



FT. HARRISON AVENUE

COMPLETE STREETS STUDY

FINAL REPORT



NOVEMBER
2020



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EXECUTIVE SUMMARY

The Ft. Harrison Avenue Complete Streets Study recommends improvements for Ft. Harrison Avenue from Belleair Road to N. Myrtle Avenue within the City of Clearwater to provide mobility, safety, and placemaking along the 3.2-mile study corridor. Certain recent planning studies and design concepts were directly incorporated into this study including the Alternate US 19 and Fairmont Street Roundabout Design (FDOT – May 2019), the Complete Drew Street Project (City of Clearwater – October 2019), and the North Marina Area Master Plan (City – January 2016). Recommended improvements are also consistent with the guiding principles established in the Clearwater Complete Streets Implementation Plan.

A menu of design strategies was considered when developing recommendations to provide mobility, safety, and placemaking along the study corridor. A Project Visioning Team (PVT) was formed to guide the initiative, including local business owners, residents, and city staff, as well as representatives from institutions and local agencies. To experience Ft. Harrison Avenue outside of a car, the PVT traveled to various locations along the corridor on the Clearwater Jolley Trolley as part of a “Walkshop”, and later discussed existing conditions, design strategies, and alternatives with the project team. Almost 650 postcards were mailed to residents and businesses within the study area to promote participation in an online survey and to encourage people to visit the project team at the February Blast Friday event in Downtown Clearwater. An estimated 300 individuals were reached, and attendees were provided with a pamphlet with further information and a link to a public survey about the project.

The final recommendations are based on the input received from the public and Project Visioning Team members. Each selected design strategy provides its own unique benefits to enhancing the street, but collectively the strategies serve to further the key goals developed for the corridor, consistent with the guiding principles established in the Clearwater Complete Streets Implementation Plan and illustrated in Figure 2. Proposed concepts primarily work within existing rights-of-way and do not require moving curbs or storm drains. A traffic study was completed for the southern segment (Segment 1A) to evaluate a proposed road diet, the results of which showed that peak-hour delays would increase by less than seven seconds on average at the controlling intersection of Ft. Harrison Avenue and Belleview Boulevard.

A planning level opinion of probable costs was developed for the permanent installation of each of the proposed improvement concepts proposed in this study to aid in advancing the improvements identified in this study to the next phase.

INTRODUCTION

PROJECT OVERVIEW

The Ft. Harrison Avenue Complete Streets Study identified potential improvements for Ft. Harrison Avenue from Belleair Road to N. Myrtle Avenue within the City of Clearwater. The study limits measure approximately 3.2 miles.



Figure 1: Study Area Map

STUDY PURPOSE

The goal of the study was to recommend improvements to provide **mobility, safety, and placemaking** along the study corridor. This project identified improvements to address the corridor deficiencies which would address the short and long-term needs of all users of the corridor. Improvements implement the guiding principles established in the Clearwater Complete Streets Implementation Plan.



Figure 2: Project Goals

PREVIOUS STUDIES

Several recent studies were completed by the City and FDOT which are referenced throughout this study. The studies included:

- **Alternate US 19 and Fairmont Street Roundabout Design (FDOT – May 2019)** – FDOT conducted a corridor planning study along Alternate US 19 (Alt. US 19) to develop a long-

term vision for the corridor and identify multimodal solutions to address the mobility needs within a context that reflects the corridor vision. The study proposed a roundabout at the Fairmont Street intersection to improve traffic operations at the northern end of Ft. Harrison Avenue near Alt. US 19, which serves as an alternative north-south corridor to Ft. Harrison Avenue. The proposed roundabout at Alt. US 19 and Fairmont Street is anticipated to relieve traffic congestion for vehicles going from northbound Ft. Harrison Avenue onto northbound Alt. US 19.

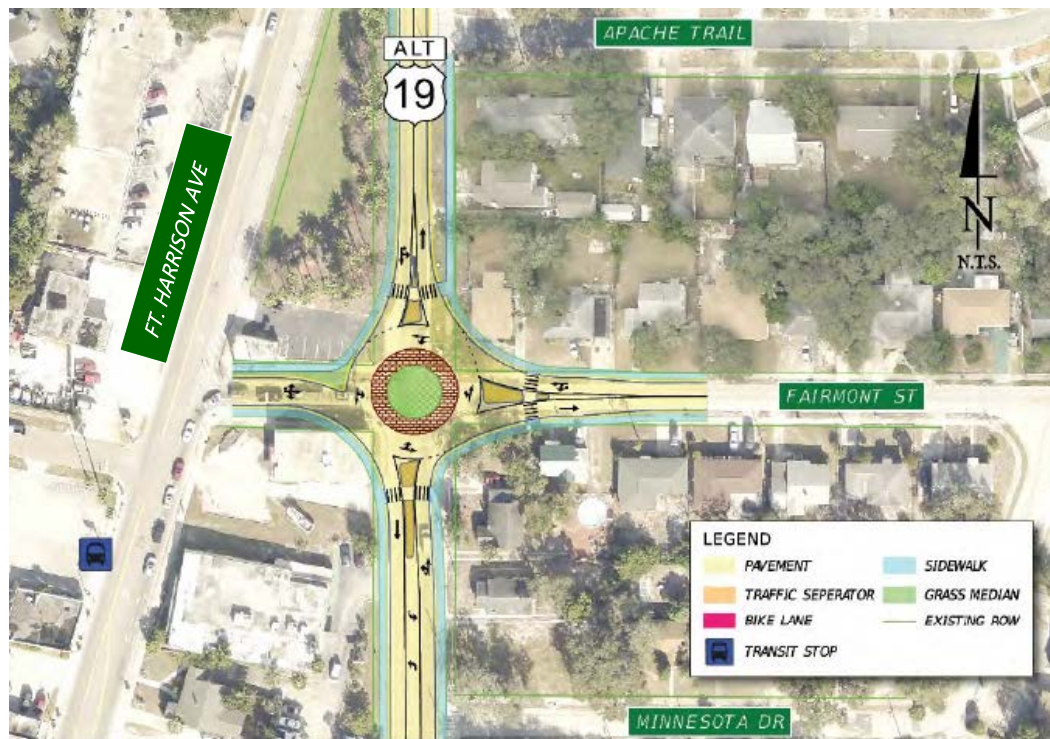


Figure 3: Roundabout Concept at Fairmont Street and Alt. US 19 (from FDOT)

- **Complete Drew Street (City – September 2018)** – This project’s goals included improving safety, accessibility, and connectivity with land uses, supporting existing businesses and future growth, and promoting active living with improved access to trails. The Complete Drew Street Project recommended a road diet from four to two lanes with on-street parking and improved infrastructure for people cycling and walking in the segment of Drew Street between Osceola and Myrtle Avenues, which crosses Ft. Harrison Avenue.
- **North Marina Area Master Plan (City – January 2016)** – This plan includes concepts for redevelopment for the area around Ft. Harrison Avenue and Seminole Street. The plan calls for wider sidewalks, activated corners, enhanced pedestrian zones, and avoidance of driveway conflicts. Future development envisions single-story retail and mid-rise residential. This area acts as a gateway into Downtown and the Seminole Street Boat Launch. Since plan adoption, this area has been integrated into the city’s Downtown

Redevelopment Plan area and the Downtown District & Development Standards were adopted which implement the vision.



Figure 4: North Marina Area Master Plan Exhibit

Improvements in this study of Ft. Harrison Avenue are consistent with the goals and recommendations of the previous relevant studies along and adjacent to the corridor. No additional analysis was completed for the FDOT roundabout at Fairmont Street.

CORRIDOR CHARACTERISTICS

The corridor was divided into three main segments based on character, context, land use, existing typical sections, and available right-of-way, which are further described below. Existing conditions and constraints were examined in the field and using demographic data. Ft. Harrison Avenue provides connections to key destinations within the city, including Clearwater Beach, Seminole Street Boat Launch, Park Street Transit Center, Morton Plant Hospital, the County Courthouse, Clearwater Main Library, and Coachman Park.

Area transit includes four distinct services shown in Figure 5 and listed below. Users of these services are oftentimes pedestrians before and after their transit trips. This increases the importance of ensuring non-vehicular user safety and connectedness along the corridor.

