



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

Chapter 4, Preliminary Draft Section 4(f) Evaluation

March 2019



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1 **4 PRELIMINARY DRAFT SECTION 4(F) EVALUATION**

2 **4.1 Introduction**

3 This chapter presents a Preliminary Draft Section 4(f) Evaluation. The Preliminary Draft
4 Section 4(f) Evaluation was prepared to comply with Section 4(f) of the United States (US)
5 Department of Transportation Act of 1966 (49 United States Code [USC] 303), hereinafter
6 referred to as “Section 4(f),” and its implementing regulations codified at 23 Code of Federal
7 Regulations (CFR) Part 774. Additional guidance was obtained from the revised Federal
8 Highway Administration (FHWA) Section 4(f) Policy Paper (FHWA 2012). As allowed by
9 23 CFR 774.7(e)(1), a Preliminary Draft Section 4(f) Evaluation was determined to be the
10 appropriate level of evaluation in light of the tiered Environmental Impact Statement (EIS)
11 approach.

12 The Preliminary Draft Section 4(f) Evaluation identifies properties that are afforded protection by
13 Section 4(f) (Section 4.3) and evaluates the potential use of these properties by the Build
14 Corridor Alternatives (Sections 4.4 and 4.5). **Figure 4-1** (Purple Alternative), **Figure 4-2** (Green
15 Alternative), and **Figure 4-3** (Orange Alternative) show the Build Corridor Alternatives, which
16 are further described in **Chapter 2** (Alternatives Considered). FHWA’s Final Tier 1 EIS will
17 examine the Preferred Alternative, and a Preliminary Final Section 4(f) Evaluation will be part of
18 the Final Tier 1 EIS document. FHWA will make its Preliminary Section 4(f) determination as
19 part of the Record of Decision (ROD) for the Tier 1 process. The public comment period for the
20 Preliminary Draft Section 4(f) Evaluation is equal in duration to and concurrent with the
21 comment period for the Draft Tier 1 EIS. As set forth in 23 CFR 774.7(e)(1), FHWA would
22 complete a Final Section 4(f) Evaluation during future Tier 2 National Environmental Policy Act
23 (NEPA) studies. At that time, FHWA would focus on making final determinations of use,
24 assessing avoidance and least harm as warranted, and identifying specific measures to
25 minimize harm. FHWA and Arizona Department of Transportation (ADOT) will use the
26 information presented in this Preliminary Draft Section 4(f) Evaluation, along with the findings of
27 the Draft Tier 1 EIS process, to identify and select a Preferred Alternative.

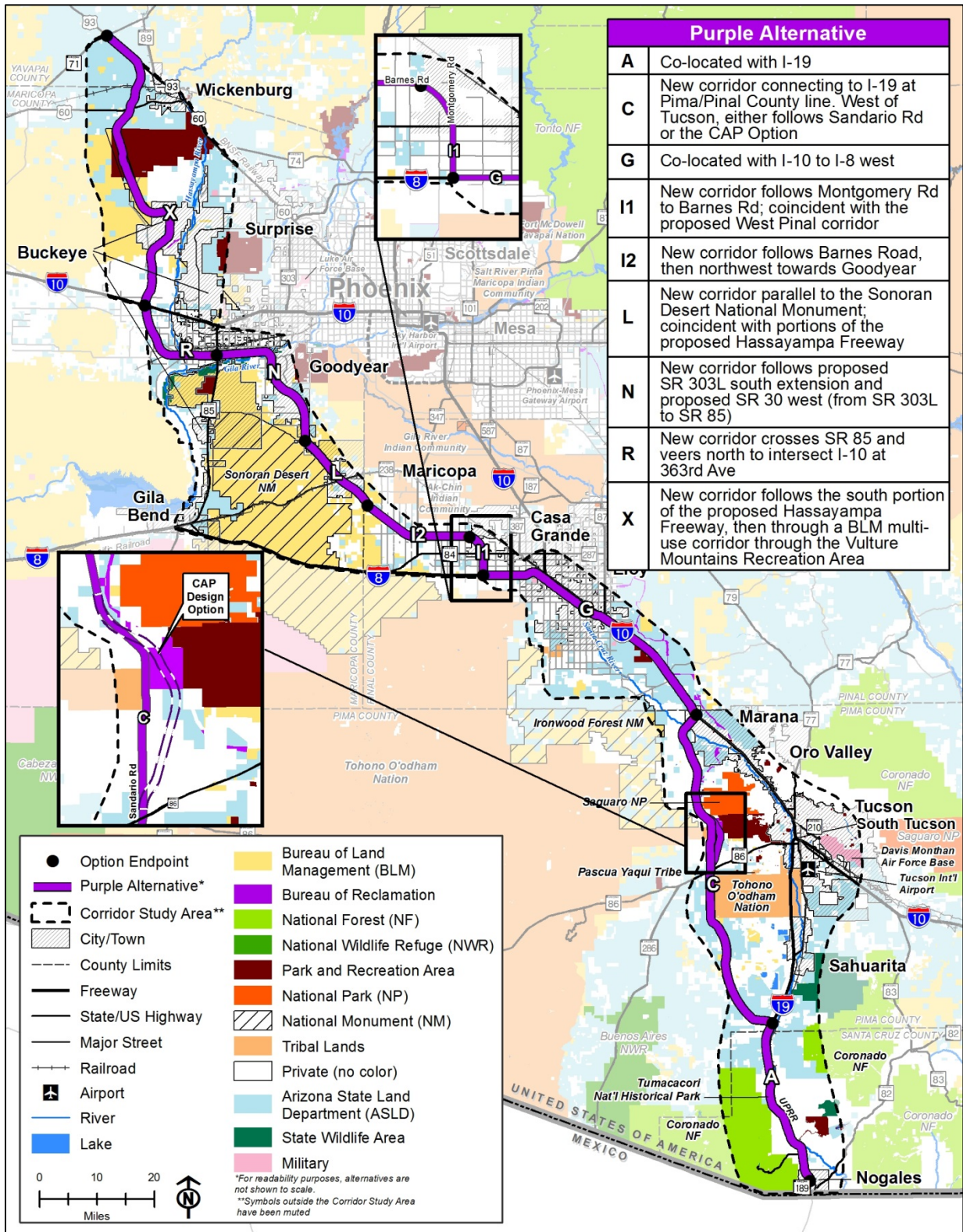


Figure 4-1 Purple Alternative

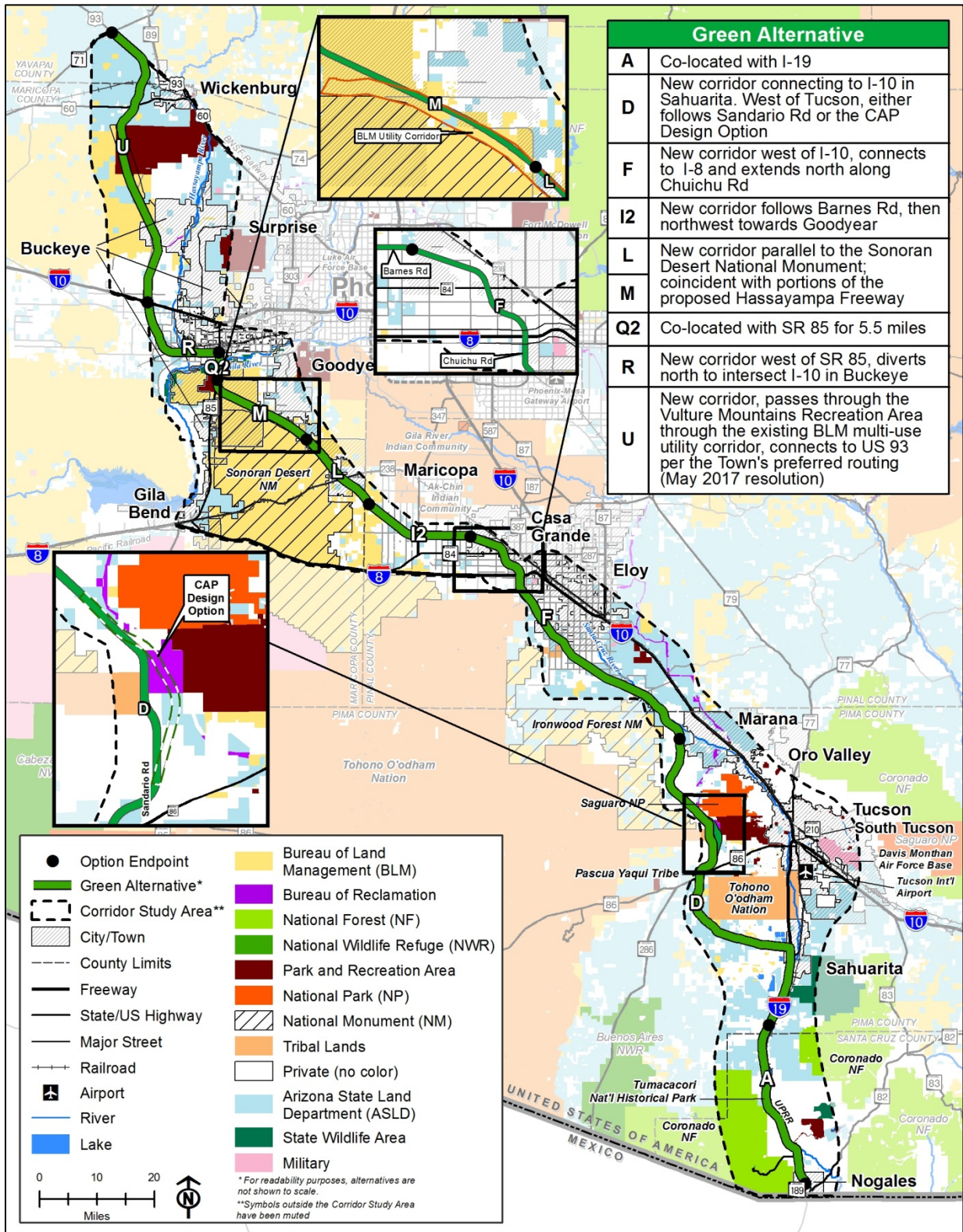


Figure 4-2 Green Alternative

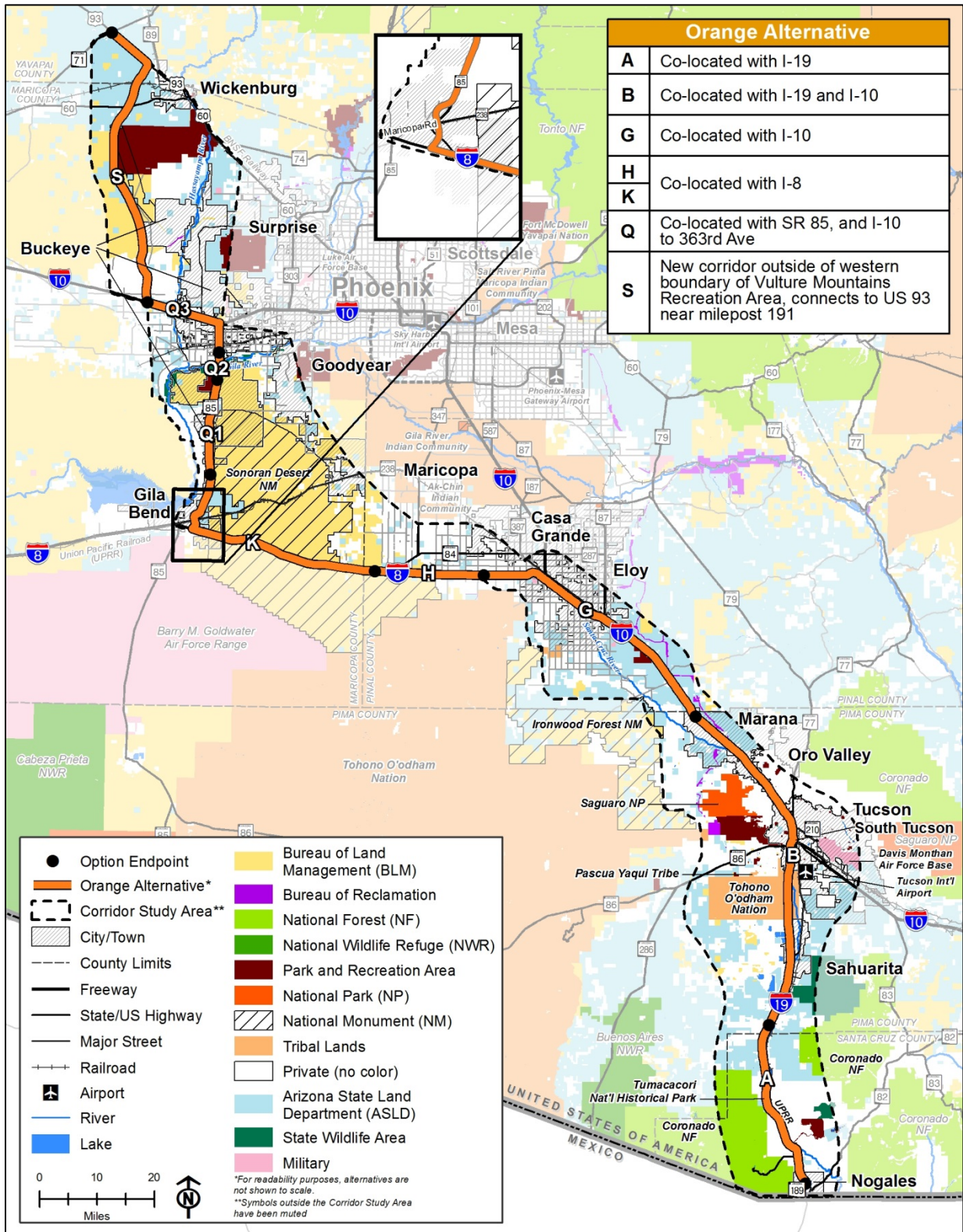


Figure 4-3 Orange Alternative

1 4.2 Regulatory Context and Methodology

2 The law on lands, wildlife and waterfowl refuges, and historic sites that is codified in Title 49 of
3 the USC 303 states, “The Secretary of Transportation may approve a transportation program or
4 project (other than any project for a park road or parkway under section 204 [1] of title 23)
5 requiring the use of publicly owned land of a public park, recreation area, or wildlife and
6 waterfowl refuge of national, State, or local significance, or land of an historic site of national,
7 State, or local significance (as determined by the federal, state, or local officials having
8 jurisdiction¹ over the park, area, refuge, or site) only if:

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

16 4.2.1 Applicability

17 Section 4(f) applies to the use of significant public parks, recreation areas, wildlife and waterfowl
18 refuges, and historic sites. Significance is determined in consultation with officials having
19 jurisdiction over those properties (see 23 CFR 774.11, Applicability).

20 4.2.2 Definitions of Use

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

26 **Permanent Use** – As outlined in Section 3.3.3 of FHWA’s Section 4(f) Policy Paper (FHWA
27 2012), an individual Section 4(f) evaluation must be completed when approving a project that
28 requires the use of Section 4(f) property if the use, as described in Sections 3.1 and 3.2 (of the
29 policy paper: Identification of Section 4(f) Properties and Assessing the Use of Section 4(f)
30 Properties), results in a greater than *de minimis* use and a programmatic Section 4(f) evaluation
31 cannot be applied to the situation (23 CFR 774.3).

¹ 23 CFR 774.17 defines officials with jurisdiction over parks, recreation areas, wildlife and waterfowl refuges, and historic sites as “(1) In the case of historic properties, the official with jurisdiction is the State Historic Preservation Office (SHPO) for the State wherein the property is located or, if the property is located on tribal land, the Tribal Historic Preservation Officer (THPO). If the property is located on tribal land but the Indian tribe has not assumed the responsibilities of the SHPO as provided for in the National Historic Preservation Act (NHPA), then a representative designated by such Indian tribe shall be recognized as an official with jurisdiction in addition to the SHPO. When the Advisory Council on Historic Preservation (ACHP) is involved in a consultation concerning a property under Section 106 of the NHPA, the ACHP also is an official with jurisdiction over that resource for purposes of this part. When the Section 4(f) property is a National Historic Landmark, the National Park Service also is an official with jurisdiction over that resource for purposes of this part. (2) In the case of public parks, recreation areas, and wildlife and waterfowl refuges, the official(s) with jurisdiction are the official(s) of the agency or agencies that own or administer the property in question and who are empowered to represent the agency on matters related to the property.”

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

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

21 **4.2.3 Types of Section 4(f) Approvals**

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

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

39 Two types of approvals are sought in the Section 4(f) Evaluation for I-11: a preliminary Section
 40 4(f) approval when a first-tier, broad-scale EIS is prepared and a Nationwide Programmatic
 41 Section 4(f) Approval for Transportation Projects That Have a Net Benefit to a Section 4(f)
 42 Property. Each of these approvals is defined below:

- 43 • **Preliminary Section 4(f) Approval** – “When the first-tier, broad-scale EIS is prepared, the
 44 detailed information necessary to complete the Section 4(f) approval may not be available at
 45 that stage in the development of the action. In such cases, the documentation should

1 address the potential impacts that a proposed action will have on Section 4(f) property and
2 whether those impacts could have a bearing on the decision to be made. A preliminary
3 Section 4(f) approval may be made at this time as to whether the impacts resulting from the
4 use of a Section 4(f) property are a *de minimis* use or whether there are feasible and
5 prudent avoidance alternatives. This preliminary approval will include all possible planning to
6 minimize harm to the extent that the level of detail available at the first-tier EIS stage allows.
7 It is recognized that such planning at this stage may be limited to ensuring that opportunities
8 to minimize harm at subsequent stages in the development process have not been
9 precluded by decisions made at the first-tier stage. This preliminary Section 4(f) approval is
10 then incorporated into the first-tier EIS. The Section 4(f) approval will be finalized in the
11 second-tier Study (23 CFR 774.7(e)).”

12 • **Nationwide Programmatic Section 4(f) Approval, Net Benefit** – FHWA has issued a Final
13 Nationwide Programmatic Section 4(f) Evaluation and Determination for Federal-Aid
14 Transportation Projects That Have a Net Benefit to a Section 4(f) Property. This nationwide
15 programmatic approval is a procedural option for preparing an individual Section 4(f)
16 Evaluation. As defined in FHWA’s guidance, *Section 4(f) Evaluation and Approval for*
17 *Transportation Projects That Have a Net Benefit to a Section 4(f) Property*, “this nationwide
18 programmatic Section 4(f) evaluation has been prepared for certain federally assisted
19 transportation improvement projects on existing or new alignments that will use property of a
20 Section 4(f) park, recreation area, wildlife or waterfowl refuge, or historic property, which in
21 the view of FHWA and official(s) with jurisdiction over the Section 4(f) property, the use of
22 the Section 4(f) property will result in a net benefit to the Section 4(f) property.”

23 Within the same guidance, a net benefit is defined as “achieved when the transportation
24 use, the measures to minimize harm and the mitigation incorporated into the project results
25 in an overall enhancement of the Section 4(f) property when compared to both the future do-
26 nothing or avoidance alternatives and the present condition of the Section 4(f) property,
27 considering the activities, features and attributes that qualify the property for Section 4(f)
28 protection. A project does not achieve a ‘net benefit’ if it will result in a substantial
29 diminishment of the function or value that made the property eligible for Section 4(f)
30 protection.”

31 4.2.4 Section 4(f) Evaluation Process

32 4.2.4.1 Individual Section 4(f) Evaluations

33 Individual Section 4(f) Evaluations involve the following steps:

- 34 • **Determine Applicability** – In this step, FHWA identifies parks, recreational areas, wildlife
35 and waterfowl refuges, and historic sites that are protected by Section 4(f) using the
36 definitions of primary purpose and significance described in Section 4.2.1.
- 37 • **Assess Impact and Determine Use** – FHWA determines what impact a project would have
38 on each protected property and what type of use that impact would be, using the definitions
39 in 23 CFR 774 and described in Section 4.2.1.
- 40 • **Analyze Avoidance Alternatives** – In this step, FHWA and ADOT consider alternatives
41 that completely avoid the potential use of a Section 4(f) property. The avoidance analysis
42 applies the Section 4(f) feasible and prudent criteria (23 CFR 774.17(2) and (3)). “An
43 alternative is not feasible if it cannot be built as a matter of sound engineering judgment. An
44 alternative is not prudent if:



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

- 1 consultation process, in a finding of ‘no adverse effect’ or ‘no historic properties
 2 affected’ in accordance with 36 CFR part 800. The Administration shall inform these
 3 officials of its intent to make a *de minimis* use determination based on their
 4 concurrence in the finding of ‘no adverse effect’ or ‘no historic properties affected.’
- 5 ▪ (iii) Public notice and comment, beyond that required by 36 CFR part 800, is not
 6 required.
- 7 – For parks, recreation areas, and wildlife and waterfowl refuges:
- 8 ▪ (i) Public notice and an opportunity for public review and comment concerning the
 9 effects on the protected activities, features, or attributes of the property must be
 10 provided. This requirement can be satisfied in conjunction with other public
 11 involvement procedures, such as a comment period provided on a NEPA document.”

12 **4.2.4.2 De Minimis Use Evaluations**

13 In a *de minimis* use evaluation, the following steps apply, as stated in 23 CFR 774.7(b) and
 14 23 CFR 774.5(c):

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

41 **4.2.4.3 Nationwide Programmatic Section 4(f) Evaluations (Net Benefit)**

42 The steps for a Nationwide Programmatic Section 4(f) Evaluation (Net Benefit) are the same as
 43 the steps for an individual Section 4(f) evaluation, except for the following:



- 1 • **Assess Impact and Determine Use** – “For historic properties, the project does not require
2 the major alteration of the characteristics that qualify the property for the National Register
3 of Historic Places (NRHP) such that the property would no longer retain sufficient integrity to
4 be considered eligible for listing. For archeological properties, the project does not require
5 the disturbance or removal of the archaeological resources that have been determined
6 important for preservation in-place rather than for the information that can be obtained
7 through data recovery. The determination of a major alteration or the importance to preserve
8 in-place will be based on consultation consistent with 36 CFR part 800.”
- 9 • **Analyze Avoidance Alternatives** – “To demonstrate that there are no feasible and prudent
10 alternatives to the use of Section 4(f) property, the programmatic evaluation analysis must
11 address alternatives that avoid the Section 4(f) property. The following alternatives avoid the
12 use of the Section 4(f) property:
- 13 – Do nothing.
- 14 – Improve the transportation facility in a manner that addresses the project's purpose and
15 need without a use of the Section 4(f) property.
- 16 – Build the transportation facility at a location that does not require use of the Section 4(f)
17 property.
- 18 This list is intended to be all-inclusive. The programmatic evaluation does not apply if a
19 feasible and prudent alternative is identified that is not discussed in this document.”
- 20 • **Measures to Minimize Harm** – “The proposed project includes all appropriate measures to
21 minimize harm and subsequent mitigation necessary to preserve and enhance those
22 features and values of the property that originally qualified the property for Section 4(f)
23 protection.”
- 24 • **Coordination** – “The official(s) with jurisdiction over the Section 4(f) property agree in
25 writing with the assessment of the impacts; the proposed measures to minimize harm; and
26 the mitigation necessary to preserve, rehabilitate and enhance those features and values of
27 the Section 4(f) property; and that such measures will result in a net benefit to the
28 Section 4(f) property.
- 29 For historic properties, consistent with 36 CFR part 800, there must be agreement reached
30 amongst the SHPO and/or THPO, as appropriate, FHWA and the Applicant on measures to
31 minimize harm when there is a use of Section 4(f) property. Such measures must be
32 incorporated into the project.”

33 4.2.4.4 Constructive Use Evaluations

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

- 35 • **Determine Applicability** – “Identification of the current activities, features, or attributes of
36 the property which qualify for protection under Section 4(f) and which may be sensitive to
37 proximity impacts;”



- 1 • **Proximity Impacts Analysis** – “An analysis of the proximity impacts of the proposed project
2 on the Section 4(f) property. If any of the proximity impacts will be mitigated, only the net
3 impact need be considered in this analysis. The analysis also should describe and consider
4 the impacts which could reasonably be expected if the proposed project were not
5 implemented, since such impacts should not be attributed to the proposed project; and”
- 6 • **Coordination** – “Consultation, on the foregoing identification and analysis, with the
7 official(s) with jurisdiction over the Section 4(f) property.”

8 **4.3 Identification of Section 4(f) Properties**

9 FHWA and ADOT reviewed existing maps (including Geographic Information System (GIS) data
10 and online maps available from federal, state, county, and city agencies), searched property
11 records, and consulted with officials with jurisdiction to identify the properties protected by
12 Section 4(f) within the I-11 Corridor Study Area (Study Area), as defined by 23 USC 138(a) and
13 49 USC 303(a), for the following:

- 14 1. “Parks and recreational areas of national, state or local significance that are both publicly
15 owned and open to the public;
- 16 2. Publicly owned wildlife and waterfowl refuges of national, state or local significance that are
17 open to the public to the extent that public access does not interfere with the primary
18 purpose of the refuge; and
- 19 3. Historic sites of national, state or local significance in public or private ownership regardless
20 of whether they are open to the public.”

21 Public ownership and administration of parks, recreation areas and wildlife and waterfowl
22 refuges was verified through available documentation as well as coordination with the officials
23 with jurisdiction over those properties. Properties that meet definitions 1 and 2 above are
24 presumed to be significant unless the official with jurisdiction over a property concludes that the
25 site is not significant. FHWA will make an independent evaluation under such circumstances
26 and may override the official with jurisdiction. FHWA defines significance in its Section 4(f)
27 Policy Paper (FHWA 2012) as follows: “comparing the availability and function of the park,
28 recreation area or wildlife and waterfowl refuge, with the park, recreation area or wildlife and
29 waterfowl refuge objectives of the agency, community or authority, the property in question
30 plays an important role in meeting those objectives.” In making such an evaluation, FHWA
31 examines the primary purpose of the property. As described in FHWA’s Section 4(f) Policy
32 Paper (response to Question 1A), primary purpose “is related to a property’s primary function
33 and how it is intended to be managed. Incidental, secondary, occasional or dispersed activities
34 similar to park, recreational or refuge activities do not constitute a primary purpose within the
35 context of Section 4(f).”

36 As discussed in the Draft Tier 1 EIS Section 3.7, historic sites that meet definition 3 above were
37 identified using AZSITE, a GIS-based system that serves as a consolidated informational
38 network of recorded cultural resources, including prehistoric and historic sites and properties,
39 and surface surveys within the State of Arizona and a 40-mile buffer around the state. Such
40 historic sites are significant if they are listed on the NRHP or have been determined to be
41 eligible for listing on the NRHP (Section 4(f) Policy Paper Answer to Question 2A). FHWA
42 consults with the SHPO, the official with jurisdiction over historic sites, Tribes, and other
43 consulting parties, and makes the determination of significance based on the context of
44 Section 106 of the NHPA (36 CFR 800). At this Tier 1 stage, previous determinations of

1 eligibility are being used. Section 106 evaluations of the properties and effects will be
 2 determined during Tier 2 undertakings.

