

Dunedin

Citywide Multimodal Transportation Master Plan



FINAL:
JUNE 2021

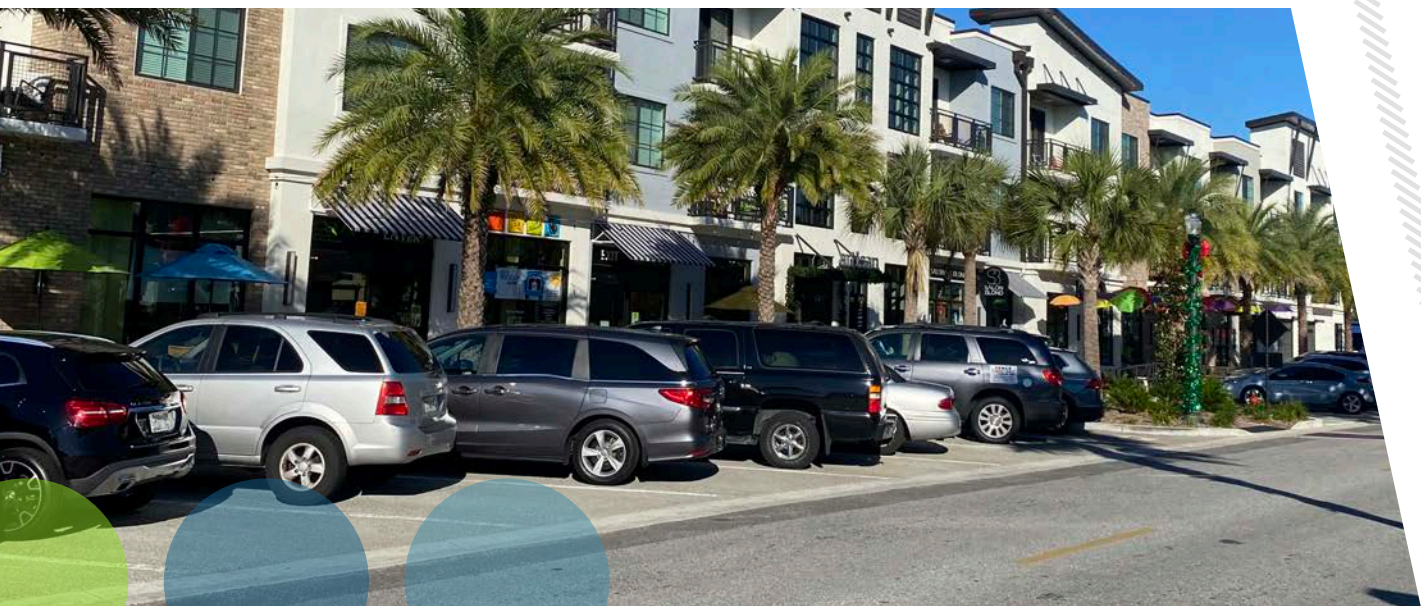


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Section 1



Introduction

“Streets for the last century have been designed to keep traffic moving but not to support the life alongside it.”

- Janette Sadik-Khan



Introduction

INCEPTION OF THE PLAN

The Dunedin Citywide Multimodal Transportation Master Plan is a plan that seeks to improve and strengthen the City's transportation network for all modes of transportation. This Plan builds on previous planning efforts and initiatives for transportation and land use. It outlines specific transportation improvements within the City and provides a toolkit of traffic calming measures for the City to implement as they see fit to better connect residents and visitors to their destinations. With the Multimodal Transportation Master Plan, the City of Dunedin is taking steps to bring these multiple planning efforts and initiatives to life. The previous planning efforts and initiatives include:

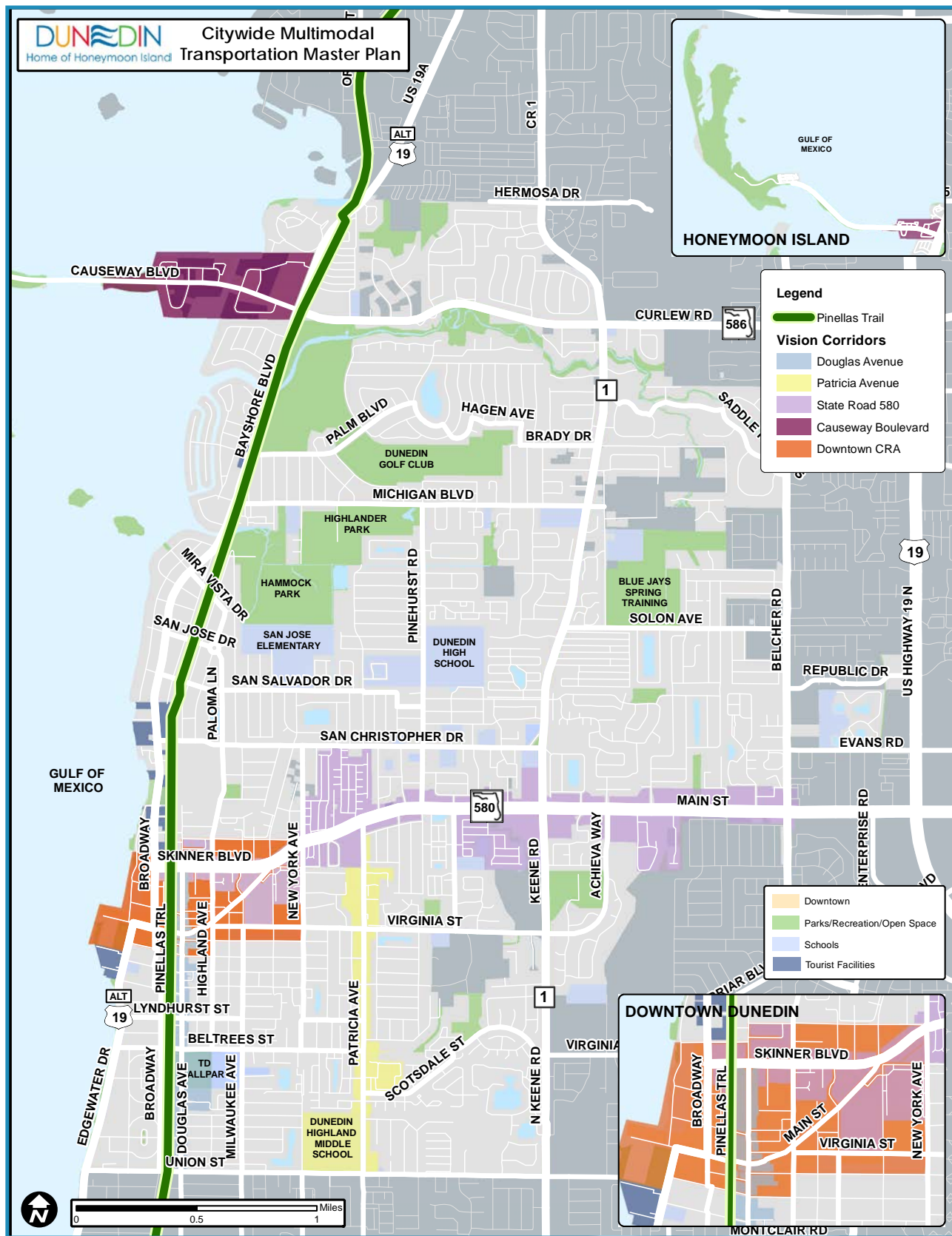
- » Dunedin 2017 Visioning Report Update resulted in 5 Vision Corridors targeted for potential future redevelopment. See Figure 1 on page 5 for the Vision Corridors.
- » In 2019, the City conducted a Citizen' Opinion Survey as part of their community outreach efforts in support of the Comprehensive Plan update. Over 1,200 residents responded. The City Commission understood the data provided a basis for allocation of resources and priorities as part of the strategic planning process moving forward. A number of transportation and safety comments were mentioned. Specific comments were related to:
 - Traffic and speed control
 - Safer more efficient ways to travel north/south in a golf cart as well as golf cart accessibility and safe crossings in town
 - Community education to advocate sharing the road for drivers, walkers, and cyclists
 - Signals at the Pinellas Trail, making it mandatory for cyclists to stop and yield to traffic
 - Bike lanes on major roads
 - Pedestrian and cyclist access across the Causeway Bridge
- » A transportation plan was identified as one of the City's Business Plan initiatives.
- » In the Fall of 2020, the City won a Department of Economic Opportunity (DEO) grant to fund the Citywide Multimodal Transportation Master Plan.
- » The 2020 Comprehensive Plan Update, Strive for 2035, and the Transportation Element were developed.



One of the City Commission's responsibilities is to actively address the needs of residents in the City and make Dunedin a safe place for pedestrian, bicyclists, and motorists. New development expanding the downtown to the north; proximity to state parks, beaches, and the Pinellas Trail; as well as Spring Training and a robust tourist season, have resulted in a huge surge in area traffic. In addition, as other agencies have updated their policies and plans, the desire of this Plan is to be consistent with regional and local transportation plans, i.e., Forward Pinellas and Florida Department of Transportation (FDOT).



FIGURE 1: VISION CORRIDORS



PURPOSE FOR THE PLAN

Based on these efforts, the purpose of this Plan is to set a framework to develop priorities for improving safety and connectivity around the City of Dunedin for all types of users that encourages seamless travel between places where people live, work, and play. The focus of the Plan is to develop a network that encourages economic development, growth, safety, and livability. The Plan will identify high priority projects, programs, and policies to help to integrate all modes of transportation including roads, transit, bicycle, and pedestrian facilities with the intent of making travel easier, safer, and more efficient. The goal is to develop and prioritize a list of implementable improvements and transportation opportunities to serve as a guide to monitor and seek transportation investment.

CITY COMMISSION GOALS

The Dunedin City Commission wants to create a safe community for residents and respond to their concerns with a Plan that supports regional, local, and area activities and is consistent with the Comprehensive Plans and Capital Improvement Plans of other local entities, such as the Florida Department of Transportation (FDOT), Pinellas Suncoast Transit Authority (PSTA), Pinellas County School Board (PCSB), Tampa Bay Area Regional Transit Authority (TBARTA), Tampa Bay Regional Planning Council (TBRPC), and Forward Pinellas. The Commission objectives in developing a Citywide Multimodal Transportation Master Plan include:

1. Addressing and achieving the goals, objectives, and policies of the transportation element of the Comprehensive Plan, Strive for 2035.
2. Addressing the transportation-related and safety concerns raised as a result of the City's Citizen Survey.
3. Establishing Complete Streets Policy design guidelines and context classifications for future infrastructure improvements, identifying key corridors for applications, i.e., Visioning Corridors and high-profile areas.
4. Incorporating the PSTA amenities master plan to address future placements/replacements of bus stop amenities in key corridors and establishing other public transit service improvements.
5. Incorporating and updating the Bicycle and Pedestrian Master Plan to address the needs in improving or expanding local facilities and providing amenities in key locations of the existing facilities.
6. Addressing the unique forms of transportation in the City to include golf carts, micromobility, waterborne, autonomous vehicles, etc., and plan for establishing policies, improvements and/or potential future expansions.
7. Prioritizing, budgeting, and planning for physical improvements to key corridors related to transportation and safety.
8. Providing consistency with regional and other local transportation plans, i.e., Forward Pinellas (Advantage Pinellas), FDOT Plans, etc.



INCLUDED IN THE PLAN

This Plan contains three other sections outlining the community benefits of multimodal transportation improvements (Section 2), a summary of stakeholder and community outreach (Section 3), and strategies and actions (Section 4) to achieve a Citywide multimodal transportation network. Within the Strategies and Action section is a street design toolkit that outlines multimodal tools and can be implemented to calm traffic and improve the traveled environment.



Section 2



Benefits of Multimodal Improvements

“Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.”

