

*BOB SIKES AIRPORT
ALP UPDATE*

*AIRPORT LAYOUT
PLAN UPDATE
NARRATIVE REPORT*

JUNE 2020

RS&H



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*BOB SIKES AIRPORT ALP UPDATE
NARRATIVE REPORT*

1 EXECUTIVE SUMMARY

The 2018 Airport Layout Plan (ALP) for Bob Sikes Airport (CEW or the Airport) was prepared for Okaloosa County to bring the 2014 ALP up to date with updated aeronautical forecasts and in accordance with Federal Aviation Administration (FAA) regulations, standards, and policies. The ALP update satisfies the FAA requirement of the Airport to keep the ALP current. This Narrative Report accompanies the ALP drawings and provides justification for the proposed development projects.

The ALP Narrative Report documents the existing conditions and all of the potential changes that the Airport could see over the 20-year planning horizon. The planning horizon is broken into three benchmarks and is intended to be independent of a specific year and driven by demand. This is due to uncertainty with demand projections and fluctuating growth rates over the course of a forecast period. The planning horizon is broken into three phases during which Airport projects will be undertaken – short-term, intermediate-term and long-term planning horizons. Therefore, the short-term, intermediate-term, and long-term planning horizons represent demand levels rather than a specific year and will be used as benchmarks for planning, designing, or constructing Airport development projects.

This ALP Narrative Report includes a Basic Aeronautical Forecast that estimates enplanements and operations for short-term, intermediate-term and long-term planning horizons over 20 years. The Forecast compares the FAA's Terminal Area Forecast (TAF) from 2017, which was published in January of 2018, with an alternative growth scenario identified as the Baseline Scenario for this study.

The Baseline Scenario used socioeconomic data for the Bob Sikes service area, current Airport activity, and trends in the industry when developing the 20-year forecast. The Baseline Forecast should be viewed as an alternative rate of growth for the Airport especially since the Airport is in a successful economic region, has capable airfield facilities and a wide variety of general aviation (GA) services to offer to existing and future customers over the planning horizon.

Section 4 Airport Development Summary provides details on the recently completed, planned, and proposed development projects for the Airport. *Table 1* describes the projects proposed for implementation throughout the 20-year planning period.

TABLE 1
PROPOSED PROJECTS

| Fiscal Year | Project | Estimated Project Total | Funding Source(s) |
|--------------------|--|--------------------------------|--------------------------|
| 2019 | Design and Construct Intermodal Access Connector | \$4,500,000 | State, Local |
| 2019 | VASI Replacement | \$70,000 | FAA, State, Local |
| 2020 | Overlay Aircraft Parking Apron-Phase II | \$3,000,000 | FAA, State, Local |
| 2020 | Security Fence Improvements | \$60,000 | State, Local |
| 2020 | Tree Removal | \$300,000 | State, Local |
| 2020-2022 | Runway 17-35 Rehabilitation | \$850,000 | FAA, State, Local |
| 2023 | Apply Asphalt Surface Treatment & Paint Markings | \$1,000,000 | FAA, State, Local |
| 2023 | Construct T-Hangars | \$1,250,000 | State, Local |
| 2024 | FAA Flight Services Facility Rehabilitation | \$1,300,000 | State, Local |
| 2023-2027 | Vehicle Parking Expansion | \$50,000 | FAA, State, Local |
| 2023-2027 | Hangar Expansion | \$865,000 | State, Local |
| 2023-2027 | Paved Taxiway Shoulders | \$4,600,000 | FAA, State, Local |
| 2023-2027 | Taxiway Direct Access | \$1,085,000 | FAA, State, Local |
| 2023-2027 | Runway 17-35 Blast Pad | \$80,000 | FAA, State, Local |
| 2023-2027 | Paved Runway 17-35 Shoulders | \$3,202,000 | FAA, State, Local |
| 2028-2037 | Vehicle Parking Expansion | \$200,000 | FAA, State, Local |
| 2030 | Construct Eastside Aircraft Parking Apron | \$6,000,000 | FAA, State, Local |
| 2028-2037 | Hangar Expansion | \$6,470,000 | State, Local |

Source: Okaloosa County Airports System, 2017; RS&H, 2018

Note: 1-This table indicates when each project is planned to begin. It does not provide details on the date expected for completion.
2-A range of years indicates that the project is anticipated during the short-term, intermediate-term, or long-term planning horizons and not a specific year.

2 INTRODUCTION AND AIRPORT BACKGROUND

The FAA requires ALP narratives in addition to ALP drawing sets to provide support in describing an airport's most current and planned physical setup. The Bob Sikes Airport ALP Update has been prepared in accordance with FAA ARP SOP No. 2.00 *ALP Review Checklist*.

Bob Sikes Airport is located three miles northeast of downtown Crestview in Okaloosa County, Florida. The Okaloosa County Board of Commissioners oversees the day-to-day operation and management of the Airport. The Okaloosa County Airports System is comprised of two additional airports, Destin Executive Airport (DTS) and Destin-Fort Walton Beach Airport (VPS). CEW is a 645-acre¹ public-use airport that provides for a variety of GA uses and includes defense and industrial aerospace development companies. GA uses include recreational activity, flight training, and corporate jet operations. Military aviation traffic on the Airport is significant due to its long runway and Instrument Landing System (ILS) capability. The Airport offers aircraft storage, and maintenance, repair, and overhaul (MRO) facilities. These industrial tenants represent over 3,000 jobs supported by the airport with total labor income over \$159M and total business sales of over \$755M as reported by the 2018 FDOT Economic Impact Study.

Bob Sikes Airport has an elevation of 213 feet above mean sea level (MSL). The Airport has a single, 8,004-foot-long runway designated as Runway 17-35. The Runway 17-35 characteristics are shown in [Table 2](#). CEW does not have an air traffic control tower. It operates using a common traffic advisory frequency for airport area traffic (Class E) and Eglin Approach/Departure. The Airport is adjacent to Special Air Traffic Rule FAR 93 airspace associated with Eglin Air Force Base.

The surrounding area is semi-rural in nature with open land areas to the east and some residential and commercial areas to the west. The rural surrounding, size, and infrastructure available at the Airport makes it viable for additional airport development.

The Airport is classified in the FAA's National Plan of Integrated Airport Systems (NPIAS) 2017-2021 Report as a Regional General Aviation Airport. There are seven other airports within 35 nautical miles (NM) of CEW, with the largest being Eglin AFB/Destin-Fort Walton Beach Airport (VPS). VPS is the only airport in the vicinity of CEW that is also equipped with an ILS. [Table 3](#) shows airport characteristics for airports within 35 nm of CEW.

A drive time analysis was used to establish the service area for CEW. An airport service area identifies the extent of the geographic area that individuals are likely to come from in order to use its facilities, rather than competing airports. The drive time analysis considered a 45-minute drive time threshold from the Airport using the normal driving conditions. The analysis results indicate that the CEW service area overlaps Santa Rosa County, Walton County, and Okaloosa County, as shown in [Figure 1](#).

¹ Okaloosa County Airports System, 2019

TABLE 2
RUNWAY 17-35 DATA

| Item | FAA Standard C-IV | Runway 17-35 | | Standard Met |
|---------------------------------------|-------------------|---------------|-----------|--------------|
| Runway Length | N/A | 8,004' | | N/A |
| Runway Width | 150' | 150' | | ✓ |
| Displaced Threshold | N/A | N/A | | N/A |
| Pavement Surface Type | Pavement | Asphalt | | ✓ |
| Condition of Runway | N/A | Good | | N/A |
| FAR Part 77 Category | N/A | PIR/C | | N/A |
| Approach Surface Slope | N/A | 34:1 and 50:1 | | N/A |
| Runway Safety Area (RSA) | | | | |
| Length Beyond Departure End (ft.) | 1000' | 1000' | | ✓ |
| Width (ft.) | 500' | 500' | | ✓ |
| Runway Object Free Area (ROFA) | | | | |
| Length Beyond Runway (ft.) | 1000' | 1000' | | ✓ |
| Width (ft.) | 800' | 800' | | ✓ |
| Item | FAA Standard | Runway 17 | Runway 35 | Standard Met |
| Runway End Elevations (ft. MSL) | N/A | 21.5 | 20.2 | N/A |
| Surface Gradient (%) | ±2.0 | ±0.0 | | ✓ |
| Runway Protection Zone (RPZ) | | | | |
| Inner Width (ft.) | 1,000 | 1,000 | 500 | ✓ |
| Outer Width (ft.) | 1,510 | 1,750 | 1,010 | ✓ |
| Length (ft.) | 1,700 | 1,700 | 1,700 | ✓ |

Source: Okaloosa County Airports System, 2019

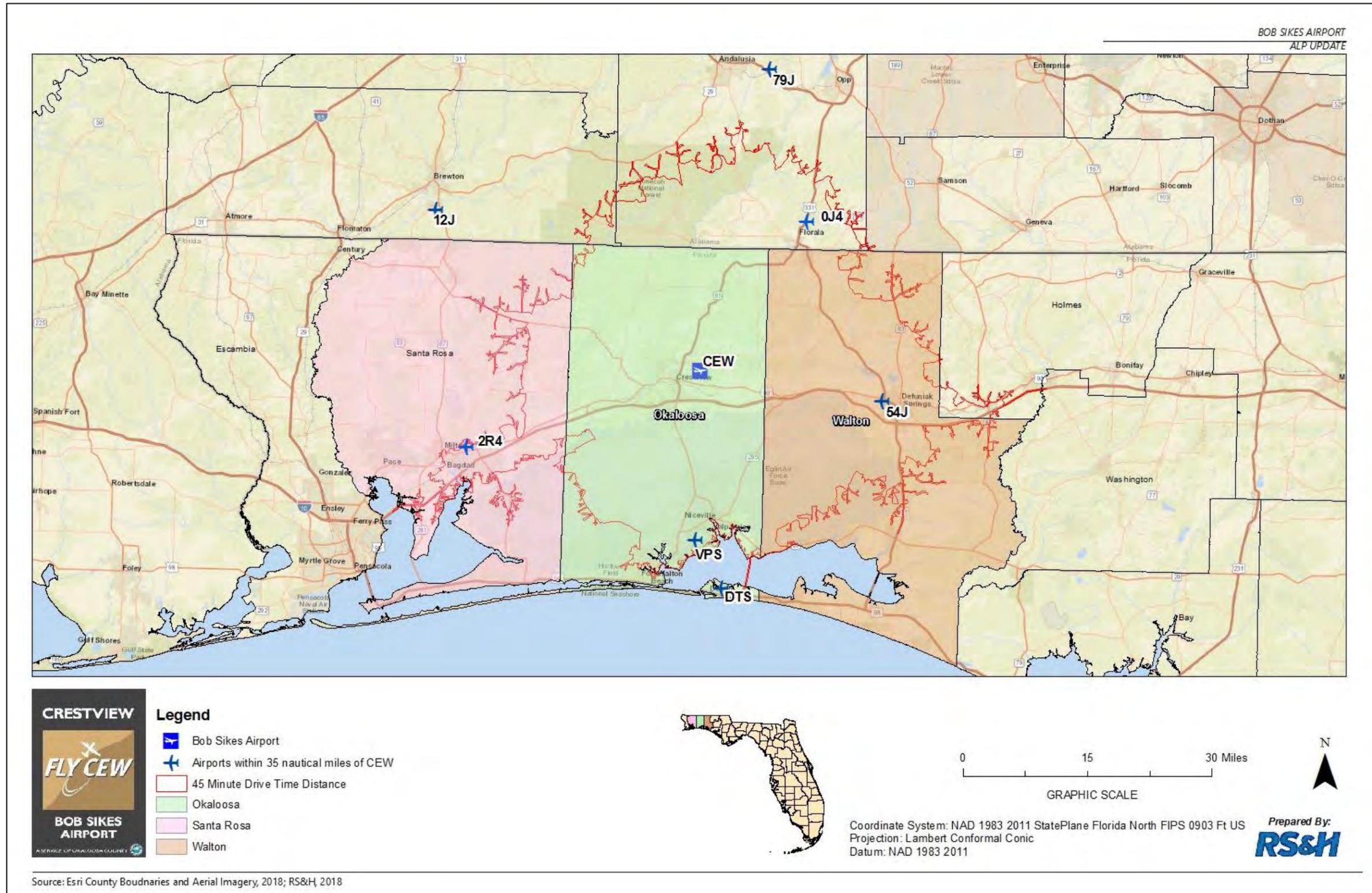
TABLE 3
AIRPORTS IN THE VICINITY OF CEW

| | Bob Sikes Airport ¹ | Eglin AFB/Destin-Fort Walton Beach Airport ² | DeFuniak Springs Airport ² | Destin Executive Airport ² | Florala Municipal Airport ² | Peter Prince Field ² | Brewton Municipal Airport ² | South Alabama Regional Airport ² |
|---|--------------------------------|---|---------------------------------------|---------------------------------------|--|---------------------------------|--|---|
| Airport Identifier | CEW | VPS | 54J | DTS | OJ4 | 2R4 | 12J | 79J |
| City | Crestview, FL | Valparaiso/Destin-Ft. Walton Beach, FL | DeFuniak Springs, FL | Destin, FL | Florala, AL | Milton, FL | Brewton, AL | Andalusia, AL |
| Airport Characteristics | | | | | | | | |
| NPIAS Role | GA - Regional | Primary - Nonhub | GA - Local | GA - Regional | GA - Local | GA - Local | GA - Local | GA - Local |
| Distance from CEW | N/A | 6 nm NW | 19.2 nm E | 22.9 nm S | 19.3 nm NE | 25.8 nm W | 32.4 nm NW | 32.5 nm N |
| Annual Operations | 48,600 | 53,000 | 16,200 | 63,000 | 21,940 | 93,950 | 165,500 | 62,750 |
| Based Aircraft | 24 | N/A | 33 | 79 | 9 | 92 | 19 | 30 |
| Air Traffic Control Tower | No | Yes | No | Yes | No | No | No | No |
| Primary Runway Characteristics | 17-35 | 12-30 | 9-27 | 14-32 | 4-22 | 18-36 | 6-24 | 11-29 |
| Length | 8,004' | 11,987' | 4,146' | 5,001' | 3,197' | 3,701' | 5,136' | 6,000' |
| Width | 150' | 300' | 60' | 100' | 75' | 75' | 150' | 100' |
| Edge Lighting | MIRL | HIRL | MIRL | MIRL | MIRL | MIRL | MIRL | MIRL |
| Visual Glide Slope Indicator | 4-Box VASI* | 4-Light PAPI | 2-Light PAPI | 4-Light PAPI | N/A | 2-Light PAPI | 2-Light PAPI | 2-Light PAPI |
| Instrument Approach (Visibility Minimums) | ILS, RNAV (3/4 mi) | ILS (1/2 mi) | RNAV (1 mi) | RNAV (1 mi) | RNAV (1 mi) | RNAV (3/4 mi) | RNAV (3/4 mi) | RNAV (3/4 mi) |
| Services | | | | | | | | |
| Fuel Types | 100LL/Jet A, A1+ | 100LL/Jet A | 100LL/Jet A | 100LL/Jet A | 100LL/Jet A | 100LL/Jet A1+ | 100LL/Jet A+ | 100LL/Jet A+ |
| Airframe/Power Plant Repair | Major | Major | Major | Major | Major | Major | Major | Major |
| Part 139 ARFF | No | Yes | No | No | No | No | No | No |
| Based Flight Training | Yes | Yes | Yes | Yes | No | No | No | No |

Sources: 1 – Okaloosa County Airports System, 2019; 2 – FAA Airport Master Record Form, 2019

* CEW VASI scheduled to be replaced by PAPI in 2019

FIGURE 1
CEW SERVICE AREA



3 BASIC AERONAUTICAL FORECAST

This section provides the Basic Aeronautical Forecast of the Airport Layout Plan Update (ALP) for Bob Sikes Airport (CEW or the Airport). This forecast includes the forecast enplanements and operations for short-term, intermediate, and long-term planning horizons. The base year for the Forecast is 2017. The short-term planning horizon corresponds to years 1-5 (from 2018-2022). The intermediate-term planning horizon corresponds to years 6-10 (from 2023-2027). The long-term planning horizon corresponds to years 11-20 (from 2028-2037). The entire 20-year timeframe is referred to as the planning horizon in this Forecast.

