DRAFT
ENVIRONMENTAL ASSESSMENT
PROPOSED AIRPORT TRAFFIC CONTROL TOWER

MARANA REGIONAL AIRPORT
PIMA COUNTY, ARIZONA

Prepared for

Town of Marana
Ed Honea Marana Municipal Complex
11555 West Civic Center Drive
Marana, Arizona 85653

U.S. Department of Transportation
Federal Aviation Administration
As lead Federal Agency pursuant to the National Environmental Policy Act of 1969

Prepared by

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April 2025

Council on Environmental Quality Unique Identification Number for NEPA Documents: EAXX-021-12-ARP-179453388

This environmental assessment becomes a federal document when evaluated, signed, and dated by the Responsible FAA Official.

_____ _____

Responsible FAA Official **Date**

GENERAL INFORMATION ABOUT THIS DOCUMENT

WHAT'S IN THIS DOCUMENT? This document is a draft environmental assessment (Draft EA) which has been completed under the National Environmental Policy Act (NEPA) for a proposed project at Marana Regional Airport. The Federal Aviation Administration (FAA) is the lead agency for the NEPA process. This document discloses the analysis and findings of the potential impacts of the Proposed Action and the No Action alternative.

PROPOSED ACTION: The Proposed Action is the construction, operation, and maintenance of an airport traffic control tower (ATCT) at Marana Regional Airport. An 8-acre site within the airport would be used for construction of an 112-foot-tall ATCT, new vehicle access road, and connection of utilities and septic system, as well as removal of the existing 50-foot-tall beacon tower and relocating the rotating beacon to the top of the new ATCT as a 28-inch-tall rotating beacon.

WHAT SHOULD YOU DO? Read the Draft EA and submit comments if you wish to do so. Any agencies or interested parties requesting a hard copy of the report should contact the Airport Administration Office at the email address given below. Copies of the Draft EA are available for download at https://www.maranaaz.gov/airport, and reading copies can be reviewed at the following locations:

Marana Regional Airport Administration Office 11700 West Avra Valley Road Marana, Arizona 85653 (M–F 7:00 a.m.–4:00 p.m.) **mra@maranaaz.gov**	**Ed Honea Marana Municipal Complex** 11555 West Civic Center Drive Marana, Arizona 85653 (M–F 8:00 a.m.–5:00 p.m.)
Wheeler Taft Abbett, Sr. Library 7800 North Schisler Drive Tucson, Arizona 85743 (M, W 10:00 a.m.–6:00 p.m.; T, Th 10:00 a.m.–7:00 p.m.; F 10:00 a.m.–5:00 p.m.)	**FAA Western-Pacific Region, Office of Airports, Phoenix Airports District Office** 3800 North Central Avenue, Suite 1025 Phoenix, Arizona 85012 (M–F, 9:00 a.m.–4:00 p.m., *by appointment only* [602-792-1075])

You may submit your written comments by letter or email to the following address **no later than 5:00 p.m. Mountain Standard Time, Wednesday, May 21, 2025.** Please allow enough time for mailing. Comments must be received by the deadline and not simply be postmarked by that date.

Greg Sendlak, Project Manager
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WHAT HAPPENS AFTER THIS? Written responses to comments received during the 30-day public review period of the Draft EA will be prepared and a Final EA will be submitted to the FAA for approval and consideration. Following review of the Final EA, the FAA will issue a finding of no significant impact (FONSI) and/or a record of decision (ROD) or decide to prepare a federal environmental impact statement.

PRIVACY NOTICE: Before including your address, phone number, email address, or other personal identifying information in your comment, be advised that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

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CONTENTS

Appendices

Figures

Tables

ACRONYMS AND ABBREVIATIONS

ADEQ	Arizona Department of Environmental Quality
airport	Marana Regional Airport
Anza Trail, Anza NHT	Juan Bautista de Anza National Historic Trail
ASLD	Arizona State Land Department
ATCT	airport traffic control tower
AVQ	Marana Regional Airport
AZPDES	Arizona Pollution Discharge Elimination System
CFR	Code of Federal Regulations
CH_4	Methane
CO_2	carbon dioxide
CO_{2e}	Carbon dioxide equivalents
CWA	Clean Water Act
CWPP	Community Wildfire Protection Plan
DOT	U.S. Department of Transportation
Draft EA	draft environmental assessment
EA	environmental assessment
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FPPA	Farmland Protection Policy Act
GHG	greenhouse gas
HAP	Hazardous air pollutants
KOP	key observation point
O_3	Ozone
Pb	Lead
LOMR	Letter of Map Revision
MOVES	EPA's MOtor Vehicle Emission Simulator
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NHT	National Historic Trail
N_2O	Nitrous oxide

NO_2	Nitrogen dioxide
NPS	National Park Service
PL	Public Law
$PM_{2.5}$	particulate matter 2.5 microns in diameter or smaller
PM_{10}	particulate matter 10 microns in diameter or smaller
Quadrex	Quadrex Aviation, LLC
RTA	Regional Transportation Authority
SCRT	Santa Cruz River Trail
SIP	State implementation plan
SHPO	State Historic Preservation Office
Siting Report	Siting Report: Safety Risk Management Document New Airport Traffic Control Tower (Quadrex et al. 2022)
SO_2	Sulfur dioxide
sponsor	Town of Marana
TAMA	Tucson Active Management Area
Town	Town of Marana
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile organic compounds

1 INTRODUCTION

The Town of Marana (sponsor) has prepared the necessary planning and environmental documentation for a new airport traffic control tower (ATCT) at the Marana Regional Airport (airport or AVQ) in Marana, Arizona (herein called the project, or the Proposed Action). The Proposed Action is subject to the requirements of Section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969 (Public Law [PL] 91-190, Title 42 United States Code [USC] Section 4321 et. seq.).

The Federal Aviation Administration (FAA) is responsible for complying with the procedures and policies of NEPA and other environmental laws, regulations, and orders applicable to FAA actions. Proposed actions and decisions by FAA officials (such as approval for a proposed ATCT) are subject to NEPA review. As the lead agency, the FAA has the primary responsibility for preparation of the NEPA document. The FAA decision-making process must consider and disclose the potential impacts of a proposed ATCT and its alternatives on the quality of the human environment. The FAA also invites federal, state, tribal, and local agencies with special expertise or jurisdiction by law to be cooperating agencies and assist the FAA by providing input or reviews. The resultant NEPA document—this environmental assessment (EA)—must fully assess and disclose potential environmental impacts resulting from the Proposed Action and alternatives. Additionally, the FAA must solicit appropriate information from the public, provide the public with the disclosed information and analysis, and allow public comment on the findings.

The FAA's NEPA process is guided by FAA Order 1050.1F (FAA 2015), with specific EA guidance provided in Section 3-1.2: Actions Normally Requiring an Environmental Assessment and Chapter 6: Environmental Assessments and Finding of No Significant Impact. FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions (FAA 2006) and 1050.1 Desk Reference (FAA 2023) supplement and provide additional instructions.

1.1 Airport Location and Project Background

The Marana Regional Airport, owned and operated by the Town of Marana (Town), is a general aviation facility that maintains two runways and terminal facilities and serves as a designated reliever airport for Tucson International Airport (Town of Marana 2019). The airport is located in Marana, Pima County, Arizona, to the west of Interstate 10 (Figure 1-1) at an elevation of 2,031 feet above mean sea level. The airport covers approximately 570 acres and has two intersecting asphalt runways. Runway 12/30, the primary runway, is 6,901 feet long by 100 feet wide. Runway 3/21, the crosswind runway, is 3,892 feet long by 75 feet wide. Full-length parallel taxiways include Taxiway A (6,901 feet long by 50 feet wide) and Taxiway B (3,892 feet long by 35–50 feet wide). Taxiways C, E, and H, along with a series of connector taxiways, provide access to and from hangars and runways. Primary access for visitors, passengers, pilots, aviation workers, and airport staff is through the main airport entrance on the north side of West Avra Valley Road.

The 2017 *Marana Regional Airport Master Plan* (Town of Marana 2017) provides guidance for future airport development, improvements to air and ground operations, and enhancements to both airport services and safety for public users. This guidance includes the Proposed Action being evaluated in this EA.

1.2 Description of the Proposed Action

The Proposed Action includes the following components:

- construction of a new ATCT that would be 112 feet tall (123 feet tall including rotating beacon, antennae, and lightning protection system [i.e., lightning rods]) and base building;
- connection of utilities and septic system to the proposed ATCT;
- construction of a new vehicle access road and parking area; and
- removal of the existing 50-foot-tall beacon tower and relocating the rotating beacon to the top of the new ATCT as a 28-inch-tall rotating beacon (including an 8-inch-high by 12-inch-wide lens).

The Proposed Action would require 8 acres. If approved, construction is anticipated to last 12 to 24 months. See full description of the Proposed Action in Section 2.3.1.

1.3 Purpose and Need

The FAA's overall purpose and need is to fulfill its statutory mission, which is to ensure the safe and efficient use of navigable airspace in the United States.[1] In this case, the Town seeks to amend its airport layout plan to include an ATCT. The role of an ATCT is to communicate with pilots and direct aircraft movements in a safe and efficient manner.

The need for the Proposed Action is to address a series of ongoing challenges that airport users increasingly face, such as (Town of Marana 2023):

- They need to be aware of the diverse types of operations occurring at the airport and complexity of the airspace, which include corporate jets, military operations, flight training, rotary wing aircraft, and skydiving (civilian and military). For example, users must vigilantly monitor the airport's common radio frequency (i.e., UNICOM), especially since corporate jet aircraft typically move faster than single-engine piston aircraft.
- They need to communicate with an increasing number of other users on a single radio channel. In 2023, more than 75,000 annual operations occurred at the airport, and operations are expected to increase (Quadrex Aviation, LLC, [Quadrex] et al. 2022, 2024). Currently, all active aircraft indicate their position by using the airport's common radio frequency.
- They need to visually distinguish between AVQ's Runway 12/30 and Pinal Airpark's similarly marked Runway 12/30, located 8 miles to the northwest, without verbal confirmation from an observer at either airport. In the past, some pilots have confused the two runways, creating potential conflicts with other users.[2]

Looking ahead, airport users need a better communication method to operate safely and efficiently. Therefore, the purpose of the Proposed Action would be to improve communications for the safe and efficient operation of aircraft, prevent collisions and other accidents, ensure airport users have safe access to movement areas and runway approaches, and enhance overall airport efficiency.

[1] 49 USC 47101(a)(1).

[2] AVQ Damage/Loss of Town Property Report 7.1, dated June 18, 2023: Where 2,363 square feet of TWY E asphalt was extensively damaged when an Airbus 310 T7-FTH inadvertently landed and overshot RWY 12-30. Per T.O.M. Insurance Claim #2023-98, dated June 29, 2023: $15,393.31 cost to replace the damaged asphalt.

1.4 Requested Federal Actions

The Town requests the FAA take the following actions to support the Proposed Action:

- Unconditional approval of the portion of the airport layout plan that depicts the Proposed Action, pursuant to 49 USC 40103(b), 44718, and 47107(a)(16) and 14 CFR Part 77 and Part 157; and
- FAA determination of project eligibility for federal funding (e.g., Airport Improvement Program).

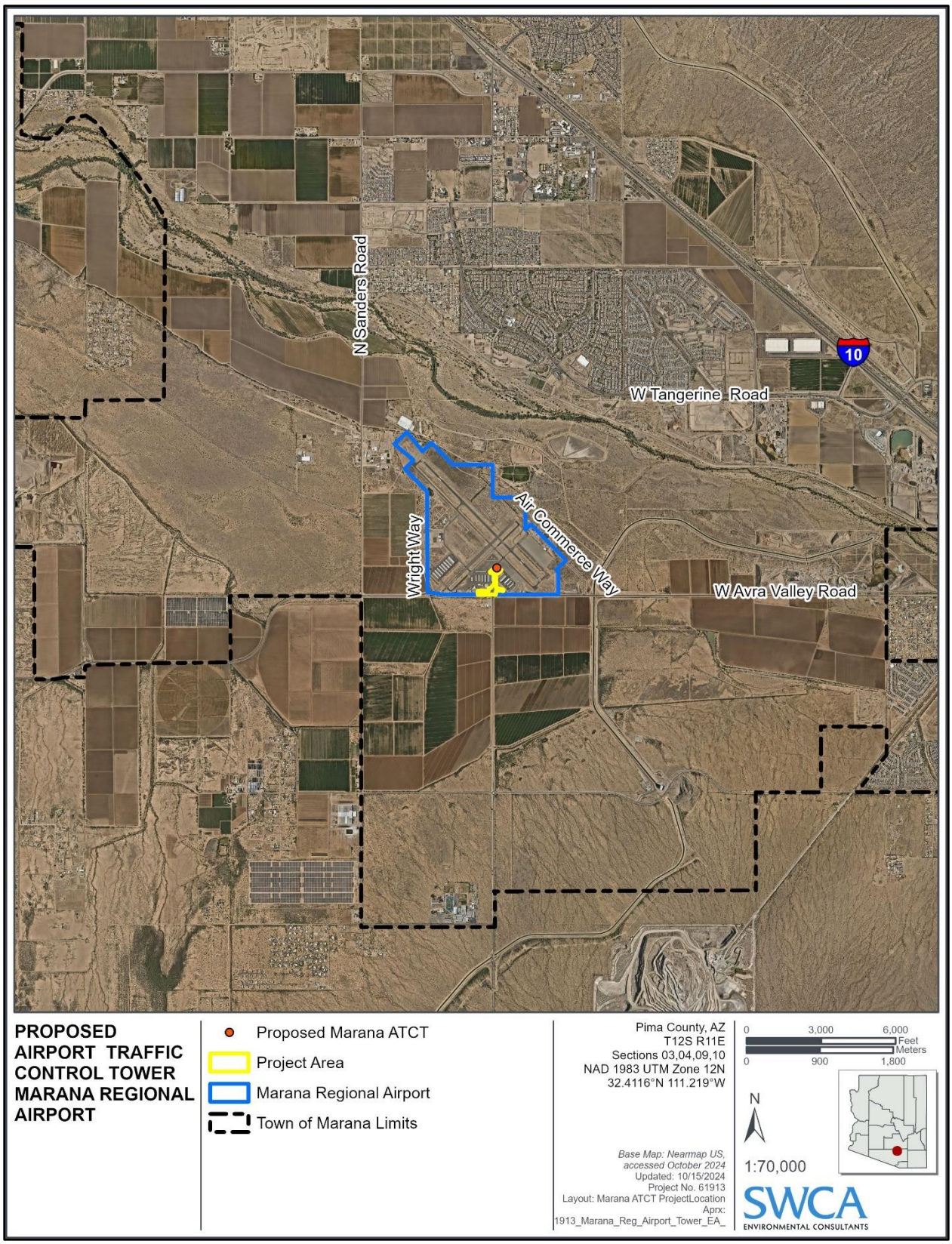

Figure 1-1. General location of the proposed project.