3 While both Section 106 and Section 4(f) are preservation legislation and are both considered in
 4 the NEPA process, Section 106 applies to all federal undertakings and Section 4(f) applies to
 5 only US Department of Transportation (USDOT) actions. Section 106 considers the “effect” of
 6 an undertaking, while Section 4(f) considers the “use of a property” by an undertaking. Section
 7 4(f) is not integral to Section 106, but Section 106 is integral to Section 4(f) compliance insofar
 8 as historic sites are concerned. Section 106 requires consultation and possibly mitigation, while
 9 Section 4(f) requires analysis of avoidance, then all possible planning to minimize harm.

10 **4.3.1 Parks, Recreation Areas, or Wildlife and Waterfowl Refuges**

11 **Table 4-1** (Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f)
 12 in the Study Area) lists the Section 4(f) properties from south to north in the Study Area.

13 **Figure 4-4** (Section 4(f) Properties in the Study Area) shows the location of each property in
 14 relation to the Build Corridor Alternatives.

15 The following properties in the Study Area were evaluated and preliminarily determined to not
 16 be protected by Section 4(f):

- 17 • Santa Rita Experimental Range and Wildlife Area. A memo providing a preliminary
 18 evaluation of wildlife areas is in **Appendix F** (Supporting Documentation for Preliminary
 19 Draft Section 4(F) Evaluation: ADOT Memo Entitled “Applicability of Identifying Wildlife
 20 Areas and Section 4(f) Properties for the I-11 Tier 1 EIS”). According to the memo, the
 21 primary purpose of the property is for research. Since the purpose is not a public park,
 22 recreation area, or wildlife or waterfowl refuge, the preliminary determination is that it does
 23 qualify for protection under Section 4(f).
- 24 • Ironwood Forest National Monument. This property, which is mainly owned and managed by
 25 the Bureau of Land Management (BLM), does not function as or is not designated within its
 26 BLM Resource Management Plan as “a significant park, recreation area, or wildlife and
 27 waterfowl refuge.” The Ironwood Forest National Monument was designated to protect
 28 objects of scientific interest within the Monument. A memo discussing the evaluation of
 29 Ironwood Forest National Monument is in **Appendix F** (Supporting Documentation for
 30 Preliminary Draft Section 4(F) Evaluation: Memo entitled “White Paper Regarding Potential
 31 Section 4(f) Constructive Use Impacts: Ironwood Forest National Monument, Tucson
 32 Mitigation Corridor, Saguaro National Park, and Tucson Mountain Park”).
- 33 • Tucson Mountain Wildlife Area. This area is managed by various agencies and is made up
 34 of publicly and privately owned land. This broad area does not qualify for Section 4(f)
 35 protection; however, Tucson Mountain Park, Saguaro National Park (SNP), and the Tucson
 36 Mitigation Corridor (TMC) fall within this wildlife area and do qualify for Section 4(f)
 37 protection.
- 38 • Sonoran Desert National Monument. The Sonoran Desert National Monument Record of
 39 Decision and Approved Resource Management Plan, dated September 2012, states that the
 40 monument was designated to protect a magnificent example of untrammled Sonoran
 41 desert landscape with an extraordinary array of biological, scientific, and historic resources.
 42 The land is mainly managed by BLM. Because the purpose is not related to a public park,
 43 recreation area, or wildlife or waterfowl refuge, it is not protected by Section 4(f). There are
 44 historic and recreation resources within the monument that are protected by Section 4(f),



1 and these are included in **Table 4-1** (Parks, Recreation Areas, and Wildlife/Waterfowl
2 Refuges Protected by Section 4(f) in the Study Area) and **Table 4-2** (Historic Sites Protected
3 by Section 4(f) in the Project Corridors) and on **Figure 4-4** (Section 4(f) Properties in the
4 Study Area).

5 **4.3.2 Historic Sites**

6 Historic sites (including historic properties and archaeological sites) are identified and discussed
7 in Section 3.7 of this Draft Tier 1 EIS. The sites include those properties that have been
8 (1) previously determined eligible for listing by others or (2) are already listed on the NRHP.
9 **Table 4-2** (Historic Sites Protected by Section 4(f) in the Project Corridors) lists the historic
10 properties within the 2,000-foot-wide Build Corridor Alternatives from south to north. **Figure 4-4**
11 (Section 4(f) Properties in the Study Area) shows the location of each property in relation to the
12 Build Corridor Alternatives.

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

Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the 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)	Santa Cruz, Pima, Pinal, and Maricopa counties, Arizona (part of 1,200-mile multi-state historic trail); Santa Cruz County: 4.5 miles between Tumacacori National Historical Park to Tubac Presidio State Historic Park; Pima County: Elephant Road to Torres Blanca Golf Club (approx. 7 miles), on the east side of and parallel to I-19; part of Pinal County-adopted and proposed 80-mile corridor (TR-2); 13 miles in Maricopa County on BLM land co-aligned with Mormon Battalion Trail and Butterfield Overland Mail Route at Butterfield Pass	National Park Service (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; Study Area includes existing and proposed trail segments, including walking, auto, and off-road elements

Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

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	US Department of Agriculture (USDA), Forest Service owns land	Forest is 1.7 million acres; resource management for multiple uses (forest, mining, range grazing, wilderness, recreation); areas developed for recreation are not close to I-19; critical wildlife habitat areas – this area was identified in the recent EIS 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	AZ 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 S. I-19 Frontage Road, Green Valley, AZ	Pima County	4,800 acres, historical and natural resources preservation and interpretation
5	Canoa Preserve Park	Public park	35 S. Camino de la Canoa, Green Valley, AZ	Pima County	6 acres, baseball fields, ramada with picnic table
6	Quail Creek Veterans Municipal Park	Public park	1905 N. Old Nogales Highway, Sahuarita, AZ	Town of Sahuarita	25 acres, playground, picnic area, walking paths, dog area
7	Parque Los Arroyos	Public park	18225 South Avenida Arroyo Seco, Sahuarita, AZ	Town of Sahuarita	7 acres, playground, basketball court, picnic areas

Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
8	Anamax Park	Public park	17501 South Camino Royale De Las Quintas, Sahuarita, AZ	Town of Sahuarita	42 acres, recreation center, ball fields, dog park
9	Sahuarita Lake Park	Public park	15466 S. Rancho Sahuarita Boulevard, Sahuarita, AZ	Town of Sahuarita	15 acres with lake, boating, pathway, amphitheater, gazebos
10	North Santa Cruz Park	Public park	14455 S. Rancho Sahuarita Blvd, Sahuarita, AZ	Town of Sahuarita	15 acres, ball fields, skating and playground areas, picnic facilities, pathway, restrooms
11	Summit Park	Public park	1800 East Summit Street, Tucson, AZ	Pima County	9 acres, ball fields, 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, ball fields, playground, picnic areas, path
14	Mission Ridge Park	Public park	3121 West Tucker Street, Tucson, AZ	Pima County	6 acres, ball fields, picnic area
15	Ebonee Marie Moody Park	Public park	6925 South Cardinal Avenue, Tucson, AZ	Pima County	5 acres, ball fields, 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	4.6 acres, fitness center and ball fields
17	Mission Manor Park	Public park	701 West Calle Ramona, Tucson, AZ	City of Tucson	6 acres, ball fields adjacent to Mission Manor Elementary School

Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

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, ball fields 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, ball fields, ball court
21	Winston Reynolds – Manzanita District Park	Public park	5200 South Westover Avenue, Tucson, AZ	Pima County	69 acres, community center, pool
22	TMC	Wildlife travel corridor	West of Tucson Mountain Wildlife Area, Pima County, AZ	Owned and managed by Bureau of Reclamation (Reclamation) in cooperation with the US Fish and Wildlife Service (USFWS), Arizona Game and Fish Commission, and Pima County (funding by Reclamation)	2,514 acres, restore and conserve wildlife population in Tucson Mountains by providing for wildlife travel on public lands and across the Central Arizona Project (CAP) aqueduct
23	Santa Cruz River Park	Public park	West of I-10, Tucson	Pima County	459 acres, trails, play equipment

Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
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
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, ball fields, 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	City of Tucson	14 miles, paved multi-use trail
30	Julian Wash Archaeological Park	Public park	2820 South 12th Avenue, Tucson, AZ	City of Tucson	9 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	4 miles, planned multi-use historic interpretation and recreation trail
32	Vista Del Pueblo Park	Public park	1800 W. 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, ball fields, ball courts, playground, picnic area
34	Ochoa Park	Public park	3457 North Fairview Avenue, Tucson, AZ	City of Tucson	0.7 acre, ball fields, picnic area
35	Santa Rita Park	Public park	South 3rd Avenue, Tucson, AZ	City of Tucson	22 acres, ball fields, skate park

Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
36	Tumamoc 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
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, ball fields, 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	0.2 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	Garden of Gethsemane	Public park	670 West Congress Street, Tucson, AZ	City of Tucson	1.3 acres, sculpture garden

Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
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	Viente 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
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	Jacome 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 W. 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

Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
59	Estevan Park	Public park	1001 North Main Avenue, Tucson, AZ	City of Tucson	8 acres, ball fields, 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	Joachim Murrieta Park	Public park	1400 North Silverbell Road, Tucson, AZ	City of Tucson	51 acres, ball fields
62	Francesco 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	SNP	Public park	3693 S. Old Spanish Road, Tucson, AZ	NPS	91,327 acres total, including approximately 25,000 acres for SNP West, historic and nature resource preservation, recreation (not an historic property)
65	Juhan Park	Public park	1770 West Copper Street, Tucson, AZ	City of Tucson	15 acres, ball fields
66	Silverbell Golf Course	Public recreation facility	3600 N. 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, ball fields, 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

Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
70	Christopher Columbus Park	Public park	4600 North Silverbell Road, Tucson, AZ	City of Tucson	277 acres, fishing lake, paths, dog park
71	Flowing Wells Park	Public park	5510 North Shannon Road, Tucson, AZ	Pima County	26 acres, ball fields, 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, ball fields, trail
73	Pima Prickly Park	Public park	3500 West River Road, Tucson, AZ	Pima County	10 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
75	Richardson Park	Public park	3535 West Green Trees Drive, Tucson, AZ	Pima County	4 acres, ball fields, picnic areas, playground, ball courts
76	Ted Walker Park	Public park	6751 North Casa Grande Highway, Marana, AZ	Pima County	61 acres, Mike Jacob Sportspark (ball fields, restrooms)
77	Ann Day Community Park (formerly Northwest Park)	Public park	7601 North Mona Lisa Road, Tucson, AZ	Pima County	21 acres, ball fields, 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
79	Canada Del Oro Christine Taylor Green Memorial River Park	Public park	North Shannon Road at the Oro River, Tucson, AZ	Pima County	26 acres, riverside trail

Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
80	Denny Dunn Park	Public park	4400 West Massingale Road, Tucson, AZ	Pima County	5 acres, ball fields, playground, picnic area
81	Crossroads at Silverbell District Park	Public park	7548 North Silverbell Road, Marana, AZ	Town of Marana	48 acres, ball fields, 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
83	Sunset Pointe Park	Public park	8535 North Star Grass Drive, Tucson, AZ	Pima County	4 acres, picnic area, playground, ball field
84	El Rio Neighborhood Park	Public park	10160 North Blue Crossing Way, Marana, AZ	Town of Marana	3 acres, green space, ball court, ramada
85	Rillito Vista 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
87	Ora Mae Harn Park	Public park	13250 North Lon Adams Road, Marana, AZ	Town of Marana	35 acres, ball fields, 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	14 acres, ball fields, ball courts, picnic areas, playgrounds, dog park
90	Anza Park	Public park	Along Santa Cruz River near Pinal County border, Tucson, AZ	Pima County	228 acres, undeveloped

Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
Pinal County					
91	Picacho Peak State Park	Public park	15520 Picacho Peak Road, Picacho, AZ	Arizona State Parks	3,747 acres, Visitor Center, picnic areas, shelter, camping areas, rest rooms
92	Pinal County West/ Kortsen Park	Community park	50801 W. Highway (Hwy) 84, adjacent to Route 8, Stanfield, AZ	Pinal County	160 acres, camping, picnicking, trails
93	Palo Verde Regional Park (Pinal County Parks)	Public recreation land	Eastern edge of Monument at western County border, between AZ State Route (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
94	Butterfield Pass Trail segment	Recreation trail	Sonoran Desert National Monument near Maricopa Mountain Pass, known as the Butterfield Pass Trail Junction off Hwy 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 Hwy 238, historic markers for Butterfield Pass and Mormon Battalion Trail routes
95	Arlington Wildlife Area	State Wildlife Area, wildlife preserve	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	Wildlife habitat	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)

Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
Maricopa County					
97	Buckeye Hills Regional Park	Public park	26700 W Buckeye Hills Drive, Buckeye, AZ	Maricopa County	4,648 acres, park, restrooms
98	Robbins Butte Wildlife Area	Wildlife habitat	Both sides of Route 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 Public Land Order)
98a	Public Land Order (PLO) 1015 Lands and adjacent AGFD parcels	Wildlife refuge	Lower Gila River Wildlife area	Owned by US Fish and Wildlife Service; managed by Arizona Game and Fish Department (AGFD)	Multiple, undeveloped PLO 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	Foothills Community Park	Public park	12795 S. Estrella Parkway, Goodyear, AZ	Town of Goodyear	18 acres, ball fields, picnic tables and barbeque grills, amphitheater, concessions, walking path
100	White Tank Mountain Regional Park	Public park	20304 W. 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



Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
101	Vulture Mountains Recreation Management Zone (RMZ)	Recreation areas within larger BLM land holding to be developed	South of US Hwy 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 N. Garden City Road to N. 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 Mountains 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



Table 4-1 Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area (Continued)

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				

SOURCES: Online information obtained from websites provided by federal (BLM, Reclamation, USDA, USFWS, US Forest Service, and NPS), state (Arizona Game and Fish Commission 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 Marana, City of Tucson, and Town of Wickenburg) agencies with jurisdiction as well as by The Nature Conservancy. Accessed June and July 2017.

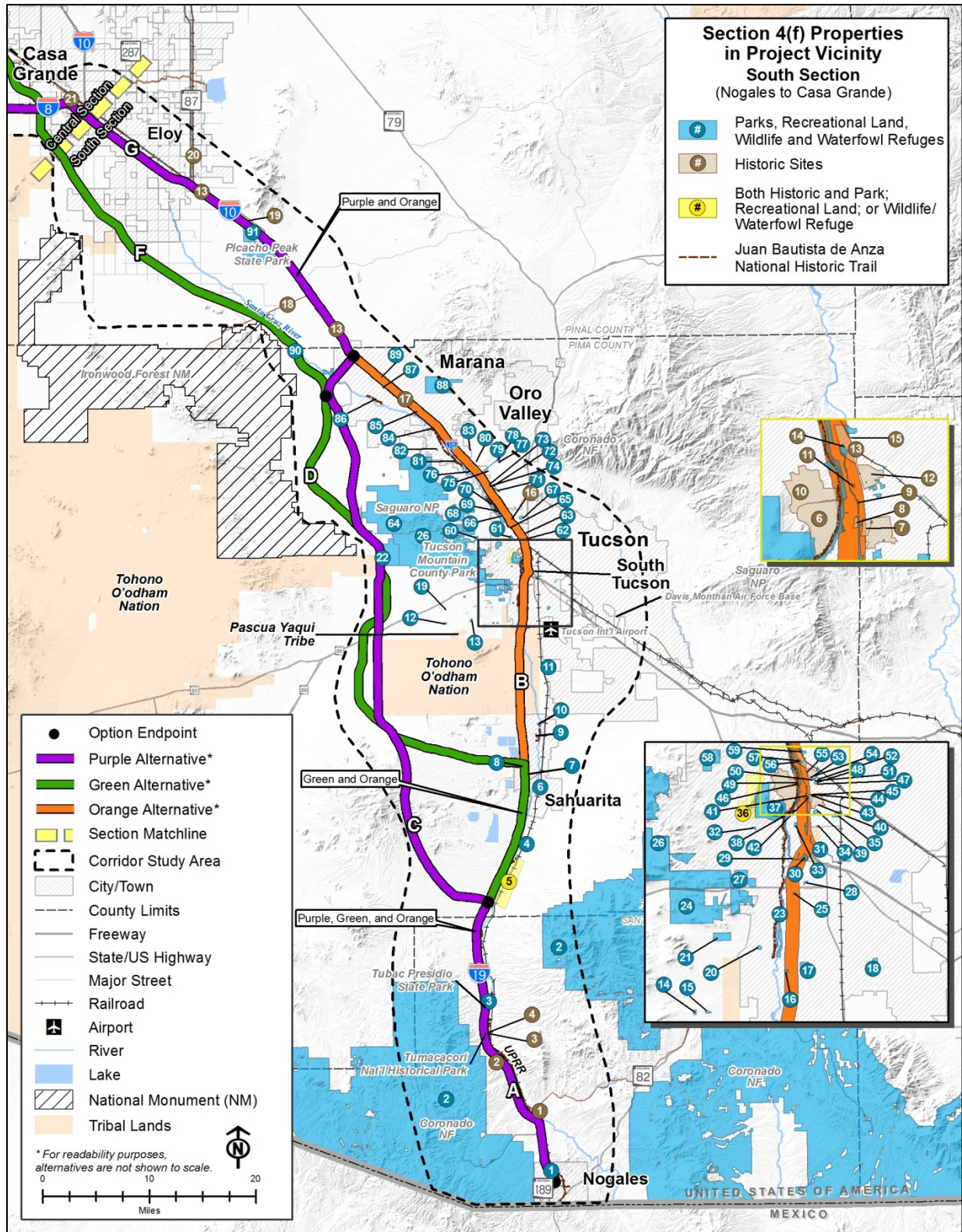


Figure 4-4 Section 4(f) Properties in the Study Area

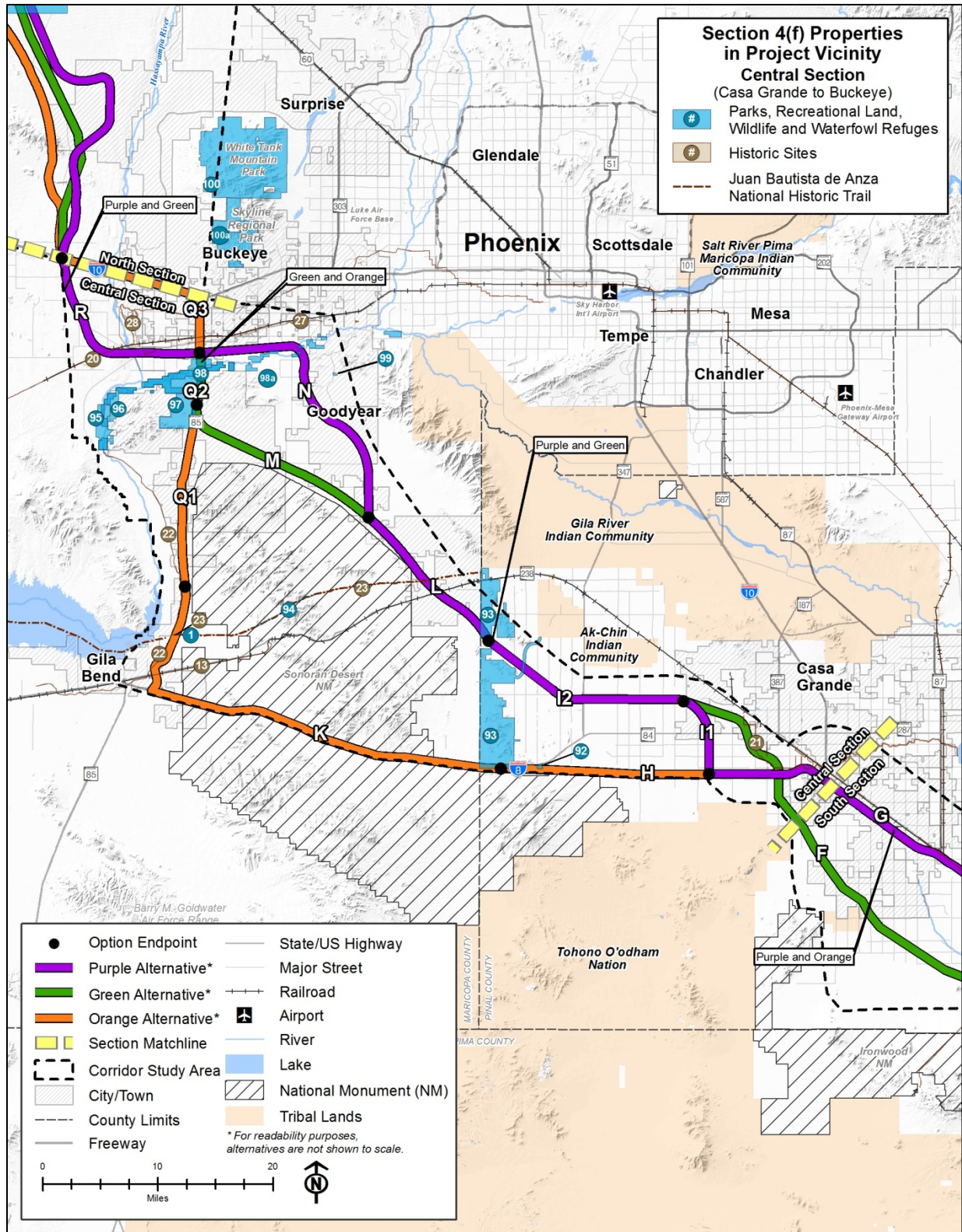


Figure 4-4 Section 4(f) Properties in the Study Area (Continued)

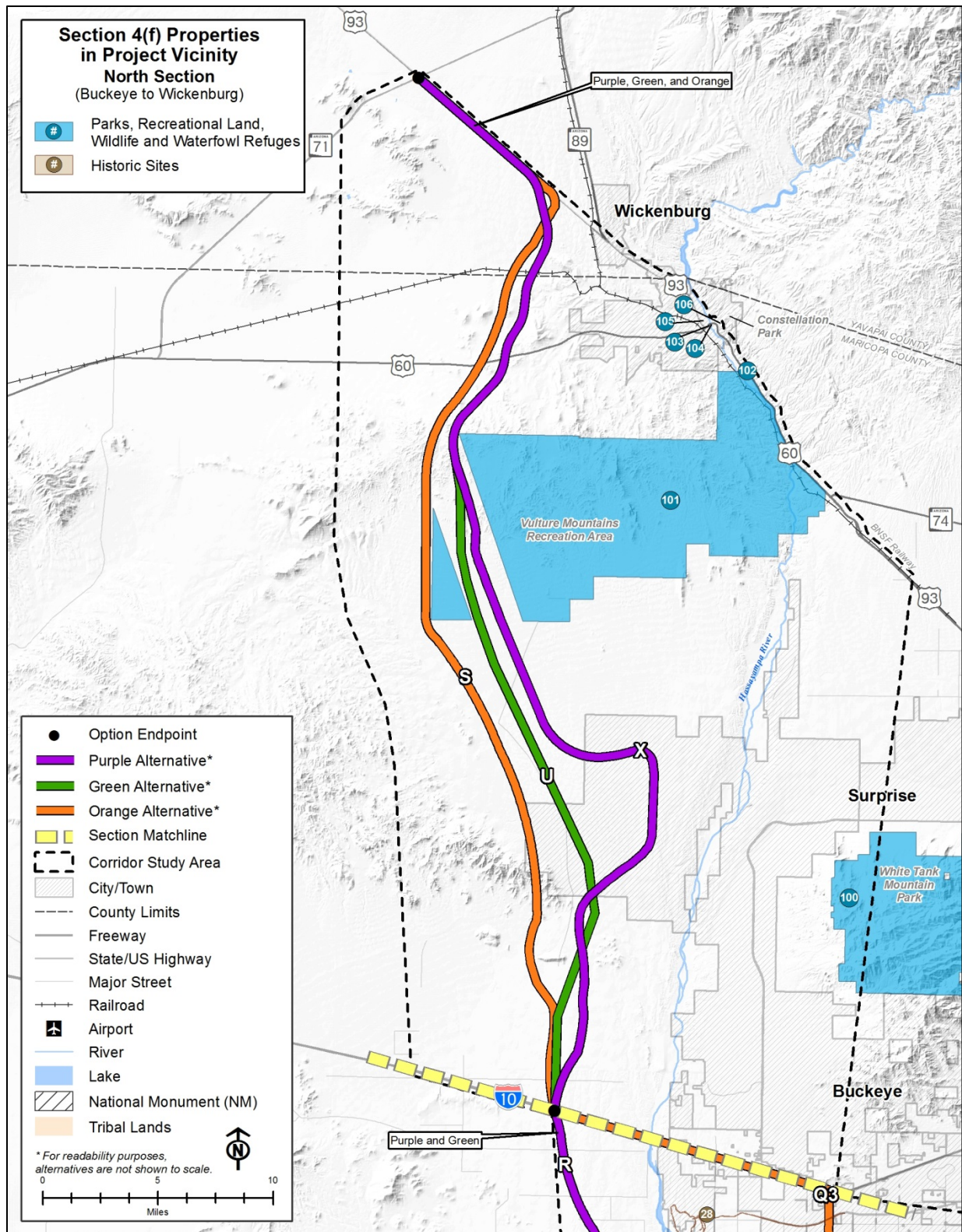


Figure 4-4 Section 4(f) Properties in the Study Area (Continued)

Table 4-2 Historic Sites Protected by Section 4(f) in the Project Corridors

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	250 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	4 acres, historic railroad property in active use; NRHP-eligible, Criterion A for significance in railroad development
2	Otero Cemetery near Palo Parado 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	Tumacacori National Monument and Museum (National Historical Park)	Historic site (three 17th and 18th Century missions and museum complex)	1895 E. Frontage Road, Tumacacori, AZ 85640	NPS	360 acres, historical and natural resources conservation and interpretation; NHL-listed, 1987, Criterion A for association with Spanish Colonial Jesuit mission period (17th and 18th centuries) and Criterion C for Mission and Spanish Colonial architecture

Table 4-2 Historic Sites Protected by Section 4(f) in the Project Corridors (Continued)

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 S. I-19 Frontage Road, Green Valley, AZ	SHPO	4,700 acres, NRHP-listed, 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	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 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 W. Cushing Street, W. 18th Street, S. 11th Avenue, and S. Samaniego Avenue, Tucson, AZ	SHPO	18 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

Table 4-2 Historic Sites Protected by Section 4(f) in the Project Corridors (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
8	Barrio El Membrillo Historic District	Historic neighborhood (1920s)	Bounded by W. Granada Street, W. Simpson Street, and right-of-way (ROW) of former El Paso and Southwestern Railroad corridor, Tucson, AZ	SHPO	5 acres, NRHP-listed in 2009, Criterion A as an historic Hispanic neighborhood along the Santa Cruz River, Criterion C for its collection of residential structures built in the 1920s in the Sonoran style
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	48-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 W. Congress Street, Tucson, AZ	SHPO	221 acres, NRHP-listed 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	1 acre, NRHP-listed in 1979, Criterion C for its combination of southwestern styles and association with former Tucson Mayor Levi Manning and architect Henry Trost

Table 4-2 Historic Sites Protected by Section 4(f) in the Project Corridors (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
12	Barrio El Presidio Historic District	Historic neighborhood (1860-1920)	Bounded by W. 6th and W. Alameda Streets, and N. Stone and Granada Avenues, Tucson, AZ	SHPO	48 acres, NRHP-listed 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
14	Barrio Anita Historic District	Historic neighborhood (1903)	Bounded by W. Speedway Boulevard, Union Pacific Railroad, N. Granada Avenue, and St. Mary's Road	SHPO	54 acres, NRHP-listed, 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 Warehouse	Historic site (1920)	911 N. 13th Avenue, Tucson, AZ	SHPO	0.2 acre, NRHP-listed, 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 Plant Materials Center	Historic site (1934)	3241 N. Romero Road, Tucson, AZ	SHPO	8 acres, NRHP-listed, 1997, Criterion A for its operation as a producer of nursery stock and seeds for regional soil stabilization and conservation projects

Table 4-2 Historic Sites Protected by Section 4(f) in the Project Corridors (Continued)

Property # on Figures	Property Name	Classification	Address/Location	Official(s) with Jurisdiction	Features/Attributes
17	Cortaro Farms Canal/Cortaro-Marana Irrigation District Canal	Historic water conduit (1920)	Town of Marana, AZ	SHPO	14 acres, NRHP-eligible, Criterion A for its significant contribution to the expansion of irrigated agriculture in the region
Pinal County					
19	Picacho Pass Skirmish Site and Overland Mail Company 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, 2002, Criterion A for association with the Battle of Picacho Peak in 1862 and for one of the stations on the Butterfield Overland Mail 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	29 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	35 miles, NRHP-eligible, Criterion A for significance as water conduit

Table 4-2 Historic Sites Protected by Section 4(f) in the Project Corridors (Continued)

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	25 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	20 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	45 miles, NRHP-eligible, Criterion A for significance as water conduit
Yavapai County					
	None found				

SOURCE: Archaeological Consulting Services and Ryden Architects 2017. *Cultural Resource Technical Report for the I-11 (Nogales to Wickenburg) Tier 1 EIS.*



1 4.4 Assessment of Use of Section 4(f) Properties

2 After identifying the Section 4(f) properties in the Study Area, FHWA determined whether and to
3 what extent each Build Corridor Alternative has the potential to incorporate land from each
4 property. To make this determination, protected properties were identified that are partially or
5 entirely within one or more of the 2,000-foot-wide Build Corridor Alternatives.

