and Engineering Standards Manual.

**Section 3.** Those certain documents dated October 19, 2017 and titled "Public Works and Engineering Standards (effective November 20, 2017)," "Supplement to MAG Uniform Standard Details for Public Works Construction (effective November 20, 2017)," and "Supplement to MAG Uniform Standard Specifications for Public Works Construction (effective November 20, 2017)," three copies of which are on file in the office of the Town Clerk, is hereby declared to be a public record, and said copies are ordered to remain on file with the Town Clerk.

**Section 4.** All ordinances and parts of ordinances in conflict with this ordinance are hereby repealed, effective as of November 20, 2017.

**Section 5.** If any section, subsection, sentence, clause, phrase or portion of this ordinance or any part thereof adopted herein by reference is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions thereof.

**Section 6.** Any person found responsible for violating this Ordinance shall be subject the civil sanctions and habitual offender provisions set forth in Section 1-5 of the Gilbert Municipal Code. Each day a violation continues, or the failure the failure to perform any act or duty required by the Municipal Code or by the Town of Gilbert Municipal Court continues, shall constitute a separate civil offense.

PASSED AND ADOPTED, BY THE COMMON COUNCIL OF THE TOWN OF GILBERT, ARIZONA THIS 19TH DAY OF OCTOBER, 2017.

AYES: S.Anderson, E.Cook, J.Daniels, V.Petersen, B.Peterson, J.Ray  
J.Taylor

NAYES: \_\_\_\_\_ NONE \_\_\_\_\_ ABSENT: \_\_\_\_\_ NONE \_\_\_\_\_

EXCUSED: \_\_\_\_\_ NONE \_\_\_\_\_ ABSTAINED: \_\_\_\_\_ NONE \_\_\_\_\_

APPROVED this 19<sup>th</sup> day of October, 2017.

  
\_\_\_\_\_  
Jenn Daniels, Mayor

ATTEST:

  
\_\_\_\_\_  
Lisa Maxwell, Town Clerk

APPROVED AS TO FORM:

  
\_\_\_\_\_  
~~Chris Payne, Town Attorney~~  
Nancy L. Davidson for

I, LISA MAXWELL, TOWN CLERK, DO HEREBY CERTIFY THAT A TRUE AND CORRECT COPY OF THE ORDINANCE NO. 2630 ADOPTED BY THE COMMON COUNCIL OF THE TOWN OF GILBERT ON THE 19<sup>TH</sup> DAY OF OCTOBER, 2017, WAS POSTED IN FOUR PLACES ON THE 26<sup>th</sup> DAY OF OCTOBER, 2017.

  
\_\_\_\_\_  
Lisa Maxwell, Town Clerk

**PROPOSED 10/19/17 REVISIONS TO PUBLIC WORKS AND  
ENGINEERING STANDARDS DOCUMENT**

## ***GILBERT PUBLIC WORKS AND ENGINEERING STANDARDS***

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NOTE: All Record Drawing measurements and data are to be taken and collected by the Engineer of Record responsible for the plans.

### **2.10.3 One Year Warranty**

A one year warranty for all infrastructure improvements is required in accordance with MAG Section 108.8. Other forms of financial assurance may be provided as approved by the Town Engineer.

At the end of the One Year Warranty period, a minimum of two coats~~an application~~ of PMM TRMSS~~(Polymer Modified Masterseal Fire Rubber Modified Slurry Seal)~~ or approved equal shall be applied to all streets. All striping that is affected by the PMMTRMSS shall be reapplied.

## **GILBERT PUBLIC WORKS AND ENGINEERING STANDARDS**

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**TABLE 4-2: CURB RETURN RADII**

<b>Street Classification</b>	<b>Intersecting Street Classification</b>			
	<b>Arterial</b>	<b>Major Collector</b>	<b>Minor Collector</b>	<b>Local/Agrarian</b>
Arterial	35'	30'	30'	30'
Major Collector	30'	30'	30'	25'
Minor Collector	30'	30'	30'	25'
Local/Agrarian	30'	25'	25'	20'

