

Appendix A

Environmental Evaluation

DRAFT



DAVID EVANS
AND ASSOCIATES INC.

MEMORANDUM

DATE: May 4, 2021

TO: Samantha Peterson, Aviation Planner
Century West Engineering
421 N. Pearl St. #206
Ellensburg, WA 98926

FROM: Casey Storey, DEA

SUBJECT: Joseph Airport Master Plan Preferred Alternative Environmental Evaluation

PROJECT: CWEX00000026
Joseph Airport Master Plan & AGIS

1. Introduction

This memorandum presents a preliminary evaluation of the potential environmental impacts that could result from implementation of the Preferred Alternative for the Joseph State Airport Master Plan. This evaluation is based on the Preferred Alternative description as provided by Century West Engineering coupled with analysis and review of environmental baseline conditions at the Joseph Airport Master Plan study area that were completed in support of a July 2020 Environmental Baseline memorandum prepared by David Evans and Associates (DEA). This evaluation area includes the existing Joseph State Airport (Airport) facility, the Preferred Alternative Area of Potential Effect (APE), and the surrounding environment – including adjacent habitats and immediate watersheds. The primary resource impact topics analyzed in this document include Land Use; Hazardous Materials and Solid Waste; Biotic Resources (including terrestrial and aquatic species and their habitats); Section 4(f) Resources; Federally Listed Endangered and Threatened Species; Wetlands and Waters of the United States; Floodplains; Air Quality; and Stormwater and Water Quality.

2. Preferred Alternative

The improvements associated with the Preferred Alternative would include operational changes, construction of both airside and landside improvements, and acquisition of land adjacent to the Airport to accommodate development of portions of the Preferred Alternative. No changes to the existing runway or west parallel taxiway configuration are proposed. Proposed Airport improvements are shown in Appendix A and summarized as follows:

Runway/Taxiway System

- Development of Non-Precision Instrument Approach with Circling Procedure.
- Grading of taxiway object free area (TOFA) at north end of west parallel taxiway.
- Pavement removal adjacent to aircraft fueling apron and parallel taxiway to address potential runway incursion in compliance with FAA standards.

South Apron Area Improvements

- New hangar infill construction (7 conventional hangars proposed).
- Replacement/relocation of existing pilot building with mixed use building, with potential for including community use space.



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- Expansion of existing aircraft apron to provide hangar access and large aircraft parking, including medevac aircraft.
- Elimination of 12 small airplane tiedowns to accommodate hangars and large aircraft parking.
- Reconfigured vehicle access and parking.
- Relocated/upgraded (electronic) south and west vehicle gates
- Expanded aircraft fueling apron.

West Hangar Area

- Acquisition of approximately 1.9 acres of City of Joseph-owned land with direct access to airfield.
- Construction of new taxiway connection to west parallel taxiway.
- New hangars (4 conventional hangars and one 8-unit T-hangar proposed).
- New vehicle parking.
- New fencing and vehicle gates.
- Relocation of existing City solid waste recycling station on site.
- Preserve (relocate) existing access to City-owned parcel, including recycling station and gravel pit extraction.

East Hangar Development Reserve

- Areas identified for potential aviation use facilities with access to the runway.

3. Potential Environmental Impacts of the Preferred Alternative

The following sections describe the potential impacts of the Preferred Alternative on the environmental resources listed in Section 1 above. Please refer to the July 2020 Environmental Baseline memo for additional detail on the environmental resources present on and near the Airport property. The analysis below does not include potential impacts to historic, cultural and archaeological resources. Potential impacts to these resources will be addressed in a separate memo to be prepared by Historical Research Associates, Inc. (HRA).

3.1. Land Use

The Airport is located adjacent to and west of the Joseph city limits in unincorporated Wallowa County. The Airport property is dedicated to airport-related uses, while adjacent properties are characterized by industrial and light industrial uses. Low-density residential uses exist immediately west of Airway Road, to the west of the Airport. A City of Joseph recycling transfer facility and a gravel pit are located on a city-owned parcel immediately adjacent to the Airport on its west side, between the Airport property and Airway Road.

Parcels immediately adjacent to the Airport, including the City of Joseph owned property to be acquired as part of the West Hangar Area improvements, are zoned M-1 (Industrial) by the Wallowa County Comprehensive Land Use Plan (Wallowa County 2005). Properties to the west of Airway Road are zoned R-1 (Rural Residential). The Airport and adjoining properties are also located within the Airport Protection Zone overlay. This protection zone prohibits the establishment of air space obstructions in airport approaches and surrounding areas through height restrictions and other land use controls deemed essential to reduce potential safety hazards.



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The improvements proposed under the Preferred Alternative would include construction of additional airport-related uses within the boundaries of the Airport property and construction of airport-related uses on the property where the recycling transfer facility and gravel pit currently exist. The Airport will acquire the latter property from the City of Joseph to construct the West Hangar Area improvements and will relocate the recycling transfer facility on site. Access to the recycling facility and gravel pit will be relocated but preserved; therefore, no displacement of existing uses would result under the Preferred Alternative. The proposed uses would be compatible with existing uses on the Airport property and adjacent sites. The West Hangar Area improvements would be consistent with the allowable uses in the M-1 district and no change in zoning will be required. In light of the above, the Preferred Alternative is not expected to have impacts on land use.

3.2. Hazardous Materials and Solid Waste

Queries of the Oregon DEQ Leaking Underground Storage Tank (LUST) and Environmental Cleanup Site Information (ESCI) were conducted in support of DEA's July 2020 Environmental Baseline Memo (DEQ 2020a; DEQ 2020b). These searches identified no records of environmental cleanup sites and no indications of spills, leaking tanks, or areas of known contamination within or adjacent to the Airport property. Several areas of suspected contamination where further investigation may be recommended were identified on or adjacent to the Airport.

Phase I Environmental Site Assessments are advised prior to ground disturbing activities proposed as part of the Preferred Alternative. Completion of a Phase I Environmental Site Assessment will be required for the acquisition of the parcel adjacent to the Airport where the recycling transfer facility is currently located and construction of the West Hangar Area improvements would take place. In all instances where initiated, Phase I Environmental Site Assessments evaluate past and current documentation, existing conditions, and current hazardous materials risks to or from subject parcels.

3.3. Biotic Resources

Vegetation in the area surrounding the Airport is characterized by agricultural fields, native bunchgrass associations, scattered mixed conifer stands, shrubs and scrub communities, and mixed herbaceous cover. Common plant species within the Airport vicinity include trees such as ponderosa pine (*Pinus ponderosa*), lodgepole pine (*Pinus contorta*), Douglas-fir (*Pseudotsuga menziesii*), black cottonwood (*Populus trichocarpa*) and quaking aspen (*Populus tremuloides*). Shrub species common to the area include serviceberry (*Amelanchier alnifolia*) and white alder (*Alnus rhombifolia*). Herbaceous species common in the area include Idaho fescue (*Festuca idahoensis*), bluebunch wheatgrass (*Agropyron spicatum*), and a mix of introduced pasture grasses. Invasive species found throughout the study area include spotted knapweed (*Centaurea stoebe*) and various species of thistle. One federally listed plant species, the threatened Spalding's catchfly (*Silene spaldingii*), has been previously documented near the Airport. Spalding's catchfly is discussed further in Section 3.5 below.

The Airport lies between two streams: Hurricane Creek to the west and northwest, and the Wallowa River to the east. A third stream, Newby Creek, which is a small tributary of the Wallowa River, lies adjacent to the southeast corner of the Airport property. These streams support a variety of aquatic species, both native and



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introduced. Critical Habitat for bull trout (*Salvelinus confluentus*) and steelhead (*Oncorhynchus mykiss*), Snake River Basin distinct population segment (DPS), both federally listed as threatened, is designated in Hurricane Creek and the Wallowa River. These species are discussed further in Section 3.5 below. All three streams are located outside the footprint of the Preferred Alternative.

Vegetated habitat on the Airport property is disturbed and managed in support of safe airport operations. Vegetated areas of the Airport property consist of runway safety area (RSA), taxiway safety area (TSA), and areas adjacent to landside operations that are characterized by mowed grasses and forbs. Wildlife expected to occur on or near the Airport property are largely typical of those found in developed areas of Wallowa county, including rodents and other small mammals such as various species of mice, voles, rats, ground squirrels, rabbits, and moles; two species of deer (*Odocoileus hemionus*, and *O. virginianus*); and coyotes (*Canis latrans*). Birds that may occur on the Airport property include species such as killdeer (*Charadrius vociferus*), western meadowlark (*Sturnella neglecta*), horned lark (*Eremophila alpestris*), savannah sparrow (*Passerculus sandwichensis*), and potentially other ground-nesting migratory species.

Because terrestrial habitat on the Airport property is disturbed and no aquatic habitat exists within the Preferred Alternative footprint, construction associated with the Preferred Alternative is generally not expected to have impacts on unique or special biotic resources. As discussed in Section 3.5 below, vegetation surveys are recommended to determine the possible presence of Spalding's catchfly (*Silene spaldingii*). If it is determined during project design that additional stormwater runoff from the Preferred Alternative improvements could reach nearby receiving waters, treatment will need to be incorporated to address potential impacts on listed fish species. This is discussed further in Section 3.5 and 3.9 below. Additionally, if construction is proposed during the nesting season for bird species likely to be present on the Airport property, pre-construction nest surveys would be required to ensure compliance with the Migratory Bird Treaty Act (MBTA).

3.4. Section 4(f) Resources

Section 4(f) of the the U.S. Department of Transportation Act of 1966 provides for consideration of park and recreation lands, wildlife and waterfowl refuges, and historic sites during transportation project development. Research conducted in support of the DEA July 2020 Environmental Baseline Memo determined that no Section 4(f) properties occur within the Airport property. As a result, no impacts on Section 4(f) properties are anticipated under the Preferred Alternative.

The Hurricane Creek Cemetery, adjacent to the Airport property, likely requires additional evaluation as potentially eligible for inclusion in the National Register of historic Places (NRHP). Cultural and historic resources will be addressed as part of a separate deliverable to be prepared by HRA. The Hurricane Creek Cemetery would not be impacted by the Preferred Alternative.

3.5. Federally Listed Threatened and Endangered Species and Habitats

Queries of the Oregon Biodiversity Information Center (ORBIC) and USFWS IPaC databases were conducted in support of DEA's July 2020 Environmental Baseline memorandum, to determine the presence of state and federally endangered or threatened species, designated Critical Habitat, and species' likelihood of occurrence in the Airport vicinity (ORBIC 2020, USFWS 2020a). Sensitive or listed terrestrial species are not expected to occur



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due to lack of suitable habitat at the Airport property, which is disturbed and managed in support of safe airport operations. One federally threatened plant species, Spalding's catchfly has been previously identified adjacent to the Airport property within the boundaries of the Hurricane Creek Cemetery (Valerie Thompson, DEA Biologist, personal communication, July 8, 2020). No designated Critical Habitat for any federally listed terrestrial species is located at or in the vicinity of the Airport.

Three federally listed fish species, all Threatened, occur in streams adjacent to or near the Airport property: bull trout, steelhead,, Snake River Basin distinct population segment (DPS), and Chinook salmon (*Oncorhynchus tshawytscha*), Snake River Spring/Summer-run evolutionarily significant unit (ESU). Critical Habitat for bull trout and steelhead is designated within Hurricane Creek, which flows to the west of the Airport and is adjacent to the Airport property on its northwest corner, and the Wallowa River, approximately 0.25 mile east of the Airport.

The Preferred Alternative is not expected to impact any federally listed terrestrial species because of a lack of suitable habitat at the Airport. Because Spalding's catchfly has been previously identified on an adjacent property, vegetation surveys are recommended prior to any disturbance of vegetated areas in order to determine if this species is present.

The Preferred Alternative is not expected to impact federally listed fish species or their habitat because no aquatic habitats exist within the Preferred Alternative footprint and additional stormwater generated under the Preferred Alternative is expected to infiltrate on site without reaching nearby waters. If project design of the Preferred Alternative is determined to result in the discharge of stormwater to nearby receiving streams, then project design may need to incorporate stormwater treatment measures to address NMFS requirements for protection of listed salmon and steelhead under their jurisdiction and consultation with this agency and the USFWS may be required

3.6. Wetlands and Waters of the United States

Three streams surround the Airport property: Hurricane Creek, which flows to the west of the Airport and adjoins the northwest corner of the property; the Wallowa River, approximately 0.25 east of the Airport; and Newby Creek, a minor tributary of the Wallowa River, adjacent to the southeastern corner of the Airport property. The National Wetland Inventory (NWI) map classifies these streams as Riverine Wetlands (USFWS 2020b). Three small ponds are located on the property adjacent to the Airport on the east. Two of these ponds are labeled as Palustrine, Unconsolidated Bottom, Semi-permanently Flooded, Excavated (PUBFx) and one is labeled as Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated (PUBHx). One small pond is located on the property adjacent to the Airport on the west and is classified as Palustrine, Unconsolidated Bottom, Semi-permanently Flooded, Excavated (PUBFx) (USFWS 2020b, Figure 2). The pond indicated to the west appears to be erroneously designated by the NWI and is associated with a quarry-created depression. The ponds mapped to the east are presumed to be seasonally wet, likely holding water in the spring after snowmelt or heavy rains.



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All construction activities associated with the Preferred Alternative would take place in upland areas. No wetlands or Waters of the U.S. are located within the Preferred Alternative footprint as currently proposed. As a result, the Preferred Alternative would not be expected to impact wetlands or waters of the U.S..

3.7. Floodplains

The Airport is located in an upland area on a broad, gently sloping plain and the FEMA National Flood Hazard Layer (NFHL) does not identify mapped floodplains, floodways, or other flood hazard areas within or adjacent to the Airport property (FEMA 2020). According to FEMA Flood Insurance Rate Map (FIRM) number 41063C0614B, effective February 17, 1988, the Airport is located in Flood Hazard Zone X. Zone X denotes areas that are determined to be outside the 500-year floodplain.

None of the actions associated with the Preferred Alternative would take place within or otherwise affect a floodplain. Therefore, no impacts on floodplains are expected to result from implementation of the Preferred Alternative.

3.8. Air Quality

The U.S. Environmental Protection Agency (EPA) established National Ambient Air Quality Standards (NAAQS) for a limited number of "criteria" pollutants with the enactment of the Clean Air Act (CAA) of 1970 and the Amendments of 1975 and 1977. The CAA defines geographic regions that do not meet the NAAQS primary and secondary criteria for certain air pollutants as "non-attainment areas."

The Joseph Airport is outside of designated air quality maintenance and air quality non-attainment areas as regulated and administered by the Oregon Department of Environmental Quality (DEQ). Therefore, the General Conformity Rule (42 United States Code [USC] 7506(c)) does not apply. The Airport is in an attainment area that meets state and federal standards for all regulated air pollutants.

