



**Chandler · Arizona**  
*Where Values Make The Difference*

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DEC 12 2013



**MEMORANDUM    Transportation & Development Department – Memo No. TDE14-003**

**DATE:**            DECEMBER 12, 2013

**TO:**                MAYOR AND CITY COUNCIL

**THRU:**            RICH DLUGAS, CITY MANAGER *R.D. By: MR*  
MARSHA REED, ASSISTANT CITY MANAGER *MR*  
R.J. ZEDER, TRANSPORTATION & DEVELOPMENT DIRECTOR *RJ*  
DANIEL W. COOK, INTERIM CITY ENGINEER *DWC*

**FROM:**            WARREN WHITE, PRINCIPAL ENGINEER *WW*

**SUBJECT:**        INTRODUCTION OF ORDINANCE NO. 4515 ADOPTING UPDATED  
VERSIONS OF EXISTING DESIGN AND CONSTRUCTION STANDARDS  
AND AMENDING CHAPTER 43, SECTION 43-4.5, SUBSECTIONS 43-4.5.A,  
43-4.5.B, 43-4.5.D, 43-4.5.E, 43-4.5.F, AND 43-4.5.I, CODE OF THE CITY OF  
CHANDLER

RECOMMENDATION: Staff recommends introduction and tentative approval of Ordinance No. 4515 adopting updated versions of existing design and construction standards and amending Chapter 43, Section 43-4.5, Subsections 43-4.5.A, 43-4.5.B, 43-4.5.D, 43-4.5.E, 43-4.5.F, and 43-4.5.I, Code of the City of Chandler.

BACKGROUND/DISCUSSION: The City maintains and publishes Standard Details and Specifications and Technical Design Manuals which have been developed to guide developers and City staff on the design and construction of the City’s infrastructure. These documents are adopted by City Council.

The Engineering Design Standards Committee, with cross-departmental representation, reviews proposed changes to our design standards and makes recommendations for yearly updates. This process also involves reviewing the Maricopa Association of Governments (MAG) Specifications and Standards and their yearly-proposed revisions and removing City standards in favor of MAG standards when possible.

This Ordinance would amend the following editions of the design standards:

- March 2013 Standard Details and Specifications Manual
- March 2013 Technical Design Manuals #1 and #2, Water & Wastewater System Design
- January 2011 Technical Design Manual #4, Street Access and Design Control
- March 2013 Technical Design Manual #5, Traffic Signal Design
- March 2012 Technical Design Manual #6, Streetlight Design

In addition, this Ordinance would adopt the 2014 revisions to the MAG Uniform Standard Specifications and Details with certain modifications.

The recommended revisions have been reviewed and approved by the Engineering Design Standards Committee consisting of Engineering, Offsite Inspection, Transportation, Water/Wastewater and Planning divisions. The revisions were provided to members of the industry including the Homebuilders Association, Multihousing Association, utility providers, and engineering design consultants. Comments received were incorporated into these revisions where appropriate.

The complete set of revised Standard Details and Specifications are on file with the City Clerk and available for review. A detailed summary of the changes is also attached.

FINANCIAL IMPLICATIONS: None.

PROPOSED MOTION: Move that City Council introduce and tentatively approve Ordinance No. 4515 adopting updated versions of existing design and construction standards and amending Chapter 43, Section 43-4.5, Subsections 43-4.5.A, 43-4.5.B, 43-4.5.D, 43-4.5.E, 43-4.5.F, and 43-4.5.I, Code of the City of Chandler.

ATTACHMENTS:

Ordinance No. 4515

Change Summary 2014

## **ORDINANCE NO. 4515**

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CHANDLER, ARIZONA, ADOPTING UPDATED VERSIONS OF PREVIOUSLY ADOPTED DESIGN AND CONSTRUCTION STANDARDS AND AMENDING CHAPTER 43, SECTION 43-4.5, SUBSECTIONS 43-4.5.A, 43-4.5.B, 43-4.5.D, 43-4.5.E, 43-4.5.F AND 43-4.5.I, CODE OF THE CITY OF CHANDLER, RELATING TO THE ADOPTION OF THESE UPDATED DESIGN AND CONSTRUCTION STANDARDS.

**WHEREAS**, the City of Chandler has previously adopted certain documents establishing minimum design and construction standards and specifications and believes it to be prudent to adopt the updated versions of those documents; and

**WHEREAS**, Chapter 43, Code of the City of Chandler, needs to be amended to reflect adoption of those updated documents.