2 ALTERNATIVES

The FAA, through the Phoenix Airports District Office, will serve as the lead agency in the NEPA process for airport actions, and the Town of Marana serves as a participating agency. The format and subject matter included within the resulting NEPA documentation will conform to the requirements and standards set forth by the FAA.

2.1 Siting Criteria

The siting criteria outlined in the Town's Siting Report[3] were developed in collaboration with the FAA's Airway Facilities Tower Integration Laboratory and the Virtual Immersive Siting Tower Assessment for a new ATCT in the Federal Contract Tower program (Quadrex et al. 2022). These criteria align with the requirements in FAA Order 6480.4B.

Potential sites are evaluated as alternatives through a two-step screening process. The first step assesses whether the alternatives are "reasonable." An alternative is considered reasonable if it meets the purpose and need identified in Section 1.3 of this EA.

If an alternative is deemed reasonable, the second step determines if the alternative is "feasible." The feasibility of an alternative is established by considering other important factors, such as logistical, technical, or cost considerations. Key technical factors considered for an ATCT location include:

- visibility performance requirements and line-of-sight angle;
- sunlight/daylight;
- artificial lighting;
- atmospheric conditions;
- safety; and
- operational requirements, including orientation, weather phenomena, visibility, look-down angle, look-across distance, and economic considerations.

2.2 Alternatives Considered

Alternatives developed and evaluated for this project include the No Action alternative and the Proposed Action (i.e., the project). The No Action alternative serves as a benchmark to compare against the Proposed Action's environmental effects.

The Siting Report initially included eight candidate sites for the Proposed Action that were analyzed by the siting team and airport staff (Quadrex et al. 2022). Airport staff and the siting team identified Site 5 as the preferred location. Site 5 is the location of the Proposed Action.

[3] New Airport Traffic Control Tower Siting Report prepared by AJT Engineering, Inc.

2.3 Alternatives Carried Forward for Detailed Evaluation

2.3.1 Proposed Action

The Proposed Action would include the following components:

- construction of a new ATCT that would be 112 feet tall (123 feet tall including rotating beacon, antennae, and lightning protection system [i.e., lightning rods]) and base building;
- connection of utilities and septic system to the proposed ATCT;
- construction of a new vehicle access road and parking area; and
- removal of the existing 50-foot-tall beacon tower and relocating the rotating beacon to the top of the new ATCT as a 28-inch-tall rotating beacon (including an 8-inch-high by 12-inch-wide lens). The existing beacon tower foundation will be left in place.

Permanent new facilities for the project would occupy 0.9 acres. Ground disturbance would be limited to the extent of the proposed new construction and temporary spaces needed for staging and storage, totaling 7.58 acres. Figure 2-1 illustrates the Proposed Action location and components.

If approved by the FAA, construction of the proposed ATCT could begin January 2026 and be completed in November 2027, lasting for 12 to 24 months. All construction activities would occur Monday through Friday and would be restricted to daylight hours.

The Proposed Action would not change the current operations and maintenance of the airport and would not increase the capacity of the airport. The Proposed Action would not modify the airfield, or accommodate a greater number of, higher frequency of, or larger aircraft.

CONSTRUCT PROPOSED ATCT AND BASE BUILDING

The proposed ATCT would be centrally located south of the intersection of Runways 12/30 and 3/21. The proposed ATCT would measure 112 feet tall to top of the cab—totaling 123 feet tall inclusive of antennae, rotating beacon, and lightning protection system—and includes an octagonal (eight-sided) 35-foot-tall cab mounted at 99.2 feet above ground level. The cab would rest atop a roughly square-shaped ATCT shaft with a footprint measuring approximately 24 by 24 feet. While the square-shaped ATCT base would be oriented following the four cardinal points, the cab would be aligned 15 degrees counterclockwise in relation to the ATCT shaft itself. The foundation for the proposed ATCT would consist of 4-by-4-foot grade beams on nine, 42-inch-diameter drilled shafts excavated to a depth of 35 feet.

The project, as proposed, also includes construction of a 1,015-square-foot base building. Its foundation would consist of 2-foot shallow-spread footings with a 1-foot-thick slab-on-grade pad (5 feet above top-of-grade beams).

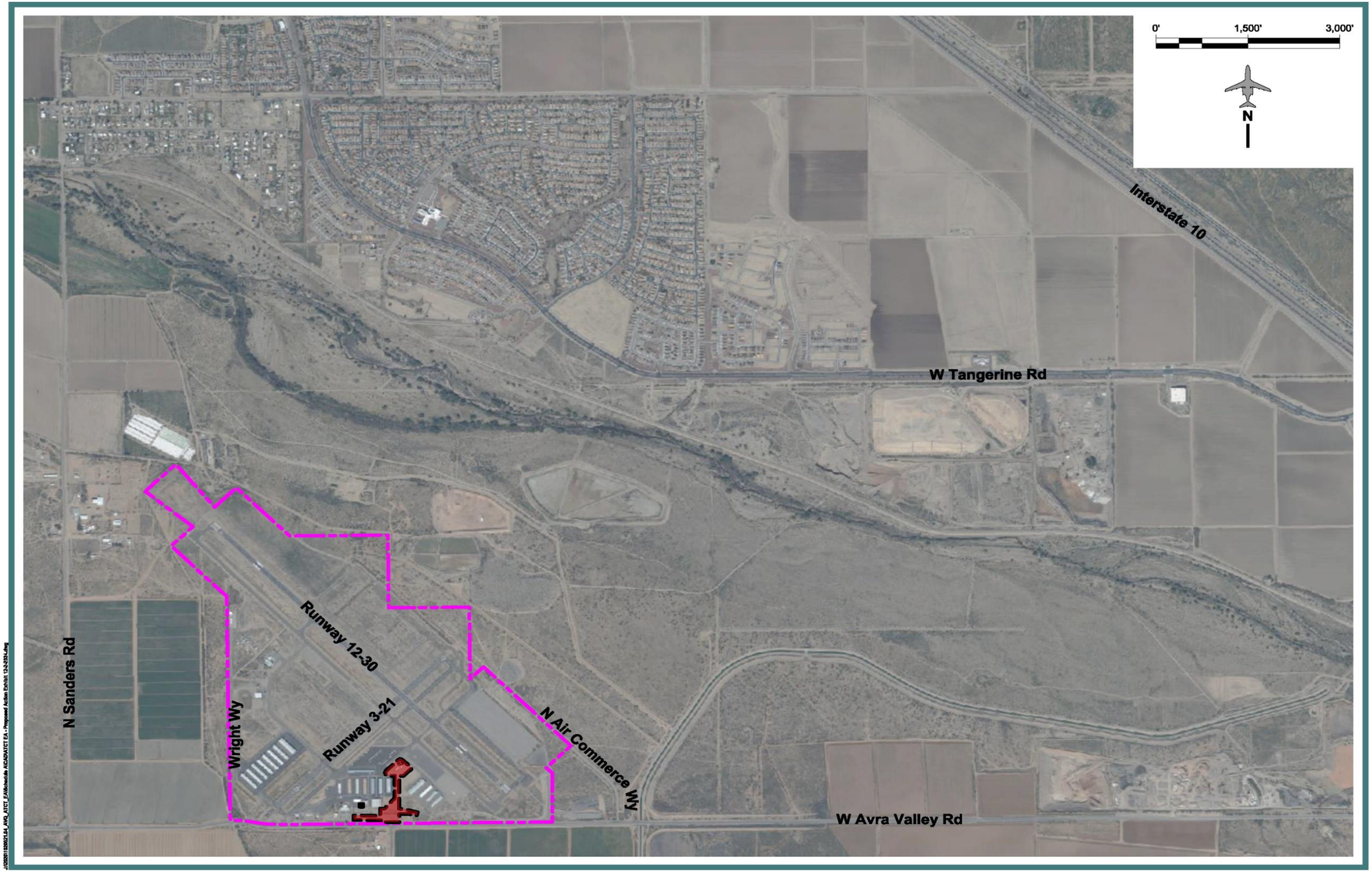

Figure 2-1. Proposed Action vicinity.

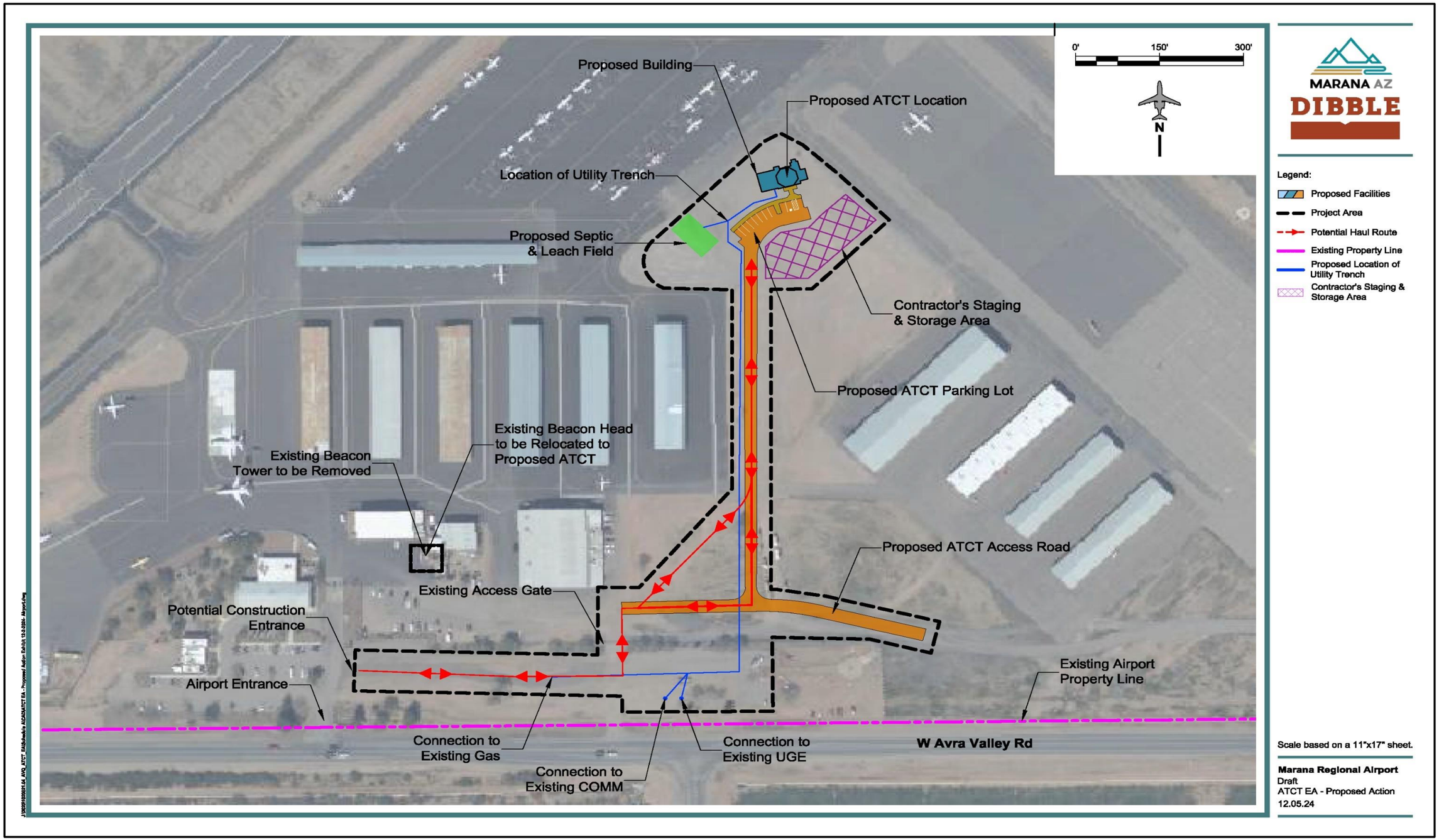

Figure 2-2. Proposed Action project area.

CONNECT UTILITIES

The proposed ATCT and base building would also require new underground utility connections including electric, water, gas, and telecommunications services. An 18-inch-wide joint dry utilities trench would be installed for electric, gas, and telecommunications lines, extending approximately 1,240 feet in length from the base building southward to the existing utility connections next to West Avra Valley Road. The joint dry utilities trench would be excavated to a depth of 42 inches. The water line would be placed in a 260-foot-long, 18-inch-wide trench excavated to a depth of 4 feet and would connect to the existing water line south of the new parking lot.

A new septic system (sewer line, septic tank, and accompanying leach field) would also be constructed to support the proposed ATCT and base building. The sewer line would be installed in a trench measuring 100 feet long, 18 inches wide, and excavated to a depth of 6 feet. The corresponding new septic tank would be placed in a trench approximately 10 by 6 feet in size and excavated to a depth of 8 feet. Finally, the leach field would measure 69 by 49 feet (3,381 square feet) and would be excavated to a depth of 6 feet.

New construction for the proposed ATCT would also include installation of new ATCT-specific equipment and computer systems. This includes the removal of an existing 50-foot-tall beacon tower (leaving the 10-by-10-foot, 6-inch-thick concrete slab foundation in place) and the relocation of the 28-inch-tall rotating beacon to the top of the new ATCT on an 18-inch square-mounting base. This way, the beacon would not shine into the cab of the ATCT and interfere with controllers' observations.

CONSTRUCT NEW ACCESS ROAD AND VEHICLE PARKING AREA

Construction of the proposed ATCT and base building would also include a new asphalt-paved vehicle parking lot for ATCT personnel and visitors, measuring 139 feet by 42 feet (5,838 square feet) in area. The proposed ATCT would be accessed via a new asphalt road (oriented north-south) and new asphalt access road extension from the existing roadway termination (oriented east-west). The new access road would be 692 feet long and 20 feet wide (totaling 13,840 square feet of newly paved surface). The new asphalt access road extension would be 548 feet long and 24 feet wide (totaling 13,152 square feet). All new pavement would consist of a 10-inch total pavement section depth, with 4 inches of asphalt atop 6 inches of aggregate base course.

