Sarasota Bradenton International Airport

MASTER PLAN UPDATE

FINAL EXECUTIVE SUMMARY

November
2021

Prepared for: The Sarasota Manatee Airport Authority

srq

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Introduction

The Sarasota Manatee Airport Authority authorized the preparation of a new Master Plan Update for Sarasota Bradenton International Airport (subsequently referred to as "the Airport" or "SRQ") to assess current and future needs and to prepare a plan to properly address those needs. The resulting plan is summarized in this Executive Summary.

Readers who are interested in the analyses that were conducted to determine the Airport's requirements should refer to the Master Plan Update report that documents all of the technical analyses. An accompanying Airport Layout Plan drawing set provides detailed drawings of all the development proposed by the Master Plan Update as well as a series of airspace drawings and a land use drawing.

The purpose of this Master Plan Update is to provide the Sarasota Manatee Airport Authority with a comprehensive, flexible and financially viable plan that will enable the Airport Authority to meet anticipated demand for air transportation through 2039. After many years of relatively flat passenger volumes, the Airport experienced exceptionally strong growth from 2017 to 2020 with annual passenger enplanements increasing from approximately 594,000 in 2017 to 980,000 in 2019.

Passenger enplanements were on track to reach 1.2 million in 2020 until the onset of the COVID-19 pandemic brought air travel to an unprecedented decline. A gradual recovery of passenger enplanements occurred during the second half of 2020, but then grew at an exceptionally high rate during March 2021 and ensuing months as a result of additional air service and a pent-up demand for domestic leisure travel.

Airport management implemented numerous actions in response to this increased passenger demand. This included changes to certain projects identified in the Master Plan Update and changes to project phasing. These changes included implementing several terminal and parking projects that deviate from the scope and timing described on the following pages. Further changes to the plan's projects and phasing are likely to occur in response to changes in passenger and operational demand.

Projects proposed by the Master Plan Update are intended to ensure that the Airport maintains its high level of passenger and tenant convenience and service by providing the capital improvements needed to accommodate future growth. These improvements will ensure that the Airport continues to serve as a strong economic asset for the Sarasota / Manatee County region.

Although the Master Plan Update sets forth a proposed schedule for the implementation of proposed capital improvements, the actual implementation of projects will be determined by the Airport Authority on the basis of demand and Authority priorities. The availability of federal and state funding for proposed improvements will also impact the order and timing of projects. The following pages describe the proposed plan.

Study Elements

The Master Plan Update followed a series of predetermined tasks to arrive at a proposed development plan. These tasks are defined by the Federal Aviation Administration and result in a comprehensive examination on an Airport's needs and the development of a plan to meet those needs through the implementation of specific improvements. The study consisted of the following tasks:

- **Inventory –** this section documents existing conditions and operations at the Airport. This information is used by planners when conducting subsequent analyses.
- **Forecasts –** this section documents historical passenger, aircraft operations and air cargo activity at the airport and then makes projections regarding future levels of activity based upon industry trends, market knowledge, the application of statistical techniques and input from airport staff. The resulting forecast is submitted to the Federal Aviation Administration (FAA) for approval in the development of the Master Plan Update.
- **Facility Requirements –** this section assesses the ability of existing airport facilities to meet forecasted levels of passenger and aircraft operations. The assessment addresses all components of the Airport including airfield, terminal, ground transportation (roadways, parking and terminal curbside), air cargo, general aviation, and support facilities.
- **Environmental Considerations –** this section provides a comprehensive examination of environmental conditions and factors at the Airport so they can be considered during the formulation of the proposed development plan.
- **Alternatives –** this section examines options for addressing the facility requirements identified in the preceding section. Alternatives may include operational as well as capital improvements. A preferred alternative is identified for each component of the Airport.
- **Airport Plans –** this section combines the preferred alternatives identified in the preceding section into a comprehensive plan for the future development of the Airport. The plan result in a set of drawings referred to as an Airport Layout Plan drawing set. The Airport Layout Plan is approved by the FAA and indicates that the agency finds the proposed development to be safe, efficient and designed in accordance with FAA design standards. Proposed development must be depicted on the ALP in order to be eligible for federal funding.
- **Facilities Implementation Plan –** this section identifies and describes the plan's proposed projects. It then prepares cost estimates for each project and tentatively phases each project into a short, intermediate and long-term phases.
- **Financial Feasibility Analysis –** this is the final section of the plan. It examines the potential sources and uses of funds and formulates a plan for funding all the development proposed by the plan. Shifts of projects from one phase to another may occur to better match projects with available funds.

The following pages provide a brief description of the study's forecasts and then condense most of the subsequent tasks into a description of "Study Findings". The proposed development plan is presented and illustrated. Finally, a summary of the financial feasibility is presented. Readers interested in greater details should refer to the Master Plan Update Report and the Airport Layout Plan drawing set on file with the Airport Authority.

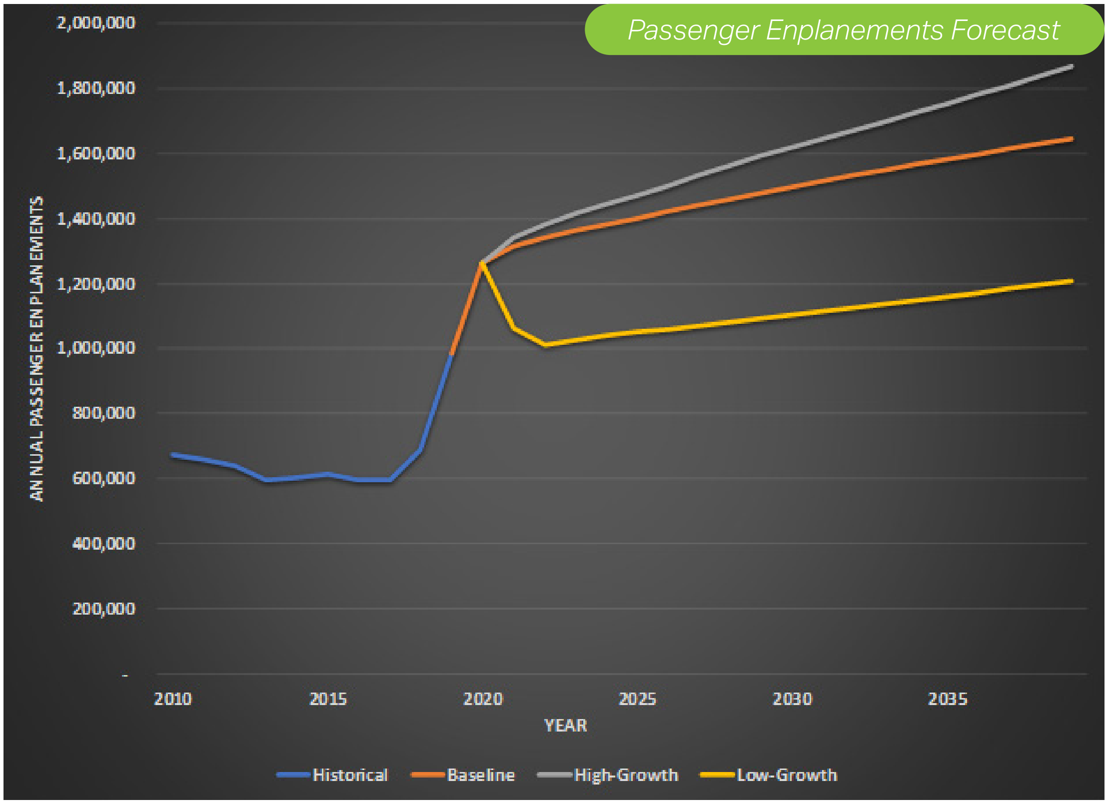
Forecasts

Forecasts of future passengers, air cargo and aircraft operations at SRQ were prepared just prior to the beginning of the COVID-19 pandemic. The pandemic had an immediate and significant adverse impact on the demand for air travel. Consequently, there is a substantial gap between the forecasts and demand at the beginning of 2021. However, it is anticipated that this gap will rapidly narrow as the pandemic subsides and ultimately ends.

The rate of recovery will depend on multiple factors including the distribution and use of vaccines, improvement of economic conditions and the willingness of leisure and business travelers to return to air transportation. Most industry observers expect leisure related travel will lead the recovery followed by business travel. International travel is expected to be the last segment to fully recover. It is also anticipated that low-cost carriers will more quickly recover than mainline carrier service due to their focus on leisure travelers and their direct point-to-point service.

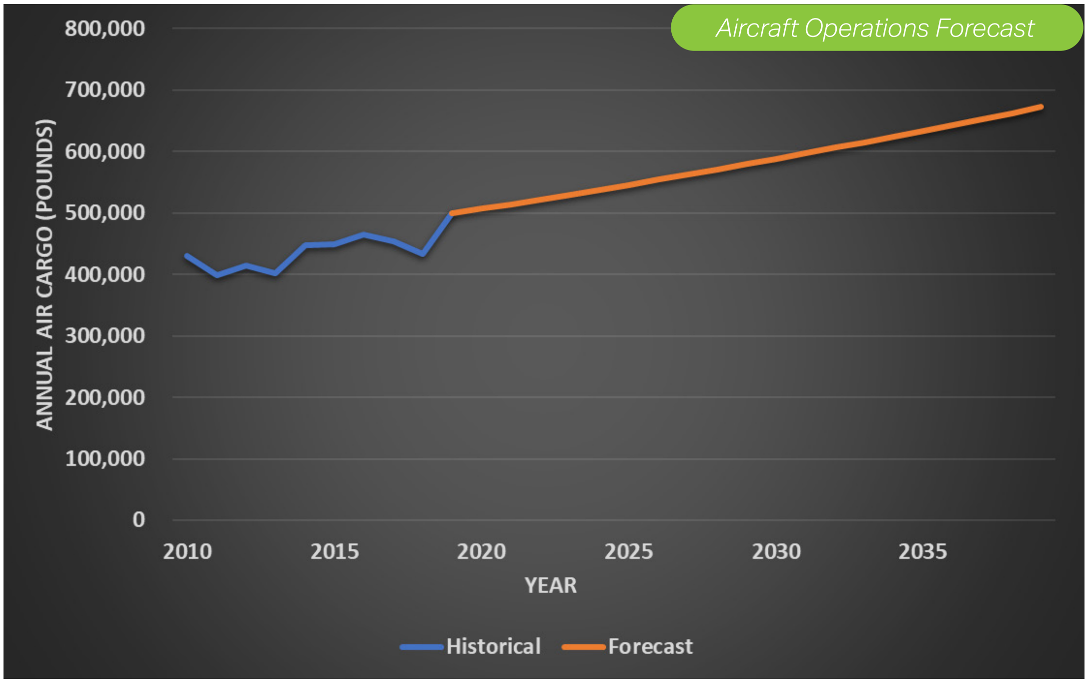
Another important development since the preparation of the Master Plan Update forecasts was the entry of Southwest Airlines into the SRQ market. This service is expected to further stimulate passenger demand and may lead to a quicker recovery of passenger enplanements in the short-term.

The forecast for passenger enplanements (i.e., the boarding of an aircraft by a revenue passenger) is presented in the figure below. It projects annual passenger enplanements will increase at an average annual rate of 2.6 percent and will reach 1.65 million passengers by 2039. Low-growth and a high growth forecasts were also prepared. They predict passenger enplanements of 1.20 million and 1.86 million enplanements, respectively in 2039. Although actual passenger enplanements may trail the forecast in the short-term due to the pandemic, it is likely that passenger enplanements will exceed the baseline forecast in the intermediate and long-term as a result of recent air service additions.

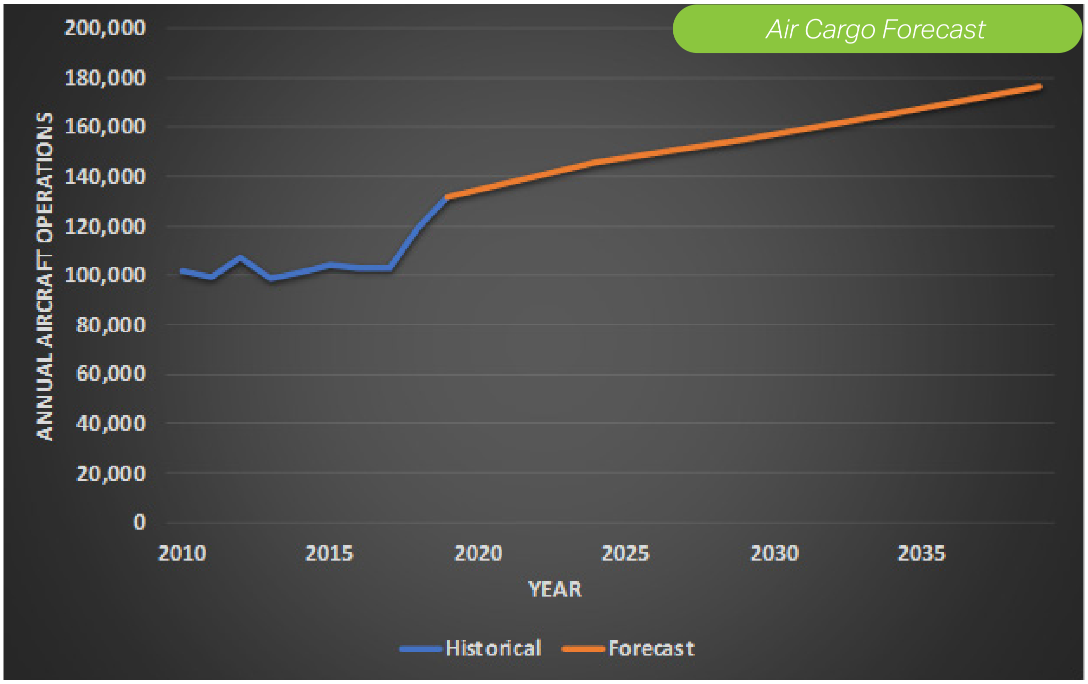


Passenger Enplanements Forecast

The forecast of aircraft operations (i.e., one aircraft landing or takeoff) predicts that total annual aircraft operations will increase from approximately 131,000 in 2019 to 177,000 in 2039. This represents an average annual growth rate of 1.5 percent. This growth is due to a projected growth of scheduled airline flights, itinerant aircraft operations and growth in the number of based aircraft. The figure to the right provides an illustration of the aircraft operations forecast.



A forecast was also prepared for air cargo at the Airport (see figure below). Recent air cargo operations at the Airport have been limited to belly freight carried by certain carriers, primarily Delta. No all-cargo carriers currently operate at the Airport. The forecast of air cargo predicts no significant change to historical growth patterns and projects that annual air cargo will grow at an average annual growth rate of 1.5 percent thereby reaching approximately 673,000 pounds in 2039.

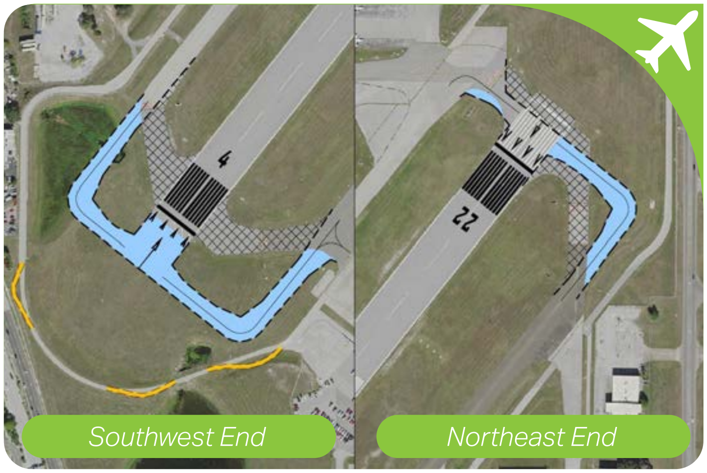


Study Findings

The following pages summarize the findings of the technical analyses performed on each element of the Airport including the airfield; terminal; ground access, curbside and parking; general aviation facilities; air cargo and support facilities. Projects recommended to address capacity or operational issues are identified. In addition to the projects developed as part of this Master Plan Update, the Airport Authority has an existing on-going Capital Improvement Plan (CIP). Projects from the existing CIP are not described in this section but are presented in a combined CIP along with project costs in the next section.

Airfield

- The existing airfield will provide sufficient capacity to meet current and future levels of aircraft operations. While aircraft operations at the end of the study horizon are projected to exceed 80 percent of airfield capacity, the likelihood of reaching that volume is highly uncertain. Therefore, less costly delay reduction actions such as constructing aircraft holding bays are recommended by the plan. A re-evaluation of airfield capacity should be conducted in the next master plan update.
- Existing runway lengths, widths and strengths are sufficient to meet the operational needs of existing and future aircraft operations.
- A 45-foot shift of Runway 4/22 to the southwest is recommended to resolve existing obstructions to the airspace clearances on the northeast end of the runway (along 15th Street East) and to resolve non-standard taxiway configurations that do not meet FAA design standards at both ends of the runway. The runway shift should occur through a combination of shortening pavement on the northeast end and extending pavement on the southwest end.
- There are no other significant airspace constraints in the vicinity of the airfield. There are obstructions in the runway approaches mostly in the form of tall trees however, the Airport Authority continues to implement obstruction removal actions to address this issue on a continuous basis.
- FAA land use guidelines recommend that airport owners control all property within the limits of the Runway Protection Zone (a trapezoidal shaped area beyond each runway end). The guidelines recommend that the property be cleared of all above ground objects. The Airport Authority does not currently own all property within the limits of the RPZ's. Therefor the study recommends that the Airport Authority purchase properties within the zones in fee simple from willing sellers. If fee simple acquisition is not possible, then avigation easements should be pursued.



- The existing taxiway system meets or exceeds width requirements for the aircraft likely to use each taxiway segment. Modifications to certain taxiways are needed to meet FAA design

standards and thereby enhance airfield safety. This includes a relocation of the segment of Taxiway A4 leading from the Dolphin Aviation ramp to Taxiway A and a modification of Taxiway R3 to reduce the line-of-sight to Taxiway A7. FAA design standards discourage direct connections from aircraft parking aprons to runways in order to reduce inadvertent runway incursions.

- Aircraft holding bays (which allow aircraft to bypass another aircraft and thereby reduce departure delays) are not currently provided on the airfield. Consultation with air traffic control tower personnel indicated that aircraft holding bays are desired at both ends of Runway 14-32. Therefore, the plan recommends the construction of aircraft holding bays at the north and south end of Taxiway A. These bays will enable aircraft to bypass small aircraft that are conducting engine run-ups prior to takeoff or awaiting aircraft departure clearances. These bays should reduce aircraft departure delays and provide greater flexibility to air traffic control personnel.
- The plan also identified one needed improvement to airfield lighting - the installation of Runway End Identifier Lights (REILs) on Runway 4. This system consists of two sequenced flashing white lights at the end of a runway. Their purpose is to enable pilots to rapidly identify a runway end during nighttime or low visibility conditions.
- Relocation of the airfield's existing weather monitoring system from its current location near the intersection of Taxiway C and F to a location east of Taxiway C and west of Taxiway J near the airport surveillance radar system. This relocation will eliminate the weather system's associated clearances that would otherwise restrict the amount and height of allowable development in the north quadrant of the airfield.

Passenger Terminal

The Master Plan Update assessed how well existing passenger terminal facilities will meet existing and future levels of passengers. The assessment was conducted on the basis of Planning Activity Levels (PALs) rather than years. PALs were used because they indicate when improvement are needed on the basis of passenger demand regardless of when that demand actually occurs. Therefore, deviations in the timing of passenger enplanement growth from the forecast will not matter when PALs are used for planning. A summary of the passenger terminal assessment is provided in **Table 1**.

The table indicates that outbound baggage systems and the passenger security screening checkpoint will be brought into balance with demand on the basis of projects that were recently completed or are planned for implementation in the short-term. Currently planned improvements to outbound baggage systems will meet all demand requirements through the 20-year planning horizon.

The recent reconfiguration of the passenger security screening checkpoint to a five-lane configuration will meet passenger demand until Planning Activity Level (PAL) 3 at which point further expansion maybe required. However, the projected need at PAL 3 should be re-evaluated again in the future based upon passenger composition (i.e., percent of Pre-Check passengers) at that time, as well as the capabilities of future screening technologies. These factors may result in greater passenger throughput and may delay the need for additional screening lanes.

Other elements of the passenger terminal that require expansion to accommodate future passenger demand includes gates, holdrooms, concessions and baggage claim. Holdroom expansions are needed on the basis of current and future demand. Restrooms

Table 1
Terminal Element Performance by Planning Activity Level (PAL)

Terminal Element	Existing	PAL 1	PAL 2	PAL 3
Airline Check-In Counters				
Airline Ticket Office Space				
Federal Inspection Services				
Outbound Baggage Systems				
Passenger Security Screening Checkpoint				
Gates				
Holdrooms				
Circulation				
Concessions				
Restrooms		✓	✓	✓
Baggage Claim				
Arrival Hall	✓	✓	✓	✓

Source: AECOM, 2020

Notes: ✓ These elements may need expansion for reasons other than passenger demand.

Legend: PAL 1 = 1.25 million passenger enplanements, PAL 2 = 1.50 million, PAL 3 = 1.75 million

Demand Less than Capacity   Demand at or Approaching Capacity   Demand Exceeds Capacity

and arrival hall space near baggage claim may also require expansion on operational factors such as distance from proposed new facilities.

The Master Plan Update recommends the following terminal projects:

- The construction of a new Federal Inspection Service facility is recommended for general aviation operations. This facility will eliminate the need to process general aviation operations at Gate B-8 thereby freeing that gate for use by scheduled airline operations.
- A series of holdroom expansions are recommended along Concourse B to provide space to better accommodate passenger seating, loading and unloading, as well as to provide additional concession space.
- A reconfiguration of concession space on the unsecure side of the terminal's second floor is

Holdroom Expansions

recommended along with the construction of a pedestrian bridge over the curbside roadway. This project will accommodate passengers who do not need access to ticketing and/or baggage claim

and would improve passenger flow past currently underutilized concession space. It would also provide capacity and pedestrian safety benefits by removing a portion of passengers from crossing the terminal curbside roadways.

- Construction of a new Concourse A with up to six new gates. This expansion will require the loss of existing Gate B1 so the net gain would be up to five gates. These gates will accommodate passenger demand through the planning horizon.

New Concourse A

- An expansion of the baggage claim lobby to the west to allow the construction of a fourth baggage claim carousel. This expansion would accommodate demand generated with the additional Concourse A gates through the end of the planning horizon.

Ground Access, Curbside and Parking

The study determined that Airport Circle, as well as other airport roadways have sufficient capacity to meet projected traffic demand throughout the study period. The intersections of Airport Circle and Old Bradenton Road at University Parkway currently operate at an acceptable Level-of-Service (LOS) but are projected to operate below desirable LOS at PALs 2 and 3. Improvements at these intersections need to be coordinated with Sarasota County and the City of Sarasota and should be monitored in future years to see if predicted LOS deficiencies actually occur. Changes in worker commuting patterns and ground transportation services may influence future traffic volumes.

The arrivals and departure curbsides currently operate at an acceptable LOS, but operations will degrade to a lower LOS at PAL 2 without traffic enforcement actions or capacity improvements. Additional short-term, long-term and rental car ready/return parking is required at all PALs. In addition, changes to the current parking configuration in the ready/return lot should be considered to improve the flow for vehicle returns and to reduce vehicle congestion in the lanes between parking spaces.

Roadway and parking projects proposed by the study include the following:

- A new Ground Transportation Center at the west end of the terminal outside the baggage claim lobby. The purpose of this project will be to reconfigure the existing ground transportation services by removing the old McClure Auditorium and repurposing this space for use as a pick up location for Transportation Network Companies such as Uber and Lyft, in addition to taxis, limousines, hotel shuttle buses and County transit. The project will also provide a separate driver's lounge with vending and restrooms.
- A project is proposed to relocate Valet Parking to the front of the short-term parking lot. The purpose of this project would be to provide one common point for both valet drop-offs and pick-ups and to reduce the required amount of vehicle

recirculation on airport roadways.

- The study recommends a new long-term parking lot to the east of the existing long-term parking lot. This lot would provide up to 550 spaces for long term parking in order to meet projected demand through the intermediate term.

- A new parking deck is recommended by the plan to accommodate additional parking for rental cars and short-term parking. This expansion would provide approximately 250 additional rental car parking spaces and approximately 300 additional short-term parking spaces. Realignment of the east-west connector road in conjunction with this project would allow a further expansion of long-term surface parking if needed.

General Aviation

The Master Plan Update proposes two Airport Authority funded hangar projects. Additional hangar projects proposed by airport tenants are also shown on the Airport Layout Plan along with aircraft ramps proposed by the Airport existing CIP.

- Additional aircraft hangars are needed to meet existing and forecasted numbers of based aircraft. It is estimated that up to 44 additional T-hangars and 263,000 square feet of conventional/ corporate hangar space will be needed by 2039. The study recommends the construction of 24 large T-Hangars and 20 small T-Hangars to meet estimated demand during the study period.

- Additional conventional hangars will be provided by the Airport's current tenants or third-party developers.

- The plan also notes that additional aircraft parking apron is needed to meet current and future demand for itinerant aircraft operations. Approximately 3,500 square yards of apron is needed to meet current demand. This will increase to 21,500 square yards of additional apron by 2039. The Airport's existing CIP contains plans for additional aprons that are incorporated into the CIP.

Air Cargo

The study determined that no additional air cargo facilities are required to meet projected demand. The projected growth of belly cargo carried by airlines can be accommodated in existing facilities.

Support Facilities

The Master Plan Update recommends several capital improvements for airport support facilities including the following:

- The study recommends that the existing Vehicle

Storage Building be expanded by 10,000 square feet at its south end to provide additional storage space for airport vehicles, supplies and equipment.

- The study also recommends that an additional 25,0000 square foot vehicle storage building be provided to accommodate long-term vehicle and equipment storage.
- The study proposes a new 5,000 square foot bulk storage facility to replace the existing building that is planned to be demolished for future commercial development.
- A project containing a series of Improvements to the existing ARFF station is proposed by the plan. These improvements include an additional apparatus bay for equipment currently stored outside and the creation of drive-through apparatus bays, additional storage space, improvements to access roads around and from the station, expansion of vehicle parking, replacement of the emergency generator and installation of an exhaust capture system.
- The plan proposes an expansion of the fuel farm in the long-term to maintain a 5-day fuel supply. The Airport Authority is installing two 102,000-gallon tanks in 2021 to attain a five-day fuel supply during peak month conditions. This requirement will increase to three 102,000-gallon tanks with 2039 demand.

Environmental Projects

The Master Plan Update recommends that environmental assessments be conducted in the short, intermediate and long-term as needed to obtain FAA environmental clearance for select projects. One additional environmental mitigation project from the Airport Authority ongoing CIP is also incorporated into the plan.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Capital Improvement Plan

The Master Plan Update identified 65 projects Including the projects described on the preceding pages as well as projects contained in the Airport Authority's existing and ongoing CIP. Cost estimates were prepared for each recommended project and then combined with the costs from the Authority's existing CIP. The projects were then phased into short-term, intermediate-term or long-term periods based upon factors such as the anticipated need from the Facility Requirements section, Airport Authority priorities, environmental approvals and anticipated funding availability. The short-term extends the five-year period extending from 2021 through 2025. The intermediate period extends the next five years from 2026 to 2030, while the long-term period extends the last ten years from 2031 to 2040.

Cost estimates were prepared in 2020 dollars and cost escalation was not applied to projects in the implementation plan. However, escalation was applied during the assessment of the plan's financial feasibility. **Table 2** below shows the un-escalated cost of the CIP by phase.

Table 2
Capital Improvement Plan Cost by Phase

Phase	Estimated Cost (2020 Dollars)
Short-Term	$118,758,335
Intermediate-Term	$158,102,139
Long-Term	$71,273,099
Total	**$348,133,573**

Source: AECOM, 2020. Cost estimates prepared by AID, 2020. Costs for ongoing CIP projects were obtained from the Airport Authority.

Short-Term Projects

Table 3 presents proposed short-term projects along with their estimated costs.

Table 3 Short-Term (2021 to 2025) Project Cost Estimates		
Project Designations	**Project Name**	**Estimated Cost (2020 Dollars)**
Environmental Projects		
E1	Conduct EA for Select Short-Term Projects	$375,000
E2	Wetland Mitigation*	$5,000,000
Airfield Projects		
A1	Shift Runway 4-22	$3,852,000
A2	Construct Runway 14-32 ROFA Improvements	$459,000
A3	Modify Taxiway A4 & R3 (Design only)	$150,000
A4	Relocate ASOS & Install RVR	$594,000
A5	Construct Perimeter Fencing Replacement*	$2,100,000
A6	Replace Airfield Guidance Signs - Phase 2*	$275,000
A7	Rehabilitate Taxiways C, C1, C2, C3*	$4,725,000
A8	Rehabilitate Taxiways A7, R4 & R5*	$1,192,000
A9	Construct Taxilanes in NorthQuad*	$1,400,000
A10	Rehabilitate Taxiway F*	$1,326,000
A11	Acquire RPZ Residential Prop/Easements (Approach to Runway 4)	$1,171,610
A12	Acquire RPZ Properties or Easements (Approach to Runway 22)	$538,731
Terminal Projects		
T1	Construct Holdroom/Concessions Expansion #2	$1,391,896
T2	Construct Holdroom/Concessions Expansion #3	$900,386
T3	Construct Holdroom/Concessions Expansion #5 plus Stairwell Improve-ments	$1,251,652
T4	Construct New GA FIS Facility	$3,109,000

Table 3
Short-Term (2021 to 2025) Project Cost Estimates

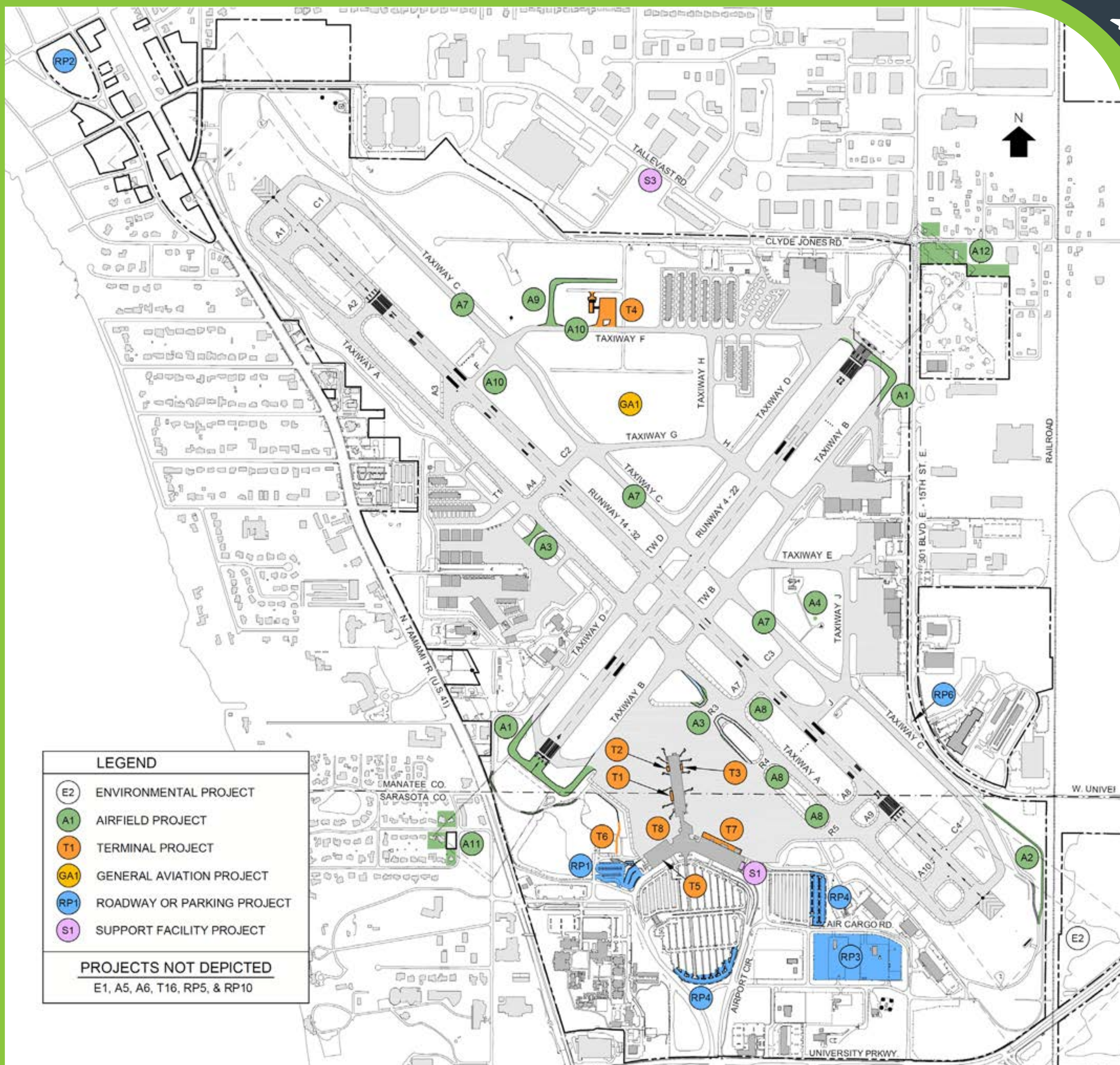
Project Designations	Project Name	Estimated Cost (2020 Dollars)
T5	Construct Rental Car Office Renovations*	$2,000,000
T6	Construct Blast Fence Deflector*	$800,000
T7	Construct New Consolidated In-Line Baggage System*	$41,000,000
T8	Design & Construct FIS Phase 2 (Access)*	$1,900,000
T16	Terminal Third Floor Renovations*	$3,000,000
General Aviation Projects		
GA1	Construct Air Center Aprons and Utilities*	$3,500,000
Roadway and Parking Projects		
RP1	Construct Ground Transportation Center	$3,905,716
RP2	Whitfield Driveway Removal*	$75,000
RP3	Construct CONRAC Service Facility*	$19,800,000
RP4	Expand Existing Long-Term and Shade Parking*	$3,611,344
RP5	Construct Airport Circle Way Point Signs *	$1,050,000
RP6	Construct 15th Street Observation Parking Area*	$250,000
RP10	Curbside Improvements*	$3,250,000
Support Facility Projects		
S1	Construct New Emergency Operations Center*	$1,500,000
S2	Conduct GIS Mapping & Master Utility Layout*	$250,000
S3	Construct Tallevast Industrial Park Roadway Improvements*	$3,055,000
	Total Short-Term Cost	**$118,758,335**

Source: AECOM, 2020. Cost estimates prepared by AID, 2020.

Note: * Designates a project from the Airport Authority's existing CIP. Costs derived from Airport Authority or third-party sources.

Short-Term Projects

The following figure provides an illustration of each short-term project and/or its location.



Intermediate-Term Projects

Table 4 presents proposed Intermediate-term projects along with their estimated costs.

Table 4
Intermediate-Term (2026 to 2030) Project Cost Estimates

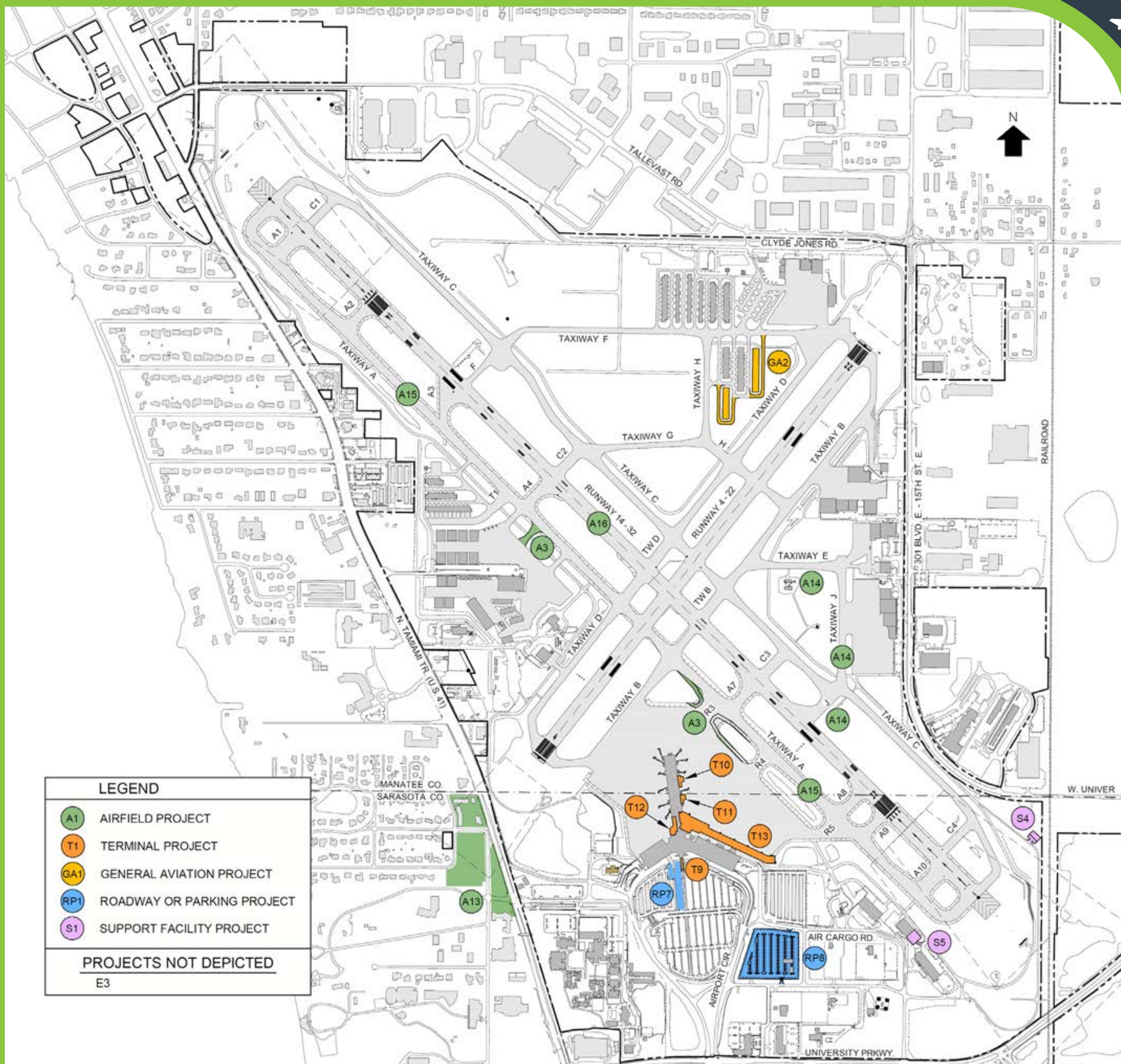
Project Designations	Project Name	Estimated Cost (2020 Dollars)
Environmental Projects		
E3	Conduct EA for Select Intermediate-Term Projects	$225,000
Airfield Projects		
A3	Modify Taxiway A4 + R3 (Construction)	$747,000
A13	Acquire RPZ College Property / Easements (Approach to RWY 4)	$9,414,020
A14	Rehabilitate Taxiway E & J*	$2,330,000
A15	Rehabilitate Taxiway A with Connectors*	$8,359,000
A16	Construct Runway 14-32 Improvements (Shoulders)*	$15,000,000
Terminal Projects		
T9	Construct Pedestrian Bridge & Reconfigure Concessions	$3,056,001
T10	Construct Holdroom/Concessions Expansion #6	$2,494,575
T11	Construct Holdroom/Concessions Expansion #7	$1,948,793
T12	Construct Holdroom/Concessions Expansion #1	$4,724,096
T13	Construct New Concourse A	$87,069,001
General Aviation Projects		
GA2	Construct 24 Large T-Hangars	$5,637,652
Roadway and Parking Projects		
RP7	Relocate Valet Parking	$898,000
RP8	Construct New Long-Term Parking Lot	$8,385,001
Support Facility Projects		
S4	Relocate Bulk Storage Facility	$1,662,000
S5	Expand Existing Vehicle Storage Building	$6,152,000
	Total Intermediate-Term Cost	**$158,102,139**

Source: AECOM, 2020. Cost estimates prepared by AID, 2020.

Note: * Designates a project from the Airport Authority's existing CIP. Costs derived from Airport Authority or third-party sources.

Intermediate-Term Projects

The following figure provides an illustration of each intermediate-term project and/or its location.



Long-Term Projects

Table 5 presents proposed long-term projects along with their estimated costs.

Table 5
Long-Term (2031 to 2040) Project Cost Estimates

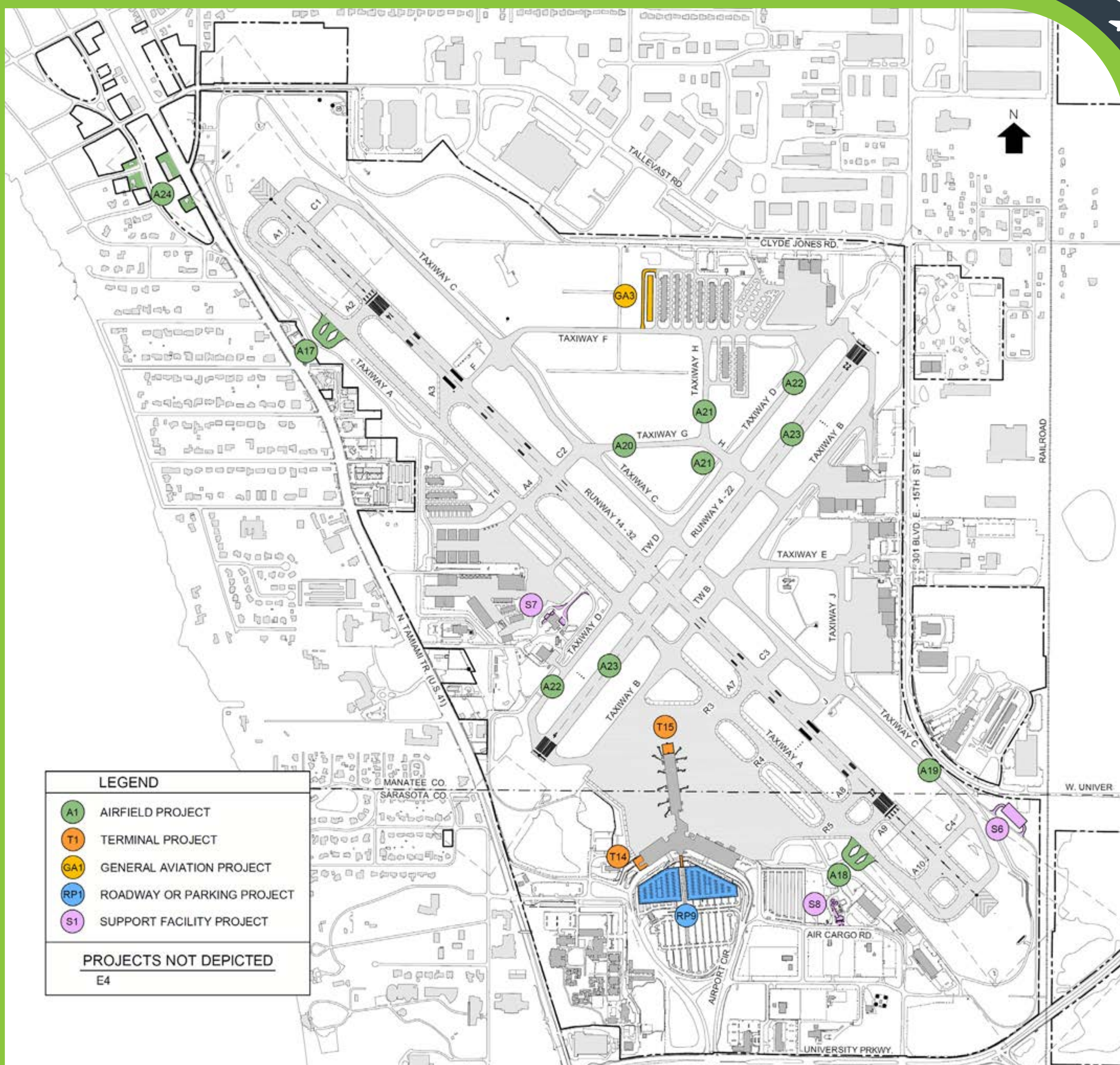
Project Designations	Project Name	Estimated Cost (2020 Dollars)
Environmental Projects		
E4	Conduct EA for Select Long-Term Projects	$300,000
Airfield Projects		
A17	Construct Holding Bay at North End of Taxiway A	$1,263,000
A18	Construct Holding Bay at South End of Taxiway A	$1,202,000
A19	Rehabilitate Taxiway C South*	$2,500,000
A20	Rehabilitate Taxiway G*	$1,800,000
A21	Rehabilitate Taxiway H*	$1,600,000
A22	Rehabilitate Taxiway D*	$3,800,000
A23	Rehabilitate Runway 4-22*	$5,000,000
A24	Acquire RPZ Properties or Easements (App to RWY 14)	$1,511,693
Terminal Projects		
T14	Expand Baggage Claim	$6,397,001
T15	Construct Holdroom/Concessions Expansion #4	$8,071,017
General Aviation Projects		
GA3	Construct 20 Small T-Hangars	$3,420,387
Roadway and Parking Projects		
RP9	Construct Short-Term & Rental Car Parking Deck	$23,915,001
Support Facility Projects		
S6	Construct New Vehicle Storage Building	$8,460,000
S7	Construct ARFF Station Improvements	$1,266,000
S8	Expand Fuel Farm (3rd Tank)	$767,000
	Total Long-Term Cost	**$71,273,099**

Source: AECOM, 2020. Cost estimates prepared by AID, 2020.

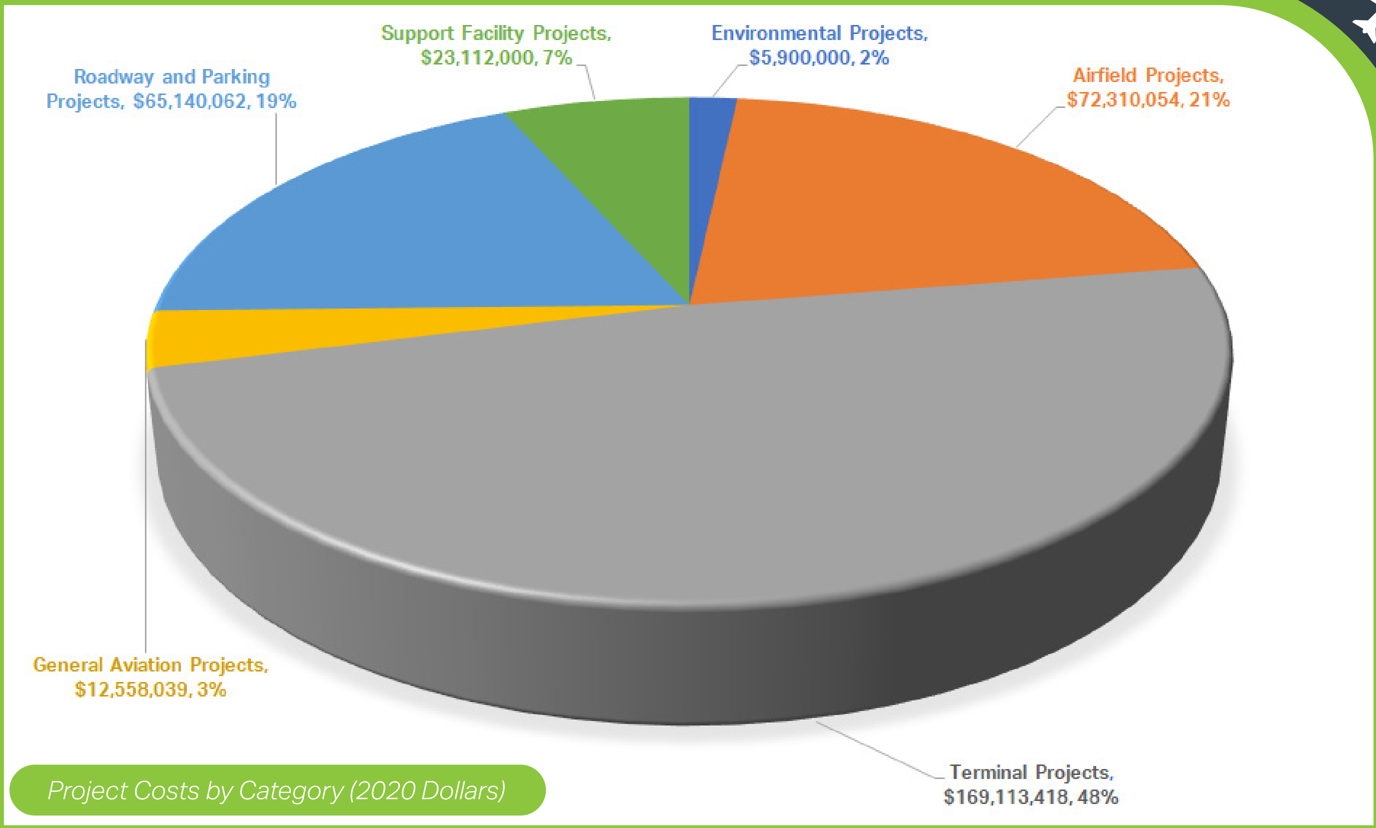
Note: * Designates a project from the Airport Authority's existing CIP. Costs derived from Airport Authority or third-party sources.

Long-Term Projects

The following figure provides an illustration of each long-term project and/or its location.



The following figure provides a breakdown of cost by category. Terminal projects account for the largest share of project costs at 48 percent. This is because the rapid growth of passenger enplanements at the Airport requires significant capital investments to accommodate existing and future growth.



Project Costs by Category (2020 Dollars)


srq
U.S. DEPARTMENT
OF TRANSPORTATION
FEDERAL AVIATION
ADMINISTRATION
AIR TRAFFIC
CONTROL TOWER
705

Financial Feasibility

The cost of the CIP in 2020 dollars is approximately $348 million. The escalated cost of the CIP, assuming that projects are implemented in the identified timeframes, is approximately $473 million. The financial feasibility analysis investigated sources of funds and made assumptions regarding the amount of funding that could realistically be obtained from those sources. The plan applied the estimated funding to each project in the CIP. Finally, the plan examined projected operating revenues and expenses and assessed whether the CIP is financially feasible. The conclusion of the analysis is that the CIP is financially feasible and would result in airline user costs that are in line with the national average for small-hub airports.

Sources of Funds

Potential sources of funds for the CIP include the following:

- **Federal Aviation Administration (FAA) Grants** – grants for airport improvements are available from the FAA through its Airport Improvement Program (AIP) as long as the proposed improvement is shown on the Airport's Layout Plan and meets other eligibility criteria. AIP grants come in two forms: "entitlement" grants that automatically accrue to the Airport based on the number of annual passenger enplanements and "discretionary" grants that the airport must compete for.
- **Florida Department of Transportation (FDOT) Grants** – FDOT provides grants to Florida airports for a wide variety of projects including some that may not be eligible for FAA grants. FDOT grants are typically used to fund a matching portion of projects that are partially funded by an FAA grant. They are also used to fund projects that are not AIP eligible. In those cases, an FDOT grant may constitute the majority of a project's funding.
- **Passenger Facility Charges (PFC)** – are another source of funds which are based on a per ticket charge per enplaned passenger at the Airport. These fees which are included in the cost of an airplane ticket are used to fund eligible airport projects. PFC's can be used in a pay-as-you-go manner and can also be used to fund debt payments for an eligible project.
- **Debt Financing** – can be used to fund projects for which other sources would be insufficient or in instances where a greater funding amount is needed in a shorter period of time.
- **Rental Car Customer Facility Charge** – these daily fees are included in the cost of rental car rentals that occur at the Airport. They are typically used to fund improvements to rental car facilities but may also be used to fund other improvements.
- **Other Capital Contributions** – this includes less typical funding sources such as grants from the Transportation Security Administration (TSA) and surrounding counties.
- **Airport Cash Reserves** - the Airport retains funds that exceed operating costs to use for capital improvements that may not be eligible for other sources of funding.

Uses of Capital Funding

Table 6 presents the assumed sources and uses of capital funding for the CIP in escalated dollars.

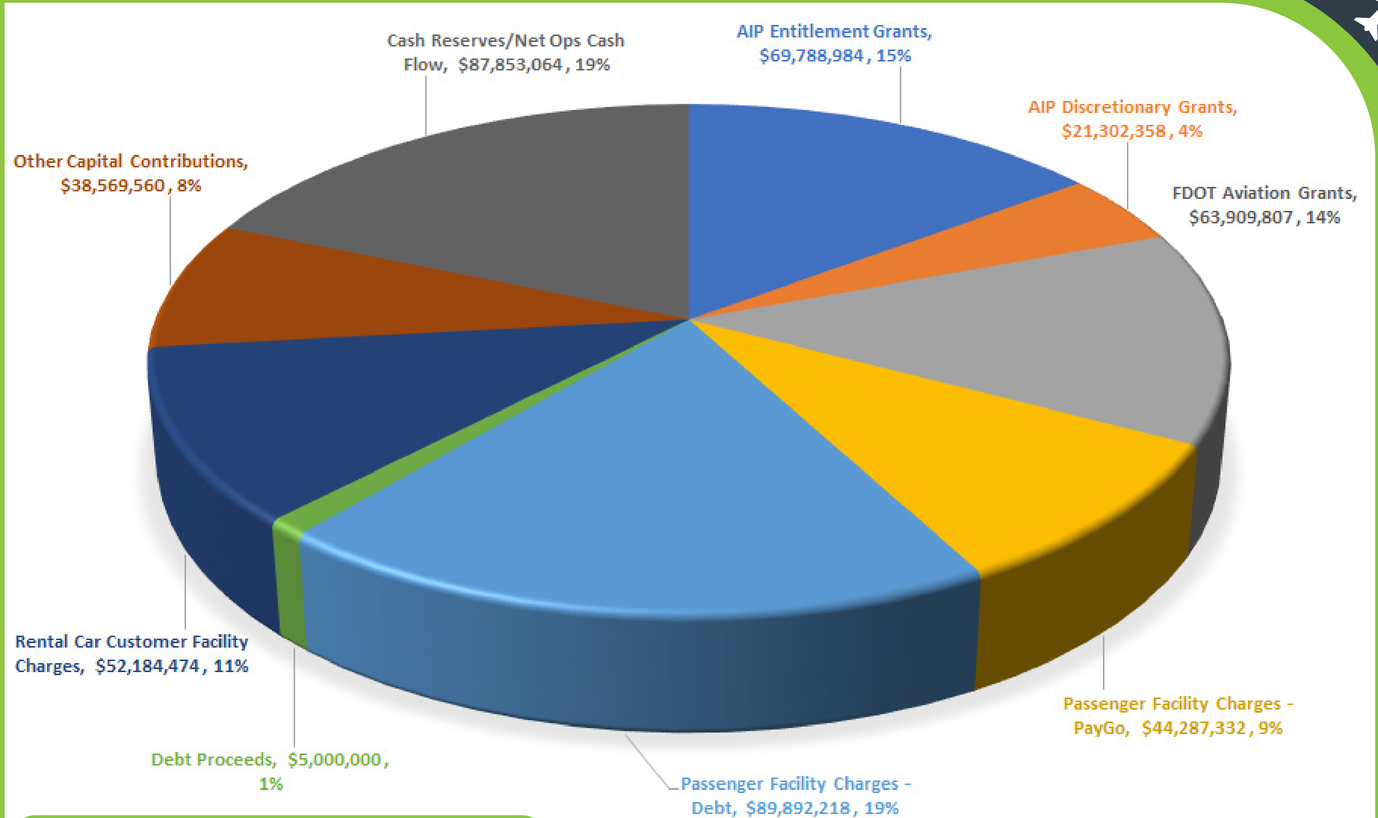
Table 6
Summary of Sources and Uses of Capital Funding for the Master Plan Capital Improvement Program

Sources of Capital Funding	Short-Term (2021-2025)	Intermediate-Term (2026-2030)	Long-Term (2031-2040)	Totals
AIP Entitlement Grants	$18,942,588	$24,582,337	$26,264,059	$69,788,984
AIP Discretionary Grants	1,789,553	17,393,153	2,119,652	21,302,358
FDOT Aviation Grants	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges - PayGo	13,648,060	13,600,727	17,038,545	44,287,332
Passenger Facility Charges - Debt	0	65,025,897	24,866,321	89,892,218
Debt Proceeds	0	5,000,000	0	5,000,000
Rental Car Customer Facility Charges	20,269,566	13,285,512	18,629,396	52,184,474
Other Capital Contributions	29,069,560	9,500,000	0	38,569,560
Cash Reserves/Net Ops Cash Flow	34,593,087	27,014,142	26,245,835	87,853,064
Total Sources of Capital Funding	**$130,513,592**	**$206,366,718**	**$135,907,487**	**$472,787,797**
Uses of Capital Funding	**Short-Term (2021-2025)**	**Intermediate-Term (2026-2030)**	**Long-Term (2031-2040)**	**Totals**
Environmental Projects	$6,160,934	$280,842	$467,390	$6,909,166
Airfield Projects	19,427,607	44,747,481	29,097,679	93,272,767
Terminal Projects	61,480,751	132,961,328	47,407,022	241,849,101
General Aviation Projects	3,651,350	7,036,836	5,328,851	16,017,037
Roadway or Parking Projects	34,355,663	11,586,909	37,258,792	83,201,364
Support Facility Projects	5,437,287	9,753,322	16,347,753	31,538,362
Total Uses of Capital Funding	**$130,513,592**	**$206,366,718**	**$135,907,487**	**$472,787,797**

Note: Addition errors are due to rounding of calculated amounts.

Source: Leibowitz & Horton AMC analysis.

The following figure provides an illustration of the sources of funding in future dollars and on a percentage basis. The figure reveals that PFCs both "pay as you go" and those used for servicing debt payments, will provide the largest percentage (28%) of funds. AIP grants from the FAA and Airport Cash Reserves will provide the next largest shares of funding at 19 percent each. Other sources account for the remaining balance.



Sources of Funding (Future Dollars)

Cost Per Passenger Enplanement

The Airport's cost per passenger enplanement is projected to grow from $7.02 budgeted in 2021 to an average of $7.71 during the Long-Term planning period. Over the same period, the overall Small-Hub industry average grows from $7.36 in 2021 to $7.96 during the Long-Term. Therefore, implementation of the CIP will result in a cost per passenger enplanement in line with the national average for similar size airports.


SARASOTA BRADENTON
INTERNATIONAL AIRPORT

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with:
American Infrastructure Development, Inc.
Leibowitz & Horton Airport Management Consultants
Walker Consultants

Sarasota Bradenton International Airport

MASTER PLAN UPDATE
FINAL REPORT

November
2021

Prepared for: The Sarasota Manatee Airport Authority

srq

ADDENDUM

INTRODUCTION

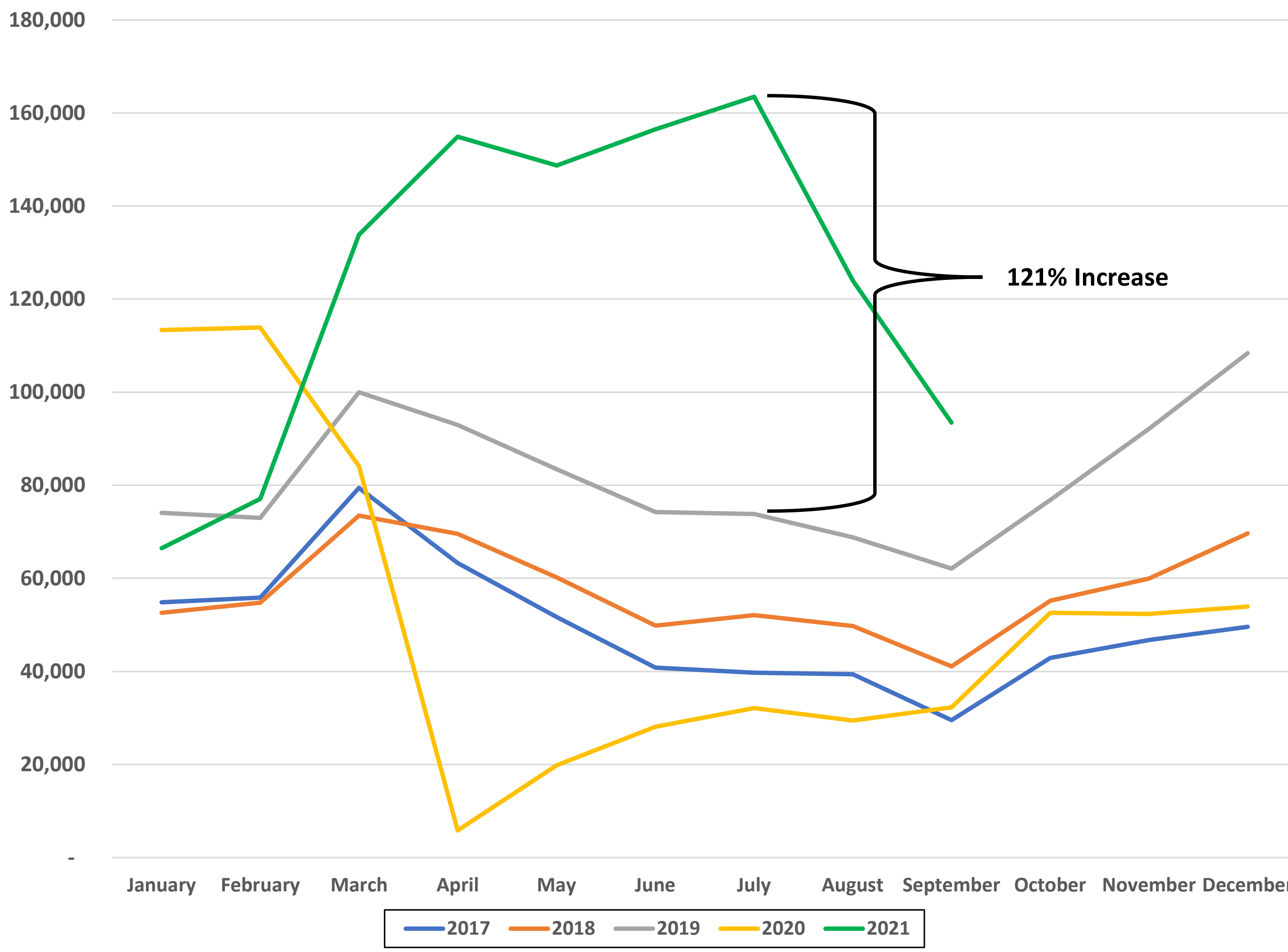
This Master Plan Update was presented to, and accepted by, the Sarasota Manatee Airport Authority for transmittal to the Federal Aviation Administration (FAA) and the Florida Department of Transportation (FDOT) on March 22, 2021. During the ensuing months Sarasota Bradenton International Airport (SRQ) continued to experience record breaking increases in passenger enplanements. The magnitude of the increase in passenger demand can best be seen in **Figure 1** which illustrates monthly passenger enplanements from 2017 through September 2021. As the figure indicates, monthly passenger enplanements during July 2021 were 121 percent higher than the same month in 2019 (i.e., pre-COVID). This represents exceptional growth and is even more surprising considering that it transpired during a pandemic.

At an annual level, SRQ passenger enplanements have increased from approximately 600,000 in 2017 to nearly 1 million in 2019 (i.e., pre-COVID) and are projected to finish in the range of 1.6 million by the end of 2021. By comparison, the FAA-approved forecast in the Master Plan Update estimates that annual passenger enplanements would not reach 1.6 million until the mid-2030's.

This exceptional growth has placed significant demands on existing airport facilities at a much faster rate than historical growth patterns would have indicated. These demands include increased need for airport parking, passenger security screening lanes, airside concessions, holdroom space and gates. Several airlines at the Airport are seeking additional gates to support their current needs. Increased passenger demand is also resulting in higher maintenance requirements on equipment such as escalators and elevators which are conveying far greater numbers of passengers up to and down from the second floor.

As a result of this increased demand, the Airport Authority has taken actions to address passenger and operational needs in an expedited manner. These actions include modifying certain projects to better meet immediate passenger needs and shifting proposed projects to earlier timeframes. Additional projects have been added as a result of the following: further planning conducted since the completion of the Draft Master Plan Update, coordination/negotiation with existing and prospective tenants and lastly, changes made in response to comments received from the FAA. The purpose of this addendum is to describe and illustrate these projects so readers can understand what changes have been implemented to the plan presented in Sections 1.0 through 7.0 of this report.

Changes to the Master Plan Update are described by functional elements of the Airport. The most significant changes from the draft Master Plan are related to terminal facilities and therefore are presented first. Changes to other elements are then described on the subsequent pages. These changes are depicted on the Airport Layout Plan (ALP) that was submitted to the FAA for approval.



Source: Sarasota Manatee Airport Authority, 2021

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

SRQ MONTHLY PASSENGER ENPLANEMENTS 2017 TO 2021

FIGURE 1

TERMINAL

Following the presentation of the Draft Master Plan Update at the March 22, 2021 board meeting, the Airport Authority solicited design services from consultants for an expansion of the passenger terminal's existing Concourse B and the design of a new Concourse A as recommended by the draft plan (please refer to page 5-12 of the Master Plan). The Airport Authority subsequently selected the architectural firm of Gresham Smith and directed the firm to evaluate the feasibility of constructing five ground-level boarding gates in conjunction with a small expansion at the east end of the existing ticketing wing. These additions would be designed to accommodate another passenger security screening checkpoint along with holdrooms, restrooms, concessions and support space. The purpose of the Airport Authority's request was to evaluate the ability to construct additional ground level gates in a shorter timeframe and at lower cost than building a full second-level Concourse A with boarding bridges.

After studying a variety of alternatives, a recommended concept (see **Figure 2**) was developed that achieved the Airport Authority's goals of providing additional gates in a quicker timeframe and at lower cost than the original Concourse A plan while also avoiding significant impacts to the existing shade parking lot east of the terminal. **Figure 3** provides a plan view illustration of the proposed concept.

The recommended concept consists of constructing approximately 76,000 square feet of new terminal at the east end of the existing ticketing wing. This new space would accommodate a new passenger security screening checkpoint, restrooms, concessions and support space. It would also allow for a future expansion of ticket counters in conjunction with a relocation of the existing airport authority boardroom. This expansion would connect to a concourse that would provide holdrooms for five new ground-level boarding gates. The concourse would also provide vertical circulation to a future Phase 2 expansion that would consist of second level gates with boarding bridges as recommended in the original plan (see **Figure 4**).

Modifications to the existing aircraft apron in this area would support five aircraft parking positions along with space to accommodate an apron taxilane that would shift north of its current location. It would also include needed modifications to Taxiway R5 to provide access to Taxiway A.

The recommended concept does have limitations including the fact that passengers arriving at the ground-level gates will need to transit through the ticketing lobby to reach baggage claim, rental cars and other ground transportation services. These limitations are recognized by the Airport Authority but are viewed as necessary short-term trade-offs to quickly obtain additional gates and passenger handling facilities at lower cost.

However, the concept also enables these limitations to be eliminated in the future by constructing a Phase 2 expansion that provides additional second level gates with boarding bridges as proposed by the original plan. These gates would allow passengers arriving at the ground-level gates to circulate up to a future Concourse A and exit the concourse at the center of the terminal in the same manner as they currently do from Concourse B. This would eliminate the need for arriving passengers to pass through the ticket lobby. **Figure 5** provides an isometric view of

SOURCE: GRESHAM SMITH, 2021

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

RECOMMENDED TERMINAL CONCEPT

FIGURE 2

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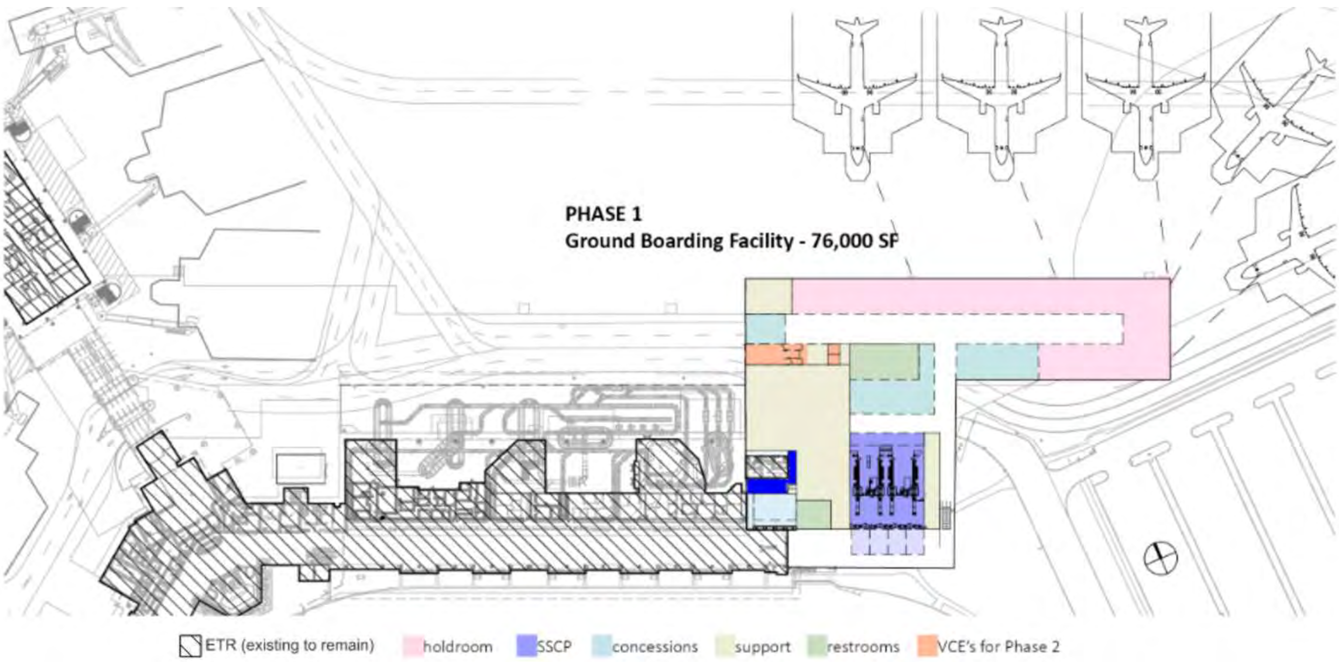

SOURCE: GRESHAM SMITH, 2021

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MASTER PLAN UPDATE

RECOMMENDED TERMINAL CONCEPT - PLAN VIEW

FIGURE 3

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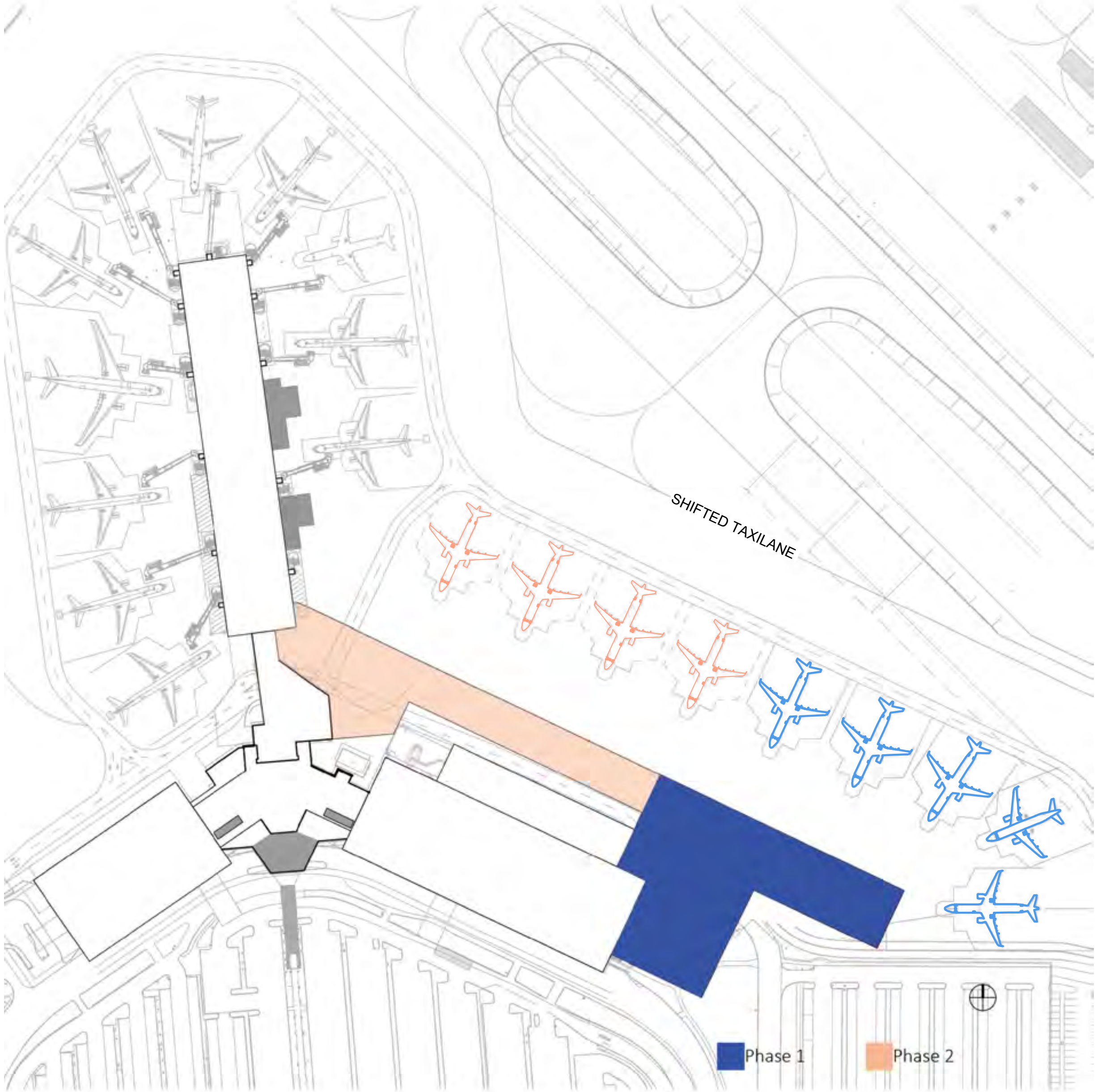

SOURCE: GRESHAM SMITH, 2021

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

RECOMMENDED TERMINAL CONCEPT (PHASE 1 AND 2)

FIGURE 4

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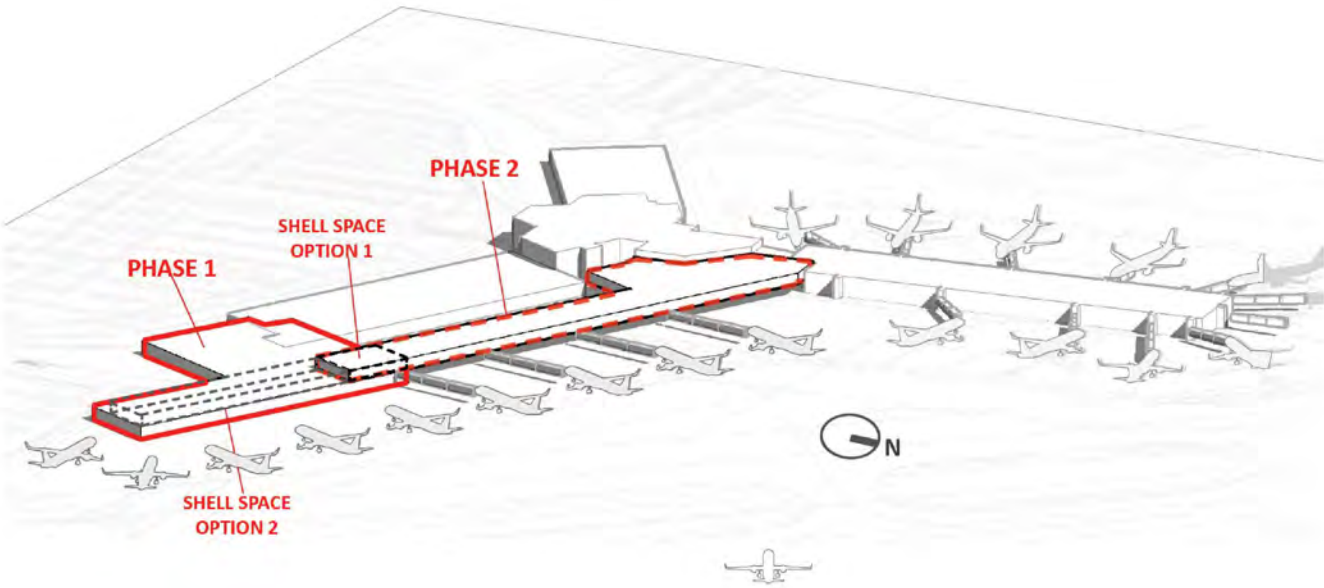

SOURCE: GRESHAM SMITH, 2021

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

ISOMETRIC VIEW
(PHASE 1 AND 2)

FIGURE
5

C:\Civil 3D Projects\SRQ\Addendum Figures\FIG 5.dwg 10/06/2021 17:32

Phase 1 and Phase 2 and how they would connect to the existing terminal. These figures also depict an option whereby the five ground level boarding gates in Phase 1 could becoming second level boarding bridge gates in the future by constructing shell space above the first-floor concourse.

The Airport Authority is currently proceeding with the Phase 1 concept along with other terminal projects including expansions of Concourse B to provide additional concession and holdroom space and a project to improve vertical circulation by expanding and replacing the escalators in the center of the terminal so they can better meet passenger demand while reducing maintenance requirements.

TERMINAL APRON

Construction of the passenger terminal facilities described above will require modifications to the existing apron in the vicinity of Taxiway R5. The final configuration of the apron changes will be determined during the design process but will include changes to the geometry of Taxiway R5 and a shift of the existing apron taxilane to the north to provide proper separation from the aircraft parking positions at the new gates.

The shift of the taxilane centerline will result in the loss of three Remain Overnight (RON) aircraft parking positions located at the east edge of the terminal ramp between Taxiways R4 and R5. Therefore, a new RON ramp was added to the ALP to show the addition of approximately 8,000 square yards of new apron on the west side of the terminal apron. This proposed RON ramp would accommodate three Airbus A321 aircraft as shown in **Figure 6**.

PARKING

PUBLIC PARKING

Two additional public parking lots were added to the ALP after completion of the draft plan. These lots include a proposed cell phone lot at the southwest corner of Rental Car Road and Old Bradenton Road and a new public parking lot at the northeast corner of University Parkway and Old Bradenton Road. These lots are shown in **Figure 7**.

The proposed cell phone lot is intended to replace the existing lot which will be displaced by construction of the consolidated rental car service facility on the north side of Rental Car Road. The Draft Master Plan intended for an interim cell phone lot to be provided in a proposed public lot just east of Airport Circle, however that parcel is currently occupied by Hertz and will not be available in the timeframe required. The proposed cell phone lot will provide approximately 165 paved spaces.

The proposed public parking lot is intended to provide approximately 470 additional long-term spaces to meet increased demand. Parking demand during the summer months of 2021 reached total capacity and overflow operations were needed. Airport staff intends for this parking lot to

SOURCE: AECOM, 2021

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

PROPOSED NEW RON AIRCRAFT PARKING

FIGURE 6

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SOURCE: AECOM, 2021

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SARASOTA BRADENTON
INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

ADDITIONAL PUBLIC PARKING FACILITIES

FIGURE
7

provide additional capacity in the short-term before the next proposed lot east of Airport Circle can be constructed.

EMPLOYEE PARKING

Construction of the proposed RON aircraft ramp on the west side of the existing terminal apron will require relocation of a portion of existing employee parking. The ALP was therefore revised to show expansion of employee parking to the west. The proposed expansion is shown in Figure 6.

AIRFIELD

Changes to proposed airfield projects consist almost exclusively of items that were changed in response to comments received from the FAA during their review of the draft Airport Layout Plan (ALP). These changes are described by runway in the following paragraphs.

RUNWAY 14-32

Runway Object Free Areas

The existing service road at the south end of Runway 14-32 penetrates the Runway Object Free Area (ROFA); please refer to Figure 4.2-6 in the Master Plan. The Draft Master Plan proposed closing the inner service road, removing the portion of road located inside the ROFA and widening and using the outer service road. The FAA requested that a Modifications to Standards (MOS) be submitted for the existing service road's penetration of the ROFA until such time the recommended master plan solution can be implemented.

Filing an MOS requires a review of options that will provide a level of safety equivalent to the design standard. Two options were identified that would provide an equivalent level of safety. The first option is to apply declared distances, which would effectively shorten the operational length of Runway 14 to end the ROFA prior to reaching the service road. The second option is to close the inner service road and use the outer service road in its current condition without improvements. Consultation with airport staff revealed that the second option is preferred and will be implemented thereby negating the need to file an MOS for this condition.

TAXIWAY CONNECTORS

Several changes were made to the ALP for taxiway connectors in response to FAA comments. These included changes to the geometry of taxiway connectors A3, J, A8 and at the intersection of taxiways C and F and at the intersection of taxiways D and F which deviate from design standards. The Draft Master Plan noted that all airport taxiways would be brought into compliance with current design standards at the time of their rehabilitation of reconstruction. The following taxiway geometry changes were added to the ALP and are described in the following paragraphs. They are depicted in **Figure 8**.

SOURCE: AECOM, 2021

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

PROPOSED TAXIWAY CHANGES

FIGURE 8

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Taxiway A3

Changes were made to the ALP to show the removal of the current angled Taxiway A3 and its replacement with a 90-degree connector taxiway in the same location. This connector taxiway would maintain access from Taxiway A to Taxiway F and proposed general aviation development.

Taxiway J

The existing Taxiway J contains excess pavement compared to the current design standard. The ALP was revised to show this connector taxiway rehabilitated to the design standard by removing the excess pavement.

Taxiway A8

The FAA requested the taxiway connection from the passenger terminal ramp to Runway 14-32 via Taxiways R5 and A8 be eliminated. The ALP was revised to show the future closure of Taxiway A8.

Other Taxiway Changes

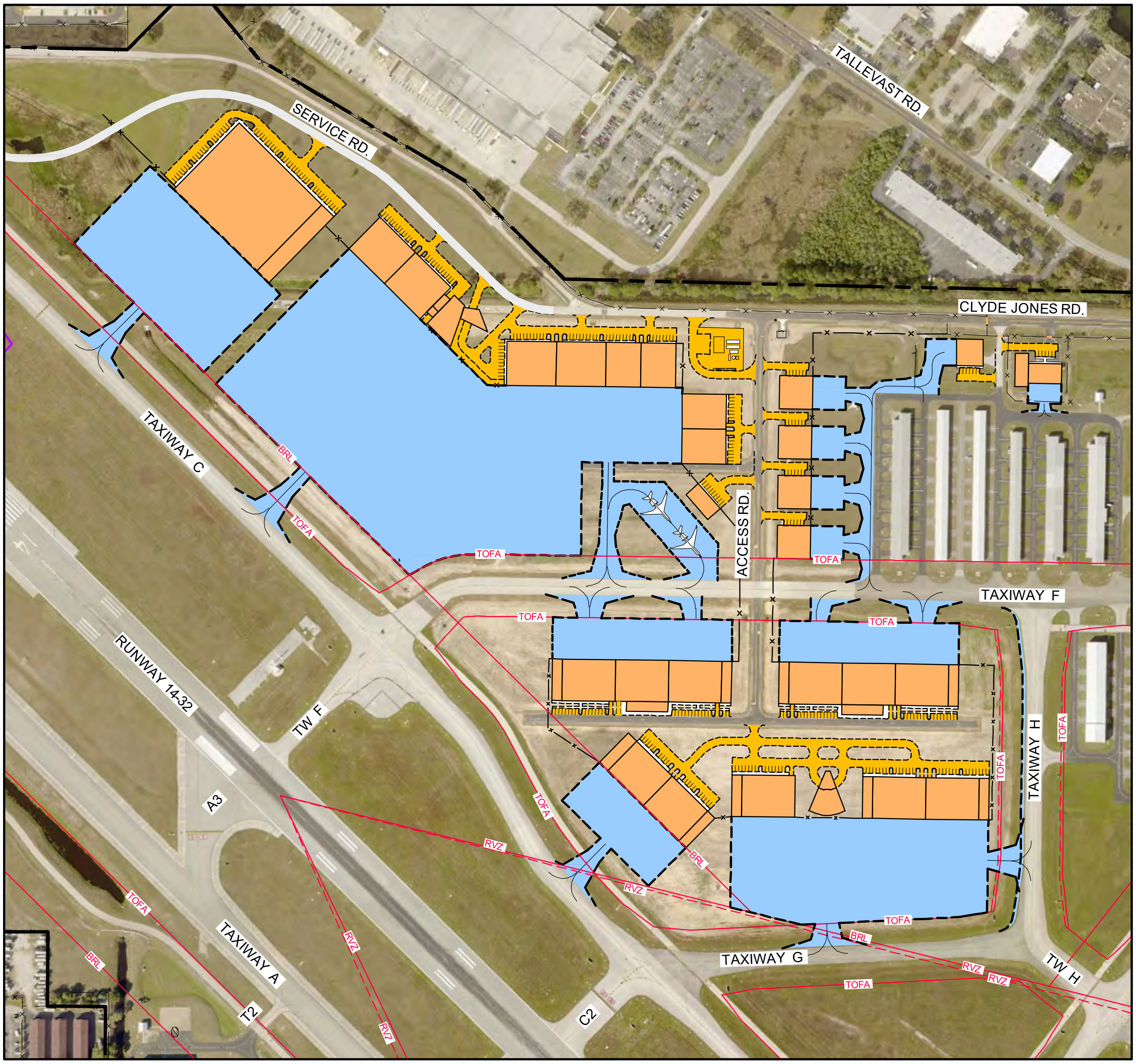
An existing aircraft holding bay is located on the south side of the intersection of Taxiways C and F. This holding bay does not meet current FAA design standards and is proposed to be replaced by a new holding bay on Taxiway A across from the landing threshold of Runway 14. Therefore, the ALP was revised to show the pavement associated with this holding bay removed once the new holding bay is constructed.

Another revision to the ALP includes removal of excess pavement at the intersection of Taxiway D and Taxiway F. The portion of pavement on the southwest side of this intersection that exceeds the design standard fillets is recommended for removal when the adjoining taxiways are rehabilitated or reconstructed.

GENERAL AVIATION

Airport Authority staff have received numerous proposals for development of new general aviation facilities in the north quadrant of the airfield. Due to the fact that development proposals are frequently received and revised, it was deemed more appropriate to indicate areas of the North Quadrant suitable for redevelopment on the ALP than to show facility layouts that are constantly changing. The Airport Authority subsequently undertook additional planning efforts for the north quadrant in conjunction with additional development proposals received after the draft plan was accepted by the Airport Authority. Furthermore, the FAA requested that an actual layout be depicted on the ALP.

Figure 9 shows the current layout of facilities which depicts the potential for one or more additional FBO / GA terminal facilities and hangars along with aircraft parking aprons. These facilities are



LEGEND

NEW AIRFIELD PAVEMENT

NEW HANGARS / BUILDINGS

NEW ROADS / PARKING

N

500 0 500

GRAPHIC SCALE IN FEET

SOURCE: AECOM, 2021

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

PROPOSED NORTH QUADRANT DEVELOPMENT PLAN

FIGURE 9

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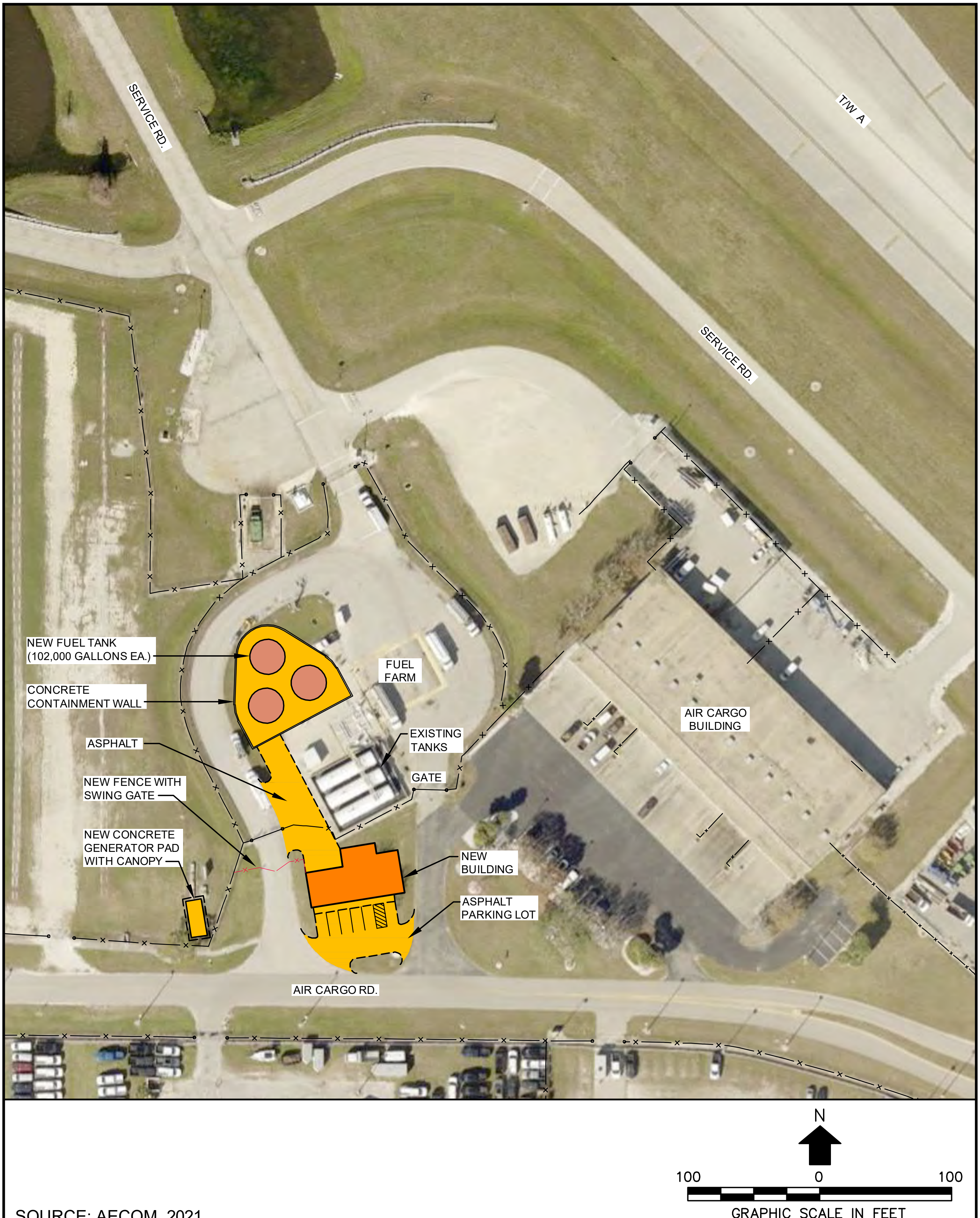
aligned with the findings of the Facility Requirements chapter which identified a need for additional hangar and aircraft parking apron to meet future demand. The actual development in the north quadrant will change as development proposals continue to evolve according to tenant business plans.

FUEL FACILITIES

Two 102,000-gallong fuel tanks for Jet-A were constructed at SRQ in 2021 to keep up with rapidly increasing demand by commercial carriers. The Draft Master Plan included space for a third 102,000-gallon fuel tank that was planned for the long-term period. The Airport Authority has accelerated the construction of the third tank to the short-term. The third tank is now planned for completion in 2021. **Figure 10** shows the layout of the fuel farm with all three tanks.



SOURCE: AECOM, 2021

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

PROPOSED
FUEL FARM EXPANSION

FIGURE 10

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Sarasota Bradenton International Airport Master Plan Update

Final Report

Prepared for:

The Sarasota Manatee Airport Authority

Prepared by:

AECOM

with

American Infrastructure Development, Inc.
Leibowtiz & Horton Airport Management Consultants and
Walker Consultants

November 2021

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TABLE OF CONTENTS

Section **Page**

LIST OF APPENDICES

LIST OF TABLES

List Of Figures

SECTION 1.0

Inventory

SECTION 1.0 INVENTORY

1.1 AIRPORT BACKGROUND AND HISTORY

Sarasota Bradenton International Airport (SRQ or the Airport) is owned and operated by the Sarasota Manatee Airport Authority (SMAA). The SMAA is a public agency created by the State of Florida and comprised of six commissioners that are appointed by the Governor. The Airport Authority is tasked with operating and maintaining SRQ to meet the air transportation needs of Sarasota and Manatee Counties. The Airport Authority does not have taxation power; therefore, operating budgets are dependent upon airport generated revenue.

The Sarasota-Bradenton International Airport (SRQ) is comprised of 1,231 acres of land within both Sarasota and Manatee Counties. Initially SRQ was constructed as a civil airport in 1941 to serve the areas general aviation needs. Later, SRQ was leased to the U.S. Air Army Corps as a training facility during World War II. In 1947, the U.S. Army Air Corps returned the Airport to the Airport Authority to function as a public use airport. The Sarasota Manatee Airport Authority Act was passed in 1955 by the Florida Legislature to oversee the maintenance and growth of the Airport.

While SRQ had been providing commercial service since the early 1940's, jet service was not available until 1965 which spurred new development at the Airport. Following the inception of the SMAA, numerous improvements were made including construction of a new terminal building in 1959 and extensions of the primary runway. SRQ continued to grow through the 1970's with the construction of new hangars and improvements to the terminal building.

The current passenger terminal opened to passengers in 1989 following two years of construction. Opening of a direct roadway connection to University Parkway that provided easy access east to Interstate 75 followed in 1992. Numerous other airfield and landside projects have been completed since that time to improve the Airport for passengers and tenants. The U.S. Customer and Border Patrol began providing service in 1992 which is when "International" was added to the Airport's name.

1.2 AIRPORT LOCATION AND CLASSIFICATION

Sarasota-Bradenton International Airport is located on the north border of Sarasota County and the south border of Manatee County; 3.5-miles north of the City of Sarasota; and 5-miles south of the City of Bradenton.

The main portion of airport property is bordered on the north by Tallevast Road, on the south by University Parkway, on the east by US Highway 41 and on the east by 15 Street East. Additional airport parcels extend east to US Highway 301. **Figure 1.2-1** depicts the location of SRQ within the State of Florida and locally. The Airport is located in Florida Department of Transportation (FDOT) District 1 which includes twelve counties in Southwest Florida including Sarasota County and Manatee County.

LOCATION MAP

VICINITY MAP

Sources: Location Map, 2019: Florida Department of Motor Vehicles
Prepared by: American Infrastructure Development, Inc.

srq

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

LOCATION AND VICINITY MAPS

FIGURE 1.2-1

The 2019-2023 National Plan of Integrated Airport Systems (NPIAS) classified SRQ as a primary commercial service airport. Primary Commercial service airports are defined by the plan as public airports that receive scheduled passenger service and have more than 10,000 passenger enplanements per year. The Airport enplaned 979,810 passengers in 2019[1].

Additionally, the NPIAS further classifies the Airport as a small hub. Small hubs are defined as airports that enplane 0.05 percent to 0.25 percent of total United States (U.S.) passenger enplanements.

1.3 PREVIOUS STUDIES

The Airport Authority prepared numerous master plan updates prior to this study. The following paragraphs summarizes major recommendations of some the most recent studies.

1980 Master Plan – This master plan was published June 1980 and addressed facility requirements through 1995. Development recommended by this master plan included relocating fixed based operators (FBOs), a new terminal building, relocating the airport's entrance, a new air traffic control tower, and a new cargo terminal.

1986 Master Plan – This master plan was initiated in 1985 and completed in 1986. It addressed facility requirements through 2005. Development recommended by this master plan included apron expansion, additional hangars, additional vehicular parking, and terminal modernization.

1993 Master Plan - This master plan was published September 1993 and focused on facility requirements through 2012. Development recommended by this master plan included an FIS facility, an extension of Runway 14-32, land acquisition, terminal parking expansion, and FBO apron expansion.

2009 Master Plan - This master plan was published May 2009 and focused on facility requirements through 2026. Development recommended by this master plan included terminal renovations, a parking garage, relocating the airport traffic control tower, an air carrier apron expansion, and the installation of an Engineered Materials Arresting System (EMAS) on Runway 4-22.

Some projects recommended by the previous master plans were not implemented.

1.4 AIRFIELD SYSTEM

This section provides an overview of existing airfield characteristics at SRQ. The following data provides a basis for determining airfield demand/capacity and the identification of facility requirements necessary to support the movement and operation of aircraft such as runways, taxiways, navigational aids, airfield lighting, pavement markings, and airfield signage.

[1] Sarasota Manatee Airport Authority, 2020.

1.4.1 RUNWAY LAYOUT

SRQ has two intersecting runways that are oriented in a crossing configuration. **Figure 1.4-1** provides details regarding physical and operational characteristics of both runways.

Runway 14-32 is the primary runway at SRQ with a published length of 9,500 feet and a width of 150 feet. The runway is a precision instrument runway and is constructed of asphalt and is grooved. The runway has displaced thresholds of over 1,000 feet on both ends. Pavement condition is reported to be in satisfactory condition according to the November 2019 FDOT Statewide Pavement Management Program study. The runway is currently rated at a strength to accommodate aircraft with a single wheel bearing capacity of 118,000 pounds, dual wheel capacity of 196,000 pounds, and dual tandem wheel capacity of 358,000 pounds.

Runway 4-22 is a crosswind, non-precision visual runway with a published length of 5,006 feet and a width of 150 feet. Thresholds are not displaced on Runway 4-22, therefore declared distances are not in effect and the full runway length is available for arrivals and departures. The surface of the runway is grooved asphalt with non-precision markings. Pavement condition is reported to in good condition according to the November 2019 Florida Department of Transportation (FDOT) Statewide Pavement Management Program study. The runway is currently rated to accommodate aircraft with a single wheel bearing capacity of 120,000 pounds, dual wheel capacity of 219,000 pounds, and a dual tandem wheel capacity of 404,000 pounds.

Table 1.4-1 presents a summary of the characteristics for both runways. Airport Traffic Control Tower personnel estimate that 80 percent of aircraft operations occur on Runway 14-32 with the remaining 20 percent occurring on Runway 4-22.

Table 1.4-1
Runway Physical Characteristics Summary

Characteristic		Runway 14	Runway 32	Runway 4	Runway 22
Length (feet)		9,500		5,006	
Width (feet)		150		150	
Runway Elevation (feet)		26.2	29.9	21.9	24.2
Displaced Threshold (feet)		1,350	1,150	0	0
Runway Markings		Precision	Precision	Non-Precision	Non-Precision
Runway Lighting		HIRL		HIRL	
Pavement Type		Asphalt		Asphalt	
Pavement Condition		Satisfactory		Good	
Pavement Classification Number		47/F/A/X/T		53/F/A/W/T	
Pavement Strength (pounds)	Single Wheel	118,000		120,000	
	Dual Wheel	196,000		219,000	
	Dual Tandem	358,000		404,000	
Airport Reference Code		D-IV		B-II	
Navigational Aids		GS, LOC, MALSR, PAPI		PAPI	PAPI, REIL
Declared Distances (feet)	TORA	8,350	8,150	5,006	5,006
	TODA	9.500	9,500	5,006	5,006
	ASDA	8,890	8,660	5,006	5,006
	LDA	7,540	7,510	5,006	5,006

Sources: FAA Airport Data; FDOT Statewide Pavement Management Program District 1 Report (November 2019); SRQ PCN Evaluation Report (September 2015)

Sources: Airline Interviews, October 2019: Sarasota-Manatee Airport Authority
Prepared by: American Infrastructure Development, Inc.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

RUNWAY / TAXIWAY LOCATION

FIGURE 1.4.1

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1.4.2 TAXIWAY LAYOUT

An airport's taxiway system consists of defined paths for aircraft movements between the aircraft parking aprons and runways. Aircraft movements on taxiways are controlled by air traffic control personnel. Taxilanes, on the other hand, are designated paths within an aircraft parking apron which provide access to parking locations, such as a terminal gate and general aviation aprons, and hangar facilities. Taxilanes are typically non-movement areas and are not controlled by air traffic control personnel. **Table 1.4-2** provides a summary of the existing taxiways at SRQ. Figure 1.4-1 depicts the locations of all taxiways.

Table 1.4-2
Taxiway Data

Taxiway	Taxiway Width (feet)	Type	Separation from Parallel Runway (feet)	Pavement Condition
A	75	Parallel	400	Satisfactory
A1	140	Connector	-	Satisfactory
A2	90	Connector	-	Fair
A3	75	Connector	-	Satisfactory
A4	90	Connector	-	Fair
A7	90	Connector	-	Fair
A8	90	Connector	-	Good
A9	90	Connector	-	Satisfactory
A10	140	Connector	-	Satisfactory
B	60 – 75	Parallel	392 - 400	Poor – Good
B1	60	Connector	-	Satisfactory – Good
C	60	Parallel	400 - 532	Fair – Good
C1	80	Connector	-	Fair
C2	100	Connector	-	Fair
C3	100	Connector	-	Satisfactory
C4	80	Connector	-	Satisfactory
D	60	Parallel	300	Fair – Good
E	60	Taxiway	-	Fair
F	50	Taxiway	-	Fair – Good
G	50	Taxiway	-	Satisfactory
H	50	Taxiway	-	Good – Satisfactory
J	60	Taxiway	-	Fair – Satisfactory
R3	275	Connector	-	Fair
R4	95	Connector	-	Fair
R5	95	Connector	-	Poor - Fair
T1	65	Connector	-	Fair
T2	30	Connector	-	Satisfactory

Source: Sarasota-Bradenton International Airport, 2009 Airport Layout Plan

1.4.3 APRONS

Several large aircraft parking aprons exist at the Airport. The commercial service aircraft parking apron surrounding the passenger terminal consists of approximately 181,300 square yards of concrete pavement which is in good condition. It supports the movement of aircraft to and from the passenger terminal and provides aircraft parking at the terminal's gates. Access to the passenger terminal apron is provided by Taxiway A via Taxiway Connectors R3, R4, and R5 and by Taxiway B. Air carrier aircraft scheduled to park overnight remain at the airlines' assigned gate. Additional overnight aircraft parking is also available on the eastern portion of the apron.

Dolphin Aviation is a Fixed Base Operator[2] (FBO) located on the west side of the Airport provides general aviation (GA) services. Dolphin has 37,000 square yards of asphalt paved apron space for aircraft parking. Dolphin's apron was not evaluated as part of the FDOT Statewide Airfield Pavement Management Program.

Ross Aviation is another FBO that operates in three locations on the airfield. Ross Aviation North includes facilities at the north of the airfield including 27,000 square yards of asphalt paved apron. Ross Aviation Hangarminiums is located on the east side of the airfield and contains 14,000 square yards of concrete paved apron. The third location is the Ross Aviation South (Ross Aviation Jet Center) which is also located on the east side of the airfield. This location contains approximately 32,000 square yards of concrete paved apron. Ross's apron was also not evaluated as part of the FDOT Statewide Airfield Pavement Management Program. Apron space located in both Ross Aviation North and Ross Aviation Hangarminiums locations are used for parking based aircraft while Ross's south apron is used for parking itinerant aircraft.

1.4.4 PAVEMENT CONDITIONS

Pavement conditions at SRQ were assessed in 2019 through a FDOT Statewide Airfield Pavement Management Program. The program assessed runway, taxiway, and apron pavements. Pavement conditions were classified based on visual observations and ranked from 0 to 100. Pavement failure is rated as 0, while pavements in good condition are rated up to 100. Pavements are assigned maintenance classifications ranging from preventative maintenance, to major rehabilitation to reconstruction based upon their Pavement Condition Index (PCI) number.

Figure 1.4-2 provides a copy of the PCI map from the study. As depicted in the figure, the majority of pavements at SRQ are in fair to good condition. A small piece of apron adjacent to Taxiway B on the approach end of Runway 22 was identified as being in very poor condition. Areas or pavement identified as poor condition includes the northeast portion of Taxiway B from the intersection of Runway 14-32 to the approach end of Runway 22 and Taxiway R5. The PCI report will be used during this study to identify what pavement rehabilitation projects are needed.

[2] An FBO is a business that provides a variety of aeronautical services to pilots and typically includes aircraft fueling, maintenance and storage. Some FBO's also provide a variety of other services.

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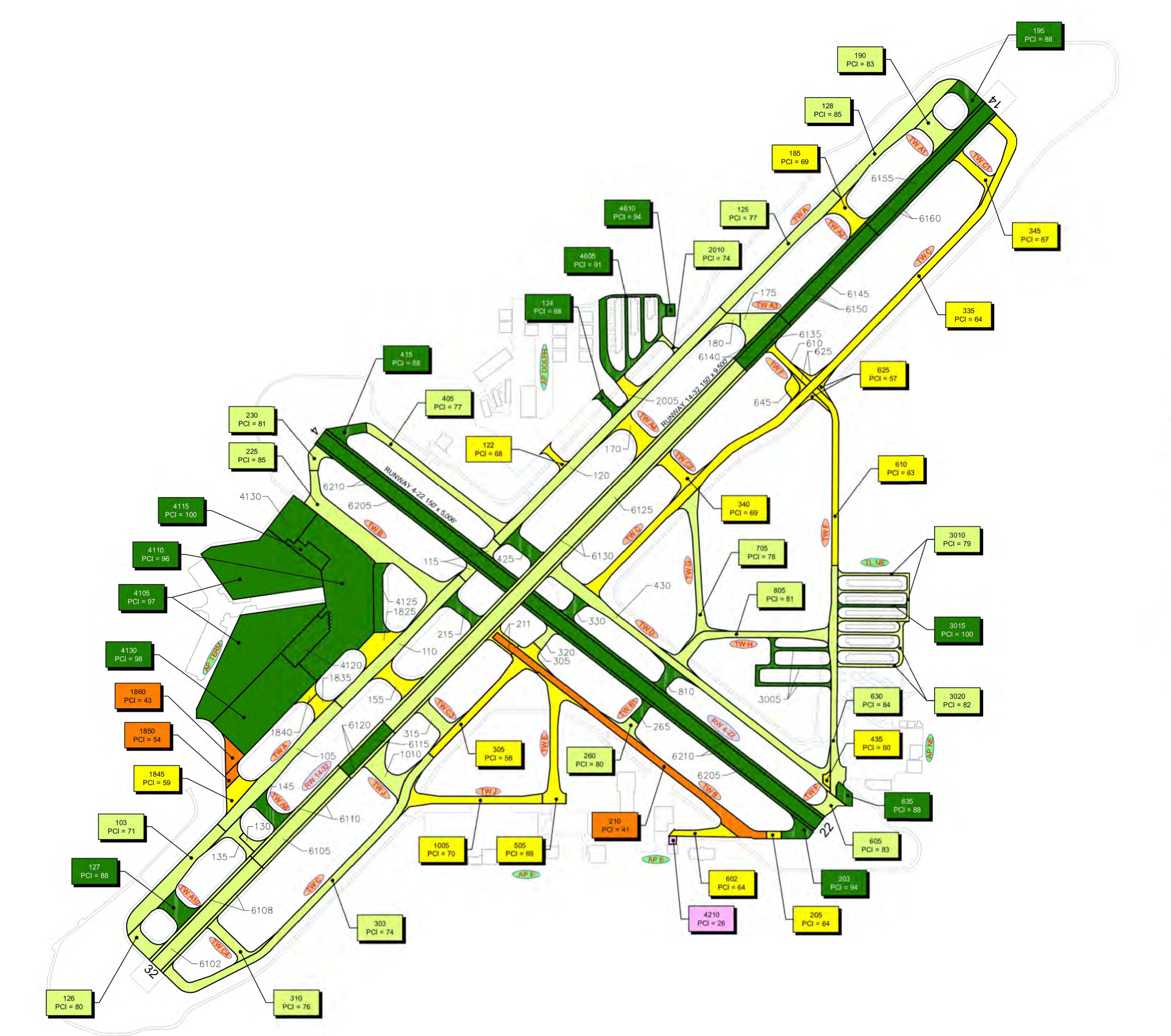

105 PCI = 74	110 PCI = 78	115 PCI = 80	120 PCI = 79	130 PCI = 77
135 PCI = 72	145 PCI = 89	155 PCI = 65	170 PCI = 61	175 PCI = 80
180 PCI = 84	211 PCI = 59	215 PCI = 90	265 PCI = 92	315 PCI = 77
320 PCI = 85	330 PCI = 94	425 PCI = 94	430 PCI = 80	645 PCI = 66
810 PCI = 94	1010 PCI = 78	1825 PCI = 61	1835 PCI = 65	1840 PCI = 66
2005 PCI = 68	3005 PCI = 94	4120 PCI = 88	4125 PCI = 88	6102 PCI = 83
6105 PCI = 84	6108 PCI = 82	6110 PCI = 81	6115 PCI = 86	6120 PCI = 82
6125 PCI = 85	6130 PCI = 82	6135 PCI = 87	6140 PCI = 86	6145 PCI = 86
6150 PCI = 88	6155 PCI = 89	6160 PCI = 93	6205 PCI = 88	6210 PCI = 88

LEGEND

RW 13-31 — TYPICAL RUNWAY BRANCH ID
TW A — TYPICAL TAXIWAY BRANCH ID
AP S — TYPICAL APRON BRANCH ID

PCI 86–100 GOOD
PCI 71–85 SATISFACTORY
PCI 56–70 FAIR
PCI 41–55 POOR
PCI 26–40 VERY POOR
PCI 11–25 SERIOUS
PCI 0–10 FAILED

"SECTION NO."
"PCI NO."

RUNWAY LENGTHS DEPICTED IN THIS DRAWING ARE FOR PAVEMENT MANAGEMENT PURPOSES ONLY AND MAY NOT MATCH PUBLISHED RUNWAY LENGTHS.

Sources: Airport Pavement Evaluation Report, 2019: FDOT
Prepared by: American Infrastructure Development, Inc.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

AIRFIELD PAVEMENT CONDITION INDEX

FIGURE 1.4.2

C:\Civil 3D Projects\SRQ\AID Figures\FIG 1.4-2.dwg 12/15/2020 10:51

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1.4.5 AIRFIELD SIGNAGE

SRQ is equipped with illuminated airfield signage that provides pilots with directional guidance on the airfield. Standard airfield signage is used to identify intersections or entrance/exits of taxiways and runways. Taxiway directional sign on the airfield also include arrows identify taxiway entrance and exists. Runway 14-32 is also equipped with eight runway distance remaining signs, which are characterized by single, double-sided white numerical inscriptions that are used by pilots to be aware of the remaining available runway in thousands of feet.

1.4.6 INSTRUMENT APPROACH PROCEDURES

According to terminal procedure charts, SRQ has seven published instrument approach procedures for use during periods with low cloud ceilings or low visibility. **Table 1.4-3** summarizes the publish approach procedures.

Table 1.4-3
Published Instrument Approach Procedures

Approach Procedure	Height Above Touch Down Zone (feet)	Visibility (statue miles)
ILS Runway 14	223	½
ILS Runway 32	227	½
RNAV (GPS) Runway 4	319 (317 LPV)	1
RNAV (GPS) Runway 22	303	1
RNAV (GPS) Runway 14	489 (223 LPV)	1 1/8 (½ LPV)
RNAV (GPS) Runway 32	463 (227 LPV)	1 (½ LPV)
VOR Runway 14	520 (440 JELSU FIX)	½

Source: FAA Digital Terminal Procedures, Southeast – 3, Effective 05 DEC 5 to 02 JAN 2020

Acronyms:
LPV – Localizer Performance with Vertical Guidance
RNAV – Area Navigation
ILS – Instrument Landing System
GPS – Global Positioning System
VOR – Very High Frequency Omni-Directional Range

1.4.7 AIRFIELD LIGHTING

1.4.7.1 Runway and Taxiway Lighting

Runway 14-32 and Runway 4-22 are equipped with High Intensity Runway Lights (HIRLs). These lights enable aircraft operations during nighttime and poor visibility conditions and are recommended for precision instrument approaches with Runway Visibility Range (RVR) based minimums. The runway lighting systems can be activated during the hours that the tower is closed by utilizing the Common Traffic Advisory Frequency (CTAF) 120.1 MHz.

All major taxiways at SRQ are equipped with Medium Intensity Taxiway Lights (MITLs). There is one airfield electrical vault at the Airport located southwest of the Aircraft Rescue and Fire Fighting (ARFF) station.

1.4.7.2 Identification Lighting

The Airport is equipped with a rotating beacon to aid in the identification of the airport at night or during inclement weather. The beacon was previously located adjacent to the ARFF station; however, it was relocated to the top of the new air traffic control tower in 2019. The beacon is in excellent condition and is continuously operated during nighttime hours and when instrument conditions are present.

1.4.7.3 Approach Lighting

Runway 22 is equipped with Runway End Identifier Lights (REILs). These lighting systems consist of two synchronized flashing lights, one on each side of the runway threshold, that assist pilots in rapidly and positively identifying a runway end. These lights are particularly helpful in areas with a preponderance of other lighting sources where runway identification can be more difficult.

Runway 14-32 is equipped with a Medium Intensity Approach Light System with Runway Alignment Indicator Light (MALSR) on both ends of the runway. FAA guidance specifies MALSR as the standard for approach lighting systems serving Category (CAT) I precision approaches (i.e., a ceiling minimum of 200 feet and visibility minimum of 0.5 mile).

1.4.8 NAVIGATIONAL AIDS

Runway 14-32 is equipped with an Instrument Landing System (ILS) on both ends of the runway. The primary components of an ILS are a localizer antenna that provides course guidance and glide slope antennae that provide approach slope guidance to pilots through instrumentation in the cockpit that receives the antennae's electronic signals. Localizer antennae are located on the extended centerline 600 feet beyond each runway end. Glideslope antennae are located on the northeast side of both runway ends.

Visual glide slope indicators also aid pilots in judging the correct approach slope of the aircraft when approaching a runway. Precision approach path indicators (PAPIs) are a system of lights that may be visible for up to 5 miles during the day and up to 20 miles or more at night. PAPI systems use light units installed in a single row of either two or four light units. All runways at SRQ are equipped with four-light PAPI systems located on the left side of each runway approach end. Each set of lights is designed to appear as either white or red, depending upon the approach angle. When an aircraft is approaching the lights at the proper angle, the two outboard sets of lights will appear white to the pilot and the inboard sets appears red. When all sets appear white, the aircraft is above the approach slope, and when all appear red, the aircraft is below the approach slope.

The Airport has an Automated Surface Observation System (ASOS) to measure and record weather conditions. The National Weather Service distributes weather data to pilots via radio frequency 124.375 MHz or by telephone at 941-355-8482. Data collected and distributed includes temperature, dewpoint, visibility, wind speed and direction, cloud ceiling, and barometric pressure. ASOS equipment is located north of the Taxiway C and F intersection.

Also, SRQ has four lighted wind cones used to determine the direction of wind on the airfield. Wind cones are located at each runway end.

1.4.9 AIRPORT AIRSIDE SECURITY

The Airport airside includes all movement areas, adjacent terrain, and buildings or portions thereof to which access is controlled. Secure areas on the airside of the Airport include Air Operations Area (AOA), Security Identification Display Areas (SIDA), and sterile area.

The AOA at SRQ includes all runways, taxiways, and apron areas, which are enclosed by a 7-foot chain link airfield perimeter fence topped by three strands of barbed wire. Operations staff indicated that the existing fence is overall in good condition. The AOA access controlled with vehicle gates equipped with card readers for vehicular ingress and egress. All access cards are authorized and distributed by the Airport Authority.

The SIDA is located within the AOA and is defined as those areas requiring controlled access and are identified by either physical or operational boundaries. All persons within the SIDA must always visibly display their security badges, unless escorted by authorized airport personnel.

Sterile areas are those that provide passengers and employees access to the aircraft boarding area which is controlled by the Transportation Security Administration (TSA) screenings. TSA security personnel use specific resources necessary to screen passengers and property to prevent or deter the carriage of weapons, explosives, or other prohibited items onto aircraft.

1.5 TERMINAL AIRSIDE AREA

The terminal area is the major interface between the airfield and landside components of the Airport. The terminal area apron at SRQ, located south of the intersection of Runways 14-32 and 4-22, encompasses approximately 183,000 square yards of pavement. The apron has direct airfield access to the runways via Taxiway A and Taxiway B, which also serve as ingress and egress points to the apron from any one of four connector taxiways, one of which connect with Taxiway B and three of which connect with Taxiway A. Aircraft circulate the terminal area along designated taxilanes and lead-in lanes to each gate area.

The passenger terminal has a single concourse with 13 aircraft gates and loading bridges. The concourse contains departure lounges and circulation space for both enplaning and deplaning passengers.

Aircraft ground service equipment (GSE) storage is located near the baggage pickup and drop-off area of the airside as well as in alcoves near the gates for airline-owned equipment. Additional storage is provided in the air cargo staging area. Ground support for the airlines is provided by four ground handling companies.

1.6 TERMINAL LANDSIDE AREA

The terminal landside area consists of the various elements essential for commercial air service, including concessions, rental car counters, baggage claim and baggage makeup, ticket counters, airline offices, holdrooms, public restrooms, circulation areas, and utility areas. The following sections outline the existing configuration and conditions of the terminal building.

1.6.1 TERMINAL BUILDING

The passenger terminal is a three-story building that was constructed in 1989 and contains approximately 277,000 square feet of space. The first floor provides approximately 159,000 square feet of space and primarily contains ticketing, baggage makeup, airline offices, baggage claim, and rental car counters. The second floor provides 102,000 square feet of space primarily for concessions, security screening, and airline gates. Finally, the third floor contains approximately 16,000 square feet of space dedicated to SMAA offices.

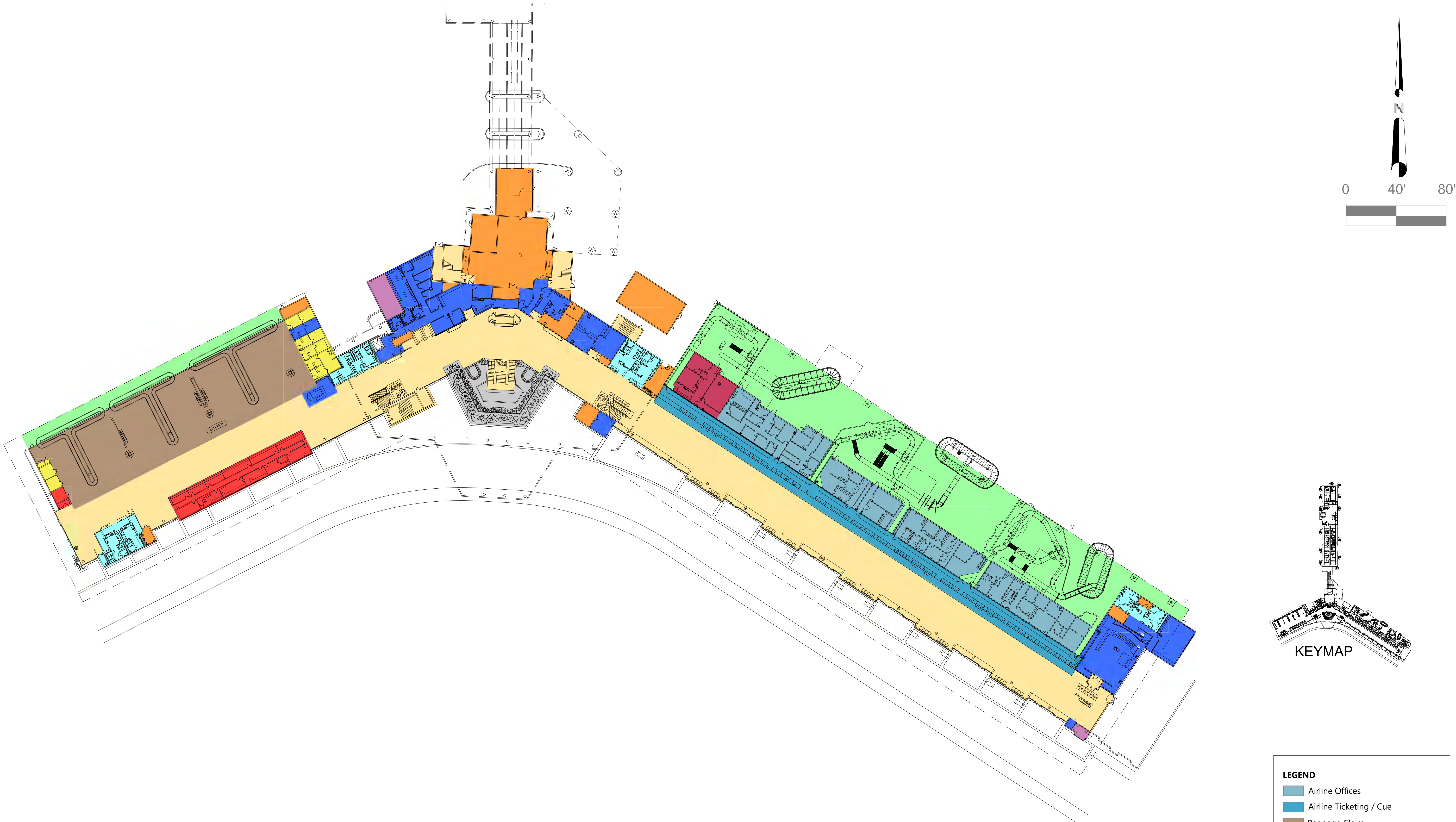
1.6.1.1 Departing Passengers

Departing passengers arrive at the curbside on the east side of the terminal building where the ticketing area is located. There are 20 curbside check-in positions along the departure curbside; however, only Delta currently offers curbside check-in services. The ticketing area includes the ticketing lobby, ticket counter area, and airline ticket offices. Once passengers received boarding passes and drop-off check baggage, they proceed to the TSA security screening checkpoint located on the second floor of the terminal. **Table 1.6-1** summarizes the airline ticketing positions and self-service kiosks at SRQ by airline. The floor plan for the first floor of the terminal is illustrated in **Figure 1.6-1**.

Table 1.6-1
Ticketing Positions and Self-Service Kiosks by Airline

Airline	Ticketing Positions	Self-Service Kiosks	Curbside Ticketing Positions	Total per Airline
Allegiant Air	4	0	0	4
American Airlines	5	3	0	8
Air Canada	2	0	0	2
Delta Airlines	7	8	4	19
Elite Airways	5	0	0	5
Frontier	6	0	0	6
JetBlue	5	3	0	8
Sun Country Airlines	2	0	NA	2
United Airlines	4	4	0	8
Vacant/Common Use	18	0	16	34
Total	**58**	**18**	**20**	**96**

Source: Sarasota Manatee County Airport Authority, Airline Interviews, October 2019
Notes:
Sun Country was not operational at the time of the inventory data collection



LEGEND

- Airline Offices
- Airline Ticketing / Cue
- Baggage Claim
- Baggage Makeup
- Baggage Offices (Airline)
- Circulation (Public)
- Concessions / Retail
- Mechanical / Electrical / Utility
- Other (Public, non-leasable)
- Rental Car / Ground Transportation
- Restrooms
- SMAA
- TSA

Sources: Inventory Site Visit, October 2019: Sarasota-Manatee Airport Authority
Prepared by: American Infrastructure Development, Inc., & AECOM

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srq

MAIN TERMINAL FIRST FLOOR PLAN

FIGURE 1.6.1

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The TSA security screening checkpoint was reconfigured in 2020 to accommodate 5 lanes. Based on data provided by TSA representatives, the hourly processing rates are 150 to 200 passengers for each standard land and 210 to 280 passengers per pre-check lane. Space constraints exist in the security area due to the limited queuing area for lane four and a support pole in the center of the screening area. **Figure 1.6-2** illustrates the layout of the second floor of the terminal.

TSA also has the responsibility to conduct security screening on all checked baggage. Passengers' checked baggage is transported from the ticket counter conveyors through one of three L-3 explosives detection systems (EDS) located in the baggage makeup area. Once baggage clears EDS they are delivered to the respective aircraft by tugs and carts. **Figure 1.6-3** illustrates the layout of the first floor of Concourse B.

Once passengers pass through the security screening checkpoint, they enter Concourse B, located on the north side of the terminal building. The second level of Concourse B consists of holdrooms, concessions, restrooms, miscellaneous support spaces, including utility rooms, storage rooms, and circulation areas. Currently, 13 boarding bridges are used to facilitate passenger enplaning and deplaning functions. **Figure 1.6-4** depicts the current airline gate assignments located on Concourse B. **Figure 1.6-5** illustrates the layout of the second floor of Concourse B.

1.6.1.2 Arriving Passengers

Arriving passengers enter the concourse from their respective aircraft and proceed to the Federal Inspection Services (FIS) facility (international passengers) or past the security checkpoint (domestic passengers) on the deplaning side.

Arriving international passengers disembark through a short sterile corridor to immigration booths where they retrieve their baggage. Once baggage is retrieved, passenger proceed to Customs for the inspection process. In total, approximately 15,000 square feet are designated for the FIS operation. Within this area, 3,500 square feet are designated for immigration and 11,500 square feet are designated for Customs. **Figure 1.6-3** depicts the layout of the FIS facility on the concourse lower level.

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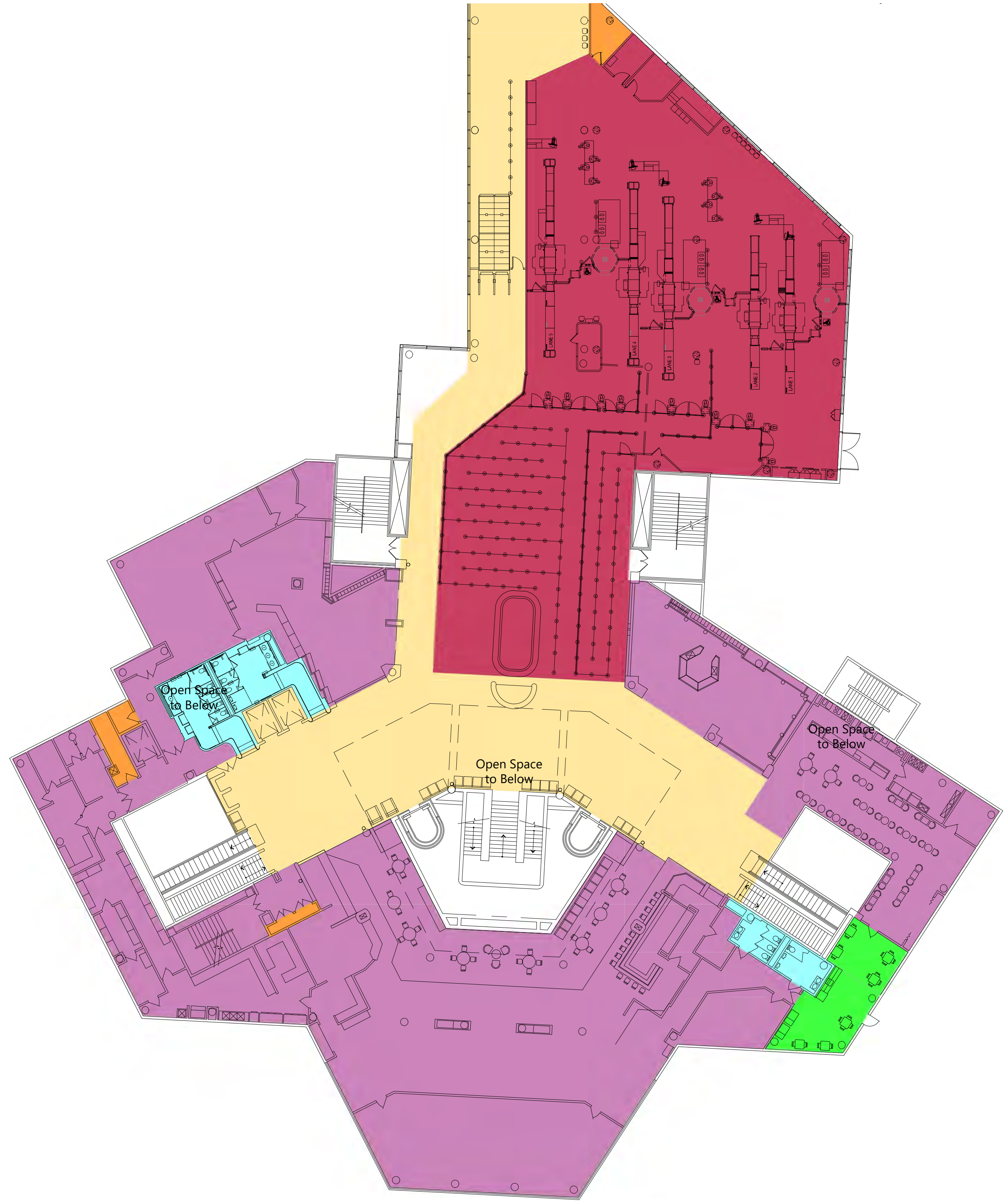
SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

MAIN TERMINAL SECOND FLOOR PLAN



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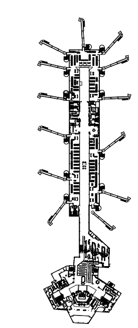

KEYMAP

LEGEND

- Circulation (Public)
- Concessions / Retail
- Mechanical / Electrical / Utility
- Restrooms / Public
- TSA
- Airport Staff Breakroom

Sources: Inventory Site Visit, October 2019: Sarasota-Manatee Airport Authority
Prepared by: American Infrastructure Development, Inc., & AECOM

FIGURE 1.6.2

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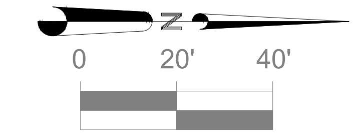

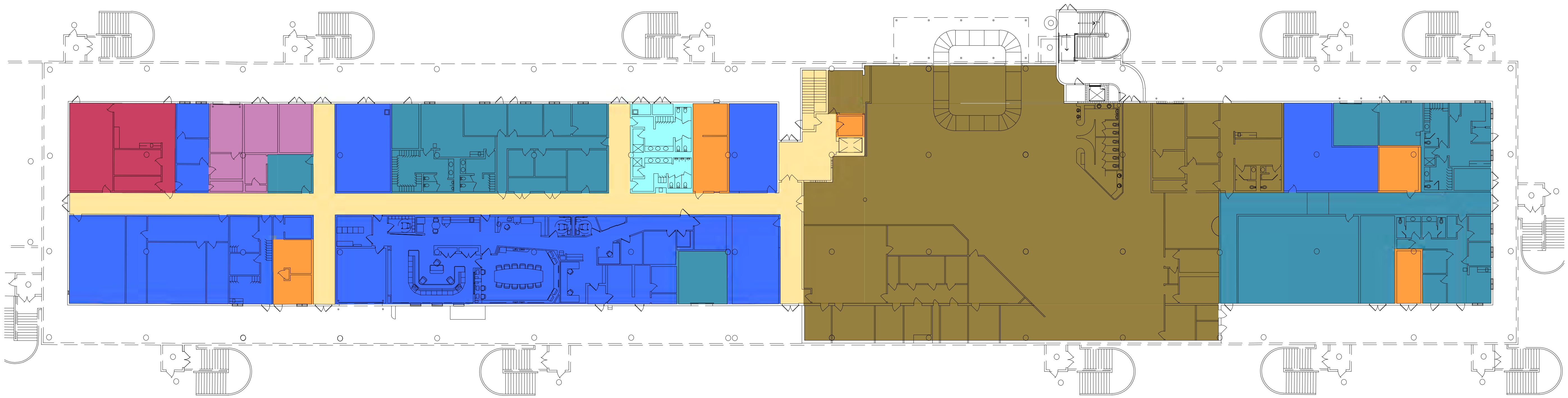

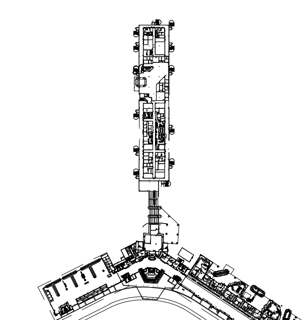

KEYMAP

LEGEND

- Airline Operations
- Circulation
- FIS
- Mechanical / Electrical / Utility
- Restrooms
- SMAA Offices
- TSA
- Concessions Storage

Sources: Inventory Site Visit, October 2019: Sarasota-Manatee Airport Authority
Prepared by: American Infrastructure Development, Inc., & AECOM

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

CONCOURSE B FIRST FLOOR PLAN

FIGURE 1.6.3

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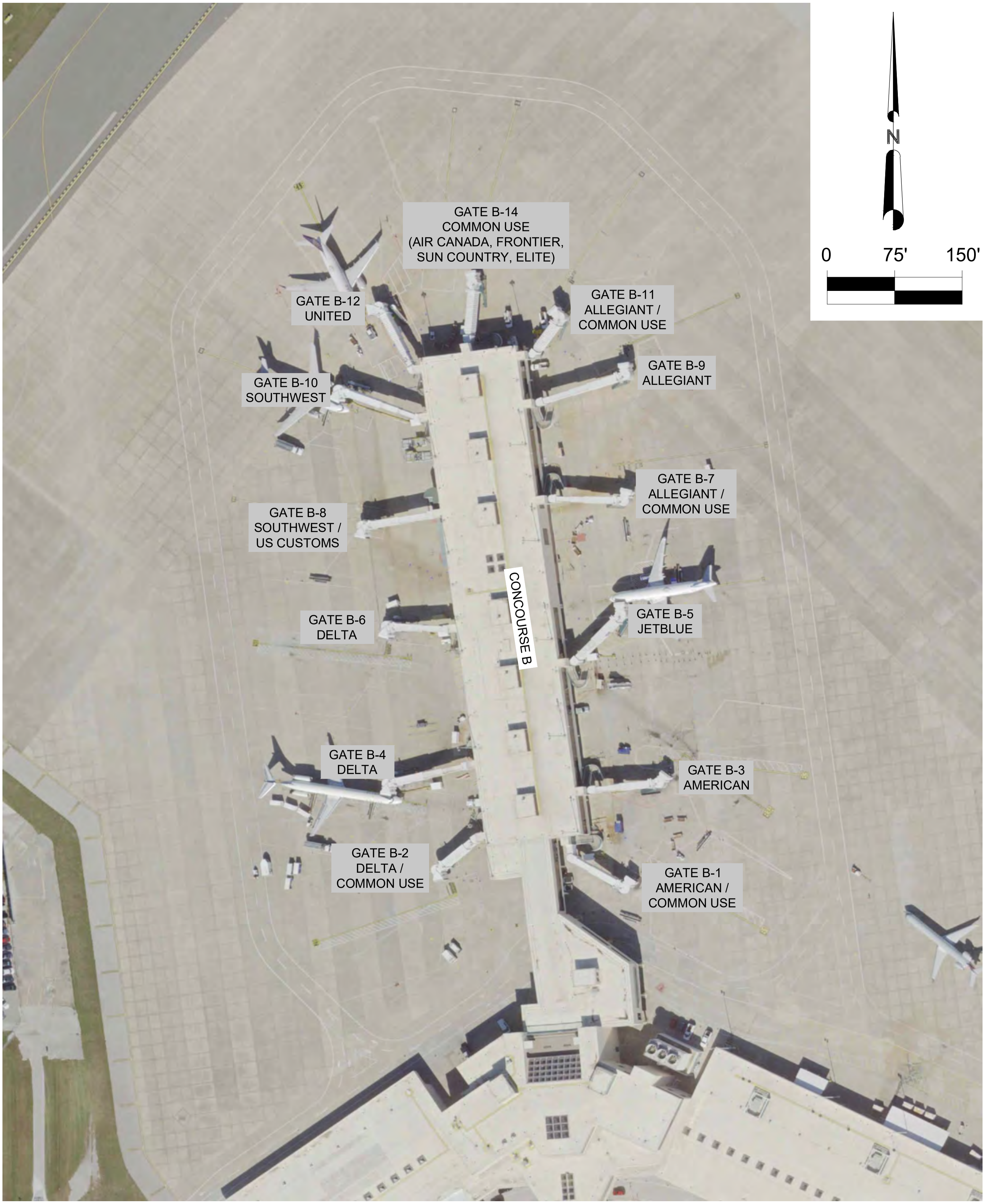

Source: Sarasota Manatee Airport Authority, March 2021.
Prepared by: American Infrastructure Development, Inc.

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MASTER PLAN UPDATE

CONCOURSE B
AIRLINE GATE ASSIGNMENT

FIGURE 1.6.4

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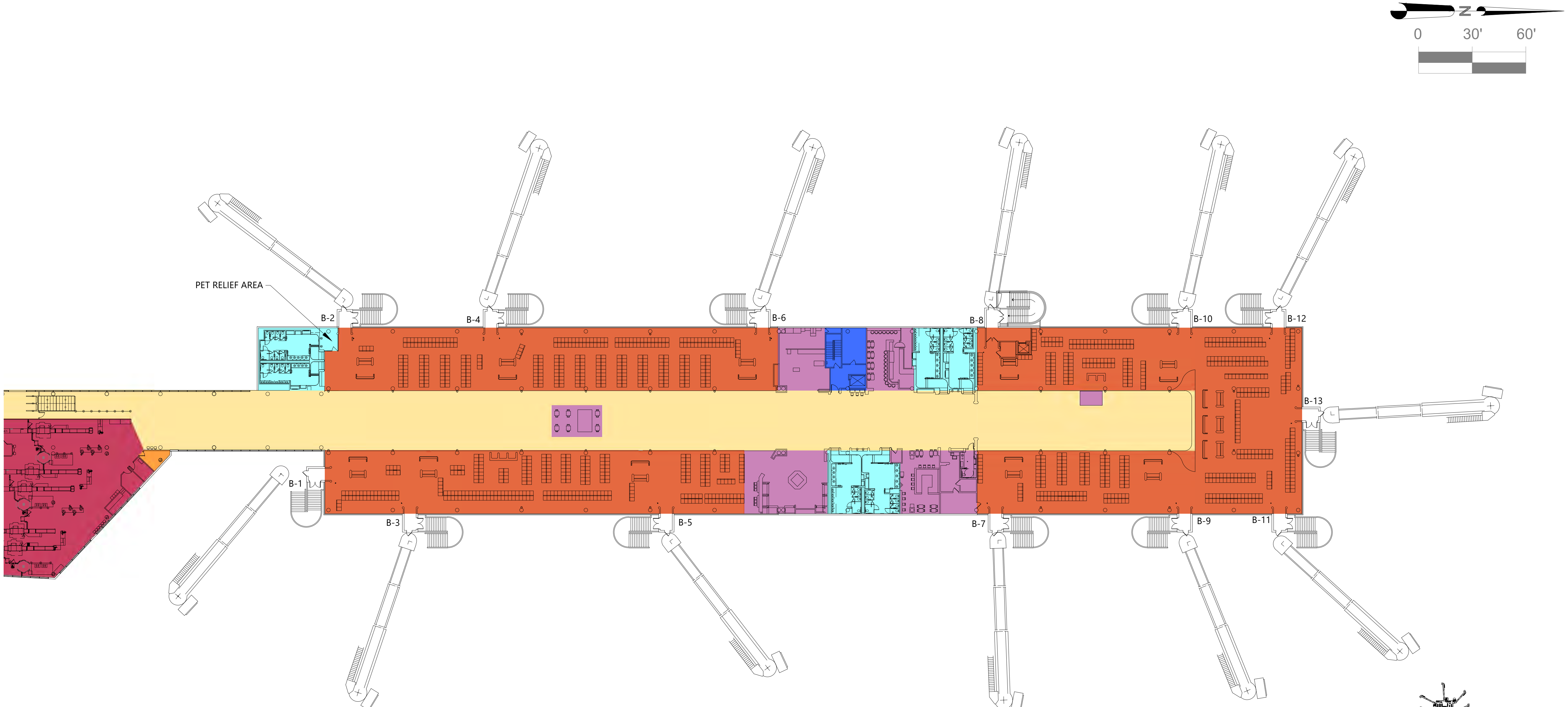

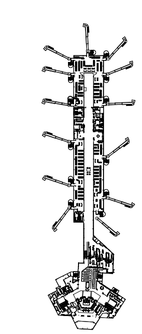

KEYMAP

LEGEND

- Circulation (Concourse)
- Concessions / Retail
- Holdroom
- Restrooms / Public
- SMAA Offices / Other
- TSA

Sources: Inventory Site Visit, October 2019: Sarasota-Manatee Airport Authority
Prepared by: American Infrastructure Development, Inc., & AECOM

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

CONCOURSE B SECOND FLOOR PLAN

FIGURE 1.6.5

C:\Civil 3D Projects\SRQ\Working paper #1\FIG 1.6-1_2_5_6.dwg 12/15/2020 13:22

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Inbound baggage is delivered by baggage tugs from the aircraft to the inbound operations area located directly behind the baggage claim devices area on the ramp level. Three recirculating flat plate conveyor devices accommodate baggage from inbound aircraft. There is a designated pick-up area in the baggage claim for large checked items such as golf clubs. The oversized item claim is located between baggage Carousels 1 and 2. Airlines have offices dedicated to baggage operations located to the east and west sides of the baggage claim area. In total, the baggage claim lobby provides approximately 13,000 square feet of space and the claim devices provides approximately 450 linear feet of frontage for passengers to pick up their baggage. **Figure 1.6-1** depicts the baggage claim and makeup areas on the first floor of the terminal.

1.6.2 AIRLINE OPERATIONS AREA

Airlines lease space throughout the terminal building to support their operations. Airlines lease offices for administration and baggage functions on the first floor of the terminal building. They also lease gates on the second floor of Concourse B to support passenger enplanement, deplanement, and holding and lease space on the first floor of Concourse B for personnel and storage. Delta Airlines also lease space in the Air Cargo building for equipment storage and cargo operations.

1.6.3 CONCESSIONS

Concessions are located on the second floor of the terminal and the second floor of Concourse B. Concessions located on Concourse B are on the secure airside for ticketed passengers who have passed through security screening. Concourse B concessions consist of approximately 5,700 square feet of food, beverage, and retail space. Two kiosks are also located within the circulation area of Concourse B. These kiosks occupy approximately 600 square feet of space.

Landside concessions located prior to security screening consist of approximately 12,600 square feet of space for food and beverage vendors and 5,800 square feet are being used for retail. These quantities include vendor offices, storage, and concession access. Since the 2009 master plan, 1,600 square feet of the restaurant has been converted to vendor storage. Interviews with HMS Host and Paradies Lagardère identified a lack of merchandise and food storage space as their top concern. **Figure 1.6-2** depicts concession areas on the second floor of the terminal and Figure 1.6-5 depicts concession areas on the second floor of Concourse B.

1.6.3.1 Deliveries

Vendors at SRQ receive deliveries at Gate 46 South. Airport police inspect deliveries at the gate and vehicles are then escorted to the terminal's designated first floor storage area. Upon the completion of the delivery, vendors escort the vehicle back to Gate 46 South to exit the secure area. Smaller day-to-day deliveries are received at the terminal curb.

1.6.4 HOLDROOMS AND GATES

The second floor of Concourse B provides access to 13 gates and their associated holdrooms. The sizes of the holdrooms vary according to location. Gates with larger holdrooms are located near the base of the concourse, while smaller holdrooms are located near the end of the concourse. Of the 13 available gates, 7 are leased under a preferential use arrangement with the signatory airlines. Six gates are assigned to airlines and US Customs, but are common use as needed. **Table 1.6-2** provides the gate assignment and holdroom breakouts per gate.

Table 1.6-2
Aircraft Loading Bridge and Gate Assignment Space on Concourse B

Gate	Leased To	Apron (linear feet)	Holdroom (square feet)
B-1	American*	170	2,770
B-2	Delta*	152	2,928
B-3	American	143	2,770
B-4	Delta	140	2,928
B-5	JetBlue	143	2,770
B-6	Delta	148	2,928
B-7	Allegiant*	143	2,113
B-8	Southwest/US Customs	163	2,113
B-9	Allegiant	130	2,113
B-10	Southwest	149	2,113
B-11	Allegiant*	147	2,113
B-12	United	157	2,113
B-14	Air Canada/Frontier/Sun Country/Elite*	175	2,113
Total		**1,959**	**31,883**

Source: Sarasota Manatee County Airport Authority, Terminal Floor Plans, Updated March 2021 for Southwest
* = Gate assignment is non-exclusive or common use based on need.

1.6.5 AIRPORT ADMINISTRATION

The SMAA has offices throughout the terminal building and concourse; however, the majority of SMAA administrative functions are located on the terminal's third floor. That area encompasses approximately 15,700 square feet of space and can be accessed via stairs or elevator in the central vertical circulation area between the ticketing and baggage claim areas. **Figure 1.6-6** illustrates the terminal's third floor. A new 3,200 square foot auditorium was constructed in 2019 on the terminal's first floor at the east end of the ticketing wing. The Dan P. McClure Auditorium is the new location for Airport Authority board meetings.

1.6.6 PUBLIC AREAS

Public areas in the terminal include areas designated for circulation, public seating, restrooms, stairs, and walkways, including open space areas that are not leased to an airlines or concessionaire. The largest concentration of public area exists on the first floor of the terminal. The second largest concentration of public space exists in the main concourse circulation corridor. In total, public circulation areas in the terminal building consist of 71,793 square feet of space.

In addition to the public areas mentioned above, the Airport has four designated pet relief areas. The pet relief areas are located:

- Outside the terminal building on the east side of the ticket wing
- Near the first row of rental car ready return lot
- Near the bus stop west of baggage claim
- On the second floor of Concourse B next to Gate B2

1.6.7 TERMINAL SUMMARY

Table 1.6-3 presents a summary of space allocations in the terminal by use.

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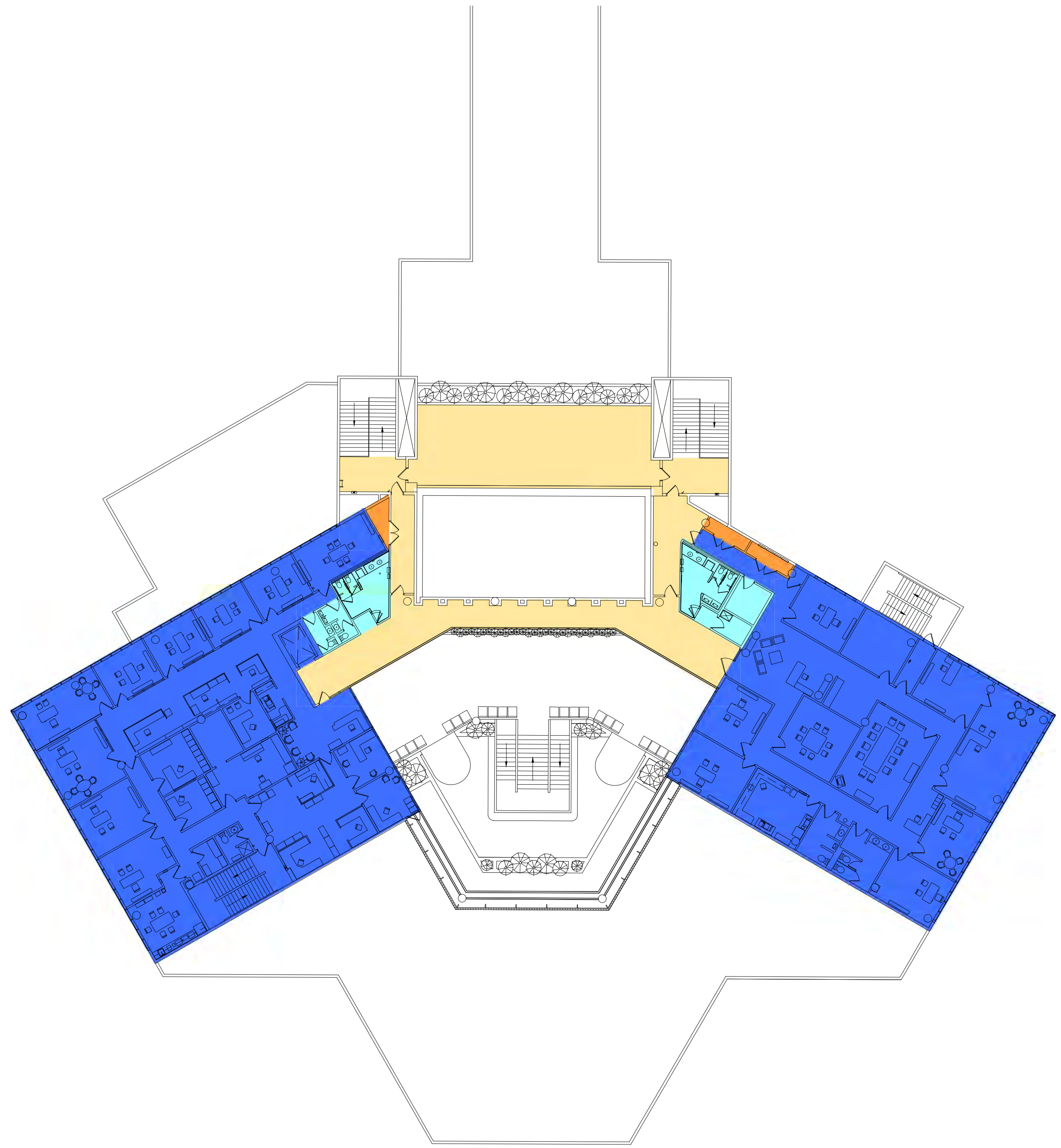

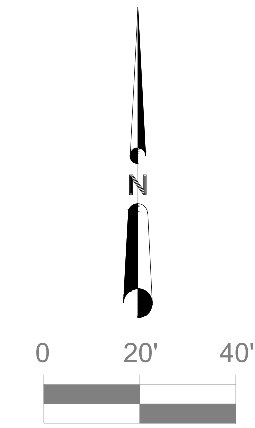

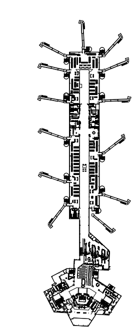

KEYMAP

LEGEND

- Circulation (Public)
- Mechanical / Electrical / Utility
- Restrooms / Public
- SMAA Offices / Other

Sources: Inventory Site Visit, October 2019: Sarasota-Manatee Airport Authority
Prepared by: American Infrastructure Development, Inc., & AECOM

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MASTER PLAN UPDATE

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MAIN TERMINAL THIRD FLOOR PLAN

FIGURE 1.6.6

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Table 1.6-3
Passenger Terminal Space Allocation (Square Feet)

Type of Space	First Floor Terminal	First Floor Concourse	Second Floor Terminal	Second Floor Concourse	Third Floor Terminal	Total
Airline Ticket Offices	8,971	-	-	-	-	8,971
Airline Operations		8,620	-	-	-	8,620
Airline Ticketing/Queuing	6,394	-	-	-	-	6,394
Baggage Claim	13,122	-	-	-	-	13,122
Baggage Make-up	24,283	-	-	-	-	24,283
Baggage Offices-Airline	1,388	-	-	-	-	1,388
Circulation-Concourse	-	3,977	-	20,137	-	24,114
Circulation-Public	35,440	-	6,856	-	3,257	45,553
Retail	-	-	5,845	1,748	-	7,593
Food & Beverage	-	-	12,603	3,944	-	16,547
Vacant	-	-	-	-	-	-
Other	-	-	-	-	-	-
FIS	-	15,067	-	-	-	15,067
Holdroom	-	-	-	31,883	-	31,883
Mechanical/ Electrical/Utility	8,307	1,378	346	-	146	10,177
Other Public Non-leasable	2,685	-	-	-	-	2,685
Rental Car	2,513	-	-	-	-	2,513
Restrooms	3,371	774	1,094	4,048	735	10,022
SMAA	9,418	10,375	654	776	11,632	32,855
TSA	1,478	1,306	11,984	-	-	14,768
Total	**117,370**	**41,497**	**39,382**	**62,536**	**15,770**	**276,555**

Source: Sarasota Manatee County Airport Authority, Terminal Floor Plans, March 2020

1.7 TERMINAL AREA ACCESS, GROUND TRANSPORTATION AND PARKING

1.7.1 ROADWAY ACCESS

Interstate 75 (I-75) is the major interstate on the west coast of Florida and provides access to points north and south. It is located 6.5 miles east of the Airport. Access to and from I-75 is provided via exit 213 (University Parkway). Airport Circle provides access from University Parkway to the terminal curbside, public parking lots and rental car ready return lot. The passenger terminal can also be accessed from the west via US 41/Tamiami Trail via General Spaatz Boulevard, which connects to Airport Circle. An additional exit from the terminal area is provided by Bradenton Connector which is a one-way street that exits to US 41/Tamiami Trail northbound.

The Dolphin Aviation FBO and hangar developments, located on the west side of the Airport, are accessible by vehicle via a dedicated entrance off US 41/Tamiami Trail. The Rectrix North is on the north side of the Airport and is accessible via Tallevast Road. Both Rectrix Hangarminiums and Rectrix South (Rectrix Jet Center) on the east side of the Airport are accessed via 15th Street East.

Vehicular airfield access is provided by an interior single lane service road that parallels Taxiways A, C, D, and B. This road is typically used by airport maintenance crews, operations, police, ARFF personnel and ground crew.

1.7.2 TERMINAL CURBSIDE

The terminal curb in front of the ticketing lobby and baggage claim consists of 4 lanes and a passenger loading and unloading lane. Another lane begins toward the center of the terminal which is used exclusively for rental car returns. A center median divides the four lanes into two segments of two lanes at the center of the terminal. This area is also used as a pick-up and drop-off point for valet parking. There are four pedestrian crosswalks in front of the ticketing lobby and three in front of baggage claim. Three overhead canopies provide weather protection for pedestrians crossing the curbside roadway to public parking or rental car parking. An additional canopy is located at the west end of baggage claim for departing passengers using taxis and limo services.

1.7.3 GROUND TRANSPORTATION

Ground transportation such as limousine, taxicab, and hotel shuttle services are staged on the west side of the terminal in the dedicated commercial vehicle loop. SMAA has contracted with Diplomat Taxi to provide ready taxicab service, however passenger may arrange for pick-up by any local taxicab provider. Ride-share services such as Uber and Lyft are available at SRQ. Public bus services are provided by the Sarasota County Area Transit (SCAT) and Manatee County Area Transit (MCAT). Buses run Monday through Saturday for 12 hours per day, however, service is not available on Sundays and holidays. County bus stops are located in the designated ground transportation area west of the commercial vehicle loop. Bus shelters are available for both the SCAT and MCAT services. Local hotels known to provide courtesy airport transportation services include:

- Aloft
- Embassy Suites by Hilton – Sarasota
- Even Hotel Sarasota
- Hampton Inn & Suites SRQ Airport
- Homewood Suites – Sarasota
- Holiday Inn – SRQ Airport
- Hotel Indigo – Sarasota

- Hyatt Place SRQ Airport
- Hyatt Place Lakewood Ranch
- Hyatt Regency Sarasota
- Residence Inn
- Ritz-Carlton Sarasota
- Sarasota Modern Hotel
- Sleep Inn/MainStay Suites

1.7.4 UBER/LYFT RIDE-SHARE

Ride-share services such as Uber and Lyft have become a growing form of ground transportation at airports nationwide in recent years. SRQ has six parking spaces located in the front of the short-term parking lot in Row A8 that are dedicated for Uber/Lyft drivers awaiting arriving passengers.

1.7.5 AUTOMOBILE PARKING

Multiple parking areas are designated for passengers, airport employees, and rental car operations. Reef Parking Systems operates all paid public parking at SRQ. Reef Parking Systems also provides and maintains revenue control equipment. SMAA maintains all public parking areas at the airport. Parking areas are depicted in **Figure 1.7-1** and summarized in the following sections.

1.7.5.1 Short-Term

The Short-Term Parking lot is located immediately south of the terminal building. There are 383 parking spaces which includes six Uber/Lyft, eight electric vehicle charging stations, and 12 handicap spaces. The short-term parking lot is accessible via a left exit lane from Airport Circle. Directional signage for parking is provided over the roadway. There are two electronic ticket taker machines at the entrance to the lot to facilitate to the movement of traffic. There is one centralized exit area which services both the short- and long-term parking lots. The exit booths are located on the west side of the parking lots and consists of five exit lanes, two of which only accept credit card payments. **Table 1.7-1** below outlines the parking rates for the short-term lot.

Table 1.7-1
Short-Term Parking Rates

Time Period	Rate
0-30 Minutes	No Charge
31-40 Minutes	$2.00
Each Additional 20 Minutes	$2.00
Daily Maximum	$16.00

Source: Sarasota Manatee County Airport Authority Parking Rates, November 2019

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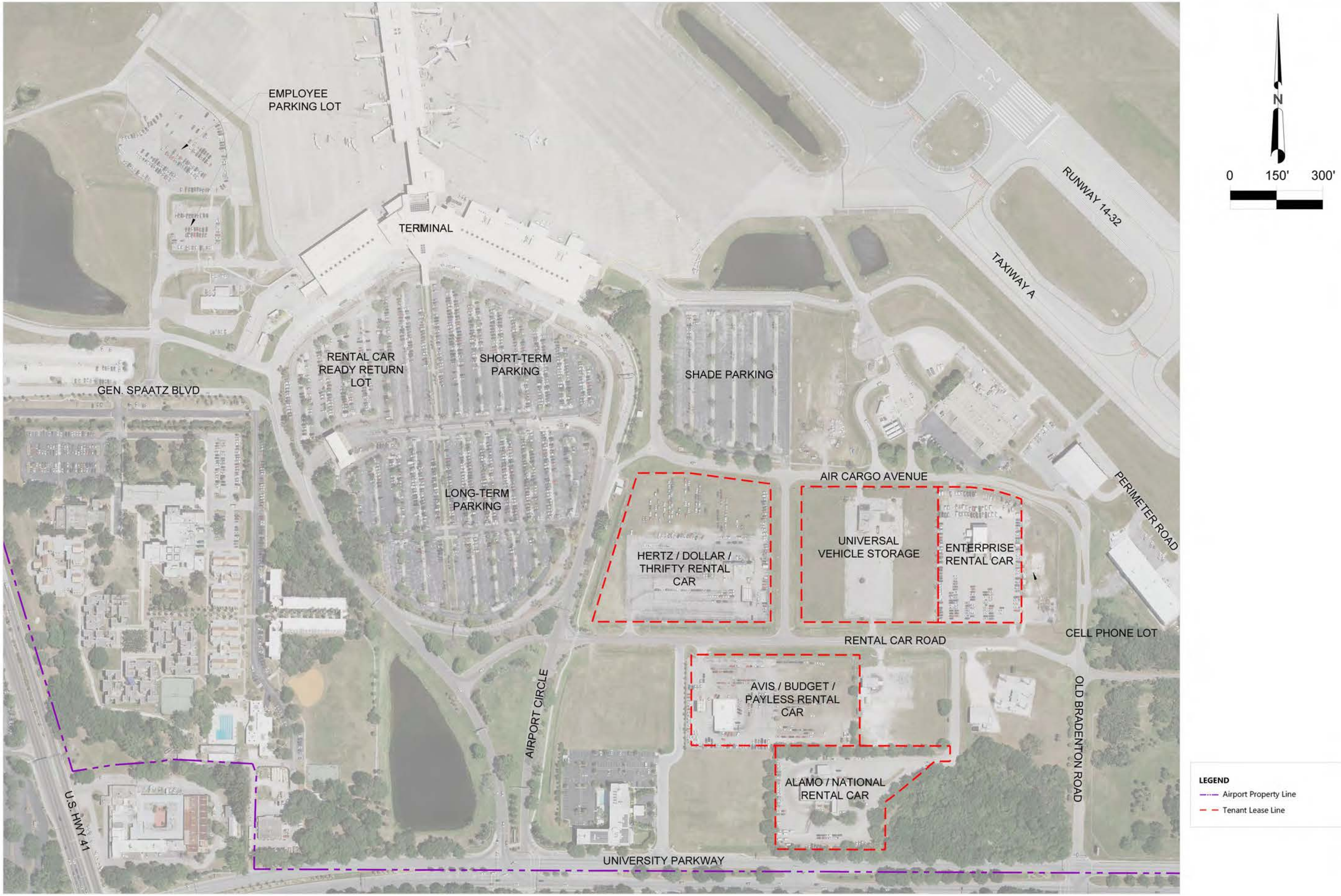

Sources: Inventory Site Visit, October 2019: Sarasota-Manatee Airport Authority
Prepared by: American Infrastructure Development, Inc.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

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AUTO PARKING AREAS

FIGURE 1.7-1

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1.7.5.2 Long-Term

The Long-Term Parking lot has 959 spaces and is located immediately south of the short-term parking lot. The long-term parking lot is accessible via a left exit lane off Airport Circle prior to the short-term exit. Directional signage for parking is provided overhead. Free shuttle service is provided to transport passengers between the terminal building and long-term parking lot. Six passenger shelters are provided throughout the long-term parking lot for passenger use while waiting for the airport shuttle. There are two electronic ticket taker machines to facilitate to movement of traffic. **Table 1.7-2** below outlines the parking rates for the long-term lot.

The Airport Authority is designing a parking expansion project that will replace existing shelters, add two new shelters, and provided an additional 135 parking spaces. The expansion of the long-term lot will result in the closure of the portion of Airport Circle that loops around the south side of the parking lot. This project is planned for construction in 2020.

Table 1.7-2
Long-Term Parking Rates

Time Period	Rate
0-30 Minutes	No Charge
31-60 Minutes	$2.00
Each Additional 20 Minutes	$2.00
Daily Maximum	$13.00

Source: Sarasota Manatee County Airport Authority Parking Rates, November 2019

1.7.5.3 Shade Parking/Valet

A Shade Parking lot is located east of the Short-Term Parking lot north of Air Cargo Road and contains 369 spaces, seven of which are reserved for the SMAA Commissioners. The entrance to the shade lot has two ticket takers and the exit is fully automated to only accept credit card payment. A parking expansion project planned for 2020 will add an additional 204 spaces to the shade lot. The expansion will further develop the shade lot to the east into an area previously used as overflow parking.

Valet parking services are available at the terminal curbside from 5 a.m. until the last scheduled arrival. Valet vehicles are taken to the Shade Parking lot and parked in first row by a Reef Parking System employee. Sixty-seven (67) parking spaces in the shade lot are dedicated to valet parking. The current valet parking rates are outline in **Table 1.7-3** below. Car wash and detailing services are available for an additional charge.

Table 1.7-3
Shade / Valet Parking Rates

Time Period	Rate
Shade Rates	
0-30 Minutes	No Charge
31-60 Minutes	$2.00
Each Additional 20 Minutes	$2.00
Daily Maximum	$14.00
Valet Rates	
First 8 Hours or Portion Thereof	$10.00
Each Additional 8 Hours or Portion Thereof	$8.00
Daily Maximum	$18.00

Source: Sarasota Manatee County Airport Authority Parking Rates, November 2019

1.7.5.4 Employee

Two employee parking lots are located west of the passenger terminal north of the Dan P. McClure Auditorium. The largest employee lot contains 250 spaces and the smaller adjacent employee lot contains 53 spaces. **Figure 1.7-1** depicts the locations of the two employee parking lots.

1.7.5.5 Rental Car Facilities

Nine rental car brands provide services to SRQ passengers and the local community. Rental car counters are located on the first floor of the passenger terminal across from the baggage claim. Rental car on-airport maintenance and storage facilities are located on the south side of the Airport along Rental Car Road. Rental car ready and return lots are co-located in one lot south of the passenger terminal. Passengers cross Airport Circle from the terminal to pick up rental vehicles. Rental vehicles are returned to the same lot via a dedicated entrance in the front of the terminal. The lot provides 308 parking spaces. Rental car employees shuttle vehicles between the ready/return lot and the maintenance areas throughout the day to ensure the maximum number of clean cars are available. **Table 1.7-4** summarizes the rental car providers on-Airport facilities. **Figure 1.7-1** depicts the location of the ready/return lot and rental car maintenance and storage areas.

Table 1.7-4
Rental Car Facilities

Rental Car Provider	Airport Ticket Counter Space (square feet)	Ground Lease Area (acres)	Ready/Return Car Spaces (number)
Alamo/National	461	3.21	131
Enterprise	375	2.67	
Hertz/Dollar/Thrifty	937	5.50	93
Avis/Budget/Payless	740	3.77	84
Total	**2,513**	**15.15**	**308**

Source: Sarasota Manatee County Airport Authority Exterior Lease Drawing, September 2019

1.7.5.6 Cell phone Lot

A Cell Phone lot is located on the south side of the Airport at the intersection of Rental Car Road and Old Bradenton Road. The Cell Phone lot was opened in October 2019 and consists of approximately 22,700 square feet which provides parking for approximately 26 vehicles. The location of the cell phone lot is depicted in **Figure 1.7-1**.

1.8 GENERAL AVIATION FACILITIES/FIXED BASED OPERATORS

There are two full service fixed based operators (FBOs) that provide general aviation services at SRQ, Dolphin Aviation and Ross Aviation (Ross).

1.8.1 ROSS AVIATION

Ross Aviation operates three locations on the airfield, Ross Aviation North, Ross Aviation Hangarminiums, and Ross Aviation South (Ross Aviation Jet Center). Ross provides charter services, aircraft maintenance, aircraft fueling, hangar storage, and aircraft ground services. Ross Aviation North encompasses 14 acres of land on the north side of the airfield. This area contains 24 tie downs spaces. Nineteen (19) of those tie downs were previously hangar buildings that no longer exist and now the slab serves as the foundation for the tie downs. There is 27,000 square yards of apron space primarily used for based aircraft. West of the apron there are two 3,000 square foot corporate hangars and one 2,000 square foot hangar. North of the apron there is one 8,000 square foot hangar (with a 3,000 square foot attached FBO) and one 13,000 square foot hangar. There is also one 15,000 square foot corporate hangar on the east end of the apron. Self-serve 100LL fueling is also available is in this area.

Ross Aviation Hangarminiums is located on the east side of the airfield and encompasses 10.1 acres of land. Currently, Ross is working to return 1.2 acres of their leasehold to SMAA for planned development. There is a 6,000 square foot hangar on this land that will be returned to SMAA. For the purpose of this master plan, this area will not be considered part of Ross Aviation. Therefore, for planning purposes, Ross Aviation leasehold is considered to be 8.9 acres. Ross Aviation Hangarminiums has a 14,000 square yard apron dedicated to based aircraft. There are three 20,000 square foot corporate hangars, one 11,000 square foot corporate hangar, and one 9,000 square foot corporate hangar within this leasehold.

Ross Aviation South (Ross Aviation Jet Center) provides FBO services and is located on the east side of the airfield south of Ross Aviation Hangarminiums. The FBO's amenities include crew lounges, conference rooms, planning rooms, and complimentary Wi-Fi. Additionally, on-site rental cars are available through Go Rentals. This leasehold encompasses 12.8 acres and provides 32,000 square yards of apron for aircraft parking. There is an 8,000 square foot FBO building that include office space available for rent on the second floor. North of the FBO there is a 15,000 square foot corporate hangar, a 20,000 square foot corporate hangar, and a 10,000 square foot maintenance hangar. Eighty-Eight (88) vehicular parking spaces are available adjacent to the FBO and hangar buildings.

The fuel farm located in the Ross Aviation North leasehold contains two 12,000-gallon Jet A tanks and one 12,000-gallon 100LL tank and one 500-gallon above ground diesel tank. Adjacent to the Ross Aviation North fuel farm there is a 2,000-gallon self-fuel 100LL tank which is equipped with a card reader. Ross Aviation South has two 20,000-gallon Jet A above ground tanks, one 12,000-gallon 100LL above ground tank, one 500-gallon above ground diesel tank and a 300-gallon unleaded fuel tank. Ross Aviation operates three 5,000-gallon Jet A fuel trucks and two 1,000-gallon 100LL trucks.

1.8.2 DOLPHIN AVIATION

Dolphin Aviation is a full service FBO that occupies 22.6 acres on the west side of the airfield. In addition to FBO services, Dolphin provides aircraft hangar storage, aircraft tie-down leases, office leases. The FBO building contains 34,000 square feet with 11,000 square feet of space used for FBO operations, administrative office space, and tenants' offices. The remaining 23,000 square feet of the FBO building is dedicated hangar space used for itinerant aircraft storage. Dolphin Aviation leases hangar and office space to a variety of tenants such as a flight school and companies specializing in aircraft maintenance and sales. There are eight 10,000 square foot corporate hangars located on the north side of the FBO entrance road and four 10,000 square foot hangars located on the south side of the FBO entrance road. Each hangar also provides dedicated office or classroom space.

One 6,000 square feet corporate hangar and four 7,500 square foot corporate hangars located on the south side of the Dolphin leasehold. Additionally, there are seven 800 square foot Port-a-Port hangars and three shade hangar building ranging in size from 6,000 to 8,000 square feet. Future development plans include the construction of two 10,000 square foot hangars and the replacement of existing shade hangars with two 12,000 square foot hangars.

Dolphin Aviation has 37,000 square yards of apron space providing 60 based and transient aircraft tiedown spaces. Vehicular parking is located adjacent to the FBO building and provides approximately 100 parking spaces. Vehicular parking is also available along the FBO entrance road in front of the corporate hangar facilities west of the FBO building.

The FBO terminal building provides amenities to passengers and flight crews such as flight planning, conference rooms, Wi-Fi, and lounge areas. On-site rental car services are provided by GoRentals and can also be coordinated with rental car providers located in the Airport terminal building.

Dolphin Aviation has two 12,000-gallon above ground tanks, one 100LL and one Jet-A fuel tank. Six fuel trucks are available with varying capacities. Two of the Jet-A trucks are 2,200-gallons, one is 3,000-gallons, and one is 4,000-gallons. The capacity of the two 100LL fuel trucks is 1,200 gallons each.

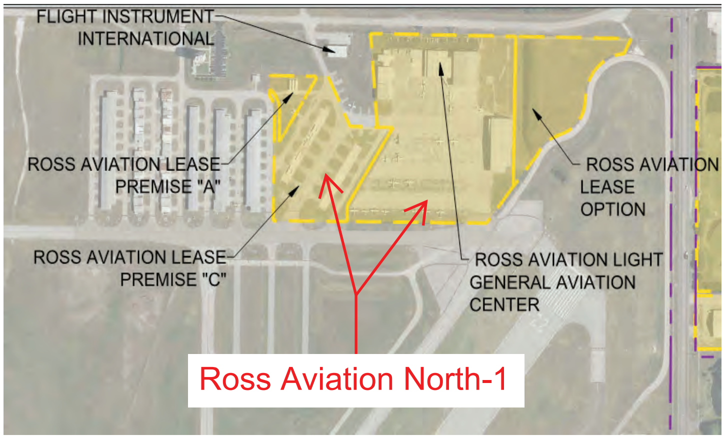
Hangar and apron facilities at Dolphin Aviation and Ross Aviation are outlined in **Table 1.8-1** and **Table 1.8-2. Figure 1.8-1** graphical depicts Dolphin and Ross Aviation leaseholds.

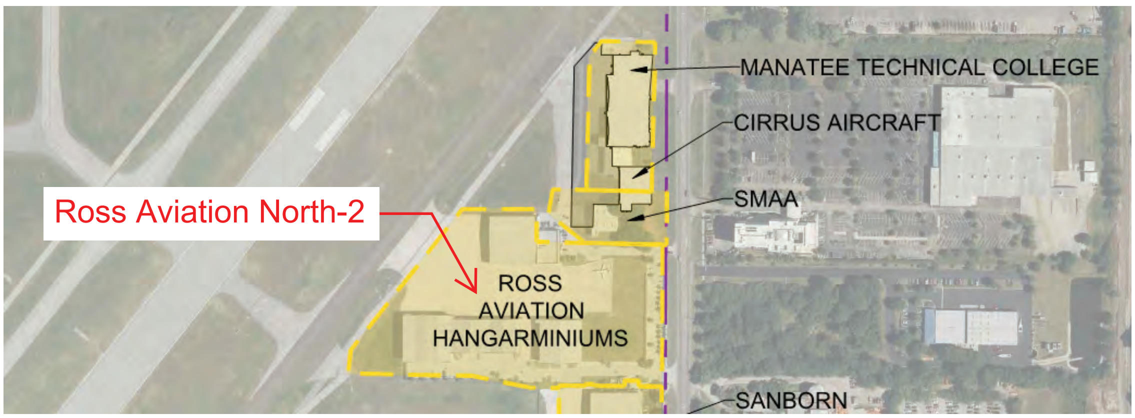
Table 1.8-1 FBO Facilities			
FBO	**Hangar/Building Size (square feet)**	**Type**	**Quantity**
Dolphin Aviation	10,000	Corporate	12
	34,000	FBO/Corporate [1]	1
	6,000	Corporate	1
	7,500	Corporate	4
	800	Port-a-Port	7
	8,000	Shade Hangar	1
	6,000	Shade Hangar	1
	7,000	Shade Hangar	1
Ross Aviation North	15,000	Conventional	1
	13,000	Conventional	1
	11,000	FBO/Maintenance [2]	1
	3,000	Conventional	2
	2,000	Conventional	1
Ross Aviation Hangarminiums	20,000	Conventional	3
	11,000	Conventional	1
	9,000	Conventional	1
Ross Aviation South (Jet Center)	8,00	FBO	1
	15,000	Conventional	1
	20,000	Conventional	1
	10,000	Maintenance	1

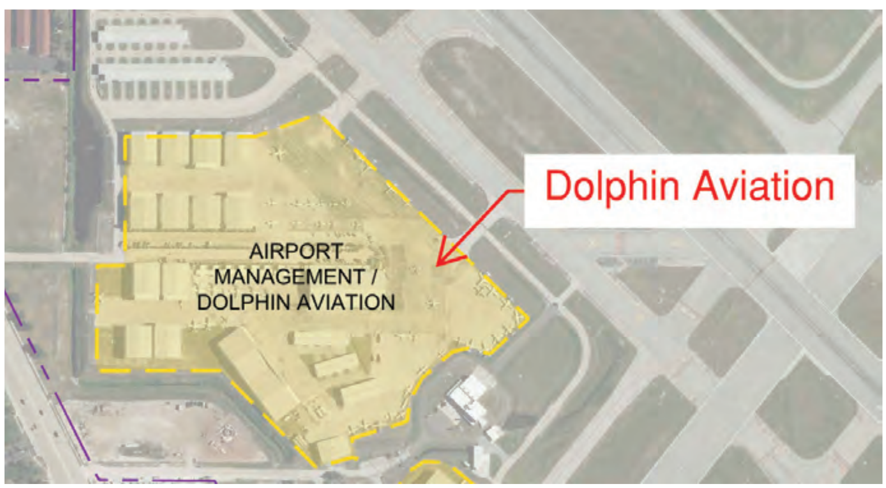
Source: Interviews with Dolphin Aviation and Ross Aviation management personnel. Data compiled by AID, November 2019
Notes:
1/ FBO/hangar building totals 34,000 square feet, 11,000 is FBO and 23,000 is hangar.
2/ FBO/hangar building totals 11,000 square feet, 3,000 is FBO and 8,000 is hangar.

Table 1.8-2 FBO Parking Areas			
FBO	**Based Aircraft Apron (square yards)**	**Transient Aircraft (square yards)**	**Total Apron Area (square yards)**
Dolphin Aviation	23,125	13,875	37,000
Ross Aviation North	17,000	10,000	27,000
Ross Aviation Hangarminiums	14,000	NA [1]	14,000
Ross Aviation South (Ross Aviation Jet Center)	15,500	18,500	32,000
Total	**69,625**	**42,375**	**110,000**

Source: Data compiled by AID, November 2019
Note:
1. Ross Aviation Hangarminiums apron is dedicated to only to based airport







Source: Sarasota-Manatee Airport Authority, Lease Hold Drawing, January 2021
Prepared by: American Infrastructure Development, Inc.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

FIXED BASED OPERATOR (FBO) FACITLITIES

FIGURE 1.8-1

1.8.3 SMAA HANGARS

The SMAA operates and leases eleven T-hangar buildings. Three T-Hangars are situated just north of Dolphin Aviation with direct taxilane access to Taxiway A. These facilities are identified as D-1, D-2, and D-3. Collectively, these T-hangars house nearly 44,800 square feet of aircraft hangar and storage space. Another eight T-hangars are situated adjacent to Ross Aviation North on the north side of the airfield with direct access to Taxiway F and Taxiway H. These hangars are identified by a letter/number (J-1 through J-8) designation through SMAA's naming convention. The northern development of T-Hangars contains 150,500 square feet of aircraft storage. **Table 1.8-3** summarizes SMAA's T-Hanger facilities.

Table 1.8-3
SMAA T-Hanger Facilities

Location Description (ALP Building Number)	Number of Units	T-Hangar Building Size (square feet)	Area per T-Hangar (square feet)	Condition
North of Dolphin Aviation				
T-Hangar D-1 (34)	20	21,300	1,065	Good
T-Hangar D-2 (57)	13	14,000	1,077	Good
T-Hangar D-3 (35)	6	9,500	1,583	Good
West of Ross Aviation North				
T-Hangar J-1 (13)	17	18,200	1,071	Good
T-Hangar J-2 (58)	17	18,200	1,071	Good
T-Hangar J-3 (59)	12	13,800	1,150	Good
T-Hangar J-4 (33)	14	17,600	1,257	Good
T-Hangar J-5 (60)	14	17,700	1,264	Good
T-Hangar J-6 (61)	20	23,000	1,150	Good
T-Hangar J-7 (C)	10	18,400	1,840	Good
T-Hangar J-8 (C)	15	23,600	1,573	Good
Total	**158**	**195,300**		

Source: Data compiled by AID, 2019.

1.9 METEOROLOGICAL CONDITIONS

This section presents meteorological data that will be used in subsequent sections of the Master Plan Update. Meteorological data is used in several elements of the master planning process. Temperature is used as a factor in determining runway length requirements, while the prevalence of ceiling and horizontal visibility data is used as a factor in determining airfield capacity. Wind data is also used as a factor in determining the adequacy of the number and orientation of existing runways.

Temperature and precipitation data at the Airport were analyzed using historical data from the National Oceanic and Atmospheric Administration's (NOAA) National Centers for Environmental Information (NCEI). Monthly precipitation and temperature from the weather station at SRQ between 1981 through 2018 to determine trends for weather conditions. **Table 1.9-1** presents the weather data collected.

Table 1.9-1
SRQ Weather Conditions

Item	Condition
Average Annual Precipitation Total	53.01 inches
Maximum Average Monthly Precipitation Total	9.14 inches (August)
Minimum Average Monthly Precipitation Total	1.93 inches (November)
Mean Max Temperature of the Hottest Month	90.00 °F (August)
Mean Max Temperature of the Coolest Month	51.80 °F (January)

Source: NOAA, NCEI Summary of Monthly Normals 1981-2010 and Climate Normals and Annual Summary, 2011-2018

1.9.1 WIND ANALYSIS

Runways are typically oriented based on the prevailing wind patterns because aircraft performance during arrivals and departures is most efficient when conducted into the wind. The FAA recommends the orientation of an airport's runways provide a minimum of 95.0% combined wind coverage. Consequently, historical wind data associated with varying meteorological conditions was reviewed to evaluate the existing orientation of the runways at SRQ.

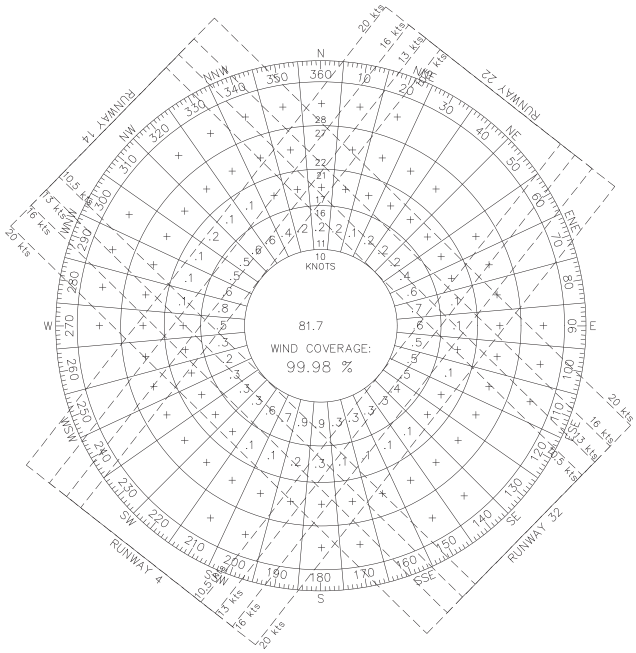
SRQ wind data was obtained from the NOAA NCEI and included 107,604 weather observations during a 10-year period between January 2009 and December 2018.

Weather observations are provided according to three types of conditions as described below:

- All-weather observations include all the 107,604 recordings throughout the study period regardless of cloud ceiling and visibility.
- Visual flight rules (VFR) observations include those when the visibility was at least 3 statute miles and cloud ceiling height was at least 1,000 feet. 97,819 VFR observations were included in the records.
- Instrument flight rules (IFR) observations include those when visibility and cloud distance do not satisfy the requirement for VFR conditions. 9,972 IFR observations were included in the records.

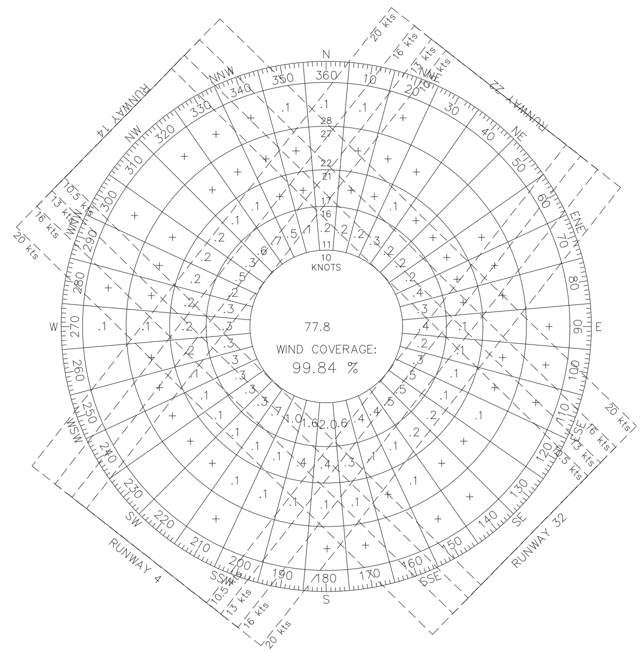
The NCEI data was used to conduct a wind analysis based on the standards specified in FAA AC 1500/5300-13A (Change 1), Airport Design. Wind coverage statistics and wind coverage roses were generated with the wind analysis tool available at the FAA's Airport Data and Information Portal[3]. **Figure 1.9-1** illustrates the wind roses for each weather condition while and **Table 1.9-2** presents the wind coverage for each crosswind component and weather condition. The analysis reveals that Runways 14-32 and 4-22 each individually satisfy the 95.0% minimum coverage under crosswind components of 13 knots and above under all weather and VFR conditions. Each runway exceeds 95 percent under IFR conditions with crosswind components of 16 knots or above Combined, both Runways 14-32 and 4-22 exceed 98 percent wind coverage under each weather and crosswind components.

