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ADOT Engineering/Maintenance Districts
Bureau of Land Management Land
US Forest Service Land

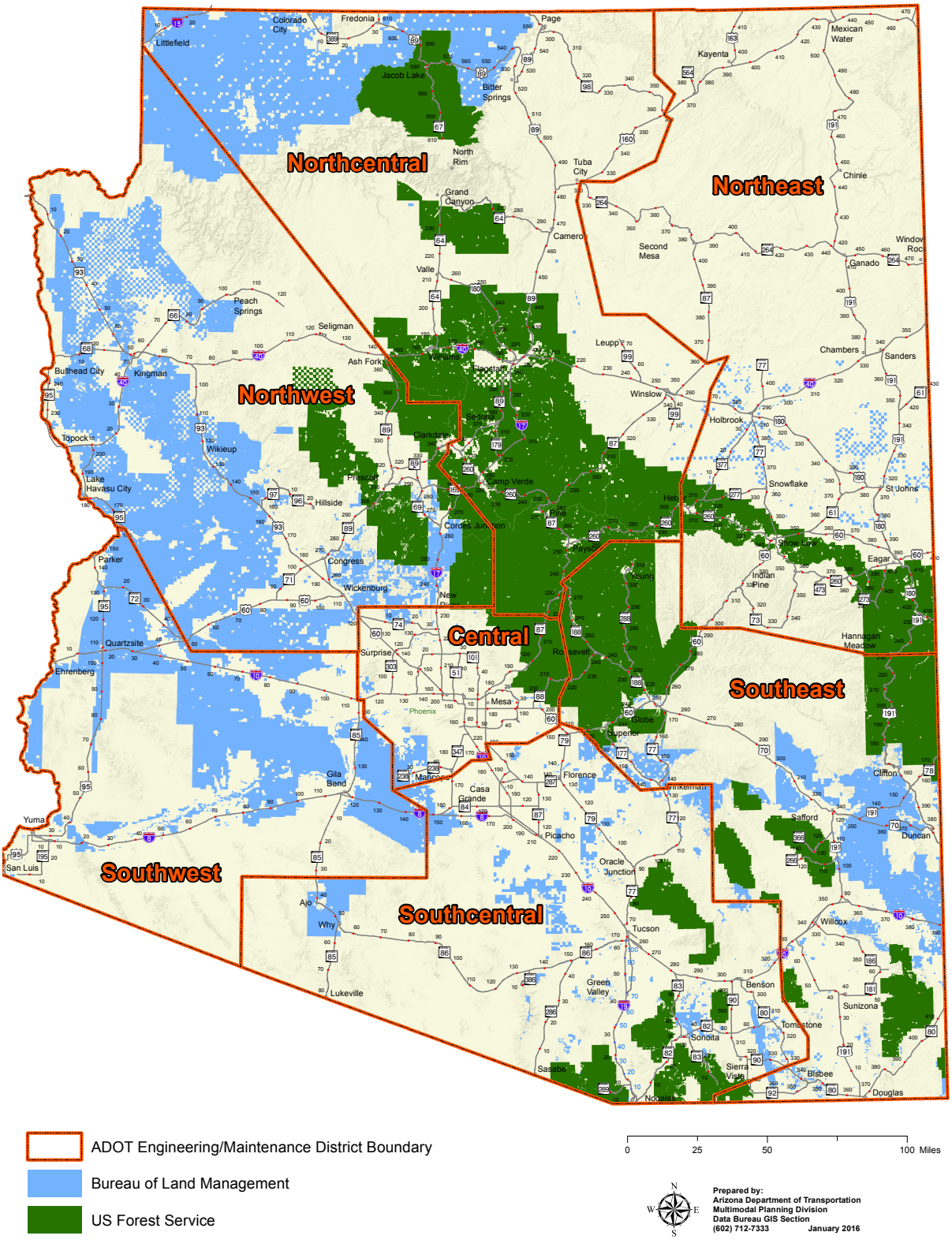

Figure 1.1 ADOT Engineering/Maintenance Districts, Bureau of Land Management Land and US Forest Service Land

CHAPTER 1: INTRODUCTION

1.1 PURPOSE AND INTENT OF THIS MANUAL

Arizona has a wide range of unique landscapes, ranging from the Sonoran and Mohave Deserts, *Figure 1.2*, to mixed conifer forests, *Figure 1.3*. A

Figure 1.2 Arizona desert.

