



DECEMBER 12, 2016

ALPHARETTA CITY HALL
COUNCIL CHAMBERS
2 PARK PLAZA
6:30 PM

I. CALL TO ORDER

II. ROLL CALL

III. PLEDGE TO THE FLAG

IV. BOARD AND COMMISSION APPOINTMENTS

A. Alpharetta Development Authority

V. CONSENT AGENDA

A. Council Meeting Minutes (Meeting of 12/05/2016)

VI. PUBLIC HEARING

A. MP-16-14/Z-16-15: Notting Hill Old Milton Holdings MU

This item was tabled by the Planning Commission and will be neither heard nor considered during this meeting.

Consideration of a request to rezone approximately 2.9 acres from R-12 (Dwelling, 'For-Sale' Residential) and DT-LW (Downtown Live-Work) to MU (Mixed-Use) in order to develop 48 'For-Sale' condominium units and 36,000 square foot office building. A master plan amendment is requested to the Old Milton Holdings Master Plan to change previous conditions of zoning and add property to the master plan. The property is located at the southwest corner of Thompson Street and Park Street and is legally described as being located in Land Lot 749, 1st District, 2nd Section, Fulton County, Georgia.

B. Z-16-13/CU-16-20/V-16-27: Perling/13 South Main Street/DT-MU

Consideration of a request to rezone 12.913 acres from C-2 (General Commercial) to DT-MU (Downtown Mixed-Use) in order to develop 36,000 square feet of retail/restaurant use 60,500 square feet of brewery, 30,000 square feet of office use, 64 'For-Sale' townhome units, 50 'For-Sale' condominium units and 200 'For-Rent' residential units. A conditional use is requested to allow 'For-Rent' residential use and to allow a residential density of 24.317 dwelling units per acre. A variance is requested from UDC Section 2.7.0(b) to delete the requirement for an on-site neighborhood grocery, as well as variances from UDC Appendix A, Alpharetta Downtown Code to increase the allowable height, allow a different architectural style, increase the maximum building setback, and increase the maximum façade length. The property is located at 13 South Main Street and is legally described as Land Lots 693, 694, 695, and 696, 1st District, 2nd Section, Fulton County, Georgia.

C. CU-16-22/PH-16-17/V-16-32: Sabri Guven

Consideration of a request to change previous conditions of zoning to allow for the expansion of the existing retail center and a freestanding office building. A request for a conditional use permit to allow a dress shop within 25% of an office building in the O-I (Office-Institutional) zoning district. A variance is requested to reduce the front and side setbacks in the O-I zoning district. The property is located at 2225, 2245 and 2255 Old Milton Parkway and is legally described as Land Lot 748, 1st District, 2nd Section, Fulton County, Georgia.

- D. V-16-33: Vein Clinics of America/Sign Variance (City Council Only)**
Consideration of a variance to allow one (1) additional wall sign. The property is located at 2775 Old Milton Parkway and is legally described as Land Lots 803 & 804, 1st District, 2nd Section, Fulton County, Georgia.

- E. PH-16-18 UDC Changes - Smart Stormwater Code (1st Reading)**
Consideration of text amendments to the Unified Development Code to implement smart stormwater strategies.

VII. OLD BUSINESS

- A. Fiscal Year 2017 T-SPLOST Budget Amendment (2nd Reading)**

VIII. NEW BUSINESS

- A. Tetra Tech - Design services for Bethany Road and Windward Parkway**
- B. POND and Company - Design services for Morris Road (Webb Bridge Road to Old Milton)**
- C. AECOM - Design Services Kimball Bridge Road and Old Milton Parkway**
- D. ATKINS - Project Management of Bond and TSPLOST Projects**
- E. Northwinds Street Lighting, ITB 17-003**
- F. Property Acquisition: 850 And 860 Old Rucker Road**

IX. WORKSHOP

- A. Marietta Street Pedestrian Improvement**

X. PUBLIC COMMENT

XI. REPORTS

XII. ADJOURNMENT TO EXECUTIVE SESSION



STAFF REPORT

Submitting Department: Council

Submitted By:

Meeting Date: December 12, 2016

I. AGENDA ITEM TITLE: ALPHARETTA DEVELOPMENT AUTHORITY

II. RECOMMENDATION:

Staff recommends the reappointment of Brad Edwards, Robert Hunter, Joe Briner, Byron Sanford, and Georgia Barrow to the Alpharetta Development Authority; said terms to expire December 31, 2020.

III. REPORT IN BRIEF:

Consideration to reappoint the following citizens to serve on the Alpharetta Development Authority:

Brad	Edwards
Robert	Hunter
Joe	Briner
Byron	Sanford
Georgia	Barrow

These citizens are all currently serving as members of the Development Authority and have terms expiring December 31, 2016. If reappointed, their new terms would expire December 31, 2020.

IV. ALTERNATIVES:

V. ATTACHMENTS:



OFFICIAL MINUTES OF COUNCIL MEETING ON DECEMBER 5, 2016

CITY HALL- 2 PARK PLAZA
6:30 P.M.

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 tapes recorded at said meeting are a matter of public record and are available to be heard at the City of Alpharetta's Clerk's office during normal business hours and on line at the City web site.

I. CALL TO ORDER

❖ *Mayor Belle Isle called the meeting to order at 6:30 p.m.*

II. ROLL CALL

- Council Members

- David Belle Isle (Mayor)
- Chris Owens (Mayor Pro Tem)
- Jason Binder
- Jim Gilvin
- Mike Kennedy
- Dan Merkel
- Donald Mitchell

- Staff

- Bob Regus, City Administrator
- Kathi Cook, Director of Community Development
- James Drinkard, Asst. City Administrator
- Mike Perry, Director of Recreation and Parks
- Lisa Gurganus, Deputy Director of Recreation and Parks
- Gary George, Director of Public Safety
- Tom Harris, Director of Finance
- Coty Thigpen, City Clerk
- Sam Thomas, City Attorney

III. PLEDGE TO THE FLAG

IV. PERSONNEL

A. Consideration Of New Director Of Public Safety

- City Administrator, Bob Regus, introduced the sole finalist for the Director of Public Safety, John Robison
- ❖ Mayor Belle Isle offered a motion to appoint John Robison as the Director of Public Safety
- The motion received a second from Council Member Gilvin
- The motion was approved 7-0
- Council took a brief recess to hold a short reception welcoming the new Director of Public Safety and then resumed the meeting at 6:53 p.m.

V. BOARD AND COMMISSION APPOINTMENTS

A. Recreation Commission: Kevin Johnson

- Mayor Belle Isle administered the Swearing-In for Council Member Gilvin's Recreation Commission Appointment Kevin Johnson

VI. CONSENT AGENDA

A. Council Meeting Minutes (Meeting of 11-14-2016)

B. Alcoholic Beverage License Applications

C. Financial Management Report: Month Ending October 31, 2016

- ❖ Council Member Kennedy offered a motion to approve the Consent Agenda
- The motion received a second from Council Member Mitchell
- The motion was approved 7-0

VII. OLD BUSINESS

A. PH-16-08 Unified Development Code - Text Amendments (2nd Reading)
Consideration of text amendments to the Unified Development Code including Spa Services, North Point Activity Center Guidelines, as well as other amendments.

- This item was heard at the July 13, 2016 Planning Commission meeting. There were no comments from the public for or against the request. After discussion, the Planning Commission voted unanimously to recommend approval of the amendments to the Unified Development Code
- Staff is asking for consideration of changes to the Unified Development Code (UDC)

in order to amend Section 1.4.2 definitions of 'Beauty Shop', 'Nail Salon', and 'Spa Services', remove Section 2.7.7 Massage Therapy, edit Section 2.2 to add 'Dwelling, Group' and 'Dwelling, 'For-Rent' as separate uses, add 'Equestrian Center' as a conditional use in the RE, R, R-22, and R-15 zoning districts, edit 2.3.1(D)(1) to allow retaining walls under 4' in building setbacks, delete Section 2.3.7 Conditional uses, and edits to Section 3.7 North Point Activity Center Guidelines.

- This being a 2nd reading, no public comment was taken

❖ Council Member Kennedy offered a motion to approve the Ordinance

- The motion received a second from Council Member Owens
- The motion was approved 6-1; Gilvin voting no

B. PH-16-12 Tree and Landscape Ordinance Amendments (2nd Reading)

- This item was deferred at the request of staff and will be heard at a later date

VIII. NEW BUSINESS

A. City Center: Consideration of Master Declaration Agreement (Resolution)

- City Attorney, Sam Thomas, outlined the details of the Agreement as it is being presented and read the correlating Resolution aloud

Public Comment

None

❖ Council Member Owens offered a motion to approve the Resolution as read by the City Attorney

- The motion received a second from Council Member Kennedy
- The motion was approved 6-1; Binder voting no

B. Downtown Sculpture Project: Recommendation To Commission Sculptures

- Assistant City Administrator, James Drinkard, came forward to present this item
- Staff is requesting authorization of the expenditure of an amount not to exceed \$137,900 to execute the 2016 Downtown Sculpture Project; to enter into agreements with Gregory Johnson (\$22,500.00), Yaoundé Odeleye (\$20,000.00), Sirlin Arts (\$30,400.00), Dillon Forge (\$32,000.00), and Outdoor Art (\$20,000.00) to create, produce, and install the specified original sculptures; and to authorize the Mayor to execute all necessary agreements.
- As part of the FY2016 Capital Budget, City Council designated \$75,000.00 for the purpose of purchasing and installing works of original sculpture art within Downtown

Alpharetta. A second allocation of \$75,000.00 was added in FY2017 to bring the total capital budget for the Downtown Sculpture Project to \$150,000.00.

- In April of this year the City of Alpharetta issued RFQ-16-1008 for the 2016 Downtown Sculpture Project: Instruments of Inspiration. The RFQ sought to create an open competition for artists or artist teams to create original sculptures of musical instruments or an artist's interpretation of a musical instrument for installation at several outdoor locations within Downtown Alpharetta. The goal of this project is to communicate and encourage the spirit of the emerging music scene that is energizing the community's downtown core while creating opportunities for citizens and visitors to physically interact with original works of visual art in a meaningful and fun way. The effort will make art and music accessible for the community to enjoy.
- The City received numerous responses from interested artists representing 23 unique sculptures.
- Committee members evaluated each art work based upon its creativity, quality, elements of design / purpose, encouragement of public interaction, and response to site / context. Sculptures were also considered within the context of one another to achieve a well-curated collection. Based upon these criteria the committee has selected a total of five sculptures for recommendation to City Council.
- The recommended sculptures and their recommended locations are generally described in the attachments associated with this agenda item. It is noted, however, that the pieces selected range from the traditional to the modern and cover a broad range of musical forms.

Public Comment

None

- ❖ Council Member Mitchell offered a motion to approve the Downtown Sculpture Project recommendation to commission sculptures.
 - The motion received a second from Council Member Kennedy
 - The motion was approved 7-0

C. Fiscal Year 2017 T-SPLOST Budget Amendment (1st Reading)

- Director of Finance, Tom Harris, came forward to present this item
- The purpose of the Fiscal Year (FY) 2017 Metropolitan County Transportation Special Purpose Local Option Sales Tax ("T-SPLOST") Budget Amendment is to amend the base budget as adopted by City Council for the T-SPLOST activity forecasted to occur during fiscal year 2017.
- Initiatives are discussed in detail within the Fiscal Year 2017 T-SPLOST Budget Amendment document

Public Comment

None

- ❖ Council Member Mitchell offered a motion to adopt the Ordinance of the Mayor and Council of the City of Alpharetta, Georgia to adopt a FY2017 T-SPLOST Budget for the City of Alpharetta in the amount not to exceed \$3,000,000
 - The motion received a second from Council Member Owens
 - The motion was approved 7-0

D. Wills Park Batting Pavilion, ITB 17-001

- Director of Recreation and Parks Mike Perry came forward to present this item on behalf of staff
- Staff is seeking Council approval for the following:
 - (1) Award ITB 17-001 for the Wills Park Batting Pavilion project to Riley Contracting Inc. in an amount totaling \$262,893.00 and authorize the Mayor to execute all necessary documents; and
 - (2) Authorize an MOU with the Alpharetta Youth Baseball Association for a contribution totaling \$115,000.00 to the City of Alpharetta to defray costs of the Wills Park Batting Pavilion project.
- The FY 2017 Capital Budget includes funding for construction of a batting pavilion at Wills Park. The batting pavilion will approximate 7,000 square feet in size and be located near fields 1-4. The pavilion will house five (5) large batting cages, one (1) pitching lane, and one (1) soft toss area. The pavilion will be on a concrete slab with a roof, but no walls, and enclosed with black vinyl link fencing and lighted for nighttime usage.
- The Recreation and Parks Department (the "Parks Department"), in partnership with the Alpharetta Youth Baseball Association ("AYBA"), worked collaboratively with Design Works (Architect) to design the Wills Park Batting Pavilion and provide construction specifications for an Invitation-to-Bid ("ITB").
- The Public Works, Parks, and Finance Departments prepared an ITB for construction of the Wills Park Batting Pavilion and advertised in September and October 2016. Bids were received on October 13, 2016.
- The apparent low bidder, Riley Contracting LLC has experience in constructing metal pre-fab buildings (Forsyth County, City of Tyrone, etc.) and their baseball experts, Better Baseball, has extensive experience in batting pavilion setup and equipping. Contacted references complimented Riley Contracting Inc. for their workmanship and indicated they would work with them again in the future. If given an opportunity.
- Staff met with representatives from Riley Contracting Inc. and Better Baseball on October 26, 2016, to review the scope of work and the City's expectations. Riley Contracting Inc. assured staff that they could complete the project for the bid amount and within the

allotted time frame (late Spring/early Summer). Thus, Staff has determined Riley Contracting to be the lowest responsive and responsible bidder.

- Subsequent to the Bid opening, staff worked with the apparent low bidder to provide a quote for multiple upgrades to the base bid specifications including: (#1) painting of the roof and gutters (hunter green) which will blend into the park surroundings better and reduce glare (+\$7,850); and (#2) upgrading the batting pavilion netting (within each batting tunnel and along the perimeter) including having a uniformed hemming along the bottom (as opposed to bunching on the ground which accumulates debris such as leaves and is generally less visually appealing) that is accomplished through additional cabling and weights (+\$16,350). The above upgrades to the base bid specifications bring the total bid to \$262,893.
- Staff believes the value added with the above upgrades is a worthy investment in both functionality and aesthetics. AYBA has committed to funding \$115,000 with the City funding the remaining \$147,893 (\$128,992 is available in the Wills Park Batting Pavilion project account with the remaining \$18,901 coming through a reallocation of available funding in the Athletic Scoreboards Replacement account – no boards are scheduled for replacement this fiscal year). AYBA will also be equipping the batting pavilion.

Public Comment
None

- ❖ Council Member Binder offered a motion (1) Award ITB 17-001 for the Wills Park Batting Pavilion project to Riley Contracting Inc. in an amount not to exceed \$262,893.00 and authorize the Mayor to execute all necessary documents; and (2) Authorize an MOU with the Alpharetta Youth Baseball Association for a contribution totaling \$115,000.00 to the City of Alpharetta to defray costs of the Wills Park Batting Pavilion project.
- The motion received a second from Council Member Gilvin
- The motion was approved 7-0

E. Dangerous Driving Education Program

- Director of Public Safety, Gary George, came forward to present this item on behalf of staff
- Staff seeks authorization and approval to operate the Department of Public Safety's Dangerous Driving Program and to fully fund such program through the charging of a fee of \$75 per participant to be levied by the Alpharetta Municipal Court for the specific purpose of funding the program The Department of Public Safety's Dangerous Driving Program was started by the Community Services Unit as an educational outreach program to the local high schools. Through the efforts of the Traffic Enforcement Unit, City Court, and City Solicitor, the class morphed into a driver's safety class for under 21-year-old traffic violators. In lieu of attending a private class

as a part of sentencing for traffic offenses, the under 21 offenders are given the option of attending the Dangerous Driving Course provided by the police department.

- The Dangerous Driving course has many benefits over a traditional private course. In addition to providing hands-on driver's training directly overseen by police officers, the course keeps the young adults together as a group, rather than interspersed with adults of all ages. This creates a more effective learning environment for the young adults, and provides direct benefits to the citizens of Alpharetta.
- The response of both the young adults and their parents is overwhelmingly positive. The court likes the program because it gives them a more positive way of addressing the traffic offenses of young adults. The Department of Public Safety would like to continue the program, but believes that the City needs to collect a fee to recover the cost of administering the program. The program is currently put on once a month for the court, and as needed for the high school students. The time spent planning and executing the program takes officers away from their normal duties. There is currently no dedicated budget for the program and no funding to maintain the donated equipment.
- All parties directly involved have agreed in principal to a plan that will allow us to continue the program while enabling us to recover operating expenses and pay overtime to the officers who run the course. The Finance and Public Safety Departments worked together to identify estimated costs and allocate over forecasted attendance to arrive at a defensible cost-recovery fee of \$75 per student. Assuming a roster of 25 students per class, offered 12 times a year, annual program costs total \$22,500. It is currently anticipated that this initiative will be part of the Mid-Year Budget to reflect program operations for the remainder of FY 2017.

Public Comment

- ❖ Council Member Gilvin offered a motion to authorize and approve the operation of the Department of Public Safety's Dangerous Driving Program and to fully fund such program through the charging of a fee of \$75 per participant to be levied by the Alpharetta Municipal Court for the specific purpose of funding the program The Department of Public Safety's Dangerous Driving Program
 - The motion received a second from Council Member Merkel
 - The motion was approved 7-0

F. Fire Engine Acquisitions: Replacement Of Fire Engines #8476/#8477 And Fire Ladder Truck #8414 (Resolution)

- Director of Public Safety, Gary George, came forward to present this item on behalf of staff

- Staff requests that Council approve the acquisition of two (2) replacement fire engines and one (1) fire aerial ladder truck (Pierce) through Ten-8 Fire and Safety Equipment of Georgia at a cost of \$2,330,524.54.
- Staff also requests that Council adopt a Resolution authorizing the Mayor to execute all associated documents with Banc of America Public Capital Corporation for the purposes of funding the fire engines/ladder truck acquisitions.
- This request is for the purchase of the following:
 - Two (2) new Pierce Fire Engines (a.k.a. Fire Pumpers) to replace the existing Pierce Fire Engines #8476 and #8477, both of which were acquired in 2007 (via a lease-financing which was paid off this year). Fire Engine #8476 has over 91,000 miles and Fire Engine #8477 has over 79,000 miles. These Fire Engines have reached the Public Safety Department's targeted service life (10-years) and will be placed in the reserve fleet. The City will surplus the two remaining HME Fire Engines (#0714 and #0713) which are currently in the reserve fleet.
 - One (1) new Pierce Fire Ladder Truck (a.k.a. Fire Aerial Truck) to replace the existing Pierce Fire Ladder Truck #8414 which was acquired in 2007 (via a lease-financing which was paid off this year). Fire Ladder Truck #8414 has over 51,000 miles and will be placed in the reserve fleet. The City will surplus the 2001 HME Ladder Truck #11 which is currently in the reserve fleet.
- The requested Pierce Fire Engines/Ladder-Truck have been designed to ensure compatibility with new development in Alpharetta. The new engine is shorter and narrower to aid in navigating roundabouts as well as the unique needs of Avalon and City Center (e.g. streets with on-street parking).
- The City of Alpharetta has 8 fire apparatus including 6 fire engines/pumpers, 1 fire ladder truck, and 1 air/light truck in active duty. The Finance and Public Safety Departments have developed a funding plan to ensure all fire apparatus are built into the annual operating budget under 10-year capital lease programs (except Ladder Trucks which will be extended to 13-years due to lower usage rates) that (A) ensure highly functional equipment to aid the Department in meeting its service needs to our citizens and to (B) eliminate periodic impacts to the capital budget.
- The Fire Engines/Ladder Truck being replaced from active duty were acquired in 2007 and funded through a 10-year capital lease with the last payment occurring on 11/1/2016. The capital lease financing for the replacement Fire Engines/Ladder Truck is set forth below with the first payment occurring on 11/1/2017 and will be built into the base operating budget for FY 2018.
- Assembly and construction will take a minimum of 12-months with delivery estimated in late 2017/early 2018.

Fire Engine/Ladder Replacements

- Pierce is the City's approved single source provider of fire engines/trucks. Pricing for the Pierce Fire Engines/Ladder-Truck quoted herein is in accordance with the competitively bid contract (RFP No. 1420) awarded to Pierce by the National Purchasing Partners (NPP). RFP 1420 became effective August 13, 2015 and is valid until August 12, 2017 (with an option for three additional 1-year renewals). Under the Procurement Code, the City is authorized to piggy-back off of competitively procured contracts provided through other governmental entities. Ten-8 and Pierce representatives have stated that the pricing under this contract is the most competitive and forms the basis of what would be provided to the City under a standalone bid scenario.
- Pierce Fire Engine Acquisition Costs (two vehicles and equipment; less allocable pre-payment discount): \$1,153,627.31
- Pierce Fire Ladder Truck Acquisition Cost (one vehicle and equipment; less allocable pre-payment discount): \$1,176,897.23

Capital Lease Program

- As mentioned above, the Public Safety Department's targeted service life for Fire Engines stands at 10-years while the targeted service life for the Fire Ladder Truck is being increased to 13-years to reflect lower usage rates (i.e. "wear and tear") for this apparatus. The varied service lives require separate capital lease financing quotes:

Pierce Fire Engines (Qty: 2)

- The Finance Department solicited quotes for the fire engine financing from seven financial institutions and obtained the following results: Banc of America (2.075%); SunTrust (2.140%); JP Morgan (2.250%); BB&T (2.540%); PNC (3.047%); Wells Fargo (no quote); State Bank & Trust (no response). Banc of America provided the most competitive interest rate and is the recommended partner for this transaction. Transaction terms include:
 - Loan amount: \$1,153,627.31
 - 10-year term;
 - 2.075% fixed interest rate;
 - no closing costs; and
 - \$128,577.06 annual payment.

Pierce Fire Ladder Truck (Qty: 1)

The Finance Department solicited quotes for the fire ladder truck financing from seven financial institutions and obtained the following results: Banc of America (2.250%); SunTrust (2.270%); BB&T (2.730%); PNC (3.359%); JP Morgan (max 10-year term); Wells Fargo (no quote); State Bank & Trust (no response). Banc of America provided the most competitive interest rate and is the recommended partner for this transaction. Transaction terms include:

- Loan amount: \$1,176,897.23
 - 13-year term;
 - 2.250% fixed interest rate;
 - no closing costs; and
- \$105,107.00 annual payment.
- The Public Safety Department has appropriations totaling \$212,670 programmed within its FY 2017 base operating budget to fund the annual lease payment (final year of the lease-financing for the fire engines/ladder truck acquired in 2007). The new annual lease payment will total \$233,546.81 (starting in FY 2018). The annual lease payment increase of \$21,014.06 (new payment of \$233,684.06 less the existing appropriation of \$212,670) will be programmed into the FY 2018 base operating budget.
- City Attorney, Sam Thomas, read the Resolution aloud

Public Comment

- John Hipes, 12295 Dancliff Trace, Alpharetta, GA, came forward to speak on this item
- ❖ Council Member Gilvin offered a motion to approve the acquisition of two (2) replacement fire engines and one (1) fire aerial ladder truck (Pierce) through Ten-8 Fire and Safety Equipment of Georgia at a cost not to exceed \$2,330,524.54 and adopt a Resolution as read by the City Attorney authorizing the Mayor to execute all associated documents with Banc of America Public Capital Corporation for the purposes of funding the fire engines/ladder truck acquisitions.
- The motion received a second from Council Member Owens
- The motion was approved 7-0

IX. PUBLIC COMMENT - None

X. REPORTS

- Council Member Gilvin commended the Public Safety Department and Battalion Chief Carl Hall on the recent recognition by the International Academy of Emergency Dispatch as an "Emergency Dispatch Center of Excellence". The City of Alpharetta is 1 of only 11 centers in the world to obtain this designation.
- Mayor Belle Isle commented on the success of the Alpharetta Tree lighting event this past Saturday.

XI. ADJOURNMENT TO EXECUTIVE SESSION

- ❖ Council Member Kennedy offered a motion to adjourn into Executive Session
- The motion received a second from Council Member Mitchell

- The motion was approved 7-0
- The meeting was adjourned at 8:05 p.m.

Respectfully Submitted,

A handwritten signature in black ink that reads "Coty Thigpen". The signature is written in a cursive, flowing style.

Coty Thigpen, City Clerk



CITY COUNCIL MEETING STAFF REPORT

SUBMITTING DEPARTMENT: COMMUNITY DEVELOPMENT

SUBMITTED BY: KATHI COOK

DRAFTED BY: MICHAEL WOODMAN

I. AGENDA ITEM TITLE: Z-16-13/CU-16-20/V-16-27 PERLING/13 S. MAIN STREET/DT-MU

CITY COUNCIL: DECEMBER 12, 2016

This item was heard at the December 1, 2016 Planning Commission meeting. One resident spoke in favor of the request. Several residents spoke in opposition to the request, stating that they had concerns with density, apartments, traffic, and that the applicant was requesting too many variances to the Downtown Code. After discussion, the Planning Commission recommended to deny the request. Vote (6-1)

II. RECOMMENDATION:

Deny Z-16-13/CU-16-20/V-16-27 Perling/13 S. Main Street/DT-MU request for rezoning, conditional use, and variance.

If approval is considered, the following conditions are recommended:

1. The property to be rezoned shall have a "DT-MU" zoning classification.
2. Property shall be developed substantially in accordance with the submitted plan prepared by TSW, dated 11/16/2016, with heavily amenitized seating areas, final approval by Staff. However, lot yield depicted is not guaranteed and subject to meeting all City Code requirements and conditions of zoning.
3. Architectural style of all buildings shall be Mercantile/warehouse or shall meet the architectural and building design requirements of the Alpharetta Downtown Code. Non-residential and mixed-use buildings shall be approved by

Design Review Board and residential buildings shall be approved by Staff. Stacked flat buildings shall have flat roofs.

4. Development regulations shall be as follows:
 - a. Office – Maximum of 64,500 square feet. Building height shall be limited to 4 stories or 60 feet, whichever is less.
 - b. Retail/Restaurant – Maximum of 50,800 square feet, of which a minimum of 15,000 square foot shall be limited to a craft brewery. No more than two free standing restaurant buildings and one free standing retail building shall be permitted. Freestanding retail/restaurant buildings shall be a minimum height of 18'. All restaurant uses shall include outdoor seating areas (min. 25% of space occupied by restaurants), including at least one building with rooftop dining. No drive-thru restaurants shall be permitted.
 - c. 'For-Rent' Residential – Maximum of 172 'For-Rent' dwelling units in accordance with UDC 'For-Rent' requirements shall be permitted. Maximum building height shall be 4 stories or 60 feet, whichever is less. Maximum building façade along the public right-of-way shall be 200 feet with a minimum landscaped garden separation of 50 feet between building walls. No more than 50% of the units may be two (2) bedroom units. 'For-Rent' units shall be constructed concurrently with retail/restaurant, craft brewery, 'For-Sale' residential and 36,000 square feet of office development. A Certificate of Occupancy shall not be issued for rental units until 36,000 square feet of office and 25,000 square feet craft brewery has been constructed and a certificate of occupancy issued for both. The units shall be part of a mixed-use development incorporating retail, brewery, 'For-Sale' residential units, connection to a neighborhood grocery, restaurant, and office. 'For-Rent' units shall have first class amenities, which shall include a private pool, fitness center, secure gated parking, resident's lounge, business center, on-site management office and secure elevator access. 'For-Rent' dwellings are prohibited on the first floor of the building on a Storefront Street. A maximum of 2 building sides shall be permitted first floor dwellings. All ground floor residential units shall be oriented to the sidewalk, provide individual unit entrance from the exterior of the building, provide individual stoops or porches, and provide a minimum of one ground floor window facing the sidewalk.
 - d. 'For-Sale' Residential – A maximum of 50 'For-Sale' condominium units shall be permitted. Maximum building height shall be 4 stories or 60 feet, whichever is less. Up to an additional 62 'For-Sale' Attached (townhome, semi-detached, and/or condominium) and Detached units shall be developed. 'For-Sale' townhomes, semi-detached, and detached product shall be oriented to Devore Road and/or the multi-use path and shall be rear-loaded. All other interior townhomes, semi-detached and detached product may be oriented to the internal driveway/street and may be permitted parking between the driveway/street and the residential structure.
 - e. Parking Decks – Maximum of 4 levels or 60 feet plus basement level, whichever is less. Parking decks visible from South Main Street and Devore Road shall be treated with comparable materials and finishes as the buildings they serve. Suitability of parking deck elevation, visibility and landscape screening shall be approved by the Design Review Board.
5. Density shall be limited to a maximum of 21.99 dwelling units per acre.
6. All residential units along Devore Road shall be oriented to the street with their front door facing Devore Road.
7. Visible privacy fence shall be prohibited along Devore Road and the multi-use path.
8. A minimum 25' undisturbed buffer, heavily planted landscape where sparse, shall be provided adjacent to the east and north between residential and commercial and a 10' heavily planted landscape strip between commercial and Dogwood Square on each side of the multi-use path.
9. Impacts to off-site trees shall be minimized. The owner(s) of off-site trees shall be notified of any encroachment greater than 20% or as directed by the City Arborist. This notification shall include a letter from the project Arborist detailing the extent of the encroachment and possible outcomes.
10. Pedestrian-scale lighting and amenities shall be required throughout the development.
11. The site shall provide a proportionate amount of civic and amenity space based on the density approved above the maximum 10 dwelling units per acre permitted in the DT-MU zoning district (a density of 21.99 du/ac would warrant 2.84 acres of civic space). A minimum of 1 acre of civic space shall be set aside as passive green area adjacent to the multi-use path between the multi-family building and the 'For-Sale' residential.
12. Dedicate a minimum 15' public access easement to the City and construct a 12' multi-use path as depicted on the site plan with final location approved by Staff. Multi-use path shall be accessible and constructed of concrete as approved by Staff. The path shall include an entrance gateway/arch on Devore Road, landscaping, low-level path lighting, seating areas, and useable greenspaces as approved by Staff. A bike share station shall be provided at a location along the path as approved by Staff. Parks impact fee credits shall be provided to the developer for improvements within the public access easement.
13. The frontage of South Main Street shall be developed with a minimum 2,000 square foot civic space and shall incorporate seating, Downtown Alpharetta Entrance signage, and a focal point feature (sculpture) with final

approval by DRB and the local arts committee. Applicant shall include a minimum of 3 original sculptures located at prominent locations within the development. Locations shall be identified and approved by Staff. Sculptures shall require approval by the local Art Committee. A minimum of 2 sculptures shall be installed prior to the issuance of the first CO.

14. An accessible path shall be provided from the project site to the property of the Walmart Neighborhood Market at the northeast corner of the site where the properties abut as approved by Staff.
15. All buildings along South Main Street and Devore Road shall face those streets or appear to face those streets. No backside of buildings or “back of house” functions (such as loading or dumpster area), shall be visible from those streets.
16. Alcohol license distance requirements from residential development shall be waived.
17. As depicted in the rendering prepared by TSW, a green roof and a rooftop amenity area shall be required and count toward required amenity space.
18. Civic spaces shall include decorative hardscape consisting of pavers or other materials approved by Staff, as well as green areas. Landscaping shall be required in the civic space in well-defined planting beds and trees in tree wells as approved by Staff. A bocce ball court, or an alternative outdoor recreational feature approved by Staff, shall be required within an area designated civic space as approved by Staff.
19. Pedestrian connections shall be provided between buildings and across roadways within the development. Pedestrian crossings throughout development shall be ramped and the surface materials shall be brick pavers, cobblestones or architecturally treated concrete products as approved by Staff.
20. Detention facilities shall not be visible from South Main Street or Devore Road, except a decorative water feature approved by Staff.
21. The developer shall provide bicycle racks, benches, trash receptacles, decorative crosswalks, planters, kiosks and other street furniture, where appropriate, throughout the development. A bus drop-off area with shelter and dedicated lane shall be incorporated into the plan design along South Main Street or at an alternative location acceptable to MARTA. Developer shall work in good faith with MARTA to add the development to city bus routes in order to assist with transportation service for employees.
22. Developer shall improve the realignment of Devore Road, per the GDOT design. The developer shall improve the south side of South Main Street, per the GDOT design. Roadway improvements shall be eligible for road impact fee credits.
23. New driveways on Devore Road shall align with existing intersections at Karen Drive and Michael Drive as approved by Staff.
24. Awnings shall be provided on buildings at street level where reasonably appropriate as determined by Staff in order to protect pedestrians from inclement weather. Awnings may encroach into the right-of-way per the Alpharetta Downtown Code.
25. Streets within the development shall be private.
26. All new onsite utilities shall be located underground, subject to utility provider consent and approval.
27. Provide detailed street planting for South Main Street and Devore Road. Landscape plan shall have trees planted on each side of the sidewalk, including pedestrian lights and shall be approved by Staff at Land Disturbance Permit.
28. Streetscape along South Main Street and Devore shall meet the requirements in the Downtown Code and shall incorporate tree wells and pedestrian lighting as approved by Staff.
29. The new street corridor leading to the parking decks shall have street trees, pedestrian lighting, and landscaping as approved by Staff.
30. Prior to the first certificate of occupancy for residential land uses, improve the intersection at South Main Street and the realigned Devore Road to include the following: westbound left and right turn lanes; southbound left turn lane; and, signalize the intersection. Intersection design to be approved by staff.
31. Provide a raised brick paver crosswalk, or alternative design approved by Staff, across Devore Road with direct access to the multi-use trail as approved by Staff.
32. Rooftop signs shall be permitted subject to Staff approval.
33. Zoning shall revert to C-2, if a building permit is not been issued for ‘For-Rent’ residential use by 12/12/2018.

III. REPORT IN BRIEF:

The applicant, Duke Land Group, is requesting a change in zoning for 12.913 acres from C-2 (General Commercial) to DT-MU (Downtown Mixed-Use) in order to develop 25,800 square feet of retail/restaurant, 25,000 square feet of craft brewery, 64,500 square feet of office, 50 ‘For-Sale’ condominium units, 62 ‘For-Sale’ townhome and detached units and 200 ‘For-Rent’ units. A conditional use is requested to allow ‘For-Rent’ residential use and to allow a residential density of 24.16 dwelling units per acre. A variance is requested from Unified Development Code (UDC) Section 2.7.0 (b) to delete the requirement for an on-site neighborhood grocery, as well as variances from UDC Appendix A, Alpharetta

Downtown Code to increase the allowable height from 4 to 5 stories, allow a different architectural style, increase the maximum front building setback, and increase the maximum façade length.

DISCUSSION

The submitted request, if approved, will allow for the construction of a mixed-use development on a 12.913-acre site consisting of 25,800 square feet of retail/restaurant, 25,000 square feet craft brewery, 64,500 square feet of office, 50 ‘For-Sale’ condominium units, 62 ‘For-Sale’ townhome and detached units, and 200 ‘For-Rent’ apartment units. The proposed residential density is 24.16 dwelling units per acre. The subject property is located at the southeast corner of South Main Street and Devore Road and extends along the north side of Devore Road.

The subject property is currently zoned C-2 (General Commercial) and is surrounded by C-2 to the west, north, and east and R-12 to the south. Dogwood Square, Walmart Neighborhood Market, Express Oil & Lube, Bank of America, QuikTrip and Alpha Park are located adjacent to the property. The property and adjacent properties are located in the Downtown Overlay and have a Comprehensive Land Use Plan designation of Mixed Use with the exception of Alpha Park, which has a designation of Downtown Residential Density.

Conditional use permits are requested to allow ‘For-Rent’ residential units, as well as to allow the residential density to exceed ten (10) dwelling units per acre. The applicant proposes 200 ‘For-Rent’ units and a residential density of 24.16 dwelling units per acre. In addition, a variance is requested to delete the requirement for an on-site neighborhood grocery in conjunction with ‘For-Rent’ residential use outside the Central Business District. Variances are also requested from Unified Development Code (UDC) Appendix A, Alpharetta Downtown Code to increase the allowable height from 4 to 5 stories, allow a mercantile/warehouse architectural style, increase the maximum front building setback, and increase the maximum façade length of the multi-family building.

The Downtown Master Plan and Comprehensive Land Use Plan identify the DT-MU zoning district as the appropriate zoning district for the subject property. As identified in the 2035 Comprehensive Plan, the property is also located in the Downtown Activity Center Character Area, which is described as:

“PRESERVE and ENHANCE historic features and small-town character. CREATE a central “heart” of the city and a community destination for civic activities, shopping, businesses and residences. It is the intent to encourage a true mixed use destination that creates a walkable and vibrant community center.”

“Future development should emphasize a strong concentration of activity along Main Street, Milton Avenue, and Academy Street surrounded by a mix of residential and commercial uses generating a high level of activity and reinforcing a walkable, downtown development pattern. The vision for the downtown district is to preserve and strengthen the historic core of Alpharetta through the strategic protection of historic resources and integration of complementary new development. Central to this strategy is expanding the mix of retail, restaurant, and professional uses in downtown while providing new distinct housing opportunities. The downtown district is intended to be the most walkable area within Alpharetta. A generous network of sidewalk and bicycle facilities should be integrated with existing and new green spaces and streetscapes creating a safe and pleasant walking environment that makes the area a destination.”

Consideration should be given to maintaining a balance between ‘For-Rent’ versus ‘For-Sale’ product in the City. The 2035 Comprehensive Land Use Plan identifies the following policy as it relates to maintaining a balance of ‘For-Sale’ versus ‘For-Rent’ housing in the City:

Housing Policy 2: Maintain a balance between ‘owner-occupied’ and ‘renter-occupied’ in Alpharetta such that at least 68% of the housing stock is ‘owner-occupied’.

There are many factors that must be considered with requests for apartments, such as mix of uses, design, long-term viability, impacts to City facilities and services, as well as traffic and school impacts. High density housing should be tied to office space where jobs exist and are created and service uses are available to limit vehicular trips. The 64,500 square feet of office use will generate approximately 322.5 employee, assuming one (1) employee per 200 square feet. Current apartment conditions in the City reflect occupancy ranges from 93% to 100% leased.

The Downtown Master Plan 5-Year Market Analysis identified a demand potential of 315 – 340 mixed-use rental flats within the Downtown Master Plan overlay. City Center’s approval included 168 ‘For-Rent’ dwelling units, which leaves 147 – 172 ‘For-Rent’ units remaining within the Downtown Overlay based on the market study. The City Rental Housing Study, which was recently updated, recommends as an approach to achieve no more than 32% rental housing that the City target an entitlement of no more than 93 – 159 ‘For-Rent’ units annually. It is important to note that this approach has not been adopted as a City policy. The City is currently at 36% rental housing; therefore, careful consideration should be given to approval of rental housing. Rental units should be part of a mixed-use development that provides ‘For-Sale’ residential, office, service retail, access to a neighborhood grocery, park and recreational amenities. Additionally, proximity to Georgia 400 should be a consideration because of the increased traffic.

SITE PLAN

The applicant’s site plan depicts the mixed-use development being broken up into three (3) distinct areas. Several interconnected buildings are located at the corner of South Main Street and the Devore Road extension, including an office behind a craft brewery and parking, retail with office above, condominiums, and a parking deck. There are also two (2) freestanding restaurants in this area. The remainder of the property along Devore Road is proposed for residential uses, including a multi-family building with internal parking deck and townhomes and detached product.

Devore Road will be realigned as part of a GDOT project with the general location of the road moving north of the Bank of America building. If approved, the proposed development will include the realignment of Devore Road, as well as improvements on South Main Street. GDOT’s timeline to begin this roadway project is behind the timeline of the mixed-use development. The traffic signal and continuation of Devore Road to Roswell Street would be completed by GDOT at a future time.

The site plan proposes a total of 889 parking spaces. Assuming that all multi-family and condominium units are two-bedroom units, the total required parking for all uses, except the detached and townhome product is 833 parking spaces. Townhome and detached units will meet all parking requirements within garages and private driveways.

Full access driveways to the site are depicted along Devore Road at three (3) locations and at one (1) location on Janis Lane. The applicant has engaged Dogwood Square for an agreement to allow access through Janis Lane, which is a private right-of-way along the north side of the property.

The site plan depicts buildings at the corner of South Main Street and Devore Road with setbacks greater than the maximum 10’ requirement. The building setbacks in the DT-MU zoning district are as follows:

- Front Setback (South Main Street/Devore Road) – Min. 5 feet and Max. 10 feet
- Side Setback – 0 feet
- Rear Setback – Min. 3 feet (alley) and 6 feet (no alley)

The undeveloped portion of the subject property is heavily wooded with pines and hardwoods. However, the applicant’s arborist report only identifies two (2) specimen-sized trees on the site. The City Arborist has questions about the tree assessment and has requested additional information. The requested information has not been provided.

The applicant proposes a variance to deviate from the prescribed historic architectural styles in the Alpharetta Downtown Code and proposes Mercantile/warehouse architecture. However, the renderings provided by the applicant lack sufficient detail depicting the requested architectural style. Renderings have not been submitted depicting the new office building/brewery configuration, apartment building, detached and townhome product. In addition, the applicant requests a variance to increase the maximum façade length of the multi-family building from 200’ to 305’ along Devore Road.

Non-residential tenants and developer(s) of the residential uses have not been confirmed by the applicant.

OPEN SPACE

The DT-MU zoning district includes an open space requirement of a minimum 10% civic space and a minimum 10% amenity space. Civic space must be available for public use and may include a park, square, plaza, pocket park, and/or playground. Amenity space is intended for private use and may include rooftop decks, balconies, patios and porches, outdoor dining areas, pool areas, tennis courts and similar uses, yards and gardens, hardscape areas improved for pedestrian enjoyment, and wooded areas. The minimum 10% civic and amenity space requirement is based on a maximum density of ten (10) dwelling

units per acre in the DT-MU zoning district. Since the applicant is requesting a conditional use to allow a residential density of nearly 2.5 times of that permitted in the proposed zoning district, it is recommended that civic and amenity space minimum requirements are increased proportionate to the increased density.

Civic space is depicted on the site plan as squares, courtyards, and plazas located primarily at the corner of South Main Street and Devore Road with a total acreage of 2.41 acres. As shown on the site plan and renderings, civic spaces consist of decorative hardscape appearing to be paver and/or architecturally-treated concrete, trees in tree wells, a fountain, and seating areas. Amenity spaces are depicted to include a rooftop deck between the brewery and office buildings, as well as amenity spaces for each of the residential uses. The total land area of all amenity space is 1.37 acres. A 12' multi-use path is shown along Devore Road and cutting through the site before running along the eastern property line with Dogwood Square. The path lacks useable green spaces and seating areas as currently depicted on the site plan.

Based on the American Community Survey estimates of average household size below, the applicant's proposed development would generate a population of 794 persons. Under the maximum density in the DT-MU, the site would generate approximately 351 persons. Due to the increased population generated by the applicant's proposal, it is recommended that the site provide a proportionate amount of civic and amenity space based on the increased density over the permitted ten (10) dwelling units per acre in the DT-MU. Therefore, the applicant's current proposal would require 3.12 acres of civic space and 3.12 acres of amenity space.

2011-2013 American Community Survey 3-Year Estimates – AVERAGE HOUSEHOLD SIZE

	Alpharetta city, Georgia	
	Estimate	Margin of Error
Total:	2.72	+/-0.09
Owner occupied	2.93	+/-0.13
Renter occupied	2.33	+/-0.16

TRAFFIC

The applicant commissioned a traffic impact study to assess the traffic impacts of the development on the surrounding transportation system. With the exception of South Main Street at the realigned Devore Road, all intersections operate at acceptable levels. With the planned GDOT improvements along South Main Street, the intersection at South Main Street and Devore Road operates within acceptable standards. If the Project precedes the GDOT improvements, the development should improve the Main Street at Devore Road as follows: Provide a westbound left turn lane and thru/right lane; provide a southbound left turn lane; signalize intersection. Improvements within the South Main Street right-of-way may be made per the approved GDOT plans, which consist primarily of striping modification and lane width adjustments.

