



BRANDON



CORRIDORS & MIXED-USE
CENTERS PILOT PROJECT

Network Evaluation & Planned Improvements

Technical Memo 3

Prepared by:

HDR

On behalf of:



Hillsborough MPO
Metropolitan Planning
for Transportation



Hillsborough County
City-County
Planning Commission

August 11, 2017

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CONTENTS

1. Introduction	1
2. Roadway Conditions	2
2.1 Overview of Major Corridors	2
2.2 Roadway & Traffic Circulation	3
2.3 Traffic Volumes	12
2.4 Roadway Safety	12
3. Projects, Plans & Studies	20
3.1 Hillsborough County Major Community Projects	20
3.2 Long Range Transportation Plan	20
3.3 SR 60 Compatibility Study.....	20
3.4 Community Transportation Plan.....	22
3.5 Transportation Improvement Program	25
4. Bicycle & Pedestrian Facilities	25
4.1 Existing Facilities.....	25
4.2 Planned Improvements	28
5. Preliminary Observations.....	28
6. Sources	34

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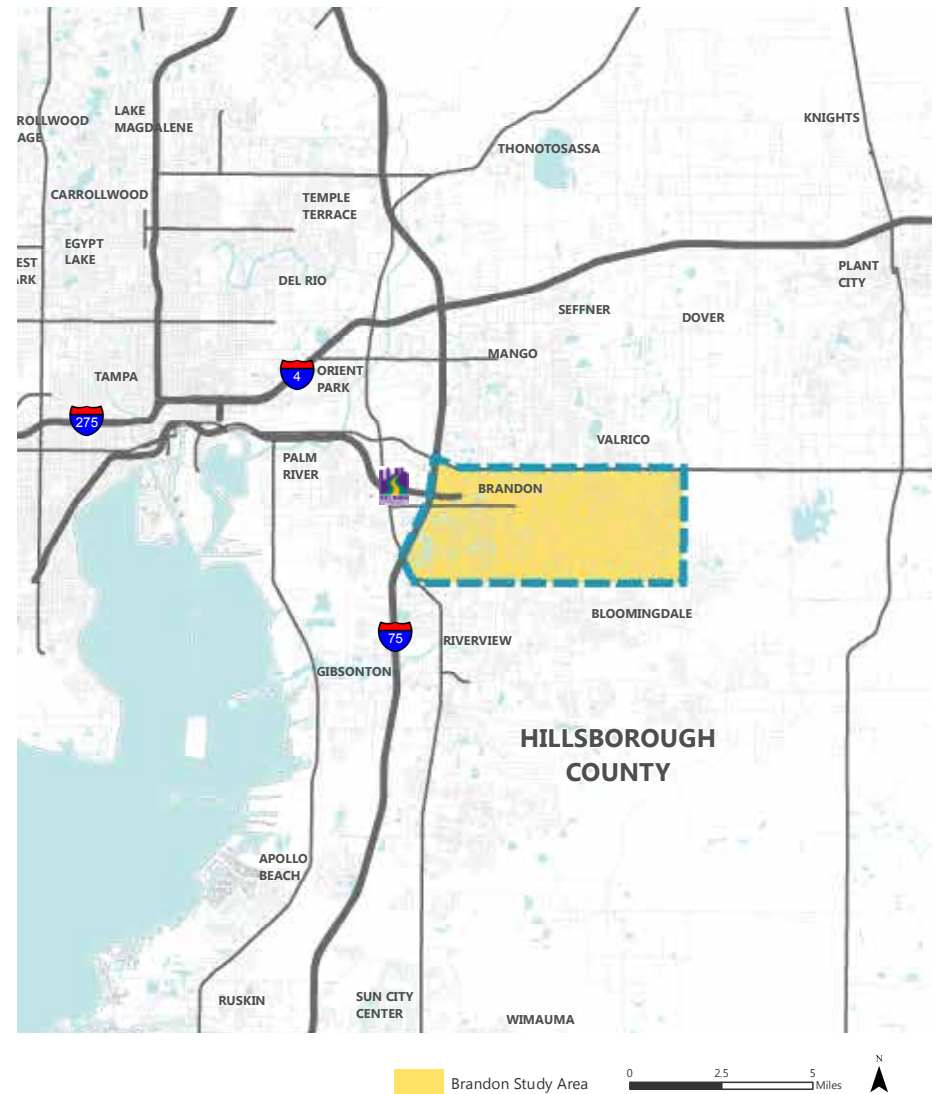
1. INTRODUCTION

The Brandon Corridors and Mixed-Use Centers Study is a joint pilot project from the Hillsborough County Metropolitan Planning Organization (MPO) and the Hillsborough County City-County Planning Commission (Planning Commission). The purpose of the study is to better coordinate the envisioned land use pattern with planned transportation improvements along major corridors within the Brandon Study Area. As shown in Figure 1, the study area is located at a key location within eastern Hillsborough County. The study area is a three-mile by six-mile area located east of Interstate 75 (I-75) between State Road 60 (SR 60)/Brandon Boulevard and Bloomingdale Avenue. The eastern limit of the study area is Dover Road/Little Road.

This memo builds upon information from the Brandon Corridors and Mixed-Use Centers Existing Conditions Report prepared by the MPO and the Planning Commission at the onset of the study. The study team conducted an analysis of transportation network existing conditions and planned improvements within the study area and adjacent areas. Proposed roadway, pedestrian, bicycle, and transit improvements from the three plans were reviewed and summarized. The plans included the MPO's *Imagine 2040: Hillsborough Long Range Transportation Plan* (Imagine 2040 LRTP), the Hillsborough Area Regional Transit's (HART) *Transit Development Plan* (TDP), and Hillsborough County's *Community Transportation Plan*, were reviewed and summarized.

In addition to the assessment, a series of maps were prepared documenting existing transportation facilities and transit service, roadway traffic volumes, safety concerns, and planned improvements. The larger scale maps referenced throughout are included at the end of the memo.

Figure 1. Study Area Regional Context Map



2. ROADWAY CONDITIONS

Located approximately ten miles east of downtown Tampa at the intersections of I-75, the Selmon Expressway toll road, and US 301, the Brandon Study Area is well connected to key destinations within Hillsborough County and the larger Tampa Bay region. The study area is also located just a few miles south of the I-75 and I-4 interchange and has the eastern entry/exit point to the Selmon Expressway express lanes off Brandon Parkway near the Westfield Brandon Mall. The study area itself has several regional destinations that attract visitors from other areas within Hillsborough County.

2.1 Overview of Major Corridors

As shown in Figure 2, the Brandon Study Area has three primary east-west major corridors that provide access from the study area to regional destinations to the north, west, and south:

- SR 60 (Brandon Boulevard/Adamo Drive);
- Lumsden Road/Causeway Boulevard; and
- Bloomingdale Boulevard/Progress Boulevard.

Numerous north-south corridors provide connectivity between destinations within the study area and to the major east-west corridors:

- Gornto Lake Road;
- Providence Road/Lakewood Drive;
- Kings Avenue;
- Parsons Avenue/John Moore Road;
- Bryan Road/Kingsway Road;
- Bell Shoals Road;
- Lithia Pinecrest Road;

- Valrico Road;
- Miller Road;
- St Cloud Avenue;
- Mulrennan Road; and
- Dover Road/Little Road.

All of these roadways, in particular the major east-west corridors, also provide access between regional destinations to the north, south, and west and suburban and rural residential areas to the south and east of the study area. Brandon Parkway is a key connection between the study area and the Selmon Expressway toll road at the western edge of the study area limits.

With the exception of SR 60, US 301, Kings Avenue, Providence Road, Lakewood Drive, Brandon Parkway, Oakfield Drive, and segments of Bloomingdale Avenue, Lumsden Road, and Gornto Lake Road, most of the roadways located within the study area are two lanes. As shown in Figure 3, the wider roadways range between four to eight lanes in width.

SR 60 changes throughout the study area, increasing from a four-lane highway in the more rural areas at the eastern limits of the study area to an eight-lane highway near I-75 at the western limits of the study area. The highway is four lanes east of Valrico Road, increases to eight lanes between Kingsway Road and Valrico Road, narrows to six lanes between Kings Avenue and Kingsway Road, and returns to eight lanes between Falkenburg Road and Kings Avenue.

The two other major east-west corridors are also wider in the western half of the study area. Bloomingdale Avenue is two lanes east of Lithia Pinecrest Road, four lanes between Gornto Lake Road and Lithia Pinecrest Road, and six lanes between US 301 and Gornto Lake Road. Lumsden Road is two lanes east of Lithia Pinecrest Road, four lanes between Kings Avenue and Lithia Pinecrest Road, and six lanes from US 301 to Kings Avenue.



2.2 Roadway & Traffic Circulation

Several of the major roadways within the study area are operating below an acceptable level of service (LOS). A set of LOS standards based on the Highway Capacity Manual and American Association of State Highway and Transportation Officials (AASHTO) standards are used to assess the quality of traffic service along a roadway. As identified in the Imagine 2040 LRTP, each of the major corridors in the study area has been rated with one of the following LOS rankings (A to F, or best to worst):

- **A: Free flow.** Traffic flows at or above posted speeds limits; complete mobility between lanes.
- **B: Reasonably free flow.** LOS A speeds with slightly restricted mobility;
- **C: Stable flow, at or near free flow.** Noticeably restricted lane maneuverability.
- **D: Approaching unstable flow.** Slightly decreased speeds due to increased traffic volumes.
- **E: Unstable flow, operating at capacity.** Irregular traffic flow and speed varies rapidly and rarely reaches posted limit.
- **F: Forced or breakdown flow.** Traffic demand exceeds capacity and vehicles move in lockstep with vehicles in front of it.

As shown in Figure 4, most of the roadways within the study area currently operate at LOS C (stable flow, at or near free flow). However, several roadways are approaching unstable flow (LOS D) or have already reached breakdown of flow (LOS F), including the three primary east-west corridors in the study area. The following roadways currently operate at LOS F:

- Bloomingdale Avenue from Gornto Lake Road to Lithia Pinecrest Road;
- Lumsden Road from N Kings Avenue to Lithia Pinecrest Road; and
- SR 60 (Brandon Boulevard) from North Kings Avenue to Kings Highway Road and from I-75 to Pauls Drive.

Based traffic model results that are built on planned improvements and anticipated growth described in the Imagine 2040 LRTP, Figure 5 illustrates the anticipated LOS on these roadways in 2040. Many segments of the major corridors will experience unstable or breakdown of flow by the year 2040. More segments of Lumsden Road, Lithia Pinecrest Road, Bell Shoals Road, and SR 60 are anticipated to change from a LOS C to a LOS F by 2040.

The LRTP model results also indicate that at least two roadway segments within the study area would see improved traffic flow:

- Bloomingdale Avenue from Gornto Lake Road to Lithia Pinecrest Road (improves from LOS F to LOS C), and
- Providence Lakes Boulevard (improves from LOS D to LOS C).

