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TOWN OF Longboat Key

Gulf of Mexico Drive
Complete Street Corridor



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THANK YOU from your Kimley-Horn Team!

The **Town of Longboat Key Gulf of Mexico Drive Corridor Plan** is the direct result of a collaborative effort between the Town of Longboat Key Commission, staff, and its residents. We extend our sincere appreciation to the residents, business owners, elected officials, bicycle community, and stakeholders who participated in the planning process and guided the development of this Plan. Everyone's time, input, and energy are greatly appreciated.



EXECUTIVE SUMMARY

The vision for the Town of Longboat Key Gulf of Mexico Drive Complete Street Corridor Plan (the "Plan) is to create a safe, resilient and aesthetically pleasing Complete Streets corridor that maintains vehicle traffic and enhances the Town's unique sense of place.





Typical Section 2 with Landscaped, Curbed Median

The Town of Longboat Key Gulf of Mexico Drive Complete Street Corridor Plan builds upon local momentum from interactions with local residents, bicycle club members, Town staff, and elected officials to implement the recommendations over an agreed upon timeline. The Town intends to pursue federal and state level grants, as well as local funds, to fulfill the vision, goals and expectations of this plan using the provided framework of corridor improvements and typical section recommendations. The intent of this Plan is to create a Complete Street that improves safety for all users of the corridor. Implementation of this plan will require collaboration from key stakeholders and the community to be truly successful.



Vision for Gulf of Mexico Drive

The Vision for Gulf of Mexico Drive is to create a safe, resilient and aesthetically pleasing Complete Streets corridor that maintains vehicle traffic and enhances the Town's unique sense of place. This vision is the product of engagement with key stakeholders, elected officials, staff and community members over the course of this planning effort. The Town of Longboat Key Gulf of Mexico Drive Corridor Plan (the Plan) establishes the roadmap for implementation of this vision for the corridor with creation of the goals, recommendations, design guidelines and an implementation plan to enable the vision come to fruition.



Aerial of Gulf of Mexico Drive

WHAT MAKES THIS PLAN UNIQUE?

Gulf of Mexico Drive presents a unique opportunity to create a safer bicyclist and pedestrian experience while maintaining vehicle mobility, and improving the aesthetic appearance and resilience of the corridor. This corridor hosts thousands of bicyclists as Gulf of Mexico Drive is a scenic route for both serious bicyclists and recreational bicyclists. It is also a designated route for the state's SUNTrail Network. Numerous sections of the island experience heavy pedestrian traffic throughout the year. One area of note is a stretch of nearly 3/4 mile in the center of the island with an uninterrupted, unencumbered view of the Gulf of Mexico, where no businesses, homes, hotels, or any other structures hinder one from viewing the beach or the water. This Plan is unique because it maintains the Longboat Key sense of place, protects natural features that separate Longboat Key from other barrier islands, and provides an enhanced pedestrian, bicyclist, and motorist experience through the proposed Framework Plan of Complete Street tools.



GOALS

To fulfill the vision for Gulf of Mexico Drive, goals were needed to set a benchmark that not only prioritizes safety and complete street tools but also leverages what Gulf of Mexico Drive offers already, which is a corridor ripe for pedestrian and bicyclist activity regardless of age, skill level, or mobility. The goals acknowledge that it is critical to build upon the existing streetscape framework to enhance the pedestrian experience, placemaking opportunities, and perception of the corridor. The process of creating the goals included ensuring solutions or recommendations are sensitive to the North, Central, and South sections of the corridor thus maintaining the character of Longboat Key.

Three Goals were identified based on the vision for Gulf of Mexico Drive and paired with a variety of potential strategies and actions to achieve the vision. These Goals are to create a strong sense of place, an equitable and environmentally sustainable community, and one that is connected by an efficient, multi-modal transportation network.



The potential strategies and actions are outlined here and are described in more detail in the Framework Plan Toolkit and form the basis of the implementation and design guidelines.



Create/Enhance a Strong Sense of Place

Creating and enhancing a strong sense of place typically involves three key components – creating great streets, great, connected public spaces and great places to live. Each of these items are related and can be achieved through implementing the various strategies outlined in the Framework Plan.

Great Streets generally meet the needs of multiple users, are safe, and include high quality streetside and travelway elements.

Great, Connected Public Spaces promote social interaction, are accessible and inviting, and provide connection to key destinations.

Great Places to Live are memorable, have high quality infrastructure, are safe, and are vibrant community destinations.

CREATE GREAT STREETS

- **Roadway Improvements** In each section of the corridor, improve the safety and quality of the roadway by restriping the roadway, widening bicycle lanes and adding striped buffers, adding raised landscaped medians where feasible, and strategically placing stop bars near intersecting roadways to address the poor visibility and influence motorists' behavior regarding speed and turning onto the corridor.
- Intersection and Crossing Improvements Working with the Florida Department of Transportation (FDOT) on enhancements to pedestrian crossing facilities at locations with high pedestrian traffic along the entire corridor to improve safety and visibility, with special consideration for the central section of the corridor. Design for a roundabout at Broadway Street, and potential roundabout at Longboat Club Road. Improve sight lines at intersections and driveways.
- *Turn Lanes* In order to improve vehicular safety and mobility, the option to add left turn lanes at the entrance to four of the larger communities on the island is proposed.

CREATE GREAT, CONNECTED PUBLIC SPACES

- **Pedestrian Improvements** Widen the multi-use path on the east side of the roadway and eliminate gaps in the sidewalk on the west side of the roadway along the entire corridor, and improve curb ramps for ADA accessibility. Consideration for a special pedestrian crossing zone in the central section of the island to improve connections to the beach for residents and visitors.
- **Traffic Calming Improvement** Add raised landscaped medians where feasible along the entire corridor to calm traffic and provide pedestrian refuges. FDOT has stated that the town is limited on treatments with a 45 mph speed limit. The Town could consider allowing speed limit of 35 mph in order to be provided with additional traffic calming opportunities where there is high pedestrian crossing activity.
- *Placemaking Improvements* By adding additional natural landscaping to the corridor, users could feel more connected to the already environmentally conscious infrastructure.

CREATE A GREAT PLACE TO LIVE

• *Placemaking Design Improvements* – Wayfinding signage, native landscaping, and decorative pavers have the potential to create more personalized character at certain key locations along the corridor.





Equitable, Environmentally Resilient Community

There are three important components to creating an equitable, environmentally resilient community for Gulf of Mexico Drive: creating a resilient model, updating the built environment for resilience, and creating an accessible environment for all users.

CREATE A RESILIENT MODEL

- **Pedestrian/Bicycle Improvements** A greatly improved multi-use path and wider sidewalks create a more walkable, multi -modal system that provides viable options in addition to full reliance on personal automobiles (and potential for reduced emissions).
- **Bicycle Improvements** Widening the bicycle lane to 7 feet is safer and provides more space for a buffer between cyclists and vehicles at 45 mph and promotes greater use of this active mode of transportation.

UPDATE BUILT ENVIRONMENT FOR RESILIENCE

• **Resilience Improvements** – The Town is completing an undergrounding project to bury the island's overhead power transmission and communications cables along the entirety of Gulf of Mexico Drive. A previous effort to be continued is the eradication of Australian Pines, an invasive species of tree that topples over in high winds and is not suitable along an evacuation route. Additional strategies include raising the roadway to mitigate the risk of nuisance flooding and implementing low impact design and green stormwater infrastructure. FDOT is considering projects to address nuisance flooding along various segments of Gulf of Mexico Drive.

CREATE AN ACCESSIBLE ENVIRONMENT FOR ALL USERS

- **Pedestrian/Bicycle Improvements** By taking advantage of existing infrastructure on the east side of the roadway, a proposed widening of the existing trail to a multi-use path will improve accessibility for pedestrians, casual bicyclists, parents with strollers, dog walkers, and others needing more room than a traditional sidewalk.
- Intersection and Crossing Improvements Ensuring all crosswalks and ramps are ADA Accessible and properly built with tactile surfaces is critical to creating an accessible environment for all users.

Connected by an Efficient, Multi-Modal Transportation Network

An efficient, multi-modal transportation network is one that has a safe, convenient place for all modes of transportation to travel.

CREATE A SAFE, CONVENIENT PLACE FOR ALL MODES OF TRANSPORTATION

- Intersection and Crossing Improvements Improved intersections, roundabouts, and enhanced crosswalks raise visibility and awareness for all users and modes of transportation. Improve and confirm sight lines at intersections and driveways during design.
- **Bicycle Improvements** Wider bicycle lanes improve safety for bicycles by providing greater separation from vehicles traveling 45mph along the corridor.



BACKGROUND

Longboat Key is located on the Gulf of Mexico in Southwest Florida and is a barrier island. Although it is its own municipality, Town of Longboat Key, it is geographically located in Manatee County on the northern/central end of the island and Sarasota County on the central/southern sections of the island. Gulf of Mexico Drive is the focus of this plan and is rather unique in that it is scenic and includes views of the Gulf of Mexico on the west side of the roadway, unencumbered by buildings for part of the corridor. The corridor is largely a two-lane undivided facility with median left turn lanes and shared median turn lanes throughout. The project boundaries are from

Longboat Pass Bridge to the north and New Pass Bridge to the south and is 10 miles in length from end to end. It is classified as an urban minor arterial with a posted speed limits ranging from 35 mph at north and south end, but 45 mph throughout the rest of the corridor. The Country Club Shores turn lane segment will be 40 mph. Construction of that project will start in FY 2024.

In addition to its beauty, the corridor is home to many bicycle enthusiasts from recreational riders to serious riders and every skill level in between. The weekends are usually the busiest timeframes for bicycle riders to traverse through the corridor. There is also heavy pedestrian traffic in the commercial and residential areas in the northern section



Aerial Image of Longboat Key. Source: FDOT

near Broadway and in the southern section near Country Club Shores and Longboat Club Road and a notable central section of the island near several residential neighborhoods. This part of the island is a perfect place to catch the sunset and enjoy the beaches of Longboat Key.



Western Shoreline along Central Section of Longboat Key

Gulf of Mexico Drive Complete Street Corridor



pedestrians to

cross streets and

access destinations

The purpose of this project is to develop a complete street corridor plan that addresses the safety concerns of roadway users, creates an innovative approach to mobility, and maintains the character and enhances the aesthetic appearance of the island. The complete streets concept and traffic calming and safety tools associated with complete streets that are part of this Plan will have a lasting positive impact on the corridor. This plan can and should be implemented in phases and in conjunction with other planned projects along the corridor to spread the financial burden out over a longer period of time.

WHAT ARE COMPLETE STREETS?

A Complete Street, as defined by the National Complete Streets Coalition (NCSC), is a street where the entire right-of-way is planned, designed, and operated for all modes of transportation and all users regardless of age or ability. Pedestrians, bicyclists, and motorists of all ages and abilities must be able to safely move along and across a Complete Street. Complete Streets make it easy to cross the street, walk to shops, bike to work and for recreation, and enjoy many other healthy activities.



of vulnerable road

efficient flow

users while maintaining

e-bikes, and scooters

promote gathering

and social interaction



Public Engagement

Understanding the community's perception, needs and desires is critical to establishing and defining the vision for Gulf of Mexico Drive. This requires a collaborative effort involving residents, visitors and stakeholder groups including local business owners, city staff and regulatory agencies.

These events provided a platform for residents and visitors to share their thoughts and opinions directly with the design team. In any public project, there are often wide-ranging, and sometimes conflicting views, interests and visions. Kimley-Horn led a series of stakeholder discussions with Town Staff, members of the public, regulatory agencies, and Town Commissioners in an effort to balance the community input and vision, with the practical requirements of maintenance, permitting, emergency access, etc.

Brief summaries of the public input received during the plan are provided in this section. A full summary of each of these meetings, community engagement activities, and public input received is available in Appendix A.

LOCAL BICYCLE COMMUNITY

Longboat Key is a popular destination for casual bicyclists and serious bicyclists alike due to the scenic nature of Gulf of Mexico Drive as well as the existing multimodal facilities along the corridor. Bicyclists have been active participants in the planning process for existing projects along the corridor and have worked with law enforcement to improve safety for bicyclists. There are several interest groups ranging in riding experience that use Gulf of Mexico Drive:

- Longboat Key Bike Association (LBKBA)
- Village Idiots Cycling Club

Palma Sola Peloton

• Sarasota Manatee Bike Club

The LBKBA drafted a White Paper and distributed it to Town staff. It included information on the Gulf of Mexico Drive bicyclists (1,700 serious cyclists use GMD), an existing site conditions analysis, feedback on project recommendations that were presented to the Town Commission (to be discussed later in this report), and suggestions on improvements that could be made to better the bicyclist experience.

2021 CITIZEN SURVEY RESPONSES

The Town of Longboat Key administers an annual Citizen Survey to poll the community on relevant topics and issues. One of the top priorities identified by the respondents of the 2021 Citizen Survey includes traffic congestion/safety: with approximately 66% of respondents selecting traffic congestion as one of the most important challenges facing the town. 71% of respondents favor improving pedestrian crossing on Gulf of Mexico Drive. In the open-ended responses, residents emphasized a desire for caution lights in the crosswalks to be changed from yellow to red as a means of improving their visibility and enhancing pedestrian safety. 30% of all respondents agreed that among underfunded mandates, enhancing Gulf of Mexico Drive should be a top priority. Responses indicated that more than half of the respondents identified proposed enhancements of pedestrian crossings, bike lanes, and medians and landscaping as "very important" or "somewhat important". Additionally, 46% indicated that reduced speed limit was very/somewhat unimportant. Conversely 30% of respondents indicated reduced speed limit as "very important" or "somewhat important".



2021 Citizen Survey Responses related to Proposed Enhancements to Gulf of Mexico Drive



TOWN COMMISSION WORKSHOPS

- Town Commission Workshop #1: November 15, 2021. Presented background information on why the plan is being created, the vision for the corridor, and opportunities for enhancement. Commissioners provided direction regarding speed and items to be incorporated into the design.
- Town Commission Workshop #2: March 21, 2022. Presented project updates to the Town Commission, including updated concepts for Commission review and comment. Commissioners and members of the public provided comments and feedback on the concepts. The Commission reinforced their direction on speed and other plan elements. Please see appendix for more detailed description of the workshop.
- Town Commission Workshop #3: December 12, 2022. Presented final project report to the Town Commission, including a summary of stakeholder engagement, for Commission review and comment. The Commission voted to do a speed study on the half-mile section near the Bayport Community and have FDOT perform this study. The Commission affirmed and supported the recommendation for a wide multi-use trail, 6-8 foot sidewalk on the western side except for along the golf course, landscaped center medians with locations to be analyzed for need, determining which is the dominant movement where two-way turn lanes currently exist, and where the benefits of the turn lane outweigh the increased distance for pedestrians to cross. Please see appendix for more detailed description of the workshop.

PUBLIC WORKSHOP

A public workshop was held on May 3rd, 2022 at the Town of Longboat Key Town Hall. The format of this workshop included a presentation, question and answer session, and workshop activities session. The purpose of this workshop was to gain public feedback on the updates that have been made to the proposed typical section concepts for the corridor based on the two previous commission workshops. The community was well represented with bicycle enthusiasts, full-time residents, and town commissioners among those in attendance.





