Alaska Flexible Pavement Design Manual

Alaska Department of Transportation and Public Facilities

Effective July 1, 2020

Cover photo, Seward Highway MP 110: Jack Stickle, Alaska Department of Transportation and Public Facilities

Alaska Flexible Pavement Design Manual

Table of Contents

List of Figures

List of Tables

Preface

This manual guides the designer through a comprehensive computerized method for the design of Alaskan pavement structures. The Alaska Flexible Pavement Design method version 2 (AKFPD-2), a computer program, replaces the original Alaska Flexible Pavement Design tool previously used by designers. While the process remains essentially unchanged, this manual reflects the changes to the software to operate on Windows 7.0 and above and to include the Life Cycle Cost procedure described in Chapter 8.

The purpose of this manual is to help the pavement designer produce cost effective pavement designs.

The manual

- Contains general engineering background to help the designer understand basic principles of both the Excess Fines and Mechanistic-Empirical design process and how the AKFPD-2 software works.
- Describes all functional capabilities of the AKFPD-2 software and provides step-by-step design examples.
- Provides specific guidance on input variables and other decision criteria required to run the AKFPD software.
- Describes the new Life Cycle Cost procedures which help the designer select the most cost-effective design.
- Presents some of the broader aspects and policies bearing on the pavement design process.

The Alaska Flexible Pavement Design is the accepted pavement structure design procedure for the Alaska Department of Transportation and Public Facilities (DOT&PF), as outlined in Chief Engineer's 2020 Directive (http://www.dot.state.ak.us/stwddes/dcspubs/directives.shtml). As such, the methods and policies provided in this manual should be followed unless appropriate approvals are obtained as provided in Chapter 2 of this manual.