Construction activities associated with the Preferred Alternative would result in short-term, localized adverse air quality impacts from fugitive dust and emissions from construction vehicles and equipment. These impacts would take place only during the construction period and could be minimized through the use of measures such as covering soil stockpiles and watering gravel areas to minimize dust, and ensuring that construction equipment is properly maintained and equipped with mufflers and air filters.

In the long term, implementation of the Preferred Alternative would not by itself be expected to affect levels of air traffic at the Airport or vehicle traffic to the airport in a way that would measurably contribute to increased emissions. The Preferred Alternative would not be expected to result in levels of pollution that would exceed the NAAQS. As a result, no long-term air quality impacts would be expected from implementation of the Preferred Alternative.

3.9. Stormwater and Water Quality

Stormwater treatment and conveyance infrastructure on the Airport property is limited to sheetflow conveyance to on-airport ditches and grassed infield and runway safety areas (RSA). No direct discharge points to nearby waterways or ditches draining to waterways occur or are associated with Airport stormwater conveyance.



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The Preferred Alternative would result in the addition of impervious areas on the Airport property in the form of paved surfaces and buildings, which would result in an increase in stormwater generated on the site. It is anticipated that stormwater would continue to sheetflow to on-airport ditches and grassed infield and RSA, infiltrating into the ground without directly discharging to nearby waterways. As a result, additional stormwater generated under the Preferred Alternative would not be expected to impact water quality in nearby waters.

If the Preferred Alternative is determined during project design to result in the potential discharge of stormwater to nearby receiving streams, then project design will need to incorporate stormwater treatment measures to address NMFS requirements for protection of listed fish under their jurisdiction or to avoid potential impacts to listed fish administered by NMFS and the USFWS.

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4 References

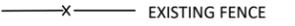
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- Wallowa County. 2005. Wallowa County Comprehensive Land Use Plan.

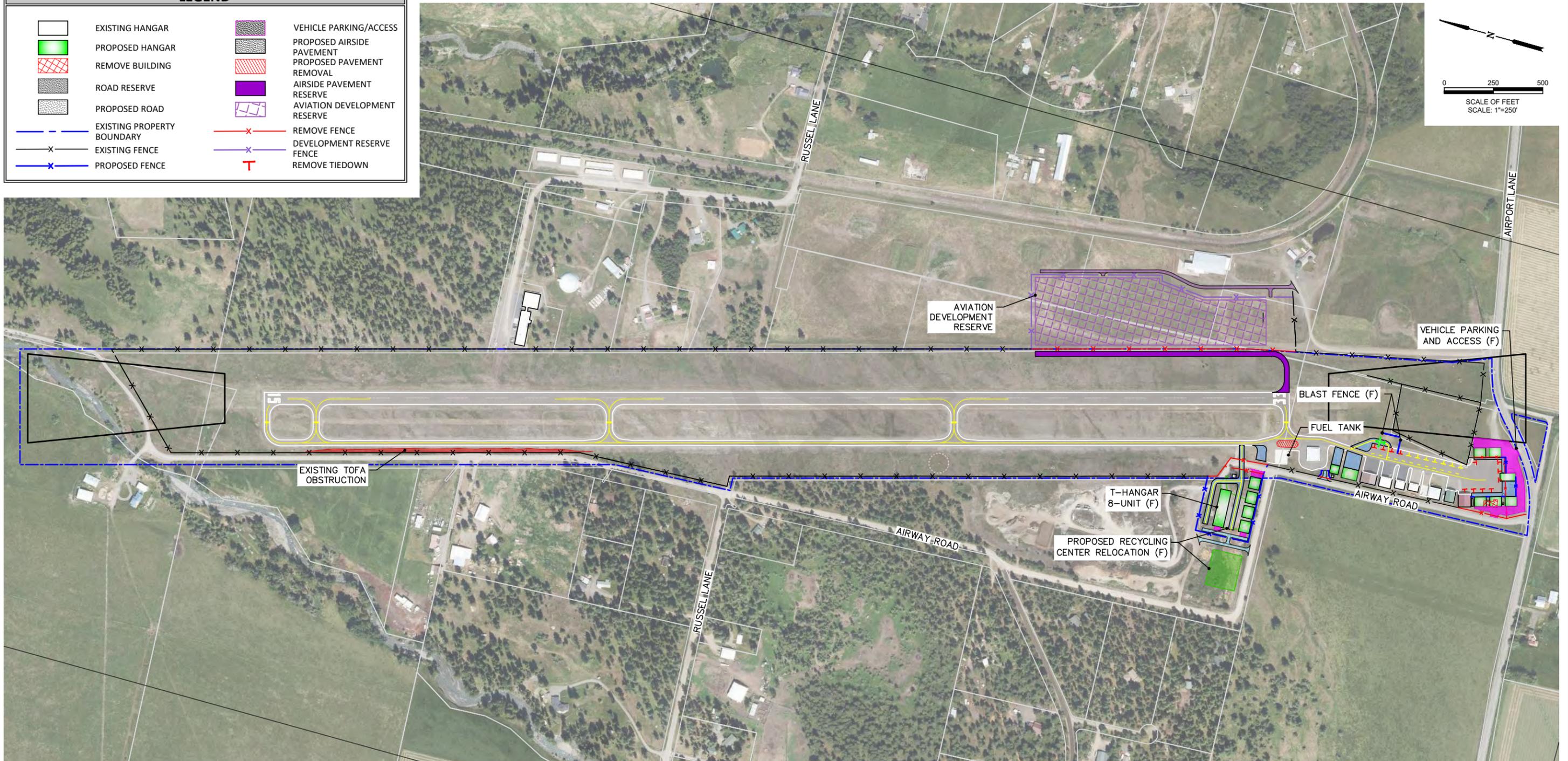
Attachments/Enclosures:

Appendix A. Preferred Alternative Proposed Improvements

***Appendix A: Preferred Alternative Proposed
Improvements***

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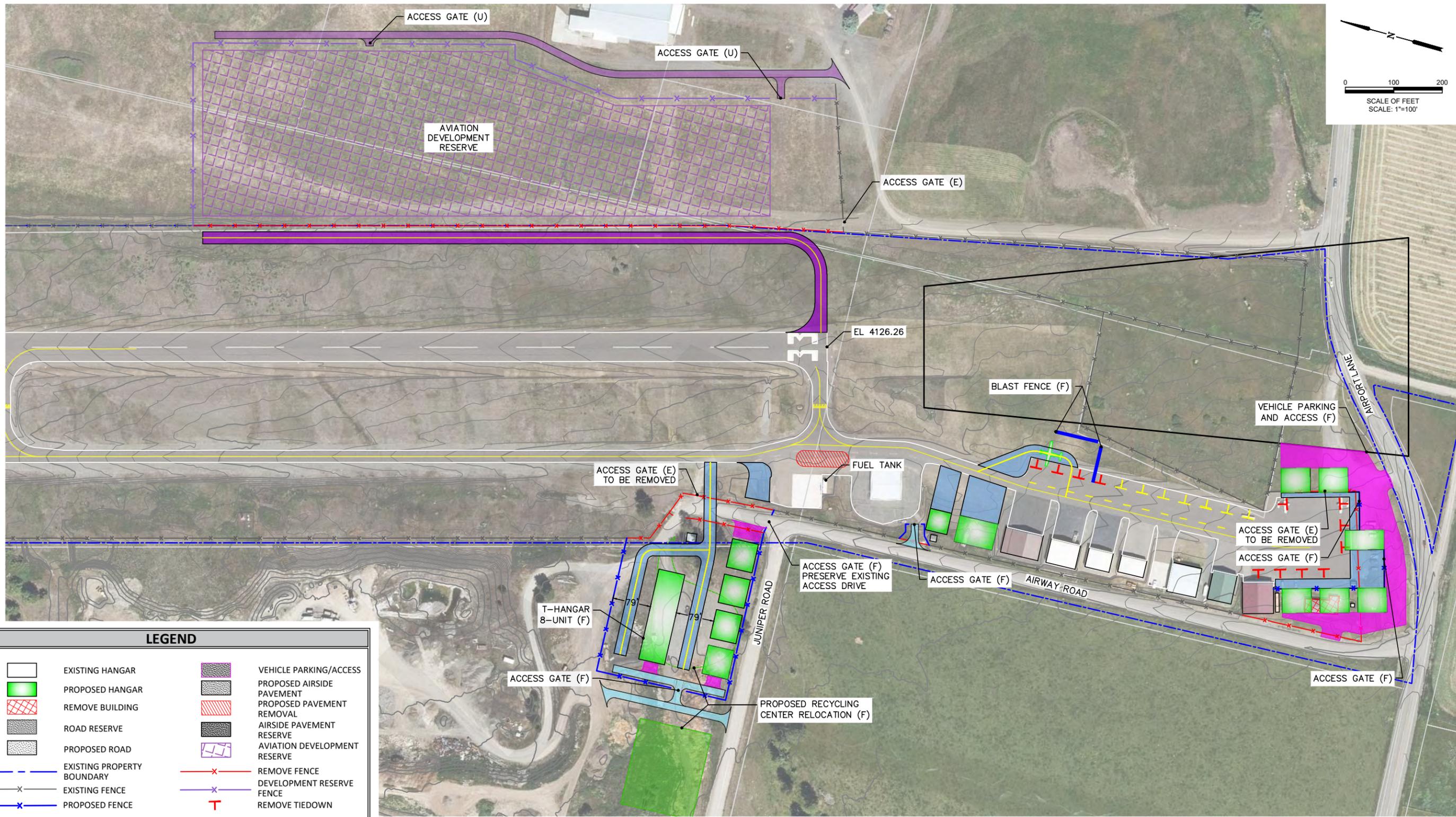
LEGEND			
	EXISTING HANGAR		VEHICLE PARKING/ACCESS
	PROPOSED HANGAR		PROPOSED AIRSIDE PAVEMENT
	REMOVE BUILDING		PROPOSED PAVEMENT REMOVAL
	ROAD RESERVE		AIRSIDE PAVEMENT RESERVE
	PROPOSED ROAD		AVIATION DEVELOPMENT RESERVE
	EXISTING PROPERTY BOUNDARY		REMOVE FENCE
	EXISTING FENCE		DEVELOPMENT RESERVE FENCE
	PROPOSED FENCE		REMOVE TIEDOWN



PREFERRED ALTERNATIVE

JOSEPH STATE AIRPORT
OREGON DEPARTMENT OF AVIATION





LEGEND			
	EXISTING HANGAR		VEHICLE PARKING/ACCESS
	PROPOSED HANGAR		PROPOSED AIRSIDE PAVEMENT
	REMOVE BUILDING		PROPOSED PAVEMENT REMOVAL
	ROAD RESERVE		AIRSIDE PAVEMENT RESERVE
	PROPOSED ROAD		AVIATION DEVELOPMENT RESERVE
	EXISTING PROPERTY BOUNDARY		REMOVE FENCE
	EXISTING FENCE		DEVELOPMENT RESERVE FENCE
	PROPOSED FENCE		REMOVE TIEDOWN

**PREFERRED ALTERNATIVE
TERMINAL APRON AND DEVELOPMENT AREAS**

**JOSEPH STATE AIRPORT
OREGON DEPARTMENT OF AVIATION**





Appendix B

Forecast Approval Letter



U.S. Department
of Transportation
**Federal Aviation
Administration**

Northwest Mountain Region
Colorado · Idaho · Montana · Oregon · Utah
Washington · Wyoming

Seattle Airports District Office
2200 S 216th St
Des Moines, WA 98198

November 12, 2020

Mr. Anthony Beach
3040 25TH ST SE
Salem, OR 97302-1125

Joseph State Airport
Joseph, OR
AIP: 3-41-0092-011-2019
Forecast Approval

Dear Mr. Beach:

The Federal Aviation Administration (FAA) reviewed forecast information for the subject airport. FAA approves the forecast as presented in Chapter 3 of the Master Plan and as shown below:

TABLE 3-15: FORECAST SUMMARY

Activity	2020	2025	2030	2035	2040
Itinerant Operations					
General Aviation	2,294	2,536	2,802	3,035	3,353
Air Taxi (Fire & Medevac)	792	875	966	1,045	1,154
Military	100	100	100	100	100
Total Itinerant Operations	3,186	3,511	3,868	4,181	4,607
Local Operations	1,006	1,109	1,221	1,320	1,455
Total Local & Itinerant Operations	4,192	4,620	5,089	5,501	6,062
Based Aircraft	12	13	15	16	18
Operations per Based Aircraft	349	355	339	344	337

Source: Century West Engineering

The FAA also approves the Cessna 182 (A-I) for the existing and future critical aircraft. We found the forecast to be supported by reasonable planning assumptions and current data. Your forecast appears to be developed using acceptable forecasting methodologies.

This forecast was prepared prior to the impacts of COVID-19. The forecast approval is based in reference to the data and methodologies used and the conclusions at the time the document was prepared. However, consideration must still be given to the significant impacts of COVID-19 on aviation activity; as a result, there is lower than normal confidence in future growth projections. FAA approval of the forecast does not provide justification to begin airport development.



U.S. Department
of Transportation
**Federal Aviation
Administration**

Northwest Mountain Region
Colorado · Idaho · Montana · Oregon · Utah
Washington · Wyoming

Seattle Airports District Office
2200 S 216th St
Des Moines, WA 98198

Justification for future projects will be made based on activity levels at the time the project is requested for development, rather than this forecast approval. Further documentation of actual activity levels reaching the planning activity levels will be needed prior to FAA participation in funding for eligible projects. Further, the approved forecasts may be subject to additional analysis or the FAA may request a sensitivity analysis if this data is to be used for environmental or Part 150 noise planning purposes.

If you have questions, please call me at 206-231-4134.

Sincerely,

Benjamin Mello
Airport Planner, FAA Seattle Airports District Office



Appendix C

Instrument Approach Development

Technical Appendix

Instrument Approach Feasibility – Joseph State Airport

Overview

The airside planning evaluations at Joseph State Airport are focused primarily on the proposed addition of an instrument approach and identification of potential taxiway improvements that may be driven by various development factors. A summary of the proposed instrument approach options are provided in Chapter 5. The technical details associated with the approach options and airspace implications are detailed in this appendix.

As noted in Chapter 5, the FAA's Western Flight Procedures Team (TWSE) Operations Support Group evaluated the "rough feasibility" of available approach procedures for the Airport.

The following email summarizes the FAA's preliminary assessment of approach procedure feasibility at Joseph State Airport.

From: Stocking, Christopher M (FAA) <Christopher.M.Stocking@faa.gov>

Sent: Tuesday, December 8, 2020 10:42 AM

To: LUCAS Sarah <Sarah.LUCAS@aviation.state.or.us>

Subject: Joseph State Airport (KJSY) RNAV (GPS) A

This message was sent from outside the organization. Treat attachments, links and requests with caution. Be conscious of the information you share if you respond.

