



City Council Meeting & Public Hearing

MARCH 27, 2023

OFFICIAL MINUTES

Office of the City Clerk

ALPHARETTA CITY HALL

COMMUNITY ROOM | 2 PARK PLAZA | 6:30 PM

OFFICIAL MINUTES

The public is advised that the following minutes are not a verbatim transcription of business presented at the Council Meeting of the date shown; but are a synopsis of pertinent information. The public is further advised that the video recording for said meeting is a matter of public record and is available to be viewed at the City Clerk's office during normal business hours or viewed online at <https://www.youtube.com/user/alpharettagov>.

I. CALL TO ORDER

- Mayor Gilvin called the meeting to order at 6:30 p.m.

II. ROLL CALL

• Council Members

- Mayor Jim Gilvin
- Mayor Pro Tem Dan Merkel
- Donald F. Mitchell
- Brian Will
- John Hipes
- Jason Binder

• Council Members Absent

- Douglas J. DeRito

• Staff

- Chris Lagerbloom, City Administrator
- Melissa Tracy, City Attorney with Jarrard & Davis
- James Drinkard, Assistant City Administrator
- Lauren Shapiro, City Clerk
- Adam Montgomery, Interim Director of Information Technology
- John Robison, Director of Public Safety
- Kathi Cook, Director of Community and Economic Development
- Morgan Rodgers, Director of Parks, Recreation, and Cultural Services
- Pete Sewczwicz, Director of Public Works

- Thomas Harris, Director of Finance
- Michael Woodman, Planning & Development Services Manager
- Jim Cheatham, Public Safety Analyst

III. PLEDGE TO THE FLAG

IV. CONSENT AGENDA

A. Council Work Session Minutes (Meeting of 3/20/2023)

Consideration of approval of the City Council meeting minutes from the Work Session on March 20, 2023.

PUBLIC COMMENTS

- There were no public comments.
 - ❖ Council Member Hipes offered a motion to approve the Council Work Session Minutes from 3/20/2023.
 - Council Member Mitchell seconded the motion.
 - The motion was approved unanimously (6-0).

V. PUBLIC HEARING

A. Z-23-01 / V-23-03 KJ Luxury Homes / 1580 Mayfield Road

Consideration of a rezoning and variances to allow for the construction of 7 'For-Sale' single-family detached homes on 5.66 acres. A rezoning is requested from AG (Agriculture) to R-22 (Dwelling, 'For-Sale', Residential) and variances are requested to reduce the right-of-way width of a local street from 50' to 44' and to have a sidewalk on 1 side of the street. The property is located at 1580 Mayfield Road and is legally described as being located in Land Lots 1057 and 1104, 2nd District, 2nd Section, Fulton County, Georgia.

- Ethan Underwood, attorney for the applicant, came forward to request a deferral to next month and would like to request that the applicant not have to go back to Planning Commission. The applicant is looking to come to an agreement with the Harrington Falls subdivision for reduced lot and more restrictive zoning.

CITY COUNCIL DISCUSSION

- Mayor Pro Tem Merkel shared that he is happy to defer, but staff will reevaluate and have the ability to determine whether or not the application needs to go back to Planning Commission.
- Council Member Will asked about the request not to go back to Planning Commission.
 - The applicant shared that they would prefer not to go back to Planning Commission based on the timing perspective.
- Council Member Binder asked whether or not Planning Commission is required to make a recommendation.

- City Attorney, Melissa Tracy, says that per the Charter, the Planning Commission may make a recommendation, but it is not required.
- ❖ Mayor Pro Tem Merkel offered a motion to postpone Z-23-01 / V-23-03 KJ Luxury Homes / 1580 Mayfield Road for a minimum of thirty days and leave the discretion of whether to go back to Planning Commission to the Community Development Director.
 - Council Member Mitchell seconded the motion.
 - The motion was approved unanimously (6-0).

B. PH-23-01 Unified Development Code (UDC) Text Amendment – Crabapple Overlay

Consideration of text amendments to the Unified Development Code (UDC) to create an overlay district for the Crabapple area and applicable regulations.

- Community and Economic Development Director, Kathi Cook, came forward to present this item.
- City Attorney, Melissa Tracy, read the Ordinance title aloud.
- This item was considered at the 3/2/2023 Planning Commission meeting. There was one (1) public comment from a property owner in the proposed overlay asking if the overlay would require streetscape improvements to the existing site. A Planning Commissioner requested that bike racks be added to the street furniture section. After discussion, Planning Commission recommended approval (vote 7-0).
- Approximately nine (9) acres of land in the Crabapple area is located in Alpharetta, with the remaining area located in the City of Milton. Through various planning efforts, Milton has established and is implementing their vision for Crabapple, which promotes the area as Milton's Downtown. In order to implement a cohesive look and vision for the area, it is recommended that the City adopt an overlay district to ensure compatible with the City of Milton's vision for Crabapple.
- In preparing the Crabapple Overlay, City Staff reviewed Milton's zoning regulations, zoning map, applicable long-range planning documents, and GDOT plans for Crabapple Road. In coordination with City of Milton staff, the proposed Crabapple Overlay addresses regulations related to site design standards, streetscapes, parking and loading, landscaping and screening, building design and street furniture.
- The proposed Unified Development Code Text Amendments are attached hereto as "Exhibit A."

CITY COUNCIL DISCUSSION

- Council Member Hipes suggested defining the building heights where it states 3 stories or 40 feet, to ensure that it is a maximum of 40 feet.

PUBLIC COMMENTS

- There were no public comments.

- ❖ Mayor Pro Tem Merkel offered a motion to approve PH-23-01 Unified Development Code (UDC) Text Amendment – Crabapple Overlay, with a change to the reference of height for a maximum of 3 stories, not to exceed 40 feet.
 - Council Member Binder seconded the motion.
 - The motion was approved unanimously (6-0).

C. E-23-01 Peachtree Immediate Care Sign Exception

Consideration of a sign exception to allow one (1) additional wall sign for Peachtree Immediate Care. The property is located at 870 North Main Street and is legally described as being located in Land Lot 1112, 2nd District, 2nd Section, Fulton County, Georgia.

- Planning and Development Services Manager, Michael Woodman, came forward to present this item.
- Staff is recommending approval of E-23-01 Peachtree Immediate Care Sign Exception, subject to the following conditions:
 1. Wall sign location, number, and size shall be limited to the submitted plans, dated 12/23/22, except to comply with the conditions below, as approved by Staff.
 2. Wall signs shall not have an internally illuminated sign face. Wall signs shall be reverse lit, externally illuminated, or non-illuminated, as approved by Staff. Wall signs shall comply with the sign regulations applicable in the Downtown Overlay.
- The submitted request, if approved, would allow for two (2) wall signs on a commercial building. The applicant proposes to aggregate allowable wall sign area and distribute to signs on the northeast and southeast building elevations. The subject property is located at 870 North Main Street near the northwest corner of North Main Street and Windward Parkway.
- For free-standing commercial establishments, the City's Sign Code allows one (1) wall sign per road frontage no greater than one square foot (1 SF) of area per one linear foot (1 LF) of frontage.
- The frontage facing North Main Street is 65 linear feet; therefore, a 65 square foot wall sign is permitted on the southeast elevation of the building.
- The applicant is proposing to split up the allowable sign area. The sign on the northeast elevation is proposed to be 20.7 square feet and the southeast elevation sign is proposed to be 42.63 square feet, for a total of 63.33 square feet.
- Staff has reviewed the applicant's request against the review criteria for a sign exception. The proposal should not have significant impacts on surrounding properties, which are developed with non-residential uses. Because the property sits below the grade of North Main Street, the building entrance was oriented to the parking lot which is located on the side of the building. The property is approved to operate as an urgent care clinic which requires strong visibility and access for the public and emergency vehicles. If approved, wall signs should meet the sign regulations applicable in the Downtown Overlay.

- The Citizen Participation Plan report submitted by the applicant states that adjacent property owners were contacted regarding the applicant's intent. The report states that no comments have been received.
- The Community Zoning Information Meeting was held on February 8, 2022. There were no public comments.
- Kim Wakefield, on behalf of the applicant, came forward to speak on behalf of this application.

CITY COUNCIL DISCUSSION

- Council Member Mitchell asked about how large the red letters are and believed that the sign was going to stick out.

PUBLIC COMMENTS

- There were no public comments.
- ❖ Mayor Pro Tem Merkel offered a motion to approve E-23-01 Peachtree Immediate Care Sign Exception, subject to the following conditions:
 1. Wall sign location, number, and size shall be limited to the submitted plans, dated 12/23/22, except to comply with the conditions below, as approved by Staff.
 2. Wall signs shall not have an internally illuminated sign face. Wall signs shall be reverse lit, externally illuminated, or non-illuminated, as approved by Staff. Wall signs shall comply with the sign regulations applicable in the Downtown Overlay.
 - Council Member Binder seconded the motion.
 - The motion was approved (4-2-; with Council Member Hipes and Council Member Mitchell in opposition).

D. PH-23-04 South Main Street Livable Centers Initiative (LCI)

Consideration of adoption of the South Main Street Livable Centers Initiative (LCI).

- Director of Community and Economic Development, Kathi Cook, and Eric Bosman, with Kimley-Horn & Associates, came forward to present this item.
- City Attorney, Melissa Tracy, read the Resolution title aloud.
- This item was considered at the 3/2/2023 Planning Commission meeting. Staff recommended approval of the item. There were no public comments. After discussion, Planning Commission recommended approval (vote 7-0).
- Staff is recommending that Mayor and Council adopt a Resolution to adopt the South Main Street Livable Centers Initiative Study.
- The Atlanta Regional Commission's (ARC) Livable Centers Initiative (LCI) is a program that incentivizes local jurisdictions to re-envision their communities as vibrant, walkable places that offer increased mobility options, encourage healthy lifestyles and provide improved access to jobs and services. The LCI program is funded by federal transportation dollars (FHWA's Surface Transportation Program).

- On February 22, 2021, Mayor and Council authorized Staff to submit an application to the ARC Livable Centers Initiative (LCI) Program seeking grant funding for the South Main Street LCI Study. ARC awarded the City \$160,000 to complete the Study, with a 20% match from the City in the amount of \$40,000. On February 7, 2022, Mayor and Council awarded the LCI Study contract to Kimley-Horn & Associates, Inc.
- The LCI Study kicked off in March 2022 and reached conclusion in December 2022. A steering committee, consisting of property owners, residents and business owners, was assembled to help guide the process and provide valuable input into the study. The public participation plan included three (3) steering committee meetings and three (3) public meetings. The final study includes an existing conditions assessment, housing and market study analysis, and final recommendations report.
- The South Main LCI Study Final Recommendations Report is attached hereto as "Exhibit B."

CITY COUNCIL DISCUSSION

- Council Member Hipes asked about the feasibility of the Accessory Dwelling Units.
 - Director Cook shared that there would need to be a code change for the accessory dwelling units.
- Council Member Binder asked when staff will bring back the text amendments for the Accessory Dwelling Units.
 - Director Cook shared that the Alpha Park will be the first section to focus on (at least 90 days to put a draft together).
- Mayor Gilvin asked about the vines and maintenance of the walls and whether or not the city would be responsible for the walls.
 - Director Sewczwicz says that we would have to get permission from GDOT.

PUBLIC COMMENTS

- There were no public comments.
- ❖ Mayor Pro Tem Merkel offered a motion to approve and adopt PH-23-04 South Main Street Livable Centers Initiative.
 - Council Member Mitchell seconded the motion.
 - The motion was approved unanimously (6-0).

VI. NEW BUSINESS

A. Resolution: Fulton County to Conduct 2023 Municipal General Election

Consideration of adoption of a Resolution to authorize the Fulton County Board of Registration and Elections to conduct the City of Alpharetta's November 7, 2023 Municipal General Election; to authorize the City to enter into a contract with Fulton County for such purposes; and for other purposes.

- City Clerk, Lauren Shapiro, came forward to present this item.
- City Attorney, Melissa Tracy, read the resolution title aloud.

- Staff is recommending that Mayor and Council adopt a Resolution to authorize the Fulton County Board of Registration and Elections to conduct the City of Alpharetta's November 7, 2023 Municipal General Election; to authorize the City to enter into a contract with Fulton County for such purposes; and for other purposes.
- The City of Alpharetta will hold a non-partisan general election on Tuesday, November 7, 2023, to elect the Mayor and three (3) members of the City Council (Posts 4, 5, and 6) for a full, four (4) year term each. Historically, the Fulton County Board of Registration and Elections has operated as the superintendent for municipal elections.
- On or about January 23, 2023, the Mayor and Council adopted Resolution Number 2168, resolving that, instead of authorizing the Fulton County Board of Registration and Elections to conduct the November 7, 2023 general election, the City would pursue the appointment of a municipal election superintendent. During the City Council Work Session on March 20, 2023, Mayor and City Council discussed whether or not Fulton County should conduct this year's election, and as such, this Resolution is being brought forward for consideration.
- If approved, this Resolution would appoint the Fulton County Board of Registration and Elections as the election superintendent and the County would perform all duties related to conducting this year's elections, with the exception of qualification of the candidates. Further, this resolution prescribes that the City will adopt a future ordinance contemplating the same and also enter into a new intergovernmental agreement with Fulton County Board of Registration and Elections to facilitate the November 7, 2023 election.

CITY COUNCIL DISCUSSION

- Council Member Will asked about how many voting locations would be within the City of Alpharetta, specifically if we would have 13 locations.
 - City Clerk, Lauren Shapiro, shared that Fulton County proposed combining two of the voting locations this year and the Milton Library will no longer be an early voting location since they are hosting their own elections. There may be 12 voting locations, but will be determined by Fulton County as it gets closer to the election (and based on the number of registered voters).

PUBLIC COMMENTS

- Birdel Jackson (1055 Chasewood Trail, Alpharetta, Georgia 30005) came forward to speak in favor of this item.
- Dr. Kay Howell (285 Snowgoose Court, Alpharetta, GA 30022) came forward to speak in favor of this item.
- ❖ Council Member Will offered a motion to adopt a Resolution to authorize the Fulton County Board of Registration and Elections to conduct the City of Alpharetta's November 7, 2023 Municipal General Election; to authorize the City to enter into a contract with Fulton County for such purposes; and for other purposes.
 - Mayor Pro Tem Merkel seconded the motion.

- The motion was approved unanimously (6-0).

B. Resolution: Adoption of the Alpha Loop Downtown Link

Consideration of adoption of a Resolution to adopt the Alpha Loop Downtown Link as a framework to connect Downtown to the Larger Alpha Loop.

- Director of Community and Economic Development, Kathi Cook, came forward to present this item.
- City Attorney, Melissa Tracy, read the resolution title aloud.
- Alpharetta has continued to experience high quality growth since the Alpha Loop was originally planned. Development continues to boom, with residences and mixed-use lifestyle centers in various stages of development emerging throughout the downtown district. Establishing a clear and comprehensive vision for the Downtown portion of the trail is critical to maximizing the public benefit of these private investments and ensuring a cohesive and connected Alpha Loop system for commuters and recreational users alike.
- The design team identified two key goals for the study: (1) Realizing opportunities for enhancing safety and placemaking; and, (2) establishing a cohesive transportation network. The framework plan being presented for adoption provides unique experience within the public realm, optimizing connections to open space and Downtown attractions, while recognizing the opportunities and constraints inherent to building in an established urban area. Projects and design standards identified within the plan can be developed as adjacent private projects come online and the cost estimates can assist programming public improvements as public funding and grant opportunities become available.
- The focus areas of the study became crossing and interacting with city streets connecting existing and planned Alpha Loop sections to Downtown. Specifically, the Old Roswell Street Section, crossing Old Milton at Roswell Street, the new Devore Road at Roswell Street intersection, and crossing Old Milton Parkway at Kingry Lane.
- The Alpha Loop Downtown Link Conceptual Design Report is attached hereto as "Exhibit C."

CITY COUNCIL DISCUSSION

- Council Member Binder asked about the material usage throughout the plan and the use of cobblestone.
 - Director Cook shared that we are open to using other materials in terms of cost and best usage for the area. Grant fundings may show that a new product that is better than what is currently proposed.

PUBLIC COMMENTS

- There were no public comments.
- ❖ Mayor Pro Tem Merkel offered a motion to approve the adoption of a Resolution to adopt the Alpha Loop Downtown Link as a framework to connect Downtown to the Larger Alpha Loop.

- Council Member Binder seconded the motion.
- The motion was approved unanimously (6-0).

C. RFP # 22-115: Public Safety CAD / RMS System

Consideration of RFP 22-115 and award to Hexagon Corporation for the CAD/RMS System and authorize the Mayor to execute all necessary documents.

- Director of Public Safety, John Robison, came forward to present this item.
- Staff is recommending that Mayor and Council approve the award of RFP 22-115 to Hexagon Corporation for the CAD/RMS System and authorize the Mayor to execute all necessary documents.
- The quest to replace the current Computer Aided Dispatch (CAD) and Records Management System (RMS) has been an almost two-year comprehensive process. This process was initiated due to multiple factors: notification that no future enhancements would be forthcoming other than state mandates decreased support and attention to service requests increased difficulty of officers to provide accurate National Incident Based Reporting System (NIBRS) incident reports due to current mobile and server-based software limitations. The requested sub-grant from GEMA/Homeland Security is \$151,200 and will be used to sustain/purchase equipment for the Department's Hazardous Material (HazMat) program.
- The current system has been in place since 2007 and needs to be replaced to meet new reporting standards, increase data analytics, and improve intelligence capabilities. Comprehensive research and a competitive RFP process have been conducted to find an appropriate vendor for a new system. One vendor stands out from the rest by not only meeting our requirements but also establishing themselves as a capable and customer service focused partner.
- In August of 2021, a team from Public Safety attended the Association of Public-Safety Communications Officials (APCO) conference. Numerous CAD/RMS vendors were on display at the conference, and the team was able to gather a tremendous amount of information on the current capabilities of CAD/RMS systems as well as some insight into the direction of the industry.
- In February 2022, the RFP for Public Safety Computer Aided Dispatch and Records Management System was opened for submissions. We received proposals from seven vendors (Hexagon, 365Labs, Central Square Technologies, Tyler Technologies, Motorola Solutions, Mark43, Pulsiam). All vendors that submitted proposals were present and displayed their products at the previously attended APCO conference. This exposure became very helpful when reviewing the proposals. A vendor selection committee was established, and all the submissions were reviewed.
- At the conclusion of the demonstration phase of the RFP, the short list was dropped to two proposals, Central Square and Hexagon. During the course of the demonstration phase, it became clear that the product offered by 365Labs was not ready for implementation and did not meet the needs and specifications listed in the original RFP.
- The CAD/RMS replacement process results show that Hexagon is the vendor of choice to replace our current CAD/RMS system. The cloud-based system proposed by Hexagon will significantly improve our CAD/RMS system functions and capabilities. Implementing

and utilizing a CAD/RMS system is a long-term commitment. Hexagon stands out from the other vendors as a partner for success.

- In addition to the response to the Best and Final Offer, Hexagon offered an additional \$50,000 discount in implementation fees and a combined discount of \$150,000 over the balance of the ten-year term which resulted in a total project cost reduction of \$200,000.
- Director Robison also shared the following points, that are incredibly important with this approval:
 - The Hexagon system is a cloud based software that will allow officers to remain in their patrol vehicles and out on the streets to complete their reports. Currently, all officers have to come back to headquarters to write their reports.
 - Every other Tuesday, the current system must be shutdown for at least 3.5 hours for rebooting. This requires officers and 911 team to use pencil and paper in order to perform their jobs.
 - Hexagon will give officers access to real-time data on the way or when present at an investigation and would allow a dispatch center to be set up outside of headquarters.
 - Since 2021, the public safety team has made 140 calls for support with the current CAD / RMS vendor, and each support call has an average closure/resolution time of 66 days.

PUBLIC COMMENTS

- There were no public comments.
- ❖ Council Member Will offered a motion to approve the award of RFP 22-115 to Hexagon Corporation for the CAD/RMS System and authorize the Mayor to execute all necessary documents.
 - Mayor Pro Tem Merkel seconded the motion.
 - The motion was approved unanimously (6-0).

VII. WORKSHOP ITEMS

A. Replacement of Council Chambers Video Wall Displays

- Interim Director of Information Technology, Adam Montgomery, came forward to present this item.
- The displays in the chambers are due for replacement. One of the displays has failed, and the other has reached the end-of-life. Our goal is to replace the current displays with aesthetically and functionally appropriate displays to enhance the audience's experience in the room. This item will be a discussion of two options:
 - Should the Council choose the change order from OneDiversified, a consideration for award approval to OneDiversified, LLC in the amount not

exceeding \$6,446.93, and authorize the Mayor to execute all necessary documents.

- Should Council choose another option, funding and vendors would need to be identified for later procurement and approval.

CITY COUNCIL DISCUSSION

- Mayor Pro Tem asked about the warranty and support.
 - Director Montgomery shared that the costs for warranty and support are for phone/ticket help desk support and site visits to fix the monitors if a monitor were to go down during a meeting.
- Council Member Will shared the cost was too high to support either of the options presented in this item.
- Council Member Hipes shared that he wanted to know about the "burn in" image if one were to happen with the tv and if it would be covered by the warranty.
- Mayor Gilvin shared that the residents deserve something to be able to see during a meeting and supports item number 1.

VIII. PUBLIC COMMENT

- There were no public comments.

IX. REPORTS

- Council Member Hipes shared that the Farmer's Market opens this Saturday, April 1st.

X. EXECUTIVE SESSION

- There was not an executive session.

XI. ADJOURNMENT

- With there being no further items to consider or discuss, Mayor Gilvin adjourned the meeting at 8:50 p.m.

Respectfully submitted,



Lauren Shapiro, City Clerk

EXHIBIT A

SECTION 2.11 CRABAPPLE OVERLAY

2.11.1. General Provisions.

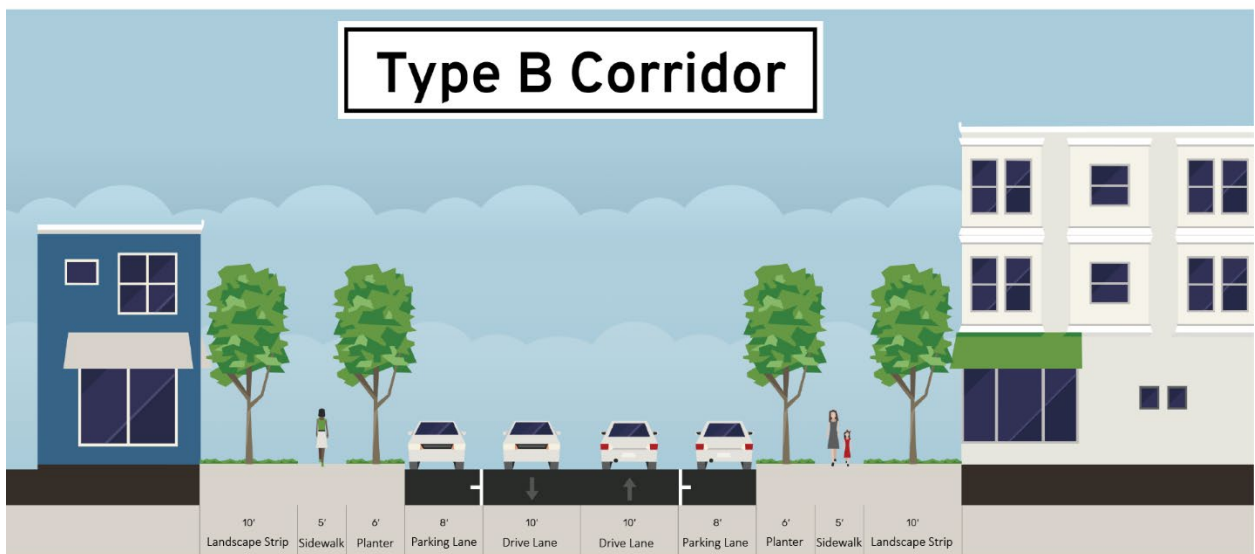
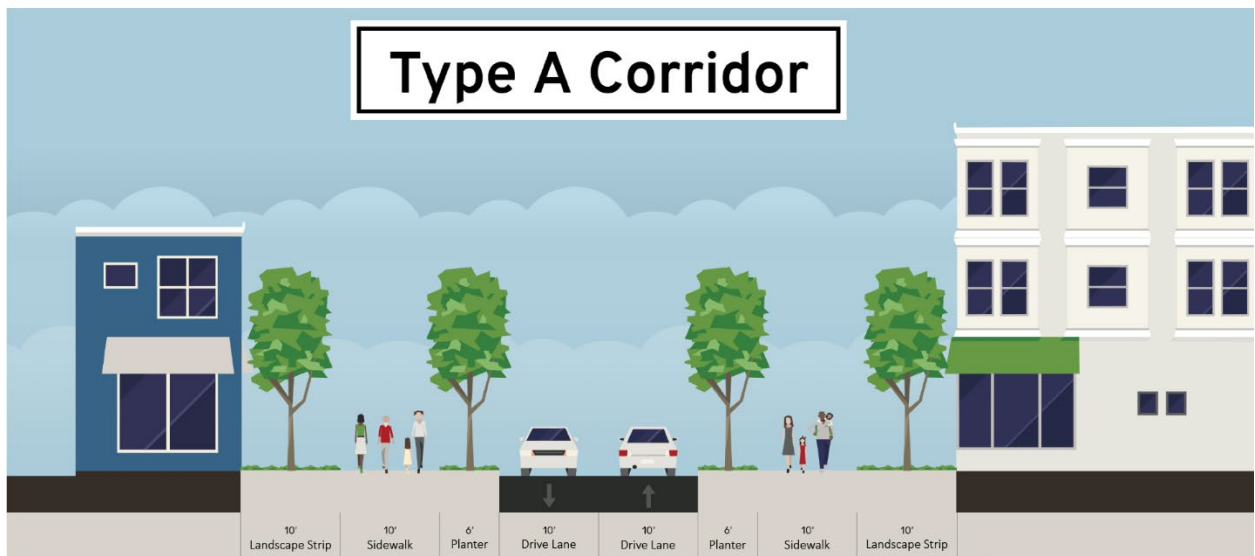
- A. *Title.* This Section shall be known as the "Crabapple Overlay" or may be internally cited as "this overlay."
- B. *General Purpose.* The purpose of this overlay is to enable and support a cohesive vision for the Crabapple area.
- C. *Applicability.*
 - 1. This overlay applies within the area be shown on the Official Zoning Map and labeled "Crabapple Overlay."
 - 2. Parcels within this overlay shall be subject to both the requirements of this Section and the requirements of their underlying zoning district, subject to the conflict provisions in "3" immediately below.
 - 3. When requirements of this overlay conflict with any requirement of the underlying zoning or any other provision of the City Unified Development Code (UDC), the requirements of this overlay shall prevail.
 - 4. When the word "street" is used it means both public and private streets unless stated otherwise.
- D. *Conformance Requirements.*
 - 1. All buildings, structures or land, in whole or in part, must be used or occupied, in conformance with this overlay. All buildings or structures, in whole or in part, must be erected, constructed, moved, enlarged or structurally altered in conformance with this overlay.
 - 2. Nothing in this overlay shall require any change in the plans, construction or intended use of a building or structure for which a lawful permit has been issued or a lawful permit application has been accepted before the effective date of this overlay, provided that the construction under the terms of such permit is diligently followed until its completion.
- E. *Conflicting Provisions.*
 - 1. It is not the intent of this overlay to interfere with or abrogate or annul any easements, covenants or other agreements between parties; provided, however, that where this overlay imposes a greater restriction upon the use of property, or requires more space than is imposed or required by other resolutions, rules or regulations, or by easements, covenants or agreements, the provisions of this overlay shall govern.
 - 2. Nothing herein shall be construed as repealing or modifying the conditions of operation or conditions of site development accompanying those zoning approvals, variances, or use permits issued prior to the existence of this overlay; however, modification or repeal of these past conditions of approval may be accomplished through a zoning change in accordance UDC Section 4.2.
- F. *Place Making.* The design of streets, streetscapes, open spaces, civic spaces, and other features regulated by this overlay must incorporate signage, plantings, lighting, materials, and other placemaking elements as follows:
 - 1. In accordance with placemaking plans adopted by the City of Alpharetta; or
 - 2. As submitted by the applicant and approved by the Director of Community development if no plans identified in "1" immediately above have been adopted.

2.11.2. Site Regulations.

- A. *Corridor Types Established.* This overlay uses corridor types to regulate the design of sidewalks, sites, buildings, and other purposes, as shown in the Site Regulation Table and as referenced in other Sections. Corridor types include:
1. **Type A Corridors**, which include Crabapple Road and Broadwell Road.
 2. **Type B Corridors**, which include Marstrow Road, Arklow Drive, and new streets.
- B. *Site Regulation Table.* Sites must be developed in accordance with the following Site Regulation Table.

Site Regulation Table

Site Design Standards		
	Type A Corridors	Type B Corridors
Building Setback (from the back of required sidewalk)	10 ft. min./ 20 ft max.	10 ft. min./ 60 ft. max.
Building Height (as measured along the applicable corridor)	20 ft. or 2 story min., whichever is higher/ Max. per Sec. 2.11.3.D.	20 ft. or 2 story min., whichever is higher/ Max. per Sec. 2.11.3.D.
Surface Parking Lots (see UDC Sec. 3.2.8.C and Sec. 2.11.5.A)	No parking allowed between primary buildings and a public street.	Only one row of parking (parallel with the road) is allowed between primary buildings and a public street.
Streetscape Standards		
	Type A Corridors	Type B Corridors
Sidewalk	10 ft. min.	5 ft. min.
Planter	6 ft. min.	6 ft. min.
Planter Pedestrian Light Spacing (see Sec. 2.10.4.C.2)	40 ft. on-center max.	40 ft. on-center max.
Planter Tree Spacing (see Sec. 2.10.4.C.1)	40 ft. on-center max.	40 ft. on-center max.
On-Street Parking	8 ft. min. (if required)	8 ft. min.
Landscape Strip	Per UDC Sec. 3.2.8.D (see note 1)	Per UDC Sec. 3.2.8.D (see note 1)



Note 1: The Director of Community Development has the authority to reduce or eliminate UDC Sec. 3.2.8.D landscape strips adjacent to buildings with ground floor commercial uses that front and are accessible from the adjacent sidewalk.

C. *Minimum Lot Size.*

1. Minimum lot size in accordance with the underlying zoning district.

D. *Maximum Building Height.*

1. Maximum building height shall not exceed 3 stories or 40'.

2.11.3. Streets.

A. *Applicability.*

1. The Section applies to:
 - a. New development;
 - b. Existing developed sites when more than 25% of the site area is disturbed, except as provided for in "2" immediately below;
 - c. Existing principal buildings that are expanded, except as provided for in "2" immediately below; and
 - d. Existing principal buildings that are renovated or repaired and the value of said work exceeds 50% of the building's replacement cost, except as provided for in "2" immediately below.
2. The Director of Community Development may grant variances to any requirement of this Section for existing developed sites and existing buildings (except as specifically delegated to the City Transportation Engineer) when one or more of the following exists:
 - a. The streetscape would render a site non-conforming with regard to vehicular parking; or
 - b. Existing topography, trees, buildings, bridges, utilities, retaining walls, or other existing features render this Section unreasonable.
3. This Section does not apply on a parcel for which a Land Disturbance Permit or Building Permit is issued but where the Director of Community Development determines that the permit is for an accessory use or structure to the principal use or structure or for minor repairs or additions to the principal building or structure in existence.

B. *Streetscapes.*

1. *Streetscapes Required.*
 - a. New public and private streets must include sidewalks and planters as identified in the Streetscape Standards of the Site Regulation Table prior to the issuance of Certificate of Occupancy, except as indicated in "d" immediately below.
 - b. Existing streets that do not meet the Streetscape Standards of the Site Regulation Table must be brought into compliance with said standards along the site's frontage prior to the issuance of Certificate of Occupancy, except as indicated in "d" immediately below.
 - c. On existing streets where there is insufficient right-of-way for the required streetscape improvements, the right-of-way needed for such improvements may be expanded by mutual agreement between the property owner and the entity holding the right-of-way, or a public access easement may be provided to the City to meet the required improvements.
 - d. On streetscapes that are or will be within the public right-of-way, root barriers are required between the sidewalk and any adjacent landscape strips or planters, subject to approval of the City Arborist.
 - e. The City encourages the use of multi-functional runoff reduction measures in the streetscape, including bioretention areas, stormwater tree box, and planter box. The dimensional standards for planting area, tree spacing, and planting type be varied to accommodate runoff reduction measures.

C. *Planter.*

1. Street trees must be planted in the planter as follows:

- a. Overstory trees must be planted in the planter in accordance with the Streetscape Standards of the Site Regulation Table. Newly planted trees shall be a minimum of 3½ inches in caliper, and must be limbed up to a minimum of 7 feet.
 - b. Trees must have a pervious planting area that is at least 6 feet wide by 10 feet long, 3 feet deep, and 1,800 cubic feet in soil volume. Tree grates are not allowed unless the City Arborist determines that they will not negatively impact tree health.
 - c. Shrubs, groundcover, or mulch must be installed in the tree planting area identified in "b" immediately above when tree grates are not installed. Shrubs must conform to "1" immediately above.
- 2. Pedestrian Lights.
 - a. Pedestrian lights must be installed in the planter in accordance with the Streetscape Standards of the Site Regulation Table.
 - b. Pedestrian lights must be spaced evenly between overstory street trees.
 - c. Pedestrian light spacing may be increased by the Director or Community Development along existing streets when trees, traffic control devices, or other existing conditions prevent the required spacing.
- D. *On-Street Parking.* Newly-created on-street parking on public or private streets must conform to the following:
 - 1. A bulbout must be provided at the end of every three (3) parallel parking spaces.
 - 2. Each bulbout must include at least one overstory tree. Newly planted trees must be a minimum of 3½ inches in caliper, and must be limbed up to a minimum of 7 feet.
 - 3. Trees must have a pervious planting area that is at least 6 feet wide by 10 feet long, 3 feet deep, and 1,800 cubic feet in soil volume. Tree grates are not allowed unless the City Arborist determines that they will not negatively impact tree health.

2.11.4. Parking and Loading.

- A. *Vehicular Parking.*
 - 1. Minimum parking requirements are as required by UDC Section 2.5. Parking requirements may be reduced based upon an Urban Land Institute shared parking analysis or other parking analyses acceptable to the City, subject to approval of the Director of Community Development.
 - 2. Where on-street parking spaces exist in the public right-of-way, one on-street parking space may be substituted for every required parking space, provided:
 - a. The on-street space immediately abuts the subject property.
 - b. Each on-street parking space may only be counted for one property. Where a space straddles an extension of a property line, the space may only be counted by the owner whose property abuts 50% or more of the on-street parking space.
 - c. The Director of Community Development, in consultation with the City Transportation Engineer, may determine that to ensure future roadway capacity or other public purposes, the on-street parking credit may not be available.
- B. *Driveways.*
 - 1. *Applicability.* The following applies to driveways, including those serving alleys, but not to new streets in conformance with Sec. 2.10.4.A.

2. *Location.* Driveways may not be located on a Type A Corridor when access is available from a Type B Corridor.
- C. *Design of Parking Structures.*
1. When a parking structure fronts a Type A Corridor its ground story must have active uses (such as, but not limited to, residential, commercial, office, or civic space) between the parking structure and said street. The active use must be at least 20 feet deep.
 2. Where any portions of structured parking are adjacent to or visible from any street, they must be screened so that cars and ramps are not visible from ground level view from the adjacent parcel or adjacent street (not including an alley). Screening must include:
 - a. Evergreen trees, vines, and landscaping that physically attached to the parking; or
 - b. A facade having the appearance of a horizontal storied building; or
 - c. A combination of "a" and "b" immediately above.
- D. *Loading.*
1. Loading areas for new buildings must be located to the rear of buildings. Loading areas may not be placed between a building and the closest adjacent street.
 2. If a loading area is provided, it must meet the following:
 - a. Screening must consist of either:
 - i. An 8-foot high wall compatible with the principal building in terms of texture, quality, material and color; or
 - ii. Evergreen plant material that can be expected to reach a height of 8 feet with a spread of 4 feet within 3 years of planting.
- E. *Parking Locations.* Driveway and off-street parking lots are only allowed between a building and the closest street when indicated in the Site Regulations Table.

2.11.5. Landscaping and Screening.

- A. *Parking Lot Landscaping.* All parking lots must conform to the requirements of UDC Sec. 3.2.8.C and these additional standards.
1. Landscaped areas within the interior of the parking area may be designed as bio-retention areas, using inwardly draining swales without curbs, in lieu of raised planting areas surrounded by curbs, provided that each parking space provides a wheel stop and provided that depressed areas adjacent to driving aisles are surrounded by painted lines or flush curbing to separate landscaping from driving aisles.
 2. Landscape design and material selection may incorporate practices of water conservation and xeriscape. Use of native materials is encouraged. Plant materials should be arranged so that plants that require similar amounts of irrigation are placed together wherever possible.
- B. *Foundation Plantings.* All building foundations facing a public street must conform to these standards, except as provided for in "3" immediately below:
1. Foundations must be screened with continuous evergreen or semi-evergreen shrubs
 2. At the time of installation, the screening must be at least 1 foot in height and reach a height of 3 feet within 3 years of planting.

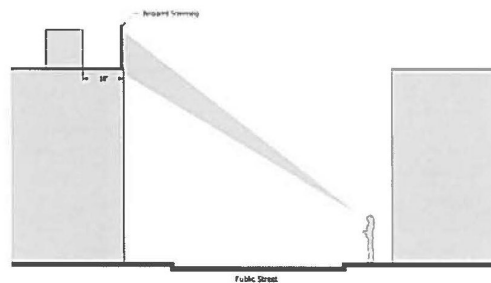
3. Foundation plantings are not required adjacent to ground floor commercial fenestration when said plantings would obstruct views into the commercial establishments, subject to approval of the Director of Community Development.

C. *Service Areas.*

1. Trash and recycling collection and other similar service areas must be located to the side or rear of buildings and may not be between a building and the street.
2. Service areas must be screened on 3 sides and on the 4th side by a solid gate at a minimum of 6 feet in height.
3. Screening must consist of:
 - a. A 6-foot high wall; or
 - b. Evergreen plant material that can be expected to reach a height of 6 feet with a spread of 4 feet within three years of planting.
4. Screening walls must be opaque and be constructed of one or a combination of the following: architectural block; brick; stone; cast-stone; or stucco over standard concrete masonry blocks.
5. The gate must be self-locking and maintained in good working order.

D. *Roof-Mounted Equipment.*

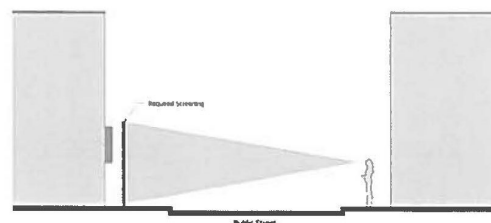
1. Roof-mounted equipment must be set back at least 10 feet from the edge of the roof and screened from ground level view from the abutting parcel or street (not including an alley).
2. New buildings must provide a parapet wall or other architectural element that is compatible with the principal building in terms of texture, quality, material, and color that fully screens roof-mounted equipment from ground level view.



3. For buildings with no or low parapet walls, roof mounted equipment must be screened on all sides by an opaque screen compatible with the principal building in terms of texture, quality, material, and color.

E. *Wall-Mounted Equipment.*

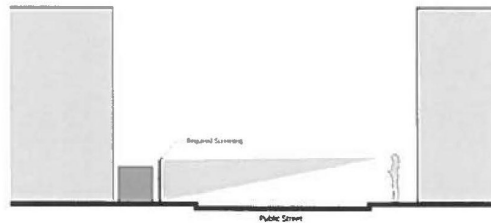
1. Wall-mounted equipment located on any surface that is visible from a street (not including an alley) must be fully screened by landscaping or an opaque wall or fence that is compatible with the principal building in terms of texture, quality, material, and color.



2. If required, screening must be of a height equal to or greater than the height of the mechanical equipment being screened.

F. *Ground-Mounted Equipment.*

1. Ground-mounted mechanical equipment that is visible from a street (not including an alley) must be fully screened by landscaping or an opaque wall or fence that is compatible with the principal building in terms of texture, quality, material, and color.



2. Screening must be of a height equal to or greater than the height of the mechanical equipment being screened.

G. *Plant Material.* All plant material shall conform to UDC Sec. 3.2.8.A, Sec. 3.2.8.C, and the following standards:

1. Plant materials must be hardy to zone 7b in accordance with the U.S. Department of Agriculture's Plant Hardiness Zone Map.
2. Plant materials must be able to survive on natural rainfall once established with no loss of health. However, irrigation may be provided as the option of the property owner.
3. No artificial plants, trees, or other vegetation may be installed as required landscaping and screening.

H. *Maintenance of Landscaping.*

1. The property owner is responsible for maintaining all required landscaping and screening in good health and condition. Any dead, unhealthy, damaged or missing landscaping and screening must be replaced with landscaping and screening that conforms to this Section within 90 days (or within 180 days where weather concerns would jeopardize the health of plant materials) as approved by the City Arborist.
2. All planting areas must be stabilized from soil erosion immediately upon planting and must be maintained for the duration of the use.

2.11.6. Building Design.

A. *Applicability.* This Section applies to all new buildings, additions to existing buildings, and any change to a building facade except ordinance maintenance and repairs.

B. *Building Architectural Standards.*

1. All buildings, except single-family detached residential, shall be designed in one of the following styles:
 - a. Vernacular
 - b. Greek Revival
 - c. Italianate
 - d. Gothic

- e. Queen Anne
 - f. Colonial Revival
 - g. Adams/Federal
2. Specific elements of the required styles can be found in A Field Guide to American Houses by Virginia Savage McAlester, Residential Architectural Styles in Georgia by the Historic Preservation Division of the Georgia Department of Natural Resources, or other architectural resources.
- C. *Exterior Walls.*
1. Technical and aesthetic requirements.
- a. Wall finishes on sides of individual buildings seen from a public road shall be the same on all visible sides; architecturally significant portions must conform; appendages or secondary wings assume a differing finish according to visibility and architectural merit.
 - b. Wood shingles shall be level at the bottom edge. Corners shall be mitered. Decorative novelty shapes are prohibited.
 - c. Trim shall be consistent on all sides of the building; the primary building mass or the Façade may be further embellished or enhanced.
 - d. Service wings may be expressed in a more simplistic manner, but shall exhibit clear design intent.
2. Materials.
- a. No more than three different exterior materials, exterior colors, or any combination thereof may be used on a single building, not including windows, doors, porches, balconies, foundations, and architectural details.
 - b. Materials may be combined on exterior walls only horizontally, with the heavier below the lighter.
 - c. Exterior material shall be limited to brick, natural stone, clapboard, board and batten, hard-coat stucco, or wood shingles.
 - d. Vinyl or aluminum siding, and synthetic stone veneer are prohibited.
 - e. Stone, brick, and mortar color and style shall match building style.
 - f. Hard-coat stucco shall be a 3-coat plaster finish, integral finish, applied on brick or concrete block; control joints shall be concealed where possible.
 - g. Clapboards and board and battens shall be wood or cementitious board. Hardi board shall have a 4 inch maximum exposure, while Artisan series Hardi board or full three-quarter inch wood siding may have up to an 8 inch lap. False wood graining is prohibited.
 - h. Wood shingles shall be level at the bottom edge.
- D. *Roofs.*
1. Technical and aesthetic requirements
- a. The roof slope on a single mass shall be the same on all sides, except for cat-slides and sheds.
 - b. Roof slopes shall match building style.
 - c. Vents and stacks shall be painted to match the roof material and hidden from view to the extent possible.

d. Overhangs that shed water within 5 feet of an adjacent lot shall be guttered or piped, and diverted away from adjacent lots.

