7 Record of Decision

ADOT has identified the Preferred Alternative as the Selected Alternative for the North-South Corridor, a new transportation facility in Pinal County, Arizona. This decision was based on analyses documented in the *Tier 1 Final Environmental Impact Statement, North-South Corridor Study, U.S. Route 60 to Interstate 10.* The Selected Alternative is the Eastern Alternative, specifically Alternative 7 (with the E1b and E3b options), which is made up of the following action corridor alternatives: E1b in Segment 1 of the study area, E2a in Segment 2, E3b in Segment 3, and E4 in Segment 4 (Figure 7.1-1). The Selected Alternative is discussed in this ROD and is also the environmentally preferable alternative. The Selected Alternative would best meet the proposed action's purpose and need and—relative to other alternatives considered—would generally be consistent with land use plans and pose the lowest risk to the human, built, and natural environments. During subsequent Tier 2 studies to identify a specific alignment for the facility, all efforts would be made to avoid, minimize, or mitigate adverse impacts.

This decision is based on an evaluation of information presented in the Tier 1 EIS, the proposed action's purpose and need, input from the public, and interagency and tribal coordination. Approximately 400 comments were received on the Tier 1 DEIS during the 53-day review period (September 6 through October 29, 2019). The Notice of Availability of the Tier 1 FEIS and ROD appeared in the *Federal Register* on August 20, 2021. The public comments and ADOT's responses to the comments are included in the Tier 1 FEIS and ROD. Additional rationale for the decision to proceed with the Selected Alternative is also presented in this ROD.

The concept of a new north-to-south transportation facility in Pinal County had been considered by state and regional transportation planners since the early 2000s; however, the formal process of studying the proposed corridor did not begin until a Notice of Intent to prepare a project-level EIS was published in the *Federal Register* on September 20, 2010. ADOT is the sponsor and lead agency¹ for the construction and operation of a north-to-south transportation corridor (North-South Corridor, or Corridor) in Pinal County, Arizona. The Corridor study area is bounded on the north by US 60 and extends south for approximately 50 miles to I-10 (Figure 7.1-1). The Corridor's northern terminus is near Apache Junction on US 60, and the southern terminus is at I-10 between Eloy and Marana. Coolidge and Florence are in the central part of the study area. An extension of SR 24 (in Queen Creek) from its currently designed terminus at Ironwood Drive to the Corridor is part of this study (Figure 7.1-1).

During the project-level EIS, it was determined that funding was not available for the proposed project and thus a project-level EIS could not be approved by FHWA/ADOT. Therefore a "tiered" approach was used to identify a Corridor (rather than the specific alignment of the potential freeway) for the future North-South Freeway. The Tier 1 EIS analyzed the action on a broad scale. During subsequent Tier 2 studies, additional NEPA documents would be prepared to analyze individual projects in greater detail, with the goal of advancing construction of the Corridor or portions of the Corridor as funding becomes available.

Pursuant to 23 USC 327 and a memorandum of understanding dated April 16, 2019, ADOT assumed NEPA Assignment for the project; prior to and up to that date, FHWA was the lead agency and was involved in the drafting of the DEIS up to the preparation of the document's administrative draft (reviewed by agencies prior to publication of the public draft in September 2019).

Apache Mesa Junction University Ave 87 Broadway Rd 88 Southern Ave Baseline Rd Phoenix Guadalupe R **70** Gold Canyon Elliot Rd Warner Rd 2 Superstition Mountains 79 77 Germann Rd Florence Pima Rd **Queen Creek** Ocotillo Rd 77 Chandler Heights Rd Riggs Rd Empire Blvd Tucson San Tan Valley Skyline Dr San Tan Mountains Gila River Indian Community Sacaton 87 Florence Florence Kelvin Hwy Vah Ki Inn Rd Coolidge Coolidge Rd 87 Wooddruff Rd Bartlett Rd McCartney Rd Randolpf Rd Kleck Rd Story Rd Casa Grande Action Alternative 7 with 79 E1b and E3b Options SR 24 and US 60 approved alignment Eloy ... Segment lines Battaglia Dr North-South Corridor **Arizona City** study area Harmon Rd DATA SOURCE: ADWR, Pinal County, Red Rock

Marana

Figure 7.1-1. Corridor location and Selected Alternative

The ultimate future transportation facility in the Tier 1 EIS' Selected Alternative corridor would be a controlled-access freeway with three travel lanes in each direction. It would have sufficient ROW to

accommodate future passenger rail (identified as an option in the 2016 Arizona Passenger Rail Corridor Study, Tucson to Phoenix, Final Tier 1 Environmental Impact Statement). Although funding is currently not available for the North-South Freeway, ADOT may seek federal highway funds to assist in the construction of all or portions of the freeway.²

For this reason, ADOT, acting on behalf of FHWA, is required to ensure that the Selected Alternative complies with provisions of NEPA and other federal laws, as appropriate for a Tier 1 environmental study (see sidebar).

Study of the Corridor in the Tier 1 EIS was based on logical termini³ of the Selected Alternative, sufficient length, independent utility, construction priorities associated with the Regional Freeway and Highway System, and projected

NEPA Assignment

ADOT has assumed FHWA's responsibility for carrying out environmental approvals for the Surface Transportation Project Delivery Program (23 USC § 327). With this assignment of federal environmental review responsibility, ADOT is responsible for complying with all applicable federal environmental laws, regulations, Executive Orders, and policies, and is solely legally responsible for environmental decisions made on all ADOT Federal-aid highway projects.

transportation needs. Consideration of alternatives and project impacts was conducted at a level of detail appropriate for a Tier 1 EIS.

7.1 Combined Tier 1 Final Environmental Impact Statement and Record of Decision

Through the results of the Tier 1 DEIS public and agency review period that closed on October 29, 2019, the NSCS Tier 1 FEIS has met the requirements for the issuance of a single combined Tier 1 FEIS and ROD, as set forth in 49 USC § 304a and 23 USC § 139n as follows:

- The Tier 1 FEIS does not make substantial changes to the proposed action that are relevant to environmental or safety concerns.
- There is no significant new circumstance or information relevant to environmental concerns that bears on the proposed action or the impacts of the proposed action.
- Identification of a NEPA Preferred Alternative, which is also the Selected Alternative, has occurred.
- A preliminary, corridor-level Section 4(f) screening and evaluation was completed.
- The Section 106 consultation process has been initiated.
- Potential mitigation activities for the Selected Alternative have been identified.
- The comments and responses received on the Tier 1 DEIS are included in the Tier 1 FEIS (see Appendix O, Agency and Public Comments), along with any additional public and agency coordination that has taken place since the issuance of the Tier 1 DEIS (see Chapter 6, Evaluation of Alternatives).

² Pinal County voters approved a sales tax to help fund the freeway, among other transportation improvements in the county, but the sales tax initiative is currently under litigation (as of September 2020).

³ The US 60 and I-10 beginning and end points of the Selected Alternative are rational end points of the alternative and are of sufficient length to address broad environmental and transportation issues within the corridor (logical termini). Further, the Selected Alternative would be a usable and reasonable expenditure and would not force additional improvements elsewhere in the corridor (independent utility).

The combined FEIS and ROD have been prepared in accordance with:

- NEPA [42 USC § 4332(2)(c)]
- Section 4(f) of the Department of Transportation Act of 1966 (49 USC § 303, as amended)
- Accelerated Decisionmaking, 49 USC § 304a
- Efficient Environment Review for Project Decisionmaking, 23 USC § 139(n)

7.2 Purpose and Need

The analysis conducted for the Tier 1 FEIS and ROD revealed that a major north-to-south transportation facility is needed in the study area. By 2040, the population in Pinal County is anticipated to increase by 97 percent, and employment by 178 percent, increasing travel demand. The current connection between US 60 and I-10 in Pinal County (Figure 7.1-1) is a fragmented assortment of rural roads with missing linkages throughout. While this fragmentation of north-to-south routes does not cause substantial congestion now, future land use patterns, population, and employment growth would result in substantial congestion. Given these conditions, the following needs were identified:

- Insufficient infrastructure to accommodate substantial projected employment and growth and
 to support local, regional, and statewide planning efforts. Local governments and CAG (the
 regional planning agency) anticipate stress on the local transportation network's capacity because of
 projected increases in population and employment. Local land use and transportation plans all call for
 a major north-to-south transportation facility in the study area to accommodate anticipated growth. An
 improved and expanded north-to-south transportation system is needed to provide the transportation
 infrastructure shown in statewide, regional, and local planning documents.
- Inadequate roadway capacity to meet future demand. Population and employment will place additional demand on the existing fragmented and discontinuous transportation network in Pinal County and will result in a lack of adequate, continuous, north-to-south transportation capacity in southeastern Maricopa County and Pinal County. Lack of capacity will translate into congestion and increased travel times, which would only worsen with continued growth, contributing to long user delays. Figure 7.2-1 shows a comparison of existing and 2040 traffic volumes, demonstrating anticipated travel demand and the resulting congestion with and without a continuous north-to-south corridor. Without additional capacity, delays and congestion would hamper the efficiency of existing and planned roadway networks.
- Lack of transportation system connectivity and need to enhance system linkages. A continuous north-to-south transportation corridor would provide a critical missing link in the southeastern Maricopa County and Pinal County transportation system. Currently, travelers heading north from the Tucson area on westbound I-10 who wish to reach areas east of central Phoenix while continuing to travel on a high-capacity roadway must go through central Phoenix to access SR 202L or through southern Phoenix to access US 60. SR 79 provides access along the eastern edge of the study area north of Florence. South of Florence, SR 79 travels southeast toward Oracle Junction, where it ends at its junction with SR 77, approximately 25 miles north of Tucson. SR 79 is not a high-capacity route, and operates as a local route through Florence with numerous access points and businesses along the route.

A continuous north-to-south facility would help integrate the study area's surface transportation network. System continuity and connectivity would be critical in improving the effectiveness of individual network segments, the use of transit, and congestion management strategies (such as operational improvements addressing intersection upgrades, access management, traffic signal improvements, and intelligent transportation systems—the use of technology to improve traffic flow).