**NOW, THEREFORE**, BE IT ORDAINED by the City Council of the City of Chandler, Arizona, as follows:

**Section 1.** That those documents identified below, three copies of each to remain on file in the Office of the City Clerk, each are hereby adopted by reference, with the additions, insertions, deletions and changes set forth herein, and each are hereby declared to be a public record.

- A. City of Chandler Standard Details and Specifications, January 2014 edition
- B. City of Chandler Technical Design Manual Numbers 1 and 2; Water and Wastewater System Design, January 2014 edition
- C. City of Chandler Technical Design Manual Number 4, Street Design and Access Control, January 2014 edition
- D. City of Chandler Technical Design Manual Number 5, Traffic Signal Design, January 2014 edition
- E. City of Chandler Technical Design Manual Number 6, Streetlight Design, January 2014 edition
- F. Uniform Standard Specifications and Details for Public Works Construction Sponsored and Distributed by the Maricopa Association of Governments, 2012 Edition, Arizona (includes 2014 revisions)

**Section 2.** Subsection 43-4.5.A. of Section 43-4 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-4.5.A *City of Chandler Standard Details and Specifications*. That certain document on file with the City Clerk marked, known and designated as "City of Chandler Standard Details and Specifications", ~~March 2013~~ January 2014 edition, is hereby adopted by reference and made a part hereof as if set forth at length herein.

**Section 3.** Subsection 43-4.5.B. of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-4.5.B. *City of Chandler Technical Design Manual, Numbers 1 and 2: Water and Wastewater System Design*. That certain document on file with the City Clerk marked, known and designated as "City of Chandler Technical Design Manual, Numbers 1 and 2: Water and Wastewater System Design", ~~March 2013~~ January 2014 edition, is hereby adopted by reference and made a part hereof as though set forth at length herein.

**Section 4.** Subsection 43-4.5.D. of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-4.5.C. *City of Chandler Technical Design Manual, Number 4: Street Design and Access Control*. That certain document on file with the City Clerk marked, known and designated as "City of Chandler Technical Design Manual, Number 4: Street Design and Access Control", ~~January 2011~~ January 2014 edition, is hereby adopted by reference and made a part hereof as though set forth at length herein.

**Section 5.** Subsection 43-4.5.E. of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-4.5.E. *City of Chandler Technical Design Manual, Number 5: Traffic Signal Design*. That certain document on file with the City Clerk marked, known and designated as "City of Chandler Technical Design Manual, Number 5: Traffic Signal Design", ~~March 2013~~ January 2014 edition, is hereby adopted by reference and made a part hereof as though set forth at length herein.

**Section 6.** Subsection 43-4.5.F. of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-4.5.F. *City of Chandler Technical Design Manual, Number 6: Streetlight Design*. That certain document on file with the City Clerk marked, known and designated as "City of Chandler Technical Design Manual, Number 6: Streetlight Design", ~~February 2012~~ January 2014 edition, is hereby adopted by reference and made a part hereof as though set forth at length herein.

**Section 7.** Subsection 43-4.5.I. of Section 43-5 of Chapter 43, Code of the City of Chandler, is hereby amended to read as follows:

43-4.5.I. *MAG Uniform Standard Specifications and Details.* That certain document on file with the City Clerk marked, known and designated as Uniform Standard Specifications and Details for Public Works Construction, Sponsored and Distributed by the Maricopa Association of Governments, 2012 Edition, Arizona (~~includes 2013 revisions~~) (includes 2014 revisions) is hereby adopted by reference and made a part hereof as though set forth at length herein with the additions, insertions, deletions and changes set forth below.

1. The Public Works Director/designee is authorized to increase standard street cross sections, both pavement and right-of-way widths, as necessary to maintain required traffic service levels when a traffic analysis indicates the need for additional lanes of traffic.
2. Where MAG refers to corrective actions for deviations from standards and provides options for "When the contracting agency is the owner" or "When the contracting agency is not the owner (i.e. permits)", the Public Works Director/designee is authorized to utilize any of the corrective actions listed regardless of whether the City is the contracting agency or not.

INTRODUCED AND TENTATIVELY APPROVED by the City Council this 12th day of December 2013.

ATTEST:

\_\_\_\_\_  
CITY CLERK

\_\_\_\_\_  
MAYOR

PASSED AND ADOPTED by the City Council of the City of Chandler, Arizona this \_\_\_\_\_ day of \_\_\_\_\_, 2013.

