



1 4 DRAFT PRELIMINARY SECTION 4(F) EVALUATION

2 4.1 Introduction

3 This chapter presents a revised Draft Preliminary Section 4(f) Evaluation of the I-11 Corridor
4 Project. The revised Draft Preliminary Section 4(f) Evaluation was prepared to comply with
5 Section 4(f) of the US Department of Transportation Act of 1966 (49 U.S.C. 303), hereinafter
6 referred to as “Section 4(f),” and its implementing regulations codified at 23 CFR Part 774.
7 Additional guidance was obtained from the revised FHWA *Section 4(f) Policy Paper* (FHWA
8 2012b). As allowed by 23 CFR 774.7(e)(1), a revised Draft Preliminary Section 4(f) Evaluation
9 was determined to be the appropriate level of evaluation in light of the tiered EIS approach.

10 The revised Draft Preliminary Section 4(f) Evaluation identifies properties that are afforded
11 protection by Section 4(f) (**Section 4.5**) and evaluates the potential use of these properties by
12 the Build Corridor Alternatives (**Section 4.6**).

13 4.2 Refinements Since Draft Tier 1 EIS

14 In response to publication of the Draft Tier 1 EIS and Draft Preliminary Section 4(f) Evaluation in
15 March 2019, FHWA and ADOT received comments on the document from agencies and the
16 public. FHWA and ADOT considered the findings of the Draft Tier 1 EIS as well as the public
17 and agency comments in preparation of the Final Tier 1 EIS and revised Draft Preliminary
18 Section 4(f) Evaluation, including the creation of a Preferred Alternative in this Final Tier 1 EIS
19 that is different from the Recommended Alternative in the Draft Tier 1 EIS. The Preferred
20 Alternative balances transportation needs with impacts to the natural and human environment
21 and stakeholder input. Refer to **Chapter 6** (Preferred Alternative) for details on the Preferred
22 Alternative.

23 4.3 Alternatives Evaluated

24 This revised Draft Preliminary Section 4(f) Evaluation assesses the Preferred Alternative
25 identified in this Final Tier 1 EIS. The Preferred Alternative has two corridor options in Pima
26 County: a west option on new alignment to the west of the City of Tucson (west option), and an
27 east option on existing highway corridors through the City of Tucson (east option). FHWA and
28 ADOT identified these alternatives for further study after considering the findings of the Draft
29 Preliminary Section 4(f) Evaluation, the findings of the Draft Tier 1 EIS, and public and agency
30 comments on the Draft Tier 1 EIS and Draft Preliminary Section 4(f) Evaluation.

31 For comparison purposes and to support the analyses in this revised Draft Preliminary Section
32 4(f) Evaluation, the Purple, Green, and Orange Build Corridor Alternatives, as well as the
33 Recommended Alternative identified in the Draft Tier 1 EIS, are also evaluated. **Figure 4-1**,
34 **Figure 4-2**, **Figure 4-3**, **Figure 4-4**, and **Figure 4-5** show the Build Corridor Alternatives.

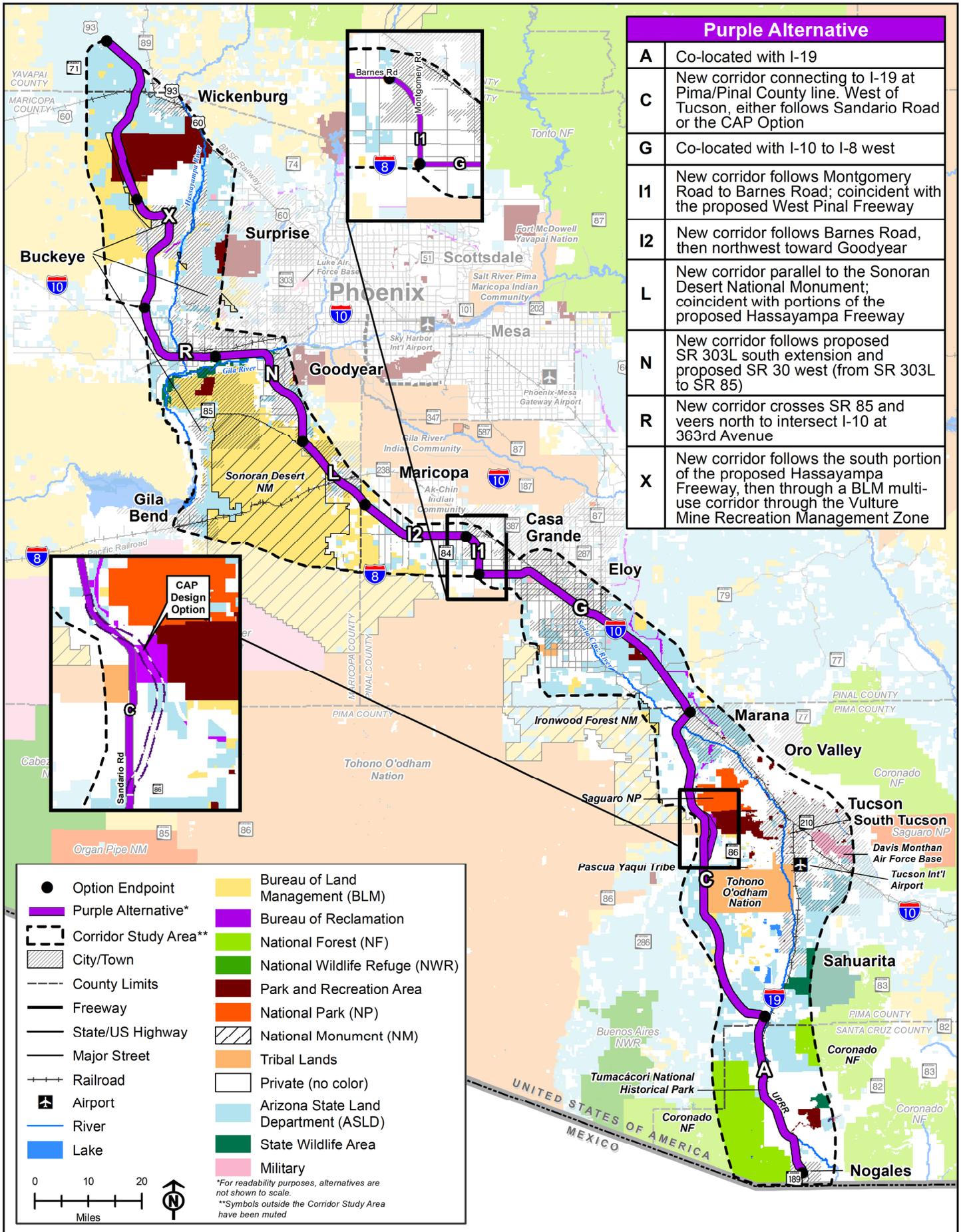


Figure 4-1. Purple Alternative

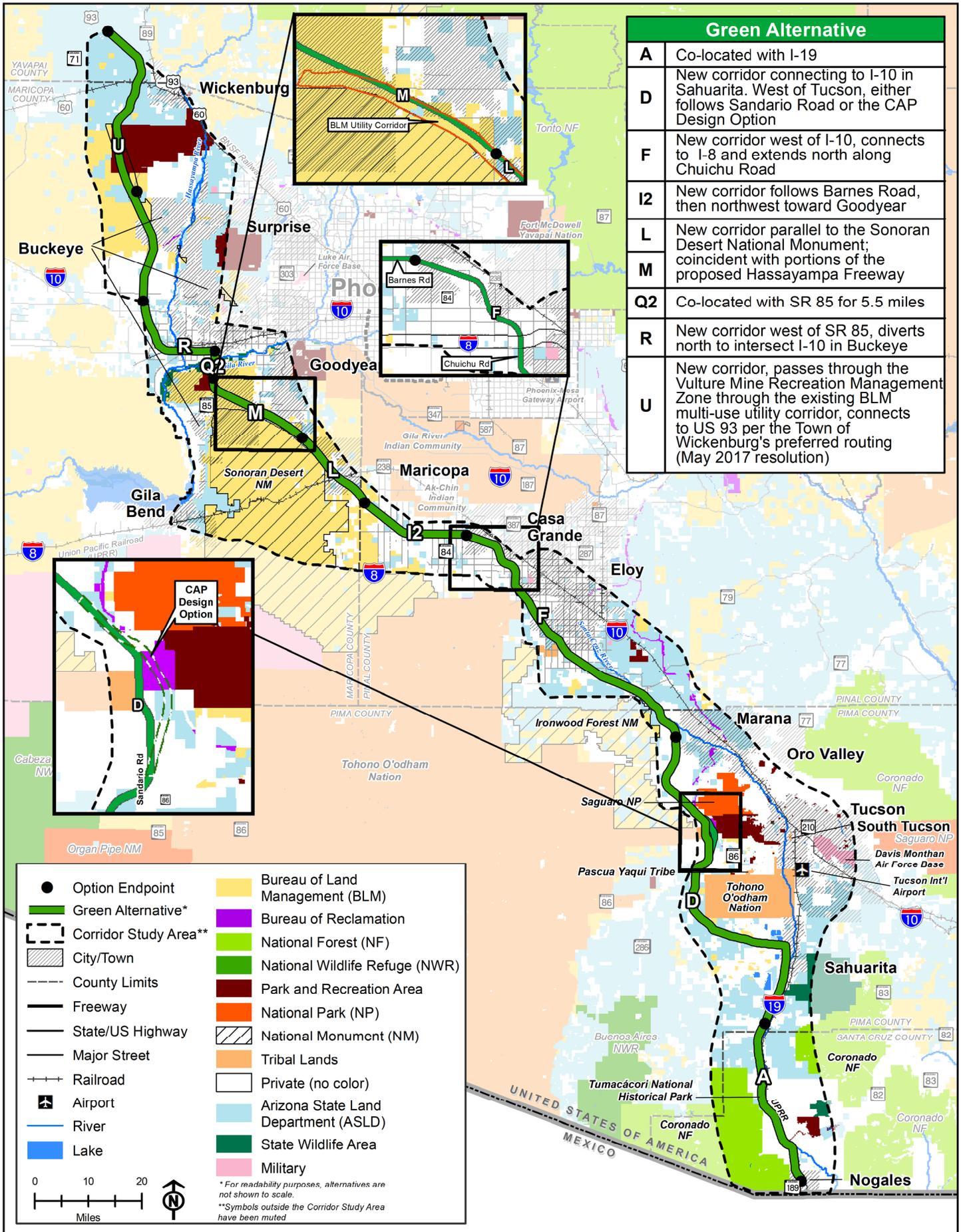


Figure 4-2. Green Alternative

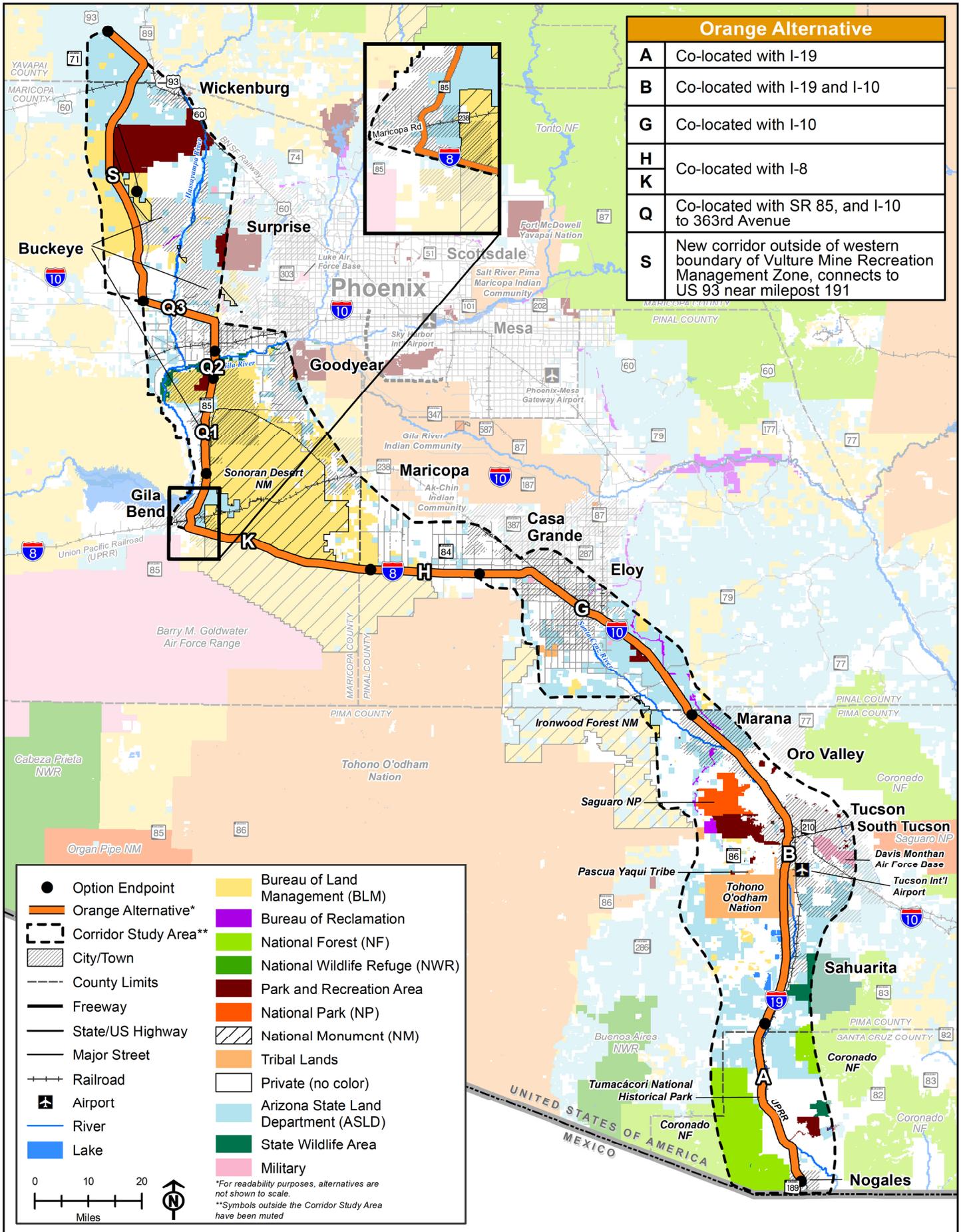


Figure 4-3. Orange Alternative

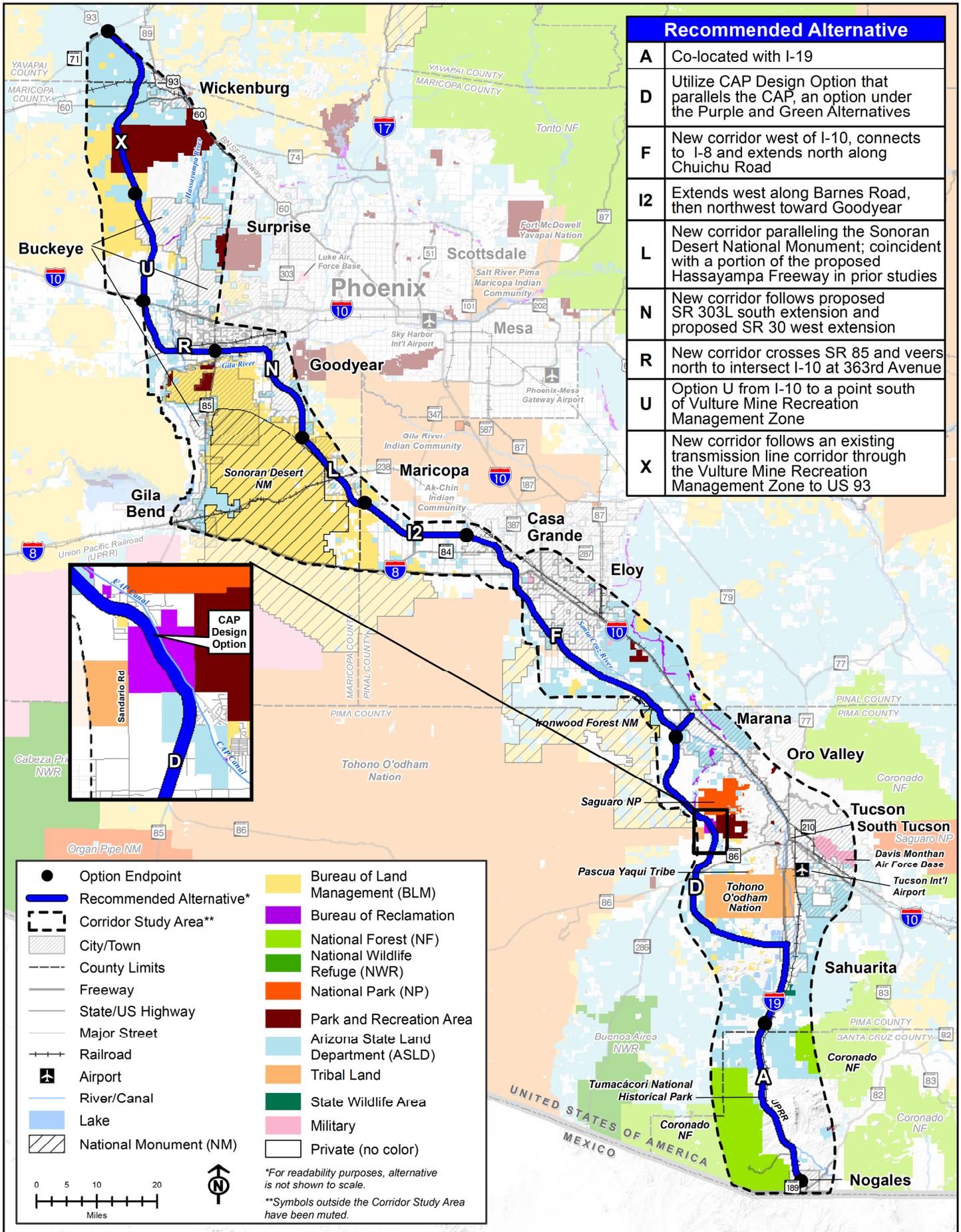


Figure 4-4. Recommended Alternative

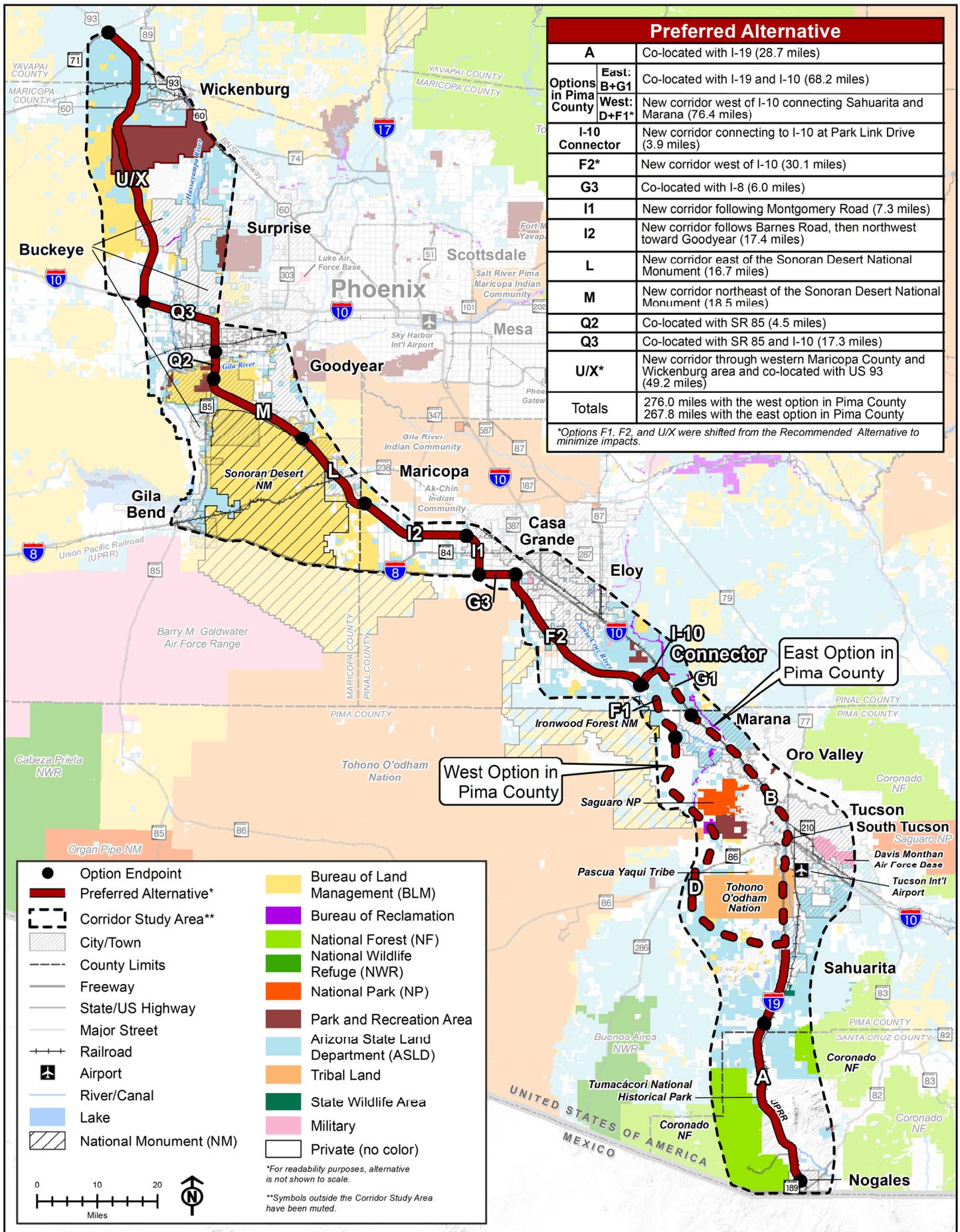


Figure 4-5. Preferred Alternative



1 FHWA will make its Final Preliminary Section 4(f) determination as part of the Record of
2 Decision for the Tier 1 process. The public comment period for the Final Preliminary Section 4(f)
3 Evaluation is equal in duration to and concurrent with the comment period for the Final Tier 1
4 EIS.

5 **4.4 Regulatory Context and Methodology**

6 The law on lands, wildlife and waterfowl refuges, and historic sites that is codified in Title 49 of
7 the U.S.C. 303 states, “The Secretary of Transportation may approve a transportation program
8 or project (other than any project for a park road or parkway under section 204 [1] of title 23)
9 requiring the use of publicly owned land of a public park, recreation area, or wildlife and
10 waterfowl refuge of national, State, or local significance, or land of an historic site of national,
11 State, or local significance (as determined by the federal, state, or local officials having
12 jurisdiction over the park, area, refuge, or site) only if:

- 13 • There is no prudent and feasible alternative to using that land; and
- 14 • The program or project includes all possible planning to minimize harm to the park,
15 recreation area, wildlife and waterfowl refuge, or historic site resulting from the use; or
- 16 • The Administration determines that the use of the property, including any measure(s) to
17 minimize harm (such as any avoidance, minimization, mitigation, or enhancement
18 measures) committed to by the applicant, will have a *de minimis* use, as defined in Sec.
19 774.17, on the property.”

20 **Section 4.4.5** defines the officials with jurisdiction in a Section 4(f) evaluation.

21 **4.4.1 Applicability**

22 Section 4(f) applies to the use of significant public parks, recreation areas, wildlife and waterfowl
23 refuges, and historic sites. Public parks, recreation areas, and wildlife and waterfowl refuges are
24 properties that have been officially designated by a federal, state, or local agency, and the
25 official with jurisdiction over each property determines that its primary purpose (primary function)
26 is as a public park, recreation area, or wildlife and waterfowl refuge. In addition, the property
27 must be a significant public park, recreation area, or wildlife and waterfowl refuge. Significance
28 means that in comparing the availability and function of the property with the objectives of the
29 officials with jurisdiction over the property, the property plays an important role in meeting those
30 objectives. Significance is determined in consultation with officials having jurisdiction over those
31 properties (refer to 23 CFR 774.11, Applicability).

32 **4.4.2 Definitions of Use**

33 Pursuant to 23 CFR 774.17 and “except as set forth in Section 774.11 and 774.13, a ‘use’ of
34 Section 4(f) property occurs: (1) when land is permanently incorporated into a transportation
35 facility; (2) when there is a temporary occupancy of land that is adverse in terms of the statute’s
36 preservation purpose as determined by the criteria in Section 774.13(d); or (3) when there is a
37 constructive use of a Section 4(f) property as determined by the criteria in Section 774.15.”

1 **Permanent Use.** As outlined in Section 3.3.3 of FHWA’s *Section 4(f) Policy Paper* (FHWA
2 2012b), an individual Section 4(f) evaluation must be completed when approving a project that
3 requires the use of Section 4(f) property if the use, as described in Sections 3.1 and 3.2 (of the
4 policy paper: Identification of Section 4(f) Properties and Assessing the Use of Section 4(f)
5 Properties), results in a greater than *de minimis* use and a programmatic Section 4(f) evaluation
6 cannot be applied to the situation (23 CFR 774.3).

7 **Constructive Use.** As defined in 23 CFR 774.15(a), “a constructive use occurs when a
8 transportation project does not incorporate land from a Section 4(f) property, but the project’s
9 proximity impacts are so severe that the protected activities, features, or attributes that qualify a
10 property for protection under Section 4(f) are substantially impaired. Substantial impairment
11 occurs only when the protected activities, features, or attributes of the property are substantially
12 diminished.” A project’s proximity to a Section 4(f) property is not in itself an impact that results
13 in constructive use. Due to the subjective nature of proximity impacts, a determination of
14 constructive use is rare.

15 **Temporary Occupancy.** 23 CFR 774.13(d) defines temporary occupancies of land from a
16 Section 4(f) property as being “so minimal as to not constitute a use within the meaning of
17 Section 4(f). The following conditions must be satisfied: (1) Duration must be temporary, i.e.,
18 less than the time needed for construction of the project, and there should be no change in
19 ownership of the land; (2) Scope of the work must be minor, i.e., both the nature and the
20 magnitude of the changes to the Section 4(f) property are minimal; (3) There are no anticipated
21 permanent adverse physical impacts, nor will there be interference with the protected activities,
22 features, or attributes of the property, on either a temporary or permanent basis; (4) The land
23 being used must be fully restored, i.e., the property must be returned to a condition which is at
24 least as good as that which existed prior to the project; and (5) There must be documented
25 agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above
26 conditions.”

27 **4.4.3 Types of Section 4(f) Approvals**

28 FHWA may not approve the use, as defined in Section 774.17, of a Section 4(f) property unless
29 a determination is made under paragraph (a) or (b) of 23 CFR 774.3: “(1) There is no feasible
30 and prudent avoidance alternative, as defined in Sec. 774.17, to the use of land from the
31 property; and (2) The action includes all possible planning, as defined in Sec. 774.17, to
32 minimize harm to the property resulting from such use; or (b) The Administration determines
33 that the use of the property, including any measure(s) to minimize harm (such as any
34 avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant,
35 will have a *de minimis* use, as defined in Section 774.17, on the property.”

36 As stated in 23 CFR 774.17, “(1) For historic sites, *de minimis* use means that the
37 Administration has determined, in accordance with 36 CFR part 800 that no historic property is
38 affected by the project or that the project will have ‘no adverse effect’ on the historic property in
39 question. (2) For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* use is
40 one that will not adversely affect the features, attributes, or activities qualifying the property for
41 protection under Section 4(f).” When a Tier 1 EIS is prepared, the regulations of Section 4(f)
42 allow for a preliminary Section 4(f) approval of a *de minimis* use or a not *de minimis* use,
43 provided that opportunities to minimize harm at subsequent stages in the project development
44 process are not precluded by the Tier 1 decisions (23 CFR 774.7(e)(1)).

1 The type of approval being sought in the Section 4(f) evaluation for the I-11 Corridor is a
 2 preliminary Section 4(f) approval, which applies when a first-tier, broad-scale EIS is prepared.
 3 “When the first-tier, broad-scale EIS is prepared, the detailed information necessary to complete
 4 the Section 4(f) approval may not be available at that stage in the development of the action. In
 5 such cases, the documentation should address the potential impacts that a proposed action will
 6 have on Section 4(f) properties and whether those impacts could have a bearing on the decision
 7 to be made. A preliminary Section 4(f) approval may be made at this time as to whether the
 8 impacts resulting from the use of a Section 4(f) property are a *de minimis* use or whether there
 9 are feasible and prudent avoidance alternatives. This preliminary approval will include all
 10 possible planning to minimize harm to the extent that the level of detail available at the first-tier
 11 EIS stage allows. It is recognized that such planning at this stage may be limited to ensuring
 12 that opportunities to minimize harm at subsequent stages in the development process have not
 13 been precluded by decisions made at the first-tier stage. This preliminary Section 4(f) approval
 14 is then incorporated into the first-tier EIS. The Section 4(f) approval will be finalized in the
 15 second-tier Study (23 CFR 774.7(e)).”

16 4.4.4 Section 4(f) Evaluation Process

17 4.4.4.1 Individual Section 4(f) Evaluations

18 Individual Section 4(f) evaluations involve the following steps:

- 19 1. **Determine Applicability.** In this step, FHWA identifies parks, recreational areas, wildlife
 20 and waterfowl refuges, and historic sites that are protected by Section 4(f) using the
 21 definitions of primary purpose and significance described in **Section 4.4.1**.
- 22 2. **Assess Impact and Determine Use.** FHWA determines what impact a project would have
 23 on each protected property and what type of use that impact would be, using the definitions
 24 in 23 CFR 774 and described in **Section 4.4.2**.
- 25 3. **Analyze Avoidance Alternatives.** In this step, FHWA and ADOT consider alternatives that
 26 completely avoid the potential use of a Section 4(f) property. The avoidance analysis applies
 27 the Section 4(f) feasible and prudent criteria (23 CFR 774.17(2) and (3)). “An alternative is
 28 not feasible if it cannot be built as a matter of sound engineering judgment. An alternative is
 29 not prudent if:
 - 30 ○ **Factor 1.** It compromises the project to a degree that it is unreasonable to proceed with
 31 the project in light of its stated purpose and need;
 - 32 ○ **Factor 2.** It results in unacceptable safety or operational problems;
 - 33 ○ **Factor 3.** After reasonable mitigation, it still causes:
 - 34 ▪ Severe social, economic, or environmental impacts;
 - 35 ▪ Severe disruption to established communities;
 - 36 ▪ Severe, disproportionate impacts on low-income or minority populations; or



- 1 ▪ Severe impacts on environmental resources protected under other Federal statutes;
- 2 ○ **Factor 4.** It results in additional construction, maintenance, or operational costs of an
3 extraordinary magnitude;
- 4 ○ **Factor 5.** It causes other unique problems or unusual factors; or
- 5 ○ **Factor 6.** It involves multiple factors in (Factors 1 through 5) of this definition, that while
6 individually minor, cumulatively cause unique problems or impacts of extraordinary
7 magnitude.”
- 8 4. **Determine Alternative with Least Overall Harm.** If the avoidance analysis concludes there
9 is no feasible and prudent avoidance alternative, then in accordance with 23 CFR 774.3(c)1
10 FHWA “may approve only the alternative that: Causes the least overall harm in light of the
11 statue’s preservation purpose. The least overall harm is determined by balancing the
12 following factors: (1) the ability to mitigate adverse impacts to each Section 4(f) property
13 (including any measures that result in benefits to the property); (2) the relative severity of the
14 remaining harm, after mitigation, to the protected activities, attributes, or features that qualify
15 each Section 4(f) property for protection; (3) the relative significance of each Section 4(f)
16 property; (4) the views of the official(s) with jurisdiction over each Section 4(f) property;
17 (5) the degree to which each alternative meets the purpose and need for the project;
18 (6) after reasonable mitigation, the magnitude of any adverse effects to resources not
19 protected by Section 4(f); and (7) substantial differences in costs among the alternatives.”
- 20 5. **Consider All Planning to Minimize Harm.** After the determination that there are no
21 feasible and prudent alternatives to avoid a Section 4(f) property, FHWA and ADOT
22 consider and incorporate all possible planning to minimize the impacts of the project. All
23 possible planning, as defined in 23 CFR 774.17, means “all reasonable measures identified
24 in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects
25 must be included in the project.”
- 26 6. **Coordination and Public Involvement.** The Section 4(f) regulations require FHWA to
27 coordinate with the officials with jurisdiction over each of the Section 4(f) properties for which
28 a determination is made in this Draft Preliminary Section 4(f) Evaluation. In compliance with
29 the requirements of Section 4(f) (23 CFR 774.5), the steps in coordination include:
- 30 ○ “For historic properties:
- 31 ▪ (i) The consulting parties identified in accordance with 36 CFR part 800 must be
32 consulted; and
- 33 ▪ (ii) The Administration must receive written concurrence from the pertinent State
34 Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO),
35 and from the Advisory Council on Historic Preservation (ACHP) if participating in the
36 consultation process, in a finding of ‘no adverse effect’ or ‘no historic properties
37 affected’ in accordance with 36 CFR part 800. The Administration shall inform these
38 officials of its intent to make a *de minimis* use determination based on their
39 concurrence in the finding of ‘no adverse effect’ or ‘no historic properties affected.’



- 1 ▪ (iii) Public notice and comment, beyond that required by 36 CFR part 800, is not
2 required.
- 3 ○ For parks, recreation areas, and wildlife and waterfowl refuges:
- 4 ▪ (i) Public notice and an opportunity for public review and comment concerning the
5 effects on the protected activities, features, or attributes of the property must be
6 provided. This requirement can be satisfied in conjunction with other public
7 involvement procedures, such as a comment period provided on a NEPA document.”

8 **4.4.4.2 De Minimis Use Evaluations**

9 In a *de minimis* use evaluation, the following steps apply, as stated in 23 CFR 774.7(b) and
10 23 CFR 774.5(c):

- 11 1. **Determine that the Proposed Use is *de minimis*.** “A *de minimis* use determination under
12 Sec. 774.3(b) shall include sufficient supporting documentation to demonstrate that the
13 impacts, after avoidance, minimization, mitigation, or enhancement measures are taken into
14 account, are *de minimis* uses as defined in Sec. 774.17; and that the coordination required
15 in Sec. 774.5(b) has been completed.
- 16 2. **Coordination and Public Involvement.** Prior to making *de minimis* use determinations
17 under Sec. 774.3(b), the following coordination shall be undertaken:
 - 18 ○ (1) For historic properties: (i) The consulting parties identified in accordance with 36 CFR
19 part 800 (Section 106) must be consulted; and (ii) FHWA must receive written
20 concurrence from the pertinent SHPO or THPO, and from the ACHP if participating in
21 the consultation process, in a finding of ‘no adverse effect’ or ‘no historic properties
22 affected’ in accordance with 36 CFR part 800. FHWA shall inform these officials of its
23 intent to make a *de minimis* use determination based on their concurrence in the finding
24 of ‘no adverse effect’ or ‘no historic properties affected.’ (iii) Public notice and comment,
25 beyond that required by 36 CFR part 800, is not required.
 - 26 ○ (2) For parks, recreation areas, and wildlife and waterfowl refuges: (i) Public notice and
27 an opportunity for public review and comment concerning the effects on the protected
28 activities, features, or attributes of the property must be provided. This requirement can
29 be satisfied in conjunction with other public involvement procedures, such as a comment
30 period provided on a NEPA document. (ii) The Administration shall inform the official(s)
31 with jurisdiction of its intent to make a *de minimis* use finding. Following an opportunity
32 for public review and comment as described in paragraph (b)(2)(i) of this section, the
33 official(s) with jurisdiction over the Section 4(f) resource must concur in writing that the
34 project will not adversely affect the activities, features, or attributes that make the
35 property eligible for Section 4(f) protection. This concurrence may be combined with
36 other comments on the project provided by the official(s).”

37 **4.4.4.3 Constructive Use Evaluations**

38 In a constructive use evaluation, the following steps apply, as stated in 23 CFR 774.15(d):



- 1 1. **Determine Applicability.** “Identification of the current activities, features, or attributes of the
2 property which qualify for protection under Section 4(f) and which may be sensitive to
3 proximity impacts;”
- 4 2. **Proximity Impacts Analysis.** “An analysis of the proximity impacts of the proposed project
5 on the Section 4(f) property. If any of the proximity impacts will be mitigated, only the net
6 impact need be considered in this analysis. The analysis also should describe and consider
7 the impacts which could reasonably be expected if the proposed project were not
8 implemented, since such impacts should not be attributed to the proposed project; and”
- 9 3. **Coordination.** “Consultation, on the foregoing identification and analysis, with the official(s)
10 with jurisdiction over the Section 4(f) property.”

11 4.4.4.4 Corridor Study Area

12 The Corridor Study Area is defined as the broad geographic area within which the Build Corridor
13 Alternatives occur. The Corridor Study Area is the area within which potential Section 4(f)
14 properties were identified for study in this chapter and is shown on **Figure 4-1**.

15 4.4.5 Officials with Jurisdiction

16 The Section 4(f) regulation (23 CFR 774.17) defines officials with jurisdiction over parks,
17 recreation areas, wildlife and waterfowl refuges, and historic sites as

18 “(1) In the case of historic properties, the official with jurisdiction is the State Historic
19 Preservation Office (SHPO) for the State wherein the property is located or, if the
20 property is located on tribal land, the Tribal Historic Preservation Officer (THPO). If the
21 property is located on tribal land but the Indian tribe has not assumed the responsibilities
22 of the SHPO as provided for in the National Historic Preservation Act (NHPA), then a
23 representative designated by such Indian tribe shall be recognized as an official with
24 jurisdiction in addition to the SHPO. When the Advisory Council on Historic Preservation
25 (ACHP) is involved in a consultation concerning a property under Section 106 of the
26 NHPA, the ACHP also is an official with jurisdiction over that resource for purposes of
27 this part. When the Section 4(f) property is a National Historic Landmark, the National
28 Park Service also is an official with jurisdiction over that resource for purposes of this
29 part. (2) In the case of public parks, recreation areas, and wildlife and waterfowl refuges,
30 the official(s) with jurisdiction are the official(s) of the agency or agencies that own or
31 administer the property in question and who are empowered to represent the agency on
32 matters related to the property.”

33 4.5 Identification of Section 4(f) Properties

34 FHWA and ADOT reviewed existing maps (including GIS data and online maps available from
35 federal, state, county, and city agencies), searched property records, and consulted with
36 officials with jurisdiction to identify the properties protected by Section 4(f) within the I-11
37 Corridor Study Area, as defined by 23 U.S.C. 138(a) and 49 U.S.C. 303(a), for the following:

- 38 1. “Parks and recreational areas of national, state or local significance that are both publicly
39 owned and open to the public;

- 1 2. Publicly owned wildlife and waterfowl refuges of national, state or local significance that are
 2 open to the public to the extent that public access does not interfere with the primary
 3 purpose of the refuge; and
- 4 3. Historic sites of national, state or local significance in public or private ownership regardless
 5 of whether they are open to the public.”

6 Public ownership and administration of parks, recreation areas, and wildlife and waterfowl
 7 refuges were verified through available documentation as well as coordination with the officials
 8 with jurisdiction over those properties. Properties that meet definitions 1 and 2 above are
 9 presumed to be significant unless the official with jurisdiction over a property concludes that the
 10 site is not significant. FHWA will make an independent evaluation under such circumstances
 11 and may override the official with jurisdiction. FHWA defines significance in its *Section 4(f)*
 12 *Policy Paper* (FHWA 2012b) as follows: “comparing the availability and function of the park,
 13 recreation area or wildlife and waterfowl refuge, with the park, recreation area or wildlife and
 14 waterfowl refuge objectives of the agency, community or authority, the property in question
 15 plays an important role in meeting those objectives.” In making such an evaluation, FHWA
 16 examines the primary purpose of the property. As described in FHWA’s *Section 4(f) Policy*
 17 *Paper* (response to Question 1A), primary purpose “is related to a property’s primary function
 18 and how it is intended to be managed. Incidental, secondary, occasional or dispersed activities
 19 similar to park, recreational or refuge activities do not constitute a primary purpose within the
 20 context of Section 4(f).”

21 As discussed in the Final Tier 1 EIS **Section 3.7** (Archaeological, Historical, Architectural, and
 22 Cultural Resources), historic sites that meet definition 3 above were identified by reviewing the
 23 NRHP and information provided by State Historic Preservation Office (SHPO) and the Tucson
 24 Historic Preservation Office. Historic sites are significant if they are listed on the NRHP or have
 25 been determined to be eligible for listing on the NRHP (*Section 4(f) Policy Paper Answer to*
 26 *Question 2A*). FHWA consults with the SHPO, the official with jurisdiction over historic sites,
 27 tribes, and other consulting parties, and determines significance based on the context of Section
 28 106 of the NHPA (36 CFR 800). At this Tier 1 stage, previous determinations of eligibility are
 29 being used. Section 106 evaluations of the properties and effects will be determined during Tier
 30 2 undertakings.

31 While both Section 106 and Section 4(f) are preservation legislation and are both considered in
 32 the NEPA process, Section 106 applies to all federal undertakings and Section 4(f) applies to
 33 only USDOT actions. Section 106 considers the “effect” of an undertaking, while Section 4(f)
 34 considers the “use of a property” by an undertaking. Section 4(f) is not integral to Section 106,
 35 but Section 106 is integral to Section 4(f) compliance insofar as historic sites are concerned.
 36 Section 106 requires consultation and possibly mitigation, while Section 4(f) requires analysis of
 37 avoidance, then all possible planning to minimize harm.

38 **4.5.1 Parks, Recreation Areas, or Wildlife and Waterfowl Refuges**

39 **Table 4-1** lists the Section 4(f) properties from south to north in the Corridor Study Area. **Figure**
 40 **4-6** through **Figure 4-11** show the location of each property in relation to the Build Corridor
 41 Alternatives.



