SONORAN CORRIDOR STUDY

FEIS APPENDIX G – PHASED IMPLEMENTATION PLAN

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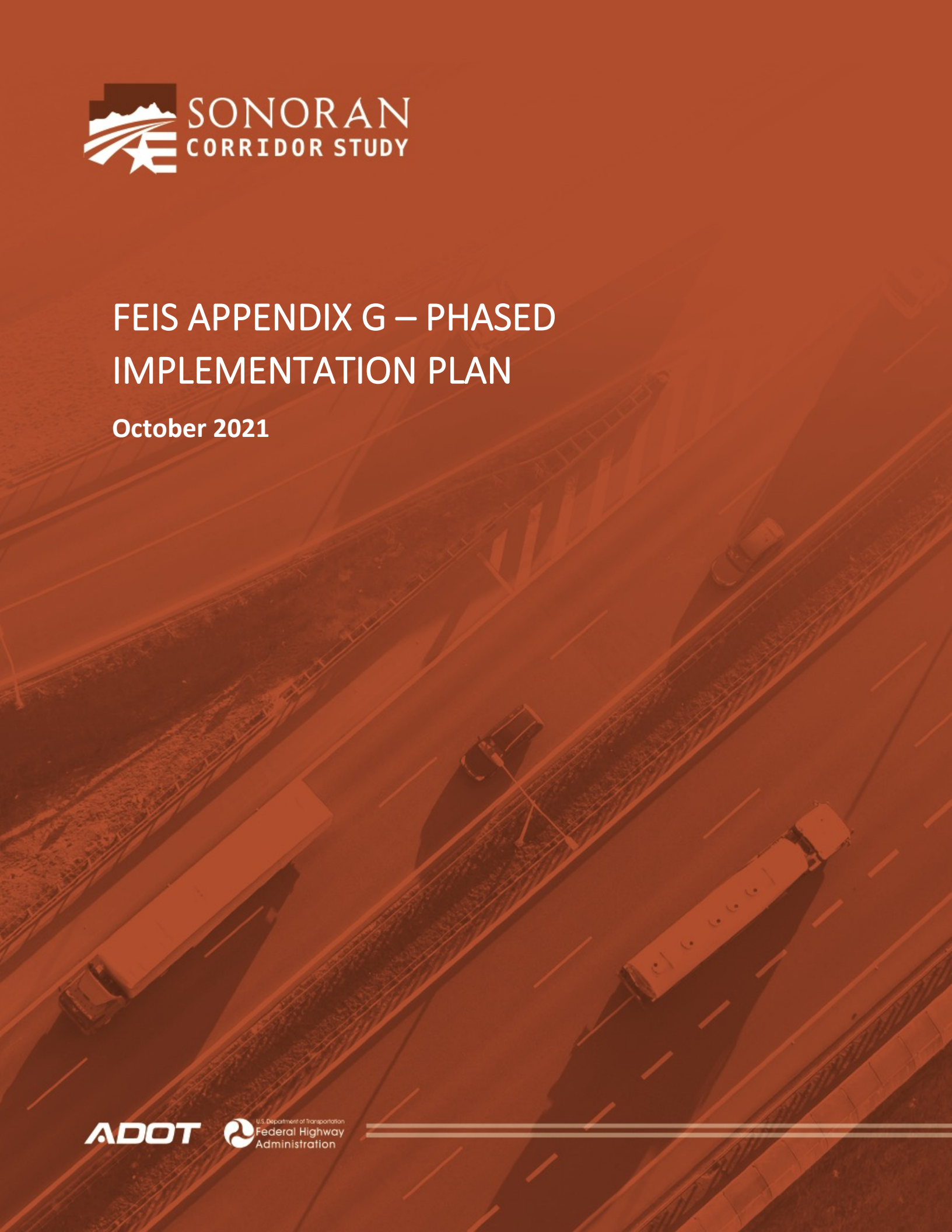

ADOT

U.S. Department of Transportation Federal Highway Administration

APPENDIX G – PHASED IMPLEMENTATION PLAN

The Pima Association of Governments (PAG) has identified $600 million for the implementation of the Sonoran Corridor in a mid-range timeframe. The Sonoran Corridor Tier 1 EIS provides the framework for implementation strategies as funding becomes available, but it does not provide the detailed analysis required to obtain approvals that need to be based on a specific design and construction plan. There are additional steps that must be accomplished before any of the strategies identified in this document can be implemented, most notably a Tier 2 level analysis of project effects.