OPERATIONS AND MAINTENANCE

The Town would be responsible for all operations and maintenance costs once the project is complete, including utilities, repairs, and custodial services. The operational schedule for the proposed ATCT would be set in accordance with FAA requirements, but it is anticipated that the proposed ATCT would be staffed by two to three people per day and follow typical ATCT operations, which generally occur from 6:00 a.m. to 10:00 p.m., 7 days a week.

2.3.2 No Action Alternative

Under the No Action alternative, there would be no construction, operation, or maintenance of an ATCT at AVQ and its facilities would remain in their existing state and configuration. The No Action alternative would not meet the project's purpose and need, but is retained for comparison purposes for the analysis in Chapter 3.

The current operations would remain in place with no ATCT.

2.4 Alternative Screening Process Summary

The discussion below identifies the alternatives discussed in the preceding sections and summarizes the alternatives screening process. Whether a proposed alternative is reasonable depends largely upon the extent to which it meets the purpose and need for the Proposed Action.

- Step 1: Reasonable? Would the alternative allow traffic control personnel to see (visually), communicate with, observe (remotely or otherwise), direct, and control operations within the areas of the airport designated as the control movement areas?

Five of the initial eight candidate sites were eliminated for not meeting the reasonable criteria: Sites 1, 3, 6, 7, and 8. Site 6, located on the east side of the airfield, was eliminated due to the distance to the busiest west side of the field and lack of infrastructure to support the site. Sites 1, 3, and 7 were eliminated due to the required crossing of movement areas to access the proposed ATCT site. Site 8 (shown on the 2018 approved Airport Layout Plan) was eliminated due to the required height that would be necessary to overcome shadowing by nearby buildings. Sites 2, 4, and 5 were carried forward by the team and airport staff for feasibility evaluations.

- Step 2: Feasible? Is the necessary infrastructure to operate an ATCT available at the site without extensive costs to provide utility connections when compared to alternate sites?

Sites 2, 4, and 5 were further analyzed with the FAA virtual immersive siting ATCT assessment team. During this process, Site 2 was eliminated from the analysis by the subject matter expert (Air Traffic Control Specialist) due to the distance from the busy area around Runway 3 and the Runway 3 approach airspace. Additional issues included view angles and distance to the Runway 3 threshold. The floor height of the cab would need to be increased due to shadowing by existing hangars adjacent to the Runway 3 threshold, and the east orientation toward the primary runway approach had severe sun glare issues.

Although Site 4 was within a short distance of Site 5, it was ultimately eliminated due to the taller height of the proposed ATCT that would be required in that location. Additional height increased the cost of the Site 4 option; thus, Site 4 was deemed less preferable than Site 5.

Site 5 was identified as the preferred location by airport staff and the siting team, having the highest ranking for reasonable and feasible evaluations. Site 5 was found to have unobstructed views of all movement areas on the airfield. Similarly, it also has the best views of a majority of the most active non-movement areas. There are no movement or non-movement areas obstructed by look-down angle and there are no other line-of-sight obstructions on any existing or proposed movement areas. Therefore, Site 5 was the first choice of all siting team members and was also identified as the preferred site in the safety risk management analysis, in which the site meets all criteria. The only noted impact, though not considered a hazard, is the ATCT's penetration of the CFR Part 77 7:1 transitional surface of Runway 3-21. Obstruction lighting will be installed at the top of the ATCT structure to mitigate the penetration. There are no other significant impacts related to NASWatch, U.S. Standard for Terminal Instrument Procedures, line of sight, CFR Part 77, future airport development, or local weather phenomena with the potential to impair visibility (Quadrex et al. 2022).

Only the Proposed Action satisfies both criteria contained in the screening process; therefore, it is carried forward for evaluation in Chapter 3.

2.5 Permits, Licenses, and Approvals Required

Grading and building permits to allow for the construction of the ATCT are required from the Town of Marana. A building permit from Pima County is also required for new utilities, including septic systems.

In addition, Pima County requires compliance with their Fugitive Dust Activity Permit Program for soil-disturbing or construction activities 1 acre or greater in overall area, mechanized trenching 500 feet or greater in length, road construction over 50 feet, or blasting (Pima County Department of Environmental Quality 2024).

2.6 List of Special Purpose Laws and Requirements Considered

Table 2-1 through Table 2-3 list federal laws and statutes, Executive Orders, and U.S. Department of Transportation (DOT) orders and FAA orders and/or advisory circulars considered in the preparation of this EA.

Table 2-1. Federal and Other Laws and Statutes

Federal Laws and Statutes
Airport and Airway Improvement Act of 1982, as amended (PL 97-248; 43 CFR 2640)
Airport and Airway Revenue Act of 1987 (PL 100-223, Title IV)
Archeological and Historic Preservation Act of 1974 (PL 93-291, 16 USC 469)
Aviation Safety and Capacity Expansion Act of 1990 (PL 101-508, as amended)
Clean Air Act of 1977, as amended (42 USC 7409 et seq.) and FAA's Presumed to Conform List (72 Federal Register 1565 July 30, 2007)
Comprehensive Environmental Response, Compensation, and Liability Act (42 USC 9601; PL 96-510)
Endangered Species Act of 1973 (PL 85-624; 16 USC 661, 664 note, 1008 note)
Federal Aviation Administration Reauthorization Act of 2024 (PL 118-63)
Federal Aviation Administration Order 6480.4B
Federal Water Pollution Control Act Amendments for 1972, Section 404 (33 USC 1344; PL 92-500), as amended by the Clean Water Act of 1977 (33 USC 1251; PL 95-217)
Migratory Bird Treaty Act (16 USC 703 et seq.)
National Environmental Policy Act of 1969 (PL 91-190; 42 USC 4321 et seq.)
National Historic Preservation Act of 1966, Section 106 (16 USC§470[f]; PL 89-665)
Noise Control Act of 1972 (PL 92-574; 42 USC 4901)
Pollution Prevention Act (42 USC 13101-13109)
Resource Conservation and Recovery Act of 1976 (42 USC 6901, et seq.); PL 94-580, as amended by the Solid Waste Disposal Act of 1980 [PL 96-482]; and the 1984 Hazardous and Solid Waste Amendments [PL 98-616])
U.S. Department of Transportation Act of 1966 – Section 4(f) (as amended by 49 USC 303, Policy on lands, wildlife and waterfowl refuges, and historic sites [PL 97-449])
14 CFR Part 150, Airport Noise Compatibility Planning
36 CFR Part 800, Protection of Historic Properties

Federal Laws and Statutes
50 CFR Part 17, Endangered and Threatened Wildlife and Plants
50 CFR Part 21, Migratory Bird Permits
50 CFR Part 402, Interagency Cooperation - Endangered Species Act of 1973, as amended
Other Laws and Statutes
Pima County Community Wildfire Protection Plans (CWPPs)

Table 2-2. Executive Orders

Executive Orders
Executive Order 11514, Protection and Enhancement of Environmental Quality (March 4, 1970)
Executive Order 11593, Protection and Enhancement of the Cultural Environment (May 13, 1971)
Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks (April 21, 1997)
Executive Order 13112, Invasive Species (February 3, 1999)
Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (November 9, 2000)
Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds (January 17, 2001)
Executive Order 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis (January 21, 2025)

Table 2-3. U.S. Department of Transportation and Federal Aviation Administration Orders

DOT and FAA Orders
DOT Order 5301.1, Department of Transportation Programs, Policies, and Procedures Affecting American Indians, Alaskan Natives, and Tribes (November 16, 1999)
DOT Order 5650.1, Protection and Enhancement of the Cultural Environment (November 20, 1972)
FAA Order 1050.1F, Environmental Impacts: Policies and Procedures (July 16, 2015)
FAA Order 1210.20, American Indian and Alaskan Native Tribal Consultation Policy and Procedures (January 28, 2004)
FAA Order 5050.4B, National Environmental Policy Act Implementing Instructions for Airport Actions (April 28, 2006)

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The FAA reviewed the environmental impact categories as found in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* (Chapters 1-14). The environmental impact categories are reviewed to identify 1) the categories that do not have the potential to be impacted by the proposed action and its reasonable alternatives; and 2) the categories that may be impacted by the proposed action and its reasonable alternatives. Significance thresholds may be quantitative criteria or qualitative factors. The FAA considers impacts determined to reach or exceed quantitative thresholds—for categories where a threshold exists—significant. For resources where there is no defined quantitative threshold, the FAA considers qualitative significance factors to determine if the project's impact is significant.

The environmental impact analysis in this chapter assesses whether potential impacts of the Proposed Action would significantly affect the human environment, as defined by FAA's NEPA implementing guidance in FAA Orders 5050.4B and 1050.1F (FAA 2006, 2015). The analysis describes environmental resources present in the study area or vicinity (i.e., the affected environment) and the anticipated impacts to those resources resulting from construction or operation of the project's alternatives (i.e., environmental consequences).

For purposes of this analysis, the "project area" includes the area encompassing all components that are part of the Proposed Action. For each resource, a specific "analysis area" is defined that encompasses a larger area where potential environmental impacts may occur. For each resource addressed in detail below, the specific analysis area (including both geographic and temporal limits) is defined.

3.1 Environmental Impact Categories Not Affected

The No Action alternative and Proposed Action do not have the potential to affect the categories identified in Table 3-1. because the resources do not exist at the airport and/or the nature of the project would not result in impacts to these resources. No discussion of the existing conditions or potential impacts related to these categories is included in this EA.

Table 3-1. Issues Not Carried Forward for Detailed Analysis

Category	Effect/ Impact	Rationale for No Further Discussion
Biological Resources	No Effect	A biological resource evaluation was prepared to evaluate impacts and none of the 10 threatened, endangered, or candidate species would be impacted by construction and operation of the ATCT (U.S. Fish and Wildlife Service IPaC and Arizona Game and Fish Department, Appendix B). Only one species has the potential to occur in the project area: the monarch butterfly, a candidate species not currently afforded protection under the Endangered Species Act (ESA). The project may impact individual monarch butterflies but is not likely to result in a trend toward federal listing or loss of population viability. No designated critical habitat is present within the project area. The FAA made a finding of "no effect" per Section 7 of the ESA and therefore consultation with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service is not required (see Appendix B). Based on a review of the Arizona Game and Fish Department's Environmental Review Tool Report, no special areas (i.e., critical habitat, important bird areas, wildlife connectivity areas, etc.) were recorded within the project area (see Appendix B). The report also indicated two species (Gila monster and Harris's hawk) have the potential to intersect the project area; however, birds protected under the Migratory Bird Treaty Act and/or Bald and Golden Eagle Protection Act were considered based on occurrence or warranting special attention in this area. In addition, the Town and its contractor will implement best management practices to avoid and minimize potential adverse effects to biological resources (see Section 3.7)

Category	Effect/ Impact	Rationale for No Further Discussion
Coastal Resources	No Impact	The Coastal Zone Management Program is specifically designed for states and territories with coastlines along the Atlantic and Pacific Oceans, the Gulf of Mexico, and the Great Lakes. Arizona, located in the southwestern region of the United States, is landlocked and, therefore, ineligible for inclusion in the Coastal Zone Management Program. The project is within Arizona and would not impact any coastal resources.
Farmlands	No Impact	The project would occur entirely on airport property, which is situated within a growth area targeted for employment, as outlined in local land use plans. Under Section 523(10)(B) of the Farmland Protection Policy Act (FPPA), land that is committed to urban development is exempt from the FPPA's provisions. The project would not involve the acquisition or conversion of any farmland, and no impacts to farmlands would occur.
Hazardous Materials, Solid Waste, and Pollution Prevention	No Effect	Construction and operation of the project would not include the use of hazardous materials, except for chemical constituents contained in fuels (gasoline and diesel fuel) and lubricants (oil and grease). The Town of Marana and its contractors would comply with all hazard communication and hazardous material laws and regulations regarding these chemicals. They would also adhere to the Marana Regional Airport Emergency Plan (Town of Marana 2024a), which provides guidance for implementation of spill prevention, control, and countermeasures to minimize the leaks of motor oils, hydraulic fluids, and fuels and response to emergency situations. In addition, the Town and its contractors would comply with all applicable federal and state regulations regarding notices to federal and local emergency response authorities and development of applicable emergency response plans, if required. With these measures and implementation of design features, impacts from hazardous materials would not occur (see Section 3.7).
Historical, Architectural, Archaeological, and Cultural Resources	No Effect	A cultural resources evaluation and built environment evaluation were conducted to address potential impacts to historical, architectural, archaeological, and cultural resources. The reports found that historic properties are not present in the Proposed Action footprint where ground-disturbing activities are planned. Although historic properties are present within other portions of the area of potential effects where the proposed ATCT would introduce a visual change, the Proposed Action would not diminish historic properties' integrity of setting or feeling because of the ATCT's size relative to the historic properties' locations, which are 0.5 to 3.0 miles away. Based on these analyses, the FAA found "no adverse effect" on historic properties per Section 106 of the National Historic Preservation Act. The FAA consulted with the Arizona State Historic Preservation Office (SHPO) and Tribes with interest in the project area. SHPO concurred with the FAA's finding in a letter dated May 21, 2024. Of the Tribes that responded, no concerns or comments were received disagreeing with the finding. Copies of the consultation letters and response matrix are included as Appendix C.
Natural Resources and Energy Supply	No Impact	Construction of the Proposed Action would consume natural resources (such as water, asphalt, aggregate, wood, etc.) that the Town would procure from approved local sources. Operation of the Proposed Action would use energy supplies (such as energy for electricity and natural gas for heating), consistent with current airport operations. No increase in demand to local utilities' energy capacity would be required, and the natural resource and energy supply demands of the Proposed Action would not exceed the available supply.
Noise and Compatible Land Use	No Impact	Implementation of the Proposed Action would not increase airport capacity or add additional aircraft, vehicle use, or other factors that could affect noise levels or land use around the airport. Construction related to the Proposed Action would not be perceptible over other ambient noise. The nearest sensitive receptors are rural residential dwellings, 1.2 miles southeast of the project area. Construction equipment noise would be short term. The noise from project operations would not exceed current noise levels.