- Jane Jacobs



Benefits of Multimodal Improvements

There are numerous benefits for investing in multimodal transportation improvements. These benefits include increased safety, better connections and access to destinations, economic development, a more sustainable city, improved health of residents, and a more inclusive, equitable, and diverse City.

SAFETY

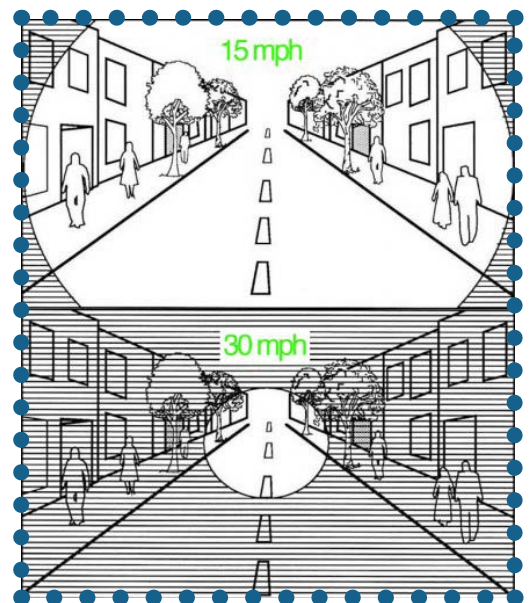
The ability for multimodal transportation improvements to create safer streets is one of the most important aspects of a multimodal transportation network. Based on crash data from 2015-2019, it is clear there are corridors and specific locations requiring safety improvements. There are several examples of roadways with significant number of traffic crashes that require partnerships with Forward Pinellas and FDOT. As shown in the map on the next page, SR 580 (Main Street) is a corridor with a significant number of crashes with serious injuries and fatalities that will require coordination to implement solutions. The Curlew Road (SR 586) corridor is another specific example where congestion and new development have resulted in a variety of unsafe conditions and intersection issues. During this 5 year period, there were 3,237 total crashes which included **78 incapacitating injuries, 8 fatalities, 79 crashes involving a pedestrian, and 150 crashes involving a bicyclist**. See Figure 2 for a map of crash locations.

Previous Safety Efforts

In 2019, a Curlew Road Traffic Analysis was conducted. Existing and future traffic information derived from the Forward Pinellas 2017 Annual Level of Service Report, the FDOT Alt. US 19 Corridor Study, and FDOT Traffic Online data which were included in a previous Alt. US 19 (SR 595) Corridor Study. The FDOT study included the Bayshore Boulevard - Causeway Boulevard/Curlew Road intersection, an area the City has identified as demonstrating the greatest need in terms of safety and traffic concerns.

As part of the FDOT study, a road safety review was also conducted based on crash data collected from 2011 to 2015. The Bayshore Boulevard - Causeway Boulevard/Curlew Road intersection accounted for six percent (155) of the total crashes along the corridor study area. These crashes involved bicyclists and vehicles, left turns, loss of control, rear ends, and sideswipe accidents. Property damage during daylight, dusk, and dry conditions were higher than the statewide average. A total of six bicycle related crashes occurred at the intersection; fortunately, there were no fatalities during this time frame. The analysis observed several factors that contribute to hazardous safety conditions in this area, such as:

- » High volume of vehicles traveling from State parks and beaches
- » Significant number of pedestrians and cyclists traveling in all directions, accessing the Pinellas Trail
- » No lighting on the northeast and southeast quadrants of the intersection location of the Pinellas Trail
- » Pinellas Suncoast Transit Authority (PSTA), Jolley Trolley, and bus stops located both north and south of the intersection



Cone of Vision



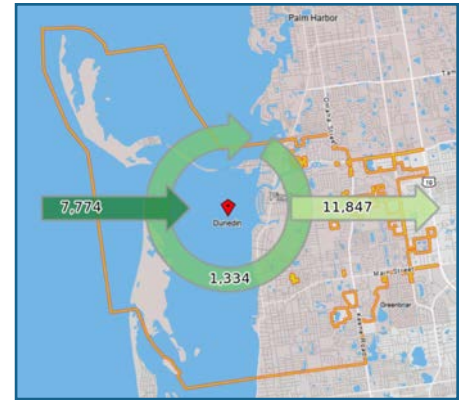
FIGURE 2: 5-YEAR CRASH DATA



This is not the only location within the City identified as having safety issues resulting from traffic congestion and new development. FDOT is also reviewing SR 580 as part of a current corridor study.

CONNECTIVITY AND ACCESSIBILITY

This Plan aims to improve connectivity and accessibility for all types of transportation and users. In conjunction with the City's Americans with Disabilities Act (ADA) Transition Plan, this plan provides improvements to ensure people of all ages and abilities can travel safely and access the destinations they desire. Better connectivity and accessibility allows people to be independent and self-sufficient, particularly seniors and people who have disabilities. Many residents that live in Dunedin commute out of the City for work. That number is almost double the number of people who commute into Dunedin for work. There is only a small number of residents who live and work in Dunedin. This means the State and County roadways are essential for commuters coming into and out of Dunedin.



ECONOMIC DEVELOPMENT

It is proven that multimodal improvements and facilities provide immense economic benefits. Residential property values are higher in neighborhoods that are walkable, adjacent to bike facilities, and in close proximity to transit stops. Similarly, commercial properties in walkable and bikeable neighborhoods make more money than commercial properties solely accessible by cars. In addition, retail adjacent to street trees and an inviting pedestrian environment generate more income than those that are not. Lastly, multimodal projects and improvements are catalysts for redevelopment and generate more jobs. For example, the construction of a trail could lead to new housing developments and business adjacent to the trail corridor as it is an attractive community feature.

“Public dollars spent on bike infrastructure generate roughly twice the jobs as money spent on driving infrastructure.”

- Walkable City, Jeff Speck

SUSTAINABILITY

Multimodal transportation networks provide advanced techniques that incorporate sustainability and best practices to promote clean, efficient, and safe infrastructure and systems. A well-connected pedestrian, bicycle, and transit network allows individuals to live without a personal vehicle while helping to reduce greenhouse gas emissions. Additional multimodal transportation tools include traffic calming improvements, such as street trees and landscaping which help reduce the heat island effect and naturally help manage stormwater. The City is creating an environmental plan called DREAM: Dunedin's Resilient Environmental Action Master Plan, which, in conjunction with this Plan, will seek to improve Citywide sustainability and resiliency.



HEALTH

Well-connected multimodal networks provide numerous health benefits. Walkable and bikeable communities allow residents to move their bodies to reach destinations as an alternative to driving everywhere. Not only does this provide the body exercise, but it also eliminates risk of being involved in a vehicle crash. Additionally, the unfortunate impacts of COVID-19 have made it clear how important outdoor recreation facilities are for the community. Many cities have seen an increase in walkers, runners, and bicyclists during the pandemic which makes it even more important for cities to have safe, well-connected, and adequate facilities for people do to so.



Street trees improve public health: regular exposure to trees prolongs life, aids mental health, reduces asthma, obesity, stress, and heart disease.

- "Funding Trees for Health", Rob McDonald



INCLUSION, EQUITY, AND DIVERSITY

A well-connected multimodal network allows people of all abilities, ages, and income levels to conveniently access goods and services. Almost one-third of Americans cannot drive, due to age or abilities, which makes non-automotive transportation facilities essential for every City. Pedestrian and bicycle facilities allow children to safely walk or bike to school or parks and gives elderly populations a new lease on life to access destinations without a vehicle. Improving and adding multimodal facilities increases safety and access for low-income residents and minority communities. Based on the US Census Bureau American Community Survey (2008-2012), walking and bicycling disproportionately serves the poor and minority communities. Thus, funding infrastructure that only serves vehicles, predominantly serves middle to upper income levels and non-minority communities. Investing in infrastructure like sidewalks, bike lanes, and transit facilities create better and safer travel routes for car-free households.



DUNEDIN

Section 3



Stakeholder and Community Outreach

“To love one’s city, and to have a part in its advancement and improvement, is the highest privilege and duty of a citizen.”

- Daniel Burnham



Stakeholder and Community Outreach

During the process of developing the Dunedin Citywide Multimodal Transportation Master Plan, key stakeholders and community members met virtually and in-person to provide input. This section provides a summary of the stakeholder group meetings and the public outreach efforts, as well as the key takeaways relevant to the recommendations of this plan.

STAKEHOLDER INTERVIEWS

A total of four stakeholder meetings were held on January 19th, 20th, and 21st, 2021 to gather input for the Dunedin Citywide Multimodal Transportation Master Plan. The stakeholder meetings included individuals from a variety of organizations within the City that represented: public safety, districts within the City, golf cart advocacy, public schools, youth population, aging population, and partnering public agencies.

Below are some of the top overall concerns related to existing transportation conditions within the City:

- » Dangerous intersections and long signal times
- » Speeding
- » Congestion on major roadways
- » Limited golf cart crossings and boundaries
- » Pinellas Trail crossings and conflicts with motorists

The summary of the discussions are grouped into several themes below.

Pedestrian

Pedestrian concerns were predominantly concentrated around safety. Intersections throughout the City were identified for concern, particularly for vehicles turning right on red and conflicts with pedestrians and bicyclists. Many pedestrian concerns involved the Downtown and included congested sidewalks (due to expanded outdoor dining), crossing conflicts with vehicles, and dangerous crossing conditions at the Alt. US 19 and Main Street intersection. Dangerous crossings near schools and lack of pedestrian/bicycle connections to schools was also a priority to address in this Plan.

Bicycle

The Pinellas Trail is an enormous asset and attraction within Dunedin and greater Pinellas County. The Pinellas Trail crossings are points of conflict between bicyclists and motorists. It was advised that these crossings should be more visible with additional signage and lighting to alert motorists to trail users. There is a desire for more dedicated bicycle facilities connecting east-west parts of the City and into surrounding communities as well as connections to schools.

Transit and Micromobility

One of the biggest transit priorities was to create enhanced transit stops. This includes adding shelters, seating, lighting, and ADA accessible platforms to better serve senior residents. There was also desire for more efficient and frequent transit stops along SR 580, such as express bus or light rail in the future.

There is also a great interest in other micromobility options like bike share and e-scooters, but a desire for the City to create guidelines before implementation. The City has an active population of golf cart users who identified difficult crossing locations and potential crossing locations in the future. There is also a desire for expanded golf cart boundaries, including to the south of Dunedin, to access as many businesses and services by golf cart instead of a car.

Roadway

Many of the roadway concerns involved congestion and speeding along major corridors and long signal times at intersections. Most of these concerns pertained to SR 580, Alt. US 19, CR1 and SR 586. Particularly, SR 580 was identified as unsafe for all modes of transportation due to high speeds, high number of travel lanes, and many driveway openings. Similarly, the intersection of Alt. US 19 and Causeway Boulevard/SR 586 is also identified as dangerous for all modes of transportation due to the Pinellas Trail crossing, the Causeway multi-use trail, high vehicle usage, long signal times, and many driveway openings.

COMMUNITY OUTREACH SUMMARY

City staff and Kimley-Horn conducted community outreach for the Dunedin Citywide Multimodal Transportation Plan to get input on draft recommendations for improving transportation for all people and all modes they choose to use to move around the City. Due to COVID-19, a range of community outreach methods were used to gather input. The community outreach included a public, in-person workshop, outreach at the Dunedin Saturday Market, and an online mapping and survey to gather input on initial recommendations and desires of the community. Input received from the outreach helped shape the recommendations in this plan. Below is a summary of input received from the public workshop and online mapping and survey.



Public Workshop: March 9th, 2021

Public Workshop

The public workshop took place on Tuesday, March 9, 2021 at the Dunedin Community Center. The workshop involved a rolling PowerPoint presentation of existing conditions, and initial project recommendations and findings. The workshop provided a handout with the same questions as the online survey and large maps for participants to provide their input.

