FINAL ENVIRONMENTAL ASSESSMENT

Rancho Santa Fe Parkway Project

KINGMAN MUNICIPAL AIRPORT

Mohave County, Arizona

Prepared for:

Kingman Municipal Airport
7000 Flightline Drive
Kingman, Arizona 86401

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

As lead Federal Agency pursuant to the *National Environmental Policy Act of 1969*

Prepared by:

AECOM Technical Services, Inc.

November 2023

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

MATTHEW H BILSBARROW

Digitally signed by MATTHEW H BILSBARROW
Date: 2023.11.09 12:11:13 -07'00'

11/9/2023

Responsible FAA Official **Date**

GENERAL INFORMATION ABOUT THIS DOCUMENT

WHAT'S IN THIS DOCUMENT? This document contains a Final Environmental Assessment (EA) for the Proposed Rancho Santa Fe Parkway Project (RSFP) at Kingman Municipal Airport (Airport) in Kingman, Mohave County, Arizona. This document discloses the analysis and findings of the potential impacts of the Proposed Project (Preferred Alternative) and a No Action Alternative.

WHAT'S THIS DOCUMENT ABOUT: The Airport seeks Federal Aviation Administration (FAA) approval to be released from the land obligation on 42.6 acres of Airport property. This would allow the land to be reclassified from aeronautical use to nonaeronautical use and be used for the RSFP. The City of Kingman is proposing to construct a new Interstate 40 (I-40) Traffic Interchange, and a 3.5-mile-long arterial street connection between I-40 north to Industrial Boulevard. RSFP includes associated drainage improvements and a new sewer line which would cross the Airport adjacent to an existing public utility easement. Kingman Municipal Airport is owned and operated by the City of Kingman. The U.S. Army constructed what is now Kingman Municipal Airport in 1941 to support World War II efforts. In 1949, the Kingman Army Airfield became the property of Mohave County through the *Surplus Property Act of 1944***,** which permitted surplus military airfields to be acquired by local governments. In 1988, ownership of the Airport and all obligations originally stipulated in the 1949 Instrument of Transfer were transferred to the City of Kingman. The Airport is classified within the current (2023-2027) National Plan of Integrated Airport Systems (NPIAS) as a general aviation airport.

WHAT SHOULD YOU DO? Read the Final Environmental Assessment to understand the actions that the City of Kingman and FAA intend to take relative to the proposed project.

WHAT HAPPENS NEXT? After reviewing this Final EA, the FAA will decide to issue a Finding of No Significant Impact (FONSI), issue a FONSI/Record of Decision, or prepare an Environmental Impact Statement.

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List of Acronyms and Abbreviations

ACIP	Airport Capital Improvement Program
ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
Airport	Kingman Municipal Airport
ALP	Airport Layout Plan
ARS	Arizona Revised Statutes
ASLD	Arizona State Land Department
AST	Above Ground Storage Tank
AZGFD	Arizona Game and Fish Department
AZPDES	Arizona Pollutant Discharge Elimination System
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practices
BNSF	Burlington Northern Santa Fe
CAA	Clean Air Act
CE	Categorical Exclusion
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CH_4	methane
City	City of Kingman
CO	carbon monoxide
CO_2	carbon dioxide
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
DCR	Design Concept Report
DNL	day-night average sound level
DOT	U.S. Department of Transportation
E.O.	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FR	Federal Registry
FUDS	Formerly Used Defense Sites
FY	Fiscal Year
GHG	greenhouse gases
HAP	hazardous air pollutant
I-	Interstate
IPCC	International Panel on Climate Change
KAAF	Kingman Army Airfield
KADMP	Kingman Area Drainage Master Plan
KATS	Kingman Area Transportation Study
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MCEDD	Mohave County Economic Development Department
MP	milepost
mph	miles per hour
MSAT	Mobile Source Air Toxics

N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NCA4	Fourth U.S. National Climate Assessment
NEPA	National Environmental Policy Act of 1969
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFRAP	no further remedial action planned
NHPA	National Historic Preservation Act of 1966
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NPIAS	National Plan of Integrated Airport Systems
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRHP	National Register of Historic Places
O_3	ozone
P2	Pollution Prevention
PA/SI	preliminary assessment/ site inspection
Pb	lead
PCB	polychlorinated biphenyl
PISA	Preliminary Initial Site Assessment
PL	Public Law
$PM_{2.5}$	Particular Matter 2.5 micrometers or less
PM_{10}	Particular Matter 10 micrometers or less
ppb	parts per billion
ppm	parts per million
PUE	Public Utility Easement
RCRA	Resource Conservation Recovery Act
ROW	right-of-way
RSFP	Rancho Santa Fe Parkway
SC-CH_4	Social Cost of Methane
SC-CO_2	Social Cost of Carbon Dioxide
SC-GHG	Social Cost of Green House Gases
SC-N_2O	Social Cost of Nitrous Oxide
SGCN	Species of Greatest Conservation Need
SHPO	State Historic Preservation Office
SIP	State Implementation Plans
SO_2	sulfur dioxide
SPCC	Spill prevention, control, and countermeasure
SR	State Route
SWPPP	stormwater pollution prevention plan
TI	Traffic Interchange
US	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
UST	underground storage tanks
UXO	unexploded ordnance
VMT	vehicle miles traveled
VOC	volatile organic compound
WQARF	Water Quality Assurance Revolving Fund

1. Introduction and Proposed Action

1.1 Introduction

The Federal Aviation Administration (FAA) has prepared this Environmental Assessment for the City of Kingman (City) and Kingman Municipal Airport (Airport) in accordance with the National Environmental Policy Act of 1969 [(NEPA); 42 United States Code (USC) 4321 et seq.]; the Council on Environmental Quality (CEQ) implementing regulations; [40 Code of Federal Regulations (CFR) 1500-1508]; FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, and FAA Order 5050.4B: National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions. In 2007, Federal Highway Administration (FHWA) issued a categorical exclusion for their action, which the Arizona Department of Transportation (ADOT) updated in 2018 and 2021.

1.2 Kingman Municipal Airport

The Airport is a public use general aviation airport located on approximately 2,989 acres in northwestern Arizona within Mohave County. The southern boundary of the Airport runs along the City of Kingman limits (see **Figure 1.2-1**). The Airport is accessible by Mohave Airport Drive via State Route 66 (SR 66), also called Andy Devine Avenue (within City of Kingman limits), to the northwest. An industrial park totaling approximately 1,100 acres is located to the northwest of the Airport; the Burlington Northern & Santa Fe Railroad (BNSF) runs parallel east of SR 66 and adjacent to the west side of the Airport.

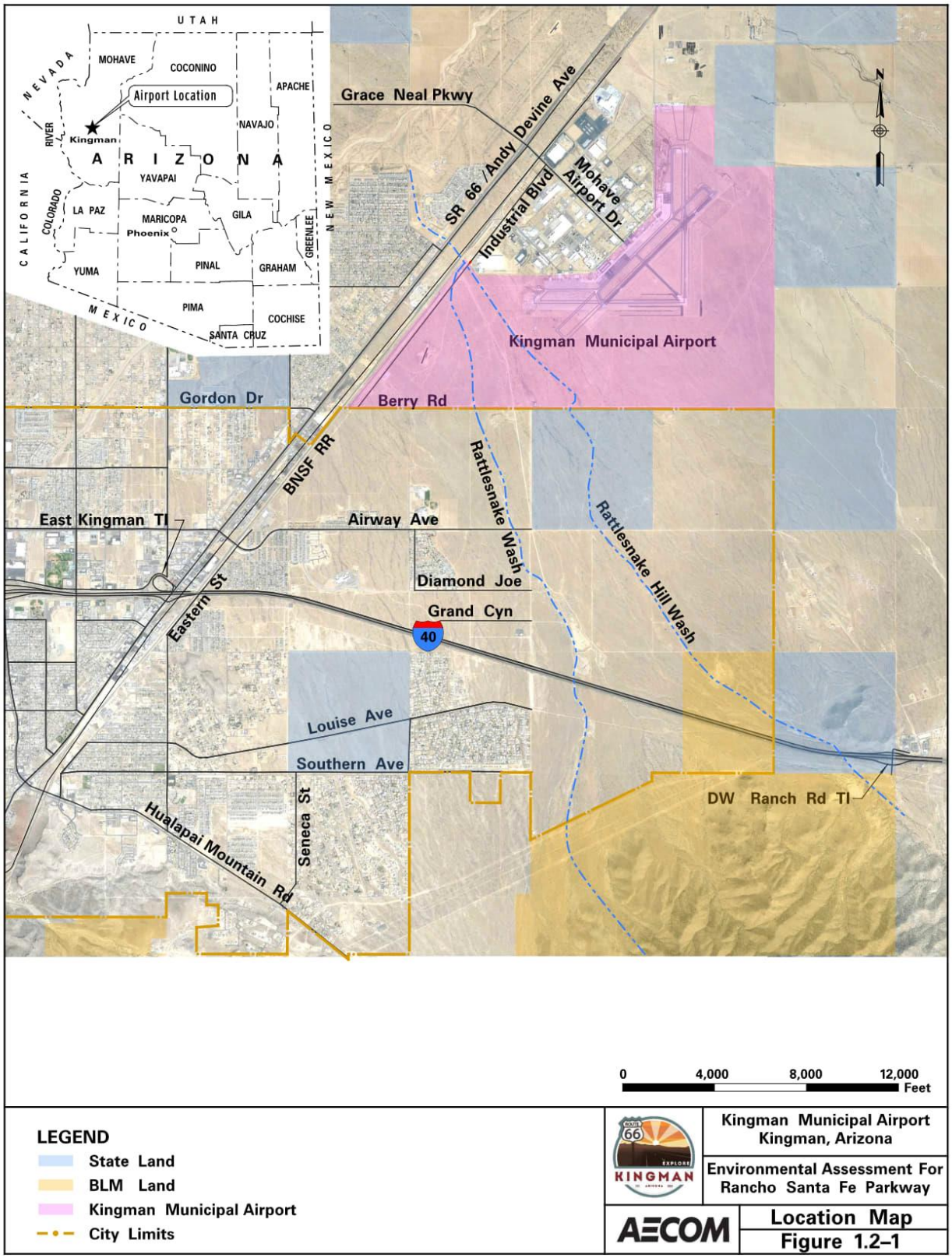
The Airport is owned, operated, and maintained by the City. The Airport is classified within the current (2023-2027) National Plan of Integrated Airport Systems (NPIAS) as a general aviation airport.[1]

According to the current (2021) Airport Master Plan, the Airport has two intersecting runways. Runway 03/21 is 6,827 feet in length and is 150 feet in width; Runway 17/35, the Airport's crosswind runway, is 6,725 feet in length and 75 feet in width. The Airport has 92 based aircraft and approximately 28,478 operations per year.[2]

The U.S. Army constructed what is now Kingman Municipal Airport in 1941 to support World War II efforts. During the War, the Airport, then referred to as Kingman Army Airfield, was used as a gunnery school. In 1949, the Kingman Army Airfield became the property of Mohave County through the *Surplus Property Act of 1944***,** which permitted surplus military airfields to be acquired by local governments. In 1988, ownership of the Airport and all obligations originally stipulated in the 1949 Instrument of Transfer were transferred to the City, which presently serves as the Airport Sponsor.

[1] National Plan of Integrated Airport Systems (2023-2027), Federal Aviation Administration. https://www.faa.gov/airports/planning_capacity/npias/current

[2] Airport Master Plan for the Kingman Municipal Airport, May 2021. https://www.kingmanairport.com/airport-information/igm-airport-layout-plan


UTAH
NEVADA
MOHAVE
COCONINO
APACHE
Airport Location
Kingman
RIVER
NAVAJO
ARIZONA
YAVAPAI
COLORADO
LA PAZ
MARICOPA
Phoenix
GILA
GREENLEE
NEW MEXICO
CALIFORNIA
YUMA
PINAL
GRAHAM
PIMA
COCHISE
MEXICO
SANTA CRUZ
Grace Neal Pkwy
SR 66 /Andy Devine Ave
Industrial Blvd
Mohave Airport Dr
Kingman Municipal Airport
Gordon Dr
Berry Rd
BNSF RR
Rattlesnake Wash
Rattlesnake Hill Wash
East Kingman TI
Airway Ave
Diamond Joe
Grand Cyn
Eastern St
40
Louise Ave
Southern Ave
Seneca St
Hualapai Mountain Rd
DW Ranch Rd TI
N
0
4,000
8,000
12,000
Feet
LEGEND
State Land
BLM Land
Kingman Municipal Airport
City Limits
Kingman Municipal Airport
Kingman, Arizona
Environmental Assessment For
Rancho Santa Fe Parkway
AECOM
Location Map
Figure 1.2–1

1.3 History of Road Transportation Studies in East Kingman

Major roadways in Kingman include Interstate 40 (I-40), SR 66, and U.S. Route 93 (US 93). The eastern portion of Kingman, generally located east of SR 66 is an area with current residential, commercial, and industrial land uses which rely on SR 66 as the main access in and out of east Kingman.

The Airport is located east of Kingman and accessed from SR 66. The only paved access to the Airport is via Mohave Airport Drive BNSF railroad underpass. There is no access into or out of the Airport and the adjacent Industrial Park in the event of a closure of the BNSF underpass at Mohave Airport Drive.

The eastern portion of Kingman is separated from the main portion of Kingman by I-40 on the south and the BNSF railroad tracks to the northwest. People driving to and from east Kingman must cross the BNSF railroad tracks at three locations (Mohave Airport Drive, Airway Avenue, and Hualapai Mountain Road). Furthermore, people driving in east Kingman only have one north-south route, which is SR 66.[3]

Limited access to eastern Kingman has put strain on the existing I-40/SR 66 (East Kingman) traffic interchange and local roadways resulting in reduced level of service (LOS) operations and higher crash segments along SR 66.[4,5] The Airport and the Industrial Park generate traffic from manufacturing facilities, distribution businesses, aviation businesses, and aircraft owners and operators.[6]

Because of the inhibited mobility in the eastern Kingman area, a new traffic interchange (TI) and arterial street connections have been proposed; the overall project is referred to as the Rancho Santa Fe Parkway (RSFP) and is being completed in conjunction with FHWA, ADOT, and the City.

Numerous studies have been conducted with associated roadway concepts for the overall RSFP:

- Kingman Area Transportation Study recommended the RSFP TI at I-40; at that time, the TI was then referenced as the Rattlesnake Wash TI (see **Appendix A.4.a**).[7]
- The City and ADOT entered into a Letter of Intent in January 2006 to provide conceptual design, environmental studies, final design, and construction of a new TI on I-40 with arterial street connections along the Mohave Drive (name was subsequently changed to RSFP) alignment between Hualapai Mountain Road on the south and Industrial Boulevard to the north.[8] The project, as identified in the Letter of Intent, was divided into two phases, as shown on **Figure 1.3-1.**
- Kingman Area Transportation Study (KATS) Traffic Model Update, Traffic Memorandum updated the traffic model for the year 2023 (see **Appendix A.4.b**).[9] It updated population and employment numbers and concluded that project population will increase from 77,748 in 2023 to 100,166 in 2030. This represents a 4% growth rate per year and the growth rate of employment at approximately 5% per year.
- Final Design Concept Report (DCR) for I-40, Rattlesnake Wash Interchange further evaluated a new TI at I-40 including a connection to Louise Avenue on the south and then Airway Avenue and Industrial Avenue to the north (ADOT 2007 see **Appendix A.4.c**).[10]

[3] *Final Design Concept Report for I-40, Rattlesnake Wash Interchange*, URS Corporation, October 2007, Figure 2-1 page 2-1.
[4] *Final Report Kingman Area Transportation Study Update*, Kimley-Horn and Associates, February 2011, Table 7 page 21.
[5] *Final Report Kingman Area Transportation Study Update*, Kimley-Horn and Associates, February 2011, Figure 10 page 23.
[6] *Final Report Kingman Area Transportation Study Update*, Kimley-Horn and Associates, February 2011, Figures 7 page 16.
[7] *Final Report Kingman Area Transportation Study Update*, Parsons Brinkerhoff, January 2005, Figure 32 page 85.
[8] *Final Design Concept Report for I-40, Rattlesnake Wash Interchange*, URS Corporation, October 2007, Appendix F.
[9] *Kingman Area Transportation Study (KATS) Traffic Model Update, Traffic Memorandum,* URS Corporation, October 2006.
[10] Final Design Concept Report for I-40, Rattlesnake Wash Interchange, URS Corporation, October 2007.


Grace Neal Pkwy
SR 66 /Andy Devine Ave
Industrial Blvd
Mohave Airport Dr
End Project
Kingman Municipal Airport
Gordon Dr
Berry Rd
Rattlesnake Wash
Rattlesnake Hill Wash
Santa Fe Pkwy
Rancho
BNSF RR
East Kingman TI
Airway Ave
Diamond Joe
Grand Cyn
Eastern St
40
Proposed Rancho Santa Fe Pkwy
Traffic Interchange
Begin Project
I–40 MP 55.9
End Project
I–40 MP 57.3
Louise Ave
Begin Project
Southern Ave
DW Ranch Rd TI
Seneca St
Hualapai Mountain Rd
N
LEGEND
Rancho Santa Fe Pkwy – Phase 1 Project Limits
Rancho Santa Fe Pkwy Channel – Phase 1 Project Limits
Rancho Santa Fe Pkwy – Phase 2 Project Limits
Berry Road Sanitary Sewer Line
State Land
BLM Land
Kingman Municipal Airport
City Limits
0
4,000
8,000
12,000
Feet
Kingman Municipal Airport
Kingman, Arizona
Environmental Assessment For
Rancho Santa Fe Parkway
AECOM
Project Limits
Figure 1.3–1

- The FHWA issued a Categorical Exclusion (CE) for Rattlesnake Wash Traffic Interchange under ADOT TRACS #040 MO 57 H6814 01C for the construction of a I-40 new TI at milepost (MP) 56.6, construction of a new six-lane arterial street along the proposed Mohave Drive (RSFP) alignment between I-40 and Industrial Boulevard near the Kingman Municipal Airport; and construction of a new four-lane arterial street along the proposed Mohave Drive alignment between Hualapai Mountain Road and I-40 (see **Appendix A.1.a**).[11] FHWA approved this CE on September 11, 2007.
- The Kingman Area Transportation Study (KATS) recommends the RSFP TI at I-40 and the alignment of the proposed RSFP connecting to Industrial Boulevard as a mid-range project to occur between 2016 and 2020 (see **Appendix A.4.d**).[12]
- The Transportation Element Update included in the City of Kingman General Plan Update 2030 references the Kingman Area Transportation Study (City of Kingman 2011).[13]
- ADOT, acting on behalf of FHWA,[14] conducted an Environmental Review under NEPA and issued environmental approval in 2018 for the construction of a new TI on I-40 at MP 56.6; construction of a new 12 foot four-lane arterial street north of I-40 along the proposed RSFP between I-40 and Industrial Boulevard near the Kingman Municipal Airport; construction of a new 12-foot-wide four-lane arterial street, south of I-40, along the proposed RSFP between I-40 and Louise Avenue; and construction of bicycle lanes, sidewalks, and medians along the new four-lane arterial street (see **Appendix A.2.a**).[15]
- ADOT, acting on behalf of FHWA,[16] conducted an Environmental Review under NEPA and issued environmental approval in 2021 for the construction a proposed new TI on I-40 between MP 55.6 and 56.6; a new RSFP extending north approximately 3.3 miles to Industrial Boulevard, near the Airport, and south from I-40 approximately 0.3 miles to Louise Avenue; and access road located southwest of I-40 from the approximate Prospector Street alignment (see **Appendix A.3.a**).[17]

1.4 FAA Proposed Action

The FAA proposes to release the City from its land obligation on 42.6 acres of Airport property, allowing this land to be reclassified from aeronautical use to nonaeronautical use so that it may be used for the RSFP (see **Section 1.5**). For land-obligation requests, the FAA considers the following:

- The reasonableness and practicality of the request;
- The effect of the request on needed aeronautical facilities;
- The net benefit to civil aviation; and
- The compatibility of the proposal with the needs of civil aviation.[18]

[11] Categorical Exclusion for Rattlesnake Wash TI, Federal Highway Administration/Arizona Department of Transportation, August 2007.
[12] City of Kingman 2014 Figure 18. P 59.
[13] City of Kingman 2014 Chapter 3 page 27.
[14] First Renewed Memorandum of Understanding Between FHWA and ADOT State Assumption of Responsibility for Categorical Exclusions dated 1/4/2021 and Memorandum of Understanding Between FHWA and ADOT Concerning the State of Arizona's Participation in the Surface Transportation Project Delivery Program Pursuant to 23 USC 327 dated 4/16/2019; Available online at https://www.fhwa.dot.gov/azdiv/stewtoc.cfm
[15] Environmental Review, Arizona Department of Transportation, November 20, 2018.
[16] First Renewed Memorandum of Understanding Between FHWA and ADOT State Assumption of Responsibility for Categorical Exclusions dated 1/4/2021 and Memorandum of Understanding Between FHWA and ADOT Concerning the State of Arizona's Participation in the Surface Transportation Project Delivery Program Pursuant to 23 USC 327 dated 4/16/2019; Available online at https://www.fhwa.dot.gov/azdiv/stewtoc.cfm
[17] Environmental Review, Arizona Department of Transportation, April 21, 2021.
[18] FAA Order 5190.6B Section 22.4a

The FAA has determined, under Section 163(b) of the FAA Reauthorization Act of 2018, that it lacks Airport Layout Plan (ALP) approval authority; however, the FAA does have authority to release land obligations on former surplus Department of Defense property.[19]

1.5 City's Proposed Project

The City, along with FHWA and ADOT, proposes to construct a new TI and arterial street connections between I-40 and Industrial Boulevard (the RSFP). The City's Proposed Project includes the following components related to construction; land and right-of-way (ROW) acquisition; and operations and maintenance.

1.5.1 Construction

Traffic Interchange: Construction of a new TI on I-40 between MP 55.5 and MP 57.2, approximately three miles east of the existing I-40/SR 66 (East Kingman) TI (see **Figure 1.5-1**). The new I-40 RSFP TI would have RSFP depressed under I-40. The I-40 eastbound and westbound overpasses would consist of two single-span cast-in-place and post-tensioned concrete box girder superstructures with a total span length of 172 feet. The width of each structure would be 44 feet 10 inches consisting of two lanes of traffic, a 10-foot inside shoulder and a 12-foot outer shoulder. Lighting and fencing are included in the TI and would be constructed to ADOT standards. The existing Rattlesnake Wash eastbound and westbound bridges would be widened to the outside to accommodate the ramp approach for the westbound off-ramp and the ramp departure of the eastbound on ramp. The eastbound widening would vary approximately 20-30 feet and the westbound bridge would be widened approximately 14 feet. The total area required for the TI and associated on- and off-ramps is 34.2 acres. ADOT would administer construction of the TI and a portion (approximately 0.75 miles) of the RSFP associated with the TI.

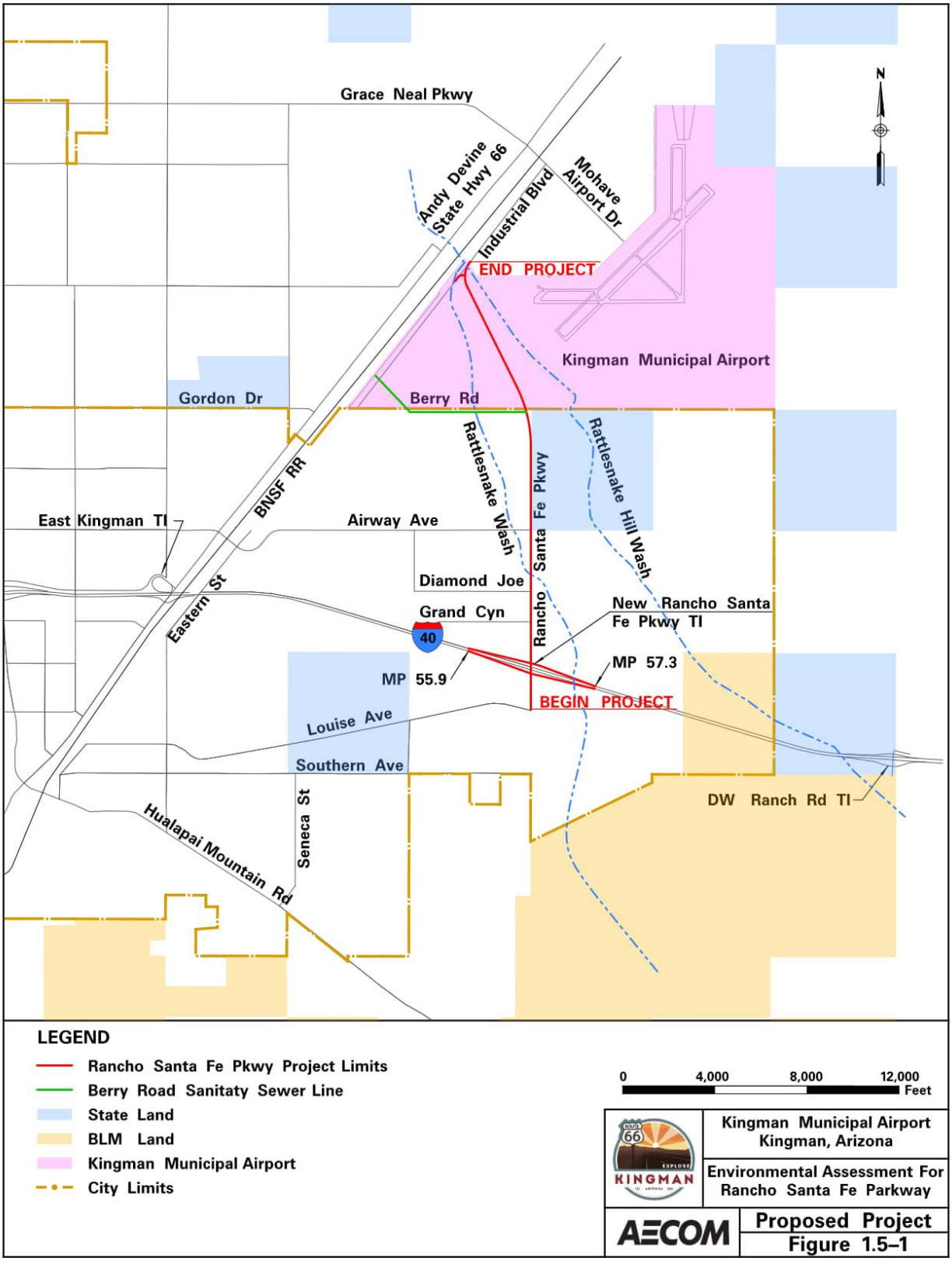
Roadway: Construction of a new paved arterial street (RSFP) between Louise Avenue south of I-40 north approximately 3.25 miles to Industrial Boulevard. The RSFP extends directly north for approximately 2.25 miles before turning northwest for 1.35 miles across the Airport before connecting into Industrial Boulevard. The RSFP would include two 14-foot-wide travel lanes with eight-foot shoulders and a 16-foot raised median (see **Figure 1.5-2**).

The proposed segment of RSFP on Airport property would include a permanent easement approximately 1.35 miles in length and 220 feet wide (see **Figure 1.5-2**). Street lighting and fencing are not proposed along RSFP including the segment on Airport property. Paving of the segment of roadway would include two 14-foot-wide travel lanes with eight-foot shoulders and a 16-foot raised median. Unpaved portions of the 220-foot-wide easement will not be landscaped but will be seeded with native grasses for soil erosion protection.

ADOT would administer construction of RSFP from Louise Avenue located south of I-40 north approximately 0.75 miles to Grand Canyon Road. The City would administer construction of RSFP from Grand Canyon Road north to Industrial Boulevard.

Drainage: Construction of a new drainage channel would be collocated within the roadway ROW from a location approximately 0.15 miles north of Diamond Joe Road. The drainage channel would extend north approximately 2.75 miles where it would outlet northwest of Industrial Boulevard before flowing under the BNSF railroad bridge. The proposed segment on Airport property would include installation of a 72-foot-wide drainage channel approximately 1.35 miles in length located within the 220-foot-wide proposed permanent easement across Airport property. Rattlesnake Wash and Rattlesnake Hill Wash drain north, and sheet flows across the northwestern portion of the Airport (see **Figure 1.5-1**). Drainage has been designed along with RSFP and is contained within the planned permanent easement across Airport property. The City would administer construction of the drainage channel.

