CHAPTER 1 Introduction

This course is designed to teach you highway geometric design and safety performance analysis with a rural highway realignment project divided into individual learning activities. This activity book is designed to teach you the information essential to highway design and safety analysis as you complete the included activities. Throughout the course, you will be guided by the instructor in completing the activities. The instructor will also provide you with the resources which are intended to accompany activities in this book.

The learning activities in this course can be categorized into two types: reading/discussions and group design activities. Materials for the reading activities are selected from references of highway design standards, including *A Policy on Geometric Design of Highways and Streets 2011* (commonly referred to as the *Green Book*), *Roadside Design Guide* 4th Edition (2011), and *Highway Safety Manual* 1st Edition (2010). All three references are published by the American Association of State Highway and Transportation Officials (AASHTO). Chapters and sections selected for the reading activities are basic subjects covering materials required for the group design project. The instructor will make arrangements for your access to the reading materials.

The project selected for the group design activities is the Elliot Highway near Minto, Alaska. An eight-mile stretch of the Elliot Highway from milepost 108 to 120 was considered for realignment by the Alaska Department of Transportation & Public Facilities (AK DOT & PF). The tasks of this realignment project were adapted into a simplified version that contains focused subjects covered in this course. These subjects will expose you to most of the critical steps in a highway design process and guide you as you work to produce a course project that documents and demonstrates your learning.

Student Notes