The applicant submitted trip generation figures for the proposed project. As shown in the tables below, the proposed uses will generate 384 PM Peak Hour trips when adjusted for internal capture trips.

Project Land Use		Project Density	Total	Inbound	Outbound
Apartments (220)		200 dwelling units			
	Daily		1336	668	668
	AM Peak Hour		102	20	82
	PM Peak Hour		128	83	45
Townhomes (230)		64 dwelling units			
	Daily		436	218	218
	AM Peak Hour		36	6	30
	PM Peak Hour		42	28	14
Condos (230)		50 dwelling units			
	Daily		352	176	176
	AM Peak Hour		30	5	25
	PM Peak Hour		34	23	11
Residential New Trips		314 dwelling units			
	Daily		2124	1062	1062
	AM Peak Hour		168	31	137
	PM Peak Hour		204	134	70
Residential Internal Capture	Reduction				
	AM Peak Hour		9	2	7
	PM Peak Hour		45	19	26
External Residential New Trips					
	AM Peak Hour		159	29	130
	PM Peak Hour		159	115	44
Office (710)		30 1000 square feet			
	Daily		526	263	263
	AM Peak Hour		73	64	9
	PM Peak Hour		112	19	93
Specialty Retail (826)		29.5 1000 square feet			
	Daily		1300	650	650
	AM Peak Hour		260	125	135
	PM Peak Hour		92	40	52
Quality Restaurant (931)		3.5 1000 square feet			
	Daily		316	158	158
	AM Peak Hour		3	2	1
	PM Peak Hour		26	17	9
High Turnover Restaurant (932)		3 1000 square feet			
	Daily		382	158	158
	AM Peak Hour		32	18	14
	PM Peak Hour		30	18	12
Brewery (No Land Use Code)		60.5 1000 square feet			
(Double Existing Counts)	AM Peak Hour		50	42	8
(Double Existing Counts)	PM Peak Hour		54	18	36
Commercial New Trips		126.5 1000 square feet			
(assumes 540 Brewery Daily Trips)	Daily		3064	1532	1532
	AM Peak Hour		418	251	167
	PM Peak Hour		314	112	202
Commercial Internal Capture	Reduction				
	AM Peak Hour		89	47	42
	PM Peak Hour		89	48	41
External Commercial Trips					
	AM Peak Hour		329	204	125
	PM Peak Hour		225	64	161
Total New Trips					
	Daily		5188	2594	2594
	AM Peak Hour		488	233	255
	PM Peak Hour		384	179	205

SCHOOLS

Residential development is known to increase school enrollment. Fulton County Schools calculated the potential number of children who may live on the property by using their standard calculation to distinguish the number of children that a residential development will generate. The following table outlines these figures:

FULTON COUNTY SCHOOLS – 64 Townhomes, 200 Apartments, & 50 Condominiums

School	Estimated # New FCS Students Generated
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Manning Oaks Elementary School	11 – 118
Northwestern Middle School	4 – 34
Milton High School	13 – 71
Total	28 – 223

Based on the total figure for all three school levels, it can be assumed that the proposed development could house approximately 28 – 223 school age children. All three schools are shown to be over capacity.

STANDARDS FOR ZONING CHANGES

The Planning Commission and the City Council shall consider the following standards in considering a rezoning application, giving due weight or priority to those factors particularly appropriate to the circumstances of each application:

a. Whether the zoning proposal will permit a use that is suitable in view of the zoning use and development of adjacent and nearby property.

Response: The proposed rezoning would permit a mixed-use development, which is consistent with adjacent non-residential and residential properties. Surrounding properties are located with the Downtown Overlay, which envisions a mix of uses in a walkable environment.

b. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property.

Response: The proposed rezoning would permit a mixed-use development, which is consistent with adjacent non-residential and residential properties. Surrounding properties are located with the Downtown Overlay, which envisions a mix of uses in a walkable environment.

c. Whether the zoning proposal will adversely affect the natural environment.

Response: The zoning proposal does not propose saving any trees.

d. Whether there are substantial reasons why the property cannot or should not be used as currently zoned.

Response: The property is currently zoned C-2, which allows the requested uses either by right or with approval of a conditional use permit. The applicant requests a rezoning to DT-MU to allow a greater building height, as well as to implement the vision of the Downtown Master Plan. The Downtown Master Plan reflects a new vision for the South Main Street corridor and the proposed DT-MU zoning district is consistent with that vision.

e. Whether the zoning proposal will result in a use that will or could cause an excessive or burdensome use of public facilities or services, including but not limited to existing streets and transportation facilities, schools, water or sewer utilities, and police or fire protection.

Response: While the proposed mixed-use development would impact public facilities and services, the purpose of a mixed-use development is to reduce impacts on facilities and services by promoting a place to live, work and play. However, staff recommends that the civic and amenity space minimum requirements be increased proportionate to the approved residential density over the ten (10) dwelling units per acre permitted in the DT-MU zoning district to off-set demand on park and recreation facilities and services.

f. Whether the zoning proposal is supported by new or changing conditions not anticipated or reflected in the existing zoning on the property.

Response: The Downtown Master Plan reflects a new vision for the South Main Street corridor. The proposed DT-MU zoning district is consistent with that vision, as well as, the Comprehensive Land Use Plan designation of the property.

g. Whether the zoning proposal reflects a reasonable balance between the promotion of the public health, safety, morality or general welfare against the right to unrestricted use of property.

Response: The request to rezone the property from C-2 to DT-MU reflects a reasonable balance as the proposed zoning is consistent with the Comprehensive Land Use Plan designation of the property, which is Mixed Use.

- h. Whether there are substantial reasons why the property cannot be used in accordance with existing zoning.

Response: The property is currently zoned C-2, which allows the requested uses either by right or with approval of a conditional use permit. The applicant requests a rezoning to DT-MU to allow a greater building height, as well as to implement the vision of the Downtown Master Plan. The Downtown Master Plan reflects a new vision for the South Main Street corridor and the proposed DT-MU zoning district is consistent with that vision.

- i. The extent to which the zoning proposal is consistent with the Comprehensive Plan.

Response: The subject property is consistent with the Comprehensive Land Use Plan designation, which is Mixed Use.

CONDITIONAL USE REVIEW CRITERIA

City staff has reviewed the applicant's request and compared it to the conditional use standards established in UDC Sec. 4.2.3 (B) which are as follows:

A conditional use otherwise permitted within a zoning district shall be considered to be compatible with other uses permitted in the district, provided that due consideration is given to the following objective criteria at a public hearing and satisfactory provisions or arrangements are made for:

1. Access into and out of the property with regard to traffic and pedestrian safety, volume of traffic flow, and emergency vehicles, as well as the type of street providing access;

Response: The subject property will not have direct access onto South Main Street. Access to the site will occur through driveways along Devore Road and Janis Lane.

2. The extent to which refuse areas, loading and service areas, off street parking, and buffers and screening are provided on the property;

Response: The proposed mixed-use development can sufficiently address all development requirements mentioned above.

3. Ensuring that the conditional use will not be injurious to the use and enjoyment of the environment or of other property in the immediate vicinity or diminish and impair property values within the surrounding neighborhood;

Response: The applicant proposes 'For-Rent' product in association with a mixed-use development, which is consistent with the UDC. The Downtown Master Plan reflects a new vision for the South Main Street corridor and the proposed mixed-use development is consistent with that vision, as well as, the Comprehensive Land Use Plan designation of the property. Staff recommends capping the 'For-Rent' product to no more than 172 units and a maximum building height of four (4) stories, which should result in a residential density that is compatible with the surrounding area. In addition, staff recommends that the civic and amenity space minimum requirements be increased proportionate to the approved residential density over the ten (10) dwelling units per acre permitted in the DT-MU zoning district.

4. Ensuring that the conditional use will not increase local or state expenditures in relation to the cost of servicing or maintaining neighboring properties;

Response: Staff recommends that the civic and amenity space minimum requirements be increased proportionate to the approved residential density over the ten (10) dwelling units per acre permitted in the DT-MU zoning district.

5. Ensuring that the conditional use will not impede the normal and orderly development of surrounding property for uses predominant in the area; and

Response: Redevelopment of the distressed retail center with a mixed-use development would likely spur development and redevelopment of properties consistent with the vision of the Downtown Master Plan.

6. Ensuring that the location and character of the conditional use is considered to be consistent with a desirable pattern of development for the city, in general.

Response: The applicant proposes 'For-Rent' product in association with a mixed-use development, which is consistent with the UDC. The Downtown Master Plan reflects a new vision for the South Main Street corridor and the proposed mixed-use development is consistent with that vision, as well as, the Comprehensive Land Use Plan designation of the property. However, the Comprehensive Land Use Plan also states a goal of reducing the City's rental housing to 32% from the current 36%. Staff recommends capping the 'For-Rent' product to no more than 172 units and a maximum building height of four (4) stories, which should result in a residential density that is compatible with the surrounding area. In addition, staff recommends that the civic and amenity space minimum requirements be increased proportionate to the approved residential density over the ten (10) dwelling units per acre permitted in the DT-MU zoning district.

VARIANCE REVIEW CRITERIA

The City of Alpharetta Unified Development Code Article IV, Section 4.5.3 outlines the criteria set forth for granting a variance. The ordinance specifically states..."a variance may be granted in whole or in part, or with conditions, in such individual case of unnecessary hardship upon a finding that":

(1) There are extraordinary and exceptional conditions pertaining to the particular piece of property in question because of its size, shape or topography; or

Response: The subject property is within the Downtown Overlay where walkability, mix of uses, site design and architecture are key components to a successful development. The applicant's requests to increase the building height and façade length of the multi-family building are inconsistent with the building form envisioned in the Downtown Master Plan and are not justified by extraordinary or exceptional conditions pertaining to the property. Mercantile/warehouse architectural style may be appropriate in the Downtown; however, the applicant has not provided sufficient information to support the requested variance. The applicant's request to delete the on-site neighborhood grocery requirement is justified as the Walmart Neighborhood Market is located adjacent to the subject site, which is approximately 500' away.

(2) The application of the Ordinance to this particular piece of property would create an unnecessary hardship; or

Response: The applicant could develop the site in compliance with all development standards. However, the proximity of the Walmart Neighborhood Market adjacent to the subject site supports the requested variance. The applicant's requests to increase the building height and façade length of the multi-family building are inconsistent with the building form envisioned in the Downtown Master Plan and are not justified. Mercantile/warehouse architecture may be appropriate in the Downtown; however, the applicant has not provided sufficient information to support the requested variance.

(3) There are conditions that are peculiar to the property which adversely affect its reasonable use or usability as currently zoned; or

Response: Not applicable.

(4) Relief, if granted, would not cause substantial detriment to the public good or impair the purpose and intent of the City of Alpharetta ordinances.

Response: Approval of variances to eliminate the requirement for an on-site neighborhood grocery and maximum front setback will not cause substantial detriment to the public good, if conditions are in place requiring a site plan-specific approval and pedestrian connection to the Walmart Neighborhood Market. However, the applicant's requests to increase the building height and façade length of the multi-family building are inconsistent with the building form envisioned in the Downtown Master Plan and are not justified. Mercantile/warehouse architecture may be appropriate in the Downtown; however, the applicant has not provided sufficient information to support the requested variance.

CONCURRENCES

Staff has reviewed the application and is generally in agreement with the applicant's requests. Redevelopment of the retail center with a mixed-use development is consistent with the vision of the Downtown Master Plan. However, careful consideration should be given to maintaining a balance between 'For-Rent' versus 'For-Sale' product in the City. The 2035 Comprehensive Land Use Plan identifies the following policy as it relates to maintaining a balance of 'For-Sale' versus 'For-Rent' housing in the City:

Housing Policy 2: Maintain a balance between ‘owner-occupied’ and ‘renter-occupied’ in Alpharetta such that at least 68% of the housing stock is ‘owner-occupied’.

The City’s Rental Housing Study, which was prepared in May 2015 and recently updated, recommends that the City target an entitlement of no more than 93 and 159 ‘For-Rent’ units per year in order to achieve a goal of reducing the current 36% rental in the City to 32%. It should be noted that although the City did adopt the recommended 32% rental maximum goal, the annual target recommendation is not an adopted City policy. There have been no entitlements of ‘For-Rent’ units over the last two (2) years. Rental should only be approved as part of a mixed-use development that includes ‘For-Sale’ residential, office and service retail. Additionally, proximity to Georgia 400 should be a consideration because of the increased traffic.

The proposed rezoning to DT-MU is consistent with the vision in the Downtown Master Plan and Comprehensive Land Use Plan, which includes a mix of uses within a walkable environment. However, the proposed number of ‘For-Rent’ units exceeds the remaining number of units identified in the Downtown Master Plan 5-Year Market Study and the increased density is not supported by sufficient open space. Also, staff does not support the applicant’s variance requests to increase the building height and increase the façade length of the multi-family building. While Mercantile/warehouse architectural style may be complimentary to the historic architecture in the Downtown Overlay, sufficient information to support this variance request has not been provided.

The Downtown Master Plan allows residential densities of up to ten (10) dwelling units per acre along South Main Street and greater densities with approval of a conditional use permit. The applicant is requesting a residential density of 24.16 dwelling units per acre and to allow for the construction of ‘For-Rent’ units. Staff recommends that the number of ‘For-Rent’ dwelling units be capped at 172 units, which is consistent with the remaining number of ‘For-Rent’ units identified in the Downtown Master Plan 5-Year Market Study. With the exception of the City Center rental units, the nearest rental housing options are AMLI Northwinds, The Lex, and Haven at Avalon, all of which are approximately one-mile from the Downtown core.

Staff does not support the applicant’s request to increase the building height from four (4) to five (5) stories and to increase the maximum façade length of the multi-family building from 200’ to 305’ as these requests contradict the building form envisioned in the Downtown Overlay. In addition, staff recommends that the civic and amenity space minimum requirements be increased proportionately to the approved residential density above the ten (10) dwelling units per acre permitted in the DT-MU zoning district. Compliance with these recommendations should lead to a quality mixed-use development with an appropriate density and mix of uses in the South Main Street corridor.

The proposed mixed-use development is consistent with many of the goals, policies, and strategies in the Comprehensive Plan as it relates to developments in the Downtown Overlay, including the following:

ED Strategy 1.1: Fully implement the Downtown Master Plan.

ED Strategy 3.2: Support the development of locally-owned, unique shopping, dining and entertainment opportunities.

ED Strategy 3.4: Continue to inventory all vacant, underperforming and distressed retail properties in order to inform the creation of targeted development strategies.

LU Strategy 1.1: Continue to implement the vision detailed in the Downtown Master Plan.

LU Strategy 1.2: Support improvements to Downtown that will result in a compact arrangement of retail and commercial enterprises with office, financial, entertainment, governmental and certain residential development, all designed and situated to permit internal pedestrian circulation.

LU Strategy 1.3: Encourage residential uses in the Downtown at higher densities and in mixed use buildings in order to support the viability of Downtown.

LU Strategy 1.4: Continue to encourage revitalization of Downtown through major streetscape improvements, landscaping, formal open spaces, and transportation network connectivity.

LU Strategy 2.2: Promote development that is pedestrian-oriented and minimizes vehicular trips.

LU Strategy 2.3: Encourage creative urban design solutions that improve physical character.

LU Strategy 8.1: Allow mixed use patterns that will create activity nodes in appropriate areas, as established by the Future Development Map, that provide jobs and services within walking distance of residences, preserve open spaces, and make public transportation more effective.

LU Strategy 8.2: Focus regional-scaled, suburban, and big box commercial development into development and redevelopment nodes, rather than allowing commercial development along the full length of major corridors. In addition, promote development of smaller-scaled neighborhood centers as well as revitalization and enhancement of existing small-scale commercial centers.

LU Strategy 8.3: Encourage owners/developers with large land holdings to plan for multiple land uses.

T Strategy 2.4: Encourage an interconnected public sidewalk and trail network within new developments and enhance connectivity area wide by linking new sidewalks and trails to existing sidewalks and trails in adjacent neighborhoods. In addition, the system should link residential areas to commercial, schools, employment centers, transit and parks.

T Strategy 4.2: Encourage development designs to promote pedestrian activity that reduces on-site vehicular dependence.

H Strategy 1.2: Encourage higher residential densities and appropriate mix of uses close to Downtown Alpharetta and in the GA-400 corridor.

NHCR Strategy 3.2: Actively pursue methods to expand, enhance, and create more multi-use trail activity.

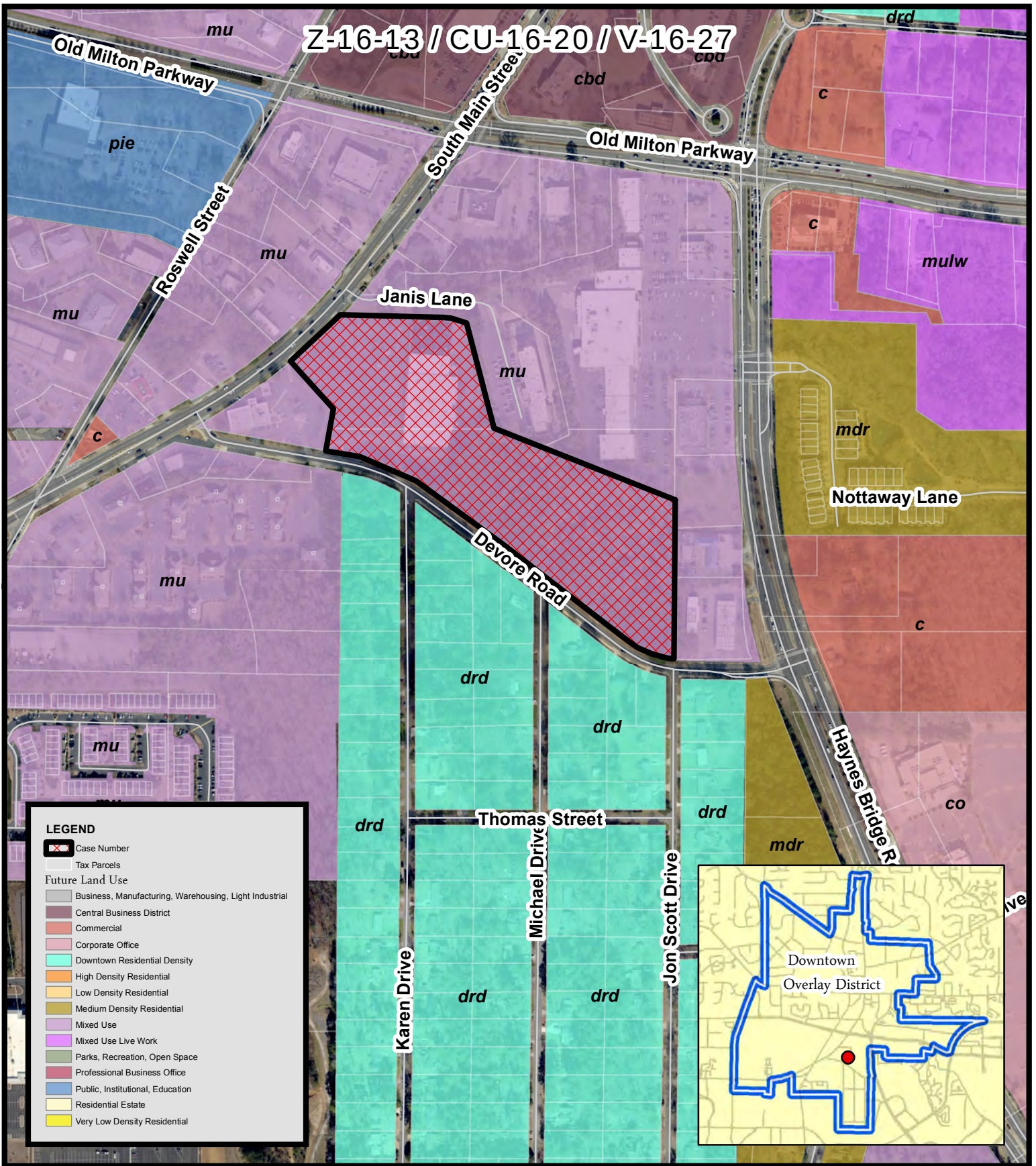
CSF Strategy 3.7: Encourage developers to build recreational opportunities in conjunction with new development, and encourage permanent protection of open space for future generations to enjoy.

CITIZEN PARTICIPATION PLAN

The report submitted by the applicant states that letters were mailed to each property owner within 500' of the subject property stating the applicant's intent. In addition, the applicant held a public participation meeting on October 27, 2016. According to the public participation report, residents were most concerned with traffic, specifically on Devore Road. Residents also requested that the applicant address a pedestrian crossing on Devore Road. However, the City has received correspondence from the public indicating that high density and 'For-Rent' product is not supported at this location.

IV. ATTACHMENTS:

- Site Plan
- Renderings

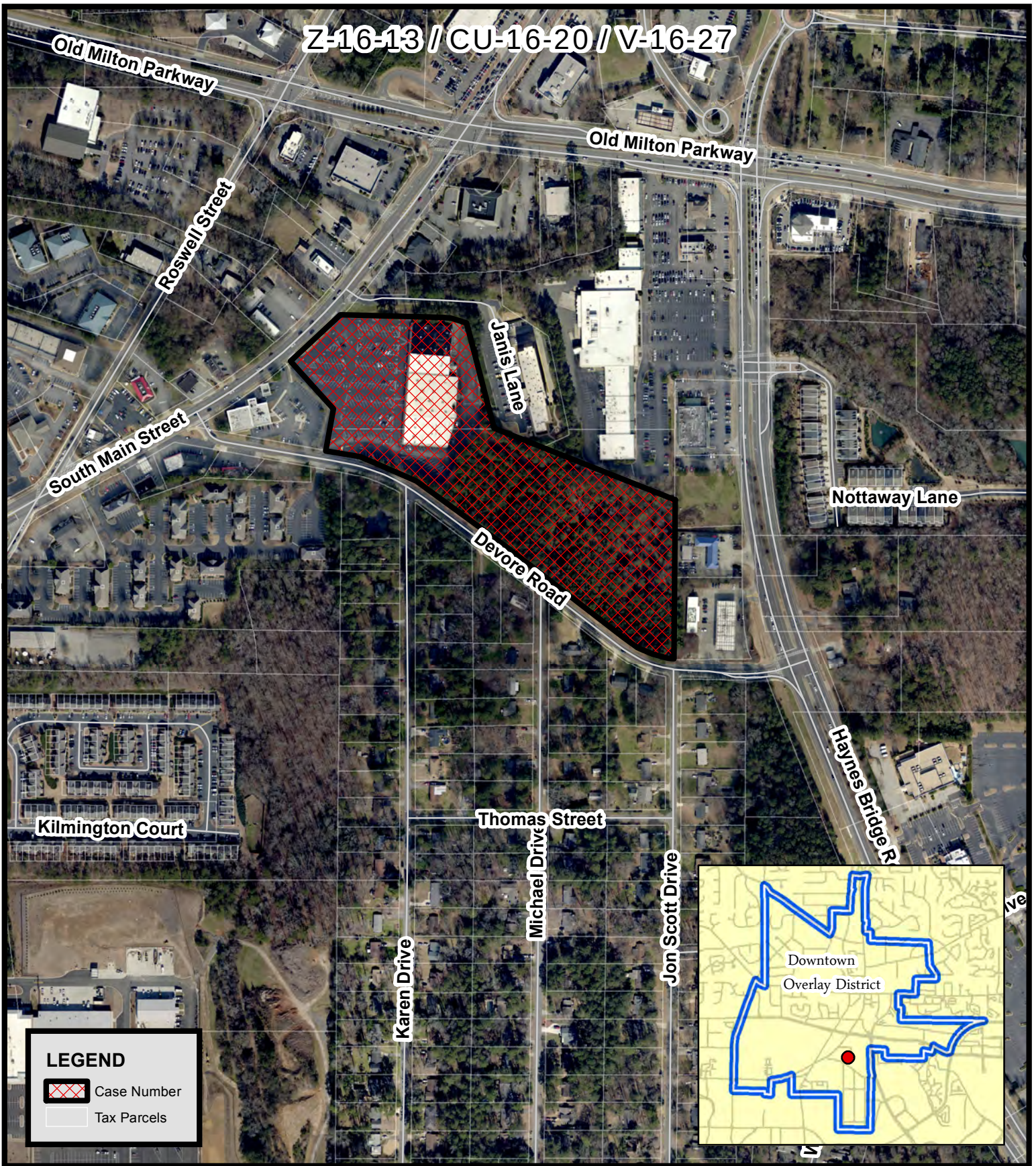


2030 Land Use
Perling
South Main & Devore

Z-16-13 / CU-16-20 / V-16-27
D/LL: 1/2/693, 694, 695, 696
PC Date: 11/03/16
CC Date: 11/14/16

Location Map Provided by:
Community Development - GIS



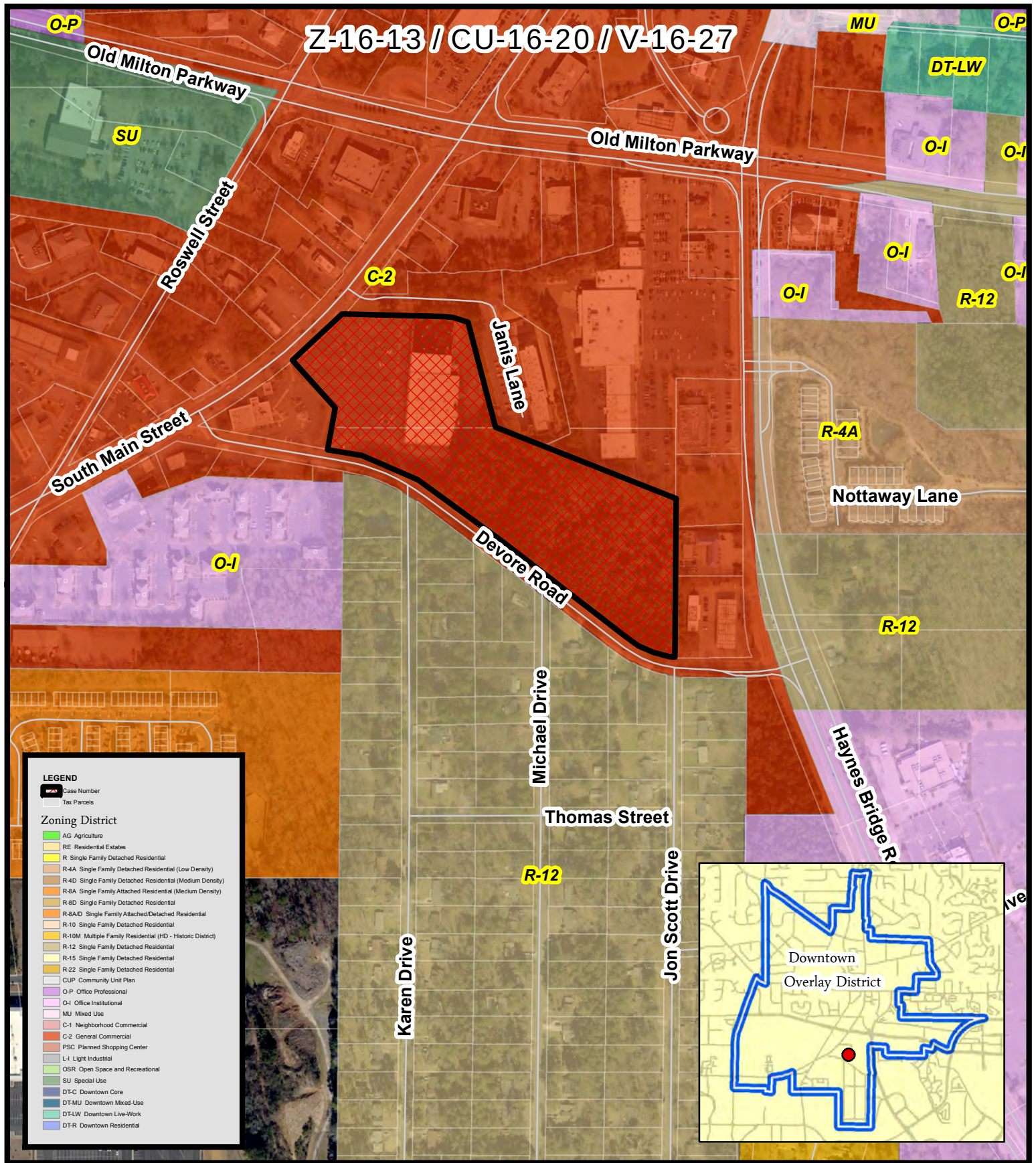


Aerial Map
Perling
South Main & Devore

Z-16-13 / CU-16-20 / V-16-27
D/L: 1/2/693, 694, 695, 696
PC Date: **12/01/16**
CC Date: **12/12/16**

Location Map Provided by:
Community Development - GIS



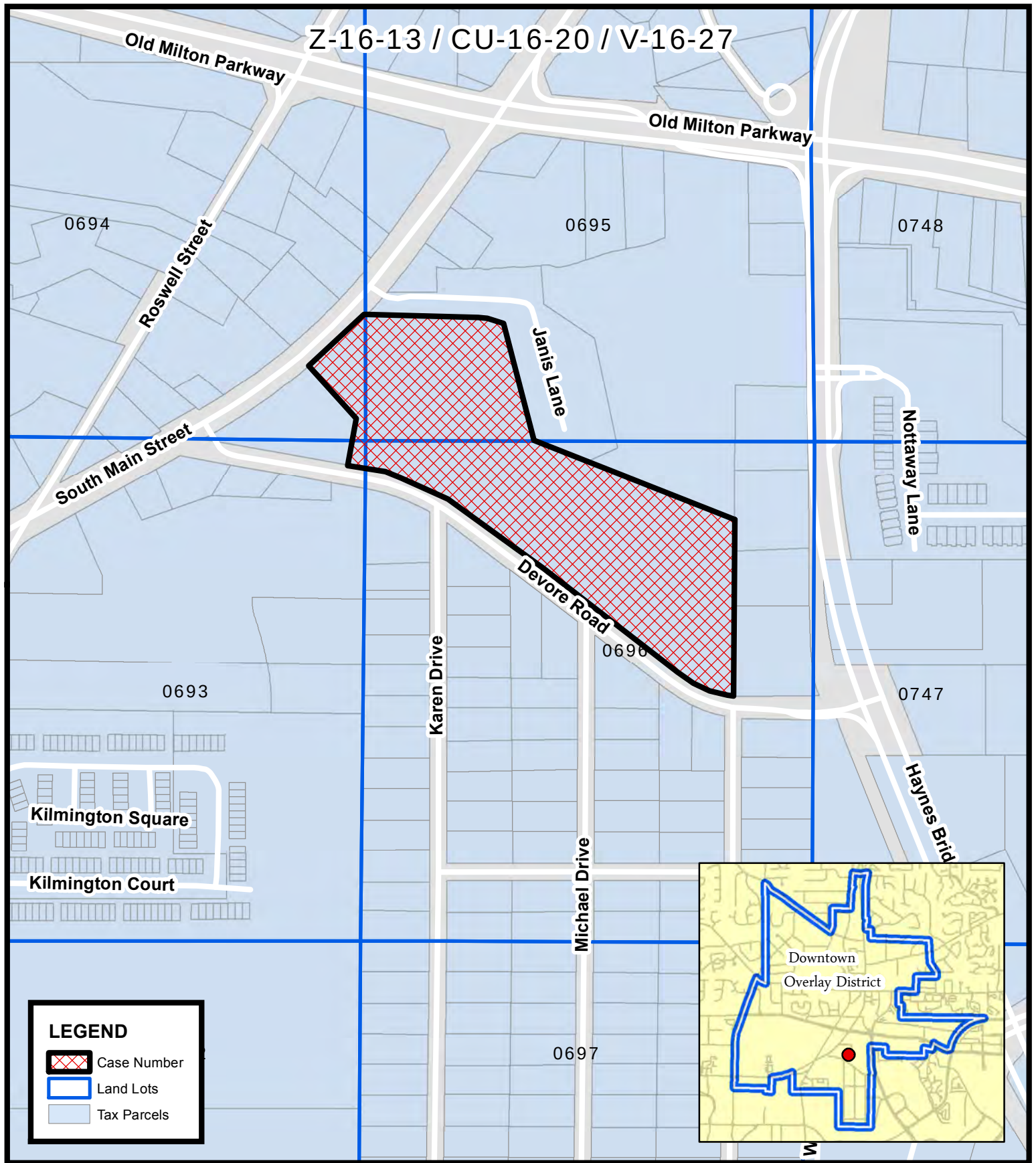


Zoning Map Perling South Main & Devore

Z-16-13 / CU-16-20 / V-16-27
D/LL: 1/2/693, 694, 695, 696
PC Date: 12/01/16
CC Date: 12/12/16

Location Map Provided by:
Community Development - GIS





Location Map
Perling
South Main & Devore

Z-16-13 / CU-16-20 / V-16-27
D/LL: 1/2/693, 694, 695, 696
PC Date: 12/01/16
CC Date: 12/12/16

Location Map Provided by:
Community Development - GIS



Staff Research Craft (Micro) Breweries

Craft (Micro) Breweries

Sizing recommendation: 0.5 – 1.5 square feet per barrel of yearly capacity (See attached study)

Staff (Jobs) Requirement: 0.75 staff per 1,000 barrels of yearly capacity

Blue Tarp Brewery (Decatur)	3,000 SF Brewery/3,000 SF Tasting Room
Jekyll (Alpharetta)	5,000 SF Brewery
Three Taverns (Decatur)	8,500 SF Brewery
Eventide (Grant Park)	3,000 SF Brewery
Creature Comforts (Athens)	12,000 SF Brewery
Reformation (Cherokee County)	

Georgia's top 10 craft breweries by volume (Barrels = BBLs in parentheses):

1. SweetWater Brewing Company (192,500) 114,000 SF (Regional Brewery)
2. Terrapin Beer Company (46,207)
3. Red Brick Brewing Company (10,000)
4. Red Hare Brewing (8,000)
5. (t.) Jekyll Brewing (7,500) 5,000 SF
5. (t.) Monday Night Brewing (7,500)
7. Three Taverns Brewery (2,500) 8,000 SF
8. Southbound Brewing Company (2,300)
9. Creature Comforts Brewing Co.* (2,100)
10. JailHouse Brewing Company (2,000)

* Only open for eight months of 2014

Staff Research Craft (Micro) Breweries

Georgia breweries, brewpubs, and client brewers in current operation

Name	Location	Initial Production	Type	Barrels/year production	Distributed By
5 Seasons Brewing Company ^[8]	Atlanta & Alpharetta	2001	Brewpub	2,258 ^[9]	Atlanta Beverage Company
Abbey of the Holy Goats ^[10]	Roswell	2016	Brewery		
Abide Brewing Company ^[11]	Newnan	2015	Brewery		
Arches Brewing ^[12]	Hapeville	2016	Brewery		
Benning Brewpub ^[13]	Fort Benning	2010	Brewpub	Unknown	Atlanta Beverage Company
BlueTarp Brewing Company ^[14]	Decatur	2012	Brewery		
Burnt Hickory Brewery ^[15]	Kennesaw	2011	Brewery	2,000 ^[16]	
Cannon Brew Pub ^[18]	Columbus	1999	Brewpub	3,000 ^[19]	
Cherry Street Brewing Co-op (Rick Tanner's) ^[20]	Cumming	2012	Brewpub	750 ^[21]	Atlanta Beverage Company
Coastal Empire Beer Co.	Savannah	2011	Brewery	1,300	Savannah Distribution
Copper Creek Brewing ^[22]	Athens	2002	Brewpub	Unknown	Savannah Distribution
Creature Comforts Brewing Co. ^[23]	Athens	2014	Brewery	8,000 ^[24]	
Dry County Brewing Company ^[25]	Kennesaw	2015	Brewery		
Eagle Creek Brewing Company ^[26]	Statesboro	2013	Brewery	4,500 ^[27]	
Eventide Brewing ^[29]	Atlanta	2011	Brewery	Unknown	Atlanta Beverage Company
Fannin Brewing Company ^[28]	Blue Ridge	2013	Brewery		
					Eagle Rock Distributing

Staff Research Craft (Micro) Breweries

Georgia breweries, brewpubs, and client brewers in current operation

Name	Location	Initial Production	Type	Barrels/year production	Distributed By
Gate City Brewing Company ^[30]	Roswell	2015	Brewery	Unknown	
Grumpy Old Men Brewing ^[31]	Blue Ridge	2012	Brewery		Savannah Distributing
Hop Alley Brew Pub ^[32]	Alpharetta	2012	Brewpub	Unknown	
Jailhouse Brewing Company ^[33]	Hampton & McDonough ^[34]	2009	Brewery	2,000 ^[35]	Atlanta Beverage Company
Jekyll Brewing ^[36]	Alpharetta	2011	Brewery	7,500 ^[37]	Atlanta Beverage Company
Left Nut Brewing Company ^[38]	Gainesville	2016	Brewery		Atlanta Beverage Company
Macon Beer Company ^[39]	Macon	2011	Brewery		
Max Lager's Wood-Fired Grill and Brewery ^[40]	Atlanta	1998	Brewpub	Unknown	
Monday Night Brewing	Atlanta	2011	Brewery	7,500 ^[41]	Atlanta Beverage Company
Monkey Wrench Brewing ^[42]	Snellville	2012	Brewery	Unknown	
Moon River Brewing Company	Savannah	1999	Brewpub	Unknown	
Omaha Brewing Company ^[43]	Omaha	2012	Brewery	Unknown	Atlanta Beverage Company
Park Tavern ^[44]	Atlanta	2009	Brewpub	Unknown	
Piedmont Brewery & Kitchen ^[45]	Macon	2016	Brewpub	Unknown ^[46]	
Red Brick Brewing Company	Atlanta	1993	Brewery	14,000 ^[47]	Georgia Crown
Red Hare Brewing	Marietta	2011	Brewery	8,000 ^[49]	Atlanta Beverage

Staff Research Craft (Micro) Breweries

Georgia breweries, brewpubs, and client brewers in current operation

Name	Location	Initial Production	Type	Barrels/year production	Distributed By
Company ^[48]					Company
Reformation Brewery ^[50]	Woodstock	2012	Brewery		
Riverwatch Brewery ^[51]	Augusta	2016	Brewery	Unknown ^[52]	A B Beverage Company
Scofflaw Brewing Company	Atlanta	2016	Brewery	Unknown	
Second Self Beer Company ^[53]	Atlanta	2014	Brewery	Unknown	
Service Brewing Co ^[17]	Savannah	2014	Brewery	unknown	Savannah Distribution
Slice & Pint ^[54]	Atlanta	2013	Brewpub	Unknown	
Southbound Brewing Co ^[55]	Savannah	2013	Brewery	6,000 ^[56]	United Distributing
Southern Brewing Company ^[58]	Athens	2015	Brewery		Leon Farmer & Company
Southern Sky Brewing Company ^[57]	Kennesaw	2015	Brewery		
Stone Mountain Brewery (The Village Corner) ^[59]	Stone Mountain	2013	Brewpub	Unknown	
Strawn Brewing Company ^[60]	Fairburn	2012	Brewery	Unknown	Georgia Crown
SweetWater Brewing Company	Atlanta	1997	Brewery	192,500 ^[61]	United Distributing
Three Taverns Craft Brewery ^[63]	Decatur	2013	Brewery	2,500 ^[64]	Savannah Distribution
Torched Hop Brewing Company ^[62]	Atlanta	2015	Brewpub	Unknown	
Twains Billiards and	Decatur	2006	Brewpub	750 ^[66]	

Staff Research Craft (Micro) Breweries

Georgia breweries, brewpubs, and client brewers in current operation

Name	Location	Initial Production	Type	Barrels/year production	Distributed By
Tap ^[65]					
Wild Heaven Craft Beers ^[67]	Avondale Estates	2010	Brewery	Unknown	Georgia Crown
Wrecking Bar Brewpub ^[68]	Atlanta	2011	Brewpub	Unknown	