[19] Letter from the Michael Williams, FAA, to Doug Breckenridge, City of Kingman, April 25, 2022. Appendix D.6


Grace Neal Pkwy
Andy Devine
State Hwy 66
Industrial Blvd
Mohave
Airport Dr
END PROJECT
Kingman Municipal Airport
Gordon Dr
Berry Rd
Rattlesnake Wash
Rattlesnake Hill Wash
Santa Fe Pkwy
Rancho
BNSF RR
East Kingman TI
Airway Ave
Eastern St
Diamond Joe
Grand Cyn
New Rancho Santa
Fe Pkwy TI
40
MP 55.9
MP 57.3
BEGIN PROJECT
Louise Ave
Southern Ave
DW Ranch Rd TI
Hualapai Mountain Rd
Seneca St
N
LEGEND
Rancho Santa Fe Pkwy Project Limits
Berry Road Sanitaty Sewer Line
State Land
BLM Land
Kingman Municipal Airport
City Limits
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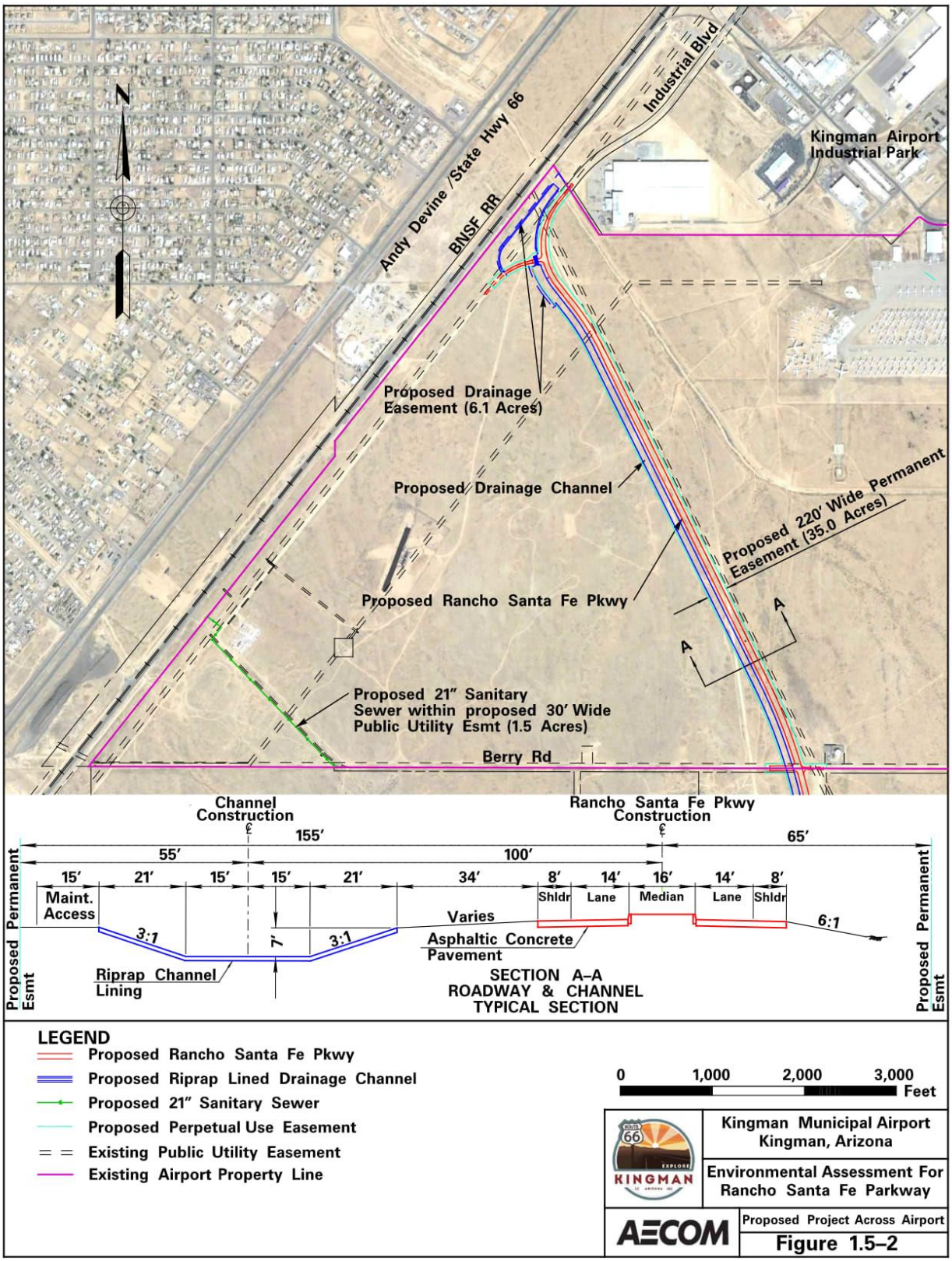
4,000
8,000
12,000
Feet
Kingman Municipal Airport
Kingman, Arizona
Environmental Assessment For
Rancho Santa Fe Parkway
AECOM
Proposed Project
Figure 1.5–1


N
Andy Devine / State Hwy 66
BNSF RR
Industrial Blvd
Kingman Airport Industrial Park
Proposed Drainage Easement (6.1 Acres)
Proposed Drainage Channel
Proposed 220' Wide Permanent Easement (35.0 Acres)
Proposed Rancho Santa Fe Pkwy
A
A
Proposed 21" Sanitary Sewer within proposed 30' Wide Public Utility Esmt (1.5 Acres)
Berry Rd
Channel Construction
Rancho Santa Fe Pkwy Construction
155'
65'
55'
100'
15'
21'
15'
15'
21'
34'
8'
14'
16'
14'
8'
Maint. Access
Shldr
Lane
Median
Lane
Shldr
Varies
3:1
7'
3:1
6:1
Asphaltic Concrete Pavement
Riprap Channel Lining
Proposed Permanent Esmt
Proposed Permanent Esmt
SECTION A–A
ROADWAY & CHANNEL
TYPICAL SECTION
LEGEND
Proposed Rancho Santa Fe Pkwy
Proposed Riprap Lined Drainage Channel
Proposed 21" Sanitary Sewer
Proposed Perpetual Use Easement
Existing Public Utility Easement
Existing Airport Property Line
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1,000
2,000
3,000
Feet
Kingman Municipal Airport
Kingman, Arizona
Environmental Assessment For
Rancho Santa Fe Parkway
AECOM
Proposed Project Across Airport
Figure 1.5–2

Sewer: Construction of a 21-inch diameter sewer line would be collocated along the south side of Berry Road for approximately one mile before turning northwest and adjacent to an existing utility easement across Airport property. The proposed segment on Airport property would include installation of a sanitary sewer line within a new 30-foot-wide Public Utility Easement (PUE) approximately 2,200 feet in length. The new sanitary sewer line would cross Airport property by utilizing a new 30-foot-wide PUE running adjacent to and southwest of an existing 16-foot-wide PUE for an overhead power line. The new sanitary sewer line would be buried 16 feet to 18 feet below ground. The sanitary sewer line will connect to an existing sanitary sewer manhole near the BNSF tracks.

The alignment and size of the proposed sanitary sewer line was developed in accordance with the City's Wastewater Master Plan Update and Inflow/Infiltration Study.[20] The City will administer construction of the sewer line.

1.5.2 Land and Right of Way Acquisition

The Proposed Project, which includes the TI, roadway, drainage channel, and sewer line, will require approximately 131.2 acres of land to construct and operate. The land is comprised of 42.6 acres of City lands on Airport that the FAA proposes to release from a land obligation (Proposed Action) and 24.7 acres of City lands off Airport, 63.2 acres of private lands, and 0.7 acres of land managed by Arizona State Lands Department (ASLD) (see **Figure 1.5-1** for location of ASLD lands). The City has acquired ROW from ASLD for a portion of the roadway and drainage channel.

The total area required for the TI and associated on- and off-ramps is 34.2 acres of private land which would become part of the federal highway system and administered by FHWA/ADOT. The remaining 29 acres of private land associated with RSFP will be acquired as permanent ROW and become City-managed land.

The 42.6 acres on Airport includes approximately 41.1 acres of permanent easement for roadway and drainage features and a PUE of approximately 1.5 acres for sewer line (see **Figure 1.5-2**). The land would remain City-owned airport property.

1.5.3 Operations and Maintenance

ADOT would be responsible for operations and maintenance of the I-40 TI. The City would be responsible for operations and maintenance of RSFP roadway and drainage from Louise Avenue north to the boundary of the Airport property. The County will maintain the roadway and drainage channel across Airport property. The sewer line will be operated and maintained by the City.

After construction, the City and County would inspect and maintain their portions of the roadway and drainage easements. General maintenance needs include such items as mowing, sweeping, and trash removal. The City and County would also conduct pavement preservation work, such as crack seal and chip seal. Drainage channel inspections would be conducted along with roadway maintenance.

After construction, the City would inspect the sewer line. Sewer maintenance would include close-circuit television inspections and cleaning of lines, as required.

1.6 Project Area Description

The Proposed Project (RSFP) encompasses 131.2 acres of which 88.6 acres is off-Airport property and 42.6 acres occur on-Airport property (see **Figure 1.5-1**). The Project Area includes the TI, roadway, drainage, and sewer line.

[20] https://www.cityofkingman.gov/home/showpublisheddocument/1028/636593004118400000 Exhibit 6.1.1 page 73 of 303

The Airport property portion of the Proposed Project includes the roadway and drainage from Berry Road to Industrial Boulevard and the diagonal sewer line adjacent to an existing utility easement in the southwestern portion of the airport (see **Figure 1.5-2**).

1.7 Proposed Time Frame of the Proposed Project

If approved, the FAA could complete the land release process by November 2023. Final design is expected to be completed by Fall 2023 with construction anticipated to start in Spring 2024; a construction duration of 24 months is anticipated. ADOT expects construction of the TI to take approximately 18 months. The City would construct the roadway, drainage, and sewer components concurrently and anticipates approximately 24 months to complete. Construction would only occur during daylight hours, generally 7 AM to 7 PM. After construction, the City and County would inspect the roadway, drainage, and sewer easements monthly for general maintenance needs, such as mowing, sweeping, and trash removal. The City and County would conduct pavement preservation work, such as crack seal and chip seal, approximately every five years.

2. Purpose and Need

2.1 FAA's Purpose and Need

The FAA's overall purpose and need is to fulfill its statutory mission, which is to ensure the safe and efficient use of navigable airspace in the U.S. The FAA's purpose and need is "to encourage the development of intermodal connections on airport property between aeronautical and other transportation modes and systems to serve air transportation passengers and cargo efficiently and effectively and promote economic development."[21] The LOS is reduced at intersections located along SR 66 from I-40 to the Airport, crash rates are high along SR 66 between I-40 and the Airport, and alternate traffic routes to using SR 66 in East Kingman are lacking (see Section 1.3). Thus, the City has proposed the RSFP (see Section 1.5) to help address this problem. A new, more-direct paved road connecting I-40 and the Airport that partially crosses non-aeronautical Airport property would represent an intermodal connection serving airport users and promoting economic development.

2.2 City's Objective

The City's objective is to provide safe and efficient vehicular access to and from East Kingman. East Kingman has the largest concentration of development in the City with few roads connecting it to the rest of the City, mainly due to limited opportunities for safely crossing the northeast-southwest-oriented BNSF railroad tracks.[22] The growth and current road network has resulted in reduced LOS at intersections and high crash rates along SR 66 between I-40 and the Airport (see Section 1.3). The City has proposed the RSFP (see Section 1.5) as one independent part an overall solution presented in the Kingman Area Transportation Study update.[23] The RSFP would build a new I-40 TI in East Kingman providing additional access to and from the rest of the City and a new, paved, north-south-oriented arterial road from I-40 to the Airport providing an alternative route for traffic currently using SR 66.

[21] 49 USC § 47101(a)(5)
[22] Final Design Concept Report for I-40, Rattlesnake Wash Traffic Interchange, URS Corporation, October 2007 page 1-1
[23] Final Report Kingman Area Transportation Study Update, Kimley-Horn and Associates, February 2011 pages 47 and 50

3. Alternative Analysis

3.1 Introduction

CEQ regulations implementing NEPA require that the Federal decision-makers perform the following tasks when preparing an Environmental Assessment:[24]

- Rigorously explore and objectively evaluate all reasonable alternatives and, for alternatives which were eliminated from detailed study, briefly discuss the reasons for elimination;
- Devote substantial treatment to each alternative considered in detail, including the proposed action, so that reviewers may evaluate their comparative merits;
- Include reasonable alternative not within the jurisdiction of the lead agency; and
- Examine the no action alternative.

3.2 Prior Alternative Analyses

3.2.1 Design Concept Report

As discussed in Section 1.3, the City and ADOT entered into a Letter of Intent to provide conceptual design, environmental studies, final design, and construction of a new TI on I-40 with arterial street connections along the RSFP alignment between Hualapai Mountain Road on the south and Industrial Boulevard to the north.[25] The project, as identified in the Letter of Intent, was divided into two phases (see **Figure 3.2-1**):

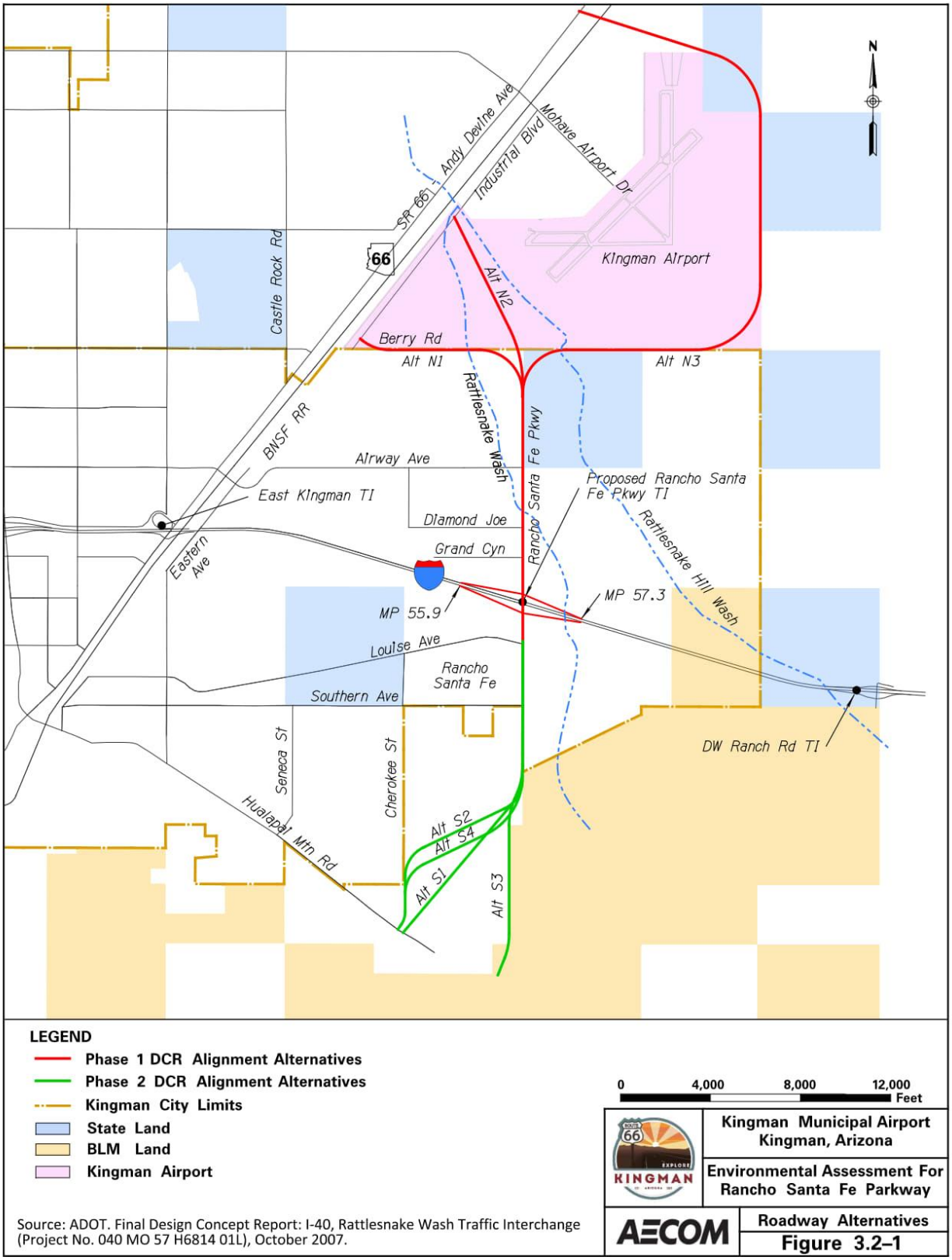
- Phase 1 includes a new TI at I-40 including a connection to Louise Avenue on the south and then Airway Avenue and Industrial Avenue to the north. The planning, design, and construction are to be jointly funded between the City and ADOT.
- Phase 2 includes connections from Louise Avenue to Hualapai Mountain Road. Phase 2, as stated in the Letter of Intent, is the responsibility of the City. At this time, Phase 2 is not currently funded and, therefore, not ready for analysis.

As a result of the Letter in Intent, in 2007, the City and ADOT examined various types of TI for I-40 as well as road corridors to connect the proposed new roadway at the intersection of Berry Road to Industrial Road as included in Phase 1, as identified above.[26] Four interchange types were considered to provide access to I-40.[27] All interchanges evaluated were located at the alignment of the new RSFP.

For the proposed road corridor to connect RSFP to Industrial Boulevard, the DCR (see **Appendix A.4.c**) evaluated three alternatives: N1, N2, and N3 (see **Figure 3.2-1**):

- Alternative N1: Under this alternative, proposed RSFP would curve onto the Berry Road alignment and extend west before turning north to intersect Industrial Boulevard. This alternative was developed to avoid dividing the Airport property.
- Alternative N2: Under this alternative, proposed RSFP would follow the section line between Louise Avenue and Berry Road; north of Berry Road, the alignment would curve to the northwest across Airport property to an intersection with Industrial Boulevard.
- Alternative N3: Under this alternative, proposed RSFP would extend around the east side of the Airport creating a ring road. This alternative was also developed to avoid dividing the Airport property.

[24] CEQ Regulations (40 CFR Sections 1500-1508)
[25] *Final Design Concept Report, URS Corporation, October 2007*, Appendix F
[26] *Final Design Concept Report, URS Corporation, October 2007, page iv*
[27] *Final Design Concept Report, URS Corporation, October 2007, page 3-1*


N
SR 66
Andy Devine Ave
Industrial Blvd
Mohave Airport Dr
Kingman Airport
Castle Rock Rd
66
Alt N2
Berry Rd
Alt N1
Alt N3
Rattlesnake Wash
Rancho Santa Fe Pkwy
BNSF RR
Airway Ave
East Kingman TI
Proposed Rancho Santa Fe Pkwy TI
Diamond Joe
Rattlesnake Hill Wash
Grand Cyn
Eastern Ave
MP 55.9
MP 57.3
Louise Ave
Rancho Santa Fe
Southern Ave
DW Ranch Rd TI
Seneca St
Cherokee St
Hualapai Mtn Rd
Alt S2
Alt S4
Alt S1
Alt S3
LEGEND
Phase 1 DCR Alignment Alternatives
Phase 2 DCR Alignment Alternatives
Kingman City Limits
State Land
BLM Land
Kingman Airport
0
4,000
8,000
12,000
Feet
Source: ADOT. Final Design Concept Report: I-40, Rattlesnake Wash Traffic Interchange (Project No. 040 MO 57 H6814 01L), October 2007.
Kingman Municipal Airport
Kingman, Arizona
Environmental Assessment For
Rancho Santa Fe Parkway
AECOM
Roadway Alternatives
Figure 3.2–1

3.2.1.1 Selection Criteria

Within the DCR, these alternatives were evaluated.

Traffic Interchange: Traffic Interchange selection criteria focused on ten evaluation criteria (lower construction costs, adequacy of roadway geometry and safety, improvements to traffic operations, reduced ROW acquisition, reduced earthwork, compliance of drainage functions to City standards, reduce the size and costs of structures, reduce impacts to I-40, minimize conflicts with existing utilities, and reduce environmental impacts).[28]

The DCR initially looked at four interchange design concept alternatives and carried forward two alternatives (both compact diamond interchanges) using the above criteria. Based on analysis in the DCR, the compact diamond overpass alternative was selected. This alternative would have RSFP passing under I-40 and was selected based on lower construction costs, reduced ROW acquisition, and excavated earthwork.[29]

Roadway: The main roadway alignment selection focused on three criteria: paralleling section lines, following existing utilities, and providing a direct route to I-40.[30] Based on analysis in the DCR, the roadway alignment following the section line along RSFP north from I-40 to the southern boundary of the Airport was selected (see **Figure 3.2-1**).

The DCR studied three roadway alignments (Alternative N1, Alternative N2, and Alternative N3) within the vicinity of Airport property (see **Figure 3.2-1**). Selection criteria for the three roadway alternatives within the vicinity of Airport property included reducing costs associated with construction, operation, and maintenance; shorter out of direction travel; and a reduced number of drainage structures required. The DCR concluded that Alternative N1 would create more out of direction travel and require an additional crossing of Rattlesnake Wash. Alternative N3 would be much longer in travel time and out of direction traffic, and given the additional roadway segment, Alternative N3 would cost the most of the three alternatives. Thus, Alternatives N1 and N3 were eliminated from further study and only Alternative N2 met criteria.[31]

Drainage: Drainage design selection criteria includes minimizing the amount of ROW acquisition, minimizing the number of crossings of Rattlesnake Wash, minimizing impacts to adjacent properties, and reconnecting and concentrating sheet flow associated with Rattlesnake Wash prior to those flows crossing under the BNSF bridge.[32] Roadway Alternative N2 was selected, and the drainage design was further developed to collocate the drainage channel with roadway ROW acquisition. Collocating the drainage channel with roadway ROW acquisition met the selection criteria.

Sewer: The sewer line alignment selection criteria include paralleling existing utility PUE and conforming with the City's Wastewater Master Plan Update and Inflow/Infiltration Study.[33] The sewer line alignment identified in the City's Wastewater Master Plan Study is the only alternative that met the criteria.

3.3 Alternatives Under Consideration

The alternatives were designed to meet the purpose and need, as discussed in **Section 1**. The FAA's release of approximately 42.6 acres from aeronautical use to lease for non-aeronautical use will consider two alternatives: 1) No Action Alternative and 2) City's Proposed Project Preferred Alternative).

[28] *Final Design Concept Report, URS Corporation, October 2007, Table 3-1 page 3-3*
[29] *Final Design Concept Report, URS Corporation, October 2007, page 3-4*
[30] *Final Design Concept Report, URS Corporation, October 2007, Section 3.2.4 page 3-2*
[31] *Final Design Concept Report, URS Corporation, October 2007, Section 3.2.4 page 3-2*
[32] *Final Design Concept Report, URS Corporation, October 2007, Section 3.2.3 page 3-2*
[33] https://www.cityofkingman.gov/home/showpublisheddocument/1028/636593004118400000 Exhibit 6.1.1 page 73 of 303

3.3.1 Alternative 1: No Action Alternative

The FAA must analyze the No Action Alternative per Section 102(2)(C) of NEPA (42 U.S.C.§ 4332(2)(C)). In the No Action Alternative, the FAA would not approve the land obligation request by the City. For purpose of analysis, the City's Proposed Project would not be built. The City would continue to manage the Airport property in its undeveloped state. The Airport property would continue to be designated for aeronautical use.

3.3.2 Alternative 2: City's Proposed Project (Preferred Alternative)

The FAA's Proposed Action is discussed in **Section 1.4** and the City's Proposed Project is discussed in **Section 1.5**.

3.4 Permits and Approvals Required

The following approvals would need to be obtained:

- **Mohave County Grading Permit**: Permit to be obtained with the County by the Contractor for construction activities.
- **Airspace Determination**: Determination to be obtained with the FAA by the Contractor through submittal of FAA Form 7460-1 NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION for work on Airport property.
- **ADOT Construction Plan Approval**: ADOT approval of the construction plans to the traffic interchange.
- **City of Kingman Construction Plan Approval:** City approval of the construction plans for RSFP north of Grand Canyon Road.
- **AZPDES Permit:** Contractor to obtain Arizona Pollution Discharge Elimination Systems (AZPDES) permit, which usually entails a Stormwater Pollution Prevention Plan (SWPPP).
- **Mohave County Right-of-Way Permit:** Mohave County Right-of-Way Permit: City to apply for a County Right-of-Way Use Permit to connect Mohave Drive (RSFP) to Industrial Boulevard, which is maintained by the County. County approval is required prior to constructing the connection.

The following approvals have been obtained:

- **FHWA Change of Access Approval:** FHWA has approved a Change of Access Report for the RSFP TI submitted by ADOT.[34]
- **ASLD ROW Permit:** In 2006, the City acquired ROW (ROW # 16-110344) from ASLD for a portion of the roadway and drainage channel.[35]

3.5 Listing of Special Purpose Laws and Requirements Considered

Table 3.5-1 includes a list of federal and state statues, executive orders, and other regulations considered in the evaluation of alternatives and throughout the preparation of this Environmental Assessment.

[34] Appendix D.7
[35] Appendix D.8

Table 3.5-1. List of Applicable Federal and State Laws and Regulations

Federal Laws and Statutes
Airport and Airway Improvement Act of 1982, as amended (P.L. 97-248; 43 C.F.R. 2640)
American Indian Religious Freedom Act of 1978 (42 U.S.C. §1996)
Antiquities Act of 1906 (16 U.S.C. §§ 431 et seq.)
Archeological and Historic Data Preservation Act of 1974 (P.L. 93-291, 16 U.S.C. 469)
Archeological Resources Protection Act (16 U.S.C. §§470aa-470mm)
Aviation Safety and Capacity Expansion Act of 1990 (P.L. 101-508, as amended)
Aviation Safety and Noise Abatement Act of 1979 (P.L. 96-193; 49 U.S.C. App. 2101)
Bald and Golden Eagle Protection Act (16 U.S.C. §668 et seq)
Civil Rights Act of 1964, Title VI (42 U.S.C. §§2000d-2000d-7)
Clean Air Act of 1977 (as amended) (42 U.S.C. § 7409 et seq.)
Clean Water Act of 1972 (as amended) (33 U.S.C. § 1251 et seq.)
Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601; P.L. 96-510)
Department of Transportation Act of 1966 – Section 4(f) (as amended by 49 U.S.C. §303, Policy on lands, wildlife and waterfowl refuges, and historic sites [P.L. 97-449])
Endangered Species Act of 1973 (P.L. 85-624; 16 U.S.C. §§661, 664 note, 1008 note)
FAA Reauthorization Act of 2018 (P.L. 115-254)
Federal Water Pollution Control Act Amendments for 1972, Section 404 (33 U.S.C. 1344; P.L. 92-500), as amended by the Clean Water Act of 1977 (33 U.S.C. 1251; P.L. 95-217)
Hazardous Materials Transportation Act (42 U.S.C. §§5101-5128)
Historic Sites Act of 1935 (16 U.S.C. §§461-467)
Land and Conservation Fund Act of 1965 (16 U.S.C. §§4601-4 et seq.)
Migratory Bird Treaty Act (16 U.S.C. §703 et seq.)
National Environmental Policy Act of 1969 (NEPA) (P.L. 91-190; 42 U.S.C. 4321 et seq.)
National Historic Preservation Act of 1966, Section 106, (55 U.S.C. 300101 et seq.)
Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. §§3011-3013)
Noise Control Act of 1972 (P.L. 92-574; 42 U.S.C. 4901)
Oil Pollution Act (33 U.S.C. §§2701-2762)
Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6901, et seq.; P.L. 94-580, as amended by the Solid Waste Disposal Act of 1980 [P.L. 96-482]; and the 1984 Hazardous and Solid Waste Amendments [P.L. 98-616]
Executive Orders
Executive Order 11514, Protection and Enhancement of Environmental Quality (dated March 4, 1970)
Executive Order 11593, Protection and Enhancement of the Cultural Environment (dated May 13, 1971)
Executive Order 11998, Floodplain Management (dated May 24, 1977)
Executive Order 12898. Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (dated February 11, 1994).
Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks (dated April 23, 1997).