- Providing direct system linkage within the existing fragmented system would reduce costs associated with hundreds of thousands of trips that would take place over future years and decades.
- Limited alternatives to avoid congestion on I-10. I-10 provides the primary connection between Phoenix and Tucson. Today, portions of I-10 in the study area and across the larger region regularly experience highly congested travel. (While the current 2020 traffic volumes are below prior years because of the COVID-19 pandemic, traffic is anticipated to return to pre-pandemic levels once widespread community immunity is achieved.) There are no alternative routes through this area of Pinal County that provide a direct route. Traffic diverted from I-10 because of congestion or a closure must mix with local traffic on rural state highways through the area, contributing to local traffic. By 2040, the study area will have 185 miles of congested roadways (Figures 7.2-1 and 7.2-2). Without unfragmented, north-to-south transportation alternatives to I-10, congestion is anticipated to worsen with the study area's projected growth. It is anticipated that during the peak evening travel period, I-10 would operate at a failing LOS⁴ by 2040 (LOS is described in detail in Section 1.4.4, Existing and Forecast Travel Demand). A continuous north-to-south transportation corridor connecting southeastern Maricopa County—by way of US 60, SR 202L, and SR 24—with I-10 would provide the necessary congestion relief to enhance mobility on I-10.

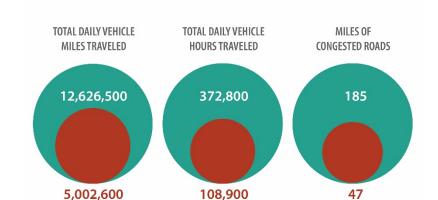


Figure 7.2-1. Existing and 2040 traffic projections

Source: second-generation Arizona statewide travel demand model (AZTDM2), 2016, existing and 2040 No-Action model information

2015 Existing

2040 No-Action

⁴ LOS is a qualitative measure used to describe traffic conditions. It is measured on a scale ranging from A to F, with LOS A representing the best performance and LOS F indicating the worst.

Apache Mesa Junction 87 University Av Broadway Rd Phoenix Gold Canyon Superstition Mountains 79 77 ecos Rd Florence Junction Pima Rd Queen Creek Ocotillo Rd 77 Chandler Heights Rd Riggs Rd Empire Blvd Tucson Skyline Dr San Tan Valley San Tan Mountains Gila River Indian Community Sacaton Florence Vah Ki Inn Rd Coolidge Coolidge Rd 87 Bartlett Rd Kleck Rd Story Rd Casa Grande Level-of-Service (LOS) 79 Battaglia Dr North-South Corridor **Arizona City** study area DATA SOURCE: ADWR, Pinal County, Red Rock Marana

Figure 7.2-2. Study area forecast condition (2040) level of service

Source: second-generation Arizona statewide travel demand model, 2017

Providing connectivity and more direct trips in the study area would reduce vehicle hours traveled, which would, in turn, reduce energy use and costs. To address transportation needs in the study area, the purpose of this proposed action is to provide a continuous, access-controlled north-to-south transportation corridor that would:

- Enhance the transportation network to accommodate existing and future populations Consistent with state, regional, and municipal planning initiatives, the new corridor would accommodate anticipated growth in the study area and across the larger region.
- Improve access to future activity centers The new corridor would benefit the study area's new
 activity and population centers and undeveloped lands identified for conversion that are in various
 stages of the local or regional planning processes.
- Improve regional mobility The new corridor would provide additional roadway capacity ahead of full development build-out to avoid congestion associated with anticipated growth.
- Improve north-to-south connectivity The new corridor would connect eastern portions of the Phoenix metropolitan area with Pinal County and destinations to the south, including Tucson.
- Provide an alternative to avoid congestion on I-10 The new corridor would provide an unfragmented alternative to I-10 to reduce traffic delays at full development build-out.
- Integrate the region's transportation network The new corridor would provide a critical link, currently missing, in the transportation network to provide regional connectivity.

Without unfragmented north-to-south transportation alternatives to I-10, congestion is anticipated to worsen with the study area's projected growth. It is anticipated that during the peak evening travel period, I-10 would operate at a LOS by 2040. A continuous north-to-south transportation corridor connecting southeastern Maricopa County—by way of US 60, SR 202L, and SR 24—with I-10 would provide the necessary congestion relief to enhance mobility on I-10.

The 2040 traffic analysis results show that the key corridors will experience, on average, nearly 200 percent more traffic than in 2015. With the added traffic, performance is estimated to degrade on many of these facilities, including SR 79 north of Hunt Highway. Overall, approximately 43 percent of local roadways in the study area would operate at LOS E or F in 2040 under the No-Action condition. Additional traffic analysis information for the proposed action is Appendix B, *Traffic Information*.

Other desired outcomes of the proposed action include:

- protecting and enhancing the natural environment along the Corridor
- supporting local and regional land use plans and preservation goals
- supporting equitable economic opportunities
- complementing other planned transportation improvements along new and established corridors in the study area

7.3 Alternatives

With the purpose and need established for the proposed action, the next step in any EIS process (that is, project-level or Tier 1) is to identify a range of reasonable alternatives to be studied in detail. For the NSCS, the range of reasonable alternatives to be studied consisted of action corridor alternatives that would entail implementing the proposed action to build a new freeway in the study area and a No-Action Alternative. This step identified reasonable alternative corridors for the proposed action to allow for meaningful subsequent comparison of the potential risk that the corridor alternatives would affect the human, built, and natural environments.

What is meant by a range of reasonable alternatives?

According to CEQ, "reasonable alternatives include those that are practical or feasible from a technical and economic standpoint" and "us[e] common sense." When a large number of alternatives exists, "only a reasonable number ... covering the full spectrum of alternatives, must be analyzed and compared in the EIS"

(Federal Register 46: 18026[1981]).

7.3.1 Alternatives Considered

Eight full-length action corridor alternatives (and options) are studied in detail in the Tier 1 EIS. The study area is divided into four segments that incorporate transition areas to allow the action corridor alternatives to shift east to west or west to east and to facilitate the evaluation of proposed action-related impacts.

The following sections describe the early alternatives documented in the 2014 ASR and the action corridor alternatives discussed in the Tier 1 DEIS.

Alternatives Selection Report

The initial alternatives development and screening process produced 1,500-foot-wide route alternatives recommended to be carried forward into a project-level DEIS for detailed analysis. Described in detail in the ASR process:

- incorporated analyses of all reasonable alternatives
- supported the iterative nature of the NEPA process
- provided a record of the investigation and selection process
- determined optimal route alternatives (as constrained by the proposed action's purpose and need, agency and public input, and environmental, engineering, social, and economic data)

Figure 7.3-1 shows the route alternatives that were recommended for evaluation in the project-level DEIS.

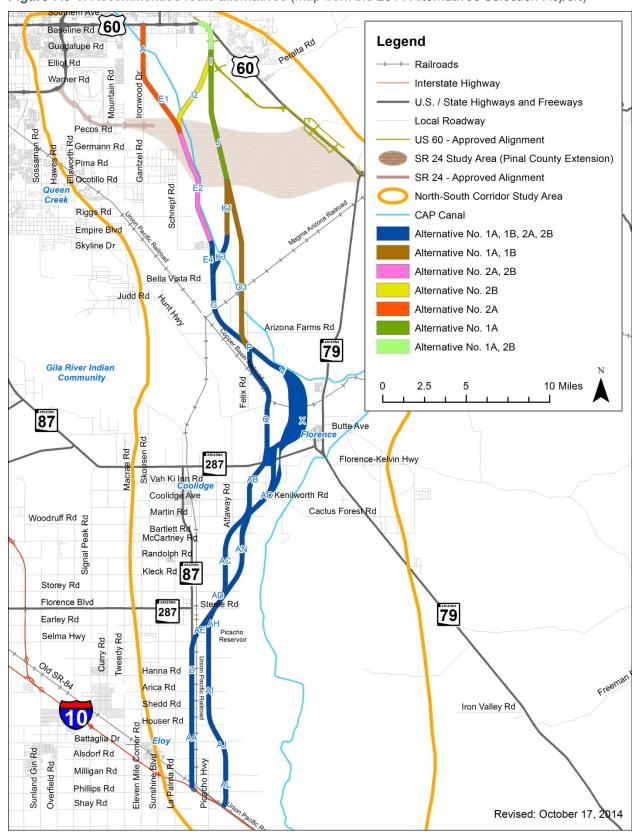


Figure 7.3-1. Recommended route alternatives (map from the 2014 Alternatives Selection Report)

Source: Arizona Department of Transportation (2014)

Modifications to Alternatives Identified in the Alternatives Selection Report

After publication of the ASR in October 2014, the alternatives recommended for further study were refined and additional options were studied. Major changes to the process and/or alternatives are described here. Additional refinements are described in Chapter 2, *Alternatives*.

Corridor Route Alternative Options and Refinements

ADOT's Williams Gateway Corridor Definition Study (2006), which recommended the implementation of the North-South Corridor, also recommended that the proposed SR 802 (now known as SR 24) in Maricopa County be extended to the east into Pinal County and connect with US 60 or SR 79. In 2015, MAG prepared the SR-24 Williams Gateway Freeway, Ellsworth Road – Ironwood Road Interim Phase II Feasibility Study. The study recommended an interim second phase of construction for SR 24 between Ellsworth Road and Ironwood Drive. This extension sets the footprint of SR 24 just east of Ironwood Drive. As a result, ADOT recommended that the SR 24 study be incorporated into the NSCS, and that the route be evaluated east to the North-South Freeway, but not all the way to US 60 or SR 79—that potential extension could be evaluated at a future date.

The study team developed four alternatives to connect the two Eastern and two Western Alternatives in Segment 1 to the planned extension of SR 24 east of Ironwood Drive.