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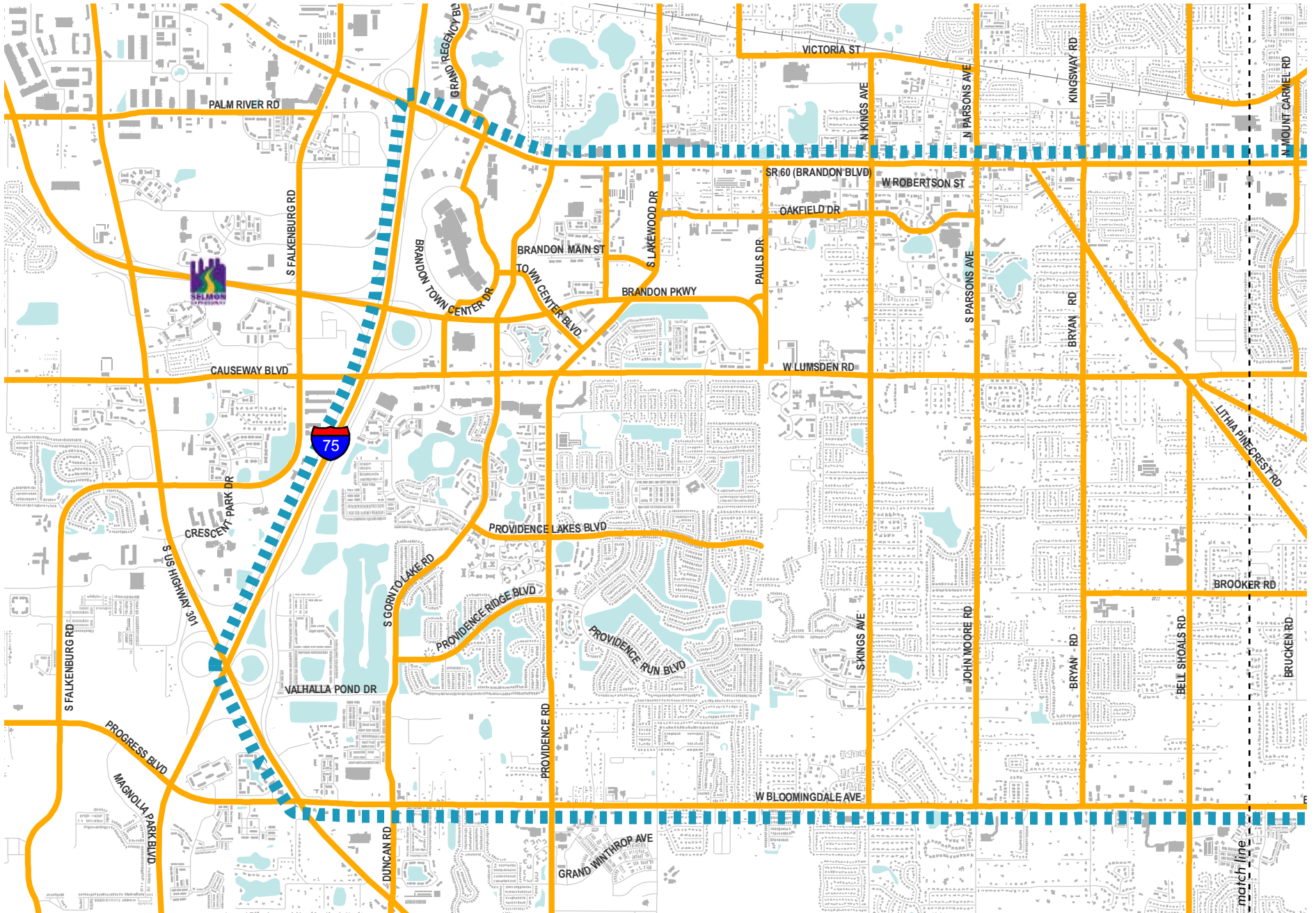
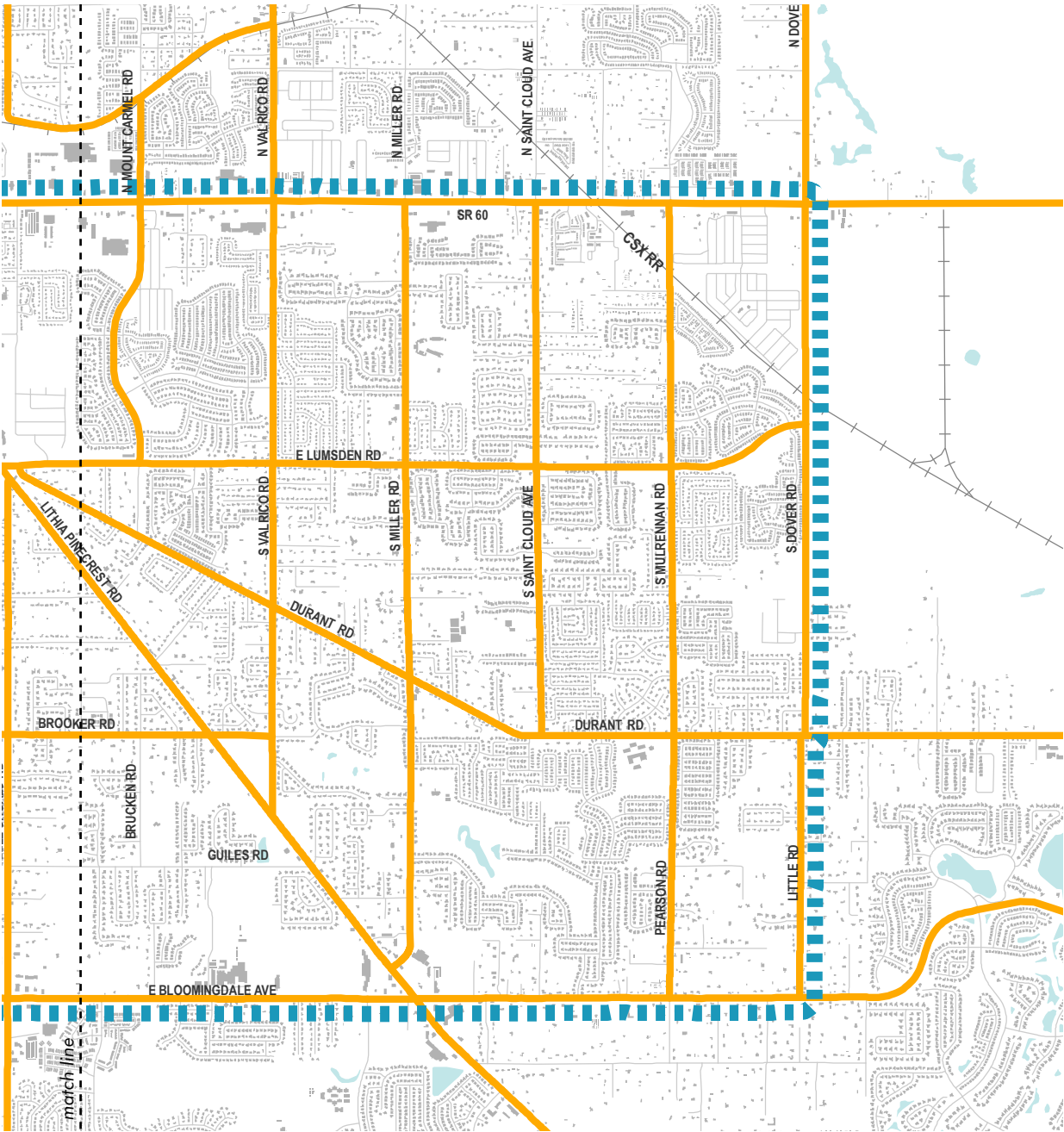




Figure 2. Major Roadway Corridors

- Brandon Study Area
- Water
- Major Corridors
- Local Roadway
- CSX-Railroad
- Building Footprint



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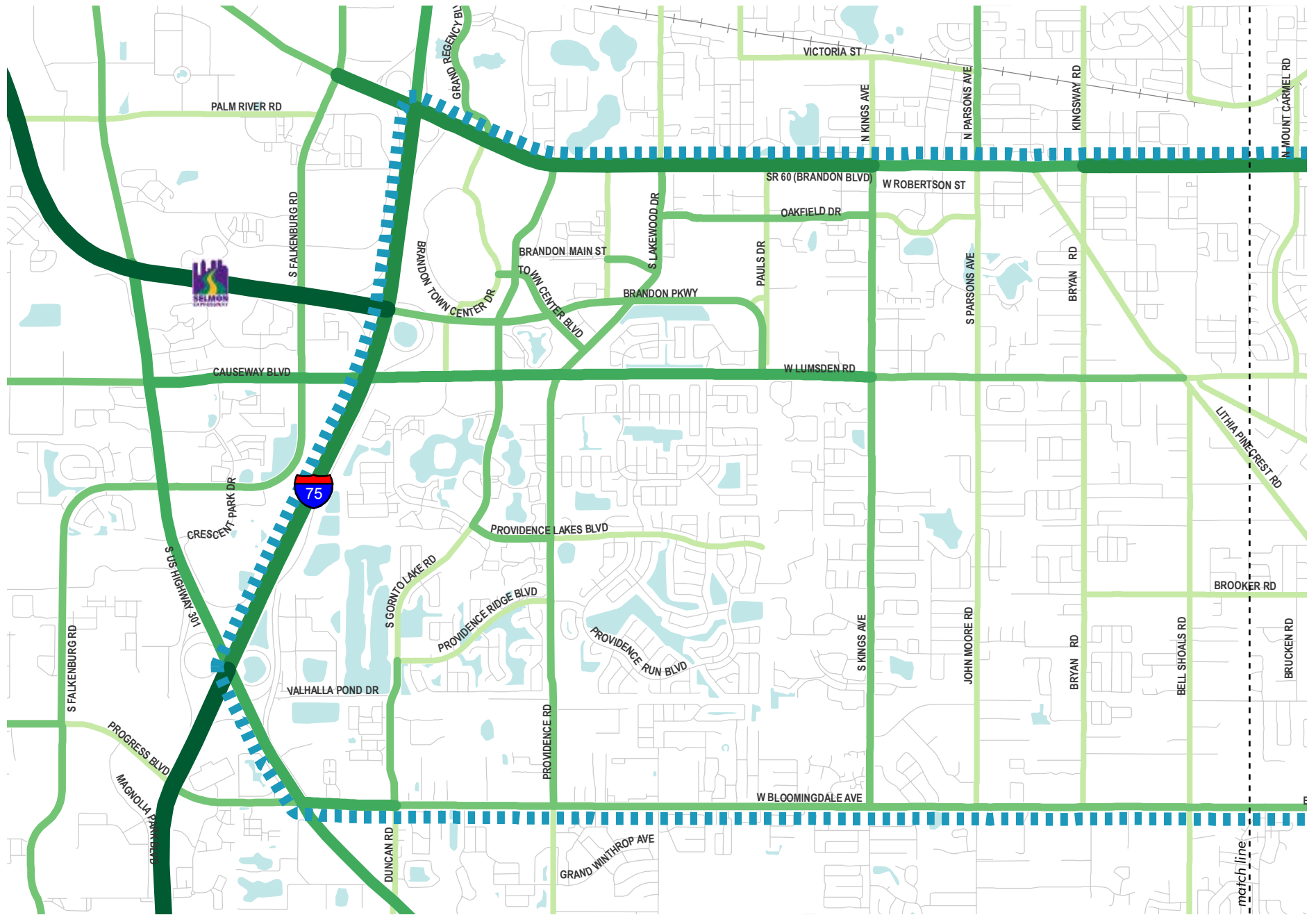









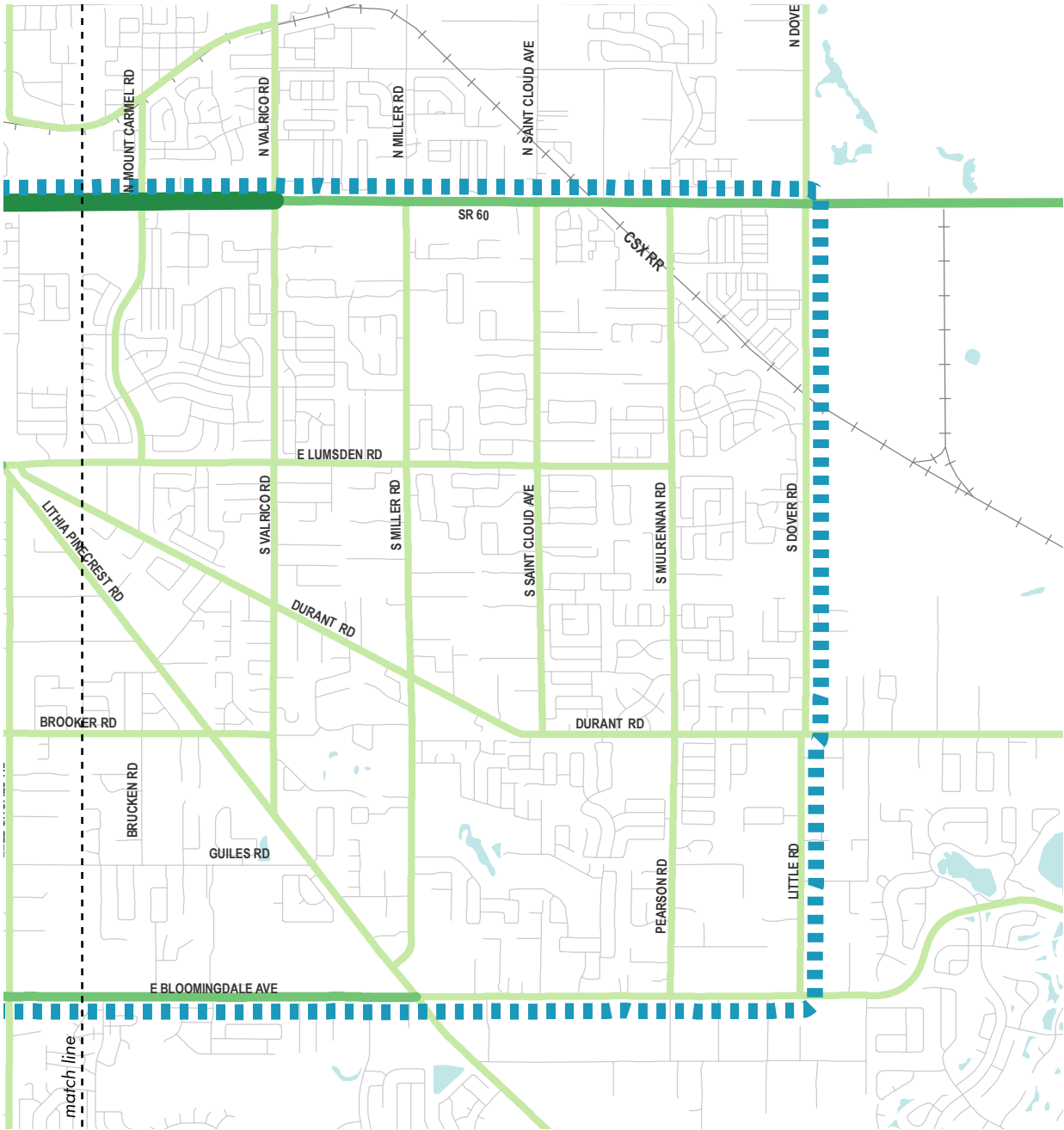




Figure 3. Major Roadway Lanes

-  Brandon Study Area
-  Water
-  2
-  4
-  6
-  8
-  10
-  Local Roadway
-  CSX-Railroad