2. Materials.

- a. Materials shall be wood shingles, wood shakes, standing-seam paint grip galvanized metal, slate or asphalt shingles (architectural weathered, wood, or classic green or red), or concrete simulated slate or wood shingles.
- b. Gutters may be ogee or half-round with round downspouts, metal-lined wood, or architecturally formed or molded. Gutter finishes may be copper, unpainted galvanized metal, or color to resemble galvanized metal
- c. Wood shingles shall not drain onto metal roofs.

E. *Foundations.*

- 1. Foundations shall be constructed of poured concrete or concrete masonry units.
- 2. Foundations may be finished with smooth stucco, brick, or stone.
- 3. Front porches of wood shall be supported on masonry piers finished in smooth stucco, masonry, brick, or stone. Piers shall have a minimum width of 18 inches and a minimum depth of 8 inches.

F. *Windows.*

- 1. The provision of windows shall match building style.
- 2. Technical and aesthetic requirements.
 - a. Windows and casings shall match building style.
 - b. Windows shall not be omitted on elevations.
 - c. Window sills shall have a minimum depth of 1.5 inches.
 - d. Ganged windows and bays shall have a continuous sill and 4 inch mulls minimum.
 - e. Grill between glass, reflective glazing, and pop-in grills are prohibited.
 - f. Windows shall be True Divided Lite or Simulated Divided Lite.
- 3. Materials.
 - a. Windows shall have sash with a minimum face width of 2 inches; the dimensions of the glass surface to sash and muntin face shall be a minimum of 0.75 inch.
 - b. Non-glass exterior window components shall be faced in wood, clad wood, or polymer materials, and said materials shall be paint grade or pre-finished.

G. *Doors and windows that operate as sliders are prohibited along Frontages.*

H. *Doors.*

- 1. Technical and aesthetic requirements.
 - a. Doors and casings shall match building style.
 - b. Exterior front doors or doors visible from a public way, shall be hardwood, and may be stained or painted.
- 2. Materials.
 - a. Plastic laminated, stamped metal, and leaded/beveled glass doors are prohibited. Tropical hardwoods are prohibited unless Forest Stewardship Council certified.

- b. Exterior doors shall be a durable, stable wood or clad in wood. Heart pine, wormy chestnut, walnut, cypress, pecan, are acceptable varieties.
 - c. Garage doors shall be wood, composite, or metal. Faux strap hinges, embellishments, standard paneled doors, and arched glass panels shall be prohibited.
- I. *Shutters.*
 - 1. Shutter design shall match building style.
 - 2. Shutters shall be solid-core polymers or durable hardwoods.
 - 3. Vinyl, nail-on, false wood graining, and pre-finished shutters are prohibited.
 - 4. Shutters shall be authentic, fully operable, and capable of totally closing over the window sash. Plank or louver shutters are acceptable. The minimum thickness of shutters shall be 1.25 inches.
 - 5. Shutters Shall occur in pairs, except that windows narrower than 3 feet may utilize a single shutter.
- J. *Chimneys.*
 - 1. Chimneys shall be proportioned, tapered, and shall match building style.
 - 2. Stacks shall be faced in smooth integral finish stucco, brick, stone, or detailed as exposed metal flues.
 - 3. Siding or stucco board is prohibited as a finish material for chimneys.
- K. *Porches and Balconies.*
 - 1. Technical and aesthetic requirements.
 - a. Columns shall match building style
 - b. Classical columns shall be architecturally correct.
 - c. Railings shall be simple pickets or fretwork centered on rails.
 - 2. Materials.
 - a. Porch floors shall be wooden, brick, or stone, and shall rest on masonry piers finished in brick, stone, or smoothed stucco.
 - b. Porch ceilings shall be beaded nominal 1 by 4 inch or 1 by 6 inch, flush boards, tongue and groove boards, or exterior gypsum board with decorative nominal 1 by 4 inch or 1 by 6 inch shallow coffers or strips.
 - c. Plywood ceilings, with or without beads, are prohibited.
 - d. Areas between porch piers, if left open, shall be in-filled with custom wood lattice, wood louvers, brick lattice, or wire mesh planted with vines, and shall match building style. The opening is not required to be in-filled if the distance from grade to bottom of floor structure is less than one foot.
 - e. Columns shall be wood, resin material, or masonry.
 - f. Sheet metal and foam columns are prohibited.
 - g. Railing systems shall be painted wood, iron, or masonry.
 - h. Synthetic and prefabricated railing systems are prohibited.
 - i. Plain, round tapered, fretwork, and straight pickets are permitted.
 - j. Precast classical balusters and ornate spindle work are prohibited.

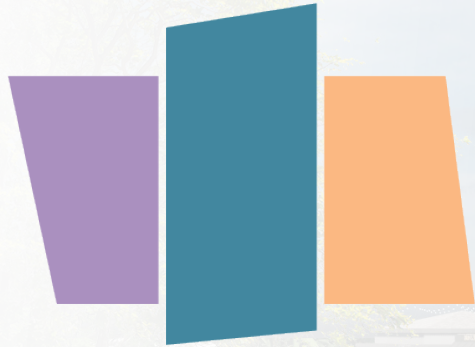
L. *Trim.*

1. Trim shall match building style.
 - a. Trim shall be consistent on all sides of building masses, with emphasis on the primary building mass and façade.
 - b. Trim for wings not along a Frontage may be simplified to match building style.
2. Materials.
 - a. Trim shall be of wooden or synthetic planks with enough thickness to conceal the edge of the siding. When used on buildings clad in horizontal siding, corner boards, casings, frieze boards, and similar architectural details shall be 1.25 inch thick material.
 - b. Pressure treated trim is prohibited.
 - c. All trim shall be dressed.

2.11.7. Street Furniture.

- A. Pedestrian lighting. Poles shall be Georgia Power “Washington” type in black and fixtures shall be Georgia Power “Granville” type.
- B. Benches shall be Victor Stanley Classic Series CR-138 in black with no center arm rest.
- C. Trash cans shall be Victor Stanley D-35 in black.
- D. Bicycle racks shall be Dero Round Rack in black.

EXHIBIT B



SOUTH MAIN

LIVABLE CENTERS INITIATIVE STUDY

Final Recommendations Report

FEBRUARY 23, 2023

SOUTH MAIN LCI Study

Introduction

The City of Alpharetta in partnership with the Atlanta Regional Commission (ARC) conducted a Livable Centers Initiative “LCI” study focused on the South Main Street (Alpharetta Highway / State Route 9) area from Downtown Alpharetta to the city limits bordering the City of Roswell. The intent of this study was to evaluate challenges and opportunities related to future development, transportation improvements, and investments in greenspace and public space, and create a vision for a reimagined South Main area. The nine-month LCI kicked-off in March of 2022 and included interactive stakeholder and public engagement, including three public meetings held at various locations throughout the City. This report is a compilation of analysis and engagement, recommendations, and an action plan.



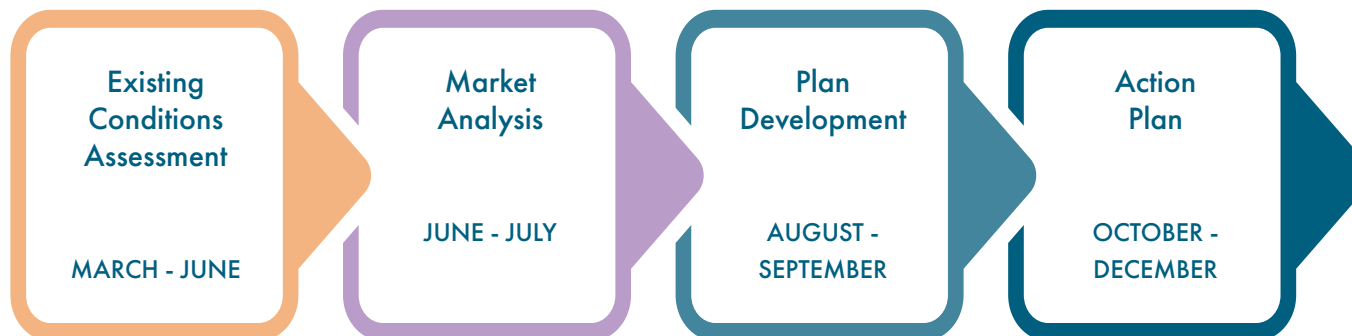
How To Use This Document

This report is organized into four chapters. Chapter 1: Project Foundations includes highlights of the Existing Conditions Assessment and Market Analysis. Chapter 2: Community Engagement details the public and stakeholder engagement strategies and activities completed during the study process. Chapter 3: Study Area Concepts explores the near-term initiatives, as well as mid-term priority redevelopment concepts. Finally, Chapter 4: Implementation Strategies outlines the action plan and specific short, mid, and longer-term steps needed to realize the community's vision for the future.

- Chapter 1: Project Foundations
- Chapter 2 Community Engagement
- Chapter 3: Study Area Concepts
- Chapter 4: Implementation Strategies

Project Schedule

The South Main LCI planning process included several phases of analysis and collaboration over a 9-month period. The first two phases included a review and assessment of the impact of previous planning efforts and an analysis of an existing conditions assessment. This work along with community and stakeholder input created the foundation for developing development concepts and the 5-Year Implementation Plan.



SOUTH MAIN LCI Study

Project Foundations

Using data provided by the City as well as data gathered throughout the Study process, an analysis was completed to best understand existing conditions within the Study Area now, as well as other challenges and constraints the area may have in the future.

PREVIOUS PLANNING EFFORTS

A thorough review of previous planning efforts was conducted at the start of this Study to gather an understanding of area trends and refine project goals. Many plans were reviewed including the Downtown Master Plan, Walkability and Pedestrian Safety Study, Rental Housing Study, and the 2040 Comprehensive Plan. Regional plans were also reviewed, including the North Fulton Comprehensive Transportation Plan, Fulton County Transit Master Plan, and the Blueprint North Fulton III. A summary of the plans that were reviewed is provided in the Existing Conditions Report, available in the appendix and project website.

EXISTING CONDITIONS ASSESSMENT

An Existing Conditions Analysis was conducted as part of the South Main LCI Study, including a review of development activity, property ownership, existing and future land use, environmental features, street conditions and roadway classifications, transit service, as well as bike and pedestrian facilities. For more information regarding the key takeaways, please refer to Appendix A and the Existing Conditions Report for the Alpharetta South Main LCI Study, located on the project website.

MARKET POTENTIAL

A market analysis was conducted for the Study Area, including the 241 acres and 805 tax parcels. A few of the demographic highlights from the Study Area are listed below, and the full market analysis can be found in **Appendix B**.

- The estimated current Study Area population is just under 1,400 people and has increased by approximately 95% since 2000.
- In the long-term, the Study Area is expected to grow faster than the City overall through 2027.
- Nearly 1/3 of residents living in the Study Area are Millennials. Compared to the City of Alpharetta, the area experiences a smaller share of Baby Boomers and Gen Z residents as well as fewer children.
- Seniors over 65 comprise a significant share of the population with 9% aged 65 or older.
- The median age in the Study Area is approximately 40.8 years, while the median age in the City of Alpharetta is about 37.9.
- Just over 50% of residents in the Study Area are white, 18% are black, 19% are Asian, approximately 5% are another race alone, and 5% are two or more races, reflecting similar trends to that of Alpharetta and North Fulton.
- More than half of the residents in the Study Area hold a bachelor's degree or higher.
- 47% of households in the Study Area earn above \$100,000 annually.
- The median household income is \$35,000 lower in the Study Area, compared to the entire City of Alpharetta.
- Nearly 60% of households in the Study Area are smaller households (1 or 2 people)
- Approximately 22% of the households in the Study Area are without children
- The area has a smaller share of medium and large households (3-4/more than 5 people) compared to surrounding areas
- Approximately 25% of the Study Area is comprised of non-family households.
- Over 50% of the households in the Study Area are renters, representing a larger share of renters when compared to Alpharetta and North Fulton.
- The average housing stock age in the Study Area is 8.9 years (versus 20.1 years old in the City of Alpharetta)

SOUTH MAIN LCI Study

VISION AND GOALS

Word clouds developed during the first round of stakeholder and public involvement were used to form the vision and goals for the Alpharetta South Main LCI Study. The vision and goals will help define future growth, identify desired placemaking elements for activation, and inform transportation investments to enhance mobility in the South Main area.

Which one word describes the study area today?



Which one word describes your vision for the study area?



Study Vision and Goals



Improve **walkability and pedestrian safety** through the identification of sidewalk segments and intersections that may enhance the pedestrian experience: connections to the AlphaLoop and Wills Park, side street lighting, pedestrian signals and crosswalks.



Develop a **well-connected area that is designed** for bicyclists, pedestrians, and motorists through the strategic use of lane markings, turn signals, driving signage, and wayfinding tools.



Identify **subareas** that may be designated to provide or preserve a scale of **attainable housing**.



Create a **unique and vibrant sense of place** in the area through the identification of community gathering spaces, public art, as well as a mix of destinations and quality establishments to create a reason to visit the area both day and night.



Continue to **preserve the lush greenery** of the area, including the mature tree canopy seen in many parts of the Study Area.



Encourage **redevelopment of lots** that have existing uses that do not contribute to a walkable environment.

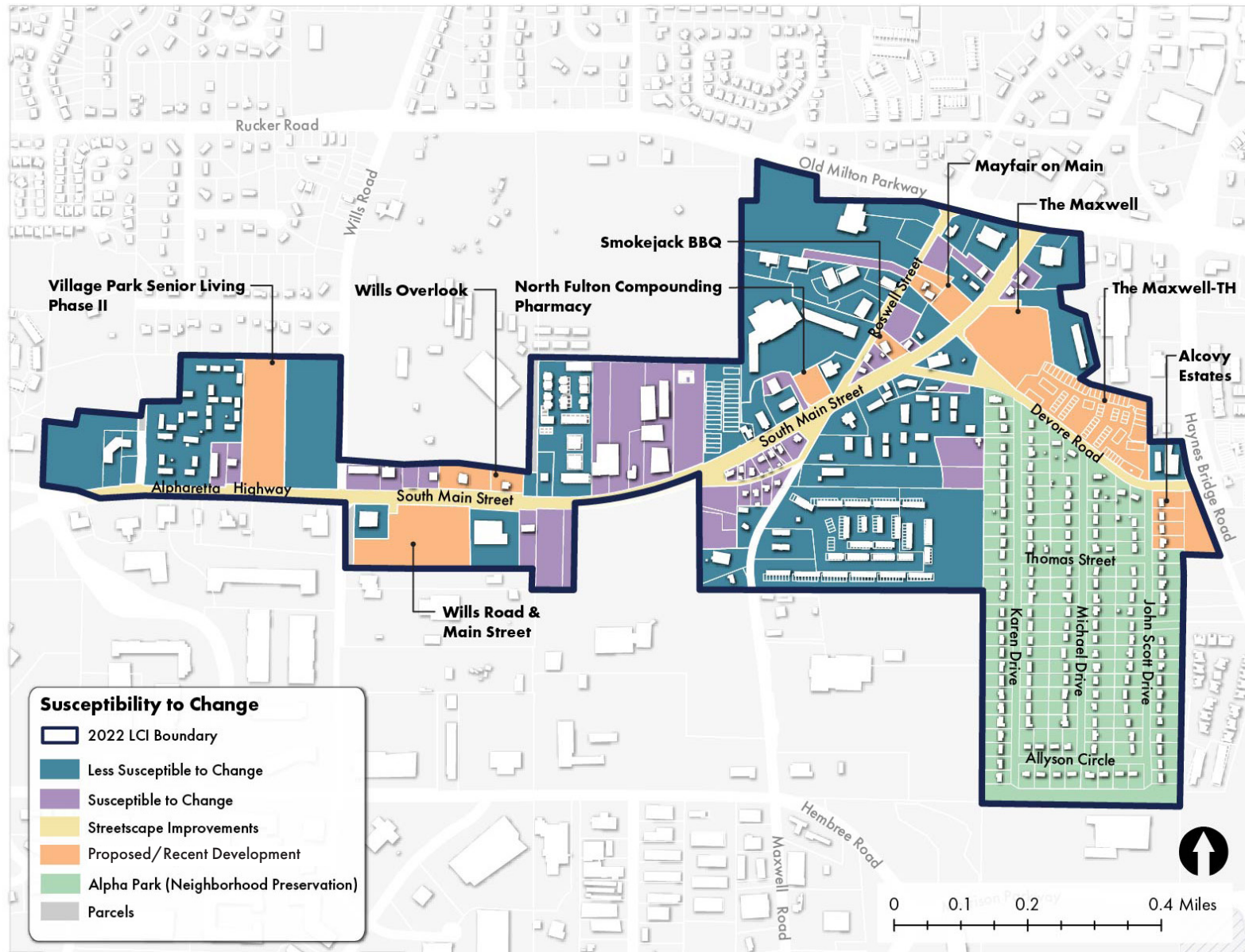
SOUTH MAIN LCI Study

SUSCEPTIBILITY TO CHANGE

Many opportunities exist to change the use of parcels and buildings within the study area as time passes. The map to the right shows the susceptibility to change parcel by parcel for the study area, based on in-person site visits and Geographic Information System (GIS) analysis. This map is divided into three categories, which include:

- **Land Less Susceptible to Change:** Includes newly constructed buildings, proposed development that the City has been notified of as of December 2022, occupied single-family housing, and civic uses such as parks and schools.
- **Land Susceptible to Change:** Includes vacant land, structures that are distressed, areas with excessive surface parking, and development that does not reflect the highest and best use OR is not likely to remain for the foreseeable future.
- **Streetscape Improvements:** Includes portions of roadway that should be evaluated for pedestrian, landscape, or vehicular streetscape improvements.
- **Alpha Park:** While the Alpha Park neighborhood was analyzed for its susceptibility to change, the focus of this area will be a focus on the preservation of existing character and affordability, while still allowing for limited infill.





SOUTH MAIN LCI Study

Community Engagement

Consistent contact with key stakeholders and targeted efforts to involve South Main community members helped the planning team develop a strategic and relevant plan for the study area. Over the course of the planning process, three stakeholder committee meetings and three public engagement events were held. These stakeholder committee and public engagement meetings provided the opportunity for community members to offer input on the challenges facing the area as well as to express their goals and vision for future development enhancements. Within this input, several recurring themes and priorities emerged, including walkability, quality development, and creating a unique part of the city. These themes, in conjunction with other plan analysis, helped shape a cohesive strategy and framework for the future of the South Main area.

STAKEHOLDER COMMITTEE

The Stakeholder Committee was comprised of various residents, business owners, and engaged citizens from within the Study Area. The full Steering Committee contact list can be found in Appendix X. The stakeholder committee was asked to meet three times during the duration of the project. The following sections highlight each of these engagements.

Stakeholder Committee Meeting #1

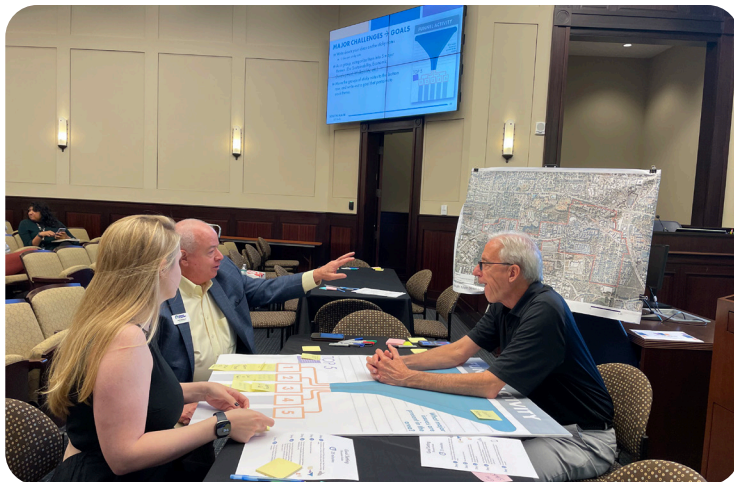
The first Stakeholder Committee meeting was held on May 11, 2022, at Alpharetta City Hall. This session was used to help set the vision and goals of the Study. Following this meeting, the remaining members of the Stakeholder Committee were engaged through an online survey so that they were able to help inform the vision and goals as well.

During the first Stakeholder Committee meeting, three planning activities were completed. The first activity included an interactive poll where members submitted one word to describe the Study Area now, as well as one word to describe their vision for the Study Area.

The second activity was an exercise to identify concepts for the future Study Area. These concepts were grouped by “Gotta Have”, “Nice to Have”, and “Never Gonna Have”. During this exercise, participants identified and noted ideas and concepts that fell into the respective category and posted the idea on the large poster board.

The final activity during the stakeholder committee meeting was used to identify the challenges within the Study Area and develop goals to address each challenge. The Study Area goals are listed below.

- Improve walkability and pedestrian safety through the identification of sidewalk segments and intersections that may enhance the pedestrian experience: connections to the AlphaLoop and Wills Park, side street lighting, pedestrian signals and crosswalks.
- Develop a well-connected area that is designed for bicyclists, pedestrians, and motorists through the strategic use of lane markings, turn signals, driving signage, and wayfinding tools.
- Identify subareas that may be designated to achieve or maintain a scale of attainable housing.
- Create a unique and vibrant sense of branding in the area through the identification of community gathering spaces, public art, as well as a mix of destinations and quality establishments to create a reason to visit the area both day and night.
- Continue to preserve the lush greenery of the area, including the mature tree canopy seen in many parts of the Study Area.
- Encourage redevelopment of lots that have existing land use patterns that do not contribute to a walkable environment.



SOUTH MAIN LCI Study

Stakeholder Committee Meeting #2

The second Stakeholder Committee meeting was held on September 13, 2022, at Alpharetta City Hall. The focus of this meeting was to share the preliminary concepts with the stakeholders and gain feedback on what parts of the designs they liked and disliked. During this meeting, various preliminary streetscapes were presented as well as precedent imagery for the overall character and theme of the Study Area.

The information gathered during this meeting helped inform and prepare the project team for the second round of public engagement that took place two weeks later. During this meeting, one large roll plot map of the Study Area was also presented to the Stakeholder Committee with various sub-area designs highlighted for review and discussion.



Stakeholder Committee Meeting #3

The third and final Stakeholder Committee meeting was held on November 30, 2022, at Alpharetta City Hall. The focus of this meeting was to share the draft final concepts with the stakeholders and gain feedback. The meeting also included discussing near-term corridor-wide strategies, long-term recommendations, and the draft 100-Day Action Plan. The near-term strategies and long-term recommendations were shown on large roll plots for the members of the stakeholder committee to mark up and provide feedback.

When discussing the long-term recommendations, questions about each area were prompted, such as: Does this support the vision of the South Main Street area? Are the land uses appropriate? What should the plan include to support this vision? During this time, the members of the stakeholder committee were asked to identify what they believed to be the three most important 100-Day Action Plan items. This input directly informed the development of the Final Plan.



SOUTH MAIN LCI Study

PUBLIC ENGAGEMENT

Three public meetings were held during the study process to engage and gain feedback from members of the public. Prior to each meeting, the City of Alpharetta advertised the event through the City's social media channels and website, and mailers were sent to residents and businesses in the Study Area boundaries. The specific locations of the public engagement events were selected in order to attract residents and business owners from within the Study Area.

Public Meeting #1

The first public engagement event was held on June 21, 2022, at the Fairway Social in the Maxwell District. Approximately 60 members of the public attended the open house. The meeting was set up with various board and easel stations for the public to walk through and learn about the study area before providing feedback in the form of dot exercises, mapping exercises, and one-word surveys. Additionally, there was a large roll plot map of the Study Area was provided so that attendees could identify areas of concern or ideas they had for the South Main area. Members of the public were also asked to use one word to describe the South Main area today as well as one word to describe their vision for the South Main Area.



Public Meeting #2

The second public engagement event was held on September 29, 2022, at the Alpharetta Community Center on the edge Wills Park in the Study Area. Approximately 15 members of the public attended the open house. The room was set up with various board stations for the public to engage with and provide feedback. Members of the public used green and red dots to provide their like or dislike for various character imagery and building materials as well as streetscape elements, such as bus stops, street furniture, lights, crosswalks, public art components, and trash cans. Attendees were also invited to leave general feedback on any of the images, elements, or concepts presented during the meeting.



SOUTH MAIN LCI Study

Public Meeting #3

The third public engagement event was held on December 6, 2022, at the Alpharetta City Hall in the Multipurpose Room. During this event, approximately 20 members of the public attended and provided feedback to the project team. The open house was set up with various board and easel stations for the public to walk through and gain information before providing feedback in the forms of dot exercises and comment forms.

Attendees began by reorienting themselves with the overall Study Area before learning about the proposed near-term corridor-wide enhancements, followed by the mid- and long-term recommendations. This also included various area-specific boards for each of the four focus areas of the Study Area. The final boards included information regarding the market demand of the area, and exercises to vote and provide feedback on study area branding as well as what the City should prioritize for the first 100 days after the plan is complete.



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SOUTH MAIN LCI Study

Study Area Concepts

NEAR-TERM CORRIDOR-WIDE INITIATIVES

Drawing on information from the stakeholder committee and public engagement events, four area-wide initiatives were identified to address study area goals. These four initiatives are focused on study area character, streetscape improvements, green space, activation, transit, and creative placemaking, all with the aim of enhancing the area as a more vibrant, unique, and walkable destination. These four initiatives are detailed on the following pages.

SR 9 Corridor Enhancements

Connectivity into Wills Park

SR 9 Public Art Program

Corridor branding and theme

SR 9 CORRIDOR DEVELOPMENT CHARACTER

The first area-wide initiative, enhancing the State Route 9 Corridor, will require developing a sense of character that is unique to the South Main Street area and that is well-defined as future developments take place. As part of this process, the Project Team considered various architectural styles that were presented to the public for feedback. The overall character of the Study Area that has naturally emerged is a traditional/mercantile architecture style, as shown in the pictures below. The style shown in these pictures pairs well with the Downtown Alpharetta aesthetic; however, there is an opportunity to guide this area to have a slightly different, more artistic and innovative style.



SOUTH MAIN LCI Study

STREETSCAPE ELEMENTS

The second area-wide initiative, includes the introduction of streetscape elements that fit into the overall character of the Study Area and that encourages visitors and residents of the area to socialize, interact with their environment, and discover the creative district. Some potential elements may include outdoor lighting and furniture, unique bus shelters and creative crosswalks that activate the area to encourage and promote a balanced and interconnected network. The following pages create a guide for future streetscape improvements included in any future developments.

BUS SHELTERS

There are currently 12 MARTA bus stops within the Study Area. All 12 of these stops are along South Main Street. Currently, there is only one stop with a shelter. Bus shelters protect transit patrons from the elements and can also add to the character of the area. Bus shelters also offer an opportunity to create a transit stop that fits into the streetscape and adds to the character of the area. The following images show precedent imagery of bus shelters that could be used to inform the design of future shelters in the Study Area. These bus shelters have heavy wood and steel components, aligning with the overall character of the area.

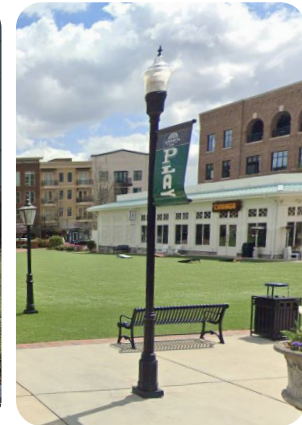
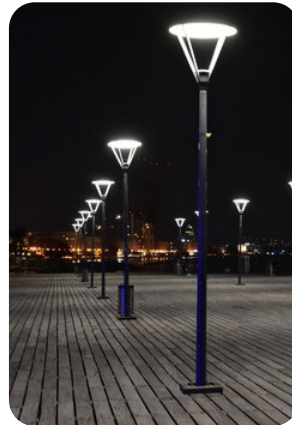
In 2019, the North Fulton CID (NFCID) began a MARTA Bus Shelter Program by creating a fund for CID members who are required, or choose to, improve existing or planned bus stops adjacent to their property and within the public right-of-way. Funded amounts are intended to be used to reimburse bus shelter upgrades consistent with the shelter design standards approved by the CID Board of Directors and the City of Alpharetta. The initial program, as approved, provided \$40,000 in landscape and hardscape reimbursement funds per installation. To initiate the program, the NFCID also approved funding to construct three initial upgraded shelters. To date, a total of five new bus shelters have been constructed within the City of Alpharetta and the NFCID that are in accordance with the new district design standards.



IMAGES FOR ILLUSTRATIVE PURPOSES ONLY*

FURNITURE, LIGHTING, AND WASTE RECEPTACLES

Street furniture that is properly integrated into the design of a public space can help create an identity and develop a sense of place. Selecting appropriate furniture and lighting should serve a function, fit into the character and layout of the area, and lastly have a durability that will last. Street furniture creates a setting for resting, sitting, and social encounters with others. Street furniture can give a comforting and appealing feeling to draw people to the area, supporting into the area-wide initiative of creating active street life. The two left pictures below highlight the types and styles of outdoor furniture that could be used as inspiration for future development, including wood and steel features, with the opportunity for brighter, colorful features.



Street lighting can serve many functions. It can illuminate an area, provide wayfinding, create a social space, and also enhance safety or security. Lighting can illuminate important spaces, such as building entrances, intersections, or key public spaces or amenities. Street lighting should be designed carefully, considering placement, intensity, and color. Additionally, the style of street light should seamlessly fit into the overall character of the area. The two right pictures above highlight various types of street lamps and lighting that could fit into the overall character of the South Main Street area, highlighting important features and creating a sense of space that connects the South Main Street area to the rest of Alpharetta and Wills Park. Some lighting, seating, and other elements will be within public ROW or on public property while others will be on private property. Those on public property should mirror what has already been installed along Main Street. Elements on private property can be similar, but also present an opportunity to provide more unique and creative solutions.

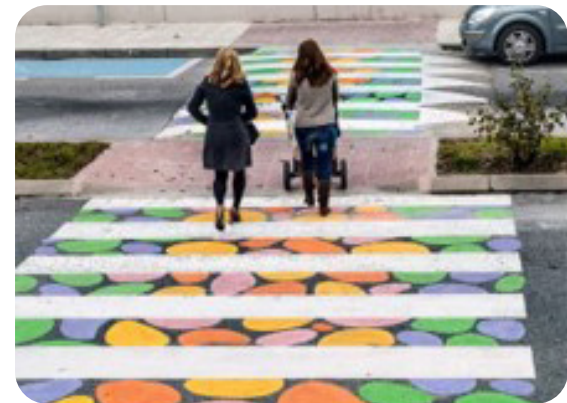
SOUTH MAIN LCI Study

An additional component of streetscape elements that are typically placed in the public right of way is trash receptacles. These receptacles should be highly visible and accessible in order to minimize litter. The following images show types of trash receptacles that fit into the overall character of the area that serve their core purpose. These receptacles are located in high-volume areas near other items of street furniture like benches and shelters. It is also important to locate trash receptacles near the entrances and exits to Wills Park and the AlphaLoop.

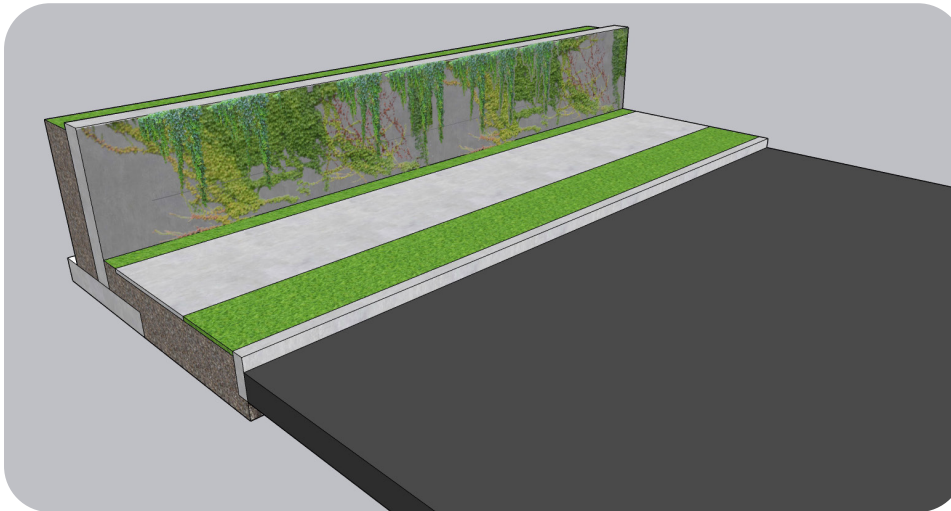


STREETSCAPE ACTIVATION - CREATIVE CROSSWALKS

Another unique streetscape element that can be used to develop a creative district identity is painted or artistically enhanced crosswalks. Pedestrian crosswalks serve an important safety function to keep pedestrians safe while crossing streets and are located at many high visibility intersections. However, crosswalks can also create a sense of community through the use of bright colors and unique designs. These “creative crosswalks” have historically received a positive reaction from the public, providing an opportunity to involve local artists or residents in their design and creation. Creative crosswalks can strongly enhance the overall aesthetic and character of the area, providing an accessible way to jump start the creative district around South Main Street.



The SR 9 / South Main Street corridor is currently undergoing a significant project led by the Georgia Department of Transportation (DOT). This project includes new sidewalks on both sides of the road, road and intersection realignments, and the addition of signalized intersections. While this work is being completed to meet GDOT standards, there are opportunities for small but impactful improvements along the corridor to enhance the look and feel, especially for pedestrians utilizing this area. The first near-term corridor-wide initiative includes coordinating with GDOT to implement street trees, lighting, median plantings and retaining wall enhancements where appropriate along the SR 9 corridor. The following two renderings show what the South Main Street corridor could look like in the future. Additionally, the following pages provide inspirational imagery for the overall character and streetscape elements.



A possible solution for the GDOT retaining walls and parapet walls along South Main include adding planters to the top or behind the wall with greenery growing above or cascading down the wall, as shown above.

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STATE ROUTE 9 PUBLIC ILLUSTRATIVE RENDERING



STATE ROUTE 9 PUBLIC ILLUSTRATIVE RENDERING

SOUTH MAIN LCI Study

CONNECTIVITY INTO WILLS PARK

The second corridor-wide near term initiative includes connectivity into Wills Park. During the public outreach phases, there was a significant amount of feedback regarding connecting South Main Street into the south part of Wills Park, including the addition of visible connections from SR 9 or other nearby road that will lead pedestrians and into the park.

The City of Alpharetta can introduce major or minor gateways into Wills Park that fit in well with the overall style of the area as well as the Wills Park Master Plan. These major and minor gateways are recommended to be visible from South Main Street.



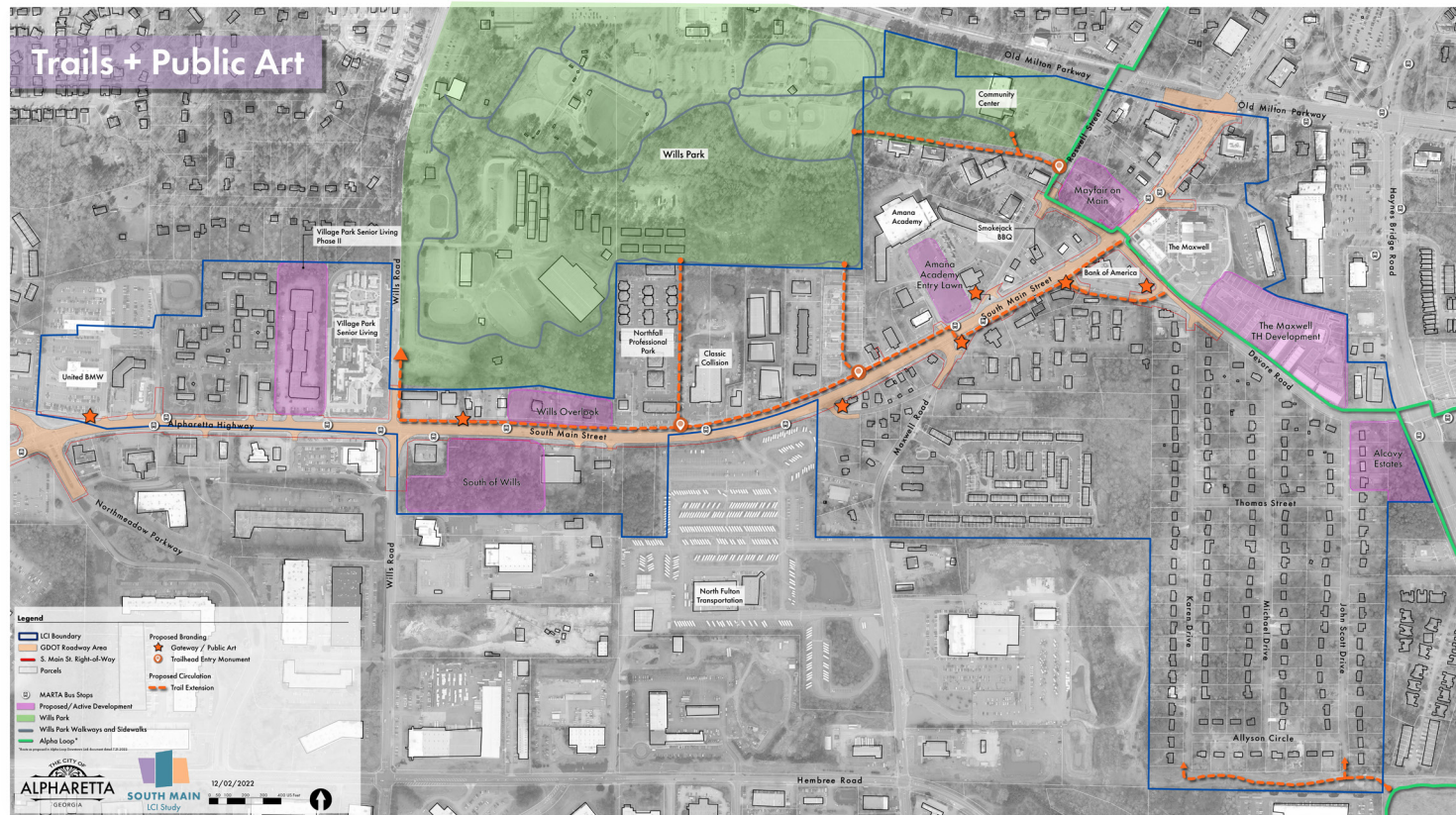
PREFERRED DESIGN



ALTERNATE DESIGN

SR 9 PUBLIC ART PROGRAM

Public art can refer to a variety of improvements and additions such as sculptures, murals, and other artworks that are located in publicly visible or accessible spaces, often but not always outdoors. Public art has the ability to enhance the environment and activate public spaces. Public art can recognize local art culture and may also highlight the functional aspects of areas, drawing people towards it, and contributing to the active street life of the South Main Street area. These features may be used to serve as focal points on streets and in public areas, especially at key locations or intersections. Public art may be permanent or temporary and creates an opportunity to engage local artists. It should also be noted that the City of Alpharetta provides a 50% funding match for approved public art including murals and sculptures. The preferred width for new trails is 8 feet and should include lighting and other amenities where appropriate.



SOUTH MAIN LCI Study

Once completed, the GDOT project along SR 9 will include several “leftover” small places that are in the GDOT right of way but that will not be used for roadway or sidewalk improvements. A near-term recommendation includes working with GDOT to leverage these small spaces within the right-of-way to add new small greenspaces and locations for public art. The map on the previous page identifies these small spaces that could be leveraged in the future. The following section identifies examples of public art that could help create character and support the branding of the area.

Examples include the realignment of the Maxwell Road intersection across from the Amana Academy as well as the Devore Road / Old Devore Road intersection. These areas are likely spaces for impactful public art that would solidify this area as unique district. The photos to the right provide examples of public art pieces that have an aesthetic type that could fit in well with the South Main Street area.



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CORRIDOR BRANDING AND THEME

The final corridor-wide near term initiative includes identifying and creating a corridor brand and theme for the South Main Street area. This may include the City of Alpharetta partnering with a branding company to create a name for the area as well as design and style pieces for the area that would help establish the area.

During the various stakeholder and public meetings, many attendees expressed the need for unique branding for the South Main area that is separate from Downtown Alpharetta. The project team used various activities to capture what the overall theme or source of the branding could be, and received a large amount of feedback. Many wanted the area to be branded based on Wills Park, as it is a large identifying feature for the area. Additionally, people wanted to create a new identity for the area, based on the potential for public art and spaces for artists in the area. Members of the stakeholder committee envisioned this area as a gateway to Downtown, and wanted to brand it something similar to the Gateway District, Village District, SoMa (South Main) District, South of Wills (SOW) District, or Parks and Arts District.

The project team created a few inspirational ideas based on elements of these potential brands such as the Gateway, Arts, Parks, and South Main. It is important to note that these are initial ideas based on feedback from various engagement efforts. Additional discussion on area branding is needed before finalizing any theme, design, or other elements.

south main
parks
& Arts
district

south main
PARKS
ARTS

south main
PARKS & ARTS
district

parks
& Arts
SOUTH MAIN ARTS DISTRICT

parks
& Arts
SOUTH MAIN ARTS DISTRICT

south main
PARKS & ARTS
district

Near Term Concept



SOUTH MAIN LCI Study

MID-TERM RECOMMENDATIONS

Mid-term recommendations were developed that could be implemented over the next 3-5 years. These four recommendations are based on feedback from the stakeholder committee and public engagement and will be discussed on the following pages.

Facade grant and frontage improvement program

Redevelopment Guidelines

Maxwell Road extension

South Main Central North semi-permanent structures

FACADE GRANT AND FRONTAGE IMPROVEMENT PROGRAM

One of the mid-term recommendations that was voiced by members of the stakeholder committee was to establish a facade and frontage improvement grant program for the South Main Street Area.

The purpose of this program would be to assist property owners in the South Main street corridor enhance their existing property and buildings in alignment with the future vision of the area. The type of eligible projects could include a variety of ideas such as the addition of awnings, painting / repairing the outside of buildings, or refreshing building signage.

This program would be led by the City of Alpharetta in conjunction with a review board to oversee the grant program and ensure that improvements remain in alignment with the character of the area. The City has used this type of program in the past with much success and would be adequately prepared to execute such a recommendation.

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DOWNTOWN OVERLAY AND GUIDELINES AMENDMENT

Amend the Downtown Overlay designation and Alpharetta Downtown Design Guidelines to include standards and recommendations to reflect the desired character identified by this South Main Street LCI Study and community vision. The proposed amendments should apply to the South Main Street and Alpharetta Highway corridor within the Downtown Overlay. Specifically, this should include any property (public or private) with direct frontage onto the identified corridor. The intent of the amendments is to shape quality spaces by appropriately regulating elements viewed from the public realm to form a cohesive district within downtown Alpharetta

It is important that the amendments to Article 2 Downtown Overlay specifically address and appropriately expand on preferred Building Design (Sec.2.8) and Building Types (Sec. 2.7).