Conversion to a Tier 1 Draft Environmental Impact Statement

To obtain NEPA approval for a project-level EIS, the study would need to follow federal guidelines dated February 9, 2011 (Supplement to January 28, 2008, "Transportation Planning Requirements and their Relationship to NEPA Process Completion"). According to the guidelines, funding sources for the proposed action would need to be identified before ADOT could sign the final project-level EIS ROD. To continue and complete the study as a federally approved NEPA action, as a result of fiscal constraint, the study transitioned to a Tier 1 EIS from the initial project-level EIS. The study began with the initial publication of a Notice of Intent in 2010; a second Notice of Intent was published in the *Federal Register* in 2016 when the study became a Tier 1 EIS effort [see Section 5.1.1, *Notices of Intent (2010 and 2016)*].

Western Alternative at Gila River Crossing

In 2016, FHWA challenged the study team to develop a route that provided a viable Western Alternative for consideration that avoided impacts on known cultural resource sites at the Gila River crossing. To do so, the study team returned to the ASR to consider whether any of the 56 original route alternatives might be reevaluated. Routes to the east of and including SR 79 were not considered for two reasons: (1) they were not contemplated as part of the ASR, and (2) routes that far to the east would not effectively address the purpose and need of improving regional mobility and connectivity.

A western alignment was developed near the previously eliminated ASR alignments "C" and "D," which connected Ironwood Drive in the northern portion of the study area with the SR 87 alignment in the southern portion of the study area (see Figure 2.2-1 in Chapter 2, *Alternatives*). These westernmost alignments in the ASR were not advanced from the ASR primarily because of low ratings from the public and local agencies.

At its northern end, the new Western Alternative branches off the ASR alignments near Arizona Farms Road. The route avoids existing development north of Hunt Highway, crossing the route at close to a right angle before shifting to the south to avoid a Union Pacific Railroad crossing. South of Hunt Highway, the new corridor generally trends north-to-south for much of its length, avoiding impacts on environmentally sensitive resources along its course. South of the Gila River and SR 287, the alternative shifts approximately 0.5 mile to the east to minimize impacts on existing development before rejoining the ASR alignments at the McCartney Road alignment.

7.3.2 Alternatives Studied in Detail in the Tier 1 DEIS

The following text briefly describes the alternatives evaluated in detail in the Tier 1 DEIS and the Tier 1 FEIS and ROD. These alternatives are discussed in detail in Chapter 2, *Alternatives*.

No-Action Alternative

A No-Action Alternative is included for detailed study in accordance with NEPA requirements to compare beneficial and adverse impacts of the action corridor alternatives in the horizon year (2040) with the consequences of not advancing one of the action corridor alternatives. The No-Action Alternative would not construct a north-to-south freeway. However, with the No-Action Alternative, other transportation projects that have been programmed in the applicable regional transportation plan would be constructed. In addition, major land use changes, as documented in land use plans of jurisdictions, anticipated to occur by 2040 are included in the No-Action Alternative.

Action Corridor Alternatives

Eight full-length action corridor alternatives (and options) were studied in detail in Tier 1 EIS. The study area is divided into four segments that incorporate transition areas to allow the action corridor alternatives to shift east to west or west to east and to facilitate the evaluation of proposed action-related impacts (Table 7.3-1 and Figure 7.3-2). For additional detail regarding these alternatives, refer to Chapter 2, *Alternatives*.

Table 7.3-1. Action corridor alternatives, by segment	Table 7.3-1.	Action	corridor	alternatives.	bv	seament
--	--------------	--------	----------	---------------	----	---------

Segment	Eastern Alternative	Western Alternative
1	E1a Alternative E1b Alternative	W1a Alternative W1b Alternative
2	E2a Alternative E2b Alternative	W2a Alternative W2b Alternative
3	E3a Alternative E3b Alternative E3c Alternative E3d Alternative	W3 Alternative
4	E4 Alternative	W4 Alternative

The full-length, 1,500-foot-wide action corridors run the length of the study area and include a Western Alternative (shown in orange on Figure 7.3-2), an Eastern Alternative (shown in purple on Figure 7.3-2), and combinations of both to avoid and minimize environmental impacts. The action corridor alternatives in Segments 1, 2, and 3 include options (shown in paler colors of orange and purple relating to the Western and Eastern Alternatives, respectively, on Figure 7.3-2).

In total, there are eight full-length action corridor alternatives with options that result in a total of 40 possible continuous through-routes that were evaluated in the Tier 1 EIS. The segment alternatives that make up each full-length action corridor alternative are presented in Table 7.3-2. A description of these segments is included in Chapter 2, *Alternatives*.

Figure 7.3-2. Action corridor alternatives, by segment

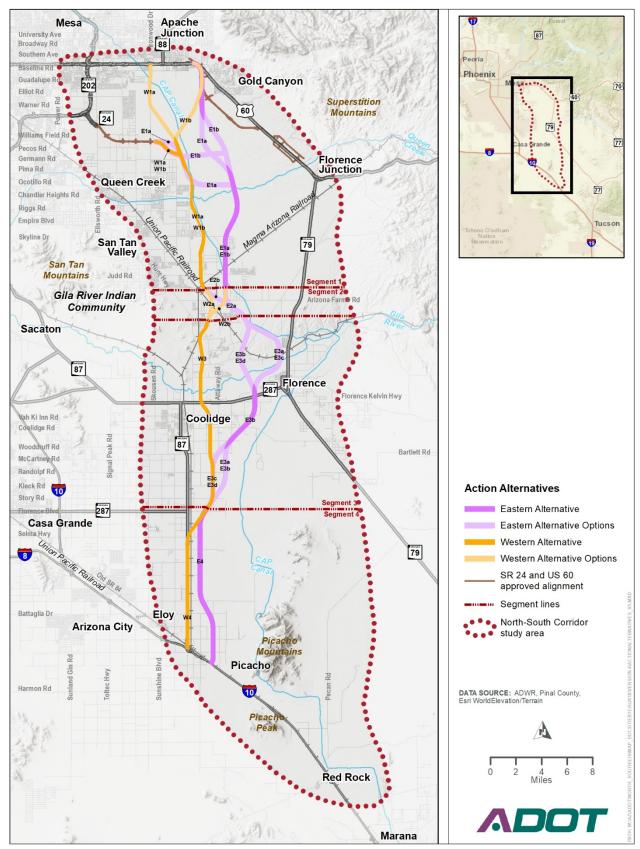


Table 7.3-2. Full-length action corridor alternatives

Alt.	Segment 1	Segment 2	Segment 3	Segment 4
1	W1a or W1b	W2a	W3	W4
2	W1a, or W1b	E2b	E3a, E3b, E3c, or E3d	W4
3	W1a, or W1b	E2b,	E3a, E3b, E3c, or E3d	E4
4	W1a, or W1b	W2a	W3	E4
5	E1a or E1b	W2b	W3	W4
6	E1a or E1b	E2a	E3a, E3b, E3c, or E3d	W4
7	E1a or E1b	E2a	E3a, E3b, E3c, or E3d	E4
8	E1a or E1b	W2b	W3	E4

7.4 Ability of the Action Corridor Alternatives to Meet the Purpose and Need

The comparison of the transportation performance between the action alternative corridors and the No-Action Alternative is presented in Section 2.5, *Transportation Performance of the Alternatives*. The analysis shows that the action alternative corridors meet the proposed action's purpose and need and will:

- improve transportation and traffic operations throughout the study area
- reduce travel time through the Corridor (Table 2.5-3)
- improve accessibility to and from destinations throughout the study area (Tables 2.5.3 through 2.5.6)
- improve regional congestion in the Corridor and in the region (Table 2.5-4)
- improve LOS on many regionally significant north-to-south routes in the Corridor (Table 2.5-6)

Identifying the No-Action Alternative as the Selected Alternative would be inconsistent with local jurisdictions' land use plans, would not adequately serve the population and employment growth in the corridor, and would result in substantial congestion on regionally significant routes in the study area; therefore, the No-Action Alternative does not meet the purpose and need of the action.

7.5 Rationale for the Identification of the Preferred Alternative

The action corridor alternatives in each segment were compared to identify which is the preferred alternative in each segment. The analysis is based on how well alternatives meet the proposed action's purpose and need and objectives and how it fared after the study team's evaluation, as presented in Section 6.2, *Comparison of Alternatives*. Additionally, during the Tier 2 phase, USACE requires that the preferred alternative be the LEDPA. The LEDPA is defined as the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historic, cultural, and natural resources. Designation of the environmentally preferable alternative typically involves judgment and the balancing of some environmental values against others. For instance, although the No-Action Alternative would overall have less environmental impact, this alternative does not meet the project's purpose and need. Therefore, the LEDPA was considered in the identification of the Selected Alternative. Table 7.5-1 presents the results of the analysis based on transportation and traffic operations, land use planning, and the human, built, and natural environments. This analysis informed a

recommended alternative within each segment. The impacts of the eight full-length action corridor alternatives (and options) result from the combination of impacts outlined in the segment-by-segment evaluation in Table 7.5-1. Once the segment-by segment analysis was completed, the next step in identifying a preferred alternative was to compare the full-length action corridor alternatives to identify which was the preferred alternative based on how well it meets the proposed action's objectives (purpose and need), meets other desirable outcomes (also described in the project's purpose and need), and how it fared after the study team's evaluation, as presented in Section 6.2, *Comparison of Alternatives*.

While all eight full-length corridor alternatives meet the proposed action's purpose and need by improving transportation and traffic operations throughout the study area, there are some similarities and differences among these alternatives, as summarized below:

- All of the action corridor alternatives (and options) would result in reduced travel time through the Corridor, relative to 2040 conditions with the No-Action Alternative.
- All of the full-length action corridor alternatives would improve regional congestion throughout the study area compared with the No-Action Alternative (46 percent of VMT congested).
- All Western Alternatives draw more traffic with Alternative 1, resulting in the greatest reduction in congestion (33 percent of VMT congested). Similar reductions in congested conditions would result with Alternatives 2, 3, and 4 and their options, with a range of 34 to 35 percent of the VMT in congested conditions. Alternatives 7 and 8 (with options) would result in 39 percent of VMT in congested conditions—still a reduction from the No-Action Alternative.
- The alternatives vary in their compatibility with municipal planning areas' published plans:
 - Town of Florence's *General Plan* is generally consistent with Alternatives 2 or 3 (with the E3a option), the City of Coolidge's *General Plan* with Alternatives 2, 3, 6 or 7 (with the E3a option), and the City of Eloy's *General Plan* with Alternatives 1, 2, 5, and 6. Pinal County's *Comprehensive Plan* does not identify a preferred alternative, but does recognize the facility's importance for planned ASLD development, which would be best served by Alternatives 5 through 8.