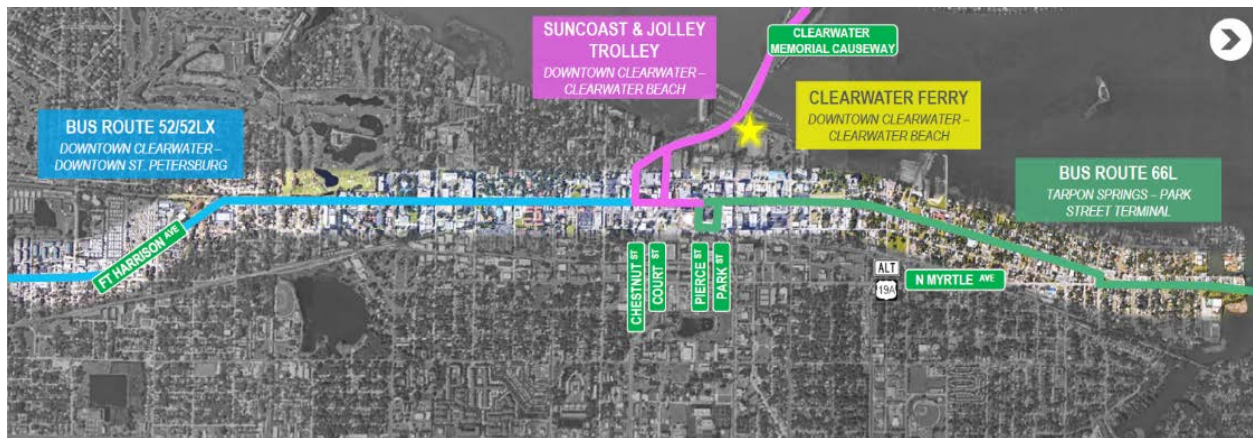


Figure 5: Study Area Transit

- **Bus Route 52/52LX (Downtown Clearwater to Downtown St. Petersburg)** – Express service during peak hours, with thirty-minute headways Monday through Saturday and one-hour headways Sundays and holidays.
- **Bus Route 66L (Tarpon Springs to Park Street Terminal)** – Limited stop route with 90-minute headways during peak hours Monday through Friday, and no service on Saturdays, Sundays, or holidays.
- **SunCoast and Jolley Trolley (Downtown Clearwater to Clearwater Beach)** – Daily service with 30-minute headways, including on holidays, and extended service on weekends.
- **Clearwater Ferry (Downtown Clearwater to Clearwater Beach)** – Reservations required, service generally with one-hour headways Thursday through Sunday.

The project team reviewed key area statistics in comparison with the county and city. Of note, the corridor area’s median household income is \$24k (compared to \$47k for Pinellas County and \$45k for the City of Clearwater). Similarly, 24% of the population in the corridor area is below the poverty level (compared to 14% for Pinellas County and 16% for the City of Clearwater). Finally, the percentage of the households with no vehicles is 22% in the study area (compared to 9% for Pinellas County and 12% for the City of Clearwater).

	CORRIDOR*	CITY	COUNTY
MEDIAN HOUSEHOLD INCOME	\$24K	\$45K	\$47K
POPULATION BELOW POVERTY LEVEL	24%	16%	14%
MINORITY POPULATION	26%	20%	26%
HOUSEHOLDS WITH NO VEHICLES	22%	12%	9%
POPULATION UNDER 18	16%	19%	17%
POPULATION OVER 65	21%	21%	24%

*Includes the area within a ¼ mile walkshed of the Project corridor

Figure 6: Study Area Statistics Compared to City and County

Ft. Harrison Avenue is consistently two lanes with a continuous center two-way left turn lane (TWLTL), with the exception of a portion of Segment 1 that is four lanes and merges into a three-lane section. Due to the different cross sections and knowing that recommended treatments may vary given the nature of the existing characteristics of each segment, the project team decided to divide Segment 1 into two sub-segments: Segment 1A and Segment 1B. Descriptions of each segment can be found on the following pages.



Figure 7: Corridor Segments

SEGMENT 1A: City Gateway

Segment 1A extends from the southern end of the study area at Belleair Road to Belleview Boulevard. The right-of-way is typically 100-foot wide and the posted speed limit is 30 MPH. This segment is currently a four-lane section. However, the two northbound lanes merge to one lane approximately 500 feet south of Woodlawn Street. The feasibility of a road diet was studied for this segment to calm traffic and improve safety while maintaining operations. Much of this segment has no curb and instead utilizes flush shoulders and open drainage swales. This gives the area a suburban feel and context. Buildings are set far back from the roadway with parking lots between the roadside and building. There are currently few opportunities for shade for people walking or riding a bicycle.



Figure 8: Segment 1A Map

Although the number of crashes is not significant, there were recent crashes with fatalities along this segment. One occurred on June 1, 2019 in which a motorcyclist was killed in a crash at the intersection of Ft. Harrison Avenue and Belleview Boulevard. Another crash with fatality occurred on November 11, 2019 at the intersection of Ft. Harrison Avenue and Woodlawn Street. In addition to improving safety for vehicular traffic, increased safety is also desired to better serve transit users as they become pedestrians and cyclists to reach their final destinations.

The Pinellas Trail runs parallel to Ft. Harrison Avenue in this segment on the west side. The trail crosses Ft. Harrison Avenue at the Belleview Boulevard intersection diagonally from the southwest corner to the northeast corner.

Goals for Segment 1 were identified as:

- Improve multimodal connections across corridor and into Downtown
- Create a gateway into the City and Downtown

SEGMENT 1B: Downtown Transition

Segment 1B extends from Belleview Boulevard to Chestnut Street. The right-of-way is typically 60-foot wide and the posted speed limit is 30 MPH. This segment is the transition into Downtown Clearwater, serving important retail areas and the Morton Plant Hospital campus. Morton Plant

Hospital was included in project coordination and participated on the Project Visioning Team. The Pinellas Trail is located parallel and immediately adjacent to the corridor from south of Belleview Boulevard to south of Lakeview Road, where it diverges and runs parallel a few blocks east of Ft. Harrison Avenue. At Corbett Street, the context of the adjacent land uses changes from suburban to more urbanized as buildings are closer to the road and sidewalks. Lakeview Road connects Ft. Harrison Avenue to Myrtle Avenue/Alt US 19, serving as an alternate route through Downtown.



Figure 9: Segment 1B Map

The goals for Segment 1B are the same as Segment 1A which includes providing multimodal connections and a gateway into the City and Downtown. However, unlike Segment 1A, Segment 1B is three lanes already and contains mature trees, especially by the hospital campus. These factors provide a sense of enclosure and character along this segment that isn't present in Segment 1A. The sense of enclosure is a key component of speed management and Complete Streets strategies. An additional goal for Segment 1B was identified during the first Project Visioning Team meeting and Walkshop that aims to increase the buffer and comfort level of the Pinellas Trail from Ft. Harrison Avenue vehicular traffic.

SEGMENT 2: Downtown Core

Segment 2 includes the Downtown Core, extending from Chestnut Street to Drew Street. The right-of-way varies from 55 feet to 70 feet and the posted speed limit is 30 MPH. This segment is characterized by buildings that abut the sidewalk, a grid of streets, and higher pedestrian activity. A significant portion of existing properties in this area is associated with the Church of Scientology. The Church of Scientology was included in project coordination and participated on the Project Visioning Team. In addition, the Cleveland Street intersection is a key retail node for the City. Because of the higher-level pedestrian activity, identifying the conditions of the existing infrastructure for people walking is even more critical.

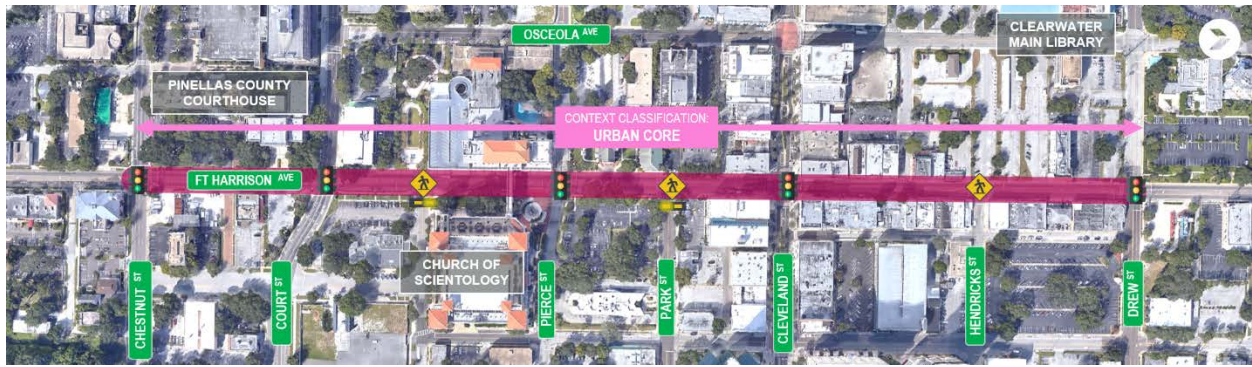


Figure 10: Segment 2 Map

The sidewalks in the Downtown Core are very narrow in some locations, such as the west side of Ft. Harrison Avenue north of Cleveland Street. In addition, tripping hazards like high curbs and obstructions in the sidewalk such as signs provide opportunities for improvement.

The key goal for Segment 2 was identified as:

- Use streetspace to create a welcoming, livable, and economically vibrant Downtown

SEGMENT 3: Old Bay/North Marina

Segment 3 extends from Drew Street to N. Myrtle Avenue. The right-of-way is 55 feet to 60 feet and the posted speed limit is 30 MPH. The southern portion is a transition area with a mix of low-scale commercial and residential uses. The portion between Eldridge Street and Cedar Street was included in the North Marina Area Master Plan study area (see Previous Studies) and provides access to the Seminole Street Boat Launch. North of Cedar Street, the adjacent context changes to predominantly single family residential.



Figure 11: Segment 3 Map

The sidewalks are in relatively poor condition and are not buffered from the roadway which makes walking uncomfortable. In addition, issues with overgrowth of vegetation was noted during the first Project Visioning Team meeting.