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

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

21 FHWA also determined that, for some properties in the Study Area, no use would occur. For all
22 other properties protected by Section 4(f), the potential use of a protected property is evaluated
23 by defining the type of use according to the definitions and criteria described in the Section 4(f)
24 regulations (23 CFR 774 et seq.), as summarized in Section 4.2.2.

25 4.4.1 No Build Alternative

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

- 35 • I-10: SR 85 to Verrado Way (Maricopa County)
- 36 • I-10: Ina Road to Ruthrauff Road (Pima County);
- 37 • I-10: SR 87 to Picacho (Pinal County);
- 38 • I-10: Earley Road to I-8 (Pinal County); and
- 39 • US 93: Tegner Drive to SR 89.



1 The No Build Alternative will avoid the use of Section 4(f) properties as part of I-11.

2 **4.4.2 Build Corridor Alternatives – No Use**

3 **4.4.2.1 Section 4(f) Properties Outside Build Corridor Alternatives (No Use)**

4 There are 81 properties that fall within the Study Area but outside of all of the 2,000-foot-wide
5 Build Corridor Alternatives. These properties would not be directly used under any alternative.

6 **Table 4-3** (Section 4(f) Properties Outside the Build Corridors) lists these properties.

Table 4-3 Section 4(f) Properties Outside the Build Corridors Where No Use Would Occur

Number on Figure 4-4	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
4	Historic Hacienda de la Canoa (Raul M. Grijalva Canoa Ranch Conservation Park)
5	Canoa Preserve Park
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	CSM Martin “Gunny” Barreras Memorial 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
27	John F. Kennedy Park
28	St. John’s School Skate Park
32	Vista Del Pueblo Park
33	Ormsby Park
34	Ochoa Park



Table 4-3 Section 4(f) Properties Outside Build Corridors Where No Use Would Occur (Continued)

Number on Figure 4-4	Property Name
35	Santa Rita Park
36	Tumamoc 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	Viente De Agosto Park
50	Sunset Park
51	El Presidio Park
52	Jacome 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	Joachim 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
71	Flowing Wells Park
72	Dan Felix Memorial Park (formerly Peglar Wash Park)
73	Pima Prickly Park
75	Richardson Park
77	Ann Day Community Park (formerly Northwest Park)
78	Northwest YMCA Community Center
80	Denny Dunn Park
81	Crossroads at Silverbell District Park

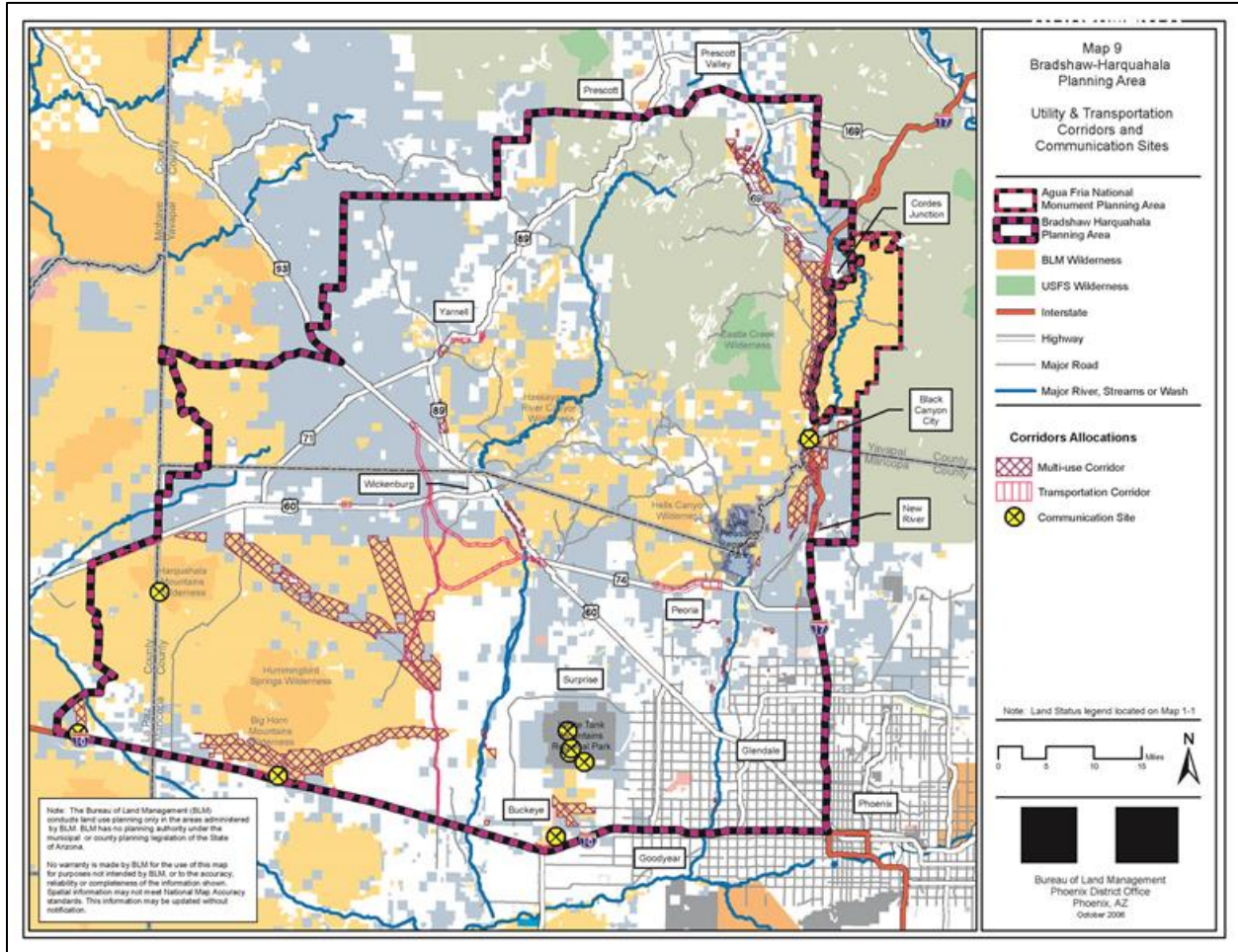


Table 4-3 Section 4(f) Properties Outside Build Corridors Where No Use Would Occur (Continued)

Number on Figure 4-4	Property Name
82	Continental Reserve Community Park
83	Sunset Pointe Park
84	El Rio Neighborhood Park
86	Santa Cruz River Park
87	Ora Mae Harn Park
88	Tortolita Preserve
89	San Lucas Community Park
90	Anza Park
94	Butterfield Pass Trail segment
95	Arlington Wildlife Area
96	Powers Butte Wildlife Area
99	Foothills Community Park
100	White Tank Mountain Regional Park
100a	Skyline Regional Park
101	Vulture Mountains RMZ
103	Wishing Well Park
104	Hassayampa River Walk
105	Coffinger Park
106	Constellation Park
Historic Sites	
38	Tumamoc Preserve
15	Ronstadt-Sims 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 Mountains RMZ. BLM is the official with
 2 jurisdiction over the property, which consists of approximately 70,000 acres of land south of
 3 Wickenburg, Arizona. Activities on the land are guided by two primary planning documents: the
 4 2010 Bradshaw-Harquahala Resource Management Plan (RMP) and the 2012 RMZ Plan. The
 5 RMP is relevant to I-11 because it identifies how and where activities can occur on the Vulture
 6 Mountains RMZ property; the RMZ is relevant to I-11 because it provides the framework for
 7 implementing activities. The relevant aspects of each plan are briefly described as follows:
- 8 • Bradshaw-Harquahala RMP – The RMP provides guidance to the Hassayampa Field Office
 9 of the BLM regarding current and future management decisions for Vulture Mountains RMZ.
 10 The RMP designates a number of multi-use corridors, including the north-south multi-use
 11 corridor that crosses the western portion of the Vulture Mountains RMZ property (**Figure 4-5**
 12 [Bradshaw-Harquahala Planning Area Map]). Multi-use corridors are defined in the RMP as

- 1 being for major utilities and regionally significant transportation uses. The RMP specifies
- 2 that BLM will coordinate with ADOT in advancing such transportation uses in multi-use
- 3 corridors.
- 4 FHWA has determined on the basis of the RMP that Section 4(f) does not apply to the multi-use
- 5 corridor that crosses the Vulture Mountains RMZ because the purpose of the multi-use corridor
- 6 is to co-locate utilities and transportation infrastructure (**Figure 4-6** [Build Corridor Alternatives
- 7 near Vulture Mountains RMZ]). BLM concurred with FHWA's determination on April 30, 2018
- 8 (**Appendix F**).



SOURCE: BLM, *Agua Fria National Monument and Bradshaw-Harquahala Resource Management Plan/Record of Decision*. April 22, 2010.

Figure 4-5 Bradshaw-Harquahala Planning Area Map

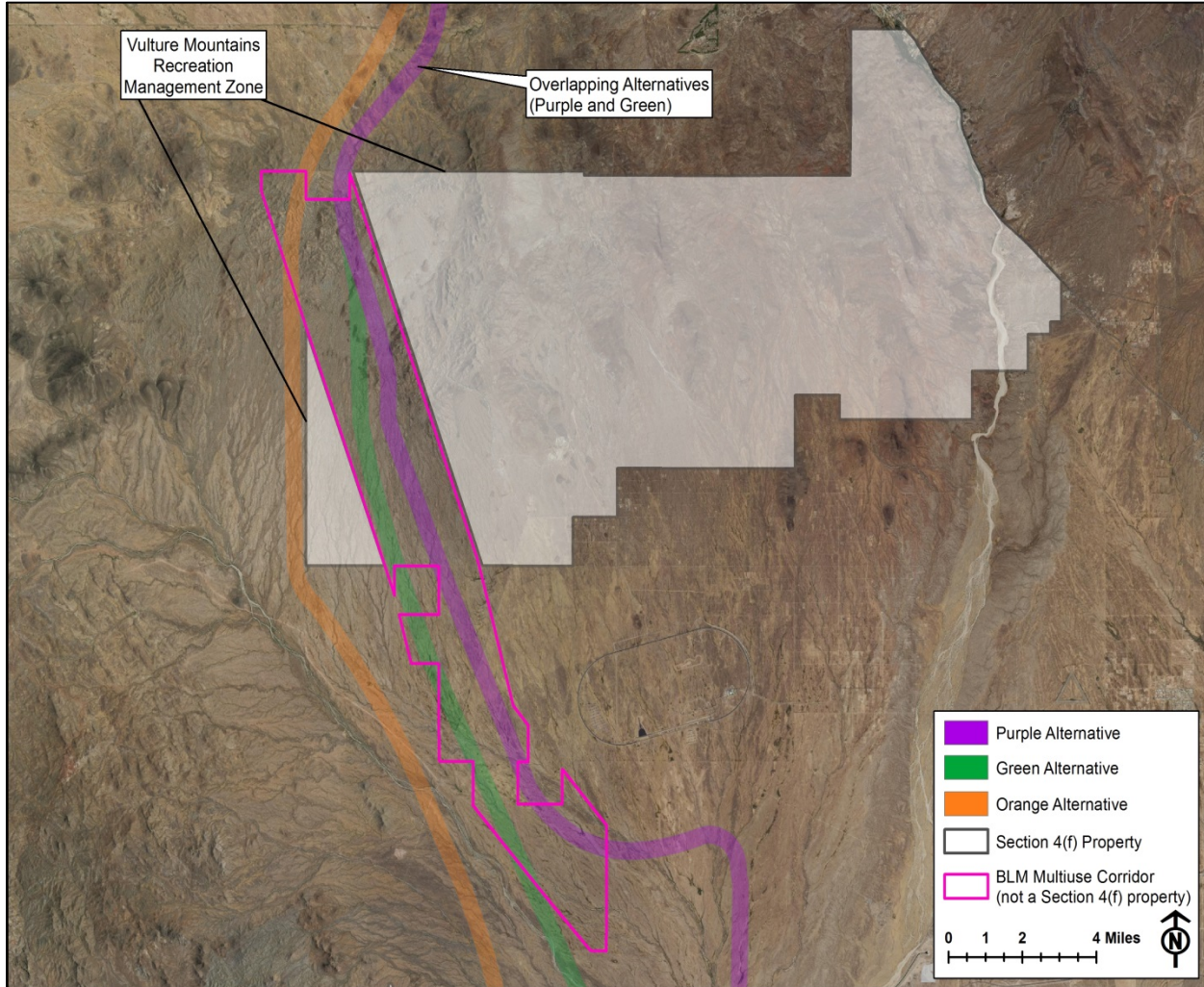


Figure 4-6 Build Corridor Alternatives near Vulture Mountains RMZ

1 FHWA, ADOT, and BLM initiated coordination regarding Vulture Mountains RMZ during scoping
2 for I-11. During development and evaluation of the alternative corridors, FHWA and ADOT
3 continued to coordinate with BLM in regard to Vulture Mountains RMZ. In this coordination,
4 corridor alignments inside and outside the multi-use corridor were discussed. The BLM
5 discouraged alignments across the property and outside the multi-use corridor, noting the
6 mission of the property to protect natural resources and provide recreation opportunities (see
7 **Table 4-7** [Summary of Comments from Officials with Jurisdiction over Section 4(f) Properties]
8 [located at the end of this chapter] and **Appendix F**).

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

20 The Orange Alternative (Option S) would be aligned west of and adjacent to the Vulture
21 Mountains RMZ property such that no use of the Vulture Mountains RMZ property would occur.
22 The BLM has stated its preference for Option S in its April 30, 2018, letter to FHWA
23 (**Appendix F**). Consistent with 23 CFR 774.7(e)(1), opportunities to minimize harm to the
24 property at subsequent stages in the project development process (for example, Tier 2), are not
25 precluded. At this preliminary level of planning, FHWA and ADOT have identified no engineering
26 or environmental constraints that would obstruct or preclude the ability to provide a highway
27 alignment that achieves general engineering design standards west of and adjacent to the
28 Vulture Mountains RMZ property.

29 **4.4.2.2 Section 4(f) Properties in Build Corridors**

30 There are 42 properties partially or entirely within one or more Build Corridor Alternatives.
31 **Table 4-4** (Section 4(f) Properties within the Build Corridors) lists these properties and identifies
32 the applicable corridor(s). The acreage of each property in a corridor is quantified along with the
33 percentage of the total property in the corridor. **Figure 4-7** (Section 4(f) Properties in Build
34 Corridor Alternatives – South Section), **Figure 4-8** (Section 4(f) Properties in Build Corridor
35 Alternatives – Central Section), and **Figure 4-9** (Section 4(f) Properties in Build Corridor
36 Alternatives – North Section) show the locations of the properties in relation to the Build
37 Corridors.

Table 4-4 Section 4(f) Properties within the Build Corridors (Potential Use)

Map #	Property Name	Property Area/Percentage Inside Corridor (acres or miles [%])			Existing Property Acreage (miles for trails/green ways)	Applicable Corridor
		Purple Alternative	Green Alternative	Orange Alternative		
Parks, Recreation Areas, and Wildlife and Waterfowl Areas						
Multiple Counties						
1	Juan Bautista de Anza National Historic Trail	5 miles (13%)	12 miles (30%)	24 miles (60%)	40 miles in segments	Crosses corridors (Purple, Green, and Orange)
Pima County						
8	Anamax Park	0	37 acres (88%)	33 acres (79%)	42 acres	Mostly in corridors (Green and Orange)
16	Pima Community College, Desert Vista Campus	0	0	5 acres (100%)	5	In corridor (Orange)
22	TMC	453 acres ⁽¹⁾ (15%)	453 acres ⁽¹⁾ (15%)	0	2,958	Partly in corridors (Purple and Green)
23	Santa Cruz River Park	0	0	131 acres (29%)	459 acres	In corridor (Orange)
25	La Mar Park	0	0	3 acres (100%)	3	In corridor (Orange)
29	Julian Wash Greenway	0	0	0.58 mile (4%)	14 miles	Partly in corridor (Orange)
30	Julian Wash Archaeological Park	0	0	15.8 (97%)	16.2	Mostly in corridor (Orange)
31	El Paso and Southwestern Greenway (Planned Trail)	0	0	3 miles (75%)	4 miles	Crosses corridor (Orange)
41	El Paso and Southwestern Greenway (Existing Trail)	0	0	0.2 mile (100%)	0.2 mile	Crosses corridor (Orange)

Table 4-4 Section 4(f) Properties within Build Corridors (Potential Use) (Continued)

Map #	Property Name	Property Area/Percentage Inside Corridor (acres or miles (%))			Existing Property Acreage (miles for trails/green ways)	Applicable Corridor
		Purple Alternative	Green Alternative	Orange Alternative		
42	El Parque De San Cosme	0	0	1 acre (100%)	1	In corridor (Orange)
46	Garden of Gethsemane	0	0	1.3 acres (100%)	1.3	In corridor (Orange)
49	Bonita Park	0	0	1.4 acres (100%)	1.4	All within corridor (Orange)
56, 57	David G. Herrera and Ramon Quiroz Park (formerly Oury Park)	0	0	7 acres (100%)	7 acres	In corridor (Orange)
59	Estevan Park	0	0	2.3 acres (28%)	8	Partly in corridor (Orange)
62	Francesco Elias Esquer Park	0	0	0.9 acre (14%)	6	Partly in corridor (Orange)
69	Sweetwater Wetlands Park	0	0	0.9 acre (2%)	58	Partly in corridor (Orange)
74	Rillito River Park	0	0	5 (83%)	6	Mostly in corridor (Orange)
76	Ted Walker Park	0	0	42 acres (69%)	61	Partly in corridor (Orange)
79	Canada Del Oro Christine Taylor Green Memorial River Park	0	0	1.5 (6%)	26	Partly in corridor (Orange)
85	Rillito Vista Park	0	0	2 acres (100%)	2	In corridor (Orange)

Table 4-4 Section 4(f) Properties within Build Corridors (Potential Use) (Continued)

Map #	Property Name	Property Area/Percentage Inside Corridor (acres or miles (%))			Existing Property Acreage (miles for trails/green ways)	Applicable Corridor
		Purple Alternative	Green Alternative	Orange Alternative		
89	San Lucas Community Park	0	0	5 acres (36%)	14	Partly in corridor (Orange)
Pinal County						
91	Picacho Peak State Park	173 acres (5%)	0	173 acres (5%)	3,747 acres	Partly in corridors (Purple and Orange)
92	Pinal County West/Kortsen Park	0	0	48 acres (30%)	160 acres	Partly in corridor (Orange)
93	Palo Verde Regional Park (Pinal County Parks)	305 acres (1%)	305 acres (1%)	427 acres (2%)	22,810 acres for recreation	Partly in corridors (Purple, Green, and Orange)
Maricopa County						
99	Buckeye Hills Regional Park	0	184 acres (4%)	345 acres (7%)	4,648 acres	Partly in corridors (Green and Orange)
98	Robbins Butte Wildlife Area	0	0, or minimal	0, or minimal	5,676	Green and Orange Alternatives can likely be accommodated within existing SR 85 ROW
98a	PLO 1015 Lands and adjacent AGFD Parcels	42 acres (0.6 %)	32 acres (0.5 acres)	32 acres (0.5 acres)	6,906 acres	Green or Orange Alternatives can likely be accommodated within existing SR 85 ROW; Purple is a new crossing

Table 4-4 Section 4(f) Properties within Build Corridors (Potential Use) (Continued)

Map #	Property Name	Property Area/Percentage Inside Corridor (acres or miles (%))			Existing Property Acreage (miles for trails/green ways)	Applicable Corridor
		Purple Alternative	Green Alternative	Orange Alternative		
Historic Sites						
Multiple Counties						
13	Southern Pacific Railroad – Phoenix Mainline (Wellton-Phoenix-Eloy Spur (AZ T:10:84(ASM)))	10 miles (4%)	10 miles (4%)	10 miles (4%)	250	Crosses corridors (Purple, Green, and Orange)
18	Arizona Southern Railroad Company – railroad grade AZ AA:10:19(ASM)	1 mile (6%)	0.4 mile (2%)	1 mile (6%)	17	Crosses corridors (Purple, Green, and Orange)
Santa Cruz County						
1	New Mexico-Arizona Railroad: Nogales Branch, AZ EE:4:43(ASM)	0	0	4 acres (100%)	4	In corridor (Orange)
2	Otero Cemetery, near Palo Parado interchange, AZ DD:8:165(ASM)	0.2 acre (100%)	0.2 acres (100%)	0.2 acre (100%)	0.2	In corridors (Purple, Green, and Orange)
3, 4	Tumacacori National Monument and Museum (National Historical Park)	4 acres (1%)	4 acres (1%)	4 acres (1%)	360 acres	Partly in corridors (Purple, Green, and Orange)

Table 4-4 Section 4(f) Properties within Build Corridors (Potential Use) (Continued)

Map #	Property Name	Property Area/Percentage Inside Corridor (acres or miles (%))			Existing Property Acreage (miles for trails/green ways)	Applicable Corridor
		Purple Alternative	Green Alternative	Orange Alternative		
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)	0	422 acres (9%)	422 acres (9%)	4,700	Partly in corridors (Green and Orange)
6	Agustin del Tucson Mission site, AZ BB:13:6(ASM)	0	0	6.2 acres (3%)	194	Partly in corridor (Orange)
7	Barrio El Hoyo Historic District	0	0	8 acres (44%)	18	Partly in corridor (Orange)
8	Barrio El Membrillo Historic District	0	0	5 acres (100%)	5	In corridor (Orange)
9	El Paso and Southwestern Railroad District	0	0	42 acres (88%)	48	In corridor (Orange)
10	Menlo Park Historic District	0	0	3 acres (1%)	221	Partly in corridor (Orange)
11	Levi H. Manning House	0	0	3 acres (100%)	3	In corridor (Orange)
12	Barrio El Presidio Historic District	0	0	3 acres (6%)	48	Partly in corridor (Orange)
14	Barrio Anita Historic District	0	0	46 acres (85%)	54	Partly in corridor (Orange)

Table 4-4 Section 4(f) Properties within Build Corridors (Potential Use) (Continued)

Map #	Property Name	Property Area/Percentage Inside Corridor (acres or miles (%))			Existing Property Acreage (miles for trails/green ways)	Applicable Corridor
		Purple Alternative	Green Alternative	Orange Alternative		
16	USDA Plant Materials Center	0	0	6 acres (75%)	8	Partly in corridor (Orange)
17	Cortaro Farms/Cortaro-Marana Irrigation District Canal	0.2 mile (1%)	0	12 miles (86%)	14	Crosses corridor (Purple); partly within corridor (Orange)
Pinal County						
19	Picacho Pass Skirmish Site and Overland Mail Company Station	35 acres (5%)	0	35 acres (5%)	724	Partly in corridors (Purple and Orange)
Maricopa County						
21	Casa Grande Canal, AZ AA:3:209(ASM)	1 mile (3%)	1 mile (3%)	1 mile (3%)	29	Crosses corridors (Purple, Green, and Orange)
22	Gila Bend Canal, AZ Z:2:66(ASM)	0	0	0.2 mile (<1%)	35	Crosses corridor (Orange)
23	Butterfield Overland Mail Stage Route (Gila Trail Archaeological Site (AZ T:15:32(ASM)))	0.4 mile (2%)	0.4 miles (2%)	0.4 mile (2%)	25	Crosses corridors (Purple, Green, and Orange)
24	Wide Trail Site, AZ T:14:28(ASM)	0	0	6.8 acres (98%)	6.9	Mostly in corridor (Orange)
25	Three prehistoric trails, AZ T:14:94(ASM)	0	0	3.2 acres (100%)	3.2	In corridor (Orange)
26	Prehistoric artifacts and canal, AZ T:10:59(ASM)	0	1.7 acres (30%)	1.7 acres (30%)	5.6	Partly in corridors (Green and Orange)

Table 4-4 Section 4(f) Properties within Build Corridors (Potential Use) (Continued)

Map #	Property Name	Property Area/Percentage Inside Corridor (acres or miles (%))			Existing Property Acreage (miles for trails/green ways)	Applicable Corridor
		Purple Alternative	Green Alternative	Orange Alternative		
27	Buckeye Canal, AZ T:10:82(ASM)	1 mile (6%)	1 mile (6%)	0.4 mile (2%)	20	Crosses corridors (Purple, Green, and Orange)
28	Roosevelt Canal, AZ T:10:83(ASM)	0	0	0.4 mile (1%)	45	Crosses corridor (Orange)
Numbers of Properties:						
Total Properties partly or entirely within each corridor		7	10	41		
Total corridor crossings of properties (trails, canals and railroads)		7	6	11		

SOURCE: AECOM 2017.

