Engineer's Design Report

ACCESS ROAD AND PARKING

Tombstone Municipal Airport

ADOT Project No. E4S3G01C

Prepared for:

Tombstone, Arizona

September 2025

Kimley»Horn

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1.0 General Scope of Project

1.1 Introduction

The purpose of this Engineer's Report is to describe the project, summarize investigations, explain design methodologies, and construction phasing. The report will also present anticipated project schedules and an estimate of probable construction costs.

1.2 Airport Location and Background Information

Tombstone Municipal Airport is a city-owned public airport located approximately three miles southeast of the City of Tombstone located in Cochise County, AZ. The Tombstone Municipal Airport was originally constructed in the late 1940's, however the construction of the aircraft parking apron and taxiway was completed in January 1980.

The airport mainly serves recreational and personal flying and is surrounded by undeveloped State-owned land. The airport consists of one aircraft hangar, a single connector taxiway and Runway 06-24. Tombstone Municipal Airport generates around 400 operations during the year.

The airport covers an area of approximately 0.23 square miles. **Figure 1.1**, *Location and Vicinity Map*, depicts the airport's location in relation to the regional setting and its location in relation to the local setting.

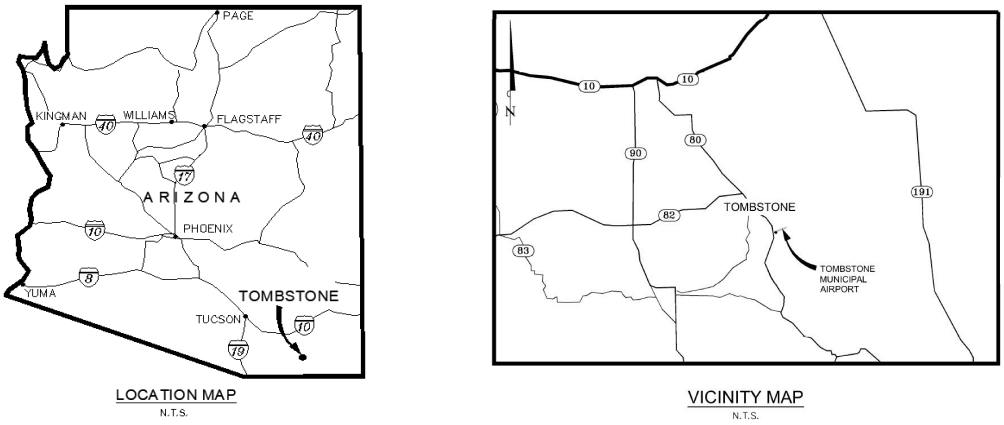


Figure 1.1, *Location and Vicinity Map*

1.3 Project Description

The Access and Parking Lot project aims to design an airport access road and a vehicular parking area, complete with pavement markings pavement. This new infrastructure will connect to the existing asphalt apron. The surrounding area is characterized as follows: to the East, is the existing asphalt apron and one metal hangar building. To the West, is the airport property/ fence line. To the North and South is vacant airport property.

Site drainage was a pre-existing issue, uncovered by rain events consistently flooding the existing aircraft hangar building. The airport underwent a Drainage Improvement Study in October of 2021 which identified the off-site flows and proposed a solution for diverting them away from the existing and proposed developments on the southwest side of the airport. This project will not impact the remedies suggested in this document.

Exhibit 1.3 *Project Layout Plan* shows the location of the project and the main elements of work. The project will consist of:

- Construction of new access road pavement
- Application of new access road pavement markings
- Grading of areas adjacent to the proposed access road to allow for positive drainage
- Clearing approximately 12,000 square feet (0.3 acres) of vegetation for clearing and grubbing

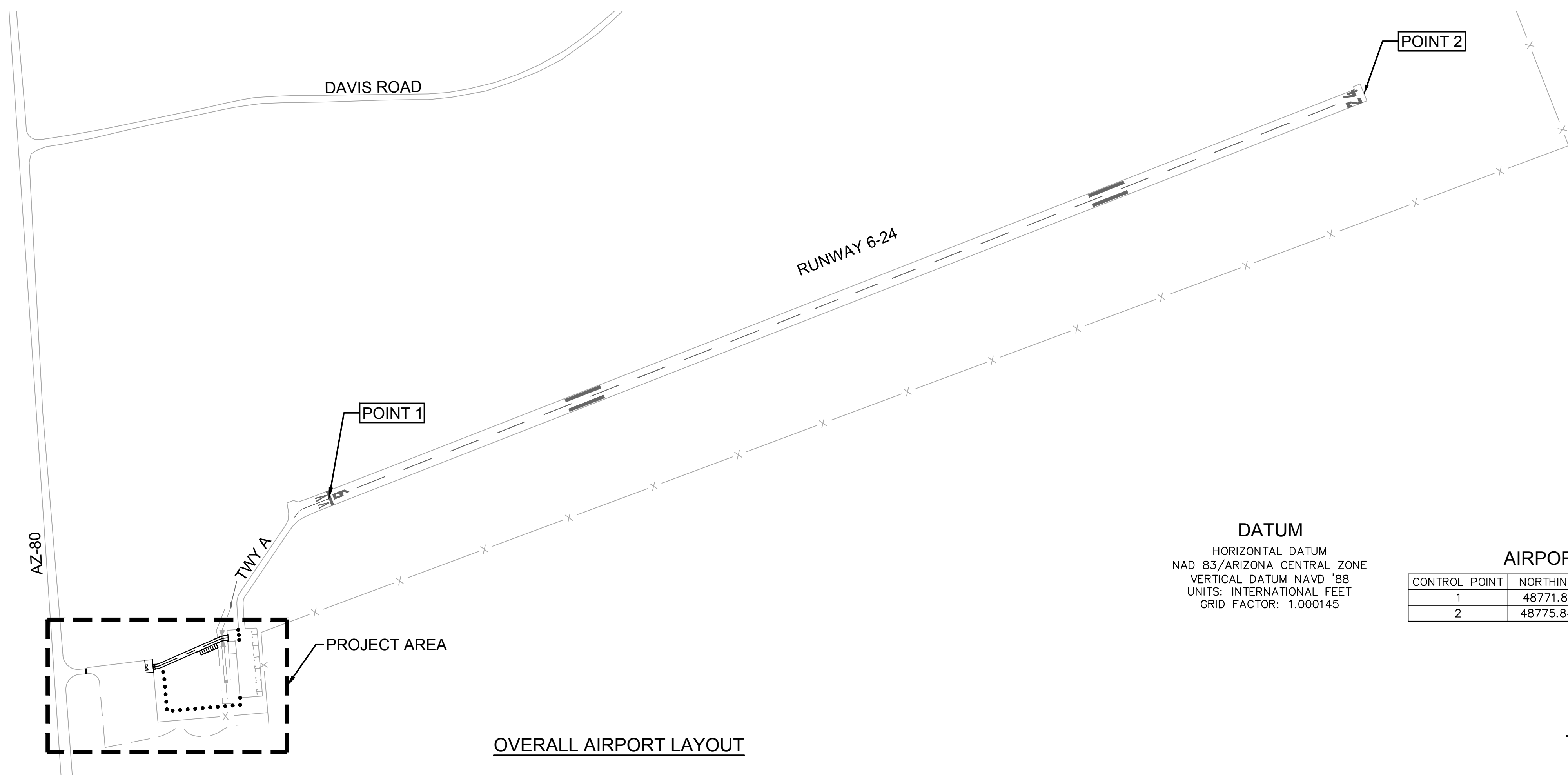
This project will be bid in the summer of 2025 and is anticipated to be paid for using ADOT and City of Tombstone funding.

ADOT Eligible/Ineligible Work Items

The table below identifies the ADOT eligible and ineligible work items included in this project.

Table 1.3
ADOT Eligible/Ineligible Work Items

Work Item	Eligible	Ineligible
Surveying and Staking	X	
Safety and Traffic Control	X	
Stormwater Pollution Prevention	X	
Clearing and Grubbing	X	
Demolish Existing Edge of AC	X	
Earthwork	X	
Proposed Roadway Asphalt	X	
Proposed Parking Lot Asphalt	X	
Proposed Concrete Curb	X	
Proposed Striping	X	



OVERALL AIRPORT LAYOUT

NORTH

GRAPHIC SCALE IN FEET
0 150 300 600

DATUM

HORIZONTAL DATUM
NAD 83/ARIZONA CENTRAL ZONE
VERTICAL DATUM NAVD '88
UNITS: INTERNATIONAL FEET
GRID FACTOR: 1.000145

AIRPORT CONTROL STATION

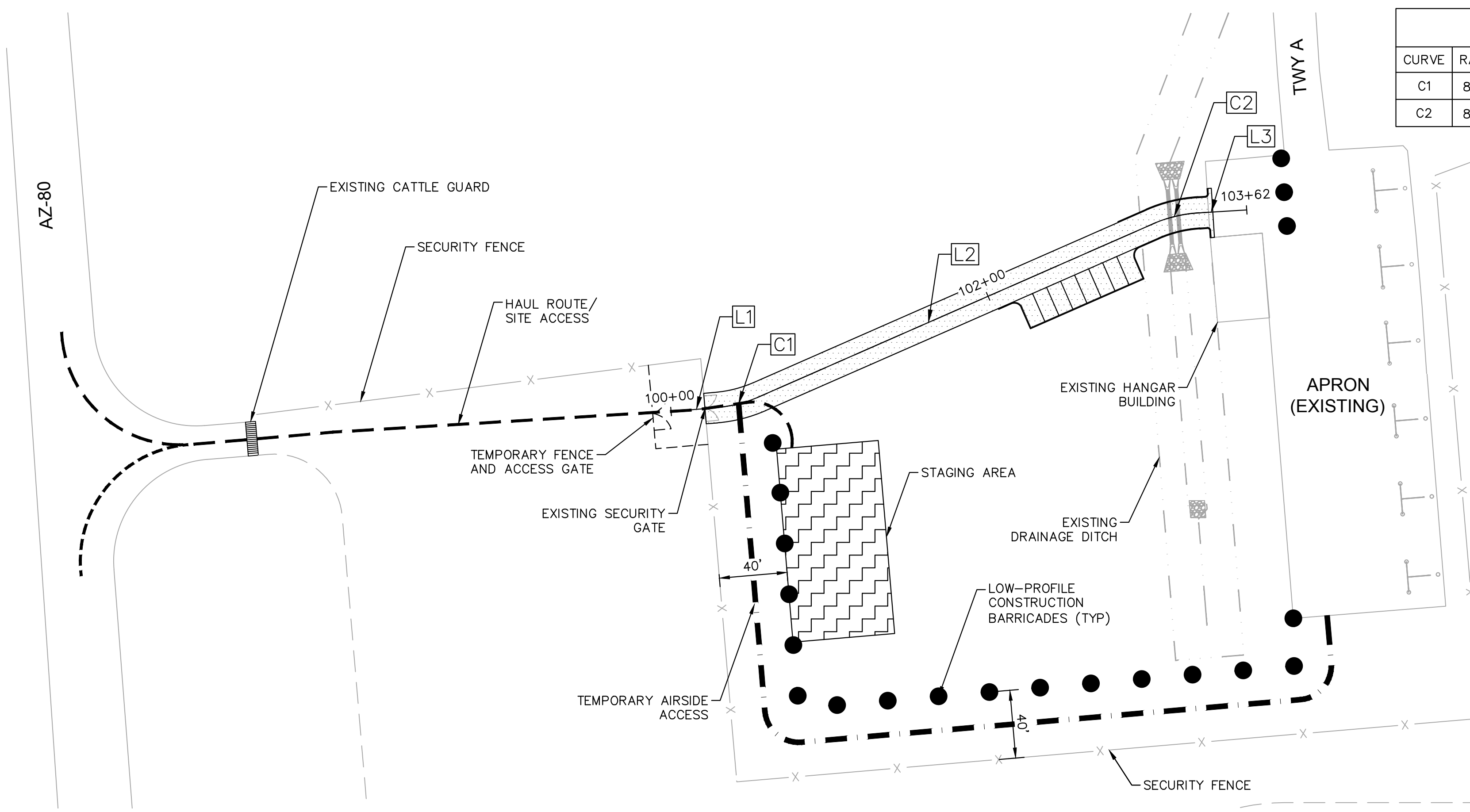
CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	48771.81	47639.54	4741.98'	EDGE OF PAVEMENT
2	48775.84	47686.63	4741.55'	EDGE OF PAVEMENT

ROADWAY ALIGNMENT

CURVE	RADIUS	LENGTH	DELTA	TANGENT	START NORTHING	START EASTING	END NORTHING	END EASTING
C1	80.00'	26.29'	18°49'43"	13.26'	48626.84	47351.63	48633.30	47376.992
C2	80.00'	28.16'	20°10'14"	14.23'	48734.90	47608.40	48741.50	47635.631

ROADWAY ALIGNMENT

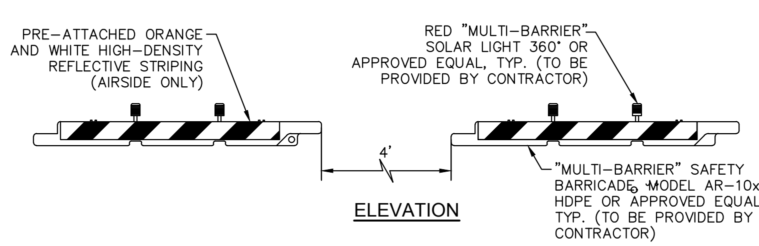
LINE	LENGTH	BEARING	START NORTHING	START EASTING	END NORTHING	END EASTING
L1	26.74	N85°07'28.70"E	48624.572	47324.992	48626.844	47351.631
L2	252.73	N66°17'46.11"E	48633.304	47376.992	48734.903	47608.400
L3	28.27	N86°28'00.07"E	48741.500	47635.631	48743.243	47663.846



NORTH

GRAPHIC SCALE IN FEET
0 25 50 100

PROJECT LAYOUT



ELEVATION

1 / C1.3 LOW PROFILE BARRICADE

N.T.S.

LEGEND

- PROJECT AREA
- STAGING AREA
- HAUL ROUTE/SITE ACCESS
- TEMPORARY AIRFIELD ACCESS
- LOW-PROFILE BARRICADES

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE ADDITION OF A NEW ASPHALT AIRPORT ACCESS ROAD WITH VEHICULAR PARKING. THE PROJECT INCLUDES SITE CLEARING, SUBGRADE PREPARATION, AGGREGATE BASE PLACEMENT, ASPHALT PAVEMENT, PAVEMENT MARKINGS/STRIPING, AND SIGNAGE.

GENERAL NOTES:

1. THE CONTRACTOR SHALL NOT START WORK UNTIL A N.T.P. HAS BEEN ISSUED BY THE CITY OF TOMBSTONE.
2. THE CONTRACTOR SHALL COORDINATE ANY NECESSARY CLOSURES WITH THE AIRPORT, PRIOR TO STARTING WORK.
3. THE CONTRACTOR SHALL NOT STRAY FROM THE HAUL ROUTE / SITE ACCESS DESIGNATED ON THE PROJECT LAYOUT PLAN, THIS SHEET.
4. THE CONTRACTOR SHALL VERIFY THE BARRICADES FOR EACH PHASE OF THE PROJECT ARE IN THE CORRECT LOCATION, ARE PROPERLY SECURED, AND ARE IN PROPER WORKING ORDER PRIOR TO STARTING WORK EACH DAY/NIGHT OF THE PROJECT.

CONSTRUCTION DURATION:

1. WORK DURING THIS PROJECT SHALL BE COMPLETED WITHIN 60 CALENDAR DAYS

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

NO.	REVISION	DATE

Kimley»Horn

7740 North 16th Street, Suite 300
Phoenix, Arizona 85020 (602) 944-5500

PRELIMINARY
NOT FOR CONSTRUCTION PURPOSES
FOR REVIEW ONLY
ENGINEER BRANDON ROBINSON
PE NO. 69243 DATE 09/13/2024

SCALE (H): 1"= 50'
SCALE (V): N/A
DESIGNED BY: SQR
DRAWN BY: ERG
CHECKED BY: BLR
DATE: 05/20/2024

TOMBSTONE MUNICIPAL AIRPORT
CITY OF TOMBSTONE
2015 AZ-80
TOMBSTONE, AZ 85638

TOMBSTONE MUNICIPAL AIRPORT ACCESS ROAD AND PARKING LOT PROJECT LAYOUT PLAN

PROJECT NO.
191991004

DRAWING NAME
191991004PL.dwg

C1.3
SHEET NO. 3 OF 11

2.0 Initial Investigations / Photographs

2.1 Site Investigations

A brief description and presentation of the results for each design investigation element is included below:

- Site Visit – Investigation and inventory of existing airport elements from visual inspection.
- Topographic Survey – Survey of the existing ground, edge of pavement, and surface features in the project area was performed.
- Review and Location of Existing Utilities - Review of utility type and locations from construction as-built drawings
- Geotechnical Investigation – Borings measuring existing composition of existing subsurface characteristics
- Environmental Clearance – Review of environmental documents for the project.

2.1.1 Site Visit

The Airport Manager escorted Kimley-Horn and Associates, Inc. (Kimley-Horn) design team on to the airfield to assess the various aspects of the project site. The team for Kimley-Horn walked the area of proposed construction. Existing project surface features were observed and photographed.

2.1.2 Topographic Survey

An airport wide topographic survey was performed by **M&S Development and Surveying LLC**. The field survey consisted of horizontal and vertical data collection for the project site and adjacent features. Survey points were taken on approximately a 50 by 50 foot grid basis over the majority of the project area. Along the existing apron area, survey points were taken at 35 by 35 foot grid base intervals. The area surveyed includes adjacent pavement areas to allow design of proposed pavement to match into existing pavement grades and elevations. The field survey performed for this project has been incorporated into the project drawings.

2.1.3 Review and Location of Existing Utilities

Kimley-Horn researched available utility records that were furnished by the airport. Prior to performing soil borings for the geotechnical investigation, the site was reviewed for potential utility conflicts. There were no existing underground utilities that were found crossing the project area.

2.1.4 Geotechnical Investigation

A Geotechnical Investigation was performed by **Western Technologies Inc. (WTI)**. Bore holes and core samples were taken and tests were taken at locations along the proposed apron expansion area as seen in **Exhibit 5.3**, *Coring and Boring Locations*. The results of the geotechnical investigation were compiled by WTI into a Geotechnical Evaluation Report, which can be seen in **Appendix A**, *Geotechnical Evaluation Report*. The Geotechnical Evaluation Report was analyzed by Kimley-Horn and Associates and used to develop the proposed structural pavement sections.

Exhibit 2.1.6, ***Boring Locations***

2.1.5 Environmental Clearances

In May 2022 an environmental review of the project was conducted by the Arizona Department of Transportation Multimodal Transportation Division, Aeronautics Group which concluded that the proposed work is environmentally cleared. The letter from ADOT will be included as **Appendix B**, *ADOT Environmental Determination Checklist.*

2.2 Site Photos

The following photos were taken during Kimley-Horn's site visit to the project area. The pictures taken help portray some of the existing conditions that were observed on site and identified by the Airport as issues. Reference **Photo 2.2a** through **Photo 2.2d** below.

Photo 2.2a – Existing Access Road facing West

Photo 2.2b – South Edge of Existing Apron

3.0 Considerations for Airport Operational Safety

3.1 Overview of Operational Safety

The contract documents have been prepared to follow the guidelines FAA Advisory Circular 150/5370-2G, *Operational Safety on Airports During Construction*. Low-level barricades will be placed to obstruct the movement of aircraft from entering construction areas. Excavations and open trenches will be adequately signed, marked and lighted. The contractor is required to continuously maintain existing airfield pavement for Runway 06-24 and Taxiway A that are not affected by construction activities.

The Contractor is required to provide an Operations Plan for the proposed construction activities identified in the contract documents. The plan will address safety, security, and airport operation issues and will include the following:

- Location of all traffic control devices
- The possible need for flagmen
- Construction area lighting, signing, and marking
- Construction phasing

NOTAM's will be issued when construction activities are near any active movement areas. All service roads and aircraft movement areas within the limits of construction will be kept clear of waste and loose materials, which will require the contractor to use a vacuum type sweeper.

3.2 Construction Phasing

Due to the nature and simplicity of this project, there will be no construction phasing for this project. The access road and parking lot can be completed all at once.

4.0 Pavement Design

4.1 Geotechnical Report

Kimley-Horn utilized the results of the Geotechnical Evaluation Report provided by WTI for the adjacent Apron Expansion project when determining appropriate proposed pavement sections for the access road and parking project area. Bore holes were taken and tests were taken at random locations as seen in Exhibit 2.1.6, Boring Locations.

The subsurface exploration was performed by drilling a total of 2 soil borings to depths ranging from about 10-1/4 to 10-1/2 feet below existing site grade (besg). The approximate location of the borings are shown on the attached Boring Location Diagram. A field log was prepared for each boring. These logs contain visual classifications of the materials encountered during drilling as well as interpolation of the subsurface conditions between samples. Final logs represent the interpretation of the field logs and may include modifications based on laboratory observations and tests of the field samples.

Soil strata at the different locations explored during this evaluation consisted predominately of a layer of stiff Sandy CLAY (CL). Near surface soils are of medium plasticity. The materials underlying the surface soils and extending to the full depth of exploration consisted of medium dense to very dense Clayey SAND. Zones of light carbonate cementation were encountered in the borings at depths below 3 feet. Groundwater was not encountered in any borings at the time of exploration. Soil strata and classifications are shown on the boring logs, which can be found in **Appendix A.**

4.2 Pavement Design

Kimley-Horn analyzed the results of the Geotechnical Evaluation Report (See **Appendix A**) along with the anticipated vehicular traffic to utilize the proposed road and the suggested pavement section for a Major Collector Road under the Cochise County Highway and Floodplain Typical section when developing the pavement section as shown in **Table 5.3.**

Table 5.3
Recommended Pavement Section

Type	Asphalt Mix (inches)	Aggregate Base Course (inches)	Compacted Subgrade (inches)
Major Collector Road (Cochise County)	3	6	6
Airport Access Road	3.5	6	6
Airport Parking Lot	2	6	6

5.0 Drainage Design

5.1 Drainage Design Criteria

The drainage design for this project involves meeting the 5-year design criteria per *FAA Advisory Circular No. 150/5320-5D, Surface Drainage Design* (*FAA AC 150/5320-5C*). A Drainage Improvement Study was completed in October of 2021 detailing the impacts of both onsite and offsite flows affecting the existing apron/hangar area of the airport.

5.2 Drainage Patterns

Existing drainage patterns will be maintained. In general, the portion of the airport adjacent to the improvements drains from southwest to northeast. Improvements associated with this project include construction of a new impervious surface creating additional runoff to the project limits. Existing stormwater infrastructure will capture and convey the runoff is included with the project. Two existing 24" RCP storm drains run underneath the proposed airport access road alignment that will convey flow from the southwest to the northeast of the airport.

The cross-section of the proposed roadway was designed based on the 2017 Road Design & Construction Standards & Specifications for Public Improvements for Cochise County. The airport entrance road, based on projected volume, was classified as a Minor Access Local Road Paved, Low Volume. **Figure 5.2**, *Major Access Local Road Paved, Low Volume* depicts the standard cross section as shown in the Cochise County 2017 Standard Typical Sections for Construction. The width of the road was reduced from 24 feet to 18 feet due to existing site restraints and the low probability of passing vehicles. To minimize impacts to the existing site drainage, and to facilitate the a smooth surface for singular directional traffic, the proposed airport access road maintains a cross slope of 2.00%. The specified clear zone was maintained, as was the shoulder grades.

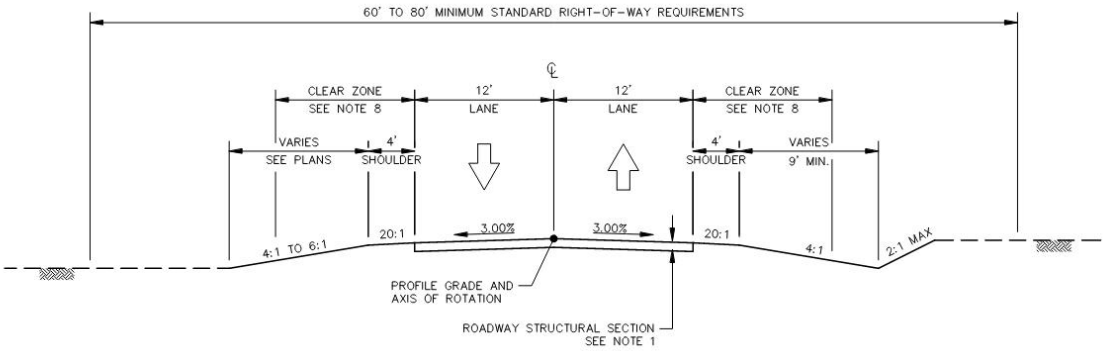


Figure 5.2, *Major Access Local Road Paved, Low Volume*

5.3 Hydrology

A hydrologic analysis was completed for the City of Tombstone to depict the onsite and offsite runoff that is impacting the airport. Hydrologic calculations followed the standards and methodologies presented in the Federal Aviation Administration *Advisory Circular Number 150/5320-5D – Airport Drainage Design (FAA-AC)*. The areas of the watersheds and sub-basins dictated the methodology to be used as part of the hydrologic investigation.

5.4 Proposed Hydraulics

The proposed improvements will have no impact to the existing site drainage patterns. No hydraulic improvements are recommended as part of this project.

5.5 Conclusions and Recommendations

The improvements included in this project have no effect on the existing drainage patterns of the area outside of the additional impervious surface. Existing drainage facilities were analyzed for the 5-year storm event per FAA requirements and can adequately convey the additional flow.

6.0 Lighting and Signage

6.1 Electrical Design

Given that there is no current airfield lighting or electricity available at the airport, there will be no electrical Lighting and Signage associated with the access road and vehicular parking. To aid in visibility and further delineate drivable pavement, two-way in-pavement reflectors will be added to the edges of the proposed roadway as well as vertical ground mounted reflectors on the edges of the existing drainage channel.

7.0 Pavement Marking

7.1 Pavement Markings

Pavement markings will be in accordance with ADOT "Pavement Design Manual". The parking lot markings will be a solid white line, 4"wide.

8.0 Environmental Considerations

8.1 Stormwater Pollution Prevention Plan

A stormwater pollution prevention plan (SWPPP) has been developed for this project based on the specific conditions of the existing site and the unique characteristics and phasing of this project in accordance with best practices. The intent of this SWPPP is to protect the existing drainage basins, channels, and pipe networks from sedimentation and containments. The SWPPP for this project includes the implementation of catch basin protection and sediment control fences as shown in the plans and associated details, see sheet C1.4.