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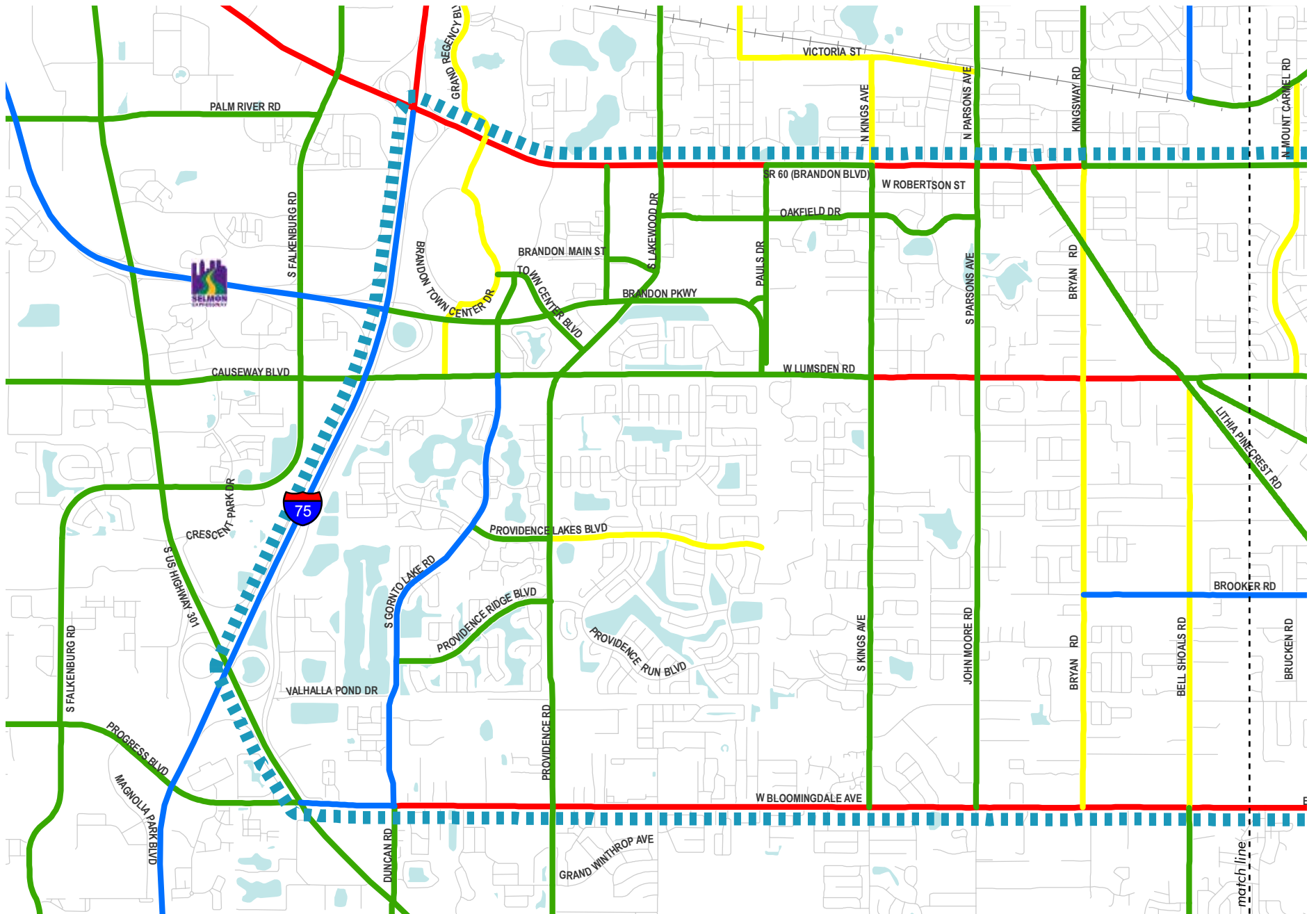
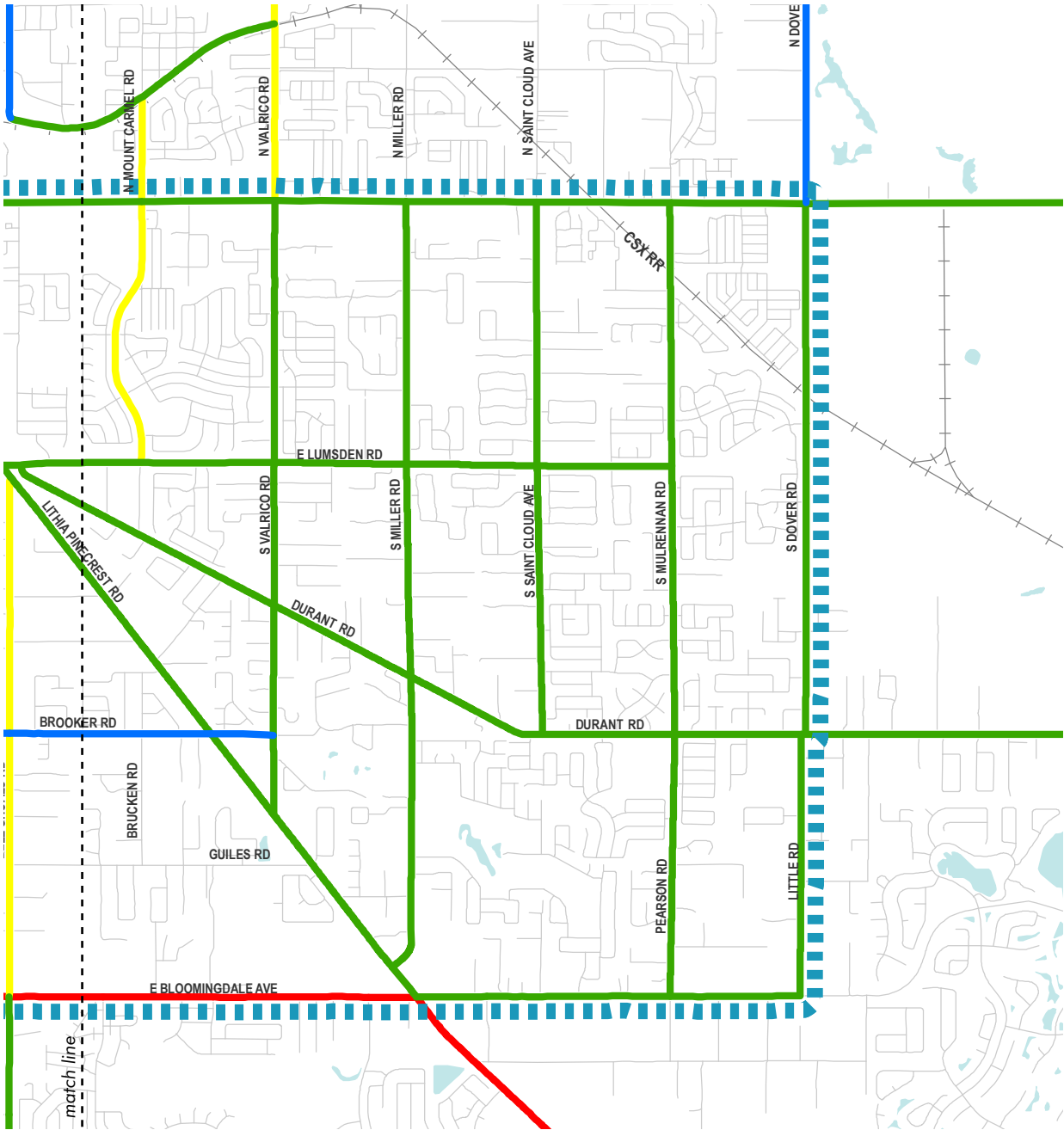




Figure 4. Imagine 2040 LRTP Existing Level of Service (LOS)



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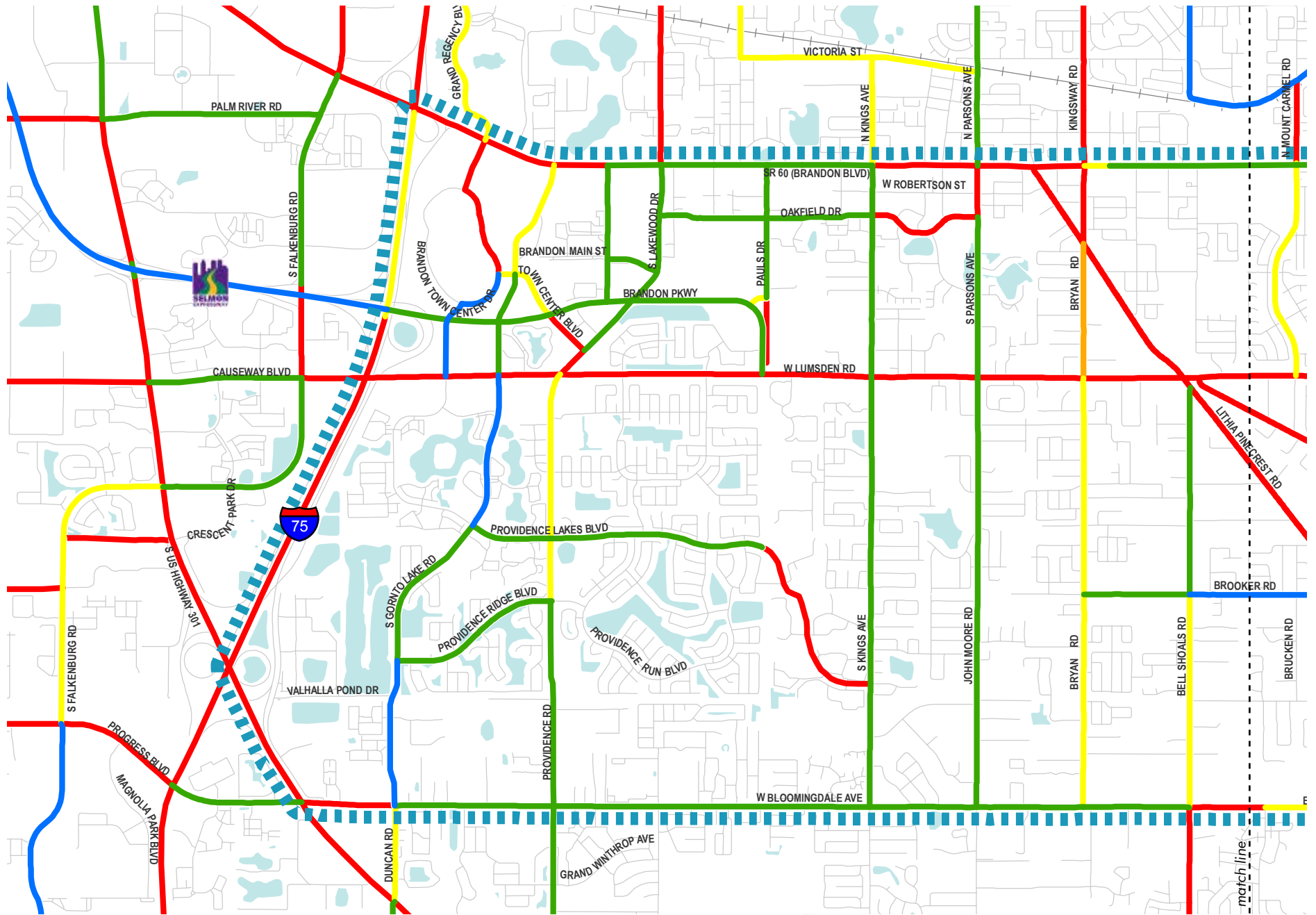

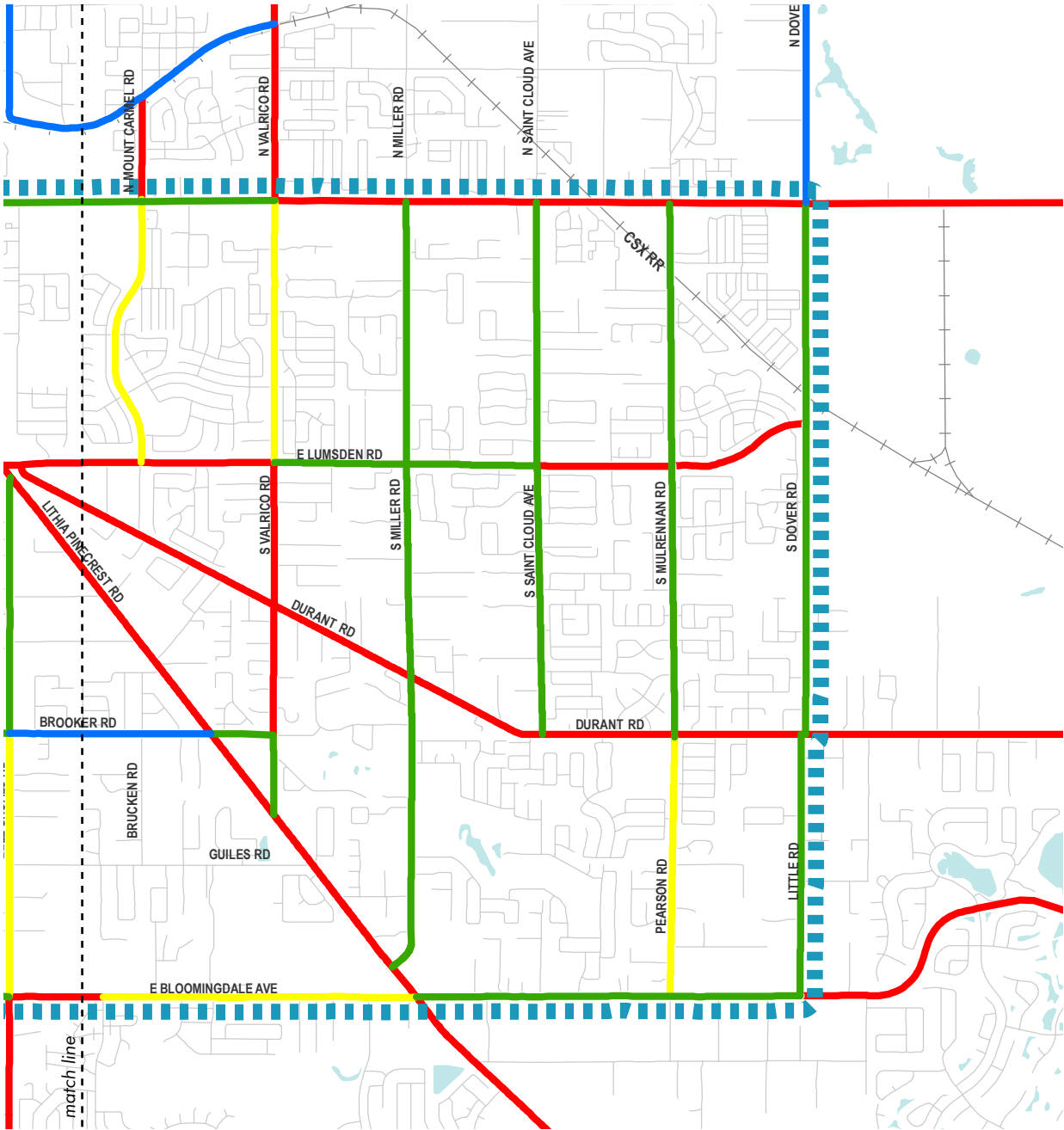




Figure 5. Imagine 2040 LRTP Future Level of Service (LOS)

-  Brandon Study Area
-  Water
-  A
-  B
-  C
-  D
-  E
-  F
-  CSX-Railroad



2.3 Traffic Volumes

As shown in Figure 6, Annual Average Daily Traffic (AADT) is measured on all major roadways within the study area. AADT is defined as the measure of total volume of vehicle traffic of a highway or road divided by 365 days. The highest traffic volumes are found on I-75, just south of US 301. SR 60 between Falkenburg Road and Parsons Avenue and Bloomingdale Avenue between Bell Shoals Road and US 301 also experience high traffic volumes.