Saturday Market

On March 27th, 2021 City staff attended the Dunedin Saturday Market to conduct additional community outreach and provide



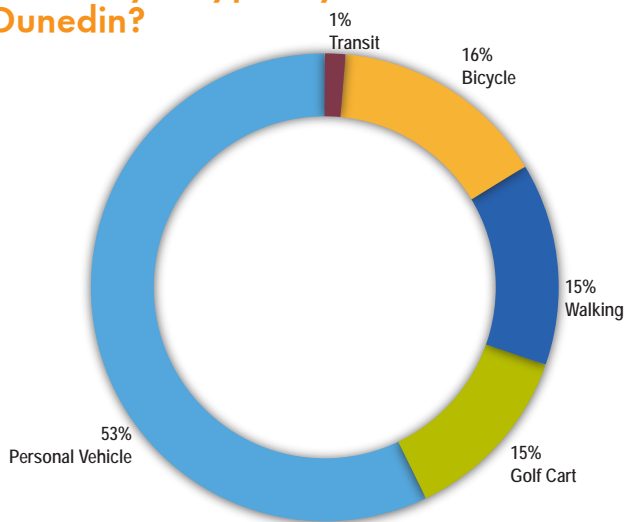
Saturday Market Outreach: March 27, 2021

awareness about the Plan. The booth included flyers that directed people to the project website and encouraged participation in the online map and survey.

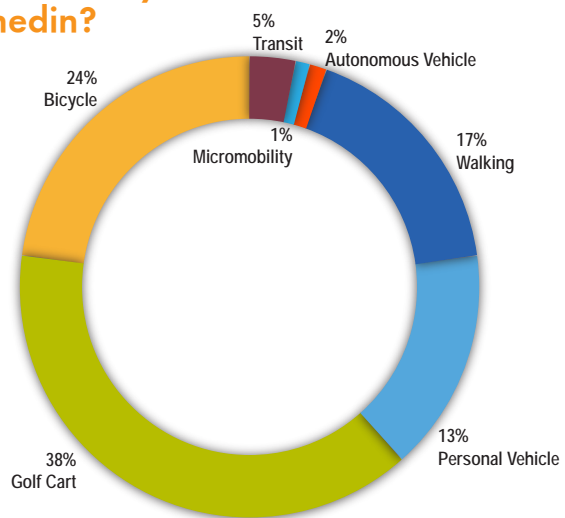
Online Map and Survey

The online mapping and survey was conducted from March 8th, 2021-April 9th, 2021 and was promoted on the City’s Planning Division and the City’s social media platforms. Over 177 people participated in the online survey and online mapping. The public workshop and online survey collected information about people’s existing transportation habits and preferences for traveling in the City. The responses indicate that most people use personal vehicles to travel around Dunedin and smaller percentages of people using golf carts, bicycles, and walking to reach their destinations. The survey also polled how people would like to get around the City and the results indicated a great interest from people to use transportation modes other than their personal vehicle.

How do you typically travel around Dunedin?

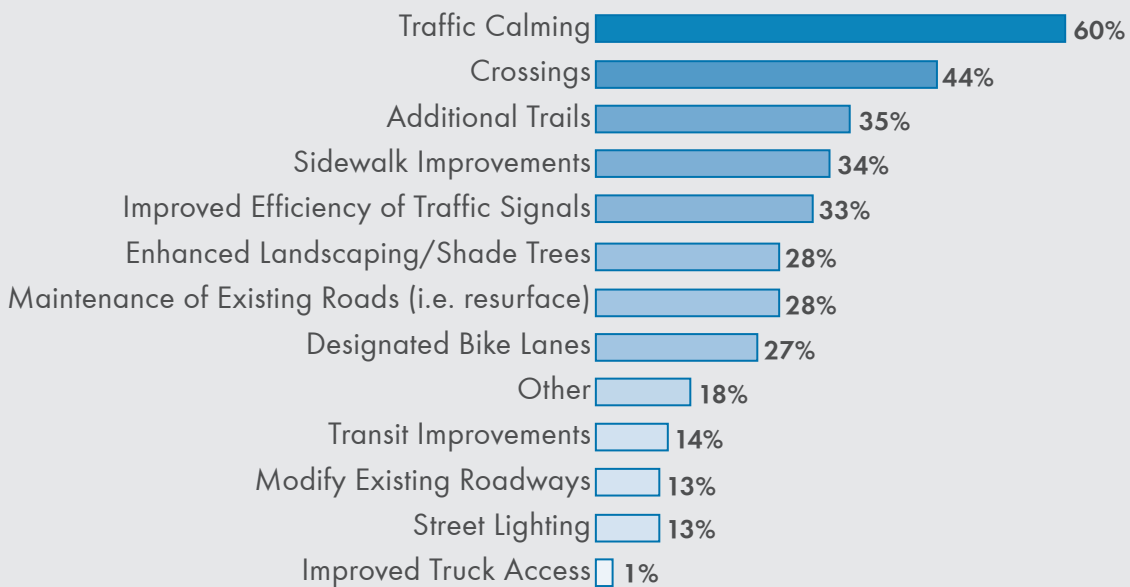


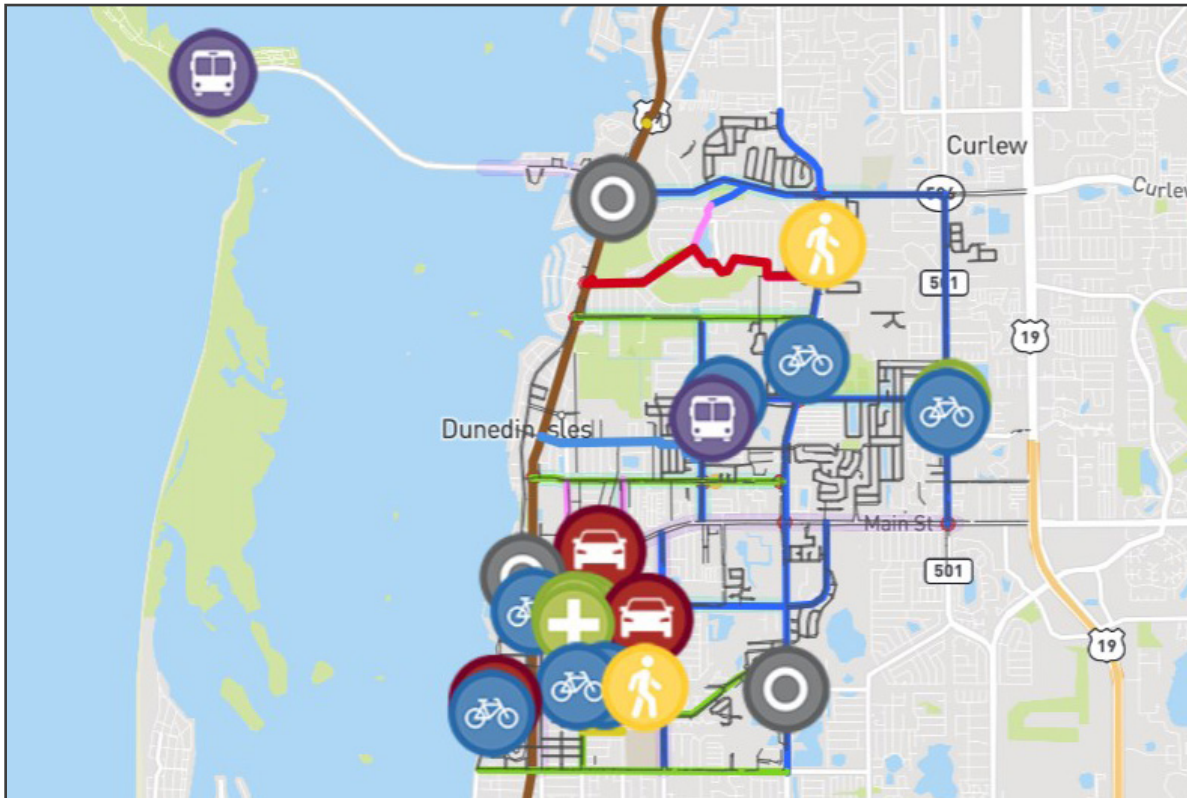
How would you like to travel around Dunedin?



Survey participants were asked to choose their top four transportation improvement priorities. The results show strong support for implementation of traffic calming measures, improved and additional crossings, more trail connections and sidewalk improvements, and increased efficiency of traffic signalization.

What are your top transportation priorities? (Select up to 4)





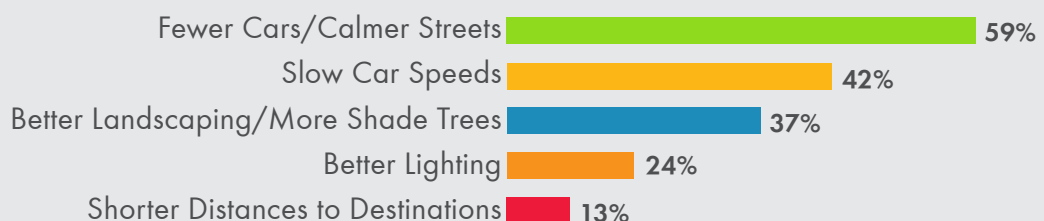
Online Survey Map Used to Collect Input on Initial Recommendations
 Source: PublicCoordinate

Pedestrian

Common pedestrian realm themes gathered from the survey revolved around increasing safety and comfort for pedestrians. The survey asked participants what would encourage them to walk more and the most common response was fewer cars and calmer streets. The input includes desire for more landscaping and crossings to create a comfortable and convenient pedestrian network while also slowing vehicle speeds for safety. There is significant concern for crossing improvements near Downtown and surrounding neighborhoods to improve safety for all modes of transportation. Another area of concern for crossing improvements is on Keene Road/CR1. The wide roadway and gaps between crossing opportunities raised concern for additional crossings to connect neighborhoods. Many comments mentioned a desire for closing streets in downtown, particularly Main Street, for pedestrian only traffic to provide more space for markets, shops, and restaurants. Many participants expressed concern for improving safety near schools for students who walk to school. Many participants were also in support of traffic calming improvements.

“When the street [Main Street] is closed for festivals, the vibe is so much nicer! Make at least part of Main Street a pedestrian mall.”

What would encourage you to walk more than you currently do? (Select up to 2)

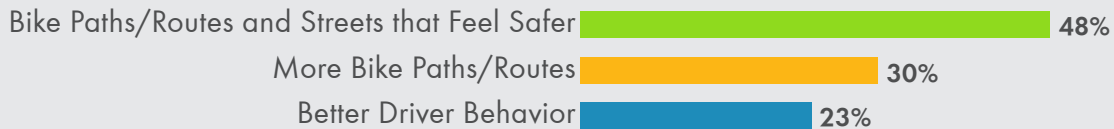


Bicycle

Bicycle-related input included a mix of existing conflicts between bicycles and vehicles, and desired improvements for a more connected bicycle network. The survey results indicated safer bicycle paths and routes would encourage more people to bike around the City. The online survey map indicated locations where existing conflicts and safety concerns exist between bicyclists, vehicles, and pedestrians. The input also included support for improving existing trails with landscaping and shade to improve bicyclists' comfort during the hotter seasons. There is also support for new east-west trails, especially connections to the Pinellas Trail.

“We need more lights or traffic calming along Skinner Boulevard to be able to cross safely either by car or bike.”

What would allow you to bicycle for more trips?

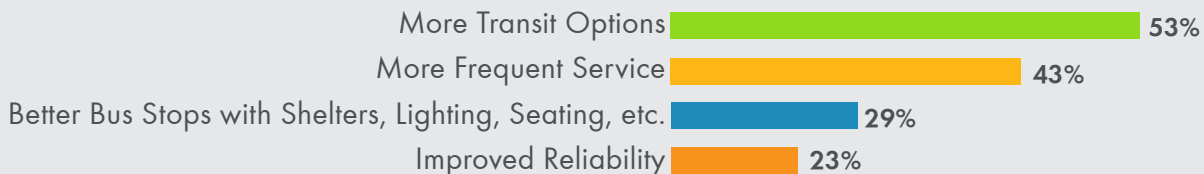


Transit, Golf Carts and Micromobility

The online survey revealed that not many people use transit to travel around Dunedin. Survey participants indicated additional transit options and enhanced frequency of service would encourage them to use transit more. The online mapping survey included comments in favor of improving transit connections and frequency to schools. Other considerations included expanded transit service, like the Jolly Trolley, to Honeymoon Island which currently cannot be accessed by transit.

