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Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation

Section 3.1, Introduction

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3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

Chapter 3 presents the transportation, environmental, and economic effects of the three Build Corridor Alternatives (Purple, Green, and Orange), and the No Build Alternative. The Build Corridor Alternatives are composed of a set of Corridor Options in three generally defined sections (South, Central, and North) as described in **Chapter 2**. **Figure 2-5** (End-to-End Build Corridor Alternatives) and **Table 3.1-1** (Build Corridor Alternative, Section, and Option Organization) clarify the organization of the Corridor Options within Build Corridor Alternatives. The South, Central, and North Sections are used to organize discussions and maps, and are not used for decision making purposes. The labeling of the Corridor Options matches those used during the alternatives screening process documented in the *Alternatives Selection Report*.

The Corridor Options provide a consistent way to refer to the various subcomponents of the Build Corridor Alternatives, and also to optimize flexibility in determining recommendations. This means that the Recommended Alternative may be one of the defined alternatives (Purple Alternative, Green Alternative, Orange Alternative, or No Build Alternative), but a hybrid, a combination of the various Corridor Options.

Table 3.1-1 Build Corridor Alternative, Section, and Option Organization

Alternative and Geography	South Section			Central Section					North Section	Total Alternative Length
Purple Alternative	A	C	G	I1	I2	L	N	R	X	271 miles
Green Alternative	A	D	F	I2	L	M	Q2	R	U	268 miles
Orange Alternative	A	B	G	H	K	Q1	Q2	Q3	S	280 miles

3.1.1 Tier 1 Analysis

The Tier 1 analysis identifies and compares the potential impacts of the Build Corridor Alternatives and the No Build Alternative, as described in **Chapter 2**. The Build Corridor Alternatives have several common features.

- Each Build Corridor Alternative is a 2,000-foot-wide corridor, within which a future alignment would be located (**Figure 3.1-1**, Tier 1 vs Tier 2 Level of Detail). The assumed typical cross-section for the future alignment in the Tier 2 analyses would be approximately 400 feet wide. The specific alignment and width of the Interstate 11 (I-11) facility would be refined as part of the Tier 2 analyses. The analysis applied in Tier 1 is sufficient to compare overall alternatives in Tier 1, and the flexibility within the corridor would allow the development of

alignments during future Tier 2 analyses to respond to additional information available at that time.

- A typical cross-section was developed to inform the analysis for the Draft Tier 1 Environmental Impact Statement and Preliminary Section 4(f) Evaluation (Draft Tier 1 EIS); future cross sections for a specific alignment may be refined in future Tier 2 analyses. In locations where a Corridor Option is intended to be co-located with an existing transportation facility, it is assumed that the implementation of the I-11 Corridor would result in capacity improvements as needed to meet Level of Service C (in rural areas) or D (in urban areas) for both the I-11 and the co-located facility. Assumptions regarding cross sections are provided in **Appendix E1**. Definitions of the levels of service are provided in **Chapter 1**, **Figure 1-6** (Levels of Service for Freeways).

