

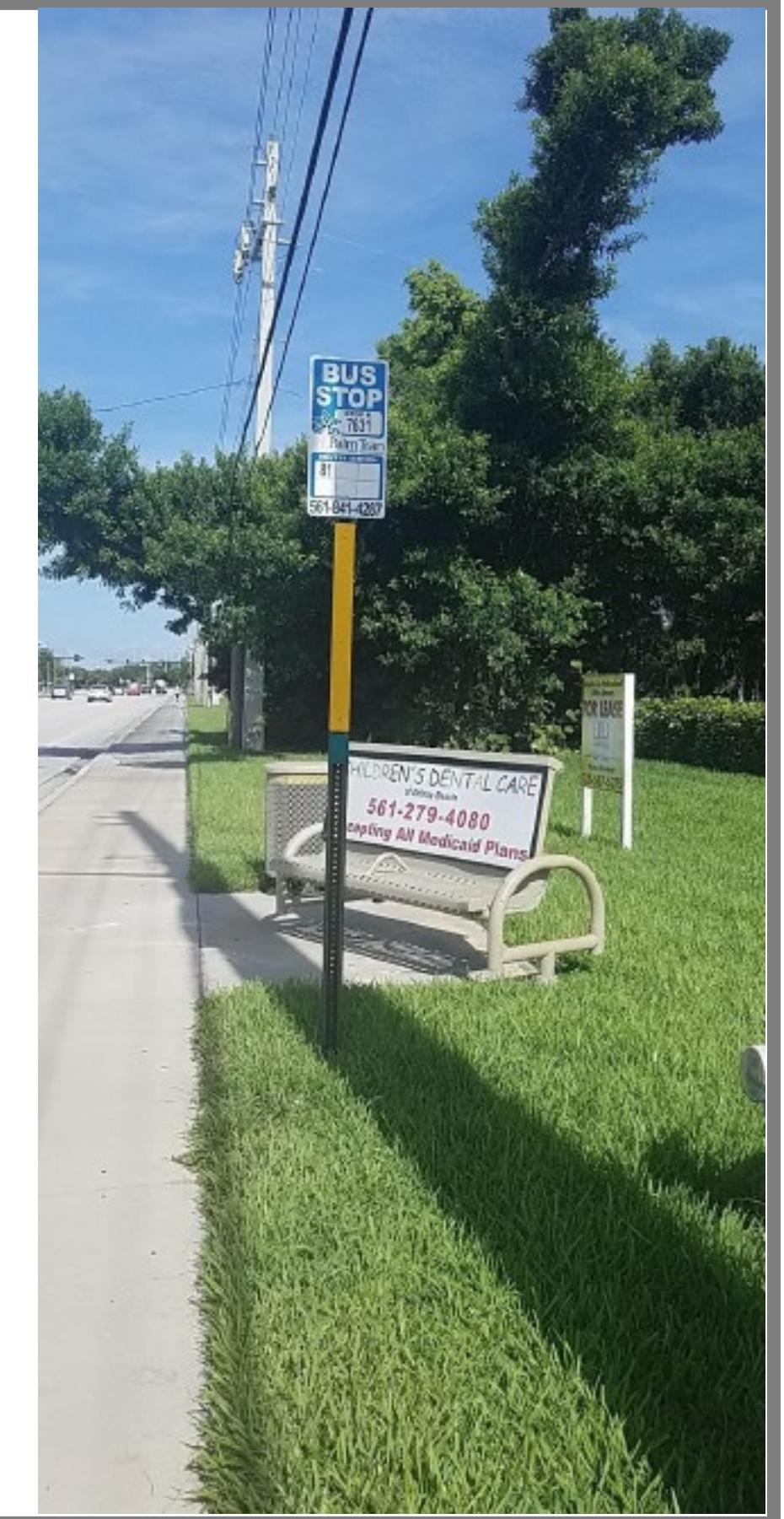


PALM BEACH
Transportation
Planning Agency

Transit Access Plan

Atlantic Avenue
Delray Beach, FL

2019



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Location Overview

Atlantic Avenue was selected by the Palm Beach Transportation Planning Agency (TPA) to conduct a transit access evaluation due to the high ridership Palm Tran bus stop located at the Atlantic Avenue and Military Trail intersection, with a monthly average of 3,927 riders. The evaluation included a field visit with key stakeholders, including representatives from Palm Tran, Palm Beach County and the City of Delray Beach that identified safety and transit accessibility concerns and potential countermeasures. In order to create a safe, efficient and connected transportation system, we must provide safe access to transit for users of all ages and abilities.