This Forecast used two different FAA-derived forecasts for comparison of future aviation activity projections. The two FAA-derived forecasts are identified as FAA Terminal Area Forecast (TAF) 2017² and the Adjusted FAA Forecast 2017 in this document. The FAA TAF 2017, which was published by the FAA in January 2018 was used as the basis for operational projections at CEW. The Adjusted FAA Forecast was created to reflect the updated and Airport confirmed based aircraft count for 2018. The FAA-derived forecasts will then be compared with an alternative forecast scenario identified as the Base Case Scenario Forecast. The Base Case Scenario is an alternative scenario that projects growth based on the specific characteristics of the Airport and local area.

3.1 FAA TAF 2017 FORECAST

The FAA TAF is an annual forecast prepared by the FAA and published annually in January. It includes projections of operations by type, based aircraft counts, and projections of enplanements. This Forecast uses the FAA TAF 2017, published in January 2018 for operational projections of CEW.

3.2 ADJUSTED FAA FORECAST

The Adjusted FAA Forecast was created since there was a discrepancy between the Airport's confirmed based aircraft count and the FAA TAF 2017. This forecast maintains the same average annual growth rate as the FAA TAF 2017, but begins by using the Airport's confirmed and updated count of based aircraft from 2018. The 2017 based aircraft total was calculated using the 2018 total and the FAA TAF 2017's rate of growth.

3.3 BASE CASE SCENARIO FORECAST

The Base Case Scenario includes an average annual growth rate (AAGR) that is slightly more optimistic than the AAGR of the FAA TAF 2017. The Base Case Scenario provides a different perspective for the Airport's future. In recognition of the Airport's role as an integral part of the general aviation (GA) activity to the region, the Forecast was developed using local characteristics, socioeconomic projections, and the baseline FAA TAF 2017.

Bob Sikes Airport has many defining characteristics that make it a desirable aviation facility for a variety of GA users in west Florida. These characteristics help explain why there could be a higher number of local

² The FAA TAF lists data and makes projections based on the FAA's fiscal year (FY), which runs from October to September. i.e. FY 2017 goes from October 1, 2016 to September 30, 2017

and itinerant operations in the future. Besides its proximity to Interstate 10 (I-10) and the Florida Gulf Coast's beaches, the Airport is within a 45-minute drive to the major population centers of Okaloosa, Walton, and Santa Rosa Counties. Along with its location, the Airport has the essential airfield components for a variety of GA aircraft and uses, with room to expand. The Airport's runway (Runway 17-35) is 8,004' x 150' in size, which allows it to accommodate a variety of aircraft³. Runway 17-35 is equipped with an Instrument Landing System (ILS) approach on one end. The only other two airports within 40 nautical miles (NM) of CEW with an ILS approach is Eglin Air Force Base/ Destin-Ft. Walton Beach Airport (VPS) and Pensacola International Airport (PNS). VPS is not available for GA operations, and PNS is 39 NM away. The Airport also provides a variety of GA services, such as aircraft storage; maintenance, repair, and overhaul (MRO) facilities; military testing; and flight training. CEW has also indicated interest to accommodate Federal Aviation Regulations (FAR) Part 135 certificated air charter operations.

The socioeconomic outlook for the CEW service area is strong. *Table 4* shows AAGR for population, employment, personal income per capita, and gross regional product for the CEW service area over the planning horizon. The rates of economic growth for a region are often used as reliable indicators for aviation demand at an airport.

TABLE 4
SOCIOECONOMIC OUTLOOK FOR THE CEW SERVICE AREA

| Socioeconomic Characteristic | Base Year | | | | AAGR |
|--------------------------------------|-----------|----------|----------|----------|-------|
| | 2017 | 2022 | 2027 | 2037 | |
| Population | 433,442 | 460,493 | 488,909 | 546,582 | 1.17% |
| Employment | 249,933 | 271,600 | 293,797 | 338,360 | 1.54% |
| Personal Income Per Capita | \$45,081 | \$48,529 | \$51,987 | \$57,914 | 1.27% |
| Gross Regional Product (\$ millions) | \$19,984 | \$22,114 | \$24,351 | \$29,053 | 1.90% |

Source: Woods and Poole, 2016; RS&H, 2018

The FAA TAF 2017 also bolsters this alternative scenario, as it makes projections that the Airport will see significant growth over the next 20 years, particularly in terms of local operations. Assuming the Airport's use will be balanced over the planning horizon, the Base Case Scenario anticipates similar rates of growth in both itinerant and local operations.

3.4 FORECAST FRAMEWORK

There are no enplanements⁴ into or out of CEW. Instead the total operations, total operations by type, and based aircraft provide the best view of how the Airport is used. For this Forecast, the FAA TAF 2017 total aircraft operations and based aircraft for CEW will be the base year totals.

The Airport is mostly used by itinerant GA and local civil operations, with a small amount of itinerant military operations, and very minimal air taxi & commuter operations. CEW has a ratio of approximately

³ CEW is capable of handling up to D-V aircraft which is based on the runway's approach and departure reference codes (APRC and DPRC). These codes are determined by the separation between a runway centerline and parallel taxiway centerline as well as instrument approach visibility minimums. The APRC and DPRC of CEW are discussed further in *Section 3.10.3*.

⁴ An enplanement is defined as a revenue passenger boarding an airplane

two itinerant operations for every one local operation. This is a similar distribution to Destin Executive Airport (DTS) (also in the Okaloosa County Airport System) which has a 3:1 ratio for itinerant to local operations.

The Airport had a total of 24 based aircraft in 2017 based on recent inventory. *Table 5* shows the base year data breakdown from the FAA TAF 2017. These numbers provide the starting point for the Base Case Scenario and the projected AAGR associated with it.

TABLE 5
BASE YEAR 2017 TOTALS

| Year | Air Carrier | Air Taxi & Commuter | Itinerant GA | Itinerant Military | Local Civil | Local Military | Total Operations | Based Aircraft |
|------|-------------|---------------------|--------------|--------------------|-------------|----------------|------------------|----------------|
| 2017 | 0 | 203 | 29,634 | 4,000 | 15,901 | 0 | 49,738 | 24 |

Source: FAA TAF, 2017; Airport inventory

3.5 TOTAL ANNUAL OPERATIONS

The FAA TAF 2017 projects a 2.41% AAGR in the Airport's total operations through the planning horizon, using a 1.96% AAGR for itinerant operations and a 3.25% AAGR for local operations. This increases CEW's total operations by more than 30,000 exceeding 80,000 total annual operations in 2037.

Comparatively, the Base Case Scenario assumes the same growth rate for both local and itinerant operations due to the distinguishing characteristics of CEW where the itinerant/local split is 2:1. This would increase both the itinerant and local operations at an AAGR of 3.25%, while keeping the 4,000 annual itinerant military operations constant. Taken together this scenario yields a total annual operations AAGR of 3.05% over the planning horizon. Using this growth rate, the Airport's 49,738 operations in 2017 are projected to nearly double exceeding 90,000 total annual operations in 2037.

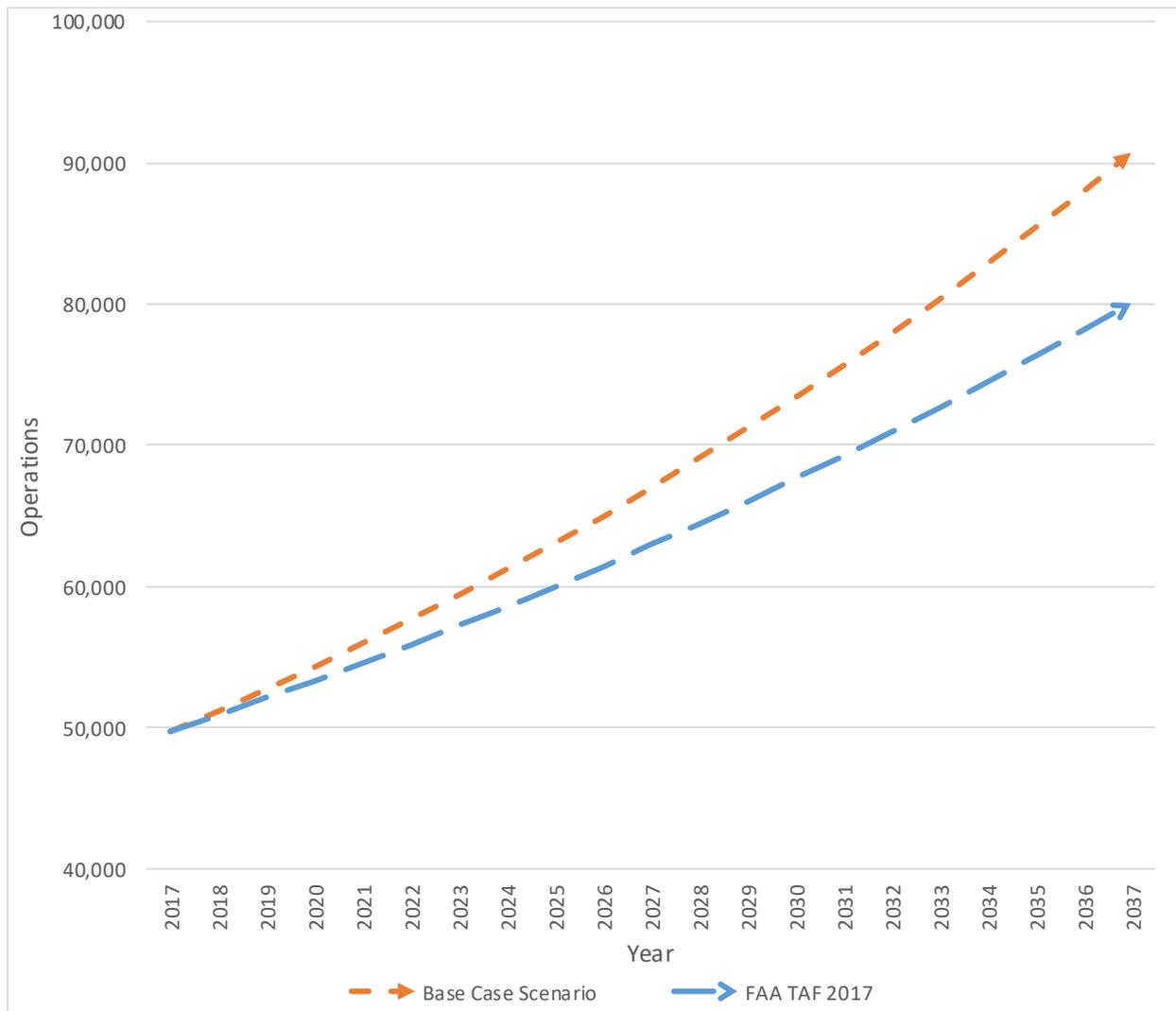
Table 6 provides the projected total annual operations by scenario and *Figure 2* shows a comparison of the total annual operation trends for the planning horizon.

TABLE 6
TOTAL ANNUAL OPERATIONS FORECASTS

| Year | FAA TAF 2017 | Base Case Scenario |
|--------------------|---------------------|---------------------------|
| 2017 (Base) | 49,738 | 49,738 |
| 2018 | 50,906 | 51,225 |
| 2019 | 52,105 | 52,760 |
| 2020 | 53,335 | 54,345 |
| 2021 | 54,598 | 55,981 |
| 2022 | 55,895 | 57,671 |
| 2023 | 57,226 | 59,416 |
| 2024 | 58,592 | 61,217 |
| 2025 | 59,995 | 63,077 |
| 2026 | 61,435 | 64,997 |
| 2027 | 62,913 | 66,980 |
| 2028 | 64,431 | 69,028 |
| 2029 | 65,990 | 71,141 |
| 2030 | 67,591 | 73,324 |
| 2031 | 69,234 | 75,577 |
| 2032 | 70,921 | 77,904 |
| 2033 | 72,653 | 80,305 |
| 2034 | 74,431 | 82,784 |
| 2035 | 76,257 | 85,343 |
| 2036 | 78,132 | 87,986 |
| 2037 | 80,059 | 90,715 |
| AAGR | 2.41% | 3.05% |

Source: RS&H, 2018

FIGURE 2
TOTAL ANNUAL OPERATIONS FORECASTS



Source: RS&H, 2018; FAA TAF, 2017

3.5.1 Annual Itinerant Operations by All Aircraft

An itinerant operation is defined by the FAA⁵ as an aircraft that leaves the local airspace with the intention of landing at another airport. Base year 2017 shows a total of 33,837 itinerant operations for CEW. This is composed of 29,634 itinerant GA operations, 4,000 itinerant military operations (which are held constant at 4,000 through 2037) and 203 air taxi & commuter operations.

Even though the total itinerant operations for all aircraft at the Airport is projected to grow at an AAGR of 1.96%, the type of itinerant operations differ. The FAA TAF 2017, projects the Airport's 29,634 itinerant GA operations to increase at an AAGR of 2.18% over the planning horizon reaching 45,647 operations by 2037. Since itinerant GA operations made up 87.6% of the total itinerant operations in 2017, and 91.5% of

⁵ FAA (2013) *Standard Operating Procedure (SOP) Standard Procedure for FAA Review and Approval of Airport Layout Plans*. Retrieved online at: <https://www.faa.gov/airports/resources/sops/media/arp-SOP-200-ALP-Review.pdf>

the total itinerant operations in 2037, their growth impacts the overall itinerant activity the greatest. Meanwhile, the 203 air taxi & commuter operations are projected to increase at an AAGR of 1.30% up to 263 operations annually during that time. There are no air carrier operations currently or projected to begin at any time over the planning horizon. *Table 7* shows the annual itinerant operations using the FAA TAF 2017.

TABLE 7
FAA TAF 2017 FORECAST OF ITINERANT OPERATIONS

| Year | Air Carrier | Air Taxi & Commuter | Itinerant GA | Itinerant Military | Itinerant Total |
|--------------------|-------------|---------------------|--------------|--------------------|-----------------|
| 2017 (Base) | 0 | 203 | 29,634 | 4,000 | 33,837 |
| 2022 | 0 | 218 | 33,017 | 4,000 | 37,235 |
| 2027 | 0 | 233 | 36,782 | 4,000 | 41,015 |
| 2037 | 0 | 263 | 45,647 | 4,000 | 49,910 |
| AAGR | 0.00% | 1.30% | 2.18% | 0.00% | 1.96% |

Source: FAA TAF, 2017

The Base Case Scenario was developed on the assumption that projected growth in CEW's local GA activity will correlate to similar growth in its itinerant GA activity. This assumption is supported by the following:

- » Strong projections for service area's economy
- » The Airport's interest in accommodating FAR Part 135 certificated air charter activity
- » Potential opportunities for development at the Airport and surrounding area
- » The wide variety of GA services and facilities offered at the Airport
- » Proximity to the I-10 corridor and Gulf Coast Beaches

Applying a 3.25% AAGR in air taxi & commuter and itinerant GA operations from of the base year yields a projected increase of nearly 27,000 itinerant operations over the planning horizon. After adding 4,000 itinerant military operations annually, the final AAGR for all itinerant operations is 2.95%, i.e., one percent higher than the annual growth rate of the FAA TAF 2017. *Table 8* shows the Base Case Scenario for annual itinerant operations.