1 **Table 4-1. Potential Parks, Recreation Areas, and Wildlife/Waterfowl Refuges in the Corridor Study Area**

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
Multiple Counties					
1	Juan Bautista de Anza National Historic Trail	Recreation trail (multi-state)	<p>Santa Cruz, Pima, Pinal, and Maricopa Counties, Arizona (part of 1,200-mile multi-state historic trail)</p> <p>Santa Cruz County: 4.5 miles between Tumacácori National Historical Park to Tubac Presidio State Historic Park</p> <p>Pima County: Elephant Road to Torres Blanca Golf Club (approximately 7 miles), on the east side of and parallel to I-19</p> <p>Pinal County: part of Pinal County-adopted and proposed 80-mile corridor (TR-2)</p> <p>Maricopa County: 13 miles on BLM land co-aligned with Mormon Battalion Trail and Butterfield Overland Mail stage route at Butterfield Pass</p>	NPS administers; implemented by other government agencies, including counties, private nonprofits (such as the Anza Trail Foundation), and private citizens	A commemorative route of the de Anza expeditions; Corridor Study Area includes existing and proposed trail segments, including walking, auto, and off-road elements



Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
Santa Cruz County					
2	Nogales Recreation Area and existing/planned critical habitat areas (portion of Coronado National Forest)	Recreation area	303 Old Tucson Road, Nogales, AZ	USDA, Forest Service owns land	Forest is 1.8 million acres; resource management for multiple uses (sustaining sky island ecosystems, mining, range grazing, wilderness, recreation); areas developed for recreation are not in the vicinity of I-19; critical wildlife habitat areas – this area was identified in the recent EIS for the property for determining motorized and non-motorized access. Roadless areas or wilderness: Pajarita and Mount Wrightson
Pima County					
3	Tubac Presidio State Historic Park	Public park	1 Burruel Street, Tubac, AZ 85646	Arizona State Parks	8 acres, historical interpretation
4	Historic Hacienda de la Canoa (Raul M. Grijalva Canoa Ranch Conservation Park)	Historic site and recreation area	5375 South I-19 Frontage Road, Green Valley, AZ	Pima County	4,950 acres, historical and natural resources preservation and interpretation
5	Canoa Preserve Park	Public park	35 South Camino de la Canoa, Green Valley, AZ	Pima County	6 acres, baseball fields, ramada with picnic table
5a	Abrego Trailhead	Trail access point	2105 South Abrego Drive, Green Valley, AZ	Pima County	4 acres, off-street vehicle and horse trailer parking, shade structure
6	Quail Creek-Veterans Municipal Park	Public park	1905 North Old Nogales Highway, Sahuarita, AZ	Town of Sahuarita	25 acres, playground, picnic area, walking paths, dog area

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
7	Parque Los Arroyos	Public park	18225 South Avenida Arroyo Seco, Sahuarita, AZ	Town of Sahuarita	7 acres, playground, basketball court, picnic areas
8	Anamax Park	Public park	17501 South Camino Royale De Las Quintas, Sahuarita, AZ	Town of Sahuarita	36 acres, recreation center, ballfields, dog park
9	Sahuarita Lake Park	Public park	15466 South Rancho Sahuarita Boulevard, Sahuarita, AZ	Town of Sahuarita	15 acres with lake, boating, pathway, amphitheater, gazebos
10	North Santa Cruz Park	Public park	14455 South Rancho Sahuarita Boulevard, Sahuarita, AZ	Town of Sahuarita	15 acres, ballfields, skating and playground areas, picnic facilities, pathway, restrooms
11	Summit Park	Public park	1800 East Summit Street, Tucson, AZ	Pima County	9 acres, ballfields, picnic area, playground
12	Star Valley Park	Public park	6852 West Brightwater Way, Tucson, AZ	Pima County	14 acres, basketball court, dog park, trails, picnic areas, playgrounds
13	Lawrence Park	Public park	6777 South Mark Road, Tucson, AZ	Pima County	30 acres, ballfields, playground, picnic areas, path
14	Mission Ridge Park	Public park	3121 West Tucker Street, Tucson, AZ	Pima County	6 acres, ballfields, picnic area
15	Ebonee Marie Moody Park	Public park	6925 South Cardinal Avenue, Tucson, AZ	Pima County	5 acres, ballfields, playground, picnic area, horseshoes
16	Pima Community College, Desert Vista Campus	Public access to recreation facilities	5901 South Calle Santa Cruz, Tucson, AZ	City of Tucson	4 acres, fitness center and ballfields
17	Mission Manor Park	Public park	701 West Calle Ramona, Tucson, AZ	City of Tucson	6 acres, ballfields adjacent to Mission Manor Elementary School

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
18	CSM Martin “Gunny” Barreras Memorial Park (formerly Sunnyside Park)	Public park	5811 South Del Moral Boulevard, Tucson, AZ	City of Tucson and Sunnyside Unified School District	33 acres, ballfields adjacent to Sunnyside District School
19	Branding Iron Park	Public park	5900 Branding Iron Circle, Tucson, AZ	Pima County	2 acres, basketball court, picnic area, swings
20	Oak Tree Park	Public park	5433 South Oak Tree Drive, Tucson, AZ	City of Tucson	8 acres, ballfields, ball court
21	Winston Reynolds – Manzanita District Park	Public park	5200 South Westover Avenue, Tucson, AZ	Pima County	69 acres, community center, pool
22	Tucson Mitigation Corridor	Wildlife movement corridor	West of Tucson Mountain Wildlife Area, Pima County, AZ	Owned and managed by the Bureau of Reclamation in cooperation with the USFWS, Arizona Game and Fish Commission, and Pima County (funding by the Bureau of Reclamation)	2,514 acres, established to reduce impacts from the CAP on wildlife movements in the Avra Valley
23	Santa Cruz River Park	Public park	West of I-10, Tucson	Pima County and Regional Flood Control District-Pima County	469 acres, trails, play equipment
24	Robles Pass at Tucson Mountain Park	Public park	3500 West River Road, Tucson, AZ	Pima County	992 acres, mountain biking trails
25	La Mar Park	Public park	900 West Lincoln Street, Tucson, AZ	City of Tucson	3 acres, playground



Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
26	Tucson Mountain Park	Public park	2451 West McCain Loop, Tucson, AZ	Pima County	19,308 acres, camping, trails, shooting range, overlook
27	John F. Kennedy Park	Public park	3700 South Mission Road, Tucson, AZ	City of Tucson	163 acres, pool, ballfields, play equipment
28	St. John's School Skate Park	Public park	602 West Ajo Way, Tucson, AZ	City of Tucson	4 acres, skate park
29	Julian Wash Greenway	Public trail	South side of Tucson, along and across I-10, Tucson, AZ	Pima County	14 miles, paved multi-use trail
30	Julian Wash Archaeological Park	Public park	2820 South 12th Avenue, Tucson, AZ	City of Tucson	16 acres, sculpture garden
31	El Paso and Southwestern Greenway (planned trail)	Planned trail	Former railroad corridor between downtown Tucson and Kino Sports Complex, South Tucson, AZ	City of Tucson	3 miles, planned multi-use historic interpretation and recreation trail
31a	Centro del Sur Community Center	Public park	1631 South 10th Avenue, Tucson, AZ	Pima County	0.3 acre, fitness center, community programs and social services
32	Vista del Pueblo Park	Public park	1800 West San Marcos Boulevard, Tucson, AZ	City of Tucson	2.8 acres, playground, open space
33	Ormsby Park	Public park	1401 South Verdugo Avenue, Tucson, AZ	City of Tucson	6 acres, ballfields, ball courts, playground, picnic area
34	Ochoa Park	Public park	3457 North Fairview Avenue, Tucson, AZ	City of Tucson	0.7 acre, ballfields, picnic area
35	Santa Rita Park	Public park	South 3rd Avenue, Tucson, AZ	City of Tucson	22 acres, ballfields, skate park
36	Tumamoc Hill Preserve	Nature preserve and National Historical Landmark	Off West Anklam Road, just west of North Silverbell Road, Pima County, AZ	University of Arizona	860 acres, site of the Desert Botanical Laboratory of the Carnegie Institution of Washington, prehistoric resources, natural resources conservation, public access



Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
37	Sentinel Peak Park	Public park	1000 Sentinel Peak Road, South Tucson, AZ	City of Tucson	373 acres, mountaintop views, gazebo
38	Verdugo Park	Public park	South Verdugo Avenue, Tucson, AZ	City of Tucson	0.8 acre, playground
39	Santa Rosa Park	Public park	1055 South 10th Avenue, Tucson, AZ	City of Tucson	8 acres, ballfields, ball courts
40	Parque de Orlando y Diego Mendoza	Public park	18th Street and 8th Avenue, Tucson, AZ	City of Tucson	0.3 acre, memorial plaque, and seating
41	El Paso and Southwestern Greenway (existing trail)	Recreation trail	Former El Paso and Southwestern Railroad corridor, Tucson and South Tucson, AZ	City of Tucson	0.1 mile, multi-use path
42	El Parque de San Cosme	Public park	496 West Cushing Street, Tucson, AZ	City of Tucson	1 acre, gazebo and green space
43	Rosendo S. Perez Park	Public park	424 South Main Avenue, Tucson, AZ	City of Tucson	0.2 acre, fountain, mural
44	La Pilita	Public park	420 South Main Avenue, Tucson, AZ	City of Tucson	0.2 acre, adobe building adjacent to Rosendo S. Perez Park
45	El Tiradito Wishing Shrine	Public park	400 South Main Avenue, Tucson, AZ	City of Tucson	0.1 acre, shrine
46	Gethsemane Garden of Prayer	Public park	670 West Congress Street, Tucson, AZ	City of Tucson	1.3 acres, sculpture garden
47	La Placita Park	Public park	West Broadway near South Church Avenue, Tucson, AZ	City of Tucson	0.4 acre, park closed, according to the city website, as of July 2017
48	Veinte de Agosto Park	Public park	Congress Street and South Church Avenue, Tucson, AZ	City of Tucson	2 acres, park closed, according to the city website, as of July 2017

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
49	Bonita Park	Public park	20 North Bonita Avenue, Tucson, AZ	City of Tucson	1.4 acres, trail and green space along river
50	Sunset Park	Public park	255 West Alameda Street, Tucson, AZ	City of Tucson	1 acre, urban plaza, walkways, landscaping
51	El Presidio Park	Public park	160 West Alameda Street, Tucson, AZ	City of Tucson	2 acres, urban plaza, veterans' memorials, rose garden, fountain, sculptures
52	Jácome Plaza	Public park	101 North Stone Avenue, Tucson, AZ	City of Tucson	2 acres, walkways, landscaping, fountain, seating
53	Christopher Franklin Carroll Centennial Park	Public park	1 West Paseo Redondo, Tucson, AZ	City of Tucson	0.1 acre, path, seating, green space, plaques
54	Presidio San Augustin del Tucson	Public park	133 West Washington Street, Tucson, AZ	City of Tucson	0.8 acre, recreated 18th Century Spanish presidio
55	Alene Dunlap Smith Garden	Public park	355 North Granada Avenue, Tucson, AZ	City of Tucson	0.1 acre, sculpture garden
56, 57	David G. Herrera and Ramon Quiroz Park (formerly Oury Park)	Public park	600 West Saint Mary's Road, Tucson, AZ	City of Tucson	7 acres, Oury Recreation Center, softball fields, basketball court, walking path, picnic area, play equipment
58	Greasewood Park	Public park	1075 North Greasewood Road, Tucson, AZ	City of Tucson	152 acres, natural resources preservation and orienteering
59	Estevan Park	Public park	1001 North Main Avenue, Tucson, AZ	City of Tucson	8 acres, ballfields, ball courts, picnic area, playground
60	Feliz Paseos Park	Public park	1600 North Camino de Oeste, Tucson, AZ	Pima County	57 acres, environmental education, trails
61	Joaquin Murrieta Park	Public park	1400 North Silverbell Road, Tucson, AZ	City of Tucson	51 acres, ballfields

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
62	Francisco Elias Esquer Park	Public park	1331 North 14th Avenue, Tucson, AZ	City of Tucson	6 acres, playground, ramada
63	Manuel Valenzuela Alvarez Park	Public park	1945 North Calle Central, Tucson, AZ	City of Tucson	0.2 acre, playground
64	Saguaro National Park	Public park	3693 South Old Spanish Road, Tucson, AZ	NPS	91,327 acres total, including approximately 25,000 acres for Saguaro National Park West, historic and nature resource preservation, recreation. <i>Note that the proposed Saguaro National Park Boundary Expansion Act would increase Saguaro National Park West by approximately 1,152 acres on its east side.</i>
65	Juhan Park	Public park	1770 West Copper Street, Tucson, AZ	City of Tucson	15 acres, ballfields
66	Silverbell Golf Course	Public recreation facility	3600 North Silverbell Road, Tucson, AZ	City of Tucson	327 acres, golf course
67	Jacobs Park	Public park	3300 North Fairview Avenue, Tucson, AZ	City of Tucson	48 acres, ballfields, pool, picnic area, playground
68	Sweetwater Preserve	Wildlife preserve	4001 North Tortolita Road, Tucson, AZ	Pima County	891 acres of preserved land, multi-use trails
69	Sweetwater Wetlands Park	Water treatment facility with public access and education	Sweetwater Drive, Tucson, AZ	City of Tucson	58 acres, pathways, environmental education, nature observation, wastewater recharge
70	Christopher Columbus Park	Public park	4600 North Silverbell Road, Tucson, AZ	City of Tucson	277 acres, fishing lake, paths, dog park

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
70a	Rillito Regional Park	Public park	4502 North 1st Avenue, Tucson, AZ	Pima County	79 acres, horse track, picnic pavilions, playground, ballfields
71	Flowing Wells Park	Public park	5510 North Shannon Road, Tucson, AZ	Pima County	26 acres, ballfields, dog park, picnic areas, playgrounds
72	Dan Felix Memorial Park (formerly Peglar Wash Park)	Public park	5790 North Camino de la Tierra, Tucson, AZ	Pima County	40 acres, ballfields, trail
73	Pima Prickly Park	Public park	3500 West River Road, Tucson, AZ	Pima County	40 acres, paths, picnic areas
74	Rillito River Park	Public park	I-10 to North Craycroft Road along Rillito River, Tucson, AZ	Pima County	6 acres, linear park
74a	Camino de la Tierra Trailhead	Trail access point	North Camino de la Tierra, north of West Tres Nogales Road, Tucson, AZ	Pima County	9 acres, pedestrian/bicycle bridge over North Camino de la Tierra and connections to existing trails
75	Richardson Park	Public park	3535 West Green Trees Drive, Tucson, AZ	Pima County	4 acres, ballfields, picnic areas, playground, ball courts
76	Ted Walker Park	Public park	6751 North Casa Grande Highway, Marana, AZ	Pima County	71 acres, Mike Jacob Sports Park (ballfields, restrooms)
76a	Mike Jacob Sports Park	Public park	6901 North Casa Grande Highway, Tucson, AZ	Pima County	71 acres, ballfields, volleyball courts, playground, concessions
77	Ann Day Community Park (formerly Northwest Community Park)	Public park	7601 North Mona Lisa Road, Tucson, AZ	Pima County	21 acres, ballfields, dog park, trails, open space
78	Northwest YMCA Community Center	Recreation center	7770 North Shannon Road, Tucson, AZ	Pima County	14 acres, gymnasium, ball courts, exercise facilities, activity programs

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
79	Cañada del Oro (Christina-Taylor Green Memorial River Park)	Public park	North Shannon Road at the Oro River, Tucson, AZ	Pima County	26 acres, riverside trail
80	Denny Dunn Park	Public park	4400 West Massingale Road, Tucson, AZ	Pima County	5 acres, ballfields, playground, picnic area
81	Crossroads at Silverbell District Park	Public park	7548 North Silverbell Road, Marana, AZ	Town of Marana	48 acres, ballfields, ball courts, picnic area, playgrounds, dog park
82	Continental Reserve Community Park	Public park	8568 North Continental Reserve Loop, Marana, AZ	Town of Marana	10 acres, ball court, picnic area, playground, path
82b	Cortaro Mesquite Bosque	Public park	Santa Cruz River, north of Twin Peaks Road, Marana, AZ	Pima County Regional Flood Control District	80 acres, wildlife habitat restoration, walking trails, wildlife viewing
82c	Los Morteros Conservation Area	Public park	9901 North El Uno Minor, Tucson, AZ	Pima County	232 acres, conservation land, trails and interpretive signage
83	Sunset Pointe Park	Public park	8535 North Star Grass Drive, Tucson, AZ	Pima County	4 acres, picnic area, playground, ballfield
84	El Rio Park	Public park	10160 North Blue Crossing Way, Marana, AZ	Town of Marana	3 acres, green space, ball court, ramada
84a	El Rio Preserve	Public park	10190 North Coachline Boulevard, Tucson, AZ	Town of Marana	104 acres, off-street parking, shade structure, wildlife viewing deck, sitting area, walking path
85	Rillito Vista Neighborhood Park	Public park	8820 West Robinson Street, Rillito, AZ	Pima County	2 acres, ball courts, playground, picnic area
86	Santa Cruz River Park	Public park	North of El Rio, Tucson, AZ	City of Tucson	10 acres, disc golf course, trails



Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
87	Ora Mae Harn Park	Public park	13250 North Lon Adams Road, Marana, AZ	Town of Marana	35 acres, ballfields, ball courts, picnic areas, playgrounds, community center
88	Tortolita Preserve	Public park	North Dove Mountain Road, Marana, AZ	Town of Marana	2,400 acres of preserved land for wildlife habitat, trails
89	San Lucas Community Park	Public park	14040 North Adonis Road, Marana, AZ	Town of Marana	13 acres, ballfields, ball courts, picnic areas, playgrounds, dog park
90	Anza Trail Park	Public park	North Trico Road, along Santa Cruz River near Pinal County border, Marana, AZ	Pima County	228 acres, off-street parking, shade structure, passive recreation
90a	Segment of Tortolita CAP Trail	Planned recreation trail	North from West Tangerine Road along canal to South County Line Road, Marana, AZ	Pima County	7.8 miles of planned multi-use trail
Pinal County					
91	Picacho Peak State Park	Public park	15520 Picacho Peak Road, Picacho, AZ	Arizona State Parks	3,461 acres, Visitor Center, picnic areas, shelter, camping areas, rest rooms
92	West Pinal (Kortsen) Park	Community park	50801 West Highway 84, adjacent to Route 8, Stanfield, AZ	Pinal County	123 acres, camping, picnicking, trails
93	Palo Verde Regional Park (Pinal County Parks)	Public recreation land	Eastern edge of Sonoran Desert National Monument at western county border, between SR 238 and I-8, Pinal County, AZ	Pinal County	22,810 acres of the Monument's 12.2 million acres; picnic and play areas, camping, shooting and other sports, motorized and non-motorized trails



Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
94	Butterfield Pass Trail segment	Recreation trail	Sonoran Desert National Monument near Maricopa Mountain Pass, known as the Butterfield Pass Trail Junction off Highway 238; co-aligned with Mormon Battalion Trail route, Gila Pioneer Route, and De Anza trail route, Maricopa County, AZ	BLM	31 acres, 4-wheel drive and hiking route; BLM kiosk off Highway 238, historic markers for Butterfield Pass and Mormon Battalion Trail routes
95	Arlington Wildlife Area	State Wildlife Area, wildlife refuge	West bank of Gila River, 3.5 miles south of Arlington and 15 miles southwest of Buckeye, Maricopa County, AZ	Arizona Game and Fish Commission and other agencies	2,574 acres, wildlife habitat area, public access for hunting and fishing
96	Powers Butte Wildlife Area	State Wildlife Area, wildlife refuge	East side of Gila River, 20 miles north of Gila Bend, Maricopa County, AZ	Arizona Game and Fish Commission and other agencies	1,947 acres, wildlife habitat preservation (riparian and aquatic habitat)
Maricopa County					
97	Buckeye Hills Regional Park	Public park	26700 West Buckeye Hills Drive, Buckeye, AZ	Maricopa County	4,648 acres, park, restrooms
97a	Maricopa Trail (Existing route)	Recreation trail	26700 West Buckeye Hills Drive, Buckeye, AZ	Maricopa County	Existing route of 242-mile loop trail that accesses Buckeye Hills Regional Park
97b	Maricopa Trail (Planned route)	Recreation trail	26700 West Buckeye Hills Drive, Buckeye, AZ	Maricopa County	Final route of 242-mile loop trail that accesses Buckeye Hills Regional Park
98	Robbins Butte Wildlife Area	State Wildlife Area, wildlife refuge	Both sides of SR 85, 7 miles south of Buckeye, AZ	Arizona Game and Fish Department and other agencies	5,676 acres, wildlife habitat preservation (food and nesting habitat for game birds; enhancing riparian habitat) and interpretation (170 acres under jurisdiction of 1954 Public Land Order)



Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
98a	1954 Public Land Order 1015 Lands and adjacent AGFD parcels	Wildlife refuge	Lower Gila River Wildlife area	Owned by USFWS; managed by Arizona Game and Fish Department	Multiple, undeveloped Public Land Order 1015 parcels are designated as "Coordination areas" under the National Wildlife Refuge Act; adjacent AGFD parcels are those that were purchased in furtherance of the Department of the Interior/AGFD Cooperative Agreement from 1954, clause 7.
99	Sonoran Foothills Community Park	Public park	12795 South Estrella Parkway, Goodyear, AZ	Town of Goodyear	18 acres, ballfields, picnic tables and barbeque grills, amphitheater, concessions, walking path
100	White Tank Mountain Regional Park	Public park	20304 West White Tank Mountain Road, Waddell, AZ	Maricopa County	29,200 acres, nature center, picnicking, hiking, biking, horseback riding, camping
100a	Skyline Regional Park	Public park and preserved land	2600 North Watson Road, Buckeye, AZ	BLM owned; managed by City of Buckeye	7,700 acres, trails, campsites, interpretive programs



Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
101	Vulture Mine RMZ	Recreation areas within larger BLM land holding to be developed	South of US 60, Wickenburg, AZ	BLM	70,452 acres, hiking and off-highway vehicle trails, picnic and camping areas; master-planned amenities include multi-use trails, motorized uses, equestrian uses, picnicking, camping, day use, archery, interpretive/educational uses, wildlife and nature viewing, historical interpretation, hunting, geocaching, and other miscellaneous uses; county-planned recreation areas in a proposed lease area; contains a designated multi-use corridor that allows for non-conservation uses
102	Hassayampa River Preserve	Nature preserve with public access	West side of US 60 from North Garden City Road to North 100th Avenue, Maricopa County, AZ	The Nature Conservancy in partnership with Maricopa County Parks and Recreation Department	770 acres, nature preserve (planned component of Vulture Mine RMZ with public access for hiking, walking, wildlife viewing), the Nature Conservancy to place conservation easement to protect natural values.
103	Wishing Well Park	Public park	Wickenburg Way at US 60/US 93 roundabout, Wickenburg, AZ	Town of Wickenburg	1 acre, wishing well, Hassayampa River Walk pedestrian bridge, event facility
104	Hassayampa River Walk	Public park	Bridge over Hassayampa River at US 60/US 93 roundabout, Wickenburg, AZ	Town of Wickenburg	1 acre, pedestrian, bicycle, and event facility
105	Coffinger Park	Public park	Tegner Street at Swilling Avenue (west side of US 93), Wickenburg, AZ	Town of Wickenburg	13.6 acres, pool, skate park, recreation building, tennis courts, play equipment, walking path



Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
106	Constellation Park	Public park	1201 Constellation Road (east side of US 93), Wickenburg, AZ	Town of Wickenburg	311 acres, campgrounds, rodeo grounds, shooting range
Yavapai County					
	None found				

1 SOURCE: Online information obtained from websites provided by federal (BLM, Bureau of Reclamation, USDA, USFWS, USFS, and NPS), state (Arizona Game and Fish Commission
2 and Arizona State Parks), county (Pima, Pinal, Maricopa, Santa Cruz, and Yavapai) and municipal (City of Buckeye, Town of Goodyear, City of Nogales, Town of Sahuarita, Town of
3 Marana, City of Tucson, and Town of Wickenburg) agencies with jurisdiction as well as by The Nature Conservancy. Accessed June and July 2017. Property acreages are based on
4 GIS shapefiles and data available at the time of study.
5
6

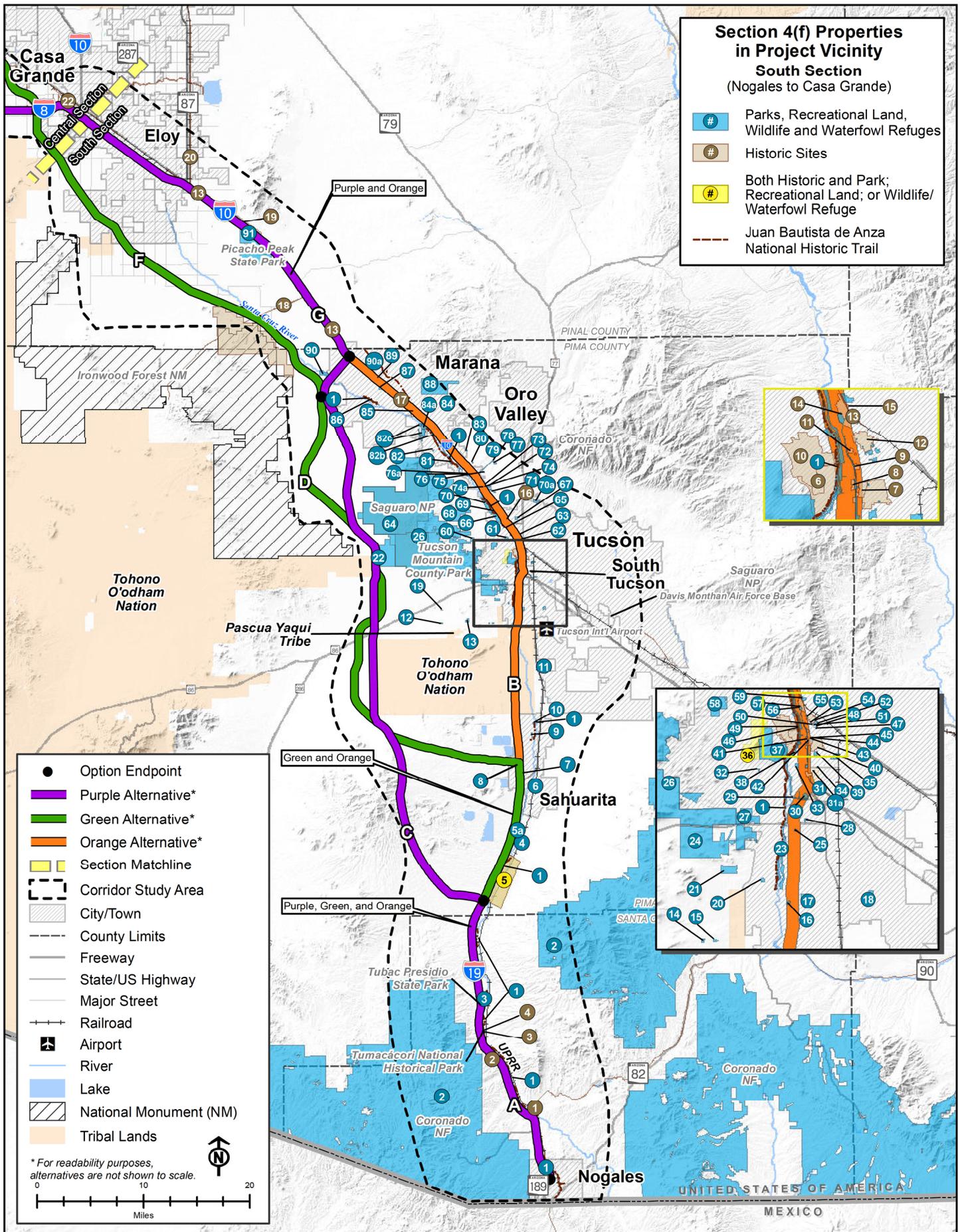


Figure 4-6. Section 4(f) Properties in the Corridor Study Area - Purple, Green, and Orange Alternatives - South Section

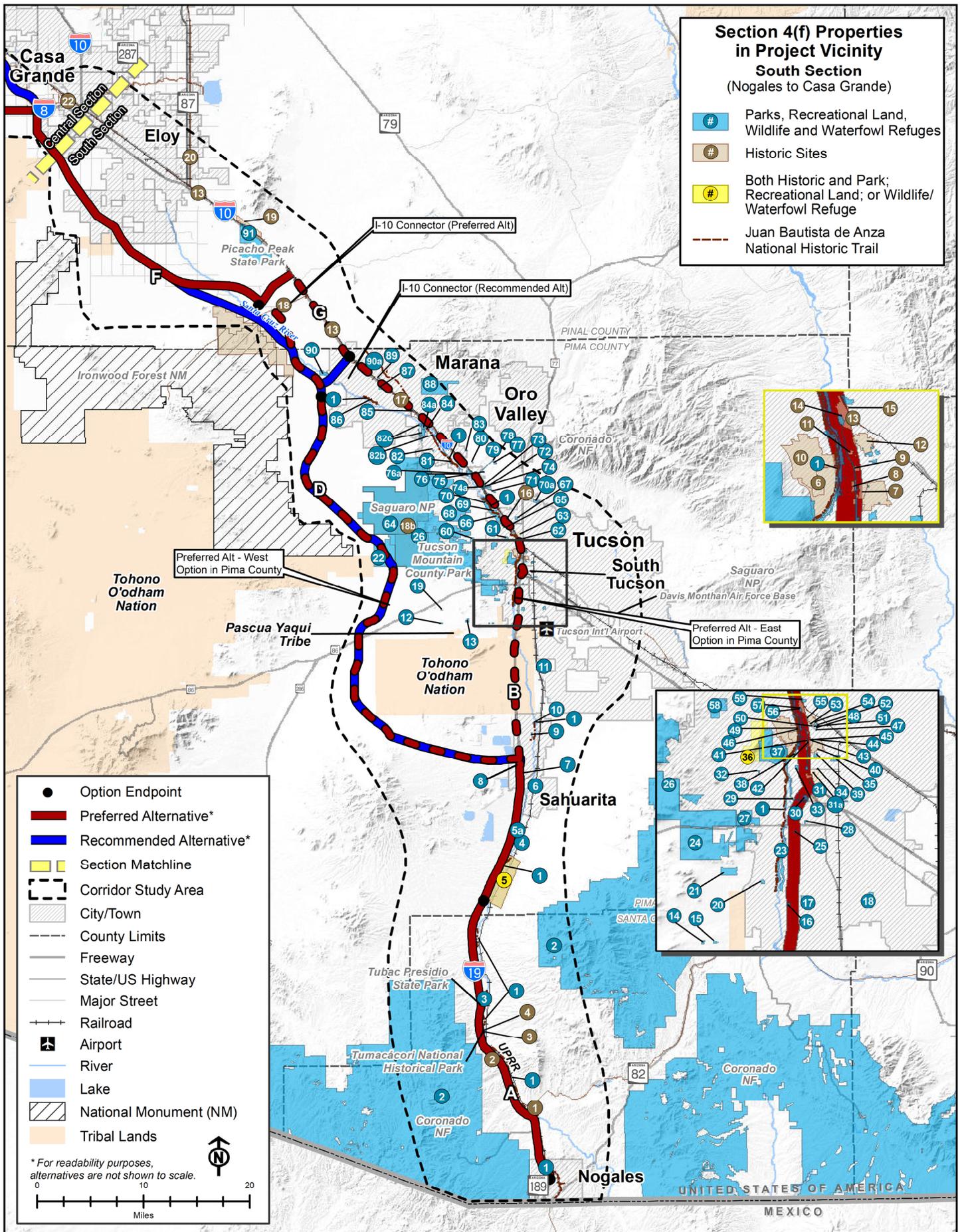


Figure 4-7. Section 4(f) Properties in the Corridor Study Area - Recommended and Preferred Alternatives - South Section

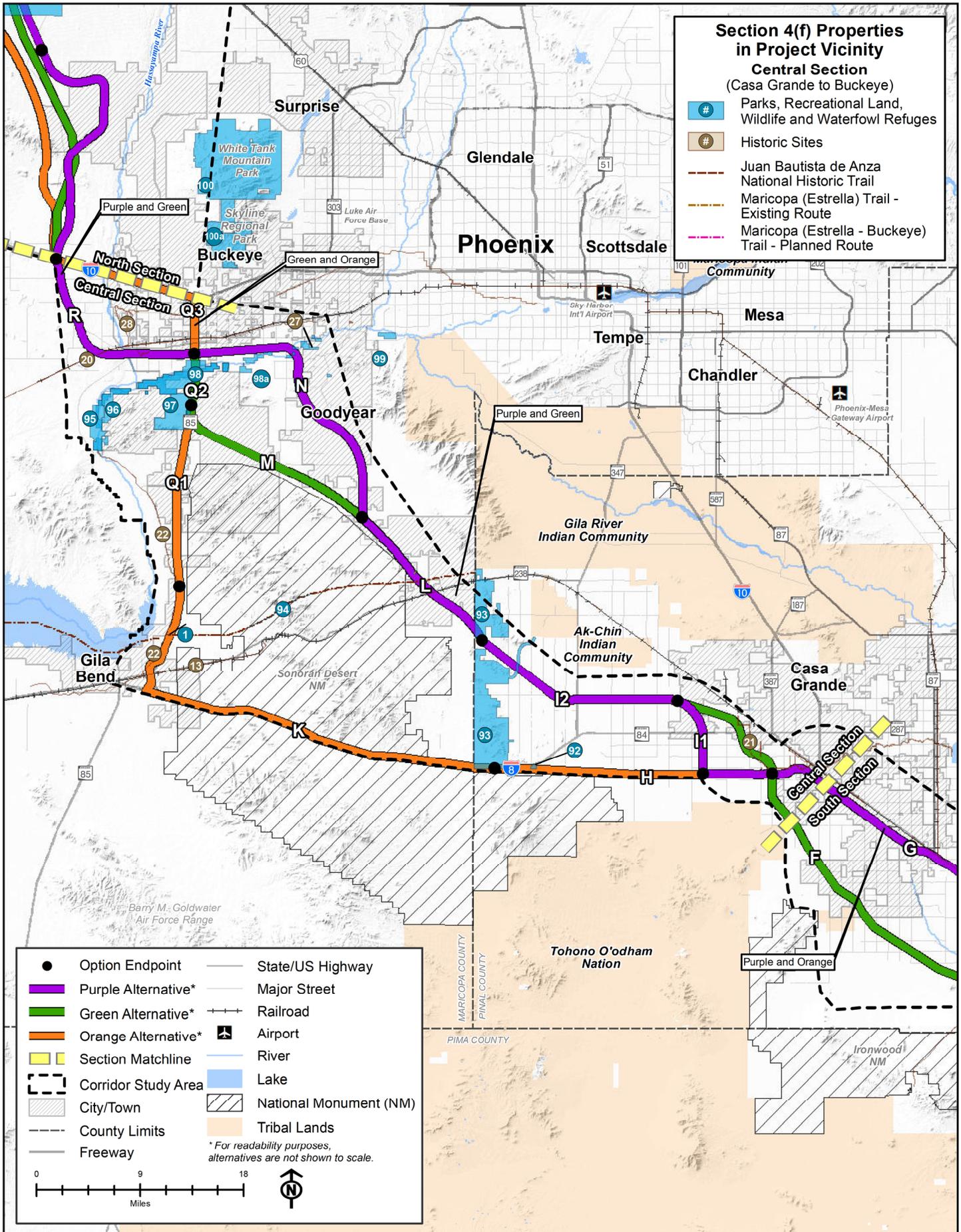


Figure 4-8. Section 4(f) Properties in the Corridor Study Area - Purple, Green, and Orange Alternatives - Central Section

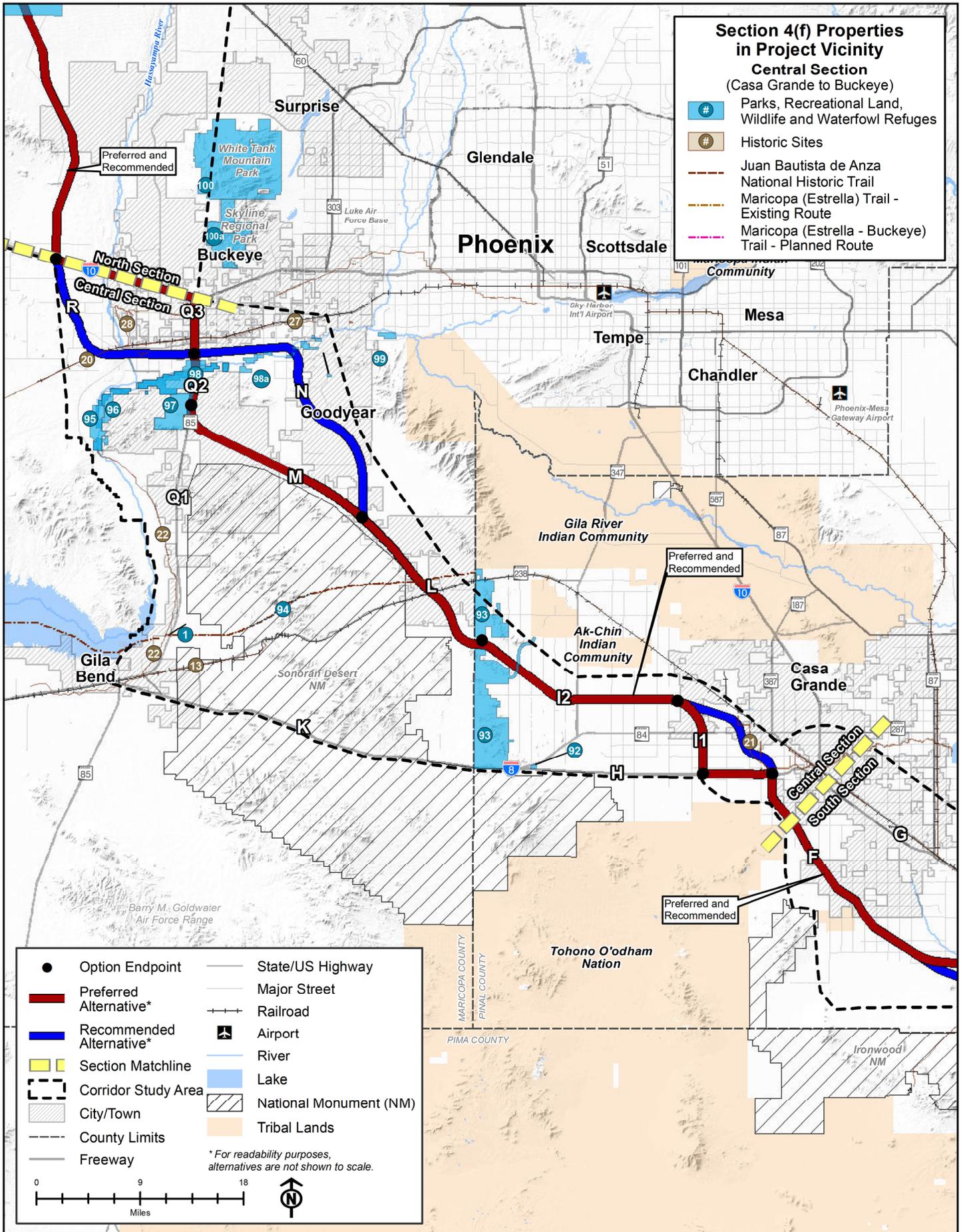


Figure 4-9. Section 4(f) Properties in the Corridor Study Area - Recommended and Preferred Alternatives - Central Section

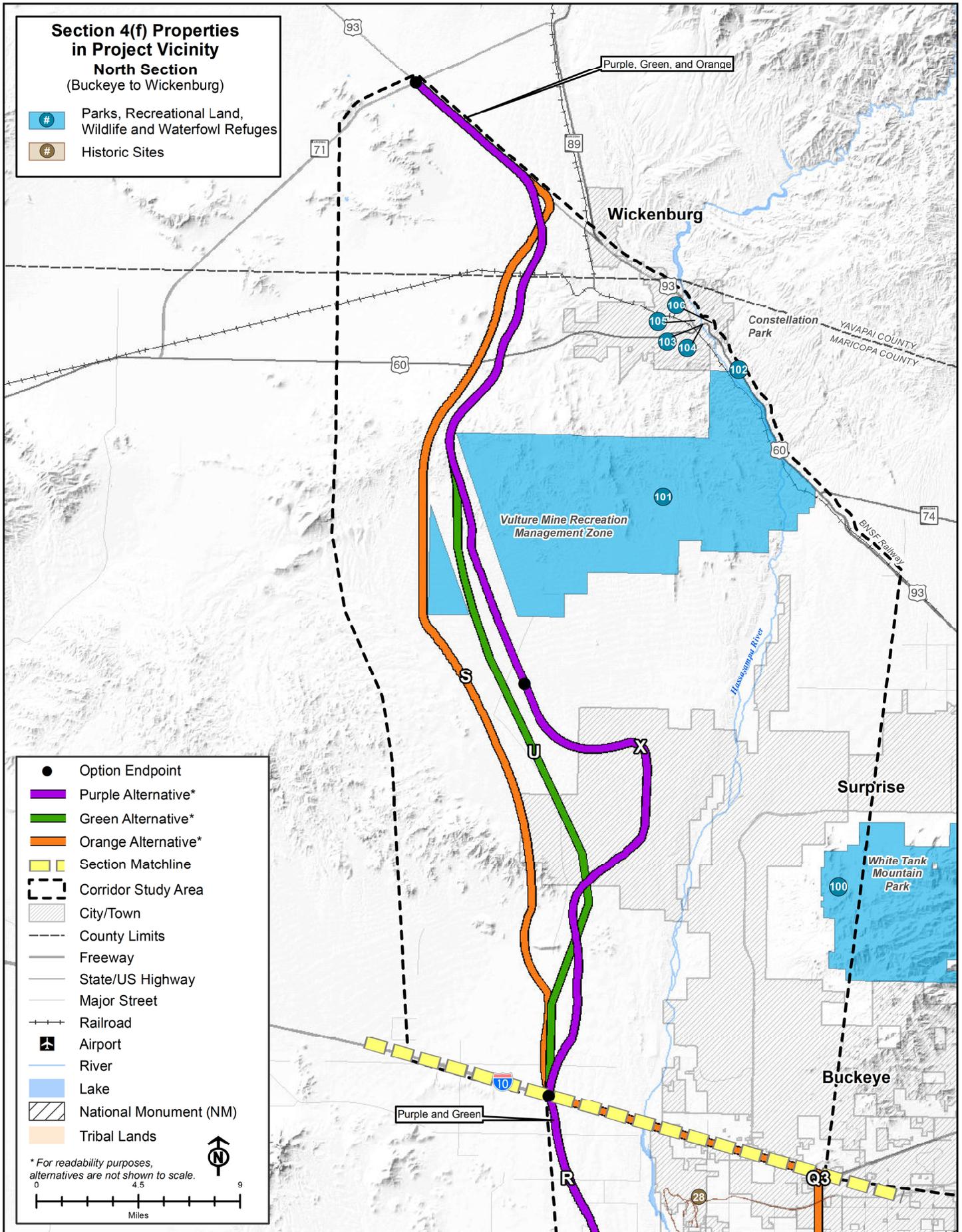


Figure 4-10. Section 4(f) Properties in the Corridor Study Area - Purple, Green, and Orange Alternatives - North Section

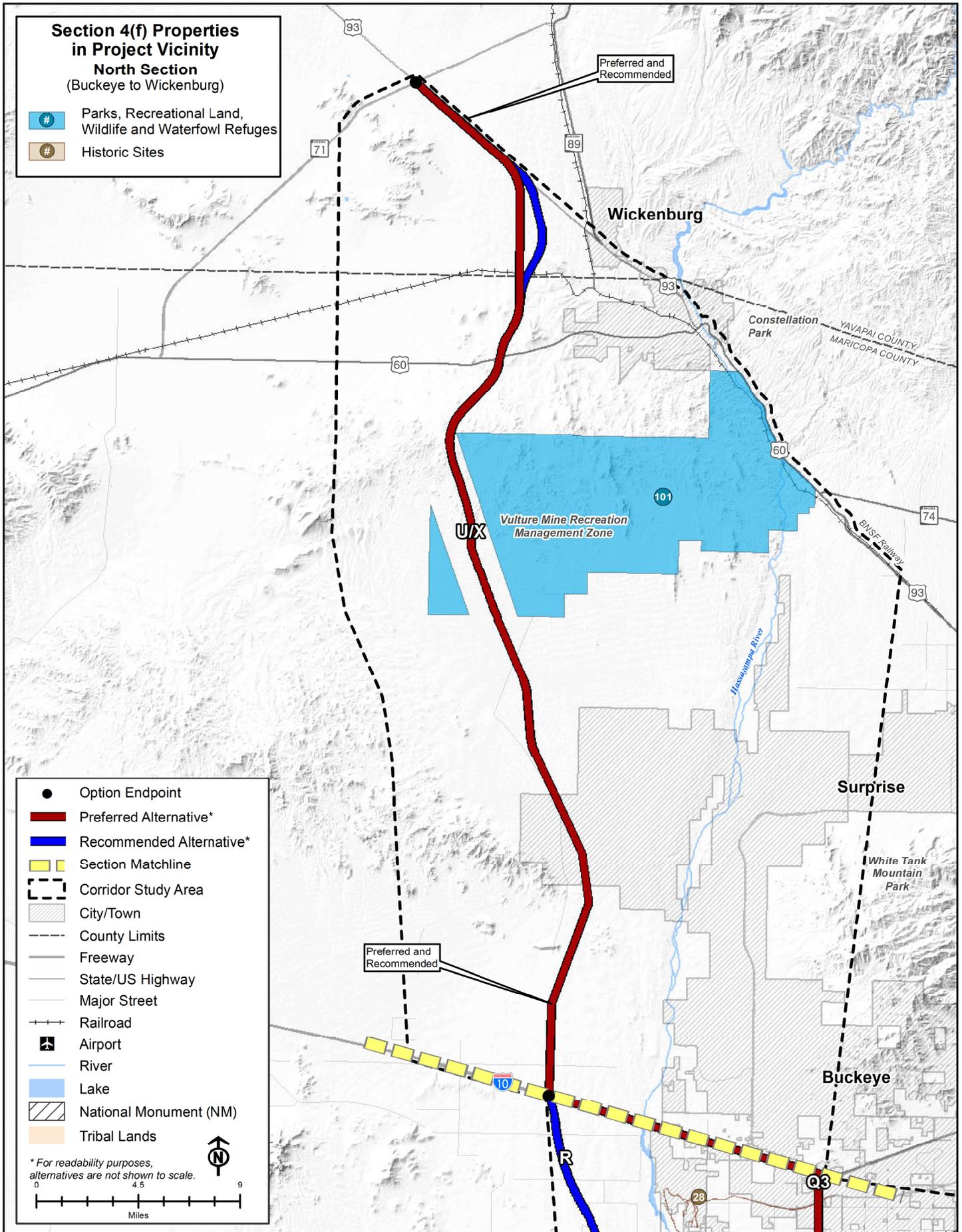


Figure 4-11. Section 4(f) Properties in the Corridor Study Area - Recommended and Preferred Alternatives - North Section

1 **4.5.1.1 Properties Preliminarily Determined not Protected by Section 4(f)**

2 **Santa Rita Experimental Range and Wildlife Area**

3 A memorandum providing a preliminary evaluation of wildlife areas is in **Appendix F1**
4 (Applicability of Identified Wildlife Areas as Section 4(f) Properties for the I-11 Tier 1 EIS).
5 According to the memorandum, the primary purpose of the property is for research. Since the
6 purpose is not a public park, recreation area, or wildlife or waterfowl refuge, FHWA preliminarily
7 determined that the Santa Rita Experimental Range and Wildlife Area does not qualify for
8 protection under Section 4(f).

9 **Marana Mortuary and Cemetery**

10 Marana Mortuary and Cemetery is a privately owned cemetery at 12146 West Barnett Road in
11 Marana. Pima County Assessor's records indicate the cemetery is owned by Marana Mortuary
12 & Cemetery Properties LLC. FHWA's *Section 4(f) Policy Paper* states that Section 4(f) only
13 applies to cemeteries if they are determined to be listed in or eligible for listing in the NRHP as
14 historic sites deriving significance from association with historic events, from age, from the
15 presence of graves of persons of transcendent importance, or from distinctive design features
16 (FHWA 2012b). County Assessor data and historical aerial photographs indicate that the
17 cemetery was established in 2010 and is less than a decade old. Because the cemetery is not
18 listed in or eligible for listing in the NRHP, it is not a historic site and does not require
19 consideration under Section 4(f).

20 **Marana Mound**

21 Marana Mound is a large prehistoric Hohokam archaeological site within the Villages of Tortolita
22 development/Marana Mound (AZ AA:12:251). The AZSITE database indicates it is NRHP
23 eligible but does not indicate under which criterion; almost certainly Criterion D for its potential
24 to yield important information. Developers have preserved parts of such sites—often to avoid
25 the costs of expensive data recovery if required by regulations—but they also then designate
26 such “set asides” as “green space” for the community they are developing, which might become
27 recreational properties. There are no indications at this time that the Marana Mound has been
28 set aside among new housing. It is likely that the Marana Mound is in private ownership and not
29 publicly interpreted or made available as a recreational facility at this time. FHWA preliminarily
30 determined that the site is not protected by Section 4(f) because of its eligibility as a historic site
31 under NRHP Criterion D and suspected private ownership, which eliminates the site from being
32 protected as a park.

33 **Arizona Veterans' Memorial Cemetery-Marana**

34 Arizona Veterans' Memorial Cemetery-Marana is located on Luckett Road just south of the Pinal
35 County line and within the I-10 connector on the Recommended Alternative. Pima County
36 Assessor's records indicate the cemetery is owned by the State of Arizona. FHWA's *Section 4(f)*
37 *Policy Paper* states that Section 4(f) only applies to cemeteries if they are determined to be
38 listed in or eligible for listing in the NRHP as historic sites deriving significance from association
39 with historic events, from age, from the presence of graves of persons of transcendent
40 importance, or from distinctive design features (FHWA 2012b). The Veterans' Cemetery
41 (Arizona Department of Veterans' Services, [https://dvs.az.gov/arizona-veterans-memorial-](https://dvs.az.gov/arizona-veterans-memorial-cemetery-marana)
42 [cemetery-marana](https://dvs.az.gov/arizona-veterans-memorial-cemetery-marana), accessed 2019), was dedicated in 2016, and Google imagery indicates this
43 cemetery was developed only about 5 years ago. Because the cemetery is not listed in or

1 eligible for listing in the NRHP, it is not a historic site and does not require consideration under
2 Section 4(f).