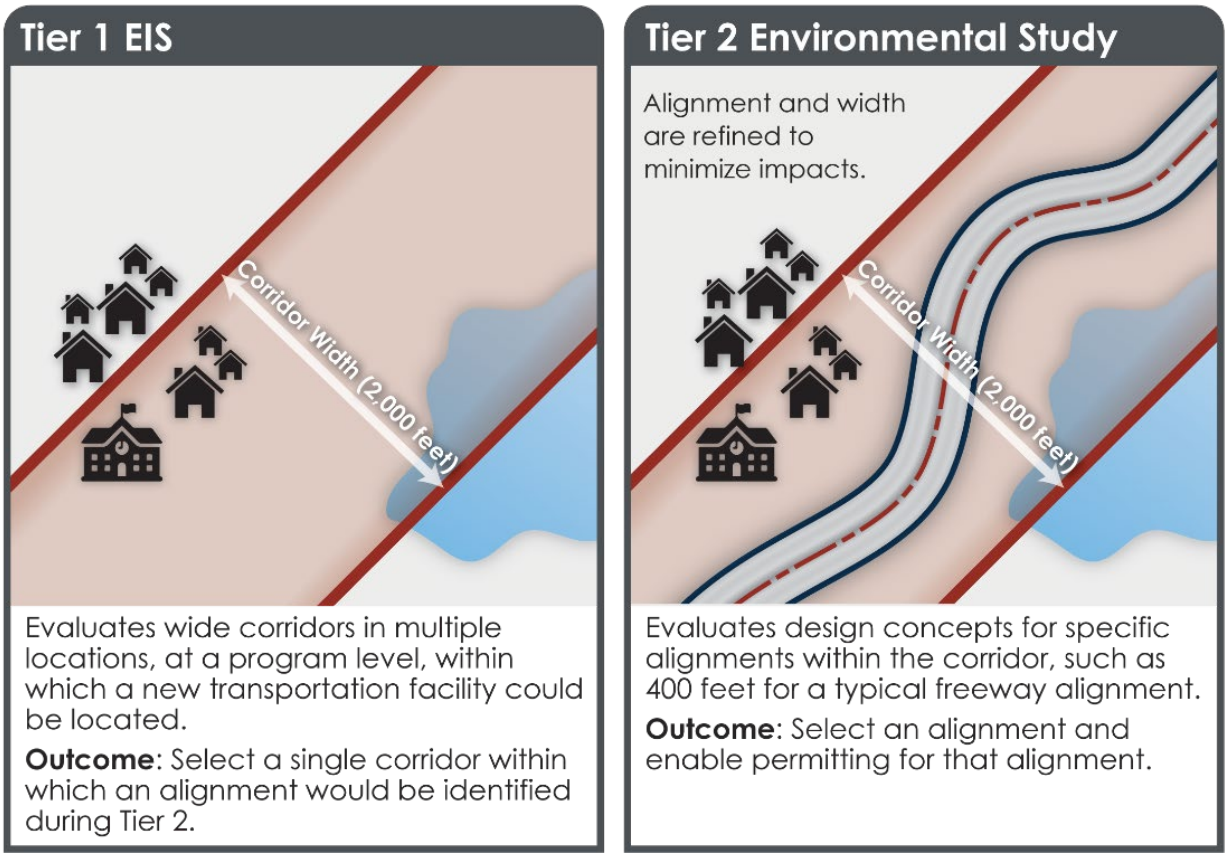

Figure 3.1-1 Tier 1 vs Tier 2 Level of Detail

- Specific interchange locations are not identified for the Build Corridor Alternatives. However, a set of potential interchange locations was assumed for purposes of this analysis based on the most current available transportation network in the Arizona Statewide Travel Demand Model (Arizona Model). It is assumed that interchange locations would be accommodated within the 2,000-foot-wide corridor.
- The level of analysis for the Draft Tier 1 EIS is qualitative and programmatic, reflecting the broad definition of the corridor for the Draft Tier 1 EIS. The analysis relies on readily available data, mapped information from resource and regulatory agencies, previously

completed environmental studies, and aerial imagery. Some technical efforts for the Draft Tier 1 EIS involved limited site visits and field work in selected areas.

3.1.2 Chapter 3 Section Organization

Each of the resource areas within **Chapter 3** are organized in seven parts:

1. **Regulatory Setting:** Identifies pertinent laws and regulations governing the management of the resource. In select cases where several topics within a resource are covered; such as Section 3.12, Geology, Soils, and Prime and Unique Farmland; the regulatory setting, methodology and affected environment may be discussed may be separated into several subtopics.
2. **Methodology:** Describes how the resource or topic was analyzed.
3. **Affected Environment:** Describes conditions of the resource in the Analysis Area today.
4. **Environmental Consequences:** Forward-looking analysis that identifies potential changes that would result from the implementation of the Build Corridor Alternatives or the No Build Alternative.
5. **Summary:** Identifies unique features and potential for impacts associated with each of the alterantives. These features differentiate between the alterantives and are used to identify the recommended alternative in **Chapter 6**.
6. **Potential Mitigation Strategies:** Defines strategies and best management practices to avoid and minimize impacts that can be identified at this level of analysis. As part of the future Tier 2 project level analyses, these strategies could be refined into formal project-level mitigation measures, as needed and appropriate. The Final EIS and Record of Decision may identify committed mitigation measures if the measures are required to advance the identification of the Preferred Alternative and Selected Alternative respectively.
7. **Future Tier 2 Analysis:** Identifies project-specific investigations that could be evaluated as part of the future Tier 2 analyses. Tier 2 analyses would include site-specific, quantitative evaluation of effects, defining avoidance and specific mitigation measures tailored for each project. All permitting activities are part of future Tier 2 analyses.
8. **Comprehensive Table of Potential Benefits and Impacts:** The environmental consequences are summarized in tabular format including major features and high level bullets identifying potential impacts. In order to provide a comprehensive summary of the impacts related to a particular resource, the tables also include indirect and cumulative impacts. Note that the full analysis for indirect and cumulative effects is included in Section 3.17.

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