“We need more bus services to include more than 30 minutes a day and to have bus service on Sunday.”

What would encourage you to take transit more frequently? (Select up to 2)

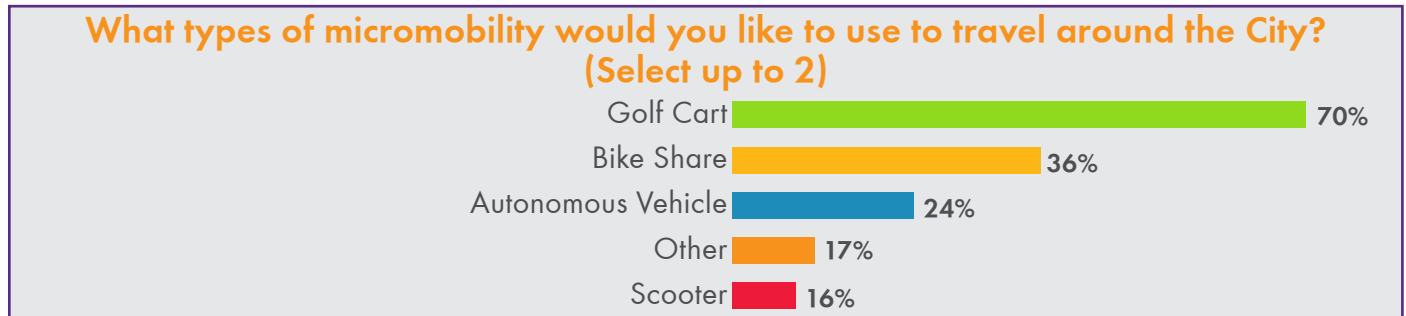


The survey results indicated the presence of a very active golf cart community in Dunedin. Many people selected golf carts as their main mode of transportation in the survey. The online map and survey results indicated desires for more golf cart crossings, particularly across state roadways, and expanded permitted golf cart use zones. Similarly to transit, many participants expressed desire for golf cart paths/access to Honeymoon Island on Causeway Boulevard. The survey indicates almost 40% of people would like to use their golf cart as their main mode of transportation and 70% choose golf carts as a desirable mode of micromobility but would need greater access to desired destinations and safer crossings. There is also strong



support for bike share in Dunedin, especially in downtown and near the Pinellas Trail. Many participants were not in favor of scooters for fear that they would create new safety issues and would not be well-managed. Many fear there will be conflicts between scooter users, pedestrians, bicycles, and vehicles especially in downtown and on Pinellas Trail.

“I don’t like the ideas of scooters and bike shares because people ride them too fast and just leave them lying everywhere.”



Roadway

Based on the results from the travel behavior survey questions, most people currently travel around Dunedin using their personal vehicles but there is a strong desire to travel by other modes of transportation. Roadway improvements and alterations will help make transportation by other modes possible by improving safety and providing dedicated space for modes other than personal vehicles. Much of the input received related to traffic calming, and creating safer and more comfortable roadway corridors throughout the City. The online survey map collected comments and locations of existing speeding traffic and dangerous intersections for all roadway users. Specific roadways and intersections that were called out for needed traffic calming and improvements were: Main Street in Downtown, Skinner Boulevard, Edgewater Drive, Bayshore Boulevard, Palm Boulevard, Douglas Avenue, Manor Drive West, and neighborhoods streets near Downtown.

“I love our city. We know it is going to grow and we need to accept that but I would like to see it grow and still look the way it does. First, I really like the outside seating along Main Street- lets keep it but make it more attractive. I also like the ideas to change Skinner Boulevard, it would slow down traffic and maybe make the trail crossing more safe.”



Section 4



Strategies and Actions

**“Alone we can do so little;
together we can do so much”**

- Helen Keller



Strategies and Actions

This section provides specific strategies and action items to improve overall mobility within different transportation modes: Pedestrian, Bicycle, Transit, Micromobility, and Roadway. Each mode includes an overview of existing conditions and identification of opportunities and considerations that guided strategies and actions. Each mode is also accompanied with a map that shows existing conditions and proposed improvements. The following pages summarize the strategies and action items while identifying an implementation time frame and responsible parties. Actions highlighted in pink, **Action 0.00**, are actions that are specific priorities identified by the City Commission. These priorities as well as all actions will continue to be re-valuated annually during the Budget Business Planning Initiative process. The process intends to be flexible as conditions change. Following the strategies and actions is a Street Design Toolkit which provides improvement options to calm traffic and create better streets.

Continuous: On-going and Routine	Immediate: 0 - 1 Years	Short-Term: 1 - 2 Years	Mid-Term: 3 - 5 Years	Long-Term: 5+ Years
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The strategies and actions listed below apply to the entire City, which require updates to City procedures.

OVERALL STRATEGIES AND ACTION

STRATEGY 1. UPDATE CITYWIDE PROGRAMS, PLANS, AND PROCEDURES

ACTION 1.01: Incorporate multimodal improvements into the CIP, TIP, FDOT Work Program, and LRTP

RESPONSIBLE PARTIES: CITY, FDOT, FORWARD PINELLAS, PSTA, PINELLAS COUNTY *CONTINUOUS*

ACTION 1.02: Promote First Mile/Last Mile strategies to fill gaps to transit stops, schools, parks, and connect to off-site parking locations

RESPONSIBLE PARTIES: CITY, PSTA, PINELLAS COUNTY *CONTINUOUS*

ACTION 1.03: Prioritize transportation needs and improvements in lower-income or minority communities

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FORWARD PINELLAS *CONTINUOUS*

ACTION 1.04: Prioritize transportation needs and improvements in lower-income or minority communities

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FORWARD PINELLAS *CONTINUOUS*

ACTION 1.05: Implement traffic calming programs and tools including within neighborhoods (see Street Design Toolkit)

RESPONSIBLE PARTIES: CITY *IMMEDIATE & CONTINUOUS*



ACTION 1.06: Update, and complete, the Dunedin Bicycle Master Plan to include recommendations from this Plan

RESPONSIBLE PARTIES: CITY

IMMEDIATE

ACTION 1.07: Implement a Citywide traffic calming policy including opportunities to decrease speed limits

RESPONSIBLE PARTIES: CITY

IMMEDIATE

ACTION 1.08: Implement a Citywide Complete Streets policy and incorporate into the land development code and development review process

RESPONSIBLE PARTIES: CITY

SHORT-TERM

ACTION 1.09: Implement a downtown curb lane management plan (include loading/unloading, ride share pickup/drop-off, dining, potential micromobility locations)

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

SHORT-TERM

ACTION 1.10: Hire transportation planner staff to help implement strategies

RESPONSIBLE PARTIES: CITY

SHORT-TERM

STRATEGY 2. CONDUCT EDUCATION AND INITIATIVES FOR SAFER STREETS

ACTION 1.11: Partner with Forward Pinellas to achieve Safe Street Pinellas initiatives and outreach

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FORWARD PINELLAS

IMMEDIATE

ACTION 1.12: Adopt a Vision Zero Policy in conjunction with Forward Pinellas efforts

RESPONSIBLE PARTIES: CITY, FORWARD PINELLAS

IMMEDIATE

ACTION 1.13: Partner with local organizations and schools to conduct a marketing and communications campaign to encourage safety initiatives

RESPONSIBLE PARTIES: CITY, LOCAL ORGANIZATIONS, PINELLAS SCHOOL BOARD

IMMEDIATE



PEDESTRIAN EXISTING CONDITIONS

The City's sidewalk network offers a low to moderate level of coverage, with neighborhood connectivity issues. The sidewalk network is strongest in Downtown and its surroundings, including the southern neighborhoods. This is due to the Downtown and southern neighborhoods being the oldest part of the City. There are many sidewalk gaps near parks and schools, limiting opportunities for walking and bicycling from surrounding neighborhoods.

There are several major corridors that run through the City which makes crossing intersections difficult and dangerous. These corridors are SR 580, SR 586, US Alt. 19, and CR 1. Due to the high speeds and number of travel lanes of most of the corridors, these corridors are responsible for many crashes with clusters of crashes occurring at intersections.



Crossing near Dunedin High School



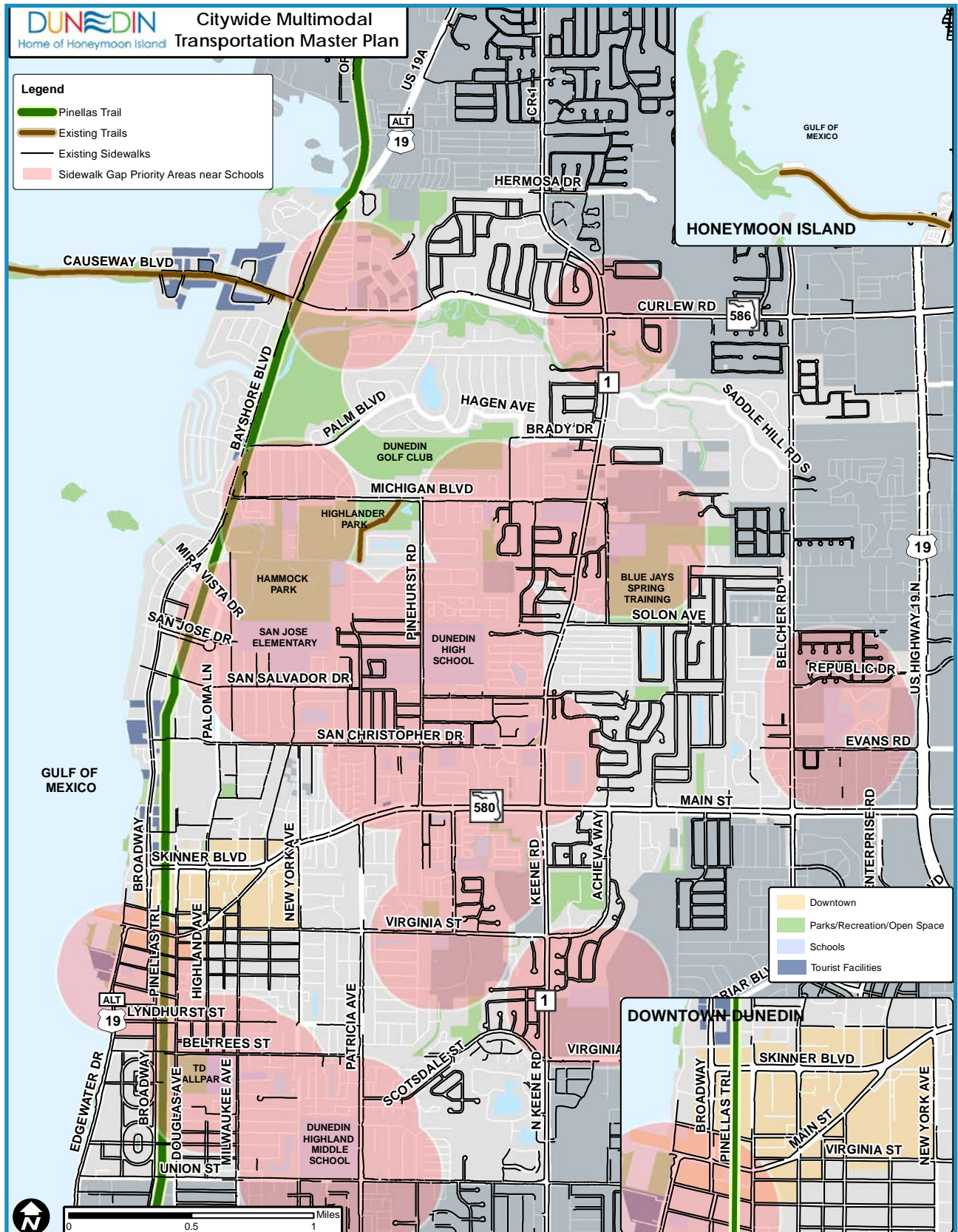
Walking Trail on Edgewater Drive

OPPORTUNITIES AND CONSIDERATIONS

There is significant opportunity to improve the pedestrian network and provide connections from neighborhoods to community amenities. Almost all neighborhoods in the City are within a 5-minute walk to a park or school. Proximity to these locations paired with a good sidewalk network encourages more walking and safer environments for people who walk. There are funding opportunities outlined in the next section. Strategies to consider are found on the next few pages.