3 **Ironwood Forest National Monument**

4 The publicly owned portions of this property, which are managed by BLM, are accessible to the
5 public. The property was designated in 2000 by Presidential Proclamation 7320 for the
6 protection and management of “historic landmarks, historic and prehistoric structures, and other
7 objects of historic or scientific interest.” This formal designation serves as the definition of the
8 primary purpose of the property as a whole. Within the BLM’s *Ironwood Forest National*
9 *Monument, Record of Decision and Approved Resource Management Plan* (BLM 2013), the
10 agency states that other, secondary uses (e.g., recreation, timbering, and rangeland) may be
11 allowed under specific criteria so that the primary purpose of the property is supported.
12 However, these other secondary uses are not relevant to the Section 4(f) test of primary
13 purpose.

14 As explained in FHWA’s *Section 4(f) Policy Paper*, Question 1A, to be protected under Section
15 4(f), land must be formally designated as a park, recreation area, wildlife and waterfowl refuge,
16 or historic site (23 CFR 774.17) (FHWA 2012b). FHWA interprets formal designation as
17 meaning that the land has been identified through an official process, such as a Presidential or
18 legislative action, or is included in an adopted master plan by the official with jurisdiction over
19 the property. As part of the formal designation, the primary purpose and function of the land is
20 identified. Referring again to FHWA’s *Section 4(f) Policy Paper*, Question 1A, primary purpose
21 is related to the land’s primary function and how it is intended to be managed. Incidental,
22 secondary, occasional, or dispersed activities that are similar to park, recreational, or refuge
23 activities do not constitute a primary purpose within the context of Section 4(f) (FHWA 2012b).
24 Determining the primary purpose of land is also important because the criteria for assessing use
25 of a Section 4(f) property differs depending on whether the land is formally designated as a
26 park, recreation area, wildlife or waterfowl refuge, or historic site.

27 BLM also designated the Ironwood Forest National Monument as a Special Recreation
28 Management Area. The Special Recreation Management Area is a management tool that allows
29 BLM to plan and implement recreation activities in a manner that ensures the primary purpose
30 of the property is protected. While the Special Recreation Management Area, in addition to the
31 *Resource Management Plan*, is an important planning tool for BLM to balance the needs of and
32 demands upon multiple resources on the property, the Special Recreation Management Area is
33 not the source for the original, formal designation of the property, and therefore, is not the
34 source of the primary purpose of the property as defined by Section 4(f).

35 On the basis of these Section 4(f) tests, FHWA assessed that, although Ironwood Forest
36 National Monument contains publicly owned land that is open to the public, the primary purpose
37 of the Ironwood Forest National Monument is not a park, recreation area, wildlife or waterfowl
38 refuge, or historic site as defined by Section 4(f). Thus, FHWA preliminarily determined that
39 Ironwood Forest National Monument is not protected under Section 4(f).

40 **Tucson Mountain Wildlife Area**

41 FHWA assessed that Tucson Mountain Wildlife Area is a mix of publicly owned properties that
42 are open to the public and privately owned properties that are not open to the public. Only the
43 properties that are publicly owned and open to the public have the potential to be protected by
44 Section 4(f). Examples of such properties within the Tucson Mountain Wildlife Area are Tucson

1 Mountain Park, Saguaro National Park, and Tucson Mitigation Corridor, which are protected by
2 Section 4(f). Because privately owned land that is not open to the public is not protected by
3 Section 4(f), the Tucson Mountain Wildlife Area, being a grouping of publicly owned and
4 privately owned lands, is not protected by Section 4(f).

5 **Sonoran Desert National Monument**

6 The Sonoran Desert National Monument is publicly owned property that is open to the public
7 and managed by BLM. The Sonoran Desert National Monument objects include plant and
8 animal resources as well as historical and archaeological resources. The Sonoran Desert
9 National Monument was designated in 2001 by Presidential Proclamation 7397 for the
10 protection and management of objects of natural and cultural interest within the property. This
11 formal designation serves as the definition of the primary purpose of the property as a whole.
12 BLM's *Sonoran Desert National Monument Record of Decision and Approved Resource*
13 *Management Plan* (BLM 2012) specifically states that the Proclamation is the principal direction
14 for management of the property; all other considerations are secondary to that edict. The RMP
15 empowers BLM to balance the availability and function of all resources within the Sonoran
16 Desert National Monument for multiple uses. Within the RMP, BLM identifies other, secondary
17 uses (including recreation) that may be allowed under specific criteria so that the primary
18 purpose of the property is supported. However, based on this information, FHWA assesses that
19 recreation as a secondary use is not relevant to the Section 4(f) test of primary purpose; the
20 Sonoran Desert National Monument is not protected by Section 4(f). Historic and recreation
21 resources within the monument are protected by Section 4(f).

22 **Sahuarita Property (northwest quadrant of West Twin Buttes Road and the canal,** 23 **Sahuarita, AZ)**

24 According to FHWA's *Section 4(f) Policy Paper*, Question 1, Section 4(f) regulations require that
25 a property must be officially designated as a park, recreation area, or wildlife or waterfowl refuge
26 by the official with jurisdiction over the property for the property to be considered for protection
27 by Section 4(f) (FHWA 2012b). Question 25 further states that evidence of formal designation
28 would be inclusion of the property in a municipal master plan. The Town of Sahuarita acquired
29 the 96-acre property in 2019, but has not formally designated the property for a specific use,
30 such as a park, and has not included the property in the Town's adopted plan. For these
31 reasons, FHWA preliminarily determined that the Sahuarita property does not qualify for
32 protection under Section 4(f) at this time. However, on October 9, 2020, the Town of Sahuarita
33 agreed to contact and coordinate with ADOT when the time comes for the Town to plan and
34 formally designate the property (**Appendix F3** [Correspondence Related to Preliminary Section
35 4(f) Evaluation]). At that time, and if the Town designates the property as a park, ADOT and the
36 Town could pursue joint planning under Section 4(f). Joint planning is a term used to describe a
37 condition in which Section 4(f) does not apply and is detailed in 23 CFR 774.11(i), which states:

38 “(i) When a property is formally reserved for a future transportation facility before or at
39 the same time a park, recreation area, or wildlife and waterfowl refuge is established,
40 and concurrent or joint planning or development of the transportation facility and the
41 Section 4(f) resource occurs, then any resulting impacts of the transportation facility will
42 not be considered a use as defined in § 774.17... (2) Concurrent or joint planning or
43 development can be demonstrated by a document of public record created after,
44 contemporaneously with, or prior to the establishment of the Section 4(f) property.
45 Examples of an adequate document to demonstrate concurrent or joint planning or
46 development include: (i) A document of public record that describes or depicts the



1 designation or donation of the property for both the potential transportation facility and
2 the Section 4(f) property; or (ii) A map of public record, memorandum, planning
3 document, report, or correspondence that describes or depicts action taken with respect
4 to the property by two or more governmental agencies with jurisdiction for the potential
5 transportation facility and the Section 4(f) property, in consultation with each other.”

6 Joint planning of the I-11 corridor project and the potential future park would prevent the
7 construction of I-11 within the park boundaries from being considered a use under Section 4(f).

8 **4.5.1.2 Properties Potentially Protected by Section 4(f)**

9 The following properties were identified by Pima County during the Draft Tier 1 EIS public
10 comment period as potentially being protected by Section 4(f). ADOT will consult further with
11 Pima County during Tier 2 studies to determine which properties are protected by Section 4(f)
12 and to complete a Section 4(f) evaluation for protected properties.

- Avra Valley Wildlife Corridor
- CAVSARP mitigation land
- Cortaro-Hartman donation
- Diamond Bell Ranch mitigation land
- Brawley Wash-Twin Peaks flood prevention land
- Los Robles Wash – Trico Wash mitigation land
- Red Point Cascada donation land
- Valencia conservation land
- Wexler property

13 **4.5.2 Historic Sites**

14 Historic sites (including historic properties and archaeological sites) are identified and discussed
15 in **Section 3.7** (Archaeological, Historical, Architectural, and Cultural Resources) of the Final
16 Tier 1 EIS. The sites include those properties that have been (1) previously determined eligible
17 for listing by others or (2) are already listed on the NRHP. **Table 4-2** lists the historic properties
18 within the 2,000-foot-wide Build Corridor Alternatives from south to north. **Figure 4-6** through
19 **Figure 4-11** show the location of each property in relation to the Build Corridor Alternatives.

20 Potentially eligible sites were not considered in the Tier 1 level of evaluation but would be
21 considered during Tier 2. During Tier 2 studies, the 2,000-foot-wide corridor of a selected Build
22 Corridor Alternative will be refined to a specific roadway alignment. At that time, historic and
23 archaeological resources will be surveyed, Section 106 consultation will be undertaken, and a
24 Final Section 4(f) Evaluation will be conducted. The findings of this revised Draft Preliminary
25 Section 4(f) Evaluation could be refined during Tier 2 if additional historic and/or archaeological
26 resources are identified at that time. Tier 2 activities will include examination of means to avoid,
27 mitigate, and/or minimize harm to protected resources.

28



1 **Table 4-2. Historic Sites in the Corridor Study Area**

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
Multiple Counties					
13	Southern Pacific Railroad (now Union Pacific), including Phoenix Main Line, AZ A:2:40(ASM)	Historic railroad corridor (1865-1988)	Maricopa, Pinal, and Pima Counties	SHPO	111 miles, some segments were determined NRHP-eligible, Criterion A for association with the expansion of rail travel
18	Arizona Southern Railroad – railroad grade, AZ AA:10:19(ASM)	Historic railroad corridor (1904-1933)	Maricopa, Pinal, and Pima Counties	SHPO	17 miles, some segments were determined NRHP-eligible, Criterion A for association with the movement of mined materials
Santa Cruz County					
1	New Mexico and Arizona Railroad: Nogales Branch, AZ EE:4:43(ASM)	Railroad	City of Nogales, AZ	SHPO	340 acres, historic railroad property in active use; NRHP-eligible, Criterion A for significance in railroad development
2	Otero Cemetery near Palo Parado/I-19 interchange, AZ DD:8:165(ASM)	Historic site	Tubac, AZ	SHPO	0.2 acre, NRHP-eligible, Criterion A and Criterion B for significant contribution to area settlement history
3, 4	Tumacácori National Monument and Museum (Tumacácori National Historic Park)	Historic site (three 17th and 18th Century missions and museum complex)	1895 East Frontage Road, Tumacácori, AZ 85640	NPS	360 acres, historical and natural resources conservation and interpretation; National Historical Landmark-listed in 1987, Criterion A for association with Spanish Colonial Jesuit mission period (17th and 18th Centuries) and Criterion C for Mission and Spanish Colonial architecture

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
Pima County					
5	Canoa Ranch Rural Historic District (Hacienda de la Canoa, Raul M. Grijalva Canoa Ranch Conservation Park)	Historic site (1912-1951) and recreation area	5375 South I-19 Frontage Road, Green Valley, AZ	SHPO	4,950 acres, NRHP-listed in 2016, Criterion A for association with cattle ranching in AZ and Criterion C for cluster of features associated with the headquarters of an early ranching and agriculture operation
6	San Agustin del Tucson Mission site, AZ BB:13:6(ASM)	Homestead	City of Tucson, AZ	SHPO	194 acres, reconstructed wall, garden; NRHP-eligible, Criterion A for significance as mission settlement
38	Tumamoc Hill Preserve	National Historical Landmark and nature preserve	Off West Anklam Road, just west of North Silverbell Road, Pima County, AZ	University of Arizona	860 acres, site of the Desert Botanical Laboratory of the Carnegie Institution of Washington, prehistoric resources, natural resources conservation, public access
7	Barrio El Hoyo Historic District	Historic neighborhood (1908-1950)	Bounded by West Cushing Street, West 18th Street, South 11th Avenue, and South Samaniego Avenue, Tucson, AZ	SHPO	15 acres, NRHP-listed in 2008, Criterion A as an early garden neighborhood along the Santa Cruz River, Criterion C for its collection of residential structures built from 1908 to 1950 in the Sonoran style
8	Barrio El Membrillo Historic District	Historic neighborhood (1920s)	Bounded by West Granada Street, West Simpson Street, and right-of-way of former El Paso and Southwestern Railroad corridor, Tucson, AZ	SHPO	6 acres, NRHP-listed in 2009, Criterion A as a historic Hispanic neighborhood along the Santa Cruz River, Criterion C for its collection of residential structures built in the 1920s in the Sonoran style



Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
9	El Paso and Southwestern Railroad District	Historic linear corridor (1913), with a depot, a roundhouse, a yard office building, a livestock exchange building, and four bridges	419 West Congress Street, Tucson, AZ	SHPO	49-acre corridor, including railroad grade, depot building and roundhouse; District was determined eligible under Criterion A for association with railroad transportation and mining; Depot was NRHP-listed in 2004, Criterion A (same as District) and Criterion C for its Classical Revival style.
10	Menlo Park Historic District	Historic neighborhood (1877–1964)	Bounded around intersection of Grande Avenue and West Congress Street, Tucson, AZ	SHPO	232 acres, NRHP-listed in 2010, Criterion A as an Anglo-European/American neighborhood, Criterion C for its mix of Spanish Colonial Revival, Craftsman bungalow, prairie, post-World War II ranch, and Mid-Century Modern architectural styles
11	Levi H. Manning House	Historic site (1908)	9 Paseo Redondo, Tucson, AZ (in El Presidio Historic District)	SHPO	3 acres, NRHP-listed in 1979, Criterion C for its combination of southwestern styles and association with former Tucson Mayor Levi Manning and architect Henry Trost
12	El Presidio Historic District	Historic neighborhood (1860–1920)	Bounded by West 6th and West Alameda Streets, and North Stone and Granada Avenues, Tucson, AZ	SHPO	42 acres, NRHP-listed in 1976, Criterion A as originally an 18th Century Spanish village; subsequent Mexican village; Criterion C for architecture in Sonoran, Transitional, American Territorial, Mission Revival, and Craftsman Bungalow styles



Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
14	Barrio Anita Historic District	Historic neighborhood (1903)	Bounded by West Speedway Boulevard, Union Pacific Railroad, North Granada Avenue, and St. Mary's Road	SHPO	37 acres, NRHP-listed in 2011; Criterion A began as a Hispanic barrio in 1920, named after Annie Hughes, sister of Sam Hughes; Criterion C for architecture in Sonoran, Territorial, and Queen Anne styles
15	Ronstadt-Sims Adobe Warehouse	Historic site (1920)	911 North 13th Avenue, Tucson, AZ	SHPO	0.2 acre, NRHP-listed in 1989, Criterion A for agricultural association, Criterion C for post-railroad Sonoran style and engineering technology; non-contiguous contributor to John Spring Neighborhood District and John Spring Multiple Resource Area
16	USDA Tucson Plant Materials Center	Historic site (1934)	3241 North Romero Road, Tucson, AZ	SHPO	8 acres, NRHP-listed in 1997, Criterion A for its operation as a producer of nursery stock and seeds for regional soil stabilization and conservation projects
17	Cortaro Farms Canal/Cortaro-Marana Irrigation District Canal	Historic water conduit (1920)	Town of Marana, AZ	SHPO	12 miles, NRHP-eligible, Criterion A for its significant contribution to the expansion of irrigated agriculture in the region
18a	Los Robles Archaeological District	Archaeological site	Pima County	SHPO	13,298 acres, NRHP-listed, Criterion D for potential to yield archaeological information; not protected by Section 4(f)



Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
18b	Tucson Mountain Park Historic District	Historic district	Pima County	SHPO	28,708 acres, designed park landscape, and prehistoric sites; determined significant under Criterion A and C at the state level; property will be further assessed according to the NRHP and Section 4(f) criteria during Tier 2 studies
Pinal County					
19	Picacho Pass Skirmish Site--Overland Mail Company Stage Station	Historic battlefield and postal station (1858–1862)	Area around Picacho Peak, 1 mile northwest of I-10 Interchange 219	SHPO	724 acres, NRHP-listed in 2002, Criterion A for association with the Battle of Picacho Peak in 1862 and for one of the stations on the Butterfield Overland Mail stage route; open land with interpretive monuments and markers, portion of old mail route road
Maricopa County					
20	Southern Pacific Railroad – Phoenix Mainline (Wellton-Phoenix-Eloy Spur, AZ T:10:84(ASM)	Historic railroad (1926)	City of Buckeye, AZ	SHPO	205 miles, some segments are NRHP-eligible, Criterion A for its association with rail travel
21	Casa Grande Canal, AZ AA:3:209(ASM)	Historic site	Pinal County, AZ	SHPO	26 miles, NRHP-eligible, Criterion A for significance as water conduit
22	Gila Bend Canal, AZ Z:2:66(ASM)	Multi-component site	Maricopa County, AZ	SHPO	33 miles, NRHP-eligible, Criterion A for significance as water conduit



Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
23	Butterfield Overland Mail stage route (Gila Trail Archaeological Site, AZ T:15:32(ASM))	Historic road (1858–1861)	Segment north of Mobile; segment northeast of Gila Bend in Maricopa Mountain Pass/Butterfield Pass	SHPO	23 miles, NRHP-eligible, Criterion A for significance as remaining roadway components of the historic Butterfield postal delivery route
24	Wide Trail Site, AZ T:14:28(ASM)	Prehistoric trail with prehistoric Hohokam and Patayan pottery	Maricopa County, AZ	SHPO	NRHP-eligible, Criterion A and Criterion D for significance as prehistoric trail and artifacts
25	Three prehistoric trails, AZ T:14:94(ASM)	Prehistoric trails and rock cairns with Hohokam and Patayan artifacts	Maricopa County, AZ	SHPO	NRHP-eligible, Criterion A and Criterion D for significance as prehistoric trails and artifacts
26	Prehistoric artifacts and canal, AZ T:10:59(ASM)	Prehistoric canal with Hohokam artifacts	Maricopa County, AZ	SHPO	NRHP-eligible, Criterion A and Criterion D for significance as prehistoric canal and artifacts
27	Buckeye Canal, AZ T:10:82(ASM)	Historic site	Maricopa County, AZ	SHPO	4 miles, NRHP-eligible, Criterion A for significance as water conduit
28	Roosevelt Canal, AZ T:10:83(ASM)	Historic site	City of Buckeye, Maricopa County, AZ	SHPO	17 miles, NRHP-eligible, Criterion A for significance as water conduit
Yavapai County					
	None found				

SOURCES: ADOT 2017i. Cultural Resource Technical Report for the I-11 (Nogales to Wickenburg) Tier 1 EIS. Property acreages are based on GIS shapefiles and data available at the time of study.

1
2
3

1 4.6 Assessment of Use of Section 4(f) Properties

2 After identifying the Section 4(f) properties in the Corridor Study Area, FHWA determined
3 whether and to what extent each Build Corridor Alternative and the No Build Alternative has the
4 potential to incorporate land from each property. To make this determination, protected
5 properties were identified that are partially or entirely within the 2,000-foot-wide corridor of the
6 Build Corridor Alternatives.

7 Then FHWA examined the potential to implement the project within each Build Corridor
8 Alternative without permanently incorporating land from each protected property. In this
9 process, FHWA considered three methods to avoid permanently using each property. All three
10 methods would apply engineering design and consideration of other natural and built
11 environment opportunities and constraints, and are described as follows:

- 12 • **Accommodate in the corridor.** Provide an alignment within the 2,000-foot-wide corridor
13 that avoids the protected property.
- 14 • **Shift the corridor.** Shift the 2,000-foot-wide corridor away from the protected property to
15 accommodate the project without using land from the protected property.
- 16 • **Grade-separate the corridor.** In the case of linear properties (such as trails, historic canals,
17 and historic railroads), a 2,000-foot-wide corridor would cross over or under the protected
18 property (such as on an elevated structure or depressed roadway section) without using
19 land from the protected property.

20 FHWA also determined that, for some properties in the Corridor Study Area, no use would
21 occur. For all other properties protected by Section 4(f), the potential use of a protected property
22 is evaluated by defining the type of use according to the definitions and criteria described in the
23 Section 4(f) regulations (23 CFR 774 et seq.), as summarized in **Section 4.4.2**.

24 4.6.1 No Build Alternative (2040)

25 The No Build Alternative (2040) represents the existing transportation system, along with
26 committed improvement projects that are programmed for funding. Within the Corridor Study
27 Area, the *2018-2022 Five-Year Transportation Facilities Construction Program* (ADOT 2017a)
28 identified several capacity improvements programmed and funded for construction on the
29 interstate and state highway system within the Corridor Study Area by 2022. The No Build
30 Alternative (2040) includes new capacity (additional lanes) on I-10 between Tucson and Casa
31 Grande and conversion of US 93 to a four-lane divided highway for a 3-mile segment through
32 Wickenburg, as shown on Draft Tier 1 EIS **Figure 2-6**. Other improvements are programmed in
33 the following locations:

- 34 • I-10: SR 85 to Verrado Way (Maricopa County)
- 35 • I-10: Ina Road to Ruthrauff Road (Pima County)
- 36 • I-10: SR 87 to Picacho (Pinal County)



- 1 • I-10: Earley Road to I-8 (Pinal County)
- 2 • US 93: Tegner Drive to SR 89
- 3 The No Build Alternative (2040) will avoid the use of Section 4(f) properties.

4 **4.6.2 Build Corridor Alternatives – No Use**

5 **4.6.2.1 Section 4(f) Properties Outside Build Corridor Alternatives (No Use)**

6 There are 89 properties that fall within the Corridor Study Area but outside the 2,000-foot-wide
7 corridor of the Build Corridor Alternatives. These properties would not be directly used under
8 any alternative. **Table 4-3** lists these properties.

9 **Table 4-3. Section 4(f) Properties Outside the Build Corridor Alternatives Where**
10 **No Use Would Occur**

Number on Figure 4-6 through Figure 4-11	Property Name
Parks, Recreation Lands, Wildlife and Waterfowl Refuges	
2	Nogales Recreation Area and existing/planned critical habitat areas (portion of Coronado National Forest)
3	Tubac Presidio State Historic Park
5	Canoa Preserve Park
5a	Abrego Trailhead
6	Quail Creek-Veterans Municipal Park
7	Parque Los Arroyos
9	Sahuarita Lake Park
10	North Santa Cruz Park
11	Summit Park
12	Star Valley Park
13	Lawrence Park
14	Mission Ridge Park
15	Ebonee Marie Moody Park
17	Mission Manor Park
18	Command Sgt. Maj. Martin “Gunny” Barreras Park (formerly Sunnyside Park)
19	Branding Iron Park
20	Oak Tree Park
21	Winston Reynolds – Manzanita District Park
24	Robles Pass at Tucson Mountain Park
26	Tucson Mountain Park

Number on Figure 4-6 through Figure 4-11	Property Name
27	John F. Kennedy Park
28	St. John's School Skate Park
31a	Centro del Sur Community Center
32	Vista del Pueblo Park
33	Ormsby Park
34	Ochoa Park
35	Santa Rita Park
36	Tumamoc Hill Preserve
37	Sentinel Peak Park
38	Verdugo Park
39	Santa Rosa Park
40	Parque de Orlando y Diego Mendoza
43	Rosendo S. Perez Park
44	La Pilita
45	El Tiradito Wishing Shrine
47	La Placita Park
48	Veinte de Agosto Park
50	Sunset Park
51	El Presidio Park
52	Jácome Plaza
53	Christopher Franklin Carroll Centennial Park
54	Presidio San Augustin del Tucson
55	Alene Dunlap Smith Garden
58	Greasewood Park
60	Feliz Paseos Park
61	Joaquin Murrieta Park
63	Manuel Valenzuela Alvarez Park
64	Saguaro National Park
65	Juhan Park
66	Silverbell Golf Course
67	Jacobs Park
68	Sweetwater Preserve
70	Christopher Columbus Park
70a	Rillito Regional Park
71	Flowing Wells Park
72	Dan Felix Memorial Park (formerly Peglar Wash Park)



Number on Figure 4-6 through Figure 4-11	Property Name
75	Richardson Park
77	Ann Day Community Park (formerly Northwest Community Park)
78	Northwest YMCA Community Center
80	Denny Dunn Park
81	Crossroads at Silverbell District Park
82	Continental Reserve Community Park
82b	Cortaro Mesquite Bosque
82c	Los Morteros Conservation Area
83	Sunset Pointe Park
84	El Rio Park
84a	El Rio Preserve
86	Santa Cruz River Park
87	Ora Mae Harn Park
88	Tortolita Preserve
89	San Lucas Community Park
90	Anza Trail Park
90a	Segment of Tortolita CAP Trail
94	Butterfield Pass Trail segment
95	Arlington Wildlife Area
96	Powers Butte Wildlife Area
97a	Maricopa Trail (Existing route)
99	Sonoran Foothills Community Park
100	White Tank Mountain Regional Park
100a	Skyline Regional Park
101	Vulture Mine RMZ
103	Wishing Well Park
104	Hassayampa River Walk
105	Coffinger Park
106	Constellation Park
Historic Sites	
38	Tumamoc Hill Preserve
15	Ronstadt-Sims Adobe Warehouse
20	Southern Pacific Railroad – Phoenix Main Line (Wellton-Phoenix-Eloy Spur (AZ T:10:84(ASM)))

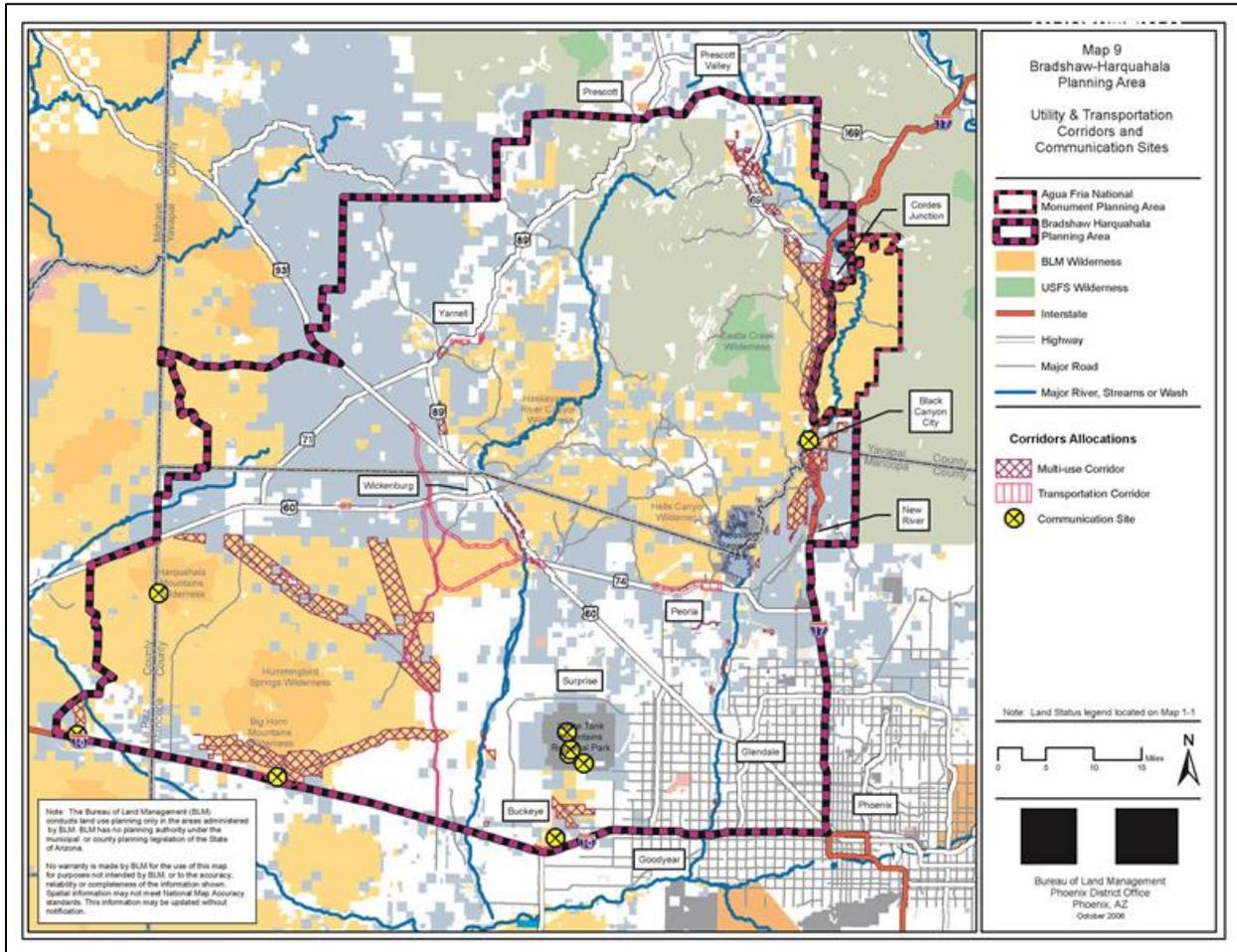
1 Among these properties is the BLM-owned Vulture Mine RMZ. BLM is the official with
2 jurisdiction over the property, which consists of approximately 70,000 acres south of
3 Wickenburg, Arizona. Activities on the land are guided by two primary planning documents: the
4 BLM *Bradshaw-Harquahala Resource Management Plan/Record of Decision* (BLM 2010) and
5 the *Vulture Mountains Cooperative Recreation Management Area Master Plan* (Maricopa
6 County 2012). The RMP is relevant to the I-11 Corridor Project because it identifies how and
7 where activities can occur on the Vulture Mine RMZ property; the Master Plan is relevant to the
8 I-11 Corridor Project because it provides the framework for implementing activities. The relevant
9 aspects of each plan are briefly described as follows:

- 10 • **Bradshaw-Harquahala RMP.** The RMP provides guidance to the BLM Hassayampa Field
11 Office regarding current and future management decisions for Vulture Mine RMZ. The RMP
12 designates a number of multi-use corridors, including the north-south multi-use corridor that
13 crosses the western portion of the Vulture Mine RMZ property (**Figure 4-12**). Multi-use
14 corridors are defined in the RMP as being for major utilities and regionally significant
15 transportation uses. The RMP specifies that BLM will coordinate with ADOT in advancing
16 such transportation uses in multi-use corridors.
- 17 • **Vulture Mountains Cooperative Recreation Management Area Master Plan.** The Master
18 Plan established public policies regarding recreational use, land management, and
19 supporting facility development on the property (**Figure 4-13**). The Master Plan is intended
20 to guide land managers as decisions are made for recreation uses of the public lands within
21 the property, as well as for the provision of public facilities on public lands within the
22 property.

23 FHWA has determined on the basis of the RMP that Section 4(f) does not apply to the multi-use
24 corridor that crosses the Vulture Mine RMZ because the purpose of the multi-use corridor is to
25 co-locate utilities and transportation infrastructure (**Figure 4-13**). BLM concurred with FHWA's
26 determination on April 30, 2018 (**Appendix F3** [Correspondence Related to Preliminary Section
27 4(f) Evaluation]).

28 FHWA, ADOT, and BLM initiated coordination regarding Vulture Mine RMZ during scoping for
29 the I-11 Corridor Project. During development and evaluation of the alternative corridors, FHWA
30 and ADOT continued to coordinate with BLM in regard to Vulture Mine RMZ. In this
31 coordination, corridor alignments inside and outside the multi-use corridor were discussed. BLM
32 discouraged alignments across the property and outside the multi-use corridor, noting the
33 mission of the property to protect natural resources and provide recreation opportunities (refer
34 to the BLM correspondence in **Appendix F3** [Correspondence Related to Preliminary Section
35 4(f) Evaluation]).

36



1

2 SOURCE: BLM, Bradshaw-Harquahala Resource Management Plan/Record of Decision. April 22, 2010.

3

Figure 4-12. Bradshaw-Harquahala Planning Area Map

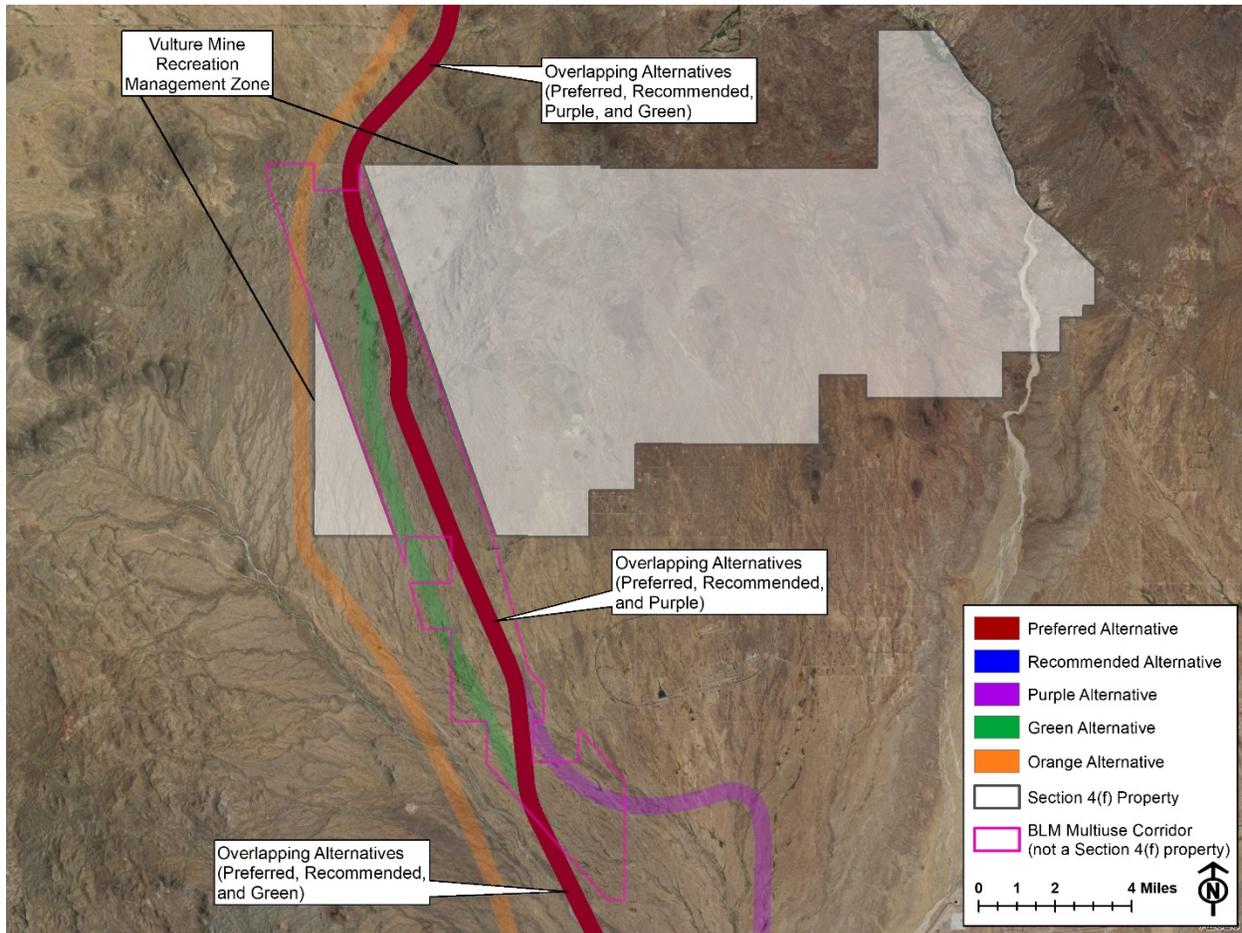


Figure 4-13. Build Corridor Alternatives near Vulture Mine RMZ

Through coordination with BLM, FHWA and ADOT developed Options X and U, corridor options that would be located within the multi-use corridor across the Vulture Mine RMZ property. Options X and U, when applied to the Preferred, Recommended, Purple, and Green Alternatives, would provide the opportunity for these alternatives to avoid a use of the Vulture Mine RMZ. In addition, and consistent with 23 CFR 774.7(e)(1), opportunities to minimize harm to the property at subsequent stages in the project development process (for example, Tier 2), are not precluded. At this preliminary level of planning, FHWA and ADOT have identified no engineering or environmental constraints that would obstruct or preclude the ability to provide a highway alignment that achieves general engineering design standards in the multi-use corridor. As a result of being able to avoid Vulture Mine RMZ, no use of the property as defined by Section 4(f) would occur as a result of the I-11 Corridor Project.

The Orange Alternative (Option S) would be aligned west of and adjacent to the Vulture Mine RMZ property such that no use of the Vulture Mine RMZ property would occur. BLM stated its preference for Option S in its April 30, 2018, letter to FHWA (**Appendix F3** [Correspondence Related to Preliminary Section 4(f) Evaluation]). Consistent with 23 CFR 774.7(e)(1), opportunities to minimize harm to the property at subsequent stages in the project development process (for example, Tier 2) are not precluded. At this preliminary level of planning, FHWA and ADOT have identified no engineering or environmental constraints that would obstruct or

1 preclude the ability to provide a highway alignment that achieves general engineering design
2 standards west of and adjacent to the Vulture Mine RMZ property.

3 **4.6.2.2 Section 4(f) Properties in Build Corridors**

4 There are 55 properties partially or entirely within one or more Build Corridor Alternatives (**Table**
5 **4-4**). The following terms are used in **Table 4-4** and **Table 4-5**:

- 6 • **Outside corridor.** The property is entirely outside the 2,000-foot-wide corridors.
- 7 • **In corridor.** The property is entirely within the 2,000-foot-wide corridor.
- 8 • **Mostly in corridor.** The property is mostly within the 2,000-foot-wide corridor; a
9 comparatively small part of the property is outside the 2,000-foot-wide corridor
- 10 • **Partially in corridor.** The property is partly within the 2,000-foot-wide corridor; most of the
11 property is outside the 2,000-foot-wide corridor.
- 12 • **Crosses corridor.** The property is linear in shape and is partly in the 2,000-foot-wide
13 corridor as it crosses from one side of the corridor to the other.

14 The acreage of each property in a corridor is quantified along with the percentage of the total
15 property in the corridor. **Figure 4-14** through **Figure 4-19** show the locations of the properties in
16 relation to the Build Corridor Alternatives.

17 The potential for use of Section 4(f) properties prompted FHWA and ADOT to assess whether,
18 by using typical construction techniques and the findings of the Final Tier 1 EIS, permanent
19 incorporation of land from the protected property can be avoided by alignment shifts and design
20 changes described in this section. An alignment shift is the rerouting of a portion of I-11 to a
21 different alignment within the 2,000-foot-wide corridor to avoid the potential use of a specific
22 property. A design change is a modification of the proposed design in a manner that would
23 avoid impacts.

24 This assessment was performed in accordance with the regulations of Section 4(f) regarding
25 first-tier analysis (23 CFR 774.7(e)(1)). Specifically, FHWA and ADOT “applied all possible
26 planning to minimize harm to the extent that the level of detail available at the first-tier EIS stage
27 allows” in order for a preliminary Section 4(f) approval to be made.

28 In this assessment, FHWA and ADOT evaluated the three methods described at the beginning
29 of **Section 4.6** to avoid Section 4(f) properties: accommodate in the corridor, shift the corridor,
30 and grade-separate the corridor.

31 The results of this evaluation are summarized in **Table 4-5** and are described in the subsections
32 that follow the table.

33 The Section 4(f) properties listed in **Table 4-5** that are to be avoided may be impacted if
34 additional Section 4(f) properties are discovered during Tier 2 studies.