ATTEST:

\_\_\_\_\_  
CITY CLERK

\_\_\_\_\_  
MAYOR

CERTIFICATION

I HEREBY CERTIFY that the above and foregoing Ordinance No. 4515 was duly passed and adopted by the City Council of the City of Chandler, Arizona, at a regular meeting held on the \_\_\_\_\_ day of \_\_\_\_\_, 2013 and that a quorum was present thereat.

\_\_\_\_\_  
CITY CLERK

APPROVED AS TO FORM:

\_\_\_\_\_  
CITY ATTORNEY *GAB*

PUBLISHED:

<b><u>Document No.</u></b>	<b><u>Title</u></b>	<b><u>Sponsor</u></b>	<b><u>Revision Summary</u></b>
<b>Streets/Traffic Details</b>			
C-228	TYPICAL DRIVEWAY ACCESS TO PRIVATE GATED COMMUNITY	Jason Richardson	Revise callout note for sidewalk ramp as "SIDEWALK RAMP PER CITY DETAILS".
C-230	CONCRETE BUS BAYS	Dan Cook	Revision for ADA requirements. Note number 8 added: Must keep 8'x8' landing area clear of obstructions.
C-231	RIGHT TURN/DECELERATION LANE FOR DRIVEWAYS	Dan Cook	Revision for ADA requirements. Note number 6 added: Must keep 8'x8' landing area clear of obstructions.
C-243	SIDEWALK RAMP FOR ROLL CURB	Leann Johnson	Revision for detectable warning per approved products list.
C-245	COMBINED SIDEWALK RAMP AND RESIDENTIAL DRIVEWAY	Jason Richardson	Revision for detectable warning per approved products list. And note regarding sidewalk easement needed for outside of right-of-way.
C-259	MODIFIED ENTRANCE	Leann Johnson	Revision to note number 3, expansion joints should use MAG Section 340 for new construction instead of Section 729.
C-258, PG 1, 2, 3	DIRECTIONAL SIDEWALK RAMP	Leann Johnson	Revision to note number 3, expansion joints should use MAG Section 340 for new construction instead of Section 729.
C-258, PG 1, 2, 4	DIRECTIONAL SIDEWALK RAMP	Dan Cook	Revisions to note number 5 and details. Monolithic pour for ramp and back curb instead of using single curb.
C-258, PG 3	DIRECTIONAL SIDEWALK RAMP LOCAL STREET	Donald Kirby	Revision to Local Street for tight return radius. Desire is to keep ramps within the curb return.
C-214	PRIVATE SHARED DRIVEWAY TYPICAL CROSS SECTION & UTILITIES	Warren White	NEW detail for inverted crown private driveway. Intended for cluster developments.
<b>Water/Wastewater/Reclaimed Details</b>			
C-404	RECLAIMED WATER SERVICE CONNECTIONS	Warren White	Revisions to PG's 3-9 and 11 with notes to indicate installation of backflow device is per Engineer of Records requirements. Consistent with TDM 1 and 2.
C-417	INDUSTRIAL WASTEWATER FLOW MONITORING VAULT	Doug Toy	NEW detail for monitoring industrial wastewater flows. Two pages including overall site plan and details.
<b>Technical Design Manuals</b>			
TDM #1&2	Water & Wastewater System Design	Lori McCallum	Revisions to include language prohibiting future connections of reclaimed water to single family, duplexes and triplexes per newly adopted Ordinance No. 4496.
TDM #1&2	Water & Wastewater System Design	Doug Toy	Revisions to include language for using new wastewater flow monitoring vault (C-417).
TDM #4	Street Design and Access Control	Jason Richardson	Add a note on page 25, table 5: "Dimensions shown are for rolled or ribbon curb, vertical curb shall be measured from Face-of-Curb to Face-of-Curb." A note of some sort for this item is needed for consistency for the fire dept. requirements.
TDM #4	Street Design and Access Control	Warren White	Revisions for new cluster development standards. Table of Contents, Pg 3 definitions for driveways, Pg 19 new sub-section 3.11 "Cluster Development with Private Shared Driveway", and revised section 5.4 to include "Private Streets and Private Shared Driveways" and references to the new stds.
TDM #5	Traffic Signal Design	Hong Hou	Revisions related to placement of signal heads. NEW details TS17A and TS17B added. Clarification revisions.
TDM #6	Street Light Design	Mike Mah	Revisions to require LED for new subdivisions and provisions to continue use of prevailing luminaire type for in-fill projects unless otherwise approved by City Transportation Engineer. Appendix A provides standards for illumination level requirements and spacing.