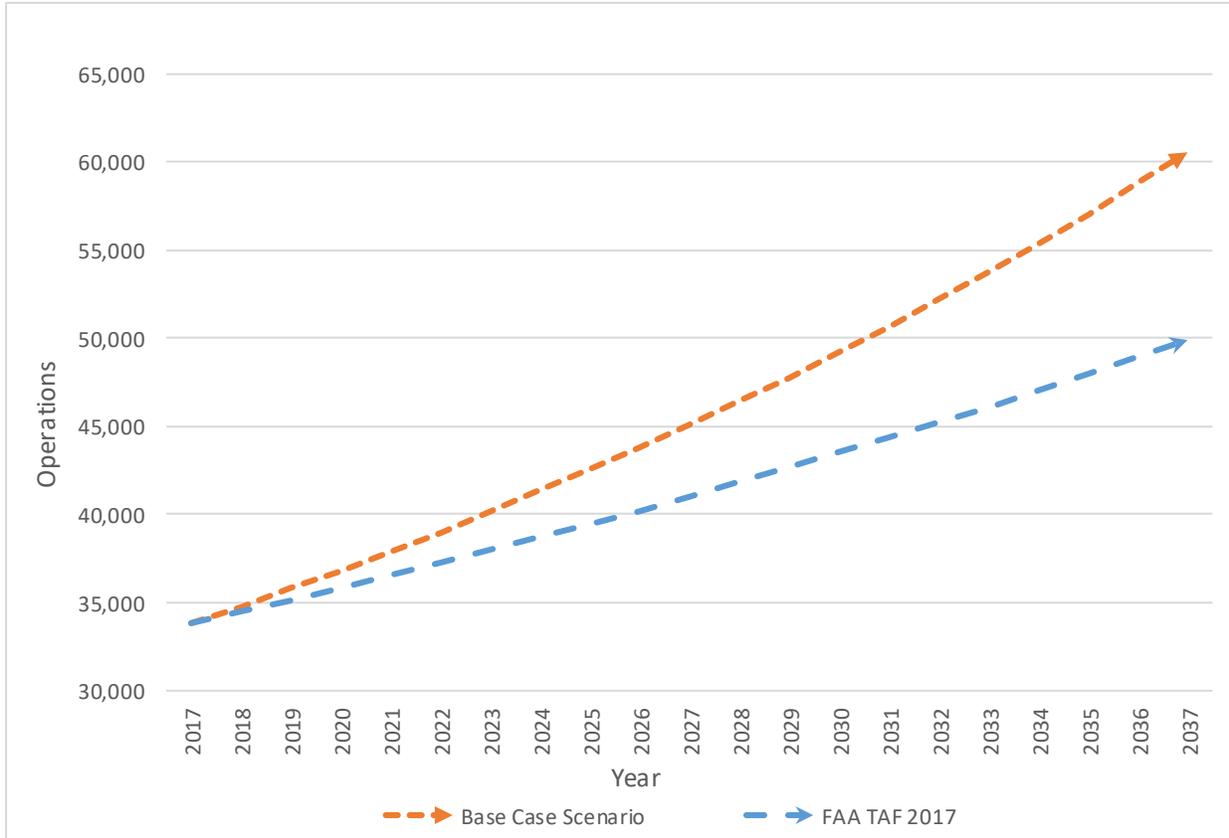
TABLE 8
BASE CASE SCENARIO FORECAST OF ITINERANT OPERATIONS

| Year | Air Carrier | Air Taxi & Commuter | Itinerant GA | Itinerant Military | Itinerant Total |
|--------------------|-------------|---------------------|--------------|--------------------|-----------------|
| 2017 (Base) | 0 | 203 | 29,634 | 4,000 | 33,837 |
| 2022 | 0 | 238 | 34,773 | 4,000 | 39,011 |
| 2027 | 0 | 280 | 40,803 | 4,000 | 45,082 |
| 2037 | 0 | 385 | 56,181 | 4,000 | 60,566 |
| AAGR | 0.00% | 3.25% | 3.25% | 0.00% | 2.95% |

Source: RS&H, 2018

A comparison of the two Forecast scenario growth trends for annual itinerant operations is shown in *Figure 3*.

FIGURE 3
ITINERANT OPERATIONS FORECAST COMPARISON



Source: RS&H, 2018; FAA TAF, 2017

3.5.2 Annual Local Operations Forecasts

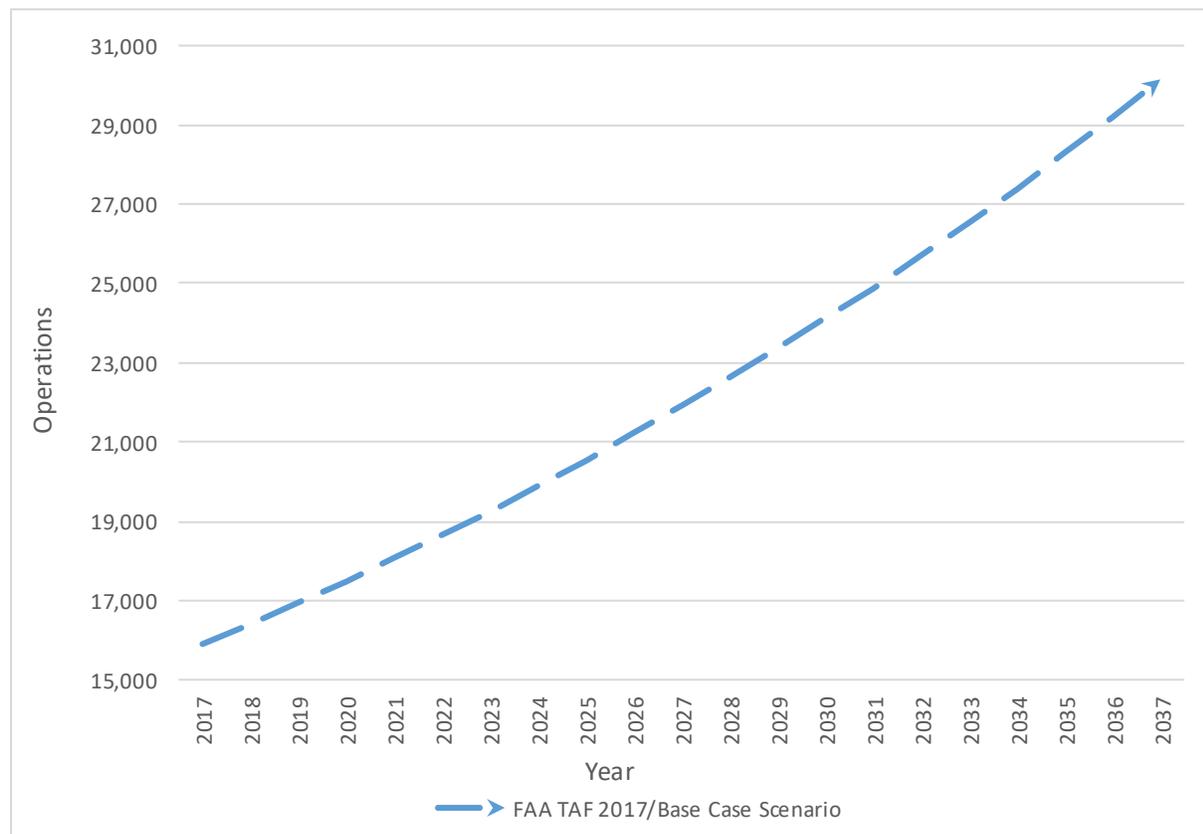
Local GA operations are defined as operations that stay in the local airspace of an airport. For example, flight training operations can generally be classified as local. Base year data shows all local operations at CEW being civil, with no local military operations. The FAA TAF 2017 projects only local civil operations over the planning horizon at an AAGR of 3.25% which increases the 15,901 local civil operations up to 30,149 operations by 2037. The Base Case Scenario adopts this AAGR for local operations. *Table 9* shows the projected local operations for each of the planning horizons, and *Figure 4* shows the trend for growth over the planning horizon.

TABLE 9
FORECAST OF LOCAL OPERATIONS

| Year | Local Civil |
|--------------------|-------------|
| 2017 (Base) | 15,901 |
| 2022 | 18,660 |
| 2027 | 21,898 |
| 2037 | 30,149 |
| AAGR | 3.25% |

Source: FAA TAF, 2017

FIGURE 4
LOCAL OPERATIONS FORECAST



Source: RS&H, 2018; FAA TAF, 2017

3.5.3 Annual Itinerant Operations by Current and Future Critical Aircraft

The critical design aircraft for an airport, as defined in the FAA in Advisory Circular 150/5000-17 *Critical Aircraft and Regular Use Determination*, is an aircraft with characteristics that determine the application of airport design standards for a specific runway, taxiway, taxilane, apron, or other facility. The Advisory Circular states that the critical aircraft is the most demanding aircraft type, or grouping of aircraft with similar characteristics, that make regular use of the Airport. Regular use is defined as 500 annual operations, including both itinerant and local operations but excluding touch-and-go operations.

For airport improvement projects to be eligible for federal funding, FAA Order 5100.38D, *Airport Improvement Program Handbook* describes that the annual operations requirement for critical aircraft cannot include military or federally-owned aircraft. The largest privately-owned aircraft that operates at CEW and exceeds the regular use threshold is the Lockheed Martin L-100-30 (Model L-382G-30), which is the civilian version of the C-130 military aircraft.

FAA Order 5100.38D indicates that letters of support from airport users can be submitted to justify existing and/or projected activity of the critical aircraft. A letter from an aircraft operator at CEW is included as Attachment A which confirms that the annual L-100-30 operations exceed the regular use threshold making this civilian aircraft the critical aircraft for CEW. The aircraft operator reported 677 operations of the L-100-30 between September 2016 and September 2017. The L-100-30 operator also reported 830 operations between August 2018 and August 2019. Over the next five years, the aircraft operator estimates the number of takeoffs and landings to be between 348 to 350 per year (which results in a calculated estimate of 696-700 annual operations).

Section 3.10 discusses key dimensional and operational characteristics of the L-100-30.

The L-100-30 accounts for the most operations by a large aircraft at CEW. However, several other large aircraft (in addition to the L-100-30) perform cargo transport/heavy lift missions or arrive at CEW to undergo MRO-type activities by various civilian tenants at the Airport. The following is the list of aircraft and the number of annual operations, as reported in the FAA Traffic Flow Management System Counts database:

- » Antonov AN-124
 - 2 operations in 2018
- » Airbus A330-300
 - 2 operations in 2019
- » Boeing 777-200
 - 1 operation in 2017
- » Boeing C-17
 - 8 operations in 2017
 - 18 operations in 2018
 - 14 operations in 2019
- » Boeing 757-200
 - 23 operations in 2017
 - 17 operations in 2018
 - 6 operations in 2019
- » Boeing DC-10
 - 1 operation in 2018
- » Lockheed Martin C-130
 - 181 operations in 2017
 - 164 operations in 2018
 - 200 operations in 2019

3.6 BASED AIRCRAFT FORECASTS

Based aircraft forecasts are essential to planning different types of facilities at an airport. A based aircraft is defined as any aircraft that is operational and airworthy, and based (or located) at a particular facility for a majority of the year⁶. There was a discrepancy in the based aircraft count listed in the FAA TAF 2017. The FAA TAF 2017 indicated that CEW had a total of 40 based aircraft in 2017 and growing at an AAGR of 2.46% over the planning horizon. However, the Airport confirmed that in 2018 it had a total of 25 based aircraft. As a result, the 25 based aircraft were used in 2018 and the 2017 total was calculated to be 24 by decreasing it at an AAGR of 2.46%. The Adjusted FAA Forecast used the 24 based aircraft of 2017 increasing at an AAGR of 2.46%, reaching a total of 40 by the end of the planning horizon.

The Base Case Scenario projects a similar trend in the growth of the Airport's 24 based aircraft to the TAF; however, it increases the total to 46 using an AAGR of 3.25% instead. The rate of growth is built off of the Airport's projected local activity in the FAA 2017. A comparison of these two scenarios are shown in *Table 10* and *Figure 5*.

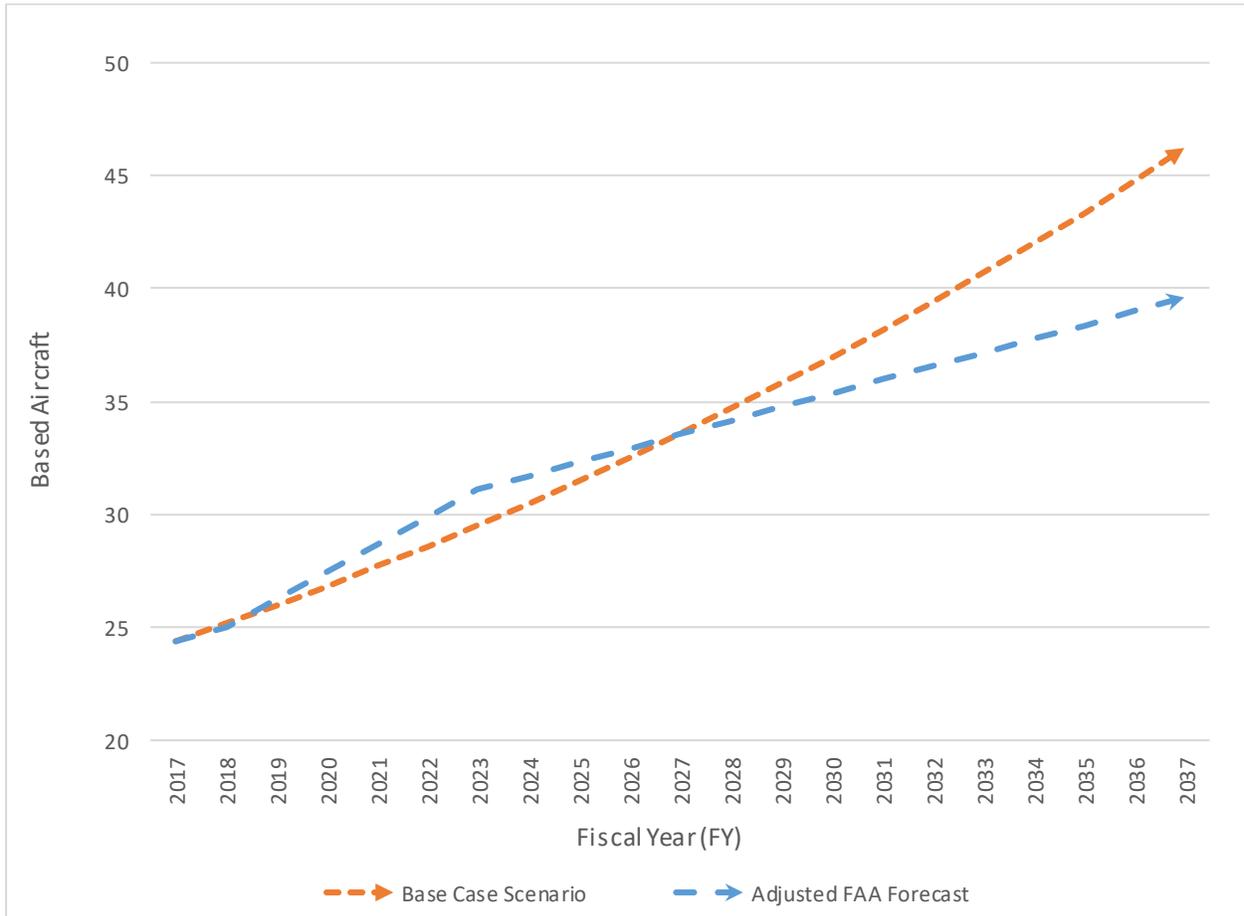
TABLE 10
BASED AIRCRAFT FORECASTS

| Year | Adjusted FAA Forecast | Base Case Scenario |
|--------------------|-----------------------|--------------------|
| 2017 (Base) | 24 | 24 |
| 2018 | 25 | 25 |
| 2019 | 26 | 26 |
| 2020 | 27 | 27 |
| 2021 | 29 | 28 |
| 2022 | 30 | 29 |
| 2023 | 31 | 30 |
| 2024 | 32 | 31 |
| 2025 | 32 | 31 |
| 2026 | 33 | 33 |
| 2027 | 34 | 34 |
| 2028 | 34 | 35 |
| 2029 | 35 | 36 |
| 2030 | 35 | 37 |
| 2031 | 36 | 38 |
| 2032 | 37 | 39 |
| 2033 | 37 | 41 |
| 2034 | 38 | 42 |
| 2035 | 38 | 43 |
| 2036 | 39 | 45 |
| 2037 | 40 | 46 |
| AAGR | 2.46% | 3.25% |

Source: RS&H, 2018; FAA TAF, 2017

⁶ FAA, 2017. National Based Aircraft Inventory Program Frequently Asked Questions

**FIGURE 5
BASED AIRCRAFT FORECASTS**



Source: RS&H, 2018: FAA TAF, 2017

3.7 FLEET MIX FORECAST

The 2017 fleet mix was broken down using the Airport’s confirmed inventory from 2018. The 2017 breakdown includes a total of 21 single engine aircraft, two multi-engine aircraft, zero jets, and one helicopter. There are no documented gliders, military or ultra-light aircraft based at CEW.