8.2 Permits

No special permitting will be required for the completion of this project. The Contractor shall be responsible for obtaining stormwater and earthwork permits through the county prior to receiving the NTP for this project.

8.3 CATEX, EIS, or EA Documentation Status

In May 2022 an environmental review of the project was conducted by the Arizona Department of Transportation Multimodal Transportation Division, Aeronautics Group which concluded that the proposed work is environmentally cleared. The letter from ADOT will be included as **Appendix B**, *ADOT Environmental Determination Checklist.*

9.0 Utility Lines in Project Area

9.1 Site Utilities

Kimley-Horn researched available utility records (see **Section 2.1.2** of this report) that were furnished by the airport. Prior to performing soil borings for the geotechnical investigation, the site was reviewed for potential utility conflicts. There were no existing underground utilities that were found crossing the project area.

10.0 Miscellaneous Work Item

10.1 Additional Work Items

In addition to the work items previously mentioned in Section 1.3 of this report, as stated in the plans, the Contractor shall be responsible for maintaining all haul routes utilized during construction. The condition of all haul routes will be documented in their existing condition prior to construction and shall be restored to a condition equivalent to or better by the Contractor prior to completion of the project.

11.0 Application of Life Cycle Cost Analysis

11.1 Life Cycle Cost Analysis

There was no discussion during the design of this project of using an alternative pavement material for the apron expansion.

12.0 Identify ADOT Ineligible Work

12.1 ADOT Ineligible Work

This project will be paid for using a combination of ADOT funding with a match from the City of Tombstone. No work items included in this project are identified as ADOT ineligible, see **Table 1.3.**

13.0 DBE Participation

The Sponsor's DBE program is currently in the review process for the FY 2025-2026 three-year cycle. Once approved a copy will be readily available for download.

14.0 Project Schedule

14.1 Project Schedule Table

Activity	Date
Preliminary Plans Submittal	5/20/2025
Preliminary Review Meeting	6/17/2025
100% Plans Submittal	9/25/2025
Bid Advertisement	10/15/2025
Recommendation for Award	11/12/2025
Begin Construction	12/15/2025

15.0 Project Estimate

15.1 Engineer's Opinion of Probable Cost

The following is a Cost Estimates for the project. The estimate is broken down by individual construction items.

Note: The Consultant has no control over the cost of labor, materials, equipment, or over the contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Consultant at this time and represent only the Consultant's judgment as a design professional familiar with the construction industry. The Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

ENGINEER'S OPINION OF PROBABLE COST

Item No.	Specification Number	Bid Item Description	Quantity	Unit	Engineer's Estimate Unit Price	Engineer's Estimate Amount
1	ADOT 106	Contractor Quality Control	1	LS	$ 2,000.00	$ 2,000.00
2	ADOT 810	Storm Water Pollution Prevention	1	LS	$ 3,200.00	$ 3,200.00
3	ADOT 901	Mobilization/Demobilization	1	LS	$ 8,500.00	$ 8,500.00
4	ADOT 202	Remove and Salvage Existing Fence and Gate	50	LF	$ 30.00	$ 1,500.00
5	ADOT 902	Installation of Temprorary Construction Fence and Gate	80	LF	$ 75.00	$ 6,000.00
6	ADOT 925	Construction Surveying and Layout	1	LS	$ 2,000.00	$ 2,000.00
7	ADOT 202	Sawcut and Removal of Bituminous Pavement	10	SY	$ 20.00	$ 200.00
8	ADOT 201	Clearing and Grubbing	0.3	AC	$ 3,000.00	$ 900.90
9	ADOT 203	Excavation and Removal of Existing Soils	59	CY	$ 18.00	$ 1,062.00
10	ADOT 203	Fill with Select Material	16	CY	$ 13.00	$ 208.00
11	ADOT 205	Compacted Subgrade - 6" Depth	840	SY	$ 9.00	$ 7,560.00
12	ADOT 303	Aggregate Base Course	140	CY	$ 150.00	$ 21,000.00
13	ADOT 415	Asphalt Mix Pavement	160	TONS	$ 150.00	$ 24,000.00
14	ADOT 908	6" Vertical Curb	250	LF	$ 12.00	$ 3,000.00
15	ADOT 305	Controlled Low Strength Material	6	CY	$ 50.00	$ 300.00
16	ADOT 708	White Pavement Markings	70	SF	$ 15.00	$ 1,050.00
17	ADOT 706	In-pavement 2-Way Plastic Reflectors	32	EA	$ 10.00	$ 320.00
18	ADOT 902	Installation of Salvaged Fence and Gate	50	LF	$ 50.00	$ 2,500.00
					Total Amount	**$ 85,300.90**

16.0 Preliminary Project Budget

Type of Expense	Anticipated Cost
Civil Design	$37,101.00
Administrative	$1,670.97
Construction	$85,300.90
Construction Observation/Testing	$10,000

17.0 Pre-design Meeting Minutes

17.1 Meeting Minutes

The pre-design meeting was held during the five-year ACIP meeting with the FAA and ADOT.

APPENDIX A: GEOTECHNICAL EVALUATION REPORT

Western Technologies
An RMA Company

GEOTECHNICAL EVALUATION REPORT

TOMBSTONE MUNICIPAL AIRPORT APRON EXPANSION

2015 Arizona State Route 80
Tombstone, Arizona
WT Job No. 2922JR079

PREPARED FOR:

Kimley-Horn and Associates, Inc.
7740 North 16th Street, Suite 300
Phoenix, Arizona 85020
Attn: Brandon Robinson, P.E.

August 23, 2023

Justin M. Heinecke, P.E., R.G.
Senior Geotechnical Engineer

Randall D. Harris, P.E.
Senior Geotechnical Engineer

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APPENDIX A

APPENDIX B

GEOTECHNICAL EVALUATION
TOMBSTONE MUNICIPAL AIRPORT APRON EXPANSION
2015 ARIZONA STATE ROUTE 80
TOMBSTONE, ARIZONA
JOB NO. 2922JR079

1.0 PURPOSE

This report contains the results of our geotechnical evaluation for a proposed aircraft apron expansion to be located at Tombstone Municipal Airport in Tombstone, Arizona. The purpose of these services is to provide information and recommendations regarding:

- Subsurface conditions
- Earthwork guidelines
- Excavation conditions
- Pavement sections
- Drainage

Results of the field exploration, field tests, and laboratory testing program are presented in the Appendices.

2.0 PROJECT DESCRIPTION

We understand the project consists of an approximately 90-foot by 130-foot apron expansion adjacent to, and immediately south of, an existing asphalt concrete apron. The project pavements will likely utilize asphalt concrete overlying aggregate base course and will be used to support general aviation aircraft weighing less than 12,500 pounds. Cuts and fills of less than 2 feet are expected with the finished apron matching the elevations of the existing apron. Final site grading plans were not available at the time of this report. Should this information not be correct, we should be notified.

3.0 SCOPE OF SERVICES

3.1 Field Exploration

Two borings were drilled to depths ranging from about 10-1/4 to 10-1/2 feet below existing site grade in the proposed apron expansion area. The borings were at the approximate

locations shown on the attached Boring Location Diagram. A field log was prepared for each boring. These logs contain visual classifications of the materials encountered during drilling as well as interpolation of the subsurface conditions between samples. Final logs, included in Appendix A, represent our interpretation of the field logs and may include modifications based on laboratory observations and tests of the field samples. The final logs describe the materials encountered, their thickness, and the locations where samples were obtained.

The Unified Soil Classification System was used to classify soils. The soil classification symbols appear on the boring logs and are briefly described in Appendix A. Local and regional geologic characteristics were used to estimate the seismic design criteria.

3.2 Laboratory Analyses

Laboratory analyses were performed on representative soil samples to aid in material classification and to estimate pertinent engineering properties of the on-site soils for preparation of this report. Testing was performed in general accordance with applicable standard test methods. The following tests were performed and the results are presented in Appendix B.

- Water content
- Dry density
- California bearing ratio (CBR)
- Plasticity
- Minus #200 sieve
- Moisture-density relationship (proctor)

3.3 Analyses and Report

This geotechnical engineering report includes a description of the project, a discussion of the field and laboratory testing programs, a discussion of the subsurface conditions, and design recommendations as appropriate to its purpose. The scope of services for this project does not include, either specifically or by implication, any environmental assessment of the site, discovery of underground storage tanks or other underground structures, or identification of contaminated or hazardous materials or conditions. If there is concern about the potential for such contamination, other studies should be undertaken. We are available to discuss the scope of such studies with you.

4.0 SITE CONDITIONS

4.1 Surface

At the time of our exploration, the area of the proposed apron expansion was essentially undeveloped. The ground surface was roughly graded and relatively flat with a sparse growth of grasses. Site drainage trended to the northeast as sheet surface flow. Other site features included a small hangar/Quonset hut and an existing asphalt concrete apron to the north of the proposed apron expansion. The airport runway was located to the northeast of the project area.

View of the site from the southeast taken on July 28, 2022 showing the one remaining hangar, the stake for Boring 2 in the foreground and the stake for Boring 1 in the distance to the left.

4.2 Aerial Photography Review

Historic aerial photographs dating back to 1983 were reviewed for the subject site. The photographs depict the site was partially cleared of vegetation, but otherwise undeveloped in 1983 and 1984. Sometime between 1984 and 1996, the existing asphalt concrete apron was constructed. Sometime between 1996 and 2003, three hangar/Quonset huts were erected along the west side of the existing apron. The 2007 and 2013 photos show no changes. Sometime between 2010 and 2013, the northern hangar/Quonset hut was

removed from the site. The 2013, 2015, and 2017 photos show just the two remaining hangar/Quonset huts. Sometime between 2017 and 2019, the southern hangar/Quonset hut was destroyed and pieces of twisted metal are visible on site (see Plate 2). Subsequent to 2019, the remains of the southern hangar/Quonset hut was removed from the site.

Aerial view of the site from Google Earth taken in June 2007 showing the three hangar/ Quonset huts.

4.3 Subsurface

As presented on the Boring Logs, surface soils to depths of about 3 to 4 feet consisted of stiff Sandy CLAY. Near surface soils are of medium plasticity. The materials underlying the surface soils and extending to the full depth of exploration consisted of medium dense to very dense Clayey SAND. Zones of light carbonate cementation were encountered in the borings at depths below 3 feet. Groundwater was not encountered in any boring at the time of exploration. A detailed description of the soils encountered can be found on the boring logs in Appendix A.

5.0 GEOTECHNICAL PROPERTIES & ANALYSIS

Near-surface soils are of medium plasticity. Based upon the swell percentages measured in the CBR tests, these soils exhibit low expansion potential when recompacted, confined by loads approximating pavement loads and saturated. Pavements supported on recompacted on-site soils have a low potential for heaving if the water content of the soil increases. Densification of the soil by the passage of construction equipment may increase the expansion potential of the on-site clayey soil.

A California Bearing Ratio (CBR) test result of 11 was obtained on a composite of the near-surface soil samples. In addition, relatively undisturbed samples of the near-surface soils indicated relatively low in-situ unit weights with moisture contents below optimum.

6.0 RECOMMENDATIONS

6.1 General

Recommendations contained in this report are based on our understanding of the project criteria described in Section 2.0 and the assumption that the soil and subsurface conditions are those disclosed by the explorations. Others may change the plans, final elevations, loads, and layout during design or construction. Substantially different subsurface conditions from those described herein may be encountered or become known. Any changes in the project criteria or subsurface conditions shall be brought to our attention in writing.

6.2 Pavements—General

Pavements for this project include asphalt concrete sections for an exterior apron. Pavement sections for aircraft presented below were designed in accordance with FAA Advisory Circular AC 150/5320-6G. Pavement designs were calculated using the FAARFIELD (v 2.0) computer program associated with the FAA advisory circular.

Borings drilled for this project indicate soils underlying the proposed apron pavements are primarily fair-quality pavement support materials. Generally, CBR values for these soils types can vary from 5 to 20 and subgrade moduli for these soil types can vary from 100-300 pci. A CBR test was performed in the laboratory for this project using soils sampled from both borings. A value of 11 was obtained.

The design aircraft includes single wheel aircraft weighing less than 12,500 pounds making minimal (up to 1200) departures/arrivals annually.

6.3 Apron (Aircraft <12,500 pounds)

Based on the information in Section 6.2, the recommended asphalt concrete section is provided below. It should be noted that this is the minimum pavement section required in AC 150/5320-6G for aircraft less than 60,000 pounds. The FAARFIELD program indicates that asphalt concrete should be at least 4 inches thick; however, Table 3-3 in the advisory circular indicates that asphalt concrete should be at least 3 inches thick for aircraft less than 60,000 pounds.

Apron Pavement Section

Aircraft and Weight (pounds)	Annual Operations	Asphalt Mix Pavement (inches)	Aggregate Base Course (inches)	Compacted Subgrade (inches)
12,500	1,200	3	6	8

Material and compaction requirements for all pavement sections should conform to recommendations presented under Section **7.0**, **EARTHWORK**. The gradient of paved surfaces should ensure positive drainage. Water should not pond in areas directly adjoining paved sections. The on-site subgrade soils may soften and lose stability if subjected to conditions that result in an increase in water content.

After removing the existing pavements and excavating to the final subgrade elevation, the exposed subgrade should be proof-rolled to identify any zones of loose/soft or unstable soil. Proof-rolling may be accomplished with a minimum 20-ton, tandem axle, dual-tire dump truck or water truck loaded to the legal limit and having tire pressures of at least 80 psi. Areas where soil movement is observed more than 6 inches away from the truck's rear tires should be considered unstable. In general, loose/soft or unstable soils should be removed to their full depth and replaced with properly compacted, engineered fill.

6.4 Drainage

The major cause of soil problems in this vicinity is moisture increase in soils below structures and pavements. Therefore, it is extremely important that positive drainage be provided

during construction and maintained throughout the life of the proposed improvement. Infiltration of water into utility excavations must be prevented during construction. Surface features that could retain water adjacent to the pavements should not be constructed.

7.0 EARTHWORK

7.1 General

The conclusions contained in this report for the proposed construction are contingent upon compliance with recommendations presented in this section. Any excavating, trenching, or disturbance that occurs after completion of the earthwork must be backfilled, compacted and tested in accordance with the recommendations contained herein. It is not reasonable to rely upon our conclusions and recommendations if any future unobserved and untested trenching, earthwork activities or backfilling occurs.

Although fills or underground facilities such as septic tanks, cesspools, basements, utilities, and dry wells were not observed, such features might be encountered during construction. These features should be demolished in accordance with the recommendations of the geotechnical engineer. Any loose or disturbed soils resulting from demolition should be removed or recompacted as engineered fill and any excavations should be backfilled in accordance with recommendations presented herein.

7.2 Site Clearing

Strip and remove any existing fill material, vegetation, debris, and any other deleterious materials from the pavement areas. All exposed surfaces should be free of mounds and depressions that could prevent uniform compaction.

7.3 Excavation

We anticipate that excavations for shallow foundations and utility trenches for the proposed construction can be accomplished with conventional equipment. Excavations penetrating the underlying very dense soil may require the use of heavy-duty, specialized equipment to facilitate removal. The speed and ease of excavation is dependent on the nature of the deposit, the type of equipment used, and the skill and experience of the equipment operator.

On-site soils may pump or become unworkable at high water contents. Workability may be improved by scarifying and drying. Over-excavation of wet zones and replacement with granular materials may be necessary. The use of lightweight excavation and compaction equipment may be required to minimize subgrade pumping. Alternative methods to mitigate loose/soft or unstable soils may be appropriate depending upon the soil conditions observed at the time of construction. General alternatives that have been used successfully on previous projects are presented in Section **7.6, Wet Subgrade Soils**, herein.

Our soil classifications are based solely on the materials encountered in widely spaced exploratory test borings. The contractor should verify that similar conditions exist throughout the proposed area of excavation. If different subsurface conditions are found at the time of construction, we should be contacted immediately to evaluate the conditions encountered.

7.3.1 Temporary Excavations and Slopes

Temporary, non-surcharged construction excavations should be sloped or shored. The individual contractor should be made responsible for designing and constructing stable, temporary excavations as required to maintain stability of both the excavation sides and bottom. All excavations should be sloped or shored in the interest of safety following local and federal regulations, including current OSHA excavation and trench safety standards. OSHA recommends a maximum slope inclination of ¾:1 (horizontal:vertical) for Type A soils, 1:1 for Type B soils, and 1½:1 for Type C soils.

As a safety measure, it is recommended that all vehicles and soil piles be kept a minimum lateral distance back from the crest of the slope at least equal to the slope height. The exposed slope face should be protected against the elements.

7.4 Pavement Subgrade Preparation

The subgrade should be scarified, moistened as required, and recompacted for a minimum depth of 8 inches prior to placement of fill and pavement materials.

7.5 Earthwork and Materials

Clean on-site soils with low expansive potentials and maximum dimension of 6 inches or imported materials may be used as fill material for the following:

- Apron pavement areas

- Backfill

Imported soils should conform to the following:

- Gradation (ASTM C136): percent finer by weight

6"	100
4"	85-100
¾"	70-100
No. 4 Sieve	50-100
No. 200 Sieve	40 (max)

- Maximum expansive potential (%)[1] 1.5

- Maximum soluble sulfates (%) 0.10

Materials should be compacted to the following:

Material	Minimum Percent Compaction (ASTM D698)
• On-site soil, reworked and fill:	
Below aircraft pavement	95
• Imported soil (cohesive):	
Below aircraft pavement	95

Material	Minimum Percent Compaction (ASTM D698)
• Imported soil (non-cohesive):	
Below aircraft pavement	100

[1] Measured on a sample compacted to approximately 95 percent of the ASTM D698 maximum dry density at about 3 percent below optimum water content. The sample is confined under a 100 psf surcharge and submerged.

- Aggregate base below pavement.....100
- Nonstructural backfill.....90

Fill at depths greater than 5 feet below finished grade should be compacted to at least 100 percent of the ASTM D698 (standard proctor) dry-density value to within 5 feet of finished grade. Fill at depths less than 5 feet below finished grade should be compacted to the minimum values provided above.

On-site and imported soils should be compacted within a water content range of 2 percent below to 2 percent above optimum.

Specifications for use during construction of the taxiway extension should follow FAA Advisory Circular AC 150/5370-10H and include:

- Item P-101, Preparation/Removal of Existing Pavements
- Item P-151, Clearing and Grubbing
- Item P-152, Excavation, Subgrade, and Embankment
- Item P-208, Aggregate Base Course
- Item P-401, Asphalt Mix Pavement [2]
- Item P-403, Hot Mix Asphalt (HMA) Pavements (Base, Leveling or Surface Course)
- Item P-603, Bituminous Tack Coat
- MAG [3] 710, Asphalt Concrete

Item P-152 should specify the use of a standard proctor (ASTM D698) with a minimum of 95 percent relative compaction for cohesive soils and 100 percent relative compaction for non-cohesive soils. Measurement of in-place density should reference ASTM D6938 using Procedure A with direct transmission and a frequency of at least one test per 1,000 square yards per lift. Proof-rolling after compaction should be specified using a minimum 20-ton truck with tires inflated to at least 80 psi.

[2] FAA Advisory Circular AC 150/5370-10H allows for the use of P-401 or, since aircraft are less than 60,000 pounds, state highway specified asphalt concrete mixes where the state has requested and received FAA approval to use state highway specifications.

[3] Asphalt concrete should conform to *Maricopa Association of Governments Uniform Standard Specifications for Public Works Construction* (MAG), Current Edition.

Item P-208 should specify the use of a standard proctor (ASTM D698) and 100 percent relative compaction. Measurement of in-place density should reference ASTM D6938 using Procedure A with direct transmission and a frequency of at least one test per 1,000 square yards. Proof-rolling after compaction should be specified using a minimum 20-ton truck with tires inflated to at least 80 psi.

Item P-401 should specify the Marshall Design Criteria corresponding to 50 blows and Gradation 3 for the aggregate and PG 64-22 bituminous material.

MAG 710 Asphalt Concrete should be specified as 1/2-inch, Low Traffic with PG 64-22 bituminous material.

7.6 Wet Subgrade Soils

At the time of our study, site soils were dry and stable; however, if these soils become excessively wet, pumping and instability should be anticipated. If wet, unstable subgrade soils are encountered during construction, there are several alternatives to mitigate them. The alternatives vary in cost and time to implement, so the alternatives should be evaluated and compared in order to decide which one is most beneficial for the project.

1. The wet, unstable subgrade may be scarified and/or partially removed in order to allow the excess moisture to evaporate. The soils should be periodically blended to allow uniform drying to occur. When the soils are near optimum moisture content, they should be compacted in accordance with project requirements.

2. The wet, unstable subgrade may be removed and replaced with drier, granular soil and/or aggregate base course. The depth of removal necessary will vary depending on the conditions in each unstable area. It may be best to remove a uniform thickness of 2 feet in each area. Although the wet, unstable soils may extend to a depth greater than 2 feet, the granular material should bridge over these deeper wet soils. Removal should be performed with an excavator or similar piece of equipment so that underlying wet soils will not be adversely affected by wheel loads and thereby become more unstable. The first foot of granular backfill should be placed at near-optimum moisture content and compacted using static (non-vibrating) equipment to at least 90 percent of the maximum dry density. The second foot of granular material may then be placed and compacted in accordance with project requirements.

3. Geogrid and aggregate base course may be used to bridge over wet subgrade soils. Wet, unstable subgrade should be removed to a depth of at least 1 foot and to a distance at least 2 feet beyond the edge of the unstable area. Removal should be performed with an excavator or similar piece of equipment so that underlying wet soils will not be adversely affected by wheel loads and thereby become unstable. Geogrid should consist of Tensar TX-5 or equivalent and should be installed in accordance with the manufacturer's installation instructions. The geogrid should extend at least 2 feet beyond the edge of the unstable area. Aggregate base course (not just granular soil) should be placed over the geogrid and compacted in accordance with project requirements. It should be noted that this use of geogrid is independent of the geogrid referenced in Table 3.

4. Wet, unstable subgrade soils at the site may be mixed with dry portland cement or hydrated lime. For cost-estimating purposes, it may be assumed that 5 percent by dry weight of the soil will be required to stabilize the site soils and that treatment to a depth of 1 foot will be required to bridge over the unstable areas. The depth of treatment and quantity of cement or lime may be modified during construction depending on the results achieved. It should be noted that the portland cement will not chemically react with the clay component of the soil; however, the cement will dry the soil and will provide cementation of the coarse-grained particles in the soil. Since the dry cement will react with the excess moisture in the subgrade soils, additional water will need to be added to achieve moisture contents near optimum prior to compaction of the soils. The blended soil should be compacted and tested in accordance with project requirements.

The extent of the unstable areas to be treated may be identified by proof rolling the exposed materials with a minimum 20-ton, tandem axle, dual-tire dump truck or water truck loaded to the legal limit and having tire pressures of at least 80 psi. Areas where soil movement is observed more than 6 inches away from the truck's rear tires should be considered unstable.

7.7 Ground Compaction and Shrinkage Factors

Clearing and grubbing operations will result in some material volume changes. Excavation and recompaction of on-site soils will result in shrinkage losses. Based on our experience, it is anticipated that shrinkage of approximately 15 percent is applicable for the upper on-site soils. As an example, a shrinkage factor of 15 percent would mean it would require 1.15

cubic yards of excavated material to equal 1.0 cubic yard of properly compacted fill. Subsidence of the subgrade where soils are scarified, wetted, and recompacted will be on the order of 1 to 2 inches.

7.8 Permanent Cut and Fill Slopes

The stability of any cut and fill slopes at the project site will be dependent upon the properties of the materials comprising the slope face and the susceptibility of slope soils to erosion. For permanent cut slopes in the typical clayey sand soil matrix encountered and less than 6 feet in vertical height, slopes no steeper than 1-1/2:1 (horizontal:vertical) are recommended. Fill slopes should not be steeper than 2H: 1V. It is assumed that appropriate slope erosion protection and/or planting will be utilized.

Where exposed slopes are predominantly made up of bare soil, slopes should be covered as quickly as possible with temporary or permanent protection in order to avoid unnecessary soil loss. If during construction, rains are anticipated, flows over graded or disturbed areas should be minimized by diverting upslope surface water through the use of berms, ditches, or other diversion devices.

Where soil slopes are 3H:1V or flatter, revegetate with native vegetation or provide other available ground covers such as netting, spray or hand-applied mulches, or crushed rock. For slopes of 2H:1V to 3H:1V, protection should consist of spray or hand-applied mulches, jute or excelsior vegetation, erosion matting, other equivalent ground covers. For slopes of 1-1/2H:1V to 2H:1V, slope protection should consist of hand placed, grouted or wire-tied rip-rap as appropriate.

Erosional activity, if allowed to form and propagate, will increase soil loss and could result in loss of support to structures, streets and other facilities. Periodic maintenance and prompt repair of erosional features is important to prevent soil loss. The effectiveness of erosion control measures should be evaluated after heavy or prolonged rains.

7.9 Compliance

Recommendations for and pavements supported on compacted fills or prepared subgrade depend upon compliance with the **EARTHWORK** recommendations. To assess compliance, observation and testing should be performed under the direction of a WT geotechnical engineer. Please contact us to provide these observation and testing services.

8.0 LIMITATIONS

This report has been prepared assuming the project criteria described in **2.0 PROJECT DESCRIPTION**. If changes in the project criteria occur, or if different subsurface conditions are encountered or become known, the conclusions and recommendations presented herein shall become invalid. In any such event, WT should be contacted in order to assess the effect that such variations may have on our conclusions and recommendations. If WT is not retained for the construction observation and testing services to determine compliance with this report, our professional responsibility is accordingly limited.

The recommendations presented are based entirely upon data derived from a limited number of samples obtained from widely spaced explorations. The attached logs are indicators of subsurface conditions only at the specific locations and times noted. This report assumes the uniformity of the geology and soil structure between explorations, however variations can and often do exist. Whenever any deviation, difference, or change is encountered or becomes known, WT should be contacted.

This report is for the exclusive benefit of our client alone. There are no intended third-party beneficiaries of our contract with the client or this report, and nothing contained in the contract or this report shall create any express or implied contractual or any other relationship with, or claim or cause of action for, any third party against WT.

This report is valid for the earlier of one year from the date of issuance, a change in circumstances, or discovered variations. After expiration, no person or entity shall rely on this report without the express written authorization of WT.

9.0 CLOSURE

We prepared this report as an aid to the designers of the proposed project. The comments, statements, recommendations and conclusions set forth in this report reflect the opinions of the authors. These opinions are based upon data obtained at the location of the explorations, and from laboratory tests. Work on your project was performed in accordance with generally accepted standards and practices utilized by professionals providing similar services in this locality. No other warranty, express or implied, is made.