[3] Formerly known as FAA's Airports GIS



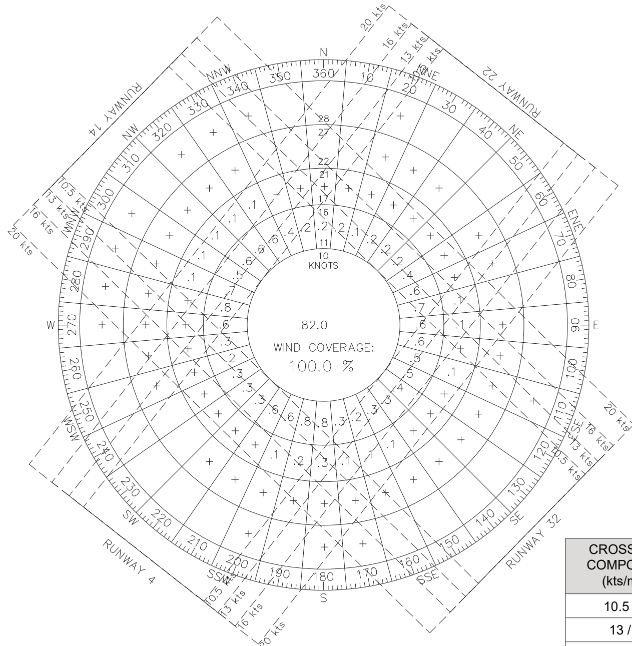
ALL WEATHER WIND ROSE

CROSSWIND COMPONENT (kts/mph)	Wind Coverage %		
	Runway 4-22	Runway 14-32	Combined
10.5 / 12	90.72	92.72	98.61
13 / 15	94.96	96.46	99.68
16 / 18	98.60	99.27	99.93
20 / 23	99.68	99.84	99.98



IFR WIND ROSE

CROSSWIND COMPONENT (kts/mph)	Wind Coverage %		
	Runway 4-22	Runway 14-32	Combined
10.5 / 12	89.46	89.70	97.50
13 / 15	93.34	94.39	98.98
16 / 18	96.96	97.91	99.58
20 / 23	98.93	99.23	99.84



VFR WIND ROSE

CROSSWIND COMPONENT (kts/mph)	Wind Coverage %		
	Runway 4-22	Runway 14-32	Combined
10.5 / 12	90.80	93.00	98.72
13 / 15	95.10	96.66	99.75
16 / 18	98.76	99.40	99.96
20 / 23	99.75	99.90	100.00

Sources: National Climatic Data Center, 2009-2018: Station 722115 - Sarasota/Bradenton International Airport
Prepared by: American Infrastructure Development, Inc.

SARASOTA BRADENTON
INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

WINDROSES

FIGURE
1.9-1

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Table 1.9-2 Runway Wind Coverage			
Crosswind Component	**4-22**	**14-32**	**Combined**
All-Weather			
10.5 Knots	90.72%	92.72%	98.61%
13 Knots	94.96%	96.46%	99.68%
16 Knots	98.60%	99.27%	99.93%
20 Knots	99.68%	99.84%	99.98%
Visual Flight Rules			
10.5 Knots	90.80%	93.00%	98.72%
13 Knots	95.10%	96.66%	99.75%
16 Knots	98.76%	99.40%	99.96%
20 Knots	99.75%	99.90%	100.00%
Instrument Flight Rules			
10.5 Knots	89.46%	89.70%	97.50%
13 Knots	93.34%	94.39%	98.98%
16 Knots	96.96%	97.91%	99.58%
20 Knots	98.93%	99.23%	99.84%

Source: National Climate Data Center, Station 722115, Sarasota/Bradenton International Airport, 2009-2018
Notes:
Runway 14-32 true heading 314.38
Runway 4-22 true heading 38.106

1.10 SUPPORT FACILITIES

1.10.1 AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF)

The Airport's ARFF station is located south of Dolphin Aviation's leasehold on the west side of the airfield. The station is accessible via U.S. 41 North Tamiami Trail from the landside and Taxiways A and D from the airside. The ARFF station consist of 9,000 square feet with four bays for vehicle and equipment storage. ARFF personnel operate three fire trucks that are equipped with water, foam, and dry chemical agents. Three additional vehicles supplement emergency response. Table 1.10-1 identifies the ARFF vehicles, their firefighting capabilities, and operational roles. There are eight employee vehicle parking spaces on the west side of the building.

The ARFF station operates 24 hour per day/365 days per year and provides emergency medical services passengers, tenants, and employees in addition to ARFF services. The ARFF employees are Florida State Certified Firefighters and Emergency Medical Technicians (EMT's).

Table 1.10-1 ARFF Vehicle Inventory				
Vehicle Identifier	**Water Capacity (gallons)**	**Foam Capacity (gallons)**	**Dry Chemical (pounds)**	**Role**
ARFF-1 2015 Rosenbauer Airwolf	750	90	500	Rapid Intervention vehicle
ARFF-2 2019 Oshkosh Striker	3000	420	500	Firefighting
ARFF-3 2013 Oshkosh Striker	3000	420	500 Halotron	Firefighting
ARFF-5 2012 GMC 3500 Truck	-	-	-	Vehicle to haul trailers/EMS
ARFF-8 2011 GMC Yukon XL	-	-	-	Fire Chief Command Vehicle
Foam Trailer	-	660	-	Large Scale incidents/Foam storage
Hazardous Spill Trailer	-	-	-	Absorbent material storage for spill containment
Mass Casualty Trailer (MCI)	-	-	-	EMS Supplies for large scale incidents
Aircraft Recovery Trailer	-	-	-	Storage for aircraft recovery equipment

Source: SRQ ARFF Personnel, December 2019

1.10.2 COMMERCIAL SERVICE FUEL FARM

Menzies Aviation provides all fueling services for airlines operating at SRQ. Fueling services for general aviation operations are provided by either the FBO's or tenants who have their own fueling capabilities. Menzies operates the fuel farm on the south side of the airfield and their personnel occupy offices within the air cargo building. The fuel farm consists of three 30,000-gallon aboveground Jet A tanks. According to Menzies personnel, five trucks each containing 5,000-gallons of Jet A fuel are available to transport fuel between the fuel farm and the terminal ramp. Fuel tankers typically deliver a total of 8,000-gallons of Jet A fuel to the fuel farm through five separate daily deliveries. During peak season, deliveries increase to eight per day. The fueling rack can off load one tanker while simultaneously loading one fuel truck.

The Airport Authority is constructing two additional 102,000-gallon aboveground Jet A tanks in 2021. Long-term expansion plans may include one more new Jet A fuel tank. The Authority is also constructing a permanent building in the location adjacent to the fuel tanks currently occupied by a trailer. The new building will house staff offices for Menzies employees.

1.10.3 AIR CARGO FACILITY

SRQ has one 23,000 square foot air cargo facility located east of the fuel farm. Delta is currently the only air carrier at SRQ that provides domestic cargo and special handling needs. Menzies utilizes a small portion of the building for personnel offices and Swissport occupies Bay 2 and shares the outdoor area for storage of ground support equipment. Delta occupies the first three bays for cargo operations, ground mechanic offices and equipment storage. Allegiant occupies two bays of the building for storage. Additionally, Delta occupies the 9,200 square feet of outdoor staging space for storage which is shared with Swissport. SMAA occupies last three bays of building for storage.

There is no aircraft access to the air cargo facility, however, a 16,500 square-foot concrete apron is located on north side of the building that us being used for equipment storage and cargo logistics. In addition, 14,000 square feet of truck docking area adjacent to the building provides for delivers and access to the air cargo vehicular parking.

1.10.4 AIR TRAFFIC CONTROL TOWER

Construction was completed on a new air traffic control tower (ATCT) at SRQ in mid-2018 at a cost of $24.8 million. The ATCT was constructed in a new location on the west side of the airfield southwest of Dolphin Aviation and has ground access available via U.S. 41 Tamiami Trail. The control tower has a height of 139 feet and contains a 525 square foot cab. A 9,000 square foot base building is located adjacent to the tower. The base building houses administrative offices, breakroom, conference room, equipment rooms, and training rooms. The tower has clear line-of-sight to the entire airfield. An employee parking lot is located west of the tower behind a secure perimeter fence and gate and contains 27 paved parking spaces. The tower is operational from 6 a.m. until midnight daily.

1.10.5 EXISTING UTILITY INFRASTRUCTURE

The utility systems serving the Airport include electric power, water, sanitary sewer, storm sewer, and communications. The following sections provide a brief overview of the utilities available to aviation and non-aviation parcels at the Airport.

1.10.5.1 Electric Power

Electric power for the Airport is currently supplied by the Florida Power and Light. Power service is available throughout the aviation and non-aviation parcels at the Airport. Power is also readily accessible to areas that Airport Authority may wish to further develop. Power is distributed from the main transformer to the terminal, the ATCT, the airfield electrical vault, and throughout the aviation and non-aviation parcels at the Airport. The airfield vault provides power to the PAPIs and airfield lighting while the FAA utility shacks provide power feeds to NAVAIDS and ASOS.

1.10.5.2 Water

Water service for the Airport is provided by the Manatee County Utilities Department. Potable water is a blend of purified groundwater and purified surface water. Ground water is pumped from the Floridian Aquifer from seven 1,200-foot deep wells in eastern Manatee County. This water is pumped through 36-inch pipe 13-miles to the Manatee County Water Purification Plant. Surface water is taken from the Lake Manatee Reservoir in central Manatee County.

An existing water main runs along southern part of the Airport along Airport Circle, Rental Car Road, and Air Cargo Avenue. The lines on the south side of the Airport tie into the east side via a main that runs from the Airport Administration building, under Runway 14-32, and into connects at 15th Street East. Connection to the west is established by a main under the short-term parking lot that extends north under Runway 4-22 and ties in at Taxiway D. All facilities at the Airport are supplied with potable water, including the FBO terminal, the ARFF facility, the ATCT, and hangars. Water is not currently distributed to the T-hangar areas. A potable water main also runs parallel to Clyde Jones Road on the north perimeter of the Airport.

1.10.5.3 Sanitary Sewer

Existing sanitary sewer services for the Airport are provided by Manatee County Utilities Department. The sanitary waste from the terminal area, east side development and northern development is collected by three separate gravity-fed sewer systems. Each system drains to its dedicated lift station, which conveys sanitary flows to the treatment plant via force main. The southern lift station is located near the shade parking lot, the eastern system drains to a lift station located just east of Ross Aviation Jet Center, and the northern system drains to a lift station just north of Ross Aviation North. A lift station was recently installed at Clyde Jones Road that pumps the Northwest Quadrant area to a county sewer line that parallels Tallevast Road. Development on the west side of the Airport is collected by three separate gravity-fed sewer systems. The system drains to a lift northwest of Dolphin Aviation via gravity main.

1.10.5.4 Storm Sewer

Several stormwater retention ponds, ditches and swales are located throughout airport property. Some ditches and swales on the northern portion of airport property drain to the north toward the Bowlees Creek sub-watershed. Stormwater retention areas on the west-central portion of airport property are connected via a piped outfall directly to Sarasota Bay. Stormwater in the southern portion of airport property drains to large ponds on the southeastern end of Airport property adjacent to University Parkway, which, in turn, outfall to the Whitaker Bayou sub-watershed.

1.10.6 HEIGHT ZONING

The Airport has established Compatible Land Use Zoning Requirements to govern the height of objects and protect the Airports 14 CFR Part 77 Imaginary Surfaces. These requirements comply with the following statute and rules:

- Florida Statute Chapter 333, Airport Zoning.
- Florida Statute Chapter 163, Part II, Growth Management Act/Local Government Comprehensive Planning and Land Development Act.
- Rule 14-60, Florida Administrative Code, Airport Licensing, Registration, and Airspace Protection.

- Rule 9J-5, Florida Administrative Code, Minimum Criteria for Review of Local Government Comprehensive Plan and Plan Amenities, Evaluation and Appraisal Reports, Land Development Regulations, and Determinations of Compliance.

The zoning requirements protect the Runway Protection Zones from development that could lead to the congestion of people, the attraction of birds, or the emissions of light, glare, or smoke. The siting of sanitary landfills and educational facilities are also governed by these zoning requirements.

In April 2017, SMAA adopted an amendment to the airport zoning ordinance under Resolution No. 2017-02 in accordance with Chapter 333. SMAA has adopted Interlocal Agreements with Sarasota County, the City of Sarasota and Manatee County to maintain consistency related to airport zoning regulations applicable to airport hazard areas.

In addition to the Interlocal Agreement, Manatee County adopted Land Development Ordinance 19-05 in February 2019 to comply with Chapter 333 Airport Zoning Regulations.

1.10.7 SURFACE TRANSPORTATION PLANS

In July 2019, the Sarasota/Manatee Metropolitan Planning Organization (MPO) published the Transportation Improvement Program for Fiscal Year (FY) 2020 – 2024. This plan identified two improvement projects planned for SRQ. These projects include:

- Aviation capacity project: North quadrant public access road design and construction. Budget: $2,471,880 (FY 2020), $4,100,000 (FY 2022)

- Preservation project: Ground transportation curbside improvements. Budget: $200,000 (FY 2021), $1,200,000 (FY 2022)

SECTION 2.0

Forecasts of Aviation Activity

SECTION 2.0 FORECASTS OF AVIATION ACTIVITY

2.1 INTRODUCTION

This section presents forecasts of aviation demand at Sarasota Bradenton International Airport (hereafter referred to as "SRQ" or "the Airport"). These forecasts were completed in January 2020 and were submitted to the FAA for approval in February 2020 just before the Covid-19 pandemic began to impact air travel. Consequently, the forecasts do not reflect the severe reduction in activity that occurred at SRQ during 2020. Nonetheless, the forecasts were subsequently approved by the FAA in early 2020 for use in this Master Plan Update.

The forecasts also do not reflect more recent air service gains such as Southwest Airlines beginning service to SRQ in late 2020. While both these events will impact activity levels in the short-term, continued growth of passenger and aircraft operations is anticipated and it is expected that projected activity levels will still be met. Consequently, these forecasts were used for all analyses presented in this Master Plan Update.

These forecasts cover all aspects of activity at the Airport including passengers, air cargo, based aircraft and aircraft operations. These forecasts will be used to evaluate the ability of existing facilities to accommodate current and future levels of demand.

Forecasts for master plans typically err on the high side of growth because they are being used to test the ability of existing facilities to meet future demand. Consequently, they may or may not be appropriate for other uses, such as financial planning, that may require the use of more conservative estimates of future demand.

Although the forecasts presented in this section are based on historical data, as well as current industry trends and local market factors, they are subject to a variety of external forces including strategic business decision of airlines and other tenants at the Airport. Consequently, actual growth may deviate from the forecast of future demand. Likewise, deviations in the timing of growth may also occur. Therefore, it is important to recognize that all capital improvement projects will need to be fully vetted at the time they are proposed for implementation. Nonetheless, the forecasts presented in this section serve a critical function in master planning process by providing a basis for assessing future needs in the Facility Requirements section of this Master Plan Update.

2.2 FORECAST CONSIDERATIONS

2.2.1 MARKET CHARACTERISTICS

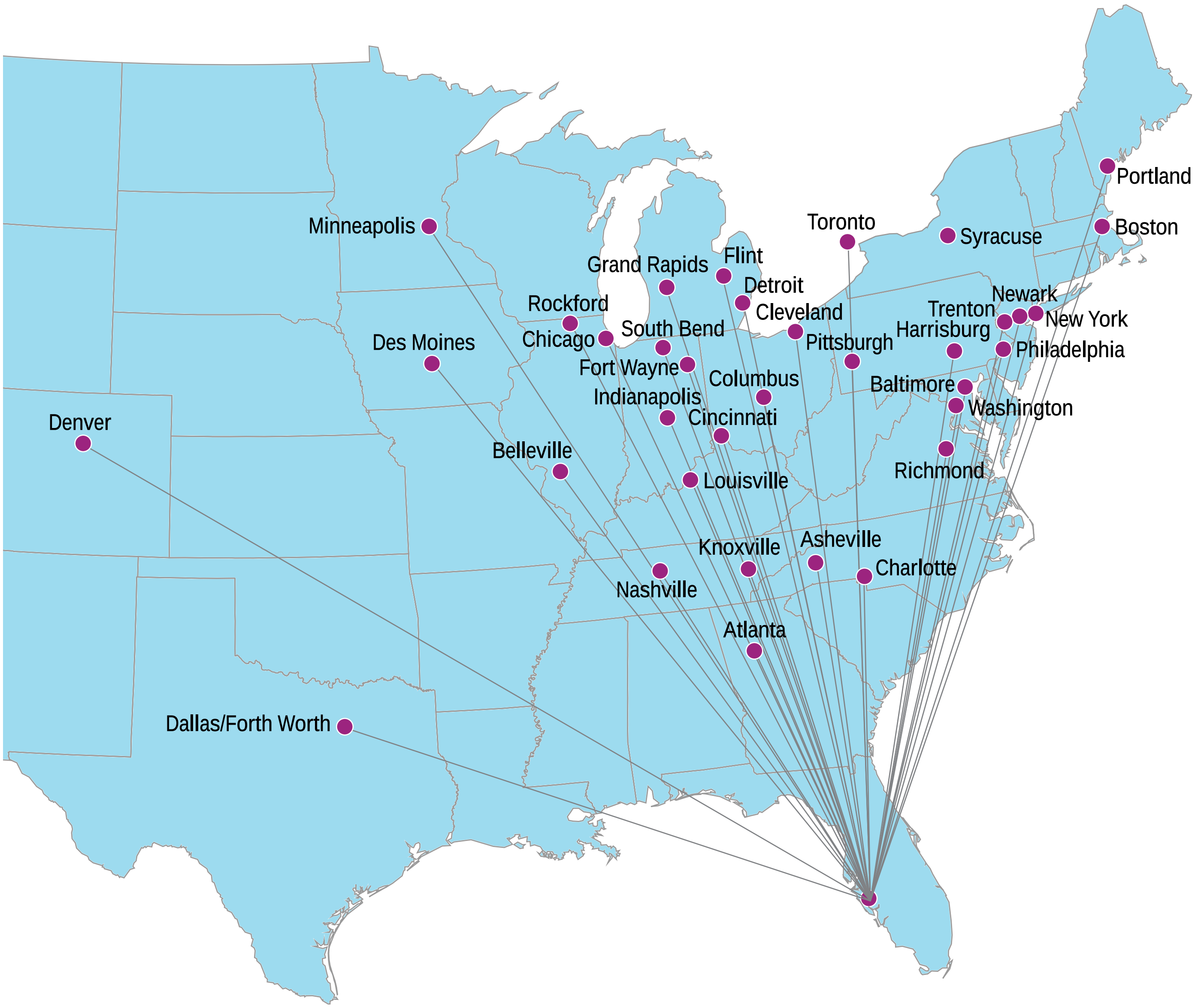
2.2.1.1 Current Airline Service Patterns

As of January 2020, nine airlines provide scheduled air service at SRQ. This includes traditional mainline carriers such as American, Delta and United and their codeshare partners1, as well as low cost carriers such as Allegiant, Frontier, and jetBlue. One international carrier (Air Canada) serves the Airport and two airlines provide either seasonal service or service to a limited number of destinations

[1] Mainline carriers contract with regional affiliates to carry passengers under the mainline carrier's brand even though the flights are actually operated by the regional affiliate. For example, American Airlines codeshares with a variety of affiliates such as, PSA Airlines, Republic and others. Mainline carriers are defined as those providing service primarily via aircraft with 90 or more seats. Regionals are defined as those providing service primarily via aircraft with 89 or less seats.

(i.e., Sun Country to Minneapolis/St. Paul and Elite to Portland, ME). Charter flight service is also provided to Gulfport-Biloxi, Mississippi by Sun Country.

Figure 2.2-1 provides an illustration of the non-stop markets served by these airlines from SRQ for January 2020. **Table 2.2-1** lists each airline and the destinations served for the years 2016 through 2020. The table also indicates if the service is provided seasonally or year-round. Review of the table indicates that a significant expansion of air service occurred in 2018 with the addition of new routes by Allegiant and the introduction of scheduled service by Frontier, Elite and Sun Country. Most of the growth began at the beginning of the winter 2019 – 2020 season.



SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

Markets with Non-Stop Airline Service (January 2020)

FIGURE 2.2-1

Table 2.2-1
Scheduled Commercial Air Service (2016-2020)

Airline	Destination	2016	2017	2018	2019	2020
Air Canada	Toronto	S	S	S	S	S
Allegiant	Allentown	-	-	-	-	YR
	Asheville	-	-	-	YR	YR
	Belleville	-	-	-	S	S
	Nashville	-	-	-	YR	YR
	Baltimore	-	-	-	YR	YR
	Cleveland	-	-	-	YR	YR
	Cincinnati	-	-	YR	YR	YR
	Des Moines	-	-	-	S	S
	Flint	-	-	-	S	S
	Fort Wayne	-	-	-	S	S
	Grand Rapids	-	-	-	YR	YR
	Indianapolis	-	-	YR	YR	YR
	Columbus	-	-	-	YR	YR
	Harrisburg	-	-	-	YR	YR
	Pittsburgh	-	-	YR	YR	YR
	Rockford	-	-	-	S	S
	Richmond	-	-	-	YR	YR
	South Bend	-	-	-	S	S
	Louisville	-	-	-	S	S
	Syracuse	-	-	-	YR	YR
	Knoxville	-	-	-	YR	YR
American	Charlotte	YR	YR	YR	YR	YR
	Washington DC	YR	YR	YR	YR	YR
	Dallas/Fort Worth	-	-	S	S	S
	Chicago	-	-	S	S	S
	Philadelphia	-	-	-	S	S
Delta	Atlanta	YR	YR	YR	YR	YR
	Boston	-	-	-	S	S
	Detroit	S	S	S	S	S
	New York - JFK	-	S	S	S	S
	New York - LGA	YR	YR	YR	YR	YR
	Minneapolis	-	-	-	-	S
Elite	Portland	-	-	-	S	S
	Traverse City	-	-	-	S	S
Frontier	Atlanta	-	-	-	S	S
	Cleveland	-	-	-	S	S
	Cincinnati	-	-	-	-	S
	Philadelphia	-	-	-	S	S
	Trenton	-	-	-	-	S
jetBlue	Boston	S	S	S	S	S
	New York - JFK	S	YR	YR	YR	YR
	New York - LGA	YR	-	-	-	-
Sun Country	Minneapolis	-	-	-	S	S
United	Denver	-	-	-	S	S
	Newark	S	S	YR	YR	YR
	Washington	-	-	-	YR	YR
	Chicago	S	S	YR	YR	YR

Source: Cirium through the use of Diio Mi, 2019.
Notes: S = Seasonal Service, YR = Year-Round Service

2.2.1.2 Top Origin and Destination Markets

Table 2.2-2 presents the top 30 Origin and Destination markets from SRQ along with gross fare and yield. Yield is the average fare paid per passenger per mile. New York tops the destination list followed by Boston, Atlanta, Chicago and Cincinnati. Cities with an asterisk after the name had non-stop air service at least seasonally during calendar year 2019.

Table 2.2-2
Top 30 O&D Markets from SRQ (2019)

Ranking	Destination	Enplanements	Percent Of Enplanements	Gross Fare	Yield
1	New York – JFK*	44,527	7.1%	$179	0.15
2	Boston*	39,357	6.3%	$217	0.15
3	Atlanta*	38,889	6.2%	$202	0.40
4	New York – EWR*	38,121	6.1%	$210	0.18
5	New York – LGA*	31,826	5.1%	$212	0.17
6	Chicago – ORD*	31,607	5.1%	$245	0.20
7	Cincinnati*	19,424	3.1%	$118	0.11
8	Pittsburgh*	19,225	3.1%	$135	0.12
9	Washington – DCA*	18,646	3.0%	$255	0.26
10	Indianapolis*	17,373	2.8%	$137	0.12
11	Charlotte*	13,481	2.2%	$264	0.43
12	Detroit – DTW*	11,077	1.8%	$269	0.22
13	Cleveland*	10,370	1.7%	$186	0.15
14	Philadelphia*	9,241	1.5%	$212	0.18
15	Minneapolis*	9,207	1.5%	$250	0.15
16	San Francisco	8,359	1.3%	$291	0.10
17	Columbus*	8,002	1.3%	$196	0.18
18	Baltimore*	7,804	1.3%	$206	0.19
19	Los Angeles – LAX	7,209	1.2%	$341	0.13
20	Buffalo	7,051	1.1%	$208	0.16
21	Denver*	6,745	1.1%	$251	0.14
22	Milwaukee	6,388	1.0%	$223	0.16
23	Hartford	6,350	1.0%	$221	0.16
24	Grand Rapids*	5,979	1.0%	$218	0.17
25	Syracuse*	5,603	0.9%	$242	0.18
26	Richmond*	5,542	0.9%	$232	0.25
27	Canton	5,470	0.9%	$197	0.17
28	St Louis*	5,288	0.8%	$228	0.21
29	Dayton	5,041	0.8%	$206	0.19
30	Nashville*	5,019	0.8%	$240	0.31
	Other Cities	176,038	28.2%		

Source: Cirium through the use of Diio Mi, 2019.

2.2.1.3 Competing Airports and Catchment Area Definition

SRQ competes for passengers with other nearby airports that also provide commercial airline service. Competition occurs based on numerous factors including, but not limited to: driving time, destinations served, airline choice, flight schedules, ticket prices and overall trip cost including airport parking. Nearby airports that provide airline service include Tampa International Airport and St. Petersburg/Clearwater Airport to the north and Punta Gorda Airport and Ft Myers Southwest Regional Airport to the south.

A passenger leakage analysis conducted for SRQ in November 2015[2] examined two-hour drive times around those airports, except Punta Gorda, but including Orlando International Airport. The analysis then examined actual airport usage within that area based on ticket sales. The analysis determined that the SRQ service area includes all of Manatee County and Hardee County, most of Sarasota County, as well as a small portion of western Charlotte County and a small portion of southern Hillsborough County. The variations in geography was influenced by road locations and resulting drive time to each airport.

A review of the catchment area defined by previous master plans for SRQ indicated that the service area was defined as consisting of either Sarasota and Manatee County (1980 and 1990 studies) or Sarasota, Manatee, Hardee and Desoto County (2009 study). The 2015 passenger leakage study offers a more quantitative and verifiable assessment of the catchment area than the previous master plans which did not include that level of detail.

Although airline service at SRQ and the competing airports is different than at the time the leakage study was conducted, the study provides the strongest quantitative assessment of the catchment area geography and therefore is used in this study with modifications as the basis for the collection of socioeconomic data to support forecast generation. Because historical and projected socioeconomic data is presented at a county level, the catchment area for SRQ for this master plan update is defined as consisting of Sarasota, Manatee and Hardee County.

In addition to competing for passengers, SRQ also competes for aircraft owners that have other choices for locating their aircraft. While a two-hour drive time is typically used as a basis for examining the catchment area for passengers, a one-hour drive time is typically used for defining a catchment area for aircraft owners. This smaller distance reflects the fact that there are many more general aviation airports than commercial service airports and therefore, aircraft owners have more choices and do not need to consider airports further from their home or business.

Airports that compete with SRQ for based aircraft owners includes some of the previously identified commercial service airports, as well as the following public general aviation airports: Albert Witted Airport in St Petersburg, Airport Manatee in Palmetto, Venice Airport in Venice, Wauchula Airport in Hardee County and Arcadia Airport in Desoto County. These airports have runway lengths in the range of 4,000 to 5,000 feet and Global Positioning System (GPS) approaches versus a runway length of 9,500 feet and Instrument Landing System (ILS) approaches at SRQ. Consequently, based aircraft at these airports are skewed toward smaller aircraft, while larger business jets that need the longer runway length and lower approach minimums would most likely use SRQ due to the more capable facilities and services provided

[2] SRQ Leakage Analysis, Campbell-Hill Aviation Group, November 2015.

there. Consequently, the catchment area for based aircraft is defined as consisting of Manatee County and Sarasota County.

2.2.2 SOCIOECONOMIC DATA FOR CATCHMENT AREA

Socioeconomic data is used in the forecasting process in two ways. The data is reviewed to gain a general understanding of the competitiveness of the catchment area versus statewide and national conditions. Data that shows the catchment area is growing faster or is attaining more wealth compared to the larger areas is typically a strong indicator that air service and passenger enplanements in the catchment area are likely to grow faster than the state or national rates. Conversely, data that shows the catchment area is growing slower than the state or nation is typically a strong predictor that air service and passenger enplanements will grow slower than the state or national averages. The second way the socioeconomic data is used is as inputs to regression models used in the forecasting process. The following paragraphs presents historical values for socioeconomic variables such as population, per capita personal income and employment. Forecast values are also presented for population.

2.2.2.1 Population

Table 2.2-3 presents population data for the Airport's catchment area, Florida and the United States. Population in the catchment area has grown faster than the US and at nearly the same rate as Florida. Population in the catchment area is projected to grow faster than Florida and twice as fast as the United States in the future.

Table 2.2-3
Historical and Forecast Population (1990-2040)

Year	SRQ Catchment Area	Florida	United States
Historical			
1990	508,982	12,937,926	248,718,301
2000	619,718	15,982,824	281,421,906
2010	729,981	18,801,310	308,745,538
Forecast			
2020	853,600	21,517,600	332,639,000
2025	922,300	23,050,800	344,234,000
2030	979,400	24,340,500	355,101,000
2035	1,029,300	25,429,300	364,862,000
2040	1,074,100	26,373,600	373,528,000
Average Annual Growth Rate			
1990 - 2010	1.8%	1.9%	1.1%
2010 - 2020	1.6%	1.4%	0.7%
2020 - 2030	1.4%	1.2%	0.7%
2030 - 2040	0.9%	0.8%	0.5%
2020 - 2040	1.2%	1.0%	0.6%

Source: Historical Data - US Census Bureau, 2019. Forecast Data – US Census Bureau and University of Florida, Bureau of Economic and Business Research, 2019.

2.2.2.2 Per Capita Personal Income

Table 2.2-4 presents Per Capita Personal Income from the US Department of Commerce, Bureau of Economic Analysis for the Northport-Sarasota-Bradenton Metropolitan Statistical Area (MSA), which was used as a surrogate for the Airport's catchment area, as well as Florida and the United States. Per Capita Personal Income in the MSA is higher than for the rest of Florida and the United States. However, it has been growing at a slower rate than the state or the nation.

Table 2.2-4
Historical Per Capita Income (1990-2010)

Year	Northport-Sarasota-Bradenton MSA	Florida	United States
Historical			
1990	$24,156	$19,973	$19,621
2000	$36,261	$29,428	$30,657
2010	$41,702	$38,474	$40,546
Average Annual Growth Rate			
1990 - 2000	4.1%	4.0%	4.6%
2000 – 2010	1.4%	2.7%	2.8%
1990 - 2010	2.8%	3.3%	3.7%

Source: US Department of Commerce, Bureau of Economic Analysis, 2019.

2.2.2.3 Employment

Table 2.2-5 presents employment values from the US Department of Commerce, Bureau of Economic Analysis for the Northport-Sarasota-Bradenton MSA, as well as Florida and the United States. Employment in the MSA grew at a faster rate that the US, but slightly slower than the state overall.

Table 2.2-5
Historical Employment (1990-2010)

Year	SRQ Catchment Area	Florida	United States
Historical			
1990	246,876	6,740,289	138,330,900
2000	353,692	8,881,279	165,370,800
2010	346,051	9,805,154	172,901,700
Average Annual Growth Rate			
1990 - 2000	3.7%	2.8%	1.8%
2000 – 2010	-0.2%	1.0%	0.4%
1990 - 2010	1.7%	1.9%	1.1%

Source: US Department of Commerce, Bureau of Economic Analysis, 2019.

2.2.2.4 Employment by Industry

Table 2.2-6 presents the distribution of employment for the Airport's catchment area versus Florida and the United States during 2018. The data reveals that employment in catchment area is significantly more reliant on the construction industry, financial services and professional and business services than the US. However, this is also true for the state of Florida overall. The catchment area is also significantly less reliant on the government sector as a source of employment. This distribution of employment makes the Airport's catchment area likely to grow faster than the nation during expansionary periods and more likely to contract faster than the nation during economic recessions.

Table 2.2-6
Employment by Industry (2018)

Year	SRQ Catchment Area	Florida	United States
Natural Resource & Mining	1.0%	0.80%	0.5%
Construction	13.7%	10.30%	4.9%
Manufacturing	3.2%	2.90%	8.5%
Trade, Transportation and Utilities	17.6%	19.90%	18.5%
Information	1.2%	1.60%	1.9%
Financial Activities	11.7%	10.60%	5.7%
Professional & Business Services	22.0%	23.40%	14.0%
Education & Health Services	10.8%	10.60%	15.8%
Leisure and Hospitality	8.1%	8.10%	10.9%
Other Services	8.4%	8.00%	4.4%
Government	0.8%	0.90%	15.0%

Source: Enterprise Florida and US Bureau of Labor Statistics, 2019.

2.2.2.5 Summary of Economic Conditions

The socioeconomic data presented on the preceding pages indicate that the Airport's catchment area is forecast to grow faster than the state or the nation, has slightly higher per capita income and has been gaining employment at a faster rate than the nation. The breakdown of employment by industry with the catchment area also is conducive to faster growth during expansions. These attributes are positive for supporting increasing demand for air travel and air transportation related services including general aviation services and air cargo.

2.3 PASSENGER ENPLANEMENTS

2.3.1 HISTORICAL PASSENGER ENPLANEMENTS

Table 2.3-1 presents annual passenger enplanements at the Airport from 2010 through 2019. Annual passenger enplanements remained fairly close to 600,000 in recent years, but increased significantly during 2018 and 2019 which coincided with the introduction of service by Allegiant Air, Frontier Airlines, Elite Airways and Sun Country to the SRQ market. **Figure 2.3-1** illustrates passenger enplanements over a longer historical period and reveals that the Airport experienced higher levels of passenger enplanements in prior years. The erosion of passenger enplanements compared to older periods was most likely the result of competing air service at nearby airports especially by low-cost and ultra-low cost carriers. This conclusion is supported by recent passenger surveys[3] and air service studies[4] that found more than one-third of passengers in the SRQ service area were using competing airports for their air service needs. However, the percentage of passengers using competing airports varies by significantly by destination depending upon factors such as the existence of non-stop service, the cost of air fares, frequency of flights as well as other factors.

Table 2.3-1
Historical Annual Passenger Enplanements (2010-2019)

Year	Air Carrier	Commuter	Total
2010	536,824	135,414	672,238
2011	560,477	98,452	658,929
2012	555,487	84,971	640,458
2013	516,571	79,033	595,604
2014	496,635	104,851	601,486
2015	495,910	116,528	612,438
2016	464,747	129,420	594,167
2017	459,703	134,127	593,830
2018	534,694	153,396	688,090
2019	822,773	157,037	979,810
AAGR	4.9%	1.7%	4.3%

Source: SRQ Airport Administration, 2020.
Note: AAGR=Average Annual Growth Rate.

Total passenger enplanements for calendar year 2019 were nearly 1 million which represents a 44 percent increase over 2018. This exceptionally high growth is a result of new air service by new entrants such as Frontier Airlines, Elite Airways and Sun Country as well as an expansion of the number of destinations served by Allegiant and legacy mainline carriers.

Figure 2.3-2 illustrates monthly passenger enplanements at the Airport from 2014 through 2019. The figure clearly shows the seasonality of passenger activity and the beginning of the current growth pattern that began in May 2018. Passenger enplanements are heavily skewed toward winter months when Sarasota, like most of Florida, experiences a heavy influx of northern travelers seeking a respite from cold winter weather, as well as second homeowners that reside in the catchment area during winter months.

2.3.2 PREVIOUS AND OTHER ENPLANEMENT FORECASTS

Forecasts of passenger enplanements were previously prepared for the Airport as part of the 2009 master plan update and by the Federal Aviation Administration through its Terminal Area Forecast (TAF). These forecasts are presented in the following paragraphs.

[3] Sarasota Bradenton International Airport, Market Research Survey, University of South Florida, College of Hospitality & Tourism Leadership, 2014.
[4] SRQ Leakage Analysis, Campbell-Hill Aviation Group, November 2015.

2.3.2.1 2009 Master Plan Forecast

The 2009 Master Plan prepared a baseline and an accelerated baseline forecast of passenger enplanements. The baseline forecast assumes that passenger enplanements would initially grow at 3.7 percent and then slow to produce an overall grow rate of 2 percent through the twenty-year period. The accelerated baseline forecast projects growth of 8.7 percent over the first five years and then decreases to 1.5 and then to 1 percent annually to produce an overall growth rate of 3 percent over the entire forecast period. The baseline forecast predicted that passenger enplanements in 2026 (the last year of the forecast) would be 1 million versus 1.2 million with the accelerated baseline forecast.

2.3.2.2 2020 FAA Terminal Area Forecast (TAF)

The FAA prepares the TAF to assist its planning, budgeting, and staffing requirements. The TAF assumes a demand driven forecast for aviation services based upon local and national economic conditions as well as conditions within the aviation industry. The TAF published in January 2020 projects that passenger enplanements at the Airport will increase at an average annual rate of 3.3 percent annually and results in a projection of 1.78 million passenger in the year 2045.

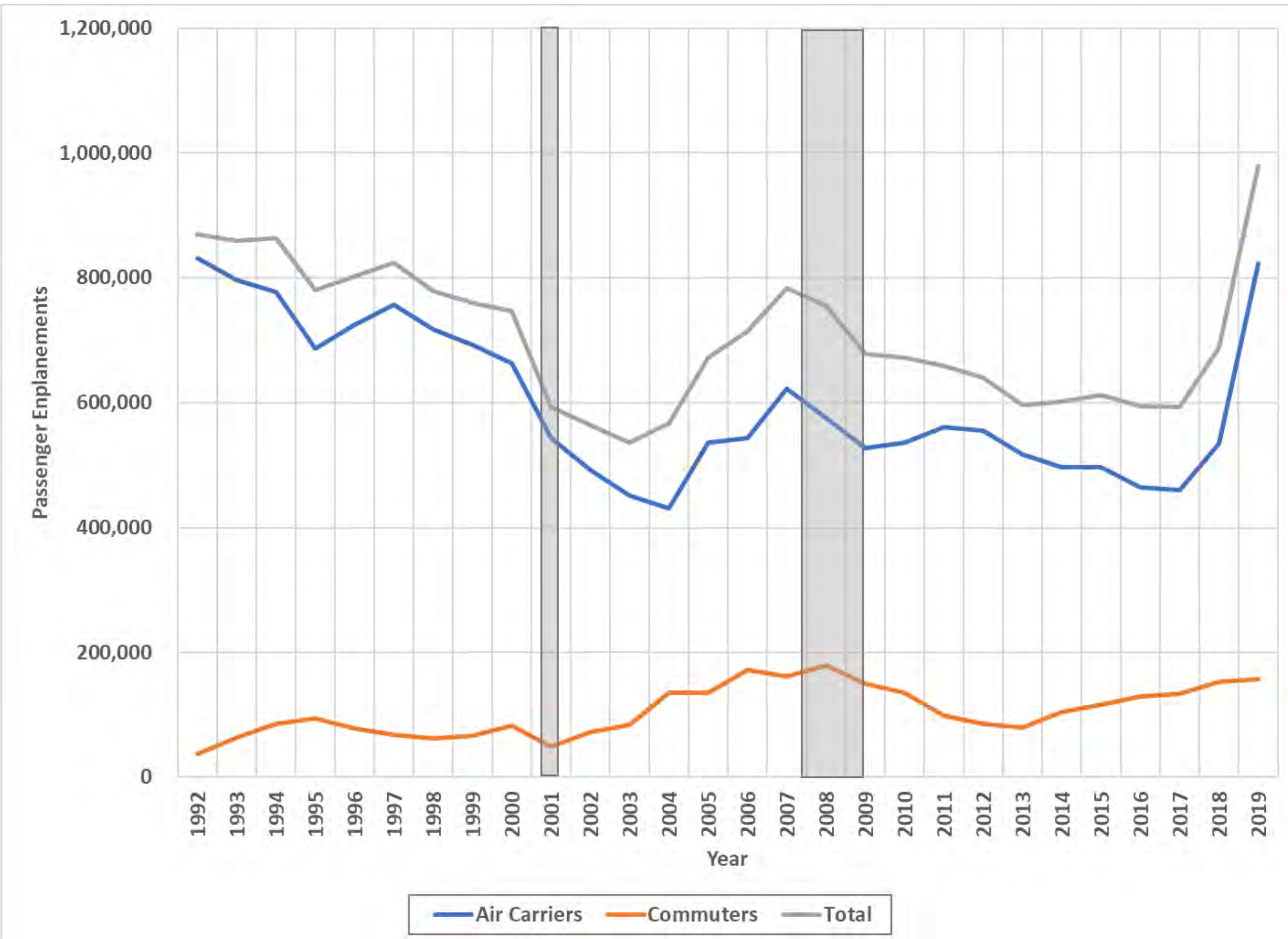
2.3.2.3 FDOT Commercial Service Airport Forecast

The Florida Department of Transportation publishes forecasts of passenger enplanements for the commercial service airports in the state. Unlike the FAA TAF, the FDOT forecasts are not published on an annual basis. The most recent forecast uses base data from 2015 and presents projections of passenger enplanements through 2035. The forecast for the Airport projects that passenger enplanements will grow at an average annual rate of 4.1 percent and will reach 1.3 million in 2035

Figure 2.3-3 illustrates these previous forecasts in relation to actual historical activity. Although there was a disparity between actual annual passenger enplanements and these forecasts during recent years, actual passenger enplanements for 2020 were close to 1 million and therefore were very close to the Baseline Forecast from the 2009 Master Plan Update. Likewise, the Accelerated Baseline Forecast may be very close to actual annual activity in 2020 and beyond. The 2020 TAF is likely to be very close to passenger levels in 2020 based on currently scheduled flights barring another recession that decreases the demand for air travel.

2.3.3 FORECAST OF PASSENGER ENPLANEMENTS

New projections of annual passenger enplanements were created using a variety of forecasting techniques and are described on the following pages.



Source: Sarasota Manatee Airport Authority, 2020.

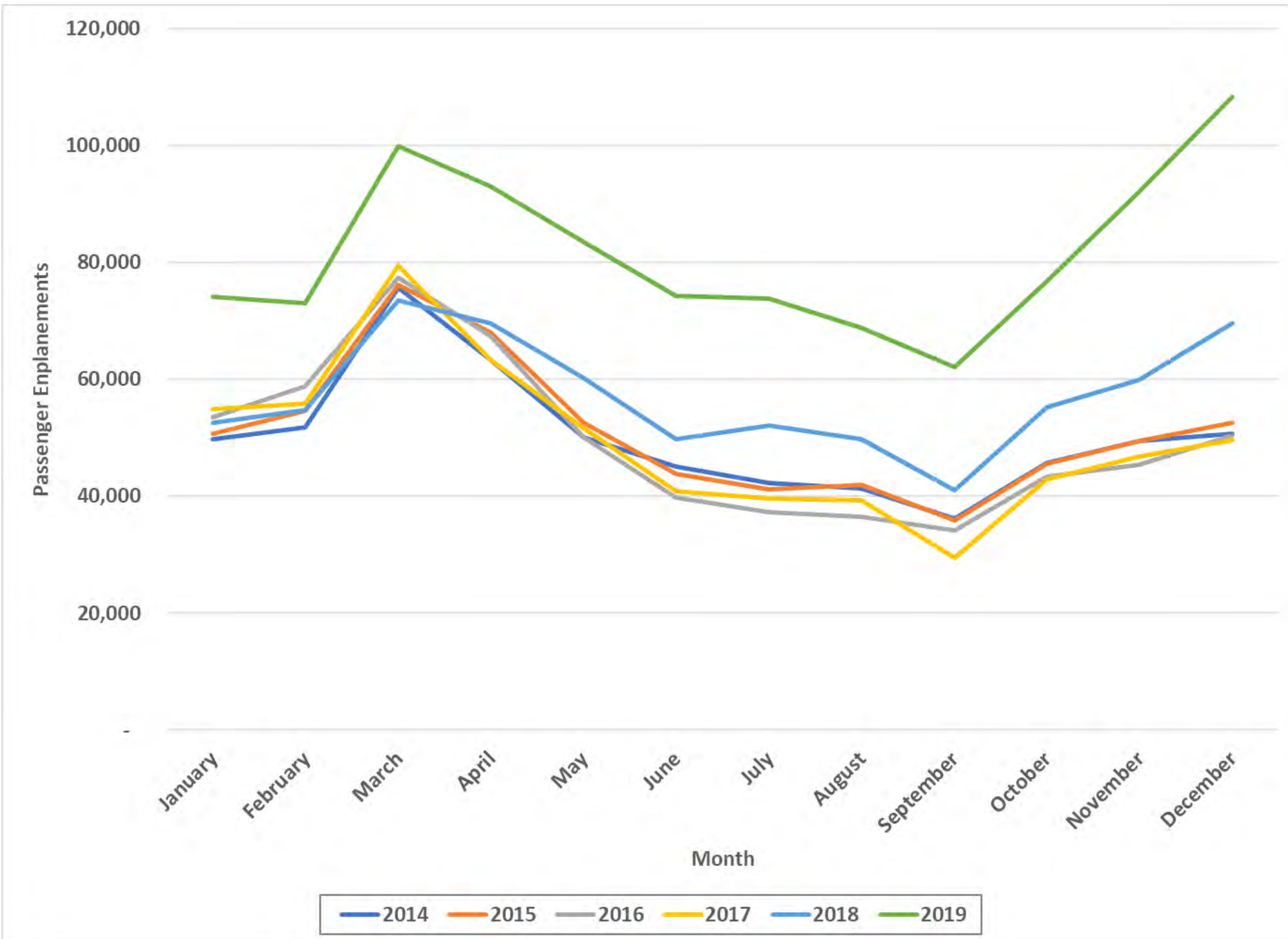
Note: Shaded areas represent economic recessions.

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

Historical Passenger Enplanements

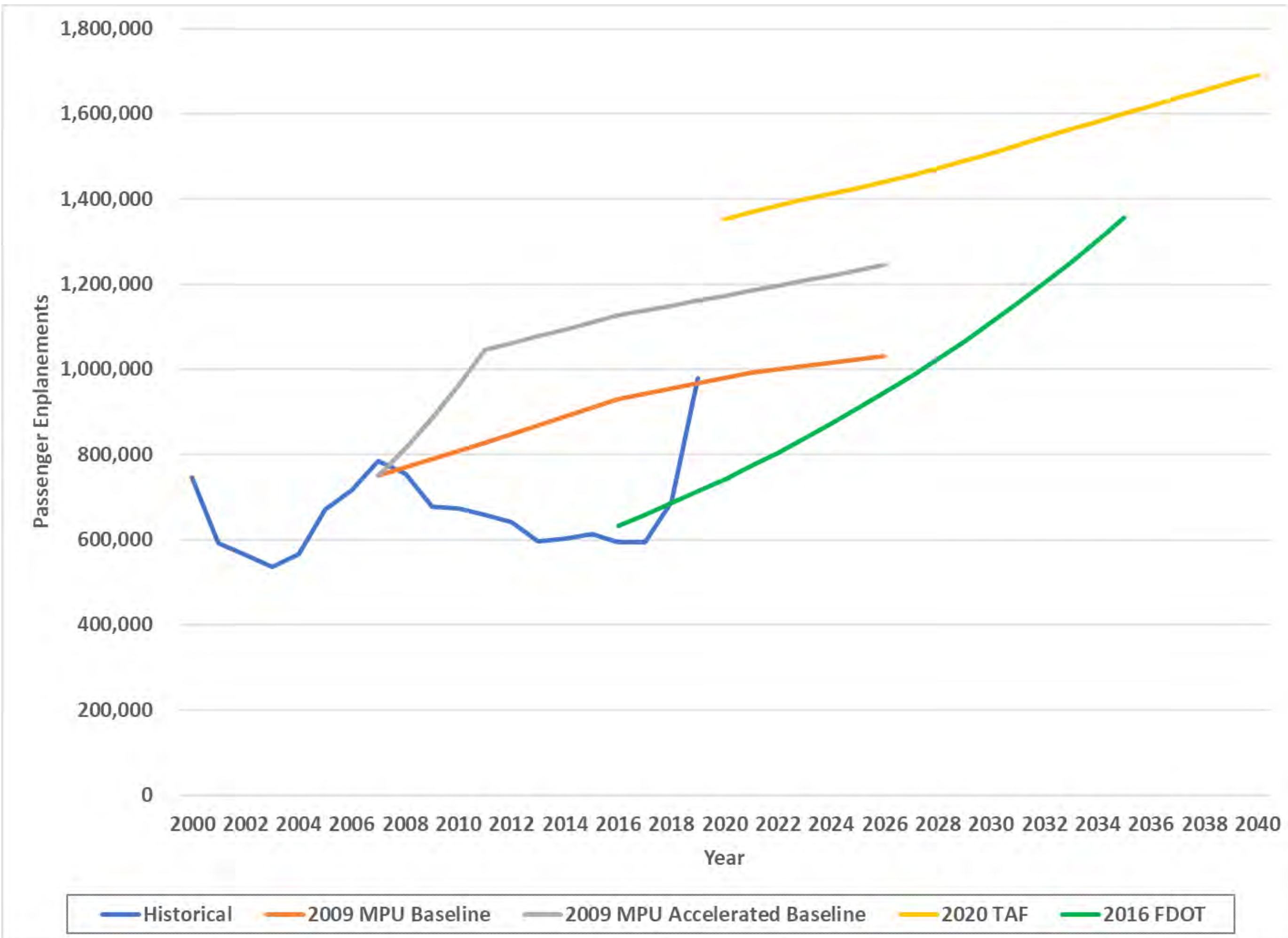
FIGURE 2.3-1



Source: Sarasota Manatee Airport Authority, 2020

Historical Monthly Passenger Enplanements

FIGURE 2.3-2



Source: Historical data - Sarasota Manatee Airport Authority, 2020.
Forecast data - as noted.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

Previous Forecasts of Passenger Enplanements

FIGURE 2.3-3

2.3.3.1 Trendline Forecast

A trendline forecast, sometimes referred to as time series forecast, is a simple method of forecasting that assumes future levels of activity will continue in the same manner as past trends. Trendline forecasts are generated using historical passenger enplanements for a specific period of interest. Consequently, trendline forecasts are dependent upon the period of historical data selected for the analysis. Another shortcoming of trendline forecasts are that they do not consider external factors that may bear on upcoming levels of activity such as recent changes in air service. Nonetheless trendline forecasts were explored and generated for this Master Plan Update as recommended by FAA guidance.

A trendline forecast was prepared based on the last 10-years of historical passenger enplanements. **Table 2.3-2** presents the trendline forecast.

Table 2.3-2
Trendline Forecast

Year	Passenger Enplanements
Historical	
2010	672,238
2011	658,929
2012	640,458
2013	595,604
2014	601,486
2015	612,438
2016	594,167
2017	593,830
2018	688,090
2019	979,810
Forecast	
2024	825,003
2029	909,624
2034	994,245
2039	1,078,866
Average Annual Growth Rate	
(2019 – 2039)	0.5%

Source: AECOM, 2019.

The 10-year trendline forecast predicts a slow average annual growth rate of 0.5 percent, because it is primarily influenced by the lower annual enplanement levels prior to 2019.

2.3.3.2 Market Share Forecast

Market share forecasts explore the historical relationship between activity at an airport versus activity for the same period within a larger market such as a state, region or the nation. Once the historical relationship is determined, it can then be applied to a forecast of activity for the larger market in order to project activity at the airport of interest.

The FAA compiles passenger enplanement data for airports and states across the US. Therefore, the historical market share of passenger enplanements at SRQ can be compared to historical passenger enplanements for the US and for Florida. The FAA also forecasts passenger enplanements for those larger markets. Therefore, market share forecasts were generated for SRQ using those forecasts and the average share that SRQ captured from 2000 through 2018. The FAA TAF lists 2018 as the last year of historical data for the larger markets and therefore was used as the last year of the analysis.

Table 2.3-3 presents historical passenger enplanements for the Airport as recorded by the Airport Authority, as well as total US and Florida enplanements as recorded by the TAF. The table also shows the Airport's historical share of each market. The notable finding of the historical analysis is that SRQ has lost market share on a national and state basis during the period examined. Consequently, if the Airport recaptures some of that lost share it has the potential to grow at a faster rate than the FAA projections for the larger markets.

Table 2.3-3
Market Share Forecast

Year	SRQ Passenger Enplanements	US Total Enplanements	Historical US Market Share	Florida Enplanements	Historical FL Market Share
2000	746,401	704,829,175	0.11%	59,104,981	1.26%
2001	592,491	693,147,977	0.09%	59,620,280	0.99%
2002	564,516	627,651,686	0.09%	53,356,523	1.06%
2003	535,716	643,224,641	0.08%	55,388,518	0.97%
2004	566,466	690,967,734	0.08%	61,175,810	0.93%
2005	671,988	733,403,888	0.09%	66,475,509	1.01%
2006	715,137	732,886,054	0.10%	66,240,039	1.08%
2007	783,964	756,525,464	0.10%	68,926,255	1.14%
2008	755,162	747,466,798	0.10%	69,414,686	1.09%
2009	677,419	695,488,533	0.10%	64,741,807	1.05%
2010	672,238	702,818,621	0.10%	65,366,623	1.03%
2011	658,929	722,926,202	0.09%	69,094,117	0.95%
2012	640,458	731,053,513	0.09%	69,848,049	0.92%
2013	595,604	734,336,521	0.08%	70,267,688	0.85%
2014	601,486	753,529,877	0.08%	71,564,866	0.84%
2015	612,438	786,384,586	0.08%	76,216,675	0.80%
2016	594,167	822,586,152	0.07%	80,699,802	0.74%
2017	593,830	846,556,739	0.07%	83,174,825	0.71%
2018	688,090	888,360,299	0.08%	89,632,909	0.77%
SRQ Forecast Based on US & Florida Market Shares					
2024	925,994 / 1,023,333*	1,052,961,396	0.09% Average Market Share (2000 to 2018)	110,296,301	0.96% Average Market Share (2000 to 2018)
2029	1,024,580 / 1,140.355*	1,165,065,046		123,809,397	
2034	1,137,933 / 1,269,363*	1,293,960,368		139,312,732	
2039	1,257,495 / 1,402,844*	1,429,915,818		155,346,835	
Average Annual Growth Rate					
2017 - 2034	2.9% / 3.5%	2.3%	-	2.7%	-

Source: AECOM, 2020.
Notes: * The first value represents the forecasted value for SRQ enplanements based on the market share of US enplanements, while the second value represents the forecasted value for SRQ enplanements based on the market share of FL enplanements.

The market share forecast generates higher average annual growth rates than the TAF growth rates for the US and Florida due to the use of the average market share during the 18-year period examined. This can be seen in the last line of the table. In particular, the Florida market share forecast suggests that passenger enplanements could grow to 1.4 million by 2034 if SRQ regained its average market share.

2.3.3.3 Regression Forecast

Regression forecasts attempt to find relationships between independent variables typically socioeconomic data for the catchment area such as population, income data or employment and/or cost or cost proxy data for air service such as air fares, oil prices, etc. and a dependent variable (i.e., passenger enplanements). Regression forecasts can be based on one independent variable which is referred to as simple regression or be based on multiple independent variables which is referred to as multiple regression. Regression analysis is typically only of value as a forecasting technique when a strong historical correlation can be found between independent variables and the dependent variable. Another drawback of regression forecasting is that it is dependent on the accuracy of forecasts for independent variables.

Regression analyses were performed for several socioeconomic variables including population, per capita personal income and employment versus historical passenger enplanements at the Airport. The regression analyses determined that a statistical valid correlation could not be found between these independent variables and passenger enplanements. Additional regressions were then performed versus variables representing the cost of air travel as measured by historical yield at SRQ. Again, no statistically valid correlation could be found. Consequently, regression analysis was not used further as a forecasting technique.

2.3.3.4 Consideration of Other Factors

An important part of the forecasting process is considering factors that are unique to the local market and may not, or cannot, be adequately captured using statistical forecasting techniques. The following paragraphs address these factors.

Recent Growth at SRQ

Table 2.3-4 shows the growth of seats at SRQ during 2016 through 2020 year, by airline. The table reveals that the current growth pattern began in 2018 with the initiation of service by Frontier and Allegiant, although United also experienced strong growth of seats during 2018 to its hubs in Newark and Chicago. The net result was a 16 percent growth of seats at the Airport during 2018 compared to 2017.

Even stronger growth of seats occurred in 2019 and the table shows that while all carriers except jetBlue experienced growth, it was exceptionally strong among the low-cost carriers Frontier and Allegiant. The high growth recorded by those airlines reflect the fact that neither airline served the Airport for a full year during 2018 and therefore those values are somewhat skewed. Nonetheless, those two low cost carriers accounted for 62 percent of the total increase in seats at the Airport from 2018 to 2019.

Table 2.3-4
Recent Seat Growth at SRQ
(Percent from Previous Year)

Airline	2016	2017	2018	2019
Elite	No Service	Began Service	-15%	52%
American	14%	-1%	7%	52%
Air Canada	21%	2%	-14%	16%
jetBlue	-29%	-8%	16%	0%
Delta	0%	-3%	4%	8%
Frontier	No Service	No Service	Began Service	1091%
Allegiant	No Service	No Service	Began Service	475%
United	-26%	6%	69%	28%
Total	**-4%**	**-2%**	**16%**	**46%**

Source: Cirium through the use of Diio Mi, 2019. Data compiled by AECOM.

A review of historical passenger enplanements at the Airport versus the socioeconomic data for the catchment area clearly indicates that the number of passenger enplanements at the Airport is not primarily being driven by population, income, employment or even ticket prices. Passengers enplanements at SRQ are primarily being driven by the air service decisions of airlines including their decisions regarding air service at nearby airports. Passenger enplanements at SRQ experienced a general downward trend from 1990 when over 1 million enplanements occurred to 2017 when just under 600,000 enplanements occurred even though shallow growth trend occurred from 2013 to 2015.

Significant expansions of air service occurred during that period at competing airports including Tampa International Airport (TPA), St. Petersburg/Clearwater International Airport (PIE) and Punta Gorda Airport (PGD). Most notably, a significant amount of the new air service began by low cost airlines and, in the case of PIE and PGD, this expansion of air service was primarily by one airline; Allegiant. At TPA low cost air service is provided by several airlines including Southwest, Spirit and Frontier. TPA has also been successful at obtaining additional international service; primarily to markets in Europe. This non-stop international service may lure some travelers from the SRQ catchment area who otherwise may have traveled from SRQ via connecting international service at other major east coast hubs such as Atlanta and New York.

Allegiant Airline’s Service at Competing Airports

Because Allegiant Air has accounted for a significant amount of the new air service at SRQ, special attention was given to examining the nature its air service at nearby competing airports and how that service has grown since its inception. This information may provide insight regarding its future growth at SRQ.

Table 2.3-5 presents a comparison of destinations served by Allegiant Air from PIE and PGD versus SRQ. The table shows that for March 2020 Allegiant is scheduled to serve 50 destinations from PIE and 45 from PGD versus 21 from SRQ. The number of destinations served by Allegiant from each airport varies throughout the year and is typically higher during the winter months to serve the winter vacation market that caters to tourists across the Midwest, Northeast and certain markets in the South.

Table 2.3-5
Allegiant Service at PIE, PGD and SRQ (March 2020)

	St. Petersburg (PIE)		Punta Gorda (PGD)		Sarasota (SRQ)	
Destination	**Flights**	**Seats**	**Flights**	**Seats**	**Flights**	**Seats**
Allentown, PA	22	3,894	19	3,372	9	1,593
Albany, NY	13	2,301	9	1,674	-	-
Appleton, WI	12	2,124	19	3,534	-	-
Asheville, NC	40	6,933	13	2,091	9	1,593
Bangor, ME	24	4,248	-	-	-	-
Belleville, IL	19	3,153	21	3,906	9	1,593
Bloomington, IL	9	1,425	-	-	-	-
Nashville, TN	13	2,028	13	2,028	9	1,593
Baltimore, MD	-	-	-	-	9	1,593
Chattanooga, TN	9	1,425	-	-	-	-
Charleston, SC	-	-	9	1,674	-	-
Cedar Rapids, IA	17	2,925	27	5,022	-	-
Cleveland, OH	8	1,269	16	2,976	11	1,947
Cincinnati, OH	57	10,305	57	10,305	27	4,959
Dayton, OH	9	1,446	13	2,418	-	-
Des Moines, IA	18	3,186	24	4,464	8	1,416
Elmira, NY	9	1,572	9	1,674	-	-
Flint, MI	36	6,183	42	7,812	10	1,770
Sioux Falls, SD	8	1,416	9	1,674	-	-
Fort Wayne, IN	24	4,080	39	7,245	10	1,770
Grand Rapids, MI	50	9,000	39	7,020	11	1,980
Greensboro, NC	9	1,509	-	-	-	-
Greenville, SC	9	1,530	-	-	-	-
Huntington, WV	16	2,685	-	-	-	-
Niagara Falls, NY	16	2,790	34	6,324	-	-
Indianapolis, IN	39	6,903	41	7,437	29	4,965
Columbus, OH	19	3,258	21	3,516	11	1,947
Lexington, KY	14	2,436	29	5,274	-	-
Kansas City, MO	9	1,467	9	1,674	-	-
Harrisburg, PA	17	2,925	16	2,976	8	1,416
Memphis, TN	11	1,884	9	1,674	-	-
Moline, IL	16	2,727	10	1,860	-	-
Ogdensburg, NY	9	1,593	-	-	-	-
Omaha, NE	7	1,239	9	1,674	-	-

Table 2.3-5 (continued)
Allegiant Service at PIE, PGD and SRQ (March 2020)

	St. Petersburg (PIE)		Punta Gorda (PGD)		Sarasota (SRQ)	
Destination	**Flights**	**Seats**	**Flights**	**Seats**	**Flights**	**Seats**
Norfolk, VA	9	1,572	9	1,674	-	-
Plattsburgh, NY	11	1,947	10	1,860	-	-
Peoria, IL	17	3,009	27	5,022	-	-
Pittsburgh, PA	16	2,832	14	2,184	17	2,652
Portsmouth, NH	-	-	22	4,092	-	-
Providence, RI	-	-	14	2,604	-	-
Raleigh, NC	9	1,593	9	1,674	-	-
Rockford, IL	15	2,592	23	4,278	8	1,416
Richmond, VA	9	1,593	-	-	9	1,593
Roanoke, WV	13	2,133	-	-	-	-
Rochester, NY	-	-	8	1,488	-	-
South Bend, IN	22	3,894	34	6,324	9	1,593
State College, PA	8	1,395	-	-	-	-
Louisville, KY	16	2,727	19	3,534	9	1,593
Springfield, MO	17	2,883	-	-	-	-
Springfield, IL	-	-	21	3,906	-	-
St Cloud, MN	-	-	8	1,488	-	-
Stewart, NY	13	2,301	9	1,674	-	-
Syracuse, NY	27	4,779	9	1,674	8	1,416
Toledo, OH	19	3,195	23	4,278	-	-
Traverse City, MI	9	1,593	9	1,674	-	-
Knoxville, TN	30	5,226	16	2,832	9	1,593
Concord, NC	24	3,978	9	1,566	-	-
Total	**872**	**151,101**	**849**	**155,124**	**239**	**41,991**
Markets Served	50		45		21	

Source: Cirium through the use of Diio Mi, 2019. Data compiled by AECOM.

Consequently, there are a substantial number of additional markets that Allegiant could choose to serve from SRQ. However, unlike PIE and PGD, SRQ also has air service from several other mainline carriers and low-cost carriers. Therefore, it is much less likely that Allegiant will serve as many markets from SRQ as they do from PIE and PGD because they will encounter greater competition from other carriers.

The reverse is also true for certain markets such as Baltimore where competing service is provided by Southwest Airlines at TPA and RSW (which are competitors to PIE and PGD), but not at SRQ. Hence, Allegiant currently chooses to serve Baltimore from SRQ, but not at PIE or PGD.

Table 2.3-5 also reveals that although Allegiant serves more markets and has more flights at PIE, it has more total seats at PGD (i.e., 151,101 at PIE versus 155,124 at PGD). This is because the airline conducts more flights at PGD with their higher seating capacity Airbus A320 aircraft that have 186 seats versus the 177-seat capacity in their other A320 aircraft.

In addition to examining the number of markets being served by Allegiant Air at these three airports, an examination was also conducted to see how quickly Allegiant grew their introduction of service to new markets at the nearby airports to gain an understanding of how that compares to the current number of markets served at SRQ and how future growth may occur. **Table 2.3-6** show the number of markets served annually by Allegiant at all three airports from the year they began service and how many new destinations were added each year.

Table 2.3-6
Destinations Served by Allegiant Air
Annually at Nearby Airports

	St. Petersburg (PIE)		Punta Gorda (PGD)		Sarasota (SRQ)	
Year	Destinations Served	Net Change	Destinations Served	Net Change	Destinations Served	Net Change
2006	12	-	0	-	0	0
2007	16	4	0	-	0	0
2008	18	2	0	-	0	0
2009	21	3	2	2	0	0
2010	21	0	5	3	0	0
2011	23	2	5	0	0	0
2012	24	1	8	3	0	0
2013	31	7	20	12	0	0
2014	35	4	24	4	0	0
2015	47	12	28	4	0	0
2016	52	5	33	5	0	0
2017	60	8	41	8	0	0
2018	59	-1	44	3	3	3
2019	55	-4	47	3	20	17

Source: Cirium through the use of Diio, Mi, 2019. Data compiled by AECOM.

The table reveals that the number of new destinations added annually varies at each airport from as little as zero to the high of 17 experienced at SRQ in 2019. The table also reveals that destination growth has been negative at PIE in recent years even though the total number of passengers served has increased. This indicates that certain markets did not meet the airline's goals for financial performance and were discontinued. This provides a note of caution for assuming that all markets will be successful. Each market must prove through its performance that it is viable and successful.

Preferred Baseline Forecast

As a result of these factors, it was determined that less reliance should be placed on traditional statistical techniques and greater attention should be paid to the unique market characteristics and potential air service patterns at the Airport when attempting to forecast passenger enplanements. Therefore, the approach used for forecasting passenger enplanement entailed attempting to accurately estimate the significantly higher levels of enplanements anticipated to occur during 2020 and then developing a few air service and socioeconomic scenarios for estimating growth thereafter.

At the time this forecast was prepared, scheduled airline seats at SRQ for 2020 were available through November 2020. Some airlines reported their scheduled seats through November, while others only reported their scheduled seats through August. Therefore, scheduled seats for missing months of 2020 were carried over from the corresponding months of 2019, to estimate the total number of seats at SRQ during 2020. The estimated total number of seats is approximately 1,472,000. Applying a load factor of 86 percent (i.e., the Airport's average load factor during 2018) to scheduled seats produces an estimate of 1,265,000 passenger enplanements in 2020. This estimate has a high degree of confidence because it is primarily based on already scheduled seats and therefore will be used as the starting point for the forecast.

The preferred baseline forecast makes the following assumptions:

- Low cost carriers will be the primary force for further increases in passenger enplanements at the Airport due to their ability to stimulate additional demand from customers that otherwise may not choose to fly. This conclusion is supported by historical performance at SRQ and other nearby airports that also have experienced significant growth due to low-cost carrier service.

- Low cost carriers will continue to add additional destinations to their route map from SRQ and/or increase service on existing routes.

- Mainline carriers will focus on flights that connect to their hubs and consider increasing frequency and/or up-gauging (i.e., using aircraft with higher seating capacities) on existing flights.

- The Airport's catchment area will experience population, employment and income growth consistent with historical trends and projections as previously described.

- Airport facilities will be expanded as needed to meet passenger demand and will not constrain future growth.

- The baseline forecast does not assume the entry of any additional airlines to the SRQ market.

- The baseline forecast does assume the addition of several new markets by low cost carriers in the short-term.

Table 2.3-7 presents the baseline forecast with a breakdown between the air carrier and commuter categories.

Table 2.3-7
Baseline Forecast of Passenger Enplanements

Year	Air Carrier Enplanements	Commuter Enplanements	Total Enplanements
Historical			
2014	496,635	104,851	601,486
2015	495,910	116,528	612,438
2016	464,747	129,420	594,167
2017	459,703	134,127	593,830
2018	534,694	153,396	688,090
2019	822,773	157,037	979,810
Forecast			
2024	1,188,925	193,546	1,382,471
2029	1,286,791	192,279	1,479,071
2034	1,371,010	195,859	1,566,869
2039	1,449,180	197,615	1,646,795
Average Annual Growth Rates			
2014 – 2019	10.6%	8.4%	10.3%
2019 - 2024	7.6%	4.3%	7.1%
2024 – 2029	1.6%	-0.1%	1.4%
2029 - 2039	1.2%	0.3%	1.1%
2019 - 2039	2.9%	1.2%	2.6%

Source: AECOM, 2020.

In addition to a baseline forecast, a low-growth and high growth forecast were also developed and are described in the following paragraphs.

2.3.3.8 High Growth Forecast

The high growth forecast assumes that the recent expansion of air service at the Airport proves to be highly successful and generates airline interest in further expanding their route structure at SRQ to include additional routes and/or increased frequency of service on existing routes above that which is projected by the baseline forecast. As was the case for the baseline forecast, it is anticipated that low-cost air carriers would be the primary drivers of such growth. This scenario also assumes that growth in the Airport's catchment area will continue at a strong rate leading to increasing population, employment and per capita income that supports an increasing propensity to use air transportation for business and leisure travel. The resulting average annual growth rate assumed in the high-growth forecast is 3.3 percent.

2.3.3.9 Low Growth Forecast

The low growth forecast assumes that the recent expansion of air service not only moderates, but that some of the new air service gained in recent years proves to be less financially successful than forecast by their operators and are reduced or eliminated. This scenario therefore, projects a decrease of passenger enplanements in the short-term compared to recent values and then grows passengers at a reduced rate compared to the baseline and high growth forecast. The resulting average annual growth rate assumed in the low-growth forecast is 1 percent.

Table 2.3-8 and **Figure 2.3-4** present the high-growth and low-growth forecasts in comparison to the baseline forecast.

Table 2.3-8
High and Low Growth Forecasts of Passenger Enplanements

Year	Baseline Forecast	High-Growth Forecast	Low-Growth Forecast
Historical			
2019	979,810		
Forecast			
2024	1,382,471	1,443,968	1,039,981
2029	1,479,071	1,594,258	1,093,031
2034	1,566,869	1,725,945	1,148,786
2039	1,646,795	1,866,672	1,207,386
Average Annual Growth Rates			
2014 – 2019	10.3%		
2019 - 2024	7.1%	8.1%	1.2%
2024 – 2029	1.4%	2.0%	1.0%
2029 - 2039	1.1%	1.6%	1.0%
2019 - 2039	2.6%	3.3%	1.0%

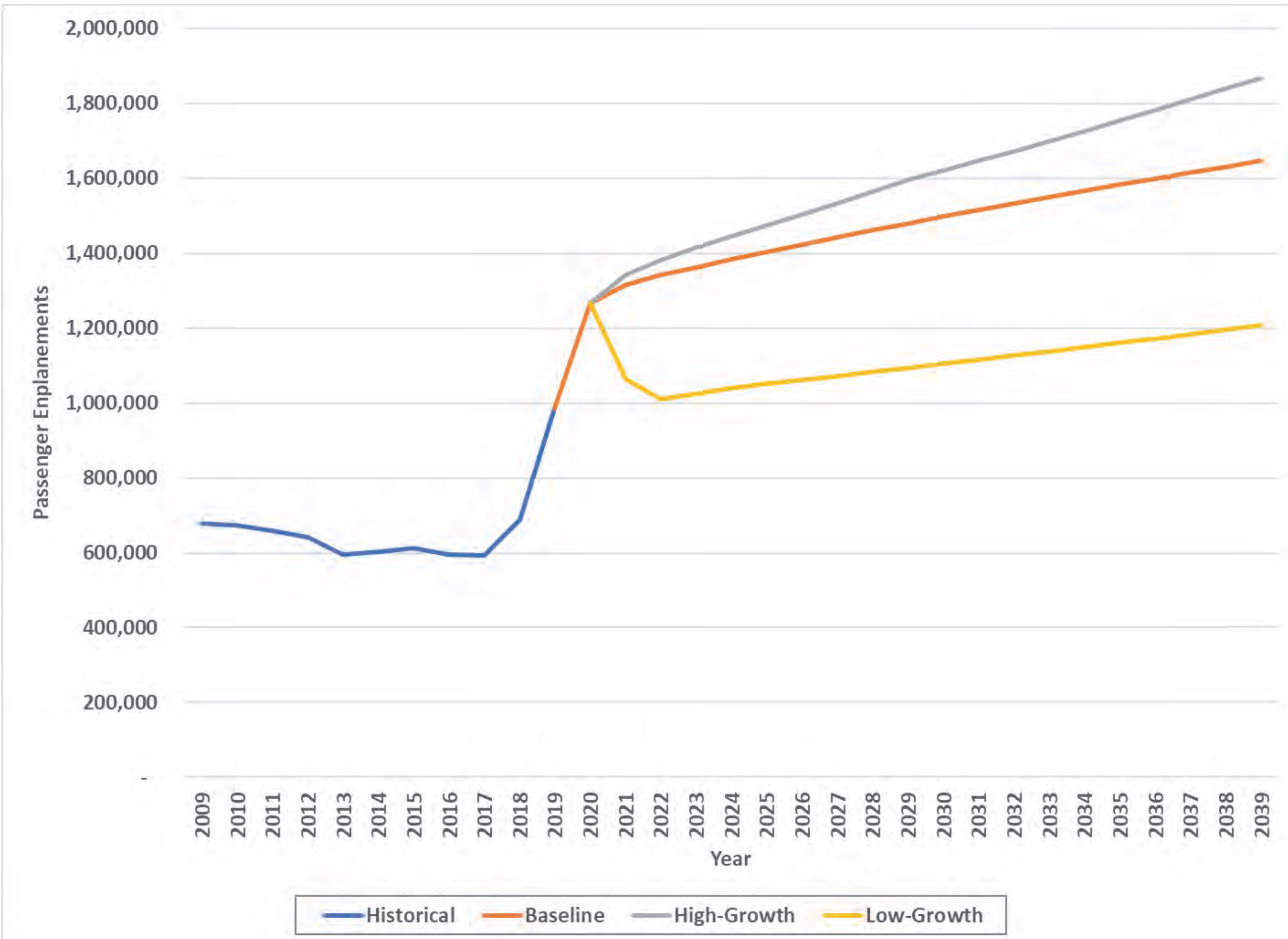
Source: AECOM, 2020.

2.3.3.10 International Passengers

The only airline currently providing scheduled international service at SRQ is Air Canada which currently operates a seasonal flight from their Toronto hub. This flight accounts for approximately 25,000 annual passenger enplanements. All Air Canada flights to SRQ are precleared by US Customs and Border Patrol in Canada. Therefore, these arrivals operate into SRQ the same as domestic flights. No other international service is forecasted to occur during the planning period although the Air Canada flights may increase in terms of aircraft size and/or months operated.

2.4 COMMERCIAL AIRCRAFT OPERATIONS

An aircraft operation is defined as an aircraft takeoff or a landing. Historical and forecasted commercial aircraft operations are presented in this section for two categories: air carriers and commuters. Air carrier aircraft are defined by the FAA as having a seating capacity of more than 60 seats or a maximum payload capacity of more than 18,000 pounds carrying passengers or cargo for hire or compensation. Commuter aircraft are defined by the FAA as having a maximum seating capacity of 60 seats or less or a maximum payload capacity of 18,000 pounds or less carrying passengers or cargo for hire or compensation.



Source: AECOM, 2019.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

Forecasts of Passenger Enplanements

FIGURE 2.3-4

2.4.1 HISTORICAL COMMERCIAL AIRCRAFT OPERATIONS

Consultation with SRQ airport traffic control tower management revealed that the tower's count of "air carrier" operations includes all operations by air carrier and commuter aircraft. Therefore, no FAA count exists for each category separately. **Table 2.4-1** presents estimated historical air carrier and commuter aircraft operations for the period 2010 through 2019 along with the actual total from the tower counts. The estimated operations for each category was generated by examining historical scheduled air carrier and commuter aircraft operations for the same period, calculating the percentage split between the two categories and then applying those percentages to the FAA's count of "air carrier" (i.e., total) operations.

Table 2.4-1
Estimated Historical Air Carrier & Commuter Aircraft Operations

Year	Estimated* Air Carrier Operations	Estimated* Commuter Operations	Actual Total Operations
2010	9,726	4,039	13,765
2011	9,893	3,135	13,028
2012	9,400	2,843	12,243
2013	8,020	3,044	11,064
2014	7,263	3,256	10,519
2015	7,474	3,958	11,432
2016	6,836	4,344	11,180
2017	6,586	4,497	11,083
2018	7,896	5,073	12,969
2019	11,847	5,576	17,423
Average Annual Growth Rates			
2010 – 2019	2.2%	3.6%	2.7%

Source: FAA, OPSNET, 2020.
Note: Consultation with SRQ air traffic control tower management confirmed that commuter operations are included in the air carrier category. Estimated values are based on the tower count of "air carrier" operations and applying the actual percentage split between scheduled air carrier and commuter aircraft operations.

The historical data reveals that air carrier operations at SRQ declined during the past decade, while commuter operations increased. It is anticipated that this trend will reverse over the next few years due to the entrance of low-cost carriers at SRQ that do not operate commuter aircraft.

Air carrier aircraft operations at SRQ are primarily conducted by the mainline and low-cost carriers such as Air Canada, Allegiant, American, Delta, jetBlue, Frontier and United and are primarily operated with common narrow-body aircraft such as the Boeing 737 series and the Airbus A320 series. Larger aircraft such as the Boeing 757 and Airbus A321 also operate at the Airport, but conduct fewer operations than the 737 and A320 series.

Commuter aircraft are dominated by the larger regional jets in the 70+ seat category including the Embraer E-170 and E-175 and the Canadair CRJ-700 and CRJ-900. These aircraft are operated by a variety of regional affiliate airlines such as Endeavor Air, Envoy, Go Jet, PSA Airlines, Republic and SkyWest. The balance of commuter aircraft operations are conducted by the CRJ-200 that are in the 50-seat range.

2.4.2 FORECAST OF COMMERCIAL AIRCRAFT OPERATIONS

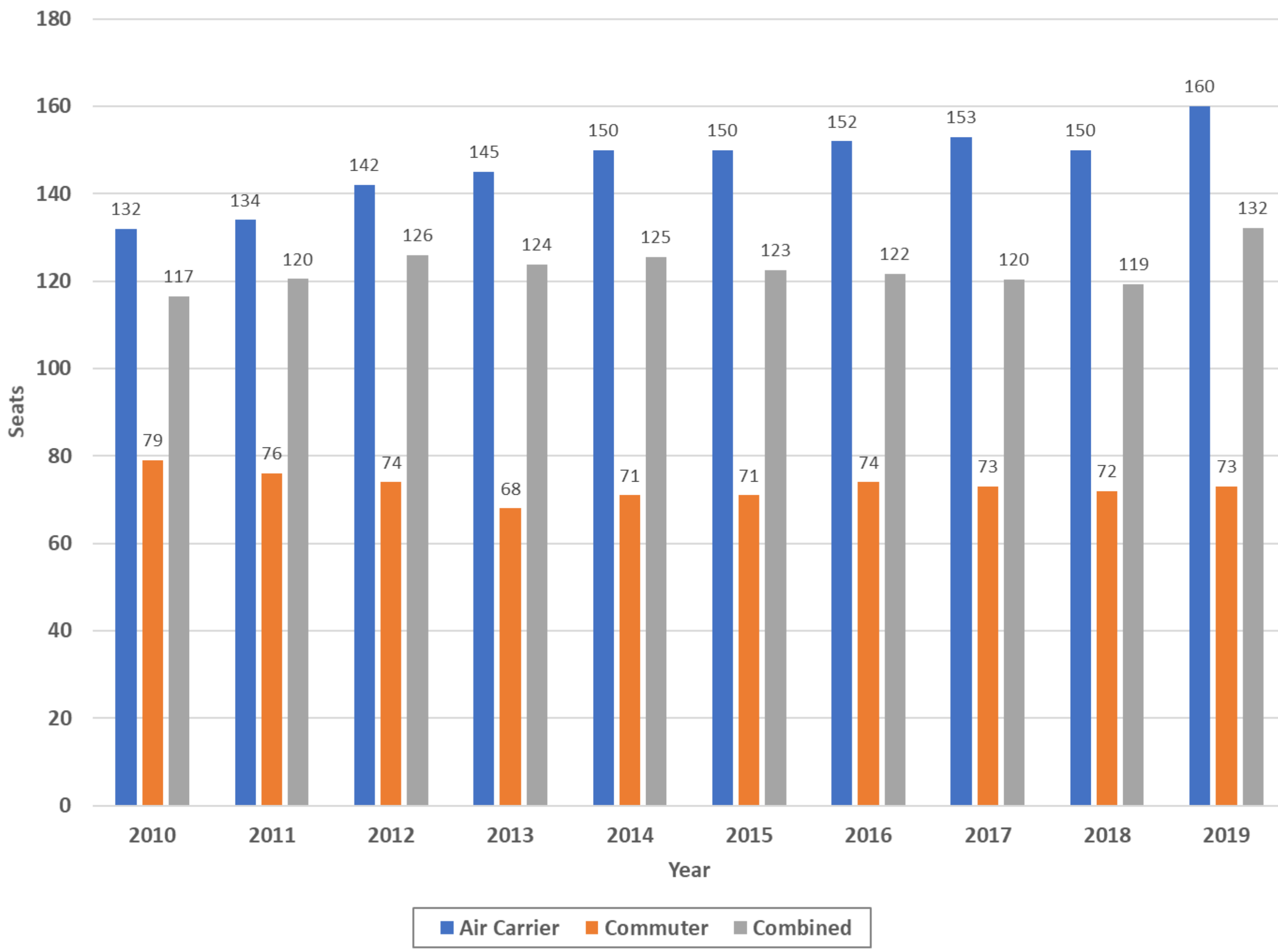
A forecast of commercial aircraft operations was prepared using the preferred forecast of passenger enplanements and applying factors for average seats per departure and average load factor. These factors were based upon the historical values presented in **Figure 2.4-1** and **Figure 2.4-2** and projected changes in aircraft fleet mix. Average seats per departure and average load factors are projected to increase slightly as a result of the types of aircraft (i.e., common narrow-bodies) being operated by the low-cost carriers that have begun operations at SRQ. **Table 2.4-2** presents the resulting forecast.

Table 2.4-2
Forecast of Commercial Aircraft Operations

Year	Total Passenger Enplanements	Average Seats Per Departure	Average Load Factor	Commercial Aircraft Operations
Historical				
2018	688,090	119	86%	12,969
2019	979,810	132	84%	17,423
Forecast				
2024	1,382,471	134	86%	23,993
2029	1,479,071	136	87%	25,001
2034	1,566,869	138	87%	26,101
2039	1,646,795	140	88%	26,734
Average Annual Growth Rates				
2019 - 2024	7.0%	0.3%	0.5%	6.6%
2024 – 2029	1.4%	0.3%	0.2%	0.8%
2029 - 2039	1.1%	0.3%	0.1%	0.7%
2019 - 2039	2.6%	0.3%	0.1%	2.2%

Source: AECOM, 2020.

The table reveals that commercial aircraft operations are projected to grow initially at a very high rate of nearly 7 percent. However, most of that growth is projected to occur during 2020 as a result of the large increase in service announced by Allegiant as well as the initiation of service by Frontier and Sun Country and growth by other mainline carriers. Over the longer terms the growth is projected to settle back to an average annual growth rate of less than 1 percent. The resulting growth rate for the entire forecast period is 2.2 percent. By comparison the FAA forecasts that domestic commercial operations will increase nationally at a rate 1.5 percent for the same period.



Source: Diio Mi by Cirium, 2019.

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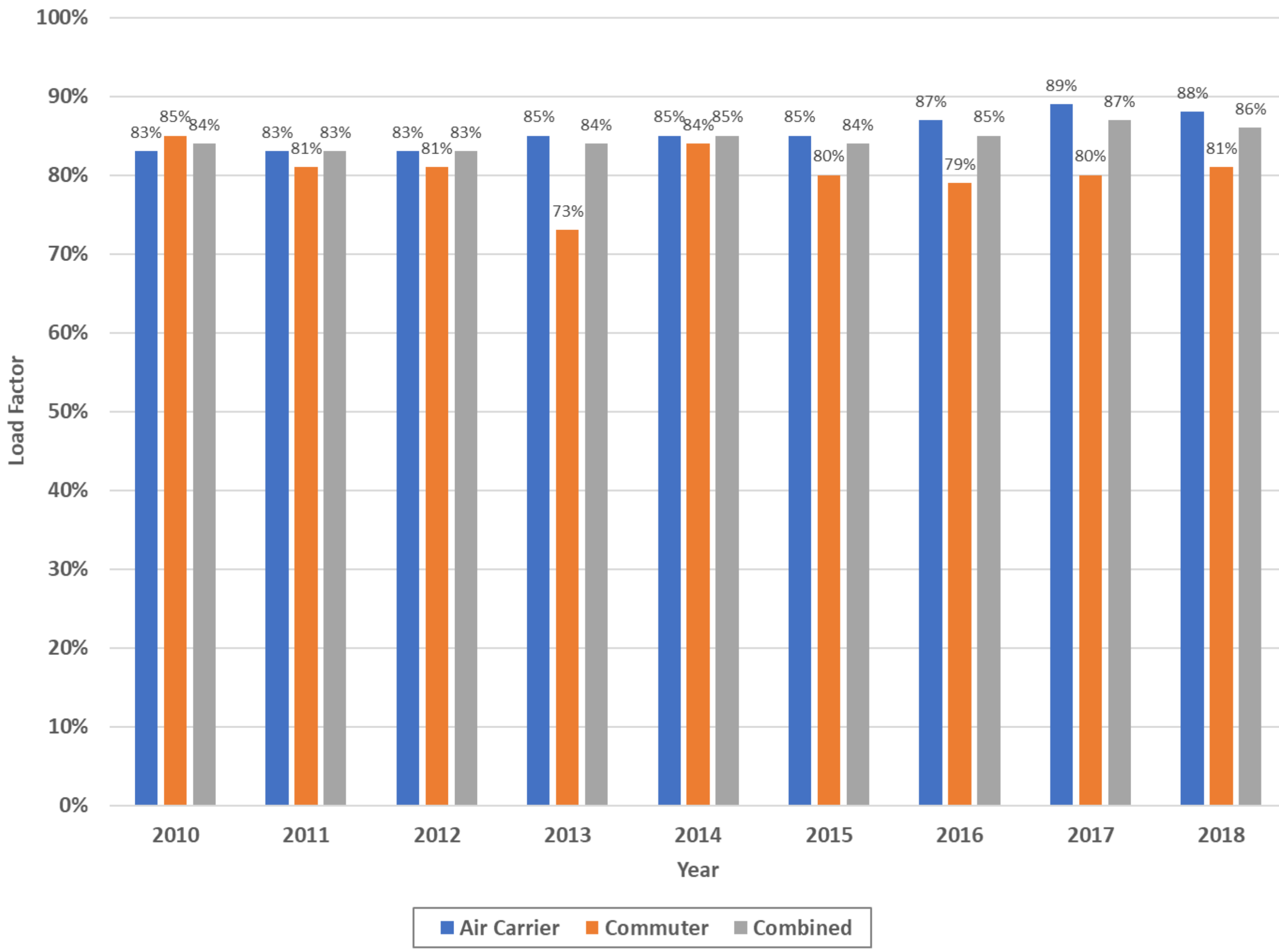
MASTER PLAN UPDATE

Historical Average Seats Per Departure

FIGURE 2.4-1



Source: Diio Mi by Cirium, 2019.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

Historical Load Factors

FIGURE 2.4-2

Table 2.4-3 presents a distribution of the commercial aircraft operations presented in Table 2.4-2 into air carrier and commuter categories. The percentage split between these two categories is also presented in the table. The share of total operations conducted by the air carrier category is expected to increase by a significant amount (i.e., from 61 to 70 percent) in the short term because of the new or increased flights by low-cost airlines that do not operate commuter aircraft.

Table 2.4-3
Forecast of Air Carrier & Commuter Aircraft Operations

Year	Air Carrier		Commuter		Total Operations
	Operations	Percent of Total	Operations	Percent of Total	
Historical					
2018	7,896	61%	5,073	39%	12,969
2019	11,847	68%	5,576	32%	17,423
Forecast					
2024	16,795	70%	7,198	30%	23,993
2029	17,251	69%	7,750	31%	25,001
2034	18,010	69%	8,091	31%	26,101
2039	18,847	70.5%	7,886	29.5%	26,734

Source: AECOM, 2020.

2.4.3 FORECAST OF COMMERCIAL AIRCRAFT FLEET MIX

The existing aircraft fleet mix for 2019 was obtained from the published flight schedule. The fleet mix was then projected to the year 2039 by examining fleet plans of the airlines currently serving the Airport. This information was primarily derived from the Boeing and Airbus orders and deliveries data as well as stockholder annual reports.

Aircraft types that are approaching the end of their service life such as the MD-80/90 series and the Boeing 757 were gradually phased out of the fleet mix, while newer aircraft such as the Airbus A220 and Boeing's proposed New Mid-Market Aircraft (NMA)[5] were added into the fleet mix. For simplification, no distinction was made between conventional engine option (CEO) and new engine option (NEO) versions of Airbus aircraft nor "next generation" versus MAX versions of Boeing 737 aircraft. The number of average seats per departure was monitored during the preparation of the forecast to ensure that it matched the values previously presented in the forecast of commercial aircraft operations.

Table 2.4-4 presents the aircraft fleet mix forecast. Notable features of the forecast include the domination of Airbus models in the air carrier category and the gradual up-gauging to aircraft with higher seating capacities. The domination of Airbus aircraft is due to certain carriers such as Allegiant Air and Frontier only operate Airbus aircraft. Likewise, Delta is transitioning to a greater share of Airbus aircraft.

[5] Boeing's proposed New Mid-Market Aircraft is intended to hold approximately 200 to 240 passengers and have a range of 4,000 to 5,000 miles.

Table 2.4-4
Forecast of Commercial Aircraft Fleet Mix

Aircraft	Seats	Percent of Operations					Number of Operations				
		2019	2024	2029	2034	2039	2019	2024	2029	2034	2039
Commuters											
CRJ-200	50	1.2%	1.0%	1.0%	1.0%	1.0%	220	240	250	261	267
CRJ-700	68	5.8%	5.0%	5.0%	5.0%	3.0%	1,022	1,200	1,250	1,305	802
E-170	70	4.4%	5.0%	8.0%	9.0%	9.0%	774	1,200	2,000	2,349	2,406
E-175	76	12.3%	13.0%	13.0%	14.0%	15.5%	2,184	3,119	3,250	3,654	4,144
CRJ-900	76	7.9%	6.0%	4.0%	2.0%	1.0%	1,408	1,440	1,000	522	267
Subtotal		**31.7%**	**30.0%**	**31.0%**	**31.0%**	**29.5%**	**5,608**	**7,198**	**7,750**	**8,091**	**7,886**
Air Carriers											
E-190	100	0.8%	0.0%	0.0%	0.0%	0.0%	150	0	0	0	0
A220-100	109	0.0%	2.0%	2.0%	2.5%	3.0%	0	480	500	653	802
A220-300	140	0.0%	4.5%	5.0%	5.0%	6.0%	0	1,080	1,250	1,305	1,604
B717-200	110	0.6%	0.0%	0.0%	0.0%	0.0%	104	0	0	0	0
B737-700/MAX 7	126	1.9%	1.5%	1.0%	0.0%	0.0%	340	360	250	0	0
A319	132	10.6%	10.0%	10.0%	6.0%	3.0%	1,874	2,399	2,500	1,566	802
MD-88	149	8.8%	4.0%	0.0%	0.0%	0.0%	1,560	960	0	0	0
MD-90	158	10.2%	5.0%	0.0%	0.0%	0.0%	1,798	1,200	0	0	0
B737-800/MAX 8	165	0.8%	4.0%	4.5%	6.0%	7.0%	138	960	1,125	1,566	1,871
A320	168	25.6%	27.0%	29.0%	30.0%	31.0%	4,526	6,478	7,250	7,830	8,287
B737-900/MAX 9	179	1.1%	2.6%	3.5%	4.0%	5.0%	190	624	875	1,044	1,337
A321	198	7.4%	9.0%	11.0%	11.5%	10.5%	1,310	2,159	2,750	3,002	2,807
B757	199	0.6%	0.4%	0.0%	0.0%	0.0%	114	96	0	0	0
NMA	200	0.0%	0.0%	3.0%	4.0%	5.0%	0	0	750	1,044	1,337
Subtotal		**68.3%**	**70.0%**	**69.0%**	**69.0%**	**70.5%**	**12,104**	**16,795**	**17,251**	**18,010**	**18,847**
Total		**100%**	**100%**	**100%**	**100%**	**100%**	**17,712**	**23,993**	**25,001**	**26,101**	**26,734**
Average Seats/Departure							**132**	**134**	**136**	**138**	**140**

Source: AECOM, 2019.
Note: 2019 data is for scheduled flights rather than actual operational counts.

2.5 AIR CARGO

2.5.1 HISTORICAL AIR CARGO

Historical volumes of air cargo at SRQ as recorded by the Authority are shown in **Table 2.5-1** and **Figure 2.5.1** for the ten-year period extending from 2010 to 2019. This includes air express, air cargo and air mail. All cargo is carried as belly freight; the airport does not currently accommodate any scheduled all cargo carriers. According to airport management nearly all the cargo handled at the Airport is carried on Delta Airlines which operates from the first bay of the air cargo facility.

Table 2.5-1
Historical Air Cargo (2009 to 2018) in Pounds

Year	Enplaned Cargo	Deplaned Cargo	Total Cargo
2010	231,530	199,104	430,634
2011	212,696	185,940	398,636
2012	219,266	195,838	415,104
2013	222,938	179,534	402,472
2014	270,363	176,713	447,076
2015	253,891	195,940	449,831
2016	260,561	204,466	465,027
2017	252,456	201,159	453,615
2018	235,424	198,169	433,593
2019	257,458	242,017	499,475
10-Year AAGR (2010 to 2019)	1.2%	2.2%	1.7%

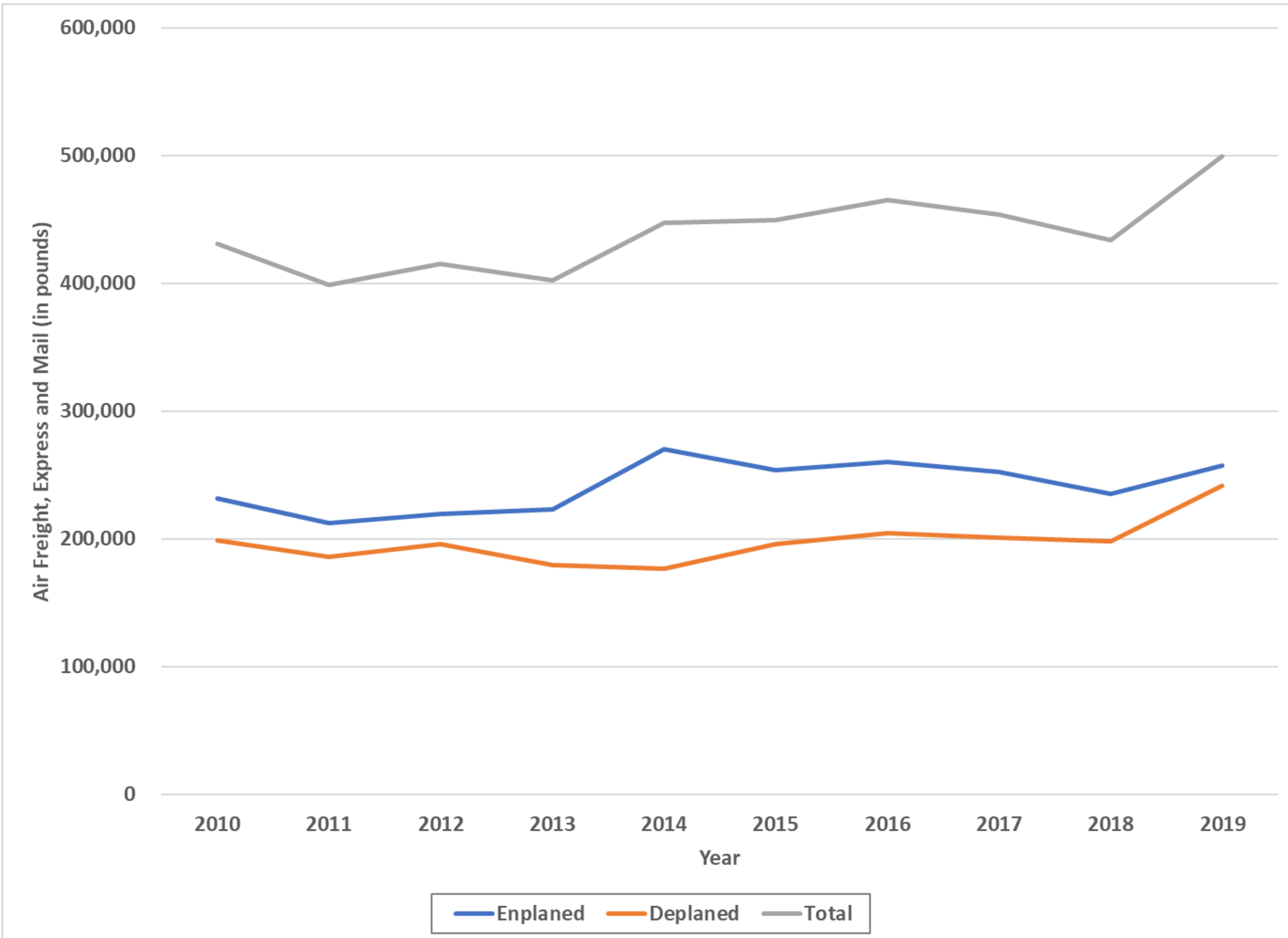
Source: Sarasota Manatee Airport Authority, 2020.
Notes: AAGR = Average Annual Growth Rate.

Figure 2.5-2 illustrates the distribution of monthly cargo volumes for the five-year period extending from 2014 through 2018. As the figure reveals, volumes are highest during the winter months and typically reach their lowest point in September. The reason for the exceptionally high volume shown for March 2017 is not known. It is possible that the value is an input error.

2.5.2 PREVIOUS AND OTHER AIR CARGO FORECASTS

The SRQ 2009 Master Plan Update did not provide a forecast of cargo volumes. Only cargo operations were projected. Therefore, no comparison could be made to that study.

The FDOT published a *2016 Florida Air Cargo Study* which contains forecasts of air cargo for SRQ and other commercial service airports in the state, as well as certain general aviation airports. The study presented a variety of methodologies for forecasting the air cargo growth in the state and generated air cargo forecasts for airports using each methodology. The study



Source: Sarasota Manatee Airport Authority, 2020.

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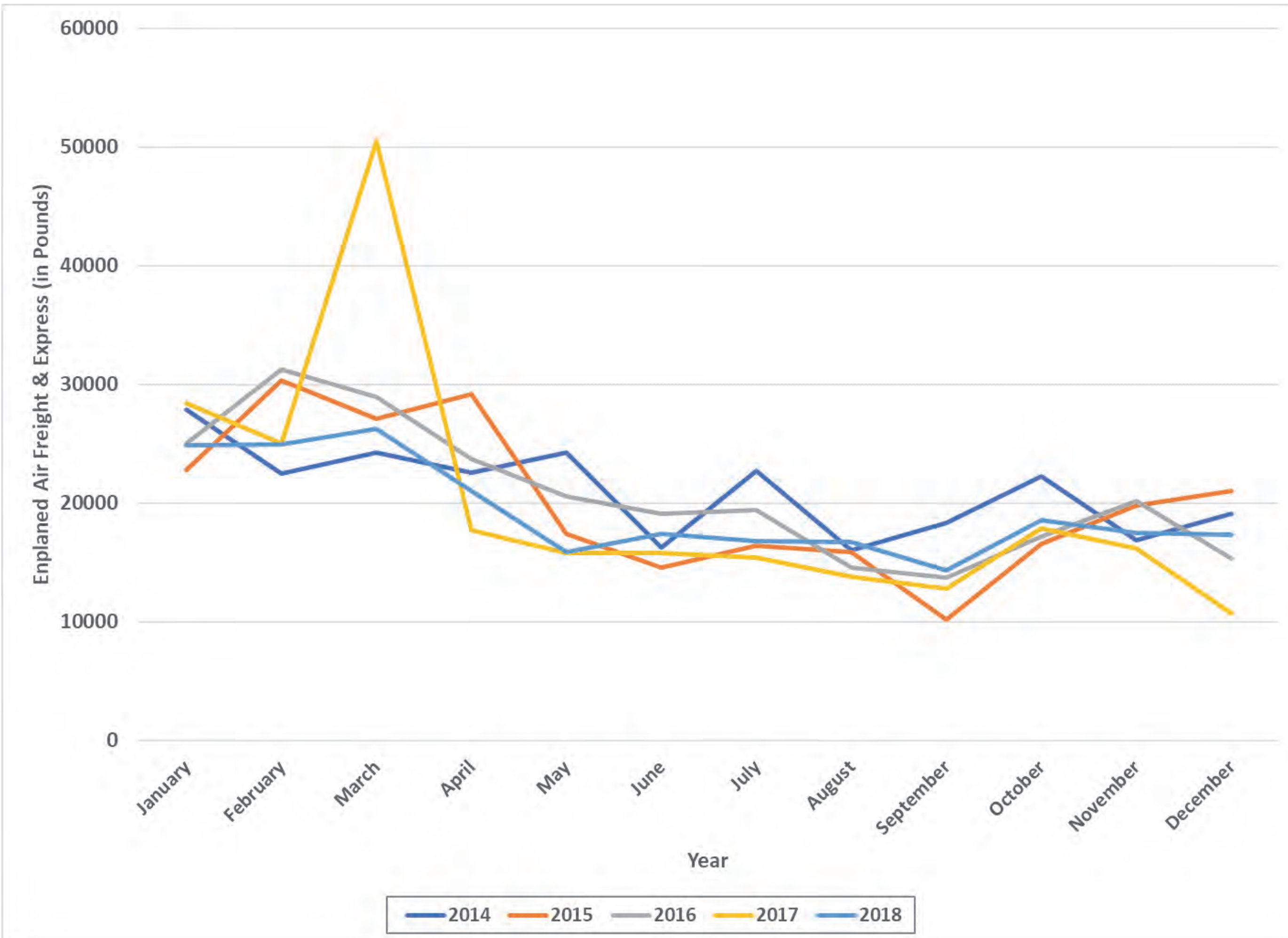
Historical Air Cargo

FIGURE 2.5-1



Source: Sarasota Manatee Airport Authority, 2019.

Historical Monthly Air Cargo

FIGURE 2.5-2

ultimately selected a methodology based on the state-wide historical growth rate which yielded an annual growth rate of approximately 2.1 percent. **Table 2.5-2** presents the study's forecast which is stated in terms of total enplaned and deplaned air freight, air express and mail in tons. The study presents all data in terms of tons rather than pounds. Therefore, an additional column was added to Table 2.5-2 that converts the study's forecast to pounds for a better comparison to the Airport's historical air cargo values.

Interestingly, the 2014 value presented in the FDOT study of 628,000 pounds is considerably higher than the Airport's recorded value of 447,000 pounds. The reason for this discrepancy is not known.

Table 2.5-2
2016 Florida Air Cargo Study Forecast of Air Cargo at SRQ

Year	Total Cargo (Tons)	Total Cargo (Pounds)
2014	314	628,000
2019	350	700,000
2024	390	780,000
2034	470	940,000
AAGR	2.04%	

Source: FDOT, 2016 Florida Air Cargo Study 2016.

Other sources of independent air cargo forecasts for national and international markets include:

- Boeing's World Air Cargo Forecast 2018-2037
- Airbus's Global Market Forecast 2019-2038
- FAA's Aerospace Forecasts FY 2019-2039

These forecasts use a different unit of measurement which captures the distance air cargo is flown as well as the cargo's weight. The unit is referred to as Revenue Ton Kilometers (RTK) or Revenue Ton Miles (RTM) which is the movement of one ton of paid cargo one kilometer or one mile. Consequently, they are not a perfect proxy for comparing to the growth of air cargo weight.

The Boeing forecast projects that air cargo RTK's will increase at a rate of 2.3 percent annually in the United States during the next twenty years. The Airbus forecast did not provide a breakout solely for the US domestic market, only US transnational markets and therefore was not used. The FAA Aerospace Forecast predicts that US domestic cargo RTM's will increase at a rate of 1.6 percent from between 2019 and 2039.

2.5.3 FORECAST OF AIR CARGO DEMAND

A review of historical cargo volumes and other market factors suggest that air cargo volumes at the Airport will grow at a modest rate during future years. Major air cargo carriers such as FedEx and UPS have their air cargo operations centered at Tampa International Airport and will continue to remain at that location. Likewise, a review of Amazon's air cargo operations indicates that the company is in the process of constructing all new air cargo facilities at Lakeland Linder Airport which is adjacent one of their major distribution facilities. Consequently, it is not likely that any of these air cargo carriers will generate demand for air cargo facilities at SRQ. Therefore, air cargo will continue to be accommodated by the belly freight capacity of air carriers operating at the Airport. Furthermore, a significant portion of the air service expansion that occurred at the Airport during the last two years was generated by low cost carriers that do not provide air cargo services.

Methodologies that can be used to forecast air cargo include many of the same techniques previously described for forecasting passenger enplanements (i.e., trend line, market share and regression analyses using local socioeconomic variables). However, review of the historical data for the last ten years shows that air cargo volumes have been essentially flat and are substantially lower than they were in previous decades. Consequently, air cargo volumes at the Airport are not increasing in conjunction with increasing population and business activity within the Airport's catchment area. This is because most air cargo originating or terminating in the catchment area is either being shipped through other airports by express carriers (i.e., FedEx, UPS, etc.) or freight forwarders.

Consequently, it is anticipated that air cargo at SRQ will continue to be generated by belly freight and will likely grow at no more than 1.5 percent annually. This rate is similar to the growth rate experienced in recent years and is just below the national rate predicted for domestic air cargo RTM by the 2019 FAA Aerospace Forecast. This forecast should provide a reasonable baseline for testing the ability of existing facilities in the next section of this master plan. **Table 2.5-3** presents the resulting air cargo forecast.

Table 2.5-3
Air Cargo Forecast (Pounds)

Year	Enplaned	Deplaned	Total
2019 (Actual)	257,458	242,017	499,475
2024	277,355	260,721	538,076
2029	298,791	280,871	579,661
2034	321,882	302,577	624,460
2039	346,759	325,962	672,720
AAGR	1.5%	1.5%	1.5%

Source: AECOM, 2020.

Essentially all air cargo activity at the Airport is carried as belly freight on scheduled passenger flights. Therefore, no forecast of cargo aircraft operations was generated as part of this forecast.

2.6 GENERAL AVIATION ACTIVITY

General Aviation is the term used to describe a diverse range of aviation activities including all segments of the aviation industry, except for commercial airlines and the military. GA includes common activities such as pilot training, recreational flying, agricultural applications, medical support, and other business and corporate uses. General aviation aircraft can range from small glider and single-engine aircraft to large turboprop and jet powered aircraft. This section provides a discussion and forecast of general aviation aircraft based at the Airport followed by a forecast of general aviation aircraft operations.

2.6.1 BASED AIRCRAFT

2.6.1.1 Historical Based Aircraft

The historical number of general aviation aircraft based at SRQ was obtained from the Authority from 1980 through 2019 and are illustrated in **Figure 2.6-1**. Values for the last ten years along with their average annual growth rates are shown in **Table 2.6-1**.

Table 2.6-1
Historical Based Aircraft (2010-2019)

Year	Single-Engine	Multi-Engine	Jet	Rotor	Other	Total
2010	171	33	34	9	0	247
2011	171	33	34	9	0	247
2012	175	22	34	17	2	250
2013	169	28	39	20	0	256
2014	159	22	24	21	0	226
2015	176	25	21	19	0	241
2016	186	23	31	21	0	261
2017	180	23	54	17	0	274
2018	187	19	48	16	2	272
2019	184	27	68	20	2	301
Period	**Average Annual Growth Rate**					
2010-2019	0.8%	-2.2%	8.0%	9.3%	NA	2.2%

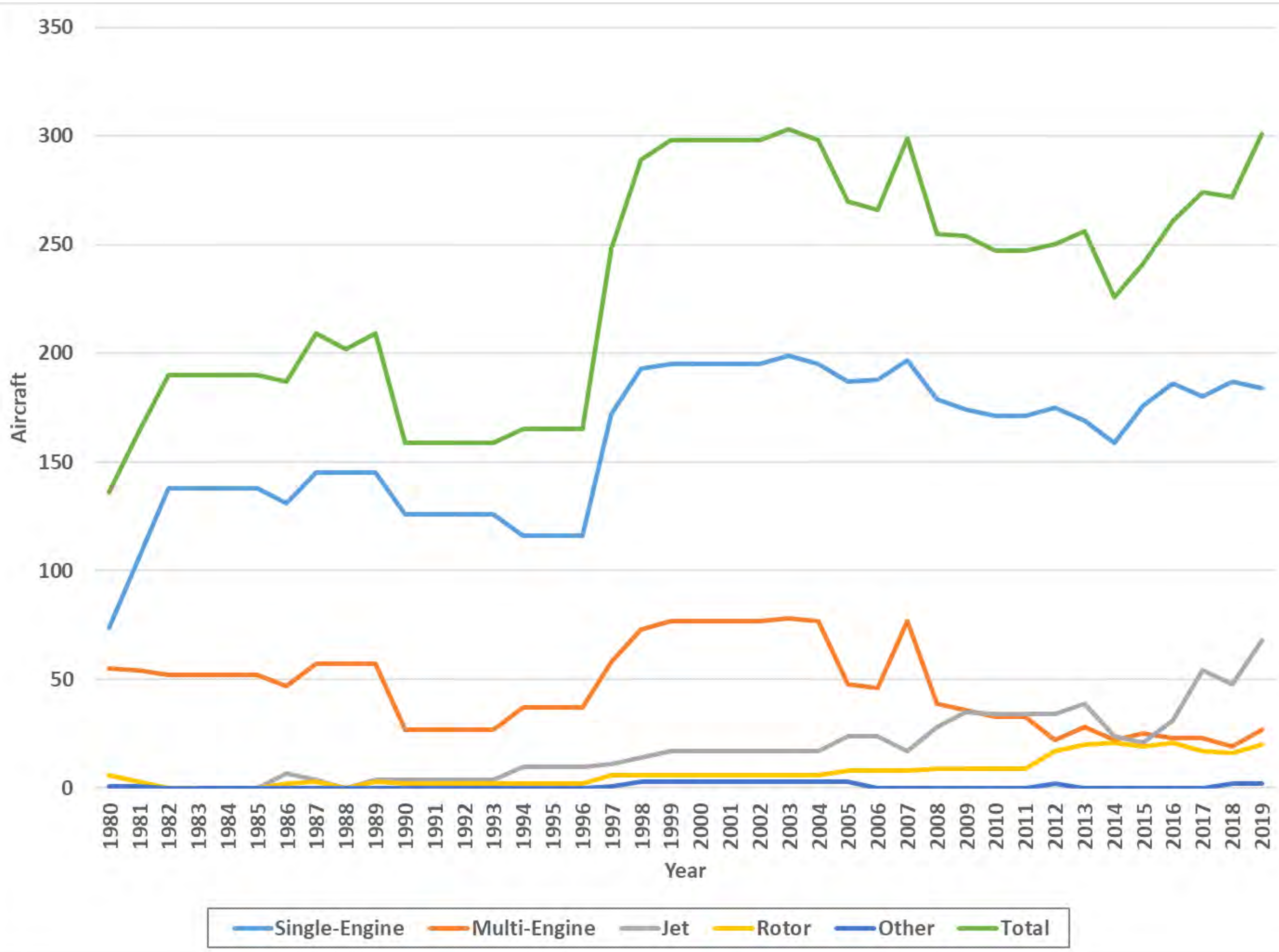
Source: Sarasota Manatee Airport Authority, October 2019.

Review of the data indicates that there was a significant disparity between the growth rates for single and multi-engine aircraft versus the growth rates for jets and rotorcraft. The former experienced slow to negative growth while the later experienced very strong growth rates of 8 to over 9 percent. The disparity experienced between these two groups echoes the pattern experienced nationally. FAA data for the US reveals that active single and multi-engine piston aircraft experienced overall declines during the period 2010 to 2018, while turboprop and jet aircraft experienced growth rates of 0.7 and 3.0, respectively.[1]

2.6.1.2 Previous and Other Based Aircraft Forecasts

Forecasts of based aircraft were previously prepared for the Airport by the 2009 Master Plan Update, by the FAA through its TAF and by FDOT. These forecasts are presented in the following paragraphs.

[1] FAA Aerospace Forecast FY 2019-2019, Table 28. The FAA defines an “active” aircraft as one that has a current registration and was flown at least one hour during the calendar year.



Source: Sarasota Manatee Airport Authority, 2019.

SARASOTA BRADENTON
INTERNATIONAL AIRPORT
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Historical Based Aircraft

FIGURE
2.6-1

2009 Master Plan Forecast

The 2009 Master Plan Update projected that based aircraft would increase at a rate at 1.3 percent through the twenty-year period from 2016 through 2026. The forecast predicted that based aircraft would increase from 299 in 2006 to 385 in 2026 and would reach 341 by 2016. Thus, the forecast was too aggressive based upon the current number of based aircraft. However, the forecast was not optimistic enough with respect to the number of based jet aircraft. The forecast projects 40 jets in 2021, while the actual number of based jets in 2019 was 68 according to airport statistics.

2020 FAA Terminal Area Forecast (TAF)

The TAF published in January 2020 projects that based aircraft at the Airport will increase at an average annual rate of 1.8 percent annually and results in a projection of 392 based aircraft by 2039. A review of the TAF reveals that it is based on a historical value of 272 aircraft in 2018 which matches the Authority's count for the same year.

FDOT Based Aircraft Airport Forecast

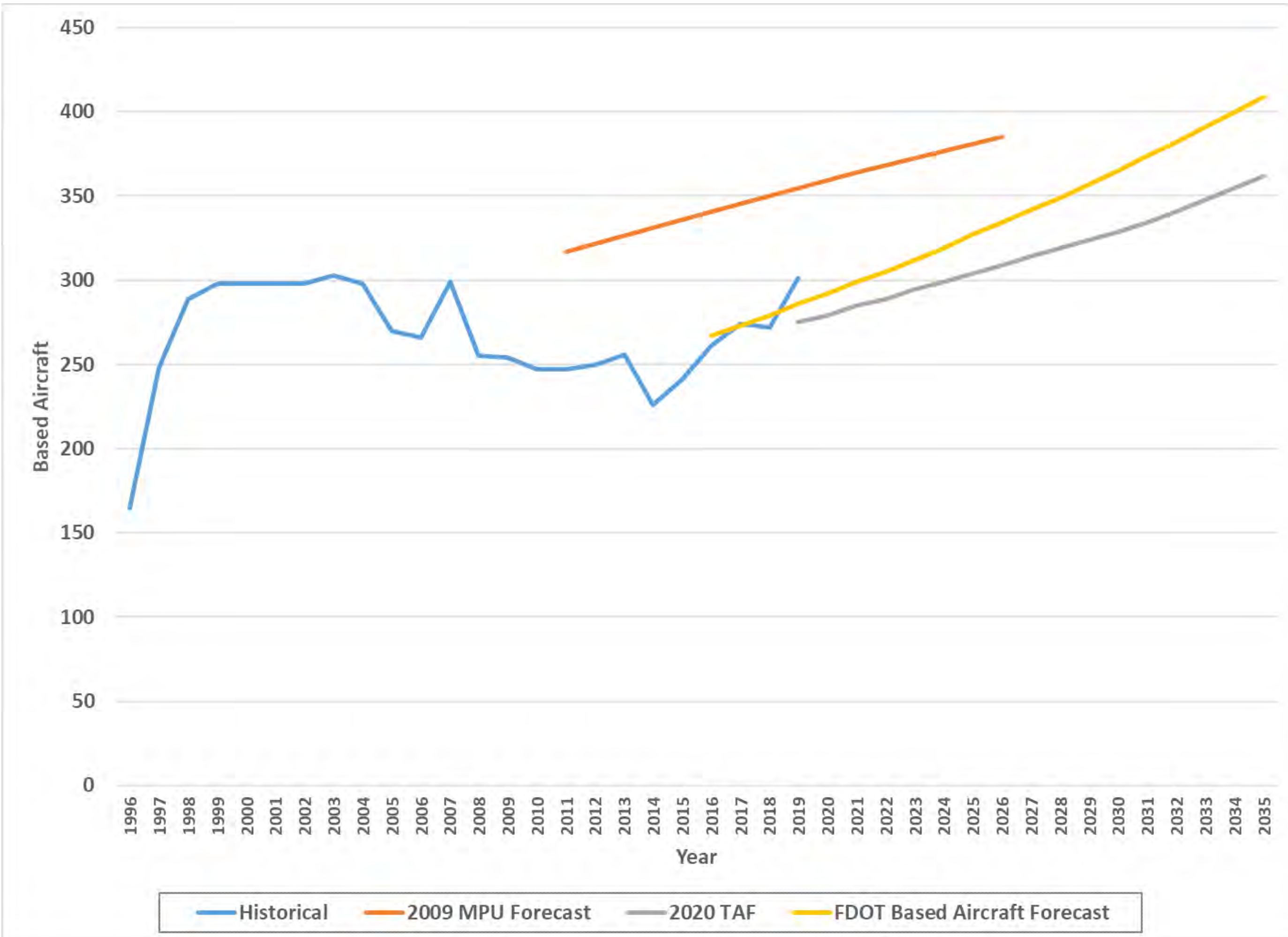
The FDOT publishes a forecast of based aircraft for all commercial service and publicly owned general aviation airports in the state. This forecast uses base data from 2015 and presents projections of based aircraft through 2035. The forecast for SRQ projects that based aircraft will grow at an average annual rate of 2.3 percent and will reach 409 in 2035.

Figure 2.6-2 illustrates these previous forecasts in relation to historical values. The figure shows that Master Plan Update forecast was too optimistic when compared to historical values. The FAA's TAF projects a similar growth pattern as the 2009 Master Plan Update, but begins from a lower level. Finally, the FDOT forecast closely tracks recent values of based aircraft at the Airport, but the forecast shows aggressive future growth.

2.6.1.3 Forecast of Based Aircraft

Before undertaking a forecast of based aircraft there are number of factors that should be considered. These factors are described in the following paragraphs.

- As was the case for passenger enplanements, the historical growth of based aircraft does not show a significant correlation with local population growth or other socioeconomic factors for the Airport's catchment area. The number of aircraft based at the Airport is dependent on several factors including the availability of suitable hangars and the cost of hangar rents versus other nearby alternatives.
- Discussions with one of the Airport's flight school operators revealed that they are seeking to expand their operations to include additional aircraft for flight training. These additional aircraft will primarily be single-engine piston aircraft and are likely to arrive at the Airport during 2020.



Source: Historical data - Sarasota Manatee Airport Authority, 2019.
Forecast data - as noted.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
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Previous Forecasts of Based Aircraft

FIGURE 2.6-2

- Discussions with the Airport's Fixed Base Operators (FBOs) noted that there is very strong interest from jet aircraft owners in obtaining hangar space at the Airport. However, both FBOs noted that they are space constrained and without additional hangar space these jet owners will locate their aircraft elsewhere.

In consideration of these factors, it was determined that a preferred forecast of based aircraft at SRQ should account for the likely expansion of flight training aircraft and then apply growth rates that are comparable to national projections while accounting for the likely higher growth rates for jets. This forecast assumes unconstrained demand (i.e., that existing facility constraints in terms of hanger space do not impact the resulting demand). This approach allows proper planning for potential growth.

Table 2.6-2 provides a comparison of the Airport's historical growth rates for each based aircraft category, as well as projected growth rates from other sources.

Table 2.6-2
Historical Based Aircraft Growth and Other Forecasts

Source	Single-Engine	Multi-Engine	Jet	Rotor	Other	Total
SRQ Historical Growth Rate 2010 to 2019	0.8%	-2.2%	8.0%	9.3%	NA	2.2%
FAA 2020 TAF	NA	NA	NA	NA	NA	2.0%
2009 Master Plan Update	0.6%	1.3%	2.0%	5.5%	NA	1.3%
FAA Aerospace Forecast (National)	-1.0%	-0.4%	2.2%	1.7%	3.5%	0.0%

Source: As noted in table. Data compiled by AECOM, 2020.

Table 2.6-3 presents the preferred forecast of based aircraft. The number of single engine aircraft was increased in the first year of the forecast to account for the anticipated increase of flight training aircraft and then were grown at a rate consistent with historical trends. Multi-engine aircraft were grown at a rate of 0.5 percent. While this rate is low, it is higher than the Airport's historical average and higher than the projected national rate which is justified given the catchment area's current and projected growth as well as the fact that some flight training activity will occur in multi-engine aircraft. Jet aircraft were increased at an average annual rate of 3 percent which is slightly higher than the FAA projected national rate. However, this seems justified considering that it is still less than one-half the historical average which was greatly influenced by the construction of additional hangars on the east side of the airfield. Rotorcraft were grown at a rate of 4 percent, which is more than double the national average, but less than one-half the historical average which was greatly influenced by the establishment of a rotorcraft operation at the Airport.

Table 2.6-3 Preferred Forecast of Based Aircraft						
Year	**Single-Engine**	**Multi-Engine**	**Jet**	**Rotor**	**Other**	**Total**
2019 (Existing)	184	27	68	20	2	301
2024	194	28	79	24	2	327
2029	199	28	91	30	2	350
2034	204	29	106	36	2	377
2039	209	30	123	44	2	408
Period	**Average Annual Growth Rate**					
2019-2039	0.6%	0.5%	3.0%	4.0%	0%	1.5%

Source: AECOM, 2020.

2.6.2 GENERAL AVIATION OPERATIONS

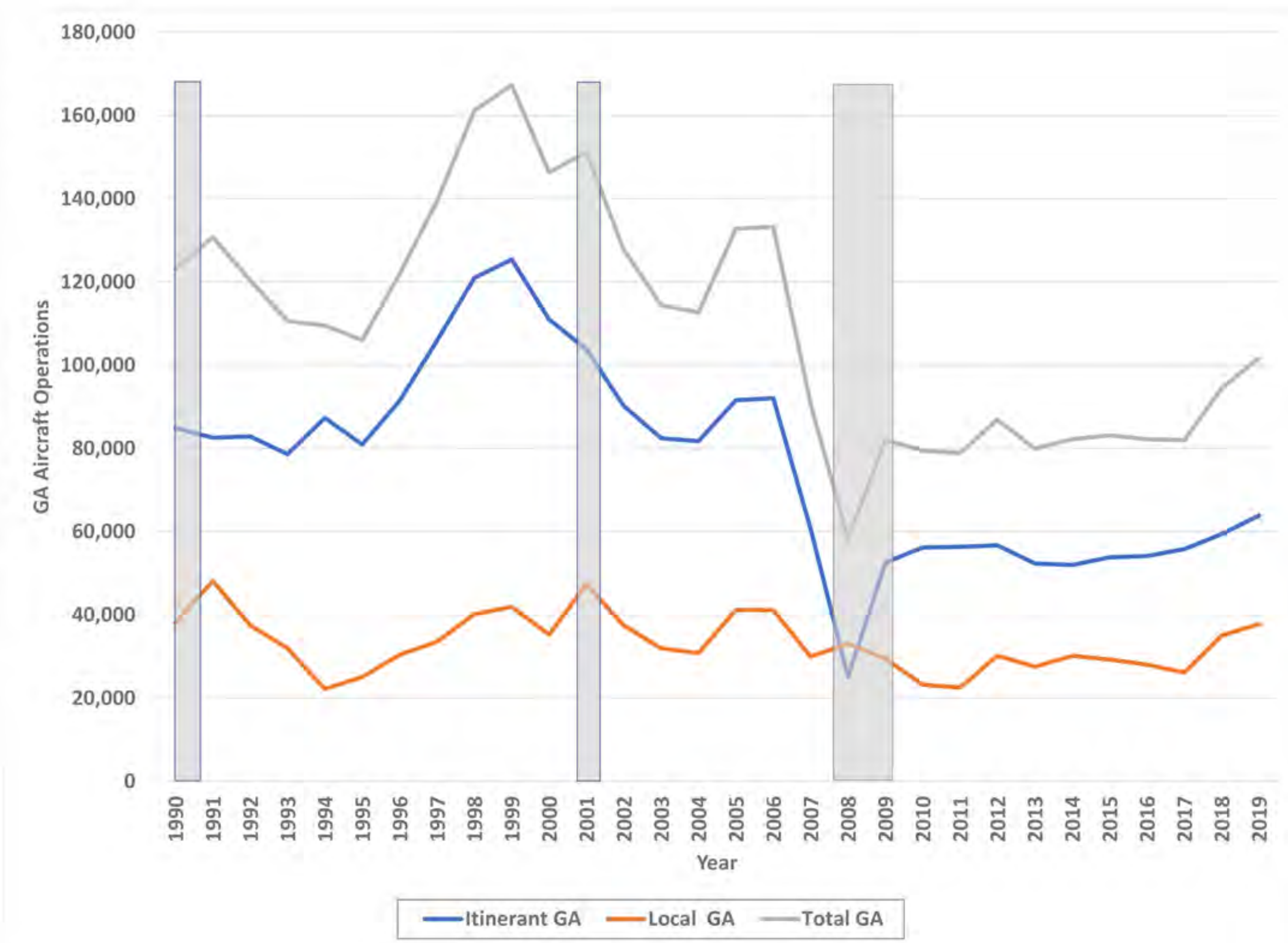
2.6.2.1 Historical General Aviation Operations

Historical general aviation aircraft operations[2] at SRQ were obtained from the FAA's Operations Network (OPSNET) counts from 1990 through 2019 and is summarized in **Figure 2.6-3**. Values for the last ten years along with their average annual growth rates are shown in **Table 2.6-4**. Although annual GA operations were fairly stable since 2009, annual operations decreased significantly during the last two economic recessions and have not recovered to levels experienced during the late 1990's. The reasons for these decreases include the high cost of aircraft ownership, maintenance and operation.

Table 2.6-4 Historical General Aviation Aircraft Operations (2010-2019)			
Year	**Itinerant GA**	**Local GA**	**Total GA**
2010	56,212	23,248	79,460
2011	56,390	22,552	78,942
2012	56,728	30,216	86,944
2013	52,390	27,572	79,962
2014	52,034	30,178	82,212
2015	53,866	29,304	83,170
2016	54,158	28,071	82,229
2017	55,848	26,177	82,025
2018	59,430	35,066	94,496
2019	63,908	37,820	101,728
Period	**Average Annual Growth Rate**		
2010-2019	1.4%	5.6%	2.8%

Source: FAA's OPSNET database, 2020.

[2] Total GA operations include itinerant and local operations.



Source: FAA Operations Network, 2020.

Note: Shaded areas represent economic recessions.

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

Historical General Aviation Operations

FIGURE 2.6-3

2.6.2.2 Previous Forecasts of General Aviation Operations

Forecasts of GA operations were previously prepared for the Airport by the 2009 Master Plan Update, by the FAA through its TAF and by FDOT. These forecasts are presented in the following paragraphs.

2009 Master Plan Forecast

The 2009 Master Plan Update projected that general aviation aircraft operations would increase at a rate at 1.1 percent through the twenty-year period from 2006 through 2026. The growth rate for itinerant operations was projected to be 1.5 percent, while the projected growth rate for local operations was projected to be zero.

The forecast predicted that GA aircraft operations would increase from approximately 115,000 in 2007 to 165,000 in 2026. Based on the number of GA operations that occurred in 2018 (94,000) the Master Plan forecast was too optimistic. However, the magnitude of the economic recession that occurred after the completion of the Master Plan forecast was not foreseeable.

2020 FAA Terminal Area Forecast (TAF)

The TAF published in January 2020 projects that total GA aircraft operations at the Airport will increase at an average annual rate of 0.7 percent annually and will reach approximately 106,000 by 2039. This forecast is fairly conservative in comparison the TAF's projection for based aircraft.

FDOT Aircraft Operations Forecast

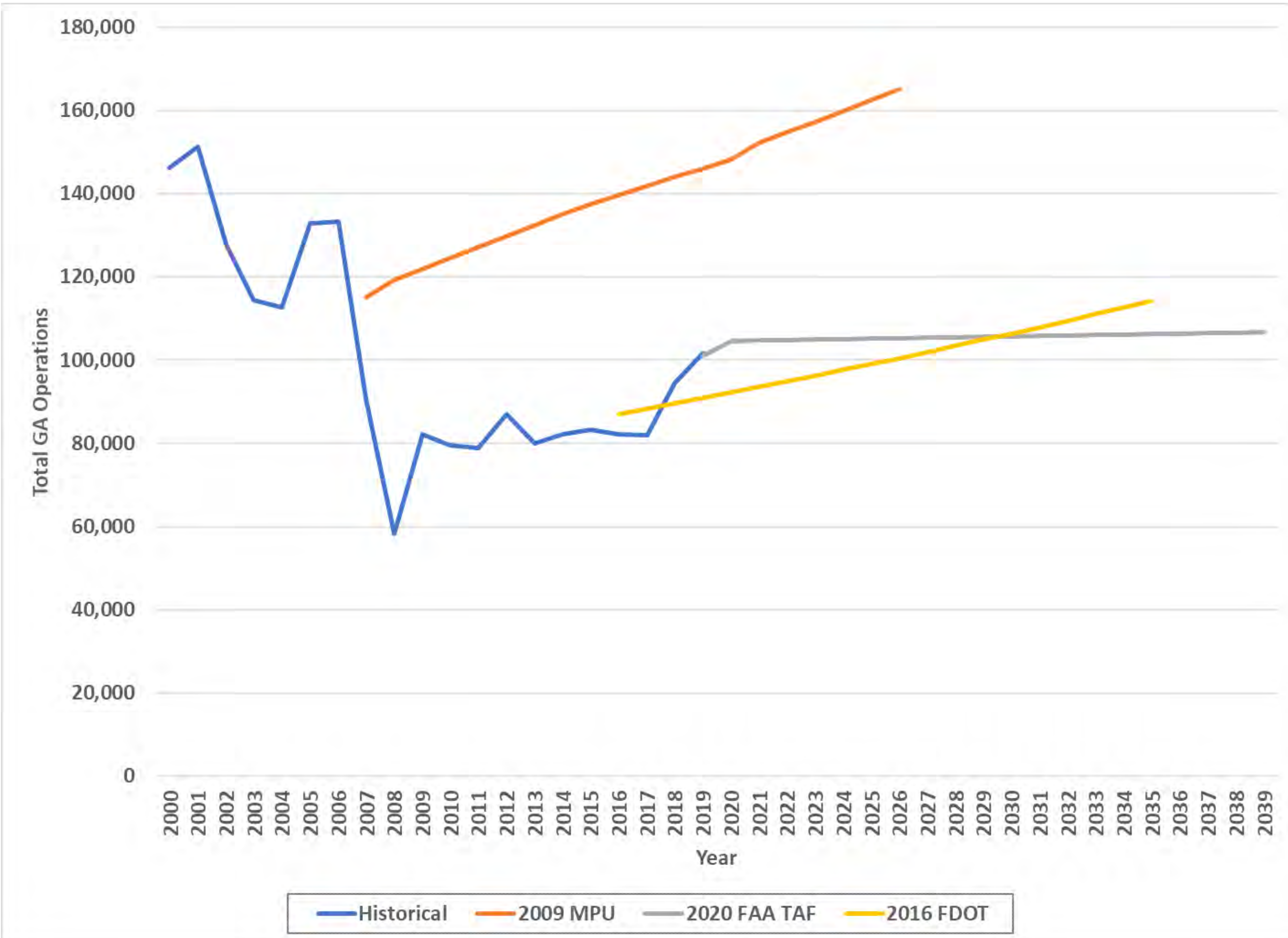
The FDOT publishes a forecast of GA aircraft operations for all commercial service and publicly owned general aviation airports in the state. This forecast uses base data from 2015 and presents projections of aircraft operations through 2035. The forecast for SRQ projects that general aviation operations will grow at an average annual rate of 1.4 percent and will reach approximately 114,000 in 2035.

Figure 2.6-4 illustrates these previous forecasts in relation to historical values. The figure shows that the Master Plan Update forecast was too optimistic when compared to historical values. The FAA's TAF and FDOT forecasts projects flat to slow growth. **Table 2.6-5** summarizes the average annual growth rates predicted by these forecasts.

Table 2.6-5
Historical GA Aircraft Operations Growth and Other Forecasts

Source	Total
SRQ Historical Growth Rate (2010 to 2019)	2.8%
2009 Master Plan Update	1.1%
FAA 2020 TAF	0.7%
FDOT Forecast	1.4%

Source: AECOM, 2019.



Source: Historical data - Sarasota Manatee Airport Authority, 2020.
Forecast data - as noted.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

Previous Forecasts of General Aviation Operations

FIGURE 2.6-4

2.6.2.3 Forecast of General Aviation Operations

A variety of methodologies were examined for forecasting general aviation aircraft operations including the use of operations per based aircraft, as well as trendline, market share and regression analyses. The results indicated regression analyses of historical operations with socioeconomic variables of the catchment area had minimal correlation and is not recommended as a predictor of future aircraft operations. Therefore, that methodology was discarded in favor of other methodologies that showed more promise. Forecasts were generated using an operations per based aircraft factor, a trendline of the last 10 years of historical operations, and a market share forecast that calculated the average market share of operations at SRQ versus total general aviation aircraft operations in Florida.

The operations per based aircraft forecast used a factor of 330 operations per based aircraft and the forecast of based aircraft presented in the previous section. The value of 330 operations per based aircraft is the based on the average at SRQ during the 10-year period from 2010 through 2019. This factor has been stable during the past 10 years after decreasing by approximately 50 percent from the mid 1990's.

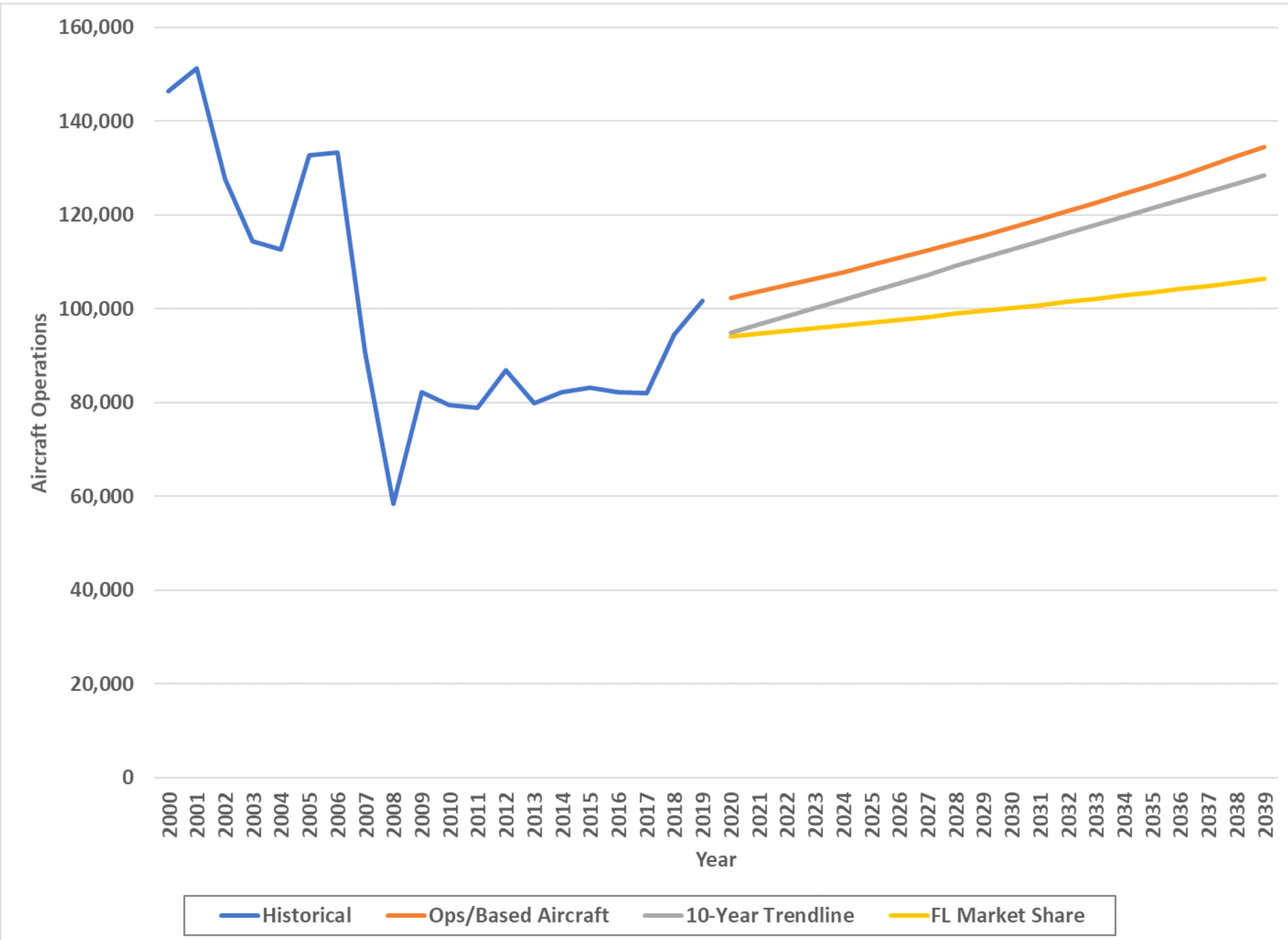
The ten-year trendline forecast is also based on historical operations at SRQ from 2010 to 2019. The market share forecast examined what percentage SRQ operations are of total general aviation operations in Florida and then used the average market share for the last ten years and applied it to the FAA's projection for general aviation operations in Florida as presented in the TAF. The results of these forecast are presented in **Table 2.6-6** and **Figure 2.6-5.**

Table 2.6-6
Forecasts of General Aviation Aircraft Operations

Year	Operations Per Based Aircraft	10-Year Trendline	Florida Market Share
2019 (Actual)		101,728	
2024	107,836	101,950	96,472
2029	115,600	110,807	99,529
2034	124,450	119,665	102,818
2039	134,573	128,522	106,360
AAGR (2019 – 2039)	1.4%	1.2%	0.2%

Source: AECOM, 2020.
Note: AAGR = Average Annual Growth Rate

The operations per based aircraft methodology produces a slightly higher growth rate than the trendline and a significantly higher growth rate than the market share forecast. It is recommended that the operations per based aircraft forecast be used as the preferred forecast of GA aircraft operations due to the anticipated growth from flight schools and planned growth on the north side of the airfield that was previously not developable. Consultation with both of the Airport's FBO's indicate that there is substantial market demand for hangar space for larger aircraft that would generate operations if new hangar space is constructed.



Source: AECOM, 2020.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

Forecasts of General Aviation Operations

FIGURE 2.6-5

2.6.2.4 Itinerant Versus Local GA Operations

Aircraft operations are defined as the number of arrivals and departures from the airport, including touch-and-go's[3]. These operations are categorized as either itinerant or local.

- Itinerant operations are operations performed by an aircraft that lands at an airport, arriving from outside the airport area, or departs an airport and leaves the airport area or local airspace.
- Local operations are those performed by aircraft that are based at the airport and that operate in the local traffic pattern or within sight of the airport. Touch-and-go's typically account for most local operations.

Table 2.6-7 presents the historical number of itinerant and local general aviation operations along with the resulting percentage split between the two categories for the period 2010 through 2019. The average split between itinerant and local aircraft operations during that timeframe was approximately 66 and 34 percent, respectively. For the purposes of developing forecasts of future general aviation aircraft operations at the Airport, that percentage split was held constant throughout the 20-year forecast period. The bottom portion of **Table 2.6-7** presents the resulting forecast of itinerant and local operations.

Table 2.6-7
Forecast of Itinerant and Local GA Operations

Year	Itinerant GA Operations	Itinerant GA Operations as a Percent of Total	Local GA Operations	Local GA Operations as a Percent of Total
2010	56,212	71%	23,248	29%
2011	56,390	71%	22,552	29%
2012	56,728	65%	30,216	35%
2013	52,390	66%	27,572	34%
2014	52,034	63%	30,178	37%
2015	53,866	65%	29,304	35%
2016	54,158	66%	28,071	34%
2017	55,848	68%	26,177	32%
2018	59,430	63%	35,066	37%
2019	63,908	63%	37,820	37%
Average (2010 – 2019)	-	66%	-	34%
Forecast				
2024	71,172	66%	36,664	34%
2029	76,296	66%	39,304	34%
2034	82,137	66%	42,313	34%
2039	88,818	66%	45,755	34%

Source: Historical aircraft operations obtained from the FAA's OPSNET database. Data compiled by AECOM, 2020.

[3] A touch and go consists of an aircraft landing and immediate takeoff without stopping or exiting the runway. It is typically conducted by student pilots for the purpose of practicing landings.

2.7 AIR TAXI OPERATIONS

Air taxi operations consist of flights undertaken for the purpose of carrying cargo or passengers for hire or compensation. This includes flights conducted for a wide variety of purposes. Air taxi operations at SRQ were less than 10,000 from 2009 through 2018 and are approximately 50 percent lower than they were in the mid 1990's. Air taxi operations during 2019 were 10,618.

Significant growth is not anticipated in the air taxi category and therefore a conservative growth rate of 0.9 percent was applied to existing operations to derive a forecast. This growth rate is the same as growth rate used for air taxi operations in the 2019 FAA TAF. **Table 2.7-1** shown the forecast.

Table 2.7-1
Air Taxi Forecast

Year	Air Taxi Operations
2019 (Actual)	10,618
2024	11,086
2029	11,594
2034	12,125
2039	12,680
Average Annual Growth Rates	
2019 - 2039	0.9%

Source: Compiled by AECOM, 2020.

2.8 MILITARY OPERATIONS

2.8.1 HISTORICAL MILITARY OPERATIONS

Historical military operations at the Airport from 2010 through 2019 are shown in **Table 2.8-1**. The average growth rate for the ten-year period is less than 2 percent, but a review of total military operations during each year shows that activity has fluctuated up and down with no discernable growth pattern.

Table 2.8-1
Historical Military Operations (2009-2018)

Year	Military Aircraft Operations		
	Itinerant	Local	Total
2010	1,200	601	1,801
2011	1,330	585	1,915
2012	1,482	898	2,380
2013	1,407	738	2,145
2014	1,774	640	2,414
2015	2,132	560	2,692
2016	1,786	538	2,324
2017	1,445	210	1,655
2018	1,965	722	2,687
2019	1,617	481	2,098
Period	**Average Annual Growth Rate**		
2009-2018	3.4%	-2.4%	1.7%

Source: FAA Operational Network (OPSNET), 2020. AAGR=Average Annual Growth Rate.

2.8.2 PREVIOUS FORECASTS

The SRQ 2009 Master Plan Update projected that future military aircraft operations would remain flat at 2,733 annual operations. That forecast was within 46 operations of the actual number of operations at the end of 2018.

The FAA TAF published in January 2020 also projects no growth of military aircraft operations. It maintains a level of 2,422 annual operations through the forecast period.

2.8.3 UPDATED FORECAST

A review of the types of military aircraft operations that occur at the Airport indicates that it consists of a wide variety of aircraft types including fighters, cargo, trainers and rotorcraft. Therefore, the activity is not limited to one military base or mission. Furthermore, the overall level of operations has remained within a range of 1,000 to 2,700 operations every year for the last twenty years. Therefore, for planning purposes it is anticipated that future military operations will be at the top end of this range for the duration of the planning period. A value of 2,700 annual military operations is used in this forecast through the end of the planning period.

2.9 TOTAL AIRCRAFT OPERATIONS

2.9.1 SUMMARY OF TOTAL AIRCRAFT OPERATIONS

Table 2.9-1 provides a consolidated view of the aircraft operations forecasts presented in the previous subsections. Total aircraft operations are forecasted to increase at a rate of 1.2 percent from 2018 through 2039. By comparison, total operations at the Airport increased at a historical average annual rate of 1.3 percent during the period 2009 through 2018. However, the air carrier category experienced significant growth from 2018 to 2019 and even more significant growth is scheduled to occur during 2020. Thus, the growth rate for the air carrier category reflects that higher level of growth compared to the air taxi, general aviation and military categories. The latter categories are projected to experience much lower growth rates.

Table 2.9-1
Forecast of Total Aircraft Operations

Year	Air Carrier	Air Taxi	GA Itinerant	GA Local	Military	Total Operations
2019 (Actual)	17,423	10,618	63,908	37,820	2,098	131,867
2024	23,993	11,086	71,172	36,664	2,700	145,615
2029	25,001	11,594	76,296	39,304	2,700	154,895
2034	26,101	12,125	82,137	42,313	2,700	165,376
2039	26,734	12,680	88,818	45,755	2,700	176,687
Average Annual Growth Rates						
2019 - 2039	2.2%	0.9%	1.7%	1.0%	1.3%	1.5%

Source: Compiled by AECOM, 2020.

2.9.2 INSTRUMENT OPERATIONS

Instrument operations consist of flights conducted under instrument flight rules (IFR). Forecasts of instrument operations can be useful when planning for navigational aids. Historical information on instrument operations was obtained from the FAA's Operations Network. Historical data extending from 2010 through 2019 was obtained from this source. The results of the data indicated that the percentage of aircraft operations operating under instrument conditions has hovered within a few points of 40 percent during the last ten years as shown in **Table 2.9-2.**

A forecast of instrument operations was produced by assuming that the percentage of IFR operations will remain in the range of 40 percent as it did for the last ten years. The resulting forecast is shown in the bottom portion of Table 2.9-2.

Table 2.9-2
Forecast of Instrument Aircraft Operations

Year	IFR Operations	Total Operations	IFR Operations as a Percentage of Total Operations
Historical			
2010	41,845	101,570	41.2%
2011	39,183	99,461	39.4%
2012	38,913	107,032	36.4%
2013	39,499	98,805	40.0%
2014	39,943	101,381	39.4%
2015	42,140	104,482	40.3%
2016	41,937	103,225	40.6%
2017	43,693	102,675	42.6%
2018	47,430	119,560	39.4%
2019	53,598	131,867	40.6%
Forecast			
2024	58,246	145,615	40%
2029	61,958	154,895	40%
2034	66,150	165,376	40%
2039	70,675	176,687	40%

Source: AECOM, 2020.

2.10 CRITICAL AIRCRAFT

The FAA defines the critical aircraft as the "most demanding aircraft type, or grouping of aircraft with similar characteristics, that make regular use of the airport".[4] Regular use is defined by the FAA as 500 annual aircraft operations, including both itinerant and local, but excluding touch and go operations. An operation is either a landing or a takeoff.

[4] FAA Advisory Circular 150/5000-17, *Critical Aircraft and Regular Use Determination*, June 2017.

The purpose of defining a critical aircraft is so that proper dimensional requirements of an airport can be determined. The FAA defines dimensional requirements for nearly all aspects of airfield design such as the proper separation between runways and taxiways and the proper safety clearances from these facilities. The FAA also defines specific categories for grouping of aircraft that have similar dimensional or operating characteristics. These categories are then used to define the dimensional requirements.

The categories include approach speed, tail height, wingspan. Additional categories are defined for taxiways and pavement design. Those items are further described in the next section of the Master Plan - "Facility Requirements".

The first category is the Aircraft Approach Category which groups aircraft according to their approach speed. The Aircraft Approach Category is based on the landing speed of the aircraft, which is defined as 1.3 times the stall speed of the aircraft. **Table 2.10-1** provides a listing of these categories.

Table 2.10-1
Aircraft Approach Category

Aircraft Approach Category	Approach Speed
A	Approach speed less than 91 knots
B	Approach speed 91 knots or more, but less than 121 knots
C	Approach speed 121 knots or more, but less than 141 knots
D	Approach speed 141 knots or more, but less than 166 knots
E	Approach speed 166 knots or more

Source: FAA AC 150/5300-13A, *Airport Design*.

The second category is the Airplane Design Group. This parameter addresses two elements: an aircraft's tail height and an aircraft's wingspan; both measured in feet. The Airplane Design Group is defined as shown in **Table 2.10-2**.

Table 2.10-2
Airplane Design Group

Group	Tail Height (feet)	Wingspan (feet)
I	Less than 20	Less than 49
II	20 to less than 30	49 to less than 79
III	30 to less than 45	79 to less than 118
IV	45 to less than 60	118 to less than 171
V	60 to less than 66	171 to less than 214
VI	66 to less than 80	214 to less than 262

Source: FAA AC 150/5300-13A, *Airport Design*.

A review of aircraft that served SRQ during 2018, as well as the first eleven months of 2019 indicates that the critical aircraft is a combination of air carrier aircraft such as the Boeing 737-900 and 757-200, as well as the Airbus A321.

Table 2.10-3 indicates the number of operations these aircraft conduct at SRQ during 2018 and 2019. The 737-900 and MD-88 are in Aircraft Approach Category D, but the A321 and the 757-200 in Aircraft Approach Category C. Conversely, the A321, 737-900W and MD-88 are in Airplane Design Group III, but the 757-200 is in ADG-IV. There were more than the required 500 annual operations per year in Aircraft Approach Category D and Airplane Design Group III during 2018 and 2019. Therefore, the existing critical aircraft is the group of aircraft in the D-III category. The A321 should be used as the critical aircraft for pavement planning, because it has the highest maximum takeoff weight (MTOW) of the aircraft that conduct more than 500 annual operations at the Airport.

Table 2.10-3
Existing Critical Aircraft Operations

Aircraft	Approach Speed (knots)	Tail Height (feet)	Wingspan (feet)	MTOW (pounds)	Number of Operations	Category
A321S	142	39.7	117.5	206,132	356 (2018) 1,316 (2019)	C-III
737-900W	141	41.4	117.4	174,000	523 (2018) 216 (2019)	D-III
MD-88	144	30.2	107.9	160,000	2,973 (2018) 1,567 (2019)	D-III
757-200W	137	45.1	134.8	255,000	13 (2018) 128 (2019)	D-IV

Source: FAA AC 150/5300-13A, *Airport Design*.
Notes: The S designation indicates sharklet model. The W designation indicates winglet model.

In addition to identifying an existing critical aircraft, the master planning process also identifies a future critical aircraft to ensure that the planning process accounts for the types of aircraft that are expected to serve the Airport on a regular basis in the future. The future critical aircraft at SRQ is also projected to be the group of aircraft rather than a single type of aircraft. It is anticipated that aircraft having a combination of Category D approach speeds and Design Group IV wingspans will be the critical aircraft group. This includes the Boeing 737-800 and 737-900 in Approach Category D and the proposed Boeing New Mid-Market Aircraft in Design Group IV.

2.11 PEAKING FORECAST

The number of passengers and aircraft operations at an airport vary throughout the year, from month to month, day to day and throughout each hour of the day. The facilities needed to meet operational demands are typically based on accommodating a level of peaking activity. For example, facilities needed to meet passenger demands such as the passenger terminal are typically planned to meet a "design hour" which typically consists of the peak hour during an average day during the peak month.

Likewise, capacity assessments for an airfield typically measures projected levels of peak hour aircraft operations versus the calculated capacity. Therefore, a thorough understanding of peak hour aircraft operations is needed to conduct the assessment.

This section describes and provides estimates of peaking activity that is needed to plan future facilities. Therefore, this section presents forecasts of peak month, average day peak month and peak hour for aircraft operations. Definitions of these peaking factors are presented below:

- **Peak Month** – The month when the highest number of aircraft operations occur.
- **Average Day, Peak Month** – The average day during the peak month (i.e., the monthly value divided by 31 days).
- **Peak Hour** – The hour with the highest number of aircraft operations during the peak month.

2.11.1 PEAKING OF PASSENGER ENPLANEMENTS

The peak month for passenger enplanements was determined by examining monthly passenger enplanements for the five-year period extending from 2014 through 2018. Data for 2019 was not used due to the tremendous increase in air service that occurred toward the end of the year and skewed the monthly peaking percentages. **Table 2.11-1** presents this information **(Figure 2.3-2** also presents this data graphically).

Table 2.11-1
Peak Month Passenger Enplanements

Year	Peak Month	Percent of Annual Enplanements
2014	March	12.6%
2015	March	12.4%
2016	March	13.0%
2017	March	13.4%
2018	March	10.7%
Average (2014 to 2018)		12.4%

Source: Sarasota Manatee Airport Authority, 2019. Compiled by AECOM.

The analysis determined that the peak month consistently occurred in March and averaged 12.4 percent of annual enplanements. Average day peak month enplanements will be estimated by dividing the peak month by 31 days. **Table 2.11-2** presents that data for key forecast years along with estimated peak hour enplanements.

The percentage of peak hour enplanements was estimated by examining hourly peaking on a scheduled seat basis and from TSA checkpoint data for March 2019. Scheduled seat data for March 2020 revealed that the peak hour during an average week is 12.7 percent. By comparison, March 2019 TSA checkpoint data (which includes more than just passengers) revealed an average peak hour of 14.6 percent. Lastly, an examination of peak hour schedule seats on a rolling peak hour basis (using 10-minute buckets) for an average day in March 2020 revealed a peak hour of 15.8 percent. These data points indicate a peak hour in the range of 13 to 16 percent. Therefore, a peak hour factor of 15 percent was selected for the purpose of forecasting future peak hour passengers.

Table 2.11-2 Summary of Peaking Forecasts for Passenger Enplanements				
Year	**Annual Passenger Enplanements**	**Peak Month Passenger Enplanements (12.4 Percent)**	**ADPM Passenger Enplanements (31 Days)**	**Peak Hour Passenger Enplanements (15 Percent)**
2019 (Actual)	979,810	108,387	3,496	524
2024	1,382,471	171,426	5,530	829
2029	1,479,071	183,405	5,916	887
2034	1,566,869	194,292	6,267	940
2039	1,646,795	204,203	6,587	988

Source: AECOM, 2020.

2.11.2 PEAKING OF AIRCRAFT OPERATIONS

Table 2.11-3 and **Figure 2.11-1** present monthly aircraft operations for 2014 through 2019. The data indicate that the peak month typically occurs in March, but occurred in November in 2018 and in February during 2019.

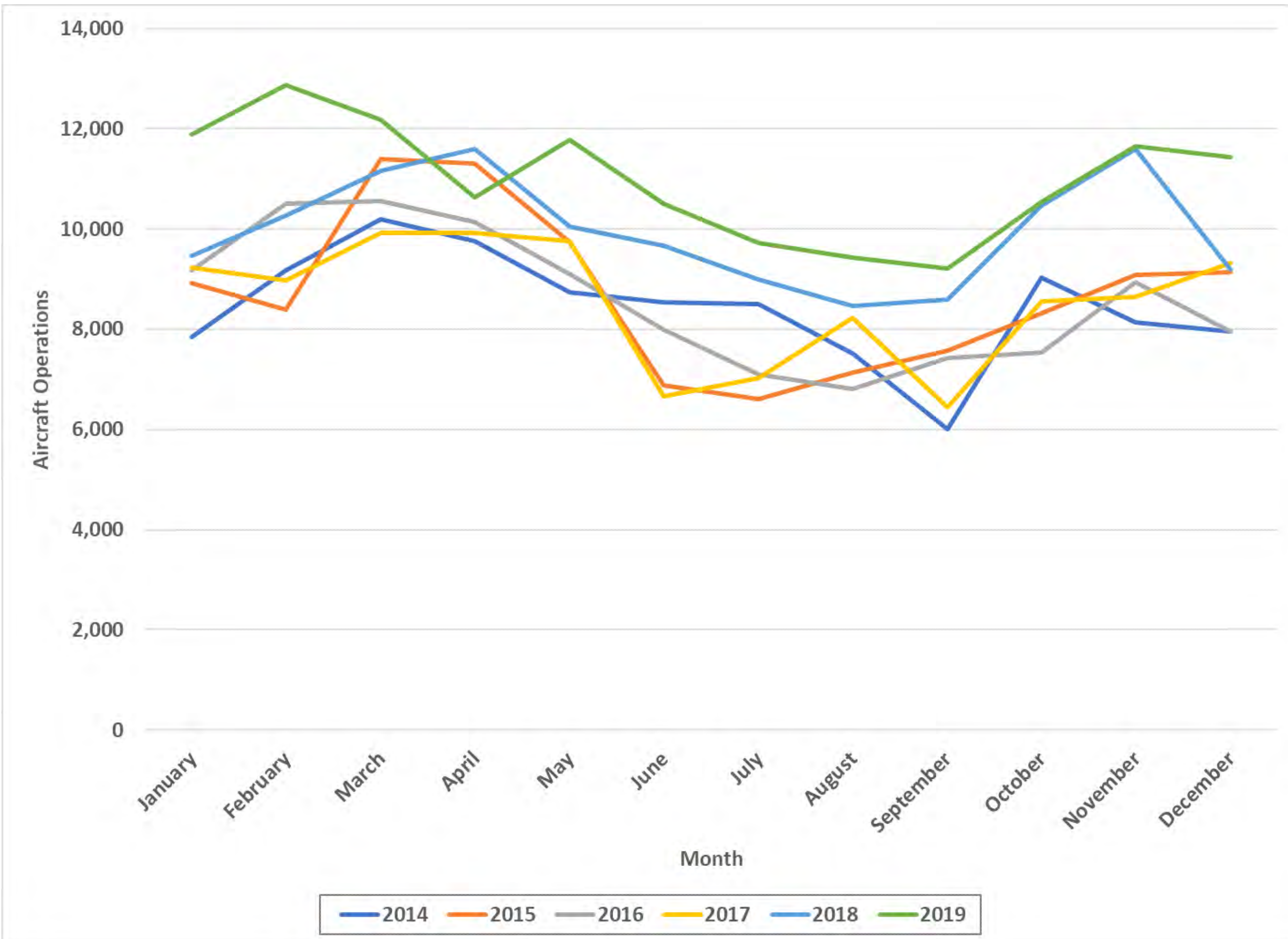
Table 2.11-3 Peak Month Aircraft Operations		
Year	**Peak Month**	**Percent of Annual Operations**
2014	March	10.1%
2015	March	10.9%
2016	March	10.2%
2017	March	9.7%
2018	November	9.7%
2019	February	9.8%
Average (2014 to 2019)		10.1%

Source: FAA OPSNET, 2020. Compiled by AECOM.

Likewise, a review of hourly aircraft operations determined that the peak hour typically accounted for 13.7 percent of daily operations and most often occurred between 11 am and 2 pm. These percentages were applied to the preferred forecast of aircraft operations (in five-year increments) to derive a peaking forecast that is shown in **Table 2.11-4**.

Table 2.11-4 Summary Of Peaking Forecasts For Aircraft Operations				
Year	**Annual Aircraft Operations**	**Peak Month Operations (10.1 Percent)**	**ADPM Operations (31 Days)**	**Peak Hour Operations (13.7 Percent)**
2019 (Actual)	131,867	12,865	415	57
2024	145,615	14,707	474	65
2029	154,895	15,644	505	69
2034	165,376	16,703	539	74
2039	176,686	17,845	576	79

Source: AECOM, 2020.



Source: FAA Operations Network, 2020.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

Historical Monthly Aircraft Operations

FIGURE 2.11-1

2.12 COMPARISON TO FAA TAF

An aviation forecast is one of three items in an airport master plan that requires FAA approval. The other two items are the identification of a critical aircraft and the airport layout plan. FAA forecasting guidance[5] includes a requirement to develop a comparison between the forecast prepared for an airport master plan and the FAA's TAF for the Airport. According to the guidance, the "general requirement for FAA approval of the Master Plan Study's forecast is that they are supported by an acceptable forecasting analysis and are consistent with the TAF." Forecasts are considered consistent with the TAF at a small hub airport like SRQ if they meet the following criteria:

a) The forecasts differ by less than 10 percent in the 5-year forecast and 15 percent in the 10-year period, or

b) The forecasts do not affect the timing or scale of an airport project.

This section provides the required comparisons to the TAF. **Table 2.12-1** presents a consolidated summary of the passenger enplanements, based aircraft and aircraft operations forecasts presented on the preceding pages along with the FAA TAF published in January 2020.

Table 2.12-1
Comparison of Master Plan and FAA TAF Forecast

Year	Master Plan Forecast	FAA TAF Published January 2020	Master Plan Forecast Vs. FAA TAF (%)
Passenger Enplanements			
2019 (Actual)	979,810	882,277	11%
2024	1,382,471	1,412,488	(2%)
2029	1,479,071	1,490,002	(1%)
2034	1,566,869	1,582,230	(1%)
2039	1,646,795	1,673,223	(2%)
Based Aircraft			
2019	301	275	9%
2024	327	299	9%
2029	350	324	8%
2034	377	355	6%
2039	408	392	4%
Total Operations			
2019 (Estimated)	131,867	129,508	2%
2024	145,615	141,672	3%
2029	154,895	144,014	8%
2034	165,376	146,623	13%
2039	176,686	149,245	18%

Source: AECOM, 2020.
Note: FAA TAF data is on a U.S. Government fiscal year basis (October through September)

[5] FAA Advisory Circular 150/5070-6B, *Airport Master Plans*, Change 2 January 27, 2015.

The results of the comparison indicate that the forecasted values for passenger enplanements are well within the FAA guidelines. The difference between the two forecasts is 1.7 percent in the five-year timeframe and 6.0 percent in the 10-year timeframe.

The master plan forecast for based aircraft is likewise within the FAA guidelines. The difference between the two forecasts is 9.4 percent in the 5-year timeframe and 8 percent in the 10-year timeframe. Furthermore, the difference between the two forecasts continues to decrease in long-term.

The forecasted values for total aircraft operations are also within the FAA criteria for the 5-year period and the 10-year period. The difference between the two forecasts is 2.8 percent in the 5-year timeframe and 7.6 percent in the 10-year timeframe. In summary, the Master Plan forecasts meet the FAA guidelines for compliance with the published 2020 TAF.

2.13 FORECAST SUMMARY

Table 2.13-1 consolidates all the forecast data provided on the preceding pages into one reference table.

Table 2.13-1
Summary of Aviation Activity Forecast

Years	Base Year	Forecast Level of Aviation Activity				Average Annual Compound Growth Rates				
	2019	2024	2029	2034	2039	2019 - 2024	2024- 2029	2029 - 2034	2034 - 2039	2019 - 2039
Passenger Enplanements										
Air Carrier	822,773	1,188,925	1,286,791	1,371,010	1,449,180	7.6%	1.6%	1.3%	1.1%	2.9%
Commuter	157,037	193,546	192,279	195,859	197,615	4.3%	-0.1%	0.4%	0.2%	1.2%
Total Passenger Enplanements	**979,810**	**1,382,471**	**1,479,071**	**1,566,869**	**1,646,795**	**7.1%**	**1.4%**	**1.2%**	**1.0%**	**2.6%**
Peak Month	108,387	171,426	183,405	194,292	204,203	9.6%	1.4%	1.2%	1.0%	3.2%
Average Day Peak Month	3,496	5,530	5,916	6,267	6,587	9.6%	1.4%	1.2%	1.0%	3.2%
Peak Hour	524	829	887	940	988	9.6%	1.4%	1.2%	1.0%	3.2%
Cargo										
Enplaned Cargo (Pounds)	**257,458**	**277,355**	**298,791**	**321,882**	**346,759**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**
Aircraft Operations										
Air Carrier	11,847	16,795	17,251	18,010	18,847	7.2%	0.5%	0.9%	0.9%	2.3%
Commuter	5,576	7,198	7,750	8,091	7,886	5.2%	1.5%	0.9%	-0.5%	1.7%
Air Taxi	10,618	11,086	11,594	12,125	12,680	0.9%	0.9%	0.9%	0.9%	0.9%
General Aviation (Itinerant)	63,908	71,172	76,296	82,137	88,818	2.2%	1.4%	1.5%	1.6%	1.7%
General Aviation (Local)	37,820	36,664	39,304	42,313	45,755	-0.6%	1.4%	1.5%	1.6%	1.0%
Military	2,098	2,700	2,700	2,700	2,700	5.2%	0.0%	0.0%	0.0%	1.3%
Total Aircraft Operations	**131,867**	**145,615**	**154,895**	**165,376**	**176,687**	**2.0%**	**1.2%**	**1.3%**	**1.3%**	**1.5%**
Instrument Operations	53,598	58,246	61,958	66,150	70,675	1.7%	1.2%	1.3%	1.3%	1.4%
Peak Month	12,865	14,707	15,644	16,703	17,845	2.7%	1.2%	1.3%	1.3%	1.6%
Average Day Peak Month	415	474	505	539	576	2.7%	1.3%	1.3%	1.3%	1.7%
Peak Hour	57	65	69	74	79	2.7%	1.2%	1.4%	1.3%	1.6%
Based Aircraft										
Single-Engine	189	194	199	204	209	0.5%	0.5%	0.5%	0.5%	0.5%
Multi-Engine (including turboprop)	27	28	28	29	30	0.7%	0.0%	0.7%	0.7%	0.5%
Jets	68	79	91	106	123	3.0%	2.9%	3.1%	3.0%	3.0%
Rotorcraft	20	24	30	36	44	3.7%	4.6%	3.7%	4.1%	4.0%
Other	2	2	2	2	2	0.0%	0.0%	0.0%	0.0%	0.0%
Total Based Aircraft	**301**	**327**	**350**	**377**	**408**	**1.73.1%**	**1.4%**	**1.5%**	**1.6%**	**1.5%**

Source: Historical data – Sarasota Manatee Airport Authority, 2020. Forecast data - AECOM, 2020.

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SECTION 3.0

Facility Requirements

SECTION 3.0 FACILITY REQUIREMENTS

3.1 INTRODUCTION

This section assesses facility requirements for Sarasota Bradenton International Airport (the Airport or SRQ) on the basis of the aviation forecasts presented in the preceding section, visual observations, as well as consultation with airport tenants and Sarasota Manatee Airport Authority staff. The capacities of specific airport elements, such as the airfield and surrounding airspace, terminal facilities, general aviation, air cargo, support facilities, ground access, and parking are evaluated to determine if they are capable of accommodating forecasted levels of demand without incurring significant delay or unacceptable decreases of service levels. If deficiencies are identified, a determination of the approximate size and timing of the facilities required to meet demand is provided.

3.2 AIRFIELD CAPACITY ANALYSIS

A demand/capacity analysis for the existing airfield configuration was conducted using the methodology contained in Federal Aviation Administration's (FAA) Advisory Circular (AC) 150/5060-5, *Airport Capacity and Delay*, commonly referred to as the FAA's "handbook methodology." This methodology uses a series of tables, graphs and equations to calculate an airfield's hourly and annual capacity. The following paragraphs provide a discussion of the handbook methodology and present the analysis results.

The handbook methodology describes how to measure an airfield's hourly capacity and its annual capacity, which is referred to as Annual Service Volume (ASV). Hourly capacity is defined as the maximum number of aircraft operations that can be accommodated by the airfield system in one hour. It is used to assess the airfield's ability to accommodate peak hour operations.

ASV is defined as a reasonable estimate of an airport's annual capacity. As the number of annual operations increases and approaches the airport's ASV, the average delay incurred by each operation increases. When annual operations are equal to the ASV, average delay per aircraft operation can be up to four minutes depending upon the fleet mix using the Airport. When the number of annual aircraft operations exceeds the ASV, moderate to severe congestion will occur and average delay per aircraft operation will increase exponentially. ASV is used to assess the adequacy of the airfield design, including the number and orientation of runways.

Calculation of an airfield's hourly capacity and ASV depends upon a number of factors including the following items:

- **Meteorological Conditions** - The percentage of time that the cloud ceiling or horizontal visibility are below certain minimums.

- **Aircraft Fleet Mix** - The percentage of operations conducted by aircraft within certain weight, engine, and wake turbulence classifications.

- **Runway Use** - The percentage of time each runway use configuration is used.
- **Percent Touch-and-Go** - The percentage of touch-and-go operations in relation to total aircraft operations.
- **Percent Arrivals** - The percentage of arrivals in relation to departures.
- **Exit Taxiway Locations** - The number and locations of exit taxiways for landing aircraft.

3.2.1 METEOROLOGICAL CONDITIONS

Meteorological conditions have a significant effect upon runway use, which, in turn, affects airfield capacity. During Visual Meteorological Conditions (VMC), runway use is greatly influenced by the direction of prevailing winds. During Instrument Meteorological Conditions (IMC), runway use is dictated by a combination of prevailing winds and the type and availability of instrument approach procedures. Operational factors, such as airspace constraints, runway length, and noise abatement considerations, may also affect runway use. Consequently, airfield capacity is typically higher during VMC than IMC. Therefore, it is important to properly identify the percentage of time that an airfield operates under each condition.

Historical data regarding the percentage of time that the Airport experiences VMC versus IMC was obtained from the National Centers for Environmental Information (NCEI) and is presented in Section 1.13. The meteorological data indicates that VMC conditions occur approximately 91 percent of the time and IMC the remaining 9 percent of the time. These percentages were used for the airfield capacity analysis.

3.2.2 AIRCRAFT FLEET MIX

Variations in aircraft weights and approach speeds affect an aircraft's wake turbulence[14] generation, which, in turn, affects the spacing of aircraft on final approach. Greater spacing requirements between aircraft lower the arrival capacity of a runway system. Therefore, if an airport is serving an aircraft fleet mix that has a high percentage of aircraft with greater separation requirements, it will have a lower capacity.

The handbook methodology defines aircraft fleet mix as the percentage of operations conducted by each of four classes of aircraft. **Table 3.2-1** summarizes representative types of aircraft found in each classification.

[14] Wake turbulence consists of a vortex of air that is created behind the wingtip of an aircraft as it flies through the air. Wake turbulence can be hazardous if flown through. Proper separation of in-trail aircraft by air traffic control is used to avoid wake turbulence.

Table 3.2-1 Aircraft Classifications		
Class	**Aircraft Type**	
Class A	**Small Single-Engine (Gross weight 12,500 pounds or less)**	
Typical Aircraft	Cessna 172/182	Piper Archer
	Cessna 206 Stationair	Pilatus PC-12
Class B	**Small, Twin-Engine (Gross weight 12,500 pounds or less)**	
Typical Aircraft	Cessna 402	Piper Aztec
	Beech Queen Air	Cessna Citation CJ2
	Phenom 100	Beech King Air B200
Class C	**Large Aircraft (Gross weight 12,500 pounds to 300,000 pounds)**	
Typical Aircraft	Phenom 300	Learjet 60 / 70
	Challenger 300 / 350	Gulfstream 500 / 550
	ATR 42/72	CRJ 700 / 900
	Embraer 175 / 190	Boeing 737 (All Series)
	Airbus A320 / A321	Boeing 757
Class D	**Heavy Aircraft (Gross weight more than 300,000 pounds)**	
Typical Aircraft	Boeing 767	Airbus A330
	Boeing 787	Airbus A350

Source: FAA Advisory Circular 150/5060-5, *Airport Capacity and Delay*, 1995.

Aircraft fleet mix at the Airport during 2019 was estimated using data from the FAA's Operations Network (OPSNET) and Traffic Flow Management System Counts (TFMSC). Based on the data, it is estimated that Class A and Class B comprise 82 percent of aircraft operations, Class C aircraft comprise 16 percent of aircraft operations, and Class D aircraft comprise 2 percent of aircraft operations at the Airport.

The FAA's handbook methodology uses the term "Mix Index" to describe an airport's fleet mix. The FAA defines the Mix Index as the percentage of Class C operations plus three times the percentage of Class D operations. By applying this calculation to the fleet mix percentages for the Airport, a Mix Index of approximately 22 percent is obtained per the following equation:

Class C Operations (16%) + (3 * Class D Operations (2%)) = Mix Index (22%)

Operations by small aircraft that comprise Class A and Class B are a smaller percentage of total operations during instrument conditions. Therefore, it is estimated that the percentage of Class C and D operations increases to approximately 43 and 6 percent, respectively during instrument conditions. The resulting Mix Index during instrument conditions is shown below.

Class C Operations (43%) + (3 * Class D Operations (6%)) = Mix Index During IMC (61%)

3.2.3 RUNWAY USE

Runway use has a significant effect on airport capacity, especially at airports where one operational configuration provides greater or less capacity than another. However, in instances where runway operational configurations are similar, it is reasonable to group them together. The FAA handbook methodology recommends that operational configurations used less than two percent of the time be credited to another runway use configuration. That recommendation was observed for this capacity analysis.

Consultation with ATCT management revealed that the airfield operates in a south flow 60 to 70 percent of the time, north flow 20 to 30 percent and less than 10 percent of the time primarily being in an east or west VFR flow for smaller aircraft using the crosswind runway.

For the purpose of this capacity analysis, a two-runway crossing configuration was assessed in two flows: south flow and north flow. The capacity graphs presented in the FAA handbook for a two-runway crossing configuration were used to determine the capacity of the existing airfield.

3.2.4 Touch-and-Go Operations

A touch-and-go operation occurs when an aircraft lands and takes-off without making a full stop. These operations are usually conducted by student pilots for the purpose of practicing landings. Touch-and-go operations do not occupy a runway for as much time as a full-stop landing or an aircraft departure. Therefore, airfields with a high percentage of touch-and-go's normally accommodate a greater number of aircraft operations within a given period.

Local aircraft operations (which are usually comprised entirely of touch-and-go's) have averaged 34 percent of total aircraft operations at the Airport during the 10-year period from 2010 through 2019. Therefore, a touch-and-go value of 34 percent was used for the purpose of this airfield capacity analysis.

3.2.5 Percentage Arrivals

The percentage of aircraft operations that are arrivals has an important influence on a runway's hourly capacity. For example, a runway used exclusively for arrivals has a different capacity than a runway used exclusively for departures or a runway used for a mixture of arrivals and departures. In general, the higher the percentage of arrivals, the lower the hourly capacity of a runway. This is because arrivals usually have greater separations between aircraft and longer runway occupancy times than departures.

The percentage of arrivals typically varies throughout the day. Consequently, there is no required procedure for stating what percentage of arrivals should be used in capacity analyses. Some analyses use the percent of arrivals during the peak hour, others use the most conservative percentage, others use 50 percent and some calculate capacity using a range of arrivals and then show a range of resulting capacities.

The FAA's handbook methodology presents a range of 40 to 60 percent for the percentage of arrivals. For this analysis, it was determined that capacities would be calculated at 50 percent arrivals.

3.2.6 EXIT TAXIWAY LOCATIONS

Exit taxiways affect airfield capacity because their location influences an aircraft's runway occupancy time. The longer an aircraft remains on a runway, the lower the runway's capacity. When exit taxiways are properly located, landing aircraft can quickly exit the runway, thereby lowering occupancy times and increasing the runway's capacity.

According to the capacity tables, exit taxiways for a runway having a Mix Index of 21 to 50 percent (i.e., the Mix Index's was previously identified for the Airport as being 22 percent during VFR conditions and 61 percent during IFR conditions) should be in the range of 3,000 to 5,500 feet from the runway's threshold for maximum effectiveness at reducing runway occupancy time. **Table 3.2-2** presents information on the number of exit taxiways in optimal locations on Runway 14/32 and were used in the capacity assessment.

Table 3.2-2
Number of Exit Taxiways in Optimal Locations

Runway	Number of Exit Taxiways Between 3,000 and 5,500 feet from Landing Threshold
14	3
32	2

Source: AECOM, 2020.

3.2.7 HANDBOOK METHODOLOGY CAPACITIES

3.2.7.1 Hourly Airfield Capacity

The airfield's hourly and annual capacities were calculated using the preceding information and the FAA's handbook methodology. Review of the results indicated that the handbook's methodology for long-range planning produced more appropriate values of hourly capacity for the existing airfield's crossing runway configuration and were therefore used.

This methodology determined the airfield's existing hourly capacity is approximately 77 operations during VMC and approximately 57 operations during IMC. **Table 3.2-3** provides a comparison of these capacities to the projected number of peak hour aircraft operations. As the table indicates, forecasted peak hour VMC aircraft operations will approach the airfield's VMC capacity at the end of the study period. Peak hour IMC operations are not known due to lack of data specifically for those conditions; however, it is anticipated that IMC peak hour operations are less than half of peak hour operations during VMC conditions. Consequently, it is not anticipated that peak hour aircraft operations during IMC will reach the airfield's capacity. Airfield capacity improvements will be explored in the Alternatives section to address the anticipated shortfall in VMC hourly capacity toward the end of the study period.

Table 3.2-3
Hourly Capacities for the Existing Airfield

Year	Hourly Capacity		Estimated VMC Peak Hour Aircraft Operations
	VMC	IMC	
2019	77	57	57
2024			65
2029			69
2034			74
2039			79

Sources: AECOM, 2020 and FAA AC 150/5060-5, *Airport Capacity and Delay*.
Note: Estimated peak hour operations were obtained from the peaking forecast presented in Section 2.0, *Forecasts of Aviation Activity*.

3.2.7.2 Annual Airfield Capacity

An airfield's annual capacity, or ASV, is calculated by determining the following three items:

- The airfield's weighted hourly capacity (Cw),
- The daily demand ratio (D), and
- The hourly demand ratio (H).

The airfield's weighted hourly capacity (Cw) is calculated via a formula that considers the hourly capacity values during visual and instrument conditions, as well as the percentage of time that each weather condition occurs. The weighted hourly capacity of the Airport's airfield is calculated to be 73 operations. This capacity is only used for calculating ASV. The value does not have any other use and should not be compared to hourly levels of demand.

The daily demand ratio (D) is calculated by dividing the annual number of aircraft operations by the average daily operations during the peak month. This calculation used data for calendar year 2019 and results in a daily demand factor of 318 (131,867 annual operations / 415 average daily demand during the peak month). This value is within the range of demand ratios (i.e., 300 to 320) listed in the FAA's handbook methodology as being typical for an airport with a Mix Index between 21 and 50. As previously noted, the Mix Index for the Airport is estimated to be 21 during VMC and 61 during IMC.

The hourly demand ratio (H) is calculated by dividing the average daily operations during the peak month by the average peak hour operations during the peak month. This calculation used data for March 2019 and results in a daily demand factor of 7.3 (415 average daily operations during the peak month / 57 average peak hour operations during the peak month).

The FAA handbook methodology indicates that typical hourly demand ratio for an airport with a Mix Index between 21 and 50 is 10 to 13. Therefore, the calculated value of 7.3 will provide an overly conservative assessment of the Airport's airfield capacity. **Table 3.2-4** presents the calculated ASV for the Airport using this methodology.

Table 3.2-4 Estimated ASV			
Weighted Hourly Airfield Capacity (Cw)	**Daily Demand Ratio (D)**	**Hourly Demand Ratio (H)**	**ASV**
73	318	7.3	169,462

Sources: AECOM, 2020 and FAA AC 150/5060-5, *Airport Capacity and Delay*.
Note: The Cw is a weighted value that considers hourly capacities during VMC and IMC. Therefore, it should not be compared to the hourly capacities presents in the “Hourly Airfield Capacities” table.

The results of the analysis present a very conservative value for ASV. This is because the low Hourly Demand Ratio of 7.3 indicates that peak hour aircraft operations at the Airport are high compared to daily operations. If the Airport experienced a higher hourly demand ratio the ASV would increase accordingly.

Chapter 2 of the Handbook provides ASV values for long-range planning that are based on a series of simple assumptions for the variables examined in preceding paragraphs. A review of the ASV values presented in that chapter indicates that a two-runway system in a crossing configuration provides an ASV of 200,000 or higher. Consequently, an ASV of 200,000 will be used for assessment purposes.

Table 3.2-5 provides a comparison of the Base Forecast of aircraft operations to the existing airfield’s ASV. As the tables indicate, the level of demand experienced in 2019 consumed 66% of available capacity. Projected levels of demand at the end of the study period will consume 88% of capacity.

Table 3.2-5 Comparison of Base Forecast to ASV			
Year	**Forecast of Aircraft Operations**	**Estimated ASV**	**Forecast Operations as a Percentage of ASV**
2019 (Existing)	131,867	200,000	66%
2024	145,615		73%
2029	154,895		77%
2034	165,376		83%
2039	176,687		88%

Sources: AECOM, 2020 and FAA AC 150/5060-5, *Airport Capacity and Delay*.

FAA Order 5090.5, *Formulation of the National Plan of Integrated Airport Systems (NPIAS) and Airports Capital Improvement Plan (ACIP)*, specifies activity levels that may trigger capacity planning and development. The Order notes that planning for airfield capacity improvements should be considered when annual aircraft operations reach 60 percent of the calculated ASV. The Order further notes that development should be considered when annual aircraft operations reach 80 percent of ASV. The preceding table indicates that the Airport is currently at 66 percent of capacity and is projected to reach 88 percent of capacity during the study period. Therefore, based on this guidance and the baseline forecast of aircraft operations, an increase of airfield capacity may be needed during the study period. However, a review of historical aircraft operations at the Airport reveals that annual operations were as high as 192,000 and were accommodated with the existing airfield in 1999.

