Tampa International Airport

2022-2042 Master Plan Update

Executive Summary

Contents

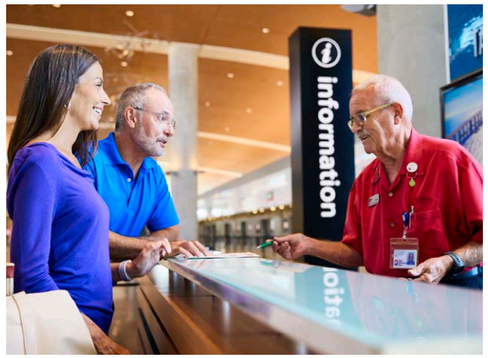
1 INTRODUCTION

This Executive Summary highlights key elements of the 2022-2042 Master Plan Update's (MPU) recommended improvements and capital projects for Tampa International Airport (TPA or the Airport). It provides an overview of major elements addressed in the detailed 2022-2042 MPU report.

The Hillsborough County Aviation Authority (HCAA or the Authority) previously completed an update to TPA's Master Plan in 2012. In 2016, the Authority initiated the 2012 Master Plan – 2016 Addendum to verify the forecasts of aviation activity, validate future facility needs, and reevaluate the roadway/curbside and airsides/Main Terminal alternatives. The 2022-2042 MPU builds upon the 2012 Master Plan Update and the associated 2016 Addendum as well as the various recommended improvements adopted as part of these prior studies.

Completed and ongoing projects that resulted from the 2012 Master Plan Update and 2016 Addendum include the following:

- the construction of the Rental Car Center (RCC);
- the SkyConnect Automated People Mover that connects the Main Terminal to the Economy Parking Garage and RCC;
- the expansion of the Main Terminal and the redevelopment of the concessions on the third level;
- the construction of a new 10,000-square-foot central utility plant;
- the expansion of the existing terminal curbs including 16 new express curbsides;
- the construction of SkyCenter One—a 9-story, 274,000-square-foot office building west of the RCC;
- the widening of George J. Bean Parkway; and
- the Airside A Bag Sortation Building checked baggage system upgrades and optimization.



"An airport master plan is a comprehensive study of an airport and usually describes the short-, medium-, and long-term development plans to meet future aviation demand."

- FAA Advisory Circular 150/5070 – 6B – Airport Master Plans

The master planning process is structured and sequenced to help address a series of questions that generally focus on:

- the current state of the Airport,
- projected growth over the next 20 years, which represents the Federal Aviation Administration's (FAA) prescribed planning horizon for airport master planning,
- capacity needs and other desired enhancements,
- strategies for delivering these needs and desired enhancements, and
- the path forward or roadmap for realizing these needs and enhancements.

The MPU outlines a strategic framework for the provision of future facilities and infrastructure to accommodate the 20-year forecast demand through 2042 and beyond. Key tasks that were conducted as part of the MPU include:

- an assessment of the capacity of the Airport's existing airfield to determine if additional runway capacity may be needed within the 20-year planning horizon;
- a review of the existing airfield layout for compliance with FAA design requirements;
- an assessment of the timing for a new Airside D, as well as any necessary adjustments or additions to the planned concept for Airside D triggered by new design criteria, passenger processing guidelines, and emerging technologies;
- the validation of the terminal, roadway, and curbfront capabilities, including passenger and baggage processing capacity, for serving 35 million annual passengers following the construction completion of the recommendations from the 2012 Master Plan Update and the 2016 Addendum, as well as the identification of additional parking capacity, curbside, and roadway improvements needed over the next 20-year horizon;
- the identification of development alternatives for the existing terminal complex facilities to accommodate the 20-year demand; and
- the preparation of an Airport Layout Plan (ALP) drawings set, a graphic representation of the preferred improvements for the Airport through 2042 and beyond.

2022-2042 MASTER PLAN UPDATE GOALS

Formulate 20-year forecasts for the Airport

Identify new or emerging trends and technologies

Assess TPA's existing airfield capacity

Revalidate Airside D timing and assess additional gates and terminal facilities needed within the 20-year time horizon

Validate the terminal, roadway and curbfront capabilities to serve 35-million annual passengers

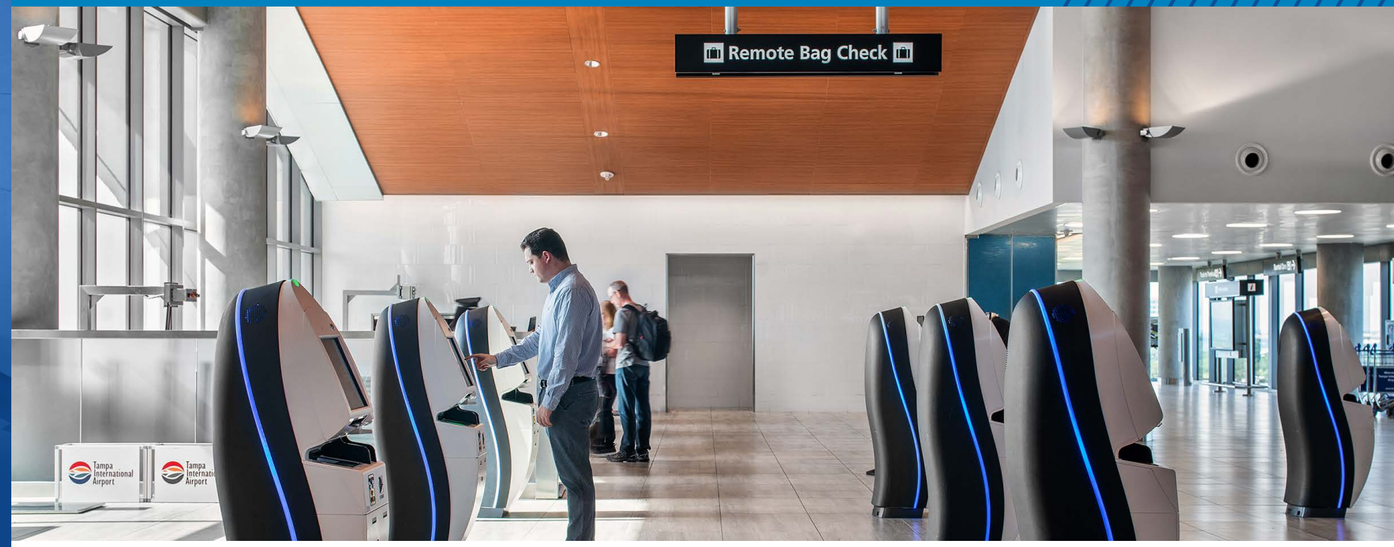
Assess needs and opportunities for additional capacity enhancements

Since the completion of the prior 2012 Master Plan Update and the 2016 Addendum, significant economic and aviation industry changes have affected needs and aviation activity at the Airport including:

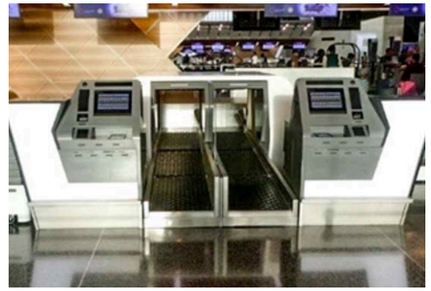
Effects of the COVID-19 pandemic: The outbreak and spread of COVID-19 severely disrupted global aviation demand. By the end of 2023, however, TPA traffic rose above the pre-pandemic levels achieved in Fiscal Year (FY) 2019.

Rising Fuel Prices: In 2018 and 2021, the airline industry faced a significant increase in fuel prices, driven by geopolitical tensions, supply disruptions, and other factors. Higher fuel costs put pressure on airlines' operating expenses and profitability, leading some carriers to adjust their pricing strategies, implement fuel surcharges, or seek more fuel-efficient aircraft to mitigate the impact.

Changes in business practices: The shift to remote work and virtual meetings during and after the COVID-19 pandemic influenced business travel demand as a result of many companies adopting remote work policies and increased utilization of virtual meeting platforms.



Technological advancements and innovation: The airline industry has witnessed ongoing technological advancements and innovation, including the development of more fuel-efficient aircraft models as well as the emergence of electric and hybrid-electric propulsion technologies for aircraft. Additionally, airlines have increasingly adopted digital technologies for passenger services, operations, and maintenance for enhancing efficiency and customer experience. These technologies include the introduction of biometrics to enable frictionless travel, self-service check-in kiosks, mobile apps, remote bag drop, and baggage tracking systems, among others.



Aircraft Fleet Disruptions: Since 2019, certain aircraft fleet groundings have led to operational disruptions, route cancellations, and financial effects for many airlines. Such aircraft fleet disruptions have affected network plans for several carriers and may affect aircraft operations levels at some airports if they continue to materialize.

The MPU outlines incremental facility and infrastructure development necessary to meet unconstrained demand over a 20-year horizon.

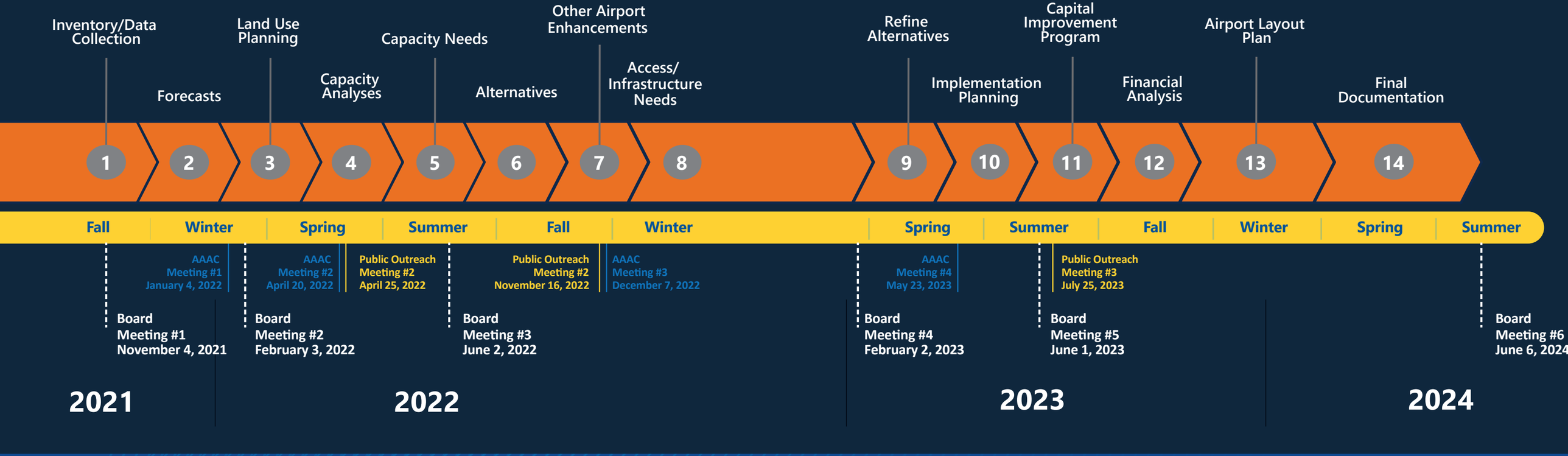
The MPU, which was conducted in accordance with FAA guidance, was initiated in November 2021 and included key stakeholder engagement activities.

6 HCAA BOARD MEETINGS

3 PUBLIC OUTREACH MEETINGS

4 AIRLINE AIRPORT AFFAIRS COMMITTEE (AAAC) MEETINGS

In addition to Public Outreach Meetings, HCAA Board Meetings, and AAAC Meetings noted on the project schedule presented on this page, ongoing coordination and meetings were conducted with the HCAA Executive Team, and 10 MPU Project Team meetings were established to review the MPU technical analyses, guide the MPU process, and gather feedback from internal and external stakeholders.