The key goal for Segment 3 was identified as:

- Beautify the streetspace to attract investment and development to achieve future land use vision

PUBLIC OUTREACH SUMMARY

PROJECT VISIONING TEAM

The Project Visioning Team (PVT) was made up of local business owners, residents, institutions, local agencies, and city staff who have an interest in improvements along the corridor. The PVT included representatives from different backgrounds, ages, and abilities to capture a greater cross-section of end users and develop solutions that may achieve a more inclusive street design.

The PVT first met on November 13, 2019 for a project kick-off presentation and “Walkshop”. After the project team presented the project background, existing conditions, and potential design strategies, the team and the PVT traveled on the Jolley Trolley to various locations and walked the street to experience Ft. Harrison Avenue from a pedestrian’s perspective. Following the “Walkshop” the PVT discussed key observations, including the poor maintenance of the sidewalk, the feeling of danger along the narrow sidewalks, and a lack of identity for Ft. Harrison Avenue. The second and final PVT meeting was held virtually on June 5, 2020 and included a presentation with the preliminary concepts for the corridor. Feedback from the PVT on the preliminary recommendations was incorporated into the final report. Summaries of each meeting, as well as comments received regarding the draft concepts, can be found in the Appendix.



Figure 12: Project Visioning Team Walkshop Photos

PUBLIC OUTREACH EVENT

On February 28, 2020 the project team attended the Blast Friday event in Downtown Clearwater for a public outreach event. Information about the project and potential design strategies were illustrated. An estimated 300 people were reached, and attendees were provided with a pamphlet with further information and a link to the public survey.

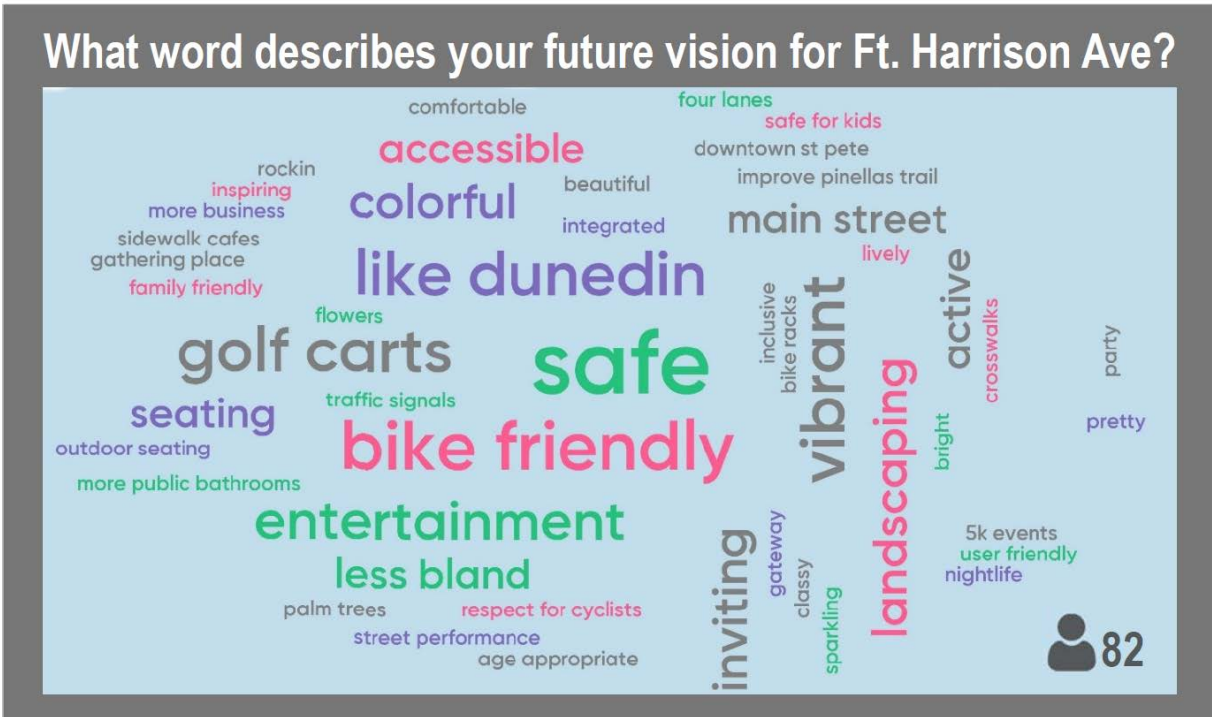


Figure 13: Blast Friday Word Cloud and Information Booth

PUBLIC SURVEY

Public input was also received through an online survey. Nearly 650 postcards were mailed to residents and businesses within 250 feet on either side of Ft. Harrison Avenue in the study area to promote survey participation. The survey was open one week before Blast Friday and two weeks after. A total of 131 people participated. The survey offered participants the opportunity to share their experiences traveling along the Ft. Harrison Avenue corridor and help identify its future vision. Questions related to potential tradeoffs of different design techniques, impressions of the street today, and preferred design strategies. General demographic questions were also asked of survey respondents.

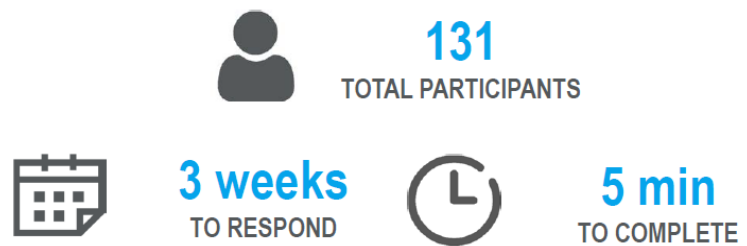
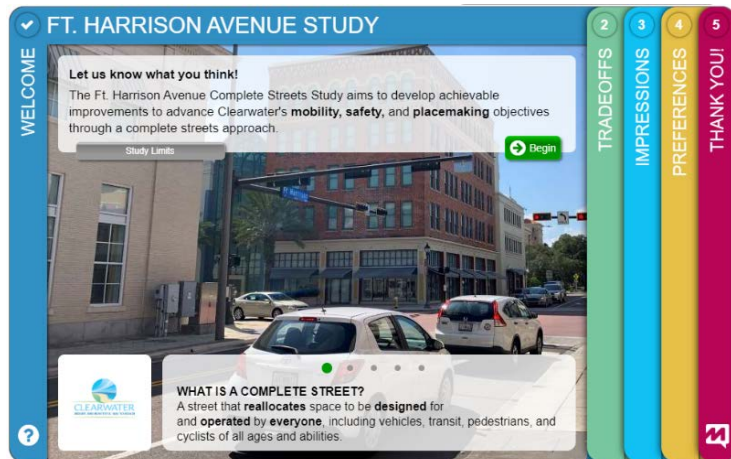