COORDINATION WITH FDOT

As Gulf of Mexico Drive is a state road, close coordination and partnership with the Florida Department of Transportation (FDOT) is a key component to the successful implementation of this Plan. A series of three meetings that included FDOT staff, Town staff, and the Kimley-Horn team were held virtually on April 19, June 13, and July 13, 2022, in addition to individual phone calls and email correspondence between Town staff, FDOT, and Kimley-Horn to review draft typical sections, draft renderings. FDOT discussed crossing options at 35 mph and 45 mph, and reviewed with the Town and Kimley-Horn a suggested special zone for speed reduction if the Town wanted to consider additional crossing. These discussions resulted in an understanding that there are few acceptable traffic calming and crossing treatments along the corridor at the existing speed limit of 45 mph. However, FDOT is implementing special signage to note this special crossing zone for a 1/2 mile segment in the Central section regardless of change in speed. A detailed summary of what was discussed at each meeting is included in Appendix B.



Drone Shot of Gulf of Mexico Drive



Existing Conditions

Gulf of Mexico Drive (SR 789) is 10-mile north-south corridor that stretches the entire length of Longboat Key, Florida, located in southwest Florida. The northern half of the island falls in the Manatee County jurisdiction and the southern half of the island falls in Sarasota County jurisdiction. The corridor is located on a unique barrier island with scenic views of the Gulf of Mexico on the west side of the roadway.

Gulf of Mexico Drive is classified as a major collector per FDOT and currently has two-lanes of undivided roadway for the majority of the corridor with left turn lanes at entrances to businesses and neighborhoods. There are instances of shared turning lanes and right turn lanes into points of interests.

In terms of bicycle facilities, there are bicycle lanes present on both sides of the roadway throughout the corridor. The bicycle lanes in the Manatee County portion of the island are in poor condition compared to that of the bicycle lanes in Sarasota county. Poor conditions include narrow lanes, cracked pavement, and rough surfaces. During the public outreach, several community members referenced that they stick to riding only in the Sarasota County bicycle lanes to avoid the safety issues present in Manatee County. There are pavement markings throughout the corridor as well as signage to notify roadway users of the presence of bicyclists in the bicycle lane.

The pedestrian facilities include a trail, sidewalk, crossings, and flashing beacons. There is an 8" existing trail on the east side of the road throughout the length of the corridor allowing for



Cyclist Along the Northern Section of Gulf of Mexico Drive

different types of users on the facility such as dog walkers, bicyclists, strollers and more. Intermittent sidewalk exists along the west side of the roadway throughout the south section of the corridor, but is lacking along much of the central and north sections.

SAFETY

A preliminary crash analysis was performed on the corridor using Signal 4 Analytics to determine crash history for the period from January 2016 - October 2021. The analysis found 114 total crashes along the corridor during this time period.

- 34 rear end crashes, 14 lane departure crashes, 10 head on crashes
- 10 crashes involved a bicyclist and 6 crashes involved a pedestrian
- 60 crashes flagged with older driver

- 38% injury rate including 3 fatal crashes:
 - 2018 pedestrian crossed south of Cedar Street struck by NB vehicles dark morning
 - 2019 pedestrian unloading vehicle from trailer on side of road near Player's Club struck by NB vehicle dark evening
 - 2019 dusk angle from En Provence with SB emergency vehicle



During the public workshop, it was noted by several residents that there are intersections that have poor site lines for both pedestrians and motorists due to overgrown landscaping. Heavy pedestrian activity is one of the unique characteristics of the island. There are more than 10 pedestrian made footpaths in the Central section of the island that lead from the west side of the roadway to the beach. FDOT sanctioned crosswalks and signaled crossings with Rectangular Rapid Flashing Beacons (RRFB) exist at various high pedestrian locations along the corridor. Reported near-misses between motorists and pedestrians have raised concerns regarding the existing crossing facilities. To better understand the pedestrian activity and work that has been done to address safety concerns, previous plans, studies, and projects were reviewed to ensure project recommendations are consistent with previous efforts and advancing them as well.

PREVIOUS PLANS, STUDIES, AND PROJECTS

This Plan builds upon previous plans, studies, and projects that have taken place along the Gulf of Mexico Drive Corridor in recent years. Much of this work has been completed for the FDOT. These efforts included:

FDOT | Longboat Key Crosswalk Enhancements | Ongoing

This program originated with the Town meeting with FDOT to discuss enhancements to the mid-block crosswalks on Gulf of Mexico Drive as a result of various reports of "near misses" by those using the existing crosswalks currently marked with Rectangular Rapid Flashing Beacons (RRFB). There are six (6) of these marked crossings within the Town. FDOT suggested the possibility of a project on Longboat Key to enhance three locations within the Town. These crossing treatments are as follows:

- One location would outfit an existing RRFB with an enhancement that includes in-pavement warning lights that work in concert with the RRFB near North Shore Road in the north section.
- Two other locations would involve a high-pedestrian count location that would be outfitted with a Pedestrian Hybrid Beacon (PHB), formerly known as a HAWK signal. These locations are at Bayfront Park (central section) and Country Club Shores (south section).

The Town continues to move forward with the Broadway roundabout, which will help address another highpedestrian crossing location. FDOT is supportive of the roundabout.

The Town met with FDOT for a follow-up meeting based on the previous discussion on additional marked crossings. FDOT provided several suggestions for Town consideration:

INTERNALLY ILLUMINATED RAISED PAVEMENT MARKERS (IIRPM) | 2018/2019

iiRMP are in-pavement light features that light up when the button is pressed. Funding and timing for this suggestion would need to be further determined between the Town, FDOT and the MPO. The Town would be required to maintain this enhancement. An FDOT approved provider has informed the Town that initial installation carries a 2-year warranty. If the Town would like to contract with them for ongoing maintenance, their current annual rate is approximately \$4,000 per 2-lane crossing. This type of improvement can only be implemented on a roadway with a speed limit of 35mph or below.

RAISED CROSSWALKS WITH STEP-DOWN POSTED SPEED TO 35-MPH | 2018/2019

A raised crosswalk can be added over the top of the existing crossings, creating a physical feature that a vehicle must slow down to traverse. FDOT believes these can be placed on 35-mph roadways and can be traversed at the lower speed, but not on a 45-mph roadway. Installation on Longboat Key would require a speed limit change on Gulf of Mexico Drive segments at each of the locations where the pavement would be raised.



The challenge with this treatment on Gulf of Mexico Drive, where pedestrian and vehicle traffic are highly seasonal, is that is requires drivers to slow down at the location whether or not a pedestrian is present. The Town did not prefer this option.

STREET LIGHTING

As part of the Utilities Undergrounding Project, lighting will be installed at each of the 6 mid-block crossings. FDOT agrees that this should greatly improve crossing visibility at dawn, dusk, and at night and supports the Town's effort. New midblock crossings on FDOT roadways are now required to have lighting.

R1-6A IN-PAVEMENT SIGN

A R1-6A In-Pavement Sign is an in pavement vertical sign similar to what was installed at Satellite Beach, Florida. FDOT indicated these are more geared for use on multi-lane roads, and tend to get hit on both low and high-speed roadways.

ENHANCED LAW ENFORCEMENT

FDOT also mentioned enhanced law enforcement presence, such as staging a patrol car at the crossing(s) from time-to-time, and also ensuring visibility with no vehicles obstructing sight distance near the crossings. The Police Department is aware of the safety enhancement discussion and will also be assisting the Town with monitoring the crossings from an enforcement standpoint.



R1-6A In-Pavement Sign



Figure 1: Location Map for Barrier Islands Traffic Study. Source: FDOT

FDOT | Right-of-Way Parking Report and Speed **Zone Study on SR 789** | *September 2020.*

In response to several fatalities along the roadway within the Town's jurisdiction between 2018— 2019, the Town engaged the FDOT to review opportunities for safety enhancements along Gulf of Mexico Drive. The Town met with the FDOT twice in 2020 to discuss the fatal crashes, "No Parking" sign regulations, a speed study, permanent counting stations, maintenance of traffic, and Town of Longboat Key Police Enforcement. The speed study took place on March 3, 2020 and evaluated five (5) different locations along the corridor:

- 1. Between Longboat Club Road and New Pass (posted 35 mph)
- 2. North of Harborside Drive (posted 45 mph)
- 3. South of Buttonwood Cove Condos (posted 45 mph)
- 4. South of Spanish Main (posted 45 mph)
- 5. South of North Shore Road (posted 35 mph)



The study found that locations 2, 3, and 4 are within the guidelines for the 45 mph posted speed limit. Locations 1 and 5 are outside the posted 35 mph speed guidelines, however no increases in posted speed limits were recommended at that time. The summary of crash data analysis showed that the corridor overall has a much lower crash rate than other similar roadways of its kind in FDOT District 1.

FDOT | Sarasota/Manatee Barrier Islands Traffic Study

Winter 2017-Winter 2020

FDOT conducted a study to examine the feasibility of improving the overall traffic operations and circulation of motorized and non-motorized traffic on the Sarasota/Manatee Barrier Islands. To ensure a comprehensive approach, this study evaluated a variety of elements including travel patterns of users on the islands, trips on and off the islands, destination points, existing transit service, existing parking facilities, bicycle/pedestrian facilities and needs, and land development as they are related to parking. A unique element that was considered for this study was event operations planning in relation to seasonal visitors. It is also recognized that off-island improvements may be evaluated in both Sarasota and Manatee counties.

The study was comprised of three phases. Phase 1 included reviewing available studies/transportation plans that have been performed and summarizing the recommendations. Phase 2 of the project included observations, collection of traffic data, parking studies, etc. Review of these elements will lead to identification of the issues present on the islands. Phase 3 included a transportation management plan and recommendations to improve the current infrastructure issues, if needed, based on conclusions made during Phase 2. The following are examples of general and specific recommendations that were provided by this study to improve safety along the corridor:

- Complete discontinuous sidewalk section to increase pedestrian safety and connectivity
- Add detectable warning surfaces at the curb ramps that do not have them to increase pedestrian safety and connectivity
- Potentially place a roundabout at Gulf of Mexico Drive and Longboat Club Road
- Develop a phone app or other methods to provide direct communication to guests, customized travel directions, "no parking near beaches" types of messages
- When Longboat Pass Bridge is replaced, new bridge should include a "flex" lane

FDOT | Gulf of Mexico Drive and Sutton Place Pedestrian and Bicycle Crossing Counts *March 2019*

Pedestrian and bicycle counts were taken at the intersection of Gulf of Mexico Drive and Sutton Place in the North section of the island. The observation period as on March 22, 2019, and March 23, 2019 from 10:00 AM to 8:00 PM on both days. Most crossings by pedestrians during both days occurred just north of the study intersection. Most bicycle crossings occurred closer to the project intersection and occurred prior to 3:00 PM. Validating the unique environment of Gulf of Mexico Drive, pedestrian crossings were greatest during the evening hours presumably to enjoy the sunset on the beach.



FDOT | Gulf of Mexico Drive from South Drive to Broadway Street Pedestrian and Bicycle Crossing Counts *March 2018*

This study was performed to better understand pedestrian and bicycle traffic from South Drive to Broadway Street. Counts were taken on Friday, March 16, 2018, and Saturday, March 17, 2018. The observation period was 10 hours while weather conditions being favorable. It was sunny with a low temperature of 62 degrees Fahrenheit and a high of 72 degrees Fahrenheit. General observations and findings are listed below:

- Friday pedestrian counts were highest from Whitney Beach to Broadway Street
- Saturday pedestrian counts were highest near Centre Shops of Longboat Key
- Both Friday and Saturday bicycle counts were from Whitney Beach to Broadway Street
- Traffic stopping throughout the day to allow pedestrians/bicyclists to cross from South Drive to Bayport Way
- Majority of pedestrian/bicycle crossed S.R. 789 (Gulf of Mexico Drive) at the entrance/exit of the Windward Bay Condominiums from Longboat Harbour to Windward Bay
- Pedestrians and bicyclists crossed S.R. 789 (Gulf of Mexico Drive) at random locations near Centre Shops
- High pedestrian traffic volume crossing S.R. 789 (Gulf of Mexico Drive) at Broadway Street. Bicyclists mainly used the bike lane, some rode on the sidewalk

ICE Evaluation | PD&E for Roundabout at SR 789 and Broadway

In 2019 a PD&E Study was completed for a potential roundabout at SR 789 (Gulf of Mexico Drive) and Broadway Street for the Town of Longboat Key. Assistance for the project was received from FDOT District 1 on the Intersection Control Evaluation which was approved in Stage 1+ including Sidra analysis. Preliminary concepts, cost estimates, and environmental impacts, were developed as part of the PD&E. FDOT advised that the project could utilize the Non-Major State Action checklist during the design phase because the intersection was within existing right-of-way. The proposed roundabout is currently under design, which is scheduled to be completed in late 2022.

Design for Country Club Shore Left-turn Lanes | Current

The purpose of this study was to investigate adding left turn lanes and landscaped medians for a segment of SR 789 (Gulf of Mexico Drive) from Channel Lane to Longboat Club Road. The scope of work included analyzing how left turn lanes would impact the segment environmentally, from a safety perspective, and usability of different modes of transportation among other design variables. The following project recommendation was made based on the analysis which was performed. The project is scheduled to be completed by fiscal year 2024–2025.

• Add 12 feet wide pavement on the southbound side of the roadway for an ultimate typical section configuration of 44 feet wide pavement consisting of two 11 feet travel lanes, 10 feet left turn lane, and two six feet wide paved shoulders w/ double 6-inch white edge lines and symbol markings for bike lanes. Five landscaped median islands are also proposed.

SITE VISIT

A site visit with the client was performed after the Town Commission meeting that was held on March 21st, 2022. A windshield survey was performed of the South section of the corridor, from Bay Isles Parkway to New Pass Bridge. The purpose of this visit was to analyze the ease of implementation of the draft typical section



concepts. Due to the large amount of public right-of-way, existing bicycle and pedestrian facilities, fewer crossings due to land uses, and the ability to place raised landscaped medians within existing striped areas, it was determined this section should be considered ready for design and implementation, as the existing condition is most consistent with the draft typical section concepts.

Pedestrians were observed using the facilities along with recreational and serious bicycle riders using the sidewalks and bicycle lane. Landscaping presented itself as a major issue as several site lines north and south at intersections and crosswalks were impeded by overgrown trees and shrubbery. Roadway design could play a role in site issues at stop signs being located behind existing trees and large curb radii hinder pedestrians from crossing roadways safely and motorists to turn left or right safely as well.



Photo from Site Visit to Intersection of Broadway and Gulf of Mexico Drive

The major pedestrian crossing location at Country Club Shores is being addressed by FDOT by implementing a PHB as previously discussed. The Longboat Club roundabout can be considered at the time of additional development at the Longboat Club Resort.

RESILIENCE

Best practices for planning for long term resilience recommend expanding mobility options to reduce automobile dependency and carbon emissions. Policy decisions such as establishing areas with mixed use development patterns enhance walking and bicycling as safe and viable modes of transportation. Additional improvements to improve resilience include raising and improving the roadway and drainage of the facility where outfalls are limited to mitigate nuisance flooding. Additionally, opportunities to improve water quality with green infrastructure and low impact design, such as natural stormwater features, using native landscaping, adding permeable pavers where possible, and reducing impervious surfaces should be considered. There are low points along the 4000-5500 blocks of the corridor that experience nuisance flooding and high water during heavy rain events that are non-tidal and without storm surge. Also, specific locations where this is a concern include:

- 4651 Gulf of Mexico Drive
- 4765 Gulf of Mexico Drive
- 6609 Gulf of Mexico Drive

Longboat Key is a barrier island that is vulnerable to flooding and extreme weather events such as hurricanes, and as the main roadway on the island, planning for the future design for Gulf of Mexico Drive needs to include mitigation options to ensure resilience to these shocks and stressors. As previously mentioned, the Town is already undertaking an undergrounding project to bury the island's overhead transmission and communications cables along the corridor.