2. Sidewalk Ramp: Sidewalk ramps shall be constructed at all curbed return street intersections, at medians, and wherever a pedestrian access route crosses a street, in accordance with ADA Standards. Sidewalk ramps shall align with the sidewalk ramps on the opposite side of the street. If a traffic signal exists or is planned, the sidewalk ramp and apron shall provide access to the pedestrian push button, per ADA requirements.
  - Directional or double sidewalk ramps per MAG Standard Details shall be installed at all arterial and collector street intersections, with exceptions as approved by the Town. Where directional sidewalk ramps are required, the minimum curb return radius shall be 20 feet.
  - Sidewalk ramps per MAG Standard Details shall be installed at all local street intersections.
  - At tee intersections, at least one pedestrian crossing of the major street and one pedestrian crossing of the single leg shall be provided per MAG Standard Details, or if ramp conflicts with proposed driveway, a joint driveway and sidewalk ramp per MAG Standard Details may be installed. The ramp shall align with one of the sidewalk ramps on the opposite side of the street.
  - Along designated pedestrian routes to school, any crosswalk location or trail connection, additional sidewalk ramps may be required.
  - Projects that include construction improvements at existing street intersections where existing sidewalk ramps are located shall note whether the ramps are in compliance with current MAG Standard Details and ADA Standards. If the sidewalk ramps are not in compliance, they shall be removed and replaced with sidewalk ramps that meet MAG Standard Details and ADA Standards.

### **4.13 SIDEWALKS**

Installation of sidewalks shall promote and enhance pedestrian safety and the aesthetic quality of the roadway. Streets constructed to Town of Gilbert Standards shall have sidewalks installed per Town of Gilbert Standard Details and conform to MAG Standard Detail 230. Sidewalks shall remain within the right-of-way or

## **GILBERT PUBLIC WORKS AND ENGINEERING STANDARDS**

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sidewalk easement.

All attached sidewalk structural sections shall be engineered to prevent settling, heaving or other undesirable movement

*Special Note: Sidewalks abutting schools require a minimum width of 10 feet. Sidewalks along designated pedestrian routes to schools may be required to have wider than minimum width as directed by the Town. Additional right-of-way or a sidewalk easement may be required to accommodate the extra width sidewalk.*

### **4.13.1 Sidewalk Widths**

#### **4.13.1.1 ARTERIAL STREET**

- Meandering Sidewalk:
  - Minimum 6 feet wide
  - Minimum radius of 150 feet
  - Minimum separation of 3 feet from back of curb at the closest point of meander and a maximum 10 foot separation from back of curb.
- Detached Sidewalk:
  - Minimum 6 feet wide
  - Minimum separation of 3 feet from back of curb
- Attached Sidewalk:
  - Minimum 6 feet wide
  - Attached sidewalks adjacent to auxiliary lanes and turning lanes at intersections and bus stops.

#### **4.13.1.2 COLLECTOR STREET**

- Meandering Sidewalk:
  - 6 feet wide
  - Minimum radius of 50 feet
  - Minimum separation of 3 feet from back of curb at the closest point of meander.
- Detached Sidewalk:
  - 6 feet wide

## **GILBERT PUBLIC WORKS AND ENGINEERING STANDARDS**

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Arterial	6%	0.25%
Collector (Major)	7%	0.25%
Collector (Minor)	7%	0.25%
Local/Agrarian	10%	0.25%

### **4.18 INTERSECTIONS**

All street intersections share the same objectives to accommodate conflicting traffic movements efficiently and safely. However, each intersection shall be evaluated based on individual characteristics. Design shall be based on standard engineering criteria, Figure 4-7 and Figure 4-8, and the Traffic Impact Study requirements to minimize conflicts.

#### **4.18.1 Typical Intersection Design Considerations**

##### **4.18.1.1 TRAFFIC FACTORS**

Street capacities, turning movements, vehicle size and operating characteristics, vehicle speed, ride quality, pedestrian and bicycle movements, transit operations, schools in vicinity, traffic control, percentage of truck traffic, accident history and future traffic projections are factors for the intersection design.

##### **4.18.1.2 PHYSICAL FACTORS**

Existing topography, existing conditions, channelization requirements, and sight distances shall be taken into consideration.

##### **4.18.1.3 HUMAN FACTORS**

Human factors include but are not limited to, driving habits, reaction to surprises, decision and reaction time, and natural paths of movement.

#### **4.18.2 Intersection Offsets (Centerline to Centerline)**

The number of intersections along arterial streets should be kept to a minimum. New public or private street intersections on arterial streets should be located to align with planned median openings. New intersections on collector streets should be located to avoid creating conflicting turning movements with existing intersections or driveways. Refer to Figure 4-1 through Figure 4-6.