Figure 14: MetroQuest Survey

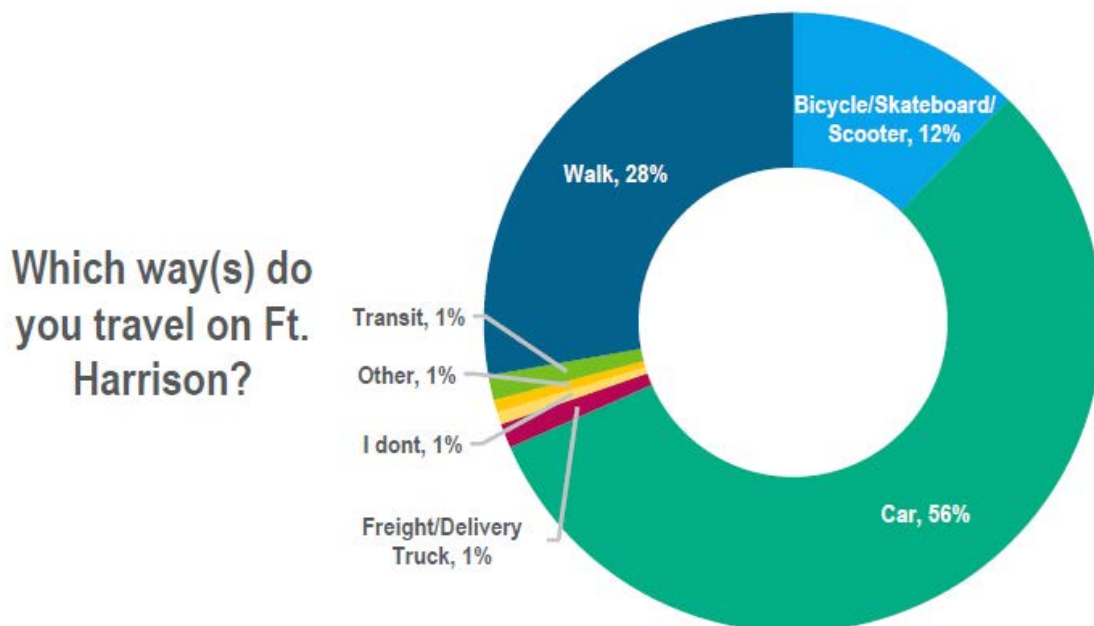
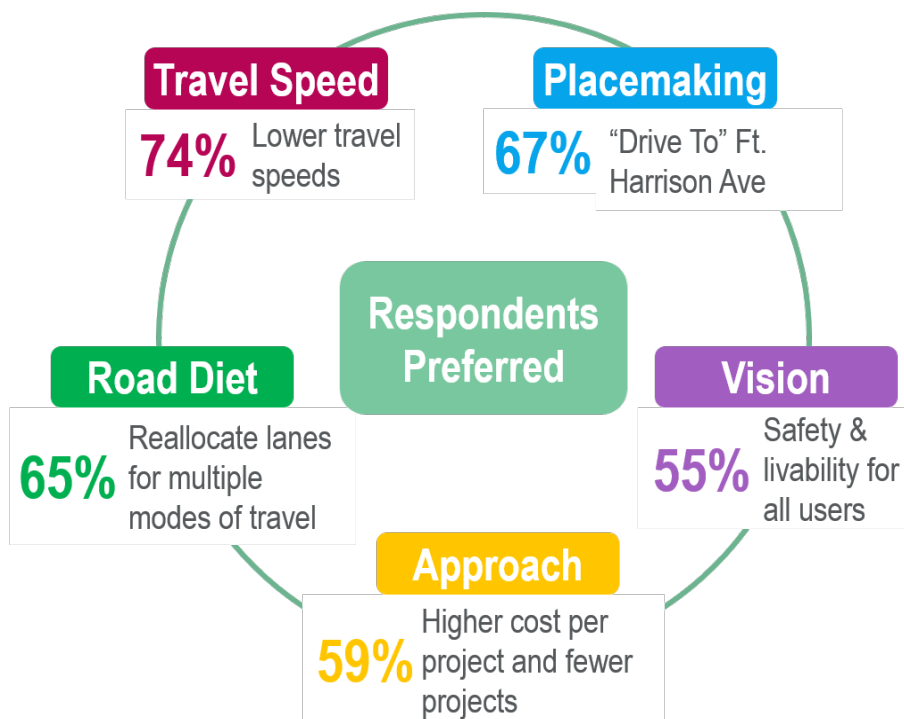
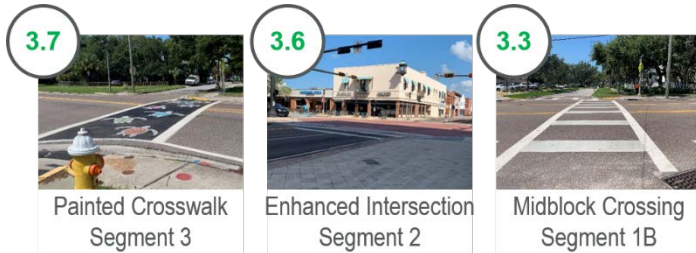


Figure 15: Survey Responses Mode of Travel



Highest rated photos:

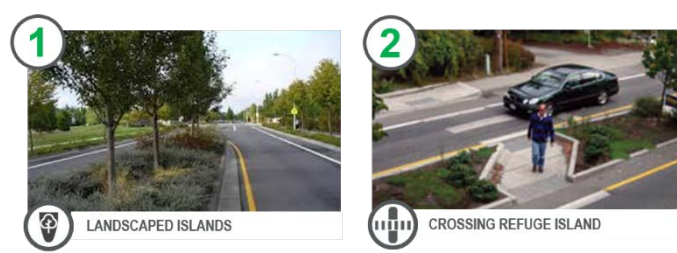


Lowest rated photos:



Design features ranked most often:

(Respondents ranked their top 4 features from 8 choices)



Design features ranked highest:

(Respondents ranked their top 4 features from 8 choices)

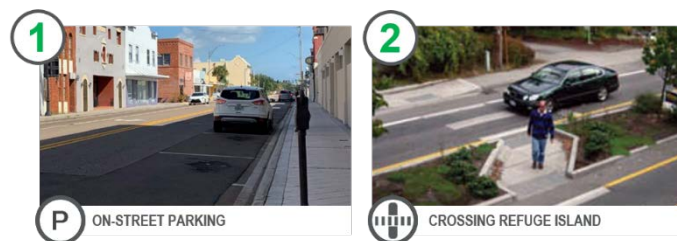


Figure 16: MetroQuest Survey Responses (Sample)

EVALUATING POTENTIAL IMPROVEMENTS

A menu of design strategies was considered when developing recommendations to provide **mobility, safety, and placemaking** along the study corridor.

DEMONSTRATION VS. PERMANENT PROJECTS

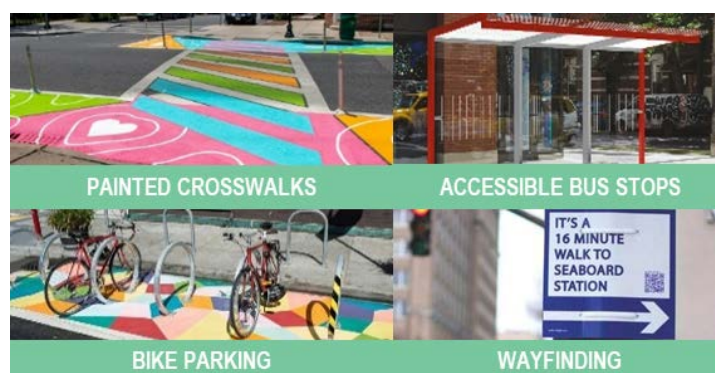
In evaluating design strategies, the project team assessed the options for using Demonstration Projects versus Permanent Installation Projects to implement the study recommendations. Demonstration Projects are smaller, less expensive projects that can demonstrate certain traffic calming principles while allowing for real-time feedback and adjustments. Permanent Installation Projects are larger and more expensive projects that create permanent changes to infrastructure through long-term and more durable construction projects.



Figure 17: Example of Demonstration vs. Permanent Installation Projects

OTHER COMPLETE STREETS FEATURES

Certain low-cost, high-impact complete streets features can be added to the corridor with minimal commitment. Implementing small, repeatable strategies such as those illustrated to the right can work in coordination throughout the corridor and create a safe, comfortable, and welcoming environment for pedestrians and cyclists.



DESIGN STRATEGIES

The following design strategies were evaluated for potential implementation along the corridor:



ON-STREET BICYCLE FACILITY



Clearly marked and designated bicycle facilities can create a safer street for all users and buffer the sidewalk from cars and trucks. When bicycle-specific facilities are installed, drivers know where to expect cyclists and cyclists are less likely to ride on the sidewalk, reducing potential conflicts with pedestrians.



INTERSECTION BULB-OUT



Intersection bulb-outs decrease the radius of a corner, slowing turning traffic and decreasing the distance a pedestrian will need to cross the street. The reclaimed public space may be used for placemaking and beautification.



MIDBLOCK BULB-OUT



Midblock bulb-outs reclaim public space on the side of the road, buffering the sidewalk and reducing the distance to cross the street. Bulb-outs may be placed to "pinch" traffic or create a "chicaning" movement, calming vehicle traffic.



RAISED INTERSECTION



Intersection is raised to slow traffic, emphasizing the intersection and reducing the risk of crashes. People cross at the same height as the sidewalk, increasing visibility. The new intersection may provide a placemaking opportunity for the corridor.



PARKLET



Existing parking spaces or extra pavement can be converted into small parks, sidewalk cafes, and other public spaces. The new gathering spaces created in front of businesses slow traffic with visual cues and people, as well as buffer the sidewalk.



ON-STREET PARKING



On-street parking protects the sidewalk from traffic and provides access to businesses. Traffic is calmed by cars slowing to park and people entering/exiting vehicles.



CROSSING REFUGE ISLAND



Refuge islands create a safe resting or waiting spot for pedestrians crossing the street, either midblock or at intersections. Crossings and islands combined connect two sides of the street and calm traffic with the pedestrian presence.



LANDSCAPED ISLANDS



Landscaped islands can calm traffic and reduce vehicle speeds with vertical visual cues. New landscaping and beautification opportunities are also created.

RECOMMENDATIONS

PROJECT CONCEPTS OVERVIEW

The following recommendations address the corridor segments illustrated in Figure 7 and incorporate the design strategies previously outlined into concepts for each segment. Each selected design strategy provides its own unique benefits to enhancing the street and in combination, these strategies work together to provide the following key benefits consistent with the guiding principles.



Figure 18: Cumulative Benefits of the Design Strategies

In addition to specific improvements recommended for each segment, the following design strategies are recommended to be implemented throughout the corridor:

	<ul style="list-style-type: none"> • Intersection Bulb-Outs - reduce the radii at corners to slow turning traffic, reduce pedestrian crossing distances, and reclaim public space.
	<ul style="list-style-type: none"> • Landscaped Islands – add landscaping in center turn lane where turning movements are not needed.
	<ul style="list-style-type: none"> • Marked Crosswalks – add marked crosswalks at minor intersections to reinforce the grid, improves pedestrian connections, and calms traffic.

SEGMENT 1A: City Gateway

The recommended concept for Segment 1A (Belleair Road to Belleview Boulevard) reduces the number of lanes from four lanes to three lanes, improves connections to the Pinellas Trail, and creates a gateway into the City and Downtown.