Given the uncertainty associated with forecasting and the substantial costs associated with capacity improvements, it is recommended that any plan for capacity improvements proceed in a cautious manner and remain focused on feasibility. Alternatives for potential airfield capacity improvements will be considered in Section 4.0 - *Alternatives*.

3.3 AIRSPACE CAPACITY ANALYSIS

Airspace constraints in the vicinity of the Airport that may affect capacity include items such as other nearby airfields, physical constraints such as towers or other tall structures, and regulatory constraints.

3.3.1 NEARBY AIRFIELDS

The nearest public use airports with significant volumes of aircraft operations are Venice Airport which is located approximately 20 nautical miles south and Albert Whitted Airport in St. Petersburg which is located approximately 22 nautical miles north. Other airfields in the vicinity of the Airport include three private airfields and one public airfield (Airport Manatee) located in Manatee County. None of these airfields generate significant volumes of air traffic.

Proper separation of air traffic to and from all these airports is achieved through the application of vertical and horizontal clearances. None of these airports have a significant impact on airspace capacity for SRQ. No new airports are proposed in the vicinity of the Airport.

3.3.2 PHYSICAL CONSTRAINTS

A review of the Miami Sectional Aeronautical Chart reveals that there are tall structures located north, east and south of the Airport within a 10-mile radius. The top of these structures have elevations extending to heights of more than 500 feet mean sea level (MSL). Other physical obstructions in proximity of the Airport include a variety of manmade and natural features in the approaches to Runway 14-32 and Runway 4-22.

These obstructions were mapped and surveyed during an airspace study conducted in 2016 and revised in August 2018. The results of the survey are summarized in a report entitled “Aeronautical Airspace Analysis Survey”, prepared by Hanson Professional Services in August 2018. The survey determined that obstructions penetrated the Threshold Siting Surfaces to Runway 4 and Runway 22. Many of these obstructions were subsequently removed by the Airport Authority through a tree clearing project.

The survey also determined that numerous obstructions penetrate the 40:1 departure surface from each runway. The Airport Authority intends to conduct additional obstruction removal to address many of these obstructions. Further evaluation of solutions to address obstructions in the runway approaches will be addressed in Section 4.0 - *Alternatives*.

Finally, the study also identified obstructions to a 62.5 to 1 One Engine Inoperative Surface from Runway 14 and Runway 32. It was determined that a very large number of obstructions exist within this surface. These obstructions may affect payload limits for certain aircraft operations from Runway 14-32, but do not require clearing. Obstructions to the approaches are identified in the Airport Layout Plan (ALP) drawing set.

3.3.3 REGULATORY CONSTRAINTS

The majority of airspace beginning 10 nautical miles north of the Airport is located within Class B airspace associated with Tampa International Airport. Class B airspace has specific operating rules and equipment requirements. Pilots operating within Class B airspace must obtain clearance from air traffic control prior to entering Class B airspace.

There is no special use airspace in the vicinity of the Airport. There is an area southeast of the Airport associated with the Myakka River State Park. Aircraft are requested to maintain a minimum altitude of 1,500 feet above the surface of the park. This altitude restriction does not have any capacity impact upon operations at the Airport.

3.4 AIRFIELD FACILITY REQUIREMENTS

Airfield facility requirements include all items needed to ensure safe and efficient operation of aircraft at the Airport. This includes runways and taxiways, as well as the associated geometric clearances from these areas. It also includes items such as aircraft parking aprons, navigational aids (NAVAIDs), etc. The following paragraphs provide a discussion of these items, as well as the associated FAA design criteria.

The FAA established airfield design criteria to ensure the safety and efficiency of airfield operations. These standards specify the dimensional and separation requirements for existing and proposed facilities based upon the types of aircraft expected to operate at the Airport.

3.4.1 CRITICAL DESIGN AIRCRAFT

The critical design aircraft for the Airport and the FAA's design standards for determining it was identified in Section 2.0 - *Forecasts of Aviation Demand*. The existing critical aircraft for Runway 14-32 is a combination of air carrier aircraft such as the Boeing 737-900, 757-200 and the Airbus A321. The group of aircraft in the D-III category was identified as the existing critical aircraft based upon aircraft operations that occurred during 2019. The future critical aircraft is projected to be aircraft having a combination of Category D approach speeds and Design Group IV wingspans. This includes the Boeing 737-800 and 737-900 in Approach Category D and the proposed Boeing New Mid-Market Aircraft (NMA) in Design Group IV. The relevant parameters for the NMA is not yet known, but it is likely to have a designation of D-IV based upon information released to date from Boeing.

The critical design aircraft for Runway 4-22 was determined through consultation with airport traffic control tower personnel and a review and evaluation of a database extraction provided by the Airport Authority for 2019. The database provided a listing of approximately 50 percent of aircraft operations that occurred on Runway 4-22 during 2019. The existing critical aircraft is a Beech King Air which is a B-II aircraft. Although larger business jets and regional jets occasionally operate on the runway, they do not generate the 500 annual operations required for them to become the runway's critical aircraft. The Beech King Air is also projected to be the future critical aircraft on Runway 4-22.

3.4.2 RUNWAY DESIGN CODE AND AIRPORT REFERENCE CODE

The FAA has developed and published design standards for the planning and design of runway facilities. These standards are described in FAA AC 150/5300-13A, *Airport Design*. This AC provides criteria for specifying a Runway Design Code (RDC) and an Airport Reference Code (ARC).

The RDC is comprised of the Aircraft Approach Category and the Airplane Design Group (described in Section 2.0) and the runway's visibility minimums. These minimums are expressed in feet of Runway Visibility Range (RVR) as shown in **Table 3.4-1.**

Table 3.4-1
Visibility Minimums

RVR (feet)	Flight Visibility Category (Statute miles)
VIS	Visual approaches only.
5000	Not lower than one mile.
4000	Lower than one mile, but not lower than ¾ mile.
2400	Lower than ¾ mile, but not lower than ½ mile.
1600	Lower than ½ mile, but not lower than ¼ mile.
1200	Lower than ¼ mile.

Source: FAA AC 150/5300-13A, *Airport Design*.

Runway 14-32 has visibility minimums of one-half mile which places it in the category of 2400 RVR. As previously noted, the group of aircraft in the D-III category is the existing critical design aircraft and will increase to D-IV during the planning period. Therefore, it is recommended that an RDC of D-IV-2400 be used for planning future airfield facilities associated with Runway 14-32.

Runway 4-22 has visibility minimums of one mile which places it in the category of 5000 RVR. The Beech King Air is the existing and future critical design aircraft for Runway 4-22. Therefore, it is recommended that an RDC of B-II-5000 be used for planning future airfield facilities associated with Runway 4-22.

The ARC is determined by the runway with the highest RDC minus the visibility minimum. Therefore, the Airport's existing ARC is D-III and future ARC is D-IV.

Not all airport facilities need to be designed to accommodate the design aircraft. Certain airside and landside facilities, such as general aviation areas or taxiway systems that are not intended to serve the design aircraft, may be designed to accommodate less demanding aircraft, where necessary, to ensure cost effective development. Designation of the appropriate design standards for each development area on the Airport is described in the following sections.

3.4.3 AIRFIELD DESIGN STANDARDS

FAA AC 150/5300-13A, *Airport Design*, specifies airfield design standards for items such as runways, taxiways and other airfield elements. The following pages describe the relevant design standard for each item of interest (i.e., runways, taxiways, etc.).

3.4.4 NUMBER OF RUNWAYS

The number of runways required at an airport depends upon factors such as wind coverage, capacity requirements, and occasionally environmental considerations. Figure 1.9-1 in Section 1.9 indicated that Runway 14-32 provides all-weather wind coverage which exceeds the FAA requirement of 95 percent with a crosswind component of 13 through 20 knots. These crosswind components are associated with aircraft in RDC A-II through E-VI. However, the runway does not meet the requirement with a crosswind component of 10.5 knots which is associated with small aircraft having an RDC of A-1 or B-I.

The additional wind coverage provided by Runway 4-22 enables the Airport to meet the 95 percent criteria with a crosswind component of 10.5 knots. Therefore, no additional runways are required on the basis of wind coverage.

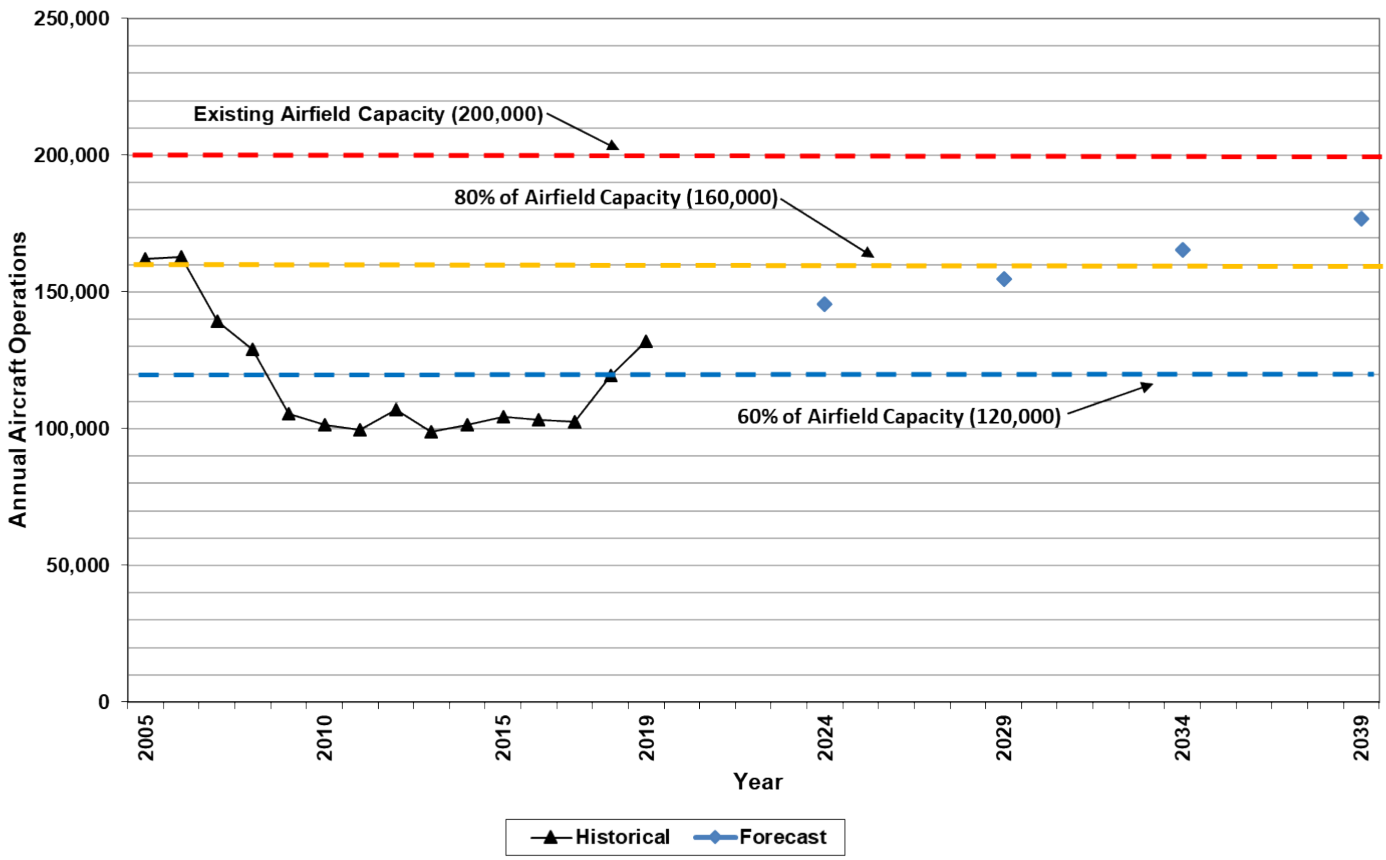
The airfield capacity analysis indicates aircraft operations during 2019 exceeded 60 percent of estimated airfield capacity and are projected to exceed 80 percent of capacity by 2034 as shown in **Figure 3.4-1**. Therefore, an additional runway may be needed if growth projections are realized. Alternatives for potential capacity improvements will be considered in Section 4.0 - *Alternatives*.

3.4.5 RUNWAY LENGTH

FAA Advisory Circular (AC) 150/5325-4B, *Runway Length Requirements for Airport Design* sets forth the procedures used to determine recommended runway lengths for new runways or extensions to existing runways. This includes key factors influencing runway length calculation including airport elevation, mean maximum temperature, airplane operating weights, flap settings, runway surface conditions and gradients. The overall goal is to assure that sufficient runway length is available to serve the needs of the aircraft and users of the Airport.

The Airport's projected aircraft fleet was presented in the forecast of aviation demand. The most critical aircraft were identified as the commercial aircraft used by the Part 121 carriers with 500 or more forecasted annual operations at the airport. This includes the Airbus A320 and A321, as well as the Boeing 737-800 and 737-900 aircraft. Airport Planning Manuals (APMs) for each manufacture were used to determine length requirements.

In calculating runway takeoff length requirements, airplane performance charts for Standard Day +27°F, Dry Runway at sea level elevation with zero wind and zero runway gradient were used from the APMs. The assessment for the Airbus aircraft was conducted for each engine type and the most demanding weight variation in the given model. The Boeing aircraft charts are inclusive of these factors so no additional adjustment was required.



Source: FAA Advisory Circular 150/5060-5 Airport Capacity and Delay. Analysis by AECOM, 2020.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

Airfield Capacity vs. Projected Aircraft Operations

FIGURE 3.4-1

Factors specific to SRQ were considered for this preliminary assessment, including the airport elevation of 30 feet, a mean maximum temperature of 90 degrees Fahrenheit for the hottest month, and a 4-foot runway high and low elevation difference. The AC states that the recommended runway length for takeoff must be increased by 10 feet per foot of difference in centerline elevations between the high and low points of the runway centerline elevations. Therefore, the runway elevations were applied to the assessment.

Table 3.4-2 and **Figure 3.4-2** present takeoff length requirements for 80%, 90%, and 100% Maximum Takeoff Weight (MTOW). Runway 14-32 has a Takeoff Run Available (TORA)[15] of 8,150 feet. This distance is less than the Accelerate Stop Distance Available (ASDA) and the Takeoff Distance Available (TODA) on the runway and therefore is the more critical length for assessment purposes. The length requirements for the A321, 737-900 and 737-800 exceed that length at 100% MTOW. However, no flights operating from the Airport require a MTOW of 100% to operate to their destinations. Therefore, the length requirements associated with 90% MTOW are more likely the upper limit of what is required. No increase of runway length is needed to support current scheduled commercial aircraft operations at the Airport.

Table 3.4-2 also presents landing length requirements which are identified for both wet and dry runway conditions at Maximum Landing Weight (MLW). Airplane performance charts from the APMs for standard day, zero wind and for both wet and dry runway conditions at sea level elevation were used for calculating landing runway length. As the Airbus APMs do not specifically chart performance conditions for wet or slippery runways, the AC design criteria follows the FAA requirement that dry runway landing distances for turbojet-powered airplanes must be increased 15% when landing on wet or slippery runways. The results are reflected in the table and illustrated in **Figure 3.4-3**.

For Runway 14-32, the Landing Distance Available is 7,540 feet for Runway 14 and 7,510 feet for Runway 32. While the Boeing 737-900 landing distance on a wet runway is the most demanding of the four aircraft types at 6,810 feet, Runway 14-32 can accommodate the landing requirements of each of the critical aircraft.

[15] Declared distances such as TORA. TODA, ASDA and LDA are described in Section 3.4.13.

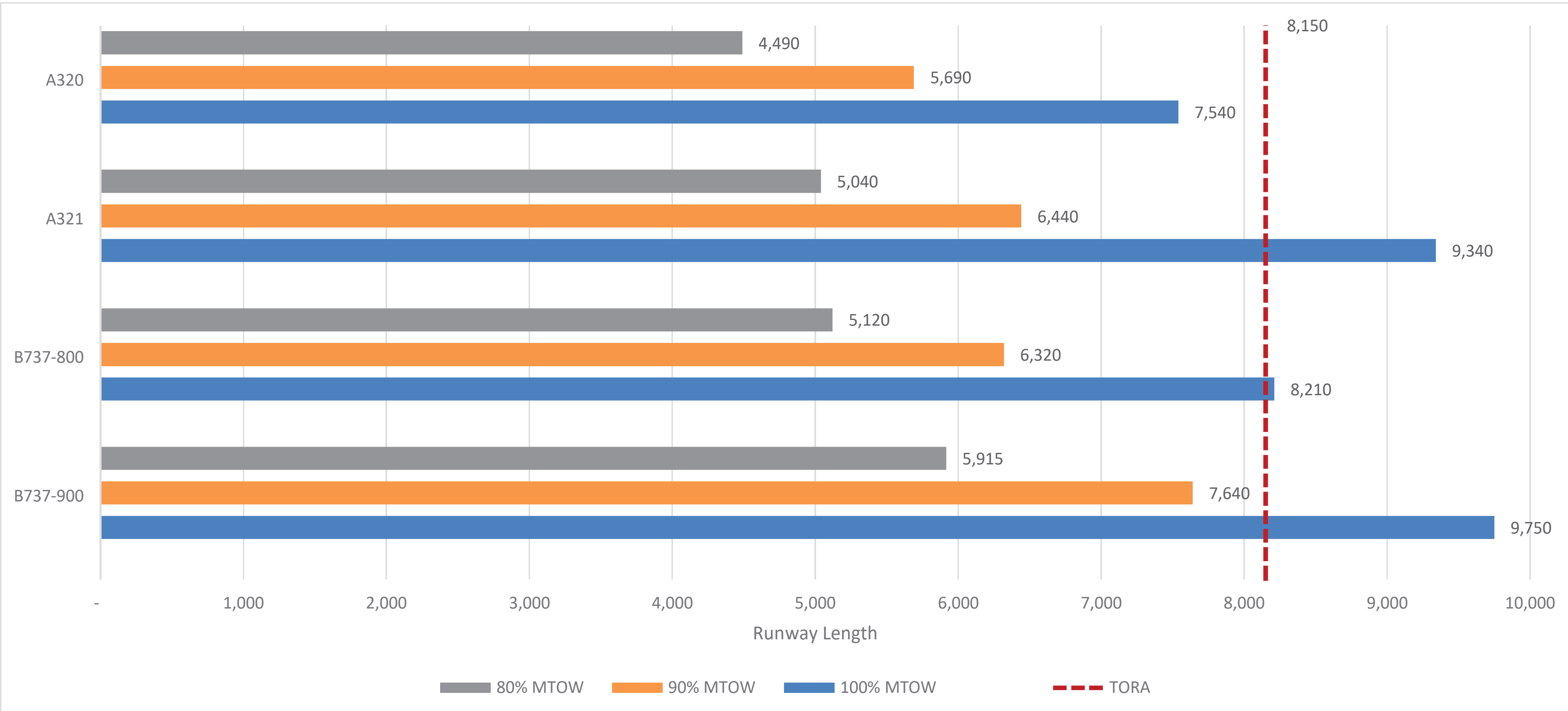
Table 3.4-2 Recommended Runway Lengths						
Aircraft	**Take-Off Runway Length +40 feet**			**Landing Field Length**		
	MTOW %	**MTOW**	**STD +27°F**	**MLW**	**Dry**	**Wet**
A320	100%	171,961	7,540	145,505	5,000	5,750
	90%	154,765	5,690			
	80%	137,569	4,490			
A321	100%	206,132	9,340	171,520	5,650	6,500
	90%	185,519	6,440			
	80%	164,906	5,040			
B737-800W	100%	174,200	8,210	146,300	5,800	6,670
	90%	156,780	6,320			
	80%	139,360	5,120			
B737-900W	100%	174,200	9,750	146,300	5,925	6,810
	90%	156,780	7,640			
	80%	139,360	5,915			

Note:

- The Runway 14-32 high and low elevation difference of 4 feet requires length to be increased 40 feet
- The most demanding weight and engine variations were used for calculations.
- Wet runway Landing Field Length not available for Airbus. The FAA requires dry condition increased 15% when landing on wet or slippery runways.

Data Source:

- Airbus A320 - Aircraft Characteristics Airport and Maintenance Planning AC document (Issue: Sep 30/85, Rev: Nov 01/19)
- Airbus A321 aircraft data from Airbus - A321 - Aircraft Characteristics Airport and Maintenance Planning AC document (Issue: Sep 30/92, Rev: Nov 01/19)
- Boeing 737 Airplane Characteristics for Airport Planning (Document #: D6-58325-6, Revision Date: September 2013)



Source: Airbus and Boeing Airport Compatibility Manuals.
Data compiled by AECOM, 2020.

FIGURE 3.4-2

Runway Length Requirements for Takeoff

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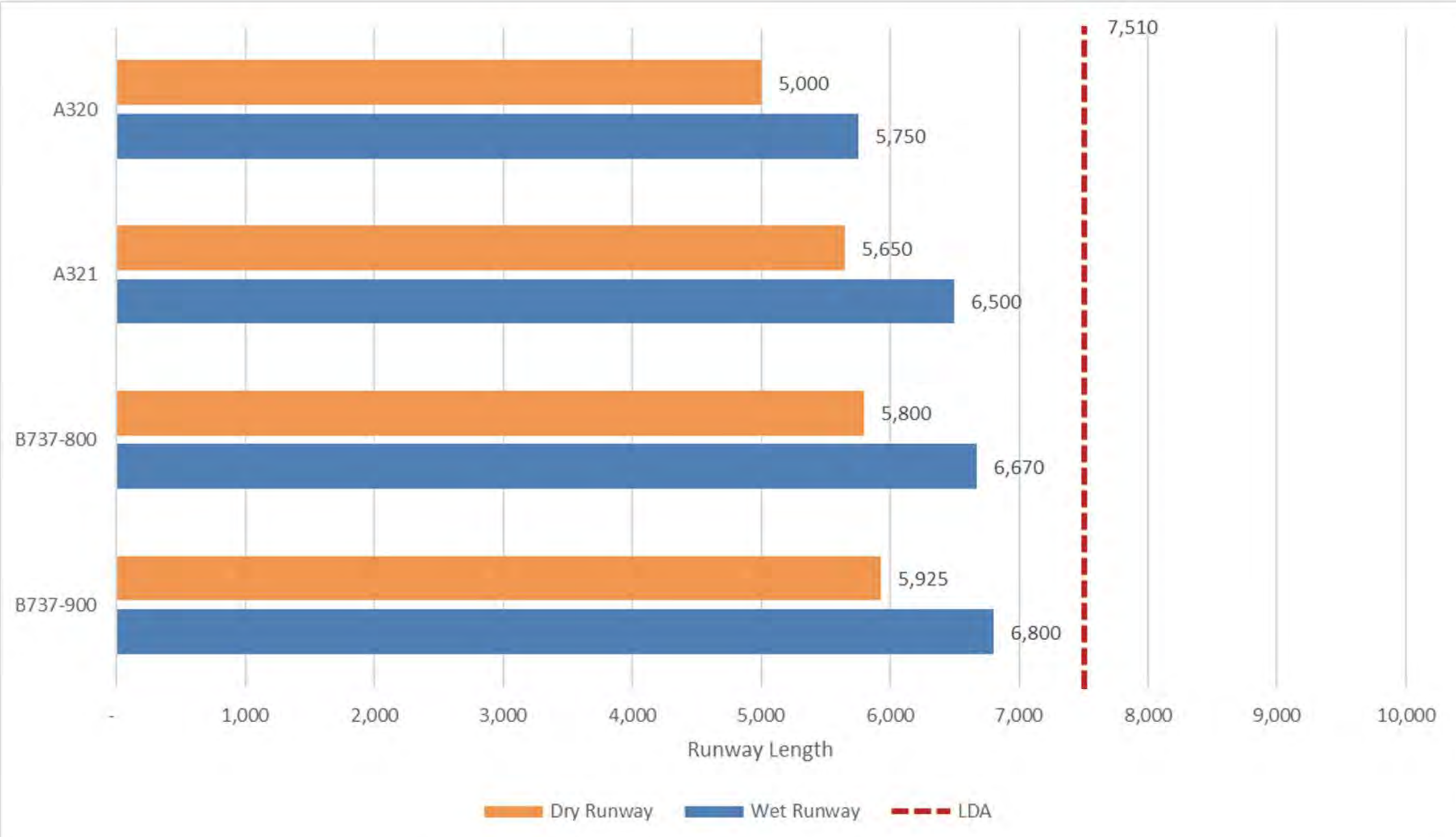
MASTER PLAN UPDATE



Source: SRQ March 13, 2020 Flight Schedule with PGDS earliness distribution curves applied.

FIGURE 3.4-3

Runway Length Requirements for Landing

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

3.4.6 RUNWAY WIDTH

Runway 14-32 has a width of 150 feet. This width is consistent with the FAA's design standard for runways serving aircraft in Design Code C-III through E-V. Aircraft in Design Code D-III and D-IV are the existing and future Critical Design Aircraft, respectively. Therefore, the existing runway width of 150 feet is adequate to serve existing and future aircraft operations.

Runway 4-22 also has a width of 150 feet. This width exceeds the FAA's design standard of 75 feet for runways serving aircraft in Design Code B-II. The 2009 Master Plan Update noted that some scheduled commercial aircraft operations occur on Runway 4-22. Aircraft operational data provided by the Airport Authority for 2019 revealed that scheduled aircraft operations still occur on Runway 4-22, but not in sufficient numbers (i.e., 500 annually) for them to become the critical aircraft. Likewise, a variety of business jets also operate on Runway 4-22, but again not in sufficient numbers to increase the Runway Design Code to C-II or C-III from B-II. Consultation with air traffic control personnel indicates that the Beech King Air (a Design B-II aircraft) is likely the largest aircraft that conducts 500 operations per year on Runway 4-22.

Given the occasional use of Runway 4-22 by larger aircraft in Design Group C-III including regional jets and large business jets such as the Gulfstream 4 and the Bombardier Global Express it is recommended that Runway 4-22 width be retained at 150 feet in excess of the 75-foot FAA design standard. The financial implications of this action will be considered when developing the capital improvement plan.

3.4.7 RUNWAY PAVEMENT STRENGTH

Pavement strength requirements are related to three primary factors: 1) the weight of aircraft anticipated to use the airport, 2) the landing gear type and geometry, and 3) the volume of aircraft operations. Pavement strength data for both runways is presented in the report *Pavement Classification Number (PCN) Evaluation*, prepared by RDM International, Ltd. dated September 2015. **Table 3.4-3** presents the values.

Table 3.4-3
Runway Pavement Strength

Wheel Gear Configuration	Pavement Strength (pounds)
Runway 14-32	
S (Single Wheel)	118,000
D (Dual Wheel)	196,000
2D (Dual Tandem)	358,000
Runway 4-22	
S (Single Wheel)	120,000
D (Dual Wheel)	219,000
2D (Dual Tandem)	404,000

Source: FAA Form 5010, *Pavement Classification Number Evaluation,* RDM International Ltd., 2015.

Aircraft projected to regularly use[16] the airfield in the future includes common narrow-body aircraft such as the Boeing 737-800 series and the Airbus A320 series as well as larger aircraft such as the A321. The 737-800 has a MTOW of 174,200 pounds with a dual wheel landing gear configuration. The A320 (with sharklets) has a MTOW of approximately 172,000 pounds with a dual-wheel landing gear configuration. The A321 (with sharklets) has a MTOW of approximately 206,000 pounds with a dual-wheel landing gear configuration.

The 737-800 and the A320 are within the 196,000 pounds dual-wheel loading for Runway 14-32, while the A321 exceeds the 196,000 pounds pavement strength rating associated with a dual wheel configuration. All three aircraft are within the 219,000 pounds dual-wheel loading for Runway 4-22 although those aircraft are unlikely to use that runway due to its length of 5,006.

Larger aircraft such as the B-757 (255,000 pounds) currently operate at the Airport and are projected to continue to operate in the short-term, but these aircraft do not operate 500 operations per year and should not be the primary basis for pavement design. Existing pavement strengths are adequate to accommodate most aircraft that are forecast to use the airfield on a regular basis. Consideration should be given to increasing the dual wheel strength of Runway 14-32 during the next rehabilitation to better accommodate the A321.

3.4.8 RUNWAY SHOULDERS

FAA design standards specify that runways should have shoulders that "provide resistance to blast erosion and accommodate the passage of maintenance and emergency equipment and the occasional passage of an aircraft veering from the runway." The design standard for shoulders on runways serving aircraft in Design Codes D-III and D-IV is 25 feet. The design standard also requires that shoulders be paved for runways that accommodate aircraft in Design Code IV and higher.

Portions of Runway 14-32 currently have paved shoulders with a width of 25 feet. Approximately 1,700 feet of runway at the north end and 1,200 feet of runway at the south end have paved shoulders. These shoulders were constructed in conjunction with previous runway extensions. There is also paved shoulder along the west side of Runway 14-32 for a length of 250 feet immediately north of Taxiway D. This portion of pavement was retained and marked as shoulder when pavement associated with a previous east-west runway was removed. Paved shoulders on the remainder of Runway 14-32 are not required since the current design code is D-III. Paved shoulders will be required when the future design code of D-IV is achieved. This type of construction would best be accomplished in conjunction with a future runway rehabilitation project.

There are no paved shoulders on Runway 4-22 and none are required. The design standard for shoulders on runways serving aircraft in Design Codes B-II is 10 feet, but there is no requirement for them to be paved.

[16] Regular use is defined by the FAA as consisting of at least 500 annual operations.

3.4.9 RUNWAY BLAST PADS

Paved blast pads provide erosion protection beyond runway ends during jet operations. The FAA design standard for blast pads on runways serving D-III and D-IV aircraft is a width of 200 feet and a length of 200 feet. The existing blasts pads on each end of Runway 14-32 meet the design standard.

The design standard for blast pads on runway serving B-II aircraft is a width of 95 feet and a length of 150 feet. There is approximately 25 feet of pavement beyond each end of Runway 4-22. This additional pavement has a width of 150 feet. It is recommended that the need for blast pads beyond each end of Runway 4-22 be evaluated in conjunction with any future rehabilitation or reconstruction project.

Operational data provided by the Airport Authority for aircraft operations on Runway 4-22 revealed that the majority of operations are conducted by piston, propeller-driven aircraft which do not generate jet blast. The number of jet operations on the runway (as of 2019) is less than 500 annually and do not appear to be producing any erosion beyond either end of the runway.

3.4.10 RUNWAY SAFETY AREAS

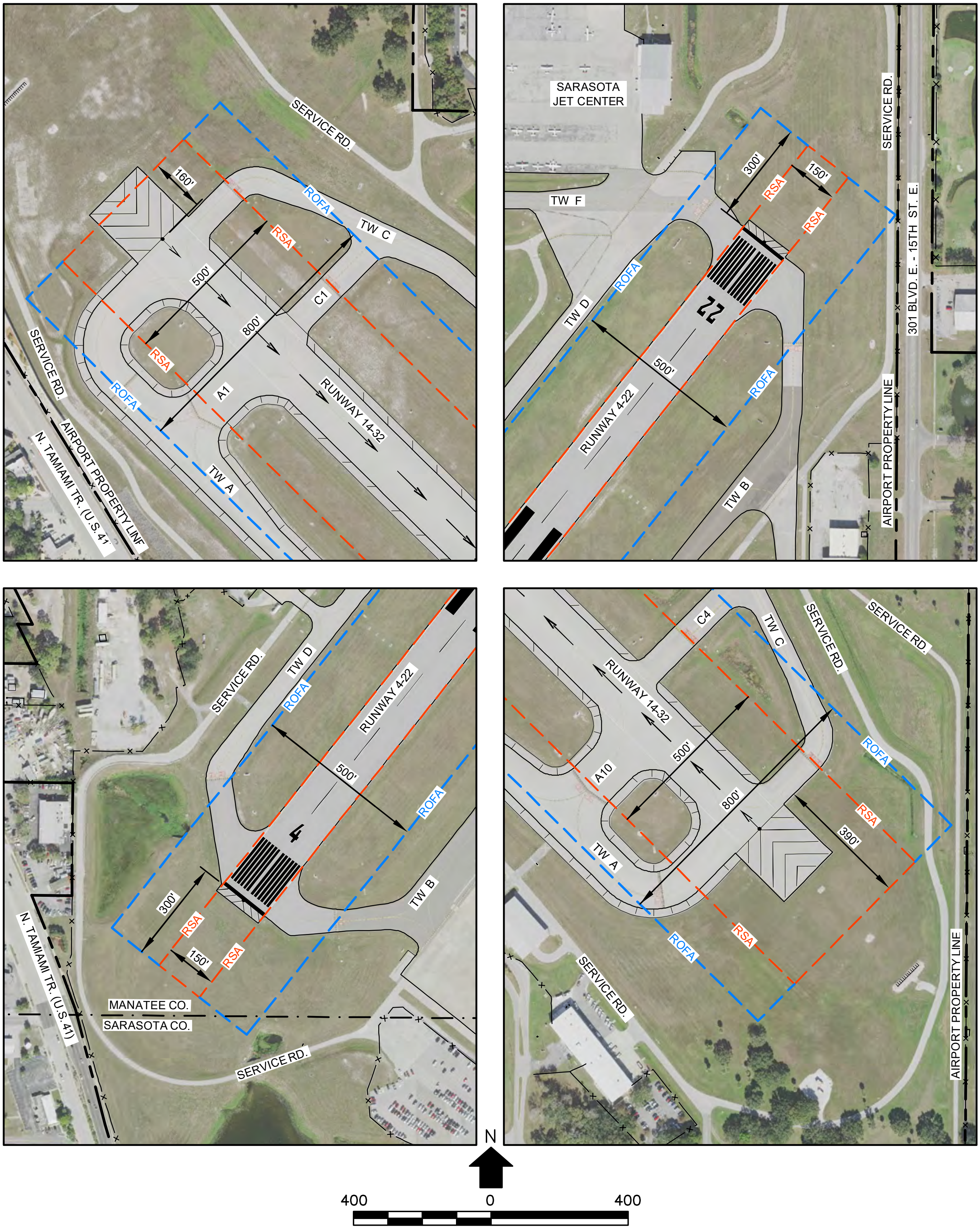
Runway safety areas (RSAs) are defined by the FAA as "surfaces surrounding a runway that are prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway." RSAs consist of a relatively flat graded area free of objects and vegetation that could damage aircraft. According to FAA guidance, the RSA should be capable, under dry conditions, of supporting aircraft rescue and firefighting equipment and the occasional passage of aircraft without causing structural damage to the aircraft. **Figure 3.4-4** depicts the Airport's RSA's and Runway Object Free Areas (ROFAs) described in the next section.

3.4.10.1 Runway 14-32

The FAA design standard for RSAs surrounding runways serving D-III and D-IV aircraft is a width of 500 feet, a length that extends 600 feet prior to the landing threshold, and a length that extends 1,000 feet beyond the runway end. The RSA must be cleared, graded and have no surface variations that could be potentially hazardous. Longitudinal and transverse grades within the RSA must meet specific requirements.

The RSA's on both ends of Runway 14-32 meet FAA design standards through the use of displaced thresholds and declared distances[17] on both ends of the runway. Declared distances are used because there is not sufficient physical distance between the end of the runway and other physical features to meet the design standards without their use.

[17] A detailed description of declared distances is provided in Section 3.4.13.



SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

RSA / ROFA EXISTING CONDITIONS

FIGURE 3.4-4

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3.4.10.2 Runway 4-22

The RSA dimensions for aircraft in Design Code B-II are a width of 150 feet and a length that extends 300 feet beyond the end of pavement. The RSA's on both ends of Runway 4-22 meet FAA design standards.

3.4.11 RUNWAY OBJECT FREE AREAS

In addition to the RSA, a Runway Object Free Area (ROFA) is also defined around runways in order to enhance the safety of aircraft operations. The FAA defines the ROFA as an area cleared of all objects except those that are related to NAVAIDs and aircraft ground maneuvering. However, unlike the RSA, there is no physical component to the ROFA. Thus, there is no requirement to support the occasional passage of an emergency response vehicle or an aircraft.

3.4.11.1 Runway 14-32

The ROFA dimensions for RDC D-III and D-IV are a width of 800 feet and a length that extends 1,000 feet beyond the runway end. The portion of the ROFA on the approach end of Runway 14 (see Figure 3.4-4) does not meet FAA design standards even with the use of declared distances due to an airport service road being located within the limits of the ROFA. Options for addressing this issue will be addressed in Section 4.0 - *Alternatives*. The portion of the ROFA on the approach end of Runway 32 meets the design standard.

3.4.11.2 Runway 4-22

The ROFA dimensions for RDC B-II are a width of 500 feet and a length that extends 300 feet beyond the runway end. The ROFA on the approach end of Runway 4 meets the design standard. However, the ROFA on the approach end of Runway 22 does not meet the design standard due to a small portion of the Airport's service road being located with its limits (see Figure 3.4-4). This issue is currently addressed through the use of stop signs on the service road and operator training. Options for further addressing this issue will be included in Section 4.0 - *Alternatives*.

3.4.12 RUNWAY PROTECTION ZONES

The RPZ is a defined area on the ground that is located prior to a runway's landing threshold and beyond the runway end that should be cleared of incompatible objects and activities. Its purpose is to enhance the protection of people and property on the ground. This is accomplished through airport owner control of property within the limits of the RPZ. FAA design standards recommend that airport owners exercise control through property acquisition (preferably in fee simple or easements), but in cases where that is not possible the design standard recommends that airport owners maintain the RPZ clear of incompatible land uses and activities through zoning or other types of land use controls.

The RPZ has a trapezoidal shape and is centered on the extended runway centerline. It typically begins 200 feet beyond the end of the runway. However, when the RPZ begins at a location other than 200 feet beyond the runway end, two RPZs are required: an approach RPZ and a departure RPZ. The dimensions for each RPZ are based on the Runway Design Code. **Table 3.4-4** provides the dimensions for the RPZs on both runways.

Table 3.4-4
Runway Protection Zones

Runway & Design Code	Type of RPZ	Item	Dimension (feet)
14-32 D-III & D-IV Lower than ¾ mile	Approach	Length	2,500
		Inner Width	1,000
		Outer Width	1,750
	Departure	Length	1,700
		Inner Width	500
		Outer Width	1,010
4-22 B-II Not Lower than 3/4 mile	NA	Length (beyond end of runway)	1,000
		Inner Width	500
		Outer Width	700

Source: FAA AC 150/5300-13A, *Airport Design*

Runway 14-32 has approach and departure RPZs on both ends of the runway due to the use of declared distances. **Figure 3.4-5** shows the RPZs on each end of Runway 14-32. The RPZs on the north end of the runway extend off airport property to the west and the north. The Approach RPZ encompasses several land uses including residential and commercial, as well as several public roads including US 41, Tallevast Road and Ponce De Leon Avenue. FAA guidance on land uses within an RPZ does not include any of these land uses as being compatible. Options for addressing these land uses will be included in Section 4.0 - *Alternatives*.

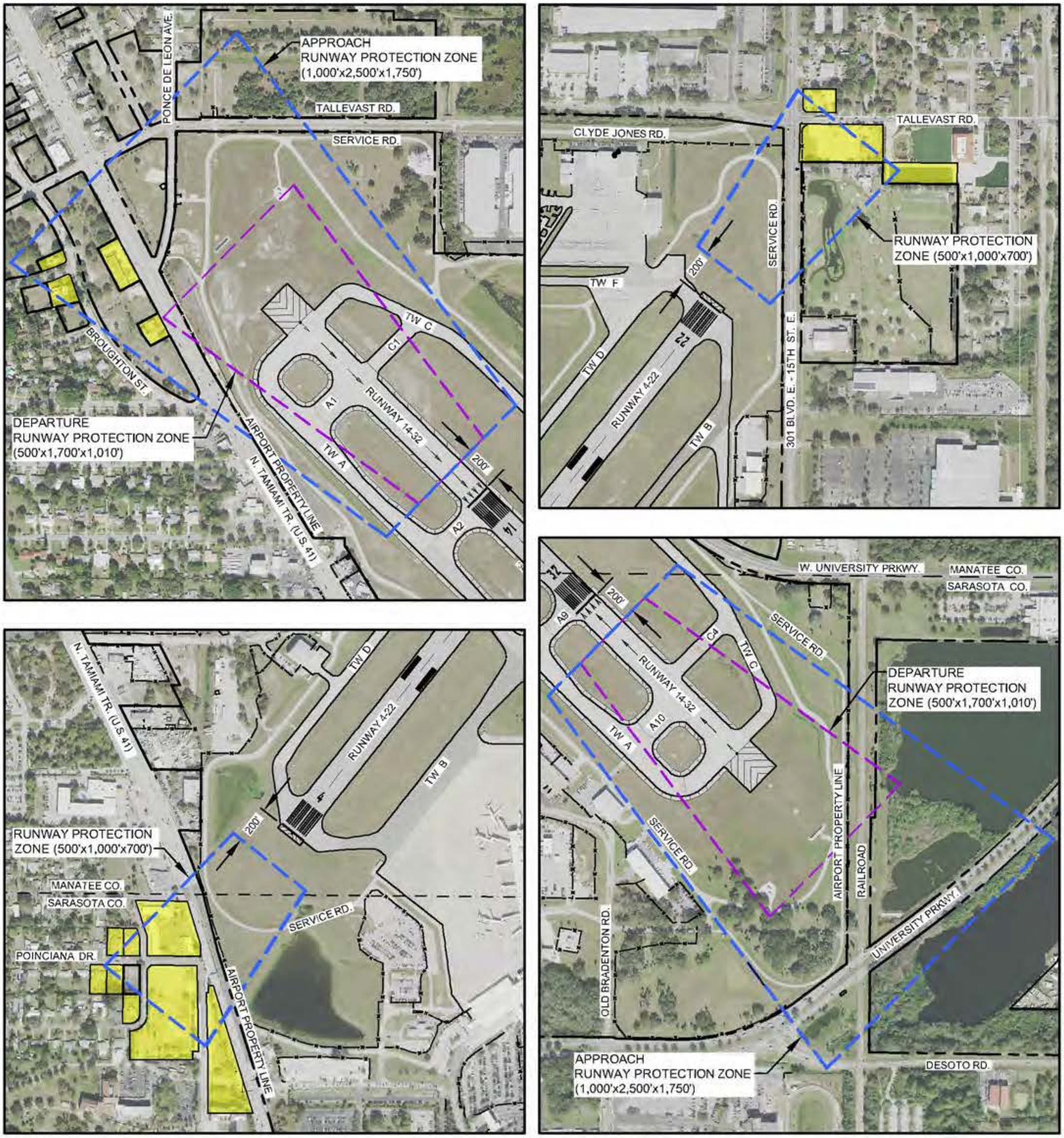
The RPZ's on the south end of Runway 14-32 remain mostly on airport property except for the portion encompassing University Parkway and Desoto Road. No other incompatible land uses exist within these RPZs.

Runway 4-22 has only one RPZ on each end of the runway. Both RPZs extend off airport property and encompass surrounding land uses. Land uses inside the RPZ on the approach end of Runway 4 include educational and residential. US 41 also passes through this RPZ.

Land uses inside the RPZ on the approach end of Runway 22 include commercial as well as 15th Street East and Tallevast Road. Options for addressing incompatible land use inside these RPZs will also be included in Section 4.0 - *Alternatives*. The Airport does not own any avigation easements inside any of the RPZ's.

3.4.13 DECLARED DISTANCES

Declared distances is a process whereby an airport owner declares a certain portion of a runway as being available for take-off or landing to meet RSA, ROFA, RPZ or other design standard requirements in a physically constrained environment. Consequently, this usually results in a portion of the runway not being used for take-off or landing calculations. Declared distances include the distances the airport owner declares available for an airplane's take-off run available (TORA), take-off distance available (TODA), accelerate-stop distance available (ASDA), and landing distance available (LDA) requirements.



LEGEND

- APPROACH RUNWAY PROTECTION ZONE
- DEPARTURE RUNWAY PROTECTION ZONE
- PROPERTY NOT OWNED BY SARASOTA MANATEE AIRPORT AUTHORITY

N

800 0 800

GRAPHIC SCALE IN FEET

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

RUNWAY PROTECTION ZONES EXISTING CONDITIONS

FIGURE 3.4-5

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In order to provide RSAs and ROFAs that comply with FAA design standards while also maximizing runway lengths, declared distances were implemented for Runway 14-32. The declared distances currently published in the FAA Chart Supplement for Runway 14-32 are presented in **Table 3.4-5**. These distances may change based on the recommended solution for RSA and ROFA compliance. This issue is further addressed in Section 4.0 - *Alternatives*.

Table 3.4-5
Declared Distances

Runway	TODA	TORA	ASDA	LDA
14	9,500	8,350	8,890	7,540
32	9,500	8,150	8,660	7,510
4	5,006	5,006	5,006	5,006
22	5,006	5,006	5,006	5,006

Source: FAA Chart Supplement, Southeast, December 2020.

3.4.14 RUNWAY OBSTACLE FREE ZONES

The Obstacle Free Zone (OFZ) is a clearing standard that precludes aircraft and other object penetrations, except for frangible navigational aids that need to be located in the OFZ due to their function. The OFZ is based on the size of aircraft using the runway and approach minimums. **Table 3.4-6** shows the required dimensions of the existing and future OFZ for Runway 14-32 and Runway 4-22. Both runways meet the OFZ design standard.

Table 3.4-6
Obstacle Free Zone Requirements

Runway	Design Standard	Item	Dimension (feet)
14-32	D-III & D-IV	Length (beyond end of runway)	200
		Width	400
4-22	B-II	Length (beyond end of runway)	200
		Width	400

Source: FAA AC 150/5300-13A, Airport Design

3.4.15 RUNWAY PAVEMENT MARKINGS

Runway 14-32 has full precision instrument runway markings on both ends of Runway 14-32 and non-precision markings on both ends of Runway 4-22. These markings meet existing and future requirements.

3.4.16 TAXIWAYS

Taxiways accommodate the movement of aircraft from parking aprons, hangars, and terminals to the runways and vice versa. In order to provide for the efficient movement of aircraft, it is desirable to have a parallel taxiway(s) and several exit taxiways associated with each runway.

The existing taxiway system has full-length, parallel taxiways on both sides of each runway with additional connecting taxiways to each quadrant of the airfield. Therefore, no additional taxiways are needed except for access to any development proposed by this plan. Taxiways needed for access to proposed facilities will be addressed in Section 4.0 - *Alternatives*.

3.4.16.1 Widths

The recommended widths for taxiways are specified by Taxiway Design Groups which are derived from a combination of undercarriage gear width and the distance from the cockpit to main gear. **Figure 3.4-6** presents the basis for Taxiway Design Groups. The required widths for taxiways are presented in **Table 3.4-7**.

Table 3.4-7
FAA Design Standards for Taxiway Widths

Taxiway Design Group	Representative Aircraft	Taxiway Width (feet)
1A & 1B	Cessna 172 / Hawker 800	25
2	CRJ-700/900	35
3 and 4	Boeing 737 & Airbus A320 / B757	50
5	New Midmarket Aircraft Boeing 767 & 787	75

Source: FAA AC 150/5300-13A, *Airport Design*.

Table 3.4-8 lists each taxiway on the airfield along with its associated design group, required pavement width and existing pavement widths. All taxiways currently meet, or exceed, their associated width requirement. No improvements to taxiway widths are required.

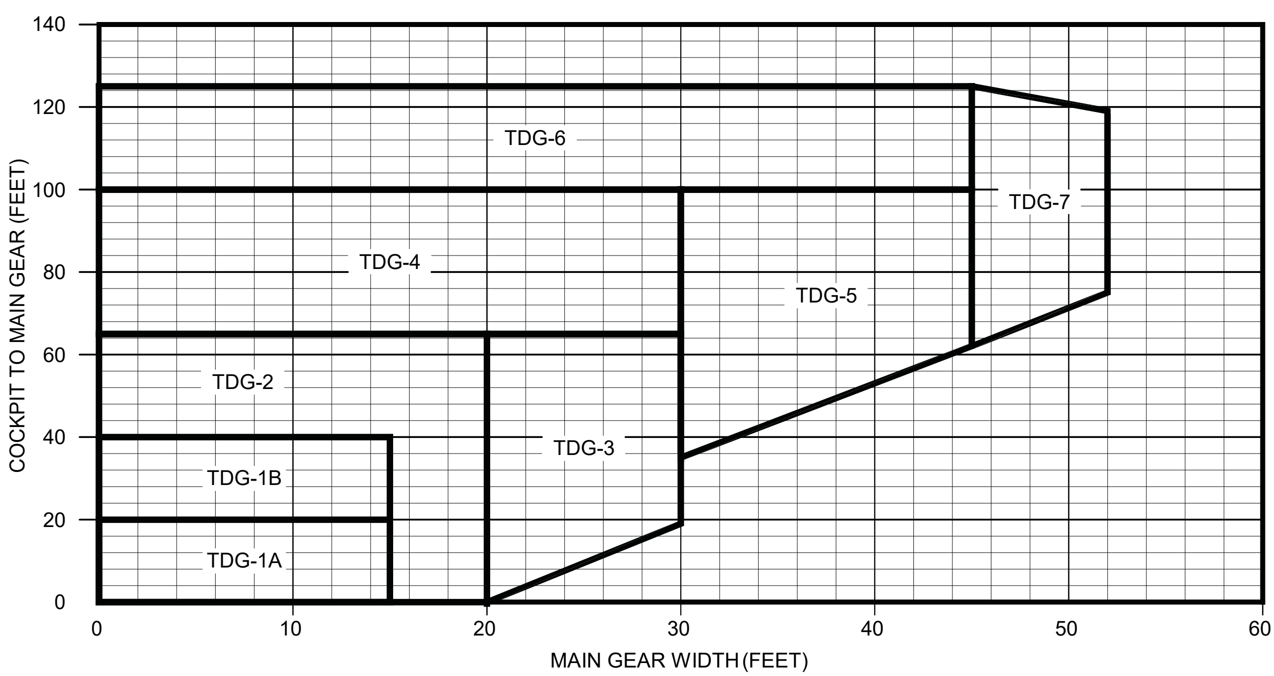
Table 3.4-8
Taxiway Width Requirements

Taxiway	Taxiway Design Group	Pavement Width Requirement (feet)	Existing Pavement Width (feet)	Additional Pavement Requirement (feet)
A	5	75	75	0
B (north of 14-32)	4	50	60	0
B (south of 14-32)	5	75	75	0
C	4	50	60	0
D	4	50	60	0
E	4	50	60	0
F	4	50	50	0
G	4	50	50	0
H	4	50	50	0
J	4	50	60	0

Source: AECOM, 2020.
Notes: *Not including the segment connecting to the approach end of Runway 22.

3.4.16.2 Non-Standard Taxiway Geometry

FAA design standards recommend taxiway layouts that enhance safety and minimize excess pavements. In recent years the FAA has placed special emphasis on correcting confusing taxiway layouts and requiring taxiway pavements to meet the latest design standards when existing pavements are rehabilitated or modified.



Source: FAA Advisory Circular 150/5300-13A, Airport Design, 2014.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

Taxiway Design Groups

FIGURE 3.4-6

The existing airfield was reviewed to identify conditions that do not meet current taxiway design standards. Two types of conditions were identified: locations where non-standard taxiway geometry exist and locations where direct access occurs from an aircraft apron to a runway without an intervening turn. **Figure 3.4-7** provides an illustration of sites where these conditions occur.

Design standards specify that a right angle turn at the end of a parallel taxiway is a clear indication of approaching a runway. Sites 1, 2 and 3 identify locations on both ends of Runway 4-22 where the parallel taxiways provide less than a right-angle turn. These conditions can be resolved by reconfiguring the taxiway connections to the end of the runway to provide standard 90 degree turns.

Design standards also specify that taxiways should not be designed to lead directly from a ramp to a runway without requiring a turn. Site 4 identifies a location where this occurs from the Dolphin ramp to Runway 14-32. Potential reconfigurations of these taxiways to meet design standards will be addressed in Section 4.0 - *Alternatives*.

3.4.16.3 Parallel Taxiway Separations

The separations of the Taxiway A and Taxiway C centerlines from the centerline of Runway 14-32 are both 400 feet[18] which meets the design standard for runways with visibility minimums lower than ¾ mile serving D-III and D-IV aircraft. The separation of the Taxiway D centerline is 300 feet and the separation of Taxiway B is 392 feet from the centerline of Runway 4-22. These separations meet the design standard for runways with visibility minimums of not lower than 1 mile serving B-II aircraft.

3.4.16.4 Taxiway Object Free Areas

Taxiway Object Free Areas (TOFA) for runways prohibit service vehicle roads, parked aircraft and other objects except for objects that need to be located in the TOFA for air navigation or ground maneuvering purposes. A review of the applicable TOFAs for all taxiways at the Airport revealed that the required separation from objects is provided except for a few locations where the stop bars on parallel vehicle service roads do not account for the increased width of the TOFA at intersections. **Figure 3.4-8** shows the locations where this occurs and provides a close-up view of the TOFA at the intersection of Taxiway C and Taxiway F. This issue can easily be resolved by relocating the vehicle service road hold bars to the edge of the TOFA.

3.4.16.5 Taxiway Hold Markings

All existing taxiway holding position markings associate with intersections to Runway 14-32 meet or exceed the D-IV design standard of 250 feet. Likewise, all existing taxiway holding position markings associate with intersections to Runway 4-22 meet or exceed the B-II design standard of 200 feet.

[18] The separation on Taxiway C increases to 532 feet where needed to remain clear of the ILS glide slope critical areas.

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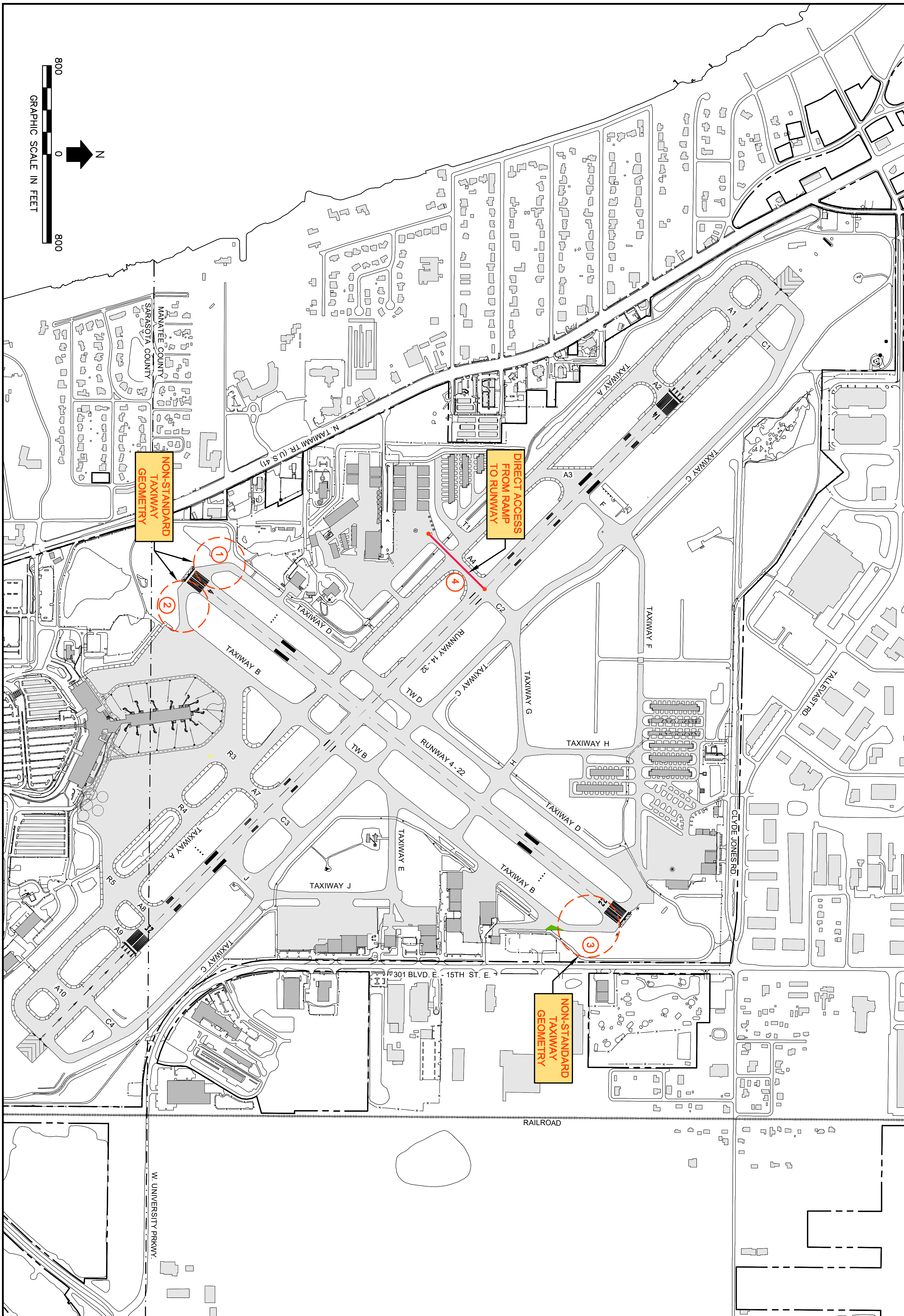

FIGURE 3.4-7

NON-STANDARD TAXIWAY GEOMETRY

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RECYCLING PLAN

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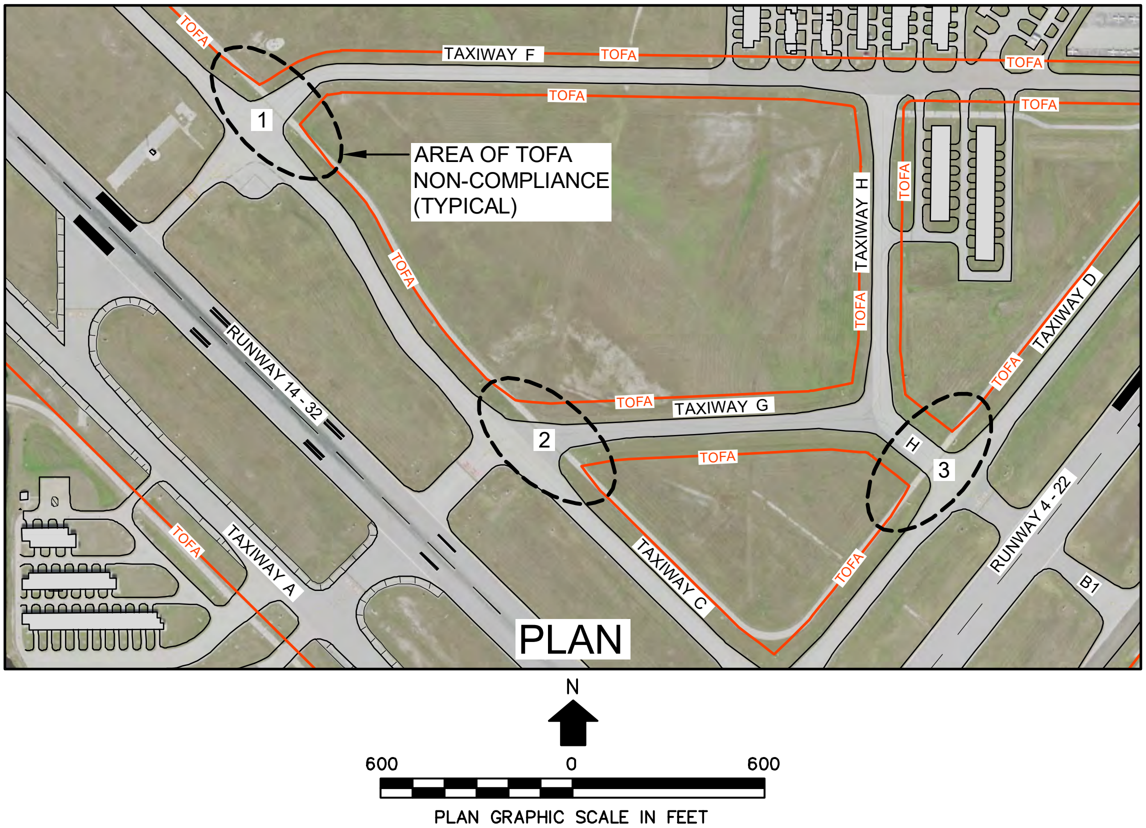

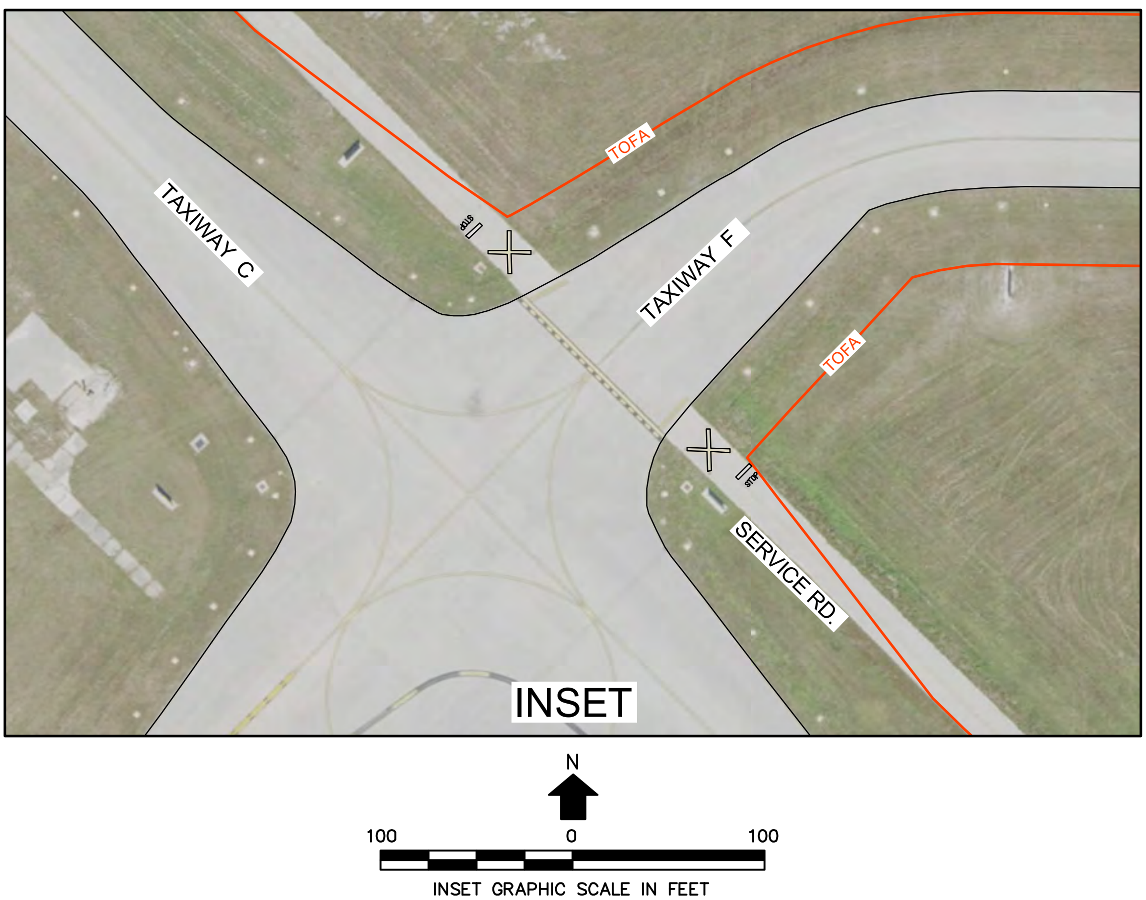

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SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

EXISTING TOFA COMPLIANCE ISSUES

FIGURE 3.4-8

3.4.17 HOLDING BAYS

Holding bays provide space for an aircraft awaiting a departure clearance or conducting an engine run-up to move off the taxiway, thereby clearing the taxiway and providing sufficient space for another aircraft to proceed to the runway for take-off. This reduces delays when an aircraft is conducting engine run-ups or is being held for air traffic control reasons.

There are no holding bays at the Airport. Consultation with air traffic control tower personnel indicated that holding bays are greatly desired at each end of Runway 14-32.

FAA Advisory Circular 150/5300-13A, Airport Design recommends that holding bays be provided when runway operations reach a level of 30 per hour. The forecasts presented in Section indicate that peak hour aircraft operation currently exceed 30 per hour and will continue to exceed that threshold through the planning period. Although there is limited space available for the construction of holding bays, alternatives for their construction will be explored in Section 4.0 - *Alternatives*.

3.4.18 NAVIGATIONAL AIDS

3.4.18.1 Instrument Landing System

The Airport currently has Instrument Landing Systems (ILS's) on both ends of Runway 14-32. Both ILS's have approach minimums of 200 feet and horizontal visibility of one-half mile. No further improvements to instrument approach capabilities are recommended for Runway 14-32.

3.4.18.2 Rotating Beacon

The Airport's rotating beacon is located on top of the Airport's traffic control tower. This location meets existing and future requirements for airport identification during nighttime and periods with low visibility. No improvements are needed.

3.4.19 AIRFIELD LIGHTING

3.4.19.1 Approach Lighting

A Medium Intensity Approach Lighting System with Sequenced Flashing Lights (MALSR) is located on both ends of Runway 14-32. This approach lighting system is the design standard for category (CAT) I approaches. No additional approach lighting systems are required at the Airport to meet the needs of existing or future aircraft operations.

3.4.19.2 Runway Lighting

Runway 14-32 and 4-22 both have High Intensity Runway Edge Lights (HIRLs). This lighting meets FAA design standards for runways having precision instrument approaches and is sufficient to accommodate existing and future aircraft operations.

Runway End Identifier Lights (REILs) are located on the approach end of Runway 22. These lights provide rapid and positive visual confirmation of the runway end to pilots and are especially important in areas with a preponderance of other light sources that may make runway end identification difficult. REILs are not currently located on the approach end of Runway 4 and are therefore recommended to provide the same benefits derived on Runway 22.

3.4.19.3 Taxiway Lighting

All taxiways at the Airport have Medium Intensity Taxiway Lights (MITLs) to support nighttime and low-visibility operations. This lighting is sufficient to meet existing and future operational requirements.

3.4.19.4 Apron Lighting

Apron lighting in the passenger terminal area is provided by high mast lights around the perimeter of Concourse B and above the outbound baggage make-up area. Area lighting is provided above the in-bound baggage area. These lighting systems are sufficient to support nighttime and low-visibility ground operations.

3.5 TERMINAL FACILITY REQUIREMENTS

3.5.1 DESIGN HOUR DEMAND

This section describes how design hour demand is calculated for the Airport and then used to estimate existing and future demand for terminal facilities.

3.5.1.1 Planning Activity Levels

The actual growth of passenger enplanements and aircraft operations often deviate from the Master Plan Update's forecast, especially during short periods of time. However, the intent of the forecast is to account for potential growth during the Master Plan Update's entire 20-year planning horizon.

In order to account for these deviations and to properly plan future facilities, Planning Activity Levels (PALs) are identified and used during the terminal planning process. PALs enable airport management to properly plan for future levels of demand regardless of when a specific level of demand actually occurs. This is accomplished by identifying the need for specific facility improvements on the basis of predefined levels of demand (i.e., PALs).

One of the purposes of a Master Plan Update is to test the ability of existing airport facilities to accommodate projected levels of demand and to provide options for facility improvements and/or expansions if and when projected levels of demand occur. Consequently, it is beneficial to assess levels of demand that are somewhat optimistic (higher) rather than pessimistic (lower). For this reason, it was determined that PALs extending up to a level of 1.75 million annual passengers enplanements would be appropriate, even though the baseline forecast presented in Section 2.0 projects 1.65 million annual passenger enplanements in 2039. **Table 3.5-1** presents PALs in increments of 250,000 passengers from the roughly 1,000,000 passenger enplanements that occurred in 2019. These PALs are used to test all passenger related facilities and determine the need for facility improvements and/or expansions.

Table 3.5-1 Planning Activity Levels				
PAL	**Annual Passenger Enplanements**	**Peak Month Passenger Enplanements (12.4 Percent)**	**Average Day Peak Month Enplanements (31 days)**	**Design Hour Enplanements**
CY 2019	979,810	108,387	3,496	Please refer to the fourth column of **Table 3.5-4**
1	1,250,000	155,000	5,000	
2	1,500,000	186,000	6,000	
3	1,750,000	217,000	7,000	

Source: AECOM, 2020.
Notes: Actual data for 2019 annual and peak month passenger enplanements was obtained from the Sarasota Manatee Airport Authority (SMAA).

Table 3.5-1 also presents the peak month and average day of the peak month values for each PAL assuming that peak month passenger enplanements remain 12.4 percent of annual passenger enplanement values in future years.[19] Estimates of design hour passenger enplanements required further analyses based upon actual flight schedules and are described in subsequent paragraphs.

The second week of March 2020 was selected as the average week during the peak month and flight schedules were obtained for that week. **Table 3.5-2** presents scheduled air carrier and commuter operations (arrivals and departures) and the total number of scheduled seats associated with those operations.

Table 3.5-2 Scheduled Operations and Seats (March 8 through 14, 2020)		
Day of Week	**Scheduled Operations**	**Scheduled Seats**
Sunday Mar 8	86	11,673
Monday Mar 9	76	10,482
Tuesday Mar 10	62	8,034
Wednesday Mar 11	66	8,828
Thursday Mar 12	83	11,726
Friday Mar 13	79	11,024
Saturday Mar 14	94	12,132
Average	78	10,557

Source: Operations and seat data from Diio Mi by Cirium. Data compiled by AECOM, 2020.

Saturday has the greatest number of scheduled operations and seats, but Friday is the day of the week closest to, but not less than, the weekly average day in terms of scheduled seats. Since the planning objective is to define the average day of the peak month rather than the absolute peak day, the flight schedule for Friday, March 13, 2020 was selected as being representative of the Average Day Peak Month (ADPM) or "design day" for current conditions.

[19] Peak month passenger enplanements at SRQ averaged 12.4 percent of annual passenger enplanements during the years 2014 through 2018. Peak month data for 2019 was not used due to the significant increase in air service during the month of December which skewed the overall percentages for all months of the year.

Once the ADPM was identified, the next step was to identify the peak hour and the number of passengers during the peak hour. The process of determining the peak hour begins with an examination of the flight schedule for the design day.

Table 3.5-3 presents the rolling peak hours that have the highest number of scheduled seats for arriving, departing and total seats. All three peaks are close to the midday period, with arriving seats peaking between 11am and noon and departing and total seats peaking from approximately 1:30pm to 2:29 pm.

Table 3.5-3
Peak Hour Scheduled Seats
(March 13, 2020)

Item	Hour	Seats
Arriving Seats	11:00am to 11:59am	835
Departing Seats	1:40pm to 2:39pm	858
Total Seats	1:30pm to 2:29pm	1412

Source: Seat data from Diio Mi by Cirium. Data compiled by AECOM, 2020.

Figure 3.5-1 illustrates the rolling peak hour for departing, arriving and total seats using a model provided by the Transportation Research Board's (TRB's) Airport Cooperative Research Program (ACRP), Report #25, Airport Passenger Terminal Planning and Design. In addition to presenting rolling hourly seats, the figure also shows the percentage that the rolling peak hours represent in terms of design day seats. As indicated, it is roughly 15 percent of daily seats. This percentage was decreased by one percent for each subsequent PAL so the percentage for PAL 3 is 12 percent. This decrease accounts for potential peak hour spreading at future PALs.

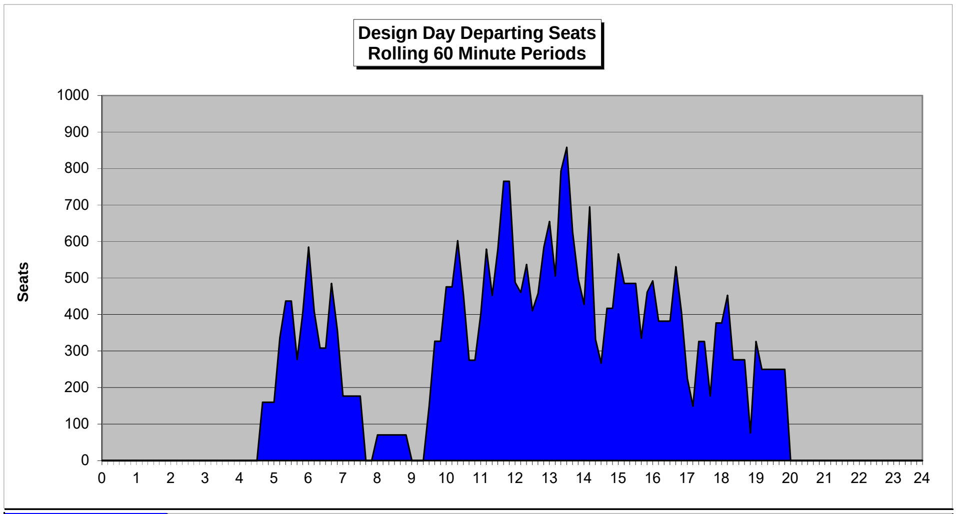
Table 3.5-4 applies these percentages to the Average Day Peak Month Enplanements presented in Table 3.5-1 to derive the estimated design hour enplanements for calendar year 2019 and PALs 1 through 3.

Table 3.5-4
Peak Hour Passenger Enplanements

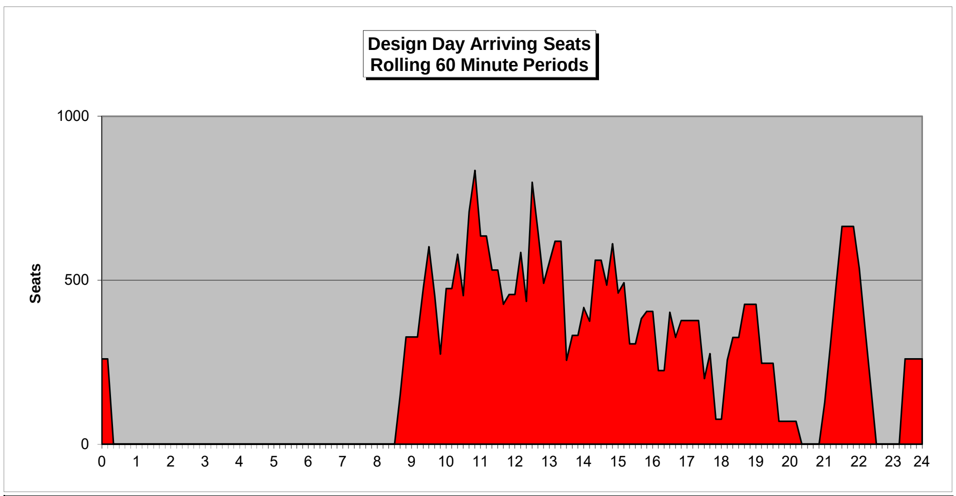
PAL	ADPM "Design Day" Enplanements	Peak "Design Hour" Percentage	Peak "Design Hour" Enplanements
CY 2019	3,496	15%	525
1	5,000	14%	700
2	6,000	13%	780
3	7,000	12%	840

Source: AECOM, 2020.

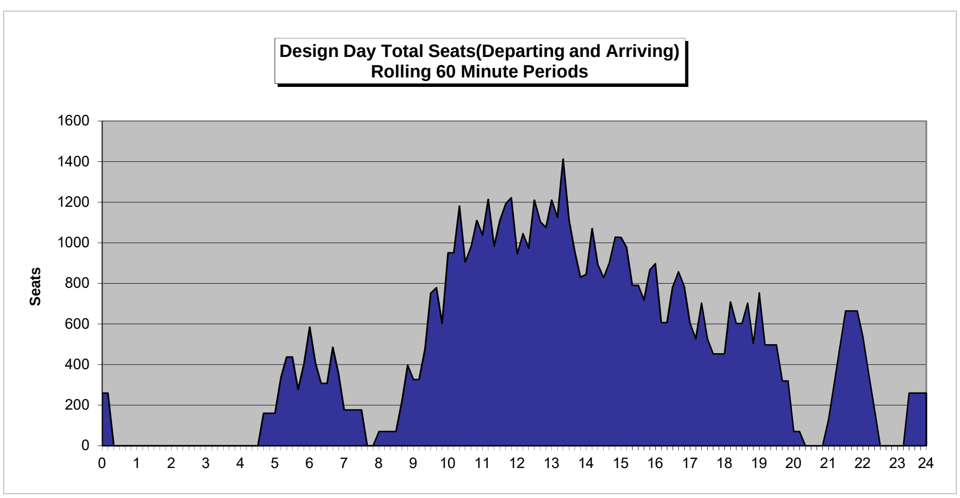
One shortcoming of this methodology is that it does not account for passenger lead time or "earliness" distribution which is described in the next section.



Peak Rolling Hour: DEPARTING SEATS	Peak Hour Begins at 13:40	Peak Seats = 858
	Daily Total = 5,428	% of Daily = 15.8%



Peak Rolling Hour: ARRIVING SEATS	Peak Hour Begins at 11:00	Peak Seats = 835
	Daily Total = 5,607	% of Daily = 14.9%



Peak Rolling Hour: TOTAL SEATS	Peak Hour Begins at 13:30	Peak Seats = 1,412
	Daily Total = 11,035	% of Daily = 12.8%

Source: Seat data from Cirium. Analysis by AECOM, 2020.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

Rolling Peak Hour Seats (March 13, 2020)

FIGURE 3.5-1

3.5.1.2 Passenger Lead Time "Earliness" Distribution

The time distribution of passengers arriving at an airport for departing flights does not match the time distribution of departing flights. This is because passengers arrive at the Airport at various times prior to their flight's departure time. Some passengers will arrive at the Airport a long time prior to their flight's departure, while others will show up close to departure time. In order to account for this variation and more accurately estimate design hour enplanements, earliness distributions were applied to the March 13, 2020 design day flight schedule.

This analysis used earliness distributions from the Transportation Security Administration as documented in the publication *Planning Guidelines and Design Standards for Checked Baggage Inspection Systems*, Version 6.0. The publication provides earliness distributions for three time periods:

- Passengers on flights departing before 8:30 am and after 8:30 am
- Passengers on domestic flights departing at peak hours (between 8:30 am and 5:00pm) versus off peak hours (midnight to 4am and 5 pm to midnight)

The publication notes that earliness distribution for flights departing in the early morning have a shorter duration and are more peaked. This is because passengers are more sensitive to losing typical sleep time compared to loss of time during other periods of the day. **Figure 3.5-2** shows the earliness distribution curves.

These curves were then applied to the March 13, 2020 design day flight schedule. The resulting rolling peak hour passenger profile is shown in **Figure 3.5-3**.

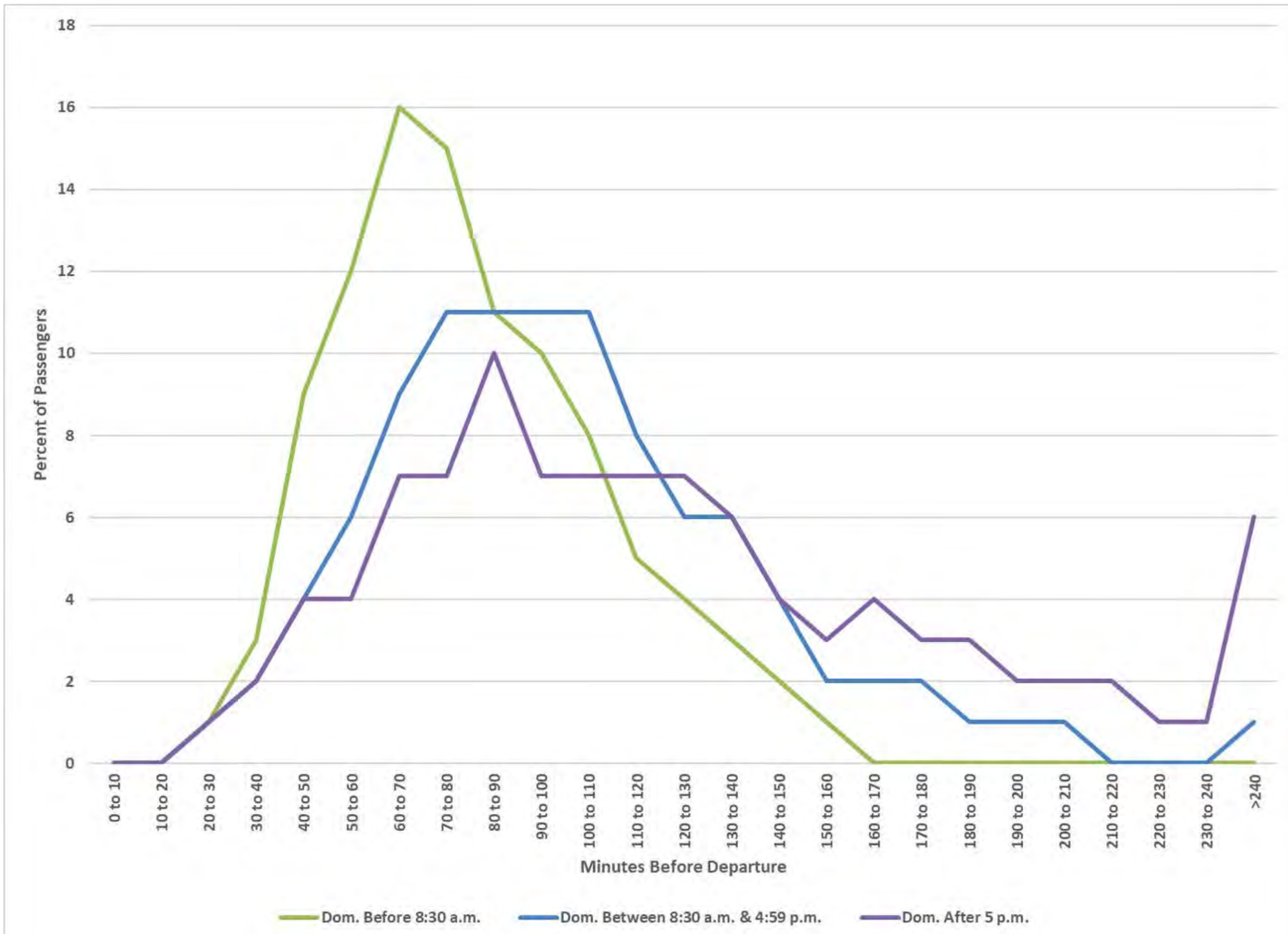
The maximum volume of hourly passengers measured in 10-minute increments is 483. This equates to 96 percent of design hour passengers for 2019. This percentage was then applied to the design hour passengers for each PAL to estimate the number of peak hour passenger with earliness distribution. **Table 3.5-5** presents estimated design hour passengers by PAL with earliness distributions applied.

Table 3.5-5
Design Hour Enplanements with Lead Time Distribution

Year / PAL	Peak "Design Hour" Enplanements	Peak "Design Hour" Enplanements with Earliness Distribution
CY 2019	525	483
1	700	644
2	780	718
3	840	773

Source: AECOM, 2020.

Design hour enplanements with earliness distribution are used when calculating the space requirements for terminal functions such as ticketing, outbound baggage screening/make-up and passenger security screening.

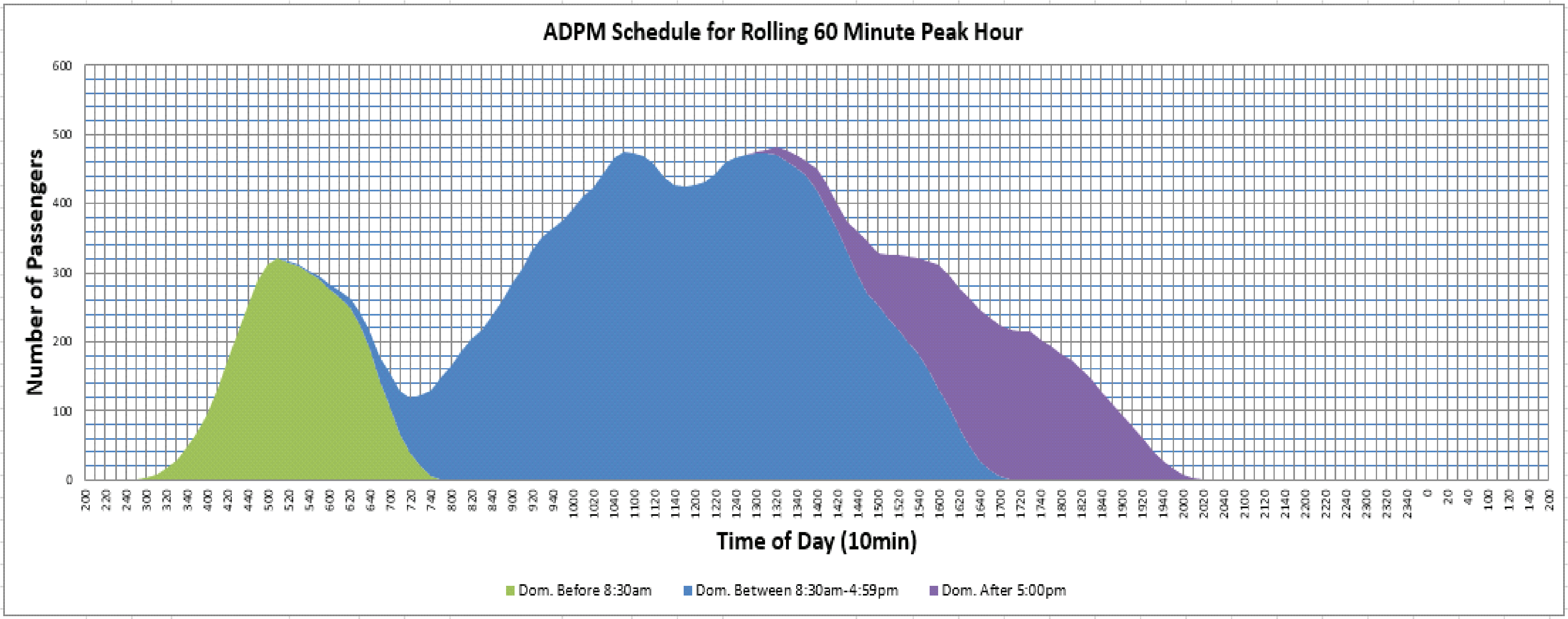


Source: Transportation Security Administration, Planning Guidelines and Design Standards for Checked Baggage Inspection Systems, Version 6.0, December 29, 2017.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

Passenger Lead Time "Earliness" Distribution Curves

FIGURE 3.5-2



Source: SRQ March 13, 2020 Flight Schedule with PGDS earliness distribution curves applied.

FIGURE 3.5-3

Rolling Peak Hour Passengers (March 13, 2020)

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

3.5.2 METHODOLOGY AND ASSUMPTIONS

This section summarizes the methodology and key assumptions used to assess facility requirements for key elements of the passenger terminal. Requirements were analyzed based on a multitude of factors, including Airport Authority and airline input, facilities at comparable airports, knowledge of industry trends, and guidelines published in the following publications:

- International Air Transport Association's (IATA's), *Airport Development Reference Manual 11th Edition*;
- FAA AC 150/5360-13A, *Planning and Design Guidelines for Airport Terminal Facilities*;
- Transportation Research Board's (TRB's) Airport Cooperative Research Program (ACRP), Report #25 *Airport Passenger Terminal Planning and Design*;
- TRB ACRP, Report #55 *Passenger Level of Service and Spatial Planning for Airport Terminals*;
- TRB ACRP, Report #54 *Resource Manual for Airport In-Terminal Concessions*.

Several space programming techniques were used to determine the future requirements for passenger and baggage processing functions of the terminal. These techniques were applied using the standards listed above and are further described in the following text, where appropriate. The specific passenger and baggage processing functions examined include the following:

- Airline Check-in Counters
- Airline Ticket Offices
- Outbound Baggage Systems
- Passenger Security Screening Checkpoint
- Gates
- Holdrooms
- Circulation
- Concessions
- Restrooms
- Baggage Claim / Arrival Hall

The requirements for other non-passenger processing functions such as terminal services were examined using information gathered from a variety of sources, including interviews with Airport staff, airline representatives, and other stakeholders.

3.5.2.1 Percentage of Originating Passengers

For the purpose of terminal planning it is assumed that 100 percent of enplaned passengers are originations (i.e., are starting their trip at Sarasota Bradenton International Airport). Previous assessments of connecting passengers at the Airport derived a value of 4 percent. An updated assessment for this master plan update derived similar to lower values. However, given the low percentage of connecting passengers, no special provisions were made in this analysis for them when calculating space requirements.

3.5.2.2 Load Factor

The estimated average load factor for March 2019 was derived from the forecast section. The data indicated that commuter flights experienced an average load factor of 81 percent, while air carrier experienced an average load factor of 88 percent. An overall load factor of 86 percent was experienced for all flights and was used for 2019 conditions. The load factors used for each PAL are shown in **Table 3.5-6**.

Table 3.5-6
Load Factors by PAL

PAL	Average Load Factor
1	86%
2	87%
3	88%

Source: AECOM, 2020.

3.5.3 LEVEL OF SERVICE STANDARDS

IATA Level of Service (LOS) standards for planning passenger terminals were originally provided with letter designations ranging from A to F, with A denoting “Excellent” LOS and F denoting an “Unacceptable” LOS. IATA revised these standards in 2014 to focus on space allocations and maximum waiting time and changed how they are presented. IATA standards are now provided using the terminology “Over-Design”, “Optimum” and “Sub-Optimum” and ”Under Provided”. Optimum is defined as providing “acceptable processing and waiting times and sufficient space to accommodate necessary functions in a comfortable environment”.

The current version of IATA’s space and waiting time LOS parameters is presented in the 11th Edition of the *Airport Development Reference Manual* which was released in March 2019. **Table 3.5-7** presents the LOS parameters.

Table 3.5-7
IATA LOS Time / Space Parameters

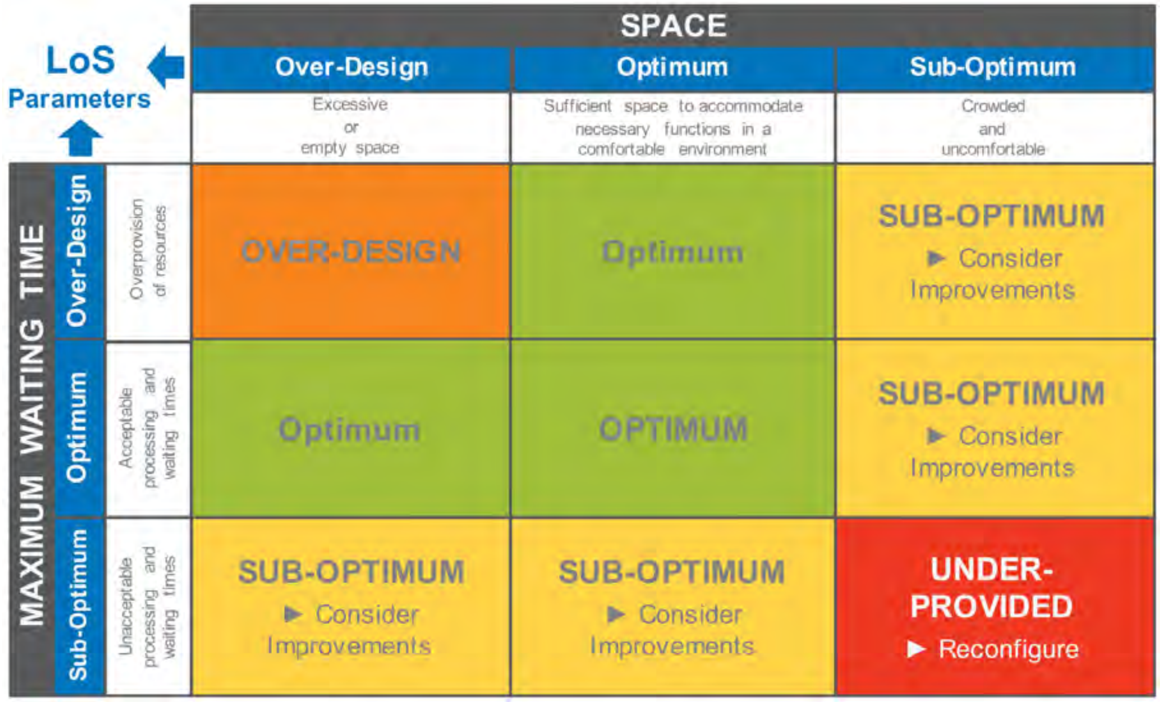


Table 3.5-8 presents IATA's Space and Waiting Time Standards for Optimum. The standards apply to the various functions inside the terminal such as ticketing, holdrooms, baggage claim, etc. The standards are intended to provide guidance regarding the proper amount of space and facilities to accommodate passenger demand without over-designing or under-providing.

The IATA standards are developed in meters and then converted to square feet. Consequently, they are often shown in fractions of units. The standards shown below were rounded up or down to the nearest whole unit of measurement for ease of use.

Table 3.5-8
IATA Space and Waiting Time Standards for "Optimum" LOS

Functional Area	Space (SF per passenger)	Waiting Time (minutes)	Proportion Seated
Departure Hall	22 to 25	N/A	15 to 20%
Ticketing (Agent)	14 to 19	10 to 20 / 3 to 5 / 1 to 3*	NA
Ticketing (Kiosk)	14 to 19	1 to 2	NA
Security Screening	11 to 13	5 to 10 / 1 to 3**	NA
Holdroom	19 to 23 (seated) 13 to 16 (standing)	N/A	50% to 70%***
Bag Claim Queuing	16 to 18	0 to 15 (narrowbody)**** 0 to 25 (widebody)	-
Arrival Hall	22 to 25	N/A	15% to 20%***

Source: IATA, *Airport Development Reference Manual*, 11th Edition, March 2020 with modifications to reflect whole units of measurement.
Notes: NA – not applicable
* Economy class / business class / first class
** Fast Track
***Lower limit to be considered only if extensive food and beverage seating is provided in concession zones.
****First value relates to first passenger to first bag. Second value relates to last bag on belt.

Passenger terminal requirements for SRQ will be based on LOS "Optimum" as recommended by the IATA standards.

3.5.4 AIRLINE CHECK-IN COUNTERS AND KIOSKS

The Airport's existing check-in ticket counters have a length of approximately 380 feet (not including employee walk throughs) and can accommodate approximately 58 agent positions. Approximately 40 agent positions were being used in October 2019.

In addition to the ticket counters, there also are banks of kiosks across from several airlines' ticket counters. As of October 2019, American had 3 kiosks, Delta Air Lines had 8 kiosks, jetBlue had 3 kiosks and United had 4 kiosks that are integrated at the ticket counter. **Table 3.5-9** summarizes ticket agent positions, kiosks and curbside positions by airline. As the table indicates, there are a significant number of unused ticket agent and curbside positions.

Table 3.5-9
Ticketing Positions and Self-Service Kiosks by Airline

Airline	Ticketing Positions	Self-Service Kiosks	Curbside Ticketing Positions	Total Per Airline
Allegiant Air	4	0	0	4
American Airlines	5	3	0	8
Air Canada	2	0	0	2
Delta Airlines	7	8	4	19
Elite Airways	5	0	0	5
Frontier	6	0	0	6
JetBlue	5	3	0	8
Sun Country Airlines	2	0	0	2
United Airlines	4	4	0	8
Vacant/Common Use	18	0	16[1]	34
Total	**58**	**18**	**20**	**96**

Source: Sarasota Manatee County Airport Authority, Airline Interviews, October 2019
Notes: Sun Country was not operational at the time of the inventory data collection
[1] Based upon visual observation and airline interviews, Delta is the only airline that provides curbside check-in. However, this service was discontinued in response to COVID-19. It is not known if this service will be reinstated in the future.

Passenger demand at airline check-in counters has declined at many airports in recent years as more passengers check-in on-line or via smart phone apps. This is especially true for passengers having only carry-on luggage. However, some air passengers prefer to use ticket counter agents for a variety of reasons. This includes individuals who require a change to their travel itinerary, individuals that prefer not to use technological means of checking-in, as well as disabled passengers who may experience difficulty using other methods. Furthermore, some airlines do not offer self-tagging of baggage through kiosks and therefore passengers must check their baggage with a station agent. Although many airlines are trying to reduce the number of passengers who check-in at the ticket counter, there is a segment of passengers that will continue to require the personal attention of a ticket agent.

The percentage of passengers checking in at counters varies significantly for each airline at the Airport due to their different business models and the fact that some airlines offer and encourage kiosk use, while others do not even offer kiosk check-in. Consequently, the use of certain traditional methodologies as presented in TRB ACRP Report #25 *Airport Passenger Terminal Planning and Design* for calculating ticket counter space requirements were not used for this assessment. Furthermore, the following additional factors must be considered in the assessment.

- The existing number of ticket agent positions is the maximum available for each airline. However, the actual number of positions staffed by each airline varies through the day in response to flight schedules and passenger demand.
- Some airlines do not offer kiosks and will most likely not offer them in the future.
- All airlines are seeking to maximize the use of on-line / mobile check-in to reduce their personnel requirements and costs.
- The current amount of space allocated for ticket counter significantly exceeds peak demand given the fact that not all ticket counter space in the terminal is currently occupied.

Considering these factors, an alternate "ratio" methodology presented in TRB ACRP Report #25 *Airport Passenger Terminal Planning and Design* was examined to estimate future ticketing demand. This methodology calculates the existing ratio of counters and kiosks to the current number of aircraft gates and then applies that ratio to the estimated number of future gates.[20] **Table 3.5-10** presents the results of the methodology.

Table 3.5-10
Ticket Agent Positions and Kiosk Requirements Using Gate Capacity

Item	2019	PAL 1	PAL 2	PAL 3
Ticket Agent Positions	40	41	50	54
Kiosks	18	21	23	24

Source: AECOM, 2020.

The results of the analysis indicate that up to 14 additional ticket agent positions and 6 additional kiosks could be required by PAL 3. The existing ticket counter provides the ability to accommodate up to 58 ticket agent positions. Therefore, there is no need for additional ticket counter space. Likewise, sufficient space is also available in the existing ticket lobby to accommodate the installation of additional kiosks.

3.5.5 AIRLINE TICKET OFFICE SPACE

Requirements for airline ticket office space are a function of operational and employee needs but are typically based on the length of the associated ticket counter and a depth of 25 to 30 feet. The actual depth of office space behind the ticket counters currently varies from 25 to 30 feet and provides approximately 10,450 square feet (including office space currently occupied by TSA), but not all of that space is currently occupied. Total space currently available for use as airline ticket office totals approximately 8,970 square feet. By comparison, a space requirement

[20] Future gate requirements are presented in Section 3.5-9.

calculated using a depth of 30 feet (and a ticket counter length of 400 feet) generates a space requirement of 12,000 square feet.

Ticket counter office space is not projected to substantially increase with future PALs because the need for space is primarily driven by operational requirements and the number of employees rather than an increase in number of passengers. If future demand for airline ticketing office space exceeds current capacity a reallocation of office space currently occupied by TSA would be a logical option. No further space requirements beyond the 12,000 square foot demand cited above is projected.

3.5.6 FEDERAL INSPECTION SERVICES

US Customs and Border Protection (CBP) facilities consist of approximately 15,000 square feet of space located on the first floor of Concourse B. This space is not currently serving any regularly scheduled passenger service because the only scheduled flights are from Canada and those flights are pre-cleared by CBP in Canada. Consequently, those flights operate at the Airport the same as any domestic flight. CBP does provide services to inbound general aviation flights from this facility. Flights are met on the air carrier apron on a designated area at Gate B8.

Requirements for CBP facilities are governed by a CBP's publication titled the *Airport Technical Design Standard* (ATDS) and vary in relation to the airport's size and the number of passengers intended to be processed during the peak hour. These requirements may also vary based upon local requirements. Review of the requirements specified in the ATDS indicate that space requirements for an FIS facility designed to serve 400 passengers per hour is in the range of 13,000 square feet, which is a far higher number of passengers than would be served on a single scheduled international flight or charter flight. Therefore, no additional space needs to be allocated to the existing FIS facility. However, one issue that will need to be considered is the ability to provide FIS at a location other than the passenger terminal in order to open Gate B8 to scheduled airline service. Sizing for a GA FIS facility, if needed, will be addressed in an alternatives assessment in Section 4.0 - *Alternatives*.

3.5.7 OUTBOUND BAGGAGE SYSTEMS

Outbound baggage systems at the Airport consist of two elements: checked baggage screening and the baggage make-up area where baggage is sorted onto carts for distribution to each departing flight. As of April 2020, SRQ is in the process of redesigning the existing checked baggage screening systems and the outbound baggage make-up area. Consequently, this assessment focused on needs for future PALs. The Airport's chosen solution from the baggage system design process will be adopted into this Master Plan Update and included in the plans. The following paragraphs describe the facility requirements for each area by PAL.

3.5.7.1 Checked Baggage Screening

Screening of checked baggage currently occurs in three separate areas labeled Nodes A, B and C. Each node consists of a baggage conveyor leading from behind the airline ticket counters to a single, in-line L3 baggage screening machine. The existing L3 machines are antiquated and in need of replacement.

Node A is located behind the Allegiant Airlines and Frontier Airlines ticket counters. Node B is located behind Delta Air Lines ticket counter, while Node C is located behind the United Airlines ticket counter. Nodes B and C are interconnected with baggage conveyors so that if one screening machine fails, baggage can be diverted to the other node. Node A does not interconnect with the others. Consequently, baggage has to be manually moved to another node if the screening system fails.

Requirements for baggage screening were calculated using the methodology presented in ACRP Report #25. This methodology uses design hour passengers, the percentage of passengers checking baggage, average bags per passenger and other factors to estimate the total number of bags to be screened per hour. The resulting value is then divided by the estimated processing rate per screening unit to arrive at an estimated number of screening units required.

A space allowance per screening unit and secondary screening is then applied to arrive at an estimate of the amount of space required for the screening function. Key inputs for the analysis include the estimated number of design hour passengers, the number of bags being checked and the processing rate of the screening machines.

Input data for the analysis was obtained from TSA and VTC (the designer of the replacement baggage system). Some of the key variables are listed below:

- The estimated percentage of passengers checking baggage is 58 percent.
- Average bags checked per passenger is 1.
- Percent of oversized bags is 3 percent.
- The processing rate for the planned screening machines is 674 bags per hour.

Using these variables and other processing rates obtained from TSA an assessment was completed. **Table 3.5-11** presents the requirements for screening units and estimated space requirement per PAL.

The proposed baggage system consists of a one plus one arrangement. This means that the first unit is capable of processing peak hour baggage demand with the second unit operating as spare capacity in the event the first unit fails or is out of service for maintenance. Due to the high processing rate provided by the proposed new L3 6700/ES machines (674 bag per hour) compared to the existing L3 units (400 bags per hour) additional units will not be required, even at PAL 3.

Table 3.5-11 Baggage Screening Units and Space Requirements				
Item	**2019**	**PAL 1**	**PAL 2**	**PAL 3**
Baggage Surge Rate (bags/hour)	351	454	501	535
Oversized Bag Rate (bags/hour)	11	14	15	17
Bag Processing Rate (bags/hour)	674			
Unit Requirements	1	1	1	1

Source: AECOM, 2020.

Space requirements for the baggage screening function were not calculated for future levels because the proposed system accommodates three L3 units which is greater than the PAL 3 requirement. Space provided in the proposed design is approximately 11,000 square feet which includes space for the L3 units, secondary screening, as well as spare parts storage and IT equipment plus circulation. This amount of space will meet requirements through PAL 3.

3.5.7.2 Baggage Make-Up

Baggage make-up for flights occurs on three race-track shaped, slope plate carousels located next to each of the screening areas. The carousels have lengths of 113, 117 and 97 feet, respectively, for a total length of 327 feet.

The carousels are mostly located underneath the terminal roof. However, portions of them extend beyond the roofline and are covered by metal awnings that provide a degree of weather protection. Baggage is delivered to each of the carousels via outbound conveyors that move baggage from the baggage screening units. Baggage rotates around each carousel until removed by baggage handlers and placed in a cart for delivery to an outbound flight.

Future requirements for baggage make-up were determined using the methodology specified in ACRP Report #25. The methodology assesses space requirements based upon the number of aircraft gates in use during the peak hour, number of carts per flight and allowances for baggage carousels and train circulation. For the purpose of this analysis, less than one departure per gate (during peak hour) and an average of three carts per aircraft were assumed. **Table 3.5-12** presents the results of the assessment.

Table 3.5-12 Outbound Baggage Make-Up Space Requirements				
Item	**2019**	**PAL 1**	**PAL 2**	**PAL 3**
Peak Hour Flights	7	8	9	9
Make-Up Area Requirement (SF)	13,800	15,600	17,700	18,900
Existing Make-Up Area (SF)	12,942 + 4,286 beneath awning = 17,228			
Additional Area Required Over Existing (SF)	0	0	472	1,672
Proposed Make Up Area with Redesign (SF)	28,300			
Additional Area Required with Redesign (SF)	0	0	0	0

Source: AECOM, 2020.

The results indicate that more space is required at PAL 2 when compared to existing space. However, with the proposed baggage system redesign the amount of space dedicated to baggage make-up will greatly increase to approximately 28,000 square feet. Therefore, no additional space will be required at any PAL with the redesign.

3.5.8 PASSENGER SECURITY SCREENING CHECKPOINT

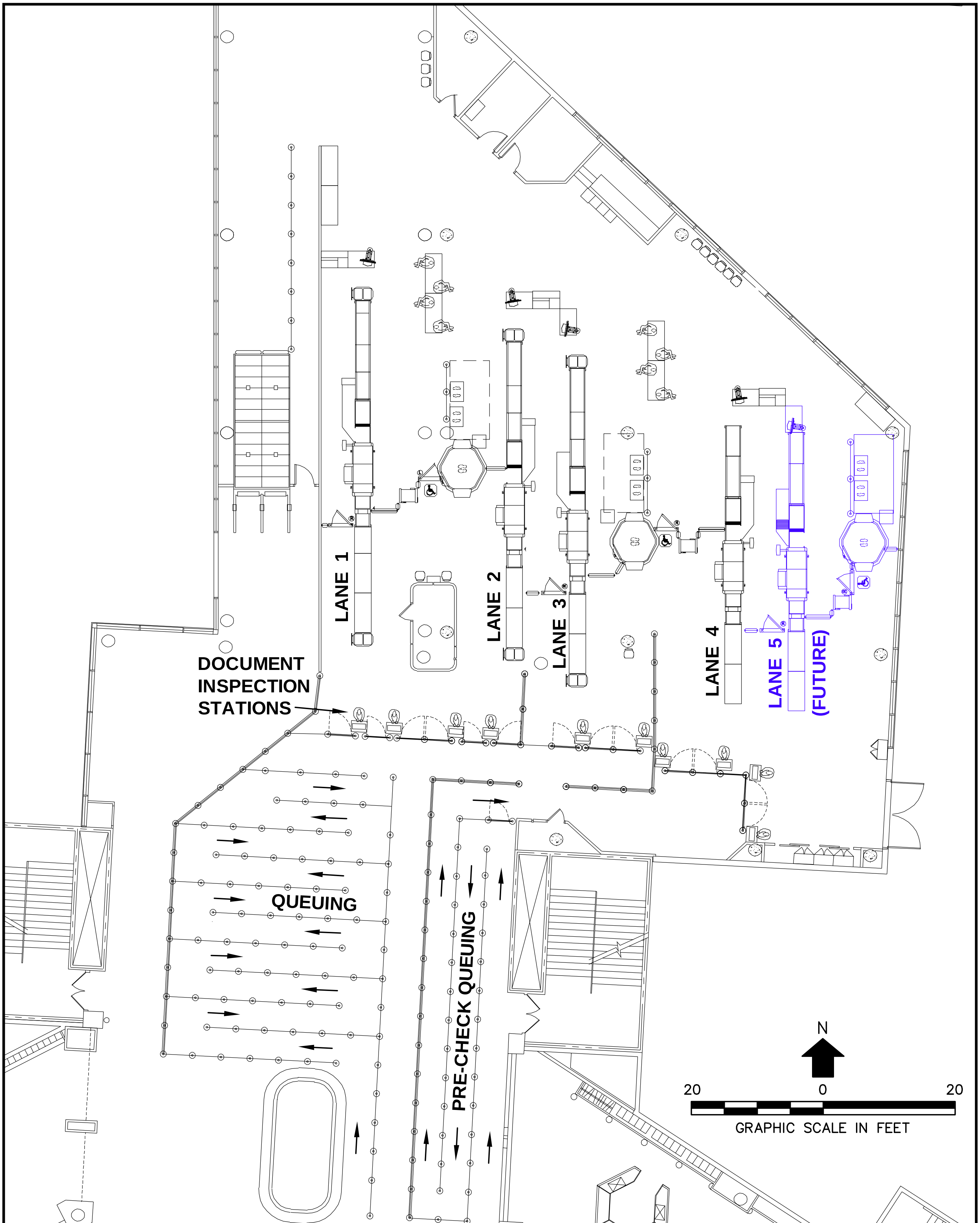
The terminal currently contains one passenger security screening checkpoint (SSCPs) at the entrance to Concourse B. The checkpoint is open from 0400 to 2000 daily. However, hours fluctuate seasonally based on airline flight schedules.

As of April 2020, the checkpoint is in the process of being converted from a four-lane configuration to a five-lane configuration with magnetometers for screening carry-on baggage and passengers, as well as walkthrough magnetometers and Advanced Imaging Technology (AIT) unit for passenger screening. Other elements of the SSCP consist of a passenger queuing area, identification checkpoints, divestment areas, secondary screening, retrieval areas, explosive trace detection units, a private screening room and small offices for TSA personnel. **Figure 3.5-4** shows the proposed checkpoint layout once the conversion to five lanes is completed.

Future space requirements for the SSCPs were assessed using the space planning model contained in ACRP Report #25, *Airport Passenger Terminal Planning and Design* and assumptions regarding peak 30-minute originating passengers, screening rates and non-passenger usage (i.e., employees and other service providers).

3.5.8.1 Requirements

Consultation with local TSA personnel indicated that a planning standard screening rate of 150 to 200 persons per lane/per hour is used for non-Pre-Check lanes with the use of AIT. A screening rate of 210 to 280 persons per lane/per hour is used for the Pre-Check lane. For this assessment the lower level of the planning standards were used for both and an overall processing rate of 165 passengers per hour (i.e., three lanes operating at 150 pph and one lane operating at 210 pph) per lane was used in the analysis. The processing rate was increased to 175 once the required number of lanes reached 5 and increased to 180 once the number of lanes reached 6. The percentage assumed for non-passenger use and re-screenings was 3.6 percent which was added to the peak demand.



SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

PASSENGER
SECURITY SCREENING CHECKPOINT
(POST CONVERSION)

FIGURE
3.5-4

C:\Civil 3D Projects\SRQ\FIG 3.5-4.dwg 05/28/2020 17:57

In addition to assessing space requirements on the basis of screening rates, the queuing model contained in ACRP Report #25 was used to assess maximum waiting time for peak hour passengers. This methodology ensures that lane requirements also consider a maximum acceptable queue time. For this analysis a maximum queue waiting time of 10 minutes was used in accordance with the IATA "Optimum" LOS standard. **Table 3.5-13** presents the required number of lanes at each PAL for the screening checkpoint.

Table 3.5-13
Checkpoint Lane Requirements

Item	2019	PAL 1	PAL 2	PAL 3
Design Hour Passengers	525	700	780	840
Peak 30-minute Passengers*	290	386	431	464
Total 30-minute Throughput**	300	400	446	480
Screening Lane Requirement**	4	5	5	6

Source: AECOM, 2020.
Notes: *With earliness distributions applied.
**Total throughput accounts for non-passengers such as employees and crew.
***Lane requirement calculated using a screening rate of 165 passengers per hour per lane and a maximum target wait time of 10 minutes in accordance with an "Optimal" Level of Service.

A few caveats apply to the lane requirement findings. First, the throughput values used for this assessment are conservative. Higher throughput values may be achieved at SRQ.

Second, the percentage of passengers using Pre-Check may continue to increase in the future thereby altering queue wait times. Flexing of Pre-Check to additional lanes may also alter queue wait times thereby decreasing lane requirements at PAL 3.

Finally, the assessment of checkpoint lanes is heavily dependent on the peaking characteristics of the flight schedule. Changes to the peaking characteristics of future schedules may also decrease lane requirements. Consequently, these limitations should be recognized when considering the lane projections.

Table 3.5-14 presents the amount of space required to accommodate security screening checkpoints at each PAL according to the ACRP Report #25 methodology. Queuing space was allocated at 600 square feet per lane. These space requirements do not include additional allocations for circulation, offices or administrative space for TSA.

Table 3.5-14
Security Screening Checkpoint Space Requirements (SF)

Item	2019	PAL 1	PAL 2	PAL 3
Lanes Required	4	5	5	6
Queuing Area Requirement	2,464	3,080	3,080	3,696
Screening Area & Ancillary Space[1]	5,712	7,140	7,140	8,568
Total Space Requirement[2]	8,176	10,220	10,220	12,264
Existing Checkpoint Space	12,000			
Additional Checkpoint Space Requirement	0	0	0	264

Source: AECOM, 2020.
Notes: [1] Includes allocation for exit lane, command post and private screening room.
[2] Does not include allocations for TSA office space or circulation other than exit lane.

The table indicates that additional checkpoint space will be required for PAL 3 although the indicated amount appears small compared to the space required for additional screening lane. This is because the existing checkpoint space is not an efficient layout due to its unusual shape. Options for addressing this future checkpoint requirements will be explored in Section 4.0 - *Alternatives*.

3.5.9 GATES

The passenger terminal has thirteen air carrier gates with loading bridges. However, Gate B8 is not currently being used because the designated parking position for U.S. Customs and Border Protection is located in front of that gate.

The SRQ March 2020 flight schedule indicates that approximately 40 air carrier departures were scheduled on an average day during peak month. This equates to 3.3 departures per gate (i.e. 40 flights /12 active gates) which is a low level of use by industry standards. However, that ratio reflects peak month. Departures per gate on an annual basis is even lower at 2.1.

The future demand for gates at SRQ will primarily be based upon flight schedules and the number of aircraft operating at the Airport at the same time, tenant preferences and the operating method decided by the Airport Authority. For example, common use of gates may substantially reduce future gate requirements compared to exclusive use.

However, for the purpose of this study, the methodologies presented in ACRP Report #25 were used to estimate future demand for air carrier gates. The report presents two approaches for assessing future gate requirements. One is the “Enplaned Passengers per Gate Approach”, and the other is the “Departures per Gate Approach”. Both approaches are described and presented in the following paragraphs.

3.5.9.1 Enplaned Passengers Per Gate

ACRP Report #25 described this methodology as follows:

> “This methodology assumes that the pattern of gate utilization will remain relatively stable over the forecast period. The changes in passengers per gate would be due to changes in enplanements per departure (due to fleet seating capacity and/or passenger load factors), as opposed to increasing (or decreasing) numbers of departures per gate.”

Table 3.5-15 presents the results which indicate that up to 20 air carrier gates may be required to accommodate enplanements at PAL 3. This assumes the current low gate utilization would continue in the future with the number of enplanements per gate increasing only slightly. A larger increase of enplanements per gate or a switch to common use gates could reduce the need for additional gates.

Table 3.5-15 Gate Requirements Using Enplaned Passengers Per Gate				
Item	**2019**	**PAL 1**	**PAL 2**	**PAL 3**
Annual Enplanements [1]	979,810	1,250,000	1,500,000	1,750,000
Annual Air Carrier Departures	8,711	10,847	12,677	14,205
Number of Gates	12[1]	15	17	20
Enplanements Per Gate	81,700	83,700	85,900	89,400
Enplaned Passengers Per Departure	112	115	118	123

Source: AECOM, 2020.
Notes: [1] Existing gates total 13, but only 12 gates are active.

3.5.9.2 Departures Per Gate

For the departures per gate approach, the historical number of departures per gate is assumed to change over time in response to variables such as the entrance of new airlines that may have different service patterns or changes in aircraft fleet mix. Assumptions regarding these variables are used to change the daily departures per gate.

Future gate requirements are estimated by dividing annual forecast aircraft departures by the estimated departures per gate factor for each PAL. **Table 3.5-16** presents the results of this methodology which assumes that daily departures on an annual basis would increase from 2.1 to 3.0. This methodology produces a gate requirement of 12 gates for PAL 1 and 13 gates for PALs 2 and 3.

Table 3.5-16 Gate Requirements Using Departures Per Gate				
Item	**2019**	**PAL 1**	**PAL 2**	**PAL 3**
Annual Enplanements [1]	979,810	1,250,000	1,500,000	1,750,000
Annual Air Carrier Departures	8,711	10,847	12,677	14,205
Number of Gates	12[1]	12	13	13
Annual Departures Per Gate	730	880	950	1060
Daily Departures Per Gate	2.1	2.5	2.7	3.0

Source: AECOM, 2020.
Notes: [1] Existing gates total 13, but only 12 gates are active.

The Enplaned Passengers Per Gate approach results in a significant increase of gates based on the assumption that the low utilization rates will continue in the future. While this method of operation may provide greater flexibility and potential to provide gates on demand, it also represents a less efficient use of capital compared to other operational actions that may accommodate gate requirements at less cost. The Departures Per Gate approach results in a significant improvement in gate utilization, but may not provide the Airport Authority with as much flexibility in the event that existing carriers desire additional gates or additional carriers desire to begin service.

Table 3.5-17 consolidates the results of both methodologies and presents their average. It is likely that future gate requirements will fall within the range presented by both methodologies and therefore, it is recommended that the Section 4.0 - *Alternatives* examine the ability to accommodate the range. However, for the purpose of calculating additional terminal requirements, such as holdrooms, the average of the two methodologies will be used. Any required adjustments to space requirements will be made in conjunction with the selection of a recommended terminal alternative.

Table 3.5-17
Aircraft Gate Requirements by PAL

Item	2019	PAL 1	PAL 2	PAL 3
Enplaned Passengers Per Gate Approach	12	15	17	20
Departures Per Gate Approach	12	12	13	13
Average of Both Methods	12	14	15	16
Existing Gates	13			
Additional Gate Requirement with Average	0	1	2	3

Source: AECOM, 2020.

3.5.10 HOLDROOMS

3.5.10.1 Requirements

Holdroom space is required for passenger seating and standing, gate check-in podiums, and egress/ingress from the gate entrance to the circulation corridors within the holdroom. Airline station managers indicated there is high demand for wheelchairs at the Airport and space is needed to accommodate them at gates. Consequently, an additional space allocation was added for wheelchair queuing area.

Holdroom space requirements were estimated assuming an 86 percent load factor for the Airbus A320 (i.e., the most common narrow-body aircraft operating at the Airport) at each gate. Space for seating was based on providing seats for 70 percent of passengers with additional standing space for the remaining 30 percent of passengers consistent with the current IATA standard.

Space standards of 21 square feet per seated passenger and 15 square feet per standing passenger were used in accordance with the midpoint of the “Optimum” Level of Service presented in the 11th Edition of the IATA *Airport Development Reference Manual*. Additional space allowances are provided for a check-in podium (184 square feet), boarding queue/gate egress area (210 square feet) and a wheelchair queuing area for 12 wheelchairs (144 square feet).

Table 3.5-18 presents the results of the analysis for Concourse B. The holdroom space requirement exceeds the current amount of holdroom space and will continue to increase through the planning horizon.

Table 3.5-18
Holdroom Space Requirements By PAL

Item	2019	PAL 1	PAL 2	PAL 3
Number of Gates	13	14	15	16
Holdroom Space Requirements (SF)	44,988	48,449	52,419	56,457
Existing Holdroom Space (SF)	31,883			
Additional Holdroom Requirement (SF)	13,105	16,566	20,536	24,574

Source: AECOM, 2020.

3.5.11 CIRCULATION

General circulation in the public portions of the terminal's first and second floors consists of approximately 62,430 square feet.[21] This equates to 23 percent of total terminal space. Visual observations indicate that existing circulation space is adequate at current levels of demand with no significant congestion or bottlenecks occurring.

The amount of circulation space required for the movement of passengers from one terminal function to the next is typically based on a percentage of overall public space. Depending upon the size of the terminal, a percentage of 15 to 30 percent is commonly applied to public areas to derive a circulation allowance. Calculations for total circulation space per PAL were not made, however provisions for additional circulation space will be made in conjunction with the creation of terminal alternatives.

3.5.12 CONCESSIONS

Existing concessions in the passenger terminal are located on the second floor. A discussion of concession types and locations is provided in the following paragraphs.

3.5.12.1 Pre-Security

There are three food and beverage concessions located on the second floor prior to passenger security screening. These include Dewar's Clubhouse Bar and Grille, Freshens and Dunkin' Donuts. Two retail concessions are also located in this area. They include Gulf Coast Travelmart and the PGA Tour Shop.

3.5.12.2 Post Security

Concessions post security consist of four food and beverage areas (Beach Market Café, Gulf Breeze Café, Landshark Bar and Grill and Starbucks Coffee) and one retail concession (CNBC Sarasota Bradenton). The amount of space devoted to pre-security and post-security concessions is summarized by type in **Table 3.5-19.**

[21] This quantity does not include circulation on the third floor (3,257 SF including observation deck) or the non-public circulation corridors on the first floor of the concourse (3,977 SF).

Table 3.5-19 Existing Concessions Space (SF)				
Location	**Food & Beverage**	**Retail & Services**	**Total**	**Percentage**
Pre-Security	12,603	5,845	18,448	76%
Post-Security	3,944	1,748	5,692	24%
Total	**16,547**	**7,593**	**24,140**	**100%**

Source: AECOM, 2020.
Note: Space values indicated do not include 2,375 SF of concession storage space on the ground floor.

The majority of concession space is located pre-security, which is not consistent with current industry trends that suggest 70 to 80 percent of concessions should be located post security and the remainder pre-security. Most outbound passengers prefer to spend their time preceding their flight's departure on the secure side of the passenger screening checkpoint to ensure that they do not experience a delay in reaching their departing flight. Consequently, the majority of an outbound passenger's waiting time (and potential spending on concessions) is in the areas beyond the passenger security screening checkpoint.

Space planning factors for airport concessions are addressed in the TRB ACRP Report #54 entitled *Resource Manual for Airport In-Terminal Concessions*, 2011. This publication presents a survey of square feet of concession space per 1,000 enplaned passengers for a range of airports surveyed in 2009. The values ranged from 2.6 to approximately 25 square feet with a median value of 9.2 square feet. It should be noted that many of the airports surveyed were large commercial airports and therefore, do not offer a direct comparison to the smaller terminals. Furthermore, some airports listed in the survey were older facilities that are space constrained. For these reasons, the publication recommends caution in the use of a rule of thumb.

Using the approximately 979,810 annual passengers that used SRQ in 2019 and the existing concession space of 24,140 square feet (excluding first floor storage space) produces a ratio of approximately 24.6 square feet per 1,000 enplaned passengers. **Table 3.5-20** applies this factor to future enplanements to estimate future concession space requirements at each PAL.

Table 3.5-20 Concession Space Requirements By PAL (SF)				
Item	**2019**	**PAL 1**	**PAL 2**	**PAL 3**
Passenger Enplanements	979,810	1,250,000	1,500,000	1,750,000
Space Requirement at 24 SF per 1,000 Enplanements	24,140	30,797	36,956	43,116
Existing Concession Space	24,140			
Additional Space Requirement	0	6,657	12,816	18,976

Source: AECOM, 2020.

Use of the ratio indicates that approximately 6,000 square feet of space is needed for each increase of 250,000 annual passengers. However, the primary issue regarding existing concessions is not the total amount of space available, but rather its allocation between pre-security and post-security locations.

For example, if the existing allocation of pre-security and post-security concessions was in line with the recommended allocation to 70 to 80 percent post-security, the amount of space post-security would be in the range of 18,000 square feet (using a 75 percent allocation) versus the existing 5,700 square feet. These quantities are the opposite of the current allocation.

Consultations with concession operators indicated that their primary need is additional storage space including cold storage. This need exists on both the second floor at the point of sale and at storage rooms on the first floor. Operators indicated that the lack of storage space on the second-floor results in excessive employee trips to the first floor to restock items. Furthermore, not all concession employees have security credentials that allow them to access the secure storage on the first floor of the concourse.

Operators also indicated that the limited amount of floor space on the first floor limits the number of pallets that can be accommodated especially for heavier items such as beverages. Another need is a pallet storage area. Finally, operators indicated that if a full-service restaurant is established on the concourse a preparation area will needed on the first floor. Options for addressing these needs and increasing post-security concessions will be examined in Section 4.0 - *Alternatives*.

3.5.13 RESTROOMS

Approximately 9,000 square feet of space in the passenger terminal is devoted to public restrooms. A higher percentage (55%) of restroom space is allocated to the unsecure portion of the terminal. **Table 3.5-21** provides a summary of restroom space. Additional restroom space for employees is located in portions of the terminal that are not accessible to the public.

Table 3.5-21
Public Restroom Space (SF)

Area	Secure (SF)	Unsecure (SF)
1st Floor Terminal	0	3,371
Second Floor Terminal	0	1,094
Second Floor Concourse	4,048	0
Third Floor Terminal	0	506
Subtotals	4,048	4,971
Percent of Total	45%	55%
Total	**9,019**	

Source: AECOM, 2020.

A companion care restroom is located on Concourse B next to Gate B-7. An additional companion care restroom is located on the third floor outside the airport administrative offices. While that restroom is accessible to the public, it is not readily visible. Consideration should be given to providing additional companion care restrooms in conjunction with any terminal expansion.

Future public restroom requirements were calculated for landside areas (i.e., ticketing and baggage claim) and Concourse B at each PAL on the basis of guidelines contained in ACRP, *Report #25, Airport Passenger Terminal Planning and Design*. Restroom requirements for landside areas were estimated on the basis of 2.5 square feet per design hour arriving and departing passengers plus allowances for well-wishers (20%) per departing passenger and greeters (30%) per arriving passenger. Restroom requirements for Concourse B were estimated using a factor of 12 fixtures per sex, per 8 Equivalent Aircraft, which was simplified for this analysis to gates. A space allocation of 80 square feet per fixture was used. The resulting requirements are shown in **Table 3.5-22**.

Table 3.5-22
Public Restroom Space Requirements (SF)

Item	2019	PAL 1	PAL 2	PAL 3
Landside Requirement	3,155	4,207	4,688	5,048
Existing Landside Restroom Space	4,465[1]			
Additional Landside Space Requirement	0	0	223	583
Airside Requirement	3,120	3,360	3,600	3,840
Existing Airside Restroom Space	4,048[2]			
Additional Airside Space Requirement	0	0	0	0

Source: AECOM, 2020.
Notes: [1] Does not include third floor restrooms.
[2] Does not include family restroom near Gate B-7.

The results of the assessment indicate that no additional restroom space is require until PAL 2 and no additional restroom space is required on the concourse. However, these conclusions are based solely on planning factors and do not consider the increased walking distances associated with potential facility improvements such as additional gates. Consequently, restroom requirements will be examined further in the Alternatives section in conjunction with any planned expansions of the passenger terminal.

3.5.14 BAGGAGE CLAIM / ARRIVAL HALL

3.5.14.1 Existing Conditions

The existing baggage claim area and arrival hall provides approximately 13,100 square feet of space and contains three flat plate claim carousels. The shape and length of the carousels is shown in **Table 3.5-23**.

Table 3.5-23
Baggage Claim Carousel Shape and Passenger Claim Length

Carousel	Shape	Passenger Claim Length (LF)
1	T	162
2	T	142
3	T	145
	Total	**449**

Source: AECOM, 2020.

Carousel 1 has a slightly longer length than Carousels 2 and 3. The distance between each carousel pier is approximately 72 feet. A small pick-up area for pets, golf clubs and other oversized items is located between Carousels 1 and 2.

One Baggage Service Office (BSO's) for American Airlines is located along the west wall of the baggage claim area, while BSO's for Delta and United are located along the east wall of the baggage claim area. Additional BSO's at both ends are used for other purposes such as a ground transportation provider at the west end and airport police at the east end.

The claim hall includes space beyond the edges of the flat-plate carousels where passengers gather to wait for their baggage. This active claim area extends approximately 15 feet beyond the edge of the carousels. The carousels and their active claim area occupy a combined footprint of approximately 9,200 square feet leaving floor space of approximately 3,900 square feet for meeters/greeters and amenities like baggage carts. Significant congestion was not observed in the baggage claim area and arrival hall during site visits.

3.5.14.2 Baggage Claim Carousel Requirements

The methodology specified in ACRP Report #25 was used to determine baggage claim carousel requirements. This methodology considers a number of factors including:

- Peak hour deplaning passengers (per the PAL tables)
- Peak hour deplaning passengers during the peak 20 minutes
- The percentage of passengers checking bags
- The average party size
- The number of additional passengers at claim
- The required claim frontage per passenger

Unlike departing passengers who arrive in the terminal over an extended period, arriving passengers arrive in a concentrated peak shortly after they deplane the aircraft. However, they also exit the baggage claim area quickly once they claim their baggage. This creates high peaks of deplaning passengers in the baggage claim/arrival hall area that occur in short periods. Consequently, the planning factors used in this analysis consider the number of passengers that deplane in the peak 20-minute period. For the purpose of this analysis a factor of 54 percent of peak hour passengers was used based on the March 13, 2020 arrival schedule.

Although the percentage of passengers checking bags is not known, the percentage of checked bags per enplaned passenger is 58 percent based upon TSA baggage screening data from March 2019. Therefore, the analysis assumed for calculation purposes that the percentage checking bags is 58 percent and that one bag is checked per person.

The average party size was estimated to be 1.6 and the percentage of additional passengers at the claim carousel was estimated to be 30 percent (i.e., not all members of the party will stand at the claim device). A required claim frontage of 1.8 feet per passenger was used in accordance with the midpoint of the IATA Optimum standard. The resulting baggage claim carousel requirements are shown in **Table 3.5-24**.

Table 3.5-24
Baggage Claim Carousels Requirements

Item	2019	PAL 1	PAL 2	PAL 3
Peak Hour Deplaning Passengers	525	700	780	840
Peak 20-Minute Deplaning Passengers	263	350	390	420
Total People at Claim	134	178	198	214
Claim Frontage Requirement (feet)	240	321	357	385
Carousels Required Based on Claim Length [1]	2	3	3	3
Carousels Required Considering Other Factors	3	3	3	4

Source: AECOM, 2020.
Note: [1] Based on a carousel claim length of 146 feet.

Although the assessment indicates a need for two carousels at the 2019 level of demand, the assessment is based solely on design hour passengers and claim length requirements without considering the actual timing of flights arriving during the design hour, nor the number of airlines serving the Airport. Review of the design day flight schedule for 2020 reveals six aircraft arrivals were scheduled in the design hour. Furthermore, three of these arrivals (with 453 seats) occur within 20 minutes of each other, while the other three arrivals (with 386 seats) occur within 7 minutes of each other. These groupings drive a need for three carousels rather than two at 2019/2020 levels of demand. Furthermore, with nine airlines currently serving the Airport, two carousels do not provide enough flexibility from an operational perspective. These factors were carried through to future PALs. The required number of carousels increases to 4 at PAL 3.

The requirement for space in baggage claim is a function of the number of carousels, their required size and buffer space needed for passengers to wait and retrieve their baggage. For the purpose of this analysis a buffer area of 15 feet around each carousel claim belt was assumed. **Table 3.5-25** presents the space requirement in comparison to the existing amount of space.

Table 3.5-25
Baggage Claim Space Requirements (SF)

Item	2019	PAL 1	PAL 2	PAL 3
Number of Carousels Required	3	3	3	4
Space Requirement with 146' Carousel Length	9,198	9,198	9,198	12,264
Existing Space (carousel plus active claim area)	9,234			
Additional Space Requirement	36	36	36	3,030

Source: AECOM, 2020.

The table indicates that existing baggage claim space is sufficient to serve demand through PAL 2. Additional space will be required to serve demand at PAL 3 when an additional carousel is projected.

3.5.14.3 Arrival Hall Space Requirements

The arrival hall provides space for arriving passengers and their meeters/greeters. This space is in addition to space required for the baggage claim function and accounts for the fact that greeters typically occupy this space for 30 minutes while arriving passengers may occupy the space for only a few minutes.

Calculations for arrival hall space are shown in **Table 3.5-26**. The calculations consider the number of persons present in the hall and then apply space factors for seated and standing greeters. Space is calculated based upon 21 square feet per seated greeter and 15 square feet per standing greeter and terminating passengers. The calculations assume that 20 percent of greeters are seated and the rest are standing.

Table 3.5-26
Arrival Hall Space Requirement (SF)

Claim Unit	2019	PAL 1	PAL 2	PAL 3
Peak Hour Terminating Passengers	525	700	780	840
Persons Present in Arrival Hall	140	187	208	224
Space Requirement	2,268	3,024	3,370	3,629
Existing Space	3,888			
Additional Area Required	0	0	0	0

Source: AECOM, 2020.
Notes: Existing space was calculated by subtracting the area encompassed by the three existing carousels and their 15' of active claim area from the total area in baggage claim (i.e., 13,122 SF minus 9,234 SF).

The analysis indicates that the existing amount of space in the baggage claim area exceeds the requirements for an arrival hall. However, two caveats apply to this finding. First, a portion of existing space is consumed by baggage cart racks rather than seating areas. Consequently, not all existing space currently serves the purpose of accommodating arriving passengers and meters/greeters. Second, the stanchioned queue areas associated with rental car counters extend out into the circulation zone near baggage claim and this compresses passenger circulation through this area near the end of the carousels. Consultation with rental car managers indicated that additional queuing space is desired in front of their counters. These issues will be addressed in Section 4.0 - *Alternatives*.

3.5.15 INBOUND BAGGAGE

Inbound baggage at SRQ is not provided in an enclosed area. Baggage is loaded directly onto the outside (secure) portions of the baggage carousels from baggage tugs on the aircraft apron. The carousels are located underneath an overhang of the terminal roof which provides weather protection for employees and baggage during its transfer from the carts to the carousel.

Space requirements for the secure portion of inbound baggage are related to the need to deliver and unload baggage to the required number of baggage carousels. Space requirements are based upon accommodating tugs and carts, space for unloading baggage and the ability for tugs and carts to pass other tugs and carts positioned at other carousels. Future space requirements are related to the number of baggage claim devices required and the length of the baggage cart trains. Baggage claim carousel requirements indicate that three carousels will be needed to accommodate demand through PAL 2 and four carousels at PAL 3.

Space requirements were calculated assuming a 31-foot by 52-foot area for a three-cart train plus a by-pass lane and space for the baggage carousel and unloading operations. The 31-foot width assumes two 12-foot lanes plus an additional 7 feet to account for the baggage conveyor and work aisle for baggage unloading. The 52-foot length assumes three carts each having a length of 15 feet and a tug with a length of 7 feet.

An additional allowance of 15 percent was added for tug circulation and maneuvering. **Table 3.5-27** presents estimated space requirement by PAL using the previously determined number of baggage claim carousels.

Table 3.5-27
Inbound Baggage Space Requirement (SF)

Claim Unit	2019	PAL 1	PAL 2	PAL 3
Space Requirement	5,400	5,400	5,400	7,200
Existing Space Under Cover	4,400 (Not Enclosed)			
Additional Area Required	1,000	1,000	1,000	2,800

Source: AECOM, 2020.

Space requirements for inbound baggage are only applicable if interior space is desired for this terminal function in the future. If not, then baggage delivery can continue in its current manner with expansion as needed when a fourth baggage carousel is required.

3.5.16 TERMINAL SERVICES

3.5.16.1 Pre-Security Amenity Allocations

There are numerous pre-security amenities that can be accessed by passengers, as well as meeters/greeters and well-wishers. As noted, the majority of concessions in the terminal are located on the second floor prior to security screening and including Dewar’s Clubhouse Bar and Grille, Freshens and Dunkin’ Donuts. Retail concessions including Gulf Coast Travelmart and the PGA Tour Shop are also available in that area. No improvements to pre-security amenities are needed.

3.5.16.2 Americans with Disabilities Act Compliance

All facilities at the terminal were designed to meet the requirements of the Americans with Disabilities Act. No ADA compliance issues are currently known to exist in the terminal although a comprehensive study would be needed to fully document the compliance of all facilities.

3.5.16.3 Animal Relief Areas

As described in the Inventory section, there are four designated animal relief areas. One area is located in the secure portion of the terminal on Concourse B next to Gate B2. Three other areas are located outside the passenger terminal. They are located east of the ticketing wing, near the first row of the rental car ready lot and near the bus stop west of baggage claim. No additional animal relief areas are needed.

3.5.16.4 Designated Waiting Areas

There is a designated waiting area for limousine services and taxis at the west end of baggage claim. Passengers meet drivers with Transportation Network Companies such as Uber and Lyft in the short-term parking lot. Passengers using these services can wait inside the terminal at various seating areas in the event there are driver delays. No additional waiting areas are needed.

3.6 GROUND ACCESS, CURBSIDE, AND PARKING REQUIREMENTS

This section assesses facility requirements for the Airport's ground transportation system. The evaluation addresses the following items:

- On-airport roadways
- Terminal curbside (unloading/loading)
- Parking facilities, including short-term, long-term, shade plus overflow, employee, cell phone, and rental car parking
- Considerations for Transportation Network Companies (TNCs)

A discussion of each of these elements is provided on the following pages.

3.6.1 ON-AIRPORT ROADWAYS

SRQ is bordered on the north by Tallevast Road, on the south by University Parkway, on the west by US Highway 41 and on the east by 15 Street East. Additional airport parcels extend east to US Highway 301. Interstate 75 (I-75) is located 6.5 miles east of the Airport. Access to and from I-75 is provided via exit 213 (University Parkway). Airport Circle provides the main access to the terminal curbside, public parking lots and rental car ready return lot via University Parkway. The passenger terminal can also be accessed from the west via US 41/Tamiami Trail via General Spaatz Boulevard, which connects to Airport Circle. An additional exit from the terminal area is provided by Bradenton Connector which is a one-way street that leads to US 41/Tamiami Trail northbound. **Figure 3.6-1** illustrates the number of lanes for each roadway in the Airport and along University Parkway.

3.6.1.2 Traffic Counts Collection

Twenty (20) approach counts in fifteen-minute intervals were collected throughout the Airport on January 9th and January 10th, 2020. Video cameras were also used to collect counts and traffic conditions along curbside roadways during a two-day period on January 30th and January 31st, 2020. **Figure 3.6-2** illustrates the counter locations. Based on the 20 approach counts, the peak hours on airport roads were determined to be 10:15 – 11:15 (AM) and 2:30 – 3:30 (PM).

Based on historical passenger enplanements data, as listed in **Table 3.6-1**, March is the peak month for passengers. Consequently, an Average Day of Peak Month (ADPM) conversion factor to convert raw data from traffic counts (January) to the peak month (March) was calculated as 1.44. **Figure 3.6-3** illustrates the resulting Annual Average Daily Traffic (AADT) for existing conditions along Airport Circle.

Table 3.6-1
Historical Monthly Enplanements

Month	2014	2015	2016	2017	2018	2019	Avg. (6 Years)
January	49,802	50,680	53,567	54,881	52,595	74,068	55,932
February	51,858	54,557	58,772	55,853	54,732	73,017	58,132
March	75,667	76,157	77,341	79,428	73,477	99,961	80,339
April	63,425	68,011	67,441	63,315	69,532	92,979	70,784
May	50,140	52,592	50,041	51,705	60,179	83,414	58,012
June	45,069	43,832	39,760	40,844	49,842	74,256	48,934
July	42,286	41,160	37,227	39,691	52,096	73,831	47,715
August	41,299	41,964	36,523	39,366	49,728	68,830	46,285
September	36,134	35,855	34,186	29,521	41,079	62,098	39,812
October	45,698	45,617	43,386	42,909	55,213	76,818	51,607
November	49,384	49,397	45,456	46,742	59,971	92,151	57,184
December	50,724	52,616	50,467	49,575	69,646	108,387	63,569

Source: Sarasota Bradenton International Airport

Turning movement counts at intersections with University Parkway were derived from the *Transportation Impact Analysis, prepared for Sarasota Bradenton International Airport, 2019* and were adjusted to reflect the year 2020 ADPM conditions. **Figure 3.6-4** illustrates the existing AM and PM peak hour volumes under the ADPM conditions.

3.6.2 TRAFFIC OPERATIONS ANALYSIS – EXISTING CONDITIONS

A LOS analysis was conducted to evaluate existing and future traffic conditions. LOS is a quality measure commonly used in traffic engineering to determine the effectiveness of the operating conditions of roadways and intersections. Variables that affect the quality of traffic flow include speed, travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. There are six levels of service ranging from A to F. LOS A represents the best operating conditions, with minimal or no delays. LOS F represents the worst conditions when extreme delays, queues, and congestion. Urban roadways should operate at LOS D or better according to the *Geometric Design of Highways and Streets*, by the American Association of State Highway and Transportation Officials (AASHTO).

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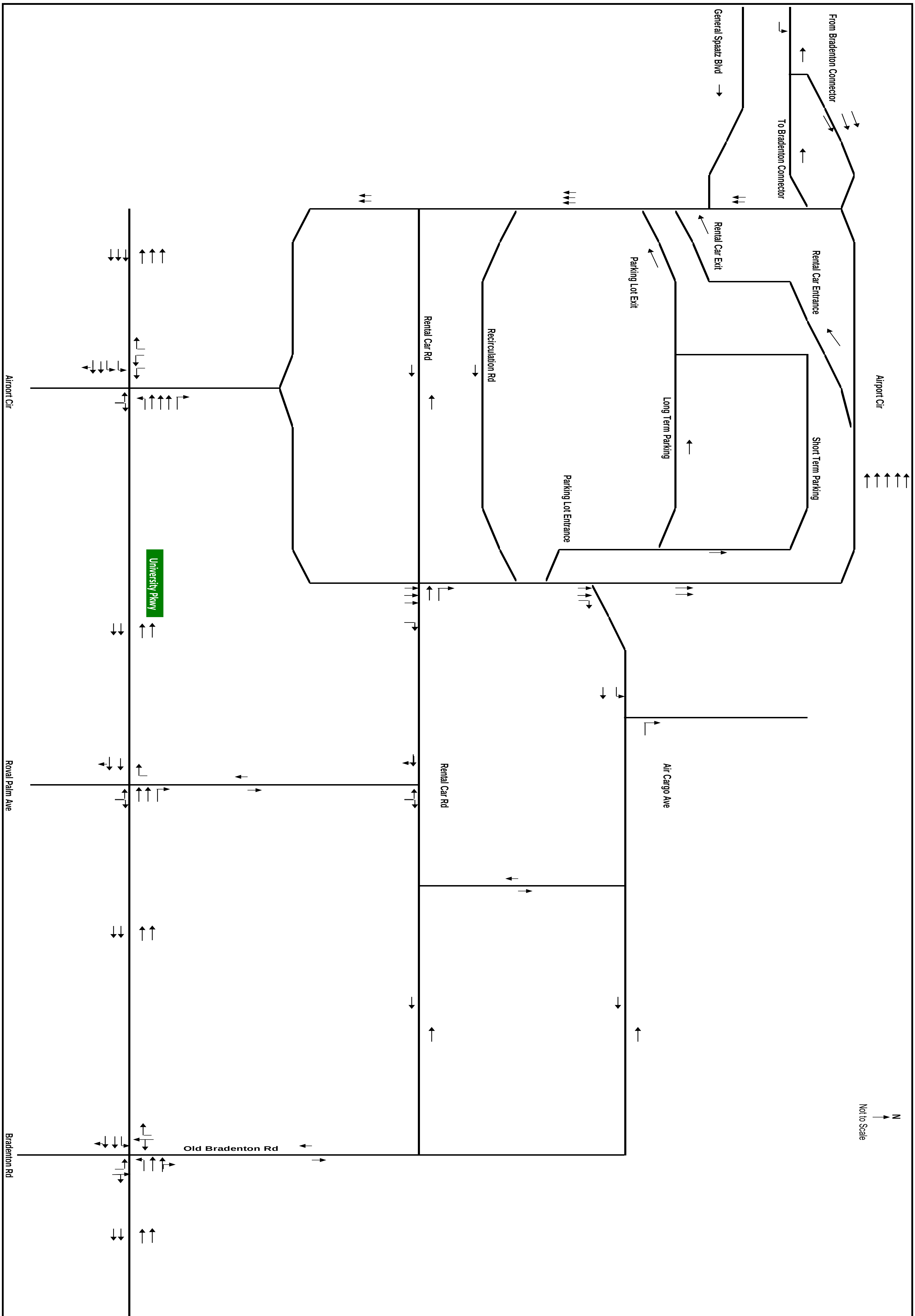

FIGURE 3.6-1

Existing Lane Geometry

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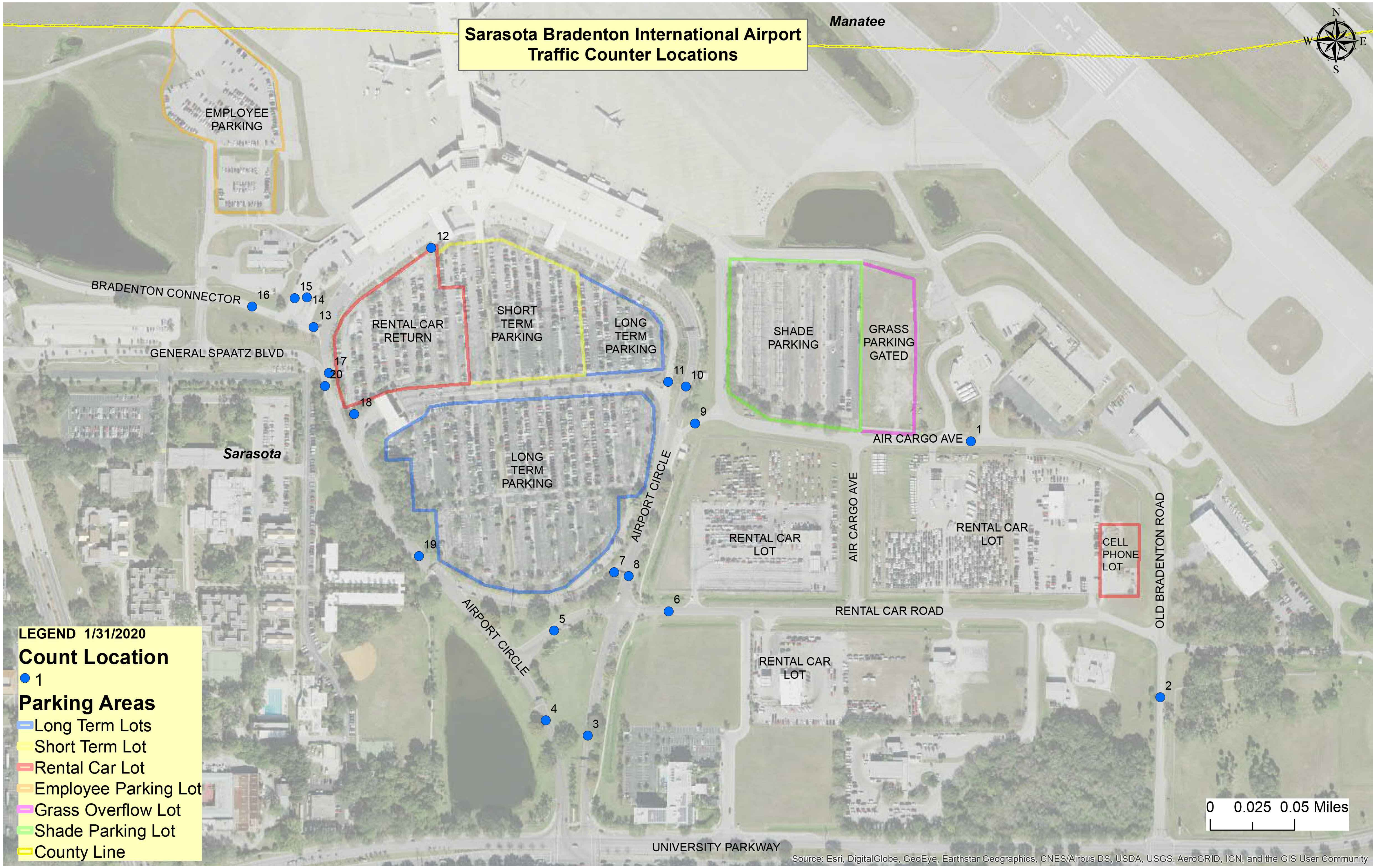

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TRAFFIC COUNTER LOCATIONS

FIGURE 3.6-2

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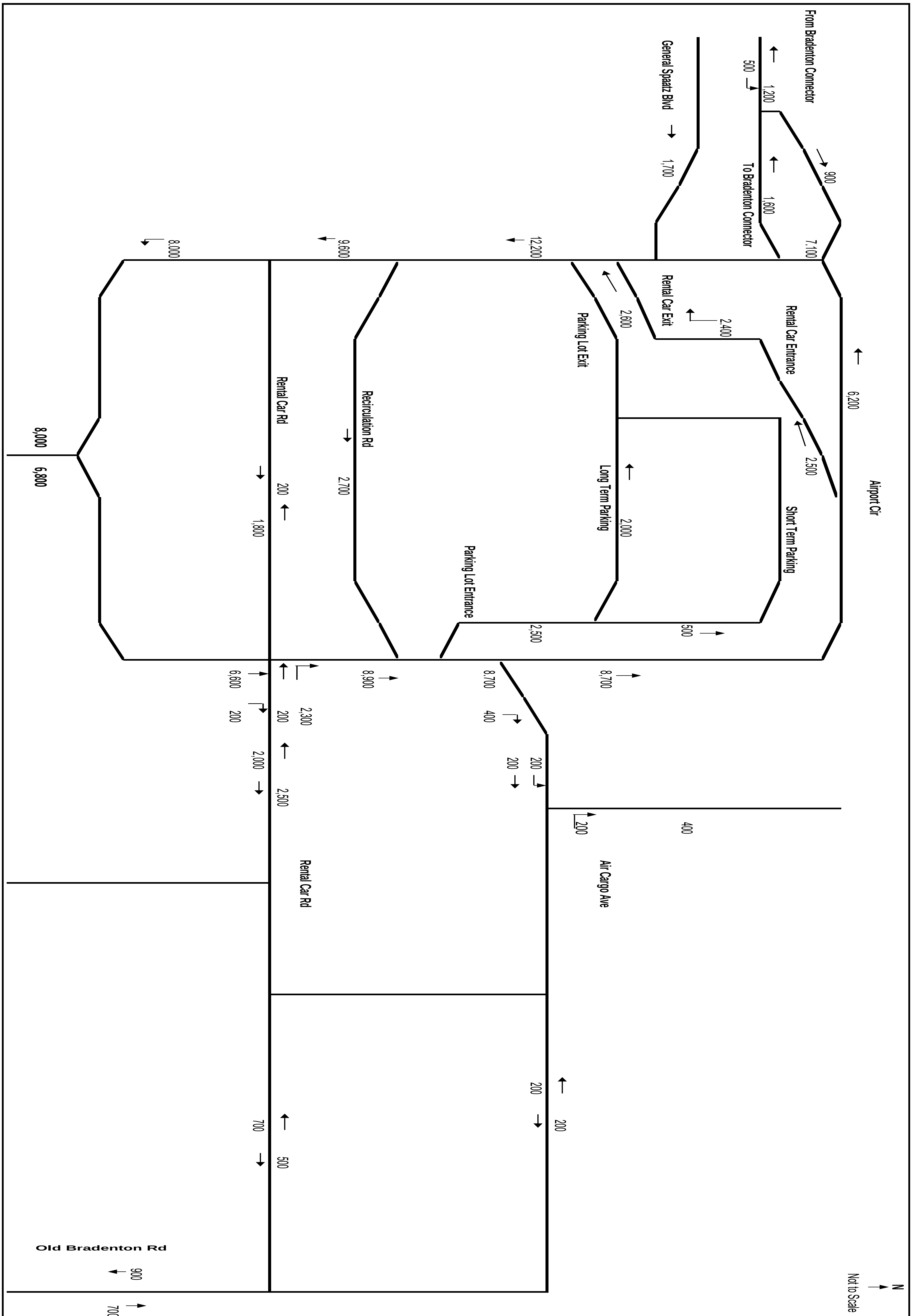

FIGURE 3.6-3

Existing (Year 2020) AADT

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MASTER PLAN UPDATE

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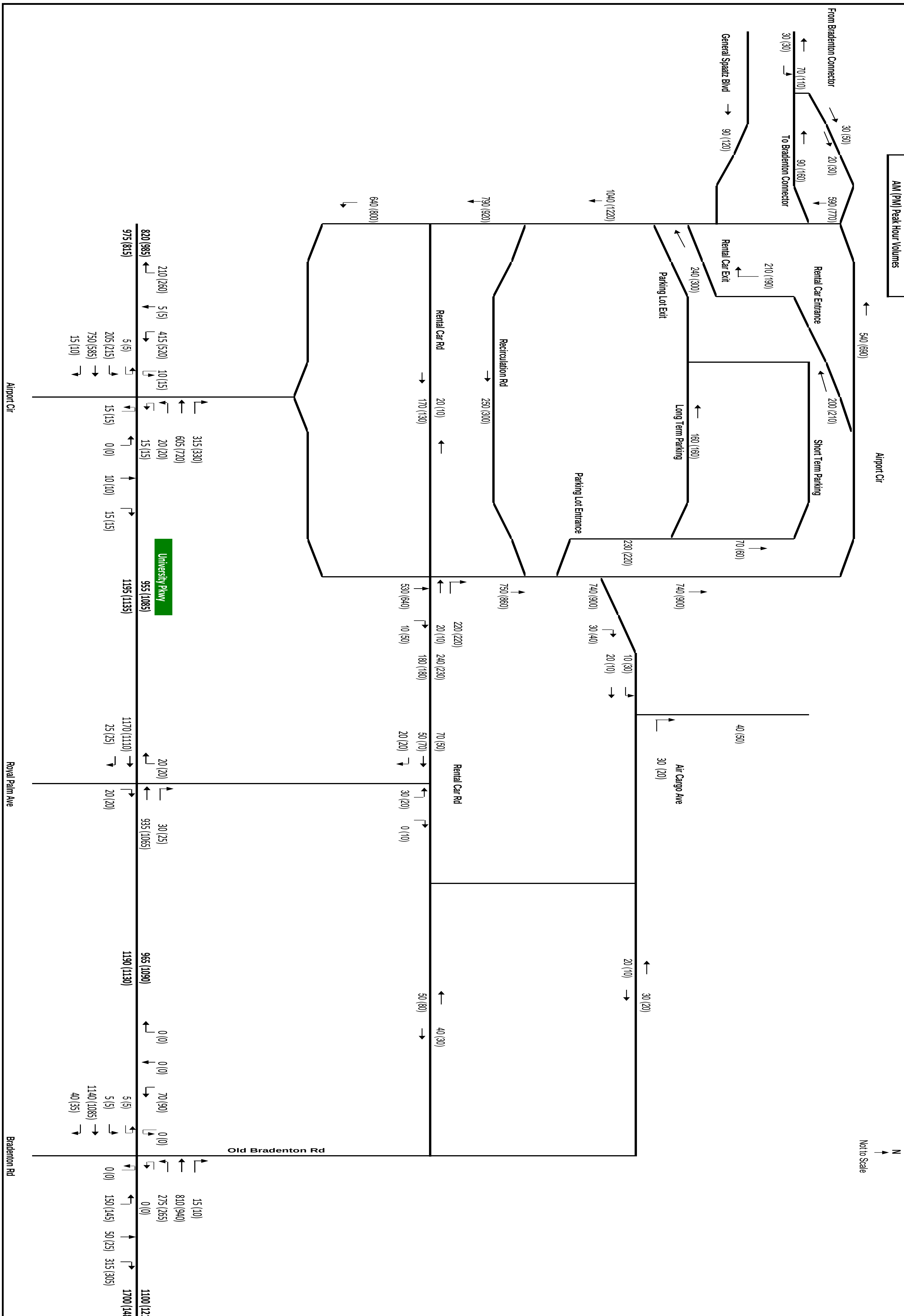

FIGURE 3.6-4

Existing (Year 2020) AM(PM) Peak Hour Volumes

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MASTER PLAN UPDATE

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Levels of Service were determined for Airport Circle using lookup tables contained in *the 2013 Quality Level of Service Handbook, by FDOT*. Two signalized intersections with University Parkway were analyzed using signal timing plans provided by Sarasota County using Synchro Version 10; a traffic analysis software application which supports the Highway Capacity Manual's (HCM) 6th Edition. The intersection of Airport Circle with University Parkway is the main entrance/exit of the Airport and the intersection of Old Bradenton Road with University Parkway leads to Air Cargo Avenue to the north. Analysis results for two signalized intersections with University Parkway reflect traffic conditions during airport peak hours of 10:15 – 11:15 (AM) and 2:30 – 3:30 (PM) and results are summarized in **Table 3.6-2.**

Table 3.6-2
Intersection Analysis Results - Existing Conditions

Intersection	Existing		
University Parkway & Airport Circle	AM	LOS	C
		Delay*	26.7
	PM	LOS	C
		Delay	32.1
University Parkway & Old Bradenton Road	AM	LOS	C
		Delay	32.3
	PM	LOS	C
		Delay	25.8

Source: AECOM, 2020.
Notes: * Delay indicated in seconds/vehicle

The results of the signalized intersection analysis indicate that under the existing conditions, signalized intersections with University Parkway are operating at LOS C.

Levels of service of roadway segments along Airport Circle are listed in **Table 3.6-3**.

Table 3.6-3
Airport Circle Roadway Segment Analysis Results - Existing Conditions

Segment/Location		LOS	
From	**To**	**AM**	**PM**
University Pkwy	Rental Car Rd.	C	C
Rental Car Rd.	Recirculation Road	C	C
Recirculation Road	Exit to Air Cargo Ave.	C	C
Exit to Air Cargo Ave.	Parking Lot Entrance	C	C
Parking Lot Entrance	Rental Car Entrance	C	D
Rental Car Entrance	Fr. Bradenton Connector	C	C
Fr. Bradenton Connector	To Bradenton Connector	C	C
To Bradenton Connector	General Spaatz Blvd.	C	C
General Spaatz Blvd.	Rental Car Exit	C	C
Rental Car Exit	Parking Lot Exit	C	C
Parking Lot Exit	Recirculation Road	C	C
Recirculation Road	Rental Car Rd.	C	C
Rental Car Rd.	University Parkway	C	C

Source: AECOM, 2020.

The results of the roadway segment analysis indicate that under the existing conditions, Airport Circle is operating at LOS D or better. **Figure 3.6-5** illustrates the levels of service for each roadway segment of Airport Circle.

3.6.3 TRIP GENERATION

In order to assess ground transportation conditions with future levels of demand and to determine future facility requirements, vehicular trip generation was assessed at the PALs summarized in **Table 3.6-4**.

Table 3.6-4
Future Passenger Activity Levels (PAL)

Activity Level	Enplanements
Existing*	979,810
PAL 1	1,250,000
PAL 2	1,500,000
PAL 3	1,750,000

Source: Sarasota Bradenton International Airport
Notes: * 2019 enplanements

Future vehicular traffic volumes under various PALs were calculated using a procedure contained in a technical paper "Airport Trip Generation," ITE Journal, May 1998. The relationship of average daily traffic and daily passenger enplanements and deplanements is listed below.

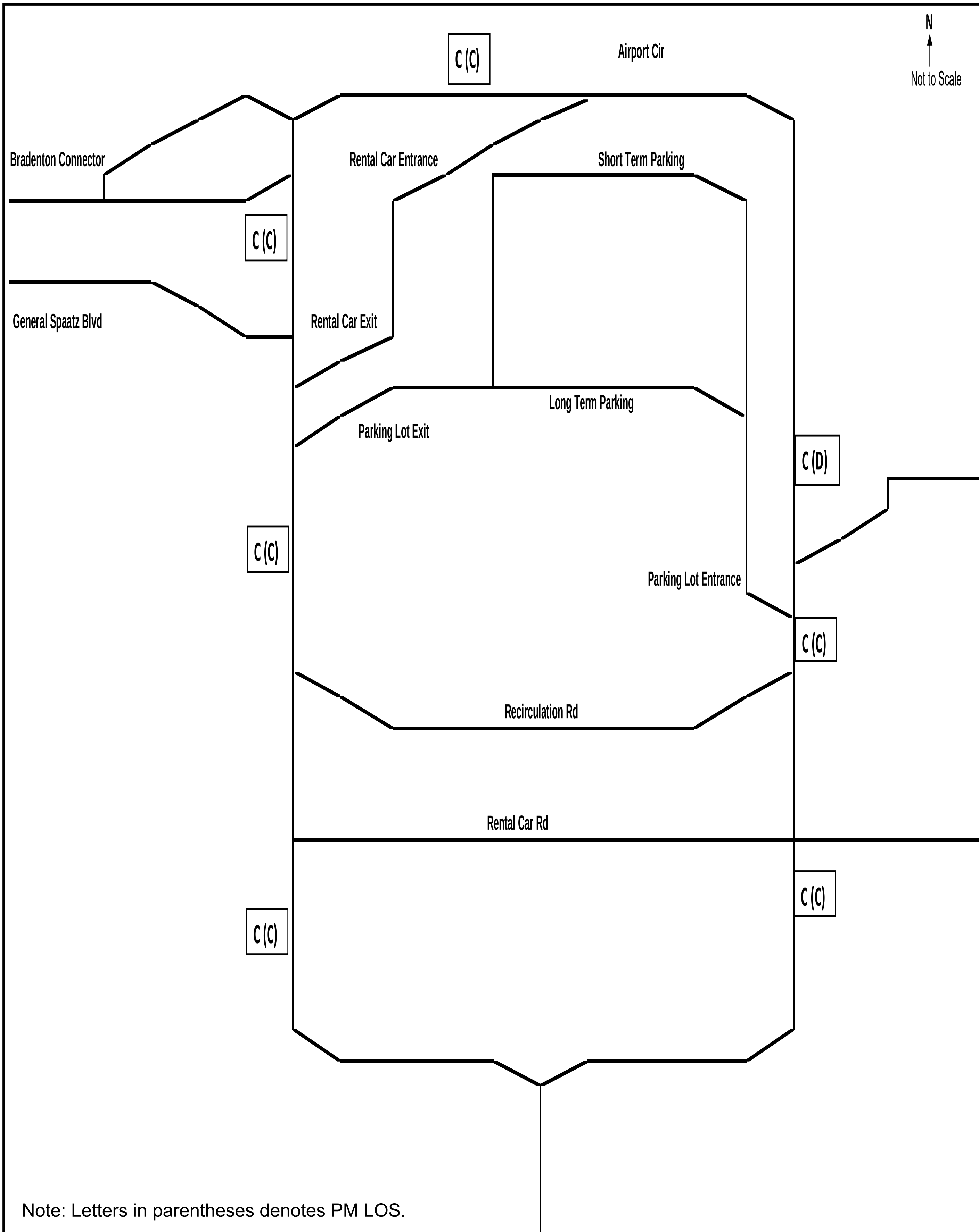
Equation (3.6.1)

$$Y = 7.395(X)^{0.8526}$$

Where:

Y=Average Daily Traffic

X=Daily Enplanements and Deplanements



Note: Letters in parentheses denotes PM LOS.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

Existing (Year 2020) Airport Circle Road LOS

FIGURE 3.6-5

Future daily vehicular traffic was initially calculated based on Equation 3.6.1 and then was adjusted based on the existing counts to reflect the local characteristic of trip generation. The projected vehicular traffic for future PALs is listed in **Table 3.6-5**.

Table 3.6-5
Vehicular Trip Generation for Future Conditions

	Existing		Future Conditions		
			PAL 1	**PAL 2**	**PAL 3**
Daily Origin/Destination Passengers	5,370		6,850	8,220	9,590
Vehicular Traffic	**Existing Trip Generation**		**Projected Trip Generation [6]**		
	Per Equation [3]	**Per Counts [4]**	**PAL 1**	**PAL 2**	**PAL 3**
AADT [1]	11,200	14,800	18,200	21,300	24,300
Peak Hour Traffic, ADPM [2]	n/a	1,690	2,100	2,400	2,800
Peak Hour / Peak Direction Traffic	n/a	860	1,100	1,220	1,420

Source: AECOM, Year 2020

1 Annual average daily traffic(2-way)
2 Peak hour traffic for an average day of the peak month (2-way)
3 Based on ITE Journal's Airport Trip Generation – ITE Journal/May 1998
4 Based on 2020 traffic counts, adjusted to average annual conditions

Growth factors for various PALs derived from Table 3.6-5 are listed in **Table 3.6-6** below:

Table 3.6-6
Vehicular Traffic Growth Factors

Growth Factors	
Existing - PAL 1	1.2
Existing - PAL 2	1.4
Existing - PAL 3	1.6

Source: AECOM, 2020.

As Table 3.6-6 displays, the growth factor for vehicular traffic from the existing conditions to PAL 1 is 1.2 and growth factors for PAL 2 and PAL 3 are 1.4 and 1.6 respectively.

3.6.4 TRAFFIC OPERATIONS ANALYSIS – FUTURE CONDITIONS

On the basis of the baseline forecast for passenger enplanements, PAL 1 approximately corresponds to year 2021; PAL 2 corresponds to year 2029 or 2030, and PAL 3 corresponds to year 2040 or 2041. Growth factors as listed in Table 3.6-6 were used to grow existing traffic volumes to the levels of PALs 1, 2, and 3. The LOS analysis results for two signalized intersections with University Parkway are listed in **Table 3.6-7**.

Table 3.6-7 Intersection LOS Analysis Results - Future Conditions				
Intersection	**Peak Hour**	**PAL 1 (Year 2021)**	**PAL 2 (Year 2029 or 2030)**	**PAL 3 (Year 2040 or 2041)**
University Parkway & Airport Circle	AM	C*	C	C
		26.9*	30.3	33.1
	PM	C	C	D
		32.1	34.9	36.8
University Parkway & Old Bradenton Rd	AM	C	E	F
		33.5	74.8	99.2
	PM	C	E	E
		25.8	58.8	77.0

Source: AECOM, Year 2020
C*: LOS
26.9*: Delay in seconds/vehicle

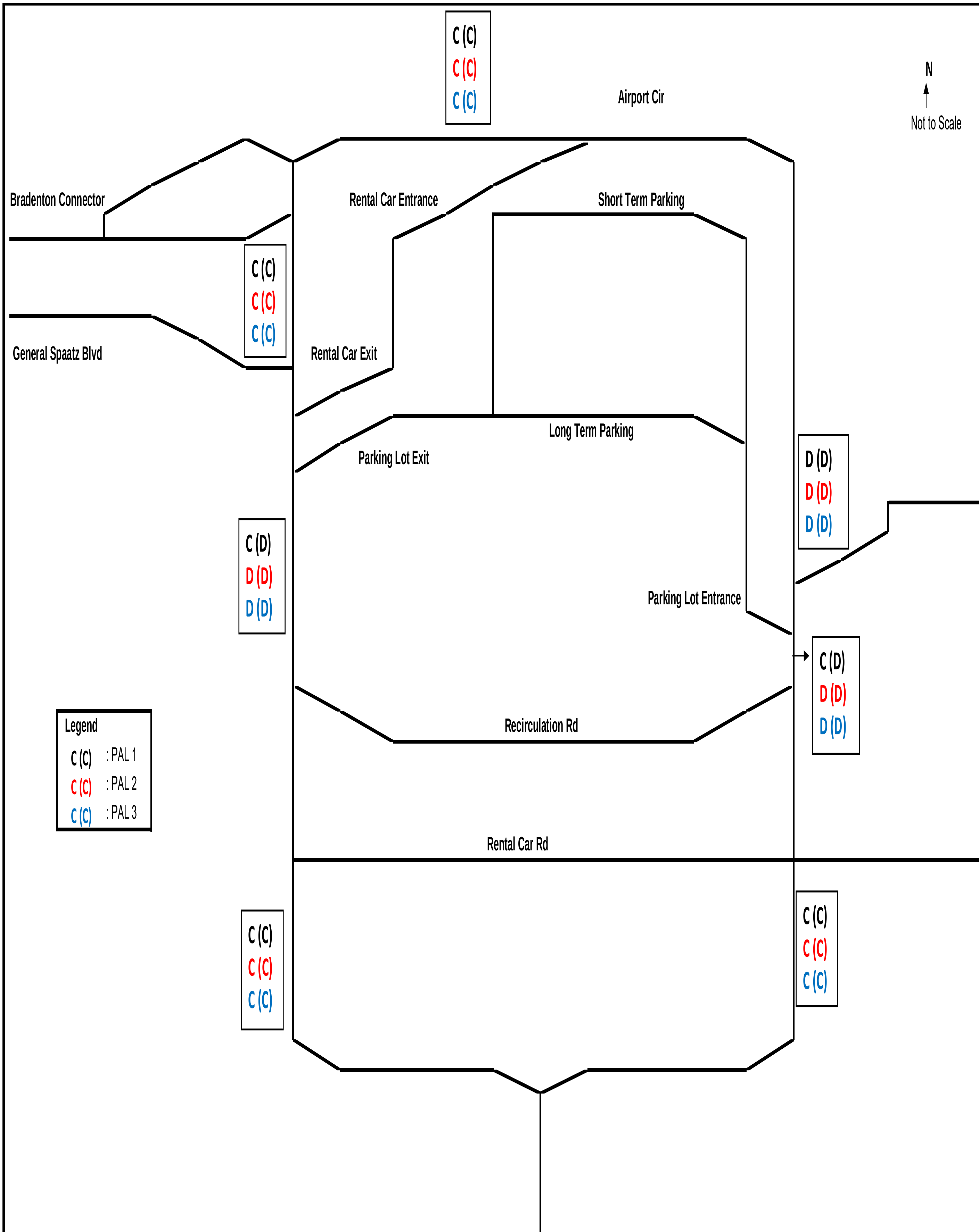
The intersection of Airport Circle and University Parkway is anticipated to operate at LOS D or better until PAL 3. The intersection of Old Bradenton Road and University Parkway is anticipated to show LOS E by PAL 2 and LOS F by PAL 3. Additional geometric improvements would be needed by year 2029 to bring the level of service at the intersection of University Parkway and Old Bradenton Road to the acceptable LOS D. Additional traffic studies should be performed when congestion increases in future years and intersection improvements can be considered in collaboration with Sarasota County.

Figure 3.6-6 illustrates the LOS for each roadway segment for future conditions. The results of the roadway segment analysis indicate that Airport Circle is anticipated to operate at LOS D or better through PAL 3. Therefore, no improvements are required.

3.6.5 TERMINAL CURBSIDE – EXISTING CONDITIONS

In order to evaluate curbside traffic conditions, cameras were used to record videos along curbside roadways over a two-day period on January 30th and January 31st, 2020. The curbside roadway consists of two segments: a segment in front of the terminal's ticketing lobby that accommodates departures and a segment in front of the baggage claim area that accommodates arrivals. Passengers are allowed to use the two lanes closest to the curb for unloading and loading activities.

For the evaluation of curbside unloading and loading conditions, linear lengths of various components, such as cross walks, valet parking, police parking, and cross hatch lines along the curb were measured in the field. The linear measurements along the terminal curb is depicted in **Figure 3.6-7**.



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Future Conditions Airport Circle Road LOS

FIGURE 3.6-6

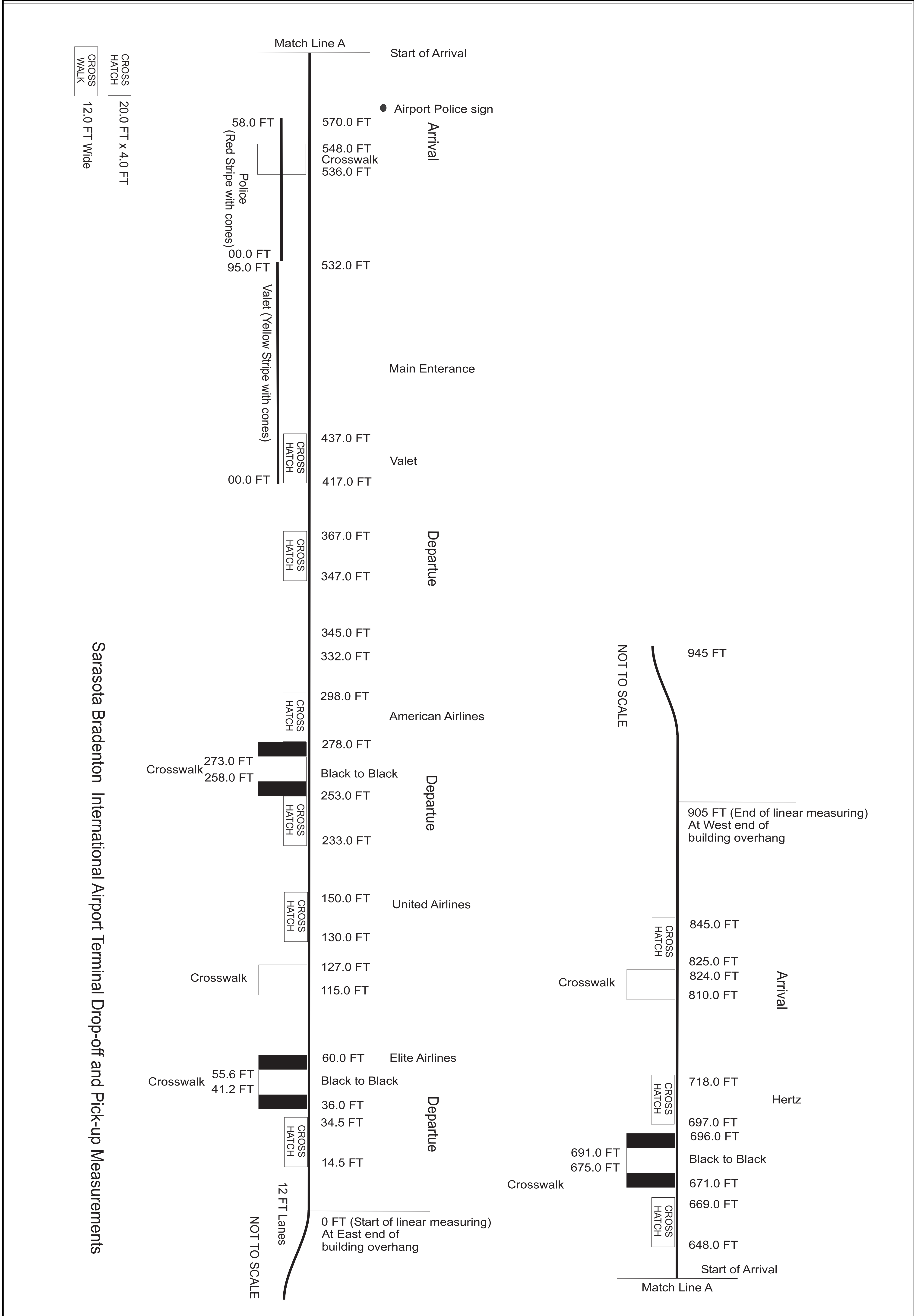

FIGURE 3.6-7

Terminal Curbside Measurements

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MASTER PLAN UPDATE

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An evaluation of existing curbside frontage conditions was performed using *CURB_PLAN*, an analytical tool developed by AECOM that evaluates curbside frontage transportation operations. CURB_PLAN provides a standardized and analytical approach for assessing the performance of curbside roadway operations.

The LOS for the curbside roadways was calculated according to the methodology contained in the report *Airport Curbside Planning and Design (Peter Mandle, E.M. Whitlock and Frank LaMagna, Transportation Research Record 840, 1982)*. The LOS criterion is determined based on the ratio of required curb length over usable curb frontage length. The LOS ratio thresholds are listed in **Table 3.6-8** below:

Table 3.6-8
Curbside Demand LOS and Utilization Ranges

Level of Service (LOS)	Utilization Range	Description
A	0-0.9	Excellent: Drivers experience no interference from pedestrians of other motorists
B	0.9-1.1	Very Good: Relatively free flow conditions with limited double parking
C	1.1-1.3	Good: Double parking near doors is common with some intermittent triple parking
D	1.3-1.7	Fair: Vehicle maneuverability restricted due to frequent double/triple parking
E	1.7-2.0	Poor: Significant delays and queues; double/triple parking throughout curbside
F	>2.0	Failure: Motorists unable to access/depart curbside; significant queuing along entry road

Source: Airport Curbside Planning and Design, Year 1982

Typically, curbside roadway conditions up to LOS C are considered acceptable. Ratios between 1.1 and 1.3 fall under LOS C. Ratios greater than 2.0 indicate that the curbside lanes are not adequate. The lane closest to the terminal is used as a load/unload lane and an adjacent lane is used as a circulation lane. The following lane descriptions were used for this study:

- ***Load/Unload Lane*:** Lane where vehicles are allowed to temporarily park to either load or unload passengers and/or luggage.
- ***Circulation Lane*:** Lane adjacent to a load/unload lane that allows vehicles to enter/exit a load/unload lane and is also used for unloading and loading of passengers and luggage during peak conditions.

Curbside videos recorded during peak hours on January 30th and January 31st, 2020 were reviewed. Hourly volumes, average dwell times, and compositions for various vehicle classifications are summarized in **Table 3.6-9**.

Table 3.6-9 Modal Splits and Average Dwell Times Existing Conditions AM(PM) Peak Hours							
		Car		Truck		Bus	
Curbside Road	Volume (Hourly)	Dwell Time (Sec.)	%	Dwell Time (Sec.)	%	Dwell Time (Sec.)	%
Departures	285(281)	98(89)	96(95)	117(163)	3(3)	110(125)	1(2)
Arrivals	147(318)	53(64)	96(99)	200(65)	2(1)	70(N/A)	2(0)

Source: AECOM, 2020.

Congestion was seldom observed to be severe enough to cause undue delays or blockage of the circulation lane on either segment of departures or arrivals. **Tables 3.6-10** and **3.6-11** provide an evaluation of the LOS for curbside operations.

Table 3.6-10 Existing Curbside Roadway Departures	
Curbside Frontage	
Effective Frontage Length* (Feet)	273
Curbside Traffic Volume	
Peak Hour Volume (Vehicle per hour)-AM(PM)	285(281)
Vehicle Composition (%) AM(PM)	
Autos	96(95)
Trucks	3(3)
Buses	1(2)
Taxis	0(0)
Other	0(0)
Curbside Frontage Level of Service	
AM(PM)	B(B)

Source: AECOM CURB_PLAN analytical tool

* Effective frontage (ft) = Physical Existing Length x Gate Concentration Factor – (Crosswalks + Doors + Other)

Table 3.6-11 Existing Curbside Roadway Arrivals	
Curbside Frontage	
Effective Frontage Length* (Feet)	219
Curbside Traffic Volume	
Peak Hour Volume (Vehicle per hour)-AM(PM)	147(318)
Vehicle Composition (%) AM(PM)	
Autos	96(99)
Trucks	2(1)
Buses	2(0)
Taxis	0(0)
Other	0(0)
Curbside Frontage Level of Service	
AM(PM)	A(B)

Source: AECOM CURB_PLAN analytical tool

* Effective frontage (ft) = Physical Existing Length x Gate Concentration Factor – (Crosswalks + Doors + Other)

According to *CURB_PLAN*, the existing curbside road operates at LOS B (Very Good Conditions) for both departures and arrivals. These results generally match the field observations during January 2020.

3.6.6 CURBSIDE ROADWAY – FUTURE CONDITIONS

Curbside roadway traffic operations were analyzed for future activity levels of PALs 1, 2, and 3. It was assumed that current average vehicular dwell times at curbside will also occur in the future. Vehicular traffic volumes were assumed to grow in accordance with the growth rates listed in Table 3.6-6. **Table 3.6-12** provides an evaluation of LOS of the curbside roadway for future conditions.

Table 3.6-12
Curbside Roadway LOS - Future Conditions

	Activity Level	Departures	Arrivals
AM	PAL 1	C	A
	PAL 2	D	A
	PAL 3	D	B
PM	PAL 1	C	C
	PAL 2	D	D
	PAL 3	D	D

Source: AECOM, 2020.

As displayed in Table 3.6-12, the curbside road is anticipated to operate at LOS D (Fair Conditions) or better through PAL 3 for both unloading and loading activities. When unloading/loading activities become more frequent and traffic becomes more congested along the curbside road, traffic enforcement could be strengthened to ensure drivers engage in active loading and unloading activities only along the terminal curbside roadway. This would minimize vehicle dwell times.

3.6.7 PARKING & RENTAL CAR FACILITY ASSESSMENT AND REQUIREMENTS

This section provides an assessment of existing capacity and demand for Airport parking lots.

3.6.7.1 Short-Term Parking

The existing short-term parking lot provides 383 spaces. Hourly data for vehicles entering and exiting the short-term parking lot, as well as overnight parking occupancy counts were provided by SRQ for December and March 2019. Hourly parking occupancy counts (i.e. number of occupied parking spaces) were calculated for everyday in December and March 2019 using hourly entering and exiting counts together with overnight parking occupancy counts received from SRQ. Accordingly, the maximum daily occupancy rate was calculated by comparing the largest occupancy volume with the lot's capacity. **Figures 3.6-8** and **3.6-9** illustrate maximum occupancy rates for every day in December and March 2019.

