2020 - 2030
USF Master Plan Updates

Data Collection & Analysis

Element 5: Transportation

UNIVERSITY OF SOUTH FLORIDA

SARASOTA - MANATEE CAMPUS

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Sarasota Transportation

Element 5 Transportation

This element assesses and makes transportation recommendations for integrating all modes of travel (bicycle, pedestrian, bus/transit, and motor vehicle) both on campus and on roadways serving the campus. These recommendations shall coordinate policies, programs, and projects with the host and/or affected local governments, as well as with other state and regional agencies.

A. Parking Inventory and Assessment

Parking at the University of South Florida Sarasota-Manatee is provided in surface parking lots surrounding the main building (SMC) on the north, east, and south sides. All parking on the campus is located within 600 feet of the campus building, and the vast majority of the campus's parking is less than 400 feet from the building. USF SARASOTA-MANATEE conducted an inventory of the University-controlled parking lots to understand overall parking capacity in the University parking system. Except for handicap and visitor parking, USF SARASOTA-MANATEE doesn't restrict parking in the University lots. The University does not control or operate any off-campus parking. Figure 5-1 shows the campus parking map and identified the number of parking spaces provided in each parking lot surrounding the campus buildings. Table 5-1 provides a summary of the existing parking capacity from the inventory.

Table 5-1 Existing Parking Supply Summary

Location	Number of Spaces	Percent of Inventory
East Lot 1	42	7%
North Lot 1	83	14%
North Lot 2	16	8%
South Lot 1	65	11%
South Lot 2	67	11%
South Lot 3	100	16%
South Lot 4	113	18%
South Lot 5	93	15%
Total Spaces	**579**	**100%**

Source: University of South Florida Department of Parking and Transportation Services, 2022

USF SARASOTA-MANATEE sells annual, fall, spring, and summer parking permits to students, faculty, and staff. During the 2018-19 school year, USF SARASOTA-MANATEE sold a total of 2,290 parking permits. This total includes annual, fall, spring, and daily permits.
Parking occupancy data on the USF SARASOTA-MANATEE campus was collected to establish peak parking demand levels for the campus.

Table 5-2 provides a summary of the observed existing USF SARASOTA-MANATEE parking occupancy.

Table 5-2 Existing Parking Occupancy Summary

	Morning Peak		Afternoon Peak		Evening Peak	
Day of the Week	**Occupied Spaces**	**Percent Occupied**	**Occupied Spaces**	**Percent Occupied**	**Occupied Spaces**	**Percent Occupied**
Monday	273	47.2%	204	35.2%	162	28.0%
Tuesday	225	38.9%	193	33.3%	56	9.7%
Wednesday	405	69.9%	259	44.7%	131	22.6%
Thursday	270	46.6%	225	38.9%	85	14.7%
Average	293.25	50.6%	220.25	38.0%	108.5	18.7%

Parking occupancy data collected on the USF SARASOTA-MANATEE campus indicates that the University's parking demand does not approach or exceed the parking supply during peak periods, suggesting that existing parking capacity is adequate for the University's normal operations. The observed parking demand data indicates that the weekday morning is typically the peak period of parking demand on the campus. The average peak parking utilization rate at USF SARASOTA-MANATEE is approximately 50%, which indicates that approximately 290 parking spaces are regularly unused.

It should be noted, that this analysis does not account for potential parking demand reductions associated with potential transportation demand management strategies included in the USF Sarasota Manatee 2020-2030 Campus Master Plan.

To adequately accommodate the projected parking demand growth, without incurring significant financial burdens associated with constructing excessive parking facilities, USF Sarasota Manatee should plan to maintain a peak parking utilization ratio of approximately 85-90 %.

To control costs as future growth of the USF Sarasota Manatee campus occurs, it is recommended to consider the potential to add spaces to existing parking lots by restriping to accommodate motor vehicles of different sizes. In recent years, the USF Sarasota Manatee motor vehicle fleet has changed to offer a range of vehicle sizes. Parking design standards typically vary from a standard 9'x18' space to an 8'x16' compact space, which represents a per-space savings of 34 sf. USF SARASOTA-MANATEE may also consider developing policies to support the University's ACUPCC pledge to lower carbon emissions by incentivizing the use of smaller vehicles.

B. Transit Services

The USF Sarasota Manatee campus is located along bus transit routes operated by regional transit providers. Manatee County Area Transit (MCAT) and Sarasota County Area Transit (SCAT) provide service to adjacent stops along U.S. Route 41 (North Tamiami Trail), the Sarasota Bradenton Airport, and Ringling Museum, the latter two of which are located approximately 0.75 miles away from campus. These transit routes provide connections to downtown Sarasota and downtown Bradenton as well as other key destinations or connections to other transit routes.

1. Service Providers

The USF Sarasota-Manatee campus does not operate any University campus shuttles. Two principal transit service providers currently operate in the vicinity of the University. The following is a list of the existing transit service providers in the area:

- Manatee County Area Transit (MCAT)
- Sarasota County Area Transit (SCAT)

2. Routes and Schedules

Currently, the MCAT Route 16 and MCAT/SCAT Route 99 provide transit service along US 41 (North Tamiami Trail), which is the only direct service to the USF SARASOTA-MANATEE campus. The following is a summary of all of the regional bus routes in proximity to the USF SARASOTA-MANATEE campus:

- Route 16 (MCAT) - Runs between the Desoto Station and Sarasota Bradenton Airport, via 15th Street East, Tallevast Road, and US 41.
- Route 99 (MCAT/SCAT) - Runs between the Downtown Station and downtown Sarasota, via downtown Bradenton and US 41.
- Route 2 (SCAT) - Runs between the Sarasota Bradenton Airport and downtown Sarasota, via Old Bradenton Road and Cocoanut Avenue.
- Route 15 (SCAT) - Runs between the Sarasota Bradenton Airport and the Landings Shopping Center, via Desoto Road, Honore Avenue, Cattlemen Road, Clark Road, and Proctor Road.
- Routes 90X/100X (SCAT) - Express bus service between the Sarasota Bradenton Airport and North Port, via downtown Sarasota and either US 41/South Tamiami Trail (90X) or I-75 (100X). Route 90X also stops in Venice Island.

3. Bus Stop Locations

Transit provider service information was reviewed to determine the location of bus stops in proximity to the USF SARASOTA-MANATEE campus. All SCAT and MCAT bus routes stop at marked bus stops along public roadways and established transit stops. The locations of major transit stop locations are summarized in Table 5-3, and a system route map near the USF SARASOTA-MANATEE campus is included in the Figure 5-2.