#### **4.18.3 Lane/Intersection Alignment**

Maximum offset of lanes across street intersections from each other is 2 feet. The offset dimension is measured from the traffic lane centerline to the corresponding traffic lane centerline at the nearest point of the curb return across the intersection.

Left turn lanes shall be provided with positive offsets at all signalized intersections. Where conditions exist that make positive offsets impractical, zero offsets may be

## **GILBERT PUBLIC WORKS AND ENGINEERING STANDARDS**

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used with approval by the Town Engineer. Left turn lanes with negative offsets will not be allowed.

### **4.18.4 Angle of Intersection**

#### **4.18.4.1 RIGHT-ANGLE**

Intersections should be designed with right-angle street intercepts. Right-angle intersections provide the shortest crossing distance for intersecting traffic streams, meet driver expectations and the most favorable condition for drivers to judge the relative position and speed of intersecting vehicles. Where special conditions exist, intersection angles may deviate from a right-angle by up to a maximum of 2° unless the Town Engineer approves otherwise.

#### **4.18.4.2 SKEWED ANGLE**

For skewed intersections, where any of the intersection angles are less than 88°, sight distances must be calculated in accordance with the procedures described in AASHTO's publication "A Policy on Geometric Design of Highways and Streets."

#### **4.18.4.3 NUMBER OF APPROACHES AT INTERSECTION**

The maximum number of approaches at any one intersection is 4.

### **4.18.5 Alignment and Profile**

Intersections occurring on the inside of crest vertical curves of all streets are prohibited. Where the grade of the through roadway is steep, flattening through the intersections is required as a safety measure. The intersecting street profiles and cross slopes shall be coordinated to ensure a safe and comfortable driving surface. Typically extending grades through the intersection for approximately 75 feet to 150 feet yields a satisfactory driving surface. Short vertical curves may also be necessary in lieu of grade breaks.

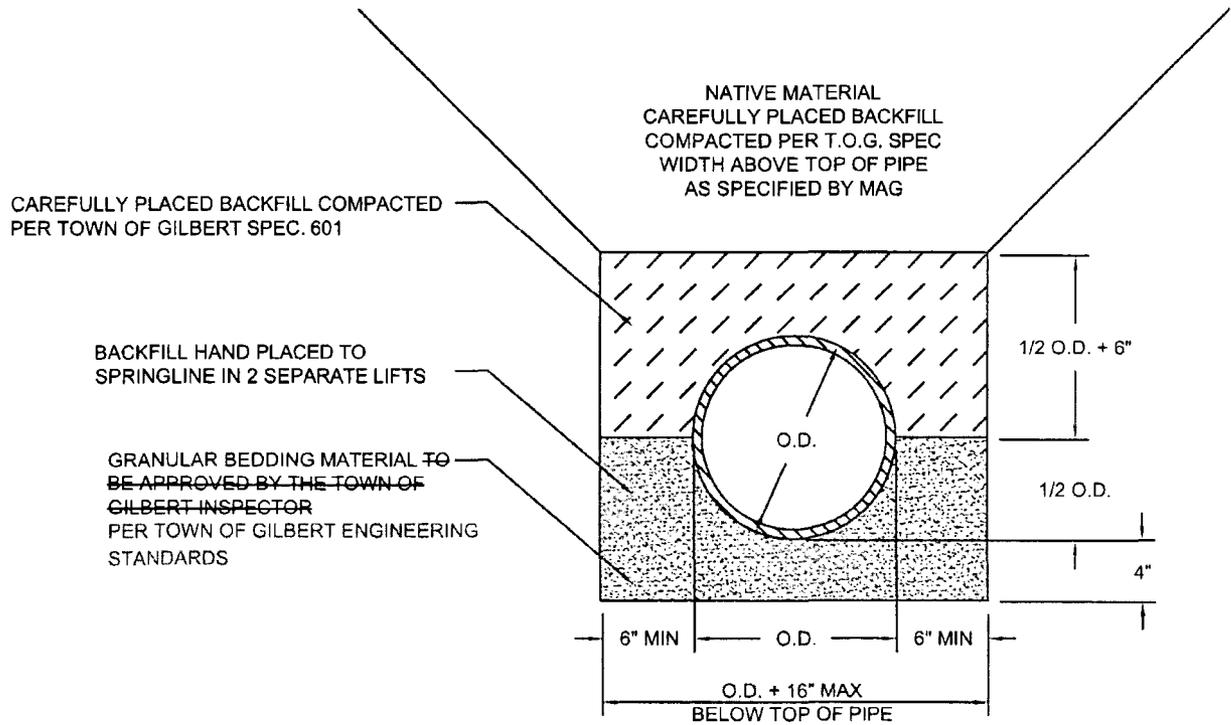
### **4.18.6 Sight Distance (Intersections and Driveways)**

