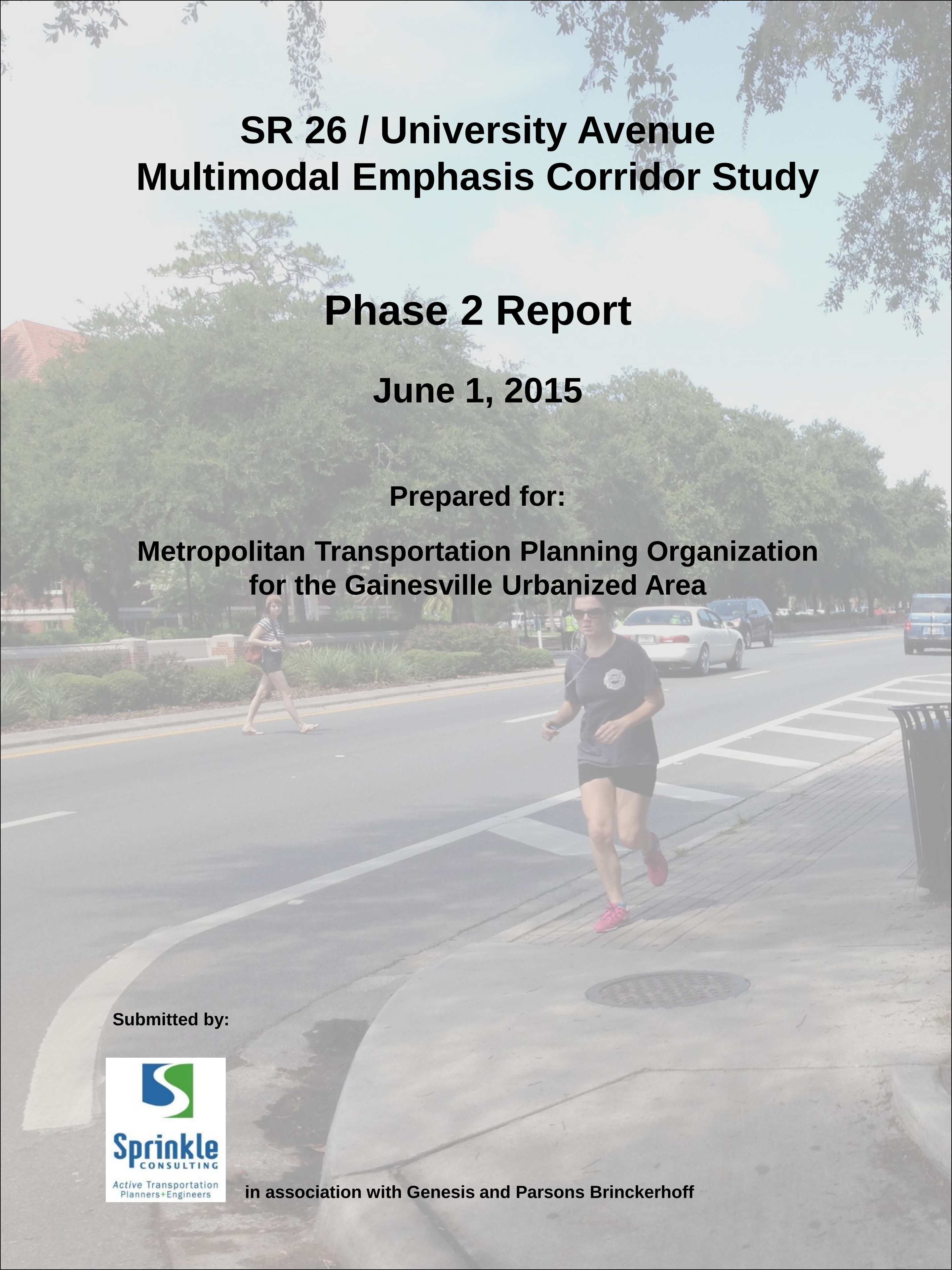

SR 26 / University Avenue
Multimodal Emphasis Corridor Study

Phase 2 Report

June 1, 2015

Prepared for:

**Metropolitan Transportation Planning Organization
for the Gainesville Urbanized Area**

Submitted by:

Sprinkle CONSULTING
Active Transportation Planners+Engineers

in association with Genesis and Parsons Brinckerhoff

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INTRODUCTION

The first phase of the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area's State Road 26/University Avenue Multimodal Emphasis Corridor Study, adopted in December 2014, identified a list of viable transportation projects that would benefit the multimodal operations of University Avenue between Gale Lemerand Drive and Waldo Road. Nine of these projects, indicated in Table 1, were selected to undergo additional research, project refinement, and resulting implementation planning. This Phase 2 report describes the project refinements and includes planning-level cost estimates for those projects (cost estimate details are provided in Appendix A). For reference, the adopted Phase 1 report, including the list of all Phase 1 projects, is provided as Appendix B.

Table 1. Phase 2 Project Listing

Location	Project Type
Waldo Rd	Pedestrian-oriented intersection
E 7th St – E 10th St	Raised median
NE Blvd	Enhanced pedestrian crossing
E 1st St – E 3rd St	Midblock pedestrian crossing
W 13th St and Main St	On-demand right turn on red restriction
NW 17th St and Corridor-Wide	Bicycle striping and signal detection at cross street intersections
Gale Lemerand Dr – W 13th St	Pedestrian/Bikeway Corridor
Gale Lemerand Dr – W 13th St	Enhanced pedestrian crossings
Corridor-Wide	Transit shelters and benches

WALDO ROAD

The existing configuration of the intersection of SR 26 and Waldo Road is shown in Figure 1. There were two specific comments regarding this intersection made during the Technical Advisory Committee (TAC) walking tour (preliminary Phase 1 field assessment). The first was that the southeast corner of the intersection includes a free-flow (uncontrolled) right turn lane across two *signalized* crosswalks. The second comment was that the pedestrian crossings are quite long.

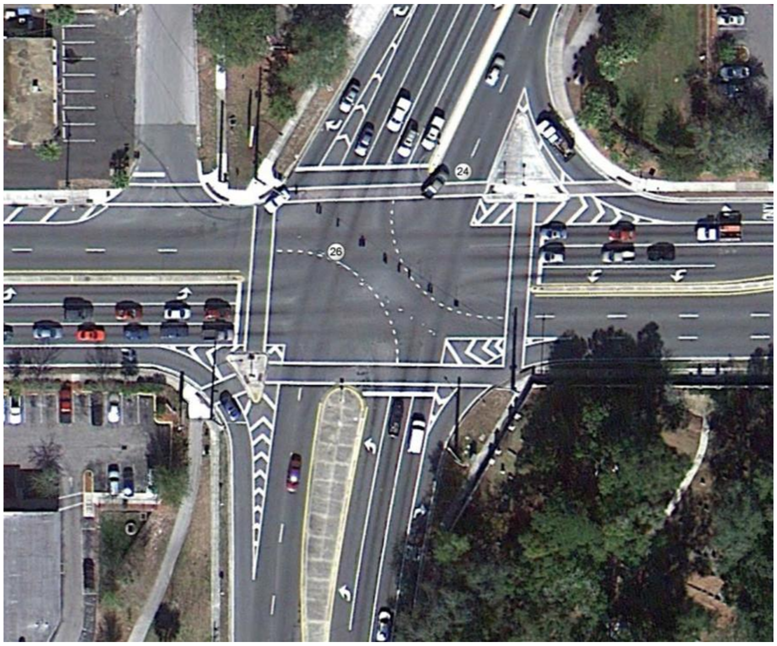

Figure 1 SR 26 at Waldo Road Existing Configuration

The uncontrolled right turn across the two signalized crosswalks results in pedestrians receiving a WALK signal when the vehicles are under free-flow operations. Essentially, this tells pedestrians they are permitted to start to cross the roadway in the direction of the signal indication. While crossings with a WALK signal can occur with conflicting turning vehicles, those vehicles approaching from a perpendicular or near perpendicular direction normally have a red signal. Thus pedestrians may reasonably expect the vehicle operators turning right from the direction that has the red traffic signal (or at least the through movements have a red traffic signal) to be required to stop and yield prior to making a right turn on red. However, under the existing condition on the southeast corner of this intersection, there is nothing to inform the free-flow north-to-east right turning motorists that the pedestrian's traffic control has changed. This could lead to confusion and safety issues at this intersection.

The signalized pedestrian movement in conflict with the free-flow right turn is also inconsistent with normal signal operations and the MUTCD.[1] Discussions with FDOT commenters suggest that restricting this free-flow right turn is not desirable. This leaves the alternative of removing the signalized crossing of the uncontrolled vehicular movement. Adding a concrete slip lane island on the southeast corner of the intersection would allow for the pedestrian signal hardware to be moved to the slip lane island and thus provide for signalized pedestrian crossings across only the signalized motor vehicle movements. The construction of this island would also reduce the needed pedestrian clearance intervals for this intersection and in turn reduce loss time to signalized vehicular movements Figure 2. This intersection modification would require

[1] MUTCD Section 4E.06, 02, "Standard: …When the pedestrian signal heads associated with a crosswalk are displaying either a steady WALKING PERSON (symbolizing WALK) or a flashing UPRAISED HAND (symbolizing DONT WALK) signal indication, a steady or a flashing red signal indication shall be shown to any conflicting vehicular movement that is approaching the intersection or midblock location perpendicular or nearly perpendicular to the crosswalk."

- installation of the channelization island,
- relocation of the pedestrian signal buttons and indications to the concrete island, and
- removal and replacement of the crosswalk markings on the eastern leg of the intersection.

The inclusion of a slip lane island on the southeast corner would also enable the reduction of pedestrian crossing distances and thus exposure times. Specifically, the signalized portion of the crossing would be reduced by approximately 38 feet (135 feet to 97 feet), which equates to an 11-second exposure reduction (39 seconds to 28 seconds) based on a walking speed of 3.5 ft/sec.

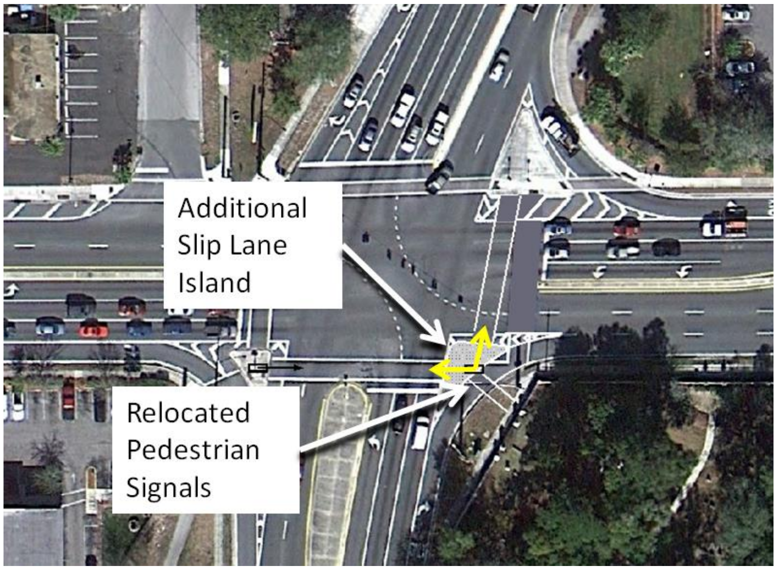

Figure 2 SR 26 and Waldo Road, Modified Southeast Corner

More significant modifications using pedestrian friendly intersection design could further reduce pedestrian crossing distances. The northwest corner could be modified to reduce the crossing distance for pedestrians as well as reduce motor vehicle turning speeds. Gap acceptance slip lanes on the southeast and southwest would also reduce motor vehicle speeds across the pedestrian crosswalks. Additionally, modified slip lanes would put the pedestrians crossing in a better position to be seen by approaching motorists. Depending on the size of the channelization islands installed, they could be used to provide a gateway treatment onto the University Avenue corridor. AASHTO's A Policy on the Geometric Design of Streets and Highways[2] allows for trucks to use the receiving width of the roadway. Finally, the *TURNING VEHICLES YIELD TO PEDESTRIAN* sign (R10-15) should be considered on the northbound to eastbound and eastbound to southbound approaches. The conceptual intersection design is shown in Figure 3.

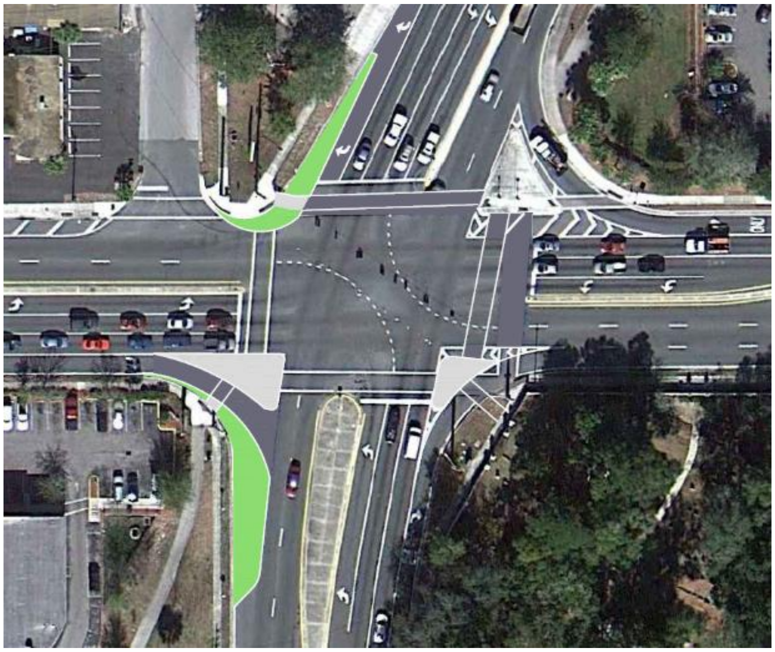
Figure 3 SR 26 and Waldo Road, Compact Design

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[2] AASHTO, A Policy on the Geometric Design of Streets and Highways, 4th Ed., AASHTO, Washington, DC, 2012.

This more comprehensive reconstruction of the intersection, which could be performed as a second implementation phase, would require the following:

- reconstruction of the radius returns on the northwest and southwest corners of the intersection,
- assessment and modification of drainage structures on the northwest and southwest corners of the intersection
    - one inlet on the northwest corner and
    - two inlets on the southwest corner,
- installation of the channelization island on the southeast corner of the intersection,
- relocation of the pedestrian signal buttons and indications from the southeast corner of the intersection to the concrete island,
- reconstruction of the channelization island on the southwest corner of the intersection,
- traffic signal adjustments on the channelization island on the southwest corner of the intersection,
- additional signing at the southeast and southwest corners of the intersection, and
- removal and replacement of the crosswalk markings on the eastern leg of the intersection.

The Waldo Road Greenway/Depot Avenue Rail-Trail approaches this intersection from the southwest and continues to the northeast, with trail users among those crossing the intersection. Potential rerouting of the trail has been proposed, and any such realignment should be considered as intersection improvements are made.

E 7TH STREET – E 10TH STREET

The section of SR 26 from NE 7th Street to east of NE 10th Street has no raised median. A raised median could improve aesthetics for all travelers and potentially improve safety for those pedestrians who choose to cross at midblock locations. There is potential to add sections of raised median – much like those west of NE 7th – midblock on each block from NE 7th to 9th. Additionally, the raised divider on the west approach to the intersection of SR 26 and Waldo Road could be extended to include the area currently marked with a painted restricted median.

It is possible that a raised median could encourage pedestrians to cross at uncontrolled locations. This Phase 2 study evaluated the degree to which installing raised medians might encourage uncontrolled pedestrian crossings along this section this location (relocated from existing controlled crossings), inhibit those using strollers or pushing carts, and/or make crossings safer.

Pedestrian Crossing Data

SR 26 from E 7th Street to the beginning of the raised median east of 10th Street was video recorded to map pedestrian movements. Data was collected for the Thursday, Friday, and Saturday, February 5-7, 2015. Visibility during the 0:00-2:00 hours on February 5th were sub-optimal due to rain. 1,340 pedestrian movements in which pedestrians crossed SR 26 were mapped (Figure 4). These pedestrian crossings fell into several categories.

Figure 4 Pedestrian Paths Mapped between E 7th St and Waldo Rd

First, 259 of the pedestrian crossings (19 percent) were made at either the E 7th Street or E 9th Street signalized crosswalks (Figure 5). These pedestrians are crossing at the preferred locations. Of these crossings, 168 represented pedestrians not walking along SR 26 at all but traveling along either 7th Street or 9th and only crossing SR 26. Thus, the potential for migration from signalized crossings to midblock crossings is represented by approximately 7% of the crossings or 91 pedestrians.

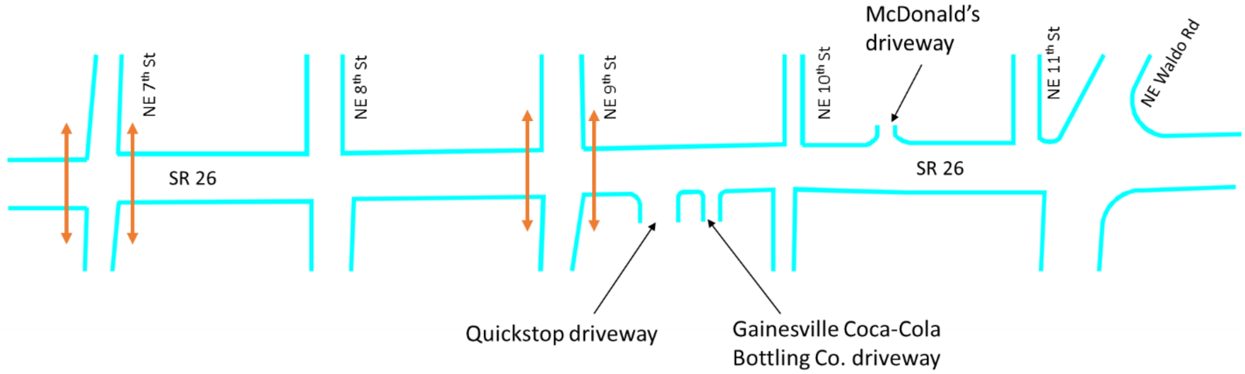

Figure 5 Crossings at Signalized Intersections

Another 185 crossings (14 percent) were made by pedestrians whose travel path took them past the signalized crosswalk at E 7th St, E 9th St, or both. These pedestrians had the opportunity to cross SR 26 at a signalized crosswalk without significantly diverting from their intended travel path. Observations of these pedestrians suggest that they walk along SR 26 until there is a gap in the traffic they feel is adequate, they then cross the street where convenient (Figure 6). This minimizes their perceived (and probably actual) delay when compared to crossing at the traffic signals.

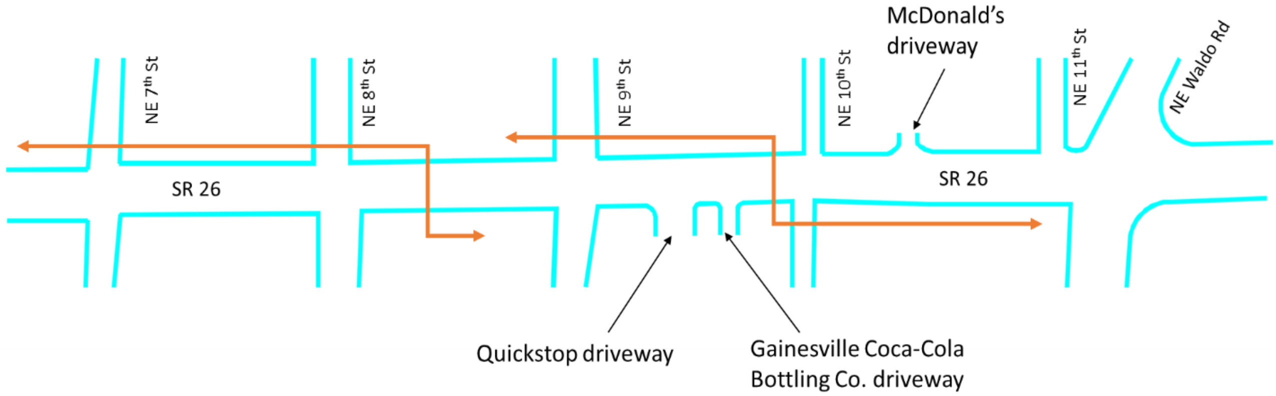

Figure 6 Example Paths of Pedestrians Who Could Have Used a Signalized Crossing

A third set of pedestrians was noted who crossed midblock but whose travel path did not take them past a signalized crosswalk. One hundred fifty (150) crossings fell into this category (11%). Also included in this set are pedestrians who crossed midblock and whose origins and destinations could not be determined. Twenty-six (26) crossings fell into this category (2%).

A large portion (26 percent) of pedestrians were observed crossing legally at unmarked crosswalks at E 8th St (145 crossings) and E 10th St (200 crossings). These pedestrians likely continued north or south after crossing SR 26.

The largest group (28 percent) of pedestrians was observed making direct crossings which originated or terminated at one of three locations: the Quickstop driveway (204 crossings), the Gainesville Coca-Cola Bottling Co. driveway (82 crossings), or the McDonald's driveway (89 crossings) (Figure 7). Pedestrians making this maneuver sometimes would wait for a sufficient gap in traffic before crossing. Other times, particularly when crossing to and from the McDonald's driveway, pedestrians would cross one half of the roadway, wait in the painted median or shared left turn lane, and then complete the crossing after finding a gap in traffic.

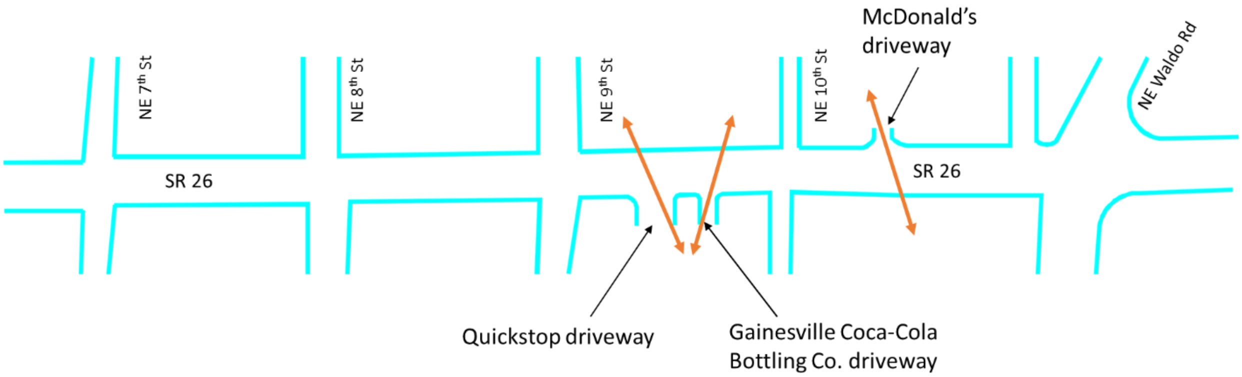

Figure 7 Pedestrians Crossing at Quickstop, Gainesville Coca-Cola Bottling Co., or McDonald's Driveways.

Recommendations

Most pedestrians who cross SR 26 between E 7th Street and E 10th Street are crossing along their desired path of travel. They are not diverting from their desire lines to cross at a traffic signal. A raised median would allow these pedestrians to cross one direction of travel at a time. This would reduce the potential for crashes along this corridor.

A specific concern for consideration identified in Phase I was whether or not individuals pushing strollers or using wheelchairs would be negatively impacted by median installation. All the individuals pushing strollers or using wheelchairs were observed to use the signalized crosswalks and curb ramps.

Given the above, a raised median is recommended to be installed between E 7th Street and the existing median east of E 10th Street. Between E 7th Street and E 9th Street, the FDOT Straight Line Diagram indicates this section of roadway has four 12-foot lanes and a 13-foot painted turn lane. Narrowing the travel lanes to 11 feet would allow for the provision of a 17-foot median where there are currently two-way left turn lanes and a 6-foot traffic separator where there are dedicated left turn lanes (which would be 11 feet wide). The 2015 revision of the FDOT *Plans Preparation Manual* (Table 2.1.1) specifies lane widths of 11 feet for divided urban arterials with design speeds of 45 mph or less. East of E 10th Street the median could widen to encompass the current painted median (Figure 8). The existing and proposed cross sections are shown in Figure 9.

Figure 8 Recommended Medians between 7th Street and 10th Street

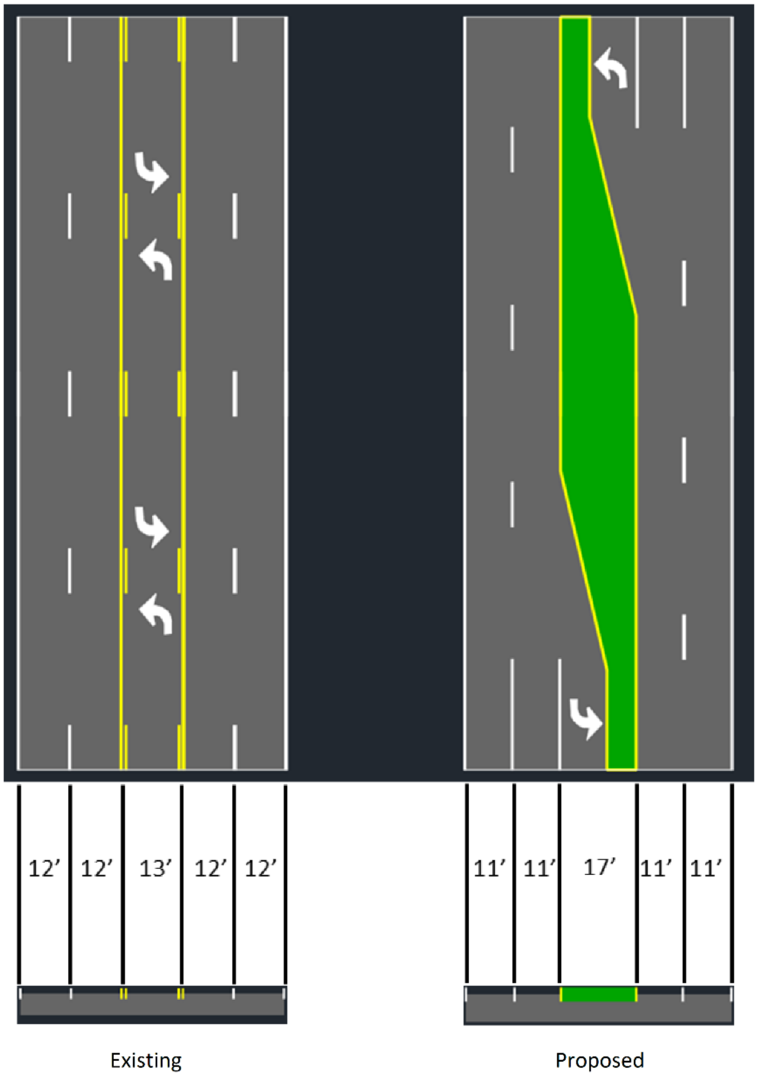

Figure 9 Existing and Proposed Cross Sections

NE BOULEVARD

TAC walking tour (preliminary Phase 1 field assessment) participants noted that NE Boulevard is located directly across from Sweetwater Park. A trail through Sweetwater Park connects SR 26 to the bike lanes on S 2nd Avenue and then further on to S 4th Avenue, and thus to the planned Power District. Providing a crossing opportunity from NE Boulevard to Sweetwater Park could make a connection for both bicyclists and pedestrians. During Phase 1, it was thought a designated crossing of SR 26 at this location, possibly a Rectangular Rapid Flashing Beacon or Pedestrian Hybrid Beacon, could serve existing demand at this location as well as the future demand that will result from further development of the Power District.

A pedestrian mapping study was conducted for the area around NE 5th Street and NE Boulevard, which currently includes a raised median (Figure 10). Morning, midday, and afternoon periods were observed in detail to evaluate the potential for a designated crossing in this area.

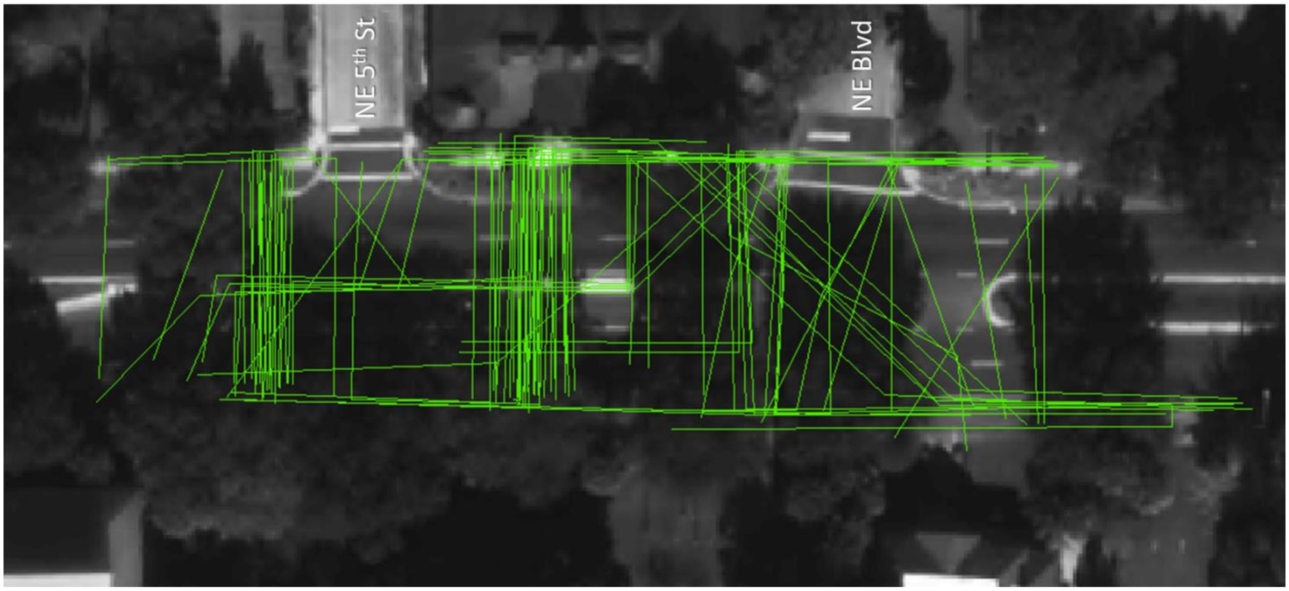

Figure 10 Pedestrian Paths Mapped near NE Blvd

The FDOT Traffic Engineering Manual includes the following guidance to determine minimum levels of pedestrian demand for a midblock crossing:

> **(3)** *Minimum Levels of Pedestrian Demand*
>
> ***(a)*** *Any location under consideration for a possible mid-block crosswalk should exhibit (1) a well defined spatial pattern of pedestrian generators, attractors, and flow (across a roadway) between them or (2) a well defined pattern of existing pedestrian crossings. Generators and attractors should be identified over an aerial photograph to illustrate potential pedestrian routes in relation to any proposed mid-block crosswalk location.*
>
> ***(b)*** *Sufficient demand should exist that meets or exceeds the thresholds for three consecutive days of data collection. Data collection should be based upon pedestrian volumes observed crossing the roadway outside a crosswalk at or in the vicinity of the proposed location, or at an adjacent (nearby) intersection.*

- *Minimum of 20 pedestrians during an hour (any four consecutive 15-minute periods).*
- *Minimum of 60 pedestrians during any 4 hours of the day, not necessarily consecutive hours.*

As can be seen from Table 2, there were no 1-hour periods during which the pedestrian volumes exceeded 20 pedestrians per hour; the maximum was 18 pedestrian crossings between 4:45 and 5:45 in the evening. While the maximum sum for any four hour period is 70 pedestrians (7:30-830 and 8:30-930 in the morning, 11:30 - 12:30 and 12:30-1:30 over lunch, and 4:45-5:45 in the evening), these crossings were not concentrated at a specific location. Thus the minimum levels of pedestrian demand are not met.