Table 5-3Major Regional Transit Stop Locations

MCAT Route 16	MCAT/SCAT Route 99	SCAT Route 2	SCAT Route 7	SCAT Route 8

DeSoto Station US301 BLVD/9th St. 15th Street E. at 63rd Avenue E. 15th Street E. at 53rd Avenue E. Parkland Drive Tallevast at 15th St. E. US 41 at Tallevast Road Sarasota Bradenton Airport	Downtown Station Bayshore Gardens Pkwy Desoto Station/US 301 State College of Florida Sarasota Bradenton Airport US41/MLK BLVD. Downtown Sarasota (1st Street & Lemon Avenue)	University Town Center Station Desoto Rd. and N. Lockwood Ridge Sarasota Bradenton Airport University Parkway and Old Bradenton Road Myrtle St. and Old Bradenton Rd. Cocoanut Avenue and 16th Street Downtown Sarasota (1st Street & Lemon Avenue)	Downtown Station 150 North Lemon Ave. North Osprey Ave @ 17th Dr. JLK Jr Way @ US 301 Kensington Park Monica Parkway @ Lockwood Ridge Road	Downtown Sation 150 N. Lemon Ave North Orange Ave @ 20th St. Dr. MLK Jr. Way @ Myrtle Street North Osprey Ave @ Myrtle Street US 301 @ Northgate Boulevard Sarasota Bradenton Airport Circle @ Bradenton Connector

4. Routes and Schedules

A complete listing of MCAT Routes and Schedules can be found at: https://www.mymanatee.org/departments/mcat/bus_routes_and_maps

A complete listing of SCAT Routes and Schedules can be found at: https://www.scgov.net/government/scat-bus-service/schedules-and-route-maps

5. Ridership Data

Ridership statistics for the SCAT and MCAT systems are not available for the campus master plan.

6. Transit Vehicle Capacity

The SCAT and MCAT systems use a variety of vehicles, including state of art transit vehicles. Capacity information for specific vehicles was unavailable.

7. Planned Transit Service Modifications

The Florida Department of Transportation (FDOT) District 1 in 2013 completed the Sarasota/Manatee Area Regional Transit Study (SMART Connect). This study evaluated the feasibility of premium transit improvements between Sarasota and Manatee Counties. Ultimately, the study determined that express bus (connecting Palmetto, downtown Bradenton, USF SARASOTA-MANATEE/Sarasota Bradenton International Airport, and downtown Sarasota) and mixed traffic BRT (serving Palmetto, downtown Bradenton, USF SARASOTA-MANATEE/Sarasota Bradenton International Airport, and points in-between) were viable options that could be implemented during the planning horizon of 2035. These transit improvements need local adoption in order to move forward. The Sarasota Manatee 2035 Long Range Transportation Plan (LRTP) describes US 41 as a Multimodal Emphasis Corridor. To support multimodal enhancements on the corridor, the 2035 LRTP recommends 15-minute bus frequency and limited-stop express bus service during morning and evening peak periods, as well as a bus transfer facility in proximity to the US 41/University Parkway intersection. The plan also calls for enhanced bus stops, including benches, shelters, lighting, and kiosks.

8. On-campus and Off-campus Transit Connections

No transit service is provided within the USF SARASOTA-MANATEE campus; however, SCAT/MCAT Route 99 and MCAT Route 16 provide transit service on US 41 (North Tamiami Trail). Both transit services provide connections to several other local/regional transit routes and transportation modes at the Sarasota Bradenton Airport, the Main Transfer Station in downtown Sarasota, Desoto Station, and Palmetto Terminal.

C. Pedestrian and Bicycle Facility Assessment

USF SARASOTA-MANATEE has long been a commuter school with little or no appreciable pedestrian and bicycle commuting for students and staff. However, as the USF SARASOTA-MANATEE campus grows and increases opportunities for on-campus student life, pedestrian and

bicycle activity within the campus and associated with off-campus origins and destinations will increase in importance. Campus sustainability is dependent on the adequacy of facilities designed to support alternatives to automobile transportation and USF SARASOTA-MANATEE will pursue opportunities to incorporate new pedestrian and bicycle facilities. Existing facilities accommodating pedestrian and bicycle modes include sidewalks, pathways, and bicycle racks throughout the campus, as well as bicycle lanes on US 41 providing access to the campus.

An existing sidewalk and multi-use pathway network currently provides pedestrian and bicycle access from US 41 and circulation throughout the core campus. Sidewalks are provided along US 41 and the main USF SARASOTA-MANATEE driveway, providing pedestrian and bicycle access to the main building (SMC) entrance plaza at the western end of the main driveway. A standard crosswalk is provided on Seagate Drive at US 41, but crosswalks are not provided at the other campus gateways. None of the intersections providing access to the campus include pedestrian crossing treatments to cross US 41, which is not a roadway compatible with unsignalized crossing treatments because of its width and relatively high traffic volumes.

Sidewalks are provided along the main campus entrance drive (Bull Run) and Seagate Drive, but not along other internal circulation roadways. The existing pathway system is comprised of eight to ten foot wide concrete pathways, radiating from the main building (SMC) to each of the parking areas and the open space bordering the Crosley Estate to the west. The existing sidewalk and pathway network is shown in Figure 5.3.

An eight-foot wide concrete and elevated wood trail connects the existing campus sidewalk system at the western end of Seagate Drive to the recreation areas along the bay front. The trail extends through the Crosley Estate grounds in a naturalized setting.

The USF SARASOTA-MANATEE 2020-2030 Campus Master Plan includes new pathways and sidewalks to improve connections to the public sidewalk system along US 41 and connect the main building (SMC) with planned future facilities.

The USF SARASOTA-MANATEE 2020-2030 Campus Master Plan also contemplates recommendations to improve pedestrian and bicycle mobility and safety along US 41 in proximity to the campus. Sidewalk improvements along the USF SARASOTA-MANATEE frontage on US 41 would improve connections from the core campus to parts the campus to the south. USF SARASOTA-MANATEE will also support improvements to the design of US 41 to implement a Complete Streets model intended to reduce speeds and provide improved facilities for pedestrians and cyclists along the roadway. Recommended improvements to pedestrian and bicycle facilities along US 41 include:

- raised median (replacing the two-way center turn lane) for pedestrian refuge
- sidewalk widening or multi-use pathways along the road edge
- reduced lane widths to reduce vehicle speeds
- widened bicycle lanes
- high-visibility crosswalks on side streets and at signalized intersections
- pedestrian countdown signals and wheelchair ramp improvements
- a landscaped buffer
- improved lighting
- warning signage
- signalization of the main driveway to improve pedestrian and bicycle safety crossing US 41

The Sarasota Manatee 2035 Long Range Transportation Plan (LRTP) describes US 41 as a Multimodal Emphasis Corridor. To support multimodal enhancements on the corridor, the 2035 LRTP recommends that gaps in sidewalk segments on US 41 should be connected and all sidewalks widened to a minimum of six feet. The plan also supports similar measures to those suggested above for the US 41 segment in proximity to USF SARASOTA-MANATEE, including reduced lane widths, enhanced pedestrian crossings, on-street bike lanes, and a 10-foot multi-use recreational trail.

While bicycling is a viable mode of transportation for the USF SARASOTA-MANATEE campus, current bicycle facilities in proximity to the campus provide an uncomfortable riding experience. In proximity to the campus, the Sarasota County bike map lists University Parkway, Bay Shore Road, General Spaatz Boulevard, and Bradenton Road as good or fair bicycle routes. Dedicated bicycle lanes are provided on University Parkway and Bradenton Road. Bicycle accommodations on US 41 consist of approximately four-foot wide bike lanes on both sides of the roadway, which provide an uncomfortable riding experience given their proximity to traffic traveling on the six-lane roadway with a posted speed limit of 50 miles per hour (mph). The SCAT and MCAT transit services have outfitted many of their vehicles with front-mounted bicycle racks for “pedal and ride” convenience on these systems. The transit vehicle bicycle racks carry capacity for two bikes. Local bicycle advocacy groups, including the Sarasota Manatee Bicycle Club, also provide additional resources for bicyclists in the region.