Sarah,

After taking a look at straight in requirements for runway 15 and using a Glide Path Angle (GPA) of 4.00° and a Threshold Crossing Height (THC) of 43ft, matching the VGSI Data on file, the following Vertical Guidance Surface (VGS) area penetrations exist and would need to be removed (entirely or shortened) as the obstacle also penetrates the 20:1 surface as shown below:

Final Segment - VGS (LNAV) - Penetrating Obstacles																
Area	Name	Source	Obs Type	Latitude	Longitude	Height (ft)	Height (ft) AGL	Height (ft) AMSL	AC (H/V (ft))	Effective Height (ft)	Adjustment s (ft)	Distance to Centerline (ft)	Distance to Origin (ft)	Surface Height (ft) AMSL	Amount of Penetration (ft)	Required GPA
VGS (LNAV)	41-024126	IFPA	TREE	N45° 22' 10.59"	W117° 15' 24.15"	4118	0	4118	2C (+50/+20)	4118	0	113.75	1139.48	4116.17	1.83	4.14

Additionally, in order to publish a Visual Descent Point (VDP), receive visibility minima lower than 1sm (does not apply for this procedure), and authorization to fly the procedure or applicable minimums at night, precluding any additional factors, the following 20:1 penetrations will need to be mitigated (lighted, lowered, removed). There are a few additional factors that can affect the publication of a VDP and visibility minima, though unmitigated 20:1 penetrations are a show stopper for night mins. Aircraft will be unable to fly the procedure at night if no action is taken.

Final Segment - Visual Area (NPA) - 20:1 Penetrating Obstacles																	
Area	Name	Source	Obs Type	Lighted	Latitude	Longitude	Height (ft)	Height (ft) AGL	Height (ft) AMSL	AC (H/V (ft))	Effective Height (ft)	Distance to Centerline (ft)	Distance to Origin (ft)	20:1 Surface Height (ft) AMSL	20:1 Amount of Penetration (ft)	34:1 Surface Height (ft) AMSL	34:1 Amount of Penetration (ft)
Visual Area (NPA)	41-024108	IFPA	TREE	NO	N45° 22' 04.73"	W117° 15' 27.33"	4139	0	4139	2C (+50/+20)	4139	242.18	413.04	4083.75	55.25	4075.25	63.75
Visual Area (NPA)	41-024107	IFPA	TREE	NO	N45° 22' 06.57"	W117° 15' 27.47"	4134	0	4134	2C (+50/+20)	4134	209.58	596.8	4092.94	41.06	4080.65	53.35
Visual Area (NPA)	41-087545	IFPA	TREE	NO	N45° 22' 05.99"	W117° 15' 27.75"	4120	70	4120	1A (+20/+3)	4120	242.39	544.13	4090.31	29.69	4079.1	40.9
Visual Area (NPA)	41-087925	IFPA	TREE	NO	N45° 22' 09.92"	W117° 15' 21.23"	4122	83	4122	1A (+20/+3)	4122	301.35	826.03	4104.4	17.6	4087.4	34.6
Visual Area (NPA)	41-088891	IFPA	TREE	NO	N45° 22' 11.65"	W117° 15' 21.20"	4124	88	4124	1A (+20/+3)	4124	343.24	996.19	4112.91	11.09	4092.4	31.6
Visual Area (NPA)	41-024106	IFPA	TREE	NO	N45° 22' 09.57"	W117° 15' 21.31"	4113	0	4113	2C (+50/+20)	4113	287.74	792.81	4102.74	10.26	4086.42	26.58
Visual Area (NPA)	41-022907	IFPA	POLE	NO	N45° 22' 03.91"	W117° 15' 26.78"	4088	33	4088	2C (+50/+20)	4088	222.81	323.23	4079.26	8.74	4072.61	15.39
Visual Area (NPA)	41-024126	IFPA	TREE	NO	N45° 22' 10.59"	W117° 15' 24.15"	4118	0	4118	2C (+50/+20)	4118	113.75	939.48	4110.07	7.93	4090.73	27.27
Visual Area (NPA)	41-024127	IFPA	TREE	NO	N45° 22' 06.41"	W117° 15' 25.35"	4094	0	4094	2C (+50/+20)	4094	65.86	546.63	4090.43	3.57	4079.18	14.82

If you wanted to proceed with pursuing a straight in procedure, I would need you or your selected representative to verify that these obstacles do or do not penetrate the above mentioned areas. If these are confirmed to penetrate the VGS and or 20:1 surfaces I will need you to provide a mitigation plan that outlines the actions to be taken and estimated completion date.

The following table identifies the circling RWY 33 20:1 penetrating obstacles. If you decided you would like circling to RWY 33 authorized at night, I would need verification that the below obstacles/terrain do or do not penetrate the 20:1. All verified penetrations must be mitigated and I would need the airports mitigation plan and expected completion date.

Obstacle Evaluation Results for Visual Area (Circling KJSY:RW33)															
Area	Name	Source	Obs Type	Lighted	Latitude	Longitude	Height (ft)	Height (ft) AGL	Height (ft) AMSL	AC (H/V (ft))	Effective Height (ft)	Distance to Centerline (ft)	Distance to Origin (ft)	20:1 Surface Height (ft) AMSL	20:1 Amount of Penetration (ft)
Visual Area (Circling KJSY:RW33)	41-088814	IFPA	TREE	NO	N45° 19' 31.39"	W117° 14' 51.75"	4726	117	4726	1A (+20/+3)	4726	1295.01	9689.17	4605.56	120.44
Visual Area (Circling KJSY:RW33)	41-087319	IFPA	TREE	NO	N45° 19' 30.77"	W117° 14' 43.72"	4669	108	4669	1A (+20/+3)	4669	750.53	9880.62	4615.13	53.87
Visual Area (Circling KJSY:RW33)	41-087304	IFPA	TREE	NO	N45° 19' 45.20"	W117° 14' 50.44"	4573	87	4573	1A (+20/+3)	4573	886.19	8348.23	4538.51	34.49
Visual Area (Circling KJSY:RW33)	41-087667	IFPA	TREE	NO	N45° 19' 45.93"	W117° 14' 51.94"	4568	83	4568	1A (+20/+3)	4568	973.76	8251.89	4533.69	34.31
Visual Area (Circling KJSY:RW33)	41-088294	IFPA	TREE	NO	N45° 19' 46.91"	W117° 14' 49.23"	4565	100	4565	1A (+20/+3)	4565	762.67	8199.19	4531.06	33.94
Visual Area (Circling KJSY:RW33)	41-086636	IFPA	TREE	NO	N45° 19' 46.47"	W117° 14' 55.25"	4562	60	4562	1A (+20/+3)	4562	1191.64	8144.91	4528.35	33.65
Visual Area (Circling KJSY:RW33)	41-087433	IFPA	TREE	NO	N45° 19' 50.54"	W117° 14' 58.61"	4539	64	4539	1A (+20/+3)	4539	1331.78	7688.93	4505.55	33.45
Visual Area (Circling KJSY:RW33)	41-087501	IFPA	TREE	NO	N45° 19' 45.40"	W117° 14' 50.35"	4569	85	4569	1A (+20/+3)	4569	875.33	8329.96	4537.6	31.4
Visual Area (Circling KJSY:RW33)	41-088269	IFPA	TREE	NO	N45° 19' 44.68"	W117° 14' 48.81"	4565	79	4565	1A (+20/+3)	4565	784.74	8425.97	4542.4	22.6
Visual Area (Circling KJSY:RW33)	41-086913	IFPA	BUILDING	NO	N45° 19' 38.05"	W117° 14' 53.53"	4593	14	4593	1A (+20/+3)	4593	1265.66	9003.36	4571.27	21.73
Visual Area (Circling KJSY:RW33)	41-087380	IFPA	ELECTRICAL_SYSTEM	NO	N45° 19' 42.54"	W117° 14' 54.99"	4565	34	4565	1A (+20/+3)	4565	1263.96	8536.78	4547.94	17.06
Visual Area (Circling KJSY:RW33)	41-088006	IFPA	TERRAIN	NO	N45° 21' 07.00"	W117° 15' 06.68"	4130	0	4130	1A (+20/+3)	4130	134.02	16.16	4121.91	8.09
Visual Area (Circling KJSY:RW33)	41-086736	IFPA	TERRAIN	NO	N45° 21' 07.41"	W117° 15' 04.89"	4127	0	4127	1A (+20/+3)	4127	0.09	4.75	4121.34	5.66
Visual Area (Circling KJSY:RW33)	41-087788	IFPA	ELECTRICAL_SYSTEM	NO	N45° 20' 58.83"	W117° 15' 01.80"	4171	38	4171	1A (+20/+3)	4171	17.41	901.19	4166.16	4.84
Visual Area (Circling KJSY:RW33)	41-087427	IFPA	ELECTRICAL_SYSTEM	NO	N45° 19' 41.54"	W117° 14' 50.31"	4559	34	4559	1A (+20/+3)	4559	961.34	8711.36	4556.67	2.33

The following is a very rough estimate on what straight in minimums may be able to achieve. Though, as a precaution during your decision making process on whether to pursue, I would expect that the straight in minimums will be effected by the terrain directly south of the airport. Due to the terrain, either a non-standard missed approach climb gradient will be required, an increase in the straight-in minimums, movement of the missed approach point, or a combination of all three. As of right now and again I must stress, this is very early and unlikely to be the final result but I do not expect there to be a drastic difference:

RNAV (GPS) 15	CAT A	CAT B
LNAV	4720-1 615 (700-1)	4720-1 615 (700-1)
Circling*	5140-1 ¼ 1019 (1100- 1 ¼)	5660-1 ½ 1539 (1600- 1 ½)

Furthermore, I have asked the question in regards to what actions need to be accomplished (airport and flight procedures) in order to begin officially working on adjusting this work to a straight in procedure and if changing to a straight in procedure would affect the current estimated publication date (9/8/22) if you decide this is what you would like to pursue. When I receive more information on that regards I will let you know. Additionally, I have done my best to provide you with graphics that can assist in identifying the aforementioned penetrations though do to limitations on file size, the quality of the images isn't that great. You will also need to rotate them so that they are viewable.

If you have any further questions, please do not hesitate to contact me. It was a pleasure speaking with you and I look forward to continuing to work with you and your department.

From: LUCAS Sarah [<mailto:Sarah.LUCAS@aviation.state.or.us>]
Sent: Friday, December 11, 2020 7:31 AM
To: PECK Heather <heather.peck@aviation.state.or.us>; BEACH Anthony <Anthony.BEACH@aviation.state.or.us>
Cc: David Miller <dmiller@CenturyWest.com>; W. Matt Rogers <WRogers@CenturyWest.com>; Mike Dane <MDane@CenturyWest.com>; Samantha Peterson <SPeterson@CenturyWest.com>
Subject: FW: Joseph State Airport (KJSY) RNAV (GPS) A

Everyone –

See below for new comments from Christopher Stocking. We address most of the questions in the Master Plan (justification, etc). I'm not sure why the PAPI was set at 4.0° GPA, and defer Tony. Maybe James would know, too, since he has history at the airport.

Sarah Lucas, MPA

OREGON DEPARTMENT OF AVIATION
Planner

OFFICE 503-378-2211 CELL 971-304-5467
EMAIL sarah.lucas@aviation.state.or.us
3040 25TH STREET SE, SALEM, OR 97302
WWW.OREGON.GOV/AVIATION

From: Stocking, Christopher M (FAA) <Christopher.M.Stocking@faa.gov>
Sent: Thursday, December 10, 2020 3:29 PM
To: LUCAS Sarah <Sarah.LUCAS@aviation.state.or.us>
Subject: RE: Joseph State Airport (KJSY) RNAV (GPS) A

This message was sent from outside the organization. Treat attachments, links and requests with caution. Be conscious of the information you share if you respond.

Sarah,

I have reviewed the current ALP on file with the FAA dated 23 Dec 2010, in addition to the items discussed earlier, the following will need to be addressed/updated (considered by you and your team) prior to approval for a straight in approach.

	EXISTING CONDITIONS		FUTURE CONDITIONS	
RUNWAY LIGHTING	MIRL		SAME	
RUNWAY END	15	33	15	33
RUNWAY APPROACH CATEGORY	VISUAL	VISUAL	VISUAL	VISUAL
RUNWAY APPROACH SLOPE	PART 77 REQUIRED	20:1	20:1	20:1
	ACTUAL	19:1	20:1	20:1
APPROACH VISIBILITY MINIMUMS	VISUAL & ≥ 1 MILE	VISUAL & ≥ 1 MILE	VISUAL & ≥ 1 MILE	VISUAL & ≥ 1 MILE
RUNWAY MARKINGS	VISUAL	VISUAL	VISUAL	VISUAL
RUNWAY END COORDINATES	LAT. LONG.	N 45° 21'59.37" W 117° 15'22.07"	N 45° 21'9.38" W 117° 15'5.54"	N 45° 21'59.37" W 117° 15'22.07"
INSTRUMENTATION AND APPROACH AIDS	NONE	NONE	GPS (WAAS)	NONE
VISUAL AIDS	PAPI, REIL	NONE	PAPI, REIL	PAPI

KJSY's FAR 77 category is currently A(V) which qualifies for a circling procedure only and would need to be updated to NPI (Non-Precision Instrument), this in turn will update the Runway Approach Category and Runway Approach Slope sections. The Approach Visibility minimums I do not believe needs changed as from what I have look at so far, visibility of less than a mile is not achievable without an approach lighting system. Only items within RWY 15 should be updated, but in the future if an approach is desired for RWY 33, those same items would need updating, including the addition of GPS (WAAS) to RWY 33.

IFR Airports in the area- this is where justification for your procedure is very important. If further justification is needed and I would expect, items such as ambulance down time, etc., and what you have previously mentioned to me will be crucial in "selling" your need for the procedure. After taking a look at the IFR low chart, Baker City (BKE) is 39 nm to the South/South West with IFR procedures and is a VOR/MON airport and La Grande is 32 nm west with an RNAV procedure. I understand this is a straight line distance and driving conditions, roads, etc may inhibit travel during times, which if requested, should be added to your justification if there are significant impacts driving to these airports. We can work on coming up with a justification later, I just wanted to point out a few things to consider.

JSY has an old 2 light PAPI, which as I mentioned in my obstacles discussion is set to a 4.0° GPA. I would like to inquire as to the reason why the PAPI was set to this as I could not easily identify any.

In my previous email, I misspoke about the VGS penetrations needing to be removed. Currently, there is criteria but it is not being enforced. So as of right now, the VGS penetration is not an issue, but may become an issue at a later time. Though, in this particular situation, the VGS penetration mentioned is also a 20:1 penetration and would need to be removed in order for the procedure to be authorized at night.