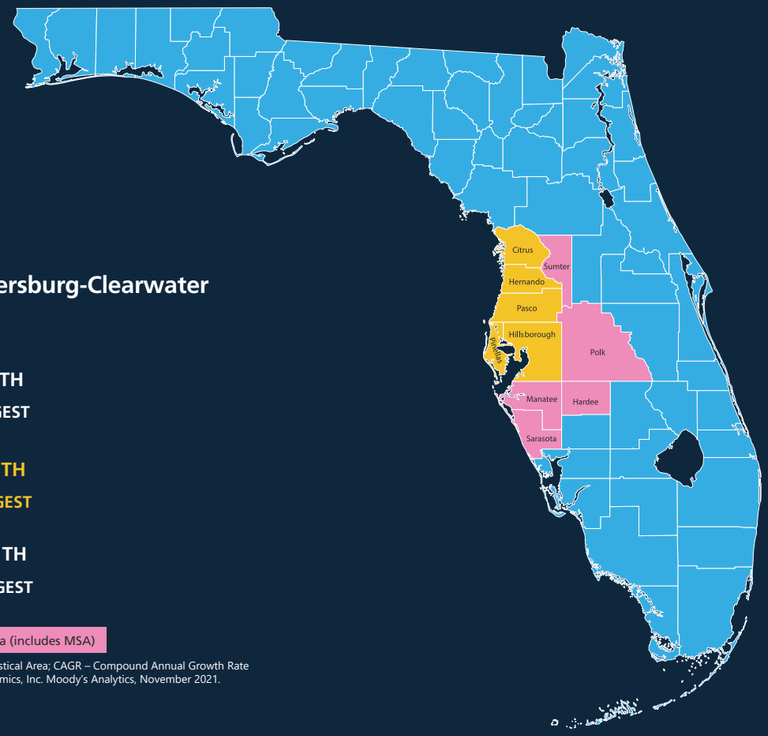
AIRPORT ROLE AND SETTING

Serving both domestic and international markets, the Airport plays a vital role in the regional transportation system for accommodating air travel, as well as commercial services, corporate aviation, and cargo operations. TPA is owned and operated by the Hillsborough County Aviation Authority (HCAA), an independent special district of the State of Florida, established[1] by the 1945 Florida Legislature with exclusive jurisdiction, control, supervision and management over all publicly owned airports in Hillsborough County. In addition to TPA, HCAA operates Tampa Executive (VDF), Peter O. Knight (TPF), and Plant City (PCM) Airports.

The Airport encompasses approximately 3,300 acres and is located in West Central Florida, approximately 6 miles west of downtown Tampa in Hillsborough County, Florida. TPA serves as the premier gateway for the West Coast of Florida and is accessible via State Road (SR) 60, Suncoast Parkway / Veterans Expressway (589), and Interstate 275 (I-275), which is linked to I-4.

TPA served 23,948,889 passengers in Calendar Year (CY) 2023 and scheduled passenger service was provided at the Airport by a total of 29 airlines. Also serving the Airport are seven all-cargo airlines. Partly due to the Authority's Air Service Incentive Program (ASIP) and its successful collaboration with the region's Convention and Visitors Bureaus, Chambers of Commerce, and Economic Development Organizations, the Airport is now offering nonstop service to more than 100 destinations (some seasonal) as of May 2024.

AIRPORT CATCHMENT AREA



Tampa-St. Petersburg-Clearwater MSA ranking

2010	19TH LARGEST
2021	18TH LARGEST
2042	17TH LARGEST

MSA | Catchment Area (includes MSA)

Note: MSA – Metropolitan Statistical Area; CAGR – Compound Annual Growth Rate
Sources: Woods & Poole Economics, Inc. Moody's Analytics, November 2021.

TPA is the gateway to the West Coast of Florida. Demand for air service is influenced by the communities and economic activity surrounding the Airport. The Airport Catchment Area, which includes the Tampa-St. Petersburg-Clearwater Metropolitan Statistical Area (MSA) consisting of Hernando, Hillsborough, Pasco, Pinellas Counties, and Citrus County, as well as surrounding counties, specifically Citrus, Hardee, Manatee, Polk, Sarasota, and Sumter Counties. These six surrounding counties are within a reasonable driving distance of TPA that generate demand for air service but may be closer to another commercial service airport than to TPA. The population is anticipated to grow from 3.3 million in FY2022 to 4.0 million inhabitants by FY2042. The Catchment area's employment growth is expected to grow at a compound annual growth rate (CAGR) of 1.3 percent, compared to the U.S. CAGR of 1.1 percent during this same 20-year period. The highest increase in professions falls within the leisure, hospitality, and professional and business services industries.

A more focused area surrounding the Airport is the Tampa Bay region, which includes Hillsborough, Pinellas and Pasco Counties, where the cities of Tampa, St. Petersburg, and Clearwater reside. The Tampa Bay region has experienced several notable trends that have influenced aviation activity at the Airport including a rise in tech-related jobs and startup activity, increased investment in medical research, innovation, and infrastructure, and an increase in visitors with the region welcoming more than 26 million visitors in FY2023. As of 2022, Tampa Bay was among the nation's 10 fastest growing metro areas for entrepreneurs and was ranked third nationally in terms of workforce confidence.[1]

[1] State of the Region, https://stateoftheregion.com/our-region (accessed April 2024)

2 AVIATION ACTIVITY FORECASTS

As part of this MPU, aviation activity forecasts were developed for total passengers, cargo tonnage, and total aircraft operations including airline, general aviation (GA), cargo, and military operations. These forecasts were then compared to the estimated capacity of each Airport system or function to identify future Airport facility and infrastructure needs. The MPU forecasts were approved by the FAA Orlando Airports District Office (ADO) on April 29, 2022.

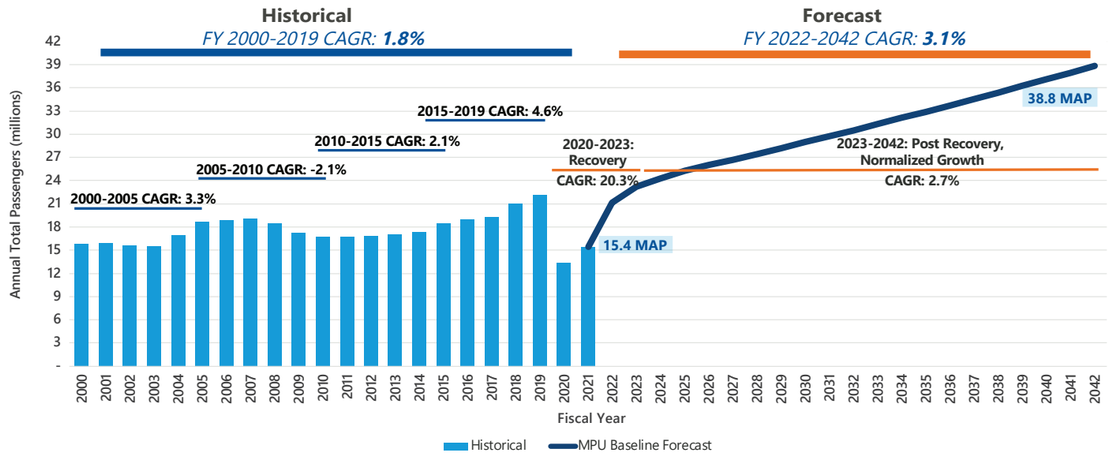
Forecast Components	Influence Facility Requirements in the following areas:
Total Passengers	• Terminal Facilities • Terminal Concessions • Parking Facilities
Cargo Tonnage	• Cargo Facilities • Aircraft Parking Apron • Ground Servicing Equipment
Total Aircraft Operations (Airline, General Aviation Cargo, and Others)	• Airfield Capacity (Runways/Taxiways) • Aircraft Gates • Aircraft Parking Apron

PASSENGER FORECAST

Forecasts of passenger activity were developed on a market-by-market basis for the period beginning in FY2022 through FY2042 (reflective of the MPU's 20-year planning horizon).

Since the COVID-19 pandemic temporarily disrupted the relationships between passenger volumes and drivers traditionally used to project demand, such as gross domestic product (GDP), employment, and other socioeconomic factors, a pandemic recovery period forecast that accounted for airline capacity and load factor recovery at TPA was developed through 2023. The long-term forecasts through 2042, on the other hand, were developed on the basis of the traditional relationships between demand and socioeconomics, which influence passenger growth.

Total Passengers Forecast (in Million Annual Passengers)



38.8 MILLION ANNUAL PASSENGERS

BY 2042

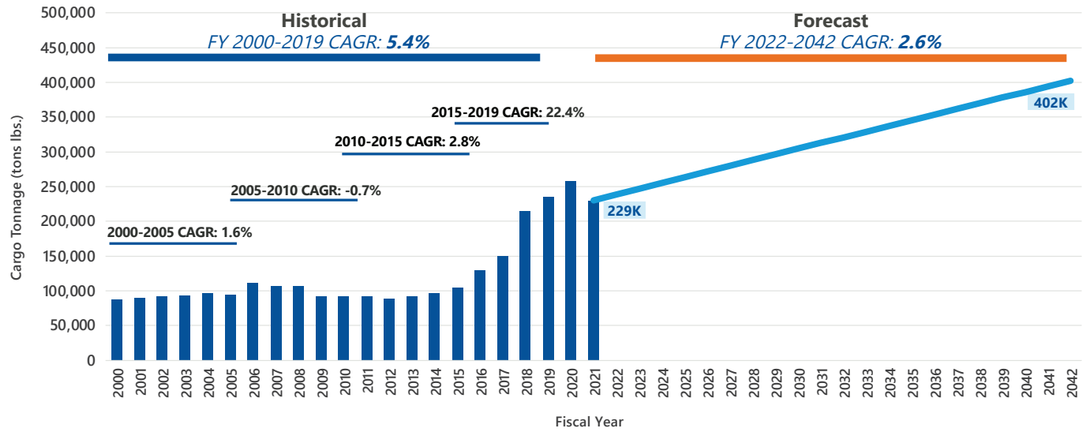
Passengers were forecast using socioeconomic regression analysis techniques that identified predictive statistical relationships between TPA's historical domestic and international passenger volumes and several independent socioeconomic variables (such as population, employment, per capita personal income). Forecast international passengers were first segmented by their country or region of origin or destination. Separate forecasts of regional activity growth, such Airbus's *Global Market Forecast 2021-2040*, Boeing's *Commercial Market Outlook 2021-2040*, and the FAA's *Aerospace Forecast 2021-2041* were considered to develop region-specific growth patterns. Future international passengers were then modeled to grow on a country or region-specific basis considering these trends.

On the basis of a combination of these methodologies, annual passengers are forecast to grow to a total of 38.8 MAP by FY2042. This represents a CAGR of 3.1 percent from FY2022 through FY2042, or 2.7 percent from FY2023, the first-year total passenger volumes were forecast to equal or exceed pre-pandemic levels.

AIR CARGO TONNAGE FORECAST

The forecast of cargo tonnage was developed using socioeconomic regression analysis, and further informed by discussions with the cargo airlines serving TPA. Total cargo tonnage is forecast to grow to 402,000 annual tons of cargo by FY2042, representing a compound annual rate (CAGR) of 2.6 percent from FY2022 through FY2042.

Total Cargo Forecast (in Tons)



402,000 TONS OF CARGO

BY 2042

TOTAL AIRCRAFT OPERATIONS FORECAST

The passenger airline aircraft operations forecast was developed for each airline using the passenger forecasts. Analyses of airline schedule completion rates (the percentage of scheduled flights that are actually operated), load factors, and published and estimated airline fleet plans were analyzed for each airline. Passenger growth was then accommodated through a combination of new flights, larger aircraft, and/or higher load factors on existing flights.