35

Table 4-4. Section 4(f) Properties in the Build Corridor Alternatives (Potential Use)

Map #	Property Name	Property Area/Percent Inside Corridor (acres or miles [%])						Existing Property Acreage (length for trails/ greenways)	Description of Potential Impact (Applicable Alternative)
		Recommended Alternative	Preferred Alternative with West Option	Preferred Alternative with East Option	Purple Alternative	Green Alternative	Orange Alternative		
Parks, Recreation Areas, and Wildlife and Waterfowl Areas									
Multiple Counties									
1	Juan Bautista de Anza National Historic Trail	0.6 mile (<1%)	0.6 mile (<1%)	4.3 miles (4%)	0.6 mile (<1%)	0.6 mile (<1%)	4.2 miles (3%)	121.4 miles	Crosses corridor (Preferred west option and Recommended) or partially in corridor (Preferred east option, Purple, Green, and Orange)
Pima County									
8	Anamax Park	22.0 acres (60%)	22.0 acres (60%)	28.7 acres (79%)	0 acres	32.2 acres (88%)	28.7 acres (79%)	36.5 acres	Mostly in corridor (Preferred west option, Preferred east option, Recommended, Green, and Orange)
16	Pima Community College, Desert Vista Campus	0 acres	0 acres	4.5 acres (100%)	0 acres	0 acres	4.5 acres (100%)	4.5 acres	In corridor (Preferred east option and Orange)
22	Tucson Mitigation Corridor	565.9 acres (23%)	565.9 acres (23%)	0 acres	453.1 acres (18%)	452.3 acres (18%)	0 acres	2,514 acres	Partially in corridor (Preferred west option, Recommended, Purple, and Green)
23	Santa Cruz River Park	0 acres	0 acres	131.3 acres (28%)	0 acres	0 acres	131.3 acres (28%)	468.6 acres	Partially in corridor (Preferred east option and Orange)
25	La Mar Park	0 acres	0 acres	3.2 acres (100%)	0 acres	0 acres	3.2 acres (100%)	3.2 acres	Mostly in corridor (Preferred east option and Orange)
29	Julian Wash Greenway	0 miles	0 miles	0.6 mile (75%)	0 miles	0 miles	0.6 mile (75%)	0.8 mile	Partially in corridor (Preferred east option and Orange)
30	Julian Wash Archaeological Park	0 acres	0 acres	15.8 acres (98%)	0 acres	0 acres	15.8 acres (98%)	16.2 acres	Mostly in corridor (Preferred east option and Orange)
31	El Paso and Southwestern Greenway (Planned Trail)	0 miles	0 miles	2.1 miles (62%)	0 miles	0 miles	2.1 miles (62%)	3.4 miles	Mostly in corridor (Preferred east option and Orange)
41	El Paso and Southwestern Greenway (Existing Trail)	0 miles	0 miles	0.1 mile (100%)	0 miles	0 miles	0.1 mile (100%)	0.1 mile	Crosses corridor (Preferred east option and Orange)
42	El Parque de San Cosme	0 acres	0 acres	0.8 acre (100%)	0 acres	0 acres	0.8 acre (100%)	0.8 acre	In corridor (Preferred east option and Orange)
46	Gethsemane Garden of Prayer	0 acres	0 acres	1.3 acres (100%)	0 acres	0 acres	1.3 acres (100%)	1.3 acres	In corridor (Preferred east option and Orange)
49	Bonita Park	0 acres	0 acres	1.4 acres (100%)	0 acres	0 acres	1.4 acres (100%)	1.4 acres	In corridor (Preferred east option and Orange)
56, 57	David G. Herrera and Ramon Quiroz Park (formerly Oury Park)	0 acres	0 acres	6.6 acres (100%)	0 acres	0 acres	6.6 acres (100%)	6.6 acres	Partially in corridor (Preferred east option and Orange)
59	Estevan Park	0 acres	0 acres	2.3 acres (27%)	0 acres	0 acres	2.3 acres (27%)	8.2 acres	Partially in corridor (Preferred east option and Orange)
62	Francesco Elias Esquer Park	0 acres	0 acres	0.9 acre (14%)	0 acres	0 acres	0.9 acre (14%)	6.3 acres	Partially in corridor (Preferred east option and Orange)
69	Sweetwater Wetlands Park	0 acres	0 acres	0.9 acre (2%)	0 acres	0 acres	0.9 acre (2%)	58.3 acres	Partially in corridor (Preferred east option and Orange)
73	Pima Prickly Park	0 acres	0 acres	7.8 acres (20%)	0 acres	0 acres	7.8 acres (20%)	40.1 acres	Partially in corridor (Preferred east option and Orange)
74	Rillito River Park	0 acres	0 acres	4.6 acres (73%)	0 acres	0 acres	4.6 acres (73%)	6.3 acres	Mostly in corridor (Preferred east option and Orange)
74a	Camino de la Tierra Trailhead	0 acres	0 acres	7.7 acres (84%)	0 acres	0 acres	7.7 acres (84%)	9.1 acres	Partially in corridor (Preferred east option and Orange)
76	Ted Walker Park	0 acres	0 acres	3.2 acres (100%)	0 acres	0 acres	3.2 acres (100%)	3.2 acres	Partially in corridor (Preferred east option and Orange)
76a	Mike Jacob Sports Park	0 acres	0 acres	36.9 acres (52%)	0 acres	0 acres	36.9 acres (52%)	70.7 acres	Partially in corridor (Preferred east option and Orange)
79	Cañada del Oro (Christina-Taylor Green Memorial River Park)	0 acres	0 acres	1.5 acres (6%)	0 acres	0 acres	1.5 acres (6%)	26.1 acres	Partially in corridor (Preferred east option and Orange)
85	Rillito Vista Neighborhood Park	0 acres	0 acres	1.7 acres (100%)	0 acres	0 acres	1.7 acres (100%)	1.7 acres	In corridor (Preferred east option and Orange)
89	San Lucas Community Park	0 acres	0 acres	4.9 acres (37%)	0 acres	0 acres	4.9 acres (37%)	13.2 acres	Partially in corridor (Preferred east option and Orange)
Pinal County									
91	Picacho Peak State Park	0 acres	0 acres	0 acres	227.9 acres (6%)	0 acres	227.9 acres (6%)	3,726.3 acres	Partially in corridor (Purple and Orange)

Map #	Property Name	Property Area/Percent Inside Corridor (acres or miles [%])						Existing Property Acreage (length for trails/ greenways)	Description of Potential impact (Applicable Alternative)
		Recommended Alternative	Preferred Alternative with West Option	Preferred Alternative with East Option	Purple Alternative	Green Alternative	Orange Alternative		
92	West Pinal (Kortsen) Park	0 acres	0 acres	0 acres	0 acres	0 acres	47.5 acres (38%)	123.4 acres	Partially in corridor (Orange)
93	Palo Verde Regional Park (Pinal County Parks)	62.6 acres (<1%)	62.6 acres (<1%)	62.6 acres (<1%)	305.1 acres (1%)	305.1 acres (1%)	427.3 acres (2%)	22,810.6 acres for recreation	Partially in corridor (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)
Maricopa County									
97	Buckeye Hills Regional Park	0 acres	184.4 acres (4%)	184.4 acres (4%)	0 acres	184.4 acres (4%)	345.4 acres (7%)	4,648.4 acres	Partially in corridor (Preferred west option, Preferred east option, Green, and Orange)
97b	Maricopa Trail (Planned route)	0.6 linear foot (2%)	1.2 linear feet (5%)	1.2 linear feet (5%)	1.2 linear feet (5%)	1.2 linear feet (5%)	0.6 linear foot (2%)	25.5 linear feet	Crosses corridor (Preferred west option, Preferred east option, Purple, Green, and Orange)
98	Robbins Butte Wildlife Area	328.7 acres (6%)	328.7 acres (6%)	328.7 acres (6%)	0 acres	328.7 acres (6%)	328.7 acres (6%)	5,676.4 acres	Recommended, Preferred west option, Preferred east option, Green, and Orange Alternatives can likely be accommodated within existing SR 85 right-of-way
98a	Public Land Order 1015 Lands and adjacent AGFD Parcels	42 acres (0.6%)	32 acres (0.5%)	32 acres (0.5%)	42 acres (0.6%)	32 acres (0.5%)	32 acres (0.5%)	6,906 acres	Preferred west option, Preferred east option, Green, or Orange Alternatives can likely be accommodated within existing SR 85 right-of-way; Recommended or Purple are a new crossing
Historic Sites									
Multiple Counties									
13	Southern Pacific Railroad – Phoenix Mainline (Wellton-Phoenix-Eloy Spur (AZ T:10:84(ASM)))	0.6 mile (1%)	0.4 mile (<1%)	0.4 mile (<1%)	0.6 mile (1%)	0.6 mile (1%)	0.4 mile (<1%)	110.8 miles	Partially in corridor (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)
18	Arizona Southern Railroad Company – railroad grade AZ AA:10:19(ASM)	0.5 mile (3%)	0.4 mile (2%)	0.1 mile (1%)	0.1 mile (1%)	0.5 mile (3%)	0.1 mile (1%)	17.3 miles	Partially in corridor (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)
Santa Cruz County									
1	New Mexico and Arizona Railroad: Nogales Branch, AZ EE:4:43(ASM)	1.6 acres (<1%)	1.6 acres (<1%)	1.6 acres (<1%)	1.6 acres (<1%)	1.6 acres (<1%)	1.6 acres (<1%)	340.1 acres	Partially in corridor (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)
2	Otero Cemetery, near Palo Parado interchange, AZ DD:8:165(ASM)	0.2 acre (100%)	0.2 acre (100%)	0.2 acre (100%)	0.2 acre (100%)	0.2 acres (100%)	0.2 acre (100%)	0.2 acre	In corridor (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)
3, 4	Tumacácori National Monument and Museum (Tumacácori National Historic Park)	6.2 acres (23%)	6.2 acres (23%)	6.2 acres (23%)	6.2 acres (23%)	6.2 acres (23%)	6.2 acres (23%)	26.6 acres	Partially in corridors (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)
Pima County									
5	Canoa Ranch Rural Historic District (Hacienda de la Canoa, Raul M. Grijalva Canoa Ranch Conservation Park and Canoa Ranch Rural Historic District)	443.9 acres (9%)	443.9 acres (9%)	443.9 acres (9%)	0 acres	443.9 acres (9%)	443.9 acres (9%)	4,951.8 acres	Partially in corridor (Preferred west option, Preferred east option, Recommended, Green, and Orange)
6	San Agustin del Tucson Mission site, AZ BB:13:6(ASM)	0 acres	0 acres	6.2 acres (3%)	0 acres	0 acres	6.2 acres (3%)	194.3 acres	Partially in corridor (Preferred east option and Orange)
7	Barrio El Hoyo Historic District	0 acres	0 acres	7.5 acres (50%)	0 acres	0 acres	7.5 acres (50%)	15.1 acres	Partially in corridor (Preferred east option and Orange)
8	Barrio El Membrillo Historic District	0 acres	0 acres	5.8 acres (100%)	0 acres	0 acres	5.8 acres (100%)	5.8 acres	In corridor (Preferred east option and Orange)
9	El Paso and Southwestern Railroad District	0 acres	0 acres	42.4 acres (87%)	0 acres	0 acres	42.4 acres (87%)	48.9 acres	Mostly in corridor (Preferred east option and Orange)
10	Menlo Park Historic District	0 acres	0 acres	3.3 acres (1%)	0 acres	0 acres	3.3 acres (1%)	231.9 acres	Partially in corridor (Preferred east option and Orange)
11	Levi H. Manning House	0 acres	0 acres	3.0 acres (100%)	0 acres	0 acres	3.0 acres (100%)	3.0 acres	In corridor (Preferred east option and Orange)

Map #	Property Name	Property Area/Percent Inside Corridor (acres or miles [%])						Existing Property Acreage (length for trails/ greenways)	Description of Potential impact (Applicable Alternative)
		Recommended Alternative	Preferred Alternative with West Option	Preferred Alternative with East Option	Purple Alternative	Green Alternative	Orange Alternative		
12	El Presidio Historic District	0 acres	0 acres	2.6 acres (6%)	0 acres	0 acres	2.6 acres (6%)	42.4 acres	Partially in corridor (Preferred east option and Orange)
14	Barrio Anita Historic District	0 acres	0 acres	36.7 acres (100%)	0 acres	0 acres	36.7 acres (100%)	36.8 acres	Partially in corridor (Preferred east option and Orange)
16	USDA Tucson Plant Materials Center	0 acres	0 acres	5.8 acres (69%)	0 acres	0 acres	5.8 acres (69%)	8.4 acres	Partially in corridor (Preferred east option and Orange)
17	Cortaro Farms Canal/Cortaro-Marana Irrigation District Canal	0.2 mile	0 acres	10.0 miles (80%)	0.2 mile (2%)	0 miles	10.0 miles (80%)	12.5 miles	Crosses corridor (Purple); partially within corridor (Preferred east option and Orange)
Pinal County									
19	Picacho Pass Skirmish Site--Overland Mail Company Stage Station	0 acres	0 acres	34.8 acres (5%)	34.8 acres (5%)	0 acres	34.8 acres (5%)	724.0 acres	Partially in corridor (Preferred east option, Purple and Orange)
Maricopa County									
21	Casa Grande Canal, AZ AA:3:209(ASM)	1.7 mile (7%)	0 miles	0 miles	0.7 mile (3%)	1.7 mile (7%)	0.7 mile (3%)	25.8 miles	Partially in corridor (Recommended, Purple, Green, and Orange)
22	Gila Bend Canal, AZ Z:2:66(ASM)	0 miles	0 miles	0 miles	0 miles	0 miles	1 mile (3%)	33.3 miles	Crosses corridor (Orange)
23	Butterfield Overland Mail stage route (Gila Trail Archaeological Site (AZ T:15:32(ASM)))	0.4 mile (2%) / 0 acres	0.4 mile (2%) / 0 acres	0.4 mile (2%) / 0 acres	0.4 mile (2%) / 0 acres	0.4 mile (2%) / 0 acres	0.4 mile (2%) / 3.7 acres (89%)	23.4 miles / 4.1 acres	Crosses corridor (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)
24	Wide Trail Site, AZ T:14:28(ASM)	0 acres	0 acres	0 acres	0 acres	0 acres	6.8 acres (98%)	6.9 acres	Mostly in corridor (Orange)
25	Three prehistoric trails, AZ T:14:94(ASM)	0 acres	0 acres	0 acres	0 acres	0 acres	3.1 acres (98%)	3.1 acres	Mostly in corridor (Orange)
26	Prehistoric artifacts and canal, AZ T:10:59(ASM)	0 acres	1.6 acres (29%)	1.6 acres (29%)	0 acres	1.6 acres (29%)	1.6 acres (29%)	5.6 acres	Partially in corridor (Preferred west option, Preferred east option, Green, and Orange)
27	Buckeye Canal, AZ T:10:82(ASM)	0.7 mile (16%)	0.4 mile (9%)	0.4 mile (9%)	0.7 mile (16%)	0.7 mile (16%)	0.4 mile (9%)	4.4 miles	Crosses corridor (Orange); partially in corridor (Preferred west option, Preferred east option, Recommended, Purple, and Green)
28	Roosevelt Canal, AZ T:10:83(ASM)	0 miles	0.8 mile (5%)	0.8 mile (5%)	0 miles	0 miles	0.8 mile (5%)	16.8 miles	Crosses corridor (Preferred west option, Preferred east option, and Orange)

1 SOURCE: AECOM. 2020. GIS Analysis. I-11 Section 4(f) Property Export into Excel and Impact Analysis. December 4, 2020.
 2 Note: Property acreages are based on GIS shapefiles and data available at the time of study.
 3



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Table 4-5. Summary of Use by Build Corridor Alternatives

Map #	Property Name	Summary of Use Findings						Description of Potential impact (Applicable Alternative Corridor)
		Recommended Alternative	Preferred Alternative with West Option	Preferred Alternative with East Option	Purple Alternative	Green Alternative	Orange Alternative	
Parks, Recreation Areas, and Wildlife and Waterfowl Areas								
Multiple Counties								
1	Juan Bautista de Anza National Historic Trail	No use – grade-separate	No use – grade-separate	No use – accommodate	No use – grade-separate	No use – accommodate	No use – accommodate	Crosses corridor (Preferred west option and Recommended) or partially in corridor (Preferred east option, Purple, Green, and Orange)
Pima County								
8	Anamax Park	No use – shift corridor	No use – shift corridor	No use – shift corridor	No use – outside corridor	No use – shift corridor	No use – shift corridor	Mostly in corridor (Preferred west option, Preferred east option, Recommended, Green, and Orange can accommodate Anamax Park as a result of the shift)
16	Pima Community College, Desert Vista Campus	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	In corridor (Preferred east option and Orange)
22	Tucson Mitigation Corridor	Use	Use	No use – outside corridor	Use	Use	No use – outside corridor	Partially in corridor (Preferred west option, Recommended, Purple, and Green)
23	Santa Cruz River Park	No use – outside corridor	No use – outside corridor	Potential use	No use – outside corridor	No use – outside corridor	Potential use	Partially in corridor (Preferred east option and Orange)
25	La Mar Park	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Mostly in corridor (Preferred east option and Orange)
29	Julian Wash Greenway	No use – outside corridor	No use – outside corridor	No use – grade-separate	No use – outside corridor	No use – outside corridor	No use – grade-separate	Partially in corridor (Preferred east option and Orange)
30	Julian Wash Archaeological Park	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Mostly in corridor (Preferred east option and Orange)
31	El Paso and Southwestern Greenway (Planned Trail)	No use – outside corridor	No use – outside corridor	Potential use	No use – outside corridor	No use – outside corridor	Potential use	Mostly in corridor alongside I-10 (Preferred east option and Orange)
41	El Paso and Southwestern Greenway (Existing Trail)	No use – outside corridor	No use – outside corridor	No use – grade-separate	No use – outside corridor	No use – outside corridor	No use – grade-separate	Crosses corridor (Preferred east option and Orange)
42	El Parque de San Cosme	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	In corridor (Preferred east option and Orange)
46	Gethsemane Garden of Prayer	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	In corridor (Preferred east option and Orange)
49	Bonita Park	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	In corridor (Preferred east option and Orange)
56, 57	David G. Herrera and Ramon Quiroz Park (formerly Oury Park)	No use – outside corridor	No use – outside corridor	Potential use	No use – outside corridor	No use – outside corridor	Potential use	In corridor (Preferred east option and Orange)
59	Estevan Park	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Preferred east option and Orange)
62	Francesco Elias Esquer Park	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Preferred east option and Orange)
69	Sweetwater Wetlands Park	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Preferred east option and Orange)
73	Pima Prickly Park	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Preferred east option and Orange)

Map #	Property Name	Summary of Use Findings						Description of Potential impact (Applicable Alternative Corridor)
		Recommended Alternative	Preferred Alternative with West Option	Preferred Alternative with East Option	Purple Alternative	Green Alternative	Orange Alternative	
74	Rillito River Park	No use – outside corridor	No use – outside corridor	No use – accommodate; grade-separate	No use – outside corridor	No use – outside corridor	No use – accommodate; grade-separate	Mostly in corridor (Preferred east option and Orange)
74a	Camino de la Tierra Trailhead	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Mostly in corridor (Preferred east option and Orange)
76	Ted Walker Park	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Preferred east option and Orange)
76a	Mike Jacob Sports Park	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Mostly in corridor (Preferred east option and Orange)
79	Cañada del Oro (Christina-Taylor Green Memorial River Park)	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Preferred east option and Orange)
85	Rillito Vista Neighborhood Park	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	In corridor (Preferred east option and Orange)
89	San Lucas Community Park	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Preferred east option and Orange)
Pinal County								
91	Picacho Peak State Park	No use – outside corridor	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – accommodate	Partially in corridors (Purple and Orange)
92	West Pinal (Kortsen) Park	No use – outside corridor	No use – outside corridor	No use – outside corridor	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Orange)
93	Palo Verde Regional Park (Pinal County Parks)	No use – shift corridor; grade separate	No use – shift corridor; grade separate	No use – shift corridor; grade separate	No use – shift corridor; grade separate	No use – shift corridor; grade separate	No use – accommodate	Crosses corridor (Preferred west option, Preferred east option, Recommended, Purple, and Green), partially in corridor (Orange)
Maricopa County								
97	Buckeye Hills Regional Park	No use – outside corridor	No use – accommodate	No use – accommodate	No use – outside corridor	No use – accommodate	No use – accommodate	Partially in corridor (Preferred west option, Preferred east option, Green, and Orange)
97b	Maricopa Trail (Planned route)	No use – grade-separate	No use – grade-separate	No use – grade-separate	No use – grade-separate	No use – grade-separate	No use – grade-separate	Crosses corridor (Preferred west option, Preferred east option, Purple, Green, and Orange)
98	Robbins Butte Wildlife Area	No use, or possible <i>de minimis</i> use	No use, or possible <i>de minimis</i> use	No use, or possible <i>de minimis</i> use	No use – outside corridor	No use, or possible <i>de minimis</i> use	No use, or possible <i>de minimis</i> use	Partially in corridor (Recommended, Preferred west option, Preferred east option, Green, and Orange Alternatives can likely be accommodated within existing SR 85 right-of-way); outside corridor (Purple)
98a	Public Land Order 1015 lands and adjacent AGFD Parcels	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	Partially in corridor (Preferred, Recommended, Green, and Orange Alternatives can likely be accommodated within existing SR 85 right-of-way); partially in corridor (Purple is a new crossing)
Historic Sites								
Multiple Counties								
13	Southern Pacific Railroad – Phoenix Mainline (Welton-Phoenix-Eloy Spur (AZ T:10:84(ASM)))	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	Partially in corridor (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)

Map #	Property Name	Summary of Use Findings						Description of Potential impact (Applicable Alternative Corridor)
		Recommended Alternative	Preferred Alternative with West Option	Preferred Alternative with East Option	Purple Alternative	Green Alternative	Orange Alternative	
18	Arizona Southern Railroad Company – railroad grade AZ AA:10:19(ASM)	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	Partially in corridor (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)
Santa Cruz County								
1	New Mexico and Arizona Railroad: Nogales Branch, AZ EE:4:43(ASM)	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	Partially in corridor (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)
2	Otero Cemetery, near Palo Parado interchange, AZ DD:8:165(ASM)	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	In corridor (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)
3, 4	Tumacácori National Monument and Museum (Tumacácori National Historic Park)	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	No use – accommodate	Partially in corridor (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)
5	Canoa Ranch Rural Historic District (Hacienda de la Canoa, Raul M. Grijalva Canoa Ranch Conservation Park and Canoa Ranch Rural Historic District)	No use – accommodate	No use – accommodate	No use – accommodate	No use – outside corridor	No use – accommodate	No use – accommodate	Partially in corridor (Preferred west option, Preferred east option, Recommended, Green, and Orange)
6	San Agustin del Tucson Mission site, AZ BB:13:6(ASM)	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Preferred east option and Orange)
7	Barrio El Hoyo Historic District	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Preferred east option and Orange)
8	Barrio El Membrillo Historic District	No use – outside corridor	No use – outside corridor	Potential use	No use – outside corridor	No use – outside corridor	Potential use	In corridor (Preferred east option and Orange)
9	El Paso and Southwestern Railroad District	No use – outside corridor	No use – outside corridor	Potential use	No use – outside corridor	No use – outside corridor	Potential use	Mostly in corridor (Preferred east option and Orange)
10	Menlo Park Historic District	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Preferred east option and Orange)
11	Levi H. Manning House	No use – outside corridor	No use – outside corridor	Potential use	No use – outside corridor	No use – outside corridor	Potential use	In corridor (Preferred east option and Orange)
12	El Presidio Historic District	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Preferred east option and Orange)
14	Barrio Anita Historic District	No use – outside corridor	No use – outside corridor	Potential use	No use – outside corridor	No use – outside corridor	Potential use	Partially in corridor (Preferred east option and Orange)
16	USDA Tucson Plant Materials Center	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – outside corridor	No use – outside corridor	No use – accommodate	Partially in corridor (Preferred east option and Orange)
17	Cortaro Farms Canal/Cortaro-Marana Irrigation District Canal	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – grade-separate	No use – outside corridor	No use – accommodate	Crosses corridor (Purple); partially within corridor (Preferred east option and Orange)
Pinal County								
19	Picacho Pass Skirmish Site--Overland Mail Company Stage Station	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – accommodate	No use – outside corridor	No use – accommodate	Partially in corridors (Preferred east option, Purple, and Orange)

Map #	Property Name	Summary of Use Findings						Description of Potential impact (Applicable Alternative Corridor)
		Recommended Alternative	Preferred Alternative with West Option	Preferred Alternative with East Option	Purple Alternative	Green Alternative	Orange Alternative	
Maricopa County								
21	Casa Grande Canal, AZ AA:3:209(ASM)	No use – grade-separate	No use – outside corridor	No use – outside corridor	No use – accommodate	No use – accommodate	No use – accommodate	Partially in corridor (Recommended, Purple, Green, and Orange)
22	Gila Bend Canal, AZ Z:2:66(ASM)	No use – outside corridor	No use – outside corridor	No use – outside corridor	No use – grade-separate	No use – outside corridor	No use – grade-separate	Crosses corridor (Orange)
23	Butterfield Overland Mail stage route (Gila Trail Archaeological Site (AZ T:15:32(ASM)))	No use – grade-separate	No use – grade-separate	No use – grade-separate	No use – grade-separate	No use – grade-separate	No use – grade-separate	Crosses corridor (Preferred west option, Preferred east option, Recommended, Purple, Green, and Orange)
24	Wide Trail Site, AZ T:14:28(ASM)	No use – outside corridor	No use – outside corridor	No use – outside corridor	No use – outside corridor	No use – outside corridor	No use – grade-separate	Mostly in corridor (Orange)
25	Three prehistoric trails, AZ T:14:94(ASM)	No use – outside corridor	No use – outside corridor	No use – outside corridor	No use – outside corridor	No use – outside corridor	No use – accommodate	Mostly in corridor (Orange)
26	Prehistoric artifacts and canal, AZ T:10:59(ASM)	No use – outside corridor	No use – accommodate	No use – accommodate	No use – outside corridor	No use – accommodate	No use – accommodate	Partially in corridor (Preferred west option, Preferred east option, Green, and Orange)
27	Buckeye Canal, AZ T:10:82(ASM)	No use – grade-separate	No use – grade-separate	No use – grade-separate	No use – grade-separate	No use – grade-separate	No use – grade-separate	Crosses corridor (Recommended, Preferred, Purple, Green, Orange) can likely grade-separate
28	Roosevelt Canal, AZ T:10:83(ASM)	No use – outside corridor	No use – grade-separate	No use – grade-separate	No use – outside corridor	No use – outside corridor	No use – grade-separate	Crosses corridor (Preferred west option, Preferred east option, and Orange)

1 SOURCE: AECOM. 2020. GIS Analysis. I-11 Section 4(f) Property Export into Excel and Impact Analysis. December 4, 2020.

2 NOTES:

3 Accommodate in the corridor – Provide space for a minimum of a 400-foot-wide linear roadway right-of-way within the 2,000-foot-wide corridor of a Build Corridor Alternative while avoiding the protected property.

4 Shift the corridor – Shift the 2,000-foot-wide corridor away from the protected property in order to accommodate the project and avoid the protected property.

5 Grade-separate the corridor – The corridor would cross over or under the protected property (such as on an elevated structure or depressed roadway section) to avoid the protected property.

6 Grey shading indicates a potential use of a property by a Build Corridor Alternative.

7

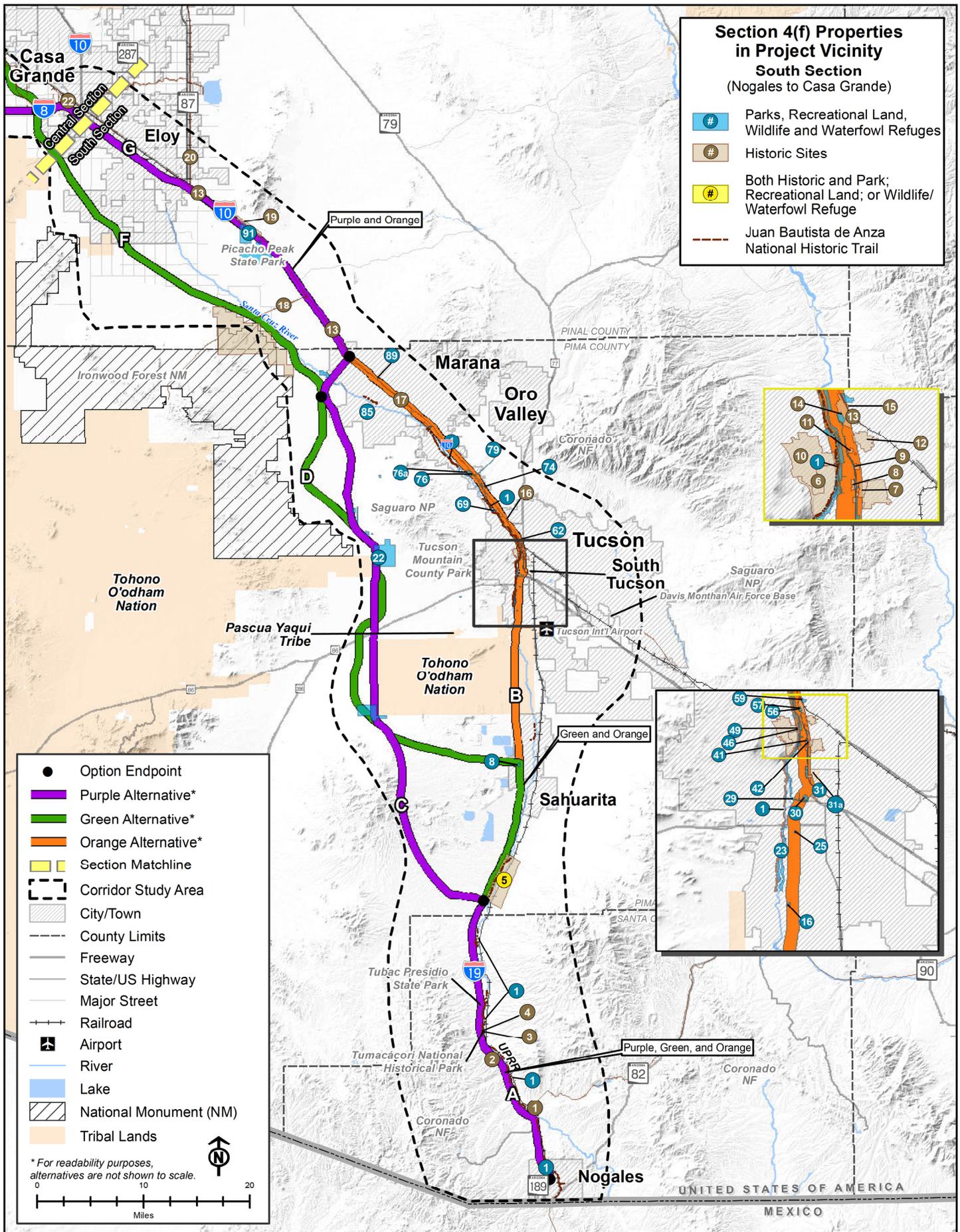


Figure 4-14. Section 4(f) Properties - Purple, Green, and Orange Alternatives - South Section

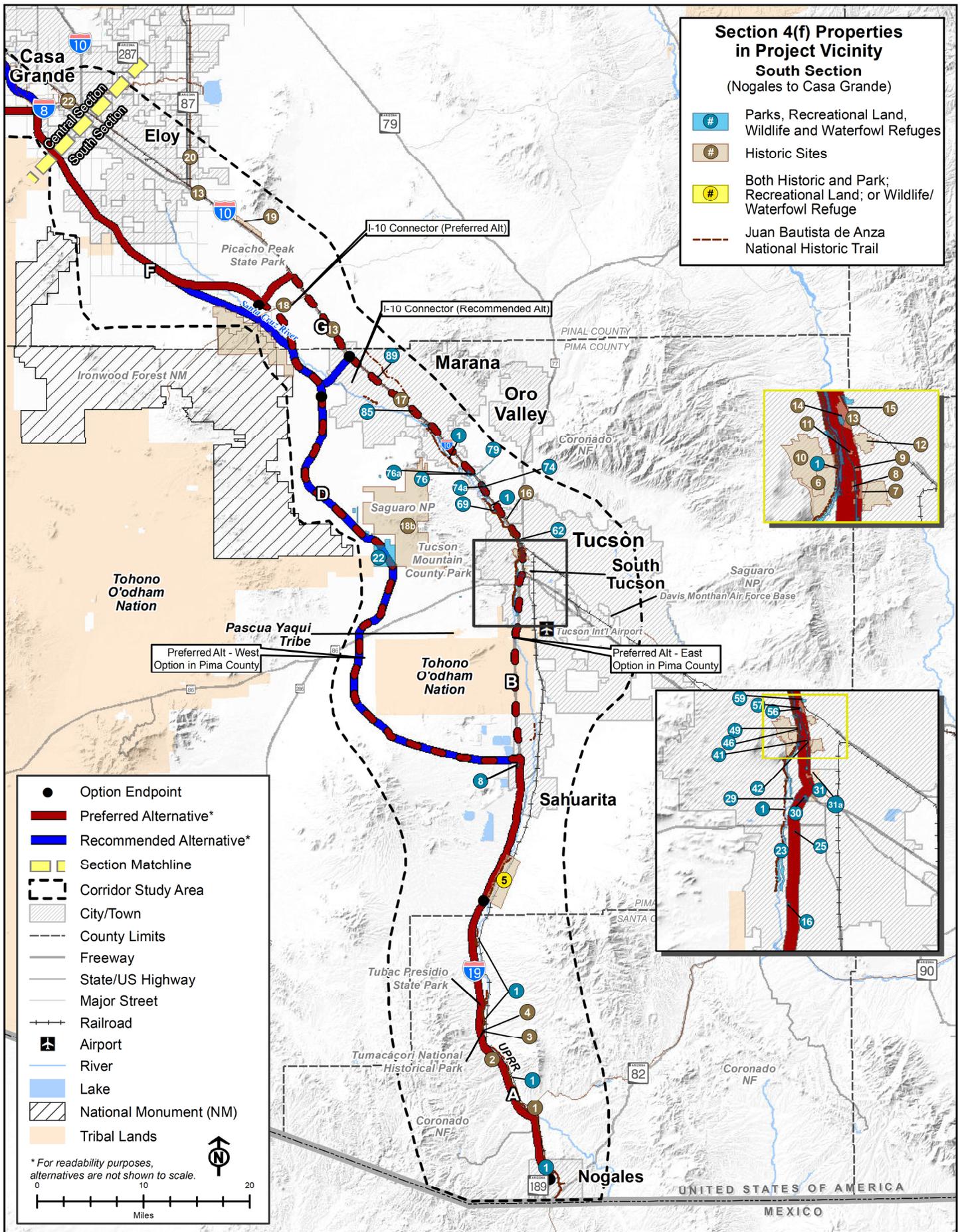


Figure 4.15. Section 4(f) Properties - Recommended and Preferred Alternatives - South Section

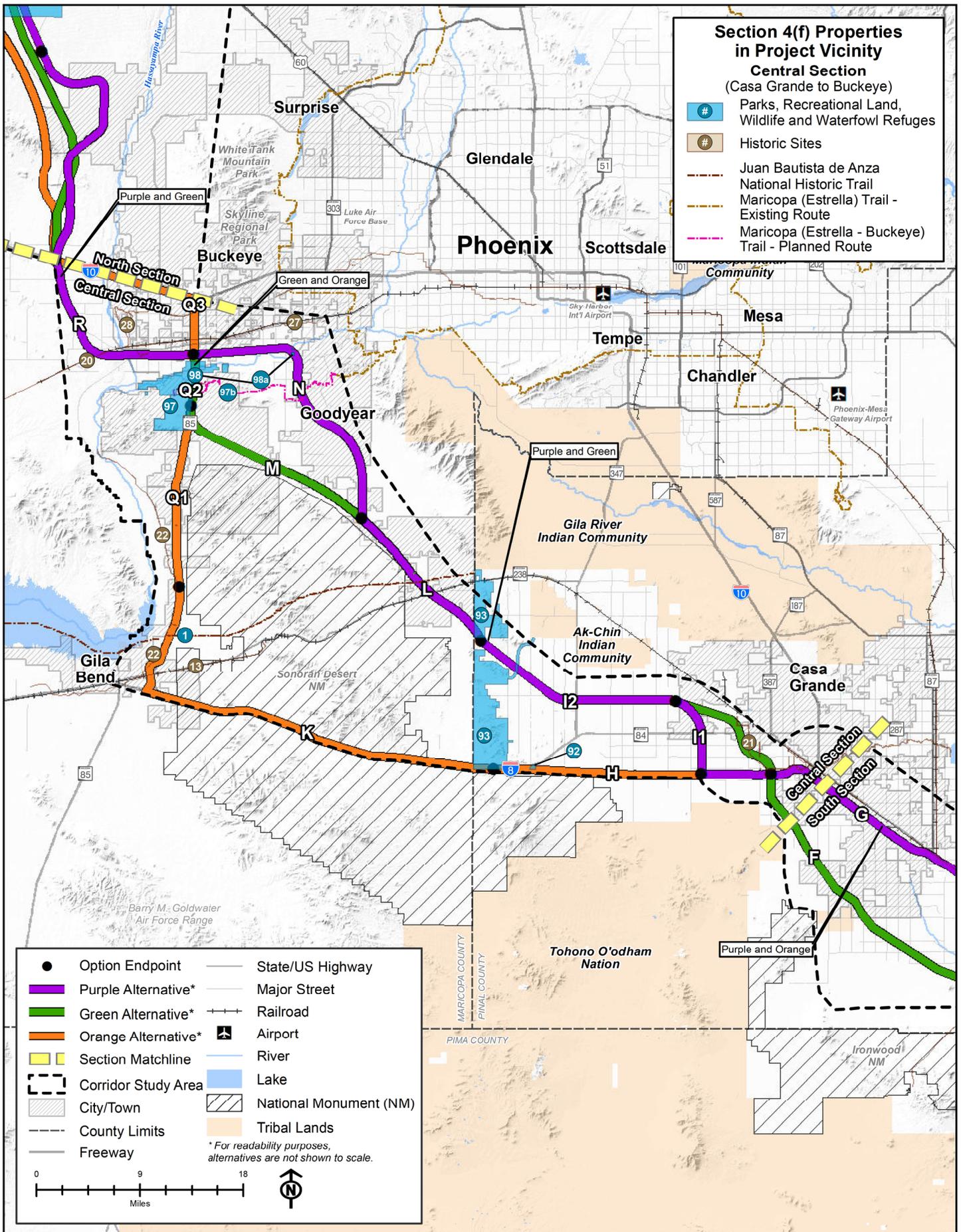


Figure 4-16. Section 4(f) Properties - Purple, Green, and Orange Alternatives -Central Section

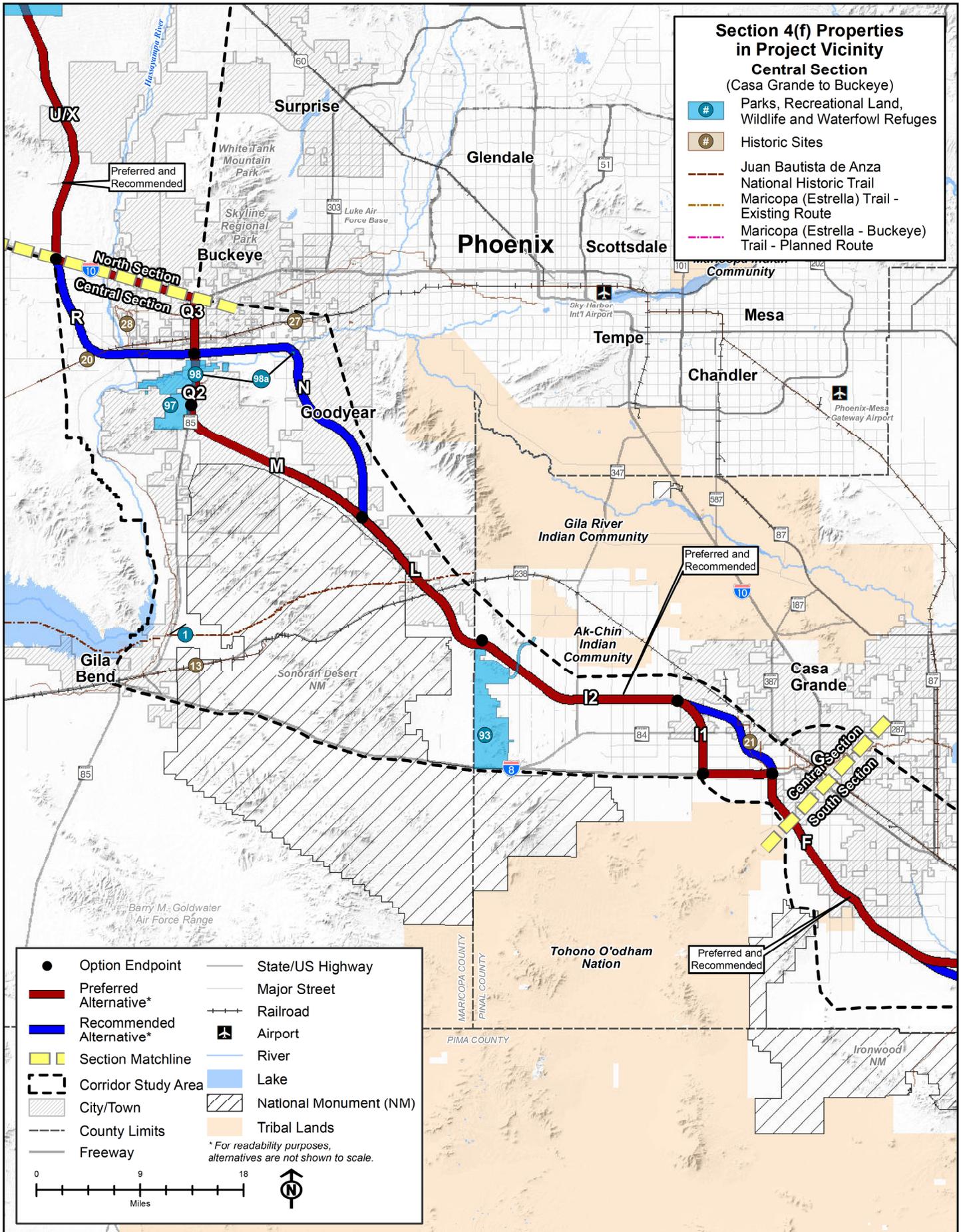


Figure 4.17. Section 4(f) Properties - Recommended and Preferred Alternatives - Central Section

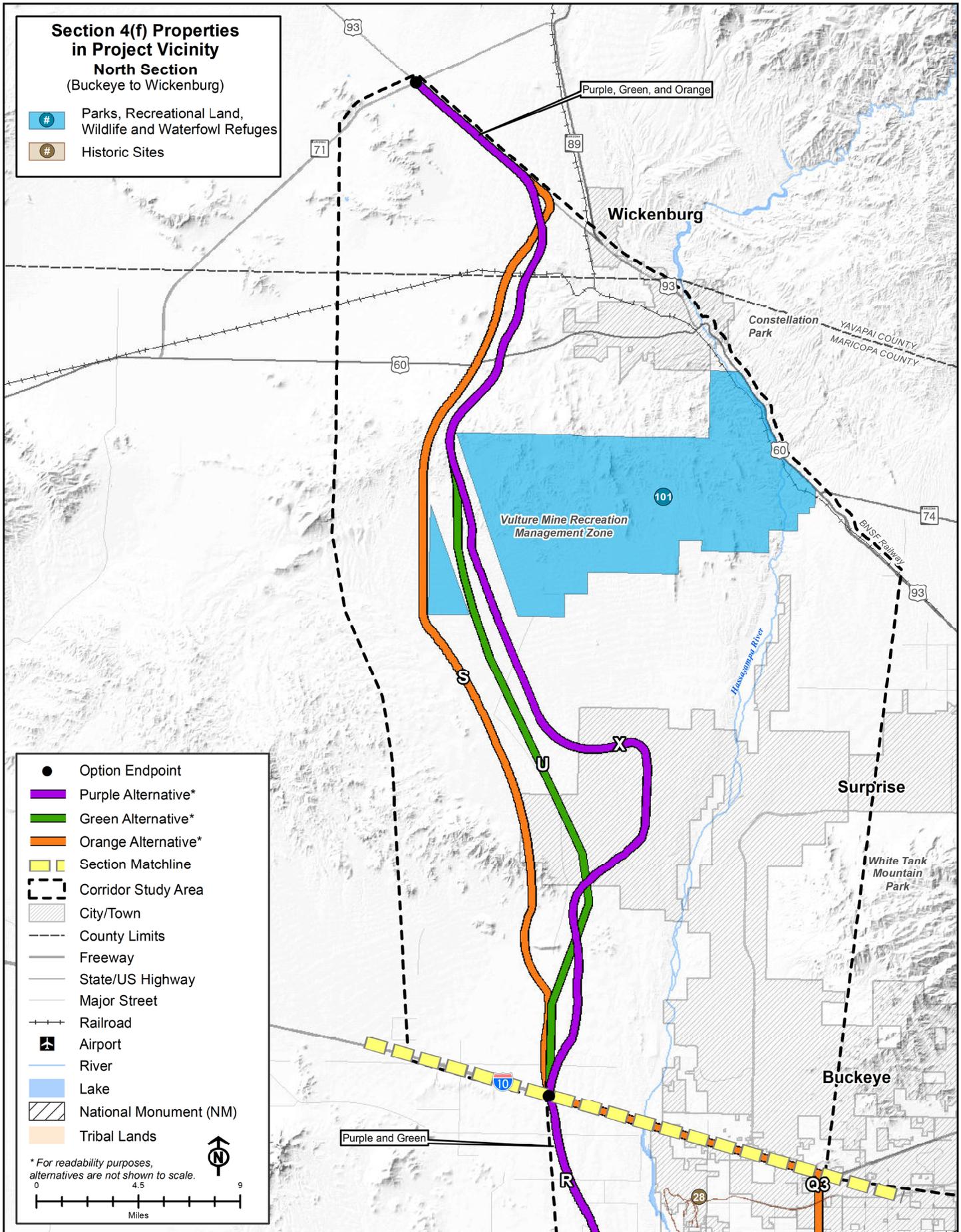


Figure 4-18. Section 4(f) Properties - Purple, Green, and Orange Alternatives -North Section

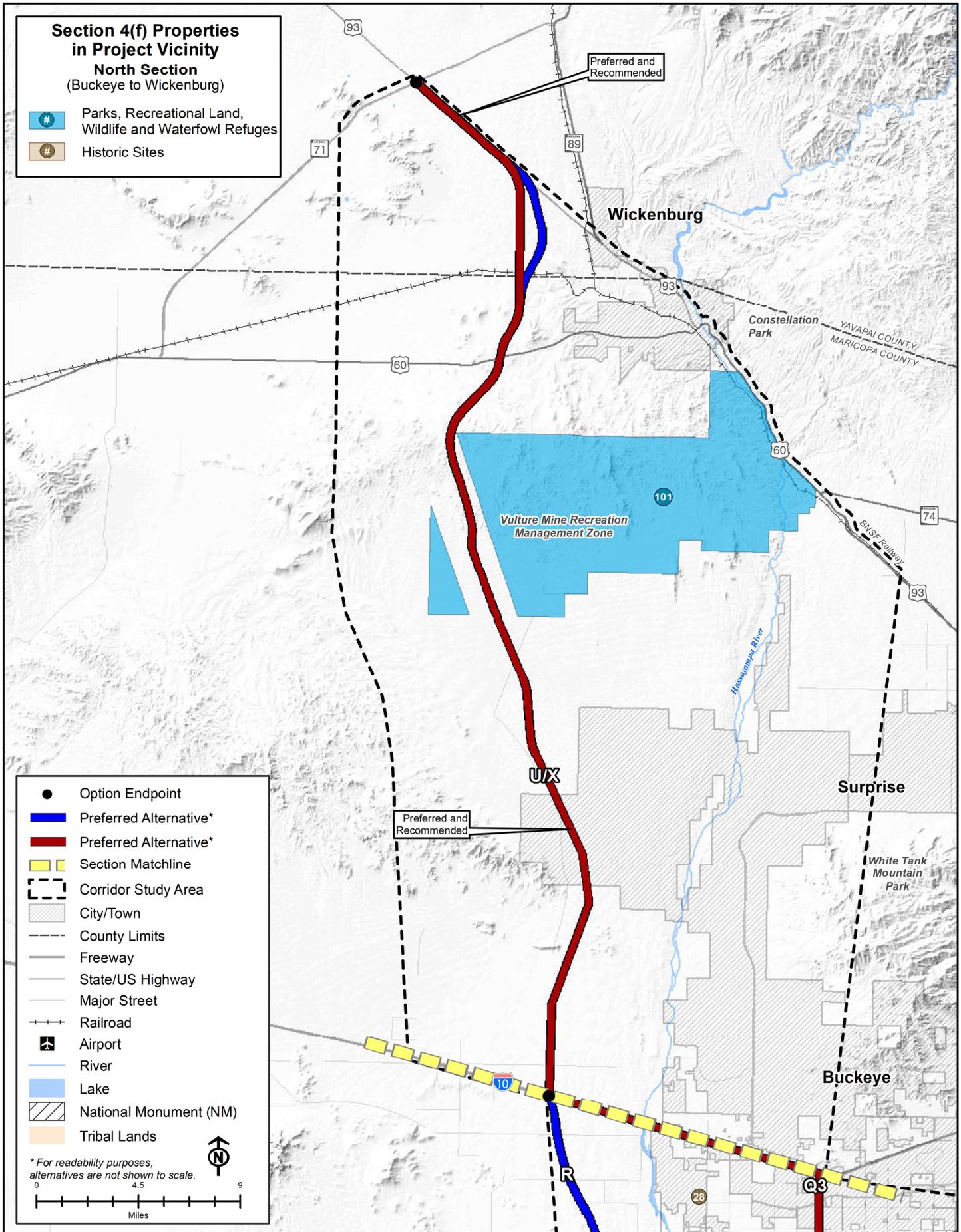


Figure 4-19. Section 4(f) Properties - Recommended and Preferred Alternatives -North Section



1 **4.6.2.3 Accommodate in the Corridor**

2 For Section 4(f) properties that occur partially or entirely within a Build Corridor Alternative, as
3 indicated in **Table 4-5**, FHWA examined the corridor in the area of each of these properties and
4 evaluated:

- 5
- 6 • Type, configuration, and extent of the property within the corridor
 - 7 • General highway design requirements that would apply to the I-11 Corridor Project,
8 including allowance for an approximately 400-foot right-of-way width
 - 9 • Other, non-Section 4(f) opportunities and constraints in the property area that were identified
10 by the Final Tier 1 EIS

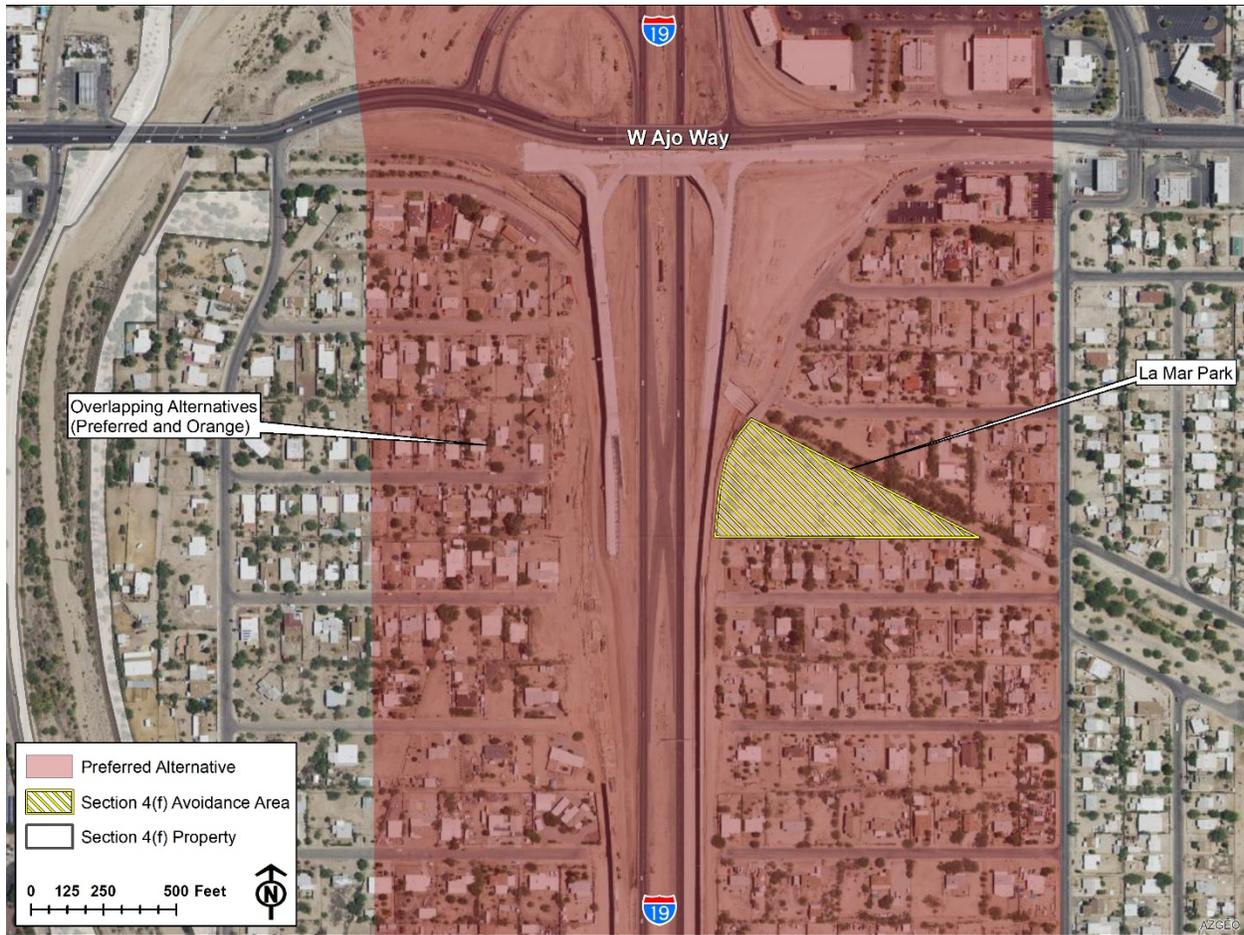
11 For each property identified in **Table 4-5** as having the potential to be avoided by
12 accommodation, FHWA identified the opportunity during Tier 2 studies to accommodate an
13 approximately 400-foot right-of-way for I-11 within each Build Corridor Alternative while avoiding
14 the Section 4(f) property that occurs within the corridor. The appropriateness and compatibility
15 of avoiding each Section 4(f) property by the future project design would be evaluated and
16 determined during Tier 2 studies in coordination with the officials with jurisdiction. Consistent
17 with 23 CFR 774.7(e)(1), opportunities to minimize harm to the property at subsequent stages in
18 the project development process (for example, Tier 2) are not precluded by this Tier 1
19 evaluation. Based on this revised Draft Preliminary Section 4(f) Evaluation, the land area
20 occupied by each property and other environmental constraints would not obstruct or preclude
21 the ability to provide a highway alignment that achieves general engineering design standards in
22 the portion of the corridor outside the boundaries of the properties. As a result of the ability to
23 avoid these properties, FHWA commits that no use of the accommodated properties as defined
24 by Section 4(f) would occur as a result of the I-11 Corridor Project. **Figure 4-20** through **Figure**
25 **4-36** show each Section 4(f) property that can be avoided through accommodation in a Build
26 Corridor Alternative. Archaeological sites are not included in the graphics because that
information is confidential in order to protect the sites.