Category	Effect/ Impact	Rationale for No Further Discussion
Socioeconomics and Children's Environmental Health and Safety Risks	No Effect	Implementation of the project would not cause disruption of communities, relocations, or disproportional socioeconomic impacts. The project was evaluated for the potential to pose environmental health risks and safety risks that could disproportionately affect children. The analysis identified project effects that may pose a risk to health or safety and expose children to products or substances they are likely to come in contact with or ingest, such as air, food, water, recreational waters, soil, or products. The nearest school, Gladden Farms Elementary School, is over 1 mile to the northeast, and Marana High School is 2.4 miles to the southwest. The nearest parks include Gladden Farms Community Park and the Santa Cruz River Park. There are no listed daycares or health clinics within 3 miles of the project area. The nearest residential areas are approximately 2 miles from the project area, including Gladden Farms to the northeast and unnamed rural residential areas to the southwest. U.S. Census community statistics data is provided in Appendix D. Although children live and attend school within 3 miles of the project area, the project would not result in new health or safety risks to children. Project activities are limited to placement and relocation of new structures within the airport boundaries and would not increase airport capacity or add additional aircraft, vehicle use, or other activities that would directly or indirectly expose children to new products or substances, including changes in air pollution. The project may result in beneficial impacts related to employment due to potential for hiring temporary new employees during construction. The number of permanent operations staff employed by the Town is anticipated to remain at current levels; and, two to three new federal employees are anticipated to be permanently employed. The Town has conducted extensive outreach to notify local communities of this Proposed Action and traffic related to movement of construction materials would be short-term. With consideration of these outreach efforts, no adverse impact to local communities related to construction vehicle traffic is anticipated.
Water Resources (subcategories wetlands, wild and scenic rivers, and groundwater)	No Impact	No waters of the U.S., including wetlands or wild and scenic rivers, are present in the project area; therefore, no impacts to these resources would occur. According to the Arizona Department of Water Resources (2004) well registry, the depth to groundwater at the nearest well, located approximately 1,500 feet southeast of the project site, is between 215 and 250 feet. Project construction and implementation would not impact groundwater, as the excavation depth for the project's foundations would not reach groundwater. Construction would require ground disturbance of more than 1 acre and would therefore have the potential to produce stormwater discharge. The Town or its contractors would prepare a Stormwater Pollution Prevention Plan and file a Notice of Intent with Arizona Department of Environmental Quality under the Construction General Permit portion of their Arizona Pollution Discharge Elimination System (AZPDES) permitting program. All requirements of AZPDES would be followed until the project is completed. With these measures and implementation of construction best management practices, impacts related to stormwater discharge would not occur (see Section 3.7).

* In general, short-term impacts are those that would occur only during the time required for construction or installation activities (e.g., 11 months or less). Long-term impacts are those that are more likely to be persistent during operation and maintenance (e.g., 11 months or longer).

The Proposed Action has the potential to impact the following environmental impact categories listed in FAA Order 1050.1F, which are discussed in the following sections:

- Air Quality
- Climate
- Department of Transportation Act, Section 4(f)
- Land use
- Visual effects (subcategories light emissions and visual resources/ visual character)
- Water resources (subcategories floodplains and surface waters)

3.2 Air Quality

- Would the project increase criteria air pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards (NAAQS), as established by the U.S. Environmental Protection Agency (EPA) under the Clean Air Act, for any of the time periods analyzed, or increase the frequency or severity of any such existing violations?

3.2.1 Affected Environment

ANALYSIS AREA (GEOGRAPHIC AND TEMPORAL)

The Marana Regional Airport is located in Pima County, which is in attainment for all criteria pollutants except for respirable particulate matter (PM_{10}). The project area is located within the Rillito moderate non-attainment area for PM_{10}.

The nearest air quality monitoring station is located in Rillito about four miles to the east of the project location. The average PM_{10} concentration measured at the station from 2021 through 2023 is presented in the table below. These averages are below the PM_{10} standard of 150 micrograms per cubic meter.

Table 3-2. Local Air Quality Monitoring Station Data

Monitoring Station	Monitoring Station Number	Address	Distance from Project Area	Pollutant Standard	2021 Arithmetic Mean (µg/m^3)	2022 Arithmetic Mean (µg/m^3)	2023 Arithmetic Mean (µg/m^3)
Rillito	04-019-0020	8840 W Robinson Street, Rillito, AZ	4.0 miles east	PM_{10} – 24-hr Average (150 µg/m^3)	51.71	45.05	46.28

Source: U.S. EPA Air Data Air Quality Monitors

Regulatory Context

Under the *Clean Air Act* (42 USC §§7409 et seq.), the U.S. EPA established NAAQS based on health risks for the following pollutants:

- Respirable particulate matter (PM_{10}) (i.e., with an aerodynamic diameter of 10 microns or less)
- Fine particulate matter ($PM_{2.5}$) (i.e., with an aerodynamic diameter of 2.5 microns or less)
- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Sulfur dioxide (SO_2)
- Lead (Pb)
- Ozone (O_3)

Based on federal air quality standards, an area can be classified as an attainment, maintenance, or nonattainment area for each criteria pollutant. A state implementation plan (SIP) that prescribes measures to bring the levels of nonconforming pollutants into conformance with the NAAQS is required for each nonattainment area. The threshold for nonattainment designation varies by pollutant.

Federal actions planned to occur within a nonattainment or maintenance area that do not fall under a *Clean Air Act* exemption or are not listed on FAA's approved "presumed to conform" list must undergo a *de minimis* comparison to determine whether a formal General Conformity Determination is required.

The Marana area is in attainment for all federal criteria pollutants except PM_{10}. Specifically, the area is located within the Rillito PM_{10} moderate non-attainment area; therefore, a General Conformity Determination under the *Clean Air Act* is required for PM_{10} for this project. A construction emissions inventory for the Proposed Action was prepared using the U.S. EPA's MOtor Vehicle Emission Simulator (MOVES). This methodology is identified in the FAA's *Air Emissions and Air Quality Handbook* as the "current EPA-approved model used to compute motor vehicle emissions rates representative of various types of vehicles and activities." MOVES5 national average emission factors for 2026 were used for off-road sources and MOVES4 national average emission factors for 2026 were used for on-road sources. The MOVES model produces emissions factors which are used to calculate emissions expressed in hours of activity for off-road equipment (such as graders or excavators) and based on miles driven for on-road vehicles (such as cement trucks or passenger cars). Estimates of grading and construction activities were used to estimate emissions from construction equipment activity.

3.2.2 Environmental Consequences

SIGNIFICANCE THRESHOLD / IMPACT INDICATOR

The FAA has established a significance threshold for impacts to Air Quality resources (FAA Order 1050.1F Exhibit 4-1:4-4).

- The action would cause pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards (NAAQS), as established by the Environmental Protection Agency under the Clean Air Act, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations.

DIRECT AND INDIRECT IMPACTS

No Action

Under the No Action alternative, airport operations would remain the same. The No Action alternative would have no additional effect on criteria pollutant emissions, because existing airport infrastructure and operations would continue unchanged. There are no construction activities associated with the No Action alternative and thus no new climate change–resilient features would be constructed. There would be no infrastructure upgrades under the No Action alternative, and therefore no preventative measures for the airport operations.

Proposed Action

Construction activities have the potential to generate temporary air pollution due to fugitive dust, as well as construction equipment and worker vehicle emissions. Pima County requires a Fugitive Dust Activity Permit for soil disturbing or construction activities that are one acre or greater in overall area, road construction 50 ft or greater, mechanized trenching 300 ft or greater in length, or blasting (Pima County Fugitive Dust Pre-Application Guidance, 2024). Since the total construction area for the ATCT would be 7.58 acres, a permit will be required.

Comparison to General Conformity *de minimis* thresholds are only conducted on pollutants for which the area is classified as either maintenance or nonattainment. Since the project area is in attainment for

all federal criteria pollutants except PM_{10}, a General Conformity *de minimis* analysis is only applicable for PM_{10}. The results of this analysis are presented in the table below. Data for all pollutants other than PM_{10} are for the purpose of disclosure only.

Table 3-3. Estimated Total Proposed Action Construction Emissions (tons)

Construction Emission Source	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	VOCs	HAPs
Year 1 - Construction Equipment (off-road)	10.09	12.90	0.01	0.20	0.19	0.49	0.15
Year 1 - Worker and On-Road Construction Equipment Commuting	1.50	1.02	0.00	1.48	0.20	0.14	0.01
Year 1 - Equipment/Material Delivery	0.10	0.14	0.00	0.49	0.09	0.01	0.00
Year 1 - Fugitive Dust from Construction Operation	-	-	-	0.60	0.06	-	-
Total Year 1 Construction Emissions for the Proposed Action	**11.69**	**14.06**	**0.02**	**2.76**	**0.54**	**0.64**	**0.15**
Year 2 - Construction Equipment (off-road)	10.09	12.90	0.01	0.20	0.19	0.49	0.15
Year 2 - Worker and On-Road Construction Equipment Commuting	1.50	1.02	0.00	1.48	0.20	0.14	0.01
Year 2 - Equipment/Material Delivery	0.10	0.14	0.00	0.49	0.09	0.01	0.00
Year 2 - Fugitive Dust from Construction Operation	-	-	-	0.60	0.06	-	-
Total Year 2 Construction Emissions for the Proposed Action	**11.69**	**14.06**	**0.02**	**2.76**	**0.54**	**0.64**	**0.15**
De Minimis Level	N/A	N/A	N/A	100	N/A	N/A	N/A
Total Project Emissions	**23.38**	**28.11**	**0.03**	**5.53**	**1.08**	**1.28**	**0.31**

Operational emissions resulting from ongoing vehicular emissions and electrical demand related to employees of the new ATCT would be minimal. Only three additional federal employees are anticipated above current staffing levels; thus, increases in operational vehicular trips would be negligible.

The project meets the criteria under Item 15 (Routine Installation and Operation of Airport Navigation Aids) because it would not generate emissions exceeding *de minimis* levels, as the estimated annual construction PM_{10} emissions of 2.76 tons per year fall well below the 100 ton per year *de minimis* threshold. Project implementation would not cause pollutant concentrations to exceed NAAQS, as established by the U.S. EPA under the Clean Air Act, or increase the frequency or severity of any such existing violations.

To assess the remaining criteria pollutants for which the project area is in attainment, the Step 4 Screening Criteria from the FAA Air Quality Handbook were used to determine whether additional analysis is required. Below are the four screening parameter questions specified.

A. If the project is not in the OTR, will the FAA Federal Action cause an increase in all aircraft operations of more than 14,000 operations per year? If the project is in the OTR, will the FAA Federal Action cause an increase in GA aircraft operations of more than 5,000 operations per year, or an increase in all aircraft operations of more than 14,000 operations per year?

The project is not in the OTR and is not anticipated to result in any additional aircraft operations.

B. Will the FAA Federal Action cause a projected annual increase of aircraft delay exceeding 340,000 minutes?

No increase in aircraft delay is anticipated as a result of this project.

C. Will the FAA Federal Action cause an additional 25 million vehicle miles traveled (VMT) from on-road vehicles per year?

The maximum total additional VMT associated with the project is anticipated to be 1.15 million VMT per year for all construction activities which represents the worst-case scenario.

D. If the project is not in an OTR, will the FAA Federal Action result in the use of an average of more than 125 pieces of construction equipment and GSE during a year? If the project is in an OTR, will the FAA Federal Action result in the use of an average of more than 50 pieces of construction equipment and GSE during a year?

The project is not in the OTR, and the maximum average pieces of construction equipment is anticipated to be 13 during a year on a 16 hour per day annualized basis. No additional GSE is anticipated as a result of the project during the operational phase.

These Screening Parameters were then normalized by dividing by the following Screening Criteria:

In a given year, if A' + B' + C' + D' ≥ 1.0, prepare emissions inventory.

Where:

A' = Increase in Aircraft LTO's / 14,000

B' = Increase in Aircraft Taxi/Idle/Delay (minutes) / 340,000

C' = Ground Access Vehicles (GAV) Trips (VMT) / 25,000,000

D' = Number of pieces of GSE and Construction Equipment / 125

Below are the normalized values for each Screening Parameter using peak construction activities:

A' = 0 Increase in Aircraft LTO's / 14,000 = 0

B' = 0 Increase in Aircraft Taxi/Idle/Delay (minutes) / 340,000 = 0

C' = 1,152,000 GAV Trips (VMT) / 25,000,000 = 0.046

D' = 13 pieces of Construction Equipment / 125 = 0.104

Adding these normalized values results in a sum below 1.0, therefore, an emission inventory is not required.

Table 3-4. Normalized Values for Screening Parameters

Variable	Variable Description	Project- Specific Change	Normalization
A	Aircraft Operations	No Change	0.000
B	Aircraft Taxi/Idle/Delay	No Change	0.000
C	Ground Access Vehicles	1,152,000 VMT	0.046
D	Construction Equipment	13 Pieces	0.104
Total	**--**	**--**	**0.150**

As the sum is well below 1.0, no further analysis was deemed necessary for the attainment criteria pollutants.

3.3 Climate

- Would the project increase greenhouse gas (GHG) emissions or change the current level of the site's preparedness to climate change?

3.3.1 Affected Environment

ANALYSIS AREA (GEOGRAPHIC AND TEMPORAL)

Climate change is a change in the average climatic conditions of the Earth, as characterized by changes in wind patterns, storms, precipitation, and temperature. Climate change is a global phenomenon that can also have local impacts. Greenhouse gases—such as water vapor, carbon dioxide (CO_2), methane, nitrous oxide, and ozone—are both naturally occurring and human-made. Research has established a direct correlation between fuel combustion and GHG emissions. GHGs from human-related sources include CO_2, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. CO_2 is a long-lived gas that remains in the atmosphere for up to 100 years (Intergovernmental Panel on Climate Change 2023:44).

The Town of Marana's 2040 General Plan (Town of Marana 2019:3-12) establishes goals for natural hazard preparedness, including flooding and droughts, and guides the Town to develop a Drought Management Plan (Town of Marana 2019:4-11). Further, the General Plan includes extensive guidance and policy for managing flooding resultant from rain events (Town of Marana 2019:3-13) and guides future projects to be resilient from future flooding (Town of Marana 2019:4-7). The Town adopted Pima County Community Wildfire Protection Plans (CWPPs) to support GHG reduction goals and establish a flexible, ongoing strategy for addressing the Town's evolving climate change needs. At the airport, implementation of the CWPP acknowledges the impacts of climate change on local fire patterns and plant communities. Pima County, in response to nationally recognized and accredited studies (e.g., Gonzalez et al. 2018, Climate Assessment for the Southwest [CLIMAS] 2024) developed a Sustainable Action Plan (Pima County 2018). The Sustainable Action Plan recognizes the risks increased heat and dryness present to Pima County residents and businesses and seeks to build cross-sector resilience to current and future climate variability.