Figure 3.6-8
Short-Term Parking Occupancy Rate – March 2019

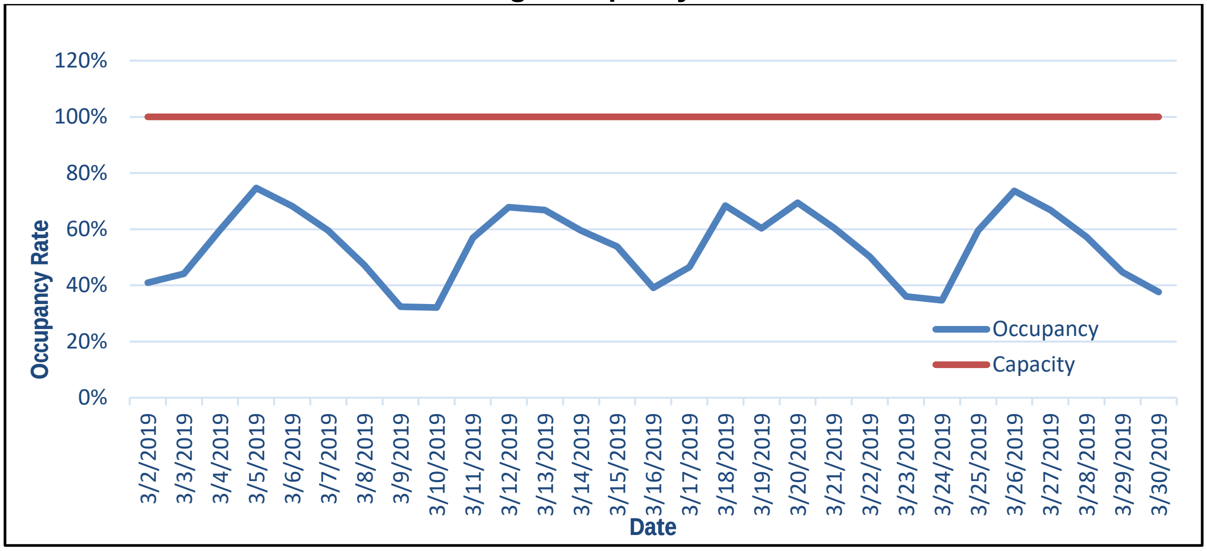
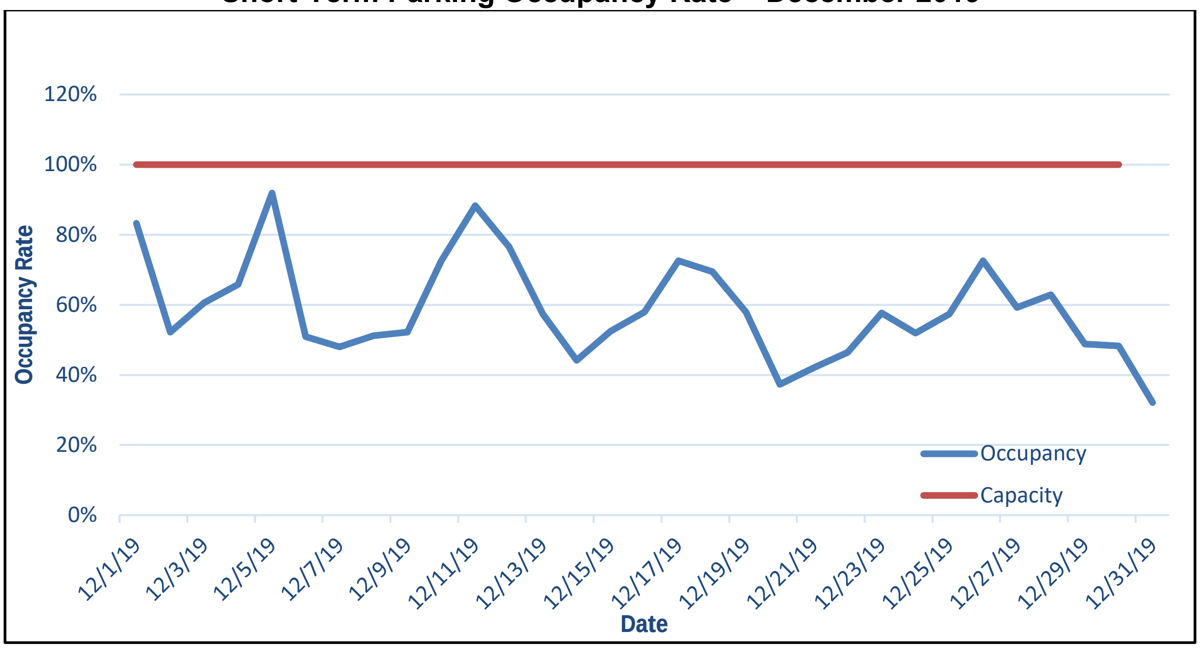


Figure 3.6-9
Short-Term Parking Occupancy Rate – December 2019



The maximum occupancy rates together with the dates and peak hours when the peak demand occurred are listed in **Table 3.6-13**.

Table 3.6-13
Max Short-Term Parking Occupancy Rate - Year 2019

Month	Type	Capacity	Occupancy Rate	Date	Peak Hour
December	Short-Term	383	92%	12/5/2019	5pm to 6pm
March			75%	3/5/2019	11am to noon

Source: AECOM, 2020.

The existing short-term parking lot provides 383 spaces, the current maximum occupancy rate is 92%, and the highest demand is 352 spaces. Parking demand during future years was calculated assuming that parking demands will grow proportionally to vehicular airport traffic.

The future demand and additional needed spaces are summarized in **Table 3.6-14** below:

Table 3.6-14
Short-Term Parking Requirements (Future Conditions)

PAL	Existing Demand	Growth Factor	Future Demand	Capacity	Additional Needed Spaces
1	352	1.2	423	383	40
2	352	1.4	493	383	110
3	352	1.6	564	383	181

Source: AECOM, 2020.

As displayed in the above table, the parking demand for the short-term parking lot is anticipated to exceed the capacity for future conditions.

3.6.7.2 Long-Term Parking

The existing long-term parking lot provides 959 spaces. Hourly data entering and exiting the long-term parking lot were provided by SRQ for December and March 2019 as well as overnight parking occupancy counts. Hourly parking occupancy counts were calculated for everyday in December and March 2019 using data received from SRQ. Accordingly, the maximum daily occupancy rate was calculated by comparing the largest count with the capacity. **Figures 3.6-10** and **3.6-11** illustrate maximum occupancy rates for every day in December and March 2019.

Figure 3.6-10
Long-Term Parking Occupancy Rate – March 2019

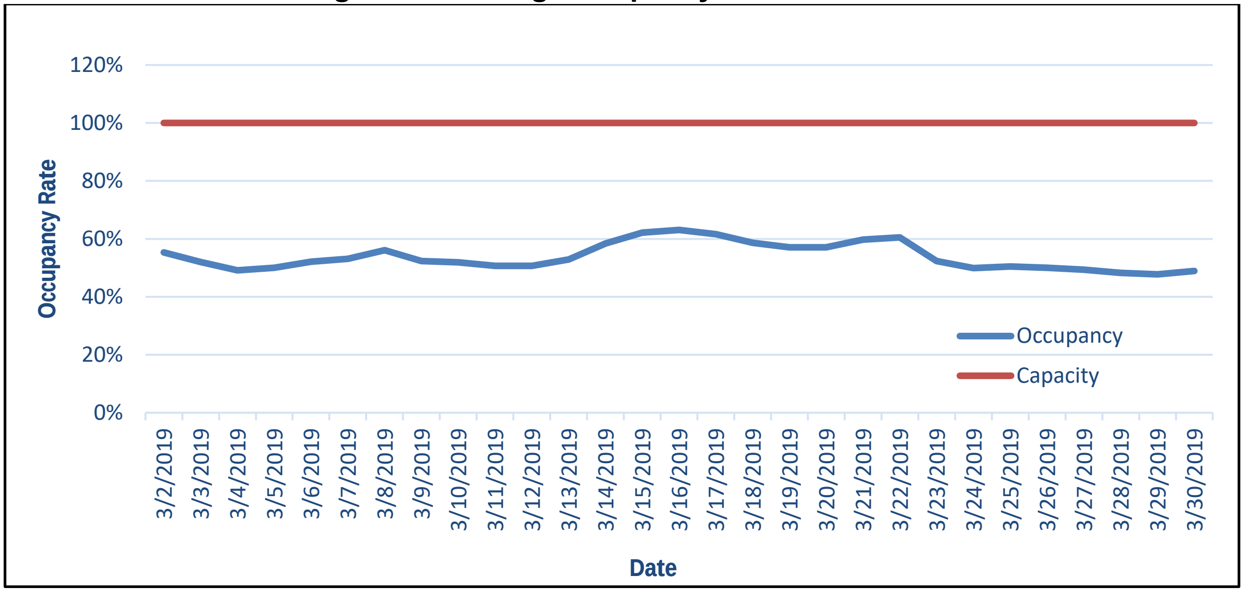
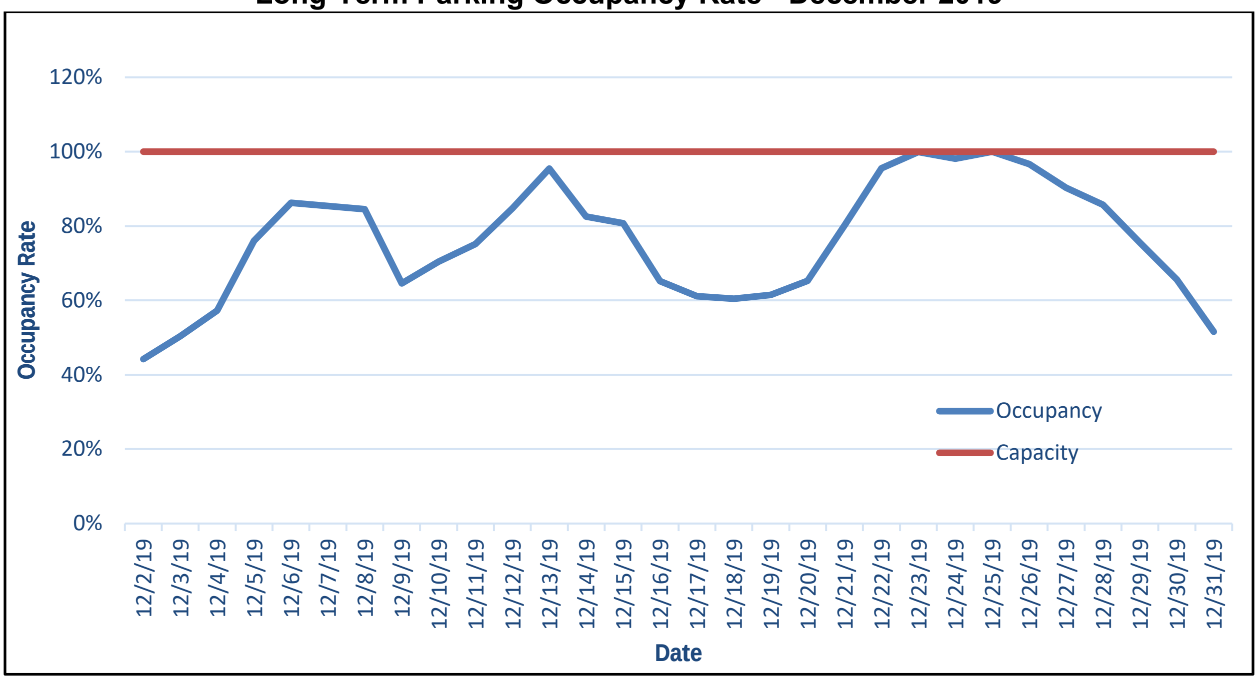


Figure 3.6-11
Long-Term Parking Occupancy Rate - December 2019



The maximum occupancy rates together with the dates and peak hours when the peak demand occurred are listed in **Table 3.6-15**.

Table 3.6-15
Max Long-Term Parking Occupancy Rate - Year 2019

Month	Type	Capacity	Occupancy Rate	Date	Peak Hour
December	Long-Term	959	100%	12/25/2019	10am to 11am
March			63%	3/16/2019	Noon to 1pm

Source: AECOM, 2020.

The existing long-term parking lot provides 959 spaces and the current maximum occupancy rate is 100%. Parking demand during future years was calculated assuming that parking demands will grow proportionally to vehicular airport traffic. The future demand and additional needed spaces are summarized in **Table 3.6-16** below:

Table 3.6-16
Long-Term Parking Requirements (Future Conditions)

PAL	Existing Demand	Growth Factor	Future Demand	Capacity	Additional Needed Spaces
1	959	1.2	1,151	959	192
2	959	1.4	1,343	959	384
3	959	1.6	1,534	959	575

Source: AECOM, 2020.

As displayed in the above table, the parking demand for the long-term parking lot is anticipated to exceed the capacity for future conditions.

3.6.7.3 Shade + Overflow

The existing shade plus overflow parking lot combined provide 554 spaces. Hourly data entering and exiting the shade plus overflow parking lot were provided by SRQ for December and March 2019 as well as overnight parking occupancy counts. Valet and VIP parking data were not included in the hourly data provided by SRQ; therefore, the spaces of valet parking (67) and of VIP parking (6) were not included in the number of available spaces while calculating occupancy rates. For purposes of calculating occupancy rates, the number of available parking spaces was set as 481. Hourly parking occupancy counts were determined for everyday in December and March 2019 using data received from SRQ. Accordingly, the maximum daily occupancy rate was calculated by comparing the largest count with the capacity. **Figures 3.6-12** and **3.6-13** illustrate maximum occupancy rates for every day in December and March 2019.

Figure 3.6-12
Shade + Overflow Parking Occupancy Rate – March 2019

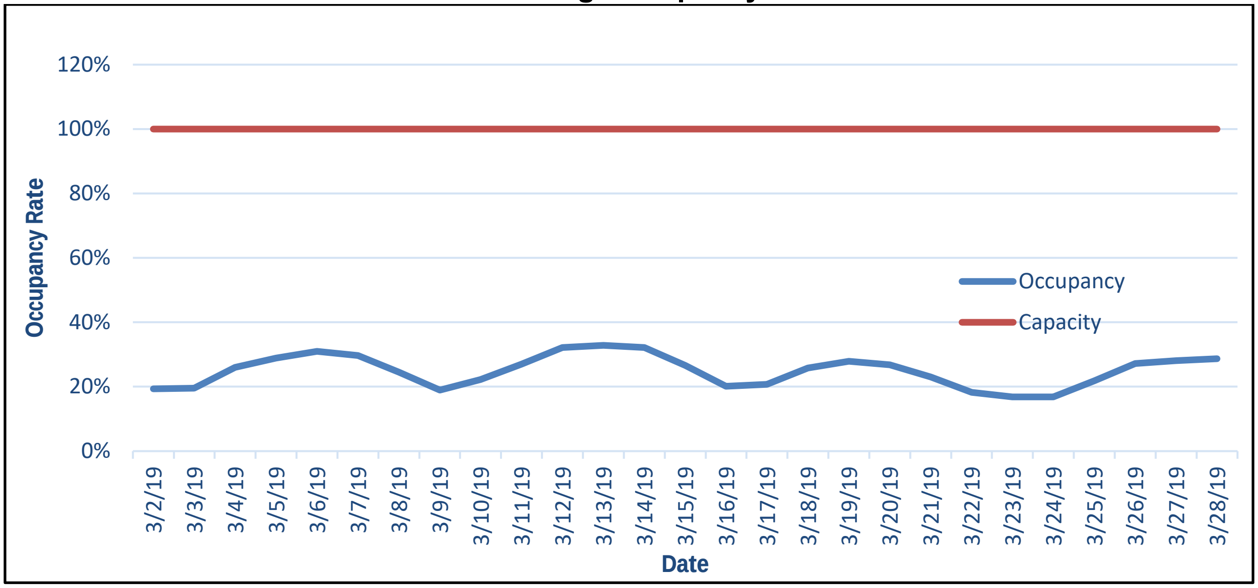
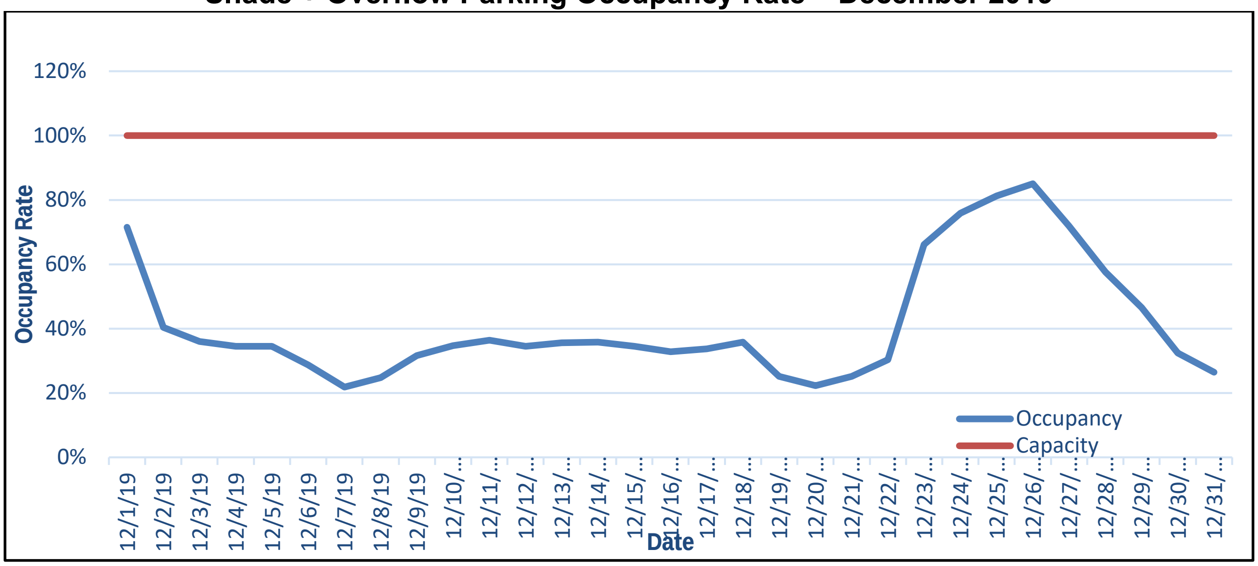


Figure 3.6-13
Shade + Overflow Parking Occupancy Rate – December 2019



The maximum occupancy rates together with the dates and peak hours when the peak demand occurred are listed in **Table 3.6-17**.

Table 3.6-17 Max Shade & Overflow Parking Occupancy Rate - Year 2019					
Month	**Type**	**Capacity**	**Occupancy Rate**	**Date**	**Peak Hour**
December	Shade & Overflow	481	85%	12/25/2019	6:00am to 7:00am
March			33%	3/13/2019	11am to noon

Source: AECOM, 2020.

The current maximum occupancy rate is 85% and the highest demand is 409 spaces. The future demand and additional needed spaces are summarized in **Table 3.6-18** below:

Table 3.6-18 Shade + Overflow Parking Requirements (Future Conditions)					
PAL	**Existing Demand**	**Growth Factor**	**Future Demand**	**Capacity**	**Additional Needed Spaces**
1	409	1.2	491	481	10
2	409	1.4	572	481	91
3	409	1.6	654	481	173

Source: AECOM, 2020.

As displayed in the above table, the parking demand for the shade plus overflow parking lot is anticipated to exceed the capacity for future conditions.

3.6.7.4 Employee Parking

Two airport employee parking lots are located west of the terminal building and they provide a total of 275 spaces. Based on visual observations performed by AECOM staff during the midday peak period on January/29th/2020, the number of occupied spaces was 189 and the number of vacant spaces was 86. Accordingly, the occupancy rate was 69%.

The future demand and additional needed spaces are summarized in **Table 3.6-19** below:

Table 3.6-19 Employee Parking Requirements (Future Conditions)					
PAL	**Existing Demand**	**Growth Factor**	**Future Demand**	**Capacity**	**Additional Needed Spaces**
1	189	1.2	227	275	0
2	189	1.4	265	275	0
3	189	1.6	302	275	27

Source: AECOM, 2020.

As displayed in the above table, the employee parking lot is anticipated to be able to serve future demand until PAL 3.

3.6.7.5 Cell Phone Lot

The cell phone lot provides 26 parking spaces. Based on visual observations performed by AECOM staff during the noon peak period on January. 29, 2020, the number of occupied spaces was 15 and the number of vacant spaces was 11. Accordingly, the occupancy rate was 58%.

The cell phone lot provides 26 parking spaces. According to field observations, the current maximum occupancy rate is 58%. Occupancy counts for the cell phone lot are not maintained by the Airport Authority and it has only been open since late 2019. Therefore, no long-term data regarding current occupancy is available. The future demand and additional needed spaces are estimated in **Table 3.6-20** below:

Table 3.6-20
Cell Phone Lot Requirements (Future Conditions)

PAL	Existing Demand	Growth Factor	Future Demand	Capacity	Additional Needed Spaces
1	15	1.2	18	26	0
2	15	1.4	21	26	0
3	15	1.6	24	26	0

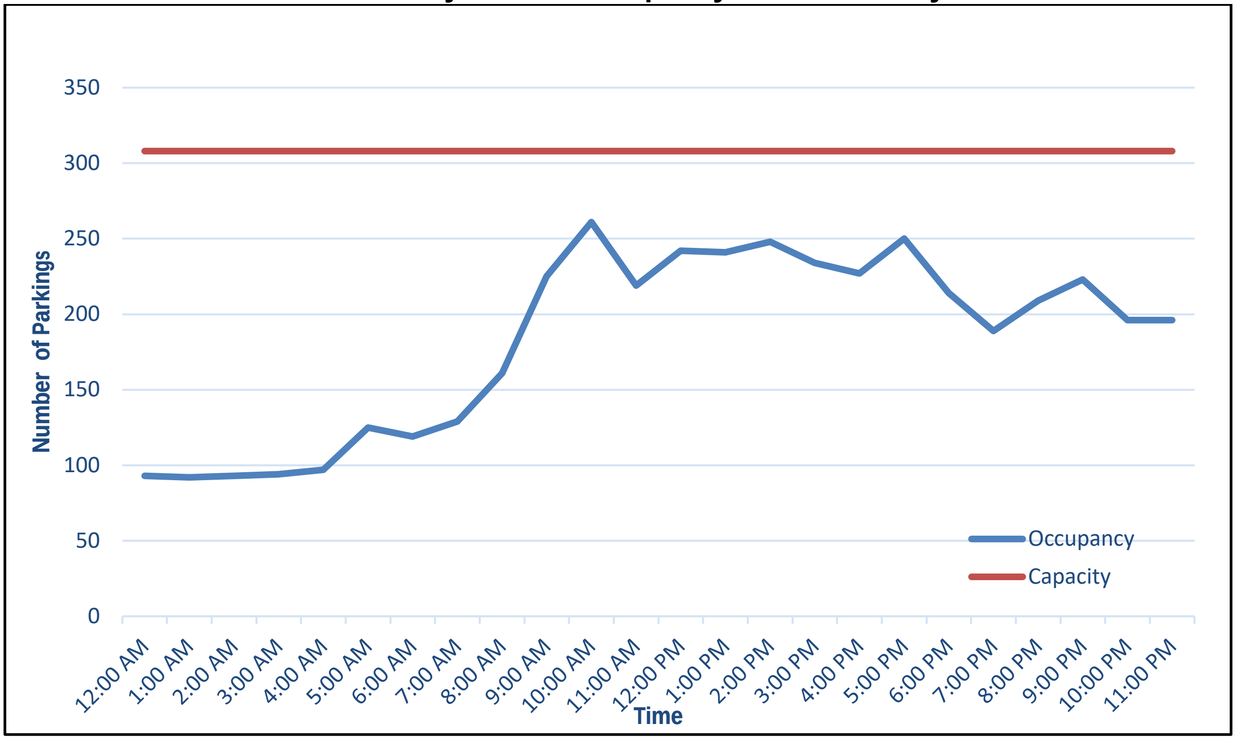
Source: AECOM, 2020.

As displayed in the above table, the cell phone lot is anticipated to be able serve future demand up to and including PAL 3. However, this conclusion is based on extremely limited occupancy data. Further assessments should be conducted when a longer timeline of historical occupancy data becomes available.

3.6.7.6 Rental Car Ready/Return Area

A total of 308 rental car ready/return spaces are provided west of the short-term parking lot. Based on visual observations performed by AECOM staff at 3pm on January 9th ,2020, the number of occupied spaces was 168 and the number of vacant spaces was 140. Hourly data entering and exiting the rental car area were collected by AECOM on January 9th and 10th, 2020. Accordingly, the number of occupied spaces was calculated for each hour on January 10th, 2020 and plotted in **Figure 3.6-14**. The peak hour occurred between 10 and 11pm with the maximum occupancy of 261 spaces.

Figure 3.6-14
Rental Car Ready/Return Occupancy Rate – January 2020



According to the interviews with staff of rental car companies of Avis/Budget/Payless, Hertz/Dollar/Thrifty, and National/Alamo/Enterprise, the spaces become fully occupied during peak hours of peak seasons. Rental car ready and return spaces are not separated in the car rental area. Furthermore, some customers fail to return the rental cars in appropriate locations (i.e., leave vehicles in lanes) and cause difficulties for other customers picking up rental cars. In particular, the layout of ready and return spaces causes congestion during peak hours approximately between 11am and 3pm.

The highest demand during peak seasons is deemed the same as the capacity of 308 spaces according to interviews with rental car companies. The future demand and additional needed spaces are summarized in **Table 3.6-21** below:

Table 3.6-21
Rental Car Ready/Return Area Requirements (Future Conditions)

PAL	Existing Demand	Growth Factor	Future Demand	Capacity	Additional Needed Spaces
1	308	1.2	370	308	62
2	308	1.4	431	308	123
3	308	1.6	493	308	185

Source: AECOM, Year 2020

As displayed in the above table, the demand for the rental car ready/return area is anticipated to exceed the capacity for future conditions. Options will be explored in Section 4.0 - *Alternatives* for minimizing interference between incoming traffic of rental cars returns and outgoing traffic of rental cars pickups.

3.6.8 TRANSPORTATION NETWORK COMPANIES

Transportation Network Companies (TNCs) such as Uber and Lyft currently drop off at the terminal curb. TNC pick-ups that historically occurred at six spaces in short-term parking are now occurring at the curb near the east end of the passenger terminal. This relocation is a measure implemented during the impacts associated with the Covid-19 pandemic.

Operations associated with TNC's impact several elements of the Airport's roadway and parking systems. Specifically, TNC operations increase curbside use and increase on-airport roadway trips. The increase of on-airport roadway trips is related to drivers who are approaching the end of their free parking time limit in short-term parking and then exit the lot to avoid paying the parking fee. These drivers then recirculate on Airport Circle to short-term parking to attain an additional free parking period while waiting for a pick-up.

In addition to these two impacts, it is suspected that TNC's also decrease demand for airport parking and rental cars. However, those impacts are difficult to measure because growth of TNC operations is occurring against a backdrop of air service increases and corresponding growth of passenger enplanements. These increases may mask the true impacts of TNC operations which were increasing at an annual rate greater than 50 percent in recent years and reached over 107,000 pick-ups in 2019. Data for December 2019 indicates that TNC pick-ups averaged over 400 per day. Consequently, the projections of future demand for parking and rental cars presented on the preceding pages do not apply a factor for the potential impacts of future TNC's on demand.

Considerable debate continues to occur within the industry regarding the future impact of TNC's on airport facilities, especially since the major operators have a history of significant financial losses and their long-term success is not yet established. However, numerous airports are dealing with the current impacts of these operators by establishing specific pick-up locations to alleviate growing congestion on curbsides. Options for accommodating TNC operations at SRQ will be addressed in Section 4.0 – *Alternatives*. Furthermore, options for addressing future parking requirements will consider the possibility that demand may be less than projected.

3.7 GENERAL AVIATION REQUIREMENTS

3.7.1 AIRCRAFT STORAGE REQUIREMENTS

There were 301 general aviation aircraft based at SRQ in 2019 including 184 single-engine pistons, 27 multi-engine pistons, 68 jets, 20 rotorcraft and two listed as other. These aircraft as well as transient operators conducted 101,728 operations during 2019. These operations consisted of local training flights and itinerant flights to and from other airports. **Table 3.7-1** presents the preferred forecast of based aircraft from Section 2.0 – *Forecasts of Aviation Activity*.

Table 3.7-1 Preferred Forecast of Based Aircraft						
Year	**Single-Engine Piston**	**Multi-Engine Piston**	**Jet**	**Rotor**	**Other**	**Total**
2019 (Existing)	184	27	68	20	2	**301**
2024	194	28	79	24	2	**327**
2029	199	28	91	30	2	**350**
2034	204	29	106	36	2	**377**
2039	209	30	123	44	2	**408**

Source: AECOM, 2020.

The based aircraft forecast anticipates that 408 aircraft will need to be accommodated at the Airport by 2039. This is an increase of 107 aircraft during the 20-year period. Furthermore, future based aircraft will consist of a higher percentage of high-performance turbine and rotor aircraft whose owners prefer or need conventional hangars. The remaining aircraft will be stored in T-hangars or use tiedowns on aprons.

In order to forecast hangar and tiedown demand, assumptions were made regarding aircraft owners' preferred method of aircraft storage if adequate facilities were available. These assumptions are shown in **Table 3.7-2** and recognize aircraft values and the desire of aircraft owners to protect their investments from inclement weather-related risks. Combining these storage assumptions with the based aircraft forecast produced the requirements for future storage.

Table 3.7-2 Assumed Distribution of Aircraft Storage Preferences					
Aircraft Type	**Port-a-Port**	**Shade Hangars**	**T-Hangars**	**Conventional/Corporate Hangars**	**Tiedown**
SEP	0%	0%	85%	0%	15%
MEP	0%	0%	75%	25%	0%
Jet	0%	0%	0%	100%	0%
Rotor	0%	0%	0%	100%	0%
Other	0%	0%	100%	0%	0%

Source: AECOM, 2020.

3.7.1.1 Hangar Storage Requirements

According to consultation with FBO management there is high demand for hangar storage at the Airport. Given the demand for permanent enclosed storage facilities, it is assumed that the existing Port-a-Port and Shade Hangars at SRQ will be replaced in the near-term with conventional hangars. Viable long-term storage options are T-Hangars and Conventional/Corporate Hangars. The number and type of these facilities anticipated over the course of the 20-year planning period is described in the following sections. The projected demand for aircraft hangars is based on the forecast, but will change in response to external forces including the cost of aircraft ownership and fluctuations in economic conditions.

3.7.1.2 T-Hangars

The SMAA currently manages eleven T-hangar buildings that provide a total of 158 units. It is assumed that demand for these T-hangars will continue to be generated by single-engine and multi-engine piston aircraft. As previously shown in Table 3.7-2, it is projected that T-Hangar storage will be required for 85 percent of single-engine piston aircraft and 75 percent of multi-engine piston aircraft. This results in demand for 202 units in 2039 (**Table 3.7-3**), a 44 unit increase over the current number.

Table 3-7.3
T-Hangar Storage Requirements

Year	Required Units	Existing Units	Additional Units Required
2019 (Existing)	158*		
2024	188	158	30
2029	192	158	34
2034	197	158	39
2039	202	158	44

Source: AECOM, 2020.
Notes: There is a waiting list of seven aircraft owners for existing T-hangars.

3.7.1.3 Conventional/Corporate Hangars

A total of 307,000 square feet of conventional and corporate hangars are currently provided by the two FBOs. The forecasted growth of based multi-engine and jet aircraft will generate demand for additional hangar space.

Space requirements for conventional hangars was estimated by considering a wide range of multi-engine, jet, and rotor aircraft and applying a 5-foot buffer around each type of aircraft. This was done to obtain a general estimate of space requirements while also assuming that hangar space is being used efficiently. This process was then used to obtain a weighted average for based multi-engine, jet, and rotor aircraft. The process consisted of the following:

- The smaller Piper PA-44 Seminole and larger King Air 90 were used as representative multi-engine aircraft and their associated areas weighted at 20 percent and 80 percent respectively. This results in an average storage area requirement for multi-engine aircraft of 1,900 square feet per aircraft.
- The Hawker 800 and Gulfstream V were used as representative jets. Area requirements for these aircraft were estimated at 75 percent and 25 percent respectively resulting in an average storage area requirement of 4,000 square feet per jet aircraft.
- The Bell 206 and Bell 412 were used as representative rotor aircraft and their associated areas were weighted at 70 percent and 30 percent respectively. This results in an average storage area requirement of 1,450 square feet for rotor aircraft.

These areas were then combined as a weighted average using the previously stated storage preferences shown in Table 3.7-2 (i.e., 25 percent of multi-engine piston, 100 percent of jet, and 100 percent of rotor aircraft) and applied to the forecast of based aircraft. This results in a forecasted requirement for 570,050 square feet of conventional/corporate hangar area in 2039. This represents a 46 percent increase compared to the amount of conventional hangar space currently available (shown in **Table 3.7-4**).

Table 3.7-4
Conventional/Corporate Hangar Storage Requirements

Year	Forecasted								Existing (SF)	Additional Required (SF)
	MEP		Jet		Helicopter		Total			
	# of Aircraft	Req'd (SF)	# of Aircraft	Req'd (SF)	# of Aircraft	Req'd (SF)	# of Aircraft	Req'd (SF)		
2019 (Existing)	[1]								307,000	
2024	7	13,300	79	316,000	24	34,800	110	364,100	307,000	57,100
2029	7	13,300	91	364,000	30	43,500	128	420,800	307,000	113,800
2034	7	13,775	106	424,000	36	52,200	149	489,975	307,000	182,975
2039	8	14,250	123	492,000	44	63,800	175	570,050	307,000	263,050

Source: AECOM, 2020.
Note: [1] An inventory of existing aircraft currently stored in conventional hangars was not conducted.

3.7.1.4 Based Aircraft Apron Requirements

Requirements for tie-down space by based aircraft was assumed to be primarily for single-engine piston aircraft. Space planning for these aircraft was calculated based on 610 square yards of apron for each parking space. This provides space for aircraft parking and circulation between the rows of aircraft.

The current amount of apron for based aircraft and itinerant aircraft is listed in **Table 3.7-5**. It is assumed that only 15 percent of based single-engine piston aircraft will prefer to use tiedown space. This results in a calculated area for existing based aircraft tiedown demand of 17,080 square yards and forecasted area of 19,124 square yards in 2039 (**Table 3.7-6)**. As shown, there is ample apron space to provide for this demand, however, given the lack of hangar space, some aircraft that would normally use a hangar if available may currently be parked at a tiedown position instead.

Table 3.7-5
FBO Apron Areas

FBO	Based Aircraft Apron (SY)	Itinerant Aircraft Apron (SY)	Total Area (SY)
Dolphin Aviation	23,125	13,875	37,000
Ross Aviation North	17,000	10,000	27,000
Ross Aviation Hangarminimums	14,000	NA[1]	14,000
Ross Aviation South (Ross Aviation Jet Center)	15,500	18,500	32,000
Total	**69,625**	**42,375**	**110,000**

Source: Data compiled by AID, November 2019
Note: [1] Ross Aviation Hangarminimums apron is dedicated only to based aircraft.

Table 3.7-6 Based Aircraft Apron Requirements			
Year	**Requirement (SY)**	**Existing (SY)**	**Additional Required (SY)**
2019 (Existing)	17,080	69,625	0
2024	17,751		0
2029	18,209		0
2034	18,666		0
2039	19,124		0

Source: AECOM, 2020.
Note: [1] A total of 610 SY was used for calculating required area to accommodate based aircraft.

3.7.1.5 Itinerant Aircraft Apron Requirements

Requirements for tiedown space to accommodate transient aircraft was also estimated. An allowance of 2,100 square yards per aircraft was used to calculate the apron required for transient tiedowns. This allowance is greater than the 610 square yards used to calculate apron requirements for based aircraft tiedowns because all types and sizes of aircraft are parked in the transient tiedown area and a greater apron allowance provides more flexibility in how the spaces are used.

The following methodology was used to calculate the number of aircraft that will require transient parking spaces:

- The number of itinerant aircraft operations that occur on the average day was determined,
- Average day itinerant operations were converted to the number of daily arriving aircraft by diving by two,
- 50 percent of daily arrival aircraft were assumed to be transient aircraft (half of the daily arrivals are assumed to be based aircraft performing itinerant operations),
- No more than 50 percent of the resulting daily transient aircraft operations were assumed to require storage at any given time.

Table 3.7-7 presents the results of the analysis using the methodology cited above. The forecasted apron area requirement in 2039 is 63,919 square yards versus the current 42,375 square yards of apron area dedicated to transient aircraft at both FBOs.

Table 3.7-7 Itinerant Aircraft Apron Requirements			
Year	**Requirement (SY)**	**Existing (SY)**	**Additional Required (SY)**
2019 (Existing)	45,961	42,375	3,586
2024	51,185		8,810
2029	54,870		12,495
2034	59,071		16,696
2039	63,919		21,544

Source: AECOM, 2020.
Notes: [1] A total of 2,100 SY was used for calculating required area to accommodate itinerant aircraft.

3.8 AIR CARGO REQUIREMENTS

Future requirements for air cargo facilities are based on the air cargo forecast presented in **Section 2.0**. The forecast recognized that air cargo at the Airport currently consists almost entirely of Delta Airlines belly cargo on scheduled passenger flights.[22] This cargo is processed at the air cargo facility located east of the fuel farm. Two significant assumptions of the air cargo forecast included the following:

1. All-cargo carriers such as FedEx, UPS, and Amazon will continue to operate out of their current locations and not require future facilities at SRQ.

2. Cargo activity at the Airport will continue to consist entirely of belly cargo on scheduled passenger flights.

Future requirements for air cargo facilities are typically based upon planning factors that account for the type of cargo (e.g., all-cargo, belly-freight, and integrator) and whether the cargo is domestic or international. These factors specify the floor area required in square feet per annual ton of cargo. The factors vary, but usually average between 1.0 and 2.5 square feet[23] per annual ton of cargo. Lower factors indicate a high level of space utilization.

Table 3.8-1 presents cargo facility requirements using historical and forecasted volumes of air cargo at SRQ and a factor of 1.75 square feet per ton of cargo. The table indicates the building floor area requirement is 437 square feet for current conditions and 589 square feet at the end of the planning period. By comparison, the existing air cargo building area is 23,000 square feet and Delta uses 3 of the 6 bays for cargo operations, ground mechanic offices and equipment storage. Therefore, the Airport will not require additional cargo facility space through the forecast period.

Table 3.8-1
Air Cargo Facility Requirements

Year	Enplaned Cargo (lbs.)	Deplaned Cargo (lbs.)	Total Cargo (lbs.)	Total Cargo (tons)	Floor Area Requirement [1] (SF)
2019 (Actual)	257,458	242,017	499,475	249.7	437
2024	277,355	260,721	538,076	269.0	471
2029	298,791	280,871	579,662	289.8	507
2034	321,882	302,577	624,459	312.2	546
2039	346,759	325,962	672,721	336.4	589

Source: AECOM, 2020.
Notes: [1] Throughput Rate: 1.75 ft²/ton

[22] Delta discontinued cargo operations at SRQ in response to COVID-19. It is not known if operations will be reinstated.
[23] TRB ACRP Report 143, *Guidebook for Air Cargo Facility Planning and Development*, 2015.

3.9 SUPPORT FACILITY REQUIREMENTS

3.9.1 AIRCRAFT RESCUE AND FIRE FIGHTING FACILITY (ARFF)

FAA requirements for ARFF vehicles and extinguishing agents are specified in **Table 3.9-1**. These requirements are based upon the length of aircraft serving the Airport and their frequency of operation. Requirements are stated in terms of “Indexes” that begin with the letter “A” for airports served by small aircraft and extend to Index “E” for airports served by large aircraft. Each Index letter defines a range for aircraft length. The Index letter that represents the longest group of aircraft that conducts an average of five or more daily departures is the Index required for the Airport.

Table 3.9-1
ARFF Equipment Requirements

Airport Index	Length[1] of Aircraft in Feet (Representative Aircraft)	Vehicles	Extinguishing Agents	
			Dry Chemicals (Pounds)	Water (Gallon)
A	Less than 90 (ATR-72)	1	1) 500 Sodium Halon or clean agent or 2) 450 Potassium & AFFF[2]	0 100
B	90 to less than 126 (A320 & 737-700)	2	500 Sodium Halon or clean agent & AFFF	1,500
C	126 to less than 158 (737-800 & 757)	3	Same as A above	3,000
D	159 to less than 199 (767)	3	Same as A above	4,000
E	At least 200 (747)	3	Same as A above	6,000

Source: Federal Aviation Regulations, Part 139, Certification of Airports, Subpart D – Operations.
Notes: [1] Length of largest aircraft providing an average of five scheduled departures per day. If there are less than an average of five daily departures by aircraft in a particular index, then the next lower index applies.
[2] AFFF = Aqueous Film Forming Foam

The longest group of aircraft that conducted five or more daily departures at the Airport in 2019 were aircraft in the 126-foot to less than 158-foot range (i.e., Index C). This includes the MD88, MD90, 737-800, 737-900, 757 and A321. The projected critical design aircraft for future commercial passenger operations is the not yet defined New Midmarket Aircraft. A New Midmarket Aircraft is likely to have a length that places it in either Index C or D.

The Airport currently meets the requirements for Index C and previously met the requirements for Index D. Table 3.9-1 indicates that the equipment requirements for Index C and D are similar. The primary difference is an increase in the water requirement. Consequently, significant changes to the ARFF station are not likely to be needed on the basis of equipment requirements associated with an increase to Index D.

Furthermore, given the lack of information regarding a New Midmarket Aircraft at this time and the fact that such an aircraft may not serve the Airport for 10 or more years, it is prudent to continue to plan for an Index C at this time. This issue should be revisited again in the Airport’s next Master Plan Update.

The existing ARFF station is undergoing a renovation in 2020 to renovate interior living space. However, changes to the apparatus bays are not part of the project. Consultation with the ARFF station chief indicates that specific needs include the following:

- **Apparatus Bays** – The existing station provides three bays. However, four bays are desired to enable equipment that is currently located outside to be stored inside the station. Furthermore, the existing bays do not provide drive through capability because the doors on the west side of the station are not large enough to accommodate current fire trucks.

- **Storage Space** – Additional storage space is needed for equipment. It is estimated that 750 additional square feet of storage space is needed.

- **Access Roads** – It was noted that the existing access roads were sized for smaller ARFF vehicles and are deficient for serving modern ARFF vehicles. In particular it was noted that the radii of the road circumventing the station to the east are too small to permit easy maneuvering of vehicles. Furthermore, the road from the station to Taxiway A is both too narrow to let vehicles pass each other and is located too close to the Dolphin aircraft ramp. Tails of large aircraft parked at the near the edge of the ramp can reach to the ARFF road. A shift of the road away from the ramp and a pavement widening would improve safety and facilitate better maneuvering capabilities for ARFF vehicles.

- **Vehicle Parking** – The existing station renovations are eliminating two parking spaces. Furthermore, the existing vehicle parking spaces on the west side of the station conflict with vehicle movements to the first bay door on either side of the station. ARFF personnel estimate that 12 to 16 parking spaces are needed to accommodate vehicles during shift changes, visitors and personnel during training exercises.

- **Emergency Generator** – A new emergency generator is needed to replace the existing one that is reaching the end of its useful life.

- **Exhaust Capture System** – The station does not currently have a system for capturing vehicle exhaust and one is needed.

In consideration of these needs, an additional capital improvement project for the ARFF station should be considered in the Capital Improvement Program.

3.9.2 FUEL FARM

Fuel farm requirements are based upon a number of factors including the Airport's existing fuel storage capacity, the projected increase of aircraft operations, fuel use per aircraft departure, and the desired number of days fuel supply. The Airport's fuel farm is currently operated by Menzies Aviation and consists of three 30,000-gallon above ground Jet-A tanks which currently provide less than a two-day supply of fuel during the peak month. Future fuel storage requirements were calculated assuming a five-day supply of Jet-A fuel is preferred to assure that there are no interruptions to fuel services.

Fuel demand was evaluated using data for January 2020 because it was the peak month for the most recent 12-month period at the time of the assessment. A total of 1,064 air carrier and commuter aircraft departures occurred in January 2020 and 1,757,147 gallons of Jet-A were dispensed. This resulted in an average of 1,652 gallons of Jet-A per departure. This value was then applied to the forecast of air carrier and commuter operations to estimate future Jet-A supply requirements. **Table 3.9-2** shows that 302,539 gallons of Jet-A will be required to provide a 5-day supply during peak month in 2039.

Table 3.9-2
Fuel Supply Requirement (Peak Month)

Year	Air Carrier and Commuter			Average Month Jet-A Demand (gallons)	5-Day Supply (gallons)
	Annual Operations	Departures	Average Month Departures		
2019	17,423	8,712	-	-	-
2020[1]	-	-	1,064[1]	1,757,147[1]	288,846[1]
2024	23,993	11,997	1,000	1,651,748	271,520
2029	25,001	12,501	1,042	1,721,142	282,927
2034	26,101	13,051	1,088	1,796,869	295,376
2039	26,734	13,367	1,114	1,840,447	302,539

Source: AECOM, 2020.
Note: [1] Average month based on January 2020 monthly operations (i.e., the peak month of the last 12 months available data)

The Airport Authority is currently planning to expand the fuel storage capacity of the existing fuel farm by installing up to three additional tanks with a capacity of 102,000 gallons each. Therefore, the assessment of future fuel storage requirements was conducted using 102,000-gallon tanks and an 80 percent limit on useable storage in each tank. This limitation results in 81,600 usable gallons in each of the 102,000-gallon tanks and 72,000 gallons of usable storage (total) in the three 30,000-gallon above ground Jet-A tanks. **Table 3.9-3** presents the resulting days of fuel supply during peak month with the existing 90,000-gallon capacity and one, two or three more 102,000-gallon tanks. The assessment indicates two additional tanks would provide a 5-day supply during peak month with current levels of demand, but it would decrease to 4.1 days of supply by the end of the forecast period.

Table 3.9-3
Number of Days Fuel Supply (Peak Month)

Year	Current 90,000-Gallon Capacity	One Additional 102,000-Gallon Tank	Two Additional 102,000-Gallon Tanks	Three Additional 102,000-Gallon Tanks
2019	1.6	3.5	5.3	7.1
2024	1.4	3.0	4.6	6.2
2029	1.3	2.9	4.4	5.9
2034	1.3	2.8	4.2	5.7
2039	1.3	2.7	4.1	5.5

Source: AECOM, 2020.
Note: Based on peak month average gallons/departure data from March 2019.

3.9.3 AIRPORT MAINTENANCE FACILITIES

Airport maintenance facilities consist of three separate buildings located in the southeast corner of the Airport. These include the Airport Facilities Maintenance Building, the Vehicle Storage Building and a third building used for storing bulk items.

The Airport Facilities Maintenance building consists of a two-story, metal structure that has a footprint of approximately 23,500 square feet. The southern portion of the building consists of several drive-in bays that are used for vehicle and equipment maintenance. This portion of the building has two story clearance to accommodate taller vehicle heights and accommodate equipment such as vehicle lifts

The first floor of the northern portion also has four drive in bays and supports other functions for staff. The second floor of the north portion of the building is used as administrative and office space that houses several airport functions including airport engineering. Airport staff estimates that an additional 2,500 square feet of office space is needed in the Airport Facilities Maintenance building to accommodate current demands. An option of constructing the required office space as a loft area within the vehicle maintenance bays was noted by airport staff.

The Vehicle Storage Building consists of a one-story, high-bay, metal structure that has a footprint of approximately 15,700 square feet. It has a center drive through lane with space for vehicle and/or equipment storage to each side. Approximately 3,000 square feet on the east side of the building consists solely of roof structure and is not enclosed. Various airport vehicles are parked underneath that portion of the building. Consultation with airport staff indicates that approximately 10,000 square feet of space are needed for equipment storage with an additional 16,000 square feet needed for vehicle storage. Staff estimates that future needs for vehicle and storage space will increase by 50 percent during the twenty-year planning horizon of the Master Plan Update.

The third building, informally referred to as the "snake pit", is located west of Old Bradenton Road and south of Rental Car Road. It consists of a metal, one-story 3,000 square foot structure. An additional shed is located adjacent to the building. This structure is scheduled for demolition to accommodate future commercial development on the parcel. Consequently, the storage provided by this structure will need to be replaced at another location on the Airport. Consultation with airport staff indicated that approximately 4,000 to 5,000 square feet is needed to properly accommodate the storage of bulk items in this facility. Staff estimates that no further increase of space will be needed for these items during the twenty-year planning horizon of the Master Plan Update. **Table 3.9-4** presents a summary of the estimated space requirements for airport maintenance facilities.

Table 3.9-4 Maintenance Facility Space Requirements			
Building	**Existing Space (SF)**	**Space Requirement (SF)**	**Additional Space Requirement (SF)**
Airport Facilities Maintenance	23,500 footprint	2,500	2,500
Vehicle Storage	15,700	26,000	10,300
Bulk Storage ”Snake Pit”	3,000 SF + shed	5,000	5,000*

Source: AECOM, 2020.
Notes: * Existing facility to be demolished. Therefore, entire space requirement is needed.

3.10 SUMMARY OF FACILITY REQUIREMENTS

The following provides a summary of the facility requirements identified on the preceding pages.

3.10.1 AIRFIELD FACILITIES

- The existing airfield is projected to provide sufficient capacity to accommodate existing and projected levels of aircraft operations without incurring significant levels of delay. However, based on annual aircraft operations in 2019 the airfield was operating at 66 percent of estimated capacity and is projected to reach 88 percent of capacity by 2039. FAA guidelines recommend that airports begin planning capacity increases when an airfield reaches 60 percent of capacity and begin the construction process when reaching 80 percent of capacity. Therefore, options will be explored for increasing future airfield capacity.
- There are no significant airspace constraints in the vicinity of the airfield. There are obstructions in the runway approaches mostly in the form of tall trees. Airport management is continuing to implement obstruction removal actions to address this issue.
- Aircraft in Design Group D-III are the existing critical aircraft for Runway 14-32 and facilities associated with the passenger terminal. Aircraft in Design Group D-IV are projected to be the future critical aircraft for Runway 14-32.
- The Beech King Air is the existing and projected future critical aircraft for Runway 4-22.
- The existing length and width of Runway 14-32 is sufficient to accommodate existing and projected aircraft operations by the critical aircraft. A runway length assessment was not conducted for Runway 4-22. Its existing length of 5,006 feet is sufficient to accommodate the majority of general aviation operations that use it. It is recommended that Runway 4-22 be maintained at its existing length and width.
- The strength of Runway 14-32 pavement is sufficient to accommodate operations by the critical aircraft. The strength of Runway 4-22 pavement is also sufficient to accommodate the critical aircraft as well as business jets that use the runway on a less than regular basis.

- The blast pads beyond each end of Runway 14-32 meet design standards. The blast pads beyond each end of Runway 4-22 do not meet design standards. However, no erosion issues are currently noted on this runway. The need for blast pads on Runway 4-22 should be further evaluated through the design process when the runway requires rehabilitation.

- The existing RSA's surrounding Runway 14-32 and Runway 4-22 meet design standards.

- The existing ROFA on the south end of Runway 14-32 and east end of Runway 4-22 do not meet design standards due to the presence of the airport service roads. This issue is currently mitigated through the use of stop signs on the service road at the east end of Runway 4-22. Options for resolving the ROFA deficiency on the approach end of Runway 32 will be addressed in the Alternatives section.

- The Approach RPZ to Runway 14 extends off airport property and encompasses land uses defined as being non-compatible by FAA guidance. Non-compatible land uses also exist in the RPZ's on both ends of Runway 4-22. Options for resolving these issues will be addressed in the Alternatives section.

- The OFZs for Runway 14-32 and Runway 4-22 meet the design standard.

- The existing taxiway system meets or exceeds width requirements for the aircraft likely to use each taxiway segment.

- Certain segments of taxiway do not meet design standards due to their geometry or direct connections from aircraft ramps to a runway. Three instances of non-compliant geometry and two instances of direct connections were identified on the airfield. Options for resolving these issues will be addressed in the Alternatives section.

- The hold lines on a few segments of vehicle service road do not met design standards for TOFA's because they do not account for the increased width of TOFA's at intersections. This issue can be easily resolved by remarking the stop bars on the road.

- No holding bays are provided on the airfield. Consultation with air traffic control tower personnel indicated that holding bays are greatly desired on both ends of Runway 14-32. Although land for constructing hold bays is limited, alternatives for their construction will be explored in the alternatives section.

- The only identified improvement to airfield lighting is the installation of REILs on Runway 4.

3.10.2 TERMINAL AREA FACILITIES

- Existing ticket counter and airline ticket office space is adequate to meet demand through PAL 3.

- The Airport has designed new outbound baggage screening and baggage makeup facilities. The proposed facilities will be adequate to meet demand through PAL 3.

- It is projected that the passenger security screening checkpoint will require six lanes at PAL 3 to meet optimum screening and wait times. This finding will need to be reconfirmed in future years because changes to throughput values, Pre-Check use and/or flight schedules may alter this finding.

- Additional gates will be required to meet future passenger demand. It is estimated that one additional gate will be needed to meet demand at PAL 1, two additional gates at PAL 2 and three additional gates at PAL 3. The demand for gates is highly dependent on the number of airlines serving the Airport, their flight schedules and the Authority's leasing method (exclusive use versus common use). Therefore, the demand for gates will need to be monitored on an annual basis.

- Existing holdroom space on Concourse B does not meet the "optimum" LOS for existing conditions. It is estimated that approximately 13,000 square feet of additional space is needed to meet current demand. This requirement will grow to approximately 24,000 square feet by PAL 3.

- The existing allocation of concession space between pre-security and post-security is the exact opposite of what is optimal. More concession space is needed post security and less is needed pre-security. It is projected that 19,000 square feet of additional concessions space will be needed to meet demand at PAL 3 based on current allocations per enplanement.

- Additional restroom space may be needed at PALs 2 and 3. Additional restrooms may also be needed in conjunction with any gate expansions.

- The three existing baggage claim carousels will meet current and future demand through PAL 2. An additional baggage claim carousel and additional hall space will be needed to meet demand at PAL 3.

- The inbound baggage function is located outside and therefore is not space constrained. If this function is enclosed in the future, approximately 5,400 square feet of space would be required through PAL 2 and 7,200 square feet would be required at PAL 3.

3.10.3 GROUND ACCESS, CURBSIDE AND PARKING FACILITIES

- No capacity improvements are needed on Airport Circle to accommodate existing or projected volumes of vehicle traffic.
- Intersections of Airport Circle and Old Bradenton Road at University Parkway currently operate at LOS C or better, but are projected to operate below desirable levels of service at PAL 2 and PAL 3.
- The arrivals and departure curbsides currently operates at LOS A to C, but will degrade to LOS D at PAL 2 without traffic enforcement actions or capacity improvements.
- Additional short-term, long-term and rental car ready/return parking is required at all PALs. In addition, changes to the current parking configuration in the ready/return lot should be considered to improve flow for vehicle returns and reduce lane congestion.

3.10.4 GENERAL AVIATION FACILITIES

- Additional aircraft hangars are needed to meet the projected number of based aircraft. It is estimated that up to 44 additional T-hangars and 263,000 square feet of conventional/corporate hangar space will be needed by 2039.
- Additional apron is needed to meet current and future demand for itinerant aircraft operations. Approximately 3,500 square yards of apron is needed to meet current demand. This will increase to 21,500 square yards of additional apron by 2039.

3.10.5 AIR CARGO FACILITIES

- No additional cargo facilities are needed to meet projected air cargo demand.

3.10.6 SUPPORT FACILITIES

- A variety of improvements to the existing ARFF station are needed. These improvements include an additional apparatus bay for equipment currently stored outside and the creation of drive-through apparatus bays, additional storage space, improvements to access roads around and from the station, expansion of vehicle parking, replacement of the emergency generator and installation of an exhaust capture system.
- Expansion of the fuel farm is needed to provide a 5-day fuel supply for existing conditions. Two 102,000-gallon tanks are needed to provide a five-day fuel supply during peak month conditions with 2019 demand. This requirement will increase to three 102,000-gallon tanks with 2039 demand.

- Additional space is required for airport maintenance facilities to provide office space and storage of equipment and vehicles. An estimated 2,500 square feet of additional office space is needed in the Airport Facilities Maintenance building. An estimated additional 10,000 square feet of storage is needed in the Vehicle Storage Building for existing conditions and will increase an additional 5,000 square feet by the end of the planning period. A 5,000 square foot bulk storage facility is needed to replace the existing building that is planned to be demolished for future commercial development.

SECTION 4.0

Alternatives

SECTION 4.0 ALTERNATIVES

4.1 INTRODUCTION

The Alternatives process examines options for addressing the facility requirements identified in the preceding section. Alternatives are identified for each element of the Airport in the same order that they were addressed in the preceding section.

The alternatives evaluation process examines a range of alternatives and then identifies a preferred alternative for each airfield element. In certain cases, a preferred solution was previously identified through other airport studies or design efforts. In those cases, the preferred alternative is simply incorporated into this study.

Conceptual-level diagrams are provided for each alternative along with a combination of qualitative and quantitative assessments. The assessments include criteria such as the following:

- Capacity increase and/or delay reduction
- Level-of-Service
- Flexibility
- Expandability
- Environmental compatibility (refer to **Appendix A** for constraints)
- Ease of construction
- Phasing considerations
- Order-of-magnitude cost comparison

Certain airport functions may not require the development of alternatives at all due to the limited magnitude of facilities required or limited options or constrained locations for proposed improvements. In those cases, the most logical option will be identified.

The goal of the evaluation is to provide sufficient information to arrive at the selection of a preferred alternative for each airport facility. The selection of a preferred alternative is then presented which may include slight variations to insure that various elements function in a cohesive manner.

4.2 AIRFIELD

4.2.1 AIRFIELD CAPACITY

FAA guidance provided in Order 5090.5 *Formulation of the National Plan of Integrated Airport Systems (NPIAS) and Airport Capital Improvement Plan (ACIP)* states that planning for airfield capacity improvements should begin when aircraft operations reach 60 percent of Annual Service Volume (ASV) and development should begin when aircraft operations reach 80 percent of ASV. Annual aircraft operations at SRQ during 2019 were approximately 66 percent of ASV. It is projected that annual aircraft operations will exceed 80 percent of ASV around 2030 and will increase to 88 percent of ASV at the end of the study period (i.e., 2039).

Events associated with the Coronavirus pandemic during 2020 adversely impacted aircraft operations and therefore, the timeframe for reaching these levels of aircraft operations is now less certain. Nonetheless, alternatives were still examined for providing capacity improvements.

The greatest increases to airfield capacity are obtained through the construction of an additional runway that is parallel to the primary runway. Insufficient property exists at the Airport for the construction of a parallel runway without significant property acquisition and relocation of existing businesses and residential land uses. The high costs associated with that level of action are not justified at the present time and therefore are not explored further in this study.

Less costly capacity improvements and/or delay reduction actions can be considered. These actions include the construction of holding bays for departing aircraft and high-speed exit taxiways for arriving aircraft. Holding bays enable aircraft waiting for a departure clearance or conducting engine run-ups to move clear of the taxiway allowing other aircraft that are ready for departure to bypass them and proceed to the runway.

High speed exit taxiways enable landing aircraft to more rapidly exit a runway thereby decreasing runway occupancy time and, in certain cases, enabling reductions in in-trail separations between arriving aircraft. These exit taxiways are constructed at acute angles in relation to the runway centerline. This allows aircraft exiting the runway to do so at a higher speed compared to standard 90-degree exit taxiway, thereby reducing the amount of time the runway is occupied.

4.2.1.1 Holding Bays Alternatives

Consultation with FAA Air Traffic Control personnel revealed that holding bays near each end of Runway 14-32 would reduce aircraft departure delays by allowing smaller aircraft, especially those conducting flight training, to taxi clear of the taxiway and allow other aircraft to taxi unimpeded to the runway. This is especially important in cases where the other aircraft is a commercial carrier which incurs high operational costs for each minute of delay.

FAA guidance provided in FAA Advisory Circular 150/5300-13A, *Airport Design* indicates that "holding bays should be provided when runway operations reach a level of 30 per hour." A review of historical hourly operations at SRQ during 2019 indicates that Runway 14-32 frequently meets that level of operations.

Holding bays historically consisted of a contiguous area of pavement extending from one side of a taxiway, typically parallel to the taxiway centerline. The FAA no longer supports that configuration and now requires holding bays to accommodate individual aircraft parking positions that ensure adequate wingtip clearance is achieved between each aircraft. **Figure 4.2-1** illustrates a holding bay designed to accommodate two Design Group II aircraft (i.e., aircraft with wingspans less than 79 feet) in accordance with the current design standard.

Figure 4.2-2 shows a potential holding bay location for aircraft departing Runway 14. This is near the north end Taxiway A across from Taxiway A2 and abeam the Runway 14 landing threshold. This is the closest point to the north end of Runway 14-32 that has sufficient space between Taxiway A and the Airport's property line to construct a holding bay. Furthermore, locations farther south have larger drainage features adjacent to Taxiway A. These drainage features would need to be relocated to construct the holding bay and therefore would have higher construction costs.

Figure 4.2-3 shows a potential holding bay location for aircraft departing Runway 32. This is near the south end of Taxiway A north of the fuel farm and air cargo building. This location is the farthest point south that a holding bay could be constructed without conflicting with other airport facilities.

Both Runway 14 and Runway 32 locations conflict with an existing vehicle service road. However, sufficient space exists to reroute the vehicle service road around the Object Free Area associated with each holding bay.

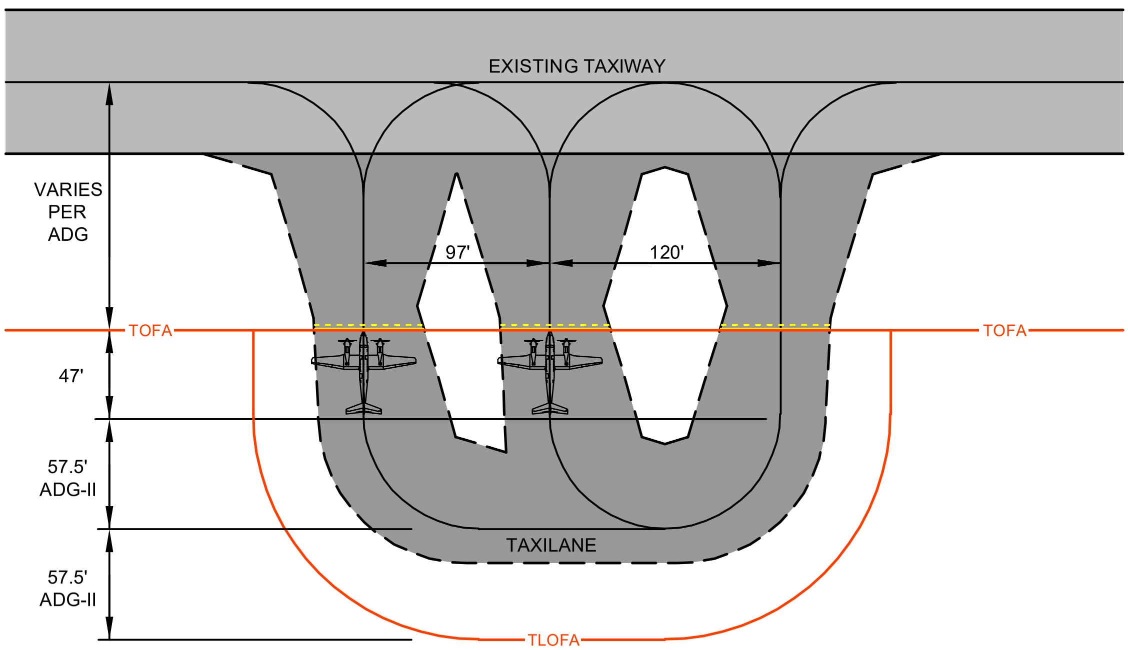
Holding bays were also examined at the north and south ends of Taxiway C but would not offer the same degree of benefits as the ones examined on Taxiway A because no scheduled airline operations use that taxiway. Consequently, the benefits would be limited to general aviation operations. Consultation with Airport Authority personnel indicates that holding bays are preferred only on Taxiway A.

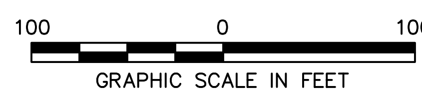
Table 4.2-1 provides a summary of the alternatives' performance on the basis of several criteria.

Table 4.2-1
Evaluation of Holding Bay Alternatives

Alternative	1	2
Description	Holding Bay near North End of Taxiway A	Holding Bay near South End of Taxiway A
Delay Reduction	Would reduce aircraft departure delays especially for commercial aircraft operations	Would reduce aircraft departure delays especially for commercial aircraft operations
Expandability	Could be expanded to three aircraft positions	Could be expanded to three aircraft positions, but would impinge on air cargo building.
Environmental Compatibility	Marginally suitable habitat for gopher tortoise may be present within the unpaved grassy areas. Conduct field survey.	Marginally suitable habitat for gopher tortoise may be present within the unpaved grassy areas. Conduct field survey.
Estimated Cost	$1.2 million	$1.2 million
Ease of Construction	Easy – no impact to other facilities except drainage swale and service road.	Easy – no impact to other facilities except drainage swale and service road.
Phasing Considerations	Service road would need to be relocated prior to construction of holding bay.	Service road would need to be relocated prior to construction of holding bay.

Source: AECOM, 2020.





Source: AECOM, 2020

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HOLDING BAY FOR TWO DESIGN GROUP II AIRCRAFT

FIGURE 4.2-1

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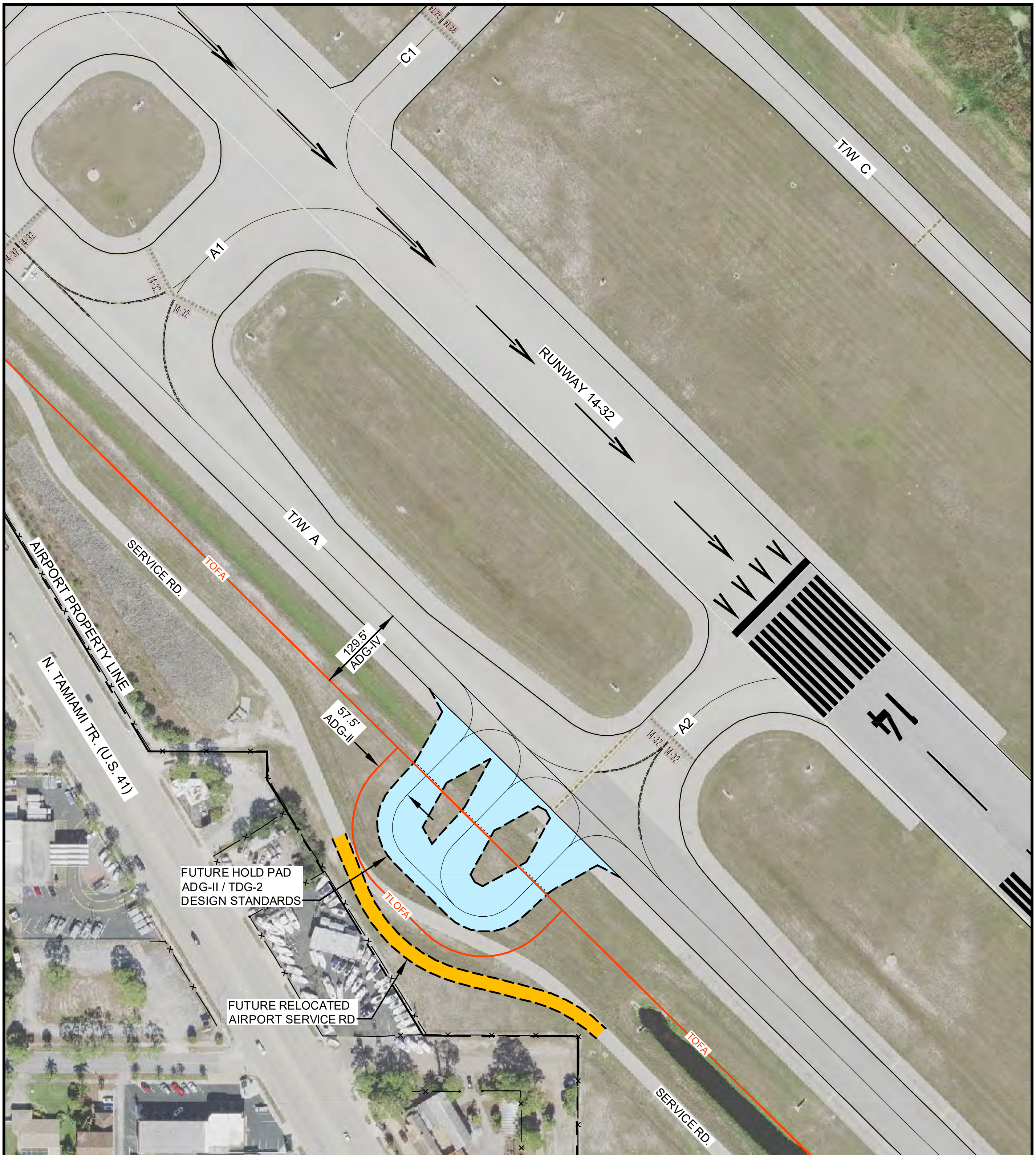

Source: AECOM, 2020

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HOLDING BAY
NORTH END OF TAXIWAY A

FIGURE 4.2-2

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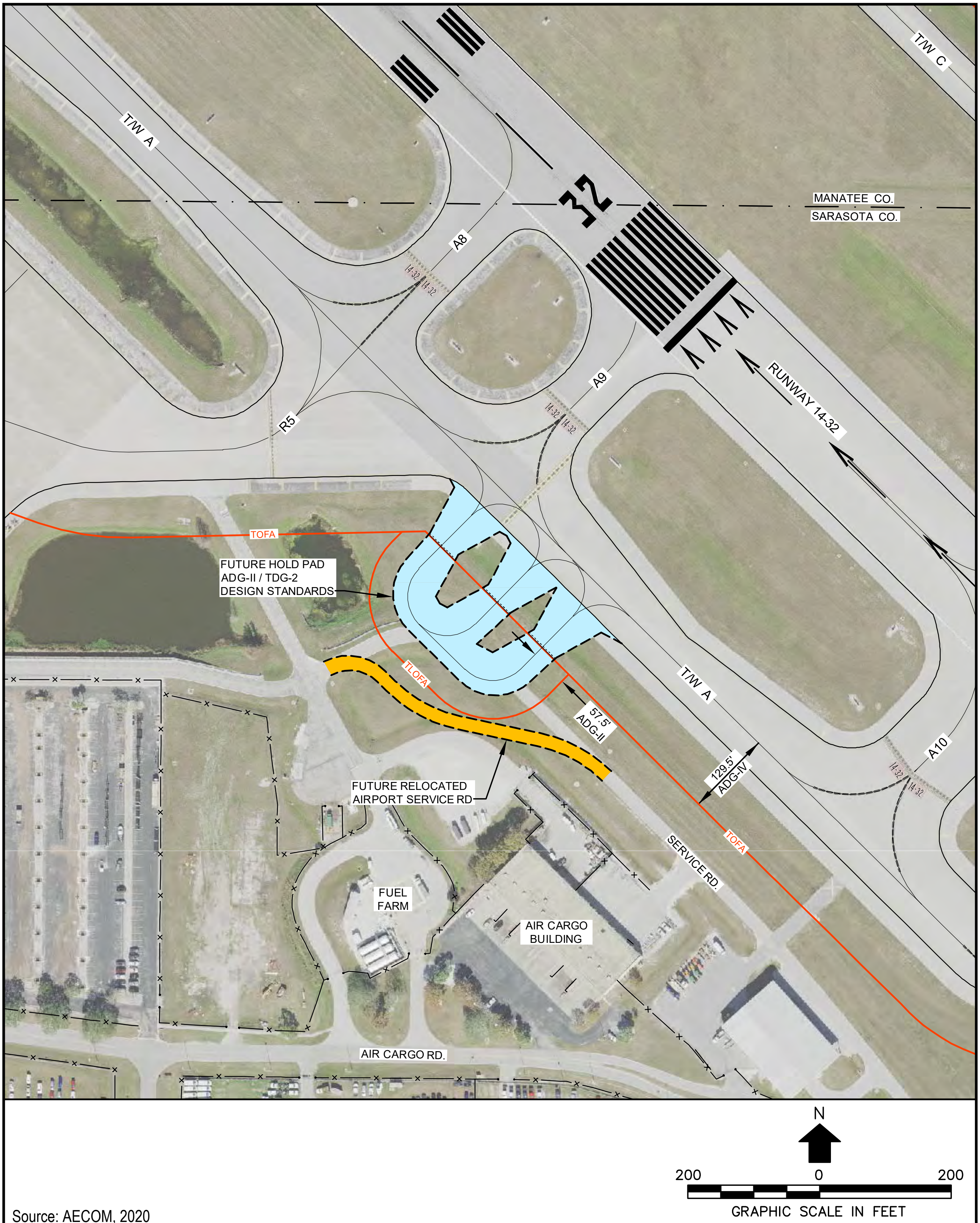

Source: AECOM, 2020

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MASTER PLAN UPDATE

HOLDING BAY SOUTH END OF TAXIWAY A

FIGURE 4.2-3

Preferred Alternative

There is no significant difference between the holding bays on the basis of the evaluation criteria. Consultation with Airport Authority staff indicated that aircraft holding bays near both ends of Taxiway A are preferred for inclusion on the Airport Layout Plan.

4.2.1.2 High-Speed Exit Taxiways

In addition to holding bays, another capacity enhancing action that could be considered when needed is the construction of a high-speed exit taxiway. High speed exit taxiways have an acute angle relative to the runway centerline. This allows aircraft to exit the runway at higher speed and thereby decrease their runway occupancy time which, in turn, increases the number of operations that can be achieved within a period.

Similar to the holding bay guidance, the FAA indicates that high-speed exit taxiways should only be considered for runways that experience more than 30 operations during the peak hour and regularly serve aircraft in Approach Category C. Runway 14-32 meets both of these requirements, but the current level of operational delays on the runway do not appear to justify the need for a high-speed exit at this time. However, this conclusion may change as the runway accommodates higher levels of aircraft operations in the future.

The location of the passenger terminal in relation to Runway 14-32 reveals that a high-speed exit on Runway 14 would allow the aircraft to continue in the same direction as landing after using the exit taxiway and therefore is likely to achieve the delay reduction goal. The opposite conclusion can be drawn for the construction of a high-speed exit on Runway 32. Aircraft using a high-speed exit on Runway 32 would have to reverse direction to reach the passenger terminal. Therefore, a high-speed exit was only examined on Runway 14 and only for aircraft exiting toward Taxiway A and the passenger terminal.

Figure 4.2-4 shows a potential high-speed exit on Runway 14 that would essentially replace Taxiway A7 because the beginning of the exit would begin in the same spot (i.e., 5,060 feet from the Runway 14 landing threshold). The location of this high-speed exit was established by keeping its associated Object Free Area clear of the outermost unit of the Runway 32 Precision Approach Path Indicator (PAPI).

The performance of a high-speed exit in this location was assessed using the computer model Runway Exit Design Interactive Model (REDIM), Version 3 developed by Virginia Tech. The model can evaluate improvements to an existing runway by adding additional exit taxiways including high-speed exits. The assessment examined a variety of common narrow-body aircraft (i.e., the Airbus A320 and A321 and the Boeing 737-800 and 737-900) that operate at the Airport, as well as a common large regional jet (i.e., the Canadair Regional Jet 900 series).

Source: AECOM, 2020

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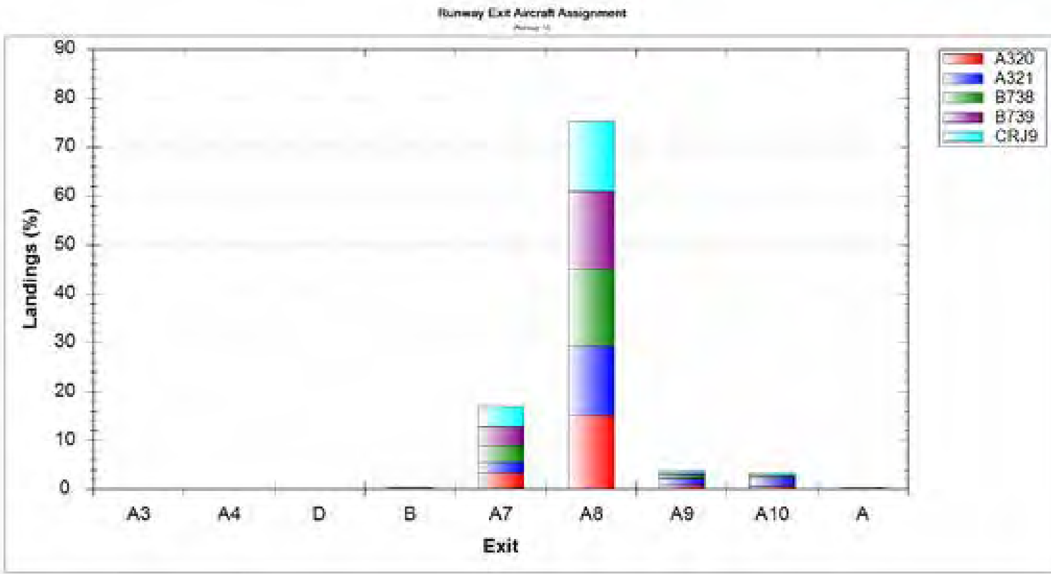
HIGH-SPEED EXIT TAXIWAY ON RUNWAY 14

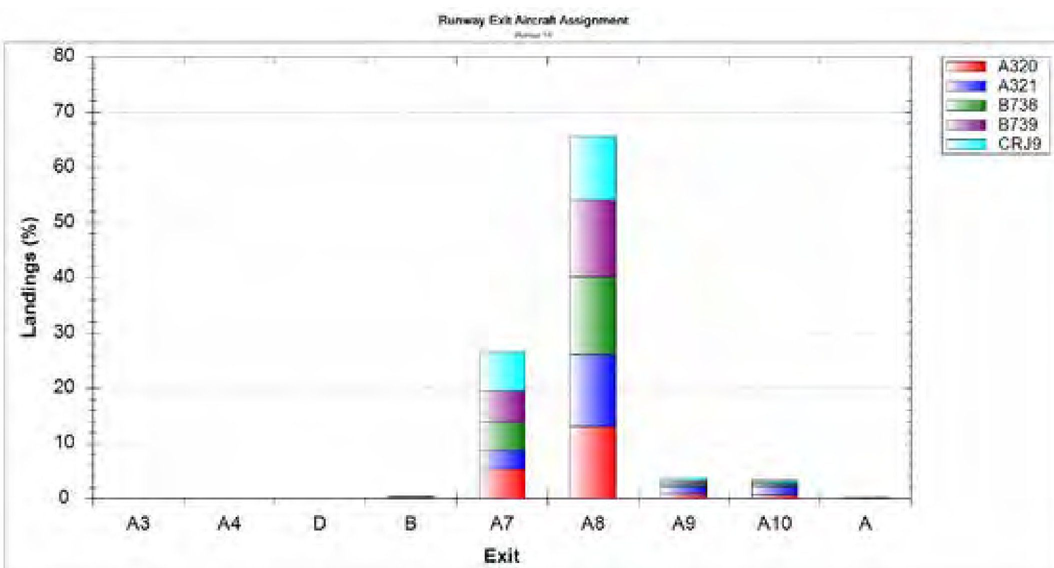
FIGURE 4.2-4

The following graph shows the estimated use of exit taxiways on Runway 14 with the aircraft evaluated. The model estimates that approximately 17 percent of landings would use Taxiway A7 and 75 percent would use Taxiway A8. Smaller percentages of landings would use Taxiways B, A9, A10 and A.



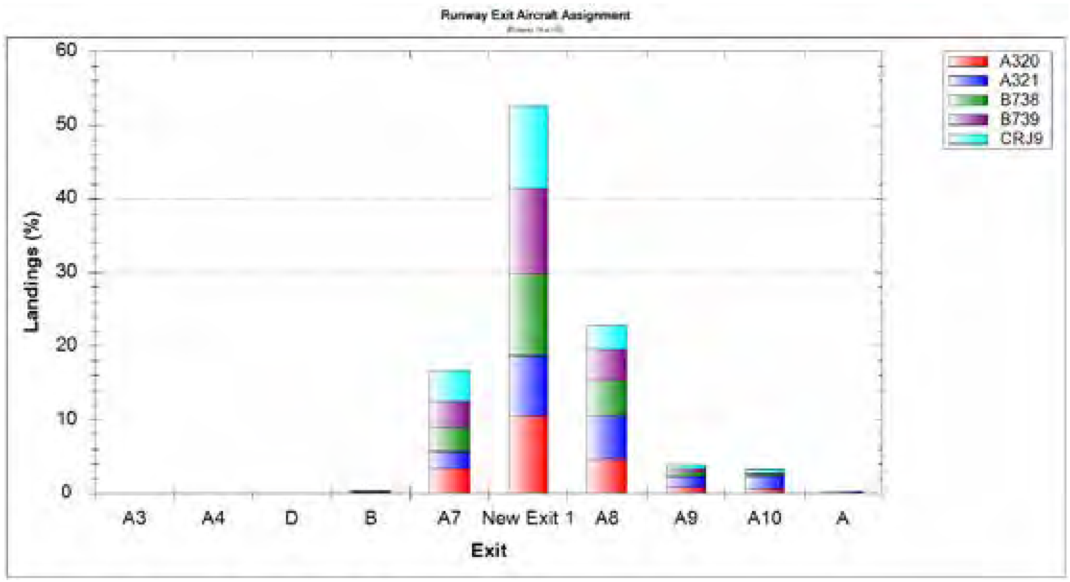
Source: REDIM, Version 3 run by AECOM, 2020.

The following graph shows the estimated use of exit taxiways if Taxiway A7 is changed from its current 90-degree configuration to a high-speed configuration. It is estimated that the use of Taxiway A7 would increase from 17 percent with the current 90-degree exit to 26 percent with a 30-degree high speed exit. The use of Taxiway A8 would decrease by approximately the same percentage. Use of the other exits would remain essentially the same.



Source: REDIM, Version 3 run by AECOM, 2020.

REDIM was also run to see where a new high-speed exit taxiway should optimally be located. The results of the analysis indicated that a new high-speed exit taxiway would optimally be located approximately 5,740 feet from the Runway 14 landing threshold. A new high-speed exit at that location would be used by approximately 53 percent of landings. Use of Taxiway A7 would remain approximately 17 percent, but the use of Taxiway A8 would decrease to approximately 23 percent. Use of the other exit taxiways would not change significantly.



Source: REDIM, Version 3 run by AECOM, 2020.

The results of the analysis indicated that changing Taxiway A7 from a 90-degree exit to a high-speed exit would not be an effective method of capturing a higher percentage of landings and thereby reducing runway occupancy time. A new high-speed exit would need to be located further from the Runway 14 landing threshold (i.e., 5,740 feet) to capture a significant percentage of landings and operate efficiently.

Construction of a high-speed exit taxiway in the optimal location identified by the model (see **Figure 4.2-5**) presents a problem. Aircraft taxiing along the centerline of the proposed high-speed exit would roll out beyond the entrance of Taxiway R5 that leads to the passenger terminal. Consequently, the high-speed would not lead commercial aircraft to their intended destination. For this reason, the construction of a high-speed exit taxiway on Runway 14 is not recommended as a future airfield capacity improvement.

Source: AECOM, 2020

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MASTER PLAN UPDATE

HIGH-SPEED EXIT TAXIWAY AT OPTIMAL LOCATION

FIGURE 4.2-5

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4.2.2 AIRSPACE CONSTRAINTS

The Facility Requirements section noted that airspace obstructions exist within the approach and departure paths beyond the end of each runway. The majority of these obstructions consist of vegetation (i.e., tall trees) that has grown into the approach and/or departure surfaces defined by the FAA. However, penetrations to the 20:1 Obstacle Clearance Surface to Runway 22 also exist at the Airport. These penetrations consist of streetlight penetrations and a lack of additional clearances over East 15th Street to account for tall vehicle heights. Alternatives for addressing these airspace issues are included in the following section.

4.2.3 RUNWAY OBJECT FREE AREAS

The Facility Requirements section noted that the existing Runway Object Free Areas (ROFAs) on the southeast end of Runway 14-32 and the northeast end of Runway 4-22 do not meet FAA design standards due to the presence of vehicle service roads on the approach end of Runway 32 and the approach end of Runway 22. Alternatives for correcting the (ROFA) deficiencies are described in this section.

4.2.3.1 Runway 14-32

The deficiency on the approach end of Runway 32 consists of the inner vehicle service road cutting through the southeast corner of the ROFA. The ROFA deficiency is 117 feet short of the required length and 112 feet short of the required width (see **Figure 4.2-6**). The total area that does not meet the design standard is approximately 6,462 square feet.

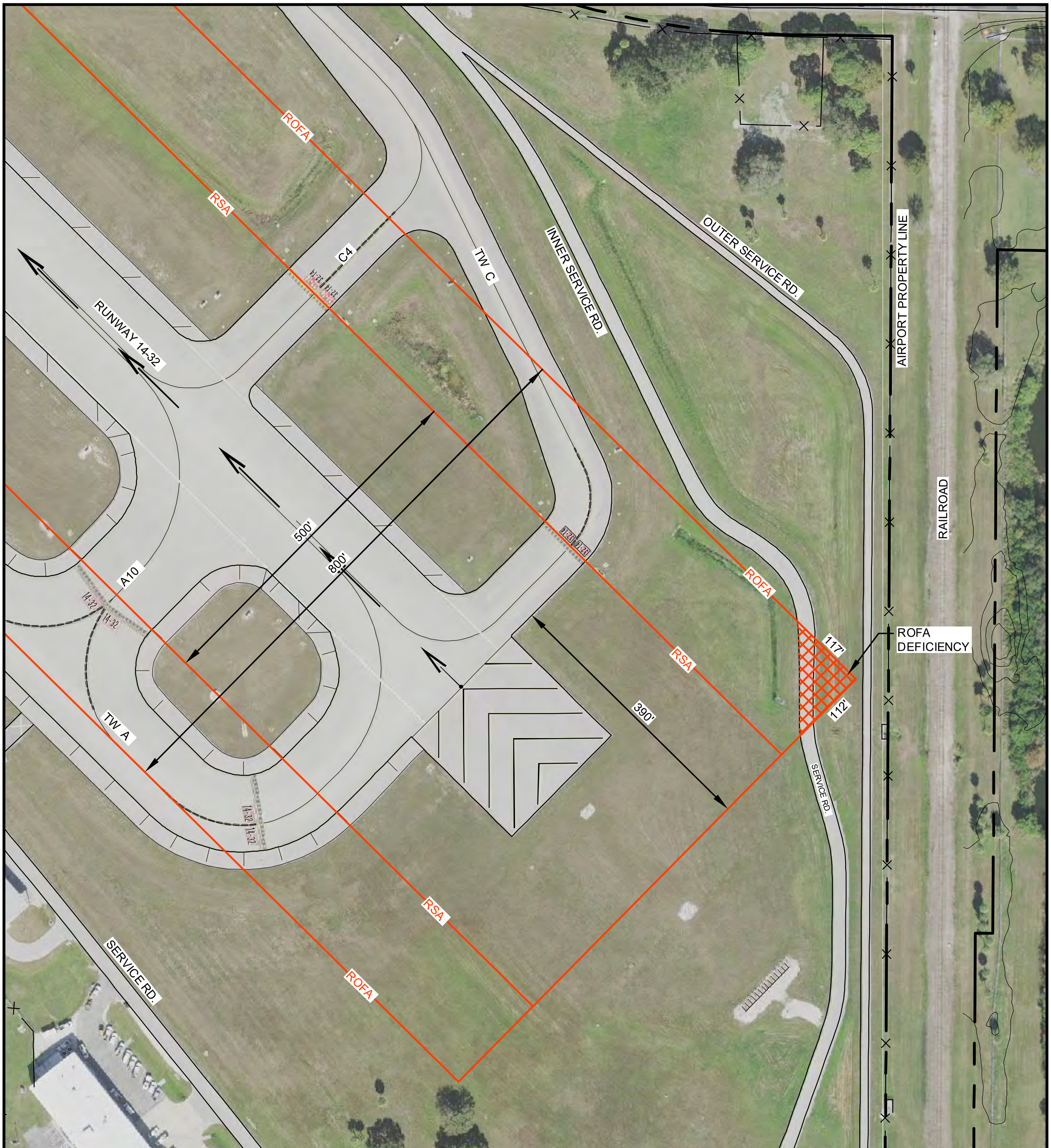
Alternatives considered to address this deficiency consist of the following:

- **Alternative 1 – Relocate Inner Service Road** – this alternative consists of relocating a small portion of the inner service road outside of the ROFA and removing the portion of service road within the ROFA.

- **Alternative 2 – Modify and Use Outer Service Road** – this alternative consists of connecting the inner service road to the outer service road in conjunction with improvements to the outer service road and removal of the portion of the inner service road that is within the ROFA. The outer service road would then be used in lieu of the inner service road.

- **Alternative 3 - Revise Declared Distances** – this alternative consists of revising the existing declared distances on Runway 14 to provide the required ROFA prior to the inner service road.

Additional alternatives that were not considered include shortening or shifting Runway 14-32. Those alternatives would entail significantly greater capital costs and/or impacts to airfield operations and were not considered for further study.



Source: AECOM, 2020

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RUNWAY 14-32 ROFA DEFICIENCY

FIGURE 4.2-6

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Descriptions and evaluations of these alternatives are provided on the following pages. The following criteria were used in the evaluation process.

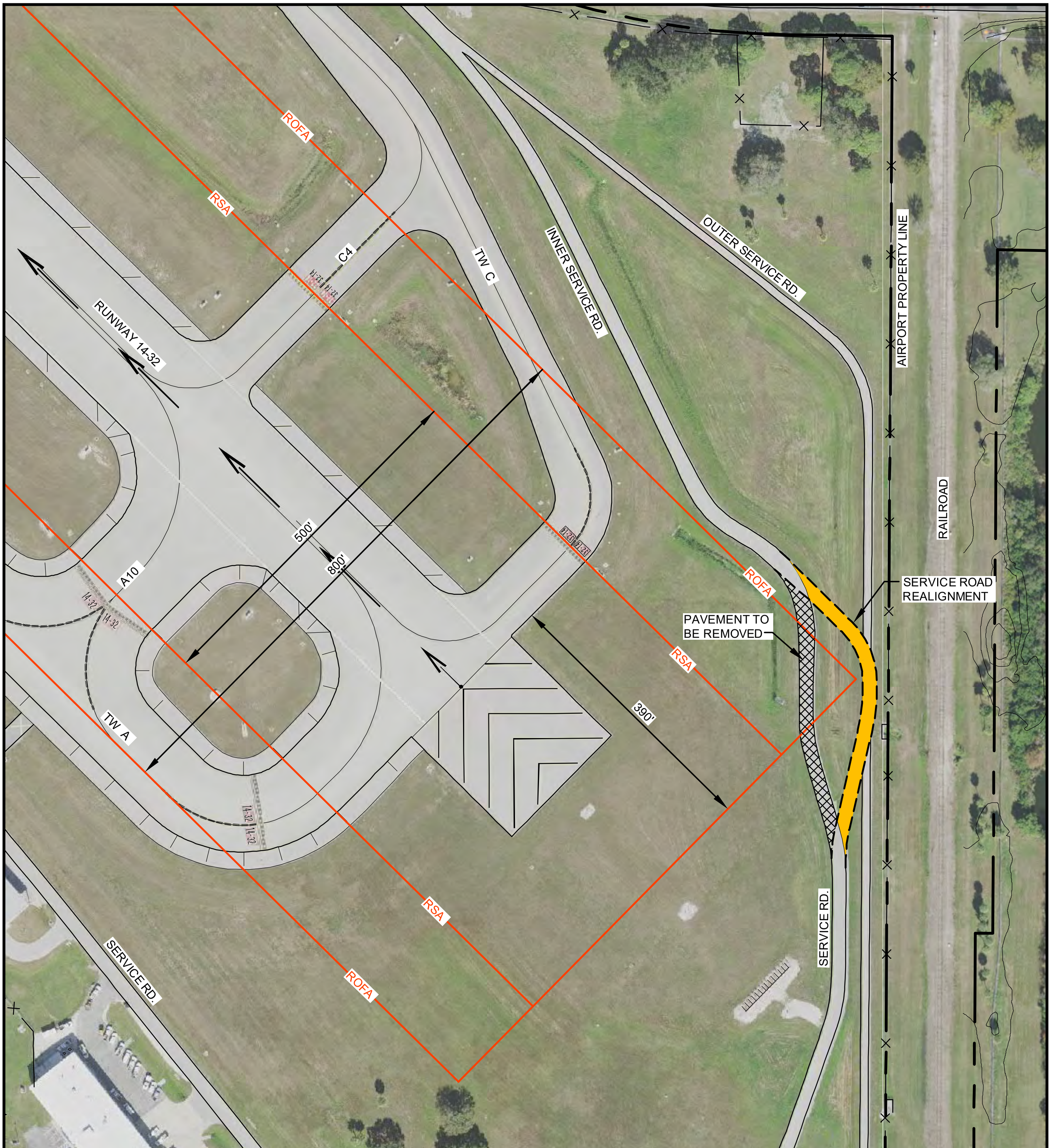
- Compliance with the Design Standard
- Operational Impacts
- Flexibility
- Construction Challenges
- Degree of Environmental Impacts
- Estimated Cost

The following paragraphs describe how each alternative performs with respect to these criteria.

Alternative 1 – Relocate Inner Vehicle Service Road

Figure 4.2-7 depicts a potential relocation of the inner service road to just outside of the ROFA on the approach end of Runway 32. The proposed rerouting would connect the inner service road to the outer service road and then back. The length of road requiring relocation is approximately 431 feet. The following bullets provide an evaluation of this alternative.

- **Compliance with the Design Standard** – Alternative 1 would bring the ROFA into full compliance with the design standard width of 800 feet and length of 1,000 feet.
- **Operational Impacts** – Alternative 1 would not result in any operational impacts following construction. Operational impacts during construction may consist of shortening Runway 14-32 to ensure that no jet blast from departures on Runway 32 impact the work site or closing the runway for construction during nighttime hours.
- **Flexibility** – This alternative would place a portion of the inner service road on the alignment of the outer service road. A decision regarding whether to keep both service roads would need to be made during the design process.
- **Construction Challenges** – A drainage pond and swale is located between the inner and outer service roads. These features would need to be accounted for and accommodated during design to ensure proper airfield drainage is maintained.
- **Degree of Environmental Impacts** – Marginally suitable habitat for gopher tortoise may be present within the unpaved grassy areas. Prior to construction of any proposed project, a survey of appropriate habitats within the project area should be performed. This project should receive environmental clearance through a documented categorical exclusion.
- **Estimated Cost** – The estimated cost for relocating a portion of the Inner Vehicle Service Road is approximately $130 thousand.



Source: AECOM, 2020

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ALTERNATIVE 1
RELOCATE INNER SERVICE ROAD

FIGURE 4.2-7

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Alternative 2 – Modify and Use Outer Service Road

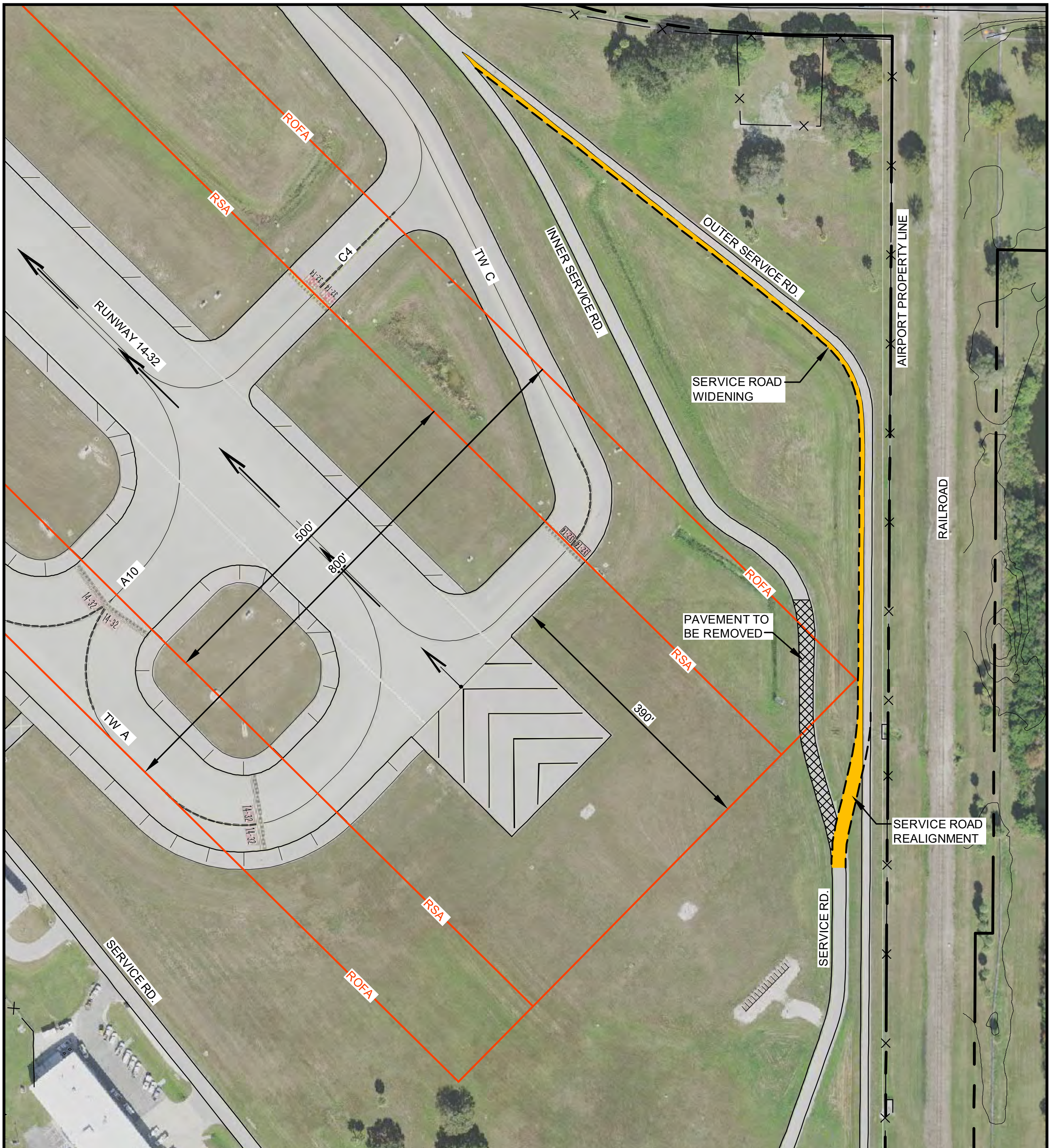
Figure 4.2-8 depicts Alternative 2. It consists of widening the outer service road from its existing width of 12 feet to a width of 18 feet (i.e., the same width as the inner service road) and connecting the inner service road to it. This would allow the outer service road to be used in lieu of the inner service road and would include the removal of the portion of the inner service road that is currently within the limits of the ROFA. The length of outer service road requiring improvement is approximately 1,420 feet.

This alternative also provides the benefit of providing improved access to airport property on the east side south of W University Parkway and west of the Airport's property line. The following bullets provide an evaluation of this alternative.

- **Compliance with the Design Standard** – Alternative 2 would also bring the ROFA into full compliance with the design standard width of 800 feet and length of 1,000 feet.
- **Operational Impacts** – Alternative 2 would not result in any impacts to airfield operations following construction. Operational impacts during construction may consist of temporarily shortening Runway 14-32 to ensure jet blast from departures on Runway 32 does not impact the work site or closing the runway for construction during nighttime hours.
- **Construction Challenges** – This alternative should minimize the impacts to existing drainage pond and swale located between the two roads by avoiding the need to connect back to the inner service road.
- **Degree of Environmental Impacts** – Marginally suitable habitat for gopher tortoise may be present within the unpaved grassy areas. Prior to construction of any proposed project, a survey of appropriate habitats within the project area should be performed. This project should receive environmental clearance through a documented categorical exclusion.
- **Estimated Cost** – The estimated cost for improvement to and use of the outer service road is $395 thousand.

Alternative 3 - Revise Declared Distances on Runway 14

Figure 4.2-9 presents the currently published declared distances for Runway 14. These declared distances provide a fully compliant Runway Safety Area (RSA), but do not provide a fully compliant ROFA (see figure insert).



Source: AECOM, 2020

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ALTERNATIVE 2 MODIFY & USE OUTER SERVICE ROAD

FIGURE 4.2-8

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Source: AECOM, 2020

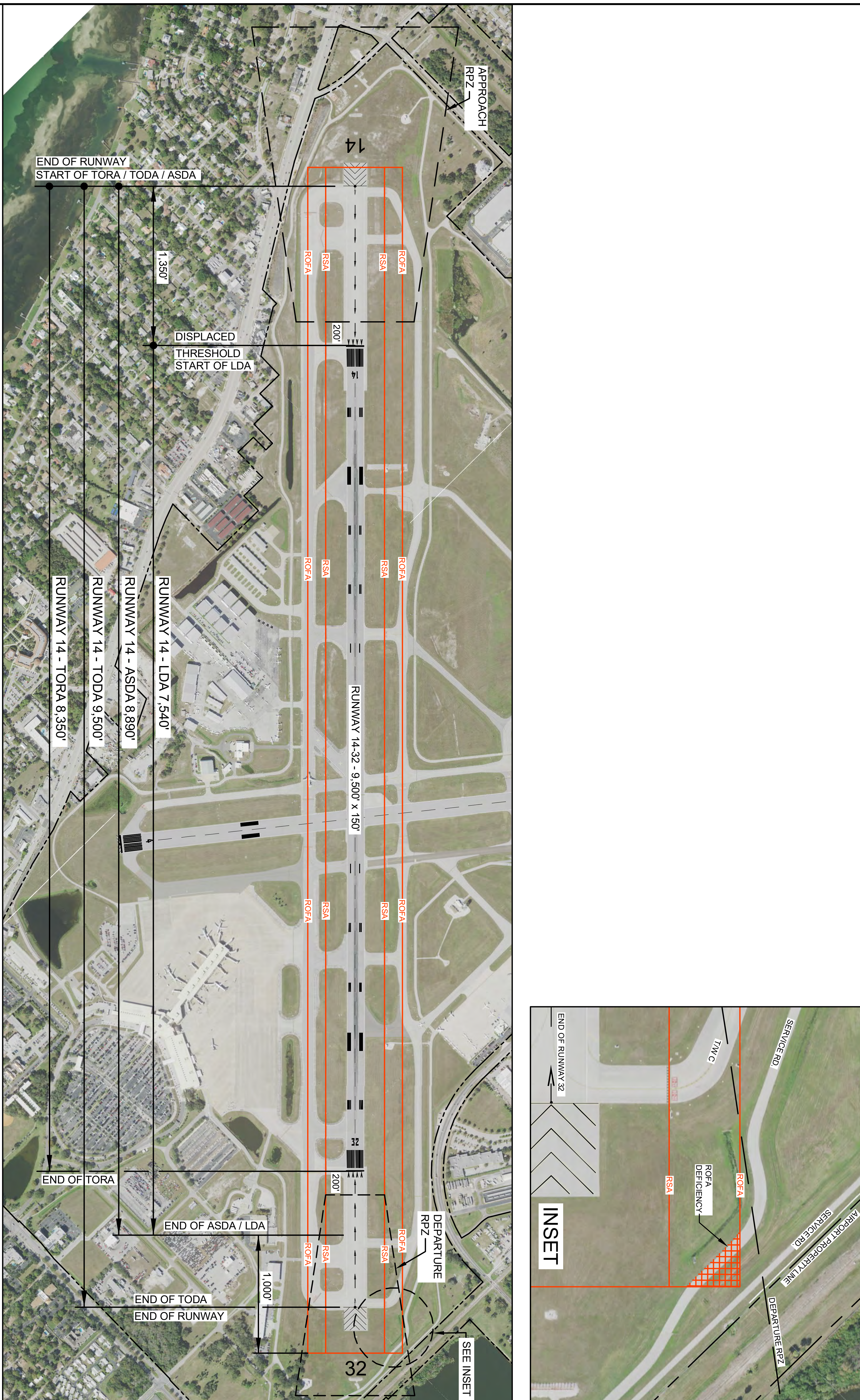

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FIGURE 4.2-9

ALTERNATIVE 3
REVISE DECLARED DISTANCES ON RUNWAY 14

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MASTER PLAN UPDATE

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Table 4.2-2 shows the resulting changes to declared distances on Runway 14 with implementation of Alternative 3 compared to the currently published declared distances. The results indicate that the Accelerate-Stop Distance Available (ASDA) and Landing Distance Available (LDA) would be reduced by 117 feet to remove the inner vehicle service road from the required 1,000-foot distance for the ROFA. The Takeoff Distance Available and the Takeoff Run Available would not change.

Table 4.2-2
Declared Distances on Runway 14 with Alternative 3
(All dimensions in feet)

Declared Distances	Currently Published	With Alternative 3	Net Change
TODA	9,500	9,500	0
TORA	8,350	8,350	0
ASDA	8,890	8,773	-117
LDA	7,540	7,423	-117

Source: AECOM, 2020.

The following bullets provide an evaluation of this alternative.

- **Compliance with the Design Standard** – Alternative 3 would provide full compliance with the ROFA design standard on the southeast end of the runway.
- **Operational Impacts** – Alternative 3 would decrease the ASDA and LDA lengths by 117 feet and therefore has the potential to adversely impact aircraft departure weights for certain operations on Runway 14. This would typically include certain air carrier and business jet departures operating at high takeoff weights during hot day conditions. The number of operations that would actually be impacted is not known, however, the runway length analysis provided in Section 3.0 indicates that the A321 and B737-900 would be impacted when operating at Maximum Takeoff Weight.
- **Construction Challenges** – None.
- **Degree of Environmental Impacts** – None.
- **Estimated Cost** – There would not be a capital construction cost associated with this alternative. Cost would be limited to airport staff time and effort to implement the new declared distances.

Preferred Alternative

Alternative 2 is recommended as the preferred alternative for implementation. This alternative will minimize changes to existing drainage features and provide improved access to the east side of airport property. It is anticipated that property on the east side will be developed for additional airport maintenance facilities as described in **Section 4.7.3**.

4.2.3.2 Runway 4-22

The ROFA deficiency on the approach end of Runway 22 consists of the Airport's vehicle service road being within its eastern corner (see **Figure 4.2-10**). The ROFA is 45 feet short of the required length and 34 feet short of the required width. The total area that does not meet the design standard is approximately 756 square feet.

In addition to having a ROFA deficiency, the approach end of Runway 22 also does not meet FAA design standards for the runway's approach due to obstacles within the 20:1 Obstacle Clearance Surface (OCS). Obstacles that currently penetrate the OCS include 15th Street East when accounting for vehicle heights and some tall trees. FAA airspace regulations specify that 15 feet of vertical clearance should be included when evaluating airspace clearances over public use roadways. This clearance accounts for the height of tall vehicles such as tractor trailer trucks that traverse the road.

Lastly, the entrance taxiways at both ends of Runway 4-22 do not meet FAA design standards because they connect to Runway 4-22 on a slant rather than a 90-degree angle. This configuration does not maximize pilot visibility of operations and therefore does not meet standards.

In light of the multiple design standards issues associated with Runway 4-22, alternatives in this section address all three items rather than examining the ROFA deficiency in isolation and then examining the other issues in subsequent sections. This results in more comprehensive solutions.

Two alternatives were identified and examined for addressing the design standards issues on Runway 4-22. One additional alternative was identified and examined at the request of Airport Authority personnel to explore what additional options may be possible if the critical aircraft for Runway 4-22 increases to Design Group C at some point in the future.

Alternatives examined include the following:

- **Alternative 1 – Shift Runway 4-22** – this alternative entails shifting the runway toward the southwest to provide the required ROFA prior to the vehicle service road at the northeast end of the runway. This alternative also addresses the 15 Street OCS penetration and entrance taxiway configuration issues.
- **Alternative 2 – Revise Declared Distances** – this alternative entails shortening the declared distances on both ends of the runway to provide the required ROFA prior to the vehicle service road. This alternative also include displacing the Runway 22 landing threshold to meet OCS requirements and improvements to the entrance taxiways at both ends of the runway.
- **Alternative 3 – Install Engineered Materials Arresting Systems (EMAS)** – this alternative was explored at the request of Airport Authority staff. The primary purpose of this alternative was to see if the design standards for Approach Category C aircraft could be accommodated by installing an EMAS on both ends of the runway.

Source: AECOM, 2020

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RUNWAY 4-22
ROFA DEFICIENCY

FIGURE 4.2-10

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These alternatives are discussed in the following paragraphs.

Alternative 1 – Shift Runway 4-22

Figure 4.2-11 depicts Alternative 1. The alternative proposes a combination of shortening the runway on its east end and extending the runway on its west end. The net result of these actions would be a 45-foot shift of the runway to the west. The purpose of these actions is to enable the runway to meet applicable FAA design standards while maintaining a minimum length of 5,006 feet for aircraft operations in both directions.

Specific changes on the east end of the runway include relocating the physical end of pavement 45 feet to the west. This relocation would provide sufficient space to provide the required 300 feet of ROFA prior to reaching the vehicle service road for operations on Runway 4. The alternative also proposes displacing the landing threshold on Runway 22 by 140 feet. This would provide the required 15 feet of vertical clearance between the OCS and 15^{th} Street East.

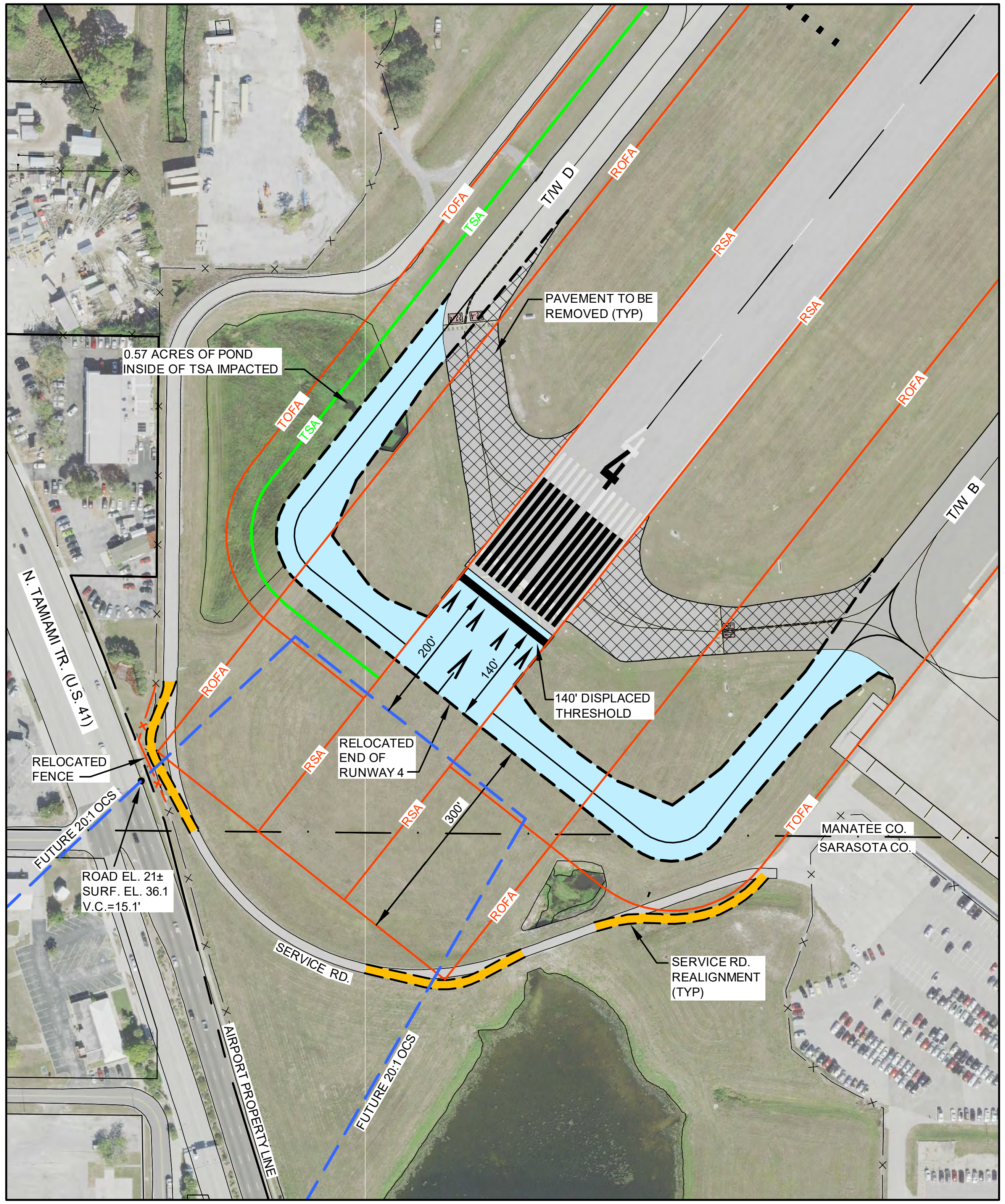
Specific changes on the west end of the runway include extending the physical end of pavement 185 feet to the west. This extension would replace the 185 feet of runway length lost on the east end through the combination of the 45-foot relocation and the 140-foot displacement of the landing threshold. A displaced landing threshold of 140 feet is also recommended on the west end of the runway. This displacement would provide the required 15 feet of vertical clearance between the OCS and US 41.

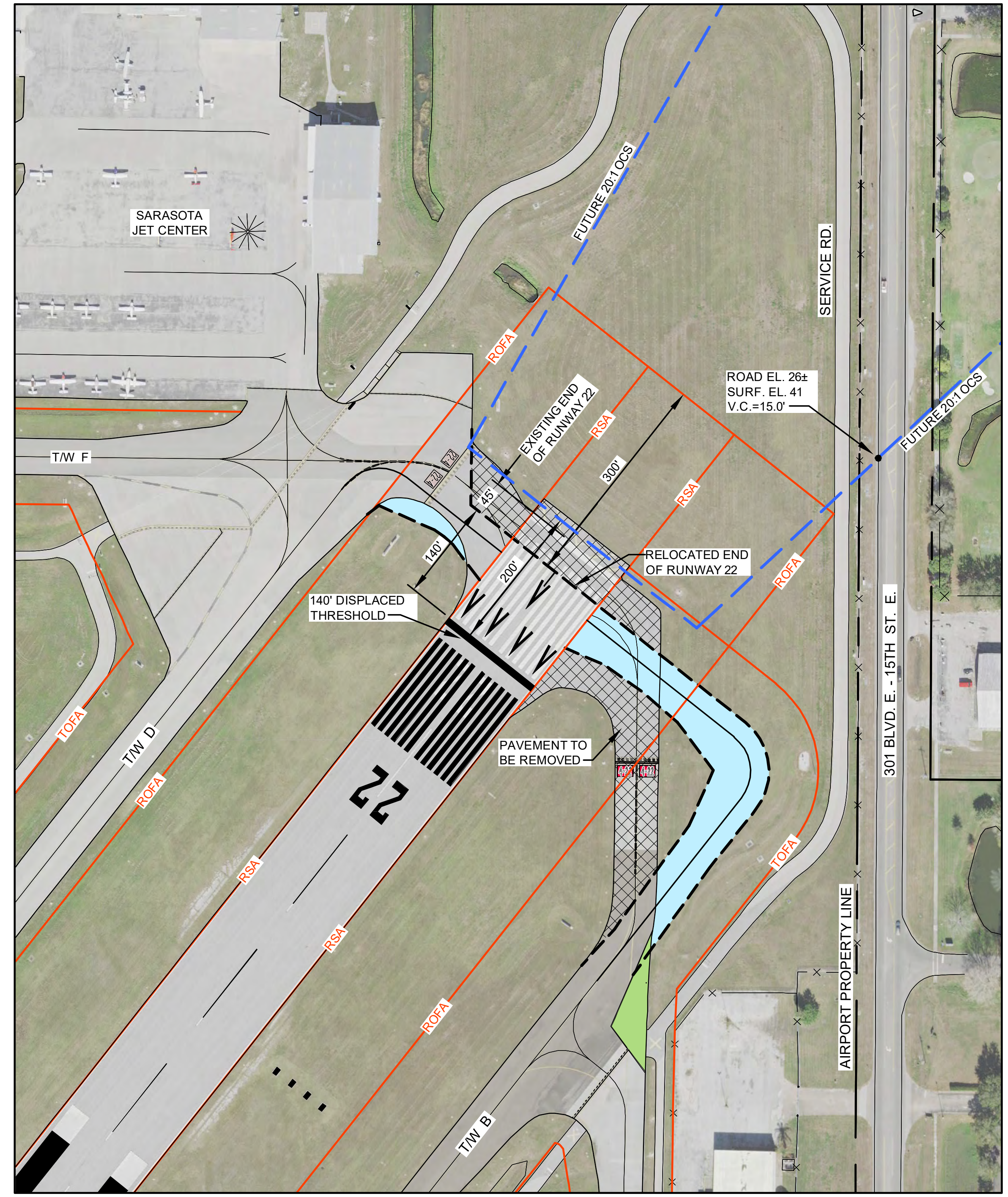
This alternative requires numerous other capital improvements including the reconfiguration of the portion of Taxiway B and Taxiway D at each end of the runway, the relocation of Precision Approach Path Indicators (PAPIs) on both ends of the runway, the relocation of Runway End Identifier Lights (REILs) on the approach end of Runway 22, modification to runway edge and threshold lights, and changes to pavement markings.

The alternative would also require redesign of the instrument approaches to both ends of the runway. The following bullets evaluate this alternative.

- **Compliance with the Design Standard** – Alternative 1 would bring the ROFA into full compliance with the Design Group II standard width of 500 feet and length of 300 feet. It would also provide the required 15 feet of vertical clearance between the OCS and 15th Street East and bring the entrance taxiways at both ends of the runway into compliance with design standards.

- **Operational Impacts** – Alternative 1 would require the temporary closure of the runway during construction. No operational impacts to aircraft operations would occur after construction is completed.





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Source: AECOM, 2020

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ALTERNATIVE 1 - SHIFT RUNWAY 4-22

FIGURE 4.2-11

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- **Flexibility** – This alternative provides operational flexibility by maintaining a minimum operational length of 5,006 feet on Runway 4-22 in both directions. This will keep the runway operational for smaller commercial aircraft operations as well as the majority of general aviation aircraft operations. The resulting declared distances with this alternative are illustrated in **Figure 4.2-12**. The Accelerate-Stop Distance Available will increase to 5,146 in both directions, but all other declared distances will remain 5,006 feet.

- **Construction Challenges** – This alternative will require modifications to the water detention pond west of the Runway 4 landing threshold. The extension of Taxiway D would reduce the water storage capacity of that pond and would require storage capacity to be replaced in another location.

- **Degree of Environmental Impacts** – Approximately 0.6 acres of a stormwater pond would be displaced northwest of Runway 4 endpoint. Authorization to alter stormwater management would be required from SWFWMD. Marginally suitable habitat for gopher tortoise may be present within the unpaved grassy areas. Prior to construction of any proposed project, The Authority would need to survey appropriate habitats within the project area for gopher tortoises. The anticipated environmental documentation required for this project would be an environmental assessment.

- **Estimated Cost** – The estimated cost for shifting Runway 4-22 is $3.9 million.

Alternative 2 – Shorten Declared Distances on Runway 4-22

Alternative 2, shown in **Figure 4.2-13,** would displace the Runway 22 landing threshold by 185 feet to provide 15 feet of vertical clearance for the OCS over 15th Street East and shorten the runway's existing declared distances to account for the ROFA deficiency at the northeast end of the runway. Entrance taxiways at both ends of the runway would also be reconstructed at 90-degree angles as part of this alternative.

Shortening the existing declared distances would reduce operational lengths in both directions. **Table 4.2-3** shows the change from existing declared distances in both directions.

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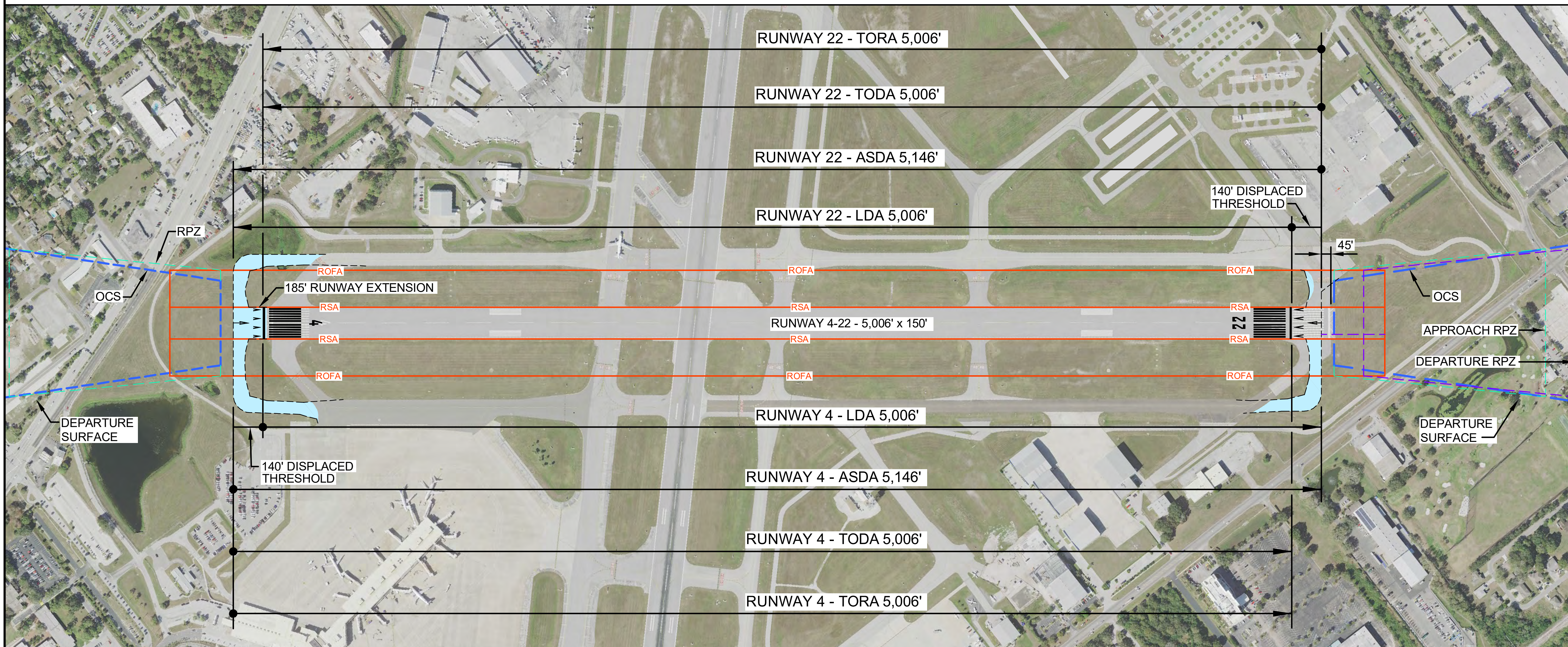

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RESULTING DECLARED DISTANCES WITH ALTERNATIVE 1

FIGURE 4.2-12

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Source: AECOM, 2020

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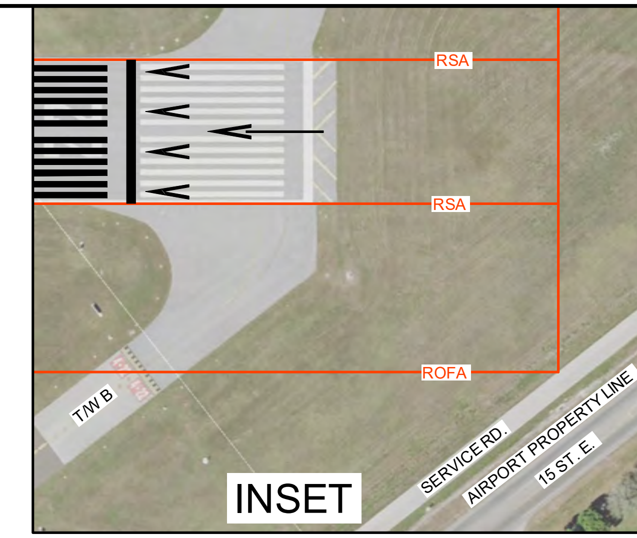

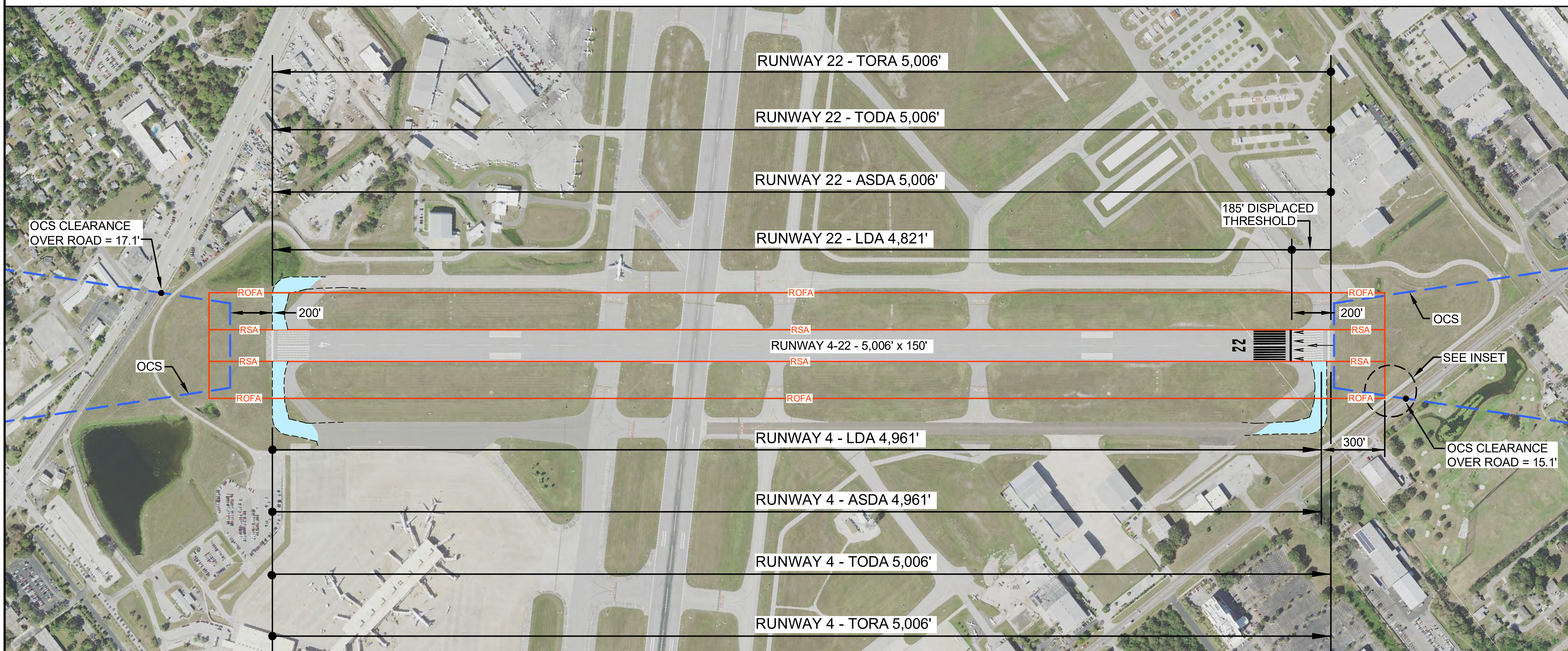

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Source: AECOM, 2020

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MASTER PLAN UPDATE

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ALTERNATIVE 2

SHORTEN DECLARED DISTANCES ON RUNWAY 4-22

FIGURE 4.2-13

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Table 4.2-3
Declared Distances on Runway 4-22 with Alternative 2
(All dimensions in feet)

Declared Distances	Currently Published	With Alternative 2	Net Change
Runway 4			
TODA	5,006	5,006	0
TORA	5,006	5,006	0
ASDA	5,006	4,961	-45
LDA	5,006	4,961	-45
Runway 22			
TODA	5,006	5,006	0
TORA	5,006	5,006	0
ASDA	5,006	5,006	0
LDA	5,006	4,821	-185

Source: AECOM, 2020.

The following bullets evaluate this alternative.

- **Compliance with the Design Standard** – Alternative 2 would provide the required length of ROFA prior to the vehicle service road. It would also provide the required 15 feet of vertical clearance between the OCS and 15th Street East and bring the entrance taxiways at both ends of the runway into compliance with design standards.

- **Operational Impacts** – Alternative 2 would permanently shorten certain operational lengths on both ends of Runway 4-22 to 4,961 feet. Some aircraft insurance policies and/or company operating procedures mandate a minimum runway length of 5,000 feet for operations and therefore, this alternative may decrease the number of aircraft that can use Runway 4-22. Likewise, shorter runway lengths may adversely impact payload and/or range capabilities of aircraft using the runway. While these aircraft operations could use Runway 14-32 on occasions when required to meet their operational demands, there may be times when prevailing wind conditions favor the use of Runway 4-22. The number of aircraft operations that would be adversely impacted is difficult to determine without more detailed data regarding destinations and payloads, but it can be concluded that this alternative would generate some degree of adverse impacts to existing and future aircraft operations.

- **Flexibility** – This alternative may reduce operational flexibility by decreasing runway use options for certain operators. In those instances, Runway 14-32 will be the only option.

- **Construction Challenges** – Implementation of a displaced threshold on Runway 22 would require closing the runway for a period to make the required changes to pavement markings and lighting, as well as to relocate the PAPI on Runway 22. The existing instrument approach procedure to Runway 22 would need to be redesigned to the relocated landing threshold.

- **Degree of Environmental Impacts** – Approximately 0.2 acres of a stormwater pond would be displaced northwest of Runway 4 endpoint. Authorization to alter stormwater management would be required from the Southwest Florida Water Management District (SWFWMD). Marginally suitable habitat for gopher tortoise may be present within the unpaved grassy areas. Prior to construction of any proposed project, The Authority would need to survey appropriate habitats within the project area for gopher tortoises. It is anticipated that an environmental assessment would be the appropriate level of environmental documentation to obtain environmental clearance of this alternative.

- **Estimated Cost** – The estimated cost for displacing the Runway 22 landing threshold, shortening the declared distances and reconfiguring the entrance taxiways at both ends of the runway is approximately $2 million.

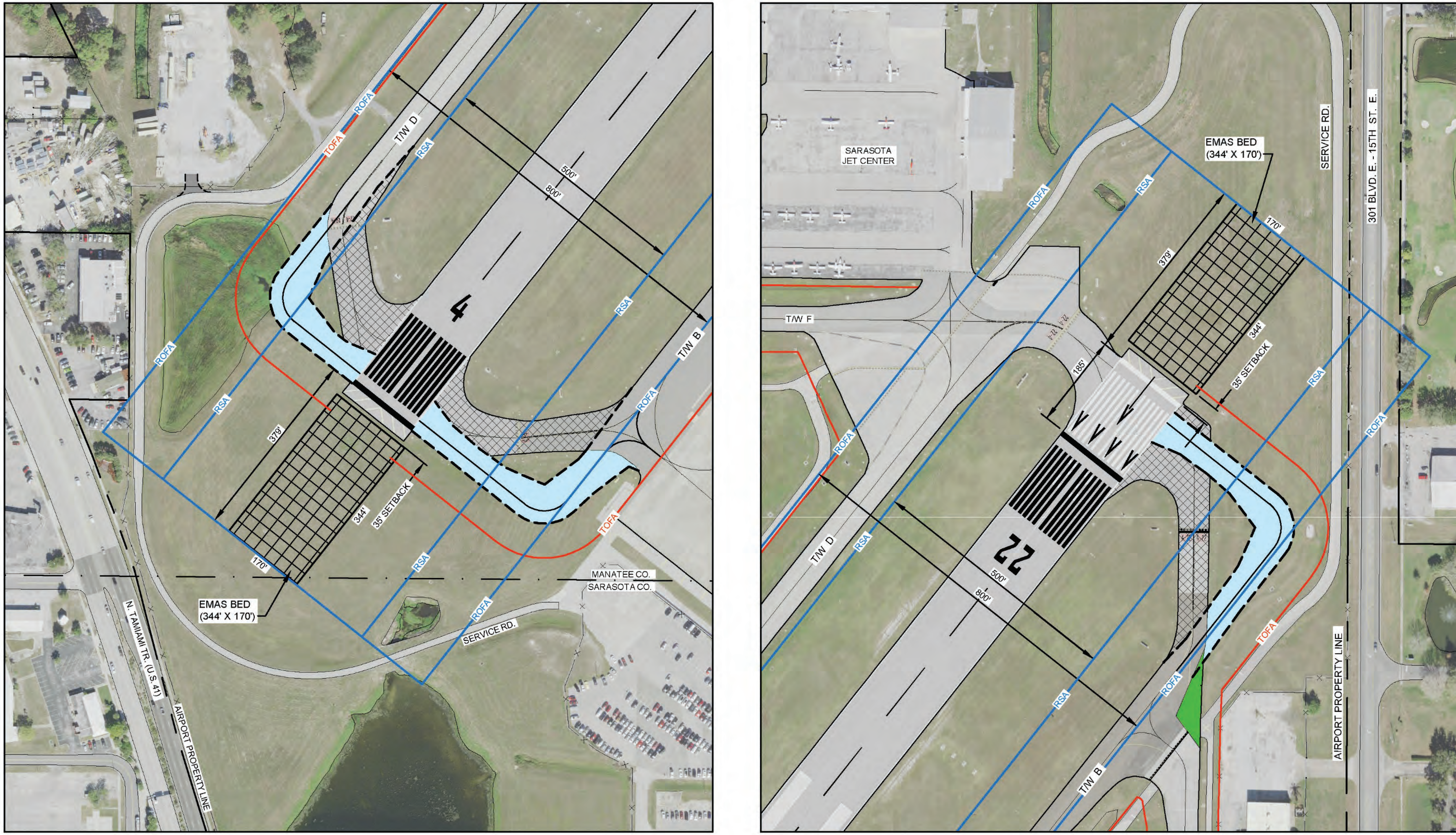
Alternative 3 – Install an Engineered Materials Arresting System (EMAS)

The Facility Requirements section noted that the Beech King Air (a Design Group B-II aircraft) is the existing critical aircraft for Runway 4-22. Although operations by C-II and C-III aircraft occur on Runway 4-22, they do not account for 500 annual operations which is the FAA defined threshold for becoming the critical aircraft. If operations by Approach Category C aircraft exceed the threshold in the future, the dimensional requirements for the Runway Safety Area and the ROFA will increase. The ROFA would increase to a width of 800 feet and a length that extends 1,000 feet beyond the physical end of pavement and Alternatives 1 and 2 would no longer be adequate to provide a ROFA that meets design standards. Consequently, an EMAS alternative was examined to assess if it could provide the ability to accommodate Approach Category C aircraft.

Runway Safe (the current manufacturer of EMAS) modeled EMAS requirements at both ends of Runway 4-22 assuming Approach Category C aircraft. Please refer to **Appendix B** for details of the modelling effort.

The assessment indicated that a bed length of 344 feet would be needed at both ends of the runway with a setback of 35 feet from the threshold. The installation would provide stopping capability for the critical group of aircraft with a runway exit speed of 70 knots. **Figure 4.2-14** depicts the installation of EMAS on both ends of Runway 4-22. The figure reveals that even with the EMAS the larger RSA and ROFA requirements associated with Approach Category C aircraft cannot be met. The RSA and ROFA on the northeast end of the runway would extend into 15 Street East.

A 185-foot displacement of the Runway 22 landing threshold and the reconfiguration of the entrance taxiways at both ends of Runway 4-22 would also be needed with this alternative to meet design standard requirements for OCS clearance over 15th Street East and taxiway design requirements.



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ALTERNATIVE 3 - INSTALL EMAS ON RUNWAY 4-22

FIGURE 4.2-14

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Source: AECOM, 2020

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The following bullets evaluate this alternative.

- **Compliance with the Design Standard** – Alternative 3 is not capable of meeting design standards associated with Approach Category C.
- **Operational Impacts** – Alternative 3 would require a temporary closure of the runway during construction of the EMAS and the displacement of the Runway 22 landing threshold. This alternative would shorten the Landing Distance Available on Runway 22 by 185 feet to a length of 4,821 feet.
- **Flexibility** – This alternative would retain operational flexibility by maintaining the existing runway length of 5,006 feet on Runway 4-22 and keeping the runway operational for smaller commercial aircraft operations as well as general aviation aircraft.
- **Construction Challenges** –Implementation of a displaced threshold on Runway 22 would require closing the runway for a period to make the required changes to pavement markings and lighting, as well as to relocate the PAPI on Runway 22. The existing instrument approach procedure to Runway 22 would need to be redesigned to the relocated landing threshold.
- **Degree of Environmental Impacts** – Approximately 0.2 acres of a stormwater pond would be displaced northwest of Runway 4 endpoint. Authorization to alter stormwater management would be required from SWFWMD. Marginally suitable habitat for gopher tortoise may be present within the unpaved grassy areas. Prior to construction of any proposed project, The Authority would need to survey appropriate habitats within the project area for gopher tortoises. It is anticipated that an environmental assessment would be the appropriate level of environmental documentation to obtain environmental clearance of this alternative.
- **Estimated Cost** – The estimated cost for installing EMAS on Runway 4-22 is $16 million. This includes approximately $14 million for the acquisition and installation of EMAS and an additional $2 million for threshold relocation and taxiway construction costs.

<u>Preferred Alternative</u>

Alternative 1 - Shift Runway is the preferred alternative for the resolution of existing deficiencies to design standards on Runway 4-22 including the ROFA. This alternative would maintain existing runway length while providing the required amount of ROFA and OCS clearance at both ends of the runway and would resolve non-standard geometry for the entrance taxiways at both ends of the runway. Furthermore, the alternative would eliminate the potential for any adverse impacts to aircraft operations on Runway 4-22 and would maintain maximum flexibility for airport operations including any period when the primary Runway 14-32 must be closed for maintenance or in the event of an accident.

4.2.3.3 Runway Protection Zones

As previously described and shown in the Facility Requirements section (please refer to Figure 3.4-5), the Sarasota-Manatee Airport Authority owns most, but not all properties within the Runway Protection Zones (RPZs) on the approach ends of Runways 14, 4 and 22. FAA guidance recommends that airports exercise control of properties within the limits of the RPZ through fee simple ownership and clear the entire RPZ of all above ground objects. In cases where that is not practicable, FAA guidance recommends that avigation easements be obtained or, at a minimum, zoning ordinances be enacted to control land uses.

Alternatives for bringing the RPZ's into compliance with FAA guidance include the following:

- Fee Simple Acquisition
- Acquisition of Avigation Easements
- Implementation of Zoning Controls

These alternatives are further described and explored in the following paragraphs.

Alternative 1 – Fee Simple Acquisition

Fee simple acquisition would entail purchasing all parcels in the RPZs not currently owned by the Airport Authority. **Table 4.2-4** details current land uses, total acreage and just value (as determined by the Sarasota County and Manatee County Property Appraiser's office) of the parcels within each RPZ that is not currently owned by the Airport Authority.

Table 4.2-4
RPZ Land Use and Acreage of Unowned Parcels

Runway Protection Zone	Current Land Uses	Acreage	Just Value[1]
Approach to Runway 14	Commercial and Residential	1.8	$1.4
Approach to Runway 4	Residential and Institutional	9.4	$9.6
Approach to Runway 22	Commercial	3.7	$0.5
Total		**14.9**	**$11.5**

Source: Sarasota and Manatee County Property Appraiser's websites, 2020.
Notes: [1] In millions of dollars.

Acquisition of these properties would be subject to property appraisals at the time of their intended acquisition and therefore may cost more or less than the property's "just value" specified by each county's property appraiser.

Advantages associated with this alternative include the fact that it would achieve complete control of each parcel and would enable removal of land uses and structures considered incompatible under FAA land use guidelines. It would also ensure that these parcels are kept clear of any natural or man-made items that could become obstructions to each runway's approach surface.

Disadvantages associated with this alternative include the fact that current owners may not be willing sellers, the high cost of purchasing the parcels, the removal of parcels from local tax rolls and the cost of any maintenance needed on the parcels acquired. Furthermore, consultation with Airport Authority personnel revealed that past attempts to acquire properties associated with the New College in the approach to Runway 4 were unsuccessful through the legislative process.

Alternative 2 – Acquisition of Avigation Easements

Avigation easements consist of the purchase of specific rights on parcels owned by another party. They can take several forms and may grant certain rights to the easement recipient and/or restrict certain rights of the property owner. Avigation easements typically restrict owners' rights regarding the type and/or height of structures on the property according to the airport height zoning.

Advantages of acquiring avigation easements compared to fee simple acquisition include their lower cost and the ability to ensure that obstructions can be prevented and/or removed. They also ensure that compatible land uses are maintained in cases of currently vacant properties and that no additional incompatible land uses are introduced on currently developed properties. Lastly, the parcel remains active on local tax rolls.

Disadvantages include the fact that they do not remove land uses that are considered incompatible under FAA land use guidance and still require coordination with the property owner for the removal of any natural obstructions. Another disadvantage is the difficultly associated with determining the proper cost of an avigation easement compared to fee simple acquisition. Easement costs are typically arrived at through a property appraisal process that considers the fair market value of the property without the easement and with the easement. The difference between the two appraisal values typically establishes the cost of the easement. This process is best accomplished with the assistance of consultants who specialize in this type of appraisal process.

Alternative 3 – Implementation of Zoning Controls

The use of zoning controls for achieving land use compatibility in RPZ's is most advantageous in the case of new greenfield airport sites were no existing incompatible land uses exist. Consequently, zoning is not as useful in cases where incompatible land uses already exist. For this reason, this alternative was not further explored.

Preferred Alternative

The selection of a preferred alternative is highly dependent on two factors: agency funding for mitigation measure and the willingness of current owners to sell. It is recommended that the property acquisition be pursued in cases of willing sellers and that avigation easements be acquired in cases where owners are not willing, but are willing to entertain an easement. All properties within the RPZ's not currently owned by the Airport Authority will be proposed for acquisition or easement acquisition. However, parcel acquisitions or easement acquisitions will be contingent on the receipt of federal and/or state funding.

4.2.3.4 Taxiways

The Facility Requirements section noted that several segments of taxiways on the existing airfield do not meet FAA design standards. FAA Advisory Circular (AC) 150/5300-13A, *Airport Design* specifies design methods that should be followed when designing new taxiways and improving existing taxiways. The overall goal of the design methods is to “enhance safety by avoiding runway incursions” and to “enable safe and efficient taxiing by airplanes while minimizing excess pavement.” The guidance specifies that taxiway geometry should be improved “whenever feasible” which is typically interpreted as being whenever a segment of taxiway requires rehabilitation or reconstruction.

The design methods specify a series of taxiway layout conditions that are undesirable and should be corrected. Two of these conditions occur on the existing airfield and include the following:

- **Reduced Visibility Intersections** – taxiways that intersect runways at less than 90-degree angles provide a lower level of visibility to the left and right than taxiways that intersect at 90 degrees. Therefore, the AC recommends that angled exits not be used for runway entrances or crossing points.
- **Direct Access from Ramps to Runways** – the AC specifies that taxiways should not provide direct access from a ramp to a runway without first requiring a turn. Direct access is not recommended.

Existing taxiway segments that include one or more of these conditions include the following:

- **Taxiways Associated with the Ends of Runway 4-22** - both ends of Taxiway B provide less than a 90-degree angle at the runway entrances. The southwest end of Taxiway D also provides less than a 90-degree angle at the Runway 4 entrance.
- **Taxiway A4** – provides a direct connection from the Dolphin Aviation ramp to Runway 14-32 without any turns.

Figure 3.4-7 in Section 3.0 provides illustrations of these conditions. This section describes potential solutions for bringing each of these taxiway segments into compliance with FAA design standards.

4.2.3.5 Entrance Taxiways on Runway 4-22

Alternatives that address the less than 90-degree angle entrance taxiways at both ends of Runway 4-22 were previously presented in conjunction with solutions for the ROFA (Section 4.2.3). Therefore, no further evaluation is needed for this item.

4.2.3.6 Taxiway A4

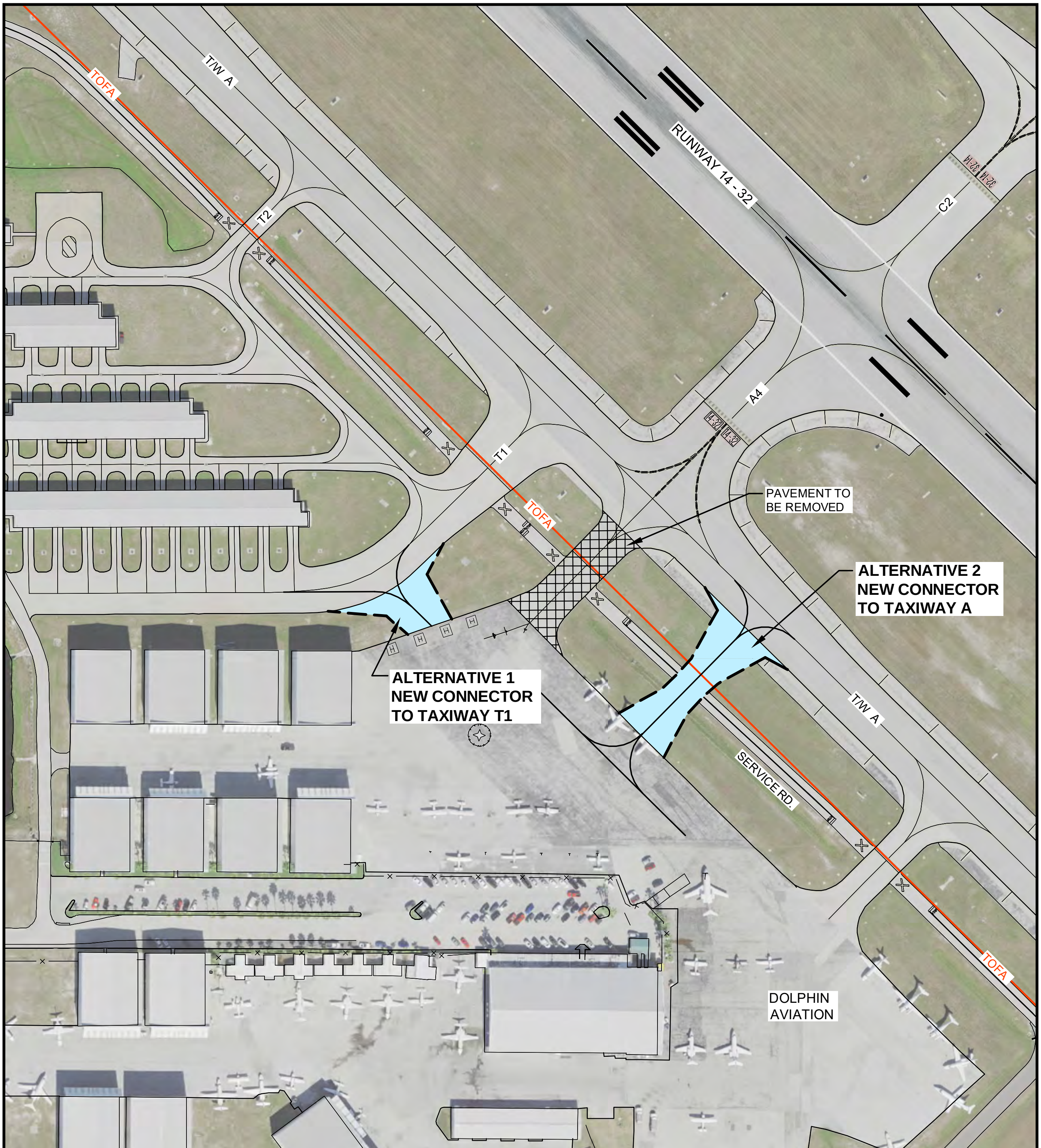
Potential solutions for making Taxiway A4 compliant with FAA design standards include removing the segment from the Dolphin Aviation ramp to Taxiway A and replacing it with a new taxiway connection. Alternative 1 proposes constructing a new taxiway connection to Taxiway T1, while Alternative 2 would construct a new taxiway connection to Taxiway A approximately 250 feet southeast of its existing location. Both of these alternatives are shown in **Figure 4.2-15**. **Table 4.2-5** summarizes an evaluation of these alternatives.

Table 4.2-5
Evaluation of Taxiway A4 Alternatives

Alternative	1	2
Description	(New connection to T1)	(New Connection to A)
Compliance with the Design Standard	Would provide full compliance.	Would provide full compliance.
Operational Impacts	Pilots may not realize that they need to taxi onto T1 to access the connection to the Dolphin ramp. The new connection would eliminate aircraft parking spaces on north edge of the ramp.	Aircraft parking positions on the ramp would shift north to where the old connection was located.
Construction Challenges	No significant construction challenges, but requires appropriate drainage features.	No significant construction challenges, but requires appropriate drainage features.
Environmental Impacts	Marginally suitable habitat for gopher tortoise may be present within the unpaved grassy areas. Prior to construction of any proposed project, survey appropriate habitats within the project area for gopher tortoises.	A portion of a drainage swale would be displaced requiring authorization from SWFWMD. Marginally suitable habitat for gopher tortoise may be present within the unpaved grassy areas. Prior to construction of any proposed project, survey appropriate habitats within the project area for gopher tortoises.
Estimated Cost	$199 thousand	$412 thousand

Source: AECOM, 2020.

Alternative 2 is recommended as the preferred alternative due to fact that it would be more easily seen by pilots taxiing on Taxiway A and therefore is likely to be more intuitive to pilots as an entrance to the Dolphin ramp.



Source: AECOM, 2020

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ALTERNATIVES FOR TAXIWAY A4

FIGURE 4.2-15

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4.3 TERMINAL ALTERNATIVES

The Facility Requirements section noted that only a few passenger terminal elements will require expansion to meet future passenger demand. **Table 4.3-1** provides an illustration of how well existing terminal elements are projected to meet existing and forecasted levels of passenger demand.

Table 4.3-1
Terminal Element Performance By Planning Activity Level (PAL)

Terminal Element	Existing	PAL 1	PAL 2	PAL 3
Airline Check-In Counters				
Airline Ticket Office Space				
Federal Inspection Services				
Outbound Baggage Systems				
Passenger Security Screening Checkpoint				
Gates				
Holdrooms				
Circulation				
Concessions				
Restrooms		*	*	*
Baggage Claim				
Arrival Hall	*	*	*	*

Source: AECOM, 2020.
Notes: * These elements may need expansion for reasons other than passenger demand.

Legend:

Demand Less than Capacity	
Demand at or Approaching Capacity	
Demand Exceeds Capacity	

The table indicates that outbound baggage systems and the passenger security screening checkpoint will be brought into balance with demand on the basis of projects that are either currently on-going or planned for implementation in the short-term. Currently planned improvements to outbound baggage systems will meet all demand requirements through the 20-year planning horizon. The proposed expansion of the passenger security screening checkpoint to a five-lane configuration will meet passenger demand until Planning Activity Level (PAL) 3 at which point further expansion maybe required. However, the projected need at PAL 3 should be re-evaluated again in the future based upon passenger composition (i.e., percent of Pre-Check passengers) at that time, as well as the capabilities of future screening technologies. These factors may result in greater passenger throughput and may delay the need for an additional screening lane.

Other elements of the passenger terminal that require expansion to accommodate future passenger demand includes gates, holdrooms, concessions and baggage claim. Restrooms and arrival hall space in baggage claim may likewise require expansion although not on the basis of passenger demand, but other operational factors. These items are described in this section after the other terminal elements are addressed.

The following bullets review the projected demand for each element of the passenger terminal

- **Gates** – the demand for additional gates is highly dependent upon a number of variables including operational preferences, flight schedules as well as the number of airlines operating at the Airport and the number of flights. The assessment in the Facility Requirement section noted that if gate utilization (i.e., aircraft turns per gate) remain at their current low level, then future gate requirements could be as high as 20 gates based on the baseline forecast of passengers. Conversely, an increase in turns per gate could reduce gate requirements to as low as 13 if gates were used more efficiently. A midpoint between these two scenarios would be demand for 3 to 4 additional gates.

- **Holdrooms** – airline station managers noted that the existing holdrooms do not provide sufficient space for the high number of wheelchairs that are needed for flights at SRQ. Furthermore, increases in average seats per aircraft departure (as documented in the Forecast section) is resulting in higher number of passengers in the holdrooms compared to a decade ago. Average seats per departure has increased from 117 in 2010 to 132 in 2019. A further increase to 140 seats per departure is forecast to occur by the year 2039. These increases generate a need for additional holdroom space. The Facility Requirements section projects a need for up to 13,000 SF of additional holdroom space with 2019 demand and up to 24,000 SF with PAL 3 demand in conjunction with three additional gates.

- **Concessions** – the Facility Requirements section noted that the existing allocation of concession space between pre-security and post-security locations is not meeting current needs and is not conducive to maximizing concession revenue. The current allocation of space is 76 percent of space pre-security and 24 percent of space post security. Current industry trends are the exact opposite with 70 to 80 percent of space post security. Furthermore, total concession space requirements are project to increase from 24,000 square feet with 2019 demand to 43,000 square feet at PAL 3.

- **Baggage Claim** – the Facility Requirements section projects that demand for baggage claim carousels will be met with the existing three carousels until PAL 3 when one additional carousel will be required.

Alternatives are examined for each of these terminal elements and other terminal facilities on the following pages.

4.3.1 GATES

Alternatives for providing additional gates focus on assessing the best location, while also considering the number of gates that can be accommodated within each area. Potential expansions were examined in three locations and are described and evaluated in the following paragraphs.

Alternative 1 – Expand Concourse B

The first location examined is at the north end of the existing Concourse B. **Figure 4.3-1** presents an alternative that would provide two additional gates by extending the concourse 185 feet further north.

Constraints to providing additional gates in this location include the height limitations associated with the Part 77 transitional surfaces extending from Runway 14-32 and Runway 4-22 and the geometric clearances associated with Taxiways A and B. The figure indicates that providing two additional gates at the north end of Concourse B would result in a few gate positions being located beyond a tail height limit line of 64 feet (mean sea level). This height limitation equals a Boeing 737-900 tail height of 42 feet plus the apron elevation of 22 feet. Consequently, two to three gates on the east side of the concourse extension would be limited to smaller aircraft with lower tail heights.

Another constraint is the lack of acceptable push-back areas. Aircraft pushing back from the gates at the end of the concourse would violate the Taxiway Object Free Areas from Taxiway A and B thereby obstructing aircraft taxi movements on those taxiways. Likewise, **Figure 4.3-1** shows that the existing apron taxilane will have to be removed as the new gate locations will no longer allow for the taxiway to taxilane design standard separation requirement of 215 feet. This separation does not meet the design standard requirement of 215 feet. Consequently, an apron taxilane cannot be established in that location.

Furthermore, the majority of the grass island north of the concourse would need to be paved to accommodate aircraft taxiing to and from the gates at the end of the concourse. This would, in turn, require further drainage improvements to accommodate the additional paved area.

Construction of this alternative would result in the loss of Gate B14 (at the north end of the concourse) during the construction period. Gates B11 and B12 could most likely remain in operation during construction with slight modifications to parking positions.

Walking distances for passengers using the new gates would increase with this alternative. The maximum walking distance (to a relocated Gate B14) would increase by 185 feet which is the same distance as the concourse extension.

The tail height limitations, geometric constraints, the small number of gates provided by this alternative make it incapable of meeting the gate requirements forecasted in the Facility Requirements section.

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ALTERNATIVE 1 - EXPAND CONCOURSE B

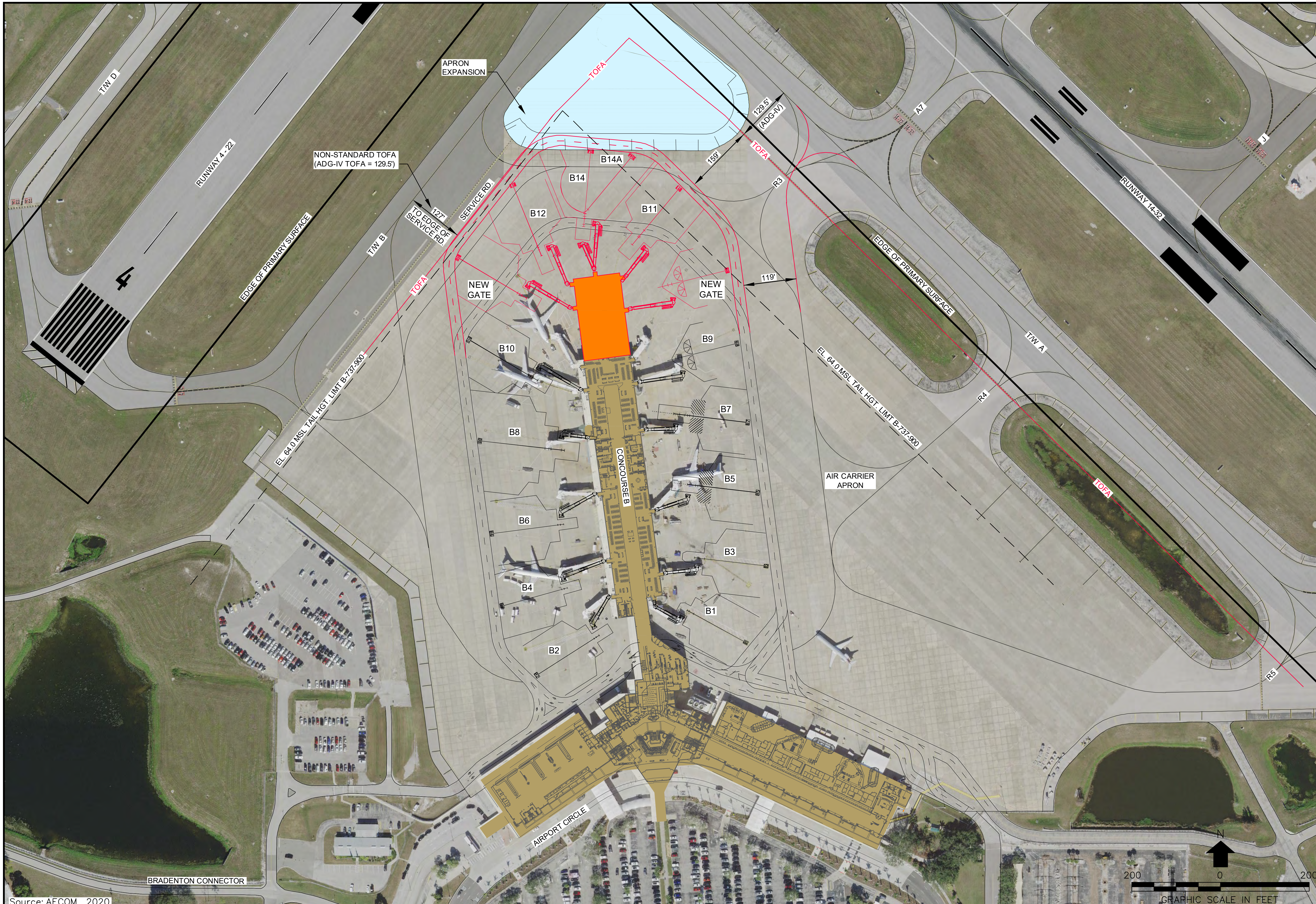

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FIGURE 4.3-1

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Alternative 2 – Construct New Concourse C

Figure 4.3-2 illustrates Alternative 2 which includes construction of a new course to the west. This alternative includes the construction of four new gates but requires the elimination of Gate B2 and therefore result in a net increase of three gates.

Construction of this concourse would require the relocation of a significant portion of employee parking and would encompass the area currently occupied by the Dan McClure Auditorium which includes the staging area for ground transportation services.

Passenger walking distances with this alternative would be similar to Alternative 1 with the proposed 2-gate expansion. The maximum walking distance to the furthest gate would be approximately 800 feet. Walking distances to the other gates would be similar to current walking distances in Concourse B.

Nearly 20,000 square yards of new aircraft parking apron would be required with this alternative. This is significantly more apron than would be needed for other gate expansion alternatives.

Expansion capability with this alternative is limited and would require the relocation of adjacent facilities including the large stormwater detention pond to the west, the Bradenton Connector and existing parking facilities for New College.

Alternative 3 – Construct New Concourse A

Figure 4.3-3 presents Alternative 3 which includes the construction of a new five gate concourse to the east. The proposed concourse would be constructed adjacent to a planned expansion of the outbound baggage make-up area (shown with red cross hatch in the figure).

This alternative requires the elimination of Gate B1 for a net increase of four gates. One additional gate could be constructed at the east end of the concourse (also shown in Figure 4.3-3) but would require filling an existing dry stormwater detention pond in that area. The stormwater detention pond covers an area of 1.3 acres. The stormwater storage capacity of the pond would need to be replaced in other Airport ponds to enable construction of the additional gate. No other airport facilities would need to be relocated to construct this option. Expansion beyond that point would require the relocation of multiple other airport facilities and would begin to result in long walking distances for passengers.

The walking distances to the furthest gate with this alternative would be approximately 900 feet (i.e., about 100 feet further than with Alternatives 1 or 2). However, walking distances to the other gates would be comparable to those in the existing Concourse B. Therefore, many passengers would not experience an increase in walking distances versus the use of existing gates in Concourse B.

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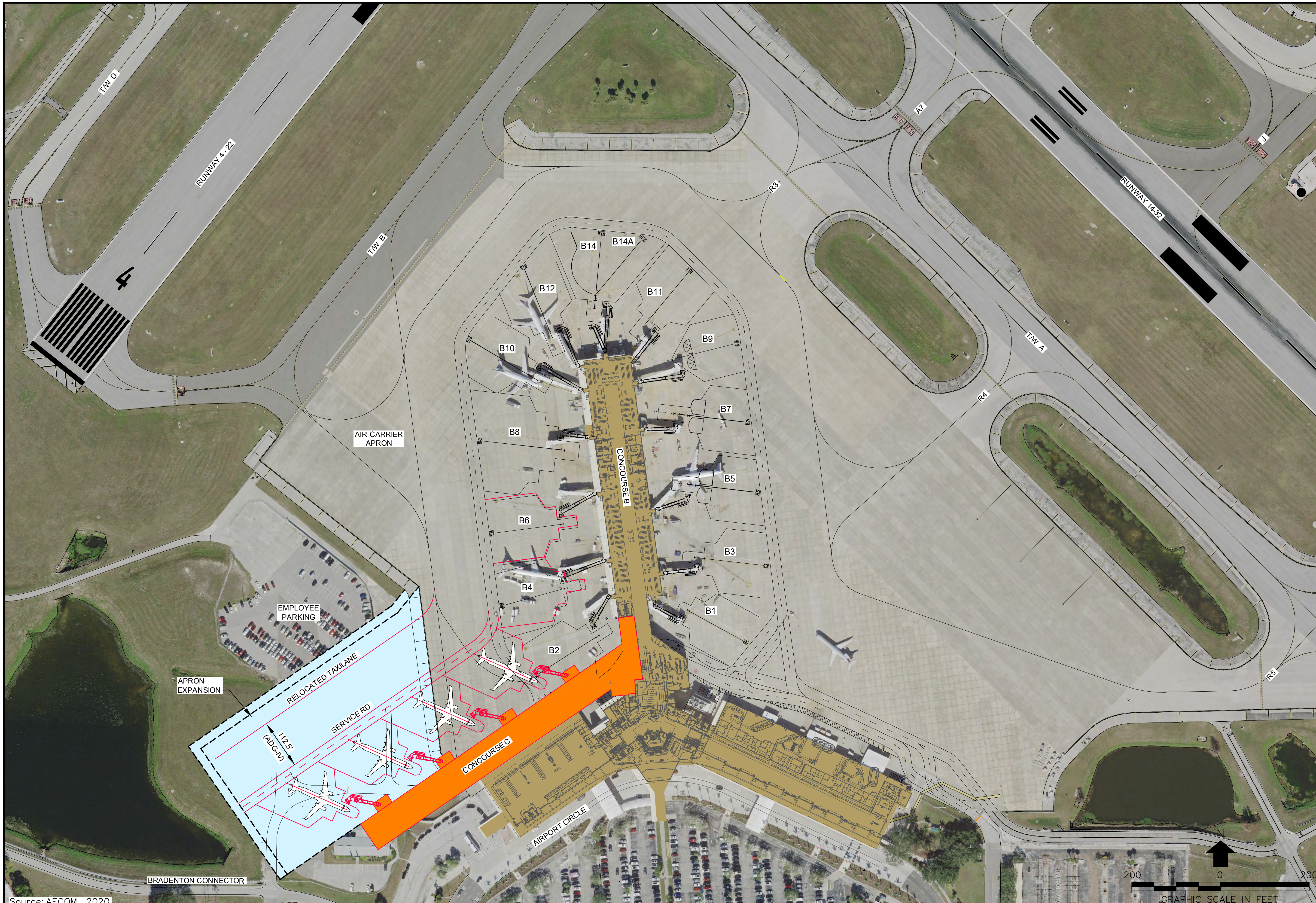

Source: AECOM, 2020

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ALTERNATIVE 2 - CONSTRUCT NEW CONCOURSE C

FIGURE 4.3-2

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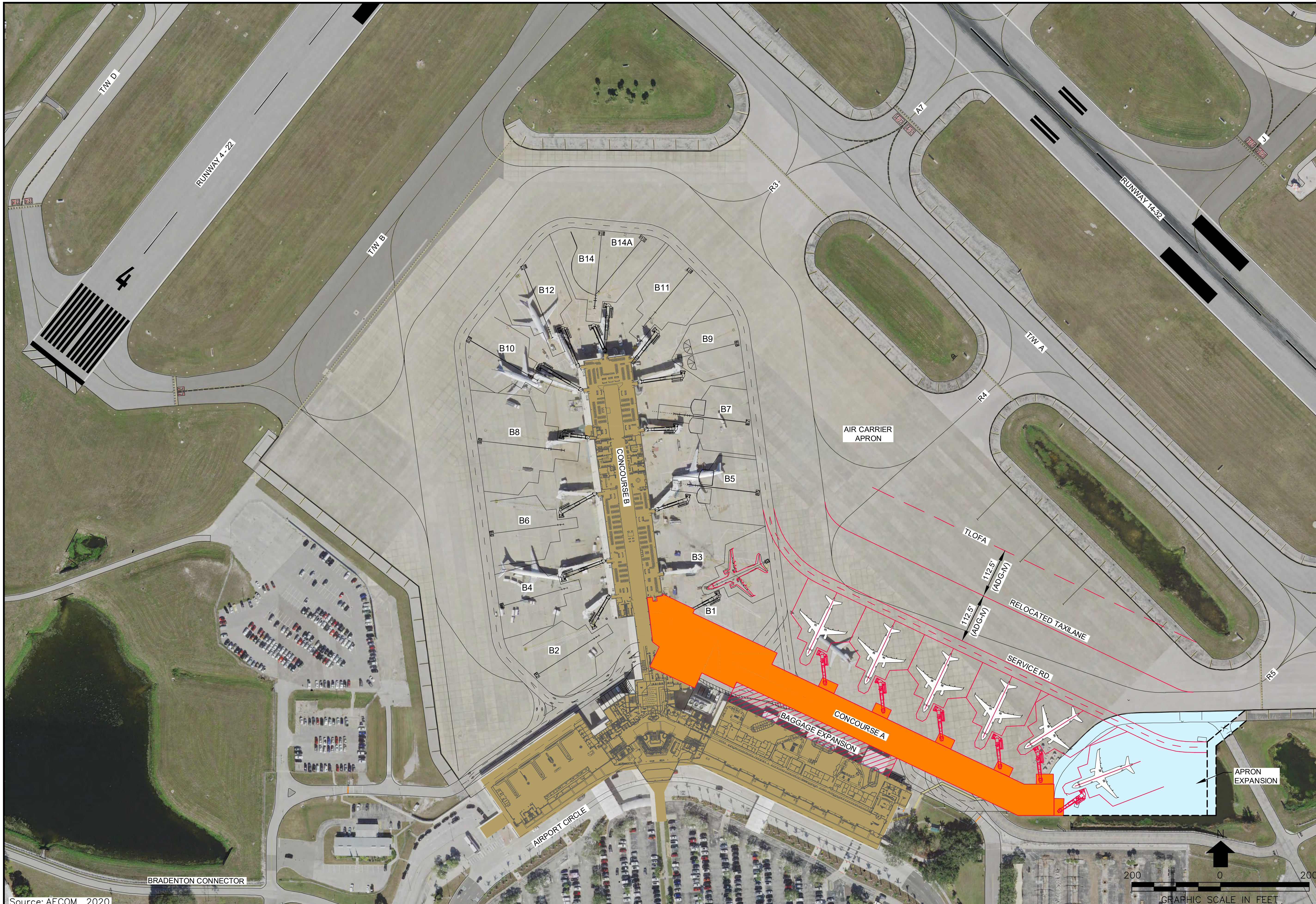
ALTERNATIVE 3 - CONSTRUCT NEW CONCOURSE A



Source: AECOM, 2020

FIGURE 4.3-3

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This alternative requires the construction of less aircraft parking apron than Alternative 1 or 2 due to the fact that a significant amount of apron already exists on the east side of the terminal. It is estimated that approximately 8,600 square yards of new apron would be needed with this alternative.

This alternative would eliminate two of the three hard stand aircraft parking positions on the east side of the existing apron. Consultation with airport staff indicates that these hard stands are used as overflow parking and are rarely used as Remain Overnight (RON) parking positions. They are also used for parking widebody aircraft in a parallel configuration to Taxiway A when needed.

One option for minimizing the impact to these hard stand parking positions would be to construct the proposed Concourse A on top of the planned expansion of outbound baggage makeup rather than next to it. This would shift the proposed taxilane behind the proposed gates approximately 50 feet to the south and would minimize the impact to hard stand parking positions. The feasibility of this option would need to be determined during detailed design for the proposed concourse.

Preferred Alternative

Table 4.3-2 provides a summary of the three gate/concourse alternatives based on the evaluation criteria. Due to its ability to provide a greater number of gates and the ability to use a large amount of existing aircraft apron, thereby lower construction cost, Alternative 3 is recommended as the preferred alternative for providing additional gates when needed.

If, in the long-term, additional gates are needed beyond the increase of five (net increase of four) provided by Alternative 3. It is recommended that the dry water detention pond to the east be filled and an additional gate be provided on the concourse. A cost-effective solution may be to build the concourse with the extra holdroom and infrastructure for the additional gate, but not provide the loading bridge or apron required. That would allow the water detention pond to remain in its present location until such time its relocation is required.

It is important to note that construction of Alternative 3 does not preclude the ability to also construct Alternative 2 if needed for additional gates beyond the time horizon examined by this study.

Table 4.3-2
Comparison of Gate/Concourse Alternatives

Evaluation Criteria	1 Expand Existing Concourse B	2 Construct New Concourse C	3 Construct New Concourse A
Net Additional Gates Provided	2	3	4
Can Meet all Airfield Design Standards	No	Yes	Yes
Requires Facility Relocations	No	Employee Parking and Ground Transportation Area	Water Detention Pond
Longest Passenger Walking Distance from Security	Max Increase 185 feet to 800 feet	Approximately 800 feet	Approximately 900 feet
New Apron Required (SY)	11,250	19,730	8,610
Expandability	Not possible.	Expansion requires multiple facility relocations and impacts New College parking	Can expand 1 gate. Further expansion would impact multiple facilities.

Source: AECOM, 2020.

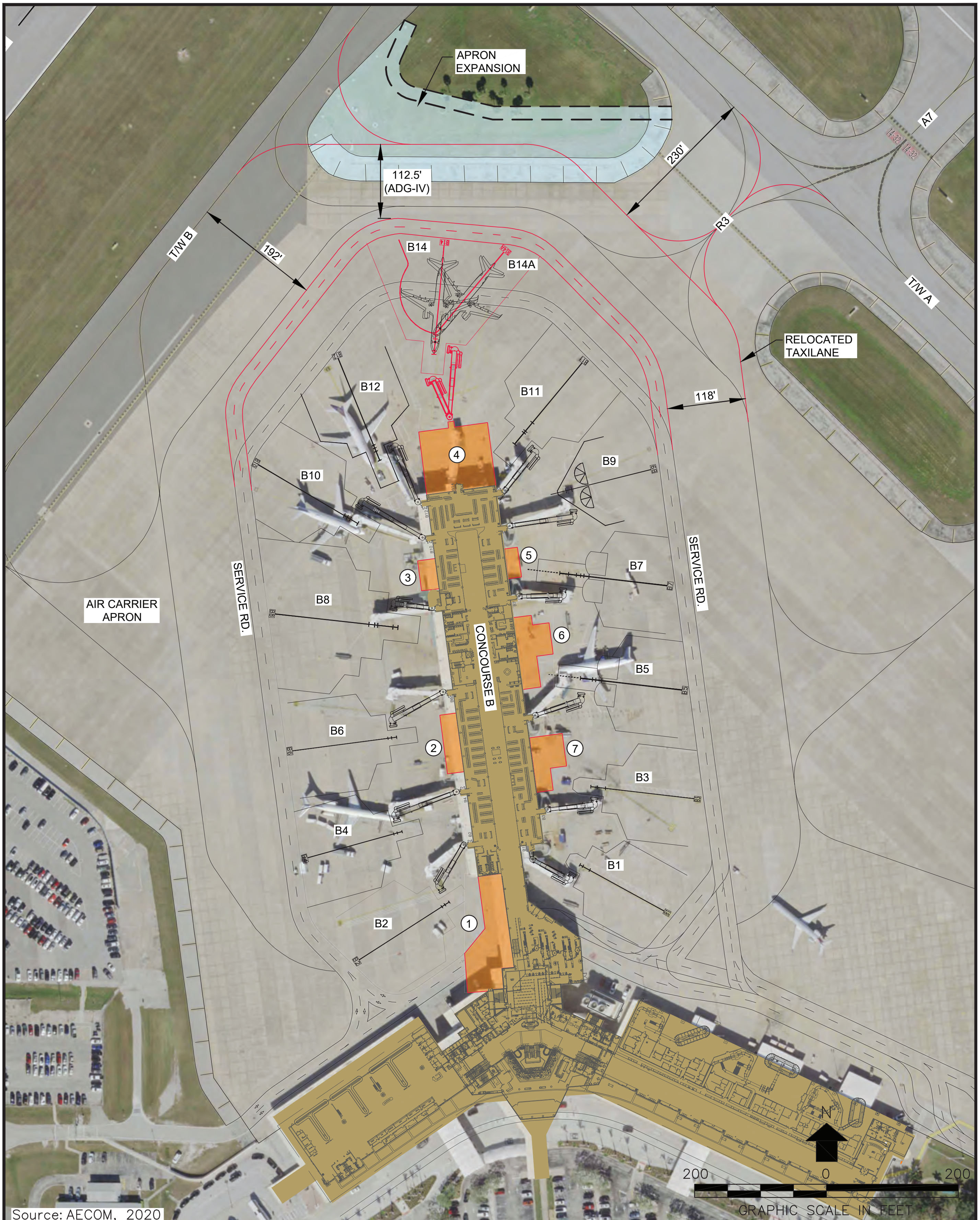
4.3.2 HOLDROOMS & CONCESSIONS

Alternatives for the expansion of holdrooms and concessions are addressed together because the space requirements for these terminal elements are in the same location (i.e., on the concourse beyond security). **Figure 4.3-4** shows seven alternatives for expansions that could be used for increases to holdroom capacity and/or provide additional concession space along the length of Concourse B. **Table 4.3-3** summarizes each of these alternatives.

Table 4.3-3
Summary of Holdroom/Concession Area Alternatives

Alternative	Location	Size (SF)	Suitable Use
1	South of Gate B2	8,469	Concessions
2	Between Gates B4 & B6	2,248	Holdroom/Concessions
3	Between Gates B8 & B10	1,262	Holdroom/Concessions
4	Between Gates B11 & B12	10,155	Holdroom/Concessions
5	Between Gate B7 & B9	910	Holdroom/Concessions
6	Between Gate B5 & B7	4,265	Concessions
7	Between Gates B3 & B5	3,340	Holdroom/Concessions
Total Space		**30,649**	

Source: AECOM, 2020.



Source: AECOM, 2020

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HOLD ROOM / CONCESSION EXPANSION ALTERNATIVES

FIGURE 4.3-4

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Alternative 4 requires the relocation of Gate B14. Consequently, this gate would not be available for use during the construction period. Gates B11 and B12 could be maintained in service during construction but may require modifications to their parking positions. None of the other alternatives directly impact gates/aircraft parking positions although the design process would need to evaluate whether construction activities would require temporary closures.

In addition to requiring the relocation of Gate B14, Alternative 4 also requires paving a portion of the triangular grass island at the intersection of Taxiway A and Taxiway B in order to provide sufficient space for a taxilane around the north end of the terminal. The amount of additional pavement required is approximately 7,800 SF. Unlike the Alternative 1 for gate expansion previously presented, Alternative 4 can provide a parallel taxilane that meets the required separation requirement from Taxiway A, but it cannot maintain a parallel taxilane from Taxiway B.

Alternatives 1 and 6 are suitable for concession use due to their locations. Alternative 1 is remote from the gates but provides an acceptable area for a larger food and beverage concession such as a sit-down restaurant. Likewise, Alternative 6 is located behind the existing concessions and restroom area on the east side of the concourse and would best be used for an expansion of concessions. The remaining areas could potentially be used for either holdroom expansions and/or concessions especially if the concessions consist of freestanding kiosk style facilities.

The amount of space provided by these alternatives is slightly more than 30,000 square feet of space. By comparison, the amount of additional holdroom space and concession space needed at PAL 1 is approximately 16,600 SF for holdrooms and 6,700 SF for concessions for a total of 23,300 SF. Thus, the combination of all these alternatives would accommodate the projected need for additional space into PAL 2. However, implementation of the preferred gate expansion alternative would provide even greater opportunities for additional concession and holdroom development. Therefore, any expansion along Concourse B should be phased with consideration of the potential increase provided in conjunction with an additional concourse.

The Facility Requirements section also noted that lack of storage space is a concern for concession operators. Therefore, it is recommended that additional concessions storage be provided on the ground floor beneath one or more of these concourse expansions. Alternative 1 would also be suitable for accommodating ground level pallet storage and a food preparation area as requested by the concession operators.

Preferred Alternative

A preferred alternative is not identified for holdroom/concession expansions. All the alternatives identified will be included in the development plan as options that the Airport Authority can implement. It is anticipated that further planning efforts will establish the preferred locations and sizes of concessions. The Airport Authority can construct the desired expansions in conjunction with the findings of those planning efforts on an as needed basis.

4.3.3 BAGGAGE CLAIM

Two alternatives were developed for baggage claim expansion. Both alternatives provide the same amount of additional terminal space by shifting the west wall 100 feet further west, but each alternative provides different types of claim carousels and amenities. **Figure 4.3-5** illustrates both alternatives.

Alternative 1 includes an additional flat plate carousel in the same configuration as Carousel 1 in the existing baggage claim area. This alternative also duplicates the baggage service offices at the east end of the baggage claim hall.

Alternative 2 proposes the replacement of the existing flat plate carousels with three high capacity slope plate carousels. Additional baggage service offices are not proposed along the west wall with this alternative because that space is needed to provide passenger claim area around all sides of the racetrack carousels. Additional baggage service office could be provided along the south wall, if needed. Other options for use of that space include a waiting area for ground transportation services.

Alternative 1 offers the following advantages:

- It provides four separate claim carousels which will provide additional flexibility for airline operations.
- Flat plate carousels are physically easier for passengers to use, due to the fact that bags can be slid straight off the carousel without the need to lift the bag up. This is especially beneficial for elderly passengers.
- The alternative provides sufficient space for additional baggage service offices of the same size and quantity as currently exists along the east wall.

The primary disadvantage of Alternative 1 is that it maintains the same through the wall baggage delivery method as the existing carousels. This method of baggage delivery suffers from the fact that individuals could conceivably gain unauthorized access to secure portions of the airside.

Alternative 2 offers the advantages of:

- Providing a high level of security by changing the method of baggage delivery to occur via drop down conveyors in the center of each carousel. This method of baggage delivery substantially reduces the risk of unauthorized individuals gaining access to the secure portion of the airside. However, additional engineering and architectural design services would need to study the feasibility of fitting the required conveyor systems within the existing ceiling space or whether drop down corridors would be required to be constructed.