The City of Sarasota has been in the process of constructing a long-term Bayfront Multi-use Recreational Trail (MURT) from downtown Sarasota to General Spaatz Boulevard at New College in segments. The MURT connects Selby Botanical Gardens to New College. Additionally, local discussion of a bay side trail or pathway, sometimes referred to as Crosley/Caples Baywalk, has circulated for several years.

The City of Sarasota's intent for the Bayfront MURT is to connect to the Crosley/Caples Baywalk. USF SARASOTA-MANATEE and Manatee County completed the northern segment of the Crosley/Caples Baywalk in 2014, extending southward from the Crosley Estate through the USF SARASOTA-MANATEE campus to the Manatee-Sarasota County line and the northern boundary of the New College campus. Future development of the trail is dependent on commitments and funding by other institutions. This plan is not currently included on the Capital Improvement Plan for Sarasota County, but USF SARASOTA-MANATEE will continue discussions with local transportation planning departments regarding development of a bicycle pathway corridor on public right-of-way along the bay, including bikeway connections to the campus.

Two bicycle racks have been installed on the USF SARASOTA-MANATEE campus. One rack is located on the north side of the main building (SMC), near the entrance to the B101 Lobby and the other rack is located on the west side of the building near Jonathan's Café. Both bicycle racks have the capacity for nine bicycles. Observations of the usage of the bicycle racks indicated one or two bikes parked in each rack during peak periods. The bicycle rack locations are also shown on Figure 5-3.

Additional bicycle racks should be provided in a visible location near the main entry of each new building constructed on the campus. Covered bicycle racks or storage within buildings is preferable for most cyclists. Dedicated shower facilities for bicyclists, or other campus users, are not currently offered on campus. New buildings and/or a designated commuter center location should include shower facilities to provide accommodations for students and employees biking to these buildings.

D. Transportation Demand Management Strategies

Transportation Demand Management (TDM) is essential to campus sustainability in order to reduce and consolidate the number of trips to campus. TDM programs are designed to maximize the people-moving capability of the existing transportation infrastructure by increasing the number of persons in a vehicle, facilitating alternate modes of travel, or influencing the time of, or need to, travel. These strategies serve to reduce the campus community's reliance on single occupant vehicles for commuting purposes and develop more sustainable transportation patterns between the campus and other parts of the community. These strategies are important to encourage travel choices that reduce the need for investment in transportation and parking infrastructure, reduce congestion, consume fewer resources, and produce lower emissions. The coordinated combination of multiple strategies forms the basis of a comprehensive TDM program.

USF SARASOTA-MANATEE does not currently maintain an official TDM program. However, several regional transportation agencies provide TDM services to the University community, including the following:

- Commuter Services (http://www.commuterservicesfl.com/) is a program of the Florida Department of Transportation, serving travelers who live or work in the 12-county region of Southwest Florida, including both Manatee and Sarasota Counties. Commuter Services provides assistance with ride matching and carpooling options for commuters and provides employers with program development, on-site events, marketing tools, and incentive programs. The Internal Revenue Service allows employers to offer participating employees pre-tax deduction for alternative transportation, which can provide benefits to employers, including tax savings, payroll savings, and reduced disability insurance.
- MCAT and SCAT provide transit service in proximity to the USF SARASOTA-MANATEE campus that provides an alternative to driving for some students and employees.

The USF SARASOTA-MANATEE 2020-2030 Campus Master Plan will include a range of new programs and strategies for USF SARASOTA-MANATEE to consider in order to incentivize the use of alternative transportation modes and reduce single-occupant vehicle trips to the campus. The following is a summary of various measures that would reduce use of single-occupant vehicles as the primary commute mode for faculty, staff, and students:

- **Ride Services** – Students attending USF SARASOTA-MANATEE have opportunity to utilize ride services such as Uber and Lyft. These services provide an alternative to car ownership on the campus is an attractive amenity to cost-conscious students.

- **Pedestrian and Bicycle Facility Improvements** - At a minimum, USF SARASOTA-MANATEE should pursue master plan recommendations to improve and expand pathway and sidewalk connections within the campus, to better connect with internal and external facilities. Additional amenities to support walking and bicycling to and within the campus include:
  - Access to shower facilities in new buildings and/or commuter center and covered bicycle storage within or adjacent to campus buildings.
  - Support for pedestrian and bicycle facility improvements along US 41 (North Tamiami Trail), including widened sidewalks or multi-use paths, bicycle lanes, raised medians, countdown pedestrian signals, and high-visibility crosswalks. Specifically, providing dedicated bicycle connections on US 41 to University Parkway and Bay Shore Road may encourage increase bicycle commuting activity for the University.
  - Consideration of bicycle sharing services through new recreational facilities.

- **Transit Services** - The University should consider the following transit service strategies to improve use of mass transportation:
  - Exploration of initiating a U-pass system, giving privileges such as reduced fares to University users of the regional transit system.
  - Consider implementing fixed route shuttle service to key local destinations, such as the Sarasota Bradenton International Airport and rental car facilities, Sarasota Bradenton International Convention Center, other nearby schools (i.e. New College and Ringling College of Art and Design), and key destinations and SCAT bus transfer stops along University Parkway.

- **Financial Incentives** - Multiple financial incentives are available to USF SARASOTA-MANATEE to encourage greater use of alternative modes:
  - The Federal government allows employers to provide employees with pre-tax deductions from the payroll for transit expenses.
  - USF SARASOTA-MANATEE should consider subsidizing or purchasing transit passes for students or employees who do not purchase a parking permit and desire to use transit.
  - A permit buyback program rewards current parking permit holders by paying commuters to surrender their parking permit and choose an alternative commute mode (i.e. rideshare, transit, bicycling, or walking). The program can also be structured to reward anyone currently using alternative transportation modes and to allow commuters who choose to relinquish their parking permits to still occasionally park on campus.
  - Provision of a reduced-price carpool permit option would allow a group of two or more students or employees to share one parking permit. This system would allow the permit to be used in multiple vehicles and requires some oversight to ensure the users are ridesharing. This option may be most effective if restricted to full-time students and employees.

- **TDM Coordinator** - As the USF SARASOTA-MANATEE campus and population grow, a designated part-time or full-time TDM coordinator may be valuable to coordinate with local and regional transportation authorities, assist commuters with alternative options, conduct program marketing, and assess effectiveness. A key function for a TDM coordinator would be to develop systems for commuters to find appropriate ride share partners and maintain a transportation website for the campus.

- **Commuter Membership Program** - USF SARASOTA-MANATEE should publicize the Commuter Services program and consider providing financial incentives to students and employees who use carpool or vanpool services, through Commuter Services or other programs.