Regulatory Context

In response to Executive Order 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, the FAA is required to consider potential impacts associated with its actions.

3.3.2 Environmental Consequences

SIGNIFICANCE THRESHOLD / IMPACT INDICATOR

The FAA has not established a significance threshold for climate (FAA 2015). FAA's 1050.1F Desk Reference, Chapter 3 (FAA 2023) provides methodology for examining impacts associated with climate.

DIRECT AND INDIRECT IMPACTS

No Action

Under the No Action alternative, airport operations would remain the same. The No Action alternative would have no additional effect on GHG emissions, because existing airport infrastructure and operations would continue unchanged. There are no construction activities associated with the No Action alternative and thus no new climate change–resilient features would be constructed. There would be no infrastructure upgrades under the No Action alternative, and therefore no preventative measures to build resilience into the airport operations.

Proposed Action

The Proposed Action would not change the current operations and maintenance of the airport, would not increase the capacity of the airport, and no incremental change in GHG emissions would take place. The current operations and maintenance of the airport would continue during and after the ATCT is constructed.

The Proposed Action would not result in an incremental increase in GHG emissions during normal operations and maintenance, compared to the No Action alternative. The Proposed Action would not modify the airfield, or accommodate a greater number of, higher frequency of, or larger aircraft. In addition, aircraft demand at the airport is anticipated to remain consistent following the upgrades to existing infrastructure. Therefore, the Proposed Action is not anticipated to increase GHG emissions from airport-related activity.

GHG emissions as part of construction activities for the Proposed Action are expected to occur in 2026. The Proposed Action includes the use of construction equipment to build the proposed facilities. Emissions associated with construction activities are expected to be approximately 4,900 tons per year of CO_2 equivalent. The Town and the FAA have shown in their alternatives analysis (refer to Chapter 2) that there were no practicable alternatives that would eliminate potential GHG emissions. A summary of the anticipated construction GHG emissions is presented in the table below.

Table 3-5. Proposed Action Construction Emissions (metric tons)

Construction Emission Source	CO_2	CH_4	N_2O	Total CO_2e [1]
Year 1 - Construction Equipment (off-road)	4,574	0.05	0.02	4,580
Year 1 - Worker and On-Road Construction Equipment Commuting	215.36	0.01	0.00	216.09
Year 1 - Equipment/Material Delivery	88.25	0.00	0.00	88.32
Year 1 - Fugitive Dust from Construction Operation	-	-	-	-
Total Year 1 Construction Emissions for the Proposed Action	**4,878**	**0.05**	**0.02**	**4,885**
Year 2 - Construction Equipment (off-road)	4,574	0.05	0.02	4,580
Year 2 - Worker and On-Road Construction Equipment Commuting	215.36	0.01	0.00	216.09
Year 2 - Equipment/Material Delivery	88.25	0.00	0.00	88.32
Year 2 - Fugitive Dust from Construction Operation	-	-	-	-
Total Year 2 Construction Emissions for the Proposed Action	**4,878**	**0.05**	**0.02**	**4,885**
Total Project GHGs	**9,755**	**0.11**	**0.04**	**9,769**

[1] Global warming potentials are based on IPCC AR6 Climate Change 2021: the Physical Science basis. Chapter 7.

The Proposed Action is not expected to be affected by future climate conditions and would be designed to function in extreme heat without impact from extreme drought. The ATCT would be built to incorporate heat-reflective materials and heat-tolerant materials. These risks are not new to the Town or the airport. The Town's adoption of Pima County's CWPP further reduces the effects of climate change through sustainable design and site development guidelines. Due to the nature of the Proposed Action, there are no recommended avoidance, minimization, or mitigation measures that would reduce GHG emissions.

3.4 U.S. Department of Transportation Act, Section 4(f)

- How would the presence of new infrastructure, including the new ATCT, affect Section 4(f) properties?

3.4.1 Affected Environment

ANALYSIS AREA (GEOGRAPHIC AND TEMPORAL)

The analysis area established for this resource was a 3-mile radius from the project area (Figure 3-1). This analysis area provides an opportunity to identify potential Section 4(f) properties that may be directly affected by construction or indirectly affected by visual or noise impacts and is the same 3-mile viewshed as that used for analysis of both cultural resources and visual resources.

A visual resources analysis was prepared for this project and the FAA coordinated with responsible local, state, and federal resource agencies to evaluate potential impacts; those findings are incorporated and described in this EA (Appendix E and Appendix F). A cultural resources evaluation and built environment evaluation were conducted to address potential impacts to historical, architectural, archaeological, and cultural resources (see Appendix C).

Letters were mailed to the Town of Marana Parks and Recreation Department, the National Park Service (NPS), and the Juan Bautista de Anza National Historic Trail (Anza Trail or Anza NHT) representatives to request input on the presence of any known Section 4(f) properties or any specific concerns related to such properties that may result as part of project implementation. A response from NPS and Anza Trail representatives was received, and additional coordination and analysis were prepared to address concerns about potential adverse impacts to the viewshed from the Anza Trail due to the placement of a new ATCT. A summary of Section 4(f) outreach and NPS coordination is included in Appendix F. Representatives of the FAA, Town Public Works–Airport, Town Public Works–Capital Improvements Program, and the Town Parks and Recreation Department, as well as a contracted visual resources professional, visited the Anza NHT corridor on July 24, 2024. This visit included taking additional photographs at key observation point (KOP) 4 (see Appendix F).

There are no recreation areas, wildlife or waterfowl refuges, or any publicly or privately owned historic site listed on or eligible for listing on the National Register of Historic Places in the analysis area. The FAA identified the following facilities in the analysis area that meet the definition of Section 4(f) properties (publicly owned park, open to the public and used primarily as a park) (see Figure 3-1):

- Santa Cruz River Park
- White Avenue Park
- Gladden Farms Community Park
- Ora Mae Harn District Park
- Marana Heritage River Park

The closest recreation facility is the Santa Cruz River Park, which contains a portion of the Santa Cruz River Trail (SCRT), also known as “Chuck Huckleberry Loop” or “The Loop”, a 137-mile regional system of paved pathways and bike lanes. The SCRT also coincides with a section of the designated corridor of the Juan Bautista de Anza National Historic Trail.

The viewshed associated with KOP 4 is characterized by both natural and human-made features. The SCRT itself is a human-made, paved pathway on top of a soil-cement treated earthen embankment bounded with various types of fencing (post and chain, rail, and chain-link fencing). The height of the embankment varies from 3 feet to more than 10 feet tall. Vegetation along the trail is dominated by large-stature, native riparian trees and shrubs such as velvet mesquite (*Prosopis velutina*) and creosote bush (*Larrea tridentata*) as well as invasive tree species, such as tamarisk (*Tamarix ramosissima*). This vegetation screens and obscures views across the river corridor from the SCRT. Urban and industrial development along the trail to the east is prominent, and when in proximity of the trail, becomes the focus

of attention. Based on fieldwork conducted for this analysis, the existing beacon is visible from discrete locations along the Santa Cruz River Trail.

Current land use adjacent to the SCRT in the vicinity of the airport includes Agricultural, Industrial, Parks/Open Space, Public/Institutional, and Single Family Residential (Town of Marana 2019). Zoning in adjacent areas outside the floodplain includes Agriculture, Small, Medium and Large Lot zones, Single Family Residential, and Village Commercial. The SCRT corridor itself would not be developed, as it is in a floodplain and the trail itself is located within designated Parks/Open Space. However, projected future land use outside the floodplain would be primarily Industrial and a mix of residential uses (see Section 3.4, Land Use).[4] The Town's Industrial designation provides for a mix of light and heavy industrial uses, employment centers, offices, research and development facilities, and mining infrastructure, such as the facilities visible in the viewpoint photographs (see Appendix E, KOP 4 Simulation).

Regulatory Context

Section 4(f) of the U.S. Department of Transportation Act protects significant publicly owned parks, recreation areas, and wildlife and waterfowl refuges, as well as significant historic sites.

The following may constitute a significant impact:

- Physical Use: Section 4(f) use would occur if the Proposed Action or alternative(s) would involve an actual physical taking of Section 4(f) property through purchase of land or a permanent easement, physical occupation of a portion or all the property, or alteration of structures or facilities on the property. In some cases, a temporary occupancy could be considered physical use of a property.
- Constructive Use: Impacts of the Proposed Action or alternative(s) on a Section 4(f) property are so severe that the activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially diminished.

[4] According to the 2040 General Plan (Town of Marana 2019:2-19), the 2010 Future Land Use Map (Attachment C) "guides the built environment by illustrating the type and location of permitted land uses. The land use types are described through the Future Land Use Categories. The 2010 FLUM represents the collective vision of Town leaders and residents and will continue to guide development decisions until the Make Marana 2040 General Plan is ratified." The 2040 General Plan was ratified on August 4, 2024.

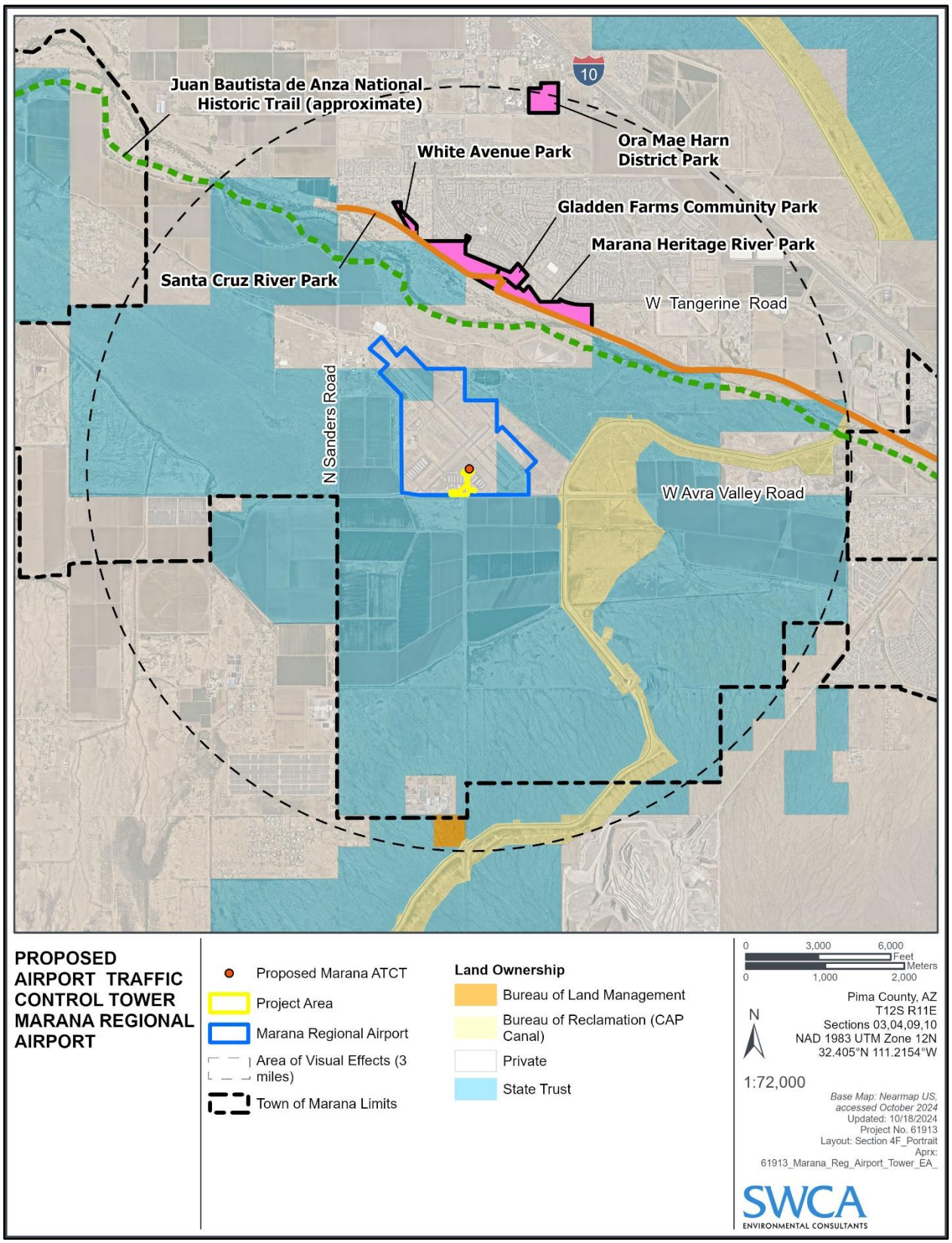

Figure 3-1. Section 4(f) resources in proximity to Marana Regional Airport.

3.4.2 Environmental Consequences

SIGNIFICANCE THRESHOLD / IMPACT INDICATOR

The FAA has established a significance threshold for impacts to Section 4(f) resources (FAA Order 1050.1F Exhibit 4-1:4-6).

- The action involves more than a minimal physical use of a Section 4(f) resource or constitutes a "constructive use" based on an FAA determination that the aviation project would substantially impair the Section 4(f) resource. Resources that are protected by Section 4(f) are publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance; and publicly or privately owned land from a historic site of national, state, or local significance. Substantial impairment occurs when the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished.

DIRECT AND INDIRECT IMPACTS

No Action

The No Action alternative would have no effect on Section 4(f) resources because all airport components would stay in their current state. Visitors to parks in the analysis area would not experience changes from current conditions as airport operations would not change. The No Action alternative would not result in a physical use of Section 4(f) properties or substantial impairment of the activities, features, or attributes of a resource that contribute to the significance of a Section 4(f) resource.

Proposed Action

The ATCT would be visible 1.5 miles from the Santa Cruz River Trail (see KOP 4 simulations, Appendix E). Construction of the Proposed Action would place a new structure (123-foot-tall ATCT) that would be visible from nearby recreational facilities, such as the SCRT.

The proposed 123-foot-tall ATCT would be visible during the day from the SCRT. Views may be direct or may occasionally be obstructed by the surrounding vegetation. The new ATCT is not anticipated to be the focus of attention of the SCRT users. The built features which currently exist, including the developed SCRT and the industrial development associated with aggregate mining facilities, would be the most prominent visible features, in contrast to the ATCT.