The following pages include key findings with recommendations and cost estimates, including street planviews. Next steps will be to meet with key stakeholders and Right-of-Way (ROW) owners to discuss implementation of the proposed recommendations.

Overall Recommendations:

1. ADA compliant curb ramps
2. Pedestrian-level lighting
3. Signage along the route to indicate bicycle lanes and routes
4. Reducing lane widths to 11 feet
5. Bringing bus stops to ADA compliance (level with landing pad of 5'X 8' or greater)
6. Making intersection crosswalks high emphasis with countdowns
7. A bicycle share system is not ideal for this location due to lack of destination locations
8. Remove and relocate out-of-service bus stops if permanently out of operation

Priorities on Military Trail:

1. Install a shared-used path for safe travels of both pedestrians and cyclists
2. Install pedestrian lighting to allow residents to get to fitness centers, shops, and services near their homes at all hours safely
3. Offer shade along corridor by adding bus shelters as well as other shade options (such as discussed in General Recommendations)

Priorities on Atlantic Avenue:

1. Offer shade along corridor by adding street trees or other shade options (such as discussed in General Recommendations)
2. Construct a 4-foot designated bicycle lane with bright green pavement where conflict zones exist to accommodate the cyclists that prefer that type of facility
3. At the intersection, construct wider pedestrian ramps to accommodate pedestrians with mobility devices



Location:
Atlantic Ave @ Military Trail
Delray Beach, Florida
Palm Tran Stop: 1156