DOWNTOWN MAIN

CITY OF ALPHARETTA





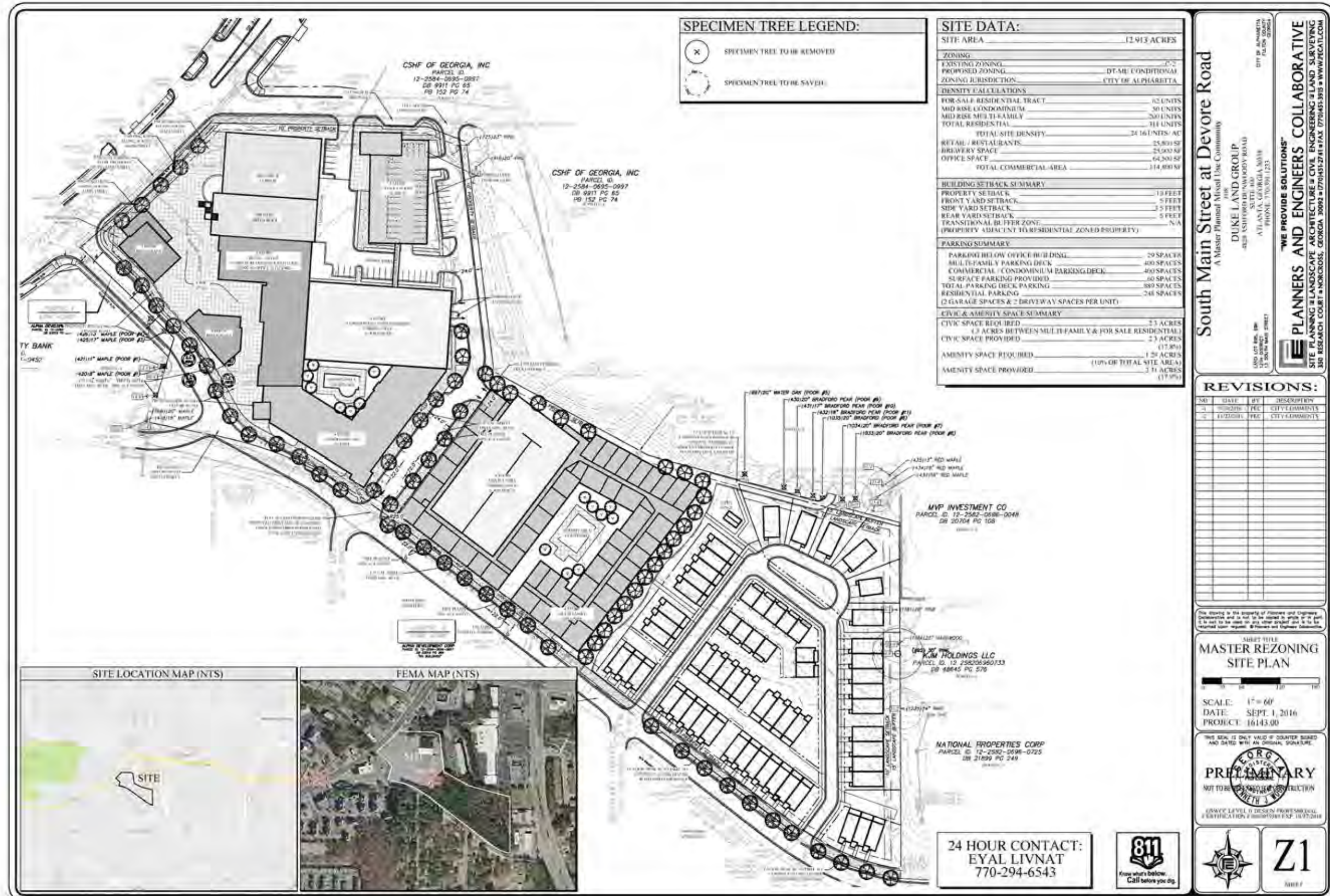
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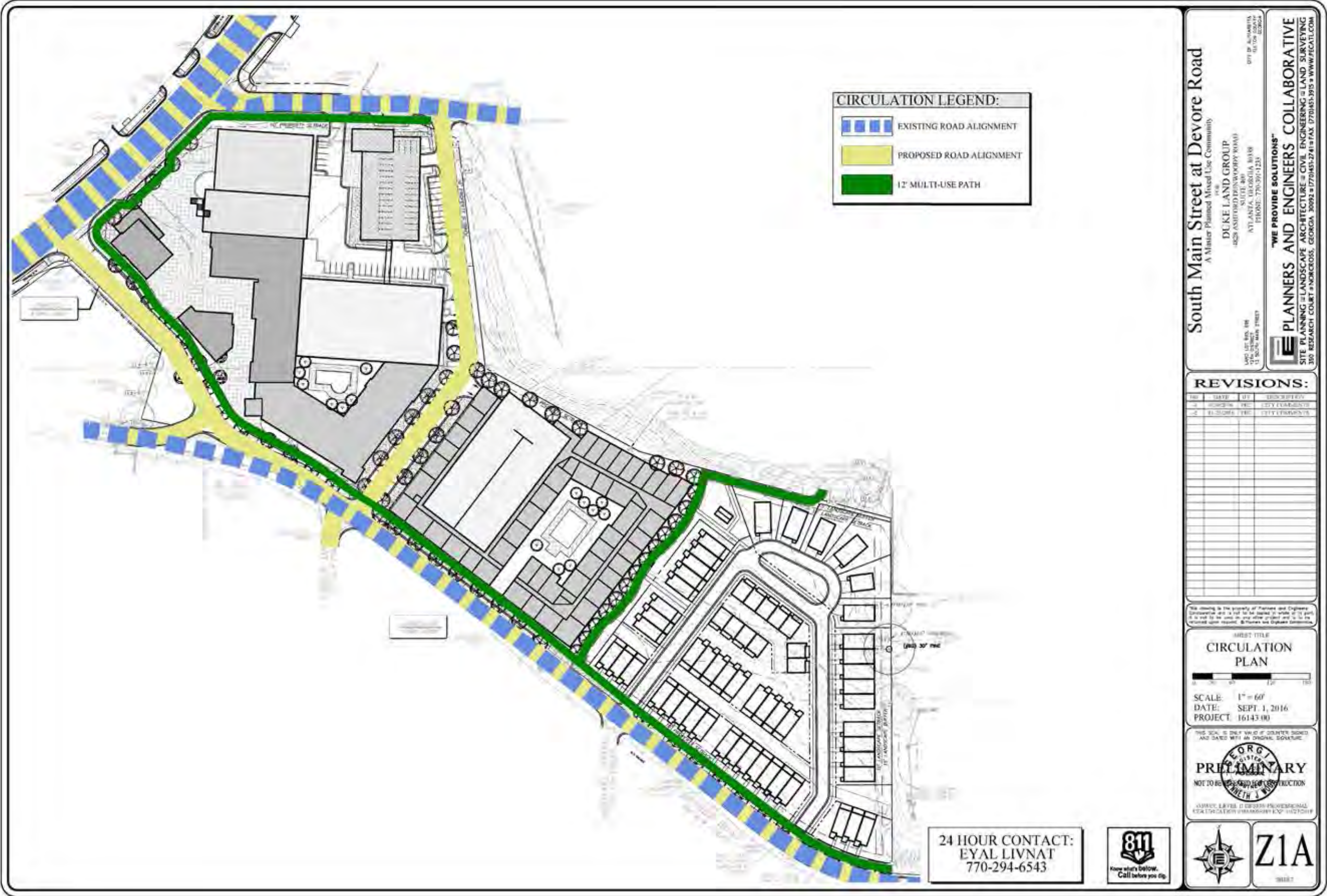
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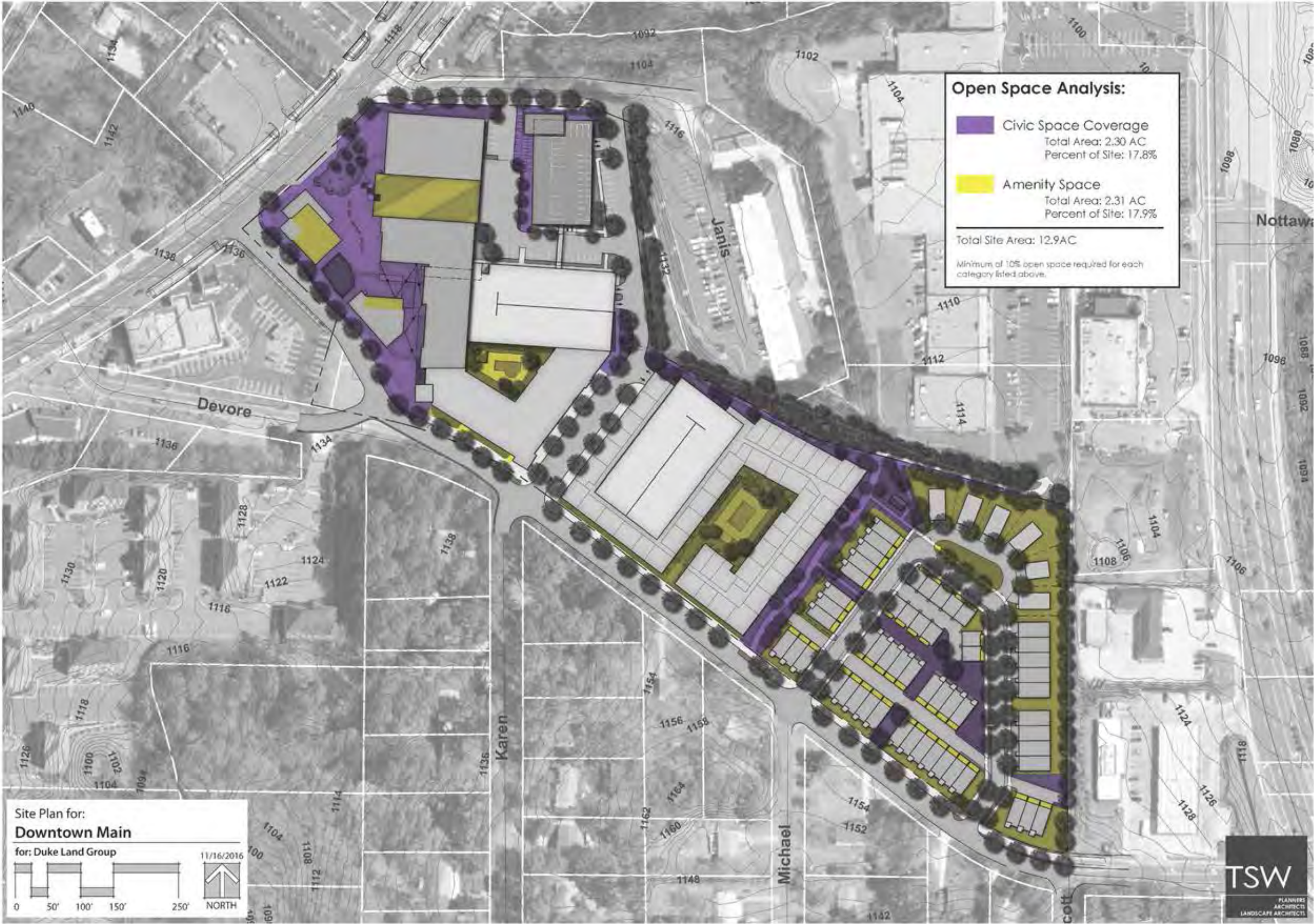


DOWNTOWN MAIN





DOWNTOWN MAIN



DOWNTOWN MAIN

TOWNHOUSE STYLES



A. Townhouse Type I
A Romanesque Brownstone Townhouse



B. Townhouse Type II
A Traditional inspired Townhouse

SINGLE FAMILY STYLES



A. "The Carmel"
A Federal Style "3-bay" brick home



B. "Eufaula"
A Folk Victorian Cottage



C. "The Summerville"
A Italianate Style home



D. "The Davenport"
A Folk Victorian Cottage



E. "The Maryland"
A Georgian inspired "3-bay" home

DOWNTOWN MAIN











TSW
PLANNERS
ARCHITECTS
LANDSCAPE ARCHITECTS

CORNER

DOWNTOWN MAIN

TOWNHOME CHARACTER



View looking north, across Devore Road, at trail between apartments and townhouses.

ARCHITECTURE PROPOSED APARTMENTS & TOWNHOUSES

DOWNTOWN MAIN



View looking southeast down Devore Road; depicts brick-Industrial Style.

ARCHITECTURE PROPOSED APARTMENTS

DOWNTOWN MAIN

DOWNTOWN MAIN

CHARACTER PERSPECTIVE



DOWNTOWN MAIN

OVERALL PERSPECTIVE





DOWNTOWN MAIN

PERSPECTIVE



DOWNTOWN MAIN

PERSPECTIVE



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TRAFFIC IMPACT STUDY FOR

SOUTH MAIN ST at DEVORE RD MIXED USE COMMUNITY

City of Alpharetta, GA

October 28, 2016

Revised November 1, 2016

Prepared by:

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11-1-2016

Executive Summary

The proposed South Main Street at Devore Road Mixed Use Community consisting of 29,500 square feet (sf) of retail space, 30,000 sf office space, 6,500 sf restaurants, a 60,500 sf brewery, 64 townhomes, 50 condominiums, 200 apartments with 1,321 parking spaces (1,030 spaces in parking structures, 256 spaces at the townhomes) is expected to be complete in 2021. The site is located in the southeast quadrant of the intersection of South Main Street (State Route 9) and Devore Road in the City of Alpharetta, Georgia, west of Janis Lane.

Vehicular access for the parking structures servicing the commercial uses, apartments and condominiums will be via three (3) entrances on a new interior roadway between Janis Lane and Devore Road at Karen Drive. The townhomes will be accessed by interior roadways intersecting with Devore Road two (2) locations, at Michael Drive and a new location to the southwest. Devore Road will provide access for the new vehicular trips at two (2) full-movement intersections at Haynes Bridge Road to the southeast and at South Main Street (SR 9) to the northwest. Janis Lane will provide access for the some of the new vehicular trips at the intersection with South Main Street (SR 9) to the north of the site. The intersection of Devore Road at Haynes Bridge Road is signalized and the intersection of Devore Road at South Main Street (SR 9) is expected to be signalized. Devore Road is expected to be extended to Roswell Street from South Main Street (SR 9) to the northwest to a new roundabout.

When completely occupied, the development is expected to generate approximately 233 entering and 255 exiting new vehicular trips during the morning peak volume hour. Approximately 179 entering and 205 exiting new evening peak hour vehicular trips are expected with a reduction taken for internal capture (trips between uses within the development) of approximately 17% during the morning peak hour and 26% during the evening peak hour. A total of 5,188 new entering and exiting vehicular trips are expected daily. Based on existing traffic patterns, approximately 20% of the new residential and 40% of the new commercial vehicular trips are expected to originate and terminate north and east of the development primarily via SR 9 and Haynes Bridge Road. Approximately 40% of the new residential and 50% of the new commercial trips are expected to use SR 9 west of the site. Approximately 40% of the new residential trips and 10% of the new commercial trips are expected to use Haynes Bridge Road from Devore Road to the south of the site.

Most study locations are expected to operate continue to operate adequately during weekday peak morning and evening hours with the new project trips in 2021 with the existing intersection lane configurations and traffic control. The planned improvements to add turning lanes and a traffic signal at the intersection of Devore Road and SR 9 will provide adequate operations with the new project trips.

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Appendix A: Counts Worksheets

Appendix B: Trip Generation Worksheets

Appendix C: Capacity Analysis Worksheets

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1. Introduction

The proposed South Main Street at Devore Road Mixed Use Community is planned to consist of 29,500 square feet (sf) of retail space, 30,000 sf office space, 6,500 sf restaurants, a 60,500 sf brewery, 64 townhomes, 50 condominiums, and 200 apartments. Parking structures will provide 1,030 spaces with 256 parking spaces provided at the townhomes and 35 surface parking spaces. The site is located in the southeast quadrant of the intersection of South Main Street (State Route 9) and Devore Road in the City of Alpharetta, Georgia.

Vehicular access for the parking structures servicing the commercial uses, apartments and condominiums will be via three (3) entrances on a new interior roadway between Janis Lane and Devore Road at Karen Drive. The townhomes will be accessed by interior roadways intersecting with Devore Road two (2) locations, at Michael Drive and a new location to the southwest. Devore Road will provide access for the new vehicular trips at two (2) full-movement intersections at Haynes Bridge Road to the southeast and at South Main Street (SR 9) to the northwest. Janis Lane will provide access for the some of the new vehicular trips at the intersection with South Main Street (SR 9) to the north of the site. The intersection of Devore Road at Haynes Bridge Road is signalized and the intersection of Devore Road at South Main Street (SR 9) is expected to be signalized. Devore Road is expected to be extended to Roswell Street from South Main Street (SR 9) to the northwest to a new roundabout.

The new development is expected to be complete in 2021. The traffic impact analyses are for a single phase of construction.

The traffic study includes existing traffic volumes, trip generation, directional distribution, and traffic impacts at the following intersections:

- South Main Street/SR 9 at Devore Road
- South Main Street/SR 9 at Janis Lane including the north internal roadway access
- South Main Street/SR 9 at Old Milton Pkwy
- Devore Road at Karen Drive and the south internal roadway access
- Devore Road at Michael Drive and townhouses' driveway
- Devore Road at the southern townhouses' driveway
- Devore Road at Haynes Bridge Road
- Devore Road extended at Roswell Street

Figure 1 shows the site location. The site plan is included with this report.

Figure 1: Vicinity Map



2. Existing Conditions

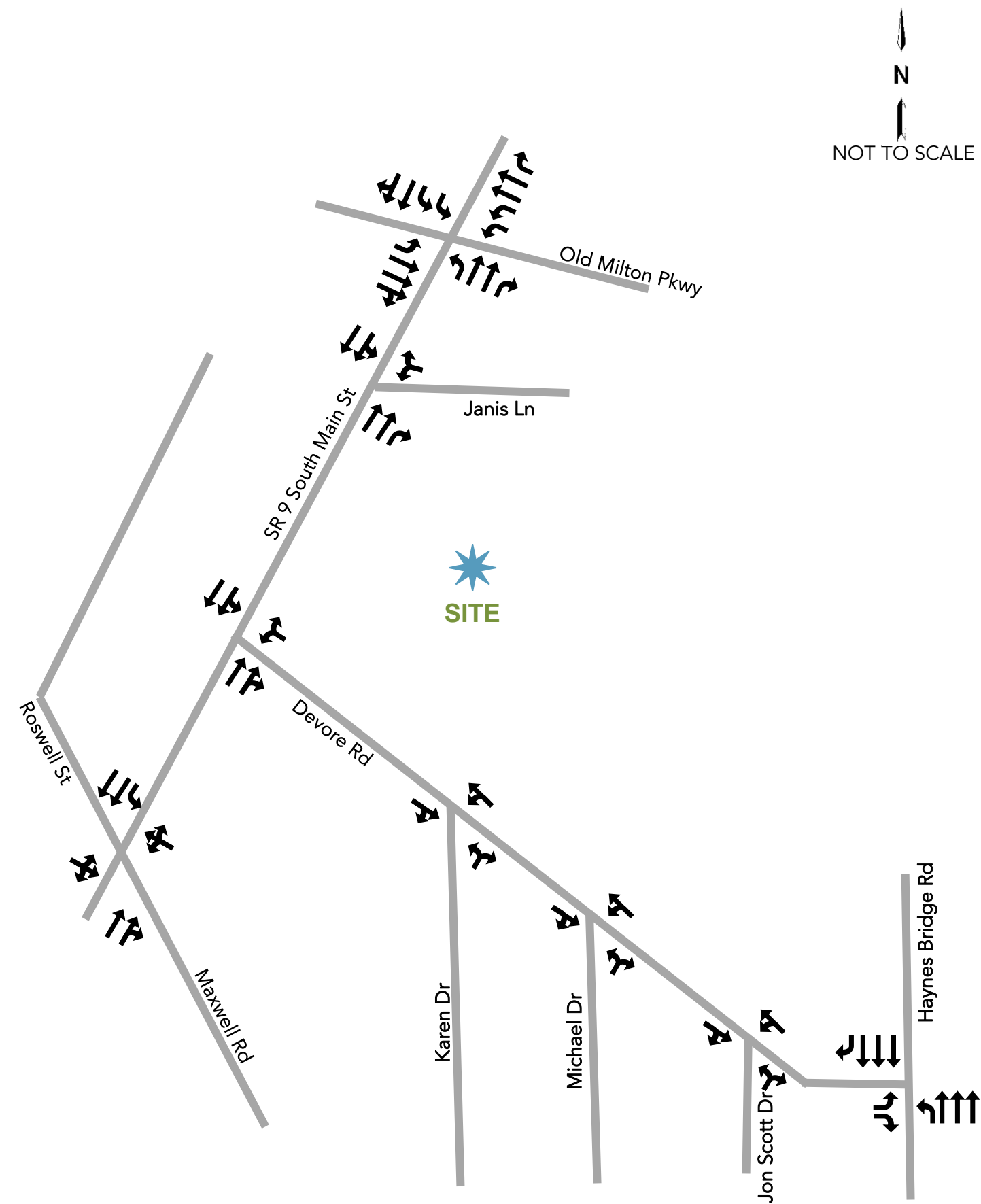
2.1. Transportation Facilities

South Main Street (SR 9) is a principal arterial with two through lanes in each direction with a 35 MPH speed limit. The land uses along SR 9 in this area are primarily commercial. SR 9 provides access between Roswell and Cumming and beyond. The primary intersections in the study area are signalized with turning lanes, but the intersections at Devore Road and at Janis Lane are side-street stop sign controlled and do not include turning lanes. SR 9 is planned to be improved to include a center raised median and left-turn lanes where appropriate.

Devore Road is a two-lane local street providing access to residences on Karen Drive, Michael Drive, and Jon Scott Drive, as well as commercial uses near the terminating intersections. Devore Road runs southeast between South Main Street (SR 9) and Haynes Bridge Road and appears to be used for substantial cut-through trips. The intersection of Devore Road at Haynes Bridge Road is controlled by a traffic signal and has dedicated turning lanes for all movements. The intersection of Devore Road at South Main Street currently allows for full-movement and is controlled by a side-street stop sign; but is planned to be improved with dedicated turning lanes and a traffic signal. Devore Road is also expected to extend northwest beyond South Main Street to terminate in a planned new roundabout at Roswell Street. Roswell Street is expected to be closed between the new roundabout and South Main Street at Maxwell Road.

The existing lane configurations and traffic controls are shown in Figure 2.

Figure 2: Existing Lane Configuration



2.2. Traffic Volumes

Traffic counts collected on Thursday, September 22, 2016, from 7-9 AM and 4-6 PM while schools were in session at the following intersections:

- South Main Street/SR 9 at Devore Road
- South Main Street/SR 9 at Janis Lane
- South Main Street/SR 9 at Old Milton Parkway
- Devore Road at Karen Drive
- Devore Road at Michael Drive
- Devore Road at Jon Scott Drive
- Devore Road at Haynes Bridge Road
- South Main Street/SR 9 at Roswell Street/Maxwell Road

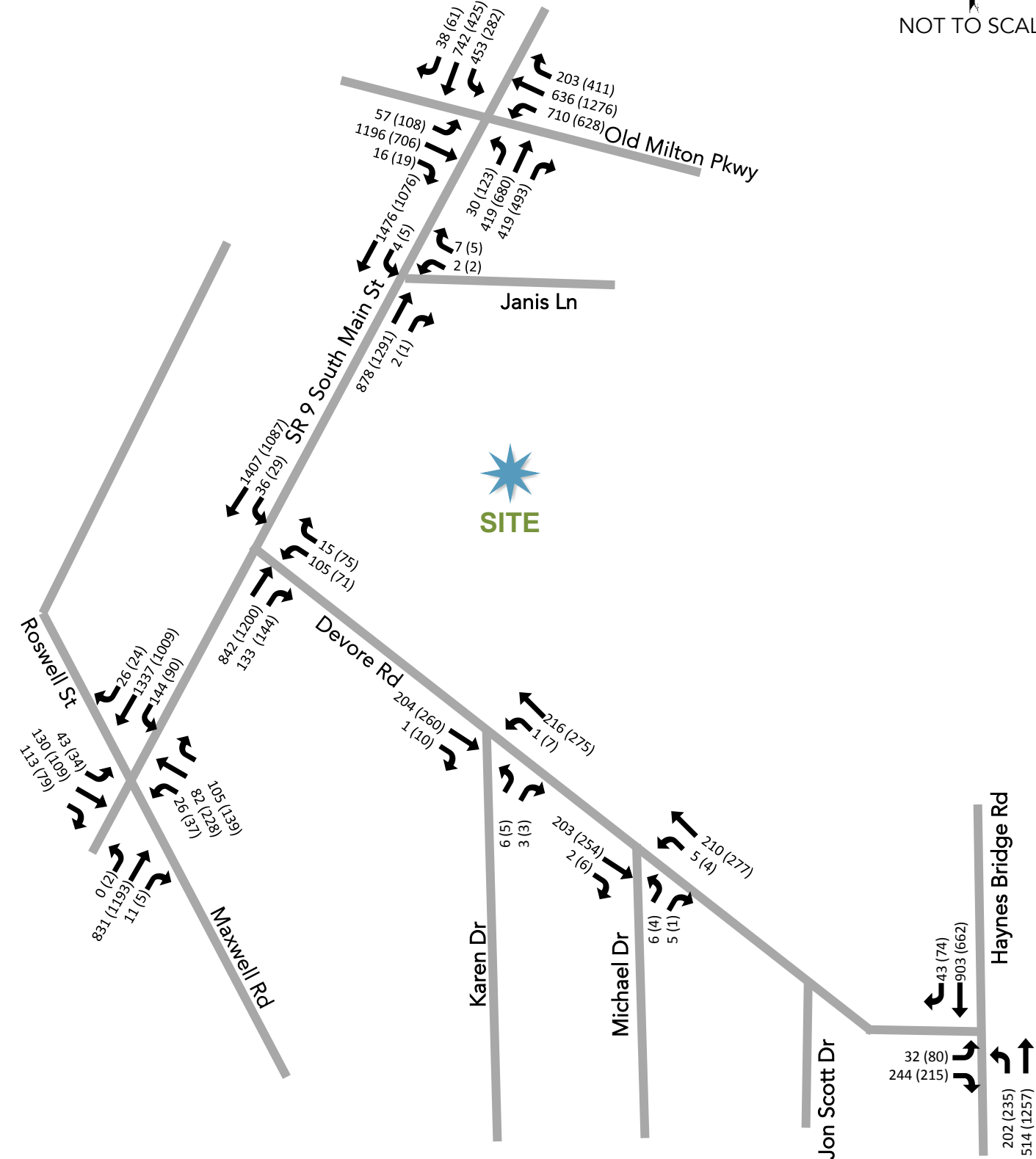
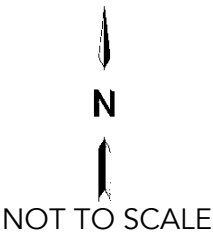
Bi-directional vehicular traffic counts were also collected Thursday, September 22, 2016, on South Main Street/SR 9, Devore Road and on Roswell Street near the site.

To provide an estimation of the new traffic expected from the brewery included in the development, entering and exiting vehicular traffic counts were also collected on Thursday, September 22, 2016, from 7-9 AM and 4-6 PM at the existing location of the Jekyll Brewery on Marconi Drive at the main and rear access points to the parking areas.

The existing morning and evening peak hour turning movement counts at the study intersections are shown in Figure 3. The count worksheets are included in the Appendix.

Figure 3: Existing Volumes

##(##)➡ AM(PM) Peak Hour Traffic Volume



2.3. Existing Capacity Analysis

The results of the intersection capacity analysis are shown in Table 1 for existing volumes. Average vehicular delays are calculated and reported as Levels of Service (LOS) as defined by the Highway Capacity Manual (HCM).

Table 1: Existing Intersection Capacity Analyses

Intersection	Control	Approach	Peak Hour LOS	
			AM	PM
SR 9 at Devore Rd	Side Street Stop	NB	A	A
		SB	B	B
		WB	F	F
SR 9 at Janis Ln	Side Street Stop	NB	A	A
		SB	A	A
		WB	B	D
SR 9 at Rucker Rd/Old Milton Pkwy	Signal	Intersection	E	D
Devore Rd at Karen Dr	Side Street Stop	EB	A	A
		WB	A	A
		NB	A	A
Devore Rd at Michael Dr	Side Street Stop	EB	A	A
		WB	A	A
		NB	B	B
Devore Rd at Jon Scott Dr	Side Street Stop	EB	A	A
		WB	A	A
		NB	B	B
Haynes Bridge at Devore Rd	Signal	Intersection	B	B
SR 9 at Maxwell Rd/Roswell St	Signal	Intersection	B	B

As can be seen in Table 1, all existing study intersections operate adequately during both morning and evening peak volume hours except the Devore Road approach to SR 9. That intersection will be reconstructed (see Section 4) so no changes are recommended. Intersection capacity analyses worksheets are included in the Appendix.

3. Trip Generation

Table 2 summarizes the project trip generation using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 9th Edition, 2012 rates and equations and *Trip Generation Handbook*, 3rd Edition, 2014, internal capture formulas, constrained between types of use.

Table 2: Project Trip Generation

Project Land Use (LUC)		Project Density		Total	IN	OUT
Apartments (220)		200	dwelling units			
	Daily			1336	668	668
	AM Peak Hour			102	20	82
	PM Peak Hour			128	83	45
Townhomes (230)		64	dwelling units			
	Daily			436	218	218
	AM Peak Hour			36	6	30
	PM Peak Hour			42	28	14
Condos (230)		50	dwelling units			
	Daily			352	176	176
	AM Peak Hour			30	5	25
	PM Peak Hour			34	23	11
Residential New Trips		314	dwelling units			
	Daily			2124	1062	1062
	AM Peak Hour			168	31	137
	PM Peak Hour			204	134	70
Residential Internal Capture	Reduction					
	AM Peak Hour			9	2	7
	PM Peak Hour			45	19	26
External Residential Trips						
	AM Peak Hour			159	29	130
	PM Peak Hour			159	115	44
Office (710)		30	ksf			
	Daily			526	263	263
	AM Peak Hour			73	64	9
	PM Peak Hour			112	19	93
Specialty Retail (826)		29.5	ksf			
	Daily			1300	650	650
	AM Peak Hour			260	125	135
	PM Peak Hour			92	40	52
Quality Restaurant (931)		3.5	ksf			
	Daily			316	158	158
	AM Peak Hour			3	2	1
	PM Peak Hour			26	17	9
High Turnover Restaurant (932)		3	ksf			
	Daily			382	158	158
	AM Peak Hour			32	18	14
	PM Peak Hour			30	18	12
Brewery (No LUC)		60.5	ksf			
(Double Existing Counts)	AM Peak Hour			50	42	8

Project Land Use (LUC)		Project Density		Total	IN	OUT
(Double Existing Counts)	PM Peak Hour			54	18	36
Commercial New Trips		126.5	ksf			
(assumes 540 Brewery Daily Trips)	Daily			3064	1532	1532
	AM Peak Hour			418	251	167
	PM Peak Hour			314	112	202
Commercial Internal Capture	Reduction					
	AM Peak Hour			89	47	42
	PM Peak Hour			89	48	41
External Commercial Trips						
	AM Peak Hour			329	204	125
	PM Peak Hour			225	64	161
Total New Trips						
	Daily			5188	2594	2594
	AM Peak Hour			488	233	255
	PM Peak Hour			384	179	205

The 3rd Edition Trip Generation Handbook does not provide daily trip reduction formulas, so none were taken. For the Brewery, we counted the existing location peak hour trips and doubled them for the new location. The Brewery was assumed to generate ten (10) times the peak hour trips for the purpose of the daily total trips calculation. No internal capture reduction was taken between the Brewery and other uses, as rates are not documented at this time.

When completely occupied, the development is expected to generate approximately 233 entering and 255 exiting new vehicular trips during the morning peak volume hour. Approximately 179 entering and 205 exiting new evening peak hour vehicular trips are expected with a reduction taken for internal capture (trips between uses within the development) of approximately 17% during the morning peak hour and 26% during the evening peak hour. A total of 5,188 new entering and exiting vehicular trips are expected daily. Figure 4 shows the volumes of the new trips.

3.1. Trip Distribution and Assignment

The assignment and directional distribution of new project trips was based on the existing traffic patterns in the area. The directional distribution for new trips is as follows:

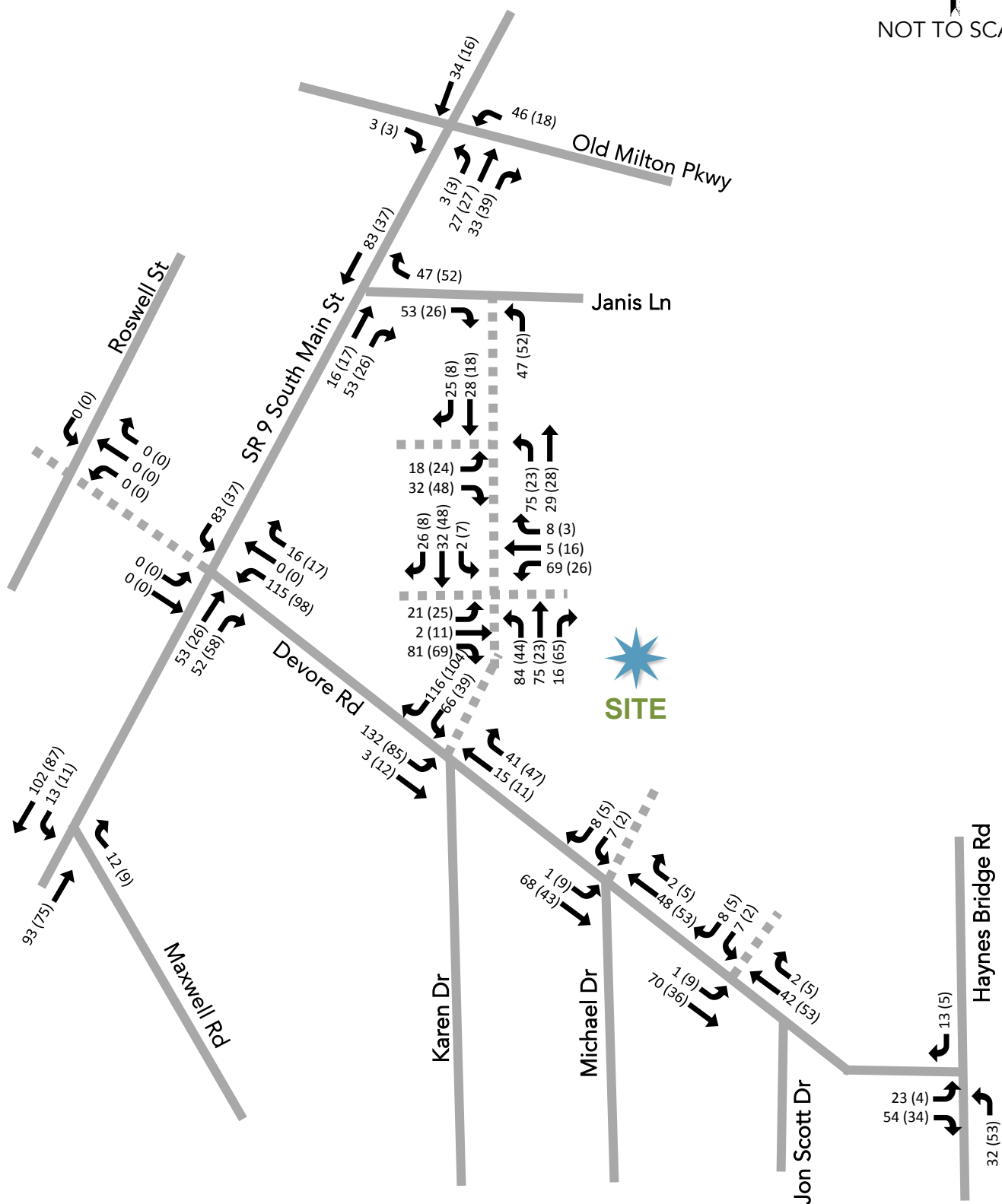
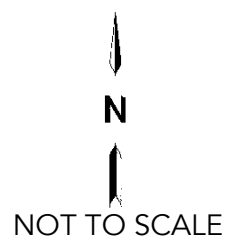
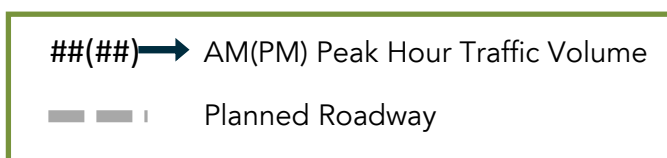
Residential:

- 20% to/from north and east on SR 9 and Haynes Bridge Road to Old Milton Parkway
- 40% to/from west and south on SR 9
- 40% to/from south on Haynes Bridge Road

Commercial:

- 40% to/from north and east on SR 9 and Haynes Bridge Road to Old Milton Parkway
- 50% to/from west and south on SR 9
- 10% to/from south on Haynes Bridge Road

Figure 4: Project Volumes



4. Background Conditions Capacity Analysis

The City of Alpharetta and the Georgia DOT has plans to modify the traffic lanes on SR 9. The project will modify the SR 9 at Maxwell Road intersection by cutting off access to Roswell Street. Devore Road will be realigned and extended west to intersect with Roswell Street at a roundabout. A traffic signal is planned for the realigned Devore Road.

As a result of the roadway changes, new traffic patterns will emerge. For example, traffic that current heads south on Roswell Street and continues onto Maxwell Road will likely use Devore Road to Haynes Bridge Road. The traffic that now heads south on SR 9 would turn left through the roundabout onto Devore Road and then right to SR 9. The reverse movements would be similar.

A traffic study was conducted for the road construction project. Traffic forecasts were made available and, to the extent reasonable, were incorporated into this study as background traffic conditions.

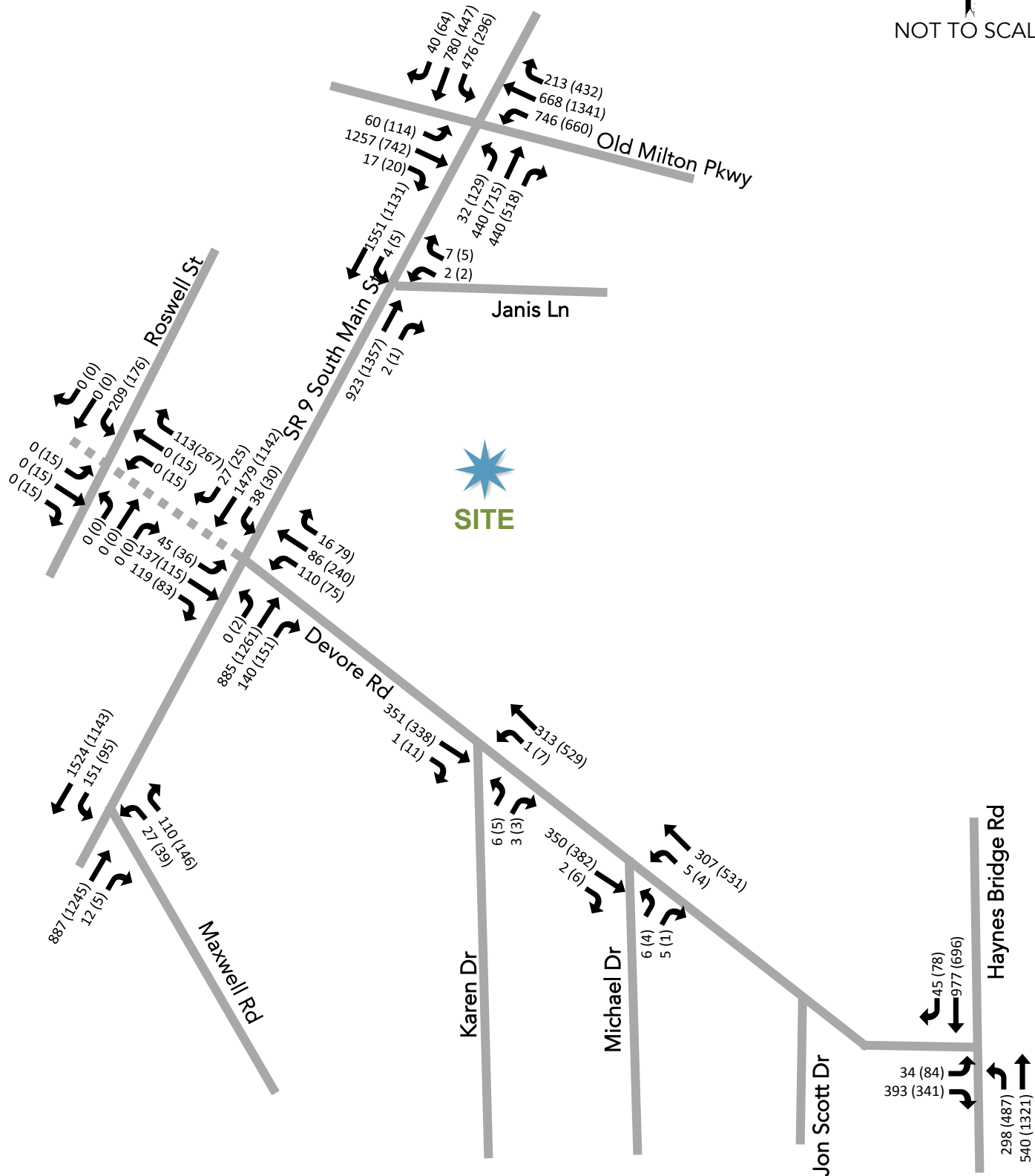
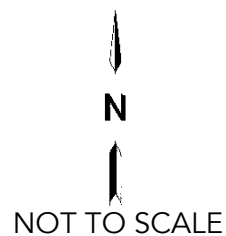
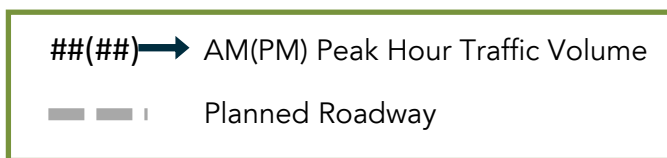
For the background capacity analysis, all GDOT improvements were assumed to be in place. It is important to note that the GDOT project should be complete by 2022 but the build-out year for the project is 2021. The results of the intersection capacity analysis are shown in Table 3 for background growth volumes shown in Figure 5.

Table 3: Background Conditions LOS

Intersection	Control	Approach	Peak Hour LOS	
			AM	PM
SR 9 at Devore Rd	Signal	Intersection	C	C
Roswell Street at Devore Rd	Roundabout	Intersection	A	A
SR 9 at Janis Ln	Side Street Stop	NB	A	A
		WB	E	E
SR 9 at Rucker Rd/Old Milton Pkwy	Signal	Intersection	E	E
Devore Rd at Karen Dr	Side Street Stop	EB	A	A
		WB	A	A
		NB	B	C
Devore Rd at Michael Dr	Side Street Stop	EB	A	A
		WB	A	A
		NB	B	C
Haynes Bridge at Devore Rd	Signal	Intersection	B	B
SR 9 at Maxwell Rd	Signal	Intersection	A	A

As a results of the SR 9 improvement project, the intersection of SR 9 at Devore Road will operate acceptably. There will be more traffic on Devore Road so the unsignalized approaches at Karen Dr and Michael Dr will degrade somewhat but not significantly over the existing case.

Figure 5: Background Volumes



5. Future Conditions Capacity Analysis

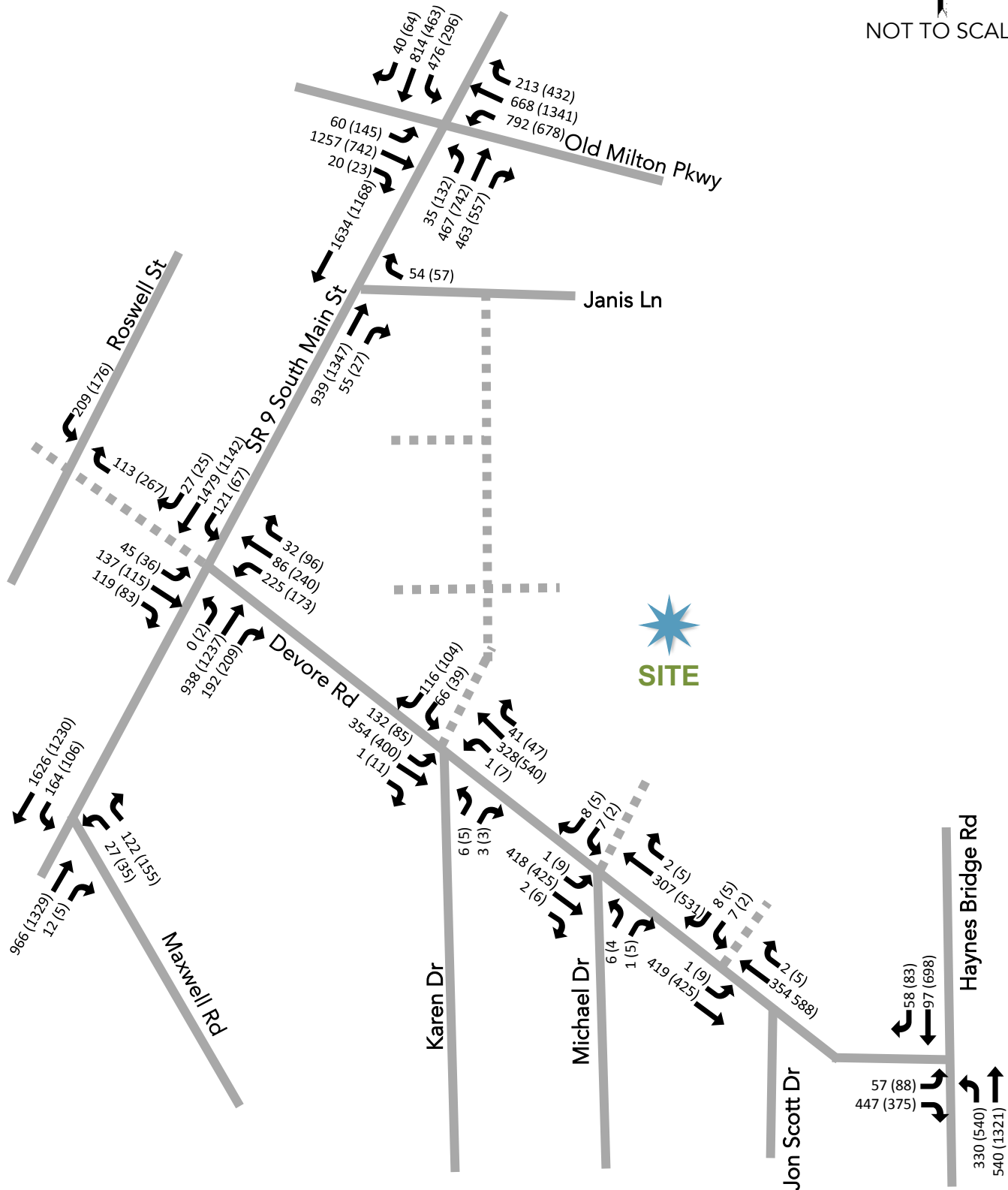
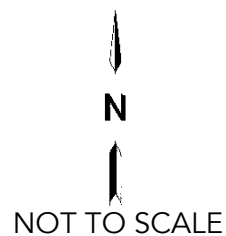
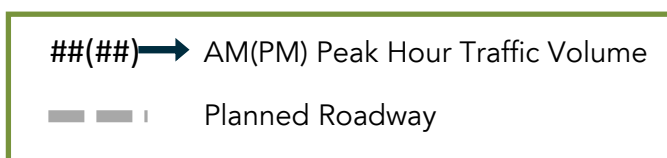
As stated previously, the future conditions assume that all of the GDOT improvements will be in place. This may not be the case for the first year of operation, depending on the construction schedule. The results of the intersection capacity analysis are shown in Table 4 for existing with project volumes shown in Figure 6.