FIGURE 3: SIDEWALKS AND SIDEWALK PRIORITY AREAS



RECOMMENDED PEDESTRIAN STRATEGIES AND ACTIONS

STRATEGY 1. PRIORITIZE VISIBILITY AND SAFETY OF PEDESTRIANS AT INTERSECTIONS AND CROSSINGS

ACTION 2.01: Increase pedestrian crossing signal times

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

IMMEDIATE

ACTION 2.02: Reduce curb radii with curb extensions and convert slip lanes into pedestrian space where feasible

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

SHORT-TERM

ACTION 2.03: Prohibiting right-turns on red in high pedestrian traffic areas

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

SHORT-TERM

ACTION 2.04: Install high emphasis crosswalks and painted intersections/crosswalks and create a consistent crosswalk design and standards throughout the City

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

SHORT-TERM

STRATEGY 2. IMPROVE CORRIDOR STREET LIGHTING TO INCREASE VISIBILITY FOR PEDESTRIANS

ACTION 2.05: Revisit annual plan and require pedestrian-scale lighting on all street reconstruction projects

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

SHORT-TERM



STRATEGY 3. MAINTAIN AN ACCESSIBLE AND SAFE PEDESTRIAN NETWORK

ACTION 2.06: Routinely assess sidewalk and crossings conditions for trip hazards or crumbling sidewalks

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

CONTINUOUS

ACTION 2.07: Revisit annual plan for incrementally filling gaps, ADA improvements particularly incrementally fill sidewalk gaps particularly within ¼ mile of schools, parks, and public facilities

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY

CONTINUOUS

ACTION 2.08: Address and implement improvements identified in the Citywide ADA Transition Plan

RESPONSIBLE PARTIES: CITY

CONTINUOUS

STRATEGY 4. PARTNER WITH PRIVATE DEVELOPMENT TO PROVIDE PEDESTRIAN AND PUBLIC REALM IMPROVEMENTS

ACTION 2.09: Require private development and residential development to comply with latest ADA standards

RESPONSIBLE PARTIES: CITY

CONTINUOUS

ACTION 2.10: Consolidate multiple driveway openings to a single business

RESPONSIBLE PARTIES: CITY, FDOT, PINELLAS COUNTY

CONTINUOUS

BICYCLE EXISTING CONDITIONS

Dunedin has an active bicycle community and attracts many bicyclists due to the Pinellas Trail that runs through the entire City and Downtown. The multi-use trail on Causeway Boulevard to Honeymoon Island also attracts many bicyclists and pedestrians in the northern part of the City. The City currently lacks dedicated east-west bicycle connections and adequate facilities. SR 580 and SR 586 currently have bicycle lanes, however, the high speeds and volumes of the roadway do not encourage safe bicycling or encourage new bicyclists.



Shared Lane Marking on McCarty Street

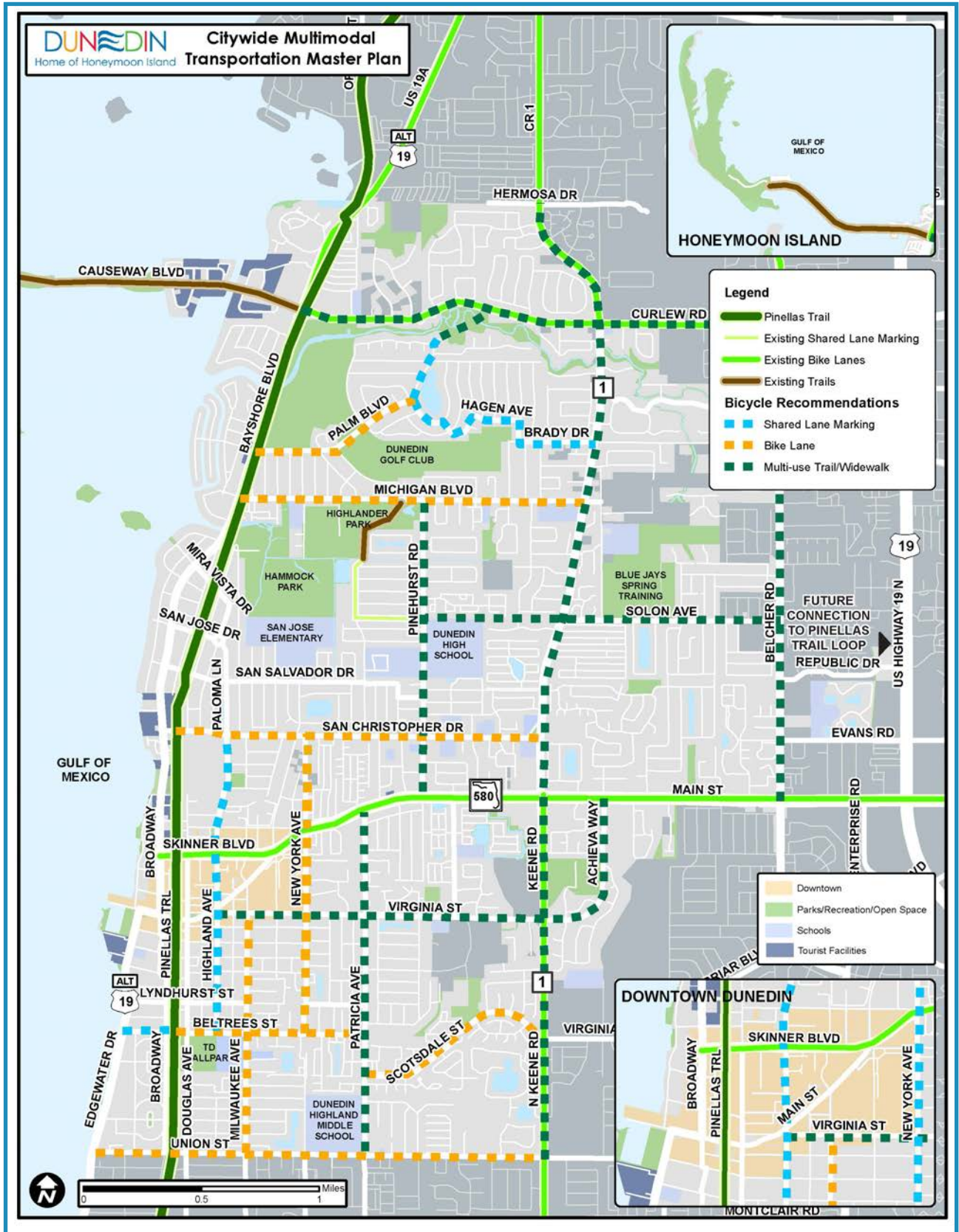


Bike Lane on SR 580

OPPORTUNITIES AND CONSIDERATIONS

The Pinellas Trail is one of the biggest attractions in the City. The lack of east-west bicycle facilities prevents more residents from traveling by bicycle to destinations in the City. There are existing bicycle facilities on the major roadways within, however, the current facilities lack separation from vehicular traffic which create dangerous environments for bicyclists. It is important to consider the City's youngest and eldest resident when designing bike facilities. Bike facilities should be designed to encourage new riders and support riders of all ages. Providing bike facilities on local roadways will provide safer and more comfortable connections to schools, neighborhoods, and throughout the entire City. There is a potential future opportunity to connect to the Pinellas Trail Loop on the east side of the City, identified in Figure 4.

FIGURE 4: BICYCLE FACILITIES AND RECOMMENDATIONS



RECOMMENDED BICYCLE STRATEGIES AND ACTIONS

STRATEGY 1. CREATE AND IMPLEMENT A BICYCLE NETWORK THAT SERVES ALL AGES AND ABILITIES

ACTION 3.01: Expand bicycle network to connect to the Pinellas Trail Loop to the east, schools, parks, and public facilities

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FORWARD PINELLAS, FDOT *SHORT-TERM*

ACTION 3.02: Expand bicycle network to connect to schools, parks, and public facilities

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FORWARD PINELLAS, FDOT *SHORT-TERM*

ACTION 3.03: Improve street lighting along the bicycle network

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FORWARD PINELLAS, FDOT *MID-TERM*

ACTION 3.04: Expand East/West bicycle network

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FORWARD PINELLAS, FDOT *MID-TERM*

ACTION 3.05: Implement protected bike lanes with permanent separations such as barriers, curbs, planters, or landscaping (where bike facilities are on higher speed roadways) and continue to expand bicycle connections on slower speed streets

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FORWARD PINELLAS, FDOT *MID-TERM*

STRATEGY 2. IMPROVE SAFETY AND USABILITY OF THE PINELLAS TRAIL

ACTION 3.06: Continue to work with local and regional partners on consistent trail crossings

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FORWARD PINELLAS, FDOT *CONTINUOUS*

ACTION 3.07: Improve traffic signal timing for Trail users

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FORWARD PINELLAS, FDOT *IMMEDIATE*

ACTION 3.08: Improve lighting at Trail crossings

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FORWARD PINELLAS, FDOT *SHORT-TERM*

ACTION 3.09: Implement alerts for vehicles that a bicyclist is approaching the Trail crossing

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FORWARD PINELLAS, FDOT *SHORT-TERM*



STRATEGY 3. CREATE AND IMPLEMENT REGIONAL CONNECTIONS

ACTION 3.10: Partner with Forward Pinellas to identify and implement bicycle and regional trail connections

RESPONSIBLE PARTIES: CITY, FORWARD PINELLAS, PINELLAS COUNTY

CONTINUOUS

ACTION 3.11: Partner with Pinellas County and the City of Clearwater to identify and implement bicycle and regional trail connections

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, CITY OF CLEARWATER

CONTINUOUS

STRATEGY 4. CONTINUE TO USE AND PROMOTE THE CITY'S WAYFINDING SYSTEM

ACTION 3.12: Maintain and routinely update the Citywide wayfinding system

RESPONSIBLE PARTIES: CITY

CONTINUOUS

ACTION 3.13: Develop a digital wayfinding and attraction platform

RESPONSIBLE PARTIES: CITY

SHORT-TERM

STRATEGY 5. EXPAND BICYCLE AMENITIES

ACTION 3.14: Expand availability of bike racks throughout the City particularly at schools, parks, public facilities, and Downtown.

RESPONSIBLE PARTIES: CITY

SHORT-TERM

ACTION 3.15: Investigate opportunities to implement a bikeshare program and place bikeshare hubs near transit, schools, parks, public facilities, and other activity generators

RESPONSIBLE PARTIES: CITY

MID-TERM



TRANSIT, MICROMOBILITY, AND OTHER TRANSPORTATION TRENDS EXISTING CONDITIONS

Dunedin is served by numerous PSTA routes providing connections to Downtown and to destinations outside the City. The Jolley Trolley is a coastal route that serves the coastal beach communities and runs along Alt. US 19 through Dunedin. The Jolley Trolley serves Pinellas County residents but is also heavily used by tourists. Many transit stops within the City lack shelters, seating, and lighting which is sometimes due to lack of right-of-way. Other transit stops lack accessible infrastructure such as pathways and concrete pads/platforms that connect people from the bus to the sidewalk.