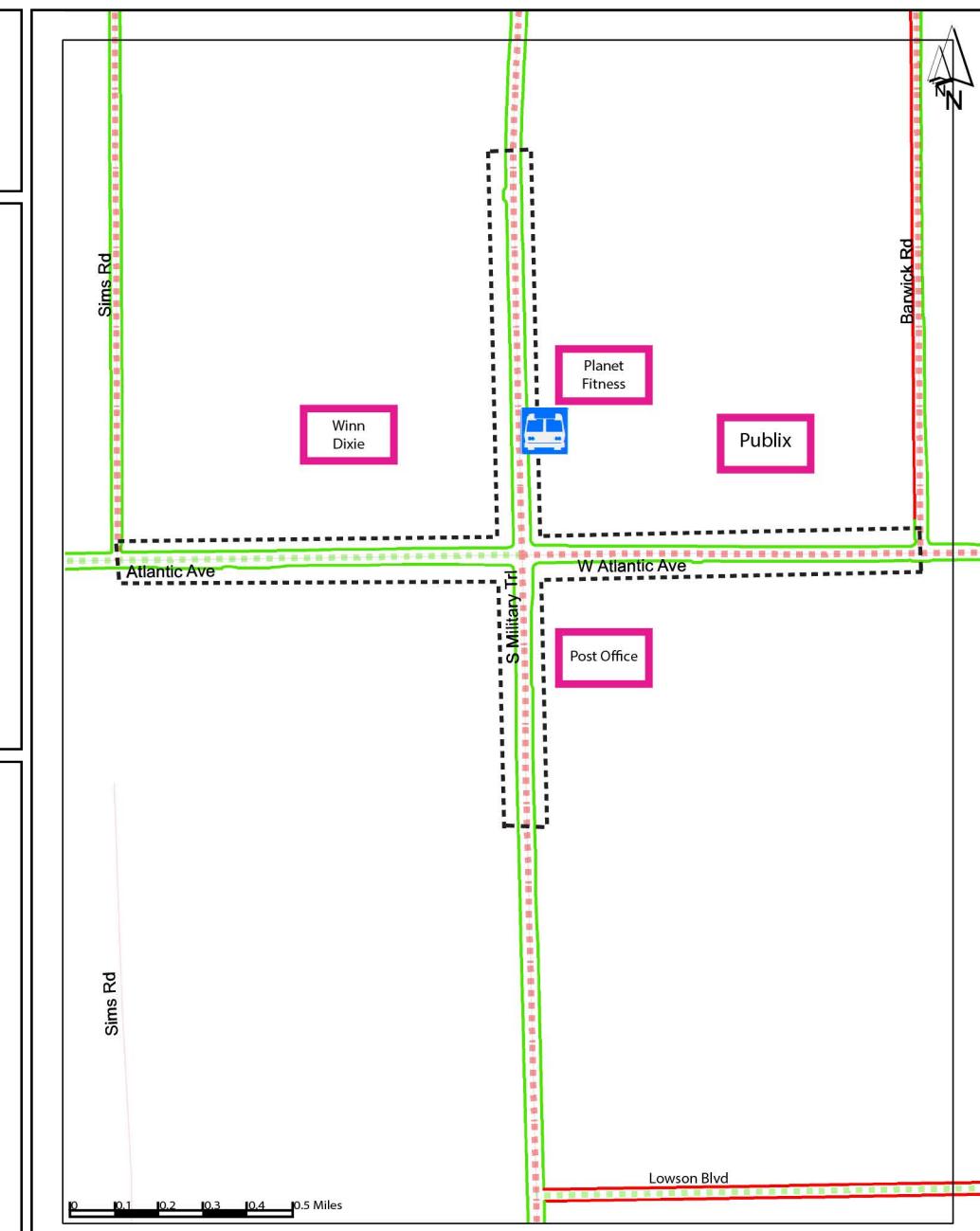
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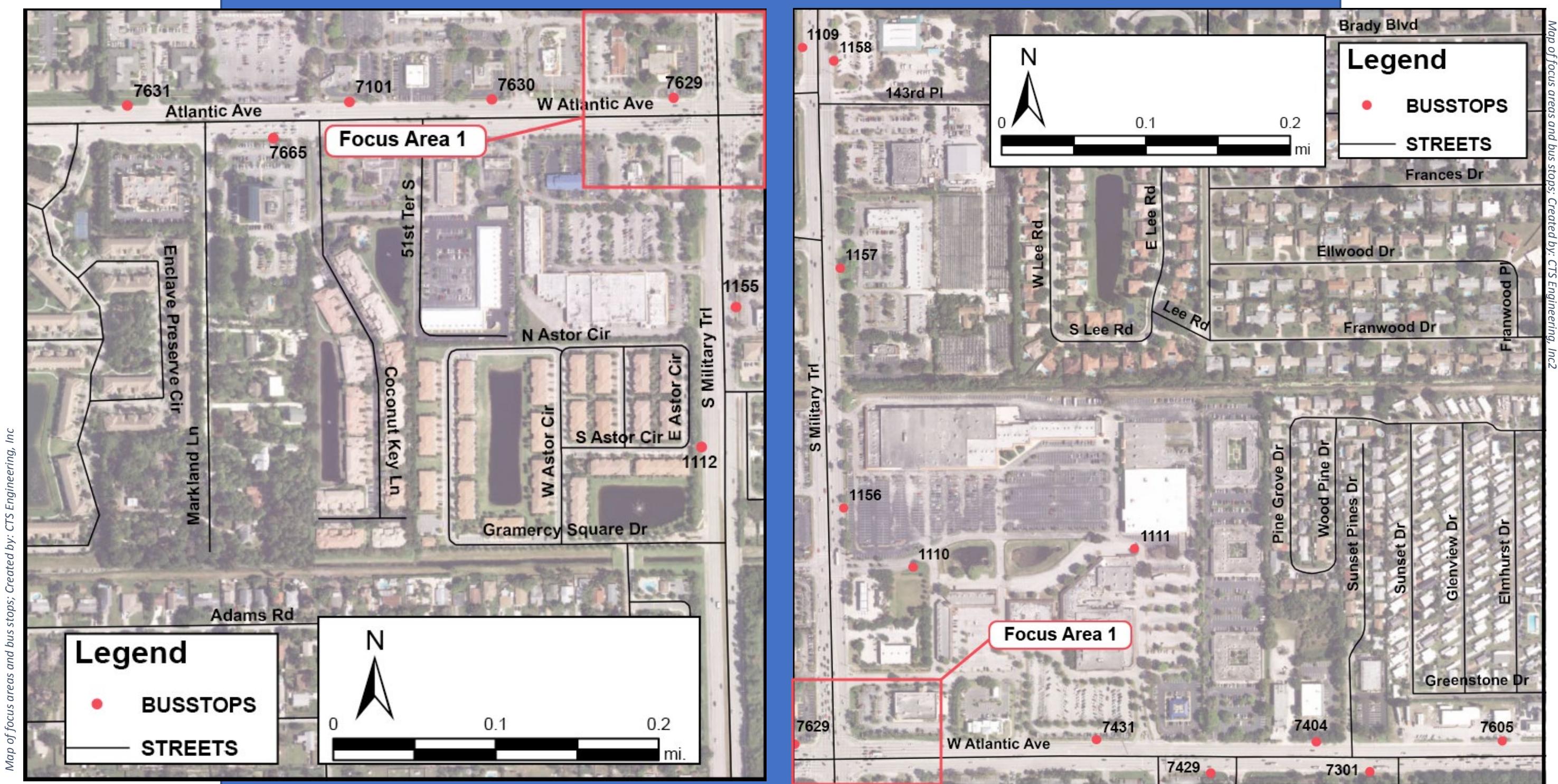
- Top Ridership Stop
- Existing Bicycle Facilities
- No Bicycle Facilities
- Existing Sidewalks
- No Sidewalks
- Study Area