Table 2. Pedestrian Crossings near NE Blvd

Morning			Midday			Evening		
Time	Pedestrians	Hourly Total	Time	Pedestrians	Hourly Total	Time	Pedestrians	Hourly Total
7:30	3	14	11:30	1	9	4:00	4	16
7:45	6	17	11:45	0	9	4:15	4	17
8:00	2	15	12:00	5	12	4:30	2	17
8:15	3	16	12:15	3	13	4:45	6	18
8:30	6	17	12:30	1	12	5:00	5	13
8:45	4		12:45	3		5:15	4	
9:00	3		1:00	6		5:30	3	
9:15	4		1:15	2		5:45	1	

Until such time as the bicycle and/or pedestrian volumes increase in this area, a designated crossing is not recommended. With the increase in development to the north, it may be that a designated crossing would be appropriate near NE Blvd. However, when further considered a more extensive origin and destination study should be conducted to determine the most appropriate location for the crossing and to inform how pedestrians could be focused to a single crossing location.

E 1ST STREET - E 3RD STREET

The north and south sides of the block between East 1st and 3rd Streets are occupied by government offices and the south side includes a busy RTS bus stop. Significant pedestrian cross flow occurs at this location. The raised median between East 1st and 3rd includes a section free of vegetation in which pavers have been installed. This section is used by pedestrians as they cross the street. A designated crossing of SR 26 at this location, possibly controlled by a Rectangular Rapid Flashing Beacon or Pedestrian Hybrid Beacon, could serve existing demand at this location. The distance between the controlled crossings at East 1st and 3rd Streets is only 400 feet (approx.) so a special justification would be needed to install a controlled crossing at this location.[3]

A pedestrian mapping study was conducted for SR 26 between E 1st St and E 3rd St (Figure 11). One hundred eighty pedestrians were observed crossing SR 26 as part of this study. This represented 166 separate crossing events (a group of pedestrians crossing together was considered one crossing event). Of these 166 pedestrian crossing events, 147 pedestrian crossings (89%) occurred at the location where the median is pavered instead of planted. The observed pedestrian crossing counts are shown in Table 3.

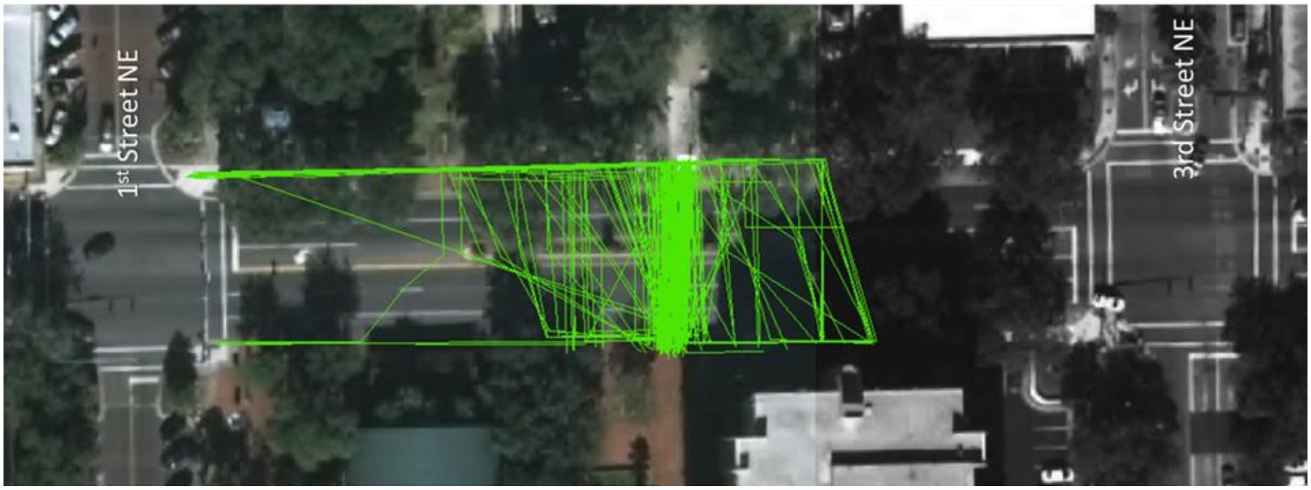

Figure 11 Mapped Pedestrian Movements between E 1st St and E 3rd St

As can be seen in Table 3, there are numerous hours, and in fact two 15-minute periods, during which the pedestrian volumes exceed 20 pedestrians.[4] For instance, between 8:15 and 9:15 in the morning, there were 22 pedestrians observed crossing SR 26. The four hour cumulative total of 8:30-9:30, 11:30-12:30, 12:30-1:30 and 4:45-5:45 is 144 pedestrians. Thus this location certainly meets the volume criteria from the Traffic Engineering Manual.

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[3] The FDOT Traffic Engineering Manual states that the minimum distance between to the nearest alternative crossing location is 300 feet per the Department's Plans Preparation Manual, Vol. 1, Section 8.3.3.2. However, in the PPM, this spacing requirement is not written as a standards condition (shall), it is a guidance condition (should).

[4] Data were collected for three consecutive days. The data shown in Table 3 are from a Thursday. The Friday counts were very similar, while the Saturday counts were significantly lower, presumably because of the presence of work-related travel.

This crossing location, however, is only 200 feet (approx.) from either the E 1st Street crosswalk or the E 3rd Street Crosswalk.

Given that there is already an accommodation made for (or acknowledgment of) midblock crossings at this location, installation of a designated crosswalk should be considered. Since the speed limit at this location is 30 mph, a rectangular rapid flashing beacon would be appropriate. Advance stop bars should be included to reduce the potential for second threat crashes.

To implement this improvement, signs and markings for the crosswalk would need to be installed. In addition, curb ramps would need to be provided at the roadsides and across the median.

The future condition of Bo Diddley Plaza, including the proposed relocation of the plaza's bus stop, should be considered in future examination of this potential project.

RIGHT TURN ON RED RESTRICTIONS SR 26 AT MAIN STREET AND SR 26 AT 13TH STREET

NO RIGHT ON RED blank out signs are installed at the signalized intersections of SR 26 with Main Street and 13th Street (Figure 12). During certain periods these signs are activated (lit) every cycle. However, during off peak periods they are not activated.

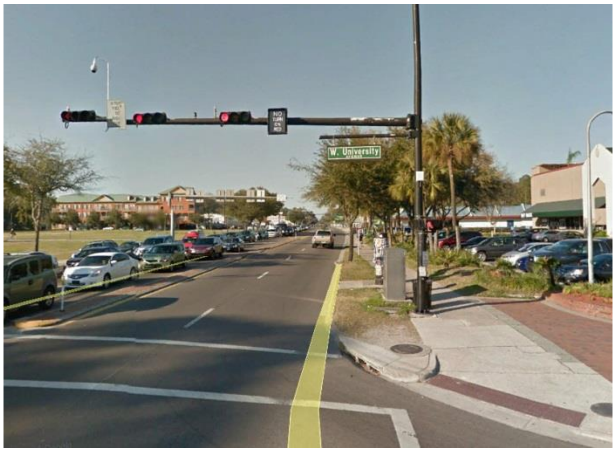

Figure 12 NO RIGHT ON RED Blank Out Sign at SR 26 and 13th Street

Periods when pedestrian crossings are less frequent include early mornings and later in the evening. Because pedestrians are not crossing the intersections every cycle during these off-peak periods, it would needlessly reduce the intersection efficiency to prohibit right turns on red during these times. However, during these periods, motorists may not be as aware of pedestrians within the right of way and waiting to cross the street. Thus, pedestrian safety could be enhanced during off peak periods by restricting right turn on red vehicular movements when pedestrians are crossing at this intersection. Allowing activation of the blank out signs when the corresponding pedestrian buttons are pushed would allow for this restriction while not prohibiting right turn on red when pedestrians are not present. Discussions with City of Gainesville traffic engineering staff suggests that while it is not trivial to reprogram the controllers for this type of on-demand blank-out sign operating, it is possible at these intersections. The implementation of this improvement would require City staff to reprogram the controllers. If implemented, pre- and post-implementation compliance rates should be evaluated.

NW 17TH STREET

The TAC walking tour (preliminary Phase 1 field assessment) participants reported that conflicts are prevalent between through (north-south) bicyclists and motorists turning right onto University Avenue at the intersection with NW 17th Street. These "right-hook" conflicts could likely be reduced if bicyclists were positioned within the through lanes to better communicate their intent to proceed through the intersections. Restriping the north approach and using Shared Lane Markings or marking the loops to show where bicyclists can be detected could encourage bicyclists to move away from the right edge of pavement.

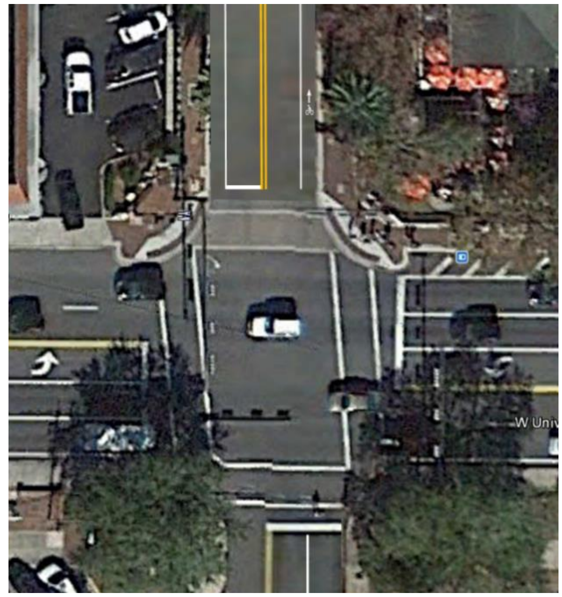

Figure 13 NW 17th Street and University Existing Markings

Figure 14 Potential Markings for NW 17th Street and SW 17th Street

The northern approach to this intersection has the bike lane striped all the way to the stop line. This solid-stripe-to-the-intersection striping is inconsistent with the MUTCD, the AASHTO *Bike Guide*,[5] and the Florida *Greenbook*.[6] Also, a solid line separating the bike lane from the general lane at an intersection discourages motorists from approaching the intersection and turning right from "as close as practicable to the right-hand curb or edge of roadway."[7] This movement to the right is required by Florida's uniform traffic laws. It also encourages bicyclists making a through movement to stay on the right side of the pavement all the way up to the intersection. The combination of these behaviors encourages "right hook" type conflicts. The (approximate) existing striping is shown in Figure 13.

The recommendation for this location is for the bike lane to be terminated in advance of the intersection and SHARED LANE MARKINGS installed on the final approach. Alternatively, the BICYCLE DETECTOR could be used instead of a SHARED LANE MARKING. Both the north and south approaches could have either marking placed at the intersection to both inform the bicyclists of where to place their bicycles to be detected by the signals and to encourage them to move their bicycles further into the through lanes. This marking pattern is shown in Figure 14. The SHARED LANE MARKING may be more familiar to Gainesville residents and thus be a better symbol to use.

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[5] AASHTO, Guide for the Development of Bicycle Facilities, 4th Ed., AASHTO, Washington, DC, 2012.

[6] FDOT, Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways, FDOT, Tallahassee, FL, 2011.

[7] Required by Section 316.151, Florida Statutes.

The advantage of the SHARED LANE MARKINGS is that they are more clearly seen by motorists and thus convey a "bikes are allowed here" message. The detector symbols are significantly smaller (see Figure 15) as they are designed for conspicuity to bicyclists, not motorists.

Discussions with City Traffic Engineering suggest that they are able to detect bicycles at this intersection using video detection. Thus, implementing this improvement would require only minimal restriping and the installation of the chosen pavement markings.

The intersection improvements described above would require the following physical improvements:

- modification of the southbound bike lane striping, and
- installation of BICYCLE DETECTION (or SHARED LANE MARKINGS) on the north and south approaches to the intersection.

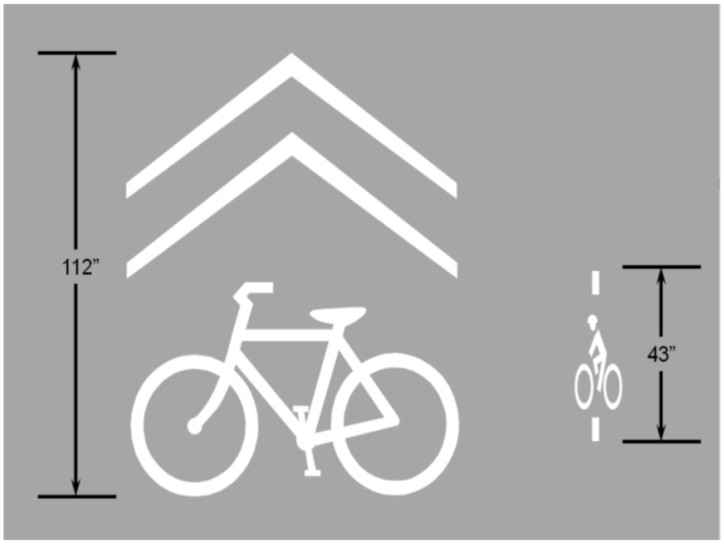

Figure 15 Relative Sizes of SHARED LANE MARKING and BICYCLE DETECTOR Symbol

Signals at Other Cross Streets

The side street signalized approaches to SR 26 at NW 17th, NW 8th, and NW 2nd were specifically mentioned during the TAC walking tour (preliminary Phase 1 field assessment) as being non-responsive to bicyclists. City staff has indicated that all signalized intersections along the corridor are capable of video detection of bicyclists. Therefore, BICYCLE DETECTOR or SHARED LANE MARKINGS should be used at all of these locations to inform bicyclists of where they need to place their bicycles to be detected by the signal system.

GALE LEMERAND DRIVE – W 13TH STREET (PEDESTRIAN/BIKEWAY CORRIDOR)

The south side of SR 26 between Gale Lemerand Drive and W 13th Street generally forms the northern boundary of the University of Florida and is an area of particularly high east-west bicycle and pedestrian activity, primarily consisting of student travel. This section of SR 26 provides non-motorized access to Ben Hill Griffin Stadium, the O'Connell Center, Library West, and multiple residence halls and classroom buildings, and also provides crossing access to key destinations on the north side of SR 26. The existing configuration of this section includes an 8-foot sidewalk located directly at the back of curb. The majority of the section also includes a second sidewalk-like facility, separated from the other sidewalk by a low brick wall and a planting strip that is located on University property. Given the lack of comfortable bicycle accommodation within University Avenue itself, each of these facilities experiences a heavy mix of bicycle and pedestrian travel, with many conflicts between the modes. This is especially true during peak travel, including on football and basketball game days, and frequently leads to the functional capacity of the sidewalk being exceeded (Figure 16).

Figure 16 Pedestrian Traffic along SR 26 on a Game Day

There are several potential options for a project that would enable the reconfiguring of the south side of SR 26 to significantly better accommodate both pedestrian and bicycle travel through this section. As part of this second study phase, three concepts/options have been developed and discussed with University staff to determine feasibility and willingness of the University to become a project partner, especially as right of way availability is limiting any other options. All of the options under consideration include improved lighting in the area (as existing lighting is blocked by the tree canopy in many locations), create chicanes at existing intersections for the campus-side facility to enhance bicycle safety, and require minor modifications to some existing parking lots. Two options leave both facilities open to bicycle and pedestrian travel but delineate (through signing and pavement markings) travel paths for each mode. Another option uses the campus-side facility for exclusive bicycle travel and the SR 26 sidewalk for exclusively pedestrian travel, and incorporates a 32-inch wall with a 2 ½-foot clear recovery zone setback from SR 26 designed to assist in channelizing pedestrians to certain SR 26 crossing locations. A conceptual rendering of this third option is shown in Figure 17, with an associated typical plan view shown in Figure 18. This design, or a hybrid approach among the proposed options, would help solve the modal conflict and facility capacity problems described above by nearly doubling functional capacity while encouraging active transportation and multi-modalism within this section of the study corridor.

As envisioned in this concept, the combined pedestrian-bikeway would include a bikeway buffer from the campus parking (textured/brick surface approximately up to 3 feet wide, providing a minimum 1 foot "shoulder" from parked vehicles' overhang); an 8 foot min. width bikeway; a min. 1 foot "shoulder" (e.g., brick surface); a landscaped median for trees, including pedestrian-scaled lighting (below the tree canopy); a pedestrian way of minimum 10 feet wide; and a 4 to 5 foot buffer to the roadway wherein is a 32-inch high (measured from roadway surface) UF campus architecturally-complementary (e.g., brick) wall with sloped top, setback at the minimum clear recovery distance of 2.5 feet from the edge of the roadway.

The intent of this project is that it would be implemented concurrently with the enhanced pedestrian crossings described in the following section; the University's partnership on the pedestrian/bikeway corridor is likely contingent on the creation of those enhanced crossings.

Figure 17 Conceptual Rendering of Potential Option for New Pedestrian/Bikeway Corridor

Figure 18 Typical Plan View of Proposed Pedestrian/Bikeway Corridor

GALE LEMERAND DRIVE – W 13TH STREET (ENHANCED PEDESTRIAN CROSSINGS)

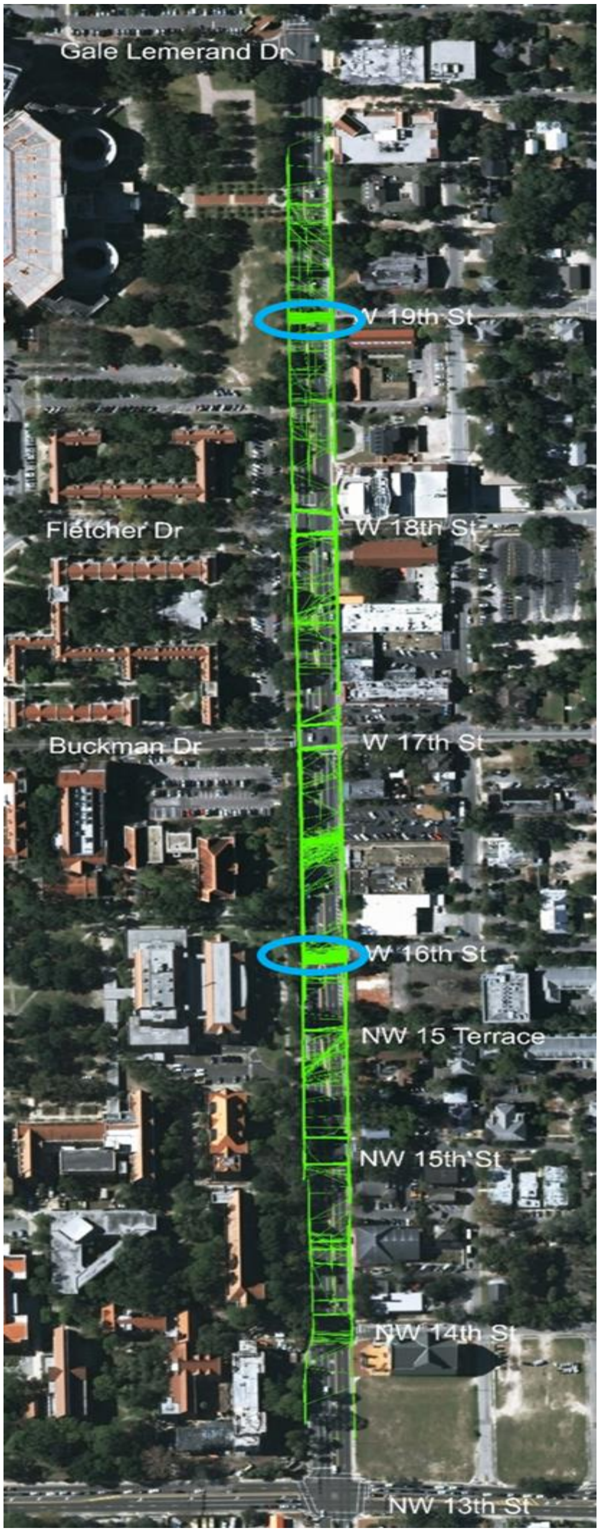

Figure 19 Pedestrian Crossing Map of SR 26 from 14th Street W to Gale Lemerand Dr

In addition to enhancing bicycle and pedestrian accommodation along SR 26, there is a desire to better accommodate pedestrian crossings of SR 26. During the TAC walking tour (preliminary Phase 1 field assessment), numerous participants reported they routinely witness pedestrian midblock crossings of this section of SR 26. The TAC members expressed the desirability of channelizing pedestrians to designated crossings, and the creation of additional controlled crossings - focusing pedestrian crossings to predictable locations.

A multi-day pedestrian mapping study, similar to those described previously in this report, was carried out to assist in identifying the need for, and appropriate locations of, enhanced crossings. The results of the study confirm the very high volume of pedestrian crossings (Figure). While crossing at midblock locations does occur frequently, the study shows that the vast majority of crossings take place at existing intersections. Two of these intersections, NW 16th Street and NW 19th Street, have been identified as the most appropriate locations for enhanced crossings. Figure 19 shows the mapped movements of 7089 of pedestrians. Of these 7089 of pedestrians, 1877 pedestrians (27%) crossed outside of designated, signalized crosswalks. Observations revealed that 630 of these uncontrolled crossings (38%) occurred at NW 16th Street and additional occurred 266 of pedestrians (14%) crossed at NW 19th Street.

Each of these potential crossing locations is more than 300 feet from the nearest signalized crossing: NW 16th is approximately 425 feet from NW 15th Street and NW 19th Street is approximately 450 feet from NW 18th Street. Given the volume of pedestrian crossings, marked pedestrian crossings without full control for pedestrians (no Don't Walk signal) could result in serious impedance to the motorist flows. For example, if a RECTANGULAR RAPID FLASHING BEACON is installed at NW 16th Street, it is likely to be activated nearly continuously. A more positive form of traffic control, PEDESTRIAN HYBRID BEACON, creates a defined period when pedestrians cannot legally enter the crosswalk. This allows for the pedestrian crossings to be timed to better accommodate vehicular flows. Alternatively, a full signal could be evaluated for these locations.

The FHWA Manual on Uniform Traffic Control Devices states in a guidance section that "*The pedestrian hybrid beacon should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs."* This statement falls under guidance and not standard, and, in fact, many Pedestrian Hybrid Beacons have been placed adjacent to stop controlled intersections. However, it may be that the FDOT would prefer to fully signalize these intersections instead of providing the hybrid beacon.

TRANSIT SHELTERS AND BENCHES (CORRIDOR-WIDE)

Phase 1 of this study identified various bus stop locations that would justify added stop amenities, in particular shelters or benches based on the warrants established by RTS. This section further reviews each candidate stop for improvements and identifies opportunities and constraints to the provision of added passenger amenities.

The FDOT *Accessing Transit Design Handbook*[8] provides guidance to state and local governments and transit agencies in the location, design, and installation of transit facilities consistent with state and federal laws, regulations, and best practices. Sections 2.1 and 2.2 identify general design criteria for bus stop benches and bus stop shelters. If implementation of the recommendations in this section moves forward, close coordination with the FDOT Maintenance office (for permitting) and the FDOT Traffic Operations office should occur.

Bus Stop Benches

Bus stop benches provide comfort for waiting passengers and help identify bus stops. Benches are recommended when a shelter with seating is not provided and if bus headways are longer than 15 minutes. According to the *Handbook*, "Bench placement must be in an accessible location … and appropriately connected to the path of travel on an accessible path to the bus boarding and alighting (B&A) area." Furthermore, bench placement "shall leave clearance for pedestrian traffic" and sidewalk width adjacent to benches "shall never be less than 5 feet in clear width." Benches "should be set back at least 10 feet from the travel lane in curbed sections," while "Unsheltered benches may be provided … in high-use areas that are unsuitable for shelters because of high levels of pedestrian movement in a small area." Table 4 summarizes the major design criteria for bus stop benches according to the *Accessing Transit Design Handbook.*

Table 4. Bus Stop Benches Criteria

Criteria	Description
Bus headways	Longer than 15 min
Placement	Connected to accessible path to B&A area
Sidewalk	Never be less than 5 feet
Set back	At least 10 feet from travel lane in curb section

Bus Stop Shelters

Shelters provide a comfortable waiting area for passengers and protect them from exposure to the sun, rain and heavy wind. Shelters also enhance the image of the transit service and help provide a more convenient overall transit experience.

The decision to place a bus shelter should be made based on a number of factors, including ridership, location, and route connectivity. Shelters should not be obstructive to pedestrian circulation and should be easily detectable to persons with visual impairments. The location of shelters should also minimize walking distance for passengers.

[8] *FDOT Accessing Transit Design Handbook for Florida Bus Passenger Facilities. Version III, 2013*

The size and design of shelters varies with the number of boardings at a bus stop and space availability. Shelters should be at a minimum distance of 5 feet from the front door of the bus to provide adequate circulating space for persons in wheelchairs while not obstructing the B&A area. A minimum distance of 5 feet between the face of the curb and the roof panels of the shelter should be maintained to allow clear passage of the bus (*FDOT Accessing Transit Design Handbook for Florida Bus Passenger Facilities. Version III, 2013*). Table 5 summarizes the major design criteria for bus stop benches according to the *Accessing Transit Design Handbook.*

Table 5. Bus Stop Shelters Criteria

Criteria	Description
Bus Service	Stop having service a minimum of 10 times in a 5-day period
Placement	Do not obstruct pedestrian circulation and easily detectable to persons with visual impairments
Sidewalk	Never be less than 5 feet wide
Setback	At a minimum distance of 5 feet between the face of the curb and the roof panels

Bus Stop Lighting

Lighting is the most critical factor in crime prevention. Bus passenger facilities that offer nighttime services should have an optimum level of lighting incorporated into the design of the facility. Adequate lighting greatly influences safety and passenger perception of safety. Local transit stops should be located within 30 feet of an overhead light source.

SR 26/University Avenue Bus Stops

RTS currently has a competitive bid, annual amenities contract with Tolar Manufacturing for three types of bus stop shelters with dimensions summarized in Table 6. The Community Redevelopment Agency (CRA), however, has design recommendations that promote Landscape Forms amenities in this area of the City.

Table 6. RTS Bus Stop Shelter Dimensions

Type	Shelter Dimensions	Concrete Pad Dimensions
9’ low dome	9 feet by 5 feet by 8 feet height	10 feet by 6 feet
13’ low dome	13 feet by 5 feet by 8 feet height	14 feet by 6 feet
17’ with screens	17 feet by 5 feet by 8 feet height	18 feet by 6 feet

Figures 20 and 21 show typical configurations of a small RTS bus stop shelter.

Figure 20 Photo of existing shelter at RTS stop located on westbound SR 26 at NW 14th Street

Figure 21 Photo of existing shelter at RTS stop located on eastbound SR 26 at SW 6th Street

RTS has established warrants to help establish the need for shelters and benches at bus stops. For a shelter, a minimum of 36 passenger boardings a day is required, while for benches, a minimum of 15 boardings a day is required. Based on these warrants, the following bus stop locations were examined during a field review to evaluate the feasibility of installing the identified passenger amenities:

Bus Stop Shelters

- Westbound SR 26 at NW 17th Street
- Westbound SR 26 at NW 16th Street
- Westbound SR 26 at NW 13th Street
- Westbound SR 26 at NW 10th Street
- Westbound SR 26 at NW 6th Street
- Westbound SR 26 at NE 1st Street
- Eastbound SR 26 at Buckman Drive
- Eastbound SR 26 at NW 15th Street
- Eastbound SR 26 at SW 13th Street

Bus Stop Benches

- Westbound SR 26 at NW 7th Terrace
- Eastbound SR 26 at Gale Lemerand Drive
- Eastbound SR 26 at Fletcher Drive
- Eastbound SR 26 at SW 9th Terrace

Figure 22 shows the location of the bus stops identified for passenger amenities improvements.