As summarized in Table 7.5-1, and based on the results of the analyses presented in the Tier 1 DEIS and the Tier 1 FEIS and ROD and summarized in Sections 6.2 (*Comparison of Alternatives*), 6.3.1 (*Identification of Action Corridor Alternatives in Each Segment*) by segment, and 6.3.2 (*Identification of Full-length Action Corridor Alternatives*) by full-length alternative, the following action corridor alternatives form the preferred corridor alternative:

- Segment 1 E1b Alternative
- Segment 2 E2a Alternative
- Segment 3 E3b Alternative
- Segment 4 E4 Alternative

This combination of action corridor alternatives creates Alternative 7, with the E1b and E3b options (as described in Section 2.3.2, *Full-length Action Corridor Alternatives*), and was recommended as the preferred corridor alternative (Figure 7.5-1). Alternative 7 best meets the proposed action's purpose and need while minimizing adverse effects on the human, built, and natural environments.

Table 7.5-1. Action corridor alternatives and environmental factors accounted for in the decision

Comparison of alternatives

Selected segment

Segment 1 (E1a, E1b, W1a, and W1b)

Transportation/traffic operations

- W1a offers the greatest congestion relief because it is close to existing population and employment centers, followed by W1b, E1a, and E1b.
- W1a would likely require constructing collector and distributor roads to carry local traffic on Ironwood Drive, resulting in a wider freeway footprint and the creation of a substantial barrier to east-to-west traffic through the area.
- E1a, E1b, and W1b would necessitate the development of Elliot Road and other east-to-west arterial roads to facilitate local access to the facility.

Land use planning

- W1a provides access to the largest existing and anticipated population, employment, and activity centers.
- E1b best improves access to future activity centers and planned development
- W1a, W1b, E1a would jeopardize the operations of Rittenhouse Army Heliport (an active military training facility); E1b poses no risk to the Rittenhouse Army Heliport.
- Segment 1 jurisdictions' general plans are supportive of a North-South Freeway facility, which is referenced without identifying a preferred alternative.

Human environment

- W1a affects substantially more community facilities than E1a, E1b, and W1b.
- W1a has greatest potential impacts on residential properties, while E1a and E1b would have the fewest potential residential impacts.
- W1a and W1b would result in potential disproportionately high and adverse effects on environmental justice populations, while E1a and E1b would have a low risk
- W1a and W1b would have a high risk of farmland impacts, while E1a and E1b would have a moderate risk of impacts on farmland.

Built environment

- E1a, E1b, and W1b would affect the planned expansion area of Silly Mountain Park; however, park planning documents already identify a future transportation facility through area of expansion. W1a would affect a golf course and trails.
- W1a would result in a high risk of noise impacts based on existing land uses, and E1a, E1b, and W1b would have a low risk.
- W1a and W1b pose a high risk of impacts on archaeological sites, while E1a and E1b have minimal risks.

Natural environment

- W1a and W1b have a high risk of land subsidence or earth fissure impacts, while E1a and E1b have a moderate risk.
- W1a and W1b have a low risk to wildlife, while E1a and E1b have a moderate risk to wildlife.
- E1b and W1b have a moderate risk of impacts on conservation/wildlife lands, while E1a and W1a have no impacts.
- All the alternatives have a high risk of impacts on protected native plants and would result in a high number of ephemeral drainage crossings.
- E1b and W1a have a moderate risk of floodplain encroachment, and E1a and W1b have a low risk.
- W1a and W1b have a moderate risk of groundwater impacts, and E1a and E1b would have no impact.

Stakeholder input

- In Segment 1, the majority of the public voicing support for the project supported W1a and/or W1b (75 percent); the remaining voicing support for the project supported the Eastern Alternative (25 percent).
- Most affected jurisdictions preferred the W1b Alternative.
- The Four Southern Tribesa preferred the E1a Alternative.

E1b Alternative

- Lowest overall risk of impacts to human environment.
- Access to future activity centers and planned development.
- Only alternative that does not jeopardize the Rittenhouse Army Heliport site and operations.
- As compared to the Western Alternatives, both Eastern Alternatives have lower risk of impact on built environment, have lower risk of use of Section 4(f) properties, would better support regional land use plans, and better complement other planned transportation improvements.
- E1b is the LEDPA.

Table 7.5-1. Action corridor alternatives and environmental factors accounted for in the decision

Comparison of alternatives **Selected segment** Segment 2 (E2a, E2b, W2a, W2b) Transportation/traffic operations E2a Alternative · Segment 2 is a relatively short transition segment, allowing a west to east or • Eastern Alternatives would result in less east to west change in alternatives. risk of impacts on environmental resources than Western Alternatives. Land use planning E2a and E2b perform similarly. · Few variations in land use between alternatives. E2a is the LEDPA. • None of the alternatives are close to many homes or activity centers. • E2b is closest to the most employment centers. • E2a and W2a would minimize risk of affecting planned development as opposed to E2b and W2b. Human environment · No community facilities at risk with any alternative. • No homes or businesses are at risk of displacement with any alternative. • Action corridor alternatives may affect populations with minority concentrations (note that the census geographies do not allow differentiation of the alternatives in Segment 2). Built environment · W2a and W2b would result in a moderate risk of impacts on existing or planned parks and trails because they cross the proposed Copper Basin Railroad Trail and may trigger Section 4(f) impacts, whereas the E2a and E2b Alternatives would result in a low risk to these facilities. • No noise impact risks were identified for any alternative. • No known risks to cultural resources were identified with any alternative. Natural environment • Minimal risk of land subsidence or earth fissure impacts with any alternative. • Low risk of impacts on wildlife or habitat with any alternative. Minimal risk of impacts on protected native plants with any alternative. • Minimal number of ephemeral drainage crossings with any alternative. · No risk of floodplain encroachment with any alternative.

Stakeholder input

- Most agencies preferred the E2b Alternative, which provides a transition to the Eastern Alternative (and options) from the W1a Alternative.
- Public comments on the Segment 2 alternatives focused on specific property impacts based on the corridor footprint.

Table 7.5-1. Action corridor alternatives and environmental factors accounted for in the decision

Comparison of alternatives

Selected segment

Segment 3 (E3a, E3b, E3c, E3d, W3)

Transportation/traffic operations

 W3 reduces regional congestion the most because it is close to population and activity centers, followed by E3b and E3d.

Land use planning

- Adopted general plans of the local jurisdictions directly affected by the alternatives in Segment 3—the City of Coolidge and Town of Florence—support E3a.
- W3 is closest to biggest existing population.
- · E3c captures most existing employment.
- W3, E3a, and E3c are near a large number of existing activity centers.
- E3a, E3b, E3c, and E3d would provide the most direct access to large planned commercial and industrial centers in the study area.

Human environment

- E3a and E3c would enhance access to community facilities in Florence, while E3b and E3d would neither affect or benefit community facilities.
- W3 would reduce access to an existing community church and have the greatest
 potential adverse impacts on environmental justice populations.
- E3a and E3b risk affecting the greatest number of homes, whereas E3c, E3d, and W3 have a lower risk of impacts on residences.
- All alternatives would affect active or anticipated sand and gravel mining operations.
- E3b and E3d would affect Florence Copper Mine.
- · All alternatives have a high risk of impacts on farmland.

Built environment

- All Eastern Alternatives have a moderate risk of impacts on existing and planned recreation facilities, while the W3 has a higher risk, particularly to Pinal County Existing Multiuse Trail Corridor.
- E3a and E3b would have a moderate risk of noise impacts, whereas E3c, E3d, and W3 would have a low risk.

Natural environment

- All alternatives have a high risk of land subsidence or earth fissure impacts.
- Biological impacts are similar across all alternatives.
- E3a, E3c, E3d, and W3 would result in a moderate number of ephemeral drainage crossings, whereas E3b would result in a low number of crossings.
- E3a and E3c have a high risk of floodplain encroachment; E3b and E3d have a moderate risk; W3 has a low risk.

Stakeholder input

- The Town of Florence and City of Coolidge both noted that they accepted the Selected Alternative in Segment 3.
- The majority of public support was for E3a in Segment 3, with the primary issue being the closer proximity to downtown Florence.
- The Four Southern Tribes preferred W3.

E3b Alternative

- Least risk of impact on human environment (along with E3d).
- As compared with Western Alternatives, the Eastern Alternatives have the least risk of impact on the human environment, least risk of use of Section 4(f) properties, better support regional lands use plans with better access for planned developments, and better support equitable economic opportunities with access to employment and activity centers in Florence.
- Fewest impacts on waters of the United States (along with E3d), and fewest drainage crossings.
- E3b is the LEDPA.

Table 7.5-1. Action corridor alternatives and environmental factors accounted for in the decision

Comparison of alternatives Selected segment Segment 4 (W4, E4) Transportation/traffic operations F4 Alternative · Would result in a lower risk of impacts on · Average weekday traffic volumes on the Segment 4 alternatives are greatest with W4, the difference being a function of whether the Corridor is east or west the human and built environments. in Segment 1 (W1a would generate the most traffic in Segment 4, while E1a and • Lowest risk of affecting Section 4(f) E1b would generate the least traffic in Segment 4). properties. • Where W4 is coincident with SR 87, access would need to be provided to E4 better supports regional land uses. properties along the route. E4 is the LEDPA. Land use planning • City of Coolidge identified a preferred alternative in its 2025 General Plan that is similar to E4. The City of Coolidge anticipates development of the Inland Port Arizona and Pinal Logistics Park east of SR 87 in its incorporated area. The City of Eloy 2010 General Plan Update Circulation Element map shows the City's preferred alternative as E4. • E4 and W4 are within 2 miles of moderate population and employment; however, W4 is near more activity centers because it is closer to the developed parts of Eloy. Human environment Both alternatives would potentially adversely affect community facilities. • W4 would potentially adversely affect environmental justice populations. • W4 would have a moderate risk of both residential and business displacements, while E4 would have a low risk. · Both alternatives have a high risk of farmland impacts. Built environment · Both alternatives would have a moderate risk of impacts on existing and planned recreational facilities. · W4 would have a moderate risk of noise impacts, whereas E4 would have a Both alternatives would have a moderate risk of impacts on archaeological W4 would have a moderate risk of impacts on known historic districts, buildings, or structures, while E4 would have no risk. Natural environment · Both alternatives have a high risk of land subsidence or earth fissure impacts. · Both alternatives have a low risk of impacts on wildlife, habitat, conservation and wildlife lands, and protected plant species. Both alternatives would have a minimal number of ephemeral drainage

have no risk. Stakeholder input

 Most of the jurisdictions in Pinal County withheld judgment in Segment 4; with the exception that the City of Eloy preferred W4, and the City of Coolidge preferred E4.