Table 3.5-1. List of Applicable Federal and State Laws and Regulations

Executive Order 13112, Invasive Species (dated February 3, 1999)
Executive Order 13834, Efficient Federal Operations
Executive Order 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis (dated January 20, 2021)
Executive Order 14008, Tackling the Climate Crisis at Home and Abroad (dated January 27, 2021)
Executive Order 14096, Revitalizing Our Nation's Commitment to Environmental Justice for All (dated April 21, 2023)
Code of Federal Regulations
14 C.F.R. Part 150, Airport Noise Compatibility Planning
36 C.F.R. Part 800 (39 F.R. 3365, January 25, 1974, and 51 FR 31115, September 2, 1986), Protection of Historic Properties
23 CFR 772 23 U.S.C. 109(h) and (i); 42 U.S.C. 4331, 4332; sec. 339(b), Pub. L. 104–59, 109 Stat. 568, 605; 49 CFR 1.48(b). 75 FR 39834, July 13, 2010
40 C.F.R. Parts 1500-1508, CEQ implementation of NEPA procedural provisions, establishes uniform procedures, terminology, and standards for implementing the procedural requirements of NEPA's section 102(2)
FAA/DOT Orders
FAA Order 1050.1F, Environmental Impacts: Policies and Procedures
Department of Transportation Order 5650.2, Floodplain Management and Protection
FAA Order 5050.4B, National Environmental Policy Act Implementing Instructions for Airport Actions
Arizona State Law
Arizona Environmental Quality Act of 1986
Arizona Administrative Code Title 18, Chapter 13, Solid Waste Management
Arizona Native Plant Law (A.R.S. § 3-900) (effective February 6, 2004)

Notes:

A.R.S.	Arizona Revised Statutes	FAA	Federal Aviation Administration
CEQ	Council on Environmental Quality	F.R.	Federal Register
C.F.R.	Code of Federal Regulations	P.L.	Public Law
		U.S.C.	United States Code

4. Affected Environment and Environmental Consequences

4.1 Introduction

The affected environment encompasses those areas that would be directly or indirectly affected if the City's Proposed Project (Preferred Alternative) is implemented. The environmental impact categories are organized as identified in FAA Order 1050.1F. The potential environmental impacts of the No Action and Preferred Alternatives are included herein.

Where necessary, mitigation measures or avoidance and minimization measures are listed which would reduce or eliminate significant anticipated impacts. Applicable special purpose laws and local programs and policies that protect environmental resources are also identified as avoidance or minimization measures or best management practices.

4.2 Environmental Resources Not Affected

A review by the City found that the environmental resources listed in **Table 4.2-1** either are not present in the project area or would not be affected by the Proposed Project (Preferred Alternative) based on research such as database searches, fieldwork, and agency scoping. As such, these environmental impact categories are excluded from further consideration.

Table 4.2-1. Environmental Resources not Present

Environmental Impact Category	Reasons for Exclusion
Biological Resources - Threatened and Endangered Species	None of the three threatened, endangered, or candidate species [California Least Tern (*Sterna antillarum browni*), yellow billed cuckoo (*Coccyzus americanus*), or monarch butterfly (*Danaus plexippus*) would be impacted by construction and operation of RSFP (USFWS IPAC 2022-0029641 and AZGFD HGIS-15965 in Appendix C). The Project area does not have suitable habitat to support these species (see **Appendix A.1.b** and **Appendix A.4.e**). FAA made a finding of no effect per Section 7 of the Endangered Species Act (ESA) and therefore consultation with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) is not required.[36]
Biological Resources – Designated Critical Habitat	No designated critical habitat is present within three miles the Project area (USFWS IPAC 2022-0029641 in Appendix C).
Coastal Resources	No coastal resources are present within the Project area. Arizona does not have a coastal zone.
Resources Protected by Section 4(f) of the Department of Transportation Act of 1966	A finding of no adverse effect pursuant to Section 106 of the National Historic Preservation Act is a basis for concluding an undertaking would not use any historic properties classified as Section 4(f) resources. The State Historic Preservation Office concurred with the FAA's determination of no adverse effect (Klebacha 2022) (See **Appendix D.3**).
Farmlands	Soils in the Project area are not considered prime, unique, or of statewide importance.[37]
Noise-Aircraft Noise	The Proposed Project would not change airport capacity or operations. The existing 65 decibel (dB) day-night average sound level (DNL) noise exposure contour would not change as a result of this project.[38] The project would not change land use within the contour.
Water Resources – Wetlands	No wetlands are present in the Project area (SPL-2019-00605).[39]
Water Resources – Surface Waters	The Project area is located in the Hualapai Valley Basin, and Rattlesnake Hill Wash and Rattlesnake Wash drains into Red Lake. The Hualapai Valley Basin and Red Lake is a closed basin. The U.S. Army Corps of Engineers (USACE) has stated in previous Approved Jurisdictional Determination (SPL-2019-00605) regarding drainages that cross the Airport that multiple scientific studies have concluded that the basin is a closed watershed with no external water flows out from Red Lake.[40] Based on the topography of the area and the hydrology of the Red Lake basin, the project site is considered isolated and, therefore, is not jurisdictional waters of the U.S. Red Lake's surface waters are not used for industrial or other commercial purposes.
Water Resources – Groundwater	The Proposed Project does not include drilling wells nor would impact groundwater recharge rates; therefore, groundwater would not be impacted.
Water Resources – Wild and Scenic Rivers	Rattlesnake Hill Wash and Rattlesnake Wash are not designated as a wild or scenic river. According to the National Park Service National Wild and Scenic Rivers map, the nearest wild or scenic river segments are the Amargosa River Segment located 130 miles northwest of the Airport and the Verde River Segment 145 miles to the southeast.[41]

[36] FAA Kingman Municipal Airport-Proposed Land-Obligated Release for RSFP-Endangered Species Act Finding dated 4/28/2023 See Appendix C.3.
[37] https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx
[38] https://www.kingmanairport.com/airport-information/igm-master-plan Exhibit 5B and 5c pp 5-25 and 5-26
[39] https://permits.ops.usace.army.mil/orm-public
[40] https://permits.ops.usace.army.mil/orm-public#
[41] www.nps.maps.arcgis.com

4.3 Air Quality

4.3.1 Regulatory Setting

Under the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) establishes National Ambient Air Quality Standards (NAAQS) based on health risks for the following pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), ozone (O_3), "fine" particulate matter with an aerodynamic diameter of 2.5 micrometers or less ($PM_{2.5}$), and "inhalable coarse" particulate matter with an aerodynamic diameter less than 10 micrometers (PM_{10}). These pollutants are known as "criteria" pollutants and the associated standards shown in **Table 4.3-1**.

Table 4.3-1. National Ambient Air Quality Standards

Pollutant (links to historical table of NAAQS reviews)		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		Primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		Primary and Secondary	Rolling 3-month average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)		Primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Primary and Secondary	1 year	53 ppm (2)	Annual Mean
Ozone (O_2)		Primary and Secondary	8 hours	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (PM)	$PM_{2.5}$	Primary	1 year	12.0 µg/m^3	Annual mean, averaged over 3 years
		Secondary	1 year	15.0 µg/m^3	Annual mean, averaged over 3 years
	PM_{10}	Primary and Secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
		Primary and Secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)		Primary	1 hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Notes:

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m^3 as a calendar quarter average) also remain in effect.

(2) The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of parts per billion (ppb) for the purposes of clearer comparison to the 1-hour standard level.

(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O_3 standards are not revoked and remain in effect for designated areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour (1997) O_3 standards.

(4) The previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous $S0_2$ standards or is not meeting the requirements of a SIP call under the previous SO_2 standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

Source: NAAQS Table | US EPA, https://www.epa.gov/criteria-air-pollutants/naaqs-table

An area with ambient air concentrations exceeding the NAAQS for a criteria pollutant is said to be a nonattainment area for the pollutant's NAAQS, while an area where ambient concentrations are below the NAAQS is an attainment area. Areas previously defined as nonattainment but have met the requirements to reduce concentrations are transition areas known as maintenance areas.

The EPA requires that areas designated as nonattainment demonstrate how they would attain the NAAQS by an established deadline. To accomplish this, states are required to prepare State Implementation Plans (SIPs). SIPs are typically a comprehensive set of reduction strategies and emissions budgets designed to bring the area into attainment.

The Proposed Project on Airport property may also be subject to the General Conformity requirements of the CAA if it would occur in a nonattainment or maintenance area. The General Conformity Rule of the CAA establishes the procedures and criteria for determining whether certain federal actions conform to state or federal air quality implementation plans.

In addition to the criteria pollutants, other pollutants of concern include greenhouse gases (GHG) and hazardous air pollutants (HAPs) also referred to as mobile source air toxic emissions (MSATs) emitted by vehicles (see **Section 4.5**). Greenhouse gases include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). GHGs and MSATs do not have ambient concentration standards and are considered by the total mass of emissions.

MSATs, also referred to as HAPs, are organic or inorganic substances that can cause health effects. HAPs have no NAAQS but are still regulated under the CAA because of their potentially adverse effects on human health and the environment. The 1990 Clean Air Act Amendments defined 189 substances (since reduced to 188) that were listed in this category of air pollutant. Nationwide, the FHWA has identified six substances that are primarily associated with motor vehicles with the greatest influence.[42] National trends are decreasing even with increased miles traveled due to emissions will likely be lower than present levels in the design year because of the EPA's national control programs that are projected to reduce annual MSAT emissions by over 76% from 2020 to 2060 (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, January 18, 2023).[43] Local conditions may differ from these national projections in terms of fleet mix and turnover, Vehicle Miles Traveled (VMT) growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in virtually all locations.

4.3.2 Affected Environment

The study area for impacts to air quality is Mohave County (see inset map of **Figure 1.2-1**). Mohave County is not listed as a nonattainment area for all criteria pollutants. The County's Bullhead City portion, but not the Kingman portion, is listed as a maintenance area for PM_{10}.[44,45] The nearest monitoring station, located at 990 Highway 95, is approximately 30 miles away in Bullhead City on the other side of the Black Mountains. The location was a Moderate nonattainment area for PM_{10}, per 1987 standards, and was designated as a maintenance area on August 26, 2002. Only PM_{10} is measured at this station and the last three years of monitoring data are included in **Table 4.3-2**. No exceedances of the PM_{10} standard have occurred in 2023. This data is not representative of the project area located in Kingman and is only included for completeness.

[42] https://www.fhwa.dot.gov/environment/air_quality/air_toxics/
[43] https://www.fhwa.dot.gov/environMent/air_quality/air_toxics/policy_and_guidance/msat//fhwa_nepa_msat_memorandum_2023.pdf
[44] https://www3.epa.gov/airquality/greenbook/ancl.html#AZ
[45] PM-10 (1987) Designated Area Area/State/County Report, Green Book, EPA

Table 4.3-2. Monitoring Values, PM_{10} µg/m³

Year	Excluded Events	First Max	Second Max	Actual Exceedances	Valid Days	Required Days
2022*	None	183	11	1	357	365
2021	None	265	84	1	363	365
2020	None	185	127	1	355	365

Notes:
Site: County: Mohave; City and Site ID: Bullhead City, 40151003; CBSA: Lake Havasu City-Kingman, AZ
*Final statistics are not valid until May 2023
Source: EPA, Monitoring Values Report, https://www.epa.gov/outdoor-air-quality-data/monitor-values-report

As monitored at the Airport, weather in Mohave County typically has temperature ranges from near freezing to the mid-90 degrees Fahrenheit, low relative humidity, and an average of 5.7 inches of precipitation annually.[46] While it can be windy, average wind speeds range from 7.5 to 9.1 miles per hour (mph). The dominant wind direction is from the South in the summer months and variable at other times of the year.

The project area is currently undeveloped with no major emission sources apart from windblown dust (particulate matter). Kingman area emission sources include vehicles on SR 66, airport operations, and other vehicles within the far eastern part of the unincorporated township of New Kingman-Butler.

Per a review of local area maps, there are no sensitive receptors (residences, schools, hospitals, libraries, and other large public gathering areas adjacent to the Airport) with the closest land uses that could be affected being residences located 0.25 miles west, across SR 66 in New Kingman-Butler from the north end of the project area. Air quality impacts from construction would be limited to the project area and immediate adjacent areas.

4.3.3 Environmental Consequences

4.3.3.1 Methodology

The Proposed Project would use heavy equipment and motor vehicles resulting in emissions from combustion and brake or tire wear. During construction, motor vehicles would use unpaved access roads, and soil disturbance would generate fugitive dust. Emissions would occur during pavement construction operations as well.

An emission inventory was performed. Equipment and vehicular uses were estimated using construction schedules. This data was then used with emission factors computed using the EPA Motor Vehicle Emission Simulator (MOVES)[47] model, version 3.04 for both nonroad and on-road sources. The EPA Compilation of Air Emission Factors (AP42)[48] was used for emission factors and methodologies to compute fugitive emissions consisting of dust from both paved and unpaved roads, brake and tire wear during construction activities, and windblown dust. More exacting details are included in **Appendix B**.

[46] https://weather-and-climate.com/average-monthly-precipitation-Rainfall-inches,kingman-arizona-us,United-States-of-America
[47] EPA, Motor Vehicle Emission Simulator (MOVES), https://www.epa.gov/moves.
[48] EPA, Compilation of Air Emission Factors (AP42), https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors.

4.3.3.2 Thresholds of Significance

The FAA defines a significant air quality impact as when an action would cause pollutant concentrations to 1) exceed one or more of the NAAQS for any of the time periods analyzed, or 2) increase the frequency or severity of any such existing violations.[49]

As an indicator of possible impacts, emissions are calculated and compared to *de minimis* levels defined by EPA.[50] *De minimis* levels in this document are defined as 100 tons per year for maintenance and moderate nonattainment areas.

The General Conformity Rule establishes the procedures and criteria for determining whether certain Federal actions conform to EPA or State air quality implementation plans.[51] The General Conformity Rule is only considered when a Federal action is proposed to occur in an EPA-designated nonattainment or maintenance area.[52] In this document, even though conformity does not apply because the proposed action does not occur in a nonattainment or maintenance area, exceeding the *de minimis* levels may indicate significant impacts. As described above, there are no thresholds of significance for GHG and MSATs.

4.3.4 Comparison of the Proposed Project and the No Action Alternative

4.3.4.1 Proposed Project

The Proposed Project would change air quality as shown in **Table 4.3-3** based on the methods above. Total emissions (construction emissions, vehicle movement, worker driving, and re-entrained dust) for the criteria pollutants are below the *de minimis* levels and the Proposed Project would not significantly impact air quality.

Greenhouse gases are included in **Table 4.3-3**. Per the latest federal guidance to use 'rule of reason' for CO_2(e) emissions and given that there are currently no defined standards, the impact of CO_2(e) emission is not significant.[53] The relatively small amount of MSATs, simply represented by $PM_{2.5}$ and volatile organic compounds (VOCs), are also small and as previously stated, have no potential for a meaningful impact.[54]

4.3.4.2 No Action Alternative

The No Action Alternative would not change existing conditions. Therefore, it would not change air quality.

4.3.4.3 Conclusion

When comparing the air quality impacts from the Proposed Project to those of the No Action Alternative, there would not be any significant impacts and would not exceed the CAA's applicable *de minimis* threshold.

[49] FAA Order 1050.1F, Exhibit 4-1 Page 4-4
[50] 40 CFR Part 93
[51] FAA 1050.1F Desk Reference, Section 1.3.5, Pages 1-8 to 1-13
[52] FAA 1050.1F Desk Reference, Section 1.3.5 Pages 1-8 to 1-13
[53] FR Vol. 88, No. 5, Jan. 9, 2023
[54] Diesel PM an MSAT, is a small fraction of $PM_{2.5}$ and was included in the $PM_{2.5}$ analysis. Many of the MSATs are gaseous hydrocarbons and included in the estimation of VOCs.

Table 4.3-3. Emissions from the Proposed Project

Total Emissions from Parkway Construction Activity and Vehicle Movements

Work Item	Source	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	VOC	CO_2	CH_4	N_2O	$CO_2(e)$
Parkway	2023 Equipment	4.590	1.613	0.0058	0.248	0.233	1.038	2151.383	0.0284	--	1952.012
Parkway	2024 Equipment	1.972	3.176	0.0119	0.243	0.234	0.395	4415.414	0.0382	--	4005.780
Sewer	2023 Equipment	0.045	0.126	0.0005	0.009	0.009	0.008	181.791	0.0027	--	164.951
Sub-Total Nonroad 2023		4.635	1.739	0.0063	0.258	0.242	1.046	233.174	0.0311	--	2116.963
Sub-Total Nonroad 2024		1.972	3.176	0.0119	0.243	0.234	0.395	4415.417	0.0382	--	4005.780
Parkway	2023 On-road	2.251	0.500	0.0014	0.049	0.022	0.063	241.720	0.0095	0.0011	242.240
Parkway	2024 On-road	1.561	0.464	0.0011	0.042	0.021	0.053	192.506	0.0068	0.0008	192.883
Sewer	2023 On-road	0.226	0.012	0.0001	0.002	0.000	0.003	17.757	0.0009	0.0001	16.153
Sub-Total On-Road 2023		2.477	0.512	0.0016	0.051	0.022	0.066	259.477	0.0104	0.0012	258.393
Sub-Total On-Road 2024		1.561	0.464	0.0011	0.042	0.021	0.053	192.506	0.0068	0.0008	192.883
Parkway	2023 Fugitives	--	--	--	0.843	0.115	--	--	--	--	--
Parkway	2024 Fugitives	--	--	--	0.089	0.008	0.005	--	--	--	--
Sewer	2023 Fugitives	--	--	--	0.356	0.045	--	--	--	--	--
Sub-Total Fugitives 2023		--	--	--	1.199	0.160	--	--	--	--	--
Sub-Total Fugitives 2024		--	--	--	0.089	0.008	0.005	--	--	--	--
Total Emissions 2023		7.111	2.251	0.0079	1.507	0.424	1.111	2592.651	0.0415	0.0012	2375.356
Total Emissions 2024		3.533	3.640	0.0130	0.374	0.263	0.453	4607.923	0.0450	0.0017	4198.663

- Units are tons/years except for $CO_2(e)$ which is in metric tons/year

4.3.5 Treatment Measures

4.3.5.1 Avoidance and Minimization Measures

ADOT would implement their treatment measures as identified in **Appendix A.3.a** during construction of the ADOT administered portion of the Proposed Project. The City would implement the following treatment measures as part of the City administered portion of the Proposed Project. All treatment measures are also combined in **Appendix E**.

- The City would require the contractor to use water to reduce windblown dust during related construction activities in compliance with a County Grading Permit.[55] The contractor would revegetate disturbed areas as soon as possible after disturbance and would cover construction materials and stockpiled soils if they are a source of fugitive dust.

4.3.5.2 Mitigation Measures

Mitigation is not required for the Proposed Project.

4.4 Biological Resources

No federally threatened or endangered species or designated critical habitat that could be affected by the Proposed Project are present (see **Table 4.2-1**). This section focuses on special status species such as covered by the Migratory Bird Treaty Act (MBTA), the Bald and Golden Eagle Protection Act (BGEPA), species importance to the State, Arizona Native Plant Law, and Executive Order 13112 Invasive Species.

4.4.1 Regulatory Setting

The MBTA implemented four international treaties that the U.S. entered to ensure the sustainability of populations of all protected migratory birds. This treaty prohibits take “defined as killing, capturing, selling, trading, and transport” of protected migratory birds without authorization by the USFWS. It only applies to migratory species that are native to the U.S.

The BGEPA aims to prevent from “taking” of bald and golden eagles including their parts without a permit issued from the Secretary of the Interior. Take includes “purse, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb” and disturb is defined as “to agitate or bother a bald or golden eagle to a degree that causes injury, a decrease in productivity by substantially interfering with normal breeding, feeding, sheltering behavior, or nest abandonment.”

Arizona's Comprehensive Wildlife Conservation Strategy was accepted by the USFWS National Acceptance Advisory Team in 2006. As part of that wildlife conservation strategy, the Arizona Game and Fish Department (AZGFD) developed and maintains a list of Species of Greatest Conservation Need (SGCN). The AZGFD rank the SGCN using seven vulnerability criteria which includes declining status, disjunct status, demographic status, concentration status, and distribution status. Following the vulnerability assessment, the AZGFD refined the SGCN species into three tiers:

- Tier 1-deemed vulnerable in at least one of the seven categories and is listed by ESA, or recently removed from listing by ESA, or has a signed conservation agreement,
- Tier 2-deemed vulnerable in at least one of the seven categories but does not match additional criteria of Tier 1, and
- Tier 3-species of unknown status in at least one of the seven categories but does not rise to a Tier 2.

The Arizona Native Plant Law protects native plants from destruction by both private landowners and State agencies. Private landowners must notify the Arizona Department of Agriculture prior

[55] https://www.cityofkingman.gov/government/departments/fire-department/building-life-safety/grading-permit-fees

to removal of native plants.[56] State agencies must notify the Arizona Department of Agriculture and propose a method of disposal including public auction, relocation, donation to a non-profit, donation to another state agency, salvage by the general public or commercial dealer.

Executive Order 13112 – Invasive Species aims to prevent the introduction of invasive species and control and minimize the economic, ecological, and human health impacts that they cause.

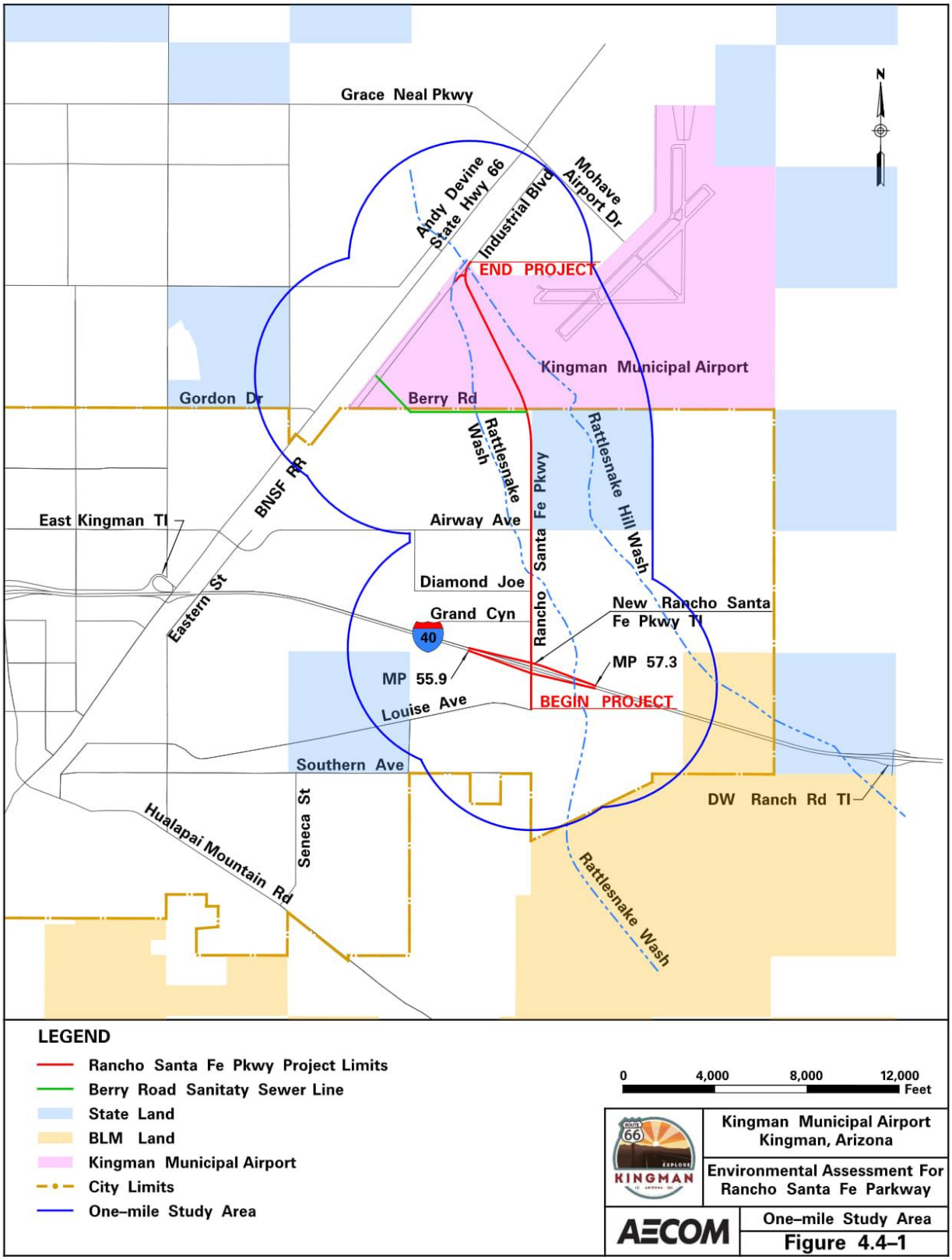
4.4.2 Affected Environment

The study area for biological resources includes one mile around the proposed RSFP (see **Figure 4.4-1**). This area is in Semidesert Grassland biotic community of the American Semi-Desert and Desert Province Ecoregion.[57] The land associated with the Proposed Project across Airport property is currently vacant land. The study area is in the Hualapai Valley at an elevational of approximately 3,800 above mean sea level.[58]

Species composition of the study area was dominated by grazing tolerant plant species such as fluff grass (*Dasyochloa pulchella*), flattop buckwheat (*Eriogonum fasciculatum*), desert marigold (*Baileya multiradiata*), desert senna (*Senna armata*), purple three-awn (*Aristida purpurea*), milkvetch (*Astragalus* sp.), catclaw acacia (*Acacia greggii*), paperflower (*Psilostrophe cooperi*), creosote bush (*Larrea tridentata*), pincushion cactus (*Mammilaria grahamii*), cane cholla (*Cylindropuntia spinosior*), prickly pear (*Opuntia* sp.), globe mallow (*Sphaeralcea ambigua*), Sahara mustard (*Brassica tournefortii*), longleaf Mormon tea (*Ephedra trifurca*), yucca (*Yucca* spp.), jimson weed (*Datura stramonium*), threadleaf groundsel (*Senecio flaccidus*), burroweed (*Isocoma tenuisecta*), and crucifixion thorn (*Castela emoryi*) (see **Appendix A.1.b**).