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PROJECT: **TOMBSTONE AIRPORT APRON EXPANSION**

JOB NO.: **2922JR079**

VICINITY MAP

PLATE

1

LEGEND

APPROXIMATE BORING LOCATION

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BORING LOCATION DIAGRAM

PLATE

2

Allowable Soil Bearing Capacity	The recommended maximum contact stress developed at the interface of the foundation element and the supporting material.
Backfill	A specified material placed and compacted in a confined area.
Base Course	A layer of specified aggregate material placed on a subgrade or subbase.
Base Course Grade	Top of base course.
Bench	A horizontal surface in a sloped deposit.
Caisson/Drilled Shaft	A concrete foundation element cast in a circular excavation which may have an enlarged base (or belled caisson).
Concrete Slabs-On-Grade	A concrete surface layer cast directly upon base course, subbase or subgrade.
Crushed Rock Base Course	A base course composed of crushed rock of a specified gradation.
Differential Settlement	Unequal settlement between or within foundation elements of a structure.
Engineered Fill	Specified soil or aggregate material placed and compacted to specified density and/or moisture conditions under observations of a representative of a soil engineer.
Existing Fill	Materials deposited through the action of man prior to exploration of the site.
Existing Grade	The ground surface at the time of field exploration.
Expansive Potential	The potential of a soil to expand (increase in volume) due to absorption of moisture.
Fill	Materials deposited by the actions of man.
Finished Grade	The final grade created as a part of the project.
Gravel Base Course	A base course composed of naturally occurring gravel with a specified gradation.
Heave	Upward movement.
Native Grade	The naturally occurring ground surface.
Native Soil	Naturally occurring on-site soil.
Rock	A natural aggregate of mineral grains connected by strong and permanent cohesive forces. Usually requires drilling, wedging, blasting or other methods of extraordinary force for excavation.
Sand and Gravel Base Course	A base course of sand and gravel of a specified gradation.
Sand Base Course	A base course composed primarily of sand of a specified gradation.
Scarify	To mechanically loosen soil or break down existing soil structure.
Settlement	Downward movement.
Soil	Any unconsolidated material composed of discrete solid particles, derived from the physical and/or chemical disintegration of vegetable or mineral matter, which can be separated by gentle mechanical means such as agitation in water.
Strip	To remove from present location.
Subbase	A layer of specified material placed to form a layer between the subgrade and base course.
Subbase Grade	Top of subbase.
Subgrade	Prepared native soil surface.

COARSE-GRAINED SOILS

LESS THAN 50% FINES

GROUP SYMBOLS	DESCRIPTION	MAJOR DIVISIONS
GW	WELL-GRADED GRAVEL OR WELL-GRADED GRAVEL WITH SAND, LESS THAN 5% FINES	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE
GP	POORLY-GRADED GRAVEL OR POORLY-GRADED GRAVEL WITH SAND, LESS THAN 5% FINES	
GM	SILTY GRAVEL OR SILTY GRAVEL WITH SAND, MORE THAN 12% FINES	
GC	CLAYEY GRAVEL OR CLAYEY GRAVEL WITH SAND, MORE THAN 12% FINES	
SW	WELL-GRADED SAND OR WELL-GRADED SAND WITH GRAVEL, LESS THAN 5% FINES	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE
SP	POORLY-GRADED SAND OR POORLY-GRADED SAND WITH GRAVEL, LESS THAN 5% FINES	
SM	SILTY SAND OR SILTY SAND WITH GRAVEL, MORE THAN 12% FINES	
SC	CLAYEY SAND OR CLAYEY SAND WITH GRAVEL, MORE THAN 12% FINES	

NOTE: Coarse-grained soils receive dual symbols if they contain 5% to 12% fines (e.g., SW-SM, GP-GC).

FINE-GRAINED SOILS

MORE THAN 50% FINES

GROUP SYMBOLS	DESCRIPTION	MAJOR DIVISIONS
ML	SILT, SILT WITH SAND OR GRAVEL, SANDY SILT, OR GRAVELLY SILT	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50
CL	LEAN CLAY OF LOW TO MEDIUM PLASTICITY, SANDY CLAY, OR GRAVELLY CLAY	
OL	ORGANIC SILT OR ORGANIC CLAY OF LOW TO MEDIUM PLASTICITY	
MH	ELASTIC SILT, SANDY ELASTIC SILT, OR GRAVELLY ELASTIC SILT	SILTS AND CLAYS LIQUID LIMIT MORE THAN 50
CH	FAT CLAY OF HIGH PLASTICITY, SANDY FAT CLAY, OR GRAVELLY FAT CLAY	
OH	ORGANIC SILT OR ORGANIC CLAY OF HIGH PLASTICITY	
PT	PEAT AND OTHER HIGHLY ORGANIC SOILS	HIGHLY ORGANIC SOILS

NOTE: Fine-grained soils may receive dual classification based upon plasticity characteristics (e.g. CL-ML).

SOIL SIZES

COMPONENT	SIZE RANGE
BOULDERS	Above 12 in.
COBBLES	3 in. – 12 in.
GRAVEL	No. 4 – 3 in.
Coarse	¾ in. – 3 in.
Fine	No. 4 – ¾ in.
SAND	No. 200 – No. 4
Coarse	No. 10 – No. 4
Medium	No. 40 – No. 10
Fine	No. 200 – No. 40
Fines (Silt or Clay)	Below No. 200

NOTE: Only sizes smaller than three inches are used to classify soils

CONSISTENCY

CLAYS & SILTS	BLOWS PER FOOT
VERY SOFT	0 – 2
SOFT	3 – 4
FIRM	5 – 8
STIFF	9 – 15
VERY STIFF	16 – 30
HARD	OVER 30

RELATIVE DENSITY

SANDS & GRAVELS	BLOWS PER FOOT
VERY LOOSE	0 – 4
LOOSE	5 – 10
MEDIUM DENSE	11 – 30
DENSE	31 – 50
VERY DENSE	OVER 50

NOTE: Number of blows using 140-pound hammer falling 30 inches to drive a 2-inch-OD (1⅜-inch ID) split-barrel sampler (ASTM D1586).

PLASTICITY OF FINE GRAINED SOILS

PLASTICITY INDEX	TERM
0	NON-PLASTIC
1 – 7	LOW
8 – 20	MEDIUM
Over 20	HIGH

DEFINITION OF WATER CONTENT

DRY
SLIGHTLY DAMP
DAMP
MOIST
WET
SATURATED

The number shown in **"BORING NO."** refers to the approximate location of the same number indicated on the "Boring Location Diagram" as positioned in the field by pacing or measurement from property lines and/or existing features, or through the use of Global Positioning System (GPS) devices. The accuracy of GPS devices is somewhat variable.

"DRILLING TYPE" refers to the exploratory equipment used in the boring wherein **HSA = hollow stem auger**, and the dimension presented is the outside diameter of the HSA used.

"N" in "BLOW COUNTS" refers to a 2-inch outside diameter split-barrel sampler driven into the ground with a 140 pound drop-hammer dropped 30 inches repeatedly until a penetration of 18 inches is achieved or until refusal. The number of blows, or "blow count", of the hammer is recorded for each of three 6-inch increments totaling 18 inches. The number of blows required for advancing the sampler for the last 12 inches (2nd and 3rd increments) is defined as the Standard Penetration Test (SPT) "**N**"-Value. Refusal to penetration is considered more than 50 blows per 6 inches. (Ref. ASTM D1586).

"R" in "BLOW COUNTS" refers to a 3-inch outside diameter ring-lined split barrel sampler driven into the ground with a 140 pound drop-hammer dropped 30 inches repeatedly until a penetration of 12 inch is achieved or until refusal. The number of blows required to advance the sampler 12 inches is defined as the "**R**" blow count. The "**R**" blow count requires an engineered conversion to an equivalent SPT N-Value. Refusal to penetration is considered more than 50 blows per foot. (Ref. ASTM D3550).

"CS" in "BLOWS/FT." refers to a 2½-in. outside diameter California style split-barrel sampler, lined with brass sleeves, driven into the ground with a 140-pound hammer dropped 30 inches repeatedly until a penetration of 18 inches is achieved or until refusal. The number of blows of the hammer is recorded for each of the three 6-inch increments totaling 18 inches. The number of blows required for advancing the sampler for the last 12 inches (2nd and 3rd increments) is defined as the "CS" blow count. The "CS" blow count requires an engineered conversion to an equivalent SPT N-Value. Refusal to penetration is considered more than 50 blows for a 6-inch increment. (Ref. ASTM D 3550)

"SAMPLE TYPE" refers to the form of sample recovery, in which **N** = Split-barrel sample, **R** = Ring-lined sample, **"CS"** = California style split-barrel sample, **G** = Grab sample, **B** = Bucket sample, **C** = Core sample (ex. diamond bit rock coring).

"DRY DENSITY (LBS/CU FT)" refers to the laboratory-determined dry density in pounds per cubic foot. The symbol **"NR"** indicates that no sample was recovered.

"WATER (MOISTURE) CONTENT" (% of Dry Wt.) refers to the laboratory-determined water content in percent using the standard test method ASTM D2216.

"USCS" refers to the "Unified Soil Classification System" Group Symbol for the soil type as defined by ASTM D2487 and D2488. The soils were classified visually in the field, and where appropriate, classifications were modified by visual examination of samples in the laboratory and/or by appropriate tests.

These notes and boring logs are intended for use in conjunction with the purposes of our services defined in the text. Boring log data should not be construed as part of the construction plans nor as defining construction conditions.

Boring logs depict our interpretations of subsurface conditions at the locations and on the date(s) noted. Variations in subsurface conditions and characteristics may occur between borings. Groundwater levels may fluctuate due to seasonal variations and other factors.

The stratification lines shown on the boring logs represent our interpretation of the approximate boundary between soil or rock types based upon visual field classification at the boring location. The transition between materials is approximate and may be more or less gradual than indicated.

DATE DRILLED: **8-3-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

BORING NO. 1

EQUIPMENT TYPE: **CME-75**
DRILLING TYPE: **8"HSA**
LOGGED BY: **A. Sarmiento**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOW COUNTS	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
12.8	89	G R		14		CL		Sandy CLAY; with gravel, light brown, stiff, damp
6.6	97	R		14				light cementation
						SC		Clayey SAND; with gravel, light brown, very dense, damp, light cementation
		R		50/5"	5			
								gravel increases
		N		50/3"	10			
								Boring Stopped at 10-1/4 Feet

N- STANDARD PENETRATION TEST
R- RING SAMPLE
NR- NO SAMPLE RECOVERY
G- GRAB SAMPLE
B- BUCKET SAMPLE

NOTES: **Groundwater not encountered.**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

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PROJECT: **TOMBSTONE AIRPORT APRON EXPANSION**
JOB NO.: **2922JR079**

PLATE
A-4

BORING LOG

DATE DRILLED: **8-3-22**
LOCATION: **See Location Diagram**
ELEVATION: **Not Determined**

BORING NO. 2

EQUIPMENT TYPE: **CME-75**
DRILLING TYPE: **8"HSA**
LOGGED BY: **A. Sarmiento**

MOISTURE CONTENT (% OF DRY WT.)	DRY DENSITY (LBS/CU FT)	SAMPLE TYPE	SAMPLE	BLOW COUNTS	DEPTH (FEET)	USCS	GRAPHIC	SOIL DESCRIPTION
		G				CL		Sandy CLAY; with gravel, light brown, stiff, damp
5.1	81	R		16				
6.6	97	R		42		SC		Clayey SAND; with gravel, light brown, medium dense, damp, light cementation
		N		26 25 22	5			dense
								gravel increases, very dense
		N		50/5"	10			
								Boring Stopped at 10-1/2 Feet

N- STANDARD PENETRATION TEST
R- RING SAMPLE
NR- NO SAMPLE RECOVERY
G- GRAB SAMPLE
B- BUCKET SAMPLE

NOTES: **Groundwater not encountered.**

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

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PROJECT: **TOMBSTONE AIRPORT APRON EXPANSION**
JOB NO.: **2922JR079**

PLATE **A-5**

BORING LOG

Boring No.	Sample Depth (ft)	USCS Class.	Percent Passing #200	Atterberg Limits		Initial Dry Density (pcf)	Initial Water Content (%)	Compression Properties			Moisture-Density Relationship			Expansion Properties			Soluble Sulfates (ppm)	Soluble Chlorides (ppm)	Remarks
				LL	PI			Surcharge (ksf)	Total Compression (%)		Maximum Dry Density (pcf)	Optimum Moisture Content (%)	Method	Surcharge (ksf)	Expansion (%)	Expansion Index (EI)			
									In-Situ	After Saturation									
1&2	0-3	CL	54	29	11						112.3	14.5	C						10,12
1	0-1	CL				89	12.8												
1	2.5-3.5	CL				97	6.6												
2	1-2	CL				81	5.1	0.5	0.6										
								1.0	1.6	11.6									2
								1.5		13.1									2
2	3-4	SC				92	8.2												

Remarks

1. Compacted density is approximately 95% of ASTM D698 maximum density at a moisture content slightly below optimum.
2. **2.** Submerged to approximate saturation.
3. **3.** Slight rebound after saturation.
4. **4.** Sample disturbance observed.
5. **5.** Expansion Index (EI) test in accordance with ASTM D4829.
6. **6.** Chloride (ARIZ 736a) by Motzz Laboratory Inc.
7. **7.** Sulfate (ARIZ 733a) by Motzz Laboratory Inc.
8. **8.** pH (ARIZ 237b).
9. **9.** Minimum Resistivity (ARIZ 236c).
10. **10.** Test Method ASTM D698 / AASHTO T99.
11. **11.** Field Visual Classification (ASTM D 2488).
12. **12.** Laboratory Soil Classification (ASTM D 2487).
13. **13.** Test Method ASTM D1557 / AASHTO T180.
14. **14.** From the ADOT Family of Curves for Maricopa County.
15. **15.** See Corrosion Plate.
16. **16.** Initial Dry Density and Initial Water Content from Remolded Swell.

Notes: Initial Dry Density and Initial Water Content are in-situ values unless otherwise noted.
NP = Non-Plastic **NV =** No Value

Geotechnical Environmental Inspections Materials
Western Technologies Inc. The Quality People Since 1955
wt-us.com

PROJECT: **TOMBSTONE MUNICIPAL AIRPORT APRON EXPANSION**

JOB NO.: **2922JR079**

PLATE

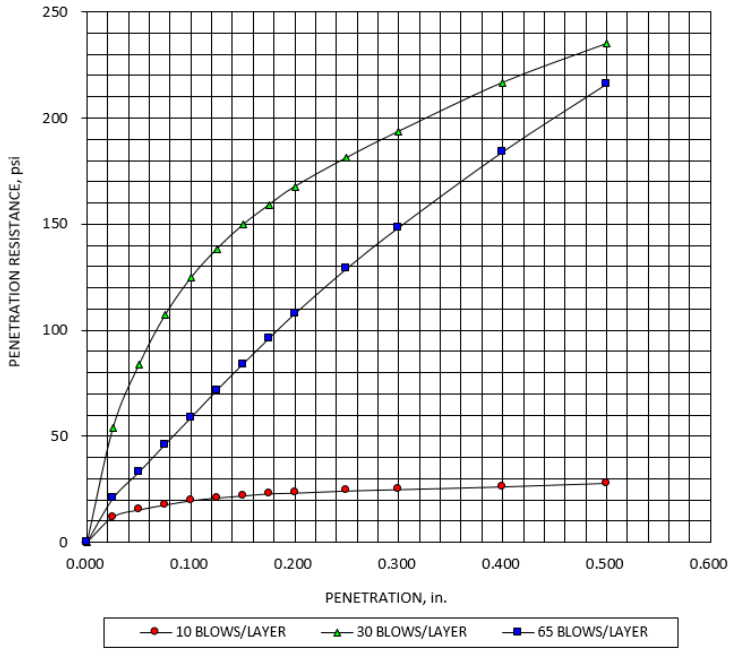
B-1

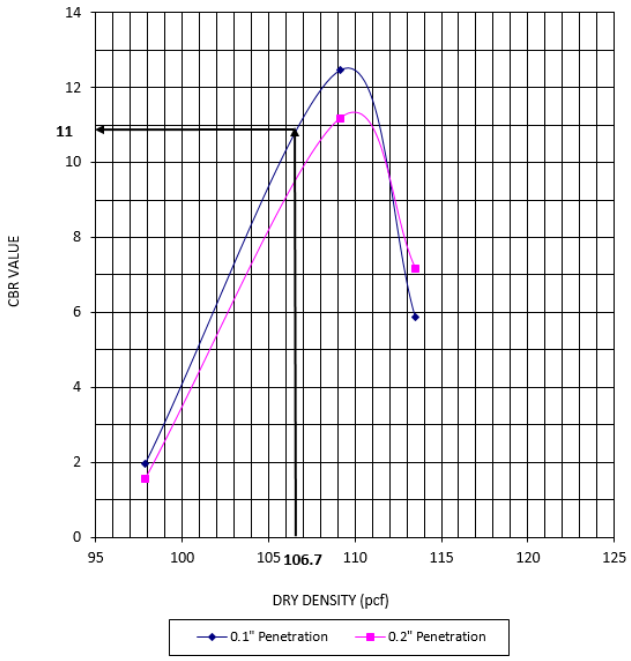
SOIL PROPERTIES

CALIFORNIA BEARING RATIO (CBR)
Borings 1&2 (0'-3')

Moisture Density Relationship			
Procedure:	ASTM D698	Method:	C
Maximum Dry Density, pcf:	112.3		
Optimum Moisture, % :	14.5		

Compacted Specimen Results	Procedure: ASTM D1883		
Compactive Effort (Blows per Layer):	10	30	65
Dry Density at Compaction, pcf:	97.8	109.1	113.5
Percent of Maximum Dry Density:	87.1	97.2	101.1
Percent Moisture Before Compaction:	15.0	14.9	14.7
Percent Moisture After Compaction:	14.1	13.6	14.0
Percent Moisture after Soaking (Avg. of Total Sample):	21.1	16.9	15.7
Dry Density after Soaking, pcf:	97.4	108.7	113.0
Percent Moisture after Soaking (Top 1 in.):	21.2	16.8	15.3
Swell, %:	0.3	0.1	0.2
Corrected CBR at 0.100 in. Penetration:	2	12	6
Corrected CBR at 0.200 in. Penetration:	2	11	7
Surcharge Weight, lbs.:	10	10	10
California Bearing Ratio (CBR) at 95% Relative Compaction:	**11**		





Geotechnical Environmental Inspections Materials

Western Technologies Inc.
The Quality People
Since 1955

PROJECT: **APRON EXPANSION TOMBSTONE MUNICIPAL AIRPORT**

JOB NO.: **2922JR079**

PLATE **B-2**

CALIFORNIA BEARING RATIO

APPENDIX B: ENVIRONMETAL EXCLUSION LETTER

ARIZONA DEPARTMENT OF TRANSPORTATION
MULTIMODAL TRANSPORTATION DIVISION
AERONAUTICS GROUP

ENVIRONMENTAL DETERMINATION CHECKLIST 2012

E1S1W01C

ADOT Project Number

Tombstone Municipal Airport (P29)

Airport Name

City of Tombstone, Cochise County, Arizona

Airport Location

PROJECT DESCRIPTION: List and clearly describe all components of project proposal. Include a summary of existing conditions at project site. Attach site map identifying project area and delineating the project.

According to ADOT, the forecasts of aviation demand that an additional aircraft parking apron is need in order to accommodate growth at the City of Tombstone Municipal Airport. This project includes the expansion of the existing asphalt concrete (AC) aircraft parking apron (90 feet x 135 feet); including the addition of aircraft tiedowns and pavement markings. Work will include the saw cut and removal of a portion of the existing asphalt apron pavement, removal (possible reuse) of the existing aggregate base course, compaction of the existing subgrade soils, placement and compaction of aggregate base course, and placement and compaction of a new asphalt surface course. A construction staging area and haul route will be required for the apron expansion and are included within the project limits.

The project area is located north of Government Draw, southeast of the Tombstone Hills in a relatively flat area that undulates gently. The project area is located in the Chihuahuan Desertscrub Biotic Community.[1] Vegetation in the project area includes catclaw acacia (*Senegalia greggii*), honey mesquite (*Prosopis glandulosa*), desert spoon (*Dasylirion wheeleri*), century plant (*Agave americana*), creosote (*Larrea tridentata*), turpentine bush (*Ericameria laricifolia*), Russian thistle (*Salsola tragus*), desert twinbugs (*Dicoria canescens*), desert broom (*Baccharis sarothroides*), oak-leaved thorn apple (*Datura quercifolia*), stinknet (*Oncosiphon pililiferum*) and resurrection plant (*Selaginella lepidophylla*). Elevation of the project area is 4,750 feet above mean sea level and slopes northeast.

1) SOCIO-ECONOMIC IMPACTS		
a) Will the proposed project lead to disruption or dividing of communities?	**YES**	**NO** X
b) Will the proposed project cause relocation of any people, homes, or businesses?	**YES**	**NO** X
2) CONSTRUCTION IMPACTS		
Will the proposed project produce construction impacts? **The contractor will be required to obtain a dust control permit. The contractor shall implement best practices for dust and air quality control. At the completion of the project all areas disturbed will be stabilized.**	**YES** X	**NO**
3) FARMLANDS		
Does the project involve acquisition of farmland or use of farmland protected by the Federal Farmland Protection Policy Act that would be converted to non-agricultural use?	**YES**	**NO** X

[1] Conservation Biology Institute (CBI). Data Basin. Data Basin. Accessed February 9, 2022. https://databasin.org/maps/new/#datasets=e8e241e869054d7e810894e5e993625e

4) ENDANGERED SPECIES		
a) Will the proposed project impact any federally or state-listed or proposed endangered or threatened species (ESA) of flora and fauna or impact critical habitat?	**YES**	**NO** X
b) Will the proposed project affect other biotic communities or habitat not ESA protected?	**YES**	**NO** X
c) Will the proposed project affect species protected under the Migratory Bird Act? **Migratory birds may nest on the ground, on structures, or in trees, shrubs, or other vegetation within the project area. Nests were not observed during field reconnaissance; however, suitable vegetation for nesting will be removed during construction. Mitigation measures will be implemented to prevent impacts to migratory birds.**	**YES** X	**NO**
d) Will the proposed project involve native plants? **Native plants located within the project limits include catclaw acacia (*Senegalia greggii*), honey mesquite (*Prosopis glandulosa*), century plant (*Agave americana*), and desert spoon (*Dasylirion wheeleri*). These species will likely be impacted by construction; therefore, mitigation measures will be required.**	**YES** X	**NO**
5) FLOODPLAINS		
Will the proposed project cause an encroachment or impacts to the 100-year base floodplain? **The project is located within FEMA FIRM Panel 04003C1895F (effective 08/27/2008). Impacts are not anticipated, as this is designated as an area of minimal flood hazard (Zone X).**	**YES**	**NO** X
6) HAZARDOUS MATERIALS		
Will the proposed project involve existing hazardous materials or cause potential contamination from hazardous materials? **See attached PISA.**	**YES**	**NO** X
7) CULTURAL RESOURCES		
Will the proposed project impact any historic or cultural properties or resources protected by local and state registers? **The Class III cultural resources survey of the area of potential effect (APE) resulted in the identification of the Tombstone Municipal Airport and the associated road. As this in-use structure (Airport) is recommended not eligible for the National Register of Historic Places (NRHP), PaleoWest recommended a finding of no historic properties affected for the proposed undertaking. No avoidance measures are recommended during ground disturbing activities.**	**YES**	**NO** X
8) WATER QUALITY		
Is a AZPDES permit required? **The project will require approximately 1.2 acres of disturbance from expanding the existing asphalt apron, staging, and access. The project is not located within 0.25 miles of impaired waters.**	**YES** X	**NO**
9) WATERS OF THE UNITED STATES		
a) Does the proposed project involve Waters of the U.S.?	**YES**	**NO** X
b) If yes, does the project qualify for a Corps of Engineers Nationwide or Individual Permit? If yes, please attach permit.	**YES**	**NO**

Signatures:

Jennifer Simpkins, Senior Environmental Scientist — 02/25/2022
(Prepared by) (title) — (date)

Regina Duran, City of Tombstone City Secretary — (date)
(Reviewed by) (title)

Attachments:

- Figure 1. State Map
- Figure 2. Proposed Improvements
- USFWS IPaC Official Species List
- AGFD On-line Environmental Review Tool Report
- Preliminary Initial Site Assessment (PISA)
- Class III Cultural Resource Survey of 1.21 Acres for the Tombstone Municipal Airport Apron Expansion Project in Tombstone, Cochise County, Arizona

Mitigation Measures:

City of Tombstone Responsibility:

- **Protective native plants within the project limits will be impacted by this project; therefore, the City of Tombstone will determine if Arizona Department of Agriculture notification is needed. If notification is needed, the City of Tombstone will send the notification at least 30 (thirty) calendar days prior to the start of construction.**

Contractor Responsibilities:

- **If vegetation clearing will occur during the migratory bird breeding season (March 1–August 31), the contractor shall avoid any active bird nests. If the active nests cannot be avoided, the contractor shall notify the Engineer to evaluate the situation. During the non-breeding season (September 1–February 28) vegetation removal is not subject to this restriction.**

- **To prevent the introduction of invasive species seeds, all earthmoving and hauling equipment shall be washed prior to entering the construction site and the contractor shall inspect all construction equipment and remove all attached debris, including plant parts, soil, and mud, prior to the equipment entering the construction site.**

- **To prevent invasive species seeds from leaving the site, the contractor shall inspect all construction and hauling equipment and remove all debris, including plant parts, soil, and mud, prior to leaving the construction site.**

- **Prior to the start of ground-disturbing activities and throughout the duration of construction and any landscape establishment period, the contractor shall arrange for and perform the control of noxious and invasive species in the project area.**

- **The contractor shall develop a Noxious and Invasive Plant Species Treatment and Control Plan in accordance with the requirements in the contract documents. Plants to be controlled shall include those listed in the state and federal noxious weed and the state invasive species lists in accordance with state and federal laws and executive orders. The plan and associated treatments shall include all areas within the project right-of-way and easements as shown on the project plans. The treatment and control plan shall be submitted to the Engineer for the Arizona Department of Transportation Construction Professional Landscape Architect for review and approval prior to implementation by the contractor.**

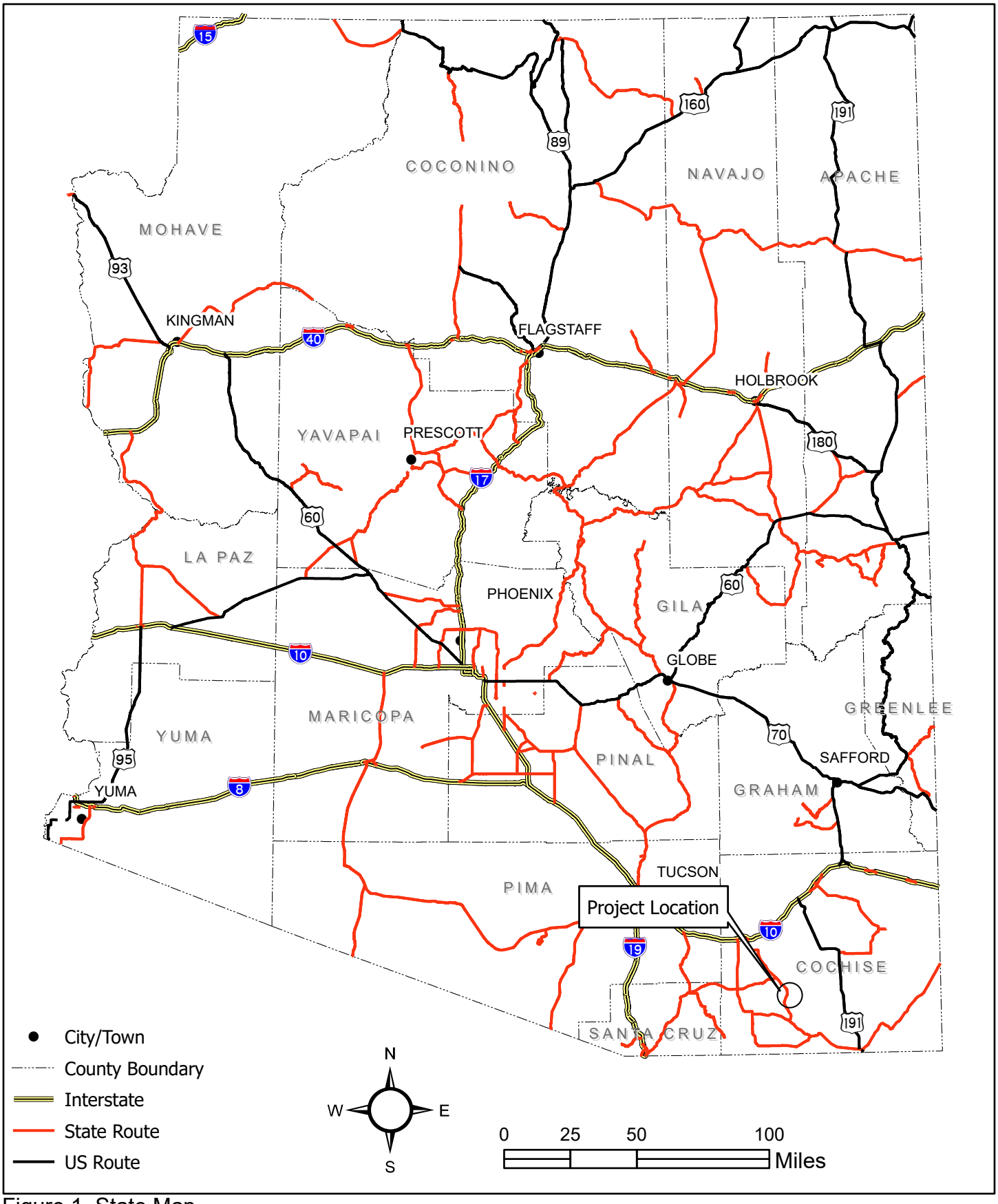


Figure 1. State Map
Tombstone Municipal Airport
Aircraft Parking Apron Expansion

Aerial Source/Date: ESRI, 2021

Kimley»Horn
Expect More. Experience Better.