The concept plan for Segment 1A includes:






	<ul style="list-style-type: none"> • Road Diet – reduce the number of lanes from 4 lanes with no turn lane to 3 lanes with a turn lane in the southern portion of the segment.
	<ul style="list-style-type: none"> • Landscaped Islands – add islands along the eastern side of the existing roadway to narrow the roadway to three lanes.
	<ul style="list-style-type: none"> • Pedestrian Crosswalk Refuge Islands – add refuge islands in the newly formed median just south of Belleair Road and south of Wildwood Way.
	<ul style="list-style-type: none"> • Bicycle Facilities – improve connections to the Pinellas Trail at Woodlawn Street.
	<ul style="list-style-type: none"> • Painted Intersection – enhance placemaking at Belleview Boulevard, to calm traffic and create a gateway into the Downtown.



Figure 19 Segment 1A Proposed Improvements

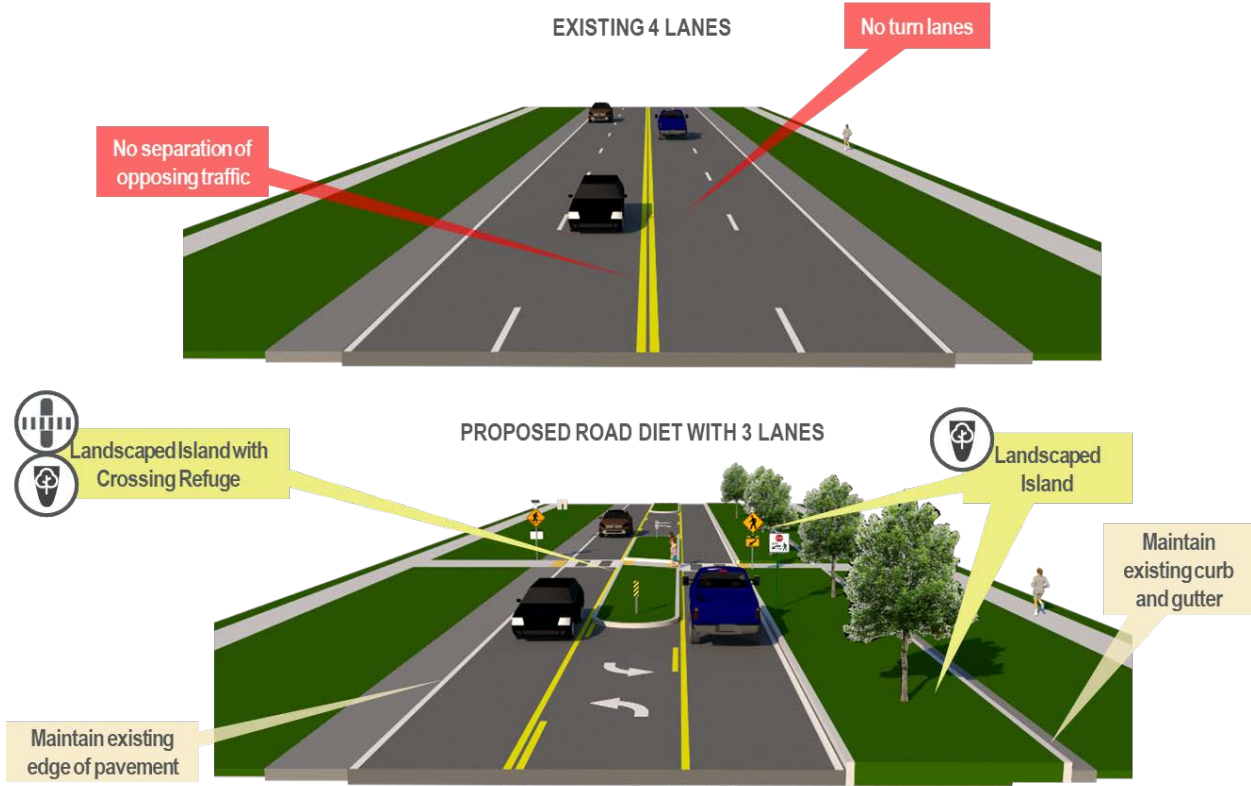


Figure 20: Segment 1A Existing and Proposed Typical Sections

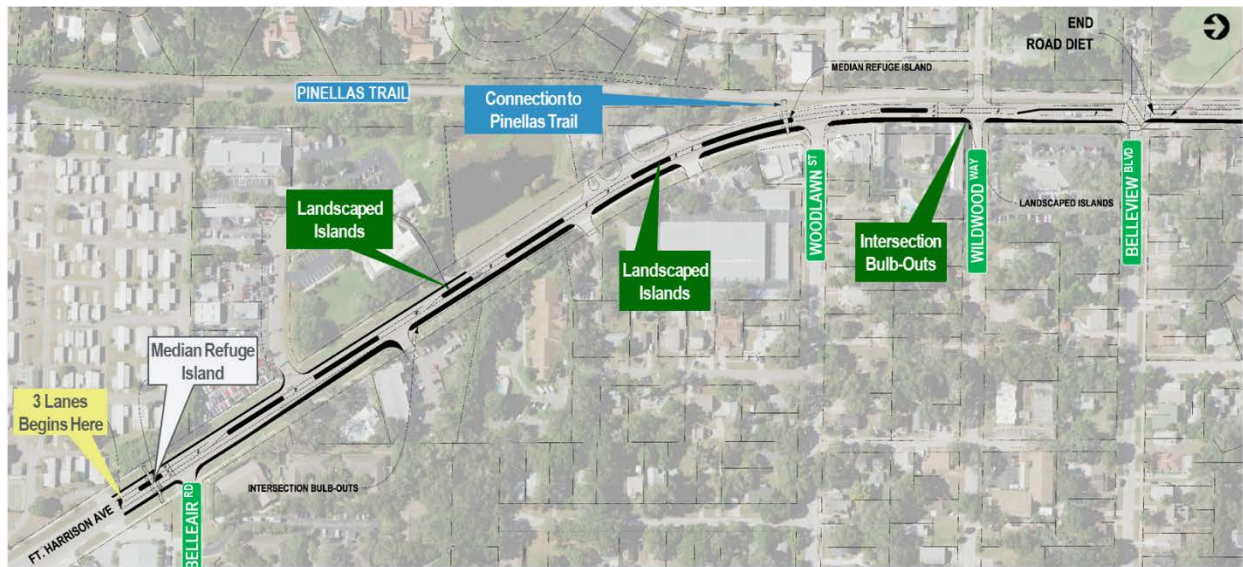


Figure 21: Road Diet Concept Plan Belleair Road to Belleview Boulevard

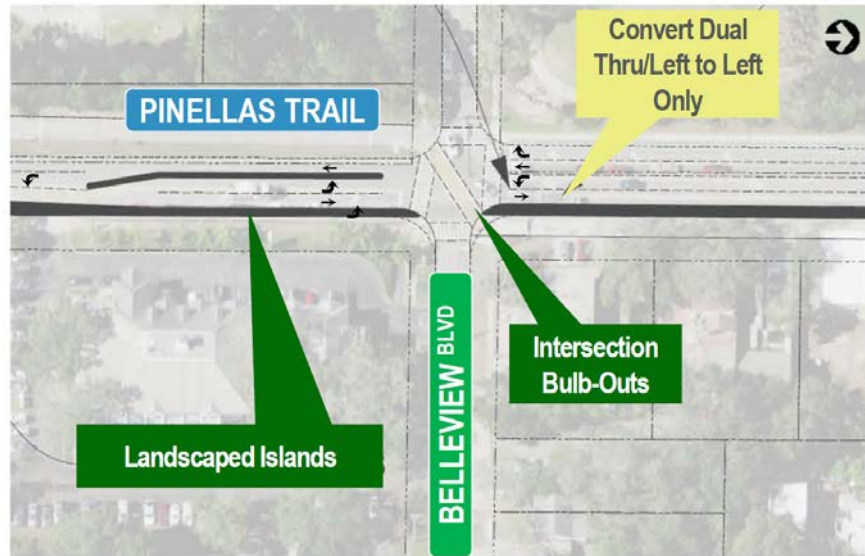


Figure 22 Road Diet Concept Plan Belleview Boulevard Intersection

The concept plan roll plot for both Segments 1A and 1B is included in **Appendix D**.

The planning level opinion of probable costs for the improvements in Segment 1A (summarized in Figure 34) includes milling and resurfacing. The proposed concept maintains the existing curb and gutter on the east side of the roadway as a potential cost savings measure. Further investigation into the age and condition of the existing drainage system should be assessed to determine if replacement of the stormsewer system is warranted at this time. If that is the case, the curb could potentially be removed and the inlets and pipes relocated.

Summary of Traffic Analysis for Road Diet





The lane repurposing proposed for Ft. Harrison Avenue, specifically from the southbound approach at Belleview Boulevard through Belleair Road, is not projected to have a significantly negative impact on traffic conditions. At the controlling intersection of Ft. Harrison Avenue and Belleview Boulevard, peak-hour delays are projected to increase by less than seven seconds on average in the proposed configuration versus the existing lane configurations (both evaluated based on 2040 traffic projections). The overall intersection LOS remains at C or better for all scenarios. Along the un-interrupted segment, the projected traffic volume represents less than two-thirds of the maximum service volume and operates at LOS D in the PM peak hour.