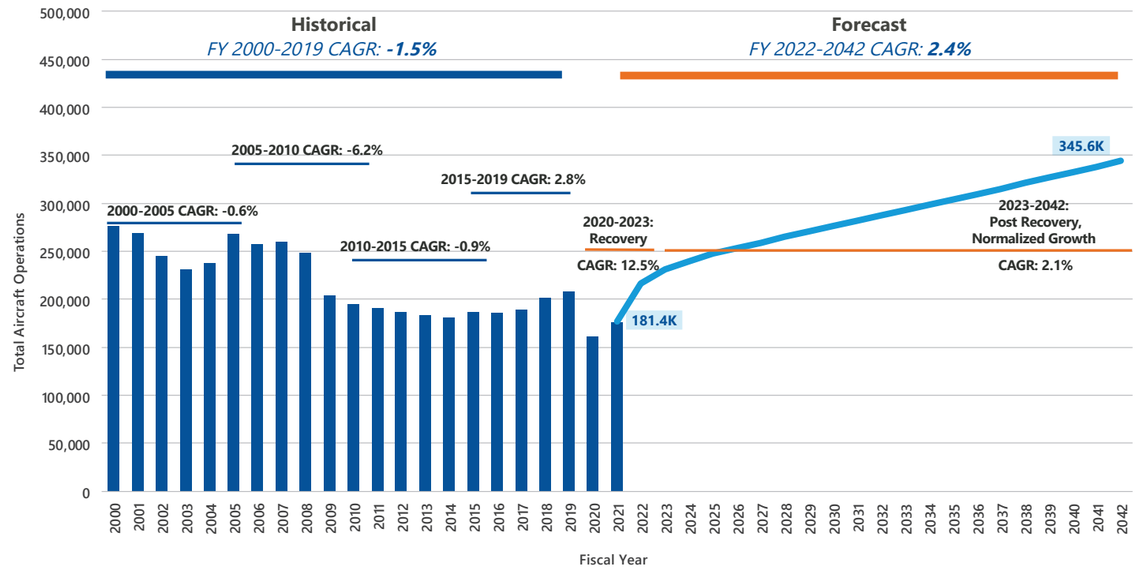
The forecast of cargo aircraft operations was developed using the forecast of freighter aircraft cargo tonnage and the expected future freighter aircraft fleet operating at TPA.

Multiple methodologies were explored to forecast GA operations at the Airport. However, because GA and other air taxi operations are predominantly jet aircraft, the trend analysis by aircraft type (i.e., piston, turboprop, jet) was selected as the forecast approach for GA and other air taxi operations. Historical activity for each segment was compared to the corresponding historical nationwide trends in that segment, and each type of aircraft type was forecast to grow as a function of total US GA demand for that specific aircraft type, as forecast in the *FAA 2021 Aerospace Forecast*.

Military aircraft operations are dependent upon US Department of Defense initiatives, which are generally not made available to the public. No changes in the use of the airport by transient military aircraft are assumed in this forecast.

Combined total aircraft operations are forecast to increase to 345,600 in FY2042, a CAGR of 2.4 percent between FY2022 and FY2042.

Total Aircraft Operations Forecast



345,600 TOTAL AIRCRAFT OPERATIONS

BY 2042

3 AIRPORT COMPONENT CAPACITIES AND FUTURE REQUIREMENTS

Analyses completed as part of the 2022-2042 MPU were based on three demand-level milestones, generally referred to as Planning Activity Levels (PALs), which represent short-term and long-term increments of growth at the Airport. The use of PALs will enable the Authority to develop facility plans on the basis of actual demand rather than the estimated timing associated with the activity forecasts. PALs represent demand levels, not necessarily specific years, which can be used as benchmarks for planning, designing, or constructing Airport improvements. Each PAL is defined by the forecast number of total passengers.

PAL 1:	PAL 2:	PAL 3:
30.5 MILLION ANNUAL PASSENGERS	34.6 MILLION ANNUAL PASSENGERS	38.8 MILLION ANNUAL PASSENGERS
(FY2032)	(FY2037)	(FY2042)

Years shown above represent the estimated year of occurrence per the approved MPU Forecasts.

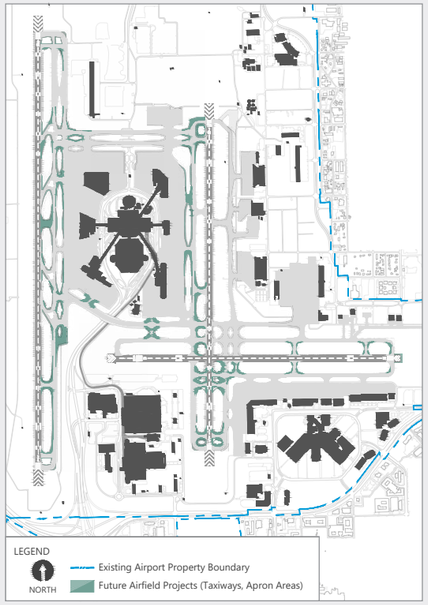
AIRFIELD

The existing airfield consists of three runways. Two of the runways (1L-19R and 1R-19L) are configured in a north–south orientation, while Runway 10-28 is oriented east–west. All three runways are served by a network of taxiways providing access between the runways and apron/terminal areas. The airfield capacity, defined in terms of the FAA's annual service volume calculation, is estimated to range between 400,000 and 440,000 annual aircraft operations.

The existing airfield provides sufficient capacity to accommodate the aircraft operations demand through 2042. In addition, the provision for a third parallel runway is being preserved to accommodate future growth beyond the 20-year planning horizon.

As shown on Figure 3-1, various airfield improvements have been identified to upgrade existing taxiways and taxilanes in compliance with the latest FAA design standards and better serve existing and projected aircraft fleets. These improvements primarily consist of taxiway geometry and fillet improvements that are proposed to be incrementally implemented as part of broader airfield pavement rehabilitation projects.

Figure 3-1: Proposed Airfield Improvements



AIRCRAFT GATES AND TERMINAL FACILITIES

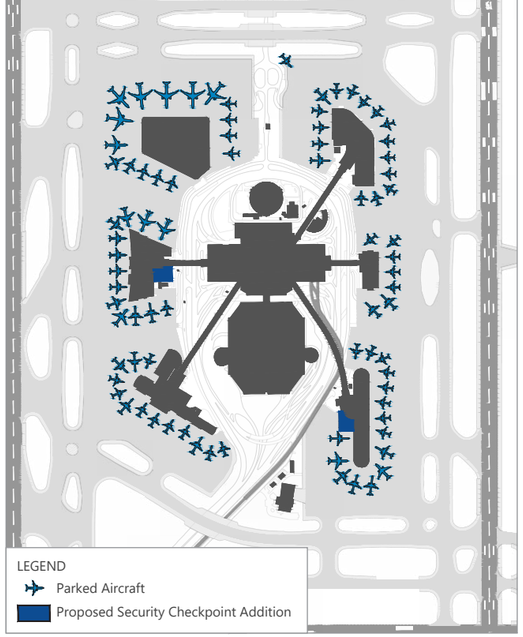
The Terminal Complex consists of the Main Terminal and Airsides A, C, E, and F. In a narrowbody aircraft parking configuration, the airside facilities provide a total of 56 contact gates (i.e., passenger boarding bridge equipped gates), 2 ground loaded commuter gates (Gates A1 and A3), and 22 remote aircraft parking positions. In 2022, HCAA's Board of Directors also approved the construction of Airside D, a new 16-gate airside, which will become the fifth airside satellite concourse and allow TPA to accommodate growing passenger demand through 35 MAP. Following construction of Airside D the total number of contact gates will increase to 72.

The opening of Airside D and the supporting hardstand positions for remote aircraft parking, illustrated on Figure 3-2, will meet the short- and mid-term (PAL 1 and PAL 2) requirements for total aircraft parking positions. By the end of the 20-year planning horizon, however, there will be a need for up to six additional gate positions.

To serve 35 MAP, which could be accommodated with the 72 contact gates resulting from the construction of Airside D, improvements to the ticketing (check-in) level will be required to provide additional check-in positions and increase the depth of check-in areas and circulation corridors to accommodate self-service kiosks and passenger queuing. In addition, to serve 35 MAP demand, the number of domestic bag claim devices on the Red and Blue Sides of the Main Terminal would also need to increase from seven devices to eight devices on each side (i.e., one additional device on the Red Side bag claim lobby and one additional device on the Blue Side bag claim lobby).

Beyond 35 MAP, new or expanded terminal facilities providing additional bag claim devices, outbound bag makeup units (OBMU), commercial concessions space, Security Screening Checkpoint (SSCP) lanes and queuing space, and holdrooms to support the additional aircraft gates (up to six) would need to be constructed to accommodate future growth.

Figure 3-2: Aircraft Parking Positions with Airside D and North Hardstand



LANDSIDE FACILITIES

The existing landside facilities at the Airport include on- and off-Airport roadways; terminal curbs and roadways; regional ground transportation systems; public and employee parking facilities; rental car facilities; vehicle staging areas for commercial vehicles such as taxicabs and transportation network companies ([TNCs] e.g., Uber, Lyft, and others); and the cell phone waiting lot.

To provide acceptable curbside roadway level of service through the 20-year planning horizon, the split of curbside traffic between the full-service and express lanes will need to be balanced so that traffic on the full-service lanes is approximately equal to the percentage of passengers that check bags (52 percent).

Near the entrance to the Airport, a Westshore Interchange project is anticipated to relocate the ramp from W. Spruce Street to George J. Bean Parkway and connect the new I-275 Express Lane into the prior W. Spruce Street ramp location. These improvements along with the remarking of the entrance ramp from SR 60 / SR 589 to maintain two lanes into the Airport, widening the weaving section of George Bean Parkway by one lane, and constructing additional pavement to widen the split to the SkyCenter and the Main Terminal to allow two lanes in each direction are anticipated to serve future PAL 3 traffic demand satisfactorily. In addition, roadway improvements including provisions for additional turn lanes, new traffic signals, and road widening will be required at several intersections in the SkyCenter area. These improvements are further discussed in the Proposed Improvements and Capital Projects section.

There are various vehicle parking options for passengers, employees, and visitors at the Airport. TPA possesses three public parking garages (collectively referred to as the public parking system) and various employee parking facilities. The Short-Term Parking Garage is a 3,722-space garage above the Main Terminal. The Long-Term Parking Garage is an 8,862-space garage to the south of the Main Terminal and the Economy Parking Garage is a six-level parking facility off Airport Service Road that accommodates 11,085 spaces.

The public parking system is anticipated to reach capacity prior to PAL 1. By PAL 3, the end of the 20-year planning horizon, the total deficit is estimated to be approximately 9,280 spaces. To meet the projected demand, the 2022-2042 MPU contains recommendations for the expansion of the Economy Parking Garage to the east and the construction of a new garage on the site of the United States Postal Service (USPS) facility, across from the Economy Parking Garage. This new garage is anticipated to include a pedestrian connector to the Economy Parking Garage's SkyConnect station.