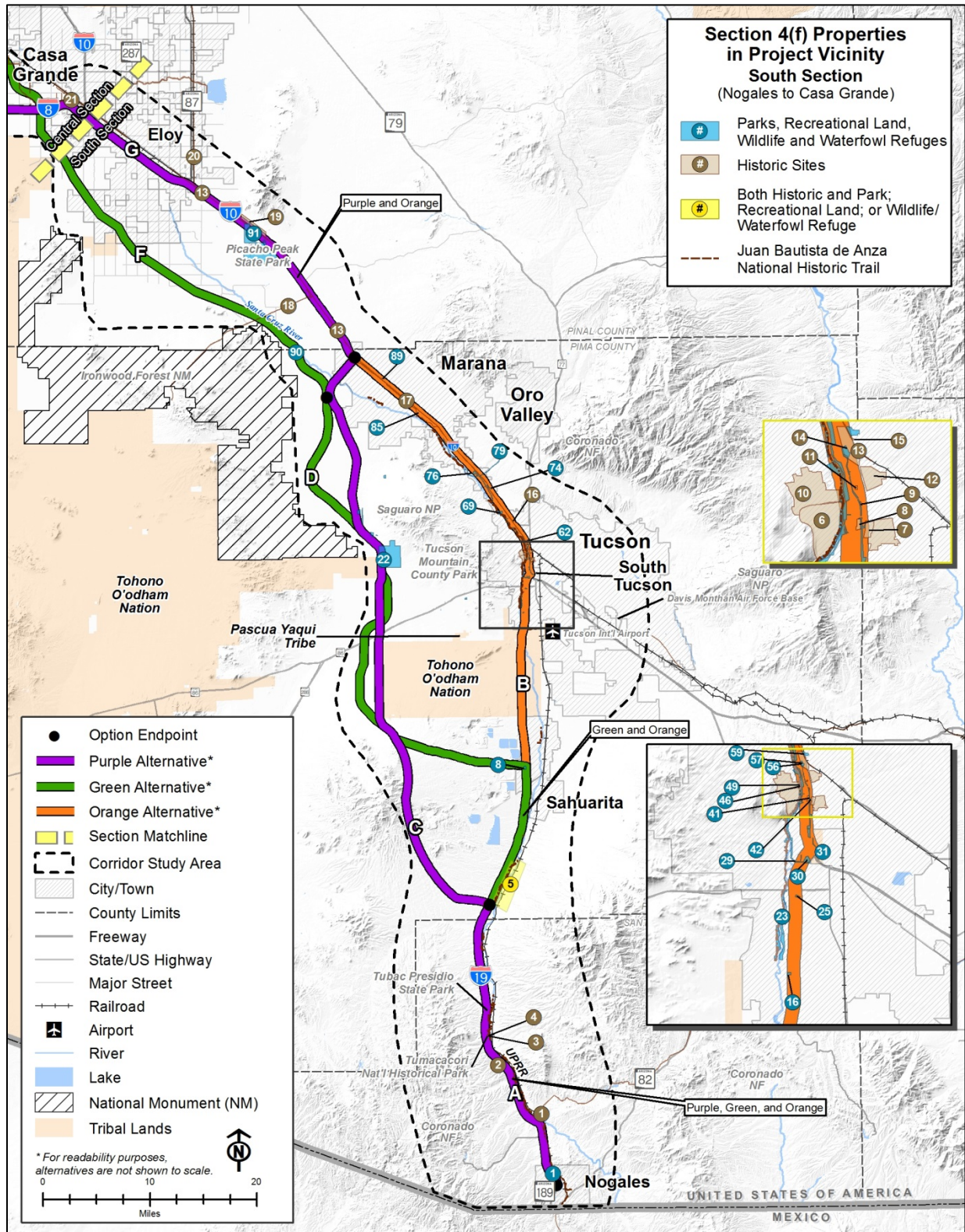


Figure 4-7 Section 4(f) Properties in Build Corridor Alternatives – South Section

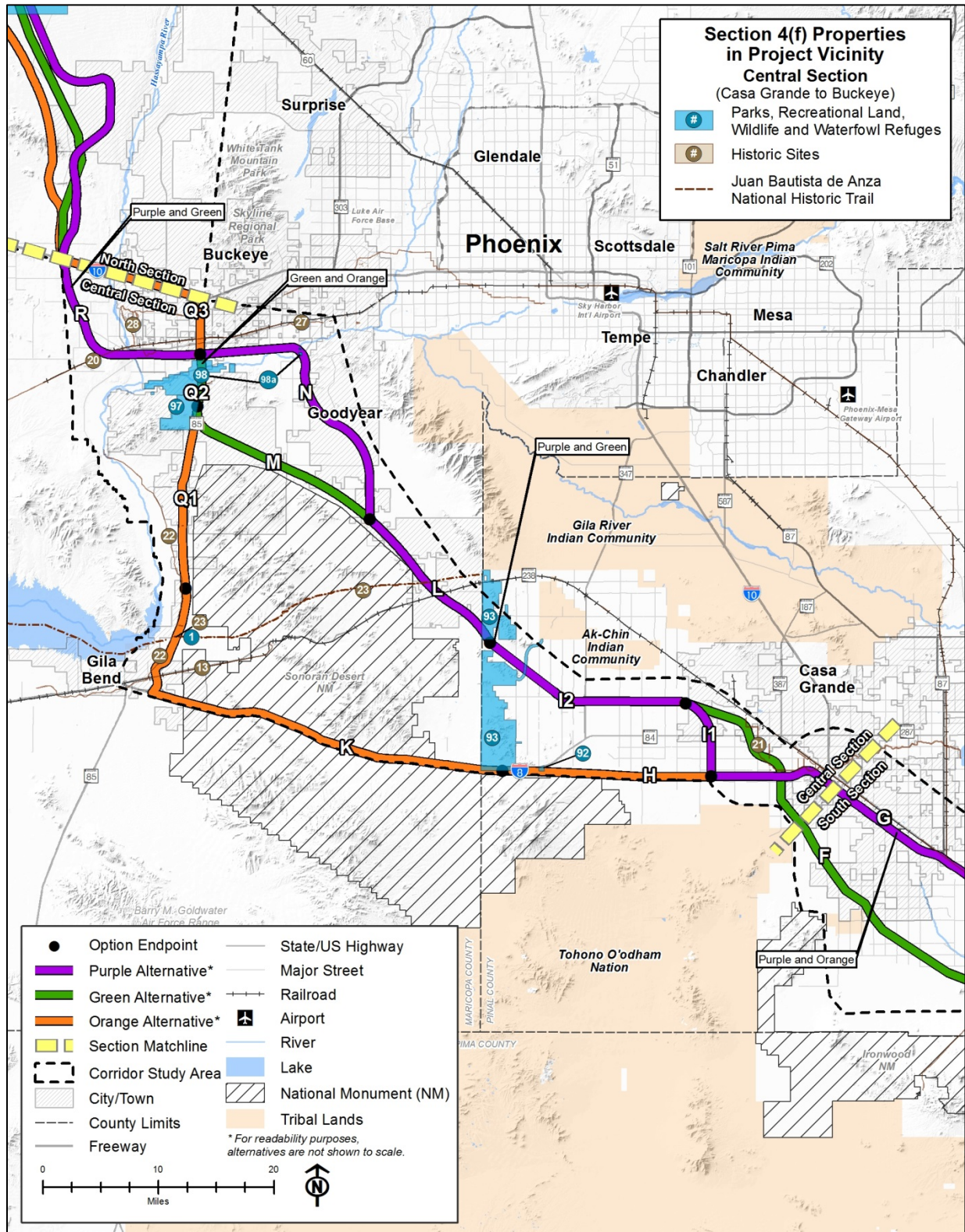


Figure 4-8 Section 4(f) Properties in Build Corridor Alternatives – Central Section

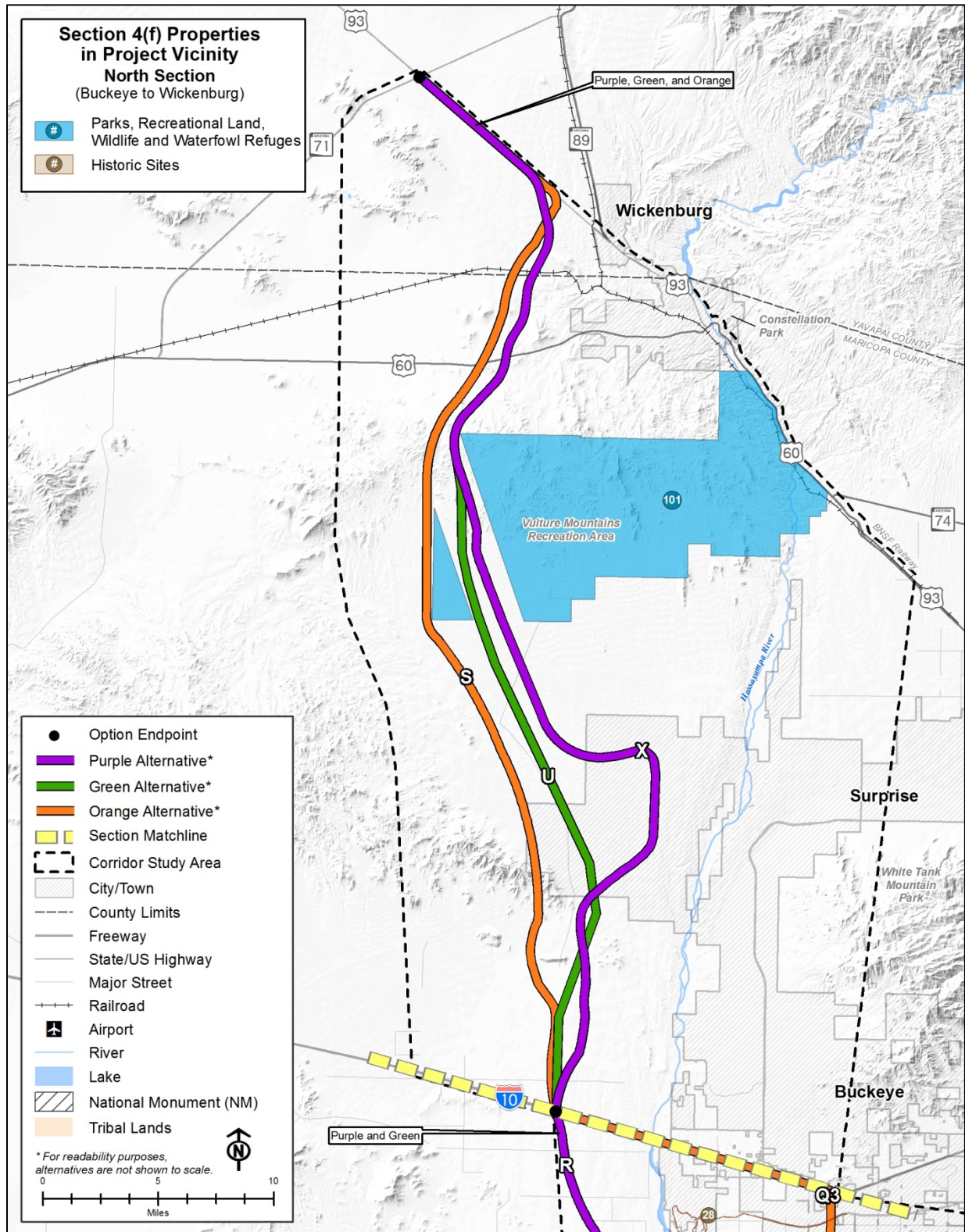


Figure 4-9 Section 4(f) Properties in Build Corridor Alternatives – North Section



1 The potential for use of Section 4(f) properties prompted FHWA and ADOT to assess whether,
2 in the context of professional engineering judgment and the findings of the Draft Tier 1 EIS,
3 permanent incorporation of land from the protected property can be avoided by alignment shifts
4 and design changes described in this section.² This assessment was performed in accordance
5 with the regulations of Section 4(f) regarding first-tier analysis (23 CFR 774.7(e)(1)).
6 Specifically, FHWA and ADOT “applied all possible planning to minimize harm to the extent that
7 the level of detail available at the first-tier EIS stage allows” in order for a preliminary
8 Section 4(f) approval to be made.

9 In this assessment, FHWA and ADOT evaluated the following three methods to avoid
10 Section 4(f) properties:

- 11 • **Accommodate in the corridor** – For properties partially or entirely within a Build Corridor
12 Alternative, provide space for an approximately 400-foot-wide linear roadway ROW within
13 the 2,000-foot-wide Build Corridor Alternative while avoiding the protected property.
- 14 • **Shift the corridor** – For properties that cannot be avoided by the previous method, shift the
15 2,000-foot-wide Build Corridor Alternative away from the protected property in order to
16 accommodate the project and avoid the protected property.
- 17 • **Grade-separate the corridor** – In the case of linear properties (such as trails, historic
18 canals and historic railroads) that are within a 2,000-foot-wide Build Corridor Alternative, the
19 corridor would cross over or under the protected property (such as on an elevated structure
20 or depressed roadway section) to avoid the protected property.

21 The results of this evaluation are summarized in **Table 4-5** (Summary of Use by Build Corridor
22 Alternatives) and are described in the subsections that follow the table. During Tier 2 studies,
23 the 2,000-foot width of a selected Build Corridor Alternative would be refined to a specific
24 roadway alignment. At that time, the commitments made in this Preliminary Draft Section 4(f)
25 Evaluation (such as accommodate in the corridor, shift the corridor, and grade-separate the
26 corridor) would be included in the alignment design. Potential impacts identified in this
27 Preliminary Draft Section 4(f) Evaluation may be avoided or minimized when a specific roadway
28 alignment is identified. At that time, the Section 4(f) Evaluations will analyze the specific
29 roadway alignment for potential uses of Section 4(f)-protected properties including historic sites
30 determined to be eligible during the Section 106 process.

31 The Section 4(f) properties listed in **Table 4-5** (Summary of Use by Build Corridor Alternatives)
32 that are to be avoided may be impacted if additional Section 4(f) properties area discovered
33 during the Tier 2 process.

² An alignment shift is the rerouting of a portion of I-11 to a different alignment within the 2,000-foot-wide corridor to avoid the potential use of a specific property. A design change is a modification of the proposed design in a manner that would avoid impacts.

Table 4-5 Summary of Use by Build Corridor Alternatives

Map #	Property Name	Summary of Use Findings			Applicable Corridor
		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 – grade-separate	Crosses corridors (Purple, Green, and Orange)
Pima County					
8	Anamax Park	No use – outside corridor	No use – shift corridor	No use – shift corridor	Mostly in corridors (Green and Orange)
16	Pima Community College, Desert Vista Campus	No use – outside corridor	No use – outside corridor	No use – accommodate	In corridor (Orange)
22	TMC	Use – net benefit	Use – net benefit	No use – outside corridor	Partly in corridors (Purple and Green)
23	Santa Cruz River Park	No use – outside corridor	No use – outside corridor	Potential use	In corridor (Orange)
25	La Mar Park	No use – outside corridor	No use – outside corridor	No use – accommodate	In corridor (Orange)
29	Julian Wash Greenway	No use – outside corridor	No use – outside corridor	No use – grade-separate	Partly in corridor (Orange)
30	Julian Wash Archaeological Park	No use – outside corridor	No use – outside corridor	No use – accommodate	Mostly in corridor (Orange)
31	El Paso and Southwestern Greenway (Planned Trail)	No use – outside corridor	No use – outside corridor	No use – grade-separate	Crosses corridor (Orange)
41	El Paso and Southwestern Greenway (Existing Trail)	No use – outside corridor	No use – outside corridor	Potential use	Crosses corridor (Orange)

Table 4-5 Summary of Use by Build Corridor Alternatives (Continued)

Map #	Property Name	Summary of Use Findings			Applicable Corridor
		Purple Alternative	Green Alternative	Orange Alternative	
42	El Parque De San Cosme	No use – outside corridor	No use – outside corridor	No use- accommodate	In corridor (Orange)
46	Garden of Gethsemane	No use – outside corridor	No use – outside corridor	No use- accommodate	In corridor (Orange)
49	Bonita Park	No use – outside corridor	No use – outside corridor	No use - accommodate	All within corridor (Orange)
56, 57	David G. Herrera and Ramon Quiroz Park (formerly Oury Park)	No use – outside corridor	No use – outside corridor	Potential use	In corridor (Orange)
59	Estevan Park	No use – outside corridor	No use – outside corridor	No use- accommodate	Partly in corridor (Orange)
62	Francesco Elias Esquer Park	No use – outside corridor	No use – outside corridor	No use – accommodate	Partly in corridor (Orange)
69	Sweetwater Wetlands Park	No use – outside corridor	No use – outside corridor	No use – accommodate	Partly in corridor (Orange)
74	Rillito River Park	No use – outside corridor	No use – outside corridor	No use – accommodate; grade-separate	Mostly in corridor (Orange)
76	Ted Walker Park	No use – outside corridor	No use – outside corridor	No use – accommodate	Partly in corridor (Orange)
79	Canada Del Oro Christine Taylor Green Memorial River Park	No use – outside corridor	No use – outside corridor	No use – accommodate	Partly in corridor (Orange)
85	Rillito Vista Park	No use – outside corridor	No use – outside corridor	No use – accommodate	In corridor (Orange)
89	San Lucas Community Park	No use – outside corridor	No use – outside corridor	No use – accommodate	Partly in corridor (Orange)

Table 4-5 Summary of Use by Build Corridor Alternatives (Continued)

Map #	Property Name	Summary of Use Findings			Applicable Corridor
		Purple Alternative	Green Alternative	Orange Alternative	
Pinal County					
91	Picacho Peak State Park	No use – accommodate	No use – outside corridor	No use – accommodate	Partly in corridors (Purple and Orange)
92	Pinal County West/Kortsen Park	No use – outside corridor	No use – outside corridor	No use – accommodate	Partly 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 – accommodate	Partly in corridors (Purple, Green, and Orange)
Maricopa County					
97	Buckeye Hills Regional Park	No use – outside corridor	No use – accommodate	No use – accommodate	Partly in corridors (Green and Orange)
98	Robbins Butte Wildlife Area	No use – outside corridor	No use, or possible <i>de minimis</i> use	No use, or possible <i>de minimis</i> use	Green and Orange Alternatives can likely be accommodated within the existing SR 85 right-of-way (ROW)
98a	PLO 1015 lands and adjacent AGFD Parcels	No use - accommodate	No use – accommodate	No use – accommodate	Partly in corridors (Purple, Green, or Orange)
Historic Sites					
Multiple Counties					
13	Southern Pacific Railroad – Phoenix Mainline (Wellton-Phoenix-Eloy Spur (AZ T:10:84(ASM)))	No use – grade-separate	No use – grade-separate	No use – grade-separate	Crosses corridors (Purple, Green, and Orange)
18	Arizona Southern Railroad Company – railroad grade AZ AA:10:19(ASM)	No use – grade-separate	No use – grade-separate	No use – grade-separate	Crosses corridors (Purple, Green, and Orange)

Table 4-5 Summary of Use by Build Corridor Alternatives (Continued)

Map #	Property Name	Summary of Use Findings			Applicable Corridor
		Purple Alternative	Green Alternative	Orange Alternative	
Santa Cruz County					
1	New Mexico-Arizona Railroad: Nogales Branch, AZ EE:4:43(ASM)	No use – outside corridor	No use – outside corridor	No use – grade-separate	Crosses corridor (Orange)
2	Otero Cemetery, near Palo Parado interchange, AZ DD:8:165(ASM)	No use – accommodate	No use – accommodate	No use – accommodate	In corridors (Purple, Green, and Orange)
3, 4	Tumacacori National Monument and Museum (National Historical Park)	No use – accommodate	No use – accommodate	No use – accommodate	Partly in corridors (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)	No use – outside corridor	No use – accommodate	No use – accommodate	Partly in corridors (Green and Orange)
6	Agustin del Tucson Mission site, AZ BB:13:6(ASM)	No use – outside corridor	No use – outside corridor	No use – accommodate	Partly in corridor (Orange)
7	Barrio El Hoyo Historic District	No use – outside corridor	No use – outside corridor	No use- accommodate	Partly in corridor (Orange)
8	Barrio El Membrillo Historic District	No use – outside corridor	No use – outside corridor	Potential use	In corridor (Orange)
9	El Paso and Southwestern Railroad District	No use – outside corridor	No use – outside corridor	Potential use	In corridor (Orange)

Table 4-5 Summary of Use by Build Corridor Alternatives (Continued)

Map #	Property Name	Summary of Use Findings			Applicable Corridor
		Purple Alternative	Green Alternative	Orange Alternative	
10	Menlo Park Historic District	No use – outside corridor	No use – outside corridor	No use - accommodate	Partly in corridor (Orange)
11	Levi H. Manning House	No use – outside corridor	No use – outside corridor	Potential use	In corridor (Orange)
12	Barrio El Presidio Historic District	No use – outside corridor	No use – outside corridor	No use – accommodate	Partly in corridor (Orange)
14	Barrio Anita Historic District	No use – outside corridor	No use – outside corridor	Potential use	Partly in corridor (Orange)
16	USDA Plant Materials Center	No use – outside corridor	No use – outside corridor	No use – accommodate	Partly in corridor (Orange)
17	Cortaro Farms/Cortaro-Marana Irrigation District Canal	No use – grade-separate	No use – outside corridor	No use – grade-separate	Crosses corridor (Purple); partly within corridor (Orange)
Pinal County					
19	Picacho Pass Skirmish Site and Overland Mail Company Station	No use – accommodate	No use – outside corridor	No use – accommodate	Partly in corridors (Purple and Orange)
Maricopa County					
21	Casa Grande Canal, AZ AA:3:209(ASM)	No use – grade-separate	No use – grade-separate	No use – grade-separate	Crosses corridors (Purple, Green, and Orange)
22	Gila Bend Canal, AZ Z:2:66(ASM)	No use – outside corridor	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	Crosses corridors (Purple, Green, and Orange)

Table 4-5 Summary of Use by Build Corridor Alternatives (Continued)

Map #	Property Name	Summary of Use Findings			Applicable Corridor
		Purple Alternative	Green Alternative	Orange Alternative	
24	Wide Trail Site, AZ T:14:28(ASM)	No use – outside corridor	No use – outside corridor	No use – accommodate	Mostly in corridor (Orange)
25	Three prehistoric trails, AZ T:14:94(ASM)	No use – outside corridor	No use – outside corridor	No use – accommodate	In corridor (Orange)
26	Prehistoric artifacts and canal, AZ T:10:59(ASM)	No use – outside corridor	No use – accommodate	No use – accommodate	Partly in corridors (Green and Orange)
27	Buckeye Canal, AZ T:10:82(ASM)	No use – grade-separate	No use – grade-separate	No use – grade-separate	Crosses corridors (Purple, Green, and Orange)
28	Roosevelt Canal, AZ T:10:83(ASM)	No use – outside corridor	No use – outside corridor	No use – grade-separate	Crosses corridor (Orange)
Numbers of Properties:					
No use		53	51	45	
Use – Net Benefit		1	1	0	
Potential Use (including possible De Minimis)		0	1	8	

NOTES:

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

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

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.

Net benefit – Preserve and enhance the features, functions and values of the property.

SOURCE: AECOM 2017.



1 **4.4.2.3 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** (Summary of Use by Build Corridor Alternatives), FHWA examined the
4 corridor in the area of each of these properties and evaluated the:

- 5 • Type, configuration and extent of the property within the corridor;
- 6 • General highway design requirements that would apply to I-11, including allowance for a
7 400-foot ROW width; and
- 8 • Other, non-Section 4(f) opportunities and constraints in the property area that were identified
9 by the Draft Tier 1 EIS.

10 This assessment determined that 53 Section 4(f) properties can be accommodated in the Purple
11 Alternative; 51 properties can be accommodated in the Green Alternative; and 45 properties can
12 be accommodated in the Orange Alternative. For each property, FHWA identified the
13 opportunity during Tier 2 studies to accommodate a 400-foot-wide ROW for I-11 within each
14 Build Corridor Alternative while avoiding the Section 4(f) property that occurs within the corridor
15 (**Table 4-5** [Summary of Use by Build Corridor Alternatives]). The appropriateness and
16 compatibility of avoiding each Section 4(f) property by the future Project design would be
17 evaluated and determined during Tier 2 studies in coordination with the officials with jurisdiction.
18 In accordance with 23 CFR 774.3(c), FHWA will determine least overall harm to Section 4(f)
19 properties during Tier 2 studies by balancing Section 4(f) as well as non-Section 4(f) (other
20 natural and built environment) factors. Consistent with 23 CFR 774.7(e)(1), opportunities to
21 minimize harm to the property at subsequent stages in the project development process (for
22 example, Tier 2) are not precluded by this Tier 1 evaluation. Based on the this Draft Section 4(f)
23 evaluation, the land area occupied by each property and other environmental constraints would
24 not obstruct or preclude the ability to provide a highway alignment that achieves general
25 engineering design standards in the portion of the corridor outside the boundaries of the
26 properties. As a result of the ability to avoid these properties, FHWA commits that no use of the
27 accommodated properties as defined by Section 4(f) would occur as a result of I-11.
28 **Figures 4-10** through **4-26** show each Section 4(f) property that can be avoided through
29 accommodation in a Build Corridor Alternative.³

³ Archaeological sites are not included in the graphics because that information is confidential in order to protect the sites.