Dunedin has a very active and passionate Golf Cart community. The City has designated areas that permit access by golf cart and areas that prohibit access by cart. The prohibited access areas include State and County roadways, some parks, and some neighborhoods. Currently, there are seven permitted crossings at State roadways within the City: Palm Boulevard at US Alt 19, Monroe Street at US Alt 19, Bass Boulevard/Main Street at SR 580, Manor Drive South/Knollwood Drive at Patricia Avenue, San Christopher Drive at CR1, Falcon Drive/Amberlea Drive North at CR1, and Michigan Boulevard at CR1. This City currently does not have bike share or scooter share micromobility programs.



Jolley Trolley on Edgewater Drive



Transit Stop on Patricia Avenue

OPPORTUNITIES AND CONSIDERATIONS

While the PSTA transit services appear to cover a good portion of the western and central part of the City, the service frequency is very low. The most frequent route is route 78 which arrives every 30 minutes. The transit ridership data also indicate very low riderships throughout the City. Major corridors within the City could provide service opportunities for future enhanced transit services such as premium or express bus. Enhanced transit service like this can serve and attract a greater number of people within a 5 and 10 minute walk. Enhanced transit services would not only serve everyday commuters, but would provide enhanced mobility options for seniors and tourists living and visiting the City.

The City recently signed an inter-local agreement with PSTA for a pilot program for AV Shuttles in Downtown. The AV service will operate along Douglas Avenue and Main Street. The program launch is set for end of May 2021 and service will operate approximately three months.

The passion and high level of use in the golf cart community create many opportunities for the City to expand its golf cart use zones, add additional crossings, and more designated golf cart parking to provide more opportunities for residents to travel by golf cart.



FIGURE 5: EXISTING TRANSIT ROUTES AND STOPS



RECOMMENDED TRANSIT, MICROMOBILITY AND OTHER TRANSPORTATION TRENDS STRATEGIES AND ACTIONS

STRATEGY 1. IMPROVE TRANSIT STOPS

ACTION 4.01: Partner with PSTA to implement shelters, seating, lighting, and other transit amenities such as bicycle racks, real time information, wayfinding, trash receptacles, and other improvements to address the PSTA amenities master plan.

RESPONSIBLE PARTIES: CITY, PSTA, FDOT, PINELLAS COUNTY

CONTINUOUS

ACTION 4.02: Routinely inventory and assess transit stop conditions and needs

RESPONSIBLE PARTIES: CITY, PSTA

CONTINUOUS

ACTION 4.03: Continue and expand partnerships with local artist for public art installations at transit stops or on shelters

RESPONSIBLE PARTIES: CITY, PSTA

CONTINUOUS

ACTION 4.04: Improve accessibility to transit stops by constructing wide pathways and bike connections

RESPONSIBLE PARTIES: CITY, PSTA, FDOT, PINELLAS COUNTY

SHORT-TERM

ACTION 4.05: Update Land Development Code approval process to require space for transit shelter updates within limited right-of-way

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY

SHORT-TERM

STRATEGY 2. INCREASE EFFICIENCY AND RELIABILITY OF TRANSIT

ACTION 4.06: Partner with PSTA to pursue new transit projects of high impact that improve access to transit

RESPONSIBLE PARTIES: CITY, PSTA

CONTINUOUS

ACTION 4.07: Partner with PSTA to implement a new transit route to Honeymoon Island

RESPONSIBLE PARTIES: CITY, PSTA

SHORT-TERM

ACTION 4.08: Partner with PSTA to evaluate the potential for express bus service along major routes such as SR 580 (it is a priority regional transit corridor per Forward Pinellas)

RESPONSIBLE PARTIES: CITY, PSTA

MID-TERM



STRATEGY 3. INCREASE ACCESS TO MICROMOBILITY OPTIONS AND CONNECTIONS TO TRANSIT

ACTION 4.09: Explore additional micromobility options such as a looper, downtowner, etc. to connect to downtown, Mease Dunedin Hospital, and TD Ballpark

RESPONSIBLE PARTIES: CITY, PSTA

SHORT-TERM

ACTION 4.10: Study feasibility of bike share, and e-bikes.

RESPONSIBLE PARTIES: CITY

MID-TERM

ACTION 4.11: Implement autonomous vehicle transit based off of pilot project and continue to partner with other pilots

RESPONSIBLE PARTIES: CITY, PSTA

MID-TERM

STRATEGY 4. CONTINUE TO INCREASE TRANSIT OPTIONS

ACTION 4.12: Continue to support and partner with PSTA for Jolley Trolley use and coordination

RESPONSIBLE PARTIES: CITY, PSTA

CONTINUOUS

ACTION 4.13: Continue to promote awareness for the free shuttle service, Local Tiki Rides, and proposed Looper within the City

RESPONSIBLE PARTIES: CITY, LOCAL TIKI RIDES

CONTINUOUS

ACTION 4.14: Implement 30-minute headways for Jolley Trolley service and consider a park and ride facility that can be serviced by the Jolley Trolley

RESPONSIBLE PARTIES: CITY, PSTA

SHORT-TERM

ACTION 4.15: Continue and expand water taxis operation and explore opportunities for future ferry service

RESPONSIBLE PARTIES: CITY, CLEARWATER FERRY, CITY OF CLEARWATER, PSTA

MID-TERM

STRATEGY 5. EXPAND GOLF CART EDUCATION AND FUNCTION

ACTION 4.16: Provide education materials for the City's golf cart rules and registration

RESPONSIBLE PARTIES: CITY

CONTINUOUS

ACTION 4.17: Implement additional Golf Cart crossings and expand Golf Cart Zones to provide greater access and connectivity

RESPONSIBLE PARTIES: CITY, FDOT, PINELLAS COUNTY

SHORT-TERM

ACTION 4.18: Develop a plan to identify additional areas for golf cart parking and additional amenities/improvements to accommodate golf cart usage

RESPONSIBLE PARTIES: CITY

SHORT-TERM



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ROADWAY EXISTING CONDITIONS

The major corridors within Dunedin are SR 580, SR 586, US Alt. 19, and CR 1. These corridors see the highest volume of traffic in the City and also are the most congested during rush hour and peak seasonal times. The higher volumes and higher speeds of these corridors make it less safe for pedestrians and bicyclists which is evident from the 5-year crash data. There are a significant number of crashes on the major corridors, particularly SR 580. There are also a significant number of nighttime crashes along SR 580 and US Alt. 19 which indicates that the existing lighting is not adequate.



Pinellas Trail Crossing on Skinner Boulevard



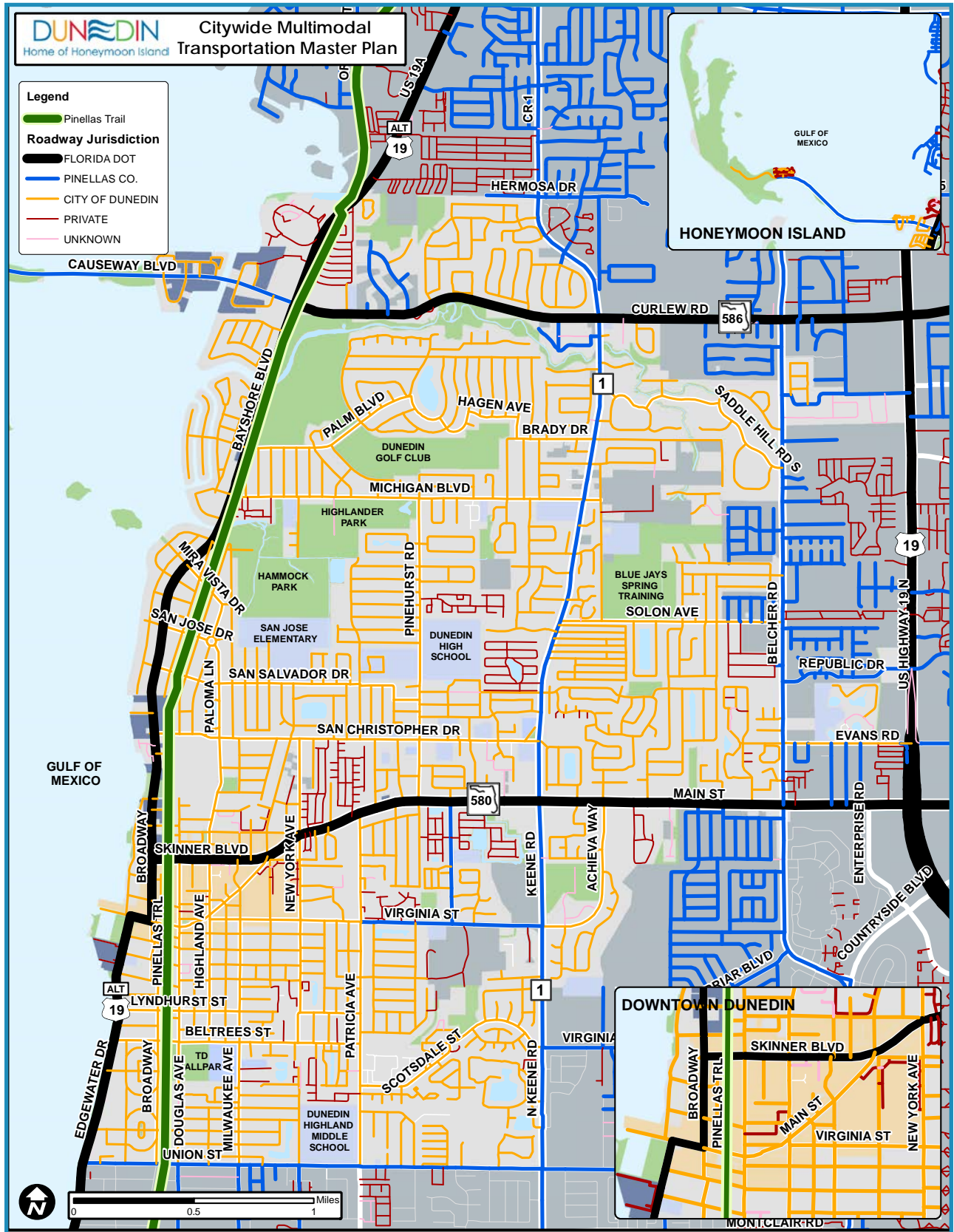
SR 580

OPPORTUNITIES AND CONSIDERATIONS

The **City owns 72% of the roadways** within the City Limits which provide opportunities for the City to implement improvements on these roadways more quickly. Other roadways owned by FDOT and Pinellas County will require partnership and coordination for improvements. Dunedin is home to many seasonal residents, including an increased Spring Training emphasis, and see a substantial number of tourists each year. These are additional people who use the City's transportation network to reach attractions, shopping, dining, and housing/lodging. It is essential to plan for residents as well as seasonal visitors and accommodate all desired modes of transportation. Providing convenient, non-automotive modes of transportation for residents and visitors can help manage congestion, particularly during tourist season.