Construction of the Proposed Action would place a new structure (123-foot-tall ATCT) that would be visible from nearby recreational facilities, such as the Santa Cruz River Trail. Based on fieldwork conducted for this analysis, the existing beacon is visible from locations along West Avra Valley Road, portions of North Sanders Road, and discrete locations along the Santa Cruz River Trail. The relocated airport beacon light would be visible from those sections of trail that have a line of sight to the ATCT (SWCA Environmental Consultants 2024). The SCRT is open for nighttime use. The brightness and steady horizontal rotation of the beacon light would be visible by nighttime users of the SCRT, from a distance of 1.5 miles. The view of the beacon would be frequently screened by vegetation and seen alongside the collective night lighting of the industrial, residential, and commercial developments directly adjacent to the trail corridor. For these reasons, the recreational experience of nighttime users of the SCRT is not expected to be impaired by the ATCT beacon light.

The nearest Section 4(f) resource, the Santa Cruz River Trail, is located approximately 1.5 miles from the Proposed Action. Construction equipment noise would be short term (limited to construction) and construction-related noise would not be perceptible over other ambient noise from the SCRT. The noise

from project operations would not exceed current noise levels. For these reasons, no noise impacts to Section 4(f) resources are anticipated.

The Proposed Action would not result in a physical use of Section 4(f) properties or substantial impairment of the activities, features, or attributes of a resource that contribute to the significance of a Section 4(f) resource. Therefore, no significant impact would occur. No avoidance, minimization, or mitigation measures are required for this impact category (see Table 3-8).

3.5 Land Use

- How would implementation of the project affect land use in the project area and vicinity, including land use compatibility?
- How do planned land use changes contribute to the context and intensity of the proposed project's potential visual impacts?

3.5.1 Affected Environment

ANALYSIS AREA (GEOGRAPHIC AND TEMPORAL)

The analysis area used to evaluate this resource was a 3-mile radius from the project area. This area encompasses land use in the surrounding vicinity and mirrors the analysis area for most other resources.

The Proposed Action is located within the boundaries of an existing airport and aligns with future development as outlined in the approved Airport Master Plan (Town of Marana 2017) and within the approved Airport Layout Plan. The Town of Marana's 2040 General Plan (Town of Marana 2019: Figure 2-2:2-12) designates Marana Regional Airport and the surrounding land as part of the West Growth Area, which is largely undeveloped Arizona State Land Department (ASLD) property but is under an avigation easement to support airport operations. The 2040 General Plan identifies five growth areas that are particularly suitable for planned multi-modal transportation and infrastructure expansion and improvements designed to support a planned concentration of a variety of uses, such as residential, office, commercial, tourism and industrial uses, including the West Growth Area that overlaps the existing airport. The designated and future use of the project area is dedicated to airport operations, with the West Growth Area expected to evolve into an employment hub associated with the airport (Figure 3-2). Other planned land uses in the analysis area include Commercial, Employment, the I-10 corridor, Low Density Residential, Master Planned Area, Open Space Rural Residential, and Traditional Neighborhood (see Figure 3-2). Designated and future land uses contribute to the analysis area's variety in visual character: employment-associated development and master planned areas are interspersed with undeveloped buffer areas such as open desert and agricultural fields, providing visual separation of land uses dissimilar in nature (Town of Marana 2019). See Section 3.6 for detailed analysis.

Regulatory Context

The FAA considers potential impacts of a proposed action on its compatibility with land use adjacent to or in the vicinity of the proposed action, primarily as a result of the Airport and Airway Improvement Act and the Airport Development Grant Program.

3.5.2 Environmental Consequences

SIGNIFICANCE THRESHOLD / IMPACT INDICATOR

The FAA has not established significance thresholds for land use (FAA Order 1050.1F Exhibit 4-1:4-8). There are no specific independent factors to consider for land use. The determination that significant impacts exist in the Land Use impact category is normally dependent on the significance of other impacts.

DIRECT AND INDIRECT IMPACTS

No Action

The No Action alternative would result in no change to the compatibility between the airport and existing land use.

Proposed Action

The Proposed Action would not require any property acquisition or involve improvements outside the airport property boundary. The permanent improvements under the Proposed Action are within the actively managed airfield, aprons, and fenced perimeter on existing airport property. Local planning supports airport improvements such as the Proposed Action. Construction of the new ATCT and auxiliary infrastructure is aligned with the 2019 Town of Marana's 2040 General Plan and Western Growth Area uses, as well as the approved 2017 *Marana Regional Airport Master Plan*, and are consistent with the airport layout plan (Town of Marana 2017). Development of the Proposed Action would support airport safety and efficiency. The Proposed Action is not anticipated to cause any compatibility-based conflicts with the Town of Marana 2040 General Plan. The addition of an ATCT to the analysis area, while a change to the visual character and subject to project mitigation (see Section 3.6.2), would not result in new or non-conforming land use in the analysis area (both on-airport and off-airport).

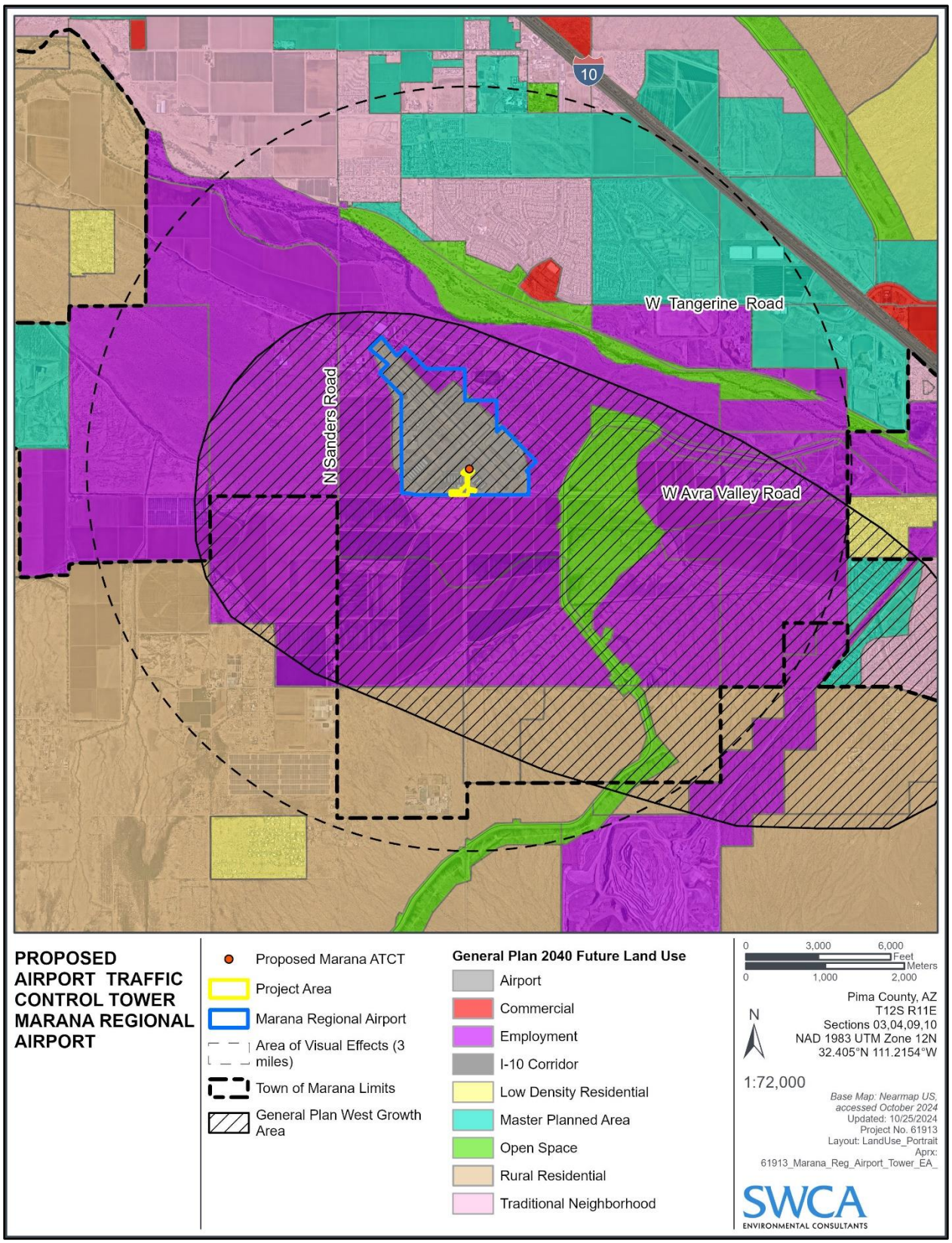

Figure 3-2. Town of Marana future land use.

3.6 Visual Effects

- How would the presence of new infrastructure, including the new ATCT, affect the viewshed of the surrounding area, including relocating light sources?

3.6.1 Affected Environment

ANALYSIS AREA (GEOGRAPHIC AND TEMPORAL)

The analysis area for visual effects is a distance of 3 miles from the ATCT, which is based on the proposed height of the ATCT, and views from a variety of surrounding locations and contexts. This analysis consisted of the following steps:

1) identify and describe the existing visual character surrounding the airport, including important and valued visual resources,

2) select critical and typical viewpoints, referred to as key observation points (KOPs), which are locations where the Proposed Action may be visible from publicly accessible and/or visually valued areas,

3) develop photo-realistic simulations representing the Proposed Action as it would appear from the selected KOPs, and

4) based on the results of the photo simulations, evaluate potential impacts to views as a result of the Proposed Action, considering both effects on visual character and the effect of light emissions.

VISUAL RESOURCES / VISUAL CHARACTER

The airport and Proposed Action are geographically within the Arizona Upland/Eastern Sonoran Basin ecoregion, characterized by broad, open plains situated between the higher-relief mountain ranges of the Eastern Sonoran Mountains (U.S. Environmental Protection Agency 2013). Vegetation within this area is uniformly scattered throughout undeveloped areas; vegetation types include creosote bush and bursage (*Ambrosia* sp.), with foothills palo verde and desert ironwood also present (Griffith et al. 2014), providing light and dark green patches over the brown and tan soils on the surface. When present, the natural vegetation can screen outward views from roadways and pedestrian areas. The narrowly braided channel of the Santa Cruz River, lined with concentrated vegetation, runs west through the landscape north of the airport. The landscape around the airport is rural, with large areas of undeveloped lands administered by the ASLD and agricultural fields, appearing as flat, continuous, and sometimes grid-like visual character. These lands contrast to developed areas and agriculture fields. The undeveloped nature of ASLD lands in the analysis area (rights-of-way and leases notwithstanding) provide views with natural vegetation and unique aesthetic value, and may offer unobstructed views.

The nearest residences are 1.2 miles northwest of the Proposed Action, and an extensive residential development, a master planned community, is also at least 1.6 miles northeast of the Proposed Action, including the Gladden Farms neighborhood. Prominent visual features within the airport include existing beacon and airfield lights, numerous large rectangular hangars, a terminal building, exterior auto and aircraft parking areas, maintenance yards, and fuel tanks.

Important or visually valued resources identified as having potential views of the Proposed Action include the Santa Cruz River Trail, a paved, off-street bicycle and pedestrian trail amenity located north of and parallel to the Santa Cruz River. Notably, the improved SCRT within the town of Marana follows the

recognized alignment of the Juan Bautista de Anza National Historic Trail, the 1,200-mile route of an eighteenth-century expedition from Sonora, Mexico, to San Francisco, California (National Park Service 2020).

The KOPs represent views of the Proposed Action by people using identified important sites and recreational areas, views from the nearest residential areas, and typical views from vehicles traveling along major roadways where the Proposed Action would be seen (Table 3-6). Photographs depicting views of the Proposed Action from each KOP are presented in the visual character analysis in Appendix E (see Appendix E: Attachment A).

Table 3-6. Identified Key Observation Points

KOP Number	Location	Distance to Proposed Action (miles)	View Direction	Area of Resource KOP Represents
1	West Avra Valley Road at Sandario Road	0.23	North	Typical foreground view from the major roadway intersection nearest to the Proposed Action
2	West Avra Valley Road	0.42	West	Typical west-facing view from roadway adjacent to the airport and proposed ATCT location
3	North Sanders Road	1.23	Southeast	Rural-residential area nearest to the Proposed Action
4	Santa Cruz River Trail	1.46	Southwest	The Santa Cruz River Trail and residential areas northwest of the Proposed Action. Within Marana and continuing south through Tucson, the Santa Cruz River Trail is part of a larger locally improved multiuse path that follows the alignment of the 1,200-mile federally designated Juan Bautista de Anza NHT.

Light Emissions

The airport and its surroundings are illuminated by various types of lighting, mainly used for safety and security of airport operations and/or nighttime use of airport facilities. The airport has approach lights, terminal area pedestrian and site lighting (such as parking lot lights and exterior and interior building lighting), runway and taxiway lighting including illuminated signage, and obstruction lighting. Many buildings within the airport, including the hangars, have bright exterior lighting affixed at the roof peak and at access doors. Additionally, the airport has a rotating beacon (height of 51 feet) affixed to a steel lattice ATCT located northeast of the terminal. In accordance with aviation standards, the beacon consists of two oppositely oriented lamps, one white-colored and one green. Based on fieldwork conducted for this analysis, the existing beacon is visible from locations along West Avra Valley Road, portions of North Sanders Road, and discrete locations along the Santa Cruz River Trail. Outside of the airport, intermittent overhead street lighting was observed along West Avra Valley Road at intersections with other major roadways, such as North Sandario Road, North Sanders Road, and others within the project area.

Regulatory Context

The Town does not specifically manage for visual resources; however, Open Space land use assigned by the Town's 2040 General Plan (Town of Marana 2019: Figure 4-1:4-4) is within the analysis area, including the Santa Cruz River and the Central Arizona Project canal (see Figure 3-2). The 2040 General Plan recognizes the significance of the Santa Cruz River to the community, both environmentally and socially. The goals and policies of the Open Space Element help guide the Town's efforts, along with similar local and regional efforts, to rehabilitate and enhance the integrity of Open Space areas.

The ASLD does not manage specifically for visual resources. ASLD's regulations found at Arizona Revised Statutes Title 37, Chapter 2, Article 4.2, Section 37-311 define open space as land that is generally free of land uses that would jeopardize the conservation and open space values of the land or development that would obstruct the scenic beauty of the land.