Disadvantages of Alternative 2 include:

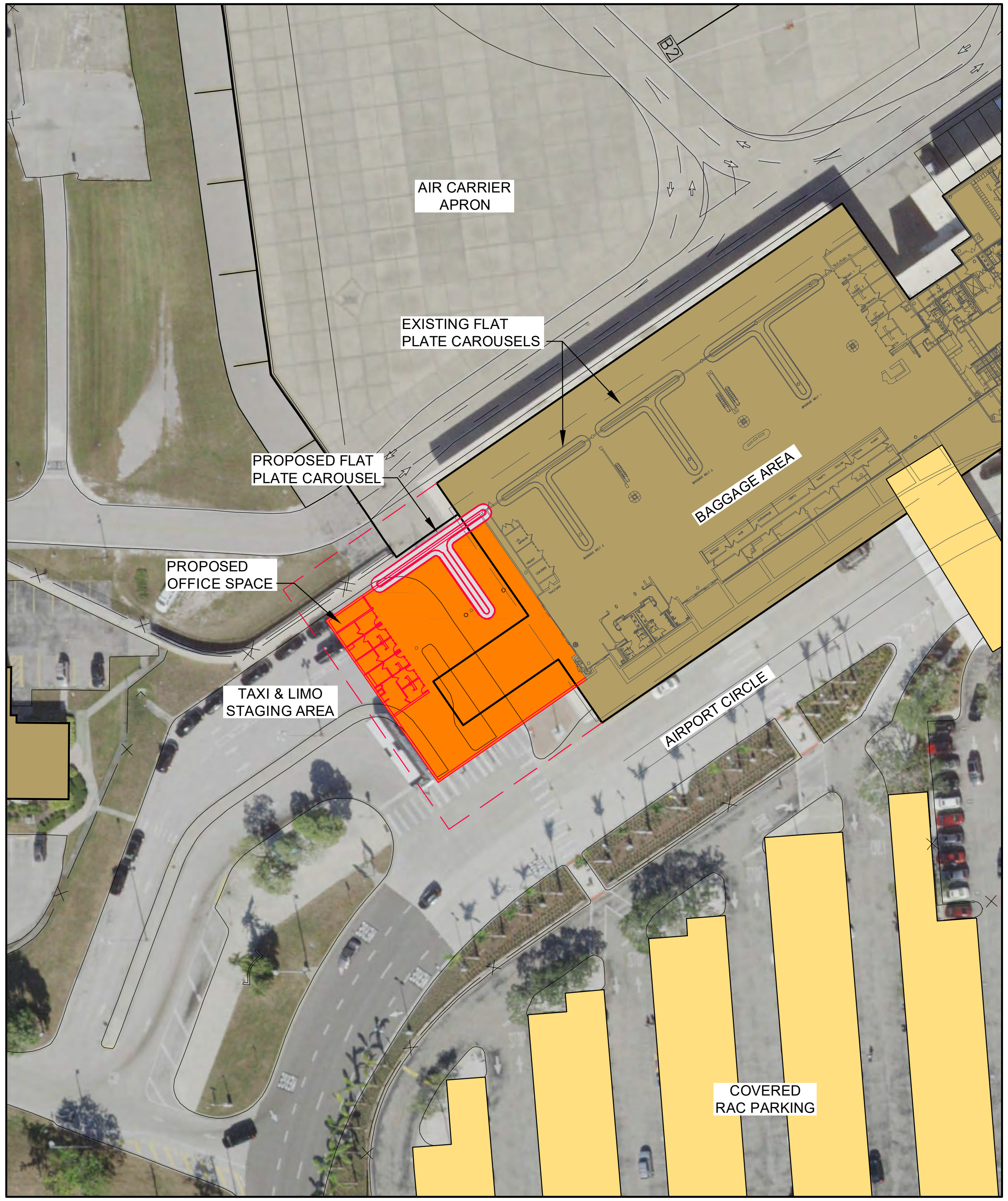
- The requirement for passengers to physically lift baggage over the edge of the carousel.
- The inability to physically fit four carousels within a 100-foot expansion of the baggage claim lobby. This would reduce airline operational flexibility especially when an existing carousel become inoperable or is shut down for maintenance. Further expansion of the baggage claim area would reduce available space for accommodating ground transportation facilities outside the baggage claim lobby.
- The greater amount of claim carousel in proximity to the rental car counters. This increase the likelihood of congestion and space conflicts with passenger queues in front of rental car counters. It would also compress the amount of space available for passengers who are transiting the bag claim lobby to reach ground transportation services.

Preferred Alternative

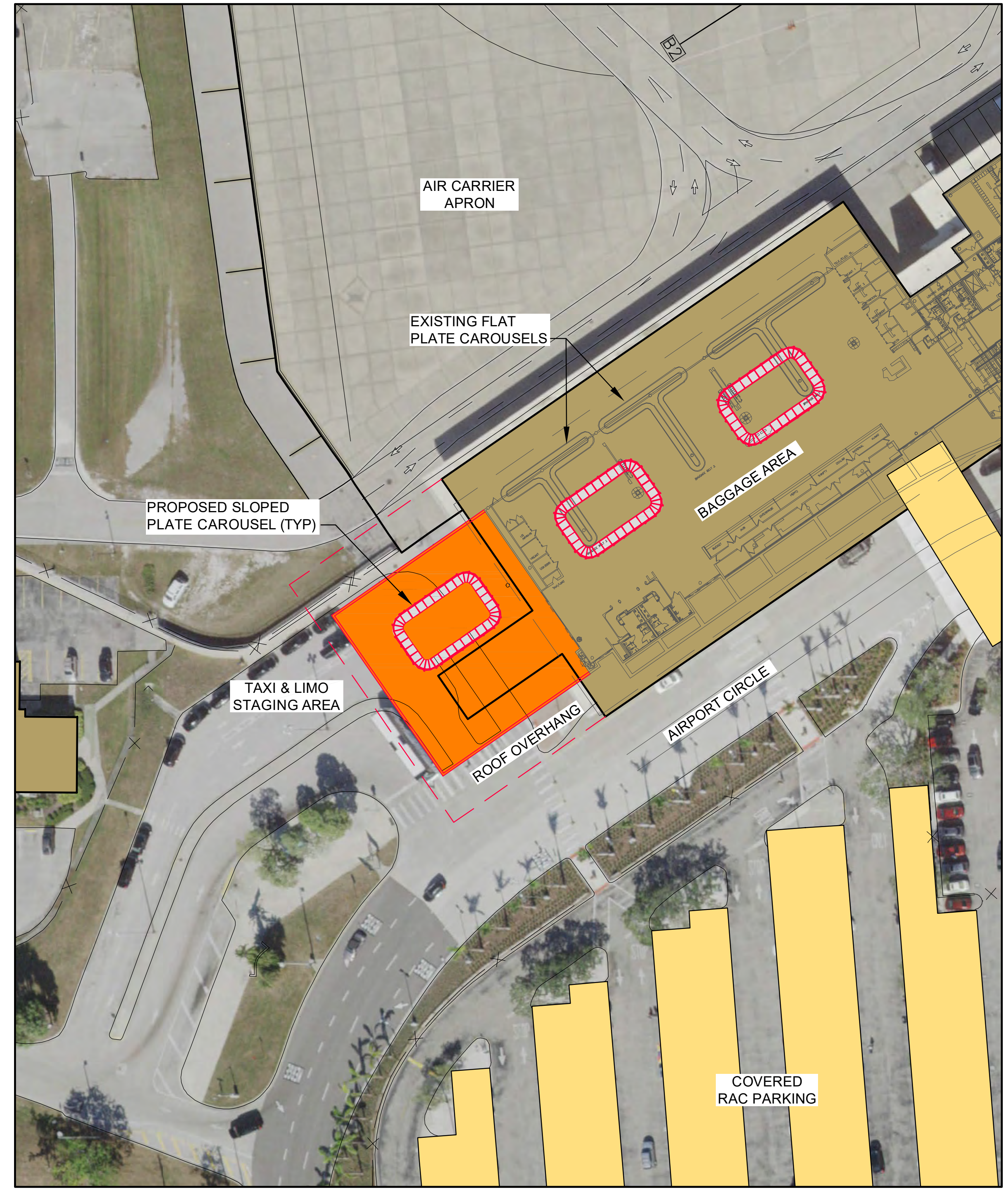
Alternative 1 is recommended as the preferred solution for the expansion of baggage claim. This alternative provides the four claim units that were identified as being needed to meet PAL 3 passenger demand and would provide greater operational flexibility for the airlines using the carousels. Furthermore, the alternative's flat-plate carousels would provide physically easier use for passengers.

4.3.4 OUTBOUND BAGGAGE SYSTEMS

The Airport Authority undertook a design effort for the expansion of outbound baggage systems during the preparation of the Master Plan Update. The design effort examined a range of alternatives and selected a design that consists of an in-line baggage system with dedicated baggage conveyors behind each ticket counter for outbound baggage along with two Explosive Detection Systems and three Trace Detection units. Four baggage make-up carousels are included and provided behind the airline ticket offices. The design includes a 50-foot expansion on the northwest side of the terminal's ticketing wing to accommodate the proposed systems and work areas. This expansion will be incorporated into the terminal plan.



ALTERNATIVE 1
FLAT PLATE CAROUSELS



ALTERNATIVE 2
SLOPE PLATE CAROUSELS

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BAGGAGE CLAIM EXPANSION ALTERNATIVES

FIGURE 4.3-5

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4.3.5 OTHER TERMINAL IMPROVEMENTS

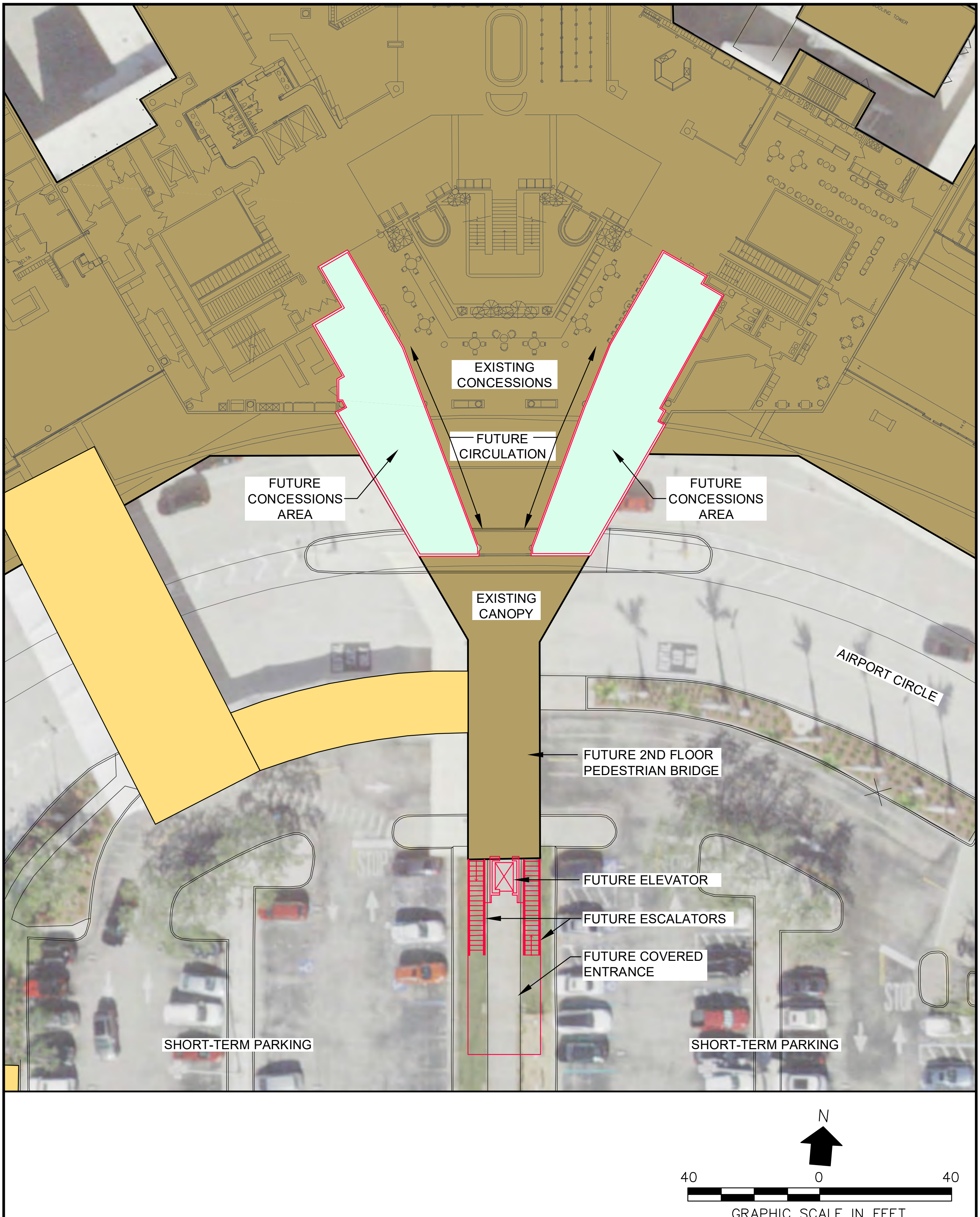
Two additional terminal functions were examined for improvements as part of the alternatives process. These functions include the south side of second floor concessions (i.e., where Dewar's Clubhouse Bar and Grille and Freshens are located) and the rental car counter area in the baggage claim wing.

4.3.5.1 Second Floor Concessions

Visual observations and consultation with Airport Authority staff confirm that the Dewar's Clubhouse Bar and Grille concession is significantly underutilized by passengers and visitors and therefore does not achieve the desired financial performance. The concession's low use can largely be attributed to its location relative to prevailing passenger flows on the second floor. Passengers transiting the second floor from ticketing are primarily headed to the security screening checkpoint and their attention and field of view is primarily directed away from the Dewar's concession. Likewise, arriving passengers transiting the second floor are focused on heading toward the escalators that will take them to baggage claim and ground transportation functions. Consequently, neither of these flows maximize passenger proximity to, nor awareness of, the concession.

A change to passenger flows through this area has the potential to improve passenger use and the financial performance of this area while also providing other beneficial capacity improvements. **Figure 4.3-6** illustrates an alternative that would reconfigure this concession space in conjunction with the construction of a new passenger bridge over the curbside roadway along with the construction of a vertical transfer core in the short-term parking lot. This would provide a direct route for passengers who do not need to use ticketing area functions and are only interested in heading to the security screening checkpoint, as well as arriving passengers who are only interested in heading to short or long-term parking. With this alternative, these passengers would no longer need to cross the curbside roadway which would improve the Level-of-Service on the curbside by reducing vehicle stops for pedestrian crossings. This will offer a capacity improvement especially at higher PAL's when passenger volumes and curbside roadway use are higher.

Concession space could be reconfigured with this option to be alongside the passenger walking routes and therefore would be within the sight of all passengers transiting this route. The resulting concession space would consist of 4,000 SF compared to the approximately 8,000 SF currently occupied by Dewar's and Freshens. However, the majority of the existing 8,000 SF consists of seating, storage and circulation space. Furthermore, an additional kiosk style concession space could be provided in front of the atrium area while not blocking passenger line of sight in either direction.



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MASTER PLAN UPDATE

2ND FLOOR CONCESSION RECONFIGURATION WITH PEDESTRIAN BRIDGE

FIGURE 4.3-6

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Other alternatives for the south side of the second-floor concessions (in lieu of establishing the pedestrian bridge) include establishing functions that have the opportunity to draw passengers and visitors into the area in conjunction with changes to the concession use and layout. Potential ideas include establishing an aviation themed children's playground or a museum space/performance venue that could partner with one of more of Sarasota's cultural attractions.

A detailed concessions study would be valuable for researching, identifying and evaluating a full range of options available and their estimated financial return to the Airport Authority.

4.3.5.2 Rental Car Counter Area

Consultations with rental car operators during the Inventory task noted three constraining factors to their existing operations in baggage claim. First, the distance between the customer counters and the wall containing each company's signage behind the counters is too small and restricts the number and movement of employees that can service customers. Second, the stanchioned queue areas for customers are small for accommodating passenger demand during peak times. Third, the lack of a secure ready-return lot means that all customers must use the ticket counters to obtain vehicle keys rather than proceeding straight to the rental car lot, thereby increasing customer queue length requirements.

These factors could be resolved by removing the rental car counters and offices from the terminal's baggage claim wing and relocating them to a redesigned rental car lot in conjunction with the construction of a structured parking facility. An alternative that proposes this action is described in the Section 4.4 Ground Access, Curbside and Parking Alternatives.

4.3.6 FEDERAL INSPECTION SERVICES (FIS)

The Facility Requirements analysis indicates that existing FIS facility in the passenger terminal will meet projected demand throughout the study period. The analysis also indicated that alternatives should be explored for providing a separate General Aviation (GA) FIS facility so Gate B8 can be used for scheduled commercial service and not be reserved exclusively for FIS use.

The requirements for a GA FIS facility are specified by the US Customs and Border Patrol in their publication Airport Technical Design Standards (ATDS). Review of the document indicates that GA facilities are intended to process up to 20 passengers and their baggage at one time. Building requirements for such a facility are in the range of 4,000 square feet and need to be set back 100 feet from roadways. Apron requirements depend on the size of the aircraft that are intended to be accommodated. Automobile parking requirements are 5 spaces.

It is assumed that air carrier size aircraft would continue to be accommodated at the existing FIS facility at Gate B8. Therefore, it is anticipated that the largest GA aircraft that would access a GA FIS facility would be a Gulfstream 700 or a Bombardier Global Express 7500. This would generate an apron requirement in the range of 4,800 square yards of pavement.

A variety of airfield locations were explored as potential GA FIS sites. **Figure 4.3-7** shows all the potential sites considered on the north, east and west sides of the airfield.

Consultation with Airport Authority personnel indicated that sites in the northern portion of the airfield are preferred over sites to the east and west because the location is halfway between the likely final destination of passengers which in most cases would be one of the Airport's two Fixed Base Operators (FBO's); Dolphin Aviation to the west or Ross Aviation to the east.

Of the sites in the northern portion of the airfield, the Airport Authority prefers the northernmost location (i.e., Site 6), but is not ruling out other sites except Site 2 which will be reserved for other aviation related uses. Site 6 would reserve land at the other northern sites for potential commercial uses that depend on high visibility from the airfield to improve their economic success. **Figure 4.3-8** shows a potential GA FIS facility at Site 6. Automobile access would occur via an existing access road from Clyde Jones Road. Airfield access would occur via Taxiway F. The site is clear of all airfield related geometric requirements including the Taxiway Object Free Area from Taxiway F.

A preferred site for the GA FIS facility will not be identified at this time. The Airport Authority will select a preferred site from the list of potential sites at the time they are ready to proceed with the development of a facility.

4.4 GROUND ACCESS, CURBSIDE AND PARKING ALTERNATIVES

Additional consulting services were procured during the development of this Master Plan Update to address ground access issues at a greater level of detail than originally scoped and to undertake a detailed assessment of a potential Ground Transportation Center to accommodate taxi/limousine services, shuttle services, county transit services and Transportation Network companies like Uber and Lyft. The Airport Authority contracted with Walker Consultants (Walker) to provide these services. Consequently, the assessments contained in Section 4.4 are primarily written in terms of the consultant's site observations, technical analyses and recommendations for improvements.

4.4.1 ROADWAY IMPROVEMENTS

The roadway capacity assessment conducted in the Facility Requirements section noted that nearly all segments of airport roadways currently operate at Level-of-Service (LOS) C (Good) or higher during the morning and evening peak hours. One segment of Airport Circle from the entrance to Short and Long-Term Parking to the Rental Car entrance currently operates at LOS D (Fair) during the PM peak. The LOS is projected to decline to D (Fair) on certain segments as traffic volumes increase with each Passenger Activity Level (PAL). However, no roadway segments are projected to decrease below LOS D (Fair) even at PAL 3 peak hours. Consequently, no increases to roadway lanes are recommended but, several operational and configuration recommendations presented in this section offer the potential to improve the efficiency of traffic flows and improve the LOS at future PALS.

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

POTENTIAL GA FIS FACILITY SITES

FIGURE 4.3-7

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MASTER PLAN UPDATE

POTENTIAL GA FIS SITE LAYOUT

FIGURE 4.3-8

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4.4.2 CURBSIDE OPERATIONS REVIEW

Walker reviewed written policies and procedures for the Airport Authority's curbside management program. In the process, Walker also viewed AECOM's previously recorded video footage of curbside operations during the dates of 1/30/20 and 1/31/20 to understand the current operational practice and management protocols. The following details the resulting curbside management recommendations.

Assessments of curbside operations and conditions along Airport Circle indicate current levels of operations at or above a LOS of B (Very Good). The forecast of future activity levels indicates a potential for degradation in curbside LOS is likely with levels of D (Fair) expected at PAL 2 and PAL 3 as documented in the Facility Requirements section of this document. LOS D (Fair) is considered acceptable, however, not ideal for the service goals that SRQ has for its users.

Walker analyzed the curbside layouts and considered alternatives that include curbside layout adjustments and pull through loading zones. Initial modeling of curbside layout adjustments results in reduced efficiency of the available curbside spaces and pull through loading zones do not increase the inventory, capacity, nor dwell times and therefore are not recommended. Improvements to the curbside activity levels should be focused on reducing vehicular traffic on Airport Circle.

4.4.2.1 Zero Curb

Walker recommends the elimination of the standard curbing at all passenger loading/unloading zones in favor of an on-grade or appropriately sloped transition from the sidewalk to the roadway. The use of bollards and/or planters, as presented in **Figure 4.4-1**, at the San Francisco Airport (SFO), provide a decorative element while delineating the vehicle and pedestrian areas that will keep pedestrians safe. Removal of the curb allows for a more efficient load process and will provide a higher level of service as passengers do not need to navigate their wheeled luggage over a 6-8" inch curb nor navigate a potential trip hazard. In addition, accessibility for Americans with Disabilities Act (ADA) and elderly passengers is greatly enhanced and not limited to key pathways along the zones.

Figure 4.4-1
Passenger Loading Zone at SFO

Source: Walker Consultants, 2020

4.4.2.2 Enforce Active Loading and Unloading Activity

Overall enforcement of the curbside, especially during peak times, by trained roadway staff to implement the no parking/stopping/standing rules (effectively moving any vehicles that are not actively loading and unloading), could assist traffic to flow more quickly and adequately.

In advance of any enforcement initiative or staffing, we would recommend:

- Investing in a marketing campaign to ensure drivers know they can park/stand along the roadway only when they are actively loading and unloading and to utilize the free cell phone lot for waiting. It should be communicated why this is being done (mobility and congestion issues), that an alternative is provided (cell phone lot) and that citations and/or towing could result from noncompliance.

- Ensure signage is placed strategically on Airport Circle road stating, “Active Loading and Unloading Only” and have a towing and/or citation sign/policy in place for violators. While current curbside signs appear to be adequate for this purpose, adding the phrase “Violators will be cited and towed” to this sign would also make it clear to customers the consequences of not following these rules and will aid in enforcement.

4.4.2.3 Adjust Duration of No-Charge Parking Time in The Short-Term Lot

The main intent of Airport Short-Term parking is to allow for those picking up and dropping off passengers to escort or meet inside the airport terminal or for any other business conducted in the Airport requiring parking for less than 24 hours. The current Short-Term Parking rates allow for the first 30 minutes of parking at no charge, and while technically allowing a driver to escort or meet their passenger in the airport terminal, 30 minutes does not allow for a margin of error. Walker proposes increasing the no charge duration from 30 minutes to 60 minutes so as to improve the customer satisfaction opportunities and to reduce potential “circling” that may occur when the current 30 minute duration is reached, and the driver leaves only to re-enter to start a new 30 minute session.

4.4.2.4 Improve Amenities at Cell Phone Lot

The Cell Phone Lot is in adequate condition and is in an appropriate location, however, communication to motorists about its location and amenities offered could be improved. **Figure 4.4-2** and **Figure 4.4-3** show the existing lot compared to a sample rendering of what improvements could look like. These would include:

- Add a digital message sign at the entry and at the intersection path of the route to the cell phone lot. Include information that Airport Circle is for active loading/unloading only.

- Improve appearance of the lot by paving and adding landscaping and signage to make the lot obvious and welcoming.

- Consider adding amenities such as Wi-Fi, covered seating, pet relief area, restrooms and vending. During peak times, food trucks serving seasonal snacks and beverages will add to the attractiveness of the lot.

Figure 4.4-2
Current SRQ Cell Phone Lot

Source: Walker Consultants, 2020

Figure 4.4-3
Rendering of SFO Cell Phone Lot

By incentivizing drivers picking up passengers to utilize the cell phone lot, rather than circle or use the short-term parking lot, the vehicle traffic on Airport Circle will be reduced and frequent users will have more single and direct approaches to the terminal for their pick-up activities.

4.4.2.5 Adjust Transportation Network Companies (TNC) Route

Currently, TNC vehicles are directed when arriving at the Airport to proceed to the Cell Phone Lot where they stage until accepting a fare. Upon accepting a fare, the vehicles proceed to Airport Circle to pick-up their passenger at the curbside designated zone near arrivals/ticketing. As indicated in **Figure 4.4-4,** this area is near the entry point to the terminal curbside and is prone to congestion.

Figure 4.4-4
Current TNC Pick-Up Area

Source: Walker Consultants, 2020

It is recommended that the TNC vehicles be moved to a staging area in the Ground Transportation Center (GTC) with its recommended layout (please refer to Section 4.4.5). Vehicles will enter the property from US-41 and access the GTC via General Spaatz Boulevard and the Bradenton Connector. The vehicles will stage in the designated queuing area until a fare is accepted. When a fare is accepted, the driver will proceed to the active pick-up zone in the GTC and then proceed off property via Airport Circle, west of the terminal. This process will eliminate the need for TNC vehicle pick up to access Airport Circle in front of the terminal as well as any curbside pickups. The effect is estimated to be a 4% reduction of curbside daily volume for pickups[24].

4.4.2.6 Adjust Valet Parking Location

Valet parking service operations are staged curbside at the easternmost point in front of the terminal. Upon acceptance of a valet vehicle, the valet attendant will move the vehicle to the storage area located in the Shade Parking lot. This route requires movement on Airport Circle before circling back to the storage area. Returning the vehicle for pick-up is also cumbersome and requires re-entry onto Airport Circle, staging on the terminal curbside, and the customer must exit via Airport Circle. See **Figure 4.4-5**.

Figure 4.4-5
Current Valet Operations Routes

Source: Walker Consultants, 2020

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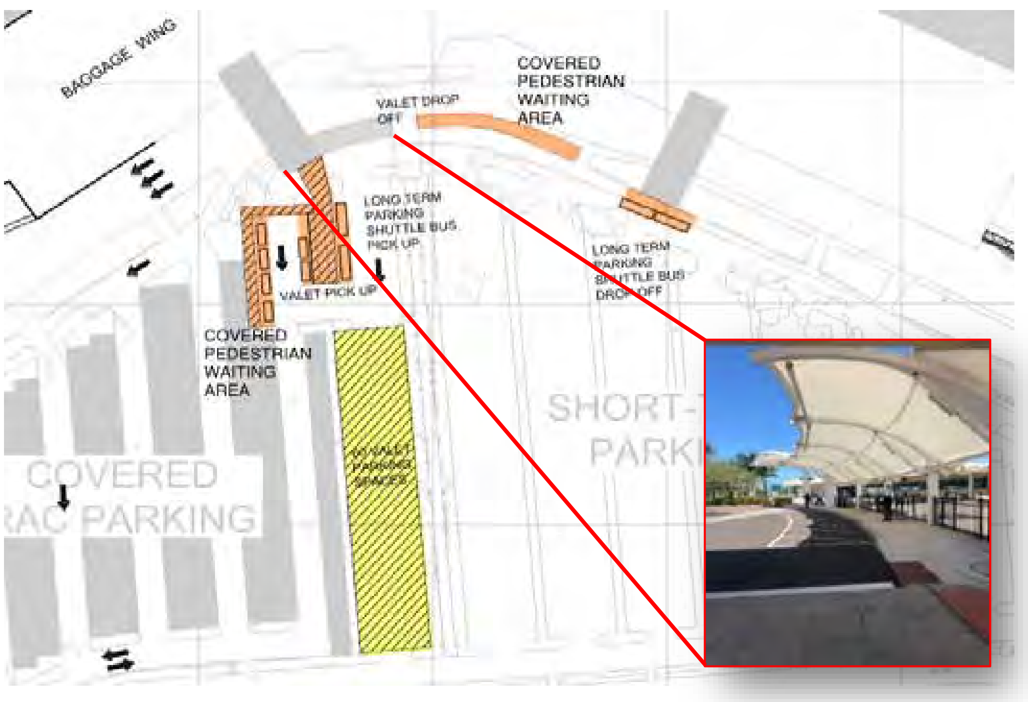
[24] Data provided by AECOM and SRQ calculated based on AECOM vehicle traffic observations on 1/9/20 and 1/10/20 with average daily total of 5,902.5 vehicles and TNC data.

It is recommended that the valet parking service operations be moved into the Short-Term Parking Lot. The pickup and drop-off of the vehicles would occur interior to the Short-Term Parking Lot, directly across from the main entrance to the terminal and near the rental car return walkway from baggage claim. This location would be more convenient for passengers arriving and departing as it would require less pedestrian traversing to get to their destinations, especially for passengers not using ticketing.

As shown in **Figure 4.4-6**, vehicles would arrive at the covered curbside interior to the Short-Term Parking Lot, just east of the baggage claim walkway. Pick-up would occur in the westernmost parking bay in the lot which will be converted to a valet departure plaza. This will allow the staging of valet vehicles without the added risk of curbside traffic flow and will allow for a more expedient customer experience for both arrivals and departures. Additionally, the storage area is proposed to be moved to the second parking bay just southeast of the designated valet plaza with the only vehicular traffic to be the long-term shuttle and other valet vehicles. The storage and retrieval routes will be greatly enhanced and will reduce risk while providing improved customer service.

Figure 4.4-6
Recommended Valet Operations Plan



Source: Walker Consultants, 2020

With this change in valet parking service operations, diligence will be needed to prohibit undesignated customer pick-ups in in the long-term shuttle pick-up area because this will conflict with valet and shuttle operations. The current valet pick-up and drop-off location is relatively new to the valet operational plan and was a change in response to increasing congestion and safety concerns curbside at the center of the terminal. This change has yet to be fully tested due to the reduction of activity as a result of the 2020 COVID-19 pandemic. Walker recommends a valet patron customer survey be conducted to validate the new arrangement, and the consideration of distinct drop-off and pick-up areas in separate locations.

4.4.2.7 Adjust Long-Term Parking Shuttle Drop-Off and Pick-Up Areas

As a consequence to the adjustment of the valet parking service operations area, it is proposed that the long-term parking shuttle bus alter its route, maintaining a drop off area in the Short-Term Parking Lot near the ticketing entrance to the terminal and adjusting its pick up area to move toward the southwest to be parallel to the proposed valet plaza. A shuttle pick-up area will be designated in this area to facilitate the boarding of the shuttle as passengers arrive from the baggage claim area. This will be a designated shuttle area that will proceed in its route further south, merging into the valet vehicle storage area. Traffic in this parking bay will be limited to shuttle and valet traffic only.

4.4.2.8 Adjust Service Vehicle Parking

While not directly related to curbside management, but rather in support of the adjustments for valet parking and the long-term shuttle route, Walker recommends moving the service vehicle parking to the Ground Transportation Center (GTC). In the proposed design, the GTC will have ample parking that is available, accessible, and convenient for service vehicles that would normally park in the Short-Term Parking Lot as shown in **Figure 4.4-7**.

Figure 4.4-7
Current Service Vehicle Parking

Source: Walker Consultants, 2020

4.4.3 REVIEW OF AECOM PROJECTIONS OF FUTURE PARKING DEMAND

Walker reviewed the projections of future parking demand presented in the Facility Requirements section. These projections of future parking demand were detailed in Section 3.6.7 - Parking and Rental Car Facility Assessment and Requirements, along with corresponding source data provided by AECOM.

4.4.3.1 Methodology Review

The Sarasota Bradenton International Airport parking lots considered in this analysis include:

- Short-Term Parking
- Long-Term Parking
- Shade & Overflow Parking
- Employee Parking
- Cell Phone Lot
- Rental Car Ready/Return Area

Walker understands that parking demand during future years was calculated assuming that demand will grow proportionally to vehicular airport traffic.

Hourly data for vehicles entering and exiting the Short-Term Parking Lot, as well as overnight parking occupancy counts were provided by the Airport's parking concessionaire for March and December of 2019. Hourly parking occupancy counts defined by the number of occupied parking spaces were calculated for each day in these months and the maximum daily occupancy rate was calculated by comparing the largest occupancy volume with the lot's capacity. This existing demand used for projections was then calculated using the maximum daily occupancy rate, on the peak day and peak hour when compared to the lot's capacity.

Future projections were calculated based on the growth factor determined from the planned activity levels (PAL) and corresponding vehicular traffic as detailed in Section 3.6.3 Trip Generation. Walker finds the method of forecasting based on projected vehicular traffic to be a reasonably acceptable approach.

4.4.3.2 Walker Adjustment Considerations and Recommendation

Walker observes the projections for the Short-Term Parking Lot could be influenced based on three factors that affect the existing demand, which is the starting basis for the future projections:

- TNC use of the Short-Term Parking Lot has been imbedded in the data used for existing demand calculations. Just prior to the COVID-19 pandemic, TNC staging was moved from the short-term parking area to the cell phone lot. As a result of this operational decision, all future recommendations related to TNC staging will not include use of the Short-Term Parking Lot. Allowing the TNC usage to remain in the short-term parking area would likely overstate the demand for future projections.
- Compared to the other parking lot designations, the Short-Term Parking Lot by

nature has a variable use of parking spaces, in that the turnover ratio (number of times a parking space will be utilized in a day) is greater than 1. Using a flat growth factor, the potential to overstate demand for short-term parking exists because the time of day of the increased activity/traffic has a more relevant effect on the Short-Term Parking Lot. As it is difficult to identify the projected activity levels by the time of day to compare to the current occupancy by time of day, the methodology used is sufficient for this factor.

- There is also a percentage of vehicles (estimated by the airport parking concessionaire to be approximately 5%) that elect to use short-term parking for longer than 24 hours. This is a customer behavior that may be able to be modified by operational and rate alignments to move these vehicles into the longer-term parking areas, rather than consideration as a true short-term parking demand. This would likely overstate the demand in future projections, however, as there will always be a percentage of the customer base that will elect to pay the premium to utilize the Short-Term Parking Lot for overnight use, the methodology used is sufficient for this factor.

Walker recommends modifying the short-term parking demand projections by adjusting the current data to account for the removal of the TNC staging from the short-term parking area.

A recalculation of the existing demand (Peak Hour Occupancy) by comparing the percentage effect of the daily average number of peak-month TNC pick-ups, removes this factor from the number of peak day transactions. **Table 4.4-1** provides a summary of steps Walker used to evaluate the future short-term parking demand projections:

Table 4.4-1
Steps to Evaluate Future Short-Term Parking Demand Projections

Step #	Defined Action	Value
1	Number of peak day transactions (12/5/19)	1,794
2	Daily average peak month TNC pick-ups	402
3	Reduce the number of peak day transactions by the daily average number of TNC pick-ups.	1,392
4	Compare peak day adjusted transactions to original as a percentage.	78%
5	Apply the calculated percentage to the current peak hour occupancy of 352 vehicles. This is the adjusted existing occupancy from which to base projections.	273

Source: Walker Consultants, 2020

In **Section 4.4.2.6** Walker recommended the reallocation of the valet parking vehicle storage area from the Shade Parking Lot to the Short-Term Parking Lot. The impact created from the reallocation reduces the number of available short-term parking spaces from 383± to 300±. When the adjusted future parking demand, as shown in **Table 4.4-2** is applied, the additional spaces required to meet the future demand projections change, as presented in **Table 4.4-3**.

Table 4.4-2 Adjusted Short-Term Parking Requirements (Future Conditions)					
PAL	Adjusted Existing Demand	Growth Factor	Future Demand	Capacity	Additional Needed Spaces
1	273	1.2	328	300	28
2	273	1.4	382	300	82
3	273	1.6	437	300	137

Source: Walker Consultants, 2020

4.4.3.3 Comments on Future Scenario Assumptions

Growth of TNC and Impact on Parking Demand

In Section 3.68 - Transportation Network Companies, AECOM acknowledges the difficulty in understanding the ability to forecast the use of TNCs as well as the impact of TNCs on parking demand.

Aside from decreasing parking demand, another airport concern associated with TNC operations is their impact on passenger loading. Many airports are finding increased congestion at the curb and are moving pickup for TNC pickups inside parking facilities. Growth in TNC use has been very aggressive since entering the market several years ago, however that growth has slowed. At the Sarasota Bradenton International Airport, TNC pick-ups for the past two years has plateaued at sixty percent (60%) growth per year[25]. This may be largely attributable to similar growth in airport activity levels (more passengers = more rides). During this same period of growth, the overall demand for parking has also grown to challenge current inventory levels.

In all, the initial affect TNCs have had on parking over the past two years appeared to have leveled and it is fair to assume that the basis for the parking demand projections for the Sarasota Bradenton International Airport are reasonably accurate at this time.

COVID-19 Pandemic Effects on TNC

While TNC use has declined due to the COVID-19 Pandemic (April rides down 75% year over year), it is expected that when pandemic conditions subside and the economy improves, so will TNC use. As such, it is reasonable to expect that the TNC demand at SRQ will be in line with the recovery of air travel.

Per Walker's recommendations for the Ground Transportation Center (please refer to Section 4.4.5), the proposed staging area for TNCs should be more than adequate for years to come.

[25] Airport data for 2016 represents the first full year data was collected and measured, reflecting a 385% growth from the prior half-year (2015). 2017 reports a 96% growth increase from 2016 levels. Years 2018 and 2019 reflect a stabilized 60% year-over-year growth since 2017 levels were collected and measured.

Table 4.4-3 Master Plan Parking Needs								
Facility	**Current Inventory**	**Adjusted Peak Demand**	**PAL 1**		**PAL 2**		**PAL 3**	
			Year 2021 1.2% Growth	**Additional Inventory Needs**	**Year 2030 1.4% Growth**	**Additional Inventory Needs**	**Year 2040 1.6% Growth**	**Additional Inventory Needs**
Short-Term Parking*	300	273	328	28	383	83	437	137
(Valet and Shuttle)	83	60	72	12	84	24	96	36
Long-Term Parking	959	959	1,151	192	1,343	384	1,535	576
Shade + Overflow Parking	554	409	491	(63)	573	19	655	101
Employee Parking	275	189	227	(48)	265	(10)	303	28
Cell Phone Lot	26	15	18	(8)	21	(5)	24	(2)
Rental Car Ready/Return Area	308	168	370	62	432	124	493	185
Total	**2,432**	**2,073**	**2,657**	**282**	**3,101**	**610**	**3,543**	**1,027**

** Inventory excludes **83** parking spaces (76 valet spaces and 7 Long-Term Shuttle Bus Staging Spaces)*

Source: Walker Consultants, 2020

Opinion on Autonomous Parking Functionality

It is expected that using driverless ride-hailing (with or without transit for some trips) will cost significantly less than owning a personal vehicle in the future. Many other players including Waymo, Ford and GM are poised to enter the TNC market alongside Uber and Lyft. Some project up to a 90% reduction in parking required, with the expected shift occurring as early as 2030. Those same entities are strongly recommending that most if not all parking structures be designed for future adaptive reuse, by which they mean easy conversion to other uses.

To date, none of Walker's clients have elected to design parking structures for 100% future adaptive reuse. The resistance is most likely due to the initial cost increment being too significant for an owner to carry for an unknowable future reduction in parking demand. It is believed this resistance may change as more substantive data becomes available. Projected cost increments may be as significant as a 10% premium for individual items such as taller floor-to-floor heights or future floor penetrations (i.e. elevator shafts, stairwells, etc.) to a 25% premium for short-span construction or express ramps.

A 90% or more reduction in parking demand would take a significant change in auto ownership, with most residents of an area giving up cars and using ride-hailing and/or transit for all trips. Some cite, among other trends, that Lyft estimated that approximately 250,000 of their users gave up their cars in 2017 alone, which seems significant until you realize it is a little more than 1% of their 23 million total users, and only 1/10 of 1% of the cars on the road in the US. Others cite "urbanization", in which increased density will make car free living feasible. This project is a good example of where highly desirable and sustainable, walkable, "live work play" developments with increased density are still not likely to result in significantly reduced car ownership.

More recently, a number of management consultants, auto experts and other academics have projected that the impact on vehicle ownership will be significantly less than a 90% reduction and that it would occur on a much longer time frame than 2030, with more and more skeptics expecting that fully autonomous vehicles won't be available for "decades." It is true however, that L5 autonomy is now available, which means that a vehicle is able to operate driverless, but only in a very limited area that has been thoroughly mapped in its programming (i.e., it knows exactly where a traffic signal head is to be able to read it) and also only in good weather conditions. To our knowledge, no manufacturer has solved all weather conditions of snow and rain.

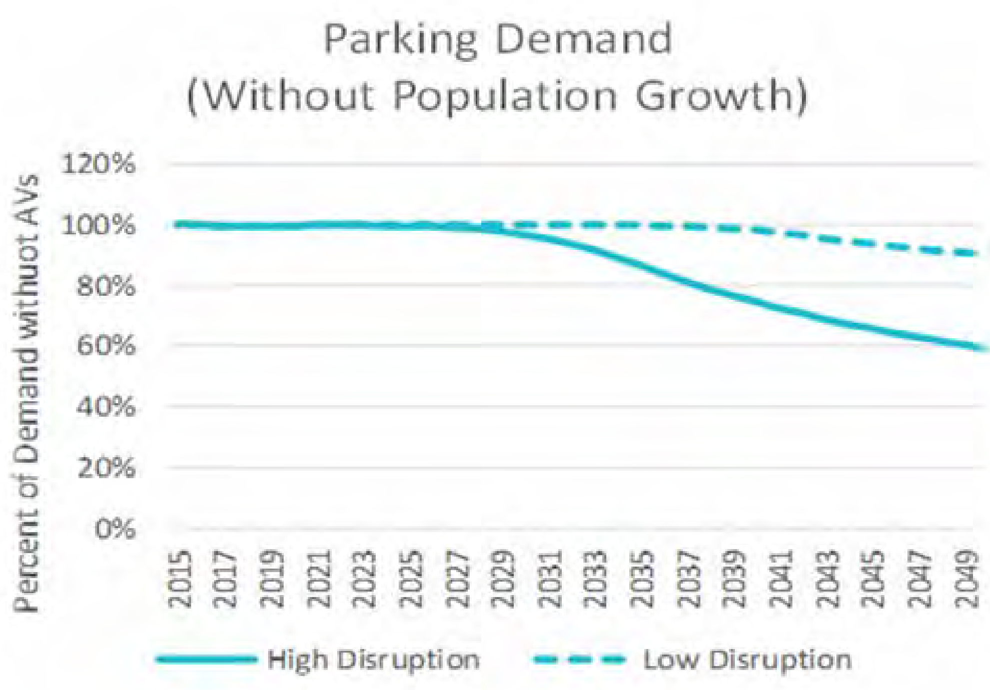
A study recently released by Cal DOT posits that there will be impact of autonomous TNCs in the next decade, but once fully autonomous vehicles are available to the public, the majority of vehicles will still be privately owned.

We have evaluated the impact on parking demand based on sales and other projections by international business and auto consultancies. We rely primarily on a McKinsey study, which projects that 10% of all passenger vehicles sold in 2030 will be to ride-hailing services, resulting in a potential reduction in private vehicle auto sales by 2.3 private vehicles sold per TNC vehicle sold. This would reduce overall vehicle sales by about 5 million vehicles, or about 25% of sales in 2030. However, there are 260 million cars on the road today, and millions more sold between now and 2030 that will be on the road for 10 to 20 years after that. We don't expect maximum impact on parking until 2050 and even then, it would fall in the range of 10 to 40% reduction nationally. Our model results in about 1/3 of vehicles owned by TNCs and 2/3 owned by private individuals by 2050. The TNC vehicles would comprise 72% of vehicle miles traveled (VMT), and private vehicles 28%. Therefore, we believe our high scenario is a maximum impact scenario.

In summary, it is projected that 100% conversion may not be appropriate for most parking structures being designed today. In campus locations with multiple parking assets (both structure and surface) it is better to tear down and rebuild the oldest parking assets rather than to convert these same existing assets to newer state of the art parking locations. Owners should consider partial conversion concepts to include future operations at grade and future additional floor expansions, requiring enhanced foundation and column design features.

Figure 4.4-8 depicts the average reduction in parking nationally. In other words, the reduction for the average building in the US is 40% at the high scenario. There will be more impact in downtowns and where residential density is high, and less in rural areas. The impact will also vary by land use. Further, once autonomous vehicles are available to private individuals, they will be able to drop the passengers and park farther away, particularly if it is paid parking.

Figure 4.4-8
Projection of Future United States Parking Demand Without AVs



Source: Walker Consultants, 2020

Several factors remain as obstacles to overcome in order to allow autonomous vehicles on the roadways.

- Sensors need to be dependable in all conditions, weather and otherwise.
- Machine learning needs standardization to ensure dependability.
- Constant changes in environments for which dependable learning needs to absorb.
- Regulations do not currently exist and will face political and legal challenges.
- Social acceptability needs to be achieved for the technology to prevail.

These are just a few of the factors that will prohibit autonomous vehicles from gaining the proliferation required in the immediate future for which to base a parking inventory forecast. While the Authority needs to be aware of the coming technology, immediate action should not yet be taken as it could still be many years away from bridging the gap in the implementation of this technology, and the direction the use of the technology will take. This timeline of uncertainty suggests a need to maximize less-costly surface parking options first, rather than increase capacity with the use of structured parking. The Authority should continue to annually track and evaluate its parking inventory forecast for site planning purposes, knowing that any type of implementation will need to take a phased approach as identified in **Section 4.4.4**.

4.4.4 PARKING DESIGN LAYOUTS AND SOLUTIONS

4.4.4.1 SRQ 2021 Parking Design Layout (PAL 1)

Based on Walker Consultant's parking demand projections for 2021, minor increases to the supply of short-term and long-term parking are needed. To meet the increase in short-term parking, the 117± parking spaces within the existing long-term parking area that exists to the east of the Short-Term Parking Lot would be converted to short-term parking. This conversion would allow for a total of 500± short-term parking spaces to serve the short-term parking needs and the transition of the valet parking storage and staging areas to a portion of the Short-Term Parking Lot. A portion of the Long-Term Parking Lot would need to be utilized to meet the projected growth in rental car service volume. (please refer to **Figure 4.4-9**).

The required long-term demand may be met by the two parking projects currently proposed:

- Expansion of Long-Term Lot: This project would expand the Long-Term Parking Lot south by eliminating the section of the Airport Circle roadway between the south edge of the Long-Term Parking Lot and Rental Car Road.
  - (Net parking gain: 135 spaces)
- <u>Paving of Overflow Lot:</u> This project would pave the existing grass overflow lot. This lot can then be designed and marked, which will provide a more efficient parking layout. The existing Shade + Overflow Parking Lots provide 554± parking spaces. When paving improvements are complete the Shade + Overflow Parking Lots will provide 613± parking spaces.
  - (Net parking gain: 59 spaces)

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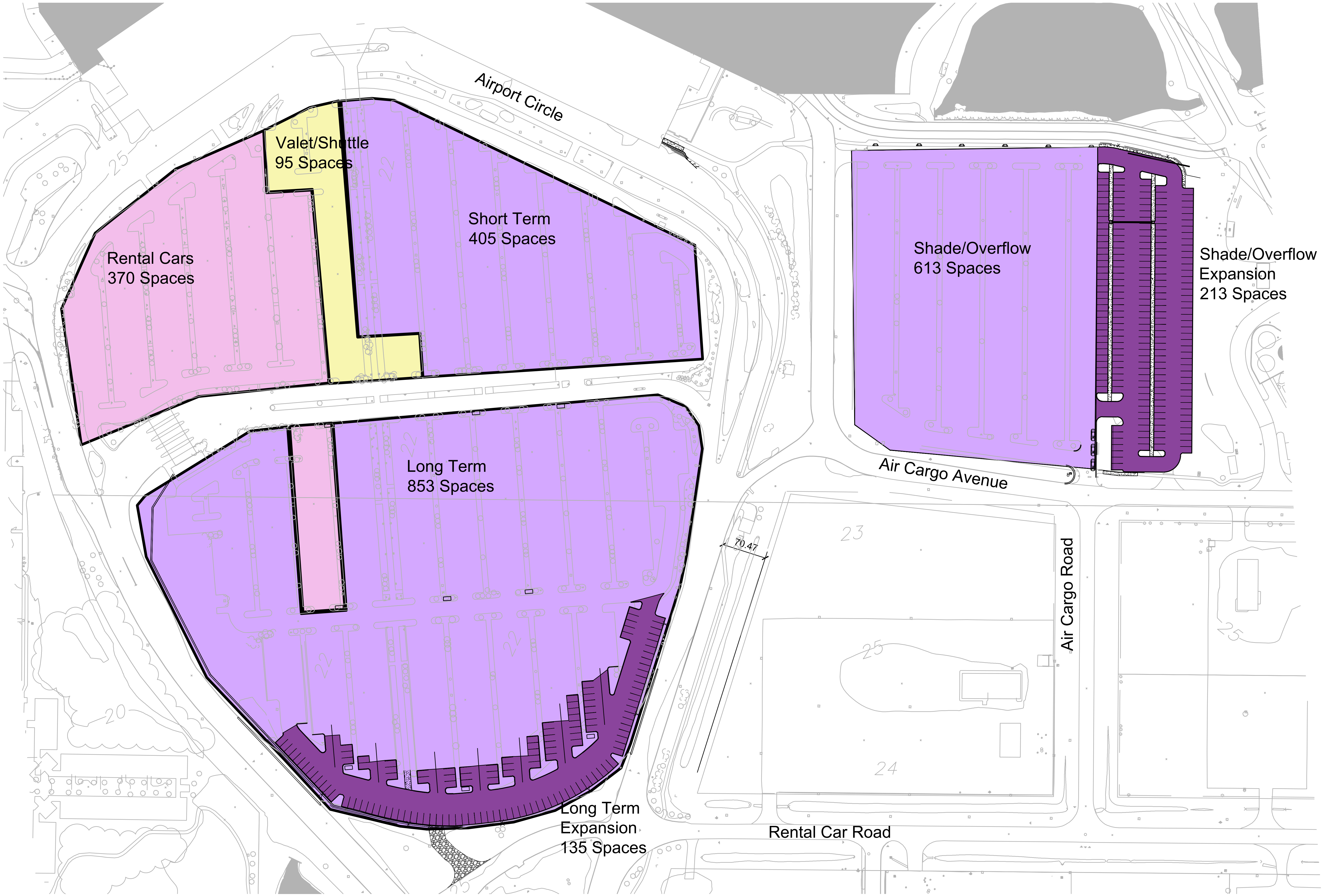

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PARKING DESIGN LAYOUT
(PAL 1)

FIGURE
4.4-9

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To meet the long-term parking demand in this initial planned activity level, Walker recommends the Shade + Overflow Lot and the Long-Term Parking Lot provide a combined use for all other airport passengers not needing short-term parking or valet parking services. These two locations offer similar service to customers and should be considered as long-term parking inventory. To assist with motorist utilization of these separate long-term parking assets, Walker supports the need to implement an electronic guidance and wayfinding solution which displays parking space availability in a digital sign format as motorists enter the airport property from Airport Circle and Bradenton Road.

4.4.4.2 SRQ 2030 Parking Design Layout (PAL 2)

Based on Walker Consultant's parking demand projections for 2030, an additional increase to the supply of long-term parking will be needed. The required long-term demand can be met by the construction of a surface parking lot on the parcel of land bounded by Air Cargo Avenue, Rental Car Road and Airport Circle. This parcel currently is in use by Hertz Rental Car as a quick turnaround (QTA) facility. With the proposed construction of a consolidated rental car and QTA facility within the land parcel immediately to the east, this lot will be vacated and available for construction of a new long-term surface parking lot, providing approximately 550± parking spaces (please refer to **Figure 4.4-10**).

Access to the new surface lot is proposed from the north via Air Cargo Road. To consolidate the entry points, the entry to the Shade + Overflow Lot would be positioned opposite to the entry for the new surface parking lot. The existing exit from the Shade Lot would be maintained due to its position directly across from the north/south portion of Air Cargo Avenue. Exit from the new surface lot would be from the south end of the lot onto Rental Car Road.

4.4.4.3 SRQ 2040 Parking Design Layout (PAL 3)

Based on Walker Consultant's parking demand projections for 2040, the parking supply created by the surface parking lot expansions and new lot created under the 2030 (PAL 2) scenario will not be sufficient to meet the 2040 demand. To meet this demand, the construction of a two-level parking structure, providing 1,100± parking spaces, along with a shift of the east to west vehicle access road to the north to expand the Long-Term Parking Lot is proposed (please refer to **Figure 4.4-11**). The new supply increases will be separated as follows:

- Parking Structure, (west module): 500 spaces for rental car ready and rental car return.
- Parking Structure, (east module): 600 spaces for short-term parking, and valet/shuttle spaces (+/-120 valet/shuttle spaces at the ground level).
- Shift of east to west access road, extension of Long-Term Lot: Approximately 120± long-term spaces.
- Employee Parking Lot, 65 spaces to maximize the pavement marking design of the current paved area to 340± parking spaces.

Our conceptual diagrams show the final footprint of the parking structure. A significant number of items such as future expansion options, phasing, staging and maintenance of traffic and parking items will need to be addressed during the parking structure design and construction process. The number of entry/exit lanes at the public areas will also need to be confirmed during the design of the structure. The proposed layouts show the direction of traffic at entry/exit lanes.

Existing Pedestrian Paths

The existing long- and short-term surface parking lot has a landscaped north-south pedestrian "spine" that splits the lot acting as a collector for patrons travelling to the terminal and is considered an essential part of the pedestrian experience. The parking garage concept (see **Figure 4.4-12**) maintains this path of travel in the conceptual layouts of the parking deck by using the existing spine to create an open and airy lightwell between the two sides of the parking structure. This lightwell will join the proposed elevated pedestrian bridge for access to the terminal.

Long-term parking passengers currently walk north towards the shuttle stops located throughout the Long-Term Parking Lot. The existing long-term parking shuttle provides easy conveyance between the various shuttle stops and a pick-up/drop-off opportunity located at the northern edge of the Short-Term Lot for easy access to the terminal. Passengers who choose not to ride the shuttle can also cross the 4-lane vehicular spine at the existing crosswalks and proceed along the landscaped sidewalk to the terminal. The general pedestrian flow for long-term parking passengers will be maintained. Shuttle access would be maintained or combined with the new surface lot constructed to meet projected 2030 demand.

Parking Structure East Side

The east half of the proposed parking structure will provide parking for short-term vehicles. This area (see **Figure 4.4-13**) covers the same general area that is currently used for short-term parking. This location provides patrons parking that has convenient, walkable access to the terminal. Short-term parking passengers will have the option to park at the ground level or take the express ramp (no parking on this ramp) and park at level 2 (the roof level). All parking spaces will be on flat parking areas for user comfort and clear sight lines.

Parking Structure West Side

Parking and staging for rental car return and rental car ready vehicles will take place on the west side of the parking structure. A section of the grade level is envisioned as enclosed air-conditioned space for the rental car agency counters, near the terminal roadways and proposed elevated pedestrian bridge. It is understood that the QTA (quick turn-around areas) where the rental car vehicles will be cleaned and refueled will not be located inside the proposed parking structure. Only rental car ready vehicles will be parked at the ground level and rental car return vehicles will be directed to level 2 (roof level). Returning rental cars will access level 2 via an express ramp along the south edge of the parking structure that is accessed directly from the dedicated rental car return lane at the long-term parking entry plaza. **Figure 4.4-14** shows a parking configuration on the support level that will allow for a more typically pull-through configuration for returning rental cars.

Employee Parking

A concept for providing the required number of employee parking spaces through the planning horizon is shown in **Figure 4.4-15**. The existing lot contains a significant amount of pavement that is not currently striped as individual parking spaces. That pavement will require rehabilitation and stripping as shown in the figure.

Overall Circulation and Parking Access and Revenue Control System (PARCS)

Our layouts include the following concepts:

1. An expanded long-term parking entrance plaza which includes a separate lane on the right (north) side for rental car return. The purpose of this rental car return lane is to remove these vehicles from the roadways in front of the terminal and thus alleviate congestion. There will be no parking control equipment at the rental car return area but access to the parking areas will be restricted.
2. Rental car return vehicles will use an express ramp accessed from the north lane of the central access spine to enter the west half of the parking structure.
3. Rental car return vehicles will exit to the west similar to the current exit.
4. The short-term parking entry remains at its present location.
5. An expanded exit plaza.

The options for PARCS continue to evolve at airport parking facilities. Traditional technologies such as pulling a ticket or using an access card upon entry and paying an attendant or exiting through a card-reader upon exit are being phased out in favor of technologies that move the transaction out of the lane to a centralized area, or a virtual, account-based platform. These technologies may include the use of Automatic Vehicle Identification technologies (AVI or RFID) such as those offered by SunPass, mobile Bluetooth and app-based payment platforms, and license plate recognition (LPR) using a vehicle's license plate as an identifying credential. Use of these technologies is quickly becoming more prevalent and allows flexibility in product offerings that can include incentive and loyalty programs, reservations, and demand-based pricing.

With the advent of camera based Automatic Parking Guidance Systems (APGS), occupancy data can be obtained in such detail that motorists can be guided to available parking via wayfinding signage or mobile app. Paired with LPR, vehicles can be tracked to help motorists find where they parked, as a customer amenity, as well as identify parking in tier-based areas (short-term parking, long-term parking, shade-parking, etc.). The information can also be used to determine the length of stay and calculate the appropriate parking fee.

Development and application of technologies that will be used in 2040 is difficult to predict, however, the trend to move parking payment activities out of the entry and exit lanes has been consistent as it helps to facilitate traffic flow and improve exit times. The current emerging trend is “frictionless” parking where drivers do not have to stop in the lane to interact with equipment, but rather slow the vehicle to allow the technology to read (LPR, Bluetooth, etc.) the identity of the vehicle, associate the vehicle with the appropriate account or transaction status and react accordingly to vend a gate to allow ingress or egress. As this technology becomes more prolific in use and the customer base embraces the account-based platforms, the need for barrier gates will diminish.

Advances in vehicle technology, such as in-car apps or smart-car systems, may further reduce the need for PARCS hardware. Use of vehicle communication devices (beacons) or geo-fencing to determine the location of the vehicle to the parking zone and establish the transaction to the associated account, will require real-time authorization or pre-authorization by the motorist as they proceed to the destination.

A PARCS technology platform should be evaluated at the time of facility development to get the most reliable solution for the needs of the Authority and its customer base.

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PARKING DESIGN LAYOUT (PAL 2)

FIGURE 4.4-10

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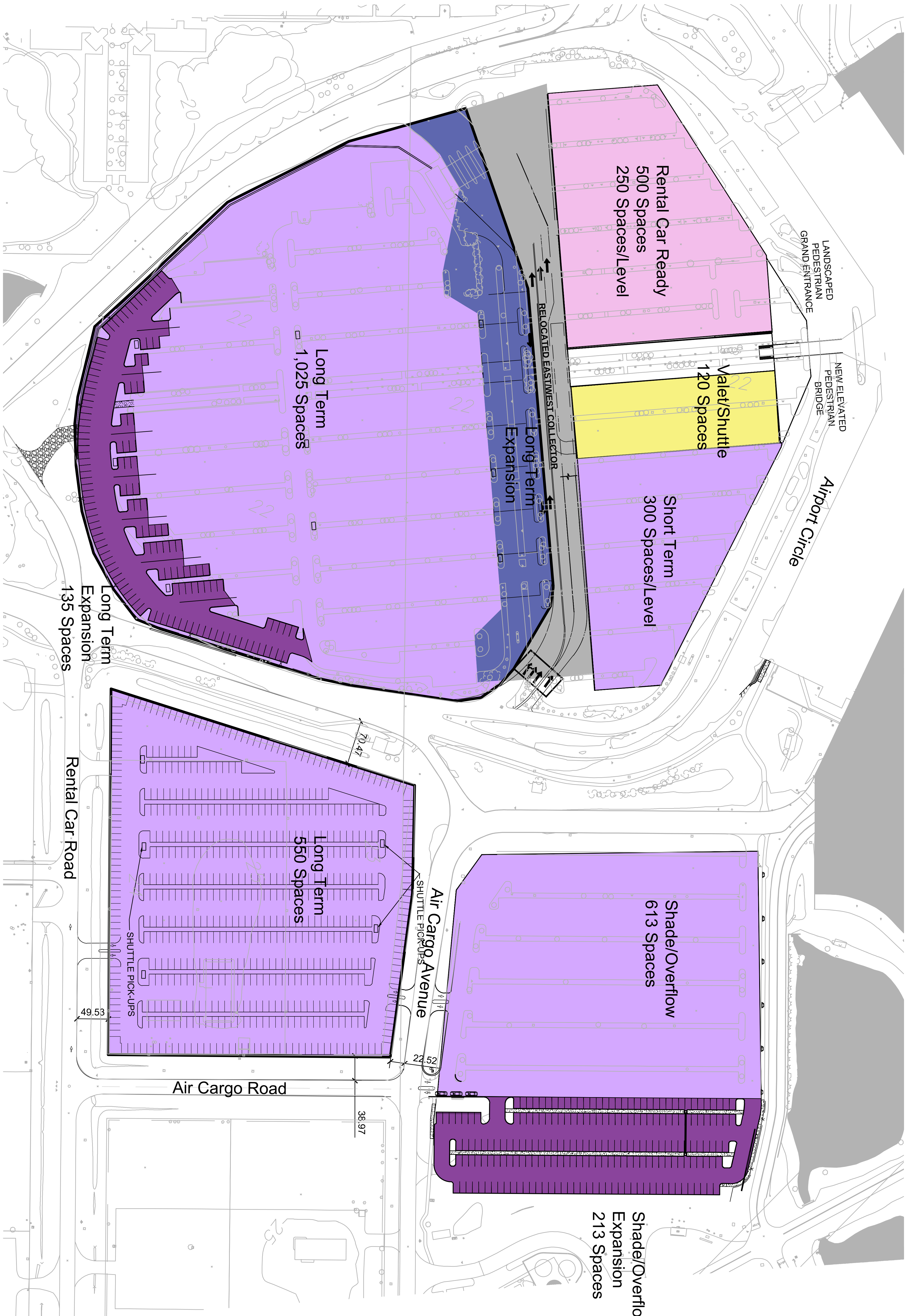

FIGURE
4.4-11

PARKING DESIGN LAYOUT
(PAL 3)

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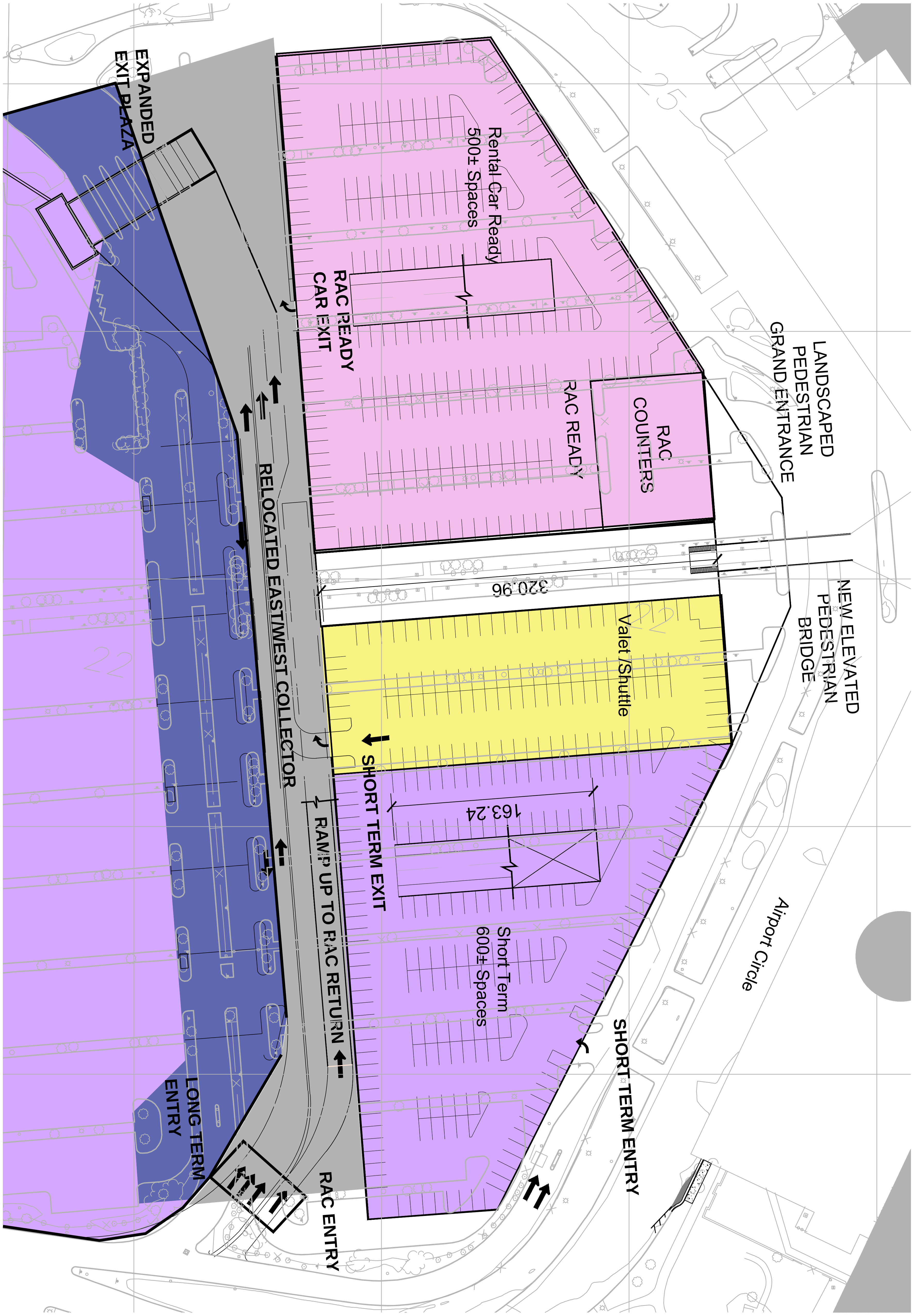

FIGURE 4.4-12

PARKING STRUCTURE CONCEPT
(GRADE LEVEL)

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FIGURE 4.4-13

PARKING STRUCTURE CONCEPT (SUPPORTED LEVEL)

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PARKING STRUCTURE CONCEPT (SUPPORTED LEVEL) RENTAL CAR RETURN PULL-THROUGH LANES

FIGURE 4.4-14

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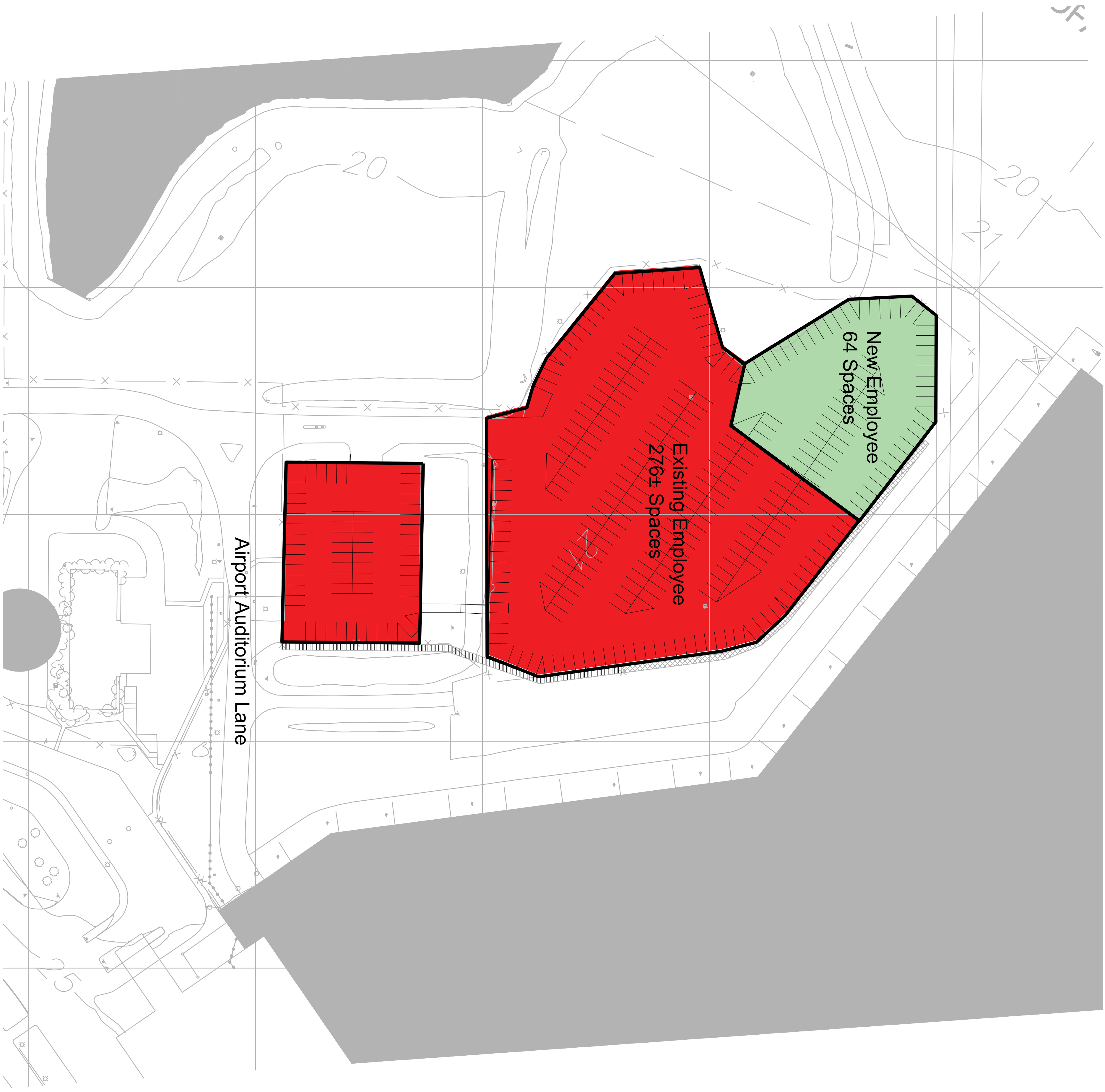

FIGURE 4.4-15

EMPLOYEE PARKING LOT CONCEPT

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MASTER PLAN UPDATE

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4.4.5 PROPOSED GROUND TRANSPORTATION CENTER LAYOUT

Conceptual design layouts for three future Ground Transportation Center (GTC) scenarios were developed. Within these scenarios, needs and enhancements including lighting, weather-protected pedestrian waiting areas, customer service amenities, Wi-Fi capacity, geofencing, etc. are considered. Additionally, wayfinding components, including suggested signage and pedestrian accommodations, as well as functional design plans for pavement markings, bollards and curbs relating to our findings are reviewed.

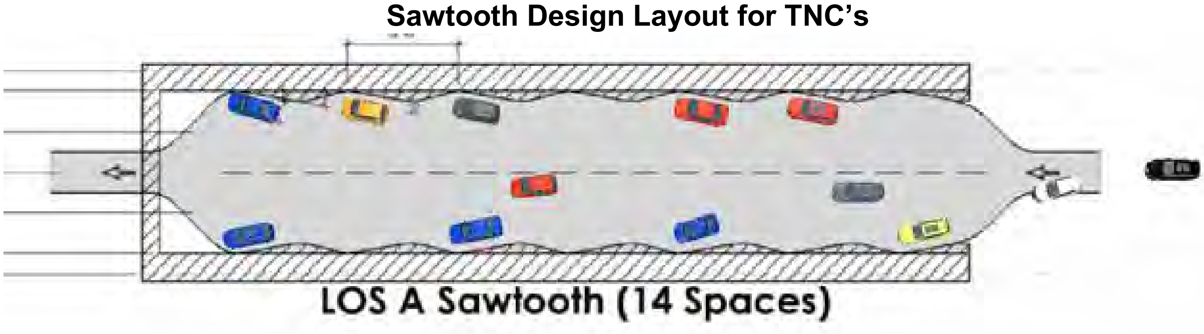
The following consolidated GTC design concepts are provided to meet the scope of service objective. All concepts support the current Ground Transportation Operating Rules and Regulations established by the Airport Authority. It is expected that all permitting and rules pertaining to the commercial and for-hire vehicle activities would remain intact with the only modification be related to directional guidance to access the facilities.

4.4.5.1 Option 1: Sawtooth Design Layout

Moving the Transportation Network Company (TNC) active pickups from the terminal curb to a newly designed GTC location is projected to reduce vehicles traveling to/from the terminal area and open curb space near the ticketing curb. TNCs would access their new staging and active pickup area via US 41 (N. Tamiami Trail). Vehicles traveling west from University Parkway would be required to proceed past the main airport entrance on University Parkway and proceed to US 41, before turning right and heading north to General Spaatz Boulevard, turn right and proceed east to Airport Auditorium Lane, then head north to access the GTC. Access to the new GTC location from Airport Circle drive would be communicated to TNCs and operationally disincentivized by vehicle congestion loads during peak arrival and departure hours.

To accommodate the planned activity levels for growing passenger volume at Sarasota Bradenton International Airport (SRQ), Walker recommends a Sawtooth Design Layout for TNCs within the new GTC location. The sawtooth design will enable TNC drivers to achieve efficient curbside access in the active pickup area by simply aligning the front of their vehicle with any of the desired sawtooth cutouts adjacent to the pedestrian pickup areas. An example of this design is provided in **Figure 4.4-16**.

Figure 4.4-16
Sawtooth Design Layout for TNC's



Source: Walker Consultants, 2020

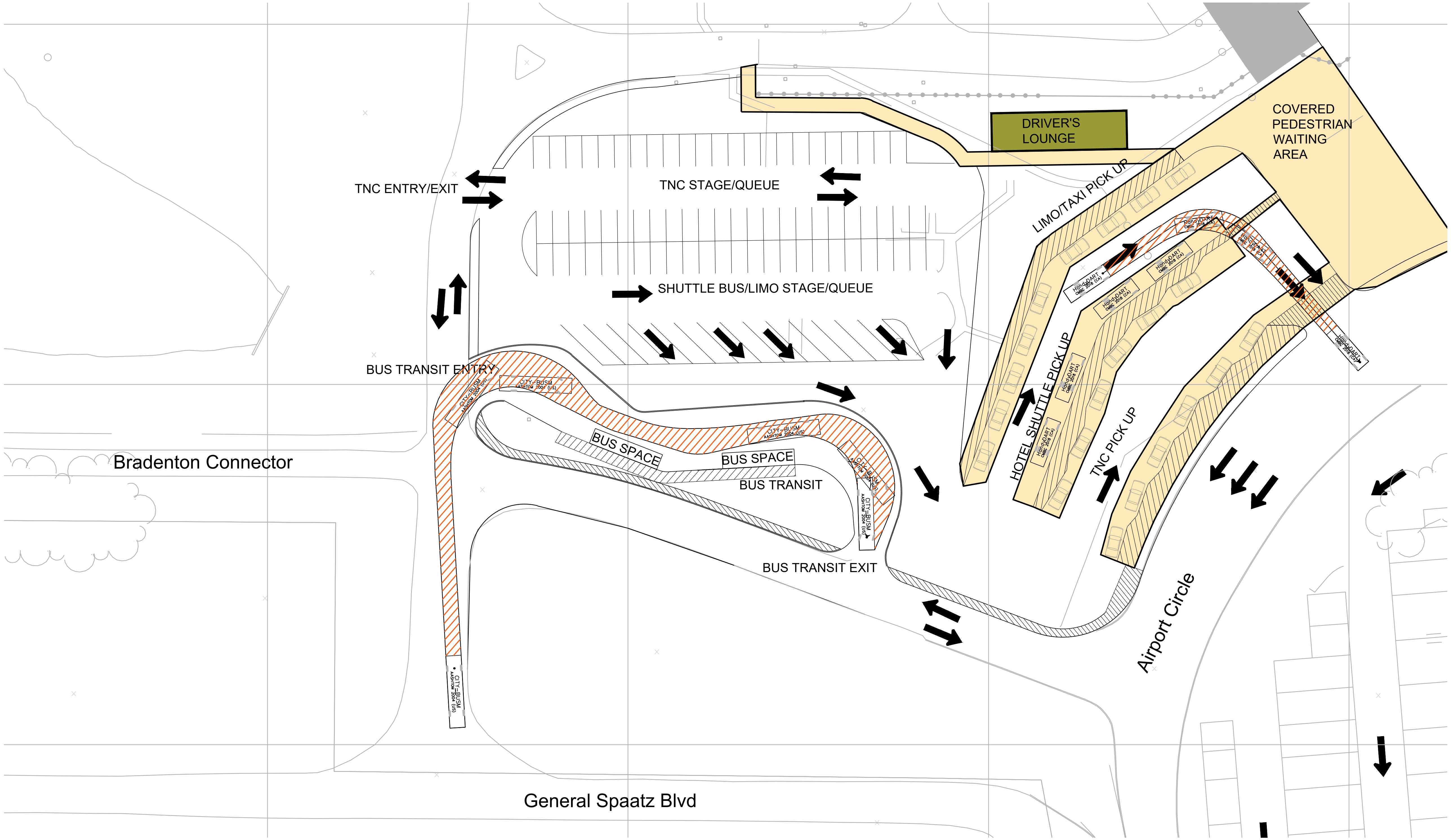
Increasing the measured distance between the sawtooth cutouts may reduce available active pickups, but the added level of service (LOS) benefit will greatly reduce dwell times that drivers and pedestrians require in the active pickup spaces for loading and departing the GTC location. **Figure 4.4-17** provides Walker's recommended GTC design layout.

The proposed design encompasses the current footprint of the limousine, taxicab and County bus transit active pickup area located outside the baggage claim area at the west end of the terminal. The proposed design also includes the removal of the McClure Auditorium Building and its surrounding surface parking area. It is also understood the Authority intends to reconfigure the jet blast wall in this area to an orientation parallel to the existing Airport Auditorium Lane that provides airfield access. No physical changes are required of the exiting roadways that border this preferred service area. All vehicles and buses will enter the new GTC area from entry points designated along Airport Auditorium Lane and exit the GTC area onto the Bradenton Connector (Bus Transit Exit) or Airport Circle (Limos, Taxis, TNCs, Vans and Shuttle Buses and Courtesy Vans). The following subsections provide additional detail for each service component of the proposed GTC location.

4.4.5.2 Bus Transit

Consultation with airport staff identified a need to maintain the bus transit access from US 41 and General Spaatz Boulevard, terminating at a location inside the new GTC area at the westernmost entrance of the SRQ terminal. The bus transit area design will continue to allow both the Sarasota County Area Transit (SCAT) and the Manatee County Area Transit (MCAT) to provide service to and from the Airport, while at the same time allowing for a ridership transfer from one County transit service to another. It is understood ridership for these routes continue to remain at significant levels, mainly as a result of the transfer service amenity between counties.

Walker's proposed design for the bus transit pickup and drop-off shelter locations will keep bus movements at a minimum as the buses enter the GTC area from Airport Auditorium lane and exit almost immediately onto the Bradenton Connector. Designing a ninety-degree angled exit onto the Bradenton Connector will allow for future and alternate route flexibility should the Bradenton Connector be inaccessible or a need to access University Parkway. To maintain the bus movement integrity through the GTC location, Walker recommends a curbed delineation which will prevent the for-hire service vehicles from occupying, blocking and restricting any bus turning movements. A pedestrian walkway was designed to provide a perimeter pathway from the bus transit area to the TNC pedestrian walkway leading to the westernmost terminal entrance.



Indicates Covered Pedestrian Walkways

CAR COUNT

9'-0" 90° STANDARD SPACE

	TNC PICK UP	TAXI PICK UP	TNC STAGE/ QUEUE	TOTAL
GROUND	12	9	85	106

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

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WALKER'S RECOMMENDED GROUND TRANSPORTATION CENTER LAYOUT

FIGURE 4.4-17

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4.4.5.3 Staging and Queuing

The new GTC location offers a designated staging and queuing area for all for-hire service vehicles. In this design, eighty-five (85) delineated spaces in total provide a convenient staging and queuing area for all for-hire service vehicles prior to responding to their fare request and scheduled pickups. Within this designation, fourteen (14) angled spaces were designed to meet the vehicular lengths of multi-passenger shuttle buses and limousines. The remaining seventy-one (71) delineated spaces were designed for 9' wide, standard parking stall needs. These spaces will provide staging for the standard-sized TNC, 7-passenger van, and taxicab vehicles. Similar to the bus transit access, the for-hire vehicles enter the GTC location from Airport Auditorium Lane and stage in the designated area immediately north of the bus transit stop.

4.4.5.4 Limousine and Taxicab Active Loading

The design for the limousine and taxicab active loading zone remains consistent with the location for today's limousine and taxicab active pickup location. Positioned along the northwest curb location of the active pickup area, the limousines and taxicabs may stand in the nine (9) designated spaces to pick up their pre-arranged passengers upon their return to SRQ. Historically, this operational procedure requires a greater dwell time for active pickups when comparing to the on-demand dwell times required of the TNCs. Passengers may access the limousine and taxicab active pickup location using a covered pedestrian walkway extending from the terminal along a designated walkway.

4.4.5.5 Shuttle Bus and Courtesy Van Active Loading

Positioned in the center of the active pickup area, multi-passenger shuttle buses and courtesy vans, will have access to picking up their passengers in the same manner as limousines and taxicabs. A covered pedestrian walkway will protect passengers as they exit the baggage claim area and proceed along a pathway centered within the active pickup area. The pedestrian pathway will be appropriately striped and protected with concrete bollards placed every five (5) feet to allow for wheelchair accessibility between bollards. The design of a center pedestrian walkway includes bollards that will run along both sides of the marked pedestrian walkway and may be staggered from either side to allow for greater pedestrian safety measures and protection from vehicles on both sides of the walkway. The shuttle buses and courtesy vans will align from the left side of the pedestrian walkway to allow for a typical right-side passenger entry. As many as four (4) multi-passenger buses could potentially be actively loading at one time without conflict. Walker analyzed the shuttle bus turning movements with the use of autoTURN, a third-party computer-aided design software product used to confirm spatial movements by various vehicle types. The turning movements are been shown in Figure 4.4-17.

4.4.5.6 Transportation Network Vehicle (TNC) Active Loading

New to the GTC location, a TNC active loading area was designed to handle the majority number of single-passenger for-hire services in both the near term, and as passenger planned activity levels continue to grow over time. To accommodate this metric, Walker designed the TNC active pickup area to encompass the east side of the covered, center pedestrian walkway and another covered pedestrian walkway along the east border of the GTC location.

Allowing for multiple pickup lanes, the TNC active pickup area will provide twelve (12) marked stations, which should be labeled to coordinate the driver and passenger connection through the use of the ride-hailing app service. As drivers accept a requested fare, they will be required to pull up to a predetermined station, while at the same time the passenger will need to proceed to the same station identified with their driver on their mobile app. To reduce surface mounted sign congestion, the active pickup stations will be identified with the use of overhead signs mounted from the covered walkway support system. Similar to the shuttle bus and courtesy van active loading area, the pedestrian pathways will be appropriately striped and protected with concrete bollards placed every five (5) feet to allow for wheelchair accessibility between bollards. There will be no raised curb design within the interior of the active pickup area. Only perimeter curbs will be incorporated in the design to allow for perimeter integrity and definition of the active GTC pickup area.

4.4.5.7 Driver's Lounge

To manage and regulate pedestrian traffic inside the baggage claim area of the terminal, Walker recommends the design of an outdoor driver's lounge. The driver's lounge will provide restroom amenities as well as a minimal covered seating area with vending machine options and Wi-Fi connectivity. Basic electrical and plumbing services will be offered in this lounge, as the design will suggest a well ventilated, open-air feel, similar to an interstate rest area.

4.4.5.8 Pedestrian Covered Walkway and Active Loading Areas

Walker recommends the design of pedestrian covered walkways and loading areas to protect passengers and drivers from exposure to inclement weather and overhead sunlight. Walkway and loading area coverings should be designed in a manner that limits obstructions in the primary direction of travel. Cantilevered-type systems extending over vehicle lanes may be preferred along curb pick-up areas such that driver and pedestrian visibility is not restricted. The structural design of the covered walkways shall be in accordance with the latest edition of the Florida Building Code. This would include all building plans and specifications to be signed and sealed by a licensed Professional Engineer within the State of Florida. Building requirements specific to the Sarasota Airport Aviation Authority shall also be considered in the final design.

4.4.5.9 Lighting, Wi-Fi, and Passenger Amenities

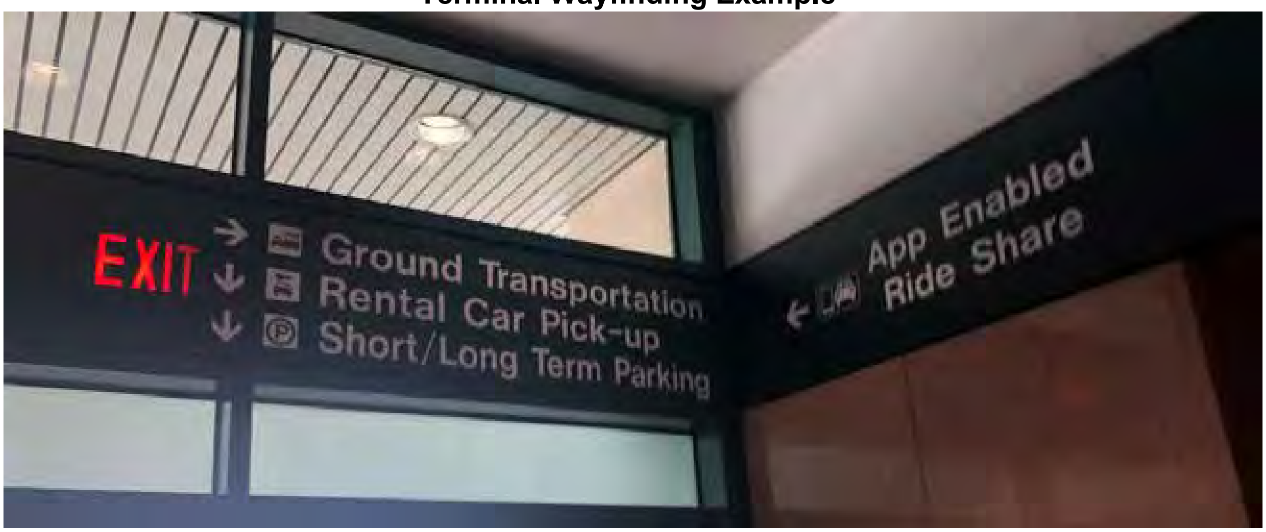
Walker recommends the extension of SRQ Wi-Fi services from the terminal to the GTC staging, queuing and active pickup areas because passengers have come to rely upon the immediate use of Wi-Fi services to communicate their arrival and plan immediate ground transportation activities. Providing this amenity for arriving passengers will provide a favorable impression for first time visitors, as well as regular users.

The addition of energy efficient lighting should be incorporated into the design of the covered pedestrian walkways in a manner the provides ample lighting for passenger loading activity during evening and early morning hours each day.

4.4.5.10 Vehicular and Pedestrian Wayfinding

Prominent, yet simple wayfinding design is critical to any successful parking and mobility program, especially in an international airport environment. To assist with the communication of complex information, Walker has recognized the increasing use of international symbols and graphics common to many of today's travelers as shown in **Figure 4.4-18**. We continue to observe the use of fewer words with more universal symbols and graphics. As an example, a number of SRQ's interior terminal pedestrian wayfinding signs have already embraced this design feature.

Figure 4.4-18
Terminal Wayfinding Example



Source: Walker Consultants, 2020

Walker supports this approach and recommends an opportunity to redesign the interior terminal signs to support relocation of app-enabled, ride-hailing active pickups and the addition of the proposed valet parking operation location within the Short-Term Parking Lot.

Upon being directed to the GTC location, Walker specifically recommends the need to redesign the overhead message as passengers exit the terminal into the outdoor active pickup area. **Figure 4.4-19** demonstrates the existing GTC offerings in a "catch all" informational manner.

Figure 4.4-19
Existing GTC Wayfinding Information – Baggage Claim Exit

Source: Walker Consultants, 2020

A simple recommendation to prepare passengers for the GTC area suggests an overhead message that initiates the process of directing passengers to their respective passenger loading activity area. In this instance, limousine and taxicab passengers would proceed to the right, shuttle bus and courtesy van passengers would remain straight ahead, and ride-hailing passengers would proceed to the left upon exiting the terminal.

Vehicular wayfinding has initially been addressed in the Curbside Operation Review section of this working paper and may be further detailed in this subsection with an explanation of vehicular messaging for GTC drivers.

4.4.5.11 GTC Approach From US 41

As drivers approach the turnoff from General Spaatz Boulevard toward Airport Auditorium Lane, the current messaging is limited to directing motorists to the J.M. Building for Airport Engineering and Environmental Affairs, the McClure Auditorium and the Employee Parking Lot.

While much of this travel route may be considered frequent for some users, to include airport employees and other representatives of the Airport, Walker suggests an opportunity to initiate a vehicular wayfinding solution that directs authorized GTC users to the new GTC location entrance, just north of the Bradenton Connector. At the same time, vehicle messaging should be introduced at the Bradenton Connector and Airport Auditorium Lane that restricts access to the general public and other non-authorized vehicles. We believe this location would also be suitable for defining an appropriate geofence application to regulate ride-hailing operators when accept ride-hailing pickup fares. **Figure 4.4-20** presents the wayfinding program that exists today as a motorist navigates General Spaatz Boulevard from US 41.

Figure 4.4-20
General Spaatz Approach to Airport Auditorium Lane

Source: Walker Consultants, 2020

The red circle demonstrates the visibility of the exiting wayfinding sign as the motorist approaches the intersection of General Spaatz Boulevard and Airport Auditorium lane. The same wayfinding sign is shown in **Figure 4.4-21**.

Figure 4.4-21
General Spaatz Vehicular Wayfinding Sign

Source: Walker Consultants, 2020

4.4.5.12 GTC Approach From Airport Circle

Walker recognizes an attempt to restrict vehicular movements from Airport Circle to the Bradenton Connector may not be supported. The use of the Bradenton Connector allows a motorist to proceed on this one-way artery toward US 41 without having to proceed southbound on Airport Circle to exit the Airport at University Boulevard and turn right toward US 41. To restrict motorists from entering the GTC location from Airport Circle and the Bradenton Connector, Walker recommends upgrading the vehicular wayfinding package to identify the types of authorized vehicles permitted to use the new GTC location. The existing sign package simply restricts unauthorized vehicles from parking in the GTC area from the Bradenton Connector. Please refer to **Figure 4.4-22**.

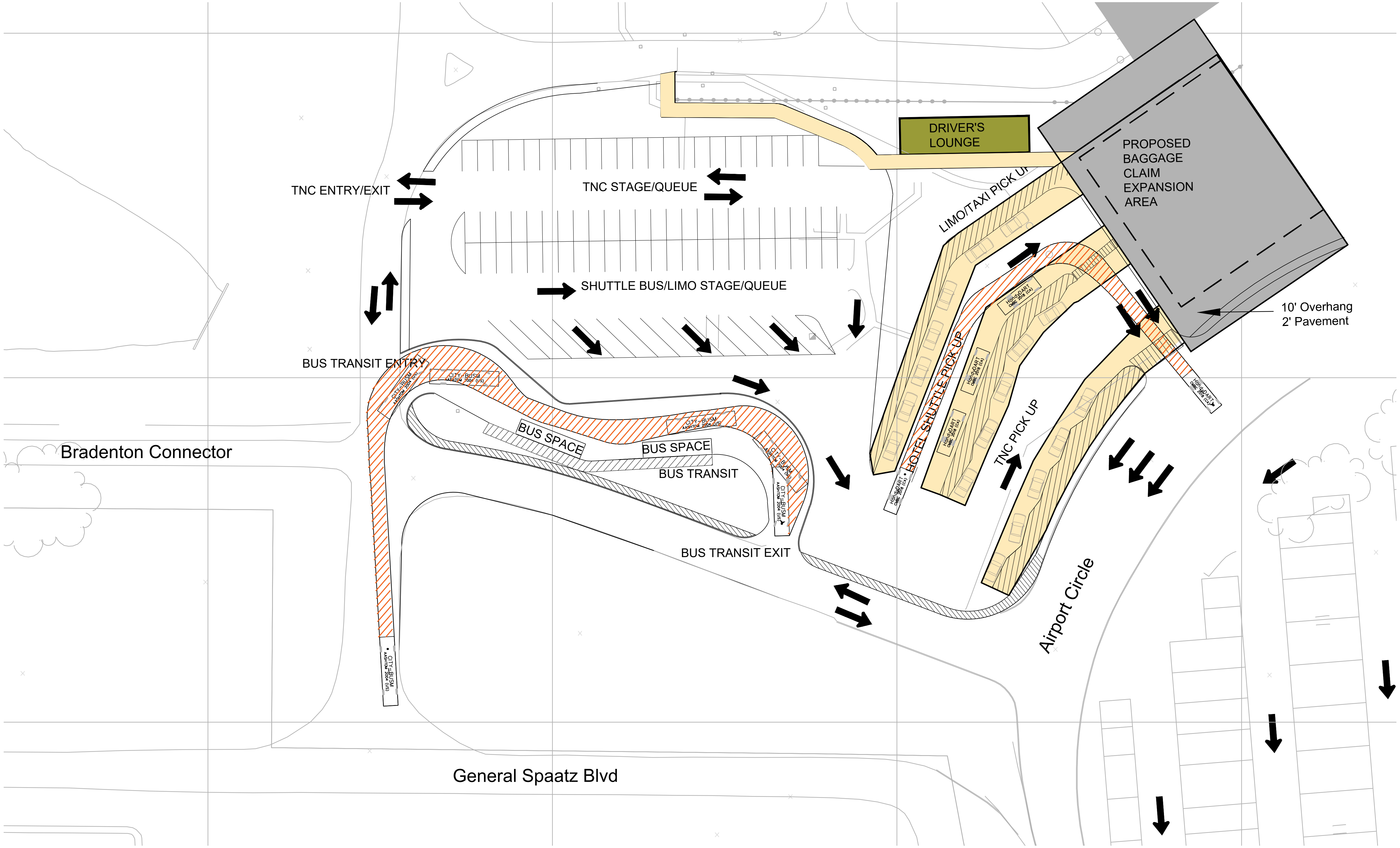
Figure 4.4-22
Existing Ground Transportation Center Sign Package

Source: Walker Consultants, 2020

This area should be formally identified as the Airport's Ground Transportation Center labeling the available service offerings to include limousine, shuttle and courtesy vans, as well as ride-hailing services to include taxicab, Lyft and Uber.

4.4.5.13 Sawtooth Design Layout with Baggage Terminal Extension

The preferred GTC design includes a provision for extending the baggage claim area into the proposed GTC location for the purpose of adding a fourth baggage claim carousel. **Figure 4.4-23** shows this modification.



Indicates Covered Pedestrian Walkways

CAR COUNT

9'-0" 90° STANDARD SPACE

	TNC PICK UP	TAXI/SHUTTLE PICK UP	TNC STAGE/ QUEUE	TOTAL
GROUND	10	10	85	105

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

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WALKER'S RECOMMENDED GROUND TRANSPORTATION LAYOUT W/PROPOSED BAGGAGE CLAIM EXPANSION

FIGURE 4.4-23

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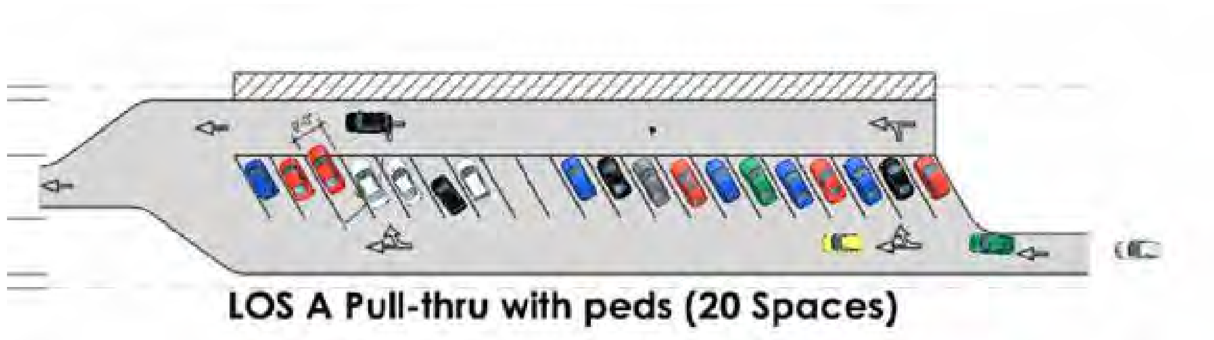
4.4.5.14 Option 2: Pull-Through Design Layout

Walker reviewed two additional options for a proposed Ground Transportation Center layout. The first is described below and is known as a “Pull-Through” design. The pull-through design allows for two unique layouts, a pedestrian exit path and a pedestrian entry path. The pedestrian exit path design allows pedestrians to access the vehicles in the active pickup area from a pedestrian walkway location, requiring the pedestrian to cross the vehicle exit travel lane after an active pedestrian pickup has been completed. An example is shown in **Figure 4.4-24**.

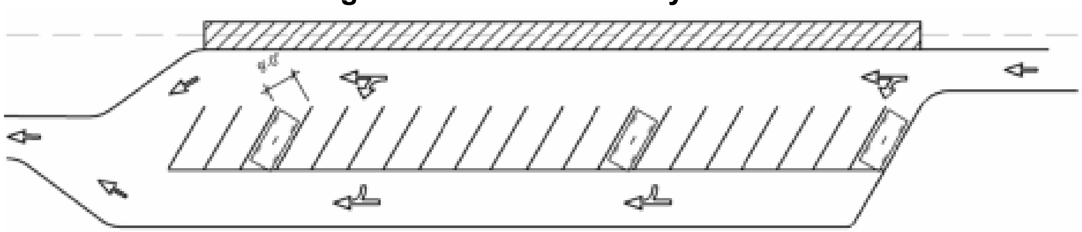
Figure 4.4-24
Vehicle Pull-Through with Pedestrian Exit Path – Not Preferred



Source: Walker Consultants, 2020

Should design limitations require the need for a pull-through design, Walker recommends a pedestrian entry path. From a safety advantage, this design allows a pedestrian to access the vehicles in the active pickup area from a pedestrian walkway location, requiring the pedestrian to cross the vehicle entry travel lane before an active pedestrian pickup has been completed. An example is shown in **Figure 4.4-25**.

Figure 4.4-25
Vehicle Pull-Through with Pedestrian Entry Path – Walker Preferred



LOS A Pull-thru with peds (20 Spaces)

Source: Walker Consultants, 2020

Figure 4.4-26 has been provided to reflect Walker’s pull-through design layout for the new GTC location. Walker does not recommend the pursuit of this design option for the new GTC location.

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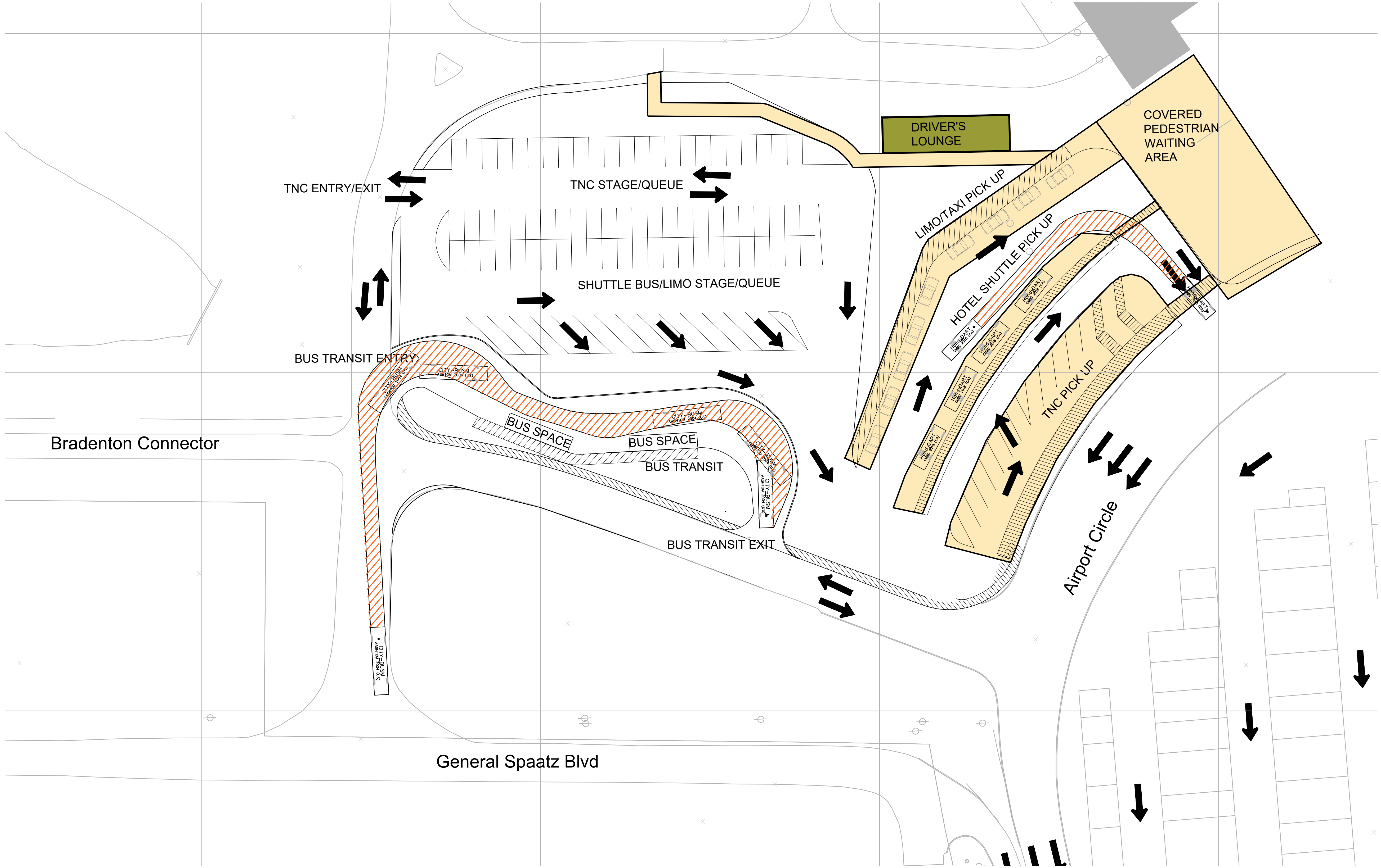
PULL-THROUGH GROUND TRANSPORTATION CENTER DESIGN OPTION

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE



Indicates Covered Pedestrian Walkways

CAR COUNT

9'-0" 90° STANDARD SPACE

	TNC PICK UP	TAXI PICK UP	TNC STAGE/ QUEUE	TOTAL
GROUND	13	9	85	107

FIGURE 4.4-26

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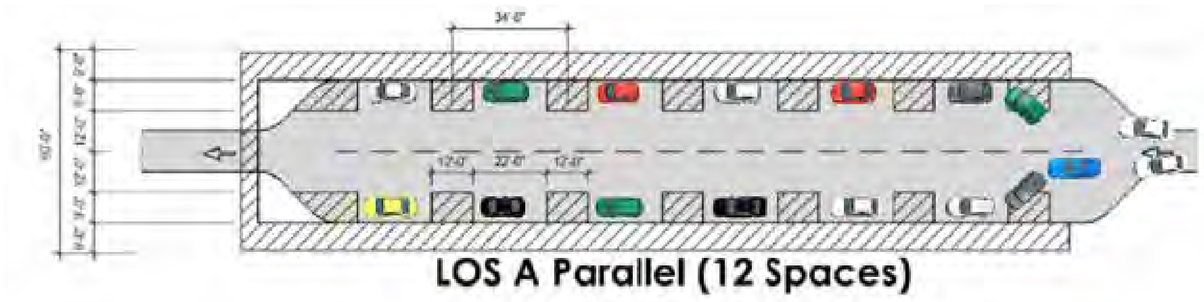
4.4.5.15 Option 3: Parallel Design Layout

The third option described below is known as a “Parallel” design. The parallel option allows for motorists and pedestrians to interface in a fashion similar to the existing terminal curb on Airport Circle. Motorists simply select an available parallel parking location along the curb while pedestrians access the active pickup vehicles from either curbside location. An example is shown in **Figure 4.4-27**.

Figure 4.4-27
Parallel Curbside Access



Source: Walker Consultants, 2020

This design option suggests fewer active pickup stations as a result of designing 12’ buffers between active vehicle pickup stations to allow for pedestrian and motorist safety measures when loading and moving in and out of the active pickup area.

Figure 4.4-28 is provided to reflect Walker’s parallel design layout for the new GTC location. Walker does not recommend the pursuit of this design option for the new GTC location.

4.5 GENERAL AVIATION ALTERNATIVES

Future general aviation development at the Airport can occur on the west side in the Dolphin leasehold, on the eastside in or next to the Ross Aviation leasehold and/or in the north quadrant. The amount of space available for construction of additional general aviation facilities in or next to the existing Dolphin and Ross Aviation leaseholds is limited by existing facilities. However, redevelopment is possible in certain areas, especially in the Dolphin leasehold. Consequently, it is anticipated that the majority of new general aviation development will occur in the north quadrant.

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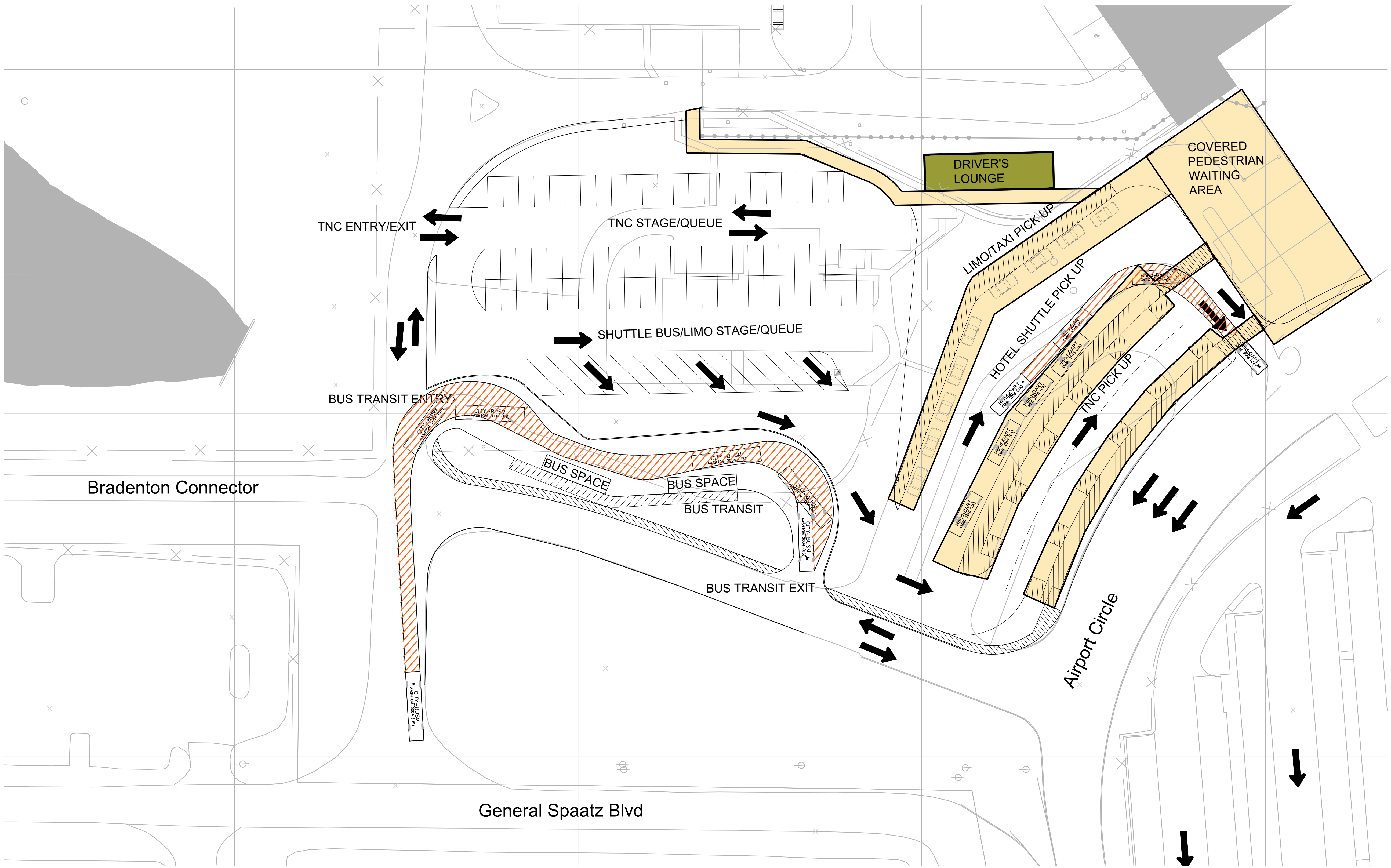

Indicates Covered Pedestrian Walkways

CAR COUNT

9'-0" 90° STANDARD SPACE

	TNC PICK UP	TAXI PICK UP	TNC STAGE/ QUEUE	TOTAL
GROUND	10	9	85	104

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

PARALLEL GROUND TRANSPORTATION CENTER DESIGN OPTION

FIGURE 4.4-28

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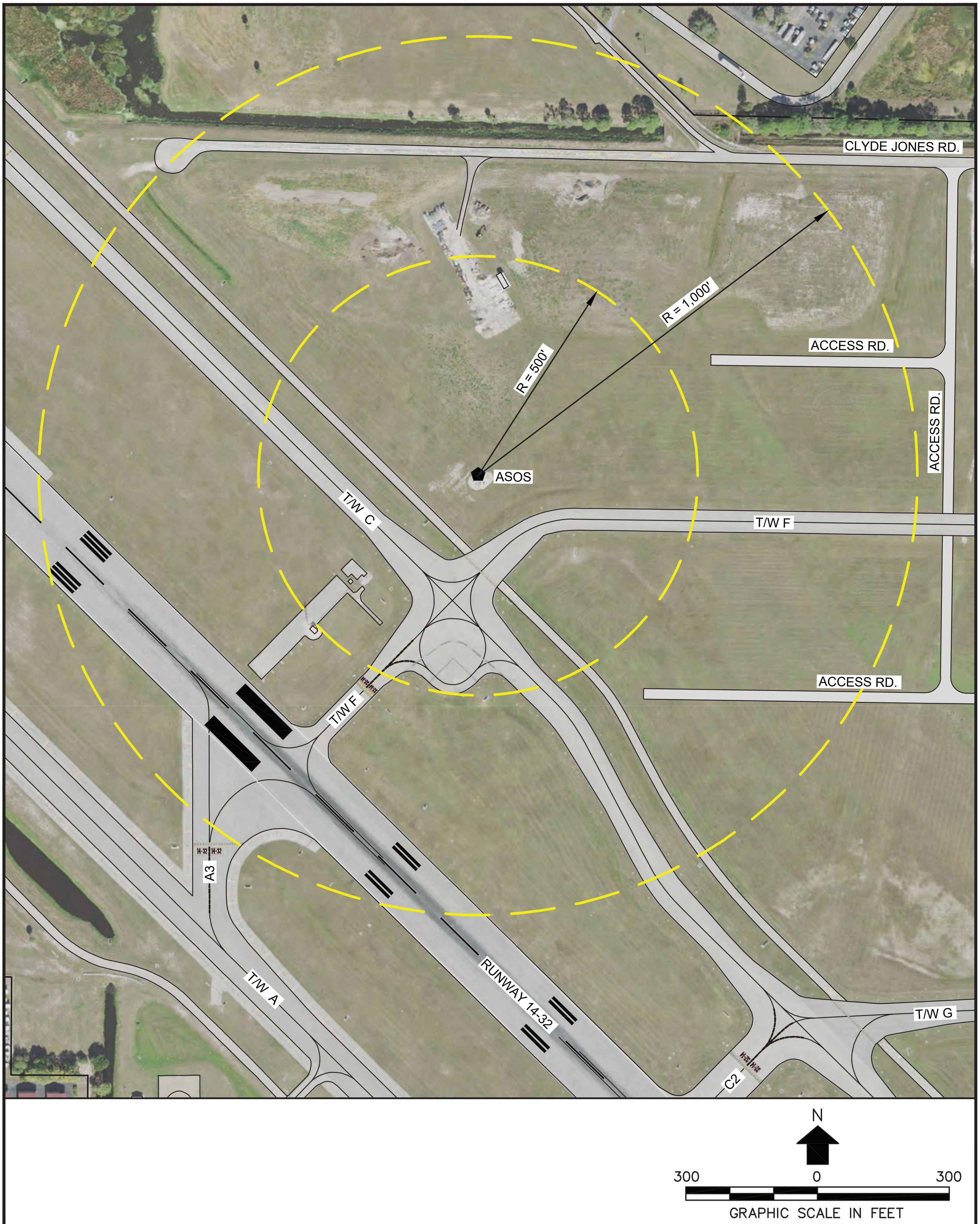
The Facility Requirements section identified a demand for up to 44 additional T-Hangars, 263,000 square feet of conventional hangars and 21,500 square yards of additional itinerant apron through the planning horizon. The Airport Authority continues to examine a variety of options for new general aviation and aviation related facilities in the airfield's north quadrant. Actual development will depend on prevailing market demand for each type of facility and developer proposals. The Airport Authority intends to maximize development in the north quadrant consistent with FAA design standards, as well as other regulatory and environmental requirements. It is recommended that the majority of these areas be reserved for aviation related development to accommodate the identified facility requirements on an as needed basis.

An examination of FAA design standards in the north quadrant revealed that clearance requirements associated with the existing Automated Surface Observing Systems (ASOS) may reduce the area available for development unless it is relocated to another location. **Figure 4.5-1** illustrates the location of the existing ASOS as well as key clearance radii associated with its wind sensor. According to the design standards contained in the National Oceanic and Atmospheric Administration (NOAA) publication FCM-S4-2019, *Federal Standard for Siting Meteorological Sensors at Airports*, a wind senor must be mounted 30 to 33 feet above the average ground height within a radius of 500 feet. The sensor height shall not exceed 33 feet except as necessary to: (a) be at least 15 feet above the height of any obstruction (e.g., vegetation, buildings, etc.) within a 500 foot radius, and (b), if practical, be at least 10 feet higher than the height of any obstruction outside the 500 foot radius, but within a 1,000 foot radius of the wind sensor.

On the basis of these siting standards, buildings within 1,000 feet of the sensor may have an adverse impact on the existing wind sensor and buildings within 500 feet are even more likely to present a problem. Approximately 10 acres and 28 acres of developable property are located within the 500-foot and 1,000-foot radius from the ASOS, respectively. Thus, a total of nearly 38 acres of land in the north quadrant could potentially experience some degree of limits on development with the ASOS in its current location.

In light of these constraints, alternative locations for the ASOS were identified and coordinated with the National Weather Service (NWS) and the FAA which owns the existing system. **Figure 4.5-2** shows the alternative sites considered. Consultations with NWS and FAA indicted that Site C is the preferred location for a relocated ASOS at SRQ. This site provides the best clearance from potential development, is close to existing electrical and communication lines and offers protection from jet blast and other facilities that are detrimental to accurate weather measurements.



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MASTER PLAN UPDATE

EXISTING ASOS AND WIND SENSOR CLEARANCE RADII

FIGURE 4.5-1

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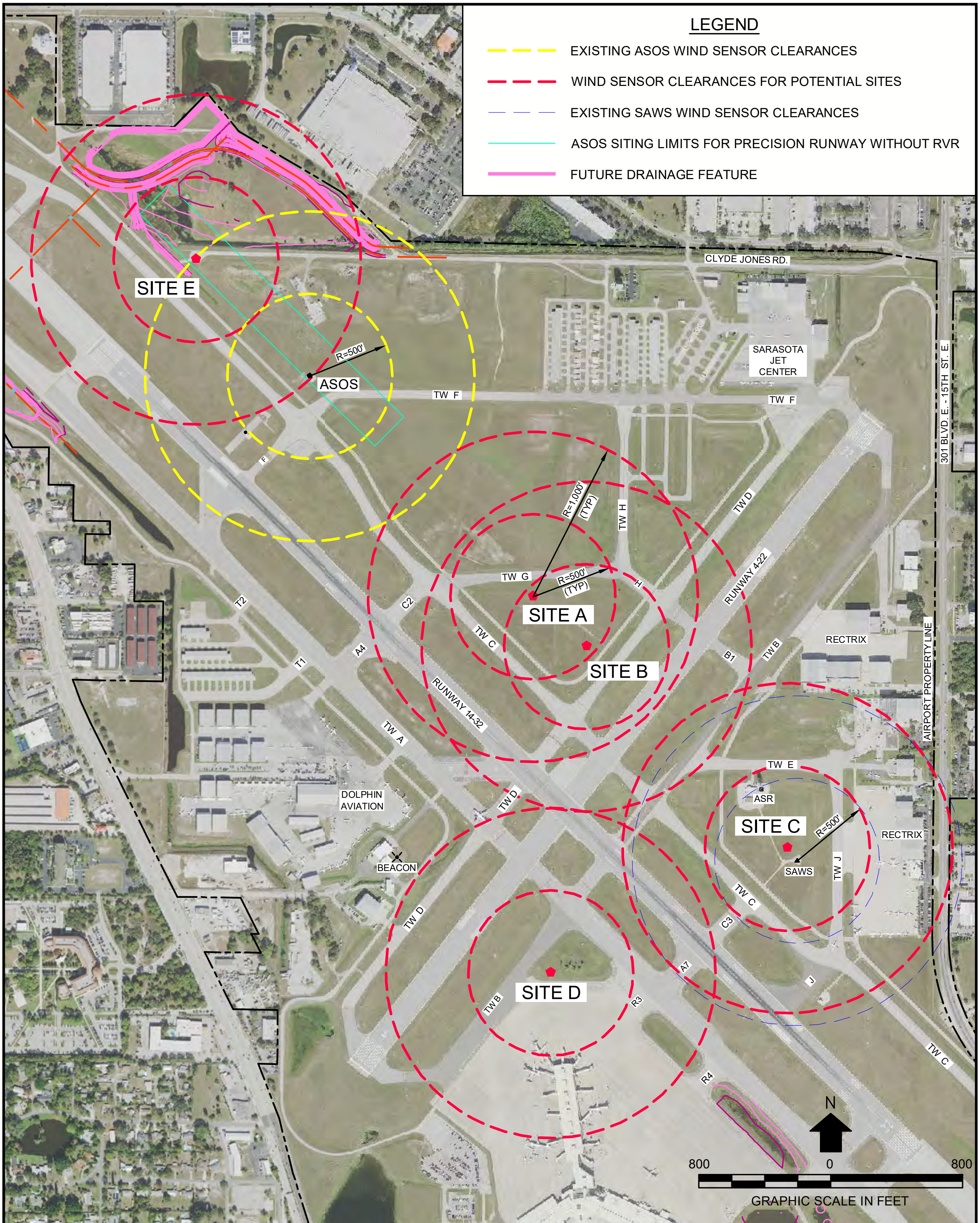

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

POTENTIAL ASOS RELOCATION SITES

FIGURE 4.5-2

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Relocation of the ASOS to Site C-1 will also require that a Runway Visual Range (RVR) be installed at the Runway 14 glide slope antenna location.

4.6 AIR CARGO ALTERNATIVES

The Facility Requirements section determined that no expansion of the existing air cargo facility is needed to meet projected demand through the study horizon. Therefore, no alternatives were developed for air cargo facilities.

4.7 SUPPORT FACILITY ALTERNATIVES

4.7.1 AIRCRAFT RESCUE AND FIRE FIGHTING FACILITY

The facility requirements section noted a series of specific needs for the existing fire station. These needs will be addressed through capital improvements proposed in the Facilities Implementation Plan. No examination of alternatives is required for the ARFF station.

4.7.2 FUELING

No alternatives are required for fueling facilities. The Airport Authority previously determined that future expansion of the fueling farm will occur in its existing location through the construction of up to three new 102,000-gallon vertical tanks along with associated control facilities. **Figure 4.7-1** shows the proposed fuel farm expansion.

The Facility Requirements section noted that three additional 102,000-gallon tanks will provide a five-day supply of fuel with the baseline forecast of aircraft operations through 2039. Consequently, the Airport Authority's current plan will meet demand requirements through the planning horizon. Construction of two tanks in the short-term will meet operational requirements.

4.7.3 AIRPORT MAINTENANCE FACILITIES

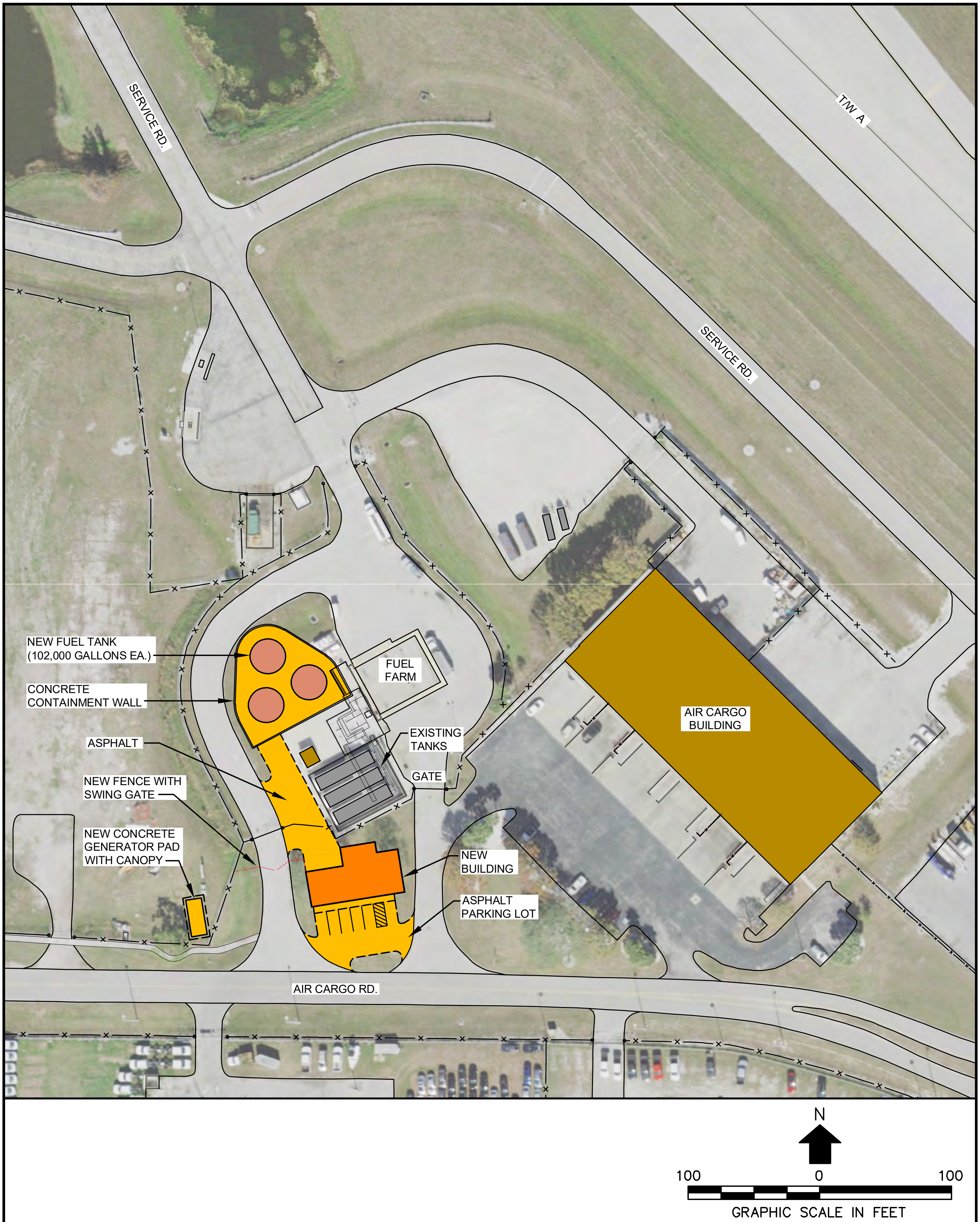
The Facility Requirements section identified several needs for airport maintenance facilities including the following:

- A need for up to 26,000 SF of vehicle and storage space for existing conditions and an increase of up to 39,000 SF by the end of the planning period.
- A need for 5,000 SF of storage for bulk storage space.

Another requirement for additional office space in the existing Airport Facilities Maintenance Building does not require the development of alternatives. Options exist for providing office space in the existing building and therefore no other alternatives were developed for that item.

Three locations were initially identified for the construction of new airport maintenance facilities. These locations included:

- Adjacent to the existing maintenance facilities.



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MASTER PLAN UPDATE

PROPOSED FUEL FARM EXPANSION

FIGURE 4.7-1

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- On the east side of the airfield, south of West University Parkway

- On the west side of the airfield, north of the southwest end of Taxiway D

Consultation with Airport Authority staff indicated that the site on the west side of the airfield is best reserved for aviation related development due to its access to Taxiway D and therefore was not further evaluated.

Figure 4.7-2 and **Figure 4.7-3** depict alternatives for accommodating the required amount of vehicle storage and bulk storage space. Alternative 1 proposes expanding the existing vehicle storage building to the south by approximately 10,000 square feet. This would require relocation of an existing stormwater detention pond on the south side of the building (see photo). This alternative also proposes constructing a new bulk storage building (5,000 SF) on the east side of Runway 14-32 south of 15th Street East.

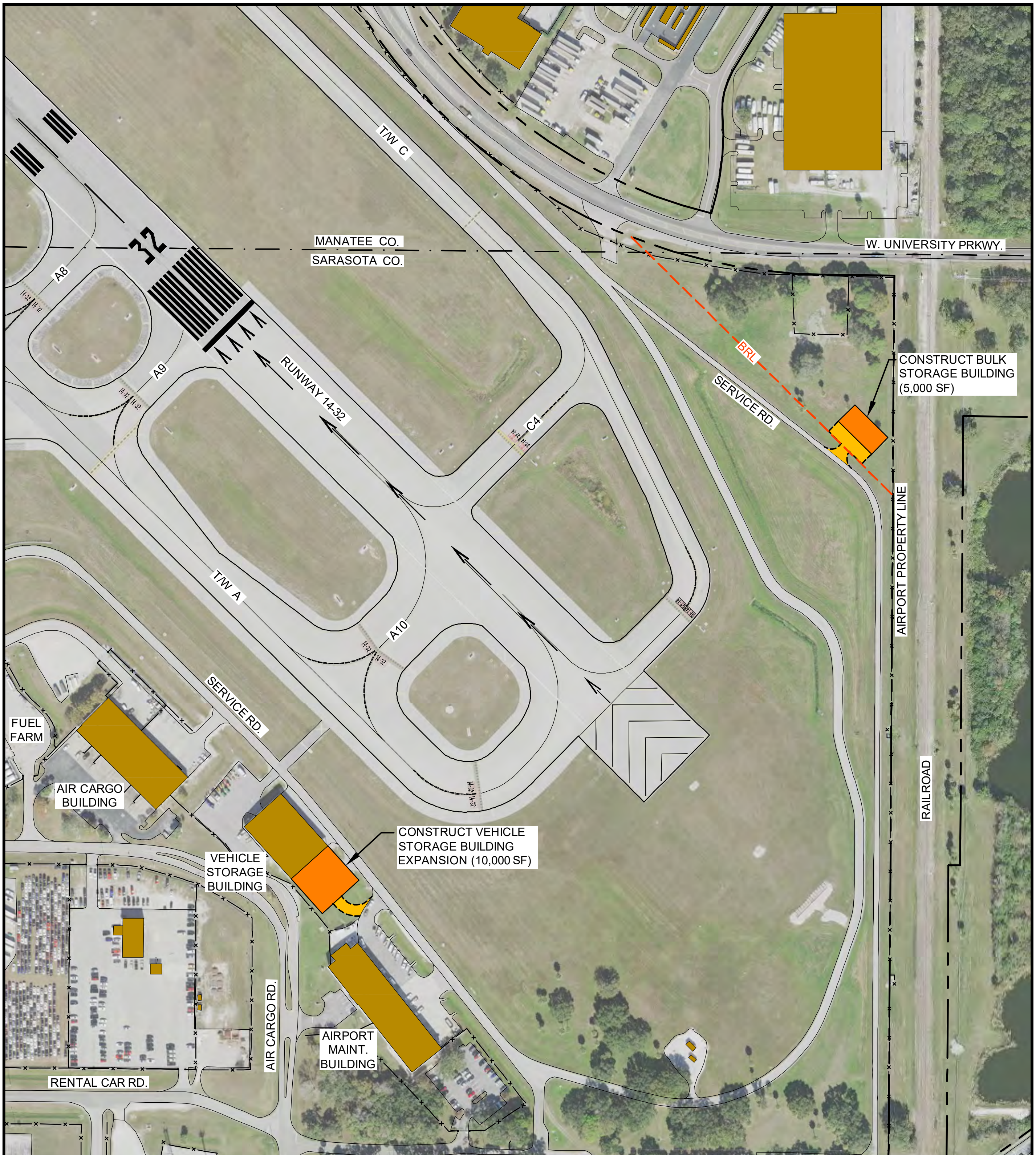
Alternative 2 proposes constructing a new 26,000 SF vehicle storage building as well as a new 5,000 SF bulk storage building on the east side of Runway 14-32 in the same location as Alternative 1. These alternatives are evaluated in the following paragraphs.

Alternative 1 – Expand Existing Vehicle Storage Building

- **Operational Efficiency** – Expanding the existing Vehicle Storage Building would maintain staff, equipment and supplies in the same area they are currently located. Constructing a new Bulk Storage Building on the east side of the airfield would place those items further away and would increase staff travel distance and time to items stored in that facility.

- **Expandability** – Once expanded to the south, the Vehicle Storage Building cannot be expanded further south due to the presence of the Airport Facilities Maintenance Building to its south. It can be expanded to the north, but the distance would be limited to approximately 50 feet in order to provide a vehicle exit lane while not encroaching on the Air Cargo Building. This alternative provides the required space for existing conditions but would not provide the estimated long-term space requirements.

- **Environment Compatibility** – Authorization to alter the existing water detention pond would be required from the Southwest Florida Water Management District (SWFWMD). Marginally suitable habitat for gopher tortoise may be present within the unpaved, upland grassy areas. Appropriate habitats for gopher tortoises should be surveyed prior to construction and appropriate mitigation undertaken if needed.



Source: AECOM, 2020

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GRAPHIC SCALE IN FEET

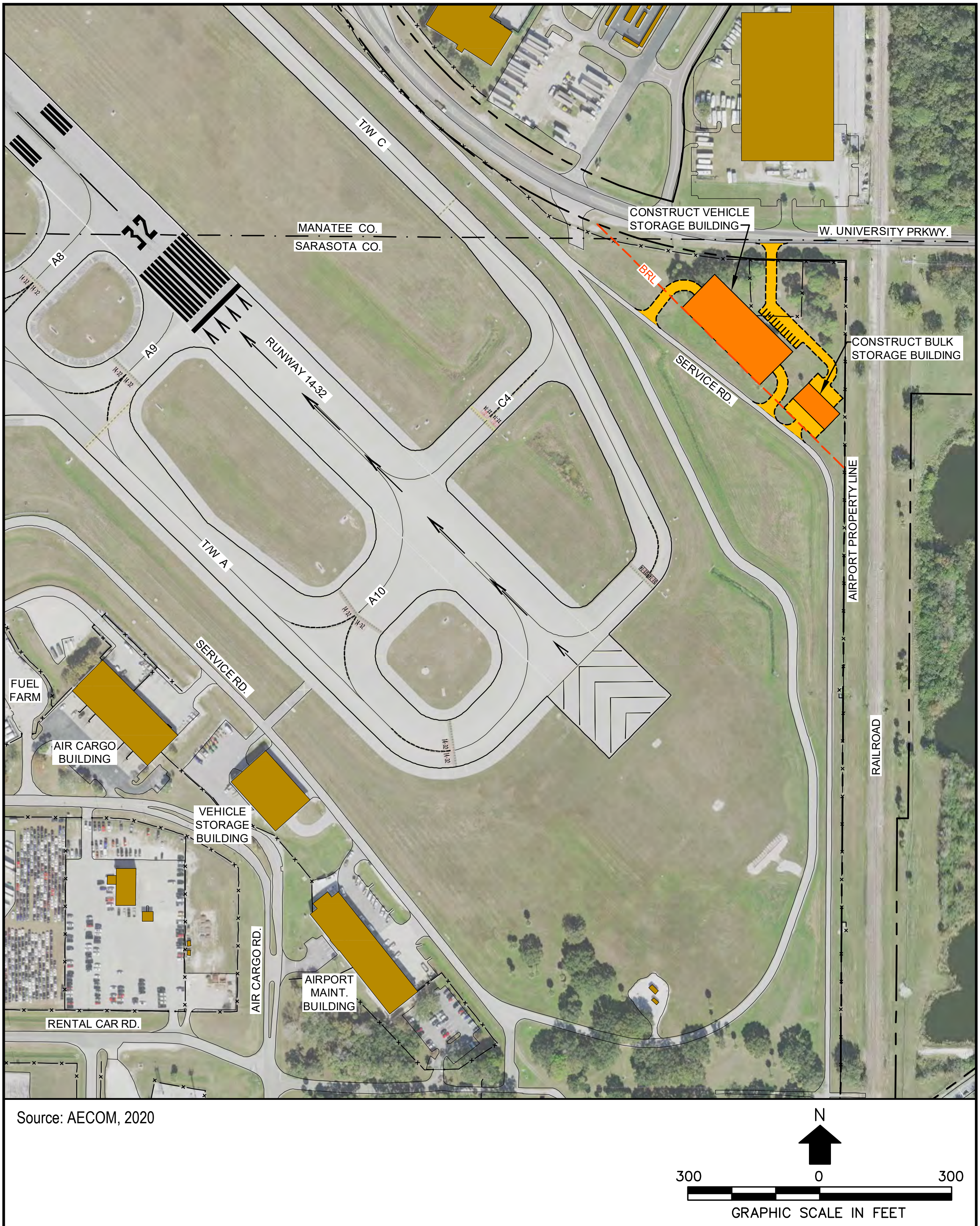
SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

ALTERNATIVE 1
EXPAND EXISTING
VEHICLE STORAGE BUILDING

FIGURE 4.7-2

C:\Civil 3D Projects\SRQ\Working Paper #3\FIG 4.7-2.dwg 08/13/2020 16:09



Source: AECOM, 2020

C:\Civil 3D Projects\SRQ\Working Paper #3\FIG 4.7-3.dwg 08/13/2020 16:09

SARASOTA BRADENTON
INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

ALTERNATIVE 2
CONSTRUCT NEW FACILITIES
ON EAST SIDE

FIGURE
4.7-3

- **Construction Challenges** – The steel frame and metal siding construction of the existing Vehicle Storage Building is well suited to expansion. No significant construction challenges would be associated with the construction of a new bulk storage facility on the west side of the airfield.

- **Phasing Considerations** – The existing water detention pond located between the Vehicle Storage Building and the Airport Facilities Maintenance Building will need to be relocated prior to beginning an expansion of the Vehicle Storage Building.

- **Estimated Cost** – The estimated cost of implementing Alternative 1 is approximately $6.2 million.

Alternative 2 – Construct New Facilities on East Side

- **Operational Efficiency** – Constructing a new Vehicle Storage Building facility on the east side of the airfield would split operations from staff, equipment and supplies located in the existing Vehicle Storage Building and Airport Facilities Maintenance Building. This would increase travel distance and time for staff. However, the proposed facility would be close and convenient to the proposed Bulk Storage Building next to it.

- **Expandability** – The amount of land available for further expansion of either the Vehicle Storage Building or the Bulk Storage Building on the east side is very limited due to constraints imposed by the Airport's Building Restriction Line and property boundary.

- **Environment Compatibility** – Marginally suitable habitat for gopher tortoise may be present within the unpaved, upland grassy areas. Appropriate habitats for gopher tortoises should be surveyed prior to construction of proposed facilities. This project could most likely receive environmental clearance though a documented Categorical Exclusion.

- **Construction Challenges** – No significant construction challenges would be associated with the construction of a new vehicle storage building and bulk storage facility on the east side of the airfield.

- **Phasing Considerations** – There are no existing facilities that would require relocation to construct this alternative. One of the alternatives to address the ROFA deficiency on the approach end of Runway 32 proposes widening the outer vehicle service road. That project should be implemented in conjunction with, or prior to, the construction of maintenance facilities on the east side of the airfield.

- **Estimated Cost** – The estimated cost of implementing Alternative 2 is approximately $10 million.

Preferred Alternative

Alternative 1 is recommended as the preferred alternative. It would provide the 10,000 square feet of additional vehicle storage needed to meet current demand and provide a replacement building for bulk storage. It would maintain the facilities most commonly used by maintenance personnel in one spot with bulk storage (which is less frequently used) on the east side. If and when the demand occurs for additional vehicle storage, it is recommended that the additional vehicle storage building recommended by Alternative 2 be constructed.

SECTION 5.0

Development Plans

SECTION 5.0 DEVELOPMENT PLANS

5.1 INTRODUCTION

This section describes the Airport Layout Plan (ALP) drawing set. The set consists of a series of full-size drawings that present graphical and tabular detail regarding the Airport's existing facilities and development proposed by this Master Plan Update. The following thirteen sheets make up the Sarasota Bradenton International Airport ALP set:

- Cover Sheet
- Airport Layout Plan Drawing
- Airport Data Sheet
- Airport Airspace Drawing – Horizontal and Conical Surfaces
- Airport Airspace Drawing – Outer Approach Surfaces
- Inner Portion of the Approach Surface Drawing – Runway 14
- Inner Portion of the Approach Surface Drawing – Runway 32
- Runway Departure Surface Drawing – Runway 14-32
- Inner Portion of the Approach Surface Drawing – Runway 4
- Inner Portion of the Approach Surface Drawing – Runway 22
- Runway Departure Surface Drawing – Runway 4-22
- Terminal Area Drawing
- Land Use Drawing

These drawings are prepared in accordance with FAA guidance contained in the following documents:

- FAA Advisory Circular 150/5070-6B, Airport Master Plans
- FAA Advisory Circular 150/5300-13B, Airport Design
- FAA Standard Operating Procedures 2.00 FAA Review and Approval of Airport Layout Plans

The following subsections describe several of these drawings and the information they present. Reduced size versions of select drawings are shown. Readers interested in further details should refer to the full-size drawing set on file with the Airport Authority.

5.2 AIRPORT LAYOUT PLAN

The Airport Layout Plan (ALP) drawing depicts all existing airport facilities as well as all proposed airport development. All facilities are drawn to scale including the Airport's runways, taxiways, aprons, terminal buildings, hangars and roads with all proposed modifications. The drawing also shows the Airport's property boundary. A reduced size version of the ALP drawing is shown in **Figure 5.2-1**.

The ALP is the only drawing that requires approval from the Federal Aviation Administration (FAA). Approval of the ALP drawing means that the development shown on it complies with FAA design standards and is found to be safe, useful and efficient. However, it does not mean that the FAA finds all proposed development to be environmentally cleared. Separate environmental approvals are required before the development shown on the ALP will become eligible for federal funding. Airport sponsors are required to maintain an up-to-date ALP at all times as part of sponsor assurances that the FAA requires for federal funding of airport projects.

According to FAA guidance presented in Advisory Circular 150/5070-6B, *Airport Master Plans*, the five primary functions of the ALP are as follows:

1. An ALP creates a blueprint for airport development by depicting proposed facility improvements. The ALP provides a guideline by which the airport sponsor can ensure that development maintains airport design standards and safety requirements and is consistent with airport and community land use plans.

2. The ALP is a public document that serves as a record of aeronautical requirements, both present and future, and as a reference for community deliberations on land use proposals and budget resource planning.

3. The approved ALP enables the airport sponsor and the FAA to plan for facility improvements at the airport. It also allows the FAA to anticipate budgetary and procedural needs. The approved ALP will also allow the FAA to protect the airspace required for facility or approach procedure improvements.

4. The ALP can be a working tool for the airport sponsor, including its development and maintenance staff.

5. An approved ALP is necessary for the Airport to receive financial assistance under the terms of the Airport and Airway Improvement Act of 1982, as amended, and to be able to impose and use Passenger Facility Charges. An airport must keep its ALP current.

The following subsections describe the ALP elements.

5.2.1 AIRFIELD

Airfield projects shown on the ALP include the following:

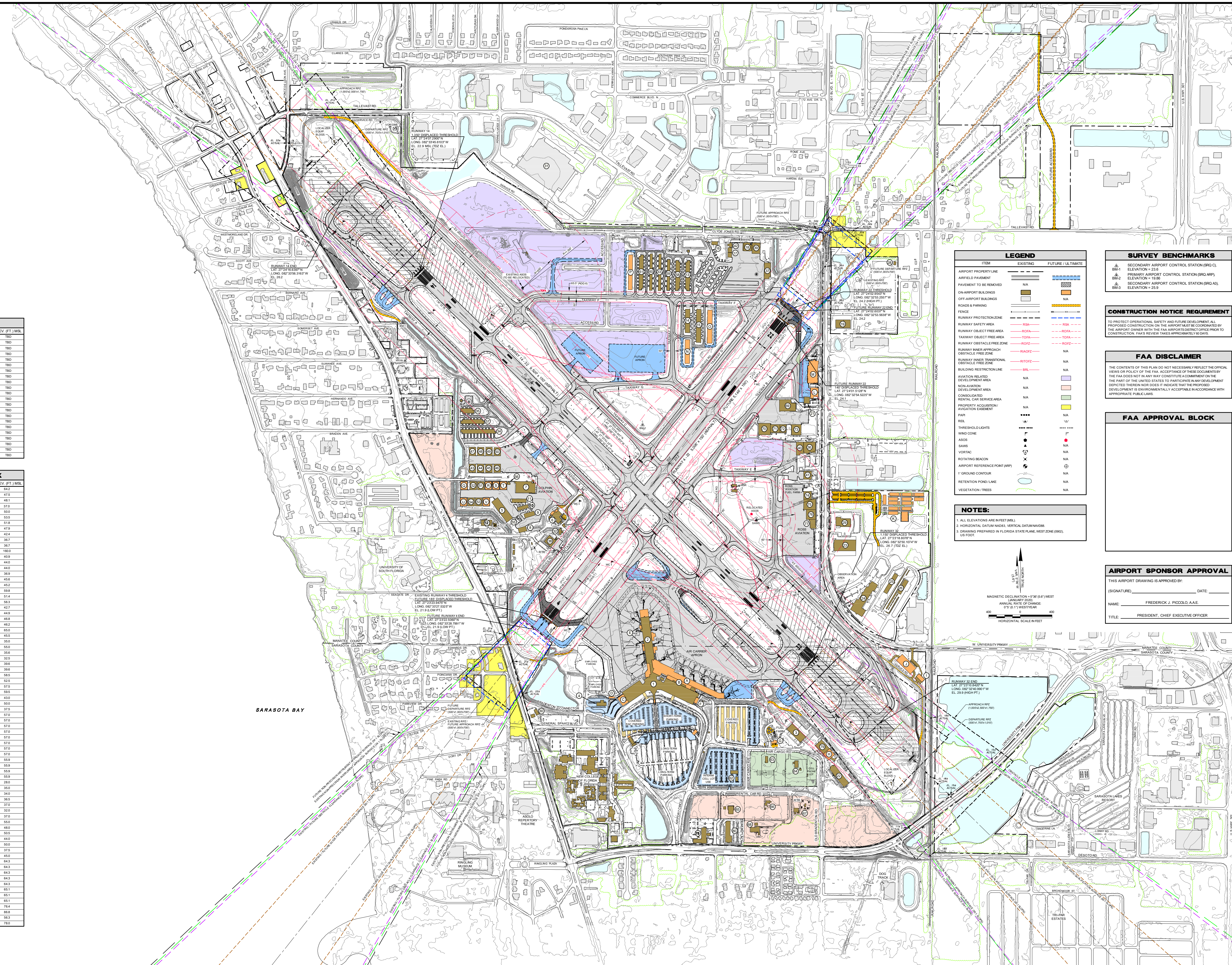
- Construction of aircraft holding bays near both ends of Taxiway A.
- Relocation of a Vehicle Service Road that is currently inside the south end of the Runway 14-32 Runway Object Free Area (ROFA).

FUTURE BUILDING INDEX

NO.	DESCRIPTION	ELEV. (FT.) MSL
A	CONCOURSE A	TBD
B	OUTBOUND BAGGAGE MAKE-UP EXPANSION	TBD
C	INBOUND BAGGAGE CLAIM EXPANSION	TBD
D	DRIVER'S LOUNGE (GROUND TRANSPORTATION CENTER)	TBD
E	CONCOURSE B EXPANSION (7 BUMP-OUTS)	TBD
F	EMERGENCY OPERATIONS CENTER ANNEX	TBD
G	FUEL FARM BUILDING	TBD
H	SMAA VEHICLE STORAGE BUILDING EXPANSION	TBD
I	BULK STORAGE BUILDING	TBD
J	VEHICLE STORAGE BUILDING	TBD
K	TEAM SUCCESS CHARTER SCHOOL	TBD
L	HANGAR	TBD
M	HANGAR (2 BAY)	TBD
N	T-HANGAR (10 UNITS)	TBD
O	T-HANGAR (14 UNITS)	TBD
P	T-HANGAR (20 UNITS)	TBD
Q	HANGAR (85'x105')	TBD
R	HANGAR (85'x105')	TBD
S	HANGAR (85'x105')	TBD
T	HANGAR (85'x105')	TBD
U	HANGAR (85'x105')	TBD
V	HANGAR (85'x105')	TBD

EXISTING BUILDING INDEX

ID NO.	DESCRIPTION	ELEV. (FT.) MSL
1	TERMINAL	64.2
2	TERMINAL (CONCOURSE B)	47.5
3	AIR CARGO	48.1
4	MCCLURE AUDITORIUM (TO BE REMOVED)	37.0
5	CORPORATE HANGARS DOLPHIN	50.0
6	ARFF	53.5
7	FBO (DOLPHIN AVIATION)	51.8
8	HANGARS	47.9
9	HANGARS	42.4
10	HANGARS	36.7
11	HANGARS	36.7
12	FAA ATCT	160.0
13	T-HANGARS (SMAA) (J1)	40.9
14	HANGARS (SMAA) (J7)	44.0
15	HANGARS (SMAA) (J8)	44.0
16	HANGARS - FLIGHT INSTRUMENTS INTERNATIONAL	36.9
17	HANGARS - APP JET CENTER SARASOTA	45.6
18	ROSS AVIATION LIGHT GA CENTER	45.2
19	STEVEN POSTANS ANTIQUES	59.8
21	HANGAR	51.4
22	AIRPORT FACILITIES MAINTENANCE BUILDING	56.3
23	AIRPORT MALL	42.7
24	RESTAURANT DEPOT	44.9
25	UNIVERSITY SELF STORAGE	46.8
26	UNIVERSITY SELF STORAGE	46.2
28	GOLF DRIVING RANGE (POLES)	65.0
29	SUNSTATE TRUCKING	45.5
30	SHELL GAS STATION	35.0
31	MANATEE U.S. POSTAL FACILITY	55.0
32	ELECTRICAL VAULT	35.6
33	T-HANGARS (J4)	32.5
34	T-HANGARS (SMAA) (D1)	39.6
35	T-HANGARS (SMAA) (D3)	39.6
36	HANGAR - GYRO-CAM	58.5
37	APP JET CENTER SARASOTA CORPORATE HANGAR	52.5
38	CORPORATE HANGAR	57.5
39	CORPORATE HANGAR - FLORIDA SUNCOAST HELICOPTERS	59.5
40	BUILDING (TREDCO)	43.0
41	CORPORATE HANGAR	50.0
42	HANGAR - APP JET CENTER SARASOTA	37.5
43	DOLPHIN AVIATION CORPORATE HANGAR B1	57.0
44	DOLPHIN AVIATION CORPORATE HANGAR B2	57.0
45	DOLPHIN AVIATION CORPORATE HANGAR B3	57.0
46	DOLPHIN AVIATION CORPORATE HANGAR B4	57.0
47	DOLPHIN AVIATION CORPORATE HANGAR B5	57.0
48	DOLPHIN AVIATION CORPORATE HANGAR B6	57.0
49	DOLPHIN AVIATION CORPORATE HANGAR B7	57.0
50	DOLPHIN AVIATION CORPORATE HANGAR B8	57.0
51	DOLPHIN AVIATION CORPORATE HANGAR C5	55.9
52	DOLPHIN AVIATION CORPORATE HANGAR C6	55.9
53	DOLPHIN AVIATION CORPORATE HANGAR C9	55.9
54	DOLPHIN AVIATION CORPORATE HANGAR C10	55.9
55	DOLPHIN AVIATION FUEL FARM	28.0
56	DOLPHIN AVIATION PORT-A-PORT HANGARS (TO BE REMOVED)	35.0
57	T-HANGARS (SMAA) (D2)	34.0
58	T-HANGARS (SMAA) (J2)	36.5
59	T-HANGARS (SMAA) (J3)	37.0
60	T-HANGARS (SMAA) (J5)	32.0
61	T-HANGARS (SMAA) (J6)	37.0
62	HERTZ RENTAL CAR	55.0
63	VEHICLE STORAGE	48.0
64	ENTERPRISE RENTAL CAR	50.5
65	BUDGET RENTAL CAR	44.0
66	DOLLAR RENTAL CAR	50.0
67	FAA TRANSMITTER SITE	37.5
68	ALAMO / NATIONAL RENTAL CAR	45.0
69	HANGAR #7 - ROSS AVIATION NORTH	64.3
70	HANGAR #1 - ROSS AVIATION NORTH	64.3
71	HANGAR #2 - ROSS AVIATION NORTH	64.3
72	HANGAR #3 - ROSS AVIATION NORTH	64.3
73	HANGAR #4 - ROSS AVIATION NORTH	64.3
74	HANGAR #3 - ROSS AVIATION SOUTH	65.1
75	HANGAR #2 - ROSS AVIATION SOUTH	65.1
76	HANGAR #1 - ROSS AVIATION SOUTH	65.1
77	RECTRIX FBO TERMINAL	76.4
78	HAMPTON INN & SUITES	86.8
79	SMAA VEHICLE STORAGE BUILDING	56.3
80	KOMPOSE HOTEL	78.0



LEGEND

ITEM	EXISTING	FUTURE / ULTIMATE
AIRPORT PROPERTY LINE		
AIRFIELD PAVEMENT		
PAVEMENT TO BE REMOVED	N/A	
ON-AIRPORT BUILDINGS		
OFF-AIRPORT BUILDINGS		N/A
ROADS & PARKING		
FENCE		
RUNWAY PROTECTION ZONE		
RUNWAY SAFETY AREA	RSA	RSA
RUNWAY OBJECT FREE AREA	ROFA	ROFA
TAXIWAY OBJECT FREE AREA	TOFA	TOFA
RUNWAY OBSTACLE FREE ZONE	ROFZ	ROFZ
RUNWAY INNER APPROACH OBSTACLE FREE ZONE	RIAOFZ	N/A
RUNWAY INNER TRANSITIONAL OBSTACLE FREE ZONE	RITOFZ	N/A
BUILDING RESTRICTION LINE	BRL	N/A
AVIATION RELATED DEVELOPMENT AREA	N/A	
NON-AVIATION DEVELOPMENT AREA	N/A	
CONSOLIDATED RENTAL CAR SERVICE AREA	N/A	
PROPERTY ACQUISITION / AVIGATION EASEMENT	N/A	
PAPI		N/A
REIL		
THRESHOLD LIGHTS		
WIND CONE		
ASOS		
SAWS		N/A
VORTAC		N/A
ROTATING BEACON		N/A
AIRPORT REFERENCE POINT (ARP)		
1' GROUND CONTOUR	20	N/A
RETENTION POND / LAKE		N/A
VEGETATION / TREES		N/A

NOTES:

1. ALL ELEVATIONS ARE IN FEET (MSL).
2. HORIZONTAL DATUM NAD83, VERTICAL DATUM NAVD88.
3. DRAWING PREPARED IN FLORIDA STATE PLANE, WEST ZONE (0902), US FOOT.

SURVEY BENCHMARKS

BM-1 SECONDARY AIRPORT CONTROL STATION (SRQ C), ELEVATION = 23.6

BM-2 PRIMARY AIRPORT CONTROL STATION (SRQ ARP), ELEVATION = 19.86

BM-3 SECONDARY AIRPORT CONTROL STATION (SRQ A3), ELEVATION = 25.9

CONSTRUCTION NOTICE REQUIREMENT

TO PROTECT OPERATIONAL SAFETY AND FUTURE DEVELOPMENT, ALL PROPOSED CONSTRUCTION ON THE AIRPORT MUST BE COORDINATED BY THE AIRPORT OWNER WITH THE FAA AIRPORTS DISTRICT OFFICE PRIOR TO CONSTRUCTION. FAA'S REVIEW TAKES APPROXIMATELY 60 DAYS.

FAA DISCLAIMER

THE CONTENTS OF THIS PLAN DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THESE DOCUMENTS BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

FAA APPROVAL BLOCK

AIRPORT SPONSOR APPROVAL

THIS AIRPORT DRAWING IS APPROVED BY:

(SIGNATURE) ______________________ DATE: ________

NAME: FREDERICK J. PICCOLO, A.A.E.

TITLE: PRESIDENT, CHIEF EXECUTIVE OFFICER

srq

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

AIRPORT LAYOUT PLAN DRAWING

FIGURE 5.2-1

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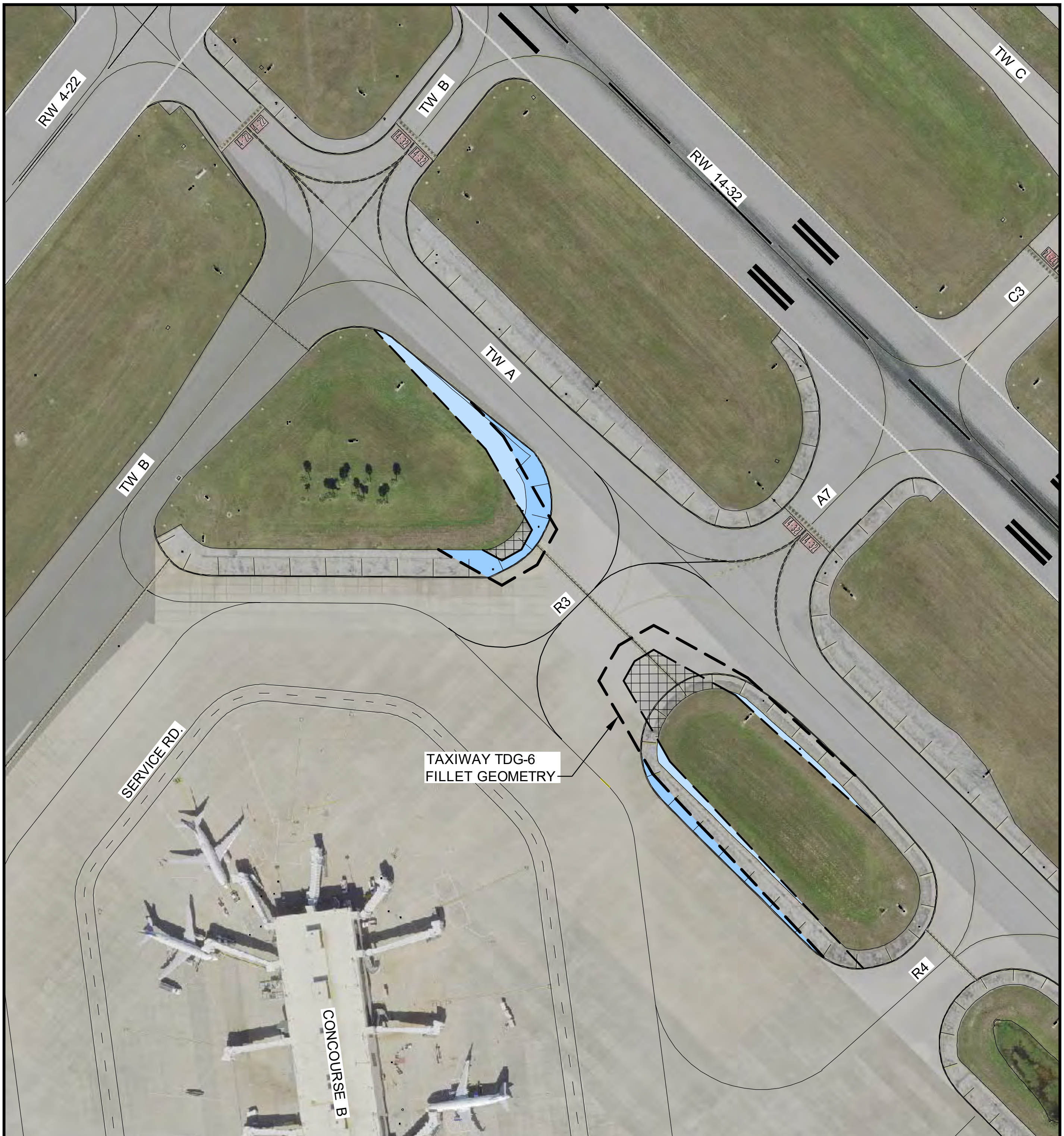
- A 45-foot shift of Runway 4-22 to the southwest to meet FAA design standards for ROFA and Obstacle Clearance Surface and taxiway geometric requirements.
- Modifications to taxiways A4 and R3 to meet FAA design standards.
- Relocation of the existing Automated Surface Observing Systems (ASOS) and the installation of a new Runway Visual Range on Runway 14 to eliminate constraints to airfield development in the north quadrant (see Section 5.2.2).
- Fee simple or easement acquisition for properties located inside the Runway Protection Zones (RPZ) to meet FAA guidance for land use control (see Section 5.2.3).

The majority of these projects are described and shown in the Alternatives section and therefore are not repeated in this section. However, a modification to Taxiway R3 was not previously addressed because it does not technically meet the definition of a direct connection between the terminal ramp and Runway 14-32 because it contains a turn. FAA personnel from the Orlando Airports District Office requested that a further examination be undertaken of actions that could reduce the direct line-of-sight along Taxiways R3 and A7 between the passenger terminal ramp and Runway 14-32.

The amount of turn required for an aircraft taxiing along Taxiways R3 and A7 could be increased by shifting the centerline of Taxiway R3 further north and reducing its existing wide expanse of pavement. Discussions with Airport Authority personnel indicated that operations by large commercial aircraft such as the Boeing 777-300 and the Boeing 747 occasionally occur at the Airport. These aircraft are typically parked on the far east side of the air carrier ramp and use Taxiway R3 due to its existing wide expanse of pavement which facilitates easy taxiing for these large aircraft. Therefore, even though the Airport's future critical design aircraft is in Taxiway Design Group (TDG) 4, a larger TDG 6 design standard was applied when examining a potential narrowing of Taxiway R3 to ensure that this remains a viable route for infrequent operations by large aircraft.

Figure 5.2-2 illustrates a potential modification of Taxiway R3 if TDG 6 design standards are applied. The centerline location was established to minimize the additional full-strength pavement that would be needed on the north side of the taxiway centerline. Modifications to the existing grass islands on both side of the Taxiway R3 centerline could consist of either remarking and painting pavements beyond the required edge of full-strength pavement or removing excess pavements. Taxiway edge lighting and signage would need to be revised according to design standards. This project was reviewed with the Orlando ADO and is included on the Airport Layout Plan.



LEGEND

- FUTURE AIRFIELD PAVEMENT
- FUTURE AIRFIELD SHOULDER
- PAVEMENT TO BE REMOVED

N

200 0 200

GRAPHIC SCALE IN FEET

Source: AECOM, 2020

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

PROPOSED MODIFICATION OF TAXIWAY R3

FIGURE 5.2-2

C:\Civil 3D Projects\SRQ\Chapter 5 figures\FIG 5.2-2.dwg 11/10/2020 10:45

5.2.2 NAVIGATIONAL AIDS

Another airfield project depicted on the ALP is a relocation of the existing Automated Surface Observing Systems (ASOS) as previously described in **Section 4.5**. The ASOS will be relocated from the north quadrant to the area between Taxiways C, E and J. Relocation of the ASOS will enable the north quadrant to be fully developed without restrictions from the existing ASOS wind sensor. A new Runway Visual Range (RVR) will also need to be installed at the Runway 14 Instrument Landing System (ILS) glide slope antennae to enable the ASOS relocation to the proposed site.

5.2.3 PROPERTY AND/OR EASEMENT ACQUISITION

The ALP depicts the acquisition of properties located within the RPZs beyond the northwest end of Runway 14-32 and both ends of Runway 4-22 that are not currently owned by the Sarasota Manatee Airport Authority. It is recommended that fee simple acquisition be obtained if existing parcels owners are willing sellers in accordance with FAA guidance. If existing property owners are not willing sellers, it is recommended that the Authority seeks avigation easements for these parcels. Fee simple or easement acquisition will be contingent on federal and/or state funding for all proposed acquisitions. **Figures 5.2-3, 5.2-4 and 5.2-5** illustrate the parcels recommended for acquisition. The parcels add up to nearly 15 acres.

5.2.4 GENERAL AVIATION

The ALP depicts future general aviation projects in the north quadrant of the airfield. Twenty additional small T-Hangars and 24 additional large T-Hangars are shown on the plan. The small T-hangars are depicted in one additional row west of the existing row J-6 (Building 61 on the ALP drawing). The large T-Hangars are depicted in two additional buildings. One row of 10 additional units south of Building J7 (Building 14 on the ALP) and one row of 14 units east of Building J8 (Building 15 on the ALP).

The ALP also depicts the majority of currently undeveloped property in the north quadrant as being available for general aviation or aviation related development. Actual development in this area will depend upon third party proposals received from interested developers. Two airport proposed aircraft parking aprons are depicted on the north side of Taxiway G and are described in greater detail in **Section 6.0**.

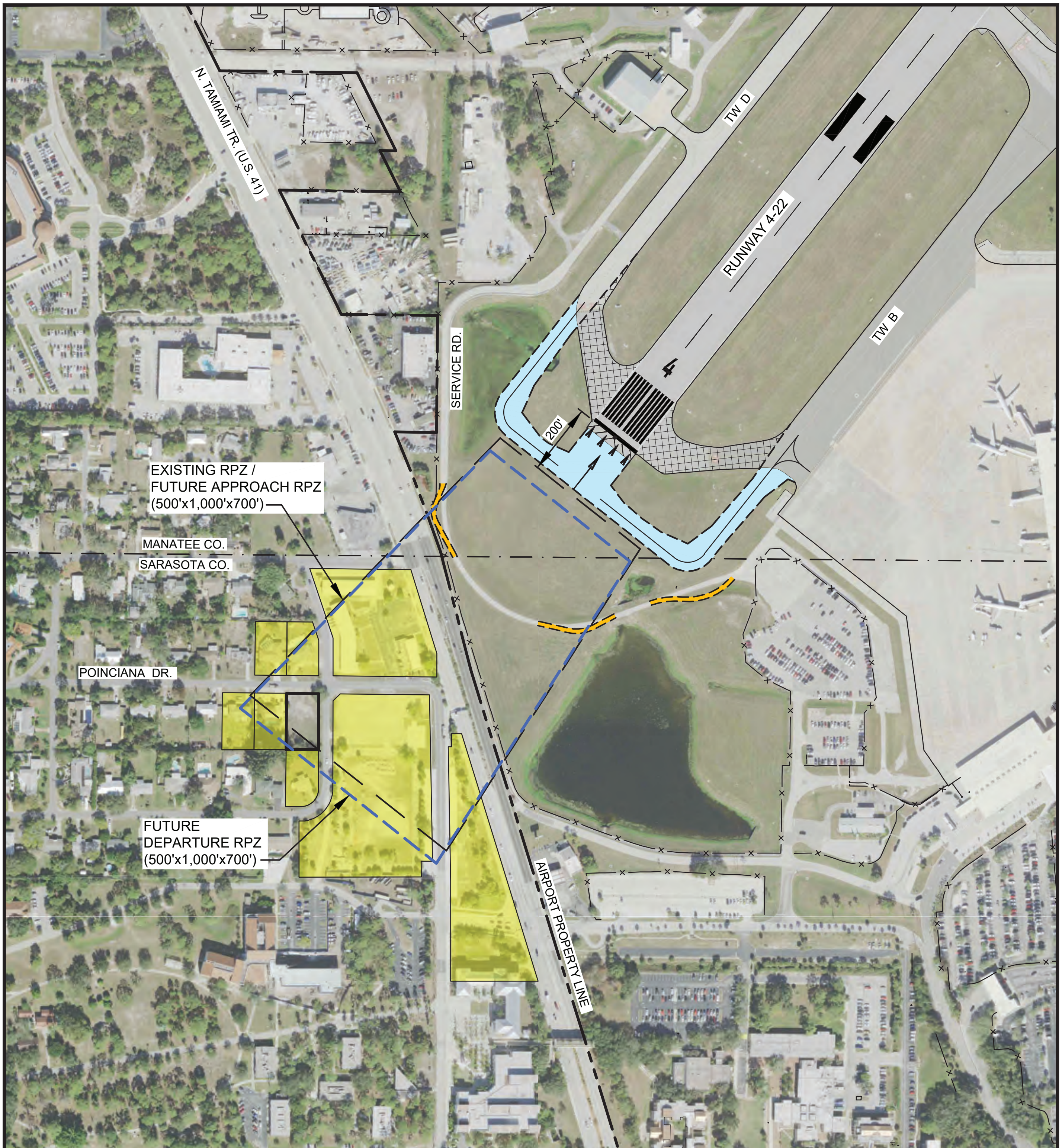
Lastly, the ALP depicts a series of conventional hangars to be constructed in the Dolphin Aviation leasehold. Additional hangars are also anticipated in the Ross Aviation leasehold, but no firm plans are currently available for those facilities. Hangars will most likely be constructed in currently vacant potions of the Ross Aviation Hangarminiums leasehold.

5.2.5 SUPPORT FACILITIES

Proposed support facilities depicted on the ALP include the following:

- An expansion of the existing vehicle storage building and the construction of an additional vehicle storage building to meet long-range needs,

- Demolition of the existing bulk storage building and construction of a replacement building at a new site east of the south end of Taxiway C.
- Expansion of the fuel farm to add a third 102,000-gallon vertical tank in addition to two additional 102,000-gallon tanks that are planned for completion in 2021.



LEGEND

APPROACH/DEPARTURE
RUNWAY PROTECTION ZONE

PROPERTY NOT OWNED BY
SARASOTA MANATEE AIRPORT AUTHORITY

N

400 0 400

GRAPHIC SCALE IN FEET

SARASOTA BRADENTON
INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

PROPOSED PROPERTY/ EASEMENT ACQUISITION RUNWAY 4

FIGURE
5.2-3

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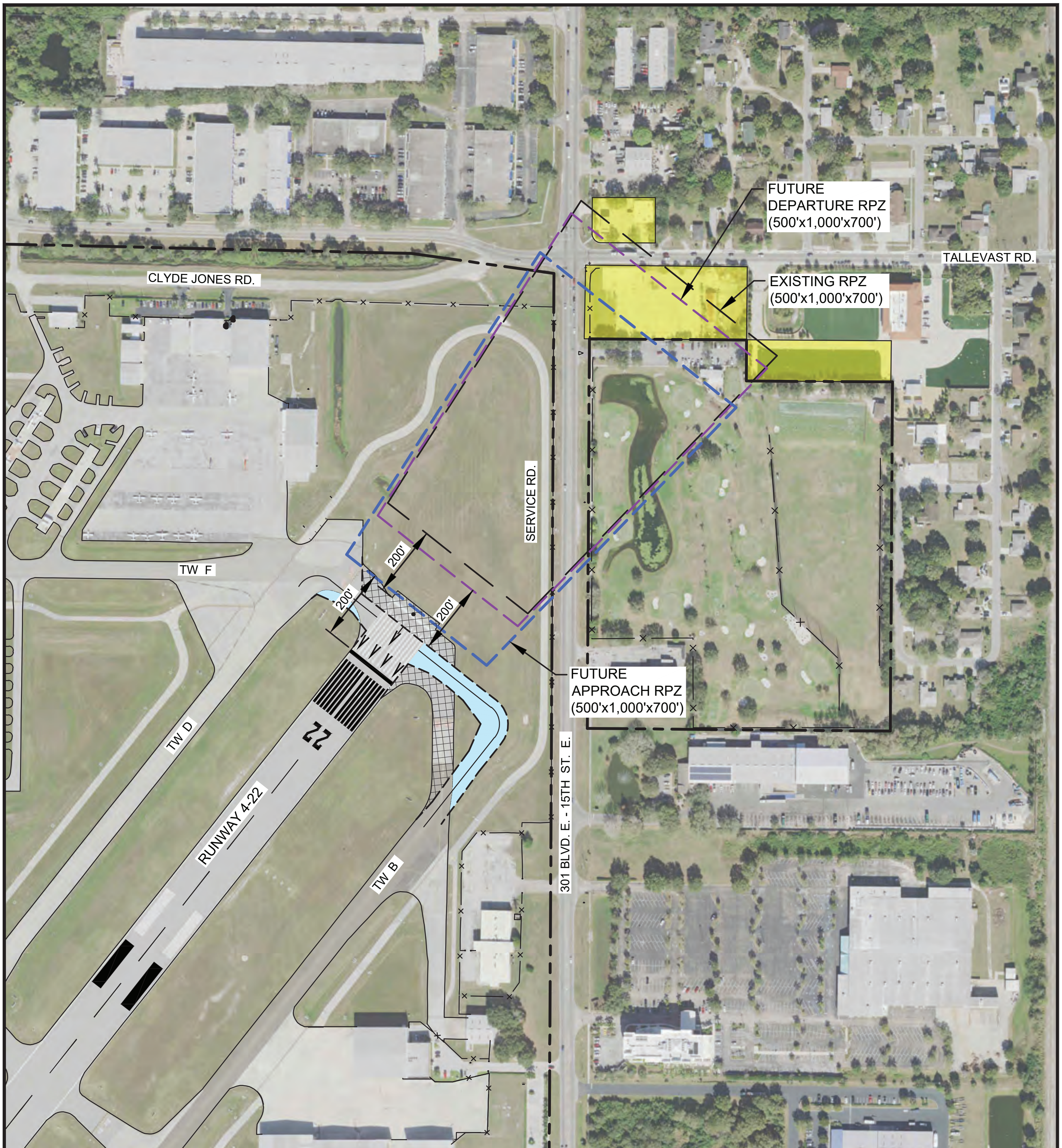

LEGEND

EXISTING RUNWAY PROTECTION ZONE

FUTURE APPROACH RUNWAY PROTECTION ZONE

FUTURE DEPARTURE RUNWAY PROTECTION ZONE

PROPERTY NOT OWNED BY SARASOTA MANATEE AIRPORT AUTHORITY

N

400 0 400

GRAPHIC SCALE IN FEET

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

PROPOSED PROPERTY/ EASEMENT ACQUISITION RUNWAY 22

FIGURE 5.2-4

C:\Civil 3D Projects\SRQ\Chapter 5 figures\FIG 5.2-4.dwg 12/02/2020 12:24

LEGEND

APPROACH RUNWAY PROTECTION ZONE

DEPARTURE RUNWAY PROTECTION ZONE

PROPERTY NOT OWNED BY SARASOTA MANATEE AIRPORT AUTHORITY

N

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GRAPHIC SCALE IN FEET

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

PROPOSED PROPERTY/ EASEMENT ACQUISITION RUNWAY 14

FIGURE 5.2-5

C:\Civil 3D Projects\SRQ\Chapter 5 figures\FIG 5.2-5.dwg 12/02/2020 12:25

- Construction of ARFF station improvements will include a fourth bay, additional storage space, additional parking and roadway improvements. These items were noted as being needed in the Facility Requirements section. **Figure 5.2-6** depicts the proposed improvements.

5.3 TERMINAL AREA PLAN

The Terminal Area Plan (see **Figure 5.3-1**) depicts recommended projects in and around the passenger terminal including proposed expansions of parking and ground transportation facilities. Descriptions of these projects are provided in the following subsections.

5.3.1 PASSENGER TERMINAL

Projects proposed for the passenger terminal include:

- Expansions along Concourse B for additional concessions and/or holdroom space on an as-needed basis.

- Construction of a new Concourse A with six new gates along with associated expansion for a larger passenger security screening checkpoint, concession spaces, restrooms and circulation. Additional space (approximately 16,000 square feet) is proposed on the first floor of the concourse to provide additional areas for concession storage, airline operations, Airport Authority operations and mechanical and electrical systems. This project will require the elimination of the existing Gate B-1 and the relocation of the boarding bridge for Gate B-3. Therefore, the net increase of gates will be five.

- Expansion of the baggage claim lobby to provide one additional flat-plate carousel along with replacement of baggage service offices along the west wall.

- Construction of a pedestrian bridge from the center of the terminal to short-term and rental car parking along with the redevelopment of concession space on the second level of the terminal.

- Construction of a new Emergency Operations Center (EOC). This project was derived from the Airport's current Capital Improvement Plan and is incorporated into this study. The EOC will be located at the east end of the ticketing wing.

- Construction of renovations on the third floor of the terminal. This area contains the airport authority offices and restrooms.

All of these projects, except the EOC, are described in detail in **Section 4.0 - Alternatives**.

5.3.2 PARKING PROJECTS

Recommended parking projects depicted on the Terminal Area Plan include the following:

- Initial expansions at the south end of the long-term parking lot (135 spaces) and east end of the shade parking lot (213 spaces). These expansions are intended to accommodate parking demand at Planning Activity Level (PAL) 1.

- The construction of a new long-term parking lot (approximately 550 spaces) to meet anticipated demand at PAL 2 or as demand dictates at the southeast corner of Airport Circle and Air Cargo Road.

LEGEND

- EXISTING ARFIELD BUILDINGS
- FUTURE ARFF BUILDING EXPANSION
- FUTURE ARFF ROAD IMPROVEMENTS AND ADDITIONAL PARKING

N

100 0 100

GRAPHIC SCALE IN FEET

SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

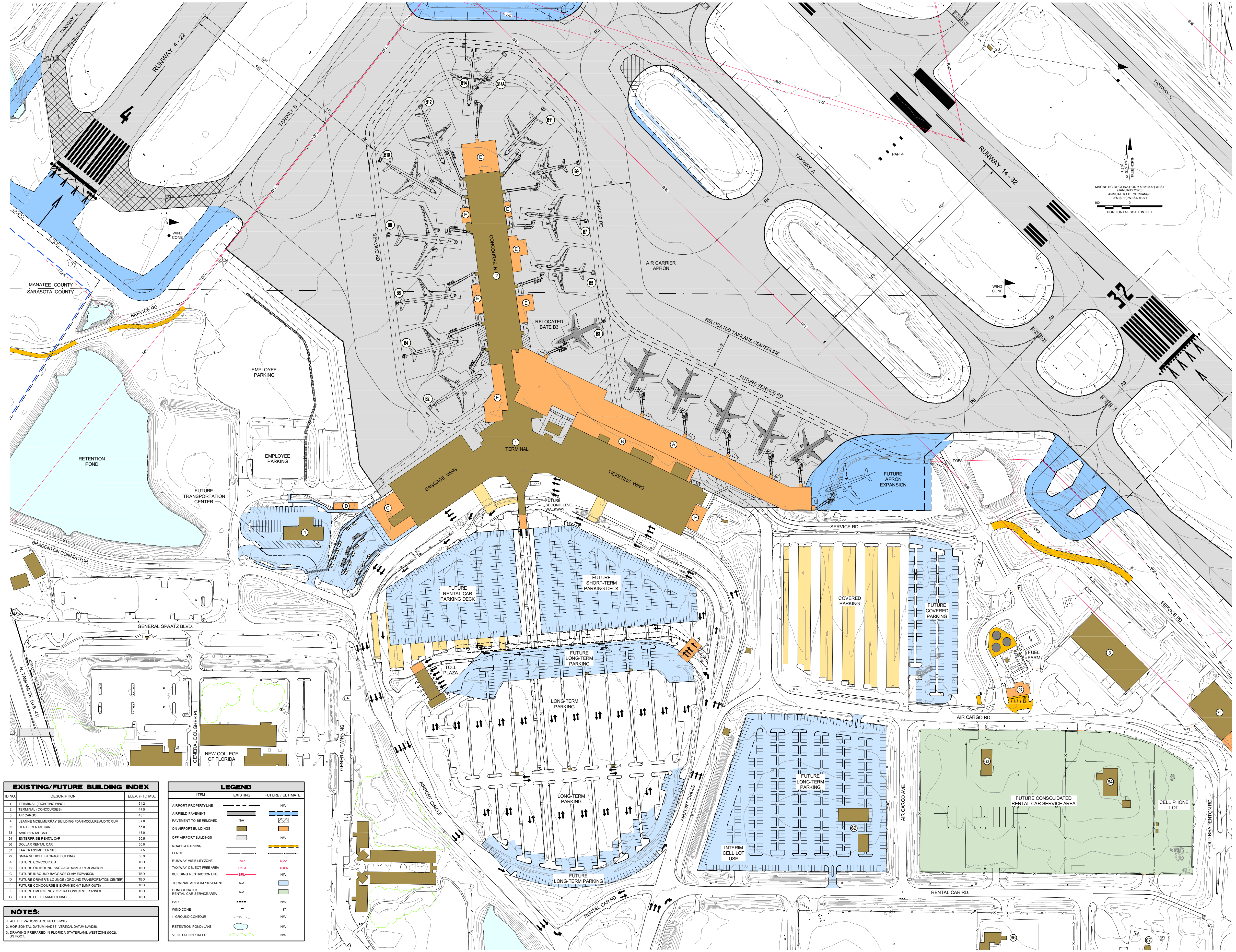
FUTURE ARFF STATION IMPROVEMENTS

FIGURE 5.2-6

C:\Civil 3D Projects\SRQ\Chapter 5 figures\FIG 5.2-6.dwg 11/10/2020 10:03

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

TERMINAL AREA PLAN



EXISTING/FUTURE BUILDING INDEX		
ID NO.	DESCRIPTION	ELEV. (FT.) MSL
1	TERMINAL (TICKETING WING)	64.2
2	TERMINAL (CONCOURSE B)	47.5
3	AIR CARGO	48.1
4	JEANNE MCELMURRAY BUILDING / DAN MCCLURE AUDITORIUM	37.0
62	HERTZ RENTAL CAR	55.0
63	AVIS RENTAL CAR	48.0
64	ENTERPRISE RENTAL CAR	50.5
66	DOLLAR RENTAL CAR	50.0
67	FAA TRANSMITTER SITE	37.5
79	SMAA VEHICLE STORAGE BUILDING	56.3
A	FUTURE CONCOURSE A	TBD
B	FUTURE OUTBOUND BAGGAGE MAKE-UP EXPANSION	TBD
C	FUTURE INBOUND BAGGAGE CLAIM EXPANSION	TBD
D	FUTURE DRIVER'S LOUNGE (GROUND TRANSPORTATION CENTER)	TBD
E	FUTURE CONCOURSE B EXPANSION (7 BUMP-OUTS)	TBD
F	FUTURE EMERGENCY OPERATIONS CENTER ANNEX	TBD
G	FUTURE FUEL FARM BUILDING	TBD

NOTES:

1. ALL ELEVATIONS ARE IN FEET (MSL).
2. HORIZONTAL DATUM NAD83, VERTICAL DATUM NAVD88.
3. DRAWING PREPARED IN FLORIDA STATE PLANE, WEST ZONE (0902), US FOOT.

LEGEND		
ITEM	EXISTING	FUTURE / ULTIMATE
AIRPORT PROPERTY LINE		N/A
AIRFIELD PAVEMENT		
PAVEMENT TO BE REMOVED	N/A	
ON-AIRPORT BUILDINGS		
OFF-AIRPORT BUILDINGS		N/A
ROADS & PARKING		
FENCE		
RUNWAY VISIBILITY ZONE	RVZ	RVZ
TAXIWAY OBJECT FREE AREA	TOFA	TOFA
BUILDING RESTRICTION LINE	BRL	N/A
TERMINAL AREA IMPROVEMENT	N/A	
CONSOLIDATED RENTAL CAR SERVICE AREA	N/A	
PAPI		N/A
WIND CONE		
1' GROUND CONTOUR	20	N/A
RETENTION POND / LAKE		N/A
VEGETATION / TREES		N/A

FIGURE 5.3-1

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- The construction of a new parking deck to meet demand for short-term parking and rental car parking at PAL 3. This project also includes the relocation of rental car offices from the baggage claim lobby to the lower level of rental car parking beneath the parking deck. The combination of ground level and deck parking will provide 459 spaces for short-term parking, 120 spaces for valet parking on the lower level and 492 spaces for rental car assuming the relocation of rental car office into the lower level. Interim expansions of rental car parking to meet peak month demands could occur on a temporary basis as previously described in **Section 4.4.4**)

5.3.3 GROUND TRANSPORTATION

- The Terminal Area Plan also shows recommended projects to improve ground transportation operations. The primary project is the creation of a Ground Transportation Center southwest of the baggage claim lobby that will accommodate the operations of county transit, taxis, limousines, hotel shuttles and Transportation Network Companies (TNC) such as Uber and Lyft as described in **Section 4.4.5**. This project will include the demolition and removal of the McClure Auditorium and the redevelopment of that parcel into parking for TNC vehicles awaiting pick-ups and hotel shuttles as shown in **Figure 5.3-2**.

- Other aspects of the plan include a dedicated area for Sarasota and Manatee County bus operations which has its own entrance and exit lane that allows buses to exit to Airport Circle or to the Bradenton Connector and/or General Spaatz Boulevard. This project will also provide four dedicated pick-up lanes for passengers as follows:
  - Limousine and Taxis
  - Hotel Shuttles
  - TNC #1
  - TNC #2

- The project will include awnings over each pick-up lane to provide sun and rain protection for passengers and drivers. Lastly, the project will include a drivers' lounge to provide easily accessible restrooms and vending area for drivers.

- Although not depicted on the Terminal Area Plan, another ground transportation project included in the plan is the option of relocating Valet Parking operations and parking as described in **Section 4.4.2.6**. This would entail moving the drop off and pick up location for valet parking into the short-term parking lot across from the center of the terminal and concerting a portion of existing short-term parking into valet parking.

- Also not shown on the plan is a curbside improvements project which includes the construction of a zero-curb.

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

PROPOSED GROUND TRANSPORTATION CENTER

FIGURE 5.3-2

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5.4 AIRSPACE PLAN

The Airspace Plan (see **Figure 5.4-1**) shows surfaces that are defined by Part 77 of Federal Aviation Regulations. These surfaces extend outward and upward from the airfield's runways and define airspace that should be kept clear of all obstacles including tall buildings, antennas and vegetation such as tall trees.

Objects that penetrate Part 77 surfaces are obstructions and may be hazards to air navigation upon a determination from the FAA. Therefore, objects that penetrate Part 77 surfaces should be removed, lighted, or appropriately marked in accordance with FAA guidance.

The surfaces shown on the drawing reflect the future airfield with implementation of the proposed shift of Runway 4-22 to resolve ROFA and Obstacle Clearance Surface penetrations. Obstructions to Part 77 surfaces, except for those penetrating the Inner Approach Surface, are shown on the drawing. Obstructions penetrating the Inner Approach Surfaces to each runway are shown on separate drawings for each runway end.