The USFWS and AZGFD database reviews documented thirteen (13) avian migratory bird species that could occur within three miles of the project area (see **Appendix C.1**). The three-mile designation is a standard distance that both the USFWS and AZGFD utilize for their data base searches. The AZGFD list included the western burrowing owl (*Athene cunicularia hypugaea*), golden eagle (*Aquila chrysaetos*), Swainson's hawk (*Buteo swainsoni*), Costa's hummingbird (*Calypte costae*), bald eagle (*Haliaeetus leucocephalus*), Gila woodpecker (*Melanerpes uropygialis*), sage thrasher (*Oreoscoptes montanus*), Lucy's warbler (*Oreothlypis luciae*), black-chinned sparrow (*Spizella atrogularis*), Brewer's sparrow (*Apizella breweri*), white-winged dove (*Zenaida asiatica*), mourning dove (*Zenaida macroura*), and gray vireo (*Vireo vicinior*) (see **Appendix C.2**).[59] **Table 4.4-1** provides the AZGFD list of SGCN.[60]

[56] Title 3- Agriculture Chapter 3 Article 11 Appendix A of the Arizona Administrative Code.
[57] ADOT 2007 Biological Review p4 -Found in Appendix A
[58] ADOT 2007 Biological Review p1 -Found in Appendix A
[59] Appendix C.2 pp 9-13
[60] Appendix C.2 page 9


Grace Neal Pkwy
Andy Devine
State Hwy 66
Industrial Blvd
Mohave
Airport Dr
END PROJECT
Kingman Municipal Airport
Gordon Dr
Berry Rd
Rattlesnake
Wash
Rattlesnake Hill Wash
Santa Fe Pkwy
Rancho
BNSF RR
East Kingman TI
Airway Ave
Eastern St
Diamond Joe
Grand Cyn
40
New Rancho Santa
Fe Pkwy TI
MP 57.3
MP 55.9
BEGIN PROJECT
Louise Ave
Southern Ave
DW Ranch Rd TI
Hualapai Mountain Rd
Seneca St
Rattlesnake Wash
N
LEGEND
Rancho Santa Fe Pkwy Project Limits
Berry Road Sanitaty Sewer Line
State Land
BLM Land
Kingman Municipal Airport
City Limits
One–mile Study Area
0
4,000
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Feet
Kingman Municipal Airport
Kingman, Arizona
Environmental Assessment For
Rancho Santa Fe Parkway
AECOM
One–mile Study Area
Figure 4.4–1

Table 4.4-1. AZGFD Species of Greatest Conservation Need Predicted in Three Miles of Project Area

Species	SGCN Ranking
American Pronghorn (*Antilocapra americana americana*)	2
Golden Eagle (*Aquila chrysaetos*)	2
Western Burrowing Owl (*Athene cunicularia hypugaea*)	2
Ferruginous Hawk (*Buteo regalis*)	2
Swainson's Hawk (*Buteo swainsoni*)	2
Costa's Hummingbird (*Calypte costae*)	2
Cactus Wren (*Campylorhynchus brunneicapillus*)	2
Gilded Flicker (*Colaptes chrysoides*)	2
Pale Townsend's Big-eared Bat (*Corynorhinus townsendii pallescens*)	1
Gray Flycatcher (*Empidonax wrightii*)	2
Prairie Falcon (*Falco mexicanus*)	2
American Kestrel (*Falco sparverius*)	2
Sonoran Desert Tortoise (*Gopherus morafkai*)	1
Cassin's Finch (*Haemorhous cassinii*)	2
Allen's Lappet-browed Bat (*Idionycteris phyllotis*)	2
Loggerhead Shrike (*Lanius ludovicianus*)	2
Hoary Bat (*Lasiurus cinereus*)	2
Lowland Leopard Frog (*Lithobates yavapaiensis*)	1
Gila Woodpecker (*Melanerpes urophgialis*)	2
Lincoln's Sparrow (*Melospiza lincolnii*)	2
Black-footed Ferret (*Mustela nigripes*)	1
Townsend's Solitaire (*Myadestes townsendi*)	2

Source: AZGFD On-Line Environmental Review Tool page 9 of 13 found in Appendix C.2

4.4.3 Environmental Consequences

4.4.3.1 Methodology

The amount of habitat to be removed due to the Proposed Project is compared to the amount that could be removed under the No Action Alternative. The potential to take birds protected by the MBTA or destroy completely or other adverse effects on MBTA is also compared between alternatives.

4.4.3.2 Thresholds of Significance

The FAA has not established a threshold of significance for non-listed species.[61] The FAA considers the following factors:

1. Long-term or permanent loss of unlisted or wildlife species,
2. Adverse impacts to special status species or their habitats,

[61] FAA Order 1050.1F, Exhibit 4-1 Page 4-4

3. Substantial loss, reduction, degradation, disturbance, or fragmentation of native species habitat or populations, and
4. Adverse impacts on a species' reproductive success rates, mortality rates, or the ability to sustain minimum population levels required for population maintenance.

4.4.4 Comparisons of the Proposed Project and the No Action Alternative

4.4.4.1 Proposed Project

The Proposed Project, both on Airport and off Airport, will impact 131.2 acres of semidesert grassland. The Proposed Project would convert 42.6 acres of semidesert grassland on Airport into manmade structures including roadway, drainage, and utility easements. Foraging habitat for raptors and migratory birds would be removed, as would native vegetation. Golden eagles, bald eagles, and migratory bird are not likely to nest in abundance in the project area since vegetation is sparse.[62]

Native plants protected by the Arizona Department of Agriculture would also be removed by the Proposed Project and include cane cholla (*Cylindropuntia spinosior*), pincushion cactus (*Mammilaria grahamii*), prickly pear (*Opuntia spp.*), and yucca (*Yucca spp.*) that were identified within the project area in 2006.[63] The study area north of I-40 is not suitable habitat for Sonoran desert tortoise and the study area south of I-40 is considered only marginal habitat at the northern extremes of this species range.[64]

The Proposed Project would remove vegetation utilized as habitat for some migratory birds protected by the MBTA and BGEPA. Western burrowing owls are not anticipated to be in the project area.[65] None of the factors considered for biological resources would result in significant adverse impacts from the Proposed Project. The Proposed Project is located in part of a larger natural area (Hualapai Valley) that is primarily undeveloped and is surrounded by additional open land within the same biotic community and ecoregion.

The Proposed Project will minimize impacts to wildlife by restricting lighting to that necessary for safety at the TI. Migratory birds may nest within and adjacent to the proposed I-40 TI. Nighttime TI lighting and vehicle noise and light along I-40 may interfere with success of individual nests; however, significant nesting opportunities remain for migratory birds in the vicinity of the Proposed Project without light or noise concerns.

The Proposed Project will minimize the spread of invasive species by implementing contractor requirements during construction and by reseeding all disturbed soils not paved with seeds native to the project vicinity.

4.4.4.2 No Action Alternative

Under the No Action Alternative, the 131.2 acres within the project area would remain semidesert grassland. No significant impacts to biological resources would result. Construction activities would not occur, and no native vegetation would be removed.

4.4.4.3 Conclusion

When comparing impacts to biological resources from the Proposed Project to the No Action Alternative, there would be no significant impacts to biological resources. Treatment measures are proposed to minimize any impacts.

[62] Appendix A.2.b. page 5
[63] Appendix A.1.b page 8
[64] Appendix A.1.b Table 1 page 5
[65] Appendix A.1.b page 7

4.4.5 Treatment Measures

4.4.5.1 Avoidance and Minimization Measures

ADOT would implement their treatment measures as identified in **Appendix A.3.a** during construction of the ADOT administered portion of the Proposed Project. The City would implement the following treatment measures as part of the City administered portion of the Proposed Project. All treatment measures are also combined in **Appendix E**.

The following BMPs are City treatment measures provided so that the construction activities can comply with MBTA.

- If vegetation removal is necessary between March 1 and August 31, a migratory bird nest survey will be conducted by a biologist hired by the contractor within one week of ground disturbance that removes trees and shrubs. If active nests are observed, no construction activities will occur within 100-feet of the nests until the young birds have fledged.
- The City will notify the Arizona Department of Agriculture prior to removal of native plants.
- Burrowing owl clearance surveys must be conducted according to AZGFD protocols and must occur before construction activities commence. The most current (2007) AZGFD guidance[66] includes the following:
  - Avoid project initiation in March due to the possibility of new owls arriving during construction after the clearance survey.
  - Burrowing owl surveyors must be certified by AZGFD.
  - If owls are present at the time of construction, they must be relocated prior to disturbing active burrows or conservation measures must be implemented to protect them on-site. If relocation is required, the contractor will be required to secure a permit from the USFWS prior to relocating burrowing owls and only a permitted handler may conduct the relocation.
  - Conservation measures include: 1) collapsing all unoccupied burrows of suitable dimensions by a USFWS-permitted individual; 2) identifying open space areas to be protected as a buffer around occupied and suitable owl burrow; 3) passive exclusion of owls; or 4) translocation of owls by a USFWS-permitted individual.
  - A 35-meter (100-foot) radius buffer that excludes all heavy machinery and foot traffic must be set up around all active burrow entrances during construction until relocation efforts or other protection measures are implemented.

The following BMPs are City treatment measures provided so that the construction activities can comply with Executive Order 13112:

- To prevent the introduction of invasive species seeds, the contractor shall inspect all earthmoving and hauling equipment at the storage facility. All vehicles and equipment shall be washed and free of all attached plant/vegetation and soil/mud debris prior to entering the construction site.
- To prevent invasive species seeds from leaving the site, the contractor shall inspect all construction equipment and remove all attached plant/vegetation and soil/mud debris prior to leaving the construction site.

[66] https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/nongame/eagles/BurrowingOwlClearanceProtocol_2009.pdf

4.4.5.2 Mitigation Measures

Mitigation is not required for the Proposed Project.

4.5 Climate

While the phenomenon of climate change is experienced at a global level, it can also create local impacts. Once emitted, GHGs mix with the atmosphere and create changing climate conditions, which can affect the populations and environments within which they are emitted, but the cumulative effect can also impact other regions of the world.[67] Greenhouse gases include CO_2, CH_4, and N_2O.

4.5.1 Regulatory Setting

NEPA requires federal agencies to consider the environmental impacts of proposed major federal actions significantly affecting the quality of the human environment. Federal regulations specific to the land use and transportation sectors regarding the reduction of GHG emissions have yet to be approved. Executive Order 14008 *Tackling the Climate Crisis at Home and Abroad* directs federal agencies to address climate change while establishing the delivery of Environmental Justice (EJ) as an administration priority. Executive Order 13990 *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis* directs federal agencies to review and take action to address regulations previously put into law that conflict with the national objective to improve public health and the environment.

In January 2023, the CEQ released new guidance titled *National Environmental Policy Act Guidance on Considering of Greenhouse Gas Emissions and Climate Change*.[68] Through this guidance, CEQ recommends that agencies evaluate the potential effects of a proposed action on climate change, as well as the effects of climate change on a proposed action and its environmental impacts. This guidance also recommends providing additional context for GHG emissions, including through the development and use of best available social cost of GHG (SC-GHG) estimates to translate climate impacts into the more accessible metric of U.S. dollars.[69]

4.5.2 Affected Environment

The study area for climate is defined as Mohave County (see inset map of **Figure 1.2-1**); however countywide GHG emission inventories have not been conducted. The project area does not currently generate significant GHGs as it is undeveloped and exists as a series of dirt roads.

The International Panel on Climate Change (IPCC) estimates that transportation accounts for 14.3% of global transportation GHG emissions, 14.0% from direct GHG emissions, and 0.3% from indirect CO_2 emissions.[70] Scientific research is ongoing to better understand climate change, including any incremental atmospheric impacts that may be caused by transportation sources.

Increasing concentrations of GHGs in the atmosphere affect global climate. According to the Arizona Department of Water Resources, Mohave County remains in a long-term drought.[71] Temperatures in Arizona have risen approximately 2.5 degrees Fahrenheit (°F) since the beginning of the 20th century.[72] The monsoon rains in Arizona are highly beneficial but can occasionally be destructive. Climate models project an increase in the frequency of heavy

[67] https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data
[68] https://www.govinfo.gov/content/pkg/FR-2023-01-09/pdf/2023-00158.pdf
[69] https://www.govinfo.gov/content/pkg/FR-2023-01-09/pdf/2023-00158.pdf page 1198 II Summary of Key Context 4th bullet.
[70] https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf page 47.
[71] https://new.azwater.gov/drought/drought-status
[72] Arizona - State Climate Summaries 2022 (ncics.org)

monsoon downpours, especially through atmospheric rivers.[73] Arizona experienced an estimated $10 billion in extreme weather-related damages between the time period of 2010 to 2020.[74]

Mohave County's preparedness for climate change includes being prepared for the possibility of more frequent and violent storms; and when prudent and feasible, designing roadway infrastructure projects for all-weather access especially in and around cities in the County.[75] ADOT has developed an *Asset Management, Extreme Weather, and Proxy Indicator Pilot Project* to address extreme weather associated with climate change.[76] The ADOT extreme weather study has developed some climate tracking and monitoring efforts, but in general, climate resiliency of ADOT assets (roads and bridges) mainly includes designing to more extreme drainage conditions such as bridges and culverts to handle 100-year flood events or 500-year flood events. Management of roadside vegetation to limit fires along roads is also an element for extreme weather management.

Since this Proposed Project does not involve alterations to aviation aircraft type, increase in aircraft usage, or alter flight patterns, climate change impacts are limited to the roadway components of the project.

4.5.3 Environmental Consequences

4.5.3.1 Methodology

This section identifies the sources and estimates of GHG emissions associated with construction of the Proposed Project, as well as the expected reduction in GHG emissions between the Proposed Project and the No Action Alternative as a result of a more direct route. Emissions from construction of the Proposed Project would result from the use of heavy equipment and motor vehicles. Equipment and vehicular use were estimated for RSFP using construction schedules. Emission factors from the EPA Motor Vehicle Emission Simulator (MOVES) model, version 3.04 were used for both nonroad and on-road sources.[77] Emissions for vehicles operating on RSFP were not calculated since this project will not create those automobiles or the vehicle trips generated. While some operational emissions can be expected as part of the Proposed Project from maintenance activities, there currently is not enough data available to calculate the expected GHG emissions from these maintenance activities, and these emissions are negligible when compared to construction emissions.

The White House prepared a technical support document called *Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates* under Executive Order 13990.[78] The best available data for vehicle fleet mix included using 80% light duty passenger vehicles and 20% heavy-duty vehicles to differentiate vehicle mix of traffic volumes on SR 66 and proposed RSFP. These assumptions and the calculated GHG emissions from construction activities, along with the social costs of carbon (SC-CO_2), methane (SC-CH_4), and nitrous oxide (SC-N_2O) have been calculated per metric ton for emission years 2020 to 2050.[79] The discount rate of 3% was utilized for 2025 rates and is consistent with estimates provided by Office of Management and Budget's Circular A-4 guidance for the consumption rate of interest.[80] These cost estimates will be utilized for estimating SC-GHG in U.S. dollars for RSFP. Emission reduction calculations have been determined based on fewer vehicles operating on SR 66 when RSFP is in operation. The difference of traffic volumes

[73] Southwest - Fourth National Climate Assessment (globalchange.gov)
[74] https://www.whitehouse.gov/wp-content/uploads/2021/04/AJP-State-Fact-Sheet-AZ.pdf
[75] https://resources.mohavecounty.us/file/EmergencyManagement/Plans/Working%20Copy%2012-15-21.pdf Section 4.45 pp 84-85.
[76] file:///C:/Users/mark.turner/Downloads/ADOT-Asset-Management-Infrastructure-Resilience-Study-Report%20Final-2020.pdf page 8-16
[77] https://www.epa.gov/moves
[78] https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf
[79] https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf. Tables ES-1, ES-2, ES-3 pp 4-5
[80] https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4/

on SR 66 were calculated. This number was translated into vehicles miles traveled and emissions in metric tons calculated.

4.5.3.2 Thresholds of Significance

The FAA has not identified significant thresholds for GHG emissions.[81] In addition, Arizona and Mohave County also do not have established GHG thresholds.

4.5.4 Comparisons of the Proposed Project and the No Action Alternative

4.5.4.1 Proposed Project

The Proposed Project would generate GHG emissions by the operation of construction equipment, and once constructed, RSFP will become a regional road with Year 2040 total daily volumes ranging from 6,200 to 11,300 vehicles while reducing traffic volumes on SR 66.[82] According to ADOT's Kingman Area Transportation Study, RSFP will enhance regional mobility and provide access to the eastern portion of Kingman as an important infrastructure project.[83] The land around the Airport contains commercial and manufacturing businesses with both rail and road connections. RSFP is being constructed as an additional access to and from a major manufacturing and commercial hub to I-40; once constructed RSFP will become a vital component of east Kingman transportation network providing a roadway crossing over Rattlesnake Wash floodplains and direct access to I-40.

Potential impacts from climate change on the Proposed Project include extreme weather events (e.g., extreme heat, extreme precipitation and flooding, wildfires), which could damage the road and require increased frequency of maintenance. The disturbance and compaction of soil and/or removal of vegetation to construct the road can reduce the natural carbon sequestration potential of these resources (thus, further contributing to climate change). Additionally, more paved surfaces can lead to increased runoff and contaminate nearby surface waters that may already be compromised (in both quantity and quality) by climate change.

Construction:

Table 4.3-3 provides a summary of GHG emissions estimates during construction. It is estimated that the Proposed Project would result in approximately 2,375 metric tons of CO_2(e) in 2023 and 4,198 metric tons CO_2(e) in 2024 during construction. White House guidance for costing per metric ton of CO_2(e) indicates that using a 2025 costing rate (3% discount) of $56 per metric ton would equate to approximately $368,088.00 in SC-$CO_2$ during construction. Construction estimates for N_2O are less than a metric ton (0.08 tons) (see **Table 4.3-3**) and using a 2025 costing rate (discount 3%) of $21,000 per ton of N_2O would equate to $1,680.00 in additional SC-N_2O emissions during construction. Construction estimates for CH_4 are less than a metric ton (0.002 tons) (see **Table 4.3-3**) and using a 2025 costing rate (discount 3%) of $1,700 per metric ton of CH_4 would equate to $4.47 additional costs for SC-CH_4. Combined, the total SC-GHG associated with construction of RSFP is approximately $369,772.47.

4.5.4.2 No Action Alternative

The No Action Alternative would not result in construction activities or a change in land use, and thus would not create GHGs. However, because the No Action Alternative would not construct the new RSFP I-40 TI, the LOS of other I-40 TIs in Kingman and SR 66 would therefore be reduced when compared to the efficiency of this new regional road connecting the Airport with I-40 to the south. These LOS represent inefficiency and delays and therefore, more idling vehicles, longer travel distances, and more traffic congestion which would increase GHG emissions. The existing

[81] FAA Order 1050.1F, Exhibit 4-1 Page 4-5
[82] City of Kingman Change of Access Report Chapter 2 and 4 Addendum Figure 4-2. P5.
[83] ADOT 2011 p 47

climate change trends and indirect effects that are being observed on a regional level would continue to affect the analysis area under the No Action Alternative.

The DCR calculated total daily traffic volumes for the No Action Alternative and RSFP.[84] Using the difference between No Action traffic volumes on SR 66 to conditions on SR 66 with RSFP equates to approximately 30,550 less vehicles on SR 66 daily or 11,150,750 less vehicles per year. A fuel efficiency rate of 22.2 and 8.0 miles per gallon were used for light-duty and heavy-duty vehicles respectively. The distance along SR 66 from Mohave Airport Drive to I-40 is approximately 4.5 miles. This equates to an expected emissions reduction of 28,828 metric tons of CO_2(e) emissions implementing the Proposed Project against the No Action Alternative.

4.5.4.3 Conclusion

The Proposed Project would create GHGs when RSFP is constructed and during operation. As discussed in **Section 4.3**, total emissions for the criteria pollutants are below the *de minimis* levels. Therefore, the Proposed Project would not significantly impact GHG emissions or climate change. Major roadway traffic movements in eastern Kingman will operate more efficiently with RSFP. There are currently no federal, state, or local GHG thresholds of significance related to land use development. Thus, no significant impacts related to Climate have been identified. A SC-GHG cost saving will occur along SR 66 when RSFP is in operation due to better LOS on SR 66 and the I-40 Kingman TI.

The Proposed Project is being designed to manage stormwater flows of Rattlesnake Hill Wash and Rattlesnake Wash when crossed by RSFP and provides another north south roadway connecting to I-40 to help Kingman area travels in the event of extreme precipitation events.

4.5.5 Treatment Measures

4.5.5.1 Avoidance and Minimization Measures

ADOT would implement their treatment measures as identified in **Appendix A.3.a** during construction of the ADOT administered portion of the Proposed Project. The City does not propose any avoidance and minimization measures for GHGs and climate as part of the City administered portion of the Proposed Project. All treatment measures are also combined in **Appendix E**.

4.5.5.2 Mitigation Measures

No mitigation measures are required to reduce Climate impacts as no federal significance thresholds have been implemented or significant impacts identified.

4.6 Hazardous Materials, Solid Waste, and Pollution Prevention

4.6.1 Regulatory Setting

4.6.1.1 Hazardous Materials

Disturbing areas that contain hazardous materials or contaminates can cause significant impacts to soil, surface water, groundwater, air quality, and the organisms using these resources. In addition, exposure to hazardous materials can cause health risks to humans. Four primary federal laws govern the handling and disposal of hazardous materials, chemicals, substances, and wastes. The two statutes of most importance to transportation projects are the Resource Conservation Recovery Act (RCRA) (as amended by the Federal Facilities Compliance Act of 1992) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended (also known as Superfund). RCRA governs the generation, treatment, storage, and disposal of hazardous wastes; CERCLA provides for cleanup of any release of a

[84] Final Design Concept Report for I-40, Rattlesnake Wash Traffic Interchange, URS Corporation, October 2007 Figure 2-6 page 2-5.

hazardous substance into the environment. These laws may extend to past and future landowners of properties containing these materials.

Locations identified as Superfund sites are listed on the National Priorities List (NPL). Deletion of sites from the NPL may occur once all response actions are complete and all cleanup goals have been achieved. Since EPA is the lead agency that enforces federal regulations impacting public health as it relates to the environment, it is responsible for processing deletions with concurrence from the appropriate state. A Partial Deletion site is a portion of an NPL site that has met the cleanup criteria. Rather than wait until cleanup of an entire NPL site is completed, these areas are designated as Partial Deletion sites.[85]

Other federal laws related to hazardous materials include the Hazardous Materials Transportation Act, which regulates the handling and transport of hazardous materials and wastes, and the Toxic Substances Control Act, which regulates and controls the use of polychlorinated biphenyls (PCBs), as well as other chemicals or toxic substances in commercial use. In addition, the air toxin provisions of the CAA give authority to EPA to develop and enforce regulations to protect the public from exposure to airborne contaminants that are known to be hazardous to human health. EPA establishes National Emission Standards for Hazardous Air Pollutants (NESHAP), which include both asbestos and lead.[86] These air toxin regulations specify work practices that must be followed during building demolition and renovations.

At the state level, the Arizona Department of Environmental Quality (ADEQ) Waste Programs Division implements federal and state hazardous waste management laws. The Waste Programs Division is responsible for inspecting facilities that generate hazardous and solid waste, as well as facilities with underground storage tanks (USTs). A remedial program, known as the Water Quality Assurance Revolving Fund (WQARF), is established to facilitate the conservation and cleanup of Arizona drinking water and water resources. WQARF was created under the Arizona Environmental Quality Act of 1986 to support hazardous substance cleanup efforts in the state.[87]

Arizona's Pollution Prevention (P2) program seeks to eliminate or reduce the generation of hazardous wastes and the use of toxic substances. The P2 program requires all industrial facilities that exceed certain thresholds of hazardous waste generation and toxic substance use to analyze potential P2 opportunities and to file an annual P2 plan.

4.6.1.2 Solid Waste

EPA also regulates household, industrial, and manufacturing solid waste under RCRA. RCRA's goals are to protect public health and the environment from the hazards of solid waste disposal; to conserve energy and natural resources through recycling and recovery efforts; to reduce or eliminate waste; and to clean up waste that may have spilled, leaked, or been improperly disposed. Under RCRA Subtitle D, states are encouraged to develop comprehensive plans to manage nonhazardous industrial solid and municipal waste. Subtitle D also establishes criteria for municipal solid waste landfills and prohibits the open dumping of solid waste.

At the state level, Arizona Administrative Code Title 18, Chapter 13, Solid Waste Management regulates solid waste management practices. The County's Solid Waste Management Department is responsible for enforcing regulations pertaining to solid waste disposal units (i.e., landfills, old burn dumps, etc.) within the County limits.

4.6.1.3 Pollution Prevention

Spill prevention, control, and countermeasure (SPCC) plans are required for facilities with certain thresholds of oil storage capabilities under Section 311 of the Clean Water Act (CWA) if there is a

[85] https://www.epa.gov/superfund/superfund-npl-deletion-guidance-and-policy
[86] Per Section 112 of the CAA,
[87] Arizona Revised Statutes (ARS) 49-822

potential for a discharge to reach waters of the U.S. through pathways of spill conveyance (such as a storm drain, drainage ditch, or sheet flow). Thresholds include total aboveground oil storage capacity of 1,320 gallons (or 42,000 gallons or greater if stored in USTs). Tanks and containers with individual oil storage capacity of 55 gallons or greater, and not associated with propulsion of a vehicle (i.e., its gas tank), are included in the determination, as is oil that is distributed from vehicles operating solely within the confines of an airport (Transportation Research Board 2017). In 1990, the Oil Pollution Act amended the CWA to require significant oil storage facilities to prepare and submit a Facility Response Plan to EPA that outlines the facility's plan for addressing a worst-case discharge of oil.

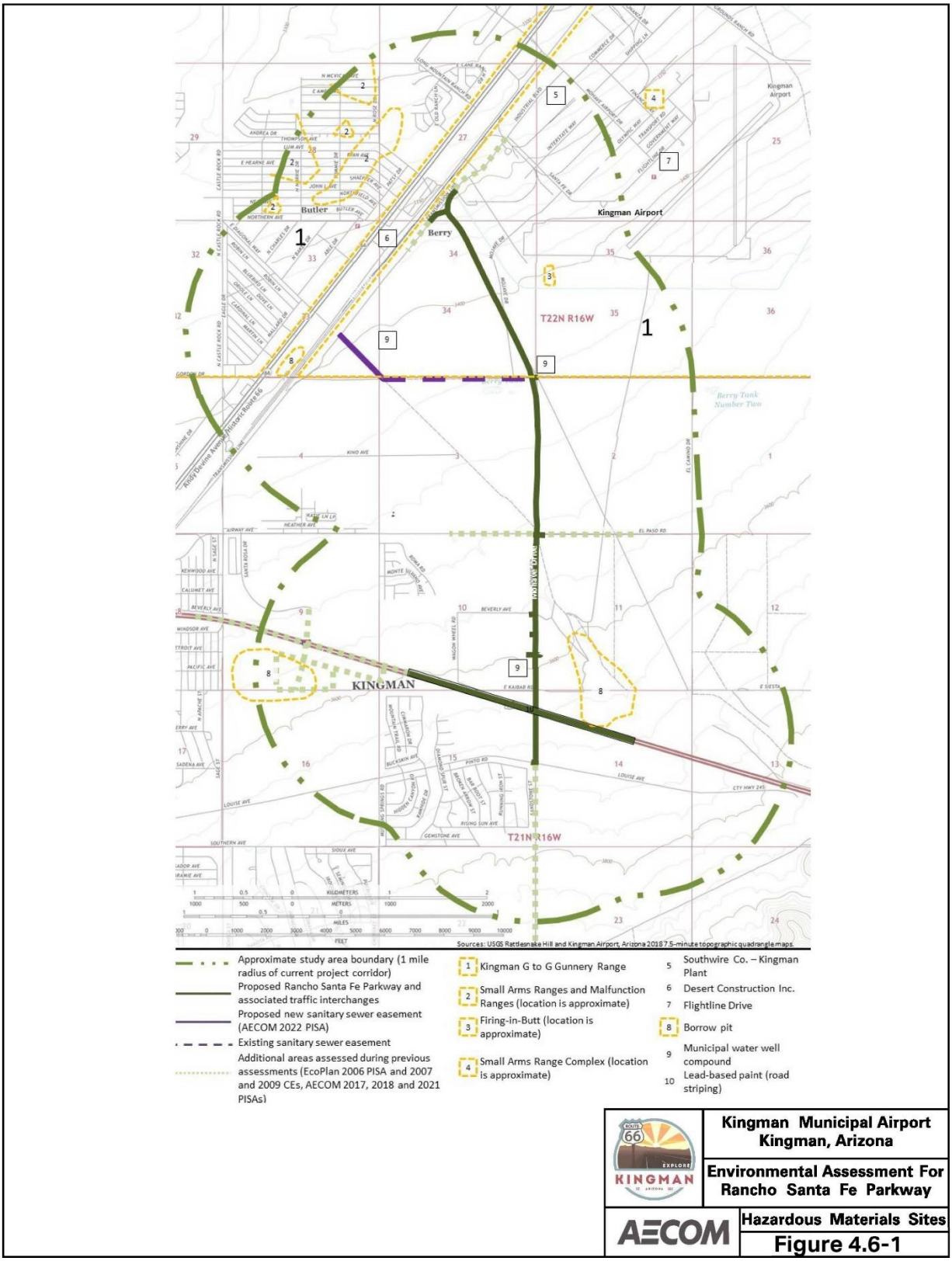
Section 402 of the CWA created the National Pollutant Discharge Elimination System (NPDES) program to authorize point source discharges of pollutants to waters of the U.S. consistent with the CWA. In terms of water pollution, a point source is a single discharge source, such as a pipe coming from a wastewater treatment plant. However, the federal Water Quality Control Act of 1987 amended the CWA to include regulation of certain discharges of pollutants in stormwater runoff under the NPDES program. Federal regulations (Title 40 CFR 122.26) require certain industrial facility owners and/or operators to obtain stormwater discharge permits. The specific types of facilities that need coverage are dependent upon the facility's Standard Industrial Classification Code. In Arizona, NPDES permitting authority has been delegated to ADEQ, as part of its AZPDES program.

Individual construction projects that have a potential for one acre or more of ground disturbance are required to obtain AZPDES coverage under the state's Construction General Permit. Permit conditions typically related to use of the AZPDES Construction General Permit include BMPs to reduce erosion and sedimentation through implementation of a construction-specific SWPPP. The construction SWPPP is a project-specific document which deals primarily with reducing pollutant sources associated with erosion and sediment transfer and chemicals used at construction sites.