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Figure 4-20. Pima Community College Desert Vista Campus – Preferred Alternative East Option or Orange Alternative (Accommodate in the Corridor)



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Figure 4-21. La Mar Park – Preferred Alternative East Option and Orange Alternative (Accommodate in the Corridor)

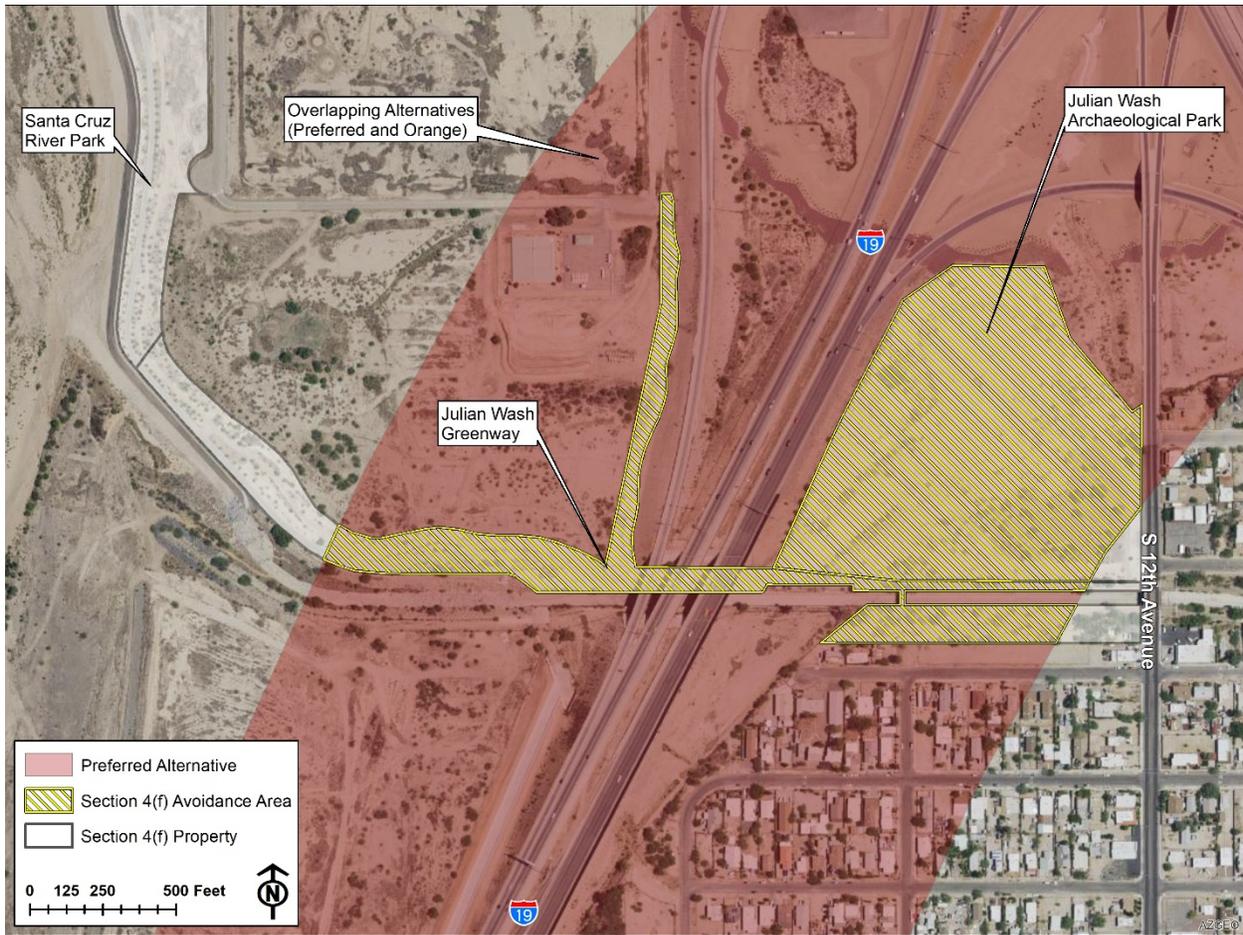
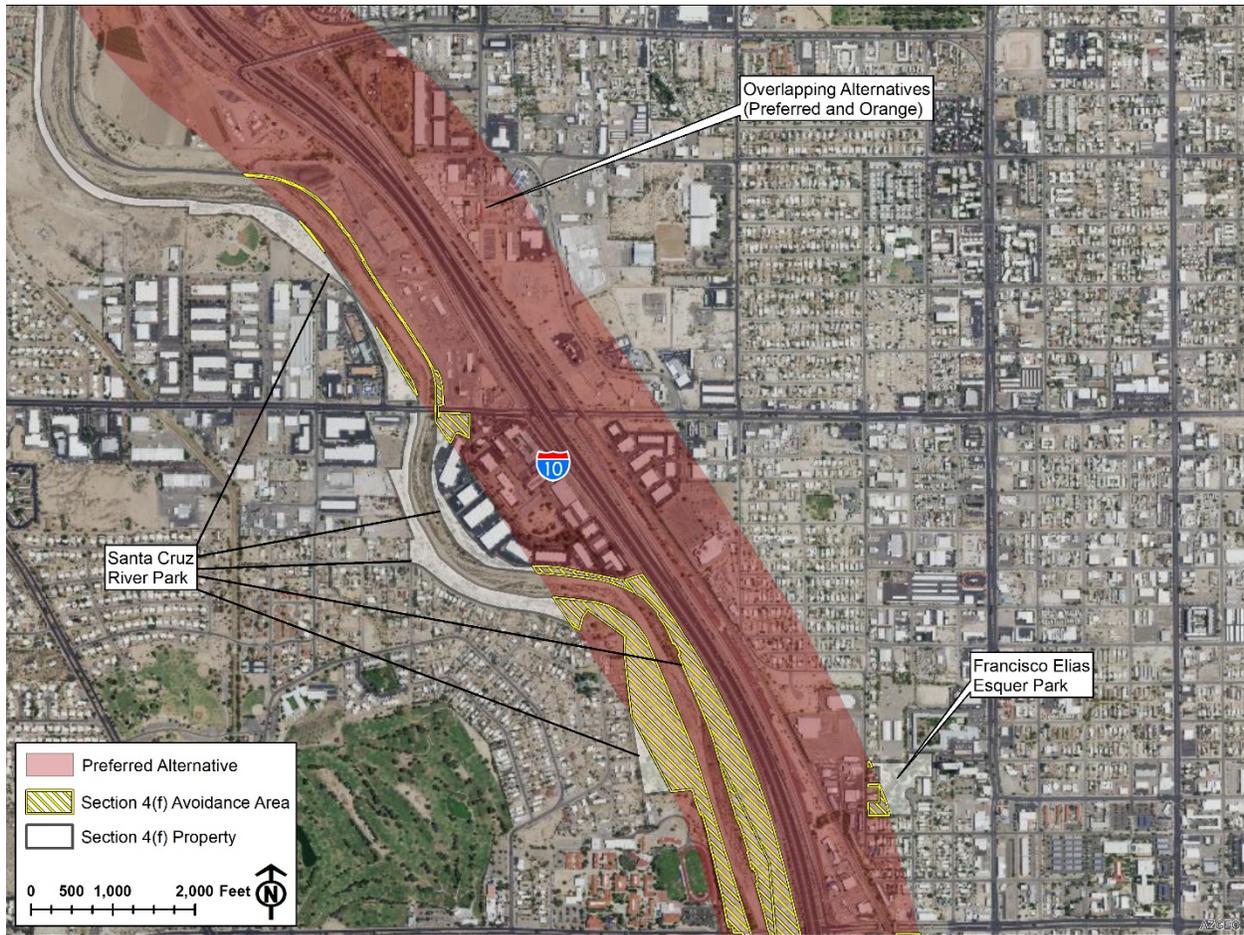


Figure 4-22. Julian Wash Greenway and Archaeological Park – Preferred Alternative East Option and Orange Alternative (Accommodate in the Corridor)

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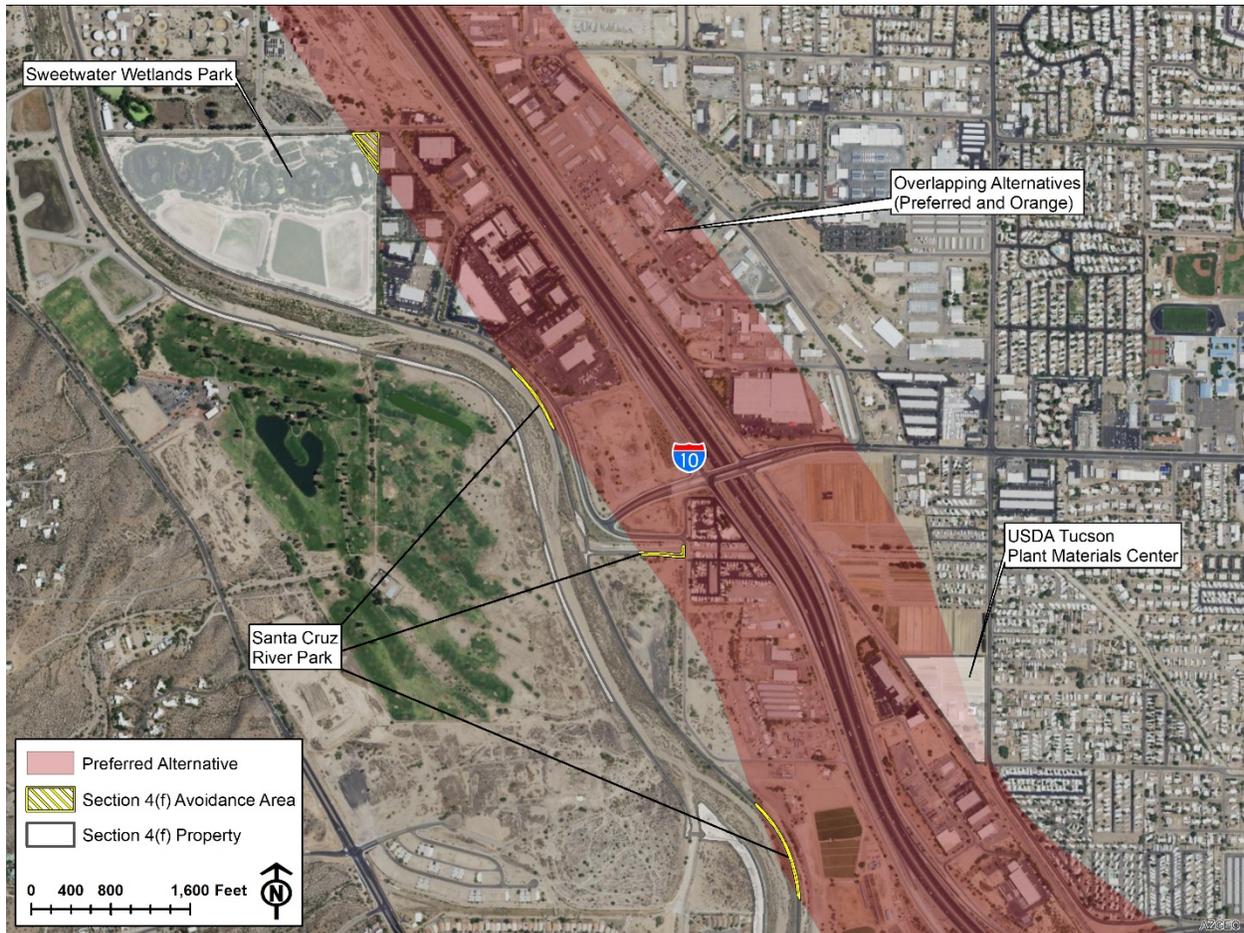
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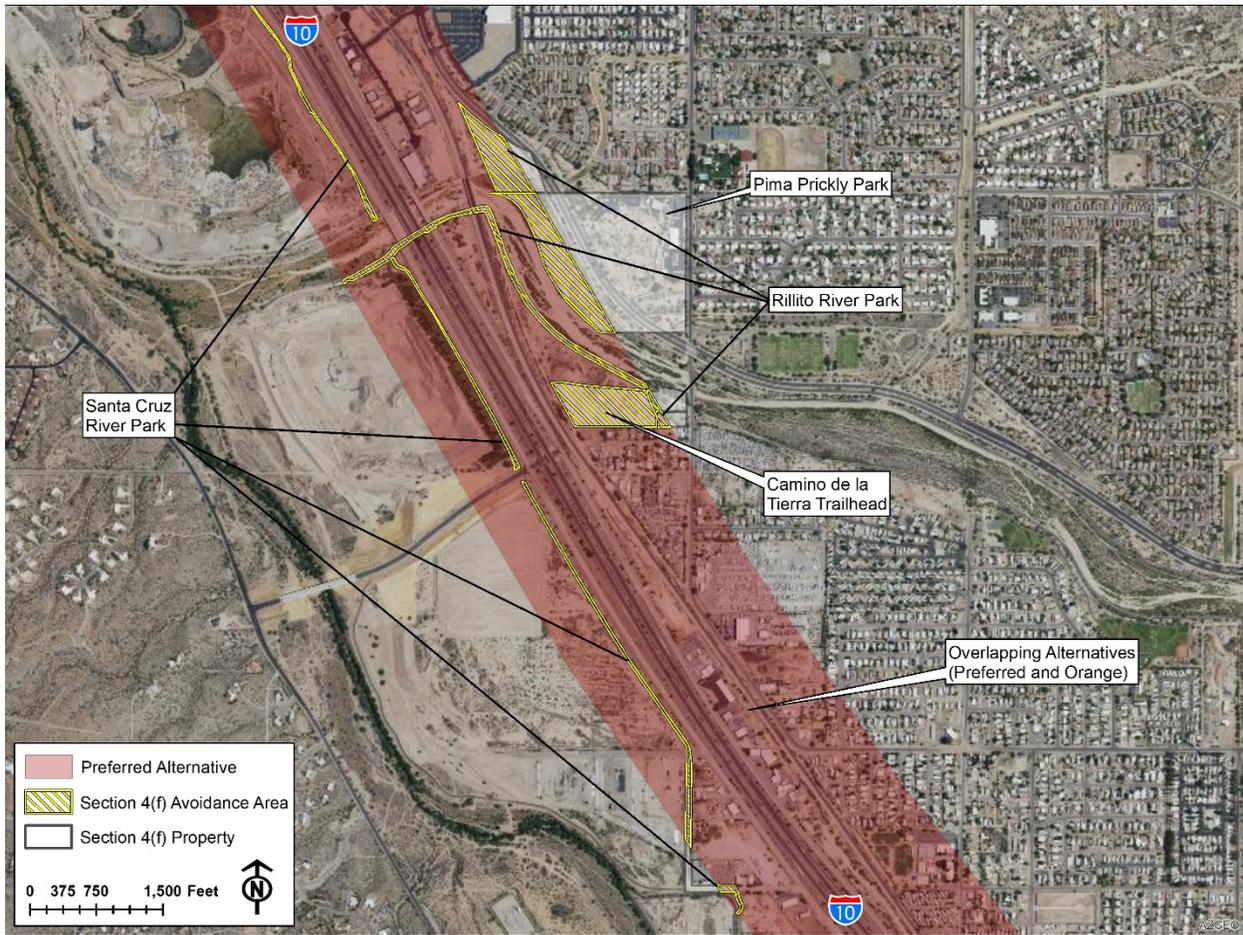
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Figure 4-23. Francisco Elias Esquer Park – Preferred Alternative East Option and Orange Alternative (Accommodate in the Corridor)



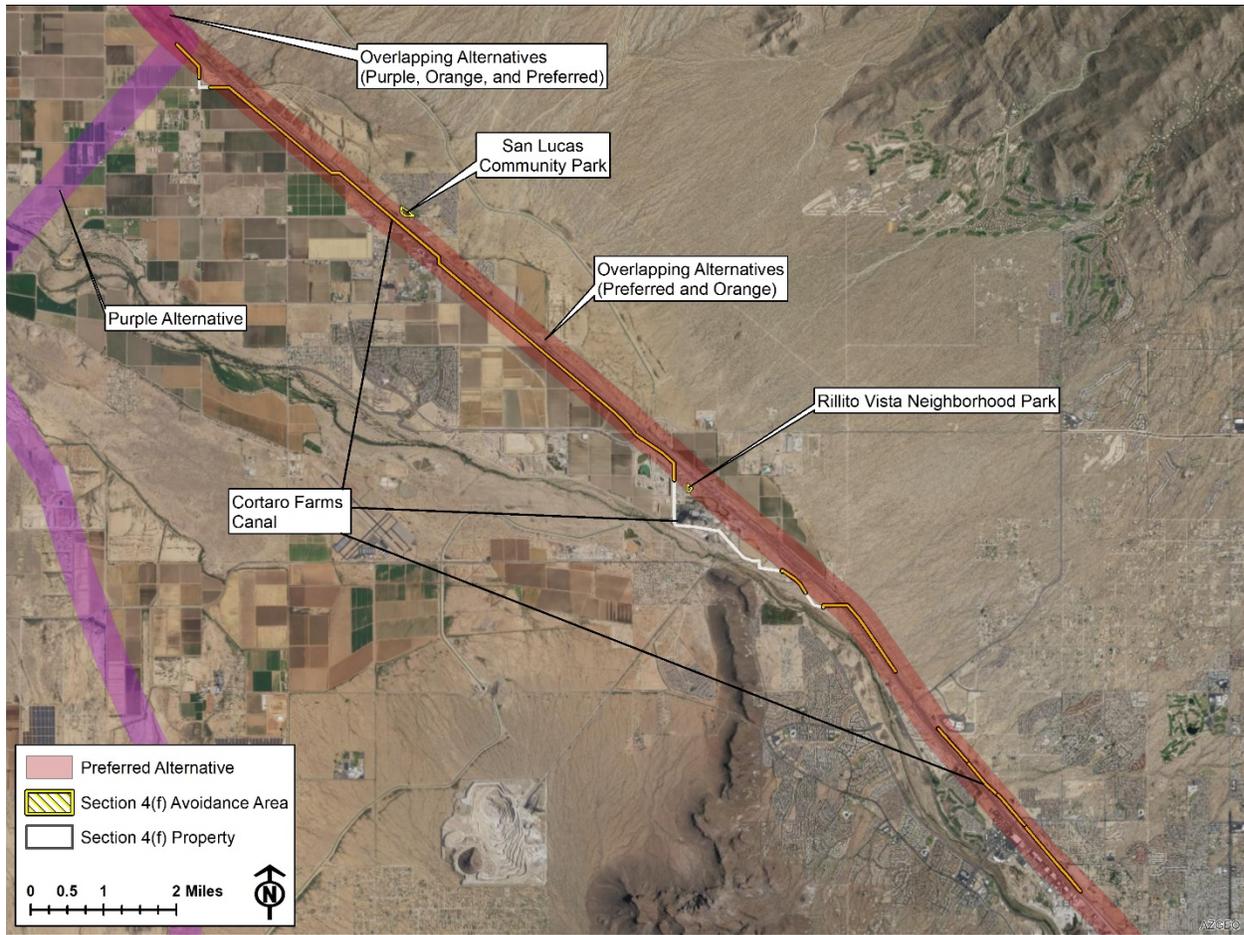
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Figure 4-24. Sweetwater Wetlands Park and USDA Tucson Plant Materials Center – Preferred Alternative East Option and Orange Alternative (Accommodate in the Corridor)



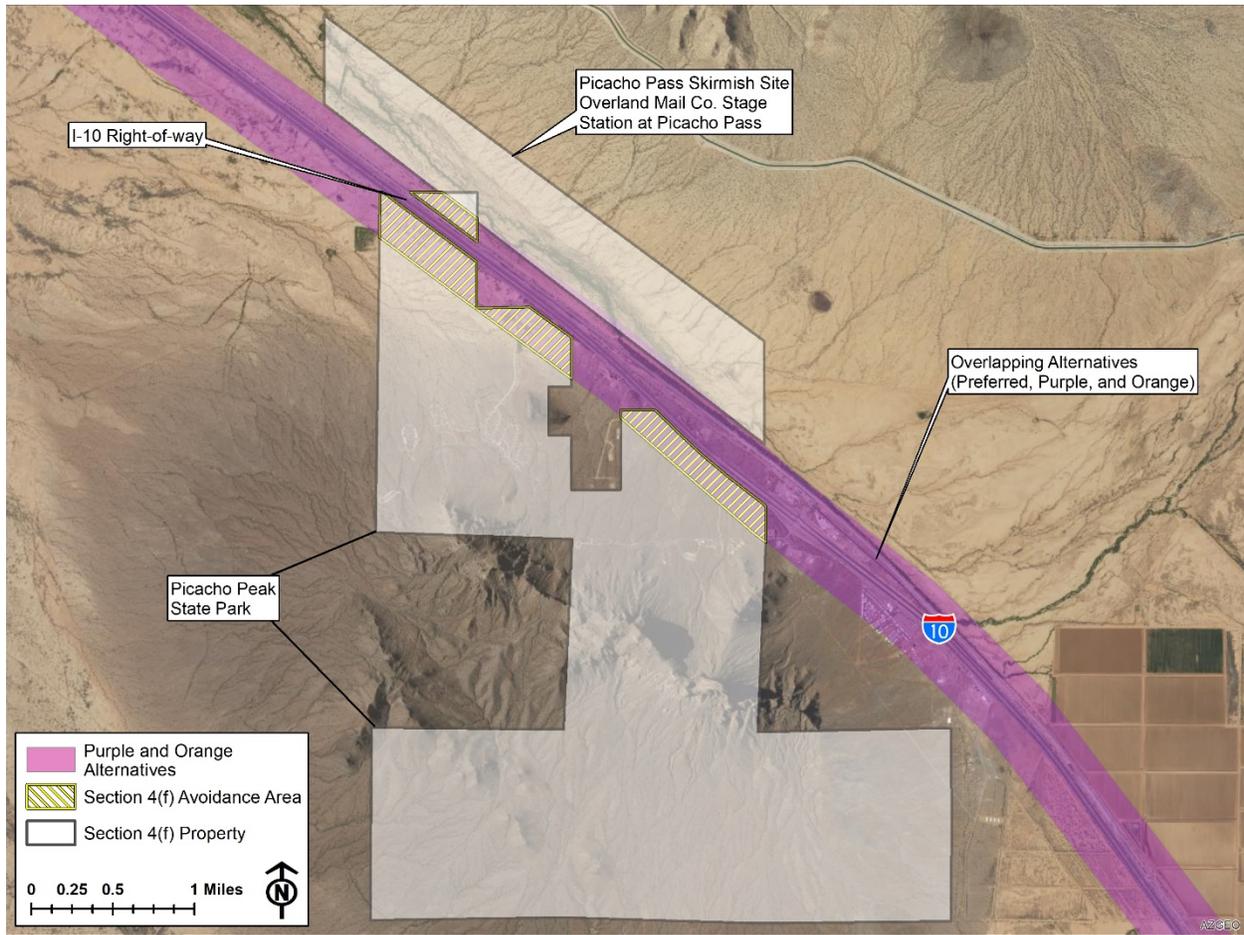
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Figure 4-25. Rillito River Park, Pima Prickly Park, and Camino de la Tierra Trailhead – Preferred Alternative East Option and Orange Alternative (Accommodate in the Corridor)



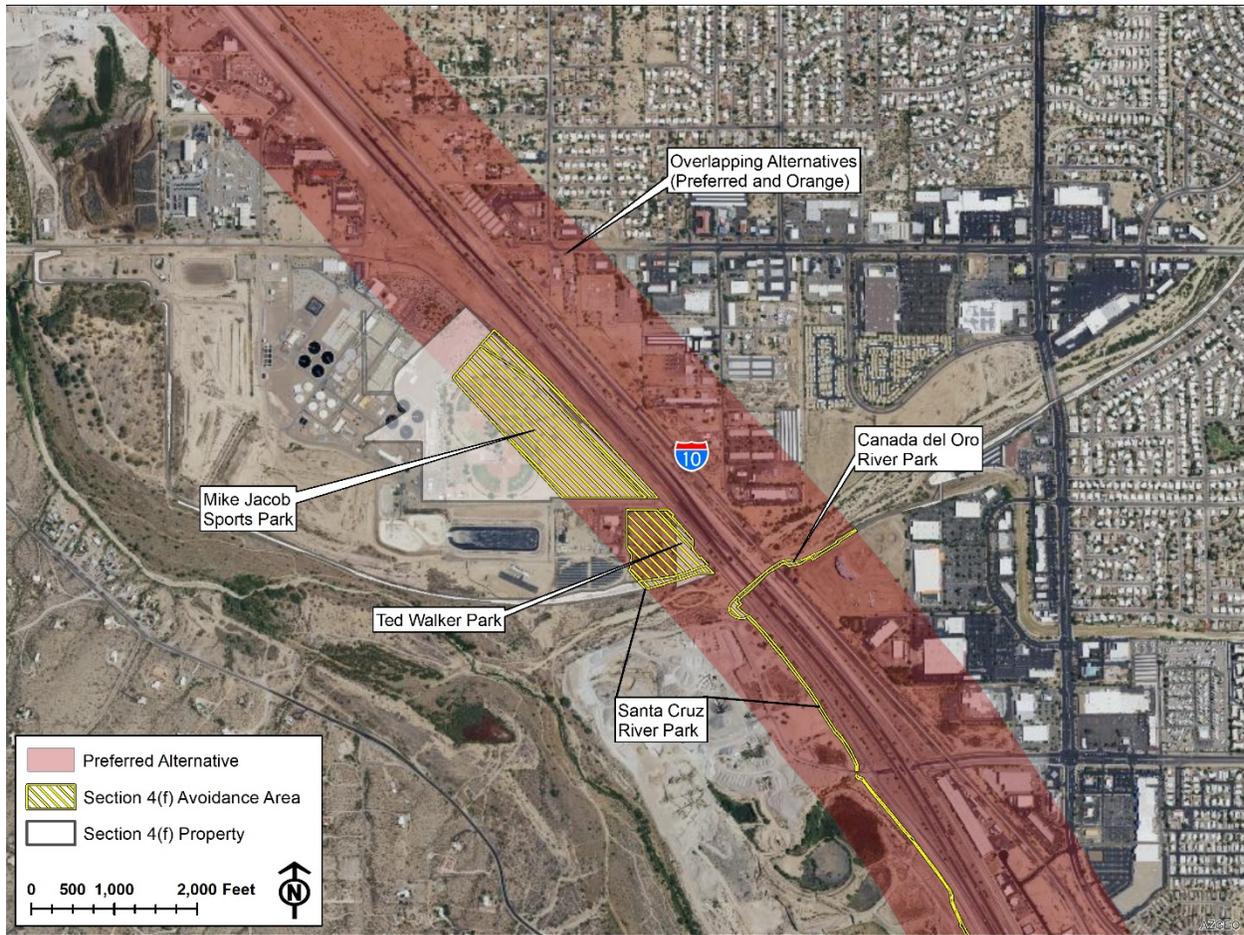
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Figure 4-26. Cortaro Farms Canal – Preferred Alternative East Option or Orange Alternative (Accommodate in the Corridor)



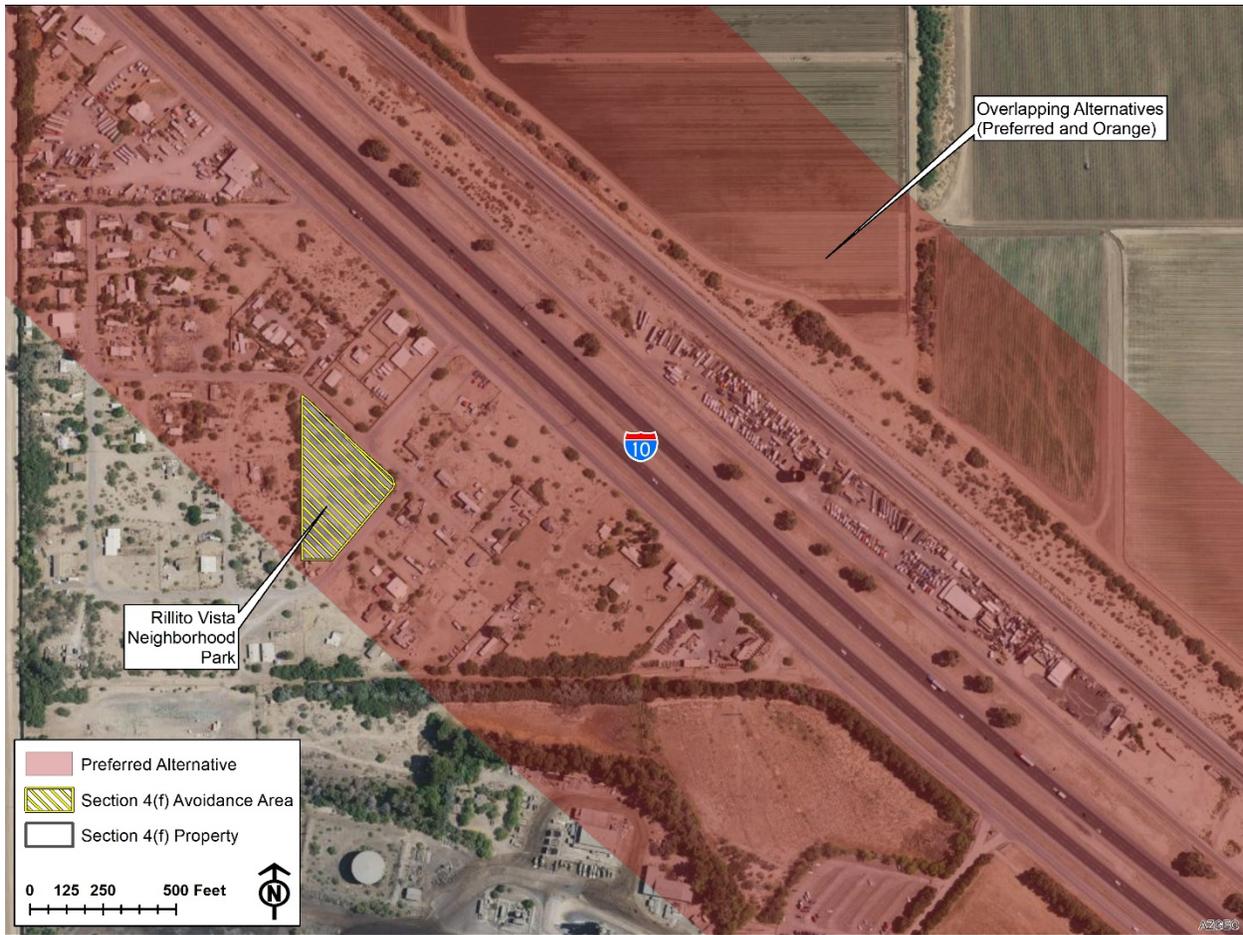
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Figure 4-27. Picacho Peak State Park and Picacho Pass Skirmish Site - Overland Mail Co. Stage Station – Preferred, Purple, or Orange Alternative (Accommodate in the Corridor)



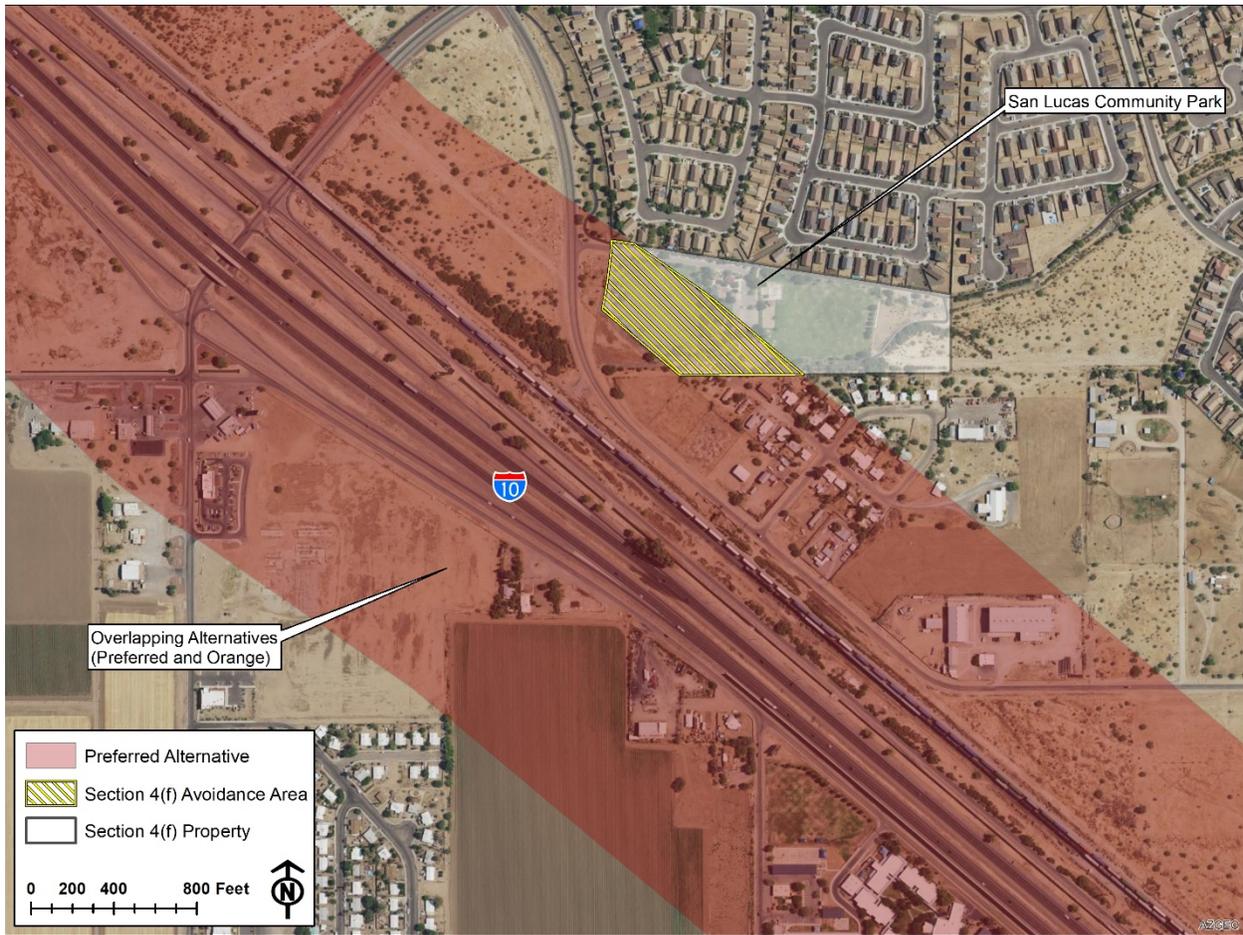
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Figure 4-28. Cañada del Oro (Christina-Taylor Green Memorial River Park), Ted Walker Park, Mike Jacob Sports Park, and Santa Cruz River Park – Preferred Alternative East Option and Orange Alternative (Accommodate in the Corridor)



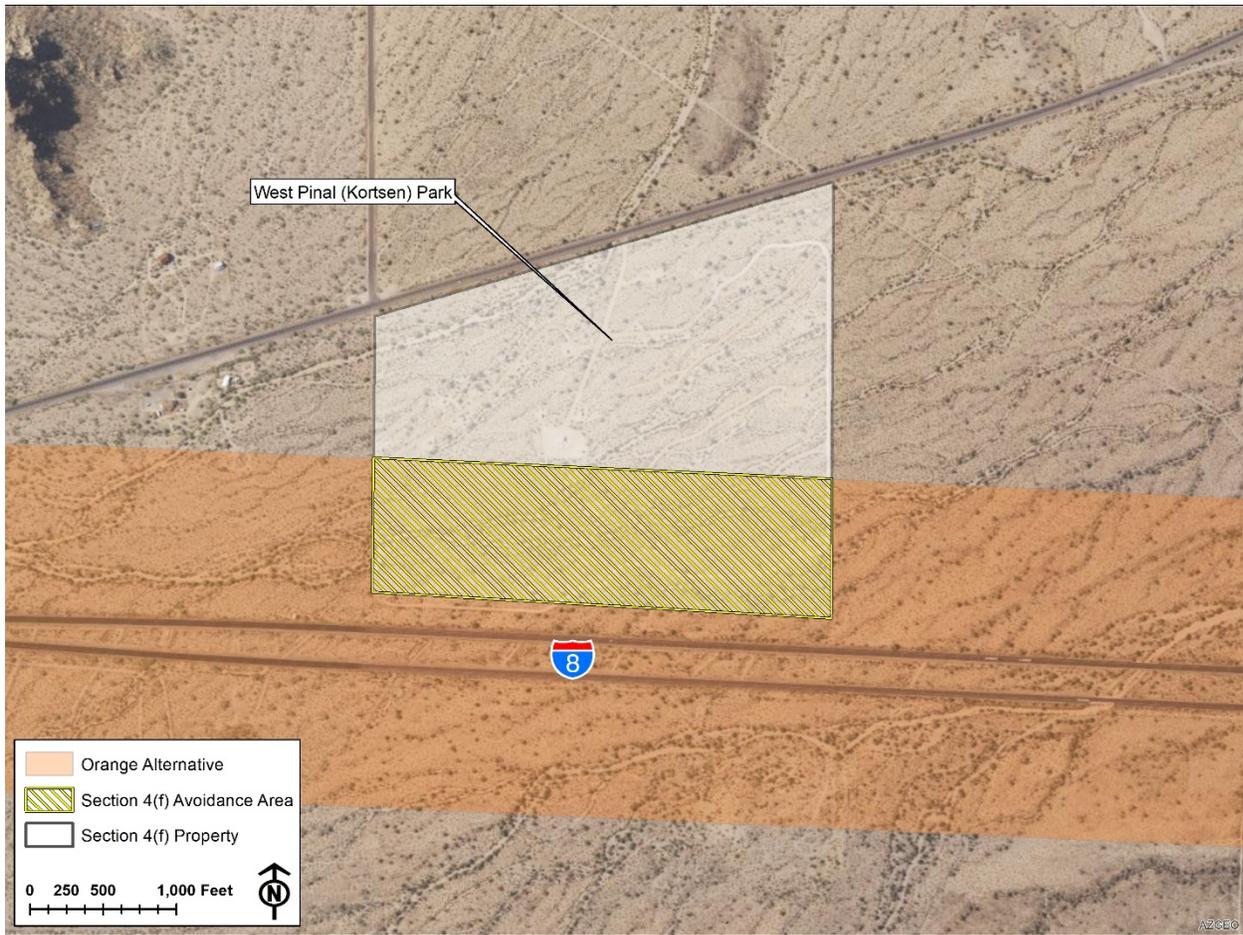
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Figure 4-29. Rillito Vista Neighborhood Park – Preferred Alternative East Option and Orange Alternative (Accommodate in the Corridor)



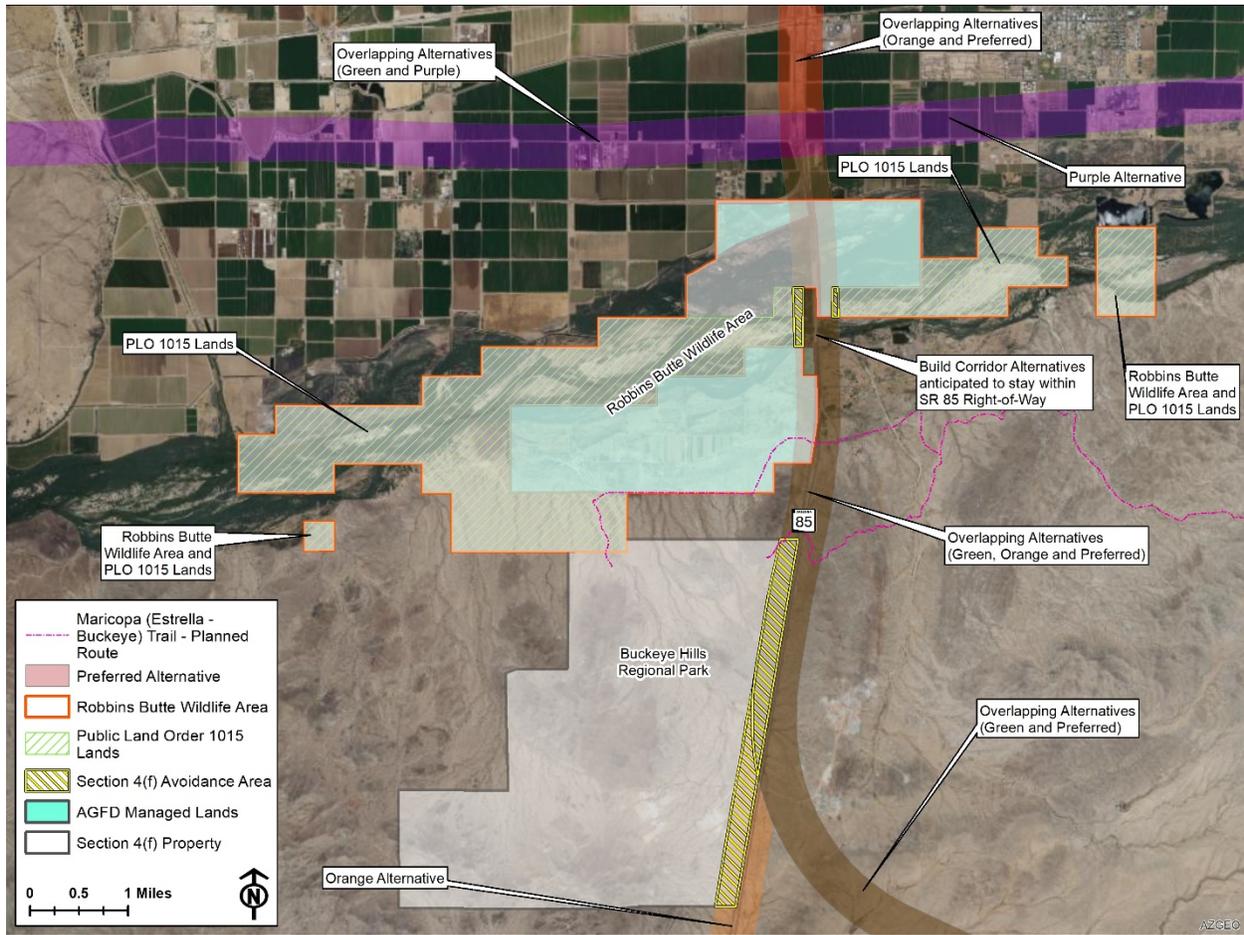
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Figure 4-30. San Lucas Community Park – Preferred Alternative East Option and Orange Alternative (Accommodate in the Corridor)