Gulf of Mexico Drive Complete Street Corridor



Additionally, the Sarasota/Manatee MPO is currently undertaking a Resiliency/Vulnerability Assessment which has identified the Gulf of Mexico Drive as a Tier I facility. Tier I facilities are the most vulnerable facilities that carry the most traffic and are either evacuation routes or connect to medical facilities. Gulf of Mexico Drive is exposed to multiple threats, including category 1 and 3 storm surge as well as nuisance flooding.

To mitigate the impact from extreme weather events such as hurricanes, mitigation strategies for the corridor should include removing potential impediments that could negatively impact pedestrian, motorist, and bicyclist safety and mobility. The Town has previously enacted an initiative to remove Australian Pines from the island, offering a cash reward for removal as well. This type of tree has shallow root systems and topples over easily in high wind conditions. During extreme weather events such as tropical storms, hurricanes and heavy rain events, especially events that overlap with high/king tides, nuisance flooding has been observed throughout the corridor and is documented in the public comments. Although this plan does not specifically address drainage and stormwater management improvements or recommendations, it is recommended that flood mitigation efforts, such as raising the roadway, should be prioritized for the Town and the FDOT moving forward to reduce this vulnerability.



Figure 2: Hurricane Irma Damage Source: City of Sarasota



TOWN OF LONGBOAT KEY COMPREHENSIVE PLAN

In order for this Plan to be implemented, one of the early critical steps was to identify ways the Plan was consistent with existing Town of Longboat Key planning documentation. The following references an objective and policies found in the Town of Longboat Key Comprehensive Plan that this Plan would assist in accomplishing. Consistency in recommendations with existing documentation suggests sound due diligence, further establishes key concepts such Complete as Streets and Context Classification, and assists in creating a uniform vision for Gulf of Mexico Drive and the town of



Figure 3: Map of Town of Longboat Key Future Multimodal Transportation. Source: Kimley-Horn

Longboat Key as a whole. The Town of Longboat Key Comprehensive Plan is currently being updated at the time of this report.

The following objective, policies, and strategies are from the Town of Longboat Key Comprehensive Plan. The consistency between this Plan and the Comprehensive Plan are rooted in Complete Street tools.

MOBILITY GOAL 1: PROVIDE FOR SAFE, CONVENIENT, AND EFFICIENT MOVEMENT OF PEOPLE AND VEHICLES.

- **MOBILITY OBJECTIVE 1.3:** Apply the principles of "Complete Streets" and "Context Sensitive Design" while maintaining the capacity and functional integrity of travel corridors.
- **MOBILITY Policy 1.3.1:** Establish Mobility and Quality Levels of Service and/or minimum standards of service for all multi-modal components.
- **MOBILITY Strategy 1.3.1.2:** Maintain and improve pedestrian access along both sides of Gulf of Mexico Drive and one side of collectors and arterials. Coordinate with FDOT to provide safe pedestrian crossings on Gulf of Mexico Drive.



- **MOBILITY Strategy 1.3.1.3:** Coordinate with FDOT to maintain bicycle lanes on both sides of Gulf of Mexico Drive and to maintain a multi-use path on the east side of Gulf of Mexico Drive.
- **MOBILITY Strategy 1.3.1.4:** Work to provide a multi-use path/sidewalk on the west side of Gulf of Mexico Drive.
- **MOBILITY Policy 1.3.2:** Coordinate with FOOT to apply "complete street/context sensitive" design principles for the incremental improvement of Gulf of Mexico Drive.
- **MOBILITY Strategy 1.3.2.1:** Guide both public and private investment, prepare and adopt design guidelines for the incremental improvement of Gulf of Mexico Drive.
- **MOBILITY Policy 1.3.3:** Apply "complete street / context sensitive" design principles to the improvement and development of collector and local streets.
- **MOBILITY Strategy 1.3.3.1:** Guide both public and private investment, prepare and adopt design guidelines for the improvement and development of collector and local corridors.
- **MOBILITY Policy 1.3.4:** Direct investment in infrastructure to maintain Mobility Quality/Levels of Service and functional integrity of travel corridors.
- **MOBILITY Strategy 1.3.4.1:** Periodically identify mobility infrastructure needs to correct deficiencies and meet future demands.



• **MOBILITY Policy 1.3.5:** Monitor future projections for sea level rise and resiliency to ensure transportation facilities and mobility is maintained in the Town into the future.

Figure 4: Map of Coastal High Hazard Area. Source: Kimley-Horn



Framework Plan Toolkit

The Town's vision of creating a complete street on the Gulf of Mexico Drive Corridor that includes pedestrian and bicycle enhancements while maintaining current traffic and is resilient provided the blueprint for the future of the Town of Longboat Key's Gulf of Mexico Drive Corridor Plan. This chapter focuses on the creation of a framework plan that identifies planning recommendations that can be implemented and constructed along the entire corridor as funds become available for roadway improvements and leverage opportunities for investment.

Within the Framework Plan, there are tools that can be applied to the Gulf of Mexico Drive to mitigate speeding, create better pedestrian and bicyclist infrastructure along the corridor, and solve other issues. Community concerns could be addressed by multiple measures, and there are no one-size-fits-all solutions. It is important to consider each specific concern and select a measure, or measures, based on the anticipated impact, effect, cost, and aesthetic elements.

The Framework Plan improvements have been grouped into the following six categories:

Pedestrian and Bicycle Improvements	Roadway Improvements	Intersection & Crossing Improvements	Traffic Calming Tools	Placemaking Design Improvements	Sustainability and Resilience
					improvements

1. PEDESTRIAN AND BICYCLE IMPROVEMENTS

In order to create great streets, improvements are needed to provide safer and more convenient pedestrian infrastructure. What follows is a description of selected pedestrian improvements for implementation along Gulf of Mexico Drive, including sidewalks, multi-use trail, and pedestrian-scale lighting.



SIDEWALKS

Sidewalks improve neighborhood connectivity, promote recreation and active transportation, and enhance safety for non-motorists. Sidewalk design can vary based on context (e.g. urban versus suburban), activity, and travel behavior. Wider sidewalks enhanced with shade trees can create a more comfortable pedestrian environment.

Sidewalk along Bayfront Park in Longboat Key, FL



Legacy Trail in Sarasota, FL



Pedestrian Scale Lighting in Gainesville, FL



Buffered Bicycle Lanes

MULTI-USE TRAIL

An adequately wide multi-use trail, or shared-use path, is separated from vehicle traffic and allows for two-way recreational and active transportation activity. Multi-use trails provide a safer, more pleasant, and low stress experience for pedestrians, bicyclists, wheelchair users, skaters, and other users.

PEDESTRIAN SCALE LIGHTING

Nationally, two-thirds of all pedestrian fatalities occur during low-light conditions. The quality, placement, and sufficiency of lighting help create safe environments for pedestrians and motorists.

BUFFERED BICYCLE LANES

Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane



2. ROADWAY IMPROVEMENTS

Achieving great streets also involves engineering and maintenance improvements to the roadway that will improve safety, functionality, and the aesthetics of the built environment. What follows is a list of potential roadway improvements identified for implementation along Gulf of Mexico Drive, such as repaving, restriping roadway markings, and speed limit reduction.



Repaved road in Pasco County, FL



Restriped road in Tampa, FL

REPAVING THE ROADWAY

Repaving the roadway improves safety by improving traction and reducing damage to vehicles, and can also make roadway markings easier to read and last longer. Repaving roadways includes filling cracks in the road, which prevents water from seeping under the pavement and forming potholes.

RESTRIPING ROADWAY MARKING

Roadway markings play a vital role in conveying information and guidance to drivers, pedestrians, and bicyclists. Roadway markings indicate lane separation, upcoming conditions, and where passing is permitted. It is important that roadways are restriped so that the markings can be clearly visible to roadway users. Restriping also creates an opportunity to narrow lanes which does not reduce safety but increases friction between motorists and results in slower speeds.



Speed Limit and Crossing Signage in Jupiter, FL

REDUCED SPEED LIMIT

Having the appropriate speed limit on a street improves safety for all users of the street, including drivers, pedestrians, and bicyclists.

3. INTERSECTION & CROSSING IMPROVEMENTS

Great streets must also be safe and convenient to cross and are accessible for all users. Improvements to intersection and crossings for implementation throughout Gulf of Mexico Drive are identified and described in this section, such as ADA compliant curb ramps, high emphasis crosswalks, rectangular rapid flashing beacons, midblock crossings, and standard signage.



ADA Curb Ramp in Cape Coral, FL



High Emphasis Crosswalk in Sarasota, FL

ADA COMPLIANT CURB RAMP

ADA compliant curb ramps slope gently into the roadway, making it possible for people using a wheelchair, scooter, walker, or other mobility device to travel safely between the sidewalk and the roadway.

HIGH EMPHASIS CROSSWALK

Crosswalks along high-volume roadways should be painted in a way that makes it extremely clear to all users of the intersection – including cars, buses, pedestrians, and bicyclists – that there are designated pedestrian zones of the intersection. High visibility crosswalks are clearer and more noticeable to oncoming vehicles, thus creating a safer environment for those using the crosswalk.





Source: Federal Highway Administration

PEDESTRIAN HYBRID BEACON CROSSINGS

A Pedestrian Hybrid Beacon (PHB) signal is a traffic signal designed to make it easier for pedestrians to cross a busy roadway safely by alerting motorists via a flashing signal system that a pedestrian needs to cross.



RRFB in Sarasota, FL



RRFBs are appropriate on roadways with a speed limit of 35 MPH or less and enhance safety by increasing motorist awareness of potential pedestrian conflicts at unsignalized and mid-block crossings.



Mid-block Crossing Source: NACTO

MID-BLOCK CROSSING

Mid-block crosswalks are appropriate on roadways with a speed limit of 35 MPH or less and when PHBs are not present. They are designated crossing areas that provide pedestrians a safe place to cross the street between intersections.



Pedestrian Crossing Signage

STANDARD SIGNAGE

At unsignalized intersections, standard crosswalk signage will emphasize and alert drivers to the presence of a crosswalk. Crosswalk signage also benefits pedestrians by directing them to cross at appropriate, safe locations.

4. TRAFFIC CALMING TOOLS

Creating and improving multi-modal facilities will also create a more equitable and environmentally sustainable community. In order to achieve these goals in Gulf of Mexico Drive, a series of traffic calming tools have been identified here, such as pedestrian safety islands and speed feedback signs.



Pedestrian Safety Island, Source: pedbikesafe.org



Dynamic Speed Display Device (DSDD)

PEDESTRIAN SAFETY ISLAND

Pedestrian safety islands provide pedestrians with a safe place to stop halfway through a crossing, thus reducing the time pedestrians are exposed to traffic.

SPEED FEEDBACK SIGNS

Speed feedback signs are a traffic calming device that uses radar to detect the speed of approaching vehicle and relay vehicle speed information to drivers.





Mini-roundabout in St. Petersburg, FL

ROUNDABOUT

Modern roundabouts are low-speed, compact designs and are potentially the most economical, safest, and most aesthetic form of traffic control for many intersections. A landscaped visual obstruction in the central island obscures the driver's view of the road beyond, to discourage users from entering the roundabout at high speeds.



Source: Federal Highway Administration



Source: NACTO

RAISED LANDSCAPE MEDIANS

Raised landscape medians separate opposing streams of traffic and restrict turning movements. They can facilitate pedestrian crossings, improve pedestrian visibility to motorists, slow motor vehicle speeds, and provide space for lighting and landscaping."

CHICANES

Chicanes are offset curb extensions on residential or low volume downtown streets, which slow vehicle speeds and increase the amount of public space available on a corridor that can be used for seating, bike racks, landscaping, and other amenities.

5. PLACEMAKING DESIGN IMPROVEMENTS

Placemaking design improvements will help create a strong sense of place on Gulf of Mexico Drive. There are a series of recommendations outlined in this section which could be implemented through a placemaking program, such as wayfinding, street furniture, and green infrastructure.



Wayfinding Sign in Port Canaveral, FL



Sidewalk Benches with Trees



Low Impact Development (LID) in Gainesville, FL

WAYFINDING

A comprehensive wayfinding system provides residents and visitors with directions to districts and destinations while encouraging walking and bicycling.

STREET FURNITURE

Street furniture can improve the comfort and appearance of the sidewalk and contribute to the character of a street or neighborhood. Street furniture can include elements such as benches, pedestrian scale lighting, public art, bicycle racks, trash receptacles, and planter boxes.

LANDSCAPING

Landscaping can not only be a safety feature specifically low rise or low-profile landscaping in verges but also can create a strong sense of place and establish/keep neighborhood character. Existing native landscaping should be enhanced instead of removed to further placemaking improvement efforts.



6. SUSTAINABILITY AND RESILIENCE IMPROVEMENTS



Bioswale in Sarasota, FL

GREEN INFRASTRUCTURE

Green infrastructure can be installed throughout a community to provide benefits to both humans and the natural environment. Green infrastructure is used to promote clean air and water, strengthen the local ecosystem, protect biodiversity, and beautify the community. Some examples of green infrastructure include rainwater gardens, native Florida landscaping, permeable pavements, and habitat and wetland restoration.



Bascule Bridge Improvements, Pompano Beach, FL



Cabbage Palm Source: Adobe Stock



Flooded Road Source: Adobe Stock

INFRASTRUCTURE HARDENING

Infrastructure hardening is the act of protecting or strengthening components of an asset and can also include maintenance and operations. Some examples of infrastructure hardening include relocation of facilities, creating redundant facilities and routes, retrofitting infrastructure to adapt to extreme weather, raising a roadway, and replacement of a transportation facility with one that is more resilient.

TREE SPECIES

Increase the presence of wind resistant tree species along the corridor and remove invasive tree species like Australian Pines that have the potential to fall and block evacuation routes. Include native tree species in landscaping when implementing transportation improvements, as these species are well-adapted to the local climate and require less maintenance.

HIGH WATER ALERT LIFESAVING TECHNOLOGY (HALT)

Install high water alert lifesaving technology at roadways that have frequent flooding to prevent incidents.



Design Standards

RECOMMENDATIONS FOR GULF OF MEXICO DRIVE

Taking all of these framework plan recommendations into account, as well as the public outreach and discussions with Town staff and commission, and FDOT, the following typical sections were created for the Gulf of Mexico Drive Corridor to serve as the design standards for the corridor.

There are two typical sections: the first is without a median. The second has a landscaped, raised median island with a curb. These sections differ from the existing conditions on the corridor in several ways, which will be described in more detail on the following pages. Additional pavement will be required for the new standard buffered bike lanes, which will require drainage work.

A visual was created to show that capacity for emergency vehicles will be maintained with these proposed concepts. In addition to maintaining capacity for emergency vehicles, the 11 foot travel lanes also preserve capacity for freight vehicles, such as car carriers and grocery/food service delivery vehicles to continue to travel safely along the corridor. As part of the initial creation of the typical sections, local emergency services were contacted to ensure any updates or redesigns to the existing roadway would not negatively impact emergency vehicles or response times. Positive feedback was received as well as support for the typical sections. Every second matters in emergency situations. These Complete street concepts and the Framework Plan toolkit were created with safety as a driving principle for all users, including larger vehicles that may access the corridor more infrequently compared to the number of bicyclists and pedestrians who are also using these facilities.