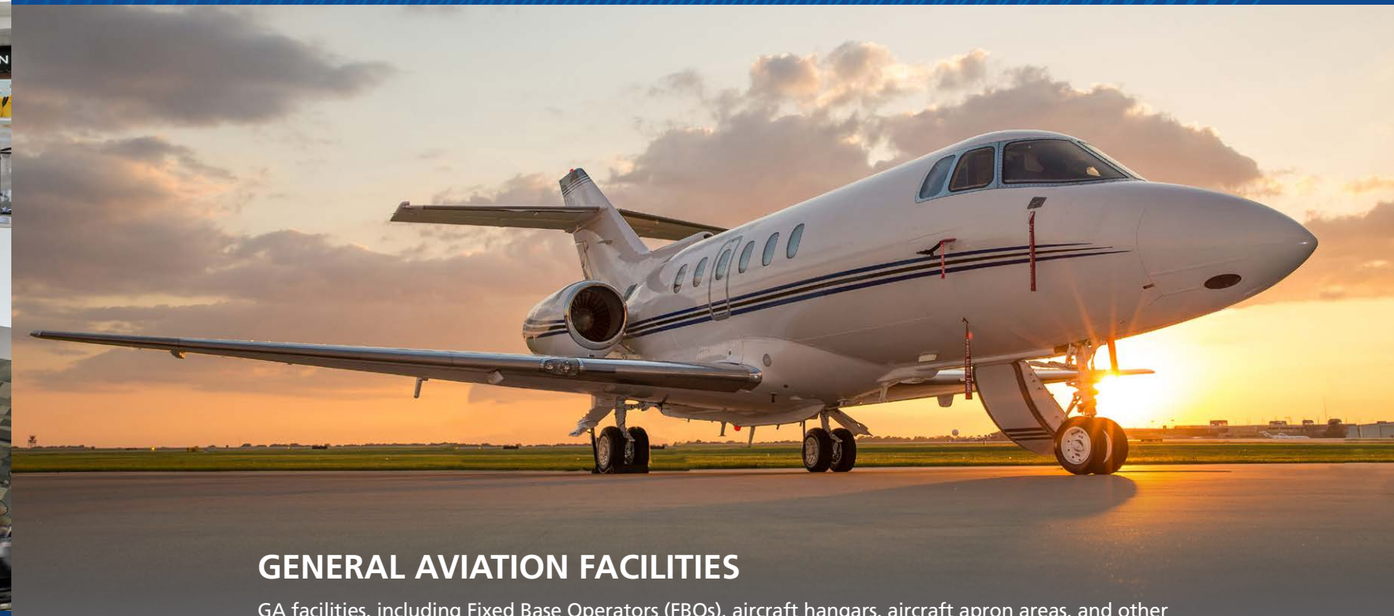
The employee parking lot along the north side of the Airport has 2,746 spaces. The North Employee Lot is anticipated to have sufficient capacity through PAL 1, but less than that needed for PAL 2. By PAL 3, approximately 890 additional spaces will be required. To meet demand beyond PAL 1, construction of a new employee parking lot west of the existing employee parking lot and North Hoover Boulevard is recommended.

SUPPORT FACILITIES

Airport support facilities, often referred to as ancillary facilities, include Airport buildings, parking areas, and infrastructure systems that support airline, airport maintenance, management, and operations activities. Some also enable the Airport to safely serve certain sizes of aircraft and types of service (e.g., passenger airlines).

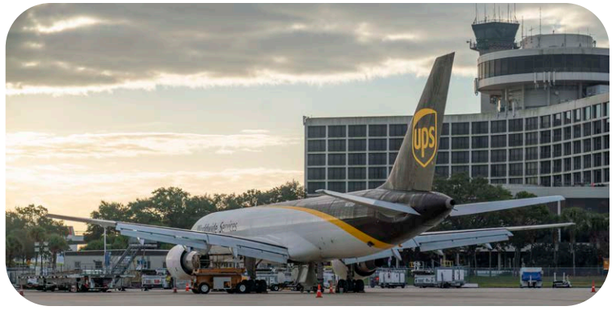
Key support facilities requirements include:

- Preserve the area north of the existing Aircraft Rescue and Fire Fighting (ARFF) facility for future expansion to allow for the possible acquisition of additional trucks, fire engines, or other equipment and dormitory space necessary to accommodate additional personnel staffing.
- Rehabilitate the Airport security, Airport police and range, and canine training facility, and, as needed, expand the existing facilities to provide additional storage and administrative spaces, additional firing lanes, and, possibly, a 1,500-square-foot simulation facility.
- Expand the Airport fuel farm to provide three additional fuel storage tanks (for a total of nine fuel tanks) with a capacity of 2.0 million gallons each.



GENERAL AVIATION FACILITIES

GA facilities, including Fixed Base Operators (FBOs), aircraft hangars, aircraft apron areas, and other support facilities are located in the southeastern quadrant of TPA, north and south of Runway 10-28. To accommodate the PAL 3 demand, up to 290,000 square feet of additional GA facilities and 120,000 square yards of apron will be required.



AIR CARGO FACILITIES

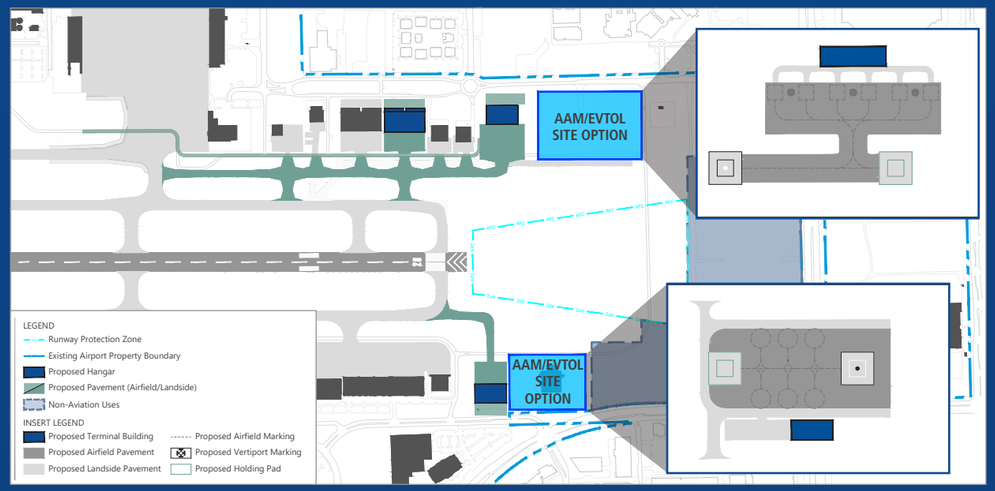
Cargo tonnage at TPA is currently handled by a combination of cargo integrators (FedEx and UPS), passenger airline belly cargo, and smaller on-demand all-cargo airlines. They operate from multiple facilities along the north and east side of the airfield, as either primary or sublease tenants. Up to 53,100 square feet of additional cargo warehouse facilities are required to accommodate future growth through PAL 3. The provision of future cargo facilities, however, could be delivered and funded by a third-party based on market demand.

ADVANCED AIR MOBILITY

The advanced air mobility concept has captured the aviation industry's attention as electric vertical takeoff and landing (eVTOL) aircraft have quickly advanced in the past 5 years and are expected to be certified as early as 2024. On November 2, 2023, TPA hosted the first manned eVTOL demonstration flight in the history of Florida. eVTOL aircraft include a variety of designs and propulsion systems using energy sources such as electric, hydrogen, and hybrid. The transport of passengers could occur as a scheduled or on-demand service between an on-Airport vertiport and other vertiports distributed within the Tampa Bay Region or throughout Central and South Florida.

Two potential sites have been identified to accommodate vertiport facilities at the Airport. These sites shown on Figure 3-3 and are on the north and south sides of the runway protection zone associated with the Runway 28 end.

Figure 3-3: Potential Sites for Future Advanced Air Mobility Facilities

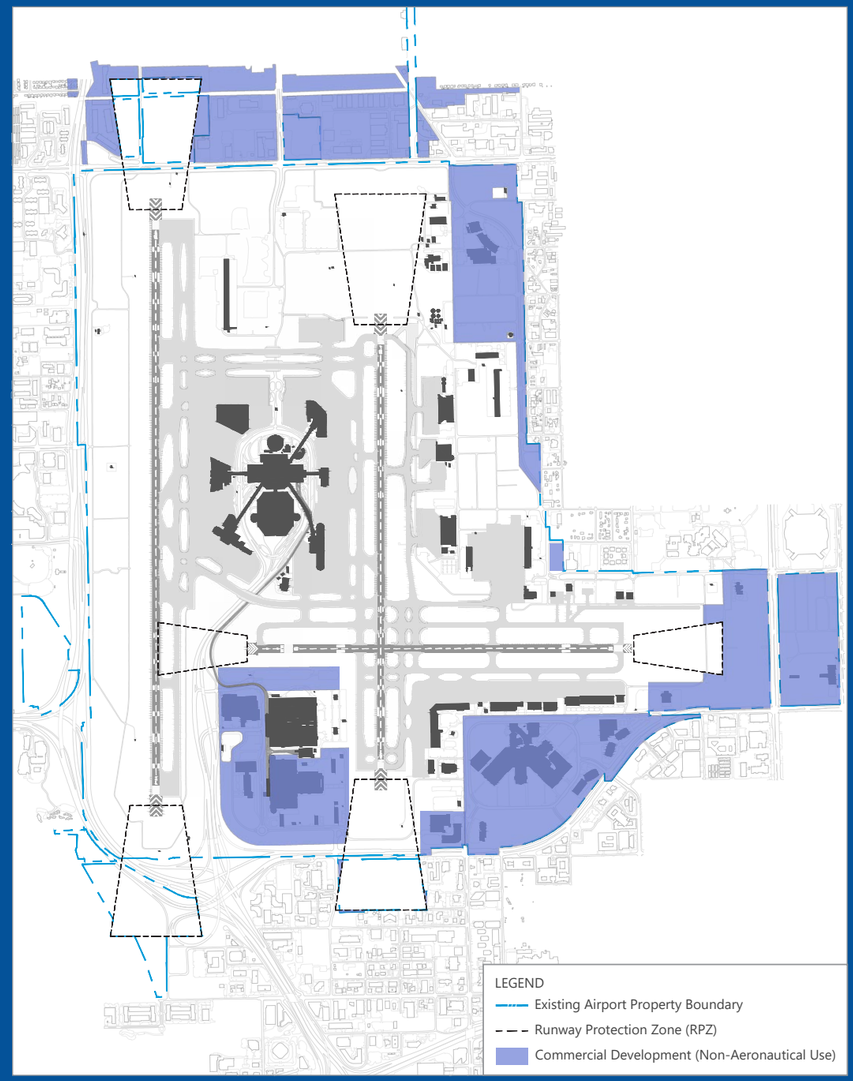


SOURCE: https://aamrealityindex.com/ (accessed November 2021).

COMMERCIAL/NON-AVIATION DEVELOPMENT AREAS

Areas being preserved for non-aviation development are depicted on Figure 3-4. These non-aviation areas of the Airport are not critical for serving the aviation needs of TPA associated with the 20-year forecast demand. For this reason, these non-aviation areas are designated within the 2022-2042 MPU for commercial uses.

Figure 3-4: Proposed Commercial/Non-Aviation Development Areas



4 PROPOSED IMPROVEMENTS AND CAPITAL PROJECTS

Timely investments in Airport infrastructure through incremental, demand-driven development helps ensure that the Authority effectively responds to changing aviation trends, increase in demand or altering demand patterns and characteristics, and other relevant factors. The implementation of the MPU's proposed recommendations and capital improvements, which are defined on the basis of unconstrained growth forecasts over the 20-year planning horizon, would be subject to the sole discretion of the Authority as the owner and operator of the Airport based on its available resources and evolving business needs.

The proposed capital projects associated with each PAL that were derived from the MPU recommendations are described in the following paragraphs. The timing of improvements is aligned with demand as defined by the three PALs, taking into consideration the cost implications of the various MPU recommended projects. Additionally, the timing of these improvements was made with consideration of optimizing the Airport's existing capacity resulting from capital investments undertaken as a result of the three-phase development program defined as part of the 2012 Master Plan Update, while preserving reasonable levels of customer service.

To improve the capacity, operational efficiency, and/or processing capabilities of the Main Terminal and to be able to support 35 MAP from the existing facilities, the 2022-2042 MPU contains recommendations for the expansion of the Airside A Sortation building, the modernization and expansion to the ticketing area, and an expansion to the baggage claim area. In addition, to maximize the use of the existing terminal facilities before initiating the incremental construction of the North Terminal, the 2022-2042 MPU identifies the construction of a new Airside B by converting the seven overnight aircraft parking positions that are adjacent to the Airside A Sortation building into six passenger boarding bridge supported aircraft gate positions. As Airport activity grows closer to 35 MAP, the Authority can reassess the option to proceed with a new Airside B, or forego this new airside and proceed with an initial phase of a North Terminal development plan taking into consideration operational and financial factors, as well as other considerations relevant to the decision-making process at that time.