· E4 would have a moderate risk of floodplain encroachment, while W4 would

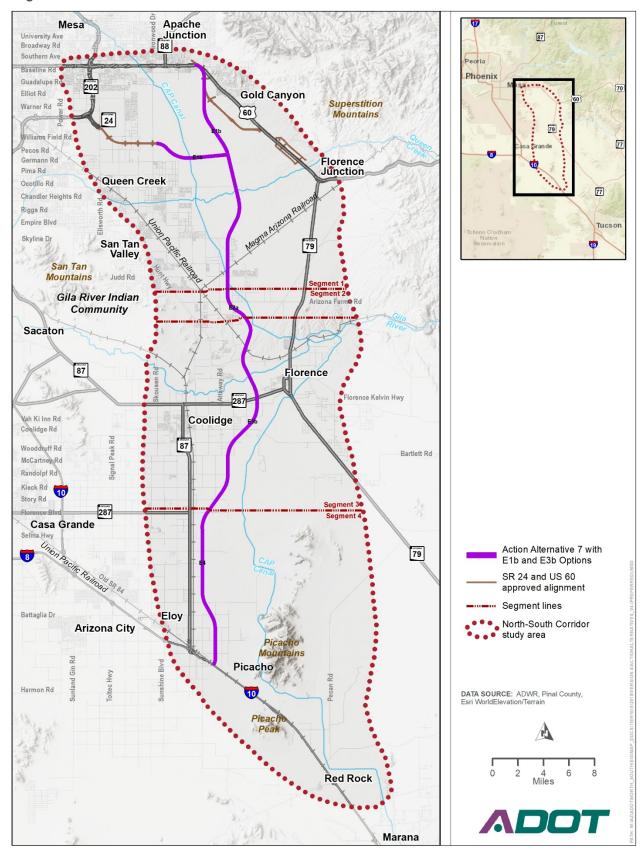
• The majority of public comments supported E4.

Notes: Corridor = North-South Corridor, LEDPA = least environmentally damaging practicable alternative, SR = State Route

Not all agencies submitted preferred alternatives for each segment, and some submitted multiple preferred alternatives for a given segment.

a consisting of the Ak-Chin Indian Community, Gila River Indian Community, Salt River Pima-Maricopa Indian Community, and Tohono O'odham

Figure 7.5-1. Preferred Alternative



7.6 Selected Alternative

ADOT has determined that the Preferred Alternative analyzed in the Tier 1 DEIS and the Tier 1 FEIS and ROD is the Selected Alternative—that is, the Eastern Alternative (Alternative 7, made up of the E1b, E2a, E3b, and E4 Alternatives). The Eastern Alternative is an approximately 50-mile-long freeway corridor between US 60 in Apache Junction and I-10 near Eloy and Picacho. The Eastern Alternative would connect with SR 24 from its currently designated terminus at Ironwood Drive in Queen Creek (Figure 7.5-1).

The Selected Alternative is also the LEDPA that satisfies the proposed action's purpose and need. Although the Selected Alternative does not have the least impact in every environmental discipline, ADOT believes that this alternative best meets the purpose and need while balancing environmental effects and benefits. The Section 4(f) Tier 1-level assessment demonstrated that the Selected Alternative has the least risk to Section 4(f) properties and, during Tier 2 analysis, there is the potential to avoid Section 4(f) impacts; this is not the case with the Western Alternatives, where the risk of Section 4(f) impacts is greater.

Relative to other action corridor alternatives considered, the Selected Alternative will overall pose the lowest risk to the environment, including having a low risk to cultural resources, a low risk of displacing residences, and no risk of displacing a major military installation.

7.6.1 Post DEIS Review of the Preferred Alternative

Based on comments received on the Tier 1 DEIS, ADOT confirmed that the preferred alternatives in Segments 2 (E2a) and 3 (E3b) were valid. ADOT engaged in additional research and coordination with potentially affected stakeholders to validate the selection of the preferred alternatives in Segments 1 (E1b) and 4 (E4).

Segment 1

In general, the Segment 1 Western Alternatives garnered much support from municipalities and the public during the comment phase of the Tier 1 DEIS. The Western Alternatives are located closer to existing development in Segment 1, particularly Queen Creek and the San Tan Valley, and would provide better access to enhanced transportation for a greater number of existing residents and improved access to existing activity centers.

One of the purposes of the Corridor is to accommodate existing and future populations and to improve access to future activity centers. However, the study area is changing, and the rural character that defines much of the study area is transitioning to a more suburban development pattern with each new planned development and residential subdivision. This is especially true in Segment 1, where the E1b Alternative would cross areas planned for residential or business development while having the least impact on existing development and the least displacements since it is located in an undeveloped area. Conversely, the Western Alternatives would have a high risk of affecting existing development west of the CAP Canal, including the Rittenhouse Army Heliport, an active military facility.

The San Tan Valley and Queen Creek have already experienced substantial growth and are currently experiencing traffic congestion along key routes—see Section 2.5.3.2, *Traffic Conditions*. The North-South Freeway would alleviate some regional traffic congestion, but travel modeling of future conditions determined that none of the alternatives alone would eliminate projected traffic congestion. Additional local roadway network improvements are necessary to address the region's growth. Pinal County has made plans for additional transportation infrastructure improvements to address traffic congestion in the region. Additionally, the Circulation Plan included in the STVSAP identified a number of local arterials to be widened and extended in the communities close to the Corridor's Western Alternatives, based on the Pinal County Regionally Significant Routes for Safety and Mobility.

The STVSAP states "...the proposed major roadway network can accommodate future growth and development within the planning area. Thus, identification of new roadway alignments is not a primary need. However, in order for the proposed system to work, existing gaps in the arterial network need to be bridged. For example, Germann Road does not exist between Meridian Road and Ironwood Road. Other gaps include Meridian Road from Combs to Pima Road, and Magma Road from Hunt Highway to Gary Road." The STVSAP also notes that, "[A]Ithough outside the study area, this plan also recognizes the potential impact the ongoing ADOT SR 24 and North – South Corridor planning, design, and construction efforts will have on the study area" and that development of a corridor may "create a need to reassess the land use composition of the planning area as more detailed plans for these corridors are defined to ensure the impacts of these facilities are appropriately accommodated in a manner that is consistent with the overall vision for the San Tan Valley community."

The development of the network of arterials described in the STVSAP would provide enhanced mobility and connectivity in the existing communities that would have been served by the Western Alternatives without the extensive impacts associated with their implementation.

The Pinal County Joint Land Use Study is a joint planning effort led by Pinal County with support of the Arizona Army National Guard (AZARNG). The study, finalized in February 2020, reports that, "[A]Ithough the final alignment [of the North-South Corridor] has not been chosen, this corridor could spur future growth and land development near Florence Military Reservation and Rittenhouse Training Site that is incompatible with AZARNG missions." The military reservation is located on BLM lands, leased to the AZARNG under the Recreation and Public Purposes Act.

In comments submitted on the Tier 1 DEIS, the Bureau of Reclamation has stated (in addition to concerns with crossing the CAP Canal, which affects all the alternatives), placing a major transportation facility parallel and in close proximity to the CAP Canal would pose an increased risk to an important water resource for the region.

ADOT acknowledges the need for improved access for existing residents, and that a Western Alternative would better serve the existing population's needs. However, because of the Circulation Plan in the STVSAP, the risk of environmental impacts, and several design challenges associated with placing a freeway adjacent to the CAP Canal, the E1b Alternative remains part of the Selected Alternative.

Segment 4

In Segment 4, the recommended E4 Alternative would similarly better serve future development because it would be closest to the planned Inland Port Arizona and Pinal Logistics Park. The E4 Alternative would be farther away from existing populations and activity centers than the W4 Alternative. However, the W4 Alternative would result in greater impacts on existing communities, and the analysis considered both the benefits and impacts to existing communities, as well as the benefits to future developments in the identification of the recommended E4 Alternative. Therefore, the E4 Alternative is part of the Selected Alternative.

Based on the analysis in the Tier 1 FEIS and ROD and comments received on the Tier 1 DEIS, the Eastern Alternative is the alternative that meets the proposed action's purpose and need and, relative to other alternatives considered, would generally be consistent with land use plans and pose the lowest risk to the human, built, and natural environments. The Selected Alternative is also the LEDPA, as required by USACE for compliance with the CWA if Waters are affected. The Selected Alternative will best meet the proposed action's purpose and need. During Tier 2 studies, all efforts to avoid, minimize, or mitigate adverse impacts would be made.

7.7 Coordination with Agencies, Stakeholders, and the Public

In accordance with requirements under SAFETEA-LU and the *North-South Corridor Study SAFETEA-LU Section 6002 Coordination Plan for Agency and Public Involvement* (2017), between 2010 and 2018, ADOT and FHWA held meetings with cooperating and participating agencies, study stakeholders, and members of the public. The outcome of these meetings indicated support by most attendees for the construction and operation of the proposed action.