- **Program Marketing** - Frequent communications, including email newsletters, articles or advertisements in student and faculty newspapers, banners, and involvement in University events would help increase the recognition and benefits of alternative commuting. A new or enhanced commuter website can be used to present an interactive and comprehensive resource for information on different commuting options, including the MCAT and SCAT bus services. Marketing should draw attention to the various resources available to the campus community and the ecological and economic benefits of non-single occupancy vehicle commutes. Campus-wide events, like employee and new student orientations, provide great forums to communicate commuting options before new students or staff have already settled on a commute mode. A TDM manager can use these forums to emphasize the cost savings and ecological benefits of alternative commutes, while providing guidance to individuals regarding their best options.

- **Telecommute and Distance Learning** - Increasing options for telecommuting and distance learning via enabling technologies (e.g., Blackboard, Microsoft Teams, high speed connections, etc.) can reduce automobile commuting to the USF SARASOTA-MANATEE campus. Other University of South Florida campuses are giving more consideration to growth in the use of distance learning as it could have an effect on parking demand and its associated debt payments for new construction.

Finally, USF SARASOTA-MANATEE may also want to consider other transportation measures and strategies that, while not directly reducing demand, support the University's environmental sustainability goals by influencing transportation choices. For instance, as part of the various campus development and parking improvement projects, USF SARASOTA-MANATEE may want to consider incorporating electric car charging stations and preferential parking (or permit fee reductions) for electric and hybrid automobiles, as well as motorcycles and mopeds which require significantly less fuel and space. Similarly, fuel sources for campus fleet vehicles should be evaluated for potential migration to more sustainable alternatives, including hybrid and electric. Such measures, as a complement to other TDM strategies, could help to establish USF SARASOTA-MANATEE as a leader in sustainable transportation design and operations.

E. On-campus Transportation Safety

USF SARASOTA-MANATEE places a priority on safety for its students, employees, and visitors. USF SARASOTA-MANATEE maintains evacuation and emergency plans, and coordinates with neighboring jurisdictions, in the event of severe weather.

1. Crash Data

On-campus transportation safety is largely managed through the design of on-campus roadways as two-lane facilities with relatively low vehicle speed. The size of the campus minimized potential vehicle-pedestrian conflict zones, and vehicles typically move slowly through parking facilities where pedestrians are present. No significant collisions within the campus were identified by USF SARASOTA-MANATEE for the USF SARASOTA-MANATEE 2020-2030 Campus Master Plan study.
Recent crash data for US 41 (North Tamiami Trail) was obtained from the FDOT for the USF SARASOTA-MANATEE 2020-2030 Campus Master Plan. Table 5-4 summarizes the crash data at the intersection.

Table 5-4 2019-2020 US 41/Seagate Drive Vehicle Crash Data

The crash data in Table 5-6 indicates a variety of crash types occur at the US 41/Seagate Drive intersection. Given the age and limited scope of the available crash data, it is inappropriate to speculate on the most significant trends or crash types at the existing USF SARASOTA-MANATEE driveways. However, it is likely that a variety of crash types continue to occur at the USF SARASOTA-MANATEE driveways on US 41.

Table 5-4 2019-2020 US 41/Seagate Drive Vehicle Crash Data

Crash Type	Number of Crashes	Total Participants Injured	Total Fatalities
Rear End	4	4	0
Angle	0	0	0
Head-on	0	0	0
Sideswipe	0	0	0
Out of Control	0	0	0
Pedestrian	0	0	0
Total	**4**	**4**	**0**

2. Lighting Assessment

Roadway lighting at the USF SARASOTA-MANATEE campus begins at the main entrance and extends along the internal driveways and into the parking lots. All of the campus parking lots are provided with overhead lighting. Bollard lighting is present along sidewalks leading into the main building (SMC) courtyard and throughout the courtyard. The courtyard canopy is illuminated with programmable colored lamps.

3. High Crash Locations and Other Safety Concerns

Recent crash data for US 41 (North Tamiami Trail) was obtained from the FDOT for the USF SARASOTA-MANATEE 2020-2030 Campus Master Plan. While crash data from FDOT is not available for these intersections, the relatively high speed design, two-way turn lane configuration, and unsignalized traffic control likely contribute to potential vehicle conflicts, including head-on collisions within the center turn lane and angle crashes between through vehicles on US 41 and turning vehicles exiting the USF SARASOTA-MANATEE campus from the main driveway and Seagate Drive. Additionally, the presence of sidewalks and bicycle lanes on both sides of US 41 enable pedestrian and bicycle travel near campus, but the nearest signalized intersections with adequate crossing treatments for pedestrians and bicyclists are located over ¾ mile from the campus. Roadway design modifications, including raised medians, protected turn-lane treatments, and potential signal control at the main driveway may benefit vehicle, pedestrian, and bicycle safety along US 41.

3. Weather Event Vulnerability

No significant physical vulnerabilities to weather events on the USF SARASOTA-MANATEE transportation network have been identified. The USF SARASOTA-MANATEE transportation system is considered adequate to provide overall mobility and emergency access during weather events.

The primary weather-related challenge for the USF SARASOTA-MANATEE transportation system consists of the reluctance of users to consider walking, bicycling, and transit options during extreme temperature conditions or precipitation. Like a number of other schools and localities in west central Florida, the hot and sunny climate creates acute challenges for the walking and bicycle modes. Providing shade along sidewalks, pathways, and bicycle routes through tree cover, shade structure, and building colonnades increases comfort and may contribute to increased use of the non-vehicular modes.

5. Evacuation and Emergency Events

The Manatee County Emergency Management Division of the Public Safety Department and Sarasota County Emergency Services are responsible for planning and coordinating the evacuation and sheltering of county residents in the event of a natural or manmade disaster. Evacuation planning and sheltering in the event of a severe weather event, such as a hurricane, for the USF SARASOTA-MANATEE campus and surrounding area is conducted by these governmental agencies.

The USF Sarasota-Manatee Facilities Planning & Management Department, in collaboration with the USF SARASOTA-MANATEE Campus Police, is responsible for maintaining the Emergency Action Plan, which outlines appropriate procedures for students, faculty, and staff in the event of an emergency. The USF System Emergency and Safety Manager provides specific guidance to the USF SARASOTA-MANATEE community during severe weather events or other emergencies. The University will execute its emergency management plan as appropriate, and it will at all times coordinate with local, state and federal agencies. USF Sarasota-Manatee will communicate regularly with the USF SARASOTA-MANATEE community via its website and mass media.

F. Planned Roadway and Transportation System Modifications

The USF SARASOTA-MANATEE 2020-2030 Master Plan seeks to expand access to the campus, particularly for pedestrian and bicycle modes. Vehicle access and circulation enhancements to improve or slightly modify existing driveways and internal roadways will be necessary to accommodate future development and growth on the campus.

G. Roadway Operations Assessment

Traffic volume data provided by USF SARASOTA-MANATEE and the FDOT indicate that US 41 carries significant traffic volume on an average daily basis, but traffic associated with the USF SARASOTA-MANATEE campus represents a fraction of the total traffic activity near the campus. This section discusses the existing operations of campus and bordering roadways and discusses transportation management strategies to enhance mobility and access for the USF SARASOTA-MANATEE campus.