Amendments to the Alpharetta Downtown Design Guidelines should address and provide recommendations for preferred bus stop design and streetscape elements as identified in this study. In this case streetscape elements include furniture, lighting, crosswalk design, and waste receptacles within the public realm.

The Downtown Design Guidelines should also seek to allow flexibility for outdoor dining and retailing, including additional sidewalk widths or informal seating added to the back of sidewalks. The guidelines should also limit driveways and parking between the public street and primary buildings along South Main Street.



MAXWELL ROAD EXTENSION

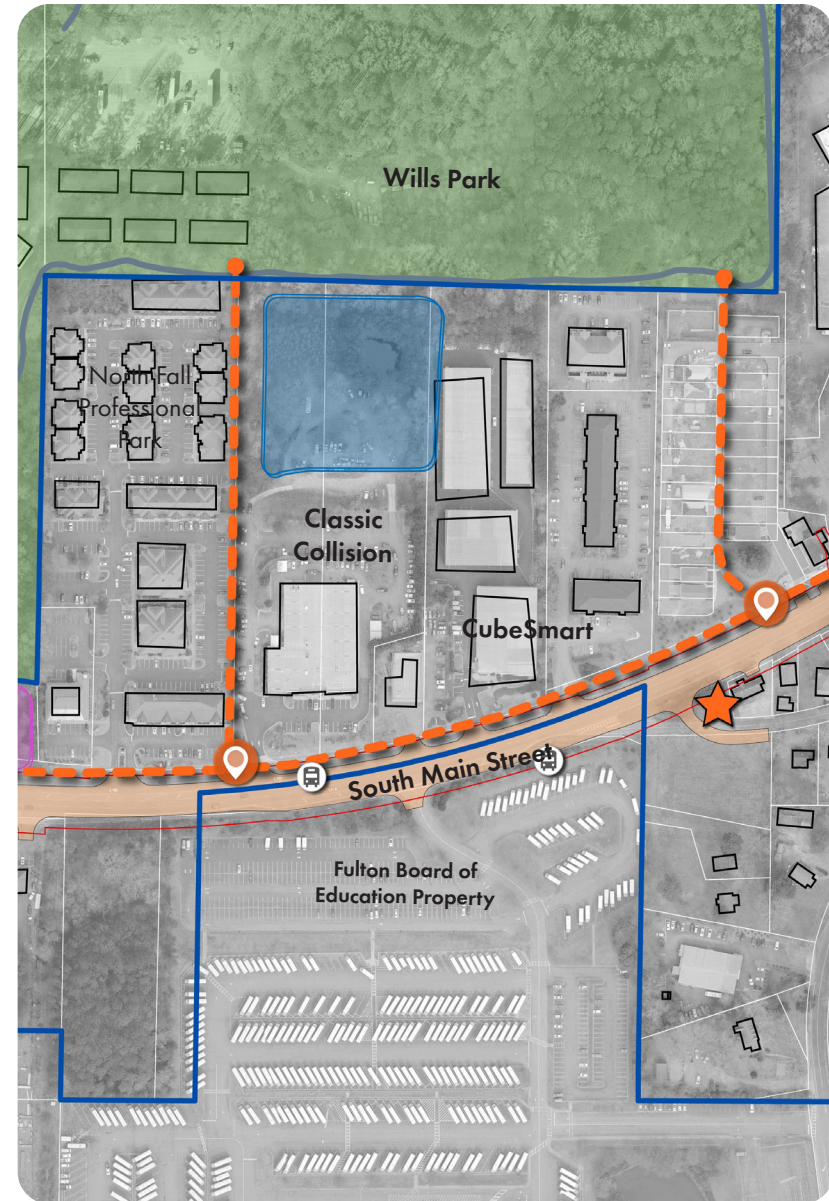
One goal for the area includes increasing connectivity for cars, bicycles, and pedestrians, while also framing out new blocks where infill or redevelopment can occur. One example of this is the Maxwell Road extension.. This extension would provide additional circulation and street frontage. It would also require coordination with the Fulton County Board of Education as it could potentially impact the parcel that is currently owned by the Board of Education and would impact their entrance and exit of the current property.

SOUTH MAIN LCI Study

SOUTH MAIN CENTRAL NORTH SEMI-PERMANENT STRUCTURES

The fourth mid-term recommendation encourages the activation of underutilized areas adjacent to Wills Park by promoting the implementation of semi-permanent and temporary structures for potential beer gardens, creative maker spaces, music venues, etc.

The underutilized 3.25 acre site at the rear of Classic Collision offers such opportunity. Necessary vehicular access may be accommodated with connections through the adjacent Northfall Professional Park to the west. Pedestrian connections from South Main to Wills Park should be coordinated with City of Alpharetta Recreation, Parks, Culture Department and adjacent property owners.



The following images illustrate examples of potential activation for the space identified behind Classic Collision. The image on the left shows a more permanent option with a stage, a food/drink vendor, and outdoor lighting that may be incorporated into a larger redevelopment opportunity in the future. The image on the right shows a more temporary installation for activation of the space through the addition of outdoor furniture, a greenspace, and a stage.



SOUTH MAIN LCI Study

LONG-TERM RECOMMENDATIONS

The long-term vision for South Main Street is to be a more walkable and mixed-use oriented district than it is today. Building on the near and mid-term recommendations, and acknowledging the study area is within the Downtown Overlay District, five areas are identified to help further create the desired character of the district. The following pages review in more detail the visions and strategies for the key redevelopment areas including:

Areas 1-2: South Main Central

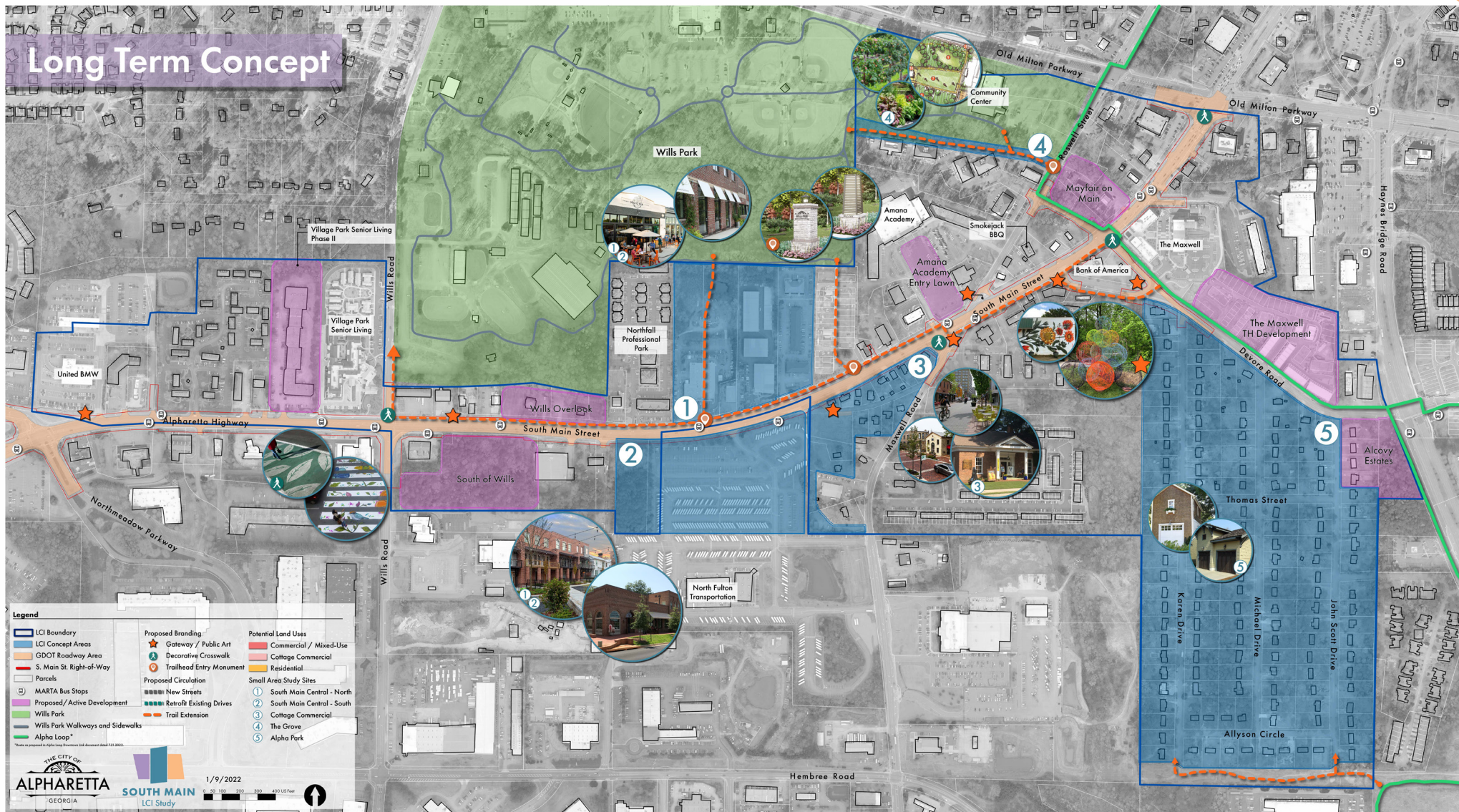
Area 3: Cottage Commercial

Area 4: The Grove

Area 5: Alpha Park

The illustrative plans shown for each redevelopment area provide a vision for what the South Main Street area can become. The following plans including building locations are for illustrative purposes only. They are intended to show one possible option for long-term redevelopment and assumes that any redevelopment will only occur when in coordination with property owners.

Long Term Concept



SOUTH MAIN LCI Study

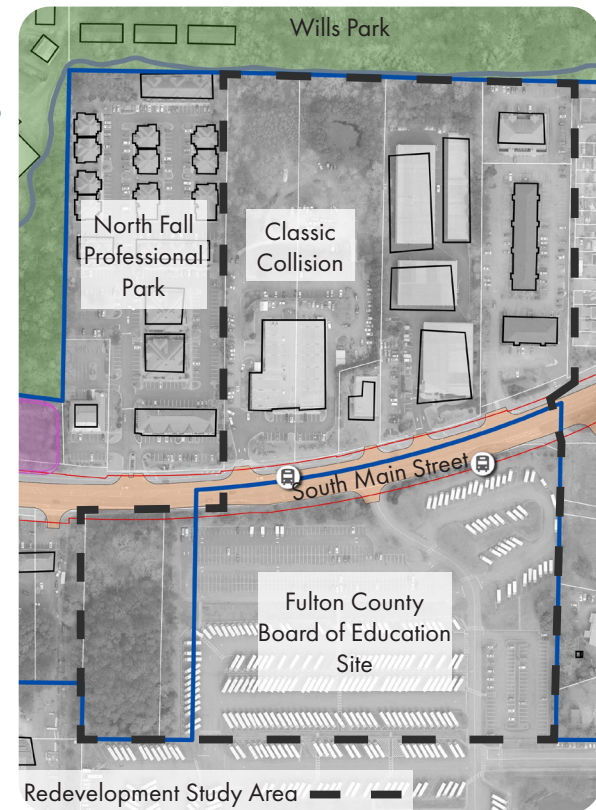
AREA 1-2: SOUTH MAIN CENTRAL

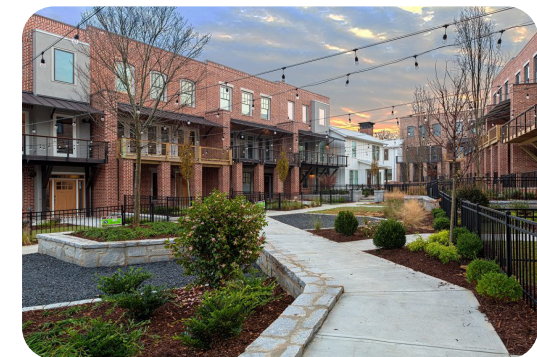
Location was the driving force behind this redevelopment study. Offering ~800' of Wills Park frontage, under a 6-minute walk from the Alpha Loop Trail crossing at Devore Road and South Main Street, and centrally located within the study, this site is a prime location for redevelopment. The illustrated concept is just one example of how the site may be redeveloped in the future. Some elements represented here should be included in all redevelopment proposals for this location.

- **Street Framework.** Provide a street framework that allows for continuous connections between developments and walkable blocks. If inner block connections are not feasible at the time of redevelopment, future connections should be identified and incorporated into the design as temporary stub-out streets.
- **Land Use.** Due to its proximity to WellsStar North Fulton medical campus, office or medical office may also be a viable use within this concept or areas further to the west along South Main. A mix of uses as allowed in the Downtown District Overlay (such as residential, commercial, and mixed-use buildings) should be incorporated into the design to promote a vibrant active district.
- **Park Frontage and Pedestrian Circulation.** Wills Park is the marquee park for the City of Alpharetta. Proposed redevelopments should highlight this amenity by providing active uses fronting onto the park. Pedestrian connections linking the park to South Main Street should be provided and appropriately incorporated into the design.

Area 2 of the redevelopment concept lies mostly outside of the study area within the City of Roswell. Currently owned by Fulton County Board of Education, the current use (school bus facilities and storage yard) does not reflect the highest and best use for a parcel with ~770' of frontage on South Main Street.

While not critical to the success of Area 1, allowing a portion of the Fulton County Board of Education land to be redeveloped (as shown in this study) allows for a more meaningful redevelopment opportunity.





The images above were selected by the public based on their appropriateness for the future of South Main Street.

SOUTH MAIN LCI Study

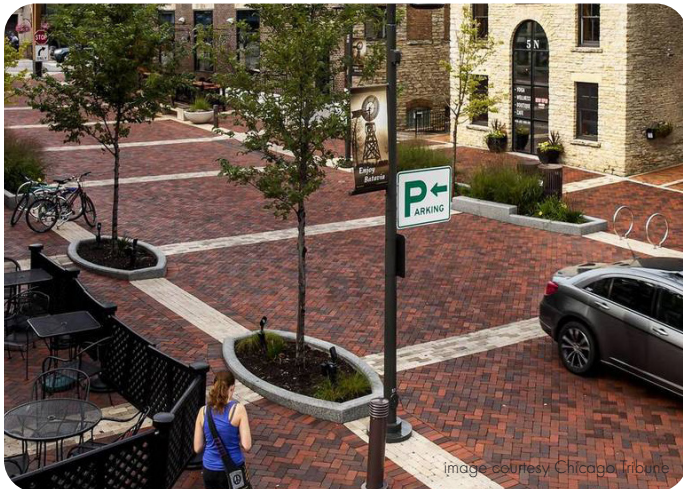
AREA 3: COTTAGE COMMERCIAL

Brady Place is a unique ~800' long street providing vehicular connection between Maxwell Road to the east and South Main Street to the west. The street character found here is not seen elsewhere in the study area. Primarily consisting of 1940s era residential housing that have been converted for commercial use, the site provides a unique opportunity to build on the market condition that has started to take hold naturally and define the area as a cottage commercial district.

The Downtown Overlay District defines this type of use as a Commercial House. This redevelopment concept recommends new infill structures that meet the Commercial House definition be considered as illustrated on the concept plan. Some existing structures may be saved, however structure modifications and replacements may also be appropriate. New Commercial House infill should compliment the existing structures in terms of mass, height, and architectural style.

Also key to this redevelopment study is the realignment and redesign of Brady Place to a Living Street. This street type complements the idea for establishing Brady Place as a node for design oriented businesses. Essentially creating a linear plaza for businesses to activate and complement the eclectic nature of Area 3.





The images above were selected by the public based on their appropriateness for the future of South Main Street.

What is a Living Street?

A living street refers to a street that encourages the mixing of pedestrian and vehicle traffic. The idea of mixing modes may seem counter to the goal of pedestrian safety, but designating the street as a shared place for pedestrians, cyclist, and vehicles elevates the awareness of each user creating a safe environment. This concept is inspired by the Dutch “woonerf” street, which translates directly to “living street.” Its key characteristics are:

- Intended for local traffic, including cyclists
- Vehicular and pedestrian zones are delineated by paving patterns, street furniture, and tree placement
- Traffic modes intermingle and negotiate between one another
- Visual and physical traffic calming treatments, such as a narrow passageway, trees, bollards, and pavers, maintain low speeds to protect those walking or biking in the street

SOUTH MAIN LCI Study

AREA 4: THE GROVE

In the long and narrow area that runs parallel to Wills Park and the Alpharetta Community Center, and leveraging plans for “The Grove” from the Wills Park Master Plan an opportunity exists to create a linear greenspace and new connection to Wills Park. The Wills Park Master Plan is shown in the figure below on the left, highlighting the area that is planned to be The Grove a forested, passive space with hammocks, places to relax, and informal picnic spots. Building on the idea of The Grove, the narrow strip of land south of the Community Center could be used to support the City’s Urban Agricultural Plan and existing community gardens in Wills Park through the implementation of a linear orchard with edible landscape elements, as shown in the figure on the right below. Additionally, connecting this area and therefore Wills Park to the Alpha Loop by creating a trail spur into the park that features innovative landscape design elements could be an innovative and practical activation strategy of this space.





SOUTH MAIN LCI Study

AREA 5: ALPHA PARK

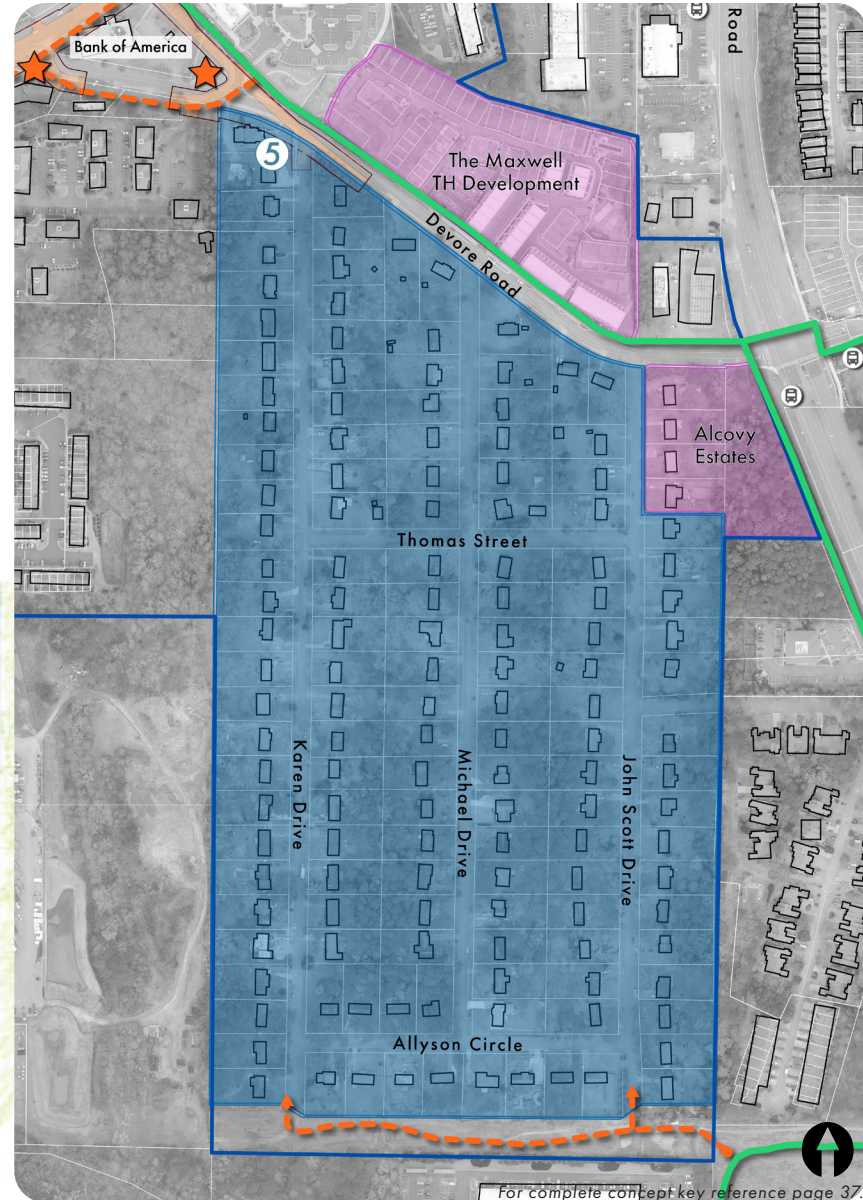
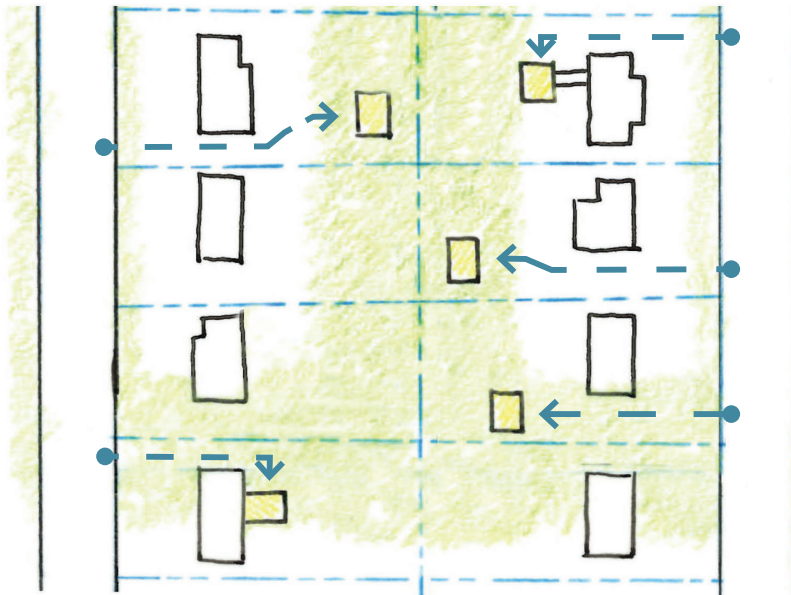
Located off Devore Road across from a recently built townhouse community, the established residential neighborhood of Alpha Park likely provides the most attainable for-sale product in downtown Alpharetta. Many developers have looked into consolidating the 141 single family parcels here for a much more intense development, however, no such development proposal has been successful to date.

The goal for this area is to foster community by evaluating the need for regulations to preserve the existing neighborhood character and affordability, while still allowing for some infill and incremental change. One such regulation may be to allow the introduction of an Accessory Dwelling Unit (ADU) program for Alpha Park. Unlike elsewhere in Alpharetta, this ADU program should allow for detached ADUs at the rear of the primary residence. A majority of lots in Alpha Park may accommodate a driveway to access ADUs placed in the rear yards. Such units would allow for additional living space and/or potential rental income for the property owner.

The City of Alpharetta should maintain the Future Land Use designation of Low-Density Residential and facilitate a listening session for property owners and residence to further evaluate potential needs. Additional possible implementation actions for Alpha Park include but are not limited to: explore possible regulations on house size or massing, streetscape improvements, and on-street parking regulations.



The images above depict typical ADUs that could be allowed in Alpha Park. Below is a diagram illustrating appropriate ADU placement and potential vehicular access routes.



For complete concept key reference page 37.

SOUTH MAIN LCI Study

CASE STUDIES

To better understand possible outcomes for the South Main Street area, it can be helpful to review case studies of other redevelopment sites with similar characteristics and challenges. The following pages contain a collection of examples of developments that have experienced success by leveraging similar strategies proposed for the South Main Street area. These examples can act as a guide the South Main Street area's future and help shape a unique identity for the area.

PLANT RIVERSIDE DISTRICT SHOPS SAVANNAH, GEORGIA

The Plant Riverside District Shops in Savannah, Georgia is an example of a pedestrian oriented area with a focus on cottage commercial vendors. These smaller-sized stores are located along the Riverfront area with food vendors, art shops and galleries, jewelry and clothing stores, and provide a contrast to the historic buildings surrounding them. This area is an inspiration for the Brady Place Woonerf area.



WIEHLE STATION RESTON, VIRGINIA

The Wiehle Station in Reston, Virginia is a transit-oriented development situated on over 80 acres of mixed-use development. It includes many shops, including bakeries, bookstores, and home ware vendors. There are also many adjacent amenities such as a parking garage, bike storage room, bus loop, and a kiss and ride.



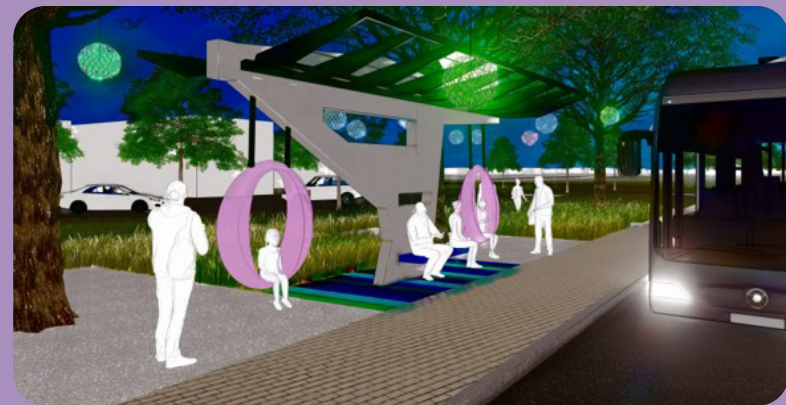
SPARKMAN WHARF TAMPA, FLORIDA

The Sparkman Wharf is a 56-acre development located on the downtown Tampa waterfront, providing various office and retail options. Amenities include a dining garden and biergarten as well as a recreational lawn. This outdoor space is an inspiration for the South Main Street area.



SUGARLOAF CID GWINNETT COUNTY, GEORGIA

The Sugarloaf CID in Gwinnett County, Georgia recently completed an LCI Study for an improved bus shelter with lighting, pole signage with route information, interactive seating, and waste and recycling receptacles. This case study shows how bus shelters can provide art through the lighting elements as well as wayfinding and branding opportunities.



SOUTH MAIN LCI Study

FOOD FOREST TRAIL GWINNETT COUNTY, GEORGIA

The Food Forest Trail is a case study related to urban agriculture components in a developed area supporting the ecological betterment of the area. This Food Forest Trail includes design ideas and suggestions related to features within the planting area (picnic table, bench, storage shed) as well as types of plants and plots (vines, edible landscape plots, pollinator plantings). This is a case study for the Roswell Street area near the Alpharetta Community Center and the planned Grove in Wills Park.



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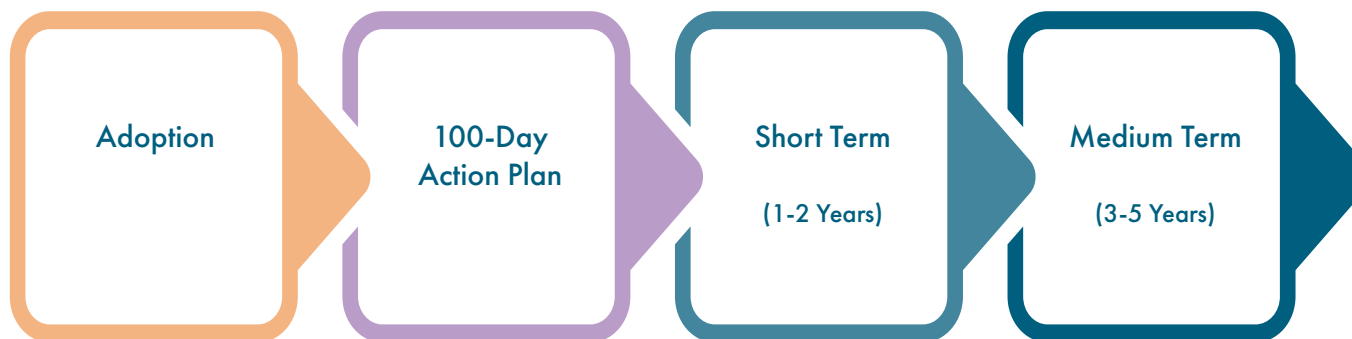
SOUTH MAIN LCI Study

Implementation Plan

Based on stakeholder and community input, existing area and market conditions, and with the redevelopment concepts in mind, a 5-year implementation plan, including a 100-day action plan was developed. The implementation and action plan outline priority projects and initiatives for the South Main Street study area. The 100-day action plan includes projects and activities that can begin upon adoption of the plan, while the 5-Year Action Plan includes short- and medium-term projects and initiatives to be completed over the next five years. Projects are organized by timeframe and identify the concept area they pertain to with those that apply to multiple concept areas or the entire study area identified accordingly.

100-DAY ACTION PLAN

Items included in the 100-day action plan are recommendations that are easy to implement with no or very low cost to build momentum for plan implementation and should be pursued in the first 100 days after this plan is adopted. Some projects identified within the 100-day action plan are not anticipated to be completed within that timeframe, but rather work should begin immediately to capitalize on recent discussions, meetings, and positive inertia from the study process. As part of the 100-day action plan, the City of Alpharetta should work with implementation partners and organizations to identify who will take a leading or supporting role and to coordinate immediate next steps.



100-DAY ACTION PLAN

1	Area-Wide	Adopt South Main LCI Study and incorporate into the Comprehensive Plan.
2	Area-Wide	Continue South Main branding discussions, including identification of priority elements
3	Area-Wide	Begin discussions with GDOT regarding additional landscaping along SR 9
4	Area-Wide	Identify areas for public art and additional streetscape elements within ROW and begin discussions with stakeholders or property owners
5	Area-Wide	Begin discussion of area-wide facade grant / frontage improvement program
6	Area-Wide	Partner with Parks Department / Recreation Commission to plan park entry monuments
7	South Main Central	Evaluate and discuss Wills Park connections with property owners
8	Cottage Commercial	Update Commercial House regulations within the Downtown Overlay to encourage appropriate building type and address non-compatible uses.
9	The Grove	Meet with Parks Department to discuss how to best support the Grove

SOUTH MAIN LCI Study

5-YEAR ACTION PLAN - TRANSPORTATION/INFRASTRUCTURE IMPROVEMENTS

Timeframe	Category	Applicable Area	Name	Description	Type of Improvement	Engineering / Design	
						Year	Cost
Short-Term	Infrastructure	Area-Wide	Corridor brand and theme	Create branding identity and install signage	Enhancements	2023	\$ 20,000
Short-Term	Infrastructure	Area-Wide	SR 9 Corridor Enhancements	Create a plan for landscaping along SR 9 and begin GDOT discussion	Enhancements	2023	\$ 500,000
Short-term	Infrastructure	Area-Wide	Bus Shelters	Bus shelter improvements at the MARTA bus stops along South Main Street	Infrastructure	2024	\$ 80,000
Short-term	Infrastructure	Area-Wide	Reclaiming ROW remnants	Create pocket greenspace and public art	Enhancements	2024	\$ 150,000
Short-Term	Sidewalks/ Paths	Area-Wide	Park Entrances	Work with Parks Department / Recreation Commission to finalize park entry monuments	Infrastructure	2025	\$ 20,000
Medium-term	Street Framework	Cottage Commercial	New Maxwell Street Extension	Provide additional circulation and street frontage with New Maxwell Street Extension	Infrastructure	2025	\$ 700,000
Medium-term	Green Spaces	The Grove	Trail Spur	Connect to the AlphaLoop by creating a trail spur into the park that features innovative landscape design elements	Walkability	2026	\$ 150,000
Medium-term	Sidewalks	Alpha Park	Sidewalk Addition	Add sidewalks on one or both sides of the street in Alpha Park	Walkability	2026	\$ 400,000
Medium-term	Streetscape	Area-Wide	South Main Streetscapes	Streetscape improvements along South Main St including: street lights, outdoor furniture, trash cans	Infrastructure	2027	\$ 400,000

MENTS

Construction			Funding			
Year	Cost	Total Cost	Responsible Party	Primary Source	Local Source	Local Match
2025	\$ 100,000	\$ 120,000	City of Alpharetta/ Cultural Arts Commission	Local	City of Alpharetta	
2025	\$ 2,500,000	\$ 3,000,000	City of Alpharetta in coordination with GDOT	LCI	City of Alpharetta	\$ 600,000
2026	\$ 720,000	\$ 800,000	City of Alpharetta	GDOT, ARC	City of Alpharetta	\$ 160,000
2026	\$ 700,000	\$ 850,000	City of Alpharetta	Local	City of Alpharetta	
2027	\$ 80,000	\$ 100,000	City of Alpharetta	Local	City of Alpharetta Parks	
2027	\$ 3,500,000	\$ 4,200,000	City of Alpharetta	GDOT, ARC	City of Alpharetta	\$ 840,000
2028	\$ 600,000	\$ 750,000	City of Alpharetta	GDOT, ARC	City of Alpharetta	\$ 150,000
2028	\$ 2,000,000	\$ 2,400,000	City of Alpharetta	Local	City of Alpharetta	
2029	\$ 2,000,000	\$ 2,400,000	City of Alpharetta	GDOT, ARC	City of Alpharetta	\$ 480,000

SOUTH MAIN LCI Study

5-YEAR ACTION PLAN - DEVELOPMENT/LAND USE INITIATIVES

Timeframe	Category	Applicable Area	Name	Description	Type of Improvement
Short-term	Redevelopment	South Main Central	Catalytic Mixed-Use	Encourage catalytic mixed-use redevelopment to reinforce South Main's character	Infrastructure
Short-term	Other	Area-Wide	Corridor brand and theme	Create a brand and theme for the area and create signage	Enhancements
Short-term	Redevelopment	South Main Central	Market Spaces	Promote the implementation of semi-permanent and temporary structures for potential beer gardens, maker spaces, music venues, etc.	Other
Short-term	Infrastructure	Area-Wide	Façade / Frontage Improvements	Create an area-wide façade grant / frontage improvement program	Enhancements
Short-term	Redevelopment	Cottage Commercial	Unique Retail	Reinforce area as a Commercial House district with small-scale, unique retail and mini café offerings as well as activated public spaces. Regulate preferred building type to avoid non-compatible development	Infrastructure
Short-term	Green Spaces	Cottage Commercial	Woonerf Street	Create opportunity for infill Commercial Houses and gathering by retrofitting Brady Place to a Woonerf-style street	Infrastructure
Short-term	Green Spaces	The Grove	Urban Agricultural Plan	Support City's Urban Agriculture Plan as well as existing community gardens in Wills Park through implementation of a linear orchard with edible landscape elements	Other
Medium-term	Street Framework	South Main Central	Street Framework	Promote street framework to allow continuous connections between developments	Infrastructure
Medium-term	Redevelopment	South Main Central	Fulton Board of Education	Discuss development opportunity for property owned by Fulton Board of Education located within City of Roswell	Other
Medium-term	Infrastructure	Alpha Park	Parking Additions	Allow for on-street parking spaces	Policy
Medium-term	Infrastructure	Alpha Park	Carriage Houses	Allow Carriage Houses or Accessory Dwelling Units (ADUs) at rear of properties by way of side yard driveways	Policy

Engineering / Design		Construction			Funding
Year	Cost	Year	Cost	Total Cost	Responsible Party
2023		2027			
2023	\$20,000	2025	\$100,000	\$120,000	City of Alpharetta/ Cultural Arts Commission
2023	\$35,000	2025	\$75,000	\$110,000	City of Alpharetta/ Cultural Arts Commission
2024	Staff Time	2026	\$ 500,000	\$500,000	City of Alpharetta
2024	N/A	2028	N/A	N/A	City of Alpharetta/ Staff Time
2024	\$50,000	2027	\$350,000	\$400,000	City of Alpharetta/Private Developer
2024	\$25,000	2026	\$150,000	\$175,000	City of Alpharetta/ Cultural Arts Commission
2025	N/A	2027	N/A	N/A	City of Alpharetta/ Staff Time
2025	N/A	2027	N/A	N/A	City of Alpharetta/ Staff Time
2026	N/A	2028	N/A	N/A	City of Alpharetta/ Staff Time
2026	N/A	2028	N/A	N/A	City of Alpharetta/ Staff Time

EXHIBIT C



DOWNTOWN LINK CONCEPTUAL DESIGN REPORT

ALPHARETTA, GA

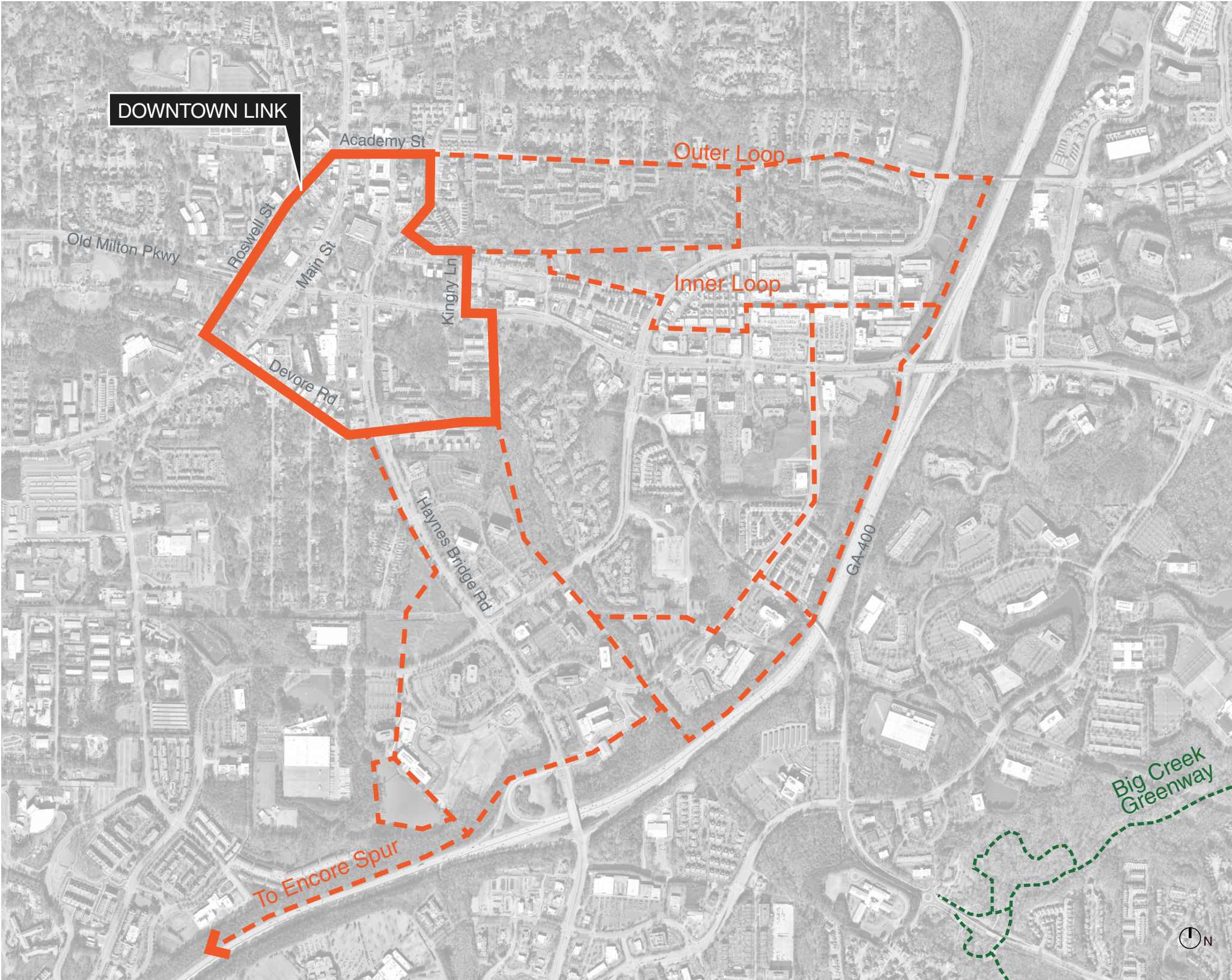
03/13/2023



STARR WHITEHOUSE
Landscape Architects
and Planners PLLC



EXECUTIVE SUMMARY



PROJECT OVERVIEW

Alpharetta has experienced unprecedented growth since the Alpha Loop was originally planned. Development continues to boom, with hotels, offices, multi-family residences, and mixed-use lifestyle centers in various stages of development emerging throughout the downtown district. Alpharettans understand the valuable connectivity that the Alpha Loop brings. Residents want to be near the trail, and the development community is eager to build the trail to make that possible. Establishing a clear and comprehensive vision for the downtown trail is critical to maximizing the public benefit of these private investments and ensuring a cohesive and connected Alpha Loop system for commuters and recreational users alike.