Table 4: Future with Project Trips LOS

Intersection	Control	Approach	Peak Hour LOS	
			AM	PM
SR 9 at Devore Rd	Signal	Intersection	D	D
Roswell Street at Devore Rd	Roundabout	Intersection	A	A
SR 9 at Janis Ln	Side Street Stop	NB	A	A
		WB	C	C
SR 9 at Rucker Rd/Old Milton Pkwy	Signal	Intersection	E	E
Devore Rd at Karen Dr/Dwy 1	Side Street Stop	EB	A	A
		WB	A	A
		NB	D	D
		SB	D	D
Devore Rd at Michael Dr / Dwy 2	Side Street Stop	EB	A	A
		WB	A	A
		NB	B	C
		SB	B	C
Devore Rd at Driveway 3	Side Street Stop	EB	A	A
		WB	A	A
		SB	B	C
Haynes Bridge at Devore Rd	Signal	Intersection	C	B
SR 9 at Maxwell Rd	Signal	Intersection	A	A

All of the study intersections will be able to operate adequately with the site traffic and the planned improvements from the SR 9 project. Intersection capacity analyses worksheets are included in the Appendix.

Figure 6: Future with Project Volumes



6. Pre-GDOT Improvements Analysis

As stated previously, the proposed GDOT project may or may not be constructed by the time the development is ready to use the road network. An additional set of analysis was conducted for the intersection of SR 9 and Devore Road without the fourth leg or without a left turn lane on SR 9.

Intersection Configuration	AM Peak Dir - LOS	PM Peak Dir - LOS
Unsignalized, left/right lanes on Devore, Existing SR 9 lanes	WB – F	WB – F
	SBL – D	SBL – C
Signalized, left/right lanes on Devore, Existing SR 9 lanes	Intersection – C	Intersection – A
	SBL – D	SBL – B
Signalized, left/right lanes on Devore, SB left turn on SR 9	Intersection – B	Intersection – B
	SBL – A	SBL – B

The unsignalized conditions would be unacceptable in much the same way the intersection functions today. With a traffic signal but without a southbound left turn lane, the southbound queues on SR 9 are expected to be very long – beyond the Old Milton Pkwy intersection. With a turn lane, the queues will be manageable. A minimal length turn bay can be provided in the interim condition prior to the full construction of turn lanes and the median on SR 9. The 95% queue for the left turn bay will be less than 100 feet, assuming a left turn signal is provided.

7. Conclusions and Recommendations

The proposed South Main Street at Devore Road Mixed Use Community consisting of 29,500 square feet (sf) of retail space, 30,000 sf office space, 6,500 sf restaurants, a 60,500 sf brewery, 64 townhomes, 50 condominiums, 200 apartments with 1,321 parking spaces (1,030 spaces in parking structures, 256 spaces at the townhomes) is expected to be complete in 2021. The site is located in the southeast quadrant of the intersection of South Main Street (State Route 9) and Devore Road in the City of Alpharetta, Georgia, to the southwest of Janis Lane.

Vehicular access for the parking structures servicing the commercial uses, apartments and condominiums will be via three (3) entrances on a new interior roadway between Janis Lane and Devore Road at Karen Drive. The townhomes will be accessed by interior roadways intersecting with Devore Road two (2) locations, at Michael Drive and a new location to the southwest. Devore Road will provide access for the new vehicular trips at two (2) full-movement intersections at Haynes Bridge Road to the southeast and at South Main Street (SR 9) to the northwest. Janis Lane will provide access for the some of the new vehicular trips at the intersection with South Main Street (SR 9) to the north of the site. The intersection of Devore Road at Haynes Bridge Road is signalized and the intersection of Devore Road at South Main Street (SR 9) is expected to be signalized. Devore Road is expected to be extended to Roswell Street from South Main Street (SR 9) to the northwest to a new roundabout.

When completely occupied, the development is expected to generate approximately 233 entering and 255 exiting new vehicular trips during the morning peak volume hour. Approximately 179 entering and 205 exiting new evening peak hour vehicular trips are expected with a reduction taken for internal capture (trips between uses within the development) of approximately 17% during the morning peak hour and 26% during the evening peak hour. A total of 5,188 new entering and exiting vehicular trips are expected daily. Based on existing traffic patterns, approximately 20% of the new residential and 40% of the new commercial vehicular trips are expected to originate and terminate north and east of the development primarily via SR 9 and Haynes Bridge Road. Approximately 40% of the new residential and 50% of the new commercial trips are expected to use SR 9 west of the site. Approximately 40% of the new residential trips and 10% of the new commercial trips are expected to use Haynes Bridge Road from Devore Road to the south of the site.

Most study locations are expected to operate continue to operate adequately during weekday peak morning and evening hours with the new project trips in 2021 with the existing intersection lane configurations and traffic control. The planned improvements to add turning lanes and a traffic signal at the intersection of Devore Road and SR 9 will provide adequate operations with the new project trips.

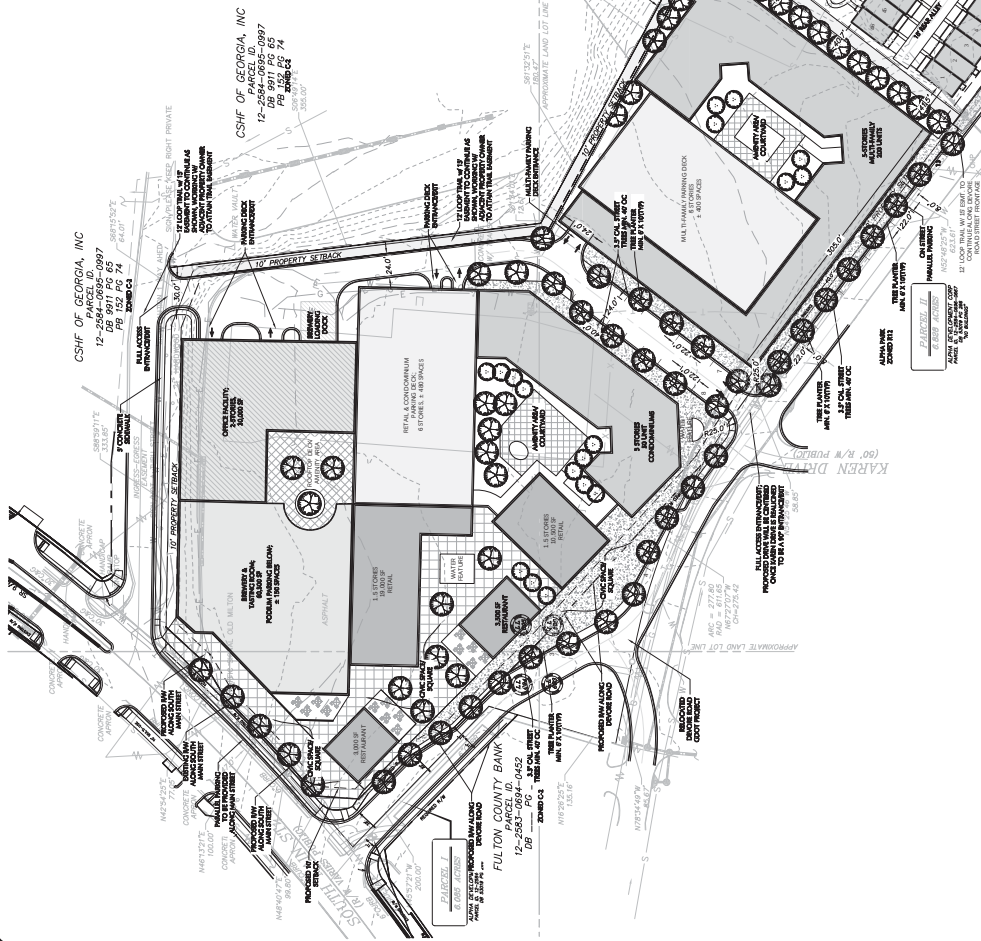
Appendix

South Main Street at Devore Road

SITE DATA:	
SITE AREA	12.913 ACRES
ZONING	C2
EXISTING ZONING	DT-MULTI COND/RES
ZONING JURISDICTION	CITY OF ALPHARETTA
DENSITY CALCULATIONS	
FOR-SALE RESIDENTIAL TRACT	64 UNITS
MID-RISE CONDOMINIUM	50 UNITS
MID-RISE MULTIFAMILY	200 UNITS
TOTAL RESIDENTIAL	314 UNITS
TOTAL SITE DENSITY	2,437 UNITS/AC
RETAIL/RESTAURANTS	36,000 SF
BREWERY SPACE	69,000 SF
OFFICE SPACE	30,000 SF
TOTAL COMMERCIAL AREA	135,000 SF
BUILDING SETBACK SUMMARY	
PROPERTY SETBACK	10 FEET
REAR YARD SETBACK	5 FEET
REAR YARD SETBACK	5 FEET
TRANSITIONAL BUFFER ZONE	5 FEET
PROPERTY ADJACENT TO RESIDENTIAL ZONED PROPERTY	N/A
PARKING SUMMARY	
PROVIDED PARKING BELOW BREWERY	150 SPACES
PROVIDED PARKING BELOW OFFICE	400 SPACES
CONDOMINIUM PARKING DECK	400 SPACES
SURFACE PARKING PROVIDED	35 SPACES
TOTAL PARKING DECK PARKING	1,000 SPACES
RESIDENTIAL PARKING	256 SPACES
6 GARAGE SPACES & 2 DRIVEWAY SPACES PER UNIT	
CIVIC & AMENITY SPACE SUMMARY	
CIVIC SPACE REQUIRED (PER 100,000 SF)	1.29 ACRES
CIVIC SPACE PROVIDED	1.30 ACRES (10.1%)
AMENITY SPACE REQUIRED (PER 100,000 SF)	1.29 ACRES
AMENITY SPACE PROVIDED	1.33 ACRES (10.3%)

SPECIMEN TREE LEGEND:	
	SPECIMEN TREE TO BE REMOVED
	SPECIMEN TREE TO BE SAVED

- VARIANCE REQUEST:**
- ALLOW 5-STORY BUILDING HEIGHT.
 - ALLOW DENSITY OF 2,437 UNITS/ACRE.
 - ARCHITECTURE STYLE VARIANCE FROM DOWNTOWN ARCHITECTURE.
 - MULTIFAMILY BUILDING FACADE TO EXCEED 200' ALONG DEVORE ROAD.
 - FRONT YARD MAXIMUM SETBACK OF 10' TO BE EXCEEDED TO BREAK UP ALL THE LONG FRONTAGE.



REVISIONS:

NO.	DATE	BY	DESCRIPTION
1	9/30/2016	REC	CITY COMMENTS

MASTER REZONING SITE PLAN

SCALE: 1" = 60'

DATE: SEPT. 1, 2016

PROJECT: 16143.00

THIS SEAL IS ONLY VALID IF COUNTER SIGNED AND DATED BY THE REGISTERED PROFESSIONAL ENGINEER.

9/30/2016

REGISTERED PROFESSIONAL ENGINEER

9/30/2016

24 HOUR CONTACT:
EYAL LIVNAT
770-294-6543

811
Mark before you dig
Call before you dig

Z1
SHEET

ITM Peak Hour Summary

Prepared by:

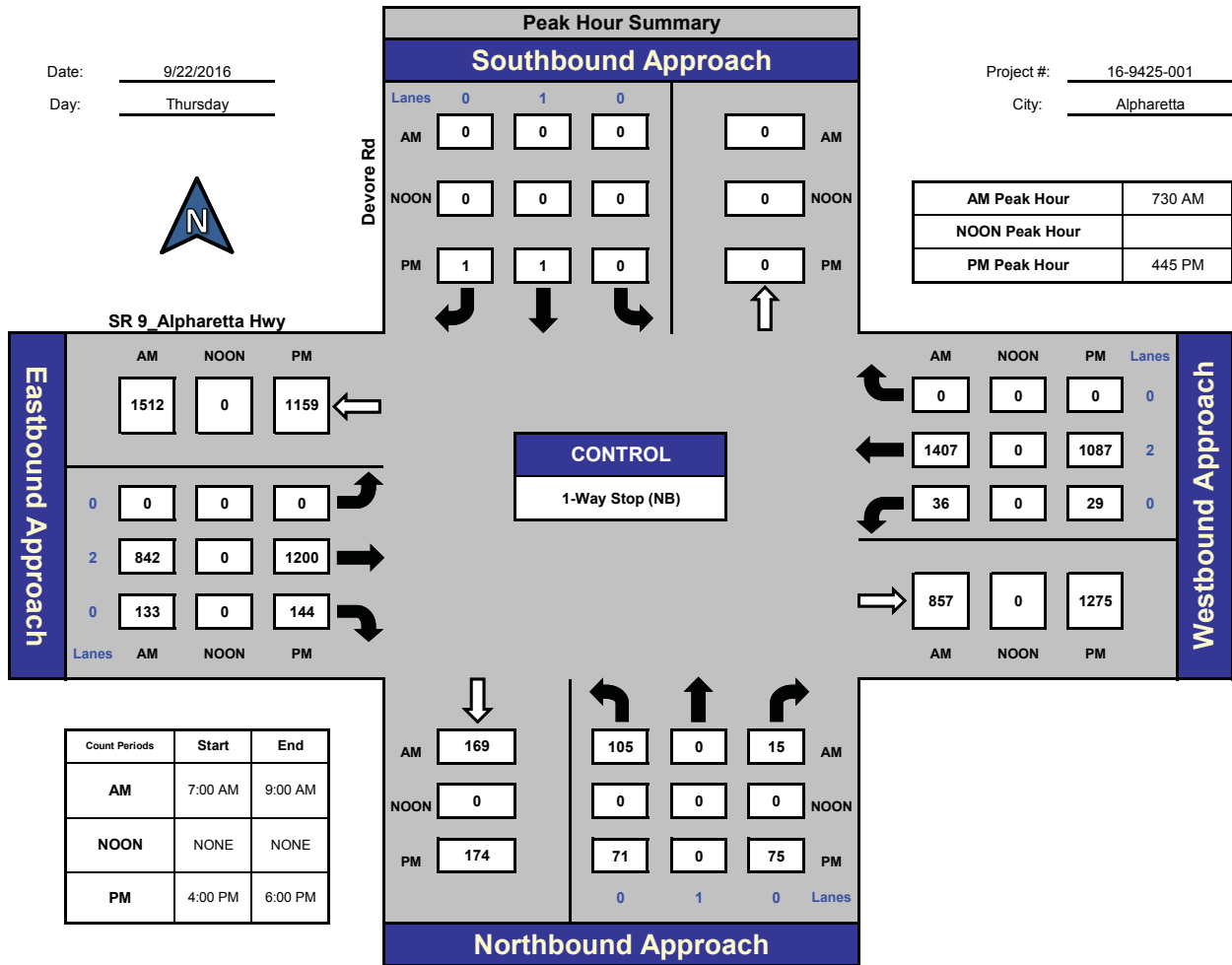


National Data & Surveying Services

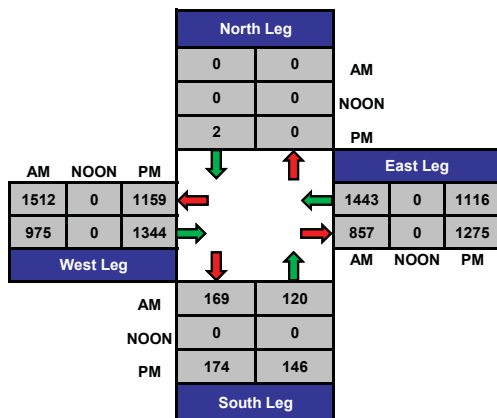
Devore Rd and SR 9 Alpharetta Hwy, Alpharetta

Date: 9/22/2016
Day: Thursday

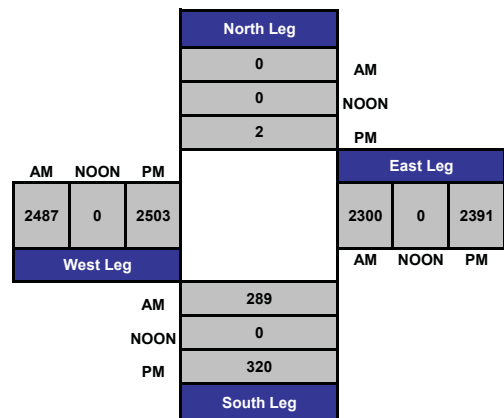
Project #: 16-9425-001
City: Alpharetta



Total Ins & Outs



Total Volume Per Leg



Project ID: 16-9425-001

Location: Devore Rd & SR 9_Alpharetta Hwy

City: Alpharetta

Day: Thursday

Date: 9/22/2016

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Devore Rd Southbound					SR 9_Alpharetta Hwy Westbound					Devore Rd Northbound					SR 9_Alpharetta Hwy Eastbound					
Start Time	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	317	17	0	334	4	0	22	0	26	9	135	0	0	144	504
7:15 AM	1	0	0	0	1	0	374	8	0	382	4	0	26	0	30	24	180	0	0	204	617
7:30 AM	0	0	0	0	0	0	374	11	0	385	4	0	22	0	26	35	200	0	0	235	646
7:45 AM	0	0	0	0	0	0	360	10	0	370	1	0	30	0	31	37	246	0	0	283	684
Total	1	0	0	0	1	0	1425	46	0	1471	13	0	100	0	113	105	761	0	0	866	2451
8:00 AM	0	0	0	0	0	0	312	5	0	317	6	0	29	0	35	24	189	0	0	213	565
8:15 AM	0	0	0	0	0	0	361	10	0	371	4	0	24	0	28	37	207	0	0	244	643
8:30 AM	0	0	0	0	0	0	299	9	0	308	4	0	26	0	30	36	216	0	0	252	590
8:45 AM	0	0	0	0	0	0	291	9	0	300	5	0	22	0	27	24	189	0	0	213	540
Total	0	0	0	0	0	0	1263	33	0	1296	19	0	101	0	120	121	801	0	0	922	2338

BREAK

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4:30 PM	0	0	0	0	0	0	244	6	0	250	15	0	16	0	31	32	283	0	0	315	596
4:45 PM	1	0	0	0	1	0	273	5	0	278	13	0	17	0	30	28	296	0	0	324	633
Total	2	0	0	0	2	0	965	22	0	987	50	0	69	0	119	124	1118	3	0	1245	2353
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5:15 PM	0	1	0	0	1	0	273	10	0	283	27	0	14	0	41	38	330	0	0	368	693
5:30 PM	0	0	0	0	0	0	300	6	0	306	20	0	16	0	36	32	259	0	0	291	633
5:45 PM	1	0	0	0	1	0	221	5	0	226	11	0	29	0	40	30	214	1	0	245	512
Total	1	1	0	0	2	0	1035	29	0	1064	73	0	83	0	156	146	1118	1	0	1265	2487

Grand Total	4	1	0	0	5	0	4688	130	0	4818	155	0	353	0	508	496	3798	4	0	4298	9629
Apprch %	80.0	20.0	0.0	0.0		0.0	97.3	2.7	0.0		30.5	0.0	69.5	0.0		11.5	88.4	0.1	0.0		
Total %	0.0	0.0	0.0	0.0	0.1	0.0	48.7	1.4	0.0	50.0	1.6	0.0	3.7	0.0	5.3	5.2	39.4	0.0	0.0	44.6	
Cars, PU, Vans	4	1	0	0	5	0	4688	130	0	4818	155	0	353	0	508	496	3798	4	0	4298	9629
% Cars, PU, Vans	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: 16-9425-001

Location: Devore Rd & SR 9_Alpharett

City: Alpharetta

PEAK HOURS

Day: Thursday

Date: 9/22/2016

AM

	Devore Rd Southbound					SR 9_Alpharetta Hwy Westbound					Devore Rd Northbound					SR 9_Alpharetta Hwy Eastbound					
Start Time	Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	0	0	0	0		0	374	11	385		4	0	22	26		35	200	0	235		646
7:45 AM	0	0	0	0		0	360	10	370		1	0	30	31		37	246	0	283		684
8:00 AM	0	0	0	0		0	312	5	317		6	0	29	35		24	189	0	213		565
8:15 AM	0	0	0	0		0	361	10	371		4	0	24	28		37	207	0	244		643
Total Volume	0	0	0	0		0	1407	36	1443		15	0	105	120		133	842	0	975		2538
% App. Total	0.0	0.0	0.0	0		0.0	97.5	2.5	100		12.5	0.0	87.5	100		13.6	86.4	0.0	100		
PHF				0.000					0.937					0.857					0.861		
Cars, PU, Vans	0	0	0	0		0	1407	36	1443		15	0	105	120		133	842	0	975		2538
% Cars, PU, Vans	0.0	0.0	0.0	0.0		0.0	100.0	100.0	100.0		100.0	0.0	100.0	100.0		100.0	100.0	0.0	100.0		100.0
Heavy Trucks	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
%Heavy Trucks	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0

PM

	Devore Rd Southbound					SR 9_Alpharetta Hwy Westbound					Devore Rd Northbound					SR 9_Alpharetta Hwy Eastbound					
Start Time	Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	1	0	0	1		0	273	5	278		13	0	17	30		28	296	0	324		633
5:00 PM	0	0	0	0		0	241	8	249		15	0	24	39		46	315	0	361		649
5:15 PM	0	1	0	1		0	273	10	283		27	0	14	41		38	330	0	368		693
5:30 PM	0	0	0	0		0	300	6	306		20	0	16	36		32	259	0	291		633
Total Volume	1	1	0	2		0	1087	29	1116		75	0	71	146		144	1200	0	1344		2608
% App. Total	50.0	50.0	0.0	100		0.0	97.4	2.6	100		51.4	0.0	48.6	100		10.7	89.3	0.0	100		
PHF				0.500					0.912					0.890					0.913		

ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

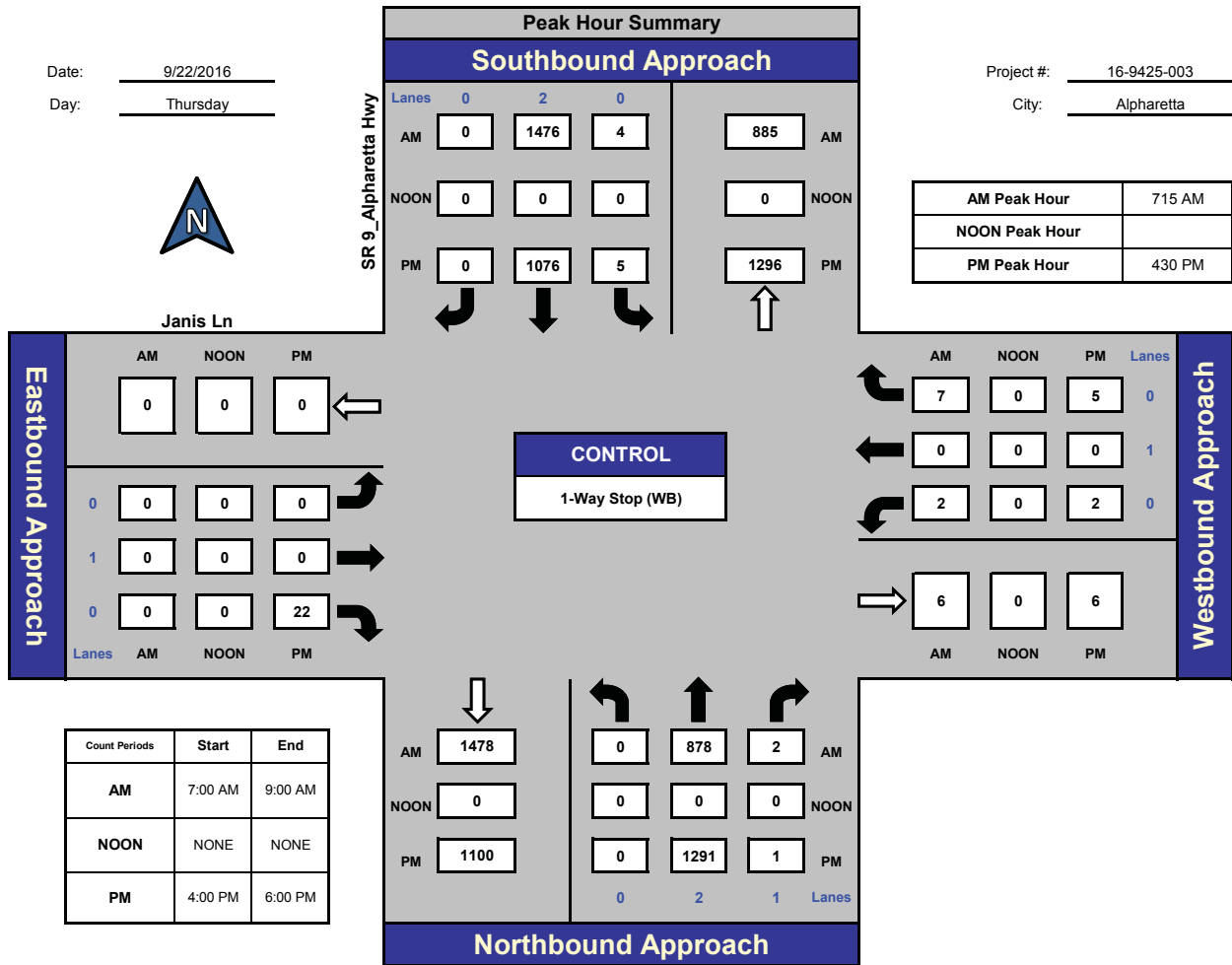
SR 9 Alpharetta Hwy and Janis Ln , Alpharetta

Date: 9/22/2016

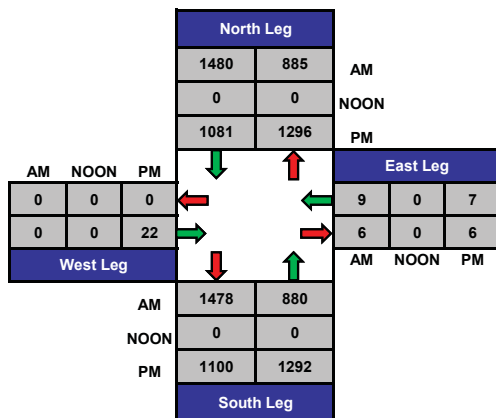
Day: Thursday

Project #: 16-9425-003

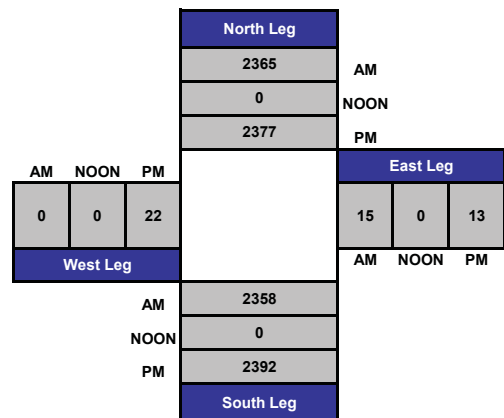
City: Alpharetta



Total Ins & Outs



Total Volume Per Leg



Project ID: 16-9425-003

Location: SR 9_Alpharetta Hwy & Janis Ln

City: Alpharetta

Day: Thursday

Date: 9/22/2016

Groups Printed - Cars, PU, Vans - Heavy Trucks

	SR 9_Alpharetta Hwy Southbound					Janis Ln Westbound					SR 9_Alpharetta Hwy Northbound					Janis Ln Eastbound					
Start Time	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Int. Total
7:00 AM	0	328	0	0	328	0	0	0	0	0	0	137	0	0	137	0	0	0	0	0	465
7:15 AM	0	451	3	0	454	0	0	1	0	1	0	182	0	0	182	0	0	0	0	0	637
7:30 AM	0	366	0	0	366	4	0	0	0	4	1	208	0	0	209	0	0	0	0	0	579
7:45 AM	0	355	1	0	356	3	0	1	0	4	1	252	0	0	253	0	0	0	0	0	613
Total	0	1500	4	0	1504	7	0	2	0	9	2	779	0	0	781	0	0	0	0	0	2294
8:00 AM	0	304	0	0	304	0	0	0	0	0	0	236	0	0	236	0	0	0	0	0	540
8:15 AM	0	343	2	0	345	0	0	1	0	1	0	198	0	0	198	0	0	0	0	0	544
8:30 AM	0	322	1	0	323	2	0	1	0	3	2	192	0	0	194	0	0	0	0	0	520
8:45 AM	0	302	0	0	302	2	0	1	0	3	1	215	0	0	216	1	0	0	0	1	522
Total	0	1271	3	0	1274	4	0	3	0	7	3	841	0	0	844	1	0	0	0	1	2126

BREAK

4:00 PM	0	240	2	0	242	2	0	1	0	3	2	326	0	0	328	2	0	4	0	6	579
4:15 PM	0	219	1	0	220	1	0	2	0	3	0	299	0	0	299	2	0	2	0	4	526
4:30 PM	0	268	2	0	270	2	0	0	0	2	1	337	0	0	338	4	0	0	0	4	614
4:45 PM	0	266	1	0	267	1	0	1	0	2	0	292	0	0	292	7	0	0	0	7	568
Total	0	993	6	0	999	6	0	4	0	10	3	1254	0	0	1257	15	0	6	0	21	2287
5:00 PM	0	268	1	0	269	1	0	1	0	2	0	304	0	0	304	6	0	0	0	6	581
5:15 PM	0	274	1	0	275	1	0	0	0	1	0	358	0	0	358	5	0	0	0	5	639
5:30 PM	0	272	0	0	272	0	0	0	0	0	2	323	0	0	325	5	0	0	0	5	602
5:45 PM	0	250	0	0	250	2	0	0	0	2	1	234	0	0	235	2	0	0	0	2	489
Total	0	1064	2	0	1066	4	0	1	0	5	3	1219	0	0	1222	18	0	0	0	18	2311

Grand Total	0	4828	15	0	4843	21	0	10	0	31	11	4093	0	0	4104	34	0	6	0	40	9018
Apprch %	0.0	99.7	0.3	0.0		67.7	0.0	32.3	0.0		0.3	99.7	0.0	0.0		85.0	0.0	15.0	0.0		
Total %	0.0	53.5	0.2	0.0	53.7	0.2	0.0	0.1	0.0	0.3	0.1	45.4	0.0	0.0	45.5	0.4	0.0	0.1	0.0	0.4	
Cars, PU, Vans	0	4828	15	0	4843	21	0	10	0	31	11	4093	0	0	4104	34	0	6	0	40	9018
% Cars, PU, Vans	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: 16-9425-003

Location: SR 9_Alpharetta Hwy & Jani

City: Alpharetta

PEAK HOURS

Day: Thursday

Date: 9/22/2016

AM

	SR 9_Alpharetta Hwy Southbound					Janis Ln Westbound					SR 9_Alpharetta Hwy Northbound					Janis Ln Eastbound					
Start Time	Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	0	451	3	454		0	0	1	1		0	182	0	182		0	0	0	0		637
7:30 AM	0	366	0	366		4	0	0	4		1	208	0	209		0	0	0	0		579
7:45 AM	0	355	1	356		3	0	1	4		1	252	0	253		0	0	0	0		613
8:00 AM	0	304	0	304		0	0	0	0		0	236	0	236		0	0	0	0		540
Total Volume	0	1476	4	1480		7	0	2	9		2	878	0	880		0	0	0	0		2369
% App. Total	0.0	99.7	0.3	100		77.8	0.0	22.2	100		0.2	99.8	0.0	100		0.0	0.0	0.0	0		
PHF				0.815					0.563					0.870					0.000		
Cars, PU, Vans	0	1476	4	1480		7	0	2	9		2	878	0	880		0	0	0	0		2369
% Cars, PU, Vans	0.0	100.0	100.0	100.0		100.0	0.0	100.0	100.0		100.0	100.0	0.0	100.0		0.0	0.0	0.0	0.0		100.0
Heavy Trucks	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
%Heavy Trucks	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0

PM

	SR 9_Alpharetta Hwy Southbound					Janis Ln Westbound					SR 9_Alpharetta Hwy Northbound					Janis Ln Eastbound					
Start Time	Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	0	268	2	270		2	0	0	2		1	337	0	338		4	0	0	4		614
4:45 PM	0	266	1	267		1	0	1	2		0	292	0	292		7	0	0	7		568
5:00 PM	0	268	1	269		1	0	1	2		0	304	0	304		6	0	0	6		581
5:15 PM	0	274	1	275		1	0	0	1		0	358	0	358		5	0	0	5		639
Total Volume	0	1076	5	1081		5	0	2	7		1	1291	0	1292		22	0	0	22		2402
% App. Total	0.0	99.5	0.5	100		71.4	0.0	28.6	100		0.1	99.9	0.0	100		100.0	0.0	0.0	100		
PHF				0.983					0.875					0.902					0.786		

ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

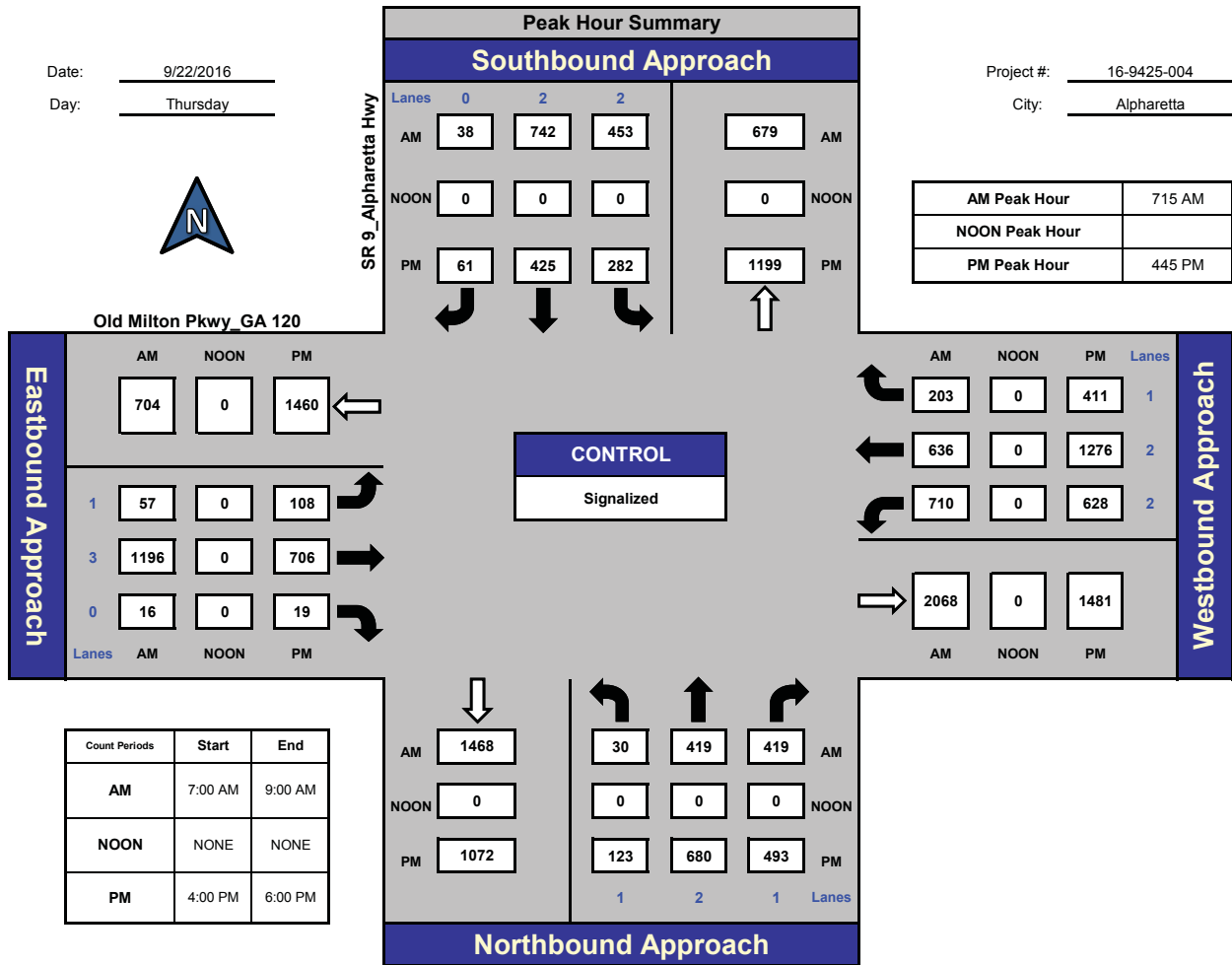
SR 9 Alpharetta Hwy and Old Milton Pkwy GA 120 , Alpharetta

Date: 9/22/2016

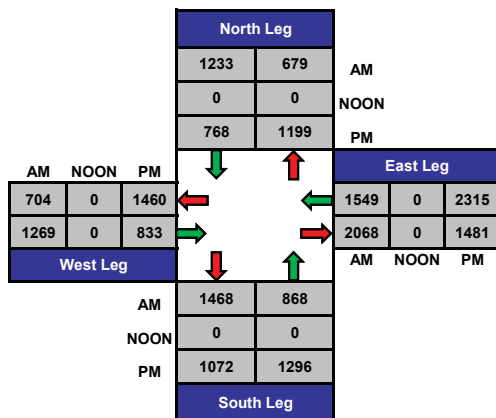
Day: Thursday

Project #: 16-9425-004

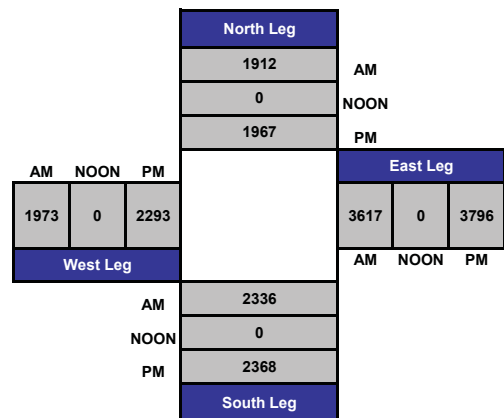
City: Alpharetta



Total Ins & Outs



Total Volume Per Leg



Project ID: 16-9425-004

Location: SR 9_Alpharetta Hwy & Old Milton Pkwy_GA 120

City: Alpharetta

Day: Thursday

Date: 9/22/2016

Groups Printed - Cars, PU, Vans - Heavy Trucks

	SR 9_Alpharetta Hwy Southbound					Old Milton Pkwy_GA 120 Westbound					SR 9_Alpharetta Hwy Northbound					Old Milton Pkwy_GA 120 Eastbound					
Start Time	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Int. Total
7:00 AM	4	148	129	0	281	36	133	185	0	354	67	48	7	0	122	2	225	9	0	236	993
7:15 AM	4	211	105	0	320	43	155	183	0	381	71	97	7	0	175	4	316	7	0	327	1203
7:30 AM	9	194	116	0	319	45	136	211	0	392	120	101	5	0	226	2	263	21	0	286	1223
7:45 AM	14	167	98	0	279	68	190	179	0	437	111	92	10	0	213	6	300	14	0	320	1249
Total	31	720	448	0	1199	192	614	758	0	1564	369	338	29	0	736	14	1104	51	0	1169	4668
8:00 AM	11	170	134	0	315	47	155	137	0	339	117	129	8	0	254	4	317	15	0	336	1244
8:15 AM	7	182	125	0	314	41	124	167	0	332	121	81	6	0	208	4	231	11	0	246	1100
8:30 AM	8	146	122	0	276	62	145	159	0	366	97	63	3	0	163	6	275	13	0	294	1099
8:45 AM	11	172	91	0	274	80	123	122	0	325	110	111	11	0	232	9	281	18	0	308	1139
Total	37	670	472	0	1179	230	547	585	0	1362	445	384	28	0	857	23	1104	57	0	1184	4582

BREAK

4:00 PM	14	129	65	0	208	74	277	107	0	458	144	139	20	0	303	3	158	20	0	181	1150
4:15 PM	17	77	60	0	154	81	361	141	0	583	148	130	22	0	300	10	133	19	0	162	1199
4:30 PM	24	111	61	0	196	83	320	144	0	547	132	181	20	0	333	4	166	19	0	189	1265
4:45 PM	11	126	62	0	199	87	337	167	0	591	132	165	26	0	323	8	173	21	0	202	1315
Total	66	443	248	0	757	325	1295	559	0	2179	556	615	88	0	1259	25	630	79	0	734	4929
5:00 PM	16	105	68	0	189	120	312	147	0	579	124	165	22	0	311	3	191	28	0	222	1301
5:15 PM	15	103	72	0	190	103	299	139	0	541	117	191	42	0	350	4	186	31	0	221	1302
5:30 PM	19	91	80	0	190	101	328	175	0	604	120	159	33	0	312	4	156	28	0	188	1294
5:45 PM	16	98	69	0	183	107	307	143	0	557	102	146	24	0	272	3	137	26	0	166	1178
Total	66	397	289	0	752	431	1246	604	0	2281	463	661	121	0	1245	14	670	113	0	797	5075

Grand Total	200	2230	1457	0	3887	1178	3702	2506	0	7386	1833	1998	266	0	4097	76	3508	300	0	3884	19254
Apprch %	5.1	57.4	37.5	0.0		15.9	50.1	33.9	0.0		44.7	48.8	6.5	0.0		2.0	90.3	7.7	0.0		
Total %	1.0	11.6	7.6	0.0	20.2	6.1	19.2	13.0	0.0	38.4	9.5	10.4	1.4	0.0	21.3	0.4	18.2	1.6	0.0	20.2	
Cars, PU, Vans	200	2230	1457	0	3887	1178	3702	2506	0	7386	1833	1998	266	0	4097	76	3508	300	0	3884	19254
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: 16-9425-004

Location: SR 9_Alpharetta Hwy & Old

City: Alpharetta

PEAK HOURS

Day: Thursday

Date: 9/22/2016

AM

	SR 9_Alpharetta Hwy Southbound					Old Milton Pkwy_GA 120 Westbound					SR 9_Alpharetta Hwy Northbound					Old Milton Pkwy_GA 120 Eastbound					
Start Time	Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	4	211	105	320		43	155	183	381		71	97	7	175		4	316	7	327		1203
7:30 AM	9	194	116	319		45	136	211	392		120	101	5	226		2	263	21	286		1223
7:45 AM	14	167	98	279		68	190	179	437		111	92	10	213		6	300	14	320		1249
8:00 AM	11	170	134	315		47	155	137	339		117	129	8	254		4	317	15	336		1244
Total Volume	38	742	453	1233		203	636	710	1549		419	419	30	868		16	1196	57	1269		4919
% App. Total	3.1	60.2	36.7	100		13.1	41.1	45.8	100		48.3	48.3	3.5	100		1.3	94.2	4.5	100		
PHF				0.963					0.886					0.854					0.944		
Cars, PU, Vans	38	742	453	1233		203	636	710	1549		419	419	30	868		16	1196	57	1269		4919
% Cars, PU, Vans	100.0	100.0	100.0	100.0		100.0	100.0	100.0	100.0		100.0	100.0	100.0	100.0		100.0	100.0	100.0	100.0		100.0
Heavy Trucks	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
%Heavy Trucks	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0

PM

	SR 9_Alpharetta Hwy Southbound					Old Milton Pkwy_GA 120 Westbound					SR 9_Alpharetta Hwy Northbound					Old Milton Pkwy_GA 120 Eastbound					
Start Time	Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	11	126	62	199		87	337	167	591		132	165	26	323		8	173	21	202		1315
5:00 PM	16	105	68	189		120	312	147	579		124	165	22	311		3	191	28	222		1301
5:15 PM	15	103	72	190		103	299	139	541		117	191	42	350		4	186	31	221		1302
5:30 PM	19	91	80	190		101	328	175	604		120	159	33	312		4	156	28	188		1294
Total Volume	61	425	282	768		411	1276	628	2315		493	680	123	1296		19	706	108	833		5212
% App. Total	7.9	55.3	36.7	100		17.8	55.1	27.1	100		38.0	52.5	9.5	100		2.3	84.8	13.0	100		
PHF				0.965					0.958					0.926					0.938		

ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

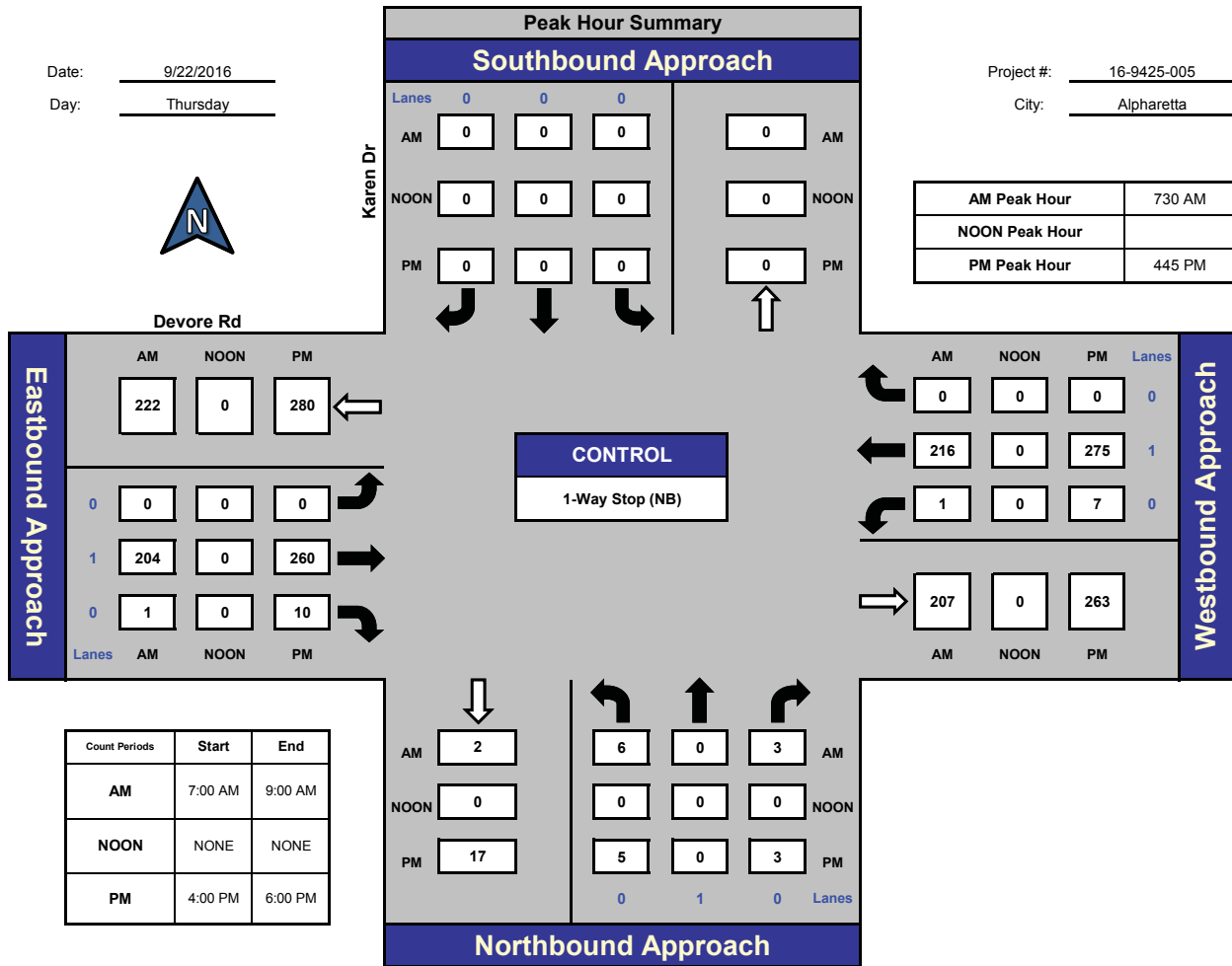
Karen Dr and Devore Rd , Alpharetta

Date: 9/22/2016

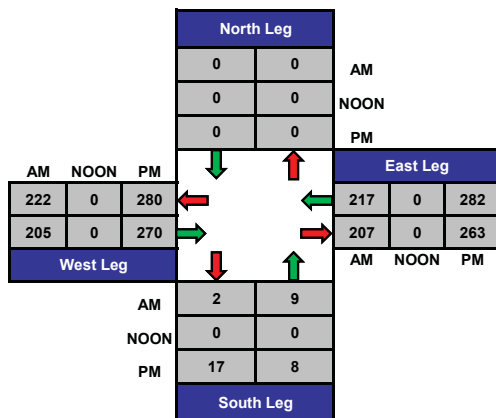
Day: Thursday

Project #: 16-9425-005

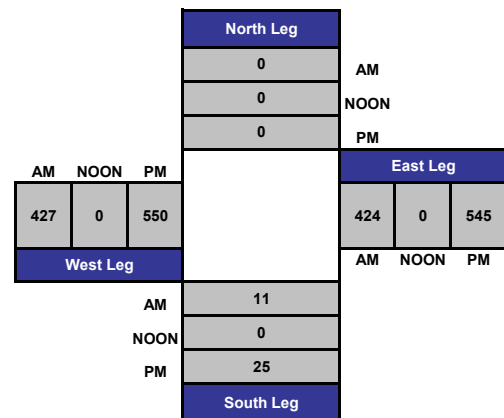
City: Alpharetta



Total Ins & Outs



Total Volume Per Leg



Project ID: 16-9425-005
Location: Karen Dr & Devore Rd
City: Alpharetta

Day: Thursday
Date: 9/22/2016

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Karen Dr Southbound					Devore Rd Westbound					Karen Dr Northbound					Devore Rd Eastbound					
Start Time	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	30	3	0	33	1	0	2	0	3	0	22	0	0	22	58
7:15 AM	0	0	0	0	0	0	43	1	0	44	1	0	0	0	1	1	40	0	0	41	86
7:30 AM	0	0	0	0	0	0	54	0	0	54	0	0	2	0	2	1	46	0	0	47	103
7:45 AM	0	0	0	0	0	0	63	1	0	64	1	0	3	0	4	0	55	0	0	55	123
Total	0	0	0	0	0	0	190	5	0	195	3	0	7	0	10	2	163	0	0	165	370
8:00 AM	0	0	0	0	0	0	43	0	0	43	1	0	1	0	2	0	44	0	0	44	89
8:15 AM	0	0	0	0	0	0	56	0	0	56	1	0	0	0	1	0	59	0	0	59	116
8:30 AM	0	0	0	0	0	0	51	1	0	52	0	0	0	0	0	1	35	0	0	36	88
8:45 AM	0	0	0	0	0	0	46	1	0	47	0	0	1	0	1	0	39	0	0	39	87
Total	0	0	0	0	0	0	196	2	0	198	2	0	2	0	4	1	177	0	0	178	380

BREAK

4:00 PM	0	0	0	0	0	0	38	2	0	40	3	0	1	0	4	4	60	0	0	64	108
4:15 PM	0	0	0	0	0	0	52	2	0	54	1	0	2	0	3	2	51	0	0	53	110
4:30 PM	0	0	0	0	0	0	41	3	0	44	2	0	2	0	4	3	61	0	0	64	112
4:45 PM	0	0	0	0	0	0	62	3	0	65	0	0	2	0	2	3	54	0	0	57	124
Total	0	0	0	0	0	0	193	10	0	203	6	0	7	0	13	12	226	0	0	238	454
5:00 PM	0	0	0	0	0	0	55	1	0	56	2	0	1	0	3	1	72	0	0	73	132
5:15 PM	0	0	0	0	0	0	88	2	0	90	1	0	1	0	2	1	65	0	0	66	158
5:30 PM	0	0	0	0	0	0	70	1	0	71	0	0	1	0	1	5	69	0	0	74	146
5:45 PM	0	0	0	0	0	0	56	1	0	57	0	0	1	0	1	0	36	0	0	36	94
Total	0	0	0	0	0	0	269	5	0	274	3	0	4	0	7	7	242	0	0	249	530

Grand Total	0	0	0	0	0	0	848	22	0	870	14	0	20	0	34	22	808	0	0	830	1734
Apprch %	0.0	0.0	0.0	0.0		0.0	97.5	2.5	0.0		41.2	0.0	58.8	0.0		2.7	97.3	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	48.9	1.3	0.0	50.2	0.8	0.0	1.2	0.0	2.0	1.3	46.6	0.0	0.0	47.9	
Cars, PU, Vans	0	0	0	0	0	0	848	22	0	870	14	0	20	0	34	22	808	0	0	830	1734
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: 16-9425-005
Location: Karen Dr & Devore Rd
City: Alpharetta

PEAK HOURS

Day: Thursday
Date: 9/22/2016

AM

	Karen Dr Southbound					Devore Rd Westbound					Karen Dr Northbound					Devore Rd Eastbound					
Start Time	Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	0	0	0	0		0	54	0	54		0	0	2	2		1	46	0	47		103
7:45 AM	0	0	0	0		0	63	1	64		1	0	3	4		0	55	0	55		123
8:00 AM	0	0	0	0		0	43	0	43		1	0	1	2		0	44	0	44		89
8:15 AM	0	0	0	0		0	56	0	56		1	0	0	1		0	59	0	59		116
Total Volume	0	0	0	0		0	216	1	217		3	0	6	9		1	204	0	205		431
% App. Total	0.0	0.0	0.0	0		0.0	99.5	0.5	100		33.3	0.0	66.7	100		0.5	99.5	0.0	100		
PHF				0.000					0.848					0.563					0.869		
Cars, PU, Vans	0	0	0	0		0	216	1	217		3	0	6	9		1	204	0	205		431
% Cars, PU, Vans	0.0	0.0	0.0	0.0		0.0	100.0	100.0	100.0		100.0	0.0	100.0	100.0		100.0	100.0	0.0	100.0		100.0
Heavy Trucks	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
%Heavy Trucks	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0

PM

	Karen Dr Southbound					Devore Rd Westbound					Karen Dr Northbound					Devore Rd Eastbound					
Start Time	Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	0	0	0	0		0	62	3	65		0	0	2	2		3	54	0	57		124
5:00 PM	0	0	0	0		0	55	1	56		2	0	1	3		1	72	0	73		132
5:15 PM	0	0	0	0		0	88	2	90		1	0	1	2		1	65	0	66		158
5:30 PM	0	0	0	0		0	70	1	71		0	0	1	1		5	69	0	74		146
Total Volume	0	0	0	0		0	275	7	282		3	0	5	8		10	260	0	270		560
% App. Total	0.0	0.0	0.0	0		0.0	97.5	2.5	100		37.5	0.0	62.5	100		3.7	96.3	0.0	100		
PHF				0.000					0.783					0.667					0.912		

ITM Peak Hour Summary

Prepared by:

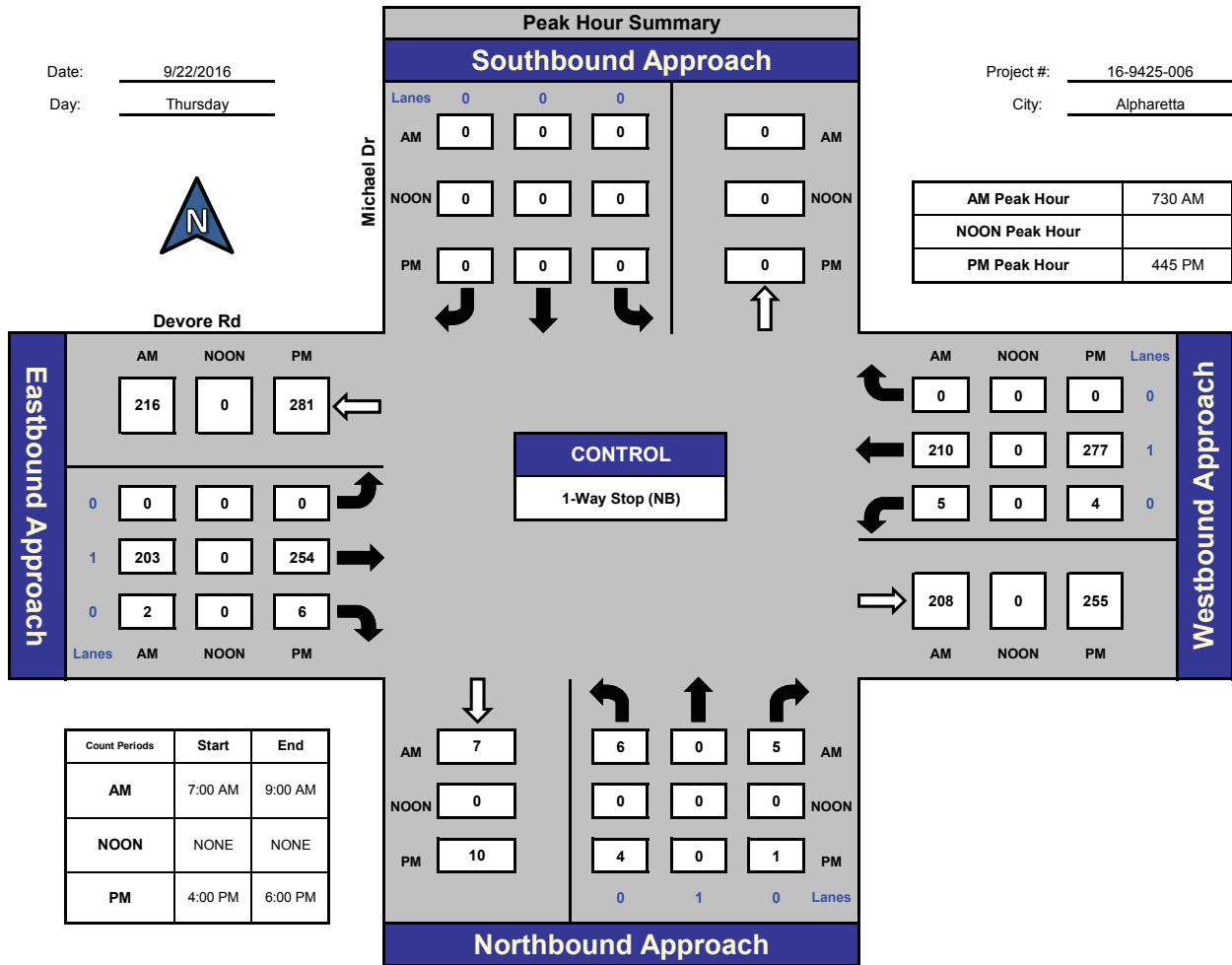


National Data & Surveying Services

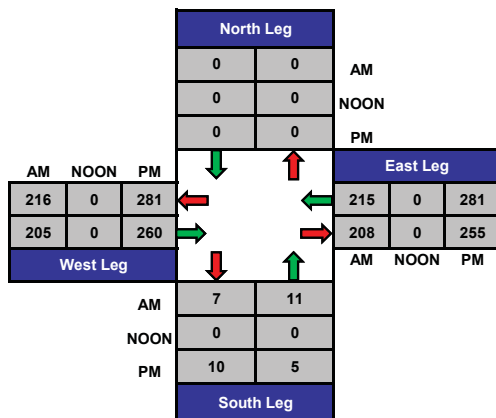
Michael Dr and Devore Rd , Alpharetta

Date: 9/22/2016
Day: Thursday

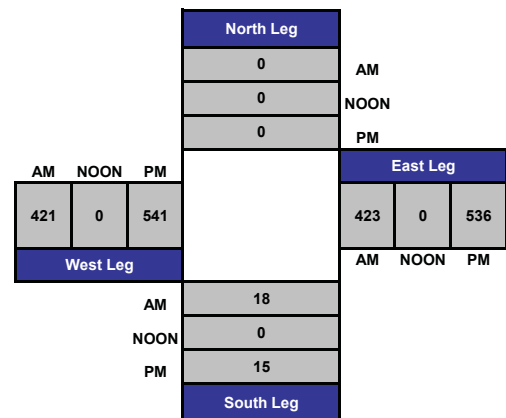
Project #: 16-9425-006
City: Alpharetta



Total Ins & Outs



Total Volume Per Leg



Project ID: 16-9425-006
Location: Michael Dr & Devore Rd
City: Alpharetta

Day: Thursday
Date: 9/22/2016

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Michael Dr Southbound					Devore Rd Westbound					Michael Dr Northbound					Devore Rd Eastbound					
Start Time	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	28	0	0	28	2	0	4	0	6	0	23	0	0	23	57
7:15 AM	0	0	0	0	0	0	44	0	0	44	1	0	2	0	3	1	42	0	0	43	90
7:30 AM	0	0	0	0	0	0	49	2	0	51	4	0	2	0	6	1	46	0	0	47	104
7:45 AM	0	0	0	0	0	0	63	2	0	65	1	0	2	0	3	0	57	0	0	57	125
Total	0	0	0	0	0	0	184	4	0	188	8	0	10	0	18	2	168	0	0	170	376
8:00 AM	0	0	0	0	0	0	43	0	0	43	0	0	1	0	1	0	47	0	0	47	91
8:15 AM	0	0	0	0	0	0	55	1	0	56	0	0	1	0	1	1	53	0	0	54	111
8:30 AM	0	0	0	0	0	0	52	1	0	53	0	0	2	0	2	1	34	0	0	35	90
8:45 AM	0	0	0	0	0	0	46	1	0	47	0	0	1	0	1	0	40	0	0	40	88
Total	0	0	0	0	0	0	196	3	0	199	0	0	5	0	5	2	174	0	0	176	380

BREAK

4:00 PM	0	0	0	0	0	0	38	1	0	39	2	0	0	0	2	1	64	0	0	65	106
4:15 PM	0	0	0	0	0	0	55	2	0	57	1	0	3	0	4	1	49	0	0	50	111
4:30 PM	0	0	0	0	0	0	42	1	0	43	1	0	1	0	2	1	59	0	0	60	105
4:45 PM	0	0	0	0	0	0	64	2	0	66	0	0	3	0	3	1	54	0	0	55	124
Total	0	0	0	0	0	0	199	6	0	205	4	0	7	0	11	4	226	0	0	230	446
5:00 PM	0	0	0	0	0	0	57	0	0	57	0	0	1	0	1	0	69	0	0	69	127
5:15 PM	0	0	0	0	0	0	88	2	0	90	1	0	0	0	1	2	63	0	0	65	156
5:30 PM	0	0	0	0	0	0	68	0	0	68	0	0	0	0	0	3	68	0	0	71	139
5:45 PM	0	0	0	0	0	0	55	2	0	57	1	0	3	0	4	0	38	0	0	38	99
Total	0	0	0	0	0	0	268	4	0	272	2	0	4	0	6	5	238	0	0	243	521

Grand Total	0	0	0	0	0	0	847	17	0	864	14	0	26	0	40	13	806	0	0	819	1723
Apprch %	0.0	0.0	0.0	0.0		0.0	98.0	2.0	0.0		35.0	0.0	65.0	0.0		1.6	98.4	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	49.2	1.0	0.0	50.1	0.8	0.0	1.5	0.0	2.3	0.8	46.8	0.0	0.0	47.5	
Cars, PU, Vans	0	0	0	0	0	0	847	17	0	864	14	0	26	0	40	13	806	0	0	819	1723
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: 16-9425-006
Location: Michael Dr & Devore Rd
City: Alpharetta

PEAK HOURS

Day: Thursday
Date: 9/22/2016

AM

Time	Michael Dr Southbound				Devore Rd Westbound				Michael Dr Northbound				Devore Rd Eastbound				Int. Total
	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
7:30 AM	0	0	0	0	0	49	2	51	4	0	2	6	1	46	0	47	104
7:45 AM	0	0	0	0	0	63	2	65	1	0	2	3	0	57	0	57	125
8:00 AM	0	0	0	0	0	43	0	43	0	0	1	1	0	47	0	47	91
8:15 AM	0	0	0	0	0	55	1	56	0	0	1	1	1	53	0	54	111
Total Volume	0	0	0	0	0	210	5	215	5	0	6	11	2	203	0	205	431
% App. Total	0.0	0.0	0.0	0	0.0	97.7	2.3	100	45.5	0.0	54.5	100	1.0	99.0	0.0	100	
PHF	0.000				0.827				0.458				0.899				
Cars, PU, Vans	0	0	0	0	0	210	5	215	5	0	6	11	2	203	0	205	431
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PM

	Michael Dr Southbound				Devore Rd Westbound				Michael Dr Northbound				Devore Rd Eastbound				
Start Time	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
4:45 PM	0	0	0	0	0	64	2	66	0	0	3	3	1	54	0	55	124
5:00 PM	0	0	0	0	0	57	0	57	0	0	1	1	0	69	0	69	127
5:15 PM	0	0	0	0	0	88	2	90	1	0	0	1	2	63	0	65	156
5:30 PM	0	0	0	0	0	68	0	68	0	0	0	0	3	68	0	71	139
Total Volume	0	0	0	0	0	277	4	281	1	0	4	5	6	254	0	260	546
% App. Total	0.0	0.0	0.0	0	0.0	98.6	1.4	100	20.0	0.0	80.0	100	2.3	97.7	0.0	100	
PHF	0.000				0.781				0.417				0.915				

ITM Peak Hour Summary

Prepared by:

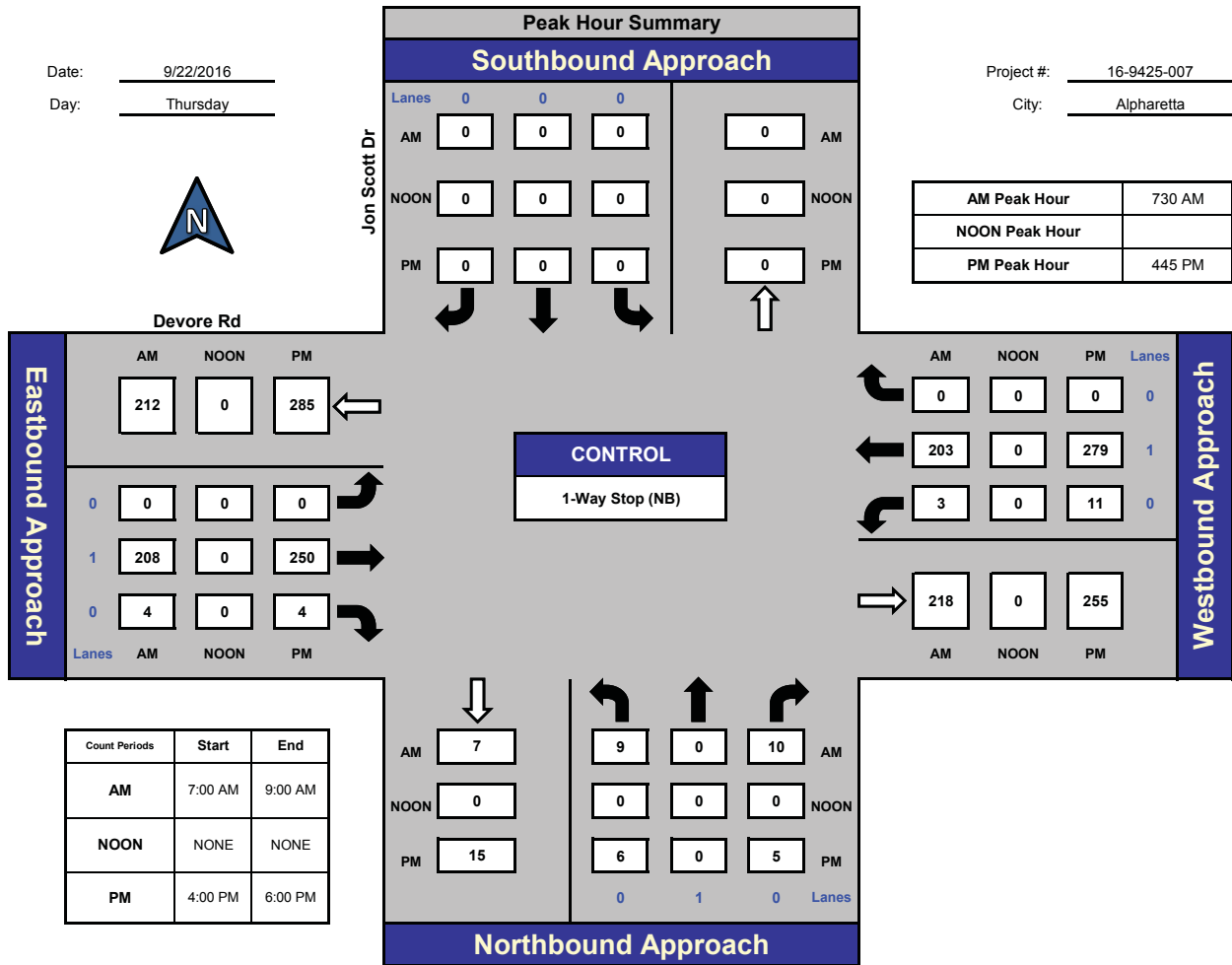


National Data & Surveying Services

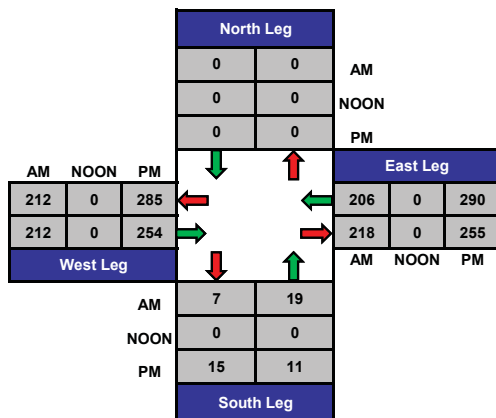
Jon Scott Dr and Devore Rd , Alpharetta

Date: 9/22/2016
Day: Thursday

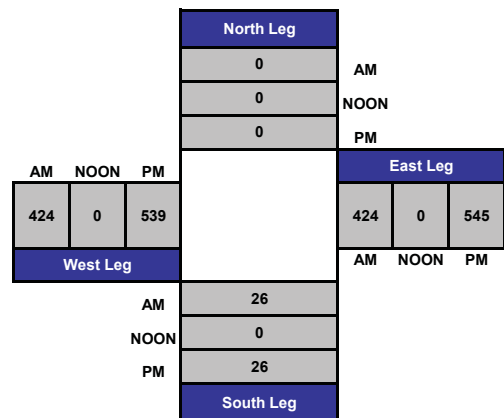
Project #: 16-9425-007
City: Alpharetta



Total Ins & Outs



Total Volume Per Leg



Project ID: 16-9425-007

Location: Jon Scott Dr & Devore Rd

City: Alpharetta

Day: Thursday

Date: 9/22/2016

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Jon Scott Dr Southbound					Devore Rd Westbound					Jon Scott Dr Northbound					Devore Rd Eastbound					
Start Time	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	24	0	0	24	1	0	5	0	6	0	25	0	0	25	55
7:15 AM	0	0	0	0	0	0	41	0	0	41	1	0	3	0	4	2	41	0	0	43	88
7:30 AM	0	0	0	0	0	0	49	0	0	49	1	0	4	0	5	2	47	0	0	49	103
7:45 AM	0	0	0	0	0	0	60	1	0	61	6	0	4	0	10	2	55	0	0	57	128
Total	0	0	0	0	0	0	174	1	0	175	9	0	16	0	25	6	168	0	0	174	374
8:00 AM	0	0	0	0	0	0	42	1	0	43	1	0	0	0	1	0	46	0	0	46	90
8:15 AM	0	0	0	0	0	0	52	1	0	53	2	0	1	0	3	0	60	0	0	60	116
8:30 AM	0	0	0	0	0	0	54	0	0	54	2	0	0	0	2	1	33	0	0	34	90
8:45 AM	0	0	0	0	0	0	44	1	0	45	1	0	2	0	3	2	36	0	0	38	86
Total	0	0	0	0	0	0	192	3	0	195	6	0	3	0	9	3	175	0	0	178	382

BREAK

4:00 PM	0	0	0	0	0	0	37	0	0	37	1	0	0	0	1	2	60	0	0	62	100
4:15 PM	0	0	0	0	0	0	56	1	0	57	0	0	0	0	0	2	50	0	0	52	109
4:30 PM	0	0	0	0	0	0	37	0	0	37	0	0	4	0	4	2	61	0	0	63	104
4:45 PM	0	0	0	0	0	0	67	1	0	68	2	0	1	0	3	1	49	0	0	50	121
Total	0	0	0	0	0	0	197	2	0	199	3	0	5	0	8	7	220	0	0	227	434
5:00 PM	0	0	0	0	0	0	52	4	0	56	1	0	0	0	1	1	72	0	0	73	130
5:15 PM	0	0	0	0	0	0	89	5	0	94	0	0	2	0	2	1	63	0	0	64	160
5:30 PM	0	0	0	0	0	0	71	1	0	72	2	0	3	0	5	1	66	0	0	67	144
5:45 PM	0	0	0	0	0	0	55	1	0	56	0	0	0	0	0	4	33	0	0	37	93
Total	0	0	0	0	0	0	267	11	0	278	3	0	5	0	8	7	234	0	0	241	527

Grand Total	0	0	0	0	0	0	830	17	0	847	21	0	29	0	50	23	797	0	0	820	1717
Apprch %	0.0	0.0	0.0	0.0		0.0	98.0	2.0	0.0		42.0	0.0	58.0	0.0		2.8	97.2	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	48.3	1.0	0.0	49.3	1.2	0.0	1.7	0.0	2.9	1.3	46.4	0.0	0.0	47.8	
Cars, PU, Vans	0	0	0	0	0	0	830	17	0	847	21	0	29	0	50	23	797	0	0	820	1717
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: 16-9425-007

Location: Jon Scott Dr & Devore Rd

City: Alpharetta

PEAK HOURS

Day: Thursday

Date: 9/22/2016

AM

	Jon Scott Dr Southbound				Devore Rd Westbound				Jon Scott Dr Northbound				Devore Rd Eastbound				
Start Time	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
7:30 AM	0	0	0	0	0	49	0	49	1	0	4	5	2	47	0	49	103
7:45 AM	0	0	0	0	0	60	1	61	6	0	4	10	2	55	0	57	128
8:00 AM	0	0	0	0	0	42	1	43	1	0	0	1	0	46	0	46	90
8:15 AM	0	0	0	0	0	52	1	53	2	0	1	3	0	60	0	60	116
Total Volume	0	0	0	0	0	203	3	206	10	0	9	19	4	208	0	212	437
% App. Total	0.0	0.0	0.0	0	0.0	98.5	1.5	100	52.6	0.0	47.4	100	1.9	98.1	0.0	100	
PHF	0.000				0.844				0.475				0.883				
Cars, PU, Vans	0	0	0	0	0	203	3	206	10	0	9	19	4	208	0	212	437
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PM

	Jon Scott Dr Southbound				Devore Rd Westbound				Jon Scott Dr Northbound				Devore Rd Eastbound				
Start Time	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
4:45 PM	0	0	0	0	0	67	1	68	2	0	1	3	1	49	0	50	121
5:00 PM	0	0	0	0	0	52	4	56	1	0	0	1	1	72	0	73	130
5:15 PM	0	0	0	0	0	89	5	94	0	0	2	2	1	63	0	64	160
5:30 PM	0	0	0	0	0	71	1	72	2	0	3	5	1	66	0	67	144
Total Volume	0	0	0	0	0	279	11	290	5	0	6	11	4	250	0	254	555
% App. Total	0.0	0.0	0.0	0	0.0	96.2	3.8	100	45.5	0.0	54.5	100	1.6	98.4	0.0	100	
PHF	0.000				0.771				0.550				0.870				

ITM Peak Hour Summary

Prepared by:

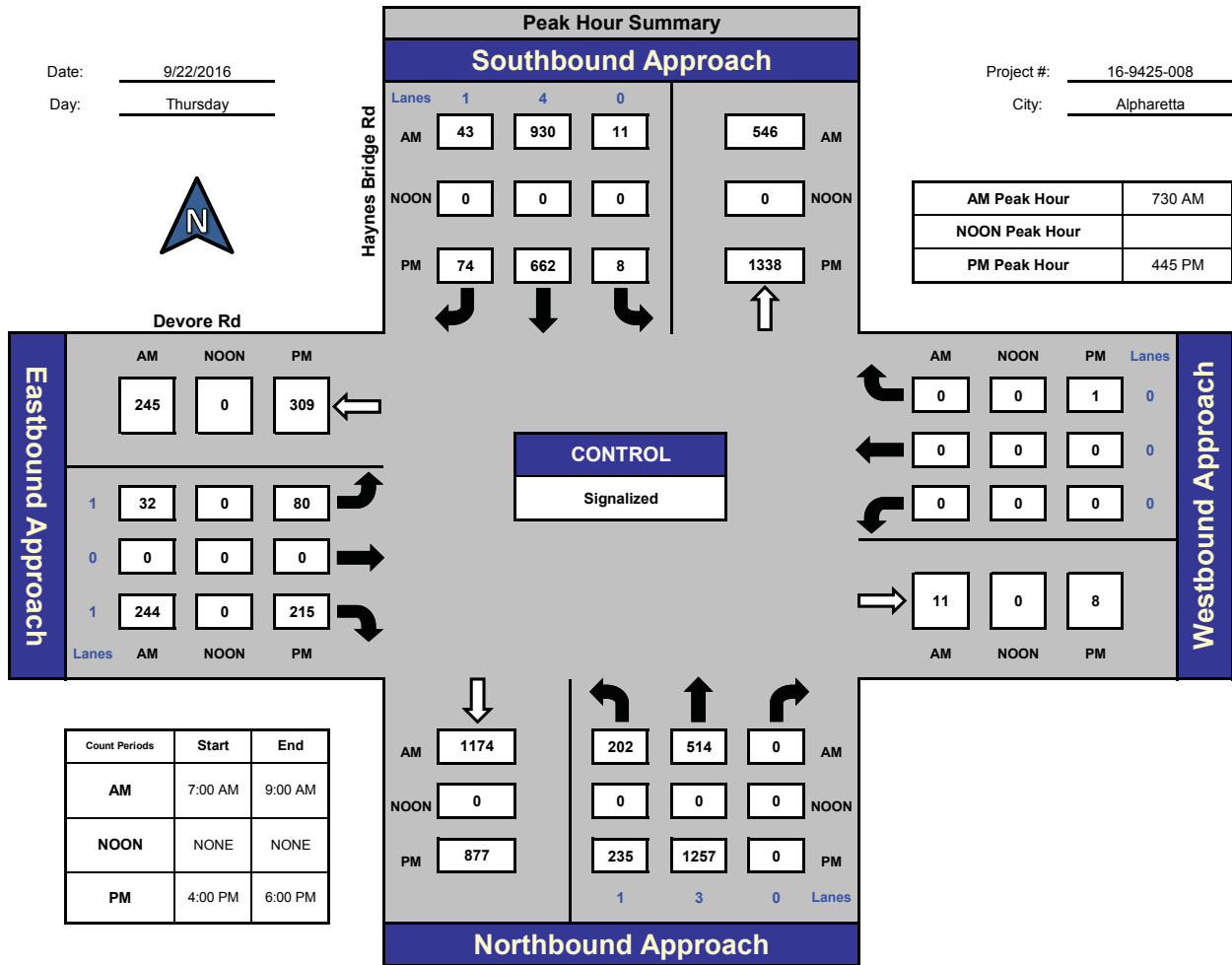


National Data & Surveying Services

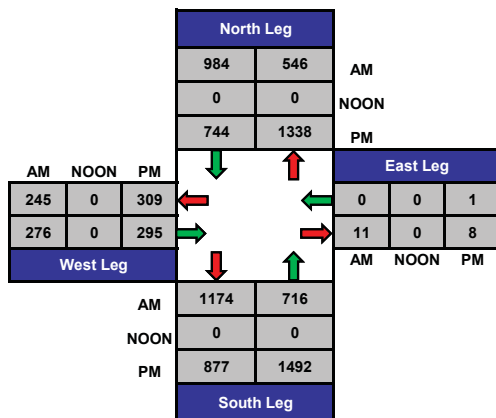
Haynes Bridge Rd and Devore Rd , Alpharetta

Date: 9/22/2016
Day: Thursday

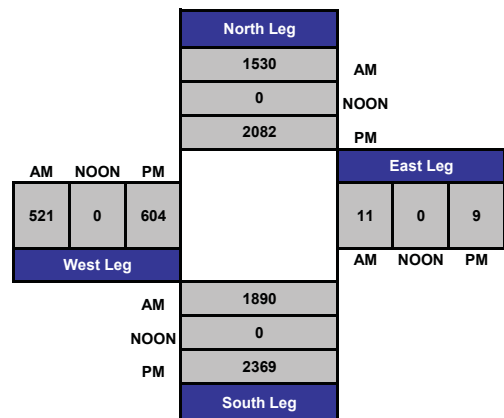
Project #: 16-9425-008
City: Alpharetta



Total Ins & Outs



Total Volume Per Leg



Project ID: 16-9425-008

Location: Haynes Bridge Rd & Devore Rd

City: Alpharetta

Day: Thursday

Date: 9/22/2016

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Haynes Bridge Rd Southbound					Devore Rd Westbound					Haynes Bridge Rd Northbound					Devore Rd Eastbound					Int. Total
	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	
7:00 AM	5	198	0	0	203	0	0	0	0	0	0	88	24	0	112	38	0	7	0	45	360
7:15 AM	13	242	2	0	257	0	0	0	0	0	0	91	38	0	129	49	0	9	0	58	444
7:30 AM	8	242	4	0	254	0	0	0	0	0	0	129	51	0	180	59	0	6	0	65	499
7:45 AM	15	213	2	0	230	0	0	0	0	0	0	141	48	0	189	60	0	11	0	71	490
Total	41	895	8	0	944	0	0	0	0	0	0	449	161	0	610	206	0	33	0	239	1793
8:00 AM	10	249	3	0	262	0	0	0	0	0	0	125	45	0	170	58	0	8	0	66	498
8:15 AM	10	226	2	0	238	0	0	0	0	0	0	119	58	0	177	67	0	7	0	74	489
8:30 AM	14	208	2	0	224	0	0	0	0	0	0	122	44	0	166	39	0	7	0	46	436
8:45 AM	16	196	2	0	214	0	0	0	0	0	0	125	39	0	164	45	0	4	0	49	427
Total	50	879	9	0	938	0	0	0	0	0	0	491	186	0	677	209	0	26	0	235	1850

BREAK

4:00 PM	14	171	3	0	188	0	0	0	0	0	0	306	30	0	336	62	0	24	0	86	610
4:15 PM	22	155	1	0	178	0	0	0	0	0	0	266	35	0	301	39	0	14	0	53	532
4:30 PM	13	142	0	0	155	0	0	0	0	0	0	265	33	0	298	55	0	9	0	64	517
4:45 PM	23	166	5	0	194	0	0	0	0	0	0	300	59	0	359	50	0	19	0	69	622
Total	72	634	9	0	715	0	0	0	0	0	0	1137	157	0	1294	206	0	66	0	272	2281
5:00 PM	15	182	1	0	198	0	0	0	0	0	0	336	53	0	389	65	0	21	0	86	673
5:15 PM	23	157	2	0	182	1	0	0	0	1	0	318	64	0	382	52	0	17	0	69	634
5:30 PM	13	157	0	0	170	0	0	0	0	0	0	303	59	0	362	48	0	23	0	71	603
5:45 PM	13	146	2	0	161	0	0	0	0	0	0	326	59	0	385	28	0	14	0	42	588
Total	64	642	5	0	711	1	0	0	0	1	0	1283	235	0	1518	193	0	75	0	268	2498

Grand Total	227	3050	31	0	3308	1	0	0	0	1	0	3360	739	0	4099	814	0	200	0	1014	8422
Approch %	6.9	92.2	0.9	0.0		100.0	0.0	0.0	0.0		0.0	82.0	18.0	0.0		80.3	0.0	19.7	0.0		
Total %	2.7	36.2	0.4	0.0	39.3	0.0	0.0	0.0	0.0	0.0	0.0	39.9	8.8	0.0	48.7	9.7	0.0	2.4	0.0	12.0	
Cars, PU, Vans	227	3050	31	0	3308	1	0	0	0	1	0	3360	739	0	4099	814	0	200	0	1014	8422
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: 16-9425-008

Location: Haynes Bridge Rd & Devore

City: Alpharetta

PEAK HOURS

Day: Thursday

Date: 9/22/2016

AM

Start Time	Haynes Bridge Rd Southbound					Devore Rd Westbound					Haynes Bridge Rd Northbound					Devore Rd Eastbound					Int. Total
	Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	8	242	4	254		0	0	0	0		0	129	51	180		59	0	6	65		499
7:45 AM	15	213	2	230		0	0	0	0		0	141	48	189		60	0	11	71		490
8:00 AM	10	249	3	262		0	0	0	0		0	125	45	170		58	0	8	66		498
8:15 AM	10	226	2	238		0	0	0	0		0	119	58	177		67	0	7	74		489
Total Volume	43	930	11	984		0	0	0	0		0	514	202	716		244	0	32	276		1976
% App. Total	4.4	94.5	1.1	100		0.0	0.0	0.0	0		0.0	71.8	28.2	100		88.4	0.0	11.6	100		
PHF				0.939					0.000					0.947					0.932		
Cars, PU, Vans	43	930	11	984		0	0	0	0		0	514	202	716		244	0	32	276		1976
% Cars, PU, Vans	100.0	100.0	100.0	100.0		0.0	0.0	0.0	0.0		0.0	100.0	100.0	100.0		100.0	0.0	100.0	100.0		100.0
Heavy Trucks	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
%Heavy Trucks	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0

PM

Start Time	Haynes Bridge Rd Southbound					Devore Rd Westbound					Haynes Bridge Rd Northbound					Devore Rd Eastbound					Int. Total
	Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
4:45 PM	23	166	5	194		0	0	0	0		0	300	59	359		50	0	19	69		622
5:00 PM	15	182	1	198		0	0	0	0		0	336	53	389		65	0	21	86		673
5:15 PM	23	157	2	182		1	0	0	1		0	318	64	382		52	0	17	69		634
5:30 PM	13	157	0	170		0	0	0	0		0	303	59	362		48	0	23	71		603
Total Volume	74	662	8	744		1	0	0	1		0	1257	235	1492		215	0	80	295		2532
% App. Total	9.9	89.0	1.1	100		100.0	0.0	0.0	100		0.0	84.2	15.8	100		72.9	0.0	27.1	100		
PHF				0.939					0.250					0.959					0.858		

ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

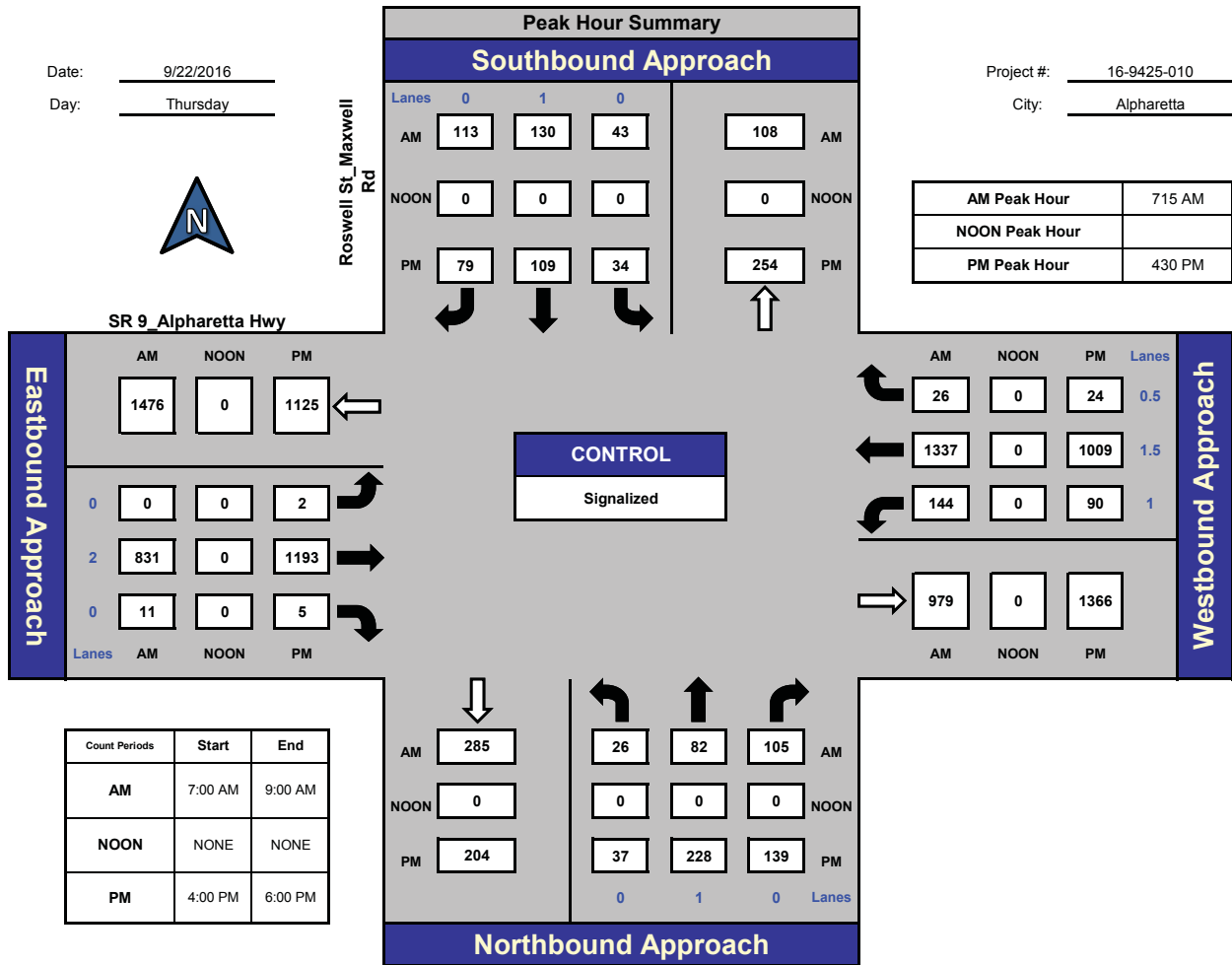
Roswell St Maxwell Rd and SR 9 Alpharetta Hwy , Alpharetta

Date: 9/22/2016

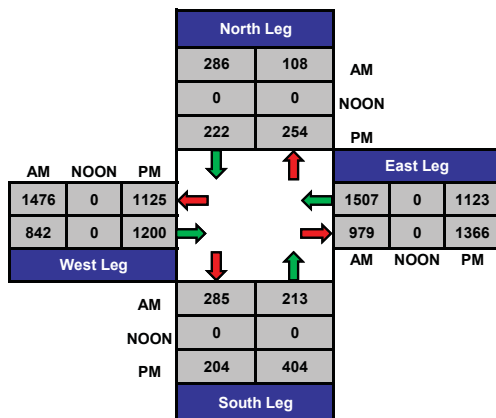
Day: Thursday

Project #: 16-9425-010

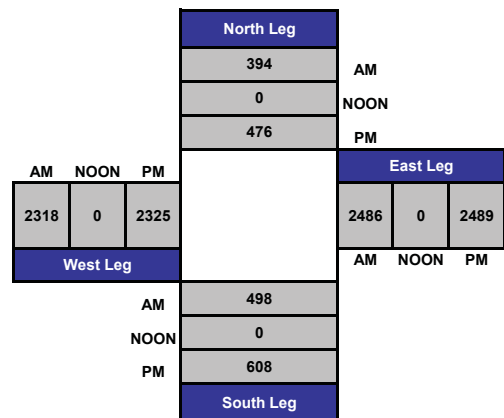
City: Alpharetta



Total Ins & Outs



Total Volume Per Leg



Project ID: 16-9425-010

Location: Roswell St_Maxwell Rd & SR 9_Alpharetta Hwy

City: Alpharetta

Day:

Date:

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Roswell St_Maxwell Rd Southbound					SR 9_Alpharetta Hwy Westbound					Roswell St_Maxwell Rd Northbound					SR 9_Alpharetta Hwy Eastbound			
Start Time	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds
7:00 AM	20	28	1	0	49	4	306	31	0	341	15	10	3	0	28	3	121	0	0
7:15 AM	32	37	4	0	73	9	373	34	0	416	18	15	2	0	35	3	183	0	0
7:30 AM	22	33	16	0	71	10	328	38	0	376	31	26	17	0	74	2	186	0	0
7:45 AM	31	29	14	0	74	6	350	44	0	400	29	24	3	0	56	5	250	0	0
Total	105	127	35	0	267	29	1357	147	0	1533	93	75	25	0	193	13	740	0	0
8:00 AM	28	31	9	0	68	1	286	28	0	315	27	17	4	0	48	1	212	0	0
8:15 AM	40	29	7	0	76	2	321	29	0	352	7	10	1	0	18	3	211	0	0
8:30 AM	26	31	4	0	61	4	276	36	0	316	11	15	3	0	29	1	212	0	0
8:45 AM	28	42	4	0	74	2	269	45	0	316	16	19	11	0	46	1	222	0	0
Total	122	133	24	0	279	9	1152	138	0	1299	61	61	19	0	141	6	857	0	0
BREAK																			
4:00 PM	24	10	5	0	39	9	210	15	0	234	25	29	3	0	57	0	321	0	0
4:15 PM	16	19	5	0	40	5	229	25	0	259	24	33	12	0	69	1	263	0	0
4:30 PM	33	23	9	0	65	6	226	25	0	257	39	52	10	0	101	1	289	0	0
4:45 PM	19	36	12	0	67	7	276	36	0	319	28	57	10	0	95	2	297	0	0
Total	92	88	31	0	211	27	941	101	0	1069	116	171	35	0	322	4	1170	0	0
5:00 PM	14	31	7	0	52	5	258	18	0	281	40	61	7	0	108	1	302	0	0
5:15 PM	13	19	6	0	38	6	249	11	0	266	32	58	10	0	100	1	305	2	0
5:30 PM	10	9	8	0	27	11	272	14	0	297	34	36	13	0	83	0	270	0	0
5:45 PM	10	11	3	0	24	8	231	16	0	255	18	29	5	0	52	1	231	0	0
Total	47	70	24	0	141	30	1010	59	0	1099	124	184	35	0	343	3	1108	2	0
Grand Total	366	418	114	0	898	95	4460	445	0	5000	394	491	114	0	999	26	3875	2	0
Apprch %	40.8	46.5	12.7	0.0		1.9	89.2	8.9	0.0		39.4	49.1	11.4	0.0		0.7	99.3	0.1	0.0
Total %	3.4	3.9	1.1	0.0	8.3	0.9	41.3	4.1	0.0	46.3	3.6	4.5	1.1	0.0	9.3	0.2	35.9	0.0	0.0
Cars, PU, Vans	366	418	114	0	898	95	4460	445	0	5000	394	491	114	0	999	26	3875	2	0
% Cars, PU, Vans	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: 16-9425-010

Location: Roswell St_Maxwell Rd & St

City: Alpharetta

PEAK HOURS

Day: Thursday

Date: 9/22/2016

AM

	Roswell St_Maxwell Rd Southbound				SR 9_Alpharetta Hwy Westbound				Roswell St_Maxwell Rd Northbound				SR 9_Alpharetta Hwy Eastbound				
Start Time	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
7:15 AM	32	37	4	73	9	373	34	416	18	15	2	35	3	183	0	186	710
7:30 AM	22	33	16	71	10	328	38	376	31	26	17	74	2	186	0	188	709
7:45 AM	31	29	14	74	6	350	44	400	29	24	3	56	5	250	0	255	785
8:00 AM	28	31	9	68	1	286	28	315	27	17	4	48	1	212	0	213	644
Total Volume	113	130	43	286	26	1337	144	1507	105	82	26	213	11	831	0	842	2848
% App. Total	39.5	45.5	15.0	100	1.7	88.7	9.6	100	49.3	38.5	12.2	100	1.3	98.7	0.0	100	
PHF	0.966				0.906				0.720				0.825				
Cars, PU, Vans	113	130	43	286	26	1337	144	1507	105	82	26	213	11	831	0	842	2848
% Cars, PU, Vans	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PM

	Roswell St_Maxwell Rd Southbound				SR 9_Alpharetta Hwy Westbound				Roswell St_Maxwell Rd Northbound				SR 9_Alpharetta Hwy Eastbound				
Start Time	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
4:30 PM	33	23	9	65	6	226	25	257	39	52	10	101	1	289	0	290	713
4:45 PM	19	36	12	67	7	276	36	319	28	57	10	95	2	297	0	299	780
5:00 PM	14	31	7	52	5	258	18	281	40	61	7	108	1	302	0	303	744
5:15 PM	13	19	6	38	6	249	11	266	32	58	10	100	1	305	2	308	712
Total Volume	79	109	34	222	24	1009	90	1123	139	228	37	404	5	1193	2	1200	2949
% App. Total	35.6	49.1	15.3	100	2.1	89.8	8.0	100	34.4	56.4	9.2	100	0.4	99.4	0.2	100	
PHF	0.828				0.880				0.935				0.974				

ITM Peak Hour Summary

Prepared by:

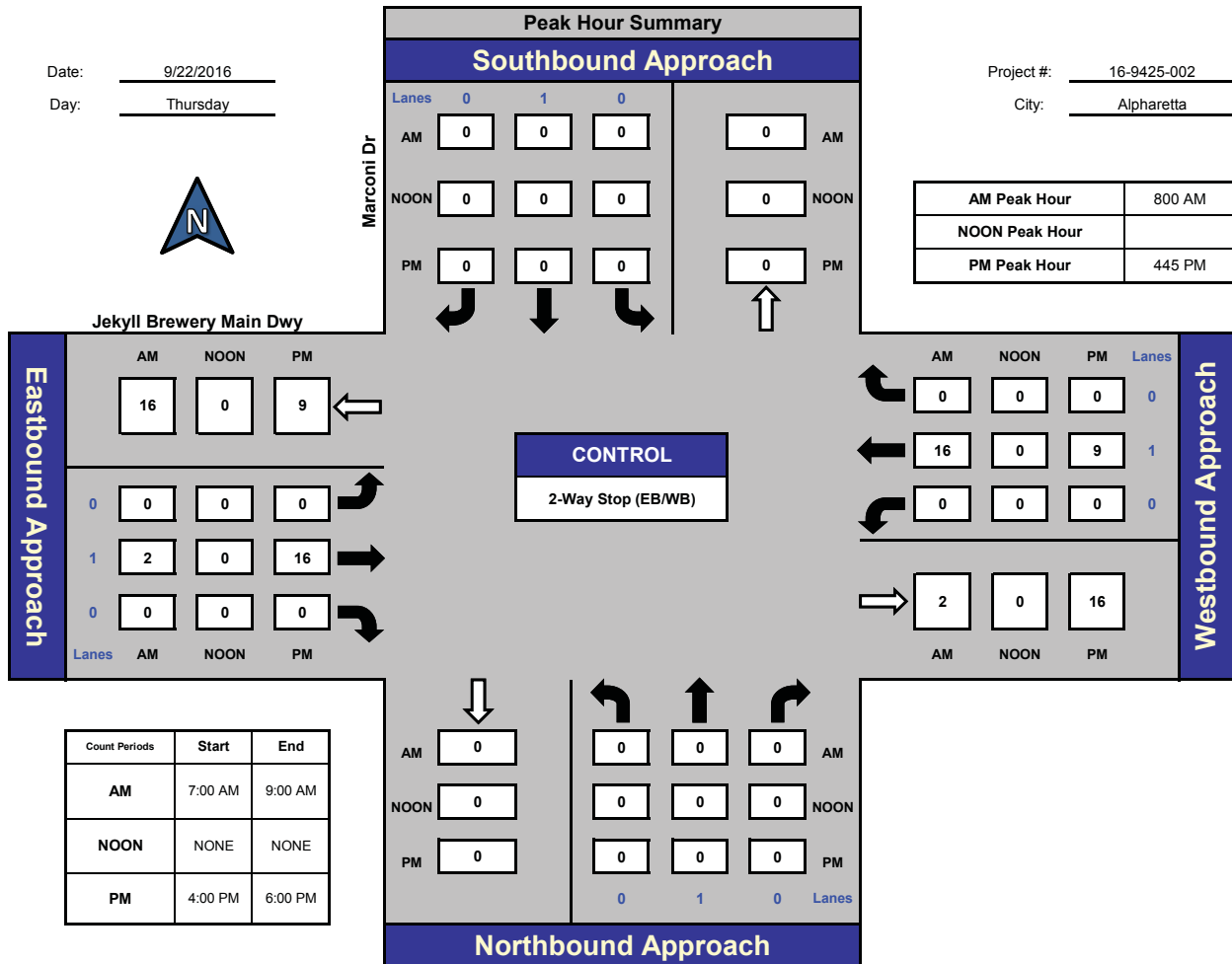


National Data & Surveying Services

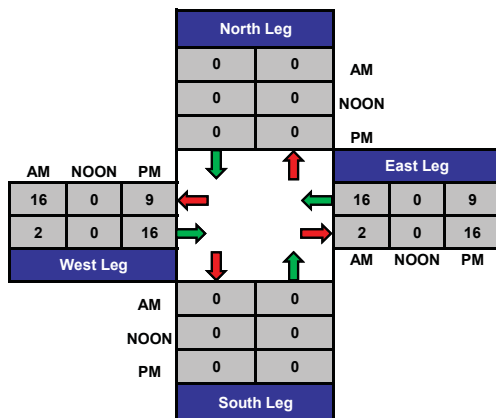
Marconi Dr and Jekyll Brewery Main Dwy , Alpharetta

Date: 9/22/2016
Day: Thursday

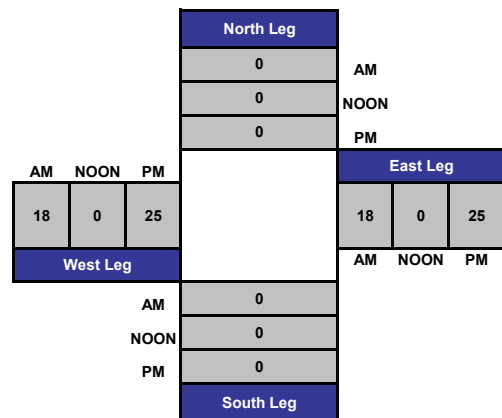
Project #: 16-9425-002
City: Alpharetta



Total Ins & Outs



Total Volume Per Leg



Project ID: 16-9425-002

Location: Marconi Dr & Jekyll Brewery Main Dwy

City: Alpharetta

Day: Thursday

Date: 9/22/2016

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Marconi Dr Southbound					Jekyll Brewery Main Dwy Westbound					Marconi Dr Northbound					Jekyll Brewery Main Dwy Eastbound					
Start Time	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	5
8:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	7
8:30 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
8:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	5
Total	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	2	0	0	2	18

BREAK

4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	6
4:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5
4:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	7
Total	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	14	0	0	14	20
5:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	7
5:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	8	0	0	8	9
5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4
Total	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	15	0	0	15	22
Grand Total	0	0	0	0	0	0	34	0	0	34	0	0	0	0	0	0	31	0	0	31	65
Approch %	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	100.0
Total %	0.0	0.0	0.0	0.0	0.0	0.0	52.3	0.0	0.0	52.3	0.0	0.0	0.0	0.0	0.0	0.0	47.7	0.0	0.0	47.7	100.0
Cars, PU, Vans	0	0	0	0	0	0	34	0	0	34	0	0	0	0	0	0	31	0	0	31	65
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: 16-9425-002

Location: Marconi Dr & Jekyll Brewery

City: Alpharetta

PEAK HOURS

Day: Thursday

Date: 9/22/2016

AM

Start Time	Marconi Dr Southbound					Jekyll Brewery Main Dwy Westbound					Marconi Dr Northbound					Jekyll Brewery Main Dwy Eastbound					Int. Total
	Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		
8:00 AM	0	0	0	0		0	2	0	2		0	0	0	0		0	0	0	0		2
8:15 AM	0	0	0	0		0	6	0	6		0	0	0	0		0	1	0	1		7
8:30 AM	0	0	0	0		0	4	0	4		0	0	0	0		0	0	0	0		4
8:45 AM	0	0	0	0		0	4	0	4		0	0	0	0		0	1	0	1		5
Total Volume	0	0	0	0		0	16	0	16		0	0	0	0		0	2	0	2		18
% App. Total	0.0	0.0	0.0	0		0.0	100.0	0.0	100		0.0	0.0	0.0	0		0.0	100.0	0.0	100		
PHF	0.000					0.667					0.000					0.500					
Cars, PU, Vans	0	0	0	0		0	16	0	16		0	0	0	0		0	2	0	2		18
% Cars, PU, Vans	0.0	0.0	0.0	0.0		0.0	100.0	0.0	100.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	100.0		100.0
Heavy Trucks	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0
%Heavy Trucks	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0

PM

Start Time	Marconi Dr Southbound					Jekyll Brewery Main Dwy Westbound					Marconi Dr Northbound					Jekyll Brewery Main Dwy Eastbound					Int. Total
	Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		Rgt	Thru	Left	App. Total		
4:45 PM	0	0	0	0		0	3	0	3		0	0	0	0		0	4	0	4		7
5:00 PM	0	0	0	0		0	3	0	3		0	0	0	0		0	4	0	4		7
5:15 PM	0	0	0	0		0	2	0	2		0	0	0	0		0	0	0	0		2
5:30 PM	0	0	0	0		0	1	0	1		0	0	0	0		0	8	0	8		9
Total Volume	0	0	0	0		0	9	0	9		0	0	0	0		0	16	0	16		25
% App. Total	0.0	0.0	0.0	0		0.0	100.0	0.0	100		0.0	0.0	0.0	0		0.0	100.0	0.0	100		
PHF	0.000					0.750					0.000					0.500					

ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

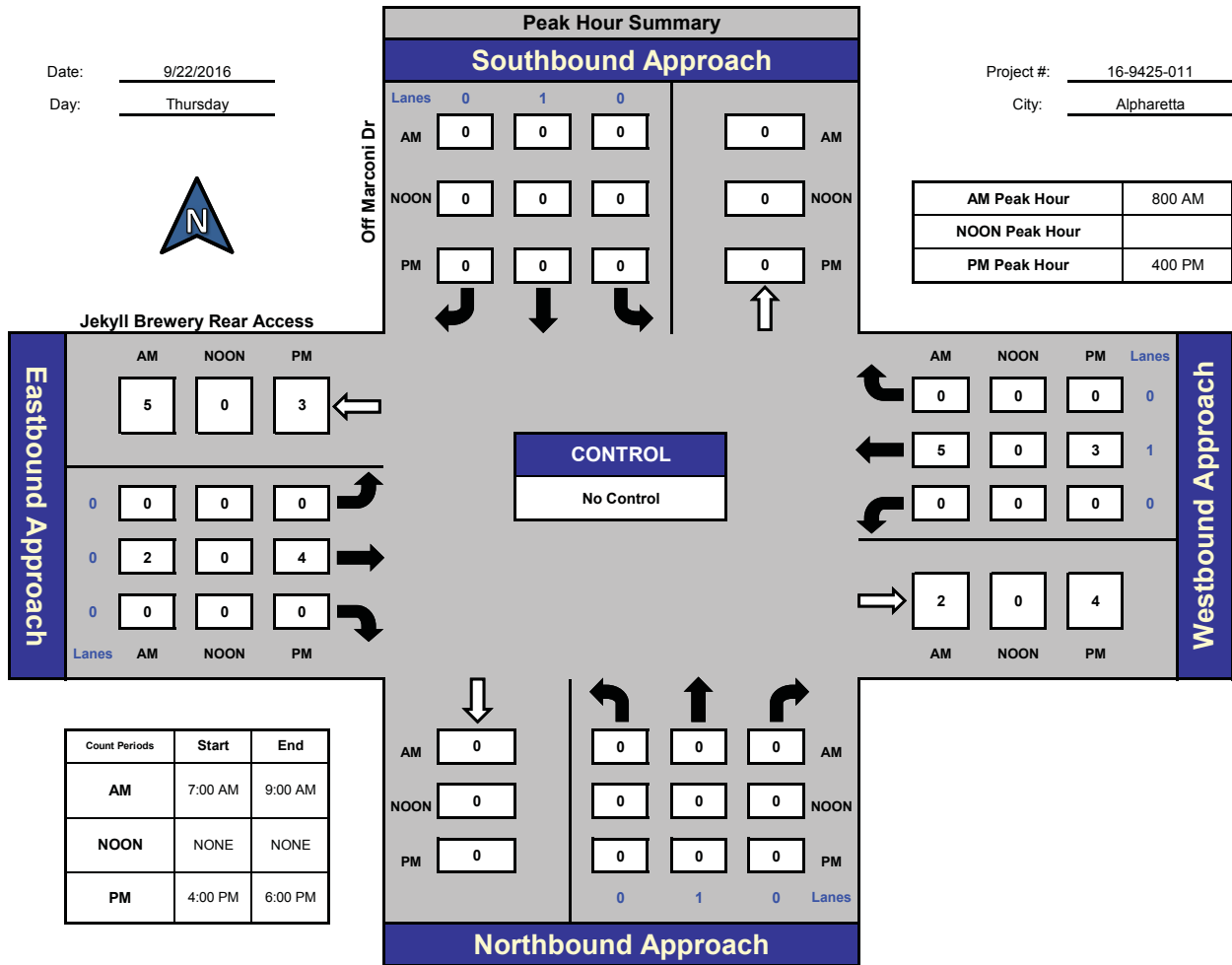
Off Marconi Dr and Jekyll Brewery Rear Access , Alpharetta

Date: 9/22/2016

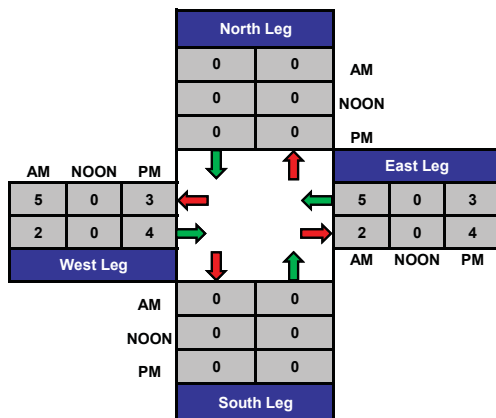
Day: Thursday

Project #: 16-9425-011

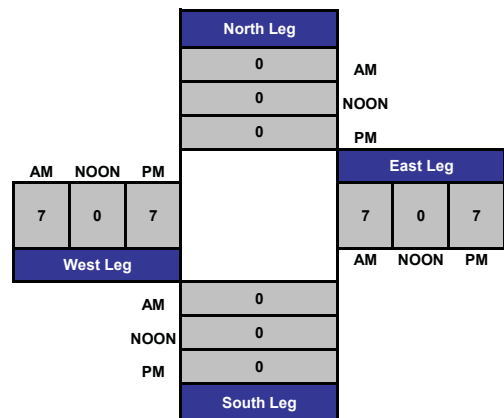
City: Alpharetta



Total Ins & Outs



Total Volume Per Leg



Project ID: 16-9425-011

Location: Off Marconi Dr & Jekyll Brewery Rear Access

City: Alpharetta

Day: Thursday

Date: 9/22/2016

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Off Marconi Dr Southbound					Jekyll Brewery Rear Access Westbound					Off Marconi Dr Northbound					Jekyll Brewery Rear Access Eastbound					
Start Time	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
8:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	7
BREAK																					
4:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	7
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	7	0	0	7	18
Apprch %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	61.1	0.0	0.0	61.1	0.0	0.0	0.0	0.0	0.0	0.0	38.9	0.0	0.0	38.9	
Cars, PU, Vans	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	6	0	0	6	16
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	90.9	0.0	0.0	90.9	0.0	0.0	0.0	0.0	0.0	0.0	85.7	0.0	0.0	85.7	88.9
Heavy Trucks	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	14.3	11.1

Project ID: 16-9425-011

Location: Off Marconi Dr & Jekyll Brev

City: Alpharetta

PEAK HOURS

Day: Thursday

Date: 9/22/2016

AM

	Off Marconi Dr Southbound				Jekyll Brewery Rear Access Westbound				Off Marconi Dr Northbound				Jekyll Brewery Rear Access Eastbound				
Start Time	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
8:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
8:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
8:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
% App. Total	0.0	0.0	0.0	0	0.0	100.0	0.0	100	0.0	0.0	0.0	0	0.0	100.0	0.0	100	
PHF	0.000				0.625				0.000				0.500				
Cars, PU, Vans	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	1	6
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	85.7
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	14.3

PM

	Off Marconi Dr Southbound				Jekyll Brewery Rear Access Westbound				Off Marconi Dr Northbound				Jekyll Brewery Rear Access Eastbound				
Start Time	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
4:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	4	0	4	7
% App. Total	0.0	0.0	0.0	0	0.0	100.0	0.0	100	0.0	0.0	0.0	0	0.0	100.0	0.0	100	
PHF	0.000				0.375				0.000				0.500				

VOLUME

Roswell St N/O SR 9/Alpharetta Hwy

Day: Thursday

Date: 9/22/2016

City: Alpharetta

Project #: GA16_9426_001

DAILY TOTALS					NB	SB	EB					WB	Total
					1,853	2,513						0	0
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL		
00:00	0	1			1	12:00	32	23			55		
00:15	0	0			0	12:15	25	41			66		
00:30	0	0			0	12:30	22	33			55		
00:45	0	1	2		1 2	12:45	27	106	42	139	69 245		
01:00	1	3			4	13:00	28	59			87		
01:15	0	0			0	13:15	26	39			65		
01:30	1	0			1	13:30	19	28			47		
01:45	0	2	1	4	1 6	13:45	27	100	34	160	61 260		
02:00	0	0			0	14:00	43	40			83		
02:15	0	0			0	14:15	16	52			68		
02:30	0	0			0	14:30	21	35			56		
02:45	0	0			0	14:45	28	108	48	175	76 283		
03:00	0	0			0	15:00	25	52			77		
03:15	0	1			1	15:15	33	48			81		
03:30	0	1			1	15:30	64	62			126		
03:45	0	0	2		0 2	15:45	47	169	27	189	74 358		
04:00	0	0			0	16:00	44	42			86		
04:15	0	1			1	16:15	49	39			88		
04:30	2	3			5	16:30	57	67			124		
04:45	0	2	3	7	3 9	16:45	83	233	75	223	158 456		
05:00	1	3			4	17:00	84	48			132		
05:15	3	6			9	17:15	79	40			119		
05:30	2	11			13	17:30	70	30			100		
05:45	3	9	14	34	17 43	17:45	44	277	27	145	71 422		
06:00	5	12			17	18:00	56	37			93		
06:15	8	14			22	18:15	41	21			62		
06:30	12	36			48	18:30	28	22			50		
06:45	18	43	38	100	56 143	18:45	34	159	34	114	68 273		
07:00	20	46			66	19:00	27	21			48		
07:15	17	84			101	19:15	27	22			49		
07:30	49	85			134	19:30	13	27			40		
07:45	24	110	56	271	80 381	19:45	25	92	16	86	41 178		
08:00	27	54			81	20:00	18	21			39		
08:15	18	84			102	20:15	11	12			23		
08:30	12	65			77	20:30	11	12			23		
08:45	30	87	72	275	102 362	20:45	15	55	13	58	28 113		
09:00	16	74			90	21:00	10	7			17		
09:15	23	51			74	21:15	8	10			18		
09:30	16	41			57	21:30	9	12			21		
09:45	20	75	47	213	67 288	21:45	7	34	4	33	11 67		
10:00	17	31			48	22:00	10	6			16		
10:15	25	40			65	22:15	6	5			11		
10:30	22	27			49	22:30	5	2			7		
10:45	19	83	30	128	49 211	22:45	2	23	3	16	5 39		
11:00	14	20			34	23:00	3	5			8		
11:15	6	45			51	23:15	6	2			8		
11:30	24	36			60	23:30	4	0			4		
11:45	29	73	28	129	57 202	23:45	0	13	3	10	3 23		
TOTALS	484	1165			1649	TOTALS	1369	1348			2717		
SPLIT %	29.4%	70.6%			37.8%	SPLIT %	50.4%	49.6%			62.2%		

DAILY TOTALS					NB	SB	EB	WB	Total
					1,853	2,513	0	0	4,366
AM Peak Hour	07:30	08:15		07:30	PM Peak Hour	16:45	16:30		16:30
AM Pk Volume	118	295		397	PM Pk Volume	316	230		533
Pk Hr Factor	0.602	0.878		0.741	Pk Hr Factor	0.940	0.767		0.843
7 - 9 Volume	197	546	0	743	4 - 6 Volume	510	368	0	878
7 - 9 Peak Hour	07:30	07:15		07:30	4 - 6 Peak Hour	16:45	16:30		16:30
7 - 9 Pk Volume	118	279	0	397	4 - 6 Pk Volume	316	230	0	533
Pk Hr Factor	0.602	0.821	0.000	0.741	Pk Hr Factor	0.940	0.767	0.000	0.843

VOLUME

SR 9/Alpharetta Hwy Bet. Devore Rd & Janis Ln

Day: Thursday

Date: 9/22/2016

City: Alpharetta

Project #: GA16_9426_002

DAILY TOTALS					NB	SB						EB	WB						Total
					0	0						13,569	13,380						26,949
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL							TOTAL
00:00			13	9	22		12:00			261	219	480							
00:15			8	6	14		12:15			228	234	462							
00:30			14	5	19		12:30			257	225	482							
00:45			9	44	5	25	12:45			250	996	241	919	491	1915				
01:00			8	4	12		13:00			245	257	502							
01:15			3	4	7		13:15			221	245	466							
01:30			4	2	6		13:30			237	234	471							
01:45			5	20	5	15	13:45			274	977	271	1007	545	1984				
02:00			4	6	10		14:00			250	227	477							
02:15			4	4	8		14:15			253	246	499							
02:30			4	1	5		14:30			268	212	480							
02:45			7	19	6	17	14:45			288	1059	163	848	451	1907				
03:00			4	0	4		15:00			242	210	452							
03:15			3	4	7		15:15			241	187	428							
03:30			3	8	11		15:30			248	221	469							
03:45			1	11	8	20	15:45			271	1002	196	814	467	1816				
04:00			2	1	3		16:00			318	220	538							
04:15			7	4	11		16:15			261	237	498							
04:30			9	13	22		16:30			329	256	585							
04:45			18	36	10	28	16:45			302	1210	272	985	574	2195				
05:00			13	19	32		17:00			313	241	554							
05:15			20	36	56		17:15			349	280	629							
05:30			38	41	79		17:30			313	271	584							
05:45			45	116	60	156	17:45			232	1207	246	1038	478	2245				
06:00			50	74	124		18:00			246	197	443							
06:15			65	113	178		18:15			205	220	425							
06:30			126	169	295		18:30			191	171	362							
06:45			129	370	201	557	18:45			236	878	129	717	365	1595				
07:00			135	333	468		19:00			195	137	332							
07:15			187	375	562		19:15			166	117	283							
07:30			206	388	594		19:30			154	110	264							
07:45			243	771	362	1458	19:45			134	649	81	445	215	1094				
08:00			201	299	500		20:00			127	87	214							
08:15			202	364	566		20:15			93	67	160							
08:30			211	299	510		20:30			100	78	178							
08:45			206	820	301	1263	20:45			82	402	54	286	136	688				
09:00			240	241	481		21:00			100	57	157							
09:15			193	221	414		21:15			59	63	122							
09:30			184	211	395		21:30			72	58	130							
09:45			191	808	203	876	21:45			56	287	42	220	98	507				
10:00			187	202	389		22:00			43	36	79							
10:15			174	170	344		22:15			43	29	72							
10:30			169	174	343		22:30			46	34	80							
10:45			192	722	185	731	22:45			38	170	24	123	62	293				
11:00			219	173	392		23:00			31	28	59							
11:15			203	184	387		23:15			31	14	45							
11:30			226	185	411		23:30			13	11	24							
11:45			257	905	225	767	23:45			15	90	12	65	27	155				
TOTALS				4642	5913	10555	TOTALS				8927	7467	16394						
SPLIT %				44.0%	56.0%	39.2%	SPLIT %				54.5%	45.5%	60.8%						

DAILY TOTALS					NB	SB						EB	WB						Total
					0	0						13,569	13,380						26,949
AM Peak Hour			11:45	07:00	07:30		PM Peak Hour			16:30	16:45	16:30							
AM Pk Volume			1003	1458	2265		PM Pk Volume			1293	1064	2342							
Pk Hr Factor			0.961	0.939	0.936		Pk Hr Factor			0.926	0.950	0.931							
7 - 9 Volume	0	0	1591	2721	4312		4 - 6 Volume	0	0	2417	2023	4440							
7 - 9 Peak Hour			07:45	07:00	07:30		4 - 6 Peak Hour			16:30	16:45	16:30							
7 - 9 Pk Volume	0	0	857	1458	2265		4 - 6 Pk Volume	0	0	1293	1064	2342							
Pk Hr Factor	0.000	0.000	0.882	0.939	0.936		Pk Hr Factor	0.000	0.000	0.926	0.950	0.931							

VOLUME

Devore Rd Bet. SR 9/Alpharetta Hwy & Karen Dr

Day: Thursday

Date: 9/22/2016

City: Alpharetta

Project #: GA16_9426_003

DAILY TOTALS					NB	SB						EB	WB	Total	
					0	0						2,538	2,095	4,633	
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL			
00:00			2	4	6		12:00			55	33	88			
00:15			1	4	5		12:15			60	32	92			
00:30			2	3	5		12:30			54	27	81			
00:45			5	10	8	24	12:45			45	214	26	118	71	332
01:00			2	2	4		13:00			39	46	85			
01:15			3	0	3		13:15			46	32	78			
01:30			0	3	3		13:30			48	29	77			
01:45			2	7	3	13	13:45			44	177	44	151	88	328
02:00			3	2	5		14:00			41	47	88			
02:15			0	0	0		14:15			45	43	88			
02:30			1	1	2		14:30			46	31	77			
02:45			4	8	6	13	14:45			48	180	49	170	97	350
03:00			0	1	1		15:00			46	37	83			
03:15			1	2	3		15:15			35	41	76			
03:30			2	1	3		15:30			66	32	98			
03:45			3	6	4	11	15:45			62	209	27	137	89	346
04:00			0	0	0		16:00			53	24	77			
04:15			3	1	4		16:15			33	37	70			
04:30			4	3	7		16:30			46	26	72			
04:45			2	9	3	14	16:45			27	159	39	126	66	285
05:00			7	5	12		17:00			57	35	92			
05:15			11	12	23		17:15			52	50	102			
05:30			9	7	16		17:30			47	29	76			
05:45			16	43	22	73	17:45			30	186	43	157	73	343
06:00			28	13	41		18:00			54	41	95			
06:15			28	18	46		18:15			47	34	81			
06:30			28	20	48		18:30			35	38	73			
06:45			34	118	55	190	18:45			33	169	29	142	62	311
07:00			18	22	40		19:00			35	36	71			
07:15			37	35	72		19:15			26	31	57			
07:30			41	23	64		19:30			39	23	62			
07:45			55	151	96	272	19:45			26	126	35	125	61	251
08:00			33	25	58		20:00			29	30	59			
08:15			56	35	91		20:15			22	18	40			
08:30			40	28	68		20:30			10	20	30			
08:45			35	164	66	283	20:45			20	81	27	95	47	176
09:00			40	38	78		21:00			8	13	21			
09:15			32	35	67		21:15			22	9	31			
09:30			39	35	74		21:30			15	17	32			
09:45			33	144	59	278	21:45			13	58	17	56	30	114
10:00			32	38	70		22:00			7	16	23			
10:15			22	35	57		22:15			6	7	13			
10:30			36	24	60		22:30			11	10	21			
10:45			33	123	59	246	22:45			5	29	12	45	17	74
11:00			33	26	59		23:00			8	7	15			
11:15			30	26	56		23:15			8	5	13			
11:30			41	24	65		23:30			2	7	9			
11:45			42	146	78	258	23:45			3	21	8	27	11	48
TOTALS			929	746	1675		TOTALS			1609	1349	2958			
SPLIT %			55.5%	44.5%	36.2%		SPLIT %			54.4%	45.6%	63.8%			

DAILY TOTALS					NB	SB						EB	WB	Total	
					0	0						2,538	2,095	4,633	
AM Peak Hour			11:45	08:45	11:45		PM Peak Hour			15:15	14:00	14:45			
AM Pk Volume			211	139	339		PM Pk Volume			216	170	354			
Pk Hr Factor			0.879	0.914	0.921		Pk Hr Factor			0.818	0.867	0.903			
7 - 9 Volume	0	0	315	240	555		4 - 6 Volume	0	0	345	283	628			
7 - 9 Peak Hour			07:30	07:45	07:45		4 - 6 Peak Hour			17:00	17:00	17:00			
7 - 9 Pk Volume	0	0	185	129	313		4 - 6 Pk Volume	0	0	186	157	343			
Pk Hr Factor	0.000	0.000	0.826	0.787	0.815		Pk Hr Factor	0.000	0.000	0.816	0.785	0.841			

Trip Generation

ITE Trip Generation, 9th Edition (2012)

Project _____ Project Number _____
 Client _____
 Site _____ Number of Units* 200
 Land Use Apartments ITE Code 220

Weekdays

$$\text{Trips} = 6.06(\# \text{ units}) + 123.56$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
1336	50%	50%	668	668

AM Peak Hour: Weekdays (peak hour of adjacent street)

$$\text{Trips} = 0.49(\# \text{ units}) + 3.73$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
102	20%	80%	20	82

PM Peak Hour: Weekdays (peak hour of adjacent street)

$$\text{Trips} = 0.55(\# \text{ units}) + 17.65$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
128	65%	35%	83	45

Peak Hour: Saturday (peak hour of generator)

$$\text{Trips} = 0.41(\# \text{ units}) + 19.23$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
101	50%	50%	51	50

*units are dwelling units

**split based on Saturday peak hour persons data

Trip Generation

ITE Trip Generation, 9th Edition (2012)

Project _____	Project Number _____
Client _____	
Site _____	Number of Units* 50
Land Use <u>Residential Condo/Townhomes</u>	ITE Code <u>230</u>

Weekdays

$$\text{Ln(Trips)} = 0.87\text{Ln}(\# \text{ units}) + 2.46$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
352	50%	50%	176	176

AM Peak Hour: Weekdays (peak hour of adjacent street)

$$\text{Ln(Trips)} = 0.80\text{Ln}(\# \text{ units}) + 0.26$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
30	17%	83%	5	25

PM Peak Hour: Weekdays (peak hour of adjacent street)

$$\text{Ln(Trips)} = 0.82\text{Ln}(\# \text{ units}) + 0.32$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
34	67%	33%	23	11

Peak Hour: Saturday (peak hour of generator)

$$\text{Trips} = 0.29(\# \text{ units}) + 42.63$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
57	54%	46%	31	26

*units are dwelling units

Trip Generation

ITE Trip Generation, 9th Edition (2012)

Project _____ Project Number _____
 Client _____
 Site _____ Number of Units* 64
 Land Use Residential Condo/Townhomes ITE Code 230

Weekdays

$$\text{Ln(Trips)} = 0.87\text{Ln}(\# \text{ units}) + 2.46$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
436	50%	50%	218	218

AM Peak Hour: Weekdays (peak hour of adjacent street)

$$\text{Ln(Trips)} = 0.80\text{Ln}(\# \text{ units}) + 0.26$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
36	17%	83%	6	30

PM Peak Hour: Weekdays (peak hour of adjacent street)

$$\text{Ln(Trips)} = 0.82\text{Ln}(\# \text{ units}) + 0.31$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
42	67%	33%	28	14

Peak Hour: Saturday (peak hour of generator)

$$\text{Trips} = 0.29(\# \text{ units}) + 42.63$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
61	54%	46%	33	28

*units are dwelling units

Trip Generation

ITE Trip Generation, 9th Edition (2012)

Project _____ **Project Number** _____
Client _____
Site _____ **Number of Units*** 30
Land Use General Office Building **ITE Code** 710

Weekdays

$$\text{Ln(Trips)} = 0.76\text{Ln}(\# \text{ units}) + 3.61$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
526	50%	50%	263	263

AM Peak Hour: Weekday (peak hour of generator)

$$\text{Ln(Trips)} = 0.80\text{Ln}(\# \text{ units}) + 1.57$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
73	88%	12%	64	9

PM Peak Hour: Weekday (peak hour of generator)

$$\text{Trips} = 1.12(\# \text{ units}) + 78.45$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
112	17%	83%	19	93

Peak Hour: Saturday (peak hour of generator)

$$\text{Trips} = 0.43(\# \text{ units})$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
13	54%	46%	7	6

*units are 1000 Sq. Feet Gross Floor Area

Trip Generation

ITE Trip Generation, 9th Edition (2012)

Project _____ **Project Number** _____
Client _____
Site _____ **Number of Units*** 29.5
Land Use Specialty Retail Center **ITE Code** 826

Weekdays

$$T = 42.78(\# \text{ units}) + 37.66$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
1,300	50%	50%	650	650

AM Peak Hour: Weekdays (peak hour of generator)

$$T = 4.91(\# \text{ units}) + 115.59$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
260	48%	52%	125	135

PM Peak Hour: Weekdays (peak hour of adjacent street)

$$T = 2.40(\# \text{ units}) + 21.48$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
92	44%	56%	40	52

Saturday

$$T = 42.04(\# \text{ units})$$

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
1,240	50%	50%	620	620

**Trips are per thousand square feet gross leasable area*

Trip Generation

ITE Trip Generation, 9th Edition (2012)

Project _____ **Project Number** _____
Client _____
Site _____ **Number of Units*** 3.5
Land Use Quality Restaurant **ITE Code** 931

Weekdays

Average Rate = 89.95 per unit

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
316	50%	50%	158	158

AM Peak Hour: Weekdays (peak hour of adjacent street)

Average Rate = 0.81 per unit

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
3	52%	48%	2	1

PM Peak Hour: Weekdays (peak hour of adjacent street)

Average Rate = 7.49 per unit

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
26	67%	33%	17	9

Peak Hour: Saturday (peak hour of generator)

Rate = 10.87(# units) - 0.46

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
38	59%	41%	22	16

Trip Generation

ITE Trip Generation, 9th Edition (2012)

Project _____ **Project Number** _____
Client _____
Site _____ **Number of Units*** 3
Land Use High-Turnover (Sit-Down) Restaurant **ITE Code** 932

Weekdays

Average Rate = 127.15 per unit

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
382	50%	50%	191	191

AM Peak Hour: Weekdays (peak hour of adjacent street)

Average Rate = 10.81 per unit

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
32	55%	45%	18	14

PM Peak Hour: Weekdays (peak hour of adjacent street)

Average Rate = 9.85 per unit

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
30	60%	40%	18	12

Peak Hour: Saturday (peak hour of generator)

Average Rate = 14.07 per unit

Trips				
Total Number	Percent		Number	
	In	Out	In	Out
42	53%	47%	22	20

HCM 2010 TWSC
1: S Main St SR9 & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 57.7

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	105	15	842	133	36	1407
Future Vol, veh/h	105	15	842	133	36	1407
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	86	86	86	86	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	122	17	979	155	38	1497

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1881	567	0	0	1134	0
Stage 1	1056	-	-	-	-	-
Stage 2	825	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 63	467	-	-	612	-
Stage 1	296	-	-	-	-	-
Stage 2	391	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 40	467	-	-	612	-
Mov Cap-2 Maneuver	~ 40	-	-	-	-	-
Stage 1	296	-	-	-	-	-
Stage 2	247	-	-	-	-	-

Approach	WB	NE	SW
HCM Control Delay, s	\$ 1136.5	0	2.2
HCM LOS	F		

Minor Lane/Major Mvmt	NET	NERWBLn1	SWL	SWT
Capacity (veh/h)	-	- 45	612	-
HCM Lane V/C Ratio	-	- 3.101	0.063	-
HCM Control Delay (s)	-	\$ 1136.5	11.3	2
HCM Lane LOS	-	- F	B	A
HCM 95th %tile Q(veh)	-	- 15.2	0.2	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 TWSC
3: S Main St SR9 & Janis Ln

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 3.3

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	2	7	878	2	4	1476
Future Vol, veh/h	2	7	878	2	4	1476
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	87	87	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	9	1009	2	5	1800

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1919	505	0	0	1009	0
Stage 1	1009	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	59	512	-	-	683	-
Stage 1	313	-	-	-	-	-
Stage 2	353	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	512	-	-	683	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	313	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NE	SW
HCM Control Delay, s	12.2	0	5.1
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	WBLn1	SWL	SWT
Capacity (veh/h)	-	-	512	683	-
HCM Lane V/C Ratio	-	-	0.023	0.007	-
HCM Control Delay (s)	-	-	12.2	10.3	5.1
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

HCM 2010 Signalized Intersection Summary

4: S Main St SR9 & Rucker Rd/Old Milton Pkwy SR 120

Devore Rd at S Main St
Synchro 9 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	1196	16	710	636	203	30	419	419	453	742	38
Future Volume (veh/h)	57	1196	16	710	636	203	30	419	419	453	742	38
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	58	1272	17	798	715	0	35	493	493	472	773	40
Adj No. of Lanes	1	3	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	0.94	0.94	0.94	0.89	0.89	0.89	0.85	0.85	0.85	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	75	1189	16	757	1444	646	55	637	633	447	955	49
Arrive On Green	0.04	0.23	0.23	0.22	0.41	0.00	0.03	0.18	0.18	0.13	0.28	0.28
Sat Flow, veh/h	1774	5172	69	3442	3539	1583	1774	3539	1583	3442	3424	177
Grp Volume(v), veh/h	58	834	455	798	715	0	35	493	493	472	399	414
Grp Sat Flow(s),veh/h/ln	1774	1695	1851	1721	1770	1583	1774	1770	1583	1721	1770	1831
Q Serve(g_s), s	3.2	23.0	23.0	22.0	15.0	0.0	2.0	13.3	18.0	13.0	21.0	21.0
Cycle Q Clear(g_c), s	3.2	23.0	23.0	22.0	15.0	0.0	2.0	13.3	18.0	13.0	21.0	21.0
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	75	780	426	757	1444	646	55	637	633	447	494	511
V/C Ratio(X)	0.78	1.07	1.07	1.05	0.50	0.00	0.63	0.77	0.78	1.05	0.81	0.81
Avail Cap(c_a), veh/h	142	780	426	757	1444	646	89	637	633	447	494	511
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(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	38.5	38.5	39.0	22.0	0.0	47.9	39.1	26.1	43.5	33.6	33.6
Incr Delay (d2), s/veh	15.7	52.4	63.4	47.8	0.3	0.0	11.5	5.9	6.1	57.8	9.7	9.5
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(95%),veh/ln	3.5	29.5	34.6	27.8	11.9	0.0	2.0	11.4	18.7	17.5	17.1	17.6
LnGrp Delay(d),s/veh	63.1	90.9	101.9	86.8	22.2	0.0	59.3	45.0	32.3	101.3	43.3	43.0
LnGrp LOS	E	F	F	F	C		E	D	C	F	D	D
Approach Vol, veh/h		1347			1513			1021			1285	
Approach Delay, s/veh		93.4			56.3			39.3			64.5	
Approach LOS		F			E			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	24.0	28.0	29.0	9.1	33.9	10.2	46.8				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	13.0	18.0	22.0	23.0	5.0	26.0	8.0	37.0				
Max Q Clear Time (g_c+I1), s	15.0	20.0	24.0	25.0	4.0	23.0	5.2	17.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.3	0.0	13.3				

Intersection Summary

HCM 2010 Ctrl Delay 64.7
HCM 2010 LOS E

Notes

User approved changes to right turn type.