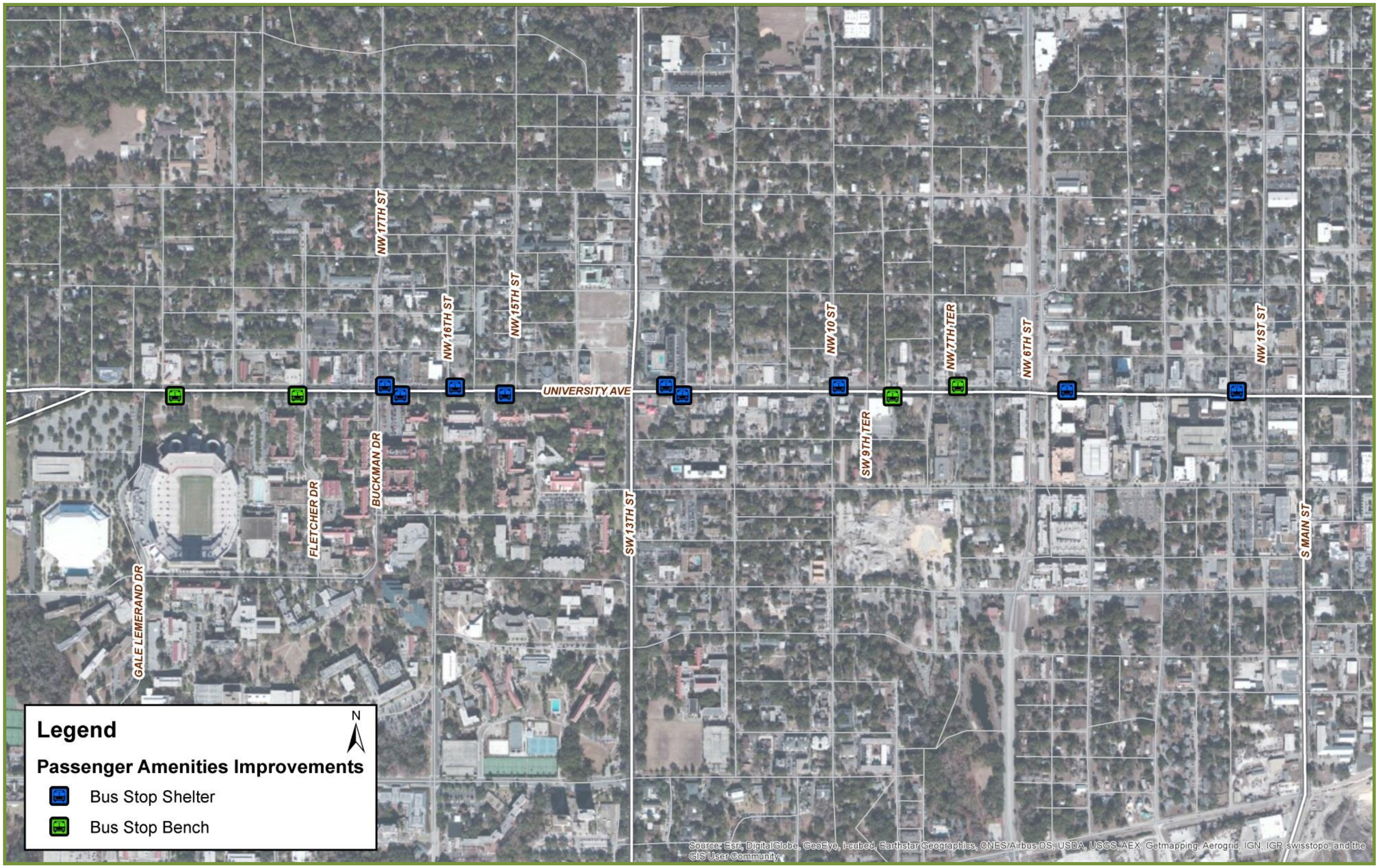

Figure 22 Bus Stops Identified For Passenger Amenities Improvements

Bus Stop Shelters Feasibility

Westbound SR 26 at NW 17th Street

This RTS stop serves the University of Florida area. It is located in an area with high pedestrian activity and limited space between the curb and the adjacent property (Figure 23). A restaurant operates in the adjacent property and offers outdoor seating presenting a constraint for the installation of a bus stop shelter at this location.

The adjacent striped area between the travel lane and the curb is approximately 8 feet wide and offers the opportunity to develop a curb extension or bus bulb; this treatment would extend the sidewalk providing added space for pedestrians and the installation of a bus shelter. The current sidewalk configuration does not provide space for installing a bus shelter and keep the minimum requirement for minimum distance of 5 feet between the face of the curb and the edge of shelter.

This stop is located about 80 feet away from the nearest overhead light source. There is no opportunity, with the existing stop layout, to locate the stop closer to the overhead light due to the proximity to the crosswalk and intersection. Therefore, the level of lighting is not adequate and the installation of a lighted shelter is recommended.

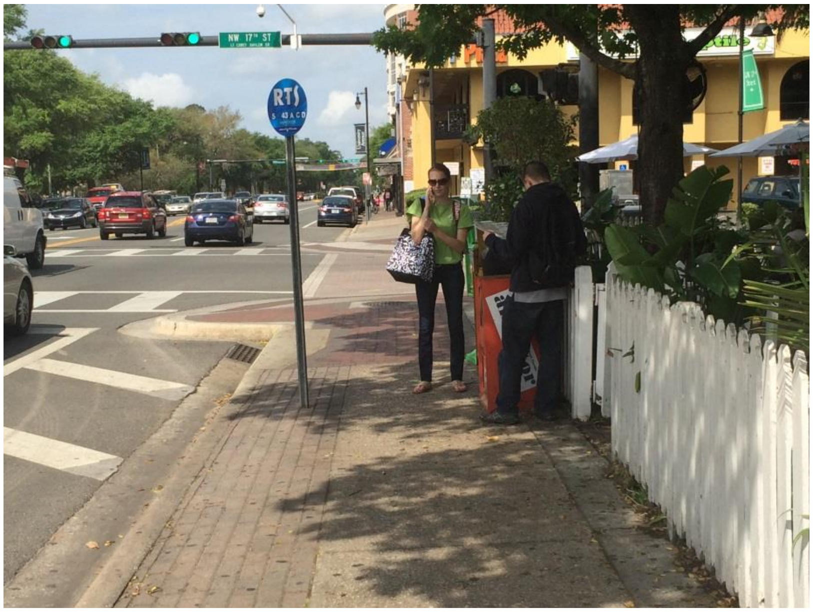

Figure 23 Photo looking west from RTS stop located on westbound SR 26 at NW 17th Street

Westbound SR 26 at NW 16th Street

This RTS stop serves the University of Florida area. There is limited space between the curb and the adjacent property line (Figure 24). The grass area between the sidewalk and the fence could represent an opportunity for the implementation of a bus stop shelter; however, costs for a property easement or acquisition will have to be considered. RTS has indicated that the need for a shelter installation has been identified but an easement was not granted by property owner. RTS has also requested authorization from FDOT for installation of a bus stop shelter on the sidewalk.

The adjacent striped area between the travel lane and the curb is approximately 8 feet wide and offers the opportunity to develop a bus bulb. This treatment would extend the sidewalk providing added space for pedestrians, quicker boarding, and opportunity for installation of a bus shelter within the right of way which will eliminate the need to incur added costs for a property easement or acquisition.

This stop is located about 10 feet away from the nearest overhead light source. However, the roof of the shelter could block the light and the installation of a lighted shelter is recommended.

Figure 24 Photo looking north from across SR 26 to RTS stop located on westbound SR 26 at NW 16th Street

Westbound SR 26 at NW 13th Street

This RTS stop serves a commercial area in the vicinity of the University of Florida. There is limited space between the curb and the adjacent property line. The grass area behind the sidewalk could present an opportunity for the implementation of a bus stop shelter that would require further engineering analysis to determine the need for a short retaining wall because of the grade differential (Figure 25).

East of the existing bench location the grass area becomes relatively flat west of the adjacent property driveway. This could present an opportunity for installing a bus stop shelter without the need for a retaining wall, but further analysis will be required to determine if a shelter in that location would introduce a sight distance constraint to vehicles exiting the driveway. Costs for a property easement or acquisition should also be evaluated since this grass area is not located within the right-of-way limits.

This stop is located about 30 feet away from the nearest overhead light source. However, the roof of the shelter could block the light and the installation of a lighted shelter is recommended.

Figure 25 Photo looking east from RTS stop located on westbound SR 26 at NW 13th Street

Westbound SR 26 at NW 10th Street

This RTS stop serves a commercial area. There is limited space in the grass area where the existing bench is located, with a large rock directly behind the bench (Figure 26). The adjacent business is currently vacant but the business is being advertised by a real estate company (Figure 27). Installation of a shelter at this location is problematic, with the required rock removal and proximity of an existing tree and signal pole.

Moving the bus stop to the east in between the entering and exiting driveway where there is more adequate spacing for the installation of a bus shelter should be considered. The grass area behind the sidewalk at this location is located within the limits of the adjacent property; therefore, costs for a property easement or acquisition should also be evaluated.

This stop is located next to an overhead light source and thus the level of lighting is adequate. If the stop were to be moved as recommended for the shelter installation, there is another overhead lighting source; however, the roof of the shelter could block the light and the installation of a lighted shelter is recommended.

Figure 26 Photo looking west from RTS stop located on westbound SR 26 at NW 10th Street

Figure 27 Photo looking east between the entering and exiting driveway next to RTS stop located on westbound SR 26 at NW 10th Street

Westbound SR 26 at NW 6th Street

This RTS stop serves a commercial area. The space between the curb and the adjacent property fence provides the opportunity for the installation of a bus shelter in the existing bench area that can extend into the sidewalk if needed (Figure 28).

This stop is located about 15 feet away from the nearest overhead light source. However, the existence of an extensive tree canopy could block the light and the installation of a lighted shelter is recommended.

Figure 28 Photo looking east from RTS stop located on westbound SR 26 at NW 6th Street

Westbound SR 26 at NW 1st Street

This RTS stop serves the Office of State Attorney building. The space between the curb and the building is limited as the building edge directly abuts the back of sidewalk, and there is not adequate space for installation of a bus shelter outside of the outer building edge (Figure 29). This stop is located next to an overhead light source; the level of lighting is adequate.

Two opportunities for a shelter installation have been identified at this location:

- Move the bus stop to the east where there is a building opening area of about 9 feet long as shown in Figure 30. However, the spacing is not adequate for the shelter concrete pad required for the smallest RTS shelter. The possibility of hanging an awning off the building should be further evaluated. The awning could block the light and the installation of additional lighting is recommended.
- Move the bus stop further to the east next to the parking lot area shown in Figure 31. The space between the curb and the parking lot provides the opportunity for the installation of a bus shelter that can extend into the sidewalk if needed, which could require an easement. There is an existing historical marker in the grass area that might have to be relocated slightly to the east to accommodate a shelter; there is sufficient curb space to accommodate a bus at this new location. There is an overhead light source at this location; however, the roof of the shelter could block the light and the installation of a lighted shelter is recommended.

Figure 29 Photo looking east from RTS stop located on westbound SR 26 at NW 1st Street

Figure 30 Photo looking east to building opening area next to RTS stop located on westbound SR 26 at NW 1st Street

Figure 31 Photo looking east parking lot area next to RTS stop located on westbound SR 26 at NW 1st Street

Eastbound SR 26 at Buckman Drive

This RTS stop serves the University of Florida area. It is located in an area with high pedestrian activity. The existing benches are located within an existing easement that provides adequate space for a shelter installation (Figure 32). Further analysis will be needed to determine the need for a concrete pad that would require the removal of part of the brick pavers at this location. Other RTS stops have shelters bolted to brick pavers but the design will need to be approved by the University of Florida. Discussions with the University of Florida are ongoing regarding the approval of installation of a bus stop shelter at this location.

This stop is located about 100 feet away from the nearest overhead light source. Therefore, the level of lighting is not adequate and the installation of a lighted shelter is recommended.

Figure 32 Photo looking west from RTS stop located on eastbound SR 26 at Buckman Drive

Eastbound SR 26 at NW 15th Street

This RTS stop serves the University of Florida area (Figure 33). There is a similar opportunity for installation of a bus stop shelter at this location as observed at the RTS stop located on eastbound SR 26 at Buckman Dr.

This stop is located about 12 feet away from the nearest overhead light source but the presence of extensive tree canopy could block the light. Therefore, the installation of a lighted shelter is recommended.

Figure 33 Photo looking west from RTS stop located on eastbound SR 26 at NW 15th Street

Eastbound SR 26 at SW 13th Street

This RTS stop serves a commercial area. There is limited space within the sidewalk area the bus stop is located (Figure 34). Bicycle racks that do not present evidence of being used are located in the adjacent grass area and could be removed to provide space for a bus stop shelter installation (Figure 35).

Further analysis will be required to determine if placement of a shelter would pose any sight distance constraint to vehicles exiting the adjacent parking area. Costs for a property easement or acquisition should also be evaluated. The adjacent striped area between the travel lane and the curb offers the opportunity to develop a bus bulb. This treatment would extend the sidewalk providing added space for pedestrians, quicker boarding, and opportunity for installation of a bus shelter within the right of way.

This stop is located about 30 feet away from the nearest overhead light source but the roof of the shelter could block the light. Therefore, the installation of a lighted shelter is recommended.

Figure 34 Photo looking east from RTS stop located on eastbound SR 26 at SW 13th Street

Figure 35 Photo looking west from RTS stop located on eastbound SR 26 at SW 13th Street

Bus Stop Benches Feasibility

Westbound SR 26 at NW 7th Terrace

This RTS stop serves a commercial area. There is adequate space within the sidewalk for a bus stop bench placement (Figure 36). Considerations to move the bus stop more towards the east away from the intersection for passenger safety is recommended. RTS indicates the bus currently stops to pick up passengers prior to the RTS bus stop sign; the sign location was chosen because it was the only location that did not require drilling the sign into concrete.

This stop is located about 60 feet away from the nearest overhead light source. Therefore, the level of lighting is not adequate and the installation of a new overhead light source no more than 30 feet from the bus stop is needed.

Figure 36 Photo looking west from RTS stop located on westbound SR 26 at NW 7th Terrace

Eastbound SR 26 at Gale Lemerand Drive

This RTS stop serves the University of Florida area (Figure 37). It is located in an area with high pedestrian activity. The existing bench does not meet ADA requirements. Moving the bench closer to the existing bus stop and providing a pad will give better accessibility for passengers. Discussions with the University of Florida are ongoing regarding the approval of movement of the bench at this location.

This stop is located about 15 feet away from the nearest overhead light source but the presence of an existing tree canopy could block the light. Therefore, the level of lighting might not be adequate.

Figure 37 Photo looking east from RTS stop located on eastbound SR 26 at Gale Lemerand Drive

Eastbound SR 26 at Fletcher Drive

This RTS stop serves the University of Florida area. It is located in an area with high pedestrian activity. There is an existing seat wall that serves as a seating area for RTS passengers (Figure 38). The seat wall does not meet ADA requirements. Installation of a bench at this location should consider effects on sidewalk capacity and should be done with consideration of the pedestrian pedestrian/bikeway corridor described previously in this study.

There is an overhead light source located behind to the RTS stop; however, the luminaria is directed to the parking lot area. Therefore, the level of lighting might not be adequate.

Figure 38 Photo looking east from RTS stop located on eastbound SR 26 at Fletcher Drive

Eastbound SR 26 at 9th Terrace

This RTS stop serves a commercial area. The grass area behind the sidewalk provides an opportunity for a bus stop bench installation (Figure 39). However, this grass area is located within the limits of the adjacent property and costs for a property easement or acquisition should be evaluated. The existing sidewalk provides opportunity to install a new bus stop bench with sufficient clearance still provided.

The adjacent striped area between the travel lane and the curb offers the opportunity to develop a bus bulb. This treatment would extend the sidewalk providing added space for pedestrians, quicker boarding, and opportunity for installation of a bus bench.

This stop is located about 30 feet away from the nearest overhead light source. Therefore, the level of lighting is adequate.

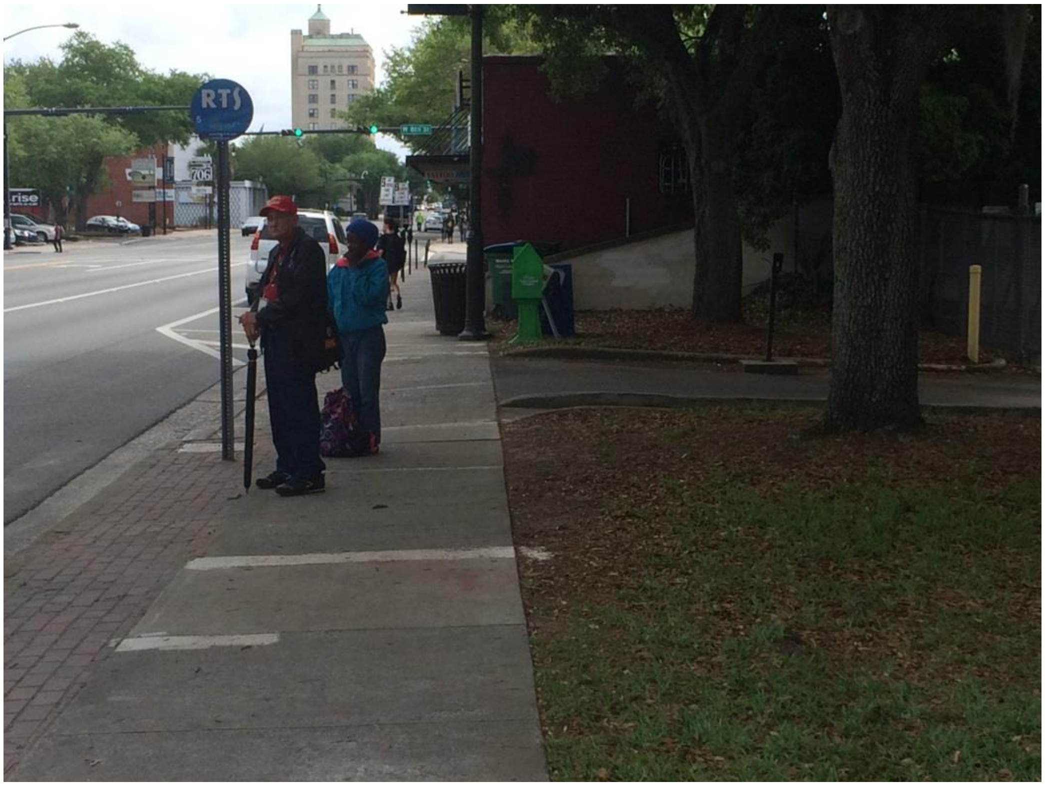

Figure 39 Photo looking east from RTS stop located on eastbound SR 26 at 9th Terrace

SUMMARY OF RECOMMENDATIONS

The recommendations associated with the bicycle- and pedestrian-oriented projects are summarized in Table 7. Table 8 summarizes the recommendations for bus stop amenities.

Table 7. Summary of Recommendations

Location	Project Type	Recommendations
Waldo Rd	Pedestrian-oriented intersection design	• reconstruct radii (NW and SW) • modify drainage structures (NW and SW) • install channelization island (SE) • reconstruct channelization island (SW) • traffic signal adjustments (SE) • add signing (SE and SW) • replace crosswalk markings (E)
E 7th St – E 10th St	Raised median	• install three new medians • extend one existing median
NE Blvd	Enhanced pedestrian crossing	• no recommendations at this time
E 1st St – E 3rd St	Midblock pedestrian crossing	• install designated crosswalk (likely Rectangular Rapid Flashing Beacon) • advance stop bars • crosswalk signing and marking • median and roadside curb ramps
W 13th St and Main St	On-demand right turn on red restriction	• re-program signals to make restriction on demand for pedestrians
NW 17th St and Corridor-Wide	Bicycle striping and signal detection	• restripe bike lane on southbound approach • add Shared Lane Marking on both approaches to aid in signal detection of bicycles (also applies to other signalized side streets)
Gale Lemerand Dr – W 13th St	Pedestrian/Bikeway Corridor (in concert with enhanced pedestrian crossings below)	• modify existing SR 26 sidewalk and campus-side sidewalk to create pedestrian/bikeway corridor • install pedestrian-scale lighting • parking lot modifications • conduct corridor alignment plan to refine project specifics
Gale Lemerand Dr – W 13th St	Enhanced pedestrian crossings	• install new pedestrian crossings at NW 16th Street and NW 19th Street

Table 8. Recommended Bus Stop Amenity Improvements

RTS Stop	Recommendations
Westbound SR 26 at NW 17th Street	Bus bulb and lighted bus stop shelter
Westbound SR 26 at NW 16th Street	Bus bulb and lighted bus stop shelter
Westbound SR 26 at NW 13th Street	Lighted bus stop shelter east of existing stop
	Property easement or acquisition needed
	Further evaluate sight distance constraints
Westbound SR 26 at NW 10th Street	Lighted bus stop shelter east of existing stop between entering and exiting driveway
	Property easement or acquisition needed
Westbound SR 26 at NW 6th Street	Lighted bus stop shelter
	Property easement or acquisition needed
Westbound SR 26 at NW 1st Street	Lighted bus stop shelter east of existing stop; two alternate locations
Eastbound SR 26 at Buckman Drive	Lighted bus stop shelter
Eastbound SR 26 at NW 15th Street	Lighted bus stop shelter
Eastbound SR 26 at SW 13th Street	Remove existing bike racks
	Bus bulb and lighted bus stop shelter
	Further evaluate sight distance constraints
Westbound SR 26 at NW 7th Terrace	Bus stop bench; move stop towards east away from intersection
Eastbound SR 26 at Gale Lemerand Drive	Move bus stop bench closer to RTS stop and provide concrete pad
Eastbound SR 26 at Fletcher Drive	Bus stop bench and provide better lighting source directed to RTS stop
Eastbound SR 26 at 9th Terrace	Bus bulb and bus stop bench

PLANNING COST ESTIMATES

General awareness of anticipated costs associated with implementing the projects described in this report will be useful as the projects programmed for implementation (via the MTPO's Long Range Transportation Plan, FDOT's Five-Year Work Program, or some other source). Planning-level project cost estimates are shown in Table 9; Appendix A provides the construction cost details. Two projects, NE Boulevard (no recommended improvements at this time) and Right Turn on Red restrictions at Main Street and W 13th Street (potential City of Gainesville task) do not have associated costs. The pedestrian-oriented intersection improvements at Waldo Road are broken into two separate cost estimates for the two potential implementation stages described in that section of the report.

Table 9. Summary of Project Costs

PROJECT	Cost Summaries: Waldo Road — Pedestrian-oriented intersection design (interim)	Waldo Road — Pedestrian-oriented intersection design (complete)	E 7th St - E 10 St — Raised Median	E 1st St - E 3rd St — Midblock pedestrian crossing	NW 17th St and Corridor-Wide — Bicycle striping and signal detection	Gale Lemerand Dr - W 13th St — Pedway/Bikeway	Gale Lemerand Dr - W 13th St — Enhanced pedestrian crossings	Corridor-Wide — Transit shelters and benches
Construction (see Appendix A for more detail)	$ 23,220	$ 197,727	$ 185,134	$ 30,824	$ 7,924	$ 2,176,165	$ 684,638	$ 377,410
Corridor Alignment Planning	$ -		$ -	$ -	$ -	$ 150,000	$ -	$ -
Preliminary Engineering/Design								
(24% Construction Cost)	$ 5,573	$ 47,454	$ 44,432	$ 7,398	$ 1,902	$ 522,280	$ 164,313	$ 90,578
Construction Inspection (CEI)								
(18% Construction Cost)	$ 4,180	$ 35,591	$ 33,324	$ 5,548	$ 1,426	$ 391,710	$ 123,235	$ 67,934
R/W Acquisition	$ -		-	-	$ -	$ -	$ -	$ 60,000
Permitting	$ -	$ 1,500	$ 500	$ -	$ -	$ 1,500	$ 1,000	$ 1,000
SUBTOTAL	$ 32,972	$ 282,272	$ 263,390	$ 43,771	$ 11,251	$ 3,241,654	$ 973,186	$ 596,922
PRORATED COST INCREASE (10%)	$ 3,297	$ 28,227	$ 26,339	$ 4,377	$ 1,125	$ 324,165	$ 97,319	$ 59,692
GRAND TOTAL	**$ 36,270**	**$ 310,499**	**$ 289,729**	**$ 48,148**	**$ 12,377**	**$ 3,565,820**	**$ 1,070,505**	**$ 656,614**

Appendix A: **Cost Estimate Details**

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SR 26/University Ave Multimodal Emphasis Corridor Study Waldo Road Pedestrian-Oriented Intersection Design (Interim)		
DESCRIPTION	ESTIMATE BASIS	AMOUNT
MOBILIZATION	15% OF CONST. COST	$825
MAINTENANCE OF TRAFFIC	15% OF CONST. COST	$825
ENVIRONMENTAL (SILT BARRIERS, HAY, ETC.)	0.75% OF CONST. COST	$41
STRIPING & SIGNAGE	500 FT @ $5.00/FT	$2,500
SIGNALIZATION	2 PED BUTTONS @ $1500 EA	$3,000
CURBING TYPE F		
TRAFFIC ISLANDS (CONCRETE)	200 SY @ $65/SY	$13,000
SUBTOTAL		$20,191
CONTINGENCY	15% OF CONST. COST	$3,029
TOTAL CONST. ESTIMATE		**$23,220**

**NOTE: THIS OPINION OF COST IS BASED ON MODIFICATIONS
TO THE SE CORNER ONLY

SR 26/University Ave Multimodal Emphasis Corridor Study Waldo Road Pedestrian-Oriented Intersection Design (Complete)		
DESCRIPTION	ESTIMATE BASIS	AMOUNT
MOBILIZATION	15% OF CONST. COST	$19,725
MAINTENANCE OF TRAFFIC	15% OF CONST. COST	$19,725
ENVIRONMENTAL (SILT BARRIERS, HAY, ETC.)	0.75% OF CONST. COST	$986
ASPHALT PAVEMENT (BASE, STRUCTURAL, FRICTION COURSE	75 TNS @ $200/TN	$15,000
DRAINAGE STRUCTURES	3 @$6000 EA	$18,000
PIPE	100 FT @$75/FT	$7,500
CLEARING & GRADING (ROADWAY)	.25 ACRES @ $20,000/ACRE	$5,000
STRIPING	2000 FT @ $5.00/FT	$10,000
SIGNALIZATION	4 PED BUTTONS @ $1500 EA	$6,000
CURBING TYPE F	750 FT @ $30/FT	$22,500
TRAFFIC ISLANDS (CONCRETE)	600 SY @ $65/SY	$39,000
GRASSING (SOD)	1500 SY @ $3.00 /SY	$4,500
UTILITY ADJUSTMENTS/RELOCATIONS	2 DECORATIVE LIGHT POLES @ $2000 EA	$4,000
SIGNAGE	2 ADDITIONAL SIGNS @ $500 EA	$1,000
SUBTOTAL		$171,936
CONTINGENCY	15% OF CONST. COST	$25,790
TOTAL CONST. ESTIMATE		**$197,727**

**NOTE: THIS OPINION OF COST IS FOR THE NW AND SW CORNERS ONLY

SR 26/University Ave Multimodal Emphasis Corridor Study East 7th to East 10th Raised Medians		
DESCRIPTION	ESTIMATE BASIS	AMOUNT
MOBILIZATION	15% OF CONST. COST	$18,469
MAINTENANCE OF TRAFFIC	15% OF CONST. COST	$18,469
ENVIRONMENTAL (SILT BARRIERS, HAY, ETC.)	0.75% OF CONST. COST	$923
CLEARING & GRADING (ROADWAY)	0.5 ACRES @ $20,000/ACRE	$10,000
STRIPING & SIGNAGE	3500 FT @ $5.00/FT	$17,500
CURBING TYPE E	2000 FT @ $30/FT	$60,000
6' TRAFFIC SEPARATORS (CONCRETE)	625 FT @ $45/FT	$28,125
GRASSING (SOD)	2000 SY @ $3.00 /SY	$6,000
UTILITY ADJUSTMENTS/RELOCATIONS	ADJUST 3 MANHOLES @ $500 EA	$1,500
SUBTOTAL		$160,986
CONTINGENCY	15% OF CONST. COST	$24,148
TOTAL CONST. ESTIMATE		**$185,134**

SR 26/University Ave Multimodal Emphasis Corridor Study E 1st to E 3rd Midblock Pedestrian Crossing		
DESCRIPTION	ESTIMATE BASIS	AMOUNT
MOBILIZATION	15% OF CONST. COST	$3,075
MAINTENANCE OF TRAFFIC	15% OF CONST. COST	$3,075
ENVIRONMENTAL (SILT BARRIERS, HAY, ETC.)	0.75% OF CONST. COST	$154
SIGNAGE	2 SIGNS @ $300 EA	$600
STRIPING	200 FT @ $5.00/FT	$1,000
SIGNALIZATION	2 RRFB @ $7000 EA	$14,000
CONCRETE ADA RAMPS	35 SY @ $40/SY	$1,400
UTILITY ADJUSTMENTS/RELOCATIONS	ELECTRICAL SERVICE	$3,500
SUBTOTAL		$26,804
CONTINGENCY	15% OF CONST. COST	$4,021
TOTAL CONST. ESTIMATE		**$30,824**

SR 26/University Ave Multimodal Emphasis Corridor Study NW 17th and Corridor-Wide Bicycle Striping and Signal Detection		
DESCRIPTION	ESTIMATE BASIS	AMOUNT
MOBILIZATION	15% OF CONST. COST	$795
MAINTENANCE OF TRAFFIC	15% OF CONST. COST	$795
PAVEMENT MARKING REMOVAL	400 FT @ $5/FT	$2,000
RESTRIPING (INCLUDES SHARED LANE SYMBOLS)	200 FT STRIPING	$1,400
SHARED LANE SYMBOLS	15 INTERSECTIONS (2 PER INT.)	$1,500
SIGNAGE	2 SIGNS AT $200 EA	$400
SUBTOTAL		$6,890
CONTINGENCY	15% OF CONST. COST	$1,034
TOTAL CONST. ESTIMATE		**$7,924**

SR 26/University Ave Multimodal Emphasis Corridor Study Gale Lemerand to W 13th Pedway/Bikeway		
DESCRIPTION	ESTIMATE BASIS	AMOUNT
MOBILIZATION	15% OF CONST. COST	$202,350
MAINTENANCE OF TRAFFIC	15% OF CONST. COST	$202,350
ENVIRONMENTAL (SILT BARRIERS, HAY, ETC.)	0.75% OF CONST. COST	$10,118
DEMOLITION	10000 SY @ $2.50/SY	$25,000
CONCRETE PAVEMENT (SIDEWALK)	5000 SY @ $35/SY	$175,000
BRICK PAVERS	3000 SY @ $60/SY	$180,000
STEM WALLS (CONC W/ BRICK FACING)	2500 FT @ $175/FT	$437,500
RELOCATE TREES	5 @ $1000 EA	$5,000
PAVEMENT SYMBOLS	100 SHARROWS @ $50 EA	$5,000
STRIPING (EDGELINE, CROSS WALKS, STOP BARS)	4500 FT @ $5.00/FT	$22,500
DRAINAGE CATCH BASINS	12 INLETS AT $3500 EA	$42,000
STORMSEWER PIPE (18" RCP)	2500 FT @ $60/FT	$150,000
GRASSING (SOD)	4000 SY @ $3.00/SY	$12,000
LIGHTING (10 FT HEIGHT)	80 DECORATIVE LIGHTS @ $4000 EA	$320,000
BIKEWAY-PEDWAY INTERIOR SEATING	VARIOUS LOCATIONS	$25,000
WHEELSTOPS	50 @ $150 EA	$7,500
PARKING LOT RE-STRIPING (EAST OF FLETCHER)	1500 FT @ $4/FT	$6,000
PARTIAL RECONSTRUCTION OF PARKING (WEST OF FLETCHER)	RELOCATE CURB/SIDEWALK/PAVEMENT	$65,000
SUBTOTAL		$1,892,318
CONTINGENCY	15% OF CONST. COST	$283,848
TOTAL CONST. ESTIMATE		**$2,176,165**

**NOTE: OPINION OF COST IS BASED ON A TWELVE FT WIDE TWO-WAY BIKE PATH ADJACENT TO CAMPUS PARKING, A TWELVE FOOT WIDE PEDESTRIAN PATH ADJACENT TO EASTBOUND UNIVERSITY AVE. WITH A STEM WALL AND AN EIGHT FOOT WIDE LANDSCAPE/HARDSCAPE PLAZA AREA BETWEEN THE TWO PATHWAYS. PROJECT LENGTH IS ESTIMATED AT 3250'.