4.6.2 Affected Environment

4.6.2.1 Hazardous Materials

The study area for hazardous materials impact assessments includes an area of one mile around the proposed RSFP as shown on **Figure 4.6-1**. Six previous assessments have been performed on land including all or portions of the current study area since 2006. Information regarding hazardous materials sites provided in these previous assessments has been compiled and evaluated to determine the potential to affect the Proposed Project. Hazardous Materials reports are located in **Appendices A.1.d, A.2.d, and A.3.b.**


Butler
Berry
Kingman Airport
KINGMAN
T22N R16W
T21N R16W
Approximate study area boundary (1 mile radius of current project corridor)
Proposed Rancho Santa Fe Parkway and associated traffic interchanges
Proposed new sanitary sewer easement (AECOM 2022 PISA)
Existing sanitary sewer easement
Additional areas assessed during previous assessments (EcoPlan 2006 PISA and 2007 and 2009 CEs, AECOM 2017, 2018 and 2021 PISAs)
1 Kingman G to G Gunnery Range
2 Small Arms Ranges and Malfunction Ranges (location is approximate)
3 Firing-in-Butt (location is approximate)
4 Small Arms Range Complex (location is approximate)
5 Southwire Co. – Kingman Plant
6 Desert Construction Inc.
7 Flightline Drive
8 Borrow pit
9 Municipal water well compound
10 Lead-based paint (road striping)
Sources: USGS Rattlesnake Hill and Kingman Airport, Arizona 2018 7.5-minute topographic quadrangle maps.
Kingman Municipal Airport
Kingman, Arizona
Environmental Assessment For
Rancho Santa Fe Parkway
Hazardous Materials Sites
Figure 4.6-1

Underground water, underground natural gas pipelines, overhead and underground electrical transmission lines, and markers for underground fiber optic cables are located in the study area. No buildings are located within the project corridor. Potential hazardous materials properties noted in the study area include a propane storage facility adjacent to the proposed new sewer easement area, and industrial properties within the airport adjacent to the northern portion of the proposed new road easement. No properties associated with hazardous materials use and storage were noted adjacent to the Proposed Project.

For the performance of a hazardous materials assessment, a risk ranking system (low/moderate/high/indeterminate) was developed that includes several investigation elements. Each element of the investigation process uses a different set of criteria to assess the risk of hazardous materials being present in association with a specific site or location. For a typical hazardous materials assessment, the following investigation elements in arriving at the risk ranking for a given site were utilized:

- Low-risk and no-risk sites are those that have little or no potential for releasing hazardous materials to the soil or groundwater.
- Moderate-risk sites are those that have a moderate potential for releasing hazardous materials to the soil or groundwater.
- High-risk sites are those that have a high potential for releasing hazardous materials to the soil or groundwater or have a recorded release issue.
- Indeterminate-risk sites are those which, at the time of report preparation, did not include sufficient information to include a high, moderate or low ranking. Indeterminate sites often require additional file review to determine the details of any related environmental issues at the site.

Based on a review of historical and regulatory records and physical inspections of the study area, no high-risk sites were identified. Moderate-risk sites were identified and evaluated for the potential to impact the study area, as summarized in **Table 4.6-1**.

Table 4.6-1. Summary of Hazardous Materials Sites in the Study Area

Figure 4.6-1 Cross-Reference	Listing / Address	Distance / Direction	Discussion	Risk	Information Source(s)
1 through 4	Kingman Army Air Field (KAAF), Kingman G to G Gunnery Range, Malfunction Ranges and Small Arms Ranges No address	Study Area is within the boundaries of the KAAF; the nearest remaining mapped areas are approximately 0.25 mile northeast and northwest of the proposed RSFP.	According to information available on the U.S. Army Corps. of Engineers (USACE) Formerly Used Defense Sites (FUDS) website[88], the subject property is mapped within the southwestern portion of the former KAAF property (FUDS Installation ID AZ99799F504300, FUDS unique property number J09AZ0023). In addition, the nearest boundary of the Kingman G to G Gunnery Range FUDS is mapped adjacent across the railroad and U.S. Route 66 to the northwest. These FUDS sites include areas of previously-identified Small Arms Ranges and Malfunction Ranges unexploded ordnance (UXO) sites. According to previous investigations, the subject property was part of the KAAF in the past and the precise locations of ordnance were unknown. The potential for the presence of small arms ordnance exists; however, the findings do not appear to present a significant or immediate risk. **Based on the potential presence of previously unidentified small arms ordnance within the project corridor, these sites were identified as moderate-risk sites.**	Moderate	EcoPlan 2006 [89] AECOM 2018[90] AECOM 2021[91] AECOM 2022[92]
5	Southwire Co. – Kingman Plant (aka General Cable Corp.) 4900 Industrial Park Boulevard (also listed as 4900 Industrial Boulevard)	0.5-mile northeast of the proposed RSFP.	This facility was listed on the Superfund Enterprise Management System (SEMS)-Archive, Arizona Department of Environmental Quality (ADEQ) hazardous waste facilities, and related databases. A preliminary assessment/ site inspection (PA/SI) was performed on the property in 1979 and the facility was assessed by the U.S. Environmental Protection Agency (EPA) in 1983. The facility was assigned no further remedial action planned (NFRAP) status and the file was archived by the EPA in 1993. Several hazardous waste enforcement actions	Low	AECOM 2021[93]

[88] USACE, 2022. FUDS Geographic Information System. <https://www.usace.army.mil/Missions/Environmental/Formerly-Used-Defense-Sites/FUDS-GIS/> (reviewed April 7, 2022).
[89] EcoPlan 2006. Preliminary Initial Site Assessment, I-40, Rattlesnake Wash TI, STP-040-B(ASL), EcoPlan 05-854, TRACS Number 040 MO 57 H6814 01L p. 3-4.
[90] AECOM 2018. Technical Memorandum, Preliminary Initial Site Assessment (PISA), Rancho Santa Fe Parkway Traffic Interchange pgs. 10 and 18.
[91] AECOM 2021. Technical Memorandum, Preliminary Initial Site Assessment (PISA), Rancho Santa Fe Parkway Traffic Interchange pgs. 11 and 15.
[92] AECOM 2022. Preliminary Initial Site Assessment (PISA), Rancho Santa Fe Parkway Improvements Project, Sanitary Sewer Easement, Kingman Municipal Airport, pgs. 8, 9, 12, and 13.
[93] AECOM 2021. Technical Memorandum, Preliminary Initial Site Assessment (PISA), Rancho Santa Fe Parkway Traffic Interchange p 10.

Table 4.6-1. Summary of Hazardous Materials Sites in the Study Area

Figure 4.6-1 Cross-Reference	Listing / Address	Distance / Direction	Discussion	Risk	Information Source(s)
			were reported and all of the enforcement actions were listed as closed. **This facility was initially considered a moderate risk to the project corridor, based on a larger project footprint in the past. Based on the distance of this site from the current project footprint and its NFRAP status, this listing is considered low risk to the current project corridor.**		
6	Desert Construction Inc. 4490 East Highway 66	Adjacent to the west-northwest of the proposed RSFP, between the railroad tracks and SR 66	The facility was listed with two underground storage tanks (USTs) permanently removed in 1992 and with permitted aboveground storage tanks (ASTs). This facility was not listed on a database indicative of a release. A screening plant, which may have been associated with this facility, was also mapped along I-40 under this name. However, the screening plant was not mapped adjacent to the proposed new right-of-way, and it was not listed on a database indicative of a release. **This facility was initially considered a moderate-risk to the project corridor, based on a larger project footprint in the past. Based on the location (across the railroad tracks) and the lack of a reported release, this listing is considered low-risk to the current project corridor.**	Low	AECOM 2018[94] and AECOM 2021[95]
7	Flightline Drive 7000 Flightline Drive	0.6-mile northeast of the proposed RSFP	A PA/SI was performed on this property in 1995 under the Water Quality Assurance Revolving Fund (WQARF) program. No further details were provided. Although the precise location within the airport could not be determined, this listing was not identified as within the WQARF program or on another database indicative of a release. In addition, no facilities within the airport associated with chemical use or storage, and no areas involving remedial actions were identified within 0.25 mile of the current project corridor. **This facility was initially considered an indeterminate risk to the project corridor. Based on the distance from**	Low	AECOM 2018[96]

[94] AECOM 2018. Technical Memorandum, Preliminary Initial Site Assessment (PISA), Rancho Santa Fe Parkway Traffic Interchange p 10-11.
[95] AECOM 2021. Technical Memorandum, Preliminary Initial Site Assessment (PISA), Rancho Santa Fe Parkway Traffic Interchange p 11.
[96] AECOM 2018. Technical Memorandum, Preliminary Initial Site Assessment (PISA), Rancho Santa Fe Parkway Traffic Interchange p 9.

Table 4.6-1. Summary of Hazardous Materials Sites in the Study Area

Figure 4.6-1 Cross-Reference	Listing / Address	Distance / Direction	Discussion	Risk	Information Source(s)
			the current project corridor, this listing is considered low-risk.		
8	Borrow pits No address	Adjacent to the north of the project corridor on I-40, approximately 0.2 mile east and west of the proposed RSFP and proposed new sewer easement, respectively	Borrow pits were identified on historical maps and aerial photographs adjacent to and in the area of the RSFP, traffic interchange with Interstate 40 (I-40), and in the area of the proposed new sewer easement. Borrow pits are generally areas of shallow sand and gravel mining. The materials were likely excavated during construction of I-40, Route 66, surface streets and/or private properties. The potential exists for borrow pits to be used as landfill after excavations have ceased. However, no indications of filling were identified for the borrow pits in the areas of the project corridor, and no hazardous materials were identified associated with these areas. **Based on reviewed information, these features are considered low-risk to the project corridor.**	Low	EcoPlan 2006[97] AECOM 2018[98] AECOM 2021[99] AECOM 2022[100]
10	Asbestos and lead-based paint	Within project corridor along I-40	An asbestos survey was performed on load bearing structures. No asbestos was detected. Lead-based paint was detected in yellow road striping on I-40. **Based on reviewed information, these features are considered moderate-risk to the project corridor.**	Moderate	ADOT 2007[101]

The RSFP and hazardous materials sites identified are depicted in **Figure 4.6-1**. Remaining sites identified in the area of the study area are considered to be low-risk or no-risk in relation to hazardous materials. A detailed description of hazardous materials sites identified is included in the PISA Technical Memorandum included as **Appendix A1d, A2.d, and A3.b**.

4.6.2.2 Solid Waste

The study area, same as used for hazardous materials, was evaluated for impacts associated with solid waste. Site inspections were performed of the proposed areas of disturbance to identified sources of solid waste, and regulatory records were reviewed to identify solid waste facilities, such as landfills, within 0.5 miles of the study area during previous PISAs.[102] Scattered trash and debris, likely the result of illegal dumping or wind or water transport, was observed

[97] EcoPlan 2006. Preliminary Initial Site Assessment, I-40, Rattlesnake Wash TI, STP-040-B(ASL), EcoPlan 05-854, TRACS Number 040 MO 57 H6814 01L p. 2
[98] AECOM 2018. Technical Memorandum, Preliminary Initial Site Assessment (PISA), Rancho Santa Fe Parkway Traffic Interchange p 11.
[99] AECOM 2021. Technical Memorandum, Preliminary Initial Site Assessment (PISA), Rancho Santa Fe Parkway Traffic Interchange p 13.
[100] AECOM 2022. Preliminary Initial Site Assessment (PISA), Rancho Santa Fe Parkway Improvements Project, Sanitary Sewer Easement, Kingman Municipal Airport, pgs. 5, 11, and 13-16.
[101] ADOT 2007. Categorical Exclusion page 19-20-found in Appendix A
[102] 2006 EcoPlan PISA (pages 2 to 4); 2017 AECOM PISA (pages 4 to 7, and 11); 2018 AECOM PISA (pages 5, 7 and 13); 2021 AECOM PISA (pages 5 to 7, 15 and 16); 2022 AECOM PISA (pages 4, 11 and 13).

within and adjacent to the study area during site inspections performed during the previous assessments. The trash and debris noted included glass, paper, plastic, and wood scrap, and scattered discarded automotive tires. Several soil, landscape debris, gravel, and asphalt debris piles were also noted in the vicinity of the study area. The trash and debris were described as minimal in nature and limited to the ground surface. No indications of buried debris were noted in the study area. No chemical containers or indications of spills or leaks such as staining or unusual odors) were noted in the areas of the trash and debris.

The City of Kingman Solid Waste Department oversees solid waste transfer services within the City and at the Airport, which is a city-owned facility. The City is responsible for enforcing solid waste disposal (i.e., recycling, pick-up schedule, etc.). Waste from the Kingman area is transported to the Cerbat Sanitary Landfill, located approximately 12 miles northwest of the airport in Mohave County.

4.6.2.3 Pollution Prevention

The study area is not currently covered by an AZPDES permit or SWPPP as it is undeveloped.

4.6.3 Environmental Consequences

4.6.3.1 Methodology

Hazardous Materials

Federal and state online databases related to the presence and/or cleanup of hazardous materials, as well as available information on known hazardous conditions, have been accessed relative to the study area. The potential for the Proposed Project to create or increase the risk of exposing surrounding populations or the environment to hazardous materials was reviewed in light of existing regulations for handling, storage, and disposal of hazardous materials and waste. Asbestos and lead-based paint surveys were performed in 2008 on load bearing structures road striping along I-40 on and west of the study area.

Solid Waste

Potential solid waste impacts were addressed qualitatively since this is a roadway project that will not generate solid waste beyond construction impacts and illegally discarded trash along RSFP during operations. Qualitative analysis includes review of generation of different types of solid waste and discussion of violations of federal, state, tribal, or local laws.

Pollution Prevention

Impacts related to pollution prevention for the Proposed Project are addressed qualitatively in the following analysis and account for the City's existing pollution prevention practices.

4.6.3.2 Thresholds of Significance

The FAA has not established a significance threshold for this environmental impact category.[103]

Hazardous Materials

The FAA considers Proposed Project's potential to:

- Violate applicable federal, state, tribal, or local laws or regulations regarding hazardous materials management;
- Involve a contaminated site, including, but not limited to, a site listed on the NPL;
- Produce an appreciably different quantity or type of hazardous waste; or

[103] FAA Order 1050.1F, Exhibit 4-1 Page 4-7

- Adversely affect human health and the environment.[104]

Solid Waste

The FAA considers the Proposed Project's potential to:

- Violate applicable federal, state, tribal, or local laws or regulations regarding solid waste management; or
- Generate an appreciable different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity.[105]

Pollution Prevention

The FAA considers the Proposed Project's potential pollution to adversely affect human health and the environment.[106]

4.6.4 Comparisons of the Proposed Project and the No Action Alternative

4.6.4.1 Proposed Project

The Proposed Project would use hazardous materials, such as fossil fuel for machinery and equipment during construction (see **Appendix B Tables B.1 and B.2**). Solid waste (earth, concrete, asphalt, and rebar) would be generated during construction that would be disposed of in accordance with federal, state, and local laws at the Cerbat Landfill. No asbestos was detected. Lead-based paint was detected in yellow road striping on I-40; white road striping tested negative for lead-based paint. No special handling requirements are necessary for materials received at Cerbat Landfill. ADOT has an independent pavement preservation project that will dispose of I-40 yellow stripping prior to RSFP. New roadway striping will utilize paint without lead.

All construction activities would be subject to existing permit procedures for the handling, transporting, and disposal of hazardous materials. Therefore, the use of hazardous substances during construction activities would not adversely affect human health and the environment.

4.6.4.2 No Action Alternative

The No Action Alternative would not require ground disturbance and would not have impacts related to potential hazardous materials, solid waste, or pollution prevention.

4.6.4.3 Conclusion

Significant impacts with respect to hazardous materials and solid waste would not occur when comparing the impacts from the Proposed Project to the No Action Alternative. Impacts related to the Proposed Project will be readily managed through pre-construction planning and permitting, and construction operations in accordance with current regulatory requirements. The Cerbat Landfill has enough future area and capacity in its currently used cell to accommodate solid waste from the Proposed Project. No significant impacts related to pollution prevention would occur; existing regulations are in place to prevent impacts related to pollution. No remediation activities would be interfered with by either the Proposed Project or the No Action Alternative.

4.6.5 Treatment Measures

4.6.5.1 Avoidance and Minimization Measures

ADOT would implement their treatment measures as identified in **Appendix A.3.a** during construction of the ADOT administered portion of the Proposed Project. The City does not propose

[104] FAA Order 1050.1F, Exhibit 4-1 Page 4-7
[105] FAA Order 1050.1F, Exhibit 4-1 Page 4-7
[106] FAA Order 1050.1F, Exhibit 4-1 Page 4-7

any avoidance and minimization measures as part of the City administered portion of the Proposed Project. All treatment measures are also combined in **Appendix E**.

4.6.5.2 Mitigation Measures

Mitigation is not required for the Proposed Project.

4.7 Historical, Architectural, Archeological, and Cultural Resources

4.7.1 Regulatory Setting

The National Historic Preservation Act of 1966 (NHPA), the Archeological and Historic Preservation Act of 1974, the Archeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act of 1990 guide the determination of a project's environmental impact to historical and cultural resources. In addition, the Antiquities Act of 1906, the Historic Sites Act of 1935, and the American Indian Religious Freedom Act of 1978, also protect historical, architectural, archeological, and cultural resources.

The Keeper of National Register of Historic Places uses the following criteria when listing cultural resources. "The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded, or may be likely to yield, information important in prehistory or history."[107]

4.7.2 Affected Environment

The study area included the RSFP, where cultural resources could be affected by ground disturbance, and a surrounding buffer area one-mile-wide where cultural resources could be affected by visual or other proximity impacts (see **Figure 4.4-1**).

Eight cultural resource studies conducted between 1980 and 2014 covered approximately 99% of the study area of potential ground disturbance and identified one cultural resource eligible for the National Register of Historic Places (NRHP) (**Appendix D.3**). (NRHP-listed and eligible properties are referred to as *historic properties*.) This cultural resource identified is a former segment of U.S. Highway 93 that remains in use as Louise Avenue and is eligible for the NRHP under Criterion D for its potential to yield important information. Three other cultural resources in the study area are not eligible for the NRHP (see **Table 4.7-1**).

[107] 36 CFR 60.4

Table 4.7-1. Summary of Cultural Resources in the Area of Potential Effects

Count	Cultural Resource	Type	NRHP Status, Eligibility Criteria[1]
Subject to Ground Disturbance			
1	U.S. Highway 93	historic paved road, upgraded and in use	eligible, Criterion D
2	AZ G:13:47(ASM)	historic domestic trash	not eligible
3	AZ G:13:48(ASM)	abandoned historic road	not eligible
4	AZ G:13:52(ASM)	historic domestic trash	not eligible
In Buffer Area and Subject to Proximity Impacts[2]			
1	Atchison, Topeka, & Santa Fe Railroad	historic railroad, in use as BNSF Railway	eligible, Criteria A and D
2	Beale Wagon Road, AZ I:14:5(ASM)	historic (1857-1859) wagon road	eligible, Criteria A and B
3	Kingman Army Airfield	World War II training facility; radio tower listed in NRHP is not in the Area of Potential Effects	eligible, Criteria A, C, and D
4	Route 66	historic paved highway, upgraded and in use	eligible, Criteria A and C
5	AZ G:9:6(ASM)	abandoned historic wagon road	unevaluated
6	AZ G:9:7(ASM)	abandoned historic wagon road	unevaluated
7	Gunnery Range, AZ G:9:9(ASM)	gunnery range associated with Kingman Army Airfield	unevaluated
8	AZ G:9:15(ASM)	historic domestic trash and privy	unevaluated
9	AZ G:13:3(ASM)	abandoned historic wagon road	unevaluated
10	AZ G:13:23(ASM)	historic domestic trash	unevaluated
11	AZ G:9:19(ASM)	World War II civilian housing project (buildings removed)	not eligible
12	AZ G:13:7(ASM)	historic domestic trash	not eligible
13	AZ G:13:8(ASM)	historic livestock facility	not eligible
14	AZ G:13:26(ASM)	historic domestic trash	not eligible
15	AZ G:13:27(ASM)	historic domestic trash	not eligible
16	AZ G:13:28(ASM)	historic domestic trash	not eligible
17	AZ G:13:38(ASM)	historic domestic trash	not eligible
18	AZ G:13:42(ASM)	historic domestic trash	not eligible
19	AZ G:13:43(ASM)	historic domestic trash	not eligible
20	AZ G:13:46(ASM)	historic livestock facility and domestic trash	not eligible
21	AZ G:13:53(ASM)	historic domestic trash	not eligible
22	AZ G:13:54(ASM)	historic domestic trash	not eligible

Notes:

[1] Determined in consultation with the State Historic Preservation Officer (SHPO).

[2] The World War II radio tower at the Kingman Army Airfield, which is listed in the NRHP, is outside the buffer for visual impacts.

Cultural resource surveys have covered approximately one-fourth of the buffer surrounding the study area of potential ground disturbance and recorded four historic properties and 12 cultural resources not eligible for the NRHP (see **Appendix D.3**). The NRHP eligibility of six other cultural resources in the buffer has not been evaluated. (The World War II radio tower at the Kingman Army Airfield is listed in the NRHP but is more than one mile from RSFP and would not be affected.)

The four NRHP-eligible properties include the historic Beale Wagon Road, Atchison, Topeka & Santa Fe Railroad (now BNSF Railway), Kingman Army Airfield (now Kingman Municipal Airport),

and Route 66 (within Kingman city limits called Andy Devine Avenue). The railroad, Airport, and highway remain in use and are upgraded to modern standards. The unevaluated resources include traces of three unnamed historic wagon roads, an abandoned gunnery range associated the World War II use of the Kingman Army Airfield, and two deposits of historic trash (one with an abandoned privy).

4.7.3 Environmental Consequences

4.7.3.1 Methodology

Impacts may occur when a project causes an adverse effect on a property that has been identified (or is unearthed during construction) as having historical, architectural, archeological, or cultural significance. Impacts were assessed using the following definition of an adverse effect. An adverse effect is a direct or indirect alteration of any of the characteristics of a historic property that qualify the property for the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.[108] The criteria of adverse effect were applied to four historic properties as well as to six properties whose NRHP eligibility has not been formally evaluated but were considered to be eligible for the purposes of assessing impacts of the Proposed Project.

4.7.3.2 Thresholds of Significance

FAA has not established a significance threshold for this environmental impact category, but a factor to consider is if a proposed action would result in a finding of adverse effect through the Section 106 process.[109]

4.7.4 Comparison of the Proposed Project and the No Action Alternative

4.7.4.1 Proposed Project

The segment of historic U.S. Highway 93 has been paved to the west of the Proposed Project and is a dirt road to the east. The FAA determined, and the SHPO concurred, that the Proposed Project would not adversely affect the road's potential to yield important information (see **Appendix D.3**).

Of the 10 historic properties recorded in the buffer around the study area (see **Table 4.7-1**), eight are buildings or structures that would be sensitive to visual impacts that could alter the feeling or setting of those properties. The other two historic properties are archaeological sites with potential to yield important information and would not be affected by any potential proximity impacts because their feeling and setting are not characteristics that make them NRHP eligible. Kingman Army Airfield, Atchison, Topeka & Santa Fe Railroad, and SR 66 remain in use and have been upgraded to modern standards. Changes in their settings would not detract from their current level of historic integrity for feeling or setting. Residential developments have encroached on the Beale Wagon Road, three unnamed wagon roads, and the gunnery range and block views from them to the Proposed Project and preclude any proximity impacts that could alter their integrity.

The FAA determined the Proposed Project would result in "no adverse effect" on historic properties. The SHPO agreed that the inventory and evaluation of cultural resources was adequate and concurred with FAA's finding of no adverse effect (see **Appendix D.3**).

4.7.4.2 No Action Alternative

The No Action Alternative would have no adverse effect on historic properties.

[108] 36 CFR 800.5(a)(1)
[109] FAA Order 1050.1F, Exhibit 4-1 Page 4-8

4.7.4.3 Conclusion

No impacts to known historical, architectural, archeological, or cultural resources would occur due to the Proposed Project or the No Action Alternative. However, impacts to unknown cultural resources or the unanticipated discovery of human remains are always a possibility during construction.

4.7.5 Treatment Measures

4.7.5.1 Avoidance and Minimization Measures

ADOT would implement their treatment measures as identified in **Appendix A.3.a** during construction of the ADOT administered portion of the Proposed Project. The City would implement the following treatment measures as part of the City administered portion of the Proposed Project.

The following BMPs are City treatment measures provided so that the construction activities can comply with cultural resource requirements. All treatment measures are also combined in **Appendix E**.

- If unidentified historic properties are discovered or if the undertaking affects known historic properties in unanticipated ways prior to the release of federal land obligations at the Airport, the FAA would follow procedures for discoveries (36 CFR 800.13[b][1]). If such discoveries are made after the anticipated release of those land obligations, the City and ADOT would follow applicable state laws regarding discoveries.

4.7.5.2 Mitigation Measures

Mitigation is not required for the Proposed Project.

4.8 Land Use

4.8.1 Regulatory Setting

The City, as a recipient of prior FAA grants, is required to provide the FAA written assurance that they have and would take appropriate action, including the adoption of zoning laws, to restrict the use of land next to or near the Airport to uses that are compatible with normal airport operations.[110] The City prepared a Land Assurance Letter under 49 U.S.C. § 47107(a)(10) that appropriate action, including the adoption of zoning laws, will be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft (see **Appendix D.6**). Airports are required to have an updated ALP. The City of Kingman Ordinance No. 1924 (Zoning Code) has zoning authority over the land in the study area.[111]

4.8.2 Affected Environment

The study area for land use is the RSFP, and a one-mile buffer (see **Figure 4.4-1**). **Table 4.8-1** identifies the landowners associated with RSFP and the amount of land required as part of the RSFP project.

[110] 49 USC section 47107(a)(10)
[111] https://www.cityofkingman.gov/home/showpublisheddocument/210/637617063810470000

Table 4.8-1. Land Management Associated with RSFP

Landowner	Acres
City of Kingman	67.3
Private	63.2
Arizona State Trust	0.7
Total Acres	**131.2**

The Proposed Project is partially located on land owned by the Airport and designated for aeronautical use. The Airport's development objectives are documented in the Airport Master Plan dated May 2021 (City of Kingman 2021). The Airport is located on Mohave County zoned lands, while lands south of the airport are managed by City of Kingman zoning ordinances. The City Council passed Resolution No. 5277 (dated June 2, 2020) setting aside and establishing roadway and drainage easements for RSFP within the Airport.[112]

According to the Kingman General Plan Projected Land Use Map, the study area contains undeveloped lands with "Manufacturing Industrial" uses identified on Airport property, with mixed residentially zoned land uses south of the Airport, and community commercial zoned land uses around I-40.[113] Desert Willow Elementary School and White Cliffs Middle School are located within the study area north of Airway Avenue along Prospector Street and approximately 0.7 mile west from the proposed RSFP.

The Mohave County General Plan (2015) identifies the airport property as "Heavy Industrial" which would include manufacturing, industrial/warehouse, and residential south of the airport near I-40.[114]

Both general plans identify a desire to promote economic growth and provide infrastructure for residents to work and learn near their homes (Mohave County 2015). In addition, the area surrounding the Airport is identified as a target area for new industrial, manufacturing, and commercial development (City of Kingman 2014; Mohave County 2015). The City of Kingman General Plan identifies future lands within the study area as a mixture of undeveloped, industrial, commercial, and residential uses.[115]

Both general plans identify goals and objectives to accommodate current and future growth, promote economic development and improve infrastructure to support manufacturing and commercial industries. The City of Kingman General Plan's Transportation Element[116] and the Mohave County General Plan[117] reference the City KATS for proposed infrastructure projects. The KATS study recommended the RSFP as a roadway improvement project for a part of the County that does not have well-defined streets.[118]

Existing overhead and underground utilities and pipelines are located within the study area; however, no conflicts are anticipated.[119]

[112] https://www.cityofkingman.gov/home/showpublisheddocument/4227
[113] https://www.cityofkingman.gov/home/showpublisheddocument/2861/636830711972700000
[114] Mohave County 2015, Exhibit VI.16 Kingman Area Detailed Land Use Diagram p. 85) (https://www.cityofkingman.gov/home/showdocument?id=292
[115] https://www.cityofkingman.gov/home/showpublisheddocument/2861/636830711972700000
[116] City of Kingman General Plan Transportation Element p 27. https://www.cityofkingman.gov/home/showdocument?id=292
[117] Mohave County General Plan Policy 49.4 page 134 https://prism.lib.asu.edu/items/42411
[118] ADOT Kingman Area Transportation Study 2011 p 47. Found in Appendix A.4.d
[119] ADOT CE 2007 Table 4-8 p 4-12. Found in Appendix A.1.a

4.8.3 Environmental Consequences

4.8.3.1 Methodology

The City of Kingman General Plan Update 2030 (City of Kingman 2014), City KATS Update (ADOT 2011), and the Mohave County General Plan (Mohave County 2015) were reviewed to determine existing conditions and future compatibility.