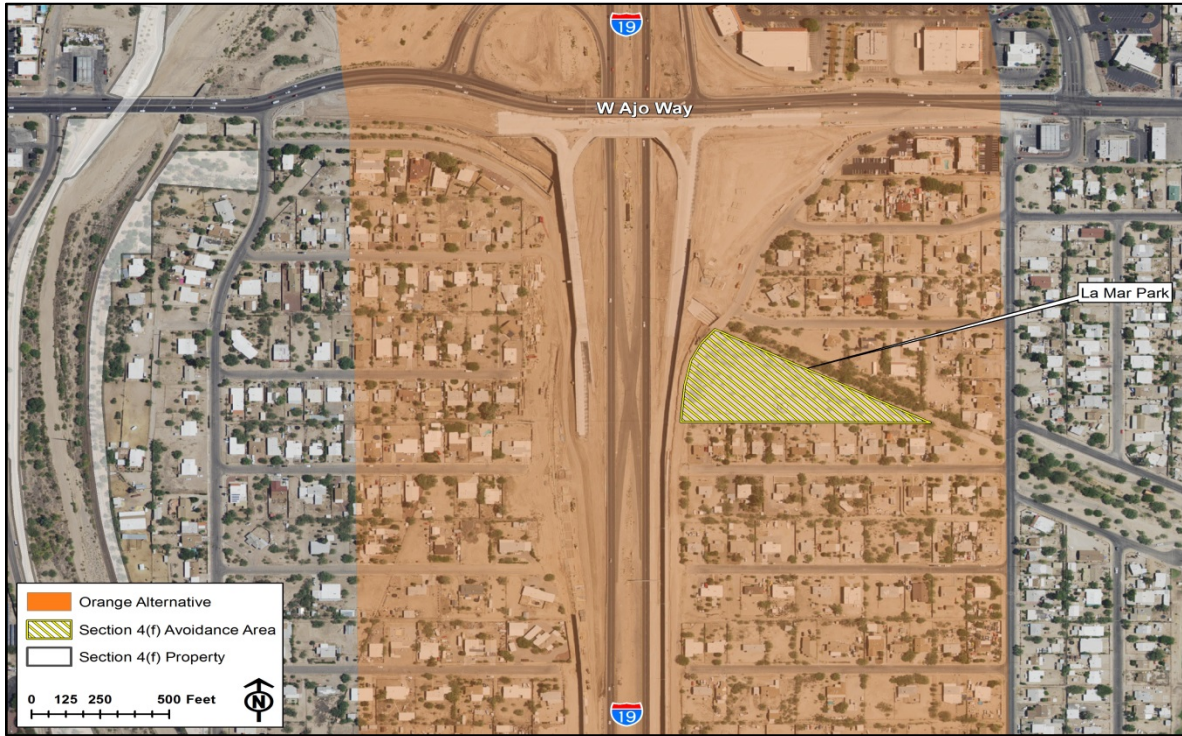


Figure 4-10 La Mar Park – Orange Alternative (Accommodate in the Corridor)

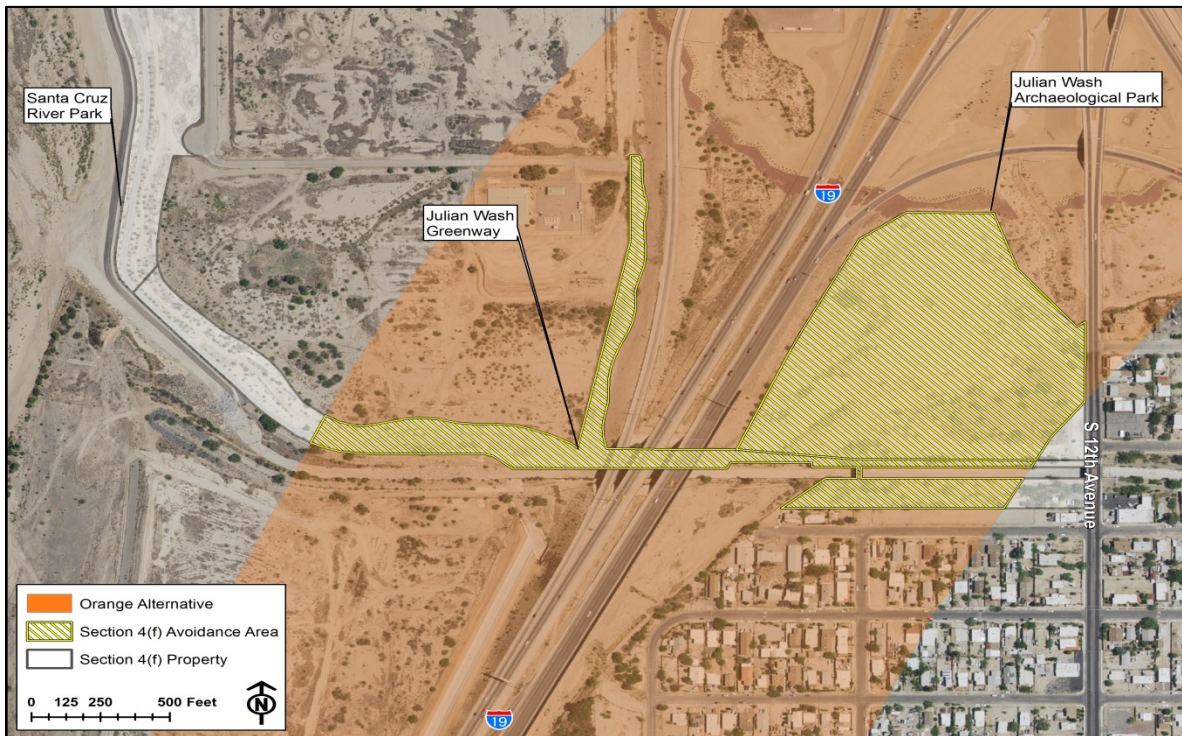


Figure 4-11 Julian Wash Greenway and Archaeological Park – Orange Alternative (Accommodate in the Corridor)

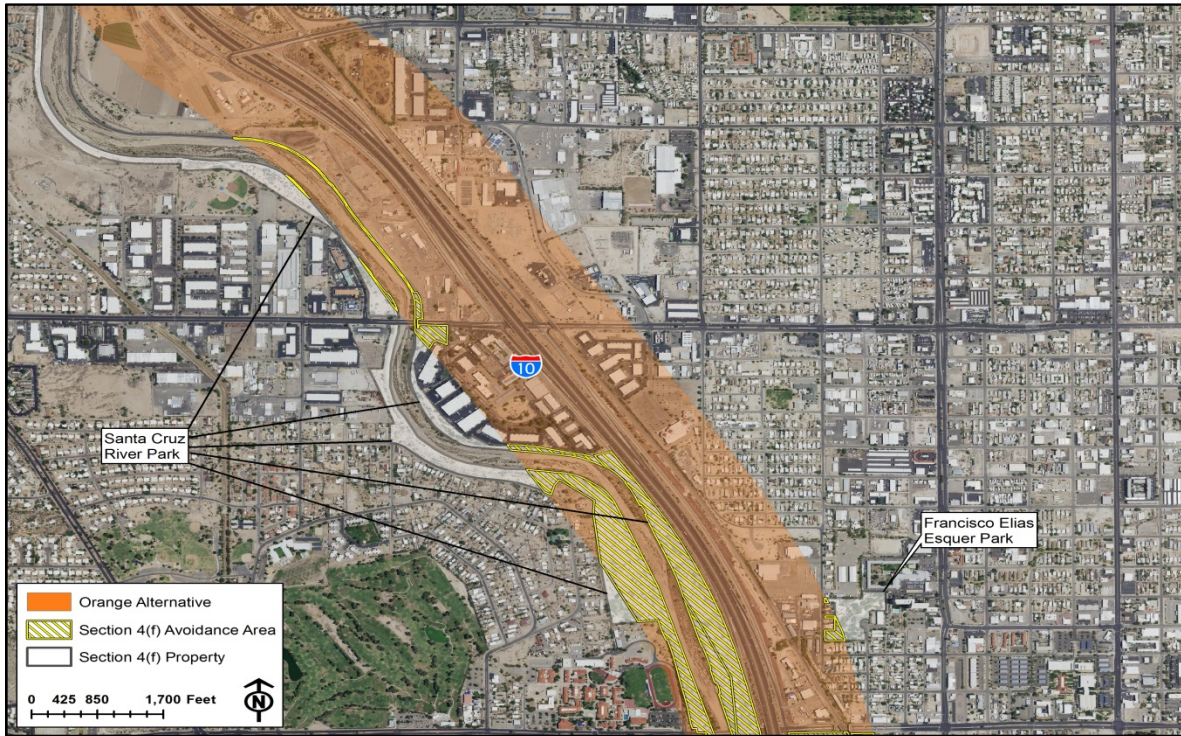


Figure 4-12 Francisco Elias Esquer Park – Orange Alternative (Accommodate in the Corridor)



Figure 4-13 Sweetwater Wetlands Park and US Department of Agriculture Plant Materials Center – Orange Alternative (Accommodate in the Corridor)

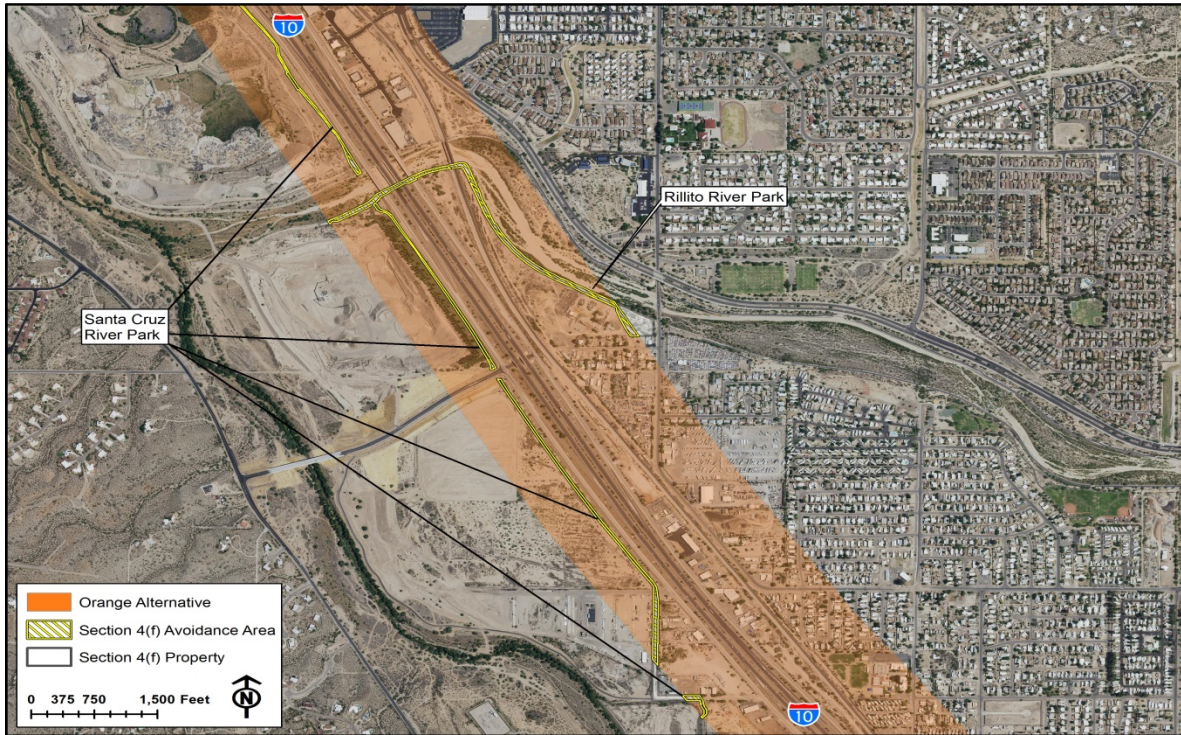


Figure 4-14 Rillito River Park – Orange Alternative (Accommodate in the Corridor)

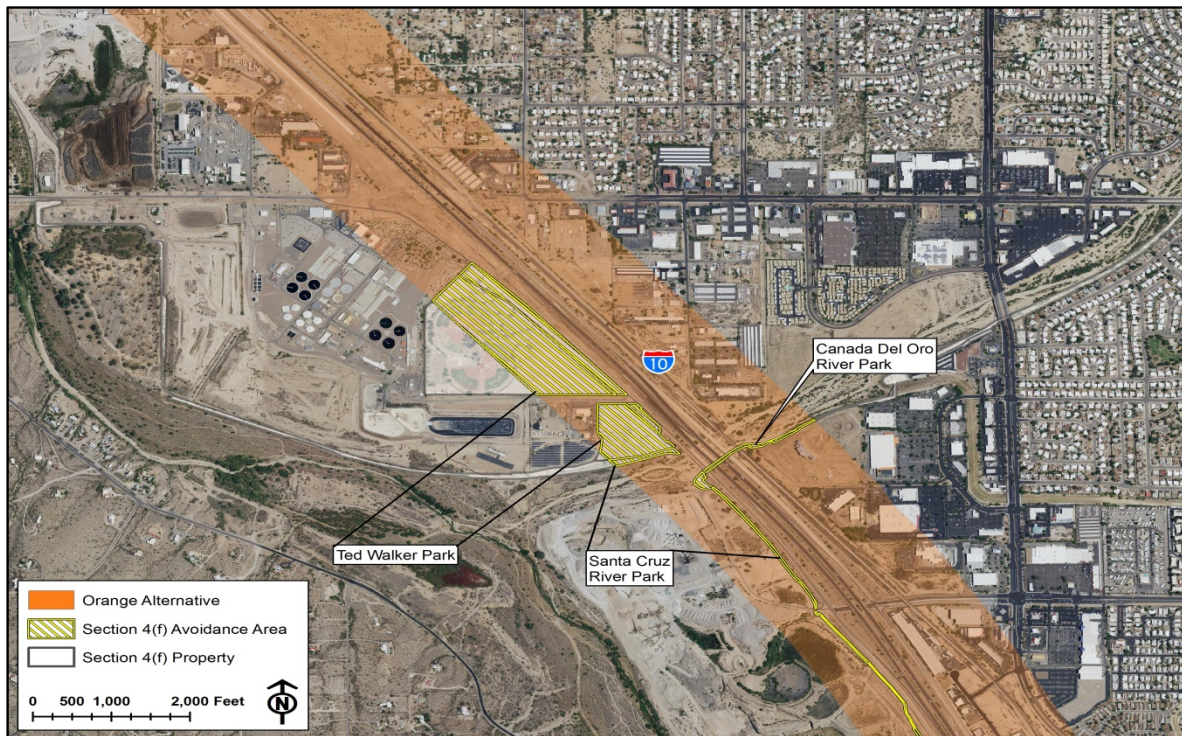


Figure 4-15 Canada Del Oro River Park, Ted Walker Park, and Santa Cruz River Park – Orange Alternative (Accommodate in the Corridor)

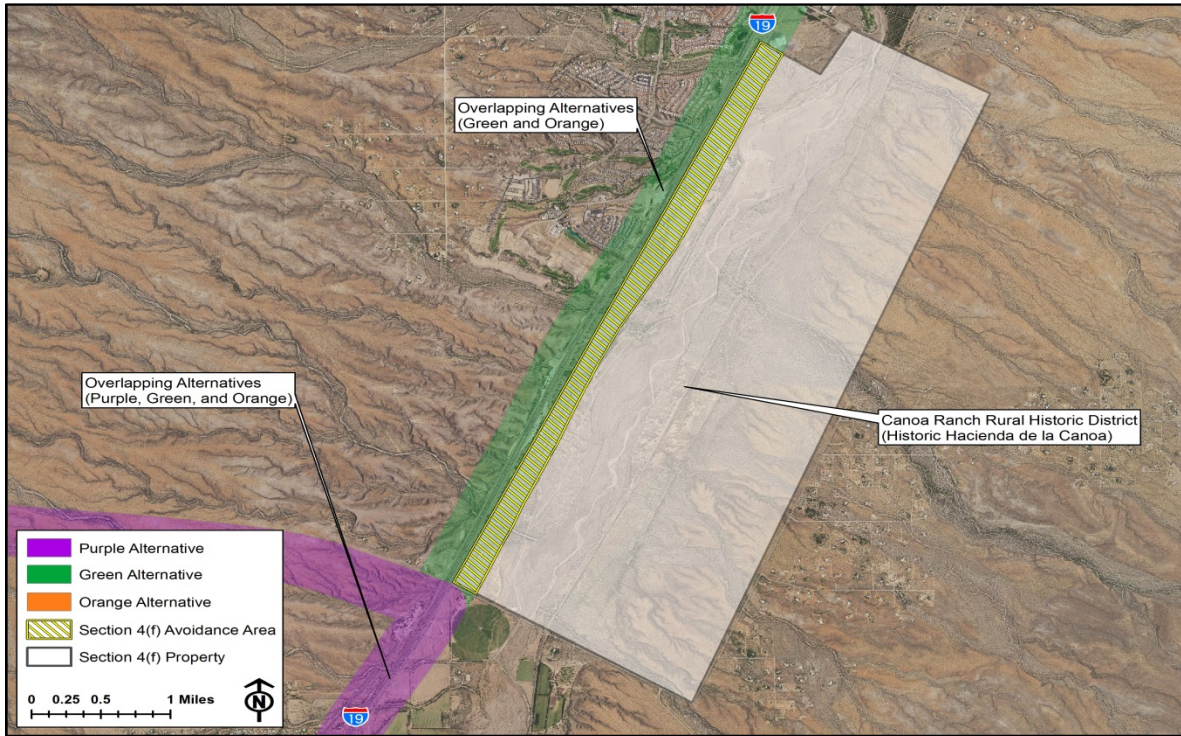
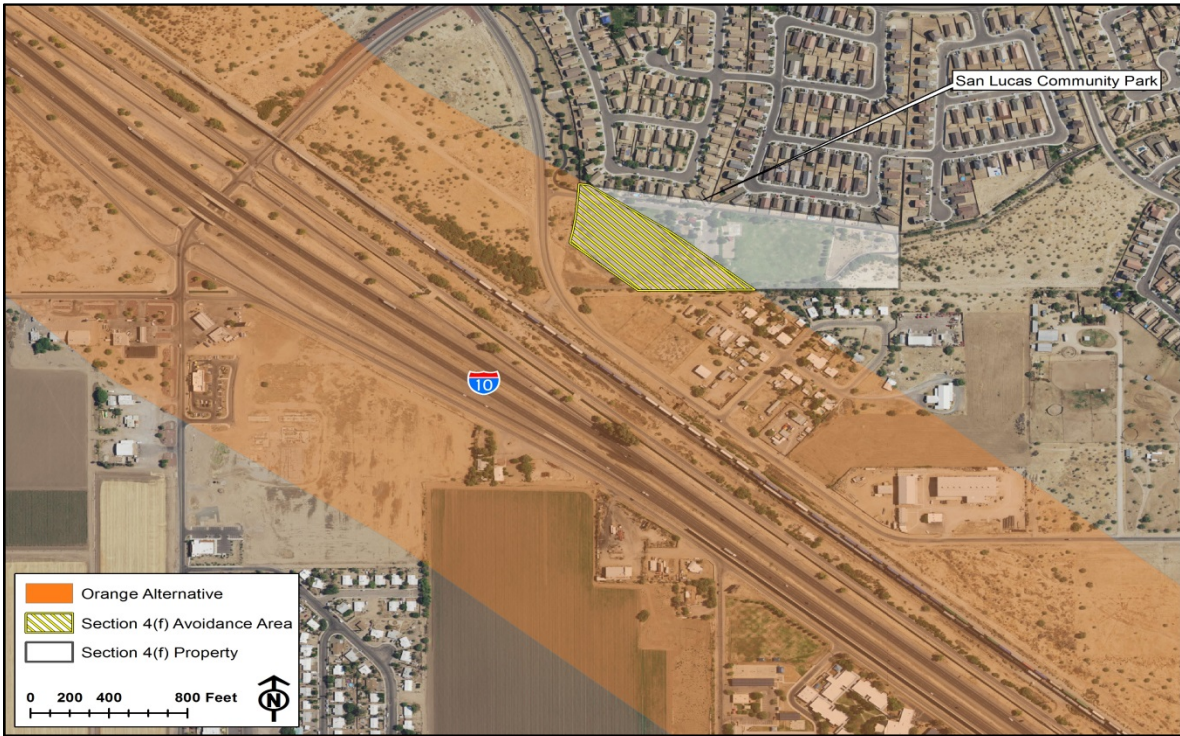


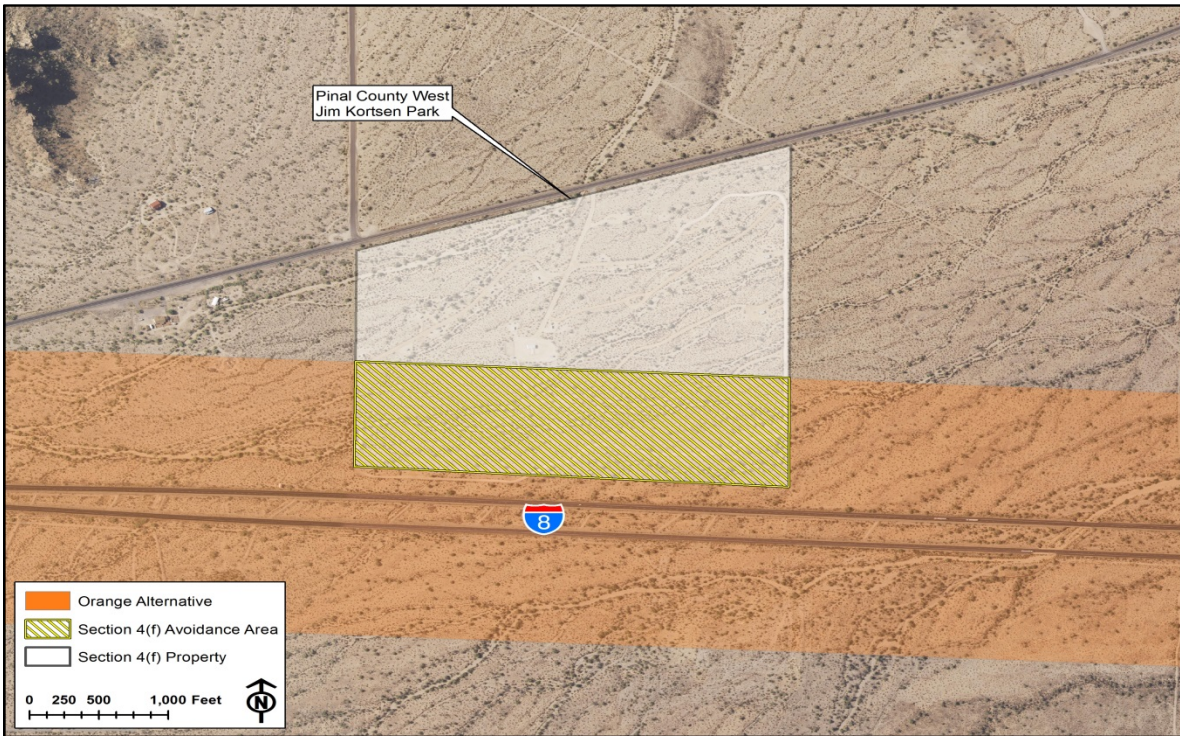
Figure 4-16 Canoa Ranch Rural Historic District (Historic Hacienda de la Canoa) – Green and Orange Alternatives (Accommodate in the Corridor)



Figure 4-17 Rillito Vista Park – Orange Alternative (Accommodate in the Corridor)



**Figure 4-18 San Lucas Community Park – Orange Alternative
 (Accommodate in the Corridor)**



**Figure 4-19 Pinal County West Jim Kortsen Park – Orange Alternative
 (Accommodate in the Corridor)**

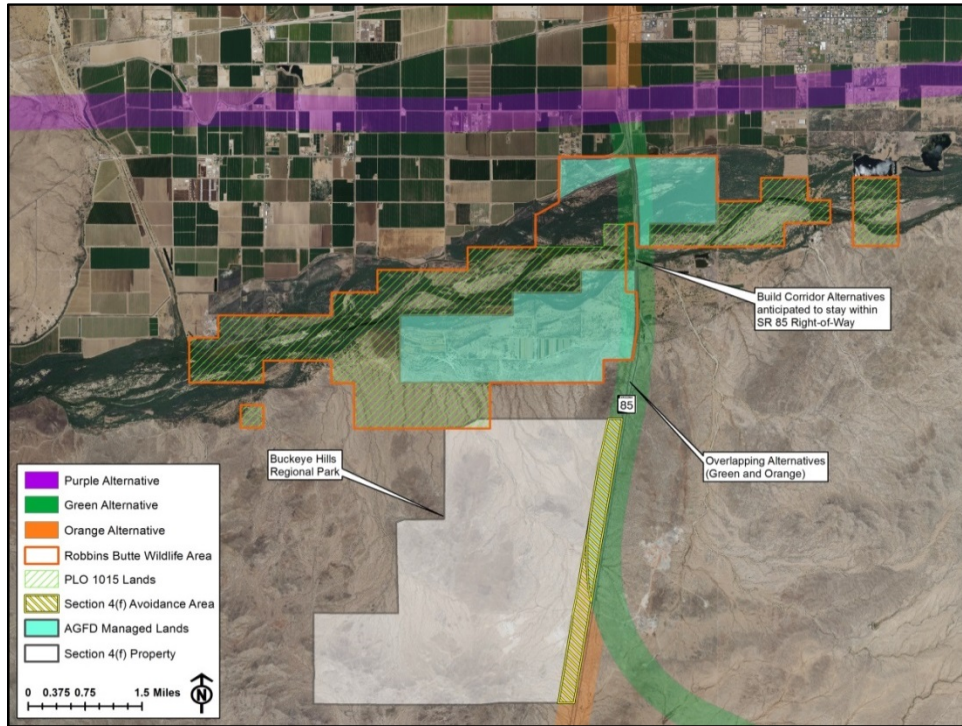


Figure 4-20 Buckeye Hills Regional Park, Robbins Butte Wildlife Area, and PLO 1015 Lands – Green or Orange Alternative (Accommodate in the Corridor)

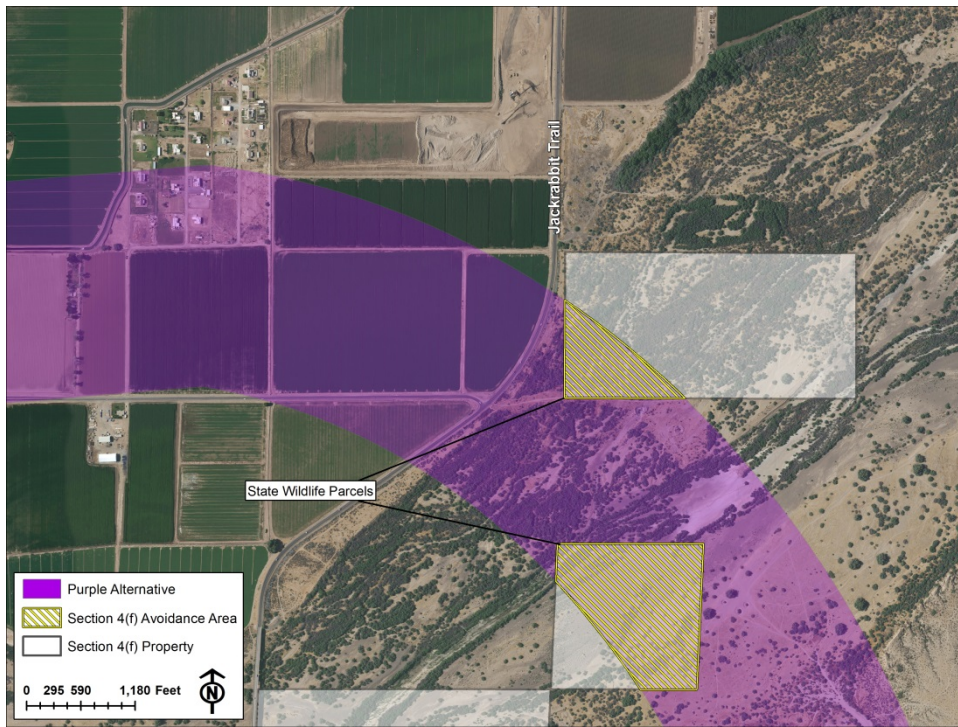


Figure 4-21 PLO 1015 Land Parcels – Purple Alternative (Accommodate in the Corridor)