Background:
Roadway Owner(s): County
Municipality: Delray Beach

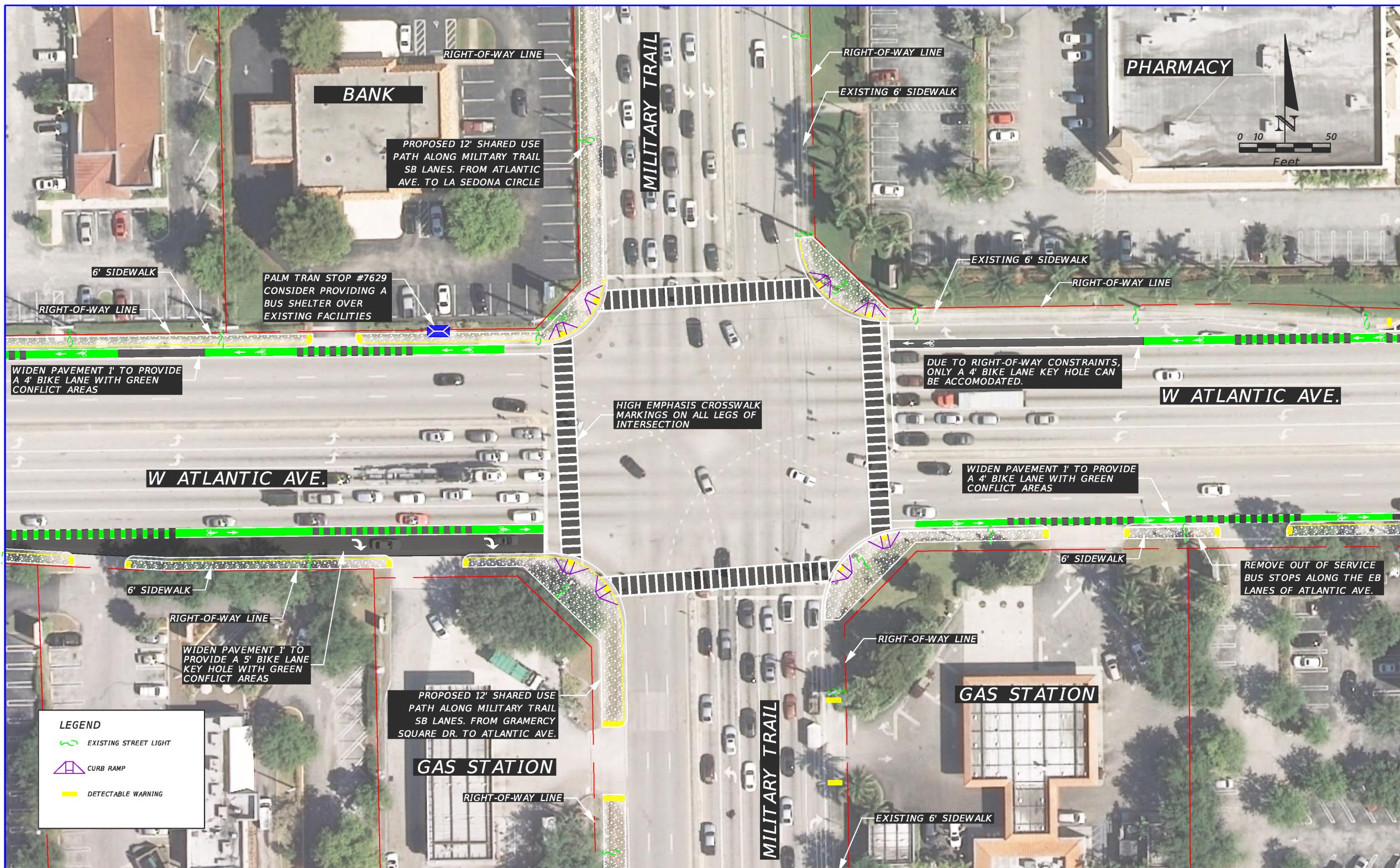
Speed Limit:
Atlantic Ave- 45 MPH
N Military Trail - 45 MPH
ROW Width: 120 ft