The projected growth rates for each aircraft type are influenced by the trends in the FAA Aerospace Forecast for active GA aircraft⁷, the Okaloosa County Airport System, and the 20-year Forecast for CEW using the FAA TAF 2017. *Table 11* provides a projection of the Airport’s fleet mix using the Base Case Scenario over the next 20 years.

⁷ Trends in the nation’s active GA fleet of aircraft are derived from the FAA Aerospace Forecast FY 2017-2037. These trends are based on the General Aviation Manufacturers Association (GAMA) 2016 General Aviation Statistical Databook & 2017 Industry Outlook and the General Aviation and Part 135 Activity Survey.

TABLE 11
BASE CASE SCENARIO FLEET MIX FORECAST

| Aircraft Type | Base Year | | | |
|----------------------|-----------|------|------|------|
| | 2017 | 2022 | 2027 | 2037 |
| Single Engine | 21 | 24 | 27 | 33 |
| Multi-Engine | 2 | 3 | 4 | 7 |
| Jet | 0 | 1 | 2 | 4 |
| Helicopter | 1 | 1 | 1 | 2 |
| Total Based Aircraft | 24 | 29 | 34 | 46 |

Source: RS&H, 2018. Bob Sikes Airport, 2018

3.8 ANNUAL INSTRUMENT APPROACHES

FAA TRACON (Terminal Radar Approach Control) facilities collect data on annual instrument approaches (AIA) for airports that are generally within a 30- to 50-mile radius up to 10,000 feet. The TRACON data is the same information typically listed in the TAF and the FAA Operations Network (OPSNET) database. Aircraft performing instrument approaches into Bob Sikes Airport are controlled by the Eglin Air Force Base / Destin-Ft. Walton Beach (VPS) TRACON facility. However, this TRACON facility does not have counts of AIA for each airport individually.

3.9 ENPLANEMENTS FORECASTS

Historically, there have not been any enplanements out of CEW, nor are there any projections for this type of activity to begin anytime throughout the planning horizon.

3.10 CRITICAL AIRCRAFT

The critical aircraft is the most demanding aircraft that performs or is projected to perform at least 250 annual departures (or 500 annual operations) at the Airport. The critical aircraft is used in establishing an airport's Airport Reference Code (ARC). The critical aircraft characteristics define the airport's aircraft approach category (AAC) based on an aircraft's approach speed and the Airplane Design Group (ADG) based on the tail height and wingspan. The current and future critical aircraft for CEW is the Lockheed Martin L-100-30, as described in [Section 3.5.3](#).

The L-100-30 aircraft has an AAC of C and an ADG of IV. [Table 12](#) shows the FAA AAC table and [Table 13](#) shows the FAA ADG table. [Table 14](#) shows the specifications of the L-100-30. As referenced in [Section 3.5.3](#), other large aircraft operate at CEW. These aircraft do not operate with sufficient frequency to meet the regular use threshold; however, accommodating these aircraft is essential to the continued economic success of CEW and the airport tenants that use or rely on operations of these aircraft. [Table 15](#) references the specifications of the other large aircraft that operate at CEW.

TABLE 12
FAA AIRCRAFT APPROACH CATEGORIES (AAC)

| AAC | V _{REF} / Approach Speed |
|-----|---------------------------------------|
| A | Approach speed < 91 knots |
| B | Approach speed ≥91 knots < 121 knots |
| C | Approach speed ≥121 knots < 141 knots |
| D | Approach speed ≥141 knots < 166 knots |
| E | Approach speed ≥ 166 knots |

Source: FAA, AC 15/5300-13A, Table 1-1. Aircraft Approach Category (AAC), 2014

TABLE 13
FAA AIRPLANE DESIGN GROUPS (ADG)

| Group # | Tail height (ft. [m]) | Wingspan (ft. [m]) |
|---------|-----------------------------|---------------------------|
| I | <20' (< 6m) | <49' (< 15m) |
| II | ≥20' < 30' (≥6m < 9m) | ≥49' < 79' (≥ 15m < 24m) |
| III | ≥30' < 45' (≥9m < 13.5m) | ≥79' < 118' (≥ 24m < 36m) |
| IV | ≥45' < 60' (≥13.5m < 18.5m) | ≥118' < 171' (≥36m < 52m) |
| V | ≥60' < 66' (≥18.5m < 20m) | ≥171' < 214' (≥52m < 65m) |
| VI | ≥66' < 80' (≥20m < 24.5m) | ≥214' < 262' (≥65m < 80m) |

Source: FAA, AC 15/5300-13A, Table 1-2. Airplane Design Group (ADG), 2014

TABLE 14
CURRENT AND FUTURE CRITICAL AIRCRAFT SPECIFICATIONS

| Aircraft | MTOW ¹ | Approach Category (AAC) | Wingspan | Tail Height | Airplane Design Group (ADG) |
|--------------------------|-------------------|-------------------------|----------|-------------|-----------------------------|
| Lockheed Martin L-100-30 | 164,000 lbs. | C | 132' 7" | 38' 10" | IV |

¹ MTOW= Maximum Takeoff Weight

Source: RS&H, 2020

TABLE 15
SPECIFICATIONS OF OTHER LARGE AIRCRAFT

| Aircraft | MTOW ¹ | Approach Category (AAC) | Wingspan | Tail Height | Airplane Design Group (ADG) |
|-----------------------|-------------------|-------------------------|----------|-------------|-----------------------------|
| Antonov AN-124 | 864,200 | D | 240' 6" | 69' 2" | VI |
| Airbus A330-300 | 518,086 | C | 197' 10" | 56' 5" | V |
| Boeing 777-200 | 545,000 | C | 199' 10" | 61' 6" | V |
| Boeing C-17 | 585,000 | D | 160' 7" | 55' 1" | IV |
| Boeing 757-200 | 255,000 | C | 125' | 45.1 | IV |
| Boeing DC-10 | 555,000 | D | 165' 4" | 57' 7" | IV |
| Lockheed Martin C-130 | 164,000 | C | 132' 7" | 38' 10" | IV |

¹ MTOW= Maximum Takeoff Weight

Source: RS&H, 2020

3.10.1 Airport Reference Code

Airports are required by the FAA to designate an airport reference code (ARC) which relates airport design criteria to the operational and physical characteristics of the aircraft that operate at the airport. The ARC signifies an airport's AAC and ADG to which the airport is designed. Therefore, the ARC of CEW is C-IV. Even though a specific ARC is used in aviation planning and design it does not put a limitation on the size of aircraft that are permitted to safely operate at the Airport.

3.10.2 Runway Design Code

The Runway Design Code (RDC) signifies the FAA design standards to which an existing runway has been, or a new runway is to be built. The RDC is used to determine the standards that apply to a specific runway and parallel taxiway to allow unrestricted operations by the design aircraft. The RDC is based on planned development and has no operational application. The design standards that apply to a runway based on RDC and consists of the critical aircraft's AAC, ADG and the Airport's instrument approach visibility minimums. Bob Sikes Airport is served by one runway, Runway 17-35, that is 8,004 feet long and 150 feet wide. Runway 17-35 is asphalt and in good condition according to the most recent FAA 5010 Form. When a Runway Visibility Range (RVR) is not available, the visibility minimums are converted using the FAA's RVR equivalents. The ILS approach for Runway 17 has a visibility minimum of a $\frac{3}{4}$ mile, which equates to RVR of 4,000 feet. Based on these three criteria, the RDC for Runway 17 is C-IV 4000 ft. Runway 35 has an RDC of C-IV 5000 because it has a visibility minimum of 1 mile.

3.10.3 Runway Approach and Departure Reference Codes

Advisory Circular 150/5300-13A *Airport Design* defines the Approach Reference Code and Departure Reference Code (APRC and DPRC) as the operational capabilities for a runway's approaches and departures based on separation between taxiways and a runway and the instrument approach visibility

minimums. The APRC and DPRC reflect the existing conditions and may change over time as improvements are made to the runway, taxiways, and NAVAIDs.

3.10.3.1 Approach Reference Code

The APRC is composed of three components that include AAC, ADG and the approach visibility minimums. It is determined by taking the visibility minimum of a runway along with the measured distance between the runway centerline and an adjacent taxiway. Essentially, it identifies the approach details for a runway end where no mitigation to operational procedures would be necessary.

There is approximately 400 feet measured between Runway 17-35's centerline and the centerline of the parallel taxiway. Since the visibility minimums for each end differ, there are two different APRCs. Runway 17 has a visibility of $\frac{3}{4}$ of a mile (4000 feet RVR), so the current APRC of Runway 17 is D-IV-4000 and D-V-4000. The visibility minimum for Runway 35 is 1 mile (5000 feet RVR), so the APRC of Runway 35 are D-IV-5000 and D-V-5000.

3.10.3.2 Departure Reference Code

Similar to the APRC, the DPRC characterizes an airport's ability to accommodate aircraft, based on the separation distances between a runway centerline and adjacent taxiway. The DPRC distinguishes an AAC and ADG for a runway based on its runway to parallel taxiway separation. The separation distance is approximately 400 feet at both runway ends therefore the DPRC are D-IV and D-V.

3.11 SUMMARY OF FORECASTS

This Forecast analyzed multiple scenarios and related growth rates. A modified high growth rate was selected as the preferred forecast or Base Case Scenario. It was concluded that this scenario best portrays the Airport and its anticipated growth. *Table 16* shows a summary of the Base Case Scenario's projections for CEW.

TABLE 16
BASE CASE SCENARIO FORECAST SUMMARY

| | Base Year | | | | |
|-------------------------------------|------------------|-------------|-------------|-------------|-------------|
| | 2017 | 2022 | 2027 | 2032 | 2037 |
| Total Enplanements | 0 | 0 | 0 | 0 | 0 |
| Air Carrier Enplanements | 0 | 0 | 0 | 0 | 0 |
| Commuter Enplanements | 0 | 0 | 0 | 0 | 0 |
| Total Itinerant Operations | 33,837 | 39,011 | 45,082 | 52,207 | 60,566 |
| Air Carrier Operations | 0 | 0 | 0 | 0 | 0 |
| Air Taxi & Commuter Operations | 203 | 238 | 280 | 328 | 385 |
| GA Operations | 29,634 | 34,773 | 40,803 | 47,879 | 56,181 |
| Military Operations | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 |
| Total Local Operations | 15,901 | 18,660 | 21,898 | 25,697 | 30,149 |
| Local Civil Operations | 15,901 | 18,660 | 21,898 | 25,697 | 30,149 |
| Local Military Operations | 0 | 0 | 0 | 0 | 0 |
| Total Operations | 49,738 | 57,671 | 66,980 | 77,904 | 90,715 |
| Critical Aircraft | L-100-30 | L-100-30 | L-100-30 | L-100-30 | L-100-30 |
| Critical Aircraft Operations | 677 | ~700 | ~700 | ~700 | ~700 |
| Total Based Aircraft | 24 | 29 | 34 | 39 | 46 |
| Annual Instrument Approaches | N/A | N/A | N/A | N/A | N/A |

Source: RS&H, 2018; FAA TAF, 2017

3.11.1 FAA TAF Comparison

FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing instructions for Airport Actions*, paragraph 706.b(3) states, “[The] FAA uses the following guidelines to determine the acceptability of a sponsor’s forecasts:

- » (a) A 5-year forecast should be within 10% of the TAF.
- » (b) A 10-year forecast should be within 15% of the TAF.⁸

Table 17 shows the comparison of the FAA TAF 2017⁹ and the Base Case Scenario Forecast. The Base Case Scenario meets the FAA criteria for approving forecasts.

TABLE 17
FAA TAF-BASE CASE SCENARIO FORECAST COMPARISON

| Category | Base Year | | | | | | | |
|--|-----------|----------|-----------|----------|-----------|----------|-----------|----------|
| | 2017 | | 2022 | | 2027 | | 2037 | |
| | Base Case | TAF 2017 |
| Enplanements | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Air Carrier Operations | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| GA Based Aircraft* | 24 | 24 | 29 | 30 | 34 | 34 | 46 | 40 |
| GA Operations | 45,738 | 45,738 | 53,671 | 51,854 | 62,980 | 58,913 | 86,715 | 76,059 |
| Military Operations | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 |
| Total Operations | 49,738 | 49,738 | 57,671 | 55,895 | 66,980 | 62,913 | 90,715 | 80,059 |
| Comparison with FAA TAF 2017 (Percent Different) | | | | | | | | |
| Enplanements | N/A | | N/A | | N/A | | N/A | |
| Air Carrier Operations | N/A | | N/A | | N/A | | N/A | |
| GA Based Aircraft* | 0.00% | | -3.33% | | 0.00% | | +15.00% | |
| GA Operations | 0.00% | | +3.50% | | +6.90% | | +14.01% | |
| Military Operations | 0.00% | | 0.00% | | 0.00% | | 0.00% | |
| Total Operations | 0.00% | | +3.18% | | +6.46% | | +13.31% | |

Source: RS&H, 2018; FAA TAF, 2017

Note: * - The Adjusted FAA Forecast was used in place of the FAA TAF 2017 due to updated Airport based aircraft counts

⁸ December 23, 2004, memorandum from the Director, Airport Planning and Programming, entitled *Revision to Guidance on Review and Approval of Aviation Forecasts*.

⁹ The FAA Adjusted Forecast was used in place of the FAA TAF 2017 due to updated Airport based aircraft counts.

4 AIRPORT DEVELOPMENT SUMMARY

4.1 Projects Since Last ALP

Several development projects have been completed since the last ALP update was completed in 2014. This section describes those development projects.

Fairchild Road Paving

Fairchild Road connects Airport Road to the southeast portion of the Airport. This portion of Fairchild Road remained unpaved since it opened as the original access road when Bob Sikes Airport opened in May 1965. The Fairchild Road paving project was completed in 2017, which improved access from Airport Road to James Lee Boulevard on the east side of the Airport.

Crestview Technology Air Park

The most significant project completed since the last ALP was the development of the Crestview Technology Air Park on the Airport's northern end. The Crestview Technology Air Park serves regional defense and aerospace companies. The privately owned 20-acre property¹⁰ is anticipated to attract additional aviation related businesses. Currently, Sunshine Aero Industries, Inc. (SAI) is located in the Crestview Technology Air Park.

4.2 Proposed Airport Development

Table 1 describes the projects proposed for implementation throughout the 20-year planning period. This section summarizes the project elements, the triggering event (if available), and the planned funding sources for the proposed projects. Short-term and some intermediate-term projects also references planned fiscal year implementation, as documented in the 2017 Airport Capital Improvement Program.

4.2.1 Short-Term Proposed Projects (0-5 years)

VASI Replacement (2019)

Visual Approach Slope Indicator (VASI) systems are now obsolete, as described in FAA Advisory Circular 150/5300-13A. As a result, replacing the VASI system with Precision Approach Path Indicator (PAPI) systems for Runway 17-35 is recommended in the planning horizon. The project has a total estimated cost of \$70,000. The project would be FAA, State, and locally funded.

Foy Shaw Parkway Connector (2019)

The Airport is seeking to enhance access to the Airport under an intermodal program. Foy Shaw Parkway is a connector roadway that would provide direct access from State Road 10 (US 90) to John Givens Road at CEW. Foy Shaw Parkway will enhance access to CEW from Interstate 10 (I-10) at the Mossy Head interchange and the CSX Railroad line. Foy Shaw Parkway will allow traffic to bypass Shoffner Boulevard and reduce airport traffic through the adjacent residential neighborhoods. Direct access to the CEW from I-10 is anticipated to generate future development on the west side of the Airport. The project has received grants for design and construction. Mitigating 1.6 acres of wetland impacts with a 40-acre conservation easement on airport property is required as part of the project. The project has a total estimated cost of \$4,500,000. The project would be State, and locally funded.

¹⁰ Retrieved from <http://crestviewairpark.com/>

Bob Sikes Airport Conservation Easement (2019)

Okaloosa County is in the process of releasing two parcels of aeronautical use (consisting of 23.32 acres and 60.42 acres) for conservation to the Bob Sikes Conservation Easement. The property will remain under ownership of Okaloosa County and Bob Sikes Airport. Both parcels will assist in mitigating wetlands in the vicinity of Bob Sikes Airport from the potential impacts of Foy Shaw Parkway.

Overlay Aircraft Parking Apron Phase II (2020)

The current south apron will be rehabilitated to extend the useful life of the pavement. The project has a total estimated cost of \$3,000,000. The project would be FAA, State, and locally funded.