4.8.3.2 Thresholds of Significance

The FAA has not established a significance threshold for land use, and the FAA has not provided specific factors to consider in making a significant determination for land use in Exhibit 4-1 of FAA Order 1050.1F. The determination whether significant impacts exist in this category is normally dependent on significance of the other impact categories. Land use compatibility with the Proposed Project is mostly associated with potential noise impacts, as discussed in **Section 4.10**.

4.8.4 Comparisons of the Proposed Project and the No Action Alternative

4.8.4.1 Proposed Project

Land use in the study area was evaluated to determine whether the Proposed Project would cause disruption of adjacent land use or cause non-conformity with local land use or zoning. Redesignation of approximately 42.6 acres of Airport property from "aeronautical" use to "non-aeronautical" use is compatible with existing and future land use identify by Kingman and Mohave County general plans and the Airport Master Plan (City of Kingman 2021).[120]

The City has been experiencing a high level of growth and development over the past ten years. ADOT's KATS study indicates that RSFP has a specific need to alleviate congestion.[121] Therefore, the permanent easement and PUE (sewer line) for the Proposed Project is compatible with both City of Kingman and Mohave County general plans in the southern portion of the study area. The Proposed Project is compatibilities with land use policy.

4.8.4.2 No Action Alternative

The No Action Alternative would not construct the RSFP or associated facilities and would therefore not change existing land use designated for aeronautical use. As a result, there would be no direct impacts to current or future land uses under the No Action Alternative.

4.8.4.3 Conclusion

Both the Proposed Project and the No Action Alternative are compatible with land use policy. The County's development approval process would ensure that future development is consistent with its Zoning Ordinance and land use policies.

4.8.5 Treatment Measures

4.8.5.1 Avoidance and Minimization Measures

ADOT would implement their treatment measures as identified in **Appendix A.3.a** during construction of the ADOT administered portion of the Proposed Project. The City does not propose any avoidance and minimization measures as part of the City administered portion of the Proposed Project. All treatment measures are also combined in **Appendix E**.

4.8.5.2 Mitigation Measures

Mitigation is not required for the Proposed Project.

[120] City of Kingman Airport Master Plan P3-48.
[121] ADOT 2011 Section 4.3.2 p 31. Found in Appendix A.4.d

4.9 Natural Resources and Energy Supply

This environmental impact category evaluates the natural resource consumption of the Proposed Project and use of energy supplies. The consumption of these resources results from construction, operation, and/or maintenance of the Proposed Action.

4.9.1 Regulatory Setting

The federal government's commitment to sustainability in terms of natural resources and energy usage has been reaffirmed through Executive Order 13834, *Efficient Federal Operations*, which sets goals for all federal agencies to promote energy conservation, efficiency, and management. Agencies are also tasked to prioritize actions to reduce waste, cut costs, and enhance the resilience of federal infrastructure and operations.

4.9.2 Affected Environment

The study area for natural resources and energy supply is Mohave County. The City provides water to the Airport and surrounding residential and commercial development. The City gets their water from a groundwater source. Both electric and natural gas service in the study area is provided by UniSource Energy Services. Minimal demand for water and energy supply currently exists within the project area.

4.9.3 Environmental Consequences

4.9.3.1 Methodology

Impacts to natural resources and energy supply are determined by comparing the supply stream with future demand.

4.9.3.2 Thresholds of Significance

The FAA has not established a threshold of significance for this environmental impact category.[122] However, a factor to consider is if the Proposed Project would have the potential to cause demand to exceed available or future supplies of natural or energy resources.

4.9.4 Comparisons of the Proposed Project and the No Action Alternative

4.9.4.1 Proposed Project

Water is used to control construction dust and would be provided using portable water tanks and water trucks supplied by the contractor using approved local water sources. Fossil fuel, gravel, asphalt, concrete, steel, and earthwork are all associated with the construction of the new roadway. The use of these types of materials by the RSFP (which includes the Proposed Federal Action) alternative would also be subject to the market factors of supply and demand. Electricity from the local power grid is not anticipated to be used during construction. Lighting would be installed at the RSFP interchange with I-40 in accordance with ADOT's Traffic Engineering Guidelines and Processes Section 700 Illumination. Besides two traffic signals at the RSFP TI ramps, no other roadway lighting or traffic signals are proposed. Construction of RSFP will not occur at nighttime; therefore, no temporary artificial lighting is proposed. Fuel consumption during construction is detailed in **Appendix B** and is not anticipated to strain local fuel supplies. RSFP (Proposed Project) includes lighting at the I-40 TI which would be the financial responsibility of ADOT. Other than water needed for construction, this project does not impact water supplies.

The use of water, fossil fuel, and electricity by the Proposed Project would not create a demand in water, fuel, or energy consumption for the City and County, and there is no indication that water, fossil fuel, or electricity would be in short supply. RSFP would provide a more direct route to I-40

[122] FAA Order 1050.1F Exhibit 4-1 page 4-8

from industrial areas and therefore would have minor positive impacts on fuel efficiency of the traveling public when compared to the No Action Alternative.

4.9.4.2 Conclusion

No impacts related to water demand, energy demand, or other consumable natural resources would result from the No Action Alternative. Under the No Action Alternative, the travel reduction would not occur, which does have minor impacts on fuel use.

The construction and operation of the Proposed Project when compared to the No Action Alternative is not expected to create a demand that would exceed available or future water or other natural resource or energy supplies and, thus, not have impacts to the region.

4.9.5 Treatment Measures

4.9.5.1 Avoidance and Minimization Measures

ADOT would implement their treatment measures as identified in **Appendix A.3.a** during construction of the ADOT administered portion of the Proposed Project. The City does not propose any avoidance and minimization measures as part of the City administered portion of the Proposed Project. All treatment measures are also combined in **Appendix E**.

4.9.5.2 Mitigation Measures

Mitigation is not required for the Proposed Project.

No mitigation required.

4.10 Noise and Compatible Land Use

4.10.1 Regulatory Setting

Noise is generally defined as any loud or undesired sound. Noise levels are expressed in decibels (dB). Since the human ear does not resound equally to all frequencies (or pitches), measured noise levels (in dB at standard frequency bands) are often adjusted or weighted to correspond to the frequency response of human hearing and the human perception of loudness. The weighted sound level corresponding to the human ear is designated as the A-weighted sound in decibels, or dBA.[123]

Typical sound levels experienced by people range from about 40 dBA, the daytime levels in a typical quiet living room, to 85 dBA, the approximate level occurring near the sidewalk adjacent to heavy traffic. Generally, changes in noise levels of three dBA will be barely perceived by most listeners, whereas 10 dBA change normally is perceived as a doubling of noise levels.[124]

The Proposed Project would not result in any changes to aviation operations or land use changes in the 65 DNL noise contour.

The Proposed Project is limited to roadway transportation features with no potential for aviation noise impacts. Therefore, the noise analysis for this Environmental Assessment utilizes FHWA regulations and guidelines to assess traffic and construction noise impacts.

Regulations for evaluating highway traffic and construction noise are detailed in 23 C.F.R. 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. FHWA regulations require consideration of noise abatement mitigation for projects. The regulations identified seven activity categories listed on **Table 4.10-1**.

[123] ADOT Noise Analysis Technical Report 2007 p3 found in Appendix A.1.e
[124] ADOT Noise Analysis Technical Report 2007 p3 found in Appendix A.1.e

State transportation agencies are required to establish how they will implement the requirements of the FHWA noise standards. A noise analysis was completed by ADOT in 2007 in accordance with the federal regulations and ADOT policies in place on the date of public knowledge for the ADOT NEPA document (see **Appendix A.1.e**).

Mohave County is the local authority for noise standard and developed noise ordinance called the Mohave County Noise Ordinance 2016-03 (Mohave County Code of Ordinances Part II Zoning § 37.W.2.f).[125] Mohave County Zoning Ordinance Section 37.W.2.f specific to noise states "No noise or vibration (other than normal vehicular traffic) shall be permitted which is discernible on neighboring residential sites, to the unaided human senses for three minutes or more duration in any one hour of the day between the hours of 7:00 a.m. to 7:00 p.m. or for thirty seconds or more duration in any one hour between the hours of 7:00 p.m. to 7:00 a.m.".

4.10.2 Affected Environment

The study area for noise is the project area and a one mile of surrounding land (see **Figure 4.4-1**). Noise sensitive areas within the study area include residential and educational facilities. Noise sensitive areas are located south of I-40 proposed RSFP TI and north of Southern Avenue. North of I-40 there are no sensitive receivers (no development) within 1,300 feet (0.25 miles) of the RSFP components; two schools are located north of I-40 and 0.6 miles west of RSFP near Airway Avenue and Prospector Street; and residences 0.25 miles north of Industrial Boulevard and across the BNSF railroad and Route 66. No churches are located within the study area.

The existing noise environment in the study area is characterized as rural (zoned residential) and industrial development (zoned industrial park and airport), dominated by trains, motor vehicle traffic on I-40, SR 66, high winds, and air traffic noise.[126]. In 2006, ADOT measured the existing noise in the study area near I-40 as between 49 and 59 dBA.[127] As discussed in **Table 4.10-1**. Noise Abatement Criteria (NAC) Land Use Categories, the residentially zoned areas are NAC Activity Category B, and the industrial park and airport areas are NAC Activity Category F with all undeveloped areas Category G.

4.10.3 Environmental Consequences

4.10.3.1 Methodology

The FHWA Procedures for Abatement of Highway Traffic Noise and Construction Noise (23 CFR 772) and the ADOT Noise Abatement Policy (ADOT 2017) were used to determine noise impacts for non-aircraft sources. (Aircraft noise was considered and dismissed in **Table 4.2-1**). Noise analysis evaluated the potential for short-term (construction) or long-term (operational) changes in noise from the Proposed Project in relation to the presence of noise-sensitive areas (receptors) within the study area. A list of construction equipment and hours are listed in **Appendix B1**. A noise analysis was completed to determine whether the Proposed Project would approach or exceed the Noise Abatement Criteria (NAC) for each specific land use in the study area (see **Appendix A.1.e and A.3.c**).

[125] http://mohavecounty-az.elaws.us/code/coor_ptii_sec37.w
[126] Kingman Airport Master Plan. https://www.kingmanairport.com/home/showpublisheddocument/5331/637618698391870000 P. 5-25 and 5-26.
[127] Appendix A.1.e Table 2. Page 15

Table 4.10-1. Noise Abatement Criteria Land Use Categories

Activity Category	Activity $L_{eq}(h)$	Criteria[2] $L_{10}(h)$	Evaluation location	Description of Activity Category
A	57	60	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	70	Exterior	Residential
C	67	70	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) site, schools, television studios, trails, and trail crossings.
D	52	55	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E[3]	72	75	Exterior	Hotels, motels, offices, restaurants/bar, and other developed lands, properties or activities no included in A-D or F.
F	None	None		Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	None	None		Undeveloped lands without an issued building permit.

Notes:
[1] Land use categories described in the 2007 Noise Report in Appendix A were based on the ADOT Noise Abatement Policy in effect as of the date of public knowledge for the project. Land Use Category B in the report covered a broader range of uses encompassed within both categories B and C in this table.
[2] The Leq(h) and L10(h) Activity Criteria values are for impact determination only and are not designed standards for noise abatement.
[3] Includes undeveloped lands permitted for this Activity Category.
Source: ADOT 2017

4.10.3.2 Thresholds of Significance

The FAA has not established a noise significance threshold for actions unrelated to aircraft noise. ADOT defines the point at which a noise level "approaches" as one dBA for Categories A, B, C, D, and E. There is no impact threshold for Category F or Category G locations. ADOT defines a substantial increase in noise levels as an increase in noise levels of 15 dBA in the predicted noise level over the existing noise level[128]. In **Table 4.10-1** Leq(h) means the equivalent continuous sound level for a sixty-minute period, and $L_{10}(h)$ is an hourly A-weighted, sound level, just exceeded for 10% (90th percentile) of the measurement period, calculated by statistical analysis.[129]

4.10.4 Comparisons of the Proposed Project and the No Action Alternative

4.10.4.1 Proposed Project

The ADOT 2007 noise analysis evaluated receptors located on undeveloped residentially zoned parcels located within 800 feet on either side of RSFP. No noise impacts were identified north of I-40, as undeveloped lands have no NAC (see **Appendix A.1.e and A.3.c**).

[128] https://azdot.gov/sites/default/files/2019/06/noise-abatement-requirements-may2017.pdf p. 3-1
[129] https://azdot.gov/sites/default/files/2019/06/noise-abatement-policy-may2017.pdf p. 5 and 29

Construction: The Proposed Project's construction would last for 24 months between Spring 2024 and Spring 2026. The nearest noise-sensitive land uses (residences) are more than 0.25 miles from RSFP. The duration of construction noise could last from seconds (e.g., a truck passing a noise-sensitive receiver) to months (e.g., constructing the roadway). Construction noise is also intermittent and depends on the type of operation, location, and function of the equipment, and the equipment usage cycle. Construction equipment is typically considered as a point source, as opposed to traffic, which is considered a line source. According to the inverse square law, for each doubling of distance from a line or point source, the sound pressure level decreases by approximately 6 dBA.[130] The Federal Highway Administration Roadway Construction Noise Model User's Guide discusses construction noise per type of equipment at 50 feet, which can range from 55 to 95 dBA.[131] Utilizing these calculations, sound levels would be in the range of 25-65 dBA at sensitive receivers 0.25 miles away and ranging from undetectable to 53 dBA at sensitive receivers 0.75 miles away.

Operation: The Proposed Project's traffic operations would not exceed the NAC for each specific land use (F and G) within 800 feet of the project area. Peak traffic hour noise levels were calculated in the range of 70 to 71 dBA.[132] To visualize transportation noise (dBA), the Department of Transportation provides maps.[133] The nearest noise-sensitive land uses (residences) are more than 0.25 miles from the closest development areas. The nearest school is 0.75 miles west of the Proposed Project. Utilizing the Department of Transportation noise mapping software, at 0.25 miles, any noise levels in the range of 80-90 dBA would be lower than 45 dBA and would not affect sensitive receivers located 0.25 to 0.75 miles away from operation of RSFP.[134]

4.10.4.2 No Action Alternative

There would be little changes to existing noise levels anticipated in the study area as a result of the No Action Alternative. Under the No Action Alternative, no noise associated with RSFP would occur. According to ADOT's noise study noise levels near I-40 would be between 50-60 dBA in 2030. Sensitive receivers are located 2,000 feet north of I-40 and more than a mile east from the railroad and SR 66; therefore, noise levels from these transportation facilities would be lower than 45 dBA and would not affect sensitive receivers located 0.25 miles to 0.75 miles away from the proposed RSFP.

4.10.4.3 Conclusion

When comparing noise impacts to sensitive receptors associated with the Proposed Project to the No Action Alternative, the closest sensitive receivers (i.e., those at 0.25 miles away) would experience up to a 20-dBA increase in noise during the Proposed Project's two-year-long construction, but afterwards noise levels would drop from a high of 65 dBA to 45 dBA or less during operations. The noise impacts to sensitive receivers associated with the Proposed Project's operations would be the same as those associated with the No Action Alternative, which is 45 dBA or less.

4.10.5 Treatment Measures

4.10.5.1 Avoidance and Minimization Measures

ADOT would implement their treatment measures as identified in **Appendix A.3.a** during construction of the ADOT administered portion of the Proposed Project. The City would implement

[130] https://www.engineeringtoolbox.com/docs/documents/890/sound_pressure_level_reduction_vs_distance_from_source.pdf
[131] https://www.gsweventcenter.com/Draft_SEIR_References/2006_01_Roadway_Construction_Noise_Model_User_Guide_FHWA.pdf Table 1 pg 3.
[132] ADOT Noise Analysis Technical Report I-40 Rattlesnake Wash Traffic Interchange Table 2. Page 15 found in Appendix A
[133] https://maps.dot.gov/BTS/NationalTransportationNoiseMap/
[134] https://maps.dot.gov/BTS/NationalTransportationNoiseMap/

the following treatment measures as part of the City administered portion of the Proposed Project. All treatment measures are also combined in **Appendix E**.

The following BMPs are City treatment measures provided so that the construction activities can comply with County noise ordinance.

- The City and ADOT will direct construction contractors to only conduct fieldwork between 7 AM and 7 PM.

Mohave County is responsible for enforcing their noise ordinance.

4.10.5.2 Mitigation Measures

Mitigation is not required for the Proposed Project.

4.11 Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks

4.11.1 Regulatory Setting

Socioeconomics is an umbrella term used to describe aspects of a project that are either social or economic in nature, or a combination of the two. A socioeconomic analysis evaluates how elements of the human environment such as population, employment, housing, and public services might be affected by the proposed action and alternative(s).[135] Federal regulations include the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, which contains provisions that must be followed if people or businesses will be displaced.

Executive Order 12898, Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations, its accompanying Presidential Memorandum, and DOT Order 5610.2, Environmental Justice require FAA to provide for meaningful public involvement by minority and low-income populations, as well as analysis that identifies and addresses potential impacts on these populations that may be disproportionately high and adverse. [136] Under Title VI of the Civil Rights Act, FAA is also required to ensure that no person is denied benefits or subjected to discrimination under any program or activity receiving federal financial assistance on the grounds of race, color, or national origin.

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, directs the FAA to make it a high priority to identify and assess environmental health risks that may disproportionately affect children.

Executive Order 14096, Revitalizing Our Nation's Commitment to Environmental Justice for All, was enacted on April 21, 2023. It does not rescind Executive Order 12898, which has been in effect since February 11, 1994 and is currently implemented through DOT Order 5610.2C. This implementation will continue until further guidance is issued by DOT.

4.11.2 Affected Environment

4.11.2.1 Socioeconomics

The socioeconomic study area is Mohave County (see inset map of **Figure 1.2-1**). According to the U.S. Census (2022) the estimated population of Mohave County in 2021 is 217,692 and the estimated population of Kingman 33,882. The density of this population at the County level is 16 people per square mile and within the city limits of Kingman 871 people per square mile (U.S. Census 2022).

[135] FAA 1050.1F 12.1 p 12-1
[136] The phrase "disproportionately high and adverse" in EO 12898 and "disproportionate and adverse" in EO 14096 have the same meaning.

The median household income within the County is $47,686 and within the City it is $51,081. Within both the County and City approximately 50% (44.8% and 49.7% respectively) of the population over 16 is employed (U.S. Census 2022).

According to the Mohave County Economic Development Department (MCEDD) data, there are 67,876 owner occupied housing units in Mohave County, 36,697 renter occupied housing units, and 29,047 seasonal or recreational housing units (MCEDD 2022).[137]

Major employment in the County includes healthcare, government, education, manufacturing, retail and distribution. According to MCEDD data, the largest industry in Mohave County includes transportation and warehousing with approximately 9,000 jobs, followed by health care and social services with 8,200 jobs, housing and food services with approximately 6,100 jobs, and both public administration and construction jobs with approximately 3,800 jobs each (MCEDD 2022). Numerous other professions are tracked by the County that make up thousands of other jobs.

The median wages in Mohave County include salaries between $60,000 and $80,000 per year for industries including utilities, mining, management positions in companies, and finance and insurance. Industries in Mohave County with salaries between $40,000 and $60,000 per year include construction, manufacturing, wholesale trade, transportation and warehousing, information technology, and health care and social services. Industries within Mohave County with salaries between $20,000 and $40,000 include retail trade, education services, arts and entertainment, accommodations, and restaurants (MCEDD 2022).

Mohave County contains over 500 different businesses in each of the construction, retail trade, health care, and social service industries. There are also over 200 establishments in the accommodations and food industry, as well as in each of the real estate and rental, professional, and scientific industries. Hundreds of establishments also are included in each of the finance and insurance, wholesale trade, and manufacturing industries (MCEDD 2022).

4.11.2.2 Environmental Justice

Table 4.11-1 provides minority population information derived from the U.S. Census Bureau (U.S. Census 2022) and incudes Black or African American, Hispanic, Asian, American, or American Indian and Alaskan Native individuals.[138] Per the U.S. Census data 13.6% of the population in Kingman is living in poverty compared to 15.3% for Mohave County, and 12.8% of the population in Arizona (U.S. Census 2022).

Table 4.11-1. Population Characteristics 2022

Characteristics	Census Tract 9539	City of Kingman	Mohave County	State of Arizona
White	84.9%	87.8%	91.1%	82%
Black or African American	0.3%	1.7%	1.4%	5.4%
American Indian and Alaska Native	11.1%	1.9%	3.1%	5.3%
Asian	2.0%	1.9%	1.4%	3.8%
Native Hawaiian and other Pacific Islander	0%	0.0%	0.3%	0.3%
Two or More Races	0%	4.6%	2.7%	3.1%
Hispanic or Latino (of any race)	0%	15.6%	17.7%	32.3%

Source: U.S. Census 2022

[137] https://www.mohave.gov/ContentPage.aspx?id=553&cid=1582. Accessed 8-16-2022
[138] DOT Order 5610.2 Appendix 1.c

4.11.2.3 Children's Environmental Health and Safety Risks

Table 4.11-2 provides information on children derived from the U.S. Census Bureau (U.S. Census 2022).

Table 4.11-2. Children Population 2022

Characteristics	Census Tract 9539	City of Kingman	Mohave County	State of Arizona
Persons under 5 years, percent	14.4%	6.7%	4.1%	5.5%
Person Under 18 years, percent	15.3%	20.2%	16.5%	22.2%

Source: U.S. Census 2022

Desert Willow Elementary School and White Cliffs Middle School are located within the study area north of Airway Avenue along Prospector Street and located in eastern Kingman. Kingman High School is located west of Andy Devine Highway on N. Bank Street. No preschools or parks are located east of SR 66 and north of I-40. Numerous hospitals and clinics are in the greater Kingman area, with an outpatient facility (Hualapai Mountain Campus) located just north of I-40 along Santa Rosa Drive and accessed from SR 66 via Airway Avenue. The medical facility is located approximately 1.5 miles east of the proposed RSFP.

4.11.3 Environmental Consequences

4.11.3.1 Methodology

Socioeconomics

The analysis of socioeconomics included existing land use patterns in the area to determine impacts on existing housing, businesses, established communities, and related public service and social conditions.

Environmental Justice

The U.S. Census Bureau's 2022 data is used to determine the number and percentage of population groups of concern (i.e., minority and low-income populations, living adjacent to the Proposed Project). Confirmation of the location of the nearest residential areas to the Proposed Project is obtained through Google Earth imagery. Potential impacts identified in other sections of this chapter (i.e., **Section 4.1; Section 4.5; Section 4.7; and Section 4.9**) are then examined to see if disproportionate and adverse impacts to an environmental justice population would occur from the Proposed Project. Disproportionate and adverse effects on minority and low-include populations means an adverse effect that is: 1) predominately borne by a minority population and/or low-income populations, or 2) will be suffered by the minority population and/or low-income population is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority populations and/or non-low-income population. An environmental justice community is identified if 50% of the community is from a minority or low-income population.

Children's Environmental Health and Safety Risks

The U.S. Census Bureau's 2022 data is used to determine the actual number and percentage of children living adjacent to the Proposed Project. Environmental analysis includes the locations of the nearest schools, daycares, parks, and children's health clinics in the study area. Potential impacts identified in other sections of this chapter (i.e., **Section 4.3**; **Section 4.5**; **Section 4.7**; and **Section 4.9**) are then examined to see if disproportionately high and adverse impacts to any children would occur from the Proposed Project.

4.11.3.2 Thresholds of Significance

Socioeconomics

FAA has not established a significance threshold for this environmental impact category.[139] However, factors to consider are if the Proposed Project would have the potential to:

- Induce substantial economic growth in an area, either directly or indirectly (e.g., through establishing projects in an undeveloped area);
- Disrupt or divide the physical arrangement of an established community;
- Cause extensive relocation when sufficient replacement housing is unavailable;
- Cause extensive relocation of community businesses that would cause severe economic hardship for affected communities;
- Disrupt local traffic patterns and substantially reduce the LOS on roads serving an airport and its surrounding communities; or
- Produce a substantial change in the community tax base.

Environmental Justice

FAA has not established a significance threshold for this impact category.[140] However, factors to consider are if the Proposed Project would lead to disproportionate and adverse impacts to an environmental justice population (i.e., low income or minority) due to:

- Significant impacts in other environmental impact categories; or,
- Impacts on the physical or natural environment that affect an environmental justice population in a way that FAA determines are unique to the environmental justice population and significant to that population.

Children's Environmental Health and Safety Risks

FAA has not established a significance threshold for this impact category.[141] However, factors to consider are situations in which the Proposed Project would have the potential to lead to a disproportionate health or safety risk to children.

4.11.4 Comparisons of the Proposed Project and the No Action Alternatives

4.11.4.1 Proposed Project

Socioeconomic

The Proposed Project would not disrupt or divide the physical arrangement of established community or displace housing or businesses since it would be constructed on vacant lands. The Proposed Project will not impact airport operations. The RSFP has been included in local planning documents for more than a decade and is a vital component of the local transportation network for Mohave County and the City of Kingman.

The Proposed Project would provide jobs in the construction sector; however, construction employment is temporary (1-2 years) and does not represent a permanent change in the community tax base. The Proposed Project would serve the existing and proposed industrial that growth the County and City envision around the Airport. Because RSFP is being constructed on new alignment on undeveloped lands as well as along existing dirt roads with infrequent traffic,

[139] FAA Order 1050.1F Exhibit 4-4 page 4-9
[140] FAA Order 1050.1F Exhibit 4-1 page 4-9
[141] FAA Order 1050.1F Exhibit 4-1 page 4-9

no disruption of local traffic patterns or substantial reduction in LOS would occur. The new TI with I-40 will require lane closures on I-40 during construction. Those impacts were considered in the ADOT CE and determined to be minimal with no mitigation required (**Appendix A.1.a**).

With implementation of RSFP, improved access in eastern Kingman (east of SR 66 and north of I-40) would occur for both existing and planned development.[142] The majority of Kingman's existing development is west of the proposed RSFP and as such, construction and operation of RSFP will not disrupt neighborhood continuity and community cohesion.

Indirect impacts of the Proposed Project include improved access to anticipated growth areas in east Kingman that the City and Mohave County envision occurring (City of Kingman 2014; Mohave County 2015). Some of this growth is linked to commercial and industrial development which the City would receive recurring revenue from commercial sales taxes and also revenue from water and wastewater user fees. Access roads to new development would connect from the RSFP (Proposed Project) to future development in adjacent lands.

Environmental Justice

There is only one unnamed residential neighborhood in the study area located approximately 0.5 miles east of the RSFP, south of Airway Avenue, and north of I-40. This residential neighborhood does not meet the definition of an environmental justice population (50% minority or low-income) (see **Table 4.11-1**). In addition, County development standards and other ordinances are in place to prevent impacts such as dust, noise, and lighting from adversely affecting sensitive land uses. Disproportionately high and adverse impacts would not occur to an environmental justice population as a result from constructing and operating the Proposed Project.

Children's Environmental Health and Safety Risks

Desert Willow Elementary School and White Cliffs Middle School are located approximately 0.7 miles west of the Proposed Project. The Hualapai Mountain Campus (outpatient surgery center) is located approximately 1.5 miles west of the proposed RSFP. Access to the schools and medical facility is from the west via Airway Avenue and will not be disrupted by construction or operation of RSFP. As previously stated, County development standards and other ordinances are in place to prevent impacts such as dust and noise from adversely affecting sensitive land uses; therefore, there are no anticipated impacts to children's environmental health and safety associated with the Proposed Project.