TPA Design Guidelines: Suburban
FDOT Context: C4 - Urban General
2040 Peak Traffic Volume: 41,704 vphpd
Bus Route(s): 3, 80, 81





Focus Areas



Delray Beach: Focus Area 1

High emphasis crosswalks, bike lanes with green conflict areas, shared-use paths and wider sidewalks, removing out-of-service stops, pedestrian lighting, ADA curb ramps

Figure 3: Location 6, Focus Area 1; Map Creator: CTS Engineering, Inc

Cost Estimates

Location	Roadway Owner	Recommendation	Description	Cost Estimate	ROW Needed?
Atlantic Avenue from just west of Military Trail to Barwick Road	State	1	Widen 1'-2' on either side of Atlantic Ave to accommodate 4' designated bicycle lanes.	\$980,000	No
Military Trail from La Sedona Circle to Gramercy Square Drive	County	2	Reconstruct existing sidewalk and paths along the west side of Military Trail to 12-feet wide to provide a shared-use facility. This can help compensate for the lack of bicycle lanes along Military Trail in this area.	\$300,000	
All throughout study limits at the signalized intersections	State, County	3	Install special emphasis crosswalk markings at all signalized intersections.	\$170,000	
All throughout study limits at bus stop locations		4	Install boarding and alighting pads, bus shelter pads, bus shelters, benches, route maps, bicycle racks and trash receptacles at all stops located throughout project corridor. Connect all bus stops to existing sidewalks and crosswalks.	\$255,000	Yes (some locations need right of way)
Delray Square Shopping Center (NE corner of Atlantic Avenue and Military Trail)		5	Provide bicycle and pedestrian connections from the Delray Square Shopping Center to the adjacent Palm Tran Bus Stops 1156 and 7431	\$200,000	Yes (requires coordination with Plaza owner)
*Cost estimate does not include ROW acquisition or drainage					Total Cost: \$ 1,905,000

Appendices

Appendix A: Field Observations

Road Users Observed during Visit		
The many bicyclists and pedestrians seen middle-aged and older. One gentleman was seen riding his electric wheelchair in a bicycle lane before hopping up on the sidewalk. Some cyclists used the sidewalk while others used the bicycle lanes (when present)	Road users ranged from senior citizens to young adults; users with mobility scooters, pedestrians walking for leisure, fitness and business; users biking for leisure, fitness, and business and transit users for work and leisure	
Observations of Things that Worked		
The sidewalks were, overall, in good condition; a few spots were lifted or cracked, however continuous throughout the corridor	Most plazas had PED access from the sidewalk to the plaza	Many of the side intersections offered countdown crosswalks
Some shade was also provided along the corridor and at many of the bus stops and shelters		

Observed Deficiencies				
Sidewalks & Crosswalks	ADA	Bicycle Facilities	Lighting	Bus Stops
There is a need for enhanced crosswalks in some locations		Continuous bicycle facility is needed throughout the study area. One specific segment had many cyclist road users		
A mid-block crossing is needed at the new (temporary) Palm Tran stop, as we saw many pedestrians and bicyclists jay-walking in the exact same location		Various segments within the study did not have designated bicycle lanes yet bicyclists still were seen biking on the road shoulder instead of the sidewalk		

Potential Pedestrian Perils	Potential Bicyclist Perils
Although there was some pedestrian lighting, the condition was poor	No continuous bicycle facility
Many driveways along the corridor had no marked conflict zones making it difficult for drivers to spot crossing pedestrians	Conflict zones are not shown along the corridor, so drivers are unable to detect a bicyclist riding before they turn onto a major road
The bus stop just north of Military Trail does not have a mid-block crossing so many pedestrians are forced to jay-walk across Military Trail in order to get to their destination	Bicycle racks at the high ridership stops are necessary, given that many of the users utilize their bikes before and after boarding the bus
The plaza at the same bus stop only offers one PED entrance into the plaza	