SR 26/University Ave Multimodal Emphasis Corridor Study Gale Lemerand to W 13th Enhanced Pedestrian Crossings		
DESCRIPTION	ESTIMATE BASIS	AMOUNT
MOBILIZATION	15% OF CONST. COST	$68,299
MAINTENANCE OF TRAFFIC	15% OF CONST. COST	$68,299
ENVIRONMENTAL (SILT BARRIERS, HAY, ETC.)	0.75% OF CONST. COST	$3,415
CONCRETE SIDEWALK (RAMPS)	4 LOCATIONS (10 SY EA) @ $35/SY	$1,575
DEMOLITION	.25 ACRES @ $10,000/ACRE	$2,500
STRIPING & SIGNAGE	5000 FT @ $5.00/FT	$25,000
SIGNALIZATION (COMPLETE)	2 INTERSECTIONS @ $200,000 EA	$400,000
CONC TRAFFIC SEPARATOR (2' WIDE)	650 FT @ $35/FT	$22,750
UTILITY ADJUSTMENTS/RELOCATIONS	INSTALL POWER FEED (2)	$3,500
SUBTOTAL		$595,337
CONTINGENCY	15% OF CONST. COST	$89,301
TOTAL CONST. ESTIMATE		**$684,638**

**NOTE: OPINION OF COST IS CONSERVATIVELY BASED ON COMPLETE INSTALLATION OF MAST ARM SIGNALS AT THE INTERSECTIONS OF NW 16TH AND NW 19TH.

SR 26/University Ave Multimodal Emphasis Corridor Study Corridor-Wide Transit Shelters and Benches		
DESCRIPTION	ESTIMATE BASIS	AMOUNT
MOBILIZATION	15% OF CONST. COST	$37,650
MAINTENANCE OF TRAFFIC	15% OF CONST. COST	$37,650
ENVIRONMENTAL (SILT BARRIERS, HAY, ETC.)	0.75% OF CONST. COST	$1,883
BUS BULB (INCL DEMO AND NEW CURB/PAVEMENT/SIDEWALK)	3 LOCATIONS @ $15,000 EA	$45,000
LIGHTED BUS SHELTER (17X5X8)	9 LOCATIONS @ $20,000 EA	$180,000
BUS STOP BENCH	3 @ $2500 EA	$7,500
RELOCATE BENCH AND POUR PAD	1 @ $2000 EA	$2,000
LIGHTING	3 LOCATIONS @ $5000 EA	$15,000
GRASSING (SOD)	3 LOCATIONS @ $500 EA	$1,500
SUBTOTAL		$328,183
CONTINGENCY	15% OF CONST. COST	$49,227
TOTAL CONST. ESTIMATE		**$377,410**

**NOTE: ADDITIONAL R/W MAY BE REQUIRED AT 3 LOCATIONS. ACQUISITION COSTS ARE REFLECTED ON SUMMARY PAGE AND ARE ESTIMATED AT $20,000 EACH.

Appendix B: **Phase 1 Report**

Prepared for the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area

in association with Genesis and Parsons Brinckerhoff

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SR 26 / University Avenue Multimodal Emphasis Corridor Study

Phase 1 Report

December 1, 2014

Prepared for:

Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area

Submitted by:

Sprinkle CONSULTING
Active Transportation Planners+Engineers

in association with Genesis and Parsons Brinckerhoff

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Prepared for the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area

Sprinkle Consulting — Active Transportation Planners • Engineers

in association with Genesis and Parsons Brinckerhoff

EXECUTIVE SUMMARY

This report summarizes the first phase of a Multimodal Emphasis Corridor Study for State Road 26 (University Avenue) in Gainesville, Florida. The purpose of this study is to identify specific projects within the corridor that will improve multimodal operating conditions. The study is being conducted for the Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area using funding supplied by the Florida Department of Transportation District 2. This Phase 1 report includes the following sections:

- Study Introduction;
- Background and Scope of the Study;
- Existing Conditions (fully described in Appendix A of the report);
- Summary of Stakeholder and Public Input;
- Preliminary Identification of Potential Design Elements/Projects, discussed in a generally west-to-east sequence, including a preliminary project listing (Table 1);
- Preliminary Ranking of Potential Projects, including an associated table (Table 2);
- Final Phase 1 Projects: a consolidated listing of viable projects (Table 3), a subset of which have been identified for further development, refinement, and analysis in Phase 2 of the study (Table 3 is replicated below with the Phase 2 projects shaded in green); and
- Phase 2 Activities.

TABLE 3 – FINAL PHASE 1 PROJECT LISTING

Precedent Project ID(s)*	Location	Project Type	Phase 2 Study
101,102,103	Gale Lemerand Dr – W 13th St	Enhanced pedestrian crossing(s)	Y
110	E 7th St – E 10th St	Raised median	Y
201	Gale Lemerand Dr – W 13th St	Bikeway/Sidewalk	Y
111,112,113	Waldo Rd	Pedestrian-oriented intersection design	Y
105,106	W 13th St and Main St	On-demand right turn on red restriction	Y
107	E 1st St – E 3rd St	Midblock pedestrian crossing	Y
108	NE Blvd	Enhanced pedestrian crossing	Y
202,206	NW 17th St and corridor-wide	Bicycle striping and signal detection	Y
309	Corridor-Wide	Transit shelters and benches	Y
207	Corridor-Wide	Bicycle boulevard wayfinding signing	N
203,204,205	NW 17th St – W 7th St	On-street bicycle parking	N
115,116	Corridor-Wide	Sidewalk obstruction relocation and curb ramp accessibility improvements	N
109	NE Blvd – Waldo Rd	Modify sidewalk lighting	N
402	W 6th St – E 7th St	Temporal lane management (eastbound on-street parking conversion)	N
114	Corridor-Wide	Bicycle/scooter parking relocation	N
403	Waldo Rd and outside study area	Intelligent Transportation Systems (ITS) variable message travel time signs	N
301,302,303	NW 19th St/NW 17th St/NW 16th St	Bus bulbs	N
308	Corridor-Wide	Transit signal priority	N
104,305	W 13th St	Enlarge pedestrian circulation areas and enhance bus stop/pedestrian connection at NW corner	N

INTRODUCTION

The Metropolitan Transportation Planning Organization (MTPO) for the Gainesville Urbanized Area is conducting the first phase of this Multimodal Emphasis Corridor Study for State Road 26 (University Avenue) between Gale Lemerand Drive and Waldo Road. According to a recent clarifying agreement between the FDOT and MTPO, the purpose of this two-phased study is to identify specific projects within this 2.3-mile portion of State Road (SR) 26 that can be included in the Long Range Transportation Plan (LRTP). Once in the LRTP, these projects can be considered for funding in the future. Phase 1 of the study initially develops potential projects and includes a preliminary review and ranking of these multimodal design elements (potential projects) for the corridor; Phase 2 will include a further refinement and costing of the listing of preferred elements (projects).

BACKGROUND AND SCOPE OF PHASE 1 AND (FUTURE) PHASE 2

The SR 26 (University Avenue) corridor represents the center, both geographically and culturally, of the Gainesville area community. It also is part of the State Highway System providing important mobility functions. Its setting as the primary east-west corridor connecting the University of Florida, downtown Gainesville, and historic eastside neighborhoods also underscores that the community, and all of the area's governmental and transportation jurisdictions, are significantly invested in the corridor's functionality, aesthetics, and overall success. Because of the corridor's importance to the community and the need for it to serve a diverse set of users of the transportation system, the Gainesville MTPO and other local transportation agencies have identified it as a roadway that should emphasize multimodal travel and thereby accommodate motor vehicle travel, bicycling, walking, and transit use. While there is abundant opportunity to improve the experience of persons using all four of these modes, there is a solid foundation of elements on which to build in this multi-modal emphasis corridor.

The MTPO defines multimodal emphasis corridors as:

> *"...major transportation facilities which accommodate automobile, truck, bus, bicycle and pedestrian travel and link different modes together, such as bikes on buses, car and walk and/or park and ride. These projects employ policies and design elements that ensure that the safety and convenience of all users of a transportation system are considered in all phases of project planning and development. Typical elements of a multimodal corridor include sidewalks, bicycle lanes (or wide, paved shoulders), shared-use bicycle and pedestrian paths, designated bus lanes, safe and accessible transit stops and frequent and safe crossings for pedestrians, including median islands, accessible pedestrian signals, and curb extensions. "*

The methodology used to review and evaluate the challenges to, and opportunities for, multi-modal elements includes Exhibit 1 - Multimodal Emphasis Corridor Design Elements (see Appendix A of this report) and other appropriate resources. Ultimately, the final result of this project is to identify specific multimodal projects that can, and should, be implemented within the SR 26 Corridor.

Phase 1 includes:

1. Documenting existing conditions within the corridor, including right-of-way (using existing right-of-way information), existing multimodal corridor design elements, other existing multimodal infrastructure and bicycle/pedestrian counts, average annual daily traffic, transit levels of service, crash data and environmental or hazardous locations;
2. Preparing an existing conditions report (and mapping); and

3. Preliminary review and ranking of multimodal corridor design elements for the corridor or segments of the corridor.

Phase 2 will further develop and refine the initial projects preliminarily identified in the first phase and will include a final listing of preferred multimodal corridor design elements to implement on the corridor (or segments of the corridor). The final recommendation(s) will include documentation of costs and phasing to the best effort available for implementation and maintenance, if the elements (projects) require significant perpetual maintenance. Final report and final mapping are included in Phase 2.

Public Participation

Two community workshops are planned: one has been held after the existing conditions report in Phase 1 was prepared and the other is planned near the end of the project to report the final draft results of Phase 2. Presentations have been, and will be, made to the Technical Advisory Committee (TAC), Citizens Advisory Committee, and Bicycle/Pedestrian Advisory Board.

EXISTING CONDITIONS

The existing conditions have been documented and evaluated in Appendix B, the Study's *Existing Conditions Report*, submitted and reviewed in September/October 2014. The report documents the scope-outlined analyses as well. These include:

Multi-modal Level of Service Analyses

Bicycle and Pedestrian Counts

Crash Data and Evaluation

Right-of-Way (ROW) limits

Environmentally Sensitive and Hazardous Materials Locations

Adopted Land Use

STAKEHOLDERS AND PUBLIC INPUT

During this Phase 1 portion of the Study, two primary methods of gaining input from stakeholders were employed. The first was input from TAC and stakeholder agencies and the second was from other organizations and the general public.

The primary input from the TAC was via a TAC walking tour/assessment of the corridor conducted early in Phase 1. Participants included staff of stakeholder transportation agencies (including members of the MTPO's Technical Advisory Committee from Alachua County, the City of Gainesville, and the University of Florida), MTPO-invited representatives of public interest and advocacy groups, and members of the study consulting team. These stakeholders were invited due to their long-time experience with the corridor. The participants, in a collaborative walking (in-situ) setting, articulated in detail the various contexts, agency experiences, observations, and recommended challenges (and potential solutions) that could be addressed, or implemented by multi-modal emphasis elements (projects).

Input from the general public was gained mostly from a large community open house held on October 2nd from 3PM until 8PM. The turnout of nearly 30 people provided more than 140 comments of challenges and/or opportunities for multi-modal elements (project ideas). Participant responses were documented in part by an interactive use of the MTPO's Multi-modal Elements table's project types list paired with the participants' comments on color coded sticky notes for the respective modes. An excerpt and example, respectively, of the large-scaled aerial location (corridor strip) map and participants' suggested projects tally boards is shown here.

PRELIMINARY IDENTIFICATION OF DESIGN ELEMENTS/PROJECTS

Identified in this section of the Phase 1 report are potential projects that may be further developed, refined, cost estimated and prioritized in Phase 2. These are preliminary projects that may address a particular mode's (motor vehicle traffic, pedestrian, bicyclists, or transit) challenge or potential opportunity to capitalize upon and/or enhance multi-modal mobility within the corridor. They have been developed from the TAC and stakeholder agencies' input, the general public and stakeholder organizations, consideration of the data and analyses identified in the *Existing Conditions Report*, and other considerations by the consultant team, MTPO staff and input from the MTPO's supporting committees. The significant majority of these initial potential projects are feasible and buildable solely within the SR 26 ROW. Some, however, would be within the ROW of adjoining or adjacent streets. A few potential projects would involve some form of partnership with adjoining properties. The following paragraphs and accompanying Table 1 (page 16) and maps (pages 17-20) include the identifier and location [**(XXX)** for pedestrian-oriented projects, **(XXX)** for transit, **(XXX)** for motor vehicle, and **(XXX)** for bicycle-primary projects] for cross-referencing of these potential (Phase 1) projects. The order of the paragraphs describing the preliminary potential Phase 1 projects largely progresses from west to east with descriptions of corridor-wide projects interspersed throughout the section; on the map, these corridor-wide projects are shown via a rectangular symbol.

Supplemental Crossings of SR 26 West of 13th Street

The section of SR 26 (University Avenue) west of 13th Street has very high pedestrian and bicycle activity. The proximity of the University of Florida campus and well-established and thriving supporting business and institutional district will keep this pedestrian and bicycle level high into the future.

During the TAC walking tour (preliminary Phase 1 field assessment), numerous participants reported they routinely witness pedestrian midblock crossings of SR 26 between Gale Lemerand Drive and 13th Street. The TAC members expressed the desirability of channelizing pedestrians to designated crossings, and the creation of additional controlled crossings - focusing pedestrian crossings to predictable locations. Given the spacing of existing crossings on SR 26 west of 13th Street there appear to be three potential locations for additional crossings:

- Between Gale Lemerand Drive and NW 18th Street/Fletcher Drive **(101)**
- Between NW 17th Street/Buckman Drive and NW 15th Street **(102)**
- Between NW 15th Street and 13th Street **(103)**

Each of these locations would allow for the spacing to nearest existing controlled crossings to exceed 300 feet, the distance given in FDOT's Plans Preparation Manual (PPM)[1] and Traffic Engineering Manual.[2]

Mapping of pedestrian movements would confirm appropriate locations for these potential supplemental crossings. This study and identification of specific locations where crossing could or should be implemented should be explored in Phase 2. Phase 2 will also be an opportunity to explore the

[1] FDOT, Plans Preparation Manual, Section 8.3.3.2, FDOT, Tallahassee, FL, 2014.
[2] FDOT, Traffic Engineering Manual, Section 3.8, FDOT, Tallahassee, FL, 2014.

feasibility of partnerships with adjoining property owners to advance the efficacy of modifications in the formal public (FDOT) right-of-way. Additionally, strategic elements of the (below-outlined) potential pedestrian/bikeway on the south side (eastbound side) of University Avenue (SR 26) that may be developed in Phase 2, could further help with the channelizing of pedestrian crossings.

Bicycle/Scooter Parking (114 corridor-wide)

This section of SR 26 is the focus of significant pedestrian, bicycle and scooter activity due to the adjacent university campus and the myriad of destinations along and adjacent to the corridor. This trend of activity will only increase in the future as both university and the supportive commercial market continues to expand. Vehicular parking (particularly for those motorized) is at a premium in this section of SR 26. There are several locations along SR 26 where bicycle or scooter parking could be increased. Several locations were specifically noted by participants during the TAC walking tour (preliminary Phase 1 field assessment). One such location is between NW 16th and NW 17th Streets. At the ends of this block are areas painted out with transverse striping that could be used as space for bike or scooter parking. A curb extension on the corner of NW 16th Street would likely be needed to implement bike parking in this area. **(203)**

Similar opportunities for bike or scooter parking were identified at either end of the existing on street parking on the south side of SR 26 between 13th and 12th Streets **(204)** and between 9th Terrace and 7th Street **(205)**.

There are also places along the entire study section where bicycle parking could be relocated. U-rack bike racks in the buffer zone of the sidewalk (that area between the curb and the pedestrian pathway) result in bicycles encroaching into the pedestrian walkway, and impeding pedestrian flow at peak times. Relocating or realigning these bike racks could reduce this encroachment.

Improved or modified parking is a recommendation that could be implemented throughout the entire SR 26 corridor. Identifying specific racks to be relocated and locations to place them should be identified in Phase 2.

Combined Pedestrian/Bikeway - Eastbound (South side): Gale Lemerand to 13th Street (201)

This potential project has the capacity to make a significant change in the multi-modal character (and statement) for this prominent transportation corridor. During the TAC walking tour (preliminary Phase 1 field assessment), numerous participants expressed that some form of enhanced eastbound and westbound capacity for pedestrians (and bicyclists) is needed within both the SR 26 ROW and a (paired) bicycle/pedestrian facility along/adjacent/within the south side of SR 26 along the campus frontage. Frequently, the following conditions occur currently:

- The functional capacity of the sidewalk (especially that directly adjoining the eastbound traffic lane) is exceeded;
- The majority of bicycle traffic is not accommodated in the motor vehicle lanes (and there is no surplus pavement cross-section of the SR 26 ROW to do so);
- There are numerous bicycle-pedestrian conflicts within the existing sidewalks;
- The immediate proximity of the (eastbound side) sidewalk to the travel lane enables spontaneous (uncontrolled) pedestrian crossings; street lights within the established tree canopy may not be lighting pedestrians crossings at these multitudes of locations at night; and

- The lighting along SR 26 and the mature trees along this section are such that the luminaires often are above or within the tree canopy and thus do not directly light the (eastbound, south side) sidewalk (and at some locations the roadway); the impression of the TAC during the walking tour (preliminary Phase 1 field assessment) was that significant portions of the sidewalk may not meet the minimum lighting requirements for the adjacent roadways.[3]

These problems have persisted for many years, and as indicated in the pedestrian crossing section above, may worsen in the future.

There are a number of potential options for a project that would enable the reconfiguring of the eastbound (south side) of SR 26 to significantly better accommodate both pedestrian and bicycle travel through this section, both day and night. Two potential options, highlighted below, would require partnership from the adjoining property owner(s). One option could be to reconfigure the SR 26 ROW on the south side to provide a buffering of the sidewalk, widening the sidewalk and a narrowing of the current grass and tree median between the SR 26 sidewalk and the parallel campus walkway within the frontage of the adjoining property, possibly incorporating bikeways (via shared lane markings) on the interior portions of the cross-section of the paired pedestrian ways. The brick wall would need to be relocated as well. New low (pedestrian-) level street lights in this ped-bikeway median could effectively illuminate this facility, promoting this non-motorized travel activity area - away from the edge of the highway.

Another option could be to use a combination of SR 26 ROW with less reconstruction and the parallel drive lanes within the adjacent property. This would likely include improvements to the pathway on the university side of the wall/grassed median on the south side of SR 26. On the campus side (property) is a non-continuous group of facilities stretching from Fletcher Drive to SW 13th Street. Sections of these are frequently used by bicyclists who are avoiding riding on the road and on the sidewalk adjacent to SR 26.

Additionally, a reconfiguration/facilities' provision would provide connectivity from the bike lanes on SR 26 west of campus, through the university campus, and then could direct bicyclists to the 2nd Avenue bike lanes east of the campus.

Obviously, partnership with the adjoining property owner(s) would be needed to actuate the improvements within SR 26 ROW. Phase 2 could explore how these facilities could potentially be improved and connected to provide an alternative to on street bicycling for those using this corridor. The potential for these modifications should be explored with both FDOT and the adjoining property owner(s) during Phase 2 to further develop and refine this project.

SR 26 at NW 17th Street (202)

The TAC walking tour (preliminary Phase 1 field assessment) participants reported that there is a significant number of conflicts between through (north-south) bicyclists and motorists turning right onto University Avenue at the intersection with NW 17th Street. These "right-hook" conflicts could likely be reduced if bicyclists were positioned within the through lanes to better communicate their intent to proceed through the intersections. Restriping the north approach and marking the loops to show where they detect bicyclists could encourage bicyclists to move away from the right edge of pavement.

[3] FDOT *Plans Preparation Manual*, Table 7.3.1, FDOT, Tallahassee, FL, 2014.

The northern approach to this intersection has the bike lane striped all the way to the stop line; interestingly, the stop line is not striped across the bike lane. This solid-stripe-to-the-intersection striping is inconsistent with the MUTCD, the AASHTO *Bike Guide*,[4] and the Florida *Greenbook*.[5] Also a solid line separating the bike lane from the general lane at an intersection discourages motorists from approaching the intersection and turning right from "as close as practicable to the right-hand curb or edge of roadway."[6] At this location, the bike lane line could become a dotted line to provide the more permissive condition that is appropriate. Alternatively, the bike lane could be terminated in advance of the intersection and SHARED LANE MARKINGS installed on the final approach.

Both the north and south approaches could have BICYCLE DETECTOR pavement markings placed at the intersection to both inform the bicyclists of where to place their bicycles to be detected by the signals and to encourage them to move their bicycles further into the through lanes. These modifications should be investigated in Phase 2 and refined for the SR 26/17th Street project.

Signals at Cross Streets (206)

The side street signalized approaches to SR 26 at NW 17th, NW 8th, and NW 2nd were specifically mentioned during the TAC walking tour (preliminary Phase 1 field assessment) as being non-responsive to bicyclists. Each signalized side street that does not have automatic recall should be checked during Phase 2 to ensure bicycles can be detected for signal activation. This may result in the identification of the number of needed traffic signal loop modifications for this project.

Traffic Calming

Traffic calming was recommended by participants during the TAC walking tour. Specifically, speed tables were identified to reduce speeds through the campus section of SR 26. Chapter 21 of the PPM indicates speed tables are not appropriate for State Highway System roadways.[7] While the PPM says that curvilinear alignment (with redesign, chicanes, winding paths, etc.) may be appropriate, such design modifications would require a complete reconstruction of SR 26 west of 13th Street and are not recommended.

Striping Uncontrolled Crosswalks

It was suggested during the TAC walking tour that all existing unsignalized crosswalks across SR 26 be striped; this had also been articulated by a number of participants at the public workshop. This recommendation would create numerous striped, yet otherwise uncontrolled, crosswalks across SR 26. Given the volumes and lane arrangements on SR 26, and research[8] regarding pedestrian safety at uncontrolled crosswalks, the consultant team does not recommend implementing this recommendation. Specific locations where crossing improvement projects should be considered are discussed in other sections of this report.

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[4] AASHTO, Guide for the Development of Bicycle Facilities, 4th Ed., AASHTO, Washington, DC, 2012.

[5] FDOT, Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways, FDOT, Tallahassee, FL, 2011.

[6] Required by Section 316.151, Florida Statutes.

[7] FDOT, Plans Preparation Manual, Table 21-B, FDOT, Tallahassee, FL, 2014.

[8] Charles V. Zegeer, J. Richard Stewart, Herman H. Huang, Peter A. Lagerwey, John Feaganes, and B.J. Campbell, *Safety Effects of Marked versus Unmarked Crosswalks at Uncontrolled Locations: Final Report and Recommended Guidelines*, FHWA –HRT-04-100, FHWA, McLean, VA, 2004.

SR 26 at W 13th Street Intersection Improvements

SR 26 at W 13th Street is a critical intersection for vehicles, pedestrians and bicyclists. There are several changes that should be a part of the project at this intersection. These include improvements for motorists and pedestrians.

Discussions with City of Gainesville traffic engineering staff suggests that northbound traffic turning right from SW 13th Street onto eastbound SR 26 are the cause of much of the congestion at this intersection. Given that the lack of a north-to-eastbound right turn lane significantly contributes to delays at this intersection, consideration should be given to adding a right turn lane for this movement. **(401)**

During the TAC walking tour (preliminary Phase 1 field assessment), consideration of an exclusive pedestrian phase was mentioned as a potential modification for this intersection. Exclusive pedestrian phases are primarily used at locations where there is a documented pedestrian safety problem. The phasing stops all vehicular traffic and allow only pedestrians to cross during the pedestrian phase. A review of the crashes at 13th Street reveals two crashes occurring at the intersection over five years. Given the historic crash numbers for pedestrians, it does not appear that an exclusive pedestrian phase would be merited based upon safety considerations. Given potential for increased traffic delays resulting from an exclusive pedestrian phase, it is not recommended for this intersection.

However, there is inadequate storage for pedestrians waiting for the WALK signal. Field observations suggest that during peak hours this intersection does have a storage problem for queuing pedestrians. This pedestrian storage problem will likely be exacerbated by additional pedestrian traffic generated by the planned University Corners development, among other smaller market projects north of this intersection that will generate (or attract) considerable pedestrian travel demand. Phase 2 should investigate the potential expansion of the sidewalk storage as well as realignment of the pedestrian crossings to provide more pedestrian space or separate pedestrian space for each crossing to help alleviate this problem **(104)**.

Curb Ramps and Driveways

Many of the curb ramps and most of the driveways along this section of SR 26 appear to not meet FDOT or Americans with Disabilities (ADA) requirements for accessibility. Curb ramp and driveway modifications should be considered for the whole corridor. Sections most in need of modification could be identified and evaluated during Phase 2 **(115)**.

Right Turn on Red Restrictions

There are NO RIGHT ON RED blank out signs at the signalized intersections of SR 26 with 13th Street and Main Street. During certain periods these signs are activated (lit) every cycle. However, during off peak periods they are not activated. Pedestrian safety could be enhanced during off peak periods by restricting right turn on red vehicular movements when pedestrians are crossing at this intersection **(105** for 13th Street; **106** for Main Street**)**. Allowing activation of the blank out signs when the corresponding pedestrian buttons are pushed would allow for this restriction while not prohibiting right turn on red when pedestrians are not present. Consideration should be given to programming the signals to activate these blank out signs when there is a call for conflicting pedestrian signals.

Wayfinding Signs for Bicyclists

The City of Gainesville is developing bicycle boulevards to serve east-west bicycle traffic along the SR 26 corridor. On the north side of SR 26, the bike boulevard runs along NW 3rd Avenue from NW 21st Street (just west of this study's western limit) to NW 6th Street. At NW 6th Street, the bike boulevard transitions to N 2nd Avenue to Northeast Boulevard and finally to NE 5th Avenue to Waldo Road. South of SR 26, the City is enhancing bike lanes on SW 2nd Avenue between SW 13th Street and SW 6th Street.

Wayfinding for east-west bicyclists to direct them to and along the bike boulevards would facilitate travel along the SR 26 corridor for both bicyclists and pedestrians (by potentially removing some bicyclists from SR 26 sidewalks). In addition, wayfinding signs from the bike boulevard to specific destinations along or across SR 26 could improve bicycling in this area. While some of these modifications may be "off-system," they nevertheless will improve bicycling and walking conditions within SR 26 ROW.

In addition to wayfinding, some modifications may be required to make the bike boulevard attractive east-west routes. For example, roadway crossing improvements at 3rd Avenue and NW 13th Street and 6th Street, 2nd Avenue at Main Street, and 5th Avenue at NE Waldo Road may be appropriate to facilitate the northern bike boulevard. Street lighting improvements may also be appropriate. On the southern bike boulevard, bike lane enhancements should be considered from SW 6th Street to the Waldo Road Greenway-Depot Avenue Rail Trail **(207)**.

Clear Width on Sidewalks

Along SR 26, objects – signs, lamps, signal poles, garbage cans, bike racks, trees – are placed in the sidewalk area. While placing objects in the sidewalk area is unavoidable, many of these are located such that they require pedestrians to take a meandering path to avoid them. For example, east of SW 5th Terrace, trees and street lamps have been placed in the middle of the sidewalk area.

Obstructions in the sidewalk should be located to minimize the inconvenience they cause to pedestrian flow and/or sidewalk capacity in some high pedestrian volume areas. This may involve relocating some obstructions to create a more linear, rather than sporadic, placement. Redundant or now unnecessary traffic signs could also be identified and removed.

In areas with on street parking, curb extensions could serve as locations to place some sidewalk obstructions out of the pedestrian path.

Addressing clear width of the pedestrian way is a project which would potentially encompass the entire project section **(116)**. Specific items that could be removed or relocated, or locations where the sidewalk may be able to be widened could be identified in Phase 2 of this project.

Temporal Lane Management

During the TAC walking tour (preliminary Phase 1 field assessment) there was discussion regarding the use of temporal lane management, potentially converting outside lanes to on-street parking during off peak periods. It was reported that for many years, a number of stakeholders have wondered about potential surplus capacity of some sections of SR 26 (particularly between 13th Street and Main Street). However, while analysis of hourly traffic volumes, capacity, and seasonal traffic conditions could be investigated that might show recurring temporal (e.g. evening hours) surplus laneage, discussions with the City (i.e., Gainesville Police Department) indicated that this option would not be viable for the westbound lanes. The City established that they need to keep westbound lanes as through lanes to enable people, hence traffic, to quickly leave the downtown after nighttime community (e.g., concert) activities.

This leaves the potential for temporal lane management for the eastbound lanes. During the evenings, it may be possible to allow evening parking on the south side of SR 26 through downtown from SW 6th Street to SE 7th Street. A traffic study would need to be completed during Phase 2 to identify periods when vehicular flows could be accommodated with a single lane through downtown and what types of control would be effective in the lane management; land use development and market trends analysis may be helpful to ascertain the benefits of the particular lane management option(s) **(402)**.

SR 26 between East 1st and 3rd Streets

The north and south sides of the block between East 1st and 3rd Streets are occupied by government offices. Significant pedestrian cross flow occurs between these two office complexes. The raised median between East 1st and 3rd includes a section free of vegetation in which pavers have been installed. This section is used by pedestrians as they cross the street. A designated crossing of SR 26 at this location, possibly controlled by a Rectangular Rapid Flashing Beacon or Pedestrian Hybrid Beacon, could serve existing demand at this location. The distance between the controlled crossings at East 1st and 3rd Streets is only 400 feet (approx.) so a special justification would be needed to install a controlled crossing at this location.[9] **(107)**

SR 26 and NE Boulevard

TAC walking tour (preliminary Phase 1 field assessment) participants noted that NE Boulevard is located directly across from Sweetwater Park. A trail through Sweetwater Park connects SR 26 to the bike lanes on S 2nd Avenue and then further on to S 4th Avenue, and thus to the planned Power District. Providing a crossing opportunity from NE Boulevard to Sweetwater Park would make an important connection for both bicyclists and pedestrians. A designated crossing of SR 26 at this location, possibly a Rectangular Rapid Flashing Beacon or Pedestrian Hybrid Beacon, could serve existing demand at this location as well as the future demand that will result from further development of the Power District **(108)**.

Lighting

The lighting along SR 26 east of NE Boulevard and the trees planted along this section are such that the luminaires often are located above or within the tree canopy and thus do not directly light the sidewalk (or, in some cases, the roadway). The impression of the TAC during the walking tour (preliminary Phase 1 field assessment) was that this could create locations along the sidewalk that do not meet the minimum lighting requirements for the adjacent roadways.[10] Supplemental lighting, such as that located to the west of NE Boulevard, could provide adequate lighting below the tree canopy **(109)**. A lighting study and identification of deficiencies could be conducted during Phase 2.

[9] The FDOT Traffic Engineering Manual states that the minimum distance between to the nearest alternative crossing location is 300 feet per the Department's Plans Preparation Manual, Vol. 1, Section 8.3.3.2. However, in the PPM, this spacing requirement is not written as a standards condition (shall), it is a guidance condition (should).