Runway Safety Area Regrading (2020)

A portion of the area north of the Runway 17 end will be regraded such that the grade does not penetrate the approach surface. This project would resolve the nonstandard RSA/ROFA condition. The project cost is unknown. The project would be locally funded.

Security Fence Improvements (2020)

The Airport has planned improvements to the security fencing around the Airport's perimeter. The perimeter fence replacement project will replace substandard sections of the fence and secure the area while continuing to provide the necessary separation for mowing and from nuisance wildlife. The portion of the security fence within the Runway 35 RSA and ROFA will be relocated as part of this project to resolve the nonstandard condition. The portion of the fence within the Taxiway E OFA would also be realigned to resolve that nonstandard condition. The project has a total estimated cost of \$800,000. The project would be State and locally funded.

Tree Removal (2020)

The Airport plans to remove obstructions, primarily trees, from around the runway to keep the runway approaches clear. If not removed, these trees will grow tall enough to encroach upon the airport's airspace and pose a risk to aircraft safety and the safety of the surrounding community. Trees within the Runway 35 ROFA will be removed as part of this project to resolve the nonstandard condition. The project has a total estimated cost of \$300,000. The project would be State and locally funded.

Rehabilitation of Runway 17-35

The Airport plans to engage in a global asphalt preventative maintenance program to slow deterioration and prolong the life of Runway 17-35 and Taxiway A. The Airport plans to upgrade the airfield lighting¹¹, antenna electrical vault, and install new sign panels. A taller antenna electrical vault will enhance signal integrity and allow for a more effective pilot control of airfield lighting. The two Modification to Standards will be resolved as part of this project. The project has a total estimated cost of \$850,000. The project would be FAA, State, and locally funded.

¹¹ The Airport also plans to install a Medium Intensity Approach Light System with Runway Alignment Indicator Lights (MALSR). However, this will be approached towards the end of the planning horizon.

Localizer Relocation

Runway 17 localizer and its associated equipment shelter is located within the Runway 35 RSA and ROFA. Relocation of the NAVAID will be coordinated with the FAA Airport District Office (ADO) and FAA Technical Operations. This project will resolve a nonstandard RSA/ROFA condition. The project cost is unknown. The project would be FAA funded.

4.2.2 Intermediate-Term Proposed Projects (6-10 years)

Surface Treatment and Paint Markings (2023)

This project consists of runway and taxiway preventative maintenance, repainting, and restriping. The project has a total estimated cost of \$1,000,000. The project would be FAA, State, and locally funded.

T-Hangar Construction (2023)

The anticipated growth of CEW has triggered the planning of additional T-hangar space. The T-hangar building has been planned for an area near the south apron. The project has a total estimated cost of \$1,250,000. The project would be State and locally funded.

Rehabilitation of FAA Flight Services Facility (2024)

The existing FAA Flight Services Facility is in need of renovation. The building is located near the Aircraft Rescue and Fire Fighting (ARFF) station and Airport Administration Building. The project has a total estimated cost of \$1,300,000. The project would be State and locally funded.

Hangar and Vehicle Parking Expansion

Analysis was performed to determine the amount of hangar and vehicular parking space available at the Airport. Vehicle parking areas are mostly located along John Givens Road near the FAA Flight Services Facility and ARFF station. On-site parking is also available adjacent to some aircraft apron spaces near the Airport Administration Building. The existing vehicle parking areas located off John Givens Road to the east of Adora Teal Way can be expanded to accommodate the required space. There is need for an additional 5,000 square feet of parking area by the end of the intermediate-term planning horizon. The vehicle parking project has a total estimated cost of \$50,000. The project would be FAA, State, and locally funded.

Most of the GA hangars are clustered to the south of the ARFF station and Emerald Coast Fixed Base Operator (FBO). An additional 10,000 square feet of hangar space will be needed to accommodate projected growth in based aircraft by the end of the intermediate-term planning horizon. The proposed location for additional hangar space is to the south of the existing hangars in the western quadrant. The hangar project has a total estimated cost of \$865,000. The project would be State and locally funded.

Paved Taxiway Shoulders

Per FAA Advisory Circular 150/5300-13A, Airport Design, paved shoulders are required for taxiways and taxilanes accommodating ADG IV and higher aircraft. As different taxiway pavement projects become eligible for reconstruction, Taxiways A, E, F, and H should be included in the overall Airport Global Asphalt Pavement maintenance program. The project has a total estimated cost of \$4,600,000. The project would be FAA, State, and locally funded.

Taxiway Direct Access

Direct access to a runway from an apron without making a turn is discouraged by airport design standards. The replacement of the existing taxiway segments that do not meet the airfield best practices should occur throughout the planning horizon. The recommendation for the non-standard and non-conforming segments is to demolish and replace a segment of the Taxiway A3 segment. The project has a total estimated cost of \$257,000 for demolition and \$828,000 for construction. The project would be FAA, State, and locally funded.

Runway 17-35 Blast Pad

A minimum of 200 feet is required for runways serving ADG IV, per Advisory Circular 150/5300-13A, *Airport Design*. However, Runway 17-35 blast pad widths are only 150 feet. The non-standard issue should be resolved as soon as practicable. The project has a total estimated cost of \$80,000. The project would be FAA, State, and locally funded.

Paved Runway 17-35 Shoulders

The analysis indicates that Runway 17-35 shoulders are non-standard because they do not have paved shoulders. The Advisory Circular indicates that 25-foot wide paved shoulders are required runways accommodating ADG IV aircraft. The project has a total estimated cost of \$3,202,000. The project would be FAA, State, and locally funded.

4.2.3 Long-Term Proposed Projects (11-20 years)

Eastside Aircraft Parking Apron Project (2030)

The new parking apron will accommodate future aviation related industrial developments that are anticipated for 2023. The project has a total estimated cost of \$6,000,000. The project would be FAA, State, and locally funded.

Hangar, and Vehicle Parking Expansion

The analysis indicates that as the Airport develops there will be a need for additional hangar and vehicle parking capacity. There is sufficient apron space to accommodate the projected growth at CEW. As the number of aircraft based at CEW increases, an additional 75,000 square feet of hangar space is recommended to meet anticipated demand. The hangar project has a total estimated cost of \$6,470,000. The project would be State and locally funded.

A total addition of 20,000 square feet is required to meet vehicle parking demand by the end of long-term planning horizon. The vehicle parking project has a total estimated cost of \$200,000. The project would be FAA, State, and locally funded.

5 NAVAIDS AND APPROACH PROCEDURES

Navigational Aids (NAVAIDs) at CEW include an airport beacon, a segmented circle with wind cone, an individual wind cone, a remote communications outlet (RCO) and an Automated Surface Observing System (ASOS). The NAVAIDs on the runway include a localizer, glideslope, and VASI. The runway edge lighting system at CEW is a medium intensity runway lighting (MIRL) system.

Currently, the Airport has four instrument approach procedures for the Runway, described as follows:

- » Runway 17 ILS or LOC (3/4 mi and 413 ft. msl)
- » Runway 17 RNAV (GPS) (1 mi and 470 ft. msl)
- » Runway 35 RNAV (GPS) (1 mi and 450 ft. msl)
- » Circling Approach VOR-A (1 mi and 900 ft. msl)

A Medium Intensity Approach Light System with Runway Alignment Indicator Lights (MALSRL) system is proposed for future development at the end of the planning horizon to support the Runway 17 ILS approach.

6 WIND COVERAGE AND RUNWAY ORIENTATION

The FAA defines wind coverage as the percent of time crosswind components are below an acceptable velocity. Using collected wind observations at the Airport, a wind rose can be generated for each runway indicating wind coverage. The analysis then determines what percentage of the time the crosswind component is within the capability of the critical design aircraft. Currently, the ARC for CEW is C-IV which requires 95% wind coverage of 20 knots. CEW has a 99.85% wind coverage for all weather and visual flight rules (VFR) at 20 knots and 99.72% wind coverage for instrument flight rules (IFR) at 20 knots (See *Table 18*). This indicates that the runway is properly oriented with adequate wind coverage.

TABLE 18
RUNWAY 17-35 WIND COVERAGE

| Crosswind Component | All Weather Wind Coverage | IFR Wind Coverage |
|---------------------|---------------------------|-------------------|
| 10.5 knots | 98.3% | 98.27% |
| 13 knots | 99.22% | 99.08% |
| 16 knots | 99.85% | 99.72% |
| 20 knots | 99.97% | 99.91% |

Source: RS&H, 2018; NDC Station 722215

Runways are designated by their orientation with respect to magnetic north. There are fluctuations associated to the earth's magnetic field and therefore the magnetic heading may change on a regular basis. The National Geophysical Data Center magnetic declination tool to determine the appropriate runway number designation for CEW.

The magnetic declination is 3° 20' west. The magnetic declination analysis indicates that Runway 17-35 is appropriately designated.

7 NON-STANDARD CONDITIONS AND MODIFICATION TO STANDARDS

7.1 Non-Standard Conditions

Table 19 summarizes non-standard conditions associated with runway and taxiway design based on comparison to FAA design standards. The L-100-30 is categorized as ADG IV and TDG 3.

7.2 Runway Non-Standard Conditions

The existing non-standard conditions associated with Runway 17-35 include RSA/ROFA impacts, lack of paved shoulders, and insufficient blast pad size. A localizer and associated equipment shelter, a portion of the security fence, and trees are located within the Runway 35 ROFA. The RSA and ROFA should be cleared of all nonessential aboveground objects. Removal of these objects are required. The Runway 17 end also includes nonstandard longitudinal grades that should be regraded to meet standards. Resolving non-standard conditions are regulated by FAA SOP. 8.00, *Runway Safety Area Determination*, and FAA Order 5200.8, *Runway Safety Area Program*.

It is practicable to resolve the existing nonstandard RSA conditions for Runway 17-35. Therefore, the RSA issues are classified as "Category 2" according to Paragraph 4 of FAA SOP 8.00. Paragraph 6.2.2 of the FAA SOP indicates that Category 2 RSA issues require a construction project or other improvement action to ensure an RSA will meet standards after project completion. The Airport plans to relocate the localizer (and associated equipment shelter) outside the ROFA, realign the security fence outside the ROFA, and remove trees currently located within the RSA. Coordination with the FAA ADO and FAA Technical Operations will be required to facilitate the relocation of the localizer (and associated equipment shelter).

The construction project to resolve the nonstandard RSA and ROFA is anticipated to begin in September 2020 with an anticipated completion date of February 2021. The exception is the relocation of the localizer and associated equipment shelter. Coordination with the FAA ADO and FAA Technical Operations is required to initiate that project.

The Runway 17-35 blast pads are 150 feet wide. A minimum of 200 feet is required for runways serving ADG IV, per Advisory Circular 150/5300-13A, *Airport Design*. In addition, Runway 17-35 does not have paved shoulders. A minimum of 25-foot-wide shoulders are required for Airports serving ADG IV aircraft. Construction of wider blast pads and paved shoulders on Runway 17-35 is necessary to satisfy FAA design standards.

7.2.1 Taxiway Non-Standard Conditions

The Advisory Circular indicates that paved shoulders are required for taxiways and taxilanes accommodating ADG IV aircraft. Several taxiways are non-standard because they do not have paved shoulders. Construction of paved shoulders on the applicable taxiways is necessary to satisfy FAA design standards.

Per the Advisory Circular, taxiways should not lead directly from an apron to a runway without a turn. Such configurations can lead to confusion as pilots typically expect to encounter a parallel taxiway but instead accidentally enter a runway. Taxiway A3 provides a direct connection between an aircraft parking apron and Runway 17-35. Reconfiguration or elimination of Taxiway A3 is recommended to enhance runway safety.

TABLE 19
EXISTING NON-STANDARD CONDITIONS

| Description | Existing Condition | FAA Standard | Disposition |
|---|--|--|--|
| Runway 35 RSA/ROFA | Localizer and associated equipment shelter located in RSA/ROFA | RSA/ROFA should be free of objects, except for objects that need to be located in the RSA because of their function. | Localizer and associated equipment shelter to be relocated outside ROFA through coordination with FAA ADO and FAA Technical Operations |
| Runway 35 RSA/ROFA | Security fence located within RSA/ROFA | RSA/ROFA should be free of objects, except for objects that need to be located in the RSA because of their function. | Security fence to be realigned outside ROFA |
| Runway 35 RSA/ROFA | Trees located within ROFA | RSA/ROFA should be free of objects, except for objects that need to be located in the RSA because of their function. | Trees to be removed |
| Runway 17 RSA Grading | Non-standard longitudinal RSA grading | Maximum positive grade should not penetrate approach surface. | RSA to be regraded |
| Runway 17-35 shoulders | No paved shoulders | Paved shoulders for all runways serving ADG IV aircraft | Construct paved shoulders when pavement eligible for reconstruction |
| Runway blast pad | Blast pad width 150 ft. | Blast pad width for runways serving ADG IV is 200 ft. | Extend blast pad when pavement eligible for reconstruction |
| Taxiway shoulders (A, A1, A2, A3, A4, A5, E, F, H) | No paved shoulders | Paved shoulders for all taxiways serving ADG IV aircraft | Construct paved shoulders when pavement eligible for reconstruction |
| Taxiway A3 | Direct Access | Design taxiways that do not lead directly from an apron to a runway without a turn | Reconstruct or eliminate taxiway |
| Taxiway E | Fence in Taxiway OFA | The taxiway OFA clearing standards prohibit objects, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes. | Realign fence outside the Taxiway OFA |

Source: RS&H, 2018

7.3 Modification to Standards

There are two existing modification to standards for CEW. The existing Runway 17 end does not meet the longitude slope standard for the last one-fourth of the Runway. Also, the existing runway pavement crown is 25 feet west of the centerline. It is recommended that these modification to standards are addressed and resolved during future pavement reconstruction or rehabilitation projects. The existing modification to standards and future disposition is described in *Table 20*.

TABLE 20
EXISTING MODIFICATION TO STANDARDS

| Description | Disposition |
|---|---|
| Runway 17 end does not meet longitude slope standard for last ¼ of runway | Pavement Reconstruction or Rehabilitation |
| Existing runway pavement crown 25 ft. west of centerline | Pavement Reconstruction or Rehabilitation |

Source: 2014 CEW ALP

8 OBSTRUCTION SURFACES

8.1 14 CFR Part 77 Surfaces

Under Title 14 of the Code of Federal Regulations, Federal Aviation Regulation (FAR) Part 77, *Safe and Efficient Use, and Preservation of Navigable Airspace*, the FAA has created three-dimensional imaginary surfaces within airport airspace to visually guide compatible land use development, as well as the removal of objects that pose a hazard to airspace.

Within the ALP set developed for this ALP Update, an airport airspace sheet will illustrate the various obstructions and objects within the Part 77 areas. *Table 21* lists the surfaces and their specific slopes for each existing runway and future runway end.

The surfaces identified on the approach surface and profile sheets are:

- » Departure Surface
- » PAPI Obstacle Clearance Surface
- » Part 77 Approach Surface
- » Threshold Siting Surface

All runway ends have an approach slope associated with them. Approach surfaces are designed to protect the use of the runway in both visual and instrument meteorological conditions near the airport. Part 77 imaginary surfaces use criteria to identify airport obstacles to those surfaces. Part 77 approach surfaces at CEW are 50:1 or 34:1 and are longitudinally centered on the extended runway centerline and extend outward and upward from each end of the primary surface.

Departure surfaces allow pilots to follow standard departure procedures and typically have a trapezoidal shape that begins at the departure end runway (DER) and extends along the extended runway center line. All runway ends have a departure surface slope of 1 foot vertically for every 40 feet horizontally (40:1).

The obstructions can be found in the ALP Update on Sheets 9 and 10.

TABLE 21
OBSTRUCTION SURFACES AT CEW

| Runway | Departure Surface | VASI Obstacle Clearance Surface | PAPI Obstacle Clearance Surface | Part 77 Approach Surface | Threshold Siting Surface |
|---------------|-------------------|---------------------------------|---------------------------------|--------------------------|--------------------------|
| Runway 17-35 | N/A | N/A | N/A | N/A | N/A |
| Runway 17 End | 40:1 | 3-Degrees (E) | 3-Degrees (F) | 50:1 | 20:1 (E) 34:1 (U) |
| Runway 35 End | 40:1 | 3-Degrees (E) | 3-Degrees (F) | 34:1 | 20:1 |

*Notes: F= Future, E=Existing, U=Ultimate.