Top Priorities Recommended from Site Visit by PB TPA	Easy Fixes by Location	Difficult Fixes by Location
Continuous bicycle facilities	Addressing conflict zones along the corridors with proper markings	Implementing a continuous bicycle facility
Enhanced crosswalks	Implementing enhanced crosswalks	Creating a mid-block crossing
Better pedestrian-scale lighting	Updating the crosswalks at intersections to be audio and countdown	Creating PED access into plazas
Visible conflict zones	Designating bicycle lanes for bicyclists	Implementing shelters and/or benches at bus stops
Shelters for bus stops with adequate ridership		Installing PED lighting for most bus stops

Other Observations
We highly recommend that Palm Tran do something with the stops in Atlantic (E of Military Trail) that are not currently in service. If they are permanently out of service, the complete removal of the stops and relocation of the existing infrastructure (shelters and benches) is highly recommended to maximize their use and benefit
The sidewalk south of Military Trail could be widened into a multi-use path
The northbound sidewalk south of Military Trail would benefit greatly from landscaping maintenance as the overgrowth decreases the useable width of the path. This same stretch could benefit from PED lighting

Site Visit: June 29, 2018

Appendix B: Field Photographs

Lighting Conditions



Dim lighting and "Not in Service" sign at stop 7301 on Atlantic Ave;
Photo by: CTS Engineering, Inc.



Dim lighting at stop 7404 on Atlantic Ave; Photo by: CTS Engineering, Inc



Bus stop 3249 on Atlantic Ave; Photo by: CTS Engineering, Inc.



Light reflecting off of sign at stop 1155 on Military Trail; Photo by:
CTS Engineering, Inc.



Lighting at stop 1112 on Military Trail; Photo by: CTS Engineering, Inc.



Bicyclist passing bus stop 1113 on Military Trail; Photo by: CTS
Engineering, Inc.

Sidewalk Conditions



Maintenance needed on side walk along Military Trail; Photo by: CTS Engineering, Inc.



Tripping hazard on sidewalk along Military Trail; Photo by: CTS Engineering, Inc.



Pedestrian walking on sidewalk along Military Trail; Photo by: CTS Engineering, Inc.



Bicyclist in bicycle lane along Military Trail; Photo by: CTS Engineering, Inc.



Sidewalk along Military Trail; Photo by: CTS Engineering, Inc.



Evidence of erosion, and lacking ADA along Military Trail; Photo by: CTS Engineering, Inc.

Crosswalks



Pedestrian crosswalk at Military Trail and Atlantic Ave; Photo by: CTS Engineering, Inc.



Pedestrian crosswalk at Atlantic Avenue and Barwick Road; Photo by: CTS Engineering, Inc.



ADA improvements needed at Military Trail and 143rd Place; Photo by: CTS Engineering, Inc.



Pedestrian jaywalking across Atlantic Ave; Photo by: Palm Beach TPA



Missing crosswalk markings in front of Autozone on Military Trail; Photo by: Palm Beach TPA



Pedestrian crosswalk at Military Trail and Lakefront Boulevard; Photo by: CTS Engineering, Inc.



Missing crosswalk markings at the intersection of Atlantic and Whatley; Photo by: Palm Beach TPA

Bicycle Facilities



Bicycle lane markings in shoulder along Atlantic Ave; Photo by: CTS Engineering, Inc.



Bicycle lane markings in shoulder along Atlantic Ave; Photo by: CTS Engineering, Inc.



Bicyclist in shoulder against traffic on Atlantic Ave; Photo by: CTS Engineering, Inc.



Bicycle parked against bus stop sign at bus stop 7630 on Atlantic Ave; Photo by: CTS Engineering, Inc.



Bicycle lane on Atlantic Ave; Photo by: CTS Engineering, Inc.



Bicyclist in bicycle lane on Atlantic Ave; Photo by: Palm Beach TPA



Bicyclist riding on sidewalk along Atlantic Avenue; Photo by: CTS Engineering, Inc.

Bus Stops

Bus stop 7632 on Atlantic Ave and Sims Road with "Not in Service" Notice; Photo by: Palm Beach TPA.



Temporary bus stop 1111 in Delray Square; Photo by: CTS Engineering, Inc.



Bus stop 7632 on Atlantic Ave; Photo by: CTS Engineering, Inc.



People waiting at bus stop on Atlantic Ave; Photo by: Palm Beach TPA



Bus stop 1286 on Military Trail; Photo by: CTS Engineering, Inc.