I have spoken with the ADO/ARP to find out if there any additional items the airport may have to accomplish before a straight in procedure could be authorized and their only comments are ensuring the ALP is updated (which they forecast the airport will have done fall 2021) and NPI runway markings are added to the runway. Additionally, during the updating of the ALP additional obstacles could be identified that may require mitigation, such as lighting, shortening, or removal.

Lastly, saving the bad news for last, pertaining to how to move this forward, I was informed the validation process does not normally (very few exceptions) allow an airport to request a procedure without the proper requirements in place. Once you have decided on which action you want to take, I will try to work with the ADO and ARP to see what the airport will need to show in hopes we can get the procedure through validation.

I hope I have covered everything that may impact your decision and provided you with enough information to make the best decision for your airport. If you have any questions, please email me or call me at your convenience.

v/r,

Christopher Stocking

Western Flight Procedures Team (TWSE)

Operations Support Group

O: 206-231-4233

C: 229-300-4157

[Visit the IFP Gateway here](#)

From: LUCAS Sarah <Sarah.LUCAS@aviation.state.or.us>

Sent: Tuesday, December 8, 2020 2:47 PM

To: Stocking, Christopher M (FAA) <Christopher.M.Stocking@faa.gov>

Subject: RE: Joseph State Airport (KJSY) RNAV (GPS) A

Christopher,

Thanks for providing this detailed overview. I'm looking it over with others at ODA and will be in touch soon.

Appreciate your work on this.

Sarah Lucas, MPA

OREGON DEPARTMENT OF AVIATION

Planner

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Joseph State (KJSY) RNAV (GPS) RWY 15

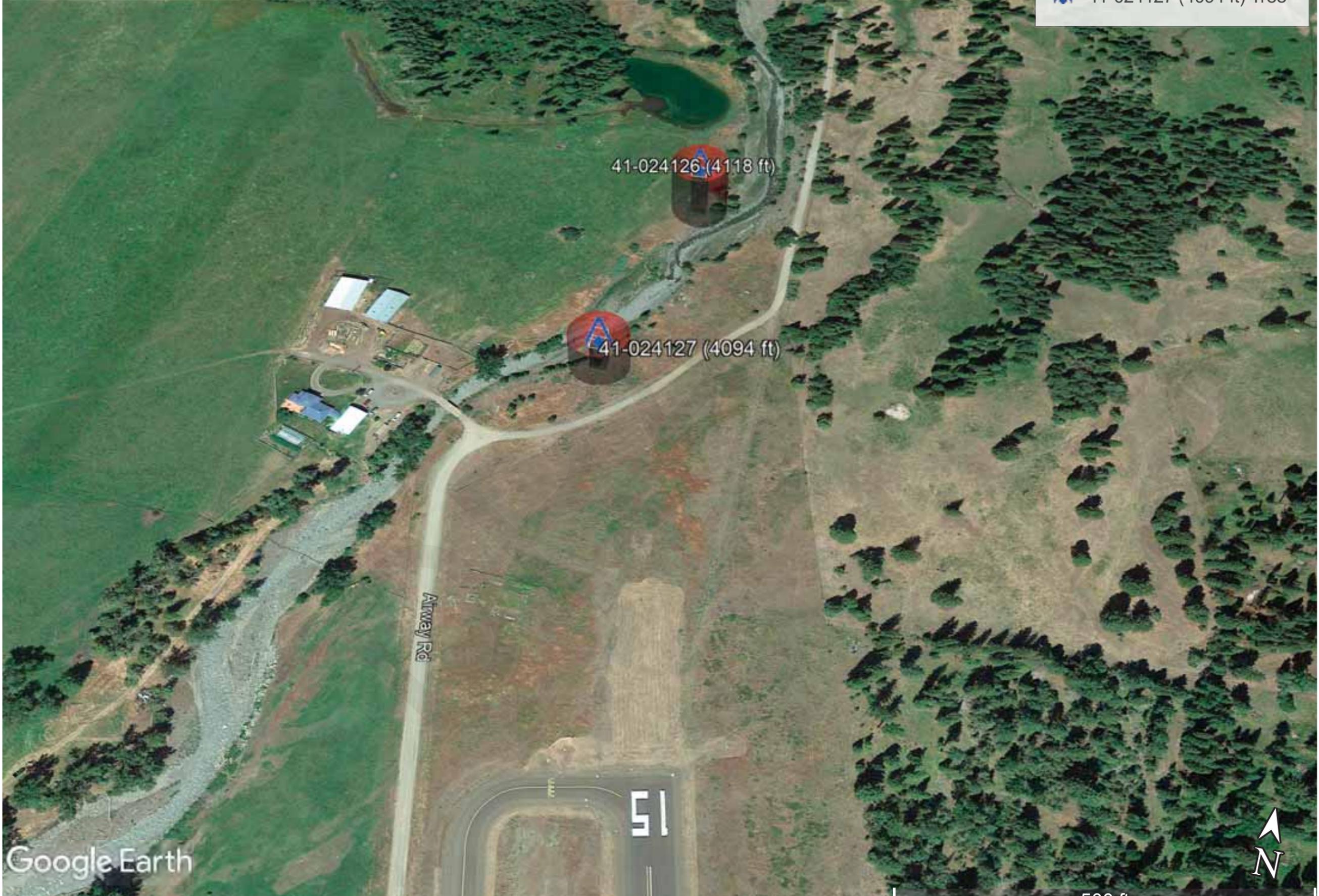


VGS Penetrations (4.0° GPA/ 43' TCH)

The following penetrations must be mitigated in order for Straight-In Minimums to be authorized for RWY 15.

Legend

-  41-024126 (4118 ft) Tree
-  41-024127 (4094 ft) Tree



Google Earth

© 2020 Google

41-024126 (4118 ft)

41-024127 (4094 ft)

Airway Rd

51



500 ft

20:1 Penetrations

The following penetrations must be mitigated in order for Night Minimums to be authorized for RWY 15.

- Legend**
- ▲ 41-022907 (4088 ft) Pole
 - ▲ 41-024106 (4113 ft) Tree
 - ▲ 41-024107 (4134 ft) Tree
 - ▲ 41-024108 (4139 ft) Tree
 - ▲ 41-024126 (4118 ft) Tree
 - ▲ 41-024127 (4094 ft) Tree
 - ▲ 41-087545 (4120 ft) Tree
 - ▲ 41-087925 (4122 ft) Tree
 - ▲ 41-088891 (4124 ft) Tree

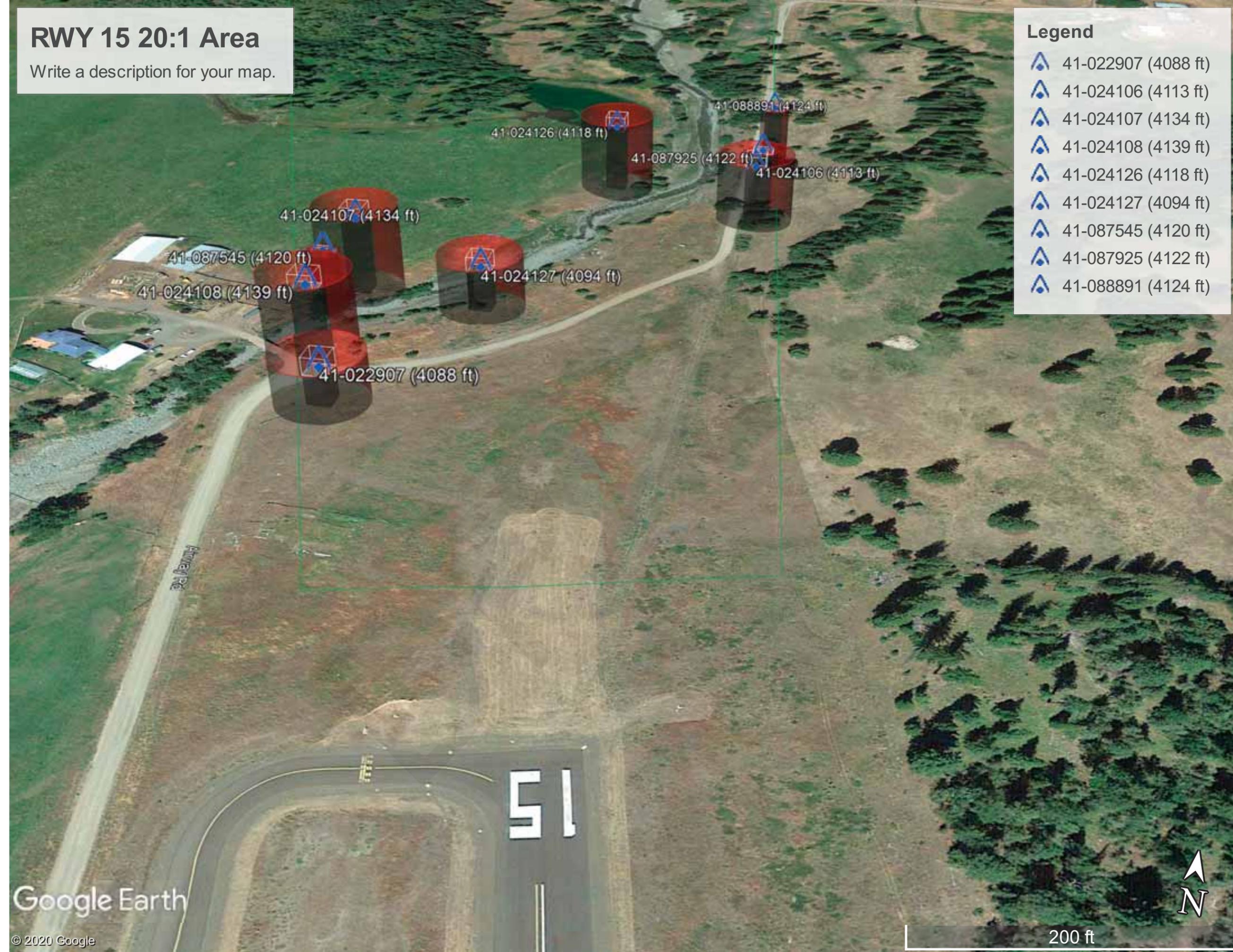


RWY 15 20:1 Area

Write a description for your map.

Legend

- 41-022907 (4088 ft)
- 41-024106 (4113 ft)
- 41-024107 (4134 ft)
- 41-024108 (4139 ft)
- 41-024126 (4118 ft)
- 41-024127 (4094 ft)
- 41-087545 (4120 ft)
- 41-087925 (4122 ft)
- 41-088891 (4124 ft)



KJSY RWY 33 20:1 Penetrations

- Legend**
- ▲ 41-086636 (4562 ft) Tree
 - ▲ 41-086736 (4127 ft) Terrain
 - ▲ 41-086913 (4593 ft) Building
 - ▲ 41-087304 (4573 ft) Tree
 - ▲ 41-087319 (4669 ft) Tree
 - ▲ 41-087380 (4565 ft) Electrical
 - ▲ 41-087427 (4559 ft) Electrical
 - ▲ 41-087433 (4539 ft) Tree
 - ▲ 41-087501 (4569 ft) Tree
 - ▲ 41-087667 (4568 ft) Tree
 - ▲ 41-087788 (4171 ft) Electrical
 - ▲ 41-088006 (4130 ft) Terrain
 - ▲ 41-088269 (4565 ft) Tree
 - ▲ 41-088294 (4565 ft) Tree
 - 📌 RWY 33
 - ▲ TP2 (4354 ft)

41-087319 (4669 ft)
41-087427 (4559 ft)
41-088269 (4565 ft)
41-088294 (4565 ft)
41-087433 (4539 ft)

41-087788 (4171 ft)
41-088006 (4130 ft)
41-086736 (4127 ft)
RWY 33



KJSY RWY 33 20:1 Penetrations

Legend

- 41-086636 (4562 ft) Tree
- 41-086736 (4127 ft) Terrain
- 41-086913 (4593 ft) Building
- 41-087304 (4573 ft) Tree
- 41-087319 (4669 ft) Tree
- 41-087380 (4565 ft) Electrical
- 41-087427 (4559 ft) Electrical
- 41-087433 (4539 ft) Tree
- 41-087501 (4569 ft) Tree
- 41-087667 (4568 ft) Tree
- 41-087788 (4171 ft) Electrical
- 41-088006 (4130 ft) Terrain
- 41-088269 (4565 ft) Tree
- 41-088294 (4565 ft) Tree
- RWY 33
- TP2 (4354 ft)

41-087788 (4171 ft)

41-088006 (4130 ft)

41-086736 (4127 ft)

RWY 33

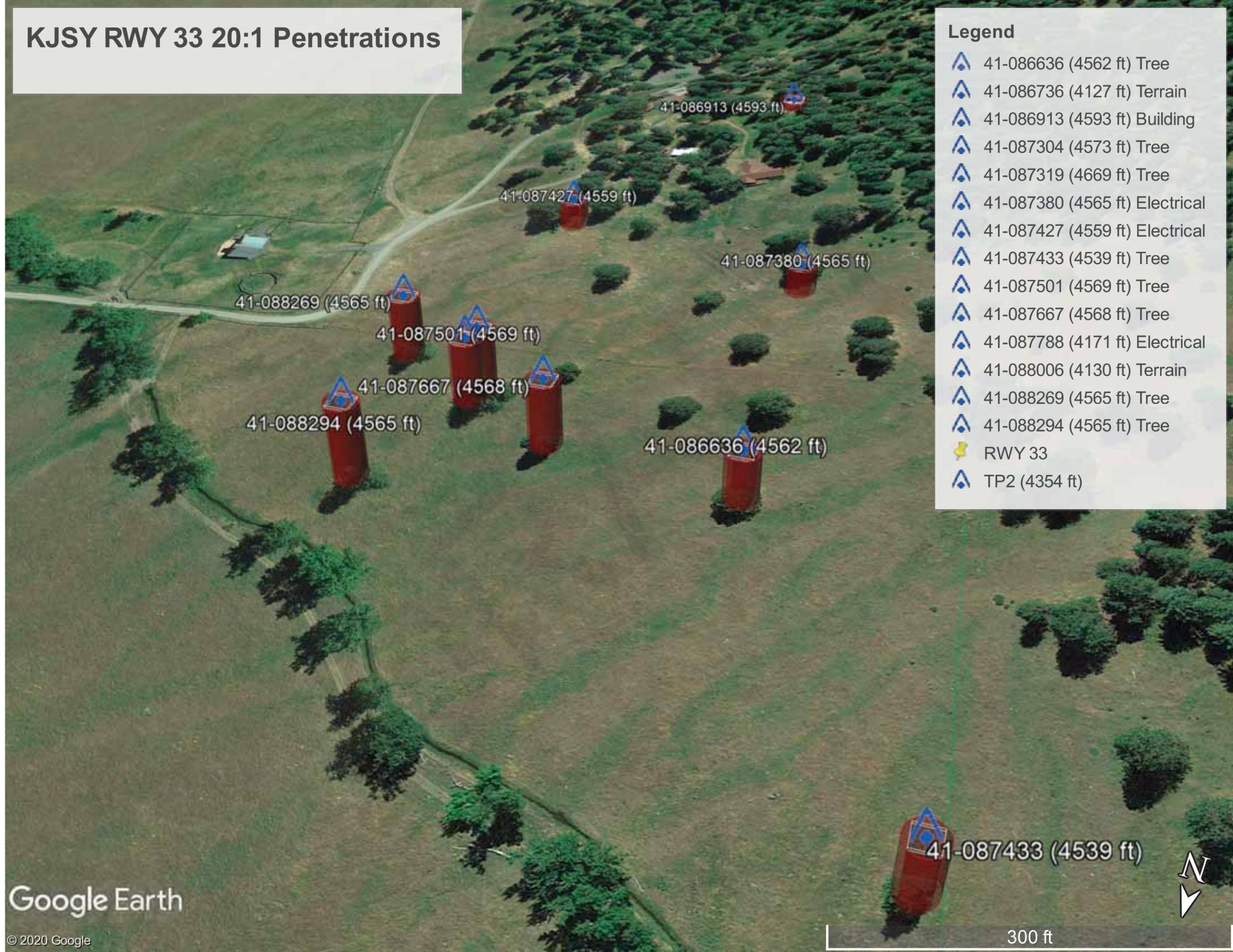
Jrway Rd



KJSY RWY 33 20:1 Penetrations

Legend

- 41-086636 (4562 ft) Tree
- 41-086736 (4127 ft) Terrain
- 41-086913 (4593 ft) Building
- 41-087304 (4573 ft) Tree
- 41-087319 (4669 ft) Tree
- 41-087380 (4565 ft) Electrical
- 41-087427 (4559 ft) Electrical
- 41-087433 (4539 ft) Tree
- 41-087501 (4569 ft) Tree
- 41-087667 (4568 ft) Tree
- 41-087788 (4171 ft) Electrical
- 41-088006 (4130 ft) Terrain
- 41-088269 (4565 ft) Tree
- 41-088294 (4565 ft) Tree
- RWY 33
- TP2 (4354 ft)