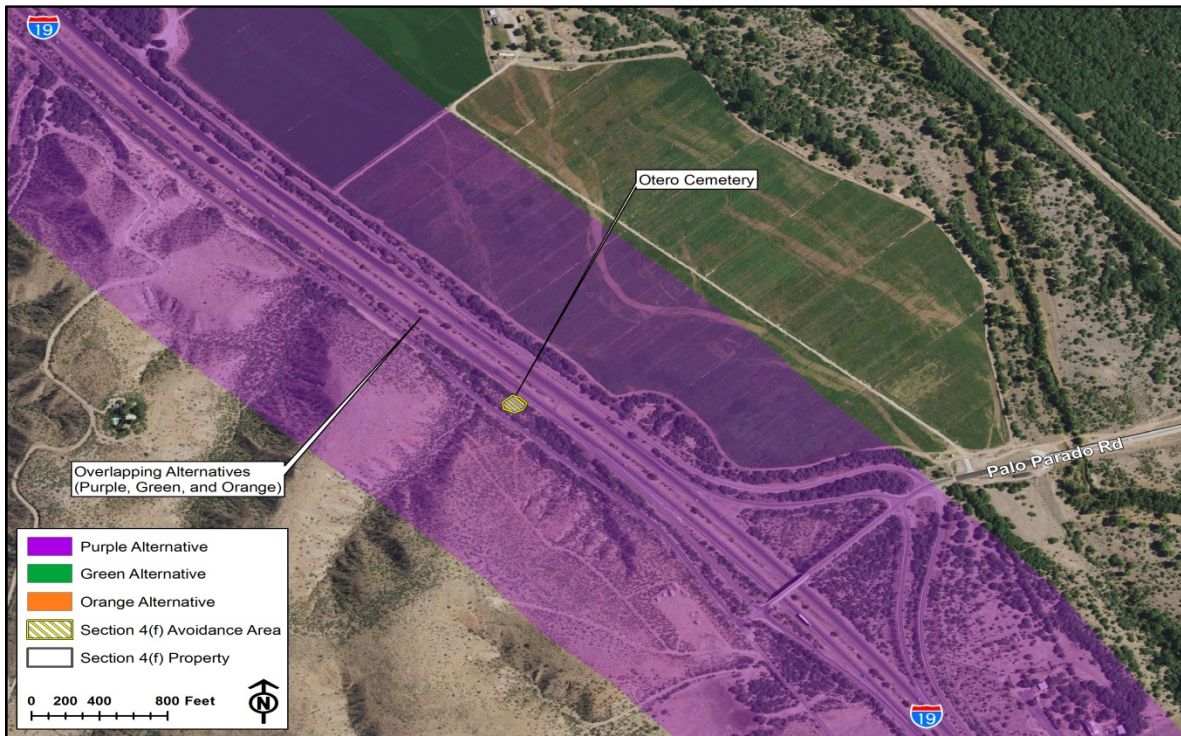


Figure 4-22 Otero Cemetery – Purple, Green, or Orange Alternative (Accommodate in the Corridor)

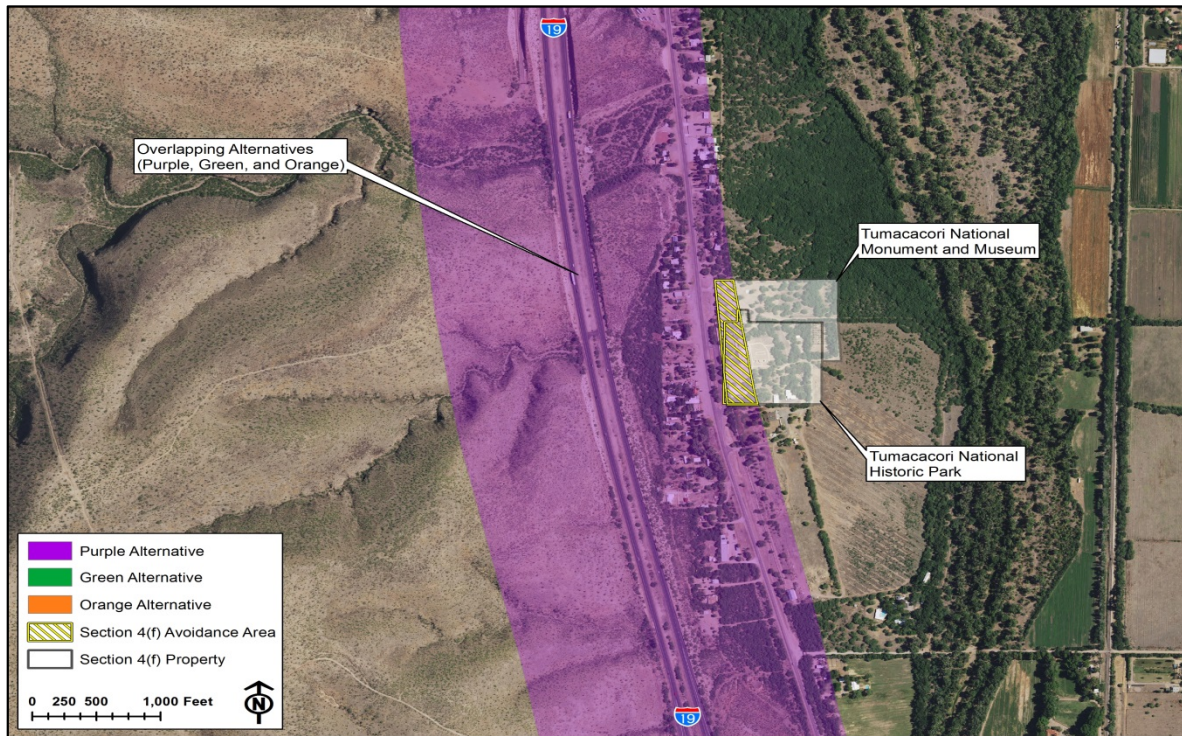


Figure 4-23 Tumacacori National Historic Park and Tumacacori National Monument and Museum – Purple, Green, or Orange Alternative (Accommodate in the Corridor)

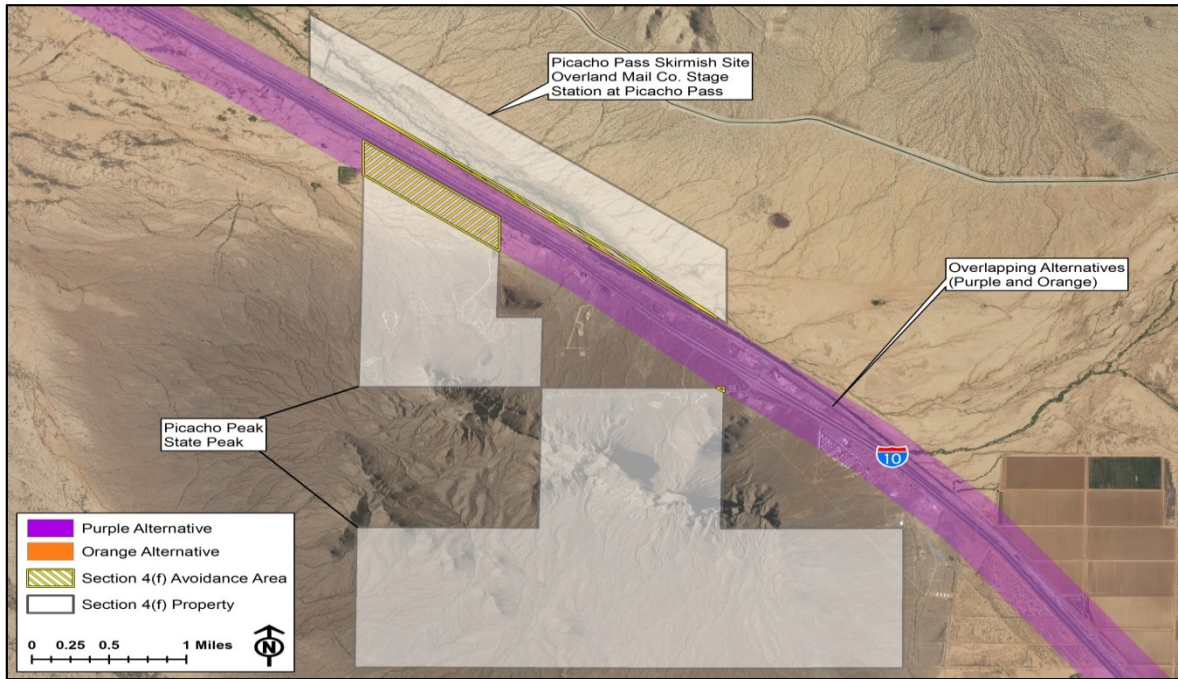
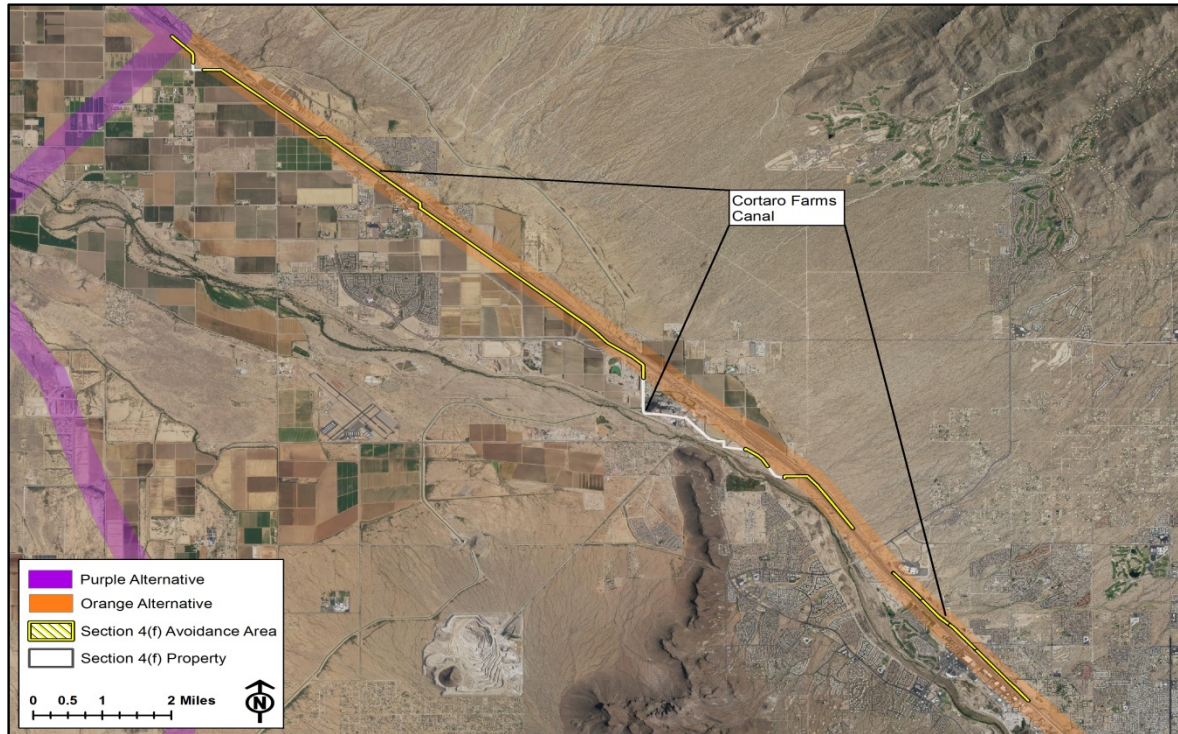


Figure 4-24 Picacho Peak State Park and Picacho Pass Skirmish Site Overland Mail Co. Stage Station at Picacho Pass – Purple or Orange Alternative (Accommodate in the Corridor)



Figure 4-25 Pima Community College Desert Vista Campus – Orange Alternative (Accommodate in the Corridor)



**Figure 4-26 Cortaro Farms Canal – Orange Alternative
 (Grade-Separate the Corridor)**

1 **4.4.2.4 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 ROW allowance for I-11 outside the boundaries of these properties:

- 4 • Palo Verde Regional Park – The property occupies portions of the Purple and Green
 5 Alternatives and would obstruct or preclude the ability to provide a highway alignment in that
 6 portion of each corridor. To avoid Palo Verde Regional Park, FHWA and ADOT would shift
 7 the corridor as shown on **Figure 4-27** (Palo Verde Regional Park – Recommended, Purple,
 8 or Green Alternative [Shift the Corridor]).
- 9 • Anamax Park – The property occupies portions of the Green and Orange Alternatives and
 10 would obstruct or preclude the ability to provide a highway alignment in those portions of
 11 each corridor. In these cases, to avoid Anamax Park, FHWA and ADOT would shift the
 12 corridor to the east, as shown on **Figure 4-28** (Anamax Park – Recommended, Green, or
 13 Orange Alternative [Shift the Corridor]).

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

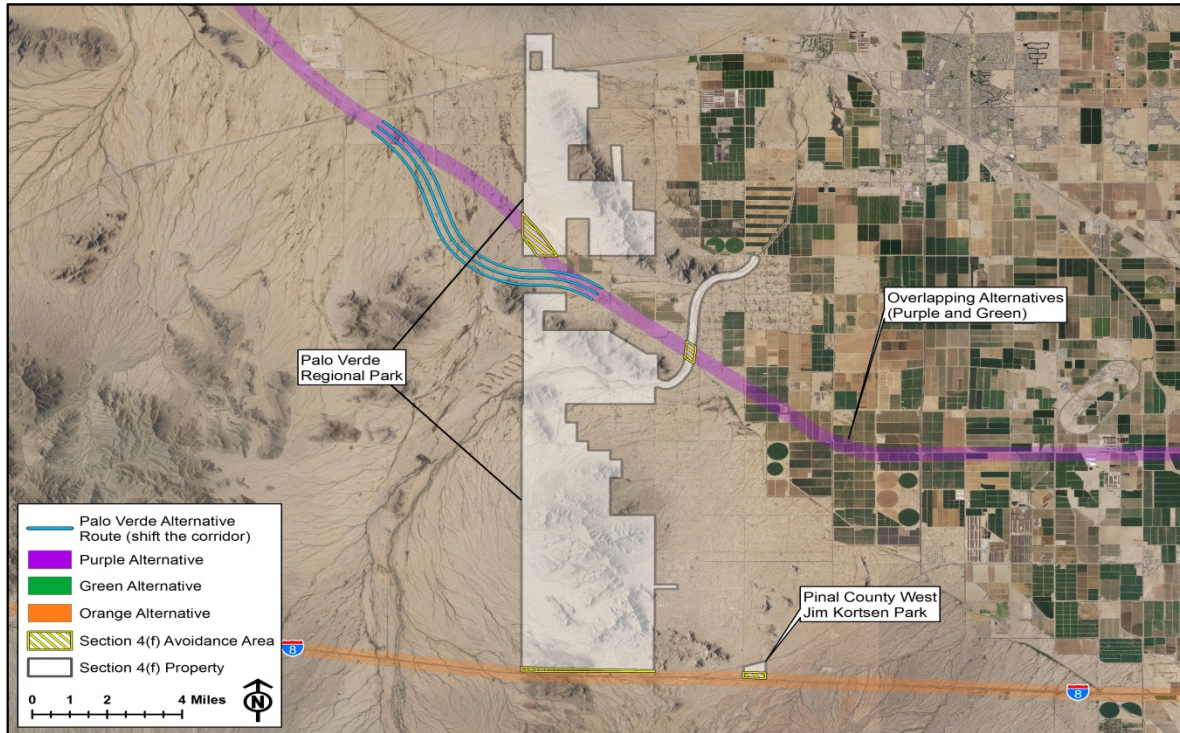


Figure 4-27 Palo Verde Regional Park – Recommended, Purple, or Green Alternative (Shift the Corridor)

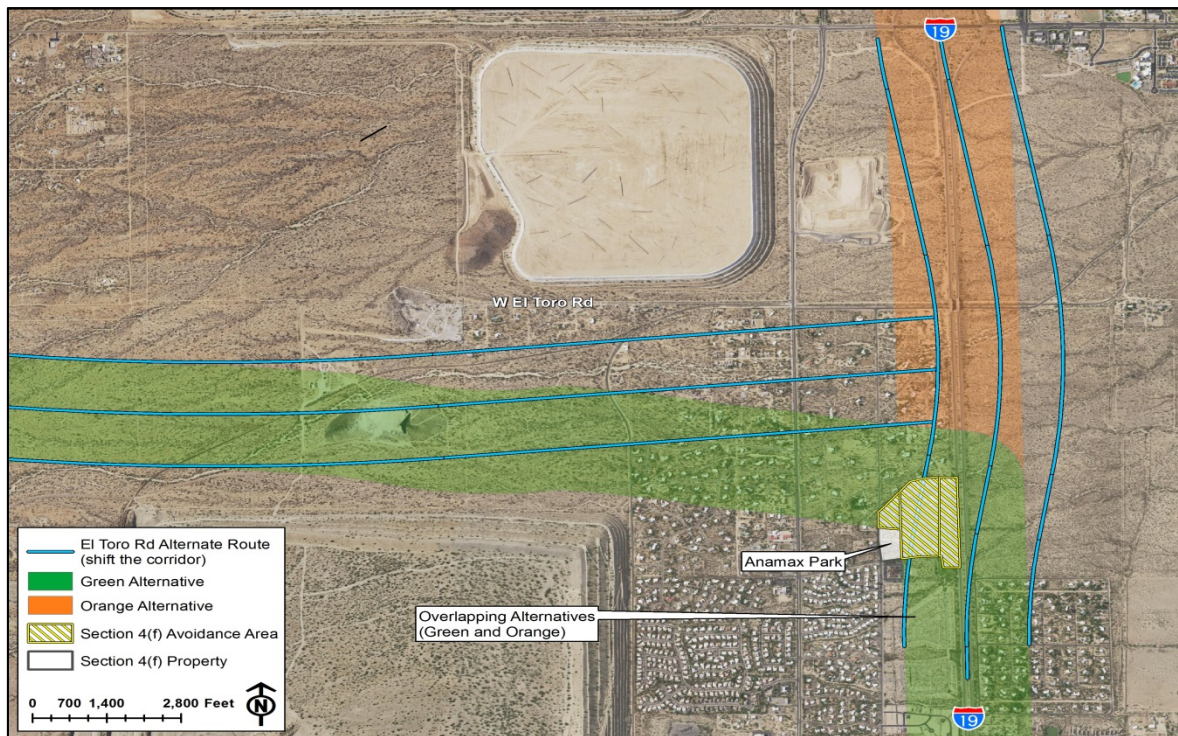


Figure 4-28 Anamax Park – Recommended, Green, or Orange Alternative (Shift the Corridor)

1 **4.4.2.5 Grade-Separate the Corridor**

2 **Linear Properties: Trails, Historic Canals, and Historic Railroads**

3 Thirteen Section 4(f)-protected trails, historic canals and railroads cross each Build Corridor
4 Alternative: built segments of the Juan Bautista de Anza National Historic Trail, Julian Wash
5 Greenway, El Paso and Southwestern Greenway (existing and planned), Rillito River Park, ,
6 Southern Pacific Railroad, Arizona Southern Railroad, New Mexico-Arizona Railroad: Nogales
7 Branch, Cortaro Farms/Cortaro-Marana Irrigation District Canal, Casa Grande Canal, Gila Bend
8 Canal, Butterfield Overland Mail Stage Route, Buckeye Canal, and Roosevelt Canal.

9 **Figures 4-10 through 4-28** show the typical linear configuration of these properties (except
10 archaeological sites) in relation to the Build Corridor Alternatives. These properties can be
11 avoided through grade-separation or other means. Elevating the roadway corridor on a structure
12 that passes over and spans the linear property or depressing the roadway corridor under a
13 structure that carries the property over the roadway would eliminate the need to incorporate
14 land from the Section 4(f) property. In addition, grade separation would preserve the activities,
15 features, and attributes of the property that qualify it for protection under Section 4(f).

16 The land area occupied by each property and other environmental constraints would not
17 obstruct or preclude the ability to provide a highway alignment that achieves general
18 engineering design standards in a grade-separated alignment while avoiding each linear
19 property. As a result of the ability to avoid these properties, FHWA commits that no use of the
20 linear properties as defined by Section 4(f) would occur as a result of I-11.

21 **4.4.3 Build Corridor Alternatives – Use Evaluation**

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

- 24 • Robbins Butte Wildlife Area (Green and Orange Alternatives)
25 • Downtown Tucson properties (Orange Alternative)
26 • TMC (Purple and Green Alternatives)

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

32 An evaluation of each property is provided in the following subsections, including analyses of
33 avoidance and all possible planning to minimize harm to the level that this first-tier EIS stage
34 allows.

35 **4.4.3.1 Robbins Butte Wildlife Area – No Use or Possible De Minimis Use (Green and**
36 **Orange Alternatives)**

37 The Robbins Butte Wildlife Area consists of multiple parcels of undeveloped land along both
38 sides of SR 85 at the existing Gila River crossing (**Figure 4-20** [Buckeye Hills Regional Park
39 and Robbins Butte Wildlife Area – Green or Orange Alternative]). The land is preserved and
40 managed for wildlife and wildlife habitat by the Arizona Game and Fish Department (AGFD).



1 The preserved wildlife habitats are the features, attributes, or activities that qualify the property
2 for protection under Section 4(f).

3 The Green and Orange Alternatives are aligned along SR 85 at the Gila River Crossing.
4 Preliminary analysis indicates the existing SR 85 ROW (**Appendix E1**) is wide enough to
5 accommodate the proposed I-11 highway cross-section. Increased traffic could increase the
6 likelihood of wildlife collisions, noise and light pollution, and runoff.

7 Based on the preliminary analysis, it will be possible for FHWA to make a finding of no use or, at
8 most, a finding of *de minimis* use for this property after consultation with the official with
9 jurisdiction.

10 **4.4.3.2 Downtown Tucson Parcels – Possible Individual Uses (Orange Alternative)**

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

12 More than 20 historic properties and parks fall within the Orange Alternative in the Downtown
13 Tucson area, as shown on **Figure 4-7** (Section 4(f) Properties in Build Corridor Alternatives –
14 South Section). These properties are protected by Section 4(f). **Table 4-1** (Parks, Recreation
15 Areas, and Wildlife/Waterfowl Refuges Protected by Section 4(f) in the Study Area) describes
16 the features and attributes of each property.

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

18 To accommodate 2040 traffic demands, the Orange Alternative would expand I-10 from 8 lanes
19 to 12 to 14 lanes from the I-19 interchange to Prince Road. The Orange Alternative would
20 require an estimated 120 feet of additional ROW. The 120 feet could be on either side of the
21 existing I-10 ROW, all on the east side of I-10, or all on the west side of I-10. In Downtown
22 Tucson, I-10 is surrounded by dense, established historic communities. Properties protected by
23 Section 4(f) are in close proximity to one another and to I-10, as shown on **Figure 4-29**
24 (Downtown Tucson Section 4(f) Properties – Orange Alternative). It is not possible to widen I-10
25 without impacting Section 4(f) properties.

26 The Orange Alternative could potentially impact (use) seven properties protected by Section 4(f)
27 as shown on **Figure 4-29** (Downtown Tucson Section 4(f) Properties – Orange Alternative) and
28 **Table 4-5** (Summary of Use by Build Corridor Alternatives). The seven Section 4(f) properties
29 are:

- 30 • Barrio El Membrillo Historic District
- 31 • Barrio Anita Historic District
- 32 • Levi H. Manning House
- 33 • David G. Herrera and Ramon Quiroz Park (formerly Oury Park)
- 34 • El Paso and Southwestern Railroad District
- 35 • Santa Cruz River Park
- 36 • El Paso and Southwestern Greenway (existing trail)

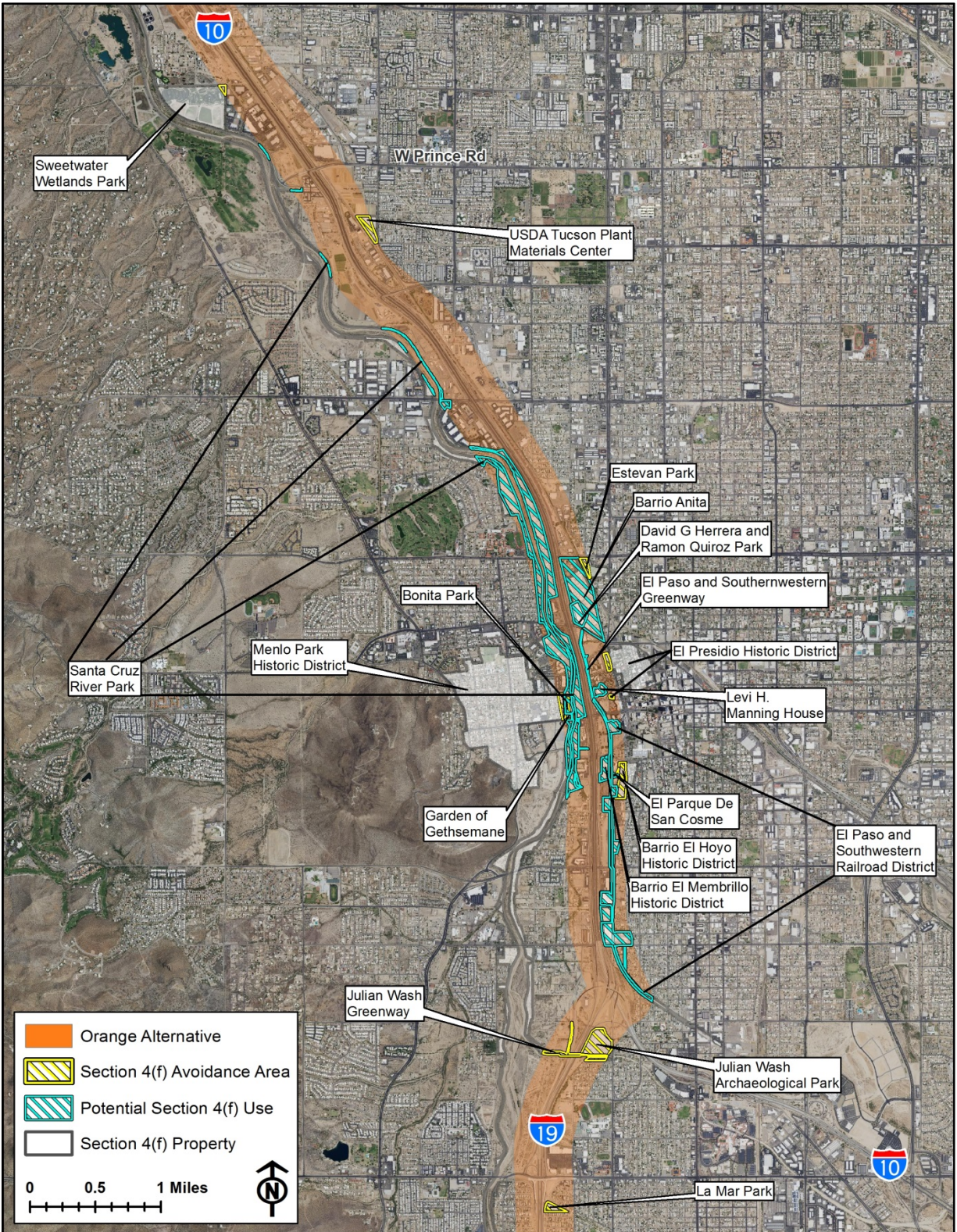


Figure 4-29 Downtown Tucson Section 4(f) Properties – Orange Alternative



1 **Table 3.7-10** (Potential Levels of Impacts on Historic Districts and Buildings) in **Chapter 3**
2 (Affected Environment and Environmental Consequences) describes impacts to historic
3 properties by the Orange Alternative. The Orange Alternative could require:

- 4 • Removal of at least one historic residential structure adjacent to I-10 in Barrio Anita,
- 5 • Removal of two to four contributing structures in the Barrio El Membrillo Historic District (of
6 about 10 surviving contributing residences) or possible removal of the entire district,
- 7 • Acquisition of Levi H. Manning House land,
- 8 • Demolition of a portion of the existing roundhouse , acquisition of portions of the El Paso
9 and Southwestern Railroad District,
- 10 • Acquisition of parts of the Santa Cruz River Park,
- 11 • Acquisition of a portion of the David G. Herrera and Ramon Quiroz Park, a contributing
12 element to the Barrio Anita Historic District, and
- 13 • Acquisition and demolition of the El Paso and Southwestern Greenway (existing trail).