FIGURE 6: ROADWAY JURISDICTION



RECOMMENDED ROADWAY STRATEGIES AND ACTIONS

STRATEGY 1. CREATE SAFER AND MORE VIBRANT STREETS THAT SERVE MULTIPLE MODES OF TRANSPORTATION

ACTION 5.01: Continue to consider Scenic Corridors designation on Edgewater Drive

RESPONSIBLE PARTIES: CITY, FORWARD PINELLAS

CONTINUOUS

ACTION 5.02: Explore opportunities for permanent parklets and street cafes particularly in Downtown

RESPONSIBLE PARTIES: CITY

IMMEDIATE

ACTION 5.03: Expand the Citywide tree planting program to provide shade, reduce the urban heat island effect, and calm traffic

RESPONSIBLE PARTIES: CITY

SHORT-TERM

ACTION 5.04: Add street lighting where possible

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

SHORT-TERM

ACTION 5.05: Implement Complete Streets and Lane Reductions

- Coordinate with FDOT to implement complete streets efforts through the FDOT Design Manual on state corridors
- Coordinate with Pinellas County to implement complete streets improvements on County roadways

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

SHORT-TERM

ACTION 5.06: Consider additional gateways into the City through a combination of monument signage, landscaping, and public art

RESPONSIBLE PARTIES: CITY, FDOT, PINELLAS COUNTY

SHORT-TERM/MID-TERM

ACTION 5.07: Improve intersections

- Include smart signal systems and coordinated signal timing
- Alternative Intersections – examples include roundabouts, median U-turn intersections, restricted crossing U turns

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

SHORT TO MID-TERM

ACTION 5.08: Implement Intelligent Transportation System improvements along Alt. US 19

RESPONSIBLE PARTIES: CITY, FDOT, FORWARD PINELLAS

MID-TERM

FIGURE 7: ROADWAY RECOMMENDATIONS



STRATEGY 2. IMPLEMENT SAFETY IMPROVEMENTS ON HIGH-CRASH CORRIDORS AND INTERSECTIONS

ACTION 5.09: Consider Leading Pedestrian Intervals (LPI) for high-pedestrian traffic intersections

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

IMMEDIATE

ACTION 5.10: Prohibit right-turn on red in Downtown and other high-traffic intersections

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

SHORT-TERM

ACTION 5.11: Reduce curb radii and implement curb extensions

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

SHORT-TERM

ACTION 5.12: Partner with FDOT on the SR 580 Corridor Study to implement safety improvements such as crossing improvements, separated bicycle facilities, driveway consolidation, and pedestrian-scale lighting.

RESPONSIBLE PARTIES: CITY, FDOT

MID-TERM

STRATEGY 3. PROVIDE EFFICIENT AND ADEQUATE SPACE FOR FREIGHT ROUTES AND DELIVERIES.

ACTION 5.13: Partner with local businesses to educate truck drivers on City regulations and freight routes (see Figure 8 for current freight routes)

RESPONSIBLE PARTIES: CITY

CONTINUOUS

ACTION 5.14: Maintain and maximize the use of existing commercial and residential alleyway system for deliveries

RESPONSIBLE PARTIES: CITY

IMMEDIATE

ACTION 5.15: Develop freight delivery guidance to help business and operators better understand the rules and regulations regarding the delivery and shipment of good within the City

RESPONSIBLE PARTIES: CITY, PINELLAS COUNTY, FDOT

SHORT-TERM

ACTION 5.16: Investigate freight loading zone and demand and supply

RESPONSIBLE PARTIES: CITY

SHORT-TERM

ACTION 5.17: Explore designated and shared loading zones in high intensity delivery areas such as Downtown

RESPONSIBLE PARTIES: CITY

SHORT-TERM



FIGURE 8: TRUCK ROUTES





VISION CORRIDOR IMPROVEMENTS

The Vision Corridors are identified by the City for redevelopment and enhancement. Various studies have been completed for several of these corridors. Recommendations from these studies are included and enhanced in this Multimodal Transportation Master Plan. Spotlights are included for these corridors with potential priority corridor improvements. The Vision Corridors include:

- » Causeway Boulevard
- » SR 580 (Skinner Boulevard/Main Street)
- » Douglas Avenue
- » Patricia Avenue
- » U.S. Alternate 19 *

PRIORITY CORRIDOR IMPROVEMENTS

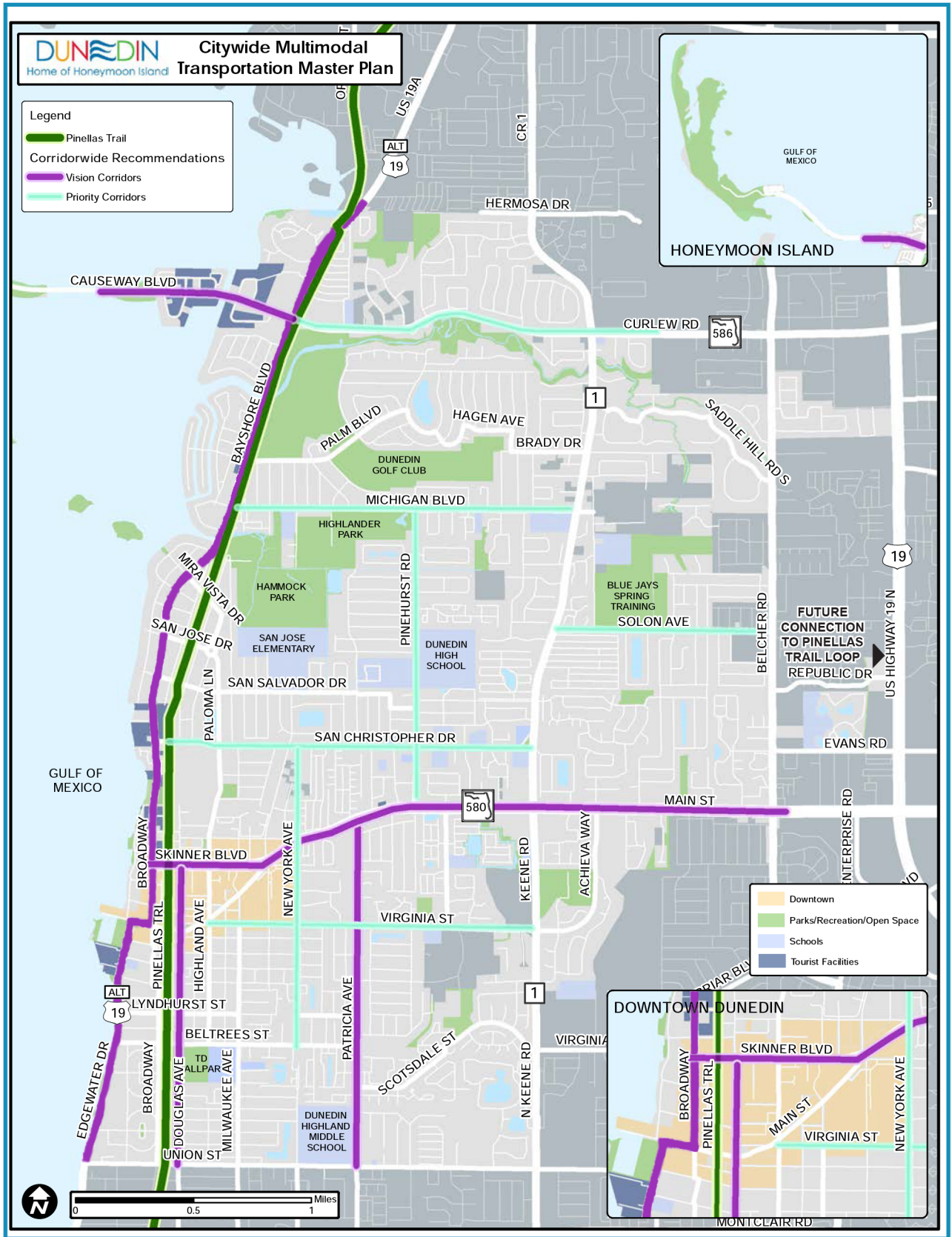
The Priority Corridors are corridors identified based on crash data and input from community stakeholders. These corridors were prioritized due to safety concerns, existing or non-existent facilities, and existing usage and connectivity. Improvements identified in this Master Plan, along with the Vision Corridor improvements, will create a citywide multimodal network. The Priority Corridors include:

- » SR 586 (Curlew Road)
- » Michigan Boulevard
- » Pinehurst Road
- » San Christopher Drive
- » New York Avenue
- » Virginia Street

The Street Design Toolkit, found on page 50, outlines tools to consider for corridor improvements and locations throughout the City.

*A corridor study was conducted by FDOT. Recommendations can be found at: www.fdotd7studies.com/altus19studies.

FIGURE 9: CORRIDOR IMPROVEMENTS



VISION AND PRIORITY CORRIDOR IMPROVEMENTS

VISION CORRIDORS	Causeway Boulevard	Downtown CRA	Douglas Avenue	Patricia Avenue	State Road 580
Pedestrian Improvements					
Sidewalks	✓				
Pedestrian Lighting	✓				✓
Crosswalks	✓		✓		
Bicycle Improvements					
Shared Lane Markings		✓			
Bike Lane		✓			
Protected Bike Lane					
Multi-use Path			✓*	✓	
Transit Improvements					
Stop Improvements (Shelter, lighting, wayfinding, pad, pathway, etc.)			✓	✓	✓
Micro-mobility Improvements					
Autonomous Vehicles		✓			
Golf Cart Crossings					
Shared Golf Cart Use					
Bike Share		✓			
Traffic Calming Tools					
Enhanced Landscaping/Street Trees	✓			✓*	
Medians			✓	✓	
Pedestrian Safety Islands				✓	
Pinchpoints					
Chicanes					
Curb Radii Reduction					
Raised Intersection					
Lane Width Reduction					
Roundabout					
Neighborhood Traffic Circles					
Signal Progression					✓*
On-street Parking		✓			
Speed Hump/Table					
Safety Improvements					
Reduce Speed Limit				✓	
RRFBs/Midblock Crossings	✓		✓	✓	
Access Management/Driveway Consolidation	✓			✓	✓
Placemaking					
Gateway Signage	✓		✓	✓*	✓
Wayfinding					
Painted Intersections/Crosswalks		✓			

*Also identified in other City plans



PRIORITY CORRIDORS	Pinehurst Road	Virginia Street	Skinner Boulevard	San Christopher Drive	Michigan Boulevard	Curlew Road	New York Avenue
Pedestrian Improvements							
Sidewalks				✓			
Pedestrian Lighting	✓	✓		✓	✓	✓	✓
Crosswalks	✓	✓					
Bicycle Improvements							
Shared Lane Markings							
Bike Lane				✓*	✓*		✓*
Protected Bike Lane							
Multi-use Path	✓	✓*				✓	
Transit Improvements							
Stop Improvements (Shelter, lighting, wayfinding, pad, pathway, etc.)							
Micro-mobility Improvements							
Autonomous Vehicles							
Golf Cart Crossings							
Shared Golf Cart Use					✓		
Bike Share							
Traffic Calming Tools							
Enhanced Landscaping/ Street Trees		✓		✓		✓	
Medians			✓*				
Pedestrian Safety Islands							
Pinchpoints							✓
Chicanes							✓
Curb Radii Reduction							
Raised Intersection							
Lane Width Reduction		✓					
Roundabout			✓*				
Neighborhood Traffic Circles							
Signal Progression							
On-street Parking			✓*				
Speed Hump/Table							
Safety Improvements							
Reduce Speed Limit		✓					
RRFBs/Midblock Crossings	✓	✓	✓*		✓		
Access Management/Driveway Consolidation							
Placemaking							
Gateway Signage							
Wayfinding							
Painted Intersections/Crosswalks							

*Also identified in other City plans

Street Design Toolkit

The Street Design Toolkit outlines design and best practice elements for different design strategies that aim to slow traffic, increase safety, and improve street aesthetics. The descriptions and images intend to give a broad overview of each strategy.

PEDESTRIAN DESIGN STRATEGIES

High Visibility Crosswalks

Crosswalks along major corridors should be painted in a way that make it extremely clear to all users of the intersection—including cars, buses, pedestrians, and bicyclists—that there are designated pedestrian zones of the intersections. High visibility crosswalks are more clear and noticeable to oncoming vehicles which creates a safer environment for pedestrians to cross.

Mural and Painted Crosswalks

Painted mural and painted crosswalks are a safety and placemaking tool to create awareness of a crosswalk while incorporating art and community character. These crosswalks are generally in slower vehicle traffic areas like downtowns, schools, and neighborhoods.