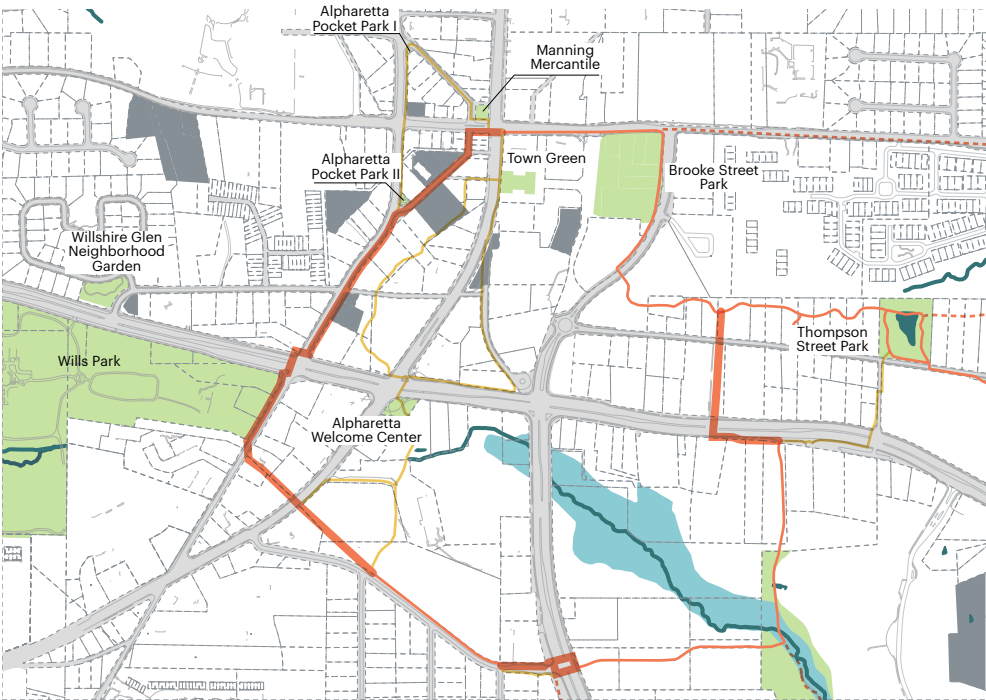
PROJECT GOALS

This trail study and conceptual design report establishes a district-wide framework for the Alpha Loop Downtown Link that creates a dynamic and legible public realm experience aligned to the unique opportunities and constraints of Alpharetta's urban context. It maximizes connections to open space assets, commercial and institutional attractions, and existing and future Alpha Loop alignments. To achieve these goals, this study considers the following:

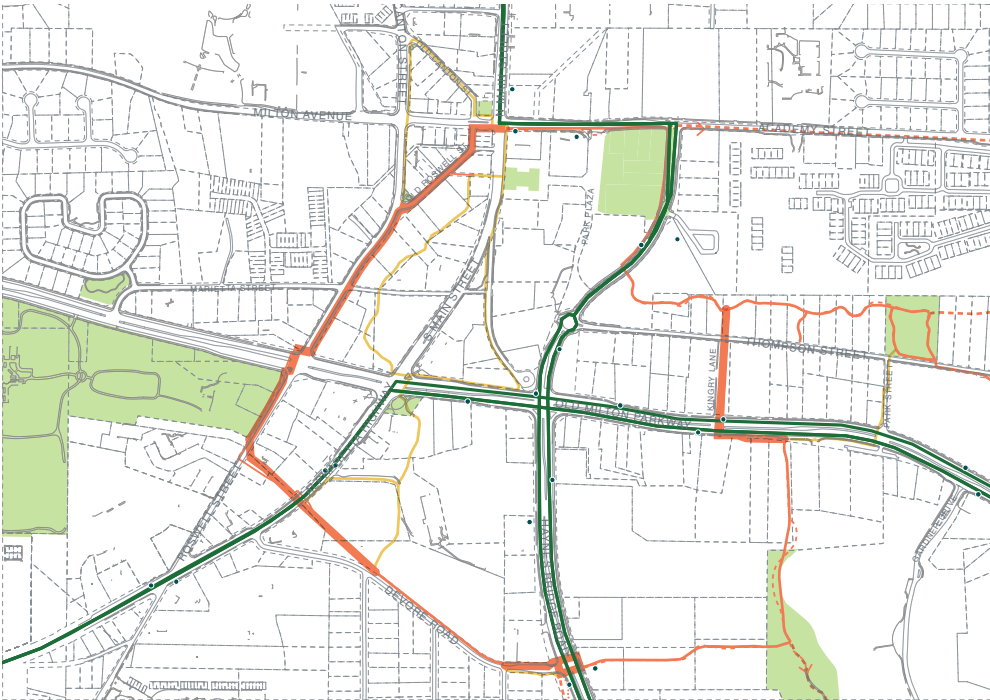
- Existing reports and studies
- Recent and upcoming development
- Minimizing right-of-way acquisition and impacts to privately held land
- Safe and efficient roadway crossings
- Catalyzing future pedestrian oriented development
- Connectivity to the broader pedestrian and bicycle circulation system



ANALYSIS



OPEN SPACE CONNECTIVITY



TRANSIT CONNECTIVITY

ANALYSIS MAPPING

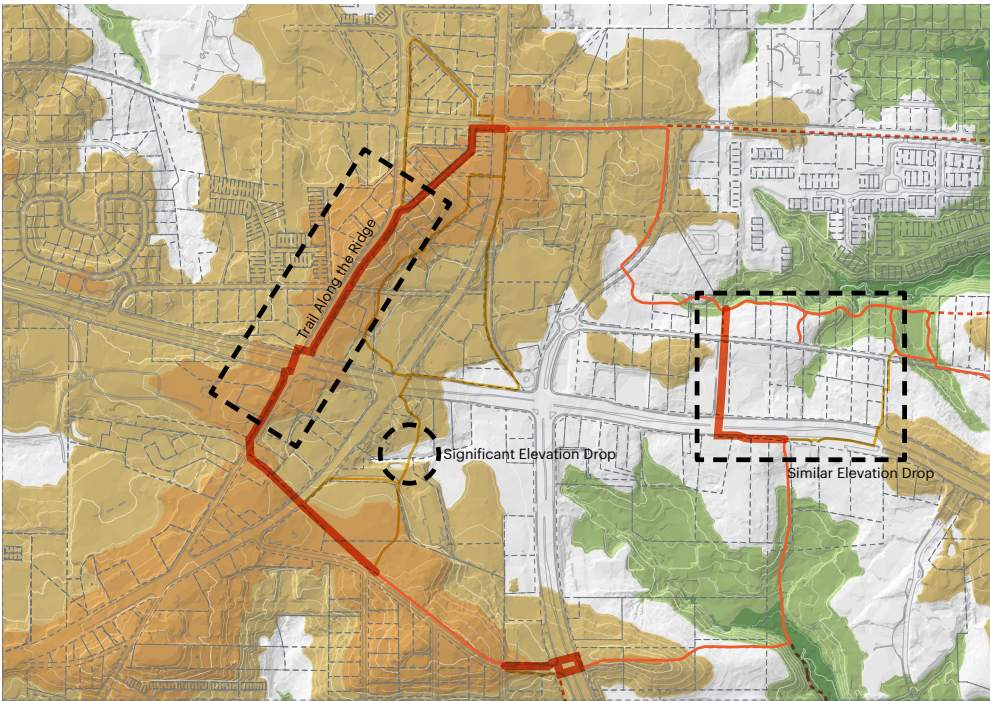
Through GIS mapping and analysis, a series of potential trail alignments were evaluated based on the following variables:

- Connectivity to open space assets, transit networks, existing pedestrian infrastructure, and roadway ownership.
- Crash and traffic data at key roadway crossings - both pedestrian and vehicular.
- Physiographic features such as topography, tree canopy, and hydrologic features.
- Right of way availability.
- Potential parking impacts.

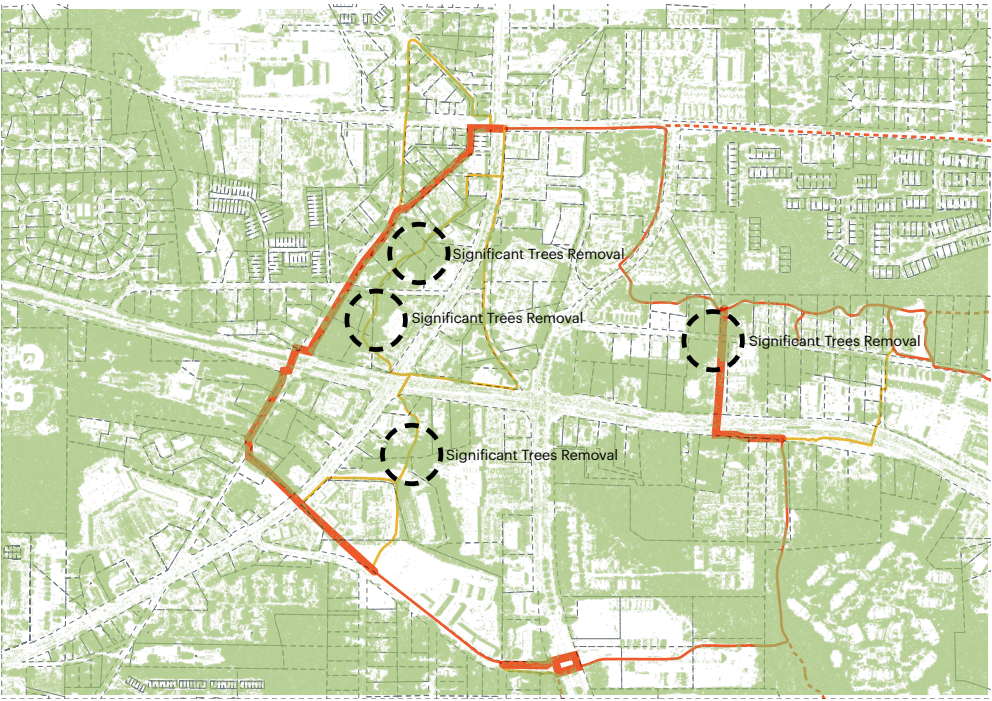
**See appendix for complete traffic study.*



CRASH DATA



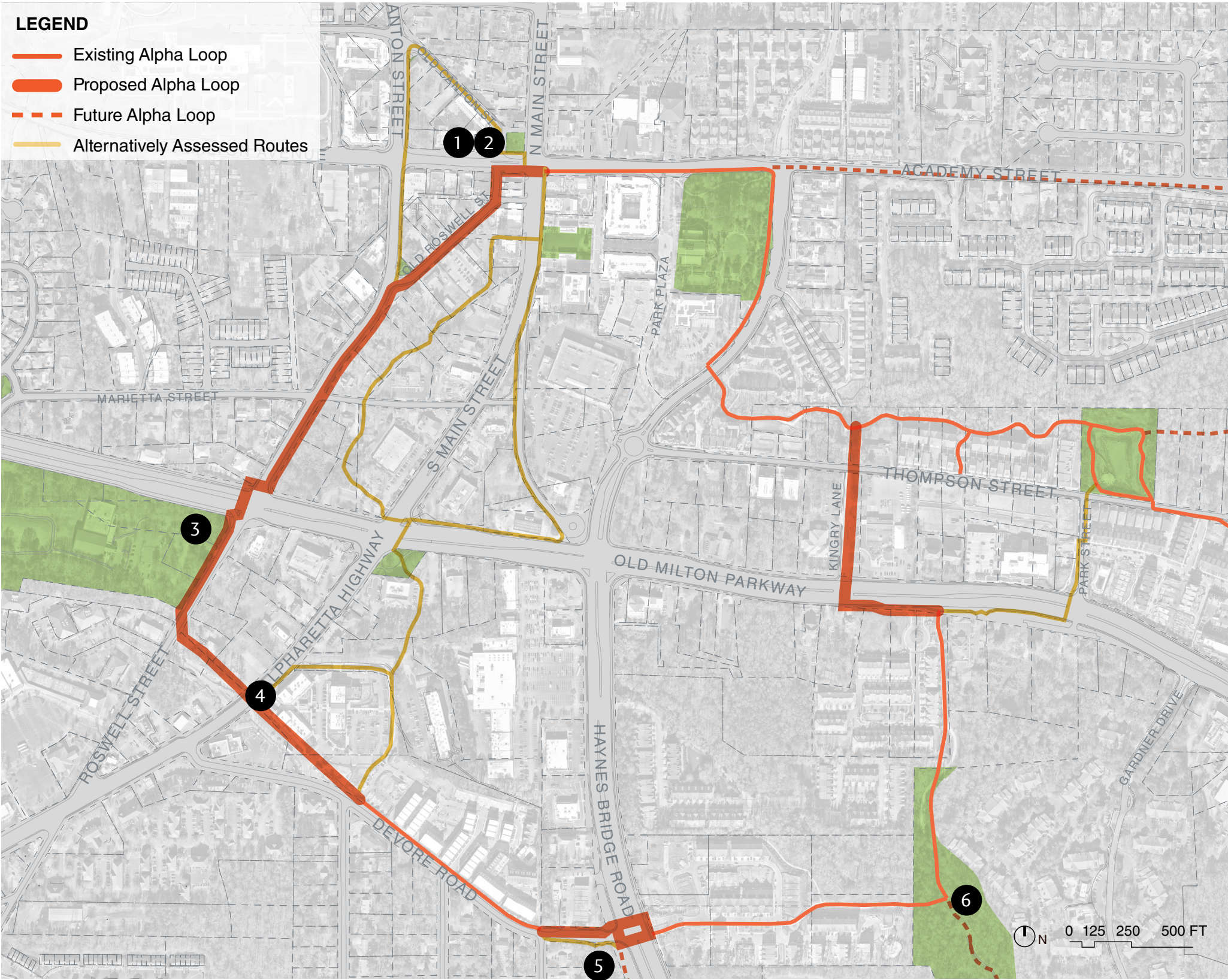
TOPOGRAPHY



TREE CANOPY IMPACTS AND SHADING



REFERENCED STUDIES AND DEVELOPMENTS



1 MILTON AVE.
AECOM



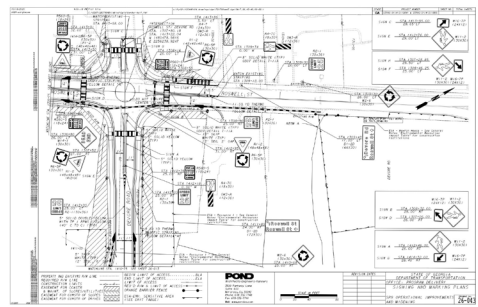
2 MILTON AVE.
KIMLEY HORN



3 WILLS PARK MASTER PLAN
JACOBS



4 DEVORE RD. REALIGNMENT
POND & COMPANY



5 ALCOVY ESTATES



6 ALPHA LOOP EXTENSION
POND & COMPANY



SELECT ADDITIONAL REFERENCED PLANS

- Alpharetta City Trail, Pond & Company.
- North Point Area and Alpha Loop Trail Connectivity Feasibility Study, MKSK, Toole Design Group.



PREFERRED TRAIL ALIGNMENT



ESTABLISHING A PREFERRED ALIGNMENT

In the Downtown District, the Alpha Loop trail has been installed incrementally over the past decade by both the City and by private developers constructing public realm improvements. The primary goal of the Downtown Link exercise is to identify the safest and most legible path to “Connect the people to the stuff.”

To define the Alpha Loop Downtown Link alignment, the team considered multiple variables including previous plans and standards, ongoing and projected development, topography, multiple modes of traffic and transportation, property ownership, and community assets.

Several alignments were assessed. The preferred alignment integrates existing stretches of trail into a cohesive network, leveraging prior investments to create a unified whole. This route prioritizes pedestrian/bicyclist safety and limits right-of-way acquisition. It endeavors to move Alpharettans through the Downtown District freely, while simultaneously identifying opportunities to encourage them to stop and stay awhile.

This Conceptual Design Report is organized into two sections:

1. Focus Areas: Opportunities for Enhancing Safety and Placemaking
2. Design Standards: Establishing A Cohesive Transportation Network

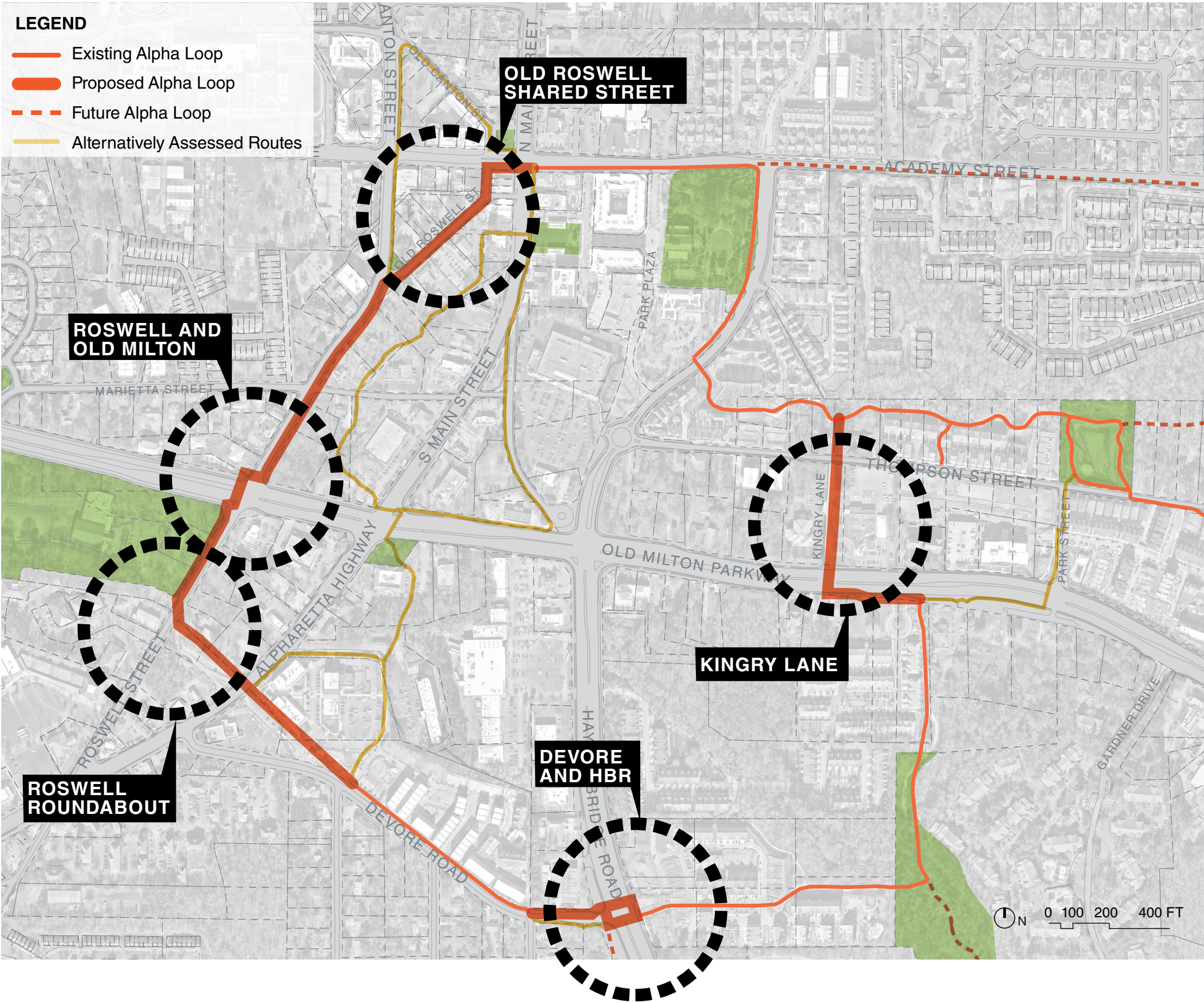


FOCUS AREAS

OPPORTUNITIES FOR ENHANCING SAFETY AND PLACEMAKING



FOCUS AREAS



OLD ROSWELL SHARED STREET

Develop a conceptual design for the conversion of Old Roswell Street to a shared street where pedestrian, bicycle, and vehicular traffic coalesce in a single, curbless, urban plaza space.

ROSWELL AND OLD MILTON

Determine optimal crossing from NE corner of intersection to SW corner of intersection, including shortening the crossing distance for pedestrians, providing pedestrian and bicycle safety improvements, and integrating with the planned Wills Park Gateway design concept.

ROSWELL ROUNDABOUT

Recommend pedestrian and bicycle safety improvements for the new Devore Road alignment (currently under construction), including widening of the Alpha Loop trail to the standard 12’ width, establishing pavement material standards for consistency, and enhancing Alpha Loop crosswalks for improved vehicular recognition.

DEVORE AND HAYNES BRIDGE ROAD (HBR)

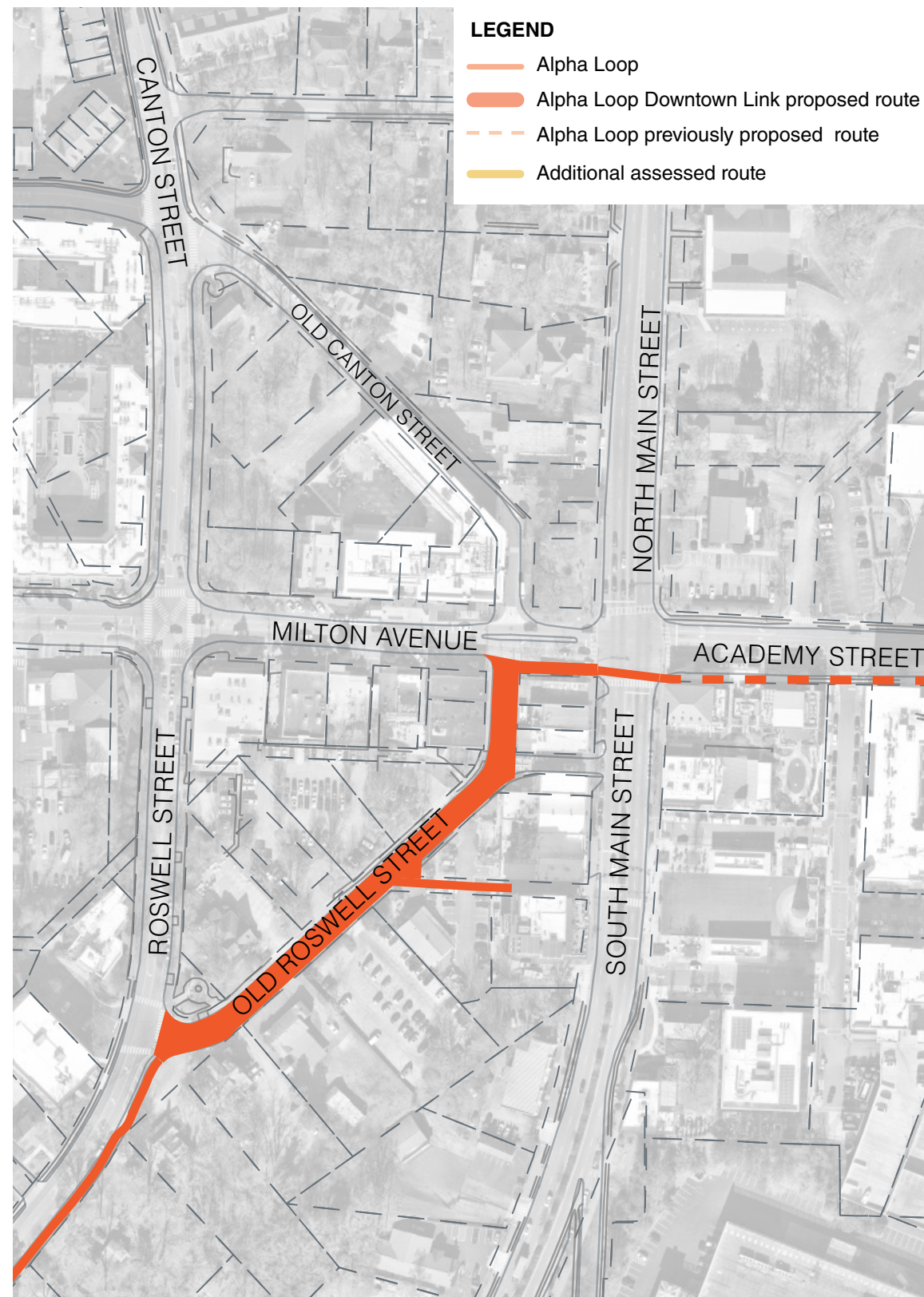
Eliminate the planned trail crossing at Jon Scott and Devore Road and align the trail on the north side of Devore, replacing the QuikTrip deceleration lane. Enhance all four crosswalks to better denote the trail’s presence to vehicular traffic at a key intersection of the Downtown Link and Outer Loop.

KINGRY LANE

Develop two feasible alternatives for connecting the existing trail spur south of Old Milton Parkway with Alpha Loop’s first phase constructed north of Thompson Street.



OLD ROSWELL STREET SHARED STREET OPTION

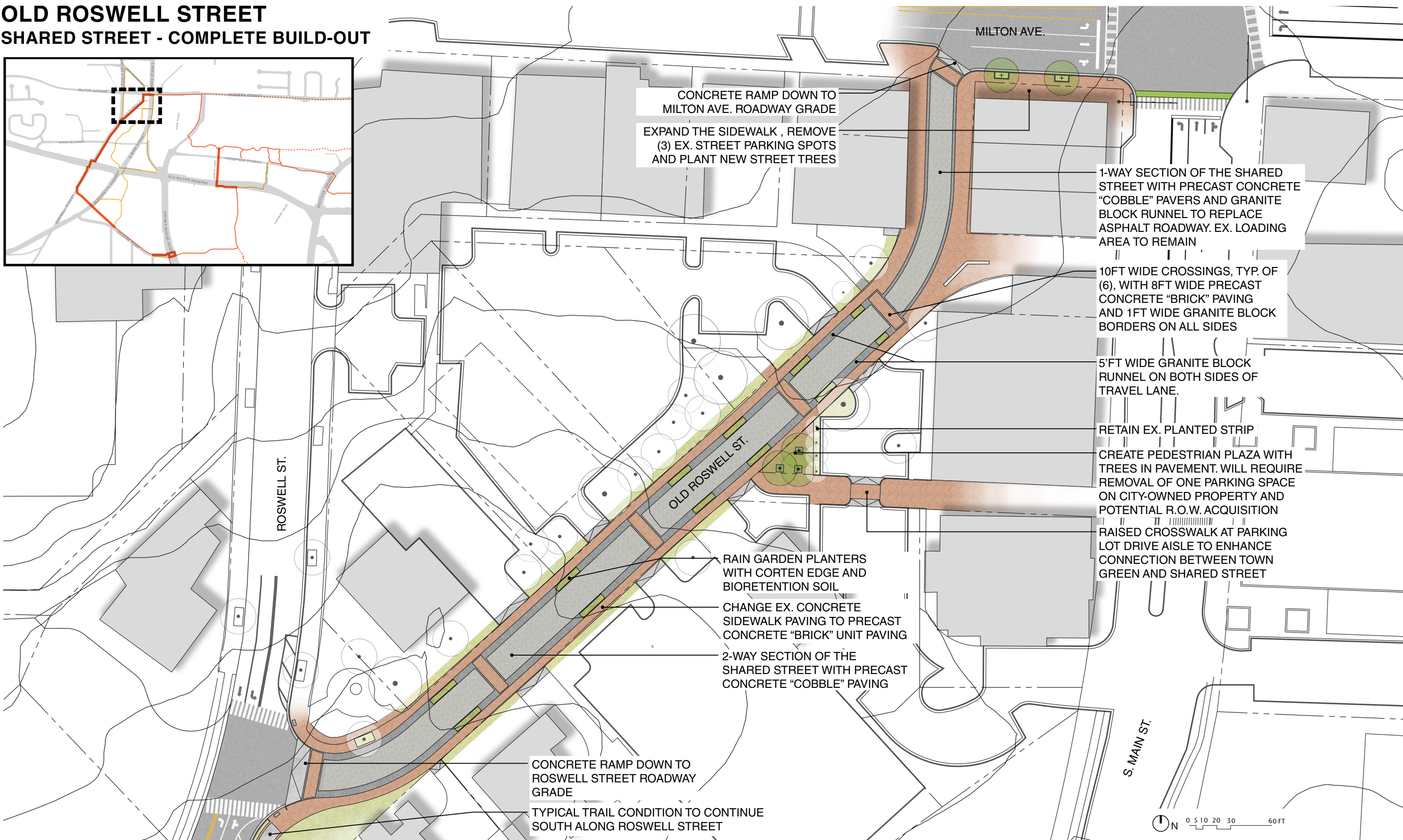
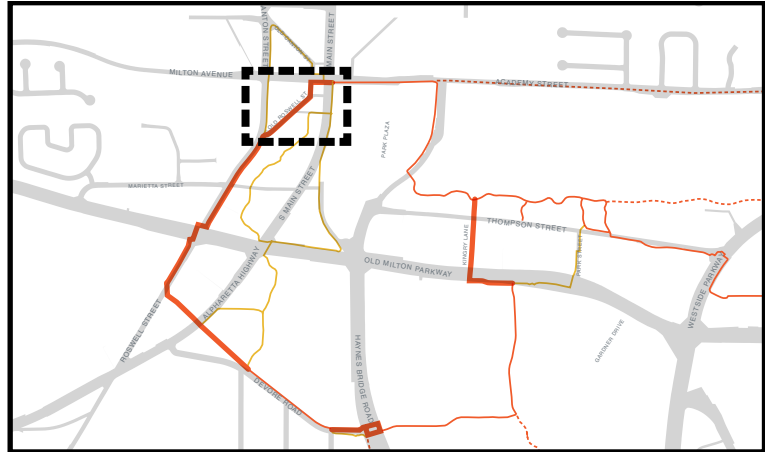


OLD ROSWELL STREET KEY CONSIDERATIONS

- Evaluate the potential for converting Old Roswell Street to a pedestrianized or shared street where pedestrian, bicycle, and vehicular traffic can coalesce in a single, curbless, urban plaza space. Note: this was shown in previous Downtown Alpharetta study.
- Synthesize current and proposed development plans including the redevelopment of Milton Avenue into a pedestrian plaza and potential additional development.
- Connect 3 existing pocket parks and potential City-owned event open space at the corner of Roswell and Milton, and extend the axis from City Hall into the new shared street.
- Synthesize Alpha Loop design standards and visual character with that of Downtown to ensure that the Alpha Loop is legible without compromising the sense of place characteristic of Downtown.
- Explore alternative options (i.e. “Partial Build-out) for aligning the Alpha Loop along Old Roswell Street, including pedestrian safety enhancements in lieu of a full shared street build-out.



OLD ROSWELL STREET
SHARED STREET - COMPLETE BUILD-OUT



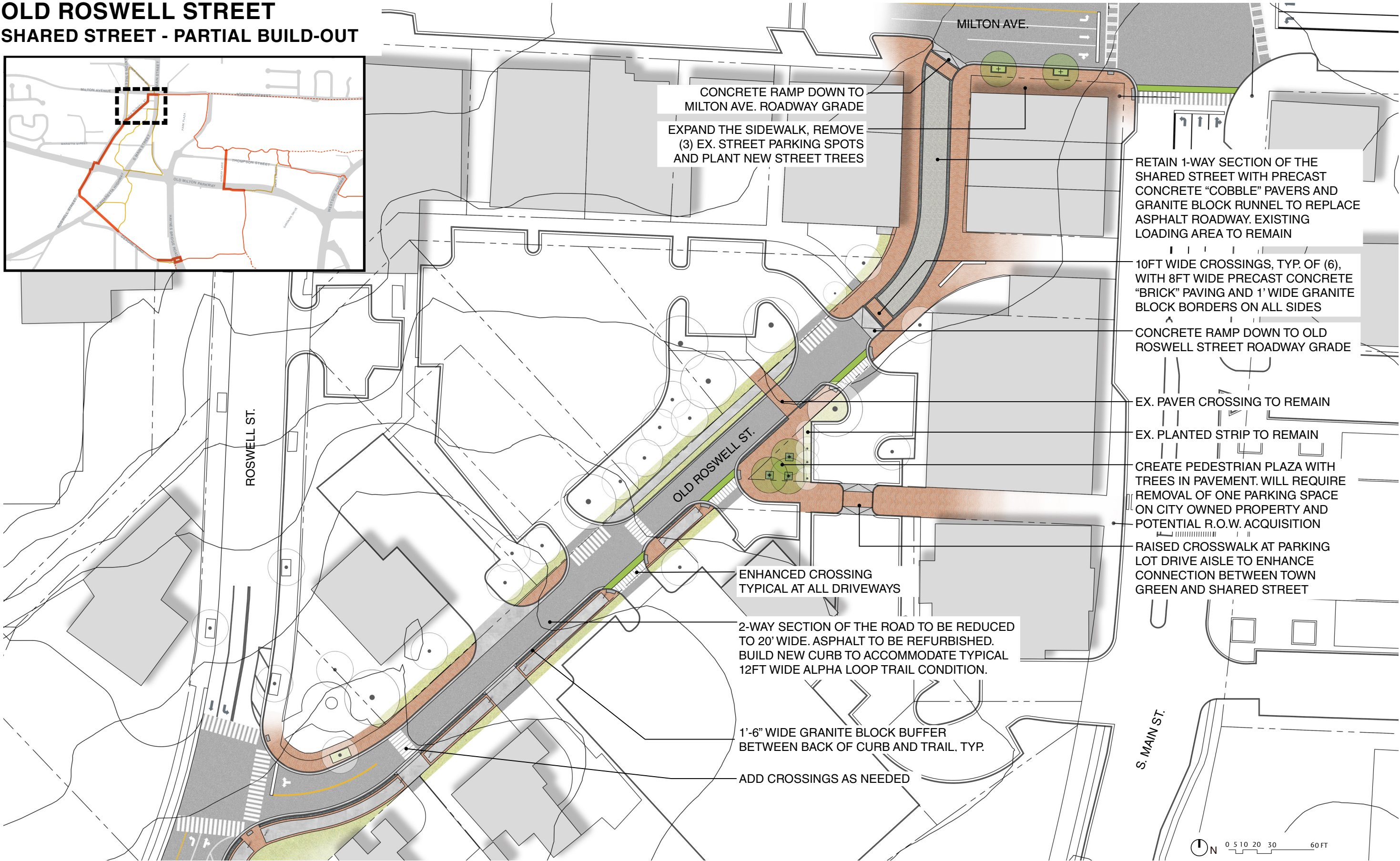
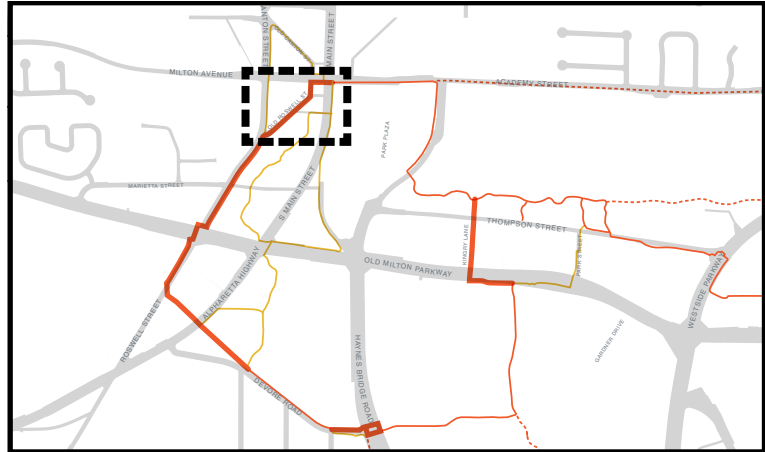
OLD ROSWELL STREET
SHARED STREET - COMPLETE BUILD-OUT



OLD ROSWELL STREET
SHARED STREET - COMPLETE BUILD-OUT



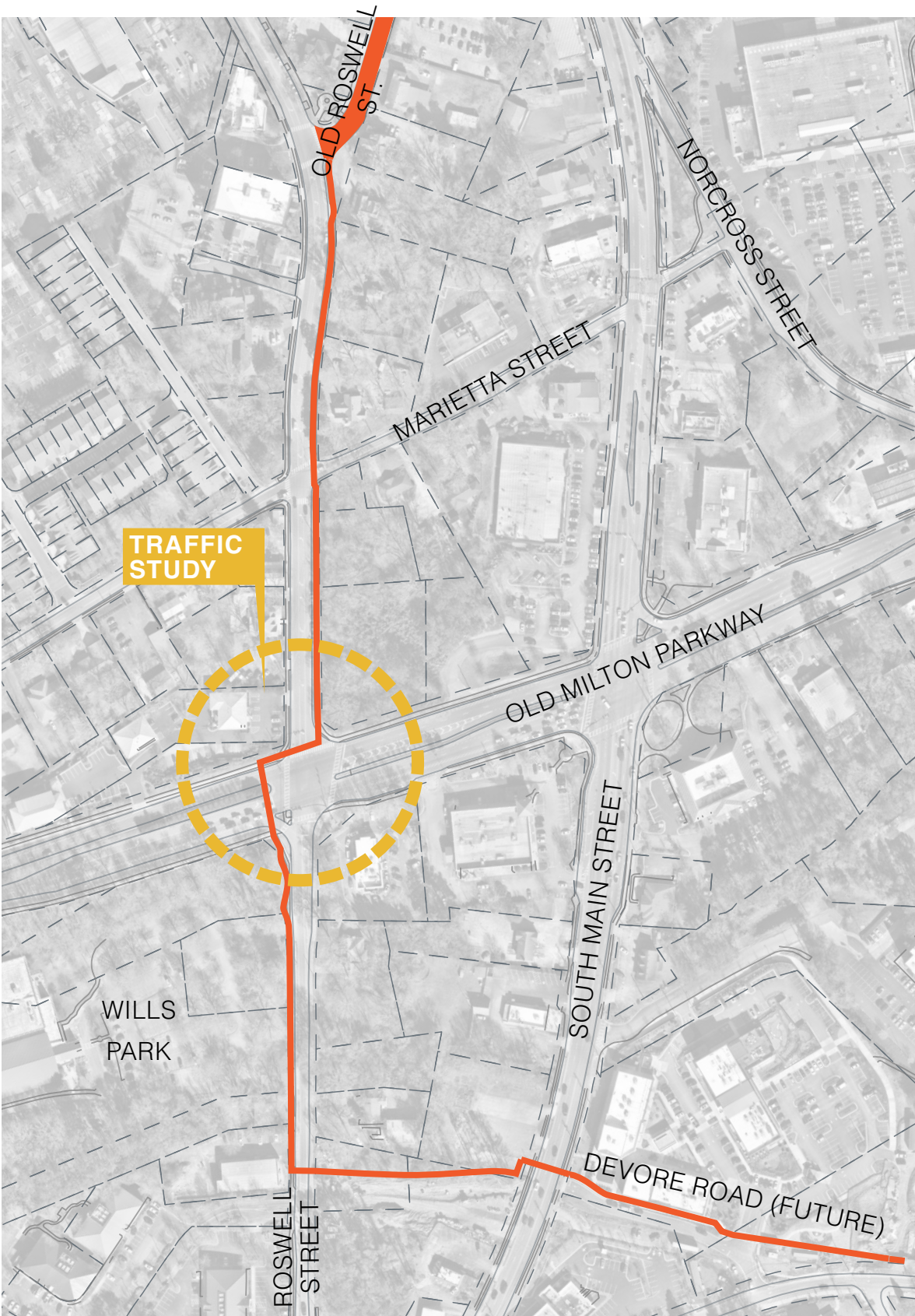
OLD ROSWELL STREET
SHARED STREET - PARTIAL BUILD-OUT



OLD ROSWELL STREET
SHARED STREET - PARTIAL BUILD-OUT



ROSWELL STREET AND OLD MILTON PARKWAY INTERSECTION ENHANCEMENT



KEY CONSIDERATIONS

- East alignment along Roswell Street between Old Roswell Street and Old Milton Parkway; West alignment along Roswell Street between Old Milton Parkway and Devore Road (future)
- Coordinate trail alignment with proposed improvements to Wills Park, including the Wills Park Gateway concept from the park Master Plan.
- Evaluate the optimal crosswalk movement based on pedestrian traffic analysis, connections to open space assets, and availability of public right-of-way.
- Provide pedestrian safety improvements including enhanced crosswalks, enlarged pedestrian plazas, and pedestrian refuges across Old Milton Parkway.
- Analyze the viability of removing the dedicated right turn lane on the eastbound Old Milton Parkway to southbound Roswell Street.

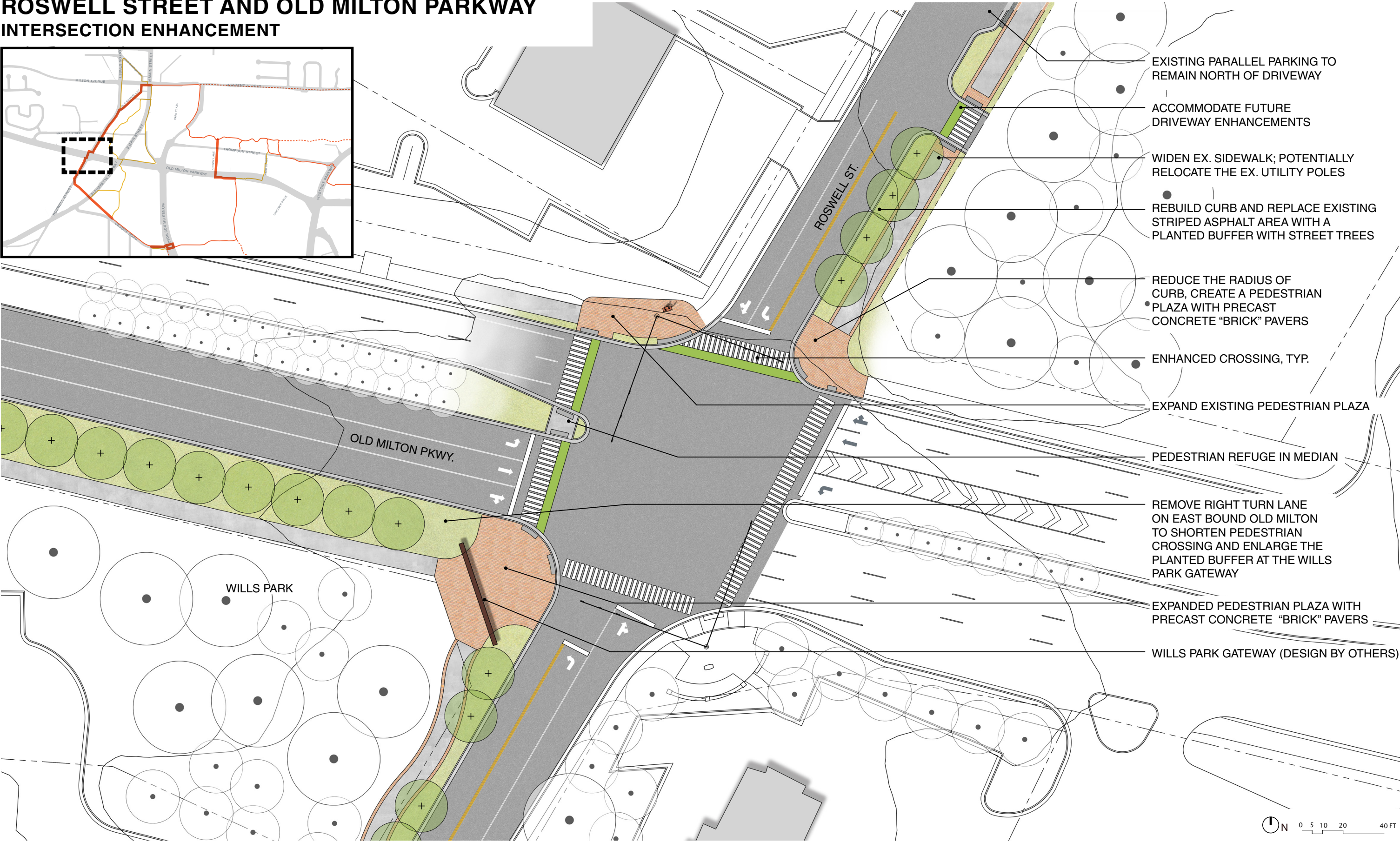
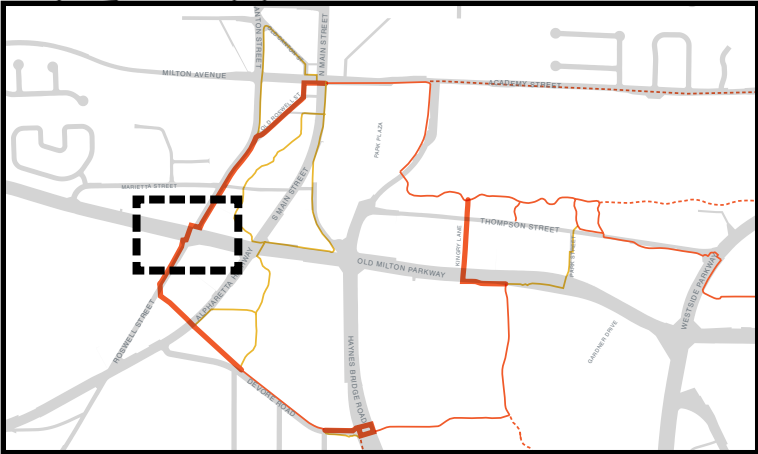
Traffic Study Findings

- Significant pedestrian and bike movement through this intersection, particularly in PM Peak
- “All red” at traffic signal would impact vehicular level of service, particularly in PM Peak
- Additional study: Assess a no-right-on-red for southbound turns from eastbound Old Milton Parkway
- Eliminating the eastbound right-turn-only lane from Old Milton Parkway to southbound Roswell Street will not have adverse impact on traffic.