The various recommendations and capital projects identified in the 2022-2042 MPU are grouped by the PAL in which such improvements should be in place and operational. This MPU also contains recommendations for safeguarding areas for projects that would need to be delivered beyond the 20-year planning horizon including the North Terminal Complex, future air cargo facilities on the east side of the Airport, the potential extension of Runway 1L, and the construction of a third parallel runway.

PROPOSED PROJECTS TO SERVE PAL 1

The PAL 1 projects shown on Figure 4-1 should be implemented prior to the Airport reaching 30.5 MAP on or near FY2032 per the FAA-approved MPU forecasts. These projects include the following:

1 Airside A Bag Sortation Building Expansion

This project is intended to support Airsides A and C OBMU operations through PAL 3. The Airside A Sortation Building would be expanded to accommodate an additional 40 cart positions and 4 new bag makeup carousels. This project should be closely coordinated with the Airside B Development (6-Gate Expansion) project shown under Proposed Projects to Serve PAL 3 to determine the appropriate limits of construction to be undertaken as part of each of these two interacting projects.

2 Economy Parking Garage Expansion

The Economy Parking Garage expansion will provide approximately 2,400-2,500 additional parking spaces. The expanded garage would use the existing Economy Parking Garage ramping system for all vertical vehicular movements, except at Level 2, where a short speed ramp would take exiting vehicles directly to grade. New vehicular crossover bridges would be added between the existing and expanded garage sections on all supported levels. This project is needed to meet the PAL 2 public parking requirement.

3 Economy Parking Road and SkyCenter Drive Roadway Improvements

This project will add two lanes of new pavement on SkyCenter Drive between Economy Parking Road and the cell phone lot entry, as well as one lane of new pavement on eastbound Economy Parking Road to create space for a dedicated right-turn lane to SkyCenter Drive.

4 O'Brien Street and West Spruce Street Roadway Improvements

The proposed improvements include the addition of one lane of new pavement on the north side of the intersection to create a second southbound left-turn lane. Other assumed improvements are intended to improve the flow of traffic in and out of the Airport terminal roadways.

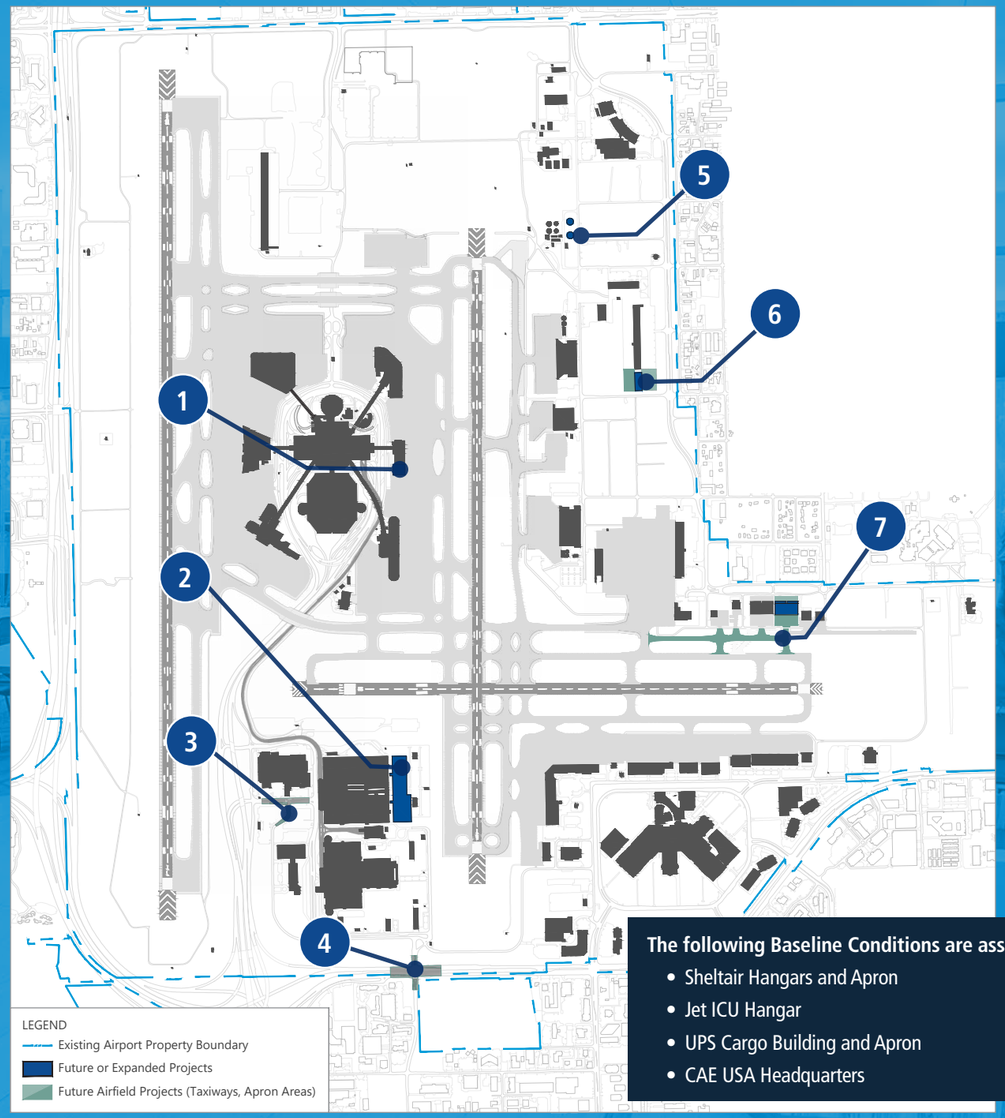
5 Fuel Farm Expansion (Two Additional Tanks)

The addition of two new fuel storage tanks with a gross capacity of 2 million gallons on the existing fuel farm parcel by PAL 1 is recommended. The current fuel storage facility at the Airport consists of six above-ground storage tanks providing approximately 3.5 million gallons of storage capacity. The intent of the project is to provide the Airport with a 7-day fuel reserve to reduce the effect of any possible disruption in the fuel supply chain due to lack of nearby storage capacity and proximity to refineries. It is anticipated that one of these two tanks will be required concurrent with the opening of future Airside D, anticipated to occur on or near 2028.

6 Belly Cargo Facility Expansion

The existing Belly Cargo Building is currently fully leased and does not have available space. A 105,000-square-foot expansion of the Airport's existing Belly Cargo Building is the preferred alternative to increase belly cargo capacity for existing tenants and/or to support new air carrier service necessitating belly cargo space.

Figure 4-1: Projects Recommended for Implementation by PAL 1 (30.5 MAP)



7 Taxiway T Relocation (ADG III Taxiway) and General Aviation Facilities Expansion

The project entails the Relocation of Taxiway T to the north of and adjacent to Taxiway N near the end of Runway 28. The relocated taxiway would extend east of existing Taxiway K. This project is necessary to improve the flow of taxiing aircraft in and around the expanding GA area near the end of Runway 28 and to meet design standards for ADG III aircraft, while also supporting tenant development proposed north of Runway 28.

PROPOSED PROJECTS TO SERVE PAL 2

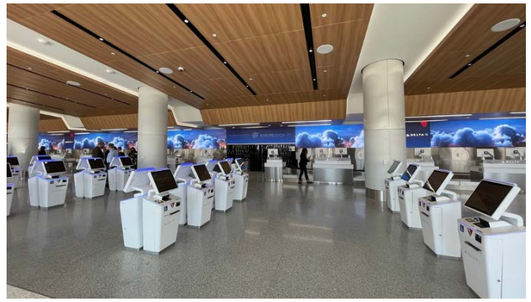
The PAL 2 projects should be implemented prior to the Airport reaching approximately 34.6 MAP on or near FY2037 per the FAA-approved MPU forecasts. These projects, shown on Figure 4-2, include the following:

1 Employee Parking Expansion

The Employee Parking Expansion will provide approximately 900 additional parking spaces. This project also includes a new entry/exit plaza vehicle checkpoint, lighting, security cameras, landscaping, and other associated infrastructure. The expanded lot may include additional electric vehicle (EV) charging stations.

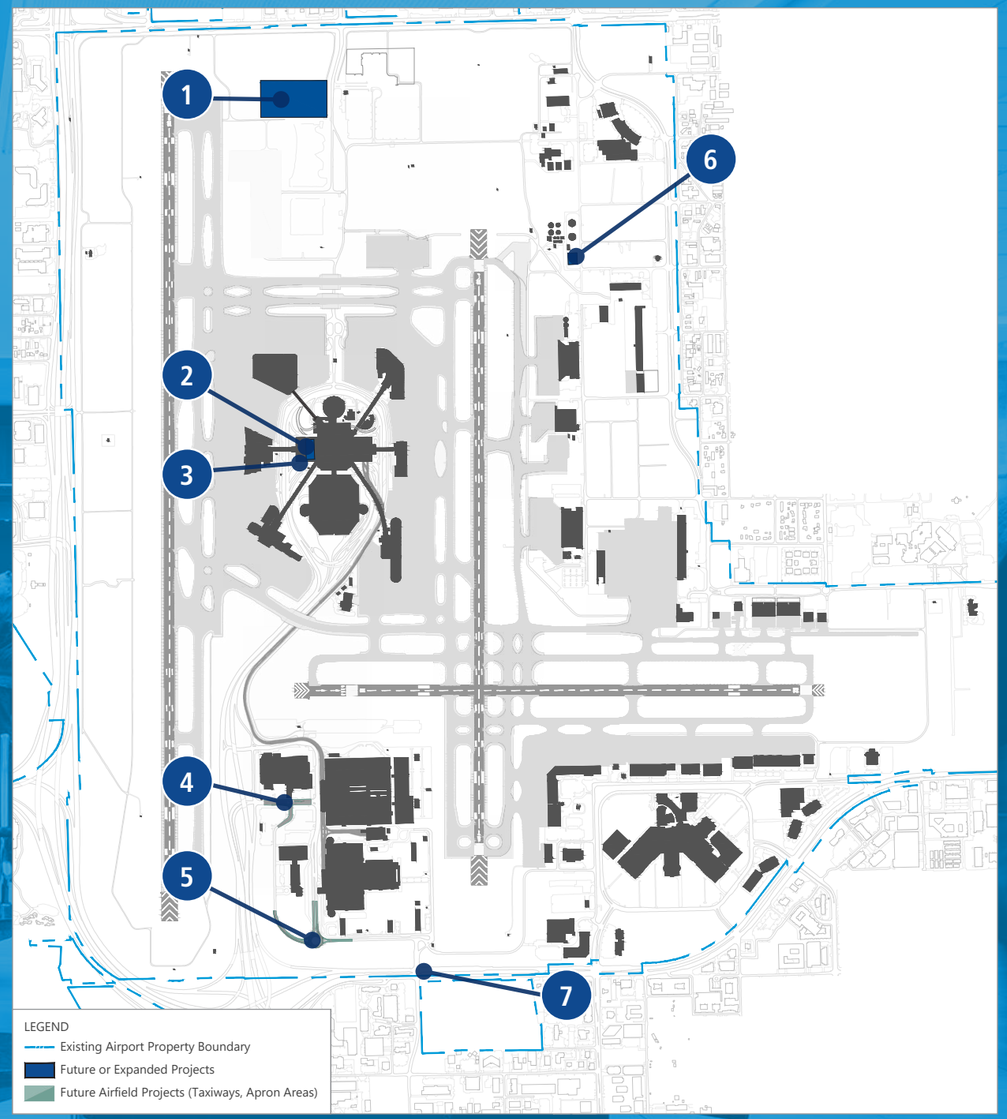
2 Ticket Level Expansion and Modernization

This project will include 30,000 square feet of new consolidated airline ticket office (ATO) space on the west side of the existing terminal to accommodate the reconfiguration of check-in islands. The project also includes the expansion of the ticketing level into the former valet services pick up/drop-off area, directly across from the Southwest Airlines ticket counters to provide additional ticketing and check-in facilities. This project is necessary to increase the capacity of the ticketing area provide additional check-in queue depth, relieve the space constraints that have created congestion throughout the ticketing lobby, add general circulation space, and accommodate increasing passenger levels. The ticketing level expansion and modernization would support the addition of dedicated baggage drop-off points equipped with automated conveyor systems or staffed service counters; support the installation of digital signage and information displays; enhance the aesthetics of the ticketing area with modern finishes, lighting fixtures, signage, and branding elements; and integrate advanced technologies, such as biometric identification systems, and mobile check-in solutions to enhance operational efficiency, security, processing capacity, and passenger convenience. Given the phasing and operational planning considerations, this should be a project that is accelerated in the implementation schedule (e.g., an FY2026 to FY2029 capital budget programming timeline) to capitalize on lower passenger volumes during construction.