Tombstone Municipal Airport
Aircraft Parking Expansion

Figure 2.
Proposed Improvements

City of Tombstone,
Cochise County, Arizona

0 50 100 200 Feet

Scale: 1" = 100'

N
W E
S

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arizona Ecological Services Field Office
9828 North 31st Ave
#c3
Phoenix, AZ 85051-2517
Phone: (602) 242-0210 Fax: (602) 242-2513
http://www.fws.gov/southwest/es/arizona/
http://www.fws.gov/southwest/es/EndangeredSpecies_Main.html

In Reply Refer To: February 09, 2022
Project Code: 2022-0005260
Project Name: Tombstone Municipal Airport Apron Expansion

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of

this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arizona Ecological Services Field Office
9828 North 31st Ave
#c3
Phoenix, AZ 85051-2517
(602) 242-0210

Project Summary

Project Code: 2022-0005260
Event Code: None
Project Name: Tombstone Municipal Airport Apron Expansion
Project Type: Airport - New Construction
Project Description: Apron expansion at the Tombstone Municipal Airport in Tombstone, Arizona

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@31.666970900000003,-110.02928566409042,14z

Counties: Cochise County, Arizona

Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Jaguar *Panthera onca* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3944	Endangered
Ocelot *Leopardus (=Felis) pardalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4474	Endangered

Birds

NAME	STATUS
Mexican Spotted Owl *Strix occidentalis lucida* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8196	Threatened
Northern Aplomado Falcon *Falco femoralis septentrionalis* Population: U.S.A (AZ, NM) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1923	Experimental Population, Non-Essential
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Northern Mexican Gartersnake *Thamnophis eques megalops*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/7655

Amphibians

NAME	STATUS
Chiricahua Leopard Frog *Rana chiricahuensis*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/1516

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

Flowering Plants

NAME	STATUS
Wright's Marsh Thistle *Cirsium wrightii*	Proposed Threatened

Population:
There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/8963

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Name: Katie Hansford
Address: 7740 North 16th Street Suite #300
City: Phoenix
State: AZ
Zip: 85020
Email katie.hansford@kimley-horn.com
Phone: 4807371455

Arizona Environmental Online Review Tool Report

Arizona Game and Fish Department Mission
To conserve Arizona's diverse wildlife resources and manage for safe, compatible outdoor recreation opportunities for current and future generations.

Project Name:
Tombstone Municipal Airport P29 Apron Expansion

Project Description:
Apron Expansion

Project Type:
Transportation & Infrastructure, Airports, Construction of new runways, terminals/concourses, other facilities

Contact Person:
Katie Hansford

Organization:
Kimley-Horn

On Behalf Of:
CONSULTING

Project ID:
HGIS-15397

Please review the entire report for project type and/or species recommendations for the location information entered. Please retain a copy for future reference.

Disclaimer:

1. This Environmental Review is based on the project study area that was entered. The report must be updated if the project study area, location, or the type of project changes.
2. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area. This review is also not intended to replace environmental consultation (including federal consultation under the Endangered Species Act), land use permitting, or the Departments review of site-specific projects.
3. The Departments Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. HDMS data contains information about species occurrences that have actually been reported to the Department. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.
4. HabiMap Arizona data, specifically Species of Greatest Conservation Need (SGCN) under our State Wildlife Action Plan (SWAP) and Species of Economic and Recreational Importance (SERI), represent potential species distribution models for the State of Arizona which are subject to ongoing change, modification and refinement. The status of a wildlife resource can change quickly, and the availability of new data will necessitate a refined assessment.

Locations Accuracy Disclaimer:
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

Recommendations Disclaimer:

1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
2. Recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation).
3. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project. These recommendations are preliminary in scope, designed to provide early considerations on all species of wildlife.
4. Making this information directly available does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.
5. Further coordination with the Department requires the submittal of this Environmental Review Report with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map). Once AGFD had received the information, please allow 30 days for completion of project reviews. Send requests to:
   Project Evaluation Program, Habitat Branch
   Arizona Game and Fish Department
   5000 West Carefree Highway
   Phoenix, Arizona 85086-5000
   Phone Number: (623) 236-7600
   Fax Number: (623) 236-7366
   Or
   PEP@azgfd.gov
6. Coordination may also be necessary under the National Environmental Policy Act (NEPA) and/or Endangered Species Act (ESA). Site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies

Arizona Game and Fish Department
Project ID: HGIS-15397
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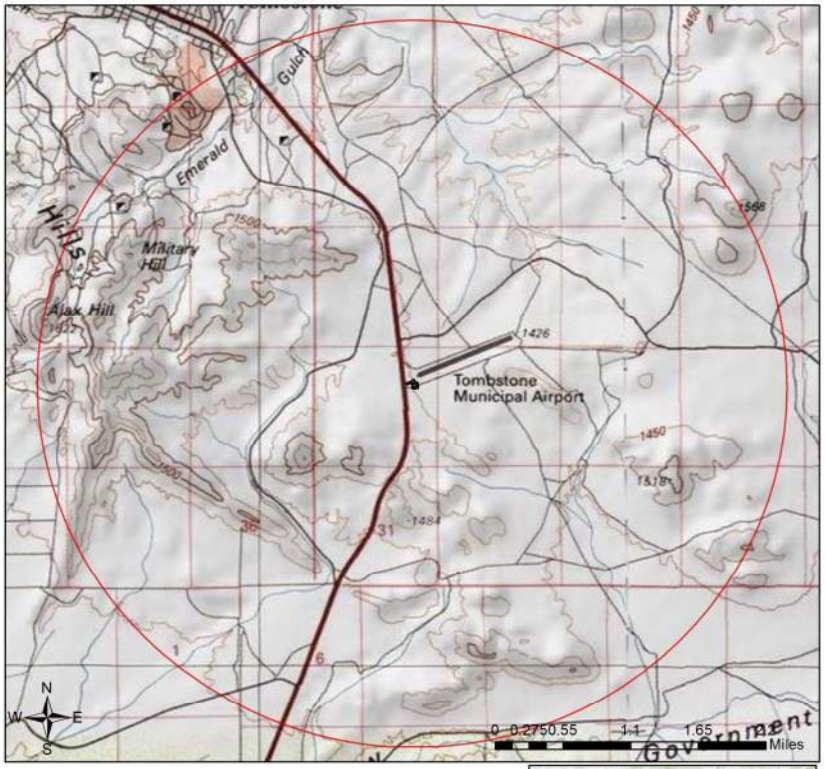
Tombstone Municipal Airport P29 Apron Expansion

USA Topo Basemap With Locator Map



Project Boundary

Buffered Project Boundary

Project Size (acres): 2.03

Lat/Long (DD): 31.6672 / -110.0295

County(s): Cochise

AGFD Region(s): Tucson

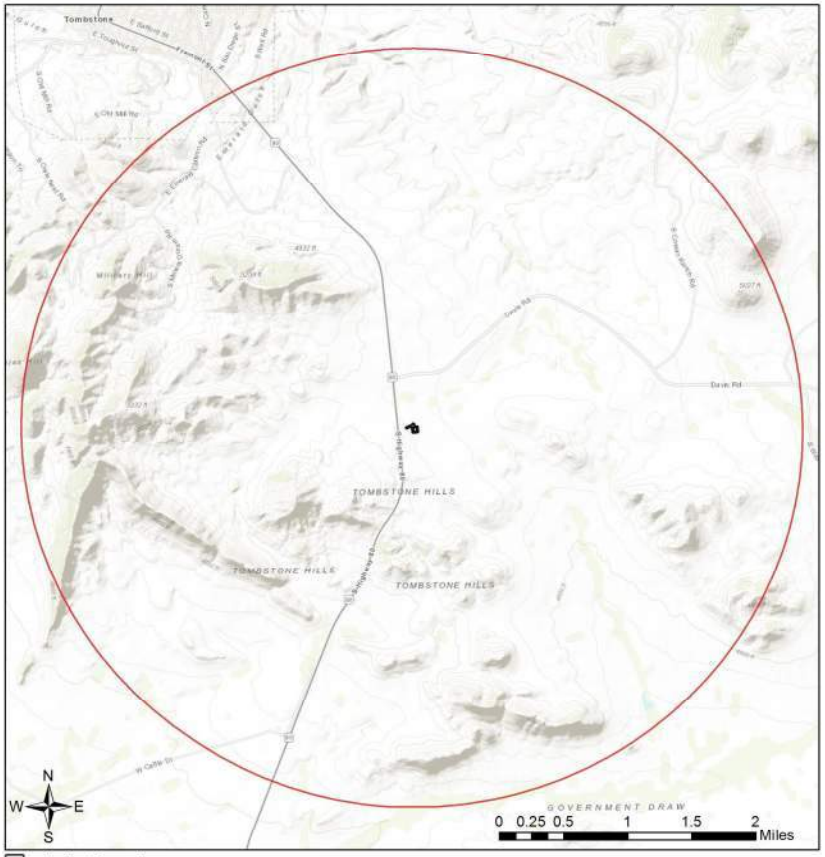
Township/Range(s): T20S, R23E

USGS Quad(s): TOMBSTONE

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap

Tombstone Municipal Airport P29 Apron Expansion

Web Map As Submitted By User



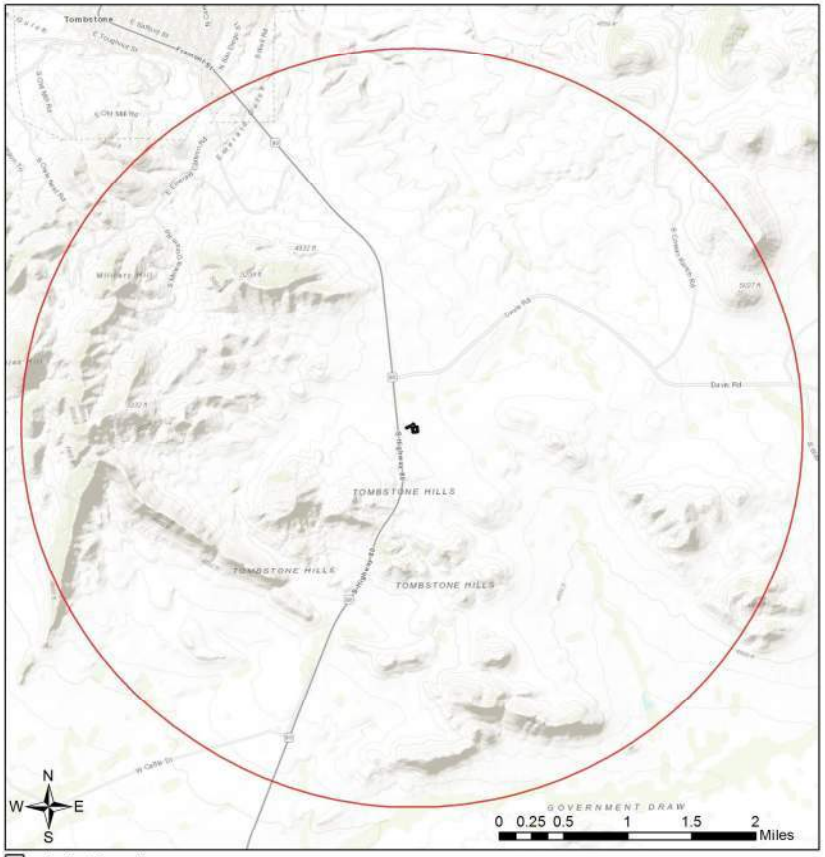
- Project Boundary
- Buffered Project Boundary

Project Size (acres): 2.03
Lat/Long (DD): 31.6672 / -110.0295
County(s): Cochise
AGFD Region(s): Tucson
Township/Range(s): T20S, R23E
USGS Quad(s): TOMBSTONE

Arizona Game and Fish Department
Project ID: HGIS-15397
project_report_tombstone_municipal_airport_49080_50593.pdf
Review Date: 1/27/2022 12:48:14 PM

Tombstone Municipal Airport P29 Apron Expansion

Important Areas

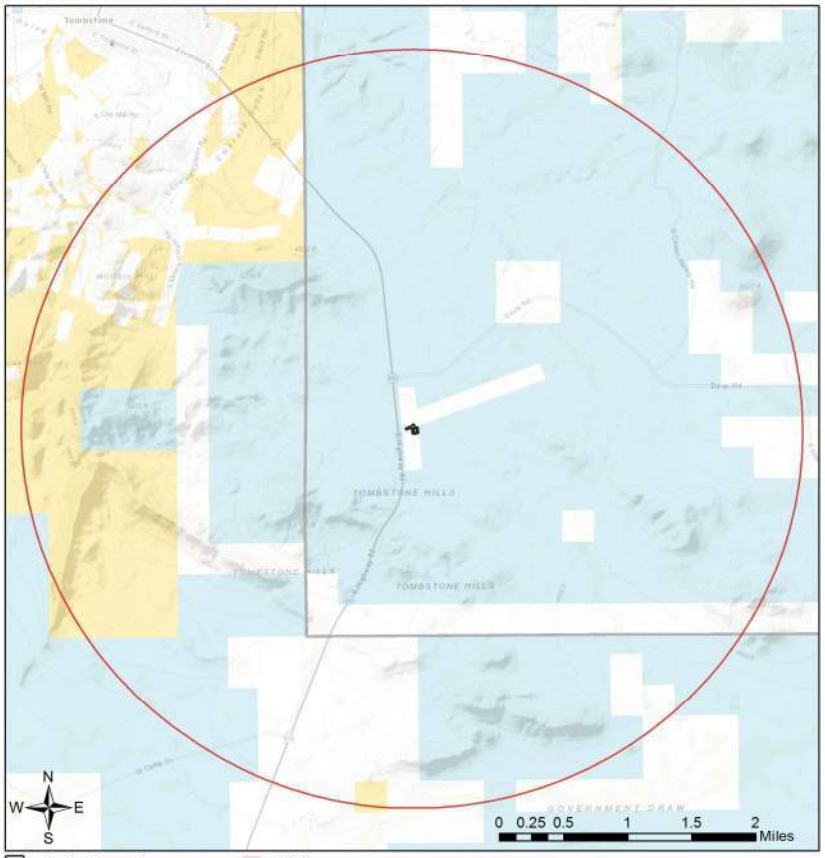


- Project Boundary
- Buffered Project Boundary
- Wildlife Connectivity
- Important Connectivity Zones
- Pinal County Riparian
- Critical Habitat
- Important Bird Areas

Project Size (acres): 2.03
Lat/Long (DD): 31.6672 / -110.0295
County(s): Cochise
AGFD Region(s): Tucson
Township/Range(s): T20S, R23E
USGS Quad(s): TOMBSTONE

Tombstone Municipal Airport P29 Apron Expansion

Township/Ranges and Land Ownership



- Project Boundary
- Buffered Project Boundary
- Township/Ranges

Land Ownership

- AZ Game & Fish Dept.
- BLM
- BOR
- Indian Res.
- Military
- Mixed/Other
- National Park/Mon.
- Private
- State & Regional Parks
- State Trust
- US Forest Service
- Wildlife Area/Refuge

Project Size (acres): 2.03
Lat/Long (DD): 31.6672 / -110.0295
County(s): Cochise
AGFD Region(s): Tucson
Township/Range(s): T20S, R23E
USGS Quad(s): TOMBSTONE

Special Status Species Documented within 3 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Bat Colony						
Echinocereus arizonicus ssp. nigrihorridispinus	Black-spined Hedgehog Cactus				SR	
Heloderma suspectum	Gila Monster					1A

Note: Status code definitions can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/
.

No Special Areas Detected
No special areas were detected within the project vicinity.

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Amazilia violiceps	Violet-crowned Hummingbird		S			1B
Ammodramus savannarum ammolegus	Arizona grasshopper sparrow		S	S		1B
Ammodramus savannarum perpallidus	Western Grasshopper Sparrow					1B
Ammospermophilus harrisii	Harris' Antelope Squirrel					1B
Anthus spragueii	Sprague's Pipit	SC				1A
Aquila chrysaetos	Golden Eagle	BGA		S		1B
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		1B
Buteo regalis	Ferruginous Hawk	SC		S		1B
Buteo swainsoni	Swainson's Hawk					1C
Callipepla squamata	Scaled Quail					1C
Chordeiles minor	Common Nighthawk					1B
Coccyzus americanus	Yellow-billed Cuckoo (Western DPS)	LT	S			1A
Coluber bilineatus	Sonoran Whipsnake					1B
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1B
Crotalus tigris	Tiger Rattlesnake					1B
Cynanthus latirostris	Broad-billed Hummingbird		S			1B
Cynomys ludovicianus	Black-tailed Prairie Dog	CCA		S		1A
Cyrtonyx montezumae	Montezuma Quail					1C
Dipodomys spectabilis	Banner-tailed Kangaroo Rat			S		1B
Euderma maculatum	Spotted Bat	SC	S	S		1B
Eumops perotis californicus	Greater Western Bonneted Bat	SC		S		1B
Falco peregrinus anatum	American Peregrine Falcon	SC	S	S		1A
Glaucidium gnoma gnoma	Mountain Pygmy-owl					1B
Heloderma suspectum	Gila Monster					1A
Hypsiglena sp. nov.	Hooded Nightsnake					1B
Incilius alvarius	Sonoran Desert Toad					1B

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Lampornis clemenciae	Blue-throated Hummingbird					1B
Lasiurus blossevillii	Western Red Bat		S			1B
Lasiurus xanthinus	Western Yellow Bat		S			1B
Leopardus pardalis	Ocelot	LE				1A
Leptonycteris yerbabuenae	Lesser Long-nosed Bat	SC				1A
Lepus alleni	Antelope Jackrabbit					1B
Megascops trichopsis	Whiskered Screech-owl		S			1B
Meleagris gallopavo mexicana	Gould's Turkey		S			1B
Melospiza lincolnii	Lincoln's Sparrow					1B
Micrathene whitneyi	Elf Owl					1C
Micruroides euryxanthus	Sonoran Coralsnake					1B
Myiarchus tyrannulus	Brown-crested Flycatcher					1C
Myotis occultus	Arizona Myotis	SC		S		1B
Myotis velifer	Cave Myotis	SC		S		1B
Myotis yumanensis	Yuma Myotis	SC				1B
Notiosorex cockrumi	Cockrum's Desert Shrew					1B
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					1B
Oreoscoptes montanus	Sage Thrasher					1C
Oreothlypis luciae	Lucy's Warbler					1C
Panthera onca	Jaguar	LE				1A
Passerculus sandwichensis	Savannah Sparrow					1B
Peucaea botterii arizonae	Arizona Botteri's Sparrow			S		1B
Phrynosoma solare	Regal Horned Lizard					1B
Picoides arizonae	Arizona Woodpecker		S			1B
Setophaga petechia	Yellow Warbler					1B
Sialia sialis fulva	Azure Bluebird					1B
Sphyrapicus nuchalis	Red-naped Sapsucker					1C
Spizella atrogularis	Black-chinned Sparrow					1C
Spizella breweri	Brewer's Sparrow					1C
Strix occidentalis lucida	Mexican Spotted Owl	LT				1A
Sturnella magna	Eastern Meadowlark					1C
Tadarida brasiliensis	Brazilian Free-tailed Bat					1B
Terrapene ornata	Ornate Box Turtle					1A
Thomomys umbrinus intermedius	Southern Pocket Gopher					1B
Vireo bellii arizonae	Arizona Bell's Vireo					1B
Vulpes macrotis	Kit Fox	No Status				1B

Species of Economic and Recreation Importance Predicted that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Callipepla gambelii	Gambel's Quail					
Callipepla squamata	Scaled Quail					1C
Odocoileus hemionus	Mule Deer					
Patagioenas fasciata	Band-tailed Pigeon					1C
Pecari tajacu	Javelina					
Puma concolor	Mountain Lion					
Zenaida asiatica	White-winged Dove					
Zenaida macroura	Mourning Dove					

Project Type: Transportation & Infrastructure, Airports, Construction of new runways, terminals/concourses, other facilities

Project Type Recommendations:
During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state. Uplands also support a large diversity of species, and should be contained within important wildlife movement corridors. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife. Guidelines for many of these can be found at: https://www.azgfd.com/wildlife/planning/wildlifeguidelines/.

Consider impacts of outdoor lighting on wildlife and develop measures or alternatives that can be taken to increase human safety while minimizing potential impacts to wildlife. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use. Use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, canted, or cut to ensure that light reaches only areas needing illumination.

Consider tower designs and/or modifications that reduce or eliminate impacts to migratory birds (i.e. free standing, minimally lighted structures).

Minimization and mitigation of impacts to wildlife and fish species due to changes in water quality, quantity, chemistry, temperature, and alteration to flow regimes (timing, magnitude, duration, and frequency of floods) should be evaluated. Minimize impacts to springs, in-stream flow, and consider irrigation improvements to decrease water use. If dredging is a project component, consider timing of the project in order to minimize impacts to spawning fish and other aquatic species (include spawning seasons), and to reduce spread of exotic invasive species. We recommend early direct coordination with Project Evaluation Program for projects that could impact water resources, wetlands, streams, springs, and/or riparian habitats.

The Department recommends that wildlife surveys are conducted to determine if noise-sensitive species occur within the project area. Avoidance or minimization measures could include conducting project activities outside of breeding seasons.

Based on the project type entered, coordination with State Historic Preservation Office may be required (http://azstateparks.com/SHPO/index.html).

Based on the project type entered, coordination with Arizona Department of Environmental Quality may be required (http://www.azdeq.gov/).

Based on the project type entered, coordination with U.S. Army Corps of Engineers may be required (http://www.usace.army.mil/)

Based on the project type entered, coordination with County Flood Control district(s) may be required.

Based on the project type entered, coordination with U.S. Fish and Wildlife Service (Migratory Bird Treaty Act) may be required (http://www.fws.gov/southwest/es/arizona/).

The Department requests further coordination to provide project/species specific recommendations, please contact Project Evaluation Program directly at PEP@azgfd.gov.

Project Location and/or Species Recommendations:
HDMS records indicate that one or more native plants listed on the **Arizona Native Plant Law and Antiquities Act** have been documented within the vicinity of your project area. Please contact:
Arizona Department of Agriculture
1688 W Adams St.
Phoenix, AZ 85007
Phone: 602.542.4373
https://agriculture.az.gov/sites/default/files/Native%20Plant%20Rules%20-%20AZ%20Dept%20of%20Ag.pdf starts on page 44

Arizona Department of Transportation

Environmental Planning

Preliminary Initial Site Assessment

Tombstone Municipal Airport
Aircraft Parking Apron Expansion

February 25, 2022
Submittal Number 1

Preliminary Initial Site Assessment

FOR

City of Tombstone Municipal Airport
Aircraft Parking Apron Expansion

Prepared for:

Arizona Department of Transportation
Environmental Planning
205 S. 17th Avenue
Phoenix, Arizona 85007

Prepared by:

Kimley-Horn
7740 N. 16th Street, Suite 300
Phoenix, AZ 85020
Kimley-Horn Project No. 191990003

February 25, 2022

Preliminary Initial Site Assessment (PISA)	
ADOT Project No. E1S1W01C	Project Name: Tombstone Municipal Airport Aircraft Parking Apron Expansion

Section I: Site Location Information

Assessor Parcel No.: 108-53-009	ADOT Parcel No.: N/A

According to ADOT, the forecasts of aviation demand that an additional aircraft parking apron is need in order to accommodate growth at the City of Tombstone Municipal Airport. This project includes the expansion of the existing asphalt concrete (AC) aircraft parking apron (90 feet x 135 feet); including the addition of aircraft tiedowns and pavement markings. Work will include the saw cut and removal of a portion of the existing asphalt apron pavement, removal (possible reuse) of the existing aggregate base course, compaction of the existing subgrade soils, placement and compaction of aggregate base course, and placement and compaction of a new asphalt surface course. A construction staging area and haul route will be required for the apron expansion and are included within the project limits.