9 RUNWAY PROTECTION ZONES

A Runway Protection Zone (RPZ) is a trapezoidal space extending outward from a runway end on the surface, and it is designated to be free of incompatible land uses. Runway 17 has an ILS approach and it has a visibility minimum of less than 3/4 mile, so its approach RPZ has an inner width of 1,000 feet and length of 1,700 feet. Runway 35 does not have an ILS approach currently, and it has a visibility minimum no less than 1 mile, so its approach RPZ has an inner base of 500 feet and a length of 1,700 feet. The departure RPZs fit completely within the approach RPZ surface at each runway end. The FAA indicates that the RPZ should be clear of all facilities supporting incompatible land uses. According to the Interim Guidance on Land Uses Within a Runway Protection Zone, transportation facilities are not a compatible use. However, this public road is not a new land use to the RPZ and within the Industrial Zoning category. Therefore, no changes are required at this time.

10 TOWER LINE-OF-SIGHT

CEW is a non-towered airport. Therefore, line-of-sight requirements do not apply to this Airport.

11 LETTERS OF COORDINATION

Aside from the FAA, letters of coordination for recommended projects are required to be reviewed and approved by the Okaloosa County Board of Commissioners.

12 PRELIMINARY IDENTIFICATION OF ENVIRONMENTAL FEATURES

The purpose of considering environmental factors in airport planning is to assist Okaloosa County evaluate current environmental conditions and future airport development, as well as provide information that will help expedite subsequent environmental processes. FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, and FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions, are the FAA's environmental guidance for aviation projects/actions to comply with NEPA. It is important to note that the environmental analysis included in this ALP update narrative is not in and of itself a NEPA document. The following description of environmental features follows those outlined on ARP SOP No. 2.00, Appendix A, ALP Review Checklist. The statutes, regulations,

and Executive Orders that apply to each resource category can be found in the FAA Order 1050.1F Desk Reference.

12.1 Major Airport Drainage Ditches

There are no major drainage ditches located at the Airport.

12.2 Wetlands

According to the U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory, there are freshwater emergent, and forested/shrub wetlands in the areas primarily west and east to the Airport. Riverine Wetland is also present on airport property.¹² See *Figure 6* for the CEW Wetlands Map.

12.3 Flood Zones

According to the Federal Emergency Management Agency (FEMA), the Airport intersects floodplain insurance rate map 112091C0170H¹³. There are no floodplains on Airport property.

12.4 Historic or Cultural Features

There are no historic resources on the National Register of Historic Places (NRHP) within the Airport property.¹⁴

12.5 Section 4(f) Features

There are no Section 4(f) properties in or around the Airport.

12.6 Flora/Fauna

The majority of the Airport property has been heavily disturbed (e.g., graded, sodded, mowed and maintained, developed). Biotic resources within in the Airport property include grass, primarily Bermuda grass. According to the USFWS, there is the potential for federally listed species to occur in Okaloosa County (See *Table 22*). There is no critical habitat within the Airport area.¹⁵

TABLE 22
FEDERALLY LISTED SPECIES WITH THE POTENTIAL TO OCCUR IN OKALOOSA COUNTY

| Group | Common Name | Scientific Name | Status |
|------------|----------------------------------|--------------------------|------------|
| Amphibians | Reticulated flatwoods salamander | Ambystoma bishopi | Endangered |
| Birds | Bald eagle | Haliaeetus leucocephalus | Recovery |
| | Red-cockaded woodpecker | Picoides borealis | Endangered |
| | Wood stork | Mycteria americana | Threatened |
| | Piping Plover | Charadrius melodus | Threatened |
| | Red knot | Calidris canutus rufa | Threatened |

¹² USFWS, (2018, January). Wetland Mapper Retrieved February 2018, from National Wetlands Inventory: <https://www.fws.gov/wetlands/data/mapper.HTML>

¹³ FEMA. (2005, November 3). Panel 12091C0170H. Retrieved February 2018, from FEMA Flood Map Service Center: Search by Address –Bob Sikes Airport: <https://msc.fema.gov/portal/search?AddressQuery#searchresultsanchor>

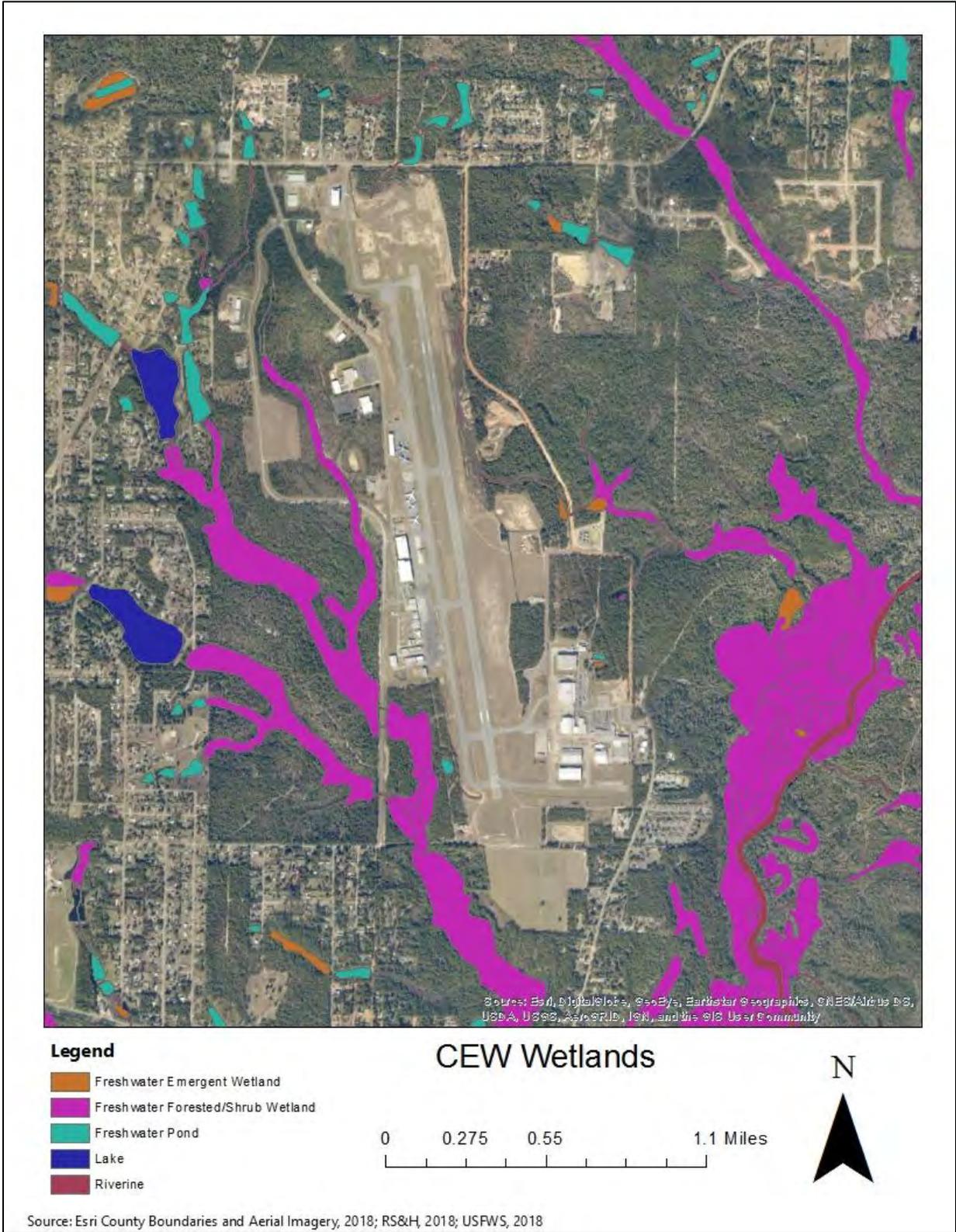
¹⁴ NPS. National Register of Historic Places. Retrieved on January 2018 from <https://npgallery.nps.gov/NRHP/SearchResults/>

¹⁵ USEPA. (2018) NEPAAssist Retrieved January 2018 <https://nepassisttool.epa.gov/nepassist/analysis.aspx>

| Group | Common Name | Scientific Name | Status |
|------------------|-------------------------------------|---|--------------|
| Clams | Choctaw bean | Villosa choctawensis | Endangered |
| | Narrow pigtoe | Fusconaia escambia | Threatened |
| | Southern sandshell | Hamiota australis | Threatened |
| | Fuzzy pigtoe | Pleurobema strodeanum | Threatened |
| Fishes | Okaloosa darter | Etheostoma okaloosae | Threatened |
| | Atlantic sturgeon (Gulf subspecies) | Acipenser oxyrinchus (=oxyrhynchus) desotoi | Threatened |
| | Saltmarsh topminnow | Fundulus jenkinsi | Under Review |
| Flowering Plants | Panhandle lily | Lilium iridollae | Under Review |
| | West's flax | Linum westii | Under Review |
| | White meadowbeauty | Rhexia parviflora | Under Review |
| | Panhandle meadowbeauty | Rhexia salicifolia | Under Review |
| | Karst pond xyris | Xyris longisepala | Under Review |
| | Boykin's lobelia | Lobelia boykinii | Under Review |
| | Gulf Sweet pitcherplant | Sarracenia rubra ssp. gulfensis | Under Review |
| Insects | Westfall's clubtail | Gomphus westfalli | Under Review |
| | Yellow-sided clubtail | Stylurus potulentus | Under Review |
| Lichens | Florida perforate cladonia | Cladonia perforata | Endangered |
| Mammals | West Indian Manatee | Trichechus manatus | Threatened |
| | Choctawhatchee beach mouse | Peromyscus polionotus allophrys | Endangered |
| Reptiles | Hawksbill sea turtle | Eretmochelys imbricata | Endangered |
| | Leatherback sea turtle | Dermochelys coriacea | Endangered |
| | Kemp's ridley sea turtle | Lepidochelys kempii | Endangered |
| | Green sea turtle | Chelonia mydas | Threatened |
| | Loggerhead sea turtle | Caretta | Threatened |
| | Eastern indigo snake | Drymarchon corais couperi | Threatened |
| | Florida pine snake | Pituophis melanoleucus mugitus | Under Review |
| | Gopher tortoise | Gopherus polyphemus | Candidate |
| | Alligator snapping turtle | Macroclmemy temmincki | Under Review |
| | Eastern diamondback rattlesnake | Crotalus adamanteus | Under Review |
| | Escambia Map turtle | Graptemys ernsti | Under Review |

Source: USFWS. (2016). Species by County Report, County: Okaloosa, Florida Retrieved January 2018, from USFWS Environmental Conservation Online System: <https://ecos.fws.gov/ecp0/reports/species-by-current-range-county?fips=12091>

FIGURE 6
CEW WETLANDS



12.7 Natural Resources

Natural resources include water, asphalt, aggregate, wood, and other similar resources. Water is the primary natural resource used at the Airport on a daily basis. Airport contractors regularly use consumable materials to maintain various airside and landside facilities and services. Those materials may include asphalt, concrete, aggregate for sub-base materials, and various metals associated with maintenance.

12.8 Other Environmental Features

Air Quality: The U.S. Environmental Protection Agency (USEPA) does not classify Okaloosa County as an attainment area for criteria pollutants.¹⁶

Land Use: The Airport is zoned as "Industrial" by Okaloosa County.¹⁷

Soils: According to the Natural Resource Conservation Service (NRCS) Web Soil Survey, a majority of the soil at the Airport is Lakeland sand (zero to five and five to twelve percent slopes).¹⁸

Hazardous Sites/Materials: The USEPA does not recognize the Airport as a hazardous waste generator.

Visual Environment: With regards to the surrounding visual environment, the area around the Airport is heavily vegetated (e.g., trees, shrubs), while the on-Airport areas are cleared and/or developed for Airport-related uses (e.g., runway, hangars, terminal). The Airport is illuminated by various types of lighting on the airfield and for landside facilities. Lighting for the airfield includes taxiway signage and taxiway edge lights. Lights for landside facilities include buildings, roadways, and parking facilities.

Noise: Noise at the Airport is primarily associated with aircraft operations (e.g., taxi, takeoff, and landing).

Socioeconomics, Environmental Justice, and Children's Health and Environmental Safety Risks: According to U.S. Census Bureau data via the USEPA NEPAassist tool, about 12 percent of the population in this census tract are minorities. About 77 percent of the population in this census tract are adults 18 years and older.

Water Quality: Three streams are within half a mile of Airport property: Moccasin Branch, Piney Woods Creek and one unnamed stream. There are no other surface water features at the Airport.

Climate: Research has shown there is a direct correlation between fuel combustion and greenhouse gas (GHG) emissions. In terms of U.S. contributions, the U.S. Government Accountability Office (GAO) reports that "domestic aviation contributes about three percent of total CO₂ emissions, according to EPA data," compared with other industrial sources, including the remainder of the transportation sector (20%) and power generation (41%). The International Civil Aviation Organization (ICAO) estimates that GHG emissions from aircraft account for roughly three percent of all anthropogenic GHG emissions globally.

¹⁶ USEPA, (2018, January 31) Florida Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Retrieved February 2018, from USEPA Green Book: https://www3.epa.gov/airquality/greenbook/anayo_fl.html

¹⁷ Okaloosa County GIS Map Viewer Retrieved from <http://webgis.okaloosafl.com/webgis/>

¹⁸ NRCS Soil Data Explorer. Retrieved February 2018, from Web Soil Survey: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

13 RUNWAY SAFETY ACTION ITEMS

The Airport has not received any action items from the Runway Safety Program Office or Runway Safety Action Team.

14 DECLARED DISTANCES

Declared Distances includes the extent of the runway that is functional. It is identified by Takeoff Run Available (TORA), Takeoff Distance Available (TODA), Accelerate Stop Distance Available (ASDA), and Landing Distance Available (LDA). *Table 23* shows the declared distances for Runway 17-35, all of which constitute the full length of usable runway pavement.

TABLE 23
RUNWAY 17-35 DECLARED DISTANCES

| Declared Distance | Runway 17 | Runway 35 |
|-------------------|-----------|-----------|
| TORA | 8,004' | 8,004' |
| TODA | 8,004' | 8,004' |
| ASDA | 8,004' | 8,004' |
| LDA | 8,004' | 8,004' |

Source: Okaloosa County Airports System, 2019

15 THROUGH-THE-FENCE AGREEMENTS

There are two existing through-the-fence developments at CEW. The operators for the through-the-fence development north of Taxiway H is Crestview Technology Park and the operator for the through-the-fence development located east of Taxiway E and Taxiway F is Crestview Aerospace. Both developments are occupied by aeronautical tenants and neither is a residential through-the-fence gateway. The through-the-fence airport access agreements are regulated using contracts with the Okaloosa County Board of County Commissioners (contract numbers C09-1741-AP and CO8-1664-AP).

The through-the-fence agreements are treated as licenses to access the Airport from off-airport development as long as certain conditions are met. The agreements are constructed to provide Okaloosa County sufficient rights and power to support the Airport's adherence to the FAA grant assurances through the conditions described in the agreements. The grant assurances to which the Airport must adhere are described in FAA Order 5190.6B, *Airport Compliance Manual*. Reference to key conditions of the agreements that supports the Airport's grant assurances are as follows:

Grant Assurance 5, Preserving Rights and Powers

The through the fence agreements do not place an encumbrance upon the Airport property nor does it reduce the Airport's ability to meet its federal obligations. Both agreements require the through-the-fence operators to abide by rules and regulations set by the Airport sponsor under penalty of contract termination.

The agreements include conditions which restricts the use of the designated off-airport area to "the sole business purpose of conducting the permitted activity and for no other purpose whatsoever". Overall, the access agreements require the operators consent to any conditions relative to the safe and efficient

operation, development, or improvement of the Airport including conditions related to grant obligations between the County and the FAA.

Grant Assurance 19, Operation and Maintenance

Both through-the-fence agreements require the operators present certificates of insurance like any other on-airport tenant. The agreements include requirements for the operators to provide sufficient personnel and equipment necessary to meet security specifications as required by the County, Transportation Security Administration, and FAA. The agreements provide sufficient legal right for the Airport to intervene if a safety or security concern arises. The agreements specifically defines the type of business that can be conducted by the operator on the off-airport land area connected to the through-the-fence gateway. This allows the Airport to ensure the use does not interfere with the intended use of the airport and supports Grant Assurance 19.