3.6.2 Environmental Consequences

SIGNIFICANCE THRESHOLD / IMPACT INDICATOR – VISUAL CHARACTER AND LIGHTING

The FAA has not established a significance threshold for visual effects (FAA 1050.1F Exhibit 1-4:4-10). The factors to consider for this analysis are the degree or extent to which the project would have the potential to affect the following:

Lighting—The degree to which the action would have the potential to:

- create annoyance or interfere with normal activities from light emissions; and
- affect the visual character of the area due to the light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources.

Visual Resources / Visual Character—The extent the action would have the potential to:

- affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources;
- contrast with the visual resources and/or visual character in the study area; and
- block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations.

DIRECT AND INDIRECT IMPACTS

No Action

Under the No Action alternative, there would be no impacts to the analysis area's visual character and no new light emissions. There would be no change to the existing visual character or lighting. Therefore, no visual effects would result from the No Action alternative.

Proposed Action

Visual Character

The Proposed Action would affect but not change the visual character, and would not present strong contrasts to the analysis area. No views would be blocked as a result of the Proposed Action; in the views from certain areas and KOPs, the Proposed Action would be visible. Photo simulations (photographic data, baseline photo, and simulated photo) depicting views of the Proposed Action from each KOP are presented in the visual character analysis in Attachment A of Appendix E. Photo simulations are presented below in Figure 3-3 through Figure 3-7. Impacts to KOP views resulting from the Proposed Action are listed in Table 3-7.

Table 3-7. Effects on Views at KOPs

KOP Number	Description of Effects
1* (Daytime)	Facing north from West Avra Valley Road at North Sandario Road, the proposed ATCT would be noticeable to viewers because it would be the tallest structure in the foreground of the view. However, the proposed ATCT is visually compatible with the existing airport hangars. The colors, textures, lines, and forms of the project are similar to the neighboring airport structures; therefore, visual contrast introduced by the project is weak. Visual character of the view from KOP 1 is not adversely altered, and the project does not block or obstruct visual resources.
1* (Nighttime)	This view represents the typical north-facing nighttime appearance of the airport from the project. As shown in the photo simulation, interior stairwell lights (required for user safety) within the shaft of the ATCT are seen as a column of small and softly illuminated rectangles. Additionally, the rotating beacon light (represented in the photo simulation at the point in time when the green lamp faces the viewer) would attract attention in the view from KOP 1, due to its prominent height on top of the ATCT and its rotation, which is perceived by the viewer as a blinking light alternating green and white in color. However, as shown in the existing photo in Attachment A, the beacon is a prominent existing illumination feature within the airport; therefore, the project does not significantly alter existing views from West Avra Valley Road or introduce additional visual contrast as a result of the relocated beacon.
2	KOP 2 represents the view facing northwest showing the airport as seen from West Avra Valley Road. The project would be briefly noticeable to travelers on West Avra Valley Road because a full line of sight to the ATCT occurs at this KOP location; no intervening structures or vegetation obscure the view. In the context of the visible hangars and development within the airport, the ATCT is compatible with the visual character and presents weak contrast. The project does not block or obstruct visual resources.
3	KOP 3 represents the view facing southeast toward the ATCT from a loose cluster of rural residential properties located off North Sanders Road. As shown in the photo simulation, the ATCT is visible, but it does not attract attention due to the viewing distance (1.23 miles) and intervening vegetation. As seen from KOP 3, the existing visual character is maintained, and the project presents negligible visual contrast. The project does not block or obstruct visual resources.
4	KOP 4 represents the view facing southwest from an off-street segment of the Santa Cruz River Trail. As shown in the photo simulation, the ATCT is visible, but is visually absorbed by the landscape due to the viewing distance (1.46 miles) and dense, mixed vegetation between the viewer and the ATCT. As seen from KOP 4, which represents views toward the project from the Santa Cruz River Trail and corresponding Juan Bautista de Anza NHT, the visual character of the landscape is maintained, and visual contrast presented by the project is negligible. Fieldwork conducted for this analysis demonstrated that concentrated vegetation along the Santa Cruz River between the Trail and the project would frequently screen direct views of the ATCT from users on the SCRT. Other potential viewpoints along the Santa Cruz River Trail identified for this analysis and visited during fieldwork determined that vegetation blocked views of the ATCT. Where it is visible, the project does not block or obstruct visual resources.

Source: SWCA Environmental Consultants (2024:Table 2).

* Photo simulations representing views from KOP 1 were created for midday and nighttime conditions.

Based on the results of the photo simulations and determinations presented in Table 3-7, the Proposed Action would alter, contrast with, or obstruct existing views at KOP 4 along the SCRT. The Town is coordinating with the NPS regarding development and installation of an interpretive sign panel along the SCRT to provide trail users with information associated with the Anza NHT as well as the historical evolution of the landscape to present day. The additional information to users from the installation of an interpretive sign on the SCRT would provide mitigation for the potential changes to the visual character at KOP 4 and the SCRT. See Section 3.3 above for additional analysis on SCRT impacts and Section 3.7 below for a discussion on required mitigation. Information regarding the proposed sign is included in Appendix F.

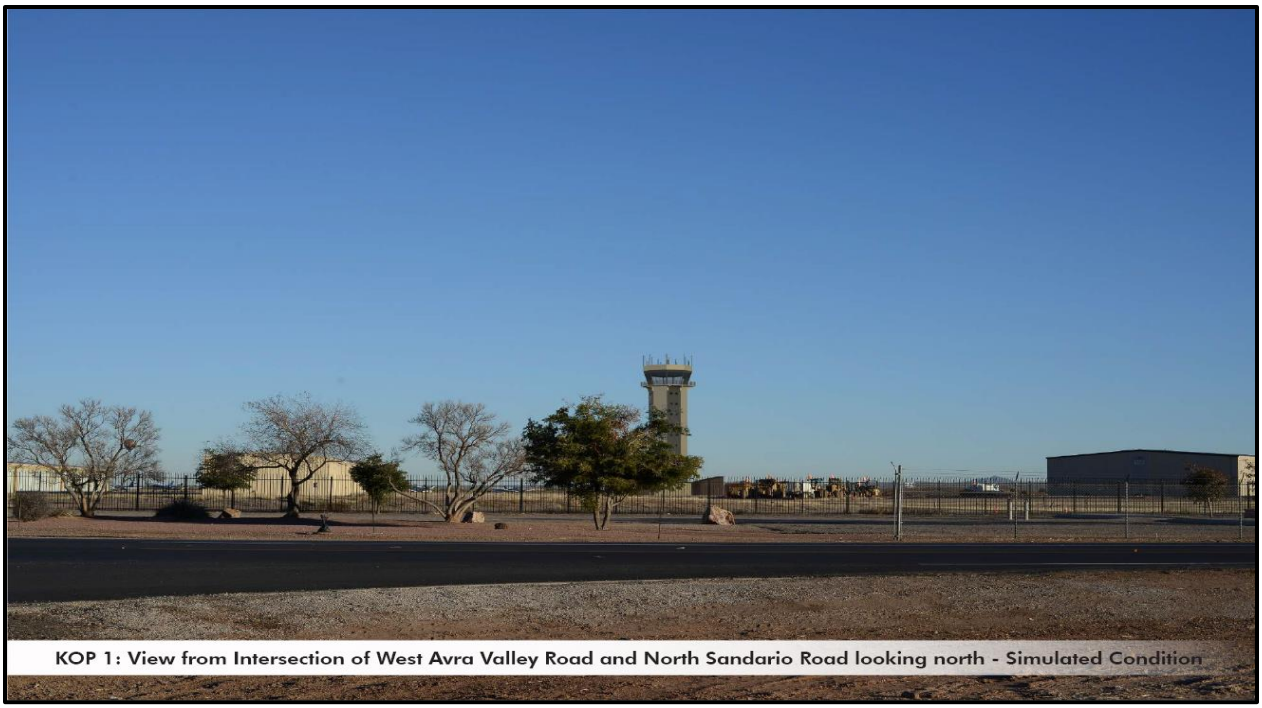

Figure 3-3. Simulation – KOP 1 (daytime).

Figure 3-4. Simulation – KOP 1 (nighttime).

Figure 3-5. Simulation – KOP 2.

Figure 3-6. Simulation – KOP 3.

Figure 3-7. Simulation – KOP 4.

Light Emissions

The Proposed Action, which entails relocating the existing airport beacon light from its current location on a 50-foot-tall tower to the top of the 123-foot-tall ATCT, as represented in the photo simulations Figure 3-3 through Figure 3-7 (see also Appendix E, Attachment A for additional details). Similar to existing conditions, the rotating beacon would be intermittently visible from areas surrounding the airport, including portions of West Avra Valley Road to the south, North Sanders Road to the west, and isolated locations northwest of the Proposed Action. The beacon would have the same brightness and motion to the existing beacon but would be positioned at a higher altitude (approximately 120 feet high on top of the ATCT) and as a result, the beacon would be visible from more locations within the analysis area. However, the higher position of the beacon, in combination with its lamp angle (approximately 5 degrees above horizontal), would result in the beacon light being above and directed upward as seen by most viewers, meaning the light would not be directly oriented toward viewers on the ground. For this reason and considering the existing presence and visibility of the beacon light in combination with the distance from the beacon to the nearest residential or recreational areas (at least 1.23 miles), the Proposed Action would not interfere with normal activities due to light emissions.

The Proposed Action would affect but not change the visual character and would not present strong contrasts to the analysis area. No views would be blocked as a result of the Proposed Action; in the views from certain areas and KOPs, the Proposed Action would be visible. Mitigation was established in coordination with the National Park Service to provide interpretive signage in an area along the SCRT where the Proposed Action would be visible (Appendix F). The Proposed Action would not interfere with normal activities due to light emissions, and lighting from the Proposed Action would not change the visual character.

3.7 Water Resources (Floodplains and Surface Waters)

- How would the presence of new infrastructure, including the new ATCT, affect floodplain values?
- How would the presence of new infrastructure, including the new ATCT, affect surface water quality?

3.7.1 Affected Environment

ANALYSIS AREA (GEOGRAPHIC AND TEMPORAL)

The analysis area used to evaluate this resource was a 3-mile radius from the project area. This area encompasses land use in the surrounding vicinity and mirrors the analysis area for most other resources and allows the evaluation to consider the specific conditions within the airport boundaries, as well as the influence of the Santa Cruz River, located to the north of the project area.

A review of the Federal Emergency Management Agency's (FEMA) floodplain mapping indicates that the project was subject to a Letter of Map Revision (LOMR) (FEMA LOMR 20-09-0784P, effective April 5, 2021). Prior to the LOMR, the entire airport property was considered within the 100-year floodplain (FEMA 04019C1040L, June 16, 2011); however, the LOMR takes into account the presence of levees along the Santa Cruz River and indicates that the majority of the airport property is not subject to an annual 1% chance of flooding. Small pockets within the airport boundaries are still shown as subject to intermittent flooding, however none of these areas are within the project area. The project would not place new infrastructure within the 100-year floodplain; see Appendix G..

The project would result in ground disturbance and will require compliance with Section 401 of the Clean Water Act (CWA). Section 303(d) of the CWA requires States to identify waterbodies, known as impaired waters, which do not meet water quality standards. Impacts to water quality standards and total maximum daily loads of pollutants for impaired waters determine a project's potential impact to water quality. The analysis area is located within the Lower Santa Cruz River Basin. Water from the Santa Cruz River is within the State's Tucson Active Management Area (TAMA), which covers 3,866 square miles in southern Arizona. Municipal use comprises the greatest portion of water demand in the TAMA, followed by agriculture. The remaining industrial demand is primarily due to mining. In 1993, the Central Arizona Project began delivering Colorado River water to Pima County, including to Marana and Tucson. The Santa Cruz River is considered an "impaired" water under the CWA as of the Arizona Department of Environmental's (ADEQ's) 2024 water quality Integrated Report (Arizona Department of Environmental Quality 2024: Impaired Waters List Appendix).

Regulatory Context

Federal agencies are required to avoid, to the extent possible, the long- and short-term[5] adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.[6] Section 404 of the CWA regulates discharges of dredged or fill material into wetlands and waterbodies classified as waters of the U.S. Sections 401 and 402 of the CWA provide protections for surface water quality by regulating pollutant discharge into waters of the U.S. Section 401 provides for state review of federal CWA permits, including

[5] In general, short-term impacts are those that would occur only during the time required for construction or installation activities (e.g., 11 months or less). Long-term impacts are those that are more likely to be persistent during operation and maintenance (e.g., 11 months or longer).

[6] Executive Order 11988, Floodplain Management, 1977.

wetland permits issued under Section 404. Section 402 regulates pollutant discharges into waters of the U.S. from point sources through issuance of permits through the ADEQ-administered Arizona Pollutant Discharge Elimination System (AZPDES).

3.7.2 Environmental Consequences

SIGNIFICANCE THRESHOLD / IMPACT INDICATOR

The FAA has established one significance threshold for floodplains (FAA 1050.1F Exhibit 1-4:4-11). Adverse effects on any the following may constitute a significant impact:

- The action would cause notable adverse impacts on natural and beneficial floodplain values.

The FAA has established two quantitative significance thresholds for impacts to surface water quality. Adverse effects on any of the following may constitute a significant impact:

- Exceed water quality standards established by federal, state, local, and tribal regulatory agencies.
- Contaminate public drinking water supply such that public health may be adversely affected.

DIRECT AND INDIRECT IMPACTS

No Action

Under the No Action alternative, there would be no change to the floodplain's values or surface water quality. Therefore, no significant effects would result from the No Action alternative.

Proposed Action

The Proposed Action would not result in impacts to existing floodplains as the project avoids placing new infrastructure within the 100-year floodplain and there would not be a change in the floodplain values.

The Proposed Action involves 0.9 acre of permanent disturbance and 7.58 acres temporary construction disturbance. Both disturbances are located within previously disturbed impervious and semi-impervious surfaces consisting of compacted structural fill. The concentration of stormwater runoff is not expected to change. Water runoff in the project area would continue to infiltrate existing storm drains. The capacity of storm drains is sufficient to handle post-construction water runoff and the drainage system is not connected to the Santa Cruz River.

The sponsor will prepare a Stormwater Pollution Prevention Plan and file a Notice of Intent with the ADEQ under the Construction General Permit portion of their AZPDES permitting program (see Table 3-8). All requirements of AZPDES will be followed until the project is completed. Operational stormwater is managed in accordance with the Town's Stormwater Ordinance. With these measures and implementation of construction best management practices, the Proposed Action would not exceed water quality standards or contaminate public water supply.