Although a traffic analysis was not included in the scope for the remainder of the study corridor, recommended improvements along the rest of the corridor are not expected to impact traffic operations in any significant way. Additionally, drivers can utilize Alt. US 19/Myrtle Avenue via Lakeview Road (Segment 1B) to travel through Downtown if desired; however, this study does not assume there would be such a shift to Lakeview Road. The full Traffic Memorandum for the study is included in **Appendix C**.

SEGMENT 1B: Downtown Transition

The recommended concept for Segment 1B (Bellevue Boulevard to Chestnut Street) maintains the existing three-lane section, with reconfigured intersections at Bellevue Boulevard and Lakeview Road. A landscaped island replaces narrow on-street bike lanes, which creates an improved off-street facility with improved buffers and a wider Pinellas Trail along Ft. Harrison Avenue. The removal of the thru lane on eastbound Lakeview Road allows for a median refuge island to be added where the Trail crosses. Additional wayfinding signage may encourage drivers to utilize Lakeview Road, but there is limited opportunity to more substantially modify this intersection (e.g., to incorporate a roundabout) due to constrained rights-of-way. Further coordination with Morton Plant Hospital when translating these concepts to design and engineering drawings will be important.

Consistent with Segment 1A, the concept plan includes:

	<ul style="list-style-type: none"> • Landscaped Islands – add landscaped islands along the eastern side of the roadway in the location of the current bike lane to buffer the Pinellas Trail.
	<ul style="list-style-type: none"> • Pedestrian Crosswalk Refuge Islands and Rectangular Rapid Flashing Beacons (RRFB) – add refuge islands on Lakeview Road at the Pinellas Trail crossing, and add a refuge island and RRFBs north of Pine Street on Ft. Harrison Avenue by the Clearwater Historical Society Museum and Cultural Center. Additional crosswalk locations may also include refuge islands
	<ul style="list-style-type: none"> • Bicycle Facilities – remove unbuffered bike lanes and improve off-street facilities.
	<ul style="list-style-type: none"> • Painted Intersection – enhance intersection at Lakeview Road to create placemaking and calm traffic.