Grant Assurance 20, Hazard Removal and Mitigation

The through-the-fence agreements include conditions requiring operators to adhere to Part 77 regulations. This supports the Airport's ability to protect the navigable airspace around the Airport by granting the power to clear, relocate, or otherwise mitigate hazards to air navigation.

Grant Assurance 21, Compatible Land Use

The through-the-fence agreements definition of the type of business that can be conducted by the operator allows the Airport to ensure the use is compatible with airport operations, which supports Grant Assurance 21.

Grant Assurance 22, Economic Nondiscrimination

The agreements include a clause that limits the off-airport tenants from "conducting any business activity on, from, or through the designated premises, other than the permitted activity, that is directly or indirectly in competition with any other airport business of any type." This helps the Airport satisfy Grant Assurance 22 because it imposes restrictions on the type of business that can occur on the off-airport property to guarantee that on-airport tenants are not indirectly economically penalized by the off-airport operator.

Grant Assurance 23, Exclusive Rights

The through-the-fence agreements include a condition that allows use of the airport's common use facilities (e.g., runways, taxiways, navigational aids) on a non-exclusive basis.

Grant Assurance 24, Fee and Rental Structure

Through-the-fence access rates and charges are collected from each operator. The charges include general operation and maintenance fees assessed for use the public airport facilities. It also includes a Runway Rehabilitation Fee which imposes a fee earmarked for the maintenance of Runway 17-35. The conditions described in the agreements support the Airport's ability to be financially self-sustaining which meets the intent of Grant Assurance 24.

ATTACHMENT A



Gulf Air Group, Inc.

Post Office Box 100 • Crestview, Florida 32536

Phone: (850) 682-8411 • Fax: (850) 682-8415

www.gulfairgroup.com

Date: 16 January 2020

To: Tracy Stage, A.A.E.
Airports Director
Okaloosa County
1701 State Rd 85 N
Eglin AFB, FL 32542-1498

From: Ted M. Scoggins Jr
Vice President & COO
Gulf Air Group, Inc

Subject: Gulf Air Group Operations at Bob Sikes Airport (CEW) Crestview, Florida.

Dear Sir, as you know Gulf Air Group, Inc is a privately owned, Florida based, Aviation business operating an FAA certificated repair station (TIQR962T) on Bob Sikes Airport in Crestview, Florida. In addition to our repair station, Gulf Air Group also operates the Lockheed Martin L382G-30 (also known as the L-100-30) aircraft under an FAA issued Private Carriage Certificate (TIQB962T).

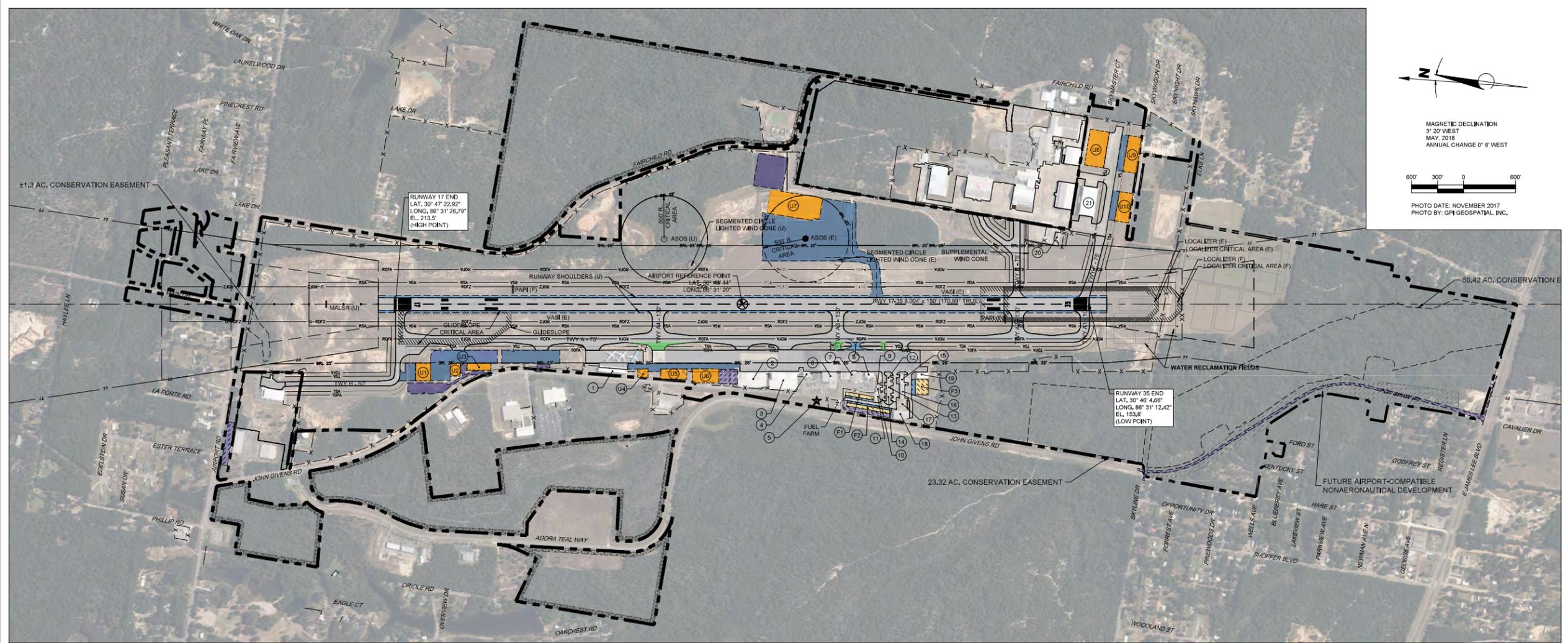
Based on our last airport access agreement calculations Gulf Air Group performed 339 departures and 338 arrivals from CEW between September 2016 and September 2017. Looking at our operations since that access agreement we expect no appreciable increase in departures and arrivals from CEW in the next five (5) years and estimate our arrivals and departures to be between 348 to 350 aircraft per year.

In order to continue our repair station operations and meet the L382G aircraft manufacturers performance standards, we are requesting that Okaloosa County Airports maintain sufficient runway and taxiway dimensional standards to allow for the continued (and future) operations of our L382G aircraft at Bob Sikes Airport.

Thank you for your attention on this matter.

Sincerely,

Ted M. Scoggins Jr
Vice President/COO
Gulf Air Group, Inc



MAGNETIC DECLINATION
3° 20' WEST
MAY, 2018
ANNUAL CHANGE 0° 6' WEST

600' 300' 0 600'

PHOTO DATE: NOVEMBER 2017
PHOTO BY: GPI GEOSPATIAL, INC.



BOB SIKES AIRPORT
CRESTVIEW, FLORIDA



RS&H, Inc.
10748 Deerwood Park Blvd South
Jacksonville, Florida 32256
904-256-2500 FAX 904-256-2501
www.rsandh.com

AIRPORT LAYOUT PLAN

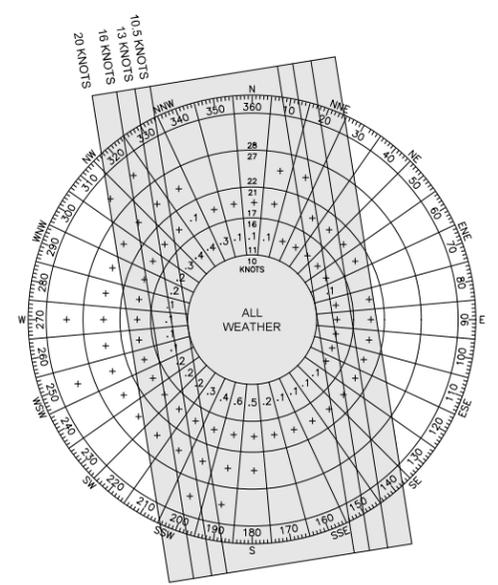
CONSULTANTS

| DESCRIPTION | EXISTING | FUTURE | ULTIMATE |
|-------------------------------|-------------|--------|---------------|
| PROPERTY LINE | --- | --- | --- |
| RUNWAY SAFETY AREA | — RSA — | SAME | |
| RUNWAY OBJECT FREE AREA | — ROFA — | SAME | |
| RUNWAY OBSTACLE FREE ZONE | — ROFZ — | SAME | |
| RUNWAY PROTECTION ZONE | | | |
| TAXIWAY SAFETY AREA | — TSA — | SAME | |
| TAXIWAY OBJECT FREE AREA | — TOFA — | SAME | |
| 25' BUILDING RESTRICTION LINE | — BRL 25' — | SAME | — U-BRL 25' — |
| PART 77 SURFACE | — 77 — | SAME | |
| VASI | ■ ■ | SAME | |
| PAPI | □ | SAME | □ |
| AIRPORT REFERENCE POINT | ⊗ | SAME | |
| AIRPORT BEACON | ★ | SAME | |
| ASOS | ● | SAME | |
| AIRFIELD PAVEMENT | SAME | SAME | |
| BUILDING | SAME | SAME | |
| BUILDING TO BE REMOVED | SAME | SAME | |
| ROADWAY/PARKING | SAME | SAME | |
| POTENTIAL LAND RELEASE | N/A | SAME | |

| BUILDING NO | BUILDING DESCRIPTION | SIZE (SQFT) |
|-------------|----------------------|-------------|
| 1 | HANGAR | 20,120 |
| 2 | HANGAR | 54,200 |
| 3 | HANGAR | 62,230 |
| 4 | AIRPORT OFFICES | 5,560 |
| 5 | AIRPORT BEACON | N/A |
| 6 | AIRFF STATION | 17,900 |
| 7 | HANGARS | 22,520 |
| 8 | FBO TERMINAL | 6,220 |
| 9 | HANGAR | 2,050 |
| 10 | HANGAR | 2,360 |
| 11 | HANGAR | 4,039 |
| 12 | HANGAR | 5,110 |
| 13 | HANGAR | 4,580 |
| 14 | HANGAR | 5,680 |
| 15 | HANGAR | 5,010 |
| 16 | HANGAR | 10,470 |
| 17 | HANGAR | 7,650 |
| 18 | HANGAR | 16,320 |
| 19 | HANGAR | 7,970 |
| 20 | STORAGE | 5,580 |
| 21 | HANGAR | 57,340 |

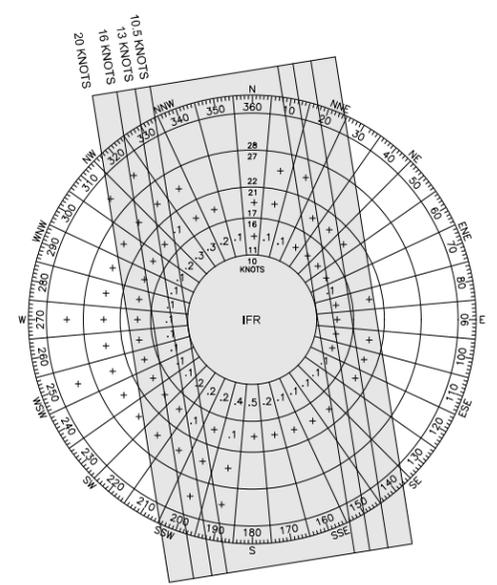
| BUILDING NO | BUILDING DESCRIPTION |
|-------------|----------------------|
| F1 | T-HANGAR |
| F2 | T-HANGAR |
| F3 | HANGAR |

| BUILDING NO | BUILDING DESCRIPTION |
|-------------|----------------------|
| U1 | HANGAR |
| U2 | HANGAR |
| U3 | HANGAR |
| U4 | HANGAR |
| U5 | HANGAR |
| U6 | HANGAR |
| U7 | HANGAR |
| U8 | HANGAR |
| U9 | HANGAR |
| U10 | HANGAR |



| ALL WEATHER WIND DATA | 10.5 KNOTS | 13 KNOTS | 16 KNOTS | 20 KNOTS |
|-----------------------|------------|----------|----------|----------|
| RUNWAY 17-35 | 98.30% | 99.22% | 99.85% | 99.97% |

ALL WEATHER OBSERVATIONS: 122,859



| IFR WIND DATA | 10.5 KNOTS | 13 KNOTS | 16 KNOTS | 20 KNOTS |
|---------------|------------|----------|----------|----------|
| RUNWAY 17-35 | 98.27% | 99.08% | 99.72% | 99.91% |

IFR OBSERVATIONS: 32,097

DATA SOURCE: NOAA NATIONAL CLIMATIC DATA CENTER
STATION: BOB SIKES AIRPORT - ASOS
DATA RANGE: 2008 - 2017

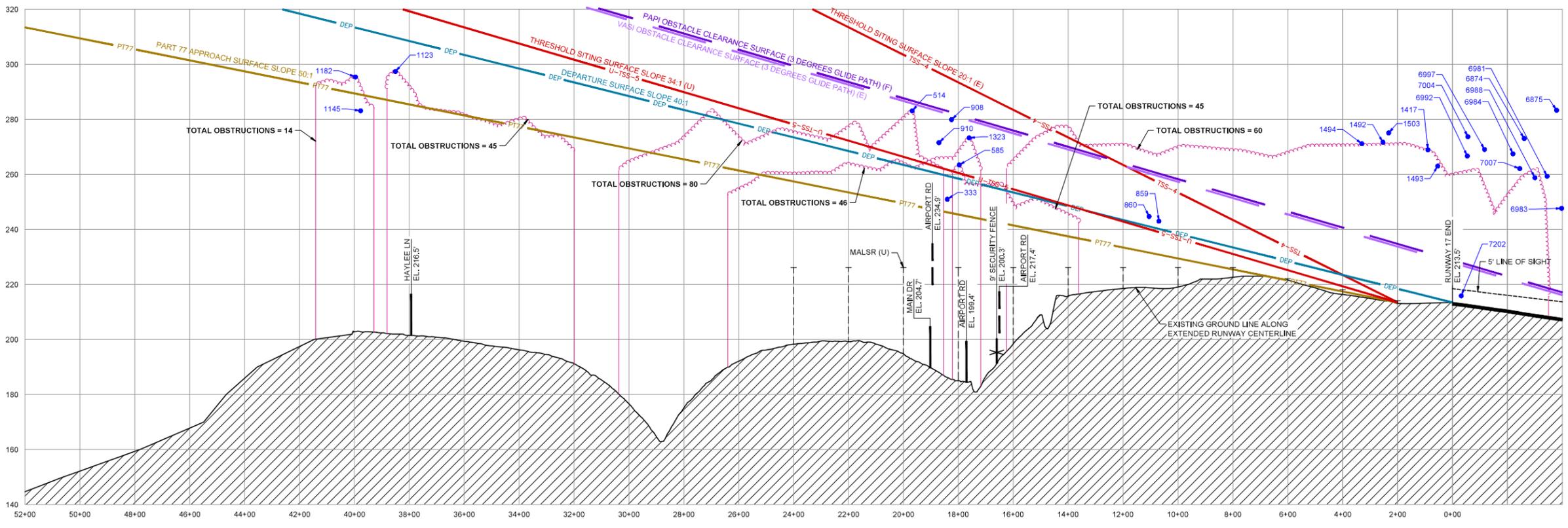
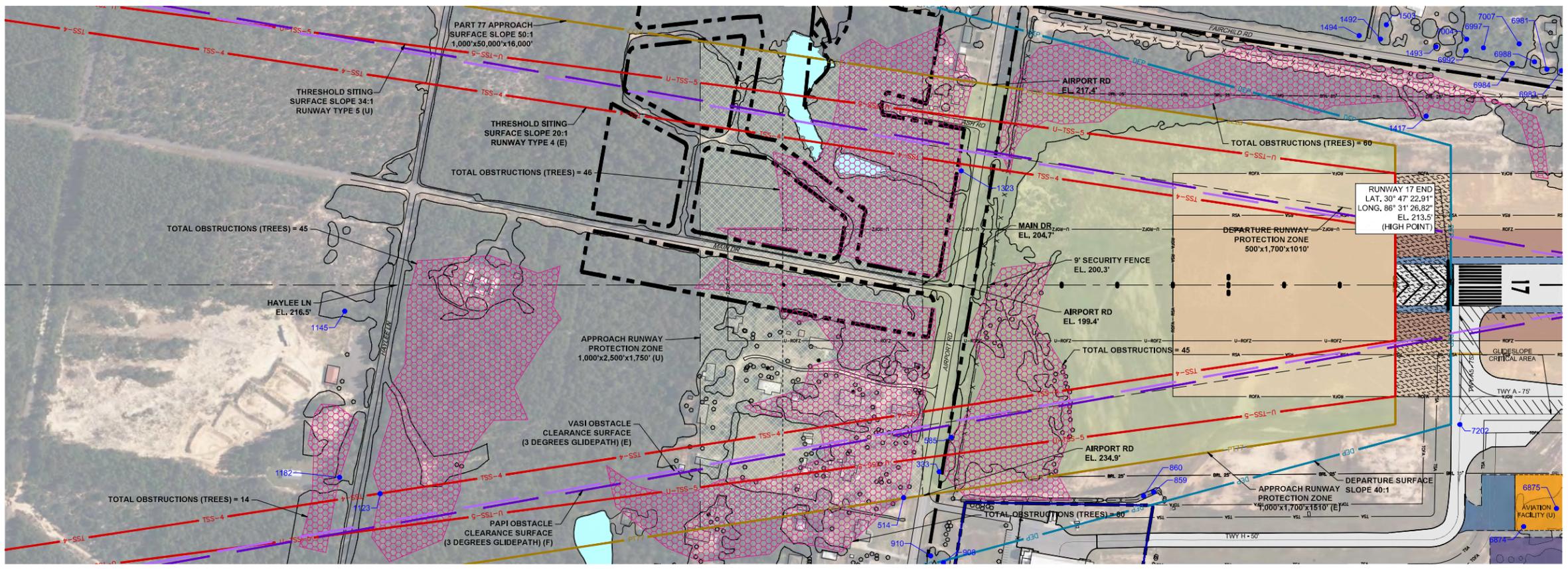
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DATE ISSUED: JUNE 2020
REVIEWED BY: GRH, KRI, TJM
DRAWN BY: JEM
DESIGNED BY: JEM