A variety of obstructions penetrate the Airport's Part 77 surfaces including numerous tall trees. The Airport Authority has an on-going program to address vegetation in the approach to each runway end. Recommended actions to address obstructions identified on the Airspace Plan are shown in the Obstruction Data tables provided in the drawing set.

In conjunction with the requirements of FAR Part 77, the State of Florida created and adopted Chapter 333, Airport Zoning within *Title XXV, Aviation* of Florida Statutes. Chapter 333 sets forth a process for the adoption, administration and enforcement of airport protection and airport compatible land use zoning to ensure the safe and efficient use of navigable airspace.

Height and land use zoning for areas surrounding Sarasota Bradenton International Airport are enforced through Resolution 2017-02 of the Sarasota Manatee Airport Authority which adopted Revised and Restated Airport Zoning Regulations on April 27, 2017. The regulations are based on Chapter 333. Surrounding jurisdictions including Sarasota County, the City of Sarasota and Manatee County have adopted an interlocal agreements with the Sarasota Manatee Airport Authority to implement the requirements of Chapter 333.

The Airport Authority will need to update the Revised and Restated Airport Zoning Regulations of April 27, 2017 to reflect the airspace drawings contained in this Airport Layout Plan drawing set. This has particular importance given the proposed 45-foot shift of Runway 4-22.

5.5 LAND USE PLAN

The Land Use Plan (see **Figure 5.5-1**) shows how the Airport's property is planned to be used. It also shows surrounding land uses in Sarasota County and Manatee County. Off-airport future land use was obtained from the Sarasota and Manatee County GIS departments.

On-Airport land use was placed into the following categories:

- Airfield Operations
- Passenger Terminal Facilities
- General Aviation Facilities
- Airport Support Facilities
- Aeronautical Development
- Non-Aeronautical Development
- Open Space
- Water Retention Ponds
- Future Drainage Area

The Airfield Operations land use accounts for the largest amount of airport property. This includes areas consumed by runways and taxiways along with their geometric clearance requirements, such as Runway and Taxiway Object Free Areas and Runway Protection Zones and the Runway Visibility Zone.

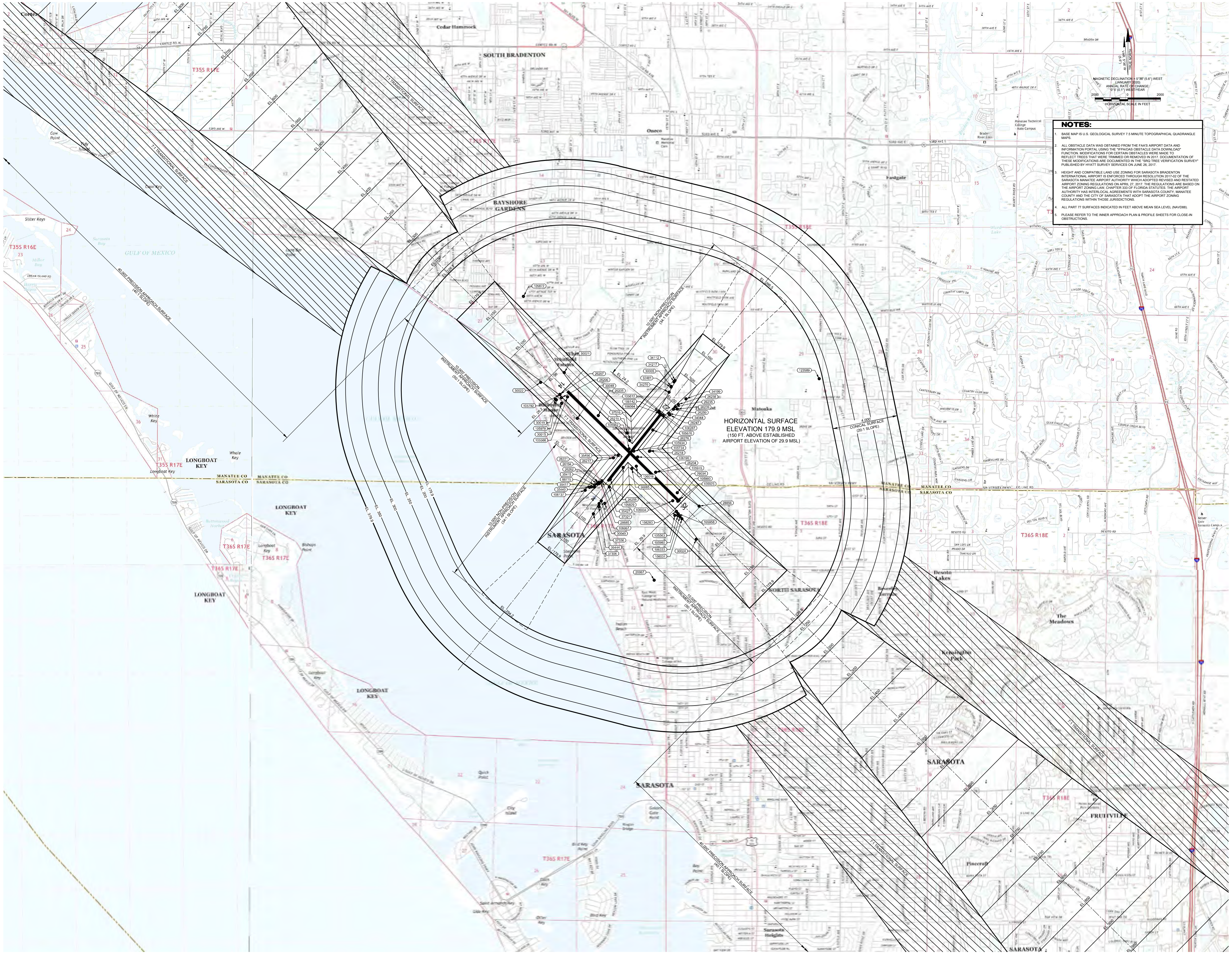
The Passenger Terminal Facilities land use (including public, employee and rental car parking lots) consumes a large portion of airport property in the south quadrant. All property north of Rental Car Road and south of Air Cargo Road is proposed for Passenger Terminal Facilities, specifically a future consolidated rental car service facility and a new long-term parking lot.

The General Aviation Facilities land use includes the majority of land in the Airport's east and west quadrants, as well as the eastern half of the north quadrant. This includes airport property occupied by Dolphin Aviation, Ross Aviation, the Airport Authority owned T-Hangars and hangar facilities of other tenants.

The Airport Support Facilities land use includes the Airport's control tower and the Aircraft Rescue and Firefighting (ARFF) station and the FAA's Remote Transmitter site in the west quadrant. It also includes the Airports' fuel farm, cargo facilities and airport maintenance facilities in the south quadrant. Finally, it includes planned airport maintenance facilities in the east quadrant. It does not include the other FAA remote transmitter site south of Rental Car Road. That parcel is planned for future non-aeronautical development.

The Aeronautical Development land use is planned for the majority of currently undeveloped land in the north quadrant and smaller parcels to the west and south of Ross Aviation.

The Non-Aeronautical land use includes a variety of existing land uses such as New College and commercial businesses on the east side of 15th Street East as well as currently vacant parcels along US 41 to the west, Clyde Jones Road to the north and all airport property east of Airport Circle from Rental Car Road to University Parkway. All of these parcels can be developed for revenue generating purposes.



SARASOTA BRADENTON
INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

srq

AIRPORT AIRSPACE DRAWING

FIGURE
5.4-1

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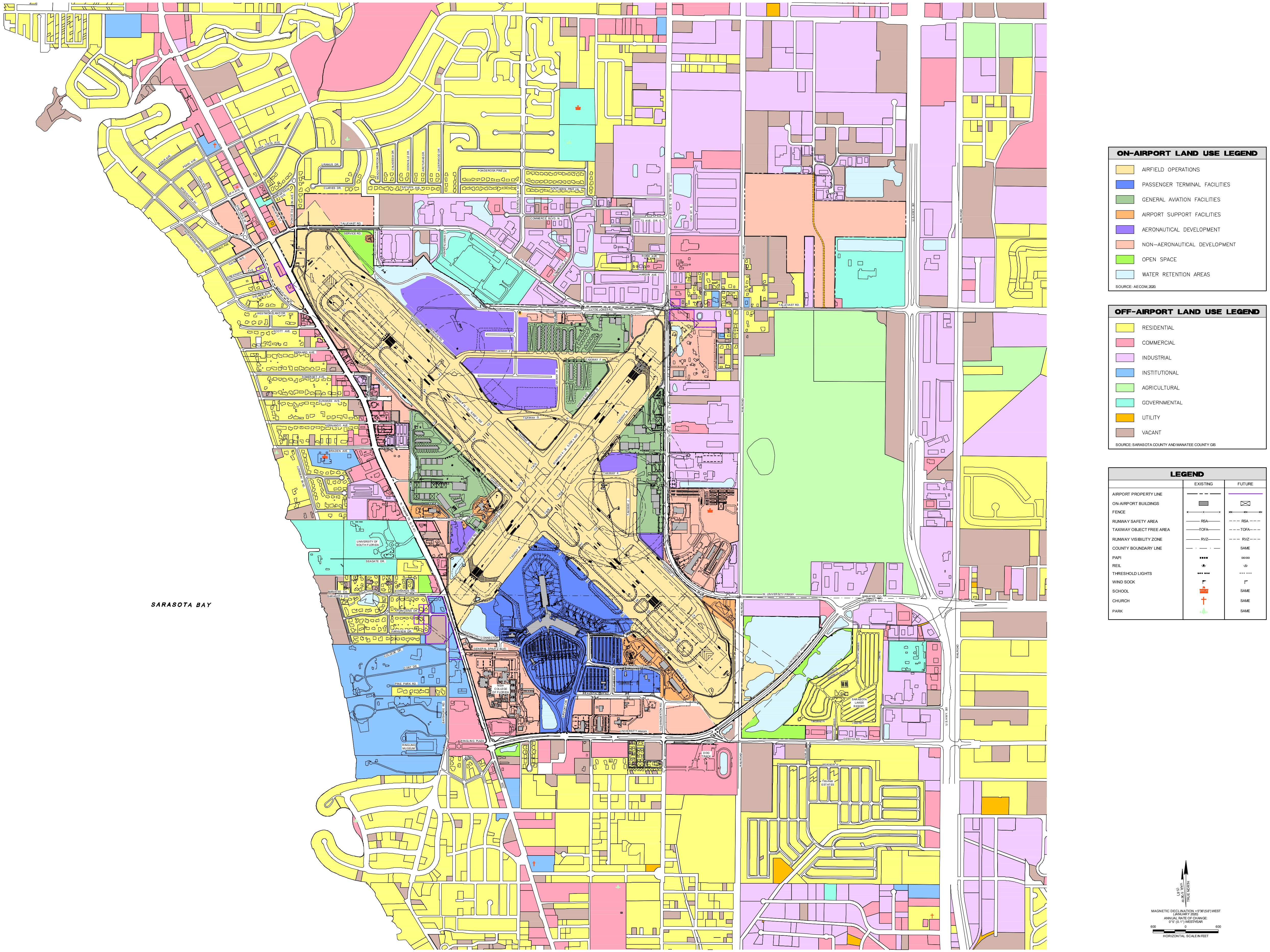

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

srq

LAND USE DRAWING

FIGURE 5.5-1

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The Open Space land use includes certain parcels adjacent to water retention ponds as well as parcels outside of the Airfield Operations land use along the north end of Runway 14-32 and parcels west of US 41.

The Water Retention land use is shown for the larger wet ponds around the Airport, while the Future Drainage Area land use is shown for an area near the north end of Taxiway C. This drainage improvement will convert a portion of airport property to a pond and construct associated drainage ditches.

Off-Airport land use is a mixture of various uses in all directions. However, commercial land uses predominate along the major roadways and along the west and south boundaries of the Airport. Significant amounts of industrial land use exist beyond the east and north boundaries of the Airport. Institutional land uses associated with colleges and cultural centers exist to the southwest. Beyond the immediate airport boundary large areas of residential land use exist north and south of the Airport, as well as west of US 41. Industrial land uses predominate to the northeast, while a significant amount of currently undeveloped land exists farther east of the Airport.

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SECTION 6.0

Facilities Implementation Plan

SECTION 6.0 FACILITIES IMPLEMENTATION PLAN

6.1 INTRODUCTION

This section identifies, describes, phases and provides costs for all of the projects recommended by this Master Plan Update. Projects from the Airport's current Capital Improvement Program (CIP) are included to provide a consolidated CIP of all intended projects during the planning horizon (i.e., through 2040). The information presented in this section will be used to conduct the Financial Feasibility Analysis presented in **Section 7.0**.

Detailed project sheets were also prepared for each Master Plan Update project. Each sheet contains the following information:

- Project ID and Name
- Estimated Cost
- Implementation Schedule
- Responsible Parties
- Project Description
- Project Need
- Prerequisites, Concurrent or Related Actions
- Required Environmental Approvals
- Potential Funding Sources

Project sheets are not provided for current airport CIP projects as the Authority already has all required information for those projects. Project Sheets are provided in **Appendix C**.

6.2 COST ESTIMATES

Cost estimates were prepared for all Master Plan Update projects and are presented in **Appendix D**. All costs are presented in 2020 dollars with no escalation. This approach allows appropriate escalation factors to be applied to each project at its inception.

Construction costs are detailed by quantities and unit prices. Unit prices were derived from bids on previous projects at the Airport as well as knowledge of local market conditions. A construction contingency of 15 percent was applied to all projects. Soft costs were applied for the following items at the indicated percentages:

- Owner Legal and Administrative – 2.5%
- Engineering and Design – 10% (Engineering fees for smaller projects were not calculated on a percentage basis.)
- Program Management – 5%

- Construction Management – 5%
- Design Services During Construction – 3%

Costs for the Airport's current CIP projects were derived from Airport Authority or from other planning studies such as the Airport's Pavement Management Study.

6.3 PROJECT CATEGORIES AND DESCRIPTIONS

All Master Plan Update and current Airport CIP projects were placed in the following categories:

- Environmental
- Airfield
- Terminal
- General Aviation
- Parking and Roadways
- Support Facilities

Project designations contain the first letter of each category and then a number. There are four environmental projects, 24 airfield projects, 16 terminal projects, three general aviation projects, 10 roadway and parking projects and eight support projects for a total of 65 projects. Descriptions of the projects are provided on the following pages.

6.3.1 ENVIRONMENTAL PROJECTS

6.3.1.1 Environmental Assessment for Select Short-Term Projects

This project will consist of the preparation of an environmental assessment to clear the group of projects proposed for the short-term (i.e., 2021 through 2025). While many of the projects in this term can be addressed through Categorical Exclusions, it is anticipated that an Environmental Assessment (EA) will be needed for certain projects including a proposed shift of Runway 4-22. Therefore, it may be more efficient to environmentally clear a larger group of projects through an EA. This would best be decided in consultation with the FAA program manager.

6.3.1.2 Wetland Mitigation

Several small wetland areas exist within and adjacent to the SRQ Airfield Operations Area. The lakes located along University Parkway (also called the "borrow pits") also have areas around their boundaries that are classified as conservation areas by the State of Florida and Sarasota County. This project will modify or eliminate all vegetation, particularly invasive species that form islands in order mitigate wildlife hazards to aircraft operations. This project also includes removal of the large wetland area in the north borrow pit beneath the approach to Runway 32.

6.3.1.3 Environmental Assessment for Select Intermediate-Term Projects

This project will consist of the preparation of an environmental assessment to clear the group of projects proposed for the intermediate term (i.e., 2026 through 2030). The rationale for this project is the same as presented for the short-term program.

6.3.1.4 Environmental Assessment for Select Long-Term Projects

This project will consist of the preparation of an environmental assessment to clear the group of projects proposed for the long-term (i.e., 2031 through 2040). The rationale for this project is the same as presented for the short-term program.

6.3.2 AIRFIELD PROJECTS

6.3.2.1 Shift Runway 4-22

This project consists of shifting Runway 4-22 by 45 feet to the southwest through a combination of removing existing pavements, extending pavement to the southwest, implementing displaced landing thresholds and using declared distances. The project also includes taxiway reconfigurations to meet FAA design standards and modifications to an existing water retention pond. This project is described in greater detail in **Section 4.2.3.2**.

This project is needed to bring the ROFA and Obstacle Clearance Surface on the approach end of Runway 4 into compliance with FAA design standards by removing the service road from the ROFA and providing 15 feet of vertical clearance over 15th Street East.

6.3.2.2 Construct Runway 14-32 ROFA Improvements

This project consists of closing and removing a portion of the existing inner airfield service road at the south end of Runway 14-32 as well as widening and improving the outer service road. The width of the road will be increase to 18 feet from its existing width of 12 feet. This project is described in greater detail in **Section 4.2.3.1**.

This project is needed to bring the Runway 14-32 ROFA into compliance with FAA design standards by removing the inner service road from the ROFA. The project will also maintain the runway's existing declared distances.

6.3.2.3 Modify Taxiway A4 & R3

This project consists of removing the segment of Taxiway A4 from the Dolphin Aviation ramp to Taxiway A and constructing a new entrance to its south. It also consists of shifting the centerline of Taxiway R3 to the north by modifying the pavement edges to Taxiway Design Group 6 standards. This project is described in greater detail in **Section 4.2.3.6**.

This project is needed to eliminate the direct connection from the Dolphin ramp to Runway 14-32 in accordance with FAA design standards and to further improve the configuration of Taxiway R3 to better comply with the intent of the design standard.

6.3.2.4 Relocate ASOS and Install RVR

This project consists of relocating the existing ASOS to a site south of the Airport's Surveillance Radar system between Taxiways C, E and J and installing a new Runway Visual Range at the Runway 14 ILS glide slope. This project is needed to eliminate building height restrictions in the north quadrant of the airfield that are associated with the existing ASOS. Approximately 28 acres of developable property is located within a 1,000-foot radius of the existing ASOS wind sensor.

6.3.2.5 Construct Perimeter Fencing Replacement

This project will replace the perimeter security fence. The project will also upgrade sections with wildlife deterrent fence and add double outriggers with strands of barbed wire.

6.3.2.6 Replace Airfield Guidance Signs – Phase 2

This project will replace faded sign panels and relocate and/or replace several signs with new bases. The purpose of this project is to ensure that all airfield signage meets FAA guidance for Part 139 airports.

6.3.2.7 Rehabilitate Taxiway C and Connectors

This project consists of milling and repaving Taxiway C (from the north end of Runway 14-32 to Taxiway D and from south of Taxiway B to midway between Taxiway C3 and Taxiway J) and its connectors (Taxiways C1, F and C2) when needed based upon Pavement Condition Index (PCI) values. FDOT's 2019 Airport Pavement Evaluation Report for SRQ estimated PCI values ranging from 58 to 69 (Fair). Consequently, the extents of this project may be further refined at the time of design.

The purpose of this project will be to restore the taxiway pavements to Good condition when needed. It is anticipated that this project will be needed in the Short-Term (i.e., in 1 to 5 years).

6.3.2.8 Rehabilitate Taxiways A7, R4 & R5

This project consists of milling and repaving Taxiways A7, R4 and R5 when needed based upon PCI values. FDOT's 2019 Airport Pavement Evaluation Report for SRQ estimated a PCI of 65 (Fair) for Taxiway A7, a PCI of 65 to 66 (Fair) for Taxiway R4 and a PCI of 43 to 59 for Taxiway R5. Consequently, it is anticipated that this project will be needed in the Short-Term (i.e., in 1 to 5 years). The purpose of this project will be to restore the taxiway pavement to Good condition when needed.

6.3.2.9 Construct Taxilanes in NorthQuad

This project will construct a new taxilane and widen an existing taxilane within the NorthQuad area to provide access for hangar development. The new taxilane will be located north of Taxiway F and will provide airfield access to future aeronautical development. The new taxilane will be designed to Design Group II standards.

6.3.2.10 Rehabilitate Taxiway F

This project consists of milling and repaving Taxiway F from Runway 14-32 to the taxilane leading to the J6 T-Hangars as recommended by FDOT's 2019 Airport Pavement Evaluation Report for SRQ. This taxiway segment has a PCI of 63 which is classified as Fair in the report. The purpose of this project will be to restore the taxiway pavement to Good condition and will be needed in the short-term.

6.3.2.11 Acquire RPZ Residential Properties or Easements (Approach to Runway 4)

This project consists of fee simple acquisition or easement acquisition from willing sellers for five residential parcels in the approach to Runway 4. Portions of four of these parcels are currently within the limits of the Runway 4 RPZ. The fifth parcel will be within the limits of the Runway 4 RPZ as a result of the proposed shift of Runway 4-22. FAA land use guidelines recommend Airport control of all properties within the RPZ.

6.3.2.12 Acquire RPZ Properties or Easements (Approach to Runway 22)

This project consists of fee simple acquisition or easement acquisition from willing sellers for three parcels in the approach to Runway 22. Portions of all these parcels are currently within the limits of the Runway 22 RPZ. FAA land use guidelines recommend Airport control of all properties within the RPZ. Consultation with FAA personnel should be initiated prior to seeking acquisition of any parcels requiring environmental remediation.

6.3.2.13 Acquire RPZ College Properties or Easements (Approach to Runway 4)

This project consists of acquisition or easement acquisition from New College for three parcels in the approach to Runway 4. Portions of these parcels are currently within the limits of the Runway 4 RPZ. FAA land use guidelines recommend Airport control of all properties within the RPZ.

6.3.2.14 Rehabilitate Taxiways E and J

This project consists of milling and repaving Taxiways E and J when needed based upon PCI values. FDOT's 2019 Airport Pavement Evaluation Report for SRQ specified a PCI of 69 (Fair) for Taxiway E and 70 (Fair) for Taxiway J. Consequently, it is anticipated that this project will not be needed until the Intermediate-Term (i.e., in 6 to 10 years). The purpose of this project will be to restore the taxiway pavement to Good condition when needed.

6.3.2.15 Rehabilitate Taxiway A with Connectors

This project consists of milling and repaving Taxiway A and its connectors when needed based upon PCI values. FDOT's 2019 Airport Pavement Evaluation Report for SRQ specified a PCI values ranging from 69 (Fair) for Taxiway A2 to 89 (Good) for Taxiway A8. The majority of the parallel segment have PCI's in the 70's except for the north portion which has PCI's in the 80's. Consequently, the extent of this project may be refined at the time of design.

It is anticipated that this project will be needed in the Short-Term (i.e., in 1 to 5 years). The purpose of this project will be to restore the taxiway pavements to Good condition when needed.

6.3.2.16 Construct Runway 14-32 Improvements (Shoulders)

This project consists of constructing 25-foot wide paved shoulders on the portions of Runway 14-32 that currently do not have shoulders. Currently, only the northernmost 1,700-feet and the southernmost 1,200-feet and certain taxiway intersections have shoulders. Paved shoulders are required for runways serving Design Group IV aircraft.

6.3.2.17 Construct Holding Bays at North End of Taxiway A

This project consists of constructing an aircraft holding bay to Aircraft Design Group II standards with two aircraft positions along the west side of Taxiway A near Taxiway A2. This project is needed to reduce aircraft departure delays on Runway 14 according to FAA air traffic control personnel and is the only low cost, viable capital improvement for providing delay reduction for departures on Runway 14.

6.3.2.18 Construct Holding Bays at South End of Taxiway A

This project consists of constructing an aircraft holding bay to Aircraft Design Group II standards with two aircraft positions along the west side of Taxiway A near Taxiway A9. This project is needed to reduce aircraft departure delays on Runway 32 according to FAA air traffic control personnel and is the only low cost, viable capital improvement for providing delay reduction for departures on Runway 32.

6.3.2.19 Rehabilitate Taxiway C (South)

This project consists of milling and repaving the southern portion of Taxiway C from halfway between Taxiways C3 and Taxiway J to the south end of Runway 32 when needed based upon PCI values. FDOT's 2019 Airport Pavement Evaluation Report for SRQ specified a PCI of 74 to 76 for these pavements which is classified as Satisfactory. Consequently, it is anticipated that this project will not be needed until the long-term. The purpose of this project will be to restore the taxiway pavement to Good condition when needed.

6.3.2.20 Rehabilitate Taxiway G

This project consists of milling and repaving Taxiway G when needed based upon PCI values. FDOT's 2019 Airport Pavement Evaluation Report for SRQ specified a PCI of 78 for these pavements which is classified as Satisfactory. Consequently, it is anticipated that this project will not be needed until the long-term. The purpose of this project will be to restore the taxiway pavement to Good condition when needed.

6.3.2.21 Rehabilitate Taxiway H

This project consists of milling and repaving Taxiway H when needed based upon PCI values. FDOT's 2019 Airport Pavement Evaluation Report for SRQ specified a PCI of 81 for these pavements which is classified as Satisfactory. Consequently, it is anticipated that this project will not be needed until the long-term. The purpose of this project will be to restore the taxiway pavement to Good condition when needed.

6.3.2.22 Rehabilitate Taxiway D

This project consists of milling and repaving Taxiway D when needed based upon PCI values. FDOT's 2019 Airport Pavement Evaluation Report for SRQ specified a PCI of 77 for these pavements which is classified as Satisfactory. Consequently, it is anticipated that this project will not be needed until the long-term. The purpose of this project will be to restore the taxiway pavement to Good condition when needed.

6.3.2.23 Rehabilitate Runway 4-22

This project consists of a future milling and repaving of Runway 4-22 pavements when needed based upon a PCI values. FDOT's 2019 Airport Pavement Evaluation Report for SRQ specified a PCI of 88 for these pavements which is classified as Good. Consequently, it is anticipated that this project will not be needed until the long-term. The purpose of this project will be to restore the taxiway pavement to Good condition when needed.

6.3.2.24 Acquire RPZ Properties or Easements (Approach to Runway 14)

This project consists of fee simple or easement acquisition from willing sellers for four parcels located inside the existing Runway Protection Zone on the north end of Runway 14-32. The purpose of these acquisitions would be to bring all property within the RPZ under Airport Authority control as recommended by FAA guidance.

6.3.3 TERMINAL PROJECTS

6.3.3.1 Construct Holdroom / Concessions Expansion #2

This project consists of a 2,250 square foot addition between gates B4 and B6 adjacent to existing holdrooms. The expansion could be used for additional holdroom and/or concession space.

The Facility Requirement section noted the need for additional holdroom and concession space on Concourse B. This project is one of several options for providing additional space on the concourse. Airport Authority management will decide on the ultimate implementation and phasing of Concourse B expansions.

6.3.3.2 Construct Holdroom / Concessions Expansion #3

This project consists of a 1,260 square foot addition between gates B8 and B10 adjacent to existing holdrooms. The expansion could be used for additional holdroom and/or concession space.

6.3.3.3 Construct Holdroom / Concessions Expansion #5 plus B11 Stairwell Improvements

This project consists of a 910 square foot addition between gates B7 and B9 adjacent to existing holdrooms. The expansion could be used for additional holdroom and/or concession space.

6.3.3.4 Construct New General Aviation FIS Facility

This project consists of constructing a new General Aviation FIS facility at a site to be selected by airport staff. The proposed facility will consist of an aircraft apron sized for the largest business jets, a building in the range of 4,000 square feet along with roadway access and a small parking lot. This project is described in greater detail in **Section 4.3.6**.

The need for this project is based upon the projected need for additional gates as described in **Section 3.5.9**. Gate B-8 is currently used for clearing international arrivals by commercial and general aviation aircraft. Removal of general aviation operations from Gate B-8 would allow it to be dedicated to commercial use and thereby achieve better utilization of an existing gate at lower cost than constructing a new gate.

6.3.3.5 Construct Rental Car Office Renovation

This project consists of renovating the existing rental car offices and counter area in the baggage claim lobby. The project will upgrade HVAC, lighting, signage, office layout, counters, security, and will include an additional covered walkway to the ready return lot. Renovations are needed to bring facilities up to modern conditions, make them compliant with the Americans with Disabilities Act (ADA) standards and to improve functionality.

6.3.3.6 Construct Blast Fence Deflector

This project will consist of the construction of two segments of new blast fence. The first segment will extend from the exterior west corner of the baggage claim lobby to the crosswalk at Airport Auditorium Lane. The second segment extends along the east side of airport employee parking. These segments are intended to protect airport employees and their personal vehicles from jet blast associated with aircraft operations on the west ramp near gates B2 and B4. It will also provide blast protection for the proposed Ground Transportation Center.

6.3.3.7 Construct New Consolidated In-Line Baggage System

This project consists of the construction of an entirely new outbound baggage system including new conveyors, new Explosive Detection Systems, an On-Screen Resolution Area, Explosive Trace Detection and outbound baggage make-up carousels. An expansion of the ticketing wing width will be required to accommodate the proposed baggage systems. The need for this project is based on the existing system's inability to reliably and efficiently process peak hour outbound baggage.

6.3.3.8 Construct FIS Phase 2 (Access)

This project consists of constructing a secure route for inbound international passengers to transit from the existing FIS facility located on the first level of Concourse B to the unsecure portion of the passenger terminal without mixing with secure passengers on the second level of the concourse. It is anticipated that this will consist of providing a sterile corridor along with a vertical circulation core containing an escalator and elevator.

6.3.3.9 Construct Pedestrian Bridge and Reconfigure Concessions

This project consists of constructing a pedestrian bridge from the second level of the passenger terminal to the pedestrian walkway between short-term parking and the rental car ready/return lot. The project also includes reconfiguration of the concession area on the terminal's second floor. This project is described in greater detail in **Section 4.3.5.1**.

The purpose of this project is to improve the use and financial viability of existing concession space on the second floor of the terminal. Construction of the pedestrian bridge would increase passenger flow past this area thereby improving concession use and would also reduce pedestrian crossings of the terminal curb roadway thereby providing additional capacity benefits.

6.3.3.10 Construct Holdroom / Concessions Expansion #6

This project consists of a 4,260 square foot addition between Gates B5 and B7 behind existing restrooms and concession areas. The expansion could be used for additional holdroom or concession development.

The Facility Requirement section noted the need for additional concession space on Concourse B. This project is one of several options for providing additional concession space on Concourse B. Airport Authority management will decide on the ultimate implementation and phasing of Concourse B expansions.

6.3.3.11 Construct Holdroom / Concession Expansion #7

This project consists of a 3,340 square foot addition between Gates B3 and B5 adjacent to existing holdrooms. The expansion could be used for additional holdroom space.

The Facility Requirement section noted the need for additional holdroom space on Concourse B. This project is one of several options for providing additional holdroom space on Concourse B. Airport Authority management will decide on the ultimate implementation and phasing of Concourse B expansions.

6.3.3.12 Construct Holdroom / Concession Expansion #1

This project consists of an 8,470 square foot addition south of Gate B2 and west of the existing passenger security screening checkpoint. This is the single largest area of contiguous space that could be constructed on the secure side of the concourse and could potentially be used as a restaurant location.

The Facility Requirement section noted the need for additional concession space on Concourse B. This project is one of several options for providing additional concession space on Concourse B. Airport Authority management will decide on the ultimate implementation and phasing of Concourse B expansions.

6.3.3.13 Construct New Concourse A

This project consists of constructing a new six-gate concourse. The new concourse location would result in the loss of Gate B-1 and therefore, would result in a net gain of five gates. The project would include additional security screening checkpoint, concessions and holdroom space and space for airline, authority operations and concession storage at ground level. This project is described in greater detail in **Section 4.3.1**.

The need for this project is based on the projection of future gates requirements as described in **Section 3.5.9** which estimates that additional gates will be needed to accommodate projected demand through the planning horizon. This project will also address requirements for additional concessions, security screening and support services including storage.

6.3.3.14 Expand Baggage Claim

This project consists of constructing a 10,600 square foot expansion of the baggage claim lobby to provide a fourth flat-plate baggage claim carousel and associated baggage offices. The expansion will occur on the southwest side of the existing baggage claim area. This project is described in greater detail in **Section 4.3.3**.

The need for this project is based upon the Facility Requirements assessment which determined that a fourth baggage claim carousel will be needed to meet anticipated peak hour passenger demand and accommodate airline operations requirements at PAL 3 as described in **Section 3.5.14**.

6.3.3.15 Construct Holdroom / Concessions Expansion #4

This project consists of a 10,150 square foot addition at the north end of Concourse B. The expansion could be used for a combination of holdroom expansion and/or additional concession development. This expansion requires the relocation of Gate B14 and therefore also requires an expansion of the apron to the north to support aircraft taxi to and from the gate.

The Facility Requirement section noted the need for additional holdroom and concession space on Concourse B. This project is one of several options for providing additional holdroom and concession space on Concourse B. Authority management will decide on the ultimate implementation and phasing of Concourse B expansions.

6.3.3.16 Construct Third Floor Renovations

This project consists of renovating the airport authority offices and restrooms on the third floor of the passenger terminal.

6.3.4 General Aviation Projects

6.3.4.1 Construct Air Center Aprons and Utilities

Project will construct infrastructure improvements and two aircraft parking aprons in the NorthQuad Area, north of Taxiway G and east of Taxiway C. The Airport Authority intends for these aprons to support future development in the NorthQuad area.

6.3.4.2 Construct 24 Large T-Hangars

This project consists of constructing two buildings of large T-hangars. One building would contain 10 units and would be located south of Building J7. The other building would contain 14 units and would be located east of Building J8. This project would also include associated taxilanes. The Facility Requirements section identified a need for up to 44 additional T-Hangars during the planning period. It is anticipated that slightly more than half of those would be for larger general aviation aircraft. This project is intended to meet that requirement.

6.3.4.3 Construct 20 Small T-Hangars

This project consists of constructing another row (20 units) of small T-hangars west of Building J6 along with an access taxilane to Taxiway F. The Facility Requirements section identified a need for up to 44 additional T-Hangars during the planning horizon. It is anticipated that nearly half of those would be for small general aviation aircraft. This project is intended to meet that requirement.

6.3.5 Parking and Roadway Projects

6.3.5.1 Construct Ground Transportation Center

This project consists of the demolition of the McClure Auditorium along with the construction of a parking area for TNC drivers and hotel shuttles, covered passenger pick-up lanes for all modes of commercial ground transportation and an area dedicated exclusively to transit. A stand-alone drivers' lounge with restrooms and a vending area is also proposed as part of this project.

This project will improve passenger convenience and access to ground transportation services. It will also increase terminal curbside capacity by removing TNC pick-ups from the terminal curb.

6.3.5.2 Whitfield Driveway Removal

This project consists of removing driveway pavements for residential properties that were previously purchased by the Airport Authority. These parcels are located in the area west of US 41. It is intended that this project will include removal of pavements each year for five consecutive years. This project is needed to discourage vehicles from trespassing on the associated parcels at each of these access points.

6.3.5.3 Construct CONRAC Service Facility

This project consists of the construction of a consolidated rental car service facility north of Rental Car Road and south of Air Cargo Road west of Old Bradenton Road. The proposed facility will contain quick turn facilities for rental car companies to service, clean and refuel vehicles. Vehicle storage parking will also be provided. The purpose of this project is to provide a consolidated location for these activities and allow existing rental car service and storage properties to be repurposed for other revenue generating activities.

6.3.5.4 Expand Existing Long-Term and Shade Parking

This project consists of expansions of the existing long-term parking lot to the south and the existing shade parking lot to the east. These expansions are intended to accommodate projected parking demand at Planning Activity Level (PAL) 1.

6.3.5.5 Construct Airport Circle Waypoint Signs

This project consists of the removal of existing roadway signage and its replacement with all new signage to facilitate vehicle movements through the entire passenger terminal area. This project is needed to replace a variety of existing signage with new signage that provides consistent hierarchy and symbology to drivers. It is also needed to provide signage to new facilities.

6.3.5.6 Construct 15th Street Observation Parking Area

Public parking currently occurs on an unpaved area on the west side of 15th Street East at the intersection of Lindbergh Court for the purpose of watching airfield operations. This project (to be funded in partnership with Manatee County) will provide a paved parking lot to better accommodate this demand.

6.3.5.7 Relocate Valet Parking

This project consists of converting a portion of short-term parking into an area for the drop-off, pick-up and storage of valet parking vehicles. The proposed location will be directly across from the center of the passenger terminal. This project will provide one common point for valet parking operations and would remove this function from the terminal curb, thereby increasing curb capacity. It would also reduce the number of valet parking vehicle movements on Airport Circle. Details of this operational concept are presented in **Section 4.4.2.6**.

6.3.5.8 Construct New Long-Term Parking Lot

This project consists of constructing a new long-term parking lot containing approximately 550 spaces at the southeast corner of Airport Circle and Air Cargo Road. This lot will provide passenger shelters at shuttle pick-up spots similar to those that currently exist in the long-term parking lot. This project is needed to provide the required number of long-term parking spaces to meet estimated demand at PAL 2.

6.3.5.9 Construct Short-Term & Rental Car Parking Deck

This project consists of constructing a parking deck over the existing rental car and short-term parking lots along with associated access ramps and roadway modifications. It also includes the construction of new rental car offices on the ground level of the rental car ready area. This project is needed to provide the required number of rental car and short-term parking spaces to meet estimated demand at PAL 3. Relocation of the rental car offices from the baggage claim lobby will provide adequate space for rental car employees and their customers while also improving the level-of-service in the baggage claim lobby for meeters/greeters and passenger circulation.

6.3.5.10 Construct Curbside Improvements

This project includes replacement of leaking roof drains and sewer drains in curbside ceiling, replacing ceiling tiles, lighting, speakers, fire sprinklers, curbside/terminal storefront, signage, carpet, curbside sidewalk, remove skycap podiums, and electrical and fiber optics upgrades. The ceiling is approximately 20,000 square feet and will consist of a suspended metal ceiling with a torsion spring system. Approximately 1,000 linear feet of curbside/sidewalk will be replaced. Eleven skycap podiums owned by the Airport will be demolished to accommodate the other improvements in this project. They will not be replaced. Approximately 300 light fixtures, 141 public address speakers and 20 to 25 wayfinding signs will be installed.

This project will correct deficiencies in the curb-side structures that have developed through normal aging. Problems include cracked and leaking sewer lines, as well as cracked and leaking roof drains. The project will also improve loading unloading capacity at curbside by replacing the existing 6-inch curb with zero-curb and will improve way-finding signage. The curbside facilities included in this project were constructed with the terminal in 1989 and have not been rehabilitated since then.

6.3.6 SUPPORT FACILITY PROJECTS

6.3.6.1 Construct New Emergency Operations Center

This project consists of constructing a building addition at the east end of the ticketing lobby. The addition will provide approximately 3,100 square feet of space that will be used to provide an operations center, conference room, computer server rooms, living space and bunk rooms. The purpose of the project will be to provide a consolidated location from which all emergency operations can be managed.

6.3.6.2 Conduct GIS Mapping & Master Utility Layout

This project consists of a planning project to map existing utilities in a Geographic Information System (GIS). This project is needed to provide a single common repository for airport utility information. The resulting data will be useful for all subsequent planning and design projects.

6.3.6.3 Construct Tallevast Industrial Park Roadway Improvements

This project will design, permit and construct the roadway and utility infrastructure within the Tallevast Industrial Park. The project will provide the infrastructure to allow development of the industrial park into leasable parcels.

6.3.6.4 Relocate Bulk Storage Facility

This project consists of constructing a new 5,000 square foot building along with parking to replace the existing bulk storage building. The proposed building will be located along the outer airfield service road west of the south end of Taxiway C. This project is needed to provide a replacement for the existing bulk storage building that is located on a parcel proposed for redevelopment to non-aeronautical land uses.

6.3.6.5 Expand Existing Vehicle Storage Building

This project consists of expanding the existing vehicle storage building at its south end to provide 10,000 square feet of additional space. This project also includes relocation of the existing stormwater retention pond located south of the building. This project is needed to provide additional storage space for existing airport vehicles, supplies and equipment as specified in the Facility Requirements section.

6.3.6.6 Construct New Vehicle Storage Building

This project consists of constructing a new 25,000 square foot vehicle storage building. The building is proposed to be located adjacent to a new bulk storage building along the outer vehicle service road east of the south end of Taxiway C. The project also includes roadway access and parking. The Facility Requirement section documented a demand for an additional 26,000 square feet of vehicle and equipment storage with additional growth of 50% during the planning horizon. This project is intended to provide additional space beyond the 10,000 square foot addition to the existing vehicle storage building.

6.3.6.7 Construct ARFF Station Improvements

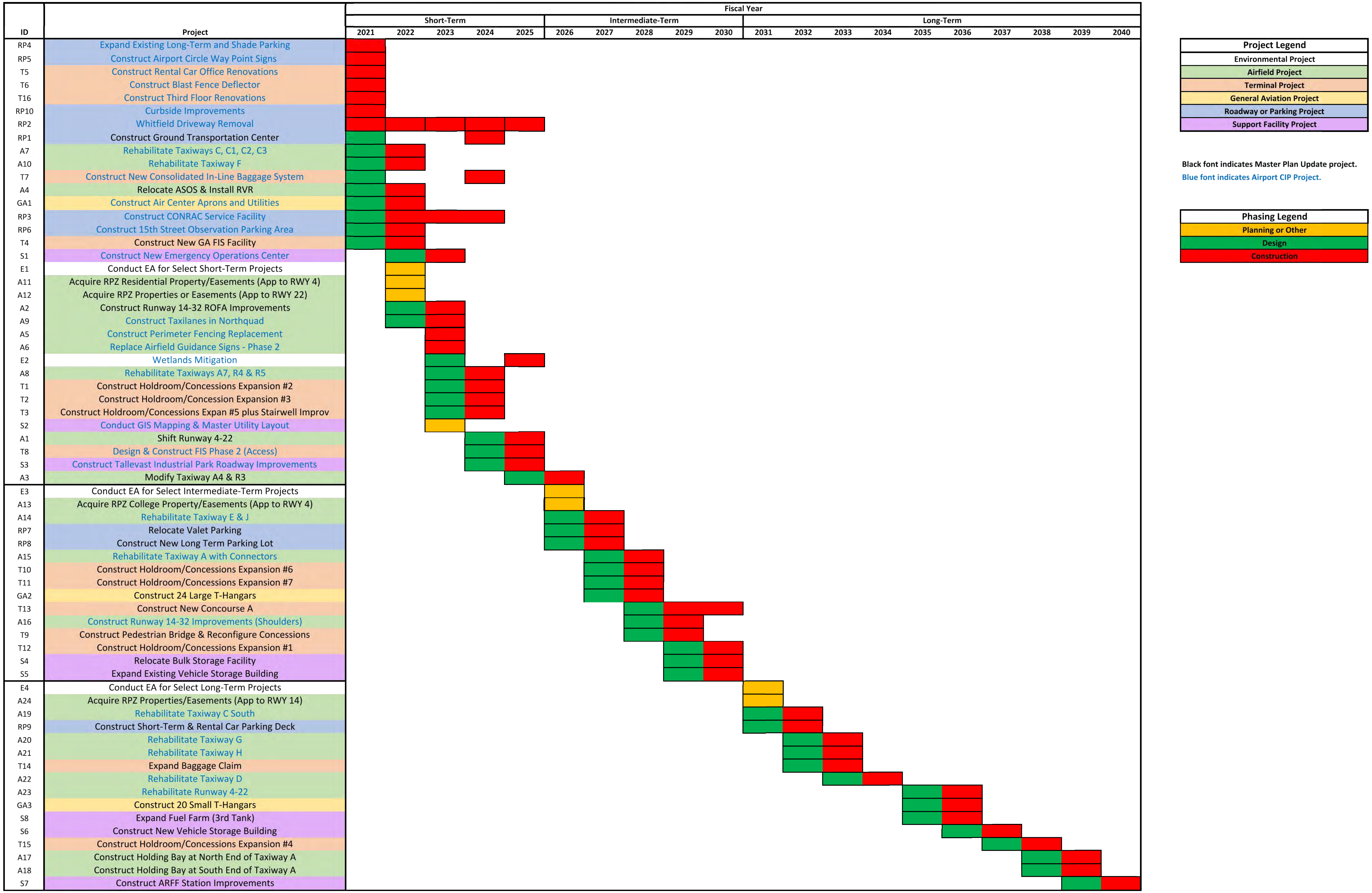
This project consists of constructing several improvements to the existing ARFF station including an additional vehicle bay, making all bays drive through capable, providing additional storage space and improving access roads and providing additional parking. An exhaust capture system is also included. The Facility Requirement section documents the need for each of these improvements based on consultation with the station chief. The proposed improvements will enable equipment currently stored outside to be brought into the station.

6.3.6.8 Expand Fuel Farm (3rd Tank)

This project consists of installing a third 102,000-gallon vertical tank in the existing fuel farm. The Facility Requirement section documents the need for a third tank to maintain a five-day fuel supply toward the end of the planning period. A third tank will provide a 5.5-day fuel supply with estimated operational demand in the year 2039.

6.4 PROJECT PHASING

Staging periods for these projects were established as follows: Short-Term (2021 to 2025), Intermediate-Term (2026 to 2030), and Long-Term (2031 to 2040). The ultimate timing of projects will be determined on the basis of passenger and operational demand, funding availability, environmental approvals, and tenant and Airport Authority priorities. **Figure 6.4-1** provides a Gantt chart for a draft project phasing plan.



SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

PROJECT PHASING CHART

FIGURE 6.4-1

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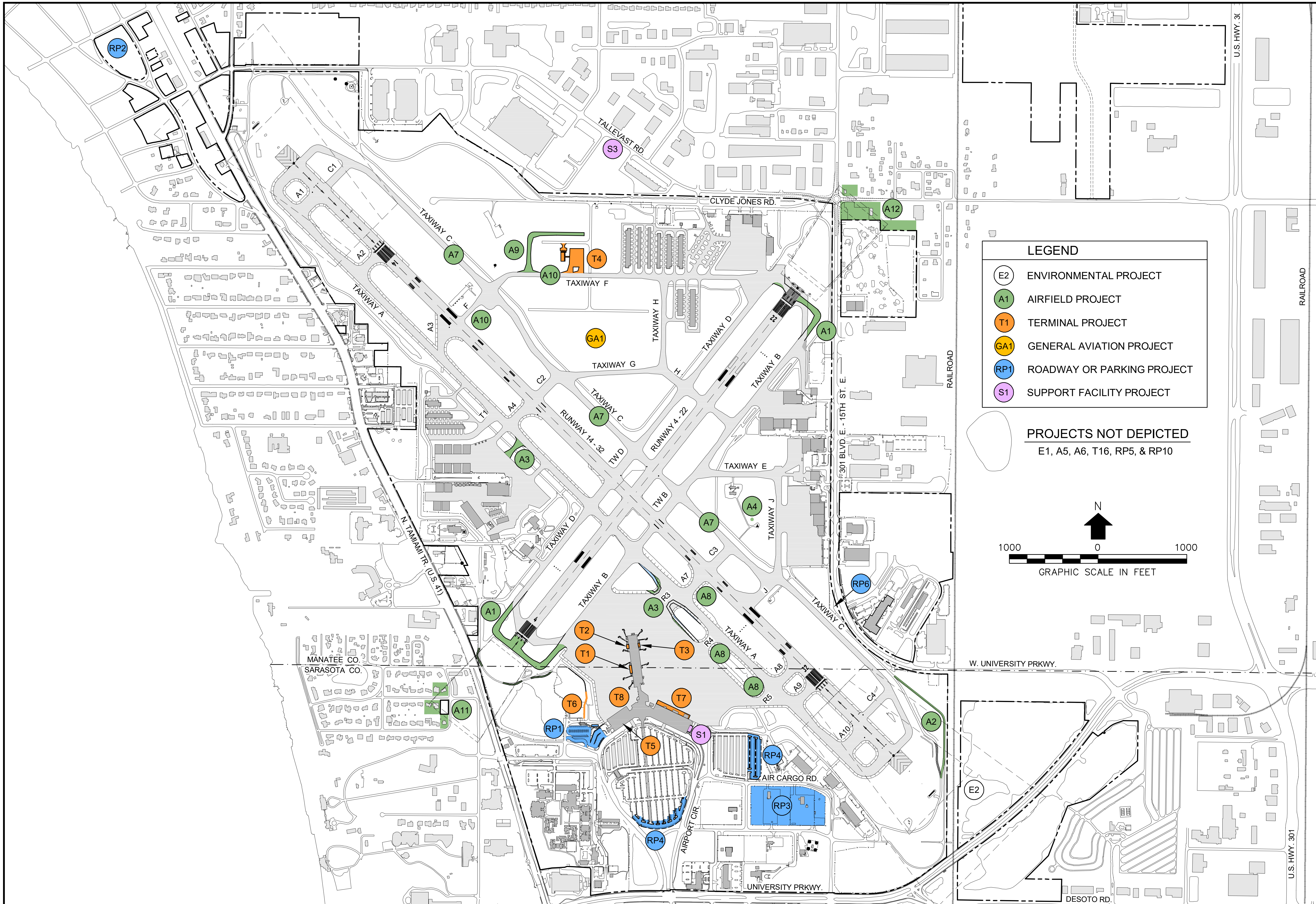
6.4.1 SHORT-TERM PROJECTS

Proposed short-term projects are illustrated in **Figure 6.4-2**. **Table 6.4-1** provides a summary of short-term projects and their estimated cost in 2020 dollars.

Table 6.4-1
Short-Term (2021 to 2025) Project Cost Estimates

Project Designations	Project Name	Estimated Cost (2020 Dollars)
Environmental Projects		
E1	Conduct EA for Select Short-Term Projects	$375,000
E2	Wetland Mitigation*	$5,000,000
Airfield Projects		
A1	Shift Runway 4-22	$3,852,000
A2	Construct Runway 14-32 ROFA Improvements	$459,000
A3	Modify Taxiway A4 & R3 (Design Only)	$150,000
A4	Relocate ASOS & Install RVR	$594,000
A5	Construct Perimeter Fencing Replacement*	$2,100,000
A6	Replace Airfield Guidance Signs - Phase 2*	$275,000
A7	Rehabilitate Taxiways C, C1, C2, C3*	$4,725,000
A8	Rehabilitate Taxiways A7, R4 & R5*	$1,192,000
A9	Construct Taxilanes in NorthQuad*	$1,400,000
A10	Rehabilitate Taxiway F*	$1,326,000
A11	Acquire RPZ Residential Prop/Easements (Approach to Runway 4)	$1,171,610
A12	Acquire RPZ Properties or Easements (Approach to Runway 22)	$538,731
Terminal Projects		
T1	Construct Holdroom/Concessions Expansion #2	$1,391,896
T2	Construct Holdroom/Concessions Expansion #3	$900,386
T3	Construct Holdroom/Concessions Expansion #5 plus Stairwell Improvements	$1,251,652
T4	Construct New GA FIS Facility	$3,109,000
T5	Construct Rental Car Office Renovations*	$2,000,000
T6	Construct Blast Fence Deflector*	$800,000
T7	Construct New Consolidated In-Line Baggage System*	$41,000,000
T8	Design & Construct FIS Phase 2 (Access)*	$1,900,000
T16	Terminal Third Floor Renovations*	$3,000,000
General Aviation Projects		
GA1	Construct Air Center Aprons and Utilities*	$3,500,000
Roadway and Parking Projects		
RP1	Construct Ground Transportation Center	$3,905,716
RP2	Whitfield Driveway Removal*	$75,000
RP3	Construct CONRAC Service Facility*	$19,800,000
RP4	Expand Existing Long-Term and Shade Parking*	$3,611,344
RP5	Construct Airport Circle Way Point Signs*	$1,050,000
RP6	Construct 15th Street Observation Parking Area*	$250,000
RP10	Curbside Improvements*	$3,250,000
Support Facility Projects		
S1	Construct New Emergency Operations Center*	$1,500,000
S2	Conduct GIS Mapping & Master Utility Layout*	$250,000
S3	Construct Tallevast Industrial Park Roadway Improvements*	$3,055,000
	Total Short-Term Cost	**$118,758,335**

Source: AECOM, 2020. Cost estimates prepared by AID, 2020.
Note: * Designates a project from the Airport Authority's existing CIP. Costs derived from Airport Authority or third-party sources.



SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

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SHORT-TERM PROJECTS

FIGURE 6.4-2

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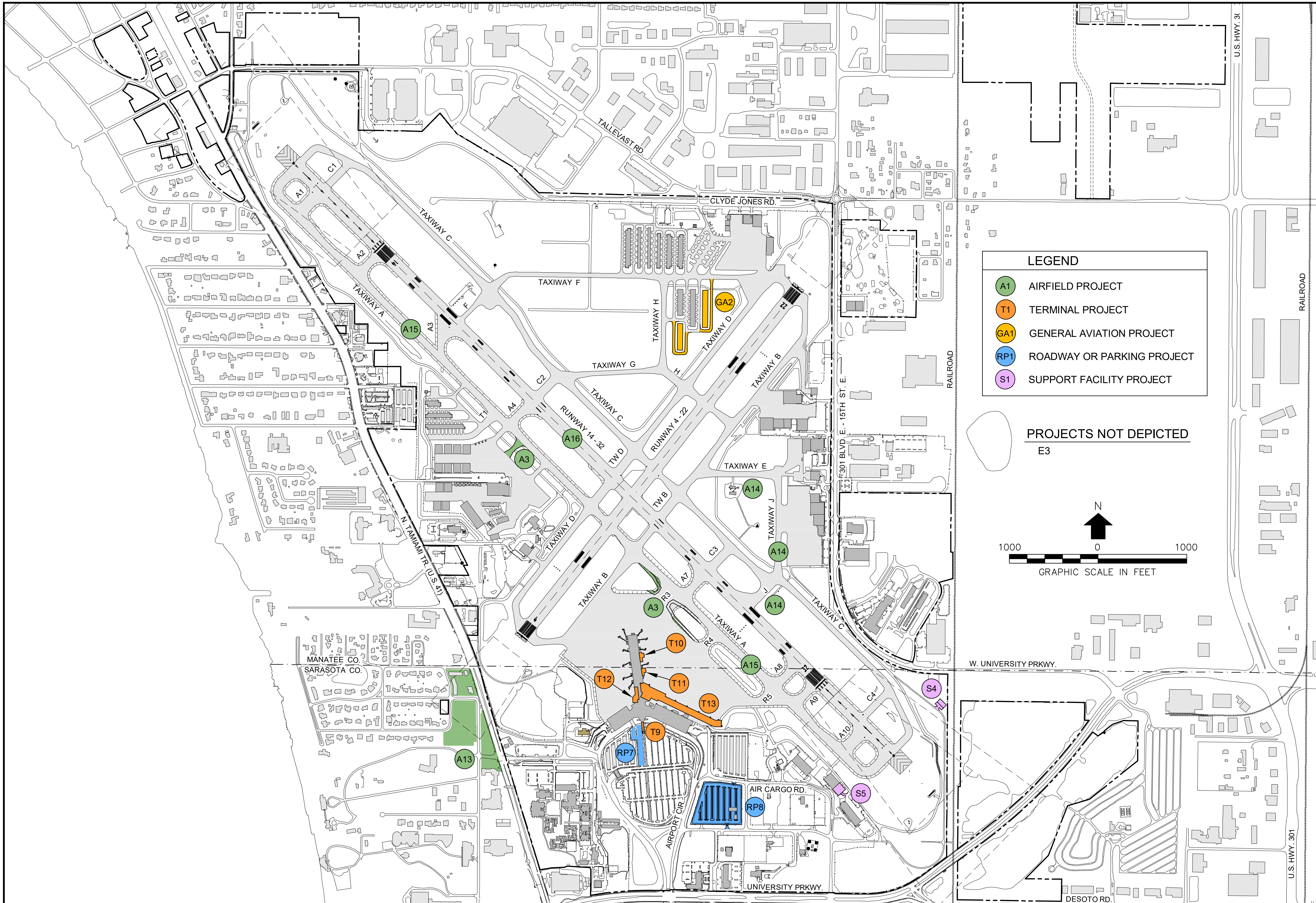
6.4.2 INTERMEDIATE-TERM PROJECTS

Proposed intermediate-term projects are illustrated in **Figure 6.4-3**. **Table 6.4-2** provides a summary of intermediate-term projects and their estimated cost in 2020 dollars.

Table 6.4-2
Intermediate-Term (2026 to 2030) Project Cost Estimates

Project Designations	Project Name	Estimated Cost (2020 Dollars)
Environmental Projects		
E3	Conduct EA for Select Intermediate-Term Projects	$225,000
Airfield Projects		
A3	Modify Taxiway A4 & R3 (Construction)	$747,000
A13	Acquire RPZ College Property / Easements (Approach to RWY 4)	$9,414,020
A14	Rehabilitate Taxiway E & J*	$2,330,000
A15	Rehabilitate Taxiway A with Connectors*	$8,359,000
A16	Construct Runway 14-32 Improvements (Shoulders)*	$15,000,000
Terminal Projects		
T9	Construct Pedestrian Bridge & Reconfigure Concessions	$3,056,001
T10	Construct Holdroom/Concessions Expansion #6	$2,494,575
T11	Construct Holdroom/Concessions Expansion #7	$1,948,793
T12	Construct Holdroom/Concessions Expansion #1	$4,724,096
T13	Construct New Concourse A	$87,069,001
General Aviation Projects		
GA2	Construct 24 Large T-Hangars	$5,637,652
Roadway and Parking Projects		
RP7	Relocate Valet Parking	$898,000
RP8	Construct New Long-Term Parking Lot	$8,385,001
Support Facility Projects		
S4	Relocate Bulk Storage Facility	$1,662,000
S5	Expand Existing Vehicle Storage Building	$6,152,000
	Total Intermediate-Term Cost	**$158,102,139**

Source: AECOM, 2020. Cost estimates prepared by AID, 2020.
Note: * Designates a project from the Airport Authority's existing CIP. Costs derived from Airport Authority or third-party sources.



SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

INTERMEDIATE-TERM PROJECTS

FIGURE 6.4-3

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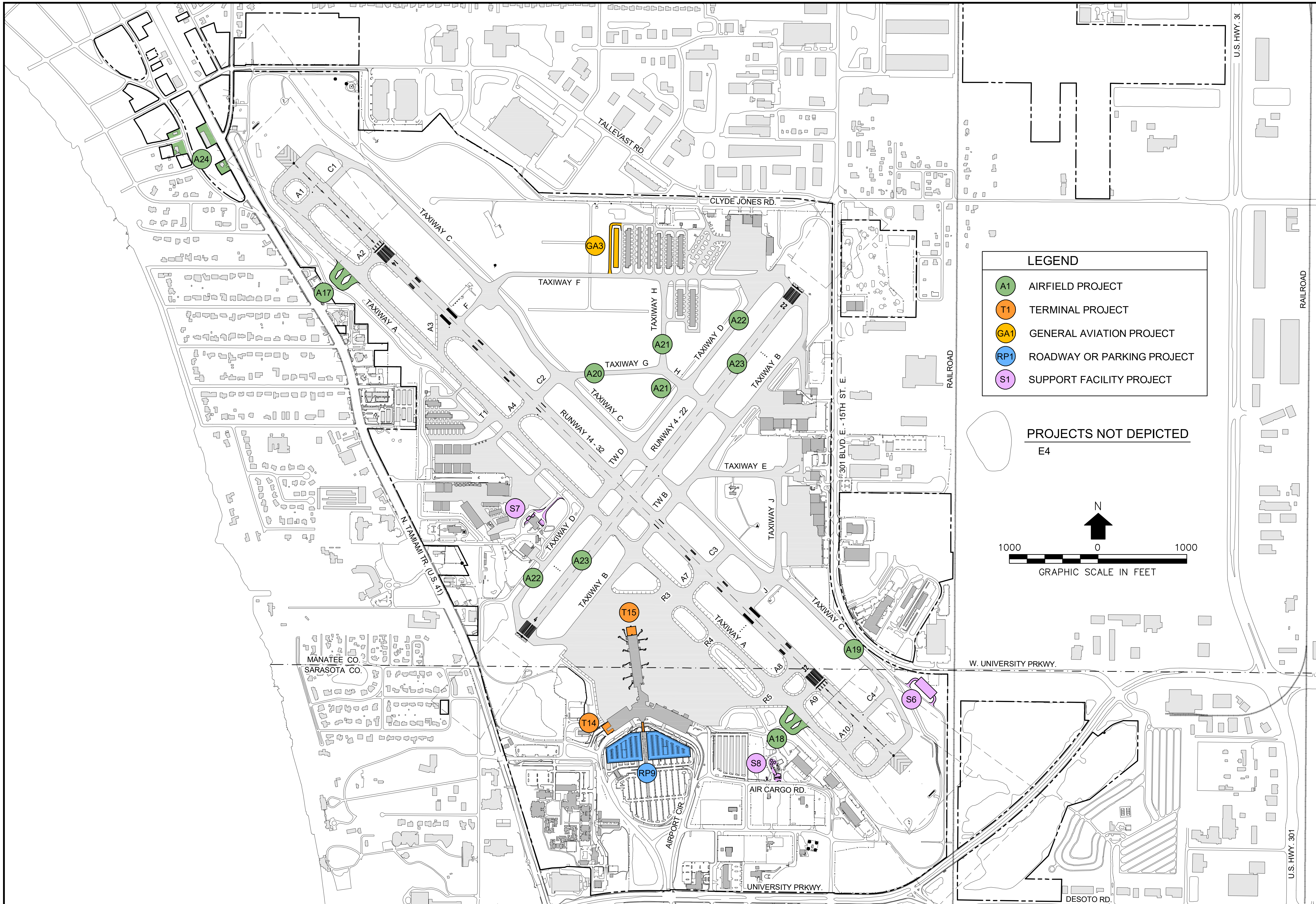
6.4.3 LONG-TERM PROJECTS

Proposed long-term projects are illustrated in **Figure 6.4-4**. **Table 6.4-3** provides a summary of long-term projects and their estimated cost in 2020 dollars.

Table 6.4-3
Long-Term (2031 to 2040) Project Cost Estimates

Project Designations	Project Name	Estimated Cost (2020 Dollars)
Environmental Projects		
E4	Conduct EA for Select Long-Term Projects	$300,000
Airfield Projects		
A17	Construct Holding Bay at North End of Taxiway A	$1,263,000
A18	Construct Holding Bay at South End of Taxiway A	$1,202,000
A19	Rehabilitate Taxiway C South*	$2,500,000
A20	Rehabilitate Taxiway G*	$1,800,000
A21	Rehabilitate Taxiway H*	$1,600,000
A22	Rehabilitate Taxiway D*	$3,800,000
A23	Rehabilitate Runway 4-22*	$5,000,000
A24	Acquire RPZ Properties or Easements (App to RWY 14)	$1,511,693
Terminal Projects		
T14	Expand Baggage Claim	$6,397,001
T15	Construct Holdroom/Concessions Expansion #4	$8,071,017
General Aviation Projects		
GA3	Construct 20 Small T-Hangars	$3,420,387
Roadway and Parking Projects		
RP9	Construct Short-Term & Rental Car Parking Deck	$23,915,001
Support Facility Projects		
S6	Construct New Vehicle Storage Building	$8,460,000
S7	Construct ARFF Station Improvements	$1,266,000
S8	Expand Fuel Farm (3rd Tank)	$767,000
	Total Long-Term Cost	**$71,273,099**

Source: AECOM, 2020. Cost estimates prepared by AID, 2020.
Note: * Designates a project from the Airport Authority's existing CIP. Costs derived from Airport Authority or third-party sources.



SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

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LONG-TERM PROJECTS

FIGURE 6.4-4

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6.4.4 SUMMARY OF PROJECTS

Table 6.4-4 presents of summary of all proposed project costs by category and term. It also presents the percentage of total program cost by category. The table reveals that the terminal category accounts for the largest percentage of the Capital Improvement Program's cost at 48 percent. This is because the rapid growth of passenger enplanements at the Airport requires significant capital investments to accommodate existing and future growth.

Although there appears to be a mismatch between the total cost of projects proposed in the intermediate-term versus the long-term this is due solely to one project (i.e., the construction of the proposed new Concourse A). The Financial Feasibility Analysis presented in the next section provides an assessment of how that project can be financed and how there is adequate financial capability to accommodate the project in the intermediate-term.

Table 6.4-4
Summary of Project Costs by Category and Term

Project Category	Short-Term	Intermediate-Term	Long-Term	Total	Percent
Environmental	$5,375,000	$225,000	$300,000	$5,900,000	2%
Airfield	$17,783,341	$35,850,020	$18,676,693	$72,310,054	21%
Terminal	$55,352,934	$99,292,466	$14,468,018	$169,113,418	48%
General Aviation	$3,500,000	$5,637,652	$3,420,387	$12,558,039	3%
Roadway and Parking	$31,924,060	$9,283,001	$23,915,001	$65,140,062	19%
Support Facility	$4,805,000	$7,814,000	$10,493,000	$23,112,000	7%
Total	**$118,758,335**	**$158,102,139**	**$71,273,099**	**$348,133,573**	**100%**

Source: AECOM, 2020. Cost estimates prepared by AID, 2020.

SECTION 7.0

Financial Feasibility Analysis

SECTION 7.0 FINANCIAL FEASIBILITY ANALYSIS

7.1 FINANCIAL ANALYSIS OBJECTIVES

The primary objective of the Financial Feasibility Analysis for the Sarasota Bradenton International Airport ("SRQ" or the "Airport") Master Plan is to evaluate the Airport's capability to fund the Capital Improvement Program (CIP) and to finance Airport operations. The program is planned for implementation through three phases of development including a five-year Short-Term period (2021-2025), a five-year Intermediate-Term period (2026-2030) and a ten-year Long-Term period (2031-2040). The analysis includes development of a detailed Financial Feasibility Plan. Objectives for developing the Financial Feasibility Plan include presenting the results of the implementation evaluation and providing practical guidelines for matching an appropriate amount and timing of financial sources with the planned use of funds.

7.2 OVERALL APPROACH

The overall approach for conducting the Financial Feasibility Analysis included the following steps:

- Gathering and reviewing key Airport documents related to historical financial results, capital improvement plans, operating budgets, regulatory requirements, Authority policies, airline agreements and other operating agreements with Airport users.
- Interviewing key Airport officials to gain an understanding of the existing operating and financial environment, relationships with the airlines and overall management philosophy.
- Reviewing the Aviation Activity Forecast previously developed in the Master Plan.
- Reviewing the Capital Improvement Program project cost estimates and development schedules anticipated for the planning period and projecting the overall financial requirements for the program.
- Determining and analyzing the sources and timing of capital funds available to meet the financial requirements for operating the Airport and financing the Capital Improvement Program.
- Analyzing historical operations and maintenance expenses, developing operations and maintenance expense growth assumptions, reviewing assumptions with Airport management and projecting future operations and maintenance expenses for the planning period.
- Analyzing historical revenue sources, developing revenue growth assumptions,

reviewing assumptions with Airport management and projecting future airline and non-airline revenues for the planning period.

- Completing results of the review in a Financial Analysis Summary that evaluates the financial reasonableness of the Capital Improvement Program.

7.3 ORGANIZATION, ACCOUNTING AND BUDGETING

7.3.1 GOVERNMENTAL ORGANIZATION AND ADMINISTRATION

The Sarasota Manatee Airport Authority (the "Authority") is the owner and operator of the Sarasota Bradenton International Airport and has jurisdiction, control, supervision and management of the Airport. The Authority is an independent special district pursuant to the constitution and laws of Florida, particularly Chapter 2003-309, Laws of Florida, as amended, revising and consolidating Chapter 31263, Special Laws of Florida, 1955. The Authority's Board consists of six members who are appointed on a non-partisan basis to four-year staggered terms. Sarasota and Manatee Counties each appoint three members (who must be residents of their respective county) and the Chairperson elected by the members thereof alternates county representation annually. The Airport's professional staff of key administrators are responsible for policy implementation, capital planning, financial planning and control, operations and maintenance, and personnel supervision.

7.3.2 ACCOUNTING AND BUDGETING PRACTICES

The Authority's financial statements are prepared and presented in the form of a single enterprise fund which encompasses all financial activity relative to owning, operating and improving the Airport facilities plus a pension trust fund for the employee defined benefit pension plan. These funds are accounted for using a flow of economic resources measurement focus on an accrual basis of accounting. Revenues are recognized in the period in which they are earned and expenses are recognized in the period incurred.

The annual budget is a financial planning tool, it reflects all estimated airport system operation and maintenance expenses and all proposed outlays for capital improvements together with anticipated capital funding sources. The budget establishes rates and charges to the airlines and other terminal tenants. The Authority adopts the annual budget through a resolution, any adjustments to the rates and charges must be adopted by the board through an amended resolution.

7.4 AVIATION FORECASTS

In **Section 2** of the Master Plan, aviation activity forecasts are developed to determine if existing Airport facilities have the capacity to meet future demand or if facility modifications are needed. These forecasts, which include passenger enplanements, total aircraft operations and commercial aircraft operations, aid in the development and prioritization of the projects included in the CIP. The forecasts are important in the projection of various capital funding sources described below. Specifically, AIP entitlement funds, Passenger Facility Charges, and a number of operating revenues (described in **Section 7.6.4**) are projected based on these forecasts.

The forecasts were developed prior to the impact of the COVID-19 pandemic. For purposes of the financial feasibility analysis, the enplanements forecast in the Short-Term were modified to reflect the estimated impact on 2020 enplanements and the anticipated recovery of those enplanements to the original Master Plan forecast by the end of the Short-Term. Given that SRQ is predominately a tourism market and has had new service and new destinations added to its market in 2021, it is anticipated that SRQ's recovery will occur more quickly than air service markets whose demand is driven by business travel.

7.5 CAPITAL FUNDING SOURCES

In recent years, the Airport has used a combination of FAA Airport Improvement Program (AIP) entitlement and discretionary grants, Passenger Facility Charges, Florida Department of Transportation grants and cash reserves/net operating revenues to fund capital improvements. These funding sources, as well as additional sources of capital funding, will continue to be important to finance the Airport's Master Plan Capital Improvement Program (CIP) during the future twenty-year planning period.

7.5.1 AIRPORT IMPROVEMENT GRANTS / OTHER FEDERAL FUNDING

The Airport receives grants from the Federal Aviation Administration (FAA) to finance the eligible costs of certain capital improvements. These federal grants are allocated to commercial passenger service airports through the Airport Improvement Program (AIP). AIP grants include passenger entitlement grants, which are allocated among airports by a formula that is based on passenger enplanements and discretionary grants which are awarded in accordance with FAA guidelines. After several years of continuing budget resolutions and other short-term legislative measures implemented by Congress, the FAA Reauthorization Act of 2018 was enacted on October 5, 2018. The Act authorized funding for the AIP through September 30, 2023.

Under current AIP authorization legislation, eligible projects are funded on a 90 percent AIP grant/10 percent local match basis for small and non-hub airports. Small-Hub airports (currently those with annual enplanements between approximately 468,000 and 2,340,000 passengers) can accumulate and carryover up to three years of unspent entitlements plus the current year before the awards are revoked. In 2021, the Airport had $924,226 of unspent entitlements to carryover for use in 2021. The feasibility analysis assumes the application of annual AIP passenger entitlement funds will be about $18.9 million during the Short-Term planning period, $24.6 million during the Intermediate-Term and $26.3 million during the Long-Term. During the Long-Term planning period, the feasibility analysis projects AIP entitlement funds apportioned to the Airport will exceed the currently envisioned AIP eligible capital needs by about $19 million during that period. However, it is likely that additional capital projects which are not currently included in the Master Plan CIP will be required and those AIP funds which are not currently apportioned, will be needed to fund the unanticipated projects.

The approval of AIP discretionary funding is based on a project eligibility ranking method the FAA uses to award grants, at their discretion, based on a project's priority and importance to the national air transportation system. It is reasonable to assume that the Airport will receive discretionary funding during the planning period for higher priority, eligible projects, such as runway projects. The feasibility analysis assumes that $1.8 million of AIP discretionary funds will be required during the Short-Term to fund the acquisition of easements or property within RPZs and for taxiway modifications at SRQ. The feasibility analysis also assumes that AIP discretionary grants of $17.4 million will be available for similar such projects as well as the rehabilitation of Taxiway A and Runway 14-32 improvements during the five-year Intermediate-Term period. In the Long-Term, $2.1 million in discretionary funds are assumed for additional RPZ easement or property acquisitions. Since the future availability of AIP discretionary grants is not certain until an actual grant is awarded, it should be noted that any CIP projects which have discretionary funds indicated as a funding source in the financial feasibility plan may need to be delayed until such funds actually become available.

The feasibility analysis further assumes that the current AIP program will continue to be extended through 2040 and that future program authorizations will provide substantially similar funding levels as it currently does and as it has historically provided since the program was established in 1982.

On March 27, 2020, the Coronavirus Aid, Relief and Economic Security Act (CARES Act) was enacted and included $9.5 billion in supplemental funding for airports. The funds were allocated to airports based on formulas specified in the Act and calculated by the FAA. Under the Act, the funds can be used for any lawful purpose on which airport revenues can be used (in accordance with Airport Sponsor Grant Assurances and FAA policies), including capital and operating costs of the airport. SRQ was allotted and awarded $23,294,336 in CARES funding. The feasibility analysis assumes that all of the Airport's CARES Act award will be utilized for operations and maintenance expenses in the Short-Term.

On December 27, 2020, the Coronavirus Response and Relief Supplemental Appropriation Act (CRRSA) was enacted providing another $2 billion in federal funds as economic relief to eligible U.S. airports and eligible concessions at those airports to prevent, prepare for, and respond to the ongoing coronavirus public health emergency. SRQ is estimated to be allotted approximately $4,200,000 in CRRSA funding which it also anticipates will be used for operational activities.

7.5.2 FLORIDA DEPARTMENT OF TRANSPORTATION GRANTS

The Florida Department of Transportation (FDOT), Aviation Office provides Aviation Grants for airport projects from a portion of the state sales tax collected on aviation fuel. The grants fall under one of six programs. The type of airport and type of project typically determine which program provides funding. Grants are approved for projects identified as eligible according to the Catalog of Eligible Projects. Eligibility generally includes those projects that are AIP eligible as well as many which are typically not AIP eligible including parking facilities, hangar construction, and certain types of equipment. For Commercial Service Airports, when a project is funded by the FAA through the AIP program, state grant awards for up to 50% of an airport's local match requirement are allowed. When a project is not funded by the FAA but meets FDOT eligibility, state grant awards are allowed for up to 50% of the total project costs. The Master Plan CIP includes several projects during the planning period that are assumed to be partially funded from State Aviation Grants - $10.4 million in the Short-Term, $31.0 million in the Intermediate-Term and $20.7 million in the Long-Term.

In 2003, the Florida Legislature and Governor established the Strategic Intermodal System (SIS) to enhance Florida's transportation facilities, including the State's largest and most significant airports, spaceports, deepwater seaports, freight rail terminals, passenger rail and intercity bus terminals, rail connectors, waterways, and highways. These facilities represent the State's primary means for moving people and freight between Florida's diverse regions, as well as between Florida and other states and nations. The SIS is Florida's highest statewide priority for transportation capacity improvements. SRQ has been designated as a Strategic Growth SIS Commercial Service Airport. The State has committed approximately $1.8 million through the SIS program toward SRQ's Air Center Aprons and Utilities project in the Short-Term planning period.

It is possible that some of the projects that assume State Aviation Grants described above could be funded through the SIS program. Similar to AIP discretionary funding, the future availability of FDOT grants is not certain until an actual grant is awarded. CIP projects which have FDOT funds indicated as a funding source in the financial feasibility analysis may need to be delayed until such funds actually become available.

7.5.3 PASSENGER FACILITY CHARGES

The Aviation Safety and Capacity Expansion Act of 1990 established the authority for commercial service airports to apply to the FAA for imposing and using a Passenger Facility Charge (PFC) of up to $3.00 per eligible enplaned passenger. With the passage of AIR-21 in June 2000, airports could apply for an increase in the PFC collection amount from $3.00 per eligible enplaned passenger to $4.50. The proceeds from PFCs are eligible to be used for AIP eligible projects and for certain additional projects that preserve or enhance capacity, safety or security; mitigate the effects of aircraft noise; or enhance airline competition. PFCs may also be used to pay debt service on bonds (including principal, interest and issue costs) and other indebtedness incurred to carry out eligible projects. In addition to funding future planned projects, the legislation permits airports to collect PFCs to reimburse the eligible costs of projects that began on or after November 5, 1990.

SRQ currently collects PFC revenues in an approved open application at the $4.50 collection level. It plans to submit new applications for additional PFC eligible capital projects identified in the Master Plan and to continue collection without interruption of its collection authority. The feasibility analysis assumes that the Airport will submit additional PFC applications and amendments, as required, to ensure that the collection of PFC revenues continues beyond the authorized expiration date through the end of the twenty-year planning period in 2040.

At the beginning of 2021, the Airport had $76,001 in unliquidated PFCs. PFC collections at the $4.50 level are estimated to yield approximately $4.7 million - $5.5 million per year in the Short-Term. Approximately $16.3 million of PFCs will be used to reimburse the Airport for PFC eligible costs incurred in prior years. The feasibility analysis then assumes that PFCs will be used on a pay-as-you-go basis for projects included in the 20-year CIP to fund approximately $13.6 million in eligible project costs during the Short-Term, $13.6 million in the Intermediate-Term and $17.0 million in the Long-Term. Some PFC pay-as-you-go funds will be used to fund the required local match on various AIP grants. PFC pay-as-you-go funds will also be used to fund eligible projects for which there are no AIP funds available. These projects include holdroom/concession expansions, a consolidated in-line baggage system, blast fence deflector, curbside improvements, waypoint signs and an expansion to baggage claim. Certain PFC projects, such as the holdroom/concession improvement projects, may include improvements which are not PFC eligible. Therefore, for such projects, an assumption was made relative to the estimated portion of the project which would be eligible for PFC funding.

In addition to using PFCs on a pay-as-you-go basis, the feasibility analysis assumes that during the Intermediate-Term, the Airport will issue approximately $56.0 million in debt to provide partial funding for the New Concourse A project to be serviced with PFC funds. The anticipated terms of the debt, as reflected in **Schedule 7-3a** (provided at the end of **Section 7**), would be 25 years at a 5 percent rate of interest and 2 percent debt issue costs. Annual debt service payments of approximately $4.4 million would be funded through annual PFC collection. Throughout the duration of the planning study, PFC revenues would be used to fund approximately $22.8 million in principal payments and approximately $33.9 million to fund the PFC eligible financing and interest costs.

7.5.4 AIRPORT CASH SERVICED DEBT ISSUE AND DEBT SERVICE COVERAGE

Debt financing is often used by airports to fund capital improvement projects. The type and term of debt financing is dependent on the airport and its governing body. In addition to the $56.0 million in PFC funded debt described above, the Financial Feasibility Analysis assumes an additional $5.0 million of debt proceeds will be secured during the Intermediate-Term also to be used to partially fund the New Concourse A project. This debt would be used to fund portions of the project which are ineligible for AIP or PFC funding. The Feasibility Analysis assumes the same terms as the PFC funded debt issue and are reflected in **Schedule 7-3b** (provided at the end of **Section 7**). Annual debt service payments of approximately $389 thousand would likely be funded through airline rates and charges.

An analysis which assumes the need to issue debt should prudently consider the Airport's ability to not only fund the debt service payments but to also meet any required debt service coverage ratio requirement. A typical debt service coverage ratio for airport revenue bonds would be 1.25. This means that the sum of net revenues and other sources of cash flow generated by the Airport and available to pay debt service must equal at least 1.25 times the annual debt service required during that year. Considering annual debt service requirements for both the PFC funded and Airport cash funded debt issues, the resulting debt service coverage ratio ranges from 2.36 to

1.81 during the Intermediate and Long-Term planning periods. These ratios exceed the typical revenue bond minimum of 1.25 as well as a financially prudent minimum level of 1.5.

7.5.5 RENTAL CAR CUSTOMER FACILITY CHARGES

In the last several years, rental car Customer Facility Charges (CFCs) have become common financing tools for landside improvements at airports in the U.S. Such charges are collected by rental car companies that provide services to commercial passengers at the airports they serve. CFCs are collected by the rental car companies on behalf of, and for the benefit of, the airports where they operate. The charge is typically based on a fee per rental car transaction day that is added to rental car contracts.

SRQ currently collects a CFC of $4.50 per transaction day. At the beginning of 2021, the Airport had $3.9 million in unspent CFCs. Collections in 2021 are estimated to be approximately $1.9 million but are anticipated to grow to approximately $3.3 million in 2022 (based on recovery from the pandemic and the introduction of new air service). CFCs are then projected to grow to about $4.6 million per year by the end of the Long-Term planning period. Based on the current structure of CFCs (as specified in the rental car concession agreement), the CFC fee is required to be used for the construction of new rental car facilities. During the Short-Term and into the Intermediate-Term planning periods, CFCs are assumed to fund approximately $23.6 million in capital improvement projects related to rental car office renovations and the construction of a consolidated rental car service facility. However, it is anticipated that prior to the Intermediate-Term, the structure of the CFC will be re-evaluated and modified to allow for the use of CFCs for terminal related projects, specifically (at a minimum), to provide partial funding for the New Concourse A project. The Feasibility Analysis assumes that $10 million in CFC revenues will be used for that project in the Intermediate-Term. In the Long-Term, an additional $18.6 million in CFCs would be used to partially fund the construction of a Short-Term and Rental Car Parking Deck.

Based on CFC collection projections and the projects anticipated to be funded with CFCs described above, at the end of the Long-Term planning period, the Airport would have generated approximately $31.5 million in excess CFCs. This assumes no increase in the CFC rate and only increases based on passenger enplanement growth. The Airport may consider future modifications to the CFC structure to allow for CFCs to be used on other required Airport capital projects. Additionally, the Airport may identify future rental car related capital needs or it may utilize some excess CFCs for operating expenses related to rental car facilities.

7.5.6 OTHER CAPITAL CONTRIBUTIONS

In the past, Sarasota and Manatee Counties have provided limited funding to the Airport for capital projects from their general fund budget or, as a temporary short-term loan from other county enterprise funds. The feasibility analysis assumes that Manatee County will provide approximately $132 thousand in the Short-Term to fund the construction of the 15th Street Observation Parking Area.

Other Capital Contributions also include grants from other federal agencies. Funding from the Department of Homeland Security (Transportation Security Administration) is anticipated in the Short-Term to provide funding for the expansion of the New Consolidated In-Line Baggage System of approximately $28.9 million.

Finally, during the Intermediate-Term, there is a need to acquire property or easements for the Runway 4 RPZ which currently includes land occupied by New College of Florida. The Airport has assumed that such a transaction, of approximately $9.5 million, would be funded through either cash or a land swap with New College or the State of Florida.

7.5.7 AIRPORT CASH RESERVES/NET OPERATING REVENUE

The Airport's cash reserves and future net operating revenues are an important source of funds for the implementation of projects included in the CIP. Net operating revenues represent the remaining funds available from the generation of operating revenues less payment of operating expenses as well as any debt service requirements of the Airport's debt obligations not funded through other sources such as PFCs. The projection of Operating Expenses and Operating Revenues is further discussed in **Sections 7.6.3 and 7.6.4**.

At the beginning of 2021, the Airport had accumulated about $18.8 million in unrestricted cash reserves available for operations and capital project funding. During the Short-Term, an additional $47.3 million in net operating revenues are anticipated to be generated. This includes funds reimbursed to the Airport through the CARES Act and CRRSA Grant, as well as PFC Reimbursements previously described. In the Intermediate-Term, approximately $30.3 million in net operating revenues are anticipated to be generated and $65.3 million are anticipated to be generated in the ten-year Long-Term.

The feasibility analysis assumes that Airport cash reserves/net operating cash flow will be used during the planning period to fund $87.9 million in project costs. This will include local grant match requirements, project components ineligible for federal funding, or for projects which federal and/or state funding may not be available. The feasibility analysis assumes $34.6 million during the Short-Term, $27.0 million in the Intermediate-Term and $26.2 million in the Long-Term. The analysis also assumes that cash reserves/net operating cash flow will be used to fund approximately $5.1 million in debt service payments required for the Airport cash debt issue required for the New Concourse A project.

7.6 FINANCIAL ANALYSIS AND FEASIBILITY PLAN FOR THE MASTER PLAN CAPITAL IMPROVEMENT PROGRAM

This analysis, along with the Schedules presented at the end of **Section 7**, provides the results of evaluating the financial reasonableness of implementing the Master Plan Capital Improvement Program during the planning period from 2021 through 2040.

7.6.1 ESTIMATED PROJECT COSTS AND DEVELOPMENT SCHEDULE

The Capital Improvement Program (CIP) Estimated Project Costs and Development Schedule is derived from previous results of the Master Plan analysis. The CIP for capital expansion and improvement projects is projected on an annual basis for the Short-Term planning period from 2021 through 2025, in total for the Intermediate-Term planning period from 2026 through 2030 and in total for the Long-Term planning period from 2031 through 2040. Projects in the Intermediate-Term and Long-Term are presented in total, not by specific year, to provide flexibility for changes or adjustments to the timing and priority of projects based on the needs of the Airport as it progresses through the planning periods. For each of these planning periods, **Schedule 7-1** (provided at the end of **Section 7**) presents the Capital Improvement Program including estimated costs and anticipated development schedule for the identified projects.

As shown in **Schedule 7-1**, the total estimated cost of projects is $348,133,573 in 2020 dollars. The estimated costs for projects scheduled during the period 2021 through 2040 are adjusted by an assumed 3 percent rate of annual inflation. The resulting total project costs escalated for inflation are $472,787,797. **Table 7.6-1** below presents a summary of **Schedule 7-1** and provides a comparison of 2020 base year costs with escalated costs adjusted for inflation for each of the planning periods.

Table 7.6-1
Summary of 2020 Base Year and Total Escalated Costs for the Master Plan Capital Improvement Program

Planning Periods	2020 Base Year Costs	Total Escalated Costs
Short-Term Projects (2021-2025)	$118,758,335	$130,513,592
Intermediate-Term Projects (2026-2030)	158,102,139	206,366,718
Long-Term Projects (2031-2040)	71,273,099	135,907,487
Total Project Costs	**$348,133,573**	**$472,787,797**

Note: Addition errors are due to rounding of calculated amounts.
Source: Leibowitz & Horton AMC analysis

7.6.2 SOURCES AND USES OF CAPITAL FUNDING

Funding sources for the CIP depend on many factors, including AIP and PFC project eligibility, the ultimate type and use of facilities to be developed, management's current and desired levels of the Airport's airline cost per enplaned passenger, the availability of other financing sources and the priorities for scheduling project completion. For example, airfield projects such as runways and taxiways are typically eligible for AIP and PFC funding, so such projects are primarily funded by those sources and do not require use of airport generated funds. However, revenue producing projects such as parking lots or non-aeronautical development projects are not eligible for AIP or PFC funding, so such projects are typically funded with airport operating revenues. For master planning purposes, assumptions were made related to the funding source of each capital improvement.

Schedule 7-2 (provided at the end of **Section 7**) lists each of the CIP projects, their estimated costs (escalated for inflation) and the assumed funding sources and amounts. During the twenty-year planning period, it was assumed that AIP entitlement grants would partially fund runway and taxiway rehabilitations and improvements, construction of federal inspection service facilities, wetlands mitigation, environmental studies, New Concourse A construction, aircraft holding bays and ARFF station improvements. It was assumed that AIP discretionary grants would fund the acquisition of RPZ property or easements, taxiway modifications (for standards compliance), the rehabilitation of Taxiway A and Runway 14-32 improvements.

It was assumed that FDOT aviation grants, in addition to providing 50 percent of the local match requirement on AIP funds, would also support the construction of a General Aviation Federal Inspection Service facility, perimeter fencing project, waypoint signage, airfield guidance signs, taxilanes in the northquad, a new emergency operations center, a ground transportation center, Tallevast Industrial Park roadway improvements, a portion of the consolidated in-line baggage system project, parking improvements, T-hangars, bulk storage facilities and a vehicle storage building. FDOT aviation grants were also assumed to partially fund the New Concourse A project and expansion of the fuel farm. FDOT SIS funds were assumed for the Air Center Aprons and Utilities project.

PFC revenues were assumed to fund a portion of the local match of some AIP projects as well as to fund eligible projects for which there are no AIP funds available or portions of projects such as holdroom/concession expansions, the new consolidated in-line baggage system, blast fence deflector, curbside improvements, waypoint signs and an expansion to the baggage claim. Debt proceeds, funded through both PFCs and Airport cash reserves/net operating revenues, were assumed to partially fund the New Concourse A project.

It was assumed that Rental Car CFCs would fund rental car office renovations, the construction of a new rental car consolidated service facility, partially fund the construction of a Short-Term and Rental Car parking deck, and provide partial funding for the New Concourse A project. Other Capital Contributions, as previously described, were assumed to provide funding for the 15th Street Observations Parking Area, a portion of the funding for the new consolidated in-line baggage system and for the acquisition of property or easements related to the New College of Florida property within the Runway 4 RPZ.

Available cash reserves were assumed to fund a number of local grant match requirements, project components ineligible for federal funding, and projects on which federal and/or state funding was not projected to be available.

An overall summary of the sources of capital funding by type and uses of capital funding by planning period for the CIP in escalated dollars is presented in **Table 7.6-2** below. The Table summarizes the uses of capital funding into six project categories. **Section 6.3** of the Master Plan describes the projects included in each category.

Table 7-6.2
Summary of Sources and Uses of Capital Funding for the Master Plan Capital Improvement Program

Sources of Capital Funding	Short-Term (2021-2025)	Intermediate-Term (2026-2030)	Long-Term (2031-2040)	Totals
AIP Entitlement Grants	$18,942,588	$24,582,337	$26,264,059	$69,788,984
AIP Discretionary Grants	1,789,553	17,393,153	2,119,652	21,302,358
FDOT Aviation Grants	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges - PayGo	13,648,060	13,600,727	17,038,545	44,287,332
Passenger Facility Charges - Debt	0	65,025,897	24,866,321	89,892,218
Airport Cash Debt	0	5,000,000	0	5,000,000
Rental Car Customer Facility Charges	20,269,566	13,285,512	18,629,396	52,184,474
Other Capital Contributions	29,069,560	9,500,000	0	38,569,560
Cash Reserves/Net Ops Cash Flow	34,593,087	27,014,142	26,245,835	87,853,064
Total Sources of Capital Funding	**$130,513,592**	**$206,366,718**	**$135,907,487**	**$472,787,797**
Uses of Capital Funding	**Short-Term (2021-2025)**	**Intermediate-Term (2026-2030)**	**Long-Term (2031-2040)**	**Totals**
Environmental Projects	$6,160,934	$280,842	$467,390	$6,909,166
Airfield Projects	19,427,607	44,747,481	29,097,679	93,272,767
Terminal Projects	61,480,751	132,961,328	47,407,022	241,849,101
General Aviation Projects	3,651,350	7,036,836	5,328,851	16,017,037
Roadway or Parking Projects	34,355,663	11,586,909	37,258,792	83,201,364
Support Facility Projects	5,437,287	9,753,322	16,347,753	31,538,362
Total Uses of Capital Funding	**$130,513,592**	**$206,366,718**	**$135,907,487**	**$472,787,797**

Note: Addition errors are due to rounding of calculated amounts.
Source: Leibowitz & Horton AMC analysis

A summary of the application of the different capital funding sources to specific categories of CIP projects is presented in **Table 7.6-3**.

Table 7.6-3
Summary of Application of Funding Sources to Master Plan Capital Project Categories

Summary of Project Types	AIP Entitle-ments	AIP Discre-tionary	FDOT Aviation/ SIS Grants	PFCs - PayGo	PFCs-Debt	Airport Cash Debt	Rental Car CFCs	Other Capital Contri-butions	Cash Reserves/ Net Revenues	Total Funding
Environmental Project	$6,218,250	$0	$345,458	$298,248	$0	$0	$0	$0	$47,210	$6,909,166
Airfield Project	49,820,825	21,302,358	6,011,582	3,509,083	0	0	0	9,500,000	3,128,919	93,272,767
Terminal Project	11,974,761	0	17,127,506	36,493,132	89,892,218	5,000,000	12,060,000	28,937,720	40,363,763	241,849,101
General Aviation Project	0	0	8,008,519	0	0	0	0	0	8,008,519	16,017,037
Roadway or Parking Project	0	0	17,671,725	3,888,250	0	0	40,124,474	131,840	21,385,074	83,201,364
Support Facility Project	1,775,148	0	14,745,016	98,619	0	0	0	0	14,919,579	31,538,362
Total Uses of Capital Funding by Project Type	$69,788,984	$21,302,358	$63,909,807	$44,287,332	$89,892,218	$5,000,000	$52,184,474	$38,569,560	$87,853,064	$472,787,797

Note: Addition errors are due to rounding of calculated amounts.

Source: Leibowitz & Horton AMC analysis

The construction of a New Concourse A, programmed during the Intermediate-Term, is a significant project which, at an escalated cost of approximately $108.7 million represents almost 30 percent of the total escalated twenty-year CIP. The ability to execute such a large project requires funding from multiple sources, as previously described, considering the eligibility requirements and availability of those funding sources. **Table 7.6-4** presents a summary of the capital funding sources assumed for this project. Based on the anticipated terminal space to be constructed, it is reasonable to assume that approximately 80 percent of the project would be eligible for AIP or PFC funding. However, AIP funds and PFC funded debt proceeds available during the time frame required are insufficient to fund all eligible costs and are anticipated to only fund approximately 60 percent of the project. As shown in **Table 7.6-4**, other sources are needed to fund the remaining costs including FDOT grants, CFCs, Airport cash funded debt proceeds and Airport cash reserves. Since debt proceeds will be required to partially fund the project, debt issue costs and interest expense will be incurred to complete the financing. These financing costs add an additional $53.0 million to the project resulting in a total cost of approximately $161.7 million to construct and finance the New Concourse A expansion.

Table 7.6-4
Summary of New Concourse A Funding Uses and Sources

Capital Funding Uses	
Design	$ 8,907,955
Construct, Year 1	49,885,161
Construct, Year 2	49,885,161
Total Capital Funding Uses	**$ 108,678,278**
Capital Funding Sources	
AIP Entitlements	$ 10,000,000
PFC Serviced Debt	56,000,000
FDOT Aviation/SIS	15,000,000
CFCs	10,000,000
Airport Cash Serviced Debt	5,000,000
Cash Reserves	12,678,278
Total Capital Funding Sources	**$ 108,678,278**
Plus Debt Financing Interest & Issue Costs	
PFC Debt Financing	$ 48,695,724
Airport Cash Debt Financing	4,347,832
Total Financing Costs	**$ 53,043,556**
Total Project Costs	**$ 161,721,834**

Note: Addition errors are due to rounding of calculated amounts.
Source: Leibowitz & Horton AMC analysis

7.6.3 PROJECTED OPERATIONS AND MAINTENANCE EXPENSES

Operations and maintenance expense projections for the Short-Term (2021 to 2025), the Intermediate-Term (2026 to 2030) and the Long-Term (2031 to 2040) planning periods are based on the Airport's 2021 budget, the anticipated impacts of inflation, aviation traffic increases, facility improvements and the recent experience of other airports with similar levels of aviation activity.

7.6.3.1 Operations and Maintenance Expense Projection Assumptions

Operations and maintenance expense growth assumptions, as reflected in **Schedule 7-4**, were developed to project the Airport's operating expenses during the planning period. Actual amounts for 2018 through 2020, and budgeted amounts for 2021 provide a comparison with expenses that are projected for the period 2022 through 2040.

Operations and maintenance expenses at SRQ include salaries, wages and benefits; supplies, maintenance and repairs; service contracts; utilities; insurance; marketing; professional services and various other expenses. For all of the expense categories reflected on **Schedule 7-4**, projections are based on 2021 budgeted amounts with an assumed 3 percent annual rate of inflation beginning in 2022.

7.6.3.2 Projection of Operations and Maintenance Expenses and Operating Expenses Per Enplaned Passenger

The projection of operations and maintenance expenses is provided in **Schedule 7-4** (provided at the end of **Section 7.0**). As shown in the Schedule, total expenses are expected to grow from $20,872,268 budgeted in 2021 to $23,491,922 projected in 2025 reflecting an overall growth rate of 3 percent per year and a total of $110,813,705 during the Short-Term planning period. Intermediate-Term expenses are projected to total $128,463,456 reflecting a 3 percent annual growth rate for the five-year period 2026-2030 and Long-Term expenses are projected to total $321,568,496 reflecting a 3 percent annual growth rate for the ten-year period 2031-2040.

Schedule 7-4 also provides a comparison of SRQ's total operating expenses per enplaned passenger versus Small-Hub airports. SRQ's operating expenses per enplaned passenger are projected to increase from $17.70 for 2021 to an average of $20.21 during the Long-Term planning period. Over the same period of time, the overall Small-Hub industry average grows from $18.90 in 2021 to $20.46 during the Long-Term (Source: Small-Hub Airports, FAA Operating and Financial Summary Report #127 and FAA Air Carrier Activity Information System enplanement database). These comparisons show that budgeted and projected operating expenses at SRQ are comparable with those of other Small-hub airports of similar size during all three phases of the planning period.

7.6.4 PROJECTED OPERATING REVENUES

Operating revenue projections for the Short-Term (2021 to 2025), the Intermediate-Term (2026 to 2030) and the Long-Term (2031 to 2040) planning periods are based on the Airport's 2021 budget, current/planned rates and charges methodology, current leasing practices, the anticipated impacts of inflation, aviation traffic increases, facility expansions and the recent experience of other airports with similar levels of aviation activity.

7.6.4.1 Operating Revenue Projection Assumptions

Operating revenue growth assumptions, as reflected in **Schedule 7-5** (provided at the end of **Section 7**), were developed to project the Airport's operating revenues during the planning period.

Actual amounts for 2018 through 2020, and budgeted amounts for 2021 provide a comparison with revenues that are projected for the period 2022 through 2040. This analysis organizes revenues into categories for airline revenues, non-airline revenues and non-operating revenues. Annual revenue growth assumptions for the period 2022 through 2040 are provided in the following sections.

Airline Revenues

Airline Revenues, which include landing fees, terminal rents, apron fees and gate use fees have in recent years, accounted for approximately 30 percent of the Airport's total annual revenues. There are currently ten air carriers serving SRQ. Five are operating as signatory airlines including American Airlines, Delta Air Lines, JetBlue, United Airlines and Southwest Airlines (Southwest Airlines entered the SRQ market in February 2021). The remaining five carriers – Air Canada, Allegiant Air, Elite Airways, Frontier and Sun County are currently operating as non-signatory carriers. The current signatory agreements expire in September 2023, and the Airport expects that all of its current signatory airlines, or replacement airlines, will continue to operate under future agreements with substantially similar provisions throughout the planning period. Air carriers operating at SRQ as non-signatory airlines pay a 25% premium on terminal building space rental rates and landing fees. They also pay apron fees and a per-turn gate use fee.

Landing fees – The 2021 landing fee rate (signatory) set by the Airport is $0.48 per 1,000 lbs. of an aircraft's certified maximum gross landed weight (MGLW). This rate is lower than the 2020 budget due to the increase in 2021 budgeted landed weights and due to the application of CARES funds to reduce the airfield cost center rate base. Beginning in 2022, landing fee projections are based on 2019 actuals (pre-pandemic levels) with increases based on one-half of the change in estimated enplanements from 2019 to 2022 plus a 3 percent annual rate of inflation.

Terminal Rents, Apron Fees and Gate Use Fees – Beginning in 2022, Terminal Rent, Apron Fees and Gate Use Fee projections are based on the 2021 budget plus a 3% annual rate of inflation.

Non-Airline Revenues

Non-Airline Revenues have in recent years accounted for approximately 70 percent of the Airport's Total annual revenues. Future projections of these revenues vary depending on the characteristics and behavior of the specific type of revenue.

Non-airline revenues which are not impacted by changes in passenger levels or aircraft operations have been projected based on the Airport's 2021 budget plus a 3 percent annual rate of inflation. Such revenues include ground and land leases; building rents including non-airline terminal rents, hangar rents, cargo facilities and storage building rents; FBO rents and fuel services; and other revenues such as rental car parking spaces, advertising, badging fees and LEO reimbursements.

Fuel flowage fees, which vary based on levels of non-airline related aircraft operations, have been forecast based on the Airport's 2019 actuals (pre-pandemic) with growth thereafter at a 3% annual rate of inflation plus increases in aircraft landed weight assuming one half the annual growth rate of passenger enplanements from 2019 to 2022.

Non-Airline revenues attributable to passenger traffic include paid public parking, a variety of concessions such as rental cars, restaurants, and gift shops; as well as certain fees such as ground transportation, security fees, and parking permits. Projections for public parking revenues as well as the various other fees and permits beginning in 2022 are based on the Airport's 2019 actuals (pre-pandemic) plus increases in the annual growth rate of passenger enplanements from 2019 to 2022. These revenues are not adjusted for inflation as airports generally do not increase parking rates and other fees every year and only increase rates as either costs or demand dictates. Projections for other passenger related concessions including car rental concessions, restaurant and gift shop concessions and vending revenues beginning in 2022 are based on the Airport's 2019 actuals (pre-pandemic) plus increases in the annual growth rate of passenger enplanements from 2019 to 2022. These revenue projections are also adjusted for a 3 percent rate of inflation as the activity generating these revenues are likely to be impacted by inflation every year.

Non-Operating Revenues

Non-Operating revenue projections beginning in 2022 for Interest Earnings and Profit/Losses from the Disposal of Assets are based on the Airport's 2021 budget and are assumed to remain flat throughout the planning period. Other non-operating revenues including PFC reimbursements and CARES Act/CRRSA grants are based on estimated amounts anticipated to be provided by those sources and in the timeframe anticipated by the Airport. Once those amounts are fully received, there is no assumption for any future revenue from those sources.

7.6.4.2 Projection of Operating Revenues, Airline Cost Per Enplaned Passenger and Operating Revenues Per Enplaned Passenger

The projection of operating revenues is provided in **Schedule 7-5** at the end of **Section 7**. As shown in the Schedule, airline revenues are expected to grow from $8,272,189 budgeted for 2021 to $8,946,292 projected for 2025 with a total of $42,492,700 during the five-year Short-Term planning period. During the five-year Intermediate-Term period, airline revenues are projected to total $48,954,072 and during the ten-year Long-Term period, revenues are projected to total $122,721,980. The compound annual growth rate for airline revenues is 3.0 percent starting in 2022 (after the pandemic) through the end of the twenty-year planning period. Non-Airline revenues are expected to increase from $6,694,907 budgeted for 2021 to $18,904,396 projected for 2025 with a total of $76,992,604 during the Short-Term period. During the Intermediate-Term period, non-airline revenues are projected to total $103,684,167 and during the Long-Term period, non-airline revenues are projected to total $260,487,154. The compound annual growth rate for non-airline revenues is 3.5 percent starting in 2022 (after the pandemic) through the end of the twenty-year planning period. Total Airport revenues (including non-operating revenues) are expected to decrease from $35,930,636 budgeted for 2021 to $33,181,459 projected for 2025 with a total of $158,071,074 during the Short-Term period. This includes the $24.8 million in CARES Act and CRRSE funds as well as PFC reimbursements from previously incurred capital costs. During the Intermediate-Term period, revenues are projected to total $158,811,344 and during the Long-Term period, revenues are projected to total $386,844,134. The compound annual growth rate for total Airport revenues (excluding CARES/CRRSE grants and PFC reimbursements) is 3.3 percent starting in 2022 (after the pandemic) through the end of the twenty-year planning period.

Schedule 7-5 also provides a comparison of the Airport's airline cost per enplaned passenger (CPEP) versus Small-Hub airports with similar levels of aviation activity. The airline CPEP (all airline fees and rentals divided by enplaned passengers) is a measure that airlines use to compare their cost of operations among the airports they serve. The Airport's airline CPEP is projected to grow from $7.02 budgeted in 2021 to an average of $7.71 during the Long-Term planning period. Over the same period, the overall Small-Hub industry average grows from $7.36 in 2021 to $7.96 during the Long-Term (Source: Small-Hub airports, FAA Operating and Financial Summary Report #127 and FAA Air Carrier Activity Information System enplanement database). SRQ's CPEP is reflective of its signatory airline agreement and its overall rates and charges policy/strategy. Through a reduction of the incentives/subsidies provided for the landing fee rate and terminal building rental rates, airline revenues are projected to increase in the Short -Term and throughout the remainder of the planning period. With the anticipated recovery from the pandemic and the addition of new and expanded air service in 2021, passenger enplanements are projected to grow resulting in CPEP growth which is projected to closely match the level and growth of the Small-Hub industry average CPEP.

Schedule 7-5 additionally provides a comparison of SRQ's total operating revenue per enplaned passenger versus an average for other Small-Hub airports. The Airport's total operating revenue per enplaned passenger is projected to grow from $12.69 projected for 2021 (impacted due to the pandemic) to an average of $24.09 during the Long-Term planning period. Over the same period, the overall Small-Hub industry average grows from $27.38 in 2021 to $29.63 during the Long-Term (Source: Small-Hub airports, FAA Operating and Financial Summary Report #127 and FAA Air Carrier Activity Information System enplanement database). Prior to the pandemic, SRQ's total operating revenue per enplaned passenger was comparable with that of the Small-Hub average. This comparison indicates that, once revenues and aviation activity at SRQ return to pre-pandemic levels, total operating revenues at SRQ are likely to return to levels which are similar to other Small-Hub airports.

7.6.5 FINANCIAL PLAN SUMMARY FOR THE MASTER PLAN CAPITAL IMPROVEMENT PROGRAM

The Financial Plan Summary presented in **Schedule 7-6** at the end of **Section 7** includes a Capital Cash Flow section that presents a summary of projected capital funding (from **Schedule 7-2**) and scheduled capital expenditures (from **Schedule 7-1**) with the cash flow that results from implementing the Master Plan Capital Improvement Program. **Schedule 7-6** also includes an Operating Cash Flow section that summarizes totals for operating revenues (from **Schedule 7-5**) and operating expenses (from **Schedule 7-4**) with the addition of beginning cash reserve balances to provide the cash flow that results from these activities.

In **Schedule 7-1** of the Financial Feasibility Analysis, practical approaches were provided for scheduling capital expenditures to match the availability of capital funding. **Schedule 7-2** provided practical approaches for matching specific capital funding sources with each of the identified projects. As shown in **Schedule 7-6**, positive year end cash reserves are projected throughout the twenty-year planning period 2021 to 2040. Additionally, the projected year-end cash balances are expected to remain at minimum acceptable balances to the Airport as determined necessary to provide the required resources to meet operating cost needs, to allow for unforeseen circumstances, and to provide protection resulting from unexpected fluctuations of revenue sources.

Based on the assumptions underlying the Financial Feasibility Analysis summarized in the Capital Cash Flow section of Schedule 7-6, implementation of projects in the Master Plan CIP that are scheduled throughout the planning period are projected to be financially reasonable.

It should be noted that implementation of capital projects during the 2021-2040 planning period that have AIP discretionary, FDOT grants, or other capital contributions indicated as funding sources are subject to the availability of those grants which are provided at the sole discretion of the FAA, FDOT, or other parties. If the identified portion of funding is not awarded in the time frames needed by the respective agency or entity, then these projects may need to be delayed until funding is available or until alternative funding is identified.

Assumptions related to Aviation Activity Forecasts - The COVID-19 outbreak in the United States has caused significant business as well as tourism disruption to the aviation industry through travel restrictions, stay-at-home orders, quarantine requirements, and an increased reliance on teleconferencing. While the disruption may be short term, there is considerable uncertainty about the duration and longer term impacts on the aviation industry. The Financial Feasibility Analysis reflects the negative impact of the virus in the 2020 to 2022 time frame and also assumes a reasonable economic recovery for SRQ by the end of the Short-Term planning period.

The aviation activity forecasts included in this Master Plan were prepared and approved prior to the COVID-19 impact and are still considered valid for the purposes of this study. Additionally, the forecasts were prepared prior to the announcement of new air service at SRQ. For purposes of the Financial Feasibility Analysis, the enplanements forecast in the Short-Term were modified to reflect the estimated impact on 2020 enplanements and the anticipated recovery of those enplanements to the originally forecast levels by the end of the Short-Term. The Financial Feasibility Analysis relies on achievement of the aviation activity and passenger enplanement forecasts. If the actual aviation activity varies temporarily from the projected levels of activity, the adverse impact on the capital program may not be significant. However, if decreased traffic levels occur and persist, implementation of all the proposed projects may not be financially feasible. It should also be noted, however, that if the forecast activity levels are not met, then a number of the planned capital improvements may be canceled or deferred as necessary.

7.7 FINANCIAL ANALYSIS SCHEDULES

Financial analysis **Schedules 7-1 through 7-6** are presented on the following pages and described below:

- **Schedule 7-1 – Estimated Project Costs and Development Schedule:** This schedule presents the CIP including estimated costs and anticipated development schedule for individual projects in the program. The schedule provides practical approaches for matching capital expenditure amounts with capital funding availability in the Short-Term, Intermediate-Term, and Long-Term planning periods. This schedule also applies inflation adjustments to provide escalated development costs for projects implemented throughout the entire 20-year planning period.

- **Schedule 7-2 – Projected Capital Funding Sources:** This schedule lists each of the CIP projects, their estimated costs (escalated for inflation) and the assumed funding sources and amounts. The schedule applies specific capital funding sources to each individual project in the capital program.

- **Schedule 7-3a – PFC Serviced Debt Issue and Schedule 7-3b – Airport Cash Serviced Debt Issue:** These schedules provide the details of the debt issues which are expected to be required in 2027 to partially fund the New Concourse A project. The schedules include the anticipated terms of the debt and the resulting annual debt service requirements including associated financing and interest costs. **Schedule 7-3a** reflects the debt service which is planned to be funded with PFCs. **Schedule 7-3b** reflects the debt service which is planned to be funded with airport cash reserves and net operating revenues.

- **Schedule 7-4 – Actual, Budgeted and Projected Operations & Maintenance Expenses:** This schedule reflects the past three years of actual operations and maintenance expenses, budgeted 2021 operations and maintenance expenses, and projections of these expenses through the Short-Term, Intermediate-Term, and Long-Term planning periods. This schedule also provides a comparison of SRQ's annual expenses per enplaned passenger with the average of other Small-Hub airports.

- **Schedule 7-5 – Actual, Budgeted and Projected Operating Revenues:** This schedule reflects the past three years of actual operating revenues, budgeted 2021 operating revenues, and projections of these revenues through the Short-Term, Intermediate-Term, and Long-Term planning periods. These revenues are organized into categories for airline revenues, non-airline revenues and non-operating revenues, and provides statistical comparisons of SRQ's airline cost per enplaned passenger and total revenue per enplaned passenger with other Small-Hub airport averages.

- **Schedule 7-6 – Budgeted and Projected Net Revenues, Capital Funding and Capital Expenditures:** This Financial Plan Summary includes a Capital Cash Flow section that presents a summary of projected capital funding (from **Schedule 7-2**) and scheduled capital expenditures (from **Schedule 7-1**) with the cash flow that results from implementing the Master Plan Capital Improvement Program. It also includes an Operating Cash Flow section that summarizes totals for operating revenues (from **Schedule 7-5**) and operating expenses (from **Schedule 7-4**) with the addition of beginning cash reserve balances to provide the cash flow that results from these activities.

Schedule 7-1
Estimated Project Costs and Development Schedule

01-Feb-21

Capital Improvement Program	Funding Schedule: Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Funding
Funds Used for Capital Improvement Projects									
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324	$88,475,022
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0	924,226
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)	(19,610,265)
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652	21,302,357
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988	100,921,515
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)	76,001
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0	56,000,000
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)	(22,817,966)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0	5,000,000
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)	(5,063,409)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0	38,569,560
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534	79,761,324
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	3,940,562	(0)	6,643,273	3,940,562
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	0	(6,643,273)	(31,517,411)	(31,517,411)
Net Operating Cash Flow	15,058,358	11,644,605	6,282,839	4,582,030	9,689,537	47,257,369	30,347,888	65,275,638	142,880,895
Funds Available Current Year	26,903,198	27,155,850	13,953,993	48,610,845	26,553,989	143,177,875	208,531,985	171,042,359	522,752,219
Beginning Cash Balance/Funds Carried Over from Prior Year	18,795,582	25,241,101	33,231,716	30,076,078	19,582,383	18,795,582	31,459,865	33,625,131	18,795,582
Funds Used Current Year	(20,457,680)	(19,165,235)	(17,109,631)	(59,104,540)	(14,676,507)	(130,513,592)	(206,366,718)	(135,907,487)	(472,787,797)
Funds Carried Over to Next Year	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004	$68,760,004
				Average Debt Service Coverage >>>			4.34	2.16	

	Capital Project Description	2020 Base Year Costs	Estimated Project Costs and Development Schedule: Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Escalated Costs
Short-Term Projects (2021-2025)											
Capital Projects 2021											
A4-D	Relocate ASOS & Install RVR, Design	$121,508	$125,153					$125,153			$125,153
A7-D	Rehabilitate Taxiways C, C1, C2 C3, Design	472,500	486,675					486,675			486,675
A10-D	Rehabilitate Taxiway F, Design	132,600	136,578					136,578			136,578
T5	Construct Rental Car Office Renovations	2,000,000	2,060,000					2,060,000			2,060,000
T6	Construct Blast Fence Deflector	800,000	824,000					824,000			824,000
T4-D	Construct New GA FIS Facility, Design	247,661	255,091					255,091			255,091
T7-D	Construct New Consolidated In-Line Baggage System, Desig	1,000,000	1,030,000					1,030,000			1,030,000
RP10	Curbside Improvements	3,250,000	3,347,500					3,347,500			3,347,500
T16	Construct Third Floor Renovations	3,000,000	3,090,000					3,090,000			3,090,000
GA1-1	Construct Air Center Aprons and Utilities, Year 1	2,000,000	2,060,000					2,060,000			2,060,000
RP1-D	Construct Ground Transportation Center, Design	311,212	320,548					320,548			320,548
RP2-1	Whitfield Driveway Removal, Year 1	15,000	15,450					15,450			15,450
RP3-D	Construct CONRAC Service Facility, Design	1,800,000	1,854,000					1,854,000			1,854,000

Schedule 7-1
Estimated Project Costs and Development Schedule

01-Feb-21

Capital Improvement Program	Funding Schedule: Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Funding
Funds Used for Capital Improvement Projects									
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324	$88,475,022
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0	924,226
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)	(19,610,265)
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652	21,302,357
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988	100,921,515
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)	76,001
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0	56,000,000
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)	(22,817,966)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0	5,000,000
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)	(5,063,409)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0	38,569,560
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534	79,761,324
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	3,940,562	(0)	6,643,273	3,940,562
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	0	(6,643,273)	(31,517,411)	(31,517,411)
Net Operating Cash Flow	15,058,358	11,644,605	6,282,839	4,582,030	9,689,537	47,257,369	30,347,888	65,275,638	142,880,895
Funds Available Current Year	26,903,198	27,155,850	13,953,993	48,610,845	26,553,989	143,177,875	208,531,985	171,042,359	522,752,219
Beginning Cash Balance/Funds Carried Over from Prior Year	18,795,582	25,241,101	33,231,716	30,076,078	19,582,383	18,795,582	31,459,865	33,625,131	18,795,582
Funds Used Current Year	(20,457,680)	(19,165,235)	(17,109,631)	(59,104,540)	(14,676,507)	(130,513,592)	(206,366,718)	(135,907,487)	(472,787,797)
Funds Carried Over to Next Year	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004	$68,760,004
				Average Debt Service Coverage >>>			4.34	2.16	

	Capital Project Description	2020 Base Year Costs	Estimated Project Costs and Development Schedule: Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Escalated Costs
RP4	Expand Existing Long-Term and Shade Parking	3,611,344	3,719,684					3,719,684			3,719,684
RP5	Construct Airport Circle Way Point Signs	1,050,000	1,081,500					1,081,500			1,081,500
RP6-D	Construct 15th Street Observation Parking Area, Design	50,000	51,500					51,500			51,500
	Total Capital Projects 2021	$19,861,825	$20,457,680	$0	$0	$0	$0	$20,457,680	$0	$0	$20,457,680
Capital Projects 2022											
E1	Conduct EA for Select Short-Term Projects	$375,000		$397,838				$397,838			$397,838
A2-D	Construct Runway 14-32 ROFA Improvements, Design	95,000		100,786				100,786			100,786
A4-C	Relocate ASOS & Install RVR, Construct	472,492		501,267				501,267			501,267
A7-C	Rehabilitate Taxiways C, C1, C2 C3, Construct	4,252,500		4,511,477				4,511,477			4,511,477
A9-D	Construct Taxilanes in Northquad, Design	140,000		148,526				148,526			148,526
A10-C	Rehabilitate Taxiway F, Construct	1,193,400		1,266,078				1,266,078			1,266,078
A11	Acquire RPZ Residential Prop/Easements (App to Rwy 4)	1,171,610		1,242,961				1,242,961			1,242,961
A12	Acquire RPZ Properties or Easements (App to Rwy 22)	538,731		571,540				571,540			571,540
T4-C	Construct New GA FIS Facility	2,861,339		3,035,595				3,035,595			3,035,595
GA1-2	Construct Air Center Aprons and Utilities, Year 2	1,500,000		1,591,350				1,591,350			1,591,350

Schedule 7-1
Estimated Project Costs and Development Schedule

01-Feb-21

Capital Improvement Program	Funding Schedule: Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Funding
Funds Used for Capital Improvement Projects									
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324	$88,475,022
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0	924,226
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)	(19,610,265)
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652	21,302,357
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988	100,921,515
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)	76,001
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0	56,000,000
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)	(22,817,966)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0	5,000,000
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)	(5,063,409)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0	38,569,560
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534	79,761,324
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	3,940,562	(0)	6,643,273	3,940,562
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	0	(6,643,273)	(31,517,411)	(31,517,411)
Net Operating Cash Flow	15,058,358	11,644,605	6,282,839	4,582,030	9,689,537	47,257,369	30,347,888	65,275,638	142,880,895
Funds Available Current Year	26,903,198	27,155,850	13,953,993	48,610,845	26,553,989	143,177,875	208,531,985	171,042,359	522,752,219
Beginning Cash Balance/Funds Carried Over from Prior Year	18,795,582	25,241,101	33,231,716	30,076,078	19,582,383	18,795,582	31,459,865	33,625,131	18,795,582
Funds Used Current Year	(20,457,680)	(19,165,235)	(17,109,631)	(59,104,540)	(14,676,507)	(130,513,592)	(206,366,718)	(135,907,487)	(472,787,797)
Funds Carried Over to Next Year	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004	$68,760,004
				Average Debt Service Coverage >>>			4.34	2.16	

Estimated Project Costs and Development Schedule

	Capital Project Description	2020 Base Year Costs	Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Escalated Costs
RP2-2	Whitfield Driveway Removal, Year 2	15,000		15,914				15,914			15,914
RP3-C1	Construct CONRAC Service Facility - Year 1	5,000,000		5,304,500				5,304,500			5,304,500
RP6-C	Construct 15th Street Observation Parking Area	200,000		212,180				212,180			212,180
S1-D	Construct New Emergency Operations Center, Design	250,000		265,225				265,225			265,225
	Total Capital Projects 2022	$18,065,072	$0	$19,165,235	$0	$0	$0	$19,165,235	$0	$0	$19,165,235
Capital Projects 2023											
E2-D	Wetlands Mitigation, Design	$500,000			$546,364			$546,364			$546,364
A2-C	Construct Runway 14-32 ROFA Improvements	364,000			397,753			397,753			397,753
A5	Construct Perimeter Fencing Replacement	2,100,000			2,294,727			2,294,727			2,294,727
A6	Replace Airfield Guidance Signs - Phase 2	275,000			300,500			300,500			300,500
A8-D	Rehabilitate Taxiways A7, R4 and R5, Design	119,200			130,253			130,253			130,253
A9-C	Construct Taxilanes in Northquad	1,260,000			1,376,836			1,376,836			1,376,836
T1-D	Construct Holdroom/Concessions Expansion #2, Design	163,753			178,937			178,937			178,937
T2-D	Construct Holdroom/Concessions Expansion #3, Design	165,000			180,300			180,300			180,300

Schedule 7-1
Estimated Project Costs and Development Schedule

01-Feb-21

Capital Improvement Program	Funding Schedule: Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Funding
Funds Used for Capital Improvement Projects									
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324	$88,475,022
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0	924,226
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)	(19,610,265)
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652	21,302,357
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988	100,921,515
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)	76,001
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0	56,000,000
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)	(22,817,966)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0	5,000,000
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)	(5,063,409)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0	38,569,560
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534	79,761,324
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	3,940,562	(0)	6,643,273	3,940,562
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	0	(6,643,273)	(31,517,411)	(31,517,411)
Net Operating Cash Flow	15,058,358	11,644,605	6,282,839	4,582,030	9,689,537	47,257,369	30,347,888	65,275,638	142,880,895
Funds Available Current Year	26,903,198	27,155,850	13,953,993	48,610,845	26,553,989	143,177,875	208,531,985	171,042,359	522,752,219
Beginning Cash Balance/Funds Carried Over from Prior Year	18,795,582	25,241,101	33,231,716	30,076,078	19,582,383	18,795,582	31,459,865	33,625,131	18,795,582
Funds Used Current Year	(20,457,680)	(19,165,235)	(17,109,631)	(59,104,540)	(14,676,507)	(130,513,592)	(206,366,718)	(135,907,487)	(472,787,797)
Funds Carried Over to Next Year	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004	$68,760,004
				Average Debt Service Coverage >>>			4.34	2.16	

Estimated Project Costs and Development Schedule

	Capital Project Description	2020 Base Year Costs	Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Escalated Costs
T3-D	Construct Holdroom/Concessions Expansion #5 and Stairwell Improvements, Design	195,783			213,937			213,937			213,937
RP2-3	Whitfield Driveway Removal, Year 3	15,000			16,391			16,391			16,391
RP3-C2	Construct CONRAC Service Facility - Year 2	9,000,000			9,834,543			9,834,543			9,834,543
S1-C	Construct New Emergency Operations Center	1,250,000			1,365,909			1,365,909			1,365,909
S2	Conduct GIS Mapping & Master Utility Layout	250,000			273,182			273,182			273,182
	Total Capital Projects 2023	$15,657,736	$0	$0	$17,109,631	$0	$0	$17,109,631	$0	$0	$17,109,631
Capital Projects 2024											
A1-D	Shift Runway 4-22, Design	$306,916				$345,437		$345,437			$345,437
A8-C	Rehabilitate Taxiways A7, R4 and R5, Construct	1,072,800				1,207,446		1,207,446			1,207,446
T1-C	Construct Holdroom/Concessions Expansion #2	1,228,143				1,382,286		1,382,286			1,382,286
T2-C	Construct Holdroom/Concessions Expansion #3	735,386				827,683		827,683			827,683
T3-C	Construct Holdroom/Concessions Expansion #5 and Stairwell Improvements	1,055,869				1,188,390		1,188,390			1,188,390
T7-C	Construct New Consolidated In-Line Baggage System	40,000,000				45,020,352		45,020,352			45,020,352
T8-D	Construct FIS Phase 2 (Access), Design	250,000				281,377		281,377			281,377

Schedule 7-1
Estimated Project Costs and Development Schedule

01-Feb-21

Capital Improvement Program	Funding Schedule								
	Short-Term						Intermediate-Term	Long-Term	Total
	2021	2022	2023	2024	2025	Total	2026-2030	2031-2040	Funding
Funds Used for Capital Improvement Projects									
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324	$88,475,022
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0	924,226
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)	(19,610,265)
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652	21,302,357
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988	100,921,515
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)	76,001
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0	56,000,000
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)	(22,817,966)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0	5,000,000
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)	(5,063,409)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0	38,569,560
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534	79,761,324
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	3,940,562	(0)	6,643,273	3,940,562
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	0	(6,643,273)	(31,517,411)	(31,517,411)
Net Operating Cash Flow	15,058,358	11,644,605	6,282,839	4,582,030	9,689,537	47,257,369	30,347,888	65,275,638	142,880,895
Funds Available Current Year	26,903,198	27,155,850	13,953,993	48,610,845	26,553,989	143,177,875	208,531,985	171,042,359	522,752,219
Beginning Cash Balance/Funds Carried Over from Prior Year	18,795,582	25,241,101	33,231,716	30,076,078	19,582,383	18,795,582	31,459,865	33,625,131	18,795,582
Funds Used Current Year	(20,457,680)	(19,165,235)	(17,109,631)	(59,104,540)	(14,676,507)	(130,513,592)	(206,366,718)	(135,907,487)	(472,787,797)
Funds Carried Over to Next Year	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004	$68,760,004
				Average Debt Service Coverage >>>			4.34	2.16	

	Capital Project Description	2020 Base Year Costs	Estimated Project Costs and Development Schedule								
			Short-Term						Intermediate-Term	Long-Term	Total Escalated
			2021	2022	2023	2024	2025	Total	2026-2030	2031-2040	Costs
RP1-C	Construct Ground Transportation Center	3,594,504				4,045,646		4,045,646			4,045,646
RP1-4	Whitfield Driveway Removal, Year 4	15,000				16,883		16,883			16,883
RP3-C3	Construct CONRAC Service Facility - Year 3	4,000,000				4,502,035		4,502,035			4,502,035
S3-D	Construct Tallevast Industrial Park Roadway Improvements, Design	255,000				287,005		287,005			287,005
	Total Capital Projects 2024	$52,513,618	$0	$0	$0	$59,104,540	$0	$59,104,540	$0	$0	$59,104,540
Capital Projects 2025											
E2-C	Wetlands Mitigation, Construction	$4,500,000					$5,216,733	$5,216,733			$5,216,733
A1-C	Shift Runway 4-22, Construct	3,545,084					4,109,724	4,109,724			4,109,724
A3-D	Modify Taxiway A4 & R3, Design	150,000					173,891	173,891			173,891
T8-C	Construct FIS Phase 2 (Access)	1,650,000					1,912,802	1,912,802			1,912,802
RP2-5	Whitfield Driveway Removal, Year 5	15,000					17,389	17,389			17,389
S3-C	Construct Tallevast Industrial Park Roadway Improvements	2,800,000					3,245,967	3,245,967			3,245,967
Reimb	Reimburse CONRAC Projects	0					0	0			0
	Total Capital Projects 2025	$12,660,084	$0	$0	$0	$0	$14,676,507	$14,676,507	$0	$0	$14,676,507

Schedule 7-1
Estimated Project Costs and Development Schedule

01-Feb-21

Capital Improvement Program	Funding Schedule								
	Short-Term						Intermediate-Term	Long-Term	Total
	2021	2022	2023	2024	2025	Total	2026-2030	2031-2040	Funding
Funds Used for Capital Improvement Projects									
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324	$88,475,022
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0	924,226
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)	(19,610,265)
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652	21,302,357
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988	100,921,515
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)	76,001
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0	56,000,000
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)	(22,817,966)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0	5,000,000
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)	(5,063,409)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0	38,569,560
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534	79,761,324
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	3,940,562	(0)	6,643,273	3,940,562
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	0	(6,643,273)	(31,517,411)	(31,517,411)
Net Operating Cash Flow	15,058,358	11,644,605	6,282,839	4,582,030	9,689,537	47,257,369	30,347,888	65,275,638	142,880,895
Funds Available Current Year	26,903,198	27,155,850	13,953,993	48,610,845	26,553,989	143,177,875	208,531,985	171,042,359	522,752,219
Beginning Cash Balance/Funds Carried Over from Prior Year	18,795,582	25,241,101	33,231,716	30,076,078	19,582,383	18,795,582	31,459,865	33,625,131	18,795,582
Funds Used Current Year	(20,457,680)	(19,165,235)	(17,109,631)	(59,104,540)	(14,676,507)	(130,513,592)	(206,366,718)	(135,907,487)	(472,787,797)
Funds Carried Over to Next Year	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004	$68,760,004
				Average Debt Service Coverage >>>			4.34	2.16	

Capital Project Description	2020 Base Year Costs	Estimated Project Costs and Development Schedule								
		Short-Term						Intermediate-Term	Long-Term	Total Escalated
		2021	2022	2023	2024	2025	Total	2026-2030	2031-2040	Costs
Total Short-Term Project Costs Before Financing	$118,758,335	$20,457,680	$19,165,235	$17,109,631	$59,104,540	$14,676,507	$130,513,592	$0	$0	$130,513,592
Financing Costs for Debt Serviced with PFCs	-	0	0	0	0	0	0	0	0	0
Total Short-Term Project Costs	$118,758,335	$20,457,680	$19,165,235	$17,109,631	$59,104,540	$14,676,507	$130,513,592	$0	$0	$130,513,592

Schedule 7-1
Estimated Project Costs and Development Schedule

01-Feb-21

Capital Improvement Program	Funding Schedule: Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Funding
Funds Used for Capital Improvement Projects									
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324	$88,475,022
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0	924,226
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)	(19,610,265)
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652	21,302,357
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988	100,921,515
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)	76,001
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0	56,000,000
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)	(22,817,966)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0	5,000,000
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)	(5,063,409)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0	38,569,560
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534	79,761,324
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	3,940,562	(0)	6,643,273	3,940,562
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	0	(6,643,273)	(31,517,411)	(31,517,411)
Net Operating Cash Flow	15,058,358	11,644,605	6,282,839	4,582,030	9,689,537	47,257,369	30,347,888	65,275,638	142,880,895
Funds Available Current Year	26,903,198	27,155,850	13,953,993	48,610,845	26,553,989	143,177,875	208,531,985	171,042,359	522,752,219
Beginning Cash Balance/Funds Carried Over from Prior Year	18,795,582	25,241,101	33,231,716	30,076,078	19,582,383	18,795,582	31,459,865	33,625,131	18,795,582
Funds Used Current Year	(20,457,680)	(19,165,235)	(17,109,631)	(59,104,540)	(14,676,507)	(130,513,592)	(206,366,718)	(135,907,487)	(472,787,797)
Funds Carried Over to Next Year	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004	$68,760,004
				Average Debt Service Coverage >>>			4.34	2.16	

Estimated Project Costs and Development Schedule

	Capital Project Description	2020 Base Year Costs	Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Escalated Costs
Intermediate-Term Projects (2026-2030)											
E3	Conduct EA for Select Intermediate-Term Projects	$225,000						$0	$280,842		$280,842
A3-C	Modify Taxiway A4 & R3, Construct	747,000						0	932,395		932,395
A13	Acquire RPZ College Prop/Easements (App to Rwy 4)	9,414,020						0	11,750,445		11,750,445
A14-D	Rehabilitate Taxiway E & J, Design	233,000						0	290,827		290,827
RP7-D	Relocate Valet Parking, Design	170,000						0	212,192		212,192
RP8-D	Construct New Long Term Parking Lot, Design	301,095						0	375,822		375,822
A14-C	Rehabilitate Taxiway E & J, Construct	2,097,000						0	2,617,445		2,617,445
A15-D	Rehabilitate Taxiway A with Connectors, Design	835,900						0	1,043,358		1,043,358
T10-D	Construct Holdroom/Concessions Expansion #6, Design	293,479						0	366,316		366,316
T11-D	Construct Holdroom/Concessions Expansion #7, Design	229,270						0	286,172		286,172
GA2-D	Construct 24 Large T-Hangars, Design	449,215						0	560,704		560,704
RP7-C	Relocate Valet Parking, Construct	728,000						0	908,679		908,679
RP8-C	Construct New Long Term Parking Lot	8,083,906						0	10,090,215		10,090,215
A15-C	Rehabilitate Taxiway A with Connectors, Construct	7,523,100						0	9,390,225		9,390,225

Schedule 7-1
Estimated Project Costs and Development Schedule

01-Feb-21

Capital Improvement Program	Funding Schedule: Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Funding
Funds Used for Capital Improvement Projects									
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324	$88,475,022
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0	924,226
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)	(19,610,265)
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652	21,302,357
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988	100,921,515
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)	76,001
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0	56,000,000
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)	(22,817,966)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0	5,000,000
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)	(5,063,409)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0	38,569,560
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534	79,761,324
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	3,940,562	(0)	6,643,273	3,940,562
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	0	(6,643,273)	(31,517,411)	(31,517,411)
Net Operating Cash Flow	15,058,358	11,644,605	6,282,839	4,582,030	9,689,537	47,257,369	30,347,888	65,275,638	142,880,895
Funds Available Current Year	26,903,198	27,155,850	13,953,993	48,610,845	26,553,989	143,177,875	208,531,985	171,042,359	522,752,219
Beginning Cash Balance/Funds Carried Over from Prior Year	18,795,582	25,241,101	33,231,716	30,076,078	19,582,383	18,795,582	31,459,865	33,625,131	18,795,582
Funds Used Current Year	(20,457,680)	(19,165,235)	(17,109,631)	(59,104,540)	(14,676,507)	(130,513,592)	(206,366,718)	(135,907,487)	(472,787,797)
Funds Carried Over to Next Year	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004	$68,760,004
				Average Debt Service Coverage >>>			4.34	2.16	

	Capital Project Description	2020 Base Year Costs	Estimated Project Costs and Development Schedule: Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Escalated Costs
A16-D	Construct Runway 14-32 Improvements (Shoulders), Design	1,500,000						0	1,872,278		1,872,278
T9-D	Construct Pedestrian Bridge & Reconfigure Concessions, Design	243,454						0	303,876		303,876
T10-C	Construct Holdroom/Concessions Expansion #6	2,201,096						0	2,747,376		2,747,376
T11-C	Construct Holdroom/Concessions Expansion #7	1,719,523						0	2,146,284		2,146,284
T13-D	Construct New Concourse A, Design	7,136,723							8,907,955		8,907,955
GA2-C	Construct 24 Large T-Hangars	5,188,437						0	6,476,133		6,476,133
A16-C	Construct Runway 14-32 Improvements (Shoulders), Construct	13,500,000						0	16,850,506		16,850,506
T9-C	Construct Pedestrian Bridge & Reconfigure Concessions	2,812,547						0	3,510,581		3,510,581
T12-D	Construct Holdroom/Concessions Expansion #1, Design	555,776						0	693,712		693,712
T13-C1	Construct New Concourse A, Year 1	39,966,139							49,885,161		49,885,161
S4-D	Relocate Bulk Storage Facility, Design	190,948						0	238,339		238,339
S5-D	Expand Existing Vehicle Storage Building, Design	490,139						0	611,784		611,784
T12-C	Construct Holdroom/Concessions Expansion #1	4,168,320						0	5,202,837		5,202,837
T13-C2	Construct New Concourse A, Year 2	39,966,139							49,885,161		49,885,161

Schedule 7-1
Estimated Project Costs and Development Schedule

01-Feb-21

Capital Improvement Program	Funding Schedule: Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Funding
Funds Used for Capital Improvement Projects									
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324	$88,475,022
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0	924,226
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)	(19,610,265)
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652	21,302,357
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988	100,921,515
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)	76,001
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0	56,000,000
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)	(22,817,966)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0	5,000,000
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)	(5,063,409)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0	38,569,560
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534	79,761,324
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	3,940,562	(0)	6,643,273	3,940,562
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	0	(6,643,273)	(31,517,411)	(31,517,411)
Net Operating Cash Flow	15,058,358	11,644,605	6,282,839	4,582,030	9,689,537	47,257,369	30,347,888	65,275,638	142,880,895
Funds Available Current Year	26,903,198	27,155,850	13,953,993	48,610,845	26,553,989	143,177,875	208,531,985	171,042,359	522,752,219
Beginning Cash Balance/Funds Carried Over from Prior Year	18,795,582	25,241,101	33,231,716	30,076,078	19,582,383	18,795,582	31,459,865	33,625,131	18,795,582
Funds Used Current Year	(20,457,680)	(19,165,235)	(17,109,631)	(59,104,540)	(14,676,507)	(130,513,592)	(206,366,718)	(135,907,487)	(472,787,797)
Funds Carried Over to Next Year	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004	$68,760,004
				Average Debt Service Coverage >>>			4.34	2.16	

Estimated Project Costs and Development Schedule

Capital Project Description		2020 Base Year Costs	Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Escalated Costs
S4-C	Relocate Bulk Storage Facility, Construct	1,471,052						0	1,836,146		1,836,146
S5-C	Expand Existing Vehicle Storage Building, Construct	5,661,861						0	7,067,054		7,067,054
Reimb	Reimburse CONRAC Projects	0						0	0		0
	Total Intermediate-Term Project Costs Before Financing	$158,102,139	$0	$0	$0	$0	$0	$0	$197,340,821	$0	$197,340,821
	Financing Costs for Debt Serviced with PFCs	-	0	0	0	0	0	0	9,025,897	0	9,025,897
	Total Intermediate-Term Project Costs	$158,102,139	$0	$0	$0	$0	$0	$0	$206,366,718	$0	$206,366,718

Schedule 7-1
Estimated Project Costs and Development Schedule

01-Feb-21

Capital Improvement Program	Funding Schedule: Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Funding
Funds Used for Capital Improvement Projects									
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324	$88,475,022
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0	924,226
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)	(19,610,265)
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652	21,302,357
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988	100,921,515
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)	76,001
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0	56,000,000
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)	(22,817,966)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0	5,000,000
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)	(5,063,409)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0	38,569,560
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534	79,761,324
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	3,940,562	(0)	6,643,273	3,940,562
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	0	(6,643,273)	(31,517,411)	(31,517,411)
Net Operating Cash Flow	15,058,358	11,644,605	6,282,839	4,582,030	9,689,537	47,257,369	30,347,888	65,275,638	142,880,895
Funds Available Current Year	26,903,198	27,155,850	13,953,993	48,610,845	26,553,989	143,177,875	208,531,985	171,042,359	522,752,219
Beginning Cash Balance/Funds Carried Over from Prior Year	18,795,582	25,241,101	33,231,716	30,076,078	19,582,383	18,795,582	31,459,865	33,625,131	18,795,582
Funds Used Current Year	(20,457,680)	(19,165,235)	(17,109,631)	(59,104,540)	(14,676,507)	(130,513,592)	(206,366,718)	(135,907,487)	(472,787,797)
Funds Carried Over to Next Year	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004	$68,760,004
				Average Debt Service Coverage >>>			4.34	2.16	

	Capital Project Description	2020 Base Year Costs	Estimated Project Costs and Development Schedule: Short-Term 2021	2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040	Total Escalated Costs
Long-Term Projects (2031-2040)											
E4	Conduct EA for Select Long-Term Projects	$300,000						$0		$467,390	$467,390
A19-D	Rehabilitate Taxiway C South, Design	250,000						0		389,492	389,492
A24	Acquire RPZ Properties/Easements (App to Rwy 14)	1,511,693						0		2,355,168	2,355,168
RP9-D	Construct Short-Term & Rental Car Parking Deck, Design	1,905,572						0		2,968,819	2,968,819
A19-C	Rehabilitate Taxiway C South, Construct	2,250,000						0		3,505,427	3,505,427
A20-D	Rehabilitate Taxiway G, Design	180,000						0		280,434	280,434
A21-D	Rehabilitate Taxiway H, Design	160,000						0		249,275	249,275
T14-D	Expand Baggage Claim, Design	509,663						0		794,038	794,038
RP9-C	Construct Short-Term & Rental Car Parking Deck	22,009,429						0		34,289,973	34,289,973
A20-C	Rehabilitate Taxiway G, Construct	1,620,000						0		2,523,907	2,523,907
A21-C	Rehabilitate Taxiway H, Construct	1,440,000						0		2,243,473	2,243,473
A22-D	Rehabilitate Taxiway D, Design	380,000						0		592,028	592,028
T14-C	Expand Baggage Claim, Construct	5,887,338						0		9,172,281	9,172,281
A22-C	Rehabilitate Taxiway D, Construct	3,420,000						0		5,328,249	5,328,249
A23-D	Rehabilitate Runway 4-22, Design	500,000						0		778,984	778,984

Schedule 7-1
Estimated Project Costs and Development Schedule

01-Feb-21

Capital Improvement Program	Funding Schedule								
	Short-Term						Intermediate-Term	Long-Term	Total
	2021	2022	2023	2024	2025	Total	2026-2030	2031-2040	Funding
Funds Used for Capital Improvement Projects									
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324	$88,475,022
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0	924,226
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)	(19,610,265)
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652	21,302,357
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988	100,921,515
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)	76,001
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0	56,000,000
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)	(22,817,966)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0	5,000,000
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)	(5,063,409)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0	38,569,560
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534	79,761,324
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	3,940,562	(0)	6,643,273	3,940,562
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	0	(6,643,273)	(31,517,411)	(31,517,411)
Net Operating Cash Flow	15,058,358	11,644,605	6,282,839	4,582,030	9,689,537	47,257,369	30,347,888	65,275,638	142,880,895
Funds Available Current Year	26,903,198	27,155,850	13,953,993	48,610,845	26,553,989	143,177,875	208,531,985	171,042,359	522,752,219
Beginning Cash Balance/Funds Carried Over from Prior Year	18,795,582	25,241,101	33,231,716	30,076,078	19,582,383	18,795,582	31,459,865	33,625,131	18,795,582
Funds Used Current Year	(20,457,680)	(19,165,235)	(17,109,631)	(59,104,540)	(14,676,507)	(130,513,592)	(206,366,718)	(135,907,487)	(472,787,797)
Funds Carried Over to Next Year	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004	$68,760,004
				Average Debt Service Coverage >>>			4.34	2.16	

	Capital Project Description	2020 Base Year Costs	Estimated Project Costs and Development Schedule								
			Short-Term						Intermediate-Term	Long-Term	Total Escalated
			2021	2022	2023	2024	2025	Total	2026-2030	2031-2040	Costs
GA3-D	Construct 20 Small T-Hangars, Design	272,541						0		424,610	424,610
S8-D	Expand Fuel Farm (3rd Tank), Design	150,000						0		233,695	233,695
A23-C	Rehabilitate Runway 4-22, Construct	4,500,000						0		7,010,853	7,010,853
GA3-C	Construct 20 Small T-Hangars	3,147,846						0		4,904,242	4,904,242
S6-D	Construct New Vehicle Storage Building, Design	674,086						0		1,050,204	1,050,204
S8-C	Expand Fuel Farm (3rd Tank), Construct	617,000						0		961,266	961,266
T15-D	Construct Holdroom/Concessions Expansion #4, Design	949,531						0		1,479,338	1,479,338
S6-C	Construct New Vehicle Storage Building	7,785,914						0		12,130,200	12,130,200
A17-D	Construct Holding Bay at North End of Taxiway A, Design	150,000						0		233,695	233,695
A18-D	Construct Holding Bay at South End of Taxiway A, Design	150,000						0		233,695	233,695
T15-C	Construct Holdroom/Concessions Expansion #4	7,121,486						0		11,095,043	11,095,043
A17-C	Construct Holding Bay at North End of Taxiway A	1,113,000						0		1,734,018	1,734,018
A18-C	Construct Holding Bay at South End of Taxiway A	1,052,000						0		1,638,982	1,638,982
S7-D	Construct ARFF Station Improvements, Design	225,000						0		350,543	350,543
S7-C	Construct ARFF Station Improvements	1,041,000						0		1,621,844	1,621,844

Schedule 7-1
Estimated Project Costs and Development Schedule

01-Feb-21

Capital Improvement Program	Funding Schedule								
	Short-Term						Intermediate-Term	Long-Term	Total
	2021	2022	2023	2024	2025	Total	2026-2030	2031-2040	Funding
Funds Used for Capital Improvement Projects									
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324	$88,475,022
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0	924,226
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)	(19,610,265)
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652	21,302,357
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679	63,909,807
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988	100,921,515
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)	76,001
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0	56,000,000
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)	(22,817,966)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0	5,000,000
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)	(5,063,409)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0	38,569,560
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534	79,761,324
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	3,940,562	(0)	6,643,273	3,940,562
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	0	(6,643,273)	(31,517,411)	(31,517,411)
Net Operating Cash Flow	15,058,358	11,644,605	6,282,839	4,582,030	9,689,537	47,257,369	30,347,888	65,275,638	142,880,895
Funds Available Current Year	26,903,198	27,155,850	13,953,993	48,610,845	26,553,989	143,177,875	208,531,985	171,042,359	522,752,219
Beginning Cash Balance/Funds Carried Over from Prior Year	18,795,582	25,241,101	33,231,716	30,076,078	19,582,383	18,795,582	31,459,865	33,625,131	18,795,582
Funds Used Current Year	(20,457,680)	(19,165,235)	(17,109,631)	(59,104,540)	(14,676,507)	(130,513,592)	(206,366,718)	(135,907,487)	(472,787,797)
Funds Carried Over to Next Year	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004	$68,760,004
				Average Debt Service Coverage >>>			4.34	2.16	

Capital Project Description	2020 Base Year Costs	Estimated Project Costs and Development Schedule								
		Short-Term						Intermediate-Term	Long-Term	Total Escalated
		2021	2022	2023	2024	2025	Total	2026-2030	2031-2040	Costs
Total Long-Term Project Costs Before Financing	$71,273,099	$0	$0	$0	$0	$0	$0	$0	$111,041,166	$111,041,166
Financing Costs for Debt Serviced with PFCs	-	0	0	0	0	0	0	0	24,866,321	24,866,321
Total Long-Term Project Costs	$71,273,099	$0	$0	$0	$0	$0	$0	$0	$135,907,487	$135,907,487
Total Project Costs	$348,133,573	$20,457,680	$19,165,235	$17,109,631	$59,104,540	$14,676,507	$130,513,592	$206,366,718	$135,907,487	$472,787,797

Schedule 7-2
Projected Capital Funding Sources

01-Feb-21

	Capital Improvement Projects	Total Escalated Costs	AIP Entitlement Funding	AIP Discretionary Funding	Total AIP Funding	FDOT Aviation / SIS Grants	Passenger Facility Charges (Debt)	Passenger Facility Charges (PAYG)	Other Capital Contribution	RAC Customer Facility Charges	Airport Cash Debt Proceeds	Cash Reserves/ Net Revs	Total Funding
Short-Term Projects (2021-2025)													
Capital Projects 2021													
A4-D	Relocate ASOS & Install RVR, Design	$125,153			$0							$125,153	$125,153
A7-D	Rehabilitate Taxiways C, C1, C2 C3, Design	486,675	438,008		438,008	24,334						24,334	486,675
A10-D	Rehabilitate Taxiway F, Design	136,578	122,920		122,920	6,829						6,829	136,578
T5	Construct Rental Car Office Renovations	2,060,000			0					2,060,000		0	2,060,000
T6	Construct Blast Fence Deflector	824,000			0			824,000				0	824,000
T4-D	Construct New GA FIS Facility, Design	255,091			0							255,091	255,091
T7-D	Construct New Consolidated In-Line Baggage System, Design	1,030,000			0			230,000	800,000 <<<TSA			0	1,030,000
RP10	Curbside Improvements	3,347,500			0			3,347,500				0	3,347,500
T16	Construct Third Floor Renovations	3,090,000			0							3,090,000	3,090,000
GA1-1	Construct Air Center Aprons and Utilities, Year 1	2,060,000			0	1,030,000						1,030,000	2,060,000
RP1-D	Construct Ground Transportation Center, Design	320,548			0							320,548	320,548
RP2-1	Whitfield Driveway Removal, Year 1	15,450			0							15,450	15,450
RP3-D	Construct CONRAC Service Facility, Design	1,854,000			0					1,854,000		0	1,854,000
RP4	Expand Existing Long-Term and Shade Parking	3,719,684			0							3,719,684	3,719,684
RP5	Construct Airport Circle Way Point Signs	1,081,500			0	540,750		540,750				0	1,081,500
RP6-D	Construct 15th Street Observation Parking Area, Design	51,500			0				25,750 <<< Manatee County			25,750	51,500
	Totals for 2021	$20,457,680	$560,928	$0	$560,928	$1,601,913	$0	$4,942,250	$825,750	$3,914,000	$0	$8,612,839	$20,457,680
Capital Projects 2022													
E1	Conduct EA for Select Short-Term Projects	$397,838	$358,054		$358,054	$19,892						$19,892	$397,838
A2-D	Construct Runway 14-32 ROFA Improvements, Design	100,786	90,707		90,707	5,039						5,039	100,786
A4-C	Relocate ASOS & Install RVR, Construct	501,267			0							501,267	501,267
A7-C	Rehabilitate Taxiways C, C1, C2 C3, Construct	4,511,477	4,060,330		4,060,330	225,574						225,574	4,511,477
A9-D	Construct Taxilanes in Northquad, Design	148,526			0	74,263						74,263	148,526
A10-C	Rehabilitate Taxiway F, Construct	1,266,078	1,139,470		1,139,470	63,304						63,304	1,266,078
A11	Acquire RPZ Residential Prop/Easements (App to Rwy 4)	1,242,961		1,118,665	1,118,665	62,148						62,148	1,242,961
A12	Acquire RPZ Properties or Easements (App to Rwy 22)	571,540		514,386	514,386	28,577						28,577	571,540
T4-C	Construct New GA FIS Facility	3,035,595			0	1,517,797						1,517,797	3,035,595
GA1-2	Construct Air Center Aprons and Utilities, Year 2	1,591,350			0	795,675						795,675	1,591,350
RP2-2	Whitfield Driveway Removal, Year 2	15,914			0							15,914	15,914
RP3-C1	Construct CONRAC Service Facility - Year 1	5,304,500			0					5,198,662		105,838	5,304,500
RP6-C	Construct 15th Street Observation Parking Area	212,180			0				106,090 <<< Manatee County			106,090	212,180
S1-D	Construct New Emergency Operations Center, Design	265,225			0	132,613						132,613	265,225
	Totals for 2022	$19,165,235	$5,648,560	$1,633,051	$7,281,611	$2,924,882	$0	$0	$106,090	$5,198,662	$0	$3,653,990	$19,165,235
Capital Projects 2023													
E2-D	Wetlands Mitigation, Design	$546,364	$491,727		$491,727	$27,318						$27,318	$546,364
A2-C	Construct Runway 14-32 ROFA Improvements	397,753	357,977		357,977	19,888						19,888	397,753
A5	Construct Perimeter Fencing Replacement	2,294,727			0	1,147,363						1,147,363	2,294,727
A6	Replace Airfield Guidance Signs - Phase 2	300,500			0	150,250						150,250	300,500
A8-D	Rehabilitate Taxiways A7, R4 and R5, Design	130,253	117,228		117,228	6,513						6,513	130,253
A9-C	Construct Taxilanes in Northquad	1,376,836			0	688,418						688,418	1,376,836
T1-D	Construct Holdroom/Concessions Expansion #2, Design	178,937			0			134,203				44,734	178,937
T2-D	Construct Holdroom/Concessions Expansion #3, Design	180,300			0			135,225				45,075	180,300
T3-D	Construct Holdroom/Concessions Expansion #5 and Stairwell Improvements, Design	213,937			0			160,453				53,484	213,937
RP2-3	Whitfield Driveway Removal, Year 3	16,391			0							16,391	16,391
RP3-C2	Construct CONRAC Service Facility - Year 2	9,834,543			0					3,551,637		6,282,906	9,834,543
S1-C	Construct New Emergency Operations Center	1,365,909			0	682,954						682,954	1,365,909
S2	Conduct GIS Mapping & Master Utility Layout	273,182			0							273,182	273,182
	Totals for 2023	$17,109,631	$966,932	$0	$966,932	$2,722,704	$0	$429,881	$0	$3,551,637	$0	$9,438,476	$17,109,631
Capital Projects 2024													
A1-D	Shift Runway 4-22, Design	$345,437	$310,893		$310,893	$17,272		$17,272				$0	$345,437
A8-C	Rehabilitate Taxiways A7, R4 and R5, Construct	1,207,446	1,086,701		1,086,701	60,372		60,372				0	1,207,446

Schedule 7-2
Projected Capital Funding Sources

01-Feb-21

Capital Improvement Projects		Total Escalated Costs	AIP Entitlement Funding	AIP Discretionary Funding	Total AIP Funding	FDOT Aviation / SIS Grants	Passenger Facility Charges (Debt)	Passenger Facility Charges (PAYG)	Other Capital Contribution	RAC Customer Facility Charges	Airport Cash Debt Proceeds	Cash Reserves/ Net Revs	Total Funding
T1-C	Construct Holdroom/Concessions Expansion #2	1,382,286			0			1,036,714				345,571	1,382,286
T2-C	Construct Holdroom/Concessions Expansion #3	827,683			0			620,763				206,921	827,683
T3-C	Construct Holdroom/Concessions Expansion #5 and Stairwell Improvements	1,188,390			0			891,292				297,097	1,188,390
T7-C	Construct New Consolidated In-Line Baggage System	45,020,352			0	500,000		5,064,790	28,137,720 <<< TSA			11,317,843	45,020,352
T8-D	Construct FIS Phase 2 (Access), Design	281,377	253,239		253,239	14,069		14,069				0	281,377
RP1-C	Construct Ground Transportation Center	4,045,646			0	2,022,823						2,022,823	4,045,646
RP1-4	Whitfield Driveway Removal, Year 4	16,883			0							16,883	16,883
RP3-C3	Construct CONRAC Service Facility - Year 3	4,502,035			0					3,776,950		725,085	4,502,035
S3-D	Construct Tallevast Industrial Park Roadway Improvements, Design	287,005			0	143,502						143,502	287,005
	Totals for 2024	$59,104,540	$1,650,834	$0	$1,650,834	$2,758,038	$0	$7,705,272	$28,137,720	$3,776,950	$0	$15,075,725	$59,104,540
Capital Projects 2025													
E2-C	Wetlands Mitigation, Construction	$5,216,733	$4,695,060		$4,695,060	$260,837		$260,837				$0	$5,216,733
A1-C	Shift Runway 4-22, Construct	4,109,724	3,698,752		3,698,752	205,486		205,486				0	4,109,724
A3-D	Modify Taxiway A4 & R3, Design	173,891		156,502	156,502	8,695		8,695				0	173,891
T8-C	Construct FIS Phase 2 (Access)	1,912,802	1,721,522		1,721,522	95,640		95,640				0	1,912,802
RP2-5	Whitfield Driveway Removal, Year 5	17,389			0							17,389	17,389
S3-C	Construct Tallevast Industrial Park Roadway Improvements	3,245,967			0	1,622,984						1,622,984	3,245,967
Reimb	Reimburse CONRAC Projects	0			0	0				3,828,317		(3,828,317)	0
	Totals for 2025	$14,676,507	$10,115,334	$156,502	$10,271,836	$2,193,641	$0	$570,658	$0	$3,828,317	$0	($2,187,944)	$14,676,507
	Total Short-Term Project Funding Before Financing	$130,513,592	$18,942,588	$1,789,553	$20,732,140	$12,201,178	$0	$13,648,060	$29,069,560	$20,269,566	$0	$34,593,087	$130,513,592
	Financing Costs for Debt Serviced with PFCs	0					0						0
	Total Short-Term Project Funding	$130,513,592	$18,942,588	$1,789,553	$20,732,140	$12,201,178	$0	$13,648,060	$29,069,560	$20,269,566	$0	$34,593,087	$130,513,592

Schedule 7-2
Projected Capital Funding Sources

01-Feb-21

	Capital Improvement Projects	Total Escalated Costs	AIP Entitlement Funding	AIP Discretionary Funding	Total AIP Funding	FDOT Aviation / SIS Grants	Passenger Facility Charges (Debt)	Passenger Facility Charges (PAYG)	Other Capital Contribution	RAC Customer Facility Charges	Airport Cash Debt Proceeds	Cash Reserves/ Net Revs	Total Funding
Intermediate-Term Projects (2026-2030)													
E3	Conduct EA for Select Intermediate-Term Projects	$280,842	$252,758		$252,758	$14,042		$14,042				$0	$280,842
A3-C	Modify Taxiway A4 & R3, Construct	932,395		839,155	839,155	46,620		46,620				0	932,395
A13	Acquire RPZ College Prop/Easements (App to Rwy 4)	11,750,445		2,025,400	2,025,400	112,522		112,522	9,500,000			0	11,750,445
A14-D	Rehabilitate Taxiway E & J, Design	290,827	261,745		261,745	14,541		14,541				0	290,827
RP7-D	Relocate Valet Parking, Design	212,192			0	106,096						106,096	212,192
RP8-D	Construct New Long Term Parking Lot, Design	375,822			0	187,911						187,911	375,822
A14-C	Rehabilitate Taxiway E & J, Construct	2,617,445	2,355,701		2,355,701	130,872		130,872				0	2,617,445
A15-D	Rehabilitate Taxiway A with Connectors, Design	1,043,358	939,023		939,023	52,168		52,168				0	1,043,358
T10-D	Construct Holdroom/Concessions Expansion #6, Design	366,316			0			274,737				91,579	366,316
T11-D	Construct Holdroom/Concessions Expansion #7, Design	286,172			0			214,629				71,543	286,172
GA2-D	Construct 24 Large T-Hangars, Design	560,704			0	280,352						280,352	560,704
RP7-C	Relocate Valet Parking, Construct	908,679			0	454,340						454,340	908,679
RP8-C	Construct New Long Term Parking Lot	10,090,215			0	5,045,108						5,045,108	10,090,215
A15-C	Rehabilitate Taxiway A with Connectors, Construct	9,390,225	4,500,000	3,951,203	8,451,203	469,511		469,511				0	9,390,225
A16-D	Construct Runway 14-32 Improvements (Shoulders), Design	1,872,278	1,685,051		1,685,051	93,614		93,614				0	1,872,278
T9-D	Construct Pedestrian Bridge & Reconfigure Concessions, Design	303,876			0			258,294				45,581	303,876
T10-C	Construct Holdroom/Concessions Expansion #6	2,747,376			0			2,060,532				686,844	2,747,376
T11-C	Construct Holdroom/Concessions Expansion #7	2,146,284			0			1,609,713				536,571	2,146,284
T13-D	Construct New Concourse A, Design	8,907,955	2,000,000		2,000,000	0	5,000,000				1,000,000	907,955	8,907,955
GA2-C	Construct 24 Large T-Hangars	6,476,133			0	3,238,066						3,238,066	6,476,133
A16-C	Construct Runway 14-32 Improvements (Shoulders), Construct	16,850,506	4,588,061	10,577,395	15,165,456	842,525		842,525				0	16,850,506
T9-C	Construct Pedestrian Bridge & Reconfigure Concessions	3,510,581			0			2,983,994				526,587	3,510,581
T12-D	Construct Holdroom/Concessions Expansion #1, Design	693,712			0			520,284				173,428	693,712
T13-C1	Construct New Concourse A, Year 1	49,885,161	4,000,000		4,000,000	7,500,000	25,500,000			5,000,000	2,000,000	5,885,161	49,885,161
S4-D	Relocate Bulk Storage Facility, Design	238,339			0	119,169						119,169	238,339
S5-D	Expand Existing Vehicle Storage Building, Design	611,784			0	305,892						305,892	611,784
T12-C	Construct Holdroom/Concessions Expansion #1	5,202,837			0			3,902,128				1,300,709	5,202,837
T13-C2	Construct New Concourse A, Year 2	49,885,161	4,000,000		4,000,000	7,500,000	25,500,000			5,000,000	2,000,000	5,885,161	49,885,161
S4-C	Relocate Bulk Storage Facility, Construct	1,836,146			0	918,073						918,073	1,836,146
S5-C	Expand Existing Vehicle Storage Building, Construct	7,067,054			0	3,533,527						3,533,527	7,067,054
Reimb	Reimburse CONRAC Projects	0			0	0				3,285,512		(3,285,512)	0
	Total Intermediate-Term Project Funding Before Financing	$197,340,821	$24,582,337	$17,393,153	$41,975,490	$30,964,950	$56,000,000	$13,600,727	$9,500,000	$13,285,512	$5,000,000	$27,014,142	$197,340,821
	Financing Costs for Debt Serviced with PFCs	9,025,897					9,025,897						9,025,897
	Total Intermediate-Term Project Funding	$206,366,718	$24,582,337	$17,393,153	$41,975,490	$30,964,950	$65,025,897	$13,600,727	$9,500,000	$13,285,512	$5,000,000	$27,014,142	$206,366,718

Schedule 7-2
Projected Capital Funding Sources

01-Feb-21

Capital Improvement Projects		Total Escalated Costs	AIP Entitlement Funding	AIP Discretionary Funding	Total AIP Funding	FDOT Aviation / SIS Grants	Passenger Facility Charges (Debt)	Passenger Facility Charges (PAYG)	Other Capital Contribution	RAC Customer Facility Charges	Airport Cash Debt Proceeds	Cash Reserves/ Net Revs	Total Funding
Long-Term Projects (2031-2040)													
E4	Conduct EA for Select Long-Term Projects	$467,390	$420,651		$420,651	$23,370		$23,370				$0	$467,390
A19-D	Rehabilitate Taxiway C South, Design	389,492	350,543		350,543	19,475		19,475				0	389,492
A24	Acquire RPZ Properties/Easements (App to Rwy 14)	2,355,168		2,119,652	2,119,652	117,758		117,758				0	2,355,168
RP9-D	Construct Short-Term & Rental Car Parking Deck, Design	2,968,819			0	742,205				1,484,410		742,205	2,968,819
A19-C	Rehabilitate Taxiway C South, Construct	3,505,427	3,154,884		3,154,884	175,271		175,271				0	3,505,427
A20-D	Rehabilitate Taxiway G, Design	280,434	252,391		252,391	14,022		14,022				0	280,434
A21-D	Rehabilitate Taxiway H, Design	249,275	224,347		224,347	12,464		12,464				0	249,275
T14-D	Expand Baggage Claim, Design	794,038			0			794,038				0	794,038
RP9-C	Construct Short-Term & Rental Car Parking Deck	34,289,973			0	8,572,493				17,144,987		8,572,493	34,289,973
A20-C	Rehabilitate Taxiway G, Construct	2,523,907	2,271,516		2,271,516	126,195		126,195				0	2,523,907
A21-C	Rehabilitate Taxiway H, Construct	2,243,473	2,019,126		2,019,126	112,174		112,174				0	2,243,473
A22-D	Rehabilitate Taxiway D, Design	592,028	532,825		532,825	29,601		29,601				0	592,028
T14-C	Expand Baggage Claim, Construct	9,172,281			0			5,236,848				3,935,433	9,172,281
A22-C	Rehabilitate Taxiway D, Construct	5,328,249	4,795,424		4,795,424	266,412		266,412				0	5,328,249
A23-D	Rehabilitate Runway 4-22, Design	778,984	701,085		701,085	38,949		38,949				0	778,984
GA3-D	Construct 20 Small T-Hangars, Design	424,610			0	212,305						212,305	424,610
S8-D	Expand Fuel Farm (3rd Tank), Design	233,695			0	116,848						116,848	233,695
A23-C	Rehabilitate Runway 4-22, Construct	7,010,853	6,309,768		6,309,768	350,543		350,543				0	7,010,853
GA3-C	Construct 20 Small T-Hangars	4,904,242			0	2,452,121						2,452,121	4,904,242
S6-D	Construct New Vehicle Storage Building, Design	1,050,204			0	525,102						525,102	1,050,204
S8-C	Expand Fuel Farm (3rd Tank), Construct	961,266			0	480,633						480,633	961,266
T15-D	Construct Holdroom/Concessions Expansion #4, Design	1,479,338			0			1,109,504				369,835	1,479,338
S6-C	Construct New Vehicle Storage Building	12,130,200			0	6,065,100						6,065,100	12,130,200
A17-D	Construct Holding Bay at North End of Taxiway A, Design	233,695	210,326		210,326	11,685		11,685				0	233,695
A18-D	Construct Holding Bay at South End of Taxiway A, Design	233,695	210,326		210,326	11,685		11,685				0	233,695
T15-C	Construct Holdroom/Concessions Expansion #4	11,095,043			0			8,321,282				2,773,761	11,095,043
A17-C	Construct Holding Bay at North End of Taxiway A	1,734,018	1,560,616		1,560,616	86,701		86,701				0	1,734,018
A18-C	Construct Holding Bay at South End of Taxiway A	1,638,982	1,475,084		1,475,084	81,949		81,949				0	1,638,982
S7-D	Construct ARFF Station Improvements, Design	350,543	315,488		315,488	17,527		17,527				0	350,543
S7-C	Construct ARFF Station Improvements	1,621,844	1,459,660		1,459,660	81,092		81,092				0	1,621,844
	Total Long-Term Project Funding Before Financing	$111,041,166	$26,264,059	$2,119,652	$28,383,711	$20,743,679	$0	$17,038,545	$0	$18,629,396	$0	$26,245,835	$111,041,166
	Financing Costs for Debt Serviced with PFCs	24,866,321					24,866,321						24,866,321
	Total Long-Term Project Funding	$135,907,487	$26,264,059	$2,119,652	$28,383,711	$20,743,679	$24,866,321	$17,038,545	$0	$18,629,396	$0	$26,245,835	$135,907,487
Total Project Funding		$472,787,797	$69,788,984	$21,302,357	$91,091,341	$63,909,807	$89,892,218	$44,287,333	$38,569,560	$52,184,474	$5,000,000	$87,853,064	$472,787,797

Schedule 7-3a
PFC Serviced Debt Issue

01-Feb-21

Debt Issue Structure

Issue Date:	01-Oct-27	(FY 2027-28)
Interest:	5.0%	
Term:	25 Years	
Project Funding Requirement:	$56,000,000	
Debt Service Reserve Fund Requirement (MADS):	4,362,322	
Capitalized Debt Issue Costs (2.0%):	1,120,000	
Total Debt Requirement:	$61,482,322	

Notes:
(1) Assumes no interest earnings on Construction Fund balance or Debt Service Reserve Fund deposit.
(2) Assumes DSRF funded from the issue amount

Debt Service Schedule

Payment Number	Fiscal Year End	Beginning Principal	Annual Debt Service	Interest Payment	Principal Payment	Ending Principal
1	2028	$61,482,322	$4,362,322	$3,074,116	$1,288,206	$60,194,116
2	2029	60,194,116	4,362,322	3,009,706	1,352,616	58,841,500
3	2030	58,841,500	4,362,322	2,942,075	1,420,247	57,421,253
4	2031	57,421,253	4,362,322	2,871,063	1,491,259	55,929,994
5	2032	55,929,994	4,362,322	2,796,500	1,565,822	54,364,172
6	2033	54,364,172	4,362,322	2,718,209	1,644,113	52,720,059
7	2034	52,720,059	4,362,322	2,636,003	1,726,319	50,993,740
8	2035	50,993,740	4,362,322	2,549,687	1,812,635	49,181,105
9	2036	49,181,105	4,362,322	2,459,055	1,903,267	47,277,839
10	2037	47,277,839	4,362,322	2,363,892	1,998,430	45,279,409
11	2038	45,279,409	4,362,322	2,263,970	2,098,351	43,181,057
12	2039	43,181,057	4,362,322	2,159,053	2,203,269	40,977,788
13	2040	40,977,788	4,362,322	2,048,889	2,313,432	38,664,356
14	2041	38,664,356	4,362,322	1,933,218	2,429,104	36,235,252
15	2042	36,235,252	4,362,322	1,811,763	2,550,559	33,684,693
16	2043	33,684,693	4,362,322	1,684,235	2,678,087	31,006,606
17	2044	31,006,606	4,362,322	1,550,330	2,811,992	28,194,614
18	2045	28,194,614	4,362,322	1,409,731	2,952,591	25,242,023
19	2046	25,242,023	4,362,322	1,262,101	3,100,221	22,141,802
20	2047	22,141,802	4,362,322	1,107,090	3,255,232	18,886,571
21	2048	18,886,571	4,362,322	944,329	3,417,993	15,468,577
22	2049	15,468,577	4,362,322	773,429	3,588,893	11,879,684
23	2050	11,879,684	4,362,322	593,984	3,768,338	8,111,347
24	2051	8,111,347	4,362,322	405,567	3,956,754	4,154,592
25	2052	4,154,592	4,362,322	207,730	4,154,592	0
	Totals		$109,058,046	$47,575,724	$61,482,322	

Schedule 7-3b
Airport Cash Serviced Debt Issue

01-Feb-21

Debt Issue Structure

Issue Date:	01-Oct-27	(FY 2027-28)
Interest:	5.0%	
Term:	25 Years	
Project Funding Requirement:	$5,000,000	
Debt Service Reserve Fund Requirement (MADS):	389,493	
Capitalized Debt Issue Costs (2.0%):	100,000	
Total Debt Requirement:	$5,489,493	

Notes:
(1) Assumes no interest earnings on Construction Fund balance or Debt Service Reserve Fund deposit.
(2) Assumes DSRF funded from the issue amount

Debt Service Schedule

Payment Number	Fiscal Year End	Beginning Principal	Annual Debt Service	Interest Payment	Principal Payment	Ending Principal
1	2028	$5,489,493	$389,493	$274,475	$115,018	$5,374,475
2	2029	5,374,475	389,493	268,724	120,769	5,253,705
3	2030	5,253,705	389,493	262,685	126,808	5,126,898
4	2031	5,126,898	389,493	256,345	133,148	4,993,749
5	2032	4,993,749	389,493	249,687	139,806	4,853,944
6	2033	4,853,944	389,493	242,697	146,796	4,707,148
7	2034	4,707,148	389,493	235,357	154,136	4,553,012
8	2035	4,553,012	389,493	227,651	161,842	4,391,170
9	2036	4,391,170	389,493	219,559	169,935	4,221,236
10	2037	4,221,236	389,493	211,062	178,431	4,042,804
11	2038	4,042,804	389,493	202,140	187,353	3,855,452
12	2039	3,855,452	389,493	192,773	196,720	3,658,731
13	2040	3,658,731	389,493	182,937	206,556	3,452,175
14	2041	3,452,175	389,493	172,609	216,884	3,235,290
15	2042	3,235,290	389,493	161,765	227,729	3,007,562
16	2043	3,007,562	389,493	150,378	239,115	2,768,447
17	2044	2,768,447	389,493	138,422	251,071	2,517,376
18	2045	2,517,376	389,493	125,869	263,624	2,253,752
19	2046	2,253,752	389,493	112,688	276,805	1,976,947
20	2047	1,976,947	389,493	98,847	290,646	1,686,301
21	2048	1,686,301	389,493	84,315	305,178	1,381,123
22	2049	1,381,123	389,493	69,056	320,437	1,060,686
23	2050	1,060,686	389,493	53,034	336,459	724,227
24	2051	724,227	389,493	36,211	353,282	370,946
25	2052	370,946	389,493	18,547	370,946	0
	Totals		$9,737,325	$4,247,832	$5,489,493	

Schedule 7-4
Actual, Budgeted and Projected Operations & Maintenance Expenses

01-Feb-21

Operations & Maintenance Expenses	Actual 2018	Actual 2019	Actual 2020	Short-Term Budgeted 2021	Projected 2022	2023	2024	2025	Total	Intermediate-Term 2026-2030	Long-Term 2031-2040
Salaries and wages	$7,616,585	$8,105,705	$7,714,735	$7,093,010	$7,305,800	$7,524,974	$7,750,724	$7,983,245	$37,657,753	$43,655,657	$109,278,424
Employee Benefits	3,274,616	3,814,715	3,994,902	5,578,565	5,745,922	5,918,300	6,095,849	6,278,724	29,617,359	34,334,637	85,946,135
Operating supplies, maintenance, repairs	1,264,946	1,634,383	2,105,374	2,384,577	2,456,114	2,529,798	2,605,692	2,683,862	12,660,043	14,676,460	36,737,974
Service contract	628,687	547,256	746,836	819,563	844,150	869,474	895,559	922,425	4,351,171	5,044,200	12,626,593
Marketing	595,620	1,459,860	1,324,194	1,168,100	1,203,143	1,239,237	1,276,414	1,314,707	6,201,602	7,189,356	17,996,327
Utilities	967,769	1,014,139	918,102	997,460	1,027,384	1,058,205	1,089,951	1,122,650	5,295,651	6,139,110	15,367,363
General insurance	571,660	614,234	687,964	786,178	809,763	834,056	859,078	884,850	4,173,926	4,838,724	12,112,248
Professional services	280,326	265,416	341,122	375,625	386,894	398,501	410,456	422,769	1,994,244	2,311,876	5,787,065
Legal	252,857	723,827	492,194	350,000	360,500	371,315	382,454	393,928	1,858,198	2,154,160	5,392,273
Data processing supplies	219,286	251,639	335,548	254,650	262,290	270,158	278,263	286,611	1,351,971	1,567,305	3,923,264
Travel	144,482	137,705	78,253	189,150	194,825	200,669	206,689	212,890	1,004,223	1,164,170	2,914,139
Customs	135,057	136,029	151,663	180,000	185,400	190,962	196,691	202,592	955,644	1,107,854	2,773,169
Advertising and entertainment	129,505	169,632	76,659	170,350	175,461	180,724	186,146	191,730	904,411	1,048,461	2,624,496
Dues and subscriptions	81,107	88,074	91,037	108,675	111,935	115,293	118,752	122,315	576,970	668,867	1,674,301
Training	56,809	49,514	28,743	109,740	113,032	116,423	119,916	123,513	582,625	675,422	1,690,709
Uniforms and identification	43,614	65,581	66,743	58,500	60,255	62,063	63,925	65,842	310,584	360,052	901,280
Accounting and audit fees	43,250	44,750	43,000	44,200	45,526	46,892	48,299	49,747	234,664	272,040	680,967
Office supplies, postage and publishing	36,004	50,013	52,286	48,825	50,290	51,798	53,352	54,953	259,219	300,505	752,222
Miscellaneous	30,523	23,346	62,744	22,200	22,866	23,552	24,259	24,986	117,863	136,635	342,024
Public relations	25,977	31,727	27,301	33,000	33,990	35,010	36,060	37,142	175,201	203,107	508,414
Bad debt	22,185	1,030	38,075	5,000	5,150	5,305	5,464	5,628	26,546	30,774	77,032
Shuttle service	15,276	4,561	2,696	8,000	8,240	8,487	8,742	9,004	42,473	49,238	123,252
Taxes	14,448	26,789	10,887	35,000	36,050	37,132	38,245	39,393	185,820	215,416	539,227
Bond and banking fees	12,680	19,375	23,237	23,000	23,690	24,401	25,133	25,887	122,110	141,559	354,349
Car allowance	9,816	16,812	17,312	17,100	17,613	18,141	18,686	19,246	90,786	105,246	263,451
Interior plants	7,595	1,546	44	300	309	318	328	338	1,593	1,846	4,622
Equipment rental	5,284	3,194	8,386	11,500	11,845	12,200	12,566	12,943	61,055	70,780	177,175
Total Operations & Maintenance Expenses	$16,485,964	$19,300,852	$19,440,037	$20,872,268	$21,498,436	$22,143,389	$22,807,691	$23,491,922	$110,813,705	$128,463,456	$321,568,496
Annual Growth Rate	-	17.1%	0.7%	7.4%	3.0%	3.0%	3.0%	3.0%	3.9%	3.0%	3.0%
Operating Expenses Per Enplaned Passenger:											
Sarasota Bradenton International Airport	$24.07	$19.70	$29.91	$17.70	$17.92	$17.03	$16.50	$16.76	$17.15	$17.61	$20.21
Small-Hub Industry Average	$19.17	$18.71	$18.80	$18.90	$19.00	$19.10	$19.20	$19.31	$19.10	$19.66	$20.46

Schedule 7-5
Actual, Budgeted and Projected Operating Revenues

01-Feb-21

Revenues	Actual 2018	Actual 2019	Actual 2020	Short-Term: Budgeted 2021	Short-Term: Projected 2022	Short-Term: Projected 2023	Short-Term: Projected 2024	Short-Term: Projected 2025	Short-Term: Total	Intermediate-Term 2026-2030	Long-Term 2031-2040
					LDW - Landed Weight Growth (2022 vs. 2019)						
					ENP - Enplanement Growth (2022 vs. 2019)						
					ENP - Enplanement Growth (2022 vs. 2019) no inflation						
AIRLINE REVENUES											
Landing Fees - Signatory	$120,104	$96,056	$412,076	$442,280	$110,054	$118,079	$125,479	$130,123	$926,015	$726,347	$1,901,417
Landing Fees - Non-Signatory/Non Scheduled	71,945	112,387	259,048	132,125	128,765	138,155	146,813	152,246	698,104	849,839	2,224,691
Terminal Rents - Signatory	4,929,342	5,550,887	5,046,051	5,584,764	5,752,307	5,924,876	6,102,622	6,285,701	29,650,271	34,372,790	86,041,640
Terminal Rents - Non-Signatory	692,692	1,802,519	2,686,627	1,749,709	1,802,200	1,856,266	1,911,954	1,969,313	9,289,443	10,769,010	26,956,883
Preferential Apron Fees	159,851	181,293	84,085	165,911	170,888	176,015	181,295	186,734	880,844	1,021,140	2,556,107
Non-Preferential Gate Use Fees	115,104	278,460	308,172	197,400	203,322	209,422	215,704	222,175	1,048,023	1,214,946	3,041,242
Airline Incentives	(465,089)	(1,586,530)	(2,415,254)	0	0	0	0	0	0	0	0
Total Airline Revenues	$5,623,949	$6,435,072	$6,380,805	$8,272,189	$8,167,537	$8,422,813	$8,683,869	$8,946,292	$42,492,700	$48,954,072	$122,721,980
Annual Growth Rate	-	14.4%	-0.8%	29.6%	-1.3%	3.1%	3.1%	3.0%	7.0%	3.0%	3.0%
Airline Cost Per Enplaned Passenger:											
Sarasota Bradenton International Airport	$8.21	$6.57	$9.82	$7.02	$6.81	$6.48	$6.28	$6.38	$6.58	$6.71	$7.71
Small-Hub Industry Average	$7.79	$7.28	$7.32	$7.36	$7.40	$7.44	$7.48	$7.51	$7.44	$7.65	$7.96
NON-AIRLINE REVENUES											
Fuel Flowage Fees	$298,533	$527,152	$535,679	$268,800	$603,977	$648,017	$688,629	$714,111	$2,923,533	$3,986,185	$10,434,951
Air Cargo Facility	73,450	95,927	80,789	76,638	79,640	85,447	90,802	94,162	426,690	525,617	1,375,949
Ground Lease - Airfield	166,507	169,863	174,130	174,129	180,950	194,144	206,312	213,946	969,481	1,194,252	3,126,289
T-Hangar Facilities	555,121	739,402	895,717	750,000	772,500	795,675	819,545	844,132	3,981,852	4,616,058	11,554,871
Fixed Base Operators - Rent	690,418	704,441	714,017	710,563	731,880	753,836	776,451	799,745	3,772,475	4,373,333	10,947,285
Fuel Services - ASIG/Menzies	23,711	35,362	33,034	25,490	26,255	27,042	27,854	28,689	135,330	156,884	392,712
Other Terminal Rents	355,708	310,221	256,620	244,439	251,772	259,325	267,105	275,118	1,297,760	1,504,459	3,765,948
Advertising	275,560	313,485	177,468	120,000	123,600	127,308	131,127	135,061	637,096	738,569	1,848,779
Restaurant Services	406,381	569,252	445,936	122,500	718,094	801,273	877,669	916,293	3,435,830	5,220,771	14,291,016
Gift Shop	352,429	469,059	367,435	115,800	591,703	660,242	723,191	755,017	2,845,954	4,301,868	11,775,668
Vending	14,622	14,275	12,023	6,500	18,008	20,093	22,009	22,978	89,588	130,920	358,373
Auto Parking	2,745,005	3,825,035	2,537,559	738,100	4,184,624	4,533,343	4,820,935	4,886,500	19,163,502	25,437,288	55,528,319
Car Rentals - Concession Fee	3,397,814	4,085,442	3,709,392	1,084,438	4,653,658	5,192,707	5,687,792	5,938,101	22,556,697	33,833,561	92,613,904
Car Rentals - Office Space	174,139	174,139	174,139	174,000	179,220	184,597	190,134	195,839	923,790	1,070,925	2,680,730
Car Rentals - Ready Car Spaces	50,670	55,440	55,440	55,440	57,103	58,816	60,581	62,398	294,338	341,219	854,136
Car Rentals - Land Rent	506,634	506,634	506,634	506,633	521,832	537,487	553,612	570,220	2,689,783	3,118,196	7,805,439
Car Rentals - Security & O&M Fee	282,480	319,544	255,628	169,488	391,354	423,967	450,863	456,995	1,892,668	2,378,945	5,193,117
Ground Transportation	209,776	310,399	229,580	68,878	380,154	411,834	437,960	443,917	1,742,743	2,310,864	5,044,499
Parking Stickers/Hang Tags	79,217	101,674	54,930	23,765	124,522	134,899	143,457	145,408	572,052	756,940	1,652,362
Land - Non-Aviation	587,606	511,506	519,405	502,918	518,006	533,546	549,552	566,039	2,670,060	3,095,331	7,748,204
Buildings - Non-Aviation	575,457	1,379,124	134,124	134,088	138,111	142,254	146,522	150,917	711,891	825,277	2,065,826
University Self Storage	442,415	521,514	582,805	500,000	515,000	530,450	546,364	562,754	2,654,568	3,077,372	7,703,248
I.D. Badges	9,550	31,146	16,929	12,000	12,360	12,731	13,113	13,506	63,710	73,857	184,878
LEO Reimbursement	112,280	112,798	101,954	100,000	103,000	106,090	109,273	112,551	530,914	615,474	1,540,650
Miscellaneous Income	49,916	105,494	147,543	10,300	0	0	0	0	10,300	0	0
Total Non-Airline Revenues	$12,435,401	$15,988,328	$12,718,909	$6,694,907	$15,877,324	$17,175,125	$18,340,852	$18,904,396	$76,992,604	$103,684,167	$260,487,154
Annual Growth Rate	-	28.6%	-20.4%	-47.4%	137.2%	8.2%	6.8%	3.1%	8.2%	3.1%	3.0%
NON-OPERATING REVENUES											
Interest Earned - Operating	$110,926	$158,457	$275,280	$350,000	$350,000	$350,000	$350,000	$350,000	$1,750,000	$1,750,000	$3,500,000
Profit/Loss on Disposal Gov. Deals	17,481	51,161	34,228	15,000	15,000	15,000	15,000	15,000	75,000	90,000	135,000
Gain/Loss on Sale of Investments	0	0	3,791	0	0	0	0	0	0	0	0
PFC Reimbursements Apps 5 &6)	0	0	0	0	4,533,180	2,463,290	0	4,965,770	11,962,241	4,333,104	0
FEMA Storm Recovery Reimbursements	10,611	49,085	1,522	0	0	0	0	0	0	0	0
CARES Act Funds/CRRSA Funds	0	0	2,695,806	20,598,530	4,200,000	0	0	0	24,798,530	0	0
Total Non-Operating Revenues	$139,018	$258,703	$3,010,627	$20,963,530	$9,098,180	$2,828,290	$365,000	$5,330,770	$38,585,771	$6,173,104	$3,635,000
Annual Growth Rate	-	86.1%	1063.7%	596.3%	-56.6%	-68.9%	-87.1%	1360.5%	12.1%	-41.5%	0.0%
Total Revenues	$18,198,367	$22,682,103	$22,110,341	$35,930,626	$33,143,041	$28,426,228	$27,389,721	$33,181,459	$158,071,074	$158,811,344	$386,844,134
Annual Growth Rate	-	24.6%	-2.5%	62.5%	-7.8%	-14.2%	-3.6%	21.1%	8.5%	-0.3%	3.0%
Operating Revenues Per Enplaned Passenger:											
Sarasota Bradenton International Airport	$26.36	$22.89	$29.38	$12.69	$20.04	$19.69	$19.55	$19.88	$18.49	$20.93	$24.09
Small-Hub Industry Average	$27.78	$27.09	$27.24	$27.38	$27.52	$27.67	$27.81	$27.96	$27.67	$28.48	$29.63

Schedule 7-6
Financial Plan Summary – Budgeted and Projected Net Revenues, Capital Funding and Capital Expenditures

01-Feb-21

Operating/Capital Cash Flow	Short-Term						Intermediate-Term	Long-Term
	Budgeted	Projected						
	2021	2022	2023	2024	2025	Total	2026-2030	2031-2040
Passenger Enplanements	1,179,000	1,200,000	1,300,000	1,382,471	1,401,273	6,462,744	7,294,501	15,910,399
Annual Growth Rates	-	1.78%	8.33%	6.34%	1.36%	4.41%	1.36%	1.08%
Operating Cash Flow								
Revenues:								
Airline Revenues	$8,272,189	$8,167,537	$8,422,813	$8,683,869	$8,946,292	$42,492,700	$48,954,072	$122,721,980
Non-Airline Revenues	6,694,907	15,877,324	17,175,125	18,340,852	18,904,396	76,992,604	103,684,167	260,487,154
Non-Operating Revenues	20,963,530	9,098,180	2,828,290	365,000	5,330,770	38,585,771	6,173,104	3,635,000
Total Revenues	$35,930,626	$33,143,041	$28,426,228	$27,389,721	$33,181,459	$158,071,074	$158,811,344	$386,844,134
Operations & Maintenance Expenses	(20,872,268)	(21,498,436)	(22,143,389)	(22,807,691)	(23,491,922)	(110,813,705)	(128,463,456)	(321,568,496)
Total Net Operating Cash Flow Available For Capital Expenditures	$15,058,358	$11,644,605	$6,282,839	$4,582,030	$9,689,537	$47,257,369	$30,347,888	$65,275,638
Capital Cash Flow								
Beginning Cash Balance	$18,795,582	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$18,795,582	$31,459,865	$33,625,131
Other Capital Funding Sources:								
AIP Entitlement Grants:	$4,003,753	$3,575,000	$4,209,000	$4,230,000	$4,330,000	$20,347,753	$22,252,945	$45,874,324
AIP Entitlement unspent current year + carryover	(4,367,051)	(2,293,491)	(5,535,559)	(8,114,725)	(2,329,391)	(2,329,391)	0	(19,610,265)
AIP Entitlements carryover from the prior years	924,226	4,367,051	2,293,491	5,535,559	8,114,725	924,226	2,329,391	0
AIP Discretionary Grants	0	1,633,051	0	0	156,502	1,789,553	17,393,153	2,119,652
FDOT Aviation / SIS Grants	1,601,913	2,924,882	2,722,704	2,758,038	2,193,641	12,201,178	30,964,950	20,743,679
Passenger Facility Charges:	4,658,229	208,020	2,673,010	5,462,143	570,658	13,572,059	24,487,468	62,861,988
PFC beginning year unliquidated balance	76,001	(208,020)	0	2,243,129	0	76,001	0	(2,200,225)
PFC unspent current year + carryover	208,020	0	(2,243,129)	(0)	(0)	(0)	2,200,225	0
PFC Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	56,000,000	0
Less PFC Funded Principal Payments	0	0	0	0	0	0	(4,061,069)	(18,756,897)
Debt Proceeds (25 yrs, 5.0%) Thru 2052	0	0	0	0	0	0	5,000,000	0
Less Cash Debt Service Payments	0	0	0	0	0	0	(1,168,479)	(3,894,930)
Other Capital Contribution	825,750	106,090	0	28,137,720	0	29,069,560	9,500,000	0
RAC Customer Facility Charges	1,893,666	3,278,434	3,551,637	3,776,950	3,828,317	16,329,005	19,928,785	43,503,534
CFC beginning year unliquidated balance	3,940,562	1,920,228	0	0	0	5,860,790	(0)	6,643,273
CFC unspent current year + carryover	(1,920,228)	0	0	0	0	(1,920,228)	(6,643,273)	(31,517,411)
Total Other Capital Funding Sources	$11,844,840	$15,511,245	$7,671,154	$44,028,815	$16,864,451	$95,920,506	$178,184,096	$105,766,721
Total Funds Available for Capital Expenditures	$45,698,780	$52,396,951	$47,185,709	$78,686,923	$46,136,372	$161,973,457	$239,991,849	$204,667,490
Capital Improvement Program Expenditures	20,457,680	19,165,235	17,109,631	59,104,540	14,676,507	130,513,592	206,366,718	135,907,487
Ending Cash Balance	$25,241,101	$33,231,716	$30,076,078	$19,582,383	$31,459,865	$31,459,865	$33,625,131	$68,760,004

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Sarasota Manatee Airport Authority
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APPENDIX A

Environmental Considerations

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACRONYMS AND ABBREVIATIONS

ACS	American Community Survey
AOA	Air Operations Area
AST	Above-ground Storage Tanks
BFE	Base Flood Elevation
CBRS	Coastal Barrier Resources System
CFR	Code of Federal Regulation
DOT	Department of Transportation
EDR	Environmental Data Resources
EJSCREEN	Environmental Justice Screening and Mapping Tool
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Environmental Science Associates
F.A.C.	Florida Administrative Code
F.S.	Florida Statutes
FAA	Federal Aviation Administration
FCMP	Florida Coastal Management Program
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FLUCFCS	Florida Land Use, Cover and Forms Classification Systems
FMSF	Florida Master Site File
FNAI	Florida Natural Areas Inventory
FONPA	Finding of No Practicable Alternative
FPPA	Farmland Protection Policy Act
FWC	Florida Fish and Wildlife Conservation Commission
GIS	Geographic Information System
IPaC	Information for Planning and Consultation
MSA	Metropolitan Statistical Areas
NAAQS	National Ambient Air Quality Standards
NATA	National Air Toxics Assessment
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NPDES	National Pollutant Discharge Elimination System
NPIAS	National Plan of Integrated Airport Systems
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
ppb	Parts Per Billion
ppm	Parts Per Million
RCRA	Resource Conservation and Recovery Act
RPZ	Runway Protection Zone
SFHA	Special Flood Hazard Areas
SHPO	State Historic Preservation Office
SMAA	Sarasota Manatee Airport Authority
SRQ	Sarasota Bradenton International Airport

SWFWMD	Southwest Florida Water Management District
SWPPP	Stormwater Pollution Prevention Plan
U.S.	United States
U.S.C.	U.S. Code
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
WHA	Wildlife Hazard Assessment
WHMP	Wildlife Hazard Management Plan
$\mu g/m^3$	micrograms per cubic meter

A.1 INTRODUCTION

This Environmental Considerations was prepared to 1) characterize the existing physical, natural and social environment on and surrounding Sarasota Bradenton International Airport (SRQ); and 2) identify environmental review, approval and permitting requirements potentially applicable to the proposed projects at the Airport. The following paragraphs provide information on key environmental categories that should be considered during the planning process.