Pedestrian Refuge Islands

Pedestrian refuge islands allow for pedestrian to have a safe place to stop halfway through an intersection or when crossing a busy street. These islands are typically constructed at the end of a median and include landscaping and/or bollards. These are particularly useful for elderly residents and people who are disabled who may take longer to cross large intersections.

Curb Extensions

Curb extensions visually and physically narrow the roadway which creates safer and shorter crossing distances while increasing available space for pedestrians and street furniture.

Street Furniture

Street furniture includes, but is not limited to: benches, outdoor cafe seating, parklets, bollards, public art, and trash receptacles. Street furniture creates active pedestrian spaces and contributes to building a sense of place within a community.

Pedestrian-Scale Lighting

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



Wayfinding

A comprehensive wayfinding system directs residents and visitors to districts and destinations while encouraging walking and bicycling.

Rectangular Rapid Flashing Beacons (RRFBs)

RRFBs can enhance safety by reducing crashes between vehicles and pedestrians at unsignalized intersections and midblock crossings by increasing motorist awareness of potential pedestrian conflicts.

Leading Pedestrian Intervals (LPIs)

LPIs provide a head-start to pedestrian crossing a roadway so they are more visible to turning vehicles. LPIs are best used in high pedestrian and high vehicle traffic areas.

Street Trees and Landscaping

Street trees, particularly canopy and shade trees, create comfort in inhospitable environments, especially for pedestrians and transit users.

BICYCLE DESIGN STRATEGIES

Protected Bike Lane

Protected bike lanes are much safer than typical painted bike lanes. The use of landscaping, raised curbs, bollards, planters, and other methods create a protective barrier for bicyclist from vehicle traffic. Protected bike lanes improves safety and encourages more people to bike to their destinations.

Intersection Bike Boxes

Bike boxes are areas at the front of stopped travel lanes at a signalized intersection that are dedicated to allow bikes to get in front of queuing traffic. These bike boxes provide cyclists with safe and clear access to the intersection ahead.

Bikeshare

Bikeshare programs are particularly useful in enhancing transit services, providing links to existing routes. Bikeshare is ideal for short distance trips and are most successful in downtowns, tourist areas, and activity nodes.

Bicycle Street Furniture

Bicycle street furniture includes bike rack, bike storage containers, and bike repairs stations. These amenities encourage more people to bike to their destinations.



TRANSIT DESIGN STRATEGIES

Enhanced Transit Stops

Transit stops should be inviting locations to protect people waiting for transit from passing vehicles and weather conditions. Ideally, stops should include a covered shelter and ample seating. Additionally, transit stops should be attractive with sufficient signage, wayfinding, and landscaping to make them more inviting to the community. Popular transit stops should also include real-time route tracking. All transit stops should be ADA accessible with sidewalk adjacent to the curb for ease of access.

Mobility Hubs

Mobility Hubs are places of connectivity where different modes of travel are available. They provide a suite of mobility services, amenities, and technologies to bridge transit and an individual's origin or destination. Features can include electric vehicle charging, bike or scooter share, autonomous shuttles, rideshare, carshare, and much more. Mobility Hubs are best located in centers of activity with a concentration of employment, housing, shopping, and recreation.

ROADWAY DESIGN STRATEGIES (INCLUDING TRAFFIC CALMING)

On-street Parking

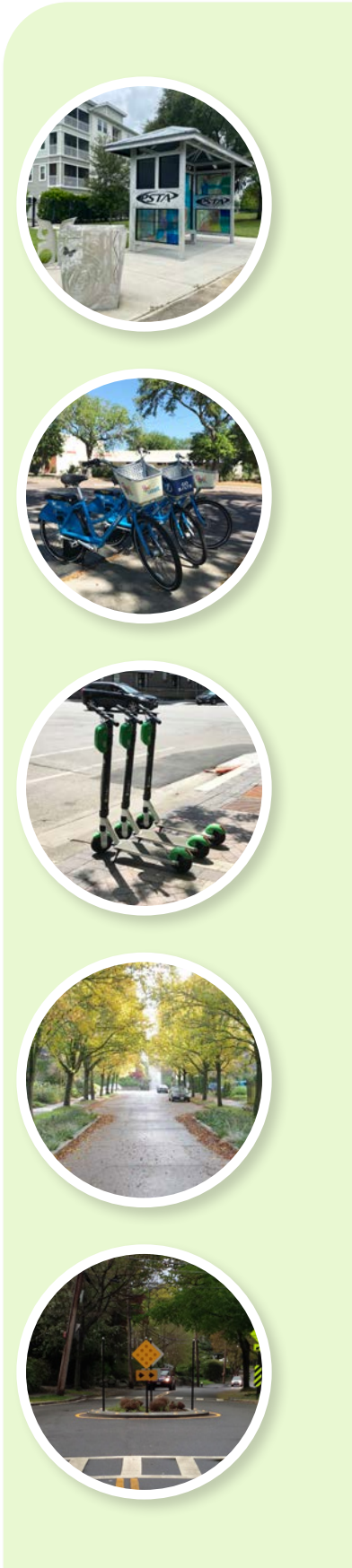
On-street parking increases safety by creating friction along the street which results in slower travel speeds and provides a buffer between pedestrian and vehicle traffic. On-street parking is particularly desirable in downtown locations and provide frequent turn-over to support retail businesses.

Chicanes

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

Pinch Points

Pinch points are curb extensions that may be applied at midblock to slow vehicle speeds and increase public space. Pinch points can also facilitate midblock crossings on low volume streets.



Speed Humps and Speed Table

Speed Humps intend to slow traffic speeds on low volume, low speed roads. Speed humps reduce speeds to 15-20 mph. Speed tables are raised, midblock crossings that are flat and longer than speed humps. Speed tables may be used on streets that range from 25-45 mph.

Neighborhood Traffic Circles

Neighborhood traffic circles, or mini roundabouts, lower speeds at minor intersection crossings and ideal for uncontrolled intersections. These may be designed with painted crossings markings or raised islands but are best implemented in conjunction with landscaping to further calm traffic. Neighborhood traffic circles are best suited for low volumes, residential streets.

Raised Intersections

Raised intersection, similar to speed humps and speed tables, reinforce slow speeds and encourage motorists to yield to pedestrians. Raised intersections are best suited for minor intersections and also provide an opportunity for intersection murals.

Painted Mural Intersections

Painted, or mural, intersections beautify roadways, naturally slow vehicle speeds, and bring attention to motorists of a pedestrian activity.

Tactical Public Spaces

Tactical public spaces include temporary or permanent transformation of public right-of-way, most likely used for vehicles, for the use of pedestrians and public space. Some of these methods include: parklets, pedestrian-only streets, and intersection reconfigurations.

Alleyways

Alleyways help create better mobility by allowing delivery and service type vehicles to more easily access the back of businesses rather than the front. This strategy helps clear the curb lane of unwanted vehicles and creates more space for things such as on-street parking, bike parking, bike lanes, multi-use paths, and more. Additionally, alleyways also improve congestion by potentially removing a stopped vehicle from the curbside lane. Alleyways can also improve emergency response times by improving access for emergency vehicles. Alleyway use is ideal in downtown areas and dense commercial districts.

Smart Signal Systems

Include technology to improve signal operation. Smart Signal Systems collect and store continuous traffic data. The system compiles a history of traffic signal controls and performance measures. This information is used to improve the traffic signal timing and overall flow of road traffic. Can include preemption or priority for emergency and transit vehicles.





Section 5



Next Steps & Conclusion

**“Action is the foundational
key to all success.”**

- Pablo Picasso



Next Steps and Conclusion

NEXT STEPS

The vibrancy, safety, and sustainability of living, working, and shopping in Dunedin requires a balanced and functional multimodal transportation system. This will need to include methods for encouraging a variety of transportation modes, and allowing for future technological advances. The next steps the City shall consider to bring this Plan into action fall into three categories: regulatory, funding and partnerships, and education and outreach. The first steps are:

- » Implement a city-wide traffic calming and Complete Streets program (Regulatory)
- » Implement traffic calming regulations into Land Development Code (Regulatory)
- » Incorporate multimodal improvements and traffic calming projects into the CIP and Business Plan Initiatives (Funding and Partnerships)
- » Continue to partner with local, regional and state agencies to implement improvements (Funding)
- » Seek federal, state, and local grant funding to implement traffic calming tools and multimodal improvements (Funding and Partnerships)
- » Educate residents about multimodal transportation options and regulations and promote non-automobile transportation modes (Education and Outreach)

Regulatory

As identified in the previous chapter, the actions of implementing a Complete Streets program and traffic calming regulations will advance many of the improvements outlined in this Plan. These procedures will create a standard in Dunedin that will improve safety and comfort for all modes of transportation. The City shall continue to monitor and update the list of improvements or new improvement that are needed and can be addressed using complete streets and traffic calming tools.

Funding and Partnerships

There is not one funding strategy or source that will provide the needed resources for the City to implement the improvements in this Plan. Dunedin must develop a funding strategy that identifies a variety of sources of future funding. Some of these funding sources may include federal and state grants as well as grants from Forward Pinellas. Below are a list of grant funding assistance the City can pursue to fund multimodal improvements:

- » DEO Technical Assistance Grants
- » BUILD
- » Forward Pinellas Transportation Alternatives Grant Funding
- » Forward Pinellas Complete Streets Grant Funding
- » Forward Pinellas Multimodal Transportation Priority Projects
- » Community Development Block Grants (CDBG)
- » State Infrastructure Bank Loans: Loan from the State of Florida for the development of Infrastructure Projects
- » Environmental Protection Agency (EPA): Grant opportunities for green infrastructure and landscaping, healthy communities initiatives, and brownfields



- » Housing and Urban Development (HUD): Community Development Block Grant Program (CDBG) grants to benefit low to moderate income persons and communities, sustainable communities grants

Modifications to existing funding sources and procedures should also be examined so that all modes of transportation are considered or added in any CIP project. This will require continued communication and coordination between City departments. Additional dedicated funding for multimodal improvements the City can pursue include:

- » Dedicate funding from multimodal impact fee, general funds, and Penny for Pinellas IV
- » Leverage Tax Increment Financing (TIF) funding for Complete Streets projects in Downtown
- » Develop 5-year and annual project priority lists to support securing funding
- » Consider adopting an internal review process similar to county's Portfolio approach

The City should also work with regional and local partnerships to fund multimodal projects.

Local City Partners

- » Coordinate with local partners to fund Complete Streets projects that are adjacent to the City and leverage funding

Pinellas County Partners

- » Fund projects within the City using Penny for Pinellas IV funding
- » Support Pinellas County on increasing the available gas tax millage and indexing the gas tax

Florida Department of Transportation

- » Work with FDOT on their Complete Streets efforts and fund projects within the City, especially on SR 580 and SR 586
- » Pursue Safe Routes to School funding and Surface Transportation Program (STP) dollars

Forward Pinellas

- » Coordinate on transportation alternatives funding
- » Coordinate on recreational trails funding
- » Program projects into the TIP and LRTP including trail and bicycle improvements

PSTA

- » Work with PSTA to prioritize funding for improvements such as stop improvements on streets with high performing transit routes

Education and Outreach

Community interest throughout the development of the Plan demonstrates the commitment that exists within the community that is needed for implementing improvements and change. Future community involvement will be key to implementing the goals and objectives outlined in this Plan. Additional outreach shall be conducted to educate residents on golf cart regulations and multi-modal transportation options to increase non-automobile use.



CONCLUSION

The Dunedin Citywide Multimodal Transportation Master Plan is an initial step in creating a more vibrant community where mobility helps the community thrive, in turn benefiting the City's safety, health, economy, environment, and livability. Effective partnerships with state, regional, and local agencies as well as interdepartmental coordination and cooperation will ensure that Dunedin's challenges become improvement opportunities. This Plan, when supported by the City administration, city staff, local businesses, residents, and regional partners, serves as an advocacy tool to make multimodal transportation a priority for Dunedin.



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