Beyond the typical sections, a roundabout concept has been designed for the intersection of Broadway Street and SR 789/Gulf of Mexico Drive. This concept, and a close-up view of the concept, follow the typical section

graphics.



Photo of Bicyclists on Gulf of Mexico Drive

Gulf of Mexico Drive Complete Street Corridor





Figure 5: Typical Section 1 Without Median

Description: Beginning with the right-of-way (R.O.W), there is 100 feet of space to create a various amenities and facilities. This typical features **two lanes**, 11 feet each, of undivided roadway. A **2-foot-wide warning buffer space** with two stripes is present along the right side of the R.O.W. One raised stripe closest to the center lane that indicates to motorists that they are getting too close to the bicycle lane and potentially impeding on it, putting themselves and bicyclists at risk of injury. **6-8-foot sidewalks** are present on the west side of the roadway which would fill in existing gaps in the sidewalk network. The southern boundary of the proposed sidewalks on the west side of Gulf of Mexico Drive is the Country Club Shores crosswalk. The **existing bicycle lanes would be expanded to 5 feet on both sides** of the road with **6-foot verge areas** in between the 8-foot sidewalk and the 5 foot bicycle lane on the west side of Gulf of Mexico Drive. **The combined bike lane and buffer provide 7 feet.**

The verge width and low landscaping allow for increased visibility for pedestrians, a place to pull off the roadway for bicyclists, if need be, and a place for law enforcement, emergency vehicles, work trucks, and landscaping vehicles to pull off the roadway. This safety feature helps to further eliminate near-miss accidents between parked service vehicles or law enforcement and those using the bicycle lane and multi-use path.

Bicycle lanes have lane markings indicating the lane is for bicyclists only. This lane is intended for serious bicyclists as well. The option to provide green striping indicates that the lane is for bicycles and to expect there to be bicycle traffic in that area at all intersections along the corridor.

The same verge can be found on the east side in between the bicycle lane and a **12-foot multi-use path**. The multi-use path will meander where right-of-way allows for additional width. There is a dotted line on the path to assist in separating directional traffic. This path allows for micromobility use, large walking/running groups, and strollers without impeding on the roadway or protected bicycle lanes. **Landscaped areas** with potential for larger trees and shrubs are to the far east and west and range in size between 14 feet and 16 feet depending on location on the corridor.

Gulf of Mexico Drive Complete Street Corridor





Figure 6: Typical Section 2 with Landscaped, Curbed Median

Description: This section is similar to the previous typical section, but includes a raised, landscaped median. Beginning with the right-of-way (R.O.W), there is 100 feet of space to create a various amenities and facilities. This typical features **two lanes**, 11 feet each, with an **11 foot wide landscaped median** that can also serve as a **pedestrian island**. Median lengths can and will vary depending on location on the corridor. In the above example, an **11-foot left turn lane is present**. Both landscaped medians and left turn lanes would be present where applicable and would not cover the entire corridor. A **2-foot-wide warning space** with two stripes is present along the right side of the roadway. One raised stripe closest to the center lane that indicates motorists that they are getting too close to the protected bicycle lane. **6-8-foot sidewalks** are present on the west side of the roadway which would fill in existing gaps in the sidewalk network. The southern boundary of the proposed sidewalks on the west side of Gulf of Mexico Drive is the Country Club Shores crosswalk. The **existing bicycle lanes would be expanded to 5 feet on both sides** of the road **with 6-foot to 8-foot verge areas** in between the 8-foot sidewalk and the 5 foot bicycle lane on the west side of Gulf of Mexico Drive. **The combined bike lane and buffer provide 7 feet**.

The verge width and low landscaping allow for increased visibility for pedestrians, a place to pull off the roadway for bicyclists, if need be, and a place for law enforcement, emergency vehicles, work trucks, and landscaping vehicles to pull off the roadway. This safety feature helps to further eliminate near-miss accidents between parked service vehicles or law enforcement and those using the bicycle lane and multi-use path.

Bicycle lanes have lane markings indicating it is for bicyclists only. The option for green striping indicates that potential conflict between bicyclists and pedestrians, bicycle traffic in that area at all intersections along the corridor.



The same verge can be found on the east side in between the bicycle lane and a **12-foot multi-use path**. The multi-use path will meander where right-of-way allows for additional width. There are dotted line markings on the path to assist separating the directional flow. This path allows for micromobility use, large walking/running groups, and strollers without impeding on the roadway or protected bicycle lanes. **Landscaped areas** are to the far east and west and range in size between 7 feet and 12 feet depending on location on the corridor.

While this is the "typical section," which will be applied to all areas where the right-of-way is 100 feet in width, there are also areas along the corridor where the right-of-way is more constrained and the implementation of this concept will result in impacts to existing landscaping and utilities. Where this is the case, the potential for a narrower sidewalk, multi-use path, and/or verge strip will be considered.



Figure 7: Typical Section 1 with Emergency Vehicle





Figure 8: Broadway Street Roundabout

Description: The Broadway Street intersection roundabout is a traffic calming feature designed for all users. The roundabout is one lane with the same multi-use path as described earlier present on the east side of the roadway. Splitter islands at each leg of the intersection are key safety features along with 2-stage crosswalks. In-pavement lighting at each crosswalk will improve pedestrian safety and visibility. The center of the roundabout can be landscaped or home to local artwork or structures that speak to the character of Longboat Key.

Unlike the bicycle lanes found elsewhere in the corridor, there are lengthened solid green merging areas for bicyclists to enter the travel lane, take the lane, and proceed through the roundabout. Because some roadway users may not know how to safely use a roundabout, it is recommended that community outreach continue through implementation and after to educate bicyclists and motorists on using a roundabout. Signage should be present to notify recreational bicyclists and pedestrians that the multi-use path is ending to help avoid potential crashes.

BROADWAY STREET ROUNDABOUT

Figure 9: Broadway Street Roundabout

Photo of landscaping near the intersection of Broadway Street and Gulf of Mexico Drive

As previously mentioned, resilience is important to the Town, and therefore native plants should be prioritized in landscaping along the corridor to ensure the plantings are low maintenance and well-adapted to their coastal climate. Adaptation to heat will ensure that alternative modes of transportation will continue to be viable in the future, and therefore shade along the multi-use path on the eastern side of the corridor should be prioritized. Removal of invasive species should also be a priority along the corridor as this plan is implemented.

Low level plantings throughout the "clear zone," as identified on the typical section concepts, will be required by the FDOT. Additionally, several community members expressed the desire to keep the plantings low along the verge between the roadway and the sidewalk and multi-use path where there will be medians so that maintenance vehicles and others can pull off into this area to allow for emergency vehicles and also be out of the bicycle lane, and also maintain sight lines.

A list, as well as some images of potential plantings for a landscape palette are available in Appendix D. These plantings are well suited to Gulf of Mexico Drive's coastal environment. Many are native and well adapted to the climate on a barrier island. Additionally, the plantings are consistent with the coastal theme and will require little maintenance.

LANDSCAPING

One aspect of the vision for the Gulf of Mexico Drive Corridor is that Longboat Key maintain the sense of place, and landscape design complementing the existing lush private and public landscaping on Longboat Key now and in the future. As a barrier island, there are opportunities to utilize a coastal landscape palette along the corridor, consistent with what you see along the corridor today.

Currently, there are a mix of different landscaping palettes throughout the corridor. Each community and development have their own unique landscape design. Some of these plantings are mature, extending into the right of way, and will potentially be impacted by the implementation of this Plan. Existing landscaping will be maintained where feasible.

Photo of native landscape plantings at Bayfront Park on Longboat Key

LEFT TURN LANE ANALYSIS

An analysis for left turn lanes from Gulf of Mexico Drive into the communities of Gulf Shore of Longboat Key (Main Street Drive), Emerald Harbor (Binnacle Point Drive), Spanish Main Yacht Club (Spanish Drive), and Buttonwood Harbour (Buttonwood Drive) has been requested. Turn lanes can help limit queuing for continuous flow of traffic and could have safety benefits for motorists to minimize rear ending. The addition of turn lanes could have drawbacks from the view of multi-modal accessibility and safety, however. First, cars in turn lanes can reduce visibility for pedestrians seeking to cross the road as it can be difficult for pedestrians to see what is beyond the stopped car further along the roadway. Furthermore, turn lanes inherently allow cars behind the turning motorist to remain at a continuous high speed. This can be detrimental to the pedestrian's determination on when to cross the roadway. Turn lane creation also requires a larger pavement width within the right of way. This results in longer crossing lengths and more time spent in the roadway for pedestrians. Overall, the addition of left turn lanes should be considered in areas with great need when the queuing of cars lags the flow of traffic and/or when operational safety concerns warrant consideration. A full analysis describing the current conditions, measurements, and opinions of probable cost for potential left turn lane construction is available in Appendix E. The Town Commission confirmed at the December 12, 2022 meeting that left turn lanes should be considered at these locations, as well as throughout the corridor, during the design phase. Additional analysis will be performed during the design phase to determine the need, which is the dominant movement where two-way turn lanes currently exist, and where the benefits of the turn lane outweigh the increased distance for pedestrians to cross.

Implementation Strategy

The implementation strategy identifies and focuses on the highest priority sections and action items to advance the Plan overall. Some action items involve key infrastructure investments in transportation to create a more resilient community. Other priorities may simply result from timing of programmed projects and opportunities to leverage potential grant funding within the plan area. Ultimately, the goal of this chapter is to position the Town of Longboat Key for sustainable long-term success through the implementation of the Framework Plan. What follows is a priority schedule for the Framework Plan Project Recommendations, as well as the Town's Capital Improvements Plan that identifies a menu of project improvement options for the Framework Plan Recommendations, and opinion of probable cost tables for the three sections of Gulf of Mexico Drive. Finally, a summary of available grant opportunities for these types of projects that can supplement the funding that the Town, the Sarasota-Manatee Metropolitan Planning Organization (MPO) and the FDOT have already identified for projects along the corridor. The Town has and will continue to invest in the design and planning phase so that the projects will be shovel-ready. Since Gulf of Mexico Drive is a state facility, this early work is intended to encourage FDOT and the MPO to ultimately fund a project to implement these concepts.

Project Area Map depicting the Implementation Strategy by Section.

Key:

Yellow = South Section: New Pass Bridge to Bay Isles Parkway, 3.4 miles Green = Central Section: Bay Isles Parkway to Bayfront Park (Jessmyth Way), 1.9 miles Purple = North Section: Bayfront Park (Jessmyth Way) to Longboat Pass Bridge, 4.7 miles


PRIORITY SCHEDULE

When setting the priority schedule, it is critical to understand which sections of the corridor have enough rightof-way, locations with increased levels of safety concerns, and existing pedestrian and bicycle facilities to improve ease and justification of implementation. Additionally, certain sections of the corridor have projects that are already funded for design and construction, which will be important to leverage existing funding for projects and efficiency by adding the complete streets design elements to the project. In the short term, continued coordination with the FDOT regarding pedestrian crossing improvements in the central section of the corridor is recommended.

Table 1: Priority Schedule

PRIORITY NUMBER	SECTION	SECTION LIMITS	DISTANCE
1	North	Broadway Street to Longboat Pass Bridge	0.3 miles
2	South	Bay Isles Parkway to New Pass Bridge	3.4 miles
3a	North	Bayfront Park (Jessmyth Way) to Broadway Street	4.4 miles
3b	Central	Bayport Special Crossing Area: Jessmyth Way to South Drive	0.5 miles
Зс	Central	Bay Isles Parkway to South Drive	1.3 miles

The North Section, from Broadway Street to Longboat Pass Bridge, has received the highest priority. The Town will coordinate on future FDOT projects, such as the ones listed below, to incorporate corridor plan elements:

Project 1: 449119-1- SR 789 from Sarasota County Line to Longboat Pass Lead Agency: FDOT Type of Work: Resurfacing Completion Date: FY 2025 Estimated Construction Cost: \$6,194,119 Project 2: Broadway Street Roundabout Lead Agency: Town of Longboat Key Type of Work: Roundabout Completion Date: PE complete FY 2023 Estimated Project Cost: \$1,676,719 (at 60% design) Project 3: SR 789 from Channel Place to Longboat Club Road Lead Agency: Sarasota County Type of Work: Addition of Left Turn Lanes Completion Date: FY 2024 Estimated Project Cost: \$1,441,729 Project 4: SR 789 from Longboat Club Road to Manatee County Line Lead Agency: FDOT Type of Work: Resurfacing Completion Date: FY 2026 Estimated Project Cost: \$6,378,438

The **South Section** is priority #2 as it appears to be in the best condition for implementation from both a rightof-way perspective and the infrastructure that is already in place to implement the project recommendations. There is a potential to add an additional roundabout at the intersection of Longboat Key Road and Gulf of Mexico Drive, as recommended in the BITS.

The **North Section**, from Bayfront Park (Jessmyth Way) to Broadway Street is priority #3a given the resurfacing project scheduled for completion in FY 2025, as mentioned on the previous page. Implementation of this segment will require additional coordination during the design phase as the right-of-way is more limited in this section of the corridor and due to the number of residential driveways and intermittent sidewalks on the western side.

The **Central Section** includes the potential special crossing zone for pedestrians to cross from the residential areas near the Bayport community to the Gulf beaches on the west side of the right-of-way. This special crossing area is priority #3b. Continued coordination with FDOT is recommended regarding this zone. Zone signage is being added by FDOT. The Central Section is the lowest overall cost because it is the shortest and also constrained with no development on the west side. Important to note, there were significant pedestrian safety concerns expressed by the community prior to and during the community workshop.

Priority #3c is the remaining 1.3 mile segment of the **Central Section** from Bay Isles Parkway to South Drive.



CAPITAL IMPROVEMENTS PLAN

The Town can continue to work with the MPO, the FDOT and the counties on how to fund these projects, given that SR 789 is a state road. Investing in the planning and design for these projects in its Capital Improvements Plan (CIP) is one way the Town can ensure the Plan is implemented. These plans typically cover a five-year period to track investment and progress on a project. The Town does not have dedicated funding for corridor plan improvements identified in their 5-year plan at the time this plan was created. It is possible improvements for this corridor can be added to the Town's CIP over time. There are projects and funds in the Fiscal Year 2022 Adopted Budget that correlate with the project recommendations of this plan.

Streets Capital Project Fund

The Streets Capital Projects Fund accounts for major street improvements such as resurfacing and drainage improvements. The design work for Country Club Shores Center Turn Lanes on Gulf of Mexico Drive (SR789) is nearly complete. The budget includes \$300,000 funding for design and engineering of the Broadway Street roundabout and \$130,000 for the development of a complete Streets Corridor Plan for the full length of Gulf of Mexico Drive.

OPINION OF PROBABLE COSTS

GMD and Neighborhood Undergrounding Facilities

On November 3, 2015, the Town's electors voted to authorize the Town's borrowing of up to \$25,250,000 for undergrounding utilities (electric, telephone, cable and fiber optic) and feeder lines on Gulf of Mexico Drive, including Binnacle Point, Spanish Main and Broadway ("GMD Undergrounding Project"). Following voter approval of the GMD Undergrounding Project, the Town Commission posed a second referendum question related to the issuance of additional debt of \$23,850,000, for the purpose of financing the costs of undergrounding the remaining utilities within the neighborhood and side street areas of the Town ("Neighborhood Undergrounding Project"). The voters approved this referendum on March 15, 2016. The project is nearly complete and includes new street lighting at mid-block crossings.