**Complete Traffic Study has been attached as an appendix to this report.*



ROSWELL STREET AND OLD MILTON PARKWAY INTERSECTION ENHANCEMENT



EXISTING PARALLEL PARKING TO
REMAIN NORTH OF DRIVEWAY

ACCOMMODATE FUTURE
DRIVEWAY ENHANCEMENTS

WIDEN EX. SIDEWALK; POTENTIALLY
RELOCATE THE EX. UTILITY POLES

REBUILD CURB AND REPLACE EXISTING
STRIPED ASPHALT AREA WITH A
PLANTED BUFFER WITH STREET TREES

REDUCE THE RADIUS OF
CURB, CREATE A PEDESTRIAN
PLAZA WITH PRECAST
CONCRETE "BRICK" PAVERS

ENHANCED CROSSING, TYP.

EXPAND EXISTING PEDESTRIAN PLAZA

PEDESTRIAN REFUGE IN MEDIAN

REMOVE RIGHT TURN LANE
ON EAST BOUND OLD MILTON
TO SHORTEN PEDESTRIAN
CROSSING AND ENLARGE THE
PLANTED BUFFER AT THE WILLS
PARK GATEWAY

EXPANDED PEDESTRIAN PLAZA WITH
PRECAST CONCRETE "BRICK" PAVERS

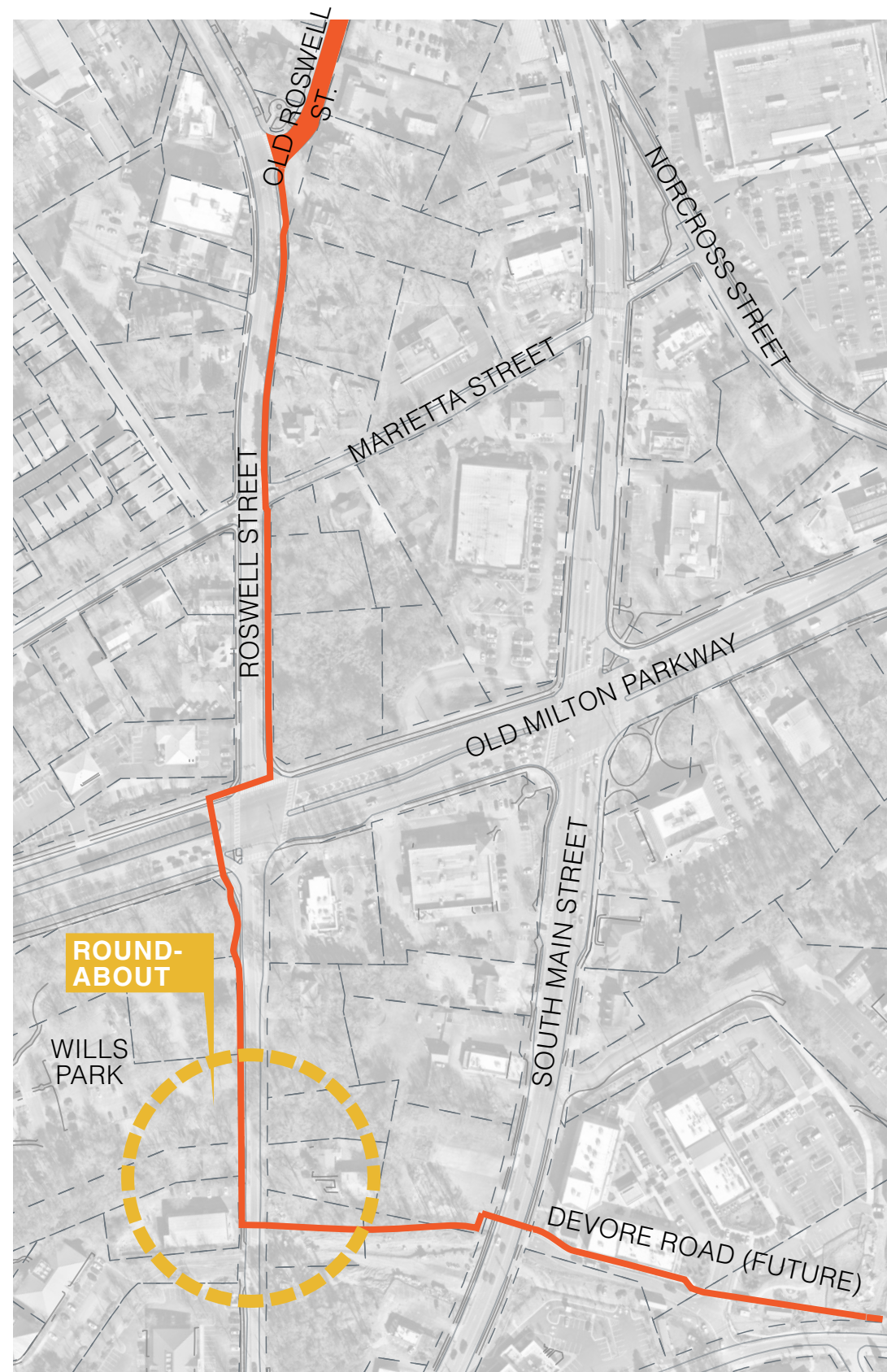
WILLS PARK GATEWAY (DESIGN BY OTHERS)



ROSWELL STREET AND OLD MILTON PARKWAY
INTERSECTION ENHANCEMENT

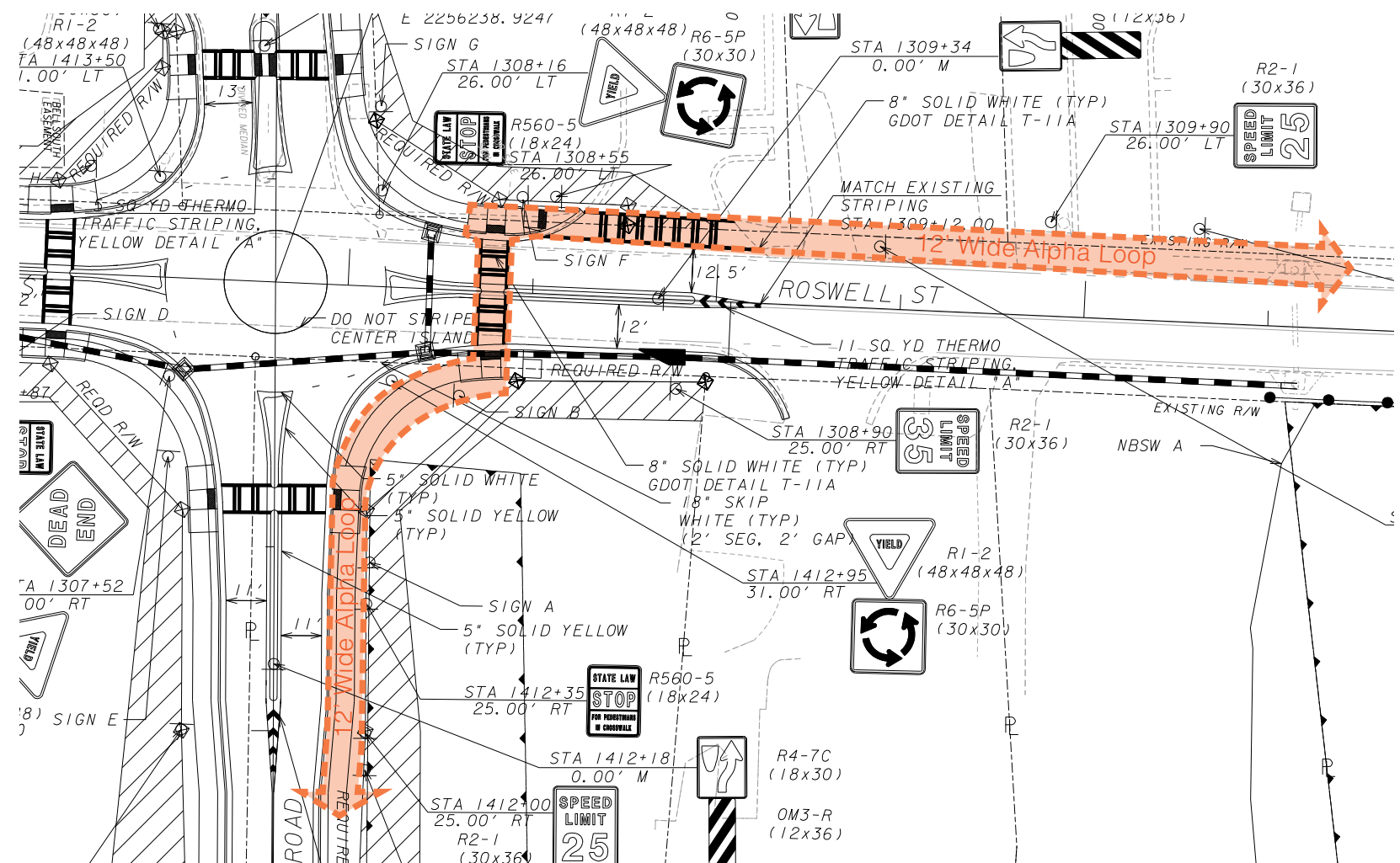


ROSWELL STREET AND DEVORE ROAD ROUNDBOUT MODIFICATIONS



KEY CONSIDERATIONS

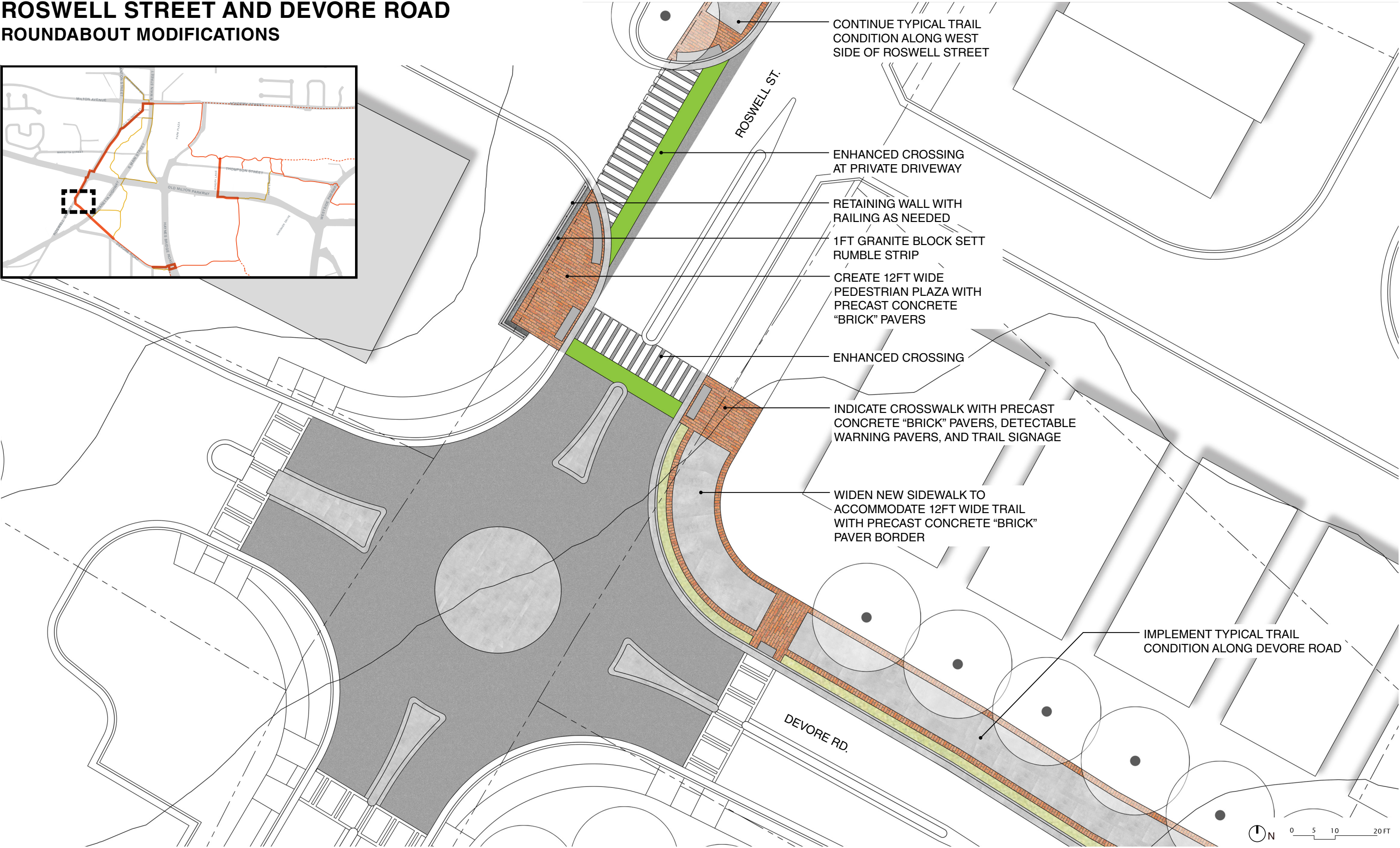
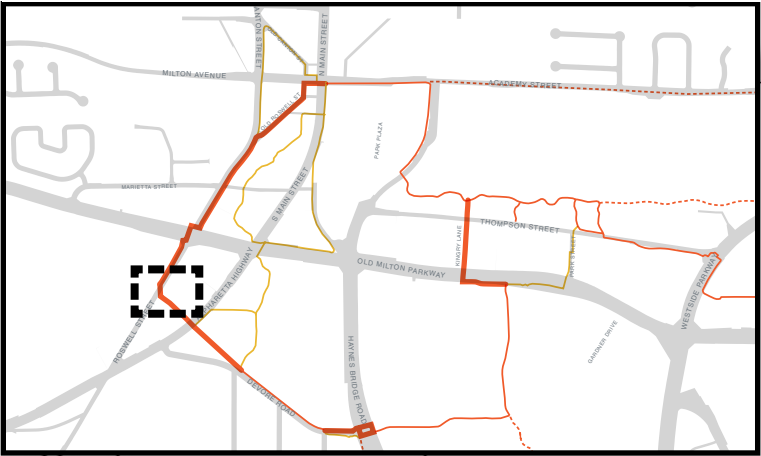
- Evaluate GDOT design (currently under construction) to determine safest route for crossing Roswell Street
- Propose expansion of trail to standard 12' width where possible (may require adjustments to mapped street)
- Introduce Downtown Link design standards and materiality.



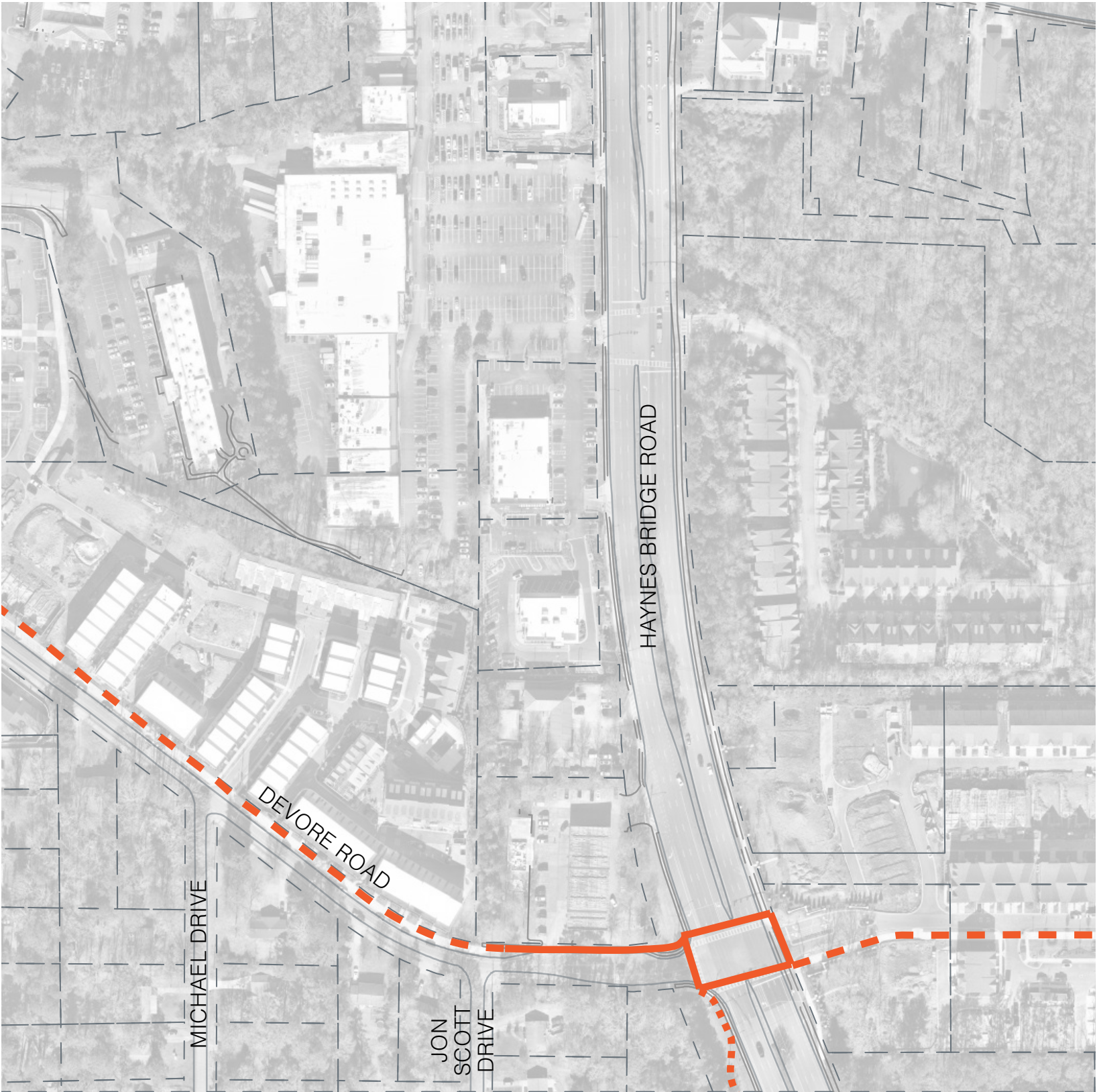
GDOT DESIGN PLAN



ROSWELL STREET AND DEVORE ROAD ROUNDBABOUT MODIFICATIONS



HAYNES BRIDGE ROAD AND DEVORE ROAD INTERSECTION ENHANCEMENT

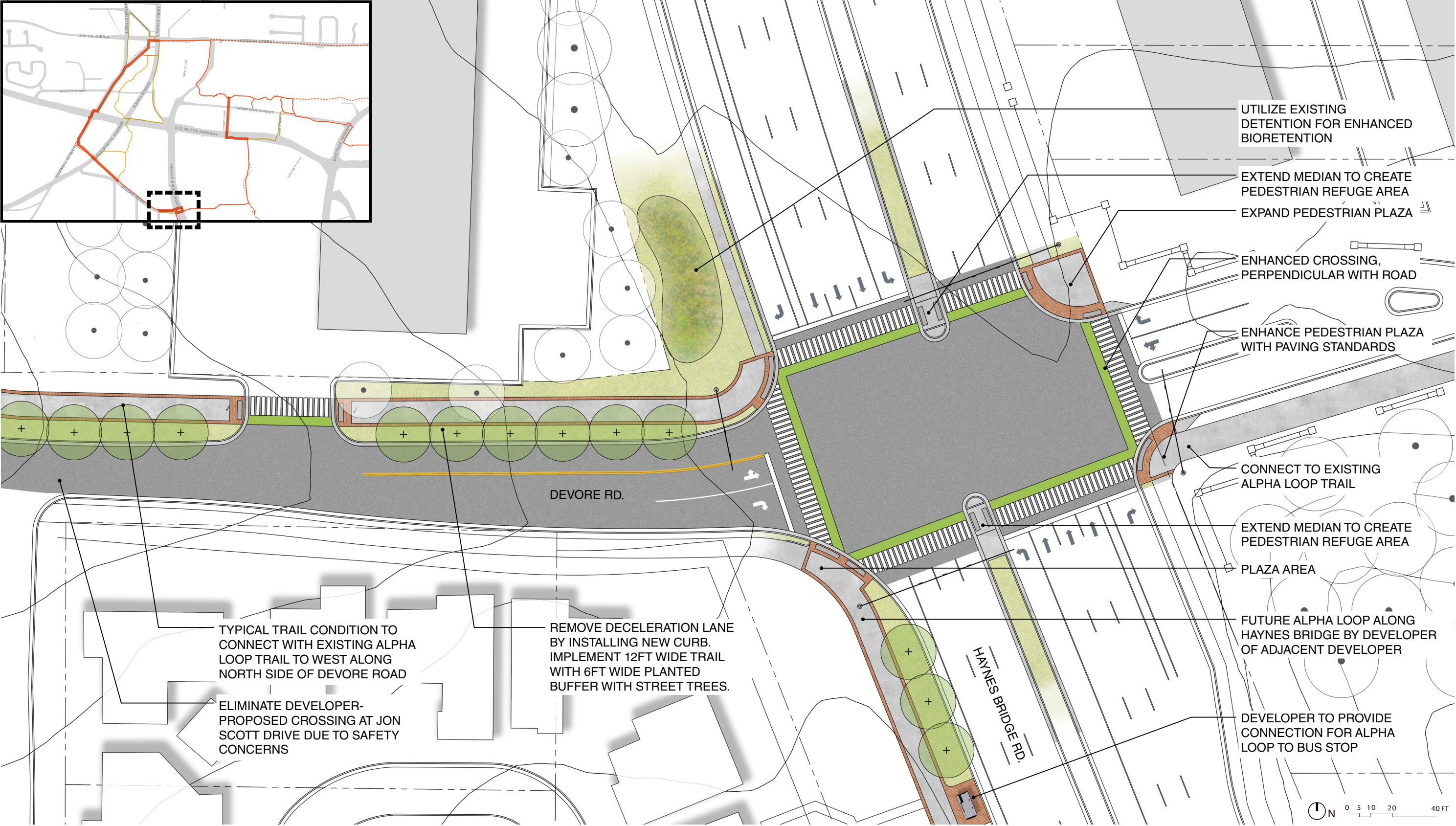


KEY CONSIDERATIONS

- Create a single, continuous and well-defined trail
- Utilize existing sidewalk along Devore Road as Alpha Loop Trail and explore how to instill the Alpha Loop experience.
- Explore modifications to the planned trail crossing at Jon Scott Drive and Devore Road, including locating the Alpha Loop within the gas station deceleration lane.
- Define trail crossing locations and types at intersection of Devore Road and Haynes Bridge Road, including the use of enhanced crosswalks to alert drivers of pedestrian and bicycle activity.



HAYNES BRIDGE ROAD AND DEVORE ROAD
INTERSECTION ENHANCEMENT



**HAYNES BRIDGE ROAD AND DEVORE ROAD
INTERSECTION ENHANCEMENT**



KINGRY LANE BETWEEN OLD MILTON AND THOMPSON

OPTIONS FOR TRAIL ALIGNMENT



KEY CONSIDERATIONS

Initial study:

- Evaluate potential crossings of Old Milton Parkway at Park Street and at Kingry Lane and assess connections to existing Alpha Loop north of Thompson along each street. Kingry Lane was identified as the preferred crossing location.
- Perform traffic studies to make data-driven decisions regarding pedestrian safety enhancements.
- Provide trail alignment alternatives along Kingry given the right-of-way constraints on the west and the post office on the east.
- Explore a reconfiguration of the property adjacent to the Post Office to facilitate an enhanced pedestrian realm.
- Determine the best connection from Kingry Lane to Alpha Loop Phase 1 north of Thompson Street.

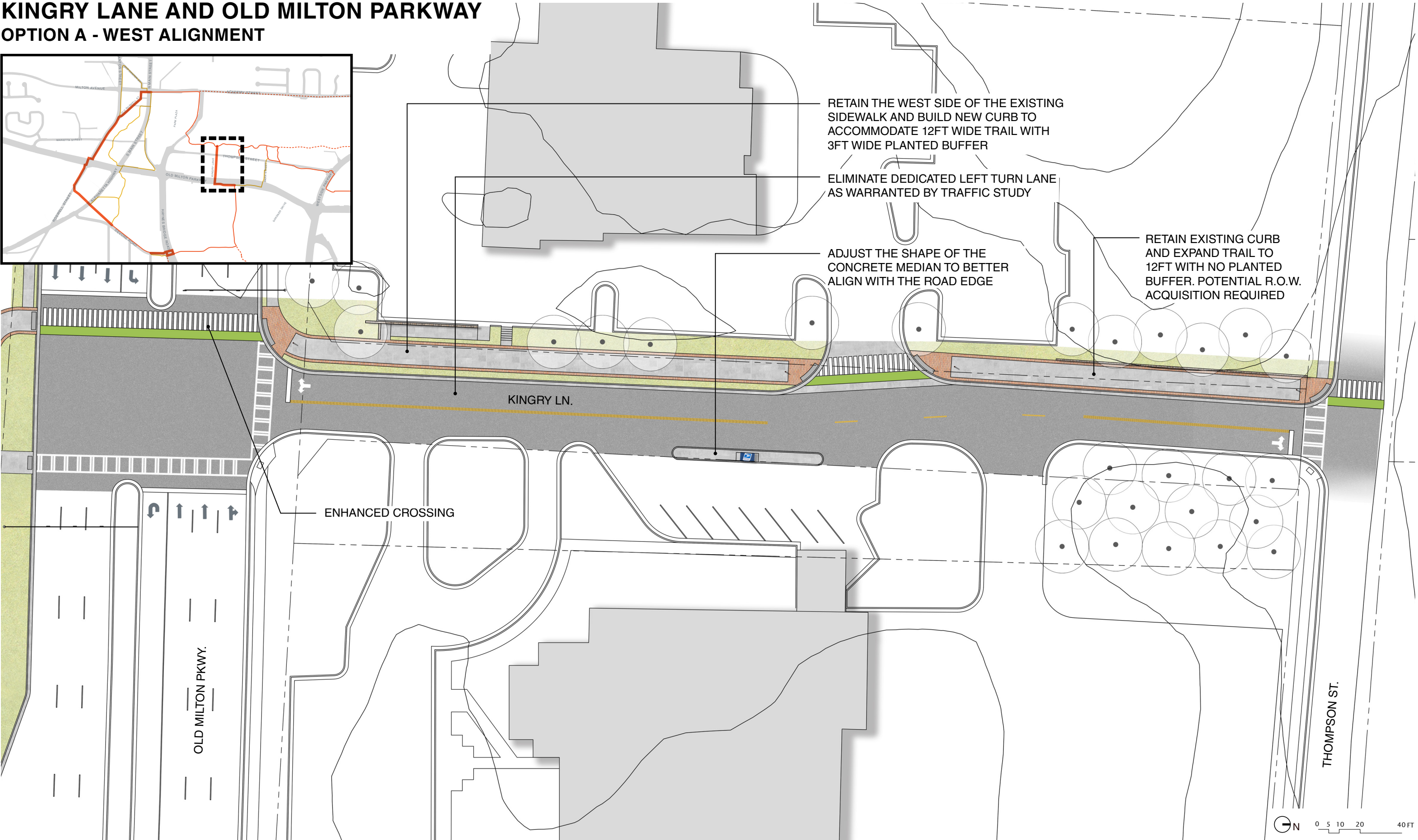
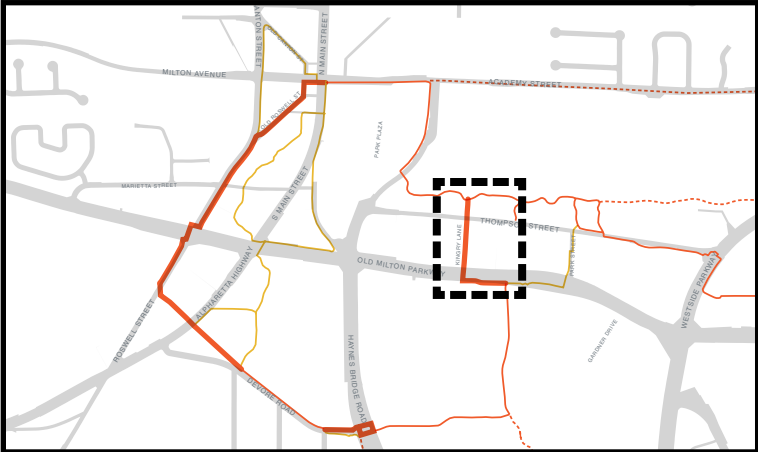
**Complete Traffic Study has been attached as an appendix to this report.*



KINGRY LANE BETWEEN OLD MILTON AND THOMPSON
OPTIONS FOR TRAIL ALIGNMENT



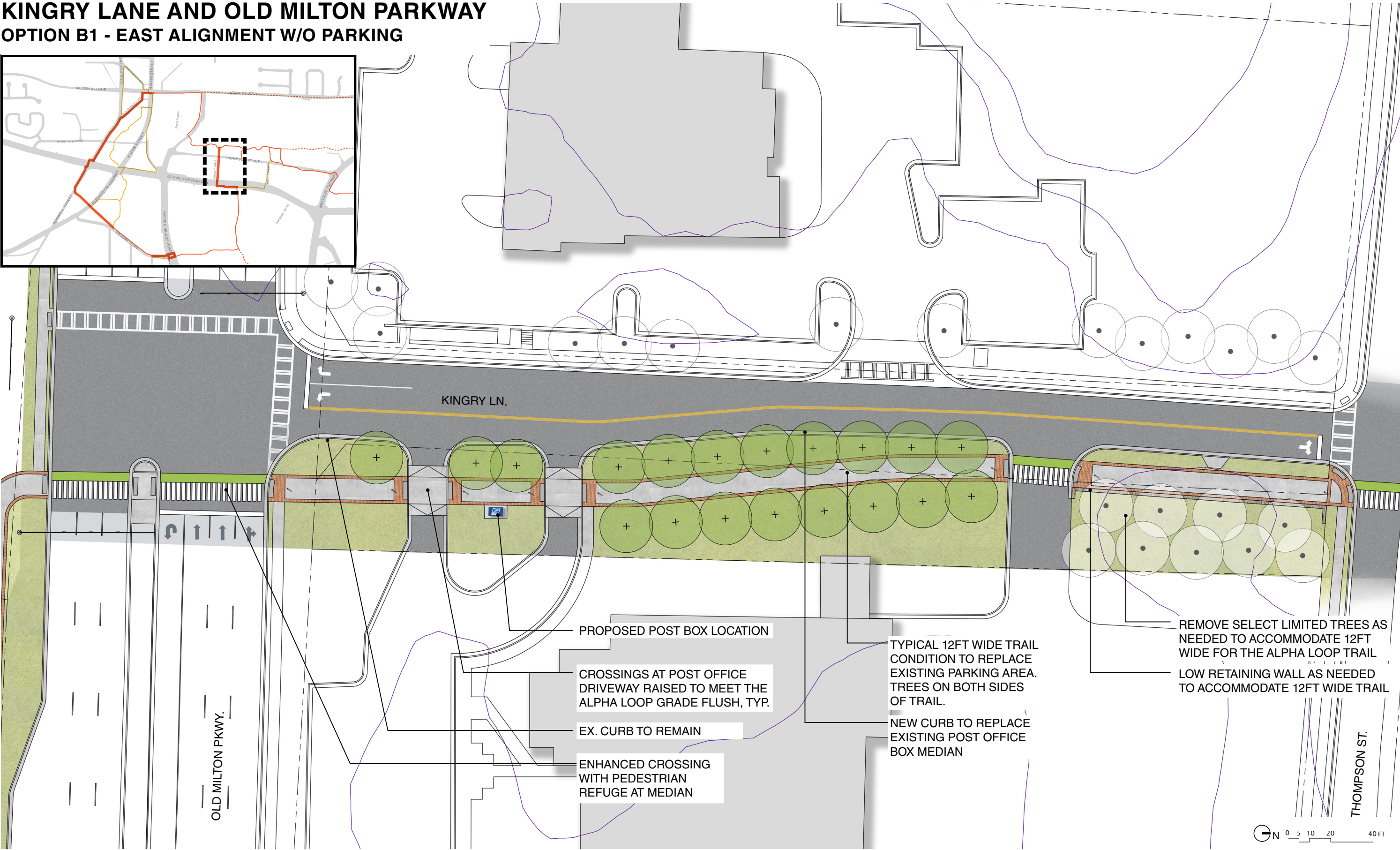
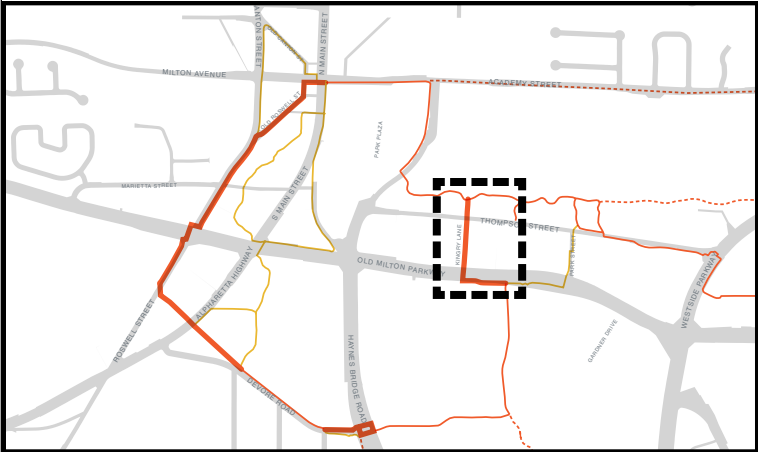
KINGRY LANE AND OLD MILTON PARKWAY
OPTION A - WEST ALIGNMENT



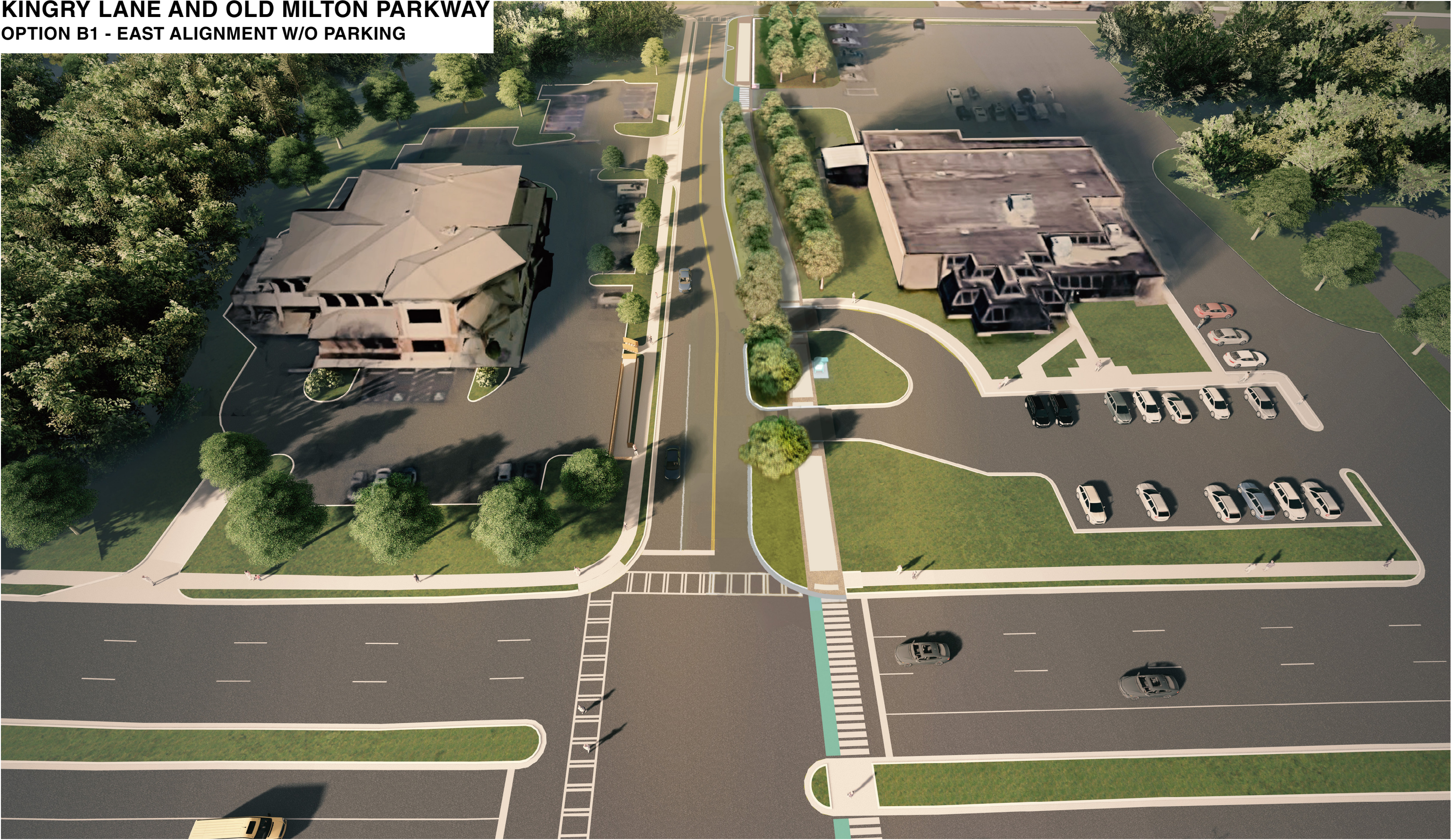
KINGRY LANE AND OLD MILTON PARKWAY
OPTION A - WEST ALIGNMENT



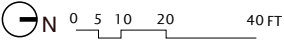
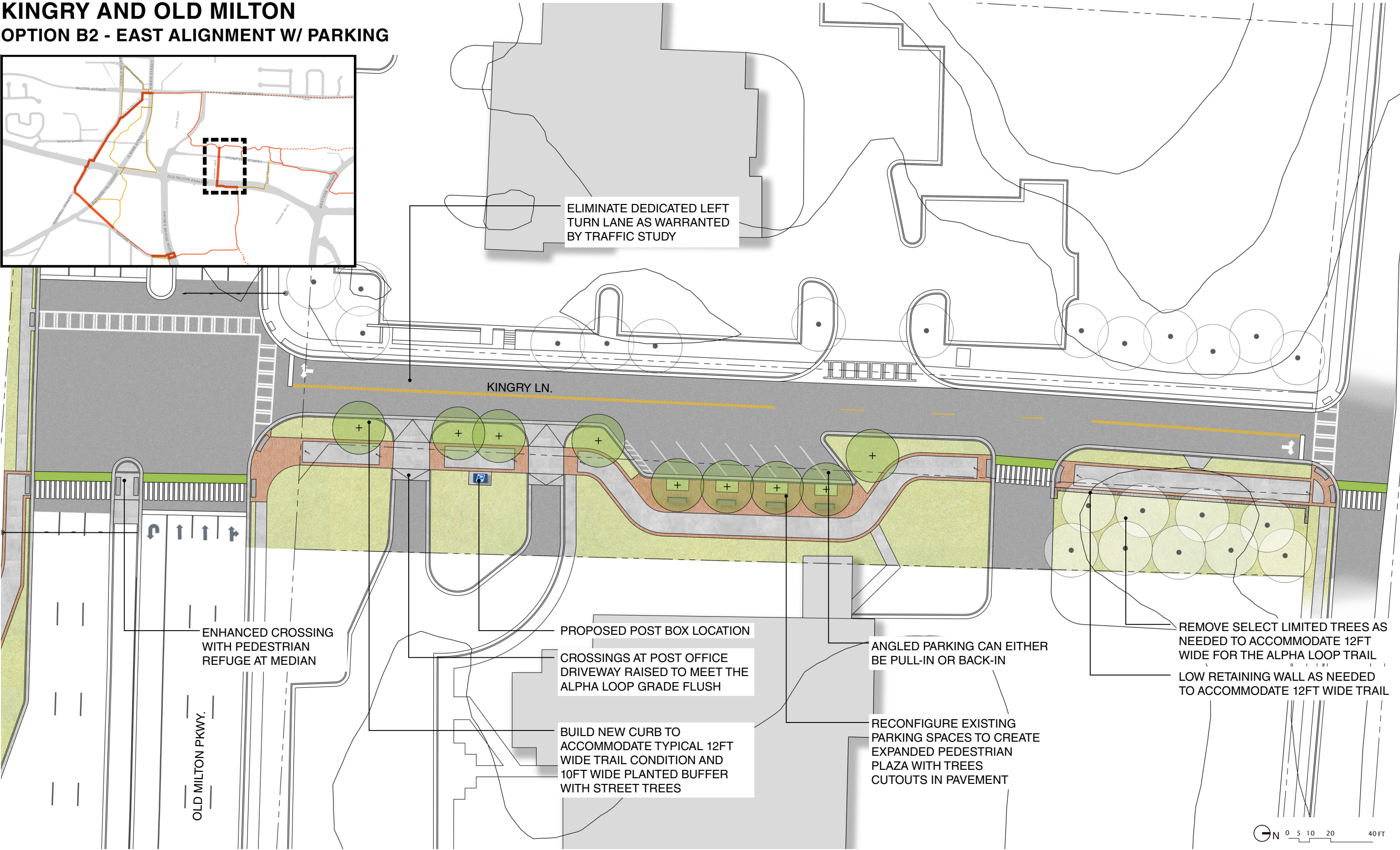
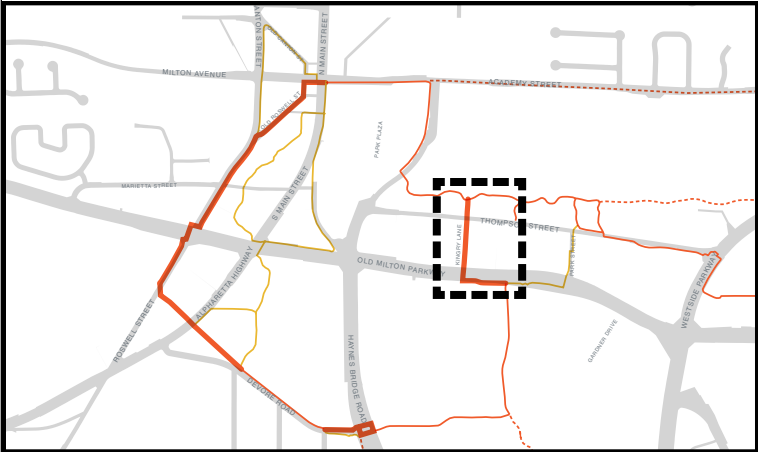
KINGRY LANE AND OLD MILTON PARKWAY
OPTION B1 - EAST ALIGNMENT W/O PARKING