[10] FDOT Plans Preparation Manual, Table 7.3.1, FDOT, Tallahassee, FL, 2014.

NE 7th Street to NE 9th Street

The section of SR 26 from NE 7th Street to east of NE 9th Street has no raised median. A raised median could improve aesthetics for all travelers and potential safety for those pedestrians who chose to cross at midblock locations. There is potential to add sections of raised median – much like those west of NE 7th – midblock on each block from NE 7th to 9th. Additionally, the raised divider on the west approach to the intersection of SR 26 and Waldo Road could be extended to include the area currently marked with a painted restricted median **(110)**.

It is possible that a raised median could encourage pedestrians to cross at uncontrolled locations. A pedestrian mapping study would be important during Phase 2 to determine if installing raised medians would encourage uncontrolled pedestrian crossings at this location (relocated from existing controlled crossings), inhibit those using strollers or pushing carts, and/or make crossings safer.

SR 26 at Waldo Road

The intersection of SR 26 and Waldo Road is shown in Figure 1. There were two specific comments regarding this intersection made during the TAC walking tour (preliminary Phase 1 field assessment). The first was that the southeast corner of the intersection includes a free-flow (uncontrolled) right turn lane across two *signalized* crosswalks. The second comment was that the pedestrian crossings are quite long.

Figure 1 - SR 26 and Waldo Road, Existing Conditions

The uncontrolled right turn across the two signalized crosswalks results in pedestrians receiving a WALK signal when the cars are under free-flow operations. Essentially, this tells pedestrians they are permitted to start to cross the roadway in the direction of the signal indication. While crossings with a WALK signal can occur with conflicting turning vehicles, those vehicles approaching from a perpendicular or near perpendicular direction normally have a red signal. Thus pedestrians may reasonably expect the vehicle operators turning right from the direction that has the red traffic signal (or at least the through movements have a red traffic signal) to be required to stop and yield prior to making a right turn on red. However, under the existing condition on the southeast corner of this intersection, there is nothing to inform the free-flow north-to-east right turning motorists that the pedestrian's traffic control has changed. This could lead to confusion and safety issues at this intersection.

The signalized pedestrian movement in conflict with the free-flow right turn is also inconsistent with normal signal operations and the MUTCD[11]. Discussions with FDOT commenters suggest that restricting this free-flow right turn is not desirable. This leaves the alternative of removing the signalized crossing of the uncontrolled vehicular movement. Adding a concrete slip lane island on the southeast corner of the intersection would allow for the pedestrian signal hardware to be moved to the slip lane island and thus provide for signalized pedestrian crossings across only the signalized motor vehicle movements. The construction of this island would also reduce the needed pedestrian clearance intervals for this intersection and in turn reduce loss time to signalized vehicular movements (Figure 2). **(111 and 112)**

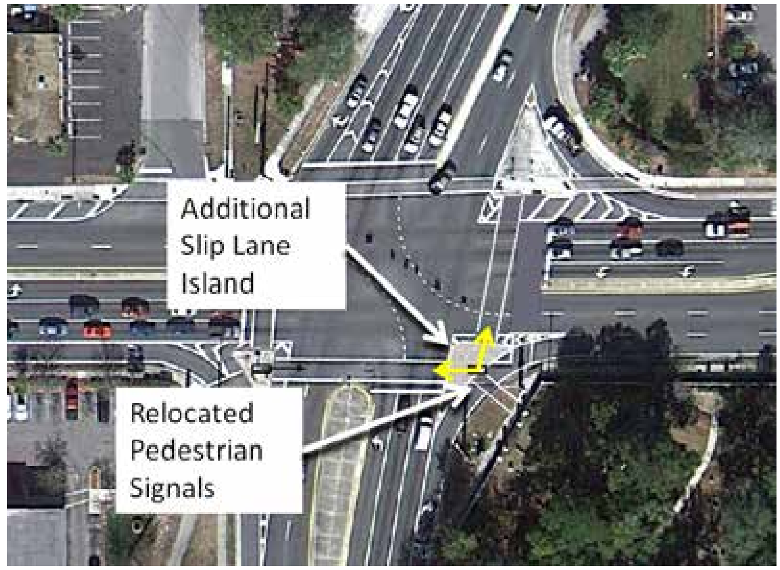

Figure 3 - SR 26 and Waldo Road, Modified Southeast Corner

Figure 2 - SR 26 and Waldo Road, Compact Design

The inclusion of a slip lane island on the southeast corner would also enable the reduction of pedestrian crossing distances and thus exposure times. More significant modifications using pedestrian friendly intersection design could further reduce pedestrian crossing distances. The northwest corner could be modified to reduce the crossing distance for pedestrians as well as reduce motor vehicle turning speeds. Gap acceptance slip lanes on the northeast and southwest would also reduce motor vehicle speeds across the pedestrian crosswalks. Additionally, modified slip lanes would put the pedestrians crossing in a better position to be seen by approaching motorists. Depending on the size of the channelization islands installed, they could be used to provide a gateway treatment onto the University Avenue corridor (Figure 3). **(113)**

[11] MUTCD Section 4E.06, 02, "Standard: ...When the pedestrian signal heads associated with a crosswalk are displaying either a steady WALKING PERSON (symbolizing WALK) or a flashing UPRAISED HAND (symbolizing DONT WALK) signal indication, a steady or a flashing red signal indication shall be shown to any conflicting vehicular movement that is approaching the intersection or midblock location perpendicular or nearly perpendicular to the crosswalk."

ITS Signs

Intelligent Transportation Systems (ITS) signs may be helpful to reduce traffic on SR 26 along the study section. ITS signs could provide real time driving times on SR 26 and alternative routes (e.g. N 8th Avenue) to inform motorists of when it might be advantageous to use the alternative routes. **(403)**

Transit Improvements

Based on a field review of existing bus operations and stop provisions in the study corridor, and insights from the Technical Advisory Committee (TAC) and RTS staff, potential transit projects for the SR 26 corridor from Gale Lemerand Drive to Waldo Road have been identified as part of this Phase 1 study.

The TAC and other stakeholders have identified interest in five types of transit projects in the corridor:

- Dedicated bus lanes
- Bus pullouts
- Bus stops with shelters
- Transit Signal Priority
- Incorporate Transit-Oriented Design features

The feasibility and configuration of these potential improvement projects is described below.

Dedicated Bus Lanes

Conversion of two general travel lanes to exclusive bus lanes to reduce transit delays and average travel times in the study corridor was deemed impractical due to the high traffic volumes and the resulting congestion along SR 26 if only one through lane in each direction were available.

An optional strategy would be to institute queue jump treatments in right turn lanes at three locations along the study corridor, if supporting future transit service is provided at these locations:

- Eastbound SR 26 at SW 13th Street **(304)**
- Eastbound SR 26 at Waldo Road **(306)**
- Westbound SR 26 at Waldo Road **(307)**

In these locations, buses would bypass the adjoining through traffic queue, and have a separate green signal to pull back into the through lane far side of the intersection before through traffic gets a green signal indication. At the intersections, some island and pavement marking modifications would be needed to develop these treatments.

Bus Bulbs

To develop bus pullouts along the corridor, roadway widening would be required and/or on-street parking removed. RTS has identified a preference to not have pullouts along the street, instead preferring that curb extensions be provided where possible. This treatment, also known as bus bulbs, would extend the sidewalk on certain street corners into the street, thus providing added space for pedestrians and bus riders, and reduce the street crossing distance for pedestrians. Locations where curb extensions could be incorporated into existing bus stops includes:

- Westbound SR 26 near side of NW 19th Street **(301)**
- Westbound SR 26 near side of NW 17th Street **(302)**

- Westbound SR 26 near side of NW 16th Street **(303)**

Added curb extensions on the south side of University east of SW 13th Street could be developed to provide added pedestrian circulation space and reduce pedestrian crossing distance outside of bus stop locations.

Bus Stop Amenities

RTS has established warrants to help establish the need for shelters and benches to bus stops. For a shelter, a minimum of 36 passenger boardings a day is required, while for benches, a minimum of 16 boardings a day is required. Based on these warrants, the following bus stop locations would justify a shelter or bench treatment (where none exists today):

Shelters ***(309 - corridorwide)***

- Westbound SR 26 at NW 17th Street
- Westbound SR 26 at NW 16th Street
- Westbound SR 26 at NW 13th Street
- Westbound SR 26 at NW 10th Street
- Westbound SR 26 at NW 6th Street
- Westbound SR 26 at NE 1st Street
- Eastbound SR 26 at Buckman Drive
- Eastbound SR 26 at NW 15th Street
- Eastbound SR 26 at SW 13th Street

It does not appear that there is space available to place transit shelters within the right-of-way at NW 13th or NW 10th westbound.

Bench Only ***(309 - corridorwide)***

- Westbound SR 26 at NW 7th Terrace
- Eastbound SR 26 at Gale Lemerand Drive
- Eastbound SR 26 at Fletcher Drive
- Eastbound SR 26 at Buckman Drive
- Eastbound SR 26 at SW 9th Terrace

Lighting should be integrated into all new shelter installations. Phase 2 should evaluate the feasibility of installing these amenities at the described locations.

Transit Signal Priority (308 – corridorwide)

While dedicated bus lanes do not appear to be practical along University Avenue in the study corridor, transit signal priority (TSP) could be provided at signalized intersections. The City of Gainesville has expressed a willingness to install TSP to facilitate bus operations. TSP could be applied when intersection level of service (LOS) is in the C-D range. Though some intersections might not have TSP during peak periods due to peak traffic congestion, there could be off-peak periods where the identified LOS threshold would be met and bus operations would benefit from TSP.

For the SR 26 study corridor, the following intersections are signalized and could warrant TSP application:

- Gale Lemerand Drive
- West 18th Street
- West 17th Street
- West 13th Street
- West 12th Street
- West 10th Street
- West 8th Street
- West 6th Street
- West 3rd Street
- West 1st Street
- Main Street
- East 1st Street
- East 3rd Street
- East 7th Street
- East 9th Street
- Waldo Road

Further discussion with City Traffic Operations during Phase 2 will be required to identify the final application and specific operating parameters associated with any TSP in the study corridor.

Incorporate Transit-Oriented Design

Associated with new development along the corridor, provision for enhanced bus stops and improved pedestrian connections from bus stops to adjoining development should be provided. A particular location is the northwest corner of the University/SW 13th Street intersection **(305)**.

TABLE 1 – PRELIMINARY PHASE 1 PROJECTS			
Project ID	**Location**	**Project Type**	**Primary Mode**
101	Gale Lemerand Dr – NW 18th St	Enhanced pedestrian crossing	Pedestrian
301	NW 19th St	Westbound near side bus bulb	Transit
201	Gale Lemerand Dr – W 13th St	Bikeway/Sidewalk	Bicycle and Pedestrian
202	NW 17th St	Bicycle striping/signage/detection	Bicycle
302	NW 17th St	Westbound near side bus bulb	Transit
203	NW 17th St – NW 16th St	On-street bicycle parking	Bicycle
102	NW 17th St – NW 15th St	Enhanced pedestrian crossing	Pedestrian
303	NW 16th St	Westbound near side bus bulb	Transit
103	NW 15th St – W 13th St	Enhanced pedestrian crossing	Pedestrian
104	W 13th St	Enlarge pedestrian circulation areas	Pedestrian
401	W 13th St	Construct northbound-to-eastbound right turn lane	Auto
105	W 13th St	On-demand right turn on red restriction	Pedestrian
304	W 13th St	Eastbound transit queue jump	Transit
305	W 13th St	Enhanced bus stop/pedestrian connection at NW corner	Transit
204	W 13th St – W 12th St	On-street bicycle parking	Bicycle
205	W 9th Ter – W 7th St	On-street bicycle parking	Bicycle
402	W 6th St – E 7th St	Temporal lane management (conversion to on-street parking)	Auto
106	Main St	On-demand right turn on red restriction	Pedestrian
107	E 1st St – E 3rd St	Midblock pedestrian crossing	Pedestrian
108	NE Blvd	Enhanced pedestrian crossing	Pedestrian
109	NE Blvd – Waldo Rd	Modify sidewalk lighting	Pedestrian
110	E 7th St – E 10th St	Raised median	Pedestrian
111	Waldo Rd	Construct concrete slip lane island at SE corner	Pedestrian
112	Waldo Rd	Move pedestrian signal to new concrete slip lane at SE corner	Pedestrian
113	Waldo Rd	Reduce crossing distances and construct gap acceptance slip lanes	Pedestrian
306	Waldo Rd	Eastbound transit queue jump	Transit
307	Waldo Rd	Westbound transit queue jump	Transit
403	Waldo Rd (and outside project area)	ITS Travel Time Signs	Auto
206	Corridor-Wide (including NW 17th St, W 8th St, and W 7th St)	Bicycle detection installation	Bicycle
207	Corridor-Wide	Bicycle boulevard wayfinding signing	Bicycle
114	Corridor-Wide	Bicycle/scooter parking relocation	Pedestrian
115	Corridor-Wide	Driveway and curb ramp accessibility audit and retrofit	Pedestrian
116	Corridor-Wide	Sidewalk obstruction relocation	Pedestrian
308	Corridor-Wide (signalized intersections)	Transit signal priority	Transit
309	Corridor-Wide (where warrants met)	Transit shelters and benches	Transit

Facility Recommendations For Phase II Consideration

Gale Lemerand Drive to NW 13th Street

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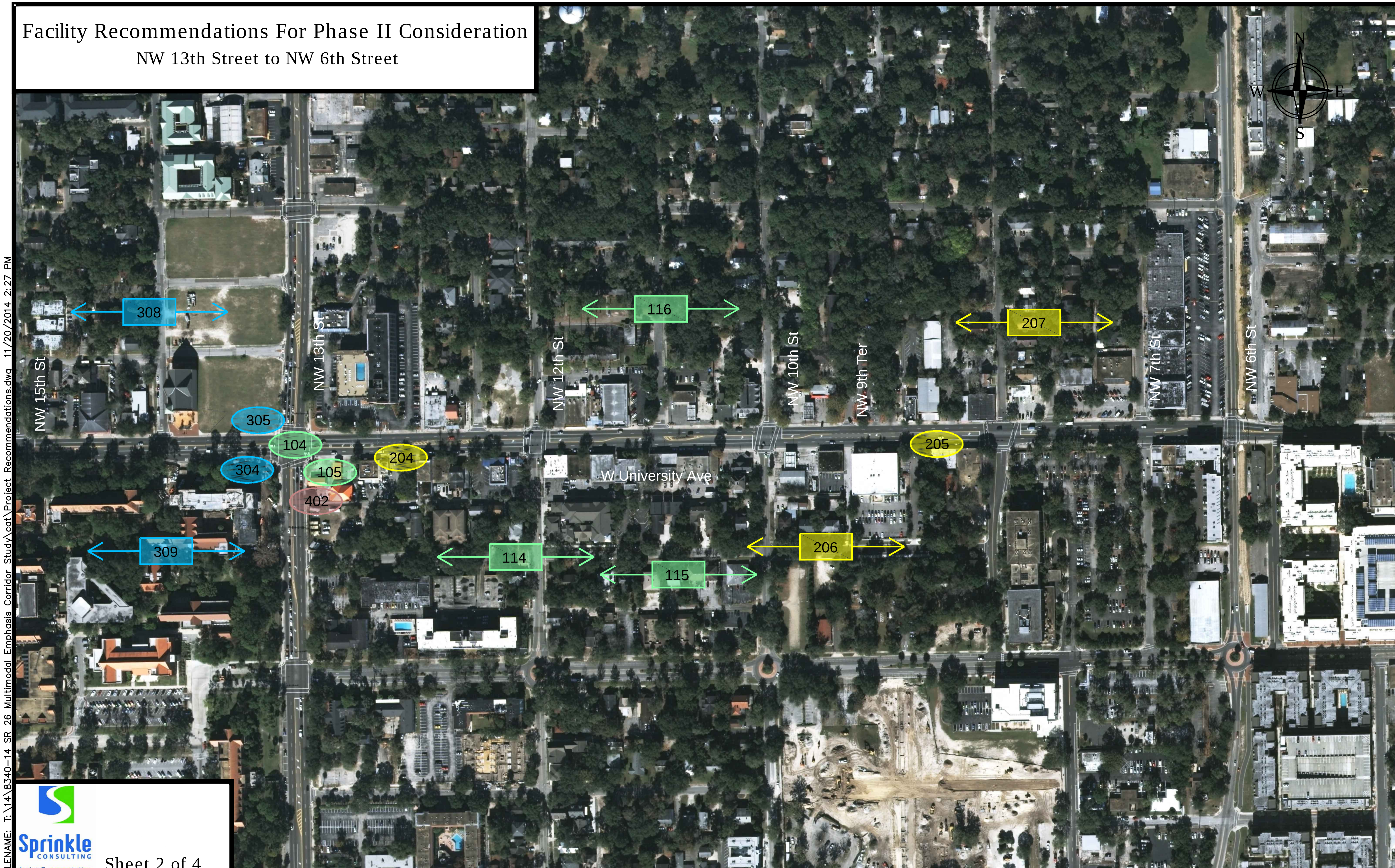
Facility Recommendations For Phase II Consideration

NW 13th Street to NW 6th Street



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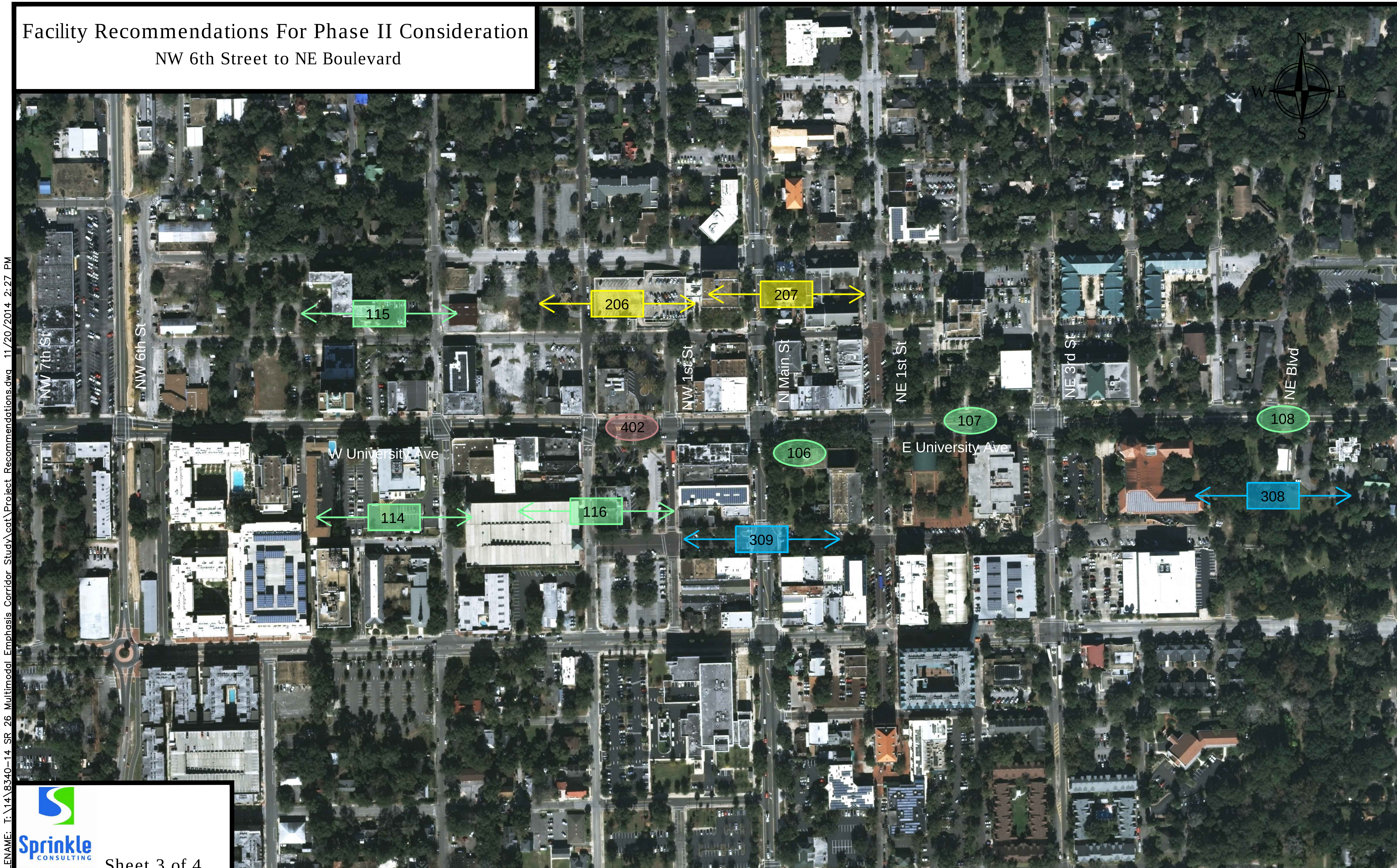
Facility Recommendations For Phase II Consideration

NW 6th Street to NE Boulevard



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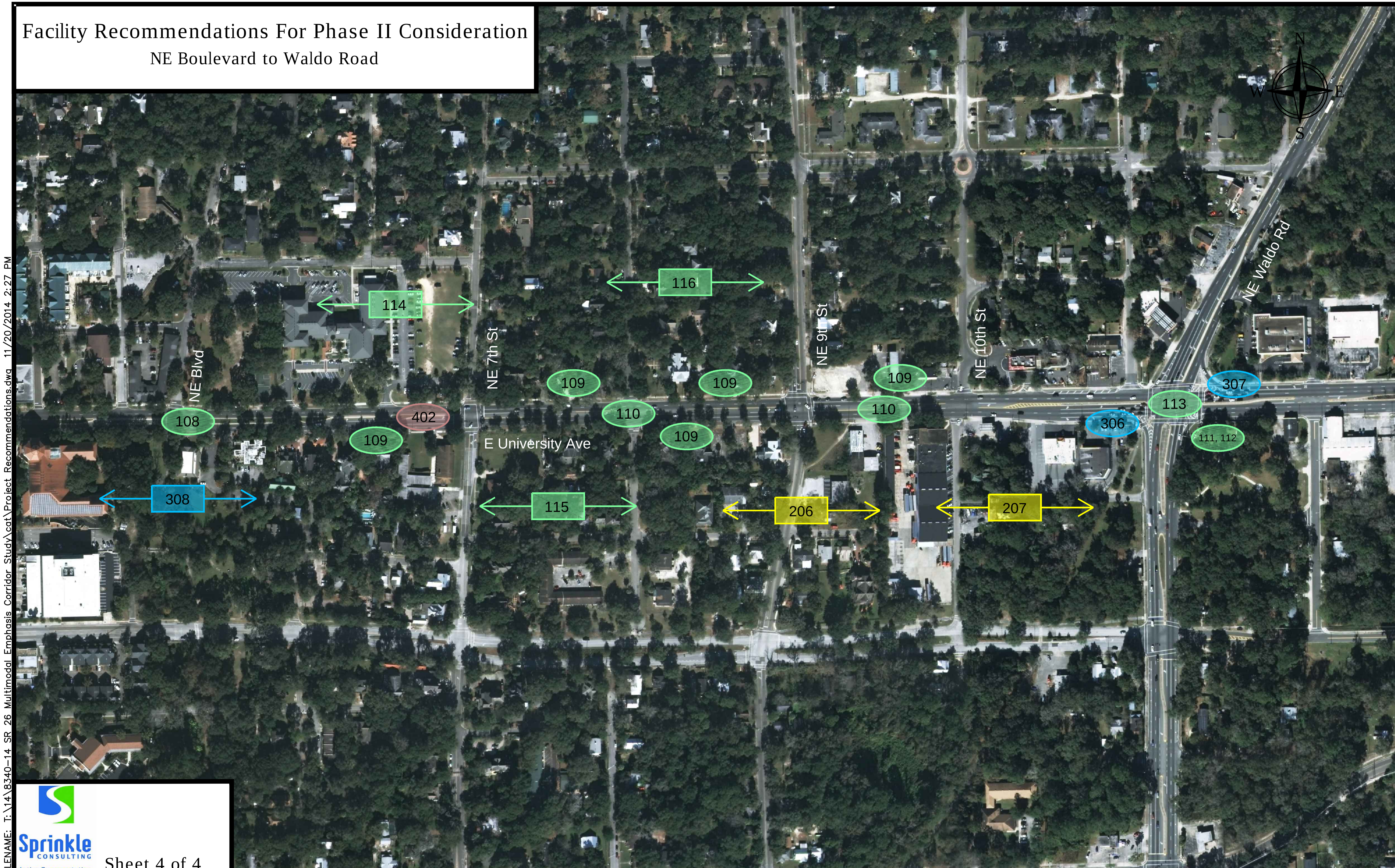
Facility Recommendations For Phase II Consideration

NE Boulevard to Waldo Road



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PRELIMINARY RANKING OF PROJECTS

A preliminary ranking of the multi-modal elements (the preliminary Phase 1 projects) is provided in the table below. They are ranked according to a combination of three straightforward evaluative criteria. These are:

The number of modes of transportation enhanced by the preliminary project (additive 4, 3, 2, 1 for the number of modes the preliminarily identified project will serve)

The relative magnitude of the benefits of the preliminary project (scaled 7 for high benefit to 1 for low benefit)

The relative cost of the preliminary project (scaled 1 to 5 for increasing cost, but with a "10" if the project might involve adjoining property participation)

Each preliminary project is evaluated according to the above and then the sum of the first two criteria is divided by the third to provide a type of benefit to cost *index*. The preliminary projects of Table 1 are then ranked in the descending order of this relative index.

TABLE 2 – PHASE 1 PRELIMINARY PRIORITIZATION

Project ID	Location	Project Type	Modes Enhanced: Auto - A Bicycle - B Ped - P Transit - T	Magnitude of Benefit	Relative Cost	Phase 1 Ranking Value
207	Corridor-Wide	Bicycle boulevard wayfinding signing	B, P	3	1	5.00
202	NW 17th St	Bicycle striping/ signage/detection	B	2	1	3.00
106	Main St	On-demand right turn on red restriction	P	2	1	3.00
204	W 13th St – W 12th St	On-street bicycle parking	P, B	3	2	2.50
205	W 9th Ter – W 7th St	On-street bicycle parking	P, B	2	2	2.00
101	Gale Lemerand Dr – NW 18th St	Enhanced pedestrian crossing	P	4	3	1.67
102	NW 17th St – NW 15th St	Enhanced pedestrian crossing	P	4	3	1.67
103	NW 15th St – W 13th St	Enhanced pedestrian crossing	P	4	3	1.67
116	Corridor-Wide	Sidewalk obstruction relocation	P, B	3	3	1.67
206	Corridor-wide	Bicycle detection installation	B	2	2	1.50
105	W 13th St	On-demand right turn on red restriction	P	2	2	1.50
109	NE Blvd – Waldo Rd	Modify sidewalk lighting	P, B, A	3	4	1.50
402	W 6th St – E 7th St	Temporal lane management (conversion to on-street parking)	A	2	2	1.50

203	NW 17th St – NW 16th St	On-street bicycle parking	P, B	2	3	1.33
107	E 1st St – E 3rd St	Midblock pedestrian crossing	P	3	3	1.33
108	NE Blvd	Enhanced pedestrian crossing	P	3	3	1.33
114	Corridor-Wide	Bicycle/scooter parking relocation	B	3	3	1.33
309	Corridor-Wide (where warrants met)	Transit shelters and benches	T	3	3	1.33
403	Waldo Rd and outside project area	ITS travel time signs	A	3	3	1.33
301	NW 19th St	Westbound near side bus bulbs	P,T	3	4	1.25
302	NW 17th St	Westbound near side bus bulbs	P, T	3	4	1.25
303	NW 16th St	Westbound near side bus bulbs	P, T	3	4	1.25
110	E 7th St – E 10th St	Raised median	P	4	4	1.25
111	Waldo Rd	Construct concrete slip lane island at SE corner and relocate signal	P	3	4	1.00
113	Waldo Rd	Reduce crossing distances and construct gap acceptance slip lanes	P, A	3	5	1.00
308	Corridor-Wide (signalized intersections)	Transit signal priority	T	4	5	1.00
201	Gale Lemerand Dr – W 13th St	Bikeway/Sidewalk	P, B	7	10	0.90
104	W 13th St	Enlarge pedestrian circulation areas	P	7	10	0.80
401	W 13th St	Construct northbound-to-eastbound right turn lane	A	7	10	0.80
112	Waldo Rd	Move pedestrian signal to new concrete slip lane at SE corner	P, A	2	5	0.80
304	W 13th St	Eastbound transit queue jump	T	2	4	0.75
306	Waldo Rd	Eastbound transit queue jump	T	2	4	0.75
307	Waldo Rd	Westbound transit queue jump	T	2	4	0.75
115	Corridor-Wide	Sidewalk and curb ramp accessibility improvements	P	2	4	0.75
305	W 13th St	Enhanced bus stop/pedestrian connection at NW corner	P, T	3	10	0.50

FINAL PHASE 1 PROJECTS

Review and discussion of this project list with the MTPO's TAC and CAC and FDOT District 2 staff in attendance at the November 2014 committee meetings indicated a desire to consolidate many of the Table 2 projects through grouping by project type and/or location. This yields the final Phase 1 project listing shown in Table 3.

TABLE 3 – FINAL PHASE 1 PROJECT LISTING

Precedent Project ID(s)*	Location	Project Type	Phase 2 Study
101,102,103	Gale Lemerand Dr – W 13th St	Enhanced pedestrian crossing(s)	Y
110	E 7th St – E 10th St	Raised median	Y
201	Gale Lemerand Dr – W 13th St	Bikeway/Sidewalk	Y
111,112,113	Waldo Rd	Pedestrian-oriented intersection design	Y
105,106	W 13th St and Main St	On-demand right turn on red restriction	Y
107	E 1st St – E 3rd St	Midblock pedestrian crossing	Y
108	NE Blvd	Enhanced pedestrian crossing	Y
202,206	NW 17th St and corridor-wide	Bicycle striping and signal detection	Y
309	Corridor-Wide	Transit shelters and benches	Y
207	Corridor-Wide	Bicycle boulevard wayfinding signing	N
203,204,205	NW 17th St – W 7th St	On-street bicycle parking	N
115,116	Corridor-Wide	Sidewalk obstruction relocation and curb ramp accessibility improvements	N
109	NE Blvd – Waldo Rd	Modify sidewalk lighting	N
402	W 6th St – E 7th St	Temporal lane management (eastbound on-street parking conversion)	N
114	Corridor-Wide	Bicycle/scooter parking relocation	N
403	Waldo Rd and outside study area	Intelligent Transportation Systems (ITS) variable message travel time signs	N
301,302,303	NW 19th St/NW 17th St/NW 16th St	Bus bulbs	N
308	Corridor-Wide	Transit signal priority	N
104,305	W 13th St	Enlarge pedestrian circulation areas and enhance bus stop/pedestrian connection at NW corner	N

* Note: Project 401 is excluded from this listing because of stated project infeasibility.