The opinion of probable costs consists of cost per linear foot for each of the corridor sections and as a whole. Costs were determined for each of the typical sections (project recommendations) features including two-lane undivided, curbed medians, and turn lanes. An additional percentage of the probable costs were added to cover mobilization, maintenance of traffic and contingency. Costs are based on 2022 values and do not account for inflation. Several assumptions were made to generate the opinion of probable costs:

- Standard Intersection
 - 36' Standard Driveway Access
 - 2 24 square foot Detectable Warnings
 - 36' of 2'/4' white skips with green paint
 - 2 Bike Symbols
 - 2 Bike Arrows

- Earthwork estimation made by comparing this project to the Gulf of Mexico Drive and Broadway Roundabout project
- Sign and pavement markings for intersections is calculated by taking the cost per intersection, multiplying by the total number of intersections, and then dividing by the total length of the corridor in order to get cost per LF



Table 2: Opinion of Probable Cost by Section 2022 Estimates

These costs per linear foot informed the Total Cost in the table below.

TYPICAL SECTION 1 (TYPICAL 1 TWO LANE UNDIVIDED)	COST PER LF
Milling & Resurfacing	\$41.17
4' Widening	\$28.66
12' Asphalt Trail	\$51.15
8' Concrete Sidewalk	\$51.72
Drainage Elements	\$56.58
Landscaping Elements	\$18.33
Miscellaneous	\$137.90
Total Cost	\$385.51

These costs do not include elevating the roadway. For sections to be elevated, consider adding an additional \$2.5 M per mile of roadway, based on the most recent FDOT Unit Cost per Mile Model for this type of facility from October 2021.

TYPICAL SECTION 2 (CURBED MEDIAN WITH TURN LANE)	COST PER LF
Milling & Resurfacing	\$41.17
4' Widening	\$28.66
12' Turn Lane	\$23.18
11' Curbed Median	\$54.12
12' Asphalt Trail	\$51.15
8' Concrete Sidewalk	\$51.72
Drainage Elements	\$56.58
Landscaping Elements	\$18.33
Miscellaneous	\$138.42
Total	\$463.33

SECTION	NORTH SECTION	CENTRAL SECTION	SOUTH SECTION
Typical 1 Two Lane Undivided \$385.52/IF	17,564 LF	2,803 LF	4,016 LF
Typical 2 Curbed Median \$433.02/LF	3,857 LF	1,501 LF	4,016 LF
Typical 2 Turn Lane \$404.64/LF	5,716 LF	1,116 LF	6,730 LF
Total LF per Section	27,137 LF	5,420 LF	17,583 LF
Cost Per Section	\$10,754,353.66	\$2,182,153.82	\$7,232,033.26
Mobilization 7%	\$752,804.76	\$152,750.77	\$506,242.33
Maintenance of Traffic 10%	\$1,075,435.37	\$218,215.38	\$723,203.33
Contingency 30%	\$3,226,306.08	\$654,646.15	\$2,169,639.98
Total Cost Per Section	\$15,808,900.20	\$3,207,766.12	\$10,631,118.90
Total Overall Project Cost			\$29,647,785.22

As referenced earlier in this Plan, additional OPCs were generated for the four neighborhoods that were examined as part of the Left Turn Lane analysis. Due to the 2022 FDOT Design Manual and the existing condition of Gulf of Mexico Drive at the intersection of those neighborhoods, the OPCs to add a left turn lane at those locations ranges from roughly \$850,000 to over \$1,500,000. This range includes a 20% contingency, mobilization fees and MOT fees for each location. The total length for each turn lane was calculated to be 650 feet. Generating the cost for additional left turn lanes outside of these neighborhoods would require additional research and coordination with the Town Staff on implementation strategies.

During Town Commission Meeting #3, the Commission decided not to add sidewalk for approximately 1.18 miles of the south section. This will reduce costs by approximately \$322,000.



GRANTS

In order to turn these plan recommendations into reality, it is suggested the Town of Longboat Key help FDOT find ways to offset their funding costs via state grants and federal grants to fund the project recommendations. Grants can be awarded for transportation projects, Complete Streets initiatives such as this project, resiliency and sustainability practices, and for continuing existing projects for pedestrian and/or bicycle facilities. Projects like this would generally be better suited for state funding than federal to avoid federal procurement, oversight, management, conditions, and other additional complications and costs for the Town. However, some do merit consideration. The following grants have been identified as options for the Town to pursue:

Federal – Safe Streets and Roads For All (SS4A)

This program will provide \$5-6 billion in grant funding through 2027 and supports initiatives that prevent roadway deaths and serious injuries on roadways. Metropolitan Planning Organizations (MPO's), counties, cities, and towns, federally recognized Tribal governments and partnerships between any of the previously mentioned are eligible to apply for this federal grant. One of the key components of this grant program is to develop and establish an Action Plan which this Plan accomplishes. Some of the key activities that make this Plan eligible to receive funding from this program are:

- Implementing improvements along an expanded multimodal network of reconfigured roads with separated bicycle lanes and improved safety features for pedestrian crossings
- Conducting speed management projects such as implementing traffic calming road design changes and setting appropriate speed limits for all road users
- Installing safety enhancements such as safer pedestrian crossings, sidewalks, and additional lighting for people walking, rolling, or using mobility assistive devices
- Making street design changes informed by culturally competent education and community outreach

Federal – Transportation Alternatives Program (TAP)

The Transportation Alternatives Program was developed by FDOT after passing the Moving Ahead for Progress in the 21st Century (MAP-21), a highway funding act. While there is typically a smaller amount of funding available in each MPO area from this funding source, this type of funding could leveraged and added to a larger overall project to achieve the Complete Streets enhancements identified in this plan. The program funds the below small-scale

- Pedestrian facilities
- Bicycle facilities
- Recreational trails
- Historic preservation and vegetation management
- Environmental mitigation related to stormwater and habitat connectivity



State – County Incentive Grant Program (CIGP)

The County Incentive Grant Program was created for providing grants to counties to improve a transportation facility including transit which is located on the State Highway System (SHS). This state program funds up to 50% for transportation improvements on the SHS. Each eligible project must be consistent to the maximum extent feasible with the Florida Transportation Plan, Metropolitan Planning Organization Plan where applicable, and any appropriate local government comprehensive plan. Counties may submit projects that are not in the Metropolitan Planning Organization Long Range Transportation Plan or local government comprehensive plan; however, if selected, the projects must be amended into these plans within six months and supporting documentation should be provided to the Florida Department of Transportation (department). As this program will require a 50% match, another funding source (such as local funds) will need to be identified to apply for this type of a grant.

State – Shared-Use Nonmotorized (SUN) Trail Program

The SUN Trail network is the statewide system of high-priority (strategic) paved trail corridors for bicyclists and pedestrians. The SUN Trail network includes a combination of existing, planned, and conceptual multiple-use trails; it is a refined version of the Florida Greenways and Trails System (FGTS) Plan's Land Trails Priority Network. The FGTS is developed and overseen by the Florida Department of Environmental Protection. Not all trails are within the SUN Trail network. Implementing projects in the SUN Trail network increases the reliability of Florida's transportation system. The Longboat Key Trail is identified as an unfunded gap on the Florida Gulf Coast Trail, which has been established as part of the SUN Trail Network. The proposed multiuse path on the east side of Gulf of Mexico Drive would likely be eligible for funding as long as it meets the standards/intent of the currently proposed trail.

Federal – PROTECT Program

The PROTECT Program is a USDOT discretionary grant program that provides discretionary grants to support planning, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure. The cost share is 80% federal funding, with a 20% match required. The purpose of the resilience grants associated with this program is to protect and increase the resilience of surface transportation infrastructure from the impacts of changing conditions, such as sea level rise, flooding, drought, wildfires, extreme weather events, and other natural disasters. Eligible projects to receive this funding include:

- Resurfacing, restoration, rehabilitation, reconstruction, replacement, improvement, or realignment of an existing surface transportation facility eligible for assistance
- Incorporation of natural infrastructure
- Upgrade of existing surface transportation facility to meet or exceed a design standard
- Improve roadway safety, prevent against invasive species, facilitate wildfire control, and provide erosion control for vegetation management practices in transportation rights-of-ways

Gulf of Mexico Drive Complete Street Corridor



State – Florida Resilient Coastlines Program (FRCP) Implementation grants

The purpose of this grant is to assist coastal communities in implementing their adaptation/ resilience plans by supporting nature-based options for erosion and flood control, elevating public structures, and projects specifically included in existing adaptation/ resilience plans. The Resilient Florida Program includes a selection of grants that are available to counties, municipalities, water management districts, flood control districts and regional resilience entities. To effectively address the impacts of flooding and sea level rise that the state faces, eligible applicants may receive funding assistance to analyze and plan for vulnerabilities, as well as implement projects for adaptation and mitigation.



Figure 10: Projects funded by the Resilient Florida Program for Fiscal Year 2021-22 and 2022-23

Federal – Building Resilient Infrastructure and Communities (BRIC)

This is a FEMA grant program that will support states, local communities, tribes and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards. The BRIC program guiding principles are supporting communities through capability- and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency.



In general, a Strengthening Mobility and Revolutionizing Transportation grant may be used to carry out a project that demonstrates at least one of the following:

- Coordinate Automation
- Connected Vehicles
- Intelligent, sensor-based infrastructure
- Systems integration

- Commerce delivery and logistics
- Leveraging use of innovative aviation technology
- Smart grid
- Smart technology traffic signals

Federal – Advanced Transportation Technologies & Innovative Mobility Deployment

The purpose of the Advanced Transportation Technologies and Innovative Mobility Deployment (ATTIMD) initiative is to make competitive grants for the development of model deployment sites for large scale installation and operation of advanced transportation technologies to improve safety, efficiency, system performance, and infrastructure return on investments. The DOT intends for these model technology deployments to help demonstrate how emerging transportation technologies, data, and their applications can be effectively deployed and integrated with existing systems to provide access to essential services and other destinations. This also includes efforts to increase connectivity to employment, education, services and other opportunities; support workforce development; or contribute to increased mobility, particularly for persons with visible and hidden disabilities and elderly individuals.

Applicants may use funds under this program to deploy advanced transportation technologies, including:

- Advanced traveler information systems
- Advanced transportation management technologies
- Infrastructure maintenance, monitoring, and condition assessment
- Advanced public transportation systems
- Transportation system performance data collection, analysis, and dissemination systems
- Advanced safety systems, including vehicle-to-vehicle and vehicle-to-infrastructure communications
- Technologies associated with autonomous vehicles, and other collision avoidance technologies, including systems using cellular technology
- Integration of intelligent transportation systems with the Smart Grid and other distribution systems
- Electronic pricing and payment systems
- Advanced mobility and access technologies, such as dynamic ride sharing and information systems to support human services for elderly and disabled individuals

Federal - Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program

The purpose of this program is to help urban and rural communities move forward on projects that modernize roads, bridges, transit, rail, ports, and intermodal transportation and make our transportation systems safer, more accessible, more affordable, and more sustainable. Projects were evaluated on several criteria, including safety, environmental sustainability, quality of life, economic competitiveness and opportunity, partnership and collaboration, innovation, state of good repair, and mobility and community connectivity. Within these areas, the U.S. Department Transportation considered how projects will improve accessibility for all travelers, bolster supply chain efficiency, and support racial equity and economic growth.



Conclusion

During Town Commission Workshop #3 on December 12, 2022, the final project report was presented to the Town Commission for Commission review and comment. The Commission voted to do a speed study on the half-mile section near the Bayport Community and have FDOT perform this study. The Commission affirmed and supported the recommendation for a wide multi-use trail on the east side, 6-8 foot sidewalk on the western side except for along the golf course, landscaped center medians with locations to be analyzed for need, determining which is the dominant movement where two-way turn lanes currently exist, and where the benefits of the turn lane outweigh the increased distance for pedestrians to cross. The Commission emphasized the importance of designing for resiliency, and in particular elevating the lowest segments of the roadway. The Commission also directed staff to engage with the FDOT regarding future funding and coordination on future projects to incorporate corridor plan recommendations. These recommendations formed the basis for this Complete Streets Corridor Master Plan.

This Complete Streets Corridor Master Plan is ambitious, yet achievable, through strategic and coordinated actions over the course of the next decade and beyond. The implementation of this plan will require years of planning and coordination between the Town, the FDOT, and other agency partners like the Sarasota/Manatee Metropolitan Planning Organization, Sarasota County, and Manatee County. The Plan should be used as a roadmap for future investment on the Gulf of Mexico Drive Corridor, as it outlines strategies identified through engagement and discussions with the community. The multi-use trail component of this plan could be conducted as a separate project, since it is part of the SUN Trail Network, and it is understood the Town is pursuing grants and other opportunities to implement this component. By undertaking this Plan, the Town, in partnership with the FDOT and others, will be creating a resilient, safe and attractive environment for all. When complete, Gulf of Mexico Drive will be a complete street with a wide multi-use path, improved bicycle facilities, and safer pedestrian infrastructure, while maintaining a design, look, and feel unique to Longboat Key.

Appendix



A. Context Classification



Context Classification

INTRODUCTION

The Town of Longboat Key is performing a Complete Streets Corridor study for improvements to State Road 789 (Gulf of Mexico Drive) from Longboat Pass Bridge to John Ringling Highway *(Figure 11)*. The purpose of this memorandum is to identify the context classification for the Gulf of Mexico Drive within the project limits. The context classification guides how the design criteria from the FDOT Design Manual will be applied during subsequent phases of this project. Identifying the appropriate context classification ensures that the selected design and project features accommodate all anticipated users.



Figure 11: Gulf of Mexico Drive/SR-789



The *FDOT Context Classification* handbook, dated July 2020, was relied upon for the preparation of this memorandum. The corridor was reviewed based on distinguishing characteristics and primary measures as outlined within the Context Classification Matrix. These measures were evaluated based on field visits, data from Sarasota County, Manatee County, and the Town of Longboat Key, and the review of aerial photography.

Based on a review of the distinguishing characteristics and primary measures, the following context classification is recommended:

• C3R Suburban Residential for the entire corridor

Additional details justifying the above recommendation is provided in the sections below.

DISTINGUISHING CHARACTERISTICS

Within the project limits, Gulf of Mexico Drive is largely a two-lane undivided facility with median left turn lanes and shared median turn lanes throughout. The corridor classified as an Urban Major General Collector with a posted speed limits ranging from 35 to 45 miles per hour. The existing right-of-way is generally 100 feet in width. Corridor features include a two-way continuous center turn lane throughout and approximately four-foot wide paved bicycle lanes on both sides of the roadway. There is a continuous 8-foot multi-use path along the entire length of the east side of the roadway. On the west site, 5-foot sidewalks are intermittent from the northern end of the island to Bay Isles Parkway.

The characteristics of the project area are generally defined by large blocks with a disconnected or sparse roadway network as described by the C3R Suburban Residential classification. This is exhibited in neighborhoods off of Broadway Street, between Shin Bone Avenue and General Harris Street, between Dream Island Road and Binnacle Point Drive, between Spanish Drive and Sandham Place, from Bicentennial Park to Putter Lane and the entire Country Club Shores neighborhood. There are instances of commercial land uses near Broadway Street, Cedar Street, Dream Island Road, Bay Isles Parkway, and St. Jude Drive offering retail opportunities for residents and tourists. The limited commercial land uses and street designs do not warrant the C3C Suburban Commercial classification.