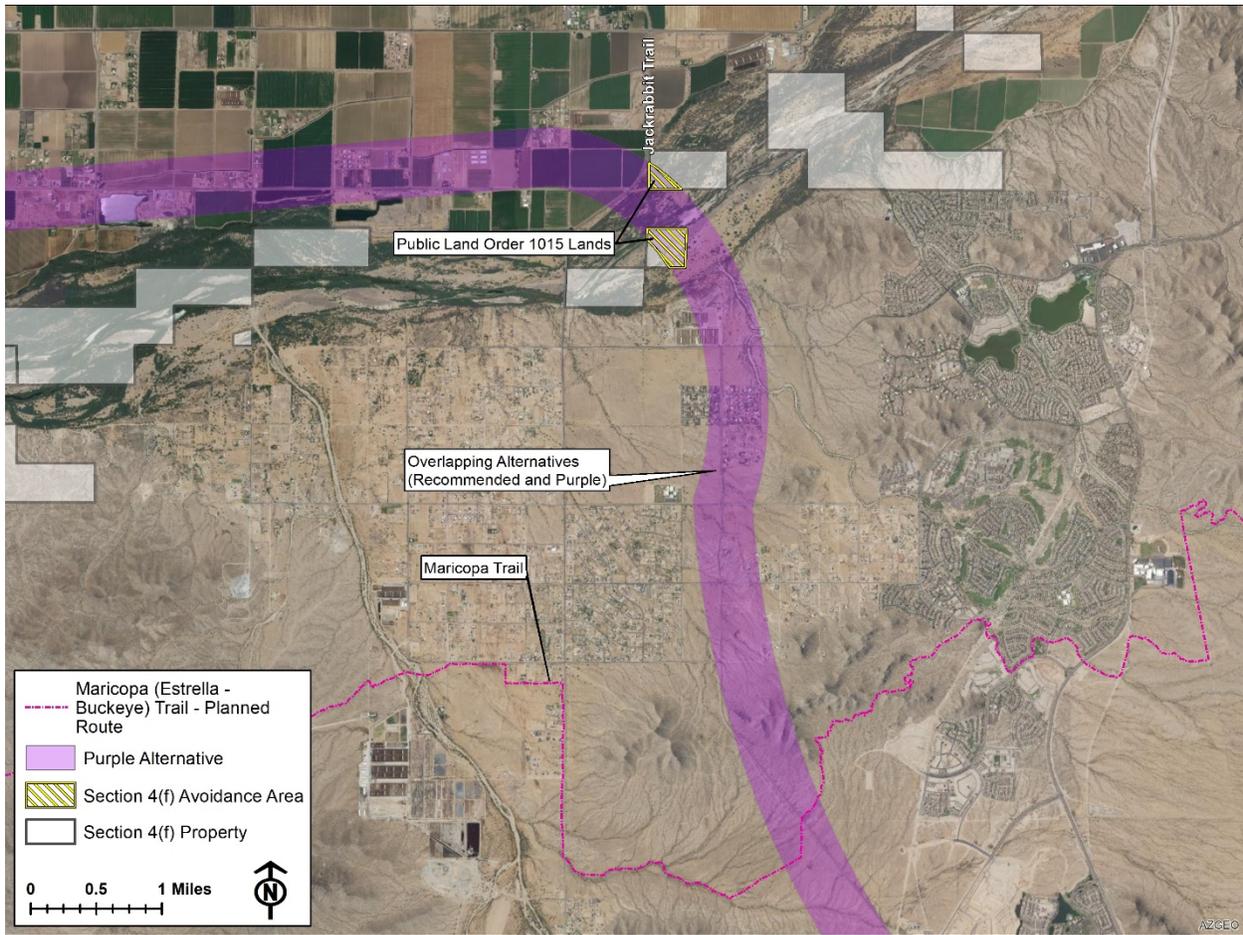
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Figure 4-31. West Pinal (Kortsen) Park – Orange Alternative (Accommodate in the Corridor)



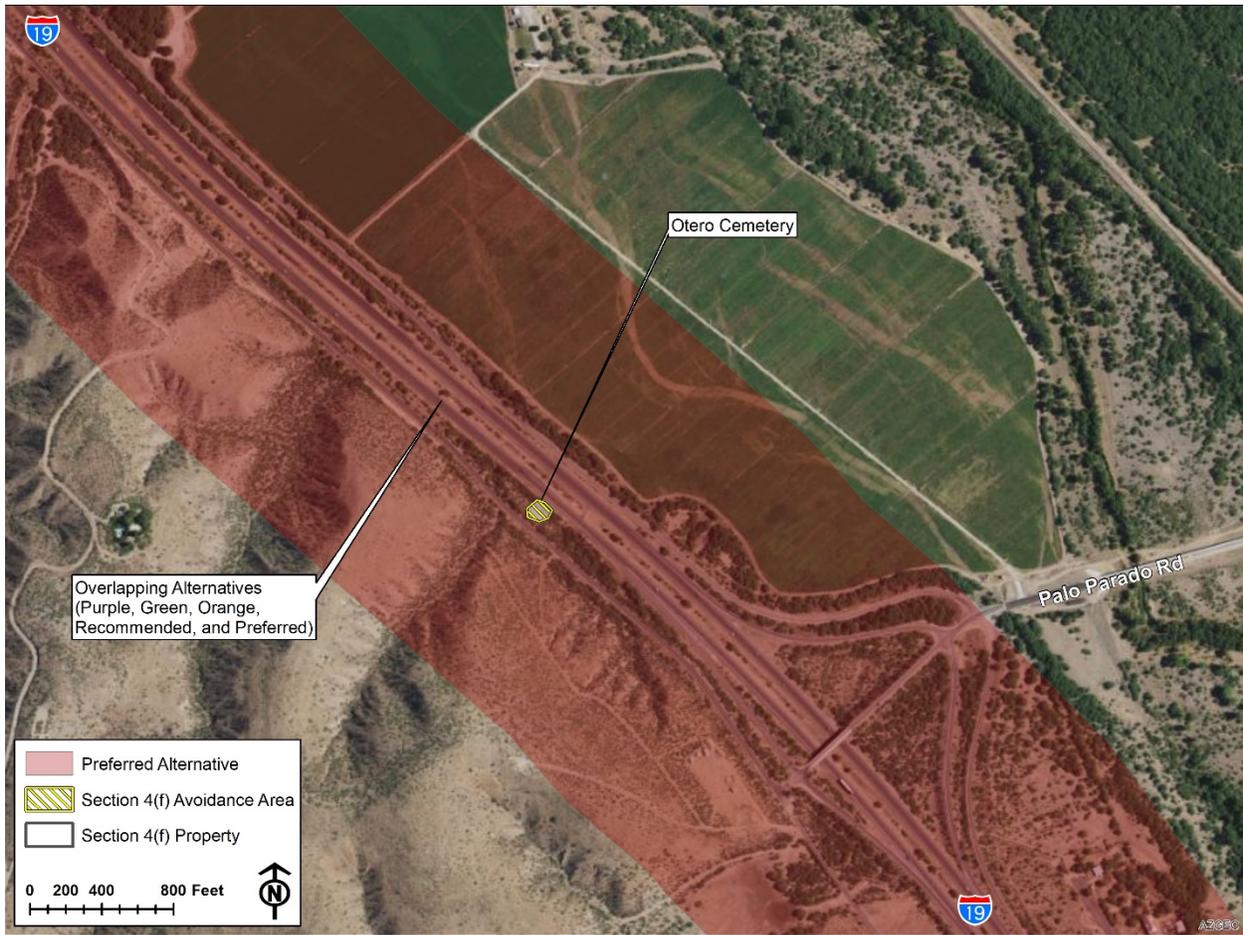
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Figure 4-32. Buckeye Hills Regional Park – Accommodate (Preferred, Green, or Orange Alternative); Robbins Butte Wildlife Area – No Use or Potential De Minimis Use (Recommended, Preferred, Green, Orange Alternative); and Public Land Order 1015 Lands – Accommodate (Recommended, Preferred, Purple, Green, or Orange Alternative)



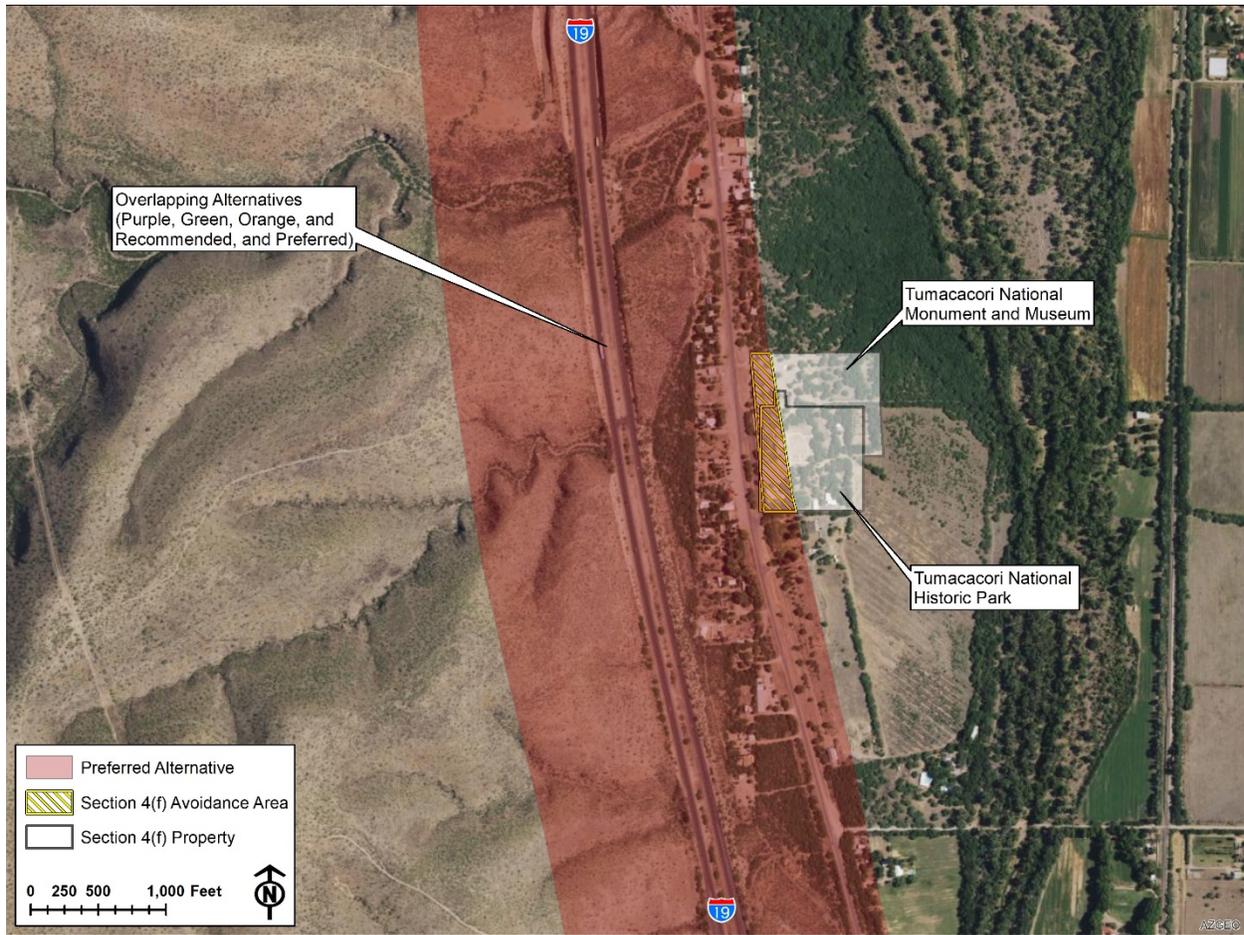
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Figure 4-33. Public Land Order 1015 Land Parcels and Maricopa Trail – Recommended or Purple Alternative (Accommodate in the Corridor)



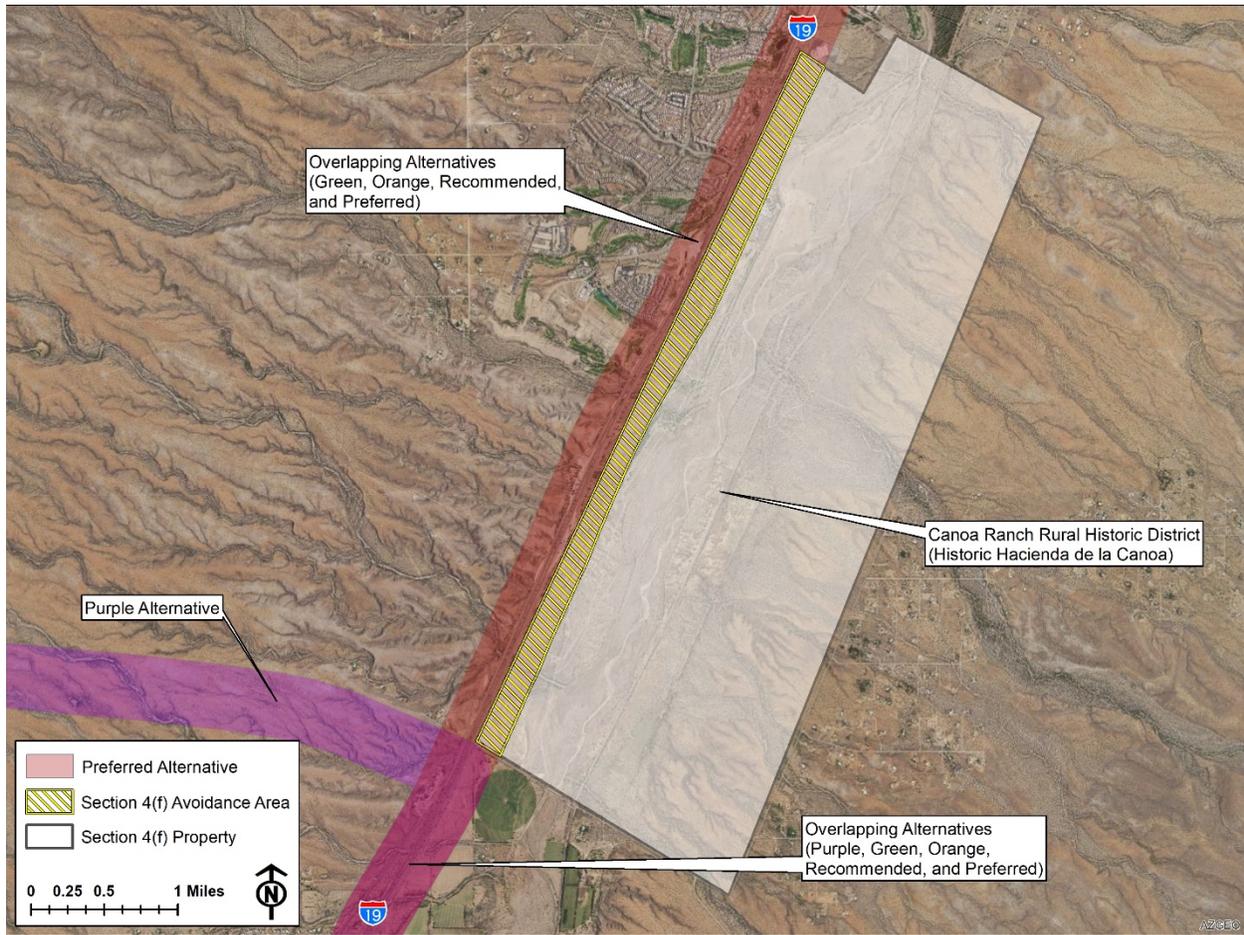
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Figure 4-34. Otero Cemetery – Preferred, Recommended, Purple, Green, or Orange Alternative (Accommodate in the Corridor)



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Figure 4-35. Tumacacori National Historic Park and Tumacacori National Monument and Museum – Preferred, Recommended, Purple, Green, or Orange Alternative (Accommodate in the Corridor)



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Figure 4-36. Canoa Ranch Rural Historic District (Historic Hacienda de la Canoa) – Preferred, Recommended, Green, and Orange Alternatives (Accommodate in the Corridor)



1 **4.6.2.4 Shift the Corridor**

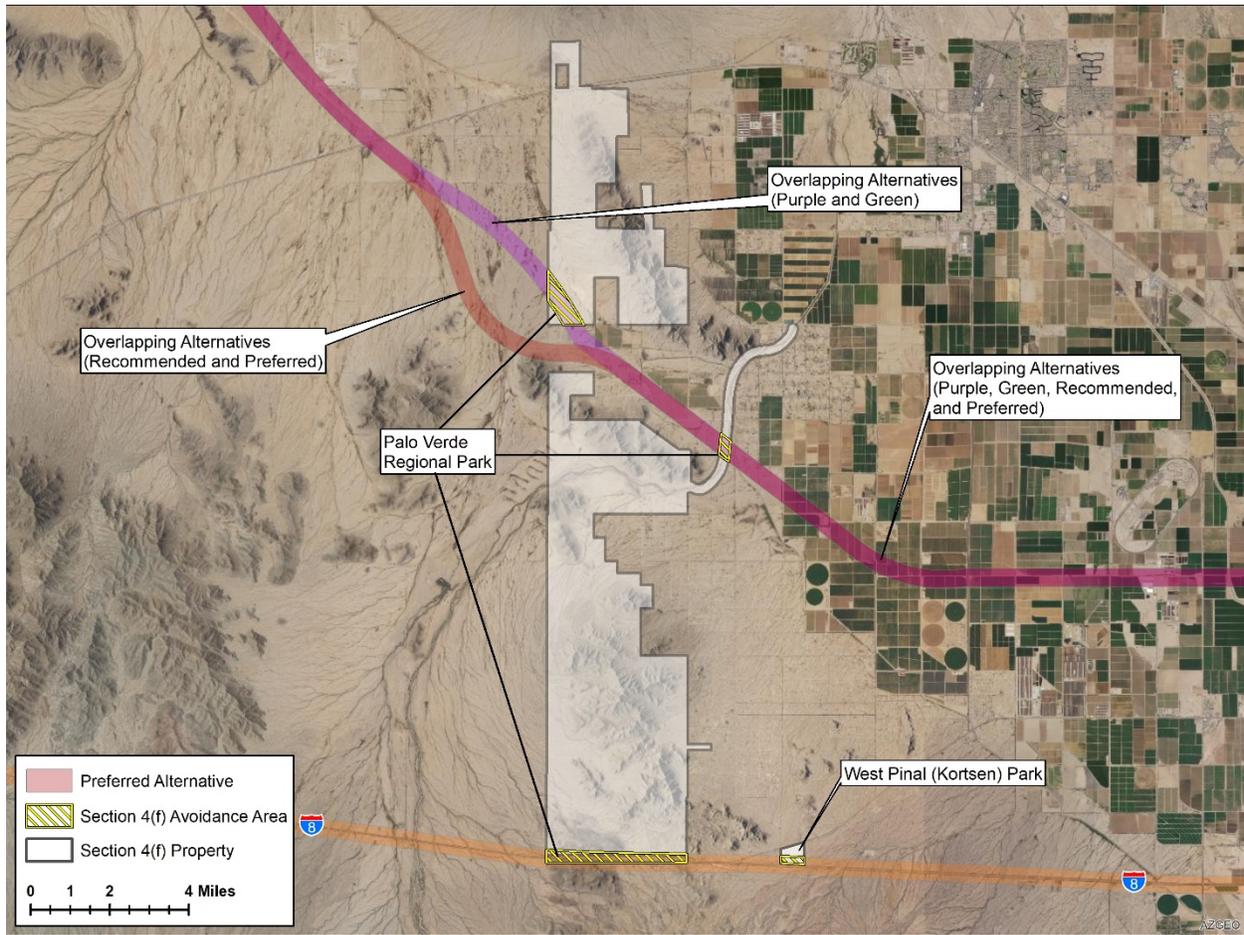
2 FHWA and ADOT identified an opportunity to avoid two properties by shifting the corridor to
3 provide the 400-foot-wide right-of-way allowance for I-11 outside the boundaries of these
4 properties:

- 5 • **Palo Verde Regional Park.** The property occupies portions of the Preferred,
6 Recommended, Purple, and Green Alternatives, obstructing or precluding the ability to
7 provide a highway alignment in that portion of each corridor. To avoid Palo Verde Regional
8 Park, FHWA and ADOT shifted the Recommended and Preferred Alternatives corridors as
9 shown on **Figure 4-37**. Purple and Green Alternatives could be similarly shifted to avoid the
10 park. The Preferred, Recommended, Purple, and Green Alternatives would also cross a
11 narrow part of the park property that connects the two park parcels; ADOT would grade-
12 separate the highway at the crossing to avoid impacting this portion of the park.

- 13 • **Anamax Park.** The property occupies portions of the Preferred, Recommended, Green, and
14 Orange Alternatives, obstructing or precluding the ability to provide a highway alignment in
15 those portions of each corridor. In these cases, to accommodate Anamax Park, FHWA and
16 ADOT shifted the corridor to the east, as shown on **Figure 4-38**.

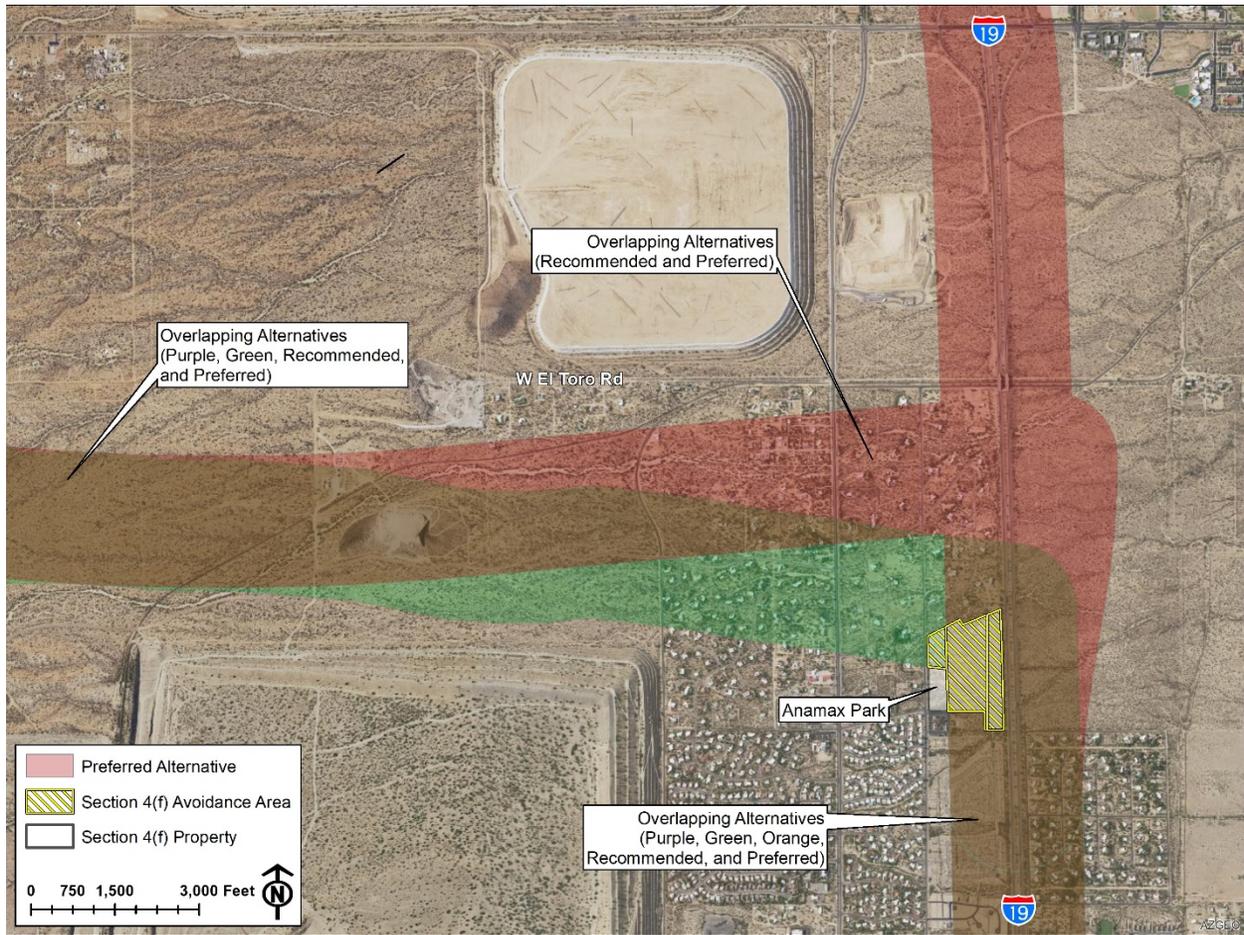
17 In addition, consistent with 23 CFR 774.7(e)(1), opportunities to minimize harm to the properties
18 at subsequent stages in the project development process (for example, Tier 2) are not
19 precluded. The land area occupied by each property and other environmental constraints would
20 not obstruct or preclude the ability to provide a highway alignment that achieves general
21 engineering design standards in the shifted portion of the corridor. As a result of the ability to
22 avoid these properties, FHWA commits that no use of Palo Verde Regional Park and Anamax
23 Park as defined by Section 4(f) would occur as a result of the I-11 Corridor Project.

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Figure 4-37. Palo Verde Regional Park – Preferred, Recommended, Purple, or Green Alternative (Shift the Corridor)



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Figure 4-38. Anamax Park – Preferred, Recommended, Green, or Orange Alternative (Shift the Corridor)



1 **4.6.2.5 Grade-Separate the Corridor - Linear Properties: Trails, Historic Canals, and**
2 **Historic Railroads**

3 Twelve Section 4(f)-protected trails, historic canals, and historic railroads cross the Build
4 Corridor Alternatives:

- 5 • Built segments of the Juan Bautista de Anza National Historic Trail (Preferred Alternative
6 west option, Recommended, or Purple Alternative)
- 7 • Julian Wash Greenway (Preferred Alternative east option or Orange Alternative)
- 8 • El Paso and Southwestern Greenway, existing trail (Preferred Alternative east option or
9 Orange Alternative)
- 10 • Rillito River Park (Preferred Alternative east option or Orange Alternative)
- 11 • Palo Verde Regional Park (Recommended Alternative, Preferred Alternative west option,
12 Preferred Alternative east option, Purple Alternative, or Green Alternative)
- 13 • Maricopa Trail – Planned Route (Recommended Alternative, Preferred Alternative west
14 option, Preferred Alternative east option, Purple Alternative, Green Alternative, or Orange
15 Alternative)
- 16 • Cortaro Farms Canal/Cortaro-Marana Irrigation District Canal (Purple Alternative)
- 17 • Casa Grande Canal (Recommended Alternative)
- 18 • Gila Bend Canal (Purple Alternative or Orange Alternative)
- 19 • Butterfield Overland Mail stage route (Recommended Alternative, Preferred Alternative west
20 option, Preferred Alternative east option, Purple Alternative, Green Alternative, or Orange
21 Alternative)
- 22 • Buckeye Canal (Recommended Alternative, Preferred Alternative west option, Preferred
23 Alternative east option, Purple Alternative, Green Alternative, or Orange Alternative)
- 24 • Roosevelt Canal (Recommended Alternative, Preferred Alternative west option, Preferred
25 Alternative east option, Purple Alternative, Green Alternative, or Orange Alternative)

26 All the properties listed above can be avoided though grade-separation or other means.
27 Elevating the roadway corridor on a structure that passes over and spans the linear property or
28 depressing the roadway corridor under a structure that carries the property over the roadway
29 would eliminate the need to incorporate land from the Section 4(f) property. In addition, grade
30 separation would preserve the activities, features, and attributes of the linear property that
31 qualify it for protection under Section 4(f).

32 The land area occupied by each property and other environmental constraints would not
33 obstruct or preclude the ability to provide a highway alignment that achieves general
34 engineering design standards in a grade-separated alignment while avoiding each linear

1 property. As a result of the ability to avoid these properties, FHWA commits that no use of the
2 linear properties as defined by Section 4(f) would occur as a result of the I-11 Corridor Project.

3 **4.6.3 Build Corridor Alternatives – Use Evaluation**

4 The revised Draft Preliminary Section 4(f) Evaluation identified the potential for use of the
5 following Section 4(f) properties by the Build Corridor Alternatives, as shown in **Table 4-4**.

- 6 • Robbins Butte Wildlife Area (Preferred, Green, or Orange Alternatives)
- 7 • Downtown Tucson properties:
 - 8 ○ Santa Cruz River Park (Preferred Alternative east option or Orange Alternative)
 - 9 ○ El Paso and Southwestern Greenway, Planned Trail (Preferred Alternative east option or
10 Orange Alternative)
 - 11 ○ David G. Herrera and Ramon Quiroz Park (Preferred Alternative east option or Orange
12 Alternative)
 - 13 ○ Barrio El Membrillo Historic District (Preferred Alternative east option or Orange
14 Alternative)
 - 15 ○ El Paso and Southwestern Railroad District (Preferred Alternative east option or Orange
16 Alternative)
 - 17 ○ Levi H. Manning House (Preferred Alternative east option or Orange Alternative)
 - 18 ○ Barrio Anita Historic District (Preferred Alternative east option or Orange Alternative)
- 19 • Tucson Mitigation Corridor (Preferred, Recommended, Purple, or Green Alternative)

20 During Tier 2 studies, historic and archaeological resources will be surveyed, Section 106
21 consultation will be undertaken, and a Final Section 4(f) Evaluation will be conducted. The
22 findings of this revised Draft Preliminary Section 4(f) Evaluation could be refined during Tier 2 if
23 additional Section 4(f) resources are identified at that time. Tier 2 activities will include
24 examination of means to avoid, mitigate, and/or minimize harm to protected resources.

25 Each property is evaluated in the following subsections, including analyses of avoidance and all
26 possible planning to minimize harm to the level that this first-tier EIS stage allows.

27 **4.6.3.1 Robbins Butte Wildlife Area – No Use or Possible De Minimis Use (Preferred, 28 Green, or Orange Alternatives)**

29 The Robbins Butte Wildlife Area consists of multiple parcels of undeveloped land on both sides
30 of SR 85 at the existing Gila River crossing (**Figure 4-32**). The land is preserved and managed
31 for wildlife and wildlife habitat by AGFD. The preserved wildlife habitats are the features,
32 attributes, or activities that qualify the property for protection under Section 4(f).



1 The Preferred, Green, and Orange Alternatives are aligned on SR 85 at the existing Gila River
2 crossing. Preliminary analysis indicates the existing SR 85 right-of-way (**Appendix E1**
3 [Conceptual Drawings] in the Draft Tier 1 EIS) is wide enough to accommodate the proposed
4 I-11 highway cross section. However, increased traffic could increase the likelihood of wildlife
5 collisions, noise and light pollution, and runoff. Tier 2 studies involving project-level design will
6 be required to assess the nature and extent of such potential impacts, to identify and evaluate
7 the effectiveness of measures to avoid or minimize harm related to these potential impacts, and
8 to develop and apply specific measures to mitigate impacts if needed. ADOT will undertake
9 these activities in coordination with AGFD. In Tier 2, appropriate minimization and mitigation
10 measures would be included in the Final Section 4(f) determination for Robbins Butte Wildlife
11 Area as well as the Final Section 4(f) Evaluation.

12 Based on the preliminary analysis, it will be possible for FHWA to make a finding of no use or, at
13 most, a finding of *de minimis* use for this property after Tier 2 studies and consultation with
14 AGFD.

15 **4.6.3.2 Downtown Tucson Parcels – Possible Individual Uses (Preferred Alternative** 16 **East Option and Orange Alternative)**

17 **Identification of Section 4(f) Properties**

18 More than 20 historic properties and parks fall within the Preferred Alternative east option and
19 Orange Alternative in the downtown Tucson area, as shown on **Figure 4-39** and **Figure 4-40**.
20 These properties are protected by Section 4(f). **Table 4-1** describes the features and attributes
21 of each property.

22 **Proposed Use of Section 4(f) Properties**

23 To accommodate 2040 traffic demands, the Preferred Alternative east option or the Orange
24 Alternative would expand I-10 from 8 lanes to 12 to 14 lanes from the I-19 interchange to Prince
25 Road. The Preferred Alternative east option and Orange Alternative would require an estimated
26 120 feet of additional right-of-way. The 120 feet could be on either side of the existing I-10 right-
27 of-way, all on the east side of I-10, or all on the west side of I-10. In downtown Tucson, I-10 is
28 surrounded by dense, established historic communities. Properties protected by Section 4(f) are
29 in close proximity to one another and to I-10, as shown on **Figure 4-39** and **Figure 4-40**. At this
30 Tier 1 level of analysis, FHWA and ADOT assessed that It is not possible to widen I-10 without
31 impacting Section 4(f) properties.

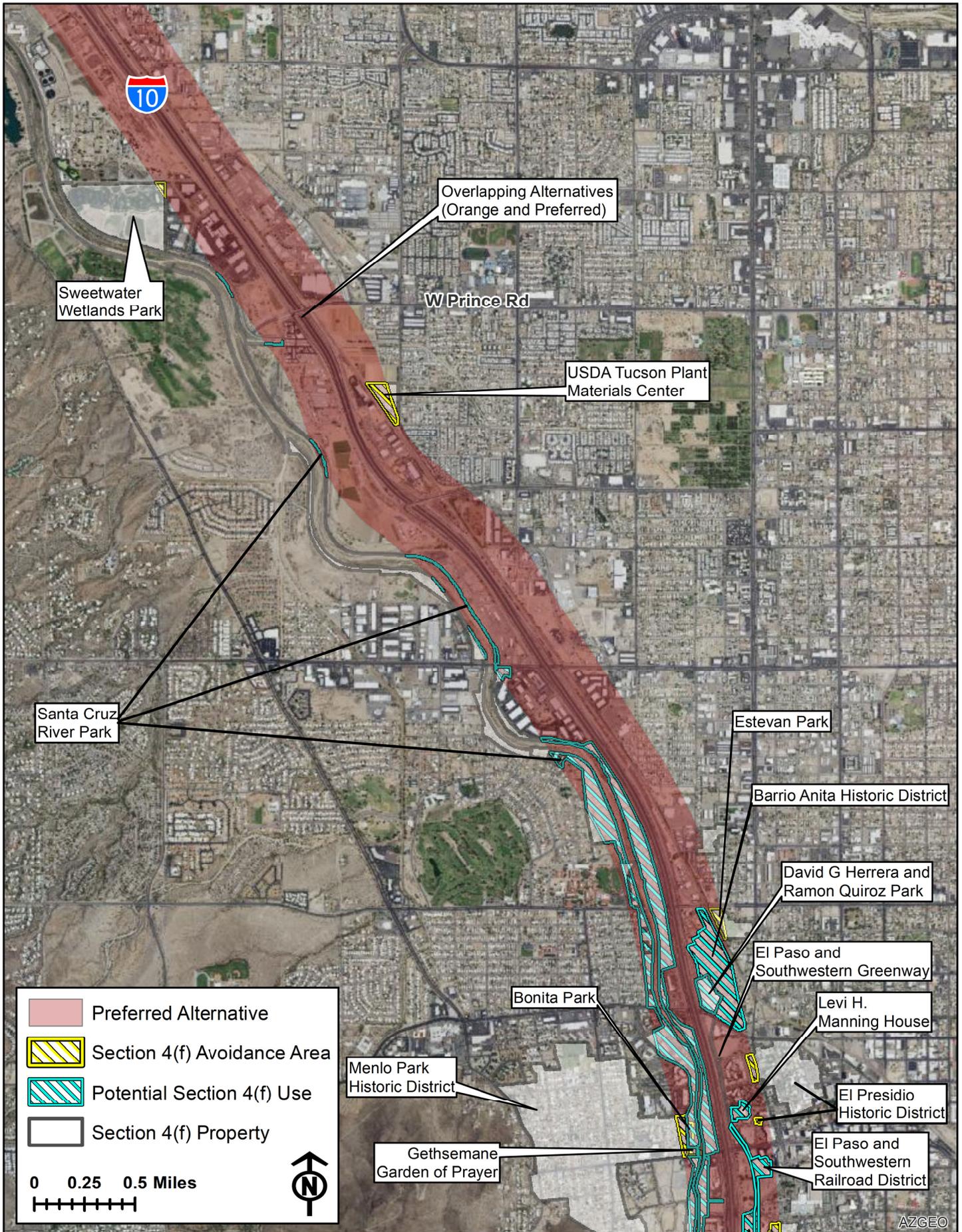


Figure 4-39. Downtown Tucson (North) Section 4(f) Properties - Preferred Alternative East Option and Orange Alternative

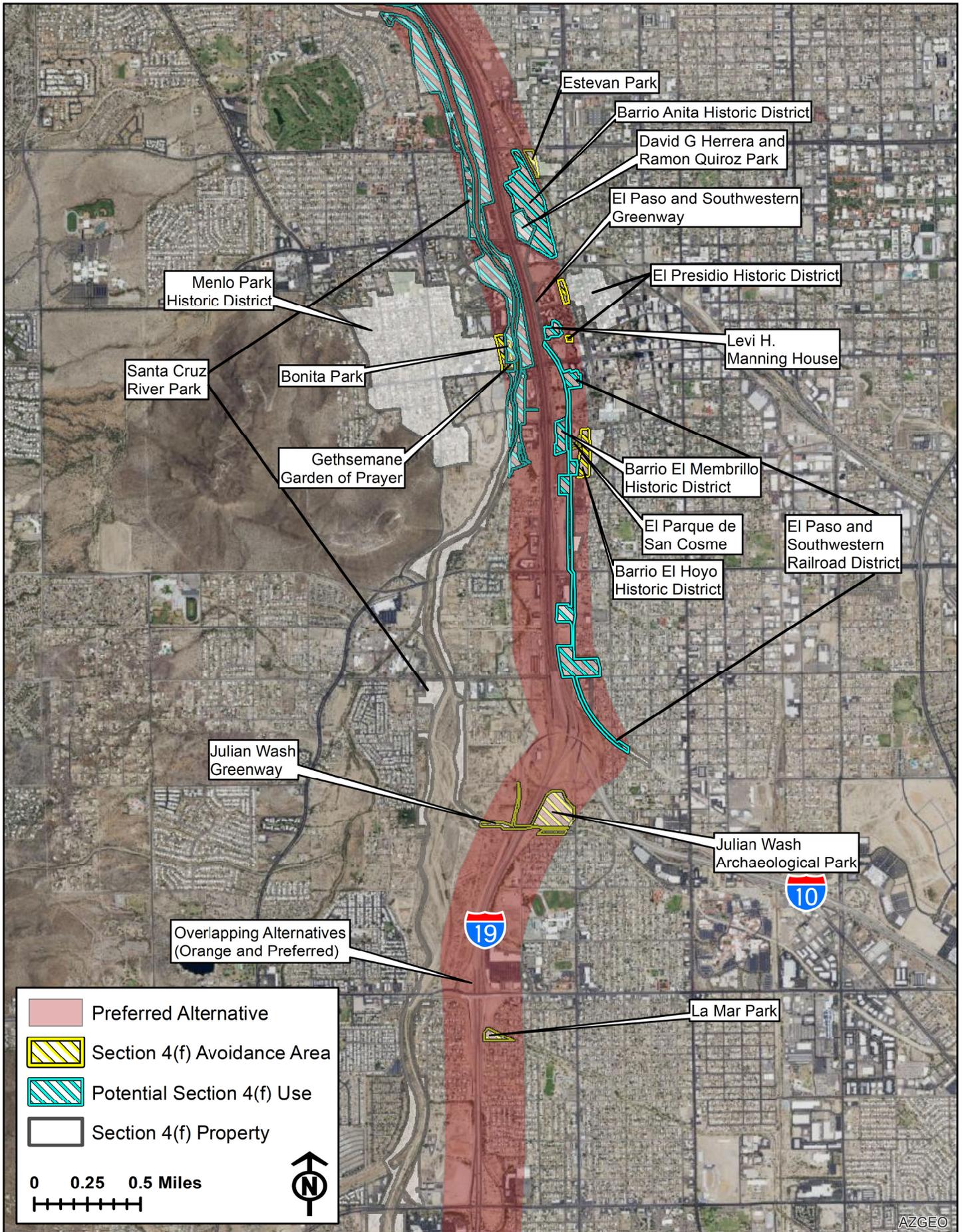


Figure 4-40. Downtown Tucson (South) Section 4(f) Properties - Preferred Alternative East Option and Orange Alternative



1 The Preferred Alternative east option or the Orange Alternative could potentially impact (use)
2 seven properties protected by Section 4(f) as shown on **Figure 4-39** and **Figure 4-40** and in
3 **Table 4-5**. The seven Section 4(f) properties at risk are:

- 4 • Santa Cruz River Park
- 5 • El Paso and Southwestern Greenway (planned trail)
- 6 • David G. Herrera and Ramon Quiroz Park (formerly Oury Park)
- 7 • Barrio El Membrillo Historic District
- 8 • El Paso and Southwestern Railroad District
- 9 • Levi H. Manning House
- 10 • Barrio Anita Historic District

11 **Table 3.7-10** in the Draft Tier 1 EIS describes impacts to historic properties by the Orange
12 Alternative. The Preferred Alternative east option or the Orange Alternative could require:

- 13 • Acquisition of parts of the Santa Cruz River Park
- 14 • Acquisition and demolition of the El Paso and Southwestern Greenway (planned trail)
- 15 • Acquisition of a portion of the David G. Herrera and Ramon Quiroz Park, a contributing
16 element to the Barrio Anita Historic District
- 17 • Removal of two to four contributing structures in the Barrio El Membrillo Historic District (of
18 approximately 10 surviving contributing residences) or possible removal of the contributing
19 resources of the district
- 20 • Acquisition of portions of the El Paso and Southwestern Railroad District; demolition of a
21 portion of the existing roundhouse
- 22 • Acquisition of a portion of Levi H. Manning House land
- 23 • Removal of at least one historic residential structure adjacent to I-10 in Barrio Anita

24 The Preferred Alternative east option or the Orange Alternative would have findings of adverse
25 effects under Section 106 of the NHPA and would permanently use Section 4(f) properties.
26 Additional impacts to non-recorded historic properties are described in **Section 3.7**
27 (Archaeological, Historical, Architectural, and Cultural Resources), including three residential
28 structures, the University of Arizona Agriculture Center, and Hotel Tucson.

29 **Avoidance Alternatives**

30 The property-specific avoidance analysis for the downtown Tucson properties assesses
31 whether, by using typical construction techniques and the findings of the Final Tier 1 EIS,
32 permanent incorporation of land from the downtown Tucson properties potentially can be

1 avoided by the No Build Alternative (2040), by improving the transportation facility without using
2 a Section 4(f) property or by building the transportation facility at a location that does not require
3 the use of the Section 4(f) property (FHWA 2005b). The results of the avoidance analysis for the
4 downtown Tucson properties are presented below.

5 No Build Alternative

6 The No Build Alternative (2040) is expected to avoid potential use of Section 4(f) properties.
7 However, the No Build Alternative (2040) is not a prudent avoidance alternative under Factor 1.
8 Specifically, and as described in **Chapter 6** (Preferred Alternative), the No Build Alternative
9 (2040) would compromise the project to such a degree that it would be unreasonable to proceed
10 in light of the I-11 Corridor Purpose and Need. The No Build Alternative (2040) would not
11 achieve the I-11 Corridor Purpose and Need, as it would not provide a high-priority, high-
12 capacity, access-controlled transportation corridor; would not support improved regional mobility
13 for people, goods, and homeland security; and would not enhance access to the high-capacity
14 transportation network to support economic vitality. Under the No Build Alternative (2040), travel
15 between Nogales and Wickenburg would occur on various existing corridors, such as I-19, I-10,
16 SR 101L, SR 202L, SR 303L, I-17, SR 74, and US 60.

17 Improve an Existing Transportation Facility Without Use of a Section 4(f) Property

18 The Build Corridor Alternatives are the outcome of an alternatives analysis that preliminarily
19 examined opportunities to avoid Section 4(f) and non-Section 4(f) properties (Draft Tier 1 EIS
20 **Chapter 2** [Alternatives Considered]). During the alternatives analysis, FHWA and ADOT
21 examined alignment shifts and design changes in downtown Tucson. An alignment shift moves
22 the roadway alignment to avoid the Section 4(f) property. In downtown Tucson, and as shown
23 on **Figure 4-39** and **Figure 4-40**, Section 4(f) properties are present on both the east and west
24 sides of the I-10 corridor, with some properties immediately adjacent to the I-10 right-of-way on
25 opposing sides of the roadway. Shifting the alignment of the I-11 Corridor to one side of I-10 or
26 the other would result in using Section 4(f) properties; avoiding Section 4(f) properties altogether
27 by shifting the alignment is not possible. As a result, alignment shifts do not result in an
28 avoidance alternative in downtown Tucson.

29 FHWA and ADOT also examined the potential to eliminate the frontage roads on each side of
30 I-10 to accommodate I-11 without impacting Section 4(f) properties. Eliminating frontage roads
31 has the potential to increase the area available for I-11 within existing transportation corridors
32 and may reduce or eliminate impacts to some Section 4(f) properties. Additional study of this
33 option is required in Tier 2 to assess the effects of eliminating frontage roads and the extent to
34 which Section 4(f) properties can be avoided.

35 FHWA and ADOT evaluated the feasibility of elevating I-11 in downtown Tucson to avoid
36 impacting Section 4(f) properties by using structures to elevate I-11 lanes above I-10.
37 Depending on the design, there may or may not be entry/exit points off I-11 to local streets. The
38 design and exact extent of impacts to Section 4(f) properties would be determined in Tier 2.
39 Although the elevated lanes could avoid use of adjacent Section 4(f) properties, noise and
40 visual impacts would result in adverse effects to historic buildings and structures. Deep
41 excavations for the elevated structure foundations would impact archaeological resources. For
42 these reasons, an elevated lanes alternative through downtown Tucson is not an avoidance
43 alternative. The elevated alternative also would impact businesses and residences that are not
44 protected by Section 4(f) and would add almost \$1 billion to the overall capital cost of the
45 Preferred Alternative east option or the Orange Alternative (compared to widening at grade).