Also shown on Figure 6, are the intersections within the study area that were included on the Imagine 2040 LRTP's Congested Intersections Map. These intersections include:

- Bloomingdale Avenue and US 301;
- Bloomingdale Avenue and Kings Avenue;
- Bloomingdale Avenue and Lithia Pinecrest Road;
- Lumsden Road and Kings Avenue;
- Lumsden Road and Parsons Avenue/John Moore Road;
- Lumsden Road and Bryan Road/Kingsway Road;
- Lumsden Road and Lithia Pinecrest Road;
- Brandon Parkway and Providence Road;
- Kingsway Road and Lithia Pinecrest Road; and
- SR 60 and Kings Avenue.

The 2040 LRTP also designated the following major corridors as Congested Corridors:

- SR 60 from I-75 to Parsons Avenue, and
- Lithia Pinecrest Road from SR 60 to Bloomingdale Avenue.

A number of roadways are operating with traffic volumes (AADT) higher than the capacity of the roadway. As shown in Figure 7, this

includes the following roadways with traffic volumes that frequently operate at capacities 50 percent or more over capacity:

- Lumsden Road;
- Bloomingdale Avenue;
- Lithia Pinecrest Road;
- Bell Shoals Road; and
- Durant Roadway.

2.4 Roadway Safety

Safety along the major corridors within the study area is a key issue. As shown in Figure 8, the study area had 478 crashes between 2010 and 2015 involving a pedestrian, bicyclist, or personal vehicle. During this period, five crashes involved a bicyclist and 14 involved a pedestrian. Four of the pedestrian-related crashes resulted in a fatality.

Over one third of the crashes within the study area occurred along SR 60. The crashes were concentrated along SR 60 between I-75 and Gornto Lake Road and between Lakewood Drive and Beverly Boulevard. Several intersections along Bloomingdale Avenue, including Gornto Lake Road, Providence Road, Kings Avenue, and Bell Shoals Road also had higher concentrations of collisions between 2010 and 2015. The fatal crashes within the study area occurred at the US 301 and Bloomingdale Avenue intersection and four intersections along Providence Road and Lakewood Drive: Bloomingdale Avenue, Providence Ridge Boulevard, Lumsden Road, and SR 60.

The Hillsborough County MPO's Congestion Management/Crash Mitigation Process: Crash Severity Reduction Report (January 2013) analyzed crash data on the county's urban major during a five-year analysis period (2006-2010). The report identified the corridors and intersections that had the highest frequency of severe injury crashes.



Described below, these high frequency crash corridors and severe injury crash location intersections are also shown on Figure 8.

Within the study area, the following urban major roadway corridors were identified as the top severe injury crash corridors (more than 35 severe crashes between 2006 and 2010):

- SR 60 from Valrico Road to Dover Road - total severe crashes 95, severe crash rate 136.99*;
- Bloomingdale Avenue from Providence Road to Bell Shoals Road - 74 severe crashes, severe crash rate 91.12;
- SR 60 from Ridgewood Avenue to Valrico Road - 52 severe crashes, severe crash rate 54.27;
- SR 60 from I-75 to Grand Regency Boulevard/Brandon Town Center Drive - 42 severe crashes, 26.15 severe crash rate;
- Valrico Road from SR 60 to Sydney Road - 37 severe crashes, 128.37 severe crash rate;
- SR 60 from Lakewood Drive to Kings Avenue - 37 severe crashes, 29.38 severe crash rate;
- Bloomingdale Avenue from US 301 to Providence Road - 36 severe crashes, 49.72 severe crash rate; and
- Lithia Pinecrest Road from Bloomingdale Avenue to Boyette Road - 35 severe crashes, 107.67 severe crash rate.

Note: *Severe crash rate is the number of severe injury crashes per 100 million vehicle miles traveled (VMT).

Additionally, the County's 2013 crash report identified several intersections within the study area as top severe injury crash locations (intersections with more than 20 severe crashes between 2006 and 2010).

- SR 60 at Grand Regency Boulevard - 193 injury-related crashes, 34 severe injury crashes;
- SR 60 at Miller Road - 85 injury-related crashes, 24 severe injury crashes; and
- Bell Shoals Road at Bloomingdale Avenue - 107 injury-related crashes, 24 severe-injury crashes.

The locations of the top severe injury crash intersections and corridors are depicted on Figure 8. The study recommended further detailed studies for several of the high frequency "severe" crash corridors or intersections within the county. One potential location that was recommended for further study was SR 60 from I-75 to Valrico Road.

Described in more detail in the following section, the Hillsborough County MPO's *Brandon Boulevard (SR 60) Compatibility Study* (December 2013) also included additional safety recommendations for the SR 60 corridor between I-75 and Valrico Road.

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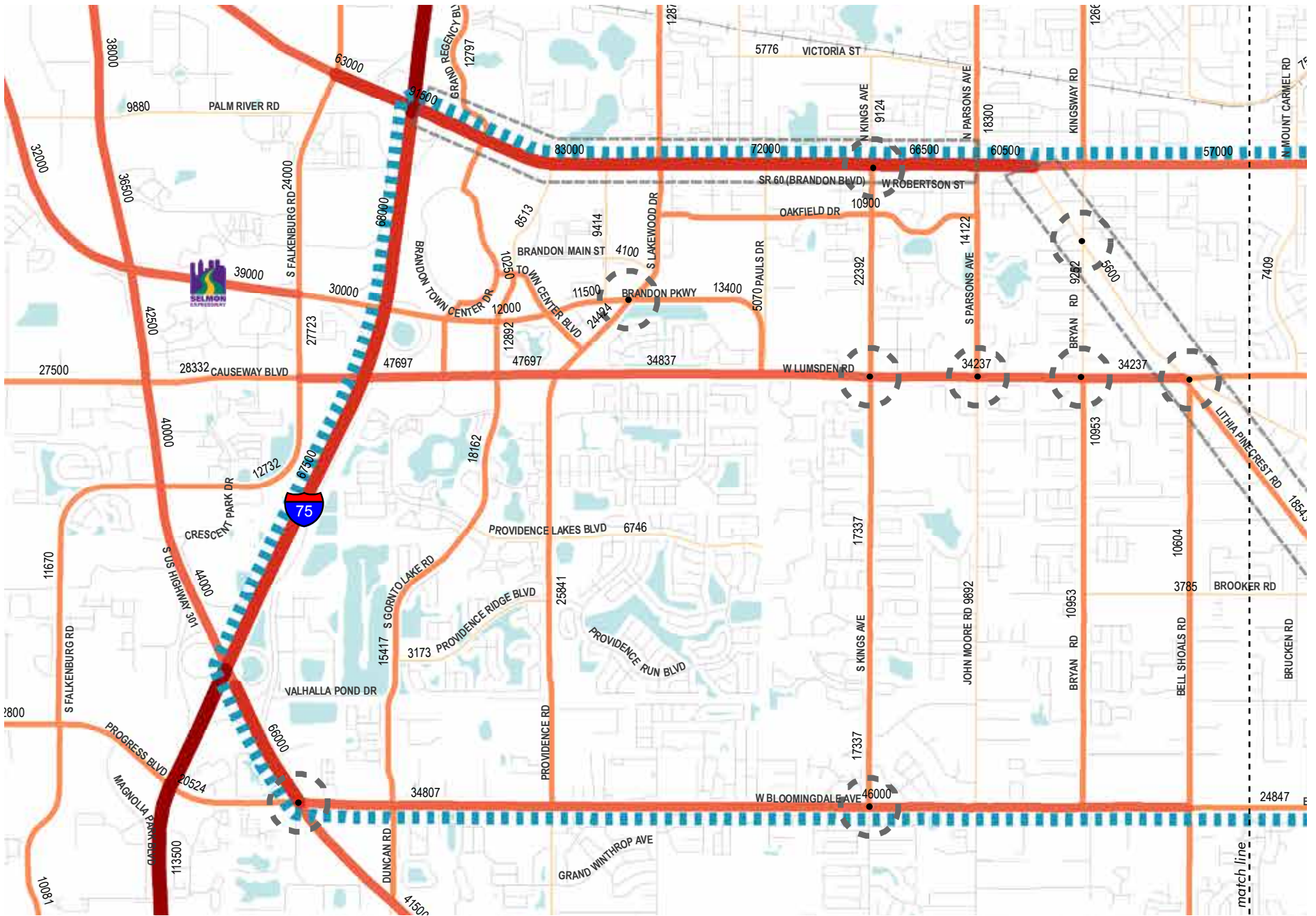











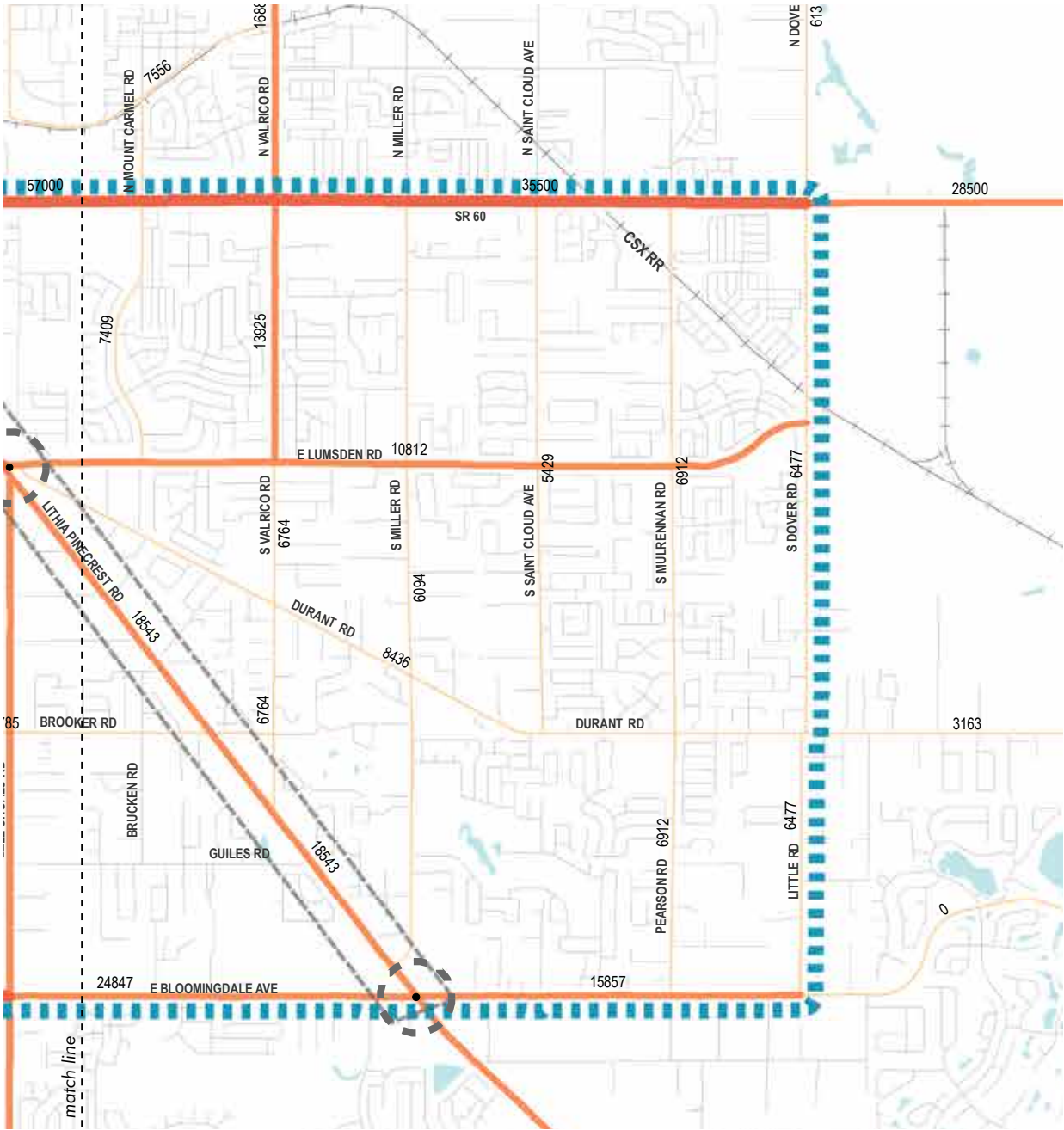




Figure 6. Traffic Volumes (AADT)

-  Brandon Study Area
-  Water
- Annual Average Daily Traffic (AADT)
 -  0 - 10,000
 -  10,001 - 30,000
 -  30,001 - 60,000
 -  60,001 - 100,000
 -  100,001 - 156,500
-  Local Roadway
-  CSX-Railroad
-  Congested Intersections
-  Congested Corridors