KINGRY LANE AND OLD MILTON PARKWAY
OPTION B1 - EAST ALIGNMENT W/O PARKING



KINGRY AND OLD MILTON
OPTION B2 - EAST ALIGNMENT W/ PARKING



KINGRY AND OLD MILTON
OPTION B2 - EAST ALIGNMENT W/ PARKING



KINGRY AND OLD MILTON
OPTION B2 - EAST ALIGNMENT W/ PARKING

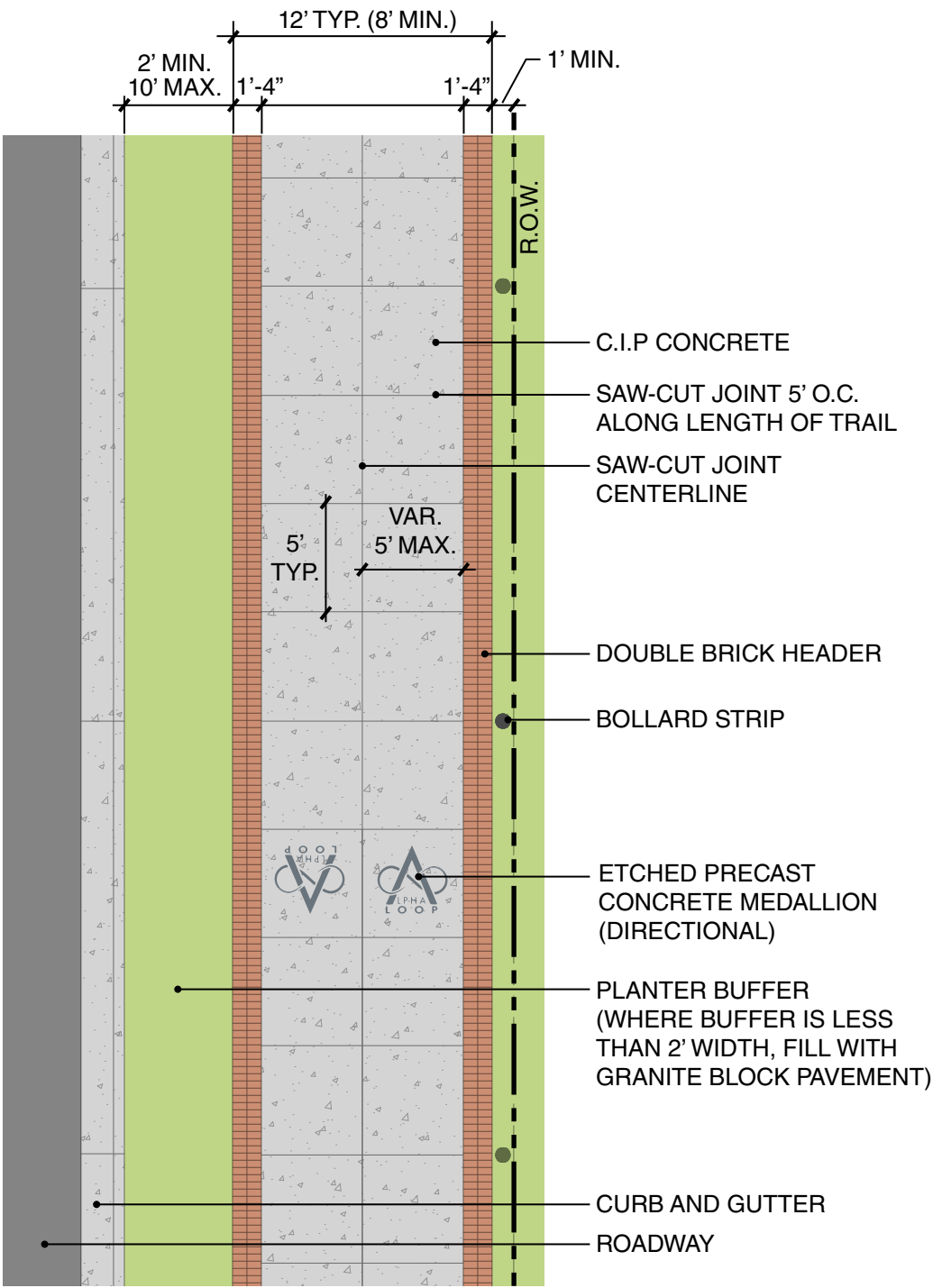


DESIGN STANDARDS ESTABLISHING A COHESIVE TRANSPORTATION NETWORK



DESIGN STANDARDS

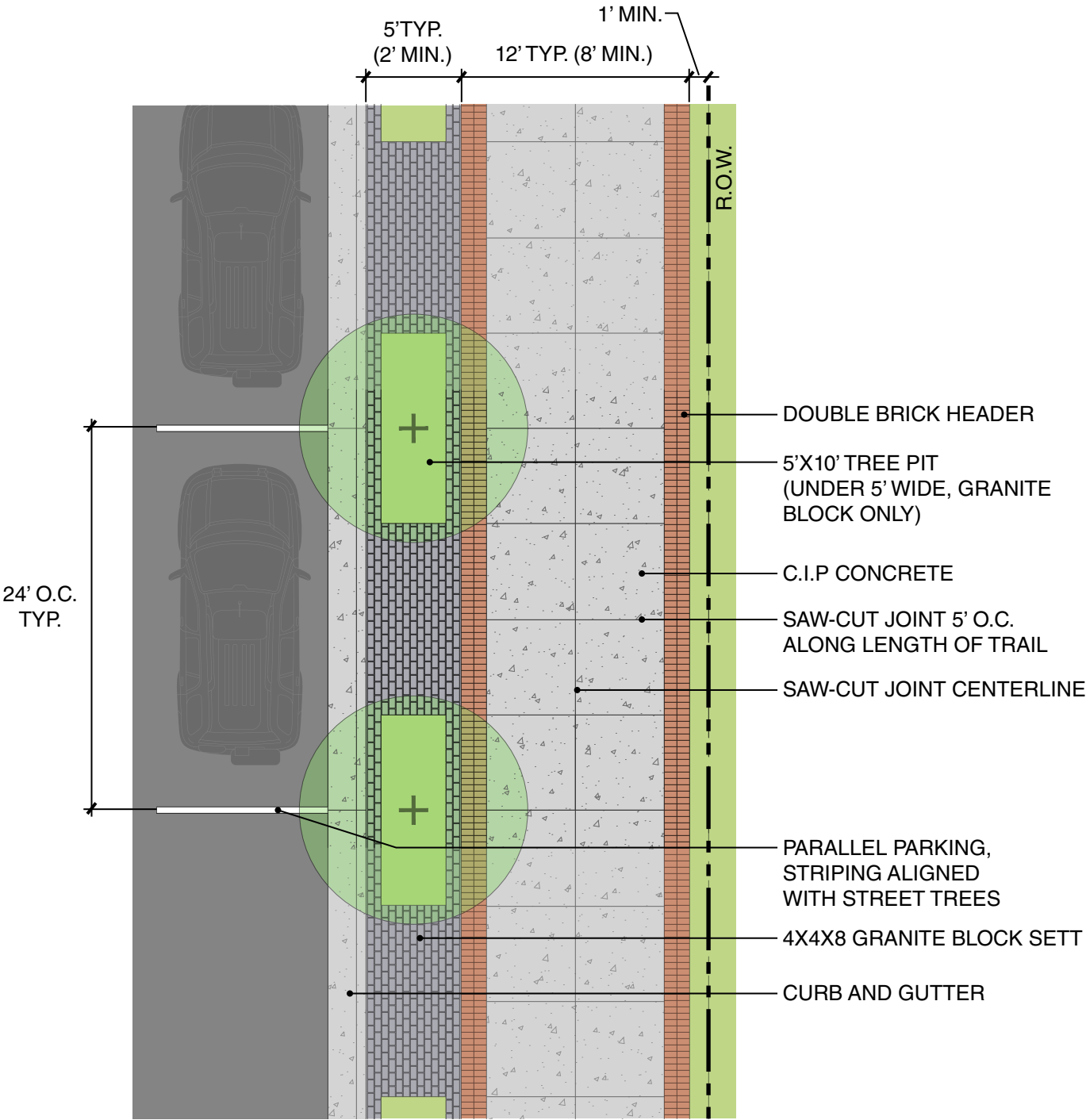
TYPICAL CONDITION



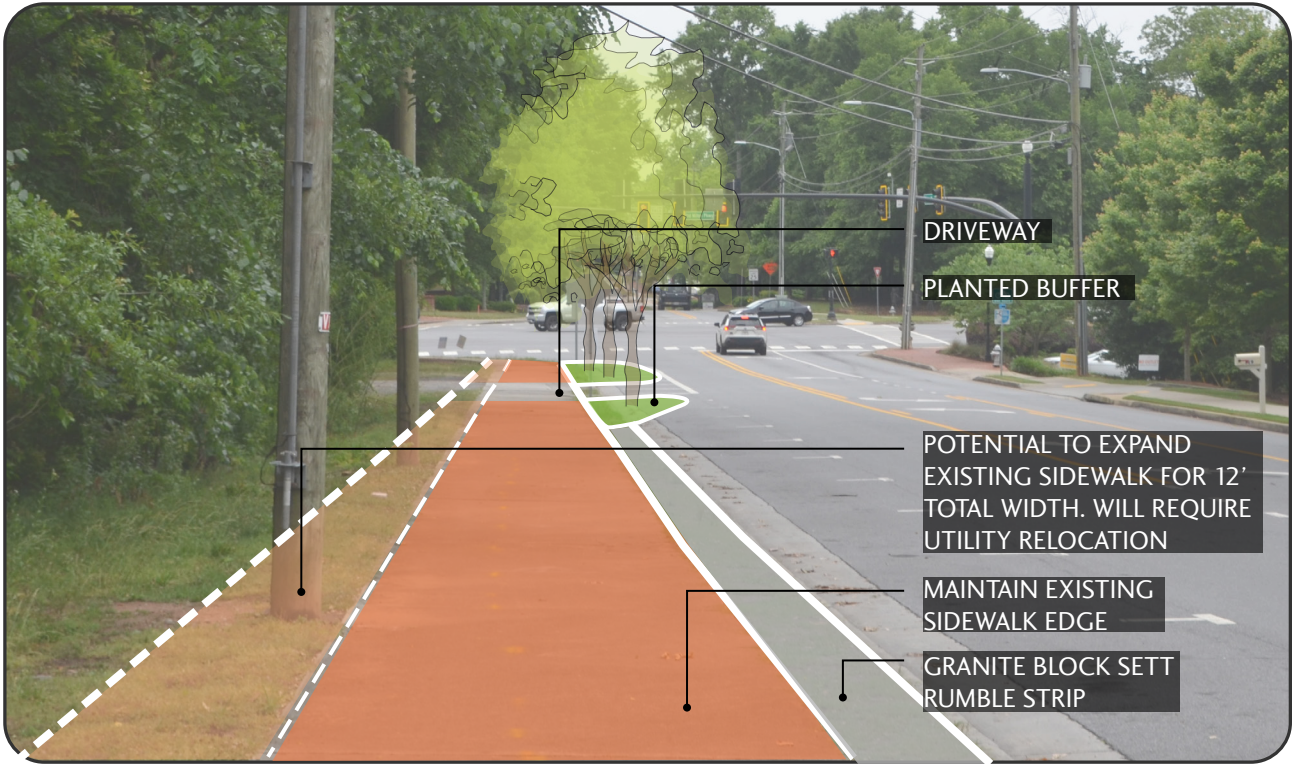
EXAMPLE OF STANDARD SHOWN AT ROSWELL STREET ALONG WILLS PARK



DESIGN STANDARDS
AT ON STREET PARKING / LANES



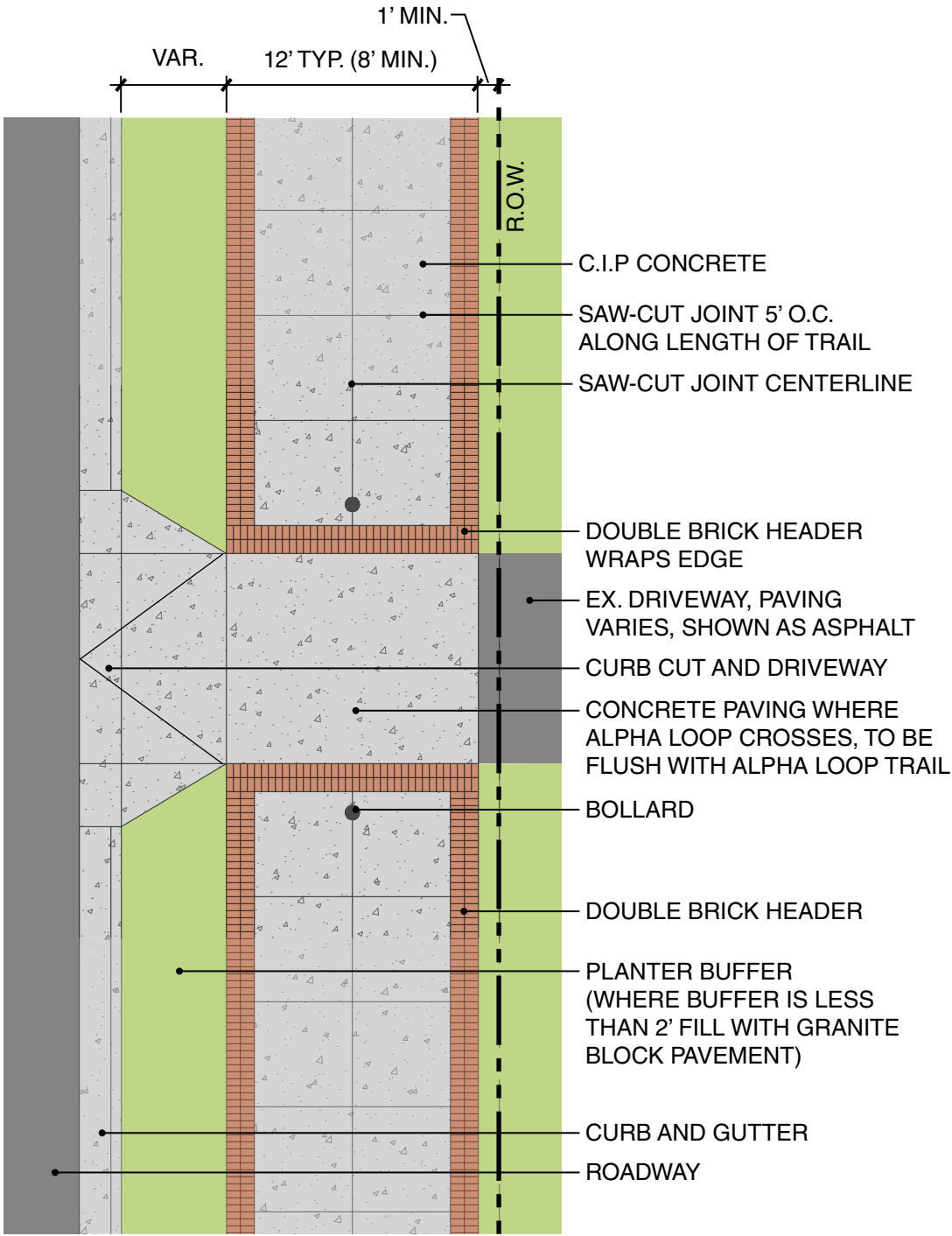
LOCATION WHERE THIS STANDARD CAN BE APPLIED



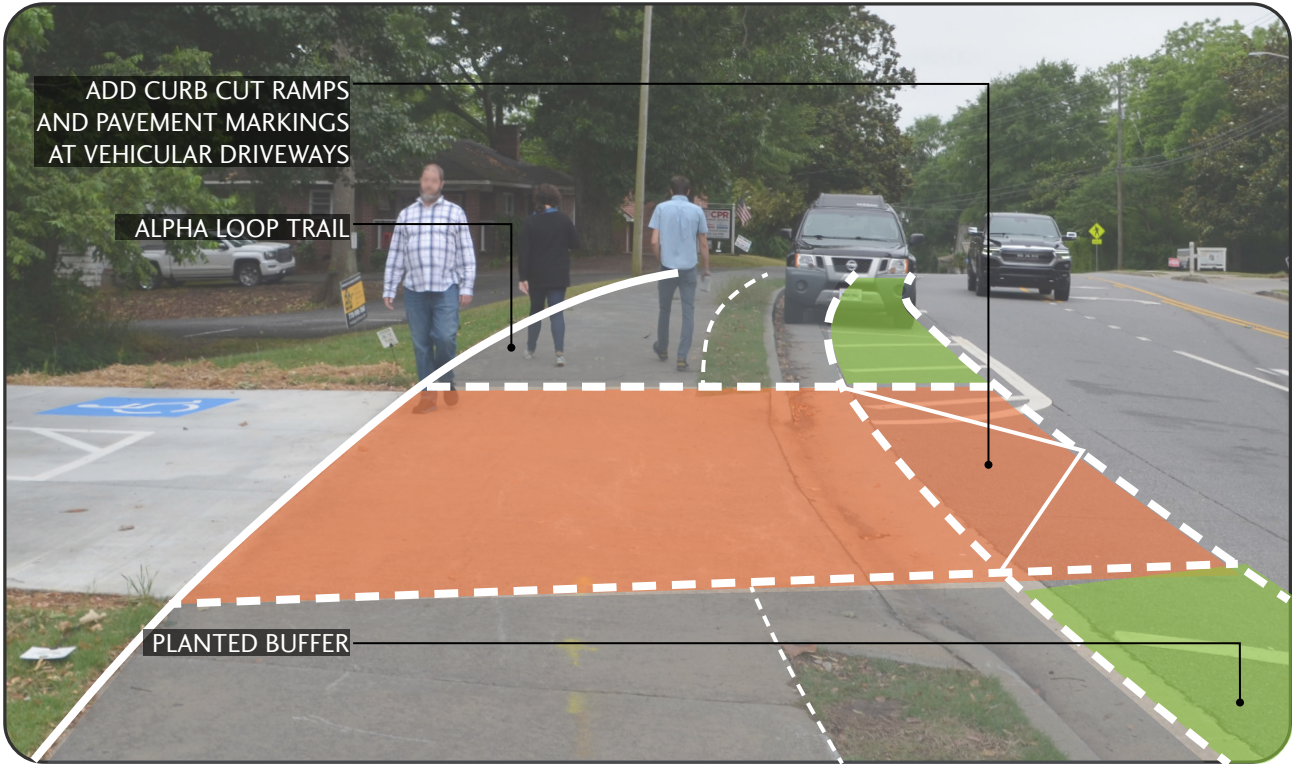
EXAMPLE OF STANDARD SHOWN AT ROSWELL STREET BETWEEN MARIETTA STREET AND OLD MILTON AVENUE



DESIGN STANDARDS AT PRIVATE DRIVEWAYS



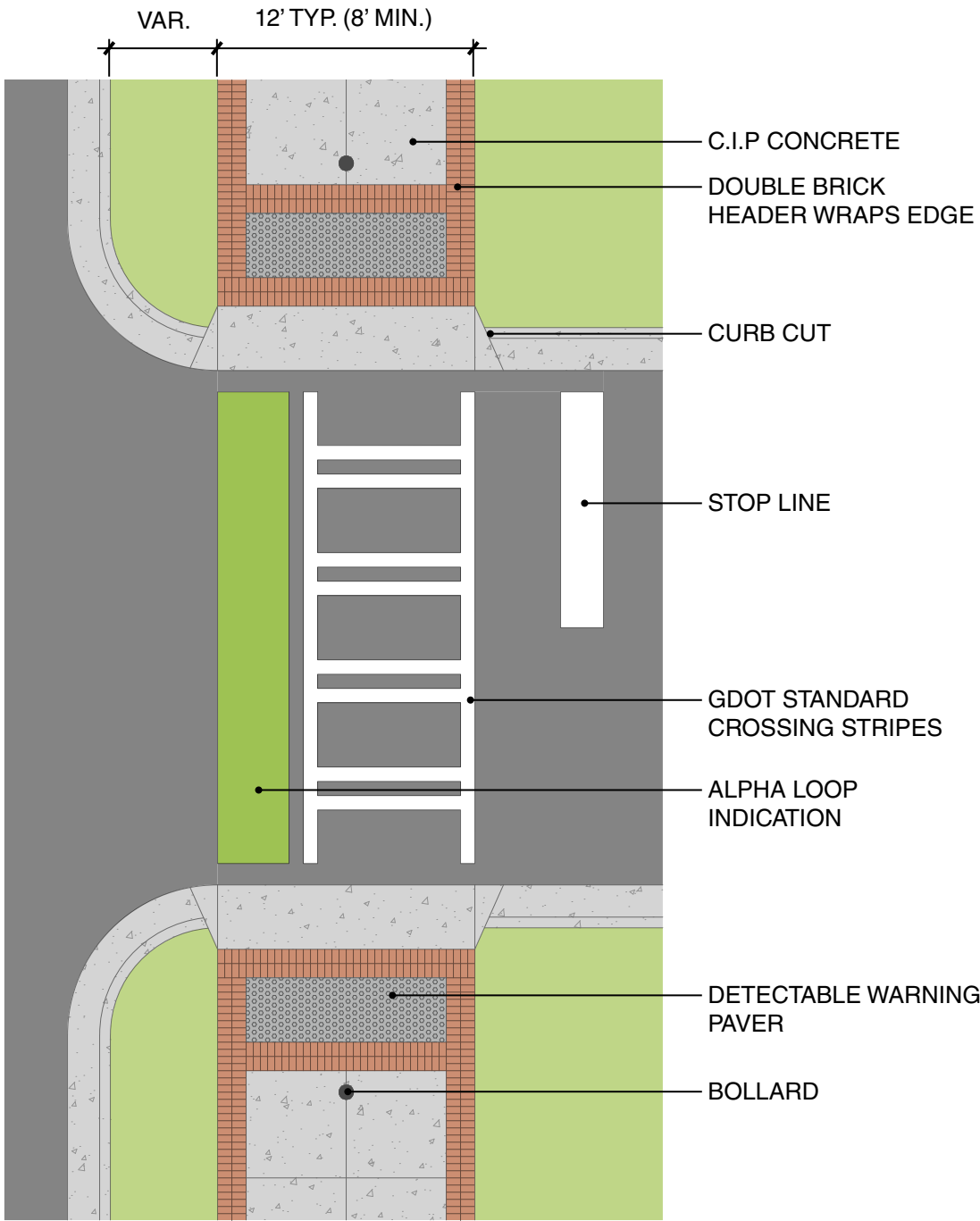
LOCATION WHERE THIS STANDARD CAN BE APPLIED



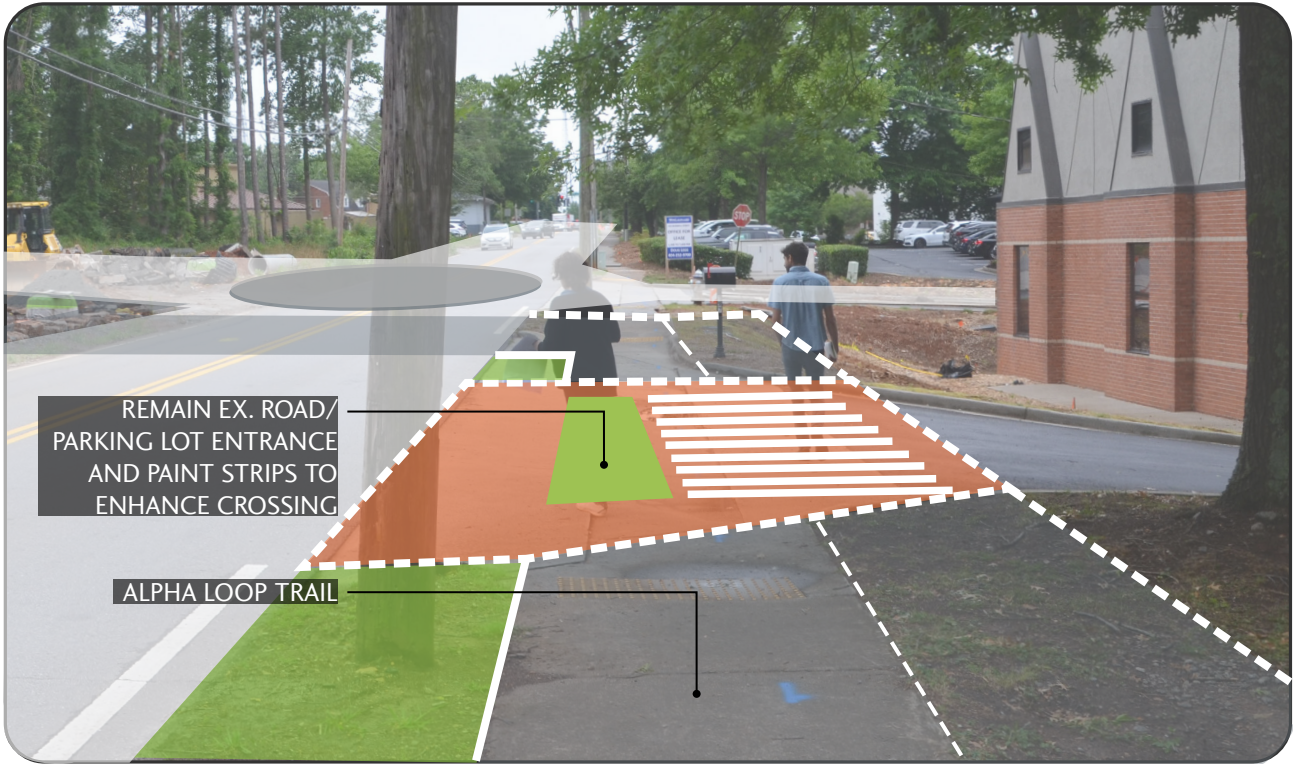
EXAMPLE OF STANDARD SHOWN AT ROSWELL STREET BETWEEN OLD ROSWELL STREET AND MARIETTA STREET



DESIGN STANDARDS
AT “T” INTERSECTIONS / PARKING LOT ENTRANCES



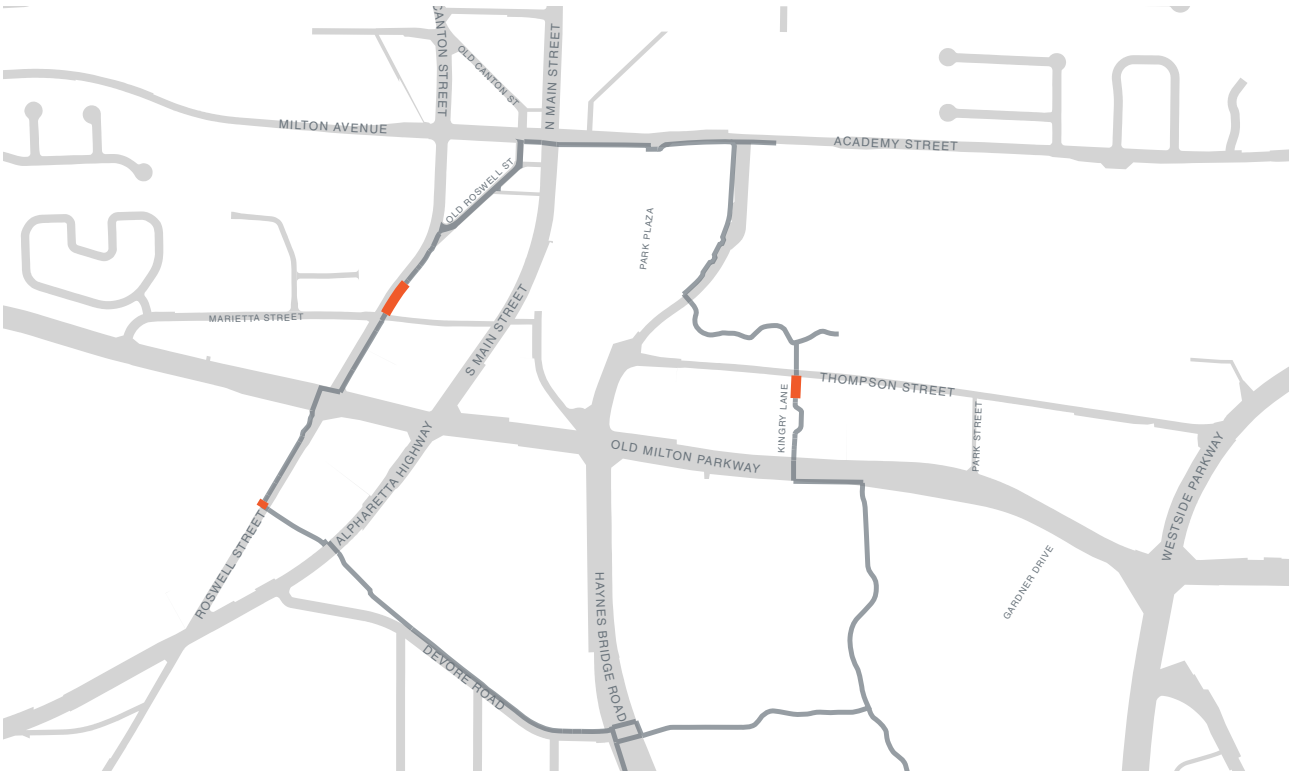
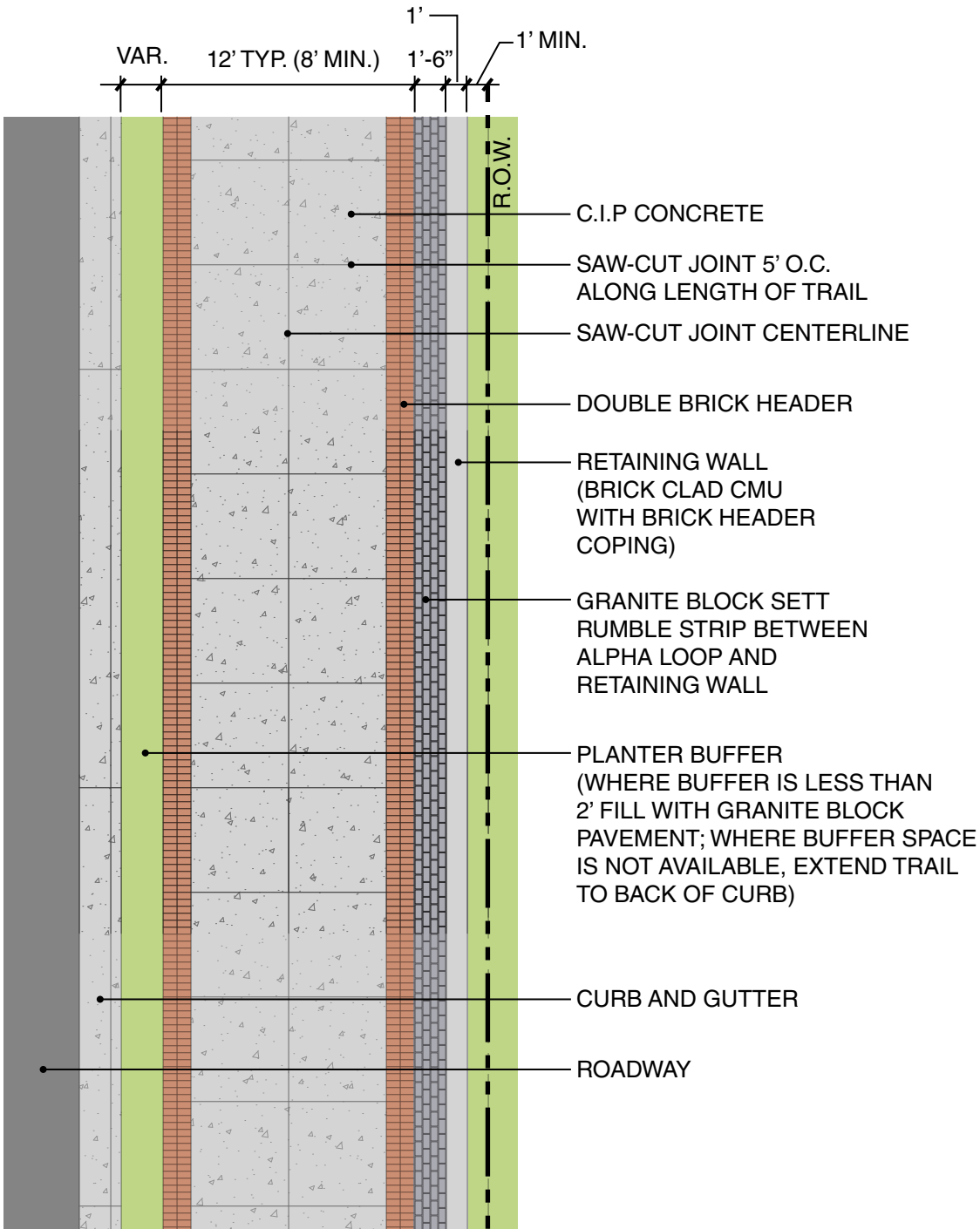
LOCATION WHERE THIS STANDARD CAN BE APPLIED



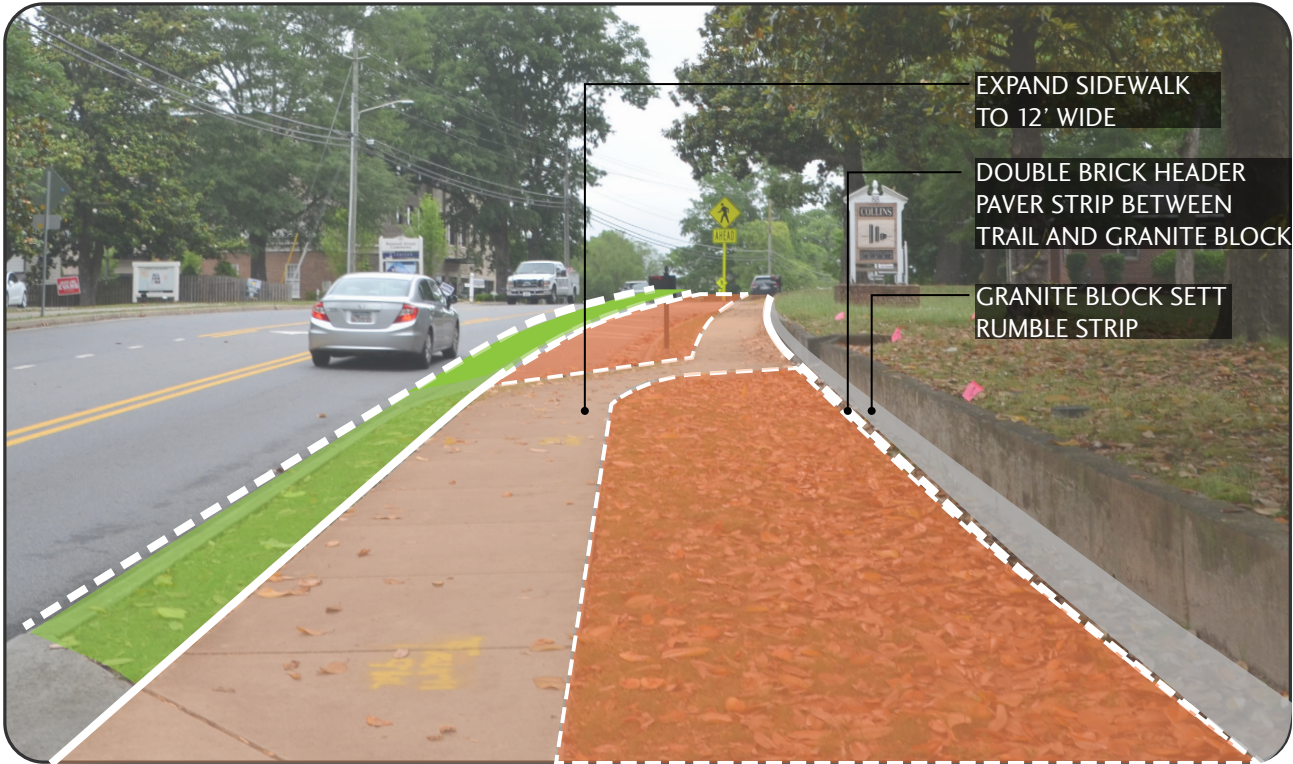
EXAMPLE OF STANDARD
SHOWN AT ROSWELL STREET NEAR PROPOSED ROUNDABOUT AT DEVORE ROAD EXTENSION



DESIGN STANDARD VIGNETTES AT RETAINING WALL



LOCATION WHERE THIS STANDARD CAN BE APPLIED

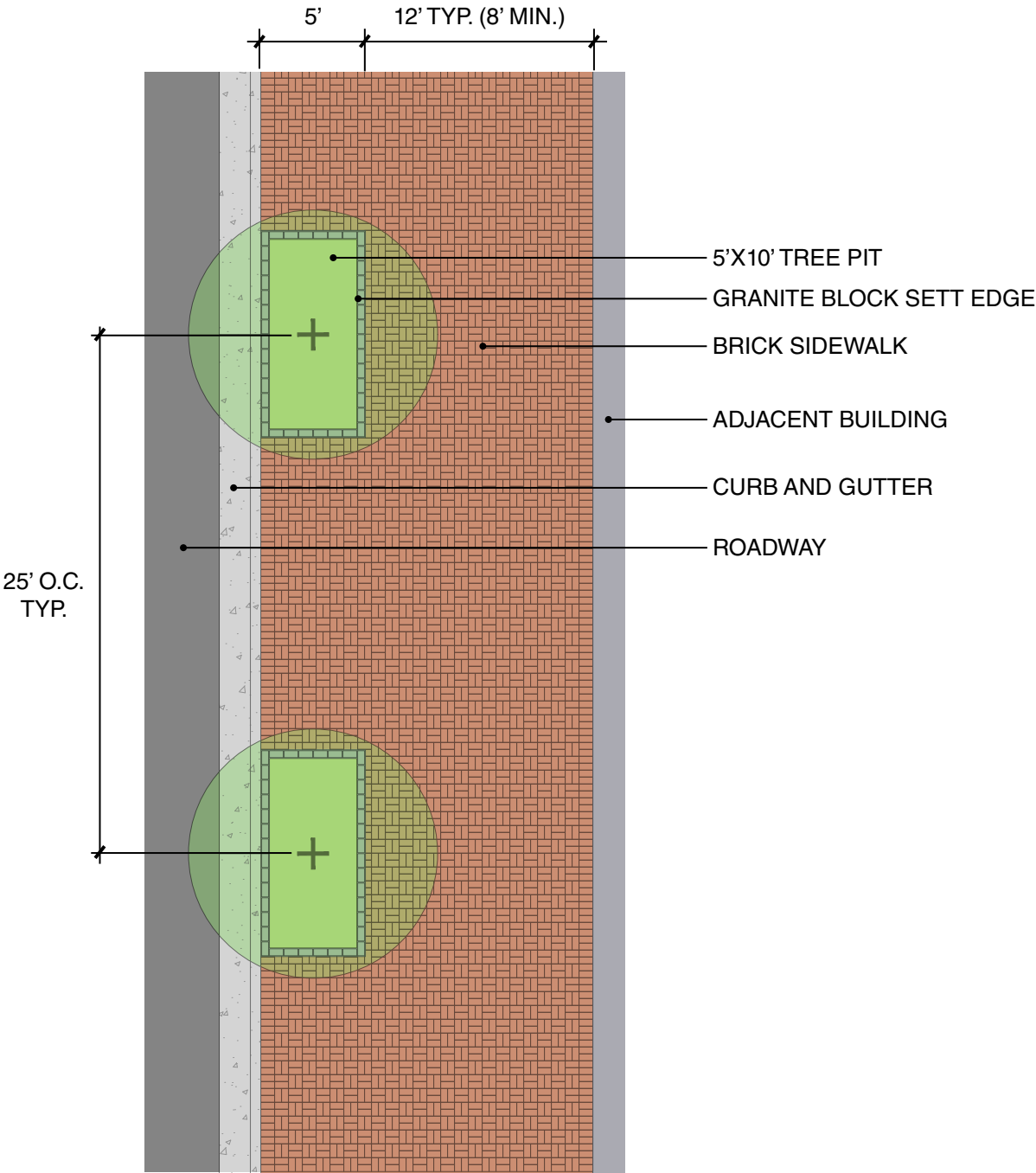


EXAMPLE OF STANDARD SHOWN AT ROSWELL STREET NORTH OF MARIETTA STREET



DESIGN STANDARD VIGNETTES

DOWNTOWN BRICK SIDEWALK RETROFIT



EXAMPLE OF STANDARD SHOWN AT MILTON AVENUE BETWEEN OLD ROSWELL STREET AND MAIN STREET



DESIGN STANDARDS

PAVING MATERIALS



CAST-IN-PLACE CONCRETE WITH SAW-CUT JOINTS

- Typical Alpha Loop Trail



PRECAST CONCRETE “BRICK” PAVERS

- Old Roswell Shared Street Pedestrian Area
- All Plaza Areas
- Milton Avenue Brick Sidewalk Retrofit



PRECAST CONCRETE “BRICK” DOUBLE HEADER

- Typ. Alpha Loop Trail Edge (Both Sides)
- Wraps End of Alpha Loop Trail at Intersections/ Driveways



CONCRETE COBBLES

- Old Roswell Shared Street Vehicular Area



GRANITE BLOCK SETTS

- Old Roswell Shared Street Runnel
- Street Tree Pits
- Buffer Strips (< 2FT Width)



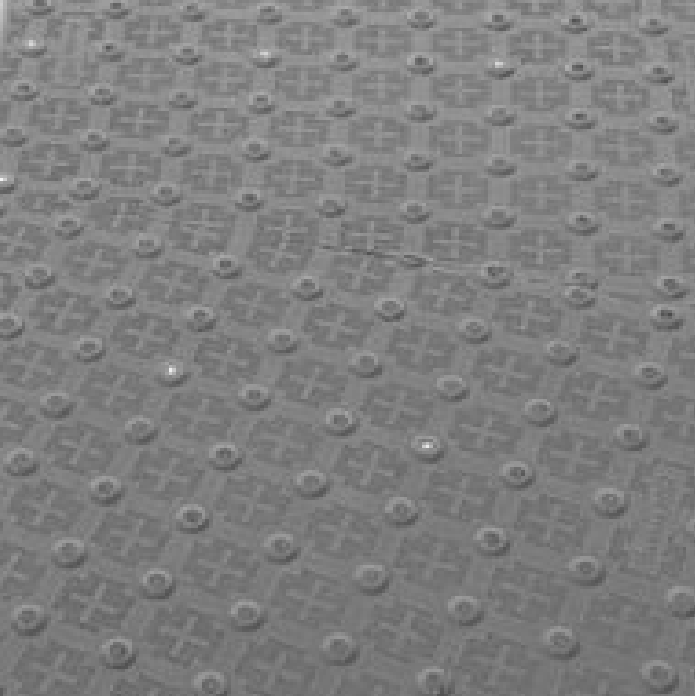
SURFACE-APPLIED COATING AT CROSSINGS

- All Vehicular Crossings (Unless Otherwise Indicated)
- See Distinctive Crosswalk Recommendations



ETCHED CONCRETE

- Alpha Loop Logo / Marker on Trail



DETECTABLE WARNING PAVERS

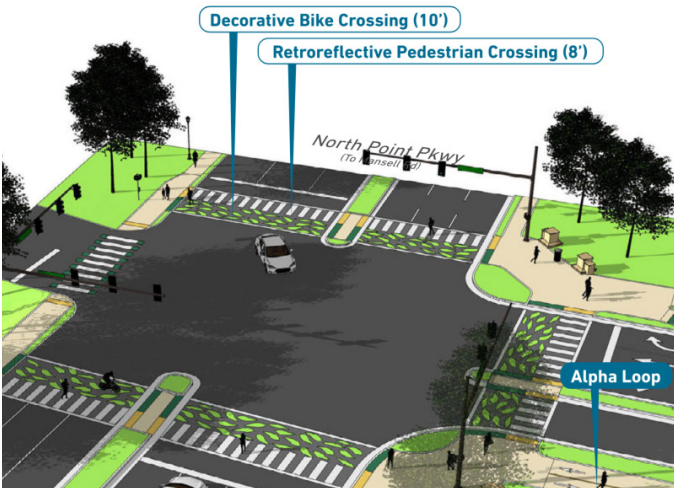
- At All Crosswalks and at Intersecting Driveways along Alpha Loop Trail



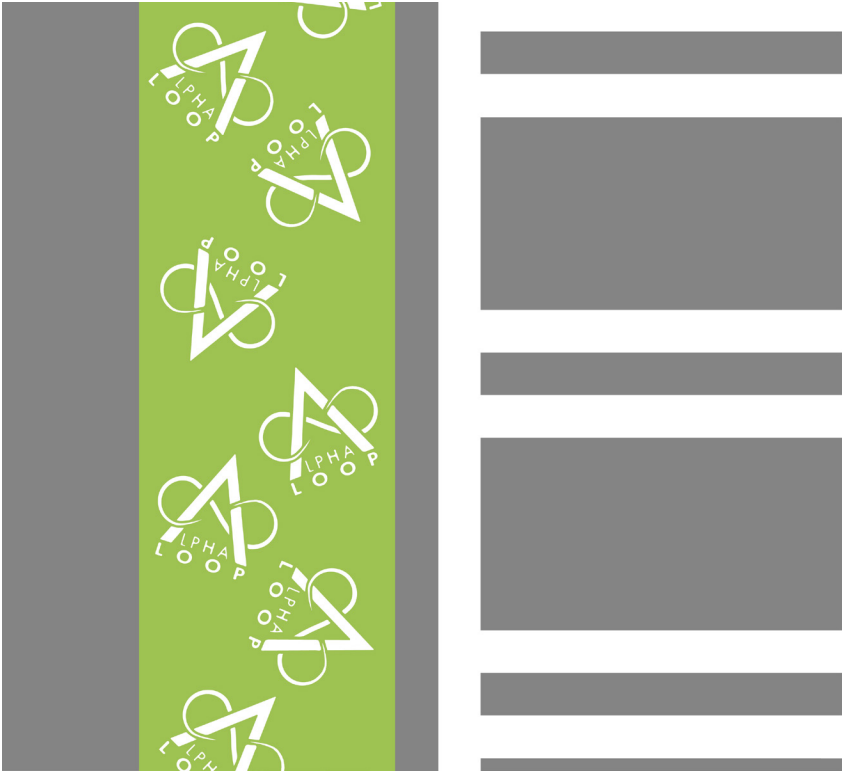
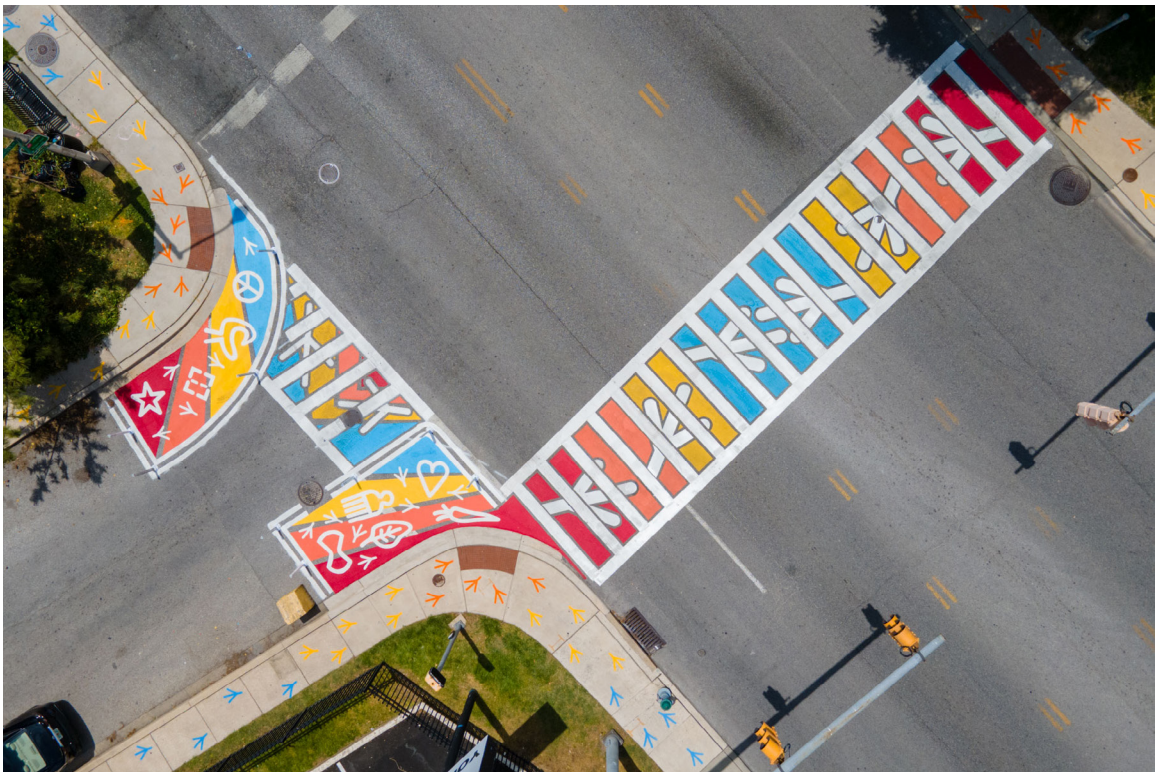
DESIGN STANDARDS
DISTINCTIVE CROSSWALKS

Downtown Alpharetta is a dynamic urban center that will continue to see increased pedestrian and bicycle traffic as the Alpha Loop is implemented and Downtown’s revitalization continues. The City has an opportunity to improve safety for pedestrians and bicyclists where the Alpha Loop trail crosses busy vehicular roadways such as Old Milton Parkway and Haynes Bride Road by instituting a Distinctive Crosswalk program. Doing so will both increase the legibility of the Alpha Loop as a multi-use trail and enhance Downtown Alpharetta’s place-making, improving the experience for all users.