41-088269 (4565 ft)

41-087501 (4569 ft)

41-087667 (4568 ft)

41-088294 (4565 ft)

41-087427 (4559 ft)

41-086636 (4562 ft)

41-087380 (4565 ft)

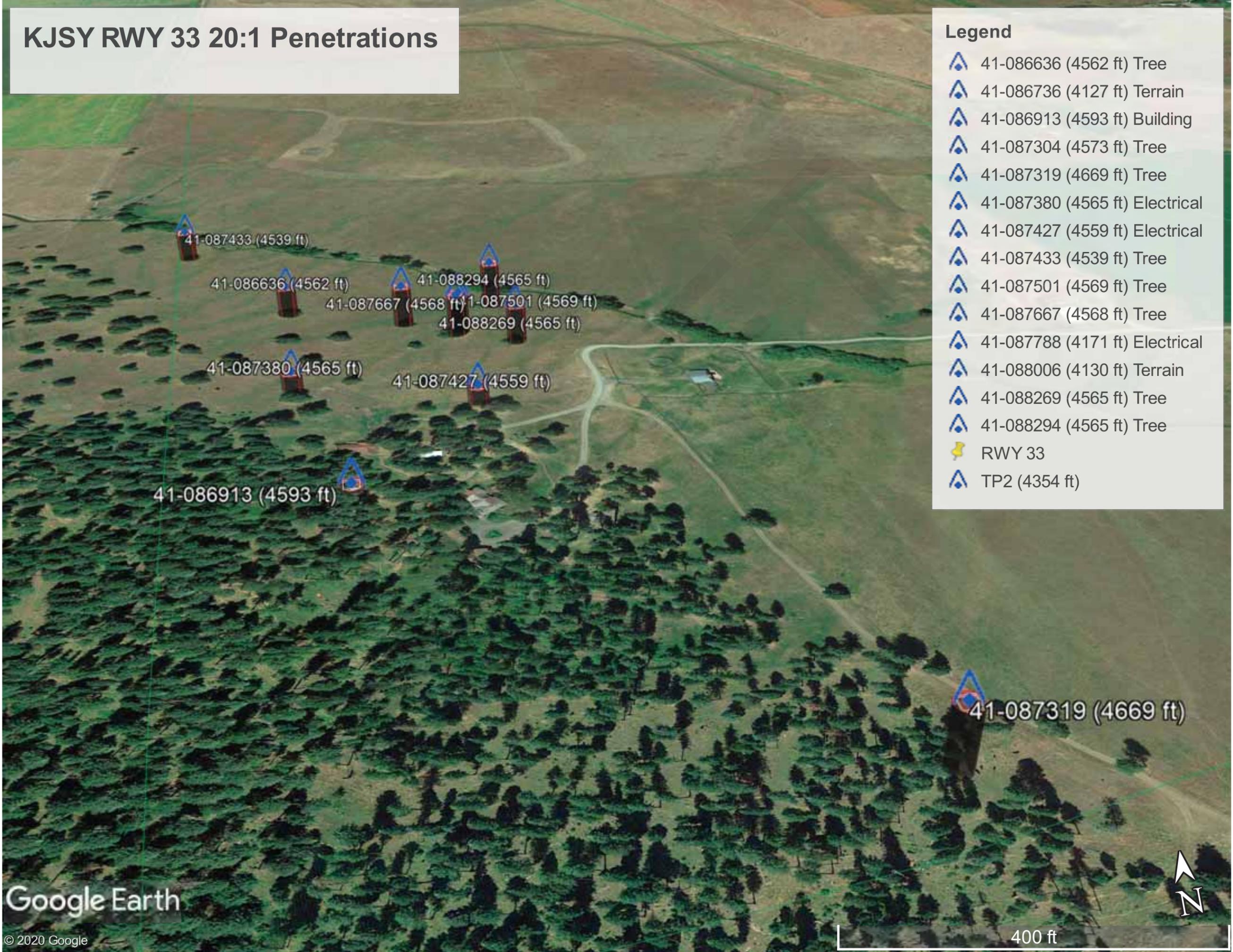
41-086913 (4593 ft)

41-087433 (4539 ft)

KJSY RWY 33 20:1 Penetrations

Legend

- 41-086636 (4562 ft) Tree
- 41-086736 (4127 ft) Terrain
- 41-086913 (4593 ft) Building
- 41-087304 (4573 ft) Tree
- 41-087319 (4669 ft) Tree
- 41-087380 (4565 ft) Electrical
- 41-087427 (4559 ft) Electrical
- 41-087433 (4539 ft) Tree
- 41-087501 (4569 ft) Tree
- 41-087667 (4568 ft) Tree
- 41-087788 (4171 ft) Electrical
- 41-088006 (4130 ft) Terrain
- 41-088269 (4565 ft) Tree
- 41-088294 (4565 ft) Tree
- RWY 33
- TP2 (4354 ft)



41-087433 (4539 ft)

41-086636 (4562 ft)

41-088294 (4565 ft)

41-087667 (4568 ft)

41-087501 (4569 ft)

41-088269 (4565 ft)

41-087380 (4565 ft)

41-087427 (4559 ft)

41-086913 (4593 ft)

41-087319 (4669 ft)



...

The FAA technical evaluation involves analysis of airspace surfaces defined in FAA Order 8260.3E – United States Standard for Terminal Instrument Procedures (TERPS). TERPS surfaces are designed to safely accommodate aircraft operating in instrument meteorological conditions (IMC) where navigation is provided exclusively through electronic guidance. Aircraft performance limitations and mandatory vertical and lateral clearances for obstacles (terrain, natural and built items) are used to design inbound approaches, missed approach procedures, and instrument departure procedures. TERPS surfaces are similar to FAR Part 77 airspace surfaces in the vicinity of a runway, but also extend beyond an airport to protect aircraft during the transition between enroute and terminal airspace, which often involves flight over obscured mountainous terrain.

The preliminary TWSE evaluation indicates that developing a non-precision instrument NPI approach appears to be feasible, assuming several penetrating obstacles identified in the vicinity of the runway are mitigated (removed, lowered, lighted, etc.). The evaluation identified 25 penetrating obstacles for the critical TERPS surfaces associated with a straight-in procedure to Runway 15 and a circling procedure to the Airport (assumed clearance required for landing on Runway 33):

- Final Segment – 20: 1 vertical guidance surface (VGS) for Runway 15 (1 item);
- Final Segment – 20:1 visual area (NPA) surface (9 items); and
- Visual Area - 20:1 surface required for Runway 33 landing (circling) (15 items).

18 of the 25 identified obstacles are trees; the remaining items include: building (1), pole (1), electrical systems (3)(assumed to be overhead powerlines), and terrain (2). The majority of penetrating obstacles are located in the final segments of each procedure. This suggests that the ability of Joseph State Airport to accommodate an NPI approach is primarily determined by the mitigation of obstacles located near the runway.

The preliminary assessment was based on available obstruction data, which is considered sufficient to support the feasibility-level analysis of approach options until the Airport Global Information System (AGIS) obstruction survey is approved by FAA and incorporated into the flight procedures database. Once the AGIS survey data is available, the obstruction analysis will be updated. The overall assessment of feasibility would not be expected to change, although the identification of additional penetrating obstacles in the AGIS may affect procedure design and minimums.

The preliminary evaluation indicates that an Approach Category A or B aircraft could descend to approximately 615 feet above runway end elevation for the straight-in procedure (referenced as LNAV by FAA for Lateral Navigation) and to approximately 1,019 to 1,539 feet above the airport for a circling procedure. The minimum approach visibility of 1-statute mile for the straight in procedure increases to 1.25 or 1.5-statute miles for the circling procedure, depending on the aircraft type. The Pilatus PC-12, operated by Life Flight, is a single-engine turboprop with an approach speed below 91 knots (Approach Category A).

Based on airport site conditions and area terrain, the most feasible inbound/outbound paths for instrument procedures at Joseph State Airport are located north of Runway 15/33. Two NPI approach options were identified:

- **Option 1** creates a straight-in approach to a fixed point near the north end of the runway (Runway 15) that is closely aligned with the runway centerline; and
- **Option 2** creates a circling approach to the airport environment.

Option 1 provides an approach to Runway 15 (referred to as a straight-in procedure); Option 2 provides an approach to the airport environment (referred to as a circling procedure). Based on airport site conditions and area terrain, the most feasible inbound/outbound paths for instrument procedures at Joseph State Airport are located north of Runway 15/33. The preliminary analysis indicates that both options are feasible for the Airport, assuming that identified close-in penetrating obstacles are adequately mitigated. The TWSE procedure analyst provided the following information:

“The following is a very rough estimate on what straight in minimums may be able to achieve. Though, as a precaution during your decision making process on whether to pursue, I would expect that the straight-in minimums will be effected by the terrain directly south of the airport. Due to the terrain, either a non-standard missed approach climb gradient will be required, an increase in the straight-in minimums, movement of the missed approach point, or a combination of all three.”

TABLE 5-2: JSY NON-PRECISION INSTRUMENT APPROACH MINIMUMS (ESTIMATED BY FAA)

RNAV (GPS) 15	CAT A	CAT B
LNAV	4720-1 615 (700-1)	4720-1 615 (700-1)
Circling	5140-1 ¼ 1019 (1100- 1 ¼)	5660-1 ½ 1539 (1600- 1 ½)

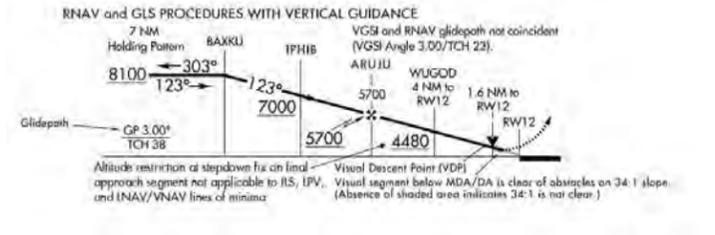
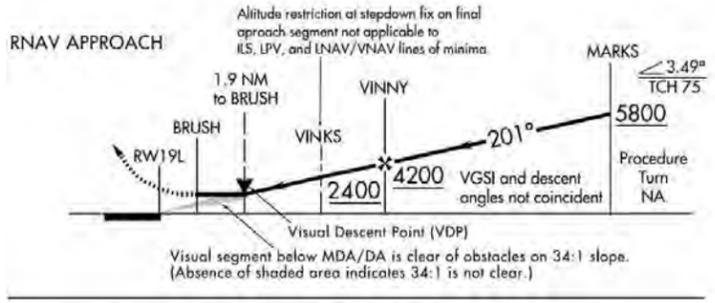
NOTE: TABLE 5-2 PRESENTS THE SAME SEQUENCE OF NUMBERS FOR EACH APPROACH TYPE/CATEGORY. LNAV PROCEDURE USED AS EXAMPLE: THE FIRST NUMBER LISTED [4720-1 615 (700-1)] IS THE MINIMUM DESCENT ALTITUDE FOR THE AIRCRAFT IN FEET ABOVE MEAN SEA LEVEL (MSL). THE SECOND NUMBER LISTED [4720-1 615 (700-1)] IS THE MINIMUM VISIBILITY REQUIRED FOR THE PROCEDURE TO BE AUTHORIZED (DATA FROM ON-AIRPORT WEATHER OBSERVATION SYSTEM) MEASURED IN STATUTE MILES. THE THIRD NUMBER LISTED [4720-1 615 (700-1)] IS THE AIRCRAFT HEIGHT ABOVE THE RUNWAY END OR AIRPORT, AT THE MISSED APPROACH POINT, MEASURED IN FEET ABOVE GROUND LEVEL (AGL). THESE NUMBERS CORRESPOND TO THE JOSEPH STATE AIRPORT ELEVATION (4,121 FEET MSL) OR THE RUNWAY 15 END ELEVATION (4,063 FEET MSL). THE FINAL NUMBERS LISTED [4720-1 615 (700-1)] ARE DESCENT ALTITUDE AND VISIBILITY REQUIREMENTS FOR MILITARY USE ONLY.

Straight-In vs. Circling

Generic examples of straight-in and circling NPI approach procedures are provided below.