1 FHWA and ADOT also analyzed the feasibility of tunneling I-11 from the I-19 interchange to
2 Prince Road (approximately 4 to 6 miles). The new I-11 lanes could be directly under I-10,
3 which would avoid potential visual and noise impacts. However, the tunnel could impact
4 undiscovered archaeological sites. The tunnel would require reconfiguring the I-19 interchange
5 to allow access into the tunnel. The estimated cost for the Preferred Alternative east option
6 assuming tunneling is approximately \$5.4 billion (compared to approximately \$586 million for
7 widening at grade). The Draft Tier 1 EIS states that tunneling is not prudent based on cost;
8 however, ADOT may re-evaluate this option in downtown Tucson in Tier 2.

9 In summary, the alternatives analysis in Tier 1 preliminarily assessed that the following options
10 would not avoid Section 4(f) properties in downtown Tucson: shifting the alignment, eliminating
11 frontage roads, elevating I-11, and tunneling I-11 under I-10 with I-10 remaining in place as it
12 exists today. During Tier 2 studies, each of these options will be evaluated in more detail as part
13 of the Preferred Alternative east option.

14 Build the Transportation Facility in a Location without Use of a Section 4(f) Property

15 All the Build Corridor Alternatives would impact Section 4(f) properties. The Preferred
16 Alternative west option would be located west of the Tucson area. The Preferred Alternative
17 west option would avoid the downtown Tucson properties but, as described in this Section 4(f)
18 Evaluation, would impact Section 4(f) properties on its route, including the Tucson Mitigation
19 Corridor. The Preferred Alternative west option is not an avoidance alternative.

20 Mitigation and Measures to Minimize Harm

21 If the Preferred Alternative east option is selected during Tier 2 studies, and prior to making a
22 Section 4(f) approval, project-level analysis in Tier 2 will include measures to minimize harm
23 and commitments that apply to Section 4(f) properties in general (listed in **Section 4.9**), as well
24 as specific commitments regarding properties in downtown Tucson, which are as follows:

- 25 • **T2-Section 4(f)-1:** If the Preferred Alternative east option is selected during Tier 2 studies,
26 ADOT will examine roadway design solutions to avoid or minimize impacts to Section 4(f)
27 properties in downtown Tucson. Examples of such solutions would include, but may not be
28 limited to, applying minimum required roadway cross sections, and shifting the proposed
29 roadway alignment to avoid some properties, elevating I-11 over I-10, tunneling I-11 under
30 I-10, and removing frontage roads. The benefits and impacts of design solutions will be
31 quantified, compared, and reported in Tier 2 analyses. Such reporting will also enable
32 comparison of the Preferred Alternative east option findings with those of the Preferred
33 Alternative west option in Tier 2.
- 34 • **T2-Section 4(f)-2:** If the Preferred Alternative east option is selected during Tier 2 studies,
35 ADOT will develop measures to minimize harm during Tier 2 in coordination with the officials
36 with jurisdiction over the affected properties in downtown Tucson.

37 The outcomes of Tier 2 studies and the Final Section 4(f) Evaluation will be ADOT's
38 commitments to include specific measures to minimize and mitigate harm to Section 4(f)
39 properties in downtown Tucson. These measures will be used to identify the alternative with the
40 least overall harm by comparing the alternatives and balancing achievement of the project
41 purpose and need with avoiding or minimizing impacts to Section 4(f) properties and non-
42 Section 4(f) resources.



1 **Coordination and Public Involvement**

2 FHWA and ADOT initiated coordination with SHPO about the downtown Tucson properties
3 during the EIS scoping process. SHPO concurred that the Orange Alternative would have
4 adverse effects to multiple historic and Section 4(f) properties (FHWA letter dated November 12,
5 2018, with concurrence from SHPO on November 23 and December 19, 2018) (**Appendix F3**
6 [Correspondence Related to Preliminary Section 4(f) Evaluation]).

7 FHWA and ADOT also coordinated with the City of Tucson and Pima County in regard to
8 identifying properties protected by Section 4(f), and potential design solutions to avoid Section
9 4(f) properties in downtown Tucson. In part because of coordination activities with the City of
10 Tucson and Pima County, FHWA and ADOT are advancing the Preferred Alternative east
11 option and the Preferred Alternative west option for Tier 2 studies, as well as the following
12 options in downtown Tucson: shifting the alignment, eliminating frontage roads, elevating I-11,
13 and tunneling I-11 under I-10.

14 FHWA and ADOT implemented a public involvement program during Tier 1 to share information
15 about the project with the public and seek public input. The Draft Tier 1 EIS was published on
16 April 5, 2019, followed by a public comment period that ended on July 8, 2019. During the public
17 comment period, FHWA and ADOT held six public hearings in the following locations: Buckeye
18 (April 29, 2019), Wickenburg (April 30, 2019), Casa Grande (May 1, 2019), Nogales (May 7,
19 2019), Tucson (May 8, 2019), and Marana (May 11, 2019). More detail regarding the public
20 involvement activities for the project may be found in **Chapter 5** (Coordination and Outreach) of
21 the Final Tier 1 EIS. Public comments on the Draft Tier 1 EIS may be found in **Appendix H**
22 (Comments on Draft Tier I EIS and Responses) of the Final Tier 1 EIS.

23 Throughout the Tier 1 EIS agency coordination and public involvement process, FHWA and
24 ADOT received input from members of the public in Pima County expressing opposition to the
25 I-11 Corridor. FHWA and ADOT invited the US Institute for Environmental Conflict Resolution to
26 facilitate a discussion in Pima County regarding the I-11 Tier 1 EIS. The US Institute is a
27 nationwide program of the Udall Foundation to assist parties in resolving environmental, public
28 lands, and natural resource conflicts that involve federal agencies or interests. The purpose of
29 the discussion was to gain a better understanding of the values and interests of the
30 communities in Pima County that the I-11 Corridor could impact. The stakeholders were divided
31 into two groups based on the communities they were representing: the I-10 Tucson
32 geographical area and the geographical area west and northwest of the Tucson Mountains. This
33 section summarizes the discussions with the I-10 Tucson geographical area group; **Section**
34 **4.6.3.3** describes discussions with the geographical area west and northwest of the Tucson
35 mountains group. During the discussions, stakeholders had the opportunity to identify
36 community-specific issues and concerns that could inform the decision-making process. The
37 U.S. Institute for Environmental Conflict Resolution prepared the final report documenting this
38 meeting process, which is included in **Appendix H** (Stakeholder Input) of the Draft Tier 1 EIS.

39 The I-10 Tucson geographical area group noted several adverse impacts the I-11 Corridor could
40 have on their community, including:

- 41 • Demolishing culturally significant historic resources and buildings
- 42 • Causing greater separation of the unique culture and history of the neighborhood

- 1 • Altering the sense of place in downtown Tucson
- 2 • Creating economic hardships for nearby businesses
- 3 During Tier 2 studies, FHWA will further evaluate the potential for use of Section 4(f) properties
- 4 in downtown Tucson and in the Avra Valley region west of Tucson, coordinate with officials with
- 5 jurisdiction, and prepare a Tier 2 Section 4(f) Evaluation of the Preferred Alternative west option,
- 6 Preferred Alternative east option, and other alternatives that may be considered at that time.

7 **4.6.3.3 Tucson Mitigation Corridor – Potential Individual Use (Preferred Alternative**
8 **West Option, Recommended, Purple, and Green Alternatives); No Use**
9 **(Preferred Alternative East Option and Orange Alternative)**

10 **Identification of the Section 4(f) Property**

11 The Tucson Mitigation Corridor (**Figure 4-41**) is a 2,514-acre property owned and managed by
12 the DOI, Bureau of Reclamation. The Tucson Mitigation Corridor was established in 1990 as a
13 commitment made by the Bureau of Reclamation with USFWS, AGFD, and Pima County to
14 partially mitigate biological impacts from the CAP. The four parties signed a 2002 cooperative
15 agreement to manage the Tucson Mitigation Corridor property in accordance with a Master
16 Management Plan that prohibits future development other than existing wildlife habitat
17 improvements (Pima County Resolution No. 1989-24B). The 2002 Cooperative Agreement
18 states in part, “Whereas, lands described herein for fish and wildlife purposes shall not become
19 subject to exchange or other transaction if those actions would defeat the initial purpose of their
20 acquisition (16 United States Code, Section 663(d)).” This agreement is intended to preserve
21 habitat from urbanization while maintaining wildlife movement across the CAP in Avra Valley.
22 Accordingly, the Bureau of Reclamation identified the Tucson Mitigation Corridor as a property
23 protected by Section 4(f) in its July 8, 2016, letter to ADOT during scoping (**Appendix F3**
24 [Correspondence Related to Preliminary Section 4(f) Evaluation]).

25 The CAP canal is a water conveyance canal that crosses the Tucson Mitigation Corridor from
26 north to south. The CAP canal underwent its own NEPA process that included involvement from
27 the public, environmental organizations, and government agencies. During that NEPA process,
28 the importance of providing wildlife connectivity across the Tucson Mitigation Corridor was
29 echoed by the public. To maintain a functional wildlife movement corridor across the CAP canal
30 on the Tucson Mitigation Corridor property, the Bureau of Reclamation installed seven concrete
31 pipe sections (also known as siphons) under washes, keeping the ground surface intact for
32 wildlife to use. Providing the siphons was critical to obtaining public acceptance of the CAP
33 alignment. Since installation, the Bureau of Reclamation and its partners have observed wildlife
34 using the siphon crossings to migrate across the Tucson Mitigation Corridor between Ironwood
35 Forest National Monument, Tohono O’odham Nation, and Roskrige Mountains to the west and
36 Saguaro National Park, Tucson Mountain Park, and Tucson Mountains to the east.

37

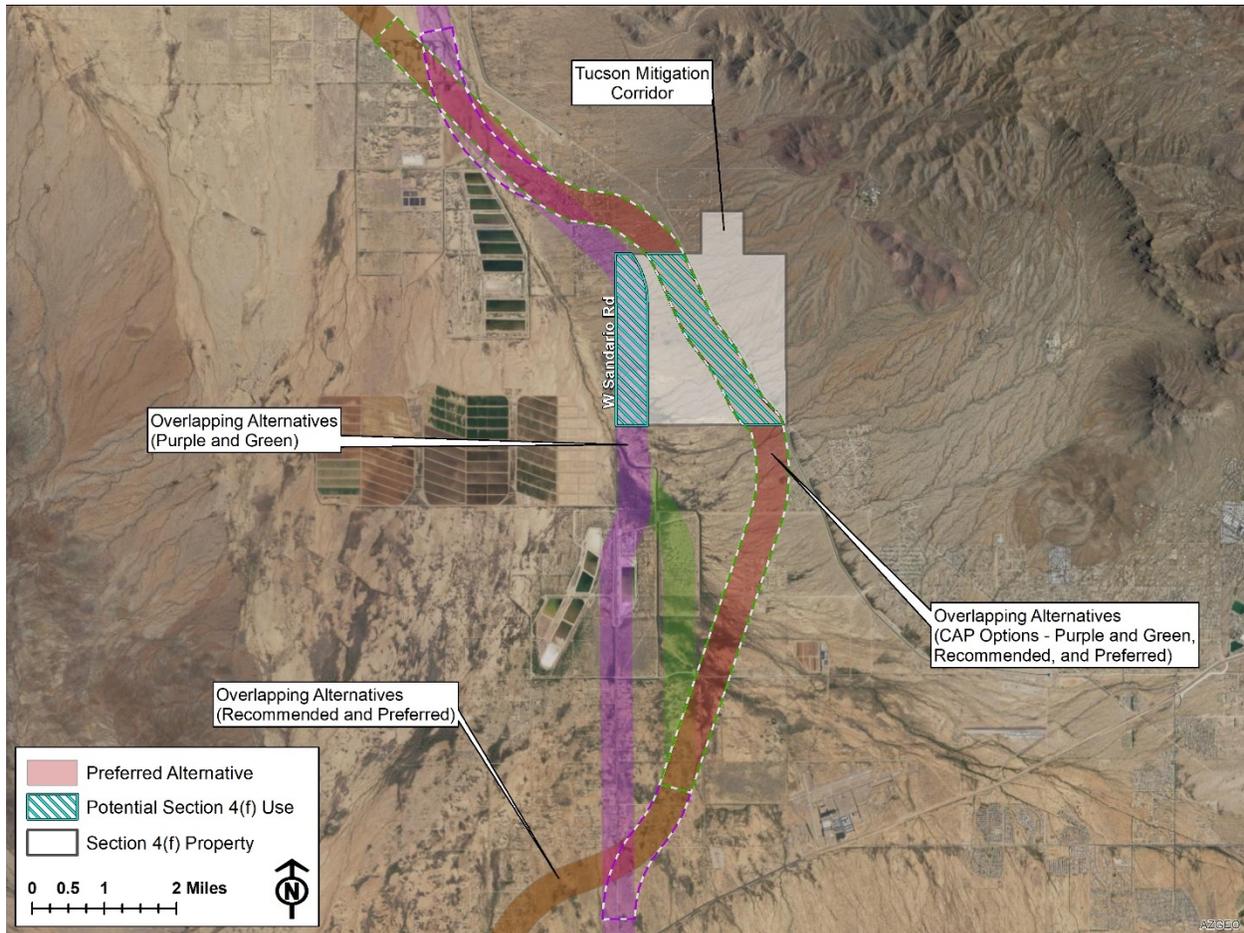


Figure 4-41. Tucson Mitigation Corridor – Preferred Alternative West Option, Recommended, Purple, or Green (CAP Design Option) Alternative

Proposed Use of the Section 4(f) Property

In this revised Draft Preliminary Section 4(f) Evaluation, the Preferred Alternative west option (Options C and D), and Recommended, Purple, and Green Alternatives would incorporate a portion of Tucson Mitigation Corridor land (453 acres, or approximately 18 percent), thereby using the Tucson Mitigation Corridor property. The 2,000-foot-wide corridor of each Build Corridor Alternative would be co-located with the CAP. As a result, the I-11 Corridor would potentially use the Tucson Mitigation Corridor property adjacent to the west side of the CAP (**Section 4.5.1**). The Preferred Alternative east option would not incorporate land from the Tucson Mitigation Corridor; no potential use of the Tucson Mitigation Corridor would occur under Section 4(f) for the Preferred Alternative east option.

Avoidance Alternatives

The property-specific avoidance analysis for the Tucson Mitigation Corridor applied the feasible and prudent criteria specified by 23 CFR 774.17 and listed in **Section 4.4.4.1**.

The property-specific avoidance analysis for the Tucson Mitigation Corridor assesses whether, by using typical construction techniques and the findings of the Final Tier 1 EIS, permanent

1 incorporation of land from the Tucson Mitigation Corridor property potentially can be avoided by
2 the No Build Alternative (2040), by improving the transportation facility without using a Section
3 4(f) property or by building the transportation facility at a location that does not require the use
4 of the Section 4(f) property (FHWA 2005b). The results of the avoidance analysis for the Tucson
5 Mitigation Corridor property are presented below.

6 No Build Alternative

7 The No Build Alternative (2040) is expected to avoid potential use of Section 4(f) properties.
8 However, the No Build Alternative (2040) is not a prudent avoidance alternative under Factor 1.
9 Specifically, and as described in **Chapter 6** (Preferred Alternative), the No Build Alternative
10 (2040) would compromise the project to such a degree that it would be unreasonable to proceed
11 in light of the I-11 Corridor Purpose and Need. The No Build Alternative (2040) would not
12 achieve the I-11 Corridor Purpose and Need, as it would not provide a high-priority, high-
13 capacity, access-controlled transportation corridor; would not support improved regional mobility
14 for people, goods, and homeland security; and would not enhance access to the high-capacity
15 transportation network to support economic vitality. Under the No Build Alternative (2040), travel
16 between Nogales and Wickenburg would occur on various existing corridors, such as I-19, I-10,
17 SR 101L, SR 202L, SR 303L, I-17, SR 74, and US 60.

18 Improve an Existing Transportation Facility Without Use of a Section 4(f) Property

19 The Preferred Alternative east option or Orange Alternative would be co-located with I-10 in the
20 Tucson area. The Preferred Alternative east option or Orange Alternative would avoid the
21 Tucson Mitigation Corridor but would impact Section 4(f) properties. The Preferred Alternative
22 east option and Orange Alternative are not avoidance alternatives.

23 The Build Corridor Alternatives are the outcome of an alternatives analysis that examined
24 opportunities to avoid Section 4(f) and non-Section 4(f) properties (Draft Tier 1 EIS **Chapter 2**
25 [Alternatives Considered]). During the alternatives analysis, FHWA and ADOT examined an
26 alignment west of the Tucson Mitigation Corridor property within the Sandario Road right-of-
27 way. Sandario Road runs parallel to the western boundary of the Tucson Mitigation Corridor.
28 The right-of-way is 80 feet wide and contains Sandario Road, a two-lane, two-way road. An 80-
29 foot-wide right-of-way is not wide enough to accommodate the proposed 400-foot right-of-way
30 for I-11 by itself or with existing Sandario Road. Additional right-of-way would be needed to
31 accommodate I-11 and retain the local traffic movements provided by Sandario Road.

32 FHWA and ADOT considered whether I-11 and Sandario Road could be accommodated in the
33 right-of-way by creating a three-level structure in the right-of-way with Sandario Road at grade,
34 with one direction of I-11 on a second level and the other direction of I-11 on a third level. While
35 the width of the right-of-way potentially could accommodate such an arrangement, the design of
36 a multi-level structure with a distance of approximately 2 miles (the length of the Tucson
37 Mitigation Corridor's western boundary) would require extensive entrance and exit structures
38 and provisions for emergency access in at least one location within that 2-mile stretch. The
39 multi-level highway structure and entrance and exit structures would extend impacts onto the
40 Tucson Mitigation Corridor property. Wildlife connectivity across Sandario Road would be
41 disrupted by the structures. The structures would also be substantially more visually invasive
42 than an at-grade highway. Also, the multi-level structure would not be desirable with respect to
43 maintenance and operations (Factors 2 and 4). Thus, while a multi-level structure may be
44 feasible, it is not prudent.



1 Build the Transportation Facility in a Location without Use of a Section 4(f) Property

2 All the Build Corridor Alternatives would impact Section 4(f) properties. The Preferred
3 Alternative east option and Orange Alternative would avoid the Tucson Mitigation Corridor
4 Section 4(f) property but would impact Section 4(f) properties that are clustered in downtown
5 Tucson. FHWA and ADOT considered the following designs to avoid Section 4(f) properties:

- 6 • **Corridor east of the Tucson Mitigation Corridor.** The Tucson Mitigation Corridor is
7 bordered on the east by the Tucson Mountain Park and to the north by Saguaro National
8 Park (both Section 4(f) properties). Therefore, an alignment to the east of the Tucson
9 Mitigation Corridor is not an avoidance alternative.
- 10 • **Corridor west of Sandario Road.** The Tohono O’odham Nation owns the land west of
11 Sandario Road. Early coordination with the Tohono O’odham Nation determined that the
12 tribe did not want the project on their sovereign lands. **Appendix F3** (Correspondence
13 Related to Preliminary Section 4(f) Evaluation) provides the 2017 resolution passed by the
14 Schuk Toak District of the Tohono O’odham Nation, which states that the Garcia Strip
15 Community in the Schuk Toak District of the Tohono O’odham Nation opposes a project
16 alignment on or near their community on the eastern boundary of the Tohono O’odham
17 Nation property west of Sandario Road. Therefore, a corridor west of Sandario Road is not
18 feasible.
- 19 • **Elevated Structure.** Placing I-11 on an elevated structure over the Tucson Mitigation
20 Corridor would allow space for wildlife movements across and underneath the roadway
21 facility. Supporting columns would be required at intervals across the property to support the
22 elevated structure. For this reason, the elevated structure option is not an avoidance
23 alternative.
- 24 • **Tunneling.** Placing I-11 in a tunnel under the Tucson Mitigation Corridor or under Sandario
25 Road would reduce the amount of land incorporated from the Tucson Mitigation Corridor
26 property. Tunneling activities could impact historic and archaeological sites on the Tucson
27 Mitigation Corridor property because a tunnel would require construction of portal structures
28 for the roadway transitions from above ground to below ground. Additionally, emergency
29 access and ventilation structures connecting the tunnel to the ground surface would be
30 required. A tunnel of this magnitude would add more than \$1 billion in costs to the Preferred
31 Alternative west option. The Draft Tier 1 EIS states that tunneling is not prudent based on
32 cost; however, ADOT may re-evaluate this option for the Tucson Mitigation Corridor in
33 Tier 2.

34 Mitigation and Measures to Minimize Harm

35 FHWA and ADOT coordinated with the Bureau of Reclamation in regard to the Tucson
36 Mitigation Corridor property. The Bureau of Reclamation is the official with jurisdiction over the
37 Tucson Mitigation Corridor property because, using the definition provided in 23 CFR 774.17,
38 the Bureau of Reclamation is the agency that owns and administers the Tucson Mitigation
39 Corridor property. The Bureau of Reclamation is the sole agency that is empowered to
40 represent the Bureau of Reclamation on matters related to the Tucson Mitigation Corridor
41 property.

42 Early coordination among FHWA, ADOT, and the Bureau of Reclamation and input received
43 from the public identified an opportunity to refine the alignment of the Purple and Green



1 Alternatives to minimize potential impacts on the Tucson Mitigation Corridor property. Because
2 the purpose of the Tucson Mitigation Corridor is to enable wildlife movements across the
3 property, FHWA and ADOT coordinated with the Bureau of Reclamation on developing a
4 conceptual roadway right-of-way width and alignment designs that would minimize impacts to
5 wildlife movements. Concepts considered included use of the existing Sandario Road right-of-
6 way with additional right-of-way from the Tucson Mitigation Corridor property (as originally
7 designed) or alignment of I-11 alongside the existing CAP canal that crosses the Tucson
8 Mitigation Corridor in a southeast to northwest direction. A summary of FHWA, the Bureau of
9 Reclamation, and ADOT coordination in regard to these concepts is described as follows:

- 10 • **Alignment Co-located with Existing Sandario Road.** Co-locating I-11 with Sandario Road
11 and using the Sandario Road right-of-way for a portion of the I-11 right-of-way needs would
12 reduce the amount of Tucson Mitigation Corridor land that would be needed for I-11
13 compared with a stand-alone alignment across the property. However, the Bureau of
14 Reclamation is concerned not only with the property impacts at that location but also with
15 the potential negative effects of I-11, Sandario Road, and the CAP canal on wildlife
16 movements. Specifically, each existing linear facility (Sandario Road and the CAP canal)
17 has some barrier effect on wildlife movements across the property. Placing I-11 on Sandario
18 Road would add at-grade interstate highway infrastructure (additional travel lanes and
19 barrier dividers), thereby increasing the barrier effect at the Sandario Road location. The
20 Bureau of Reclamation indicated that I-11/Sandario Road and the CAP canal would form
21 two parallel linear systems that would negatively affect wildlife movements to a greater
22 extent than exists today.

- 23 • **Alignment on the West Side of the CAP Canal, Existing Sandario Road.** Because of the
24 Bureau of Reclamation's concerns about co-locating I-11 with Sandario Road, FHWA,
25 ADOT, and the Bureau of Reclamation worked together to develop a concept that would
26 place I-11 on the west side of and parallel to the CAP canal. An alignment on the east side
27 of the CAP canal is infeasible because of the sloping condition of the land and because it
28 would require two, likely elevated interstate crossings of the CAP; such crossings would
29 cause visual and noise effects. The west side alignment would consolidate the two linear
30 systems in one general location. The concept for I-11 would include wildlife crossing areas
31 that are in line with the existing CAP siphon crossings. The Bureau of Reclamation prefers
32 this alignment of I-11 alongside the CAP canal because, although land from the Tucson
33 Mitigation Corridor would be required for I-11, the alignment would consolidate the I-11 and
34 CAP infrastructure in one general location. However, the Bureau of Reclamation was
35 concerned about the negative effects on wildlife movements that would be caused by
36 retaining existing Sandario Road in its current location and the I-11/CAP corridors.

- 37 • **CAP Design Option (Alignment on the West Side of the CAP Canal, with Mitigation).**
38 Based on these concerns, FHWA, ADOT, and the Bureau of Reclamation worked together
39 to develop the following mitigation concepts to relocate Sandario Road and reduce the
40 barrier effect of the I-11/CAP canal corridors:
 - 41 ○ Remove and reclaim Sandario Road. As identified in the Bureau of Reclamation's June
42 8, 2018, letter (**Appendix F3** [Correspondence Related to Preliminary Section 4(f)
43 Evaluation]), ADOT would terminate Sandario Road at the northern and southern border
44 of the Tucson Mitigation Corridor (approximately a 2-mile section of road) using cul-de-
45 sacs. ADOT would remove the abandoned section of the road and any fencing or other
46 features that are a wildlife barrier and reclaim the right-of-way with native habitat. The



1 design would remove barriers for wildlife while ensuring local access to adjacent
2 properties is maintained.

3 ○ Sandario Road is managed by Pima County. The ownership of the road is half Pima
4 County and half Tohono O’odham Nation. Pima County has a maintenance easement on
5 the tribal land. Relocating Sandario Road would be undertaken as an integral part of the
6 proposed project if the Preferred Alternative west option were to be selected in Tier 2
7 studies. During Tier 2 study, ADOT would undertake coordination with the Bureau of
8 Reclamation, the Tohono O’odham Nation, Pima County, the public, and others as part
9 of identifying a specific design and construction plan for relocating Sandario Road,
10 assessing potential benefits and impacts, and developing appropriate mitigation.

11 ○ I-11 Wildlife Crossings. ADOT would incorporate seven wildlife crossing areas into the
12 I-11 and Sandario Road design such that the crossings are in line with the existing CAP
13 canal siphons. By removing Sandario Road, co-aligning I-11 alongside the CAP canal,
14 and co-aligning wildlife crossing areas, the barrier effect formed by existing Sandario
15 Road would be removed. The Bureau of Reclamation acknowledges this mitigation
16 measure for this reason and because it would consolidate the I-11/CAP canal
17 infrastructure in one location and reduce the potential barrier effect I-11 could cause on
18 the Tucson Mitigation Corridor property. As stated in their letter of June 8, 2018
19 (**Appendix F3** [Correspondence Related to Preliminary Section 4(f) Evaluation]), this
20 would encourage and enhance conditions for wildlife movements across the Tucson
21 Mitigation Corridor compared to the alternative of I-11 not adjacent to the CAP canal.

22 Wildlife crossings could take the form of passages over or under I-11 depending on a
23 variety of factors such as, but not limited to, engineering feasibility, terrain, and wildlife
24 requirements. The analysis of, and specifications for, such crossings would be
25 determined during Tier 2 studies in coordination with the official with jurisdiction.

26 Minimization and Mitigation Measures

27 Prior to making a Section 4(f) approval, project-level analysis in Tier 2 will include measures to
28 minimize harm and commitments that apply to Section 4(f) properties in general (listed in
29 **Section 4.9**). ADOT will consult with the Bureau of Reclamation, AGFD, USFWS, and Pima
30 County to evaluate the Preferred Alternative west option in more detail in Tier 2. After these
31 consultations, if the Preferred Alternative west option is chosen, ADOT will continue
32 consultations to further develop measures to minimize and mitigate impacts to the Tucson
33 Mitigation Corridor. As a result of extensive coordination with cooperating agencies, FHWA and
34 ADOT assumed the CAP Design Option (as described above) for assessing impacts in the Draft
35 Tier 1 EIS. The Tier 2 studies may evaluate tunneling or elevated structures to minimize or
36 mitigate impacts to the Tucson Mitigation Corridor, including the need to relocate Sandario
37 Road.

38 Specific commitments regarding the Tucson Mitigation Corridor are:

- 39 • **T2-Section 4(f)-3:** Coordinate with Central Arizona Water Conservation District and the
40 Bureau of Reclamation on the applicable design standards in Tier 2 studies.
- 41 • **MM-Section 4(f)-1:** Coordinate with the Bureau of Reclamation, NPS, AGFD, and Pima
42 County regarding the Tucson Mitigation Corridor during Tier 2 studies.



- 1 • **MM-Section 4(f)-2:** Relocate and reclaim Sandario Road. If the Preferred Alternative west
2 option (including the CAP Design Option) is chosen in Tier 2, ADOT will further study
3 relocation of Sandario Road to coincide with the new I-11 alignment. ADOT will remove and
4 reclaim an approximately 2-mile section of the existing road with native vegetation. The
5 design would reduce barriers for wildlife (including the road and associated roadway
6 fencing) while maintaining necessary local access.
- 7 • **MM-Section 4(f)-3:** Co-align wildlife crossings with CAP canal wildlife crossings. If the
8 Preferred Alternative west option is chosen in Tier 2, ADOT will study placement of wildlife
9 crossings on I-11 that align with the six existing CAP siphon crossings in the Tucson
10 Mitigation Corridor and would place one wildlife crossing immediately north of the Tucson
11 Mitigation Corridor (a total of seven crossings). The purpose of the I-11 wildlife crossings is
12 to provide continuity to the existing CAP wildlife crossings (siphons) and minimize impacts to
13 wildlife movements between the Tucson Mountains and Roskrige Mountains.
- 14 • **MM-Section 4(f)-4:** Provide no interchanges between West Snyder Hill Road and West
15 Manville Road. To maximize the effectiveness of the Tucson Mitigation Corridor mitigation
16 measures, ADOT will not build exits or interchanges on I-11 between West Snyder Hill Road
17 and West Manville Road if the Preferred Alternative west option is chosen in Tier 2. The
18 distance between these two roads is approximately 9 miles.
- 19 • **MM-Section 4(f)-5:** Minimize width of I-11 in Tucson Mitigation Corridor. If the Preferred
20 Alternative west option is chosen in Tier 2, ADOT will minimize the width of I-11 through the
21 Tucson Mitigation Corridor using appropriate interstate design standards.
- 22 • **MM-Section 4(f)-6:** Partner with land use planning organizations and agencies.
23 Understanding the potential for indirect and cumulative land use effects that could occur if
24 the Preferred Alternative west option is chosen in Tier 2, ADOT will be an active partner in a
25 broader effort with metropolitan planning organizations, local jurisdictions, resource
26 agencies, and private stakeholders to cooperatively plan development in the I-11 Corridor.
27 The effort would coordinate wildlife connectivity, local land use planning, and context-
28 sensitive design for the I-11 facility. The White Tank Mountains Conservancy may be a
29 model for this type of effort. Coordination with Pima County on the implementation of the
30 Sonoran Desert Conservation Plan also could be part of the effort.
- 31 • **MM-Section 4(f)-7:** Apply design standards. The Bureau of Reclamation and the Central
32 Arizona Water Conservation District have design standards for facilities that encroach on
33 CAP lands. ADOT will comply with these standards where I-11 crosses CAP lands or is
34 adjacent to the CAP facility.
- 35 • **MM-Section 4(f)-8:** Comply with dark skies objectives. Roadway lighting will be compatible
36 with dark skies objectives and lighting would be limited to be consistent with land use and
37 development patterns at the time of the I-11 Corridor implementation.
- 38 • **MM-Section 4(f)-9:** Visually screen the Project. If the Preferred Alternative west option is
39 chosen in Tier 2, the roadway will be designed in such a way as to screen the facility from
40 sensitive viewpoints in the area. The design will use various measures, such as vegetation,
41 berms, and topography or partial depression of the roadway, to accomplish this. The
42 screening also could reduce noise impacts.

- 1 • **MM-Section 4(f)-10:** Undertake wildlife studies and create or enhance wildlife corridor(s).
2 ADOT will coordinate with AGFD and USFWS, as recognized wildlife authorities, on
3 determining the studies required to understand east-west wildlife movement needs (both on
4 and off the Tucson Mitigation Corridor) between the Tucson Mountains and the Roskrige
5 Mountains. ADOT will undertake and use the results of the wildlife studies, in consultation
6 with AGFD, USFWS, and the Tucson Mitigation Corridor Working Group, to develop specific
7 mitigation measures that will be incorporated into the I-11 Corridor. Mitigation measures may
8 include creation of new or enhancement of existing wildlife corridor(s) on or outside the
9 Tucson Mitigation Corridor property, but would be located between the Tucson Mountains to
10 the east and the Roskrige Mountains to the west, and they would support the purpose of
11 the Tucson Mitigation Corridor. These studies will gather baseline wildlife data, including
12 evaluation of historical and current movement data, and surveys of existing populations.
13 Using the baseline data, the studies will identify the extent, location, requirements, target
14 species, and expected benefits of additional and enhanced wildlife movement corridors,
15 supporting structures, and other mitigation measures. The wildlife studies will identify
16 adaptive management thresholds and likely actions. ADOT will fund and facilitate the
17 implementation of the identified wildlife studies in Tier 2 so that the results can be used to
18 inform the I-11 Corridor design.
- 19 • **MM-Section 4(f)-11:** Replace or compensate for any land in the Tucson Mitigation Corridor
20 acquired for I-11 by considering comparable value and function, restoration of land value,
21 and preservation of land. If the Preferred Alternative west option requires acquisition of
22 Tucson Mitigation Corridor land, ADOT will assess the feasibility of transferring land
23 acquired for Tucson Mitigation Corridor mitigation to an entity that would protect the lands
24 for wildlife and wildlife movement purposes. ADOT will consult with the Tucson Mitigation
25 Corridor partners to jointly identify and agree on the appropriate entity.

26 **Coordination and Public Involvement**

27 FHWA and ADOT coordinated with the Bureau of Reclamation and Tucson Mitigation Corridor
28 management partners in each phase of alternatives development and evaluation, beginning with
29 scoping and continuing through development and evaluation of the Build Corridor Alternatives.
30 Specifically, and as described in this section, the Bureau of Reclamation stated their opinion
31 that the Tucson Mitigation Corridor is protected by Section 4(f) in their July 8, 2016 letter
32 (**Appendix F3** [Correspondence Related to Preliminary Section 4(f) Evaluation]). Subsequent
33 coordination meetings among FHWA, ADOT, and the Bureau of Reclamation in 2017 and 2018
34 included discussion of the merits and flaws associated with aligning the Build Corridor
35 Alternatives on Sandario Road or alongside the CAP canal and relocating Sandario Road and
36 co-aligning the I-11/CAP canal wildlife crossings. Coordination activities also included
37 consideration of applying the Programmatic Net Benefit approach for the Tucson Mitigation
38 Corridor, an approach that will not be pursued. **Section 4.10.2** provides more detail regarding
39 the Programmatic Net Benefit approach. In all such discussions, minimizing impacts to wildlife
40 movements was the primary concern of all parties.

41 This detailed coordination work was critical to identifying and resolving concerns regarding the
42 ability of the Tucson Mitigation Corridor property to continue achieving its mission of enabling
43 wildlife movements. The March 5, 2018 meeting memoranda found in **Appendix F3**
44 (Correspondence Related to Preliminary Section 4(f) Evaluation) of the Final Tier 1 EIS
45 documents these coordination activities.



1 FHWA and ADOT implemented a public involvement program during Tier 1 to share information
2 about the project with the public and seek public input. The Draft Tier 1 EIS was published on
3 April 5, 2019, followed by a public comment period that ended on July 8, 2019. During the public
4 comment period, FHWA and ADOT held six public hearings in the following locations: Buckeye
5 (April 29, 2019), Wickenburg (April 30, 2019), Casa Grande (May 1, 2019), Nogales (May 7,
6 2019), Tucson (May 8, 2019), and Marana (May 11, 2019). More detail regarding the public
7 involvement activities for the project may be found in **Chapter 5** (Coordination and Outreach) of
8 the Final Tier 1 EIS. Public comments on the Draft Tier 1 EIS may be found in **Appendix H**
9 (Comments on Draft Tier I EIS and Responses) of the Final Tier 1 EIS.

10 Throughout the Tier 1 EIS agency coordination and public involvement process, FHWA and
11 ADOT received input from members of the public expressing opposition to the I-11 Corridor.
12 FHWA and ADOT invited the US Institute for Environmental Conflict Resolution to facilitate a
13 discussion in Pima County regarding the I-11 Corridor Tier 1 EIS. The US Institute is a
14 nationwide program of the Udall Foundation to assist parties in resolving environmental, public
15 lands, and natural resource conflicts that involve federal agencies or interests. The purpose of
16 the discussion was to gain a better understanding of the values and interests of the
17 communities in Pima County that the I-11 Corridor could impact: the I-10 Tucson geographical
18 area and the geographical area west and northwest of the Tucson Mountains. This section
19 summarizes the discussions with the geographical area west and northwest of the Tucson
20 mountains group. **Section 4.6.3.2** describes discussions with the I-10 Tucson geographical area
21 group. During the meetings, the following community-specific issues and concerns were
22 identified that could inform the decision-making process. The US Institute for Environmental
23 Conflict Resolution prepared the final report documenting this meeting process, which is
24 included in **Appendix H** (Stakeholder Input) of the Draft Tier 1 EIS.

25 The geographical area west and northwest of the Tucson mountains group noted their primary
26 preference to not build I-11 in their area and stated the following concerns regarding the
27 adverse impacts the I-11 Corridor could have on their community, including but not limited to:

- 28 • Impacted viewsheds
- 29 • Impacted Saguaro National Park, protected lands, and desert ecosystem
- 30 • Loss of community cohesion; impacts to quality of life
- 31 • Fragmentation of wildlife connectivity
- 32 • Potential contamination of the City of Tucson's aquifer, SAVSARP and CAVSARP recharge
33 basins, and wells
- 34 • Impacted emergency services and public safety
- 35 • Impacts from light, noise, and air quality

36 Stakeholders from the geographical area west and northwest of the Tucson mountains group
37 meetings proposed different strategies to mitigate these concerns, including co-locating with the
38 CAP canal, tunneling under the Tucson Mitigation Corridor, and other robust construction
39 techniques to isolate I-11 from the surrounding area.



1 **4.6.4 Constructive Use**

2 **4.6.4.1 Regulatory Context**

3 The requirements of 23 CFR 774.15 describe the conditions in which a constructive use could
4 occur:

5 “A constructive use occurs when the transportation project does not incorporate land
6 from a Section 4(f) property, but the project's proximity impacts are so severe that the
7 protected activities, features, or attributes that qualify the property for protection under
8 Section 4(f) are substantially impaired. Substantial impairment occurs only when the
9 protected activities, features, or attributes of the property are substantially diminished.”

10 Substantial impairment is a high threshold; an impact does not rise to the level of being
11 so severe unless specific criteria are achieved. FHWA has determined that a
12 constructive use occurs when (23 CFR 774.15(e)):

13 “(1) The projected noise level increase attributable to the project substantially interferes
14 with the use and enjoyment of a noise-sensitive facility of a property protected by
15 Section 4(f), such as:

16 (i) Hearing the performances at an outdoor amphitheater;

17 (ii) Sleeping in the sleeping area of a campground;

18 (iii) Enjoyment of a historic site where a quiet setting is a generally recognized feature or
19 attribute of the site's significance;

20 (iv) Enjoyment of an urban park where serenity and quiet are significant attributes; or

21 (v) Viewing wildlife in an area of a wildlife and waterfowl refuge intended for such
22 viewing.

23 (2) The proximity of the proposed project substantially impairs esthetic features or
24 attributes of a property protected by Section 4(f), where such features or attributes are
25 considered important contributing elements to the value of the property. Examples of
26 substantial impairment to visual or esthetic qualities would be the location of a proposed
27 transportation facility in such proximity that the facility obstructs or eliminates the primary
28 views of an architecturally significant historical building, or substantially detracts from the
29 setting of a Section 4(f) property which derives its value in substantial part due to its
30 setting;

31 (3) The project results in a restriction of access which substantially diminishes the utility
32 of a significant publicly owned park, recreation area, or a historic site;

33 (4) The vibration impact from construction or operation of the project substantially
34 impairs the use of a Section 4(f) property, such as projected vibration levels that are
35 great enough to physically damage a historic building or substantially diminish the utility
36 of the building, unless the damage is repaired and fully restored consistent with the
37 Secretary of the Interior's Standards for the Treatment of Historic Properties, i.e., the



1 integrity of the contributing features must be returned to a condition which is
2 substantially similar to that which existed prior to the project; or
3 (5) The ecological intrusion of the project substantially diminishes the value of wildlife
4 habitat in a wildlife and waterfowl refuge adjacent to the project, substantially interferes
5 with the access to a wildlife and waterfowl refuge when such access is necessary for
6 established wildlife migration or critical life cycle processes, or substantially reduces the
7 wildlife use of a wildlife and waterfowl refuge.”

8 FHWA has determined that a constructive use does not occur when (23 CFR 774.15(f)):

9 “(1) Compliance with the requirements of 36 CFR 800.5 for proximity impacts of the
10 proposed action, on a site listed on or eligible for the National Register, results in an
11 agreement of ‘no historic properties affected’ or ‘no adverse effect’;

12 (2) The impacts of projected traffic noise levels of the proposed highway project on a
13 noise-sensitive activity do not exceed the FHWA noise abatement criteria as contained
14 in Table 1 in part 772 of this chapter, or the projected operational noise levels of the
15 proposed transit project do not exceed the noise impact criteria for a Section 4(f) activity
16 in the FTA [Federal Transportation Administration] guidelines for transit noise and
17 vibration impact assessment;

18 (3) The projected noise levels exceed the relevant threshold in paragraph (f)(2) of this
19 section because of high existing noise, but the increase in the projected noise levels if
20 the proposed project is constructed, when compared with the projected noise levels if
21 the project is not built, is barely perceptible (3 dBA or less);

22 (4) There are proximity impacts to a Section 4(f) property, but a governmental agency's
23 right-of-way acquisition or adoption of project location, or the Administration's approval of
24 a final environmental document, established the location for the proposed transportation
25 project before the designation, establishment, or change in the significance of the
26 property. However, if it is reasonably foreseeable that a property would qualify as eligible
27 for the National Register prior to the start of construction, then the property should be
28 treated as a historic site for the purposes of this section; or

29 (5) Overall (combined) proximity impacts caused by a proposed project do not
30 substantially impair the activities, features, or attributes that qualify a property for
31 protection under Section 4(f);

32 (6) Proximity impacts will be mitigated to a condition equivalent to, or better than, that
33 which would occur if the project were not built, as determined after consultation with the
34 official(s) with jurisdiction;

35 (7) Change in accessibility will not substantially diminish the utilization of the Section 4(f)
36 property; or

37 (8) Vibration levels from project construction activities are mitigated, through advance
38 planning and monitoring of the activities, to levels that do not cause a substantial
39 impairment of protected activities, features, or attributes of the Section 4(f) property.”

1 **4.6.4.2 Tucson Mountain Park and Saguaro National Park Assessment**

2 Based on comments from the Bureau of Reclamation, FHWA assessed the potential for
3 constructive use on Tucson Mountain Park and Saguaro National Park. **Appendix F3**
4 (Correspondence Related to Preliminary Section 4(f) Evaluation) provides the detailed
5 constructive use assessment.

6 Noise and visual impacts, combined, would impact the visitor experience at Tucson Mountain
7 Park and Saguaro National Park. However, according to FHWA policy and practice on
8 constructive use, these combined impacts would not be so severe as to substantially impair or
9 diminish the attributes that qualify the parks for protection under Section 4(f). The attributes of
10 each property are listed in **Table 4-1** and **Table 4-2**. Specifically, noise levels with I-11 are
11 predicted to be less than the applicable FHWA noise abatement threshold at Saguaro National
12 Park and Tucson Mountain Park. Also, ADOT has committed to mitigate impacts on night skies
13 by complying with dark skies ordinances and by limiting lighting, if necessary.

14 **4.6.4.3 Public Land Order 1015 Lands and Adjacent AGFD Parcels Assessment**

15 Originally under the jurisdiction of BLM, the Public Land Order 1015 lands were withdrawn from
16 BLM jurisdiction in 1954 under Public Land Order 1015 and “reserved under the jurisdiction of
17 the USFWS for wildlife refuge purposes.” The Public Land Order 1015 lands are
18 owned/administered by USFWS but managed by AGFD. USFWS considers the Public Land
19 Order 1015 lands to be in a special category of lands called “Coordination areas” under the
20 National Wildlife Refuge Act. The adjacent AGFD parcels are in furtherance of the 1954
21 USFWS/AGFD/Pima County Cooperative Agreement, clause 7 (USFWS and AGFD 1954).

22 FHWA and ADOT assessed the potential for the Project to cause a constructive use on the
23 Public Land Order 1015 lands. The assessment focused on Public Land Order 1015 lands on
24 either side of the Recommended Alternative corridor (**Figure 4-33**). **Appendix F2** (Section 4(f)
25 Constructive Use White Papers) provides the detailed constructive use assessment.

26 Based on the assessment, FHWA determined that, if the Recommended Alternative had been
27 selected for further study in Tier 2, the proximity effects of I-11 to Public Land Order 1015 lands
28 would not be so severe that the protected activities, features, or attributes that qualify the
29 properties for protection under Section 4(f) would be substantially impaired. No constructive use
30 of Public Land Order 1015 lands or adjacent AGFD parcels would occur as a result of the
31 Project.

32 **4.7 Corridor-wide Avoidance Analysis**

33 An avoidance analysis was undertaken at the corridor-wide level because a use of properties
34 protected by Section 4(f) potentially would occur as a result of each Build Corridor Alternative,
35 including the Preferred Alternative. In the corridor-wide avoidance analysis, FHWA and ADOT
36 identified avoidance alternatives that would eliminate potential use of Section 4(f) properties and
37 applied the feasible and prudent criteria to those alternatives. Feasible and prudent avoidance
38 alternatives are those that would avoid using any Section 4(f) property and would not cause
39 other problems of a magnitude that would substantially outweigh the importance of protecting
40 the Section 4(f) property (23 CFR 774.17). Alternatives evaluated in the avoidance analysis



1 include the No Build Alternative (2040) and the following types of alternatives as identified in
2 FHWA's *Section 4(f) Policy Paper* (FHWA 2012b):

- 3 • **Location Alternatives.** A location alternative refers to the rerouting of the entire project on a
4 different alignment. Examples of location alternatives are the other Build Alternatives
5 assessed in this Final Tier 1 EIS.
- 6 • **Alternative Actions.** An alternative action involves actions that do not require construction
7 or that consist of a different transit mode.