Township, Range, Section
Township 20 South, Range 23 East, Section 30

Location
Latitude/Longitude (Decimal Degrees)
Eastern Project Limits: 31.667320/-110.029023
Western Project Limits: 31.667198/-110.030427

Site Characteristics: Past Land Use Google Earth

1996

Subject Property: The site consists of what appears to be native desert and previously disturbed vacant land. An unpaved access road to the existing aircraft parking apron is visible in the northern property limits. An unpaved dirt road is visible in the central portion of the site.

Adjacent Property: The adjacent lands consist of a paved aircraft parking apron and native desert to the north; native desert to the east; native desert and an unpaved road to the south; and native desert, previously disturbed vacant land, and an unpaved road to the west.

2003

Subject Property: An aircraft hangar is visible in the northern portion of the site. The remainder of the site appears to be mass graded.

Adjacent Property: Two additional aircraft hangars are visible to the north of the site. Lands adjacent to the north, south, and west of the site have been graded.

2006

No notable changes from the 2003 aerial photograph.

2010

No notable changes from the 2006 aerial photograph.

2013

Subject Property: No notable changes from the 2010 aerial photograph.

Adjacent Property: The northernmost aircraft hangar has been demolished.

2015

No notable changes from the 2013 aerial photograph.

2019

Subject Property: The aircraft hangar in the northern portion of the project limits has been demolished. Metal debris is visible in its former location.

Adjacent Property: No notable changes from the 2015 aerial photograph.

Summary of Historical Land Use based on Aerial Photograph Review/Field Reconnaissance

Agriculture: N/A	Residential: N/A	Commercial: X	Industrial: N/A	Natural: X
Vehicle Maintenance: N/A	Chemical Storage: N/A	UST System: Per the Environmental Risk Information Services (ERIS) database search, two underground storage tanks (USTs) were located		

		at 31.667215367, -110.029800485 which is approximately 65 feet west of the site. The USTs were removed in 1988; therefore, no further action is warranted.
Septic System: N/A	Water/Dry Well: N/A	Pesticide/Herbicide: N/A
Other:	The project limits consisted of native desert and previously disturbed lands until 2003 when an aircraft hangar was first visible onsite and the remainder of the site was mass graded. Between 2015 and 2019, the aircraft hangar was demolished.	

Section II: Site Surface Conditions

The site consists of an unpaved dirt access road to the existing aircraft parking apron, previously disturbed vacant land, and scrap metal associated with the previously existing aircraft hangar.

Dimensions :	Length: Between ~15 and 340 feet	Width: ~Between 25 and 340 feet	Area: 1.2 Acres
Topography:	The project area is located at 4,750 feet above mean sea level (MSL) and slopes northeast.		
Geology:	The following soils occur within the site: Sutherland-Mule Complex, 3 to 15 percent slopes[1]. Information from the Arizona Department of Water Resources (ADWR) website was reviewed for water wells located within five miles of the site. According to the closest well registration records, groundwater exists at greater than 430 feet below ground surface.[2] However, groundwater levels can fluctuate due to seasonal variations, groundwater withdrawal or injection, and other factors.		
Vegetation:	No stained or stressed vegetation was observed during field reconnaissance.		
Structures/ Improvements:	None		
Utilities:	There were no utilities observed within the project limits.		

Section III: Results of Database Review

No concerns on project: X (Complete Section IV)

Concerns on project: None from database review

Kimley-Horn retained the services of ERIS, a third-party database search company, to conduct a search of regulated facilities within and in the immediate vicinity (1/8-mile) of the project limits. Information provided by ERIS, is conveyed as reported and Kimley-Horn assumes no responsibility for the inaccuracies of the data reported by ERIS or the various local, state, and federal databases from which ERIS compiles data. Kimley-Horn's review of the referenced databases also considered the potential or likelihood of contamination from adjoining and nearby sites. To evaluate which of the adjoining and nearby sites identified in the regulatory database report present an environmental risk to the subject property, Kimley-Horn considered the following criteria:

- The type of database on which the adjoining/nearby property is identified.
- The topographic position of the property relative to the subject property.
- The direction and distance of the identified facility from the subject property.
- Local soil conditions in the subject property area.
- The known and/or inferred groundwater flow direction and depth in the subject property area.
- The status of the respective regulatory agency-required investigations and/or cleanup associated with the identified facility.

[1] U.S. Department of Agriculture, Natural Resources Conservation Service. Custom Soil Resource Report for Cochise County, Arizona, Douglas-Tombstone Part. Accessed: February 9, 2022. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

[2] Arizona Department of Water Resources (ADWR). Arizona Groundwater Site Inventory (GWSI). Accessed: February 10, 2022. https://azwatermaps.azwater.gov/gwsi

- Surface and subsurface obstructions and diversions (e.g., buildings, roads, sewer systems, utility service lines, ditches, etc.) located between the identified site and the subject property.

Only those sites that are judged to present a potential environmental risk to the subject property and/or warrant additional clarification are further evaluated. Using the referenced criteria and based upon a review of readily available information contained within the regulatory database report, Kimley-Horn did not identify adjoining (i.e., bordering) or nearby sites (e.g., properties within a 1/8-mile radius) listed in the regulatory database report that were judged to present a potential environmental risk to the subject property.

Section IV: Environmental Concerns

Observed: None

Suspected: None

Unusual Conditions: No unusual conditions were identified during the course of this PISA.

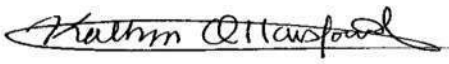
Section V: Recommendations
High Priority Phase 1: N/A
Medium Priority Phase 1: N/A
Low Priority Phase 1: N/A
Aerial Photograph Review: N/A
Additional testing required: N/A

Section VI: Comments

Kimley-Horn has conducted a PISA for the project limits. Assessments made during this PISA represent a reasonable attempt to identify environmental concerns for the project limits. There is always the possibility that environmental concerns have escaped detection due to the limitations of this PISA, the incompleteness or inaccuracy of governmental records, or the presence of undetected and unreported environmental incidents.

Environmental Commitments

No mitigation measures are required.

Consultant Name	KATHRYN HANSFORD, EP In Training Kimley-Horn and Associates, Inc.	Signature			2/25/2022
Consultant Name	JENNIFER SIMPKINS, EP Kimley-Horn and Associates, Inc.	Signature		Date	2/25/2022
ADOT Name		Signature		Date	

K:\PHX_Aviation\191910003 Tombstone Apron Expansion\Environmental\Hazmat\PISA

Attachments:
Figure 1. State Map
Figure 2. Photo Location Map
Ground Photographs
ERIS Database Report

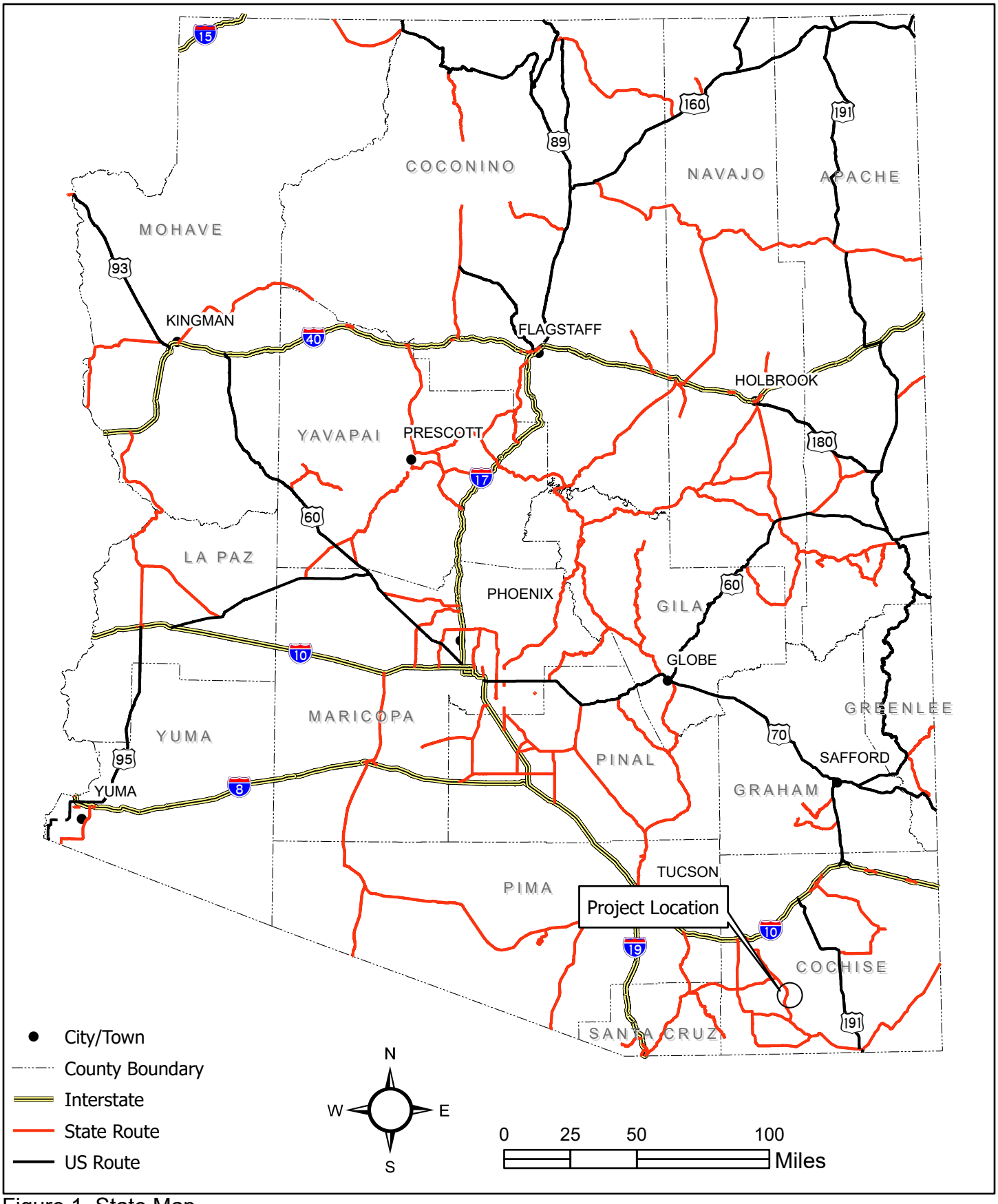


Figure 1. State Map
Tombstone Municipal Airport
Aircraft Parking Apron Expansion

Aerial Source/Date: ESRI, 2021

Kimley»Horn
Expect More. Experience Better.

Tombstone Municipal Airport
Aircraft Parking Expansion

Figure 2. Photo Location Map

City of Tombstone,
Cochise County, Arizona

0 50 100 200 Feet

Scale: 1" = 100'

N
W E
S

Photo No. 1

View of the location of the previously existing aircraft hangar.

Photo No. 2

View of the aircraft parking apron and aircraft hangar located north of the site.

Photo No. 3

View from the northeast corner of the project limits looking toward disturbed vacant land (typical).

Photo No. 4

View of scrap metal from demolished aircraft hangar.

Photo No. 5

View from the southeast corner looking north toward aircraft hangar.

Photo No. 6

View from the south-central portion of the site looking east along a dirt road.

Photo No. 7

View from the western project limits looking north at unpaved access road and entrance gate.

DATABASE REPORT

Project Property:	*Tombstone Apron Expansion* *Tombstone Muncipal Airport* *Tombstone AZ*
Project No:	*191910003*
Report Type:	*Database Report*
Order No:	*22012800367*
Requested by:	*Kimley-Horn & Associates, Inc*
Date Completed:	*February 1, 2022*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

Executive Summary

Property Information:

Project Property:		*Tombstone Apron Expansion* *Tombstone Muncipal Airport Tombstone AZ*
Project No:		*191910003*
Coordinates:		
	Latitude:	*31.6671753*
	Longitude:	*-110.02970365*
	UTM Northing:	*3,503,946.98*
	UTM Easting:	*592,009.95*
	UTM Zone:	*12R*
Elevation:		*4,747 FT*

Order Information:

Order No:	*22012800367*
Date Requested:	*January 28, 2022*
Requested by:	*Kimley-Horn & Associates, Inc*
Report Type:	*Database Report*

Historicals/Products:

ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
DOE FUSRAP	Y	1	0	0	0	0	0	0
NPL	Y	0.125	0	0	-	-	-	0
PROPOSED NPL	Y	0.125	0	0	-	-	-	0
DELETED NPL	Y	0.125	0	0	-	-	-	0
SEMS	Y	0.125	0	0	-	-	-	0
ODI	Y	0.125	0	0	-	-	-	0
SEMS ARCHIVE	Y	0.125	0	0	-	-	-	0
CERCLIS	Y	0.125	0	0	-	-	-	0
IODI	Y	0.125	0	0	-	-	-	0
CERCLIS NFRAP	Y	0.125	0	0	-	-	-	0
CERCLIS LIENS	Y	0.125	0	0	-	-	-	0
RCRA CORRACTS	Y	0.125	0	0	-	-	-	0
RCRA TSD	Y	0.125	0	0	-	-	-	0
RCRA LQG	Y	0.125	0	0	-	-	-	0
RCRA SQG	Y	0.125	0	0	-	-	-	0
RCRA VSQG	Y	0.125	0	0	-	-	-	0
RCRA NON GEN	Y	0.125	0	0	-	-	-	0
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.125	0	0	-	-	-	0
FED INST	Y	0.125	0	0	-	-	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	0.125	0	0	-	-	-	0
ERNS 1987 TO 1989	Y	0.125	0	0	-	-	-	0
ERNS	Y	0.125	0	0	-	-	-	0
FED BROWNFIELDS	Y	0.125	0	0	-	-	-	0
FEMA UST	Y	0.125	0	0	-	-	-	0
FRP	Y	0.125	0	0	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.125	0	0	-	-	-	0
BULK TERMINAL	Y	0.125	0	0	-	-	-	0
SEMS LIEN	Y	0.125	0	0	-	-	-	0
SUPERFUND ROD	Y	0.125	0	0	-	-	-	0
State								
SHWS	Y	0.125	0	0	-	-	-	0
SHWS ACIDS	Y	1	0	0	0	0	0	0
WQARF	Y	0.125	0	0	-	-	-	0
DELISTED SUPERFUND	Y	0.125	0	0	-	-	-	0
SWF/LF	Y	0.125	0	0	-	-	-	0
LUST	Y	0.125	0	0	-	-	-	0
DELISTED LUST	Y	0.125	0	0	-	-	-	0
UST	Y	0.125	0	**1**	-	-	-	**1**
AST	Y	0.125	0	0	-	-	-	0
AST2	Y	0.125	0	0	-	-	-	0
DELISTED TANKS	Y	0.125	0	0	-	-	-	0
AUL	Y	0.125	0	0	-	-	-	0
AZURITE	Y	0.125	0	0	-	-	-	0
VCP	Y	0.125	0	0	-	-	-	0
BROWNFIELDS	Y	0.125	0	0	-	-	-	0
Tribal								
INDIAN LUST	Y	0.125	0	0	-	-	-	0
INDIAN UST	Y	0.125	0	0	-	-	-	0
DELISTED ILST	Y	0.125	0	0	-	-	-	0
DELISTED IUST	Y	0.125	0	0	-	-	-	0
County	***No County databases were selected to be included in the search.***							
Additional Environmental Records								
Federal								
FINDS/FRS	Y	0.125	0	**1**	-	-	-	**1**
TRIS	Y	0.125	0	0	-	-	-	0
PFAS TRI	Y	0.125	0	0	-	-	-	0
PFAS NPL	Y	0.125	0	0	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
PFAS WATER	Y	0.125	0	0	-	-	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	0.125	0	0	-	-	-	0
FTTS INSP	Y	0.125	0	0	-	-	-	0
PRP	Y	0.125	0	0	-	-	-	0
SCRD DRYCLEANER	Y	0.125	0	0	-	-	-	0
ICIS	Y	0.125	0	0	-	-	-	0
FED DRYCLEANERS	Y	0.125	0	0	-	-	-	0
DELISTED FED DRY	Y	0.125	0	0	-	-	-	0
FUDS	Y	0.125	0	0	-	-	-	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	0.125	0	0	-	-	-	0
MLTS	Y	0.125	0	0	-	-	-	0
HIST MLTS	Y	0.125	0	0	-	-	-	0
MINES	Y	0.125	0	0	-	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	0	0	0
URANIUM	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.125	0	0	-	-	-	0
SSTS	Y	0.125	0	0	-	-	-	0
PCB	Y	0.125	0	0	-	-	-	0
State								
SPILLS	Y	0.125	0	0	-	-	-	0
DRYCLEANERS	Y	0.125	0	0	-	-	-	0
PFAS	Y	0.125	0	0	-	-	-	0
AIR PERMITS	Y	0.125	0	0	-	-	-	0
DRYWELLS	Y	0.125	0	0	-	-	-	0
DRYWELLS HIST	Y	0.125	0	0	-	-	-	0
DRUG LAB REMEDIATION	Y	0.125	0	0	-	-	-	0
CDL	Y	0.125	0	0	-	-	-	0
TIER 2	Y	0.125	0	0	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
BIO HAZ WASTE	Y	0.25	0	0	0	-	-	0

Tribal ***No Tribal additional environmental record sources available for this State.***

County ***No County additional environmental record sources available for this State.***

Total:	*0*	***2***	*0*	*0*	*0*	***2***

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	FINDS/FRS	USDA - FIELD OFFICE	NO ADDRESS ON RECORD TOMBSTONE AZ 85638 ***Registry ID:*** 110039463103	WNW	0.01 / 56.52	2	16
2	UST	USDA - FIELD OFFICE	OLD BISBEE HWY TOMBSTONE AZ ***Facility ID | Status (Map):*** 0-006722 | NOT ACTIVE	WNW	0.01 / 56.66	2	16

Executive Summary: Summary by Data Source

Standard

State

UST - Underground Storage Tanks List

A search of the UST database, dated Nov 10, 2021 has found that there are 1 UST site(s) within approximately 0.12 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
USDA - FIELD OFFICE	OLD BISBEE HWY TOMBSTONE AZ	WNW	0.01 / 56.66	2
	Facility ID* | *Status* *(Map): *0-006722 | NOT ACTIVE*			

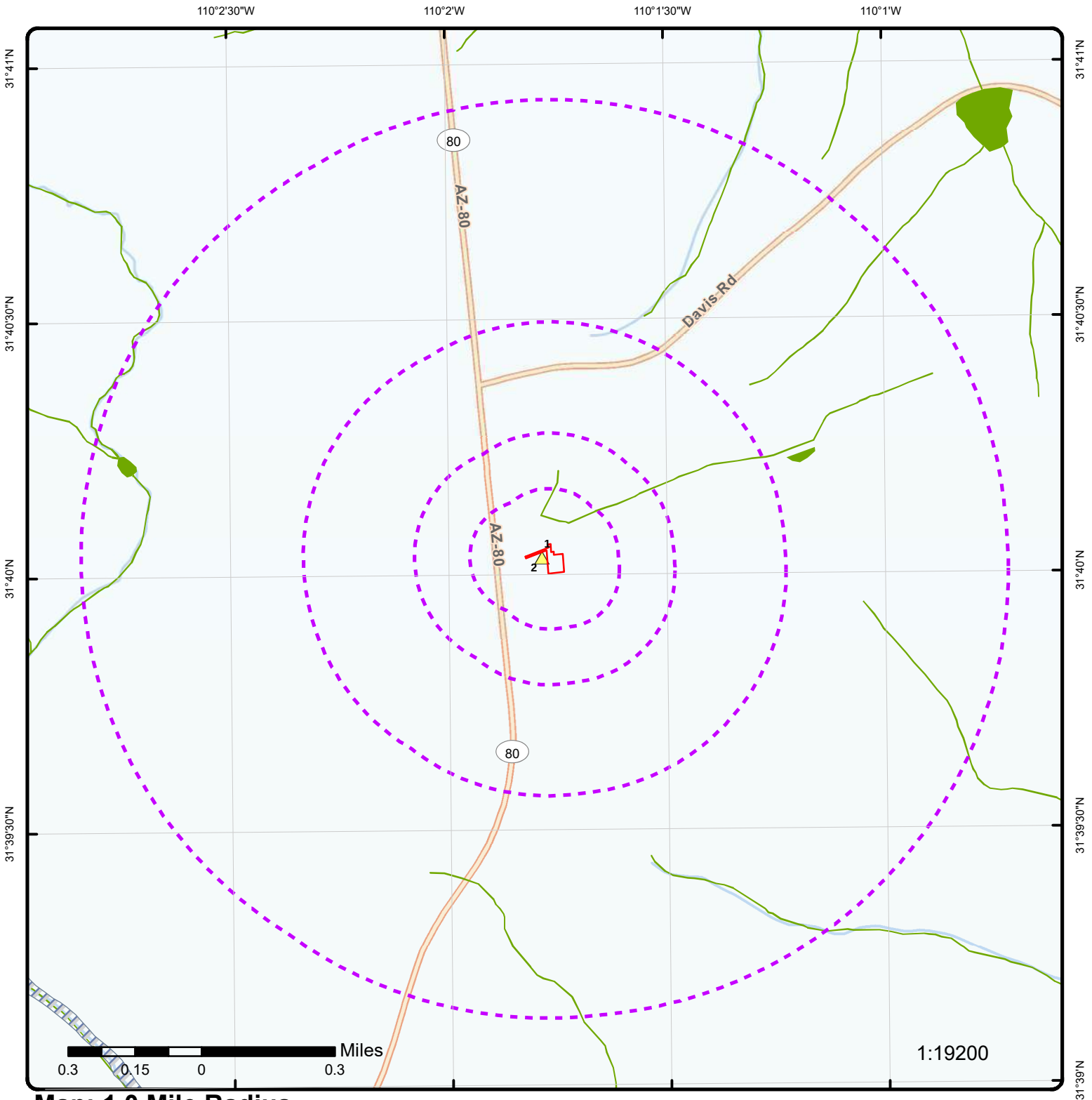
Non Standard

Federal

FINDS/FRS - Facility Registry Service/Facility Index

A search of the FINDS/FRS database, dated Nov 2, 2020 has found that there are 1 FINDS/FRS site(s) within approximately 0.12 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
USDA - FIELD OFFICE	NO ADDRESS ON RECORD TOMBSTONE AZ 85638	WNW	0.01 / 56.52	1
	Registry ID: *110039463103*			



Map: 1.0 Mile Radius

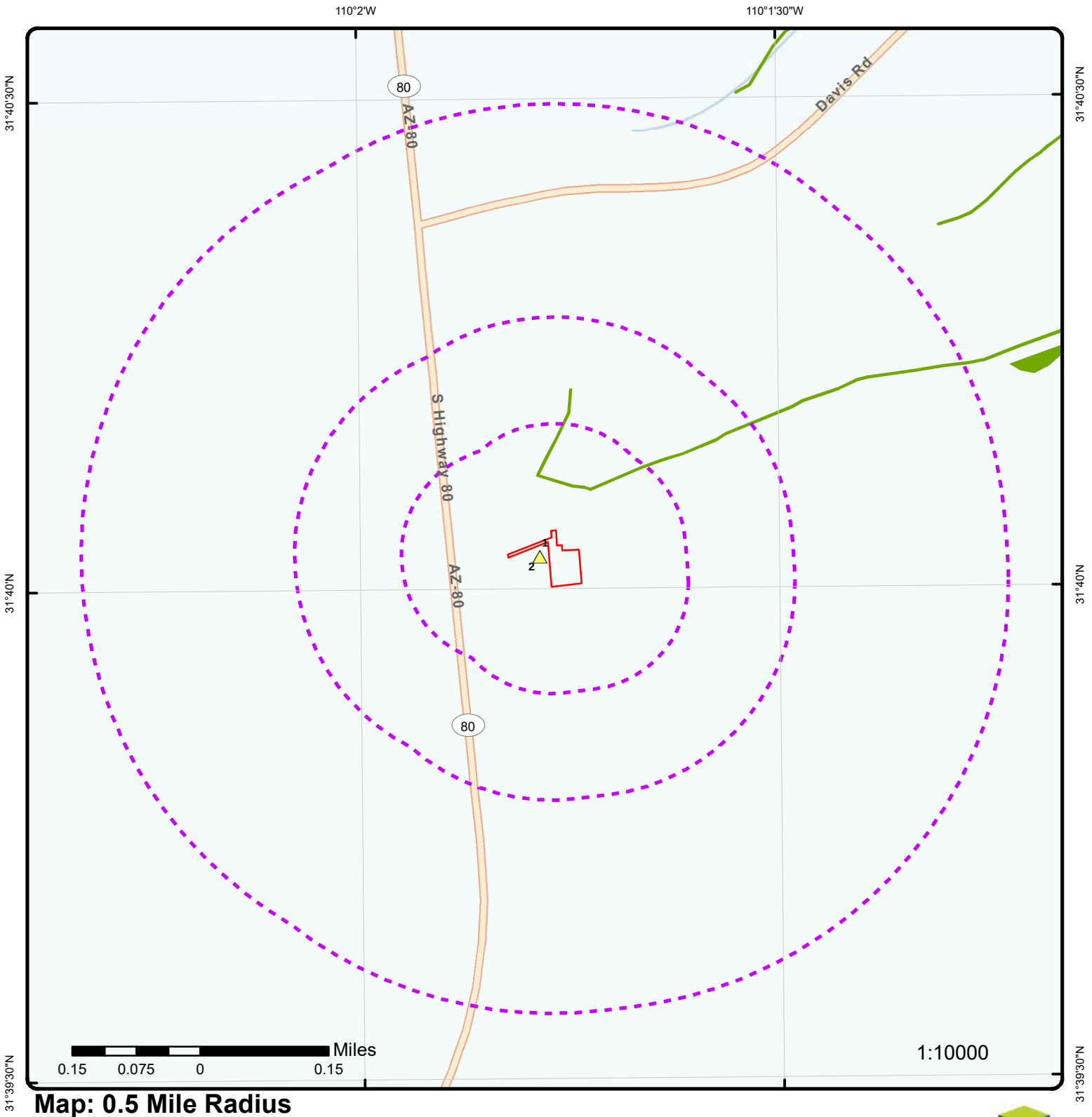
Order Number: 22012800367

Address: Tombstone Muncipal Airport, Tombstone, AZ

ERIS

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Eris Areas with Higher Elevation
- Eris Areas with Same Elevation
- Eris Areas with Lower Elevation
- Eris Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Priority List Sites
- National Wetland
- Indian Reserve Land
- Historic Fill
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- Plume