14 The Orange Alternative will have findings of adverse effects under Section 106 of the NHPA and
15 would permanently use Section 4(f) properties. Additional impacts to non-recorded historic
16 properties are described in **Chapter 3** (including three residential structures, the University of
17 Arizona Agriculture Center, and Hotel Tucson).

18 Avoidance Alternatives

19 The following analysis examines property-specific avoidance alternatives for the Orange
20 Alternative through Downtown Tucson, including alignment shifts and design changes as
21 specified in FHWA’s Section 4(f) Policy Paper (FHWA 2012).

22 Alignment Shifts

23 An alignment shift moves the roadway alignment to avoid the Section 4(f) property. In
24 Downtown Tucson, and as shown on **Figure 4-29** (Downtown Tucson Section 4(f) Properties –
25 Orange Alternative), Section 4(f) properties are present on both the east and west sides of the
26 I-10 corridor, with some properties immediately adjacent to the I-10 ROW on opposing sides of
27 the roadway. Shifting the alignment of I-11 to one side of I-10 or the other would result in using
28 Section 4(f) properties; avoiding Section 4(f) properties altogether by shifting the alignment is
29 not possible. As a result, alignment shifts do not result in an avoidance alternative in Downtown
30 Tucson.

31 Design Changes – Elevated Structure

32 FHWA and ADOT evaluated the feasibility of elevating I-11 in Downtown Tucson to avoid
33 impacting Section 4(f) properties. Two structures would elevate I-11 above I-10 for about six
34 miles. The elevated lanes would operate as express lanes, meaning drivers could not exit onto
35 local streets at the I-11 level. Under this scenario, it could be possible to keep I-11 within the
36 existing I-10 ROW. Access ramps between the I-10, I-11, I-19, Prince Road, and the local street
37 network would require additional ROW.

38 Although the elevated express lanes could avoid direct impacts on adjacent Section 4(f)
39 properties, noise and visual impacts would result in adverse effects to historic buildings and
40 structures. Deep excavations for the elevated structure foundations would impact archaeological



1 resources. For these reasons, an elevated express lanes alternative through Downtown Tucson
2 is not an avoidance alternative. The elevated alternative also would impact businesses and
3 residences that are not protected by Section 4(f) and would add \$1 billion to the overall capital
4 cost of the Orange Alternative

5 Design Changes – Tunnel

6 FHWA and ADOT also analyzed the feasibility of tunneling I-11 from the I-19 interchange to
7 Prince Road (about four to six miles). The new I-11 lanes would be directly under I-10, which
8 would avoid potential visual and noise impacts. However, the tunnel would impact archeological
9 sites. The tunnel would require reconfiguring the I-19 interchange to allow access into the
10 tunnel.

11 The cost estimate for tunneling the I-11 is approximately \$3.5 to \$5.1 billion. The cost of
12 widening I-10 at grade is estimated at \$240 million. Even if a tunneling option could be designed
13 that would completely avoid Section 4(f) properties, this option would have an extraordinary cost
14 and would not be prudent (Avoidance Analysis Factor 4).

15 Mitigation and Measures to Minimize Harm

16 If the Orange Alternative is selected, alternatives that cause the least harm to Section 4(f)
17 properties in downtown Tucson will be further analyzed.

18 If the Orange Alternative is selected, the Tier 2 analysis will include the following strategies to
19 minimize impacts to Section 4(f) properties in Downtown Tucson:

- 20 • Avoid Menlo Park Historic District, Bonita Park, Garden of Gethsemane, El Parque De San
21 Cosme, and Barrio El Hoyo Historic District
- 22 • Design modifications to avoid or minimize the use of Section 4(f) properties
- 23 • Replacement of land and facilities of comparable value and function
- 24 • Compensation
- 25 • Restoration, preservation, interpretation, and recordation of impacted historic structures and
26 properties (Historic American Buildings Survey/Historic Architectural and Engineering
27 Record)
- 28 • Mitigation developed in coordination with the officials with jurisdiction over parks and
29 recreation areas
- 30 • Consideration of the views of the official(s) with jurisdiction
- 31 • Consideration of impacts and benefits to non-Section 4(f) resources (such as the natural
32 and built environment)

33 Coordination and Public Involvement

34 FHWA and ADOT initiated coordination with SHPO about the downtown Tucson properties
35 during the EIS scoping process. SHPO concurred that the Orange Alternative would have
36 adverse effects to multiple historic and Section 4(f) properties (FHWA letter dated November 12,
37 2018 with concurrence from SHPO on November 23, 2018). If the Orange Alternative is
38 selected, FHWA will further evaluate the potential for use of Section 4(f) properties in downtown
39 Tucson, coordinate with officials with jurisdiction, and prepare a final Section 4(f) Evaluation for
40 the downtown Tucson properties during the Tier 2 analysis.



1 Throughout the scoping and outreach process, the study team received input from members of
2 the public in Pima County expressing opposition to the I-11 Corridor. FHWA and ADOT invited
3 the US Institute for Environmental Conflict Resolution to facilitate a discussion in Pima County
4 regarding the I-11 Tier 1 EIS. The US Institute is a program of the Udall Foundation and exists
5 to assist parties in resolving environmental, public lands, and natural resource conflicts
6 nationwide that involve federal agencies or interests. The purpose of the discussion was to gain
7 a better understanding of the values and interests of the communities in Pima County that the
8 I-11 corridor could impact. The stakeholders were divided into two groups based on the
9 communities they were representing: downtown Tucson and Avra Valley. During the
10 discussions, stakeholders had the opportunity to identify community-specific issues and
11 concerns that could inform the decision-making process.

12 The downtown Tucson stakeholder group noted several adverse impacts the I-11 could have on
13 their community, including:

- 14 • Demolishing culturally significant historic resources and buildings;
- 15 • Causing further separation of the unique culture and history of the neighborhood;
- 16 • Altering the sense of place in downtown Tucson; and
- 17 • Creating economic hardships for nearby businesses.

18 **4.4.3.3 Tucson Mitigation Corridor – Nationwide Programmatic Section 4(f) Evaluation** 19 **(Net Benefit) (Purple and Green Alternatives)**

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

21 The TMC (**Figure 4-30** [Tucson Mitigation Corridor – Purple or Green [CAP Design Option]
22 Alternative]) is a 2,514-acre property owned and managed by the US Department of the Interior,
23 Reclamation. The TMC was established in 1990 as a commitment made by Reclamation with
24 USFWS, AGFD, and Pima County in the EIS for the CAP. The four parties signed a cooperative
25 agreement to manage the TMC property in accordance with a Master Management Plan that
26 prohibits future development other than existing wildlife habitat improvements. This agreement
27 is intended to preserve habitat from urbanization while maintaining an open wildlife movement
28 corridor. Accordingly, Reclamation identified the TMC as a property protected by Section 4(f) in
29 its July 8, 2016, letter to ADOT during scoping (**Appendix F**).

30 The CAP canal is a water conveyance canal that crosses the TMC from north to south. The
31 CAP canal underwent its own NEPA process, during which time the importance of providing
32 wildlife connectivity across the TMC was echoed by the public. To maintain a functional wildlife
33 movement corridor across the CAP canal on the TMC property, Reclamation installed seven
34 concrete pipe sections (also known as siphons) under washes, keeping the surface intact for
35 wildlife to use. Providing the siphons was critical to obtaining public acceptance of the CAP
36 alignment. Since installation, Reclamation and its partners have observed wildlife using the
37 siphon crossings to migrate across the TMC between the Ironwood Forest National Monument
38 and SNP.

39 **Proposed Use of Section 4(f) Property**

40 In the Preliminary Draft Section 4(f) Evaluation, the Purple or Green Alternatives (Options C
41 and D) would incorporate a portion of TMC land, thereby using the TMC property. The
42 2,000-foot-wide corridors of each Build Corridor Alternative would be aligned along Sandario
43 Road, which parallels the western boundary of the property in a north-to-south orientation.

- 1 Additional ROW would be required beyond the approximately 80-foot ROW of Sandario Road to
- 2 accommodate I-11 and Sandario Road. As a result, I-11 would potentially use approximately
- 3 453 acres (15 percent) of the TMC property along the length of the TMC's western boundary
- 4 (Section 4.4.1).

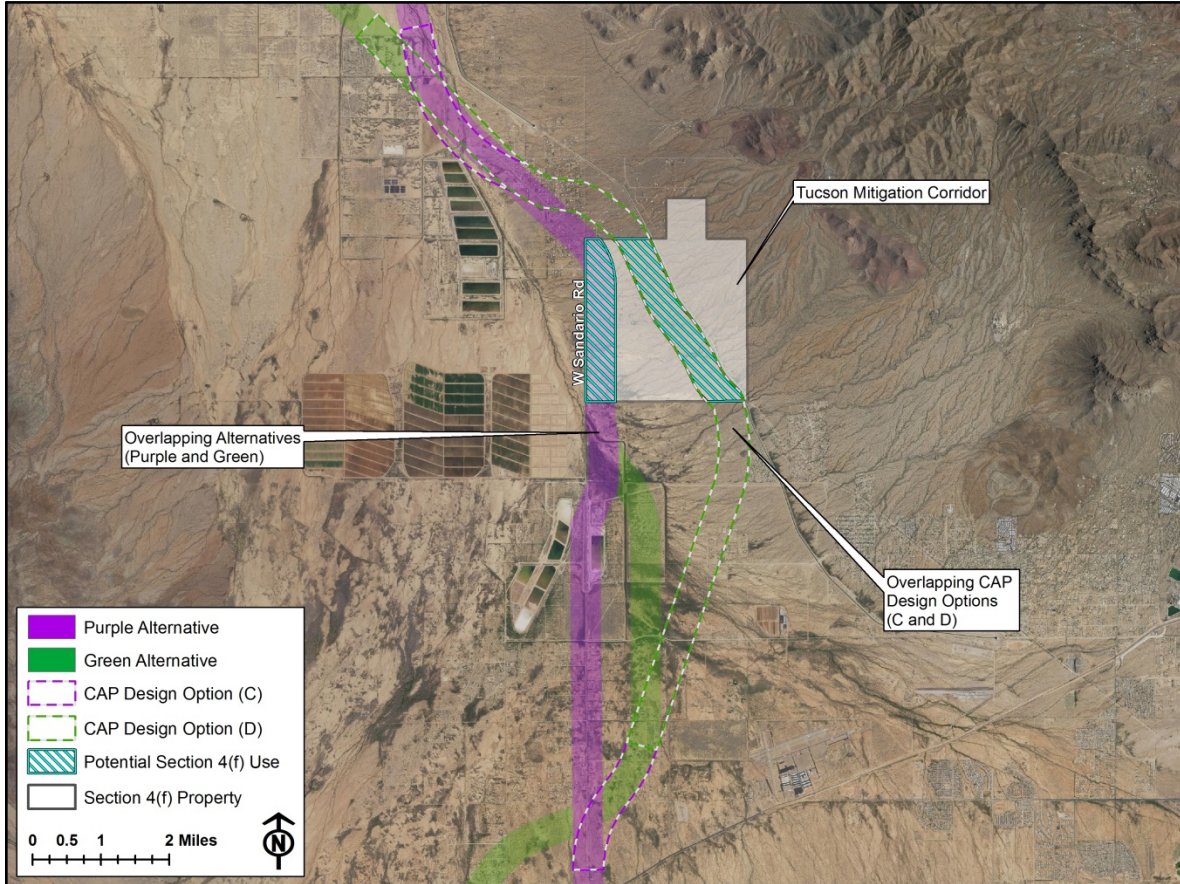


Figure 4-30 Tucson Mitigation Corridor – Purple or Green (CAP Design Option) Alternative

5 **Avoidance Analysis**

6 The property-specific avoidance analysis for the TMC applied the feasible and prudent criteria
 7 specified by 23 CFR § 774.17 and summarized below. An alternative that potentially uses a
 8 Section 4(f) property is not an avoidance alternative. An alternative is determined feasible if it
 9 could be built as a matter of sound engineering judgment. Under 23 CFR § 774.17, factors are
 10 defined for determining that alternatives are not prudent. An alternative would not be prudent for
 11 any of the following reasons:

- 12 • **Factor 1** – It would compromise the project to a degree that it is unreasonable to proceed
- 13 with the project in light of its stated purpose and need.
- 14 • **Factor 2** – It would result in unacceptable safety or operational problems.



- 1 • **Factor 3** – After reasonable mitigation, it would still cause one or more of the following:
 - 2 – Severe social, economic, or environmental impacts
 - 3 – Severe disruption to established communities
 - 4 – Severe, disproportionate impacts on low-income or minority populations
 - 5 – Severe impacts on environmental resources protected under other federal statutes
- 6 • **Factor 4** – It would result in additional construction, maintenance, or operational costs of an
7 extraordinary magnitude.
- 8 • **Factor 5** – It would cause other unique problems or unusual factors.
- 9 • **Factor 6** – It would involve multiple issues from Factors 1 through 5 that, while individually
10 minor, could cumulatively cause unique problems or impacts of extraordinary magnitude.

11 The property-specific avoidance analysis for the TMC assesses whether, in the context of
12 professional engineering judgment and the findings of the Draft Tier 1 EIS, permanent
13 incorporation of land from the TMC property potentially can be avoided by the No Build
14 Alternative (do nothing) and two property-specific avoidance strategies identified in FHWA's
15 guidance paper titled *Section 4(f) Evaluation and Approval for Transportation Projects That*
16 *Have a Net Benefit to a Section 4(f) Property*. The two avoidance strategies are (1) improve the
17 transportation facility without using a Section 4(f) property and (2) build the transportation facility
18 at a location that does not require the use of the Section 4(f) property. The results of the
19 avoidance analysis for the TMC property are presented below.

20 Do Nothing

21 The do nothing or No Build Alternative is described in Section 2.3.1 and Section 4.4.1. The No
22 Build Alternative is expected to avoid potential use of Section 4(f) properties. However, the No
23 Build Alternative is not a prudent avoidance alternative under Factor 1. Specifically, and as
24 described in **Chapter 6** (Recommended Alternative), the No Build Alternative would
25 compromise the project to such a degree that it would be unreasonable to proceed in light of the
26 I-11 Purpose and Need. The No Build Alternative would not achieve the I-11 Purpose and Need,
27 as it would not provide a high-priority, high-capacity, access-controlled transportation corridor;
28 would not support improved regional mobility for people, goods, and Homeland Security; and
29 would not enhance access to the high-capacity transportation network to support economic
30 vitality. Under the No Build Alternative, travel between Nogales and Wickenburg would occur on
31 various existing corridors, such as I-19, I-10, SR 101L, SR 202L, SR 303L, I-17, SR 74, and
32 US 60.

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

34 The Orange Alternative is co-located with I-10 in the Tucson area. The Orange Alternative
35 would avoid the TMC, but would impact more Section (f) properties than the Purple and Green
36 Alternatives. The Orange Alternative is not an avoidance alternative.

37 The Purple, Green, and Orange Alternatives are the outcome of an alternatives analysis that
38 examined opportunities to avoid Section 4(f) and non-Section 4(f) properties (**Chapter 2**
39 [Alternatives Considered]). During that alternatives analysis, the following designs were
40 examined:



1 • Alignment west of the TMC property within the Sandario Road ROW – Sandario Road runs
2 parallel to the western boundary of the TMC. The ROW is 80 feet wide and contains
3 Sandario Road, a two-lane, two-way road. An 80-foot-wide ROW is not wide enough to
4 accommodate the proposed 400-foot ROW for I-11 by itself or along with existing Sandario
5 Road. Additional ROW would be needed to accommodate I-11 and retain the traffic
6 movements provided by Sandario Road.

7 FHWA and ADOT considered whether I-11 and Sandario Road could be accommodated in
8 the ROW by creating a three-level structure in the ROW with Sandario Road at grade, with
9 one direction of I-11 on a second level and the other direction of I-11 on a third level. While
10 the width of the ROW potentially could accommodate such an arrangement, the design of a
11 multilevel structure over a distance of approximately 2.0 miles (the length of the TMC's
12 western boundary) would require extensive entrance and exit structures and provisions for
13 emergency access. The structures would extend impacts beyond the TMC area to an
14 unreasonable degree. Wildlife connectivity would be disrupted at the entrance and exit
15 structures. The structures would be substantially more visually invasive than an at-grade
16 highway. Also, the multi-level structure would not be desirable with respect to maintenance
17 and future expansion (Factors 1 and 2). Thus, while a multilevel structure may be feasible, it
18 is not prudent.

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

20 All of the Build Corridor Alternatives impact Section 4(f) properties. The Orange Alternative
21 would avoid the TMC Section 4(f) property but would impact Section 4(f) properties that are
22 clustered in Downtown Tucson. FHWA and ADOT considered the following designs to avoid
23 Section 4(f) properties.

24 • Corridor east of the TMC – The TMC is bordered on the east by the TMC and to the north by
25 SNP (both Section 4(f) properties). Therefore an alignment to the east of the TMC is not an
26 avoidance alternative.

27 • Corridor west of Sandario Road – The Tohono O’odham Nation owns most of the land west
28 of Sandario Road. Early coordination with the Tohono O’odham Nation determined that the
29 Tribe did not want the project on their sovereign lands. **Appendix F** provides the resolution
30 passed by the Schuk Toak District of the Tohono O’odham Nation, which states that the
31 Garcia Strip Community in the Schuk Toak District of the Tohono O’odham Nation opposes
32 a project alignment on or near their community on the eastern boundary of the Tohono
33 O’odham Nation property west of Sandario Road. Therefore a corridor west of Sandario
34 Road is not feasible.

35 • Elevated Structure – Placing I-11 on an elevated structure over the TMC would allow space
36 for wildlife movements across and underneath the roadway facility. Supporting columns
37 would be required at intervals across the property to support the elevated structure.
38 Sandario Road would remain a barrier to wildlife movements. The elevated structure option
39 would not provide a net benefit to wildlife movements.

40 • Tunneling – Placing I-11 in a tunnel under the TMC or under Sandario Road would reduce
41 the amount of land incorporated from the TMC property. Tunneling activities would impact
42 historic and archaeological sites on the TMC property. Although tunneling could maintain
43 wildlife connectivity at the ground level on the TMC property, Sandario Road would remain a
44 barrier to wildlife movements. The tunnel option would not provide a net benefit to wildlife
45 movement. In addition, a tunnel of this magnitude would cost more than \$1 billion in



1 comparison to \$100 million for the at-grade options. Therefore this option is not prudent due
2 to cost.

3 During Tier 2 studies, the 2,000-foot width of a selected Build Corridor Alternative would be
4 refined to a specific roadway alignment. Potential impacts identified in this Preliminary Draft
5 Section 4(f) Evaluation may be avoided or minimized when a specific roadway alignment is
6 identified. At that time, the Section 4(f) Evaluations will analyze the specific roadway alignment
7 for potential uses of Section 4(f) protected properties.

8 **Mitigation and Measures to Minimize Harm**

9 FHWA and ADOT are coordinating with Reclamation in regard to the TMC property.
10 Reclamation is the official with jurisdiction over the TMC property because, using the definition
11 provided in 23 CFR 774.17, Reclamation is the agency that owns and administers the TMC
12 property and it is the sole agency that is empowered to represent Reclamation on matters
13 related to the TMC property.

14 Early coordination between FHWA, ADOT, and Reclamation and input received from the public
15 identified an opportunity to refine the alignment of the Purple and Green Alternatives on the
16 TMC property. Because the purpose of the TMC is to enable wildlife movements across the
17 property, FHWA and ADOT coordinated with Reclamation on developing a conceptual roadway
18 ROW width and alignment designs that would minimize impacts to wildlife movements.
19 Concepts considered included use of the existing Sandario Road ROW with additional ROW
20 from the TMC property (as originally designed) or alignment of I-11 alongside the existing CAP
21 canal that crosses the TMC in a southeast to northwest direction. The CAP canal is a water
22 conveyance system that has been fitted with wildlife crossing areas, which reduce the barrier
23 effect to wildlife movements that the system could otherwise have. A summary of FHWA,
24 Reclamation, and ADOT coordination in regard to these concepts is described as follows:

- 25 • Alignment Co-located with Existing Sandario Road – Co-locating I-11 with Sandario Road
26 and using the Sandario Road ROW for a portion of the I-11 ROW needs would reduce the
27 amount of TMC land that would be needed for I-11 compared with a stand-alone alignment
28 across the property. However, Reclamation is concerned not only with the property impacts
29 at that location but also with the potential negative effects of I-11, Sandario Road and the
30 CAP canal on wildlife movements. Specifically, each existing linear facility (Sandario Road
31 and the CAP canal) has some barrier effect on wildlife movements across the property.
32 Placing I-11 along Sandario Road would add at-grade interstate highway infrastructure
33 (additional travel lanes and barrier dividers), thereby increasing the barrier effect at the
34 Sandario Road location. Reclamation indicated that I-11/Sandario Road and the CAP canal
35 would form two parallel linear systems that would negatively affect wildlife movements to a
36 greater extent than exists today.
- 37 • Alignment Along the West Side of the CAP Canal, Existing Sandario Road – Because of
38 Reclamation's concerns about co-locating I-11 with Sandario Road, FHWA, ADOT, and
39 Reclamation worked together to develop a concept that would place I-11 along the west side
40 of and parallel to the CAP canal. An alignment on the east side of the CAP canal is
41 infeasible because of the sloping condition of the land. The west side alignment would
42 consolidate the two linear systems in one general location. The concept for I-11 would
43 include wildlife crossing areas that are in line with the existing CAP siphon crossings.
44 Reclamation prefers this alignment of I-11 along the CAP canal because, although land from
45 the TMC would be required for I-11, the alignment would consolidate the I-11 and CAP
46 infrastructure in one general location. However, Reclamation was concerned about the



1 negative effects on wildlife movements that would be caused by retaining existing Sandario
2 Road in its current location and the I-11/CAP corridors.

3 • Alignment Along the West Side of the CAP Canal, with Mitigation – Based on these
4 concerns, FHWA, ADOT, and Reclamation worked together to develop the following
5 mitigation concepts to relocate Sandario Road and reduce the barrier effect of the I-11/CAP
6 canal corridors:

7 – Remove and reclaim Sandario Road. As identified in Reclamation’s June 8, 2018, letter
8 (**Appendix F**), ADOT would terminate Sandario Road at the northern and southern
9 border of the TMC (about a 2-mile section of road) using cul-de-sacs. ADOT would
10 remove the abandoned section of the road and any fencing or other features that are a
11 wildlife barrier, and reclaim the ROW with native habitat. The design would remove
12 barriers for wildlife while ensuring local access is maintained.

13 – Sandario Road is managed by Pima County. The ownership of the road is half Pima
14 County and half Tohono O’odham Nation. Pima County has a maintenance easement on
15 the tribal land. Relocating Sandario Road would be undertaken as an integral part of the
16 proposed project if the Purple or Green Alternative were to be selected. During Tier 2
17 study, FHWA and ADOT would undertake coordination with Reclamation, the Tohono
18 O’odham Nation, Pima County, the public, and others as part of identifying a specific
19 design and construction plan for relocating Sandario Road, assessing potential benefits
20 and impacts, and developing appropriate mitigation.

21 – I-11 Wildlife Crossings. ADOT would incorporate eight wildlife crossing areas into the
22 I-11 and Sandario Road design such that the crossings are in line with the existing CAP
23 canal siphons crossing. By removing Sandario Road, co-aligning I-11 alongside the CAP
24 canal, and co-aligning wildlife crossing areas, the barrier effect formed by existing
25 Sandario Road would be removed. Reclamation supports this mitigation measure as it
26 would have the beneficial effect of removing the barrier effect caused by existing
27 Sandario Road, thereby encouraging and enhancing conditions for wildlife movements
28 across the TMC. Reclamation also supports this mitigation measure because it will
29 consolidate the I-11/CAP canal infrastructure in one location and reduce the potential
30 barrier effect I-11 could cause on the TMC property. As stated in their letter of June 8,
31 2018, this will encourage and enhance conditions for wildlife movements across the
32 TMC.

33 As a result of this coordination activity, FHWA and ADOT have added the I-11 alignment along
34 the CAP canal with mitigation (removed and reclaimed Sandario Road and co-aligned wildlife
35 crossings with the CAP canal) as the CAP Design Option in the Draft Tier 1 EIS.