1. Roadway Classifications

The USF SARASOTA-MANATEE campus is bordered on the east by US 41 (North Tamiami Trail), a six-lane undivided urban principal arterial highway. US 41 becomes a divided six-lane highway, with a raised and landscaped median, in Sarasota County, approximately 500 feet to the south of the USF SARASOTA-MANATEE campus. The USF SARASOTA-MANATEE core campus is characterized by an area of wooded conservation space along the US 41 frontage and a combined academic and administrative building surrounded by surface parking lots on three sides (north, south, and east). Once on campus, vehicles may circulate around the site and access individual parking lots via a set of two-lane campus roadways. The SMC building is accessible to the fire department, and deliveries are accomplished via loading access within the parking lots, on the north side of the building.

Primary access to the campus is provided via one main driveway on US 41, aligned with the main campus building (SMC). The primary campus access leads to the parking lots directly in front of the SMC building. Secondary access to the campus is available via Seagate Drive, which accesses the site on the southern border and connects US 41 with the southern parking lots. Informally, the campus is also accessible from US 41 via inter-parcel access with the Hilton Garden Inn parcel to the north. The combined USF SARASOTA-MANATEE/New College bookstore is located on US 41, approximately 1,000 feet south of the core campus, adjacent to New College of Florida. To the west, the campus is bordered by the publicly-owned Crosley Estate, which is accessible via Seagate Drive, and Sarasota Bay.

The geometric configuration of US 41 at the access locations for the USF SARASOTA-MANATEE campus is comprised of three travel lanes in each direction (north and south) separated by a two-way turn lane in the center of the roadway. The posted speed on US 41 is 50 miles per hour (mph). All roadways accessing the USF SARASOTA-MANATEE campus from US 41 are unsignalized and operate under STOP sign control for the minor street.

The USF SARASOTA-MANATEE 2020-2030 Master Plan contemplates maintaining existing campus access points but relocating the primary campus access to Seagate Drive. The proposed roadway changes will facilitate improved and safer access to USF SARASOTA-MANATEE and the Manatee County Crosley Estate property. Roadway design modifications to Seagate Drive from the US 41 intersection westward to the intersection with an internal north-south campus roadway will improve the traffic flow and safety on US 41 and Seagate Drive by providing reduced traffic lane widths, dedicated traffic turning lanes, pedestrian and bicycle improvements, pedestrian median refuges and landscaping, improved street lighting and, most importantly, strengthen the case for a traffic signal or roundabout providing a campus gateway.

The USF SARASOTA-MANATEE 2020-2030 Campus Master Plan maintains the existing main entrance driveway (i.e. Bull Run) as a secondary access point on US 41. The proposed US 41 median improvements will require that this access point be accessible only for southbound US 41 traffic for ingress and egress (i.e., right-in/right-out configuration). This driveway will maintain its connectivity to the internal

access roadway system and campus parking lots. The existing inter-parcel access to the Hilton Garden Inn driveway on US 41 will be maintained.

Some slight modifications to the internal roadways serving the core campus parking lots are planned to accommodate new surface parking near the main building (SMC). Additionally, a roadway may be constructed to provide access to several existing and/or planned parking lots on the campus and will extend via an emergency access way to a planned boathouse on the Crosley Estate.

2. Existing Traffic Volumes and Levels of Service

Existing daily and weekday evening peak hour traffic volume data for roadways on-campus and within the context area were obtained from prior studies conducted by the Florida Department of Transportation. Daily traffic count data for US 41 near the USF SARASOTA-MANATEE campus was collected. Table 5-5 provides a comparison of the traffic volumes on US 41, indicating that overall traffic volume levels decreased over the three year period.

Table 5-5 US 41 (North Tamiami Trail) Average Daily Traffic Volumes

Roadway	Limits	Lanes	2007 Daily Volume	2010 Daily Volume	Percentage Difference
US 41 (North Tamiami Trail)	USFSM Driveway to Tallevast Road	6LU	44,800	37,405	-14%

Source: 2007 USFSM Traffic Signal Warrant Study and 2010 FDOT Daily Traffic Counts

3. Pavement Condition

Work was done to some of the existing lots in 2020. South Lot 1 was completely resurfaced and areas of depression were repaired in other lots. These repairs have extended the life of the lots and no additional repairs are needed at this time.

4. Transportation System Management Strategies

Transportation system management strategies used on the USF SARASOTA-MANATEE campus will support the University's goals to provide enhanced multimodal transportation options for the campus, enhance campus air quality, reduce greenhouse gas emissions, and enable the establishment of housing and recreational uses on the campus. In particular, USF SARASOTA-MANATEE will focus on improving transit, bicycle, and pedestrian connections to address operational and safety issues on the USF SARASOTA-MANATEE campus. The following is a summary of a various transportation management strategies USF SARASOTA-MANATEE will consider:

- Maintain or enhance connections to the public roadway system and reduce reliance on single-occupant automobiles by supporting regional transit systems.
- Construct only necessary new parking, based on empirical parking demand projections, and re-evaluate parking demand vs. supply before each new development project.
- Encourage alternative fuel vehicles for the campus automobile fleet.
- Pursue Transportation Demand Management programs (discussed in section D of this element) that increase carpooling, transit ridership, and pedestrian/bicycle trips.
- Support completion of off-campus pedestrian and bicycle facilities, including widened sidewalks, landscaped buffers, on-street bicycle lanes, and multi-use pathways along US 41 and other nearby transportation corridors.
- Support installation of crosswalks, warning signage, and/or a new traffic signal on US 41 to improve pedestrian and bicycle safety along the campus edge.
- Support the development and construction of nearby off-campus student housing to reduce single occupant vehicle trips.
- Provide shade and shaded benches along streets and sidewalks.
- Base decisions to construct new lane capacity, modify lane geometry, or install traffic signals on detailed engineering studies and capacity evaluations.

H. Roadway Capacity Evaluation

Transportation mode split data for the USF SARASOTA-MANATEE campus shows that the vast majority of campus users drive to the campus alone. USF SARASOTA-MANATEE student enrollment is anticipated to grow, resulting in overall growth in traffic accessing the campus. USF SARASOTA-MANATEE can implement programs to reduce single-occupant vehicle travel to the campus, including policies and programs designed to increase the proportion of commuters using alternative transportation modes.

5. Mode Split

The University has not conducted student or employee surveys to determine the mode choice for the campus community. However, observational and anecdotal information indicates that the vast majority of students, faculty, staff, and visitors commute to the campus by single-occupant vehicle. The single-occupant mode share for the USF SARASOTA-MANATEE campus likely exceeds 90%.