The projects listed in Table 3 are considered viable and worthy of consideration for future refinement and implementation. The projects shaded in green and indicated with a "Y" are those that will be further studied, refined, cost estimated, and phased for implementation as part of Phase 2 of this Multimodal Emphasis Corridor Study; many of these projects may eventually be included in the MTPO's long range needs plan. The remaining projects may be appropriate for refinement and implementation through separate efforts conducted by FDOT or a local government agency.

PHASE 2 ACTIVITIES

The purpose of the second phase of the study is to create a final listing of preferred multimodal design elements (i.e., projects) to implement on the corridor. Documentation of costs and implementation phasing will be developed for those projects, which will consist of the projects identified for Phase 2 study in Table 3. To achieve the objectives of Phase 2, the following activities will be undertaken:

- Conduct additional research and data collection needed to refine select project specifics, including the following:
  - Pedestrian mapping study (Gale Lemerand Drive – W 13th Street): via video, observe and map pedestrian crossing behaviors and patterns to determine recommended crossing locations and treatments (Projects 101-103)
  - Pedestrian mapping study (E 7th Street – E 9th Street): via video, observe and map pedestrian crossing behaviors and patterns to determine appropriate locations for raised medians (Project 110)
  - Coordination with University of Florida and FDOT District 2 to develop options for pedestrian/bikeway facility (Project 201)
- Prepare cost estimates for the Phase 2 projects
- As appropriate, prepare phasing and implementation plans for Phase 2 projects
- Review findings with MTPO TAC and CAC
- Conduct a community workshop to review the characteristics of the Phase 2 projects
- Prepare and submit draft study report
- Review draft report with MTPO TAC and CAC
- Respond to comments and prepare and submit final study report
- Present final study report to MTPO Board

Appendix A: **Multi-modal Emphasis Corridor Elements**

Category	Design Element
Transit	Safe and Accessible Transit Stops
	Bus Pullouts
	Bus Stops with Shelters
	Transit Superstop (similar to the one on SW 20th Avenue)
	Transit Signal Priority
	Transit System Amenities (Bus Shelters and Benches)
	Incorporate Transit-oriented Design
	Provide Curb Extensions (where parking is allowed)
	Dedicated Bus Lanes
	Park and Ride Facilities
	Bus Rapid Transit Route
	Bus Rapid Transit Infrastructure
	Parking Management (Controlling the Price and Supply)
Traffic Calming	Narrower Travel Lanes
	Raised Crosswalks
	Shorter Curb Corner Radii
	Elimination of Free-flow Right-turn Lanes
Other	Linking Modal Facilities
	Use of Route Markings/Signing for Historical and Cultural Resources

Category	Design Element
Bicycle	Bicycle Friendly Design and Parking
	Bike Lanes
	Wide Paved Shoulders
	Wide Curb Lanes
	Sharrow Markings
	Additional Bicycle Facility Signage
	Shared-use Bicycle and Pedestrian Paths
	Bikes on Buses
	Provide Bicycle Repair Station
	Bicycle Loop Detectors on Side Streets
	Removal of Street Parking to Construct Bicycle Lanes
	Reduce Lane Widths to Add Bicycle Facilities
Roadway	Access Management
	Raised Medians
	Addition of General Purpose Lanes
	Reduce Lane Widths to Add a Lane
	Intersection Widening
	Limiting Heavy Trucks
	Limit accommodation of left turning vehicles in off peak direction
	Traffic Control Center
	Traffic Signal Progression
	Additional Green Time
	Carpooling/Vanpooling

Category	Design Element
Pedestrian	Construct Missing Sidewalk Sections
	Wider Sidewalks (12 feet in commercial areas for landscaping and street furniture)
	Pavement Markings (Painted Crosswalks with highly visible markings)
	Midblock Crossing (Frequent and Safe Crossings for Pedestrians- every 200-600 feet)
	Pedestrian Median Islands (6 feet minimum if used as pedestrian refuge)
	Illuminated Pedestrian Crossings
	Illuminated Blank-out Message Sign- No Right Turn on Red
	Pedestrian Traffic Signal Timing
	"Barn Dance" at University Avenue and W 13th Street
	Accessible and Audible Pedestrian Signals with Count-down Heads that do not require activitation
	Short traffic signal cycle lengths to reduce pedestrian waiting time
	Pedestrian crossing intervals adequate for slower-walking pedestrians
	Leading Pedestrian Interval at Signalized Crossing
	Pedestrian Buttons Reachable by People in Wheelchairs
	Wheelchair Accessible Curb Cuts and Ramps
	Pedestrian Overpass/Underpass
	Pedestrian Friendly Intersection Design/ Compact Intersections (curb-return radius as small as possible)
	Crosswalks Shortened by Curb Extensions In Areas With On-street Parking
	On-street Parking to Buffer Travel Lanes and Pedestrian Areas
	Pedestrian Amenities (Street Trees for Shading, Benches, Planter Strips and Street Trees in Tree Wells)
	Pedestrian Scale Safety Lighting
	Provide As Much Curb Parking As Possible
	Consider Eliminating Some Left-turn Bays (to reduce pedestrian conflicts)
	Vehicle Access Across Sidewalks (24 feet or less)

Appendix "B": **Existing Conditions Report**

Existing Conditions Report - Table of Contents

Introduction and Summary

The Metropolitan Transportation Planning Organization (MTPO) for the Gainesville Urbanized Area is conducting the first phase of a Multimodal Emphasis Corridor Study for State Road 26 (University Avenue) between Gale Lemerand Drive and Waldo Road. This two-phased study will identify specific multimodal projects within this 2.3-mile portion of SR 26 that can be adopted into the LRTP. Once in the LRTP, these projects can be considered for funding in the future.

This Existing Conditions Report sets the stage for the Phase 1 identification of design elements (potential projects). It consists of several elements that describe the current multimodal setting and operations of the corridor:

- existing corridor infrastructure and design elements;
- multi-modal level of service (LOS) evaluation;
- bicycle and pedestrian count data summary and analysis;
- historical crash data summary; and
- right-of-way, environmental, and land use scenario description.

Existing Corridor Infrastructure and Design Elements

The SR 26/University Avenue corridor represents the center, both geographically and culturally, of the Gainesville community. Its role as the primary east-west corridor connecting the University of Florida, downtown Gainesville, and historic eastside neighborhoods means that the community and all of the area's governmental and transportation jurisdictions are significantly invested in the corridor's functionality, aesthetics, and overall success. Because of the corridor's importance to the community and its need to serve a diverse set of users of the transportation system, the Gainesville MTPO and other local transportation agencies have identified it as a roadway that should emphasize multimodal travel and thereby accommodate motor vehicle travel, bicycling, walking, and transit use. While there is abundant opportunity to improve the experience of using all four of these modes, there is a solid foundation of elements on which to build.

TAC and Stakeholder Agencies' Walking Tour / Preliminary Assessment

A TAC walking tour/assessment of the corridor was conducted early in the study process. Participants included staff of stakeholder transportation agencies (including members of the MTPO's Technical Advisory Committee from Alachua County, the City of Gainesville, and the University of Florida), MTPO-invited representatives of public interest and advocacy groups, and members of the study consulting team. These stakeholders were invited due to their long-time experience with the corridor. The participants, in a collaborative walking (in-situ) setting, articulated in detail the various contexts, experiences, observations, and recommended challenges (and potential solutions) that could be addressed, or implemented by multi-modal emphasis projects. The following sections outline these agency representatives' suggestions.

University of Florida Section (Gale Lemerand Drive to W 13th Street)

The west end of the corridor, west of W 13th Street, forms the northern boundary of the University of Florida. Traffic volumes are highest in this section, with an Annual Average Daily Traffic (AADT) of 27,000. The posted speed limit is 30 miles per hour, and mid-block sections include landscaped raised medians. Well-utilized on-street parking is intermittently present on the north side of the street. 8-foot sidewalks, located directly behind the curb face, are present throughout this section. Given the proximity to campus, the western portion of the corridor experiences very high bicycle and pedestrian activity, particularly crossing activity in which students are traveling between campus and commercial properties on the north side of the street. Numerous Regional Transit System (RTS) routes, including two campus circulator routes, are located along this section. Average bus stop spacing is approximately 900 feet, which is typical of the remainder of the corridor as well.

Some of the TAC and Stakeholder Agencies walking group's observations of the western section of the corridor are highlighted below:

- Even during off-peak university seasons, the number of pedestrian mid-block crossings is significant. There may be a need to better facilitate and channelize these crossings. A pedestrian mapping study could be used to inform associated recommendations. On-campus pedestrians are thought to experience a "cocoon effect" of safety that carries over to University Avenue in spite of higher traffic volumes and speeds.
- Several blocks have striped-off space on the north side that is the same width as striped on-street parking; there may be opportunities for bike corral-style parking in such locations. Other locations appear to have sufficient width to create additional on-street parking spaces.
- There is a second sidewalk on the south side of the roadway for much of this section which is located behind a brick wall. It is regularly used by bicyclists.
- Access to bus stops on the north side of University Avenue (for outbound trips from the university) is difficult because of the roadway geometry and right-of-way constraints.

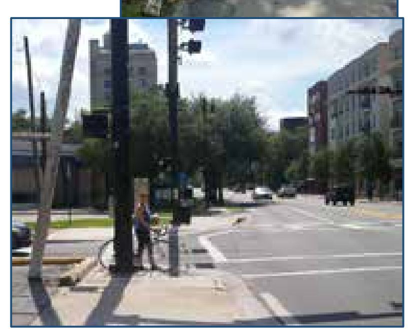
- At the intersection with NW 17th Street there are a significant number of conflicts between through (north-south) bicyclists and motorists turning onto University Avenue.
- Bicycle detection may be beneficial at side street signals such as NW 17th Street.
- Anecdotally, operating speeds are high; creating speed tables at minor intersections could have a positive effect.

- A campus bike route including a cycle track-type facility intersects University Avenue at Newell Drive, just west of NW 16th Street.
- The north side of the street would benefit from improved transit amenities.
- All legs of the intersection with W 13th Street experiences high pedestrian volumes. At times there is insufficient queuing space for pedestrians waiting to cross.
- In addition to potential operational improvements for pedestrians, this situation creates a potential need for improved motor vehicle operations as well. In particular, northbound-to-eastbound right-turning motorists are frequently significantly delayed because of the need to yield to crossing pedestrians, which significantly reduces intersection capacity and leads to northbound congestion (queuing) on W 13th Street, and creates the need for longer cycle lengths than other corridor intersections. An exclusive pedestrian phase has been discussed for this intersection.

W 13th Street to W 6th Street

Traffic volumes are somewhat lower in this section (AADT range of 22,000 to 25,000). On-street parking is generally present on the south side of the street. The median is a mixture of raised islands and two-way left-turn lane sections. 8-foot sidewalks located directly at the back of the curb face are present on both sides. This section is only served directly by one RTS route. Observations from the walking tour for this section include the following:

- Several intersections have time-based right turn on red restrictions that use electronic signing. During other time periods, some of these signs could be pedestrian activated.
- There are numerous wide driveways and curb cuts that could be narrowed or consolidated to reduce pedestrian crossing distances and conflicts.
- Several curb ramps are in need of improvement.



- Traffic signs are abundant and collectively reduce visibility; a traffic sign audit may be appropriate.
- There is a planned bike parking corral in the gore area just west of W 6th Street on the south side of University Avenue.
- There is a general need for enhancing the bicycle and pedestrian operating environment in this key section that connects the campus and downtown.

Downtown Section (W 6th Street to NE Boulevard)

Within downtown Gainesville daily traffic volumes range from 16,000 to 20,000. The posted speed limit remains 30 mph, but operating speeds are generally lower than in adjacent sections of the corridor. Between W 6th Street and E 3rd Street every public street intersection is signalized. The western portion of this section is undivided, while the eastern portion includes a mix painted turn lanes and raised medians; the medians were recently constructed with coordination with the City of Gainesville and the MTPO. Sidewalks, while narrower in some cases, generally have grass buffers that frequently include tree plantings. The following are other multimodal design elements and opportunities:

- A shared use path was recently constructed on the east side of W 6th Street. Trail user counts are already significant, even in summer, which leads to numerous bicycle and pedestrian crossings of the intersection.
- S 2nd Avenue has a bike lane and N 3rd Avenue has been designated as a bicycle boulevard. These two lower-volume streets provide alternative parallel routes for bicycle travel.
- In the early morning hours, the Gainesville Police Department sometimes closes the outside lanes as a pedestrian safety issue related to heavy and unpredictable pedestrian movements on the sidewalks.
- Pedestrian lighting is perceived as insufficient in some areas.
- The pedestrian operating environment is quite narrow in places because of lighting fixtures and other obstructions.
- Several curb ramps are in need of improvement.
- Mid-block crossings occur between E 1st Street and E 2nd Street to access the RTS stop and structure on the south side of University Avenue.
- Sweetwater Park (opposite NE Boulevard) includes a trail that provides access between University Avenue and the planned Power District redevelopment area.

East Gainesville Section (NE Boulevard to Waldo Road)

The eastern section of the study corridor transitions from downtown to the residential neighborhoods of East Gainesville. East of E 7th Street a two-way left-turn lane is present. Five-foot sidewalks are separated from the roadway by grass buffers. The major intersection with Waldo Road includes two channelized right turn lanes with raised pedestrian refuges. No transit routes run along the corridor east of E 9th Street. Many of the observations for this section focus on improving pedestrian conditions:

- Replacing the two-way left-turn lane with a raised median would add a refuge for crossing pedestrians
- Vegetation encroaches upon vertical pedestrian clearance
- Pedestrian-scale lighting is needed under the tree canopy; existing poles could be used
- Most crosswalks are unmarked, and it may be appropriate to add marked crosswalks at some intersections
- Sidewalks are somewhat narrow, particularly when bicyclists use them
- The pedestrian crossings at Waldo Road are very long, but could be reduced with intersection re-design
- The southeast corner of the Waldo Road intersection includes an unsignalized vehicle movement crossing a signalized pedestrian movement.

Multimodal Level of Service Evaluation

The MTPO for the Gainesville Urbanized Area maintains a Multimodal Level of Service Report. The September 2013 version of this report identifies automobile, bicycle, pedestrian, and transit levels of service for two segments of the corridor, Gale Lemerand Drive to US 441/West 13th Street and US 441/West 13th Street to SR 24/Waldo Road, as shown below.

Segment	Auto LOS	Bicycle LOS	Pedestrian LOS	Transit LOS
Gale Lemerand Drive to W 13th Street	D	B[12]	D	A
W 13th Street to Waldo Road	D	D	C	E

Auto Mode

The Florida Department of Transportation (FDOT) 2013 Florida Transportation Information DVD includes Annual Average Daily Traffic (AADT) data for seven count stations along the study corridor, ranging from 27,000 west of W 13th Street to 16,400 east of E 9th Street. Generally speaking, traffic volumes decrease from west to east. According to the same source, the corridor has a peak K-factor (ratio of study hour traffic volume to AADT) of 0.09, a D-factor (directional distribution factor) of .527, and a T-24 (daily truck percentage) of 2.1. Using FDOT's generalized/conceptual planning methodology, and given the corridor's Class II (posted speed 35 mph or less) status, the auto level of service is "D" for the length of the corridor as indicated in the MTPO report.

[12] This result is influenced by the indicated presence of a bike lane/paved shoulder that does not exist.

Pedestrian and Bicycle Modes

Bicycle and pedestrian level of service measures are indicators of perceived safety and comfort (as related to motor vehicle traffic) experienced by non-motorized travelers. The operational-level analysis for these modes outlined in the *Q/LOS Handbook* consider various roadway traffic characteristics, including motor vehicle volume and speed, and geometric design elements, including the presence and width of bicycle and pedestrian facilities. Because lane widths, on-street parking characteristics, and sidewalk and buffer widths are highly variable within the corridor, this report includes a detailed block-by-block bicycle and pedestrian LOS analysis, which is included as Appendix A.

The majority of the corridor provides relatively good walking conditions (pedestrian LOS "C") because of the consistent presence of sidewalks which frequently have buffers with tree plantings. At the west end of the corridor, where traffic volumes are highest and sidewalks are typically located directly behind the curb, pedestrian LOS "D" is most prevalent. Isolated blocks east of W 13th Street produce pedestrian LOS "B" conditions. However, there are sections not well-accommodating of pedestrians with disabilities.

Conditions within the corridor are not as conducive to creating a comfortable bicycling environment, with nearly all blocks having a bicycle LOS of "D." The absence of dedicated space for bicyclists to ride (e.g., designated bike lanes) contributes to these conditions.

The bi-directional distance-weighted average pedestrian LOS for the corridor is 2.9 ("D"), while the corresponding average bicycle LOS is 3.9 ("D").

Transit Mode

The most recent edition of FDOT's *Quality/Level of Service Handbook* was released in 2013, subsequent to the publication of the MTPO's Multimodal Level of Service Report. While this newest edition of the handbook retains service frequency as the primary determinant of transit level of service, some of the factors used to adjust service frequency have changed. The four adjustment factors are 1) passenger load factor, 2) bus stop amenities, 3) roadway crossing difficulty, and 4) pedestrian level of service.

Eight routes, including two campus routes, serve portions of the study corridor, and the headways of these routes determine the base service frequency.

Route #	Corridor Extent	Typical Peak Hour Headway (minutes)
5	Gale Lemerand Drive to E 3rd Street	24
11	East 3rd Street to E 9th Street	30
15	Main Street to E 3rd Street	35
28	Gale Lemerand Drive to NW 17th Street	16
34	Gale Lemerand Drive to NW 17th Street	20
43	Gale Lemerand Drive to W 13th Street	30
118	Gale Lemerand Drive to NW 17th Street	7
119	Gale Lemerand Drive to NW 17th Street	30

These routes and headways produce the following base service frequencies for the corridor.

Corridor Extent	Buses per Hour
Gale Lemerand Drive to NW 17th Street	21.8
NW 17th Street to W 13th Street	4.5
W 13th Street to Main Street	2.5
Main Street to E 3rd Street	4.2
E 3rd Street to E 9th Street	2.0
E 9th Street to Waldo Road	0.0

Load factor is the ratio of riders to number of seats on the bus. Load factors vary significantly among the routes serving the corridor, the location along the routes, and by time of day. During the afternoon peak hour of traffic, average maximum loads along the routes yield load factors ranging from approximately 20% to greater than 60%. Given FDOT's guidance that no adjustments based on load factor should be applied when average load factors are between 30% and 70%, no such adjustment was used in this analysis.

FDOT's transit LOS procedure also includes adjustment factors based on stop amenities. Specifically, a factor is applied if both shelters and benches are provided or if neither is provided. Benches are available at the majority of University Avenue bus stops. A few stops have shelters as well, and several have neither. The collective prevalence of these amenities suggests that neither a positive nor negative adjustment is warranted.

An adjustment based on roadway crossing difficulty is applied when certain combinations of roadway class, number of lanes, auto LOS, and median type are met. As a Class II roadway (35 mph or slower posted speed limit) with four through lanes, an auto LOS of "D," and a median that is intermittently restrictive, no roadway crossing difficulty factor is applied.

No adjustment factor based on the quality of the walking experience is applied when a roadway has a pedestrian LOS of "D." As pedestrian LOS improves from that point, a positive adjustment is applied, while a negative adjustment is applied when walking conditions are worse than the base assumption. As described previously, pedestrian LOS varies throughout the corridor; for this analysis, the most prevalent pedestrian condition within the transit segments is used.

The table below shows the buses per hour for the corridor's transit segments, the typical pedestrian level of service within those segments, the associated pedestrian LOS adjustment factor (the only applicable adjustment factor using FDOT's transit LOS methodology), the adjusted service frequency, and the associated transit levels of service provided along the corridor. <u>It is worth noting that the FDOT methodology does not consider the benefits of nearby parallel routes, including several that operate on S 2nd Avenue, that offer additional transit service to travelers in the vicinity of the University Avenue corridor. All portions of the corridor are within 800 feet of a bus stop.</u> Also note that not all identified routes for the eastern portion of the corridor include stops within the study corridor.

Corridor Extent	Buses per Hour	Pedestrian LOS	Pedestrian LOS Adjustment	Adjusted Buses per Hour	Transit LOS
Gale Lemerand Drive to NW 17th Street	17.5	D	1.00	17.5	A
W 17th Street to W 13th Street	4.5	C	1.05	4.7	B
W 13th Street to Main Street	2.5	C	1.05	2.6	D
Main Street to E 3rd Street	4.2	C	1.05	4.4	B
E 3rd Street to E 9th Street	1.0	C	1.05	1.1	E
E 9th Street to Waldo Road	0.0	C	1.05	0	F

Bicycle and Pedestrian Count Data

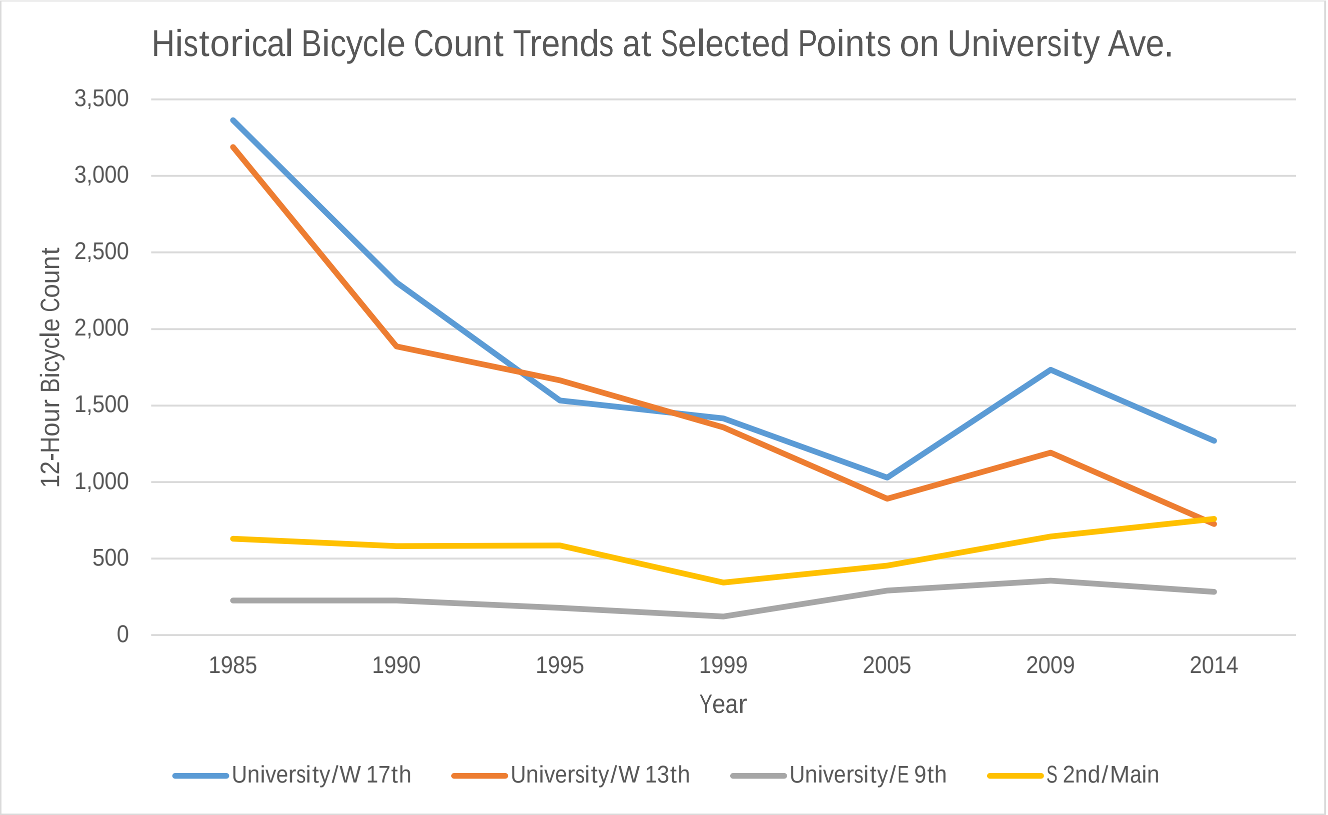
The University Avenue corridor experiences high volumes of non-motorized travel. While comprehensive bicycle and pedestrian count data for the corridor are somewhat lacking, the transportation component of the University of Florida's *Campus Master Plan, 2010-2020*, and the Gainesville MTPO's *2014 Bicycle Usage Trends Report* each include several such counts within the corridor's extents.

The UF plan counted bicycles and pedestrians entering campus (i.e., crossing University Avenue from the north) at the four locations shown in the table below. The counts were conducted on a September weekday during the morning (7:00am - 9:00am), midway (12:00pm - 1:00PM), and evening (4:00pm - 6:00pm) travel peaks. Total counts for these periods by mode are shown in the table. Bicycle volumes at all four locations were significantly higher in the morning period, while pedestrian volumes were generally more consistent throughout the three periods.

Campus Entry Location	Bicycle Count	Pedestrian Count
Gale Lemerand Drive	82	332
NW 18th Street	130	329
NW 17th Street	250	475
NW 15th Street	176	558

The MTPO maintains a Bicycle Usage Trends Program which is based on routinely collected bicycle volumes at more than a dozen "permanent" (i.e., consistent from year to year) count locations, the majority of which were established in the early 1980s. Three of these intersection locations are located along the University Avenue study corridor, and a fourth is located along S 2nd Avenue, which has a bike lane and is used by many bicyclists as an alternative to University Avenue. The bicycle volumes collected for this program are based on 12-hour weekday counts. The table and figure below show trends at the four relevant locations at roughly five-year intervals since the inception of the program.

Year	University/W 17th	University/W 13th	University/E 9th	S 2nd/Main
1985	3,365	3,188	225	630
1990	2,305	1,886	225	581
1995	1,532	1,664	177	585
1999	1,416	1,357	122	344
2005	1,028	891	290	454
2009	1,734	1,191	355	645
2014	1,269	725	283	759



This trend graph illustrates that the two count locations adjacent to the UF campus demonstrate an overall downward trend since 1985, although most of that decline occurred during the first of the three intervening decades. (The report notes that these two locations are consistently amongst the highest bicycle volumes collected throughout Alachua County.) The count location that represents the eastern portion of the study corridor demonstrates the opposite trend, with bicycle volumes generally on the rise since 1999. Three of the four locations experienced a decline in volume between 2009 and 2014, with the exception being the site along S 2nd Avenue. The *2014 Bicycle Usage Trends Report* contains additional details, including all years collected and intersection bicycle turning movements for the 2014 counts.

Historical Crash Data

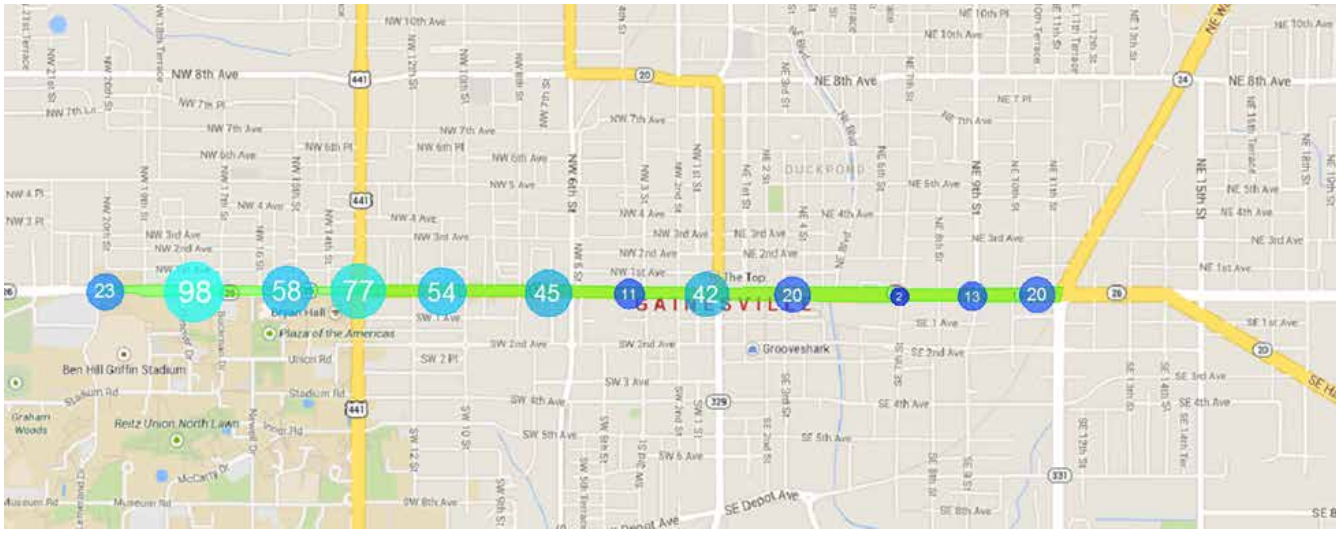
Introduction

A crash analysis was undertaken based on the past three years of crash data for the study corridor. The crash analysis includes an overall examination and separately focuses specifically on bicycle and pedestrian crashes. Temporal, roadway condition, and crash type trends are included in the analysis.

Overall, it was determined that most crashes exhibited a combination of the following characteristics: resulting in one or less injury, involving a rear end collision, occurring during daylights hours, occurring under non-adverse weather, lighting, or road surface conditions, concerning contact primarily between two motor vehicles, and not involving alcohol. Small sample sizes of bicycle and pedestrian crashes makes drawing definitive conclusions about trends difficult. However, both bicycle and pedestrian crashes more often resulted in injury. More than 80% of bicycle crashes occurred during daylight hours while the majority (65%) of pedestrian crashes occurred between 7pm-7am. A substantial amount of pedestrian crashes (35%) were alcohol related, with the pedestrian suspected to be under the influence more frequently than the driver.

Crash Trends

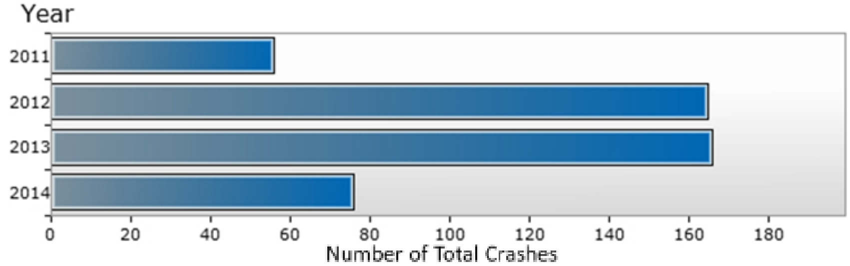
Motor vehicle crash trends were analyzed in the study area for the three year period from September 1, 2011 to August 31, 2014. Crash data was provided by the University of Florida GeoPlan Center's Signal Four Analytics. Four-hundred and sixty-three (463) total crashes were reported, with 17 crashes involving a bicyclist and 23 crashes involving a pedestrian. A map of the study area is shown below with predominant crash zones identified.