Figure 1.3 Arizona forests.

complex network of highway corridors managed by the Arizona Department of Transportation (ADOT) connects these diverse Arizona landscapes. These highway consist not only of the pavement that carry traveling vehicles, but also the constructed slopes, bridges, drainage structures, fencing, signs and intersections associated with those roadways. As will be discussed throughout this manual, highway corridors typically disturb resources such as wildlife, hydrology, vegetation and aesthetics. Addressing this disturbance requires the design, construction and maintenance of measures that minimize and mitigate the impacts.

It is the responsibility of the United States Department of Agriculture Forest Service (USFS) and Bureau of Land Management (BLM) to manage the full range of natural and cultural resources on agency lands. Where highway corridors are constructed within USFS or BLM boundaries, these agencies seek to minimize and mitigate highway-related disturbances to these resources. Therefore, it is important to integrate resource management concerns into the process of planning, design, construction and maintenance of highway corridors. The Federal Highway Administration (FHWA) defines this integration process as “Context Sensitive Solutions.”

This manual was developed to provide guidance for the design, construction and maintenance of ADOT projects on lands managed by BLM and the USFS. Differing agency missions can create conflict unless proposed activities are managed in a true partner relationship. This manual describes accepted procedures, as well as the needs and concerns of each agency in an effort to minimize conflict and facilitate the creation of safe, environmentally sound and aesthetically pleasing highway corridors, *Figure 1.4*. The central philosophy of this manual is that it is important for personnel from all agencies to consider strategies that may normally fall outside of their standard approaches to addressing challenges. It is recommended that ADOT, its design consultants, and the responsible land management agencies (USFS and BLM) use these guidelines during the development of highway corridors on public lands, *Figure 1.5*.

Figure 1.4 Aesthetically pleasing highway winding through mountainous terrain.

Figure 1.5 Highway corridor.

The guidelines presented herein are not rigid requirements that will be applicable to every situation. Rather, they are intended to communicate philosophy, approach and examples from which new applications and techniques can be developed. Departures from these guidelines do not typically require formal documentation, but the involved agencies should coordinate with one another and carefully review suggested departures before implementation.

1.2 MEMORANDA OF UNDERSTANDING

In order to enhance coordination and facilitate the creation of highway corridors compatible with the concerns and needs of all affected parties, it is critical that the associated agencies actively and effectively cooperate with each other throughout the planning, design, construction and maintenance of these corridors. This process is formalized in two Memoranda of Understanding (MOU) (Appendix C contains the USFS-FHWA-ADOT MOU and Appendix D the BLM-FHWA-ADOT MOU).

1.3 ADOT, U.S. FOREST SERVICE, BUREAU OF LAND MANAGEMENT AND FEDERAL HIGHWAY ADMINISTRATION MISSIONS

Arizona Department Of Transportation (ADOT)
"To provide products and services for a safe, efficient, cost-effective transportation system that links Arizona to the global economy, promotes economic prosperity and demonstrates respect for Arizona's environment and quality of life".

Figure 1.6 Highway corridors link Arizona to global economy.

U.S. Forest Service (USFS)
"To sustain the health, diversity and productivity of the nation's forests and grasslands to meet the needs of present and future generations". As set forth in law, the mission is to achieve quality land management under the sustainable multiple-use management concept to meet the diverse needs of all people. The USFS motto captures the spirit of that agency: "Caring for the Land and Serving the People." This mission includes the following directives:

Figure 1.7 Highway through the forest.

- Advocating a conservation ethic that promotes the health, productivity, diversity, and beauty of forests and associated lands;
- Listening to people and responding to their diverse needs in making decisions;
- Assisting states and local communities to wisely use the forests to promote planned rural economic development while maintaining a quality rural environment; *Figure 1.8*.

Figure 1.8 Part of the USFS Mission is to maintain a quality rural environment.

- Developing and providing scientific and technical knowledge aimed at improving our abilities to protect, manage and utilize forests and rangelands.

Bureau of Land Management (BLM)
"To sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations".

Federal Highway Administration (FHWA)
"Enhancing mobility through innovation, leadership and public service".

1.4 LEARNING BY EXAMPLE

This manual is an attempt to summarize what has been learned from projects as well as introduce new techniques and public policies. The design, construction and maintenance of highways will continue to evolve following the publication of this text. In order to continue to achieve high quality projects, it is important that transportation personnel communicate the lessons learned from previous and ongoing projects to their co-workers and colleagues.

1.5 ADDITIONAL RESOURCES

FHWA Context Sensitive Design:
http://www.fhwa.dot.gov/environment/csd.htm

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