6. Transportation Demand Management Strategies

USF SARASOTA-MANATEE does not currently maintain an official TDM program. TDM programs would help to support the University's goals of reducing single occupant vehicles and developing more sustainable transportation patterns for the campus and community. As described in detail in section D of this element, the USF SARASOTA-MANATEE 2020-2030 Campus Master Plan will consider a range of new programs and strategies for USF SARASOTA-MANATEE to consider to incentivize the use of alternative transportation modes and reduce single-occupant vehicle trips to the campus, including the following:

- Providing shuttle service to off-campus residential areas and key destinations
- Coordinating with SCAT to locate the planned BRT route and a stop/transfer station on the USF SARASOTA-MANATEE campus
- Improving pedestrian and non-vehicular facilities
- Locating student oriented housing in close proximity to the campus
- Partnering with a car sharing service
- Academic scheduling modifications, including scheduling more classes during non-peak hours
- Parking pricing strategies designed to make other modes of travel more economical and to provide revenue for improved TDM services and facilities
- Parking permit buyback program
- Pre-tax deduction for employee alternative commute expenses
- Services to provide a Guaranteed Ride Home
- Hiring or designating a TDM Coordinator
- Promoting of Commuter Membership Programs offering ride matching services and designating preferential parking locations for carpoolers
- Distance learning programs for students and telework or staggered work hours for faculty and staff

Car sharing and ride-matching are two program types that are commonly supported and funded by the administrations of large university campuses and these programs play a strong role in supporting use of alternative travel modes by students, staff and faculty. Providing a car sharing option is an effective strategy to minimize the need for resident students to own a car.

USF SARASOTA-MANATEE should carefully consider and evaluate the costs and benefits of various TDM measures to inform decisions on improving the use of alternative commuter modes. In particular, TDM strategies that save money on personal costs of transportation for all campus users (students, staff, and faculty), promote healthier and more active lifestyle through changes in transportation, and support sustainability goals of USF SARASOTA-MANATEE are the most likely to succeed. By targeting funding and resources for the projects and initiatives most likely to affect commuting behaviors, USF SARASOTA-MANATEE can achieve significant results in reducing single-occupant vehicle trips to the campus. The 2020-2030 USF SARASOTA-MANATEE Campus Master Plan envisions that moderate implementation of TDM measures is capable of reducing the mode split for single-occupant vehicles by at least 10% during the planning horizon.

USF SARASOTA-MANATEE should continue to play an active role in coordinating with the Sarasota Manatee Metropolitan Planning Organization and the MCAT and SCAT transit systems. These agencies already provide many of the types of services USF SARASOTA-MANATEE can leverage to achieve improvements in alternative transportation options and usage.

The USF Center for Urban Transportation Research (CUTR) on the USF-Tampa campus is a leader in Transportation Demand Management research and advocacy. CUTR maintains excellent resources for the USF community regarding TDM programs and CUTR staff can be consulted and utilized to research and develop effective TDM programs that are appropriate for the University. Many of CUTR's resources can be found at http://www.nctr.usf.edu/clearinghouse/index.htm .

I. USF Vehicle Fleet and Fuel Sources

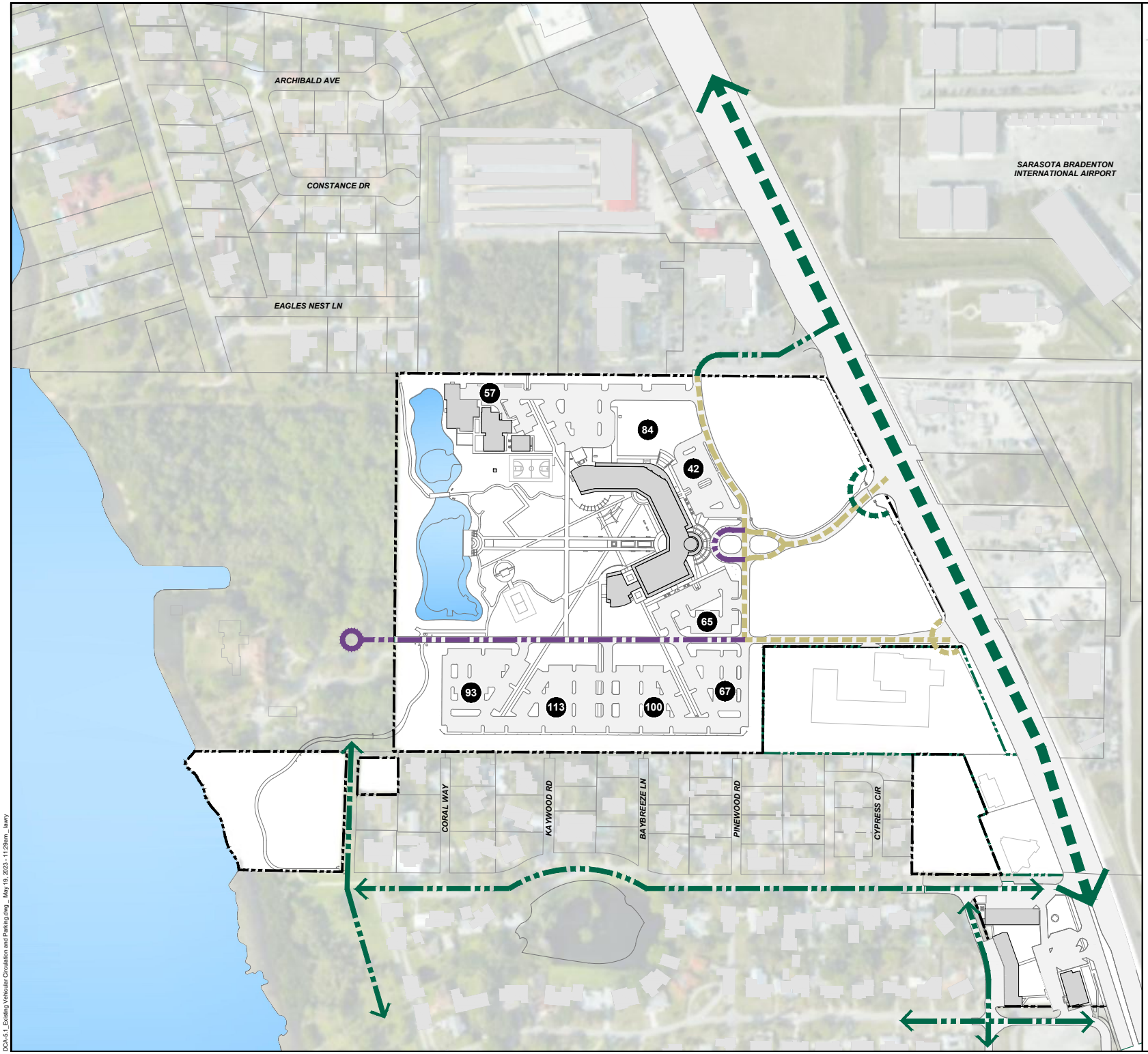
The USF SARASOTA-MANATEE vehicle fleet is comprised eight vehicles. A summary of the vehicle types, age, fuel types, and departments owning the vehicles is provided Table 5-6.