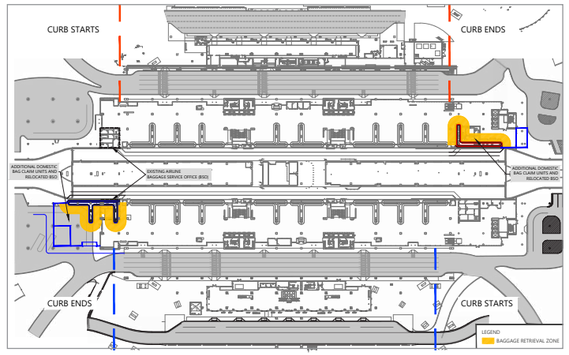
Examples of contemporary ticket lobby configurations representative of the expanded and more spacious layout proposed by the Ticket Level Expansion and Modernization Project.

Figure 4-2: Projects Recommended for Implementation by PAL 2 (34.6 MAP)



3 Baggage Claim Expansion

This project will include two additional domestic bag claim units (one on the Red side and one on the Blue side) and relocated Baggage Service Offices (BSO) to accommodate higher passenger and baggage volumes and improve efficiency.



4 Economy Parking Road and SkyCenter Drive Roadway Improvements

The proposed improvements include modified markings to convert a dedicated right-turn lane from Economy Parking Road to SkyCenter Drive into a channelized right turn that does not stop at the signal, as well as modified markings to remove the left turn from Economy Parking Road to SkyCenter Drive.

5 Airport Service Road and SkyCenter Drive Roadway Improvements

The proposed improvements include the addition of pavement for a second lane on SkyCenter Drive leading into the roundabout, modified markings to add a lane on the east side of the roundabout, and additional pavement and remarking of Airport Service Road northbound between the roundabout and the entrance to the RCC curb.

6 Fuel Farm Expansion (3rd additional tank)

One new fuel storage tank on the existing fuel farm parcel is included under this project. The intent of the project is to continue providing the Airport with a 7-day fuel reserve to reduce the effect of any possible disruption in the fuel supply chain due to a lack of nearby storage capacity and proximity to refineries.

7 O'Brien Street and Airport Service Road Roadway Improvements

The roadway improvements include additional pavement for a second right-turn lane from Airport Service Road to O'Brien Street, three additional lanes of pavement to the RCC truck entry to realign the intersection, removal of pavement on O'Brien Street leading to the current intersection with Airport Service Road, and a new traffic signal to the realigned intersection.

PROPOSED PROJECTS TO SERVE PAL 3

The PAL 3 projects, shown on Figure 4-3, should be implemented prior to the Airport reaching 38.8 MAP on or near FY2042 per the FAA-approved MPU forecasts. These projects include the following:

1 Additional Public Parking (Garage)

This new parking garage proposed on the site of the existing USPS facility, assuming the site is available for development following the expiration of the lease provides approximately 3,800 additional parking spaces. This project includes the construction of a six-level, parking garage. Approximately 10 percent of spaces are assumed to have EV chargers with the capacity to expand that to 25 percent. It also includes the construction of a pedestrian bridge to connect to the existing SkyConnect station at the Economy Parking Garage. This project is needed to meet the PAL 3 vehicular (public) parking requirement.

2 Bessie Coleman Boulevard and Economy Parking Road Roadway Improvements

The proposed improvements include the addition of pavement for a second right-turn lane from Bessie Coleman Boulevard to Economy Parking Road.

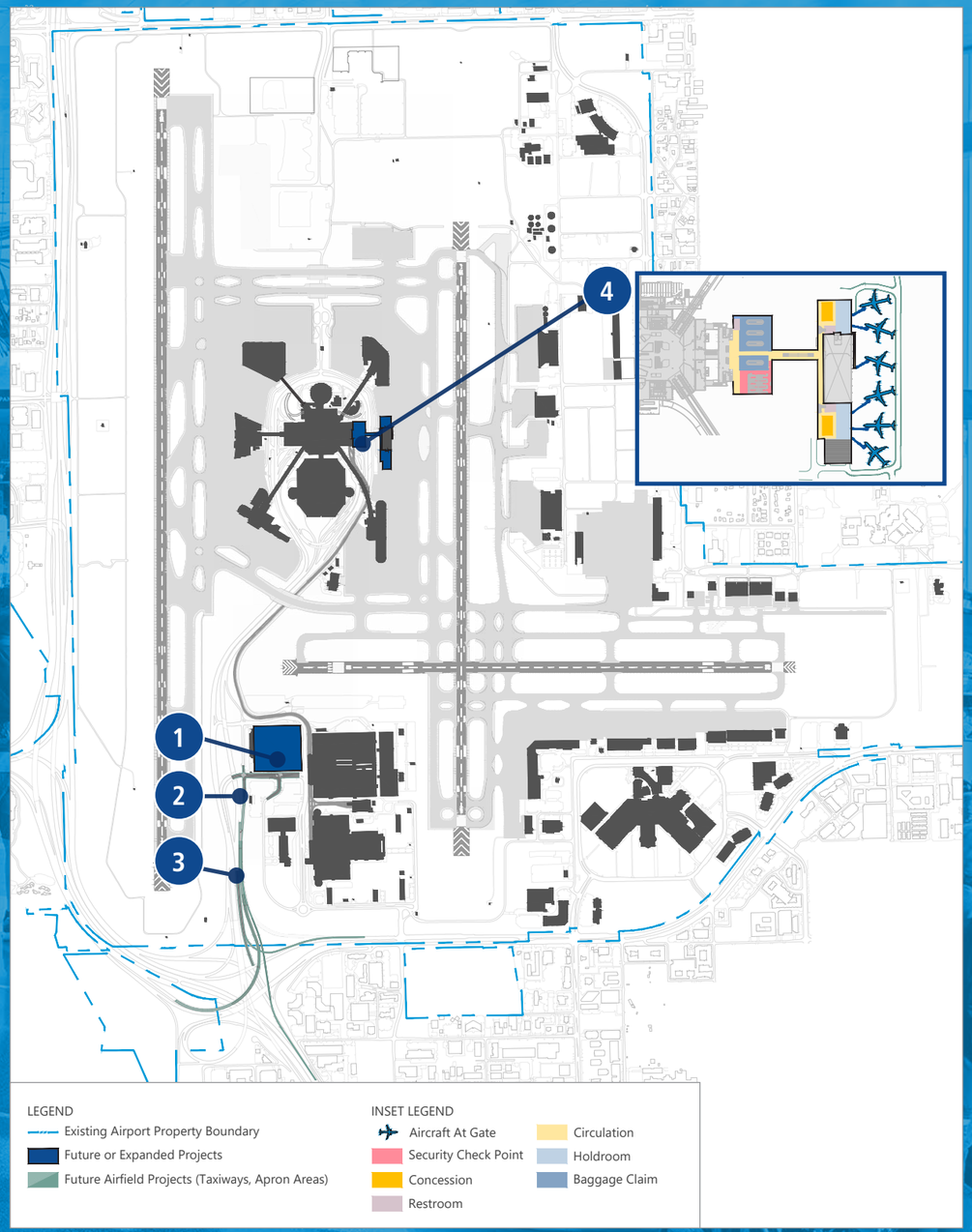
3 George J. Bean Parkway Roadway Improvements

The proposed improvements include the remarking of the entrance ramp from SR 60 / SR 589 to maintain two lanes into the Airport, additional pavement to widen the weaving section of the road by one lane, and additional pavement to widen the split to the SkyCenter and the Main Terminal to allow two lanes in each direction.

4 Airside B Development (6-Gate Expansion)

This project consists of the programming, design, and construction of a new Airside B by converting the seven overnight aircraft parking positions that are adjacent to the A-Sortation Building into six passenger boarding bridge supported aircraft gate positions. The expansion of Airside B will require the easterly expansion to the Transfer Level of the Main Terminal to house the passenger and baggage processing functions required to support these additional aircraft gates including up to four domestic bag claim units and six Transportation Security Administration (TSA) security screening lanes. The Transfer Level expansion to the Main Terminal would be connected to the airside functions by a pedestrian bridge that spans over George Bean Parkway. The building addition north of the A-Sortation Building would house the inbound bag loading system for arriving domestic baggage, mechanical equipment and ramp personnel support spaces; the building addition south of the A-Sortation Building would house additional outbound bag makeup devices that are required to support the six new Airside B gates, and the PAL 3 outbound bag makeup requirements for Airside A and Airside C.

Figure 4-3: Projects Recommended for Implementation by PAL 3 (38.8 MAP)



OPPORTUNITIES FOR OTHER AIRPORT ENHANCEMENTS

The 2022-2042 MPU also safeguards for other projects that are not tied to a specific PAL but are related to business opportunities driven by growing market demand or tenant interests that may emerge at any time during the 20-year horizon. These projects illustrated on Figure 4-4 are included on the Airport Layout Plan prepared as part of this MPU, but the development of these projects does not have a specific timeframe.

1 Taxiway E Relocation

This project realigns and upgrades Taxiway E to an Airplane Design Group (ADG) V Taxiway. The relocated taxiway would extend Taxiway E to the end of Runway 19L, giving Runway 1R-19L a full parallel ADG V taxiway adjacent to the east side of the runway. This project would help support ADG V aircraft movements to and from the new air cargo facilities described below, provide additional development opportunities east of Runway 1R-19L by relocating the taxiway closer to the runway, and improve the taxiway geometry where Taxiway E intersects Runway 10-28.

2 New Air Cargo Facilities and Expansion of the Existing Air Cargo Facilities

Future airport development north of the existing terminal area and crossfield taxiways will require the demolition of the North Cargo Building and the relocation of the existing tenants to new facilities. This project includes the design and construction of a new and larger air cargo facility. This project will increase air cargo capacity for existing tenants and support additional growth in air cargo carrier operations.