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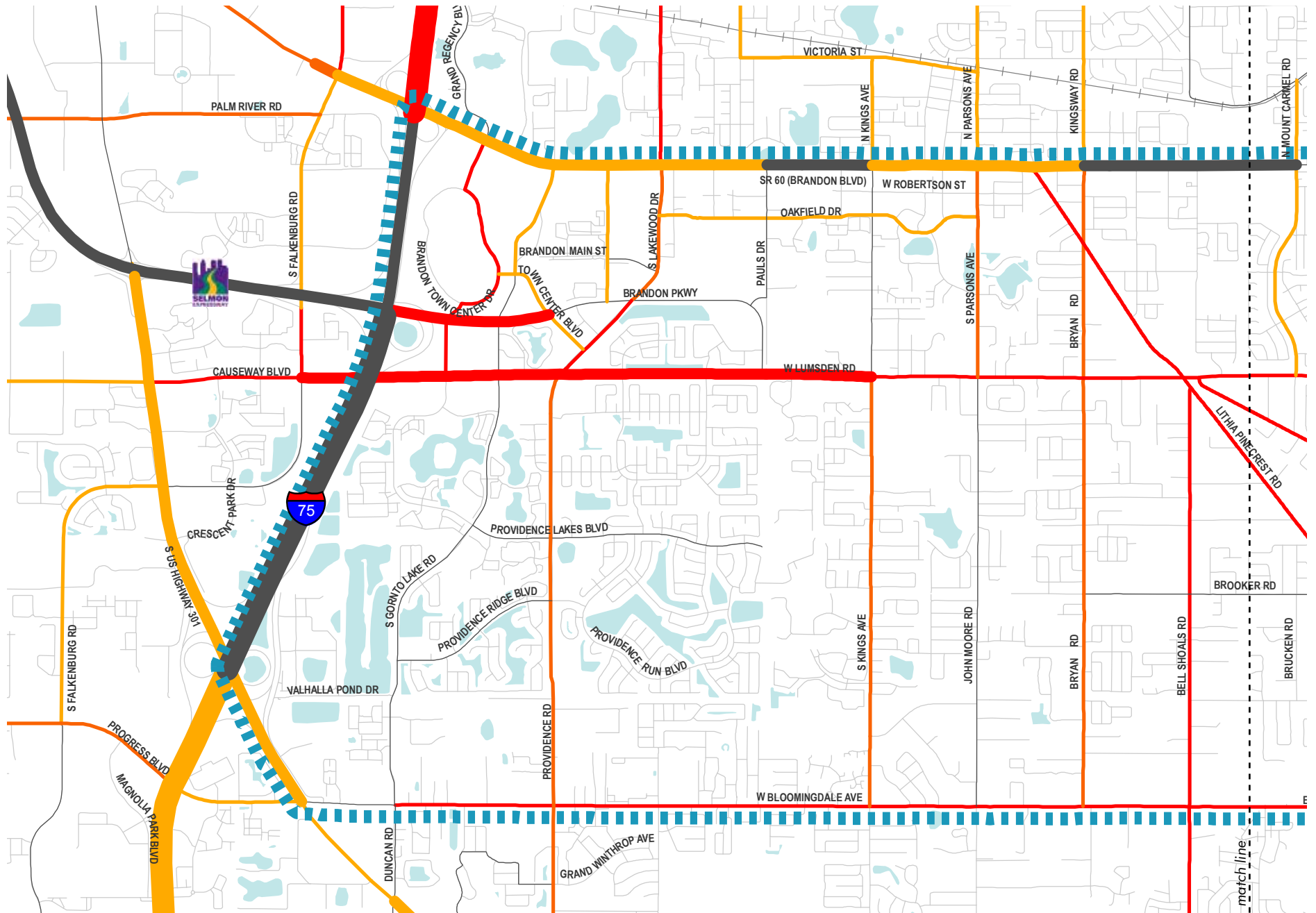
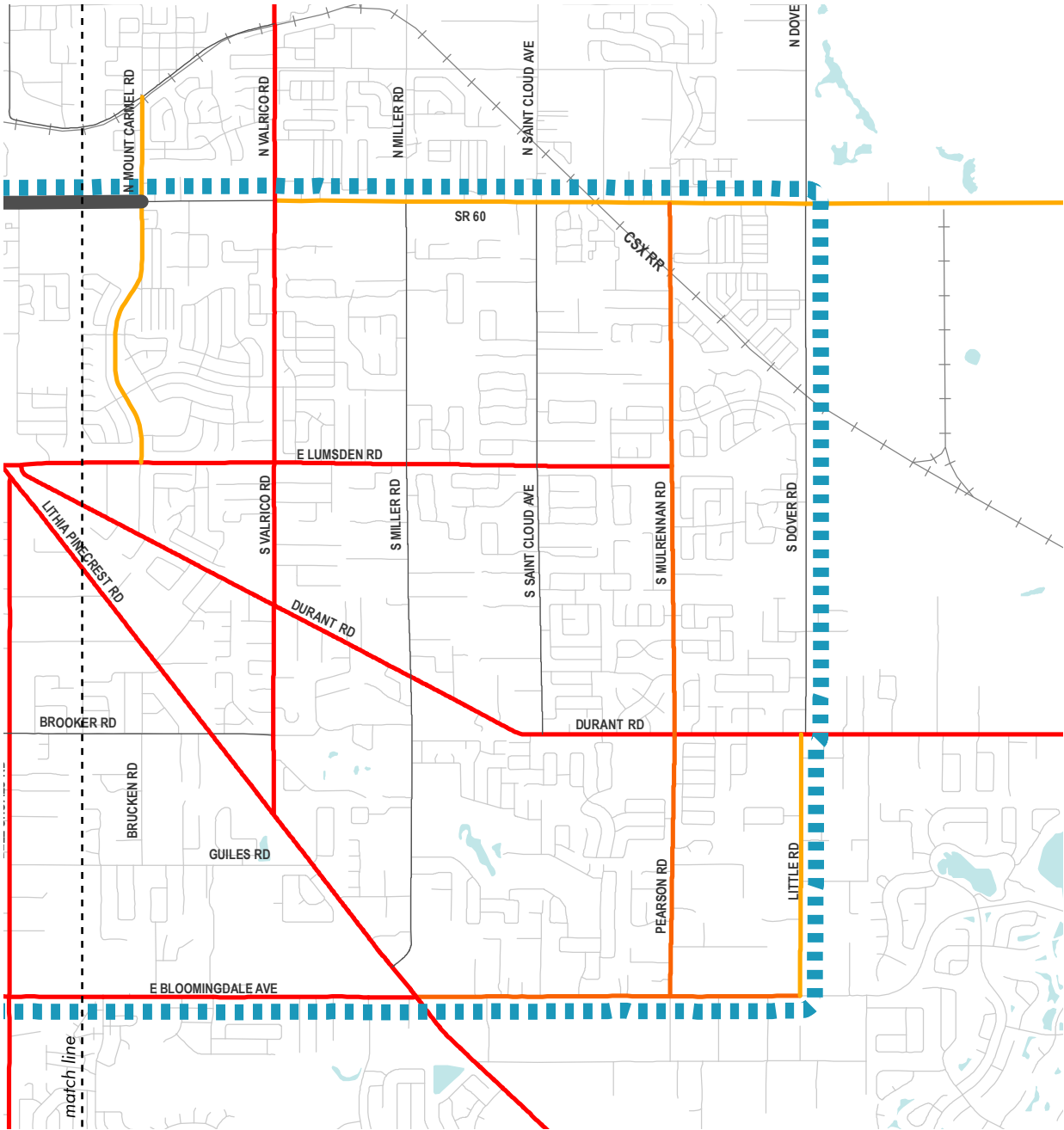
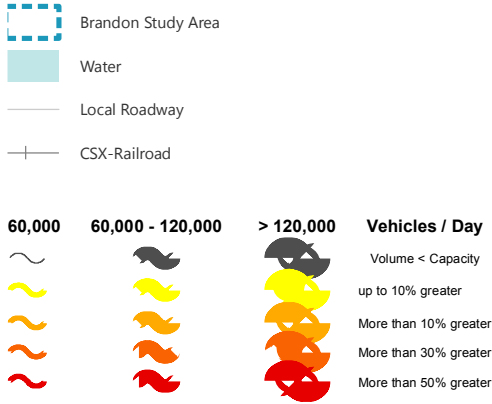
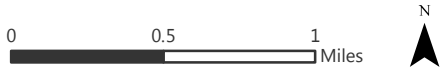




Figure 7. Traffic Volumes (AADT) Higher than Capacity



Note: 2018 network, 2040 growth
Source: Hillsborough County MPO, 2040 LRTP



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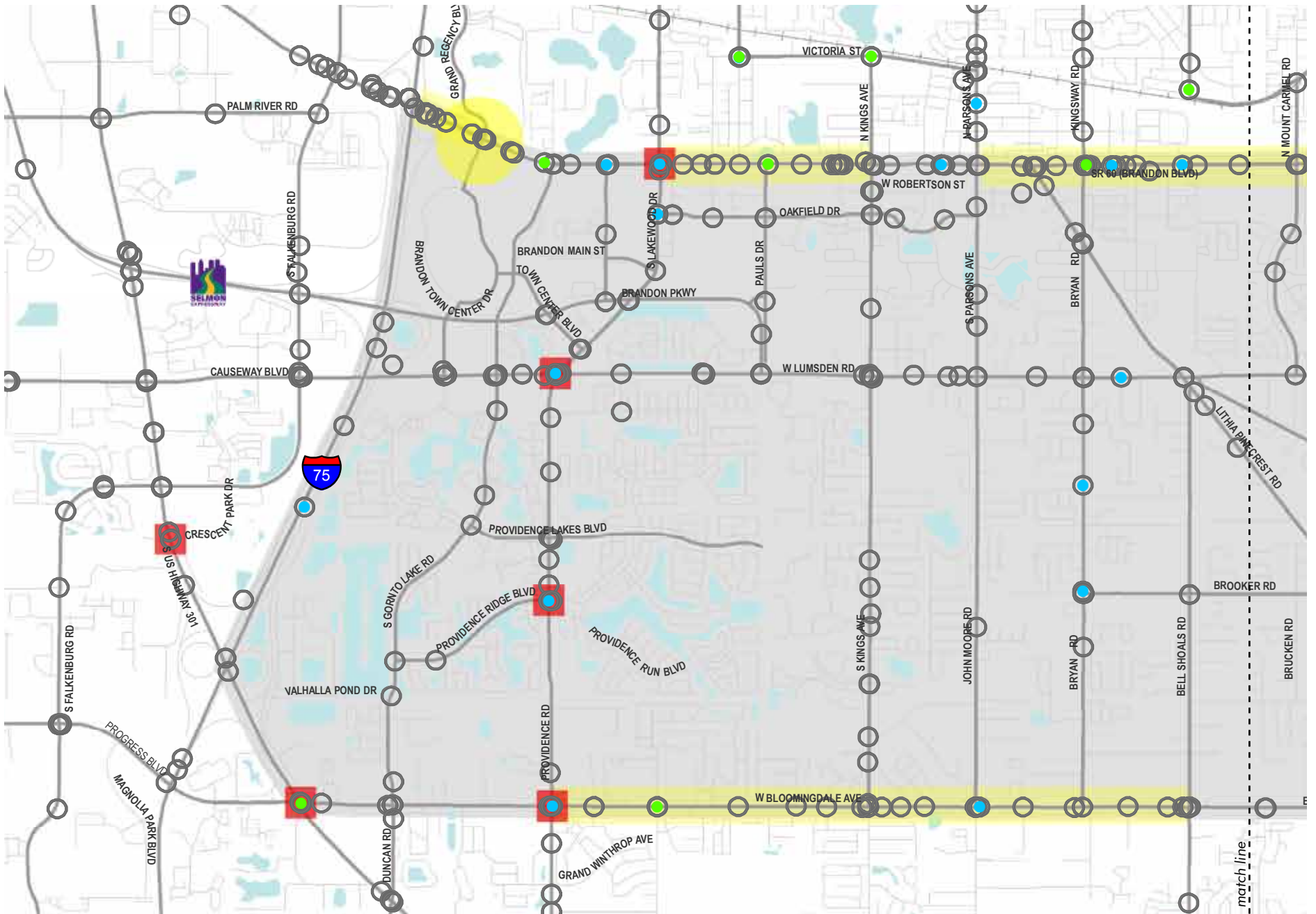




Figure 8. Crashes, 2010-2015

- Brandon Study Area
- Water
- Major Corridors
- Local Roadway
- CSX-Railroad
- Crash Involving Bicyclist
- Crash Involving Pedestrian
- Other Crashes
- Fatal Crash
- Top Severe Injury Locations
- High Frequency Crash Corridors



3. PROJECTS, PLANS & STUDIES

Several projects are planned or proposed for roadways in the study area and adjacent areas. These projects are included in a number of longer-term plans. Details from these plans are provided in the following section.

3.1 Hillsborough County Major Community Projects

Hillsborough County has plans for several significant roadway projects within the study area or adjacent area in the next five years. Bells Shoals Road between just south of the Alafia River to north of Bloomingdale Avenue will be widened from a two-lane undivided rural road to a four-lane divided urban roadway. Improvements to the Lithia Pinecrest Road and Lumsden Road intersection and Bloomingdale Avenue and Culbreath Road intersection are also planned.

3.2 Long Range Transportation Plan

Prepared by the Hillsborough County MPO, the Imagine 2040 LRTP directs federal and state spending for projects within Hillsborough County. The plan was last updated in November 2015 and provides direction for the next 25 years.

The 2040 Needs Project List is a mixture of roadway widening and extensions, interchange modifications, and fixed-guideway transit projects. This project list is financially unconstrained, which means that these are the projects that should be built to accommodate projected growth in Hillsborough County. The Florida Department of Transportation (FDOT) has developed a list of financially unconstrained Strategic Intermodal System (SIS) projects for the facilities in Hillsborough County that have statewide or interregional significance the FDOT SIS Project List includes all projects on SIS facilities that are projected to be needed through 2040.

The Imagine 2040 LRTP also included several other development-based projects that were identified to mitigate the traffic impacts of new or expanded developments within the county.

Projects within or immediately adjacent to the study area that were identified in the Imagine 2040 LRTP on the highway needs assessment and cost affordable projects list are listed in Table 1.

3.3 SR 60 Compatibility Study

The Hillsborough MPO prepared the *Brandon Boulevard (SR 60) Compatibility Study* in December 2013 to evaluate the impacts on SR 60 between I-75 and Valrico Road that could result from increased traffic related to a new CSX intermodal freight hub near Winter Haven and SR 60 widening between Valrico Road and Polk County line. The study evaluated safety concerns, connectivity, physical constraints, congestion, pedestrian and bicycle amenities, and signage or wayfinding opportunities.