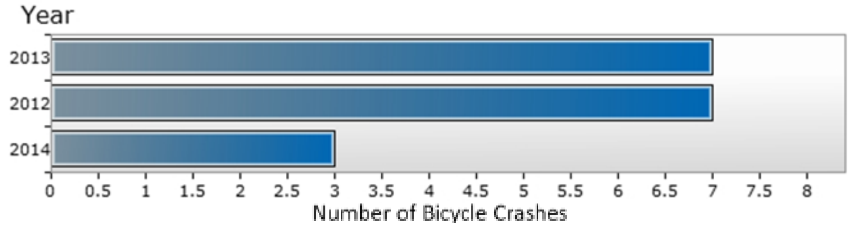


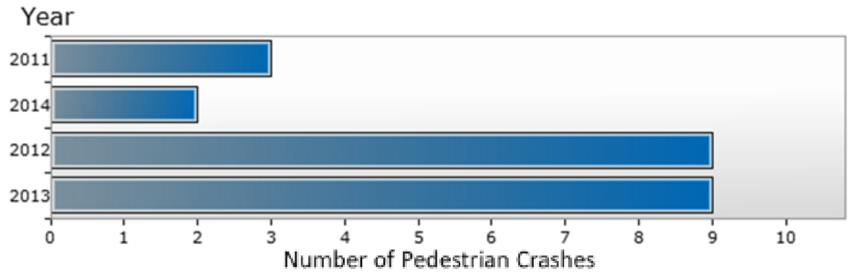
This section is intended as a summary overview of the corridor's crash history. The crash statistics described herein do not tell the complete story of multimodal safety within the corridor. Many crashes are not reported, and additional observations and analysis are needed to provide a more complete corridor safety study.

Temporal Trends

From September 1, 2011 to August 31, 2014, 463 total crashes occurred. When analyzing the two full years of data, 2012 and 2013, average annual crashes remain steady.

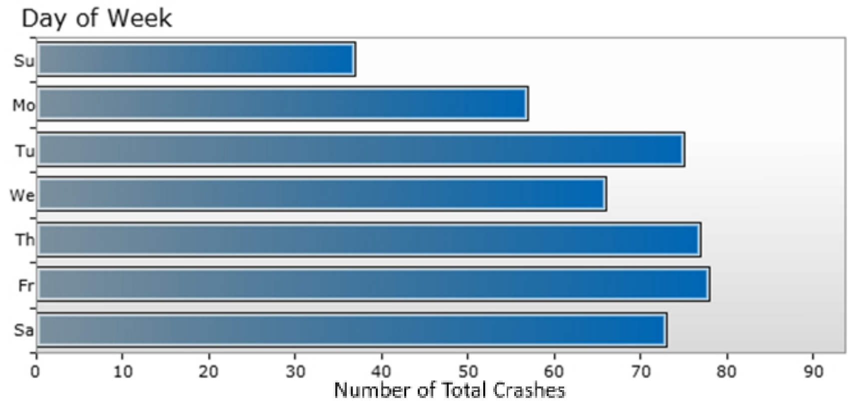


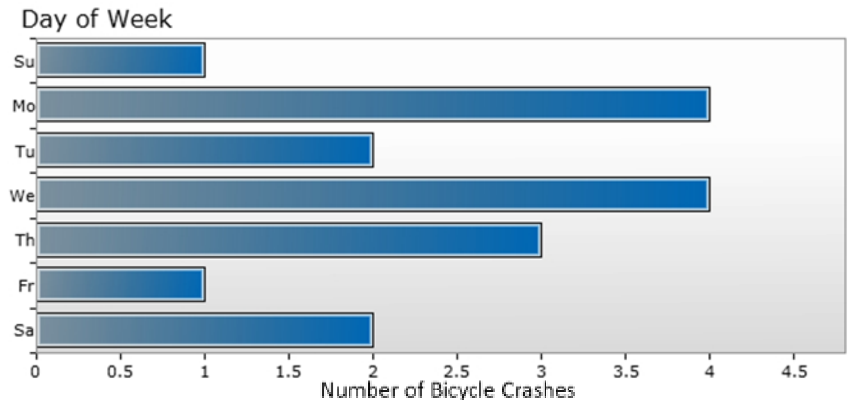


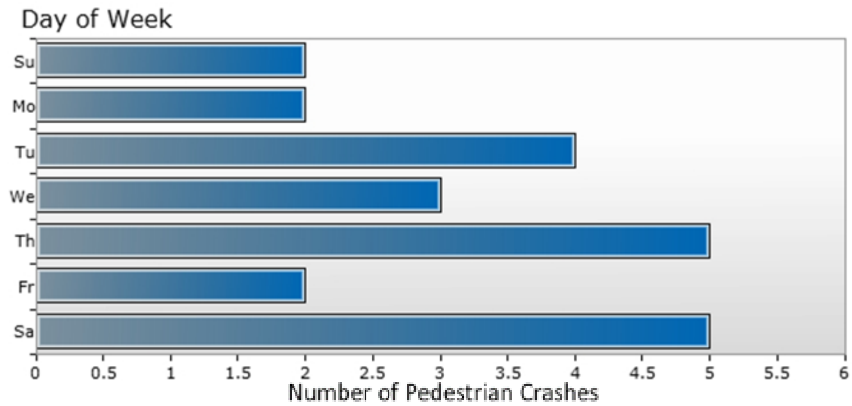


Friday is the day of the week that experiences the greatest number of crashes on the corridor. The number of crashes on Sunday is significantly lower than the other days of the week

The most bicycle crashes occurred on Monday and Wednesday while the most pedestrian crashes occurred on Thursday and Saturday. Only 17 bicycle crashes occurred compared to 23 pedestrian crashes. In both cases, prominent conclusions are difficult to draw due to such a small sample size.

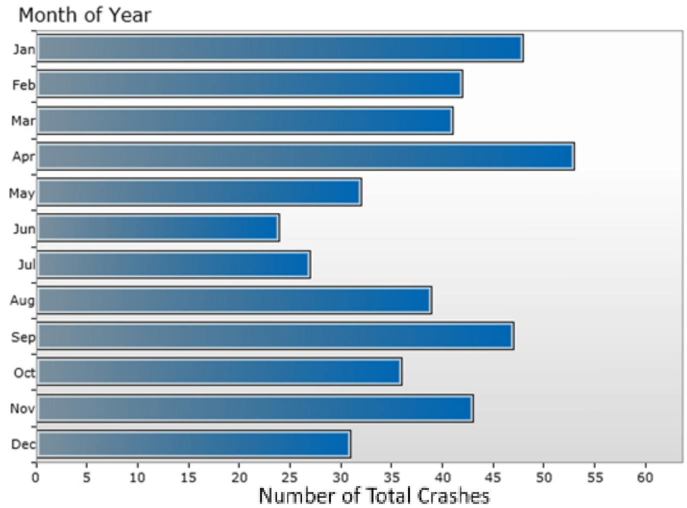


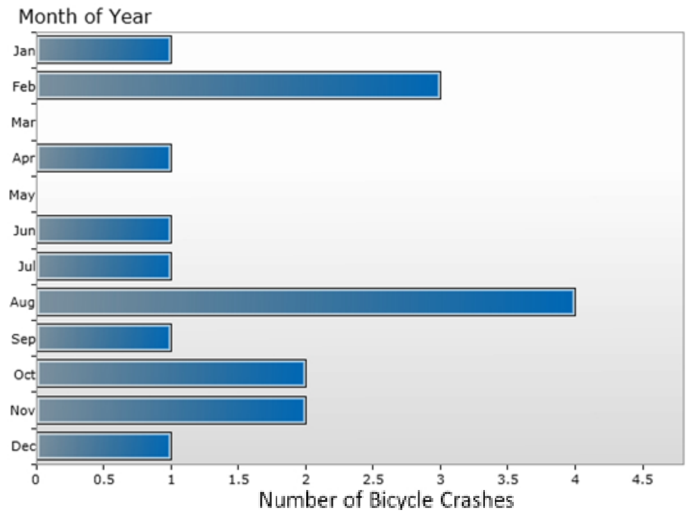


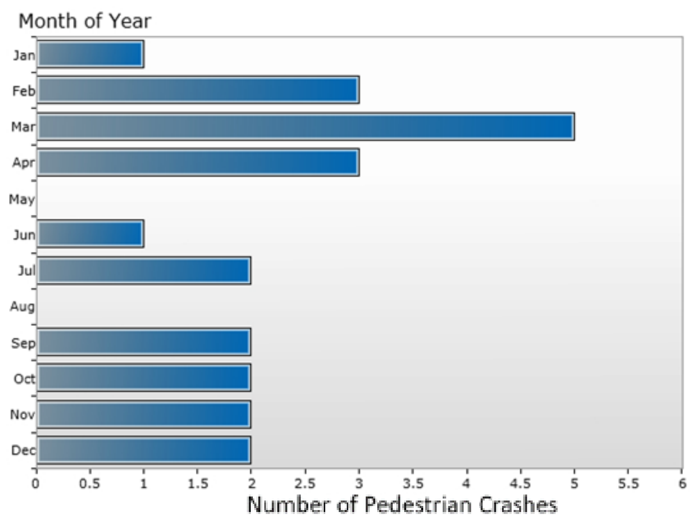


The total number crashes by month of year reveals that April experienced the most crashes, followed by January and September. Crashes are least frequent in the summer month and in December, months when campus activity is generally lightest.

Bicycle and pedestrian crashes do not show discernable seasonal trends.

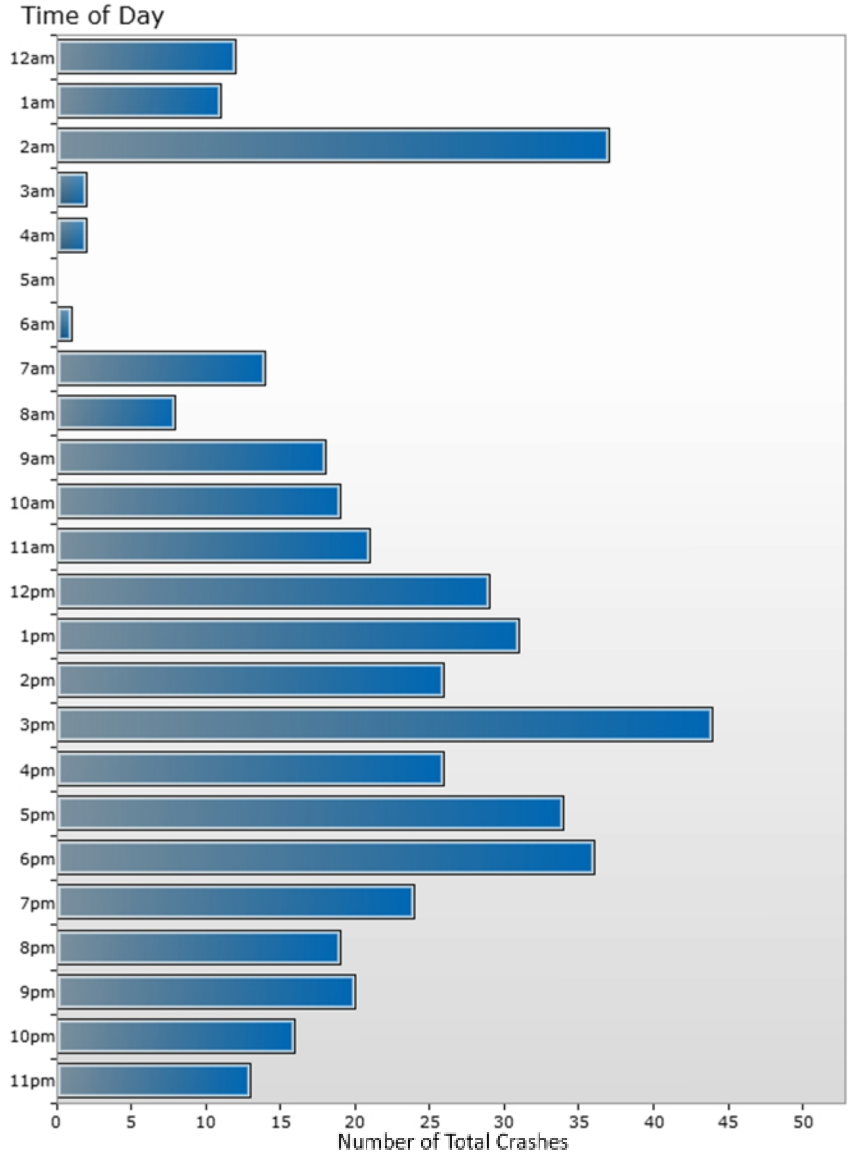




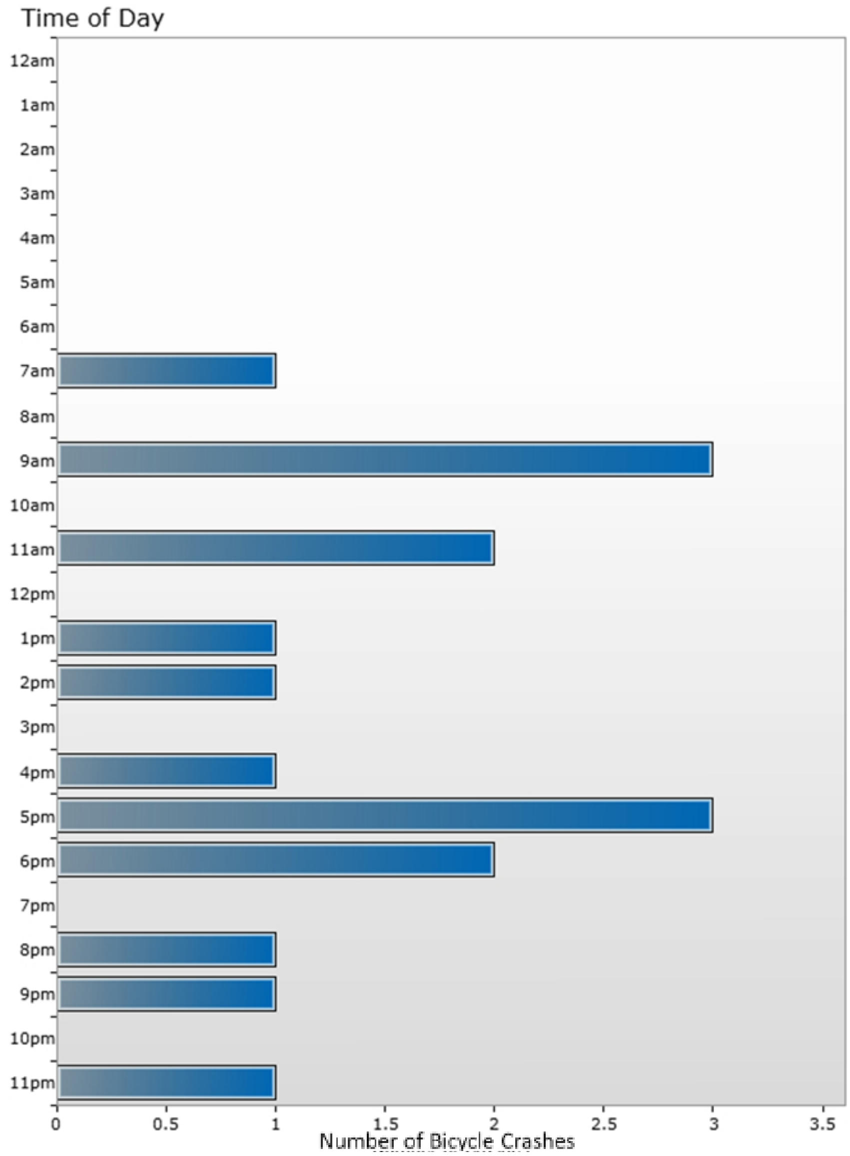


The most number of crashes occurred during the 3pm hour. There is a general increase in crashes from the late morning until a peak in the afternoon followed by a drop-off into the late evening hours.

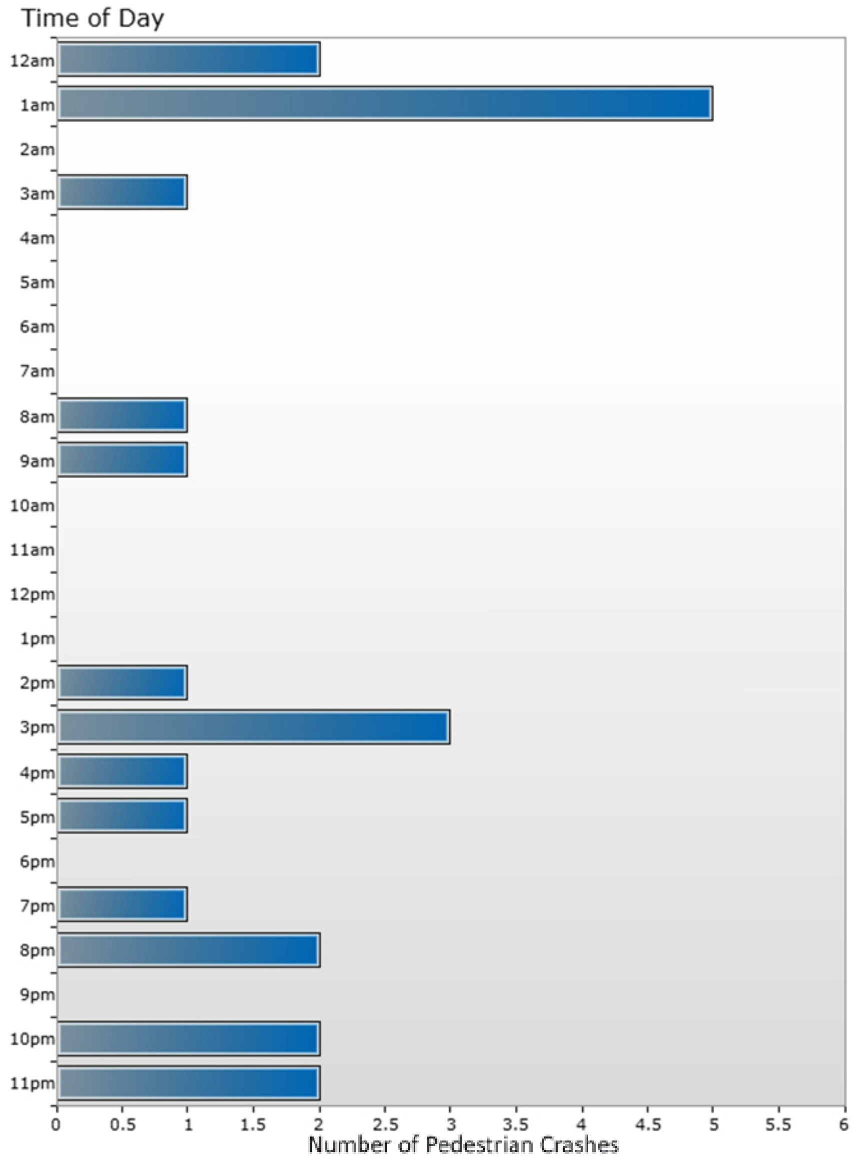
A noticeable spike in crashes occurred during the 2am hour. This spike may be explained by the corridor featuring numerous night-time entertainment venues and bars.



Bicycle crashes occurred sporadically between 7:00am and midnight. While the sample size is small, the greatest number of bicycle crashes occurred during the morning and afternoon peak travel periods.



The highest number of pedestrian crashes occurred during the 1am hour. This can likely be explained similarly to the early morning peak seen in the total crashes by time of day analysis. Interestingly, more pedestrian crashes occurred between the hours of 7pm-7am (14) then during daylight hours between 7am-7pm (9). This might suggest inadequate lighting conditions. However, there is a much stronger correlation between pedestrian crashes and the involvement of alcohol compared to lighting conditions. This correlation will be explored later in this report.

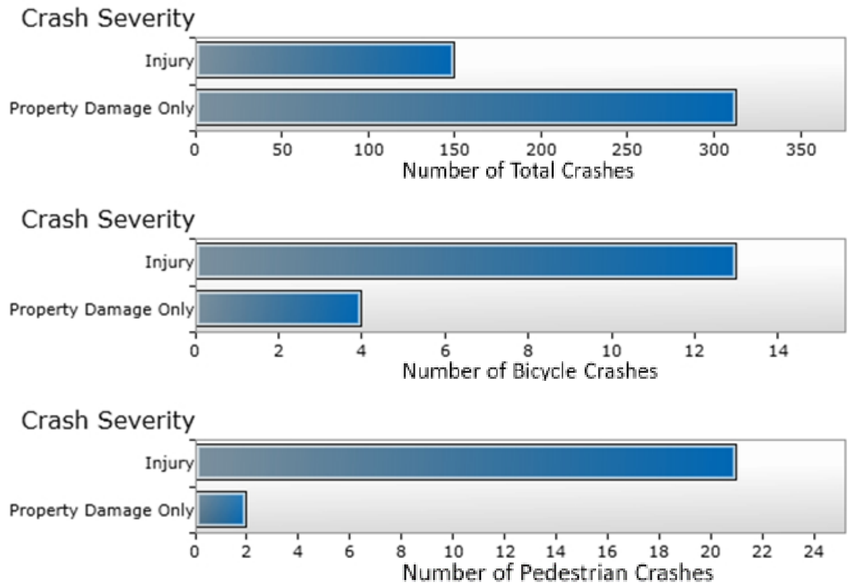


Injury Trends

Injuries occurred far more frequently in crashes involving bicyclists and pedestrians compared to overall crashes. This type of trend is expected as a bicyclist or pedestrian has a higher potential to sustain injury than a motorist in a vehicle.

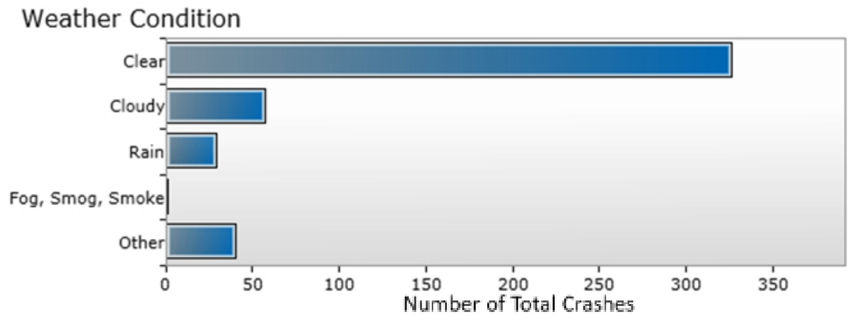
Out of 463 total crashes, 150 crashes occurred in which at least one injury was reported (32%). This figure is skewed slightly by the inclusion of bicycle and pedestrian crashes. There were 216 injuries reported altogether, and 43 crashes resulted in more than one injury.

This high number of crashes resulting in multiple injuries could be the result of one or more of the following: crashes involving higher speeds, crashes where multiple parties are at fault, and crashes involving motor vehicles occupied by multiple persons. Crashes involving motor vehicles occupied by multiple persons likely have the greatest impact on the number of crashes resulting in more than one injury. This is especially true if those involved were not wearing a safety harness.

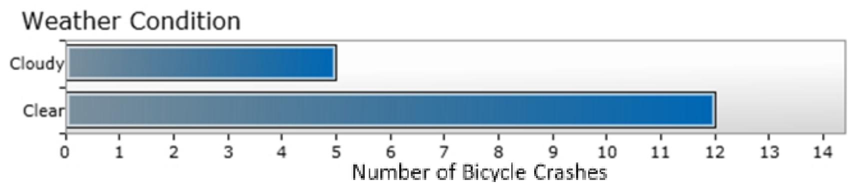


Weather Conditions

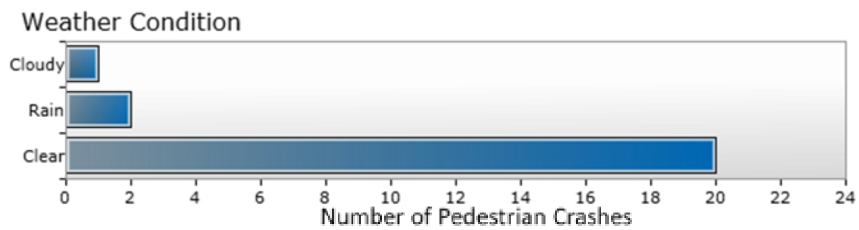
Of the 463 reported crashes, 383 (83%) occurred during clear or cloudy weather conditions. Rain was involved in only 29 crashes, and 40 crashes involved a condition other than what is listed.



All 17 bicycle crashes occurred during clear or cloudy weather conditions. The lack of crashes in other conditions is likely tied to a reduction in the volume of bicycling activity during adverse weather conditions.



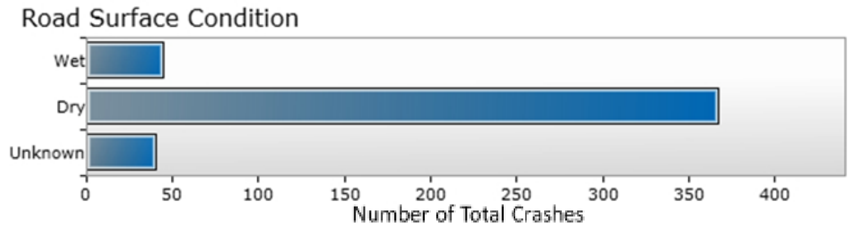
Of the 23 reported pedestrian crashes, only two involving rainy weather conditions occurred. Similarly to crashes involving bicyclists, this low figure is likely tied to a reduction in pedestrian traffic during adverse weather conditions, though perhaps not to the same degree.

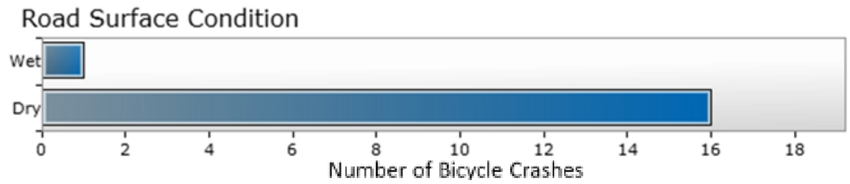


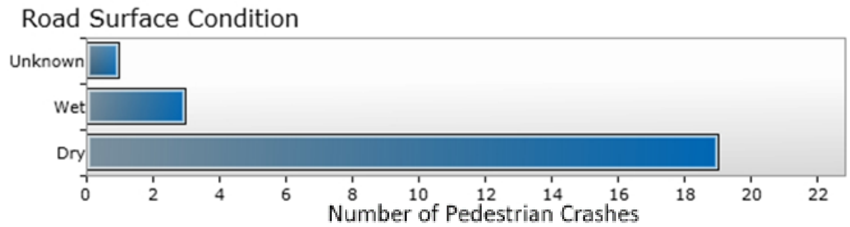
Road Surface Condition

Road surface condition had seemingly minimal impact on the majority of reported crashes. Most crashes involved a dry road surface. Of the 463 total crashes, only 45 (10%) involved a wet road surface while 41 crashes involved an unknown road surface.

A wet road surface was involved in a similarly low number of bicycle and pedestrian crashes. This is likely tied to a reduction in the volumes of bicycle and pedestrian traffic during adverse weather conditions.





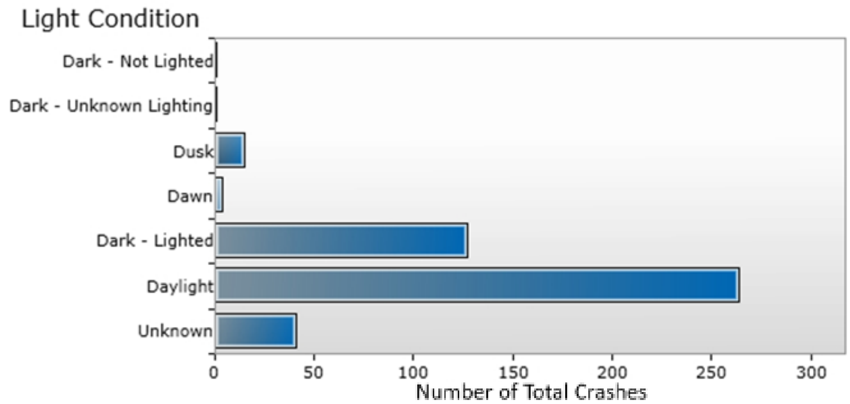


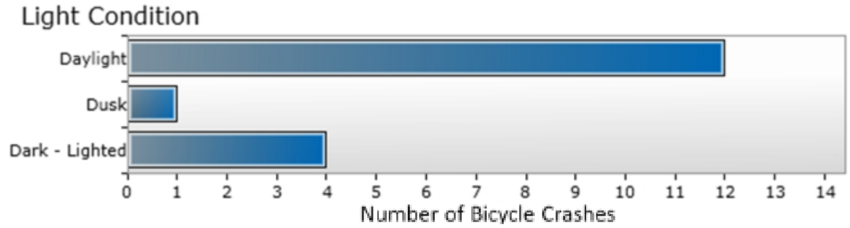
Light Condition

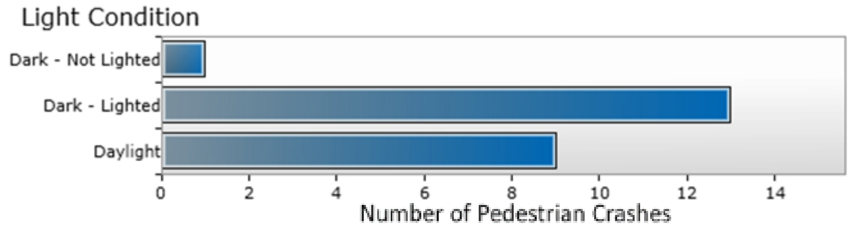
Of the 463 total reported crashes, 264 (57%) occurred during daylight conditions. An additional 127 occurred in dark-lighted conditions, while 41 crashes occurred during unknown lighting conditions. Significantly more crashes occurred at dusk (15) than at dawn (four). Only one crash occurred during dark-not lighted conditions. A single crash occurred during dark-unknown lighting conditions as well.

Similar trends can be observed for bicycle crashes, with the majority occurring during daylight hours.

Pedestrian crashes occurred mostly during dark-lighted conditions. This supports previous data that indicates an increase in pedestrian crashes between the hours of 7pm-7am.