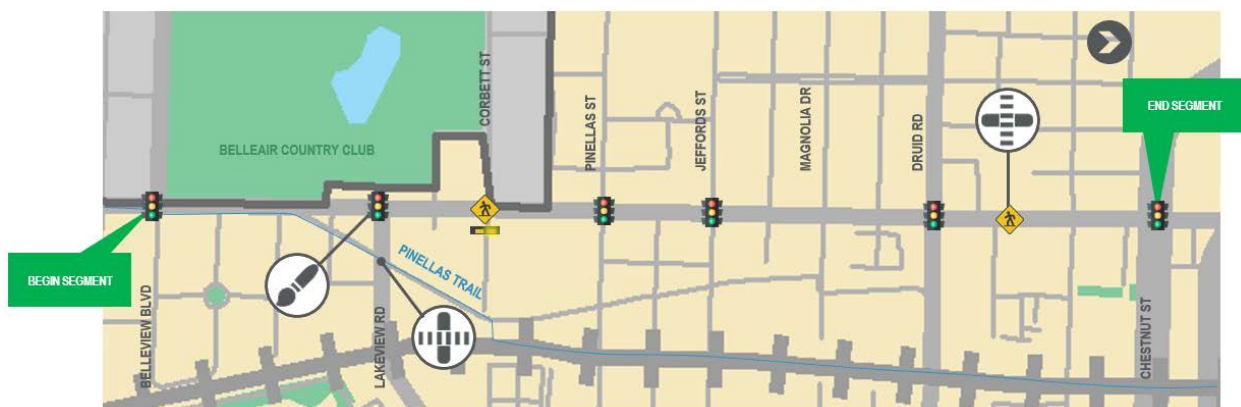


Figure 23 Segment 1B Proposed Improvements

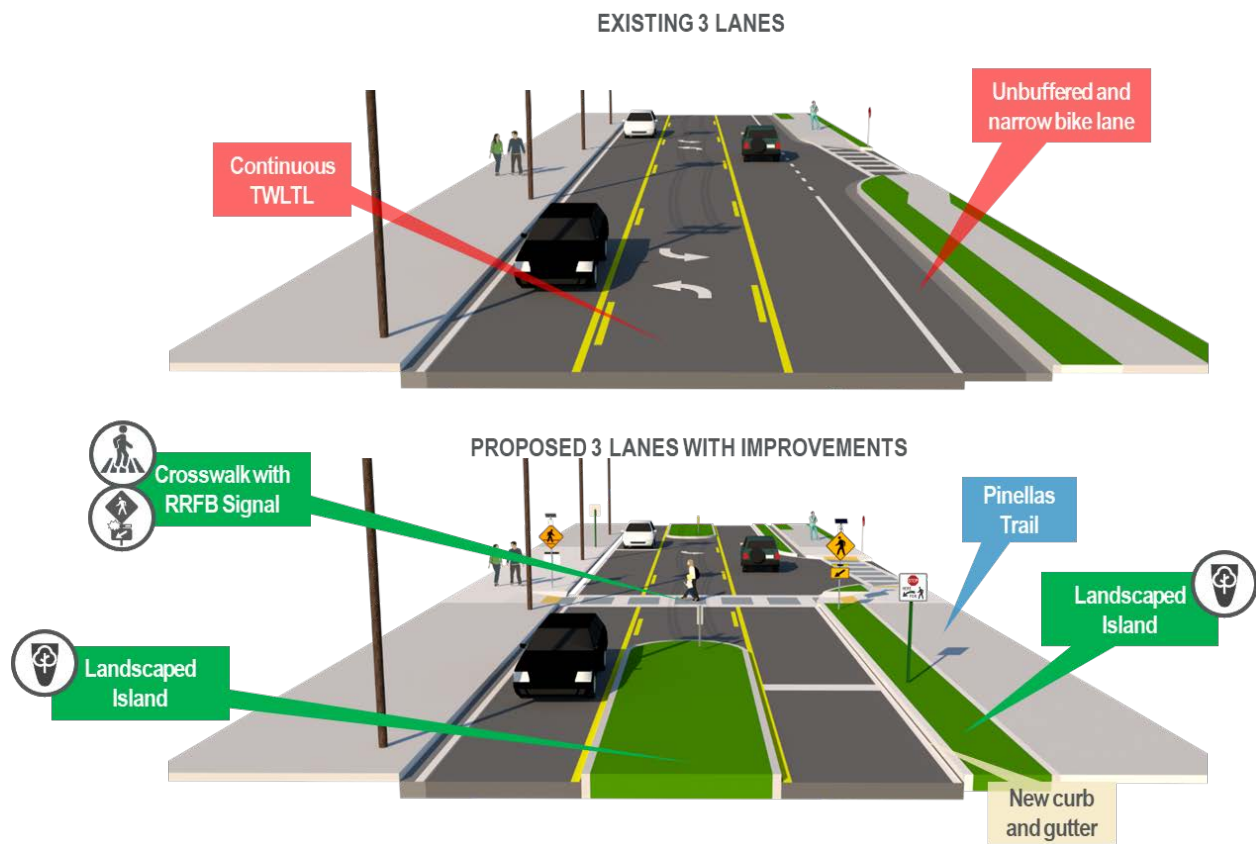


Figure 24: Segment 1B Existing and Proposed Typical Sections

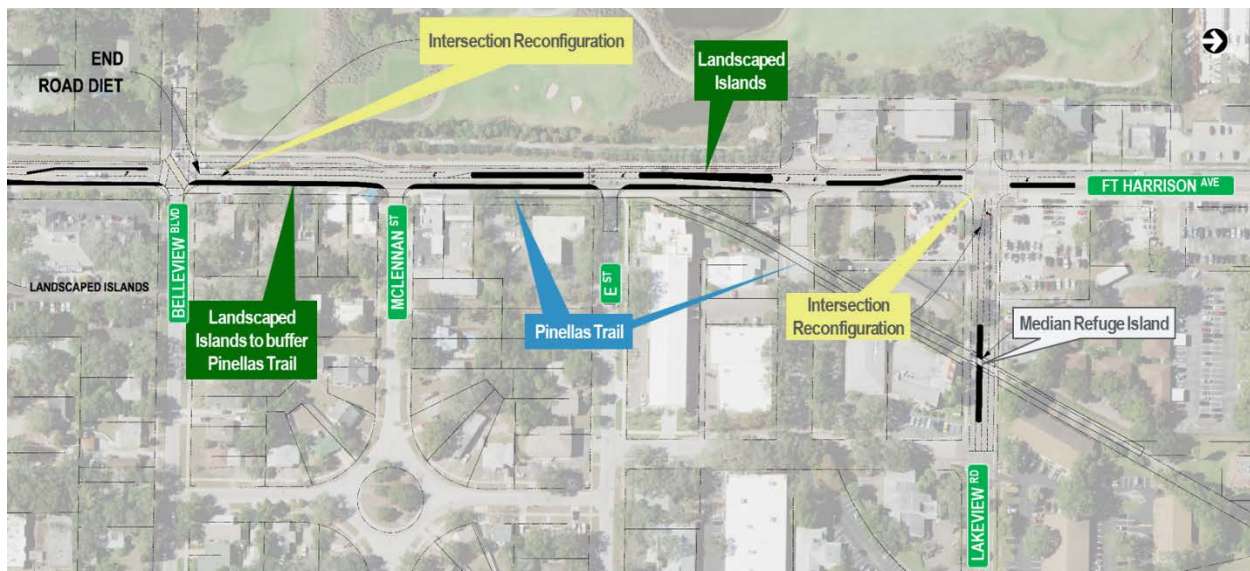


Figure 25: Concept Plan from Bellevue Boulevard to north of Lakeview Road

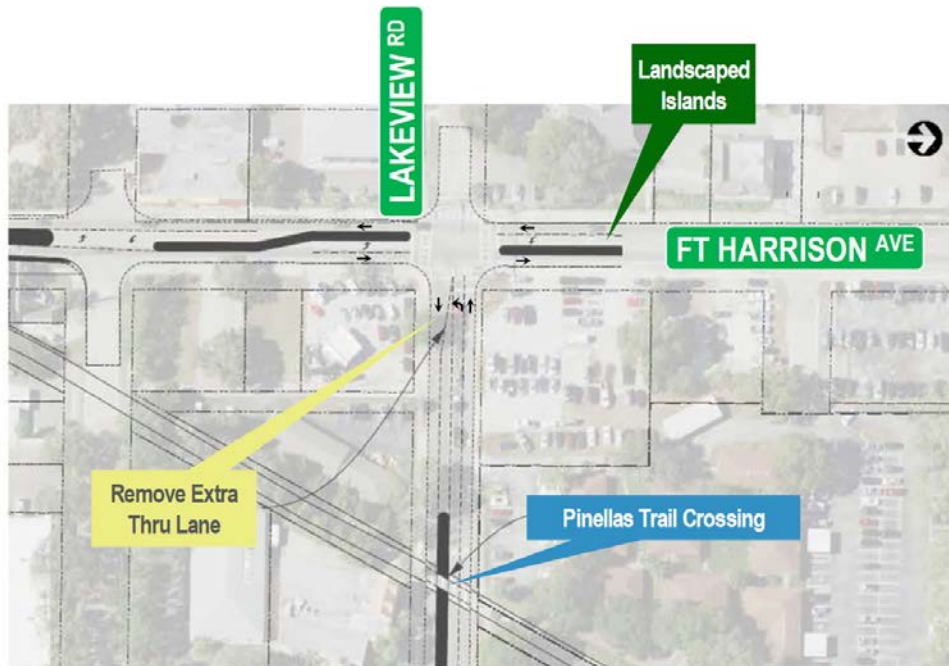


Figure 26 Concept Plan Reconfigured Lakeview Road Intersection

SEGMENT 2: Downtown Core

The recommended concept for Ft. Harrison Avenue from Chestnut Street to Drew Street in the Downtown Core creates a more welcoming, livable, and economically vibrant Downtown, increases and improves space for people walking, and provides an opportunity for additional landscaping and beautification.

The Segment 2 concept plan includes:

	<ul style="list-style-type: none"> • On-Street Parking, Loading, and Parklet Opportunities – eliminate the northbound left turn lane at Pierce Street and the southbound left turn lane at Cleveland Street to create space for designated loading area, on-street parking, parklets and a wider sidewalk.
	<ul style="list-style-type: none"> • Rectangular Rapid Flashing Beacons (RRFB) – add RRFBs at the existing Hendricks Street crossing to increase pedestrian safety.
	<ul style="list-style-type: none"> • Pedestrian Crosswalk Refuge Islands – add refuge islands at existing Park and Franklin Streets crossings where RRFBs are already installed.
	<ul style="list-style-type: none"> • Painted Intersection – enhance placemaking at Drew Street, calm traffic, and create a gateway into the Downtown Core.



Figure 27 Segment 2 Proposed Improvements

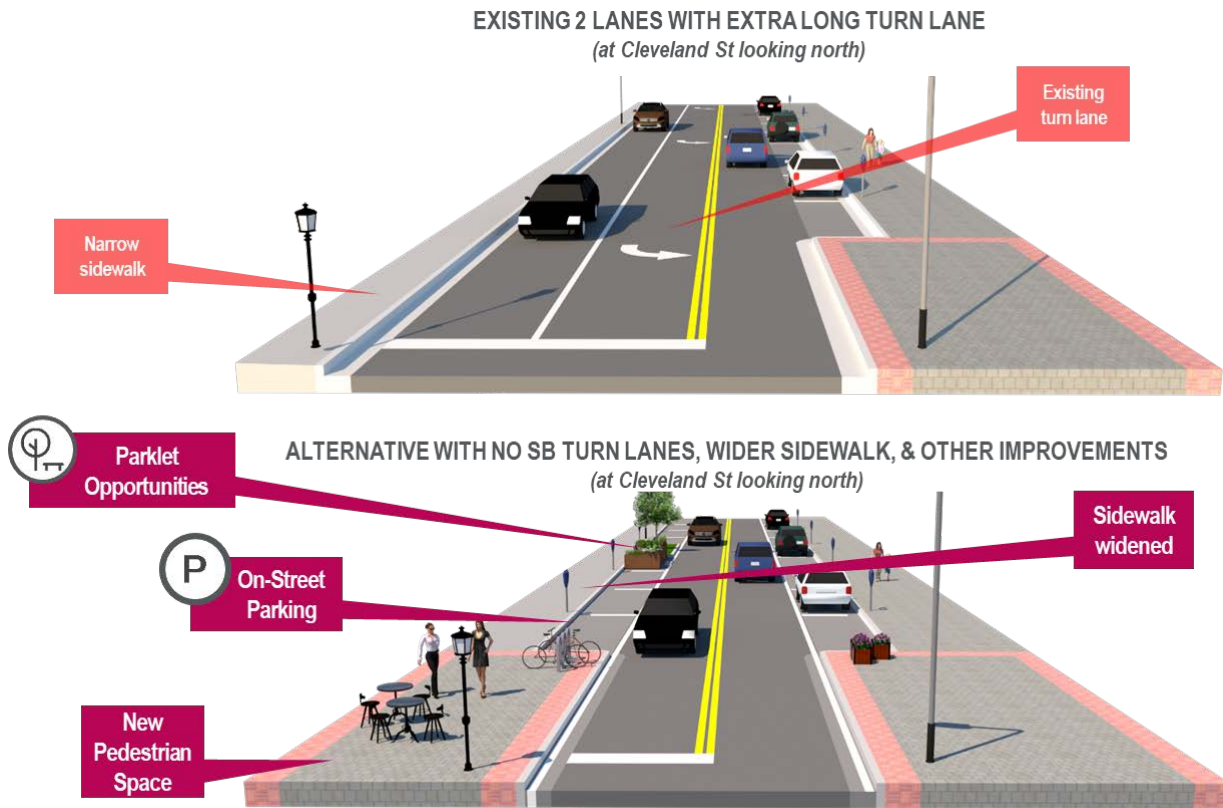


Figure 28: Existing and Proposed Typical Section North of Cleveland Street



Figure 29: Concept Plan Removing Northbound Left Turn Lane at Pierce Street

The southbound left turn lane at Cleveland Street is recommended to be removed. The sidewalk on the west side of Ft. Harrison Avenue north of Cleveland Street is narrow and the curb is unusually tall, which can be a tripping hazard. The removal of the left turn lane allows the western sidewalk to be expanded to provide more pedestrian space and addresses the tall curb. On-street parking could be added as well, which would also provide space for potential parklets, as illustrated in Figure 28.

The center turn lane in front of the Ft. Harrison Hotel is used often for loading and unloading deliveries. In addition, the pedestrian drop-off space in front of the hotel requires vehicles to encroach into the sidewalk. A solution to these two undesirable conditions is shown in the concept plan in Figure 29.

At each of the suggested locations for left turn lane removal, vehicles may still turn left. There would be a negligible impact to traffic operations as the well-connected grid of streets in the Downtown Core provides many options for drivers to reach their destinations. Both proposed left turn lane removals could be assessed further by utilizing temporary closures to test impacts prior to final design and construction.



Figure 30: Photo of Delivery Truck in Center Turn Lane and Drop-off Zone within Sidewalk

This concept plan has been coordinated with the Church of Scientology. The Church has provided renderings for these improvements. With this concept, loading and unloading of deliveries and passengers can occur at the curb side.







Figure 31: Renderings of Concept Removing Left Turn Lane in Front of Ft. Harrison Hotel (from Church of Scientology)

SEGMENT 3: Old Bay/North Marina

The recommended improvements in Segment 3 address the portions of Ft. Harrison Avenue to the north and south of the North Marina area, for which concepts were previously developed, in addition to proposing some design strategies in the North Marina area. Proposed changes would beautify the streetscape to attract investment and development without needing to move existing curbs. The recommendations include narrowing and chicaning travel lanes to calm vehicular traffic north of Eldridge Street, and using landscaping to create a larger buffers to the existing sidewalk which should improve pedestrian comfort along the corridor. This also creates opportunities for additional on-street parking to support businesses along the corridor. Between Drew Street and Eldridge Street, limited landscaped median islands can be incorporated into the existing continuous left turn lane to further support traffic calming.