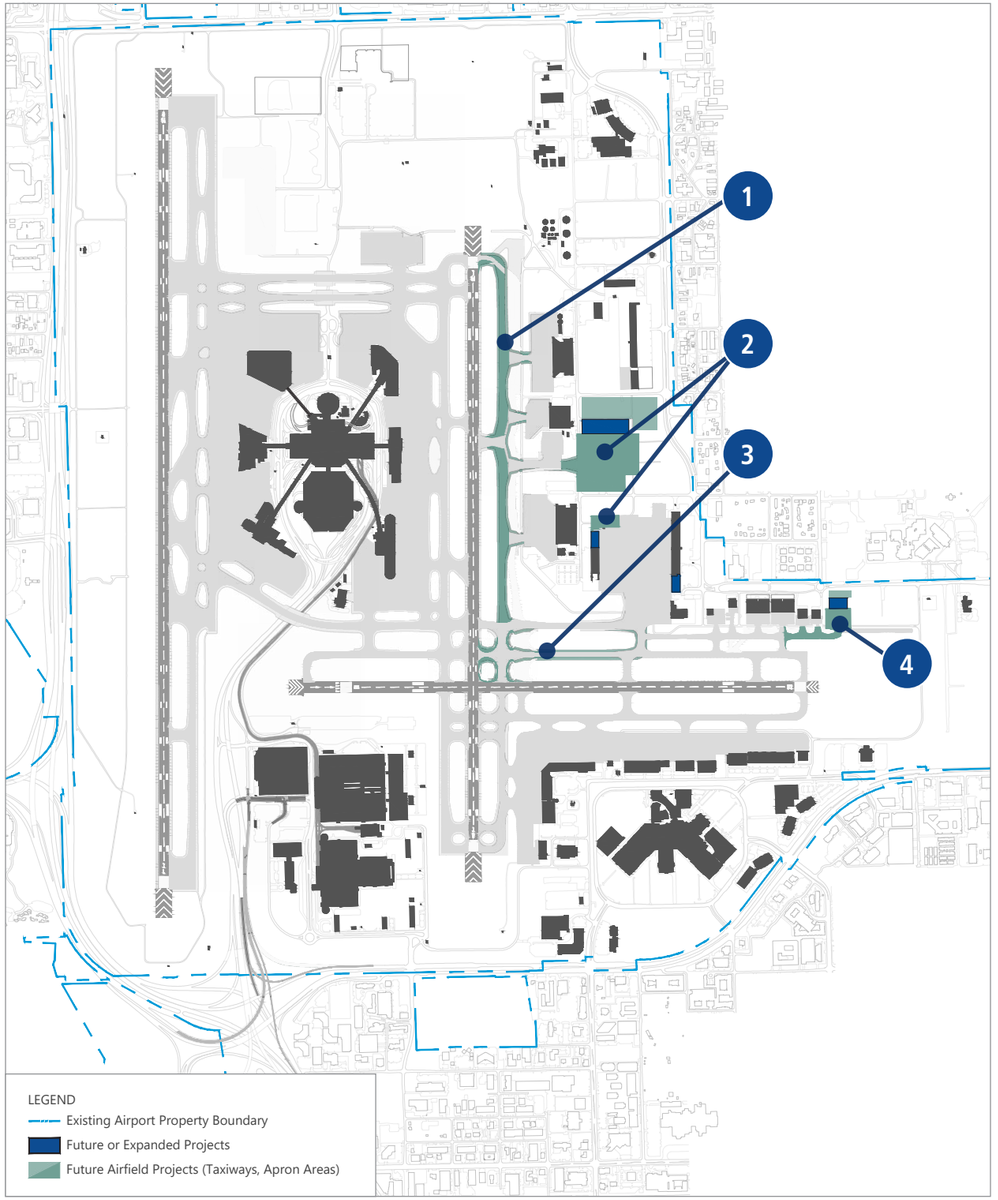
3 Taxiway Improvements (Add Shoulders) to Serve Aircraft Design Group V

This project consists of shoulders along portions of Taxiway N to accommodate ADG V aircraft. This project is necessary to support increase growth in ADG V aircraft movements to and from the existing air cargo facilities as future activity levels trigger the need to supplement the ADG V capabilities currently provided by parallel Taxiway J. Taxiway shoulders help reduce the risk of aircraft veering off the taxiway surface, especially during low-visibility conditions or in the event of pilot error, as well as helps prevent the accumulation of foreign object debris (FOD) on the taxiway surface. Taxiway shoulders also protect the integrity of the taxiway pavement by preventing erosion, edge deterioration, and pavement degradation caused by environmental factors, such as rainwater runoff, freeze-thaw cycles, or vehicular traffic. The proposed shoulders would be designed to meet ADG V and Taxiway Design Group (TDG) 5 airfield design requirements.

4 Taxiway T Extension (ADG III Taxiway) and General Aviation Facilities Expansion

This project comprises an extension to the Taxiway T project proposed as part of the PAL 1 recommendations north of and adjacent to Taxiway N near the end of Runway 28. This project would support further tenant-delivered facilities for future GA operations and would be designed and constructed to meet design standards for ADG III aircraft.

Figure 4-4: Opportunities for Other Airport Enhancements



OTHER PROJECTS BEYOND THE 20-YEAR PLANNING HORIZON

Other projects that are not discussed in the capital improvement projects recommended for the 20-year horizon but are reflected as Ultimate development on the ALP and presented on Figure 4-5 include the following:

1. **Long-term North Terminal and Gates Expansion:** Consistent with the previous master plans, the MPU has recommendations to reserve the area north of existing crossfield Taxiways A and B for the incremental development of a 45-gate terminal and related hardstand positions. Associated projects would include the extension of the existing roadway system to provide access to the new facilities, the construction of new parking garage facilities, and the extension of SkyConnect. The North Terminal Complex development should be revisited as part of the future MPUs to better define the optimum layout and configuration and facility requirements. Detailed planning and programming should be completed before a final decision is made regarding the configuration of these new terminal facilities.

2. **Runway 19L Extension:** To facilitate the movement of aircraft from the future North Terminal to Runway 1R-19L, and possibly avoid future penetration to the US Standard for Terminal Instruments Procedures (TERPS), it is recommended that the extension of Runway 19L by 2,200 feet, as shown on the 2016 ALP, be preserved.

3. **SkyConnect Extension:** The existing SkyConnect system that connects the RCC and the Economy Parking Garage to the Main Terminal would be extended to a future North Terminal. The track would extend north from the Main Terminal station by approximately 3,200 linear feet, passing underneath Taxiway A and Taxiway B to a new North Terminal station.

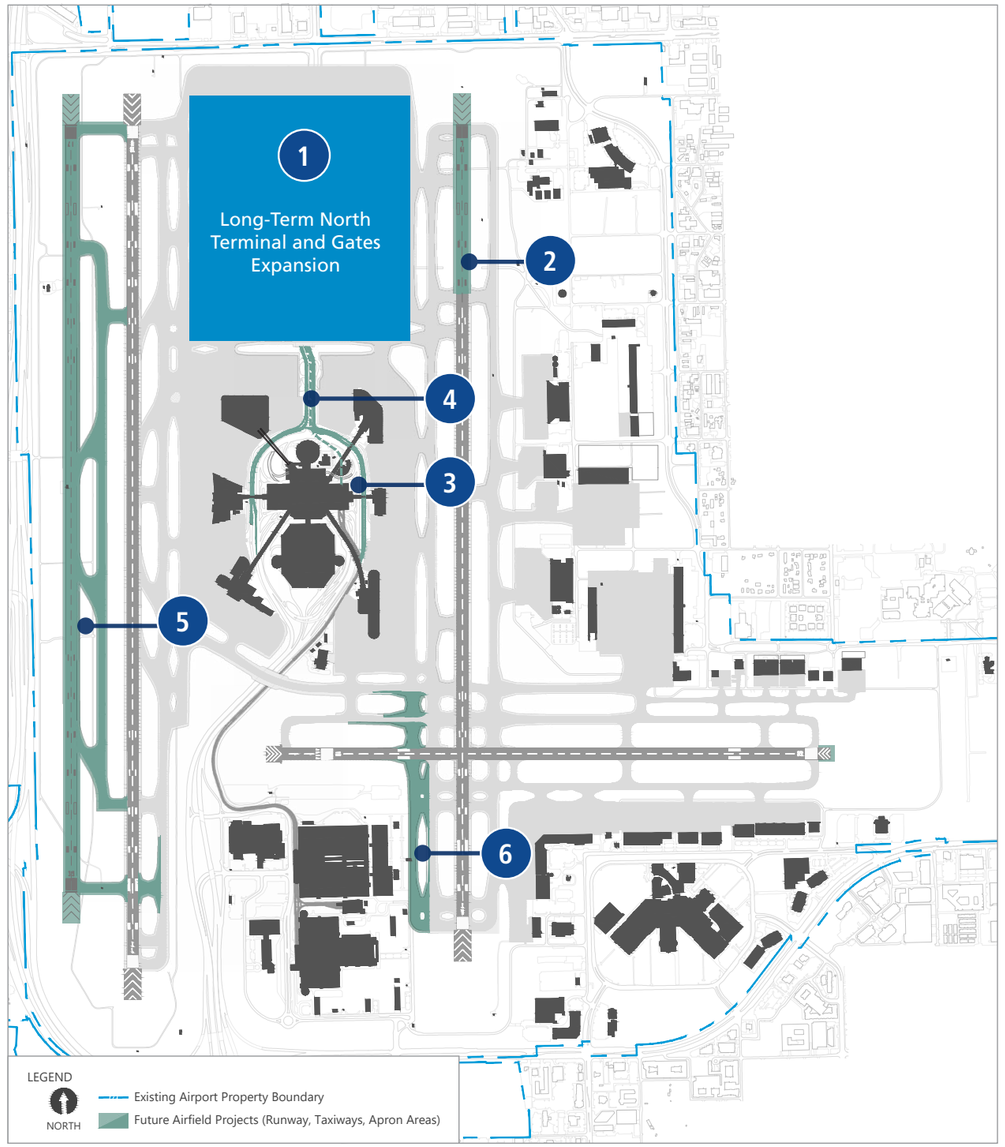
4. **Roads to North Terminal:** A new roadway system would need to be constructed to provide access to the North Terminal and associated facilities. The roadway would connect from George J. Bean Parkway and generally follow the alignment of the current Bessie Coleman Boulevard landside service road with the existing Main Terminal campus and follow the alignment of the current N Hoover Boulevard, north of George J. Bean Parkway to cross underneath Taxiway A and Taxiway B, before providing access to the North Terminal facilities.

5. **Third Parallel Runway:** The future Runway 17L-35R configuration is for a 10,200-foot by 150-foot parallel runway with a centerline separation of 800 feet from the existing Runway 1R-19L. The proposed future runway dimensions and configuration meet airfield requirements associated with ADG V operations. The 800-foot separation would allow for the construction of a parallel taxiway between ultimate Runway 17L-35R and existing Runway 1L-19R.

6. **Taxiway G Extension:** To facilitate the movement of aircraft from the terminal areas to and from the GA ramp, it is recommended that Taxiway G be extended southward to the Runway 1R end. The recommended extension would also improve aircraft movements to and from Runway 1R-19L, provide access and bypass capability to Runway 1R, and allow air traffic control (ATC) to queue and sequence additional aircraft for departure on Runway 1R. The proposed taxiway width for the extension of Taxiway G is 75 feet, consistent with current FAA standards for ADG V aircraft. Also, 30-foot-wide paved shoulders would be required on each side of extended Taxiway G.

These projects are anticipated to occur beyond the 20-year timeframe of the MPU and be phased in over time, with each phase contingent on securing adequate funding, National Environmental Policy Act (NEPA) approval, and other regulatory clearances. These projects are included on the ALP to preserve the long-term use of the North Terminal development site and to avoid off-Airport development that could effect the airspace surfaces associated with an extended Runway 1R-19L as well as a future third parallel runway and, ultimately, HCAA's ability to construct this new runway.

Figure 4-5: Ultimate Development Projects anticipated to occur beyond the 20-year horizon



RECOMMENDED AIRPORT DEVELOPMENT PLAN

The proposed Airport development plan including projects required to meet forecast demand over the 20-year planning horizon, projects that are not tied to a PAL but that would likely be driven by third-party development based on market demand, and projects that will be required to accommodate demand beyond the 20-year planning horizon are shown on Figure 4-6. The exhibit is consistent with the Airport Layout Plan (ALP) that is being submitted to the FAA.

As noted in Advisory Circular 150/5070-6B, Airport Master Plan, FAA approval of the ALP indicates that the existing facilities and proposed development depicted on the ALP conform to the FAA airport design standards in effect at the time of the approval or that an approved modification to standard has been issued.

An approved ALP is necessary for the Authority to receive financial assistance under the terms of the Airport and Airway Improvement Act of 1982 (AIP), as amended, and to be able to receive specific Passenger Facility Charge funding. An airport must keep its ALP current and follow that plan, since those are grant assurance requirements of the AIP and previous airport development programs.

This proposed Airport development plan provides a framework for the sequencing of future projects and improvements required to accommodate future aviation activity at the Airport. The update of the MPU every 5 to 10 years, however, will enable the Authority to periodically reassess project priorities and timeframes, thereby validating forecasts, development needs and priorities. As discussed earlier, the HCAA has sole discretion to determine whether to proceed with any of these projects and whether to incorporate any project into its Capital Improvement Program for implementation.