4.11.4.2 No Action Alternative

Socioeconomic

Under the No Action Alternative, the City would not build RSFP, and regional and local growth would continue to use existing roads. Proposed industrial and commercial growth around the airport will not have the direct traffic connection (i.e., RSFP) to I-40 and would use local roads around the airport to SR 66. Impacts to socioeconomic conditions or environmental justice populations as a result of the No Action Alternative may occur but will not be disproportional on environmental justice populations.

In addition, the No Action Alternative has potential to indirectly affect development by limiting access to industrial and commercial opportunities around the airport and could reduce future recurring revenue from commercial sales taxes and revenue from water and wastewater user fees.

[142] City of Kingman Change of Access Report Figure 4-2 p.5.

Environmental Justice

Under the No Action Alternative, the City would not build RSFP, and regional and local growth would continue to use existing roads. Impacts related to LOS on local roads would equally affect populations in the Kingman area and would not adversely impact environmental justice populations.

Children's Environmental Health and Safety Risks

Under the No Action Alternative, the City would not build RSFP, and regional and local growth would continue to use existing roads. Access to the two schools in the study area will not be impacted.

Conclusions

The Proposed Project would provide improved access to and from the Airport and provide access to land that the City and County envision for economic growth, while the No Action Alternative does not improve access. Disproportionate and adverse impacts would not occur to an environmental justice population or to Children's Environmental Health and Safety as a result from constructing and operating the Proposed Project or No Action Alternative.

4.11.5 Treatment Measures

4.11.5.1 Avoidance and Minimization Measures

ADOT would implement their treatment measures as identified in **Appendix A.3.a** during construction of the ADOT administered portion of the Proposed Project. The City does not propose any avoidance and minimization measures as part of the City administered portion of the Proposed Project. All treatment measures are also combined in **Appendix E**.

4.11.5.2 Mitigation Measures

Mitigation is not required for the Proposed Project.

4.12 Visual Effects

4.12.1 Regulatory Setting

Visual effects deal with the extent to which the Proposed Project or alternative(s) would either: 1) produce light emissions (or glare) that create annoyance or interfere with activities; or 2) contrast with, or detract from, the visual resources and/or the visual character of the existing environment. Areas that can be sensitive to visual changes include scenic rivers, historic properties, public parks, public wildlife refuges, and public recreation areas. There is no formal required federal consultation process, permits, or other approvals related solely to visual effects.

The City is the local authority for lighting and has roadway lighting requirements restricting height, intensity, and location of roadway lighting (City of Kingman 2018).[143]

4.12.2 Affected Environment

4.12.2.1 Light Emissions

The study area for light emissions is one-mile radius around the RSFP (see **Figure 4.4-1**). Sources of light and glare within the study area include lighted buildings and parking lots associated with Airport, industrial, manufacturing, and other commercial development in the northern portion of the study area along SR 66. Interstate-40 in the southern portion of the study area produces some light emissions.

[143] Section 3.9 of the Streets and Sidewalk Development Rules and Regulations dated January 5, 2018

The portions of Mohave Airport Drive, SR 66, Industrial Boulevard, and I-40 within the project vicinity do not currently have streetlights or traffic lights other than the TI of I-40 and SR 66.

4.12.2.2 Visual Resources

The study area for visual effects is one-mile radius around the RSFP (see **Figure 4.4-1**). There are no visually sensitive areas such as sensitive species habitats, wild and scenic rivers, trails, or dark sky districts located within the study area. The Kingman Army Airfield is a historic property located within the Project study area. (see **Section 3.6**). The study area is not located adjacent to an area that is considered sensitive to light emissions.

One visual resource observation point was established along and near the center of the RSFP. Observation Point #1 is located approximately 0.5 miles north of Airway Avenue and 0.5 mile south of the Airport property (see **Photographs 1 through 4**).

Within the study area, the foreground views (0 to 1 mile) consist of sparsely vegetated grassland with above ground and below ground utilities located along east to west dirt roads (Airway Avenue and Gordon Drive); midground views (1-2 miles) consist of transportation (airport) industrial, commercial, and residential development at the Airport (see **Photograph 1**) and along SR 66 and the railroad (see **Photograph 4**). Background views (beyond 2 miles) include undeveloped grassland, Hualapai Mountains to the south, the Cerbat Mountains to the northwest, and the Peacock Mountains to the northeast.

Observation Point #1 was established along the Proposed Project approximately 0.5 miles south of the Airport property and 1.5 miles north of I-40 in the middle of the study area. The middle portion of the study area is divided by dirt road Airway Avenue. Desert Willow Elementary School and White Cliffs Middle School are located 0.7 miles west of the proposed RSFP north of Airway Avenue and east of Prospector Street. Residential development is located south of Airway Avenue and west of Prospector Street. Views to the east of the Proposed Project include sparsely developed land (see **Photograph 2**). The southern portion of the study area ends at I-40 (see **Photograph 3**).

Photograph 1. View looking north. Development in background is the Kingman Municipal Airport.

Photograph 2. View looking east

Photograph 3. View looking south. Development in background is near I-40.

Photograph 4. View looking west, development in background is Kingman.

4.12.3 Environmental Consequences

4.12.3.1 Methodology

Light Emissions

Analysis includes compliance with local lighting codes and the potential to produce light emissions that create annoyance or interfere with activities, or potential for contrast or detraction from the visual character of the existing environment.

Visual Resources

Visual impacts are determined by defining the visual quality of the area, the expected change from the action, and the sensitivity of potential viewers to those changes and compliance with local planning documents.

4.12.3.2 Thresholds of Significance

FAA has not established a significance threshold for these environmental impact categories.[144] However, factors to consider are the degree to which the Proposed Project would have the potential to:

- Create annoyance or interfere with normal activities from light emissions;
- Affect the visual character of the area due to the light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources;
- Affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources; and
- Block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations.[145]

4.12.4 Comparisons of the Proposed Project and the No Action Alternative

4.12.4.1 Proposed Project

Light Emissions:

Lighting would be installed at the RSFP interchange with I-40 in accordance with ADOT's Traffic Engineering Guidelines and Processes Section 700 Illumination and similar as other I-40 TIs. Besides two traffic signals at the RSFP TI ramps, no other roadway lighting or traffic signals are proposed. Construction of RSFP would not occur at nighttime; therefore, no temporary artificial lighting is proposed. The addition of lights at the TI will not adversely impact migratory birds' ability to nest or forage in the project area (see **Section 4.4.4.1**).

Existing residences are limited in the study area and located 0.7 miles west of RSFP. Additional residences are located 0.25 miles northwest of SR 66 and the railroad in the northern part of the study area. Light emission associated with drivers on the Proposed Project would not be visible from residences on the west side of the railroad and SR 66 but could be visible from some residences 0.7 miles west of RSFP near Airway Avenue. As discussed in the land use analysis (Section 4.10), the area surrounding the Airport is identified as a target area for new industrial, manufacturing and commercial development (City of Kingman 2014; Mohave County 2015). RSFP is also identified as an important roadway project (KATS 2011).

[144] FAA Order 1050.1F Exhibit 4-1 page 4-10
[145] FAA Order 1050.1F Exhibit 4-1 page 4-10

Light emissions associated with construction and operation of the proposed RSFP is not anticipated to create annoyance or interfere with existing or proposed land uses within the study area.

Visual Character

RSFP would be constructed along an unpaved roadway portion of the RSFP alignment. As depicted on **Figure 1.4-2**, RSFP would be paved and include a median with curb. The proposed development would change the visual character of the foreground and midground views by adding an interchange on I-40 and arterial roadway (RSFP) in currently undeveloped areas (see **Photographs 1-4**). Distances to residences is 0.7 miles west of the Proposed Project and nighttime lighting impacts from operation of north to south directional road (RSFP) to residential areas would be negligible. As discussed in the land use analysis (see **Section 4.9**), the area surrounding the Airport is identified as a target area for new industrial, manufacturing and commercial development (City of Kingman 2014; Mohave County 2015). RSFP is also identified as an important roadway project (KATS 2011).

The background views of distant mountains from the study area would be unchanged.

4.12.4.2 No Action Alternative

Under the No Action Alternative, the proposed facilities would not be constructed. Therefore, changes to light emissions and the area's visual character would not be altered by a new roadway.

4.12.4.3 Conclusion

No significant lighting or glare impacts to nearby residential neighborhoods would occur from either the Proposed Project or the No Action Alternative. RSFP has been planned for decades and is a vital transportation component. Visual impacts associated with RSFP are in areas where both the City and County envision growth and therefore visual impacts are within compliance with local development plans.

4.12.5 Treatment Measures

4.12.5.1 Avoidance and Minimization Measures

ADOT would implement their treatment measures as identified in **Appendix A.3.a** during construction of the ADOT administered portion of the Proposed Project. The City does not propose any avoidance and minimization measures as part of the City administered portion of the Proposed Project. All treatment measures are also combined in **Appendix E**.

4.12.5.2 Mitigation Measures

Mitigation is not required for the Proposed Project.

4.13 Water Resources

FAA Order 1050.1F identifies the following subcategories under the overall topic of water resources: wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers.[146] The Project Area does not contain wetlands, waters of the U.S., an effective groundwater recharge area or high groundwater table, or designated wild and scenic rivers (see **Table 4.2-1**). Therefore, the following discussion focuses on potential impacts to floodplains.

4.13.1 Regulatory Setting

To comply with Executive Order 11988, Floodplain Management, and USDOT Order 5650.2, Floodplain Management and Protection, all FAA actions must avoid floodplains if a practicable alternative exists; if no practicable alternative exists, actions in a floodplain must be designed to

[146] FAA Order 1050.1F Exhibit 4-1 pages 4-11 to 4-13

minimize adverse impacts to the floodplain's natural and beneficial values. If the proposed action or alternative(s) involves a significant encroachment in a floodplain, the FAA should issue a written finding that the proposed significant encroachment is the only practicable alternative. As defined in USDOT Order 5650.2, significant encroachment is one that results in one or more of the following impacts:

- considerable probability of loss of human life,
- likely future damage associated with the encroachment that could be substantial in cost or extent, including interruption of service on or loss of a vital transportation facility, and
- a notable adverse impact on "natural and beneficial floodplain values".[147]

Part of the significant encroachment definition in USDOT Order 5650.2 includes impacts on human life and substantial encroachment-related costs or damage. This includes interruption of service on or loss of a vital transportation facility (e.g., runway, taxiway, air navigation facilities damage, etc.).

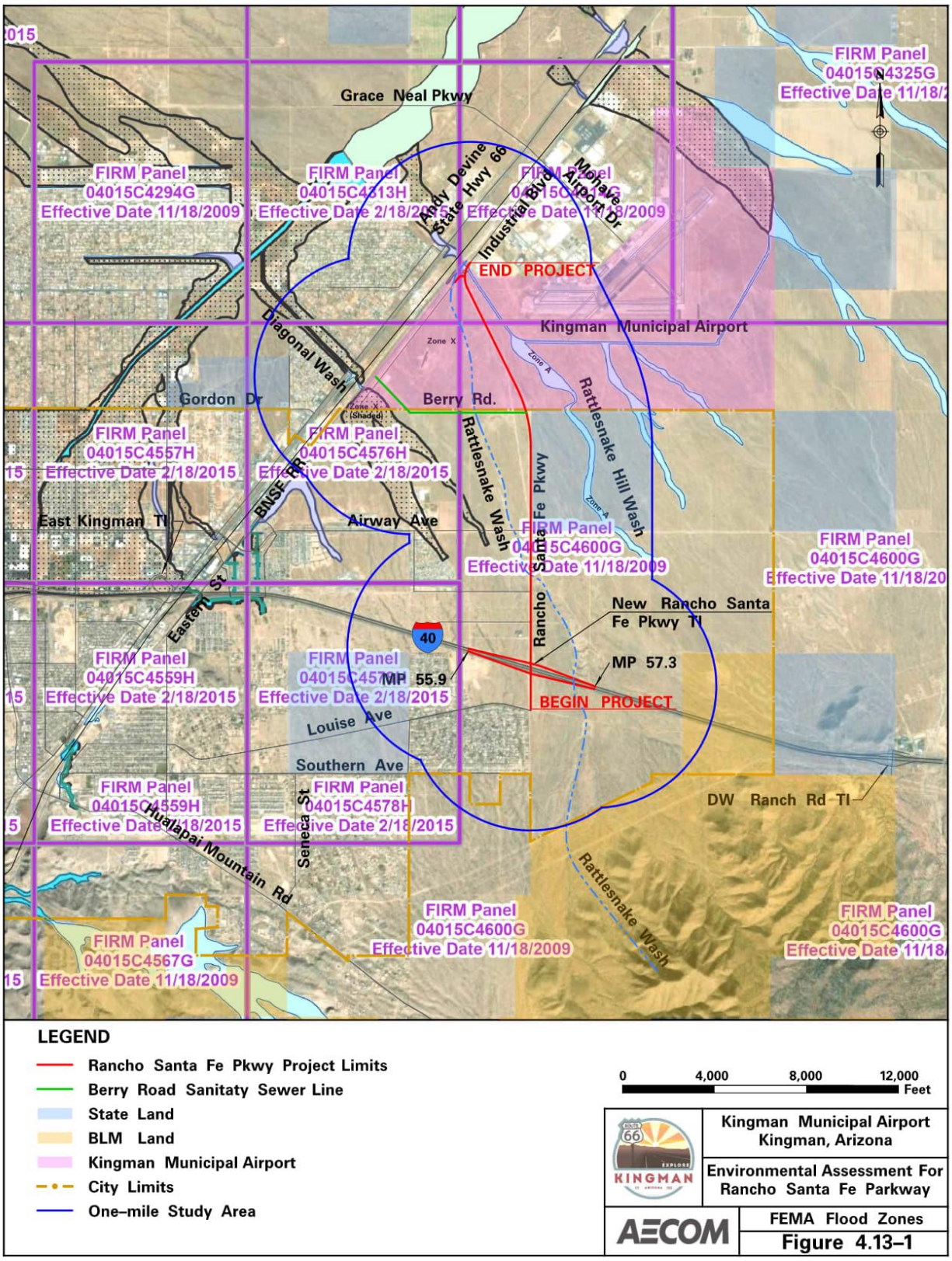
Mohave County is the local floodplain authority.

4.13.2 Affected Environment

The study area for floodplains is a one-mile radius around the RSFP (see **Figure 4.4-1**). Rattlesnake Hill Wash is generally located to the east of the Proposed Project and Diagonal Wash is generally west of the Proposed Project. Rattlesnake Wash is located between those two drainages and has not been mapped for FEMA 100-year floodplains (see **Figure 4.13-1**). The Kingman Area Drainage Master Plan (KADMP) study included 84.6 square miles inclusive of the study area (JE Fuller, 2020).[148] The KADMP was developed to understand drainage problems and develop flood modeling to determine severity, complexity, and extend of drainage problems. The drainage area between I-40 north to the Airport has been identified as having flooding hazards (JE Fuller 2020).[149]

According to FEMA Flood Insurance Rate Map panels 0415C4313H (effective date 2/18/2009), and 0415C43214G (effective date 11/18/2009), there are 100-year floodplains (Special Flood Hazard Area, Zone A) within the study area associated with the ephemeral drainage Rattlesnake Hill Wash (see **Figure 4.13-1**).[150] Rattlesnake Hill Wash was channelized on Airport property during construction of the Army Airfield to control flooding; and it is part of a FEMA 100-year floodplain. Industrial Boulevard is a two-lane unpaved at grade crossing of Rattlesnake Hill Wash (see **Figure 4.13.2**). **Photographs 5** and **6** showing the Rattlesnake Hill Wash floodplain at Industrial Boulevard. The study area contains approximately 400 acres of FEMA 100-year floodplains (see **Figure 4.13.1**).

[147] DOT Order 5650.2 Floodplain Management and Protection. P 4. https://www.fhwa.dot.gov/engineering/hydraulics/policymemo/order56502.pdf
[148] Kingman Area Master Drainage Plan P 1. https://www.cityofkingman.gov/home/showpublisheddocument/468/637347398091370000
[149] Kingman Area Drainage Master Plan Figure 2-14, Figure 2-16, and Figure 2-18 https://www.cityofkingman.gov/government/departments/engineering/kingman-area-master-drainage-plan
[150] FEMA's National Flood Hazard Layer (NFHL) Viewer. https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd


Grace Neal Pkwy
FIRM Panel
04015C4294G
Effective Date 11/18/2009
FIRM Panel
04015C4313H
Effective Date 2/18/2015
FIRM Panel
04015C4325G
Effective Date 11/18/2009
Andy Devine
State Hwy 66
Industrial Blvd
Mohave
Airport Dr
END PROJECT
Kingman Municipal Airport
Diagonal Wash
Zone X
Zone A
Gordon Dr
Berry Rd.
Rattlesnake Hill Wash
FIRM Panel
04015C4557H
Effective Date 2/18/2015
FIRM Panel
04015C4576H
Effective Date 2/18/2015
BNSF RR
East Kingman TI
Airway Ave
Rattlesnake Wash
Santa Fe Pkwy
FIRM Panel
04015C4600G
Effective Date 11/18/2009
FIRM Panel
04015C4600G
Effective Date 11/18/20
Eastern St
New Rancho Santa
Fe Pkwy TI
Rancho
40
MP 57.3
MP 55.9
BEGIN PROJECT
FIRM Panel
04015C4559H
Effective Date 2/18/2015
FIRM Panel
04015C4578H
Effective Date 2/18/2015
Louise Ave
Southern Ave
FIRM Panel
04015C4559H
Effective Date 2/18/2015
FIRM Panel
04015C4578H
Effective Date 2/18/2015
DW Ranch Rd TI
Hualapai Mountain Rd
Seneca St
Rattlesnake Wash
FIRM Panel
04015C4600G
Effective Date 11/18/2009
FIRM Panel
04015C4600G
Effective Date 11/18
FIRM Panel
04015C4567G
Effective Date 11/18/2009
LEGEND
Rancho Santa Fe Pkwy Project Limits
Berry Road Sanitaty Sewer Line
State Land
BLM Land
Kingman Municipal Airport
City Limits
One–mile Study Area
0
4,000
8,000
12,000
Feet
Kingman Municipal Airport
Kingman, Arizona
Environmental Assessment For
Rancho Santa Fe Parkway
AECOM
FEMA Flood Zones
Figure 4.13–1

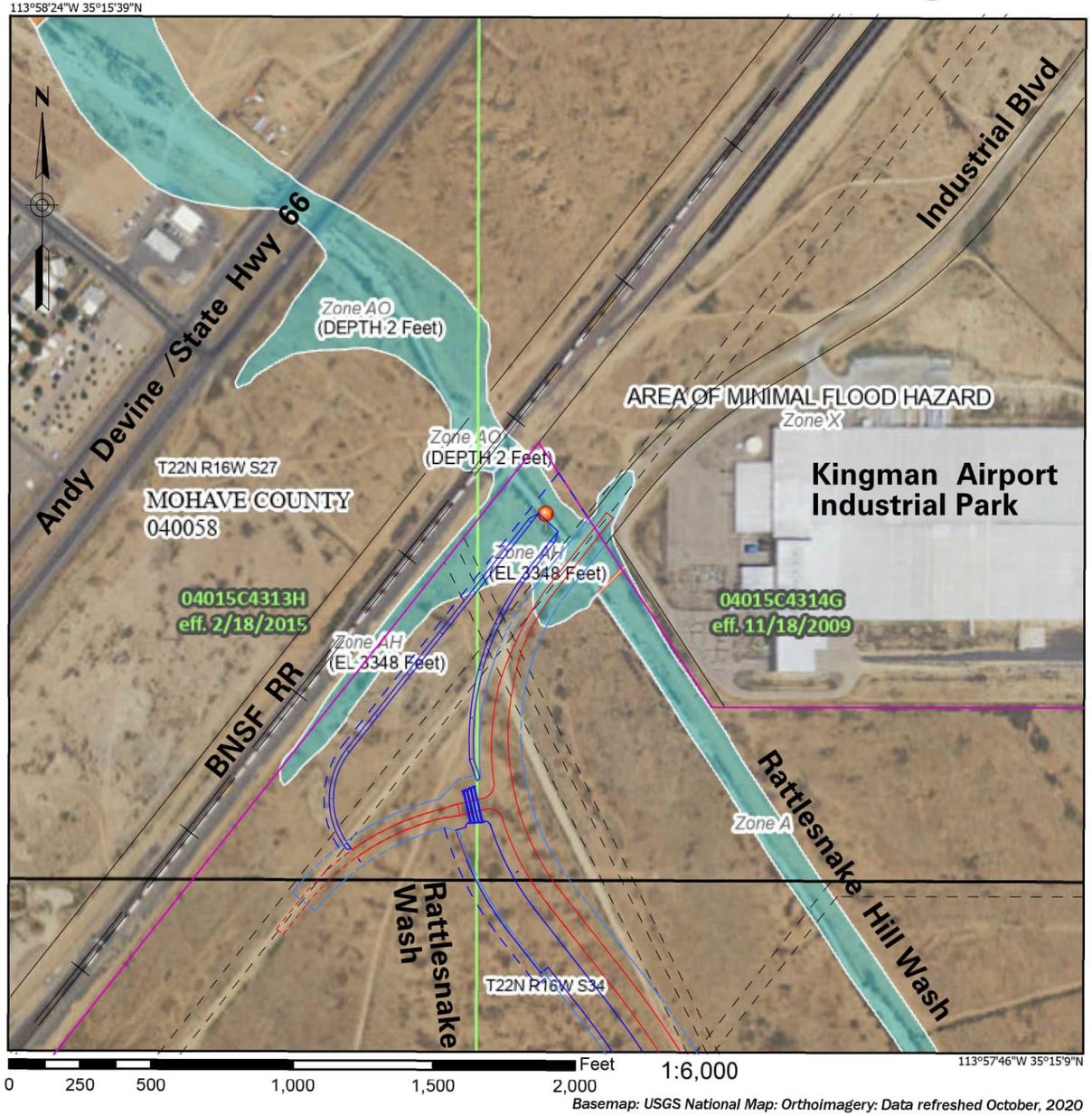
Photograph 5. View looking southeast on Airport property.

Photograph 6. View looking north from Industrial Boulevard towards BNSF railroad bridge over Rattlesnake Hill Wash.

National Flood Hazard Layer FIRMette

FEMA

113°58'24"W 35°15'39"N



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/10/2023 at 12:44 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

LEGEND
- Proposed Rancho Santa Fe Pkwy
- Proposed Riprap Drainage Channel
- Proposed Perpetual Use Easement
- Existing Public Utility Easement
- Existing Airport Property Line

Kingman Municipal Airport
Kingman, Arizona

Environmental Assessment For
Rancho Santa Fe Parkway

AECOM

FEMA Floodplains
Figure 4.13–2

4.13.3 Environmental Consequences

4.13.3.1 Methodology

Impacts to floodplains are analyzed by reviewing the site's development and grading plans compared to the limits of mapped floodplains.

4.13.3.2 Thresholds of Significance

The FAA has determined floodplain impacts would be significant if the action would cause notable adverse impacts on natural and beneficial floodplain values.[151] Natural and beneficial floodplain values are defined as including natural moderation of floods, water quality maintenance, groundwater recharge, fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, and forestry.[152]

4.13.4 Comparisons of the Proposed Project and the No Action Alternative

4.13.4.1 Proposed Project

The Proposed Project would impact 1.1 acres of 100-year FEMA floodplains (Zone A) associated with Rattlesnake Hill Wash (see **Figure 4.13-2**). A 1.1-acre impact equates to a 0.27% impact to floodplains within the study area. The Proposed Project would construct a two-lane at-grade paved crossing of Rattlesnake Hill Wash to replace the currently un-paved at-grade crossing. On either side of the road crossing the Proposed Project would install scour protection structures one foot wide and four feet deep. Drainage design would include excavating a shallow (2-3 foot) channel approximately 75 feet wide and running parallel to the railroad ROW to avoid impacts to adjacent property. FEMA mapped 100-year floodplain elevations would not change as a result of the Proposed Project. RSFP drainage components are designed to address regional flooding hazards between I-40 north to the railroad as identified in the KADMP (JE Fuller 2020).[153]

The Proposed Project would not pose a risk to the BNSF railroad or Airport because surface flow patterns would be maintained, surface elevation of the floodplain would not be altered, and the floodplain at the railroad crossing would not change. The Proposed Project includes scour protection for the road crossing.

The Proposed Project would encroach on a floodplain; however, it would not have a notable adverse impact on floodplain values. The floodplain's capacity to carry and store floodwaters and provide for groundwater recharge would not be affected because the drainage channel would be permeable, and the roadway crossing would not impede or redirect surface flows. The floodplain's ability to sustain agriculture, aquaculture, and aquatic or terrestrial organisms would not be affected. The floodplain's limited ability to provide recreation opportunities would be unchanged. The floodplain's ability to maintain water quality would not be disrupted.

The Proposed Project is unlikely to lead to further development in the Rattlesnake Hill Wash FEMA 100-year floodplain. The west branch of the floodplain occurs next to the railroad and would be unsuited for non-railroad related development. Any railroad project located here would occur regardless of the Proposed Project. The east branch of the floodplain occurs between RSFP and the Airport's airfield boundary.

[151] FAA Order 1050.1F Exhibit 4-1 page 4-11
[152] DOT Order 5650.2, Floodplain Management and Protection Paragraph 4.k
[153] Kingman Area Drainage Master Plan Figure 2-14, Figure 2-16, and Figure 2-18 https://www.cityofkingman.gov/government/departments/engineering/kingman-area-master-drainage-plan

4.13.4.2 No Action Alternative

The No Action Alternative will not build the Proposed Project. There would be no encroachment of the FEMA 100-year floodplains. The floodplain would not change. The unpaved at-grade road crossing would remain.

4.13.4.3 Conclusion

When comparing the floodplains impacts of the Proposed Project to the No Action Alternative, there would be no significant impact to FEMA 100-year floodplains.

4.13.5 Treatment Measures

4.13.5.1 Avoidance and Minimization Measures

ADOT would implement their treatment measures as identified in **Appendix A.3.a** during construction of the ADOT administered portion of the Proposed Project. The City would implement the following treatment measures as part of the City administered portion of the Proposed Project. All treatment measures are also combined in **Appendix E**.

The following BMPs are City treatment measures provided so that the construction activities can comply with floodplain compliance.

- The City will update the KADMP FLO-2D model after the Proposed Project has been constructed and will submit data to FEMA for purposes of updating the 100-year floodplain maps.

4.13.5.2 Mitigation Measures

Mitigation is not required for the Proposed Project.

4.14 Cumulative Impacts

4.14.1 Regulatory Setting

CEQ regulations define cumulative effects as “effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (federal or non–federal) or person undertakes such other actions” (40 CFR § 1508.1(g)(3)). Cumulative impacts are evaluated on the following time horizon: past actions, present actions, and reasonably foreseeable future actions. Past actions are those known to have occurred within the five years immediately prior to the year of project implementation. Present actions are those projects which are ongoing and would continue during implementation of the Proposed Project. Reasonably foreseeable future actions are those that have:

- Received local approval for implementation, such as a building permit, and are expected to occur within the five years immediately after project implementation; or
- Are programmed into the five-year Airport Capital Improvement Program (ACIP) or City’s Adopted 5-year Capital Improvement Plan. Projects without a building permit, such as those outlined within a community’s general plan or specific plan, are not considered reasonably foreseeable as part of this analysis.

Table 4.14-1 and **Table 4.14-2** list the projects considered under the cumulative analysis of this Environmental Assessment. For this analysis, past, present, and reasonably foreseeable future actions were selected based on the following criteria: projects within the Airport boundaries that could contribute to physical changes and, thus, incremental disturbance of the Airport environment; off-Airport projects within the greater Kingman area that could contribute to incremental impacts; and regional growth that could contribute to incremental traffic impacts.

4.14.2 Affected Environment

4.14.2.1 On-Airport Development Projects

Future projects are planned in the airport's most recent FAA and ADOT Aeronautics Five-Year Capital Improvement Program are listed in **Table 4.14-1**.