Significant findings from the SR 60 Compatibility Study were determined by completing a high-level analysis of the study corridor:

- Potential increase in freight traffic, due in part to CSX Intermodal Logistics Center;
- High speed limits (areas around I-75 interchange and east of Bryan Road are 50 mph);
- Physical constraints on the six-lane segment between Kings Avenue and Bryan Road;
- Lack of bicycle lanes on the six-lane segment;
- Lack of sidewalks west of Grand Regency Boulevard/Brandon Town Center Drive and limited crosswalks at the intersection with SR 60;
- Increasing congestion on parallel facilities (Lumsden Road and Bloomingdale Avenue); and



Table 1. Imagine 2040 LRTP Highway Needs Assessment & Cost Affordable Projects

Project Facility	Existing or Committed Lanes	2040 Needed Lanes
New Capacity: Non-SIS Major Corridors		
Within Study Area		
<i>*Bloomingdale Avenue from US 301 to Bell Shoals Road</i>	4-lane divided	Widen to 4-lane divided and 1 reversible lane
Parsons Avenue/John Moore Road from Bloomingdale Avenue to SR 60 (Brandon Boulevard)	2-lane undivided	Widen to 4-lane divided
Progress Boulevard from Falkenburg Road to US 301	2-lane undivided	Widen to 4-lane divided
Adjacent		
<i>*Woodberry Road from Falkenburg Road to Grand Regency Boulevard to Lakewood Drive</i>	2-lane divided	Widen to 4-lane divided
Woodberry Road from Grand Regency Boulevard to Lakewood Drive	2-lane divided	Widen to 4-lane divided
Everhart Road Extension from Falkenburg Road to US 301	--	New 3-lane divided
Lakewood Drive from SR 60 to SR 574	2-lane undivided	3-lane divided
FDOT SIS Projects		
Within Study Area		
<i>*I-75 from South of US 301 to Fletcher Avenue</i>	6-lane freeway	4 Express Toll Lanes
<i>*I-75 from SR 674 to South of US 301</i>	6-lane freeway/8-lane freeway	4 Express Toll Lanes
<i>*I-75 & SR 60 from SR 60 Slip Ramp to north of SR 60 at CSX</i>		Interchange
<i>*I-75 from South of Selmon Expressway to North of SR 60</i>	6-lane freeway	Operational Improvements
<i>*I-75 from westbound SR 60 entrance ramp to South of CSX Railroad</i>	-	Reconstruct Interchange
I-75 from US 301 to I-4	-	Reconstruct Interchange
SR 60 from Valrico Road to SR 39	4-lane divided	Widen to 6-lane divided
Development Based Needs Projects		
Within Study Area		
Providence Lake Boulevard from English Bluff Court to South of Summer Breeze Drive	-	New 2-lane undivided
Adjacent		
Lithia Pinecrest Road from Bloomingdale Avenue to Adelaide Drive	2-lane undivided	Widen to 4-lane divided

Source: Imagine 2040 LRTP

Note: * Cost Affordable Project (italicized project)

- High number of crashes at SR 60 intersection with Grand Regency Boulevard/Brandon Town Center Drive.

The SR 60 Compatibility Study recommended the following safety, connectivity, wayfinding, signage, and landscaping improvements:

▪ Safety

- Conduct speed study to evaluate potential for reducing the speed limit to 45 mph on SR 60 through entire corridor;
- Explore narrowing all travel lanes to 11 feet, allowing for more separation between bicycle lanes and motor vehicles;
- Evaluate the feasibility of new traffic signals on SR 60 at Pauls Drive and Beverly Boulevard and conduct all necessary warrant studies;
- Modify the coordinated signal timing and/or explore potential for an adaptive signal system;
- Enhance traffic signal visibility; and
- Install dynamic message signs.

▪ Connectivity Enhancements

- Extend existing parallel roads to provide alternatives to SR 60 for local trips;
- Provide additional pedestrian connections on side roads;
- Add bicycle and pedestrian facilities on SR 60 at the I-75 interchange;
- Designate alternate bike corridors in the area, especially for the portion of SR 60 that doesn't have bike lanes; and
- Modify configuration of Lithia-Pinecrest Road and Bryan Road to provide better circulation (roundabout, one-way pairs for circulation).

▪ Other Enhancements

- Develop a unified signage/wayfinding system for users of the SR 60 corridor and area, and

- Provide additional landscaping consistent with the adopted SR 60 Overlay district.

3.4 Community Transportation Plan

Working in conjunction with the Cities of Plant City, Tampa, and Temple Terrace, as well as HART, Hillsborough County developed a list of proposed transportation projects between 2013 and 2015. Based on technical analysis and a public engagement process, the project list was developed to address safety, congestion relief, enhanced transit options, and maintenance to improve the quality of life for residents and improve the community's competitive edge for job creation.

The Hillsborough County Board of County Commissioners approved the list of projects for the unincorporated portions of the County on April 20, 2016. The following proposed projects within the study area limits and immediately adjacent area are included on this list:

- **New and Improved Signals.** Designed to increase safety for motorists, pedestrians, and bicyclists.
 - **Durant Road at Little Road/Dover Road.** Convert unsignalized four-way stop intersection to a signalized intersection with turn-lane improvements and pedestrian enhancements. \$1.9 million estimated cost.
 - **Lithia Pinecrest Road at Adelaide Avenue.** Convert unsignalized two-way stop intersection to a signalized intersection with turn lane improvements and pedestrian enhancements. \$1.9 million estimated cost.
 - **Lithia Pinecrest Road at Panera Bread/Bank of America.** Convert unsignalized two-way stop intersection to a signalized intersection with turn lane improvements and pedestrian enhancements. \$1.8 million estimated cost.
 - **Lumsden Road at Heather Lakes Boulevard.** Convert unsignalized two-way stop intersection to a signalized



intersection with turn lane improvements and pedestrian enhancements. \$1.4 million estimated cost.

- **Lumsden Road at Kensington Ridge Boulevard.** Convert unsignalized two-way stop intersection to a signalized intersection with turn lane improvements and pedestrian enhancements. \$2.0 million estimated cost.
- **Providence Road at Watson Road.** Convert unsignalized one-way T-intersection to a signalized intersection with turn lane improvements and pedestrian enhancements. \$1.4 million estimated cost.
- **Seffner Valrico Road at Clay Avenue.** Convert unsignalized four-way stop intersection to a signalized intersection with turn lane improvements and pedestrian enhancements. \$1.5 million estimated cost.
- **Intersection Improvements.** Changes and modifications to enhance the flow of traffic and increase safety for motorists, pedestrians, and bicyclists. Includes project such turn lanes, traffic signal installation, additional lighting, Americans with Disabilities Act (ADA) compliant crosswalks, and pedestrian-activated signals.
 - **SR 60 (Brandon Boulevard) at Kings Drive.** Intersection improvements including, but not limited to, adding northbound left-turn and southbound left-turn lanes with raised median. \$2.2 million estimated cost.
 - **SR 60 (Brandon Boulevard) at Lakewood Drive.** Intersection improvements including, but not limited to, extension of southbound left lane. \$1.0 million estimated cost.
 - **SR 60 (Brandon Boulevard) at Parsons Boulevard.** Intersection improvements including, but not limited to, southbound and eastbound dual left-turn lanes and eastbound, westbound, and northbound right-turn lanes. \$8.9 million estimated cost.
 - **Broadway Avenue at Falkenburg Road.** Intersection improvements including, but not limited to, NT dual left-turn lane and northbound right-turn lane. \$1.4 million estimated cost.
 - **Durant Road at Miller Road.** Intersection improvements including, but not limited to, converting an unsignalized four-way stop intersection to a signalized intersection with turn lane improvements and pedestrian enhancement. \$1.9 million estimated cost.
 - **Falkenburg Road at Woodbery Road.** Intersection improvements including, but not limited to, northbound right-turn lane/westbound dual left-turn lane. \$1.6 million estimated cost.
 - **Lumsden Road at Valrico Road.** Intersection improvements including, but not limited to, westbound left-turn lane and southbound right-turn lane. \$0.6 million estimated cost.
 - **Parsons Avenue at Windhorst Road.** Intersection improvements including, but not limited to, right-turn lanes on all four approaches. \$3.8 million estimated cost.
 - **SR 60 at Mt. Carmel Road.** Intersection improvements including, but not limited to, southbound, eastbound, and westbound with turn lanes/northbound dual left-turn lanes. \$4.4 million estimated cost.
 - **SR 60 at St. Cloud Avenue.** Intersection improvements including, but not limited to, northbound left-turn lane. \$2.5 million estimated cost.
 - **SR 60 at Valrico Road.** Intersection improvements including, but not limited to, northbound and southbound dual left-turn lanes and a westbound right-turn lane/southbound left-turn and northbound left-turn lanes. \$3.1 million estimated cost.
 - **US 301 at Palm River Road.** Intersection improvements, including but not limited to, adding eastbound left-turn lane

making dual left-turns and installation of pedestrian features. \$1.2 million estimated cost.

- **School Safety Improvements.** Improvements around schools, such as paved shoulders, additional lighting, and enhanced crosswalks, to relieve congestion, improve traffic circulation and improve safety for students.
 - **Brooker Elementary School, 812 Dewolf Road.** Dewolf Road - northbound 8 foot paved shoulder leading into school, 330 feet; Bama Road - westbound 8 foot paved shoulder leading onto Dewolf Road, 660 feet. \$0.8 million estimated cost.
 - **Burns Middle School, 615 Brooker Road.** Bryan Road at Brooker Road - northbound 8 foot paved shoulder leading onto Brooker Roads right-turn lane into school, 435 feet. \$0.4 million estimated cost.
- **Sidewalks Near Schools.** Construction of sidewalks near schools, identified in partnership with Hillsborough County Public Schools, to improve safety for students walking to and from school.
 - **Nelson Elementary, 5413 Durant Road.** Construct sidewalks on Durant Road east and west of Red Fern Drive. \$0.1 million estimated cost.
- **New Roads/Widening.** New roads and widening to relieve congestion by increasing the number of vehicles a road or highway can accommodate daily. This is achieved by adding new roads or additional through lanes to existing roads, and may include other alternatives when road expansion is not feasible.
 - **Lithia Pinecrest Road.** Widen from 2 lanes to 4 lanes. \$97.0 million estimated cost.
 - **Progress Boulevard.** Widen overpass over I-75 from 2 lanes to 4 lanes. \$17.7 million estimated cost.

- **Advanced Traffic Management System (ATMS).** Projects that utilized technology to help improve traffic flow, congestion, and traffic signal reliability. ATMS projects include traffic monitoring and signal timing coordination.
 - **Kingsway Road from Brandon Boulevard (SR 60) to Martin Luther King Boulevard.** Retrofit of seven traffic signals with fiber optic communications and new controller cabinets. Corridor signal operation re-timing and coordination. \$0.2 million estimated cost.
 - **Lithia Pinecrest Road from Brandon Boulevard (SR 60) to Fish Hawk Boulevard.** Retrofit of eight traffic signals with fiber optic communications and new controller cabinets and corridor signal operation re-timing and coordination. \$0.2 million estimated cost.
 - **Parsons Avenue from Brandon Boulevard (SR 60) to US 92.** Retrofit 12 traffic signals with fiber optic communications and new controller cabinets and corridor signal operation re-timing and coordination. \$0.3 million estimated cost.
- **Transit.** Improvements include roadway enhancements and station construction to accommodate rail, bus rapid transit and water ferry routes. Proposed scopes are subject to Project Development and Environment (PD&E) study.
 - **Brandon and South County Bus Rapid Transit.** Roadway projects to enhance transit service. \$124 million estimated cost.
- **Unfunded maintenance.** Maintenance projects and programs to preserve community transportation assets. Projects countywide include right-of-way maintenance, road resurfacing, bridge replacements and improvements, and sidewalk repair or replacement. The total unfunded maintenance projects countywide, including projects within the study area, have an estimated cost of \$259 million.



3.5 Transportation Improvement Program

The FY2017 Transportation Improvement Program (TIP) was adopted by the Hillsborough County MPO on June 22, 2016 and was effective on October 1, 2016. The TIP includes a list of the MPO's top priority projects that are funded for construction within the next five years.

Only one road widening project located within or adjacent to the study area is funded for construction within the next five years. Construction is programmed in 2017 to widen SR 60 from US 301 to Falkenburg Road from four lanes to six lanes divided. FDOT is the project sponsor (FPN 405525 2).

The TIP also includes a list of projects that identifies priorities for new funding. The following projects located within or adjacent to the study area were identified in the FY2017 TIP:

- **Manage Congestion for Drivers and Shippers**
 - *US 301 from Falkenburg Road to Sligh Avenue* - Operational improvements.
- **Real Choices When Not Driving**
 - *PD&E/Design Phase for an additional MetroRapid Corridor*
 - Evaluate new expanded transit service along several corridors, including Brandon to Downtown Tampa corridor.
- **Major Investments for Economic Growth**
 - *I-75 from Fowler Avenue to US 301* - Design and construction of this segment of Tampa Bay Express (TBX) project with express bus. FDOT is the project sponsor.
 - *I-75 from SR 674 to US 301* - Design and construction of this segment of TBX project with express bus. FDOT is the project sponsor.

4. BICYCLE & PEDESTRIAN FACILITIES

4.1 Existing Facilities

As shown in Figure 9, the study area has several bicycle facilities along many of the major roadways. The three following types of bicycle facilities are located within the study area:

- **Designated Bike Lane.** A designated bike lane is a portion of a roadway that has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists.
- **Wide Outside Lane.** A wide outside lane, or wide curb lane, is an outermost lane of a roadway that is wide enough to be safely shared side by side by a bicycle and a wider motor vehicle at the same time.
- **Paved Shoulder.** In areas where there is no curb and gutter on the road, such as rural road or some suburban roads, FDOT paves the shoulder of the road to provide space for bicyclists. Paved shoulders provide minimal space for bicyclists.

The primary type found within the study area is the Wide Outside Lane designation. This includes Bloomingdale Avenue between US 301 and Bell Shoals Road and several north/south roadways. A few roadway corridors within the study area have Designated Bike Lanes, including SR 60 between Gornto Lake Road and Kings Avenue, segments of Gornto Lake Road, Providence Lakes Road, and Lakewood Drive.