Source: © 2021 ESRI StreetMap Premium



Map: 0.5 Mile Radius

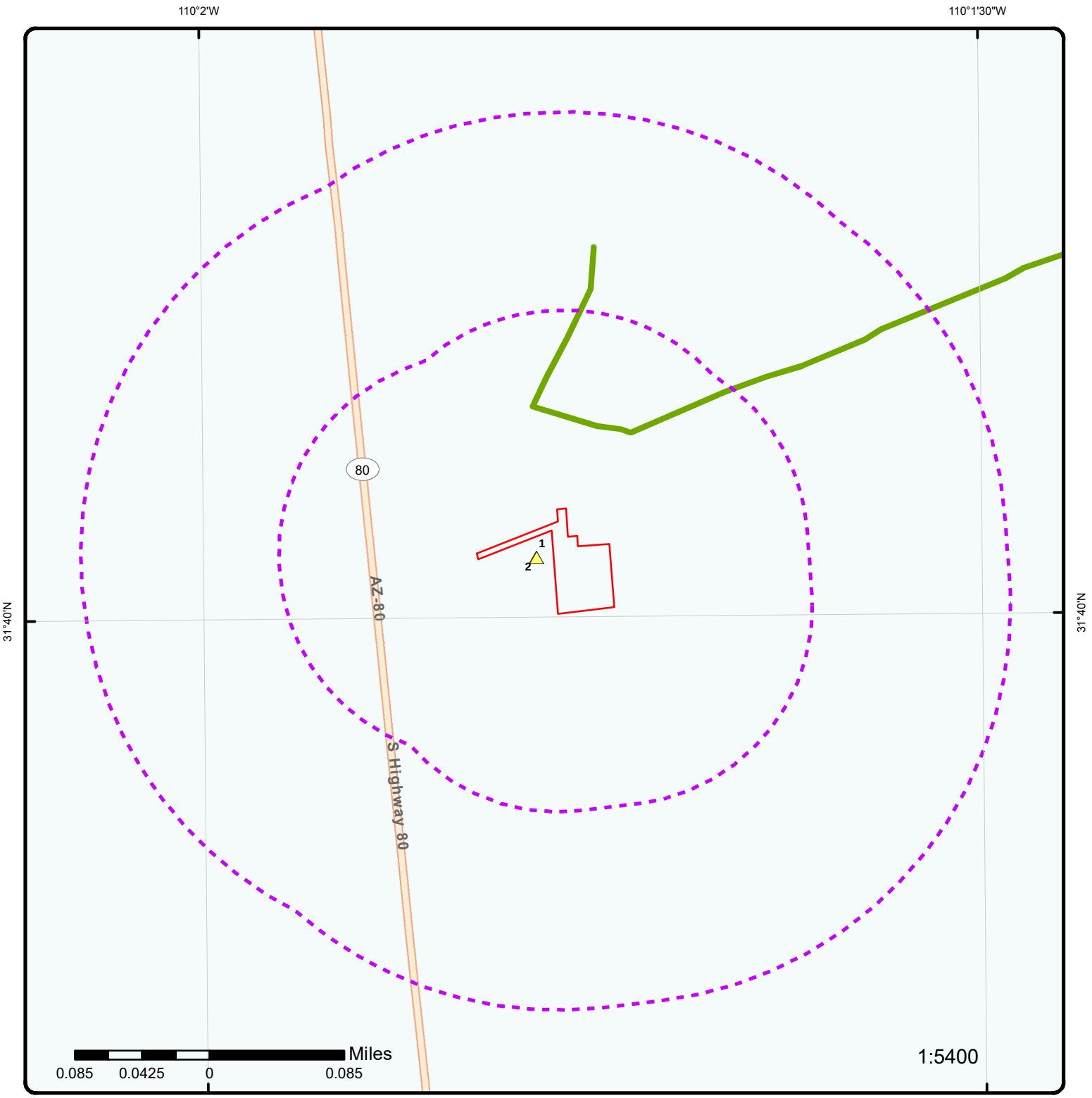
Order Number: 22012800367

Address: Tombstone Muncipal Airport, Tombstone, AZ

ERIS

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Eris Areas with Higher Elevation
- Eris Areas with Same Elevation
- Eris Areas with Lower Elevation
- Eris Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Priority List Sites
- National Wetland
- Indian Reserve Land
- Historic Fill
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- Plume

Source: © 2021 ESRI StreetMap Premium



Map: 0.25 Mile Radius

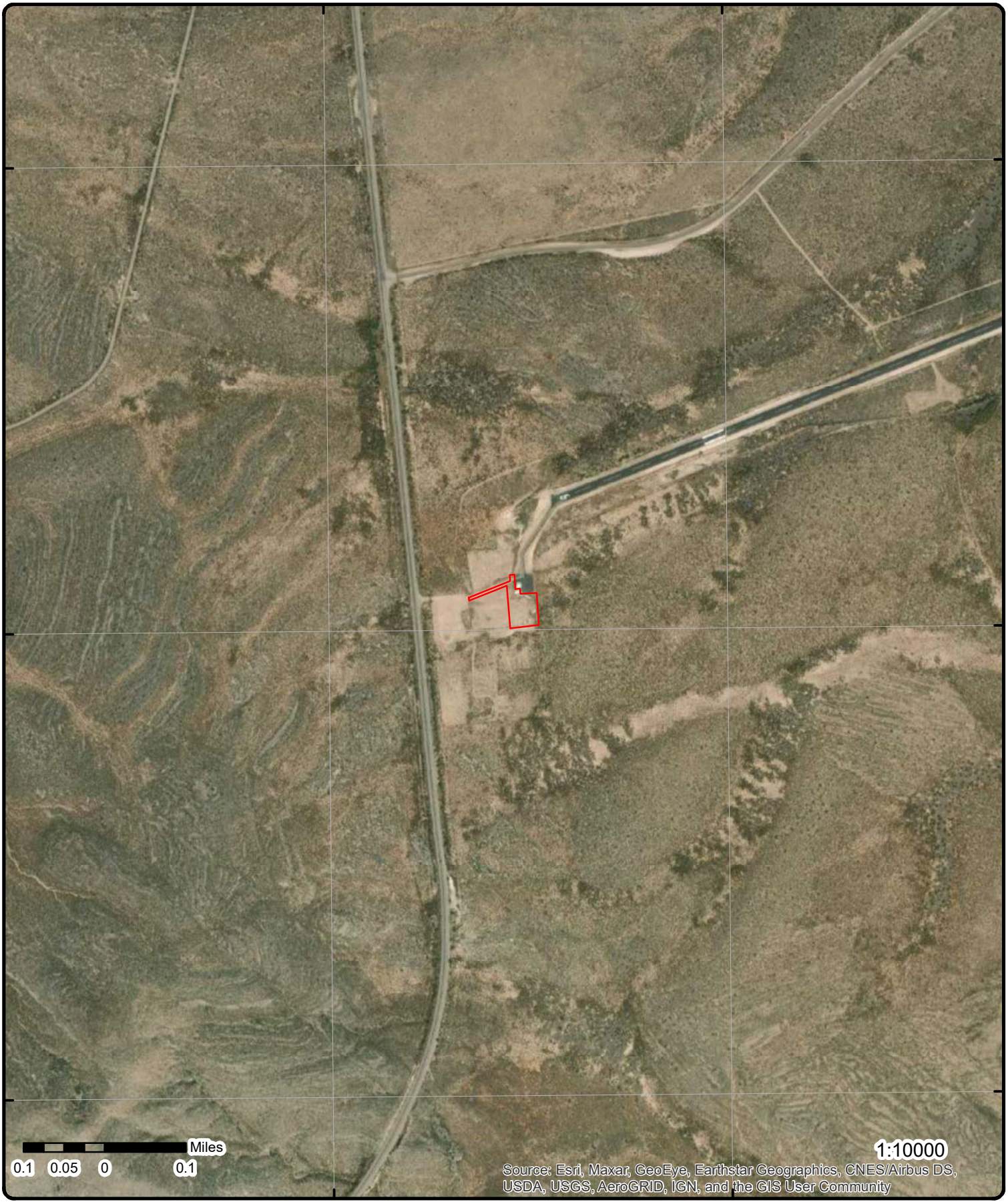
Order Number: 22012800367

Address: Tombstone Muncipal Airport, Tombstone, AZ

ERIS

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Eris Areas with Higher Elevation
- Eris Areas with Same Elevation
- Eris Areas with Lower Elevation
- Eris Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Priority List Sites
- National Wetland
- Indian Reserve Land
- Historic Fill
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- Plume

Source: © 2021 ESRI StreetMap Premium

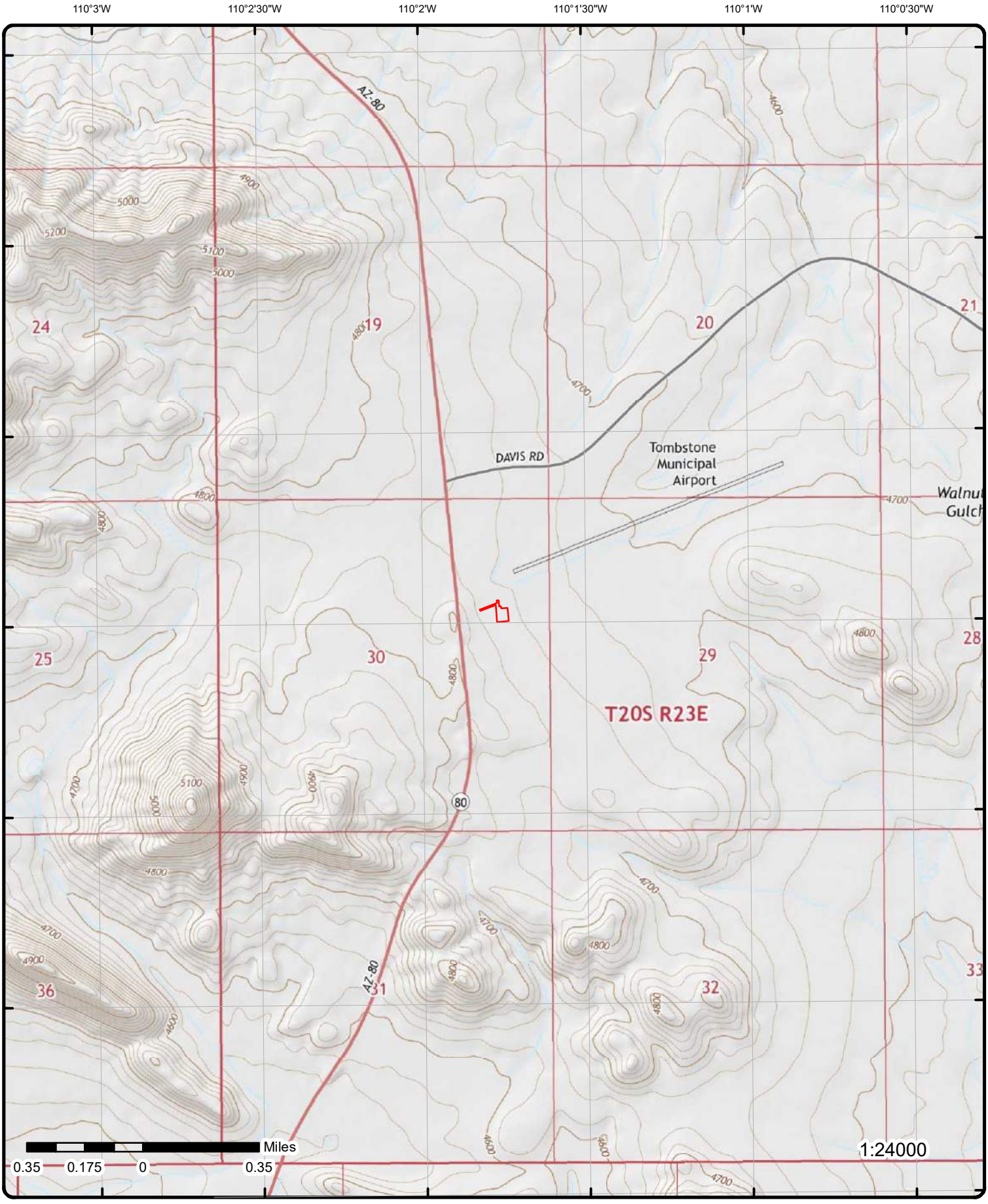


Aerial **Year: 2020**

Order Number: 22012800367

Address: Tombstone Muncipal Airport, Tombstone, AZ

Source: ESRI World Imagery



Topographic Map

Year: 2014

Order Number: 22012800367

Address: Tombstone Muncipal Airport, AZ

Quadrangle(s): Tombstone, AZ; Hay Mountain, AZ

Source: USGS Topographic Map

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	WNW	0.01 / 56.52	4,749.30 / 2	USDA - FIELD OFFICE NO ADDRESS ON RECORD TOMBSTONE AZ 85638	FINDS/FRS

Registry ID: 110039463103
FIPS Code: 04003
HUC Code: 15050202
Site Type Name: STATIONARY
Location Description: OLD BISBEE HWY
Supplemental Location:
Create Date: 24-SEP-09
Update Date:
Interest Types: STATE MASTER
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: AZURITE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 08
Census Block Code: 040030010001012
EPA Region Code: 09
County Name: COCHISE
US/Mexico Border Ind: Yes
Latitude: 31.667215
Longitude: -110.0298
Reference Point:
Coord Collection Method: UNKNOWN
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110039463103
Program Acronyms:

AZURITE:30353

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	1 of 1	WNW	0.01 / 56.66	4,749.30 / 2	USDA - FIELD OFFICE OLD BISBEE HWY TOMBSTONE AZ	UST

Facility ID: 0-006722
Status (Map): NOT ACTIVE
City (Map): TOMBSTONE
Zip (Map): 0
County (Map): Cochise
LUST No (Map): 0
Place ID (Map): 30353
Cadastral (Map):
Attrib Date(Map): 11/10/2021 3:00 AM
Name (Map): USDA - FIELD OFFICE
Place Type (Map): GOVERNMENT FACILITY
Fac Name(UST Search): USDA - FIELD OFFICE
Name (UST List): USDA - FIELD OFFICE
Address (Map):
Lat (Map): 31.667215367
Long (Map): -110.029800485
City (UST List): TOMBSTONE
County (UST List): Cochise
Zip (UST List):
State (UST List):
FacCnty(USTSearch): Cochise
Tnk Lat(USTSearch): 31.667215367
TnkLong(USTSearch): 110.029800485

Address (UST Search): OLD BISBEE HWY
TOMBSTONE, AZ
Address (UST List):
Data Source(s): ADEQ eMaps UST Tank; ADEQ UST Database Search (as of Nov 10, 2021); ADEQ UST Database Download

ADEQ UST Database Search

Owner Name: USDA AGRICULTURAL RESEARCH S
Tank ID: 2
Tank Closure Type: Perm Removal
Tank Closure Date: 11/14/1988

Owner Name: USDA AGRICULTURAL RESEARCH S
Tank ID: 1
Tank Closure Type: Perm Removal
Tank Closure Date: 11/14/1988

ADEQ eMaps UST Tank

Name: USDA - FIELD OFFICE
Address:
County: Cochise
Place ID: 30353
Place Type: GOVERNMENT FACILITY
City: TOMBSTONE
Zip Code: 0
Cadastral:
Latitude: 31.667215367
Longitude: -110.029800485
Tank No: 2
Install Dt:
Lust No: 0
Status: Perm Closed
Generated: 11/10/2021 3:00 AM
Construct: Unknown
Material: Asphalt coated or Bare Steel

Name: USDA - FIELD OFFICE
Address:
County: Cochise
Place ID: 30353
Place Type: GOVERNMENT FACILITY
City: TOMBSTONE
Zip Code: 0
Cadastral:
Latitude: 31.667215367
Longitude: -110.029800485
Tank No: 1
Install Dt:
Lust No: 0
Status: Perm Closed
Generated: 11/10/2021 3:00 AM
Construct: Unknown
Material: Unknown

ADEQ UST Database Download

Tank No: 1
Tank Status: Perm Closure
Tank Inst Date:
Capacity:
Substance: Unleaded Gasoline
Compartment: COMPARTMENT A
Tank Const Type: Unknown
Tank Mtrl Type: Unknown
Pipe Type:

Pipe Material Type:	
Pipe Const Type:	
Closure Type:	Removal
Closure Date:	11/14/1988
Airport Hydrant Flag:	

Tank No:	2
Tank Status:	Perm Closure
Tank Inst Date:	
Capacity:	
Substance:	Unleaded Gasoline
Compartment:	COMPARTMENT A
Tank Const Type:	Unknown
Tank Mtrl Type:	Asphalt coated or Bare Steel
Pipe Type:	
Pipe Material Type:	
Pipe Const Type:	
Closure Type:	Removal
Closure Date:	11/14/1988
Airport Hydrant Flag:	

Unplottable Summary

Total: 4 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
AST	Fiber Optic- Regeneration Facility	State Highway 80 & State Line Road (2 miles south of Rodeo N/M)	Cochise AZ		820451142
ERNS		MILE MARKER 305 ON HWY 80 BETWEEN TOMBSTONE AND ST., DAVID ***NRC Report No:*** 424349	TOMBSTONE AZ		806881512
ERNS		NEAR STATE RD 80 ***NRC Report No:*** 638938	TOMBSTONE AZ		806696307
SPILLS	U.S. Border Patrol	Hwy. 80, MP 305	Tombstone AZ		820446888

Unplottable Report

Site: ***Fiber Optic- Regeneration Facility***
State Highway 80 & State Line Road (2 miles south of Rodeo N/M) Cochise AZ AST

--Details--

Status:	Permitted
Approval Dt:	1/11/2001
Permit:	3006
Submitter:	Tierra Right of Way Services(Russ Close)
Permit Year:	2001
Submitter Ph:	(520) 319-2106
Memo:	

Site:
MILE MARKER 305 ON HWY 80 BETWEEN TOMBSTONE AND ST.,DAVID TOMBSTONE AZ ERNS

NRC Report No:	424349	***Latitude Degrees:***	
Type of Incident:	FIXED	***Latitude Minutes:***	
Incident Cause:	UNKNOWN	***Latitude Seconds:***	
Incident Date:	02/13/98 06:00:00	***Longitude Degrees:***	
Incident Location:		***Longitude Minutes:***	
Incident Dtg:	OCCURRED	***Longitude Seconds:***	
Distance from City:		***Lat Quad:***	
Distance Units:		***Long Quad:***	
Direction from City:		***Location Section:***	
Location County:	COCHISE	***Location Township:***	
Potential Flag:		***Location Range:***	
Year:	Year 1998 Reports		

Description of Incident: 55 GAL DRUM / CAUSE UNKNOWN / HOSE WAS LEFT OUT OF THE BBL / RELEASINGSOME KEROSENE ON THE SOIL

Material Spill Information

Chris Code:	OON	***Unit of Measure:***	GALLON(S)
CAS No:		***If Reached Water:***	YES
UN No:		***Amount in Water:***	0
Name of Material:	OIL, FUEL: NO. 1 (KEROSENE)	***Unit Reach Water:***	NONE
Amount of Material:	20		

Calls Information

Date Time Received:	02/13/98 12:35:31	***Responsible City:***	TUCSON
Date Time Complete:	02/13/98 12:52:51	***Responsible State:***	AZ
Call Type:	INC	***Responsible Zip:***	85713
Resp Company:	US BOARDER PATROL	***Source:***	UNAVAILABLE
Resp Org Type:	FEDERAL GOVERNMENT		

Incident Information

Tank ID:		***Building ID:***	
Tank Regulated:	U	***Location Area ID:***	
Tank Regulated By:		***Location Block ID:***	
Capacity of Tank:		***OCSG No:***	
Capacity Tank Units:		***OCSP No:***	
Description of Tank:		***State Lease No:***	
Actual Amount:		***Pier Dock No:***	

Actual Amount Units:		***Berth Slip No:***	
Tank Above Ground:	ABOVE	***Brake Failure:***	N
NPDES:		***Airbag Deployed:***	
NPDES Compliance:	U	***Transport Contain:***	U
Init Contin Rel No:		***Location Subdiv:***	
Contin Rel Permit:		***Platform Rig Name:***	
Contin Release Type:		***Platform Letter:***	
Aircraft ID:		***Allision:***	N
Aircraft Runway No:		***Type of Structure:***	
Aircraft Spot No:		***Structure Name:***	
Aircraft Type:	UNKNOWN	***Structure Oper:***	Y
Aircraft Model:		***Transit Bus Flag:***	
Aircraft Fuel Cap:		***Date Time Norm Serv:***	
Aircraft Fuel Cap U:		***Serv Disrupt Time:***	
Aircraft Fuel on Brd:		***Serv Disrupt Units:***	
Aircraft Fuel OB U:		***CR Begin Date:***	
Aircraft Hanger:		***CR End Date:***	
Road Mile Marker:		***CR Change Date:***	
Power Gen Facility:	U	***FBI Contact:***	
Generating Capacity:		***FBI Contact Dt Tm:***	
Type of Fixed Obj:	UNKNOWN	***Passenger Handling:***	
Type of Fuel:		***Passenger Route:***	XXX
DOT Crossing No:		***Passenger Delay:***	XXX
DOT Regulated:	U	***Sub Part C Test Req:***	XXX
Pipeline Type:	UNKNOWN	***Conductor Test:***	
Pipeline Abv Ground:	ABOVE	***Engineer Test:***	
Pipeline Covered:	U	***Trainman Test:***	
Exposed Underwater:	U	***Yard Foreman Test:***	
Railroad Hotline:	No	***RCL Operator Test:***	
Railroad Milepost:	UNKNOWN	***Brakeman Test:***	
Grade Crossing:	N	***Train Dispat Test:***	
Crossing Device Ty:		***Signalman Test:***	
Ty Vehicle Involved:	UNKNOWN	***Oth Employee Test:***	
Device Operational:	Y	***Unknown Test:***	

Incident Details Information

Release Secured:	U	***State Agen Report No:***	
Release Rate:		***State Agen on Scene:***	
Release Rate Unit:		***State Agen Notified:***	
Release Rate Rate:		***Fed Agency Notified:***	
Est Duration of Rel:		***Oth Agency Notified:***	
Desc Remedial Act:	BBL IS IN A STEEL CONTAINMENT/HOSE HAS BEEN PUT BACK IN BBL / SPILL HASBEEN SECURED	***Body of Water:***	
Fire Involved:	N	***Tributary of:***	
Fire Extinguished:	U	***Near River Mile Make:***	
Any Evacuations:	N	***Near River Mile Mark:***	
No Evacuated:		***Offshore:***	N
Who Evacuated:		***Weather Conditions:***	
Radius of Evacu:		***Air Temperature:***	
Any Injuries:	U	***Wind Direction:***	
No. Injured:		***Wind Speed:***	
No. Hospitalized:		***Wind Speed Unit:***	
No. Fatalities:		***Water Supp Contam:***	U
Any Fatalities:	U	***Water Temperature:***	
Any Damages:	N	***Wave Condition:***	
Damage Amount:		***Current Speed:***	
Air Corridor Closed:	N	***Current Direction:***	
Air Corridor Desc:		***Current Speed Unit:***	
Air Closure Time:		***EMPL Fatality:***	
Waterway Closed:	N	***Pass Fatality:***	
Waterway Desc:		***Community Impact:***	N
Waterway Close Time:		***Passengers Transfer:***	UNK
Road Closed:	N	***Passenger Injuries:***	
Road Desc:		***Employee Injuries:***	
Road Closure Time:		***Occupant Fatality:***	
Road Closure Units:		***Sheen Size:***	
Closure Direction:		***Sheen Size Units:***	
Major Artery:	No	***Sheen Size Length:***	

Track Closed:	N	***Sheen Size Length U:***	
Track Desc:		***Sheen Size Width:***	
Track Closure Time:		***Sheen Size Width U:***	
Track Closure Units:		***Sheen Color:***	
Track Close Dir:		***Dir of Sheen Travel:***	
Media Interest:		***Sheen Odor Desc:***	
Medium Desc:	LAND	***Duration Unit:***	
Addl Medium Info:	SOIL	***Additional Info:***	TEMP: 45F / CLOUD COVER: CLEAR / WIND: UNK

Site:

NEAR STATE RD 80 TOMBSTONE AZ ERNS

NRC Report No:	638938	***Latitude Degrees:***	
Type of Incident:	PIPELINE	***Latitude Minutes:***	
Incident Cause:	EQUIPMENT FAILURE	***Latitude Seconds:***	
Incident Date:	03/09/03 14:05:00	***Longitude Degrees:***	
Incident Location:		***Longitude Minutes:***	
Incident Dtg:	OCCURRED	***Longitude Seconds:***	
Distance from City:	11	***Lat Quad:***	
Distance Units:	MILES	***Long Quad:***	
Direction from City:	NW	***Location Section:***	
Location County:	COCHISE	***Location Township:***	
Potential Flag:		***Location Range:***	
Year:	Year 2003 Reports		

Description of Incident: A CRACK OCCURRED IN A 10 INCH TRANSMISSION LINE CAUSING NATURAL GAS TO RELEASE INTO THE ATMOSPHERE.