HCM 2010 TWSC
5: Karen Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	204	1	1	216	6	3
Future Vol, veh/h	204	1	1	216	6	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	85	85	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	234	1	1	254	8	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	236	0	235	235
Stage 1	-	-	-	-	235	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	-	-	4.12	-	7.12	6.22
Critical Hdwy Stg 1	-	-	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1331	-	720	804
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1331	-	720	804
Mov Cap-2 Maneuver	-	-	-	-	720	-
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	746	-	-	1331	-
HCM Lane V/C Ratio	0.016	-	-	0.001	-
HCM Control Delay (s)	9.9	-	-	7.7	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 2010 TWSC
6: Michael Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	203	2	5	210	6	5
Future Vol, veh/h	203	2	5	210	6	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	75	75	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	226	2	7	280	7	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	228	0	520	227
Stage 1	-	-	-	-	227	-
Stage 2	-	-	-	-	293	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1340	-	516	812
Stage 1	-	-	-	-	811	-
Stage 2	-	-	-	-	757	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1340	-	513	812
Mov Cap-2 Maneuver	-	-	-	-	513	-
Stage 1	-	-	-	-	811	-
Stage 2	-	-	-	-	752	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	616	-	-	1340	-
HCM Lane V/C Ratio	0.022	-	-	0.005	-
HCM Control Delay (s)	11	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 2010 TWSC
7: Jon Scott Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection
Int Delay, s/veh 0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	208	4	3	203	9	10
Future Vol, veh/h	208	4	3	203	9	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	84	84	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	236	5	4	242	12	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	241	0	488	239
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	249	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1326	-	539	800
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	792	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1326	-	537	800
Mov Cap-2 Maneuver	-	-	-	-	537	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	790	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	649	-	-	1326	-
HCM Lane V/C Ratio	0.039	-	-	0.003	-
HCM Control Delay (s)	10.8	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 2010 Signalized Intersection Summary 8: Haynes Bridge Rd & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	244	202	514	930	43
Future Volume (veh/h)	32	244	202	514	930	43
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1676	1676	1676	1676	1676	1676
Adj Flow Rate, veh/h	34	262	213	541	989	46
Adj No. of Lanes	1	1	1	3	3	1
Peak Hour Factor	0.93	0.93	0.95	0.95	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	354	316	384	2500	1443	449
Arrive On Green	0.22	0.22	0.11	0.55	0.32	0.32
Sat Flow, veh/h	1597	1425	1597	4728	4728	1425
Grp Volume(v), veh/h	34	262	213	541	989	46
Grp Sat Flow(s),veh/h/ln	1597	1425	1597	1526	1526	1425
Q Serve(g_s), s	0.9	9.1	4.2	3.1	9.8	1.2
Cycle Q Clear(g_c), s	0.9	9.1	4.2	3.1	9.8	1.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	354	316	384	2500	1443	449
V/C Ratio(X)	0.10	0.83	0.55	0.22	0.69	0.10
Avail Cap(c_a), veh/h	556	496	387	2657	1594	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	19.2	10.7	6.0	15.5	12.5
Incr Delay (d2), s/veh	0.1	6.6	1.7	0.0	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	11.6	3.5	2.4	7.5	0.9
LnGrp Delay(d),s/veh	16.1	25.8	12.4	6.1	16.5	12.6
LnGrp LOS	B	C	B	A	B	B
Approach Vol, veh/h	296			754	1035	
Approach Delay, s/veh	24.7			7.9	16.4	
Approach LOS	C			A	B	
Timer	1	2	3	4	5	6
Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		34.2		17.4	11.9	22.3
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		30.0		18.0	6.0	18.0
Max Q Clear Time (g_c+I1), s		5.1		11.1	6.2	11.8
Green Ext Time (p_c), s		12.1		0.6	0.0	4.5
Intersection Summary						
HCM 2010 Ctrl Delay			14.5			
HCM 2010 LOS			B			

HCM 2010 Signalized Intersection Summary 10: Maxwell Rd/Roswell St & S Main St SR9

Devore Rd at S Main St
Synchro 9 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	831	11	144	1337	26	26	82	105	43	130	113
Future Volume (veh/h)	0	831	11	144	1337	26	26	82	105	43	130	113
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	1001	13	158	1469	29	35	109	140	44	134	116
Adj No. of Lanes	0	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.75	0.75	0.75	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	1317	17	325	1934	38	98	192	217	91	249	178
Arrive On Green	0.00	0.37	0.37	0.08	0.54	0.54	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	0	3671	46	1774	3550	70	123	742	841	91	965	688
Grp Volume(v), veh/h	0	495	519	158	732	766	284	0	0	294	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1855	1774	1770	1850	1706	0	0	1744	0	0
Q Serve(g_s), s	0.0	14.9	14.9	3.1	19.5	19.6	0.0	0.0	0.0	10.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	14.9	14.9	3.1	19.5	19.6	8.8	0.0	0.0	10.4	0.0	0.0
Prop In Lane	0.00		0.03	1.00		0.04	0.12		0.49	0.15		0.39
Lane Grp Cap(c), veh/h	0	651	683	325	964	1008	507	0	0	0	0	0
V/C Ratio(X)	0.00	0.76	0.76	0.49	0.76	0.76	0.56	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	668	700	332	988	1033	567	0	0	0	0	0
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(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	16.9	16.9	12.4	10.8	10.8	20.1	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.0	4.7	1.1	3.4	3.3	1.0	0.0	0.0	0.0	0.0	0.0
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(95%),veh/ln	0.0	12.9	13.3	2.9	15.5	16.1	7.7	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	21.8	21.6	13.5	14.1	14.1	21.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS		C	C	B	B	B	C					
Approach Vol, veh/h		1014			1656			284			294	
Approach Delay, s/veh		21.7			14.0			21.0			0.0	
Approach LOS		C			B			C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		21.7	10.7	28.4		21.7		39.2				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0		6.0				
Max Green Setting (Gmax), s		18.0	5.0	23.0		29.0		34.0				
Max Q Clear Time (g_c+I1), s		10.8	5.1	16.9		12.4		21.6				
Green Ext Time (p_c), s		2.1	0.0	5.5		3.3		10.5				
Intersection Summary												
HCM 2010 Ctrl Delay			15.8									
HCM 2010 LOS			B									

HCM 2010 TWSC
1: S Main St SR9 & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 43.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	71	75	1200	144	29	1087
Future Vol, veh/h	71	75	1200	144	29	1087
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	89	89	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	84	1319	158	32	1195

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2059	738	0	0	1477	0
Stage 1	1398	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 48	360	-	-	452	-
Stage 1	194	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 38	360	-	-	452	-
Mov Cap-2 Maneuver	~ 38	-	-	-	-	-
Stage 1	194	-	-	-	-	-
Stage 2	375	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	\$ 740.3	0	1.7
HCM LOS	F		

Minor Lane/Major Mvmt	NET	NERNWLn1	SWL	SWT
Capacity (veh/h)	-	- 70	452	-
HCM Lane V/C Ratio	-	- 2.343	0.071	-
HCM Control Delay (s)	-	-\$ 740.3	13.6	1.4
HCM Lane LOS	-	- F	B	A
HCM 95th %tile Q(veh)	-	- 15.7	0.2	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 TWSC
3: S Main St SR9 & Janis Ln

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	2	5	1291	1	5	1076
Future Vol, veh/h	2	5	1291	1	5	1076
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	90	90	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	1434	1	5	1098

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1993	717	0	0	1434	0
Stage 1	1434	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	53	372	-	-	470	-
Stage 1	186	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	52	372	-	-	470	-
Mov Cap-2 Maneuver	52	-	-	-	-	-
Stage 1	186	-	-	-	-	-
Stage 2	522	-	-	-	-	-

Approach	WB	NE	SW
HCM Control Delay, s	33.3	0	0.3
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	WBLn1	SWL	SWT
Capacity (veh/h)	-	-	135	470	-
HCM Lane V/C Ratio	-	-	0.059	0.011	-
HCM Control Delay (s)	-	-	33.3	12.7	0.2
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

HCM 2010 Signalized Intersection Summary

4: S Main St SR9 & Rucker Rd/Old Milton Pkwy SR 120

Devore Rd at S Main St
Synchro 9 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	706	19	628	1276	411	123	680	493	282	425	61
Future Volume (veh/h)	108	706	19	628	1276	411	123	680	493	282	425	61
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	110	751	20	654	1329	0	132	731	530	291	438	63
Adj No. of Lanes	1	3	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	0.94	0.94	0.94	0.96	0.96	0.96	0.93	0.93	0.93	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	1129	30	729	1298	581	158	747	670	306	656	94
Arrive On Green	0.07	0.22	0.22	0.21	0.37	0.00	0.09	0.21	0.21	0.09	0.21	0.21
Sat Flow, veh/h	1774	5094	135	3442	3539	1583	1774	3539	1583	3442	3109	445
Grp Volume(v), veh/h	110	499	272	654	1329	0	132	731	530	291	248	253
Grp Sat Flow(s),veh/h/ln	1774	1695	1839	1721	1770	1583	1774	1770	1583	1721	1770	1784
Q Serve(g_s), s	5.6	12.1	12.1	16.6	33.0	0.0	6.6	18.5	19.0	7.6	11.6	11.7
Cycle Q Clear(g_c), s	5.6	12.1	12.1	16.6	33.0	0.0	6.6	18.5	19.0	7.6	11.6	11.7
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	118	751	407	729	1298	581	158	747	670	306	374	377
V/C Ratio(X)	0.93	0.66	0.67	0.90	1.02	0.00	0.84	0.98	0.79	0.95	0.66	0.67
Avail Cap(c_a), veh/h	118	751	407	765	1298	581	158	747	670	306	374	377
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(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	32.0	32.0	34.5	28.5	0.0	40.4	35.3	22.5	40.8	32.6	32.6
Incr Delay (d2), s/veh	61.2	2.2	4.1	13.0	31.3	0.0	30.8	27.5	6.4	38.5	4.4	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(95%),veh/ln	8.3	9.9	10.9	14.2	39.0	0.0	8.1	17.5	18.3	9.0	10.2	10.3
LnGrp Delay(d),s/veh	103.0	34.2	36.1	47.5	59.8	0.0	71.1	62.8	29.0	79.3	37.0	37.2
LnGrp LOS	F	C	D	D	F		E	E	C	E	D	D
Approach Vol, veh/h		881			1983			1393			792	
Approach Delay, s/veh		43.4			55.7			50.7			52.6	
Approach LOS		D			E			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	25.0	25.1	25.9	14.0	25.0	12.0	39.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	8.0	19.0	20.0	19.0	8.0	19.0	6.0	33.0				
Max Q Clear Time (g_c+I1), s	9.6	21.0	18.6	14.1	8.6	13.7	7.6	35.0				
Green Ext Time (p_c), s	0.0	0.0	0.4	4.2	0.0	3.9	0.0	0.0				

Intersection Summary

HCM 2010 Ctrl Delay 51.7
HCM 2010 LOS D

Notes

User approved changes to right turn type.

HCM 2010 TWSC
5: Karen Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBL	NBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	7	275	5	3	260	10
Future Vol, veh/h	7	275	5	3	260	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	0	-	0	-
Veh in Median Storage, #	0	-	0	-	0	-
Grade, %	0	-	0	-	0	-
Peak Hour Factor	78	78	75	75	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	353	7	4	286	11

Major/Minor	Major2		Minor1		Major1	
Conflicting Flow All	11	-	0	0	0	0
Stage 1	-	-	0	-	-	-
Stage 2	-	-	0	-	-	-
Critical Hdwy	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-
Pot Cap-1 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-				-
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB		NB		SE
HCM Control Delay, s					
HCM LOS			-		

Minor Lane/Major Mvmt	NBLn1	WBL	WBR	SEL	SER
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	-	-	-
HCM Lane LOS	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-

HCM 2010 TWSC
6: Michael Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	254	6	4	277	4	1
Future Vol, veh/h	254	6	4	277	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	75	75	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	282	7	5	369	5	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	289	0	286	286
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	-	-	4.12	-	7.12	6.22
Critical Hdwy Stg 1	-	-	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1273	-	666	753
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1273	-	664	753
Mov Cap-2 Maneuver	-	-	-	-	664	-
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	680	-	-	1273	-
HCM Lane V/C Ratio	0.009	-	-	0.004	-
HCM Control Delay (s)	10.3	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 2010 TWSC
7: Jon Scott Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	250	4	11	279	6	5
Future Vol, veh/h	250	4	11	279	6	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	77	77	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	287	5	14	362	8	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	292	0	681	290
Stage 1	-	-	-	-	290	-
Stage 2	-	-	-	-	391	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1270	-	416	749
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	683	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1270	-	410	749
Mov Cap-2 Maneuver	-	-	-	-	410	-
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	673	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	516	-	-	1270	-
HCM Lane V/C Ratio	0.028	-	-	0.011	-
HCM Control Delay (s)	12.2	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 2010 Signalized Intersection Summary 8: Haynes Bridge Rd & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	80	215	235	1257	662	74
Future Volume (veh/h)	80	215	235	1257	662	74
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1676	1676	1676	1676	1676	1676
Adj Flow Rate, veh/h	93	250	245	1309	704	79
Adj No. of Lanes	1	1	1	3	3	1
Peak Hour Factor	0.86	0.86	0.96	0.96	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	347	309	445	2511	1440	448
Arrive On Green	0.22	0.22	0.12	0.55	0.31	0.31
Sat Flow, veh/h	1597	1425	1597	4728	4728	1425
Grp Volume(v), veh/h	93	250	245	1309	704	79
Grp Sat Flow(s),veh/h/ln	1597	1425	1597	1526	1526	1425
Q Serve(g_s), s	2.5	8.5	4.9	9.3	6.4	2.1
Cycle Q Clear(g_c), s	2.5	8.5	4.9	9.3	6.4	2.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	347	309	445	2511	1440	448
V/C Ratio(X)	0.27	0.81	0.55	0.52	0.49	0.18
Avail Cap(c_a), veh/h	561	500	445	2679	1607	500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	19.0	9.6	7.3	14.2	12.7
Incr Delay (d2), s/veh	0.4	5.0	1.5	0.2	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	11.0	4.1	7.1	4.9	1.5
LnGrp Delay(d),s/veh	17.1	24.0	11.1	7.5	14.5	12.9
LnGrp LOS	B	C	B	A	B	B
Approach Vol, veh/h	343			1554	783	
Approach Delay, s/veh	22.2			8.0	14.3	
Approach LOS	C			A	B	
Timer	1	2	3	4	5	6
Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		34.1		17.1	12.0	22.1
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		30.0		18.0	6.0	18.0
Max Q Clear Time (g_c+I1), s		11.3		10.5	6.9	8.4
Green Ext Time (p_c), s		13.3		0.7	0.0	7.7
Intersection Summary						
HCM 2010 Ctrl Delay			11.7			
HCM 2010 LOS			B			

HCM 2010 Signalized Intersection Summary 10: Maxwell Rd/Roswell St & S Main St SR9

Devore Rd at S Main St
Synchro 9 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1193	5	90	1009	24	37	228	139	34	109	79
Future Volume (veh/h)	2	1193	5	90	1009	24	37	228	139	34	109	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	2	1230	5	102	1147	27	39	243	148	41	131	95
Adj No. of Lanes	0	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.88	0.88	0.88	0.94	0.94	0.94	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	1523	6	254	2006	47	79	286	164	86	255	158
Arrive On Green	0.43	0.43	0.43	0.06	0.57	0.57	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1	3538	14	1774	3534	83	98	1039	597	116	926	575
Grp Volume(v), veh/h	648	0	589	102	574	600	430	0	0	267	0	0
Grp Sat Flow(s),veh/h/ln	1860	0	1693	1774	1770	1848	1735	0	0	1617	0	0
Q Serve(g_s), s	0.0	0.0	23.1	2.3	15.8	15.8	6.2	0.0	0.0	11.8	0.0	0.0
Cycle Q Clear(g_c), s	23.1	0.0	23.1	2.3	15.8	15.8	18.0	0.0	0.0	11.8	0.0	0.0
Prop In Lane	0.00		0.01	1.00		0.05	0.09		0.34	0.15		0.36
Lane Grp Cap(c), veh/h	848	0	729	254	1004	1049	528	0	0	0	0	0
V/C Ratio(X)	0.76	0.00	0.81	0.40	0.57	0.57	0.81	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	878	0	756	268	1047	1093	552	0	0	0	0	0
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(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.9	0.0	18.9	14.9	10.5	10.5	26.5	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	3.9	0.0	6.4	1.0	0.7	0.7	8.8	0.0	0.0	0.0	0.0	0.0
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(95%),veh/ln	8.7	0.0	17.8	2.1	12.4	12.9	15.1	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	22.8	0.0	25.3	15.9	11.2	11.2	35.3	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	C		C	B	B	B	D					
Approach Vol, veh/h		1237			1276			430			267	
Approach Delay, s/veh		24.0			11.6			35.3			0.0	
Approach LOS		C			B			D			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		26.9	10.4	38.8		26.9		49.2				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0		6.0				
Max Green Setting (Gmax), s		22.0	5.0	34.0		33.0		45.0				
Max Q Clear Time (g_c+I1), s		20.0	4.3	25.1		13.8		17.8				
Green Ext Time (p_c), s		0.9	0.0	7.6		4.4		19.2				
Intersection Summary												
HCM 2010 Ctrl Delay			18.6									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary

1: S Main St SR9 & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	45	137	119	110	86	16	0	885	140	38	1479	27
Future Volume (veh/h)	45	137	119	110	86	16	0	885	140	38	1479	27
Number	1	6	16	5	2	12	7	4	14	3	8	18
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	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	49	149	129	128	93	19	0	1029	163	40	1573	29
Adj No. of Lanes	0	1	1	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.86	0.92	0.86	0.92	0.86	0.86	0.94	0.94	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	183	210	152	110	229	73	1652	261	216	1918	35
Arrive On Green	0.13	0.13	0.13	0.14	0.14	0.14	0.00	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	455	1385	1583	1049	762	1583	316	3062	484	468	3555	65
Grp Volume(v), veh/h	198	0	129	221	0	19	0	594	598	40	782	820
Grp Sat Flow(s),veh/h/ln	1840	0	1583	1810	0	1583	316	1770	1777	468	1770	1851
Q Serve(g_s), s	10.3	0.0	7.6	11.7	0.0	1.0	0.0	22.8	22.9	6.4	35.8	36.0
Cycle Q Clear(g_c), s	10.3	0.0	7.6	11.7	0.0	1.0	0.0	22.8	22.9	29.3	35.8	36.0
Prop In Lane	0.25		1.00	0.58		1.00	1.00		0.27	1.00		0.04
Lane Grp Cap(c), veh/h	244	0	210	262	0	229	73	955	959	216	955	999
V/C Ratio(X)	0.81	0.00	0.62	0.84	0.00	0.08	0.00	0.62	0.62	0.18	0.82	0.82
Avail Cap(c_a), veh/h	337	0	290	350	0	306	80	991	996	226	991	1037
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(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	0.0	40.2	40.9	0.0	36.3	0.0	15.7	15.7	25.9	18.7	18.7
Incr Delay (d2), s/veh	10.1	0.0	2.9	13.1	0.0	0.2	0.0	1.1	1.2	0.4	5.4	5.2
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	5.9	0.0	3.5	6.8	0.0	0.5	0.0	11.4	11.4	0.8	18.8	19.7
LnGrp Delay(d),s/veh	51.5	0.0	43.1	54.0	0.0	36.5	0.0	16.8	16.8	26.3	24.0	23.9
LnGrp LOS	D		D	D		D		B	B	C	C	C
Approach Vol, veh/h		327			240			1192			1642	
Approach Delay, s/veh		48.2			52.6			16.8			24.0	
Approach LOS		D			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.2		59.0		19.0		59.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		19.0		55.0		18.0		55.0				
Max Q Clear Time (g_c+I1), s		13.7		24.9		12.3		38.0				
Green Ext Time (p_c), s		0.5		24.5		0.7		15.0				
Intersection Summary												
HCM 2010 Ctrl Delay			25.8									
HCM 2010 LOS			C									

HCM 2010 Roundabout
2: Roswell St & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Intersection Delay, s/veh 4.8

Intersection LOS A

Approach	NB	SB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	227	0	123
Demand Flow Rate, veh/h	0	232	0	125
Vehicles Circulating, veh/h	232	0	232	0
Vehicles Exiting, veh/h	0	125	0	232
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	5.1	0.0	4.2
Approach LOS	-	A	-	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	0	232	0	125
Cap Entry Lane, veh/h	896	1130	896	1130
Entry HV Adj Factor	1.000	0.978	1.000	0.984
Flow Entry, veh/h	0	227	0	123
Cap Entry, veh/h	896	1106	896	1112
V/C Ratio	0.000	0.205	0.000	0.111
Control Delay, s/veh	4.0	5.1	4.0	4.2
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	0

HCM 2010 TWSC
3: S Main St SR9 & Janis Ln

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	2	7	923	2	4	1551
Future Vol, veh/h	2	7	923	2	4	1551
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	87	87	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	9	1061	2	5	1891

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2016	530	0	0	1061	0
Stage 1	1061	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Critical Hdwy	7.54	6.94	-	-	4.14	-
Critical Hdwy Stg 1	6.54	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	34	493	-	-	652	-
Stage 1	239	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	34	493	-	-	652	-
Mov Cap-2 Maneuver	34	-	-	-	-	-
Stage 1	239	-	-	-	-	-
Stage 2	278	-	-	-	-	-

Approach	WB	NE	SW
HCM Control Delay, s	37.4	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NET	NER	WBLn1	SWL	SWT
Capacity (veh/h)	-	-	123	652	-
HCM Lane V/C Ratio	-	-	0.098	0.007	-
HCM Control Delay (s)	-	-	37.4	10.6	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

HCM 2010 Signalized Intersection Summary

4: S Main St SR9 & Rucker Rd/Old Milton Pkwy SR 120

Devore Rd at S Main St
Synchro 9 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1257	17	746	668	213	32	440	440	476	780	40
Future Volume (veh/h)	60	1257	17	746	668	213	32	440	440	476	780	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	64	1337	18	838	751	0	38	518	518	496	812	42
Adj No. of Lanes	1	3	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	0.94	0.94	0.94	0.89	0.89	0.89	0.85	0.85	0.85	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	1269	17	751	1476	661	55	611	619	501	983	51
Arrive On Green	0.05	0.25	0.25	0.22	0.42	0.00	0.03	0.17	0.17	0.15	0.29	0.29
Sat Flow, veh/h	1774	5171	70	3442	3539	1583	1774	3539	1583	3442	3424	177
Grp Volume(v), veh/h	64	877	478	838	751	0	38	518	518	496	420	434
Grp Sat Flow(s),veh/h/ln	1774	1695	1850	1721	1770	1583	1774	1770	1583	1721	1770	1831
Q Serve(g_s), s	3.9	27.0	27.0	24.0	17.3	0.0	2.3	15.6	19.0	15.8	24.4	24.4
Cycle Q Clear(g_c), s	3.9	27.0	27.0	24.0	17.3	0.0	2.3	15.6	19.0	15.8	24.4	24.4
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	82	832	454	751	1476	661	55	611	619	501	508	526
V/C Ratio(X)	0.78	1.05	1.05	1.12	0.51	0.00	0.69	0.85	0.84	0.99	0.83	0.83
Avail Cap(c_a), veh/h	145	832	454	751	1476	661	81	611	619	501	508	526
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(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	41.5	41.5	43.0	23.7	0.0	52.7	44.1	30.3	46.9	36.7	36.7
Incr Delay (d2), s/veh	14.4	46.2	57.0	69.5	0.3	0.0	14.0	10.8	9.8	37.7	10.8	10.5
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	2.2	17.9	20.9	18.6	8.5	0.0	1.4	8.5	15.9	10.1	13.4	13.8
LnGrp Delay(d),s/veh	66.2	87.7	98.5	112.5	24.0	0.0	66.7	54.8	40.1	84.7	47.4	47.1
LnGrp LOS	E	F	F	F	C		E	D	D	F	D	D
Approach Vol, veh/h		1419			1589			1074			1350	
Approach Delay, s/veh		90.4			70.7			48.2			61.0	
Approach LOS		F			E			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	25.0	30.0	33.0	9.4	37.6	11.1	51.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	16.0	19.0	24.0	27.0	5.0	30.0	9.0	42.0				
Max Q Clear Time (g_c+I1), s	17.8	21.0	26.0	29.0	4.3	26.4	5.9	19.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.9	0.0	15.2				

Intersection Summary

HCM 2010 Ctrl Delay 69.0
HCM 2010 LOS E

Notes

User approved changes to right turn type.

HCM 2010 TWSC
5: Karen Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.2

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	3	351	1	1	313
Future Vol, veh/h	6	3	351	1	1	313
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	75	75	87	87	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	4	403	1	1	368

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	775	404	0	0	405	0
Stage 1	404	-	-	-	-	-
Stage 2	371	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	366	647	-	-	1154	-
Stage 1	674	-	-	-	-	-
Stage 2	698	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	366	647	-	-	1154	-
Mov Cap-2 Maneuver	366	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	428	1154	-	-	-
HCM Lane V/C Ratio	0.028	0.001	-	-	-
HCM Control Delay (s)	13.7	8.1	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

HCM 2010 TWSC
6: Michael Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.3

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	6	5	350	2	5	307
Future Vol, veh/h	6	5	350	2	5	307
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	83	83	90	90	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	6	389	2	7	409

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	813	390	0	0	391	0
Stage 1	390	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	348	658	-	-	1168	-
Stage 1	684	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	345	658	-	-	1168	-
Mov Cap-2 Maneuver	345	-	-	-	-	-
Stage 1	684	-	-	-	-	-
Stage 2	656	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s	13.4	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	440	1168	-	-	-
HCM Lane V/C Ratio	0.03	0.006	-	-	-
HCM Control Delay (s)	13.4	8.1	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

HCM 2010 Signalized Intersection Summary 8: Haynes Bridge Rd & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	34	393	298	540	977	45
Future Volume (veh/h)	34	393	298	540	977	45
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1676	1676	1676	1676	1676	1676
Adj Flow Rate, veh/h	37	423	314	568	1039	48
Adj No. of Lanes	1	1	1	3	3	1
Peak Hour Factor	0.93	0.93	0.95	0.95	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	379	548	422	2768	1730	539
Arrive On Green	0.24	0.24	0.15	0.60	0.38	0.38
Sat Flow, veh/h	1597	1425	1597	4728	4728	1425
Grp Volume(v), veh/h	37	423	314	568	1039	48
Grp Sat Flow(s),veh/h/ln	1597	1425	1597	1526	1526	1425
Q Serve(g_s), s	1.4	18.0	8.3	4.3	13.9	1.6
Cycle Q Clear(g_c), s	1.4	18.0	8.3	4.3	13.9	1.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	379	548	422	2768	1730	539
V/C Ratio(X)	0.10	0.77	0.74	0.21	0.60	0.09
Avail Cap(c_a), veh/h	379	548	880	4824	2472	770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	20.4	13.5	6.8	19.0	15.2
Incr Delay (d2), s/veh	0.1	6.7	2.6	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	15.3	3.9	1.8	5.8	0.7
LnGrp Delay(d),s/veh	22.7	27.1	16.2	6.8	19.3	15.3
LnGrp LOS	C	C	B	A	B	B
Approach Vol, veh/h	460			882	1087	
Approach Delay, s/veh	26.7			10.1	19.2	
Approach LOS	C			B	B	
Timer	1	2	3	4	5	6
Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		51.9		24.0	17.2	34.7
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		80.0		18.0	33.0	41.0
Max Q Clear Time (g_c+I1), s		6.3		20.0	10.3	15.9
Green Ext Time (p_c), s		18.1		0.0	0.9	12.8
Intersection Summary						
HCM 2010 Ctrl Delay			17.3			
HCM 2010 LOS			B			

HCM 2010 Signalized Intersection Summary 10: Maxwell Rd & S Main St SR9

Devore Rd at S Main St
Synchro 9 Report

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	873	12	151	1524	27	110		
Future Volume (veh/h)	873	12	151	1524	27	110		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1900		
Adj Flow Rate, veh/h	1052	14	166	1675	36	147		
Adj No. of Lanes	2	0	1	2	0	0		
Peak Hour Factor	0.83	0.83	0.91	0.91	0.75	0.75		
Percent Heavy Veh, %	2	2	2	2	0	0		
Cap, veh/h	2615	35	406	2588	43	177		
Arrive On Green	0.73	0.73	0.73	0.73	0.14	0.14		
Sat Flow, veh/h	3669	48	527	3632	317	1293		
Grp Volume(v), veh/h	521	545	166	1675	184	0		
Grp Sat Flow(s),veh/h/ln	1770	1854	527	1770	1619	0		
Q Serve(g_s), s	10.2	10.2	15.9	21.9	10.0	0.0		
Cycle Q Clear(g_c), s	10.2	10.2	26.0	21.9	10.0	0.0		
Prop In Lane		0.03	1.00		0.20	0.80		
Lane Grp Cap(c), veh/h	1294	1356	406	2588	221	0		
V/C Ratio(X)	0.40	0.40	0.41	0.65	0.83	0.00		
Avail Cap(c_a), veh/h	1502	1574	468	3003	375	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	4.6	4.6	9.6	6.2	38.2	0.0		
Incr Delay (d2), s/veh	0.2	0.2	0.7	0.4	7.9	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.0	5.2	2.4	10.6	5.0	0.0		
LnGrp Delay(d),s/veh	4.8	4.8	10.3	6.6	46.1	0.0		
LnGrp LOS	A	A	B	A	D			
Approach Vol, veh/h	1066			1841	184			
Approach Delay, s/veh	4.8			6.9	46.1			
Approach LOS	A			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		18.4		72.3				72.3
Change Period (Y+Rc), s		6.0		6.0				6.0
Max Green Setting (Gmax), s		21.0		77.0				77.0
Max Q Clear Time (g_c+I1), s		12.0		12.2				28.0
Green Ext Time (p_c), s		0.3		47.3				38.3
Intersection Summary								
HCM 2010 Ctrl Delay			8.5					
HCM 2010 LOS			A					

Notes

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary

1: S Main St SR9 & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	36	115	83	75	240	79	2	1261	151	30	1142	25
Future Volume (veh/h)	36	115	83	75	240	79	2	1261	151	30	1142	25
Number	1	6	16	5	2	12	7	4	14	3	8	18
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	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	39	125	90	84	261	89	2	1386	166	33	1255	27
Adj No. of Lanes	0	1	1	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.89	0.92	0.89	0.92	0.91	0.91	0.91	0.91	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	159	179	94	293	333	167	1586	189	107	1763	38
Arrive On Green	0.11	0.11	0.11	0.21	0.21	0.21	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	438	1403	1583	448	1392	1583	429	3187	379	331	3543	76
Grp Volume(v), veh/h	164	0	90	345	0	89	2	765	787	33	627	655
Grp Sat Flow(s),veh/h/ln	1841	0	1583	1840	0	1583	429	1770	1796	331	1770	1849
Q Serve(g_s), s	8.7	0.0	5.4	18.3	0.0	4.7	0.4	38.5	39.3	9.9	27.7	27.7
Cycle Q Clear(g_c), s	8.7	0.0	5.4	18.3	0.0	4.7	28.1	38.5	39.3	49.3	27.7	27.7
Prop In Lane	0.24		1.00	0.24		1.00	1.00		0.21	1.00		0.04
Lane Grp Cap(c), veh/h	208	0	179	387	0	333	167	881	894	107	881	920
V/C Ratio(X)	0.79	0.00	0.50	0.89	0.00	0.27	0.01	0.87	0.88	0.31	0.71	0.71
Avail Cap(c_a), veh/h	330	0	284	440	0	378	167	881	894	107	881	920
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(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	0.0	41.9	38.6	0.0	33.2	30.6	22.3	22.6	44.6	19.6	19.6
Incr Delay (d2), s/veh	6.5	0.0	2.2	18.4	0.0	0.4	0.0	9.3	10.1	1.6	2.7	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	4.8	0.0	2.5	11.3	0.0	2.1	0.0	21.0	22.0	1.0	14.1	14.7
LnGrp Delay(d),s/veh	49.9	0.0	44.1	57.0	0.0	33.6	30.6	31.6	32.7	46.2	22.3	22.2
LnGrp LOS	D		D	E		C	C	C	C	D	C	C
Approach Vol, veh/h		254			434			1554			1315	
Approach Delay, s/veh		47.8			52.2			32.2			22.9	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.1		56.0		17.4		56.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		24.0		50.0		18.0		50.0				
Max Q Clear Time (g_c+I1), s		20.3		41.3		10.7		51.3				
Green Ext Time (p_c), s		0.8		8.1		0.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			32.3									
HCM 2010 LOS			C									

HCM 2010 Roundabout 2: Roswell St & Devore Rd

Devore Rd at S Main St Synchro 9 Report

Intersection

Intersection Delay, s/veh 5.3

Intersection LOS A

Approach	NB	SB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	191	0	290
Demand Flow Rate, veh/h	0	195	0	296
Vehicles Circulating, veh/h	195	0	195	0
Vehicles Exiting, veh/h	0	296	0	195
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	4.8	0.0	5.7
Approach LOS	-	A	-	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	0	195	0	296
Cap Entry Lane, veh/h	930	1130	930	1130
Entry HV Adj Factor	1.000	0.979	1.000	0.980
Flow Entry, veh/h	0	191	0	290
Cap Entry, veh/h	930	1107	930	1107
V/C Ratio	0.000	0.173	0.000	0.262
Control Delay, s/veh	3.9	4.8	3.9	5.7
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	1

HCM 2010 TWSC
3: S Main St SR9 & Janis Ln

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	2	5	1357	1	5	1131
Future Vol, veh/h	2	5	1357	1	5	1131
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	90	90	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	1508	1	5	1154

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2095	754	0	0	1508	0
Stage 1	1508	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	45	352	-	-	440	-
Stage 1	169	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	44	352	-	-	440	-
Mov Cap-2 Maneuver	44	-	-	-	-	-
Stage 1	169	-	-	-	-	-
Stage 2	502	-	-	-	-	-

Approach	WB	NE	SW
HCM Control Delay, s	38	0	0.3
HCM LOS	E		

Minor Lane/Major Mvmt	NET	NER	WBLn1	SWL	SWT
Capacity (veh/h)	-	-	117	440	-
HCM Lane V/C Ratio	-	-	0.068	0.012	-
HCM Control Delay (s)	-	-	38	13.3	0.2
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

HCM 2010 Signalized Intersection Summary

4: S Main St SR9 & Rucker Rd/Old Milton Pkwy SR 120

Devore Rd at S Main St
Synchro 9 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	742	20	660	1341	432	129	715	518	296	447	64
Future Volume (veh/h)	114	742	20	660	1341	432	129	715	518	296	447	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	121	789	21	688	1397	0	139	769	557	305	461	66
Adj No. of Lanes	1	3	0	2	2	1	1	2	1	2	2	0
Peak Hour Factor	0.94	0.94	0.94	0.96	0.96	0.96	0.93	0.93	0.93	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	1173	31	756	1345	602	169	779	696	310	668	95
Arrive On Green	0.07	0.23	0.23	0.22	0.38	0.00	0.10	0.22	0.22	0.09	0.21	0.21
Sat Flow, veh/h	1774	5094	135	3442	3539	1583	1774	3539	1583	3442	3111	443
Grp Volume(v), veh/h	121	525	285	688	1397	0	139	769	557	305	261	266
Grp Sat Flow(s),veh/h/ln	1774	1695	1839	1721	1770	1583	1774	1770	1583	1721	1770	1785
Q Serve(g_s), s	6.8	14.1	14.1	19.5	38.0	0.0	7.7	21.7	22.0	8.8	13.6	13.7
Cycle Q Clear(g_c), s	6.8	14.1	14.1	19.5	38.0	0.0	7.7	21.7	22.0	8.8	13.6	13.7
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	124	781	423	756	1345	602	169	779	696	310	380	383
V/C Ratio(X)	0.97	0.67	0.67	0.91	1.04	0.00	0.82	0.99	0.80	0.98	0.69	0.69
Avail Cap(c_a), veh/h	124	781	423	792	1345	602	195	779	696	310	380	383
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(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	35.1	35.1	38.0	31.0	0.0	44.4	38.9	24.2	45.4	36.2	36.2
Incr Delay (d2), s/veh	72.5	2.3	4.2	14.1	35.2	0.0	21.4	29.1	6.6	46.8	5.1	5.3
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	5.8	6.8	7.6	10.8	25.1	0.0	4.8	13.7	14.4	6.2	7.2	7.4
LnGrp Delay(d),s/veh	119.0	37.3	39.2	52.2	66.2	0.0	65.8	67.9	30.8	92.2	41.3	41.5
LnGrp LOS	F	D	D	D	F		E	E	C	F	D	D
Approach Vol, veh/h		931			2085			1465			832	
Approach Delay, s/veh		48.5			61.6			53.6			60.1	
Approach LOS		D			E			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	28.0	28.0	29.0	15.5	27.5	13.0	44.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	22.0	23.0	22.0	11.0	20.0	7.0	38.0				
Max Q Clear Time (g_c+I1), s	10.8	24.0	21.5	16.1	9.7	15.7	8.8	40.0				
Green Ext Time (p_c), s	0.0	0.0	0.5	5.1	0.0	3.3	0.0	0.0				

Intersection Summary

HCM 2010 Ctrl Delay 56.9
HCM 2010 LOS E

Notes

User approved changes to right turn type.