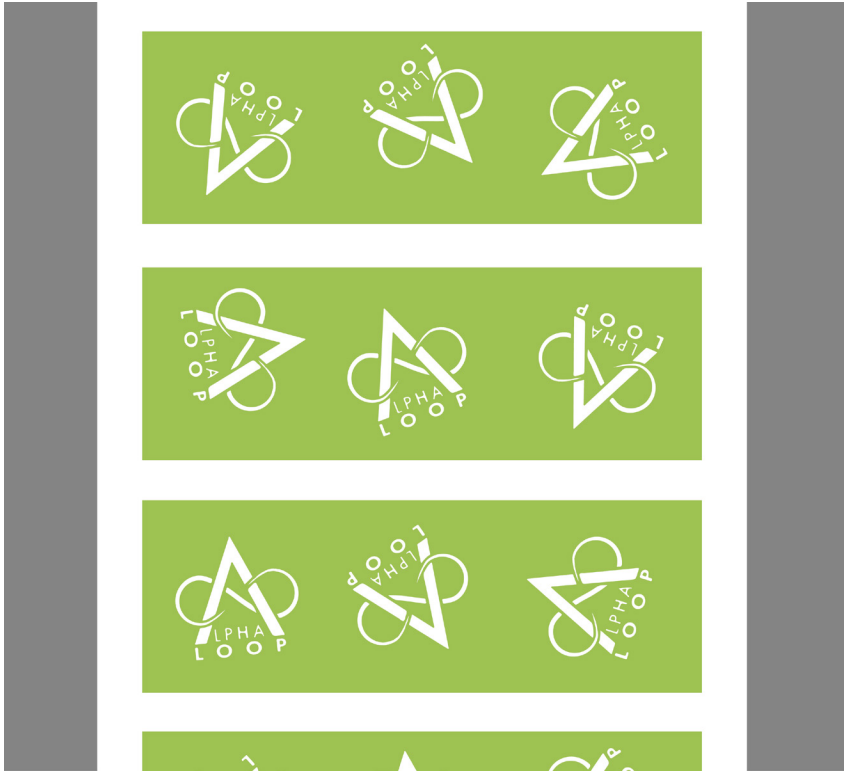
- Two potential options for Distinctive Crosswalk designs are proposed here:
- 1. MMA (or similar) surface-applied sealcoat with Alpha Loop logo stenciling.
 - 2. Partnership with Arts Alpharetta to commission local artists to design distinctive crosswalks.



PREVIOUS STUDY REFERENCE:
NORTHPOINT PLACEMAKING STUDY



OPTION 1a: STENCILED BIKE LANE STRIPE



OPTION 1b: STENCILED NEGATIVE SPACE



OPTION 2: POTENTIAL ARTS ALPHARETTA PARTNERSHIP



APPENDIX

TRAFFIC STUDY



June 27, 2022

AlphaLoop
Traffic Study
5633.01

Prepared for:
Starr Whitehouse
Landscape Architects
and Planners
437 Memorial Drive SE,
Ste. A-2
Atlanta, GA 30312

Prepared by:
Michael Crawford, PE
PE# 019633



AlphaLoop Traffic Study

PREPARED BY:
Columbia Engineering and Services, Inc.
2862 Buford Highway, Suite 200
Duluth, GA 30096
770-925-0357

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Introduction

The AlphaLoop project is located in the City of Alpharetta in North Fulton County and aims to provide a comfortable, safe and consistent path for pedestrians and bicyclists to travel between parks. In order to achieve the goals for the path, four intersections have been evaluated to safely and efficiently cross pedestrians and bicyclists. The four intersections evaluated were Old Milton Parkway and Roswell Street, Old Milton Parkway and Kingry Lane, Old Milton Parkway and Park Street, and South Main Street and Devore Road. Traffic analyses were completed with the previous three years of crash data and the current traffic counts.

The vicinity for the studied locations is shown on Figure 1.

Old Milton Parkway is a four to six lane roadway divided by raised medians with left and right turn lanes. Roswell Street, at the intersection of Old Milton Parkway, is a two-lane road with left turn lanes. The speed limits posted are 35 mph on Old Milton Parkway and 25 mph on Roswell Street. The intersection is signalized.

S. Main Street at the intersection of Devore Road is a four-lane roadway, Devore Road being a two-lane. The posted speed on S. Main Street is 45 mph and 35 mph on Devore Road. The intersection is not signalized.

Kingry Lane and Park Street are both three-lane roadways with a left and a right turn lane onto Old Milton Parkway. No speed limits are posted on Kingry Lane or Park Street. The posted speed limit for Old Milton Parkway is 35 mph. Kingry Lane is a signalized intersection, however, Park Street is not.

Figure 1: Vicinity Map



Existing Conditions Analysis

Traffic counts were conducted on Thursday May 12th, 2022 and Wednesday May 25th, 2022. AM, noon and PM peak period counts were conducted at the intersection of Kingry Lane and Old Milton Parkway and Roswell Street and Old Milton Parkway. AM and PM peak counts were conducted at Old Milton Parkway and Park Street and at S. Main Street and Devore Road. Pedestrians and bicyclists were also recorded in the time frames. The quantity of pedestrians crossing in a time frame did not exceed 12 except for the PM peak periods at Roswell Street and Old Milton Parkway and at Kingry Lane and Old Milton Parkway.

Figure 2: PM Peak- Roswell St and Old Milton Parkway

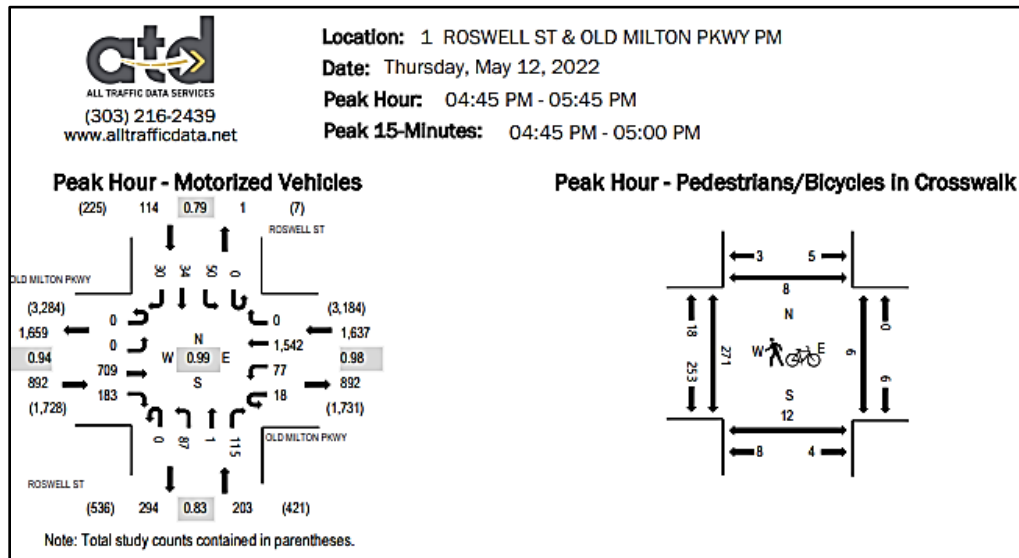
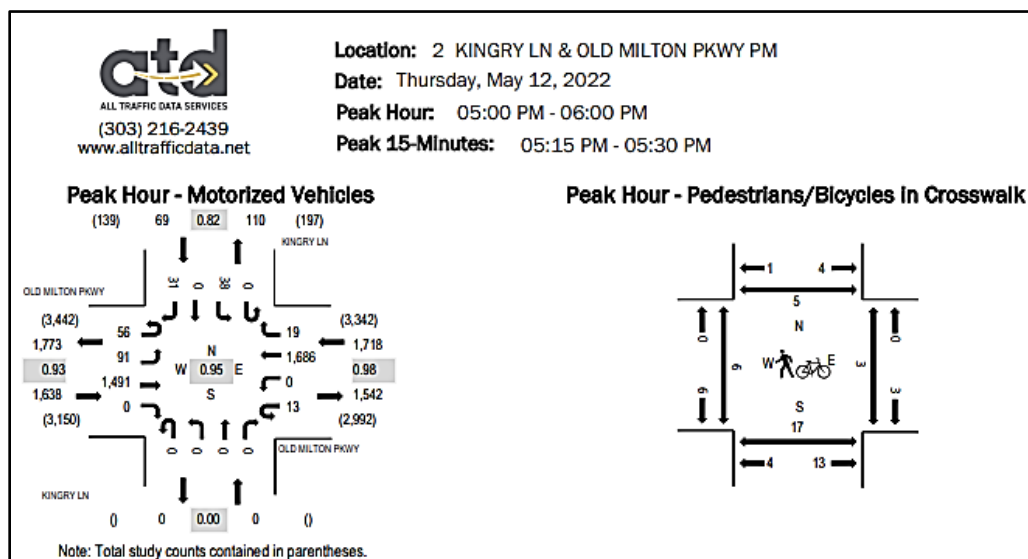


Figure 3: PM Peak- Kingry Lane and Old Milton Parkway



Complete traffic count data are provided in the Appendix.

Crash Diagram Analysis

To conduct the crash analysis for the intersections, the Georgia Electronic Accident Reporting System (GEARS) maintained by the Georgia Department of Transportation (GDOT) was utilized. Law enforcement agencies around the state report crash data to GEARS so that statewide and local crash analysis may be performed. The data analysis results in the generation of crash diagrams.

The crash diagrams portray crash data reported between December 2019 and May 2022. Each crash was categorized based on type of crash, time of day, type of weather and severity of the wreck. Figure 4 provides the complete crash diagrams.

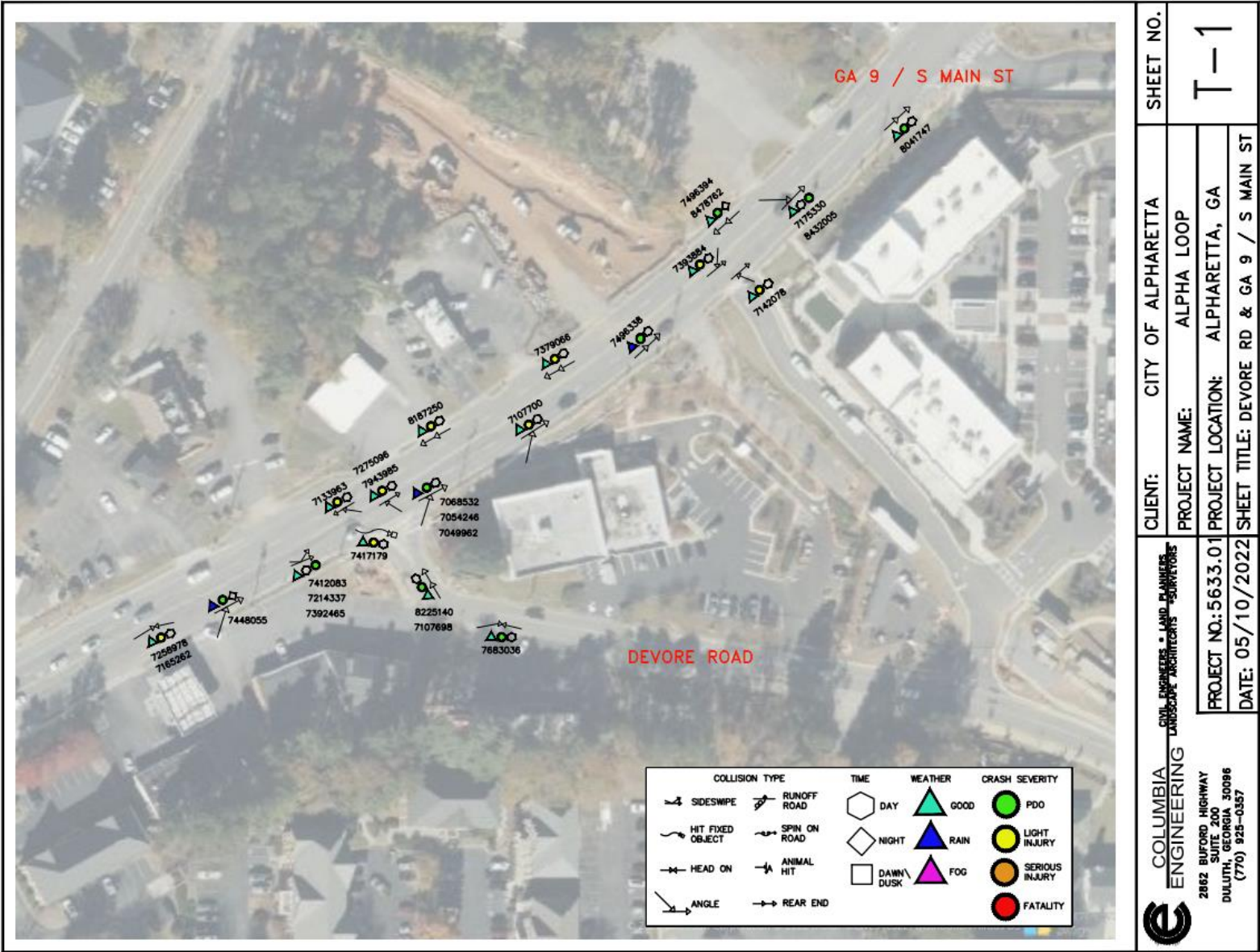
The first intersection analyzed was S. Main Street and Devore Road. The car crashes at this intersection consisted of angled wrecks, side-swipes and rear-end crashes. The majority of wrecks were angled crashes as people turned out onto S. Main Street. Some of the wrecks recorded were caused by illegal left turns onto S. Main Street. In this analysis, an alternative crossing path for pedestrians was also analyzed. The alternative crossing would be at S. Main Street and the proposed Devore Relocation Road. This intersection was found to have less wrecks onto S. Main Street than the current Devore Road.

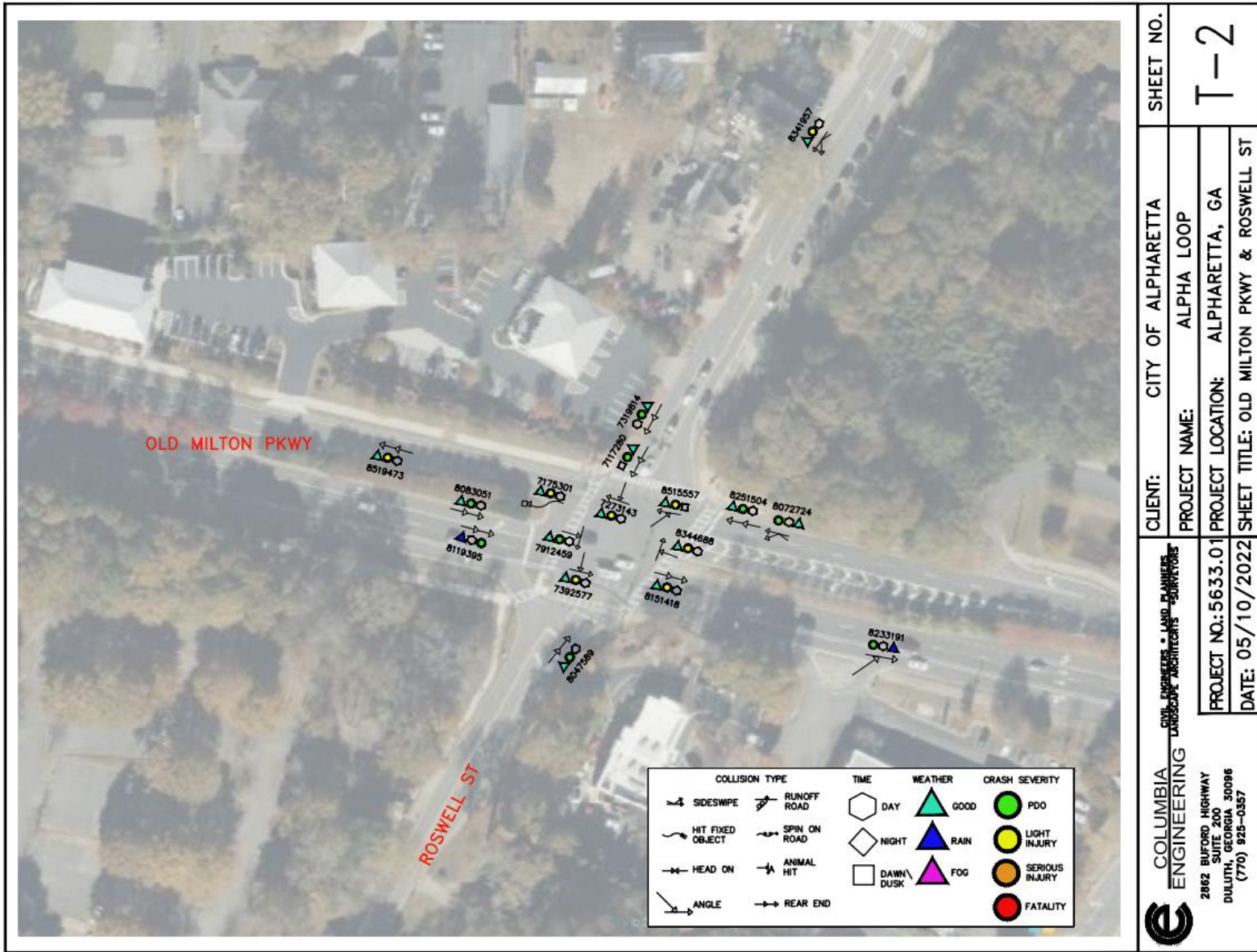
The second intersection analyzed was Roswell Street and Old Milton Parkway. The car crashes at this intersection consisted of angled wrecks, side-swipes and rear-end crashes. The majority of wrecks were angled crashes as vehicles attempted to turn in-between too small of gaps in the flow of through traffic.

Lastly, the intersection of Kingry Lane and Old Milton Parkway was analyzed. The car crashes at this intersection consisted of angled wrecks, side-swipes and rear-end crashes. The clear majority of wrecks were angled crashes as vehicles turned left from Old Milton Parkway onto Kingry Lane. The intersection of Park Street and Old Milton Parkway was included in this scope and was found to have a variety of angled wrecks, side-swipes and rear-end crashes. There were less wrecks at Park Street than recorded at Kingry Lane.

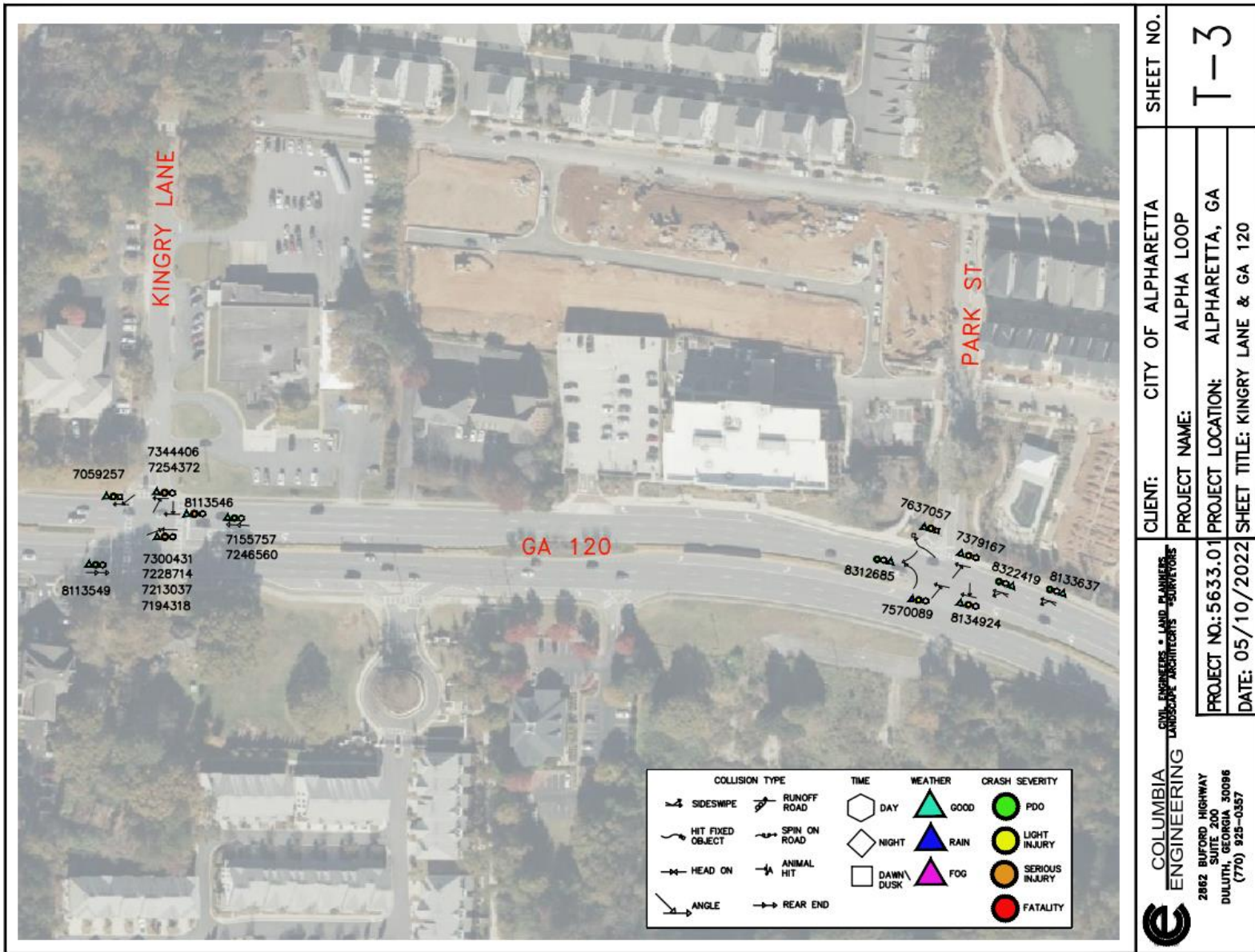
No pedestrians or bicyclists were involved in the reported crashes.

Figure 4: Existing Crash Data





 COLUMBIA ENGINEERING CIVIL ENGINEERS • LAND PLANNERS LANDSCAPE ARCHITECTS • SURVEYORS 2882 BUFORD HIGHWAY SUITE 200 DULUTH, GEORGIA 30096 (770) 925-0357	CLIENT: CITY OF ALPHARETTA		SHEET NO. T-2
	PROJECT NAME: ALPHA LOOP		
	PROJECT NO.: 5633.01		
	PROJECT LOCATION: ALPHARETTA, GA		
DATE: 05/10/2022		SHEET TITLE: OLD MILTON PKWY & ROSWELL ST	



COLUMBIA ENGINEERING CIVIL ENGINEERS & LAND PLANNERS LANDSCAPE ARCHITECTS & SURVEYORS 2862 BUFORD HIGHWAY DULUTH, GEORGIA 30086 (770) 925-0357	CLIENT:	CITY OF ALPHARETTA	SHEET NO.
	PROJECT NAME:	ALPHA LOOP	T-3
	PROJECT LOCATION:	ALPHARETTA, GA	
	SHEET TITLE:	KINGRY LANE & GA 120	

Capacity Analysis

To determine the operation efficiency of the adjacent roads and intersections, under existing and total traffic conditions, SYNCHRO analysis was performed utilizing methods documented in the *Highway Capacity Manual (HCM)*, 6th Edition, published by the Transportation Research Board.

Level of Service is a function of driver expectation and is calculated based upon delay experienced by vehicles at intersections. For roadway segments, Level of Service (LOS) is a function of the average travel speed.

Level of Service is graded from A through F, with LOS A being the best and LOS F being the worst. The higher the letter grade, generally the higher levels of delay and congestion may be expected.

For unsignalized intersections, the average delay per vehicle is calculated for all vehicles traversing the intersection. Level of Service thresholds developed in the *Highway Capacity Manual* are then used to grade the intersection operations. Table 1 and 2 report the thresholds utilized for unsignalized and signalized intersections, respectively.

The study network intersections were analyzed with existing geometry for both the existing and total traffic scenarios. See Table 3 and 4 for Level of Service summaries.

Table 1: Level of Service Criteria – Unsignalized Intersections

Level of Service	Average Control Delay (sec/veh)
A	0 - 10
B	>10 - 15
C	>15 - 25
D	>25 - 35
E	>35 - 50
F	>50

Table 2: Level of Service Criteria – Signalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)	General Description
A	≤10	Free Flow
B	>10 – 20	Stable Flow (slight delays)
C	>20 – 35	Stable flow (acceptable delays)
D	>35 – 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 – 80	Unstable flow (intolerable delay)
F ¹	>80	Forced flow (congested and queues fail to clear)

Table 3: Level of Service Analysis Summary- Unsignalized Intersections

Existing Traffic: Unsignalized Intersections					
		AM Peak Period		PM Peak Period	
Intersection	Movement	Delay (s)	LOS	Delay (s)	LOS
S. Main St. and Devore Road.	WBR	10.9	B	19.1	C
	SBL	9	A	11.9	B
Old Milton Pkwy and Park St.	EBL	21.2	C	31.3	D
	WBU	11.9	B	17.5	C
	SBL	52.2	F	134.5	F
	SBR	16.4	C	21.5	C

Table 4: Level of Service Analysis Summary- Signalized Intersections

Existing Traffic: Signalized Intersections						
	AM Peak Period		Noon Peak Period		PM Peak Period	
Intersection	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
Old Milton Pkwy and Kingry St	5.1	A	11.9	B	7.7	A
Old Milton Pkwy and Kingry St Removing Turn Lane	5.1	A	11.9	B	7.8	A
Old Milton Pkwy and Roswell	28	C	20.9	C	22.7	C
Old Milton Pkwy and Roswell All-Red Pedestrian Scramble	67.2	E	-	-	123.5	F

Alternatives Analysis

Two alternative pedestrian/cycling routes were considered in this analysis.

The first alternative was to direct pedestrians and cyclists to the proposed Devore Relocation Road in order to cross S. Main Street instead of crossing at Devore Road. By adjusting the crossing, foot-traffic would be crossing at an intersection with less recorded crashes in the last three years.

The second alternative was to direct pedestrians and cyclists to cross Old Milton Parkway at the intersection of Park Street instead of at Kingry Lane. Kingry Lane is a signalized intersection as Park Street is not, however, less crashes were recorded at Park Street.

Two alternative intersection configurations were investigated.

The first intersection configuration alternative was to combine the right and left turn lanes on Kingry Lane to a single lane of traffic turning onto Old Milton Parkway. Removing the lane would provide additional space for the AlphaLoop project to create a wider pathway. Combining the turn lanes have no significant impact upon the Level of Service on Kingry Lane as shown in Table 4.

The second intersection configuration alternative was to alter Old Milton Parkway and Roswell Street to have an all-red phase in order for foot-traffic to cross in any direction safely. The all-red pedestrian phase created a delay that moved the Level of Service into the F category during the PM peak period as shown in Table 4.

Conclusions

The report has analyzed traffic and safety conditions in the project vicinity of three proposed pedestrian crossings at Old Milton Parkway and Roswell Street, Old Milton Parkway and Kingry Lane, and South Main Street and Devore Road in North Fulton County. In the analysis, two alternative routes and two alternative intersection configurations were investigated. The alternative intersection configurations found that removing a lane at Kingry Street did not have significant effect on the Level of Service. The all-red pedestrian phase was found to have a significant negative impact on the Level of Service on Old Milton Road due to the delay.

Based on this analysis, the PM peak traffic had a higher volume of vehicles, pedestrians, and bicyclists than the AM and Noon peaks. Roswell Street and Old Milton Parkway had the highest volume of pedestrians recorded with 271 pedestrians/bicyclists crossing northbound across Old Milton Parkway between 4:45 PM and 5:45 PM.

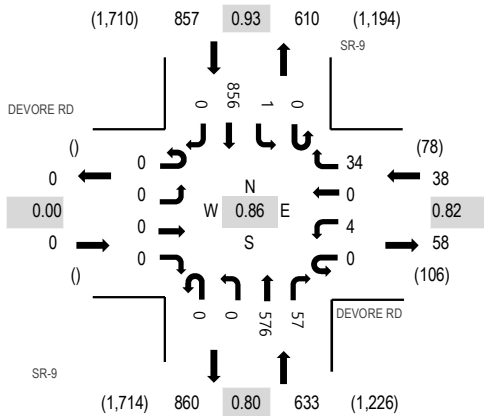
To conduct the crash analysis for the intersections, GEARS was utilized. The most car wrecks occurring at S. Main Street and Devore Road were angled crashes as people turned out onto S. Main Street. The majority of wrecks recorded at Roswell Street and Old Milton Parkway were angled crashes as vehicles attempted to turn left onto both roadways. Crashes recorded at Kingry Lane and Old Milton Parkway were most-often angled crashes as vehicles turned left from Old Milton Parkway onto Kingry Lane. No pedestrians or bicyclists were involved in the reported crashes.

Through the several analysis methods, it is concluded that the Level of Service at the three proposed AlphaLoop crossings currently maintain a LOS rating of C or above with the existing conditions. It is also important to note that no reported crashes included pedestrians or bicyclists at any of the studied locations.

Appendices

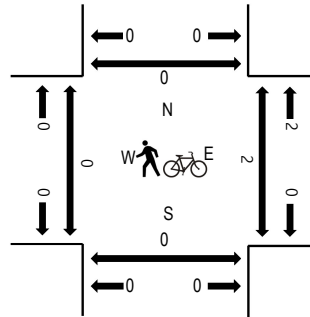
Appendix A- Traffic Count Data

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	DEVORE RD Eastbound				DEVORE RD Westbound				SR-9 Northbound				SR-9 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	0	0	6	0	0	101	5	0	0	195	0	307	1,521	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	8	0	0	128	13	0	1	223	0	373	1,528	0	1	0	0
7:30 AM	0	0	0	0	0	1	0	5	0	0	186	16	0	0	235	0	443	1,526	0	0	0	0
7:45 AM	0	0	0	0	0	2	0	7	0	0	147	19	0	0	223	0	398	1,487	0	0	0	0
8:00 AM	0	0	0	0	0	1	0	14	0	0	115	9	0	0	175	0	314	1,493	0	1	0	0
8:15 AM	0	0	0	0	0	0	0	4	0	0	145	7	0	0	215	0	371		0	2	0	0
8:30 AM	0	0	0	0	0	1	0	14	0	0	156	21	0	1	211	0	404		0	0	0	0
8:45 AM	0	0	0	0	0	1	0	14	0	0	144	14	0	0	231	0	404		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
Lights	0	0	0	0	0	4	0	34	0	0	558	54	0	1	837	0	1,488
Mediums	0	0	0	0	0	0	0	0	0	0	15	3	0	0	19	0	37
Total	0	0	0	0	0	4	0	34	0	0	576	57	0	1	856	0	1,528



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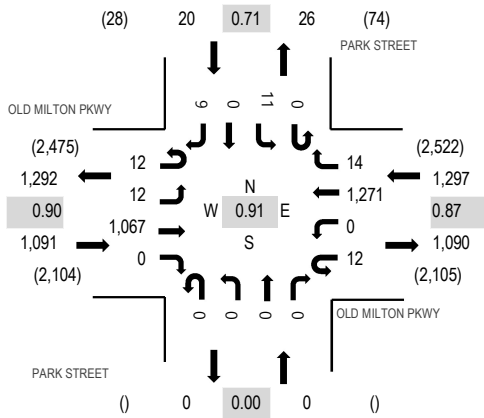
Location: 4 PARK STREET & OLD MILTON PKWY AM

Date: Wednesday, May 25, 2022

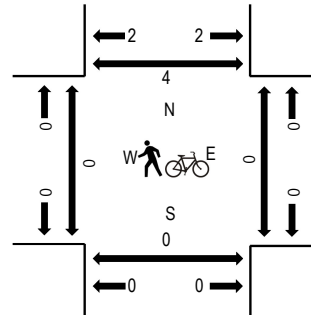
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	OLD MILTON PKWY Eastbound				OLD MILTON PKWY Westbound				PARK STREET Northbound				PARK STREET Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	1	1	194	0	1	0	252	8	0	0	0	0	0	2	0	1	460	2,246	0	0	0	0
7:15 AM	4	3	230	0	5	0	280	7	0	0	0	0	0	2	0	0	531	2,337	0	0	0	0
7:30 AM	2	2	301	0	5	0	292	8	0	0	0	0	0	0	0	0	610	2,381	0	0	0	2
7:45 AM	4	4	267	0	7	0	345	15	0	0	0	0	0	1	0	2	645	2,395	0	0	0	1
8:00 AM	0	3	258	0	2	0	282	3	0	0	0	0	0	2	0	1	551	2,408	0	0	0	0
8:15 AM	5	1	253	0	0	0	307	2	0	0	0	0	0	6	0	1	575		0	0	0	0
8:30 AM	6	4	281	0	5	0	319	5	0	0	0	0	0	1	0	3	624		0	0	0	1
8:45 AM	1	4	275	0	5	0	363	4	0	0	0	0	0	2	0	4	658		0	0	0	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5
Lights	12	11	1,051	0	12	0	1,194	13	0	0	0	0	0	11	0	8	2,312
Mediums	0	1	14	0	0	0	74	1	0	0	0	0	0	0	0	1	91
Total	12	12	1,067	0	12	0	1,271	14	0	0	0	0	0	11	0	9	2,408



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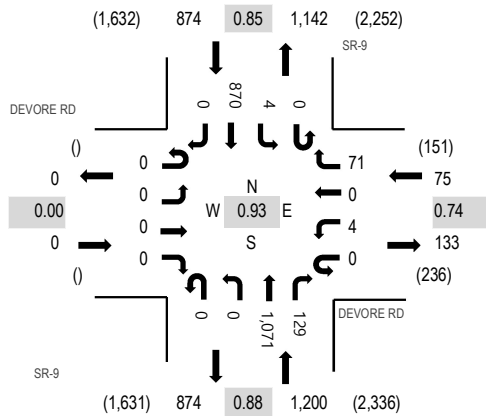
Location: 3 SR-9 & DEVORE RD PM

Date: Wednesday, May 25, 2022

Peak Hour: 05:00 PM - 06:00 PM

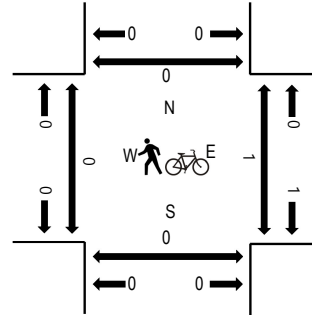
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	DEVORE RD Eastbound				DEVORE RD Westbound				SR-9 Northbound				SR-9 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	0	0	1	0	27	0	0	277	28	0	1	171	0	505	1,970	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	11	0	0	248	20	0	1	205	0	485	1,996	0	1	0	0
4:30 PM	0	0	0	0	0	1	0	21	0	0	267	26	0	0	186	0	501	2,090	0	2	0	0
4:45 PM	0	0	0	0	0	0	0	15	0	0	244	26	0	1	193	0	479	2,133	0	1	0	0
5:00 PM	0	0	0	0	0	0	0	14	0	0	312	33	0	0	172	0	531	2,149	0	0	0	0
5:15 PM	0	0	0	0	0	1	0	25	0	0	247	49	0	1	256	0	579		0	1	0	0
5:30 PM	0	0	0	0	0	0	0	16	0	0	286	24	0	1	217	0	544		0	0	0	0
5:45 PM	0	0	0	0	0	3	0	16	0	0	226	23	0	2	225	0	495		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5
Lights	0	0	0	0	0	4	0	71	0	0	1,062	127	0	4	855	0	2,123
Mediums	0	0	0	0	0	0	0	0	0	0	6	2	0	0	13	0	21
Total	0	0	0	0	0	4	0	71	0	0	1,071	129	0	4	870	0	2,149



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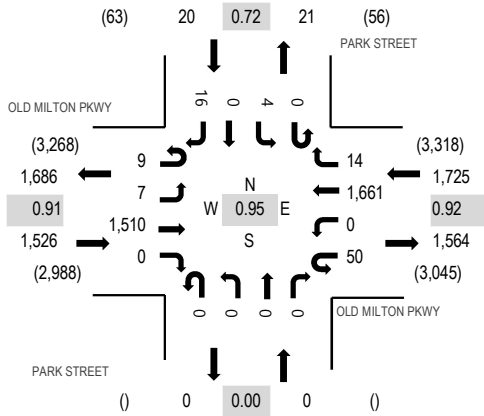
Location: 4 PARK STREET & OLD MILTON PKWY PM

Date: Wednesday, May 25, 2022

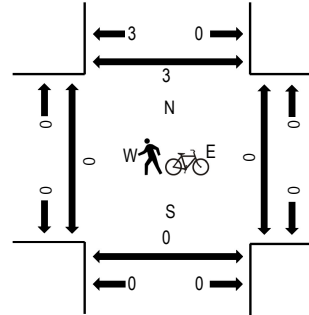
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	OLD MILTON PKWY Eastbound				OLD MILTON PKWY Westbound				PARK STREET Northbound				PARK STREET Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	2	1	349	0	5	0	335	5	0	0	0	0	0	2	0	6	705	3,098	0	0	0	1
4:15 PM	3	8	384	0	8	0	376	2	0	0	0	0	0	5	0	10	796	3,200	0	0	0	0
4:30 PM	4	5	359	0	9	0	455	7	0	0	0	0	0	3	0	8	850	3,213	0	0	0	3
4:45 PM	0	6	341	0	10	0	380	1	0	0	0	0	0	6	0	3	747	3,223	0	2	0	1
5:00 PM	6	3	366	0	9	0	414	3	0	0	0	0	0	0	0	6	807	3,271	0	0	0	1
5:15 PM	0	1	420	0	13	0	368	4	0	0	0	0	0	1	0	2	809		0	0	0	0
5:30 PM	3	2	380	0	17	0	450	3	0	0	0	0	0	1	0	4	860		0	0	0	0
5:45 PM	0	1	344	0	11	0	429	4	0	0	0	0	0	2	0	4	795		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	8
Lights	9	7	1,491	0	50	0	1,642	14	0	0	0	0	0	4	0	15	3,232
Mediums	0	0	15	0	0	0	15	0	0	0	0	0	0	0	0	1	31
Total	9	7	1,510	0	50	0	1,661	14	0	0	0	0	0	4	0	16	3,271