A.2 AIRPORT BACKGROUND AND DESCRIPTION

SRQ is owned and operated by the Sarasota Manatee Airport Authority (SMAA). The SMAA is a public agency created by the State of Florida and comprised of six commissioners that are appointed by the Governor. The SMAA is tasked with operating and maintaining SRQ to meet the air transportation needs of Sarasota and Manatee counties. The SMAA does not have taxation power; therefore, operating budgets are dependent upon airport generated revenue.

SRQ is located on the north border of Sarasota County and the south border of Manatee County 3.5 miles north of the City of Sarasota and five miles south of the City of Bradenton. The main portion of Airport property is bordered on the north by Tallevast Road, on the south by University Parkway, on the east by United States (U.S.) Highway 41 and on the east by 15th Street East. Additional Airport parcels extend east to U.S. Highway 301. **Figure A.2-1** depicts the location of SRQ within the State of Florida and locally.

The 2019-2023 National Plan of Integrated Airport Systems (NPIAS) classified SRQ as a primary commercial service airport. Primary Commercial service airports are defined by the plan as public airports that receive scheduled passenger service and have more than 10,000 passenger enplanements per year. The Airport enplaned 979,810 passengers in 2019.[1]

Additionally, the NPIAS further classifies the Airport as a small hub. Small hubs are defined as airports that enplane 0.05 percent to 0.25 percent of total U.S. passenger enplanements.

[1] Sarasota Manatee Airport Authority, 2020

LOCATION MAP

VICINITY MAP

Sources: Location Map, 2019: Florida Department of Motor Vehicles
Prepared by: American Infrastructure Development, Inc.

srq SARASOTA BRADENTON INTERNATIONAL AIRPORT MASTER PLAN UPDATE	LOCATION AND VICINITY MAPS	FIGURE A.2-1

A.3 ENVIRONMENTAL CONSTRAINTS

A.3.1 AIR QUALITY

Pursuant to the Federal Clean Air Act and its amendments, the U.S. Environmental Protection Agency (EPA) identifies air pollutants that cause or contribute to the endangerment of human health and or environmental welfare, and establishes air quality "criteria" that guide the establishment of air quality standards to regulate these pollutants (42 U.S. Code (U.S.C.) Sections 7408 - 7409). To date, EPA has established such criteria for six air pollutants: carbon monoxide, lead, nitrogen dioxide, ozone, fine and respirable particulate matter, and sulfur dioxide, and has subsequently promulgated National Ambient Air Quality Standards (NAAQS) meant to safeguard public health (i.e., primary NAAQS) and environmental welfare (i.e., secondary NAAQS).

EPA evaluates ambient monitoring data on a geographic basis, delineated by Core Based Statistical Areas (CBSA) or Metropolitan Statistical Areas (MSA) established by the U.S. Office of Management and Budget and U.S. Census Bureau. From each ambient monitor within a CBSA/MSA, EPA derives criteria pollutant design values, which are statistics that describe the air quality status of a given location relative to the level of the NAAQS. Areas where monitored ambient air concentrations (i.e., design values) are within an applicable NAAQS are considered in attainment of that NAAQS. If sufficient data are not available to make a determination, the area is instead deemed attainment/unclassifiable. Areas where monitored ambient air concentrations exceed the NAAQS are designated by EPA as nonattainment areas. Lastly, areas that have historically violated the NAAQS, but have since instituted controls and programs that have successfully remedied these violations are known as maintenance areas. According to the US EPA, Manatee and Sarasota counties are considered attainment/unclassifiable of all current NAAQS.

The current NAAQS are summarized on **Table A.3-1**, along with EPA data from the nearest available air monitoring stations for the period of 2016-2018. Of note, only ozone, nitrogen dioxide, and particulate matter less than 10 micrometers in size concentrations are monitored within six miles of the Airport; pollutant monitoring data from more-distant monitors are excluded from the summary. Available data indicate no current violations of the NAAQS for ozone, nitrogen dioxide, and particulate matter less than 10 micrometers. As stated, the Airport area is considered attainment/unclassifiable of all NAAQS.

Table A.3-1
Air Monitoring Data Summary (2016-2018)

Pollutant	Averaging Time	Level	Form	Concentration (Monitor ID, Distance from Airport)		
				12-081-4012 (6.0 miles NW)	12-081-4013 (3.5 miles NE)	12-115-1006 (5.1 miles SE)
Carbon [76 FR 54294, Aug 31, 2011]	8-hour	9 ppm	Not to be exceeded more than once per year	--	--	--
	1-hour	35 ppm		--	--	--
Lead [81 FR 71906, Oct 18, 2016]	Rolling 3-month average	0.15 µg/m^3	Not to be exceeded	--	--	--
Nitrogen Dioxide [77 FR 20218, Apr 3, 2012] [75 FR 6474, Feb 9, 2010]	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years	--	--	14.73
	Annual	53 ppb	Annual mean	--	--	1.87
Ozone [80 FR 65292, Oct 26, 2015]	8-hour	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years	0.064	0.062	0.064
Particle Pollution [78 FR 3085, Jan 15, 2013]	Particulate Matter less than 2.5 micrometers Annual (primary)	12 µg/m^3	Annual mean, averaged over 3 years	--	--	--
	Particulate Matter less than 2.5 micrometers Annual (secondary)	15 µg/m^3	Annual mean, averaged over 3 years			
	Particulate Matter less than 2.5 micrometers 24-hour	35 µg/m^3	98th percentile, averaged over 3 years	--	--	--
	Particulate Matter less than 10 micrometers 24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years	--	--	Not exceeded
Sulfur Dioxide [77 FR 20218, Apr 3, 2012] [75 FR 35520, Jun 22, 2010]	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years	--	--	--
	3-hour	0.5 ppm	Not to be exceeded more than once per year	--	--	--

Sources: FR, as above; and EPA AirData (https://www.epa.gov/outdoor-air-quality-data/interactive-map-air-quality-monitors), accessed October 31, 2019.
-- = not monitored; ppb = parts per billion; ppm = parts per million; µg/m^3 = micrograms per cubic meter of air.

A.3.2 BIOLOGICAL RESOURCES

The Endangered Species Act of 1973, as amended (87 Stat. 884; 16 U.S.C. 1531 et seq.), requires that all Federal agencies undertake programs for the conservation of endangered and threatened species and prohibits Federal agencies from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its critical habitat as designated in 50 Code of Federal Regulations (CFR) 17 and 226. Projects that would otherwise jeopardize a federally listed species or impact its critical habitat must contain conservation measures or habitat mitigation that removes the jeopardy. State listed species are those animal and plant species protected by the State of Florida.

The following information was reviewed to characterize habitat features and land use patterns within the study area:

- Aerial photographs, (Hanson Professional Services/Quantum Spatial, 2019);
- U.S. Fish and Wildlife Service (USFWS), Information for Planning and Consultation (IPaC) (https://ecos.fws.gov/ipac) (USFWS, 2020);
- USFWS, Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12, updated March 2017 (USFWS, 2017);
- Florida Fish and Wildlife Conservation Commission (FWC), *Florida's Endangered Species, Threatened Species, and Species of Special Concern*, Chapter 68A-27, Florida Administrative Code (F.A.C.), updated December 2018 (FWC, 2018);
- FWC, Eagle Nest Locator website (http://myfwc.maps.arcgis.com/apps/webappviewer/index.html?id=253604118279431984e8bc3ebf1cc8e9), updated 2017 (FWC, 2017);
- Florida Natural Areas Inventory (FNAI), Sarasota and Manatee Counties Tracking Lists, (http://fnai.org/bioticssearch.cfm), updated April 2019 (FNAI, 2019);
- Florida Department of Agricultural and Consumer Services (FDACS), 2010 *Notes on Florida's Endangered and Threatened Plants: Botany Contribution No. 38, 5th edition*;
- Southwest Florida Water Management District (SWFWMD) Florida Land Use, Cover and Forms Geographic Information System (GIS) Database (SWFWMD, 2017);
- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), Web Soil Survey of Sarasota and Manatee Counties, Florida http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx;
- Florida Association of Professional Soil Scientists, Hydric Soils of Florida Handbook, Fourth Edition (Hurt, 2007);
- Florida Department of Transportation (FDOT), *Florida Land Use, Cover and Forms Classification System Handbook* (FLUCFCS) (Third edition, 1999);
- Florida Department of Environmental Protection (FDEP), Map Direct Gateway (http://ca.dep.state.fl.us/mapdirect/gateway.jsp);

- Wildlife Hazard Assessment (WHA), prepared by Environmental Science Associates (ESA) in May 2018 for SRQ; and
- Wildlife Hazard Management Plan (WHMP) for SRQ approved by the FAA October 15, 2018.

In addition, SRQ's 2019 Master Drainage Plan Update was prepared by ESA and authorized by SWFWMD on February 6, 2020 in accordance with Environmental Resource Permit (ERP) #43009458.045. Based on review of the listed documentation and databases, the majority of the airfield is regularly mowed and maintained and is vegetated with ruderal vegetation. Several small stormwater ponds are located within and adjacent to the air operations area (AOA). The outparcel southeast of Runway 32 consists of an additional large, open water stormwater pond. The outparcel located northeast of Runway 22 consists of herbaceous wetlands surrounded by upland tree plantations. All vegetative habitats and land uses within the Airport property boundary were classified using the FLUCFCS and mapped using SWFWMD's GIS data. Land use and vegetative cover types identified within the Airport property boundary are depicted on **Figure A.3-1**. **Table A.3-2** summarizes the acreage of each land use/vegetative cover type within the existing property boundary.

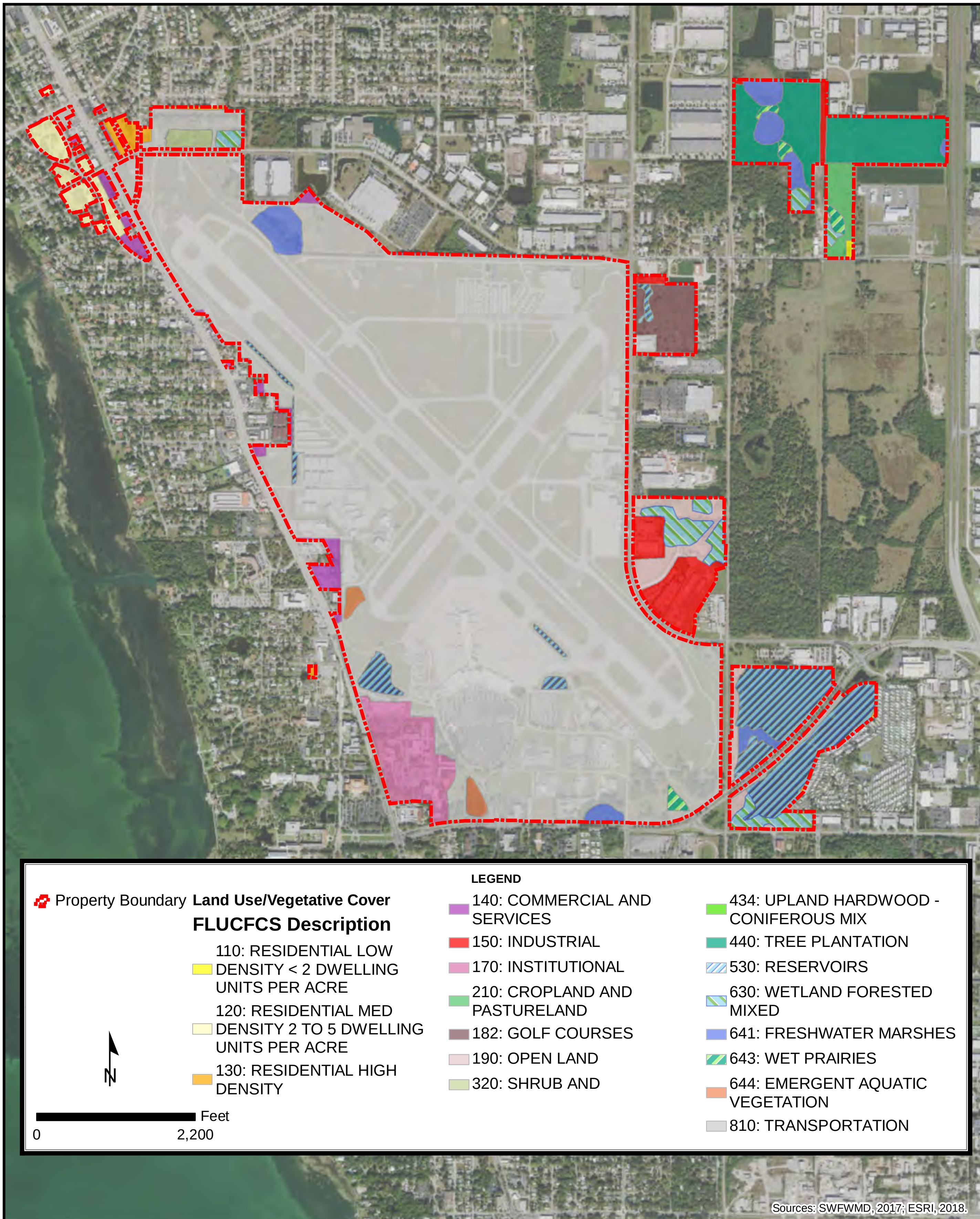
Table A.3-2
Land Use and Vegetative Communities on Airport Property

FLUCFCS Description	Acres
Uplands	
110 – Residential (low-density)	0.6
120 – Residential (medium-density)	14.2
130 – Residential (high-density)	5.9
140 – Commercial and services	13.6
150 – Industrial	27.0
170 – Institutional	29.9
182 – Golf Course	15.6
190 – Open land	17.8
210 – Cropland and pastureland	8.6
320 – Shrub and brushland	3.5
434 – Upland hardwood-coniferous mix	0.2
440 – Tree plantation	46.8
810 – Transportation	920.2
Sub-total of uplands	*1,103.9*
Wetlands	
630 – Wetland forested mixed	20.3
641 – Freshwater marshes	23.1
643 – Wet prairie	4.4
644 – Emergent aquatic vegetation	4.4
Sub-total of wetlands	*52.2*
Other Surface Waters	
530 – Reservoirs	60.4
TOTAL	**1,216.5**

Source: FDOT, 1999; SWFWMD, 2017.

Based on ERP #43009458.045, the wetland land use descriptions mapped within the AOA at SRQ are all considered to be upland-cut ditches and ponds, were not constructed to divert natural stream flow, and do not provide significant habitat for threatened or endangered species.

The potential for federally and state listed species to occur within and/or adjacent to the Airport was assessed by reviewing agency listings of species, species' ranges, the presence of suitable nesting and foraging habitat located within and/or adjacent to the Airport, and the 2018 WHA. **Table A.3-3** provides a summary of the listed and protected species with the potential to occur within and/or adjacent to the Airport.



SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

LAND USE/ VEGETATIVE COVER

FIGURE A.3-1

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Table A.3-3
State and Federally Listed Species[1] with Potential to Occur On or Adjacent to the Airport

Species	Common Name	Habitat	Federal Status[2]	State Status[3]
Reptiles				
Drymarchon corais couperi	Eastern indigo snake	Various habitats with the exception of open water.	T	FT
Gopherus polyphemus	Gopher tortoise	Dry upland habitats, including disturbed habitats such as pastures, old fields, and road shoulders.	C	T
Birds				
Anitgone canadensis pratensis	Florida sandhill crane	Prairies, freshwater marshes, and pasture lands. Will frequent agricultural areas like feed lots and crop fields, and also golf courses and other open lawns.	NL	T
Aphelocoma coerulescens	Florida scrub jay	Fire-dominated, low-growing, oak scrub habitat found on well-drained sandy soils. ***SRQ is located within the USFWS consultation area for the Florida scrub jay.**	T	FT
Athene cunicularia floridana	Florida burrowing owl	High, sparsely vegetated, sandy ground. Natural habitats include dry prairie and sandhill. Makes extensive use of ruderal areas such as pastures, airports, ball fields, parks, school grounds, university campuses, road right-of-ways, and vacant spaces in residential areas.	NL	T
Caracara cheriway	Crested caracara	Open country with scattered cabbage palms, cabbage palm/live oak hammocks, and shallow ponds/sloughs.	T	FT
Egretta caerulea	Little blue heron	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, and in manmade impoundments and ditches.	NL	T
Egretta tricolor	Tricolored heron	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, and in manmade impoundments and ditches.	NL	T
Falco sparverius Paulus	Southeastern American kestrel	Open pine habitats, woodland edges, prairies and pastures.	NL	T
Mycteria americana	Wood stork	Nests in inundated forested wetlands. Forages in freshwater marshes, swamps, flooded pastures. ***Three active wood stork colonies located within USFWS-designated 18.6-mile buffer (see Figure 1.3-2).**	T	FT
Platalea ajaja	Roseate spoonbill	Marine tidal flats and ponds, coastal marshes, mangrove-dominated inlets and pools, and freshwater sloughs and marshes.	NL	T

Table A.3-3 (continued)
State and Federally Listed Species[1] with Potential to Occur On or Adjacent to the Airport

Species	Common Name	Habitat	Federal Status[2]	State Status[3]
Rynchops niger	Black skimmer	Coastal waters, including beaches, bays, estuaries, sandbars, tidal creeks (foraging), and also inland waters of large lakes, phosphate pits, and flooded agricultural fields. Nests primarily on sandy beaches, small coastal islands, and dredge spoil islands, gravel rooftops.	NL	T
Mammals				
Eumops floridanus	Florida bonneted bat	Foraging habitat consists of open fresh water, permanent or seasonal freshwater wetlands, within and above wetland and upland forests, wetland and upland shrub, and agricultural lands golf courses, parking lots, and parks in addition to relatively small patches of natural habitat. Roosting habitat includes forest and other areas with tall, mature trees or other areas with suitable roost structures (*e.g.,* utility poles, artificial structures). ***SRQ is located within the USFWS consultation area for the Florida bonneted bat (Sarasota County only)**	E	FE
Other Species of Concern				
Haliaeetus leucocephalus	Bald eagle	Nests in tall trees. Forages near bodies of water.	NL[(4)]	NL[(4)]

NL = Not Listed; E = Endangered; T = Threatened; F = Federal; C = Candidate
Sources: See footnotes below.

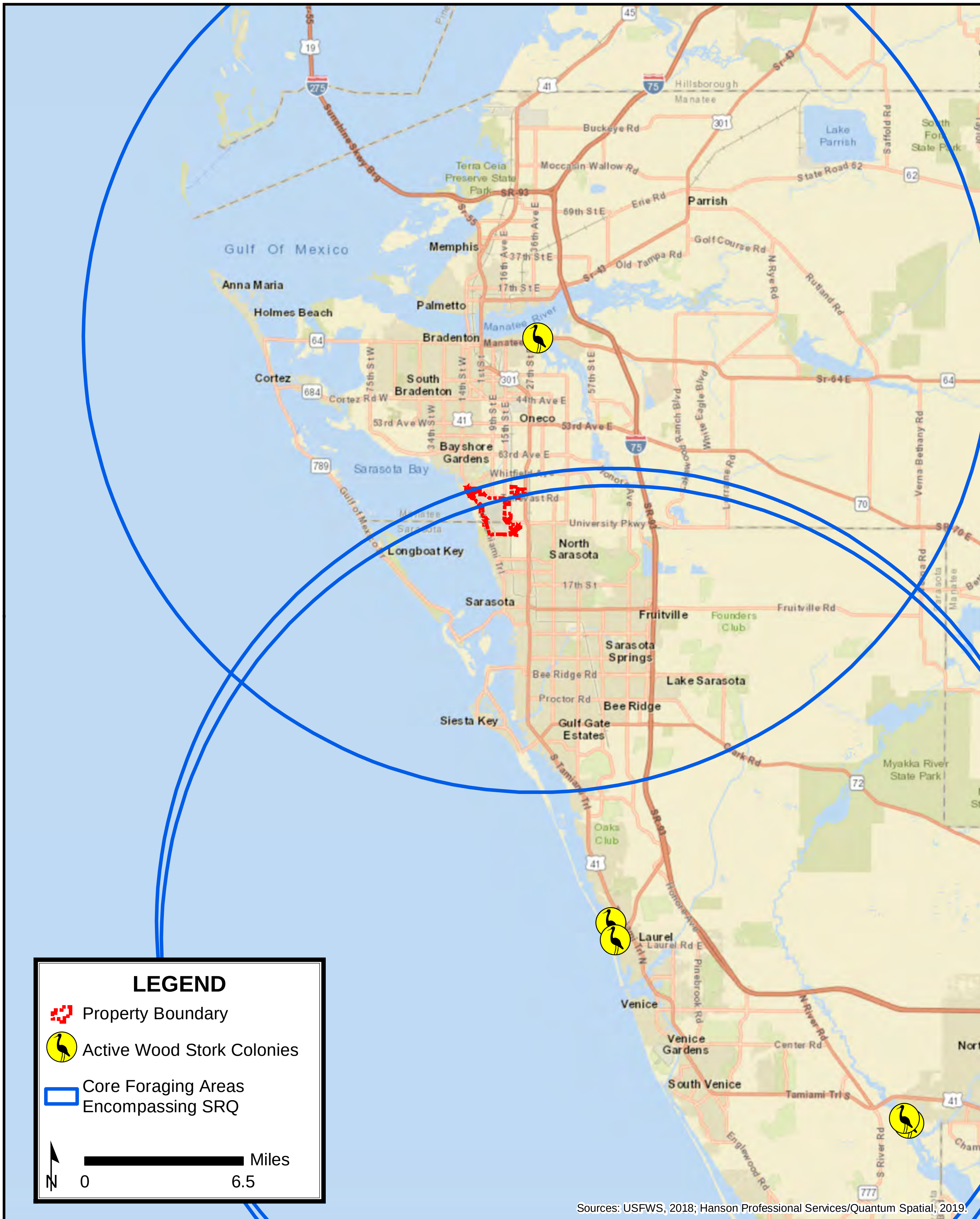
1 As reported by the "FNAI Tracking List, Manatee and Sarasota counties", accessed on October 31, 2019 from http://www.fnai.org and the USFWS IPaC database accessed on October 31, 2019 from http://ecos.fws.gov/ipac.

2 As listed by the USFWS in 50 CFR 17 (http://www.fws.gov/endangered/), updated March 2017.

3 Plant species listed by the FDACS pursuant to Chapter 5B-40, F.A.C., updated July 2018. Animal species listed by the FWC pursuant to Rules 68A-27.003 through 68A-27.005, F.A.C. (https://myfwc.com/wildlifehabitats/wildlife/), updated December 2018.

4 The bald eagle is neither state nor federally-listed; however, this species is federally-protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The bald eagle is also managed in Florida by the FWC's bald eagle rule (68A-16.002, F.A.C.).

Based on the review of 2018 WHA, the following listed and protected species have been observed on or adjacent to SRQ during the WHA study period (September 2016 through August 2017): American kestrel, bald eagle, black skimmer, burrowing owl, little blue heron, roseate spoonbill, sandhill crane, and tricolored heron. According to the 2018 WHMP, SRQ using non-lethal methods to prevent and/or minimize wildlife strikes on Airport property including harassment (e.g., loud noises, pyrotechnics), habitat management (i.e., vegetation removal, stormwater pond modification), and live-trapping and relocating. The USFWS issued a Migratory Bird Depredation



SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

ACTIVE WOOD STORK COLONIES

FIGURE A.3-2

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Permit (#MB763668-0) on April 1, 2019 (expires March 31, 2020) that allows the Airport to capture or kill birds to reduce the likelihood of a bird strike, as necessary. Depredation Permit #MB763668-0 is reviewed and renewed annually. The USFWS also issued an Eagle Depredation Permit (#MB22183B-0) on September 4, 2018 (expires June 30, 2021) that allows the Airport to use non-lethal scare devices, scare tactics or frightening devices to move or disperse bald eagles roosting on Airport property to reduce the likelihood of a bird strike. Eagle Depredation Permit #MB22183B-0 is reviewed and renewed on a tri-annual basis.

The Airport property was evaluated for the occurrence of listed species Critical Habitat designated by Congress in 50 CFR 424. No designated critical habitat for any federally listed species occurs on Airport property.

In order to avoid or minimize potential adverse impacts to the species listed in **Table A.3-3**, the following commitments may be required:

1. Implement the latest version of the USFWS Standard Protection Measures for the Eastern Indigo Snake during all construction phases of any proposed project;
2. Prior to construction of any proposed project, survey appropriate habitats within the project area for Florida bonneted bat roosts. Coordination with the USFWS will occur to determine the appropriate best management practices, as necessary;
3. Prior to construction of any proposed project, survey appropriate habitats within the project area for gopher tortoises. Coordination with the USFWS and/or FWC will occur to minimize adverse effects to these species, as necessary;
4. Prior to construction of any proposed project, survey for bald eagle nests within the limits of a proposed project. If a nest is observed or documented within 1,000 feet of a proposed project, coordinate with the USFWS and FWC; and
5. Obtain any necessary state and Federal permits and coordinate with the appropriate state and Federal agencies. If there are unavoidable impacts to jurisdictional waterbodies, appropriate mitigation to offset adverse impacts to wetland-dependent listed species habitat should be provided.

It is anticipated that the following permits may be required for any proposed projects occurring at SRQ:

Permit	**Issuing Agency**
Gopher Tortoise Conservation Relocation Permit (as necessary)	FWC
Eagle Nest Disturbance Permit (as necessary)	USFWS and FWC

A.3.3 COASTAL RESOURCES

Coastal resources comprise any natural resources or natural environments occurring in coastal waters or adjoining shorelines, and are primarily protected by the Coastal Zone Management Act, as well as the Coastal Barrier Resources Act, which governs development within the Coastal Barrier Resources System (CBRS). The Florida Coastal Management Program (FCMP) implements these regulations within the state of Florida and encompasses the state's 67 counties and territorial seas. The FCMP is administered by eight state agencies and five water management districts; the FDEP Office of Intergovernmental Programs Florida State Clearinghouse is the entity charged with coordinating review of projects and activities in the state of Florida for consistency with the FCMP.

SRQ is located in an area subject to the FCMP. The closest CBRS units to SRQ are located 4.8 miles due southwest of SRQ (Lido Key Unit FL-72P), 6.8 miles due northwest of SRQ (Longboat Key Unit P23), and 11.5 miles due southwest of SRQ (Casey Key system Unit P22), all on the Gulf of Mexico coastline.

Regarding consistency of proposed projects at SRQ with the FCMP, if the FAA has made a determination during the National Environmental Policy Act (NEPA) evaluation that there are no reasonably foreseeable impacts on coastal resources and that no formal negative determination is required to be submitted to the appropriate Coastal Program Management Agency, no further action is required. If FAA has determined if there are reasonably foreseeable impacts and a consistency determination is required, or that there are no impacts and yet a formal negative determination is required, the appropriate NEPA documentation would be provided to the FDEP Office of Intergovernmental Programs Florida State Clearinghouse to coordinate a FCMP consistency review.

Aside from the NEPA process, if a project requires the issuance of any FAA licenses, permits or authorizations to conduct activities directly affecting land or water usage in the coastal zone, FAA must certify that the licensed, permitted or authorized activities are consistent with state Coastal Zone Management Act policies. The consistency certification must be approved by the applicable Coastal Program Management Agency (or overridden by the Secretary of Commerce) prior to FAA licensure, permitting or authorization actions.

A.3.4 DEPARTMENT OF TRANSPORTATION ACT SECTION 4(F) RESOURCES

Section 4(f) of the Department of Transportation (DOT) Act of 1966 provides protection for publicly-owned parks, recreational areas, wildlife, and waterfowl refuges; and significant historic sites (properties listed on or eligible for listing on the National Register). The term "Section 4(f) resource" refers to any specific site or property meeting DOT Act criteria. Section 4(f) which stipulates that the use of land from these resources cannot be approved unless the following conditions apply:

- There is no feasible and prudent avoidance alternative to the use of land; and the action includes all possible planning to minimize harm to the property resulting from such use; or
- The project includes all possible planning to minimize harm to the protected resource resulted from the use.

Special consideration also needs to be given to noise sensitive areas within Section 4(f) properties (including, but not limited to, noise sensitive areas within national parks; national wildlife and waterfowl refuges; and historic sites, including traditional cultural properties).

A review of available information from a variety of sources including Sarasota and Manatee County, local municipalities, and state databases was used to document the location of Section 4(f) resources such as publicly-owned parks, recreational areas, wildlife, and waterfowl refuges; and significant historic sites within the vicinity of the Airport.

One potential Section 4(f) resource is located adjacent to the northeast side of the Airport: Suncoast Golf Center. The Suncoast Golf Center is a public-use nine-hole golf course located on the east side of 15th Street East south of Tallevast Road. The following are additional Section 4(f) resources located within 0.5 mile of the Airport:

- North Water Tower Park, located approximately 0.50 mile south of the Airport and owned/managed by the City of Sarasota.
- Whitfield Park, located approximately 0.50 mile north of the Airport and owned/managed by Manatee County.
- Crosley Estate, located approximately 0.40 mile west of the Airport and owned/managed by Manatee County.
- McArthur Park, located approximately 0.30 mile north of the Airport and owned/managed by Manatee County.

The FAA may make a *de minimis* impact determination with respect to a physical use of Section 4(f) property if, after taking into account any measures to minimize harm, the result is either:

- A determination that the project would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or wildlife or waterfowl refuge for protection under Section 4(f); or
- A Section 106 finding of no adverse effect or no historic properties affected.

Based on evaluation of the SRQ property boundary in conjunction with the above-referenced Section 4(f) properties, it is unlikely that the properties would experience a physical use (i.e., taking for transportation activities) due to any proposed projects. However, any development proposed by the current Master Plan study should be evaluated for Section 4(f) properties.

A.3.5 FARMLANDS

In accordance with the Farmland Protection Policy Act (FPPA), the NRCS of the USDA uses soil survey information to identify the extent to which soils are classified as Prime, Unique, or Statewide/Locally Important farmland, defined as follows:

- Prime Farmland: soils which have the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed and other agricultural crops. Prime farmlands require minimal use of fuel, fertilizer, pesticides or other products to maximize agricultural yield.

- Farmland of Unique Importance: soils which are used for producing high-value food and fiber crops. Unique farmland has unique qualities conducive to producing high quality crops and/or high yields of such crops.
- Statewide/Locally Important Farmland: soils designated as "important" by a state or local governmental entity.

The NRCS has published soil survey data for Sarasota and Manatee counties, presented on **Figure A.3-3** and **Table A.3-4** for the Airport property.

Table A.3-4
Farmlands

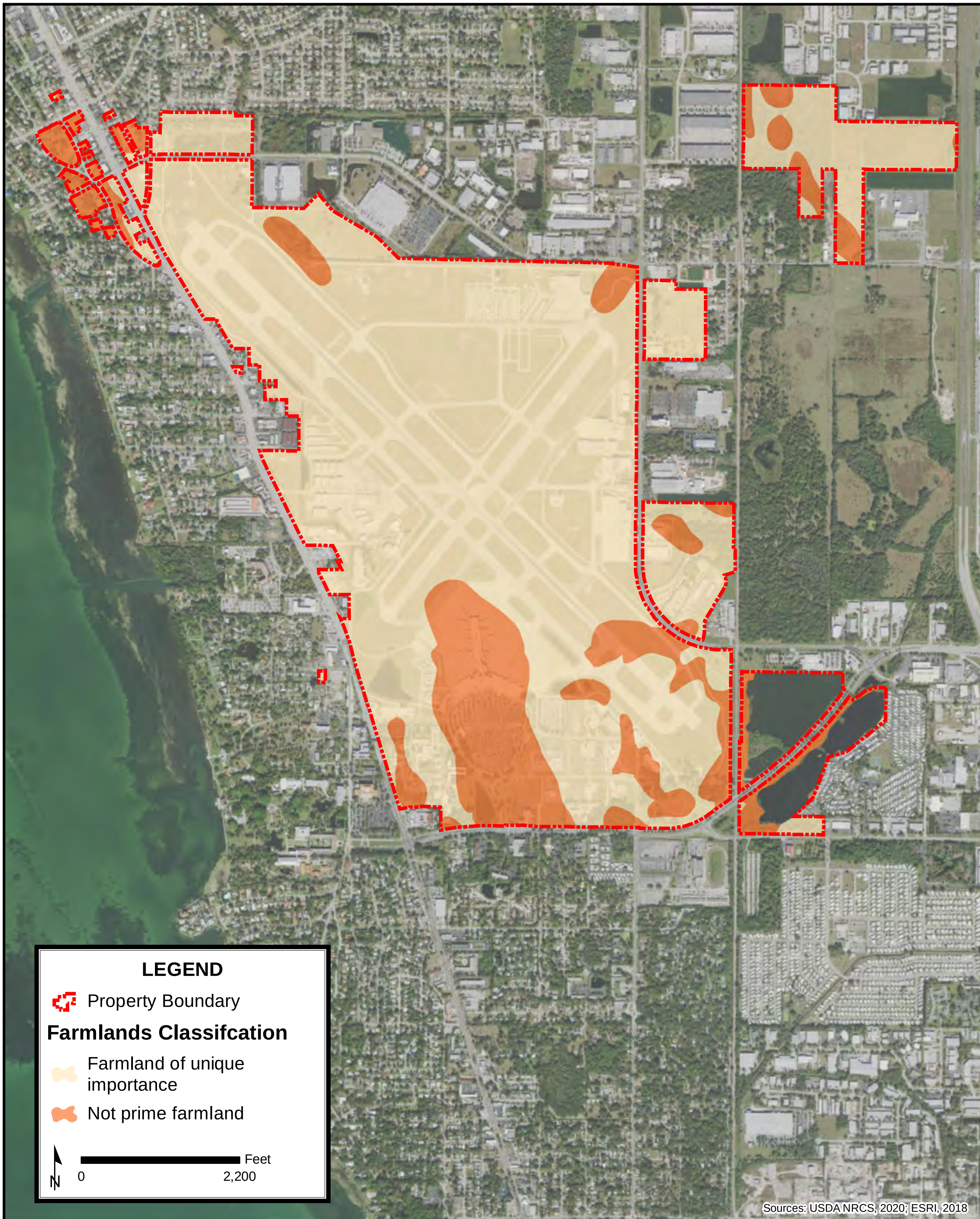
Category	Acres on Property
Farmland of unique importance	943.1
Not prime farmland	221.1
Grand Total	**1,164.2**

Source: USDA NRCS, 2019.
Note: The NRCS does not map soils within the open surface water portions of the Airport property. Therefore, acreage of farmlands shown does not reflect entire Airport property acreage.

As shown on **Table A.3-4,** there are farmlands located on the Airport property that are considered by the NRCS to be Farmland of Unique Importance.

Federal agencies such as the FAA are directed to account for the adverse effects of federal programs on the preservation of farmland and minimize the extent to which federal activities contribute to the conversion of agricultural land to nonagricultural uses. Compliance with the FPPA would need to be addressed during NEPA review if land outside of airport property is proposed for acquisition and converted to airport use due to a development project or other action.

When adjudging significance, FAA has the flexibility under the FPPA to determine whether the site of a proposed action is considered a farmland due to existing data and property use. Alternatively, if the FAA does not make this determination, or if existing information would indicate that consultation is required, the FAA may elect to initiate coordination with the NRCS to further inform an impact determination. The mechanism for this coordination is completion of Form AD-1006. A farmland impact would be considered significant if the "Farmland Conversion Impact Rating" from the Form AD-1006 ranges between 200 and 260 points.



SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

FARMLANDS

FIGURE A.3-3

Path: C:\Users\tia.norman\Desktop\SRQ\920 GIS-Graphics\mxd\Figure A.3-3_Farmlands_rev2.mxd, Date Saved: 6/4/2020 12:20:25 PM

A.3.6 HAZARDOUS MATERIALS AND SOLID WASTE

To evaluate potential for hazardous waste and contamination related impacts on Airport property, an environmental records search was performed by Environmental Data Resources (EDR) which queried available environmental records from Federal and state environmental databases. Of the databases searched, environmental records located on or surrounding Airport property were uncovered. Available historical aerial photographs were also collected and evaluated. Records located on or surrounding Airport property were uncovered within the following 24 databases:

- Above-ground Storage Tank (AST) Facility Information: contains information about registered AST as reported by the FDEP.
- ASBESTOS: lists notifications of asbestos sites reported to the FDEP.
- FDEP Cleanup Sites (CLEANUP SITES): includes locations of waste cleanup sites from various state programs.
- Department of Waste Management Contaminated Sites (DWM CONTAM): lists active or known sites that need cleanup but are not actively being worked on because agency does not currently have funding.
- ECHO (Enforcement and Compliance History Online): provides integrated compliance and enforcement information for regulated facilities nationwide.
- Emergency Response Notification System (ERNS): records and stores information on releases of oil and hazardous substances reported to the National Response Center of the U.S. Coast Guard.
- Financial Assurance: listing of hazardous waste, solid waste, or storage tank facilities obligated to provide financial assurance under the Resource Conservation and Recovery Act (RCRA).
- FINDS (Facility Index Data System): contains both facility information and "pointers" to other sources of information that contain more detail.
- Formerly Used Defense Sites (FUDS): former defense site properties where the U.S. Army Corps of Engineers (USACE) has evaluated the need to take, is actively taking, or has historically taken, remedial actions.
- Hazardous Materials Information Reporting System (HMIRS): contains hazardous materials spill incident data reported to the DOT.
- Leaking Underground Storage Tanks (LUST): contains inventory of reported LUST incidents.
- National Pollutant Discharge Elimination System (NPDES): indicates that a facility currently maintains or has historically obtained a discharge permit under the NPDES.
- RCRA NonGen: registrants are currently or have historically been subject to RCRA regulations for non-generators of hazardous waste. A non-generator status signifies that hazardous waste is not currently generated by the facility.
- RCRA Small Quantity Generator (SQG): registrants are currently or have historically been subject to regulations for SQG under the RCRA. An SQG generates more than 100 and less than 1,000 kg of hazardous waste during any calendar month and accumulates less than 6,000 kg of hazardous waste at any time, or generates 100 kg or less of hazardous

waste during any calendar month and accumulates more than 1,000 kg of hazardous waste at any time.

- RCRA Very small quantity generators (VSQGs): registrants are currently or have historically been subject to regulations for VSQG under the RCRA. A VSQG generates less than 100 kg of hazardous waste, or less than one kg of acutely hazardous waste per month.
- Superfund Enterprise Management System (SEMS): tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the U.S.
- Responsible Party Sites Listing (RESP PARTY): catalogs open, inactive, and closed sites with contamination clean-up responsibility.
- Oil and Hazardous Materials Incidents (SPILLS): statewide oil and hazardous materials incidents occurring inland.
- Solid Waste and Landfilling Facilities (SWF/LF): inventory of solid waste disposal facilities or landfills. May be active or inactive facilities, open dumps, or other entities failing to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.
- TANKS: This listing includes storage tank facilities that do not have tank information. The tanks have either be closed or removed from the site, but the facilities were still registered at some point in history.
- Tier 2 Facility Listing (TIER2): a listing of facilities which store or manufacture hazardous materials, and which are required to submit chemical inventory reports.
- Underground Storage Tanks (UST): contains storage tank facility information.
- UXO: A Department of Defense listing of unexploded ordnance site locations.

The results of the environmental records searches described above are depicted graphically on **Figure A.3-4**. Results are also described in detail on **Table A.3-5** for those records that likely occur within or adjacent to the Airport property, based on the best available geographic data.

No sites on or around the Airport are listed on the National Priority List of contaminated sites.

Aside from what is documented above, the potential for contaminated site involvement during the construction or implementation of any development within the Airport property is generally low.

In general terms, solid wastes and hazardous materials generated during the construction phase of any project would be handled in accordance with all applicable Federal, state and local regulations. Construction waste not diverted, recycled, or re-used would be transported to and disposed of in local permitted construction/demolition facilities or in local waste-to-energy plants in accordance with applicable state and local requirements.

Construction contractor(s) would be required to implement pollution prevention, spill prevention, and response plans documenting the measures that will be taken to prevent accidental releases to the environment and, should they occur, the actions that will be undertaken to minimize the environmental impact. In addition, new aviation-related tenants would, in most cases, be required to implement site-specific pollution prevention plans (i.e., Spill Prevention Control and Countermeasures Plan) that reduce the potential for substantial impacts associated with regulated materials.

Table A.3-5
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
1	Sarasota Bradenton Airport – ARFF *(6000 Airport Circle)*	FL UST, FL AST, FL Financial Assurance	1,000-gallon diesel UST installed at facility in 1986 and removed in 1999. 1,000-gallon diesel AST registered at facility as of 1992. 2,500-gallon unleaded gas AST registered as of 2001. SMAA maintains financial assurances for the purposes of storage tank registry and compliance. No violations reported.
	Sarasota Bradenton Airport North Quad Development *(6000 Airport Circle)*	FINDS, ECHO	Currently registered as a small quantity generator of hazardous waste. Several NPDES permits issued to SMAA, four of which are currently active until 2021 and one active until 2024. Violations reported from April 2018 through September 2019 for failure to report discharge monitoring reports. No other violations reported.
	Sarasota Bradenton Airport-Airfield Generator 2 *(6000 Airport Circle)*	FL AST	1,500-gallon diesel AST registered at facility as of 2003. No violations reported.
	Sarasota Manatee Airport Authority (SRQ) DDMS *(6000 Airport Circle)*	FL SWF/LF, FL ASBESTOS, FL NPDES	FDEP granted SMAA pre-authorization for Disaster Debris Management Sites on March 12, 2019 at SRQ to accept disaster debris (i.e., hurricane/storm-generated debris). Asbestos-containing materials (ACM) discovered during demolition activity at SRQ in 2018 authorized to be disposed of at North Manatee Class III Recycling and Disposal Facility. NPDES permits issued at facility active until 2024. No violations reported.
	Sarasota-Bradenton Airport *(6000 Airport Circle)*	FL ASBESTOS	AMC discovered during renovations within baggage claim area and federal inspection service area in 2013-2014 authorized to be disposed of at North Manatee Class III Recycling and Disposal Facility.
	No facility name identified *(6000 Airport Circle)*	ERNS	In May 2019, smoke emanating from passenger's laptop lithium battery in carry-on bag in aircraft reported. Aircraft was in push back to proceed to the runway and passenger notified flight attendant who then alerted captain who then stopped flight. Once main door opened, laptop thrown out onto ramp where extinguisher used on laptop. Passengers and crew evacuated. Lithium not reported to reach waterways and incident closed.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
1 (cont.)	Sarasota Bradenton Airport Facilities ES *(6000 Airport Circle)*	FL AST	3,000-gallon unleaded gas AST and 500-gallon vehicular diesel AST removed in 2004 from facility. No violations reported.
	Sarasota Bradenton Airport Terminal *(6000 Airport Circle)*	FL UST, FL Financial Assurance	2,500-gallon diesel UST registered as of 1989. SMAA maintains financial assurances for the purposes of storage tank registry and compliance. No violations reported.
2 and 25	Firing In-Butt (also known as Sarasota Co Unknown Mil Site) *(Tallevast, FL)*	UXO, FUDS	The Firing In-Butt project was comprised of 1.8-acres located at the former Sarasota Army Air Field (now SRQ). Between 1942 and 1946 fighter pilots were instructed in gunnery, skip bombing, and dive bombing at the airfield. The military aircraft maintenance crews zeroed, serviced, and maintained aircraft weapon systems at the Firing In-Butt range. The range was also used for general small arms. Munitions known or suspected to have been used at the munitions response sites include general small arms ammunition. Property was determined “No Department of Defense Action Indicated” with FDEP concurrence on 6/29/11 due to lack of explosive threat and no munitions constituents exceedance discovered during the site inspection.
3	United Airlines Inc *(Regional Airport)*	RCRA-VSQG	Facility registered as conditionally-exempt small quantity generator for hazardous waste. Historically registered as conditionally-exempt small quantity generator of hazardous waste. Hazardous waste materials generated at facility consist of ignitable waste (D001), corrosive waste (D002). No violations reported.
4	Sarasota Bradenton Airport #2 *(General Twining Avenue)*	FL LUST, FL UST	In 1988, discharge from a 10,000-gallon unleaded gas UST and a 500-gallon waste oil UST was detected. The tanks were subsequently removed and clean up was completed in 1989. No further contamination has been reported.
	Sarasota Bradenton Airport-Admin Bldg *(General Twining Boulevard)*	FL UST	250-gallon fuel oil UST removed from facility in 1991. Not violations reported.
	Sarasota Bradenton Airport #4 *(General Tinker Avenue)*	FL LUST, FL UST, FL CLEANUP SITES, FL DWM CONTAM	Discharge of unspecified non-regulated hazardous material from 10,000-gallon UST detected. UST was subsequently removed and clean up was completed. Clean up and routine monitoring are on-going with FDEP coordination.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
4 (cont.)	Sarasota Bradenton Airport #1 *(General Twining Avenue)*	FL LUST, FL UST, FL CLEANUP SITES, FL DWM CONTAM	Discharge of leaded gas and unleaded gas from USTs detected in 1988. Clean up and routine monitoring are on-going with FDEP coordination.
	Hertz Rent a Car *(1121 Rental Car Road)* (also see Map ID 49)	FL LUST, FL UST, FL CLEANUP SITES, FL DWM CONTAM, FL Financial Assurance, FL TIER 2	Discharge of unleaded gas from UST detected in 2006. Clean up and monitoring are on-going with FDEP coordination. 10,000-gallon unleaded gas UST registered as of 1988. 550-gallon waste oil and 550-gallon new/lube oil USTs removed from facility in 1997. Hertz Corporation maintains financial assurances for the purposes of storage tank registry and compliance. Hertz Corporation has participated in TIER 2 chemical reporting for the period of 1994 through 2018.
	Budget Site #1917 *(1120 Rental Car Road)*	FL LUST, FL UST, FL AST, FL Financial Assurance	Discharge of unleaded gas from UST detected in 1997 and 2008. Clean-up has since been completed. 10,000-gallons unleaded gas and 1,000-gallon waste oil USTs removed from facility in 1988. 550-gallon new/lube oil UST removed in 1997. 6,000-gallon unleaded gas AST registered as of 2016. Budget Rent A Car System Inc. maintains financial assurances for the purposes of storage tank registry and compliance.
	Sarasota Bradenton Airport #3 *(General Tinker Avenue)*	FL LUST, FL UST, FL CLEANUP SITES, FL DWM CONTAM, FL Financial Assurance	Discharge of unleaded gas from UST detected in 1987 and leaded gas from UST detected in 1988. Clean up and routine monitoring are ongoing. Two 6,000-gallon unleaded gas USTs removed in 1988. SMAA maintains financial assurances for the purposes of storage tank registry and compliance.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
5	Validus Hangar *(8100 15th Street East)*	FL Financial Assurance, FL AST	Validus Aviation, LLC maintains financial assurances for the purposes of storage tank registry and compliance. 20,000-gallon jet fuel AST registered as of 2017.
	OMC Chris Craft *(8161 15th Street East)*	FL SPILLS	Incident reported to SPILL in 1997. Details not reported. Incident status is reportedly closed.
	Rectrix Aerodrome Center *(8250 15th Street East)* (also see Map ID 53 and 6)	FINDS, ECHO, FL NPDES, FL AST, FL Financial Assurance, FL TIER 2	NPDES permit active until 2021. Violations reported from April 2018 through September 2019 for failure to report discharge monitoring reports. No other violations reported. 20,000-gallon jet fuel AST, 500-gallon unleaded gas AST, and 12,000-gallon aviation gas AST registered as of 2006. Rectrix Aerodrome Center maintains financial assurances for the purposes of storage tank registry and compliance. Facility also participated in TIER 2 chemical reporting for the period of 2016-2018.
6	Schult Homes Corp *(8220 Bradenton Road)*	FL AST	500-gallon leaded gas AST registered to facility. No violations reported.
	Sun State International Trucks *(8247 15th Street East)*	RCRA-SQG, FINDS, ECHO	Facility registered as small-quantity generator of hazardous waste. No violations reported.
7	Sarasota Bradenton Airport A-2 *(8010 East 15th Street)*	FL LUST, FL UST, FL CLEANUP SITES, FL DWM CONTAM, FL Financial Assurance, FL AST	Discharge of aviation gas detected in 1990 and the UST was subsequently removed. In January 2020, results of soil boring/monitoring well installation activities and groundwater sampling activities that were conducted were reported to be below the target cleanup levels and no additional assessments were recommended. 10,000-gallon diesel UST removed in 1990. 550-gallon unleaded gas UST removed from facility (date unspecified). 640-gallon kerosene AST removed in 2004. SMAA maintains financial assurances for the purposes of storage tank registry and compliance.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
8	Sarasota-Bradenton Aviation Inc. *(8301 North Tamiami Trail)*	FL AST, FL Financial Assurance,	12,000-gallon jet fuel AST registered to facility. Sarasota-Bradenton Aviation Inc maintains financial assurances for the purposes of storage tank registry and compliance.
9	Dolphin Aviation (aka Dynamic Aviation Group) *(8191 North Tamiami Trail)*	FL TIER 2, FINDS, ECHO, FL LUST, FL UST, FL AST, FL CLEANUP SITES, FL DWM CONTAM, FL Financial Assurance, FL RESP PARTY, FL NPDES	Facility participated in TIER 2 chemical reporting for the period of 1995-2017. NPDES permit issued to facility active until 2025. Discharge of unspecified hazardous material in 1995. Clean up reportedly on-going; however, in 2000, it was reported that all contaminated soils had been successfully removed and no further assessment was recommended. 12,000-gallon aviation gas UST, 12,000-gallon jet fuel UST, 15,000-gallon jet fuel UST, and 2,000-gallon unleaded gas UST removed in 1995. 12,000-gallon aviation gas AST and 12,000-gallon jet fuel AST registered as of 1995. Dolphin Aviation Inc maintains financial assurances for the purposes of storage tank registry and compliance.
10	Asolo Building *(7990 15th Street East)*	FL ASBESTOS	AMC discovered during demolition of Asolo building at SRQ from April to May 2018 authorized to be disposed of at Waste Corporation of Florida (WCA) in Bradenton, Florida. AMC discovered during demolition of vacant building at SRQ in March 2018 authorized to be disposed of at Enterprise Landfill and Recycling in Dade City, Florida.
	Chris Craft Boats *(7941 Old Bradenton Road)*	FINDS, ECHO, RCRA-VSQG	Facility registered as a small-quantity generator of hazardous waste. No violations reported.
11	Honeywell – Cabin Management Systems *(8323 Lindebergh Court)*	FL TIER 2, FL NPDES	Facility participated in TIER 2 chemical reporting. NPDES permit issued to facility in 2014 and expired in 2019. No violations reported.
12	Aircraft Service Intl Inc *(Sarasota-Bradenton Airport)*	FL SPILLS 80	Discharge of jet fuel reported in 1986, 1988, 1990, 1993, and 1995 requiring cleanup and monitoring. Status updates not found past January 2000.
	United Airlines Inc *(Regional Airport)*	FINDS, ECHO	Registered as small-quantity generator of hazardous waste. No violations reported.
	Sarasota Airport *(General Tinker Avenue)*	FL UST	Two 6,000-gallon unleaded gas USTs removed from facility in 1977. No violations reported.
	Delta Air Lines Sarasota *(6010 Airport Circle)*	RCRA-VSQG, FINDS, ECHO	Facility registered as conditionally-exempt small quantity generator of hazardous waste. Historically registered as conditionally-exempt small quantity generator of ignitable waste (D001). No violations reported.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
12 (cont.)	Transportation Security Admin at Sarasota – Braden *(6004 Airport Circle)*	RCRA-VSQG	Facility registered as conditionally-exempt small quantity generator of hazardous waste. Hazardous waste generated at facility consists of ignitable waste (D001), corrosive waste (D002), reactive waste (D003), barium (D005), cadmium (D006), lead (D008), mercury (D009), methyl ethyl ketone (D035), 2-propane (l) (OR) acetone (l) (U002), and methane, dichloro-(OR) methylene chloride (U080). No violations reported.
13	New College of FL-E Campus *(5510 General Twinning Boulevard)*	FL LUST, FL UST, FL AST, FL Financial Assurance, TIER 2	Discharge of hazardous waste reported in 1990 and 1991. Cleanup has since been completed with no further action required. 8,000-gallon vehicular diesel UST and 500-gallon leaded gas UST removed from site in 1990. 2,000-gallon unleaded gas UST removed from site in 1991. 2,000-gallon unleaded gas AST and 1,000-gallon vehicular diesel AST removed from site in 2005. 4,000-gallon unleaded gas AST and 4,000-gallon vehicular diesel AST registered as of 2005. Facility maintains financial assurances for the purposes of storage tank registry and compliance. Facility participated in TIER 2 chemical reporting for the period of 2012 through 2018.
14	Alamo Rent A Car #060 *(8311 N Tamiami Trail)*	FL LUST, FL UST, FL AST	Discharge of hazardous material from a UST detected in 1990. Cleanup was required and completed in 1993. Two 10,000-gallon unleaded gas USTs removed from facility in 1991. One 2,600 unleaded gas AST removed in 1992.
15	Mobil Oil Corp SS #CTA *(7802 North Tamiami Trail)*	RCRA-VSQG, FINDS, ECHO	Facility registered as conditionally-exempt small quantity generator of ignitable waste (D001) and benzene (D018). No violations reported.
	Scotts Auto Repair *(7802 North Tamiami Trail)*	FL LUST, FL UST, FL Financial Assurance	Facility maintains financial assurances for the purposes of storage tank registry and compliance. 1,000-gallon waste oil UST and 1,000-gallon kerosene UST were removed from site in 1988. Three 10,000-gallon unleaded gas USTs, 10,000-gallon vehicular diesel UST, and a 550-gallon waste oil UST were removed from site in 2009. Discharge of gasoline reported in 1991 and 2009 and cleanup was completed with no further action required in 2013.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
15 (cont.)	Pamaro Shop Inc *(7782 North Tamiami Trail)*	RCRA-VSQG, FINDS, ECHO	Facility registered as conditionally-exempt small quantity generator of ignitable waste (D001), methyl ethyl ketone (D035), and spent nonhalogenated solvents (F003). No violations reported.
16	Dynasty Boat Corp *(1335 W University Parkway)*	FINDS, ECHO, RCRA NonGen/NLR	Registered as a boat building facility that does not presently generate hazardous waste. No violations reported. Historically registered as a conditionally-exempt small quantity generator of hazardous waste including ignitable waste (D001) in 1994. Violations received during this time have been reportedly resolved.
	Quonset Hut *(1335 W University Parkway)*	FL ASBESTOS	Demolition of former warehouse completed in 2012 monitored for ACM. ACM discovered during demolition activities authorized to be transported by Waste Management in Sarasota.
17	SRQ Air Traffic Control Tower *(8291 N Tamiami Trail)*	FL NPDES, FINDS, ECHO	NPDES permit issued to facility that expires in October 2020. No violations reported.
	Home2 Suites by Hilton *(8260 N Tamiami Trail)*	FL NPDES, FINDS, ECHO	NPDES permit issued to facility that expires in January 2021.
18	U-Haul Center #64 *(7850 North Tamiami Trail)*	FL UST	6,000-gallon unleaded gas UST and 10,000-gallon vehicular diesel UST removed from site in 1997.
	Old Antique Store *(7820 North Tamiami Trail)*	FL ASBESTOS	ACM discovered during demolition activities in 2013 disposed of at undisclosed location.
19	SRQ Aircraft Fuel Farm *(1144 Air Cargo Avenue)*	FL LUST, FL AST, FL CLEANUP SITES, FL DWM CONTAM, FL TIER 2, FL NPDES	Discharge of jet fuel detected in 1986, 1988, 1990. Cleanup and monitoring activities are ongoing with coordination with the FDEP. Facility participated in TIER 2 chemical reporting for the period of 2014 through 2018. 1,000-gallon unleaded gas AST removed from facility in 1981. 1,000-gallon unleaded gas AST registered as of 2017. Three 30,000-gallon jet fuel ASTs registered as of 1999. NPDES permit issued to facility that expires in August 2022. No violations reported.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
19 (cont.)	Allegiant Air *(1154 Air Cargo Avenue Suite F)*	ECHO	Registered as small-quantity generator of hazardous waste including ignitable waste (D001), corrosive waste (D002), reactive waste (D003), barium (D005), cadmium (D006), lead (D008), benzene (D018), methyl ethyl ketone (D035), and cyclohexanone (I) (U057). No violations reported.
20	University of South Florida – New College of Florida – Sarasota Campus (*5700 North Tamiami Trail)*	FL TIER 2	Facility participated in TIER 2 chemical reporting for the period of 1993 through 2005.
	New College of Florida *(5700 North Tamiami Trail)*	RCRA-SQG, FINDS, ECHO	Facility registered as small-quantity generator of hazardous waste including ignitable waste (D001), corrosive waste (D002), reactive waste (D003), and spent nonhalogenated solvents (F005). Non-compliance violations received have reportedly been resolved.
	J & J Fuels *(General Spatz Boulevard)*	FL SPILLS 90	Discharge of unleaded gas and aviation gas reported in 1990. Cleanup was required and last monitored in 2007.
	New College of Florida *(5845 General Dougher Place)*	FL TIER 2	Facility participated in TIER 2 chemical reporting for the period of 2012 through 2018.
21	Waste Pro of Florida Inc *(7921 East 15th Street)*	FL AST, FL Financial Assurance	10,000-gallon vehicular diesel AST registered as of 2010. No violations reported. Facility maintains financial assurances for the purposes of storage tank registry and compliance.
	Famous Craft *(7921 East 15th Street)*	RCRA NonGen/NLR	Registered as a facility that does not presently generate hazardous waste. Historically registered as small-quantity and large-quantity generator of hazardous waste. Hazardous waste potentially handled by facility include ignitable waste (D001) and spent non-halogenated solvents. Non-compliance violations received reportedly resolved.
	Waste Pro SRQ MRF *(7921 East 15th Street)*	FL SWF/LF, FL SWRCY	Registered as facility for collecting waste tires and processing recovered materials.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
22	FAA/DOT-SRQ-ATCT *(Sarasota-Bradenton Airport)*	FL FF TANKS, FL AST	2,000-gallon fuel tank removed from site. A 1,000-gallon diesel AST has been in service on site since 1997. No violations reported.
	US Dept of Transportation-Aviation Adm(SRQASR) *(Sarasota-Bradenton Airport)*	FL FF TANKS, FL AST, FL Financial Assurance	1,000-gallon diesel AST registered at facility since 1992. Facility maintains financial assurances for the purposes of storage tank registry and compliance. No violations reported.
	Sarasota Bradenton International Airport *(1120 Clyde Jones Rd)*	ECHO	NPDES permit issued to facility that expires June 2024. No violations reported.
23	J & M Food Mart Inc DBA Airport Shell *(6000 North Tamiami Trail)*	FL LUST, FL UST, FL Financial Assurance	Discharge of hazardous material detected in 1996, 1998 from UST at facility requiring cleanup. Cleanup reportedly complete as of 2010. Two 8,000-gallon unleaded gas USTs, two 550-gallon non-regulated substance USTs, and one 6,000-gallon leaded gas USTs removed from facility. Two 9,728-gallon unleaded gas USTs and one 9,728-gallon vehicular diesel UST in service as of 1986. Facility maintains financial assurances for the purposes of storage tank registry and compliance.
	New College of Florida Heiser Natural Sciences *(5800 Bay Shore Road)*	FINDS, ECHO, FL NPDES, FL TIER 2	NDPES permit issued to facility in 2016 for stormwater construction that expires in July 2021. Facility participated in TIER 2 chemical reporting for the period of 2010 through 2018.
	Ringling Museum-Energy Center *(5790 Bay Shore Road)*	FL Financial Assurance, FL AST	Facility maintains financial assurances for the purposes of storage tank registry and compliance. 3,000-gallon diesel AST registered to facility as of 2004.
	New College of Florida *(5790 Bay Shore Road)*	FL TIER 2	Facility participated in TIER 2 chemical reporting for the period of 2012 through 2018.
24	Kreissle Forge Inc *(7947 North Tamiami Trail)*	RCRA-VSQG, FINDS, ECHO	Facility registered as conditionally-exempt small quantity generator of ignitable waste (D001). Violations reported have all been resolved.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
26	Jones Aviation Service Inc *(1234 Clyde Jones Road)*	FL SPILLS 90, FL TIER 2, HMIRS	Discharge of unleaded gas reported in 1999. Cleanup work status is reportedly complete. Facility participated in TIER 2 chemical reporting for the period of 1994 through 2008. Jet fuel spillage during transport reported in 1994 with immediate clean up. Incident status now closed.
	Rectrix North *(1234 Clyde Jones Road)*	FL TIER 2	Facility participated in TIER 2 chemical reporting for the period of 2016 through 2018.
	APP Jet Center Sarasota *(1234 Clyde Jones Road)*	FL LUST, FL AST, FL TIER 2	Discharge of unleaded gas from UST detected in 1999 that required cleanup. In 2007, completed deemed complete and required no further action. 12,000-gallon aviation gas AST and two 12,000-gallon jet fuel ASTs registered at facility as of 1999. 2,000-gallon aviation gas AST registered at facility as of 2013. Facility participated in TIER 2 chemical reporting from 2011 to 2012.
	Sarasota Bradenton Airport *(1234 Clyde Jones Road)*	FL LUST, FL UST, FL CLEANUP SITES, FL DWM CONTAM	Discharge of aviation gas from UST detected in 1990. Cleanup activities were conducted and no further action was required as of 1991. Four 4,000-gallon aviation gas USTs removed from site in 1990.
	Rectrix Aerodrome Centers *(1234 Clyde Jones Road)*	FL UST, FL Financial Assurance	12,000-gallon jet fuel UST and 12,000-gallon aviation gas UST registered as of 1999. Facility maintains financial assurances for the purposes of storage tank registry and compliance.
27	Federal Aviation Administration-SRG-SSC/T-Hangar Replacement *(1120 Clyde Jones Road)*	FINDS, ECHO, FL ASBESTOS, FL TIER 2, FL NPDES	ACM discovered during demolition activities in 2019 authorized to be transported by Elite Coastal Trucking to WCA of Florida in Sarasota, Florida. Facility participated in TIER 2 chemical reporting for the period of 2010 through 2011. NPDES permits issued in 2016, 2018, and 2019 for stormwater construction at facility expire in 2021, 2023, and 2024, respectively. No violations have been reported.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
28	Spindrift 1 Designs *(1220 Tallevast Road)*	RCRA NonGen/NLR, FINDS, ECHO, FL SPILLS 90	Registered as a facility that does not presently generate hazardous waste. Non-compliance violations received reportedly resolved. Discharge of fuel oil reported in 1993 that required cleanup. Status of incident has been closed.
29	J & J Fuels *(General Spatz Boulevard)*	FL LUST, FL CLEANUP SITES, FL DWM CONTAM	Discharge of unleaded gas and aviation gas from USTs detected in 1990. The USTs were removed and cleanup of contaminated soils was completed in 1991.
30	Guy's Hauling & Dumpster Service, Inc. *(8251 15th Street East)*	FL SWF/LF	Facility registered to collect waste tires. No violations reported.
31 and 32	Aircraft Service International Group *(1037 Air Cargo Avenue)*	FL TIER 2, FINDS, ECHO	Facility participated in TIER 2 chemical reporting for the period of 2002 through 2013. NPDES permit issued to facility for stormwater construction that expires in 2022. No violations reported.
32	Enterprise Rent A Car *(1171 Rental Car Road)*	FL LUST, FL UST, FL Financial Assurance, FL TIER 2	Discharge of ethanol in January 2015 reported on site. Cleanup completed in July 2015 and no further action required. 10,000-gallon unleaded gas UST removed from site in 2015. Facility maintains financial assurances for the purposes of storage tank registry and compliance. Facility participated in TIER 2 chemical reporting for the period of 2003 through 2014.
33	Budget Rent A Car System, Inc. *(1120 Rental Car Road)*	FL TIER 2	Facility participated in TIER 2 chemical reporting for the period of 2010 through 2018.
34	New College of Florida *(5850 General Daugher Place)*	FL TIER 2	Facility participated in TIER 2 chemical reporting for the period of 2012 through 2018.
35	Dollar Rent A Car *(8450 North Tamiami Trail)*	FL UST	Two 4000-gallon unleaded gas USTs, 4000-gallon leaded gas UST, 2000-gallon unleaded gas UST, and 550-leaded gas UST removed from facility in 1990.
36	SMAA Phillips Plumbing *(8371 North Tamiami Trail)*	FL ASBESTOS	ACM discovered during demolition activities in October 2019 transported by Waste Connections and disposed of at Palmetto Materials Transfer & Recycling WPF in Palmetto, Florida.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
37	Gulf Site 24692 *(7559 North Tamiami Trail)*	RCRA-VSQG	Facility registered as a conditionally-exempt small quantity generator of hazardous waste. No violations reported.
38	Spindrift *(Tallevast Road & Old Highway 301)*	FL LUST, FL AST	Discharge of hazardous material detected in 1993. Clean up completed as of 1996. 5,000-gallon fuel oil AST removed from facility in 1993.
39	Lockheed Martin Tallevast Facility *(1600 Tallevast Road)*	SEMS, RCRA-SQG, FINDS, ECHO	Facility currently registered as small quantity generator of hazardous waste and historically registered as large quantity generator. Hazardous waste generated at facility includes corrosive waste (D002) and spent halogenated solvents (F002). Compliance violations received have reportedly been resolved.
40	American Beryllium Company (former) *(1600 Tallevast Road)*	FL SPILLS, FL CLEANUP SITES, FL DWM CONTAM, FL RESP PARTY, FL NPDES	Discharge of 22,000 gallons of monitoring well water reported in 2008. Remediation action is active and ongoing as of August 2019. Facility was documented as responsible party in 2000 for the cleanup of metals, polycyclic aromatic hydrocarbons, and solvents.
	Tallevast Remediation *(1600 Tallevast Road)*	FL TIER 2	Facility participated in TIER 2 chemical reporting for the period of 2014 through 2018.
	Wire Pro Incorporated *(1600A Tallevast Road)*	RCRA NonGen/NLR, FINDS, ECHO	Registered as a facility that does not presently generate hazardous waste. Historically registered as conditionally-exempt small-quantity generator of hazardous waste. Hazardous waste potentially handled by facility include methyl ethyl ketone (D035) and spent non-halogenated solvents (F005). Non-compliance violations received reportedly resolved.
	Lockheed Martin – Sarasota *(1600 Tallevast Road)*	FL TIER 2	Facility participated in TIER 2 chemical reporting for the period of 2010 through 2013.
41	Loral American Beryllium Co *(1600 Tallevast Road)*	FL UST	1,000-gallon leaded gas UST and 550-gallon leaded gas UST removed from facility.
42	T J Smith & Company *(2021A Tallevast Road)*	RCRA-VSQG	Facility registered as a conditionally-exempt small quantity generator of ignitable waste (D001). Violations received have reportedly been resolved.
	Just Steel Inc *(2021B Tallevast Road)*	RCRA-VSQG	Facility registered as a conditionally-exempt small quantity generator of ignitable waste (D001). No violations reported.
43	Keller Logistics 3-41-0487 *(2205 Tallevast Road)*	FL LUST, FL TANKS	Discharge of 130-gallons vehicular diesel reported in 2003 on site caused by overturned semi rupturing the saddle tanks. Cleanup complete as of 2006 and no further action required.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
44	Sarasota Lakes Country Store *(1680 University Parkway)*	FL LUST, FL UST	Discharge of hazardous material reported in 1988, 1989, and 1991. Cleanup completed as of 1994. 6,000-gallon vehicular diesel UST removed from site in 1991. Three 6,000-gallon unleaded gas USTs removed from site in 1991.
	Sarasota Lakes Country Store *(1680 University Parkway)*	RCRA-VSQG, FINDS, ECHO	Facility registered as conditionally-exempt small quantity generator of hazardous waste. No violations reported.
45	Air Comfort Inc *(1605 University Parkway)*	FL LUST, FL AST	Discharge of unleaded gas detected in 1992 at facility. Cleanup required and completed as of 2011. Three 100-gallon ASTs and one 270-gallon AST registered on site as unmaintained. 4,000-gallon gasoline AST and two 10,000-gallon gasoline ASTs removed in 1997. Facility is reportedly abandoned.
	University Self Storage-Hertz Rental *(1349 University Parkway)*	FL AST	550-gallon unleaded gas AST removed in 1991 from facility.
	TreadCo *(1345-49 University Parkway West)*	FL ASBESTOS	ACM discovered during demolition of commercial buildings in 2013. Disposal and transport information is unavailable.
	Sun Hydraulics *(1500 University Parkway)*	FL SPILLS, FL ASBESTOS, RCRA NonGen/NLR, FINDS, ECHO	Spillage of 50 pounds of ammonia reported on site in 2005. Incident status reportedly closed. ACM discovered during demolition activities in 2019 disposed of at North Manatee Class III Recycling & Disposal Facility in Parrish, Florida. Registered as a facility that does not presently generate hazardous waste. Historically registered as small-quantity generator of hazardous waste. Hazardous waste potentially handled by facility include ignitable waste (D001), corrosive waste (D002), and spent non-halogenated solvents (F005). Non-compliance violations received reportedly resolved.
46	Airport Hotel *(965 University Parkway)*	ECHO, FL NDPES	NPDES permit issued for stormwater construction in 2018 that expires in 2023. No violations reported.

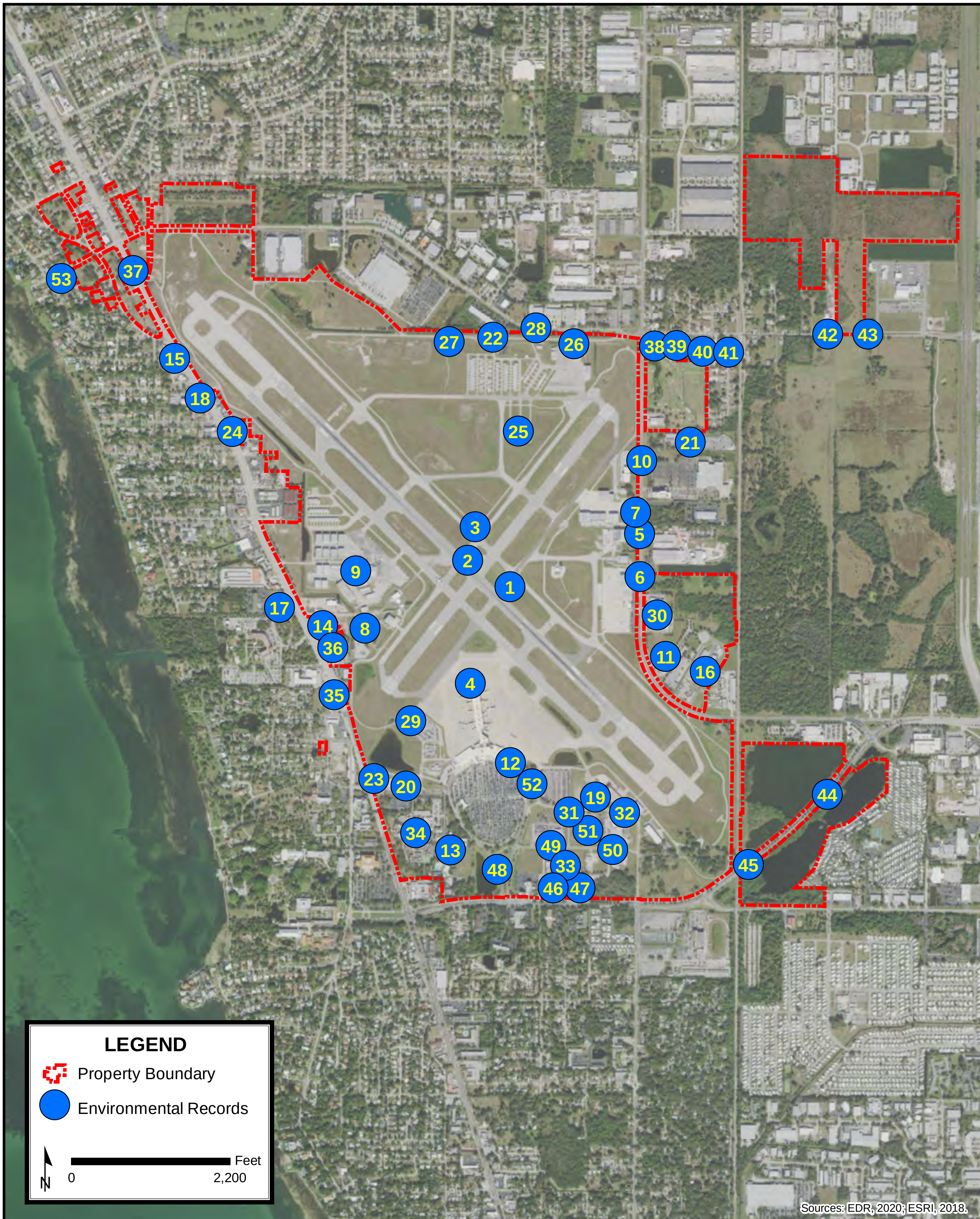
Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
47	Vanguard Car Rental – 25075 *(1130 Rental Car Road)*	FL TIER 2	Facility participated in TIER 2 chemical reporting for the period of 1997 through 2007.
	Alamo/National Rent A Car *(1130 Rental Car Road)*	FL TIER 2	Facility participated in TIER 2 chemical reporting in 2012.
48	Sarasota-Bradenton Airport – “Hot Drill” Area *(Manatee & Sarasota County Line)*	FL RESP PARTY	Facility was documented as responsible party in in 1992 and 1994 for the cleanup of hazardous material at the entrance to the airport. Status of site cleanup is reportedly closed.
49	National Car Rental – Sarasota *(1171 Car Rental Road)*	FL TIER 2	Facility participated in TIER 2 chemical reporting for the period of 1993 through 2002.
	Avis Rent A Car System, LLC *(1115 Rental Car Road)*	FL TIER 2	Facility participated in TIER 2 chemical reporting for the period of 2010 through 2012.
50	Alamo Rent A Car #60 *(1170 Rental Car Road)*	FL LUST, FL UST, FL AST, FL TIER 2, FL Financial Assurance	Discharge of unleaded gas detected in 2010 onsite. Cleanup complete as of 2011. 10,000-gallon unleaded gas UST removed from site in 2012. 6,000-gallon unleaded gas AST and 4,000-gallon unleaded gas AST in service as of 2015. Facility maintains financial assurances for the purposes of storage tank registry and compliance. Facility participated in TIER 2 chemical reporting for the period of 2015 through 2018.
	Advantage – Sarasota *(1150 Rental Car Road)*	FL TIER 2, FL Financial Assurance, FL AST	6,000-gallon unleaded gas AST removed from site in 2016. Facility maintains financial assurances for the purposes of storage tank registry and compliance. Facility participated in TIER 2 chemical reporting in 2013.
	Dollar Rent A Car – Sarasota *(1150 Rental Car Road)*	FL TIER 2	Facility participated in TIER 2 chemical reporting for the period of 1994 through 2012.

Table A.3-5 (continued)
Environmental Records Search Summary

Map ID	Facility Name	Database(s)	Description
51	AVIS Rent A Car System *(1151 Rental Car Road)*	FINDS, ECHO, FL UST, FL DWM CONTAM, FL LUST, FL CLEANUP SITES, FL Financial Assurance, FL TIER 2	NPDES permit issued in 2015 for dewatering that expires in August 2020. Discharge of unleaded gas reported on site in 1995. Cleanup required and status is reportedly inactive. 10,000-gallon unleaded gas UST removed from site in 2015. Facility maintains financial assurances for the purposes of storage tank registry and compliance. Facility participated in TIER 2 chemical reporting for the period of 2003 through 2015.
52	Sarasota Bradenton Airport *(Airgate Station)*	FL LUST, FL UST, FL CLEANUP SITES, FL DWM CONTAM	Discharge of hazardous material reported in 1988. Cleanup status is ongoing as of 2006. 560-gallon unleaded gas UST, 2,000-gallon unleaded gas UST, and 2,000-gallon leaded gas UST removed from facility in 1988. 1,000-gallon vehicular diesel UST removed in 1989.
53	Fields Residence *(7619 Westmoreland Drive)*	FL LUST, FL UST	Discharge of fuel oil – onsite heat – reported July 2005 requiring cleanup and monitoring. As of October 2012, cleanup status has been considered complete. A 147-gallon UST was removed from the facility in September 2005.
	Thompson Property *(214 Gaines Avenue)*	FL LUST, FL UST, FL CLEANUP SITES, FL DWM CONTAM	Discharge of hazardous material from UST during removal reported in 1996 requiring cleanup and monitoring. Monitoring of site by FDEP is ongoing.

Source: EDR, 2020; individual databases as noted.
Note: Facility names and locations presented as reported in databases noted.



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SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

ENVIRONMENTAL RECORDS

FIGURE A.3-4

A.3.7 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

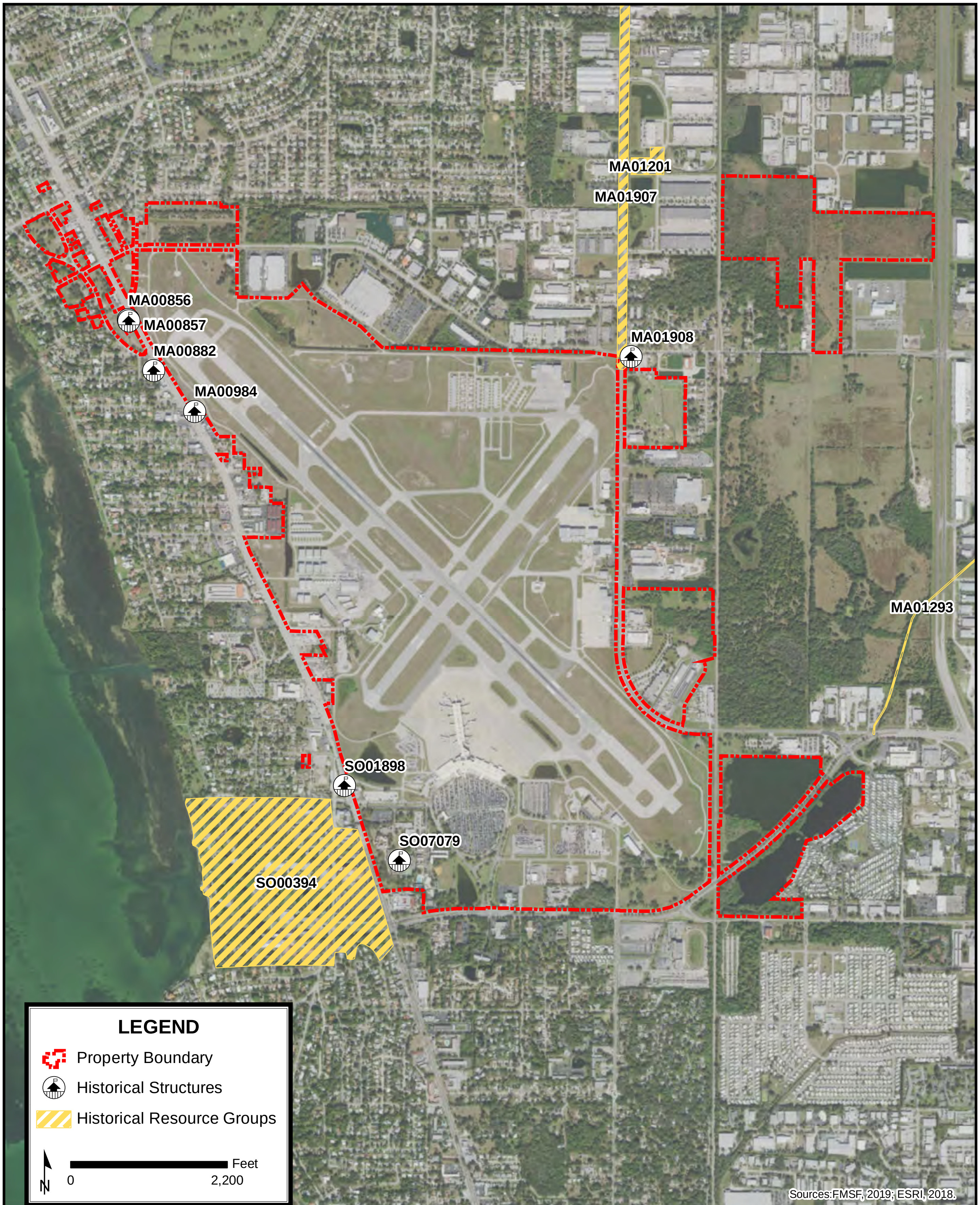
Section 106 of the National Historic Preservation Act of 1966 requires that Federal agencies take into account the effect of their undertakings on any site that is included in or eligible for inclusion in the National Register of Historic Places (NRHP). Implementing regulations published at 36 CFR 800 define the measures to be implemented to identify and mitigate impacts to such historic properties.

An archaeological and historical information search within the vicinity of the Airport was conducted to determine the types, chronology, and locations of previously recorded cultural resources and studies within or near the Airport. This included an appraisal of area physiographic and soils information, as well as a search of the Florida Master Site File (FMSF), NRHP nomination forms, and cultural resource management reports on file at the Florida Division of Historical Resources in Tallahassee. The FMSF documents that there are seven historic structures and four historic resource groups located within or adjacent to the Airport (see **Table A.3-6** and **Figure A.3-5**). Examination of the FMSF indicated that three of the resources documented on **Table A.3-6** are eligible for listing to the NRHP (MA00984, MA01201, and SO00394).

Table A.3-6
Previously Recorded Cultural Resources

Category	FMSF Site ID	Name	Description	Temporal Affiliation	SHPO Evaluation
Historic Structure	MA00856	7622 North Tamiami Trail	Mediterranean Revival circa 1880-1940	1928	Ineligible for NRHP
	MA00857	7626 North Tamiami Trail	Mediterranean Revival circa 1880-1940	1928	Ineligible for NRHP
	MA00882	Pamaro Shop	Mediterranean Revival circa 1880-1940	1924	Not Evaluated
	MA00984	Kreissle Forge	Masonry Vernacular	1947	Eligible for NRHP
	MA01908	1520 Tallevast Road	Masonry Vernacular	1956	Ineligible for NRHP
	SO01898	Zinn's Restaurant	Masonry Vernacular	--	Not Evaluated
	SO07079	PEI Residence Halls	Mid-century Modern circa 1940s-early 1960s	1965	Not Evaluated
Historic Resource Group	MA01201	Midway Subdivision Historic District	Historical District,	1925-1948	Eligible for NRHP
	MA01293	Pearce Canal Segment	Linear Resource	American 20th Century	Ineligible for NRHP
	MA01907	15th Street East	Linear Resource	--	Ineligible for NRHP
	SO00394	Caples-Ringling Estates Historic District	FMSF Building Complex	1911+	Eligible for NRHP

Note: SHPO = State Historic Preservation Office
Source: FMSF, 2019



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SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

PREVIOUSLY RECORDED CULTURAL RESOURCES

FIGURE A.3-5

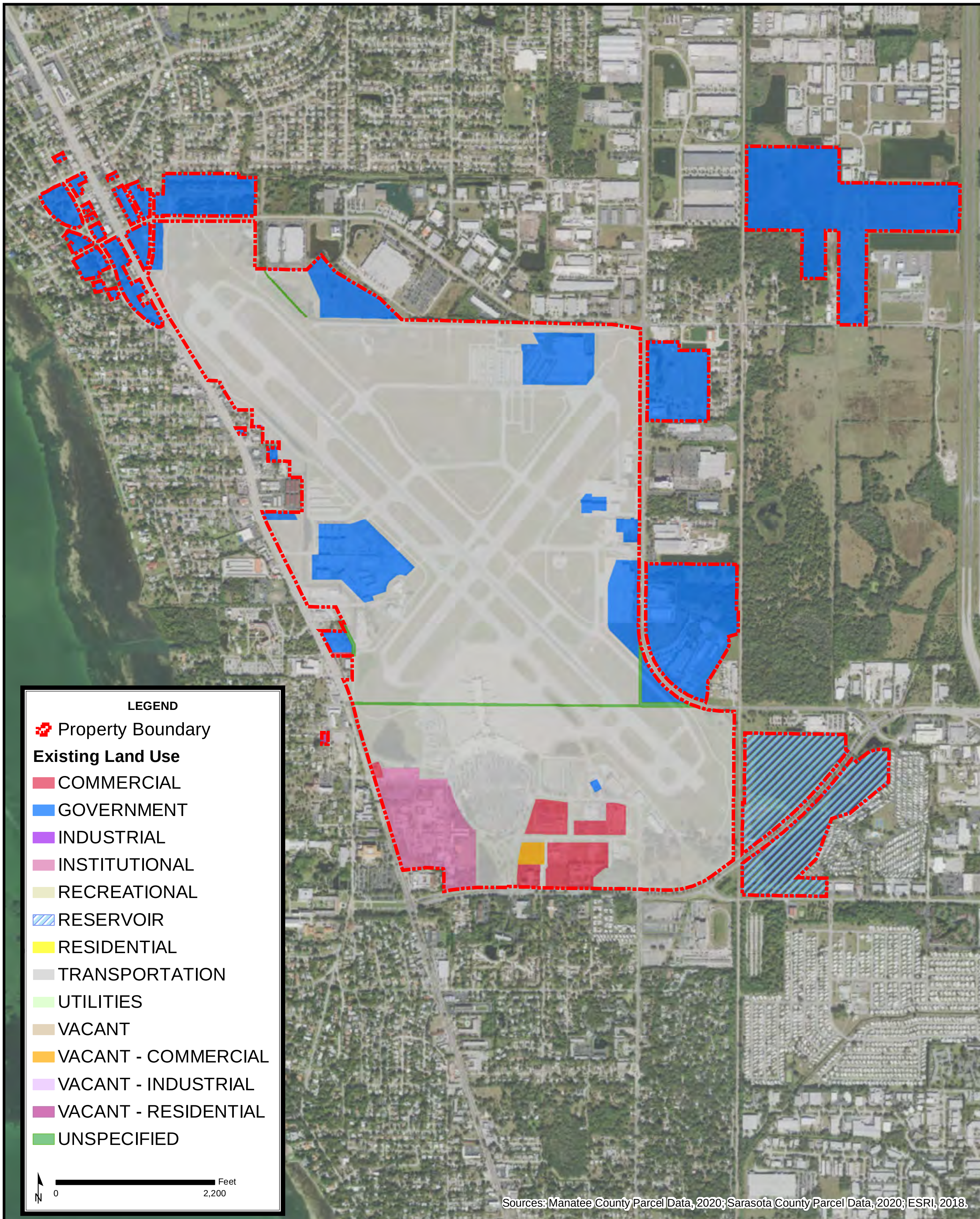
Should construction activities associated with the proposed capital improvements uncover any archaeological remains, it is recommended that activity in the immediate area of the remains be stopped while a professional archaeologist evaluates the remains. In the event that human remains are found during construction or maintenance activities, the provisions of Chapter 872.05, F.S. will apply. Chapter 872.05 states that when human remains are encountered all activity that might disturb the remains shall cease and may not resume until authorized by the District Medical Examiner or the State Archaeologist. The District Medical Examiner has jurisdiction if the remains are less than 75 years old or if the remains are involved in a criminal investigation. The State Archaeologist has jurisdiction if the remains are over 75 years of age or more.

A.3.8 LAND USE

FAA Advisory Circular 5300-13, *Airport Design*, notes that land uses prohibited within a runway protection zone (RPZ) include residences and places of public assembly (e.g., churches, schools, hospitals, office buildings, shopping centers, and other uses with similar concentrations of people). FAA recommends that an Airport Sponsor have positive control over land use within the RPZs and that such control is preferably exercised through the acquisition of sufficient property interest in the RPZs. Where it is determined to be impracticable for the Airport Sponsor to acquire and plan the land uses within the entire RPZ, the RPZ land use standards specified by the advisory circular should be implemented for that portion of the RPZ not controlled by the Airport Sponsor.

Land uses on or surrounding the Airport were assessed with a particular focus on land use types that would be particularly affected by airport development and airport operations, or would otherwise be considered environmentally sensitive in terms of noise and air pollutant exposure. The assessment focused on the presence of residential and institutional land uses, including religious facilities, recreational areas, schools, cemeteries, and hospitals. **Figure A.3-6** displays the existing land use on Airport property as indicated on the Sarasota and Manatee County land use maps.

Existing land uses within the existing Airport property are summarized in **Table A.3-7.** The existing land use within the existing Airport property is mostly comprised of Transportation (Airport) use. Unspecified land use is comprised of Airport property.



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SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

EXISTING LAND USE

FIGURE A.3-6

Table A.3-7
Existing Land Use

Land Use Type	Acres
Commercial	24.4
Government	258.0
Industrial	0.4
Institutional	34.7
Recreational	0.1
Reservoir	67.5
Residential	0.1
Transportation	821.5
Unspecified	6.9
Utilities	< 0.1
Vacant	0.1
Vacant – Commercial	2.5
Vacant - Industrial	< 0.1
Vacant – Residential	0.3
TOTAL	**1,216.5**

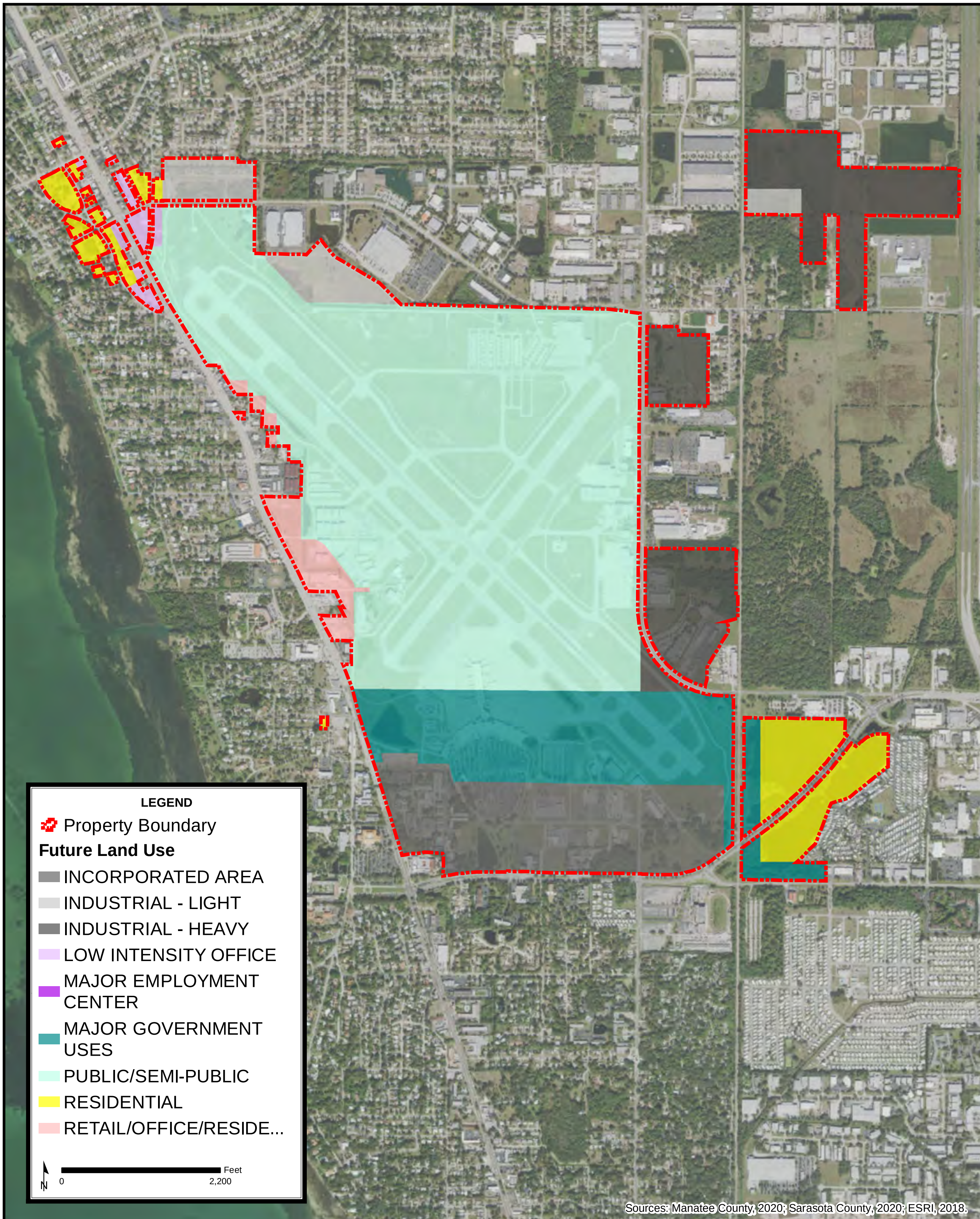
Source: Sarasota County GIS data retrieved from https://data-sarco.opendata.arcgis.com on October 23, 2019; Manatee County GIS data retrieved from https://www.mymanatee.org/departments/information_technology_services/geographic_information_systems on October 23, 2019.

The future land use across Airport property is displayed on **Figure A.3-7** as indicated on the Sarasota and Manatee County land use maps**.** and summarized in **Table A.3-8**.

Table A.3-8
Future Land Use

Land Use Type	Acres
Incorporated Area	133.6
Industrial – Heavy	139.0
Industrial – Light	42.0
Low Intensity Office	10.6
Major Employment Center	< 0.1
Major Government Uses	161.5
Public/Semi-Public	635.5
Residential	69.5
Retail/Office/Residential	24.8
TOTAL	**1,216.5**

Source: Source: Sarasota County GIS data retrieved from https://data-sarco.opendata.arcgis.com on October 23, 2019; Manatee County GIS data retrieved from https://www.mymanatee.org/departments/information_technology_services/geographic_information_systems on October 23, 2019



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SARASOTA BRADENTON INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

FUTURE LAND USE

FIGURE A.3-7

Land uses on and surrounding the Airport would remain fully compliant with local existing and future land use and zoning regulations. During NEPA review of any proposed project at SRQ, the FAA would require an airport sponsor assurance letter which states that any acquired or controlled property would remain a compatible land use per the local applicable land use planning authority.

A.3.9 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE AND CHILDREN'S HEALTH AND SAFETY RISK

EPA's Environmental Justice Screening and Mapping Tool (EJSCREEN) reports environmental and demographic indicators, drawing from the U.S. Census Bureau's American Community Survey (ACS), the National Air Toxics Assessment (NATA), information from the Center for Disease Control and other sources. These indicators are used to assess potential environmental justice issues in planning and decision-making processes.

EJSCREEN was queried within one mile of the Airport. Information from the ACS as reported through EJSCREEN indicates that 1,687 people live within one mile of the Airport with a population density of 879 people per square mile. 439 households are within this area with a per capita income of $27,660. Approximately three percent of the 439-household income base was less than $15,000, nine percent between $15,000 to $25,000, 36 percent between $25,000 to $50,000, 13 percent between $50,000 to $75,000, and 39 percent at $75,000 or above. Approximately 89 percent of housing units are owned rather than renter-occupied.

Environmental and demographic indicators from EJSCREEN are summarized on **Table A.3-9** below. Indicators are expressed in terms of percentiles compared to similar statistics within the state of Florida, within the EPA region, and within the U.S. A low percentile value signifies that the Airport area scores or ranks better or is at lower risk for that indicator compared to the state/regional/national population; a high percentile value signifies that the Airport area ranks worse or is at elevated risk compared to state/regional/national populations.

In terms of reported environmental indicators, nearly all environmental indicators show that the Airport area ranks better or is comparable to reference populations for risk of environmental exposure. Demographically, EJSCREEN reports that there is a relatively low level of minority and low-income population and a high level of elderly population compared to state, regional and national trends.

Table A.3-9
Socioeconomic Indicators

Category	Percentile		
	Florida	EPA Region 4	U.S.
Environmental Indicators			
Particulate Matter	46	52	57
Ozone	46	52	57
NATA* Diesel PM	47	53	57
NATA* Air Toxics Cancer Risk	46	52	57
NATA* Respiratory Hazard Index	46	52	57
Traffic Proximity and Volume	26	23	31
Lead Paint Indicator	4	9	25
Superfund Proximity	46	51	56
RMP Proximity	43	45	50
Hazardous Waste Proximity	44	50	55
Water Discharger Proximity	99	98	96
Demographic Indicators			
Demographic Index (composite of minority and low income population statistics)	43	49	55
Minority Population	48	57	58
Low Income Population	35	32	43
Linguistically Isolated Population	51	71	63
Population with Less Than High School Education	12	11	15
Population under Age 5	27	22	20
Population over Age 64	72	81	84

Source: EPA EJSCREEN, 2019.
Note: EPA Region 4 consists of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

In general, socioeconomic effects related to any construction at the Airport would stem from a temporary increase in the labor force needed to support facility construction and the potential displacement of existing use. Generally, projected effects would be short-term and minor in scope, having a minimal to no effect on adjacent communities.

A.3.10 WETLANDS

The USACE has authority to regulate activities in waters of the U.S., including certain wetlands, under three laws: the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research, and Sanctuaries Act of 1972, as amended.

The USACE's regulations define wetlands as:

> "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

The USACE uses three characteristics of wetlands when making wetland determinations; vegetation, soil, and hydrology. Unless an area has been altered or is a rare natural situation, wetland indicators of all three characteristics must be present during some portion of the growing season for an area to be defined as a wetland.

Based on available data and as previously shown on **Figure A.3-1**, approximately 60.4 acres of other surface waters (i.e., wet detention ponds) that treat, attenuate, and convey surface water occur within the Airport boundary. Alterations of these features would require authorization from the SWFWMD. Approximately 26.7 acres of forested and herbaceous wetlands are present on Airport property outside of the AOA. These wetlands are located in the out parcels located north, northeast, east, and southeast of the Airport. As previously mentioned, based on ERP #43009458.045, approximately 25.5 acres of herbaceous wetlands mapped within the AOA at SRQ are all considered to be upland-cut ditches and ponds, were not constructed to divert natural stream flow, and do not provide significant habitat for threatened or endangered species.

Both the USACE and SWFWMD regulate impacts to wetlands and other surface waters. Other agencies, including the USFWS, National Marine Fisheries Service, EPA, and the FWC, review and comment on wetland permit applications. In addition, the FDEP regulates stormwater discharges from construction sites. The complexity of the permitting process will depend greatly on the degree of the impact of proposed projects to jurisdictional areas. Mitigation will be required to offset impacts on state and/or federally jurisdictional wetlands will have to satisfy all mitigation requirements of 33 U.S.C. 1344 and Part IV, Chapter 373 F.S. If wetland impacts are incurred as a result of any proposed projects, the following permits may be required:

Permit	Issuing Agency
Section 404 Dredge and Fill Permit	USACE
ERP	SWFWMD
NPDES	FDEP

Federal Permits

Section 404 Dredge and Fill Permit

For impacts to federally jurisdictional wetlands, an individual permit will be required from the USACE. An individual permit will require compliance with the 404(b)(1) guidelines, including verification that all impacts have first been avoided to the greatest extent possible, that unavoidable impacts have been minimized to the greatest extent possible, and lastly that unavoidable impacts have been mitigated in the form of wetlands creation, restoration, and/or enhancement. The 404(b)(1) guidelines state that only the least environmentally damaging practicable alternative can be authorized for construction.

State Permits

Environmental Resource Permit (ERP)

SWFWMD requires an ERP when construction of any project results in the creation of a new or modification of an existing water management system or results in impacts to waters of the state. As with USACE permits, the complexity associated with the ERP permitting process will depend on the size of the project and/or the extent of wetland impacts.

National Pollutant Discharge Elimination System (NPDES)

40 CFR Part 122 prohibits point source discharges of stormwater to waters of the U.S. without a NPDES permit. Under the State of Florida's delegated authority to administer the NPDES program, construction sites that will result in greater than one acre of disturbance must file for and obtain either coverage under an appropriate generic permit contained in Chapter 62-621, F.A.C, or an individual permit pursuant to Chapter 62-620, F.A.C. A major component of the NPDES permit is the development of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP identifies potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the site and discusses good engineering practices (i.e., best management practices) that will be used to reduce the pollutants.

A.3.11 FLOODPLAINS

Executive Order (EO) 11988, Floodplain Management, defines floodplains as the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands. Floodplain areas are differentiated primarily based on flood frequency and intensity. Specifically, areas subject to a one (1) percent or greater chance of flooding in a given year are commonly referred to as the 100-year floodplain. Further, areas subject to a 0.2 percent chance of flooding in a given year are referred to as the 500-year floodplain.

The Federal Emergency Management Agency (FEMA) in part implements the National Flood Insurance Program (NFIP) by developing Flood Insurance Rate Maps (FIRM) to delineate the extent of floodplains across the U.S. The current effective FIRMs for the Airport area are map number 12081C, panels 0312E, 0314E, 0316E, and 0318E with an effective date of March 17, 2014; and map number 112115C, panel 0043F, with an effective date of November 4, 2016. For flood insurance purposes, FIRM floodplain areas are further classified into Special Flood Hazard Areas (SFHA), constituting areas where NFIP floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

Data from the above-referenced FIRM panels are summarized on **Table A.3-10** and depicted on **Figure A.3-8** for the Airport property. As shown, approximately 105 acres (9 percent) of the Airport property is comprised of Zone A and AE SFHA of the 100-year floodplain. Of note, no 500-year floodplain is located on or near Airport property.

Table A.3-10
Floodplains on Airport Property

SFHA	Acres
Zone A[1]	34.1
Zone AE[2]	71.2
Total	**105.3**

Source: FEMA FIRM 12081C, 2014; 12115C, 2016.

[1] Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

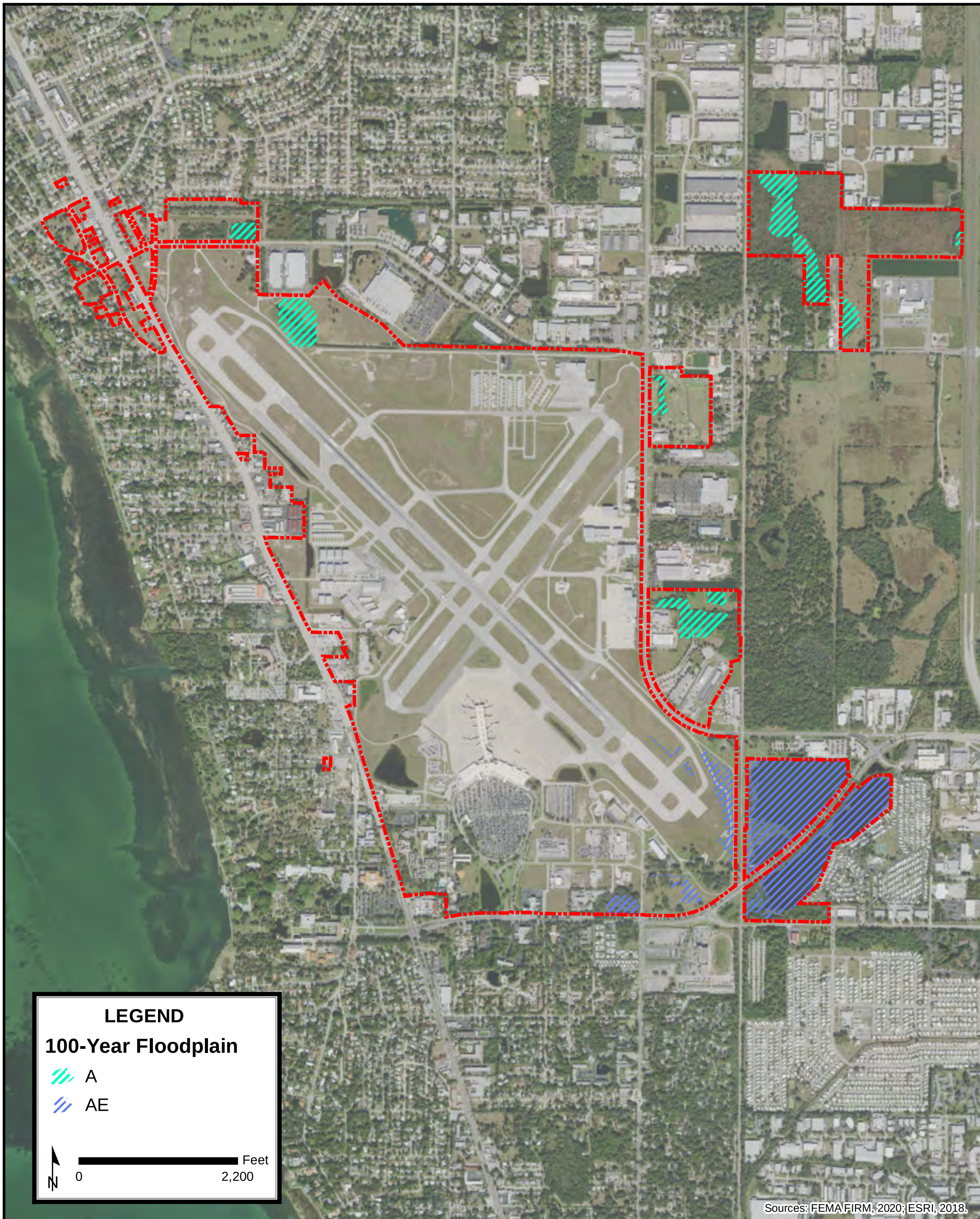
[2] Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. BFEs are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Significant floodplain encroachments involve actions that result in: 1) considerable probability of loss of human life; 2) likely future damage that could be substantially costly or widespread, including loss of a vital transportation facility; and/or 3) notable adverse impact on natural and beneficial floodplain values. DOT Order 5650.2, *Floodplain Management and Protection*, qualifies “natural and beneficial floodplain values” as those including, but not necessarily being limited to: natural moderation of floods; water quality maintenance; groundwater recharge; fish, wildlife, and plants; open space; natural beauty; scientific study; outdoor recreation; agriculture; aquaculture and forestry.

EO 11988 directs Federal agencies such as the FAA to avoid floodplain encroachments to the extent that a practicable alternative to do so exists. If there is no practicable alternative available for an FAA action, FAA is required to issue a written finding prior to a NEPA decision that significant floodplain encroachment is the only practicable alternative available.

This Finding of No Practicable Alternative (FONPA) must contain a discussion of why no practicable alternative to the action was available, that all applicable state and local floodplain protection standards will be adhered to, and that all feasible measures to minimize floodplain harm will be incorporated into the action’s construction/implementation. Therefore, during preliminary planning and design of improvement projects, the viability and practicability of avoiding significant encroachment upon floodplain areas mapped on **Figure A.3-8** should be thoroughly considered; otherwise, FAA would have to substantiate and issue a FONPA prior to rendering NEPA approval on the project(s).

During design and prior to construction of developments occurring in the floodplain, Sarasota and Manatee County Code of Ordinances require floodplain development permits to be submitted and approved for buildings, structures and facilities exempt from the Florida Building Code.



SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER PLAN UPDATE

FLOODPLAINS

FIGURE A.3-8

Path: C:\Users\tia.norman\Desktop\SRQ\920 GIS-Graphics\mxd\Figure A.3-8_Floodplains_rev2.mxd, Date Saved: 6/4/2020 4:30:53 PM

APPENDIX B

EMAS Modelling Results

Preliminary Performance & Cost Estimates for EMASMAX®

SRQ – Sarasota Bradenton International Airport
Runways 4-22 (both runway ends)

REVISED BY: Trip Thomas, Regional Sales Director

AUGUST 2020
REV 2.0

RUNWAY SAFE EMASMAX®

ENGINEERED TO PROTECT.

Preliminary Performance & Costing Estimates:

Airport:	Sarasota Bradenton International Airport (SRQ)
Runway:	RW 4-22
Runway Dimensions:	5,006 ft long x 150 ft wide
Elevation:	22 ft above sea level
RSA slope(s):	0% slopes used

Runway 4 dep end (22 numbered end):

Request:	**EMAS bed in 460 ft long RSAs. Looking for maximum stopping performance.**
Cost Estimate (Per System)	***$5.9 Million for EMAS materials & $550,000 for installation (excluding any site preparation costs)** Please note site preparation consists of runway shoulder type paving of sufficient strength to support an occasional aircraft passage. The site prep dimensions recommended for this EMAS system would be 470' long x 190' wide. *(*Cost estimate based on FY2020 costs and for one EMAS bed)*
Size:	• 307 long x 170' wide EMAS arrestor bed (plus 153' long setback/lead-in ramp) • Suggested total site prep area = 470' long x 190' wide (190' width to allow room for vehicle access) • ***See attached sketch for typical EMAS configuration.**
Performance Estimate:	**Predicted runway exit speeds:** (see table below)

Predicted runway exit speeds:

Aircraft Model	RW exit speed @ MTOW (kt)	RW exit speed @ 80% MLW (kt)	Remarks
CRJ-700	>70	>70	See notes below
CRJ-900	>70	>70	See notes below
EMB-175	>70	>70	See notes below
Citation V	>70	>70	See notes below
Ciation Latitude	>70	70	See notes below

Notes:

(1) EMAS performances shown above were predicted by ESCO's computer simulation, an FAA validated program.

(2) Based on design case using poor braking (0.25 braking coefficient) and no reverse thrust at maximum take-off weight (MTOW).

(3) Where complete AC data is not available, modeling was done using data from similar AC.

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Runway 22 dep end (4 numbered end):

Request:	**EMAS bed in 530 ft long RSAs. Looking for maximum stopping performance.**
Cost Estimate (Per System)	***$5.1 Million for EMAS materials & $447,000 installation (excluding any site preparation costs)** Please note site preparation consists of runway shoulder type paving of sufficient strength to support an occasional aircraft passage. The site prep dimensions recommended for this EMAS system would be 540' long x 190' wide. **(*Cost estimate based on FY2020 costs and for one EMAS bed)**
Size:	• 267' long x 170' wide EMAS arrestor bed (plus 263' long setback/lead-in ramp) • Suggested total site prep area = 540' long x 190' wide (190' width to allow room for vehicle access) • ***See attached sketch for typical EMAS configuration.**
Performance Estimate:	**Predicted runway exit speeds:** (see table below)

Predicted runway exit speeds:

Aircraft Model	RW exit speed @ MTOW (kt)	RW exit speed @ 80% MLW (kt)	Remarks
CRJ-700	>70	>70	See notes below
CRJ-900	>70	>70	See notes below
EMB-175	>70	>70	See notes below
Citation V	>70	>70	See notes below
Ciation Latitude	>70	70	See notes below

Notes:

(1) EMAS performances shown above were predicted by ESCO's computer simulation, an FAA validated program.

(2) Based on design case using poor braking (0.25 braking coefficient) and no reverse thrust at maximum take-off weight (MTOW).

(3) Where complete AC data is not available, modeling was done using data from similar AC.

Summary

Runway Safe was giving a fleet mix consisting of the CRJ-700, CRJ-900, and the EMB-175 for both runway ends. We added the Citation V (15,900# MTOW) and the Citation Latitude (30,800# MTOW) to show the performance of the EMASMAX system across a larger weight range of possible aircraft using these runways at SRQ.

RW4 dep end (22 numbered end):

We used an RSA length of 460ft with a slope of 0.0%. Although the information given to Runway Safe listed an RSA length of 380ft this was based on the 300ft wide RSA. An EMAS bed will be about 20ft wider than the runway, in this case 170ft. Using this width, we are able to extend the RSA length out to the 460ft, which leaves some room between the back of the proposed EMASMAX bed and the airport service road. The RSA at the 460' will have a clipped corner but with the EMASMAX bed installed it will be providing a full 70 knot performance. The EMASMAX bed would have a 152ft setback from the runway threshold. The bed will start with 6" tall EMASMAX blocks and ramp up to 20" tall EMASMAX® blocks. We will utilize two sets of step blocks around the two sides as well as the back of the EMASMAX® bed to allow ARFF equipment up onto the EMASMAX bed as well as allowing for passengers to walk (step) down from the bed onto the ground.

Runway Safe's performance model predicts we will be able to provide a minimum of a 70 knot EMASMAX® bed. The design aircraft for the RW 4 dep end RSA is the Citation V. All other aircraft within the fleet mix are predicted to have higher arresting performance

RW 22 dep end (4 numbered end):

We used an RSA length of 530ft with a slope of 0%. Although the information given to Runway Safe listed the RSA length as 525ft we pushed it out to 530ft as we can install a full EMASMAX bed (no clipped corners) at this length. With this RSA length we can provide a 70 knot EMASMAX® bed of 267ft long. The EMASMAX bed would have a 263ft setback from the runway threshold. The bed will start with 6" tall EMASMAX® blocks and ramp up to 20" tall EMASMAX® blocks. We will utilize two sets of step blocks around the two sides as well as the back of the EMASMAX® bed to allow ARFF equipment up onto the EMASMAX® bed as well as allowing for passengers to walk (step) down from the bed onto the ground.

Runway Safe's performance model predicts we will be able to provide a minimum of a 70 knot EMASMAX bed. The design aircraft for the RW 22 dep end RSA is the Citation V. All other aircraft within the fleet mix are predicted to have higher arresting performance.

We also ran additional modeling working for the shortest RSA length that would allow for 70 knot systems. For each departure end the RSA could be as short as 379ft and still provide 70 knot arresting performance. We would use our shortest setback length of 35ft from runway end. Each bed would be 344 ft long. In doing this SRQ would pick up 230ft of runway length. A 344ft long EMASMAX bed would have a ROM price of $ 6.5 million with similar installations costs.

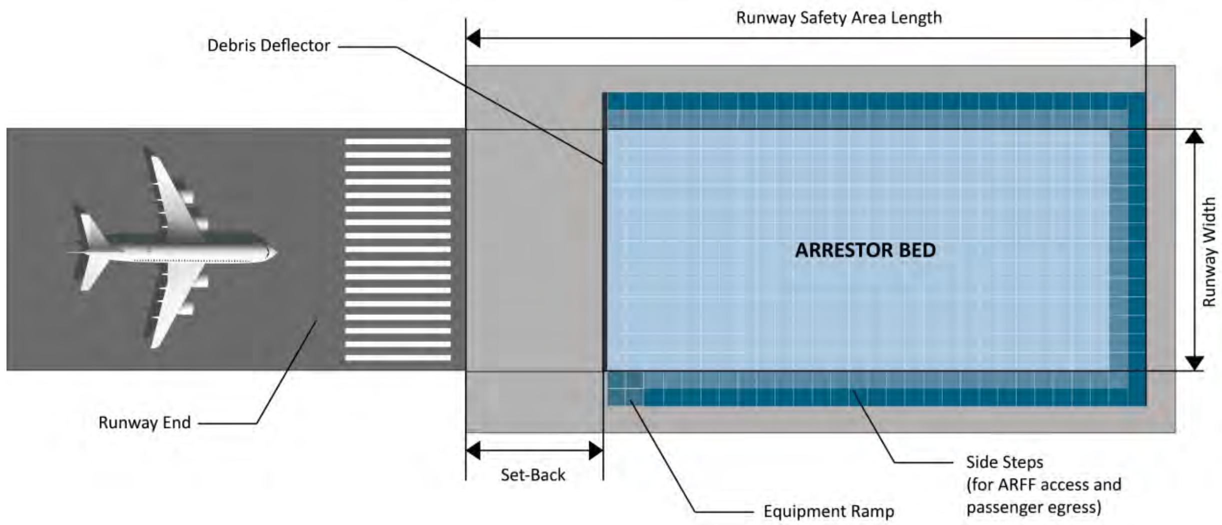
The pricing given is a rough order of magnitude (ROM). The fleet mix and RSA lengths were provided to Runway Safe Inc.

Please feel free to contact me with any questions or comments.

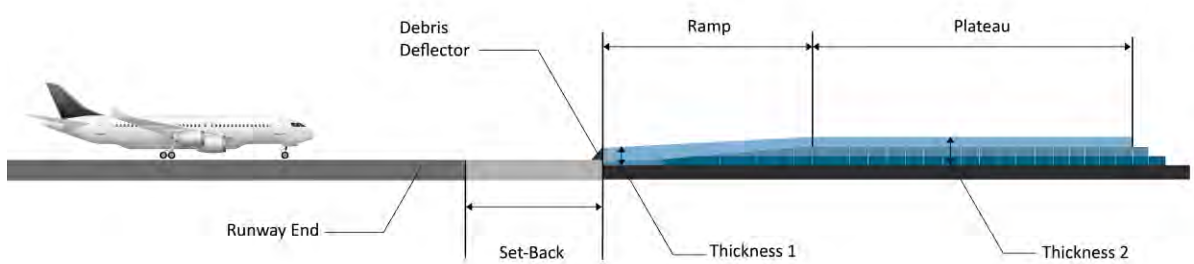
Runway Safe looks forward to working with AECOM on this potential project and stands ready to respond to whatever the next steps may be.

Typical EMAS Configuration

Picture 1 – A Typical plan view of EMASMAX®



Picture 2 – A Typical elevation view of EMASMAX®



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APPENDIX C

Project Sheets

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

A1 – Shift Runway 4-22

Project Illustration

Estimated Cost (2020 Dollars)

$3,852,000

Implementation Schedule

Short-Term

Responsible Parties

Airport Authority for project approval. FAA for environmental approvals & new flight procedures. FAA / FDOT for funding assistance.

Project Description

This project consists of shifting Runway 4-22 by 45 feet to the southwest through a combination of existing pavement removal, pavement extension, implementing displaced landing thresholds and using declared distances. The project also includes taxiway reconfigurations to meet FAA design standards.

Project Need

This project is needed to bring the ROFA and Obstacle Clearance Surface on the approach end of Runway 4 into compliance with FAA design standards by removing the service road from the ROFA and providing 15 feet of vertical clearance over 15th Street East.

Prerequisites, Concurrent or Related Actions

Stormwater management permit needed from SWFWMD. Drainage permit needed from Manatee County. New instrument flight procedures must be coordinated with FAA in advance. Aeronautical survey will be required for new flight proceduires and should be coordinated with design services.

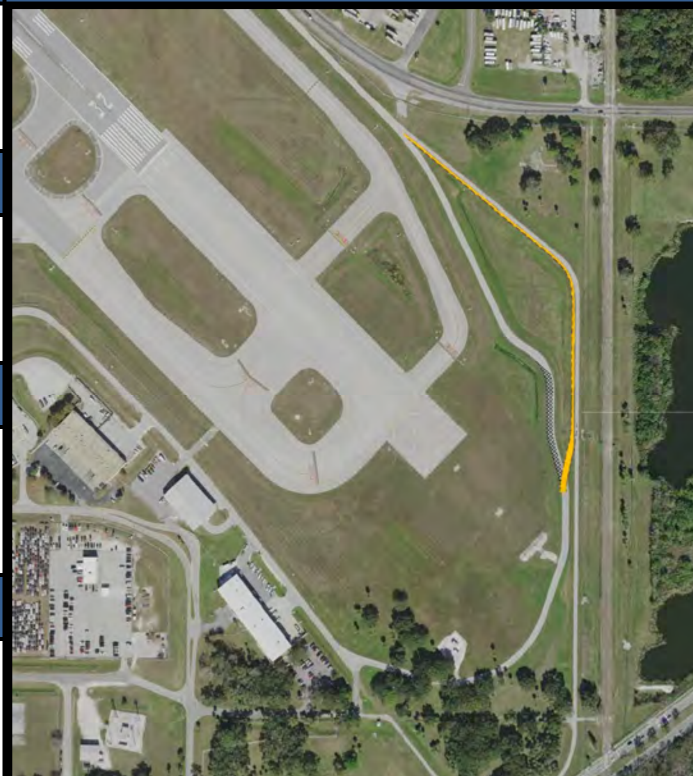
Required Environmental Approvals

This project should be environmentally cleared through an Environmental Assessment.

Potential Funding Sources

FAA AIP Entitlement / Discretionary Grant
FDOT Aviation Grant
SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name	Project Illustration
A2 – Construct Runway 14-32 ROFA Improvements - Modify and Use Outer Service Road	

Estimated Cost (2020 Dollars)

$459,000

Implementation Schedule

Short-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental approvals.
FAA / FDOT for funding assistance.

Project Description

This project consists of closing and removing a portion of the existing inner service road as well as widening and improving the outer service road. The width of the road will be increase to 18 feet from its existing width of 12 feet.

Project Need

This project is needed to bring the Runway 14-32 Runway Object Free Area into compliance with FAA design standards by removing the inner service road from the ROFA. The project will also maintain the runway's existing declared distances lengths.

Prerequisites, Concurrent or Related Actions

Prerequisites - Project must receive environmental clearance prior to seeking federal funding. Stormwater management permit needed from SWFWMD. Drainage permit needed from Manatee County.

Required Environmental Approvals	Potential Funding Sources
This project should be environmentally cleared through a CATEX or as part of an Environmental Assessment for a phase of the master plan.	FAA AIP and or FDOT Funding

SARASOTA BRADENTON INTERNATIONAL AIRPORT
CAPITAL IMPROVEMENT PLAN

PROJECT ID / NAME	PROJECT ILLUSTRATION
A3 – Reconfigure Taxiways A4 and R3	
ESTIMATED COST (2020 DOLLARS)	
$897,000	
IMPLEMENTATION SCHEDULE	
Short-Term	
RESPONSIBLE PARTIES	
Airport Authority for project authorization. FAA for environmental approvals. FAA / FDOT for funding assistance.	

PROJECT DESCRIPTION

This project consists of removing the segment of Taxiway A4 from the Dolphin Aviation ramp to Taxiway A and constructing a new entrance to its south. It also consists of shifting the centerline of Taxiway R3 by modifying the pavement edges to Taxiway Design Group 6 standards.

PROJECT NEED

This project is needed to eliminate the direct connection from the Dolphin ramp to Runway 14-32 in accordance with FAA design standards and to further improve the configuration of Taxiway R3 to better comply with the intent of the design standard.

PREREQUISITES, CONCURRENT OR RELATED ACTIONS

Stormwater management permit needed from SWFWMD. Drainage permit (or update) needed from Manatee County.

REQUIRED ENVIRONMENTAL APPROVALS	POTENTIAL FUNDING SOURCES
This project should be environmentally cleared through a CATEX or as part of a CIP Environmental Assessment.	FAA AIP Entitlement / Descretionary Grants FDOT Aviation Grant SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

A4 – Relocate ASOS and Install RVR on Runway 14

Project Illustration

Estimated Cost (2020 Dollars)

$594,000

Implementation Schedule

Short-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental approvals and reimbursable agreement.

Project Description

This project consists of relocating the existing ASOS to a site south of the Airport's Surveillance Radar system between Taxiways C, E and J and installing a new Runway Visual Range at the Runway 14 ILS glide slope.

Project Need

This project is needed to eliminate building height restrictions in the north quadrant of the airfield associated with the existing ASOS. Approximately 28 acres of developable property is located within a 1,000 radius of the existing ASOS wind sensor.

Prerequisites, Concurrent or Related Actions

Prerequisites – Proposed site should be initially coordinated through 7460 submittal.
Coordination must occur with the National Weather Service and the FAA during design. A reimbursable agreement will be needed with the FAA.

Required Environmental Approvals

This project should be environmentally cleared through a CATEX or as part of a CIP Environmental Assessment.

Potential Funding Sources

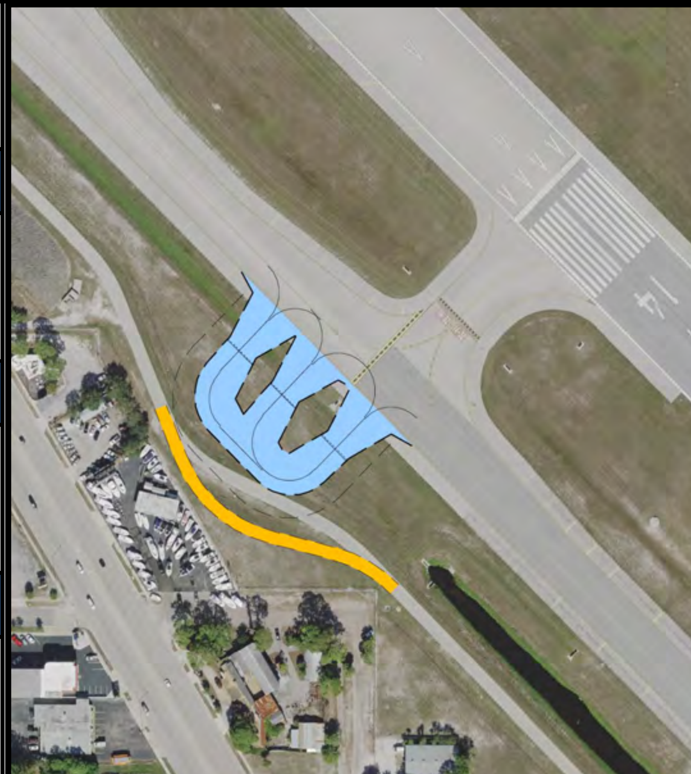
FDOT Aviation Grant
SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

A17 – Construct Holding Bay at North End of Taxiway A

Project Illustration



Estimated Cost (2020 Dollars)

$1,263,000

Implementation Schedule

Long-Term

Responsible Parties

SMAA for project approval
FAA for environmental approvals.
FAA & FDOT for funding assistance.

Project Description

This project consists of the construction of an aircraft holding bay to Aircraft Design Group II standards with two aircraft positions along the west side of Taxiway A near Taxiway A2.

Project Need

This project is needed to reduce aircraft departure delays on Runway 14 according to FAA air traffic control personnel and is the only low cost, viable capital improvement for providing delay reduction for departures on Runway 14.

Prerequisites, Concurrent or Related Actions

Stormwater permits needed from SFWMD and Mantee County.

Required Environmental Approvals

This project should be environmentally cleared through a programmatic Environmental Assessment. Although a CATEX is also possible.

Potential Funding Sources

FAA AIP Grant
FDOT Aviation Grant
SMAA Capital Improvement Account

SARASOTA BRADENTON INTERNATIONAL AIRPORT
CAPITAL IMPROVEMENT PLAN

PROJECT ID / NAME

A18 - Holding Bay at South End of Taxiway A

ESTIMATED COST (2020 DOLLARS)

$1,202,000

IMPLEMENTATION SCHEDULE

Long-Term

RESPONSIBLE PARTIES

Airport Authority for project authorization.
FAA for environmental approvals.
FAA / FDOT for funding assistance.

PROJECT ILLUSTRATION

PROJECT DESCRIPTION

This project consists of the construction of an aircraft holding bay to Aircraft Design Group II standards with two aircraft positions along the west side of Taxiway A near Taxiway A9.

PROJECT NEED

This project is needed to reduce aircraft departure delays on Runway 32 according to FAA air traffic control personnel and is the only low cost, viable capital improvement for providing delay reduction for departures on Runway 32.

PREREQUISITES, CONCURRENT OR RELATED ACTIONS

Stormwater permits needed from SFWMD and Mantee County.

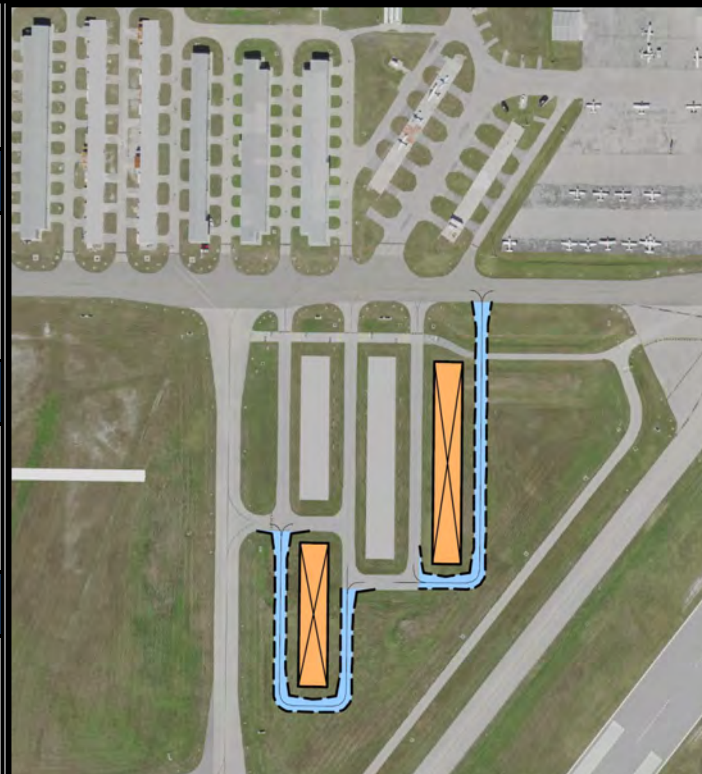
REQUIRED ENVIRONMENTAL APPROVALS

This project should be environmentally cleared through a CATEX or as part of an Environmental Assessment for a phase of the master plan.

POTENTIAL FUNDING SOURCES

FAA AIP Entitlement / Discretionary Grant
FDOT Aviation Grant
SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name	Project Illustration
GA2 – Construct 24 Large T-Hangars	

Estimated Cost (2020 Dollars)

$5,637,652

Implementation Schedule

Intermediate-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental clearance.

Project Description

This project consists of constructing two buildings of large T-hangars. One building would contain 10 units and would be located south of J7. The other building would contain 14 units and would be located east of J8. This project would also include associated taxilanes.

Project Need

The Facility Requirements section identified a need for up to 44 additional T-Hangars during the planning horizon. It is anticipated that slightly more than half of those would be for larger general aviation aircraft. This project is intended to meet that requirement.

Prerequisites, Concurrent or Related Actions

Manatee Building permits including sanitary, potable water, fire water, life safety, landscaping and structural. Coordination needed with Verizon and Florida Power.

Required Environmental Approvals	Potential Funding Sources
This project should be environmentally cleared through a CATEX or as part of a CIP Environmental Assessment.	FDOT Aviation Grant SMAA Capital Improvement Account

SARASOTA BRADENTON INTERNATIONAL AIRPORT
CAPITAL IMPROVEMENT PLAN

PROJECT ID / NAME

GA3 – Construct Small T-Hangars (20 Units)

ESTIMATED COST (2020 DOLLARS)

$3,420,387

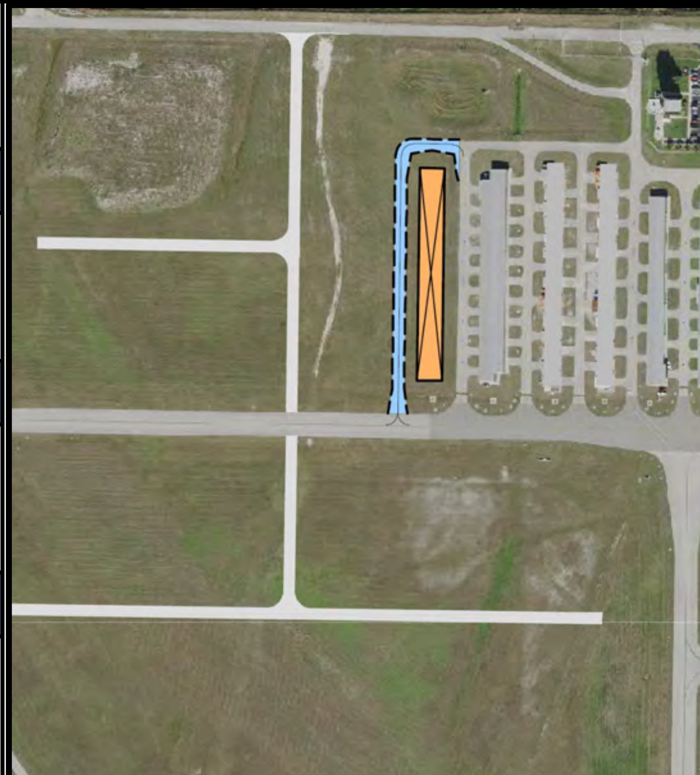
IMPLEMENTATION SCHEDULE

Long-Term

RESPONSIBLE PARTIES

Airport Authority for project authorization.
FAA for environmental approval.

PROJECT ILLUSTRATION



PROJECT DESCRIPTION

This project consists of constructing another row (20 units) of small T-hangars west of J6 along with an access taxilane to Taxiway F.

PROJECT NEED

The Facility Requirements section identified a need for up to 44 additional T-Hangars during the planning horizon. It is anticipated that nearly half of those would be for small general aviation aircraft. This project is intended to meet that requirement.

PREREQUISITES, CONCURRENT OR RELATED ACTIONS

Manatee Building permits including sanitary, potable water, fire water, life safety, landscaping and structural. Coordination needed with Verizon and Florida Power.

REQUIRED ENVIRONMENTAL APPROVALS

This project should be environmentally cleared through a CATEX or as part of a CIP Environmental Assessment.

POTENTIAL FUNDING SOURCES

FDOT Aviation Grant
SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

RP1 – Ground Transportation Center

Project Illustration

Estimated Cost (2020 Dollars)

$3,905,716

Implementation Schedule

Short-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental clearance.

Project Description

This project consists of the demolition of the McClure Auditorium along with the construction of a parking area for TNC drivers and hotel shuttles, covered passengers' pick-up lanes for all modes of commercial ground transportation and an area dedicated exclusively to transit.

Project Need

This project will improve passenger convenience and access to ground transportation services. It will also increase terminal curbside capacity by removing TNC pick up from the terminal curb.

Prerequisites, Concurrent or Related Actions

Manatee County building and drainage permits required. Coordination with Florida Power and Light will be needed during design. A drainage permit is required from the SWFWMD.

Required Environmental Approvals

This project should be environmentally cleared through a CATEX.

Potential Funding Sources

FDOT Aviation Grant
SMAA Capital Improvement Account

SARASOTA BRADENTON INTERNATIONAL AIRPORT
CAPITAL IMPROVEMENT PLAN

PROJECT ID / NAME

RP7 – Relocate Valet Parking

ESTIMATED COST (2020 DOLLARS)

$898,000

IMPLEMENTATION SCHEDULE

Intermediate-Term

RESPONSIBLE PARTIES

Airport Authority for project authorization.
FAA for environmental clearance.

PROJECT ILLUSTRATION

PROJECT DESCRIPTION

This project consists of converting a portion of short-term parking into an area for the drop-off, pick-up and storage of valet vehicles. The proposed location will be directly across from the center of the passenger terminal.

PROJECT NEED

This project will provide one common point for valet operations and would remove this function from the terminal curb, thereby increasing curb capacity. It would also reduce the number of valet vehicle movements on Airport Circle.

PREREQUISITES, CONCURRENT OR RELATED ACTIONS

Drainage permit will be required from the SWFWMD. Permits are required from Sarasota County for building, landscape, planning (land use) & drainage. City of Sarasota landscaping requirements need to be met.

REQUIRED ENVIRONMENTAL APPROVALS

This project should be environmentally cleared through a CATEX.

POTENTIAL FUNDING SOURCES

SMAA Capital Improvement Account

SARASOTA BRADENTON INTERNATIONAL AIRPORT
CAPITAL IMPROVEMENT PLAN

PROJECT ID / NAME

RP8 – Construct New Long-Term Parking Lot

PROJECT ILLUSTRATION

ESTIMATED COST (2020 DOLLARS)

$3,378,000

IMPLEMENTATION SCHEDULE

Intermediate-Term

RESPONSIBLE PARTIES

Airport Authority for project authorization.
FAA for environmental clearance.

PROJECT DESCRIPTION

This project consists of constructing a new long-term parking lot containing approximately 550 spaces at the southeast corner of Airport Circle and Air Cargo Road. This lot will provide passenger shelters at shuttle pick-up spots similar to those that currently exit in the long-term parking lot.

PROJECT NEED

This project is needed to provide the required number of long-term parking spaces to meet estimated demand at PAL 2.

PREREQUISITES, CONCURRENT OR RELATED ACTIONS

Drainage permit will be required from the SWFWMD. Permits are required from Sarasota County for building, landscape, planning (land use) & drainage. City of Sarasota landscaping requirements need to be met.

REQUIRED ENVIRONMENTAL APPROVALS

This project should be environmentally cleared through a CATEX.

POTENTIAL FUNDING SOURCES

SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

RP9 – Construct Short-Term & Rental Car Parking Deck

Estimated Cost (2020 Dollars)

$23,915,000

Implementation Schedule

Long-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental clearance.

Project Illustration

Project Description

This project consists of constructing a parking deck over the existing rental car and short-term parking lots, along with associated access ramps and roadway modifications. It also includes the construction of new rental car offices on the ground level of the rental car area.

Project Need

This project is needed to provide the required number of rental car and short-term parking spaces to meet estimated demand at PAL 3. Relocation of the rental car offices from the baggage claim lobby will provide adequate space for rental car employees and their customers.

Prerequisites, Concurrent or Related Actions

Drainage permit will be required from the SWFWMD. Permits are required from Sarasota County for building, landscape, planning (land use) & drainage. City of Sarasota landscaping requirements need to be met.

Required Environmental Approvals

This project should be environmentally cleared through an Environmental Assessment.

Potential Funding Sources

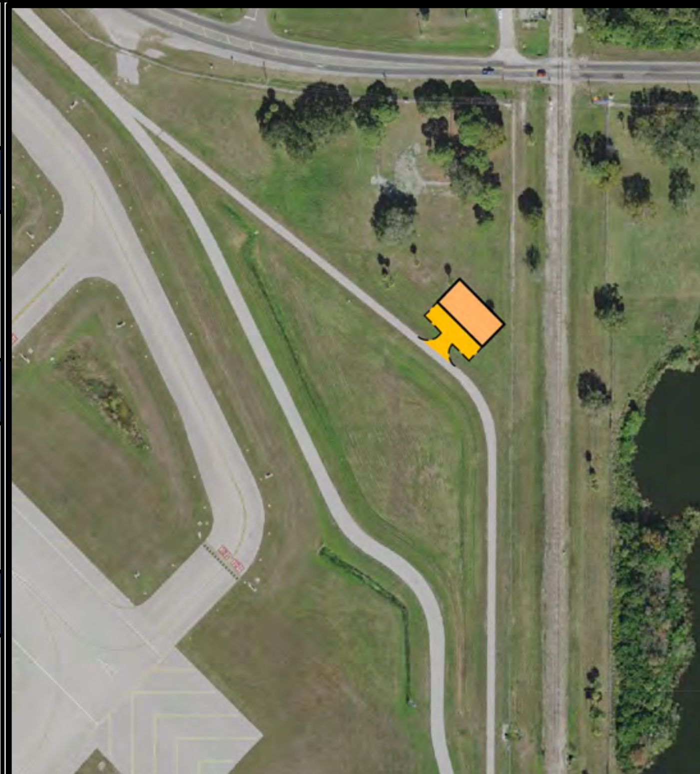
SMAA Capital Improvement Account
Debt Financing

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

S4 – Relocate Bulk Storage Facility

Project Illustration



Estimated Cost (2020 Dollars)

$1,662,000

Implementation Schedule

Intermediate-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental clearance.
City and County for construction permits.

Project Description

This project consists of constructing a new 5,000 square foot building along with parking to replace the existing bulk storage building. The proposed building will be located along the outer airfield service road west of the south end of Taxiway C.

Project Need

This project is needed to provide a replacement for the existing bulk storage building that is located on a parcel proposed for redevelopment to non-aeronautical land uses.

Prerequisites, Concurrent or Related Actions

Stormwater permit required from SWFWMD and Manatee County. Building permits also required from Manatee County. Coordination needed with Fire Marshall for life safety elements.

Required Environmental Approvals

This project should be environmentally cleared through a CATEX.

Potential Funding Sources

FDOT Aviation Grant
SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

S5 – Expand Existing Vehicle Storage Building

Estimated Cost (2020 Dollars)

$6,152,000

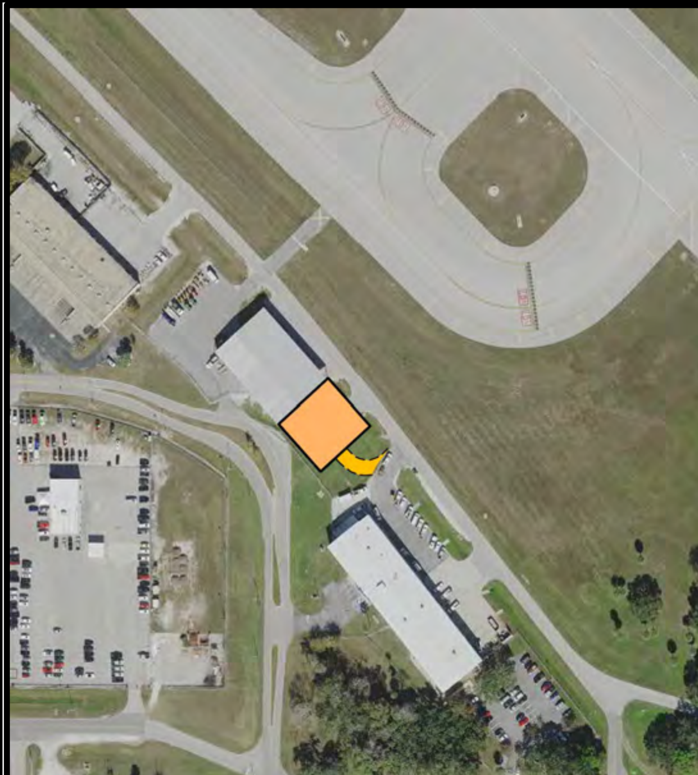
Implementation Schedule

Intermediate-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental clearance.
City and County for construction permits.

Project Illustration



Project Description

This project consists of expanding the existing vehicle storage building to provide 10,000 square feet of additional space. This project also includes relocation of the existing stormwater retention pond located south of the building.

Project Need

This project is needed to provide additional storage space for existing airport vehicles, supplies and equipment as specified in the Facility Requirements section.

Prerequisites, Concurrent or Related Actions

Stormwater permit required from SWFWMD and Manatee County. Building permits also required from Manatee County. Coordination needed with Fire Marshall for life safety elements.

Required Environmental Approvals

This project should be environmentally cleared through a CATEX.

Potential Funding Sources

FAA AIP and/or PFC
FDOT Aviation Grant
SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

S6 – Construct New Vehicle Storage Building

Estimated Cost (2020 Dollars)

$8,460,000

Implementation Schedule

Long-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental clearance.
City and County for construction permits.

Project Illustration

Project Description

This project consists of constructing a new 25,000 square foot vehicle storage building. The building is proposed to be located adjacent to a new bulk storage building along the outer vehicle service road east of the south end of Taxiway C. The project also includes roadway access and parking.

Project Need

The Facility Requirement section documented a demand for an additional 26,000 SF of vehicle and equipment storage with additional growth of 50% during the planning horizon. This project is intended to provide additional space beyond the 10,000 SF addition to the existing vehicle storage building.

Prerequisites, Concurrent or Related Actions

Stormwater permit required from SWFWMD and Manatee County. Building permits also required from Manatee County. Coordination needed with Fire Marshall for life safety elements.

Required Environmental Approvals

This project should be environmentally cleared through a CATEX.

Potential Funding Sources

FAA AIP and PFC
FDOT Aviation Grant
SMAA Revenues

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

S7 – Construct ARFF Station Improvements

Estimated Cost (2020 Dollars)

$1,266,000

Implementation Schedule

Long-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental clearance.
City and County for construction permits.

Project Illustration

Project Description

This project consists of constructing several improvements to the existing ARFF station including an additional vehicle bay, making all bays drive through capable, providing additional storage space and improving access roads and providing additional parking. An exhaust capture system is also included.

Project Need

The Facility Requirement section documents the need for each of these improvements based on consultation with the station chief. The proposed improvements will enable equipment currently stored outside to be brought into the station.

Prerequisites, Concurrent or Related Actions

Stormwater permit needed from SFWMD and stormwater and building permits needed from Manatee County.

Required Environmental Approvals

This project should be environmentally cleared through a CATEX.

Potential Funding Sources

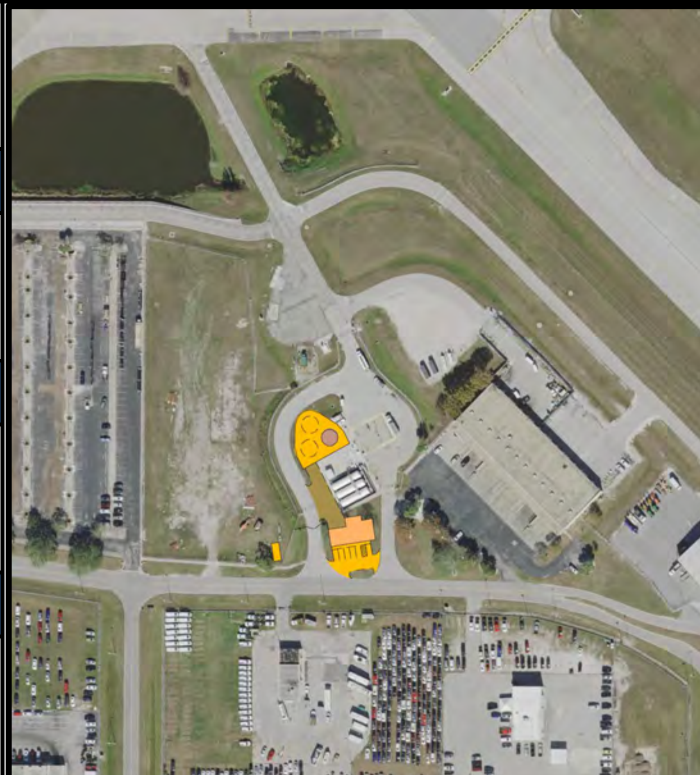
FAA AIP and/or PFC
FDOT Aviation Grant
SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

S8 – Expand Fuel Farm (3rd Tank)

Project Illustration



Estimated Cost (2020 Dollars)

$767,000

Implementation Schedule

Long-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental clearance.
City and County for construction permits.

Project Description

This project consists of installing a third 102,000-gallon vertical tank in the existing fuel farm.

Project Need

The Facility Requirement section documents the need for third tank to maintain a five-day supply toward the end of the planning period. A third tank will provide a 5.5-day fuel supply with estimated operational demand in the year 2039.

Prerequisites, Concurrent or Related Actions

Prerequisites - Project must receive environmental clearance prior to seeking federal funding. Stormwater permit will be required from SWFWMD. Building, Fire Marshall & Drainage permits required from Sarasota County. Coordination with Fire Marshall will be needed for fire lanes.

Required Environmental Approvals

This project should be environmentally cleared through a CATEX.

Potential Funding Sources

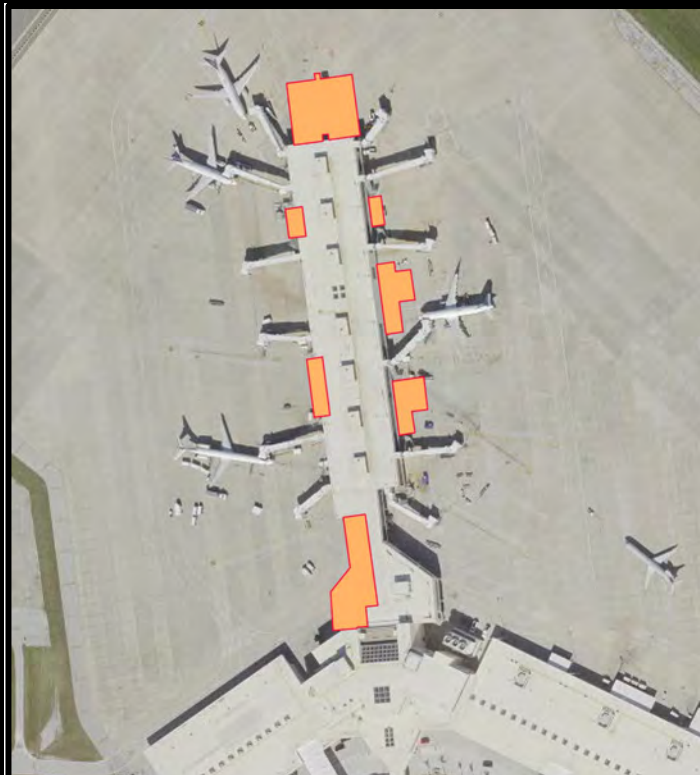
FDOT Aviation Grant
SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

T1, T2, T3, T10, T11, T12 & T15 - Construct Concessions/Holdroom Expansions

Project Illustration



Estimated Cost (2020 Dollars)

#1 - $4,724,096, #2 - $1,391,896, #3 - 900,387, #4 - $8,071,017, #5 - $1,251,652, #6 - $2,494,575, #7 - $1,948,793

Implementation Schedule

Various – see project phasing tables in Section 6.0.

Responsible Parties

Airport Authority for project authorization.
FAA for environmental approvals.

Project Description

This project consists of constructing various expansions along the existing Concourse B to provide additional space for concessions and holdrooms.

Project Need

The Facility Requirements section determined that additional concessions and holdroom space is needed on Concourse B to meet existing and future passenger demand. Projects will be phased to meet demand.

Prerequisites, Concurrent or Related Actions

Building permits required from Manatee County. Coordination needed with Fire Marshall for life safety elements.

Required Environmental Approvals

This project should be environmentally cleared through a CATEX or as part of a CIP Environmental Assessment.

Potential Funding Sources

FAA AIP and/or PFC
FDOT Aviation Grant
SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

T4 – Construct GA FIS Facility

Estimated Cost (2020 Dollars)

$3,109,000

Implementation Schedule

Short-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental approvals.
DHS – CBP for facility approval.

Project Illustration

Project Description

This project consists of constructing a new General Aviation FIS facility at a site to be selected by airport staff. The proposed facility will consist of an aircraft apron sized for the largest business jets, a building in the range of 4,000 SF along with roadway access and a small parking lot.

Project Need

Gate B-8 is currently used for clearing international arrivals by commercial and general aircraft. Removal of general aviation operations from Gate B-8 would allow it to be dedicated to commercial use and thereby achieve the use of an existing gate at lower cost than constructing a new gate.

Prerequisites, Concurrent or Related Actions

Prerequisites - Project must receive environmental clearance prior to seeking federal funding. DHS CBP approval must be obtained for the proposed facility. Design of the new facility must be coordinated with the DHS. Storwater permit required from SWFWMD. Building permits required from Manatee County.

Required Environmental Approvals

This project should be environmentally cleared through a CATEX or as part of a CIP Environmental Assessment.

Potential Funding Sources

FAA AIP and/or PFC
FDOT Aviation Grant
SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

T9 – Construct Pedestrian Bridge and Concession Reconfiguration

Estimated Cost (2020 Dollars)

$3,056,000

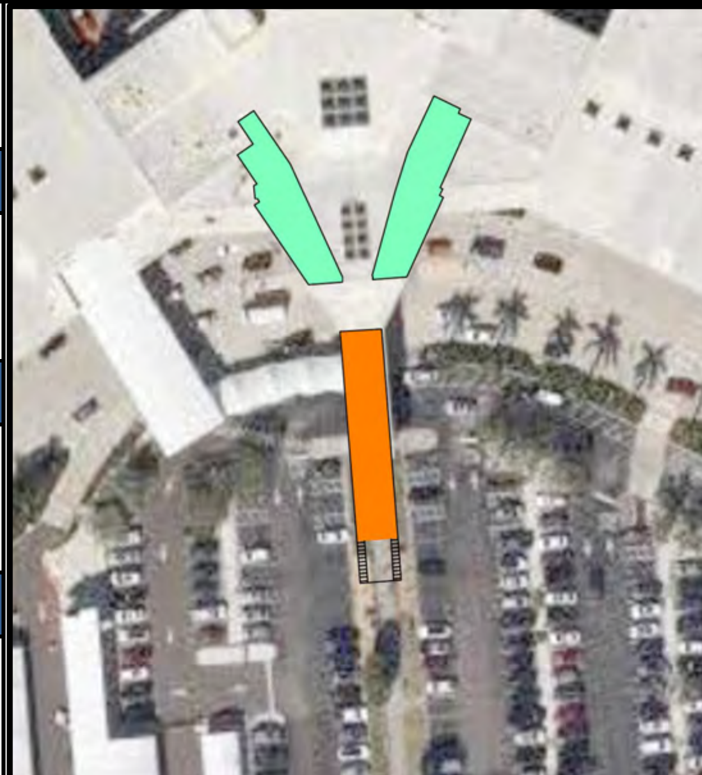
Implementation Schedule

Intermediate-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental approval.

Project Illustration



Project Description

This project consists of constructing a pedestrian bridge from the second level of the passenger terminal to the pedestrian walkway between short-term parking and the rental car ready/return lot. The project also includes reconfiguration of the concession area on the terminal's second floor.

Project Need

The existing Dewar's Clubhouse Bar and Grille concession on the second floor is significantly underutilized. Construction of the pedestrian bridge would increase passenger flow past this area thereby improving concession use and would reduce pedestrian crossings of the terminal curbside road.

Prerequisites, Concurrent or Related Actions

Building permits required from Manatee County. City of Sarasota landscaping requirements will need to be met.

Required Environmental Approvals

This project should be environmentally cleared through a CATEX or as part of a CIP Environmental Assessment.

Potential Funding Sources

FDOT Aviation Grant
SMAA Capital Improvement Account

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

T13 – Construct New Concourse A

Estimated Cost (2020 Dollars)

$87,069,000

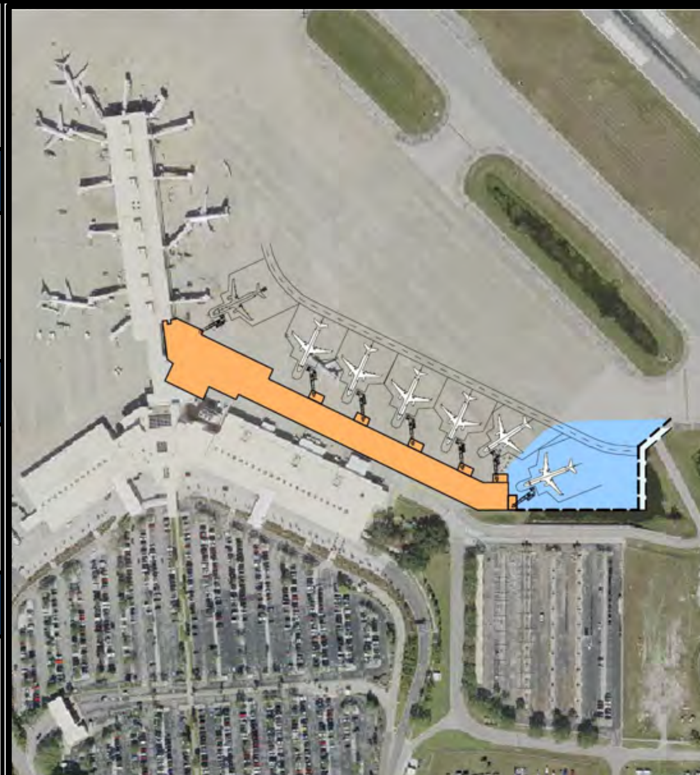
Implementation Schedule

Intermediate-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental approvals.
City and County for permits.

Project Illustration



Project Description

This project consists of constructing a new six-gate concourse. The concurrent loss of Gate B-1 would result in a net gain of five gates. The project would include additional checkpoint, concessions and holdroom space and space for airline and Authority operations and concession storage at ground level.

Project Need

The Facility Requirements section projects that four additional gates will be needed to accommodate projected demand through the planning horizon. This project will also address requirements for additional concessions, security screening and support services including storage.

Prerequisites, Concurrent or Related Actions

Stormwater permits required from SWFWMD and Manatee County. Building permits also required from Manatee County.

Required Environmental Approvals

This project would need clearance through an Environmental Assessment.

Potential Funding Sources

FAA AIP and/or PFC, FDOT Aviation Grant
SMAA Capital Improvement Account and Debt Financing

Sarasota Bradenton International Airport
Capital Improvement Plan

Project ID / Name

T14 – Expand Baggage Claim

Project Illustration

Estimated Cost (2020 Dollars)

$6,397,000

Implementation Schedule

Long-Term

Responsible Parties

Airport Authority for project authorization.
FAA for environmental approval.
City and County building permits.

Project Description

This project consists of constructing a 10,600 square foot expansion of the baggage claim lobby in order to provide a fourth flat plate baggage claim carousel and associated baggage offices. The expansion will occur on the southwest side of the existing baggage claim area.

Project Need

The Facility Requirements assessment determined that a fourth baggage claim carousel will be needed to meet anticipated peak hour passenger demand and accommodate airline operations requirements at PAL 3.

Prerequisites, Concurrent or Related Actions

Building permits required from Sarasota County. Coordination needed with Fire Marshall for life safety elements.

Required Environmental Approvals

This project should be environmentally cleared through a CATEX or as part of a CIP Environmental Assessment.

Potential Funding Sources

FAA AIP and/or PFC, FDOT Aviation Grant, SMAA Capital Improvement Account or Debt Financing

APPENDIX D

Cost Estimates

AMERICAN INFRASTRUCTURE DEVELOPMENT, INC.

Master Plan Update

COST ESTIMATES

Prepared for:

SARASOTA BRADENTON INTERNATIONAL

December 22, 2020

AID Project No. AEC19002

3810 Northdale Blvd., Suite 170
Tampa, Florida 33624
(813) 374-2200

Table of Contents

ESTIMATE PARAMETERS

ESTIMATING TEAM	
Firm(s):	American Infrastructure Development, Inc.
Principal Estimator:	Mark Jansen, P.E.
Estimators:	Milad Modaberi

PROJECT INFORMATION	
Master Planner	AECOM
Owner:	Sarasota Manatee Airport Authority
Project Location:	Sarasota Bradenton International Airport (SRQ)
Date of Report:	October 2020

PROJECT WIDE COST FACTORS	
Contingencies	
Design and Construction Contingencies:	15.0%
Management Cost	
Owner Legal & Administration Costs:	2.5%
Design (Architecture/Engineering):	10% (unless increased on a project-by project basis if the percentage results in an unrealistically low number).
Program Management:	5.0%
Construction Management:	5.0%
Design Services During Construction:	3.0%

Additional Notes:

- All costs are present values in 2020 U.S. dollars with no escalation applied.
- Costs were developed using conceptual files provided by AECOM during July-September 2020.

COST DEVELOPMENT BACKUP

NEW AIRFIELD ASPHALT PAVEMENT				
Subgrade Compaction (12”)	1	SY	$15.00	$15.00
Lime Rock Base Course (8”)	1	SY	$20.00	$20.00
Bituminous Surface Course	0.22	TN	$150.00	$33.00
Bituminous Prime Coat	0.30	GAL	$4.00	$1.20
Bituminous Tack Coat	0.07	GAL	$4.00	$0.28
			Total Cost/SY	$69.48

SERVICE ROAD				
Subgrade Compaction (12")	1	SY	$15.00	$15.00
Optional Base Course (6’)	1	SY	$22.00	$22.00
Superpave Asphalt Pavement (3”)	0.17	TN	$145.00	$24.65
Bituminous Prime Coat	0.30	GAL	$4.00	$1.20
Bituminous Tack Coat	0.07	GAL	$4.00	$0.28
			Total Cost/SY	$63.13

NEW AIRFIELD CEMENT CONCRETE PAVEMENT				
Subgrade Compaction (12”)	1	SY	$15.00	$15.00
Lime Rock Base Course (8”)	1	SY	$20.00	$20.00
Reinforced PCC Pavement (15”)	1	SY	$170.00	$33.00
			Total Cost/SY	$205.00

New Building - Storage/Basic Metal Building				
Construct New Building	1	SF	$ 135.00	$ 135.00
Electrical	1	SF	$ 15.00	$ 15.00
Plumbing	1	SF	$ 6.00	$ 6.00
HVAC	1	SF	$ 9.00	$ 9.00
Fire Protection	1	SF	$ 12.00	$ 12.00
Furnishings	1	SF	$ 8.00	$ 8.00
			Total Cost/SF	$185.00

New Building - Back of House				
Construct New Building	1	SF	$ 150.00	$ 150.00
Electrical	1	SF	$ 18.00	$ 18.00
Plumbing	1	SF	$ 12.00	$ 12.00
HVAC	1	SF	$ 14.00	$ 14.00
Fire Protection	1	SF	$ 15.00	$ 15.00
Furnishings	1	SF	$ 16.00	$ 16.00
			Total Cost/SF	$225.00

New Building – Finished Passenger Space				
Construct New Building	1	SF	$ 210.00	$ 210.00
Electrical	1	SF	$ 20.00	$ 20.00
Plumbing	1	SF	$ 14.00	$ 14.00
HVAC	1	SF	$ 16.00	$ 16.00
Fire Protection	1	SF	$ 20.00	$ 20.00
Furnishings	1	SF	$ 45.00	$ 45.00
			Total Cost/SF	$325.00

BASIS OF ESTIMATES

White Reflective Markings

1. White reflective markings for Runways
    - Centerline, threshold arrows, threshold, threshold bars, aiming point marking, runway touchdown zone and Runway designations.
2. Service road on apron
    - Dashed centerline and solid edge markings

Yellow Reflective Markings

1. Taxiways
    - Taxiway centerline, holding position marking
2. Holding bay area
    - Centerline, holding bars
3. Main terminal apron and general aviation apron
    - Centerline, holding bars, aircraft lead-in-line

Red Non-Reflective Markings

1. Taxiways
    - Holding position sign inscriptions (background)

White/Yellow Non-Reflective Markings

1. Main terminal apron
    - Gate position marking (background)
2. Main terminal apron
    - Aircraft stand safety line

Black Outline Markings

- Black outline marking for all around yellow, white, and red markings.

SRQ Master Plan Update
Date: 12/22/2020

Master Plan Costs

#	PROJECT NAME	Construction Cost	Owner Soft Costs	Total Project Cost (Rounded)
1	Holding Bay at North End of Taxiway A	$ 963,464	$ 299,536	$ 1,263,000
2	Holding Bay at South End of Taxiway A	$ 910,064	$ 291,936	$ 1,202,000
3	Runway 32 ROFA - Alternative 1 - Relocate Inner Service Road	$ 102,028	$ 110,972	$ 213,000
4	Runway 32 ROFA - Alternative 2 - Modify and Use Outer Service Road	$ 314,502	$ 144,498	$ 459,000
5	Runway Protection Zone Control (Property Acquisition)	n/a	n/a	$ 11,488,000
6	Runway 4-22 - Alternative 1 - Shift Runway 4-22	$ 3,069,160	$ 782,840	$ 3,852,000
7	Runway 4-22 - Alternative 2 - Revise Declared Distances	$ 1,454,647	$ 371,354	$ 1,826,000
8	Taxiway A4 & R3- Alternative 1 - New Connection to T1	$ 470,172	$ 223,828	$ 694,000
9	Taxiway A4 & R3 - Alternative 2 - New Connection to A	$ 646,106	$ 250,894	$ 897,000
10	Construct Concourse B Hold room/Concession Expansions	$ 15,804,289	$ 4,497,711	$ 20,302,000
11	Alternative 3- Construct New Concourse A	$ 71,367,229	$ 15,701,771	$ 87,069,000
12	Construct New Concourse A-ALT 2	$ 67,020,068	$ 14,744,932	$ 81,765,000
13	Construct Pedestrian Bridge and Concessions Reconfiguration	$ 2,434,539	$ 621,462	$ 3,056,000
14	Baggage Claim Expansion - Alternative 1 - Flat Plate Carousels	$ 5,096,628	$ 1,300,373	$ 6,397,000
15	Baggage Claim Expansion - Alternative 2 - Slope Plate Carousels	$ 6,055,187	$ 1,544,813	$ 7,600,000
16	Construct GA FIS Facility	$ 2,476,611	$ 632,389	$ 3,109,000
17	Maintenance Facility Alt. 1- Expand Vehicle Storage Bldg.	$ 4,901,392	$ 1,250,608	$ 6,152,000
18	Relocate Bulk Storage Facility	$ 1,272,987	$ 389,013	$ 1,662,000
19	Construct New Vehicle Storage Building	$ 6,740,863	$ 1,719,137	$ 8,460,000
20	Expand Existing Shade and Long Term Parking Lots	$ 3,126,558	$ 797,442	$ 3,924,000
21	Construct Parking Structure and Roadway Toll Plaza Modifications	$ 19,055,719	$ 4,859,282	$ 23,915,000
22	Construct New Long Term Parking Lot	$ 2,691,132	$ 686,868	$ 3,378,000
23	Relocate ASOS and Install RVR on Runway 14	$ 408,480	$ 185,520	$ 594,000
24	Construct Ground Transportation Center	$ 3,112,124	$ 793,876	$ 3,906,000
25	Relocate Valet Parking	$ 629,826	$ 268,174	$ 898,000
26	Construct Fire Station (ARFF) Improvements	$ 900,511	$ 365,489	$ 1,266,000
27	Expand Fuel Farm (3rd Tank)	$ 534,158	$ 232,842	$ 767,000
28	Construct T-Hangars (20 Units)	$ 2,725,408	$ 694,979	$ 3,420,387
29	Construct T-Hangars (10 and 14 Units)	$ 4,492,153	$ 1,145,499	$ 5,637,652
30	Environmental Assessment for Short Term Projects	n/a	n/a	$ 375,000
31	Environmental Assessment for Intermediate Term Projects	n/a	n/a	$ 225,000
32	Environmental Assessment for Long Term Projects	n/a	n/a	$ 300,000

SRQ Master Plan Update
Date: 12/22/2020

Capital Improvement Plan (CIP) Costs

#	PROJECT NAME	Construction Cost	Owner Soft Costs	Total Project Cost (Rounded)
33	*Blast Fence Deflector*	$ 800,000	n/a	$ 800,000
34	*GIS Mapping & Master Utility Layout*	n/a	$ 250,000	$ 250,000
35	*Taxiway C - Rehabilitation Design & Construction*	$ 2,500,000	$ 250,000	$ 2,750,000
36	*Design & Construct Taxilanes in North quad*	$ 1,200,000	$ 200,000	$ 1,400,000
37	*Taxiway R1, R2 & R3 - Rehabilitation Design & Construction*	$ 1,500,000	$ 180,000	$ 1,680,000
38	*Taxiway F - Rehabilitation*	$ 1,350,000	$ 250,000	$ 1,600,000
39	*Taxiway A2, C1, AP DOLF & T1 - Rehabilitation Design & Construction*	$ 1,250,000	$ 180,000	$ 1,430,000
40	*Taxiway A9, C2 & E - Rehabilitation Design and Construction*	$ 2,500,000	$ 265,000	$ 2,765,000
41	*Runway 14-32 Improvements Design & Construction*	$ 14,000,000	$ 700,000	$ 14,700,000
42	*Taxiway J - Rehabilitation Design & Construction*	$ 1,000,000	$ 150,000	$ 1,150,000
43	*Design Runway 4-22 Rehabilitation*	n/a	$ 475,000	$ 475,000
44	*Design Taxiway A Rehabilitation*	n/a	$ 400,000	$ 400,000

Projects in Italics are taken from the SRQ CIP and were not estimated separately by AID.

SRQ Master Plan Update
Date: 12/22/2020
1. Holding Bay at North End of Taxiway A

AMERICAN INFRASTRUCTURE DEVELOPMENT, INC.