Material Spill Information

Chris Code:	ONG	***Unit of Measure:***	UNKNOWN AMOUNT
CAS No:	000000-00-0	***If Reached Water:***	NO
UN No:		***Amount in Water:***	
Name of Material:	NATURAL GAS	***Unit Reach Water:***	
Amount of Material:	0		

Calls Information

Date Time Received:	03/09/03 18:00:21	***Responsible City:***	COLORADO SPRINGS
Date Time Complete:	03/09/03 18:08:12	***Responsible State:***	CO
Call Type:	INC	***Responsible Zip:***	
Resp Company:	EL PASO NATURAL GAS	***Source:***	TELEPHONE
Resp Org Type:	PRIVATE ENTERPRISE		

Incident Information

Tank ID:		***Building ID:***	
Tank Regulated:	U	***Location Area ID:***	
Tank Regulated By:		***Location Block ID:***	
Capacity of Tank:		***OCSG No:***	
Capacity Tank Units:		***OCSP No:***	
Description of Tank:		***State Lease No:***	
Actual Amount:		***Pier Dock No:***	
Actual Amount Units:		***Berth Slip No:***	
Tank Above Ground:	ABOVE	***Brake Failure:***	N
NPDES:		***Airbag Deployed:***	
NPDES Compliance:	U	***Transport Contain:***	U
Init Contin Rel No:		***Location Subdiv:***	
Contin Rel Permit:		***Platform Rig Name:***	
Contin Release Type:		***Platform Letter:***	
Aircraft ID:		***Allision:***	N
Aircraft Runway No:		***Type of Structure:***	
Aircraft Spot No:		***Structure Name:***	
Aircraft Type:		***Structure Oper:***	U
Aircraft Model:		***Transit Bus Flag:***	
Aircraft Fuel Cap:		***Date Time Norm Serv:***	
Aircraft Fuel Cap U:		***Serv Disrupt Time:***	
Aircraft Fuel on Brd:		***Serv Disrupt Units:***	

Aircraft Fuel OB U:		***CR Begin Date:***	
Aircraft Hanger:		***CR End Date:***	
Road Mile Marker:		***CR Change Date:***	
Power Gen Facility:	U	***FBI Contact:***	
Generating Capacity:		***FBI Contact Dt Tm:***	
Type of Fixed Obj:		***Passenger Handling:***	
Type of Fuel:		***Passenger Route:***	XXX
DOT Crossing No:		***Passenger Delay:***	XXX
DOT Regulated:	Y	***Sub Part C Test Req:***	XXX
Pipeline Type:	TRANSMISSION	***Conductor Test:***	
Pipeline Abv Ground:	BELOW	***Engineer Test:***	
Pipeline Covered:	U	***Trainman Test:***	
Exposed Underwater:	N	***Yard Foreman Test:***	
Railroad Hotline:		***RCL Operator Test:***	
Railroad Milepost:		***Brakeman Test:***	
Grade Crossing:	N	***Train Dispat Test:***	
Crossing Device Ty:		***Signalman Test:***	
Ty Vehicle Involved:		***Oth Employee Test:***	
Device Operational:	Y	***Unknown Test:***	

Incident Details Information

Release Secured:	N	***State Agen Report No:***	
Release Rate:		***State Agen on Scene:***	
Release Rate Unit:		***State Agen Notified:***	CORP. COMISSION
Release Rate Rate:		***Fed Agency Notified:***	
Est Duration of Rel:		***Oth Agency Notified:***	
Desc Remedial Act:	IN THE PROCESS OF CLAMPING THE LINE	***Body of Water:***	
Fire Involved:	N	***Tributary of:***	
Fire Extinguished:	U	***Near River Mile Make:***	
Any Evacuations:	Y	***Near River Mile Mark:***	
No Evacuated:	4	***Offshore:***	N
Who Evacuated:	PRIVATE CITIZENS	***Weather Conditions:***	CLEAR
Radius of Evacu:		***Air Temperature:***	78
Any Injuries:	N	***Wind Direction:***	
No. Injured:		***Wind Speed:***	
No. Hospitalized:		***Wind Speed Unit:***	
No. Fatalities:		***Water Supp Contam:***	U
Any Fatalities:	N	***Water Temperature:***	
Any Damages:	N	***Wave Condition:***	
Damage Amount:		***Current Speed:***	
Air Corridor Closed:	N	***Current Direction:***	
Air Corridor Desc:		***Current Speed Unit:***	
Air Closure Time:		***EMPL Fatality:***	
Waterway Closed:	N	***Pass Fatality:***	
Waterway Desc:		***Community Impact:***	Y
Waterway Close Time:		***Passengers Transfer:***	UNK
Road Closed:	N	***Passenger Injuries:***	
Road Desc:		***Employee Injuries:***	
Road Closure Time:		***Occupant Fatality:***	
Road Closure Units:		***Sheen Size:***	
Closure Direction:		***Sheen Size Units:***	
Major Artery:	No	***Sheen Size Length:***	
Track Closed:	N	***Sheen Size Length U:***	
Track Desc:		***Sheen Size Width:***	
Track Closure Time:		***Sheen Size Width U:***	
Track Closure Units:		***Sheen Color:***	
Track Close Dir:		***Dir of Sheen Travel:***	
Media Interest:	NONE	***Sheen Odor Desc:***	
Medium Desc:	AIR	***Duration Unit:***	
Addl Medium Info:	ATMOSPHERE	***Additional Info:***	A NEAR BY HOME WAS EVACUATED DUE TO THE RELEASE.

Site: ***U.S. Border Patrol***
Hwy. 80, MP 305 Tombstone AZ

SPILLS

ID: 4144
County: Cochise

--Details--

Incident NO:	98-094-D	***Chemic Material:***	Oil (Fuel #1 - Kerosene)
Incident Dt:	2/13/1998	***Structure:***	Drum
Date Reported:	2/13/1998	***Type:***	Release
Quantity:	20 gals.	***Response Dt:***	N/A
Fund Amount:	Fed/Unk	***Admin:***	admin

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

Formerly Utilized Sites Remedial Action Program: DOE FUSRAP

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

National Priority List: NPL

National Priorities List (Superfund)-NPL: EPA's (United States Environmental Protection Agency) list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action.

Government Publication Date: Dec 30, 2021

National Priority List - Proposed: PROPOSED NPL

Includes sites proposed (by the EPA, the state, or concerned citizens) for addition to the NPL due to contamination by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.

Government Publication Date: Dec 30, 2021

Deleted NPL: DELETED NPL

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Government Publication Date: Dec 30, 2021

SEMS List 8R Active Site Inventory: SEMS

The Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted.

Government Publication Date: Dec 30, 2021

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites: SEMS ARCHIVE

The Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Government Publication Date: Dec 30, 2021

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Nov 17, 2021

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Government Publication Date: Nov 17, 2021

RCRA Generator List: RCRA LQG

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Nov 17, 2021

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Nov 17, 2021

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Nov 17, 2021

RCRA Non-Generators: RCRA NON GEN

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Nov 17, 2021

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Nov 17, 2021

Federal Engineering Controls-ECs: FED ENG

Engineering controls (ECs) encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Dec 30, 2021

Federal Institutional Controls- ICs: FED INST

Institutional controls are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's (United States Environmental Protection Agency) expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Government Publication Date: Dec 30, 2021

Land Use Control Information System: LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Jul 26, 2021

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Aug 20, 2021

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

List of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Dec 2, 2020

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Jul 10, 2020

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Apr 28, 2020

LIEN on Property: SEMS LIEN

The EPA Superfund Enterprise Management System (SEMS) provides LIEN information on properties under the EPA Superfund Program.

Government Publication Date: Dec 30, 2021

Superfund Decision Documents: SUPERFUND ROD

This database contains a listing of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD), along with other associated memos and files. This information is maintained and made available by the US EPA (Environmental Protection Agency).

Government Publication Date: Nov 16, 2021

State

Waste Program Remedial Projects - Superfund & DOD: SHWS

The Arizona Department of Environmental Quality (ADEQ) Waste Programs Division investigates, manages, and oversees remediation of soil and groundwater contaminated with hazardous substances. List of sites overseen by the Remedial Projects Section and/or Federal programs, including Federal DOD and Superfund sites.

Government Publication Date: Dec 8, 2021

CERCLIS Information Data System (ACIDS): SHWS ACIDS

The Arizona CERCLIS Information Data System (ACIDS) list was used by the Arizona Department of Environmental Quality Superfund Programs Section (SPS) prior to July 2000. The ACIDS list consists of locations subject to investigations concerning possible contamination of soil, surface water, or groundwater under the State Water Quality Assurance Revolving Fund (WQARF) and Federal CERCLA programs. The ACIDS list has been archived and is no longer being distributed or updated. The ACIDS list has been replaced by the Arizona Superfund Program List (ASPL).

Government Publication Date: Aug 3, 1995

Water Quality Assurance Revolving Fund Sites (WQARF): WQARF

The Arizona Department of Environmental Quality (ADEQ) Water Quality Assurance Revolving Fund (WQARF) program supports the ADEQ in identifying, prioritizing, assessing, and resolving the threat of contaminated soil and groundwater sites in the state. This list of sites includes those on the WQARF Registry, sites removed from the WQARF Registry, and sites requiring remediation under the WQARF Emergency Response.

Government Publication Date: Dec 8, 2021

Delisted WQARF, Superfund, DOD: DELISTED SUPERFUND

List of sites which once appeared, but have since been removed from either the WQARF Registry, Superfund Sites, Department of Defense Sites, or Superfund Alternative Sites.

Government Publication Date: Dec 8, 2021

Directory of Solid Waste Facilities: SWF/LF

A list of Solid Waste Facilities and Landfill sites in the State of Arizona. This list is made available by Arizona Department of Environmental Quality, Waste Programs Division, Solid Waste Management.

Government Publication Date: Jan 14, 2020

Leaking Underground Storage Tanks: LUST

A list of Leaking Underground Storage Tanks (LUST) sites in the state of Arizona. This list is made available by Arizona Department of Environment Quality.

Government Publication Date: Nov 10, 2021

Delisted Leaking Underground Storage Tanks: DELISTED LUST

A list of sites that once appeared on - and have since been removed from - the list of Leaking Underground Storage tanks made available by the Arizona Department of Environmental Quality.

Government Publication Date: Nov 10, 2021

Underground Storage Tanks List: UST

A list of Underground Storage Tank sites registered with the Arizona Department of Environmental Quality (ADEQ) Waste Program Division. This list is made available by ADEQ.

Government Publication Date: Nov 10, 2021

Aboveground Storage Tanks: AST

List of aboveground fuel storage tanks (ASTs) made available by the State Fire Marshal's Office. This list is of installed ASTs and does not include any AST permitted and inspected by any City, Town, County, or Fire District. This is not a complete list of storage systems in use in the State of Arizona; ASTs may have been installed and used without adequate permission from the State Fire Marshal's Office. The absence of a property from the State Fire Marshal records as a permitted tank is not proof that an AST for hazardous materials was never installed or used at a given address.
Government Publication Date: Sep 29, 2015

Exemption Certificate Renewals: AST2

The Exemption Certificate Renewals data lists applicants that have renewed their tank certificates that will never expire from the penny underground storage tank tax. This is provided by Arizona Department of Environmental Quality.
Government Publication Date: Sep 2, 2021

Delisted Storage Tanks List: DELISTED TANKS

This database contains a list of storage tank sites that were removed from the Arizona Department of Environmental Quality (ADEQ) Waste Program Division.
Government Publication Date: Nov 10, 2021

Environmental Use Restriction Sites List: AUL

List of sites in the Arizona Department of Environmental Quality (ADEQ)'s Remediation and DEUR Tracking System (RDT) with either a Declaration of Environmental Use Restriction (DEUR) or a Voluntary Environmental Mitigation Use Restriction (VEMUR). A DEUR is a restrictive land use covenant that is required when a property owner elects to use an institutional (i.e., administrative) control or engineering (i.e., physical) control as a means to meet remediation goals. The DEUR runs with and burdens the land, and requires maintenance of any institutional or engineering controls. A VEMUR is a restrictive land use covenant that, prior to July 18, 2000, was required when a property owner elected to remediate the property to non-residential uses. Effective July 18, 2000, the DEUR replaced the VEMUR as a restrictive use covenant.
Government Publication Date: Nov 10, 2021

Azurite Database: AZURITE

List of sites from the Arizona Department of Environmental Quality (ADEQ) Remediation and DEUR Tracking System where the owner has elected to remediate the property without the use of an institutional or engineering control.
Government Publication Date: Nov 10, 2021

Voluntary Remediation Program: VCP

A list of sites registered in Voluntary Remediation Program (VRP). This list is made available by Arizona Department of Environment Quality (ADEQ). Through ADEQ's VRP, property owners, prospective purchasers and other interested parties investigate or clean up a contaminated site in cooperation with ADEQ.
Government Publication Date: Oct 21, 2020

Brownfields Tracking System: BROWNFIELDS

A list of brownfield sites in the State of Arizona, made available by Arizona Department of Environmental Quality. Brownfields are abandoned or underutilized properties where the reuse is complicated by actual or perceived environmental contamination.
Government Publication Date: Oct 21, 2020

Tribal

Leaking Underground Storage Tanks (LUSTs) on Indian Lands: INDIAN LUST

LUSTs on Tribal/Indian Lands in Region 9, which includes Arizona.
Government Publication Date: Apr 8, 2020

Underground Storage Tanks (USTs) on Indian Lands: INDIAN UST

USTs on Tribal/Indian Lands in Region 9, which includes Arizona.
Government Publication Date: Apr 8, 2020

Delisted Tribal Leaking Storage Tanks: DELISTED ILST

Leaking Underground Storage Tank facilities which have been removed from the Regional Tribal LUST lists made available by the EPA.
Government Publication Date: Apr 14, 2020

Delisted Tribal Underground Storage Tanks: DELISTED IUST

Underground Storage Tank facilities which have been removed from the Regional Tribal UST lists made available by the EPA.

Government Publication Date: Apr 14, 2020

County

No County databases were selected to be included in the search.

Additional Environmental Record Sources

Federal

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Nov 2, 2020

Toxics Release Inventory (TRI) Program: TRIS

The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U. S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Aug 24, 2021

Perfluorinated Alkyl Substances (PFAS) Releases: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a Per- or polyfluorinated alkyl substance (PFAS) included in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances. The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Aug 24, 2021

PFOA/PFOS Contaminated Sites: PFAS NPL

List of sites where PFOA or PFOS contaminants have been found in drinking water or soil. Made available by the Federal Environmental Protection Agency (EPA).

Government Publication Date: Sep 17, 2021

Perfluorinated Alkyl Substances (PFAS) Water Quality: PFAS WATER

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). This listing includes records from the Water Quality Portal where the characteristic (environmental measurement) is in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances.

Government Publication Date: Jul 20, 2020

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents, and this is cited in the tracker. Disclaimer: The source conveys this database undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Limited location details are available with this data. Access the following for the most current informations https://pfasproject.com/pfas-contamination-site-tr acker/

Government Publication Date: Dec 12, 2019

Hazardous Materials Information Reporting System: HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Sep 1, 2020

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department") provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Oct 5, 2020

Toxic Substances Control Act: TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Apr 11, 2019

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the cleanup process, the Environmental Protection Agency (EPA) conducts a search to find the potentially responsible parties (PRPs). EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site.

Government Publication Date: Oct 20, 2021

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) is a system that provides information for the Federal Enforcement and Compliance (FE&C) and the National Pollutant Discharge Elimination System (NPDES) programs. The FE&C component supports the Environmental Protection Agency's (EPA) Civil Enforcement and Compliance program activities. These activities include Compliance Assistance, Compliance Monitoring and Enforcement. The NPDES program supports tracking of NPDES permits, limits, discharge monitoring data and other program reports.

Government Publication Date: Oct 14, 2021

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) online search. The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: May 5, 2021

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: May 5, 2021

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DoD) is responsible for an environmental restoration. This list is published by the U.S. Army Corps of Engineers.

Government Publication Date: May 26, 2021

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

A list of flagged pipeline incidents made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types.

Government Publication Date: Jul 7, 2020

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) contains mine identification numbers issued by the Department of Labor Mine Safety and Health Administration (MSHA) for mines active or opened since 1971. Note that addresses may or may not correspond with the physical location of the mine itself.

Government Publication Date: Nov 2, 2021

Surface Mining Control and Reclamation Act Sites: SMCRA

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of Abandoned Mine Land (AML) impacts, as well as information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Government Publication Date: Dec 18, 2020

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2006

Uranium Mill Tailings Radiation Control Act Sites: URANIUM

The Legacy Management Office of the Department of Energy (DOE) manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The L.M. Office manages this database of sites registered under the Uranium Mill Tailings Control Act (UMTRCA).

Government Publication Date: Mar 4, 2017

Alternative Fueling Stations: ALT FUELS

List of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE). The National Renewable Energy Laboratory (NREL) obtains information about new stations from trade media, Clean Cities coordinators, a Submit New Station form on the Station Locator website, and through collaborating with infrastructure equipment and fuel providers, original equipment manufacturers (OEMs), and industry groups.

Government Publication Date: Dec 21, 2021

Registered Pesticide Establishments: SSTS

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: Apr 13, 2021

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Jan 20, 2022

State

Hazardous Material Logbook/Spills: SPILLS

Hazardous Material Incident Logbook database made available by Arizona Department of Environmental Quality (ADEQ). This database is updated through November 15, 2001; after that date, reports were registered with the National Response Center.

Government Publication Date: Nov 15, 2001

Dry Cleaning Facilities: DRYCLEANERS

This list of dry cleaners includes sites from two sources: the 2016 Arizona Department of Environmental Quality (ADEQ) Dry Cleaners list, and the 2006 Dry Cleaner Inventory Project by Miller Brooks Environmental for ADEQ. The 2016 ADEQ Dry Cleaners list does not distinguish between contaminated or non-contaminated facilities and only provides limited details per facility with a Place ID. The 2006 Dry Cleaner Inventory Project was commissioned to assist in the identification, prioritization, investigation, and remediation of sites that have released hazardous substances into the lands and waters of the state. This Inventory includes the following types of sites: Sites with Known Contamination (sites with documented contamination, or a history of release and/or prior site characterization and remedial activities); Sites with High Potential for Release (sites with multiple owners, sites that have been in operation more than 10 years, sites that specifically operated between 1935 and 1984, and high-volume sites); and Sites with Low Potential for Release (sites that have been in operation only after 1985, or prior to 1934, sites that "broker" cleaning services to other facilities, and sites that operate primarily as a coin-operated laundry facility). Disclaimer: Due to the time spanned between these listings and available details, multiple listings may occur. Per ADEQ, these listings are no longer updated.

Government Publication Date: Jul 10, 2021

Per- and Polyfluoroalkyl Substances (PFAS): PFAS

The Arizona Department of Environmental Quality (ADEQ) Waste Programs Division investigates, manages, and oversees remediation of soil and groundwater contaminated with hazardous substances. List of sites overseen by the Remedial Projects Section and/or Federal programs, including Federal DOD and Superfund sites, where the contaminant or potential contaminant of concern is a Per- or polyfluorinated alkyl substances (PFAS).
Government Publication Date: Dec 8, 2021

Air Permits Major/Minor Sources: AIR PERMITS

A list of Arizona operating air permits major and minor sources. A "major" source is any source that has the potential to emit 100 tons per year of any criteria air pollutant and if it has the potential to emit 10 tons per year of any single Hazardous Air Pollutant or 25 tons per year of any combination of Hazardous Air Pollutants. This list is provided by the Department of Environmental Quality.
Government Publication Date: Nov 29, 2021

Drywell Database: DRYWELLS

The Drywell database contains information regarding drywells in Arizona. This database is maintained by the Arizona Department of Environmental Quality (ADEQ).
Government Publication Date: Oct 20, 2021

Historical Drywells: DRYWELLS HIST

Historical listing of registered drywells once maintained and made available by the Arizona Department of Environmental Quality (ADEQ) Water Quality Division. As of May 2018, ADEQ stopped accepting paper forms and will no longer be updating this list.
Government Publication Date: Aug 6, 2018

Drug Labs Remediation: DRUG LAB REMEDIATION

Arizona State Board of Technical Registration maintains a list of drug lab remediation. This is a list of seized drug laboratory sites or sites where drug manufacturing chemicals were seized. Remediated sites are removed from this list when the Board receives clean up notification from a certified clean up firm.
Government Publication Date: Sep 03,2013

Clandestine Drug Labs: CDL

A list of unremediated seized clandestine drug laboratory sites or sites where drug manufacturing chemicals were seized. This list is made available by Arizona State Board of Technical Registration.
Government Publication Date: Jan 22, 2019

Tier 2 Chemical Inventory Reporting: TIER 2

List of facilities that report to the Arizona Emergency Response Commission (AZSERC) for Tier II Chemical Inventory Reporting. AZSERC is tasked with the implementation of the Emergency Planning and Community Right to Know Act (EPRCA) in Arizona. As of 2016, the Arizona Emergency Response Commission (AZSERC) is overseen by Arizona Department of Environmental Quality (ADEQ).
Government Publication Date: Dec 31, 2018

Biohazardous Medical Waste Facilities: BIO HAZ WASTE

This list of biohazardous medical waste facilities is maintained by the Arizona Department of Environmental Quality (ADEQ) Waste Programs Division. This list includes: Biohazardous Medical Waste Disposal Facilities, Biohazardous Medical Waste Treatment Facilities, Biohazardous Medical Waste Storage & Transfer Facilities, Registered Biohazardous Medical Waste Transporters, and Registered Alternative Biohazardous Medical Waste Treatment Technologies. Biohazardous medical waste is medical waste that is composed of one or more of the following: cultures and stocks; human blood and blood products; human pathologic wastes; medical sharps; and research animal wastes. The Arizona Department of Environmental Quality adopted specific rules for handling biohazardous medical waste and discarded drugs. Non-biohazardous medical waste is handled as solid waste.
Government Publication Date: Jul 7, 2020

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

ADOT | Arizona Department of Transportation

Environmental Planning

Class III Cultural Resource Survey of 1.21 Acres for the Tombstone Municipal Airport Apron Expansion Project in Tombstone, Cochise County, Arizona

Aircraft Parking Apron Expansion

ADOT Project No. E1S1W01C

February 25, 2022

First Submittal

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Class III Cultural Resource Survey of 1.21 Acres for the Tombstone Municipal Airport Apron Expansion Project in Tombstone, Cochise County, Arizona

ADOT Project No. E1S1W01C

Prepared for:
Arizona Department of Transportation
Environmental Planning
205 South 17th Avenue, Mail Drop EM02
Phoenix, Arizona 85007

Prepared by:
Stephen Molinares, M.A.
Tiffany Grew, B.A.

Submitted by:
Chad V. Kirvan, M.A., RPA

PaleoWest, LLC
319 East Palm Lane
Phoenix, Arizona 85004

Technical Report No. 22-067
Arizona Antiquities Act Blanket Permit No. 2022-050bl
ASM Accession No. 2022 -0076

February 25, 2022

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State Historic Preservation Office
Survey Report Summary Form

SECTION 1. REPORT TITLE

1a. Report Title:	Class III Cultural Resource Survey of 1.21 Acres for the Tombstone Municipal Airport Apron Expansion Project in Tombstone, Cochise County, Arizona. First Submittal.
1b. Report Author(s):	Stephen Molinares M.A., Tiffany Grew, B.A.
1c. Date:	February 25, 2022
1d. Report No.:	22-0067

SECTION 2. PROJECT REGISTRATION/PERMITS

2a. ASM Accession Number:	2022-0076
2b. AAA Permit No.:	2022-050bl
2c. ASLD Lease Application No.:	N/A
2d. Other Permit Number(s):	N/A

SECTION 3. ORGANIZATION/CONSULTING FIRM

3a. Name:	PaleoWest, LLC
3b. Internal Project Number:	22-0047
3c. Internal Project Name:	Tombstone Municipal Airport Apron Expansion Class III
3d. Contact Name:	Chance Copperstone M.A.
3e. Contact Address:	319 East Palm Lane, Phoenix, Arizona 85004
3f. Contact Phone:	(520) 429-7507
3g. Contact Email:	Ccopperstone@paleowest.com

SECTION 4. SPONSOR/LEAD AGENCY

4a. Sponsor:	City of Tombstone
4b. Lead Agency:	Arizona Department of Transportation (ADOT)
4c. Agency Project Number(s):	E1S1W01C
4d. Agency Project Name:	Aircraft Parking Apron Expansion

4e. Funding Source(s):	Grant funding from the Arizona Department of Transportation (ADOT) Multimodal Planning Division's Aeronautics Group and the City of Tombstone
4f. Other Involved Agencies:	Arizona State Museum (ASM)
4g. Applicable Regulations:	The Undertaking is subject to compliance with 36 CFR 800, the regulations implementing Section 106 of the National Historic Preservation Act (NHPA), the Arizona State Historic Preservation Act (A.R.S. §41-861 et seq.) and the Arizona Antiquities Act (A.R.S. §41-841 et seq.).

SECTION 5. DESCRIPTION OF UNDERTAKING

PaleoWest, LLC (PaleoWest) was contracted by Kimley-Horn on behalf of the City of Tombstone to complete cultural resource services in support of the Tombstone Municipal Airport Apron Expansion Project in Tombstone, Cochise County, Arizona (Undertaking). The Undertaking would occur on land owned by the City of Tombstone under the auspices of ADOT Aeronautics Group. According to ADOT, the forecasts of aviation demand that an additional aircraft parking apron is need in order to accommodate growth at the City of Tombstone Municipal Airport.

This Undertaking includes the expansion of the existing asphalt concrete (AC) aircraft parking apron (90 feet x 135 feet); including the addition of aircraft tiedowns and pavement markings. Work will include the saw cut and removal of a portion of the existing asphalt apron pavement, removal (possible reuse) of the existing aggregate base course, compaction of the existing subgrade soils; placement and compaction of aggregate base course, and placement and compaction of a new asphalt surface course.

SECTION 6. AREA OF POTENTIAL EFFECTS

The area of potential effect (APE) consists of an irregularly shaped area, approximately 0.08 mile (mi) wide × 0.06 mi long. The APE is at the Tombstone Municipal Airport approximately 3 mi southeast of the City of Tombstone, Arizona and is surrounded by mostly undeveloped land. The APE is approximately 0.07 mi east of the Arizona State Route 80, and approximately 0.40 mi south of Davis Road.

SECTION 7. PROJECT AREA INFORMATION

7a. Address:	N/A
7b. Route:	N/A
7c. Mileposts Limits:	N/A

State Historic Preservation Office
Survey Report Summary Form

7d. Nearest City/Town: The City of Tombstone is approximately 3 mi northwest

7e. County: Cochise County

7f. Project Locator UTMs: NAD 83, Zone 12 592010 mE 3503944 mN

7g. Baseline & Meridian: Gila and Salt River Baseline and Meridian (G&SRB&M)

7h. USGS Quadrangle(s): Tombstone, AZ (1978)

7i. Legal Description(s): Section 30, T20S, R23E

SECTION 8. SURVEY AREA SUMMARY

8a. Total Acres: 1.21 acres

8b. Survey Area. 1.21 acres

1. Land Jurisdiction	2. Total Acres Surveyed	3. Total Acres Not Surveyed	4. Justification for Areas Not Surveyed
Municipal	1.21	0	–

SECTION 9. ENVIRONMENTAL CONTEXTS

9a. Landform: Fan terraces

9b. Elevation: 4750 feet above mean sea level

9c. Surrounding Topographic Features: Military Hill is approximately 2.1 mi northwest of the APE, while Ajax Hill is 3.5 mi east of the APE. Both are part of the Tombstone Hills.

9d. Nearest Drainage (Distance/Direction): Branches of Walnut Gulch are approximately 0.4 mi east and 0.2 mi north of the APE. Government Draw is approximately 2.9 mi to the south of the APE.

9e. Local Geology: Permian to Pennsylvanian Sedimentary Rocks (280–310 Ma). Interbedded sandstone, shale, and limestone, usually characterized by ledgy outcrops (Arizona Geological Survey 2000).

9f. Vegetation: The biotic community is characterized as Chihuahuan Desertscrub (Brown 1982). Observed vegetation consisted of Creosote, Mesquite, Triangle leaf bursage, Sotol/cca, and assorted grasses.