BRANDON CORRIDORS & MIXED-USE CENTERS PILOT PROJECT

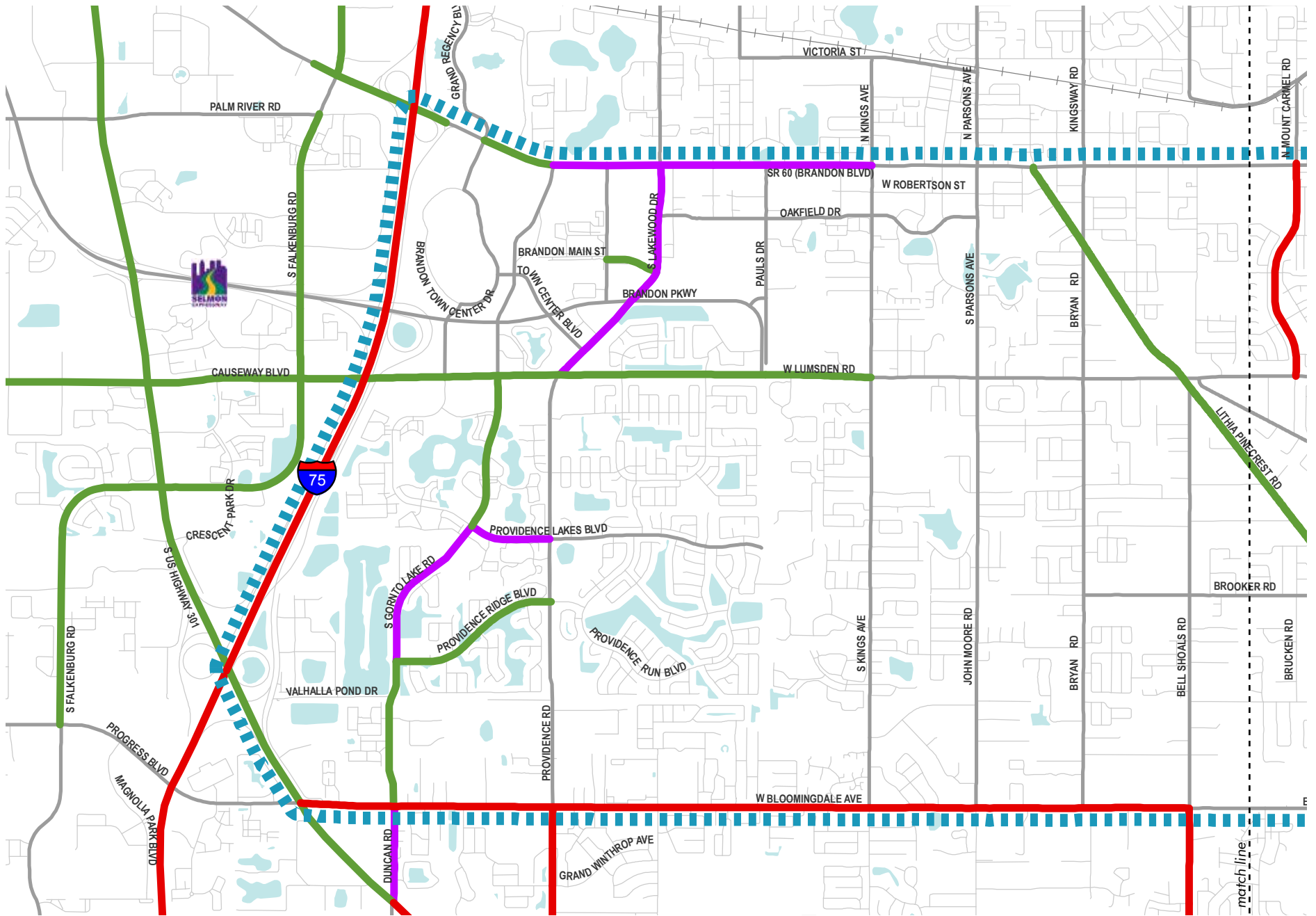
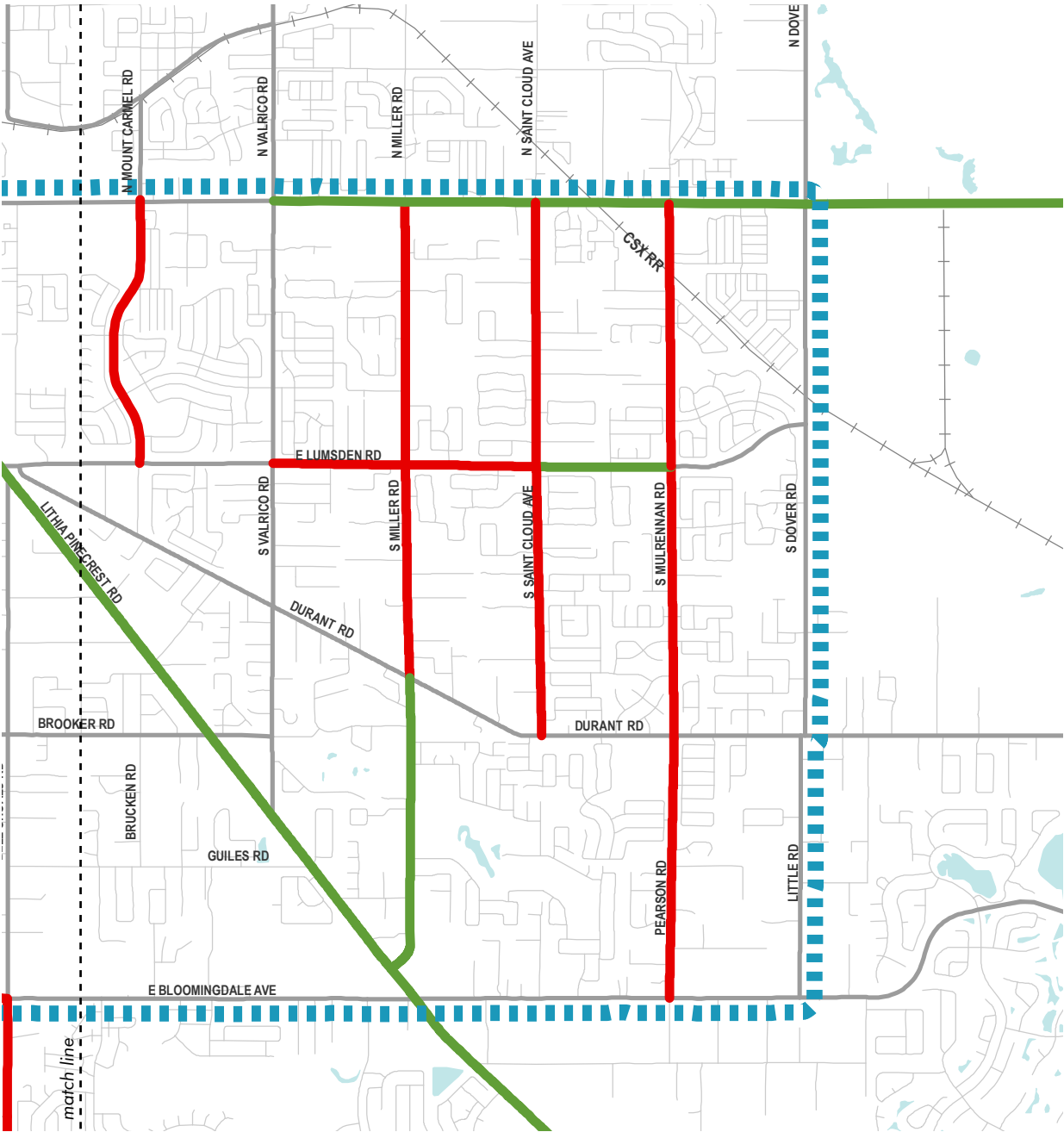




Figure 9. Existing Bicycle Facilities

- Brandon Study Area
- Water
- Major Corridors
- Designated Bike Lane
- Paved Shoulder
- Wide Outside Lane
- CSX-Railroad



Segments of Lithia Pinecrest Road, Lumsden Road, SR 60, and Gornto Lake Road have paved shoulders.

As shown in Figure 10, many of the major corridors within the study area have existing sidewalk improvements. However, there are a few exceptions that contain no existing sidewalk:

- Lithia Pinecrest Road, north of Lumsden Road and south of (SR 60) Brandon Boulevard;
- Lumsden Road, east of Valrico Road, and west of Dover Road;
- Durant Road;
- John Moore Road, south of Lumsden Road, north of Bloomingdale Avenue; and
- Brooker Road, east of Bell Shoals Road.

Many of the local roadways also possess sidewalks, but data for these areas is not readily available.

4.2 Planned Improvements

As shown in Figure 11, bicycle and pedestrian improvements have been implemented on Bloomingdale Avenue, just east of I-75 and west of Bell Shoals Road. As indicated in the Imagine 2040 LRTP, only one additional bicycle or pedestrian improvement project is planned within the study area. As part of the Cost Affordable roadway widening project for Bloomingdale Avenue from just east of I-75 to west of Bell Shoals Road, bicycle and pedestrian facilities along this corridor will also be upgraded.

5. PRELIMINARY OBSERVATIONS

The evaluation of existing data, plans, and studies resulted in the identification of several key mobility challenges affecting the future of the Brandon Area. These are summarized below:

- **Major Corridor Capacity.** Major arterial corridors in the study area are operating below acceptable levels of service, with future Levels of Service projected to be F for Lumsden Road, Lithia-Pinecrest Road, Durant Road, and sections of SR 60 and Bloomingdale Ave. These corridors carry significant peak hour commute trips with origins and destinations both within and outside the study area. Although traffic operations, access management, and transit service improvements have been completed in recent years, the potential to drastically increase arterial capacity to serve peak hour travel demand is limited due partly to right-of-way and development-related constraints. Issues with congestion and capacity constraints are highlighted in several studies, including the Imagine 2040 LRTP and the SR 60 Compatibility Study.
- **Travel Safety.** Travel safety has been identified as a significant problem in the study area, with specific road segments defined as top severe injury or high frequency crash intersections and corridors by the Hillsborough MPO. Most of SR 60 and a significant segment of Bloomingdale Avenue have been identified as high frequency crash corridors. Addressing corridor safety was a specific focus of the SR 60 Compatibility Study. The study offered a range of recommendations to address safety, including recommendations for travel speed reduction, lane width reduction, intersection improvement, sign and signal enhancements, pedestrian and bicycle facility improvement, and parallel road network development.



- **Secondary Network Connectivity.** The absence of a secondary network of interconnected collector streets contributes to congestion on the arterial network. Virtually all east-west trips are forced onto three arterials, thus contributing to arterial segment and intersection congestion. Although capacity improvements are proposed on east-west arterials, no major projects are designed to increase east-west capacity off the arterial network.
- **Pedestrian and Bicyclist Facilities.** Although the study area includes improvements to accommodate bicycle and pedestrian travel, including a fairly continuous sidewalk network along the arterial road network, the predominant development pattern is auto-oriented with limited pedestrian and bicycle connections among destinations and across private properties. In addition, many of the pedestrian and bicycle accommodations in the study area were designed to meet outdated or minimum standards, and therefore do not always provide for high levels of user comfort.