Figure 4-6: Recommended Airport Development Plan

5 LAND USE

To facilitate land use and development in accordance with the MPU, a revised land use plan was prepared in accordance with FAA's Policy Regarding Processing Land Use Changes on Federally Acquired or Federally Conveyed Airport Land, effective January 8, 2024, and the land use designations that were established as part of the 2012 MPU. Five existing on-Airport land uses are identified on the land use plans shown on Figure 5-1 and briefly described here.

Aircraft operation area includes portions of land directly related to aircraft operations and used for aircraft landing, takeoff, or surface maneuvering including the associated navigation and communication facilities. The Runway Protection Zones, NAVAIDs critical areas including approach lighting rights-of-way, safety areas and other airfield critical areas, as well as aircraft movement areas (runway, taxiway, aprons, and other aircraft movement areas) are included within this category.

The FAA identifies this type of use of airport property as Aeronautical Use, which it defines as "any activity that involves, makes possible, is required for the safety of, or is otherwise directly related to, the operations of aircraft."

Airport support and aviation-related development includes existing airport support facilities that directly support flight operations such as HCAA training facilities and police training facility, ground service equipment maintenance and airport maintenance, fuel farms, air traffic control tower, ARFF facilities, areas and/or roads that support the movement of authorized service and emergency vehicles and aeronautical facilities such as aircraft hangars, aircraft maintenance repair and overhaul (MRO) facilities, and other aviation-related facilities such as air ambulance and air taxi facilities. This category also includes future developmental uses to reserve property interests for foreseeable aeronautical development such as the future Air Traffic Control Tower (ATCT), future air cargo facilities, future GA facilities, among others.

The FAA policy identifies this type of use as Airport Purpose that it defines as "uses of land that are (1) directly related to the actual operation or the foreseeable aeronautical development of a public airport and (2) whose nonaeronautical components do not conflict with existing or foreseeable aeronautical needs/demands."

Airline passenger terminal support functions includes uses of land that are directly related to the actual operation or the foreseeable aeronautical development of the Airport whose nonaeronautical components do not conflict with existing or foreseeable aeronautical needs/demands. Facilities included within this land use category include the Main Terminal, airside buildings, the terminal/service roadway system, the automobile parking garages and at-grade parking facilities, automated people mover guideways and train stations, public access roads and service roads serving the terminal area, supporting airport terminal facilities such as the cell phone lots, employee parking, taxi and bus staging areas, central concession warehouse, substations that serves the Airport grid only, a future cogeneration plant and distributed antenna system (DAB) facilities.

The FAA identifies this type of use of airport property as Airport Purpose.

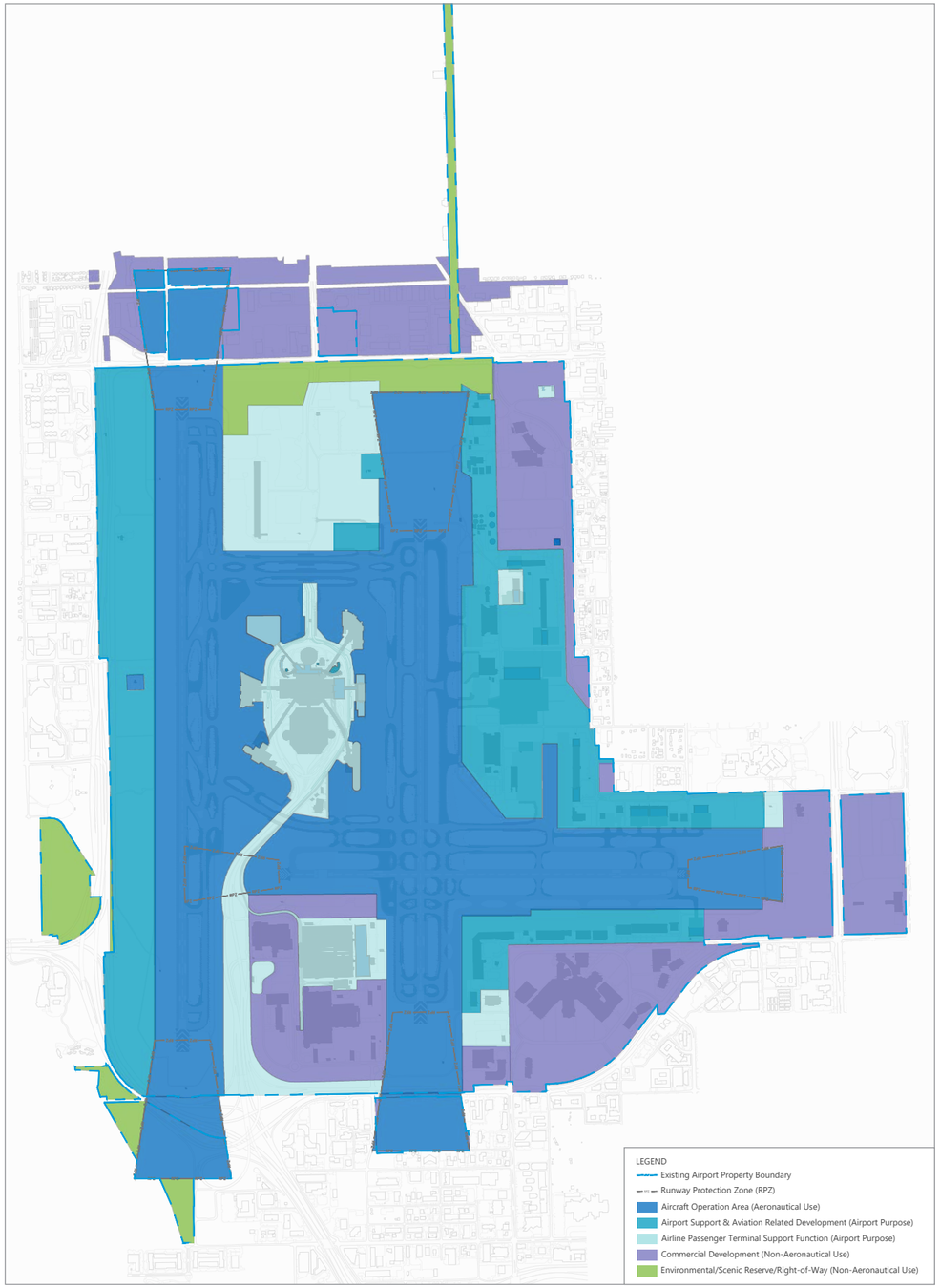
Commercial development includes other uses that are not considered aircraft operation area, airport support and aviation-related development, and airline passenger terminal support functions. These land uses are revenue producing but not directly tied to an aeronautical purpose and support the Airport self-sufficiency requirement. This category includes the RCC including the rental car ready/return facilities, the quick turnaround facilities, overflow rental car parking, rail right-of-way, and existing and proposed commercial development areas.

The FAA identifies this type of use of airport property as Nonaeronautical Use and is defined as "all other uses that are not considered aeronautical or airport purpose."

Environmental/Scenic Reserve/Right of Way includes scenic reserves, landscaping, rights-of-way, retention ponds, drainage channels, environmental mitigation areas, buildings or structures necessary for the maintenance of the scenic reserve, and recreational facilities such as bicycle and nature trails.

The FAA also identifies this type of use of airport property as Nonaeronautical Use.

Figure 5-1: Land Use Plan



6 SUSTAINABILITY INITIATIVES

The Authority began implementing focused sustainability initiatives in the late 2000s. A Sustainability Management Policy was formalized and adopted in 2012 and, in 2014, the Authority developed its first Sustainable Management Plan (SMP v1) and an accompanying *Sustainable Design Criteria Manual* (SDCM) with a Sustainability Checklist for design and construction projects.

Notable sustainability achievements at TPA following adoption of SMP v1 include the following:

- Installed a 2-megawatt (MW) solar system on the Economy Parking Garage roof in partnership with TECO Energy.
- Participated in the Airport Council International (ACI) Airport Carbon Accreditation (ACA) program since 2017.
- Created the BeWell internal wellness program.
- Developed the first vulnerability assessment for TPA in 2019 to understand climate risks.
- Constructed a new, efficient Central Utility Plant (CUP).
- Transitioned the Authority's maintenance and bus fleets to EV technology.
- Expanded the Airport recycling program to include donation of unsold, prepackaged food.
- Achieved Leadership in Energy and Environmental Design (LEED)[1] Platinum certification for the SkyCenter One office building in 2022.
- Earned an Envision Verified[2] award for sustainable infrastructure for the Tampa International Airport Master Plan Phase I Project in 2023.

The Authority continues to advance sustainability and resiliency, including a 2023 update to its Sustainable Management Plan (SMP v2). The foundation for SMP v2 is established by a mission and a vision that jointly express the Authority's commitment to sustainability and resiliency.

MISSION

Create a sustainable and resilient organization through intentional and responsible leadership, empowerment, and action.

VISION

Be an innovative leader throughout the aviation industry and inspire action in the Tampa Bay community.

Opportunities to advance sustainability at TPA related to implementation of the MPU projects center on four focus areas:

Resource Management | **Sustainable Engagement** | **Adaptation and Mitigation** | **Clean Transport**

1 LEED, developed by the US Green Building Council (USGBC), is a green building rating system. The SkyCenter One Platinum certification was achieved through the "Core and Shell" program. Under this program, a project is rated on the design and construction of the building's core and shell (e.g., mechanical, electrical, plumbing, and fire protection systems) but not for the tenant-controlled build-out.

2 The Envision framework, developed by the Institute for Sustainable Infrastructure, includes a third-party verification and awards program to recognize sustainable development achievements.

Recommended Sustainability Initiatives to support MPU Project Implementation

RESOURCE MANAGEMENT

Energy Management Initiatives

- Hire an Energy Manager.
- Periodically refresh and assess research on funding opportunities.
- Periodically refresh assessments of TPA electricity needs and local electricity capacity.
- Maintain building recommissioning practice to maximize the energy efficiency of TPA's existing built environment.
- Designate area(s) at TPA for future fuel infrastructure needs.
- Periodically assess fleet electrification and associated charging infrastructure needs.
- Identify and implement onsite renewable energy generation and storage.
- Evaluate opportunities to transition away from natural gas with new MPU development.

Water Management Initiatives

- Seek new opportunities to capture and reuse condensate.
- Evaluate opportunities to harvest and reuse rainwater onsite.

Waste Management Initiatives

- Integrate waste reuse, reduction, and minimization strategies into the update of the SDCM Sustainability Checklist.
- Expand recycling program to underserved areas of TPA.
- Expand tenant opportunities for recycling materials at TPA.
- Partner with TPA concessionaires to improve awareness of and participation in the Authority's recycling program.
- Consider the Authority's recycling program needs when developing the next procurement for concessionaire services at TPA.
- Identify opportunities for the Authority to support innovation in waste management.

SUSTAINABLE ENGAGEMENT

Internal and External Engagement Initiatives

- Comply with Title VI in sustainability engagement.
- Develop and implement a plan to remediate former industrial sites in Drew Park.
- Identify opportunities to engage with Airport partners to advance sustainability.

Purchasing and Procurement Initiatives

- Incorporate sustainability evaluation criteria into the selection of future Airport tenants.

ADAPTION AND MITIGATION

Climate and Resilience Initiatives

- Identify opportunities to enhance resiliency of existing infrastructure concurrent with MPU project design and construction.
- Integrate lessons learned about existing vulnerabilities into MPU project design and construction.
- Continue TPA's participation in the ACA program.

Green Buildings and Infrastructure Initiatives

- Update the SDCM Sustainability Checklist and formalize a process to ensure all design and construction projects are evaluated under the SDCM.

CLEAN TRANSPORT

Mobility Initiatives

- Incorporate EV charging infrastructure in proposed development.
- Encourage use of public transit to access the Airport.

Clean Fuels Initiatives

- Add EV bus charging infrastructure as part of the MPU's North Employee Parking Lot Expansion project.