Continued from previous segments, the concept plan includes:

	<ul style="list-style-type: none"> • Landscaped Islands – add limited landscaped median islands where turning movements are not needed.
	<ul style="list-style-type: none"> • Chicaning – add midblock bulb-outs while maintaining the existing curb to narrow the roadway and create a “chicaning” movement to encourage drivers to not speed.
	<ul style="list-style-type: none"> • On-Street Parking – add on-street parking where needed within midblock bulb-outs.
	<ul style="list-style-type: none"> • Painted Intersection – calm traffic and enhance placemaking at Seminole Street, a major intersection in the heart of the Old Bay District of Downtown.

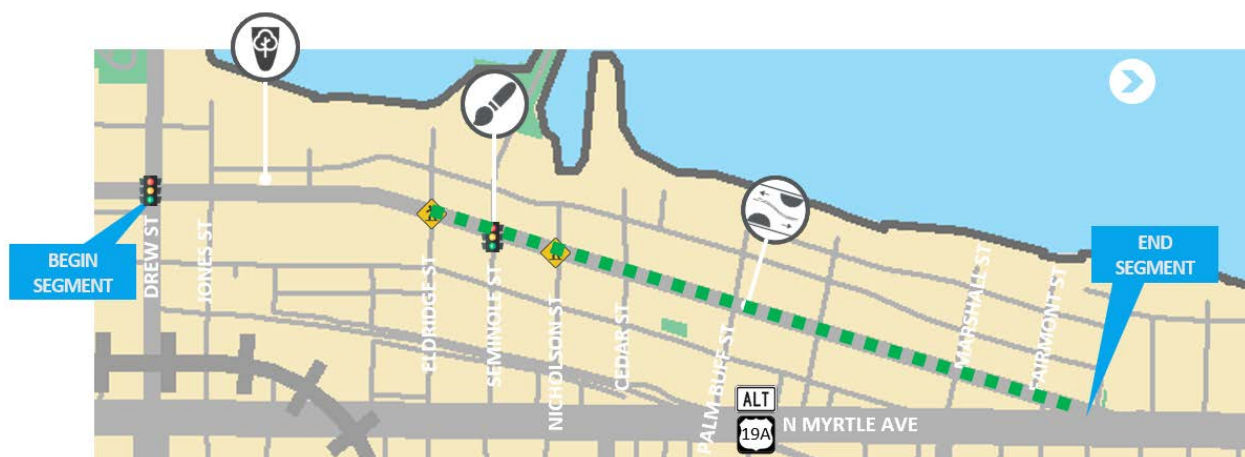


Figure 32 Segment 3 Proposed Improvements

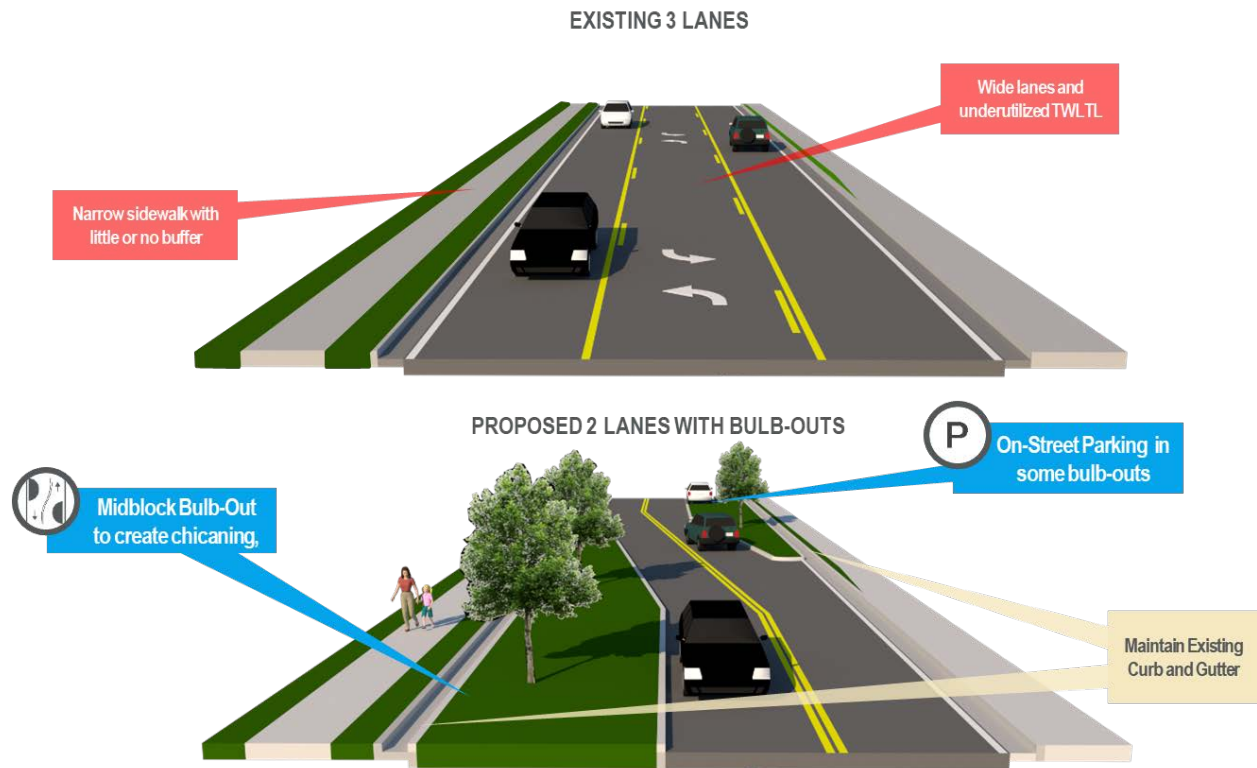


Figure 33: Segment 3 Existing and Proposed Typical Sections

PLANNING LEVEL OPINION OF PROBABLE COSTS

A planning level opinion of probable costs was developed for the permanent installation of each of the proposed improvement concepts proposed in this study. The cost breakdown includes an estimate of the construction costs, professional services (costs such as surveying and design/engineering), and construction administration (referred to as Construction Engineering and Inspection or CEI in the table).

Since costs are planning level only, they are subject to change as the recommendations move into future phases. Although not anticipated, costs of any minor right-of-way acquisition have not been included and costs for utility relocations have also not been identified or included. Costs estimated in this study are for standalone improvements not associated with any future project. Improvements that require restriping of lanes also assume milling and resurfacing in the restriping areas. Cost savings could potentially be realized by reducing the resurfacing area to just what is necessary. Segments 1A, 2, and 3 include milling and resurfacing to update striping.

CONCEPT ENGINEERS OPINION OF PROBABLE COST					
<i>FT HARRISON AVENUE COMPLETE STREETS STUDY</i>					
	Segment				TOTALS
	Segment 1A (0.4 miles)	Segment 1B (1.1 miles)	Segment 2 (0.5 miles)	Segment 3 (1.2 miles)	
CONSTRUCTION SUBTOTAL	\$ 671,234	\$ 625,953	\$ 620,741	\$ 837,643	\$ 2,755,571
PROJECT UNKNOWNNS (20% OF SUBTOTAL)	\$ 134,247	\$ 125,191	\$ 124,148	\$ 167,529	\$ 551,114
TOTAL CONSTRUCTION COST	\$ 805,481	\$ 751,144	\$ 744,889	\$ 1,005,171	\$ 3,306,686
SURVEY (6% OF TOTAL CONSTRUCTION COST)	\$ 48,329	\$ 45,069	\$ 44,693	\$ 60,310	\$ 198,401
DESIGN (12% OF TOTAL CONSTRUCTION COST)	\$ 96,658	\$ 90,137	\$ 89,387	\$ 120,621	\$ 396,802
CEI (7% OF TOTAL CONSTRUCTION COST)	\$ 56,384	\$ 52,580	\$ 52,142	\$ 70,362	\$ 231,468
TOTAL SURVEY, DESIGN & CEI	\$ 201,370	\$ 187,786	\$ 186,222	\$ 251,293	\$ 826,671
ESTIMATED TOTAL	\$ 1,006,851	\$ 938,930	\$ 931,112	\$ 1,256,464	\$ 4,133,357

Figure 34: Planning Level Opinion of Probable Costs

The city has planned a future utility reconstruction project along Ft. Harrison Avenue that will require full reconstruction of the majority of the corridor. This project will be done in phases and take about five years to complete. Many of the improvements recommended in this study may be beneficial to implement prior to the larger reconstruction project and could be implemented in a more temporary, less expensive way, if desired so they could be removed or modified during the construction process. Demonstration projects, as previously discussed and shown in Figure 17, would allow the city to test the locations of some of the proposed design strategies using paint and other low cost materials, allowing the city to evaluate locations and changes before investing in more permanent infrastructure as part of the Ft. Harrison Avenue Reconstruction Project. Larger, more expensive projects, such as landscaped islands requiring new curb and gutter, would be constructed later after the stormwater and utilities work is completed.