3.8 Avoidance, Minimization, and Mitigation Measures

The Proposed Action's design and construction specifications will include measures and commitments to avoid, minimize, or mitigate potential or likely adverse environmental effects. Table 3-8 lists specific Environmental Impact Category design guidelines, operating procedures, best management practices, and/or measures. For those resources not listed in Table 3-8, no measures are recommended.

Table 3-8. Avoidance, Minimization and Mitigation Measures

Environmental Impact Category	Description of Avoidance or Minimization Measure	Description of Mitigation Measure
Air Quality	Appropriate best management practices such as watering, stabilizing construction entrances/exits, and stabilizing disturbed ground in accordance with Marana Regional Airport, Pima County, and Town of Marana dust control requirements will be implemented by the sponsor to maintain air quality.	
Biological Resources	• If burrowing owls are encountered during project construction, the sponsor shall follow Arizona Game and Fish Department guidelines in accordance with the Burrowing Owl Project Clearance Protocols (Arizona Burrowing Owl Working Group 2009). • If vegetation clearing will occur during the migratory bird breeding season (March 1–August 31), the sponsor shall avoid any active bird nests. • If Sonoran desert tortoise are encountered during project construction, the sponsor shall follow the Arizona Game and Fish Department Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects (see Appendix B). • Protection measures to reduce the potential introduction and spread of noxious weeds shall be implemented during construction. To reduce or eliminate the potential to introduce or spread noxious or invasive plants, equipment shall be cleaned prior to and following mobilizing to the project area.	• Any burrowing owl encounters and related mitigation measures taken by the sponsor shall be documented and reported to the Arizona Game and Fish Department within 30 days. • If the migratory bird active nests cannot be avoided, the sponsor shall notify the FAA to evaluate the situation. During the non-breeding season (September 1-–February 28), vegetation removal is not subject to this restriction.
Hazardous Materials and Solid Waste	The sponsor will comply with all hazard communication and hazardous material laws and regulations regarding these chemicals. They will also adhere to the Marana Regional Airport Emergency Plan (Town of Marana 2024a), which provides guidance for implementation of spill prevention, control, and countermeasures to minimize the leaks of motor oils, hydraulic fluids, and fuels and response to emergency situations. In addition, the Town will comply with all applicable federal and state regulations regarding notices to federal and local emergency response authorities and development of applicable emergency response plans, if required.	
Water Resources (Surface Waters)	The sponsor will prepare a Stormwater Pollution Prevention Plan and file a Notice of Intent with the ADEQ under the Construction General Permit portion of their AZPDES permitting program. All requirements of AZPDES will be followed until the project is completed.	
Historical, Architectural, Archaeological, and Cultural Resources	If an unknown cultural resource or an unidentified impact to a known cultural resource is encountered during the undertaking, then the sponsor will direct the construction contractor to immediately stop work within 100 feet of the discovery, secure the area, and arrange for a qualified professional to evaluate it and make treatment recommendations. The sponsor will notify the FAA and the Arizona State Historic Preservation Office. The sponsor will also notify the Arizona State Museum if the discovery involves human remains. The sponsor will not allow work to resume in the discovery area until notified by the FAA and in case of human remains, the Arizona State Museum as well.	
Visual Effects		The sponsor will develop and install an interpretive sign panel along the SCRT in collaboration with the NPS, which is intended to provide trail users with information associated with the Anza NHT as well as the historical evolution of the landscape to present day. The sign will be installed during or prior to construction of the new ATCT.

3.9 Cumulative Impacts

Cumulative environmental impacts are those which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time. Cumulative effects analysis considers only those resources experiencing a permanent adverse direct or indirect impact resulting from the Proposed Action.

The Proposed Action is the only alternative addressed for cumulative effects. Because the No Action alternative would not add any new impacts to any of the resources identified in the analysis area, there would be no incremental contribution to cumulative impacts to resources in the region.

3.9.1 Past, Present, and Reasonably Foreseeable Future Actions

The airport was built during World War II and repurposed into a public airport in 1974; the Town purchased the airport in 1999 (Town of Marana 2017). Since then, there have been multiple facility expansion and development projects undertaken within the airport's controlled area as well as actions within the analysis area outside the airport (RTA 2023; Town of Marana 2024b, 2024c). Table 3-9 lists past projects by year and Table 3-10 lists projected future projects.

Table 3-9. Past Projects

Year	Description of Past Project (Phase)
2006	Rehabilitation Design of Runway 03-21, Taxiway A, E, and others; Construct Taxiway E Apron and Access Road
2007–2022	ATCT design-only
2008	Construct security fence and gates
2008	Reconstruct and expand South Apron
2008	Land Acquisition for 90-acres
2015	Airport Master Plan Update
2015	Runway/Taxiway Guidance Sign Replacement and Taxiway In-pavement Light Replacement
2022	Avra Valley Road improvements: greenway, pathway, bikeway, sidewalks (RTA)
2022	Gladden Farms: greenway, pathway, bikeway, sidewalks (Marana)
2024	East Hangar Apron Reconstruction Project, Phase 1 and 2, replace all asphalt and improve drainage (Marana)
2024	Gladden Farms Community Park ball field improvements (Marana)
2024	Santa Cruz Shared Use Path at CalPortland (Marana)
2024	Automated Weather Observation System Replacement Project (Marana)
2024	Reconstruction Design of portions of the Airport's West Hangar aprons to improve drainage (Marana)

Table 3-10. Future Projects

Project Description (Entity/Funding)
Tangerine and I-10 Interim, Marana Road/I-10 – traffic interchange improvements (Marana)
Cortaro Road/I-10, Moore Road/1-10, Tangerine/I-10 TI reconstruction – traffic interchange improvements (Marana)
Tortolita, Pinal Airpark Road/I-10, Marana Road I-19, Avra Valley Road/I-10 – traffic interchange improvements (Marana)

Project Description (Entity/Funding)
I-10 Frontage Roads: Tangerine to Avra Valley Road – frontage road improvements (Marana)
Runway 12-30 Pavement rehabilitation – Capital Improvements, Airport (Marana)
2025 Capital Improvement Program Airport Projects: ATCT Design, Taxiway C Reconstruction Design, Runway 30 Safety Area Mitigation /Obstruction Environmental & Design; Taxiway A Rehabilitation Design, Taxiway A Lighting Rehabilitation Design (Marana)
2026 Capital Improvement Program Airport Projects: ATCT Construction, Runway 30 Safety Area Mitigation/Obstruction Removal Phase 1 & 2 Construction, Airport Master Plan Update (Marana)
2027 Capital Improvement Program Airport Projects: Taxiway C Reconstruction Construction, Airport Drainage Master Plan, Airport Security Fence Design & Construction, West Hangar Apron Reconstruction Phase 1 Construction (Marana)

3.9.2 Cumulative Effects of the Proposed Action

The Proposed Action has minimal permanent or temporary impacts on environmental resources. Taken together, the Proposed Action would not add incremental change to environmental resources when combined with past, present, and reasonably foreseeable future actions.

AIR QUALITY

The Proposed Action, in combination with other projects, would not result in significant incremental cumulative impacts to air quality. The Proposed Action would have the potential to generate temporary air pollution due to fugitive dust and vehicle emissions during construction. Operational emissions resulting from ongoing vehicular emissions and electrical demand related to employees of the new ATCT would be minimal. A Pima County Fugitive Dust Activity Permit would be required to reduce fugitive dust generation during construction. The project would not generate emissions exceeding *de minimis* levels, as the estimated annual construction PM_{10} would not cause pollutant concentrations to exceed NAAQS, as established by the U.S. EPA under the Clean Air Act, or increase the frequency or severity of any such existing violations.

CLIMATE

The Proposed Action, in combination with other projects, would not result in significant incremental cumulative impacts to climate or the airport's preparedness for climate change. The Proposed Action would contribute temporary GHGs during construction and minimal amounts of GHGs during operations. All projects are required to be constructed to a building code that incorporates energy efficiency measures, which also reduces the generation of related GHGs.

DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F)

The Proposed Action would not use Section 4(f) resources; thus, the Proposed Action, in combination with other projects, would not result in incremental cumulative impacts to Section 4(f) resources. Most of the other cumulative actions considered in this EA would not use Section 4(f) properties (e.g., transportation or roadway improvement projects) or would also be on airport property and would not have a physical or constructive use of nearby parks or other recreational uses.

LAND USE

The Proposed Action, in combination with other cumulative actions, supports airport safety and efficiency as well as solves community needs for infrastructure in compliance with the Town's General Plan as well as the Town's Airport Master Plan.

VISUAL EFFECTS

The Proposed Action, in combination with other cumulative actions, would not result in changes to the characteristic landscape or visual character of the area, either during the daytime or nighttime (due to light emissions). The Proposed Action would not interfere with normal activities due to light emissions and would not be expected to adversely affect the visual character of the area, including the importance, uniqueness, and aesthetic value of the area; thus, no significant incremental cumulative impacts to visual resources would result from the Proposed Action.

WATER RESOURCES (FLOODPLAINS AND SURFACE WATERS)

The Proposed Action's surface disturbances, when combined with the cumulative actions, is not expected to result in incremental impacts to floodplain and surface water resources, as any concentration of stormwater runoff is not expected to change. Runoff from the project, when combined with other cumulative actions, would infiltrate existing storm drains and flow into natural drainages and washes without exceeding their capacity.

4 COORDINATION AND PUBLIC INVOLVEMENT

4.1 Agency and Public Scoping Process

Prior to the onset of this EA, letters were sent to resource agencies, local jurisdictions, tribal governments, and other airport stakeholders seeking input regarding potential environmental resources that could be impacted by the Proposed Action. A list of the agencies contacted, a copy of the information sent, and the responses received are included in Appendix H.

Responses to the scoping materials were received from the following agencies:

- Arizona Department of Transportation—Would like to continue to receive project information via email; provided information regarding the recently completed East Hangar Apron Reconstruction and the upcoming State Aviation System Plan.
- Arizona Game and Fish Department—Does not anticipate significant adverse impacts to wildlife resources as the Proposed Action is located in a previously disturbed area on the airport, with the present habitat providing relatively low value to wildlife.
- Bureau of Land Management—Stated there are no comments, and no additional information is needed.
- Central Arizona Water Conservation District/Central Arizona Project—Does not believe that the Proposed Action will have any impacts to the District and its operations and maintenance of the Central Arizona Project.
- Northwest Fire District—Would like to provide input on Fire Code Requirements; would like to continue to receive project information via email and be considered a Cooperating Agency.
- Pascua Yaqui Tribe—Would like to continue to receive project information via email; since the Yoeme Pueblo Yaqui community is located just within the 3-mile viewshed, consultation with community members might be appropriate; concern that NEPA analysis will ensure that heritage resources are not adversely affected by the Proposed Action.

  In January 2025, the Town called the community to provide a project update and provide an opportunity for further comment. No additional comments were received (personal communication, Greg Sendlak, Town of Manana, to Felipe Molina, Yoeme Pueblo Community Representative, January 30, 2025).
- Salt River Pima-Maricopa Indian Community—Reviewed the consultation letter and has no comments at this time; defers to the Tohono O'odham Nation Tribal Historic Preservation Officer as lead in the consultation process.
- Marana Police Department—Would like to continue to receive project information via email and would like to be considered a Cooperating Agency.
- White Mountain Apache Tribe—Reviewed the NEPA Scoping Letter provided and determined the Proposed Action will have "No Adverse Effect" to the Tribe's traditional cultural resources and/or historic properties; concurs with the Proposed Action findings; would not like to receive further project information.

No formal public meetings have been held as part of the NEPA process to date, however, the Town of Marana has been presenting the project to the public since 2022 through outreach efforts, which have included community events, podcast episodes, town newsletters, town holiday events and festivals,

community meetings, and town website publications. A list of the events and publications, the locations, and the types of outreach efforts are included in this EA in Appendix H.

- Public Outreach—the public has been receptive of the project and generally supportive, no specific comments or concerns have been received to date.

4.2 Draft Environmental Assessment's Availability for Review

The Draft EA is available for download at https://www.maranaaz.gov/airport. Copies of the Draft EA can also be reviewed at the following physical locations:

Location	Information
Marana Regional Airport Administration Office 11700 West Avra Valley Road Marana, Arizona 85653	M–F 7:00 a.m. – 4:00 p.m.
Ed Honea Marana Municipal Complex 1155 West Civic Center Drive Marana, Arizona 85653	M–F 8:00 a.m. – 5:00 p.m.
Wheeler Taft Abbett, Sr. Library 7800 North Schisler Drive Tucson, Arizona 85743	M, W 10:00 a.m. – 6:00 p.m.; T, Th 10:00 a.m. – 7:00 p.m.; F 10:00 a.m. – 5:00 p.m.
FAA Western-Pacific Region, Office of Airports **Phoenix Airports District Office** 3800 North Central Avenue Suite 1025 Phoenix, Arizona 85012	M–F, 9:00 a.m. – 4:00 p.m., *by appointment only* ([602] 792-1075)

Following the comment review period, the FAA will revise the Draft EA, as necessary, in response to internal and external comments received on the draft document, and prepare a Final EA. Upon review of the Final EA, public comments, and applicable interagency and intergovernmental consultation, the responsible FAA official determines whether any environmental impacts analyzed in the EA are significant:

(1) If, the responsible FAA official concludes that the proposed action would not result in significant impacts to the human environment, the responsible FAA official may prepare a finding of no significant impact (FONSI) for the signature of the approving official.

(2) If, based on the EA, the responsible FAA official concludes that the proposed action would significantly affect the human environment, and mitigation would not reduce the potential impact(s) below significant levels, the responsible FAA official must publish a Notice of Intent (NOI) to prepare an environmental impact statement (EIS) in the *Federal Register* and begin the EIS process.

5 LIST OF PREPARERS

Staff at the Town of Marana and Dibble Associates Consulting Engineers conducted engineering and baseline studies for the Proposed Action. SWCA Environmental Consultants prepared this EA with supervision and review by the Town of Marana and FAA. Table 5-1 contains the list of contributors, their affiliation, and role during EA development.

Table 5-1. List of Preparers

Name	Organization / Agency	Role / Expertise
Taylor N. Neal	FAA, Western-Pacific Region, Office of Airports, Phoenix Airports District Office	Environmental Protection Specialist
Matthew H. Bilsbarrow	FAA, Western-Pacific Region, Office of Airports, Phoenix Airports District Office	Environmental Planner
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