STRAIGHT-IN NPI APPROACH FEATURES (GENERIC)

Source: FAA Aeronautical Information Manual



DRAFT

CIRCLING NPI APPROACH FEATURES (GENERIC)

Source: AOPA; FAA Instrument Procedures Manual

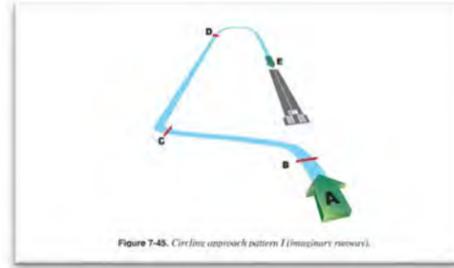
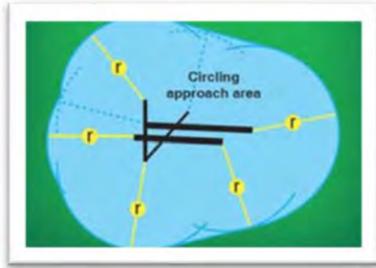
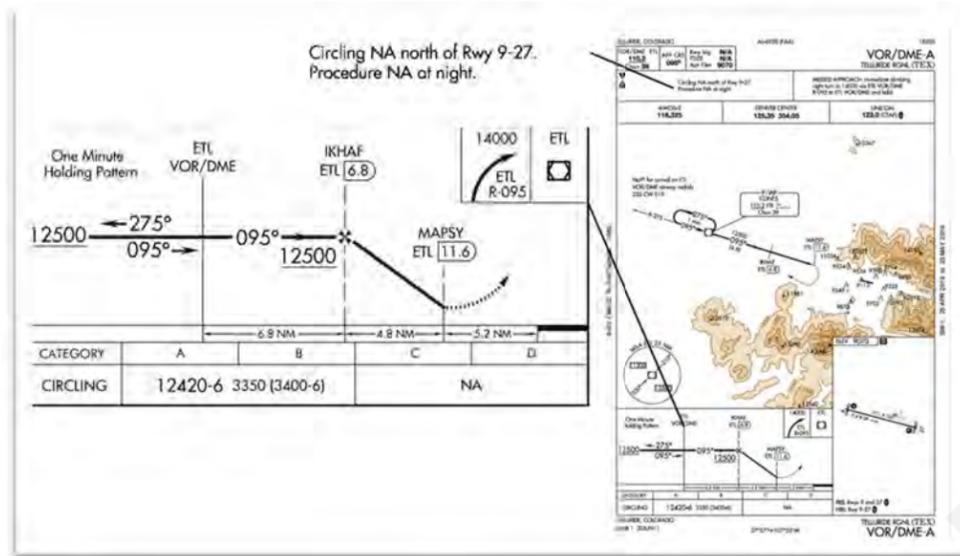


Figure 7-45. Circling approach pattern (imaginary runway).



Airspace Planning and Development – FAR Part 77

Federal Aviation Regulation (FAR) Part 77, defines runways as Visual, Non-Precision Instrument, or Precision Instrument based on their current or planned approach capability. Part 77 airspace surfaces are intended to protect runways from obstructions that could create a hazard to air navigation. As noted earlier, these surfaces generally increase in size and become more restrictive for each incremental increase in approach capability. This may result in additional obstruction clearing requirements and increased development setbacks for common airport facilities such as hangars and aircraft parking areas.

- **NPI Circling Procedure** - The existing FAR Part 77 Visual designation for Runway 15/33 is maintained with the proposed NPI circling procedure. No changes are required to the current FAR Part 77 airspace surface configurations, dimensions, or markings for Runway 15/33. This is accomplished by combining electronic guidance for the aircraft to the missed approach point and then requiring the pilot maintain visual contact with the airport environment during the transition to landing on either runway end.
- **NPI Straight-In Procedure** - The FAR Part 77 designation for Runway 15/33 is upgraded to Non-Precision Instrument because the approach is designed for a specific runway end. Required changes in FAR Part 77 surfaces are driven by an increase in primary surface width, which then affects the location of the transitional surface slopes that extend upward from the sides of the primary surface. The runway markings for the approach end are upgraded to NPI.

Since both NPI approach options have been determined to be feasible, the master plan evaluation should focus on the relative benefits and the potential impacts of each procedure.

Table A-1 summarizes several design elements that are associated with a future non-precision instrument (NPI) approach for straight-in and circling procedure options described in Chapter 5. The more demanding straight-in approach requires an upgrade to NPI FAR Part 77 airspace for Runway 15/33. These items are shown in bold and are compared to the existing visual airspace definitions for Runway 15/33, which are maintained with the circling procedure.

APPENDIX TABLE 1: RUNWAY 15/33 - INSTRUMENT APPROACH AIRSIDE STANDARDS/REQUIREMENTS^{1, 2, 3, 4, 5}

Airside Item	Non-Precision Instrument Approach (straight-in procedure)	Non-Precision Instrument Approach (circling procedure)
Primary Surface Width	500 feet¹	250 feet
Runway Designation (FAR Part 77)	NPI	Visual
Approach Surface Type	NPI	Visual
Runway Markings (on procedure approach end)	NPI	Visual
Approach Surface Inner Width	500 feet	250 feet
Approach Surface Width	2,000 feet	1,250 feet
Approach Surface Length	5,000 feet	Same
Approach Surface Slope	20:1	Same
Transitional Surface	7:1 Slope to 150 feet above runway ²	Same
Horizontal Surface Elevation	150 feet above runway	Same
Horizontal Surface Radius	5,000 feet for each runway end (measured from end of primary surface - 200 feet from runway end)	Same
Conical Surface	20:1 for 4,000 feet	Same
Runway Width	60 feet	Same
Runway-Parallel Taxiway Separation	150 feet	Same

1. Portions of the parallel taxiway (Taxiway A) are elevated above the runway by up to 3.6 feet. These sections of taxiway would penetrate a 500-foot wide primary surface for Runway 15/33. FAA indicates that mitigation would be required, which would involve reconstruction of either the runway or taxiway to eliminate the surface penetration. No other known penetrations to the primary surface.
2. The base of the 7:1 transitional surface slope will shift outward 125 feet due to the wider primary surface. The net change in vertical clearance for all objects beneath the shifted transitional surface is 17.9 feet (e.g., a structure that is 1 foot below the current visual transitional surface would penetrate the NPI surface by 16.9 feet).
3. Runway 15/33 is classified in FAR Part 77 as a "Utility" category runway, which is designed to accommodate airplanes weighing 12,500 pounds or less.
4. FAA design standards based on Airport Reference Code (ARC) A/B-I (small aircraft).
5. Approach visibility minimums not less than 1-mile design threshold assumed for airfield geometry; actual approach minimums may be higher based on required terrain clearances.



Appendix D

Grant Assurances



ASSURANCES AIRPORT SPONSORS

A. General.

1. These assurances shall be complied with in the performance of grant agreements for airport development, airport planning, and noise compatibility program grants for airport sponsors.
2. These assurances are required to be submitted as part of the project application by sponsors requesting funds under the provisions of Title 49, U.S.C., subtitle VII, as amended. As used herein, the term "public agency sponsor" means a public agency with control of a public-use airport; the term "private sponsor" means a private owner of a public-use airport; and the term "sponsor" includes both public agency sponsors and private sponsors.
3. Upon acceptance of this grant offer by the sponsor, these assurances are incorporated in and become part of this grant agreement.

B. Duration and Applicability.

1. Airport development or Noise Compatibility Program Projects Undertaken by a Public Agency Sponsor.

The terms, conditions and assurances of this grant agreement shall remain in full force and effect throughout the useful life of the facilities developed or equipment acquired for an airport development or noise compatibility program project, or throughout the useful life of the project items installed within a facility under a noise compatibility program project, but in any event not to exceed twenty (20) years from the date of acceptance of a grant offer of Federal funds for the project. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with federal funds. Furthermore, the duration of the Civil Rights assurance shall be specified in the assurances.

2. Airport Development or Noise Compatibility Projects Undertaken by a Private Sponsor.

The preceding paragraph 1 also applies to a private sponsor except that the useful life of project items installed within a facility or the useful life of the facilities developed or equipment acquired under an airport development or noise compatibility program project shall be no less than ten (10) years from the date of acceptance of Federal aid for the project.

3. Airport Planning Undertaken by a Sponsor.

Unless otherwise specified in this grant agreement, only Assurances 1, 2, 3, 5, 6, 13, 18, 25, 30, 32, 33, and 34 in Section C apply to planning projects. The terms, conditions, and assurances of this grant agreement shall remain in full force and effect during the life of the project; there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport.

C. Sponsor Certification.

The sponsor hereby assures and certifies, with respect to this grant that:

1. General Federal Requirements.

It will comply with all applicable Federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance and use of Federal funds for this project including but not limited to the following:

- a. Title 49, U.S.C., subtitle VII, as amended.
- b. Davis-Bacon Act - 40 U.S.C. 276(a), et seq.¹
- c. Federal Fair Labor Standards Act - 29 U.S.C. 201, et seq.
- d. Hatch Act – 5 U.S.C. 1501, et seq.²
- e. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 Title 42 U.S.C. 4601, et seq.^{1,2}
- f. National Historic Preservation Act of 1966 - Section 106 - 16 U.S.C. 470(f).¹
- g. Archeological and Historic Preservation Act of 1974 - 16 U.S.C. 469 through 469c.¹
- h. Native Americans Grave Repatriation Act - 25 U.S.C. Section 3001, et seq.
- i. Clean Air Act, P.L. 90-148, as amended.
- j. Coastal Zone Management Act, P.L. 93-205, as amended.
- k. Flood Disaster Protection Act of 1973 - Section 102(a) - 42 U.S.C. 4012a.¹
- l. Title 49, U.S.C., Section 303, (formerly known as Section 4(f))
- m. Rehabilitation Act of 1973 - 29 U.S.C. 794.
- n. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- o. Americans with Disabilities Act of 1990, as amended, (42 U.S.C. § 12101 et seq.), prohibits discrimination on the basis of disability).
- p. Age Discrimination Act of 1975 - 42 U.S.C. 6101, et seq.
- q. American Indian Religious Freedom Act, P.L. 95-341, as amended.
- r. Architectural Barriers Act of 1968 -42 U.S.C. 4151, et seq.¹
- s. Power plant and Industrial Fuel Use Act of 1978 - Section 403- 2 U.S.C. 8373.¹
- t. Contract Work Hours and Safety Standards Act - 40 U.S.C. 327, et seq.¹
- u. Copeland Anti-kickback Act - 18 U.S.C. 874.1
- v. National Environmental Policy Act of 1969 - 42 U.S.C. 4321, et seq.¹
- w. Wild and Scenic Rivers Act, P.L. 90-542, as amended.
- x. Single Audit Act of 1984 - 31 U.S.C. 7501, et seq.²
- y. Drug-Free Workplace Act of 1988 - 41 U.S.C. 702 through 706.
- z. The Federal Funding Accountability and Transparency Act of 2006, as amended (Pub. L. 109-282, as amended by section 6202 of Pub. L. 110-252).

EXECUTIVE ORDERS

- a. Executive Order 11246 - Equal Employment Opportunity¹
- b. Executive Order 11990 - Protection of Wetlands
- c. Executive Order 11998 –Flood Plain Management
- d. Executive Order 12372 - Intergovernmental Review of Federal Programs
- e. Executive Order 12699 - Seismic Safety of Federal and Federally Assisted New Building Construction¹
- f. Executive Order 12898 - Environmental Justice
- g. Executive Order 13788 - Buy American and Hire American
- h. Executive Order 13858 – Strengthening Buy-American Preferences for Infrastructure Projects

FEDERAL REGULATIONS

- a. 2 CFR Part180 – OMB Guidelines to Agencies on Government-wide Debarment and Suspension (Non-procurement).
- b. 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. [OMB Circular A-87 Cost Principles Applicable to Grants and Contracts with State and Local Governments, and OMB Circular A-133 - Audits of States, Local Governments, and Non-Profit Organizations].^{4,5,6}
- c. 2 CFR Part 1200 – Non-procurement Suspension and Debarment
- d. 14 CFR Part 13 - Investigative and Enforcement Procedures14 CFR Part 16 - Rules of Practice For Federally Assisted Airport Enforcement Proceedings.
- e. 14 CFR Part 150 - Airport noise compatibility planning.
- f. 28 CFR Part 35- Discrimination on the Basis of Disability in State and Local Government Services.
- g. 28 CFR § 50.3 - U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964.
- h. 29 CFR Part 1 - Procedures for predetermination of wage rates.¹
- i. 29 CFR Part 3 - Contractors and subcontractors on public building or public work financed in whole or part by loans or grants from the United States.¹
- j. 29 CFR Part 5 - Labor standards provisions applicable to contracts covering federally financed and assisted construction (also labor standards provisions applicable to non-construction contracts subject to the Contract Work Hours and Safety Standards Act).¹
- k. 41 CFR Part 60 - Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Federal and federally assisted contracting requirements).¹
- l. 49 CFR Part 18 - Uniform administrative requirements for grants and cooperative agreements to state and local governments.³
- m. 49 CFR Part 20 - New restrictions on lobbying.

- n. 49 CFR Part 21 – Nondiscrimination in federally-assisted programs of the Department of Transportation - effectuation of Title VI of the Civil Rights Act of 1964.
- o. 49 CFR Part 23 - Participation by Disadvantage Business Enterprise in Airport Concessions.
- p. 49 CFR Part 24 – Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally Assisted Programs.^{1,2}
- q. 49 CFR Part 26 – Participation by Disadvantaged Business Enterprises in Department of Transportation Programs.
- r. 49 CFR Part 27 – Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance.¹
- s. 49 CFR Part 28 –Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities conducted by the Department of Transportation.
- t. 49 CFR Part 30 - Denial of public works contracts to suppliers of goods and services of countries that deny procurement market access to U.S. contractors.
- u. 49 CFR Part 32 –Government-wide Requirements for Drug-Free Workplace (Financial Assistance)
- v. 49 CFR Part 37 –Transportation Services for Individuals with Disabilities (ADA).
- w. 49 CFR Part 41 - Seismic safety of Federal and federally assisted or regulated new building construction.

SPECIFIC ASSURANCES

Specific assurances required to be included in grant agreements by any of the above laws, regulations or circulars are incorporated by reference in this grant agreement.

FOOTNOTES TO ASSURANCE C.1.

- ¹ These laws do not apply to airport planning sponsors.
- ² These laws do not apply to private sponsors.
- ³ 49 CFR Part 18 and 2 CFR Part 200 contain requirements for State and Local Governments receiving Federal assistance. Any requirement levied upon State and Local Governments by this regulation and circular shall also be applicable to private sponsors receiving Federal assistance under Title 49, United States Code.
- ⁴ On December 26, 2013 at 78 FR 78590, the Office of Management and Budget (OMB) issued the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards in 2 CFR Part 200. 2 CFR Part 200 replaces and combines the former Uniform Administrative Requirements for Grants (OMB Circular A-102 and Circular A-110 or 2 CFR Part 215 or Circular) as well as the Cost Principles (Circulars A-21 or 2 CFR part 220; Circular A-87 or 2 CFR part 225; and A-122, 2 CFR part 230). Additionally it replaces Circular A-133 guidance on the Single Annual Audit. In accordance with 2 CFR section 200.110, the standards set forth in Part 200 which affect administration of Federal awards issued by Federal agencies become effective once implemented by Federal agencies or when any future amendment to this Part becomes final. Federal agencies, including the Department of Transportation, must implement the policies and procedures applicable to Federal awards by promulgating a regulation to be effective by December 26, 2014 unless different provisions are required by statute or approved by OMB.