Given the size of the project, it is likely it would be developed in phases to accommodate funding needs and serve the rate of growth in travel demand. Though an estimated cost has been included in this planning document, funding for the Sonoran Corridor has not been identified at this time. However, the identification of a recommended phasing strategy for the overall project is consistent with the objective of analyzing and selecting transportation solutions on a broad enough scale to provide meaningful analysis and avoid segmentation. If the project is developed in phases as suggested here, each phase would require a Tier 2 level of analysis as part of its approval process.

Independent Utility and Logical Termini

The Tier 1 EIS has evaluated the possible phasing of the project as part of a preliminary or conceptual implementation plan. In particular, phasing must address the need for logical termini and independent utility of the phases proposed. The three principles for determining the adequacy of logical termini and independent utility as provided in 23 CFR 771.111(f) require phases:

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
- Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made;
- Not restrict consideration of alternatives for other reasonably-foreseeable transportation improvements.

Project Configuration

The appropriate configuration of each implementation phase, and subsequent expansions, as appropriate, will be influenced by completion of the requisite environmental studies and design efforts, but largely by travel demand for the facility and the availability of funding. That could mean building a parkway or arterial another transitional classification that could be built into a full Interstate facility as the need materializes. Travel demands of around 35,000 to 40,000[1] Average Daily Traffic (ADT) could be accommodated with a parkway with at-grade crossings for a time with provisions for future grade-separated interchanges when needed.

Possible Project Phases

Shown in Figure I-1, the following are preliminary suggested implementation phases for the Sonoran Corridor presented from north to south without regard to implementation priority:

[1] Travel demand analyses are preliminary and require much more detail based on a specific engineered alignment before a final determination of future traffic volumes can be used to support a facility type decision.

Phase 1 - Alvernon Way (Aerospace Parkway) to I-10

This segment is 6.7 miles long, primarily along Old Vail Connection Road, and carries the highest traffic volumes in the corridor because it connects the main activities in the study area. Traffic volumes are over 38,000 ADT indicating high demand between employment centers near TUS and along I-10. It also provides relief for the arterial network north of TUS and includes a southerly access to the airport. It has fewer environmental challenges than the other project phases. This phase would include I-10 and TUS/Nogales Highway as logical termini for purposes of Federal review and NEPA compliance. Phase 1 includes a critical connection to I-10 as part of the northerly terminus of the project and the link to the Tucson airport joins major employment activity centers and a regional travel hub.

Phase 1 would not impact residential developments and would have limited environmental effects though it would require mitigation of wildlife corridors, protection of drainage courses and associated habitat. The phase would require close coordination with existing sand and gravel mining activities in the area and the implementation of power generation and distribution systems by Tucson Electric Power.

Cost of this segment is estimated at $364 million[2] with construction to be completed around 2030 after a two to three-year construction timeline subject to completion of a Tier 2 analysis, final design, right-of-way acquisition and the identification of a funding source.

Phase 2 – Sahuarita Road to Alvernon Way (Aerospace Parkway)

The middle segment is just over 8 miles long. It is the least costly based on preliminary estimates and could be combined with Phase 3 if funding is available. It is also the segment that is most likely to affect sensitive habitat, wildlife corridors and water courses, though it has limited effects on residential areas of the corridor. It requires modest earthwork and, through there are many drainage crossings, in general, Phase 2 comprises smaller structures than the other phases, both of which include major system interchange structures at Interstate highways.

Cost of this segment is estimated at $173 million. PAG had tentatively identified this in the long-term plan for after 2035. Construction will take between two and three years.

Phase 3 – I-19 to Sahuarita Road

Phase 3 will serve currently developed areas of Sahuarita in the short term and accommodate planned growth in the future. It is forecast to carry the lowest traffic among the three phases but provides the critical southern terminus for the corridor at I-19 and connects to the major roadway serving the area, Sahuarita Road, as its northerly terminus. Phase 3 is 6.1 miles long. It crosses several drainage courses, including the Santa Cruz River, and is likely to have an effect on existing residential communities.

[2] All cost estimates in this appendix assume interchanges at the key arterial crossings and at the two interstates and a high-level assessment of required earthwork and structures. They also include an assumption for rights-of-way, design and construction management and a 30% contingency recognizing these are very early, minimally designed estimates.

Because it crosses the Santa Cruz River and other water systems, it is likely to have effects on both natural habitat, wildlife corridors, farming activity and cultural/archeological sites.

Cost of this segment is estimated at $432.5 million with a timeline for completion of Phase 3 of around 2035. Construction will take between two and three years.

Figure I-1. Possible Implementation Phases for the Sonoran Corridor