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	3	1	0	0	0	0	0	0	0	0	6
Lights	1	44	1,059	101	1	149	650	122	0	37	79	97	0	121	109	31	2,601
Mediums	0	1	4	4	0	0	11	3	0	1	0	0	0	2	1	0	27
Total	1	45	1,065	105	1	149	664	126	0	38	79	97	0	123	110	31	2,634



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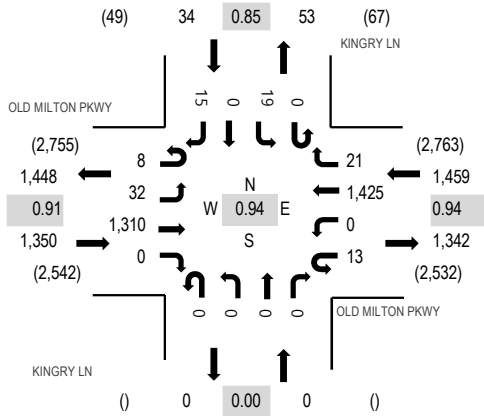
Location: 2 KINGRY LN & OLD MILTON PKWY AM

Date: Thursday, May 12, 2022

Peak Hour: 08:00 AM - 09:00 AM

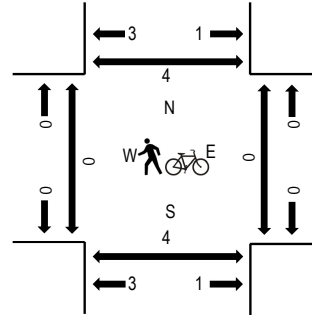
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	OLD MILTON PKWY Eastbound				OLD MILTON PKWY Westbound				KINGRY LN Northbound				KINGRY LN Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	1	1	190	0	1	0	301	0	0	0	0	0	0	2	0	4	500	2,511	0	0	1	0
7:15 AM	1	1	324	0	1	0	318	1	0	0	0	0	0	0	0	0	646	2,715	3	0	2	0
7:30 AM	2	0	298	0	1	0	342	4	0	0	0	0	0	1	0	3	651	2,770	0	0	1	1
7:45 AM	2	2	370	0	1	0	329	5	0	0	0	0	0	1	0	4	714	2,804	0	0	1	0
8:00 AM	1	8	354	0	2	0	327	4	0	0	0	0	0	6	0	2	704	2,843	0	0	0	1
8:15 AM	2	3	317	0	3	0	360	9	0	0	0	0	0	4	0	3	701		0	0	1	1
8:30 AM	2	13	292	0	3	0	359	6	0	0	0	0	0	6	0	4	685		0	0	1	0
8:45 AM	3	8	347	0	5	0	379	2	0	0	0	0	0	3	0	6	753		0	0	2	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	5	0	0	0	13	1	0	0	0	0	0	0	0	0	19
Lights	8	32	1,276	0	13	0	1,374	20	0	0	0	0	0	19	0	15	2,757
Mediums	0	0	29	0	0	0	38	0	0	0	0	0	0	0	0	0	67
Total	8	32	1,310	0	13	0	1,425	21	0	0	0	0	0	19	0	15	2,843



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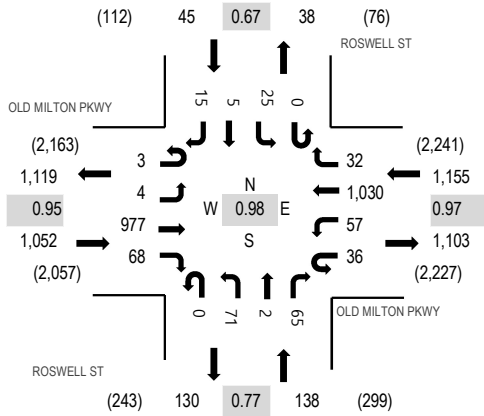
Location: 1 ROSWELL ST & OLD MILTON PKWY Noon

Date: Thursday, May 12, 2022

Peak Hour: 01:00 PM - 02:00 PM

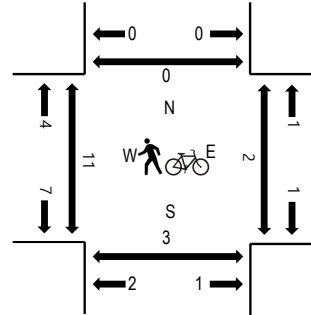
Peak 15-Minutes: 01:45 PM - 02:00 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	OLD MILTON PKWY Eastbound				OLD MILTON PKWY Westbound				ROSWELL ST Northbound				ROSWELL ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
12:00 PM	2	0	223	11	8	13	256	6	0	11	0	41	0	5	2	4	582	2,319	2	0	1	2
12:15 PM	0	1	243	14	12	12	239	13	0	22	1	17	0	9	0	8	591	2,338	2	3	3	0
12:30 PM	1	1	223	12	8	17	231	5	0	18	0	20	0	16	6	3	561	2,321	4	3	0	0
12:45 PM	0	2	258	14	10	11	236	9	0	11	0	20	0	11	1	2	585	2,363	1	1	1	0
1:00 PM	2	1	249	23	11	20	239	12	0	24	0	15	0	2	0	3	601	2,390	7	1	0	0
1:15 PM	0	1	226	19	14	9	257	6	0	11	0	18	0	8	2	3	574		3	0	1	0
1:30 PM	0	2	243	10	7	17	270	5	0	18	0	17	0	9	2	3	603		1	1	1	0
1:45 PM	1	0	259	16	4	11	264	9	0	18	2	15	0	6	1	6	612		0	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	3
Lights	3	4	956	66	36	56	1,002	30	0	54	2	60	0	23	5	15	2,312
Mediums	0	0	20	2	0	1	27	1	0	17	0	5	0	2	0	0	75
Total	3	4	977	68	36	57	1,030	32	0	71	2	65	0	25	5	15	2,390



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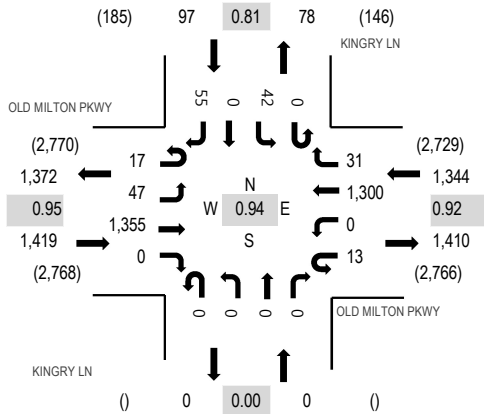
Location: 2 KINGRY LN & OLD MILTON PKWY Noon

Date: Thursday, May 12, 2022

Peak Hour: 01:00 PM - 02:00 PM

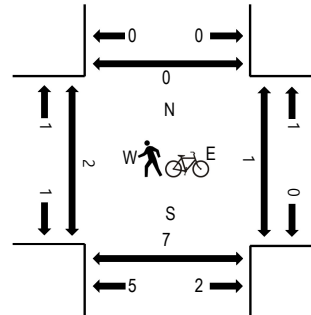
Peak 15-Minutes: 01:45 PM - 02:00 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	OLD MILTON PKWY Eastbound				OLD MILTON PKWY Westbound				KINGRY LN Northbound				KINGRY LN Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
12:00 PM	5	17	294	0	5	0	353	9	0	0	0	0	0	11	0	13	707	2,822	0	0	2	1
12:15 PM	4	11	339	0	6	0	292	0	0	0	0	0	0	5	0	19	676	2,788	0	0	1	1
12:30 PM	4	13	306	0	10	0	331	3	0	0	0	0	0	14	0	7	688	2,827	0	0	1	0
12:45 PM	6	10	340	0	17	0	354	5	0	0	0	0	0	9	0	10	751	2,852	1	0	1	2
1:00 PM	9	6	320	0	3	0	310	8	0	0	0	0	0	6	0	11	673	2,860	2	0	3	0
1:15 PM	2	13	353	0	3	0	310	8	0	0	0	0	0	13	0	13	715		0	1	2	0
1:30 PM	4	15	360	0	5	0	297	8	0	0	0	0	0	9	0	15	713		0	0	1	0
1:45 PM	2	13	322	0	2	0	383	7	0	0	0	0	0	14	0	16	759		0	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3
Lights	17	45	1,281	0	13	0	1,262	30	0	0	0	0	0	41	0	53	2,742
Mediums	0	2	72	0	0	0	37	1	0	0	0	0	0	1	0	2	115
Total	17	47	1,355	0	13	0	1,300	31	0	0	0	0	0	42	0	55	2,860

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3
Lights	0	0	698	162	18	74	1,532	0	0	87	1	114	0	50	34	30	2,800
Mediums	0	0	10	21	0	3	8	0	0	0	0	1	0	0	0	0	43
Total	0	0	709	183	18	77	1,542	0	0	87	1	115	0	50	34	30	2,846



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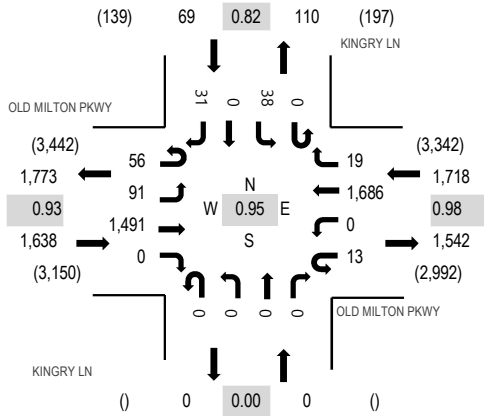
Location: 2 KINGRY LN & OLD MILTON PKWY PM

Date: Thursday, May 12, 2022

Peak Hour: 05:00 PM - 06:00 PM

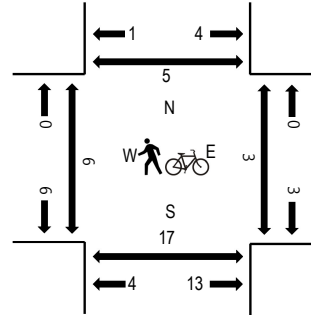
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	OLD MILTON PKWY Eastbound				OLD MILTON PKWY Westbound				KINGRY LN Northbound				KINGRY LN Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	15	8	337	0	4	0	370	8	0	0	0	0	0	13	0	7	762	3,206	0	2	0	1
4:15 PM	22	18	361	0	4	0	395	8	0	0	0	0	0	10	0	9	827	3,266	0	0	0	0
4:30 PM	16	19	340	0	4	0	420	6	0	0	0	0	0	5	0	7	817	3,337	0	0	0	0
4:45 PM	11	14	351	0	7	0	392	6	0	0	0	0	0	14	0	5	800	3,397	1	0	2	1
5:00 PM	11	19	356	0	3	0	404	7	0	0	0	0	0	12	0	10	822	3,425	0	2	2	4
5:15 PM	7	23	411	0	2	0	436	1	0	0	0	0	0	8	0	10	898		0	0	0	0
5:30 PM	21	22	388	0	3	0	429	2	0	0	0	0	0	8	0	4	877		2	0	14	0
5:45 PM	17	27	336	0	5	0	417	9	0	0	0	0	0	10	0	7	828		4	1	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	7
Lights	56	90	1,465	0	13	0	1,668	19	0	0	0	0	0	37	0	31	3,379
Mediums	0	1	23	0	0	0	14	0	0	0	0	0	0	1	0	0	39
Total	56	91	1,491	0	13	0	1,686	19	0	0	0	0	0	38	0	31	3,425

Appendix B- Capacity Analysis

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	W	W	W	W
Traffic Vol, veh/h	0	38	0	633	1	856
Future Vol, veh/h	0	38	0	633	1	856
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	41	0	688	1	930

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	811	346	0
Stage 1	344	-	-
Stage 2	467	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	817	650	-
Stage 1	689	-	-
Stage 2	597	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	816	649	-
Mov Cap-2 Maneuver	816	-	-
Stage 1	689	-	-
Stage 2	596	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBT
Capacity (veh/h)	-	-	649	902
HCM Lane V/C Ratio	-	-	0.064	0.001
HCM Control Delay (s)	-	-	10.9	9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	N	N	S	S
Traffic Vol, veh/h	4	71	1071	129	4	870
Future Vol, veh/h	4	71	1071	129	4	870
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	77	1164	140	4	946

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1715	652	0
Stage 1	1234	-	-
Stage 2	481	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	81	411	-
Stage 1	238	-	-
Stage 2	588	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	80	411	-
Mov Cap-2 Maneuver	80	-	-
Stage 1	238	-	-
Stage 2	579	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBT
Capacity (veh/h)	-	-	337	527
HCM Lane V/C Ratio	-	-	0.242	0.008
HCM Control Delay (s)	-	-	19.1	11.9
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.9	0

Intersection							
Int Delay, s/veh	0.6						
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	24	1067	12	1271	14	11	9
Future Vol, veh/h	24	1067	12	1271	14	11	9
Conflicting Peds, #/hr	4	0	0	0	4	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	Stop
Storage Length	320	-	360	-	-	0	0
Veh in Median Storage, #	0	-	0	-	0	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	26	1160	13	1382	15	12	10
Major/Minor	Major1	Major2		Minor2			
Conflicting Flow All	1401	0	847	-	0	1936	703
Stage 1	-	-	-	-	-	1420	-
Stage 2	-	-	-	-	-	516	-
Critical Hdwy	5.34	-	5.64	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	2.32	-	-	3.82	3.92
Pot Cap-1 Maneuver	249	-	534	-	-	101	326
Stage 1	-	-	-	-	-	133	-
Stage 2	-	-	-	-	-	515	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	248	-	534	-	-	88	325
Mov Cap-2 Maneuver	-	-	-	-	-	88	-
Stage 1	-	-	-	-	-	119	-
Stage 2	-	-	-	-	-	501	-
Approach	EB	WB		SB			
HCM Control Delay, s	0.5	0.1		36.1			
HCM LOS				E			
Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	248	-	534	-	-	88	325
HCM Lane V/C Ratio	0.105	-	0.024	-	-	0.136	0.03
HCM Control Delay (s)	21.2	-	11.9	-	-	52.2	16.4
HCM Lane LOS	C	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	0.1	-	-	0.4	0.1

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	16	1510	50	1661	14	4	16
Future Vol, veh/h	16	1510	50	1661	14	4	16
Conflicting Peds, #/hr	3	0	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	Stop
Storage Length	320	-	360	-	-	0	0
Veh in Median Storage, #	0	-	0	-	0	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	17	1641	54	1805	15	4	17

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1823	0 1198	- 0 2614 913
Stage 1	-	- -	- - 1924 -
Stage 2	-	- -	- - 690 -
Critical Hdwy	5.34	- 5.64	- - 5.74 7.14
Critical Hdwy Stg 1	-	- -	- - 6.64 -
Critical Hdwy Stg 2	-	- -	- - 6.04 -
Follow-up Hdwy	3.12	- 2.32	- - 3.82 3.92
Pot Cap-1 Maneuver	154	- 341	- - 43 237
Stage 1	-	- -	- - 64 -
Stage 2	-	- -	- - 418 -
Platoon blocked, %	-	- -	- -
Mov Cap-1 Maneuver	154	- 341	- - 32 236
Mov Cap-2 Maneuver	-	- -	- - 32 -
Stage 1	-	- -	- - 57 -
Stage 2	-	- -	- - 351 -

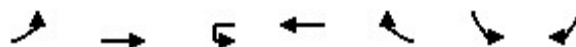
Approach	EB	WB	SB
HCM Control Delay, s	0.3	0.5	44.1
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	154	-	341	-	-	32	236
HCM Lane V/C Ratio	0.113	-	0.159	-	-	0.136	0.074
HCM Control Delay (s)	31.3	-	17.5	-	-	134.5	21.5
HCM Lane LOS	D	-	C	-	-	F	C
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-	0.4	0.2

HCM Signalized Intersection Capacity Analysis

12: Old Milton Pkwy & Kingry St

06/07/2022

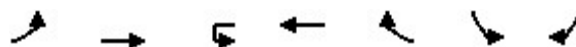


Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑↑↑	↰	↑↑↑		↰	↰
Traffic Volume (vph)	40	1310	13	1425	21	19	15
Future Volume (vph)	40	1310	13	1425	21	19	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	0.91	1.00	0.91		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)	1768	5085	1770	5074		1770	1583
Flt Permitted	0.14	1.00	0.16	1.00		0.95	1.00
Satd. Flow (perm)	255	5085	304	5074		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	1424	14	1549	23	21	16
RTOR Reduction (vph)	0	0	0	1	0	0	14
Lane Group Flow (vph)	43	1424	14	1571	0	21	2
Confl. Peds. (#/hr)	4						
Turn Type	Perm	NA	Perm	NA		Prot	Perm
Protected Phases		6		2		3	
Permitted Phases	6		2				8
Actuated Green, G (s)	92.9	92.9	92.9	92.9		18.1	18.1
Effective Green, g (s)	92.9	92.9	92.9	92.9		18.1	18.1
Actuated g/C Ratio	0.77	0.77	0.77	0.77		0.15	0.15
Clearance Time (s)	4.5	4.5	4.5	4.5		4.5	4.5
Lane Grp Cap (vph)	197	3936	235	3928		266	238
v/s Ratio Prot		0.28		c0.31		c0.01	
v/s Ratio Perm	0.17		0.05				0.00
v/c Ratio	0.22	0.36	0.06	0.40		0.08	0.01
Uniform Delay, d1	3.7	4.3	3.2	4.4		43.8	43.3
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.5	0.3	0.5	0.3		0.6	0.1
Delay (s)	6.2	4.5	3.7	4.7		44.4	43.4
Level of Service	A	A	A	A		D	D
Approach Delay (s)		4.6		4.7		44.0	
Approach LOS		A		A		D	
Intersection Summary							
HCM 2000 Control Delay		5.1		HCM 2000 Level of Service		A	
HCM 2000 Volume to Capacity ratio		0.35					
Actuated Cycle Length (s)		120.0		Sum of lost time (s)		9.0	
Intersection Capacity Utilization		44.9%		ICU Level of Service		A	
Analysis Period (min)		15					
c Critical Lane Group							

HCM Signalized Intersection Capacity Analysis

12: Old Milton Pkwy & Kingry St

06/07/2022



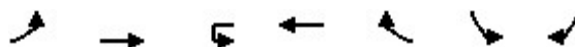
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑↑↑	↰	↑↑↑		↰	↰
Traffic Volume (vph)	147	1491	13	1686	19	38	31
Future Volume (vph)	147	1491	13	1686	19	38	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	0.91	1.00	0.91		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)	1768	5085	1769	5075		1770	1546
Flt Permitted	0.10	1.00	0.13	1.00		0.95	1.00
Satd. Flow (perm)	179	5085	239	5075		1770	1546
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	160	1621	14	1833	21	41	34
RTOR Reduction (vph)	0	0	0	1	0	0	29
Lane Group Flow (vph)	160	1621	14	1853	0	41	5
Confl. Peds. (#/hr)	5		3		5	3	6
Turn Type	Perm	NA	Perm	NA		Prot	Perm
Protected Phases		6		2		3	
Permitted Phases	6		2				8
Actuated Green, G (s)	92.5	92.5	92.5	92.5		18.5	18.5
Effective Green, g (s)	92.5	92.5	92.5	92.5		18.5	18.5
Actuated g/C Ratio	0.77	0.77	0.77	0.77		0.15	0.15
Clearance Time (s)	4.5	4.5	4.5	4.5		4.5	4.5
Lane Grp Cap (vph)	137	3919	184	3911		272	238
v/s Ratio Prot		0.32		0.37		c0.02	
v/s Ratio Perm	c0.89		0.06				0.00
v/c Ratio	1.17	0.41	0.08	0.47		0.15	0.02
Uniform Delay, d1	13.7	4.6	3.3	5.0		43.9	43.1
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	129.1	0.3	0.8	0.4		1.2	0.2
Delay (s)	142.8	4.9	4.2	5.4		45.1	43.2
Level of Service	F	A	A	A		D	D
Approach Delay (s)		17.3		5.4		44.3	
Approach LOS		B		A		D	
Intersection Summary							
HCM 2000 Control Delay			11.9		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio			0.99				
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		9.0
Intersection Capacity Utilization			67.4%		ICU Level of Service		C
Analysis Period (min)			15				

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

12: Old Milton Pkwy & Kingry St

06/07/2022



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	64	1355	13	1300	31	42	55
Future Volume (vph)	64	1355	13	1300	31	42	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	0.91	1.00	0.91		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)	1770	5085	1769	5067		1770	1557
Flt Permitted	0.15	1.00	0.15	1.00		0.95	1.00
Satd. Flow (perm)	286	5085	277	5067		1770	1557
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	1473	14	1413	34	46	60
RTOR Reduction (vph)	0	0	0	2	0	0	48
Lane Group Flow (vph)	70	1473	14	1445	0	46	12
Confl. Peds. (#/hr)			1			1	2
Turn Type	Perm	NA	Perm	NA		Prot	Perm
Protected Phases		6		2		3	
Permitted Phases	6		2				8
Actuated Green, G (s)	87.5	87.5	87.5	87.5		23.5	23.5
Effective Green, g (s)	87.5	87.5	87.5	87.5		23.5	23.5
Actuated g/C Ratio	0.73	0.73	0.73	0.73		0.20	0.20
Clearance Time (s)	4.5	4.5	4.5	4.5		4.5	4.5
Lane Grp Cap (vph)	208	3707	201	3694		346	304
v/s Ratio Prot		c0.29		0.29		c0.03	
v/s Ratio Perm	0.24		0.05				0.01
v/c Ratio	0.34	0.40	0.07	0.39		0.13	0.04
Uniform Delay, d1	5.8	6.2	4.6	6.2		39.8	39.1
Progression Factor	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.3	0.3	0.7	0.3		0.8	0.2
Delay (s)	10.2	6.5	5.3	6.5		40.6	39.3
Level of Service	B	A	A	A		D	D
Approach Delay (s)		6.7		6.5		39.9	
Approach LOS		A		A		D	

Intersection Summary

HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary

7: Roswell St & Old Milton Pkwy

06/07/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	1065	105	150	664	126	38	79	97	123	110	31
Future Volume (veh/h)	46	1065	105	150	664	126	38	79	97	123	110	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	50	1158	114	163	722	137	41	86	105	134	120	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	385	1620	721	362	1596	303	328	133	162	316	321	91
Arrive On Green	0.04	0.46	0.46	0.12	0.54	0.54	0.04	0.17	0.17	0.10	0.23	0.23
Sat Flow, veh/h	1781	3554	1582	1781	2979	565	1781	763	932	1781	1400	397
Grp Volume(v), veh/h	50	1158	114	163	430	429	41	0	191	134	0	154
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1781	1777	1767	1781	0	1695	1781	0	1797
Q Serve(g_s), s	1.7	31.6	5.1	4.9	17.8	17.8	2.2	0.0	12.6	6.9	0.0	8.7
Cycle Q Clear(g_c), s	1.7	31.6	5.1	4.9	17.8	17.8	2.2	0.0	12.6	6.9	0.0	8.7
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.55	1.00		0.22
Lane Grp Cap(c), veh/h	385	1620	721	362	952	947	328	0	295	316	0	412
V/C Ratio(X)	0.13	0.71	0.16	0.45	0.45	0.45	0.12	0.00	0.65	0.42	0.00	0.37
Avail Cap(c_a), veh/h	385	1620	721	362	952	947	328	0	295	316	0	412
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.8	26.4	19.1	18.3	17.1	17.1	37.7	0.0	46.1	33.9	0.0	39.0
Incr Delay (d2), s/veh	0.7	2.7	0.5	4.0	1.6	1.6	0.8	0.0	10.5	4.1	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	13.5	2.0	2.3	7.4	7.4	1.1	0.0	6.2	3.4	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	29.1	19.6	22.3	18.6	18.6	38.5	0.0	56.6	38.0	0.0	41.6
LnGrp LOS	B	C	B	C	B	B	D	A	E	D	A	D
Approach Vol, veh/h	1322		1022				232		288			
Approach Delay, s/veh	27.8		19.2				53.4		39.9			
Approach LOS	C		B				D		D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	68.8	16.2	25.4	19.2	59.2	9.6	32.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax),s	51	64.3	11.7	20.9	14.7	54.7	5.1	27.5				
Max Q Clear Time (g_c+l1),s	7	19.8	8.9	14.6	6.9	33.6	4.2	10.7				
Green Ext Time (p_c), s	0.0	6.3	0.1	0.5	0.2	9.0	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay	28.0											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

7: Roswell St & Old Milton Pkwy

06/07/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	977	68	93	1030	32	71	2	65	25	5	15
Future Volume (veh/h)	7	977	68	93	1030	32	71	2	65	25	5	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.98		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	1062	74	101	1120	35	77	2	71	27	5	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	337	1851	823	402	2008	63	381	7	259	326	59	190
Arrive On Green	0.05	0.52	0.52	0.10	0.57	0.57	0.07	0.17	0.17	0.05	0.15	0.15
Sat Flow, veh/h	1781	3554	1580	1781	3517	110	1781	43	1519	1781	385	1232
Grp Volume(v), veh/h	8	1062	74	101	566	589	77	0	73	27	0	21
Grp Sat Flow(s),veh/h/ln	1781	1777	1580	1781	1777	1850	1781	0	1562	1781	0	1617
Q Serve(g_s), s	0.2	24.5	2.8	2.6	24.1	24.1	4.2	0.0	4.9	1.5	0.0	1.3
Cycle Q Clear(g_c), s	0.2	24.5	2.8	2.6	24.1	24.1	4.2	0.0	4.9	1.5	0.0	1.3
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.97	1.00		0.76
Lane Grp Cap(c), veh/h	337	1851	823	402	1014	1056	381	0	267	326	0	249
V/C Ratio(X)	0.02	0.57	0.09	0.25	0.56	0.56	0.20	0.00	0.27	0.08	0.00	0.08
Avail Cap(c_a), veh/h	337	1851	823	402	1014	1056	381	0	267	326	0	249
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.3	19.6	14.5	11.8	16.2	16.2	37.7	0.0	43.3	38.2	0.0	43.5
Incr Delay (d2), s/veh	0.1	1.3	0.2	1.5	2.2	2.1	1.2	0.0	2.5	0.5	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	10.1	1.1	1.1	9.9	10.3	2.0	0.0	2.1	0.7	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	20.9	14.7	13.3	18.4	18.3	38.9	0.0	45.8	38.7	0.0	44.2
LnGrp LOS	B	C	B	B	B	B	D	A	D	D	A	D
Approach Vol, veh/h	1144					1256		150		48		
Approach Delay, s/veh	20.5					18.0		42.2		41.1		
Approach LOS	C					B		D		D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	73.0	11.0	25.0	17.0	67.0	13.0	23.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax),s	68.5	68.5	6.5	20.5	12.5	62.5	8.5	18.5				
Max Q Clear Time (g_c+1)2s	26.1	26.1	3.5	6.9	4.6	26.5	6.2	3.3				
Green Ext Time (p_c), s	0.0	9.6	0.0	0.3	0.1	9.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			20.9									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

7: Roswell St & Old Milton Pkwy

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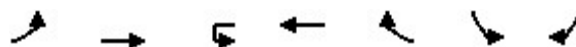
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	709	183	95	1542	0	87	1	115	50	34	30
Future Volume (veh/h)	0	709	183	95	1542	0	87	1	115	50	34	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.76		0.71	0.78		0.65
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	771	199	103	1676	0	95	1	125	54	37	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	2049	905	417	2082	0	294	2	199	212	107	96
Arrive On Green	0.00	0.58	0.58	0.05	0.59	0.00	0.07	0.18	0.18	0.04	0.15	0.15
Sat Flow, veh/h	1781	3554	1569	1781	3647	0	1781	9	1115	1781	715	638
Grp Volume(v), veh/h	0	771	199	103	1676	0	95	0	126	54	0	70
Grp Sat Flow(s),veh/h/ln	1781	1777	1569	1781	1777	0	1781	0	1124	1781	0	1353
Q Serve(g_s), s	0.0	14.1	7.4	2.7	44.4	0.0	5.2	0.0	12.4	3.0	0.0	5.6
Cycle Q Clear(g_c), s	0.0	14.1	7.4	2.7	44.4	0.0	5.2	0.0	12.4	3.0	0.0	5.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.99	1.00		0.47
Lane Grp Cap(c), veh/h	198	2049	905	417	2082	0	294	0	200	212	0	203
V/C Ratio(X)	0.00	0.38	0.22	0.25	0.81	0.00	0.32	0.00	0.63	0.25	0.00	0.34
Avail Cap(c_a), veh/h	198	2049	905	417	2082	0	294	0	200	212	0	203
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.7	12.3	9.8	19.5	0.0	37.8	0.0	45.6	40.5	0.0	45.7
Incr Delay (d2), s/veh	0.0	0.5	0.6	1.4	3.4	0.0	2.9	0.0	14.0	2.9	0.0	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.6	2.7	1.2	17.9	0.0	2.5	0.0	4.3	1.5	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.3	12.9	11.3	22.9	0.0	40.7	0.0	59.6	43.4	0.0	50.3
LnGrp LOS	A	B	B	B	C	A	D	A	E	D	A	D
Approach Vol, veh/h	970		1779				221		124			
Approach Delay, s/veh	14.0		22.2				51.5		47.3			
Approach LOS	B		C				D		D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	74.8	9.8	25.9	10.6	73.7	13.2	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax),s	50	70.3	5.3	21.4	6.1	69.2	8.7	18.0				
Max Q Clear Time (g_c+1)0s	0	46.4	5.0	14.4	4.7	16.1	7.2	7.6				
Green Ext Time (p_c), s	0.0	14.4	0.0	0.4	0.0	7.1	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			22.7									
HCM 6th LOS			C									

Appendix C- Capacity Analysis Alternatives

HCM Signalized Intersection Capacity Analysis

12: Old Milton Pkwy & Kingry St

06/07/2022

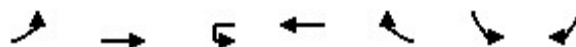


Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	40	1310	13	1425	21	19	15
Future Volume (vph)	40	1310	13	1425	21	19	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5		4.5	
Lane Util. Factor	1.00	0.91	1.00	0.91		1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00	1.00		0.94	
Flt Protected	0.95	1.00	0.95	1.00		0.97	
Satd. Flow (prot)	1768	5085	1770	5074		1706	
Flt Permitted	0.14	1.00	0.16	1.00		0.97	
Satd. Flow (perm)	255	5085	304	5074		1706	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	1424	14	1549	23	21	16
RTOR Reduction (vph)	0	0	0	1	0	14	0
Lane Group Flow (vph)	43	1424	14	1571	0	23	0
Confl. Peds. (#/hr)	4						
Turn Type	Perm	NA	Perm	NA		Prot	
Protected Phases		6		2		3	
Permitted Phases	6		2				
Actuated Green, G (s)	92.9	92.9	92.9	92.9		18.1	
Effective Green, g (s)	92.9	92.9	92.9	92.9		18.1	
Actuated g/C Ratio	0.77	0.77	0.77	0.77		0.15	
Clearance Time (s)	4.5	4.5	4.5	4.5		4.5	
Lane Grp Cap (vph)	197	3936	235	3928		257	
v/s Ratio Prot		0.28		c0.31		c0.01	
v/s Ratio Perm	0.17		0.05				
v/c Ratio	0.22	0.36	0.06	0.40		0.09	
Uniform Delay, d1	3.7	4.3	3.2	4.4		43.9	
Progression Factor	1.00	1.00	1.00	1.00		1.00	
Incremental Delay, d2	2.5	0.3	0.5	0.3		0.7	
Delay (s)	6.2	4.5	3.7	4.7		44.6	
Level of Service	A	A	A	A		D	
Approach Delay (s)		4.6		4.7		44.6	
Approach LOS		A		A		D	
Intersection Summary							
HCM 2000 Control Delay		5.1		HCM 2000 Level of Service		A	
HCM 2000 Volume to Capacity ratio		0.35					
Actuated Cycle Length (s)		120.0		Sum of lost time (s)		9.0	
Intersection Capacity Utilization		44.9%		ICU Level of Service		A	
Analysis Period (min)		15					
c Critical Lane Group							

HCM Signalized Intersection Capacity Analysis

12: Old Milton Pkwy & Kingry St

06/07/2022

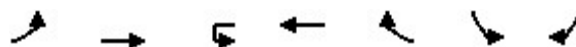


Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	147	1491	13	1686	19	38	31
Future Volume (vph)	147	1491	13	1686	19	38	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5		4.5	
Lane Util. Factor	1.00	0.91	1.00	0.91		1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00	1.00		0.94	
Flt Protected	0.95	1.00	0.95	1.00		0.97	
Satd. Flow (prot)	1768	5085	1769	5075		1684	
Flt Permitted	0.10	1.00	0.13	1.00		0.97	
Satd. Flow (perm)	179	5085	239	5075		1684	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	160	1621	14	1833	21	41	34
RTOR Reduction (vph)	0	0	0	1	0	25	0
Lane Group Flow (vph)	160	1621	14	1853	0	50	0
Confl. Peds. (#/hr)	5		3		5	3	6
Turn Type	Perm	NA	Perm	NA		Prot	
Protected Phases		6		2		3	
Permitted Phases	6		2				
Actuated Green, G (s)	92.5	92.5	92.5	92.5		18.5	
Effective Green, g (s)	92.5	92.5	92.5	92.5		18.5	
Actuated g/C Ratio	0.77	0.77	0.77	0.77		0.15	
Clearance Time (s)	4.5	4.5	4.5	4.5		4.5	
Lane Grp Cap (vph)	137	3919	184	3911		259	
v/s Ratio Prot		0.32		0.37		c0.03	
v/s Ratio Perm	c0.89		0.06				
v/c Ratio	1.17	0.41	0.08	0.47		0.19	
Uniform Delay, d1	13.7	4.6	3.3	5.0		44.3	
Progression Factor	1.00	1.00	1.00	1.00		1.00	
Incremental Delay, d2	129.1	0.3	0.8	0.4		1.7	
Delay (s)	142.8	4.9	4.2	5.4		45.9	
Level of Service	F	A	A	A		D	
Approach Delay (s)		17.3		5.4		45.9	
Approach LOS		B		A		D	
Intersection Summary							
HCM 2000 Control Delay		11.9		HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio		1.00					
Actuated Cycle Length (s)		120.0		Sum of lost time (s)		9.0	
Intersection Capacity Utilization		67.4%		ICU Level of Service		C	
Analysis Period (min)		15					
c Critical Lane Group							

HCM Signalized Intersection Capacity Analysis

12: Old Milton Pkwy & Kingry St

06/07/2022



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	64	1355	13	1300	31	42	55
Future Volume (vph)	64	1355	13	1300	31	42	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5		4.5	
Lane Util. Factor	1.00	0.91	1.00	0.91		1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00	1.00		0.92	
Flt Protected	0.95	1.00	0.95	1.00		0.98	
Satd. Flow (prot)	1770	5085	1769	5067		1668	
Flt Permitted	0.15	1.00	0.15	1.00		0.98	
Satd. Flow (perm)	286	5085	277	5067		1668	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	1473	14	1413	34	46	60
RTOR Reduction (vph)	0	0	0	2	0	39	0
Lane Group Flow (vph)	70	1473	14	1445	0	67	0
Confl. Peds. (#/hr)			1			1	2
Turn Type	Perm	NA	Perm	NA		Prot	
Protected Phases		6		2		3	
Permitted Phases	6		2				
Actuated Green, G (s)	87.5	87.5	87.5	87.5		23.5	
Effective Green, g (s)	87.5	87.5	87.5	87.5		23.5	
Actuated g/C Ratio	0.73	0.73	0.73	0.73		0.20	
Clearance Time (s)	4.5	4.5	4.5	4.5		4.5	
Lane Grp Cap (vph)	208	3707	201	3694		326	
v/s Ratio Prot		c0.29		0.29		c0.04	
v/s Ratio Perm	0.24		0.05				
v/c Ratio	0.34	0.40	0.07	0.39		0.20	
Uniform Delay, d1	5.8	6.2	4.6	6.2		40.4	
Progression Factor	1.00	1.00	1.00	1.00		1.00	
Incremental Delay, d2	4.3	0.3	0.7	0.3		1.4	
Delay (s)	10.2	6.5	5.3	6.5		41.8	
Level of Service	B	A	A	A		D	
Approach Delay (s)		6.7		6.5		41.8	
Approach LOS		A		A		D	

Intersection Summary

HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

7: Roswell St & Old Milton Pkwy

06/23/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	1065	105	150	664	126	38	79	97	123	110	31
Future Volume (vph)	46	1065	105	150	664	126	38	79	97	123	110	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.92		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1769	3539	1583	1770	3442		1763	1709		1770	1793	
Flt Permitted	0.21	1.00	1.00	0.07	1.00		0.60	1.00		0.20	1.00	
Satd. Flow (perm)	387	3539	1583	126	3442		1112	1709		379	1793	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	1158	114	163	722	137	41	86	105	134	120	34
RTOR Reduction (vph)	0	0	77	0	9	0	0	26	0	0	6	0
Lane Group Flow (vph)	50	1158	37	163	850	0	41	165	0	134	148	0
Confl. Peds. (#/hr)	2					2	4					4
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Actuated Green, G (s)	59.8	54.7	54.7	73.9	64.3		26.0	20.9		37.1	27.5	
Effective Green, g (s)	59.8	54.7	54.7	73.9	64.3		26.0	20.9		37.1	27.5	
Actuated g/C Ratio	0.36	0.33	0.33	0.44	0.39		0.16	0.13		0.22	0.17	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	181	1162	520	201	1329		193	214		182	296	
v/s Ratio Prot	0.01	c0.33		c0.07	0.25		0.01	0.10		c0.05	0.08	
v/s Ratio Perm	0.09		0.02	0.29			0.03			c0.11		
v/c Ratio	0.28	1.00	0.07	0.81	0.64		0.21	0.77		0.74	0.50	
Uniform Delay, d1	36.5	55.8	38.4	46.7	41.7		60.7	70.5		55.4	63.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.8	25.6	0.3	28.7	2.4		2.5	23.0		23.1	5.9	
Delay (s)	40.3	81.4	38.7	75.4	44.0		63.2	93.5		78.5	69.2	
Level of Service	D	F	D	E	D		E	F		E	E	
Approach Delay (s)		76.2			49.0			88.1			73.5	
Approach LOS		E			D			F			E	
Intersection Summary												
HCM 2000 Control Delay			67.2			HCM 2000 Level of Service				E		
HCM 2000 Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			166.5			Sum of lost time (s)			22.5			
Intersection Capacity Utilization			69.7%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: Roswell St & Old Milton Pkwy

06/23/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	709	183	95	1542	0	87	1	115	50	34	30
Future Volume (vph)	0	709	183	95	1542	0	87	1	115	50	34	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.96	1.00	1.00		1.00	0.97		1.00	0.82	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		0.79	1.00		1.00	1.00	
Frt		1.00	0.85	1.00	1.00		1.00	0.85		1.00	0.93	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3539	1526	1768	3539		1406	1544		1763	1425	
Flt Permitted		1.00	1.00	0.21	1.00		0.69	1.00		0.49	1.00	
Satd. Flow (perm)		3539	1526	382	3539		1016	1544		902	1425	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	771	199	103	1676	0	95	1	125	54	37	33
RTOR Reduction (vph)	0	0	79	0	0	0	0	109	0	0	22	0
Lane Group Flow (vph)	0	771	120	103	1676	0	95	17	0	54	48	0
Confl. Peds. (#/hr)	8		12	12		8	271		6	6		271
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		
Actuated Green, G (s)		52.4	52.4	57.6	52.5		23.0	18.0		23.0	18.0	
Effective Green, g (s)		52.4	52.4	57.6	52.5		23.0	18.0		23.0	18.0	
Actuated g/C Ratio		0.36	0.36	0.40	0.36		0.16	0.12		0.16	0.12	
Clearance Time (s)		4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)		1278	551	200	1281		174	191		172	176	
v/s Ratio Prot		0.22		c0.02	c0.47		c0.02	0.01		0.01	0.03	
v/s Ratio Perm			0.08	0.19			c0.07			0.04		
v/c Ratio		0.60	0.22	0.52	1.31		0.55	0.09		0.31	0.27	
Uniform Delay, d1		37.8	32.1	31.0	46.3		55.6	56.2		53.0	57.6	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.1	0.9	9.2	144.5		11.8	0.9		4.7	3.8	
Delay (s)		39.9	33.0	40.1	190.7		67.3	57.1		57.8	61.4	
Level of Service		D	C	D	F		E	E		E	E	
Approach Delay (s)		38.5			182.0			61.5			59.8	
Approach LOS		D			F			E			E	
Intersection Summary												
HCM 2000 Control Delay			123.5			HCM 2000 Level of Service				F		
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			145.0			Sum of lost time (s)				22.5		
Intersection Capacity Utilization			69.5%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

Timing Report, Sorted By Phase
7: Roswell St & Old Milton Pkwy

06/23/2022



Phase Number	1	2	3	4	5	6	7	8	9
Movement	EBL	WBTL	SBL	NBTL	WBL	EBTL	NBL	SBTL	Ped
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize	Yes		Yes		Yes		Yes		
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Maximum Split (s)	9.5	57	9.5	22.5	9.6	56.9	9.5	22.5	46.5
Maximum Split (%)	6.6%	39.3%	6.6%	15.5%	6.6%	39.2%	6.6%	15.5%	32.1%
Minimum Split (s)	9.5	56.5	9.5	22.5	9.5	56.5	9.5	22.5	46.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1	1	1	1	1	1	1	1	1
Minimum Initial (s)	5	5	5	5	5	5	5	5	7
Vehicle Extension (s)	3	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0	0
Walk Time (s)									7
Flash Dont Walk (s)									35
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes	No
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	135.4	144.9	56.9	66.4	135.4	0	56.9	66.4	88.9
End Time (s)	144.9	56.9	66.4	88.9	0	56.9	66.4	88.9	135.4
Yield/Force Off (s)	140.4	52.4	61.9	84.4	140.5	52.4	61.9	84.4	130.9
Yield/Force Off 170(s)	140.4	52.4	61.9	84.4	140.5	52.4	61.9	84.4	95.9
Local Start Time (s)	135.4	144.9	56.9	66.4	135.4	0	56.9	66.4	88.9
Local Yield (s)	140.4	52.4	61.9	84.4	140.5	52.4	61.9	84.4	130.9
Local Yield 170(s)	140.4	52.4	61.9	84.4	140.5	52.4	61.9	84.4	95.9

Intersection Summary

Cycle Length	145
Control Type	Pretimed
Natural Cycle	145
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	

Splits and Phases: 7: Roswell St & Old Milton Pkwy

Ø1	Ø2 (R)	Ø3	Ø4	Ø9
9.5 s	57 s	9.5 s	22.5 s	46.5 s
Ø5	Ø6 (R)	Ø7	Ø8	
9.6 s	56.9 s	9.5 s	22.5 s	