ADOT has provided opportunities for agency and public involvement throughout the course of the study. Approximately 100 public stakeholder and 90 agency meetings were held between 2009 and 2018, and interested parties had opportunities to provide input through the study telephone hotline, website, email, traditional mail, and other means. Specific opportunities to provide input included:

- agency and public scoping meetings
- presentations at city council/local agency meetings
- presentations at industry association meetings
- · individual agency and stakeholder coordination meetings
- feedback on newsletters
- · public information workshops and meetings
- · stakeholder agency progress meetings
- workshop and meetings with Native American tribes
- public comment period for action corridor alternatives

ADOT and the study team implemented an extensive public involvement program, meeting with numerous agencies, tribes, special interest groups, civic organizations, businesses, and the public to discuss the study and to answer questions about the Corridor and the Tier 1 DEIS environmental review process.

Throughout the study process, news releases, social media, newsletters, brochures, questionnaires, a study website, an online webmap (with features allowing people to make comments), and public meetings were used to disseminate information about the NSCS and to gather input from the public and other interested parties.

Upon publication of the Tier 1 DEIS, an official comment period commenced. Commenters could submit comments by email, voice messages, and online and written comment forms. During the comment period, three public hearings were held where the public and agencies had additional opportunities to provide comments on the NSCS. Interpreters were provided and translations completed to accommodate the language needs of the public.

7.8 Independent Evaluation of the Tier 1 DEIS

In addition to ADOT as the lead federal agency, the NSCS has eight cooperating agencies: AGFD, Federal Railroad Administration, USACE, U.S. Bureau of Indian Affairs – San Carlos Irrigation District, BLM, EPA, USFWS, and Western Area Power Administration. The lead and cooperating agencies have been integral in providing guidance regarding document content and format. The agencies have evaluated the document independently and provided further guidance for incorporation into the Tier 1 DEIS. Upon completion of the EIS process, the lead and cooperating agencies will adopt the document according to CEQ procedures.

7.9 Environmental Commitments and Potential Mitigation

Construction of the North-South Freeway would result in direct, indirect, and cumulative impacts that could require mitigation. At this stage in the development of the proposed freeway, potential mitigation measures can be identified only in general terms—such as minimizing impacts on residential and sensitive environmental areas—until a specific alignment is defined during Tier 2 studies.

Table 7.9-1 describes potential mitigation measures to consider as future commitments to avoid, minimize, or mitigate adverse impacts on land use that may result from implementing the proposed action. ADOT may elect to modify, remove, or add measures to mitigate impacts, as appropriate and feasible, as the decision-making process advances and a preferred alternative is identified (see Appendix D, *Summary of Avoidance, Minimization, and Mitigation Strategies*).

Table 7.9-1. Potential strategies for minimizing or mitigating impacts

Resource	Potential Mitigation		
Arizona Department of Transportation			
Land use	 ADOT would continue to be an active participant in a broader effort with MPOs, local jurisdictions, resource agencies, and private stakeholders to cooperatively plan development in the study area. The effort would coordinate wildlife connectivity, local land use planning, and context-sensitive design for the facility. ADOT would coordinate with the entities managing affected public land (for example, ASLD, BLM, and U.S. Bureau of Reclamation) to accommodate the proposed action. In the case of ASLD, ADOT would continue to engage with the Superstition Vistas Steering Committee or other entities involved in planning efforts for this area of State Trust land. 		
	Local agencies		
Land use	 Amending general plans as necessary, depending on individual municipality amendment requirements as stipulated by State law. A.R.S. § 9-461.06 requires each municipality to prepare a plan for addressing major amendments to its general plan. Depending on the municipal requirements, a major amendment process may be triggered by changes to the land use plan to accommodate the proposed action (or the No-Action Alternative, in the case of Pinal County). By statute, major amendments may be considered only once per calendar year. Clustering development in certain areas or allowing new development patterns to accommodate a transportation corridor through the area. Considering, on a case-by-case basis, mitigation initiated by private landowners as advocated by affected jurisdictions to improve the compatibility of land uses adjacent to the proposed action. The implementation of this strategy would be the responsibility of the affected jurisdictions and landowners and would be subject to the affected jurisdiction's land development approval process. Rezoning undeveloped land to more freeway-compatible uses. 		
	Arizona Department of Transportation		
Social conditions	 ADOT would coordinate with municipal and County partners and affected communities to address concerns regarding the internal roadway network, connectivity with the freeway, and potential grade separations at non-interchange locations to improve local and regional connectivity. ADOT would coordinate with municipal and County partners as development occurs to fully integrate the freeway into the regional transportation network. ADOT would build upon public involvement efforts undertaken for the NSCS to engage study area residents in the EIS process to help understand community access, connectivity, and circulation concerns and opportunities. 		
Economics	 Select action corridor alternatives that minimize full parcel takes. Position the freeway in the action corridor alternative in a manner that minimizes takes of taxable land. Select action corridor alternatives that minimize takes of land that is currently taxable. 		
Local agencies			
Economics	 Rezone existing undeveloped land for other taxable uses that may compensate for lost tax revenue associated with the necessary takes. 		

 Table 7.9-1. Potential strategies for minimizing or mitigating impacts

Resource	Potential Mitigation			
Arizona Department of Transportation				
Parkland and recreational facilities	 ADOT would avoid impacts on parks and recreational facilities to the extent possible. ADOT would coordinate with the local jurisdictions regarding the affected parks and/or recreational facilities to maintain access to the resources potentially affected to the extent feasible. Where access cannot be maintained or where implementation of the proposed action would require full or partial acquisition of existing parks or recreational facilities, potential mitigation measures would be developed in consultation with the local agencies. Specific mitigation measures may include minimizing the acreage of acquisition of these areas during the Tier 2 design, selecting alternatives that avoid parks and recreational facilities, strategically locating construction equipment to suitable locations within existing parks and recreational facilities, and designing landscaping to offset vegetation removal or to establish screening for noise and visual disturbances. 			
Prime and unique farmland	 ADOT would coordinate with affected property owners to maintain access to farmland to the extent feasible. Where access cannot be maintained, or where property acquisition is required, acquisition would be undertaken in accordance with the Uniform Act (49 CFR Part 24). Additional mitigation measures may be implemented following consultation with NRCS during Tier 2 analysis. 			
Air quality	 To avoid and minimize air quality impacts during construction, best management practices would be recommended, such as minimizing wind-blown dust from blasting, particularly near community areas; control and/or avoidance of blasting on days with high winds; and/or the development of a traffic control plan to minimize traffic flow interference from construction equipment movement and activities. Specific measures would be determined during Tier 2 studies. 			
Noise	 New freeway alignments constructed in otherwise quiet noise environments often result in a substantial noise increase at nearby homes (that is, 15-dBA or greater increases over existing noise levels). Under such circumstances and depending on the number of homes affected, detailed consideration of noise barriers would be warranted. Depending on the alignment selected in subsequent Tier 2 studies, expected noise impacts identified at homes may warrant noise abatement measures. 			
Visual resources	 Depress the freeway to eliminate visual intrusion in sensitive areas. Eliminate highway lighting when not required or if it causes superfluous light pollution. Minimize the height of facilities to the extent possible to reduce their visibility. Install screening walls to screen views of the freeway. Design walls to blend into the character of the community through careful selection of colors, materials, and textures. Use plants to provide screening for sensitive visual resources and viewers. Design new lighting to direct light to focus where it is needed, minimize light intruding onto adjacent properties, and reduce light pollution of the night sky. Minimize cut and fill areas by blending them with the surrounding environment. Use grading designs that create natural-looking slopes, surfaces, and transitions. Include landscape treatments that blend stormwater channels and basins into their surroundings and create new visual resources in the landscape. 			
Topography, geology, and soils	 Research should include reviewing existing data and reports, analyzing remote sensing data, conducting surface and subsurface investigations, conducting a geophysical investigation, and completing other more intensive investigative methods as appropriate when special conditions exist. Siting of critical structures or facilities—where long-term monitoring is crucial—warrants more intensive investigative methods. These more intensive methods include, but are not limited to, conducting aerial reconnaissance overflights, installing and monitoring piezometers, taking high-precision survey or geodetic measurements (including comparison surveys and a program of repeat surveys), measuring strain (displacement) at the surface and in borings as part of a long-term monitoring program, and age dating (AZGS 2011). 			

Table 7.9-1. Potential strategies for minimizing or mitigating impacts

Resource	Potential Mitigation
Biological resources	Prior to Initiation of the Tier 2 Biological Analysis ADOT would have a qualified biologist conduct surveys for acuña cactus in the study area to determine its presence or absence prior to the initiation of the Tier 2 biological analysis. ADOT would have a permitted avian biologist, approved by USFWS and AGFD, conduct protocol surveys for southwestern willow flycatchers, yellow-billed cuckoos, and Yuma Ridgway's rails in suitable habitats within the study area and 500 feet of disturbance areas to determine their presence or absence prior to initiation of the Tier 2 biological analysis. The surveys would be of adequate duration to verify potential nest sites. ADOT would coordinate with AGFD and other stakeholders to determine wildlife connectivity data needs and study design. ADOT would facilitate implementation of identified studies prior to the initiation of the Tier 2 biological analysis, given the timeline required (likely 2 to 4 years) to collect and analyze sufficient data before draft design plans begin to limit the possible mitigations. ADOT and the stakeholders would identify potential crossing structures, design features, and supporting mitigation or conservation necessary to facilitate the movement of wildlife through the roadway barrier and would incorporate the solutions into subsequent Tier 2 studies. ADOT would coordinate with AGFD and USFWS regarding wildlife connectivity would be conducted early in the Tier 2 studies. Future coordination with AGFD and USFWS regarding wildlife connectivity would be conducted early in the Tier 2 studies. Potential wildlife through the roadway barrier identified by ADOT and other stakeholders would be incorporated into the Tier 2 analysis. During the design phase, ADOT would coordinate with federal and state wildlife agencies, as required, to identify any species-specific mitigation mains selected for construction that are located within Sonoran desert tortoise habitat would Follow ADOT's existing mitigation to riting and strategies. ADOT has developed compr