Table 4.14-1. On-Airport Development Projects

Year	Player	Project	Type	Status
2020	FAA, ADOT, City	Runway 03/21 Rehabilitation	Construction	Complete
2021	City	Airport Fence Relocation	Construction	Complete
2021	City of Kingman	Land Release 700 Acres	Planning	Ongoing
2022	ADOT, City	Taxiway B Reconstruction	Construction	Ongoing
2022	ADOT, City	Precision Approach Path Indicators Replacement	Construction	Ongoing
2022	City	Berm Repair of the Northeastern Wash	Construction	Complete
2023	ADOT, City	Taxiway C and Runway 17/35 Pavement Preservation	Construction	Ongoing
2024	FAA, ADOT, City	Taxiway D Rehabilitation	Construction	Planned
2024	City	Dross Site Asphalt Overlay	Construction	Planned
2024	FAA, City	Supplementary Windcone Relocation	Construction	Planned
2025	FAA, ADOT, City	Airfield Access Control Systems & Gate improvements	Construction	Planned
2025	FAA, ADOT, City	Transient Apron Rehabilitation	Construction	Planned
2025	FAA, City	Runway Blast Pad Extension	Construction	Planned
2025	FAA, City	Replace Airfield Lighting, Signs & NAVAIDS (Phase 1)	Construction	Planned

4.14.2.2 Off-Airport Development Projects

Table 4.14-2 includes projects in the Adopted 5-year Capital Improvement Plan for the City of Kingman for the years Fiscal Year (FY) FY23-FY27[154], Mohave County Five Year Capital Improvement Road Program FY 23-27[155], and ADOT Multimodal Planning Divisions Five Year Transportation Facilities Construction Program from FY 2023-2027.[156]

[154] https://www.cityofkingman.gov/home/showpublisheddocument/7788/638276261128682248
[155] https://resources.mohave.gov/file/Public%20Works/Engineering/PDF/Projects/2023-24%205YR%20CIRP.pdf
[156] https://azdot.gov/sites/default/files/media/2022/06/2023-2027-Final-Five-Year-Program.pdf

Table 4.14-2. Off-Airport Development Projects

Year	Player	Project	Type	Status
2019-2024	ADOT	US 93/I-40 West Kingman TI	Construction	Ongoing
2019	City	Eastern Street Improvements-Pasadena to Airway	Construction	Ongoing
2019	City	(I-11) Airway Avenue-Prospector to Rancho Parkway	Construction	Ongoing
2019	City	(I-11) Kingman Crossing Boulevard-Southern to I-40	Construction	Ongoing
2020/2023	ADOT	East Kingman TI Westbound Bridge Replacement and Rehabilitation	Construction	Ongoing
2023-2025	ADOT	I-40 Walnut Creek-Holy Moses Wash Pavement Preservation from MP 33 to 46.2	Construction	Ongoing
2023/2024	Mohave County	Gold Springs Road and Blue Canyon Road	Construction	Planned
2023/2024	Mohave County	Pierce Ferry Road Stipes	Construction	Planned
2023/2024	Mohave County	Sand Hollow Bridge Strengthening	Construction	Planned
2024/2025	Mohave County	Bolsa Drive soil stabilization and hard surfacing for 1.9 miles	Construction	Planned
2024/2025	Mohave County	Egar Road soil stabilization and hard surfacing for 2.0 miles	Construction	Planned
2023/2024	City	Chino Drive soil stabilization and hard surfacing for 0.25 mile	Construction	Planned
2024/2025	Mohave County	Bank Street soil stabilization and hard surfacing for 2.0 miles	Construction	Planned
2023/2024	City	Santa Fe Ranch Road soil stabilization and hard surfacing for 1.04 miles	Construction	Planned
2024/2025	Mohave County	Gold Springs Road and Blue Canyon Road Shoulder Widening	Construction	Planned
2024/2025		Pierce Ferry Road Stipes on US 93	Construction	Planned
2023/2024	City	Various Capital Improvements-pavement structural rehabilitation	Construction	Planned
2024/2025	City	Thompson Avenue Reconstruct and widen to 3-lanes for 0.5 mile	Construction	Planned
2025/2026	Mohave County	Calle del Media soil stabilization and hard surfacing for 0.25 mile	Construction	Planned
2024/2025	City	Various Capital Improvements-pavement structural rehabilitation	Construction	Planned
2025/2026	Mohave County	Verde Road between Shinarump Drive and Bolsa Road.	Construction	Planned
2025/2026	Mohave County	Thompson Avenue between Norrie Drive and State Route 66	Construction	Planned
2025/2026	City	Various Capital Improvements-pavement structural rehabilitation	Construction	Planned
2026/2027	Mohave County	Rancho Santa Fe Parkway between Louse Avenue and Hualapai Mountain Road	Construction	Planned
2026/2027	City	Various Capital Improvements-pavement structural rehabilitation	Construction	Planned

Table 4.14-2. Off-Airport Development Projects

Year	Player	Project	Type	Status
2027/2028	Mohave County	Vanderslice Road from Laguna Road to Sterling Road	Construction	Planned

Sources: https://www.cityofkingman.gov/home/showpublisheddocument/7788/638276261128682248
https://resources.mohave.gov/file/Public%20Works/Engineering/PDF/Projects/2023-24%205YR%20CIRP.pdf
https://azdot.gov/sites/default/files/media/2022/06/2023-2027-Final-Five-Year-Program.pdf

4.14.3 Comparisons of the Proposed Project and the No Action Alternative

4.14.3.1 Proposed Project

Air Quality and Climate (Greenhouse Gases). Eventually regional development, both commercial and residential, in other areas of the project vicinity would occur and further reduce the LOS in the region without this new regional connection parkway. The Proposed Project, in conjunction with projects listed in **Tables 4.14-1** and **4.14-2** do not occur within a maintenance area but would generate emissions. These emissions can occur both during the construction, as well as the operation, of other projects. The following BMPs would be implemented by the City or County on a project-by-project basis to minimize fugitive dust:

- Implement dust abatement techniques (e.g., water application) on unpaved or unvegetated surfaces to minimize airborne dust during construction;
- Revegetate disturbed areas as soon as possible after disturbance; and
- Cover construction materials and stockpiled soils if they are a source of fugitive dust.

No air quality thresholds of significance would be exceeded due to incremental impacts from the Proposed Project in conjunction with projects listed in **Tables 4.14-1** and **4.14-2** due to the oversight of the local jurisdictions. Thus, significant incremental impacts would not occur.

Biological Resources (Migratory Birds). Impacts to migratory birds and raptors could occur due to other projects listed in **Tables 4.14-1** and **4.14-2** occurring on or off the Airport. However, take permits or avoidance measures (such as preconstruction nesting bird surveys or other protective measures) are required prior to development. Thus, significant incremental impacts would not occur.

Hazardous Materials, Solid Waste, and Pollution Prevention. Hazardous and solid wastes would be generated by the Proposed Project, as well as by other projects listed in **Tables 4.14-1** and **4.14-2**. The federal, state, and local governments have established policies and programs that require the proper disposal and handling of hazardous materials and waste products. Due to mandatory compliance with existing programs and regulations, significant incremental impacts would not occur.

Historical, Architectural, Archeological, and Cultural Resources. Adverse effects to historical, architectural, archeological, or cultural resources from the Proposed Project in conjunction with other projects listed in **Tables 4.14-1** and **4.14-2** are not anticipated. If unidentified historic properties are discovered or if the undertaking affects known historic properties in unanticipated ways prior to the release of federal land obligations at the Airport, the FAA would follow procedures for discoveries (36 CFR 800.13[b][1]). If such discoveries are made after the anticipated release of those land obligations, the City and ADOT would follow applicable state laws regarding discoveries.

Land Use. The Proposed Project as well as projects listed in **Tables 4.14-1** and **4.14-2** are included in the 5-year Capital Improvement Programs and as such are conducted with city and

county planning departments and in compliance with guidance documents specified in **Section 4.9.2**.

Natural Resources and Energy Supply. The Proposed Project as well as projects listed in **Tables 4.14-1** and **4.14-2** would use natural resources and energy. However, the City or County would require project proponents to secure utilities through a permitting process prior to development. Thus, significant incremental impacts would not occur.

Noise and Compatible Land Use. Construction and operational noise from other projects listed in **Tables 4.14-1** and **4.14-2** in conjunction with the Proposed Project would contribute incrementally to noise levels within the general study area. However, noise standards are enforced by the County. Other projects listed in **Tables 4.14-1** and **4.14-2** would be located over a mile from the nearest noise-sensitive land uses and, thus, significant incremental impacts would not occur.

Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risk). Projects listed in **Tables 4.14-1** and **4.14-2** at the Airport are primarily maintenance or capital improvement projects to continue safe and efficient operation of the Airport. As such, they would not generate a direct economic benefit to the community. However, because the Airport, overall, is an economic generator, any projects that ensure its continued safe operation would have an indirect benefit to the local and regional economy. None of the projects listed in **Tables 4.14-1** and **4.14-2** would have a significant impact on population and housing demand, or other public services and social conditions associated with population and housing growth, in conjunction with the Proposed Project. Furthermore, the project listed in **Tables 4.14-1** and **4.14-2** benefit the traveling public and residents of Kingman equally; therefore, there are no anticipated significant incremental impacts would not occur to socioeconomic conditions, environmental justice populations, or children's environmental health and safety.

No disproportionate impacts to environmental justice communities would occur from the Proposed Project and other projects listed in **Tables 4.14-1** and **4.14-2**. County development standards and other ordinances are in place to prevent impacts such as dust, noise, and lighting from adversely affecting sensitive land uses that will be imposed with project listed in **Tables 4.14-1** and **4.14-2**. Thus, significant incremental impacts to environmental justice populations would not occur.

Visual Effects. No significant visual effects would occur from the Proposed Project and other projects listed in **Tables 4.14-1** and **4.14-2**. The City's Zoning Ordinance identified in **Section 4.12.1** contains lighting standards. Visual impacts associated project listed in **Tables 4.14-1** and **4.14-2** are in urban areas or located where both the City and County envision growth; therefore; visual impacts are within compliance with local development plans. Thus, significant incremental impacts would not occur.

Water Resources (Floodplains). Any floodplain development associated with the City of Kingman Area Drainage Master Plan or project listed in **Tables 4.14-1** and **4.14-2** that are within 100-year floodplains requires County review and, if needed, a Floodplain Use Permit. In addition, the Proposed Project, as well as other cumulative projects, would manage their stormwater runoff in accordance with required AZPDES permits and other state and local stormwater regulations. No significant impacts to floodplains or surface water from incremental impacts of the Proposed Project in conjunction with other cumulative projects would occur. Thus, significant incremental impacts would not occur.

4.14.3.2 No Action Alternative

The RSFP has been a project included in local planning documents for more than a decade and would be a vital component of the local transportation network for Mohave County and the City of Kingman. No impacts to environmental impact categories would occur with the No Action

Alternative, in conjunction with other cumulative projects, because this alternative would not result in any physical change.

The No Action Alternative would not construct the new I-40 TI and the LOS of other I-40 TI and along SR 66 would be reduced when compared to the efficiency of the Proposed Project linking up industrial uses around east Kingman.

5. Coordination and Public Involvement

5.1 Agency and Public Scoping Process

The City sent letters to resource agencies and local jurisdictions seeking input regarding potential environmental resources which could be impacted by the Proposed Project. A list of the agencies contacted, a copy of the information sent, and the responses received are included in this Environmental Assessment in **Appendix D**.

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

- Kingman Police Department, Chief of Police Rusty Cooper, dated July 20, 2022, stated they do not have any concerns or suggestions regarding the project.
- Arizona Department of Environmental Quality, Air Quality Division, Acting Manager of Technical Analysis Unit, dated July 21, 2022, requesting more data, followed by additional communications on September 22, 2022.

5.2 Draft Environmental Assessment and Availability for Review

All organizations and interested persons previously contacted during the scoping process or that submitted scoping comments were sent a notice of the availability for the Draft Environmental Assessment. A link to download the Draft Environmental Assessment was also provided https://www.kingmanairport.com/airport-information/kingmanairport-rsfp-ea.

A Notice of Availability was published in Kingman Daily Miner on July 23, 2023. The Draft Environmental Assessment was available for review by the public and interested parties for 30 calendar days at the following physical locations (see **Table 5.2-1**):

Table 5.2-1. Locations Draft Environmental Assessment was available for Public Review

Location	Address	Hours of Operation
FAA Phoenix Airports District Office	3800 North Central Avenue, Suite 1025, 10th Floor, Phoenix, AZ 85012	Monday through Friday 9 AM to 4 PM by appointment only (602 792-1062)
Kingman Municipal Airport	7000 Flightline Drive, Kingman, AZ 86401	Monday through Friday 8 AM to 5 PM
Mohave County Library	3269 North Burbank Street, Kingman, AZ 86402-7000	Monday through Friday 9 AM to 6 PM Saturday 9 AM to 5 PM
City of Kingman Complex	310 N 4th Street, Kingman, AZ 86401	Monday through Thursday 7 AM to 6 PM

Note: All locations closed on public holidays.

Anyone wishing to comment on the Draft Environmental Assessment could submit written comments by letter or email to the following physical or email addresses:

Doug Breckenridge, Airport General Manager
Kingman Municipal Airport
7000 Flightline Drive
Kingman, AZ 86401
dbreckenridge@cityofkingman.gov

The cutoff date for comment submission was not later than 5:00 PM- Arizona Standard Time, August 24, 2023.

5.3 Summary of Responses to Comments Received

The public comment period closed on August 24, 2023. During the comment period, seven comment letters were received. The comment letters were reviewed and a total of 23 unique comments were identified. The comment topics were categorized as follows:

- Correction – 6
- Biology – 2
- Floodplains – 6
- Coordination – 3
- Water Permitting – 2
- Project Support - 4

The section below includes each of the comments submitted followed by a response. The types of response are summarized as follows:

- Modify alternative or proposed action – 0
- Develop and evaluate a new alternative – 0
- Supplement, improve or modify the analysis – 5
- Make factual correction – 11
- Explain that the comment doesn't warrant a response – 7

Kingman Police Department, Rusty Cooper, Chief

KPD Comment 1 (Project Support). Please let this serve as confirmation that my office has received the "Notice of Availability for a Draft Environmental Assessment for the Proposed Rancho Santa Fe Project Across Kingman Municipal Airport, Mohave County, Arizona". My office has no objection to the project moving forward and no further comments.

Response: The City of Kingman and FAA appreciate your review of the project. The FAA finds the comment doesn't warrant further response.

Mohave County Public Works, Steven Latoski, Public Works Director –

MCPW Comment 1 (Correction). Section 3.4. Mohave Drive connection to County maintained Industrial Boulevard will require Right-of-Way Use Permit and County approval for construction.

Response: Text within **Section 3.4** has been updated to include an additional bullet that reads:

> "Mohave County Right-of-Way Permit: City to apply for a County Right-of-Way Use Permit to connect Mohave Drive (RSFP) to Industrial Boulevard, which is maintained by the County. County approval is required prior to constructing the connection."

MCPW Comment 2 (Correction). Section 4.14.2.2. Indicate the radius considered for identifying Off-Airport Development Projects.

Response: **Section 4.14.1** discusses the radius of cumulative impacts of off-Airport projects as within the greater Kingman area that could contribute to incremental impacts; and regional growth

that could contribute to incremental traffic impacts. The FAA finds the comment doesn't warrant further response.

MCPW Comment 3 (Correction). Update Table 4.14.2 as per the FY 23-27 Capital Improvement Road Program approved by the County on July 3, 2023, and enclosed herein.

Response: Text within **Section 4.14.2.2** and **Table 4.14.2** has been updated with County's FY 23-27 Capital Improvement Projects.

MCPW Comment 4 (Correction). Section 3.2.1. This section establishes the City as responsible for Mohave Drive Phase 2 construction (to Hualapai Mountain Road); please confirm.

Response: Mohave Drive Phase 2 isn't part of the Proposed Action or the alternatives under consideration. It is an unfunded, future concept developed during a transportation planning study. On February 7, 2006, ADOT and the City signed a Letter of Intent stating that Phase 2 would be the sole responsibility of the City. A copy of letter has been added as Appendix A.4.f.

MCPW Comment 5 (Correction). On Page 4 of Appendix A.1.a, a roadway cross section for Mohave Drive Phase 2 is described; please indicate whether such cross section becomes a requirement as part of any EA approval.

Response: Mohave Drive Phase 2 isn't part of the Proposed Action or the alternatives under consideration. It is an unfunded, future concept developed during a transportation planning study. The FAA finds the comment doesn't warrant further response.

Mohave County Flood Control District, Paul Baughman, District Engineer –

MCFCD Comment 1 (Correction). I noticed the letter you attached calls out Section 4.14 of the Draft EA as discussing floodplains. After reviewing the document, I found that Section 4.13 is where I found the relevant floodplain information.

Response: The Draft EA notification letter dated July 23, 2023, mis-stated the section number of the floodplain analysis. The FAA will use the correct section number, **Section 4.13**, in future notices for this action. The FAA finds the comment doesn't warrant further response.

MCFCD Comment 2 (Project Support). As a response to this document, I simply state that I concur with the conclusion found within Section 4.13.4.3 based on the Avoidance and Minimization Measures to be taken by the City of Kingman and as described in section 4.13.5.1 of the Draft EA.

Response: The City of Kingman and FAA appreciate your review of the project. The FAA finds the comment doesn't warrant further response.

Navajo Nation Heritage and Historic Preservation Department, Timothy Begay, Navajo Cultural Specialist –

Navajo Nation Comment 1 (Project Support). The Navajo Nation Heritage and Historic Preservation Department's Traditional Culture Program is in receipt of your letter regarding the City of Kingman seeks a land-obligation release from the Federal Aviation Administration to construct, operate and maintain the proposed Rancho Santa Fe Parkway Project across Kingman Municipal Airport, Mohave County, Arizona. After reviewing your letter, the Navajo Nation have no concerns in the construct of Rancho Santa Fe Parkway Project, and you may proceed without further consultation for this project.

Response: The City of Kingman and FAA appreciate your review of the project. The FAA finds the comment doesn't warrant further response.

Arizona Department of Transportation Environmental Planning, Tatum Wertin, Environmental Planner –

ADOT Comment 1 (Project Support). I have reviewed and have no comments at this time.

Response: The City of Kingman and FAA appreciate your review of the project. The FAA finds the comment doesn't warrant further response.

Arizona Department of Environmental Quality, Edwin Slade, Administrative Counsel

ADEQ Comment 1 (Water Permitting). If the operator disturbs an acre or more of earth and stormwater from that area discharges to a Protected Surface Water, then a state Construction General Permit is required.

Response: ADEQ's draft Protected Surface Waters List[157] was reviewed on September 4, 2023, and did not show Rattlesnake Wash or Rattlesnake Hill Wash. At this time, an AZPDES permit isn't necessary for the Proposed Action. The FAA finds the comment doesn't warrant further response.

ADEQ Comment 2 (Water Permitting). You may also be required to obtain a Water Quality Certification, pursuant to Section 401 of the Clean Water Act for an activity or project requiring a federal permit or license, that may result in a discharge to waters of the U.S.

Response: **Table 4.2-1** (under Water Resources-Surface Water) states that the project area is located in the Hualapai Valley Basin, which is a closed basin. Therefore, CWA Section 404 and 401 permitting and certification are not required. **Table 4.2-1** was updated to add Rattlesnake Hill Wash. The FAA finds the comment doesn't warrant further response.

ADEQ Comment 3 (Coordination) Please copy Edwin Slade, Office of Administrative Counsel at oac@azdeq.gov on all future correspondence and invitations to participate in regard[s] to this project.

Response: Noted. The FAA finds the comment doesn't warrant further response.

United States Environmental Protection Agency Region IX, Jean Prijatel, Manager, Environmental Review Branch –

USEPA Comment 1 (Coordination). Building upon the thorough presentation of past planning and environmental review documents in the Draft EA, EPA recommends that FAA work with ADOT and the City of Kingman to prepare a stand-alone "Minimization and Mitigation Plan" that identifies the responsible party and timing for each of the proposed minimization features and mitigation measures as the project is constructed and maintained.

Response: The FAA added **Appendix E** containing a list of all proposed treatment measures. References to **Appendix E** have been added to each environmental analysis section.

USEPA Comment 2 (Coordination). Prepare the document in a format that can be included in future Requests for Proposals and Contractor Scope of Work to ensure no protective measures fall behind schedule or are missed by the multiple parties working to construct and maintain various elements of the project.

Response: The FAA added **Appendix E** containing a list of all protection measures. References to **Appendix E** have been added to each environmental analysis section.

[157] http://static.azdeq.gov/wqd/wotus/pswl.pdf

USEPA Comment 3 (Biology). Confirm that additional, project specific species coordination with Arizona Game and Fish Department has occurred to pursuant to the April 26, 2023 request.

Response: Since 2006, ADOT has coordinated with AZGFD about this project's design and potential impacts to wildlife. For example, AZGFD made the following recommendations to ADOT (see **Appendix A1.b** pages A.1b-23 and A.1b-24):

- limit activities in riparian areas,
- design culverts to limit erosion and maximize culvert design to aid in wildlife use,
- incorporate vegetated buffers around river crossings,
- develop staging areas in previous disturbed areas,
- adjust road grade to concentrate water flows into stream channels, and
- incorporate best management practices during construction to limit the introduction and spread of invasive species.

In 2007, ADOT's biological consultant provided ADOT with recommended responses for each of these items (see **Appendix A1.b** page A.1b-11).

In 2023, FAA queried the AZGFD database to update and verify species list only (see **Appendix C** page C.2-1). The FAA finds the comment doesn't warrant further response.

USEPA Comment 4 (Biology). Describe specific facility, bridge, and culvert design recommendations that will be incorporated into the project to facility continued species considerations and wildlife movement across the new facility.

Response: In 2007, ADOT incorporated the following items into the road design to accommodate wildlife (see **Appendix A1.b** page A.1b-11):

- Drainages control features will be designed and constructed in conjunction with ADOT best management practices. Soil erosion and impacts to surface water quality will be minimized and no net loss of riparian habitat quality will occur.
- New culverts will be designed and constructed to allow passage of calculated local surface flows and will allow passage of small wildlife. The Rattlesnake Wash drainage structure is designed to be a 5-barrel, 12-foot-wide by 9-foot-high concrete box culvert and will be sized to allow passage of most small to large wildlife species.
- All disturbed areas in and around drainages will be reseeded with species native to the area.
- All areas disturbed by equipment staging will be reseeded with species native to the area.

The FAA finds the comment doesn't warrant further response.

USEPA Comment 5 (Floodplains). Confirm the approach being used to establish the flood elevation and corresponding flood hazard area used for project siting, design, and construction pursuant to [Executive Order] 13690.

Response: Executive Order 13690, which was reinstated by Executive Order 14030 on May 20, 2021, and amended portions of Executive Order 11988, established the Federal Flood Risk Management Standard (FFRMS) for federally funded projects. Its purpose was to expand management from the current base flood plain to address current and future flood risk and ensure

that projects funded with taxpayer dollars last as long as intended. The FAA didn't apply the FFRMS, because the proposed action and its alternatives aren't federally funded. Instead, the FAA used the 100-year floodplain, as shown on FEMA Flood Insurance Rate Maps, as the base floodplain for analysis (see **Sections 4.13.2 and 4.13.4**) per Executive Order 11988 and USDOT 5650.2. The FAA finds that this comment doesn't warrant further response.

USEPA Comment 6 (Floodplains). Include a drainage plan that models hydrologic flows before and after construction of the proposed Rancho Santa Fe Parkway, and clearly identify design elements that will allow the facility to be built safely within a 100 year floodplain.

Response: In 2020, the City sponsored a drainage study that modelled existing flows in East Kingman including the current project area. The EA discusses this study (i.e., Fuller 2020) in **Section 4.13.2** and provides a web link to it in **Section 6**. The City commits to update the project area portion of the model after construction in **Section 4.13.5.1.**

The proposed project is designed to withstand a 100-year flood event. For example:

- Rattlesnake Wash drainage structures at I-40 and at RSFP are designed to pass estimated 100-year storm flows under the roadway (see **Section 1.5.1**). Extreme storm events greater than 100-year flood events would pass over top of the roadway and pass through the project area in current drainage patterns.

- After Rattlesnake Wash passes under RSFP, a drainage channel is designed to contain estimated 100-year storm flows within RSFP ROW to the confluence with Rattlesnake Hill Wash at Industrial Boulevard (see **Figure 4.13.2** and **Section 4.13.4.1**).

Both the City and Mohave County Flood Control District have reviewed the plans for floodplains impacts and resilience. The RSFP plans were submitted to Mohave County Flood Control District in July 2021, and comments were addressed in September 2021. RSFP drainage components are designed to address regional flooding hazards between I-40 and the railroad to the north as identified in the KADMP (JE Fuller 2020).[158] The FAA finds the comment doesn't warrant further response.

USEPA Comment 7 (Floodplains). Identify specific design features to prevent the new roadway from negatively affecting stormwater flows and/or impacting current or proposed development, infrastructure, and drainage features.

Response: The proposed project is designed to protect floodplain values as discussed in **Section 4.13.4.1.** For example, a scour-protected, paved at-grade crossing of Rattlesnake Hill Wash would replace an unprotected, unpaved at-grade crossing. Also, a new shallow (2-3 foot deep) channel approximately 75 feet wide would be constructed to protect the adjacent railroad ROW. Rattlesnake Wash is crossed by RSFP with the roadway design passing estimated 100-year storm flows under the roadway. A new drainage channel associated with RSFP ROW will help manage storm flows in the northern portion of the project area including across airport property. The FAA finds the comment doesn't warrant further response.

USEPA Comment 8 (Floodplains). Describe past and planned future coordination between the "action" agencies (FAA, ADOT, City of Kingman, and Mohave County) and the Mohave Flood Control District that is required prior to finalizing appropriately sized drainage features.

Response: Mohave County Flood Control District, ADOT, and Mohave County reviewed the RSFP drainage plans as part of the City's approval process. The RSFP plans were submitted to Mohave County Flood Control District in July 2021, and comments were addressed in September

[158] Kingman Area Drainage Master Plan Figure 2-14, Figure 2-16, and Figure 2-18 https://www.cityofkingman.gov/government/departments/engineering/kingman-area-master-drainage-plan

2021. **Section 4.13.5.1** states the City will update the KADMP FLO-2D model after the Proposed Project has been constructed and will submit data to FEMA for purposes of updating the 100-year floodplain maps. The FAA finds the comment doesn't warrant further response.

USEPA Comment 9 (Floodplains). Confirm whether a stormwater detention basin is required and identify its placement in relation to the proposed roadway.

Response: The roadway drainage structures (culverts & channels) have been designed to City and County design criteria to pass estimated 100-year stormwater flows under the roadway without the need for detention basins. The drainage design is described in **Appendix A.4.c** (Pages A.4.c-55 to 57). The FAA finds the comment doesn't warrant further response.

USEPA Comment 10 (Floodplains). Discuss the potential for increased flooding as an effect of climate change by referencing recent and predicted flood-inducing precipitation events, and how extreme precipitation events are being factored into planning the roadway design, new bridge crossing of Rattlesnake Wash, retrofit of the existing bridge over Rattlesnake Wash, and culvert facilities.

Response: **Section 4.5.2** discussed the County's and ADOT's approaches to designing new infrastructure to address extreme weather events associated with climate change. They focus on avoiding flood hazard areas when possible and designing bridges and culverts to pass estimated 100-year storm flows. The only storm event in the last decade that produced recordable flows in the project vicinity occurred in October 2018 when a Mohave County gauge in Diagonal Wash recorded a peak flow of 350 cubic feet per second.[159] The RSFP is designed to accommodate estimated 100-year stormwater flows. For extreme storm events larger than 100-year flows, RSFP is designed so that stormwaters would overtop the road and continue to follow the existing drainages. As presented in **Section 4.5.4.3**, RSFP drainage components address regional flooding hazards. The FAA finds the comment doesn't warrant further response.

[159] https://mohave.onerain.com/map/?view=372ea817-281b-4de2-ab10-4b4f792fe1e7

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7. List of Preparers

City:

Mr. Doug Breckenridge - Kingman Municipal Airport, Airport General Manager

Mr. Jack Plaunty - City of Kingman, Public Works

AECOM:

Ms. Jennifer Lutz - Senior Planner

Mr. Mark Turner - Senior Planner

Dr. Gene Rogge - Senior Archaeologist

Dr. Roger Wayson, P.E. - Air Quality and Noise

Ms. Elizabeth Parker - Environmental Planner Hazardous Materials

Mr. Dale Wiggins, P.E. - Project Engineer

Ms. Alexa Molthen- Climate

Federal Aviation Administration:

Mr. Matthew Bilsbarrow - Environmental Planner

Mr. Jared Raymond - Community Planner