Between Atlas Street which is north of Zota Hotel and the former The Colony Beach & Tennis Resort (St. Regis Mixed Use Development is currently under-construction), there are seventeen (17) properties zoned as High-Density Tourist Resort Commercial Districts and one zoned as Low-Medium-Density Tourist Resort Commercial District just north of Atlas Street. There are 30 legally grandfathered or non-conforming tourism properties on the entire corridor. Due to the limited number of zoned resorts (five) compared to the adjacent large blocks of residential neighborhoods and similar neighborhood designs throughout the entire corridor, the C3R Suburban Residential classification is justified.

For the purpose of this context classification, corridor has been split into three sections: North (from the Longboat Pass Bridge to Bayfront Park, approximately 4.7 miles), Central (from Bayfront Park to Bay Isles Parkway, approximately 1.9 miles), and South (Bay Isles Parkway to New Pass Bridge, approximately 3.4 miles).





Figure 12: Rectangular Rapid Flashing Beacon near Bayfront Park

The Central section contains a unique stretch of about a half-mile from Bayfront Park to South Drive. This stretch or "special zone" has no structures or parking lots on the Gulf side of the roadway that would inhibit beach access. Residents of the nearby communities have created over 10 footpaths to access the beach that are not standard crossings. A Rectangular Rapid Flashing Beacon (RRFB) is present in this section at Bayfront Park (**Figure 13**) but additional pedestrian facilities could be considered to accommodate increased pedestrian traffic. Again, certain marked crossings can only be installed on 35 MPH or less Roadways. FDOT is working on zone signage.

There are a high number of pedestrians crossing Gulf of Mexico Drive to see the sunset. The elevated pedestrian activity compared to other parts of the island presents unique opportunity to create a "special zone" with updated signage to notify motorists of the high number of pedestrian crossings, increased pedestrian lighting, and the potential for lowering the speed limit just in this zone.

PRIMARY MEASURES

The *FDOT Context Classification* handbook states that a roadway segment must meet a majority of the primary measures defined for a context classification in order to be assigned that context classification. The following measures were evaluated in accordance with the guidelines provided in the handbook:

Land Use. The land use between N Shore Road and Binnacle Point Drive is dominated by residential uses. Between Binnacle Point Drive and Bay Isles Parkway the land use consists of residential and commercial uses. From Bay Isles Parkway to John Ringling Parkway, the land use returns to predominantly residential.

Building Height. Most of the commercial fronting Gulf of Mexico Drive are one story tall. The residential properties range from one story, single family homes to 13-story residential condominiums. The limited number of zoned resorts and hotels (five) throughout the corridor range in height from one floor to four floors.



Building Placement. The corridor consists of detached buildings a setback range of approximately 70 feet to 200 feet.

Fronting Uses. Buildings with fronting uses as shown in *Figure 13*, are those that have front doors that can be accessed from the sidewalk or connected to the sidewalk by a pedestrian path. There are sidewalks throughout the corridor and parking separates the roadway from the front for the commercial buildings. Residential properties on Gulf of Mexico Drive face the roadway. Fences and landscaping separates the front yard from the roadway right-of-way. Therefore, the corridor can be described as having fronting uses throughout the project limits.



Figure 13: Examples of Fronting Uses

Location of Off-street Parking. Most of the commercial businesses provide parking in the front. Some businesses provide additional parking on the side.

Intersection Density. The intersection density is defined as the number of intersections per square mile. For the segment of Gulf of Mexico Drive in Manatee County, the number of intersections per square mile is 5. For the segment of Gulf of Mexico Drive in Sarasota County, the number of intersections per square mile is 5. Both segments contain less than 100 intersections per square mile each which is consistent with the C3R Suburban Residential classification.

Block Perimeter. The block perimeter is the average perimeter of all the blocks adjacent to the roadway. For the segment of Gulf of Mexico Drive in Manatee County, the average perimeter is approximately 4,725.07 feet. For the segment of Gulf of Mexico Drive in Sarasota County, the average perimeter is approximately 4,815.46 feet.

Block perimeter is not applicable for the C3R Suburban Residential classification.



Block Length. The block length and average block length is provided below.

NORTH SECTION

Manatee County West Side of Roadway

N Shore Rd to Broadway Street = 1,386 ft Broadway Street to Gulfside Rd = 3,616 ft Gulfside Rd to Gulfside Rd = 1,516 ft Gulfside Rd to Atlas Street = 12,066 ft Atlas Street to Sea Club = 4,914 Ft

AVERAGE = 4,699.6 FT

Manatee County East Side of Roadway

Broadway Street to Cedar Street = 634 ft Cedar Street to Reclinata Drive= 1,814 ft Reclinata Drive to Noma's Way = 194 ft Noma's Way to Juan Anasco Drive = 1,085 ft Juan Anasco Drive to De Narvaez Drive = 285 ft De Narvaez Drive to Bayview Drive = 252 ft Bayview Drive to Lyons Lane/General Harris Street = 461 ft Lyons Lane/General Harris Street to Wake Island Rd = 415 ft Wake Island Rd to Laguna Drive = 327 ft Laguna Drive to Edlee Lane = 464 ft Edlee Lane to Dream Island Rd = 1,418 ft Dream Island Rd to Binnacle Point Drive = 2,111 ft Binnacle Point Drive to Spanish Drive = 529 ft Spanish Drive to Companion Way = 724 ft Companion Way to Jungle Queen Way = 219 ft Jungle Queen Way to Tarawitt Drive = 207 ft Tarawitt Drive to St. Jude Drive = 294 ft St. Jude Drive to Gulf Bay Rd = 585 ft Gulf Bay Rd to Sandhamn Place = 1,290 ft Sandhamn Place to Exeter Drive = 6,085 ft Exeter Drive to Sutton Place = 1,196 26 ft

AVERAGE = 980.43 FT

NORTH SECTION AVERAGE = 1,695.65 FT

CENTRAL SECTION

Sarasota County West Side of Roadway

Westfield Street to Neptune Avenue = 3,584 ft Neptune Avenue to Islands Ct = 1,529 ft

AVERAGE = 2,556.5 FT

Sarasota County East Side of Roadway Royal Rd to Bayport Way = 808 ft Bayport Way to Twin Shore Blvd = 938 ft Twin Shore Blvd to Main Street Drive = 191 ft Main Street Drive to South Drive = 227 ft South Drive to Monroe Street = 3,024 ft Monroe Street to Buttonwood Drive = 559 ft Buttonwood Drive to Triton Avenue = 449 ft Triton Avenue to Neptune Avenue = 1,258 ft Neptune Avenue to Bay Isles Rd = 676 ft Bay Isles Rd to Bay Isles Pkwy = 1,000 ft AVERAGE = 913 FT

CENTRAL SECTION AVERAGE = 1,186.92 FT



Sarasota	County	West Side	of Roadway	
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Islands Ct to Longboat Club Rd = 11,088 ft Longboat Club Rd to Longboat Key Club Rd = 7,928 ft

AVERAGE = 9,508 FT

Sarasota County East Side of Roadway

Harbourside Drive to Bogey Lane = 3,599 ft Bogey Lane to Bogey Lane = 1,195 ft Bogey Lane to Ranger Lane = 555 ft Ranger Lane to Spinnaker Lane = 697 ft Spinnaker Lane to Hornblower Lane = 389 ft

SOUTH SECTION

Hornblower Lane to Gunwale Lane = 416 ft Gunwale Lane to Outrigger Lane = 410 ft Outrigger Lane to Cutter Lane = 430 ft Cutter Lane to Yawl Lane = 368 ft Yawl Lane to Schooner Lane = 374 ft Schooner Lane to Ketch Lane = 368 ft Ketch Lane to Sloop Lane = 333 ft Sloop Lane to Channel Lane = 373 ft Channel Lane to Tangerine Bay = 837 ft

AVERAGE = 738.86 FT

SOUTH SECTION AVERAGE = 1,803.75 FT

SECTION	LAND USE	BUILDING HEIGHT	BUILDING PLACEMENT	FRONTING USES	OFF-STREET PARKING	INT. DENSITY	BLOCK LENGTH
North	Residential, commercial	1-13	Large setback	Yes	In front and side	5	1,695.65 ft.
Central	Residential, commercial	1-13	Large setback	Yes	In front and side	5	1,186.92 ft.
South	Residential	1-13	Large setback	Yes	In front and side	19	1,803.75 ft.

Table 3: Summary of Primary Measures

Shaded cells represent items that meet C3R Classification

SECONDARY MEASURES

Secondary measures were not reviewed as an evaluation of the primary measures were sufficient to understand and determine the context classification for the project study area.

RECOMMENDATION

Based on a review of the distinguishing characteristics and primary measures, the following context classification is recommended:

• C3R Suburban Residential for the segment for the entire corridor

The character of the roadway is consistent with the C3R designations as it contains large blocks with a disconnected or sparse roadway network, building heights are generally between 1-3 stories with very few 4 story buildings, detached building, parking in the front and the side of commercial businesses and residences and a minimal intersection density throughout the corridor. There are instances of commercial land uses throughout the corridor in both Manatee and Sarasota Counties but the requirements have been met for the C3R-Suburban Residential classification standard.

B. Public Engagement



TOWN COMMISSION MEETING #1

The Gulf of Mexico Drive Complete Street Corridor Plan was presented to the Town of Longboat Key Town Commission on November 15th, 2021 at the Town Hall Antechamber. Background information on why the Plan is being created, the vision for the corridor, recognition of previous works that have been completed on the corridor, upcoming projects on the corridor, and various opportunities for enhancements that could be implemented were presented to the Commissioners. Based upon feedback from the Commission, the following requests/recommendations were made:

- Maintain current speed limit at 45mph
- Wider bike lanes with RPMs
- Typical Section Concept with planted medians
- How will Emergency Vehicles maneuver
- Aerial views of corridor with proposed concepts
- Turn lanes for larger neighborhoods

TOWN COMMISSION MEETING #2

Updates for the Gulf of Mexico Drive Complete Street Corridor Plan were presented to the Town of Longboat Key Town Commission on March 21st, 2022 at the Town Hall Antechamber. These updates were in response to the Town Commission Meeting requests and recommendations from the Town Commissioners in the previous sections.

Gathering feedback based on the updates from the Town Commissioners is one of the more critical steps in creating a successful plan. After the presentation was given Commissioner comments can be summarized in the below:

- Disagreement with lowering speed limits to 35 mph Crossing concerns on the Central section of
- Favorable response for medians
- Design related questions on the multi-use path
- Some interest in implementing sidewalks on both sides of the roadway
- Crossing concerns on the Central section of the island as most beachgoers do not cross at crosswalks
- Disagreement on the use of RPMs
- Mixed feelings about adding a left turn lane
- Agreement on a raised stripe between the roadway and the bicycle lane

As part of the meeting, the public was given the opportunity to make comments on the plan. Local bicycle clubs for both seasoned bicyclists and casual riders were represented as well as corridor residents. The following provides a summary of the public comments received during this meeting:

- Concern over the poor condition of the section of Gulf of Mexico Drive in Manatee County
- Typicals that were presented were in line with suggestions from the Longboat Key Bicyclist Association
- Safety concerns limit riding bicycles on Gulf of Mexico Drive to only Sundays
- Favor for raised paint to separate bicycle lane and rest of roadway
- Desire for 7-foot-wide bicycle lanes
- Recreational and casual riders were impressed with the Plan
- Education for bicyclists and pedestrians specifically for roundabout operation



- Complaints about traffic, landscaped medians, and left-hand turn lanes
- Town Commissioners provided a summary of their recommendations based on the presentation and comments from the public. This summary was used to create an agenda for the Public Workshop and coordination with FDOT.
- Reconsider Center Shops crosswalk. Perhaps use this design at a different location.
- Investigate where crosswalks should be located and with public input
- Do not include RPMs as a recommendation, rather use raised paint instead
- Create a 12-foot-wide multi-use path and add a dashed line down the middle to separate by mode
- Implement turn lanes instead of medians when warranted and where viable
- Include this concept in Country Club Shores turn lane project (immediate need)
- Implement sidewalks on both sides of the roadway where viable
- Areas to the right of bicycle lanes should be designed for pull offs and mindful of landscaping
- Roundabout at Broadway add more intelligent signage and provide public information about how to
 navigate this roundabout on a bicycle
- Do not reduce speed limits unless required based on existing projects
- Eliminate or reduce passing lanes (Kimley-Horn will be analyzing this at time of final design)
- Work with FDOT to address pedestrian crossing at mobile home park (in central section)
- Provide clarity on clear zones and work to keep trees

TOWN COMMISSION MEETING #3

During Town Commission Workshop #3 on December 12, 2022, the final project report was presented to the Town Commission for Commission review and comment. The Commission voted to do a speed study on the half-mile section near the Bayport Community and have FDOT perform this study. The Commission affirmed and supported the recommendation for a wide multi-use trail on the east side, 6-8 foot sidewalk on the western side except for along the golf course, landscaped center medians with locations to be analyzed for need, determining which is the dominant movement where two-way turn lanes currently exist, and where the benefits of the turn lane outweigh the increased distance for pedestrians to cross. The Commission emphasized the importance of designing for resiliency, and in particular elevating the lowest segments of the roadway. The Commission also directed staff to engage with the FDOT regarding future funding and coordination on future projects to incorporate corridor plan recommendations.

PUBLIC WORKSHOP

A public workshop was held on May 3rd, 2022 at the Town of Longboat Key Town Hall Antechamber. The format of this workshop included a presentation, question and answer session, and workshop activities session. The purpose of this workshop was to gain public feedback on the updates that have been made to the proposed typical section concepts for the corridor based on the two previous commission workshops. The community was well represented with bicycle enthusiasts, full-time residents, and town commissioners among those in attendance. 15 participants signed in on the workshop sign-in sheet which is included in the appendix.

The following advertisements were posted to social media prior to the workshop to gain attract residents and interested individuals. Part of the Town Manager Brief – May 2022, which provides a monthly snapshot of the Town's Initiatives included information about the workshop is included below as well.









Town Manager Brief – May 2022

TOWN OF LONGBOAT KEY

Turtle Season Starts May 1 – Remember Flip a Switch, Make a Move! Town Initiatives – Snapshot

Sea Turtle Nesting Season officially begins on May 1 and runs through October 31. There are a number of new & revised requirements in our Town Code adopted in 2021, that are effective this nesting season. Thank you to our partners Mote Marine, Longboat Key Turtle Watch, and the Longboat Key Garden Club. Call Chris Kopp at 941-316-1966 with any questions or to schedule discussions about the new Code for your condominium or HOA meetings.

Auto Transport Vehicles (car-haulers). It is that time of year again as many of our seasonal visitors start to depart the island. For those that schedule an auto transport, please tell the driver that parking on Gulf of Mexico Drive or on the GMD right-of-way is illegal, and being enforced with ticketing. Signs are in place at the entry points to the island reminding the commercial truck drivers of the law. There are safer & legal locations to load/unload vehicles available both on, and just off, the island. If you have questions, please call the Town Manager's Office at 941-316-1999.

It is also Budget Season... Our first budget workshop of the year will be at 9am on May 16th. This first workshop will focus on capital needs of the Town over the next five years. We will also be incorporating the Commission priorities developed during the April Strategic Planning Retreat into our Fiscal Year 2023 Work Plan.

Gulf of Mexico Drive Corridor Plan. Learn more about this long-range planning effort at a public outreach session on May 3rd at 9am at Town Hall. The Corridor Plan includes wider bike paths, wider multi-use sidewalks, landscaped medians, and a roundabout at GMD and Broadway. The Town staff and our consultant will provide information and take public input that will be considered when the Plan goes back for Commission for approval.