Table 5-6 USFSM Vehicle Fleet Summary		
Vehicle	**Year**	**Decal Number**
Uplander (Chevrolet, Minivan/SUV)	2007	495000252338

Cargo Van (Ford)	2013	495000274755
Grand Caravan (Dodge)	2016	495000275778
Transit (Ford, 15 passenger Small Bus)	2016	495000275777
Impala (Chevrolet)	2016	495000275014
Transit (Ford, 15 passenger Small Bus)	2018	495000275795
Pick-Up Truck (Ford)	2020	495000278408
Cargo Van (Ford)	2022	495000278424

J. Existing Alternative Transportation Incentives

The University doesn't currently maintain an official transportation demand management program providing alternative transportation incentives. USF SARASOTA-MANATEE administrators actively coordinate with the regional transit providers, transportation agencies, and planning authorities to discuss opportunities to provide new strategies and incentives for alternative transportation options. The USF SARASOTA-MANATEE 2020-2030 Campus Master Plan outlines a range of TDM measures that will effectively support alternative transportation on the USF SARASOTA-MANATEE



UNIVERSITY of SOUTH FLORIDA

2020 - 2030
Sarasota-Manatee Campus
Master Plan Update

- Campus Limits
- Study Area
- Principal Arterial
- Public Drive
- Campus Access Road
- Campus Access by Agreement
- Campus Drive
- Surface Parking
- Main Campus Entry
- Secondary Campus Entry
- Parking Space Total
- Existing USFSM Facilities

Element 5
Transportation

DCA Figure 5.1
Existing Vehicular Circulation and Parking

Date
ADOPTED 06/13/2023

0 500 1000 ft.

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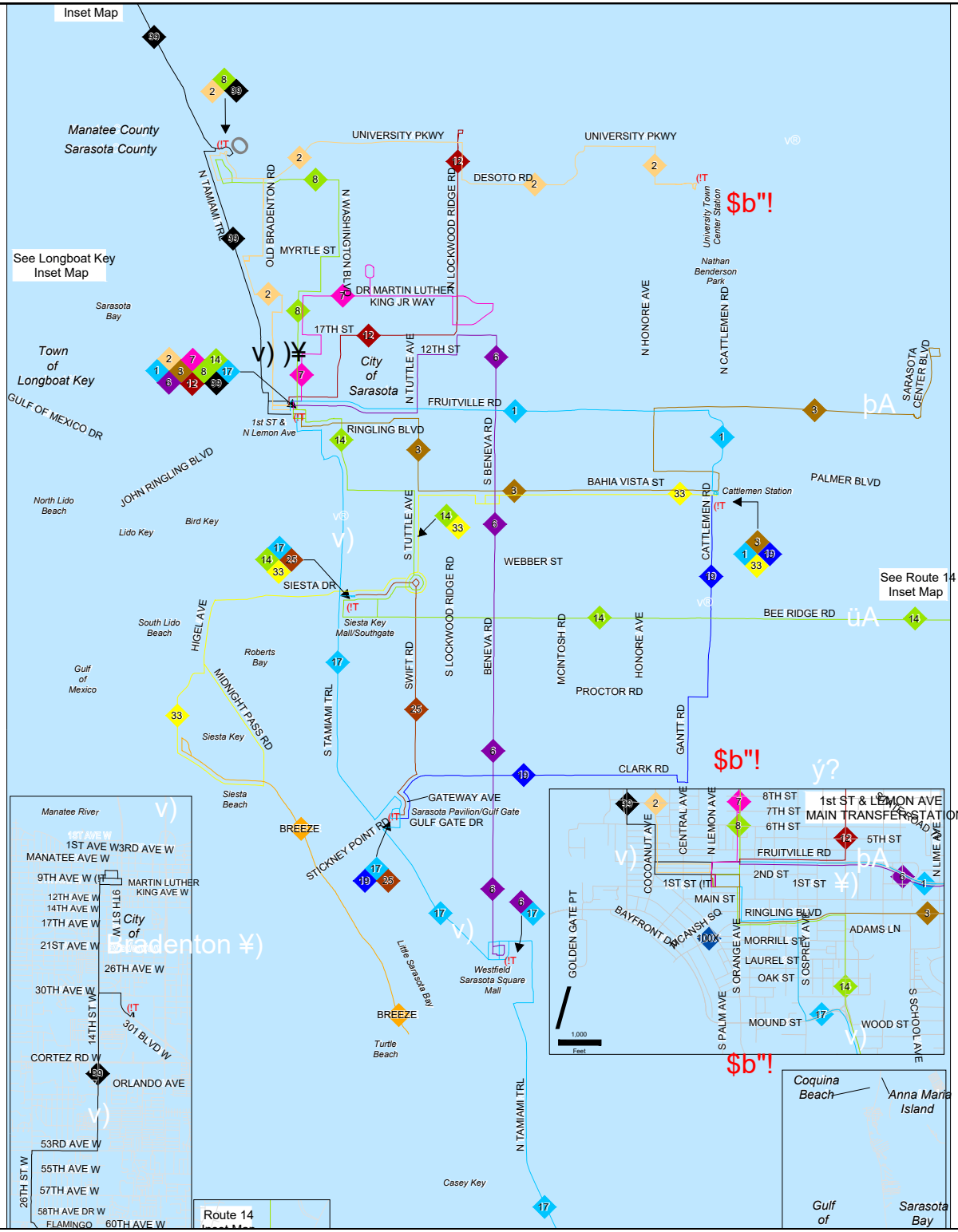