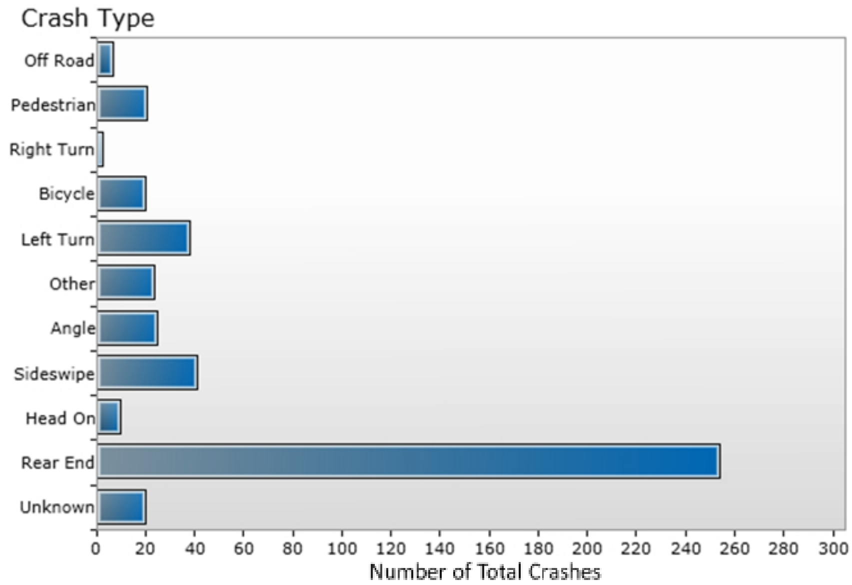


Crash Type

By far the most common crash type reported was rear end collision. Of the 463 reported crashes, 254 (55%) were rear end collisions. Sideswipe collisions were second most frequent, followed by left turn collisions.

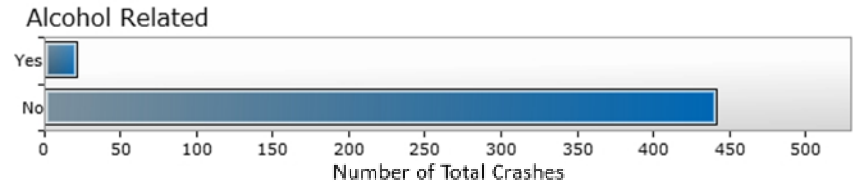
These trends suggest that most crashes occurred as the result of an at-fault driver following too close or being inattentive. A relatively high number of sideswipe collisions suggests an at-fault driver who either misjudged a clearance or was inattentive. Left turn and angle collisions suggest a failure to yield on the part of the at-fault driver.

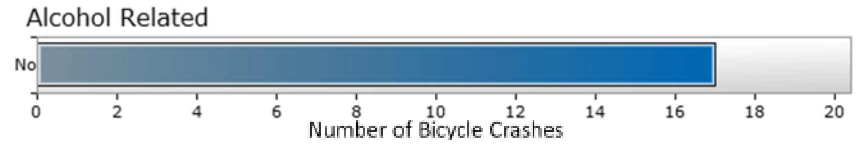
Only ten collisions were head on, while only seven crashes occurred off the roadway. These types of crashes are typically more severe. This correlates highly with the relatively low number of injuries and complete absence of fatalities.

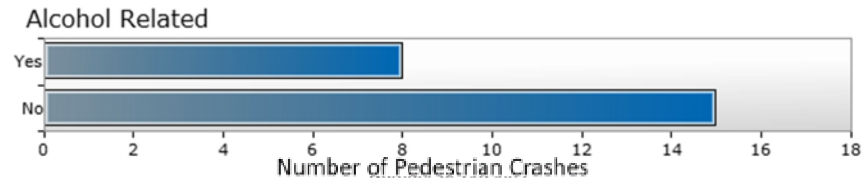


Alcohol Related Trends

Alcohol was reported as being involved in 22 of 463 total reported crashes, less than five percent. No bicycle crashes were reported as involving alcohol.







The same cannot be said for alcohol related pedestrian crashes. Alcohol was involved in about 35% of pedestrian crashes. While the sample size of pedestrian crashes is small, this trend is noticeable and deserves attention.

Of the eight pedestrian crashes reported as involving alcohol, four occurred during the 1am hour. Two occurred during the 8pm hour while 2pm and 11pm also had a pedestrian crash. Only one crash resulted in a D.U.I. for the driver. While alcohol was involved in eight crashes, the pedestrian who was struck was suspected to be under the influence in six of the crashes. More often than not, the pedestrian was witnessed as standing in the middle of the road or suddenly darting into traffic. According to multiple *Florida Traffic Crash Reports*, pedestrians were commonly struck outside of a designated crosswalk.

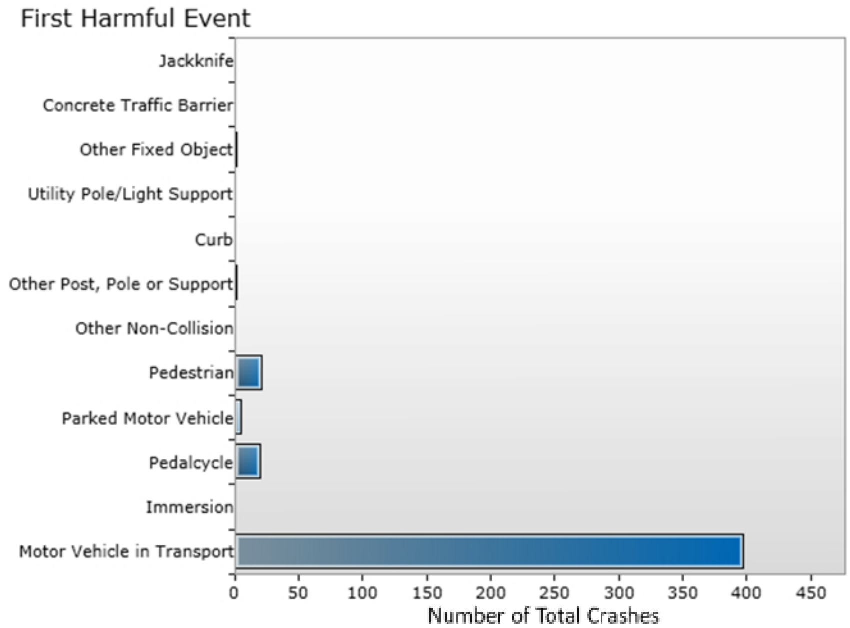
Note that crashes may be reported as alcohol related if either person involved is *suspected* of being under the influence. Categorization as alcohol related does not necessarily mean that a D.U.I. was issued for the driver or a citation for the pedestrian.

First Harmful Event

The first harmful event describes the first injury or damage producing event of a crash. It is similar to most harmful event, which describes the incident that produces the most serious injury or the most damage. Often times, especially for low speed collisions, first harmful event and most harmful event are the same.

By far the most common first harmful event was motor vehicle in transport (86%). This indicates that the initial event of a crash was due to contact between two travelling motor vehicles. Other than bicycle and pedestrian crashes, the only other first harmful event reported in more than two crashes was parked motor vehicle.

A lack of first harmful events with fixed objects suggests a few important details about the roadway on which these crashes occurred. This low number of crashes with fixed objects suggests that University Avenue is well designed both in terms of geometry and speed limit. Thus, drivers typically have ample time and space to anticipate and react to events occurring within the roadway.



Right-of-Way

The right-of-way width along the study corridor varies from a minimum of 43 feet to a maximum of 71 feet with an average width of 56 feet. The right-of-way line is generally located at the back of existing sidewalks, meaning that the corridor is largely constrained in this regard. Right-of-way boundaries and existing adjacent land uses can be seen in Appendix B.

Environmentally Sensitive and Hazardous Materials Locations

No environmentally sensitive areas or documented hazardous material sites are known within the corridor right-of-way that would impact the study's eventual recommendations.

Land Use Scenario

To begin to study the potential future buildout scenario for the SR 26 Corridor it was necessary to examine the opportunities and constraints that exist within the corridor.   The first constraint to consider was to identify the current Historic Districts within which it is not anticipated that development intensity would likely increase in the future. The City's Comprehensive Plan includes a series of maps that identify five Historic Districts with parcels lying within the study corridor: University Heights Historic District North, University Heights Historic District South, Pleasant Street Historic District, the Northeast Gainesville Residential Historic District and the Southeast Gainesville Historic District. Additionally, the Comprehensive Plan includes another map of Designated Historically Significant Properties, several of which are located within the study area. These parcels are located outside of the Historic Districts and are either listed on the National Register, listed on the Local Register or on both and should be considered to remain as developed with respect to our future development scenario.

The future land use designations of parcels not listed on the Historic Register or located with Historic Districts were then reviewed for potential future buildout. Density can be defined by dwelling units per acre, floor area ratio, maximum lot coverage or maximum building height or may require a combination of these factors to fully define the potential development opportunity. Where the Future Land Use Designations provided only a maximum dwelling unit factor a general height limitation was derived from reviewing the policies within the current Land Development Code (in effect on 7/2014) for those zoning districts permitted within the Land Use Designation. Incorporating the height limitations into the development scenario will assist in the visualization of the corridor's potential future buildout. The following are the density factors for the land use designations that fall within the study area and other assumptions made that will be used to develop the potential future buildout scenario:

Residential Low-Density – up to 12 units per acre (height generally 35' or 3 stories)

Residential Medium Density – between 8 and 30 units per acre (height 3 stories with a bonus opportunity to 5 stories)

Residential High-Density – between 8 and 100 units per acre (height 5 stories)

Mixed-Use Residential – up to 75 units per acre (height generally 3 stories)

Mixed-Use Low-Intensity – between 8 and 30 units (height limits of 5 stories or less but a maximum of 8 stories with special permit)

Mixed-Use Medium-Intensity – between 12 and 30 units per acre (height limits of 5 stories or less but a maximum of 8 stories with special permit)

Mixed-Use High-Intensity – up to 150 units per acre (height limit of 6 stories (88') or 8 stories (116') with bonuses

Urban Mixed-Use 1 - between 8 and 75 units (height minimum 24' up to 6 stories)

Urban Mixed-Use 2 – between 10 and 100 units per acre with potential additional 25 units per acre by special permit (height limit 6 stories)

Commercial - height limit of 5 stories with a maximum of 8 stories possible with special use permit (assumption 10' setback; minimum 25' setback near residential but may be greater based on building height and sun angle coverage; 40% maximum lot coverage)

Education – no floor area ratio maximum

Recreation – intensities based on the Recreation Element of the Comprehensive Plan

Public and Institutional Facilities – maximum lot coverage of 80 percent except in urban core

Planned Development – this would apply to the University Corners PUD where the underlying Mixed Use Residential and Mixed Use Low designations were applied

To develop the preliminary future buildout scenario, these intensities were applied on a lot by lot basis using land area information from the Property Appraiser's GIS files. Future development would likely involve the assemblage of multiple parcels. This preliminary future buildout scenario is based on intensity calculations only and does not consider factors such as street edge, landscaping and parking requirements.

The projected future increases in density and intensity of land use in the blocks that are adjacent to the study corridor are as follows:

- Blocks 1 to 14 (Gale Lemerand Drive to W 10th Street) are programed to allow an increase of 2,735 dwellings
- Blocks 15 to 23 (W 10th Street to W 3rd Street) are programmed to allow an increase of 4,118 dwellings
- Blocks 24 to 35 (W 3rd Street to E 7th Street) are programmed to allow an increase of 4,388 dwellings
- Blocks 36 to 39 (E 7th Street to Waldo Road) are programed to allow up to 200,000 s.f. of commercial and service uses.

This analysis considers the portion of CRA plan overlap and historic district restrictions.

Appendix A: SR 26/University Avenue Multimodal Emphasis Corridor Study Multimodal Level of Service Evaluation

From	To	Dir.	Through Lanes	AADT	Speed Limit	HV %	W_t (ft)	W_l (ft)	Park %OSP	SW Width (ft)	Buffer Width (ft)	Tree Spacing (ft)	Freq. (bus/hr)	Stop Amenities	Passenger Load	Bicycle Score	Bicycle LOS	Pedestrian Score	Pedestrian LOS	Motor Vehicle LOS	Transit LOS
Gale Lemerand Dr	NW 19th St	EB	4	27,000	30	2	12	0	0	7	0	0	21.8	Fair	≥30% and < 70%	**4.09**	**D**	**3.52**	**D**	**D**	**A**
Gale Lemerand Dr	NW 19th St	WB	4	27,000	30	2	12	0	0	7	0	0	21.8	Fair	≥30% and < 70%	**4.09**	**D**	**3.52**	**D**	**D**	**A**
NW 19th St	NW 18th St	EB	4	27,000	30	2	11	0	0	8	0	0	21.8	Fair	≥30% and < 70%	**4.21**	**D**	**3.51**	**D**	**D**	**A**
NW 19th St	NW 18th St	WB	4	27,000	30	2	16	0	0	8	0	0	21.8	Fair	≥30% and < 70%	**3.53**	**D**	**3.36**	**C**	**D**	**A**
NW 18th St	NW 17th St	EB	4	27,000	30	2	11	0	0	8	0	0	21.8	Fair	≥30% and < 70%	**4.21**	**D**	**3.51**	**D**	**D**	**A**
NW 18th St	NW 17th St	WB	4	27,000	30	2	19	8	75	8	0	0	21.8	Fair	≥30% and < 70%	**3.69**	**D**	**2.45**	**B**	**D**	**A**
NW 17th St	NW 16th St	EB	4	27,000	30	2	11	0	0	8	0	0	4.5	Fair	≥30% and < 70%	**4.21**	**D**	**3.51**	**D**	**D**	**B**
NW 17th St	NW 16th St	WB	4	27,000	30	2	19	8	50	7	0	0	4.5	Fair	≥30% and < 70%	**3.01**	**C**	**2.66**	**C**	**D**	**B**
NW 16th St	NW 15th St	EB	4	27,000	30	2	11	0	0	8	0	0	4.5	Fair	≥30% and < 70%	**4.21**	**D**	**3.51**	**D**	**D**	**B**
NW 16th St	NW 15th St	WB	4	27,000	30	2	11	0	0	8	0	0	4.5	Fair	≥30% and < 70%	**4.21**	**D**	**3.51**	**D**	**D**	**B**
NW 15th St	NW 14th St	EB	4	27,000	30	2	12	0	0	8	0	0	4.5	Fair	≥30% and < 70%	**4.09**	**D**	**3.47**	**C**	**D**	**B**
NW 15th St	NW 14th St	WB	4	27,000	30	2	12	0	0	8	0	0	4.5	Fair	≥30% and < 70%	**4.09**	**D**	**3.47**	**C**	**D**	**B**
W 14th St	W 13th St	EB	4	27,000	30	2	12	0	0	8	0	0	4.5	Fair	≥30% and < 70%	**4.09**	**D**	**3.47**	**C**	**D**	**B**
W 14th St	W 13th St	WB	4	27,000	30	2	12	0	0	8	0	0	4.5	Fair	≥30% and < 70%	**4.09**	**D**	**3.47**	**C**	**D**	**B**
W 13th St	W 12th St	EB	4	25,000	30	2	20	8	50	8	0	0	2.5	Fair	≥30% and < 70%	**2.77**	**C**	**2.50**	**B**	**D**	**D**
W 13th St	W 12th St	WB	4	25,000	30	2	12	0	0	8	0	0	2.5	Fair	≥30% and < 70%	**4.05**	**D**	**3.35**	**C**	**D**	**D**
W 12th St	W 11th St	EB	4	22,000	30	2	19	8	100	8	0	0	2.5	Fair	≥30% and < 70%	**4.09**	**D**	**2.01**	**B**	**D**	**D**
W 12th St	W 11th St	WB	4	22,000	30	2	11	0	0	8	0	0	2.5	Fair	≥30% and < 70%	**4.09**	**D**	**3.21**	**C**	**D**	**D**
W 11th St	W 10th St	EB	4	22,000	30	2	21	8	75	8	0	0	2.5	Fair	≥30% and < 70%	**3.25**	**C**	**2.13**	**B**	**D**	**D**
W 11th St	W 10th St	WB	4	22,000	30	2	11	0	0	8	0	0	2.5	Fair	≥30% and < 70%	**4.09**	**D**	**3.21**	**C**	**D**	**D**
W 10th St	W 8th St	EB	4	22,000	30	2	19	8	75	8	0	0	2.5	Fair	≥30% and < 70%	**3.57**	**D**	**2.15**	**B**	**D**	**D**
W 10th St	W 8th St	WB	4	22,000	30	2	11	0	0	8	0	0	2.5	Fair	≥30% and < 70%	**4.09**	**D**	**3.21**	**C**	**D**	**D**
W 8th St	W 7th St	EB	4	22,000	30	2	19	8	100	8	0	0	2.5	Fair	≥30% and < 70%	**4.09**	**D**	**2.01**	**B**	**D**	**D**
W 8th St	W 7th St	WB	4	22,000	30	2	11	0	0	8	0	0	2.5	Fair	≥30% and < 70%	**4.09**	**D**	**3.21**	**C**	**D**	**D**
W 7th St	W 6th St	EB	4	22,000	30	2	19	8	75	5	3	30	2.5	Fair	≥30% and < 70%	**3.57**	**D**	**2.08**	**B**	**D**	**D**
W 7th St	W 6th St	WB	4	22,000	30	2	11	0	0	5	3	65	2.5	Fair	≥30% and < 70%	**4.09**	**D**	**3.17**	**C**	**D**	**D**
W 6th St	W 3rd St	EB	4	19,900	30	2	10	0	0	6	3	0	2.5	Fair	≥30% and < 70%	**4.12**	**D**	**3.13**	**C**	**D**	**D**
W 6th St	W 3rd St	WB	4	19,900	30	2	10	0	0	6	3	0	2.5	Fair	≥30% and < 70%	**4.12**	**D**	**3.13**	**C**	**D**	**D**
W 3rd St	W 2nd St	EB	4	18,700	30	2	11	0	0	5	3	40	2.5	Fair	≥30% and < 70%	**3.96**	**D**	**2.89**	**C**	**D**	**D**
W 3rd St	W 2nd St	WB	4	18,700	30	2	11	0	0	8	0	0	2.5	Fair	≥30% and < 70%	**3.96**	**D**	**3.01**	**C**	**D**	**D**

Appendix A: SR 26/University Avenue Multimodal Emphasis Corridor Study Multimodal Level of Service Evaluation

From	To	Dir.	Through Lanes	AADT	Speed Limit	HV %	W_t (ft)	W_l (ft)	Park %OSP	SW Width (ft)	Buffer Width (ft)	Tree Spacing (ft)	Freq. (bus/hr)	Stop Amenities	Passenger Load	Bicycle Score	Bicycle LOS	Pedestrian Score	Pedestrian LOS	Motor Vehicle LOS	Transit LOS
W 2nd St	W 1st St	EB	4	18,700	30	2	11	3	0	5	5	40	2.5	Fair	≥30% and < 70%	**3.58**	**D**	**2.64**	**C**	**D**	**D**
W 2nd St	W 1st St	WB	4	18,700	30	2	13	0	0	8	4	25	2.5	Fair	≥30% and < 70%	**3.72**	**D**	**2.49**	**B**	**D**	**D**
W 1st St	N Main St	EB	4	18,700	30	2	12	0	0	5	3	50	2.5	Fair	≥30% and < 70%	**3.84**	**D**	**2.90**	**C**	**D**	**D**
W 1st St	N Main St	WB	4	18,700	30	2	13	0	0	4	3	30	2.5	Fair	≥30% and < 70%	**3.72**	**D**	**2.86**	**C**	**D**	**D**
N Main St	E 1st St	EB	4	16,400	30	2	12	0	0	4	4	40	4.2	Fair	≥30% and < 70%	**3.75**	**D**	**2.73**	**C**	**D**	**B**
N Main St	E 1st St	WB	4	16,400	30	2	11	0	0	5	3	35	4.2	Fair	≥30% and < 70%	**3.86**	**D**	**2.73**	**C**	**D**	**B**
E 1st St	E 3rd St	EB	4	16,400	30	2	11	0	0	7	4	60	4.2	Fair	≥30% and < 70%	**3.86**	**D**	**2.61**	**C**	**D**	**B**
E 1st St	E 3rd St	WB	4	16,400	30	2	11	0	0	6	6	50	4.2	Fair	≥30% and < 70%	**3.86**	**D**	**2.50**	**C**	**D**	**B**
E 3rd St	E 4th St	EB	4	16,400	30	2	11	0	0	6	5	45	2	Fair	≥30% and < 70%	**3.86**	**D**	**2.54**	**C**	**D**	**D**
E 3rd St	E 4th St	WB	4	16,400	30	2	12	0	0	5	10	45	2	Fair	≥30% and < 70%	**3.75**	**D**	**2.26**	**B**	**D**	**D**
E 4th St	E 5th St	EB	4	16,400	30	2	11	2	0	5	3	50	2	Fair	≥30% and < 70%	**3.86**	**D**	**2.74**	**C**	**D**	**D**
E 4th St	E 5th St	WB	4	16,400	30	2	11	0	0	5	10	35	2	Fair	≥30% and < 70%	**3.86**	**D**	**2.16**	**B**	**D**	**D**
E 5th St	NE Blvd	EB	4	16,400	30	2	11	0	0	5	6	45	2	Fair	≥30% and < 70%	**3.86**	**D**	**2.54**	**C**	**D**	**D**
E 5th St	NE Blvd	WB	4	16,400	30	2	11	0	0	5	10	30	2	Fair	≥30% and < 70%	**3.86**	**D**	**2.10**	**B**	**D**	**D**
NE Blvd	E 7th St	EB	4	16,400	30	2	11	0	0	5	8	65	2	Fair	≥30% and < 70%	**3.86**	**D**	**2.53**	**C**	**D**	**D**
NE Blvd	E 7th St	WB	4	16,400	30	2	11	0	0	5	6	70	2	Fair	≥30% and < 70%	**3.86**	**D**	**2.65**	**C**	**D**	**D**
E 7th St	E 8th St	EB	4	16,400	35	2	12	0	0	5	7	60	2	Fair	≥30% and < 70%	**3.86**	**D**	**2.66**	**C**	**D**	**D**
E 7th St	E 8th St	WB	4	16,400	35	2	12	0	0	5	7	50	2	Fair	≥30% and < 70%	**3.86**	**D**	**2.61**	**C**	**D**	**D**
E 8th St	E 9th St	EB	4	16,400	35	2	12	0	0	5	7	35	2	Fair	≥30% and < 70%	**3.86**	**D**	**2.49**	**B**	**D**	**D**
E 8th St	E 9th St	WB	4	16,400	35	2	12	0	0	5	7	50	2	Fair	≥30% and < 70%	**3.86**	**D**	**2.61**	**C**	**D**	**D**
E 9th St	E 10th St	EB	4	18,100	35	2	12	0	0	5	8	50	0	Fair	≥30% and < 70%	**3.94**	**D**	**2.64**	**C**	**D**	**F**
E 9th St	E 10th St	WB	4	18,100	35	2	12	0	0	5	7	65	0	Fair	≥30% and < 70%	**3.94**	**D**	**2.78**	**C**	**D**	**F**
E 10th St	NE Waldo Rd	EB	4	18,100	35	2	12	0	0	5	3	0	0	Fair	≥30% and < 70%	**3.94**	**D**	**3.18**	**C**	**D**	**F**
E 10th St	NE Waldo Rd	WB	4	18,100	35	2	12	0	0	5	4	0	0	Fair	≥30% and < 70%	**3.94**	**D**	**3.14**	**C**	**D**	**F**

BLOCK N.1A			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
O	35,773	24,319	41
PUD	8,482	1,727	
RL	39,005	8,933	

BLOCK N.2C:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
RL	53,227	10,573	
BLOCK N.2B:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
RL	86,479	21,842	
BLOCK N.2A:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU1	86,400	42,052	147

BLOCK N.3C:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du
MUR	53,127	21,512	50
BLOCK N.3B:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
MUR	86,463	21,512	74
BLOCK N.3A:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU1	86,327	29,269	147

BLOCK N.4C:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
MUR	53,227	10,573	53
BLOCK N.4B:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
UMU1	86,481	5,263	87
BLOCK N.4A:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
UMU1	86,310	55,341	146

BLOCK N.5C:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
MUR	53,188	24,345	51

BLOCK N.5B:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU1	43,301	25,262	42
MUR	27,140	2,353	25
PF	10,751	0	
MUL	5,430	4,841	2

BLOCK N.5A:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU1	86,174	40,395	147

BLOCK N.6C:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
MUR	18,489	9,250	18

BLOCK N.6A:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU1	38,354	9,389	49
MUR	17,572	9,389	10

BLOCK N.7B:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
MUR	107,826	53,536	106

BLOCK N.7A:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU1	34,140	8,346	58

BLOCK N.8C:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
MUR	60,461	14,294	58

BLOCK N.8B:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
MUR	61,245	19,999	59

BLOCK N.8A:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU1	71,171	24,078	120

BLOCK N.9C:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
PUD	39,726	0	17

BLOCK N.9B:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
PUD	51,662	0	21

BLOCK N.9A:			
LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
PUD	61,680	8,714	40

BLOCK N.10A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	184,347	39,129	115

BLOCK S.10A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	143,323	46,319	339

BLOCK S.10B:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	151,330	43,546	116

BLOCK N.11A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	20,996	9,371	64
RH	55,659	11,945	

BLOCK N.12A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	28,154	0	48
RH	49,707	16,893	

BLOCK N.13B:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
MUL	45,567	8,015	
RH	89,326	15,754	

BLOCK N.13A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	42,674	22,453	96

BLOCK S.13A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	72,238	34,992*	161
RH	99,793	18,288	

BLOCK S.13B:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
O	45,965	12,560	
UMU2	81,430	26,577	116

BLOCK N.14B:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
RH	90,480	22,554	

BLOCK N.14A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	66,448	15,590	112

BLOCK N.15A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	21,079	4,200	48
RH	97,510	25,207	

BLOCK S.15A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	47,386	15,858	106

BLOCK S.15B:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	152,799	10,921	206
RH	99,793	18,288	

BLOCK N.16A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	23,013	1,393	52
RH	30,469	6,292	

BLOCK S.16A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	97,188	36,275	221

BLOCK N.17B:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
RH	72,486	21,015	

BLOCK N.17A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf/du)
UMU2	76,893	24,637	225
UMU2	76,893	24,637	225

60' 0 60'

GENESIS GROUP
FROM VISION TO REALITY

N.23C
N.24C
N.23B
N.24B
N.23A
N.24A
N.18A
N.19A
N.20A
N.21A
N.22A
7A
N.W. 8th St.
N.W. 7th Terr.
N.W. 7th St.
N.W. 6th St.
N.W. 5th St.
N.W. 3rd St.
.314 ac - 47 du < 10 far
S.R. 26 (W. University Ave)
S.R. 26 (W. University Ave)
S.R. 26 (W. University Ave)
S.W. 8th St.
S.W. 7th St.
S.W. 6th St.
S.W. 5th Terr.
S.W. 3rd St.
S.18A
S.21A
S.22A
S.23A
S.24A
.314 ac - 47 du < 10 far
4.44 ac - 665 du
< 10 far
.79 ac - 118 du
< 10 far
.553 ac - 82 du
< 10 far
.771 ac - 115 du
< 10 far
.08 ac - 12 du
1.1 ac - 165 du
< 10 far
.30 ac - 45 du
< 10 far
.333 ac - 50
du < 10 far
.112 ac - 16 du
.179 ac - 26 du
< 10 far
.153 ac - 23 du <
1.78 ac - 266 du < 10 far
60'
0
60'
GENESIS GROUP
FROM VISION TO REALITY

N.24C
N.25C
N.26C
N.27C
N.28C
N.29C
N.24B
N.25B
N.27B
N.28A
N.24A
N.25A
N.26A
N.27A
N.W. 3rd St.
N.W. 2nd St.
N.W. 1st St.
N. Main St.
N.E. 1st St.
N.E. 3rd St.
S.R. 26 (W. University Ave)
S.R. 26 (W. University Ave)
.30 ac - 45 du
< 10 far
.333 ac - 50
du < 10 far
.112 ac - 16 du
.25 ac - 37 du
< 10 far
1.1 ac - 165 du
< 10 far
.179 ac - 26 du
< 10 far
.153 ac - 23 du < 10 far
S.24A
1.78 ac - 266 du < 10 far
.27 ac - 40 du
< 10 far
S.25A
.213 ac - 32 du < 10 far
.38 ac - 57 du < 10 far
.246 ac - 36 du < 10 far
.198 ac - 28 du < 10 far
S.26A
.277 ac - 41 du < 10 far
.113 ac - 16
du < 10 far
.069 ac - 10 du
< 10 far
.072 ac - 10 du
.023 ac - 3 du
< 10 far
1.329 ac - 199 du < 10 far
S.27A
1.213 ac - 182 du < 10 far
.966 ac - 145 du < 10 far
S.28A
S.W. 3rd St.
S.W. 2nd St.
S.W. 1st St.
S. Main St.
S.E. 1st St.
S.E. 3rd St.
S.25B
S.26B
S.27B
S.28B
60'
0
60'
GENESIS GROUP
FROM VISION TO REALITY

60'
0
60'
GENESIS GROUP
FROM VISION TO REALITY
N.30C
N.31C
N.32C
N.33B
N.31B
N.32B
N.32A
N.31A
N.30A
N.33A
N.35A
N.E. 3rd St.
N.E. 4th St.
N.E. 5th St.
N.E. Blvd
N.E. 7th St.
N.E. 8th St.
S.R. 26 (W. University Ave)
S.R. 26 (W. University Ave)
S.R. 26 (W. University Ave)
1.098 ac - 164 du < 10 far
1.499 ac - 224 du < 10 far
S.30A
S.33A
S.35A
S.E. 3rd St.
S.E. 7th St.
S.E. 8th St.
S.30B
S.33B
S.34B
S.35B

BLOCK N.36C:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
RL	99,092	19,402	FUTURE (sf)

BLOCK N.36A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
MUL	60,751	11,376	FUTURE (sf)
RL	179,682	24,024	FUTURE (sf)

BLOCK S.36A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
PUD	27,572	6,605	FUTURE (sf)
MUL	27,985	3,505	FUTURE (sf)
RM	54,503	10,161	FUTURE (sf)

BLOCK N.36C:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
RM	69,576	11,885	FUTURE (sf)

BLOCK N.37C:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
RM	100,101	28,611	FUTURE (sf)

BLOCK N.37A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
C	54,186	4,952	42,181
RM	185,631	22,485	FUTURE (sf)

BLOCK S.37A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
C	105,454	34,343	42,181
MUL	80,947	15,761	FUTURE (sf)
RM	31,512	7,152	FUTURE (sf)

BLOCK N.38C:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
RM	99,987	23,794	FUTURE (sf)

BLOCK N.38B:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
RM	109,143	18,157	FUTURE (sf)

BLOCK N.38A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
C	60,000	9,396	23,363
RM	50,079	8,540	FUTURE (sf)

BLOCK S.38A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
C	95,158	18,256	36,972

BLOCK S.38B:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
C	89,282	12,496	34,393

BLOCK N.39C:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
RM	99,884	10,003	FUTURE (sf)

BLOCK N.39B:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
C	78,769	9,655	31,478

BLOCK S.39A:

LAND USE:	TOTAL AREA:	CURRENT (sf)	FUTURE (sf)
C	26,154	6,491	9,476

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Metropolitan Transportation Planning Organization for the Gainesville Urbanized Area

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