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 76,200.00	$ 76,200
2	Safety, Security and Maintenance of Airfield Operations	1	LS	$ 30,000.00	$ 30,000
Holding Bay					
3	Demolish Existing asphalt and Base	4,350	SY	$ 8.00	$ 34,800.00
5	3" Turf Stripping	5,455	SY	$ 2.00	$ 10,910.00
6	Regular Excavation	4,435	CY	$ 10.00	$ 44,350.00
7	Demolish Airfield Sign	1	EA	$ 1,000.00	$ 1,000.00
8	Demolish Taxiway Edge Lights	7	EA	$ 300.00	$ 2,100.00
9	12" Stabilization LBR 40	5,540	SY	$ 12.00	$ 66,480.00
10	8" Limerock Base	5,890	SY	$ 22.00	$ 129,580.00
11	4" Bituminous Surface Course	1,225	TN	$ 150.00	$ 183,750.00
12	Bituminous Prime Coat	1,630	GAL	$ 4.00	$ 6,520.00
13	Bituminous Tack Coat	380	GAL	$ 4.00	$ 1,520.00
14	Non-Reflective Yellow Pavement Marking (Temporary 30%)	940	SF	$ 4.00	$ 3,760.00
15	Reflective Yellow Pavement Marking (Final 100%)	940	SF	$ 5.00	$ 4,700.00
16	Black Outline Marking	1,785	SF	$ 4.00	$ 7,140.00
17	Sodding	2,000	SY	$ 3.00	$ 6,000.00
18	Hydro Seed	0.13	AC	$ 2,500.00	$ 325.00
19	Storm Inlet Type D	2.00	EA	$ 4,000.00	$ 8,000.00
20	Mitered End Section	1.00	EA	$ 4,200.00	$ 4,200.00
21	36" RCP Drainage Pipe	410.00	LF	$ 150.00	$ 61,500.00
22	New Airfield Sign	2	EA	$ 6,000.00	$ 12,000.00
23	New Edge Lights	22	EA	$ 1,500.00	$ 33,000.00
24	Misc. Airfield Electrical (Cabling, Trenching, Duct)	1	LS	$ 30,000.00	$ 30,000.00
Service Road					
25	12" Stabilization LBR 40	1,370	SY	$ 15.00	$ 20,550.00
26	6" Optional Base Course	1,285	SY	$ 20.00	$ 25,700.00
27	3" Superpave Asphalt SP-9.5	196	TN	$ 145.00	$ 28,420.00
28	Bituminous Tack Coat	80	GAL	$ 4.00	$ 320.00
29	Bituminous Prime Coat	350	GAL	$ 4.00	$ 1,400.00
30	Sodding	1,190	SY	$ 3.00	$ 3,570.00

Subtotal, Construction		$ 837,795
Contingency	15%	$ 125,669
Total Construction Cost:		***$ 963,464***
Owner Legal & Admin	2.5%	*$ 24,087*
Engineering & Design	16%	*$ 150,000*
Program Management	5%	*$ 48,173*
Construction Management	5%	*$ 48,173*
Design Services During Construction	3%	*$ 28,904*
Total Project Cost		**$ 1,262,801**

SRQ Master Plan Update
Date: 12/22/2020
2. Holding Bay at South End of Taxiway A

AMERICAN INFRASTRUCTURE DEVELOPMENT, INC.
TRANSPORTATION CONSULTING

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 72,000.00	$ 72,000
2	Safety, Security and Maintenance of Airfield Operations	1	LS	$ 30,000.00	$ 30,000
Holding Bay					
3	Demolish Existing asphalt and Base	1,315	SY	$ 8.00	$ 10,520.00
4	3" Turf Stripping	4,600	SY	$ 2.00	$ 9,200.00
5	Regular Excavation	4,920	CY	$ 10.00	$ 49,200.00
6	Sign Demolition	1	EA	$ 1,000.00	$ 1,000.00
7	Taxiway Edge Lights Demolition	6	EA	$ 300.00	$ 1,800.00
8	12" Stabilization LBR 40	5,740	SY	$ 12.00	$ 68,880.00
9	8" Limerock Base	5,610	SY	$ 22.00	$ 123,420.00
10	4" Bituminous Surface Course	1,225	TN	$ 150.00	$ 183,750.00
11	Bituminous Prime Coat	1,635	GAL	$ 4.00	$ 6,540.00
12	Bituminous Tack Coat	380	GAL	$ 4.00	$ 1,520.00
13	Non-Reflective Yellow Pavement Marking (Temporary 30%)	920	SF	$ 4.00	$ 3,680.00
14	Reflective Yellow Pavement Marking (Final 100%)	920	SF	$ 5.00	$ 4,600.00
15	Black Outline Marking	1,745	SF	$ 4.00	$ 6,980.00
16	Sodding	2,000	SY	$ 3.00	$ 6,000.00
17	Hydro Seed	0.07	AC	$ 2,500.00	$ 175.00
18	Storm Inlet Type D	2.00	EA	$ 4,000.00	$ 8,000.00
19	Mitered End Section	1.00	EA	$ 4,200.00	$ 4,200.00
20	36" RCP Drainage Pipe	295.00	LF	$ 150.00	$ 44,250.00
21	New Airfield Sign	2	EA	$ 6,000.00	$ 12,000.00
22	New Edge Lights	22	EA	$ 1,500.00	$ 33,000.00
23	Misc. Airfield Electrical (Cabling, Trenching, Duct)	1	LS	$ 30,000.00	$ 30,000.00
Service Road					
24	12" Stabilization LBR 40	1,410	SY	$ 15.00	$ 21,150.00
25	6" Optional Base Course	1,350	SY	$ 20.00	$ 27,000.00
26	3" Superpave Asphalt SP-9.5	190	TN	$ 145.00	$ 27,550.00
27	Bituminous Prime Coat	335	GAL	$ 4.00	$ 1,340.00
28	Bituminous Tack Coat	80	GAL	$ 4.00	$ 320.00
29	Sodding	1,095	SY	$ 3.00	$ 3,285.00

Subtotal, Construction		$	791,360
Contingency	15%	$	118,704
Total Construction Cost:		***$***	***910,064***
Owner Legal & Admin	2.5%	*$*	*22,752*
Engineering & Design	16%	*$*	*150,000*
Program Management	5%	*$*	*45,503*
Construction Management	5%	*$*	*45,503*
Design Services During Construction	3%	*$*	*27,302*
Total Project Cost		**$**	**1,201,124**

SRQ Master Plan Update
Date: 12/22/2020
3. Runway 32 ROFA - Alternative 1 - Relocate Inner Service Road

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 8,100.00	$ 8,100
2	Safety, Security and Maintenance of Airfield Operations	1	LS	$ 2,000.00	$ 2,000
3	Demolish Existing asphalt and Base	1,075	SY	$ 8.00	$ 8,600
5	3" Turf Stripping	700	SY	$ 2.00	$ 1,400
5	Regular Excavation	565	CY	$ 10.00	$ 5,650
6	12" Stabilization LBR 40	1,160	SY	$ 12.00	$ 13,920
7	6" Optional Base Course	1,050	SY	$ 20.00	$ 21,000
8	3" Superpave Asphalt SP-9.5	160	TN	$ 145.00	$ 23,200
9	Bituminous Prime Coat	280	GAL	$ 4.00	$ 1,120
10	Bituminous Tack Coat	65	GAL	$ 4.00	$ 260
11	Sodding	990	SY	$ 3.00	$ 2,970
13	Hydro Seed	0.20	AC	$ 2,500.00	$ 500

Subtotal, Construction		$	88,720
Contingency	15%	$	13,308
Total Construction Cost:		**$**	**102,028**
Owner Legal & Admin	2.5%	*$*	*2,551*
Engineering & Design	93%	*$*	*95,000*
Program Management	5%	*$*	*5,101*
Construction Management	5%	*$*	*5,101*
Design Services During Construction	3%	*$*	*3,061*
Total Project Cost		**$**	**212,842**

SRQ Master Plan Update
Date: 12/22/2020
4. Runway 32 ROFA - Alternative 2 - Modify and Use Outer Service Road

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 24,900.00	$ 24,900
2	Maintenance of Air Operations Traffic	1	LS	$ 6,000.00	$ 6,000
3	Demolish Existing asphalt and Base (Road)	850	SY	$ 10.00	$ 8,500
5	3" Turf Stripping	1,220	SY	$ 2.00	$ 2,440
6	Regular Excavation	520	CY	$ 10.00	$ 5,200
6	Embankment	1,205	CY	$ 20.00	$ 24,100
7	12" Stabilization LBR 40 (Road)	10,825	SY	$ 12.00	$ 129,900
8	6" Optional Base Course (Road)	1,625	SY	$ 20.00	$ 32,500
9	3" Superpave Asphalt SP-9.5 (Road)	226	TN	$ 145.00	$ 32,770
10	Bituminous Prime Coat (Road)	405	GAL	$ 4.00	$ 1,620
11	Bituminous Tack Coat (Road)	95	GAL	$ 4.00	$ 380
12	Sodding (Road)	1,590	SY	$ 3.00	$ 4,770
14	Hydro Seed	0.16	AC	$ 2,500.00	$ 400

Subtotal, Construction		$ 273,480
Contingency	15%	$ 41,022
Total Construction Cost:		**$ 314,502**
Owner Legal & Admin	2.5%	*$ 7,863*
Engineering & Design	30%	*$ 95,000*
Program Management	5%	*$ 15,725*
Construction Management	5%	*$ 15,725*
Design Services During Construction	3%	*$ 9,435*
Total Project Cost		**$ 458,250**

SRQ Master Plan Update
Date: 12/22/2020
5. Runway Protection Zone Control (Property Acquisition)

No.	Description				Total Cost
1	Property Acquisition				$ 11,487,323

Subtotal	$	11,487,323
Contingency (10%)	$	1,148,732
Total Cost	**$**	**12,636,055**

RUNWAY 14-APPROACH RPZ

1	PARCEL #	LAND USE	ACREAGE	2019 JUST VALUE	ADDRESS
2	6676500059	STORES	0.764	$668,820	7606 NORTH TAMIAMI TRAIL
3	6676200006	OFFICE BUILDING	0.3701	$257,775	7626 NORTH TAMIAMI TRAIL
4	6680300008	SINGLE FAMILY	0.2119	$177,128	243 GREEANWOOD AVENUE
5	6677700004	TWO OR MORE HOUSES	0.4484	$270,544	242 GREEANWOOD AVENUE
				$1,374,267	

RUNWAY4-RPZ

6	PARCEL #	LAND USE	ACREAGE	2019 JUST VALUE	ADDRESS
7	1040003	COLLEGE (PUBLIC)	1.95	$1,861,800	600 EDWARDS DRIVE
8	1040047	SINGLE FAMILY	0.3	$217,200	569 POINCIANNA DRIVE
9	1040046	SINGLE FAMILY	0.31	$239,600	559 POINCIANNA DRIVE
10	1040001	VACANT INSTITUTIONAL	3.58	$1,012,500	6255 BAYSHORE DRIVE
11	1040025	SINGLE FAMILY	0.33	$154,000	567 PARKVIEW DRIVE
12	1040027	SINGLE FAMILY	0.33	$252,800	560 POINCIANNA DRIVE
13	1040028	SINGLE FAMILY	0.33	$201,500	554 POINCIANNA DRIVE
14	1060005	COLLEGE (PUBLIC)	2.22	$5,683,900	5800 BAYSHORE ROAD
				$9,623,300	

RUNWAY 22-RPZ

15	PARCEL #	LAND USE	ACREAGE	2019 JUST VALUE	ADDRESS
16	2004110009	CONVN STR/ GAS STATION	0.5115	$303,215	7671 15TH STREET EAST
17	2020900003	COMMERCIAL	2.0606	$108,200	1520 TALLEVAST ROAD
18	2021410051	LEASEHOLD INTEREST GOV OWNED	1.08	$78,341	TALLEVAST ROAD
				$489,756	

Total:	**0**	**$11,487,323**

SRQ Master Plan Update
Date: 12/22/2020
6. Runway 4-22 - Alternative 1 - Shift Runway 4-22

Reconstruct Taxiways B and D With 185' Runway Shift

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 242,700.00	$ 242,700
2	Maintenance of Air Operations Traffic	1	LS	$ 55,000.00	$ 55,000
Reconstruct Taxiway B					
3	Demolish Existing asphalt and Base	6,030	SY	$ 8.00	$ 48,240
4	3" Turf Stripping	3,145	SY	$ 3.00	$ 9,435.00
5	Regular Excavation	1,100	CY	$ 10.00	$ 11,000.00
6	Pavement Marking Removal	810	SF	$ 3.00	$ 2,430.00
7	Sign Demolition	5	EA	$ 1,000.00	$ 5,000.00
8	Taxiway Edge Lights Demolition	30	EA	$ 300.00	$ 9,000.00
9	12" Stabilization LBR 40	4,610	SY	$ 12.00	$ 55,320.00
10	8" Limerock Base	4,425	SY	$ 22.00	$ 97,350.00
11	4" Bituminous Asphalt Pavement	945	TN	$ 150.00	$ 141,750.00
12	Bituminous Prime Coat	1,260	GAL	$ 4.00	$ 5,040.00
13	Bituminous Tack Coat	295	GAL	$ 4.00	$ 1,180.00
14	Non-Reflective Yellow Pavement Marking (Temporary 30%)	1,240	SF	$ 4.00	$ 4,960.00
15	Reflective Yellow Pavement Marking (Final 100%)	1,240	SF	$ 5.00	$ 6,200.00
16	Black Outline Marking	2,130	SF	$ 4.00	$ 8,520.00
17	Red Pavement Marking	630	SF	$ 4.00	$ 2,520.00
18	Sodding	3,165	SY	$ 3.00	$ 9,495.00
19	Hydro Seed	0.60	AC	$ 2,500.00	$ 1,500.00
20	New Airfield Signs	5	EA	$ 6,000.00	$ 30,000.00
21	New Taxiway Edge lights	35	EA	$ 1,500.00	$ 52,500.00
Reconstruct Taxiway D With 185' Runway Shift					
22	Demolish Existing asphalt and Base	6,615	SY	$ 8.00	$ 52,920
23	3" Turf Stripping	11,585	SY	$ 3.00	$ 34,755.00
24	Regular Excavation	3,915	CY	$ 10.00	$ 39,150.00
25	Embankment	15,492	CY	$ 20.00	$ 309,840.00
26	Pavement Marking Removal	405	SF	$ 3.00	$ 1,215.00
27	Sign Demolition	6	EA	$ 1,500.00	$ 9,000.00
28	Taxiway Edge Lights Demolition	43	EA	$ 300.00	$ 12,900.00
29	12" Stabilization LBR 40	12,575	SY	$ 12.00	$ 150,900.00
30	8" Limerock Base	12,055	SY	$ 22.00	$ 265,210.00
31	4" Bituminous Asphalt Pavement	2,610	TN	$ 150.00	$ 391,500.00
32	Bituminous Prime Coat	3,480	GAL	$ 4.00	$ 13,920.00
33	Bituminous Tack Coat	815	GAL	$ 4.00	$ 3,260.00
34	Non-Reflective Yellow Pavement Marking (Temporary 30%)	1,985	SF	$ 4.00	$ 7,940.00
35	Reflective Yellow Pavement Marking (Final 100%)	1,985	SF	$ 5.00	$ 9,925.00
36	Black Outline Marking	3,535	SF	$ 4.00	$ 14,140.00
37	Red Pavement Marking	630	SF	$ 4.00	$ 2,520.00
38	Sodding	4,270	SY	$ 3.00	$ 12,810.00
39	Hydro Seed	1.12	AC	$ 2,500.00	$ 2,800.00
40	New Airfield Signs	6	EA	$ 6,000.00	$ 36,000.00
41	New Taxiway Edge lights	61	EA	$ 1,500.00	$ 91,500.00
Runway 4-22					
42	Pavement Marking Removal	25,470	SF	$ 3.00	$ 76,410.00
43	Runway End Lights Demolition	16	EA	$ 300.00	$ 4,800.00
44	White Pavement Marking (Temporary 30%)	48,470	SF	$ 4.00	$ 193,880.00

SRQ Master Plan Update
Date: 12/22/2020
6. Runway 4-22 - Alternative 1 - Shift Runway 4-22

Reconstruct Taxiways B and D With 185' Runway Shift

45	White Pavement Marking (Final 100%)	48,470	SF	$	5.00		
46	Black Outline Marking	4,815	SF	$	4.00	$	19,260.00
47	New Runway End Lights	16	EA	$	1,500.00	$	24,000.00
Service Road							
48	Demolish Existing Asphalt and Base	980	SY	$	8.00	$	7,840
49	Regular Excavation	230	CY	$	10.00	$	2,300.00
50	12" Stabilization LBR 40	1,315	SY	$	12.00	$	15,780.00
51	6" Optional Base Course	1,180	SY	$	20.00	$	23,600.00
52	3" Superpave Asphalt SP-9.5	230	TN	$	145.00	$	33,350.00
53	Bituminous Prime Coat	305	GAL	$	4.00	$	1,220.00
54	Bituminous Tack Coat	70	GAL	$	4.00	$	280.00
55	Sodding	1,540	SY	$	3.00	$	4,620.00
56	Hydro Seed	0.06	AC	$	2,500.00	$	150.00

Subtotal, Construction		$	2,668,835
Contingency	15%	$	400,325
Total Construction Cost:		**$**	**3,069,160**
Owner Legal & Admin	2.5%	*$*	*76,729*
Engineering & Design	10%	*$*	*306,916*
Program Management	5%	*$*	*153,458*
Construction Management	5%	*$*	*153,458*
Design Services During Construction	3%	*$*	*92,075*
Total Project Cost		**$**	**3,851,796**

SRQ Master Plan Update
Date: 12/22/2020
7. Runway 4-22 - Alternative 2 - Revise Declared Distances

Reconstruct Taxiway B and D

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 115,000.00	$ 115,000
2	Maintenance of Air Operations Traffic	1	LS	$ 25,000.00	$ 25,000
Reconstruct Taxiway B					
3	Demolish Existing asphalt and Base	3,935	SY	$ 8.00	$ 31,480
5	3" Turf Stripping	3,225	SY	$ 2.00	$ 6,450.00
6	Regular Excavation	1,050	CY	$ 10.00	$ 10,500.00
7	Pavement Marking Removal	85	SF	$ 3.00	$ 255.00
8	Sign Demolition	3	EA	$ 1,000.00	$ 3,000.00
9	Taxiway Edge Lights Demolition	20	EA	$ 300.00	$ 6,000.00
10	12" Stabilization LBR 40	1,825	SY	$ 12.00	$ 21,900.00
11	8" Limerock Base	4,200	SY	$ 22.00	$ 92,400.00
12	4" Bituminous Asphalt Pavement	910	TN	$ 150.00	$ 136,500.00
13	Bituminous Prime Coat	1,210	GAL	$ 4.00	$ 4,840.00
14	Bituminous Tack Coat	270	GAL	$ 4.00	$ 1,080.00
15	Non-Reflective Yellow Pavement Marking (Temporary 30%)	860	SF	$ 4.00	$ 3,440.00
15	Reflective Yellow Pavement Marking (Final 100%)	860	SF	$ 5.00	$ 4,300.00
16	Black Outline Marking	1,560	SF	$ 4.00	$ 6,240.00
17	Red Pavement Marking	630	SF	$ 4.00	$ 2,520.00
18	Sodding	1,555	SY	$ 3.00	$ 4,665.00
19	Hydro Seed	0.55	AC	$ 2,500.00	$ 1,375.00
20	New Airfield Signs	4	EA	$ 6,000.00	$ 24,000.00
21	New Taxiway Edge lights	26	EA	$ 1,500.00	$ 39,000.00
Reconstruct Taxiway D					
22	Demolish Existing Asphalt and Base	6,540	SY	$ 8.00	$ 52,320
23	3" Turf Stripping	5,300	SY	$ 2.00	$ 10,600.00
24	Regular Excavation	620	CY	$ 10.00	$ 6,200.00
25	Embankment	1,610	CY	$ 20.00	$ 32,200.00
26	Pavement Marking Removal	405	SF	$ 3.00	$ 1,215.00
27	Sign Demolition	6	EA	$ 1,000.00	$ 6,000.00
28	Taxiway Edge Lights Demolition	38	EA	$ 300.00	$ 11,400.00
29	12" Stabilization LBR 40	6,990	SY	$ 12.00	$ 83,880.00
30	8" Limerock Base	6,710	SY	$ 22.00	$ 147,620.00
31	4" Bituminous Asphalt Pavement	1,450	TN	$ 150.00	$ 217,500.00
32	Bituminous Prime Coat	1,935	GAL	$ 4.00	$ 7,740.00
33	Bituminous Tack Coat	455	GAL	$ 4.00	$ 1,820.00
34	Non-Reflective Yellow Pavement Marking (Temporary 30%)	1,570	SF	$ 4.00	$ 6,280.00
35	Reflective Yellow Pavement Marking (Final 100%)	1,570	SF	$ 5.00	$ 7,850.00
36	Black Outline Marking	2,735	SF	$ 4.00	$ 10,940.00
37	Red Pavement Marking	630	SF	$ 4.00	$ 2,520.00
38	Sodding	2,835	SY	$ 3.00	$ 8,505.00
39	Hydro Seed	0.95	AC	$ 2,500.00	$ 2,375.00
40	New Airfield Signs	6	EA	$ 6,000.00	$ 36,000.00
41	New Taxiway Edge lights	48	EA	$ 1,500.00	$ 72,000.00

SRQ Master Plan Update
Date: 12/22/2020
7. Runway 4-22 - Alternative 2 - Revise Declared Distances

Reconstruct Taxiway B and D

Subtotal, Construction		$	1,264,910
Contingency	15%	$	189,737
Total Construction Cost:		***$***	***1,454,647***
Owner Legal & Admin	2.5%	*$*	*36,366*
Engineering & Design	10%	*$*	*145,465*
Program Management	5%	*$*	*72,732*
Construction Management	5%	*$*	*72,732*
Design Services During Construction	3%	*$*	*43,639*
Total Project Cost		**$**	**1,825,581**

SRQ Master Plan Update
Date: 12/22/2020
8. Taxiway A4 & R3- Alternative 1 - New Connection to T1

AMERICAN INFRASTRUCTURE DEVELOPMENT, INC.
TRANSPORTATION CONSULTING

New Connector to Taxiway T-1					
No.	**Description**	**Quant**	**Unit**	**Unit Price**	**Total Cost**
1	Mobilization	1	LS	$ 14,000.00	$ 14,000
2	Maintenance of Air Operations Traffic	1	LS	$ 2,500.00	$ 2,500
3	Demolish Existing Asphalt and Base	1,390	SY	$ 8.00	$ 11,120.00
5	3" Turf Stripping	815	SY	$ 3.00	$ 2,445.00
6	Regular Excavation	275	CY	$ 10.00	$ 2,750.00
7	Pavement Marking Removal	1,280	SF	$ 3.00	$ 3,840.00
8	Sign Demolition	1	EA	$ 1,000.00	$ 1,000.00
9	Taxiway Edge Lights Demolition	17	EA	$ 300.00	$ 5,100.00
10	12" Stabilization LBR 40	875	SY	$ 12.00	$ 10,500.00
11	8" Limerock Base	840	SY	$ 22.00	$ 18,480.00
12	4" Bituminous Surface Course	185	TN	$ 150.00	$ 27,750.00
13	Bituminous Prime Coat	245	GAL	$ 4.00	$ 980.00
14	Bituminous Tack Coat	60	GAL	$ 4.00	$ 240.00
15	Non-Reflective Yellow Pavement Marking (Temporary 30%)	495	SF	$ 4.00	$ 1,980.00
16	Reflective Yellow Pavement Marking (Final 100%)	495	SF	$ 5.00	$ 2,475.00
17	Black Outline Marking	335	SF	$ 4.00	$ 1,340.00
18	Sodding	560	SY	$ 3.00	$ 1,680.00
19	Hydro Seed	0.21	AC	$ 2,500.00	$ 525.00
20	New Airfield Sign	2.00	EA	$ 6,000.00	$ 12,000.00
21	Airfield Electrical - Cables, Ductbanks, Counterpoise	1,000.00	LF	$ 15.00	$ 15,000.00
22	New Taxiway Edge lights	6	EA	$ 1,500.00	$ 9,000.00
Service Road					
23	Pavement Marking Removal	310	SF	$ 3.00	$ 930.00
24	Sign Demolition (Stop Sign)	2	EA	$ 100.00	$ 200.00
25	6" Optional Base Course	165	SY	$ 20.00	$ 3,300.00
26	3" Superpave Asphalt SP-9.5	30	TN	$ 145.00	$ 4,350.00
27	Bituminous Prime Coat	50	GAL	$ 4.00	$ 200.00
28	Bituminous Tack Coat	15	GAL	$ 4.00	$ 60.00

Subtotal, Construction		$ 153,745
Contingency	15%	$ 23,062
Total Construction Cost:		$ 176,807
Owner Legal & Admin	2.5%	*$ 4,420*
Engineering & Design	42%	*$ 75,000*
Program Management	5%	*$ 8,840*
Construction Management	5%	*$ 8,840*
Design Services During Construction	3%	*$ 5,304*
Total Project Cost		**$ 279,212**

SRQ Master Plan Update
Date: 12/22/2020
8. Taxiway A4 & R3- Alternative 1 - New Connection to T1

Modify Taxiway R3

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 23,200.00	$ 23,200
2	Maintenance of Air Operations Traffic	1	LS	$ 4,500.00	$ 4,500
3	Demolish Existing Asphalt and Base	1,045	SY	$ 8.00	$ 8,360.00
4	3" Turf Stripping	1,420	SY	$ 3.00	$ 4,260.00
5	Regular Excavation	460	CY	$ 10.00	$ 4,600.00
6	Pavement Marking Removal	2,215	SF	$ 3.00	$ 6,645.00
7	Sign Demolition	2	EA	$ 1,000.00	$ 2,000.00
8	Taxiway Edge Lights Demolition	17	EA	$ 300.00	$ 5,100.00
9	12" Stabilization LBR 40	1,515	SY	$ 12.00	$ 18,180.00
10	8" Limerock Base	1,445	SY	$ 22.00	$ 31,790.00
11	4" Bituminous Surface Course	270	TN	$ 150.00	$ 40,500.00
12	Bituminous Prime Coat	400	GAL	$ 4.00	$ 1,600.00
13	Bituminous Tack Coat	95	GAL	$ 4.00	$ 380.00
14	Non-Reflective Yellow Pavement Marking (Temporary 30%)	1,140	SF	$ 4.00	$ 4,560.00
15	Reflective Yellow Pavement Marking (Final 100%)	1,140	SF	$ 5.00	$ 5,700.00
16	Black Outline Marking	1,610	SF	$ 4.00	$ 6,440.00
17	Sodding	1,595	SY	$ 3.00	$ 4,785.00
18	New Airfield Sign	2.00	EA	$ 6,000.00	$ 12,000.00
19	Airfield Electrical - Cables, Ductbanks, Counterpoise	2,200.00	LF	$ 15.00	$ 33,000.00
20	New Taxiway Edge lights	25	EA	$ 1,500.00	$ 37,500.00

Subtotal, Construction		$	255,100
Contingency	15%	$	38,265
Total Construction Cost:		**$**	**293,365**
Owner Legal & Admin	2.5%	*$*	*7,334*
Engineering & Design	26%	*$*	*75,000*
Program Management	5%	*$*	*14,668*
Construction Management	5%	*$*	*14,668*
Design Services During Construction	3%	*$*	*8,801*
Total Project Cost		**$**	**413,837**
Total Combined Construction Cost:		**$**	**693,048**

SRQ Master Plan Update
Date: 12/22/2020
9. Taxiway A4 & R3 - Alternative 2 - New Connection to A

AMERICAN INFRASTRUCTURE DEVELOPMENT, INC.
TRANSPORTATION CONSULTING

New Connector to Taxiway A					
No.	**Description**	**Quant**	**Unit**	**Unit Price**	**Total Cost**
1	Mobilization	1	LS	$ 27,900.00	$ 27,900
2	Maintenance of Air Operations Traffic	1	LS	$ 4,000.00	$ 4,000
3	Demolish Existing asphalt and Base	1,390	SY	$ 8.00	$ 11,120.00
5	3" Turf Stripping	1,645	SY	$ 3.00	$ 4,935.00
6	Regular Excavation	575	CY	$ 10.00	$ 5,750.00
7	Pavement Marking Removal	955	SF	$ 3.00	$ 2,865.00
8	Drainage Inlet Demolition	2	EA	$ 1,500.00	$ 3,000.00
9	12"-36" RCP Demolition	65	LF	$ 100.00	$ 6,500.00
10	Sign Demolition	1	EA	$ 1,000.00	$ 1,000.00
11	Taxiway Edge Lights Demolition	14	EA	$ 300.00	$ 4,200.00
12	12" Stabilization LBR 40	1,890	SY	$ 12.00	$ 22,680.00
13	8" Limerock Base	1,790	SY	$ 22.00	$ 39,380.00
14	4" Bituminous Surface Course	385	TN	$ 150.00	$ 57,750.00
15	Bituminous Prime Coat	515	GAL	$ 4.00	$ 2,060.00
16	Bituminous Tack Coat	120	GAL	$ 4.00	$ 480.00
17	Non-Reflective Yellow Pavement Marking (Temporary 30%)	295	SF	$ 4.00	$ 1,180.00
18	Reflective Yellow Pavement Marking (Final 100%)	295	SF	$ 5.00	$ 1,475.00
19	Black Outline Marking	589	SF	$ 4.00	$ 2,356.00
20	Sodding	875	SY	$ 3.00	$ 2,625.00
21	Hydro Seed	0.22	AC	$ 2,500.00	$ 550.00
22	Storm Inlet Type D	2.00	EA	$ 4,000.00	$ 8,000.00
23	36" RCP Drainage Pipe	300.00	LF	$ 150.00	$ 45,000.00
24	New Airfield Sign	1.00	EA	$ 6,000.00	$ 6,000.00
25	Airfield Electrical - Cables, Ductbanks, Counterpoise	1,300.00	LF	$ 15.00	$ 19,500.00
27	New Taxiway Edge lights	10	EA	$ 1,500.00	$ 15,000.00
Service Road					
28	Demolish Existing Asphalt and Base	120	SY	$ 8.00	$ 960.00
29	Pavement Marking Removal	105	SF	$ 3.00	$ 315.00
30	Sign Demolition (Stop Sign)	2	EA	$ 100.00	$ 200.00
31	6" Optional Base	165	SY	$ 20.00	$ 3,300.00
32	3" Superpave Asphalt SP-9.5	30	TN	$ 145.00	$ 4,350.00
33	Bituminous Prime Coat	50	GAL	$ 4.00	$ 200.00
34	Bituminous Tack Coat	15	GAL	$ 4.00	$ 60.00
35	Single Post Sign	2	EA	$ 400.00	$ 800.00
36	Yellow/White Pavement Marking	310	SF	$ 4.00	$ 1,240.00

Subtotal, Construction		$ 306,731
Contingency	15%	$ 46,010
Total Construction Cost:		$ 352,741
Owner Legal & Admin	2.5%	*$ 8,819*
Engineering & Design	21%	*$ 75,000*
Program Management	5%	*$ 17,637*
Construction Management	5%	*$ 17,637*
Design Services During Construction	3%	*$ 10,582*
Total Project Cost		**$ 482,415**

SRQ Master Plan Update
Date: 12/22/2020
9. Taxiway A4 & R3 - Alternative 2 - New Connection to A

New Connector to Taxiway A
Modify Taxiway R3

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 23,200.00	$ 23,200
2	Maintenance of Air Operations Traffic	1	LS	$ 4,500.00	$ 4,500
3	Demolish Existing Asphalt and Base	1,045	SY	$ 8.00	$ 8,360.00
4	3" Turf Stripping	1,420	SY	$ 3.00	$ 4,260.00
5	Regular Excavation	460	CY	$ 10.00	$ 4,600.00
6	Pavement Marking Removal	2,215	SF	$ 3.00	$ 6,645.00
7	Sign Demolition	2	EA	$ 1,000.00	$ 2,000.00
8	Taxiway Edge Lights Demolition	17	EA	$ 300.00	$ 5,100.00
9	12" Stabilization LBR 40	1,515	SY	$ 12.00	$ 18,180.00
10	8" Limerock Base	1,445	SY	$ 22.00	$ 31,790.00
11	4" Bituminous Surface Course	270	TN	$ 150.00	$ 40,500.00
12	Bituminous Prime Coat	400	GAL	$ 4.00	$ 1,600.00
13	Bituminous Tack Coat	95	GAL	$ 4.00	$ 380.00
14	Non-Reflective Yellow Pavement Marking (Temporary 30%)	1,140	SF	$ 4.00	$ 4,560.00
15	Reflective Yellow Pavement Marking (Final 100%)	1,140	SF	$ 5.00	$ 5,700.00
16	Black Outline Marking	1,610	SF	$ 4.00	$ 6,440.00
17	Sodding	1,595	SY	$ 3.00	$ 4,785.00
18	New Airfield Sign	2.00	EA	$ 6,000.00	$ 12,000.00
19	Airfield Electrical - Cables, Ductbanks, Counterpoise	2,200.00	LF	$ 15.00	$ 33,000.00
20	New Taxiway Edge lights	25	EA	$ 1,500.00	$ 37,500.00

Subtotal, Construction		$	255,100
Contingency	15%	$	38,265
Total Construction Cost:		**$**	**293,365**
Owner Legal & Admin	2.5%	*$*	*7,334*
Engineering & Design	26%	*$*	*75,000*
Program Management	5%	*$*	*14,668*
Construction Management	5%	*$*	*14,668*
Design Services During Construction	3%	*$*	*8,801*
Total Project Cost		**$**	**413,837**

Total Combined Construction Cost: **$ 896,252**

SRQ Master Plan Update
Date: 12/22/2020
10. Construct Concourse B Hold room/Concession Expansions

No.	Description	Quant	Unit	Unit Price	Total Cost
B-1-Concession (South of Gate B2)					
1	Mobilization	1	LS	$ 292,900.00	$ 292,900
2	Maintenance of Air Operations Traffic	1	LS	$ 72,000.00	$ 72,000
3	Demolish PCC Pavement	1,040	SF	$ 15.00	$ 15,600
4	Drainage Inlet Demolition	4	EA	$ 1,500.00	$ 6,000
5	12"-36" RCP Demolition	255	LF	$ 100.00	$ 25,500
6	Storm Inlet Type D	3.00	EA	$ 4,000.00	$ 12,000
7	36" RCP Drainage Pipe	210.00	LF	$ 150.00	$ 31,500
8	8" Limerock Base	95	SY	$ 22.00	$ 2,090
9	15" Reinforced PCC Pavement (Complete)	95	SY	$ 125.00	$ 11,875
10	Construct New Concession Space	8,469	SF	$ 325.00	$ 2,752,425

Subtotal, Construction		$	3,221,890
Contingency	15%	$	483,284
Total Construction Cost:		***$***	***3,705,174***
Owner Legal & Admin	2.5%	*$*	*92,629*
Engineering & Design	15%	*$*	*555,776*
Program Management	2%	*$*	*74,103*
Construction Management	5%	*$*	*185,259*
Design Services During Construction	3%	*$*	*111,155*
Total Project Cost		**$**	**4,724,096**

No.	Description	Quant	Unit	Unit Price	Total Cost
B-2-Holdroom/Concession (Between Gates B4 & B6)					
1	Mobilization	1	LS	$ 86,300.00	$ 86,300
2	Maintenance of Air Operations Traffic	1	LS	$ 22,000.00	$ 22,000
3	Demolish PCC Pavement	355	SF	$ 15.00	$ 5,325
4	Drainage Inlet Demolition	2	EA	$ 1,500.00	$ 3,000
5	12"-36" RCP Demolition	240	LF	$ 100.00	$ 24,000
6	Storm Inlet Type D	2.00	EA	$ 4,000.00	$ 8,000
7	36" RCP Drainage Pipe	325.00	LF	$ 150.00	$ 48,750
8	8" Limerock Base	145	SY	$ 22.00	$ 3,190
9	15" Reinforced PCC Pavement (Complete)	145	SY	$ 125.00	$ 18,125
10	Construct New Concession Space	2,248	SF	$ 325.00	$ 730,600

Subtotal, Construction		$	949,290
Contingency	15%	$	142,394
Total Construction Cost:		***$***	***1,091,684***
Owner Legal & Admin	2.5%	*$*	*27,292*
Engineering & Design	15%	*$*	*163,753*
Program Management	2%	*$*	*21,834*
Construction Management	5%	*$*	*54,584*
Design Services During Construction	3%	*$*	*32,751*
Total Project Cost		**$**	**1,391,896**

SRQ Master Plan Update
Date: 12/22/2020
10. Construct Concourse B Hold room/Concession Expansions

No.	Description	Quant	Unit	Unit Price	Total Cost
B-3-Holdroom/Concession (Between Gates B8 & B10)					
1	Mobilization	1	LS	$ 51,700.00	$ 51,700
2	Maintenance of Air Operations Traffic	1	LS	$ 12,000.00	$ 12,000
3	Demolish PCC Pavement	145	SF	$ 15.00	$ 2,175
4	Drainage Inlet Demolition	2	EA	$ 1,500.00	$ 3,000
5	12"-36" RCP Demolition	240	LF	$ 100.00	$ 24,000
6	Storm Inlet Type D	2.00	EA	$ 4,000.00	$ 8,000
7	36" RCP Drainage Pipe	265.00	LF	$ 150.00	$ 39,750
8	8" Limerock Base	120	SY	$ 22.00	$ 2,640
9	15" Reinforced PCC Pavement (Complete)	120	SY	$ 125.00	$ 15,000
10	Construct New Concession Space	1,262	SF	$ 325.00	$ 410,150

Subtotal, Construction		$	568,415
Contingency	15%	$	85,262
Total Construction Cost:		***$***	***653,677***
Owner Legal & Admin	2.5%	*$*	*16,342*
Engineering & Design	25%	*$*	*165,000*
Program Management	2%	*$*	*13,074*
Construction Management	5%	*$*	*32,684*
Design Services During Construction	3%	*$*	*19,610*
Total Project Cost		**$**	**900,387**

SRQ Master Plan Update
Date: 12/22/2020
10. Construct Concourse B Hold room/Concession Expansions

No.	Description	Quant	Unit	Unit Price	Total Cost
B-4-Holdroom/Concession (Between Gates B11 & B12)					
Relocate Taxiway Centerline		1	LS	$ 500,500.00	$ 500,500
1	Mobilization	1	LS	$ 3,400.00	$ 3,400
2	Maintenance of Air Operations Traffic	1	LS	$ 11,000.00	$ 11,000
3	Demolish Existing asphalt and Base	2,850	SY	$ 8.00	$ 22,800
5	3" Turf Stripping	5,685	SY	$ 3.00	$ 17,055
6	Regular Excavation	1,910	CY	$ 10.00	$ 19,100
7	Pavement Marking Removal	6,370	SF	$ 3.00	$ 19,110
8	Drainage Inlet Demolition	1	EA	$ 1,500.00	$ 1,500
9	12"-36" RCP Demolition	135	LF	$ 100.00	$ 13,500
10	Trench Drain Demolition	410	LF	$ 20.00	$ 8,200
11	Inlet Trench Drain Demolition	3	EA	$ 100.00	$ 300
12	Taxiway Edge Lights Demolition	17	EA	$ 500.00	$ 8,500
13	Airfield Sing Demolition	3	EA	$ 1,500.00	$ 4,500
14	Tree Removal	14	EA	$ 1,000.00	$ 14,000
15	12" Stabilization LBR 40	9,060	SY	$ 12.00	$ 108,720
16	8" Limerock Base	8,770	SY	$ 22.00	$ 192,940
17	15" Reinforced PCC Pavement (Complete)	8,545	SY	$ 125.00	$ 1,068,125
18	Non-Reflective Yellow/White/Red Pavement Marking	4,385	SF	$ 4.00	$ 17,540
19	Reflective Yellow Pavement Marking (Final 100%)	2,810	SF	$ 5.00	$ 14,050
20	Black Outline Marking	5,270	SF	$ 4.00	$ 21,080
21	Sodding	595	SY	$ 3.00	$ 1,785
22	New Trench Drain	375.00	LF	$ 60.00	$ 22,500
23	New Inlet Trench Drain	3.00	EA	$ 3,000.00	$ 9,000
24	Storm Inlet Type D	1.00	EA	$ 4,000.00	$ 4,000
25	36" RCP Drainage Pipe	130.00	LF	$ 150.00	$ 19,500
26	New Airfield Sign	3.00	EA	$ 6,000.00	$ 18,000
27	New Taxiway Edge lights	11	EA	$ 1,500.00	$ 16,500
28	Misc. Airfield Electrical (Cabling, Trenching, Duct)	1	LS	$ 30,000.00	$ 30,000.00
Construct Additional Concourse					
29	Demolish Existing PCC Pavement	1,130	SY	$ 15.00	$ 16,950
30	Construct New Concession Space	10155	SF	325	3300375

Subtotal, Construction		$	5,504,530
Contingency	15%	$	825,680
Total Construction Cost:		***$***	***6,330,210***
Owner Legal & Admin	2.5%	*$*	*158,255*
Engineering & Design	15%	*$*	*949,531*
Program Management	2%	*$*	*126,604*
Construction Management	5%	*$*	*316,510*
Design Services During Construction	3%	*$*	*189,906*
Total Project Cost		**$**	**8,071,017**

No.	Description	Quant	Unit	Unit Price	Total Cost
B-5-Holdroom/Concession (Between Gates B7 & B8)					
1	Mobilization	1	LS	$ 42,600.00	$ 42,600
2	Maintenance of Air Operations Traffic	1	LS	$ 11,000.00	$ 11,000

SRQ Master Plan Update
Date: 12/22/2020
10. Construct Concourse B Hold room/Concession Expansions

3	Demolish PCC Pavement	345	SY	$	15.00	$	5,175
4	Drainage Inlet Demolition	1	EA	$	1,500.00	$	1,500
5	12"-36" RCP Demolition	240	LF	$	100.00	$	24,000
6	Storm Inlet Type D	2.00	EA	$	4,000.00	$	8,000
7	36" RCP Drainage Pipe	300.00	LF	$	150.00	$	45,000
8	8" Limerock Base	240	SY	$	22.00	$	5,280
9	15" Reinforced PCC Pavement (Complete)	240	SY	$	125.00	$	30,000
10	Construct New Concession Space	910	SF	$	325.00	$	295,750

Subtotal, Construction		$	468,305
Contingency	15%	$	70,246
Total Construction Cost:		***$***	***538,551***
Owner Legal & Admin	2.5%	*$*	*13,464*
Engineering & Design	31%	*$*	*165,000*
Program Management	2%	*$*	*10,771*
Construction Management	5%	*$*	*26,928*
Design Services During Construction	3%	*$*	*16,157*
Total Project Cost		**$**	**770,870**

SRQ Master Plan Update
Date: 12/22/2020
10. Construct Concourse B Hold room/Concession Expansions

No.	Description	Quant	Unit	Unit Price	Total Cost
B-6-Concession (Between Gates B5 & B7)					
1	Mobilization	1	LS	$ 154,700.00	$ 154,700
2	Maintenance of Air Operations Traffic	1	LS	$ 36,000.00	$ 36,000
3	Demolish PCC Pavement	715	SY	$ 15.00	$ 10,725
4	Drainage Inlet Demolition	1	EA	$ 1,500.00	$ 1,500
5	12"-36" RCP Demolition	240	LF	$ 100.00	$ 24,000
6	Storm Inlet Type D	2.00	EA	$ 4,000.00	$ 8,000
7	36" RCP Drainage Pipe	300.00	LF	$ 150.00	$ 45,000
8	8" Limerock Base	240	SY	$ 22.00	$ 5,280
9	15" Reinforced PCC Pavement (Complete)	240	SY	$ 125.00	$ 30,000
10	Construct New Concession Space	4,265	SF	$ 325.00	$ 1,386,125

Subtotal, Construction		$	1,701,330
Contingency	15%	$	255,200
Total Construction Cost:		***$***	***1,956,530***
Owner Legal & Admin	2.5%	*$*	*48,913*
Engineering & Design	15%	*$*	*293,479*
Program Management	2%	*$*	*39,131*
Construction Management	5%	*$*	*97,826*
Design Services During Construction	3%	*$*	*58,696*
Total Project Cost		**$**	**2,494,575**

No.	Description	Quant	Unit	Unit Price	Total Cost
B-7-Concession (Between Gates B3 & B5)					
1	Mobilization	1	LS	$ 120,900.00	$ 120,900
2	Maintenance of Air Operations Traffic	1	LS	$ 30,000.00	$ 30,000
3	Demolish PCC Pavement	565	SY	$ 15.00	$ 8,475
5	12"-36" RCP Demolition	175	LF	$ 100.00	$ 17,500
6	Storm Inlet Type D	2.00	EA	$ 4,000.00	$ 8,000
7	36" RCP Drainage Pipe	220.00	LF	$ 150.00	$ 33,000
8	8" Limerock Base	175	SY	$ 22.00	$ 3,850
9	15" Reinforced PCC Pavement (Complete)	175	SY	$ 125.00	$ 21,875
10	Construct New Concession Space	3,340	SF	$ 325.00	$ 1,085,500

Subtotal, Construction		$	1,329,100
Contingency	15%	$	199,365
Total Construction Cost:		***$***	***1,528,465***
Owner Legal & Admin	2.5%	*$*	*38,212*
Engineering & Design	15%	*$*	*229,270*
Program Management	2%	*$*	*30,569*
Construction Management	5%	*$*	*76,423*
Design Services During Construction	3%	*$*	*45,854*
Total Project Cost		**$**	**1,948,793**

Total Combined Construction Cost: **$ 20,301,634**

SRQ Master Plan Update
Date: 12/22/2020
11. Alternative 3- Construct New Concourse A

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 5,641,700	$ 5,641,700
2	Maintenance of Air Operations Traffic	1	LS	$ 977,000	$ 977,000
Relocate Taxiway Centerline/Fill the Existing Pond					
3	Demolish Existing asphalt and Base (Shoulder)	1,665	SY	$ 8.00	$ 13,320
4	Demolish Existing PCC Pavement (Trench for RCP)	680	SY	$ 15.00	$ 10,200
5	Relocate AC Cooling Towers	1	LS	$ 30,000.00	$ 30,000
6	Demolish High Mast Towers	3	EA	$ 500.00	$ 1,500
7	Relocate TSA Bag Screening Area	1	LS	$ 40,000.00	$ 40,000
8	Drain Inlet Demolition	7	EA	$ 1,500.00	$ 10,500
9	Mitered End Demolition	1	EA	$ 1,000.00	$ 1,000
10	12"-36" RCP Demolition	1,230	LF	$ 100.00	$ 123,000
11	3" Turf Stripping	2,730	SY	$ 3.00	$ 8,190
12	Regular Excavation	525	CY	$ 10.00	$ 5,250
13	Embankment	53,160	CY	$ 20.00	$ 1,063,200
14	Pavement Marking Removal	1,920	SF	$ 3.00	$ 5,760
15	Taxiway Edge Lights Demolition	5	EA	$ 500.00	$ 2,500
16	12" Stabilization LBR 40	9,230	SY	$ 12.00	$ 110,760
17	8" Limerock Base	8,785	SY	$ 22.00	$ 193,270
18	15" Reinforced PCC Pavement (Complete)	9,380	SY	$ 170.00	$ 1,594,600
19	Non-Reflective Yellow/White/Red Pavement Marking (Final 100%)	7,515	SF	$ 4.00	$ 30,060
20	Reflective Yellow Pavement Marking (Final 100%)	1,405	SF	$ 5.00	$ 7,025
21	Black Outline Marking	1,965	SF	$ 4.00	$ 7,860
22	Storm Inlet Type D	7	EA	$ 4,000.00	$ 28,000
23	36" RCP Drainage Pipe	1,500	LF	$ 150.00	$ 225,000
24	Sodding	585	SY	$ 3.00	$ 1,755
25	Hydro Seed	0.50	SY	$ 2,500.00	$ 1,250
36	High Mast Towers	3	EA	$ 1,200.00	$ 3,600
Service Road					
27	12" Stabilization LBR 40	270	SY	$ 12.00	$ 3,240
28	6" Optional Base Course	220	SY	$ 20.00	$ 4,400
29	3" Superpave Asphalt SP-9.5	35	TN	$ 145.00	$ 5,075
30	Bituminous Prime Coat	60	GAL	$ 4.00	$ 240
31	Bituminous Tack Coat	15	GAL	$ 4.00	$ 60
32	Sodding	115	SY	$ 3.00	$ 345
33	Relocate Entrance Gate	1	EA	$ 10,000.00	$ 10,000
34	Relocate AOA Fence	110	LF	$ 20.00	$ 2,200
35	Relocate CCTV Camera	1	EA	$ 7,000.00	$ 7,000
36	Relocate Card Reader	1	LS	$ 15,000.00	$ 15,000
37	Relocate Gate Controller	1	LS	$ 2,000.00	$ 2,000
Construct New Concourse A (First Floor)					
38	Demolish Existing PCC Pavement	10,040	SY	$ 15.00	$ 150,600
39	Construct New Building-Mechanical	2,000	SF	$ 225.00	$ 450,000
40	Construct New Building-Concessions Storage	3,000	SF	$ 225.00	$ 675,000
41	Construct New Building-Airline Operations	6,000	SF	$ 225.00	$ 1,350,000
42	Construct New Building-SMAA	5,000	SF	$ 225.00	$ 1,125,000
43	Construct New Building-Addition (Free Space)	70,040	SF	$ 225.00	$ 15,759,000
Construct New Concourse A (Second Floor)					

SRQ Master Plan Update
Date: 12/22/2020
11. Alternative 3- Construct New Concourse A

44	Construct New Building- Hold rooms, Concessions and Restrooms	28,400	SF	$ 325.00	$ 9,230,000
45	Construct New Building- Concessions	10,135	SF	$ 325.00	$ 3,293,875
46	Construct New Building- Check Point	13,480	SF	$ 325.00	$ 4,381,000
47	Construct New Building- Circulation Corridor	34,025	SF	$ 325.00	$ 11,058,125
48	Relocate Jet Bridge	1	EA	$ 200,000.00	$ 200,000
49	New Jet Bridge	6	EA	$ 700,000.00	$ 4,200,000

Subtotal, Construction		$	62,058,460
Contingency	15%	$	9,308,769
Total Construction Cost:		***$***	***71,367,229***
Owner Legal & Admin	2.0%	*$*	*1,427,345*
Engineering & Design	10%	*$*	*7,136,723*
Program Management	2%	*$*	*1,427,345*
Construction Management	5%	*$*	*3,568,361*
Design Services During Construction	3%	*$*	*2,141,017*
Total Project Cost		**$**	**87,068,019**

SRQ Master Plan Update
Date: 12/22/2020
12. Construct New Concourse A-ALT 2

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 5,298,100	$ 5,298,100
2	Maintenance of Air Operations Traffic	1	LS	$ 930,000	$ 930,000
Relocate Taxiway Centerline/Fill the Existing Pond					
3	Demolish Existing asphalt and Base (Shoulder)	1,665	SY	$ 8.00	$ 13,320
4	Demolish Existing PCC Pavement (Trench for RCP)	680	SY	$ 15.00	$ 10,200
5	Relocate AC Cooling Towers	1	LS	$ 30,000.00	$ 30,000
6	Demolish High Mast Towers	3	EA	$ 500.00	$ 1,500
7	Relocate TSA Bag Screening Area	1	LS	$ 40,000.00	$ 40,000
8	Drain Inlet Demolition	6	EA	$ 1,500.00	$ 9,000
10	12"-36" RCP Demolition	1,005	LF	$ 100.00	$ 100,500
14	Pavement Marking Removal	1,920	SF	$ 3.00	$ 5,760
15	Taxiway Edge Lights Demolition	5	EA	$ 500.00	$ 2,500
16	12" Stabilization LBR 40	2,650	SY	$ 12.00	$ 31,800
17	8" Limerock Base	2,510	SY	$ 22.00	$ 55,220
18	15" Reinforced PCC Pavement (Complete)	2,345	SY	$ 170.00	$ 398,650
19	Non-Reflective Yellow/White/Red Pavement Marking (Final 100%, All Apron Markings)	6,740	SF	$ 4.00	$ 26,960
20	Reflective Yellow Pavement Marking (Final 100%)	1,230	SF	$ 5.00	$ 6,150
21	Black Outline Marking	1,965	SF	$ 4.00	$ 7,860
22	Storm Inlet Type D	6	EA	$ 4,000.00	$ 24,000
23	36" RCP Drainage Pipe	1,500	LF	$ 150.00	$ 225,000
24	High Mast Towers	3	EA	$ 1,200.00	$ 3,600
Service Road					
25	Relocate Entrance Gate	1	EA	$ 10,000.00	$ 10,000
26	Relocate AOA Fence	110	LF	$ 20.00	$ 2,200
27	Relocate CCTV Camera	1	EA	$ 7,000.00	$ 7,000
28	Relocate Card Reader	1	LS	$ 15,000.00	$ 15,000
29	Relocate Gate Controller	1	LS	$ 2,000.00	$ 2,000
Construct New Concourse A (First Floor)					
30	Construct New Building-Mechanical	2,000	SF	$ 225.00	$ 450,000
31	Construct New Building-Concessions Storage	3,000	SF	$ 225.00	$ 675,000
32	Construct New Building-Airline Operations	6,000	SF	$ 225.00	$ 1,350,000
33	Construct New Building-SMAA	5,000	SF	$ 225.00	$ 1,125,000
34	Construct New Building-Addition (Free Space)	70,040	SF	$ 225.00	$ 15,759,000
Construct New Concourse A (Second Floor)					
35	Construct New Building- Hold rooms, Concessions and Restrooms	28,400	SF	$ 325.00	$ 9,230,000
36	Construct New Building- Concessions	10,135	SF	$ 325.00	$ 3,293,875
37	Construct New Building- Check Point	13,480	SF	$ 325.00	$ 4,381,000
38	Construct New Building- Circulation Corridor	34,025	SF	$ 325.00	$ 11,058,125
39	Relocate Jet Bridge	1	EA	$ 200,000.00	$ 200,000
40	New Jet Bridge	5	EA	$ 700,000.00	$ 3,500,000

SRQ Master Plan Update
Date: 12/22/2020
12. Construct New Concourse A-ALT 2

Subtotal, Construction		$	58,278,320
Contingency	15%	$	8,741,748
Total Construction Cost:		***$***	***67,020,068***
Owner Legal & Admin	2.0%	*$*	*1,340,401*
Engineering & Design	10%	*$*	*6,702,007*
Program Management	2%	*$*	*1,340,401*
Construction Management	5%	*$*	*3,351,003*
Design Services During Construction	3%	*$*	*2,010,602*
Total Project Cost		**$**	**81,764,483**

SRQ Master Plan Update
Date: 12/22/2020
13. Construct Pedestrian Bridge and Concessions Reconfiguration

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 192,500.00	$ 192,500
2	Maintenance of Traffic	1	LS	$ 11,000.00	$ 11,000
3	Demolish Existing Canopy	2,285	SF	$ 10.00	$ 22,850.00
4	Demolish Existing Concrete Sidewalk	655	SF	$ 8.00	$ 5,240.00
5	Remodel Interior Area (Concessions)	4,245	SF	$ 200.00	$ 849,000.00
6	Escalator	2	EA	$ 150,000.00	$ 300,000.00
7	Elevator	1	EA	$ 150,000.00	$ 150,000.00
8	Pedestrian Bridge	1,980	SF	$ 250.00	$ 495,000.00
9	Canopy	2,285	SF	$ 40.00	$ 91,400.00

	Subtotal, Construction	$	2,116,990
Contingency	15%	$	317,549
	Total Construction Cost:	**$**	**2,434,539**
Owner Legal & Admin	2.5%	*$*	*60,863*
Engineering & Design	10%	*$*	*243,454*
Program Management	5%	*$*	*121,727*
Construction Management	5%	*$*	*121,727*
Design Services During Construction	3%	*$*	*73,036*
	Total Project Cost	**$**	**3,055,346**

SRQ Master Plan Update
Date: 12/22/2020
14. Baggage Claim Expansion - Alternative 1 - Flat Plate Carousels

Flat Plate Carousels

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 402,900.00	$ 402,900
2	Maintenance of Air Operations Traffic	1	LS	$ 65,000.00	$ 65,000
Road/Sidewalk					
3	Demolish Concrete Sidewalk and Curb	1,480	SY	$ 8.00	$ 11,840.00
4	Demolish Asphalt Pavement and Base	1,485	SY	$ 8.00	$ 11,880.00
5	Demolish Existing Fence	85	LF	$ 10.00	$ 850
6	12" Stabilization LBR40	1,160	SY	$ 12.00	$ 13,920.00
7	6" Optional Base Course	1,160	SY	$ 20.00	$ 23,200.00
8	3" Superpave Asphalt Pavement	195	TN	$ 145.00	$ 28,275.00
9	Bituminous Prime Coat	35	GAL	$ 4.00	$ 140.00
10	Bituminous Tack Coat	80	GAL	$ 4.00	$ 320.00
11	4" Concrete Sidewalk	935	SY	$ 45.00	$ 42,075.00
12	Concrete Curb, Type D	735	LF	$ 18.00	$ 13,230.00
Additional Building					
13	Demolish Existing Canopy	1,905	SF	$ 10.00	$ 19,050.00
14	Demolish Exterior Wall	1,470	SF	$ 8.00	$ 11,760.00
15	Demolish Curtain Wall	800	SF	$ 20.00	$ 16,000.00
16	Demolish Entrance Sliding Door	1	EA	$ 500.00	$ 500.00
17	Demolish Interior Office Doors with Frames	5	EA	$ 50.00	$ 250.00
18	Demolish Interior Office Walls	840	SF	$ 6.00	$ 5,040.00
19	New Building - Finished Passenger Space	10,250	SF	$ 325.00	$ 3,331,250.00
20	New Canopy	1,905	SF	$ 40.00	$ 76,200.00
21	Interior Office Walls	2,435	SF	$ 12.00	$ 29,220.00
22	Interior Office Doors and Frames	12	EA	$ 2,000.00	$ 24,000.00
23	Flat Plate Carousel	1	EA	$ 220,000.00	$ 220,000.00
24	Entrance Slide Door	2	EA	$ 10,000.00	$ 20,000.00
25	New Glass Curtain Walls	885	SF	$ 70.00	$ 61,950.00
26	New LCD Screen	1	EA	$ 3,000.00	$ 3,000.00

Subtotal, Construction		$ 4,431,850
Contingency	15%	$ 664,778
Total Construction Cost:		**$ 5,096,628**
Owner Legal & Admin	2.5%	*$ 127,416*
Engineering & Design	10%	*$ 509,663*
Program Management	5%	*$ 254,831*
Construction Management	5%	*$ 254,831*
Design Services During Construction	3%	*$ 152,899*
Total Project Cost		**$ 6,396,268**

SRQ Master Plan Update
Date: 12/22/2020
15. Baggage Claim Expansion - Alternative 2 - Slope Plate Carousels

Slope Plate Carousels

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 478,700.00	$ 478,700
2	Maintenance of Air Operations Traffic	1	LS	$ 82,000.00	$ 82,000
Road/Sidewalk					
3	Demolish Concrete Sidewalk and Curb	1,480	SY	$ 8.00	$ 11,840.00
4	Demolish Asphalt Pavement and Base	1,485	SY	$ 8.00	$ 11,880.00
5	Demolish Existing Fence	85	LF	$ 10.00	$ 850
6	12" Stabilization LBR40	1,160	SY	$ 12.00	$ 13,920.00
7	6" Optional Base Course	1,160	SY	$ 20.00	$ 23,200.00
8	3" Superpave Asphalt Pavement	195	TN	$ 145.00	$ 28,275.00
9	Bituminous Prime Coat	35	GAL	$ 4.00	$ 140.00
10	Bituminous Tack Coat	80	GAL	$ 4.00	$ 320.00
11	4" Concrete Sidewalk	935	SY	$ 45.00	$ 42,075.00
12	Concrete Curb, Type D	735	LF	$ 18.00	$ 13,230.00
Additional Building					
13	Demolish Existing Canopy	1,905	SF	$ 10.00	$ 19,050.00
14	Demolish Exterior Wall	1,470	SF	$ 8.00	$ 11,760.00
15	Demolish Glass Curtain Wall	800	SF	$ 20.00	$ 16,000.00
16	Demolish Entrance Sliding Door	1	EA	$ 500.00	$ 500.00
17	Demolish Interior Office Doors with Frames	5	EA	$ 50.00	$ 250.00
18	Demolish Interior Office Walls	840	SF	$ 6.00	$ 5,040.00
19	Demolish Flat Plate Carousels	3	EA	$ 50,000.00	$ 150,000.00
20	New Building - Finished Passenger Space	10,250	SF	$ 325.00	$ 3,331,250.00
21	Slope Plate Carousel	3	EA	$ 280,000.00	$ 840,000.00
22	Entrance Slide Door	2	EA	$ 10,000.00	$ 20,000.00
23	New Glass Curtain Walls	2,230	SF	$ 70.00	$ 156,100.00
24	New LCD Screen	3	EA	$ 3,000.00	$ 9,000.00

Subtotal, Construction		$	5,265,380
Contingency	15%	$	789,807
Total Construction Cost:		***$***	***6,055,187***
Owner Legal & Admin	2.5%	*$*	*151,380*
Engineering & Design	10%	*$*	*605,519*
Program Management	5%	*$*	*302,759*
Construction Management	5%	*$*	*302,759*
Design Services During Construction	3%	*$*	*181,656*
Total Project Cost		**$**	**7,599,260**

SRQ Master Plan Update
Date: 12/22/2020
16. Construct GA FIS Facility

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 195,800.00	$ 195,800
2	Maintenance of Air Operations Traffic	1	LS	$ 38,000.00	$ 38,000
Apron					
3	3" Turf Stripping	5,035	SY	$ 3.00	$ 15,105
5	Regular Excavation	175	CY	$ 10.00	$ 1,750
5	Embankment	1,625	CY	$ 20.00	$ 32,500
6	Taxiway Edge Lights Demolition	5	EA	$ 500.00	$ 2,500
7	12" Stabilization LBR40	5,530	SY	$ 12.00	$ 66,360
8	8" Limerock Base Course	5,210	SY	$ 22.00	$ 114,620
9	4" Bituminous Asphalt Pavement	1,135	TN	$ 150.00	$ 170,250
10	Bituminous Prime Coat	1,510	GAL	$ 4.00	$ 6,040
11	Bituminous Tack Coat	355	GAL	$ 4.00	$ 1,420
12	Non-Reflective Yellow Pavement Marking (Temporary 30%)	320	SF	$ 4.00	$ 1,280
13	Reflective Yellow Pavement Marking (Final 100%)	320	SF	$ 5.00	$ 1,600
14	Black Outline Marking	640	SF	$ 4.00	$ 2,560
15	Sodding	1,280	SY	$ 3.00	$ 3,840
16	New Airfield Sign	3	EA	$ 6,000.00	$ 18,000
17	New Taxiway Edge lights	5	EA	$ 1,500.00	$ 7,500
Service Road					
18	3" Turf Stripping	10,500	SY	$ 3.00	$ 31,500
19	Regular Excavation	320	CY	$ 8.00	$ 2,560
20	12" Stabilization LBR40	5,325	SY	$ 12.00	$ 63,900
21	6" Optional Base Course	4,460	SY	$ 20.00	$ 89,200
22	3" Superpave Asphalt SP-9.5	1,715	TN	$ 145.00	$ 248,675
23	Bituminous Prime Coat	3,045	GAL	$ 4.00	$ 12,180
24	Bituminous Tack Coat	710	GAL	$ 4.00	$ 2,840
25	4" Concrete Sidewalk	205	SY	$ 60.00	$ 12,300
26	Painted Pavement Markings, STD, White/Blue, Solid, 6"	3,510	LF	$ 4.00	$ 14,040
27	Painted Pavement Markings, STD, White, Solid, 24"	110	LF	$ 4.00	$ 440
28	Painted Pavement Markings, STD, White/Blue ADA Sign	1	EA	$ 85.00	$ 85
29	Single Post Sign	8	EA	$ 400.00	$ 3,200
30	Concrete Wheel Stop	6	EA	$ 50.00	$ 300
31	Sodding	7,780	SY	$ 3.00	$ 23,340
FIS Building					
32	3" Turf Stripping	480	SY	$ 3.00	$ 1,440
33	Regular Excavation	320	CY	$ 10.00	$ 3,200
34	New Building	4,290	SF	$ 225.00	$ 965,250

SRQ Master Plan Update
Date: 12/22/2020
16. Construct GA FIS Facility

Subtotal, Construction		$	2,153,575
Contingency	15%	$	323,036
Total Construction Cost:		***$***	***2,476,611***
Owner Legal & Admin	2.5%	*$*	*61,915*
Engineering & Design	10%	*$*	*247,661*
Program Management	5%	*$*	*123,831*
Construction Management	5%	*$*	*123,831*
Design Services During Construction	3%	*$*	*74,298*
Total Project Cost		**$**	**3,108,147**

SRQ Master Plan Update
Date: 12/22/2020
17. Maintenance Facility Alt. 1- Expand Vehicle Storage Bldg.

AMERICAN INFRASTRUCTURE DEVELOPMENT, INC.
TRANSPORTATION CONSULTING

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 387,500.00	$ 387,500
2	Maintenance of Air Operations Traffic	1	LS	$ 90,000.00	$ 90,000
Expand Vehicle Storage Building					
3	Regular Excavation	1,710	CY	$ 10.00	$ 17,100
4	Embankment	750	CY	$ 20.00	$ 15,000
5	Tree Removal	6	EA	$ 1,000.00	$ 6,000
6	Mitered End Section Demolition	3	EA	$ 1,000.00	$ 3,000
7	12"-36" RCP Demolition	210	LF	$ 100.00	$ 21,000
8	Demolish Concrete Curb	1,100	LF	$ 4.00	$ 4,400
9	Demolish Light Pole	5	EA	$ 500.00	$ 2,500
10	12" Stabilization LBR40	1,005	SY	$ 12.00	$ 12,060
11	6" Optional Base Course	960	SY	$ 20.00	$ 19,200
12	3" Superpave Asphalt SP-9.5	155	TN	$ 145.00	$ 22,475
13	Bituminous Prime Coat	275	GAL	$ 4.00	$ 1,100
14	Bituminous Tack Coat	65	GAL	$ 4.00	$ 260
15	Painted Pavement Markings, STD, White/Blue, Solid, 6"	1,205	LF	$ 4.00	$ 4,820
16	Painted Pavement Markings, STD, White, Solid, 24"	15	LF	$ 4.00	$ 60
17	4" Concrete Island	520	SY	$ 45.00	$ 23,400
18	Concrete Curb, Type D	1,170	LF	$ 18.00	$ 21,060
19	Single Post Sign	1	EA	$ 400.00	$ 400
20	36" Mitered End Section	3	SY	$ 3,500.00	$ 10,500
21	36" RCP Drainage Pipe	1,500	LF	$ 150.00	$ 225,000
22	Construct New Building	10,640	SF	$ 225.00	$ 2,394,000
Construct Bulk Storage Building					
23	3" Turf Stripping	1,045	SY	$ 3.00	$ 3,135
24	Regular Excavation	320	CY	$ 10.00	$ 3,200
25	Tree Removal	5	SF	$ 1,000.00	$ 5,000
26	12" Stabilization LBR40	525	SY	$ 12.00	$ 6,300
27	6" Optional Base Course	505	SY	$ 20.00	$ 10,100
28	3" Superpave Asphalt SP-9.5	80	TN	$ 145.00	$ 11,600
29	Bituminous Prime Coat	140	GAL	$ 4.00	$ 560
30	Bituminous Tack Coat	35	GAL	$ 4.00	$ 140
31	36" Mitered End Section	3	SY	$ 3,500.00	$ 10,500
32	36" RCP Drainage Pipe	35	LF	$ 150.00	$ 5,250
33	Single Post Sign	1	EA	$ 400.00	$ 400
34	Painted Pavement Markings, STD, White, Solid, 24"	15	LF	$ 4.00	$ 60
35	Construct New Building	5,000	SF	$ 185.00	$ 925,000

Subtotal, Construction		$	4,262,080
Contingency	15%	$	639,312
Total Construction Cost:		***$***	***4,901,392***
Owner Legal & Admin	2.5%	*$*	*122,535*
Engineering & Design	10%	*$*	*490,139*
Program Management	5%	*$*	*245,070*
Construction Management	5%	*$*	*245,070*
Design Services During Construction	3%	*$*	*147,042*
Total Project Cost		**$**	**6,151,247**

SRQ Master Plan Update
Date: 12/22/2020
18. Relocate Bulk Storage Facility

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 100,700.00	$ 100,700
2	Maintenance of Air Operations Traffic	1	LS	$ 25,000.00	$ 25,000
23	3" Turf Stripping	1,045	SY	$ 3.00	$ 3,135
24	Regular Excavation	320	CY	$ 10.00	$ 3,200
25	Tree Removal	5	SF	$ 1,000.00	$ 5,000
26	12" Stabilization LBR40	525	SY	$ 12.00	$ 6,300
27	6" Optional Base Course	505	SY	$ 20.00	$ 10,100
28	3" Superpave Asphalt SP-9.5	80	TN	$ 145.00	$ 11,600
29	Bituminous Prime Coat	140	GAL	$ 4.00	$ 560
30	Bituminous Tack Coat	35	GAL	$ 4.00	$ 140
31	36" Mitered End Section	3	SY	$ 3,500.00	$ 10,500
32	36" RCP Drainage Pipe	35	LF	$ 150.00	$ 5,250
33	Single Post Sign	1	EA	$ 400.00	$ 400
34	Painted Pavement Markings, STD, White, Solid, 24"	15	LF	$ 4.00	$ 60
35	Construct New Building	5,000	SF	$ 185.00	$ 925,000

Subtotal, Construction		$	1,106,945
Contingency	15%	$	166,042
Total Construction Cost:		***$***	***1,272,987***
Owner Legal & Admin	2.5%	*$*	*31,825*
Engineering & Design	15%	*$*	*190,948*
Program Management	5%	*$*	*63,649*
Construction Management	5%	*$*	*63,649*
Design Services During Construction	3%	*$*	*38,190*
Total Project Cost		**$**	**1,661,248**

SRQ Master Plan Update
Date: 12/22/2020
19. Construct New Vehicle Storage Building

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 532,900.00	$ 532,900
2	Maintenance of Air Operations Traffic	1	LS	$ 120,000.00	$ 120,000
Construct New Buildings					
3	Regular Excavation/Embankment	5,975	CY	$ 10.00	$ 59,750
4	Tree Removal	4	EA	$ 1,000.00	$ 4,000
5	Demolish Existing Fence	500	LF	$ 10.00	$ 5,000
6	12" Stabilization LBR40	2,615	SY	$ 12.00	$ 31,380
7	6" Optional Base Course	2,380	SY	$ 20.00	$ 47,600
8	3" Superpave Asphalt SP-9.5	365	TN	$ 145.00	$ 52,925
9	Bituminous Prime Coat	755	GAL	$ 4.00	$ 3,020
10	Bituminous Tack Coat	150	GAL	$ 4.00	$ 600
11	Painted Pavement Markings, STD, White/Blue, Solid, 6"	220	LF	$ 4.00	$ 880
12	Painted Pavement Markings, STD, White, Solid, 24"	35	LF	$ 4.00	$ 140
13	Single Post Sign	5	EA	$ 400.00	$ 2,000
14	36" Mitered End Section	5	EA	$ 3,500.00	$ 17,500
15	36" RCP Drainage Pipe	115	LF	$ 150.00	$ 17,250
16	Entrance Gate	1	EA	$ 15,000.00	$ 15,000
17	New Fence	100	LF	$ 14.00	$ 1,400
18	CCTV Camera	1	EA	$ 10,000.00	$ 10,000
19	Card Reader	2	EA	$ 15,000.00	$ 30,000
20	Gate Controller	1	EA	$ 5,000.00	$ 5,000
21	Construct Storage/Basic Metal Building	26,515	SF	$ 185.00	$ 4,905,275

Subtotal, Construction		$	5,861,620
Contingency	15%	$	879,243
Total Construction Cost:		***$***	***6,740,863***
Owner Legal & Admin	2.5%	*$*	*168,522*
Engineering & Design	10%	*$*	*674,086*
Program Management	5%	*$*	*337,043*
Construction Management	5%	*$*	*337,043*
Design Services During Construction	3%	*$*	*202,226*
Total Project Cost		**$**	**8,459,783**

SRQ Master Plan Update
Date: 12/22/2020
20. Expand Existing Shade and Long Term Parking Lots

No.	Description	Quant	Unit	Unit Price	Total Cost
Expand Existing Long-Term Parking Lot					
1	Mobilization	15%	PCT	$1,624,074.50	$ 243,611
2	Maintenance of Traffic	1.0	LS	$12,000.00	$ 12,000
3	Sediment Barrier	900.0	LF	$4.00	$ 3,600
4	Soil Tracking Device	2.0	EA	$2,650.00	$ 5,300
5	Inlet Protection (In Pavement)	9.0	EA	$200.00	$ 1,800
6	Inlet Protection (Wattle)	11.0	EA	$200.00	$ 2,200
7	Inlet Protection (Hay Bales)	1.0	EA	$200.00	$ 200
8	Floating Turbidity Barrier	67.0	LF	$28.00	$ 1,876
9	Clearing and Grubbing	0.7	AC	$10,075.00	$ 7,053
10	Demolish Wooden landscape Fence	1,584.0	LF	$1.00	$ 1,584
11	Demolish Trees	65.0	EA	$500.00	$ 32,500
12	Demolish Delineators	69.0	EA	$5.00	$ 345
13	Demolish Steel Bollards	3.0	EA	$15.00	$ 45
14	Demolish Overhead Sign	1.0	EA	$5,000.00	$ 5,000
15	Demolish Curb	3,080.0	LF	$8.00	$ 24,640
16	Demolish Miscellaneous Existing Concrete	68.0	SY	$17.00	$ 1,156
17	Demolish Bus Shelter	6.0	Ea	$500.00	$ 3,000
18	Adjust inlet	3.0	EA	$4,000.00	$ 12,000
19	Demolish Asphalt Pavement and Base Course	7,655.0	SY	$5.00	$ 38,275
20	Regular Excavation	3,484.0	CY	$8.00	$ 27,872
21	12" Type B Stabilization LBR 40	5,973.0	SY	$5.00	$ 29,865
22	6" Limerock Base Material LBR 100	5,973.0	SY	$20.00	$ 119,460
23	Milling Exist ASPH PAVT, 2" AVG Depth	0.0	SY	$3.00	$ -
24	Superpave Asphaltic Concrete (Type SP-9.5 Traffic Level C)	783.0	TON	$160.00	$ 125,280
25	Concrete Curb, Type D	1,158.0	LF	$22.00	$ 25,476
26	Concrete Curb, Type F	2,303.0	LF	$26.00	$ 59,878
27	Concrete Sidewalk and Driveways, 4"	44.0	SY	$40.00	$ 1,760
28	Concrete Sidewalk at Shuttle Dropoff, 4"	36.0	SY	$40.00	$ 1,440
29	Black Wire Fence, 6' Tall	1,775.0	LF	$35.00	$ 62,125
30	Sign-Single Post Sign, F&I Ground Mount up to 12 SF	1.0	EA	$1,200.00	$ 1,200
31	Sign-Single Post Sign, Relocate	7.0	EA	$300.00	$ 2,100
32	Painted Pavement Markings, Standard, White, Solid for Stop Line, 24"	96.0	LF	$2.50	$ 240
33	Painted Pavement Markings, Standard, White, Solid, 6"	2,550.0	LF	$1.50	$ 3,825
34	Painted Pavement Markings, Standard, White, Skip, 6"	200.0	LF	$1.50	$ 300

SRQ Master Plan Update
Date: 12/22/2020
20. Expand Existing Shade and Long Term Parking Lots

35	Painted Pavement Markings, Standard, White, Arrows	16.0	EA	$30.00	$ 480
36	Painted Pavement Markings, Crosswalks	3.0	LS	$1,000.00	$ 3,000
37	Painted Pavement Marking, Standard White, Messege (STOP)	8.0	EA	$275.00	$ 2,200
38	Shuttle Gate Modifications, including relocating existing wooden post, shortening wooden rails, and new 16' gate arm.	1.0	LS	$5,000.00	$ 5,000
39	Bus Shelters, concrete foundation design and engineering, installed	9.0	LS	$35,000.00	$ 315,000
40	Utility Modifications Allowance	1.0	LS	$25,000.00	$ 25,000
26	Electrical	1	LS	$ 360,000.00	$ 360,000
27	Landscape	1	LS	$ 300,000.00	$ 300,000

Subtotal, Construction		$	1,867,686
Contingency	15%	$	280,153
Total Construction Cost:		***$***	***2,147,839***
Owner Legal & Admin	2.5%	*$*	*53,696*
Engineering & Design	10%	*$*	*214,784*
Program Management	5%	*$*	*107,392*
Construction Management	5%	*$*	*107,392*
Design Services During Construction	3%	*$*	*64,435*
Total Project Cost		**$**	**2,695,537**

SRQ Master Plan Update
Date: 12/22/2020
20. Expand Existing Shade and Long Term Parking Lots

AMERICAN INFRASTRUCTURE DEVELOPMENT, INC.
TRANSPORTATION CONSULTING

No.	Description	Quant	Unit	Unit Price	Total Cost
Expand Existing Shade Lot					
1	Mobilization	1	LS	$ 77,400.00	$ 77,400
2	Maintenance of Traffic	1	LS	$ 18,000.00	$ 18,000
3	Demolish Asphalt Pavement	30	SY	$ 8.00	$ 240
4	Clearing and Grubbing	2	AC	$ 10,000.00	$ 20,000
5	Regular Excavation	2,780	CY	$ 8.00	$ 22,240
6	Demolish Concrete Curb	510	LF	$ 4.00	$ 2,040
7	Concrete Pavement Removal	950	SY	$ 15.00	$ 14,250
8	Adjust Utilities	2	EA	$ 2,500.00	$ 5,000
9	12" Stabilization LBR40	7,250	SY	$ 12.00	$ 87,000
11	6" Optional Base Course	7,250	SY	$ 20.00	$ 145,000
12	3" Superpave Asphalt Pavement	870	TN	$ 145.00	$ 126,150
13	Bituminous Prime Coat	2,445	GAL	$ 4.00	$ 9,780
14	Bituminous Tack Coat	510	GAL	$ 4.00	$ 2,040
15	Painted Pavement Markings, STD, White/Blue, Solid, 6"	6,620	LF	$ 4.00	$ 26,480
16	Painted Pavement Markings, STD, White, Solid, 24"	355	LF	$ 4.00	$ 1,420
17	Painted Pavement Markings, STD, White/Blue Sign	33	EA	$ 85.00	$ 2,805
18	Single Post Sign	33	EA	$ 400.00	$ 13,200
19	4" Concrete Sidewalk/Islands	215	SY	$ 45.00	$ 9,675
20	Concrete Curb, Type D	890	LF	$ 18.00	$ 16,020
21	Concrete Curb, Type F	2,445	LF	$ 22.00	$ 53,790
22	New Fence	195	EA	$ 14.00	$ 2,730
23	Single Post Sign	2	EA	$ 400.00	$ 800
24	Utility Allowance	1	LS	$ 25,000.00	$ 25,000
25	Electrical	1	LS	$ 110,000.00	$ 110,000
26	Landscape	1	LS	$ 60,000.00	$ 60,000

Subtotal, Construction		$	851,060
Contingency	15%	$	127,659
Total Construction Cost:		***$***	***978,719***
Owner Legal & Admin	2.5%	*$*	*24,468*
Engineering & Design	10%	*$*	*97,872*
Program Management	5%	*$*	*48,936*
Construction Management	5%	*$*	*48,936*
Design Services During Construction	3%	*$*	*29,362*
Total Project Cost		**$**	**1,228,292**

***Total Combined Construction Cost:* $ 3,923,830**

SRQ Master Plan Update
Date: 12/22/2020
21. Construct Parking Structure and Roadway Toll Plaza Modifications

No.	Description	Quant	Unit	Unit Price	Total Cost
Garage Parking					
1	Mobilization	1	LS	$ 1,506,400.00	$ 1,506,400
2	Maintenance of Traffic/Maintain Pedestrian Traffic	1	LS	$ 810,000.00	$ 810,000
3	Demolish Asphalt Pavement	36,710	SY	$ 8.00	$ 293,680
5	Demolish Concrete Sidewalk/Islands	8,690	CY	$ 8.00	$ 69,520
5	Tree Removal	193	EA	$ 1,000.00	$ 193,000
6	Sign Demolition	55	EA	$ 100.00	$ 5,500
7	Demolish High Mast Lights	13	EA	$ 1,000.00	$ 13,000
8	Drain Inlet Demolition	20	EA	$ 1,500.00	$ 30,000
9	12"-36" RCP Demolition	1,075	LF	$ 100.00	$ 107,500
10	3" Superpave Asphalt Pavement	10,205	TN	$ 145.00	$ 1,479,725
11	Bituminous Prime Coat	18,135	GAL	$ 4.00	$ 72,540
12	Bituminous Tack Coat	4,225	GAL	$ 4.00	$ 16,900
13	Bituminous Seal Coat	14,015	GAL	$ 5.00	$ 70,075
14	Painted Pavement Markings, STD, White/Blue, Solid, 6"	26,620	LF	$ 4.00	$ 106,480
15	Painted Pavement Markings, STD, White, Solid, 24"	505	LF	$ 4.00	$ 2,020
16	Painted Pavement Markings, STD, White/Blue ADA Sign	40	EA	$ 85.00	$ 3,400
17	Single Post Sign	11	EA	$ 400.00	$ 4,400
18	Concrete Wheel Stop	585	EA	$ 50.00	$ 29,250
19	Ticket Machin System	8	EA	$ 2,500.00	$ 20,000
20	Regular Excavation	320	CY	$ 10.00	$ 3,200
21	Construct Garage Building	515,200	SF	$ 18.00	$ 9,273,600
21	Construct RAC Building	10,000	SF	$ 225.00	$ 2,250,000
22	Ticket Machine System	4	EA	$ 2,500.00	$ 10,000
23	Expand Exit Plaza	2	Lane	$ 100,000.00	$ 200,000

Subtotal, Construction		$	16,570,190
Contingency	15%	$	2,485,529
Total Construction Cost:		***$***	***19,055,719***
Owner Legal & Admin	2.5%	*$*	*476,393*
Engineering & Design	10%	*$*	*1,905,572*
Program Management	5%	*$*	*952,786*
Construction Management	5%	*$*	*952,786*
Design Services During Construction	3%	*$*	*571,672*
Total Project Cost		**$**	**23,914,927**

SRQ Master Plan Update
Date: 12/22/2020
22. Construct New Long Term Parking Lot
(new remote long-term lot)

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 212,800.00	$ 212,800
2	Maintenance of Traffic	1	LS	$ 48,000.00	$ 48,000
3	Demolish Asphalt Pavement	13,100	SY	$ 8.00	$ 104,800
4	Demolish Concrete Sidewalk/Islands	4,390	CY	$ 8.00	$ 35,120
5	Tree Removal	148	EA	$ 1,000.00	$ 148,000
6	Sign Demolition	43	EA	$ 100.00	$ 4,300
7	Demolish High Mast Tower	5	EA	$ 1,000.00	$ 5,000
8	Drain Inlet Demolition	12	EA	$ 1,500.00	$ 18,000
9	12"-36" RCP Demolition	1,095	LF	$ 100.00	$ 109,500
10	12" Stabilization LBR40	5,240	SY	$ 12.00	$ 62,880
11	6" Optional Base Course	5,240	SY	$ 20.00	$ 104,800
12	3" Superpave Asphalt Pavement	3,365	TN	$ 145.00	$ 487,925
13	Bituminous Prime Coat	5,985	GAL	$ 4.00	$ 23,940
14	Bituminous Tack Coat	1,395	GAL	$ 4.00	$ 5,580
15	Painted Pavement Markings, STD, White/Blue, Solid, 6"	6,620	LF	$ 4.00	$ 26,480
16	Painted Pavement Markings, STD, White, Solid, 24"	180	LF	$ 4.00	$ 720
17	Single Post Sign	7	EA	$ 400.00	$ 2,800
18	4" Concrete Sidewalk/Islands	2,225	SY	$ 45.00	$ 100,125
19	Concrete Curb, Type D	6,040	LF	$ 18.00	$ 108,720
20	Storm Inlet Type D	5	EA	$ 4,000.00	$ 20,000
21	36" RCP Drainage Pipe	650	LF	$ 150.00	$ 97,500
22	RAC Counters	10,875	SF	$ 15.00	$ 163,125
24	Electrical	1	LS	$ 300,000.00	$ 300,000
25	Landscape	1	LS	$ 150,000.00	$ 150,000

Subtotal, Construction		$	2,340,115
Contingency	15%	$	351,017
Total Construction Cost:		***$***	***2,691,132***
Owner Legal & Admin	2.5%	*$*	*67,278*
Engineering & Design	10%	*$*	*269,113*
Program Management	5%	*$*	*134,557*
Construction Management	5%	*$*	*134,557*
Design Services During Construction	3%	*$*	*80,734*
Total Project Cost		**$**	**3,377,371**

SRQ Master Plan Update
Date: 12/22/2020
23. Relocate ASOS and Install RVR on Runway 14

No.	Description	Quant	Unit	Unit Price	Total Cost
ASOS Relocation					
1	Mobilization	1	LS	$ 21,000.00	$ 21,000
2	Maintenance of Traffic	1	LS	$ 2,000.00	$ 2,000
3	Relocate Rain Sensor	1	LS	$ 650.00	$ 650
4	Relocate Temperature/Dewpoint Sensor	1	LS	$ 2,000.00	$ 2,000
4	Relocate Wind Tower	1	LS	$ 13,500.00	$ 13,500
6	Relocate Data Collection Package	1	LS	$ 6,500.00	$ 6,500
7	Relocate Ceilometer	1	LS	$ 13,000.00	$ 13,000
8	Relocate Freezing Rain Sensor	1	LS	$ 650.00	$ 650
9	Relocate Visibility Sensor	1	LS	$ 5,200.00	$ 5,200
10	New Foundations for Relocated Equipment	7	Ea	$ 5,500.00	$ 38,500
10	2" schedule 40 PVC conduit direct buried in earth complete in place	2,500	LF	$ 3.00	$ 7,500
11	Generator	1	LS	$ 25,000.00	$ 25,000
12	Cabling and Electrical Upgrades	1	LS	$ 20,000.00	$ 20,000
13	Commissioning	1	LS	$ 25,000.00	$ 25,000
14	FAA Coordination	1	LS	$ 50,000.00	$ 50,000

Subtotal, Construction		$	230,500
Contingency	15%	$	34,575
Total Construction Cost:		***$***	***265,075***
Owner Legal & Admin	2.5%	*$*	*6,627*
Engineering & Design	10%	*$*	*26,508*
Program Management	5%	*$*	*13,254*
Construction Management	5%	*$*	*13,254*
Design Services During Construction	3%	*$*	*7,952*
Total Project Cost		**$**	**332,669**

SRQ Master Plan Update
Date: 12/22/2020
23. Relocate ASOS and Install RVR on Runway 14

No.	Description	Quant	Unit	Unit Price	Total Cost
Install RVR on Runway 14 (DH 100' and RVR 1200')					
1	Mobilization	1	LS	$ 11,400.00	$ 11,400
2	Maintenance of Traffic	1	LS	$ 1,500.00	$ 1,500
3	Install Transmitter and Receiver	1	LS	$ 3,250.00	$ 3,250
4	Install Wetness Sensor	1	LS	$ 3,250.00	$ 3,250
5	Install Background Luminance Sensor	1	LS	$ 6,500.00	$ 6,500
6	Install CPU	1	LS	$ 1,300.00	$ 1,300
7	New Foundations for Relocated Equipment	1	Ea	$ 5,500.00	$ 5,500
8	2'' schedule 40 PVC conduit direct buried in earth complete in place	3,000	LF	$ 3.00	$ 9,000
9	Cabling and Electrical Panels	1	LS	$ 13,000.00	$ 13,000
10	Commissioning	1	LS	$ 25,000.00	$ 25,000
11	FAA Coordination	1	LS	$ 45,000.00	$ 45,000

Subtotal, Construction		$	124,700
Contingency	15%	$	18,705
Total Construction Cost:		***$***	***143,405***
Owner Legal & Admin	2.5%	*$*	*3,585*
Engineering & Design	66%	*$*	*95,000*
Program Management	5%	*$*	*7,170*
Construction Management	5%	*$*	*7,170*
Design Services During Construction	3%	*$*	*4,302*
Total Project Cost		**$**	**260,633**
Total Combined Construction Cost:		**$**	**593,302**

SRQ Master Plan Update
Date: 12/22/2020
24. Construct Ground Transportation Center

Flat Plate Carousels

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 246,100.00	$ 246,100
2	Maintenance of Traffic	1	LS	$ 100,000.00	$ 100,000
Road/Sidewalk					
3	Demolish Concrete Sidewalk	1,855	SY	$ 8.00	$ 14,840
4	Demolish Asphalt Pavement	5,220	SY	$ 8.00	$ 41,760
5	Demolish Concrete Curb	1,845	LF	$ 4.00	$ 7,380
6	Demolish Existing Building (New Parking Lot)	6,415	SF	$ 20.00	$ 128,300
7	Regular Excavation	2,725	CY	$ 10.00	$ 27,250
8	Demolish Existing Fence	85	LF	$ 10.00	$ 850
9	Demolish Bus Stop Shelter	90	SF	$ 10.00	$ 900
10	Demolish High Mast Tower	3	EA	$ 1,000.00	$ 3,000
11	Sign Demolition	7	EA	$ 100.00	$ 700
12	12" Stabilization LBR40	5,760	SY	$ 12.00	$ 69,120
13	6" Optional Base Course	5,760	SY	$ 20.00	$ 115,200
14	3" Superpave Asphalt Pavement	1,470	TN	$ 145.00	$ 213,150
15	Bituminous Prime Coat	2,610	GAL	$ 4.00	$ 10,440
16	Bituminous Tack Coat	610	GAL	$ 4.00	$ 2,440
17	4" Concrete Sidewalk	1,855	SY	$ 45.00	$ 83,475
18	Concrete Curb, Type D	2,830	LF	$ 18.00	$ 50,940
19	Yellow/White/Blue Pavement Marking	1,160	SF	$ 5.00	$ 5,800
20	Painted Pavement Markings, Arrows	12	EA	$ 100.00	$ 1,200
21	Single Post Sign	14	EA	$ 400.00	$ 5,600
22	Bus Station Shelter	90	SF	$ 45.00	$ 4,050
23	Driver's Lounge	1,525	SF	$ 150.00	$ 228,750
24	Sidewalk Canopy	17,175	SF	$ 40.00	$ 687,000
25	Storm Inlet Type D	10	EA	$ 4,000.00	$ 40,000
26	New Fence	50	LF	$ 14.00	$ 700
27	36" RCP Drainage Pipe	715	LF	$ 150.00	$ 107,250
28	Electrical	1	LS	$ 340,000.00	$ 340,000
29	Landscaping	1	LS	$ 170,000.00	$ 170,000

Subtotal, Construction		$	2,706,195
Contingency	15%	$	405,929
Total Construction Cost:		**$**	**3,112,124**
Owner Legal & Admin	2.5%	*$*	*77,803*
Engineering & Design	10%	*$*	*311,212*
Program Management	5%	*$*	*155,606*
Construction Management	5%	*$*	*155,606*
Design Services During Construction	3%	*$*	*93,364*
Total Project Cost		**$**	**3,905,716**

SRQ Master Plan Update
Date: 12/22/2020
25. Relocate Valet Parking

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 49,800.00	$ 49,800
2	Maintenance of Traffic	1	LS	$ 12,000.00	$ 12,000
3	Clearing and Grubbing (Curbside)	0.1	AC	$ 3,000.00	$ 300
4	Tree Removal	7	EA	$ 1,000.00	$ 7,000
5	Regular Excavation	25	CY	$ 10.00	$ 250
6	Demolish High Mast Light Pole	3	EA	$ 1,000.00	$ 3,000
7	Relocate Quad LED Pole; provide new foundations	3	EA	$ 10,000.00	$ 30,000
7	Pavement Marking Removal	400	SY	$ 3.00	$ 1,200
8	4" Concrete Sidewalk (Curbside)	115	SY	$ 45.00	$ 5,175
9	Yellow/White/Blue Pavement Marking	630	SF	$ 5.00	$ 3,150
10	Painted Pavement Markings, Arrows	4	EA	$ 100.00	$ 400
11	Single Post Sign	5	EA	$ 400.00	$ 2,000
12	Valet Pick up and Pedestrian Canopy	2,300	SF	$ 40.00	$ 92,000
13	Valet Drop off and Pedestrian Canopy	2,385	SF	$ 40.00	$ 95,400
14	Long Term Shuttle Pick up and Pedestrian Canopy	4,090	SF	$ 40.00	$ 163,600
15	Long Term Shuttle Drop off Canopy	1,135	SF	$ 40.00	$ 45,400
16	Landscape and Irrigation Modifications	1	LS	$ 30,000.00	$ 30,000
17	Gate Arms	2	EA	$ 3,500.00	$ 7,000

Subtotal, Construction		$	547,675
Contingency	15%	$	82,151
Total Construction Cost:		**$**	**629,826**
Owner Legal & Admin	2.5%	*$*	*15,746*
Engineering & Design	27%	*$*	*170,000*
Program Management	5%	*$*	*31,491*
Construction Management	5%	*$*	*31,491*
Design Services During Construction	3%	*$*	*18,895*
Total Project Cost		**$**	**897,449**

SRQ Master Plan Update
Date: 12/22/2020
26. Construct Fire Station (ARFF) Improvements

AMERICAN INFRASTRUCTURE DEVELOPMENT, INC.

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 71,200.00	$ 71,200
2	Maintenance of Traffic	1	LS	$ 12,000.00	$ 12,000
Apparatus Bays					
3	Add Apparatus Bay and Door	1,167	SF	$ 200.00	$ 233,333
4	Remove Existing Doors on West Side	4	EA	$ 5,000.00	$ 20,000
5	Install New Doors	4	EA	$ 15,000.00	$ 60,000
Storage Space					
6	3" Turf Stripping	85	SY	$ 3.00	$ 255
7	Regular Excavation	30	CY	$ 10.00	$ 300
8	Additional Storage Building	750	SF	$ 95.00	$ 71,250
Access Road Expansion					
9	Demolish Asphalt Pavement and Base	760	SY	$ 8.00	$ 6,080
10	Regular Excavation	115	CY	$ 10.00	$ 1,150
11	Embankment	555	CY	$ 20.00	$ 11,100
12	3" Turf Stripping	830	SY	$ 2.00	$ 1,660
13	12" Stabilization LBR 40	1,000	SY	$ 15.00	$ 15,000.00
14	6" Optional Base Course	915	SY	$ 20.00	$ 18,300.00
15	3" Superpave Asphalt SP-9.5	140	TN	$ 145.00	$ 20,300.00
16	Bituminous Prime Coat	250	GAL	$ 4.00	$ 1,000.00
17	Bituminous Tack Coat	60	GAL	$ 4.00	$ 240.00
18	Sodding	700	SY	$ 3.00	$ 2,100.00
Vehicle Parking					
19	3" Turf Stripping	270	SY	$ 2.00	$ 540
20	Regular Excavation	90	CY	$ 10.00	$ 900
21	12" Stabilization LBR 40	325	SY	$ 15.00	$ 4,875.00
22	6" Optional Base Course	300	SY	$ 20.00	$ 6,000.00
23	3" Superpave Asphalt SP-9.5	50	TN	$ 145.00	$ 7,250.00
24	Bituminous Prime Coat	85	GAL	$ 4.00	$ 340.00
25	Bituminous Tack Coat	20	GAL	$ 4.00	$ 80.00
26	Pavement Markings	700	LF	$ 4.00	$ 2,800
Emergency Generator and Exhaust Capture System					
27	Remove Existing Generator	1	EA	$ 5,000.00	$ 5,000
28	New Generator and Connections	1	EA	$ 175,000.00	$ 175,000
29	Exhaust Capture System	1	LS	$ 35,000.00	$ 35,000

Subtotal, Construction		$	783,053
Contingency	15%	$	117,458
Total Construction Cost:		**$**	**900,511**
Owner Legal & Admin	2.5%	*$*	*22,513*
Engineering & Design	25%	*$*	*225,000*
Program Management	5%	*$*	*45,026*
Construction Management	5%	*$*	*45,026*
Design Services During Construction	3%	*$*	*27,015*
Total Project Cost		**$**	**1,265,091**

SRQ Master Plan Update
Date: 12/22/2020
27. Expand Fuel Farm (3rd Tank)

AMERICAN INFRASTRUCTURE DEVELOPMENT, INC.
TRANSPORTATION CONSULTING

No.	**Description**	**Quant**	**Unit**	**Unit Price**	**Total Cost**
1	Mobilization	1	LS	$ 42,300.00	$ 42,300
2	Maintenance of Traffic	1	LS	$ 8,000.00	$ 8,000
3	Demolish Existing Fence	120	LF	$ 10.00	$ 1,200
4	Regular Excavation	80	CY	$ 10.00	$ 800
5	3" Turf Stripping	80	SY	$ 2.00	$ 160
6	12" Stabilization LBR 40	95	SY	$ 15.00	$ 1,425.00
7	6" Optional Base Course	85	SY	$ 20.00	$ 1,700.00
8	6" Concrete Pavement	80	SY	$ 85.00	$ 6,800.00
9	New Fence	150	LF	$ 14.00	$ 2,100
10	New Tank Construction	1	LS	$ 400,000.00	$ 400,000.00

Subtotal, Construction		$	464,485
Contingency	15%	$	69,673
Total Construction Cost:		**$**	**534,158**
Owner Legal & Admin	2.5%	*$*	*13,354*
Engineering & Design	28%	*$*	*150,000*
Program Management	5%	*$*	*26,708*
Construction Management	5%	*$*	*26,708*
Design Services During Construction	3%	*$*	*16,025*
Total Project Cost		**$**	**766,952**

SRQ Master Plan Update
Date: 12/22/2020
28. Construct T-Hangars (20 Units)

AMERICAN INFRASTRUCTURE DEVELOPMENT, INC.
TRANSPORTATION CONSULTING

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 215,500.00	$ 215,500
2	Maintenance of Air Operations Traffic	1	LS	$ 5,000.00	$ 5,000
3	Regular Excavation/Embankment	2,000	CY	$ 10.00	$ 20,000
4	12" Stabilization LBR40	1,700	SY	$ 12.00	$ 20,400
5	6" Optional Base Course	1,700	SY	$ 20.00	$ 34,000
6	3" Superpave Asphalt SP-9.5	200	TN	$ 145.00	$ 29,000
7	Bituminous Prime Coat	755	GAL	$ 4.00	$ 3,020
8	Bituminous Tack Coat	150	GAL	$ 4.00	$ 600
9	36" Mitered End Section	2	EA	$ 3,500.00	$ 7,000
10	36" RCP Drainage Pipe	300	LF	$ 150.00	$ 45,000
11	Drainage Structures	4	EA	$ 6,000.00	$ 24,000
12	New Fence	100	LF	$ 14.00	$ 1,400
13	Utilities	1	EA	$ 200,000.00	$ 200,000
14	Electrical Service and Transformer	1	EA	$ 40,000.00	$ 40,000
15	T-Hangar Building (M)	23,000	SF	$ 75.00	$ 1,725,000
					$ -
					$ -

Subtotal, Construction		$	2,369,920
Contingency	15%	$	355,488
Total Construction Cost:		**$**	**2,725,408**
Owner Legal & Admin	2.5%	*$*	*68,135*
Engineering & Design	10%	*$*	*272,541*
Program Management	5%	*$*	*136,270*
Construction Management	5%	*$*	*136,270*
Design Services During Construction	3%	*$*	*81,762*
Total Project Cost		**$**	**3,420,387**

SRQ Master Plan Update
Date: 12/22/2020
29. Construct T-Hangars (10 and 14 Units)

No.	Description	Quant	Unit	Unit Price	Total Cost
1	Mobilization	1	LS	$ 355,200.00	$ 355,200
2	Maintenance of Air Operations Traffic	1	LS	$ 5,000.00	$ 5,000
3	Regular Excavation/Embankment	2,000	CY	$ 10.00	$ 20,000
4	12" Stabilization LBR40	1,700	SY	$ 12.00	$ 20,400
5	6" Optional Base Course	1,700	SY	$ 20.00	$ 34,000
6	3" Superpave Asphalt SP-9.5	200	TN	$ 145.00	$ 29,000
7	Bituminous Prime Coat	755	GAL	$ 4.00	$ 3,020
8	Bituminous Tack Coat	150	GAL	$ 4.00	$ 600
9	36" Mitered End Section	2	EA	$ 3,500.00	$ 7,000
10	36" RCP Drainage Pipe	200	LF	$ 150.00	$ 30,000
11	Drainage Structures	8	EA	$ 6,000.00	$ 48,000
12	New Fence	1,000	LF	$ 14.00	$ 14,000
13	Utilities	1	EA	$ 140,000.00	$ 140,000
14	Electrical Service and Transformer	1	EA	$ 50,000.00	$ 50,000
15	T-Hangar Building (K)	18,000	SF	$ 75.00	$ 1,350,000
16	T-Hangar Building (L)	24,000	SF	$ 75.00	$ 1,800,000

	Subtotal, Construction	$	3,906,220
Contingency	15%	$	585,933
	Total Construction Cost:	**$**	**4,492,153**
Owner Legal & Admin	2.5%	*$*	*112,304*
Engineering & Design	10%	*$*	*449,215*
Program Management	5%	*$*	*224,608*
Construction Management	5%	*$*	*224,608*
Design Services During Construction	3%	*$*	*134,765*
	Total Project Cost	**$**	**5,637,652**

APPENDIX E

Public Information Meetings

Appendix E
Public Information Meetings

The public was provided with two opportunities to hear and comment on the Master Plan Update. Both opportunities occurred at regularly scheduled meetings of the Sarasota Manatee Airport Authority.

The first meeting occurred on September 28, 2020 at 1pm in the Dan P McClure Auditorium in the passenger terminal located at 6000 Airport Circle, Sarasota. AECOM provided a PowerPoint presentation that gave a status report on the progress of the Master Plan Update along with a summary of the forecasts for passengers, air cargo, aircraft operations and based aircraft. The design aircraft was identified, and recommended airfield, terminal, parking and support facility projects were shown and described. No citizen comments were made regarding the recommended projects.

The second meeting occurred on March 22, 2021 at 1pm in the Dan P McClure Auditorium in the passenger terminal located at 6000 Airport Circle, Sarasota. AECOM provided a PowerPoint presentation of all recommended projects along with estimated costs, proposed project phasing, potential sources of funding, funding scenarios and conclusions regarding financial feasibility. No citizen comments were made regarding the recommended plan. The Airport Authority Board voted to accept the draft Master Plan report and Airport Layout Plan drawing set for the purpose of submitting it to the Federal Aviation Administration and the Florida Department of Transportation for their review and approval.

Copies of both meeting notices, agendas, meeting minutes and presentation materials are provided on the following pages.

Publication Date
2020-09-18

Subcategory
Miscellaneous Notices

NOTICE OF SMAA Meeting The SARASOTA MANATEE AIRPORT AUTHORITY will hold a Regular Meeting and Public Hearing on September 28, 2020, at 1:00 p.m. at the Dan P. McClure Auditorium in the terminal building, 6000 Airport Circle, Sarasota. The Public Hearing will consider SMAA Resolution 2020-05 Adopting FY2021 Budget Establishing Airline Rentals, Fees and Charges, Designating Employee Promotion Increases, Contributions to Employee Defined Contribution Retirement Plan, Employer Contribution Credit to 457(f) Retirement Plan and Public Parking Rates. The public may view a copy of the draft Budget at the office of the Senior VP, Finance & Administration, in the Administration Offices of the Sarasota Manatee Airport Authority, third floor of the Sarasota Bradenton International Airport, 6000 Airport Circle, Sarasota. The meeting is OPEN TO THE PUBLIC. IF A PERSON DECIDES TO APPEAL ANY DECISION MADE BY THE AIRPORT AUTHORITY WITH RESPECT TO ANY MATTER CONSIDERED AT THIS PUBLIC MEETING, HE WILL NEED A RECORD OF THE PROCEEDINGS, AND FOR SUCH PURPOSE, HE MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED. PURSUANT TO THE AMERICANS WITH DISABILITIES ACT, PERSONS NEEDING ASSISTANCE TO PARTICIPATE IN ANY OF THESE MEETINGS SHOULD CONTACT KAREN GAROFALO AT 359-2770, EXT. 4216, FAX AT 359-5054 or email karen.garofalo@srq-airport.com.

AGENDA
SARASOTA MANATEE AIRPORT AUTHORITY
REGULAR MEETING & PUBLIC HEARING
September 28, 2020 - 1:00 p.m.
Dan P. McClure Auditorium East

1. Call to order, invocation, and pledge to flag

2. Approval: Participation in Meeting Discussion via Amplified Telephone by Commissioner Wish

3. Presentation: Florida's 16th District Congressional Law Enforcement Dedication and Professionalism Award to Airport Police Sergeant Jeremy Beal

4. Introduction of New Employees (A. Eldridge)

5. Public Hearing Re: SMAA Resolution 2020-05 Adopting FY2021 Budget Establishing Airline Rentals, Fees and Charges, Designating Employee Promotion Increases, Contributions to Employee Defined Contribution Retirement Plan, Employer Contribution Credit to 457(f) Retirement Plan and Public Parking Rates,

6. Approval: SMAA Resolution 2020-05 Adopting FY2021 Budget Establishing Airline Rentals, Fees and Charges, Designating Employee Promotion Increases, Contributions to Employee Defined Contribution Retirement Plan, Employer Contribution Credit to 457(f) Retirement Plan and Public Parking Rates. (FJP)

7. Approval: Minutes of Budget Workshop of August 24, 2020 and Minutes of Regular Meeting of August 24, 2020

8. Presentation of Master Plan Update - AECOM

9. Citizen's Comments
Comments must be limited to an absolute maximum of 5 minutes per person and concern only business that is on the current agenda. If the item concerns a matter not on the current agenda, comments will be heard under "Public Comments" at the end of the meeting. Please fill out a Citizen's Comments form and present it to the Executive Assistant. Any person failing to complete this form in its entirety and/or who fails to identify the agenda topic will not be heard. No individual may give his/her time to another speaker.

10. ITEMS NEEDING ACTION
    A. Approval: RFQ-06-2019-CONRAC, Professional Services to Design the Consolidated Rent-A-Car Facility (short list of firms making ten-minute presentations in alphabetical order)
        1. Demattei Wong Architecture
        2. Infrastructure Consulting & Engineering
        3. PGAL
    B. Approval: Construction License Agreement with Ryan Companies US, Inc. (FJP)
    C. Approval: Extension of COVID 19 Relief Guidelines to Defer/Waive Airport Tenant Rents and Fees (FJP)
    D. Approval: SMAA Resolution 2020-06, One Time Substitution to Various Employee Incentive Programs (FJP)
    E. Approval: Letter of Agreement for Establishment of Aviation Immersion Program (FJP)

11. Department Reports
    A. Financial Statements (AE)
    B. Investment Portfolio (AE)
    C. Finance & Administration Department (AE)
    D. Real Estate Development & Properties Department (FJP)
    E. ARFF, Operations & Police Departments (FJP)
    F. Development/Community Relations, Activity Report (FJP)
    G. Engineering, Planning & Facilities Departments (FJP)
    H. Internal Audit & Investment Compliance (FJP)
    I. Information Technologies (FJP)

12. Attorney Presentations (D. Bailey)

13. Old/New Business

14. Public Comments

Comments must be limited to absolute maximum of five (5) minutes per person. Anyone wishing to speak must complete a Citizen's Comment form and present it to the Executive Assistant prior to the beginning of the meeting. No individual may give his/her time to another speaker.

15. Comments by Commissioners

16. Adjournment

Proceedings at this public meeting are digitally recorded. You may purchase copies from the SMAA Executive Assistant, telephone number 941-359-2770, ext. 4216. Anyone wishing to appeal a decision made by the Airport Authority concerning any matter considered at this public meeting will need a record of the proceedings and must ensure that a verbatim record of the proceedings is made, which includes the testimony and evidence upon which the appeal is based.

AGENDA ITEM NO. 5

SARASOTA MANATEE AIRPORT AUTHORITY
REGULAR MEETING & PUBLIC HEARING
Monday, September 28, 2020 - 1:00 p.m.
Dan P. McClure Auditorium East

THOSE PRESENT:
Kristin Incrocci, Chairman
John Stafford, Vice Chairman
Doug Holder, Secretary
Carlos Beruff, Commissioner
Bob Spencer, Commissioner
Fredrick J. Piccolo, President, Chief Executive Officer
C. Dan Bailey, Jr., Airport Counsel
Mark Stuckey, Exec. VP COS
Anita Eldridge, Sr. VP, Finance & Administration
Kent Bontrager, Sr. VP Engineering & Facilities
Karen Garofalo, Executive Assistant – SMAA

THOSE ABSENT:

Commissioner Peter A. Wish (via teleconference)

Item 1. Call to Order, Invocation, and Pledge to Flag
Chairman Incrocci called the meeting to order at 1:00 p.m. and gave the invocation and led the pledge of allegiance to the flag.

Item 2. Re Approval: Participation in Meeting Discussion via Amplified Telephone by Commissioner Wish
Chairman Incrocci stated that Commissioner Wish is unable to be physically present today, but desires to participate and address the assembly by means of amplified telephone. Article II, Section 5. D. of the Authority bylaws permits this if a majority of a quorum of the Board votes to permit it, and if Commissioner Wish does not make, second or vote on any motions. The Board unanimously approved a motion to allow Commissioner Wish to address the Board by amplified telephone without making, seconding or voting on any motions.

MOTION: Commissioner Stafford moved approval for Commissioner Wish to participate and address the assembly by means of amplified telephone, as permitted in Article II, Section 5. D. of the Authority bylaws, if a majority of a quorum of the Board votes to permit it, and if Commissioner Wish does not make, second or vote on any motions. Commissioner Beruff seconded. **MOTION PASSED UNANIMOUSLY (5 -0).**

Item 3. Presentation of Florida's 16th District Congressional Law Enforcement Dedication and Professionalism Award to Airport Police Sergeant Jeremy Beal.
Chairman Incrocci presented to Sergeant Beal the Congressional Law Enforcement Dedication and Professionalism Award received from the 16th District Office of Congressman Vern Buchanan for his outstanding service to the law enforcement community. Sgt. Beal accepted the award and thanked the Command staff and the Airport Authority Board for their support.

Item 4. Introduction of New Employees

Ms. Eldridge introduced new employee, Kevin Phillips, Maintenance Technician in the Facilities Department.

Items 5. Public Hearing Regarding Approval of SMAA Resolution 2020-05 Adopting FY2021 Budget Establishing Airline Rentals, Fees and Charges, Designating Employee Promotion Increases, Contributions to Employee Defined Contribution Retirement Plan, Employer Contribution Credit to 457(f) Retirement Plan, and Public Parking Rates

Chairman Incrocci opened the public hearing on SMAA Resolution 2020-05 Adoption of FY2021 Budget Establishing Airline Rentals, Fees and Charges, Designating Employee Promotion Increases, Contributions to Employee Defined Contribution Retirement Plan, Employer Contribution Credit to 457(f) Retirement Plan, and Public Parking Rates. Karen Garofalo, Notary Public, administered the oath to those taking part in today's public hearing. Staff members, Fredrick Piccolo, Anita Eldridge, Mark Stuckey, Kent Bontrager, and C. Dan Bailey, Airport Counsel, were sworn in. No members of the audience came forward to offer testimony.

Chairman Incrocci requested a member of staff summarize the budget proposal. Mr. Piccolo advised that the Board held a Workshop on August 24, 2020, to review the FY2021 Budget in detail. No issues were raised by the Board at that meeting. He stated he is very pleased with this particular budget as it was extremely challenging because of the complications of COVID during the past year. A meeting was held with the airport's signatory airlines to review the budget and stated they are very pleased with its proposal. He read into the record, a letter from Amira Trebincevic, Chairman of the Airport Airline Affairs Committee on behalf of the airport's signatory airlines, recognizing the efforts of the airport's management team and employees (attached to original minutes as Exhibit A).

Chairman Incrocci requested comments from the Board on the budget as presented. There were no questions. No members of the audience came forward to offer evidence or testimony for this public hearing. Chairman Incrocci requested a motion to close the public hearing.

> **MOTION:** Commissioner Stafford moved approval to close the Public Hearing on SMAA Resolution 2020-05 Adoption of FY2021 Budget Establishing Airline Rentals, Fees and Charges, Designating Employee Promotion Increases, Contributions to Employee Defined Contribution Retirement Plan, Employer Contribution Credit to 457(f) Retirement Plan, and Public Parking Rates. Commissioner Beruff seconded. **MOTION PASSED UNANIMOUSLY (5-0).**

Item 6. Approval of SMAA Resolution 2020-05 Adopting FY2021 Budget Establishing Airline Rentals, Fees and Charges, Designating Employee Promotion Increases, Contributions to Employee Defined Contribution Retirement Plan, Employer Contribution Credit to 457(f) Retirement Plan, and Public Parking Rates

Chairman Incrocci requested a motion to approve the FY 2021 budget.

> **MOTION:** Commissioner Holder moved approval of SMAA Resolution 2020-05 Adoption of FY2021 Budget Establishing Airline Rentals, Fees and Charges, Designating Employee Promotion Increases, Contributions to Employee Defined Contribution Retirement Plan, Employer Contribution Credit to 457(f) Retirement Plan, and Public Parking Rates. Commissioner Beruff seconded. **MOTION PASSED UNANIMOUSLY (5-0).**

Item 7. Approval of the Minutes of the Budget Workshop of August 24, 2020, and Regular Meeting of August 24, 2020

The Board approved the minutes of the August 24, 2020 Budget Workshop and the August 24, 2020 Regular Meeting as presented.

> **MOTION:** Commissioner Spencer moved approval of the minutes of the August 24, 2020 Budget Workshop and Regular Meeting of August 24, 2020 as presented. Commissioner Beruff seconded. **MOTION PASSED UNANIMOUSLY (5-0)**

(Item 10A. brought forward at this time)

Item 10A. Approval: RFQ-06-2019-CONRAC, Professional Services to Design the Consolidated Rent-A-Car Facility

Mr. Piccolo advised staff received Request for Qualifications for a qualified firm capable of providing professional engineering services and architectural design services to develop a new Consolidated Rent-A-Car Facility (CONRAC) off Rental Card Road. The facility will consolidate rental car storage, cleaning, automotive maintenance, and fueling activities for all rental car operators at SRQ. Staff reviewed the submitted responses and selected three proposing firms to make presentations today at which time the Board will rank the firms.

Mr. Bailey explained the general protocol for presenters and the voting process that would take place following the presentations. Under CCNA, no clear law exists, therefore, competing firms have the right to remain in the room while competitors are presenting. He advised that the tradition at the airport is for the firms chosen to present, leave the room during the other presentations, but it is not required.

Each firm made presentations in alphabetical order: Demattei Wong Architecture; Infrastructure Consulting & Engineering PLLC; and PGAL. The Board selected the first, second, and third choice firm, with Mr. Bailey conducting the ballot voting process.

The ballot vote for first choice resulted in three votes for PGAL, one vote for Infrastructure Consulting, and one vote for Demattei Wong. The ballot vote for second choice resulted in four votes for Infrastructure Consulting, and one vote for Demattei Wong. The Board ranked the firms as follows:

1. **PGAL**
2. **Infrastructure Consulting & Engineering**
3. **Demattei Wong Architecture**

Contract negotiations will begin with the first ranked firm of PGAL and a contract will be brought back to the Board if successful.

> **MOTION:** Commissioner Stafford moved approval of the selected firms of PGAL as first ranked firm; Infrastructure Consulting & Engineering as second ranked firm; and Demattei Wong Architecture as third ranked firm; and for staff to negotiate scope and fees with the first ranked firm and if successful to present contract for approval at the next Board meeting and prepare all documents necessary to implement this action. Commissioner Beruff seconded. **MOTION PASSED UNANIMOUSLY (5-0)**

Item 8. Presentation of Master Plan Update – AECOM

Mr. Piccolo advised that the Master Plan presentation is a working draft and not the final master plan with periodic updates given to the Board under the agreement. This is the first update for review. He introduced Mr. Steve Henriquez and Mr. Howard Klein, from AECOM and stated that staff has been meeting on a frequent basis with Mr. Klein and his team to review all issues of the Master Plan. Mr. Klein advised the Board that the plans are nearly seventy percent complete and the recommended projects identified. They are currently refining the cost estimates on the identified projects and phasing will commence to develop the capital improvement plans for the financial consultant to assess the financial feasibility of the projects. The draft plan should be completed by the end of this year and forwarded to the FAA and FDOT for their review.

Mr. Klein presented a PowerPoint forecast working through each project in the Master Plan by area/function of the airport. All forecasts presented were developed and approved by the FAA prior to COVID. Presentation topics included forecasts, airfield projects, terminal projects, North Quadrant projects, roadway and parking projects and support facility projects. He reviewed passenger forecast numbers and scenarios for baseline, high and low growth projections and stated the enplanement projections going forward for SRQ are at 1.5%, which is faster than the FAA national rate at 0.9% for airports. The forecast projection for based aircraft is at 1.5% assuming the airport can accommodate the demand for hangar space by aircraft owners. He identified existing and future design aircraft for the airfield and reviewed aerials of AECOM's recommendations for various projects i.e., proposed runway shift & displacement of landing thresholds, proposed taxiway segment removal and replacement area, and proposed parcel or easement acquisitions areas. He reviewed relocation of the existing ASOS to take advantage of potential development at the north end of the airport.

From the PowerPoint, Mr. Klein reviewed additional terminal projects in the Master Plan including the Concessions/Holdroom Expansions, New Concourse A, the General Aviation Federal Inspection Services facility, Baggage Claim Expansion and Pedestrian bridge and concessions reconfiguration. He identified and discussed the terminal requirements for the projects by using Planning Activity Levels (PAL) for the facility's demand capacity. By this process, Concessions, Holdrooms, and Gates would need improvements earlier than the security checkpoint and baggage claim areas. He discussed expansion of the concourse going east of the current concourse at Gate B1 and configuration of the additional gates for new Concourse A. He discussed a possible general aviation FIS facility gate at lower cost. He reviewed a possible option for redevelopment of concession space near Dewar's to construct a passenger bridge that would improve the flow of passengers not checking baggage and not needing to enter the bag claim area. He reviewed various options for the north airfield including additional aprons, conventional hangars and t-hangars. He reviewed options for a roadway and parking project and discussed the ground transportation center and parking expansions within the Master Plan.

Following the presentation, Mr. Piccolo stated AECOM has done excellent work on the Master Plan and will continue going forward. We are looking at a twenty-year window and we will ensure costs of all improvements are prudent and functional. Chairman Incrocci thanked Mr. Klein and staff for a very well done presentation.

Item 9. Citizens Comments

No Citizen Comments were offered.

Item 10. ITEMS NEEDING ACTION

10A. (See Page 3 of Minutes)

10B. Approval: Construction License Agreement with Ryan Companies US, Inc.

10C. Approval: Extension of COVID 19 Relief Guidelines to Defer/Waive Airport Tenant Rents and Fees

10D. Approval: SMAA Resolution 2020-06, One Time Substitution to Various Employee Incentive Programs *(Approved with revision as discussed)*

Mr. Piccolo requested a revision to the agreement to eliminate the term "union contract agreements" from the Resolution. Following consultation with Airport legal team, and as this is a voluntary program, we do not want to set a precedent as it is not in the Police Union contract.

10E.Approval: Letter of Agreement for Establishment of Aviation Immersion Program

MOTION: Commissioner Stafford moved approval of Agenda Items 10B. Approval of Construction License Agreement with Ryan Companies US, Inc; Item 10C. Approval of Extension of COVID 19 Relief Guidelines to Defer/Waive Airport Tenants Rents and Fees; 10D. Approval of SMAA Resolution 2020-06, One Time Substitution to Various Employee Incentive Programs; Agenda Item 10E. Approval of Letter of Agreement for Establishment of Aviation Immersion Program. Commissioner Beruff seconded.

AMENDED MOTION: Commissioner Stafford moved approval of Agenda Items 10B. Approval of Construction License Agreement with Ryan Companies US, Inc; Item 10C. Approval of Extension of COVID 19 Relief Guidelines to Defer/Waive Airport Tenants Rents and Fees; 10D. Approval of SMAA Resolution 2020-06, One Time Substitution to Various Employee Incentive Programs (with revision to Resolution to eliminate the term "union contract agreements" from Resolution); and Agenda Item 10E. Approval of Letter of Agreement for Establishment of Aviation Immersion Program. Commissioner Beruff seconded. **MOTION PASSED UNANIMOUSLY (5-0)**

Item 11. Department Reports

The following department reports were accepted:

- **A.** Financial Statements
- **B.** Investment Portfolio
- **C.** Finance & Administration Department Report
- **D.** Real Estate Development & Properties Department
- **E.** ARFF, Operations & Police Departments
- **F.** Development/Community Relations Report, Activity Report
- **G.** Engineering, Planning & Facilities Departments
- **H.** Internal Audit & Investment Compliance
- **I.** Information Technologies

Item 12. Attorney Presentations

No items offered.

Item 13. Old/New Business

No items offered.

Item 14. Public Comments:
No Public Comments offered.

Item 15: Commissioner Comments:
No Comments by Commissioners offered.

Item 16. Adjournment
There was no further business to come before the Authority. The meeting adjourned at 2:29 p.m.

APPROVED:

DOUG HOLDER **Chairman**

ATTEST:

CARLOS BERUFF **Secretary**

Master Plan Update Briefing
Sarasota Bradenton International Airport

Sarasota Manatee Airport Authority

September 28, 2020

AECOM

1

Master Plan Update Status

– Study is 70% complete.

– Recommended projects are identified.

– Recommended projects are currently being costed and phased.

– Draft Plan will be completed by end of this year.

AECOM

2

Presentation Topics

- Forecasts
- Airfield Projects
- Terminal Projects
- North Quadrant Projects
- Roadway & Parking Projects
- Support Facility Projects

AECOM

3

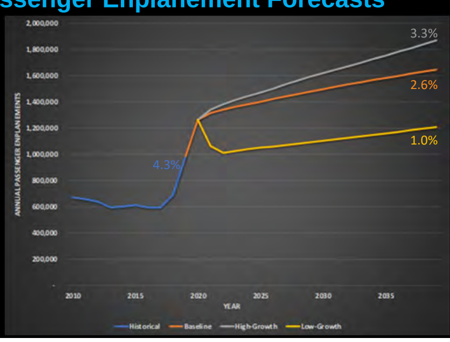
Forecasts

- Passenger Enplanements
- Air Cargo
- Aircraft Operations
- Based Aircraft
- Design Aircraft

AECOM

4

Passenger Enplanement Forecasts



AECOM

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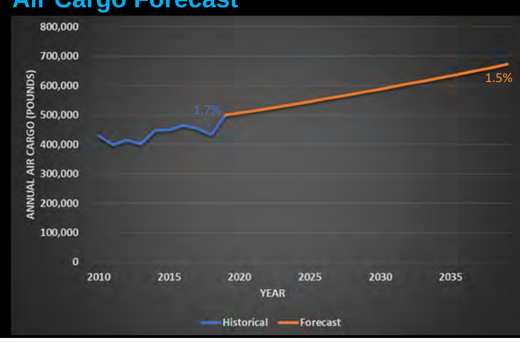
Air Cargo Forecast



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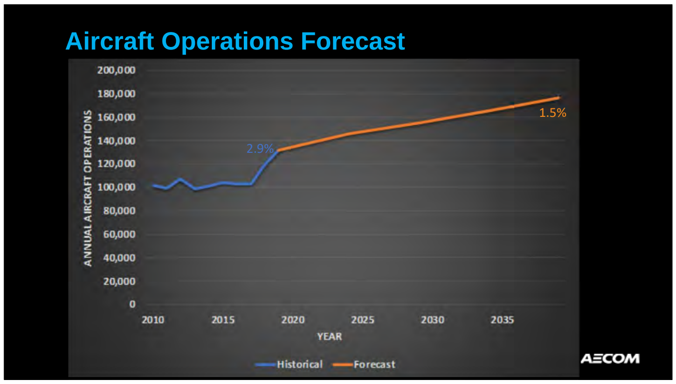
Aircraft Operations Forecast
ANNUAL AIRCRAFT OPERATIONS
YEAR
2.9%
1.5%
Historical
Forecast
AECOM

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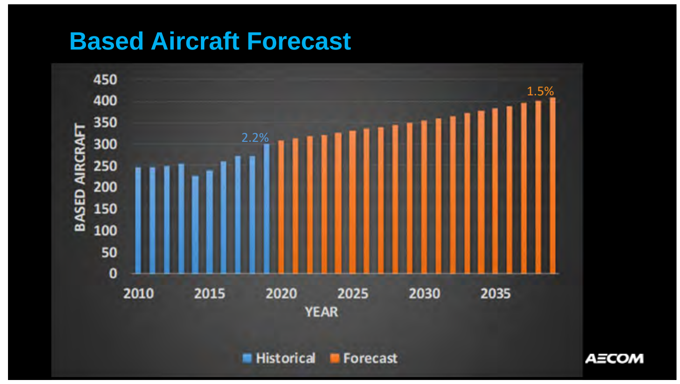
Based Aircraft Forecast
BASED AIRCRAFT
YEAR
2.2%
1.5%
Historical
Forecast
AECOM

8


Existing & Future Design Aircraft
• Existing: Airbus A321, Boeing 737-800 & 900
• Future: New Mid-Market Aircraft
AECOM

9


Airfield Projects
• Holding Bays on Taxiway A
• Runway 14-32 Improvements
• Runway 4-22 Improvements
• Taxiway Improvements
• Navigational Aid Relocation
• Property / Easement Acquisitions
AECOM

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AECOM

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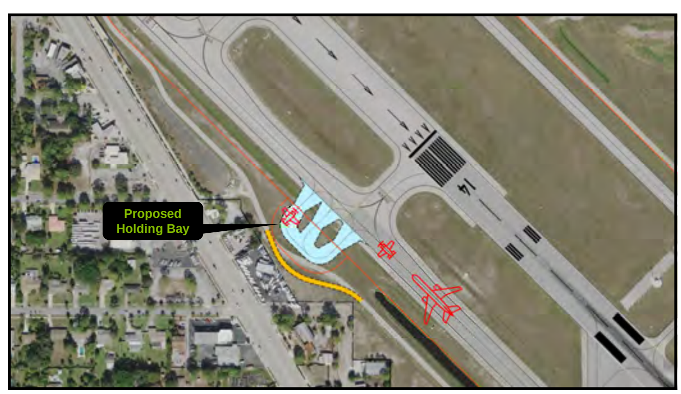
Proposed Holding Bay

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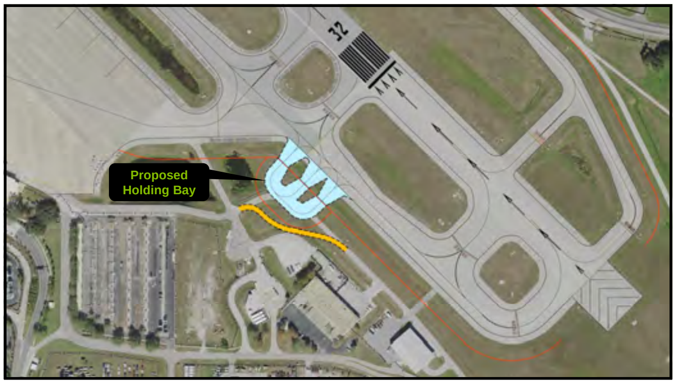

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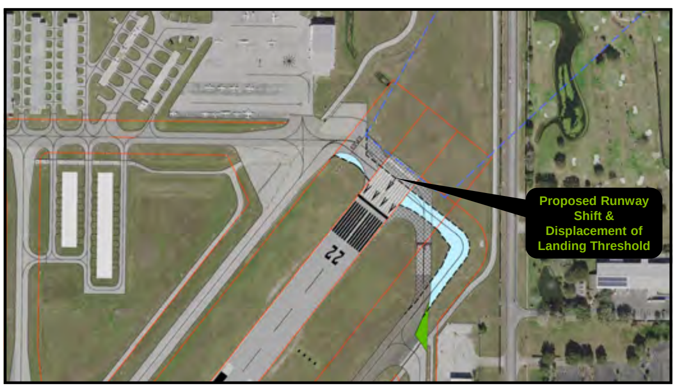

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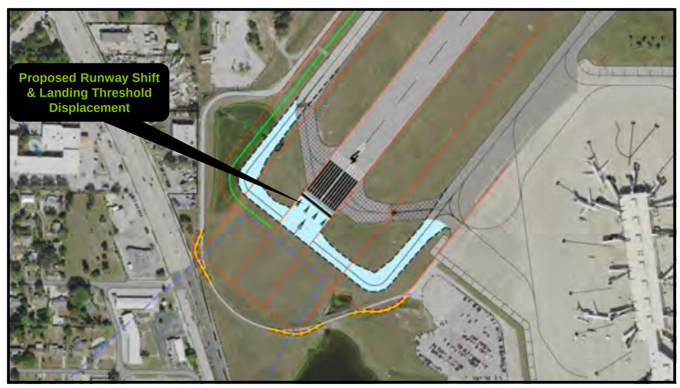

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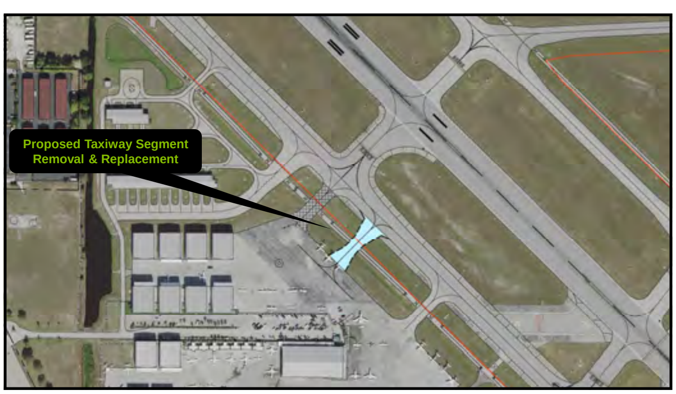

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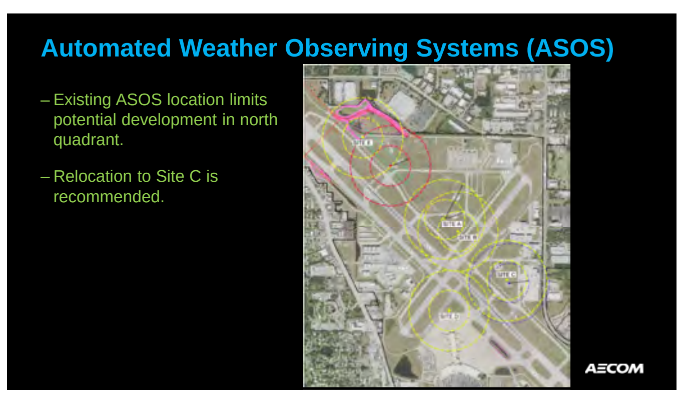

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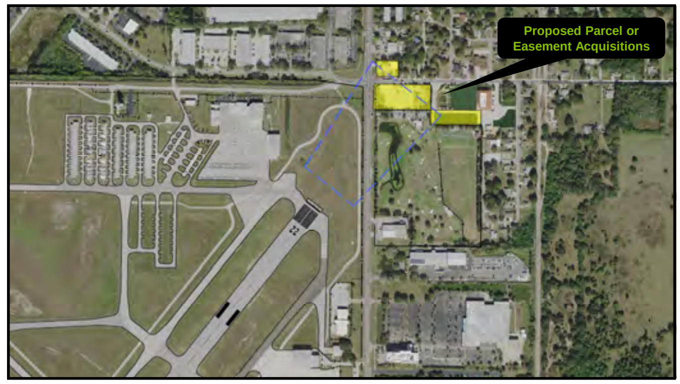

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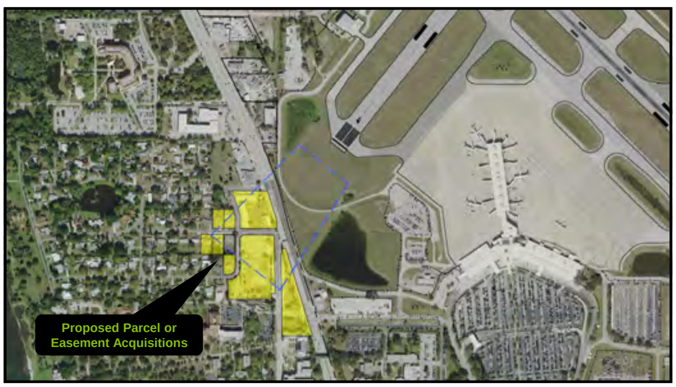

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Terminal Projects

- Concessions / Holdroom Expansions
- New Concourse A
- General Aviation Federal Inspection Services (FIS) Facility
- Baggage Claim Expansion
- Pedestrian Bridge & Concessions Reconfiguration

AECOM

22

Terminal Requirements by Planning Activity Level (PAL)

Terminal Function	Existing	PAL 1 1.25 M	PAL 2 1.5 M	PAL 3 1.75 M
Airline Check-In Counters	Green	Green	Green	Green
Airline Ticket Office Space	Green	Green	Green	Green
Federal Inspection Services	Green	Green	Green	Green
Outbound Baggage Systems & Make-Up Area	Yellow	Green	Green	Green
Passenger Security Screening Checkpoint	Yellow	Green	Green	Red
Gates	Green	Red	Red	Red
Holdrooms	Red	Red	Red	Red
Circulation	Green	Green	Green	Green
Concessions	Yellow	Red	Red	Red
Restrooms	Green	Green *	Yellow *	Yellow *
Baggage Claim	Green	Green	Green	Red
Arrival Hall	Green *	Green *	Green *	Green *

LEGEND

Demand Less than Existing Facility Capacity	Green
Demand Approaching or at Existing Facility Capacity	Yellow
Demand Exceeds Existing Facility Capacity	Red

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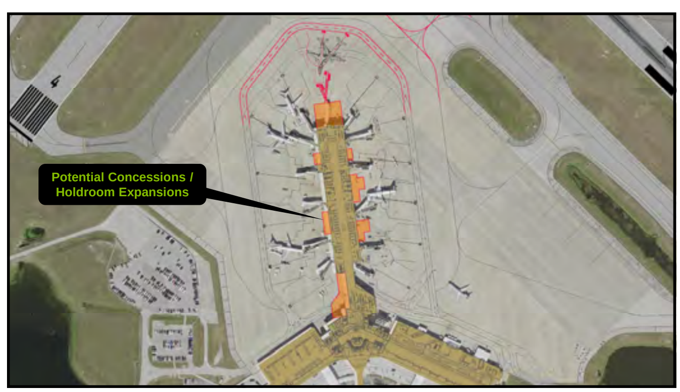
23



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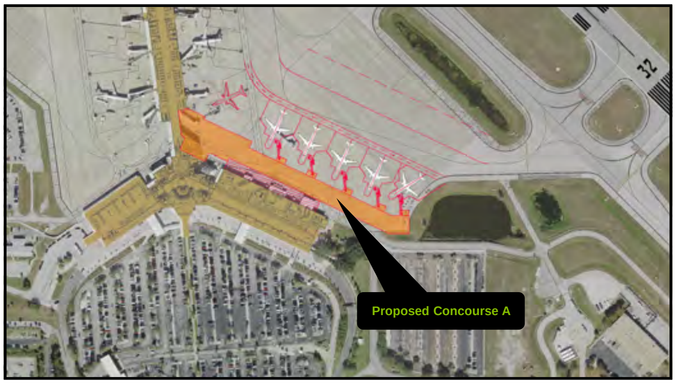

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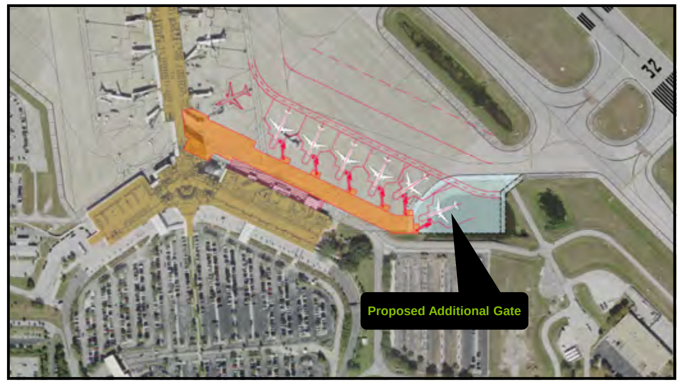

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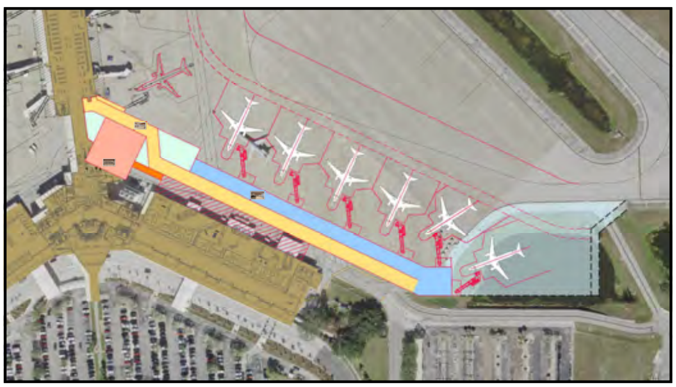

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General Aviation FIS Facility

- Potential GA FIS locations identified.
- Preferred site not selected at this time. Staff can select site based on needs at time of project.

AECOM

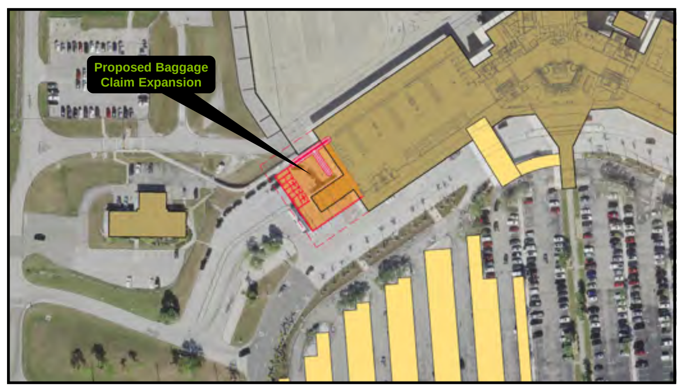
32

General Aviation FIS Facility Alternatives

- Site 6 in North Quadrant
- 4,000 SF building
- 4,800 SY Apron for Gulfstream 700 / Bombardier Global Express 7500

AECOM

33



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Potential Concession Redevelopment

– Dewar's Clubhouse Bar and Grille area is underutilized.

– Existing passenger flows are not conducive to concession success.

– Passenger flow next to and visibility of concessions is critical to success.

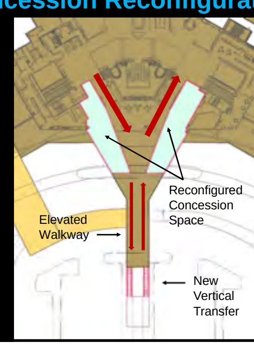
AECOM

35

Pedestrian Bridge / Concession Reconfiguration

– Passenger flow (if not checking baggage) is from parking-to-security checkpoint for departures and gate-to-parking for arrivals.

– What if another path was established to facilitate those passenger flows through a reconfigured concession area.



AECOM

36

North Quadrant Projects

- Development in North Quadrant:
  - Aprons
  - Conventional Hangars
  - T-Hangars

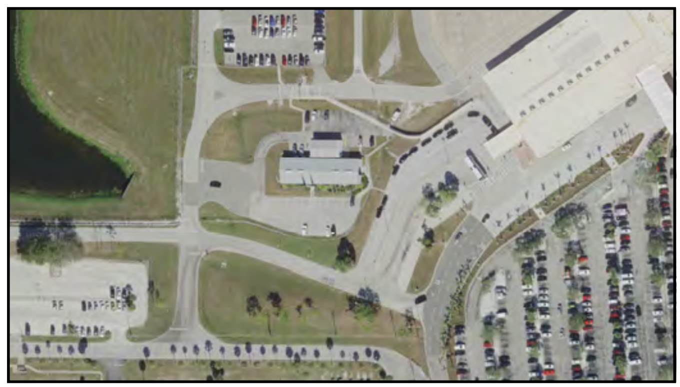
37

38

Roadway & Parking Projects

- Ground Transportation Center
- Parking Expansions

39



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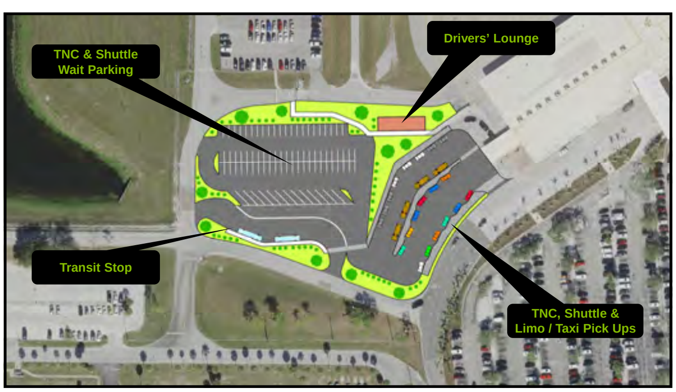

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New Long-Term
Parking Lot (PAL 2)

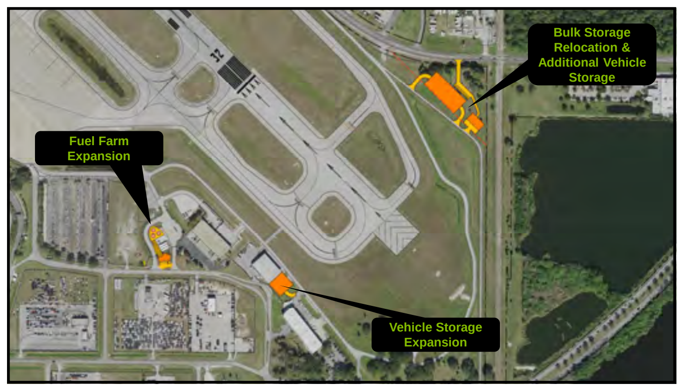
43


New Rental Car &
Short-Term Parking
Deck (PAL 3)
Long-Term Parking
Expansion (PAL 3)

44


Support Facilities
• Expansion of Fuel Farm
• Expanded / New Airport Maintenance Facilities
AECOM

45


Bulk Storage
Relocation &
Additional Vehicle
Storage
Fuel Farm
Expansion
Vehicle Storage
Expansion

46


Questions?
AECOM

47

Miscellaneous Notices

Published in Sarasota Herald-Tribune on December 18, 2020

Location Sarasota County, Florida

Notice Text:

SARASOTA MANATEE AIRPORT AUTHORITY Pursuant to Section 189.417 FL Statutes, the SMAA hereby gives notice of its schedule of meetings for the year 2021. REGULAR MEETINGS OF THE SARASOTA MANATEE AIRPORT AUTHORITY shall be held in the Dan P. McClure Auditorium, 6000 Airport Circle, 1st. floor at east end of Ticketing, at the Sarasota Bradenton International Airport on the following dates: CY 2021 Regular Meetings Commence at 1:00 pm Monday, JANUARY 25 Monday, MARCH 22 Monday, MAY 24 Monday, AUGUST 23 Monday, SEPTEMBER 27 Monday, NOVEMBER 15 In accordance with Authority by-laws, The Board will hold a Workshop meeting on May 24 at 11:00 a.m. to assess the performance of the President, Chief Executive Officer. The Authority will hold a Budget Workshop on August 23 at 11:00 a.m. According to the by-laws, if necessary, the Board shall schedule a second Budget Workshop for the first Wednesday after Labor Day: Wednesday, September 8. We invite the public to attend. If a person decides to appeal any decision made by the Airport Authority with respect to any matter considered at these public meetings, he will need a record of the proceedings, and for such purpose, he may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. Pursuant to the Americans with Disabilities Act, persons needing assistance to participate in any of these meetings should contact Karen Garofalo, Executive Assistant at 359-2770 ext. 4216 or email at karen.garofalo@srq-airport.com. Any Regular or Workshop meeting of the board may be recessed to be later reconvened on a date certain. There may be other workshops and special meetings scheduled throughout the year. Notices of those meetings shall be published at least seven days prior to the meeting occurrence. Notices of any other meetings conducted under the auspices of the Authority, which are required to be noticed under s. 286.011, F.S., shall be posted on the first floor of the Airport terminal in the display case near the main elevators, for a minimum of seven days, or, in the case of an emergency, two days, in advance of the meeting. You may obtain any formal request for proposal/solicitation by Airport Authority on-line at www.demandstar.com, www.srq-airport.com under Airport Business/Bid Announcements, or by contacting DemandStar by Onvia toll free 1-800- 711-1712 and requesting current solicitation.

Date of pub: December 18, 2020

AGENDA
SARASOTA MANATEE AIRPORT AUTHORITY
REGULAR MEETING
March 22, 2021 - 1:00 p.m.
Dan P. McClure Auditorium East

1. Call to order, invocation, and pledge to flag.

2. Swearing in Ceremony:
   Jesse Biter, Sarasota County, Seat 3
   By the Honorable Kevin Bruning, Circuit Court Judge

3. Plaque Presentation to John Stafford for his service as a Member of the Airport Authority Board (FJP)

4. Introduction of New Employees (AE)

5. Re Approval: Minutes of Workshop Meeting of January 25, 2021, Minutes of Regular Meeting of January 25, 2021, Minutes of Commissioner Orientation of March 1, 2021

6. Citizen's Comments.
   Must be limited to an absolute maximum of 5 minutes per person and concern only business that is on the current agenda. If the item concerns a matter not on the current agenda, comments will be heard under "Public Comments" at the end of the meeting. Please fill out a Citizen's Comments form and present it to the Executive Assistant. Any person failing to complete this form in its entirety and/or who fails to identify the agenda topic will not be heard. No individual may give his/her time to another speaker.

7. PowerPoint Presentation: Airport Growth Update (FJP)

8. ITEMS NEEDING ACTION:
   A. Approval: Airport Master Plan – Presentation of Final Draft (FJP/and Consultant)
   B. Approval: Increase FY 2021 Capital Equipment and Capital Project Budgets (FJP)
   C. Approval: Revisions to the Sarasota Manatee Airport (FL) Deferred Compensation Plan (FJP)
   D. Approval: Amend the Definition of Actuarial Equivalent in the Sarasota Manatee Airport Authority Retirement Plan (FJP)
   E. Approval: SMAA Resolution 2021-03, Amending the Rental Car Customer Facility Charge (“CFC”) to Fund the Construction, Maintenance and Operation of the Rental Car Facilities at the Airport (FJP)
   F. Approval: General Building & Ground Lease with Unipak Aviation, LLC (FJP)
   G. Approval: Fourth Amendment to General Ground Lease with Aircraft Service International, Inc. d/b/a Menzies Aviation (FJP)
   H. Approval: Letter of Agreement with Southwest Airlines (FJP)
   I. Ratification of Consultant Selection Ranking of January 25, 2021 Board Meeting – Design Services Ground Transportation Center (FJP)
   J. Ratification of OTA from Transportation Security Administration (TSA) (FJP)
   K. Approval: P-210001 Replacement Chillers at FAA Control Tower (FJP)
   L. Approval: B-210002 Roof Replacement for Honeywell Building (FJP)
   M. Approval: B-210003 A/C Replacement for the Honeywell Building (FJP)
   N. Approval: Construction Phase Professional Services Contract with Michael Baker International for the Jet Blast Deflector Project (FJP)
   O. Approval: RFQ-04-2020-GAFIS, Professional Services to Design a General Aviation Federal Inspection Station, short list of firms making 10 minute presentations in alphabetical order:
      1. C&S Companies
      2. Mead & Hunt
      3. SchenkelShultz Architecture

P. Approval: RFQ-05-2020-APR1, Professional Services to Design the Phase 1 Apron Project, short list of firms making 10 minute presentations in alphabetical order:
1. American Infrastructure Development
2. Infrastructure Consulting & Engineering
3. Kimley-Horn

ITEMS through 8Q and 8R involve contracts in excess of the threshold of $325,000, and, pursuant to Section 332.0075(3)(b) F.S. a reasonable opportunity for public comment must be afforded before their approval, award, or ratification.

Q. Ratification of Consultant Selection Ranking of January 25, 2021 Board Meeting – Design Services for Rehabilitation of Taxiway Charlie & Foxtrot, and Approval of Professional Engineering Services Contract with Hanson Professional Services, Inc. for the Rehabilitation of Taxiway Charlie & Foxtrot (FJP)

R. Approval: Construction Contract Award to E.O. Koch Construction Co. for the Jet Blast Deflector Project (FJP)

9. DEPARTMENT REPORTS
   A. Financial Statements (AE)
   B. Investment Portfolio (AE)
   C. Finance & Administration Department (AE)
   D. Real Estate Development & Properties Department (FJP)
   E. ARFF, Operations & Police Departments (FJP)
   F. Development/Community Relations, Activity Report (FJP)
   G. Engineering, Planning & Facilities Departments (FJP)
   H. Internal Audit & Investment Compliance (FJP)
   I. Information Technologies (FJP)

10. Attorney Presentations (D. Bailey)

11. Old/New Business

12. Public Comments

Comments must be limited to absolute maximum of five (5) minutes per person. Anyone wishing to speak must complete a Citizen's Comment form and present it to the Executive Assistant prior to the beginning of the meeting. No individual may give his/her time to another speaker.

13. Comments by Commissioners

14. Adjournment

AGENDA ITEM NO. 4

SARASOTA MANATEE AIRPORT AUTHORITY
REGULAR MEETING
Monday, March 22, 2021 - 1:00 p.m.
Dan P. McClure Auditorium (east)

THOSE PRESENT:
Doug Holder, Chairman
Bob Spencer. Vice Chairman
Carlos Beruff, Secretary
Jesse Biter, Commissioner
Kristin Incrocci, Commissioner
Jeff Jackson, Commissioner
Fredrick J. Piccolo, President, Chief Executive Officer
C. Dan Bailey, Jr., Airport Counsel
Anita Eldridge, Sr. VP Finance & Administration
Mark Stuckey, Exec. VP, COS
Kent Bontrager, Sr. VP Engineering & Facilities
Karen Garofalo, Executive Assistant – SMAA

THOSE ABSENT:

Item 1. Call to Order, Invocation, and Pledge to Flag
Chairman Holder called the meeting to order at 1:00 p.m. Commissioner Spencer gave the invocation and led the pledge of allegiance to the flag.

Item 2. Swearing in Ceremony:
Chairman Holder recognized the Honorable Kevin Bruning, Circuit Court Judge, who swore into office, our newly appointed Commissioner Jesse Biter, Seat 3, Sarasota.

Item 3. Plaque Presentation:
Chairman Holder presented a plaque to Commissioner John Stafford, noting his many years of dedicated service and appreciation of the good work he has contributed to the Airport Authority. Commissioner Stafford served on the Airport Authority Board from October 2013 - February 2021. Commissioner Stafford thanked the Board, Mr. Piccolo and staff and stated it was an honor to serve the Airport these last eight years.

Item 4. Introduction of New Employees
No new employees were introduced at today's meeting.

Item 5. Approval of the Minutes of the Workshop Meeting of January 25, 2021, Minutes of Regular Meeting of January 25, 2021, and SMAA New Commissioner Orientation Meeting of March 1, 2021
The Board approved the Minutes of Workshop Meeting of January 25, 2021, Minutes of Regular Meeting of January 25, 2021, and Minutes of Commissioner Orientation of March 1, 2021 as presented.

> **MOTION:** Commissioner Spencer moved approval of the minutes of the Minutes of Workshop Meeting of January 25, 2021, Minutes of Regular Meeting of January 25, 2021, and Minutes of Commissioner Orientation of March 1, 2021 as presented. Commissioner Beruff seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

Item 6. Citizens Comments
There were no Citizens Comments offered.

Item 7. Airport Growth Update

Mr. Piccolo presented the Board with a PowerPoint on the tremendous growth issues the airport is experiencing and strategies to prepare and handle its growth in the future. He noted the slide that shows enplanement growth for the next five years with SRQ ranked as the #1 fastest enplanement growth airport in the country at 72.6%. He discussed construction projects that are in progress, including the fuel farm expansion, taxiway bravo rehab, the parking lot expansion that is estimated to be completed in the fall of this year. Site work is underway for the new aircraft maintenance hangar and the A&P Mechanic School, improvements to rental car counters to increase space in baggage claim, and curbside renovations, He reviewed design projects in process including the ground transportation center, the U.S. Customs stand-alone facility for general aviation, consolidated rental car facility, the build out for additional space in the terminal to increase capacity for passengers and to accommodate concessions, and remove, redesign and relocate existing gate podiums, add a second desk/position to support the common use equipment at each gate. He noted we will be looking to complete the terminal build-outs very quickly. He reviewed the re-design of the consolidated baggage belt system, the 15th Street observation area, and replacing the roof and air conditioning system on the Honeywell building. He reviewed plans for the ramp expansion, layout and parking locations for remote and overflow aircraft parking and servicing. He reviewed Properties projects, Operations, Police and ARFF staffing evaluations, and the challenges of gate management for the future.

Mr. Piccolo noted that TSA approved the equipment for the fifth security lane, and it is due for installation on April 19. He advised that the last Cares Act allocation should bring between $8 and $9 Million to the airport, which is a total of $36 to $38 Million in Cares Act funding. He reviewed upcoming challenges and the importance of maintaining the airport's brand of comfort, convenience, and cleanliness. We are staying ahead of things we can control and preparing for all challenges as best possible. Mr. Piccolo noted that in his fifty years in aviation, he has never seen an airport deal with growth issues such as what this airport is experiencing today. There were no questions from the Board.

Item 8. Items Needing Action:

8A. Approval: Airport Master Plan – Presentation of Final Draft

Mr. Piccolo introduced Howard Klein from AECOM. Mr. Klein made a presentation on the final draft of the Airport Master Plan prepared by AECOM on behalf of the airport. He advised that Liebowitz & Horton, the firm that prepared the Financial Analysis for the Master Plan, is on teleconference for any questions on financial issues. He advised that the plan is complete in draft form with three (3) deliverables: large scale drawings submitted to FAA, an extensive technical report providing all analysis, and the Executive Summary. He distributed a copy of the Executive Summary to the Board. He advised his presentation will focus on a summary of the recommended projects that were presented to the Board in September 2020, the capital improvement program, and the financial feasibility analysis. Following the presentation, they are requesting the Board accept the plan in the current draft form and authorize staff to submit to FAA and FDOT for review and comment. AECOM will respond to any comments, and when approved by FAA and FDOT, they will publish final reports. He reviewed the projects on the airfield and discussed correcting an approach surface obstruction on runway 4/22 by creating a small shift in the runway, taxiway relocations, construction of a new taxiway on north end to provide additional space for development, and relocating a weather observation system to the same area as the radar and current weather system. He noted that aircraft holding bays were recommended at the north and south end of Taxiway A by the air traffic control tower and reviewed the relocation of a service road from the southeast corner of the airfield. He briefly addressed the 16 terminal projects and 10 parking projects ongoing or in design as discussed by Mr. Piccolo in his earlier presentation. He discussed the 7 bump-outs proposed on the hold room that provides 31,000 sq. ft. of additional space for either hold rooms or concessions. He reviewed the proposed Concourse A that will accommodate future growth, expansion of baggage area with a fourth carousel to accommodate additional gates, long-term parking expansion at the current Hertz location for a 150 space surface lot. Further recommendations are a parking deck for rental car spaces and short term parking along with pedestrian bridge that would extend from the second level of the terminal. He discussed the north quadrant general aviation projects including the air center aprons, and large and small t-hangars. He reviewed support facility projects that included the additional improvements to the fire station and expansion in long-term; industrial park roadway improvements at north end, emergency operations center at east end of terminal building, vehicle storage expansion proposed on south end of existing vehicle storage building, new storage and boat storage area, and the third tank for the fuel farm expansion. He explained the phasing plan for the 65 capital improvement projects (CIP) as two five year periods, short term five year period, an intermediate subsequent five year term, and a long term as a subsequent ten year term. He stated they prepare an initial project phasing plan for all of the projects.

Mr. Klein explained the environmental assessments that consist of three assessments, one for each of the periods that would give environmental clearance from the FAA to implement the projects. Additionally, he noted there is an environmental assessment for the wetland mitigation project, which is the pond on University Parkway. He reviewed the CIP costs of the phasing plans contained in the summary. He reviewed the last phase of the plan, which is the financial feasibility analysis prepared by Liebowitz & Horton. He reviewed the costs of each phase from the summary and pointed out that the Master Plan lays out a possible scenario for the potential funding of the projects. He stated that the cost per enplaned passenger, which is a metric focused on by airlines and bond rating agencies, will remain around $7.00. He concluded that the proposed CIP is financially feasible dependent on projected passenger levels being achieved, the debt financing for Concourse A, and attaining FAA and FDOT grants. He feels the program as stated is reasonable and competitive with other small hub airports across the country.

Following questions from Commissioner Spencer and Beruff on the Runway 4/22 shift, Mr. Klein explained that it is actually a small shift at the ends of the runway, and stated that the FAA is adamant regarding removing any problems on approach surfaces, therefore the small shift of the runway to the southwest will clear up those problems in the area. There was discussion on the timeline for Concourse A. Mr. Klein stated it is at the beginning of the intermediate term, which is after five years. Mr. Piccolo noted that does not limit what we can do presently and that the Master Plan is an outline and does not limit the availability of additional airlines before that time. He noted that the efforts today should be in the bump-outs and the efficiencies to see where we go. He believes we can do well with 3 Million passengers with what we have if these improvements are made now.

Commissioner Beruff suggested we may want to start the terminal expansion to reduce the timeframe by starting the paperwork necessary to open Concourse A, process the design, and bidding process as you move forward with the initial five year plan. As the paper process is so lengthy, it may be prudent for the Board to seriously think about fast forwarding the terminal expansion in the very near future. Commissioner Spencer stated that Commissioner Beruff pushed us forward on the fuel farm and we are glad we did, possibly it may be prudent to start the process for Concourse A as discussed. Mr. Piccolo agreed but stated that if we moved the project from intermediate to short term, it would not affect the Master Plan, but we must approve the Master Plan and get it to the FAA before they will endorse any funding. Mr. Bailey added that currently we are looking at an opportunity to resend the developments of regional impact, of which we have three, Manatee County, City of Sarasota, unincorporated Sarasota County, and replace them with some other form of entitlement. Some of these projects should be logged into that process, which is part of the paperwork Commissioner Beruff is discussing. Following additional discussion, it was the direction of the Board to approve the Master Plan Update as presented and to start plans for the terminal (Concourse A) in addition to all items in Phase 1.

> **MOTION:** Commissioner Beruff moved to approve the Airport Master Plan Final Draft for submittal to the FAA and FDOT as presented. Commissioner Incrocci seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

Mr. Piccolo stated that we are planning to present another consultant selection for all of the bump-outs as discussed in the Master Plan Update and we will ensure the process for the terminal expansion, in addition to all items noted in Phase 1, are contained in the worklist plans.

8B. Approval: Increase FY 2021 Capital Equipment and Capital Project Budgets
Mr. Piccolo requested an increase to the FY 2021 Capital Equipment and Capital Projects budget for unanticipated costs due to the addition of Southwest Airlines and increased flights by other airlines.

> **MOTION:** Commissioner Beruff moved to approve the increase to the Fiscal Year 2021 Capital Equipment budget in the amount of $7,400 to a total of $179,040 and the Capital Projects budget in the amount of $13,581,500 to a total of $18,496,500. Commissioner Jackson seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8C. Approval: Revisions to the Sarasota Manatee Airport (FL) Deferred Compensation Plan
Mr. Piccolo requested approval of recommended revisions to the Authority's Personnel Policies and changes to the Deferred Compensation Plan.

> **MOTION:** Commissioner Spencer moved to approve the revisions to the SMAA personnel policy and be authorized to prepare any documents to implement the requested changes to the Sarasota Manatee Airport Authority (FL) Deferred Compensation Plan. Commissioner Beruff seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8D. Approval: Amend the Definition of Actuarial Equivalent in the Sarasota Manatee Airport Authority Retirement Plan
Mr. Piccolo requested approval of Amendment No. 3 as noted, to amend the definition of Actuarial Equivalent in the defined benefit plan named Sarasota Manatee Airport Authority Retirement Plan in Article I, Section 1.02 ("Definitions") since the current rates determined by Pension Benefit Guaranty Corporation will no longer be published, and to make the calculation of the Applicable Interest Rate consistent throughout the plan as recommend by the plan actuary.

> **MOTION:** Commissioner Beruff moved to approve the proposed amendment No. 3 to the Sarasota Manatee Airport Authority Retirement Plan. Commissioner Jackson seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8E. Approval: SMAA Resolution 2021-03, Amending the Rental Car Customer Facility Charge ("CFC") to Fund the Construction, Maintenance and Operation of the Rental Car Facilities at the Airport

Mr. Piccolo requested approval of Resolution 2021-03 to amend the rental car customer facility charge (CFC) from $4.50 to $5.50 for each rental day of a rental car contract, effective April 1, 2021.

> **MOTION:** Commissioner Beruff moved approval of SMAA Resolution 2021-03 amending the rental car customer facility charge (CFC) from $4.50 to $5.50 for each rental day of a rental car contract, effective April 1, 2021. Commissioner Spencer seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8F. Approval: General Building & Ground Lease with Unipak Aviation, LLC

Mr. Piccolo requested approval of the General Building and Ground Lease with Unipak Aviation, LLC for the former Honeywell building FAA/EASA component repair and light manufacturing for a ten year term effective April 12, 2021. Commissioner Beruff requested the cost to the Authority and amount of money invested by the tenant into the facility. Mr. Piccolo noted we will repair the roof and air conditioning system, which is on today's agenda (Items 8L, 8M) for approval. He noted that the roof replacement will cost $239,028, and the A/C replacement is $225,035. Mr. Filippelli advised that Unipak will spend $180,000 on other improvements to the facility.

> **MOTION:** Commissioner Beruff moved approval of the General Building and Ground Lease with Unipak Aviation, LLC. Commissioner Spencer seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8G. Approval: Fourth Amendment to General Ground Lease with Aircraft Service International, Inc. d/b/a Menzies Aviation

Mr. Piccolo requested approval of the Fourth Amendment to Aircraft Services International, Inc. D/B/A Menzies Aviation General Ground Lease to extend the lease term by five years, increases the premises and land rent, includes a newly built building, and extends the fuel flowage fee schedule through the term of the lease (May 31, 2027).

> **MOTION:** Commissioner Beruff moved approval of the Fourth Amendment to Aircraft Services International, Inc. D/B/A Menzies Aviation General Ground Lease. Commissioner Jackson seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8H. Approval: Letter of Agreement with Southwest Airlines

Mr. Piccolo requested approval of the letter of agreement with Southwest Airlines to add one additional gate to the scheduled airline operating agreement effective April 1, 2021. They will utilize Gate B-10 and now Gate B-8 but acknowledge if the airport requires federal inspection services for an international flight, they will allow Authority to accommodate such flights on Gate B-8.

> **MOTION:** Commissioner Beruff moved approval of the letter of agreement with Southwest Airlines Co. Commissioner Spencer seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8I. Ratification of Consultant Selection Ranking of January 25, 2021 Board Meeting – Design Services Ground Transportation Center
Mr. Piccolo requested approval of the ratification of the consultant selection ranking of the January 25, 2021 Board Meeting for the design services for the ground transportation center. It was reviewed and ranked by three members of the Board, but due to lack of quorum, official action must be taken to be approved by a majority of the Board. The ranking of the three firms were in the following order:
1. AVCON, Inc
2. Mead & Hunt
3. AECOM Technical Services, Inc.

MOTION: Commissioner Beruff moved approval to ratify the consultant ranking recommended by the Board members present at the January 25, 2021 Regular Board Meeting for the Professional Services Design for Ground Transportation Center. Commissioner Biter seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8J. Ratification of OTA from Transportation Security Administration (TSA)
Mr. Piccolo requested approval of the ratification of Other Transaction Agreement (OTA) acceptance from TSA, accepted on March 1, 2021 by the President, Chief Executive Officer for $849,752.63 for design services for an inline baggage system.

MOTION: Commissioner Jackson moved approval to ratify the acceptance of the OTA from the Transportation Security Administration by the President, Chief Executive Officer in the amount of $849,752.63. Commissioner Beruff seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8K. Approval: P-210001 Replacement Chillers at FAA Control Tower
Mr. Piccolo requested approval of a contract award to Trane Tampa to provide an experienced and qualified firm capable of providing the technical, administrative skills and installation expertise in replacing two air cooled chillers and providing a 10 year maintenance program for the units.

MOTION: Commissioner Incrocci moved to approve the contract award for the Replacement Chillers at FAA Control Tower to Trane Tampa for $198,846 and authorize staff to prepare any and all documents necessary to implement this action. Commissioner Biter seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8L. Approval: B-210002 Roof Replacement for Honeywell Building

MOTION: Commissioner Beruff moved to approve award of contract for the Honeywell Building roof replacement to JR & Co., Inc. in the amount of $239,028; and authorizes staff to prepare any and all document necessary to implement this action. Commissioner Jackson seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8M. Approval: B-210003 A/C Replacement for the Honeywell Building

MOTION: Commissioner Beruff moved to approve award of contract for the Honeywell Building Replacement A/C to Cortez Heating & Air in the amount of $225,035; and authorizes staff to prepare any and all document necessary to implement this action. Commissioner Jackson seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8N. Approval: Construction Phase Professional Services Contract with Michael Baker International for the Jet Blast Deflector Project

MOTION: Commissioner Beruff moved approval to authorize the Chairman to execute a construction phase services contract with Michael Baker International in the amount of $43,878.00, with a 10% contingency for a total budget of $48,266.00. Commissioner Spencer seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8O. Approval: RFQ-04-2020-GAFIS, Professional Services to Design a General Aviation Federal Inspection Station (FIS)

Mr. Piccolo advised staff received Request for Qualifications for a qualified firm capable of providing professional engineering and architectural design, permitting, bidding, and construction phase services to construct a new General Aviation FIS. The project will relocate General Aviation clearance from existing FIS to the new facility and will increase gate capacity for commercial activity. Staff reviewed the submitted responses and selected three proposing firms to make presentations today at which time the Board will rank the firms.

Mr. Bailey explained the general protocol for presenters and the voting process that would take place following the presentations. Under CCNA, no clear law exists, therefore, competing firms have the right to remain in the room while competitors are presenting. He advised that the tradition at the airport is for the firms chosen to present, leave the room during the other presentations, but it is not required.

Each firm made presentations in alphabetical order: C&S Companies; Mead & Hunt; and SchenkelShultz Architecture. The Board selected the first, second, and third choice firm, with Mr. Bailey conducting the ballot voting process.

The ballot vote for first choice resulted in four votes for C&S Companies, two votes for SchenkelShultz, and no votes for Mead & Hunt. The ballot vote for second choice resulted in four votes for SchenkelShultz , and one vote for Mead & Hunt. The Board ranked the firms as follows:

1. **C&S Companies**
2. **SchenkelShultz**
3. **Mead & Hunt**

Contract negotiations will begin with the first ranked firm of C&S Companies and a contract will be brought back to the Board if successful.

MOTION: Commissioner Spencer moved approval of the selected firms of C&S Companies as first ranked firm; SchenkelShultz as second ranked firm; and Mead & Hunt as third ranked firm; and for staff to negotiate scope and fees with the first ranked firm and if successful to present contract for approval at the next Board meeting and prepare all documents necessary to implement this action. Commissioner Beruff seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

8P. Approval: RFQ-05-2020-APR1, Professional Services to Design the Phase 1 Apron Project

Mr. Piccolo advised staff received Request for Qualifications for a qualified firm capable of providing professional engineering and architectural design, permitting, bidding, and construction phase services to design the Phase 1 Apron project. The project will create a concrete apron hardstand that will allow Remain Overnight (RON) parking for commercial service aircraft, general aviation aircraft, and occasional military aircraft. Staff selected three proposing firms to make presentations today at which time the Board will rank the firms.

Each firm made presentations in alphabetical order: American Infrastructure Development (AID); Infrastructure Consulting & Engineering (ICE); and Kimley-Horn.

The ballot vote for first choice resulted in three votes for Kimley-Horn, two votes for AID; and one vote for ICE. The ballot vote for second choice resulted in five votes for AID; and one vote for ICE. The Board ranked the firms as follows:

1. **Kimley-Horn & Associates**
2. **AID**
3. **ICE**

Contract negotiations will begin with the first ranked firm of Kimley-Horn and a contract will be brought back to the Board if successful.

<u>**MOTION:**</u> Commissioner Spencer moved approval of the selected firms of Kimley-Horn & Associates as first ranked firm; American Infrastructure Development as second ranked firm; and Infrastructure Consulting & Engineering as third ranked firm; and for staff to negotiate scope and fees with the first ranked firm and if successful to present contract for approval at the next Board meeting and prepare all documents necessary to implement this action. Commissioner Beruff seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

Chairman Holder thanked staff and expressed the Board's appreciation to today's presenters for taking the time and effort to make the presentations.

Chairman Holder stated that ITEMS 8Q and 8R involve contracts in excess of the threshold of $325,000, and, pursuant to Section 332.0075(3)(b) F.S. a reasonable opportunity for public comment must be afforded before their approval, award, or ratification. Chairman Holder asked if there is anyone in the audience who would like to speak regarding Item 8Q. There were No public comments offered.

8Q. Ratification of Consultant Selection Ranking of January 25, 2021 Board Meeting – Design Services for Rehabilitation of Taxiway Charlie & Foxtrot, and Approval of Professional Engineering Services Contract with Hanson Professional Services, Inc. for the Rehabilitation of Taxiway Charlie & Foxtrot

Rankings as recommended:

1. Hanson Professional Services, Inc.
2. Kimley-Horn
3. AVCON, Inc.

MOTION: Commissioner Spencer moved approval to ratify the Consultant Selection Rankings of January 25, 2021 Board Meeting – Design Services for Rehabilitation of Taxiway Charlie & Foxtrot, and Approval of Professional Engineering Services Contract with Hanson Professional Services, Inc. for the Rehabilitation of Taxiway Charlie & Foxtrot and authorize the Chairman to execute a design contract with Hanson Professional Services for $335,671.43 with a 15% contingency providing an authorized level of $386,022.00, and for staff to prepare all documents necessary to implement this action. Commissioner Biter seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

Chairman Holder asked if there is anyone in the audience who would like to speak regarding Item 8R. There were No public comments offered.

8R. Approval: Construction Contract Award to E.O. Koch Construction Co. for the Jet Blast Deflector Project

MOTION: Commissioner Biter moved approval to authorize the Chairman to execute a construction contract with E. O. Koch Construction Co. for the Jet Blast Deflector project for $685,875.14 with a 15% contingency for a total budget of $788,756.00. Commissioner Incrocci seconded. **MOTION PASSED UNANIMOUSLY (6-0)**

Item 9. Department Reports

The following department reports were accepted:

A. **Financial Statements**
B. **Investment Portfolio**
C. **Finance & Administration Department**
D. **Real Estate Development & Properties Department**
E. **ARFF, Operations & Police Departments**
F. **Development/Community Relations, Activity Report**
G. **Engineering, Planning & Facilities Departments**
H. **Internal Audit & Investment Compliance**
I. **Information Technology Department**

Mr. Piccolo presented the department reports and pointed out that our reserves are now over $31 Million and reminded the Board Members that if you have not done so to please start their Ethics Training by March 31.

Item 10. Attorney Presentations

No presentation at this time.

Item 11. Old/New Business

No Old/New Business at this time.

Item 12. Public Comments:

No Public Comments at this time.

Item 13. Commissioner Comments:

No Comments by Commissioners offered.

Item 14. Adjournment

There was no further business to come before the Authority. The meeting adjourned at 3:22 p.m.

APPROVED:

Doug Holder, Chairman

ATTEST:

Carlos Beruff, Secretary

Draft Master Plan Update Presentation

Sarasota Bradenton International Airport

Sarasota Manatee Airport Authority

March 22, 2021

AECOM

1

Master Plan Update Status

– Study is completed in draft form.

– Recommended projects were presented during the September 2020 board meeting.

– This presentation will focus on:

- Summary of Recommended Projects
- Capital Improvement Program (CIP)
- Financial Feasibility Analysis

– Requested board action is acceptance of the draft plan and authorization to submit it to FAA and FDOT for their review and approval.

AECOM

2

Airfield Projects

- 24 Projects
- Many are taxiway pavement rehabilitation projects.

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Proposed Airfield Projects

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Terminal & Parking Projects

– 16 Terminal Projects

– 10 Parking Projects

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Proposed Terminal & Parking Projects

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North Quadrant / GA Projects

- 3 Projects
  - Air Center Aprons
  - Large and Small T-Hangars

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Proposed North Quadrant / GA Projects

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Support Facility Projects

- 8 Projects

- Not shown:
  - Fire Station Improvements
  - Tallevast Industrial Park Roadway Improvements

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Proposed Support Facility Projects

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Capital Improvement Program

- Identified desired projects.

- Prepared project cost estimates.

- Defined implementation periods:
  - Short-Term (2021 to 2025)
  - Intermediate-Term (2026 to 2030)
  - Long-Term (2031 to 2040)

- Prepared an initial project phasing plan.

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11

Capital Improvement Program (CIP)

- Consists of 65 projects

- Types of Projects:
  - Environmental – 4
  - Airfield – 24
  - Terminal – 16
  - General Aviation – 3
  - Roadway and Parking – 10
  - Support Facilities – 8

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12

Estimated CIP Cost By Phase

Phase	# of Projects	Cost (2020 Dollars)
Short-Term	34	$118,758,335
Intermediate-Term	15	$158,102,139
Long-Term	16	$71,273,099
Total	65	$348,133,573

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Sample Phasing Plan (Short-Term Projects)

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Financial Feasibility Analysis

- Identified Potential Uses & Sources of Funding
- Explored Potential Funding Scenarios
- Projected Future Operations and Maintenance Expenses
- Projected Future Operating Revenues
- Assessed CIP Feasibility Based on Industry Metrics

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15

CIP Cost by Phase (Escalated Dollars)

Phase	Cost (2020 Dollars)	Cost (Escalated Dollars)
Short-Term	$118,758,335	$130,513,592
Intermediate-Term	$158,102,139	$206,366,718
Long-Term	$71,273,099	$135,907,487
Total	$348,133,573	$472,787,797

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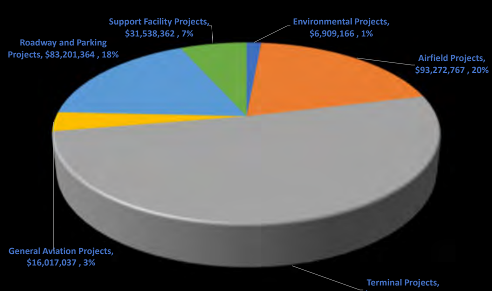
Uses of Funds By Project Type (Escalated Dollars)



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17

Sources of Funds

– FAA Entitlement Grants - based on passenger enplanements.

– FAA Discretionary Grants - based on priority and importance to the national air transportation system.

– Florida DOT Grants - Aviation grants for eligible projects from a portion of the state sales tax collected on aviation fuel or Strategic Intermodal System (SIS) program.

– Passenger Facility Charges (PFC) - up to $4.50 per eligible enplaned passenger for specific eligible and justified projects.

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Sources of Funds (Continued)

– Customer Facility Charges (CFC) – $4.50 per transaction day on car rentals.

– Airport Cash Reserves / Net Operating Revenue – funds generated from excess operating revenues over expenses and Covid-19 legislation.

– Other Capital Contributions – funds from counties and the Transportation Security Administration (TSA).

– Debt Financing – issuance of bonds in public markets for a high-cost project.

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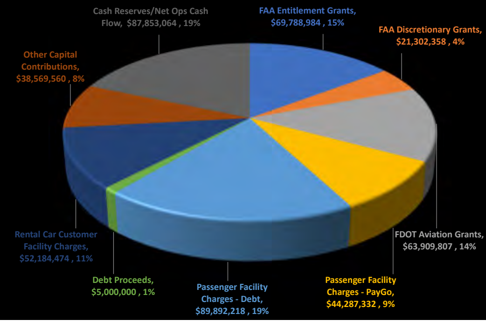
Sources of Funds (Escalated Dollars)



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20

Proposed Concourse A - Potential Funding

- $109 million project
- Financed with:
  - FAA Grants
  - FDOT Grants
  - Passenger Facility Charges (PFC)
  - Customer Facility Charges (CFC)
  - Airport Cash
- Also requires:
  - Debt Financing

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21

Concourse A - Potential Funding Scenario

- Assumes debt issuances of:
  - $56 million (PFC Funded)
  - $5 million (Airport Cash Funded)
- 25-year term @ 5% interest
- Financing Costs = $53 million
- Total project cost of $162 million

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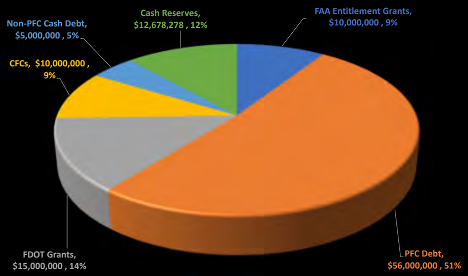
Concourse A – Potential Funding Scenario



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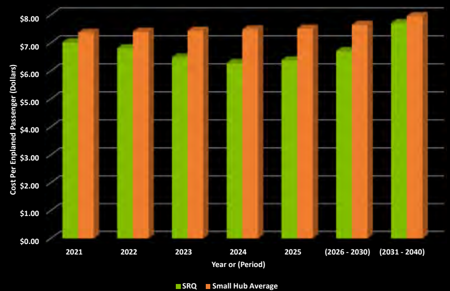
23

CIP – Cost Per Enplaned Passenger



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24

CIP Financial Feasibility Conclusion

– The proposed Capital Improvement Program is financially feasible.

– The program is dependent on:

- Projected passenger levels being achieved.
- FAA and FDOT grants being attained.
- Debt financing for the proposed Concourse A.

– The resulting Cost Per Enplanement from implementing the program is reasonable and competitive.

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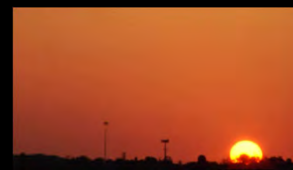
25

Questions?



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26

Passenger growth has airport officials scrambling to keep up at SRQ
BY JAMES A. JONES JR.
MARCH 23, 2021 05:00 AM,
UPDATED MARCH 23, 2021 11:39 AM

Sarasota Bradenton International Airport trending as one of nation's fastest growing. Traveling public benefitting from the new destinations and airlines. BY **JAMES A. JONES JR.**

In the past year, passenger growth at Sarasota Bradenton International Airport went from soaring to coming to a dead stop during the COVID-19 pandemic.

Monday, Rick Piccolo told members of the Sarasota Manatee Airport Authority that not only is passenger growth soaring again, it has reached a trajectory he could never have imagined.

In the first seven months of 2022, it is projected that SRQ will serve 2.5 million passengers, compared to 1.3 million in the same period of the 2020 pandemic year, and 1.3 million in the the year before the arrival of the pandemic.

“Tremendous, tremendous growth that creates new issues for us,” Piccolo said.

One consultant conducted a study of airport enplanement trends in the United States over the next five years that shows SRQ with 72.6 percent growth, which would make it the fastest-growing airport in the country.

“I bring these up to show you some of the issues we will be dealing with,” Piccolo said, urging “preparation, not panic.”

Work is now underway to expand the airport fuel farm to increase capacity to 290,000 gallons to serve all of the new flights.

Airport authority members Monday approved the final draft of the airport master plan, which includes provisions for the addition of a concourse to help handle the airport’s growing business, adding space to the existing concourse to accommodate more concessions, consolidating the baggage handling system, consolidating the rental care facility and more.

Authority member Carlos Beruff recommended starting the paperwork sooner rather than later to streamline the process of adding another concourse, which is forecast to be about a $109 million project.

The earliest that a new concourse might be added is four to five years.

“It usually takes two years to build,” Beruff said, noting that getting federal paperwork approvals prior to building is usually a lengthy process.

Monday, the passenger drop-off area in front of the terminal stayed busy with continuous vehicle traffic as passengers lined up at ticket counters inside.

“Every day becomes an adventure,” Piccolo said of challenges caused by all the new and expanding airport business. “I have been in this business 50 years and I have never seen anything come close to this at any airport that I am aware. It has come on us pretty quickly.”

The estimated cost of all items in the airport’s capital improvement plan comes to $348 million, funded with a combination of fees, grants and the assumption of some debt.

There are now 10 airlines serving 45 destinations from SRQ.

Allegiant and more recently Southwest have been prime movers in boosting passenger traffic at SRQ.

On Saturday, the airport had 58 arriving flights and 58 departing flights. On Sunday, there were 57 arriving and 57 departing flights.

During the downturn caused by the pandemic, SRQ implemented stepped-up cleaning and safety measures and expedited construction projects that would have been difficult to complete during a busier time. Among those projects: repaving short and long-term parking lots, redesigning the screening checkpoint and accelerating airfield construction projects.

BUSINESS

A new way to keep watch? SRQ airport wants to build observation deck for plane fans

BY JAMES A. JONES JR.
MARCH 23, 2021 02:51 PM,
UPDATED MARCH 23, 2021 03:37 PM

A rendering by Fawley Bryant Architecture shows what a proposed observation deck along Sarasota Bradenton International Airport might look like. The deck would be constructed in an area popular with the plane-watching public. PROVIDED RENDERING
MANATEE

The big sweeping curve that 301 Boulevard East makes on the east side of Sarasota Bradenton International Airport has long been a favorite spot for motorists to pull off the highway to watch aircraft land and take off.

It's a no-frills place that's bumpy and unpaved. Yet, there are always cars and trucks parked there. Rick Piccolo, president and CEO of the airport, counted 14 at one time on Tuesday.

Manatee leaders begin planning for how to spend $100 million in COVID-19 stimulus money

That viewing area may be coming in for a nice upgrade, at a time when air traffic at SRQ is ratcheting up sharply, giving plane spotters a lot more to watch.

In a joint concept project with Manatee County government, the Sarasota Manatee Airport Authority is considering adding a covered observation deck there with paved parking and landscaping.

Monday, Piccolo briefed the authority on the project and showed them a rendering by Fawley Bryant Architecture of what the observation deck could look like.

“We are still working on getting agreement on cost and final design,” Piccolo said in a text when asked about a possible construction time frame.

A rendering by Fawley Bryant Architecture shows what a proposed observation deck along Sarasota Bradenton International Airport might look like. The deck would be constructed in an area popular with the plane-watching public. provided rendering

“This preliminary design was a cost share with Manatee County so at least a year would be my guess once we come to agreement,” Piccolo said.

Monday, members of the airport authority approved the final draft of the airport master plan, which is designed to help SRQ keep pace with fast-growing passenger traffic. One study shows the airport will soon be the nation’s fast growing.

Over the next five years, SRQ is expected to experience 72.6 percent growth, which would make it the fastest-growing airport in the United States.

Work is now underway to expand the airport fuel farm to increase capacity to 290,000 gallons to serve the new flights. Plans are also being made for the addition of a concourse to help handle the airport’s growing business.

SRQ Airport unveils 20-year plan to grow with increased traffic

mysuncoast.com/2021/03/25/srq-airport-unveils-year-plan-grow-with-increased-traffic

By Chase Campbell

Updated: Mar. 24, 2021 at 9:18 PM EDT

SARASOTA, Fla. (WWSB) - The Sarasota Bradenton International Airport is rapidly expanding and has now released a 20-year plan to get the airport where they want it to be.

Over the next 20 years, the airport is looking to grow along with its increased traffic. The airport is growing at a breakneck pace.

Recently, the airline ran out of fuel, causing over 20 flights to be delayed. "It's a very very unusual amount of growth at this airport versus most airports," said the airport's president and CEO, Rick Piccolo. "Most master plans, a high-end of growth would be five percent. We're looking at growth that is nearly 88 to 90% on an annual basis. That's just unheard of. Regardless of how well you plan, it's tough to plan for something like that."

"It was a little sluggish earlier because some of the airlines didn't want to pay some of the higher fees for a smaller airplane. But in the last, I'm gonna say, three years, it has really exploded, things have. If they've got a 20-year plan, I'm excited," said Abe Keim, a frequent flyer at SRQ.

That 20-year plan starts with a $400,000 observation deck that will allow people to come watch planes take off and touch down.

"They'll have cover, so if it's raining, they can sit under cover, and it also, if everything works out well, we'll have some pictures, historical pictures of the airport, or even looking at whether we can get sound out there, and have the tower transmissions being blared over a speaker as well," said Piccolo. "It'll be a nice, enjoyable thing and an educational thing for children."

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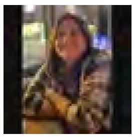
Airport Expansion Planned, Passenger Traffic Grows Significantly

patch.com/florida/sarasota/airport-expansion-planned-passenger-traffic-grows-significantly

June 16, 2021

Travel

The Sarasota-Bradenton International Airport has seen a 180 percent increase in passenger seats in 2021 compared to 2019.



Tiffany Razzano, Patch Staff

Posted Wed, Jun 16, 2021 at 1:12 pm ET

The Sarasota-Bradenton International Airport has seen a 180 percent increase in passenger seats in 2021 compared to 2019. (Sarasota-Bradenton International Airport)

SARASOTA, FL — Passenger traffic is booming at the Sarasota-Bradenton International Airport (SRQ) as the airport continues to see record-breaking growth this year.

In May, passenger traffic at SRQ totaled 288,551, according to a news release from the airport. That number is 622 percent higher than May 2020, which was impacted by the COVID-19 pandemic. It's also 79 percent higher than the pre-pandemic levels of May 2019.

"I didn't expect to see the numbers that we're seeing," Rick Piccolo, president and CEO, told Patch. "We are recovering faster than most places."

Even in late 2020 and the first months of 2021, when concerns about the ongoing pandemic continued to curb travel worldwide, traffic through Sarasota-Bradenton was down just 37 percent compared to the previous year, while most other airports around country saw a 50 to 75 percent drop in traffic, Piccolo said.

"I think that's attributable to the location," he said.

With outdoor activities, such as beaches, golf, fishing and boating, it was easier for visitors to socially distance in the Sarasota-Bradenton area, he added. "Plus, Florida has been far more open than most states. I think that helped."

All of the airline companies that fly out of Sarasota-Bradenton have been doing well, Piccolo said. "Allegiant has grown quite a bit. Delta has added cities. United and American have been strong."

But since the addition of Southwest Airlines in February, traffic has really taken off, he said. "As we started to hit the spring and Southwest came in, the growth has been explosive."

Between the Southwest flights and the new destinations added by the other airline companies that have flown out of Sarasota-Bradenton for years, the number of passenger seats offered at SRQ is up 180 percent this year compared to 2019.

"That's not 2020, the pandemic year," Piccolo said. "That's over 2019. And we were up 43 percent in 2019."

SRQ is the fastest growing airport in the United States, he added. In 2019 and 2020, there was approximately 1.5 million passenger seats coming from and going to the airport. By the end of 2021, there will be more than 4.3 million passenger seats flying in and out of Sarasota-Bradenton.

Every month, the airport's airline partners add new destinations and additional seats.

"And they've all done well. It would be one thing to say we had a lot of seats, but flights were canceled in a lot of cities," Piccolo said. "Nothing has been canceled. Every time we add a city, it seems to do well."

To address this growth, the airport will spend more than $100 million on expansion and renovation projects in coming years.

The priority project is the construction of a new $25 million five-gate terminal on the east end of the airport over the next 18 to 24 months, Piccolo said. This addition is a single-story, ground-loading terminal that will have passengers walk out to a ramp and load the plane.

"That was the quickest way to get it done," he said. "Instead of a jet bridge, we'll pull the ramp up to the aircraft. It will relieve some of the pressure."

In coming weeks, the airport will also see the completion of a parking lot expansion project and the expansion of its fuel farm, increasing its fuel storage capacity from 90,000 to 390,000 gallons.

Sarasota-Bradenton will also expand its existing terminal wing to increase its holding space and concession offerings and also expand its baggage claim area, a $50 million project, within two years.

A new ground transportation center to handle pick-ups and drop-offs by rideshare service, taxis and shuttles will be built within the next year and the security checkpoint will be expanded, as well, Piccolo said. The airport will also consolidate the rental car and maintenance facilities in the next two to three years.

"Simply, the growth dictates doing these facility improvements," he said. "We want to continue the level of convenience and cleanliness that the public has come to expect of us."

Airport officials need to think of SRQ's future growth with these expansion projects, he added.

"I think this growth will continue, certainly not to the level of 180 percent, but even if it slows down to a normal 3 to 4 percent, we're looking at 100,000 to 150,000 (new passenger seats) than the previous year," Piccolo said. "That's more significant than the old days, when 3 percent (increase) on 1 million (passenger seats) was 30,000 and we'd hardly notice it."

The airport board approved a 20-year master plan for Sarasota-Bradenton in March. Mere months later, SRQ has already hit the passenger level milestones projected for 2031, he added. "I don't think there's another airport in the country or the world right now that has seen the kind of growth we have."

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