UNIVERSITY of SOUTH FLORIDA

2020 - 2030
Sarasota-Manatee Campus
Master Plan Update

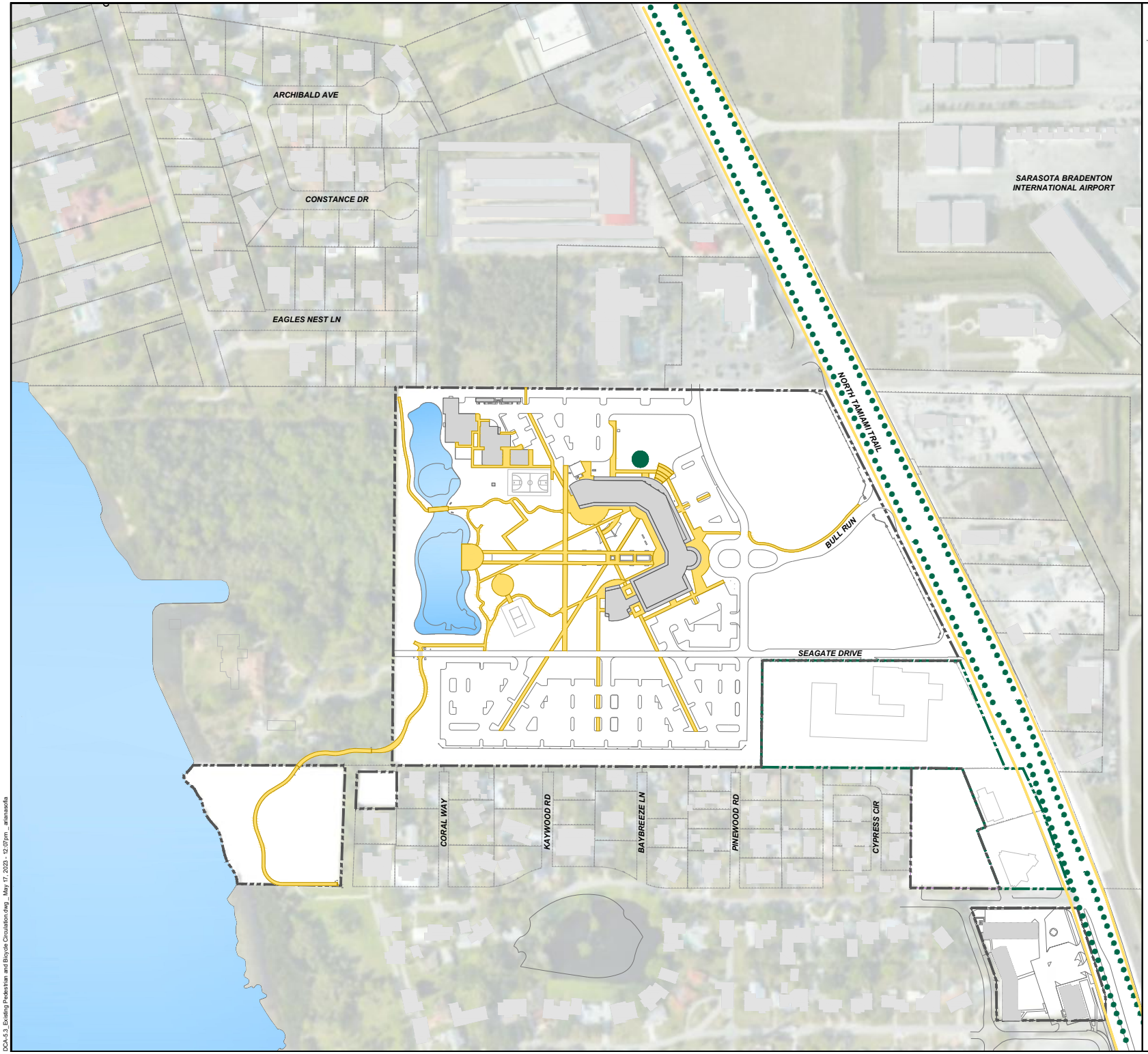
Element 5
Transportation

DCA Figure 5.2
Bus Route Map

Date
ADOPTED 06/13/2023

0 500 1000 ft.

DCA-5.2_Bus Route Map.dwg _ May 17, 2023 - 12:03pm _ ariana.ofa



UNIVERSITY of SOUTH FLORIDA

2020 - 2030
Sarasota-Manatee Campus
Master Plan Update

- Campus Limits
- Study Areas
- On-Campus Walkway
- Off-Campus Walkway
- Bicycle Lane
- Bicycle Racks
- Multi Use Path
- Existing USFSM Facilities

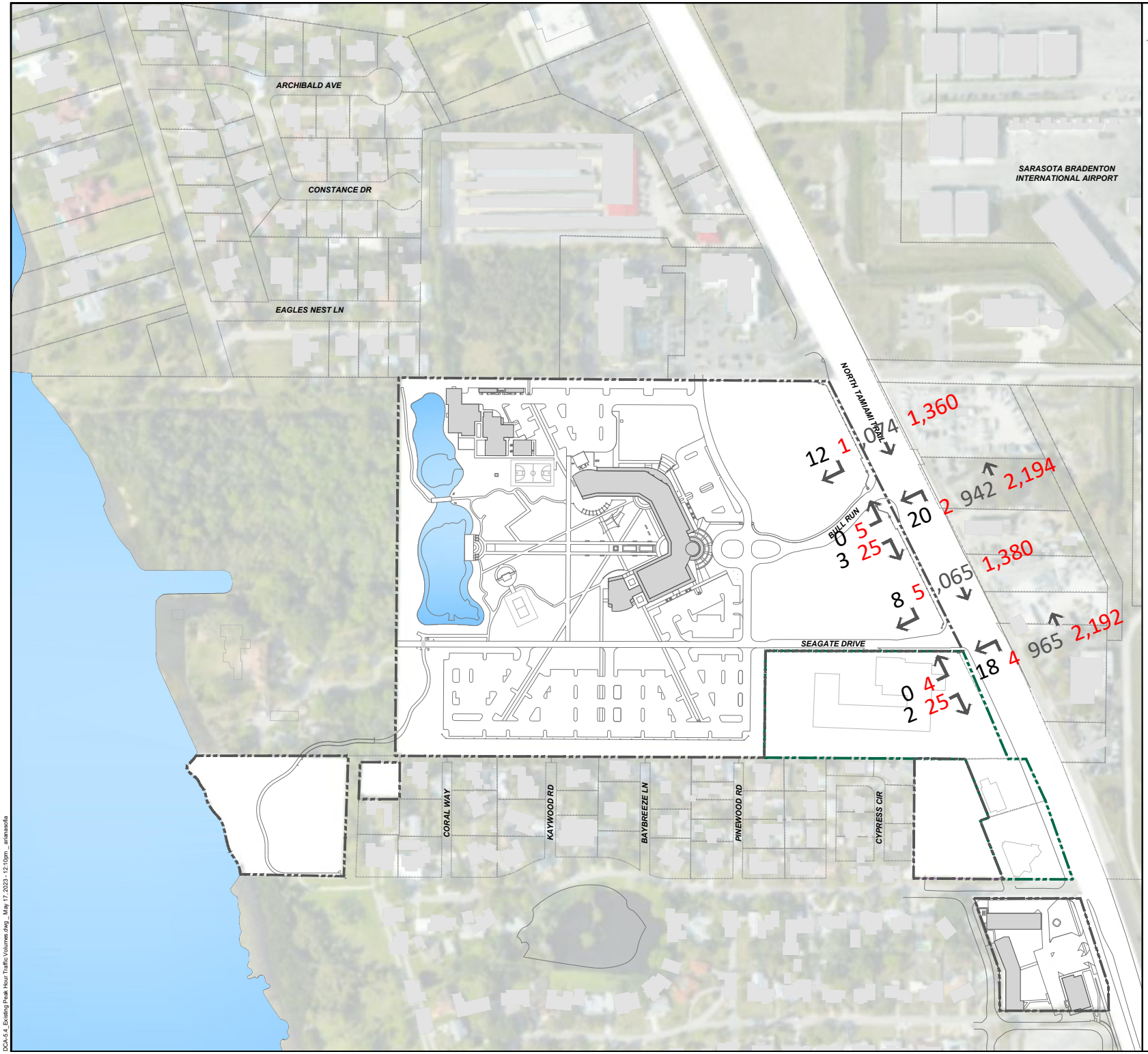
Element 5
Transportation

DCA Figure 5.3
Existing Pedestrian and Bicycle Circulation

Date
ADOPTED 06/13/2023

0 500 1000 ft.

DCA-5.3_Existing Pedestrian and Bicycle Circulation.dwg , May 17, 2023 - 12:07pm , arianasolis



UNIVERSITY of SOUTH FLORIDA

2020 - 2030
Sarasota-Manatee Campus
Master Plan Update

- Campus Limits
- Study Area
- #/# Existing Traffic Volume (AM/PM)
- Existing USFSM Facilities

Element 5
Transportation

DCA Figure 5.4
Existing Peak Hour Traffic Volumes

Date
ADOPTED 06/13/2023

0 500 1000 ft.

DCA-5.4_Existing Peak Hour Traffic Volumes.dwg _ May 17, 2023 - 12:10pm _ arinarasolia