BRANDON CORRIDORS & MIXED-USE CENTERS PILOT PROJECT

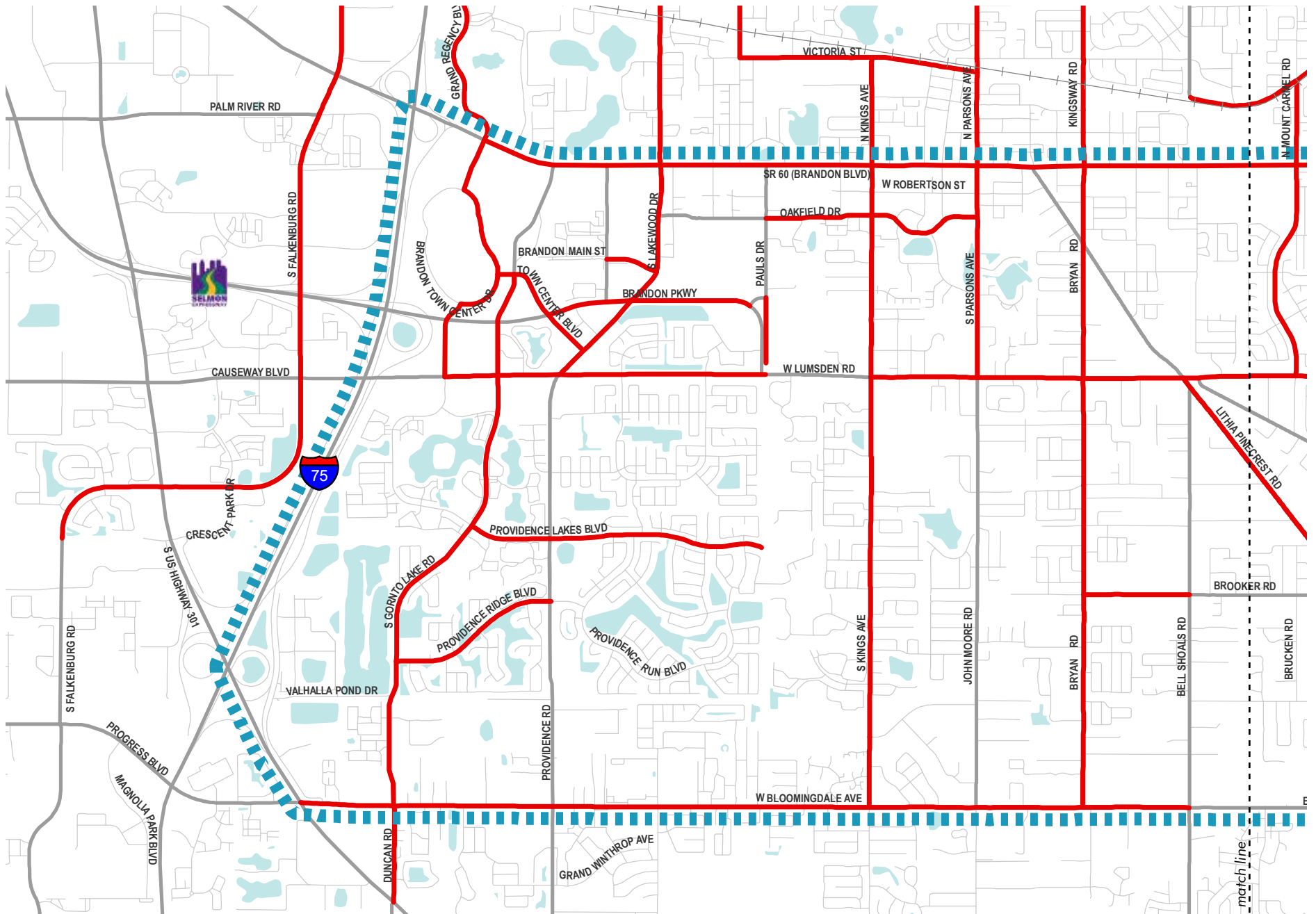





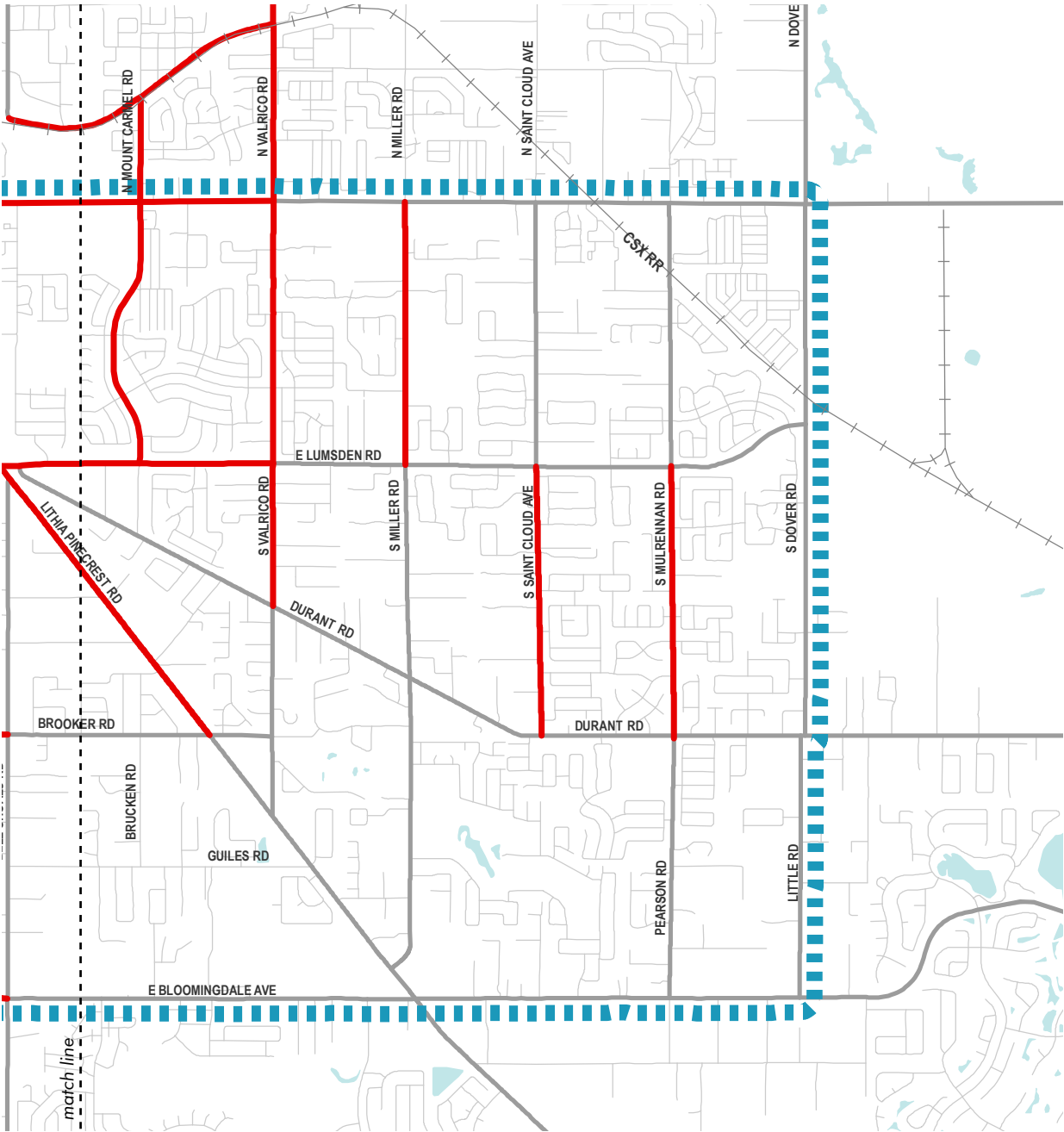




Figure 10. Existing Sidewalk Improvements

-  Brandon Study Area
-  Water
-  Major Corridors
-  Existing Sidewalk
-  CSX-Railroad



0 0.5 1 Miles



BRANDON CORRIDORS & MIXED-USE CENTERS PILOT PROJECT

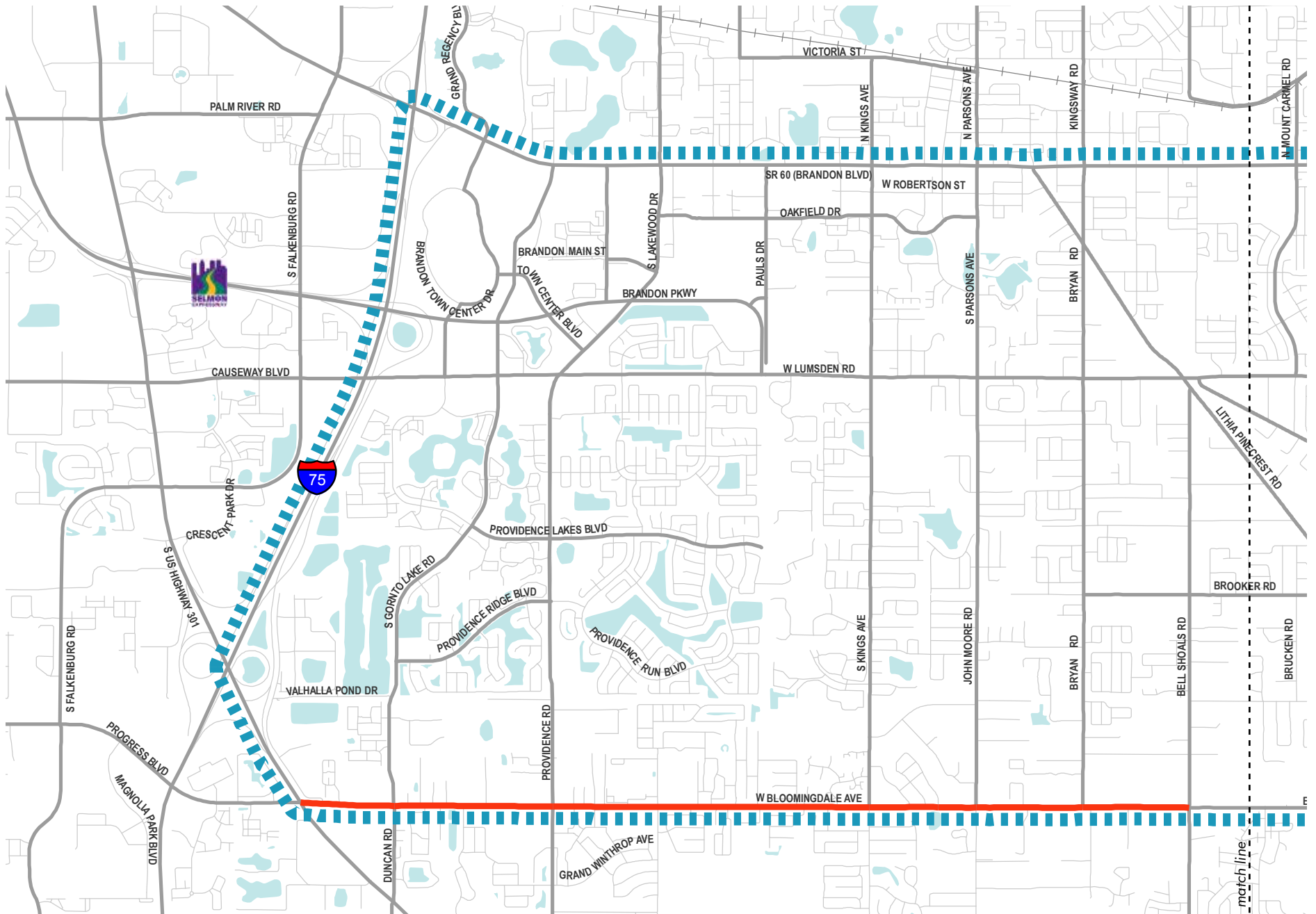






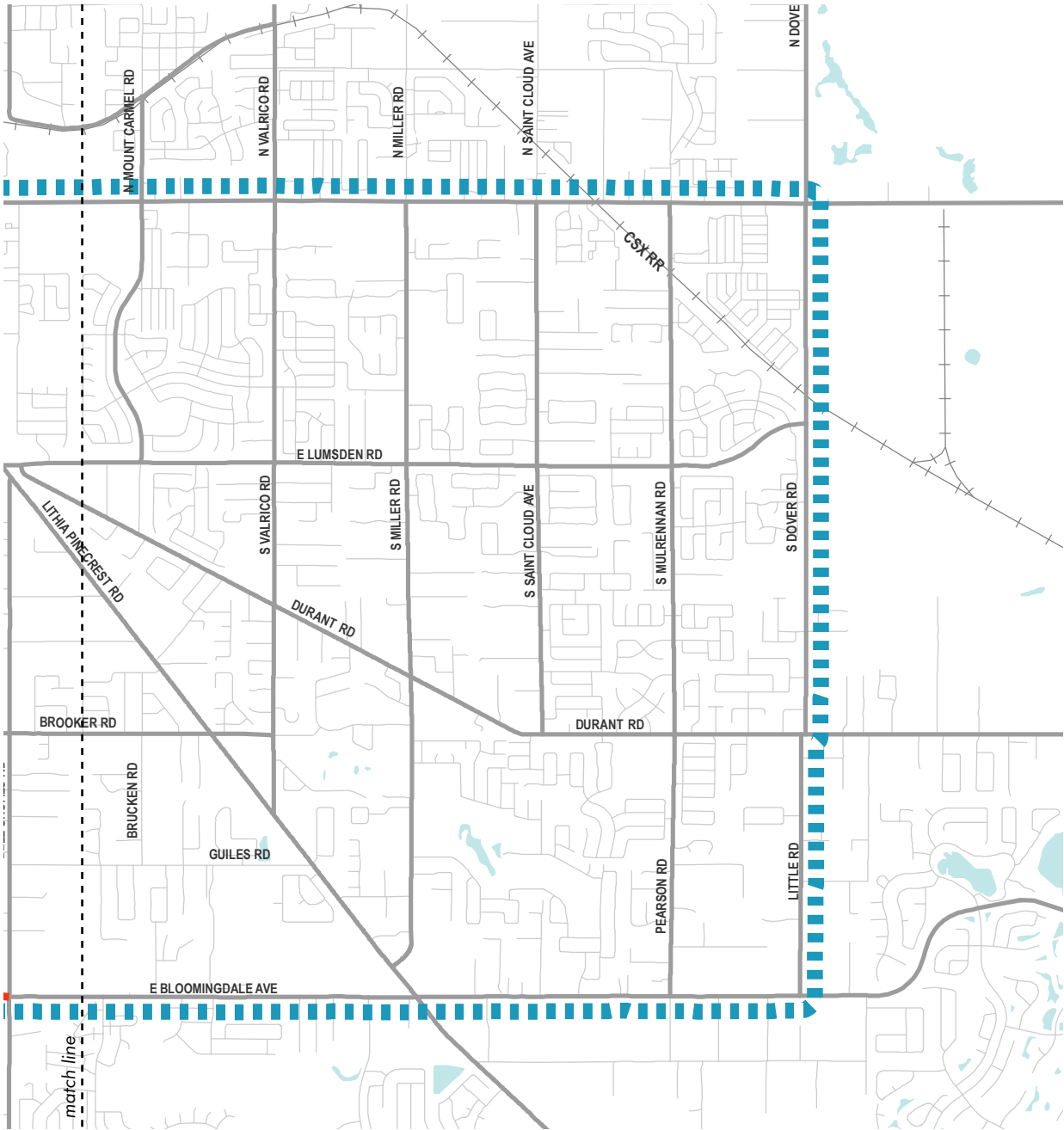




Figure 11. Proposed Bicycle and Pedestrian Enhancements (2040 LRTP)

-  Brandon Study Area
-  Water
-  Planned Bicycle Facility Improvements
-  Major Corridors
-  Local Roadway
-  CSX-Railroad



6. SOURCES

- HART, FY2016-FY2015 Transit Development Plan (September 2015): <http://gohart.or/Pages/About-Transit-Dev-Plan.aspx>
- Hillsborough County Board of County Commissioners, Community Transportation Plan planned project list (April 20, 2016 Agenda Item): <http://agenda.hillsboroughcounty.org/cache/00003/686/C-1.PDF>
- Hillsborough County MPO, Imagine 2040: Hillsborough Long Range Transportation Plan (December 2015): <http://www.planhillsborough.org/2040-lrtp>
- Hillsborough MPO, Brandon Boulevard (SR 60) Compatibility Study (December 2013): http://www.planhillsborough.org/wp-content/uploads/2013/08/Brandon-Boulevard_LAST_FINAL-Report_121313.pdf
- Hillsborough MPO, Congestion Management/Crash Mitigation Process: Crash Severity Reduction Report (January 2013): <http://www.planhillsborough.org/wp-content/uploads/2013/02/Crash-Severity-Reduction-Report-Final.pdf>
- Hillsborough MPO, FY2017 Transportation Improvement Program (TIP): <http://www.planhillsborough.org/transportation-improvement-program-tip>