Table 7.9-1. Potential strategies for minimizing or mitigating impacts

Resource	Potential Mitigation		
Hydrology, floodplains, and water resources	 Reduce the quantity of pollutants reaching the Gila and Salt Rivers, if necessary, after further investigations during Tier 2 studies. Minimize erosion from cut and fill slopes. Prevent erosion along conveyance features. Provide settling basins to reduce the potential impact of contaminants. Obtain an AZPDES Construction General Permit. In compliance with the Construction General Permit, develop a Stormwater Pollution Prevention Plan that includes best management practices for erosion and sediment control. Obtain CWA Section 401 certification by ADEQ. Coordinate with governmental agencies, including flood control districts, and the community regarding the design of drainage features. Relocate irrigation district canals as necessary to allow conveyance of irrigation water from one side of the freeway to the other. Obtain CWA Section 402 permit authorization. Comply with State of Arizona Surface Water Quality Standard Rules (18 Arizona Administrative Code 11). Coordinate with municipal separate storm sewer system agencies. Improve surface water quality when the freeway would be open to operation by properly maintaining retention, detention, and stormwater runoff facilities, if necessary, after further investigations during Tier 2 studies. Design bridges to cross floodplains so that their support piers and abutments do not contribute to a rise in floodwater elevation by more than 1 foot. Minimize floodplain impacts by implementing transverse crossings of the floodplains and avoiding longitudinal encroachments. Conduct comprehensive analyses of hydrology, hydraulics, sediment transport, and erosion to minimize the impacts of encroachment. Provide the Pinal County Floodplain Manager with an opportunity to review and comment on the design plans. Base design criteria for on- and off-site drainage on current ADOT guidance. Complete comprehensive hydro		
Waters of the United States	 If a Section 404 permit is required: minimize impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts rectify impacts by repairing, rehabilitating, or restoring the affected environment reduce impacts over time by preservation and maintenance operations during the life of the action compensate for impacts by replacing, enhancing, or providing substitute resources or environments The general and special conditions of any Section 404 permit would be followed during construction 		
Cultural resources	 ADOT will develop a programmatic agreement, pursuant to Section 106 of the NHPA, to define procedures for continuing to consider effects on historic properties during the proposed phased planning and construction of Tier 2 projects Potential mitigation measures could include—but are not limited to—archaeological testing and data recovery, flagging of sites for avoidance, monitoring of sites during construction, a Historic American Buildings Survey, or a Historic American Engineering Record. These types of mitigation would be guided by plans that are required by the agreement document and consulted on through the Section 106 process. 		

Table 7.9-1. Potential strategies for minimizing or mitigating impacts

Resource	Potential Mitigation
Hazardous materials	 No activity would occur in an area that potentially has lead-based substances until a Lead-Based Paint Removal and Abatement Plan is approved and implemented. The engineer, in association with the contractor, would complete the National Emission Standards for Hazardous Air Pollutants documentation and submit it to the ADOT Environmental Planning hazardous materials coordinator for review 5 working days prior to it being submitted to the regulatory agency or agencies. No activity would occur in an area that potentially has asbestos until an Asbestos Removal and Disposal Plan is approved by the ADOT Environmental Planning hazardous materials coordinator. Staging for construction activities near wells or dry wells would be located in areas where accidental releases of potential contaminants would be minimized and any accompanying threat to groundwater resources minimized. In cooperation with the contractor, ADOT's Construction District would develop and coordinate emergency response plans with local fire authorities, local hospitals, and certified emergency responders for hazardous materials releases or chemical spills. Asbestos- and lead-paint-containing materials identified in structures to be demolished would be properly removed and disposed of prior to demolition. Existing aboveground storage tanks or underground storage tanks would be removed or relocated. The contractor would develop an on-site health and safety plan for construction activities. A hazardous waste management plan would be prepared for handling hazardous materials during construction. If suspected hazardous materials are encountered during construction, work would cease at that location and the engineer would be notified. The engineer would contact the ADOT Environmental Planning hazardous materials.
Energy	No mitigation is proposed for energy use associated with the proposed action.
Environmental justice	 specifying commitments in terms of time frame or performance standards so that expectations are clear providing ongoing commitment and monitoring reports to minority and low-income populations conducting additional outreach to minority and low-income populations assigning a dedicated point-of-contact to be available for EJ-related concerns and issues during the Tier 2 process including monitoring requirements, and sharing the results, to alleviate concerns providing appropriate compensation through replacement or substitute resources rectifying an impact through repair, rehabilitation, or restoration
Section 4(f) resources	 During Tier 2 studies, ADOT would coordinate with owners with jurisdiction over the Section 4(f) properties to identify further avoidance or minimization measures to reduce impacts on affected parks and recreational facilities and historic properties. ADOT would coordinate with local agencies on planned park and recreational resources and the potential for joint development. Where access cannot be maintained or where implementation of the proposed action would require full or partial acquisition of existing parks or recreational facilities, potential mitigation measures would be developed in consultation with the local agencies. Specific mitigation measures may include minimizing the acreage of acquisition of these areas during the design phase, selecting alternatives that avoid parks and recreational facilities, strategically locating construction equipment to suitable locations within existing parks and recreational facilities, and designing landscaping.
Section 6(f) resources	 During Tier 2 design and NEPA analysis, ADOT would examine ways to avoid or minimize impacts on Section 6(f) properties. Potential strategies ADOT could consider include, but are not limited to, defining alignments that do not use park properties and incorporating refinement details—such as using retaining walls to minimize the proposed freeway's footprint. ADOT would continue coordinating with the agencies having jurisdiction over the potentially affected properties. If land from one or more properties cannot be avoided, Section 6(f) requires replacement of park land that is converted to a transportation use. The land must be equal to or greater in value than the affected land in terms of its ability to serve as park land. To achieve this requirement, if park land cannot be avoided, ADOT would assist in identifying replacement land.

Table 7.9-1. Potential strategies for minimizing or mitigating impacts

Resource	Potential Mitigation
Indirect and cumulative impacts	 ADOT would collaborate with local jurisdictions, resource agencies, and private stakeholders to participate in discussions regarding development in the North-South Corridor. These efforts would coordinate local land use planning, local and regional connectivity, and context-sensitive design, while preserving and enhancing wildlife habitat and connectivity. Specific mitigation measures, to the extent required, would be identified as part of Tier 2 studies when more details of the freeway design and operation are known and project-specific indirect and cumulative impacts are identified. All mitigation strategies to address direct impacts on resources in the study area would also mitigate cumulative impacts.

Notes: ADEQ = Arizona Department of Environmental Quality, ADOT = Arizona Department of Transportation, AGFD = Arizona Game and Fish Department, A.R.S. = Arizona Revised Statutes, ASLD = Arizona State Land Department, AZGS = Arizona Geological Society, AZPDES = Arizona Pollutant Discharge Elimination System, BLM = Bureau of Land Management, CFR = Code of Federal Regulations, CWA = Clean Water Act, dBA = A-weighted decibel, EIS = environmental impact statement, EJ = environmental justice, MPO = metropolitan planning organization, NEPA = National Environmental Policy Act, NHPA = National Historic Preservation Act, NRCS = Natural Resources Conservation Service, NSCS = North-South Corridor Study, ROW = right-of-way, USFWS = U.S. Fish and Wildlife Service

Short-term impacts associated with construction would affect a number of resources. Potential impacts and potential mitigation are outlined in Table 7.9-2.

Table 7.9-2. Short-term construction impacts, by resource

Resource	Impacts	Potential mitigation
Social conditions	 Detours, lane closures, and the movement of construction-related vehicles would temporarily affect access to residential areas and businesses. Construction-related activities have the potential to affect access to community facilities and services, and the delivery of emergency services. Construction of the proposed action would generate employment opportunities throughout the construction period. 	 ADOT's traffic control management procedures would be implemented to avoid, minimize, or mitigate potentially adverse construction-related access impacts on affected neighborhoods, businesses, and community facilities and services. Construction action and traffic control plans would identify temporary transportation impacts and the locations of potential temporary detours. The plans would help ensure that local access to homes and businesses, and access for emergency services providers, is maintained. Plans would specify time frames for temporary detours and identify the process for notifying affected parties of the construction period and changes in access. ADOT would work with local contractors to employ workers who reside in Pinal County and/or across the larger region.
Parkland and recreational facilities	 Construction impacts on parks or recreational facilities would occur if resources are located near or in the construction area. Temporary impacts might include increased dust from ground disturbance, noise from construction equipment, views of construction activities, access restrictions, and the presence of construction staging areas. 	To minimize potential construction-related impacts, mitigation measures may include strategically locating construction equipment to suitable locations near existing parkland and recreational facilities and establishing screening for noise disturbances.

