



City Council Report

Date: November 18, 2019
To: City Council
Through: Karolyn Kent, Assistant City Manager
From: RJ Zeder, Transportation Director
Subject: City Code Amendments to Allow for Adaptive Street Lighting and Repeal References to Pilot Streetlight Study

Purpose and Recommendation

The purpose of this report is to request Council approval to amend portions of the Mesa City Code (MCC) regarding adaptive lighting and elimination of references to the previous pilot streetlight study. Adaptive lighting is defined as public streetlights that may be dimmed in accordance with city engineering and design standards.

Background

On May 8, 2017, Council approved a streetlight Pilot Study Period from June 1, 2017 through December 31, 2019 in two areas of the City (Desert Uplands Area and City of Mesa Electric Service Area) to test alternative night-time lighting levels within various portions of the City. Based on results and feedback, staff requested additional authority to test lower lighting levels than the previously approved ordinance allowed in the Desert Uplands Area, which had permitted staff to go as low as 50% of the lighting level required by American National Standards Institute (ANSI)/Illuminating Engineering Society (IES) RP-8-00 (Recommended Practices for Roadway Lighting). On November 5, 2018, Council approved staff to further reduce lighting levels for the remainder of the Pilot Study Period.

With the Pilot Study Period ending on December 31, 2019 and staff having completed a Street Light Master Plan Study, staff propose more permanent changes to MCC to allow for adaptive lighting.

Discussion

City staff completed their work with the Consultant on a citywide lighting study (Street Light Master Plan) to evaluate existing inventory, test alternative lighting levels, evaluate of economic advantages derived from lower energy costs for LED lighting, determine the return on investment from making the conversion to LED lights, and consider the safety implications of varying the minimum required light level to ensure that our roadways are safe for motorists and pedestrians. Given the results, the proposed changes to MCC are as follows:

Staff presented the Street Light Master Plan Report to the Sustainability and Transportation Committee and recommends that Council find adaptive streetlighting and the ability to adjust the illumination levels of such lighting serves an important public purpose, and that the power levels of the City's LED streetlights may be reduced to as low as twenty-five percent (25%) of the maximum power level on arterial streets in the areas identified as "Lighting Zone 1" in Street Light Master Plan Report (see Exhibit 1 for Lighting Zone Map) dated June 2019 (generally, rural and low density residential areas), and as low as forty-five (45%) of the maximum power level in all other areas and streets within the City, all without sacrificing public safety.

Title 4, Chapter 4, Section 1

Clarified that public streetlighting is not subject to this section of code and therefore eliminated reference to IES standards.

Title 9, Chapter 6, Sections 1, 4, and 5

Added Adaptive Lighting definition and ability, eliminated reference to Pilot Study dimming and general code clean up.

Title 9, Chapter 8, Section 3

Removed reference to waiving streetlight requirements and accepting payment in lieu. Referenced proper section of City Code and Engineering and Design Standards.

Alternatives

The City Council could choose not to approve the proposed code changes, which would require the City to utilize current RP-8-00 levels for streetlighting with no flexibility. This is not recommended as it would not allow City staff to dim streetlighting or allow for further reductions in lighting levels, if warranted.

Fiscal Impact

There is no direct fiscal impact associated with this request.

Coordinated With

The Mesa Police Department and Mesa Fire and Medical Department concur with this recommendation. Transportation staff held a nighttime dimming demonstration for Police and Fire representatives in 2018 and there were no objections to the reduced lighting levels.

Exhibit 1