- ⁵ Cost principles established in 2 CFR part 200 subpart E must be used as guidelines for determining the eligibility of specific types of expenses.
- ⁶ Audit requirements established in 2 CFR part 200 subpart F are the guidelines for audits.

2. Responsibility and Authority of the Sponsor.

a. Public Agency Sponsor:

It has legal authority to apply for this grant, and to finance and carry out the proposed project; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.

b. Private Sponsor:

It has legal authority to apply for this grant and to finance and carry out the proposed project and comply with all terms, conditions, and assurances of this grant agreement. It shall designate an official representative and shall in writing direct and authorize that person to file this application, including all understandings and assurances contained therein; to act in connection with this application; and to provide such additional information as may be required.

3. Sponsor Fund Availability.

It has sufficient funds available for that portion of the project costs which are not to be paid by the United States. It has sufficient funds available to assure operation and maintenance of items funded under this grant agreement which it will own or control.

4. Good Title.

- a. It, a public agency or the Federal government, holds good title, satisfactory to the Secretary, to the landing area of the airport or site thereof, or will give assurance satisfactory to the Secretary that good title will be acquired.
- b. For noise compatibility program projects to be carried out on the property of the sponsor, it holds good title satisfactory to the Secretary to that portion of the property upon which Federal funds will be expended or will give assurance to the Secretary that good title will be obtained.

5. Preserving Rights and Powers.

- a. It will not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in this grant agreement without the written approval of the Secretary, and will act promptly to acquire, extinguish or modify any outstanding rights or claims of right of others which would interfere with such performance by the sponsor. This shall be done in a manner acceptable to the Secretary.
- b. Subject to the FAA Act of 2018, Public Law 115-254, Section 163, it will not sell, lease, encumber, or otherwise transfer or dispose of any part of its title or other interests in the property shown on Exhibit A to this application or, for a noise compatibility program project, that portion of the property upon which Federal funds have been expended, for the duration of the terms, conditions, and assurances in this grant agreement without approval by the

Secretary. If the transferee is found by the Secretary to be eligible under Title 49, United States Code, to assume the obligations of this grant agreement and to have the power, authority, and financial resources to carry out all such obligations, the sponsor shall insert in the contract or document transferring or disposing of the sponsor's interest, and make binding upon the transferee all of the terms, conditions, and assurances contained in this grant agreement.

- c. For all noise compatibility program projects which are to be carried out by another unit of local government or are on property owned by a unit of local government other than the sponsor, it will enter into an agreement with that government. Except as otherwise specified by the Secretary, that agreement shall obligate that government to the same terms, conditions, and assurances that would be applicable to it if it applied directly to the FAA for a grant to undertake the noise compatibility program project. That agreement and changes thereto must be satisfactory to the Secretary. It will take steps to enforce this agreement against the local government if there is substantial non-compliance with the terms of the agreement.
- d. For noise compatibility program projects to be carried out on privately owned property, it will enter into an agreement with the owner of that property which includes provisions specified by the Secretary. It will take steps to enforce this agreement against the property owner whenever there is substantial non-compliance with the terms of the agreement.
- e. If the sponsor is a private sponsor, it will take steps satisfactory to the Secretary to ensure that the airport will continue to function as a public-use airport in accordance with these assurances for the duration of these assurances.
- f. If an arrangement is made for management and operation of the airport by any agency or person other than the sponsor or an employee of the sponsor, the sponsor will reserve sufficient rights and authority to insure that the airport will be operated and maintained in accordance Title 49, United States Code, the regulations and the terms, conditions and assurances in this grant agreement and shall insure that such arrangement also requires compliance therewith.
- g. Sponsors of commercial service airports will not permit or enter into any arrangement that results in permission for the owner or tenant of a property used as a residence, or zoned for residential use, to taxi an aircraft between that property and any location on airport. Sponsors of general aviation airports entering into any arrangement that results in permission for the owner of residential real property adjacent to or near the airport must comply with the requirements of Sec. 136 of Public Law 112-95 and the sponsor assurances.

6. Consistency with Local Plans.

The project is reasonably consistent with plans (existing at the time of submission of this application) of public agencies that are authorized by the State in which the project is located to plan for the development of the area surrounding the airport.

7. Consideration of Local Interest.

It has given fair consideration to the interest of communities in or near where the project may be located.

8. Consultation with Users.

In making a decision to undertake any airport development project under Title 49, United States Code, it has undertaken reasonable consultations with affected parties using the airport at which project is proposed.

9. Public Hearings.

In projects involving the location of an airport, an airport runway, or a major runway extension, it has afforded the opportunity for public hearings for the purpose of considering the economic, social, and environmental effects of the airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community and it shall, when requested by the Secretary, submit a copy of the transcript of such hearings to the Secretary. Further, for such projects, it has on its management board either voting representation from the communities where the project is located or has advised the communities that they have the right to petition the Secretary concerning a proposed project.

10. Metropolitan Planning Organization.

In projects involving the location of an airport, an airport runway, or a major runway extension at a medium or large hub airport, the sponsor has made available to and has provided upon request to the metropolitan planning organization in the area in which the airport is located, if any, a copy of the proposed amendment to the airport layout plan to depict the project and a copy of any airport master plan in which the project is described or depicted.

11. Pavement Preventive Maintenance.

With respect to a project approved after January 1, 1995, for the replacement or reconstruction of pavement at the airport, it assures or certifies that it has implemented an effective airport pavement maintenance-management program and it assures that it will use such program for the useful life of any pavement constructed, reconstructed or repaired with Federal financial assistance at the airport. It will provide such reports on pavement condition and pavement management programs as the Secretary determines may be useful.

12. Terminal Development Prerequisites.

For projects which include terminal development at a public use airport, as defined in Title 49, it has, on the date of submittal of the project grant application, all the safety equipment required for certification of such airport under section 44706 of Title 49, United States Code, and all the security equipment required by rule or regulation, and has provided for access to the passenger enplaning and deplaning area of such airport to passengers enplaning and deplaning from aircraft other than air carrier aircraft.

13. Accounting System, Audit, and Record Keeping Requirements.

- a. It shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of this grant, the total cost of the project in connection with which this grant is given or used, and the amount or nature of that portion of the cost of the project supplied by other sources, and such other financial records pertinent to the project. The accounts and records shall be kept in accordance with an accounting system that will facilitate an effective audit in accordance with the Single Audit Act of 1984.
- b. It shall make available to the Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, for the purpose of audit and examination, any books, documents, papers, and records of the recipient that are pertinent to this grant. The Secretary may require that an appropriate audit be conducted by a recipient. In any case in which an independent audit is made of the accounts of a sponsor relating to the disposition of the proceeds of a grant or relating to the project in connection with which this grant was given or used, it shall file a certified copy of such audit with the Comptroller General of the United States not later than six (6) months following the close of the fiscal year for which the audit was made.

14. Minimum Wage Rates.

It shall include, in all contracts in excess of \$2,000 for work on any projects funded under this grant agreement which involve labor, provisions establishing minimum rates of wages, to be predetermined by the Secretary of Labor, in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a-276a-5), which contractors shall pay to skilled and unskilled labor, and such minimum rates shall be stated in the invitation for bids and shall be included in proposals or bids for the work.

15. Veteran's Preference.

It shall include in all contracts for work on any project funded under this grant agreement which involve labor, such provisions as are necessary to insure that, in the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to Vietnam era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns owned and controlled by disabled veterans as defined in Section 47112 of Title 49, United States Code. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

16. Conformity to Plans and Specifications.

It will execute the project subject to plans, specifications, and schedules approved by the Secretary. Such plans, specifications, and schedules shall be submitted to the Secretary prior to commencement of site preparation, construction, or other performance under this grant agreement, and, upon approval of the Secretary, shall be incorporated into this grant agreement. Any modification to the approved plans, specifications, and schedules shall also be subject to approval of the Secretary, and incorporated into this grant agreement.

17. Construction Inspection and Approval.

It will provide and maintain competent technical supervision at the construction site throughout the project to assure that the work conforms to the plans, specifications, and schedules approved by the Secretary for the project. It shall subject the construction work on any project contained in an approved project application to inspection and approval by the Secretary and such work shall be in accordance with regulations and procedures prescribed by the Secretary. Such regulations and procedures shall require such cost and progress reporting by the sponsor or sponsors of such project as the Secretary shall deem necessary.

18. Planning Projects.

In carrying out planning projects:

- a. It will execute the project in accordance with the approved program narrative contained in the project application or with the modifications similarly approved.
- b. It will furnish the Secretary with such periodic reports as required pertaining to the planning project and planning work activities.
- c. It will include in all published material prepared in connection with the planning project a notice that the material was prepared under a grant provided by the United States.
- d. It will make such material available for examination by the public, and agrees that no material prepared with funds under this project shall be subject to copyright in the United States or any other country.
- e. It will give the Secretary unrestricted authority to publish, disclose, distribute, and otherwise use any of the material prepared in connection with this grant.

- f. It will grant the Secretary the right to disapprove the sponsor's employment of specific consultants and their subcontractors to do all or any part of this project as well as the right to disapprove the proposed scope and cost of professional services.
- g. It will grant the Secretary the right to disapprove the use of the sponsor's employees to do all or any part of the project.
- h. It understands and agrees that the Secretary's approval of this project grant or the Secretary's approval of any planning material developed as part of this grant does not constitute or imply any assurance or commitment on the part of the Secretary to approve any pending or future application for a Federal airport grant.

19. Operation and Maintenance.

- a. The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal, state and local agencies for maintenance and operation. It will not cause or permit any activity or action thereon which would interfere with its use for airport purposes. It will suitably operate and maintain the airport and all facilities thereon or connected therewith, with due regard to climatic and flood conditions. Any proposal to temporarily close the airport for non-aeronautical purposes must first be approved by the Secretary. In furtherance of this assurance, the sponsor will have in effect arrangements for-
 - 1) Operating the airport's aeronautical facilities whenever required;
 - 2) Promptly marking and lighting hazards resulting from airport conditions, including temporary conditions; and
 - 3) Promptly notifying airmen of any condition affecting aeronautical use of the airport. Nothing contained herein shall be construed to require that the airport be operated for aeronautical use during temporary periods when snow, flood or other climatic conditions interfere with such operation and maintenance. Further, nothing herein shall be construed as requiring the maintenance, repair, restoration, or replacement of any structure or facility which is substantially damaged or destroyed due to an act of God or other condition or circumstance beyond the control of the sponsor.
- b. It will suitably operate and maintain noise compatibility program items that it owns or controls upon which Federal funds have been expended.

20. Hazard Removal and Mitigation.

It will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

21. Compatible Land Use.

It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, 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. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with

respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

22. Economic Nondiscrimination.

- a. It will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.
- b. In any agreement, contract, lease, or other arrangement under which a right or privilege at the airport is granted to any person, firm, or corporation to conduct or to engage in any aeronautical activity for furnishing services to the public at the airport, the sponsor will insert and enforce provisions requiring the contractor to-
 - 1) furnish said services on a reasonable, and not unjustly discriminatory, basis to all users thereof, and
 - 2) charge reasonable, and not unjustly discriminatory, prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.
- c. Each fixed-based operator at the airport shall be subject to the same rates, fees, rentals, and other charges as are uniformly applicable to all other fixed-based operators making the same or similar uses of such airport and utilizing the same or similar facilities.
- d. Each air carrier using such airport shall have the right to service itself or to use any fixed-based operator that is authorized or permitted by the airport to serve any air carrier at such airport.
- e. Each air carrier using such airport (whether as a tenant, non-tenant, or subtenant of another air carrier tenant) shall be subject to such nondiscriminatory and substantially comparable rules, regulations, conditions, rates, fees, rentals, and other charges with respect to facilities directly and substantially related to providing air transportation as are applicable to all such air carriers which make similar use of such airport and utilize similar facilities, subject to reasonable classifications such as tenants or non-tenants and signatory carriers and non-signatory carriers. Classification or status as tenant or signatory shall not be unreasonably withheld by any airport provided an air carrier assumes obligations substantially similar to those already imposed on air carriers in such classification or status.
- f. It will not exercise or grant any right or privilege which operates to prevent any person, firm, or corporation operating aircraft on the airport from performing any services on its own aircraft with its own employees [including, but not limited to maintenance, repair, and fueling] that it may choose to perform.
- g. In the event the sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by commercial aeronautical service providers authorized by the sponsor under these provisions.
- h. The sponsor may establish such reasonable, and not unjustly discriminatory, conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport.

- i. The sponsor may prohibit or limit any given type, kind or class of aeronautical use of the airport if such action is necessary for the safe operation of the airport or necessary to serve the civil aviation needs of the public.

23. Exclusive Rights.

It will permit no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, the providing of the services at an airport by a single fixed-based operator shall not be construed as an exclusive right if both of the following apply:

- a. It would be unreasonably costly, burdensome, or impractical for more than one fixed-based operator to provide such services, and
- b. If allowing more than one fixed-based operator to provide such services would require the reduction of space leased pursuant to an existing agreement between such single fixed-based operator and such airport. It further agrees that it will not, either directly or indirectly, grant or permit any person, firm, or corporation, the exclusive right at the airport to conduct any aeronautical activities, including, but not limited to charter flights, pilot training, aircraft rental and sightseeing, aerial photography, crop dusting, aerial advertising and surveying, air carrier operations, aircraft sales and services, sale of aviation petroleum products whether or not conducted in conjunction with other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity, and that it will terminate any exclusive right to conduct an aeronautical activity now existing at such an airport before the grant of any assistance under Title 49, United States Code.

24. Fee and Rental Structure.

It will maintain a fee and rental structure for the facilities and services at the airport which will make the airport as self-sustaining as possible under the circumstances existing at the particular airport, taking into account such factors as the volume of traffic and economy of collection. No part of the Federal share of an airport development, airport planning or noise compatibility project for which a grant is made under Title 49, United States Code, the Airport and Airway Improvement Act of 1982, the Federal Airport Act or the Airport and Airway Development Act of 1970 shall be included in the rate basis in establishing fees, rates, and charges for users of that airport.

25. Airport Revenues.

- a. All revenues generated by the airport and any local taxes on aviation fuel established after December 30, 1987, will be expended by it for the capital or operating costs of the airport; the local airport system; or other local facilities which are owned or operated by the owner or operator of the airport and which are directly and substantially related to the actual air transportation of passengers or property; or for noise mitigation purposes on or off the airport. The following exceptions apply to this paragraph:
 - 1) If covenants or assurances in debt obligations issued before September 3, 1982, by the owner or operator of the airport, or provisions enacted before September 3, 1982, in governing statutes controlling the owner or operator's financing, provide for the use of the revenues from any of the airport owner or operator's facilities, including the airport, to support not only the airport but also the airport owner or operator's general debt obligations or other facilities, then this limitation on the use of all revenues generated

by the airport (and, in the case of a public airport, local taxes on aviation fuel) shall not apply.