Table 7.9-2. Short-term construction impacts, by resource

Resource	Impacts	Potential mitigation
Traffic and transportation	 Construction activities would temporarily affect vehicular movements, on-street parking, and access to adjacent properties along existing streets. The number of lanes along existing arterial streets adjacent to construction activities may be reduced periodically during construction, and detours may be necessary at some locations. The movement of construction vehicles would create temporary traffic impacts in areas close to the construction zone, the extent of which would depend on which alternative is selected as the preferred alternative, and on the amount of new development at the time of construction. In addition, the magnitude of these impacts would depend on the location of sources of fill material and of disposition sites for surplus material, land uses adjacent to the Corridor and along haul routes, duration of hauling operations, staging locations, and construction phasing. 	 Traffic would be managed by detailed traffic control plans and by procedures and guidelines specified in Part VI of FHWA's Manual on Uniform Traffic Control Devices (FHWA 2009) and by the Arizona Supplement to Part VI of the Manual on Uniform Traffic Control Devices (ADOT 2012b). In planning traffic control measures, the contractor would coordinate with potentially affected public services. Access would be maintained during construction, and construction activities that may substantially disrupt traffic would not occur during peak travel times. ADOT would coordinate with local jurisdictions regarding traffic control and construction activities during special events. Requirements for using construction notices and bulletins would be identified. The effectiveness of traffic control measures would be monitored during construction and necessary adjustments would be made. To identify acceptable routes and times of operation for hauling operations, ADOT would prepare an agreement with local agencies regarding hauling of construction materials on public streets.
Air quality	Air quality impacts associated with construction would be limited to short-term increased fugitive dust and mobile source emissions. Fugitive dust would be generated by haul trucks, concrete trucks, delivery trucks, and other earthmoving vehicles. Increased dust levels would be attributable primarily to particulate matter re-suspended by vehicle movement over paved and unpaved roads and other surfaces, dirt tracked onto paved surfaces from unpaved areas at access points, and material blown from uncovered haul trucks. Most fugitive dust is made up of relatively large particles (that is, greater than 100 microns in diameter) that are responsible for the reduced visibility often associated with this type of construction. Given their relatively large size, these particles tend to settle within 20 to 30 feet of their source.	To reduce the amount of construction dust generated, particulate control measures related to construction activities would be followed. Measures to avoid, minimize, or mitigate adverse effects would be implemented in accordance with the most recent version of ADOT's Standard Specifications for Road and Bridge Construction (ADOT 2008b). The measures would address three phases of construction: site preparation, construction, and post-construction.
Noise	 Roadway construction generates a substantial amount of temporary noise in localized areas. As a result, noise generated by construction activities has the potential to be a nuisance to nearby residents and businesses. The most common noise source in construction areas would be from engine-powered machinery such as earth-moving equipment (bulldozers), material-handling equipment (cranes), and stationary equipment (generators). Mobile equipment (such as trucks and excavators) operates in a sporadic manner while stationary equipment (generators and compressors) generates noise at fairly constant levels. Typical noise levels from construction equipment range from 69 to 106 dBA at 50 feet from the source; however, most typical construction activities fall within the 75 to 85 dBA range at 50 feet. 	 ADOT's Standard Specifications for Highway and Bridge Construction (2008b) stipulate that all exhaust systems on equipment should be in good working order, and properly designed engine enclosures and intake silencers should be used where appropriate. Stationary equipment would be located as far from sensitive receptors as possible. On-site generators would be shielded from sensitive noise receptors by using temporary noise enclosures. Construction alerts would be distributed to inform the public of ongoing construction activities near noise-sensitive locations.

Table 7.9-2. Short-term construction impacts, by resource

Resource	Impacts	Potential mitigation
Visual resources	Temporary visual impacts would result from construction activities, such as temporary vegetation removal, disturbed soil, construction equipment, and construction equipment operation. Such impacts would occur where the proposed freeway is adjacent to existing homes and where the proposed traffic interchanges would be built. These temporary disruptions and activities would be typical of any major roadway project and are not considered adverse.	No mitigation would be needed for temporary construction impacts on visual resources.
Biological resources	 Temporary construction impacts would occur during and for a period after construction because of reduced habitat quantity and quality in disturbed areas. During construction, artificial lighting and noise and dust in the air generated by equipment and human activity could temporarily displace birds from foraging, resting, and nesting habitat. Disturbance-related displacement from favored breeding habitats could result in birds competing with other birds for suitable replacement habitats. This could result in nesting in less-favored areas where nests may be damaged or accessed more easily by predators, which could limit survival of offspring or adults. 	 Once construction activities are complete, disturbed native desertscrub habitats adjacent to the new roadway embankment would be addressed according to a revegetation plan. Measures to avoid, minimize, and mitigate impacts on protected species, comply with state and federal regulations, and reduce habitat fragmentation, wildlife displacement, impediments to movements, collisions, and spread of invasive species would be developed for a preferred alternative during the Tier 2 study.
Waters of the United States	Temporary construction zones may result in additional impacts on waters of the United States beyond the permanent impacts associated with road and bridge crossings for the proposed action.	During the Tier 2 study, the preferred alternative would be evaluated for specific impacts on waters of the United States, the appropriate level of Section 404 permitting would be identified, and mitigation measures would be developed.
Hydrology, floodplains, and water resources	 Construction activities such as clearing, grading, trenching, and excavating would disturb soils and sediment. If not managed properly, disturbed soils and sediment could be washed into nearby water bodies during storms, thereby reducing water quality. Potential areas of shallow groundwater were identified in the study area. If groundwater is determined to be shallow at locations near the proposed action, it may affect the facility's foundation and subgrade design, and could require dewatering during construction activities. 	 Measures to avoid, minimize, or mitigate impacts on hydrology, floodplains, and other water resources would be implemented to address temporary construction impacts. Ground-disturbing activities exceeding 1 acre would require an AZPDES permit from the Arizona Department of Environmental Quality. The permit must be consistent with discharge limitations and water quality standards established for the receiving water. Construction-related activities regulated under the AZPDES permit are required to have a Stormwater Pollution Prevention Plan, which would be prepared by the contractor. Implementing best management practices would reduce water quality impacts on the receiving waters of the Gila River and its tributaries. Both construction and operational impacts may be mitigated by using best management practices. During design, the depth to groundwater in areas with potentially shallow groundwater would be field-verified.
Minority and low-income populations	Construction-related impacts may disproportionately affect minority and low-income populations in the study area. These construction-related impacts include adverse effects on social conditions, parkland and recreational facilities, traffic and transportation, air quality, noise, visual resources, and utility service. These construction-related impacts would be short-term and temporary because they would occur during construction or until ground-disturbing activities are completed.	Mitigation measures presented in this table would address construction-related impacts for both minority and low-income populations and the general population.

Table 7.9-2. Short-term construction impacts, by resource

Resource	Impacts	Potential mitigation
Utilities	 Construction may temporarily disrupt the delivery of utility services to customers near the proposed action. Table 3.18-2 identifies the number the existing public utilities that may be in conflict with the proposed action. Potential permanent impacts, such as required utility relocations resulting from conflicts with the proposed action, may also result and would be evaluated during the Tier 2 study once a preferred alternative is selected and the specific conflicts are identified. 	 Disruptions to utility services would be restricted to being short-term and localized. Advanced planning would be accomplished during the design phase so that interruption of the delivery of utility services would not occur or would be minimized. ADOT and its contractors would coordinate with utility service providers during the design phase and throughout construction to identify potential problems and/or conflicts and to provide opportunities for their resolution before construction begins. Utility interruptions would be scheduled and prior notification would be provided to affected parties. Emergency response procedures would be outlined by ADOT in consultation with utility providers to ensure quick and effective repair of any inadvertent or accidental disruptions in service.

Notes: ADOT = Arizona Department of Transportation, AZPDES = Arizona Pollutant Discharge Elimination System, Corridor = North-South Corridor, dBA = A-weighted decibel, FHWA = Federal Highway Administration

7.10 Public Outreach and Comments on the Final Environmental Impact Statement and Record of Decision

ADOT will release the Tier 1 FEIS and ROD to allow members of the public; stakeholders; Native American tribes; and local, state, and federal agencies an opportunity to review and provide input on the Selected Alternative and the contents of the Tier 1 FEIS and ROD. This is not a formal review and comment period, and ADOT will not respond to comments—as was a NEPA requirement for the Tier 1 DEIS. Instead, ADOT will consider the input received for subsequent Tier 2 NEPA processes when potential freeway alignments would be identified and more detailed environmental analyses would be conducted. At that time, applicable permits and location-specific mitigation measures would be identified.

7.10.1 Tier 1 Final Environmental Impact Statement and Record of Decision

The Tier 1 FEIS and ROD were made available to the public on August 20, 2021. Public notification of availability of the Tier 1 FEIS and ROD included the following:

- publication in the Federal Register
- email notice to cooperating and participating agencies, stakeholders, and those on the study distribution list
- Native American tribe and jurisdictional briefings about the Tier 1 FEIS and ROD
- study website announcement
- notification posters distributed throughout the study area
- advertisement of Tier 1 FEIS and ROD availability in local newspapers of wide distribution, including:
 - The Arizona Republic: August 20, 2021
 - Gila River Indian News: August 20, 2021
 - o Prensa Arizona (Spanish-language newspaper): August 26, 2021
 - o Tri-Valley Dispatch: August 24, 2021

Next Steps/Implementation

Tier 2 studies and NEPA documentation would need to occur prior to construction of a federally funded North-South Freeway. Tier 2 studies would identify selected alternative alignments and provide sufficient design and construction information such that the environmental impacts of the project or projects could be evaluated (including the No-Action Alternative).

7.10.2 Phased Implementation

ADOT anticipates that the North-South Freeway would be incrementally funded and thus construction and operation would be phased. Appendix P, *Implementation Plan*, identifies proposed segments and phasing for continued development of the North-South Freeway. Each of the proposed segments of the NSCS have independent utility and logical termini and thus could go through Tier 2 studies independently.

7.11 Statute of Limitation

To facilitate certainty and predictability in the transportation decision-making process and in transportation program implementation, SAFETEA-LU established a restriction on the statute of limitations regarding claims with respect to FHWA actions—or, in the case of the NSCS, ADOT, under 23 USC § 327 (NEPA Assignment). This restriction was modified by Moving Ahead for Progress in the 21st Century by shortening the period during which such claims must be filed, from 180 to 150 days. Part A of Section 6002 of SAFETEA-LU makes clear that FHWA may publish a notice in the *Federal Register*, pursuant to 23 USC § 139(I), indicating that it (ADOT) and the cooperating federal agencies have taken a final action regarding the decision-making process for a proposed action. This final action (this ROD, for the NSCS) pertains to all issues that have been addressed under the NEPA process, such as project alternatives, potential environmental effects of the proposed action, and the avoidance and minimization of impacts, as appropriate for a Tier 1 EIS. Claims seeking judicial review of the FHWA (ADOT) action will be barred unless such claims are filed within 150 days after the date of publication of the notice regarding the statute of limitations for the proposed action. If no notice is published, then the period that would otherwise be provided by the federal laws governing such claims applies (typically 6 years).

7.12 Conclusion

Based on the evaluation of information presented above and in the Tier 1 FEIS and ROD, the proposed action's purpose and need, input from the public on the Tier 1 DEIS, and interagency and tribal coordination, ADOT has decided to identify the Eastern Alternative (Alternative 7 [with the E1b, E2a, E3b, and E4 options]) as the Selected Alternative. The Selected Alternative will best meet the proposed action's purpose and need and, relative to other alternatives considered, would generally be consistent with land use plans and pose the lowest risk to the human, built, and natural environments.