9g. Soils/Deposition:	Sutherland-Mule complex soils with 3–15 percent slopes. Surface soils characterized as a gravelly fine sandy loam (Natural Resources Conservation Service 2020).
9h. Buried Deposits:	Not likely.
9i. Justification:	The geologically recent alluvial depositional context within the Project area suggests the possibility of buried deposits within the APE. However, the area within the APE has been disturbed by grading and adjacent construction, reducing the likelihood of intact deposits.

SECTION 10. BUILT ENVIRONMENT

The APE is within the Tombstone Municipal Airport, approximately 0.07 mi east of the Arizona State Route 80. The northern portion of the APE includes an approximately 0.07-mi-long segment of an in-use dirt road and is immediately adjacent to the western and southern border of the existing aircraft parking apron. The southern border is bound by fence line, though there is airport property south of the APE. The airport property is surrounded by undeveloped state land.

SECTION 11. INVENTORY CLASS COMPLETED

11a. Class I Inventory:	☐
11b. Researcher(s):	Stephen Molinares M.A.
11c. Class II Survey:	N/A
11d Sampling Strategy:	N/A
11e. Class III Inventory:	☒

SECTION 12. BACKGROUND RESEARCH SOURCES

12a. AZSITE:	☒
12b. ASM Archaeological Records Office:	☒
12c. SHPO Inventories and/or SHPO Library:	☐
12d. NRHP Database:	☒
12e. ADOT Portal:	☒

12f. GLO Maps: Plat 2398 (filed 11/16/1914); Plat 2397 (filed 4/5/1906). Three roads and a telephone line are depicted within the 1-mi search radius. No historic features are depicted within the APE.

12g. Land-Managing Agency Files: N/A

12h. Tribal Cultural Resources Files: N/A

12i. Local Government Websites: N/A

12j. Other: USGS 1:125000 Benson, AZ (1915, 1943), 15" Fairbank, AZ (1932) 7.5" and 15" Tombstone, Ariz. (1952), 1:25000 Nogales, Ariz. (1956, 1958, 1959). Historic resources depicted within the 1-mi research area include several improved and unimproved roads, a secondary highway (SR 80), and the Tombstone Airfield. One road (1952) and the Tombstone Airfield (1952, 1956, 1958, 1959) overlap the APE.

SECTION 13. BACKGROUND RESEARCH RESULTS

13a. Previous Projects within the APE

1. Project Reference Number	2. Project Name	3. Author(s)	4. Year
–	–	–	–

13b. Previously Recorded Cultural Resources within the APE

1. Site No./ Name	2. Affiliation	3. Site Type	4. Eligibility Status	5. Associated Reference(s)
–	–	–	–	–

13c. Historic Buildings/Districts/Neighborhoods within the APE

1. Property Name or Address	2. Year	3. Eligibility Status
–	–	–

13d. Historic USGS Map and GLO Properties within the APE

1. Property Description	2. Map Year
Tombstone Airport	1952, 1956, 1958, 1959
Road	1952

13e. Background Research Narrative:

PaleoWest consulted records from AZSITE database, the ADOT Historic Preservation Team (HPT) Portal database, records held at the ASM Archaeology Records Office, and the National Historic Information System database, as well as historic maps within a 1-mi-wide search radius of the APE. Five previous projects and SR80, an historic highway previously recorded as AZ FF:9:17(ASM), are within the 1-mi-wide search radius, but no previously known projects or archaeological sites overlap the APE. An examination of historic USGS and GLO maps indicate two historic map intersect the APE including the Tombstone Municipal Airport

and an unnamed unimproved road which appears to be contemporaneous with the airport and used as an access road.

SECTION 14. CULTURAL CONTEXTS

14a. Prehistoric Culture:	PaleoIndian, Archaic, Hohokam, and Salado
14b. Protohistoric Culture:	Akimel O'odham (Pima), Xalychidom Piipash (Maricopa), Apache, Yavapai
14c. Indigenous Historic Culture:	Akimel O'odham (Pima), Xalychidom Piipash (Maricopa), Apache, Yavapai
14d. Euro-American Culture:	1860s–Present

SECTION 15. FIELD SURVEY PERSONNEL

15a. Principal Investigator:	Chad Kirvan, M.A.
15b. Field Supervisor:	Stephen Molinares, M.A.
15c. Crew:	Stephen Molinares, M.A.
15d. Fieldwork Date(s):	February 3, 2022

SECTION 16. SURVEY METHODS

16a. Transect Intervals:	20 m **apart**
16b. Coverage (%):	100%
16c. Ground Surface Visibility:	80%
16d. Observed Disturbances:	Disturbance within the APE includes an in-use dirt road, modern road push, land leveling, and debris.

SECTION 17. FIELD SURVEY RESULTS

17a. No Cultural Resources Identified:	☐
17b. Isolated Occurrences (IOs) Only:	☐
17c. Number of IOs Recorded:	0
17d. Number of IUs Recorded:	1 (IU1)

17e. Table of IOs

1. IO Number	2. Description	3. Date Range	4. UTMs	
			Easting	Northing
–	–	–	–	–

17f. Table of IUs

1. IU Number	2. Description	3. Date Range	4. UTMs	
			Easting	Northing
IU1	Tombstone Municipal Airport	1948–Present	592685	3504336

SECTION 18. COMMENTS/RECOMMENDATIONS

The records review indicated that several projects and one site have been recorded within 1-mi of the APE. However, no previous projects have been conducted within or overlapping the APE and no archaeological sites have been previously identified within the APE. The review of historic plats and maps dating from the 1906 to the 1950s identified a network of roads, including a secondary highway, a telephone line, and the Tombstone Airfield within the 1-mile search radius. The Tombstone Airfield and one of the roads that is associated with the airfield were depicted within the area of the APE.

The survey of the APE encompassed 1.21 acres and resulted in the identification of the Tombstone Municipal Airport or P29, and the associated road, which was recorded as IU1. The current airport parking apron and taxiway (Taxiway A), north of the APE, were constructed in 1980 (Kimley-Horn and Associates 2017). The airport runway was paved between 1984 and 1996, according to modern aerials (Netronline 2022), but the taxiway and apron were not paved until 2004. The APE is within the mapped boundary of the airport, which first appears on historic maps in 1952 (USGS 15" Tombstone, Ariz., 1952). Two unpaved access roads are within the APE. The first, the access road to the existing airport apron from the west, appears on historic maps dating to 1952 and appears to have always been used for airport access. This road is regularly maintained (berms from grating on the roadside are evident) and is currently in use. The road was recorded as a feature of IU1 (Appendix A) and would be paved as a part of this undertaking. The second unpaved access road along southern edge of the APE is not historic and first appears on modern aerials dating to 2003.

PaleoWest evaluated the Tombstone Municipal Airport for inclusion in the National Register of Historic Places (NRHP) within the context of *National Register Bulletin No. 43: Guidelines for Evaluating and Documenting Historic Aviation Properties* (Milbrooke et al. 1998). The property is not associated with a specific event marking an important moment or representing a pattern of events important to the history of aviation, nor is it associated with individuals significant to the history of aviation, therefore PaleoWest recommends it not eligible under Criteria A or B. It does not embody the distinctive characteristics of a type, period, or method of construction important to aviation history, therefore PaleoWest recommends it not eligible under Criterion C. The property is not likely to yield information

important to the history of aviation in the U.S, Arizona, or the City of Tombstone, therefore PaleoWest recommends it not eligible under Criterion D.

As this in-use structure is recommended not eligible for the NRHP, PaleoWest recommends a finding of no historic properties affected for the proposed undertaking. No avoidance measures are recommended during ground disturbing activities.

SECTION 19. ATTACHMENTS

19a. Project Location Map:	☒ (Figure 1)
19b. Land Jurisdiction Map:	☒ (Figure 1)
19c. Background Research Map(s):	☒ (Figure 2)
19d. GLO Map(s):	☐
19e. Project Area Photograph(s):	☒ (Figure 3)
19f. References:	☒
19g. Historic In-use Structure Form(s):	1 (Appendix A)

SECTION 20. CONSULTANT CERTIFICATION

I certify the information provided herein has been reviewed for content and accuracy and all work meets applicable agency standards.

Signature

February 25, 2022

Date

Title: Principal Investigator

SECTION 21. DISCOVERY CLAUSE

In the event that previously unreported cultural resources are encountered during ground disturbing activities, all work must immediately cease within 30 m (100 ft) until a qualified archaeologist has documented the discovery and evaluated its eligibility for the Arizona or NRHP in consultation with the ADOT and the SHPO. Work must not resume in this area without approval of the ADOT.

If human remains are encountered during ground disturbing activities, all work must immediately cease within 30 m (100 ft) of the encounter and the area must be secured. The ASM, ADOT, SHPO, and appropriate tribes must be notified of the encounter. All encounters will be treated in accordance with Arizona Revised Statutes (ARS 41-844 and ARS 41-865), and work must not resume in this area without authorization from ASM and the ADOT.

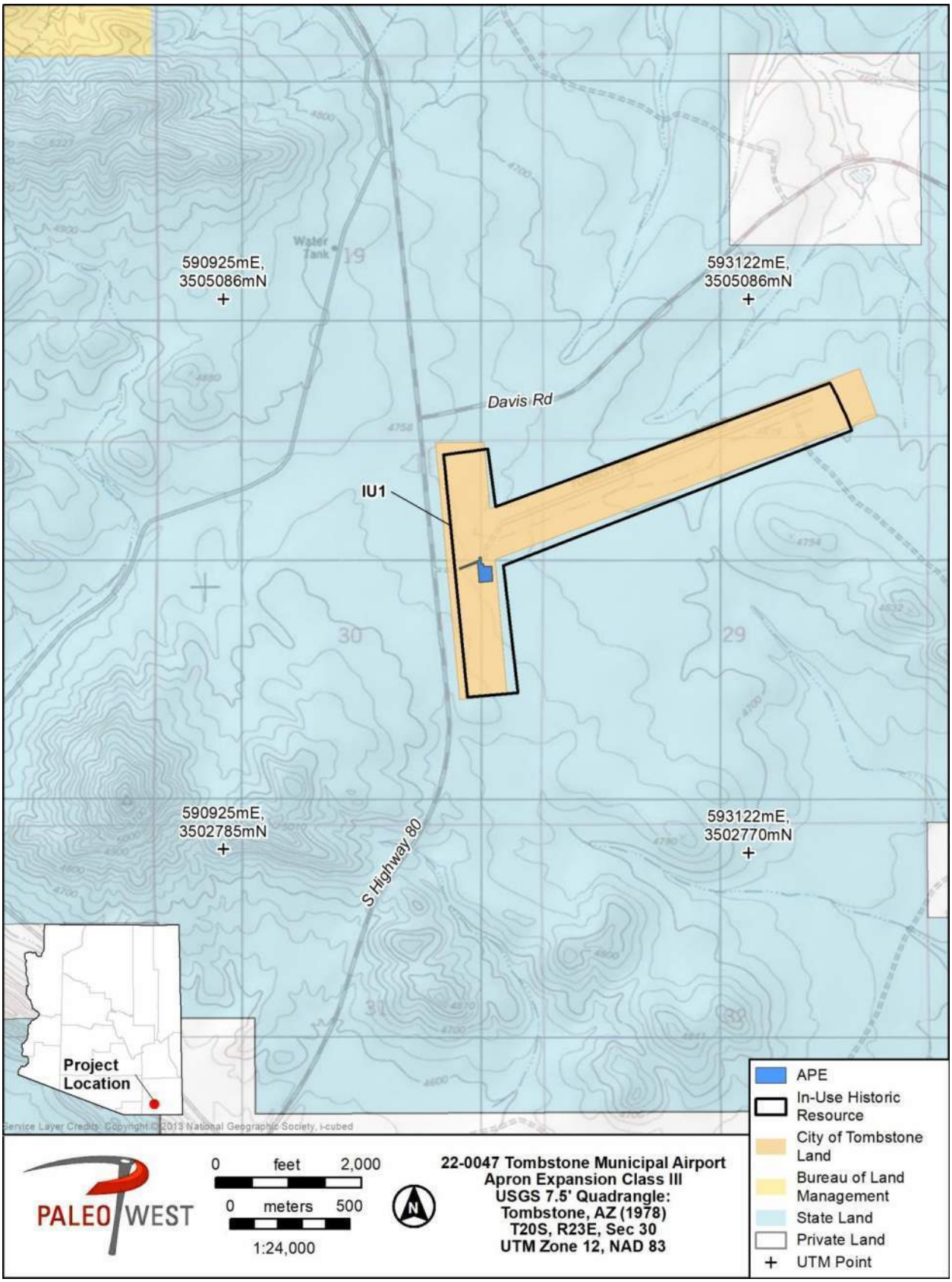

Figure 1. Project location map showing land jurisdiction and results of survey.

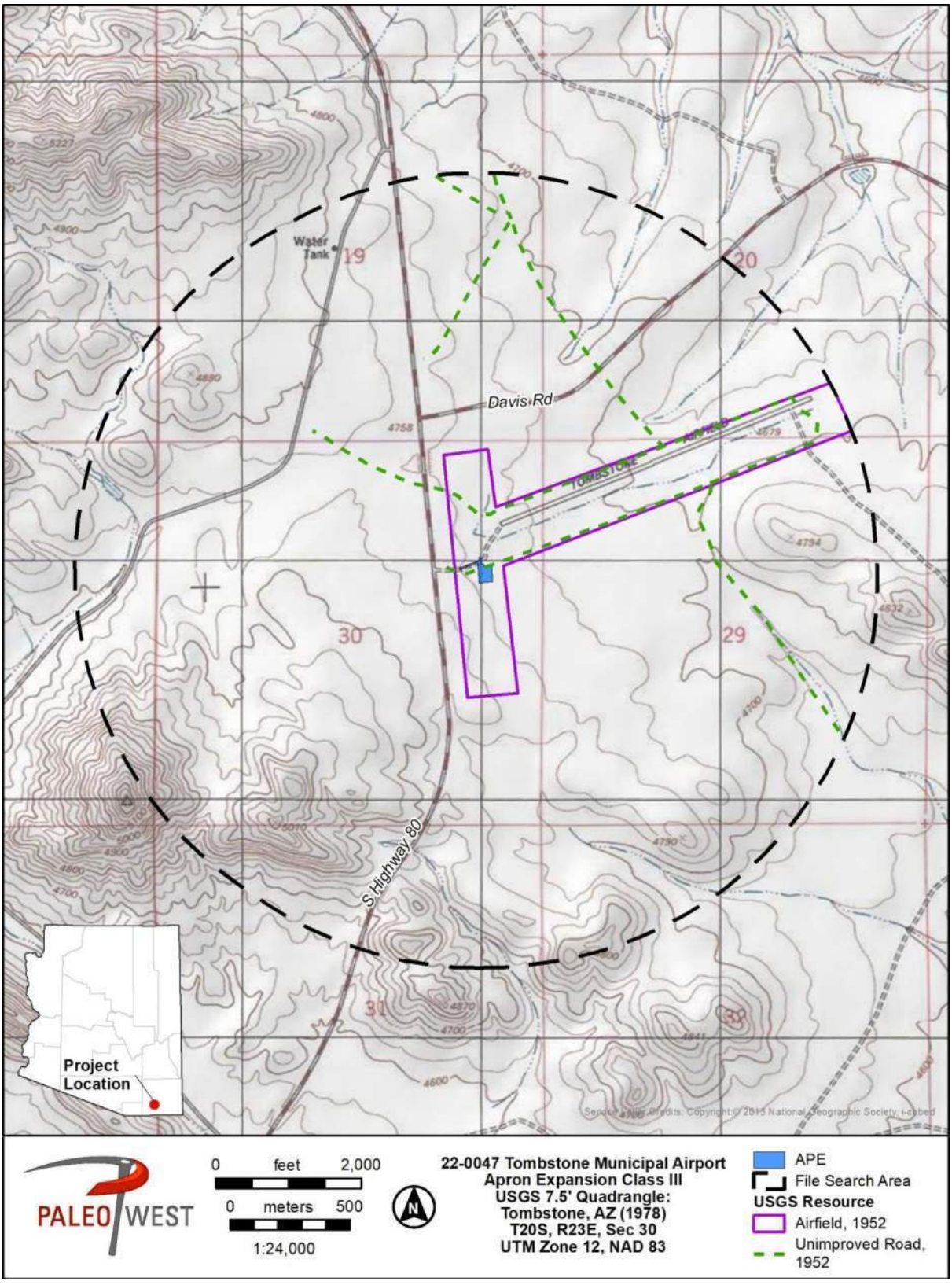

Figure 2. Previous projects, previously recorded sites, and historic map properties within the APE.

Figure 3. Overview photograph of APE, facing east.

REFERENCES

Arizona Geological Survey
2013 The Geologic Map of Arizona. Electronic document, http://data.azgs.az.gov/geologic-map-of-arizona/, accessed February 09, 2022.

Brown, David E.
1994 *Biotic Communities of the American Southwest*. General Technical Report No. RM-78. Rocky Mountain Forest and Range Experiment Station, USDA Forest Service, Fort Collins, Colorado.

Kimley-Horn and Associates
2017 *Tombstone Municipal Airport: Airport Layout Plan Update with Narrative.* General Technical Report, Phoenix, Arizona.

Milbrooke, Anne, Patrick Andrus, Jody Cook, and David B. Whipple
1998 *National Register Bulletin No. 43: Guidelines for Evaluating and Documenting Historic Aviation Properties.* U.S. Department of the Interior, National Park Service, Washington D.C.

Netronline
1996 Historic Aerials. Electronic document, https://www.historicaerials.com/viewer, accessed February 11, 2022.

USDA Natural Resources Conservation Service
2018 Web Soil Survey. Electronic document, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, accessed February 09, 2022.

Appendix A:
Historic In-Use Structure Form

STATE OF ARIZONA **HISTORICAL IN-USE STRUCTURE INVENTORY FORM**
General/Miscellaneous Structures

Historic Name: Tombstone Municipal Airport/Tombstone Airfield/P29

STRUCTURE IDENTIFICATION, DIMENSIONS AND CONSTRUCTION

Structure Type: Airport
Construction Materials: None – the portion of the Airport located within the current APE has been graded, but is otherwise unimproved.
Alterations: The airport opened in 1948 and the airport apron and taxiway were built in 1980 (AirNav 2022; Kimley-Horn and Associates 2017). The runway was paved sometime between 1984 and 1996, but the taxiway and apron were not paved until 2004 (Kimley-Horn and Associates 2017). None of these structures are located within the current APE.

Rectilinear Structures

Length (ft.)	
Width (ft.)	
Depth (ft.)	

Circular Structures

Max Diameter (ft.)	
Min Diameter (ft.)	
Depth (ft.)	

ASSOCIATED FEATURES

List all associated features and note whether they contribute, or not, to the eligibility of the primary structure; include photographs if warranted.

Feature Table

Feature No.	Feature Type	Eligibility Status[1]	Length[2] (ft.)	Width[2] (ft.)	Depth[2] (ft.)	Comments[3]
F1	Unimproved road	Non-contributor	360 ft	16 ft		This road segment first appears on the USGS 15" Tombstone, Ariz. (1952) map as an airport access road. The portion of the road within the APE would be paved as part of the proposed undertaking (see Photo IMG_SM18)

[1]Contributor or Non-contributor to the eligibility of the primary structure
[2] Recorded portions in Project Area/APE only
[3] Brief description if necessary. Include corresponding figure number if photographs are on attached continuation sheet(s)

ADDITIONAL COMMENTS

Document distinctive attributes, as well as inscriptions, markings, metal tags, etc.

AirNav
2022 Tombstone Municipal Airport. Electronic document, https://www.airnav.com/airport/P29. Accessed February 2022

Kimley-Horn and Associates
2017 *Tombstone Municipal Airport: Airport Layout Plan Update with Narrative*. General Technical Report, Phoenix, Arizona.

Feature 1 Photo

Date of Photo: 02/03/2022

Direction: West

Source/Photo No.: IMG_SM18

STATE OF ARIZONA **HISTORICAL IN-USE STRUCTURE INVENTORY**
Structure Summary Form, Page 1

Please type or print clearly. Fill out each applicable space accurately and with as much information as is known about the property. ***Modify fields as needed.*** *Use Continuation Form if necessary.* ***Attach Individual Structure Form.***

State Historic Preservation Office (SHPO) | 1100 W. Washington St., Phoenix, AZ 85007 | 602-542-4009 | AZStateParks.com/SHPO

GENERAL INFORMATION

Consultant Project Name: Tombstone Municipal Airport Apron Expansion Class III
*Consultant Project Number:*22-0047

Associated Report Reference: Molinares, Stephen and Tiffany Grew. 2022. *Class III Cultural Resource Survey of 1.21 Acres for the Tombstone Municipal Airport Apron Expansion Project in Tombstone, Cochise County, Arizona.* Technical Report No. 22-067. PaleoWest, Phoenix, Arizona.

Former Site Number (if any): N/A

STRUCTURE IDENTIFICATION

Structure Type (see structure type in Field Guide): Airport

Historic Name(s): Tombstone Municipal Airport/Tombstone Airfield/P29

Use/Function (Describe how the property has been used over time): The property has been continuously used as a municipal airport.

Constructed by: Unknown ☐ known ☒ not determined

Construction Date: 1948 ☒ known ☐ estimated

Source(s)/Reference(s): USGS 15" Tombstone, Ariz. (1952), 1:250,000 Nogales, Ariz. (1956, 1958, 1959).

AirNav
2022 Tombstone Municipal Airport. Electronic document, https://www.airnav.com/airport/P29. Accessed February 2022

Kimley-Horn and Associates
2017 *Tombstone Municipal Airport: Airport Layout Plan Update with Narrative*. General Technical Report, Phoenix, Arizona.

Total number of linear segments documented in project area/APE: 1 – One in-use access road

LOCATIONAL INFORMATION (For linear segment, including start and end UTM points)

Map required – attach to end of form

USGS 7.5' map: Tombstone, Ariz (1978)
Center of APE: UTM reference (NAD 83): Zone 12S Easting 592014 Northing 3503923

Land Jurisdiction (land managing agency, private/municipal/county: City of Tombstone

STRUCTURAL CONDITION

☒ Good (well maintained, no serious problems apparent)
☐ Fair (some problems apparent).
☐ Poor (major problems visible, imminent threat)
Comments: The portion of the airport within the current APE is graded, but otherwise undeveloped. The remaining areas were not examined.

Continuation Form(s) Used? (Y/N) N

Historic Name: Tombstone Municipal Airport/Tombstone Airfield/P29

HISTORIC CONTEXT *(define the context in which the structure's significance is being evaluated; include even if it is ultimately not significant – must include period of significance, place and theme)*:

The Tombstone Municipal Airport is a general aviation airport located approximately three miles southeast of the City of Tombstone, AZ and is surrounded by mostly undeveloped state land. The airport was originally activated in August 1948 (AirNav 2022). The airport first appears on the historic USGS 15" Tombstone, Ariz (1952) map, labeled as Tombstone Airfield. The extent of the airport property on this historic map aligns with the current property boundary depicted on the Cochise County Assessor's map with the exception of the westernmost portion abutting South Highway 80, which is shown as state land on the county assessor's site (Cochise County 2022).

The Tombstone Municipal Airport was assessed within the context of the history of aviation in the United States, Arizona, and the City of Tombstone. The airport was evaluated using guidance found in *National Register Bulletin No. 43: Guidelines for Evaluating and Documenting Historic Aviation Properties* (Milbrooke et al. 1998).

AirNav
2022 Tombstone Municipal Airport. Electronic document, https://www.airnav.com/airport/P29. Accessed February 2022.

Cochise County
2022 Assessor Map. Electronic document, https://gis-cochise.opendata.arcgis.com/. Accessed February 2022.

Milbrooke, Anne, Patrick Andrus, Jody Cook, and David B. Whipple
1998 *National Register Bulletin No. 43: Guidelines for Evaluating and Documenting Historic Aviation Properties.* U.S. Department of the Interior, National Park Service, Washington D.C.

SIGNIFICANCE (Check all that apply)

☐ A *Historic Events/Trends*
☐ B *Person*
☐ C *Architecture*
☐ D *Information Potential*

INTEGRITY *(Check all that apply and use a continuation form to describe the contributing aspects of integrity)*

☒ *Location,* ☒ *Design,* ☒ *Setting,* ☐ *Materials,* ☐ *Workmanship,* ☐ *Feeling,* ☒ *Association*
Comments: The portion of the airport within the current APE is graded, but otherwise undeveloped. The remaining airport was not examined. This integrity evaluation is based on the small portion of the airport within the APE. The airport remains in the same location, the layout of which is mostly unchanged, and the airport is surrounded by undeveloped land, and therefore it maintains integrity of setting, design, and location. The airport does not retain historic features within the APE, and therefore does not retain integrity of materials, workmanship, or feeling. The airport does maintain association with the historic development of Tombstone.

NATIONAL REGISTER STATUS *(if listed, check the appropriate box)*

☐ Individually listed ☐ Contributor ☐ Non-Contributor to Historic District

Date Listed

Historic Name: Tombstone Municipal Airport/Tombstone Airfield/P29

RECORDER'S RECOMMENDATION OF ELIGIBILITY

Property ☐ is ☒ is not eligible individually

Property ☐ is ☒ is not eligible as a contributor

☐ More information needed to evaluate

Justification:

PaleoWest evaluated the Tombstone Municipal Airport for inclusion in the NRHP within the context of *National Register Bulletin No. 43: Guidelines for Evaluating and Documenting Historic Aviation Properties* (Milbrooke et al. 1998). The property is not associated with a specific event marking an important moment or representing a pattern of events important to the history of aviation, nor is it associated with individuals significant to the history of aviation, therefore PaleoWest recommends it not eligible under criteria A or B. It does not embody the distinctive characteristics of a type, period, or method of construction important to aviation history, therefore PaleoWest recommends it not eligible under criterion C. The property is not likely to yield information important to the history of aviation in the United States, Arizona, or the City of Tombstone, therefore PaleoWest recommends it not eligible under criterion D.

Date of Photo: 02/03/2022

Direction: Northeast

Source/Photo No.: IMG_SM26

ADDITIONAL COMMENTS (use continuation form if needed)

Historic Name: Tombstone Municipal Airport/Tombstone Airfield/P29

FORM(S) COMPLETED BY:
Name: Jennifer Deats
Date: 2/22/2022
Affiliation: PaleoWest
Mailing Address: 319 E. Palm Lane, Phoenix, AZ 85004
Phone No.: 602-261-7253

SHPO RESPONSE *(to be completed by SHPO staff, signed, and dated)*
Property ☐ is ☐ is not eligible individually.
Property ☐ is ☐ is not eligible as a contributor.
☐ More information needed to evaluate