36 If the Purple or Green Alternative is selected, FHWA and ADOT propose and commit to
37 including the CAP Design Option plus additional mitigation to provide a net benefit to the
38 features and values of the TMC. The above mitigation measures and additional commitments to
39 the proposed measures are summarized below:

40 1. Wildlife Studies Prior to Tier 2 Process. FHWA and ADOT will coordinate with AGFD and
41 USFWS, as recognized wildlife authorities, on determining the studies required to
42 understand east-west wildlife movement needs (both on and off the Tucson Mitigation
43 Corridor [TMC]) within Avra Valley. These studies will gather baseline wildlife data, including
44 evaluation of historic and current movement data, and surveys of existing populations. Using
45 the baseline data, the studies will identify the extent, location, requirements, target species,
46 and expected benefits of additional wildlife movement areas, supporting structures, and



- 1 other mitigation measures. Finally, the studies will identify an approach for perpetual
2 management and protection of any acquired lands as well as any adaptive management
3 thresholds and likely actions. Identification of the entity responsible for management and
4 agreements with that entity would take place during the Tier 2 process. FHWA and ADOT
5 will fund and facilitate the implementation of the identified wildlife studies prior to the
6 initiation of the Tier 2 process so that the results can be used to inform the I-11 design.
- 7 2. Mitigation Recommended in Wildlife Studies Including Additional Wildlife Corridor. As part of
8 the Tier 2 design, FHWA and ADOT would use the results of the wildlife studies, in
9 consultation with AGFD, USFWS, and the TMC Working Group, to identify wildlife
10 movement areas, supporting structures, and other mitigation measures to incorporate into
11 the I-11 Corridor. Mitigation measures may be located outside the TMC, but will be located
12 between the Tucson Mountains and the Roskrige Mountains to the west, and they will
13 support the purpose of the TMC.
- 14 3. Land Replacement. FHWA and ADOT would transfer any lands acquired for TMC mitigation
15 to an entity that would protect the lands for wildlife and wildlife movement purposes. FHWA
16 and ADOT would consult with the TMC partners to jointly identify and agree on the
17 appropriate entity
- 18 4. Relocate and Reclaim Sandario Road. ADOT would relocate Sandario Road to coincide with
19 the new I-11 alignment. ADOT would remove and reclaim about a 2-mile section of the old
20 road with native vegetation. The design would remove barriers for wildlife (including the road
21 and associated roadway fencing) while maintaining any necessary local access.
- 22 5. Wildlife Crossings Concurrent with CAP Canal Wildlife Crossings. ADOT would place wildlife
23 crossings on I-11 that align with CAP siphon crossings in the TMC, and would place one
24 wildlife crossing immediately north of the TMC (a total of seven crossings). The purpose of
25 the I-11 wildlife crossings is to provide continuity to the existing CAP wildlife crossings
26 (siphons) and minimize impacts to wildlife movements between the Tucson Mountains and
27 Roskrige Mountains.
- 28 6. Design Standards. Reclamation and the Central Arizona Water Conservation District
29 (CAWCD) have design standards for facilities that encroach on CAP lands. ADOT would
30 comply with these standards where I-11 crosses CAP lands or is adjacent to the CAP
31 facility.
- 32 7. No Interchanges in the TMC. ADOT would prohibit exits and interchanges on I-11 within the
33 TMC.
- 34 8. No Interchanges between West Snyder Hill Road and West Manville Road. To maximize the
35 effectiveness of the TMC mitigation measures, ADOT would not build exits or interchanges
36 on I-11 between West Snyder Hill Road and West Manville Road. The direct distance
37 between these two roads is approximately 9 miles.
- 38 9. Minimize Width of I-11 in TMC. Within appropriate interstate design standards, ADOT would
39 minimize the width of I-11 through the TMC. The design would occur during Tier 2.
- 40 10. Land Use Planning. Understanding the potential for indirect and cumulative land use effects
41 from the I-11 project, ADOT would be an active partner in a broader effort with Metropolitan
42 Planning Organizations, local jurisdictions, resource agencies, and private stakeholders to
43 cooperatively plan development in the I-11 corridor. The effort would coordinate wildlife



1 connectivity, local land use planning, and context-sensitive design for the I-11 facility. The
2 White Tanks Conservancy may be a model for this type of effort. Coordination with Pima
3 County on the implementation of the Sonoran Desert Conservation Plan also could be part
4 of the effort.

5 Additional mitigation measures that would reduce the impact to sensitive resources in the
6 vicinity of the TMC that are discussed elsewhere in the EIS are:

- 7 • Lighting Compliant with Dark Skies. Roadway lighting would be compatible with dark skies
8 objectives and lighting would be limited to be consistent with land use and development
9 patterns at the time of the I-11 implementation.
- 10 • Visual Screening. The roadway would be designed in such a way as to screen the facility
11 from sensitive viewpoints in the area. The design would use various measures, such as
12 vegetation, berms, and topography or partial depression of the roadway, to accomplish this.
13 The screening also would reduce noise impacts.

14 **Coordination and Public Involvement**

15 FHWA and ADOT coordinated with Reclamation and TMC management partners in each phase
16 of alternatives development and evaluation, beginning with scoping and continuing through
17 development and evaluation of the Build Corridor Alternatives. Specifically, and as described in
18 Section 4.4.2, Reclamation identified the TMC as a property protected by Section 4(f) in their
19 July 8, 2016 letter (**Appendix F**). FHWA confirms this status. Subsequent coordination
20 meetings between FHWA, ADOT, and Reclamation in 2017 and 2018 included discussion of the
21 merits and flaws associated with aligning the Build Corridor Alternatives along Sandario Road or
22 along the CAP canal, and relocating Sandario Road and co-aligning the I-11/CAP canal wildlife
23 crossings. In all such discussions, minimizing impacts to wildlife movements was the primary
24 concern of all parties.

25 This detailed coordination work was critical to identifying and resolving concerns regarding the
26 ability of the TMC property to continue achieving its mission of enabling wildlife movements. The
27 meeting memoranda found in **Appendix F** of the Draft Tier 1 EIS provide evidence of the
28 coordination activities. Circulation of the Draft Tier 1 EIS and Preliminary Draft Section 4(f)
29 Evaluation during the public comment period will give the public an opportunity to review and
30 comment upon the activities and findings related to the TMC property.

31 FHWA and ADOT invited the US Institute for Environmental Conflict Resolution to facilitate a
32 discussion in Pima County regarding the I-11 Tier 1 EIS. The US Institute is a program of the
33 Udall Foundation and exists to assist parties in resolving environmental, public lands, and
34 natural resource conflicts nationwide that involve federal agencies or interests. The purpose of
35 the discussion was to gain a better understanding of the values and interests of the
36 communities in Pima County that the I-11 corridor could impact.. During the meetings, Avra
37 Valley stakeholders identified community-specific issues and concerns that could inform the
38 decision-making process.

39 The Avra Valley stakeholder group noted several adverse impacts the I-11 could have on their
40 community, including:

- 41 • Impacted viewsheds;
- 42 • Loss of community cohesion;



- 1 • Fragmentation of wildlife connectivity; and
 - 2 • Potential contamination of the City of Tucson’s aquifer and SAVSARP and CAVSARP
 - 3 recharge basins.
- 4 Stakeholders from the Avra Valley stakeholder group meetings proposed different strategies to
- 5 mitigate these concerns, including co-locating with the CAP Canal.

6 **Determination of Net Benefit**

7 The purpose of the TMC and the function that qualifies the TMC for Section 4(f) protection is

8 wildlife refuge and movement. The Purple and Green Alternatives directly impact (use) the

9 TMC, and wildlife mitigation measures are incorporated into these alternatives’ corridors. The

10 mitigation measures are aimed at protecting and enhancing wildlife connectivity and movements

11 across the newly introduced I-11 project. The mitigation measures reflect and expand upon

12 those outlined in Reclamation’s letter of June 8, 2018.

13 ADOT and FHWA will continue to coordinate with Reclamation and the TMC management

14 partners throughout the Tier 1 EIS process to determine if the identified process and mitigation

15 strategies will improve wildlife connectivity for the TMC and result in a net benefit. FHWA is

16 making a preliminary Section 4(f) evaluation in the Tier 1 Draft EIS and after public comment,

17 will make a preliminary net benefit determination in the Tier 1 EIS ROD. A Final Section 4(f)

18 Evaluation and net benefit determination will be made during the Tier 2 environmental process,

19 after wildlife studies have been completed and specific mitigation measures finalized.

20 **4.4.4 Constructive Use**

21 **4.4.4.1 Regulatory Context**

22 The requirements of 23 CFR 774.15 describe the conditions in which a constructive use could

23 occur:

24 “A constructive use occurs when the transportation project does not incorporate land from a

25 Section 4(f) property, but the project’s proximity impacts are so severe that the protected

26 activities, features, or attributes that qualify the property for protection under Section 4(f) are

27 substantially impaired. Substantial impairment occurs only when the protected activities,

28 features, or attributes of the property are substantially diminished.”

29 Substantial impairment is a high threshold; an impact does not rise to the level of being so

30 severe unless specific criteria are achieved. FHWA has determined that a constructive use

31 occurs when (23 CFR 774.15(e)):

32 “(1) The projected noise level increase attributable to the project substantially interferes with

33 the use and enjoyment of a noise-sensitive facility of a property protected by

34 Section 4(f), such as:

- 35 (i) Hearing the performances at an outdoor amphitheater;
- 36 (ii) Sleeping in the sleeping area of a campground;
- 37 (iii) Enjoyment of a historic site where a quiet setting is a generally recognized feature or
- 38 attribute of the site’s significance;
- 39 (iv) Enjoyment of an urban park where serenity and quiet are significant attributes; or



- 1 (v) Viewing wildlife in an area of a wildlife and waterfowl refuge intended for such
2 viewing.
- 3 (2) The proximity of the proposed project substantially impairs esthetic features or attributes
4 of a property protected by Section 4(f), where such features or attributes are considered
5 important contributing elements to the value of the property. Examples of substantial
6 impairment to visual or esthetic qualities would be the location of a proposed
7 transportation facility in such proximity that it obstructs or eliminates the primary views of
8 an architecturally significant historical building, or substantially detracts from the setting
9 of a Section 4(f) property which derives its value in substantial part due to its setting;
- 10 (3) The project results in a restriction of access which substantially diminishes the utility of a
11 significant publicly owned park, recreation area, or a historic site;
- 12 (4) The vibration impact from construction or operation of the project substantially impairs
13 the use of a Section 4(f) property, such as projected vibration levels that are great
14 enough to physically damage a historic building or substantially diminish the utility of the
15 building, unless the damage is repaired and fully restored consistent with the Secretary
16 of the Interior's Standards for the Treatment of Historic Properties, i.e., the integrity of
17 the contributing features must be returned to a condition which is substantially similar to
18 that which existed prior to the project; or
- 19 (5) The ecological intrusion of the project substantially diminishes the value of wildlife habitat
20 in a wildlife and waterfowl refuge adjacent to the project, substantially interferes with the
21 access to a wildlife and waterfowl refuge when such access is necessary for established
22 wildlife migration or critical life cycle processes, or substantially reduces the wildlife use
23 of a wildlife and waterfowl refuge.”
- 24 FHWA has determined that a constructive use does not occur when (23 CFR 774.15(f)):
- 25 “(1) Compliance with the requirements of 36 CFR 800.5 for proximity impacts of the
26 proposed action, on a site listed on or eligible for the National Register, results in an
27 agreement of ‘no historic properties affected’ or ‘no adverse effect’;
- 28 (2) The impacts of projected traffic noise levels of the proposed highway project on a noise-
29 sensitive activity do not exceed the FHWA noise abatement criteria as contained in
30 Table 1 in part 772 of this chapter, or the projected operational noise levels of the
31 proposed transit project do not exceed the noise impact criteria for a Section 4(f) activity
32 in the FTA [Federal Transportation Administration] guidelines for transit noise and
33 vibration impact assessment;
- 34 (3) The projected noise levels exceed the relevant threshold in paragraph (f)(2) of this
35 section because of high existing noise, but the increase in the projected noise levels if
36 the proposed project is constructed, when compared with the projected noise levels if
37 the project is not built, is barely perceptible (3 dBA or less);
- 38 (4) There are proximity impacts to a Section 4(f) property, but a governmental agency's
39 right-of-way acquisition or adoption of project location, or the Administration's approval of
40 a final environmental document, established the location for the proposed transportation
41 project before the designation, establishment, or change in the significance of the
42 property. However, if it is reasonably foreseeable that a property would qualify as eligible
43 for the National Register prior to the start of construction, then the property should be
44 treated as a historic site for the purposes of this section; or



- 1 (5) Overall (combined) proximity impacts caused by a proposed project do not substantially
2 impair the activities, features, or attributes that qualify a property for protection under
3 Section 4(f);
- 4 (6) Proximity impacts will be mitigated to a condition equivalent to, or better than, that which
5 would occur if the project were not built, as determined after consultation with the
6 official(s) with jurisdiction;
- 7 (7) Change in accessibility will not substantially diminish the utilization of the Section 4(f)
8 property; or
- 9 (8) Vibration levels from project construction activities are mitigated, through advance
10 planning and monitoring of the activities, to levels that do not cause a substantial
11 impairment of protected activities, features, or attributes of the Section 4(f) property.”

12 **4.4.4.2 Tucson Mountain Park and SNP Assessment**

13 Based on comments from Reclamation, FHWA assessed the potential for constructive use on
14 Tucson Mountain Park and SNP. **Appendix F** provides the detailed constructive use
15 assessment.

16 Noise and visual impacts, combined, would impact the visitor experience at Tucson Mountain
17 Park and SNP. However, according to FHWA policy and practice on constructive use, these
18 combined impacts would not be so severe as to substantially impair or diminish the attributes
19 that qualify the parks for protection under Section 4(f). The attributes of each property are listed
20 in **Table 4-1** (Parks, Recreation Areas, and Wildlife/Waterfowl Refuges Protected by
21 Section 4(f) in the Study Area) and **Table 4-2** (Historic Sites Protected by Section 4(f) in the
22 Project Corridors) in Section 4.3. Specifically, noise levels with I-11 are predicted to be less than
23 the applicable FHWA noise abatement threshold at SNP and Tucson Mountain Park. Also,
24 ADOT has committed to mitigate impacts on night skies by complying with dark skies
25 ordinances and by limiting lighting, if necessary.

26 **4.4.4.3 Public Land Order (PLO) 1015 Lands and Adjacent AGFD Parcels Assessment**

27 Originally the jurisdiction of the BLM, the PLO 1015 lands were withdrawn from BLM jurisdiction
28 in 1954 under Public Land Order 1015 and “reserved under the jurisdiction of the USFWS for
29 wildlife refuge purposes.” The PLO 1015 lands are owned/administered by USFWS, but
30 managed by AGFD. The USFWS considers the PLO 1015 lands to be in a special category of
31 lands called “Coordination areas” under the National Wildlife Refuge Act. The adjacent AGFD
32 parcels are in furtherance of the USFWS/AGFD Cooperative Agreement from 1954, clause 7.

33 FHWA and ADOT assessed the potential for the Project to cause a constructive use on the PLO
34 1015 lands. The assessment focuses on PLO 1015 lands on either side of the Purple
35 Alternative corridor (Figure 4-21). **Appendix F** provides the detailed constructive use
36 assessment.

37 Based on the assessment, FHWA has determined that, if the Purple Alternative is selected, the
38 proximity effects of I-11 to PLO 1015 lands would not be so severe that the protected activities,
39 features or attributes that qualify the properties for protection under Section 4(f) would be
40 substantially impaired. No constructive use of PLO 1015 lands or adjacent AGFD parcels would
41 occur as a result of the Project.



1 **4.5 Summary of Findings**

2 FHWA evaluated a hybrid of the three Build Corridor Alternatives (the Recommended
3 Alternative) as a result of the technical analyses in the Tier 1 EIS and input received from
4 agencies, Tribes and the public. The Recommended Build Corridor Alternative is presented in
5 **Chapter 6** (Recommended Alternative). It consists of the elements of the Build Corridor
6 Alternatives would best achieve the I-11 Purpose and Need while avoiding or minimizing
7 impacts on Section 4(f) properties.

8 The Recommended Alternative would have a proposed net benefit to one Section 4(f) property
9 (TMC). The Purple Alternative would have a proposed net benefit to one Section 4(f) property
10 (TMC). The Green Alternative would have a proposed net benefit to the TMC and would a result
11 in No Use or at most, a *de minimis* use to Robbins Butte Wildlife Area. Based on preliminary
12 design, the Orange Alternative would impact seven Section 4(f) properties in downtown Tucson.

13 **Table 4-6** (Summary of Potential Section 4(f) Uses by Build Corridor Alternative) summarizes
14 the impacts to Section 4(f) properties for the Build Corridor Alternatives.

Table 4-6 Summary of Potential Section 4(f) Uses by Build Corridor Alternative

Alternative	Potential Uses of Section 4(f) Properties	Ability to Mitigate Adverse Impacts to Section 4(f) Properties	Severity of Remaining Harm to Section 4(f) Properties
Purple with CAP Design Option	TMC: new linear surface structure (highway alignment) across TMC property; impact to wildlife movements and connectivity	TMC: The CAP Design Option with additional mitigation strategies could result in a net benefit. Options such as tunneling and elevating I-11 over the TMC may mitigate impacts, but would not result in a net benefit.	TMC Goal: Achieve a net benefit to wildlife connectivity for the TMC compared to existing conditions.
Green Alternative with CAP Design Option	TMC: new linear surface structure (highway alignment) across TMC property; impact to wildlife movements and connectivity Robbins Butte: No use or <i>de minimis</i> use	TMC: The CAP Design Option with additional mitigation strategies could result in a net benefit. Options such as tunneling and elevating I-11 over the TMC may mitigate impacts, but would not result in a net benefit. Robbins Butte: Design goal is to accommodate I-11 cross-section in existing SR 85 ROW	TMC Goal: Achieve a net benefit to wildlife connectivity for the TMC compared to existing conditions. Robbins Butte: No use or <i>de minimis</i> use
Orange Alternative	Downtown Tucson: Impacts to seven Section 4(f) properties Robbins Butte: No use or <i>de minimis</i> use	Downtown Tucson: Low potential to mitigate impacts. Elevating the new I-11 lanes would adversely affect Section 4(f) properties. Tunneling the new I-11 lanes would impact underground archaeological resources and is not prudent due to cost. Robbins Butte: Design goal is to accommodate I-11 cross-section in existing SR 85 ROW	Downtown Tucson: Impacts to seven Section 4(f) properties. Robbins Butte: No use or <i>de minimis</i> use
Recommended Alternative (includes the CAP Design Option)	TMC: new linear surface structure (highway alignment) across TMC property; impact to wildlife movements and connectivity	TMC: The CAP Design Option with additional mitigation strategies could result in a net benefit. Options such as tunneling and elevating I-11 over the TMC may mitigate impacts, but would not result in a net benefit.	TMC Goal: Achieve a net benefit to wildlife connectivity for the TMC compared to existing conditions.

1 4.6 Coordination

2 FHWA and ADOT initiated pre-scoping coordination with federal, state, and local officials with
3 jurisdiction in spring 2016 as part of preparing for the NEPA process. FHWA and ADOT met
4 periodically with officials to share I-11 project information and seek input. **Table 4-7** (Summary
5 of Comments from Officials with Jurisdiction over Section 4(f) Properties) lists the officials with
6 jurisdiction over the Section 4(f) properties identified in this chapter, and summarizes the
7 comments each official provided during coordination activities that are relevant to Section 4(f).
8 Correspondence from officials with jurisdiction that is relevant to the Section 4(f) Evaluation is
9 provided in **Appendix F** of this Draft Tier 1 EIS. The dialogue between FHWA, ADOT and the
10 officials with jurisdiction was used in this Preliminary Draft Section 4(f) Evaluation to identify
11 properties that are protected by Section 4(f), assess potential use of the properties by the Build
12 Alternatives, determine potential means to avoid or minimize potential use of Section 4(f)-
13 protected properties, and generally identify measures to minimize harm.

14 FHWA considered the input from officials with jurisdiction in the development and refinement of
15 the Build Corridor Alternatives. For example, and as described in Section 4.4.3, FHWA and
16 ADOT worked with Reclamation to align the Purple and Green Alternatives alongside the CAP
17 canal on the TMC property as well as relocate and co-align Sandario Road with I-11. By
18 relocating Sandario Road, co-aligning Sandario Road and I-11 alongside the CAP canal, and
19 co-aligning wildlife crossing areas, the barrier effect formed by existing Sandario Road would be
20 removed. Reclamation supports this mitigation measure as it would have the beneficial effect of
21 removing the barrier effect caused by existing Sandario Road, thereby encouraging and
22 enhancing conditions for wildlife movements across the TMC. Furthermore, Reclamation
23 supports this mitigation measure, as it will consolidate the I-11/CAP canal infrastructure in one
24 location and reduce the potential barrier effect I-11 could cause on the TMC property. As stated
25 in their letter of June 8, 2018, co-alignment of the I-11, Sandario Road, and CAP canal
26 crossings will provide the benefit of encouraging and enhancing conditions for wildlife
27 movements across the TMC.

28 FHWA and ADOT anticipate coordinating with other officials with jurisdiction over Section 4(f)
29 properties where a project use has been identified in this evaluation. Such coordination will
30 occur during the Final Tier 1 EIS and during Tier 2 study. Coordination will focus on examining
31 ways to avoid or minimize uses of the Section 4(f) properties, and on identifying appropriate
32 mitigation.

33 This coordination activity will enable FHWA to make determinations of potential use and
34 complete the Final Section 4(f) Evaluation as required to satisfy the requirements of Section 4(f)
35 during Tier 1. During Tier 2, coordination activity will enable FHWA to make project-level
36 determinations of use and complete Draft and Final Section 4(f) Evaluations.

Table 4-7 Summary of Comments from Officials with Jurisdiction Over Section 4(f) Properties

Agency/Entity	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 SNP.
	April 8, 2016 (CA Meeting)	<ul style="list-style-type: none"> Concerned with I-11 on west side of SNP; 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).
	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 Project Area for I-11.
	July 11, 2016	<ul style="list-style-type: none"> Comments on the Notice of Intent (NOI) regarding encroachment on SNP through a Corridor Option bisecting Avra Valley which will be built with the intention of being a multiuse corridor. Irreparable damage to the park and surround area for future generations may occur. Other concerns include the Juan Bautista de Anza National Historic Trail and various National Historic Landmarks.
	June 2, 2017	<ul style="list-style-type: none"> Expectation of severe and widespread impacts of Project on SNP 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.
	December 19, 2017	<ul style="list-style-type: none"> Meeting notes discussing viewshed, noise, and air quality impacts to areas around the SNP.
	August 10, 2018	<ul style="list-style-type: none"> Environmental and user experience impacts to SNP.
BLM	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 Mountains RMZ, or in the VMRA multi-use corridor. VMRA is a 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 Mountains 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.



Table 4-7 Summary of Comments from Officials with Jurisdiction Over Section 4(f) Properties (Continued)

Agency/Entity	Comment Date (Context)	Summary of Comments Related to Section 4(f) Properties
BLM (Con't)	April 12, 2018	<ul style="list-style-type: none"> FHWA letter to BLM Hassayampa Field Office, Phoenix District regarding Vulture Mountains RMZ and the utilization of the multiuse corridor by the future I-11.
	September 7, 2018	<ul style="list-style-type: none"> Refer to BLM recreation feature as the Vulture Mountains RMZ instead of the Vulture Mountains Cooperative Management Recreation Area. Mitigate possible impacts to the race course.
Reclamation	April 20, 2016 (CA Meeting)	<ul style="list-style-type: none"> Alignment in TMC would contradict TMC goals of re-connecting wildlife habitat across the Avra Valley; language that established TMC will help determine if it 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 Preserve lands that were set aside to preserve formerly designated endangered Tumamoc globeberry (<i>Tumamoca macdougallii</i>)
	July 8, 2016 (Scoping comments letter)	<ul style="list-style-type: none"> TMC is protected for preservation of wildlife habitat and movements. TMC is protected by Section 4(f) because it was acquired for mitigation purposes. Canal siphon crossings provide wildlife movement across the CAP canal. Concern that I-11 would fragment habitat and/or be a barrier to wildlife movement through the TMC or elsewhere in Avra Valley. Archaeological sites on the TMC. 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 TMC.
	November 3, 2016 (CA Meeting)	<ul style="list-style-type: none"> Need to clarify language regarding the designation of the land associated with the TMC.
	September 18, 2017	<ul style="list-style-type: none"> On-going coordination to study I-11 Corridor Options in the vicinity of the TMC. 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"> Reclamation preference to align I-11 alongside CAP canal, matching wildlife crossings to existing canal siphon crossings) to maintain wildlife connectivity. Reclamation preference is to relocate Sandario Road to reduce barriers to wildlife movements. Potential for future environmental studies to identify wildlife corridors.



Table 4-7 Summary of Comments from Officials with Jurisdiction Over Section 4(f) Properties (Continued)

Reclamation (Con't)	June 8, 2018	<ul style="list-style-type: none"> Reclamation input and consultation on a Section 4(f) evaluation for the TMC.
	August 9, 2018	<ul style="list-style-type: none"> Requirements to reach a net benefit for the TMC.
	October 18, 2018	<ul style="list-style-type: none"> Preliminary concurrence with mitigation commitments to meet net benefit for TMC. Reclamation would provide final concurrent on net benefit during Tier 2.
US Fish and Wildlife Service	December 3, 2018	<ul style="list-style-type: none"> The PLO 1015 lands are owned/administered by USFWS, but managed by AGFD. The PLO 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 DOI/AGFD Cooperative Agreement from 1954, clause #7 also are Wildlife Refuge lands.
	January 3, 2018	<ul style="list-style-type: none"> Consultation email regarding findings of Section 4(f) constructive use evaluation of PLO 1015 lands.
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 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 SNP, Tucson Mountain Park, and the TMC, 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 impacts of I-11 proximity to natural resources.
	August 7, 2018	<ul style="list-style-type: none"> Impacts to outdoor recreation user experience and revenue generation. Applicability of Section 4(f) to PLO 1015 lands and determining owner or official with jurisdiction.
	December 18, 2018	<ul style="list-style-type: none"> The AGFD parcels that are adjacent to or near the PLO 1015 lands also are wildlife refuges and are in furtherance of the DOI/AGFD Cooperative Agreement from 1954, clause #7.



Table 4-7 Summary of Comments from Officials with Jurisdiction Over Section 4(f) Properties (Continued)

Arizona State SHPO	April 27, 2016 (Pre-scoping)	<ul style="list-style-type: none"> SHPO suggested that at least 3 categories of sensitivity be considered. Potential historic bottlenecks within the 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 Study Area.
	June 7, 2016	<ul style="list-style-type: none"> Preserve historic resources by using existing transportation infrastructure where possible.
	April 16, 2018	<ul style="list-style-type: none"> Concern over 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"> Concurrence with adverse impacts from the Orange Alternative historic and Section 4(f) properties in downtown Tucson.
Maricopa County	April 6, 2016 (Pre-scoping)	<ul style="list-style-type: none"> Proposed Maricopa Association of Governments Hassayampa alignment effects on Vulture Mountains 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.
	May 16, 2017	<ul style="list-style-type: none"> Concerned about potential Impacts to the County's lands in the Vulture Mountains RMZ.
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.



Table 4-7 Summary of Comments from Officials with Jurisdiction Over Section 4(f) Properties (Continued)

City of Tucson	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 project Area of Potential Effects within the City of Tucson and City-owned lands outside the city limits.
Pima County	December 3, 2019	<ul style="list-style-type: none"> Section 4(f) evaluation and constructive use assessment of Tucson Mountain Park.

1 4.7 Future Tier 2 Analysis

2 As set forth in 23 CFR 774.7(e)(1), FHWA will complete a Final Section 4(f) Evaluation and
 3 Final Nationwide Programmatic Section 4(f) Evaluation (Net Benefit) during future Tier 2
 4 analyses. At that time, FHWA will make final determinations of use, assess avoidance and least
 5 harm as warranted, and identify additional specific measures to minimize harm.



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