Adequate sight distance shall be provided at all intersections and driveways on all streets, or types of roadways per Town of Gilbert Standard Detail GIL-211 and GIL-212. The determination of whether an object constitutes a sight obstruction shall consider both the horizontal and vertical alignment of both intersecting roadways, as well as the height and position of the object. The sight distance required varies according to traffic speeds on the through road and widths of the intersecting streets or driveways. The Engineer may provide sight distance from their own calculations, as long as they are based on the AASHTO publication "A Policy on Geometric Design of Highways and Streets" and submitted with the plans.

Continuous unobstructed line of sight must be provided along sight line and throughout the approach to the intersection, providing an unobstructed sight triangle to the side street driver. Sight lines corresponding to each conflicting movement are to be drawn on roadway and landscaping plans to represent the areas that must be free of all objects. There shall be no fence, wall, shrubbery,



**PROPOSED 10/19/17 REVISIONS TO GILBERT'S SUPPLEMENT  
TO MAG UNIFORM STANDARD DETAILS FOR PUBLIC WORKS  
CONSTRUCTION**



PVC WATER PIPE BEDDING DETAIL  
C-900

**PROPOSED 10/19/17 REVISIONS TO GILBERT'S SUPPLEMENT  
TO MAG UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC  
WORKS CONSTRUCTION**

**SECTION 321  
ASPHALT CONCRETE PAVEMENT**

**321.3 WEATHER AND MOISTURE CONDITIONS:**

*Modify this paragraph as follows (added or modified text shown in **bold**):*

Asphalt concrete shall be placed only when the surface is dry and when the **ambient air** temperature in the shade is 40 degrees Fahrenheit (50 degrees F for Asphalt Concrete lifts less than 2 inch thick) **and rising**. No asphalt concrete shall be placed when the weather is foggy or rainy, or when the **untreated base (aggregate base course, select material, etc.)** or sub base on which the material is to be placed is unstable. Asphalt concrete shall be placed only when the **Town** Engineer determines that weather conditions are suitable.

**321.8 PLACEMENT:**

*Add the following subsection at the end of this section:*

**321.8.11 Preservative Seal:** A preservative seal surface treatment per MAG Sections 334 and 718 shall be required on streets other than arterials. The surface treatment shall be PMM (Polymer Modified Masterseal) Type C Tire Rubber Modified Surface Seal (TRMSS) or approved equal and shall be applied in two coats immediately prior to the end of the construction warranty period, but no later than three (3) years after the date of placement. The application of PMM shall be in accordance with the manufacturer's recommendations. This preservative seal surface treatment shall be the responsibility of the Contracting Agency, shall be at no cost to the Town, and shall include any necessary traffic control and restriping of all pavement markings that are impacted by the preservative seal placement. An End of Warranty Letter will not be issued until the preservative seal surface treatment has been completed.

**321.10 ACCEPTANCE:**

**321.10.4 Asphalt Pavement Thickness:**

*Delete subparagraphs (2) and (3) under the 2<sup>nd</sup> paragraph in this section, and replace them with the following:*

(2) If the pavement thickness from step one above deviates from the target thickness by more than 0.25 inch, but not more than 0.50 inch, corrective action will be required. For arterial and collector streets, this corrective action shall consist of microsurfacing in conformance with the MAG Section 331. Microsurfacing aggregate gradation shall be Type III in accordance with International Slurry Seal Association (ISSA) publication A143, Section 4.2.3 Gradation. For local streets, this corrective action shall consist of application of a Type II slurry seal coat in accordance with MAG Section 715. The Contractor may present an engineering analysis outlining other proposed remedial measures for the consideration of the Engineer. The Engineer will review the engineering analysis and decide within 30 working days whether to accept the proposed remedial measures.