- 2) If the Secretary approves the sale of a privately owned airport to a public sponsor and provides funding for any portion of the public sponsor's acquisition of land, this limitation on the use of all revenues generated by the sale shall not apply to certain proceeds from the sale. This is conditioned on repayment to the Secretary by the private owner of an amount equal to the remaining unamortized portion (amortized over a 20-year period) of any airport improvement grant made to the private owner for any purpose other than land acquisition on or after October 1, 1996, plus an amount equal to the federal share of the current fair market value of any land acquired with an airport improvement grant made to that airport on or after October 1, 1996.
- 3) Certain revenue derived from or generated by mineral extraction, production, lease, or other means at a general aviation airport (as defined at Section 47102 of title 49 United States Code), if the FAA determines the airport sponsor meets the requirements set forth in Sec. 813 of Public Law 112-95.
 - b. As part of the annual audit required under the Single Audit Act of 1984, the sponsor will direct that the audit will review, and the resulting audit report will provide an opinion concerning, the use of airport revenue and taxes in paragraph (a), and indicating whether funds paid or transferred to the owner or operator are paid or transferred in a manner consistent with Title 49, United States Code and any other applicable provision of law, including any regulation promulgated by the Secretary or Administrator.
 - c. Any civil penalties or other sanctions will be imposed for violation of this assurance in accordance with the provisions of Section 47107 of Title 49, United States Code.

26. Reports and Inspections.

It will:

- a. submit to the Secretary such annual or special financial and operations reports as the Secretary may reasonably request and make such reports available to the public; make available to the public at reasonable times and places a report of the airport budget in a format prescribed by the Secretary;
- b. for airport development projects, make the airport and all airport records and documents affecting the airport, including deeds, leases, operation and use agreements, regulations and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request;
- c. for noise compatibility program projects, make records and documents relating to the project and continued compliance with the terms, conditions, and assurances of this grant agreement including deeds, leases, agreements, regulations, and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request; and
- d. in a format and time prescribed by the Secretary, provide to the Secretary and make available to the public following each of its fiscal years, an annual report listing in detail:
 - 1) all amounts paid by the airport to any other unit of government and the purposes for which each such payment was made; and
 - 2) all services and property provided by the airport to other units of government and the amount of compensation received for provision of each such service and property.

27. Use by Government Aircraft.

It will make available all of the facilities of the airport developed with Federal financial assistance and all those usable for landing and takeoff of aircraft to the United States for use by Government aircraft in common with other aircraft at all times without charge, except, if the use by Government aircraft is substantial, charge may be made for a reasonable share, proportional to such use, for the cost of operating and maintaining the facilities used. Unless otherwise determined by the Secretary, or otherwise agreed to by the sponsor and the using agency, substantial use of an airport by Government aircraft will be considered to exist when operations of such aircraft are in excess of those which, in the opinion of the Secretary, would unduly interfere with use of the landing areas by other authorized aircraft, or during any calendar month that –

- a. Five (5) or more Government aircraft are regularly based at the airport or on land adjacent thereto; or
- b. The total number of movements (counting each landing as a movement) of Government aircraft is 300 or more, or the gross accumulative weight of Government aircraft using the airport (the total movement of Government aircraft multiplied by gross weights of such aircraft) is in excess of five million pounds.

28. Land for Federal Facilities.

It will furnish without cost to the Federal Government for use in connection with any air traffic control or air navigation activities, or weather-reporting and communication activities related to air traffic control, any areas of land or water, or estate therein, or rights in buildings of the sponsor as the Secretary considers necessary or desirable for construction, operation, and maintenance at Federal expense of space or facilities for such purposes. Such areas or any portion thereof will be made available as provided herein within four months after receipt of a written request from the Secretary.

29. Airport Layout Plan.

- a. Subject to the FAA Reauthorization Act of 2018, Public Law 115-254, Section 163, it will keep up to date at all times an airport layout plan of the airport showing:
 - 1) boundaries of the airport and all proposed additions thereto, together with the boundaries of all offsite areas owned or controlled by the sponsor for airport purposes and proposed additions thereto;
 - 2) the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and roads), including all proposed extensions and reductions of existing airport facilities;
 - 3) the location of all existing and proposed non-aviation areas and of all existing improvements thereon; and
 - 4) all proposed and existing access points used to taxi aircraft across the airport's property boundary. Such airport layout plans and each amendment, revision, or modification thereof, shall be subject to the approval of the Secretary which approval shall be evidenced by the signature of a duly authorized representative of the Secretary on the face of the airport layout plan. The sponsor will not make or permit any changes or alterations in the airport or any of its facilities which are not in conformity

with the airport layout plan as approved by the Secretary and which might, in the opinion of the Secretary, adversely affect the safety, utility or efficiency of the airport.

- b. Subject to the FAA Reauthorization Act of 2018, Public Law 115-254, Section 163, if a change or alteration in the airport or the facilities is made which the Secretary determines adversely affects the safety, utility, or efficiency of any federally owned, leased, or funded property on or off the airport and which is not in conformity with the airport layout plan as approved by the Secretary, the owner or operator will, if requested, by the Secretary (1) eliminate such adverse effect in a manner approved by the Secretary; or (2) bear all costs of relocating such property (or replacement thereof) to a site acceptable to the Secretary and all costs of restoring such property (or replacement thereof) to the level of safety, utility, efficiency, and cost of operation existing before the unapproved change in the airport or its facilities except in the case of a relocation or replacement of an existing airport facility due to a change in the Secretary's design standards beyond the control of the airport sponsor.

30. Civil Rights.

It will promptly take any measures necessary to ensure that no person in the United States shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in any activity conducted with, or benefiting from, funds received from this grant.

- a. Using the definitions of activity, facility and program as found and defined in §§ 21.23 (b) and 21.23 (e) of 49 CFR § 21, the sponsor will facilitate all programs, operate all facilities, or conduct all programs in compliance with all non-discrimination requirements imposed by, or pursuant to these assurances.
- b. Applicability
 - 1) Programs and Activities. If the sponsor has received a grant (or other federal assistance) for any of the sponsor's program or activities, these requirements extend to all of the sponsor's programs and activities.
 - 2) Facilities. Where it receives a grant or other federal financial assistance to construct, expand, renovate, remodel, alter or acquire a facility, or part of a facility, the assurance extends to the entire facility and facilities operated in connection therewith.
 - 3) Real Property. Where the sponsor receives a grant or other Federal financial assistance in the form of, or for the acquisition of real property or an interest in real property, the assurance will extend to rights to space on, over, or under such property.

- c. Duration.

The sponsor agrees that it is obligated to this assurance for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the assurance obligates the sponsor, or any transferee for the longer of the following periods:

- 1) So long as the airport is used as an airport, or for another purpose involving the provision of similar services or benefits; or
- 2) So long as the sponsor retains ownership or possession of the property.

- d. Required Solicitation Language. It will include the following notification in all solicitations for bids, Requests For Proposals for work, or material under this grant agreement and in all proposals for agreements, including airport concessions, regardless of funding source:

“The **(Name of Sponsor)**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises and airport concession disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.”

- e. Required Contract Provisions.

- 1) It will insert the non-discrimination contract clauses requiring compliance with the acts and regulations relative to non-discrimination in Federally-assisted programs of the DOT, and incorporating the acts and regulations into the contracts by reference in every contract or agreement subject to the non-discrimination in Federally-assisted programs of the DOT acts and regulations.
- 2) It will include a list of the pertinent non-discrimination authorities in every contract that is subject to the non-discrimination acts and regulations.
- 3) It will insert non-discrimination contract clauses as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a sponsor.
- 4) It will insert non-discrimination contract clauses prohibiting discrimination on the basis of race, color, national origin, creed, sex, age, or handicap as a covenant running with the land, in any future deeds, leases, license, permits, or similar instruments entered into by the sponsor with other parties:
 - a. For the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
 - b. For the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.
- f. It will provide for such methods of administration for the program as are found by the Secretary to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the acts, the regulations, and this assurance.
- g. It agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the acts, the regulations, and this assurance.

31. Disposal of Land.

- a. For land purchased under a grant for airport noise compatibility purposes, including land serving as a noise buffer, it will dispose of the land, when the land is no longer needed for such purposes, at fair market value, at the earliest practicable time. That portion of the proceeds of such disposition which is proportionate to the United States' share of acquisition of such land will be, at the discretion of the Secretary, (1) reinvested in another project at the airport, or (2) transferred to another eligible airport as prescribed by the Secretary. The Secretary shall give preference to the following, in descending order, (1)

- reinvestment in an approved noise compatibility project, (2) reinvestment in an approved project that is eligible for grant funding under Section 47117(e) of title 49 United States Code, (3) reinvestment in an approved airport development project that is eligible for grant funding under Sections 47114, 47115, or 47117 of title 49 United States Code, (4) transferred to an eligible sponsor of another public airport to be reinvested in an approved noise compatibility project at that airport, and (5) paid to the Secretary for deposit in the Airport and Airway Trust Fund. If land acquired under a grant for noise compatibility purposes is leased at fair market value and consistent with noise buffering purposes, the lease will not be considered a disposal of the land. Revenues derived from such a lease may be used for an approved airport development project that would otherwise be eligible for grant funding or any permitted use of airport revenue.
- b. For land purchased under a grant for airport development purposes (other than noise compatibility), it will, when the land is no longer needed for airport purposes, dispose of such land at fair market value or make available to the Secretary an amount equal to the United States' proportionate share of the fair market value of the land. That portion of the proceeds of such disposition which is proportionate to the United States' share of the cost of acquisition of such land will, (1) upon application to the Secretary, be reinvested or transferred to another eligible airport as prescribed by the Secretary. The Secretary shall give preference to the following, in descending order: (1) reinvestment in an approved noise compatibility project, (2) reinvestment in an approved project that is eligible for grant funding under Section 47117(e) of title 49 United States Code, (3) reinvestment in an approved airport development project that is eligible for grant funding under Sections 47114, 47115, or 47117 of title 49 United States Code, (4) transferred to an eligible sponsor of another public airport to be reinvested in an approved noise compatibility project at that airport, and (5) paid to the Secretary for deposit in the Airport and Airway Trust Fund.
 - c. Land shall be considered to be needed for airport purposes under this assurance if (1) it may be needed for aeronautical purposes (including runway protection zones) or serve as noise buffer land, and (2) the revenue from interim uses of such land contributes to the financial self-sufficiency of the airport. Further, land purchased with a grant received by an airport operator or owner before December 31, 1987, will be considered to be needed for airport purposes if the Secretary or Federal agency making such grant before December 31, 1987, was notified by the operator or owner of the uses of such land, did not object to such use, and the land continues to be used for that purpose, such use having commenced no later than December 15, 1989.
 - d. Disposition of such land under (a) (b) or (c) will be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the airport.

32. Engineering and Design Services.

Engineering and Design Services. If any phase of such project has received Federal funds under Chapter 471 subchapter 1 of Title 49 U.S.C., it will award each contract, or sub-contract for program management, construction management, planning studies, feasibility studies, architectural services, preliminary engineering, design, engineering, surveying, mapping or related services in the same manner as a contract for architectural and engineering services is negotiated under Chapter 11 of Title 40 U. S. C., or an equivalent qualifications-based requirement prescribed for or by the sponsor of the airport.

33. Foreign Market Restrictions.

It will not allow funds provided under this grant to be used to fund any project which uses any product or service of a foreign country during the period in which such foreign country is listed by the United States Trade Representative as denying fair and equitable market opportunities for products and suppliers of the United States in procurement and construction.

34. Policies, Standards, and Specifications.

It will carry out the project in accordance with policies, standards, and specifications approved by the Secretary including, but not limited to, the advisory circulars listed in the Current FAA Advisory Circulars for AIP projects, dated _____, and included in this grant, and in accordance with applicable state policies, standards, and specifications approved by the Secretary.

35. Relocation and Real Property Acquisition.

- a. It will be guided in acquiring real property, to the greatest extent practicable under State law, by the land acquisition policies in Subpart B of 49 CFR Part 24 and will pay or reimburse property owners for necessary expenses as specified in Subpart B.
- b. It will provide a relocation assistance program offering the services described in Subpart C and fair and reasonable relocation payments and assistance to displaced persons as required in Subpart D and E of 49 CFR Part 24.
- c. It will make available within a reasonable period of time prior to displacement, comparable replacement dwellings to displaced persons in accordance with Subpart E of 49 CFR Part 24.

36. Access By Intercity Buses.

The airport owner or operator will permit, to the maximum extent practicable, intercity buses or other modes of transportation to have access to the airport; however, it has no obligation to fund special facilities for intercity buses or for other modes of transportation.

37. Disadvantaged Business Enterprises.

The sponsor shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract covered by 49 CFR Part 26, or in the award and performance of any concession activity contract covered by 49 CFR Part 23. In addition, the sponsor shall not discriminate on the basis of race, color, national origin or sex in the administration of its Disadvantaged Business Enterprise (DBE) and Airport Concessions Disadvantaged Business Enterprise (ACDBE) programs or the requirements of 49 CFR Parts 23 and 26. The sponsor shall take all necessary and reasonable steps under 49 CFR Parts 23 and 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts, and/or concession contracts. The sponsor's DBE and ACDBE programs, as required by 49 CFR Parts 26 and 23, and as approved by DOT, are incorporated by reference in this agreement. Implementation of these programs is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the sponsor of its failure to carry out its approved program, the Department may impose sanctions as provided for under Parts 26 and 23 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1936 (31 U.S.C. 3801).

38. Hangar Construction.

If the airport owner or operator and a person who owns an aircraft agree that a hangar is to be constructed at the airport for the aircraft at the aircraft owner's expense, the airport owner or

operator will grant to the aircraft owner for the hangar a long term lease that is subject to such terms and conditions on the hangar as the airport owner or operator may impose.

39. Competitive Access.

- a. If the airport owner or operator of a medium or large hub airport (as defined in section 47102 of title 49, U.S.C.) has been unable to accommodate one or more requests by an air carrier for access to gates or other facilities at that airport in order to allow the air carrier to provide service to the airport or to expand service at the airport, the airport owner or operator shall transmit a report to the Secretary that-
 - 1) Describes the requests;
 - 2) Provides an explanation as to why the requests could not be accommodated; and
 - 3) Provides a time frame within which, if any, the airport will be able to accommodate the requests.
- b. Such report shall be due on either February 1 or August 1 of each year if the airport has been unable to accommodate the request(s) in the six month period prior to the applicable due date.