8 The FHWA *Section 4(f) Policy Paper* also identifies alignment shifts and design changes as
9 types of avoidance (FHWA 2012b). These property-specific types of avoidance strategies are
10 detailed in **Section 4.4.4.1**.

11 **4.7.1 Avoidance Alternative Feasibility and Prudence Standards**

12 Definitions of feasible and prudent alternatives under 23 CFR 774.17 are listed in **Section**
13 **4.4.4.1**. An alternative that potentially would use any Section 4(f) property is not an avoidance
14 alternative.

15 The following subsections evaluate the No Build Alternative (2040) and other potential location
16 alternatives, alternative actions, alignment shifts, and design changes using these feasible and
17 prudent factors. In each case, a discussion of the relevant issues for each alternative is
18 provided and the applicable factor(s) are applied. For some alternatives, the issues relate to a
19 single factor; for other alternatives, multiple factors apply. To be considered a feasible and
20 prudent avoidance alternative as defined by Section 4(f), an alternative has to be assessed as
21 being both feasible from the standpoint of buildability and prudent in terms of achieving the I-11
22 Purpose and Need while having no severe or extraordinary impacts related to safety on the
23 natural and built environments and cost. An avoidance alternative that fails one of the feasible
24 and prudent tests is not a viable avoidance alternative in terms of Section 4(f).

25 The results of the evaluations in the following subsections are that the No Build Alternative
26 (2040) and other potential location alternatives, alternative actions, alignment shifts, and design
27 changes are not feasible and prudent avoidance alternatives.

28 **4.7.2 No Build Alternative (2040)**

29 The No Build Alternative (2040) represents the existing transportation system, along with
30 committed improvement projects that are programmed for funding. These improvements are
31 represented in the federally approved *2017–2021 STIP* (ADOT 2016a). The *2018–2022 Five-*
32 *Year Transportation Facilities Construction Program* (ADOT 2017b) identified several capacity
33 improvements that are in the STIP and are programmed and funded for construction on the
34 interstate and state highway system within the Corridor Study Area by 2022.

35 The No Build Alternative (2040) is expected to avoid the potential use of Section 4(f) properties.
36 However, the No Build Alternative (2040) is not a prudent avoidance alternative under Factor 1.
37 Specifically, the No Build Alternative (2040) would not meet the I-11 Purpose and Need. The No
38 Build Alternative (2040) would not achieve the I-11 Purpose and Need as it would not provide a
39 high priority, high capacity, access-controlled transportation corridor; would not support

1 improved regional mobility for people, goods, and homeland security; would not connect
2 metropolitan areas and markets in the Intermountain West region with Mexico and Canada; and
3 would not enhance access to the high-capacity transportation network to support economic
4 vitality. For these reasons, the No Build Alternative (2040) is not a feasible and prudent
5 avoidance alternative (Factor 1).

6 **4.7.3 Location Alternatives**

7 **4.7.3.1 Use Existing Non-Road Transportation Corridors**

8 Portions of the Build Corridor Alternatives are aligned on and within existing highway corridors
9 such as I-19 and I-10, portions of which parallel but are not within existing BNSF and Union
10 Pacific freight railroad right-of-way. During the alternatives development and screening process,
11 described in Draft Tier 1 EIS **Chapter 2** (Alternatives Considered), portions of the various Build
12 Corridor Alternatives were aligned adjacent to and parallel with linear transportation and utility
13 uses (roadway, railroad, and power line corridors) where possible to minimize impacts. During
14 the Tier 1 EIS scoping and Alternative Selection Report phases, the railroads did not
15 communicate interest or need in sharing existing or new corridors with the project because of
16 ample existing capacity in their networks and their desires to retain their existing right-of-way for
17 potential future expansion. Using existing railroad corridors for the I-11 Corridor would
18 negatively impact the existing and future operations of the railroads by limiting their future
19 options. ADOT would have to acquire additional right-of-way to accommodate both ADOT's
20 project needs and those of the railroads, thereby eliminating the potential benefit of using an
21 existing transportation corridor. As existing railroad corridors in the Corridor Study Area pass
22 through developed areas and alongside existing roadways, potentially severe impacts could
23 result from property acquisitions, displacements, and community disruption. For these reasons,
24 future I-11 alignments would not be aligned within existing railroad right-of-way. FHWA
25 determined that while use of existing freight railroad corridors may be potentially feasible from
26 an engineering perspective, it is not prudent in light of potentially severe social and community
27 impacts (Factor 3). Therefore, using existing non-road transportation corridors is not a feasible
28 and prudent avoidance alternative.

29 **4.7.3.2 Use Existing Roadway Corridors**

30 Also during the alternatives development process, FHWA and ADOT examined the potential to
31 align the Project within existing Corridor Study Area roadways. Potential use of existing roadway
32 corridors was considered early in the project development process when a list of potential
33 alignments was examined by FHWA using the feasible and prudent test. **Chapter 2**
34 (Alternatives Considered) of the Draft Tier 1 EIS summarizes the findings of the screening
35 process, which eliminated potential corridors that either could not be built as a practical matter
36 (infeasible) or had one or more other circumstances that made continued consideration not
37 reasonable. In this revised Draft Preliminary Section 4(f) Evaluation, these results indicate that
38 none of the potential corridors eliminated during the alternatives development process would be
39 both feasible and prudent. Specifically, potential corridors that were assessed as not able to be
40 built as a matter of sound judgment are not feasible. Other potential corridors would not achieve
41 the I-11 Purpose and Need and/or would have one or more engineering, environmental, or cost
42 impacts of extraordinary magnitude (Factors 1 through 6).

1 **4.7.3.3 Tunneling**

2 Placing portions of the Project in a tunnel in downtown Tucson and under the Tucson Mitigation
3 Corridor property was considered in the property-specific avoidance analysis (**Sections 4.6.3.2**
4 **and 4.6.3.3**) as a means to avoid potential impacts to clusters of properties and historic districts.
5 FHWA determined that tunneling could result in a use of one or more Section 4(f) properties
6 and, therefore, is not an avoidance alternative. In addition, tunneling has the potential to impact
7 archaeological sites (Avoidance Analysis Factor 3).

8 **4.7.3.4 Elevated Structures**

9 Elevating I-11 in downtown Tucson to avoid impacting Section 4(f) properties was considered in
10 the property-specific avoidance analysis (**Section 4.6.3.2**). Although the elevated lanes could
11 avoid use of adjacent Section 4(f) properties, noise and visual impacts would result in adverse
12 effects to historic buildings and structures. Deep excavations for the elevated structure
13 foundations would impact archaeological resources. For these reasons, an elevated lanes
14 alternative through downtown Tucson is not an avoidance alternative. The elevated alternative
15 also would impact businesses and residences that are not protected by Section 4(f).

16 **4.7.4 Alternative Actions**

17 **4.7.4.1 Use Existing Facilities**

18 Public input during scoping identified preferences for improving existing freeways and
19 interstates as well as constructing I-11 as a separate, new facility, in part because of recognized
20 congestion problems on existing highways. FHWA and ADOT developed and evaluated
21 alternatives that co-located I-11 with existing transportation facilities, such as I-8, I-10, I-19,
22 SR 85, and SR 93. By 2040, traffic operations on both urban and rural segments of I-10 would
23 deteriorate due to the increased travel demand in the Corridor Study Area. For example, the
24 segment of I-10 between Casa Grande and the southern edge of the Phoenix metropolitan area
25 is projected to operate at LOS C to LOS F in 2040. The Tucson to Casa Grande segment also
26 would experience an increase in traffic congestion, with LOS ranging from LOS C to LOS F by
27 2040. These projected levels of service are at the poor end of the traffic flow condition scale (as
28 illustrated on Draft Tier 1 EIS **Figure 1-6**) and indicate expected delays and the need for
29 transportation improvements to increase travel efficiency.

30 In addition, and as documented in the *Alternatives Selection Report* (ADOT 2017g), some
31 existing non-access-controlled, arterial roadways, such as the Sun Valley Parkway, were initially
32 considered for co-locating I-11. However, these roadways are typically surrounded by built,
33 under construction, or entitled properties, making it challenging to overlay an access-controlled
34 freeway on a functioning arterial with limited future expansion opportunities. An overlay would
35 have to provide for both the arterial and I-11 roadways, causing severe disruption (such as a
36 relatively high number of property impacts and displacements of residences and businesses) of
37 the adjacent, urban environment that would be difficult to mitigate. By comparison and as
38 described in **Section 3.3** (Land Use and Section 6(f)) and **Section 3.5** (Community Resources,
39 Title VI, and Environmental Justice), new corridor alignments (Preferred Alternative west option,
40 Recommended, Purple, and Green Alternatives) are in areas that are less dense than the
41 Preferred Alternative east option and Orange Alternative. The Orange Alternative would impact
42 dense, established communities in downtown Tucson. The Preferred Alternative west option,

1 Recommended, Purple, and Green Alternatives would impact fewer properties and require
2 fewer displacements than the Preferred Alternative east option and Orange Alternative.

3 **4.7.4.2 Alternative Modes**

4 Between Nogales and Phoenix, goods are moved by freight railroad as well as on-road trucking
5 to local and regional destinations. The type of mode by which goods are shipped depends on a
6 combination of several logistical factors, the distance of transport, the types of freight, and the
7 destinations. BNSF Railroad and Union Pacific Railroad operate freight railroad service,
8 transporting goods locally and regionally. During FHWA's and ADOT's outreach to the railroads,
9 BNSF and Union Pacific indicated no specific expansion plans related to the foreseeable growth
10 in freight movement as described in Draft Tier 1 EIS **Chapter 2** (Alternatives Considered). In
11 contrast, on-road trucking is a growth industry in the Corridor Study Area. This is because of a
12 combination of the long-haul nature of the freight movements, the types and variety of freight
13 that are suited to truck transport as opposed to rail transport (such as fresh produce),
14 connections to Mexico through the Mariposa Port of Entry, and the many destinations for that
15 truck freight. As a result, FHWA determined that while using freight rail as an alternative mode
16 may be potentially feasible, using the freight rail mode as an alternative to the Project would not
17 address the logistical needs of moving the freight that is moved by trucks now and into the
18 future. For this reason, the freight rail service mode would not achieve the I-11 Purpose and
19 Need and is not prudent (Factor 1).

20 As the Build Corridor Alternatives also would transport people, FHWA and ADOT considered
21 the ability for existing and planned passenger transit and rail service modes. As described in
22 Draft Tier 1 EIS **Chapter 2** (Alternatives Considered), existing passenger transport between
23 Nogales and Wickenburg, and on to Las Vegas, is provided by private bus companies. The
24 Federal Railroad Administration (FRA) and ADOT completed a Tier 1 NEPA process for a
25 proposed passenger rail service between Tucson and Phoenix. Known as the Arizona
26 Passenger Rail Corridor Study, the Final Tier 1 EIS and Record of Decision identified a corridor
27 for further study (ADOT 2016b). This proposed project, in combination with existing bus
28 services, would address portions of non-freight travel that will occur between Tucson and
29 Phoenix, and future connections north of Phoenix, but would not address future freight
30 transport. For this reason, the passenger rail service mode would not achieve the I-11 Purpose
31 and Need and is not prudent (Factor 1).

32 **4.8 Least Overall Harm Analysis**

33 In accordance with 23 CFR 774.3(2)(c), if the determination is made that there is no feasible
34 and prudent avoidance alternative, FHWA may approve only the alternative that causes the
35 least overall harm in light of the preservation purpose of Section 4(f). ADOT will undertake a
36 least overall harm analysis during Tier 2 studies. At that time, more detailed study of each
37 Section 4(f) property and the potential for impacts to such properties. ADOT will develop and
38 evaluate roadway alignments at a project-level with the goals of avoiding or minimizing impacts
39 on the natural and built environment, including Section 4(f) properties. For example, Tier 2 study
40 will provide the opportunity for ADOT to coordinate further with AGFD during development of a
41 roadway design that is co-aligned with SR 85 adjacent to the Robbins Butte Wildlife Area,
42 incorporate measures to minimize harm, assess use under the Section 4(f) regulations, and
43 identify appropriate mitigation, as needed.

1 During Tier 2, ADOT will examine the Preferred Alternative west and east options in detail and
 2 will coordinate with the officials with jurisdiction over potentially affected Section 4(f) properties
 3 during the studies and during development of appropriate mitigation measures. These studies
 4 and coordination activities will enable completion of a Final Section 4(f) Evaluation that
 5 compares the relative impacts and mitigation effectiveness of the options prior to selection of
 6 the option with the least overall harm.

7 **4.9 All Planning to Minimize Harm**

8 Throughout alternatives and Final Tier 1 EIS development, FHWA and ADOT applied the
 9 following strategies to minimize impacts to Section 4(f) properties:

- 10 • Co-located corridors with existing transportation corridors where reasonably feasible to keep
 11 additional right-of-way needs to a minimum
- 12 • Refined corridors to avoid or minimize potential use of Section 4(f) properties (**Section 4.6.2**
 13 and **Section 4.6.3**)
- 14 • Coordinated with officials with jurisdiction over Section 4(f) properties to identify such
 15 properties early in alternatives development, determine plans for the properties by officials
 16 with jurisdiction, and discuss the potential for project impacts on those properties (refer to
 17 **Section 4.10**); committed to continued coordination during Tier 2 studies
- 18 • Organized and conducted focus group meetings utilizing the US Institute for Environmental
 19 Conflict Resolution (The Udall Foundation)
- 20 • Sought input from stakeholders and the public regarding the effects of the Build Corridor
 21 Alternatives on Section 4(f) properties and other resources
- 22 • Considered input from officials with jurisdiction, stakeholders, and the public in the NEPA
 23 analyses and Section 4(f) evaluation

24 In addition, through coordination with officials with jurisdiction and the Final Preliminary Section
 25 4(f) Evaluation, FHWA and ADOT made the following commitments as part of the Project and
 26 identified the following actions to be undertaken in Tier 2. These commitments are
 27 supplemented by additional, specific commitments regarding Section 4(f) properties in
 28 downtown Tucson (listed in **Section 4.6.3.2**) and the Tucson Mitigation Corridor (listed in
 29 **Section 4.6.3.3**):

- 30 • **T2-Section 4(f)-4:** Continue considering ways to avoid use of Section 4(f) properties through
 31 engineering design and mitigation.
- 32 • **T2-Section 4(f)-5:** Evaluate the need for and effectiveness of measures to mitigate impacts
 33 to Section 4(f) properties. Types of measures to be evaluated include replacement of land
 34 and facilities of comparable value and function; compensation; restoration, preservation,
 35 interpretation, and recordation (such as for historic structures and properties); and other
 36 types of mitigation developed in coordination with the officials with jurisdiction over Section
 37 4(f) properties.



- 1 • **T2-Section 4(f)-6:** Continue coordinating with officials with jurisdiction in Tier 2 regarding
2 potential impacts to Section 4(f) properties. Where impacts to Section 4(f) properties
3 potentially would occur, coordination will focus on identifying appropriate and reasonable
4 measures to minimize and mitigate impacts.

- 5 • **MM-Section 4(f)-12:** Avoid the use of specific properties that are partially or entirely within
6 the Build Corridor Alternatives. The properties are identified in the Preliminary Section 4(f)
7 Evaluation and can be avoided by accommodation, shifting the corridor, or grade-separating
8 the corridor.

- 9 • **MM-Section 4(f)-13:** Commit to Tier 2 studies, during which the selected Build Corridor
10 Alternative will be refined to a specific roadway alignment, potential impacts and uses as
11 defined by Section 4(f) will be identified, measures to avoid or minimize impacts to Section
12 4(f) properties will be identified and assessed, measures to mitigate adverse impacts to
13 Section 4(f) properties will be identified, and a Final Section 4(f) Evaluation will be
14 completed, prior to making a final Section 4(f) approval.

4.10 Coordination

4.10.1 NEPA and Section 4(f) Coordination Activities

FHWA and ADOT initiated pre-scoping coordination with federal, state, and local officials with jurisdiction in spring 2016 as part of preparing for the NEPA process. FHWA and ADOT met periodically with officials to share I-11 Corridor Project information and seek input. **Table 4-6** lists the officials with jurisdiction over the Section 4(f) properties identified in this chapter and summarizes the comments each official provided during coordination activities that are relevant to Section 4(f). Correspondence from officials with jurisdiction that is relevant to the Section 4(f) Evaluation is provided in **Appendix F3** (Correspondence Related to Preliminary Section 4(f) Evaluation) of this Final Tier 1 EIS. The dialogue among FHWA, ADOT, and the officials with jurisdiction was used in this revised Draft Preliminary Section 4(f) Evaluation to identify properties that are protected by Section 4(f), assess potential use of the properties by the Build Corridor Alternatives, determine potential means to avoid or minimize potential use of Section 4(f)-protected properties, and identify measures to minimize harm.

Table 4-6. Summary of Comments from Officials with Jurisdiction Over Section 4(f) Properties

Comment Date (Context)	Summary of Comments Related to Section 4(f) Properties
Federal Agencies	
NPS	
March 14-15, 2016	<ul style="list-style-type: none"> • NPS comments on concerns related to Saguaro National Park.
April 8, 2016 (Cooperating Agency Meeting)	<ul style="list-style-type: none"> • Concerned with the I-11 Corridor on west side of Saguaro National Park; possible impairment due to designated wilderness, night sky, noise levels, fragmentation, impairment of wildlife movements. • Potential impacts to the Anza Recreation Trail, Anza Auto Tour Route. • Potential impacts to numerous historic and archaeological sites (named).



Comment Date (Context)	Summary of Comments Related to Section 4(f) Properties
June 15, 2016	<ul style="list-style-type: none"> Acceptance letter to become a Cooperating Agency. Expressed concern for all National Parks and National Monuments within the 2,000-foot-wide corridor for the I-11 Corridor.
July 11, 2016	<ul style="list-style-type: none"> Comments on the Notice of Intent regarding encroachment on Saguaro National Park through a corridor option bisecting Avra Valley that will be built with the intention of being a multi-use corridor. Irreparable damage to the park and surrounding area for future generations may occur. Other concerns include the Juan Bautista de Anza National Historic Trail and various National Historic Landmarks.
November 3, 2016	<ul style="list-style-type: none"> Requested studies to assess impacts to Wilderness and other values at Saguaro National Park.
December 16, 2016	<ul style="list-style-type: none"> Concerned about potential impacts to National Historic Landmark properties, including the Desert Laboratory and Tumacácori National Monument and Museum.
March 17, 2017	<ul style="list-style-type: none"> Concerned about the proximity of the project to Saguaro National Park, particularly proximity to the Wilderness area of the park; potential direct and indirect effects to wilderness values, air quality, natural sound, viewsheds, night skies, plant communities, and wildlife.
June 2, 2017	<ul style="list-style-type: none"> Expectation of severe and widespread impacts of project on Saguaro National Park and Saguaro Wilderness due to alignments through Avra Valley: plant and animal habitat fragmentation and loss, as well as proximity effects to air quality, noise, viewsheds, and night skies. Evaluate mitigation efficacy plan.
August 31, 2017	<ul style="list-style-type: none"> NPS comments on the Annotated Outline and Methodology Report.
November 3, 2017	<ul style="list-style-type: none"> Saguaro National Park comments on Alternatives Selection Report.
December 19, 2017	<ul style="list-style-type: none"> Meeting notes discussing viewshed, noise, and air quality impacts to areas around the Saguaro National Park.
August 6, 2018	<ul style="list-style-type: none"> Commented regarding project effects on National Park System units, specifically Saguaro National Park.
July 8, 2019 (Draft Tier 1 EIS Comments)	<ul style="list-style-type: none"> Expanded evaluation of the Preferred Alternative east option (known at the time as Option B) is needed to compare impacts with those of the Preferred Alternative west option (known at the time as Option D). Questions achievability of a net benefit for the Tucson Mitigation Corridor with Option D. Expanded evaluation of potential for constructive use of Saguaro National Park is needed.
DOI	
July 8, 2019 (Draft Tier 1 EIS Comments)	<ul style="list-style-type: none"> Request for individual Section 4(f) evaluation of the Tucson Mitigation Corridor property.
BLM	
April 13, 2016	<ul style="list-style-type: none"> Concerns regarding project effects on national monument properties.



Comment Date (Context)	Summary of Comments Related to Section 4(f) Properties
July 13, 2016 (CA Meeting)	<ul style="list-style-type: none"> Project infrastructure would be incompatible with the national monument and wilderness designations (Sonoran Desert National Monument, Ironwood Forest National Monument, Anza National Historic Trail corridor).
February 24, 2017	<ul style="list-style-type: none"> Prefer alternatives west of Vulture Mine RMZ or in the Vulture Mine RMZ multi-use corridor. Vulture Mine RMZ is subject to Section 4(f). Alignment outside the multi-use corridor would require amending the Resource Management Plan for the property.
May 12, 2017	<ul style="list-style-type: none"> Avoid Vulture Mine RMZ, Area of Critical Environmental Concern, wildlife habitat, and other sensitive and natural resources in the area; co-location with power infrastructure in the designated multi-use corridor in the Cooperative Recreation Management Area could reduce impacts.
April 12, 2018	<ul style="list-style-type: none"> FHWA letter to BLM Hassayampa Field Office, Phoenix District regarding Vulture Mine RMZ and the utilization of the multi-use corridor by the future I-11 Corridor.
September 7, 2018	<ul style="list-style-type: none"> Refer to BLM recreation feature as the Vulture Mine RMZ instead of the Vulture Mountains Cooperative Management Recreation Area. Mitigate possible impacts to the race course.
July 8, 2019 (Draft Tier 1 EIS Comments)	<ul style="list-style-type: none"> Section 4(f) should apply to Ironwood Forest National Monument and Sonoran Desert National Monument. Request for ongoing coordination among FHWA, ADOT, and specific BLM offices.
October 11, 2019	<ul style="list-style-type: none"> Clarified the property name is Vulture Mine RMZ, not Vulture Mountain.
Bureau of Reclamation	
April 20, 2016 (CA Meeting)	<ul style="list-style-type: none"> Alignment in the Tucson Mitigation Corridor would contradict Tucson Mitigation Corridor goals of reconnecting wildlife habitat across the Avra Valley; language that established the Tucson Mitigation Corridor will help determine whether the property qualifies as a Section 4(f) property. Barrier effect of the project on wildlife connectivity despite recent investment in wildlife crossings of the CAP canal. Effect of Avra Valley alignment on Tumamoc Hill Preserve lands that were set aside to preserve formerly designated endangered Tumamoc globeberry (<i>Tumamoca macdougalii</i>).

Comment Date (Context)	Summary of Comments Related to Section 4(f) Properties
July 8, 2016 (Scoping comments letter)	<ul style="list-style-type: none"> • Tucson Mitigation Corridor is protected for preservation of wildlife habitat and movements. • Tucson Mitigation Corridor is protected by Section 4(f) because the property was acquired for mitigation purposes. • Canal siphon crossings provide wildlife movement across the CAP canal. • Concern that the I-11 Corridor would fragment habitat and/or be a barrier to wildlife movement through the Tucson Mitigation Corridor or elsewhere in Avra Valley. • Archaeological sites on the Tucson Mitigation Corridor. • Globeberry habitat and individuals to be avoided. • Concern for project-related noise and lighting impacts on wildlife connectivity. • Concern for induced growth and development due to project in Avra Valley and the Tucson Mitigation Corridor.
November 3, 2016 (CA Meeting)	<ul style="list-style-type: none"> • Need to clarify language regarding the designation of the land associated with the Tucson Mitigation Corridor.
March 16, 2017	<ul style="list-style-type: none"> • Comments on Alternatives Selection Report Evaluation Methodology and Criteria Report. • Concern about effectiveness and detail of evaluation measure and scale of impact when discussing Tucson Mitigation Corridor.
September 18, 2017	<ul style="list-style-type: none"> • Ongoing coordination to study I-11 corridor options in the vicinity of the Tucson Mitigation Corridor. • Importance of maintaining already-established, well-used wildlife crossings near canal siphons. • Noise concerns. • Warrant for mitigation for loss of habitat. • Effects on existing trails and future trail planning.
March 5, 2018	<ul style="list-style-type: none"> • Bureau of Reclamation preference to align the I-11 Corridor alongside CAP canal (matching wildlife crossings to existing canal siphon crossings) to maintain wildlife connectivity. • Bureau of Reclamation preference is to relocate Sandario Road to reduce barriers to wildlife movements. • Potential for future environmental studies to identify wildlife corridors.
March 26, 2018 (Meeting Notes)	<ul style="list-style-type: none"> • Net benefit • Crossings and overpasses • Connectivity to Ironwood Forest National Monument.
June 8, 2018	<ul style="list-style-type: none"> • Bureau of Reclamation input and consultation on a Section 4(f) evaluation for the Tucson Mitigation Corridor.
October 18, 2018	<ul style="list-style-type: none"> • Preliminary concurrence with mitigation commitments to meet net benefit for the Tucson Mitigation Corridor. • Bureau of Reclamation would provide final concurrence on net benefit during Tier 2.



Comment Date (Context)	Summary of Comments Related to Section 4(f) Properties
July 8, 2019 (Draft Tier 1 EIS Comments)	<ul style="list-style-type: none"> • Questions ability to achieve a net benefit for the Tucson Mitigation Corridor with Option D. • Questions specific historic property impacts in Tucson with the Preferred Alternative east option (known at the time as Option B). • Requests expanded quantification and comparison of the Preferred Alternative west option and the Preferred Alternative east option (known at the time as Option B and D) impacts. • Requests more use of property impact acreages in the Section 4(f) evaluation. • Request to distinguish between minimization and mitigation measures.
January 2, 2020	<ul style="list-style-type: none"> • Request for an individual Section 4(f) evaluation for the Tucson Mitigation Corridor with Option D. • Requests expanded quantification and comparison of the Preferred Alternative west option and the Preferred Alternative east option (known at the time as Option B and D) impacts. • Provided information on wildlife habitat fragmentation/isolation studies. • Requests evaluation of significance of all Section 4(f) properties. • Identifies members of the Tucson Mitigation Corridor Working Group that Bureau of Reclamation would work with in determining whether minimization and mitigation measures for the Tucson Mitigation Corridor are adequate. • Requests FHWA/ADOT/Bureau of Reclamation coordination in identifying constraints, minimization and mitigation measures for impacts to the Tucson Mitigation Corridor.
US Fish and Wildlife Service	
December 3, 2018	<ul style="list-style-type: none"> • The Public Land Order 1015 lands are owned/administered by USFWS but managed by AGFD. • The Public Land Order 1015 lands are National Wildlife Refuge Act lands (special category of lands called “Coordination Areas”). • The AGFD parcels that are adjacent or near in furtherance of the 1954 DOI/AGFD Cooperative Agreement, clause #7 also are Wildlife Refuge lands.
February 12, 2019	<ul style="list-style-type: none"> • FHWA consultation with USFWS regarding findings of Section 4(f) constructive use evaluation of Public Land Order 1015 lands.
July 8, 2019 (Draft Tier 1 EIS Comments)	<ul style="list-style-type: none"> • Questions the ability to achieve a net benefit to the Tucson Mitigation Corridor with Option D. • Expanded Section 4(f) evaluation of the Preferred Alternative east option (known at the time as Option B) is needed.
August 30, 2019 (Draft Tier 1 EIS Comments)	<ul style="list-style-type: none"> • Concerned with potential impacts related to corridor through the Tucson Mitigation Corridor. • Concerned with potential impacts to Robbins Butte Wildlife Area with co-aligned SR 85 crossing. • Concerned with potential impacts to wildlife movements in Avra Valley.

Comment Date (Context)	Summary of Comments Related to Section 4(f) Properties
US Forest Service	
July 1, 2019 (Draft Tier 1 EIS Comments)	<ul style="list-style-type: none"> • CNF does not support Option D of the Recommended Alternative that parallels the CAP canal. • CNF prefers an option co-located with I-10 and I-10 through Pima County. • CNF would like wilderness addressed as a separate resource.
State Agencies	
AGFD	
July 8, 2016 (CA Meeting)	<ul style="list-style-type: none"> • General comment: agency is interested in habitat and wildlife connectivity.
February 1, 2017 (letter)	<ul style="list-style-type: none"> • The Department provided a list of properties it owns or manages in the I-11 Corridor Study Area, along with a status of each.
February 1, 2017 (letter)	<ul style="list-style-type: none"> • “The Department’s position is that the publicly owned portions of the Tucson Mountain Wildlife Area, comprising the Tucson Mountain District of Saguaro National Park, Tucson Mountain Park, and the Tucson Mitigation Corridor, qualify as a Section 4(f) property in the category of a significant state recreation area and state wildlife refuge...” The Department also provided its position regarding Tucson Mountain Wildlife Area, Arlington Wildlife Area, and Powers Butte Wildlife Area.
March 7, 2017	<ul style="list-style-type: none"> • Email and meeting notes discussing the AGFD GIS data provided for the Alternatives Selection Report and Tier 1 EIS.
June 1, 2017	<ul style="list-style-type: none"> • Avoid Vulture Mountain and Avra Valley areas because of high habitat quality and sensitive biological resources. • Concern for habitat fragmentation and loss. • Consider indirect effects of I-11 proximity to natural resources.
August 6, 2018	<ul style="list-style-type: none"> • Impacts to outdoor recreation user experience and revenue generation. • Applicability of Section 4(f) to Public Land Order 1015 lands and determining owner or official with jurisdiction.
July 8, 2019	<ul style="list-style-type: none"> • Section 4(f) should apply to the Tucson Mountain Wildlife Area. • Expanded Section 4(f) Evaluation of the Preferred Alternative east option (known at the time as Option B) in downtown Tucson is warranted for a balanced comparison with the Preferred Alternative west option (known at the time as Option D). • Requests individual Section 4(f) evaluation of the Tucson Mitigation Corridor property. • Public Land Order 1015 lands concerns regarding potential for constructive use due to noise and hunting impacts by highway proximity.



Comment Date (Context)	Summary of Comments Related to Section 4(f) Properties
Arizona State Historic Preservation Office	
April 27, 2016 (Pre-scoping)	<ul style="list-style-type: none"> • SHPO suggested that at least three categories of sensitivity be considered. • Potential historic bottlenecks within the Corridor Study Area include Gila River and Ironwood/Picacho Peak areas. • Documentation of the specific De Anza Trail location varies and locations of passes, watering holes, and other features provide the best indication of the historic location. • Tribal trails cross the Corridor Study Area.
June 7, 2016	<ul style="list-style-type: none"> • Preserve historic resources by using existing transportation infrastructure where possible.
September 14, 2016 (Meeting Summary)	<ul style="list-style-type: none"> • Section 106 process overview. • Tribal coordination efforts to date.
April 16, 2018	<ul style="list-style-type: none"> • Concern about prehistoric and historic sites and districts being disrupted by the need to widen I-10 as well as the possible disturbance to unknown historical sites in unsurveyed areas (rural) where the alternatives could be placed.
November 7, 2018	<ul style="list-style-type: none"> • Potential for adverse effects under Section 106 by Orange Alternative in downtown Tucson.
November 23, 2018	<ul style="list-style-type: none"> • Concurrence with adverse impacts from the Orange Alternative historic and Section 4(f) properties in downtown Tucson.
December 19, 2018	<ul style="list-style-type: none"> • Concurrence with adverse impacts from the Orange Alternative to historic and Section 4(f) properties in downtown Tucson. Addressed corrections to November 23, 2018 concurrence to indicate the Barrio El Hoyo and Menlo Park Historic Districts would not be affected and revised the mapping of El Paso and Southwestern Railroad District that would potentially be adversely affected, resulting in a Section 4(f) use.
Arizona State Land Department	
April 14, 2016 (Pre-Scoping)	<ul style="list-style-type: none"> • Property transfers are examined on a case-by-case basis.
July 8, 2019 (Draft Tier 1 EIS Comments)	<ul style="list-style-type: none"> • Provision of access to State Trust Land would be a benefit, while I-11 crossing such lands with no access would provide no benefit and would be considered an encumbrance.
January 27, 2020	<ul style="list-style-type: none"> • State Trust lands are not publicly owned; the purpose of such lands is to generate revenue for the land beneficiaries and not for the general public • ASLD does not have an agreement with AGFD for managing lands within the Tucson Mountain Wildlife Area



Comment Date (Context)	Summary of Comments Related to Section 4(f) Properties
Arizona State Parks	
July 8, 2016	<ul style="list-style-type: none"> Improving access to parks is important. Potential for co-aligning trails in corridors. Project should avoid or minimize impacts to statewide trails and enable trails to cross the I-11 Corridor. Project should avoid impacts to state parks. Project should avoid Vulture Mountain Recreation Area and ASP-funded projects in the area by keeping alignment west of power line.
October 8, 2020	<ul style="list-style-type: none"> Section 4(f) consultation letter to ASP from FHWA regarding Picacho Peak State Park. Request for verification of location and boundaries, agreement to Section 4(f) protection, and significance of property.
November 6, 2020	<ul style="list-style-type: none"> Slight variance in property boundary for Picacho Peak State Park. Sent new GIS files.
Tribes	
Tohono O’odham Nation	
February 11, 2017	<ul style="list-style-type: none"> Resolution from Schuk Toak District of the Tohono O’odham Nation – Opposition of the I-11 Corridor on or near the Garcia Strip Community.
County Agencies	
Maricopa County	
April 6, 2016 (Pre-scoping)	<ul style="list-style-type: none"> Proposed Maricopa Association of Governments Hassayampa alignment effects on Vulture Mine RMZ: existing and planned off-highway vehicle recreation area, campground, day use area, trail system, east/west recreation opportunities, access, wildlife connectivity. Hassayampa River Preserve impacts to land, wildlife/wildlife connectivity, and noise (traffic). County is looking at acquiring a piece of the Hassayampa River preserve as well. Raptor nesting at Vulture Peak Area of Critical Environmental Concern (BLM).
July 7, 2016	<ul style="list-style-type: none"> Concerns for probable conflicts with local traffic, recreation, and usage of areas in and around Vulture Mine Road. Wildlife habitat and connectivity and neighborhood cohesion are areas of potential impacts. Impacts to local FRSs and dams need to be considered. Possible impacts to the Loop 303 Outfall Drainage Channel, which could negatively affect flooding retention and floodplains in the area. Considerations should be made for air quality and the Maricopa Regional trail.
October 8, 2020	<ul style="list-style-type: none"> Section 4(f) consultation letter to ASP from FHWA regarding Buckeye Hills Regional Park. Request for verification of location and boundaries, agreement to Section 4(f) protection, and significance of property.



Comment Date (Context)	Summary of Comments Related to Section 4(f) Properties
October 14, 2020	<ul style="list-style-type: none"> Response to Section 4(f) consultation letter from Maricopa County. Agree that Buckeye Hills Regional Park is protected by Section 4(f), the boundaries are correct, and the property is significant. Provided information and mapping on two new trail crossings for the Maricopa Trail that will bisect Hwy 85.
Pima County	
December 3, 2017	<ul style="list-style-type: none"> Section 4(f) evaluation and constructive use assessment of Tucson Mountain Park. Importance of CAP siphons to wildlife linkages; co-aligning project wildlife crossings with CAP siphons would be a good strategy in terms of enabling linkages to operate in the future. Tucson Mitigation Corridor management agreement is still in place despite stop in funding.
July 8, 2019 (Draft Tier 1 EIS Comments)	<ul style="list-style-type: none"> Request for an individual Section 4(f) evaluation of the Tucson Mitigation Corridor with Option D. County should be an official with jurisdiction over the Tucson Mitigation Corridor. The EIS process should provide assurances that sufficient resources will be available to mitigate project impacts. Section 4(f) should apply to Ironwood Forest National Monument and Tucson Mountain Wildlife Area. Questions the thoroughness of the Section 4(f) evaluation of historic properties. Requests consideration of specific factors when developing mitigation measures for Section 4(f) property impacts.
October 29, 2019	<ul style="list-style-type: none"> More detail about the impacts of the Preferred Alternative west option and the Preferred Alternative east option is needed by Pima County The County believes that some mitigation lands in the county's Habitat Conservation Plan qualify for Section 4(f) protection County to provide information about additional properties they believe are protected by Section 4(f) Pima County is not in favor of the No Build option
December 6, 2019	<ul style="list-style-type: none"> Provided information on additional, potential Section 4(f) properties.
Pinal County	
May 31, 2017	<ul style="list-style-type: none"> Impacts to the following properties are of concern: Palo Verde Regional Park, Anza National Historic Trail Corridor, and several planned regional trail and open space corridors.
Municipal	
City of Tucson	
July 8, 2016	<ul style="list-style-type: none"> Participating Agency agreement letter.
August 19, 2016 (106 Consulting Party Acceptance)	<ul style="list-style-type: none"> Historic properties, including archaeological sites and Traditional Cultural Properties, are within the Area of Potential Effects within the City of Tucson and city-owned lands outside the city limits.

Comment Date (Context)	Summary of Comments Related to Section 4(f) Properties
March 17, 2017	<ul style="list-style-type: none"> Comments on Evaluation Methodology and Criteria for Alternatives Selection. Wish to ensure criteria do not favor routes through vacant land over existing freeways; address concerns about water resources; include multimodal improvements; analyze induced growth; analyze economic and social impacts.
November 16, 2017	<ul style="list-style-type: none"> Comments on Alternatives Selection Report. Would like screening methodology to include impacts on water supply (CAVSARP/SAVSARP).
July 1, 2019 (Draft Tier 1 EIS Comments)	<ul style="list-style-type: none"> Observes that more analysis and comparison of Options B and D is required in the Section 4(f) evaluation.
October 29, 2019	<ul style="list-style-type: none"> Examine eliminating frontage roads as an alternative to Section 4(f) impacts Location of David G. Herrera and Ramon Quiroz Park is significant Santa Cruz River Park is partly owned by Pima County and partly owned by the City of Tucson, but maintained by the County City is concerned about potential water quality impacts from I-11 traffic in the Preferred Alternative west option Julian Wash Park belongs to Pima County Potential for another neighborhood to become a future historic district Sweetwater Wetlands Park may be expanded in the future
Town of Marana	
July 8, 2019 (Draft Tier 1 EIS Comments)	<ul style="list-style-type: none"> Concerned with the route of the proposed interconnect between I-10 and I-11.
October 8, 2020	<ul style="list-style-type: none"> Section 4(f) consultation letter to the Town of Marana from FHWA regarding El Rio Preserve, Loop Trail (portion in Town of Marana), and San Lucas Community Park. Request for verification of locations and boundaries, agreement to Section 4(f) protection, and significance of properties.
November 9, 2020	<ul style="list-style-type: none"> Response to Section 4(f) consultation letter from the Town of Marana. Agree that the three properties are protected by Section 4(f), the boundaries are correct, and the properties are significant.
Town of Sahuarita	
October 9, 2020 (Signature of agreement on October 8, 2020 FHWA letter)	<ul style="list-style-type: none"> ADOT's depiction of the boundaries of the Sahuarita property is accurate. The Town agrees to contact and coordinate with ADOT when the time comes for the Town to plan and formally designate the property. At that time, and if the Town designates the property as a park, ADOT and the Town could pursue joint planning under Section 4(f).

Source: AECOM. 2020. GIS Analysis. I-11 Section 4(f) Property Export into Excel and Impact Analysis. December 4, 2020.

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1 FHWA considered input from officials with jurisdiction in the development and refinement of the
2 Build Corridor Alternatives. For example, and as described in **Section 4.6.3**, FHWA and ADOT
3 worked with the Bureau of Reclamation to align the Purple and Green Alternatives alongside the
4 CAP canal on the Tucson Mitigation Corridor property as well as relocate and co-align Sandario
5 Road with I-11. By making these modifications, and co-aligning wildlife crossing areas, the
6 barrier effect formed by existing Sandario Road would be removed. The Bureau of Reclamation
7 supports this mitigation measure because of the beneficial effects. Furthermore, the Bureau of
8 Reclamation supports the consolidation of the I-11/CAP canal infrastructure in one location to
9 reduce the potential barrier effect I-11 could cause on the Tucson Mitigation Corridor property.
10 The Bureau of Reclamation's support for these mitigation measures is provided in their letter of
11 June 8, 2018 (**Appendix F3** [Correspondence Related to Preliminary Section 4(f) Evaluation]).

12 ADOT anticipates continuing coordination with other officials with jurisdiction over Section 4(f)
13 properties where a project use has been identified in this evaluation. Such coordination will
14 occur up until the Tier 1 EIS Record of Decision and during Tier 2 studies. Coordination will
15 focus on examining ways to avoid or minimize uses of the Section 4(f) properties and on
16 identifying appropriate mitigation. This coordination activity will enable ADOT to determine the
17 potential for a use and complete the Draft and Final Section 4(f) Evaluation as required to
18 satisfy the requirements of Section 4(f) during Tier 2.

19 FHWA and ADOT also coordinated with the public as required by Section 4(f) regulations
20 (23 CFR 774.5(2)). Public coordination activities for Section 4(f) were combined with the public
21 involvement activities undertaken for the EIS process, documented in **Chapter 5** (Coordination
22 and Outreach) and in **Appendix H** (Comments on Draft Tier 1 EIS and Responses). Key
23 themes among the public comments relevant to Section 4(f) were concerns regarding the
24 potential for I-11 Corridor project impacts to Vulture Mountains, Saguaro National Park, and
25 other protected properties in the area of the Preferred Alternative west option and historic
26 properties in the City of Tucson.

27 **4.10.2 Programmatic Net Benefit for Tucson Mitigation Corridor**

28 In the Draft Tier 1 EIS, FHWA and ADOT assessed the potential for the I-11 Corridor to have a
29 net benefit to the Tucson Mitigation Corridor property. Net benefit is an assessment allowed by
30 the *Final Nationwide Programmatic Section 4(f) Evaluation and Determination for Federal-Aid*
31 *Transportation Projects That Have a Net Benefit to a Section 4(f) Property* (FHWA 2005a). This
32 nationwide programmatic approval is a procedural option for preparing an individual Section 4(f)
33 Evaluation. As defined in FHWA's guidance, *Section 4(f) Evaluation and Approval for*
34 *Transportation Projects That Have a Net Benefit to a Section 4(f) Property*, a net benefit is
35 defined as "achieved when the transportation use, the measures to minimize harm and the
36 mitigation incorporated into the project results in an overall enhancement of the Section 4(f)
37 property when compared to both the future do-nothing or avoidance alternatives and the present
38 condition of the Section 4(f) property, considering the activities, features, and attributes that
39 qualify the property for Section 4(f) protection" (FHWA 2005b).

40 In undertaking the net benefit assessment, FHWA and ADOT examined the potential for
41 alternatives to avoid impacts to Section 4(f) properties, including alternative corridors, elevated
42 structure across the property, and tunneling under the property. FHWA assessed that none of
43 these alternatives would avoid incorporating land from a Section 4(f) property and none would
44 be feasible and prudent.



1 During the assessment, FHWA coordinated with the Bureau of Reclamation regarding the
2 primary purpose and significance of the property; activities, attributes, and features of the
3 property; potential for impacts to the property; potential refinements to the alternative corridors
4 to avoid or minimize impacts to the property; and potential mitigation strategies. Details
5 regarding the property, the potential for Build Corridor Alternative impacts to the property, and
6 the outcomes of coordination activities with the Bureau of Reclamation are presented in **Section**
7 **4.6.3.3** and **Table 4-6** of this revised Draft Preliminary Section 4(f) Evaluation.

8 After publication of the Draft Tier 1 EIS, and after consideration of public and agency comments
9 on these documents, FHWA assessed that more detailed study of the potential impacts of the
10 I-11 Corridor on Section 4(f) properties, including the Tucson Mitigation Corridor, would be
11 required prior to making a final Section 4(f) approval, and FHWA determined that a net benefit
12 determination would no longer be pursued. Instead, Tier 1 studies will include an individual
13 Section 4(f) evaluation of the Tucson Mitigation Corridor property. By taking this approach
14 during Tier 2, FHWA is committing to more detailed study and comparison of the Preferred
15 Alternative west option and the Preferred Alternative east option, as well as more coordination
16 with the officials with jurisdiction over Section 4(f) properties, and consideration of public and
17 agency comments on the Section 4(f) Evaluation, prior to making a final determination of the
18 option with the least overall harm to Section 4(f) properties.

19 **4.11 Summary of Findings**

20 This revised Draft Preliminary Section 4(f) Evaluation assessed five Build Corridor Alternatives:
21 the Preferred Alternative west option and Preferred Alternative east option; Recommended
22 Alternative; and Purple, Green, and Orange Alternatives from the Draft Tier 1 EIS. The
23 Recommended, Purple, Green, and Orange Alternatives would only advance one of the
24 corridors to Tier 2 study. In contrast, the Preferred Alternative from the Final Tier 1 EIS includes
25 two options for further study in Tier 2. As part of the Preferred Alternative, FHWA and ADOT
26 identified specific commitments regarding Tier 2 studies. Specifically, ADOT will refine the
27 corridor to a specific roadway alignment, identify and assess potential impacts and uses of
28 Section 4(f) properties as defined by Section 4(f), evaluate measures to avoid or minimize
29 impacts to Section 4(f) properties, identify and commit to measures to mitigate adverse impacts
30 to Section 4(f) properties, and complete a Final Section 4(f) Evaluation prior to FHWA making a
31 final Section 4(f) approval. In each of these activities, ADOT will coordinate with the officials with
32 jurisdiction over properties potentially impacted by the I-11 Corridor.

33 **4.12 Future Tier 2 Analysis**

34 As set forth in 23 CFR 774.7(e)(1), FHWA has completed a revised Draft Preliminary Section
35 4(f) Evaluation in this Final Tier 1 EIS, including avoidance alternatives, measures to minimize
36 harm, and potential use analysis. ADOT will complete a Tier 2 Section 4(f) Evaluation during
37 Tier 2 analyses. At that time, the Section 4(f) Evaluation will analyze the specific roadway
38 alignment for potential uses of Section 4(f)-protected properties including historic sites
39 determined to be eligible during the Section 106 process. During Tier 2 and prior to making a
40 final Section 4(f) approval, ADOT will make final determinations of use, assess avoidance and
41 least overall harm as warranted, and identify additional specific measures to minimize harm.



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