Greer Island– Army Corps of Engineers approved our permit for the Spit Management Plan project. That project will take some time to solicit the contractor and perform the work and is part of an on-going plan to maintain that area. Staff also requested an emergency permit from the Corps to remove a smaller amount of sand near the area of the private dock to improve access to the lagoon as soon as possible. Town staff is also presenting a proposal to establish a motorized vessel exclusion zone for a portion of the spit to facilitate kayaks and paddleboards.

Legislative Update. Lots of press about State politics and new laws proposed and enacted this year. At the May 2nd Commission Meeting our State Lobbyist and State Representative Fiona McFarland will be providing an update on the actions of the State Legislature this session.

Multi-Story Building Inspections. The State did not act on legislation regarding multistory building inspections as a follow-up to the Surfside Collapse in South Florida. Absent State-wide regulations, the Town was prepared with proposed regulations for structures on the island. Commission discussion will occur at the May 16th Workshop.

Town Hall's Art Exhibit. Come by and see the latest local artists' work installed on April 9th as part of the 72nd Town Hall Art Exhibit. All artwork is for sale directly from the artists. Call 941-316-1955 with any questions.

Gulfstream & U.S. 41 Roundabout Project. Season is winding down but traffic can still be a challenge, especially with the State FDOT US 41 & Gulfstream project under construction. Check routes and potential delays in advance of your travel. FDOT Project Website: http://www.swflroads.com/gulfstreamroundabout/

Upcoming Public Meetings/Events

•	May 2, 2022,	1:00 pm	Town Commission Regular Meeting		
•	May 3, 2022	9:00 am	Gulf of Mexico Drive Corridor Plan Public Outreach Meeting		
•	May 10, 2022	9:00 am	Planning & Zoning Board (Comprehensive Plan Workshop)		
•	May 11, 2022	10:00 am	Special Magistrate		
•	May 16, 2022	9:00 am	Town Commission Special Workshop Meeting (Budget)		
•	May 16, 2022	1:00 pm	Town Commission Regular Workshop Meeting		
•	May 17, 2022	9:15 am	Planning & Zoning Board (Comprehensive Plan Workshop)		
•	May19, 2022	1:00 pm	Zoning Board of Adjustment		
•	May 20, 2022	9:00 am	Consolidated Retirement System Board of Trustees		
•	May 26, 2022	1:30 pm	Joint Meeting with Manatee County Commission		
	Fast Fact(s)				

In the 2021 Sea Turtle Nesting Season, Longboat Key beaches held 1,032 turtle nests!

Town Manager Brief, May 2022

Gulf of Mexico Drive Complete Street Corridor



Presentation

A presentation on the project was given at the beginning of the workshop to introduce the project to provide the background and context of the project, as well as to update those who had already been part of the planning process. The presentation covered the definition of complete streets, a review of the typical sections with updates from the previous two Town Commission meetings, a review of the Broadway Street intersection roundabout concept, introduction to a speed reduction zone concept, a brief discussion on the left turn-lane analysis, and pedestrian and bicyclist safety throughout the corridor. After the presentation, the public was encouraged to ask any questions and provide comments on the plan in the question-andanswer part of the workshop.



Town Commission Public Workshop Presentation

Questions, Answers, and Feedback Session

This session was an engaging interaction between the public and the project team in a less formal setting to address any concerns from the public about the project. One of the key takeaways from the last Town Commission workshop was to gain feedback from the community, and this session provided an ideal opportunity to accomplish this. The following is a summarized list of themes from the session:

- Design concerns over the width of the verge (grassy strip between the roadway pavement and multi-use path
- Concerns over line of sight and pedestrian/bicyclist safety when turning onto Gulf of Mexico Drive
- Crosswalk placement can be an issue
- Bicycle lanes should remain on the roadway and not on the multi-use trail



Questions, Answers, and Feedback Session

- Bayport residents provided support for studying the central section area for crossing improvements/ accommodations
- Favorable response to speed reduction zone
- Favorable response to concepts for the entire corridor
- Lack of enforcement for vehicles illegally parking in the bicycle lanes
- Improve lighting, especially near the Bay Port neighborhood
- Concern over sea-level rise
- Flooding concerns throughout the corridor and need for better stormwater management



Live, Work, Travel, and Improvement Map



Improvement Stickers

NORTH SECTION (LONGBOAT PASS BRIDGE TO BAYFRONT PARK – 4.7 MILES)

There were no public comments on the North Section Roll Plot.

To solicit additional public feedback on the Plan, elongated roll plot maps were printed, and workshop participants were asked to place stickers on where they live, where they work and at locations they felt needed to be improved. An example of the sticker options is shown below. The corridor was split into three sections, North, Central, and South, and one roll plot for each. Pens, markers, and highlighters were provided for participants to draw on the maps routes they take to walk, run, ride their bicycle, or drive along the Gulf of Mexico Drive corridor.



North Section Roll Plot at Public Workshop



CENTRAL SECTION (BAY FRONT PARK TO BAY ISLES PARKWAY – 1.9 MILES)

This section received the most feedback compared to the other sections with the majority of the feedback for this section focused on the area near the Bayport community. "Crossing & Mid-block Crossings Improvements" was the improvement sticker that was used most often, specifically being placed near the Bayport community. This coincided with the comments and questions that were asked during the Questions, Answers, and Feedback Session. A suggestion was made to begin a "special zone" or speed reduction to 35 MPH at Bayfront Park as this part of the corridor experiences high pedestrian crossings in comparison to other parts of the island. Speed Reduction to 35 MPH, Intersection Improvements, Add or Enhance Sidewalks, and "Add Traffic Calming" stickers were placed near the Bayport community and Twin Shores community.

- "Visibility issue looking south" at Gulf of Mexico Drive and Bayport Way
- "Need a turn-a-round for trucks" at Buttonwood Drive
- "Drainage issues and flooding" between Monroe Street and Triton Bend
- "Turn lane??" between Monroe Street and Triton Bend



The end of the suggested "special zone" for speed reduction is at the intersection of Gulf of Mexico Drive and Twin Shores Boulevard. An exploration of this suggestion is continued in the Coordination with FDOT section of this Plan.

SOUTH SECTION (BAY ISLES PARKWAY TO NEW PASS BRIDGE - 3.4 MILES)

Similar to the Central Section, the improvement type received the most was "Crossing & Mid-block Crossing Improvements." Comments that did not have corresponding improvement type stickers were handwritten on the roll plot, some examples of these comments are provided below.

A Connection to Transit Facilities sticker was placed at Gulf of Mexico Drive and Bay Isles Parkway. An accompanying handwritten comment was left near this sticker. "Split in public transportation – need to connect Manatee and Sarasota systems for continuous public transportation."



Residents placing written feedback and improvement stickers on Central Section roll plot



COMMENT CARDS

Public workshop participants were encouraged to complete comment cards to provide their specific feedback and thoughts on the Plan. These comment cards were provided at the beginning of the workshop and were requested to be returned as the participants left. The purpose of the comment cards was to obtain a better understanding of how participants travel through the corridor and their thoughts on upcoming projects. The questions included on the comment cards are provided here.

- Please provide comments on the draft concept
- Please provide comments on the Broadway Street Roundabout
- How do you usually travel through the corridor?
- Optional: Name, address, phone number/email
- Optional: Describe your residency of Longboat Key (please circle)
 - a. Full time resident
 - b. Part time resident
 - c. Visitor/Live Elsewhere
 - d. Other (Please comment)

ונ	mplete Street Corridor
PI	comments ease provide comments on the draft concept.
PI	ease provide comments on the Broadway Street Roundabout.
H	ow do you usually travel through the corridor?
0	ptional: Name, address, phone number/email.
0	ptional: Describe your residency of Longboat Key (please circle). A. Full time resident B. Part time resident C. Visitor/Live Elsewhere D. Other (Please comment)

Comment card given to participants

How do you usuall	y travel through the corridor?	
BIKE	Please provide comments on the draft conce	pt.
CAR	I don't understand the obje	iction to 35 mph for
	put in pedestrian protect	ion, and perhaps
	island. Guruntly its col	traffic on the
	changes 35-45-35 mpl.	5 ~ ~ ~
Please provide comments	on the draft concept.	
U MAINTAN 46 MPI	+ Likes!	
(2) HET BALT DANES (3) DO NOT ROTNER CON	WOULD BOOK (TALLY POAD CYCLIST)	
	·	

Responses on comment cards



FACT SHEETS

Fact sheets were available to participants that described the briefly described the project, defined what a complete street is, provided an update on next steps for the plan, draft concepts for Gulf of Mexico Drive displaying the latest updates as recommended by the Town Commission, and a draft concept of the upcoming Broadway Street roundabout.



Fact sheets for project

PROJECT BOARDS

In the Town Commission Town Antechamber, draft concepts of the complete street design for Gulf of Mexico Drive and the upcoming Broadway Street Roundabout were displayed on large project boards. Participants were encouraged to ask questions and provide feedback to the project team.



Gulf of	ELCOME, PLE Mexico Drive Complete Streets Tuesday, May 3, 2022 9:0	Corridor Project Public Worksh 0 A.M. to 11:00 A.M.	юр	OT THE T	OF THE OF
NAME	AGENCY/RESIDENT	EMAIL	PHONE	HOME	ZIP CODE
Jane Jacobs	Resident	janejacobs@email.com	(555) 555-5555	55	555
Ben Johnson	Resi Lent	bioh- 2 gan	450 508 5064	34	228
SHARON JOHNSON	RESIDENT	5 the Opinine	850 508-50 47	34	228
JAMES SCHMD	$\sim -\chi/V$	JAMO - A - SCHUDTC	813.316. 828		4
Mile staycon	A COMMISSING				
HOWRD TESSIER	Resident	Home Toskegoila	8 47-804-7.4	34.	228
BY Bishop	Commiss.	BBishop @Louto	T Key. Ofa		
Mua Bishor	Resident	BiBigurses House	ay	342	28
C. Mark Van Barlen	Resident	vstitch econorst net	40-198-008	30	228
Velazquez	Bayport	aramisinv@comcashm	t 678-640-5985	34	225
Penny Gold	Seaplace	people a longbother	502-714-10353	34	228
LENNY LONDON	9 Ere	Lereny LANDA-ComAIL	Lon 941-307-080	342	23
Aaron Kleiner	resident	anone Kurzweitteher	6/2-306-3467	342	25

Attendee List



Participant Comments



COORDINATION WITH FDOT

First Meeting

The first meeting with FDOT occurred virtually on April 19, 2022. This meeting focused on the recommendations and feedback from the Town Commission workshop that was held in March 2022. Based on the Town Commission's recommendation to keep speed limits at 45 MPH, crossing options were to be explored. According to FDOT, there are limited options at that speed limit. RRFB's are not permitted with a speed limit of 45 MPH. The FDOT suggested lighting improvements as the option that will provide the biggest safety benefit for pedestrians crossing at sunset. Due to the number of pedestrian crossing locations without an actual crosswalk in close proximity to one another, it will not be feasible to add a crossing at each potential location. FDOT recommended each crossing should have some sort of control to protect pedestrian safety. FDOT conveyed to the Town and Kimley-Horn that lowering the speed in this section of the corridor, in conjunction with a speed study and commitment to implement traffic calming improvements, is going to be key to further improving safety.

When reviewing the draft typical sections, specifically the multi-use path on the east side of Gulf of Mexico Drive, FDOT shared that best practice is not to delineate lanes on a trail, similar to not marking streets when trying to reduce speeding. Education that the path is for all users and pedestrians get the right of way will assistance in reducing conflicts. Knowing what improvements the public would like to see applied to the corridor helps FDOT strategize implementation measures. This public feedback was obtained in the public workshop and shared with FDOT during the second meeting.

Second Meeting

The second meeting with FDOT occurred virtually on June 13, 2022. A summary of the themes from the public workshop were shared with Town staff and FDOT. When crossings and speed reduction were discussed, FDOT confirmed a speed study would need to be performed in order to reduce the speed limit. The recommendation provided by FDOT was to create a list of potential traffic calming options and put those possibilities in a master plan. Having multiple possibilities instead of just one would increase the chances of speed being below the 85th percentile for the posted speed. The 85th percentile concept is the average speed that 85 percent of drivers will drive along a given roadway. FDOT would then review the plan internally and set target speeds as deemed appropriate.

FDOT recommended the speed along the corridor be reduced to 35 mph for entire island but would need to investigate the context classification further to confirm their recommendation. Each typical would need to be modified or altered to fit the section of the corridor it would be applied to and would need to be consistent. Because the island appears to be of suburban context for most of the island, it is difficult to lower the speed limit without additional assessment. FDOT requested a third meeting be setup to discuss the corridor context with the goal of determining if reducing the speed limit is feasible even in sections.

Third Meeting

A third meeting with FDOT occurred virtually on July 13, 2022. The purpose of this meeting was for FDOT to provide information that would assist in supporting the context classification, how speed can be managed at different speed limits, and an example of a barrier island that this Plan can use as inspiration for traffic calming measures.

Gulf of Mexico Drive Complete Street Corridor



In terms of context classification, which was covered earlier in this report, FDOT performed an analysis to determine if Gulf of Mexico Drive as a whole or sections of the corridor meet the requirements of any other classification outside of C3C-Suburban Commercial or C4-Urban General. To determine the correct context, primary measures are used such as Existing Land Use, Building Placement, Block Length, and Intersection Density. But in the case of barrier islands, secondary measures can be used to determine the context. Secondary measures include Population Density, Employment Density, and Allowed Residential Density. FDOT assessed the secondary measures and determined Gulf of Mexico Drive did not meet the "barrier island" context classification.

Speed management strategies should be used to achieve a target speed with more successful outcomes occurring when more than one strategy is implemented. FDOT recommended enclosure is a speed management strategy that gives the feeling of being contained within a roadway. This feeling can be accomplished by shade trees along the roadway, buildings close to the roadway, and terminated vistas.

In addition to enclosure, engagement is an additional traffic calming strategy that FDOT suggested for application to Gulf of Mexico Drive. Engagement is the visual and audio connection between drivers and the environment they are in. On-street parking presents an opportunity of engagement between drivers and those opening their car doors or people attempting to park. Additional opportunities of engagement include passing vehicles in narrow lanes, the presence of pedestrians, and store windows close to the roadway.

Deflection was an additional traffic calming strategy recommended by the FDOT. This strategy involves a design that forces a driver to move either vertically or horizontally on a roadway in hopes to reduce speeds. Examples of deflection include speed humps/tables, chicanes, roundabouts, splitter medians, and raised intersections. Coordination is needed with emergency services as certain deflections pose a risk of hindering emergency response times.

With speed being one of the key contention points between pedestrians, motorists, and bicyclists along the corridor and with the Commission's direction to investigate what available options are to mitigate speed, FDOT provided Table 4 with options based on the determined context Classification. By reducing the speed limit to 35 mph for the entire corridor or for more

C3R, C3C	50-55	Project-specific; see FDM 202.4.	
	40-45 Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, RRFB and PHB		
	35	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, Islands in crossings, Road Diet, RRFB and PHB, Terminated Vista	
C4	40-45	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, RRFB and PHB	
	35	Techniques for 40-45mph plus On-Street Parking, Street Trees, Short Blocks, Islands at Crossings, Bulb-outs, Terminated Vista, Road Diet	
	30	Techniques for 35-45 mph plus Chicanes, Islands in Curve Sections	

Table 4: Speed Management	Table by Context Classification. Source: FDOT
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segments instead of keeping the speed limit at 45 mph, the additional speed management tools at this speed include islands in crossings, road diets, and terminated vistas. A context classification analysis was performed as part of this project as previously described in **Appendix A**.