PROJECT NUMBER
201-0251-005
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FACILITIES LAYOUT PLAN

SHEET NUMBER

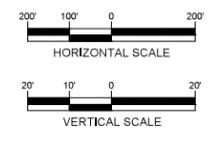


MAGNETIC DECLINATION

 3° 20' WEST

 MAY, 2018

 ANNUAL CHANGE 0" 6' WEST



| DESCRIPTION | EXISTING | FUTURE | ULTIMATE |
|--------------------------|----------|--------|----------|
| OBSTRUCTION | ● 1000 | SAME | SAME |
| OBSTRUCTION AREA (TREES) | | SAME | SAME |



BOB SIKES AIRPORT
 CRESTVIEW, FLORIDA



RS&H, Inc.
 10748 Deerwood Park Blvd South
 Jacksonville, Florida 32256
 904-256-2500 FAX 904-256-2501
 www.rsandh.com

AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

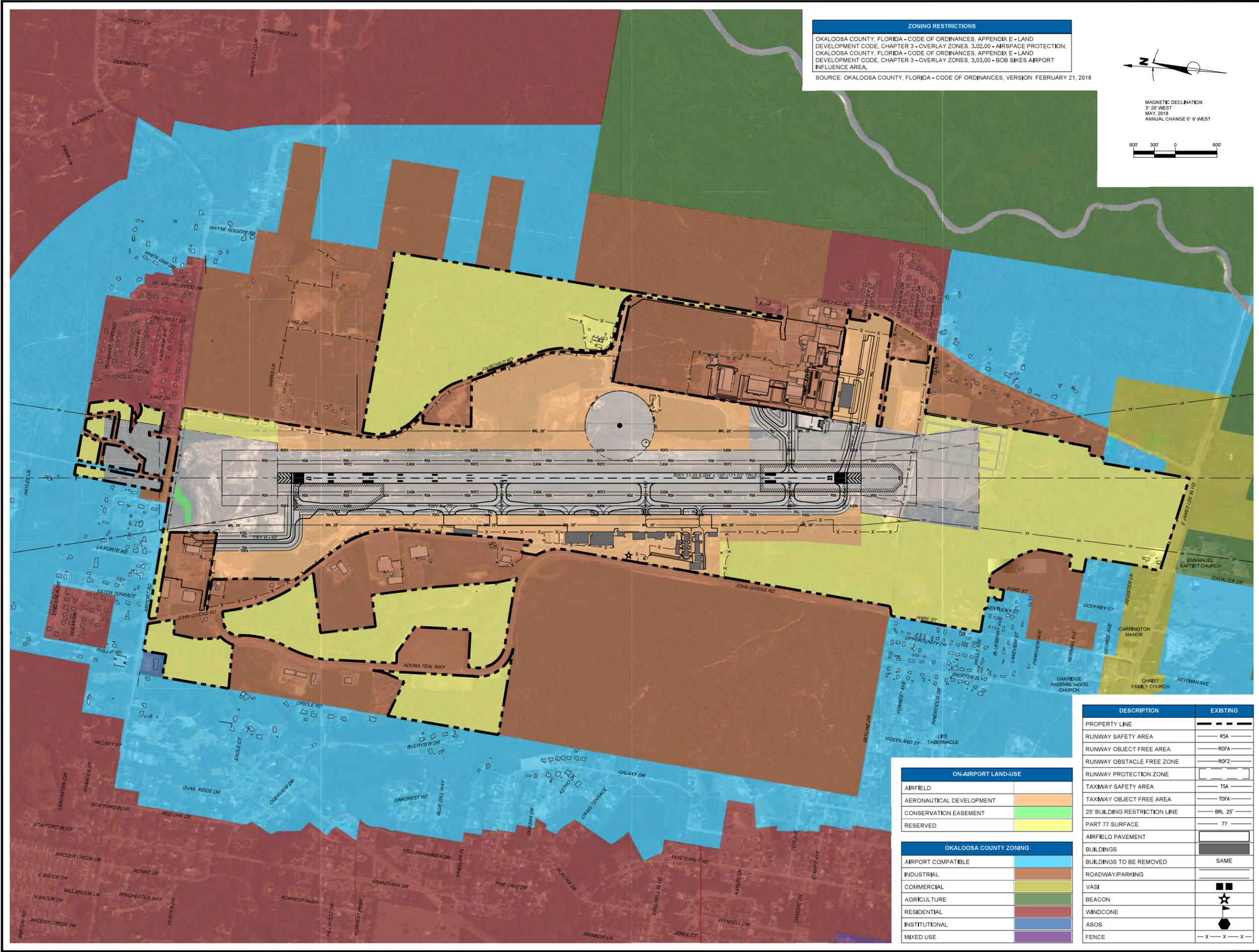
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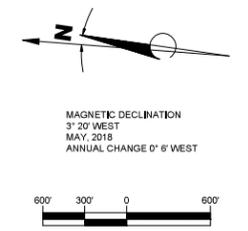
PROJECT NUMBER
201-0251-005
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SHEET TITLE
INNER APPROACH AND DEPARTURE PLAN AND PROFILE RUNWAY 17

SHEET NUMBER



ZONING RESTRICTIONS
 OKALOOSA COUNTY, FLORIDA - CODE OF ORDINANCES, APPENDIX E - LAND DEVELOPMENT CODE, CHAPTER 3 - OVERLAY ZONES, 3.02.00 - AIRSPACE PROTECTION;
 OKALOOSA COUNTY, FLORIDA - CODE OF ORDINANCES, APPENDIX E - LAND DEVELOPMENT CODE, CHAPTER 3 - OVERLAY ZONES, 3.03.00 - BOB SIKES AIRPORT INFLUENCE AREA.
 SOURCE: OKALOOSA COUNTY, FLORIDA - CODE OF ORDINANCES, VERSION: FEBRUARY 21, 2018



BOB SIKES AIRPORT
 CRESTVIEW, FLORIDA



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AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

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SHEET TITLE
EXISTING AIRPORT LAND USE MAP

SHEET NUMBER
 11 OF 15

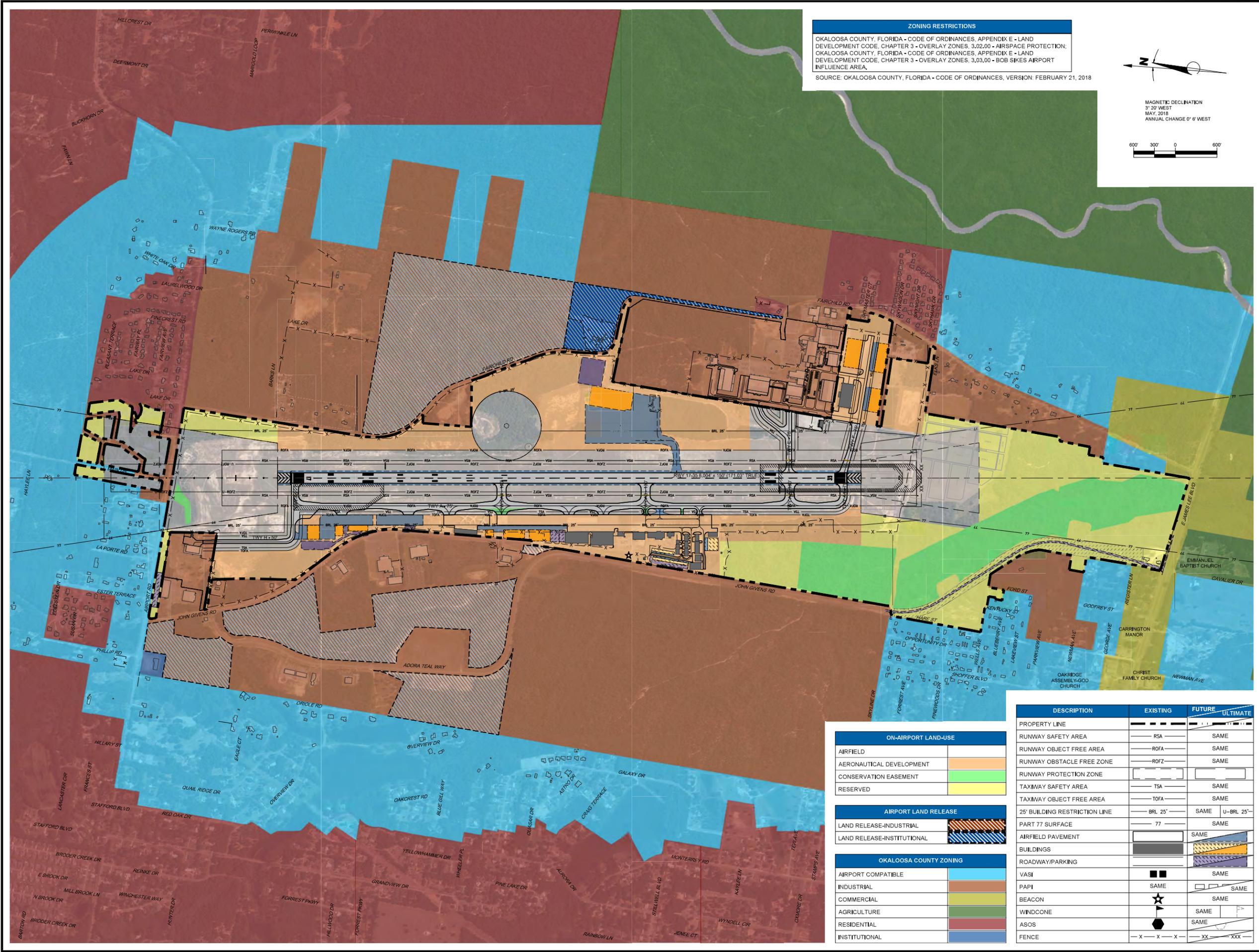
ON-AIRPORT LAND-USE

| | |
|--------------------------|--|
| AIRFIELD | |
| AERONAUTICAL DEVELOPMENT | |
| CONSERVATION EASEMENT | |
| RESERVED | |

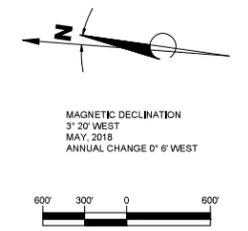
OKALOOSA COUNTY ZONING

| | |
|--------------------|--|
| AIRPORT COMPATIBLE | |
| INDUSTRIAL | |
| COMMERCIAL | |
| AGRICULTURE | |
| RESIDENTIAL | |
| INSTITUTIONAL | |
| MIXED USE | |

| DESCRIPTION | EXISTING |
|-------------------------------|-----------------|
| PROPERTY LINE | --- |
| RUNWAY SAFETY AREA | --- RSA --- |
| RUNWAY OBJECT FREE AREA | --- ROFA --- |
| RUNWAY OBSTACLE FREE ZONE | --- ROFZ --- |
| RUNWAY PROTECTION ZONE | --- |
| TAXWAY SAFETY AREA | --- TSA --- |
| TAXWAY OBJECT FREE AREA | --- TOFA --- |
| 25' BUILDING RESTRICTION LINE | --- BRL 25' --- |
| PART 77 SURFACE | --- 77 --- |
| AIRFIELD PAVEMENT | --- |
| BUILDINGS | ■ |
| BUILDINGS TO BE REMOVED | SAME |
| ROADWAY/PARKING | --- |
| VASI | ■ ■ |
| BEACON | ★ |
| WINDCONE | ☆ |
| ASOS | ● |
| FENCE | - X - X - X - |



ZONING RESTRICTIONS
 OKALOOSA COUNTY, FLORIDA - CODE OF ORDINANCES, APPENDIX E - LAND DEVELOPMENT CODE, CHAPTER 3 - OVERLAY ZONES, 3.02.00 - AIRSPACE PROTECTION;
 OKALOOSA COUNTY, FLORIDA - CODE OF ORDINANCES, APPENDIX E - LAND DEVELOPMENT CODE, CHAPTER 3 - OVERLAY ZONES, 3.03.00 - BOB SIKES AIRPORT INFLUENCE AREA.
 SOURCE: OKALOOSA COUNTY, FLORIDA - CODE OF ORDINANCES, VERSION: FEBRUARY 21, 2018



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AIRPORT LAYOUT PLAN

CONSULTANTS

REVISIONS

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SHEET TITLE
FUTURE AIRPORT LAND USE MAP

SHEET NUMBER
12 OF 15

| ON-AIRPORT LAND-USE | |
|--------------------------|--|
| AIRFIELD | |
| AERONAUTICAL DEVELOPMENT | |
| CONSERVATION EASEMENT | |
| RESERVED | |

| AIRPORT LAND RELEASE | |
|----------------------------|--|
| LAND RELEASE-INDUSTRIAL | |
| LAND RELEASE-INSTITUTIONAL | |

| OKALOOSA COUNTY ZONING | |
|------------------------|--|
| AIRPORT COMPATIBLE | |
| INDUSTRIAL | |
| COMMERCIAL | |
| AGRICULTURE | |
| RESIDENTIAL | |
| INSTITUTIONAL | |

| DESCRIPTION | EXISTING | FUTURE | ULTIMATE |
|-------------------------------|-----------|----------|-----------|
| PROPERTY LINE | --- | --- | --- |
| RUNWAY SAFETY AREA | —RSA— | | SAME |
| RUNWAY OBJECT FREE AREA | —ROFA— | | SAME |
| RUNWAY OBSTACLE FREE ZONE | —ROFZ— | | SAME |
| RUNWAY PROTECTION ZONE | —RTPZ— | | SAME |
| TAXIWAY SAFETY AREA | —TSA— | | SAME |
| TAXIWAY OBJECT FREE AREA | —TOFA— | | SAME |
| 25' BUILDING RESTRICTION LINE | —BRL 25'— | SAME | U-BRL 25' |
| PART 77 SURFACE | —77— | | SAME |
| AIRFIELD PAVEMENT | | | SAME |
| BUILDINGS | | | SAME |
| ROADWAY/PARKING | | | SAME |
| VASI | ■ ■ | | SAME |
| PAPI | SAME | | SAME |
| BEACON | ★ | | SAME |
| WINDCONE | | | SAME |
| ASOS | ● | | SAME |
| FENCE | —X—X—X— | —XX—XXX— | |

