PAVEMENT DESIGN MEMORANDUM 17-01

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CC: Federal Highway Administration

FROM: Reed Henry, Deputy State Roadway Engineer

DATE: September 29, 2017

Revised ADOT Pavement Design Manual

Purpose
To issue a revised ADOT Pavement Design Manual. The manual can be found on our web site at, https://www.azdot.gov/business/engineering-and-construction/roadway-engineering/pavement-design

Background
The purpose of this manual revision is to present guidance on how ADOT currently uses the 1993 AASHTO Guide for the Design of Pavement Structures to design new pavements, and the Structural Overlay Design for Arizona (SODA) to design asphalt overlays. Significant changes since the last manual update include: modifying the method of calculating the design R-value for highly variable subgrade soils, revising the combined standard error ($S_o$) for rigid pavements, updating the format and presentation of the Materials Design Package, updating the SODA equation to reflect roughness measurements based on International Roughness Index (IRI) rather than Mays Meter values, and a new procedure for calculating design equivalent single axle loads (ESAL’s).

It should be noted that the structure and format of ADOT’s pavement design guidance has changed since it was last revised in 1992. Previously, guidance for pavement design activities was included in the
Materials Preliminary Engineering and Design Manual. However, reorganizational changes have resulted in a decision to issue this guidance as a stand-alone document under the title of ADOT Pavement Design Manual.

Process
Pavement design for all ADOT roadways should be performed in accordance with the guidance provided in the ADOT Pavement Design Manual, dated September 29, 2017.