All results from the FDOT coordination meetings were presented to the Commission on December 12th, 2022. Upon their guidance, permission was granted to request FDOT perform a study to reduce the speed limit in the Bayport Section to 35 mph.

C. Typical Sections



GULF OF MEXICO DRIVE COMPLETE STREETS STUDY





LONGBOAT KEY, FLORIDA CONTACT: COLLEEN MCGUE, AICP (941)-529-8186 MAY 2022



GULF OF MEXICO DRIVE COMPLETE STREETS STUDY



e Experience Bette

LONGBOAT KEY, FLORIDA CONTACT: COLLEEN MCGUE, AICP (941)-529-8186 MAY 2022



GULF OF MEXICO DRIVE COMPLETE STREETS STUDY



Expect More Experience Bette



BROADWAY STREET ROUNDABOUT



GULF OF MEXICO DRIVE COMPLETE STREETS STUDY





LONGBOAT KEY, FLORIDA CONTACT: COLLEEN MCGUE, AICP (941)-529-8186 MAY 2022

BROADWAY STREET ROUNDABOUT



GULF OF MEXICO DRIVE COMPLETE STREETS STUDY



Kimley »Horn Expect More. Experience Better.

LONGBOAT KEY, FLORIDA CONTACT: COLLEEN MCGUE, AICP (941)-529-8186 MAY 2022

PREVIOUSLY DEVELOPED CONCEPTS

All measurements are approximate





LONGBOAT KEY, FL



ROADWAY AND LANDSCAPE CONCEPTUAL DESIGN - 35 MPH DRAFT FOR REVIEW **GULF OF MEXICO DRIVE**


All measurements are approximate



ROADWAY AND LANDSCAPE CONCEPTUAL DESIGN - 35 MPH DRAFT FOR REVIEW **GULF OF MEXICO DRIVE** LONGBOAT KEY, FL Kimley »Horn



All measurements are approximate



ROUNDABOUT AT LONGBOAT CLUB DRIVE

LONGBOAT KEY, FL

ROADWAY AND LANDSCAPE CONCEPTUAL DESIGN - 45 MPH DRAFT FOR REVIEW **GULF OF MEXICO DRIVE**

ONGBOAT CLUB DRIVI



All measurements are approximate



SECTION A: TWO LANE TYPICAL



SECTION B: TWO-WAY TURN LANE

GULF OF MEXICO DRIVE

LONGBOAT KEY, FL



SECTION C - PLANTED MEDIAN (WHERE APPROPRIATE)



D. Landscape Options

PLANT PALETTE























Kimley »Horn Expect More. Experience Better.

LONGBOAT KEY, FLORIDA CONTACT: COLLEEN MCGUE, AICP (941)-529-8186 APRIL 2022

E. Left Turn Lane Analysis

Gulf of Mexico Drive Complete Street Corridor



Included in the Left Turn Lanes analysis for each community is an opinion of probable cost table. Opinions of probable costs provided herein are based on the information known to Engineer at this time, 2022, such as the FDOT Historical Costs online archive and represent only the Engineer's judgment as a design professional familiar with the construction industry. Additional information is provided with each table on the applicability of the opinions of probable costs and how they were derived. The Emerald Harbor and Spanish Main entrances are too close for the expansion and contraction of two separate turn lanes, so their cost estimation has been combined to represent one continuous turn lane through the two areas.



DESIGN		L _a (Ft.)	L _d (Ft.)	
SPEED (mph)	STANDARD	MINIMUM UNDER CONSTRAINTS	STANDARD	MINIMUM UNDER CONSTRAINTS
30	180	120	180	120
40	320	150	240	150
50	500	180	360	180
60	720	240	480	240

MEDIAN TURN LANES								
			URBA	AN CONDIT	IONS	RURAL CONDITIONS		
Design Speed (mph)	Entry Speed (mph)	Clearance Distance L; (ft.)	Brake To Stop Distance L ₂ (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L ₃ (ft.)	Brake To Stop Distance L ₂ (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L ₂ (ft.)
35	25	70	75	145	110			
40	30	80	75	155	120			
45	35	85	100	185	135			
50	40/44	105	135	240	160	185	290	160
55	48	125				225	350	195
60	52	145				260	405	230
65	55	170				290	460	270

Figure 14: FDOT Lane Transitions for 2-Lane Roadways. Source: FDOT, 2022



The following four locational analyses describe the current conditions, measurements, and costs of potential left turn lane construction.

GULF SHORE OF LONGBOAT

Gulf Shore of Longboat is a Retirement Community in Longboat Key, FL that is directly adjacent to Gulf of Mexico Drive. The current configuration of Gulf of Mexico Drive adjacent to the community is a 45-mph two-lane continuous closed striped road with bike lanes on both sides and a sidewalk along the eastern side. The right of way along this segment of Gulf of Mexico Drive spans 100 ft and is bordered by the Gulf Shore of Longboat community on the east and beach on the west. Considerations for pavement widening to accommodate a turn lane for this community include impediments within the right of way. Included in the eastern portion of the right of way is a part of the community's parking lot which would likely be altered if turn lane pavement widening is pursued. Furthermore, on the western side of the corridor within the right of way are hedges and a beach which may be disrupted if turn lane pavement widening is pursued. For these reasons, creation of a turn lane here is not recommended. This same condition is the case for the Twin Shore neighborhood to the north of Gulf Shore, where a turn lane would not be recommended either.





Table 5: Opinion of Probable Cost for Gulf Shore of Longboat 2022

GMD CORRIDOR - ENGINEERS OPINION OF PROBABLE COST						
ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT	
Roadway						
160 4	TYPE B STABILIZATION	SY	963	\$11.74	\$11,302.50	
285 706	OPTIONAL BASE, BASE GROUP 06	SY	794	\$35.80	\$28,441.11	
327 70 6	MILLING EXISTING ASPHALT PAVEMENT, 1.5" AVG DEPTH	SY	2167	\$3.94	\$8,531.25	
334 1 12	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC B, PG 76-22	ΤN	794.4	\$141.46	\$112,384.10	
337 7 80	ASPHALT FRICTION COURSE, TRAFFIC B, FC-9.5, PG 76-22	ΤN	2961.1	\$211.81	\$627,200.35	
520 1 10	CONCRETE CURB & GUTTER, TYPE F	LF	650	\$51.68	\$33 <i>,</i> 588.75	
Signing						
706 1 3	RAISED PAVEMENT MARKER, TYPE B	EA	33	\$4.80	\$158.40	
711 11 170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	3	\$94.65	\$283.95	
711 11 241	THERMOPLASTIC, STANDARD, YELLOW, 2-4 DOTTED GUIDE LINE /6-10 DOTTED EXTENSION LINE, 6"	GM	0.246	\$2,985.49	\$735.06	
711 14 160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	2	\$317.55	\$635.10	
711 14 170	THERMOPLASTIC, PREFORMED, WHITE, ARROW	EA	2	\$213.84	\$427.68	
711 16 101	THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 6"	GM	0.246	\$6,058.70	\$1,491.73	
711 16 201	THERMOPLASTIC, STANDARD, OTHER SURFACES, YELLOW, SOLID, 6"	GM	0.246	\$6,122.59	\$1,507.46	

GMD CORRIDOR - CONCEPT OPC

TOTAL COSTS	AMOUNT
SUBTOTAL (DOES NOT INCLUDE MOBILIZATION & MOT)	\$826,687.42
MOBILIZATION & MOT	\$115,736.00
O.P.C. SUBTOTAL	\$942,423.42
20% Contingency	\$188,484.68
ESTIMATED O.P.C. TOTAL	\$1,130,908.10



EMERALD HARBOR

Emerald Harbor is a residential community located 2.2 miles from the north end of Longboat Key and 7.7 miles from the south end. The current configuration of Gulf of Mexico Drive adjacent to the community is a 45-mph two-lane open striped road with bike lanes on both sides and a sidewalk along the eastern side. When traveling northbound on Gulf of Mexico Drive there is a right turn lane into Emerald Harbor. The right of way along this segment of Gulf of Mexico Drive spans 100 ft and is bordered by the Emerald Harbor community on the east and both single family residential and Silver Sands Gulf Beach Resort on the west. Landscaping on eastern side of this segment may have to be removed to accommodate turn lane pavement widening.





Table 6: Opinion of Probable Costs for Emerald Harbor 2022

GMD CORRIDOR -	ENGINEERS	OPINION	OF PROE	BABLE CO	ST

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
Roadway					
160 4	TYPE B STABILIZATION	SY	1442	\$9.39	\$13,542.47
285 706	OPTIONAL BASE, BASE GROUP 06	SY	1442	\$28.64	\$41,305.24
327 70 6	MILLING EXISTING ASPHALT PAVEMENT, 1.5" AVG DEPTH	SY	3933	\$3.15	\$12,390.00
334 1 12	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC B, PG 76-22	ΤN	1442.2	\$113.17	\$163,216.29
337 7 80	ASPHALT FRICTION COURSE, TRAFFIC B, FC-9.5, PG 76-22	ΤN	5375.6	\$169.45	\$910,887.89
Signing					
706 1 3	RAISED PAVEMENT MARKER, TYPE B	EA	59	\$3.84	\$226.56
711 11 170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	6	\$75.72	\$454.32
711 11 241	THERMOPLASTIC, STANDARD, YELLOW, 2-4 DOTTED GUIDE LINE /6-10 DOTTED EXTENSION LINE, 6"	GM	0.447	\$2,388.39	\$1,067.54
711 14 160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	4	\$254.04	\$1,016.16
711 14 170	THERMOPLASTIC, PREFORMED, WHITE, ARROW	EA	4	\$171.07	\$684.28
711 16 101	THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 6"	GM	0.447	\$4,846.96	\$2,166.44
711 16 201	THERMOPLASTIC, STANDARD, OTHER SURFACES, YELLOW, SOLID, 6"	GM	0.447	\$4,898.07	\$2,189.29

GMD CORRIDOR - CONCEPT OPC

TOTAL COSTS	AMOUNT
SUBTOTAL (DOES NOT INCLUDE MOBILIZATION & MOT)	\$1,149,146.48
MOBILIZATION & MOT	\$ 160,880.00
O.P.C. SUBTOTAL	\$1,310,026.48
20% Contingency	\$262,005.30
ESTIMATED O.P.C. TOTAL	\$1,572,031.78



SPANISH MAIN

Spanish Main Yacht Club is a residential community comprised of condominiums located just south of the Emerald Harbor community. The current configuration of Gulf of Mexico Drive adjacent to the community is a 45-mph two-lane road with bike lanes and sidewalks on both sides. There exists open passing striping for northbound travelers on Gulf of Mexico Drive along this segment. The right of way along this segment of Gulf of Mexico Drive spans 100 ft and is bordered by the Spanish Main Yacht Club community on the east and Shore Condominium community on the west. Landscaping on the eastern side of this segment would likely have to be removed to accommodate turn lane pavement widening.





Table 7: Opinion of Probable Costs for Spanish Main 2022

GMD CORRIDOR - ENGINEERS OPINION OF PROBABLE COST						
ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT	
Roadway						
160 4	TYPE B STABILIZATION	SY	1442	\$9.39	\$13,542.47	
285 706	OPTIONAL BASE, BASE GROUP 06	SY	1442	\$28.64	\$41,305.24	
327 70 6	MILLING EXISTING ASPHALT PAVEMENT, 1.5" AVG DEPTH	SY	3933	\$3.15	\$12,390.00	
334 1 12	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC B, PG 76-22	ΤN	1442.2	\$113.17	\$163,216.29	
337 7 80	ASPHALT FRICTION COURSE, TRAFFIC B, FC-9.5, PG 76-22	ΤN	5375.6	\$169.45	\$910,887.89	
Signing						
706 1 3	RAISED PAVEMENT MARKER, TYPE B	EA	59	\$3.84	\$226.56	
711 11 170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	6	\$75.72	\$454.32	
711 11 241	THERMOPLASTIC, STANDARD, YELLOW, 2-4 DOTTED GUIDE LINE /6-10 DOTTED EXTENSION LINE, 6"	GM	0.447	\$2,388.39	\$1,067.54	
711 14 160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	4	\$254.04	\$1,016.16	
711 14 170	THERMOPLASTIC, PREFORMED, WHITE, ARROW	EA	4	\$171.07	\$684.28	
711 16 101	THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 6"	GM	0.447	\$4,846.96	\$2,166.44	
711 16 201	THERMOPLASTIC, STANDARD, OTHER SURFACES, YELLOW, SOLID, 6"	GM	0.447	\$4,898.07	\$2,189.29	

GMD CORRIDOR - CONCEPT OPC

TOTAL COSTS	AMOUNT
SUBTOTAL (DOES NOT INCLUDE MOBILIZATION & MOT)	\$1,149,146.48
MOBILIZATION & MOT	\$ 160,880.00
O.P.C. SUBTOTAL	\$1,310,026.48
20% Contingency	\$262,005.30
ESTIMATED O.P.C. TOTAL	\$1,572,031.78



BUTTONWOOD HARBOUR

Buttonwood Harbour is a residential community comprised of 50 single family homes located along the central section of the corridor. The current configuration of Gulf of Mexico Drive adjacent to the community is a 45-mph two-lane open striped road with bike lanes and sidewalks on both sides. The right of way along this segment of Gulf of Mexico Drive spans 100 ft and is bordered by the Buttonwood community on the east and Shore Condominium community on the west. Landscaping on both sides of this segment would likely have to be removed to accommodate turn lane pavement widening.





Table 8: Opinion of Probable Costs for Buttonwood Harbour 2022

GMD CORRIDOR - ENGINEERS OPINION OF PROBABLE COST

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
Roadway					
160 4	TYPE B STABILIZATION	SY	794	\$9.39	\$7,459.83
285 706	OPTIONAL BASE, BASE GROUP 06	SY	794	\$28.64	\$22,752.89
327 70 6	MILLING EXISTING ASPHALT PAVEMENT, 1.5" AVG DEPTH	SY	2167	\$3.15	\$ 6,825.00
334 1 12	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC B, PG 76-22	ΤN	794.4	\$113.17	\$89,907.28
337 7 80	ASPHALT FRICTION COURSE, TRAFFIC B, FC-9.5, PG 76-22	ΤN	2961.1	\$169.45	\$501,760.28
Signing					
706 1 3	RAISED PAVEMENT MARKER, TYPE B	EA	33	\$3.84	\$126.72
711 11 170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	3	\$75.72	\$227.16
711 11 241	THERMOPLASTIC, STANDARD, YELLOW, 2-4 DOTTED GUIDE LINE /6-10 DOTTED EXTENSION LINE, 6"	GM	0.246	\$2,388.39	\$588.05
711 14 160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	2	\$254.04	\$508.08
711 14 170	THERMOPLASTIC, PREFORMED, WHITE, ARROW	EA	2	\$171.07	\$342.14
711 16 101	THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 6"	GM	0.246	\$4,846.96	\$1,193.38
711 16 201	THERMOPLASTIC, STANDARD, OTHER SURFACES, YELLOW, SOLID, 6"	GM	0.246	\$4,898.07	\$1,205.96

GMD CORRIDOR - CONCEPT OPC

TOTAL COSTS	AMOUNT
SUBTOTAL (DOES NOT INCLUDE MOBILIZATION & MOT)	\$632,896.77
MOBILIZATION & MOT	\$ 88,606.00
O.P.C. SUBTOTAL	\$721,502.77
20% Contingency	\$144,300.55
ESTIMATED O.P.C. TOTAL	\$865,803.33