HCM 2010 TWSC
5: Karen Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.2

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	5	3	388	11	7	529
Future Vol, veh/h	5	3	388	11	7	529
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	75	75	91	91	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	4	426	12	9	678

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1128	432	0	0	438	0
Stage 1	432	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	226	624	-	-	1122	-
Stage 1	655	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	223	624	-	-	1122	-
Mov Cap-2 Maneuver	223	-	-	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	489	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s	17.7	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	294	1122	-	-	-
HCM Lane V/C Ratio	0.036	0.008	-	-	-
HCM Control Delay (s)	17.7	8.2	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

HCM 2010 TWSC
6: Michael Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.2

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	4	1	382	6	4	531
Future Vol, veh/h	4	1	382	6	4	531
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	75	75	90	90	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	1	424	7	5	640

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1077	428	0	0	431	0
Stage 1	428	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	242	627	-	-	1129	-
Stage 1	657	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	240	627	-	-	1129	-
Mov Cap-2 Maneuver	240	-	-	-	-	-
Stage 1	657	-	-	-	-	-
Stage 2	516	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s	18.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	274	1129	-	-	-
HCM Lane V/C Ratio	0.024	0.004	-	-	-
HCM Control Delay (s)	18.5	8.2	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

HCM 2010 Signalized Intersection Summary 8: Haynes Bridge Rd & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	84	341	487	1321	696	78
Future Volume (veh/h)	84	341	487	1321	696	78
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1676	1676	1676	1676	1676	1676
Adj Flow Rate, veh/h	98	397	507	1376	740	83
Adj No. of Lanes	1	1	1	3	3	1
Peak Hour Factor	0.86	0.86	0.96	0.96	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	365	680	582	2822	1329	414
Arrive On Green	0.23	0.23	0.25	0.62	0.29	0.29
Sat Flow, veh/h	1597	1425	1597	4728	4728	1425
Grp Volume(v), veh/h	98	397	507	1376	740	83
Grp Sat Flow(s),veh/h/ln	1597	1425	1597	1526	1526	1425
Q Serve(g_s), s	3.9	15.6	15.7	12.8	10.6	3.4
Cycle Q Clear(g_c), s	3.9	15.6	15.7	12.8	10.6	3.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	365	680	582	2822	1329	414
V/C Ratio(X)	0.27	0.58	0.87	0.49	0.56	0.20
Avail Cap(c_a), veh/h	371	685	988	4133	1476	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	14.7	13.5	8.1	23.3	20.7
Incr Delay (d2), s/veh	0.4	1.3	4.6	0.1	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	13.2	7.5	5.4	4.5	1.4
LnGrp Delay(d),s/veh	25.0	15.9	18.2	8.3	23.7	21.0
LnGrp LOS	C	B	B	A	C	C
Approach Vol, veh/h	495			1883	823	
Approach Delay, s/veh	17.7			10.9	23.4	
Approach LOS	B			B	C	
Timer	1	2	3	4	5	6
Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		53.8		23.7	25.3	28.5
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		70.0		18.0	39.0	25.0
Max Q Clear Time (g_c+I1), s		14.8		17.6	17.7	12.6
Green Ext Time (p_c), s		27.2		0.1	1.6	9.9
Intersection Summary						
HCM 2010 Ctrl Delay			15.2			
HCM 2010 LOS			B			

7 8

HCM 2010 Signalized Intersection Summary

10: Maxwell Rd & S Main St SR9

Devore Rd at S Main St
Synchro 9 Report

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	1254	5	95	1143	39	146		
Future Volume (veh/h)	1254	5	95	1143	39	146		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1900		
Adj Flow Rate, veh/h	1293	5	108	1299	41	155		
Adj No. of Lanes	2	0	1	2	0	0		
Peak Hour Factor	0.97	0.97	0.88	0.88	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2	0	0		
Cap, veh/h	2567	10	318	2512	49	186		
Arrive On Green	0.71	0.71	0.71	0.71	0.15	0.15		
Sat Flow, veh/h	3709	14	423	3632	337	1275		
Grp Volume(v), veh/h	633	665	108	1299	197	0		
Grp Sat Flow(s), veh/h/ln	1770	1860	423	1770	1621	0		
Q Serve(g_s), s	13.5	13.5	12.9	14.0	9.8	0.0		
Cycle Q Clear(g_c), s	13.5	13.5	26.4	14.0	9.8	0.0		
Prop In Lane		0.01	1.00		0.21	0.79		
Lane Grp Cap(c), veh/h	1256	1321	318	2512	237	0		
V/C Ratio(X)	0.50	0.50	0.34	0.52	0.83	0.00		
Avail Cap(c_a), veh/h	1466	1541	368	2931	370	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	5.5	5.5	11.4	5.5	34.6	0.0		
Incr Delay (d2), s/veh	0.3	0.3	0.6	0.2	9.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.6	6.9	1.6	6.7	5.0	0.0		
LnGrp Delay(d),s/veh	5.8	5.8	12.0	5.7	43.6	0.0		
LnGrp LOS	A	A	B	A	D			
Approach Vol, veh/h	1298			1407	197			
Approach Delay, s/veh	5.8			6.2	43.6			
Approach LOS	A			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		18.2		65.1				65.1
Change Period (Y+Rc), s		6.0		6.0				6.0
Max Green Setting (Gmax), s		19.0		69.0				69.0
Max Q Clear Time (g_c+l1), s		11.8		15.5				28.4
Green Ext Time (p_c), s		0.3		37.6				30.8
Intersection Summary								
HCM 2010 Ctrl Delay			8.5					
HCM 2010 LOS			A					

Notes

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary

1: S Main St SR9 & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	45	137	119	225	86	32	0	938	192	121	1479	27
Future Volume (veh/h)	45	137	119	225	86	32	0	938	192	121	1479	27
Number	1	6	16	5	2	12	7	4	14	3	8	18
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	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	49	149	129	245	93	35	0	1020	209	132	1608	29
Adj No. of Lanes	0	1	1	0	1	1	1	2	0	1	2	0
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	61	185	212	280	106	340	66	1424	291	161	1730	31
Arrive On Green	0.13	0.13	0.13	0.21	0.21	0.21	0.00	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	455	1385	1583	1303	495	1583	305	2928	599	452	3557	64
Grp Volume(v), veh/h	198	0	129	338	0	35	0	615	614	132	799	838
Grp Sat Flow(s),veh/h/ln	1840	0	1583	1798	0	1583	305	1770	1757	452	1770	1851
Q Serve(g_s), s	11.4	0.0	8.4	19.8	0.0	1.9	0.0	29.8	30.0	23.0	46.0	46.3
Cycle Q Clear(g_c), s	11.4	0.0	8.4	19.8	0.0	1.9	0.0	29.8	30.0	53.0	46.0	46.3
Prop In Lane	0.25		1.00	0.72		1.00	1.00		0.34	1.00		0.03
Lane Grp Cap(c), veh/h	246	0	212	386	0	340	66	861	855	161	861	901
V/C Ratio(X)	0.80	0.00	0.61	0.88	0.00	0.10	0.00	0.71	0.72	0.82	0.93	0.93
Avail Cap(c_a), veh/h	439	0	378	544	0	480	66	861	855	161	861	901
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(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	0.0	44.5	41.4	0.0	34.4	0.0	22.0	22.1	46.2	26.2	26.2
Incr Delay (d2), s/veh	6.1	0.0	2.8	11.2	0.0	0.1	0.0	2.8	2.9	27.0	16.0	15.8
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	6.2	0.0	3.8	11.1	0.0	0.9	0.0	15.2	15.2	5.2	26.2	27.5
LnGrp Delay(d),s/veh	51.9	0.0	47.3	52.5	0.0	34.5	0.0	24.9	25.0	73.1	42.2	42.1
LnGrp LOS	D		D	D		C		C	C	E	D	D
Approach Vol, veh/h		327			373			1229			1769	
Approach Delay, s/veh		50.1			50.8			24.9			44.4	
Approach LOS		D			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		29.4		59.0		20.6		59.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		33.0		53.0		26.0		53.0				
Max Q Clear Time (g_c+I1), s		21.8		32.0		13.4		55.0				
Green Ext Time (p_c), s		1.6		18.8		1.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			39.1									
HCM 2010 LOS			D									

HCM 2010 Roundabout
2: Roswell St & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Intersection Delay, s/veh 4.8

Intersection LOS A

Approach	NB	SB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	227	0	123
Demand Flow Rate, veh/h	0	232	0	125
Vehicles Circulating, veh/h	232	0	232	0
Vehicles Exiting, veh/h	0	125	0	232
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	5.1	0.0	4.2
Approach LOS	-	A	-	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	0	232	0	125
Cap Entry Lane, veh/h	896	1130	896	1130
Entry HV Adj Factor	1.000	0.978	1.000	0.984
Flow Entry, veh/h	0	227	0	123
Cap Entry, veh/h	896	1106	896	1112
V/C Ratio	0.000	0.205	0.000	0.111
Control Delay, s/veh	4.0	5.1	4.0	4.2
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	0

HCM 2010 TWSC
3: S Main St SR9 & Janis Ln

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 1.8

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	2	54	939	55	4	1634
Future Vol, veh/h	2	54	939	55	4	1634
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	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	2	59	1021	60	4	1776

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1918	510	0	0	1021	0
Stage 1	1021	-	-	-	-	-
Stage 2	897	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	59	509	-	-	675	-
Stage 1	309	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	33	509	-	-	675	-
Mov Cap-2 Maneuver	33	-	-	-	-	-
Stage 1	309	-	-	-	-	-
Stage 2	198	-	-	-	-	-

Approach	WB	NE	SW
HCM Control Delay, s	18.1	0	2.3
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	WBLn1	SWL	SWT
Capacity (veh/h)	-	-	336	675	-
HCM Lane V/C Ratio	-	-	0.181	0.006	-
HCM Control Delay (s)	-	-	18.1	10.4	2.3
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-

HCM 2010 Signalized Intersection Summary

4: S Main St SR9 & Rucker Rd/Old Milton Pkwy SR 120

Devore Rd at S Main St
Synchro 9 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1257	20	792	668	213	35	467	463	476	814	40
Future Volume (veh/h)	60	1257	20	792	668	213	35	467	463	476	814	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	65	1366	22	861	726	0	38	508	503	517	885	43
Adj No. of Lanes	1	3	0	2	2	1	1	2	1	2	2	0
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	83	1309	21	847	1604	717	51	572	646	529	985	48
Arrive On Green	0.05	0.25	0.25	0.25	0.45	0.00	0.03	0.16	0.16	0.15	0.29	0.29
Sat Flow, veh/h	1774	5155	83	3442	3539	1583	1774	3539	1583	3442	3436	167
Grp Volume(v), veh/h	65	898	490	861	726	0	38	508	503	517	456	472
Grp Sat Flow(s),veh/h/ln	1774	1695	1848	1721	1770	1583	1774	1770	1583	1721	1770	1833
Q Serve(g_s), s	4.7	33.0	33.0	32.0	18.3	0.0	2.8	18.3	21.0	19.4	32.2	32.2
Cycle Q Clear(g_c), s	4.7	33.0	33.0	32.0	18.3	0.0	2.8	18.3	21.0	19.4	32.2	32.2
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	83	861	469	847	1604	717	51	572	646	529	507	526
V/C Ratio(X)	0.78	1.04	1.04	1.02	0.45	0.00	0.75	0.89	0.78	0.98	0.90	0.90
Avail Cap(c_a), veh/h	136	861	469	847	1604	717	68	572	646	529	507	526
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(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.3	48.5	48.5	49.0	24.5	0.0	62.7	53.4	33.4	54.8	44.5	44.5
Incr Delay (d2), s/veh	14.5	42.7	53.4	35.1	0.2	0.0	25.9	15.8	6.1	33.0	18.7	18.2
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	2.6	20.5	23.8	19.3	9.0	0.0	1.7	10.2	16.7	11.7	18.3	18.9
LnGrp Delay(d),s/veh	75.8	91.2	101.9	84.1	24.7	0.0	88.5	69.1	39.5	87.8	63.3	62.8
LnGrp LOS	E	F	F	F	C		F	E	D	F	E	E
Approach Vol, veh/h		1453			1587			1049			1445	
Approach Delay, s/veh		94.1			56.9			55.6			71.9	
Approach LOS		F			E			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	27.0	38.0	39.0	9.7	43.3	12.1	64.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	20.0	21.0	32.0	33.0	5.0	36.0	10.0	55.0				
Max Q Clear Time (g_c+I1), s	21.4	23.0	34.0	35.0	4.8	34.2	6.7	20.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.5	0.0	20.0				

Intersection Summary

HCM 2010 Ctrl Delay 70.3
HCM 2010 LOS E

Notes

User approved changes to right turn type.

HCM 2010 TWSC
5: Karen Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 6.6

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Vol, veh/h	6	0	3	66	0	116	132	354	1	1	328	41
Future Vol, veh/h	6	0	3	66	0	116	132	354	1	1	328	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	3	72	0	126	143	385	1	1	357	45

Major/Minor	Minor1			Minor2			Major1			Major2		
Conflicting Flow All	1116	1075	385	1055	1054	379	401	0	0	386	0	0
Stage 1	672	672	-	381	381	-	-	-	-	-	-	-
Stage 2	444	403	-	674	673	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	185	220	663	204	226	668	1158	-	-	1172	-	-
Stage 1	445	454	-	641	613	-	-	-	-	-	-	-
Stage 2	593	600	-	444	454	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	132	185	663	178	190	668	1158	-	-	1172	-	-
Mov Cap-2 Maneuver	132	185	-	178	190	-	-	-	-	-	-	-
Stage 1	375	383	-	540	612	-	-	-	-	-	-	-
Stage 2	481	599	-	372	383	-	-	-	-	-	-	-

Approach	NB	SB	SE	NW
HCM Control Delay, s	26.1	30.3	2.3	0
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	NWR	SEL	SET	SER	SBLn1
Capacity (veh/h)	180	1172	-	-	1158	-	-	334
HCM Lane V/C Ratio	0.054	0.001	-	-	0.124	-	-	0.592
HCM Control Delay (s)	26.1	8.1	0	-	8.5	0	-	30.3
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0.4	-	-	3.6

HCM 2010 TWSC
6: Michael Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.5

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Vol, veh/h	6	0	5	7	0	8	1	418	2	5	307	0
Future Vol, veh/h	6	0	5	7	0	8	1	418	2	5	307	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	5	8	0	9	1	454	2	5	334	0

Major/Minor	Minor1			Minor2			Major1			Major2		
Conflicting Flow All	807	803	455	805	804	334	334	0	0	457	0	0
Stage 1	458	458	-	345	345	-	-	-	-	-	-	-
Stage 2	349	345	-	460	459	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	300	317	605	301	316	708	1225	-	-	1104	-	-
Stage 1	583	567	-	671	636	-	-	-	-	-	-	-
Stage 2	667	636	-	581	566	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	295	315	605	297	314	708	1225	-	-	1104	-	-
Mov Cap-2 Maneuver	295	315	-	297	314	-	-	-	-	-	-	-
Stage 1	582	566	-	670	632	-	-	-	-	-	-	-
Stage 2	655	632	-	575	565	-	-	-	-	-	-	-

Approach	NB	SB	SE	NW
HCM Control Delay, s	14.7	13.7	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	NWR	SEL	SET	SER	SBLn1
Capacity (veh/h)	385	1104	-	-	1225	-	-	430
HCM Lane V/C Ratio	0.031	0.005	-	-	0.001	-	-	0.038
HCM Control Delay (s)	14.7	8.3	0	-	7.9	0	-	13.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

HCM 2010 Signalized Intersection Summary 8: Haynes Bridge Rd & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	57	447	330	540	977	58
Future Volume (veh/h)	57	447	330	540	977	58
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1676	1676	1676	1676	1676	1676
Adj Flow Rate, veh/h	62	486	359	587	1062	63
Adj No. of Lanes	1	1	1	3	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	358	549	440	2868	1787	556
Arrive On Green	0.22	0.22	0.16	0.63	0.39	0.39
Sat Flow, veh/h	1597	1425	1597	4728	4728	1425
Grp Volume(v), veh/h	62	486	359	587	1062	63
Grp Sat Flow(s),veh/h/ln	1597	1425	1597	1526	1526	1425
Q Serve(g_s), s	2.5	18.0	9.9	4.4	14.8	2.3
Cycle Q Clear(g_c), s	2.5	18.0	9.9	4.4	14.8	2.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	358	549	440	2868	1787	556
V/C Ratio(X)	0.17	0.88	0.82	0.20	0.59	0.11
Avail Cap(c_a), veh/h	358	549	1116	5697	2677	834
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	23.0	14.1	6.4	19.4	15.6
Incr Delay (d2), s/veh	0.2	15.8	3.8	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	19.9	4.6	1.9	6.2	0.9
LnGrp Delay(d),s/veh	25.4	38.8	17.8	6.5	19.7	15.7
LnGrp LOS	C	D	B	A	B	B
Approach Vol, veh/h	548			946	1125	
Approach Delay, s/veh	37.3			10.8	19.5	
Approach LOS	D			B	B	
Timer	1	2	3	4	5	6
Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		56.3		24.0	19.0	37.4
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		100.0		18.0	47.0	47.0
Max Q Clear Time (g_c+l1), s		6.4		20.0	11.9	16.8
Green Ext Time (p_c), s		19.5		0.0	1.1	14.6
Intersection Summary						
HCM 2010 Ctrl Delay			20.1			
HCM 2010 LOS			C			

HCM 2010 TWSC
9: Devore Rd & East TH Dr

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.3

Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	7	8	1	425	354	2
Future Vol, veh/h	7	8	1	425	354	2
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	8	9	1	462	385	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	850	386	387	0	-	0
Stage 1	386	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	331	662	1171	-	-	-
Stage 1	687	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	331	662	1171	-	-	-
Mov Cap-2 Maneuver	331	-	-	-	-	-
Stage 1	687	-	-	-	-	-
Stage 2	632	-	-	-	-	-

Approach	SB	SE	NW
HCM Control Delay, s	13.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1
Capacity (veh/h)	-	-	1171	-	451
HCM Lane V/C Ratio	-	-	0.001	-	0.036
HCM Control Delay (s)	-	-	8.1	0	13.3
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0	-	0.1

HCM 2010 Signalized Intersection Summary

10: Maxwell Rd & S Main St SR9

Devore Rd at S Main St
Synchro 9 Report

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	966	12	164	1626	27	122		
Future Volume (veh/h)	966	12	164	1626	27	122		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1900		
Adj Flow Rate, veh/h	1050	13	178	1767	29	133		
Adj No. of Lanes	2	0	1	2	0	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	0	0		
Cap, veh/h	2738	34	421	2707	35	159		
Arrive On Green	0.76	0.76	0.76	0.76	0.12	0.12		
Sat Flow, veh/h	3673	44	529	3632	287	1318		
Grp Volume(v), veh/h	519	544	178	1767	163	0		
Grp Sat Flow(s),veh/h/ln	1770	1855	529	1770	1616	0		
Q Serve(g_s), s	10.2	10.2	17.7	24.6	10.3	0.0		
Cycle Q Clear(g_c), s	10.2	10.2	27.9	24.6	10.3	0.0		
Prop In Lane		0.02	1.00		0.18	0.82		
Lane Grp Cap(c), veh/h	1353	1419	421	2707	195	0		
V/C Ratio(X)	0.38	0.38	0.42	0.65	0.84	0.00		
Avail Cap(c_a), veh/h	1622	1700	502	3244	339	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	4.1	4.1	8.7	5.8	45.0	0.0		
Incr Delay (d2), s/veh	0.2	0.2	0.7	0.4	9.1	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.0	5.2	2.6	11.9	5.1	0.0		
LnGrp Delay(d),s/veh	4.3	4.3	9.4	6.1	54.1	0.0		
LnGrp LOS	A	A	A	A	D			
Approach Vol, veh/h	1063			1945	163			
Approach Delay, s/veh	4.3			6.4	54.1			
Approach LOS	A			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		18.6		86.1				86.1
Change Period (Y+Rc), s		6.0		6.0				6.0
Max Green Setting (Gmax), s		22.0		96.0				96.0
Max Q Clear Time (g_c+l1), s		12.3		12.2				29.9
Green Ext Time (p_c), s		0.3		59.6				50.2
Intersection Summary								
HCM 2010 Ctrl Delay			8.2					
HCM 2010 LOS			A					

Notes

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary

1: S Main St SR9 & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	36	115	83	173	240	96	2	1287	209	67	1142	25
Future Volume (veh/h)	36	115	83	173	240	96	2	1287	209	67	1142	25
Number	1	6	16	5	2	12	7	4	14	3	8	18
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	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	39	125	90	188	261	104	2	1399	227	73	1241	27
Adj No. of Lanes	0	1	1	0	1	1	1	2	0	1	2	0
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	49	156	176	190	264	393	148	1431	229	72	1658	36
Arrive On Green	0.11	0.11	0.11	0.25	0.25	0.25	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	438	1403	1583	764	1061	1583	435	3056	490	309	3542	77
Grp Volume(v), veh/h	164	0	90	449	0	104	2	803	823	73	620	648
Grp Sat Flow(s),veh/h/ln	1841	0	1583	1825	0	1583	435	1770	1776	309	1770	1849
Q Serve(g_s), s	9.1	0.0	5.6	25.7	0.0	5.5	0.4	46.2	48.1	0.9	30.0	30.0
Cycle Q Clear(g_c), s	9.1	0.0	5.6	25.7	0.0	5.5	30.4	46.2	48.1	49.0	30.0	30.0
Prop In Lane	0.24		1.00	0.42		1.00	1.00		0.28	1.00		0.04
Lane Grp Cap(c), veh/h	205	0	176	453	0	393	148	829	832	72	829	866
V/C Ratio(X)	0.80	0.00	0.51	0.99	0.00	0.26	0.01	0.97	0.99	1.02	0.75	0.75
Avail Cap(c_a), veh/h	299	0	257	453	0	393	148	829	832	72	829	866
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(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	0.0	43.8	39.2	0.0	31.6	35.2	27.1	27.6	52.3	22.8	22.8
Incr Delay (d2), s/veh	9.3	0.0	2.3	39.7	0.0	0.4	0.0	23.8	28.5	111.9	3.8	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	2.6	17.8	0.0	2.5	0.0	28.0	29.9	4.3	15.5	16.2
LnGrp Delay(d),s/veh	54.7	0.0	46.1	78.9	0.0	32.0	35.3	50.9	56.1	164.3	26.5	26.4
LnGrp LOS	D		D	E		C	D	D	E	F	C	C
Approach Vol, veh/h		254			553			1628			1341	
Approach Delay, s/veh		51.7			70.0			53.5			34.0	
Approach LOS		D			E			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.0		55.0		17.6		55.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		26.0		49.0		17.0		49.0				
Max Q Clear Time (g_c+I1), s		27.7		50.1		11.1		51.0				
Green Ext Time (p_c), s		0.0		0.0		0.5		0.0				

Intersection Summary

HCM 2010 Ctrl Delay 48.9
HCM 2010 LOS D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 2010 Roundabout
2: Roswell St & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Intersection Delay, s/veh 5.3

Intersection LOS A

Approach	NB	SB	SE	NW
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	191	0	290
Demand Flow Rate, veh/h	0	195	0	296
Vehicles Circulating, veh/h	195	0	195	0
Vehicles Exiting, veh/h	0	296	0	195
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	4.8	0.0	5.7
Approach LOS	-	A	-	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	0	195	0	296
Cap Entry Lane, veh/h	930	1130	930	1130
Entry HV Adj Factor	1.000	0.979	1.000	0.980
Flow Entry, veh/h	0	191	0	290
Cap Entry, veh/h	930	1107	930	1107
V/C Ratio	0.000	0.173	0.000	0.262
Control Delay, s/veh	3.9	4.8	3.9	5.7
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	1

HCM 2010 TWSC
3: S Main St SR9 & Janis Ln

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.6

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	2	57	1374	27	5	1168
Future Vol, veh/h	2	57	1374	27	5	1168
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	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	2	62	1493	29	5	1270

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2139	747	0	0	1493	0
Stage 1	1493	-	-	-	-	-
Stage 2	646	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	42	355	-	-	446	-
Stage 1	173	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	40	355	-	-	446	-
Mov Cap-2 Maneuver	40	-	-	-	-	-
Stage 1	173	-	-	-	-	-
Stage 2	466	-	-	-	-	-

Approach	WB	NE	SW
HCM Control Delay, s	21.6	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	WBLn1	SWL	SWT
Capacity (veh/h)	-	-	280	446	-
HCM Lane V/C Ratio	-	-	0.229	0.012	-
HCM Control Delay (s)	-	-	21.6	13.2	0.2
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0	-

HCM 2010 Signalized Intersection Summary

4: S Main St SR9 & Rucker Rd/Old Milton Pkwy SR 120

Devore Rd at S Main St
Synchro 9 Report

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	742	23	678	1341	432	132	742	557	296	463	64
Future Volume (veh/h)	114	742	23	678	1341	432	132	742	557	296	463	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	124	807	25	737	1458	0	143	807	605	322	503	70
Adj No. of Lanes	1	3	0	2	2	1	1	2	1	2	2	0
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	129	1194	37	816	1416	633	171	772	721	313	664	92
Arrive On Green	0.07	0.24	0.24	0.24	0.40	0.00	0.10	0.22	0.22	0.09	0.21	0.21
Sat Flow, veh/h	1774	5069	157	3442	3539	1583	1774	3539	1583	3442	3123	433
Grp Volume(v), veh/h	124	539	293	737	1458	0	143	807	605	322	284	289
Grp Sat Flow(s),veh/h/ln	1774	1695	1835	1721	1770	1583	1774	1770	1583	1721	1770	1786
Q Serve(g_s), s	7.7	15.9	16.0	22.9	44.0	0.0	8.7	24.0	24.0	10.0	16.6	16.7
Cycle Q Clear(g_c), s	7.7	15.9	16.0	22.9	44.0	0.0	8.7	24.0	24.0	10.0	16.6	16.7
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	129	799	432	816	1416	633	171	772	721	313	376	380
V/C Ratio(X)	0.96	0.68	0.68	0.90	1.03	0.00	0.83	1.05	0.84	1.03	0.76	0.76
Avail Cap(c_a), veh/h	129	799	432	907	1416	633	194	772	721	313	376	380
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(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	38.2	38.2	40.7	33.0	0.0	48.8	43.0	26.4	50.0	40.6	40.7
Incr Delay (d2), s/veh	67.0	2.3	4.2	11.5	31.9	0.0	23.8	44.8	8.7	58.6	8.5	8.7
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	6.2	7.7	8.6	12.1	27.7	0.0	5.4	16.5	17.9	7.3	9.0	9.2
LnGrp Delay(d),s/veh	117.9	40.5	42.4	52.2	64.9	0.0	72.6	87.8	35.1	108.6	49.1	49.4
LnGrp LOS	F	D	D	D	F		E	F	D	F	D	D
Approach Vol, veh/h		956			2195			1555			895	
Approach Delay, s/veh		51.1			60.6			65.9			70.6	
Approach LOS		D			E			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	30.0	32.1	31.9	16.6	29.4	14.0	50.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	10.0	24.0	29.0	23.0	12.0	22.0	8.0	44.0				
Max Q Clear Time (g_c+I1), s	12.0	26.0	24.9	18.0	10.7	18.7	9.7	46.0				
Green Ext Time (p_c), s	0.0	0.0	1.2	4.5	0.0	2.7	0.0	0.0				

Intersection Summary

HCM 2010 Ctrl Delay 62.1
HCM 2010 LOS E

Notes

User approved changes to right turn type.

HCM 2010 TWSC
5: Karen Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 4.7

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Vol, veh/h	5	0	3	39	0	104	85	400	11	7	540	47
Future Vol, veh/h	5	0	3	39	0	104	85	400	11	7	540	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	3	42	0	113	92	435	12	8	587	51

Major/Minor	Minor1			Minor2			Major1			Major2		
Conflicting Flow All	1310	1279	441	1255	1260	613	638	0	0	447	0	0
Stage 1	626	626	-	628	628	-	-	-	-	-	-	-
Stage 2	684	653	-	627	632	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	136	166	616	148	170	492	946	-	-	1113	-	-
Stage 1	472	477	-	471	476	-	-	-	-	-	-	-
Stage 2	439	464	-	471	474	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	94	143	616	131	146	492	946	-	-	1113	-	-
Mov Cap-2 Maneuver	94	143	-	131	146	-	-	-	-	-	-	-
Stage 1	411	415	-	410	471	-	-	-	-	-	-	-
Stage 2	334	459	-	408	412	-	-	-	-	-	-	-

Approach	NB	SB	SE	NW
HCM Control Delay, s	32.8	32.6	1.6	0.1
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	NWR	SEL	SET	SER	SBLn1
Capacity (veh/h)	138	1113	-	-	946	-	-	281
HCM Lane V/C Ratio	0.063	0.007	-	-	0.098	-	-	0.553
HCM Control Delay (s)	32.8	8.3	0	-	9.2	0	-	32.6
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0.3	-	-	3.1

HCM 2010 TWSC
6: Michael Dr & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.4

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Vol, veh/h	4	0	1	2	0	5	9	425	6	4	531	0
Future Vol, veh/h	4	0	1	2	0	5	9	425	6	4	531	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	1	2	0	5	10	462	7	4	577	0

Major/Minor	Minor1			Minor2			Major1			Major2		
Conflicting Flow All	1074	1071	465	1071	1074	577	577	0	0	468	0	0
Stage 1	485	485	-	586	586	-	-	-	-	-	-	-
Stage 2	589	586	-	485	488	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	198	221	597	198	220	516	996	-	-	1094	-	-
Stage 1	563	552	-	496	497	-	-	-	-	-	-	-
Stage 2	494	497	-	563	550	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	193	217	597	195	216	516	996	-	-	1094	-	-
Mov Cap-2 Maneuver	193	217	-	195	216	-	-	-	-	-	-	-
Stage 1	555	544	-	489	495	-	-	-	-	-	-	-
Stage 2	486	495	-	554	542	-	-	-	-	-	-	-

Approach	NB	SB	SE	NW
HCM Control Delay, s	21.5	15.5	0.2	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	NWR	SEL	SET	SER	SBLn1
Capacity (veh/h)	223	1094	-	-	996	-	-	351
HCM Lane V/C Ratio	0.024	0.004	-	-	0.01	-	-	0.022
HCM Control Delay (s)	21.5	8.3	0	-	8.7	0	-	15.5
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

HCM 2010 Signalized Intersection Summary

8: Haynes Bridge Rd & Devore Rd

Devore Rd at S Main St
Synchro 9 Report

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	88	375	540	1321	696	83
Future Volume (veh/h)	88	375	540	1321	696	83
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1676	1676	1676	1676	1676	1676
Adj Flow Rate, veh/h	96	408	587	1436	757	90
Adj No. of Lanes	1	1	1	3	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	342	727	635	2942	1261	393
Arrive On Green	0.21	0.21	0.30	0.64	0.28	0.28
Sat Flow, veh/h	1597	1425	1597	4728	4728	1425
Grp Volume(v), veh/h	96	408	587	1436	757	90
Grp Sat Flow(s),veh/h/ln	1597	1425	1597	1526	1526	1425
Q Serve(g_s), s	4.2	16.5	20.9	13.7	12.1	4.1
Cycle Q Clear(g_c), s	4.2	16.5	20.9	13.7	12.1	4.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	342	727	635	2942	1261	393
V/C Ratio(X)	0.28	0.56	0.92	0.49	0.60	0.23
Avail Cap(c_a), veh/h	342	727	1094	4360	1362	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	14.1	15.1	7.8	26.4	23.5
Incr Delay (d2), s/veh	0.4	1.0	7.7	0.1	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	14.3	14.2	5.8	5.1	1.6
LnGrp Delay(d),s/veh	28.0	15.1	22.9	7.9	27.1	23.8
LnGrp LOS	C	B	C	A	C	C
Approach Vol, veh/h	504			2023	847	
Approach Delay, s/veh	17.6			12.3	26.7	
Approach LOS	B			B	C	
Timer	1	2	3	4	5	6
Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		60.0		24.0	30.8	29.1
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		80.0		18.0	49.0	25.0
Max Q Clear Time (g_c+l1), s		15.7		18.5	22.9	14.1
Green Ext Time (p_c), s		30.8		0.0	2.0	9.1
Intersection Summary						
HCM 2010 Ctrl Delay			16.7			
HCM 2010 LOS			B			

HCM 2010 TWSC
9: Devore Rd & East TH Dr

Devore Rd at S Main St
Synchro 9 Report

Intersection

Int Delay, s/veh 0.2

Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	2	5	9	419	588	5
Future Vol, veh/h	2	5	9	419	588	5
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	2	5	10	455	639	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1117	642	645	0	-	0
Stage 1	642	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	229	474	940	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	226	474	940	-	-	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	617	-	-	-	-	-

Approach	SB	SE	NW
HCM Control Delay, s	15.2	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1
Capacity (veh/h)	-	-	940	-	361
HCM Lane V/C Ratio	-	-	0.01	-	0.021
HCM Control Delay (s)	-	-	8.9	0	15.2
HCM Lane LOS	-	-	A	A	C
HCM 95th %tile Q(veh)	-	-	0	-	0.1

HCM 2010 Signalized Intersection Summary 10: Maxwell Rd & S Main St SR9

Devore Rd at S Main St
Synchro 9 Report

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	1329	5	106	1230	39	155		
Future Volume (veh/h)	1329	5	106	1230	39	155		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1900		
Adj Flow Rate, veh/h	1445	5	115	1337	42	168		
Adj No. of Lanes	2	0	1	2	0	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	0	0		
Cap, veh/h	2241	8	262	2193	54	216		
Arrive On Green	0.62	0.62	0.62	0.62	0.17	0.17		
Sat Flow, veh/h	3711	13	366	3632	322	1289		
Grp Volume(v), veh/h	707	743	115	1337	211	0		
Grp Sat Flow(s),veh/h/ln	1770	1861	366	1770	1619	0		
Q Serve(g_s), s	14.3	14.3	16.4	13.0	7.0	0.0		
Cycle Q Clear(g_c), s	14.3	14.3	30.7	13.0	7.0	0.0		
Prop In Lane		0.01	1.00		0.20	0.80		
Lane Grp Cap(c), veh/h	1096	1153	262	2193	271	0		
V/C Ratio(X)	0.64	0.64	0.44	0.61	0.78	0.00		
Avail Cap(c_a), veh/h	1099	1155	262	2197	517	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	6.8	6.8	16.5	6.6	22.5	0.0		
Incr Delay (d2), s/veh	1.3	1.2	1.2	0.5	4.8	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7.3	7.6	1.7	6.3	3.5	0.0		
LnGrp Delay(d),s/veh	8.1	8.0	17.7	7.0	27.2	0.0		
LnGrp LOS	A	A	B	A	C			
Approach Vol, veh/h	1450			1452	211			
Approach Delay, s/veh	8.1			7.9	27.2			
Approach LOS	A			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		15.4		40.9				40.9
Change Period (Y+Rc), s		6.0		6.0				6.0
Max Green Setting (Gmax), s		18.0		35.0				35.0
Max Q Clear Time (g_c+l1), s		9.0		16.3				32.7
Green Ext Time (p_c), s		0.4		16.9				2.3
Intersection Summary								
HCM 2010 Ctrl Delay			9.3					
HCM 2010 LOS			A					

Notes

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary

1: S Main St SR9 & Devore Rd

11/01/2016

								
Movement	NWL	NWR	NET	NER	SWL	SWT		
Lane Configurations								
Traffic Volume (veh/h)	225	32	938	192	121	1479		
Future Volume (veh/h)	225	32	938	192	121	1479		
Number	7	14	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863		
Adj Flow Rate, veh/h	245	35	1020	209	132	1608		
Adj No. of Lanes	1	1	2	0	0	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	273	244	2238	457	155	1946		
Arrive On Green	0.15	0.15	0.76	0.76	0.76	0.76		
Sat Flow, veh/h	1774	1583	3021	599	166	2631		
Grp Volume(v), veh/h	245	35	615	614	826	914		
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1757	1102	1610		
Q Serve(g_s), s	19.9	2.8	18.4	18.5	87.8	45.3		
Cycle Q Clear(g_c), s	19.9	2.8	18.4	18.5	106.4	45.3		
Prop In Lane	1.00	1.00		0.34	0.16			
Lane Grp Cap(c), veh/h	273	244	1352	1343	870	1231		
V/C Ratio(X)	0.90	0.14	0.46	0.46	0.95	0.74		
Avail Cap(c_a), veh/h	436	389	1354	1344	871	1232		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	60.8	53.6	6.2	6.3	21.9	9.4		
Incr Delay (d2), s/veh	13.9	0.3	0.2	0.2	19.3	2.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	10.8	1.2	9.0	9.0	36.6	20.6		
LnGrp Delay(d),s/veh	74.7	53.9	6.5	6.5	41.2	11.9		
LnGrp LOS	E	D	A	A	D	B		
Approach Vol, veh/h	280		1229			1740		
Approach Delay, s/veh	72.1		6.5			25.8		
Approach LOS	E		A			C		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		117.9		28.5		117.9		
Change Period (Y+Rc), s		6.0		6.0		6.0		
Max Green Setting (Gmax), s		112.0		36.0		112.0		
Max Q Clear Time (g_c+I1), s		20.5		21.9		108.4		
Green Ext Time (p_c), s		63.9		0.7		3.5		
Intersection Summary								
HCM 2010 Ctrl Delay			22.5					
HCM 2010 LOS			C					
Notes								
User approved pedestrian interval to be less than phase max green.								

HCM 2010 Signalized Intersection Summary

1: S Main St SR9 & Devore Rd

11/01/2016

								
Movement	NWL	NWR	NET	NER	SWL	SWT		
Lane Configurations								
Traffic Volume (veh/h)	225	32	938	192	121	1479		
Future Volume (veh/h)	225	32	938	192	121	1479		
Number	7	14	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	245	35	1020	209	132	1608		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	285	254	1837	375	340	2578		
Arrive On Green	0.16	0.16	0.63	0.63	0.05	0.73		
Sat Flow, veh/h	1774	1583	3021	599	1774	3632		
Grp Volume(v), veh/h	245	35	615	614	132	1608		
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1757	1774	1770		
Q Serve(g_s), s	14.5	2.0	21.4	21.6	2.7	24.4		
Cycle Q Clear(g_c), s	14.5	2.0	21.4	21.6	2.7	24.4		
Prop In Lane	1.00	1.00		0.34	1.00			
Lane Grp Cap(c), veh/h	285	254	1110	1102	340	2578		
V/C Ratio(X)	0.86	0.14	0.55	0.56	0.39	0.62		
Avail Cap(c_a), veh/h	658	587	1427	1417	506	3543		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	44.1	38.9	11.5	11.5	9.2	7.3		
Incr Delay (d2), s/veh	7.6	0.2	0.4	0.4	0.7	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7.7	0.9	10.6	10.5	1.4	11.9		
LnGrp Delay(d),s/veh	51.7	39.1	11.9	12.0	9.9	7.5		
LnGrp LOS	D	D	B	B	A	A		
Approach Vol, veh/h	280		1229			1740		
Approach Delay, s/veh	50.1		11.9			7.7		
Approach LOS	D		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.9	73.7		23.3		84.6		
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		
Max Green Setting (Gmax), s	15.0	87.0		40.0		108.0		
Max Q Clear Time (g_c+l1), s	4.7	23.6		16.5		26.4		
Green Ext Time (p_c), s	0.2	44.1		0.8		51.9		
Intersection Summary								
HCM 2010 Ctrl Delay			13.0					
HCM 2010 LOS			B					
Notes								
User approved pedestrian interval to be less than phase max green.								

Queues

1: S Main St SR9 & Devore Rd

11/01/2016

					
Lane Group	NWL	NWR	NET	SWL	SWT
Lane Group Flow (vph)	245	35	1229	132	1608
v/c Ratio	0.64	0.10	0.74	0.47	0.71
Control Delay	42.6	11.8	22.0	13.0	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	11.8	22.0	13.0	12.7
Queue Length 50th (ft)	122	0	267	24	265
Queue Length 95th (ft)	257	27	441	65	457
Internal Link Dist (ft)	760		305		227
Turn Bay Length (ft)		150		235	
Base Capacity (vph)	831	762	3173	405	3464
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.05	0.39	0.33	0.46
Intersection Summary					

HCM 2010 Signalized Intersection Summary

1: S Main St SR9 & Devore Rd

11/01/2016

								
Movement	NWL	NWR	NET	NER	SWL	SWT		
Lane Configurations								
Traffic Volume (veh/h)	173	96	1287	151	66	1142		
Future Volume (veh/h)	173	96	1287	151	66	1142		
Number	7	14	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863		
Adj Flow Rate, veh/h	188	104	1399	164	72	1241		
Adj No. of Lanes	1	1	2	0	0	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	230	205	2430	283	119	2073		
Arrive On Green	0.13	0.13	0.76	0.76	0.76	0.76		
Sat Flow, veh/h	1774	1583	3288	372	108	2810		
Grp Volume(v), veh/h	188	104	770	793	599	714		
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1797	1223	1610		
Q Serve(g_s), s	11.2	6.7	20.1	20.6	6.1	20.8		
Cycle Q Clear(g_c), s	11.2	6.7	20.1	20.6	26.7	20.8		
Prop In Lane	1.00	1.00		0.21	0.12			
Lane Grp Cap(c), veh/h	230	205	1346	1367	967	1225		
V/C Ratio(X)	0.82	0.51	0.57	0.58	0.62	0.58		
Avail Cap(c_a), veh/h	635	567	1771	1798	1253	1611		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	46.2	44.2	5.5	5.6	4.9	5.6		
Incr Delay (d2), s/veh	7.1	1.9	0.4	0.4	0.7	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.0	3.0	9.8	10.1	6.3	9.3		
LnGrp Delay(d),s/veh	53.2	46.1	5.9	6.0	5.6	6.1		
LnGrp LOS	D	D	A	A	A	A		
Approach Vol, veh/h	292		1563			1313		
Approach Delay, s/veh	50.7		6.0			5.8		
Approach LOS	D		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		88.8		20.1		88.8		
Change Period (Y+Rc), s		6.0		6.0		6.0		
Max Green Setting (Gmax), s		109.0		39.0		109.0		
Max Q Clear Time (g_c+l1), s		22.6		13.2		28.7		
Green Ext Time (p_c), s		56.8		0.9		54.2		
Intersection Summary								
HCM 2010 Ctrl Delay			10.0					
HCM 2010 LOS			B					
Notes								
User approved pedestrian interval to be less than phase max green.								

HCM 2010 Signalized Intersection Summary

1: S Main St SR9 & Devore Rd

11/01/2016

								
Movement	NWL	NWR	NET	NER	SWL	SWT		
Lane Configurations								
Traffic Volume (veh/h)	173	96	1287	151	66	1142		
Future Volume (veh/h)	173	96	1287	151	66	1142		
Number	7	14	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	188	104	1399	164	72	1241		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	228	204	2130	248	270	2696		
Arrive On Green	0.13	0.13	0.67	0.67	0.04	0.76		
Sat Flow, veh/h	1774	1583	3288	372	1774	3632		
Grp Volume(v), veh/h	188	104	770	793	72	1241		
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1797	1774	1770		
Q Serve(g_s), s	11.3	6.7	28.2	28.8	1.3	14.1		
Cycle Q Clear(g_c), s	11.3	6.7	28.2	28.8	1.3	14.1		
Prop In Lane	1.00	1.00		0.21	1.00			
Lane Grp Cap(c), veh/h	228	204	1180	1198	270	2696		
V/C Ratio(X)	0.82	0.51	0.65	0.66	0.27	0.46		
Avail Cap(c_a), veh/h	502	448	1485	1508	344	3454		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	46.5	44.5	10.8	10.9	9.9	4.8		
Incr Delay (d2), s/veh	7.3	2.0	0.7	0.7	0.5	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.0	3.1	13.9	14.3	0.8	6.8		
LnGrp Delay(d),s/veh	53.8	46.5	11.5	11.6	10.4	4.9		
LnGrp LOS	D	D	B	B	B	A		
Approach Vol, veh/h	292		1563			1313		
Approach Delay, s/veh	51.2		11.6			5.2		
Approach LOS	D		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.4	79.1		20.1		89.5		
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		
Max Green Setting (Gmax), s	9.0	92.0		31.0		107.0		
Max Q Clear Time (g_c+l1), s	3.3	30.8		13.3		16.1		
Green Ext Time (p_c), s	0.1	42.2		0.8		53.9		
Intersection Summary								
HCM 2010 Ctrl Delay			12.6					
HCM 2010 LOS			B					
Notes								
User approved pedestrian interval to be less than phase max green.								

Queues

1: S Main St SR9 & Devore Rd

11/01/2016

					
Lane Group	NWL	NWR	NET	SWL	SWT
Lane Group Flow (vph)	188	104	1563	72	1241
v/c Ratio	0.61	0.29	0.75	0.33	0.50
Control Delay	50.2	10.8	18.4	9.1	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	50.2	10.8	18.4	9.1	7.8
Queue Length 50th (ft)	108	0	362	12	157
Queue Length 95th (ft)	232	50	571	32	271
Internal Link Dist (ft)	760		305		227
Turn Bay Length (ft)		150		235	
Base Capacity (vph)	600	605	3112	258	3366
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.17	0.50	0.28	0.37
Intersection Summary					

CITY OF ALPHARETTA

DOWNTOWN MASTER PLAN



Kimley»Horn

TRAFFIC EVALUATION

June 2015

Introduction

The Alpharetta Downtown Master Plan was developed in the fall of 2014 and winter of 2015 to provide an updated vision and refined concepts, policies, and implementation strategies to foster appropriate growth and enhancement of the City's historic center. The planning effort included an inventory and assessment of existing conditions; facilitation of a community-based vision for future growth and development; development of land use, economic, and transportation strategies to foster responsible, dynamic growth; and a capital improvements plan and updated zoning regulations to implement the community vision.

The master plan vision calls for more dynamic, mixed-use development in the Downtown area, particularly within the Downtown Core and the South Main Street corridor, and has resulted in proposed zoning regulations that provide greater flexibility and intensity by right. ***This traffic evaluation was conducted to gauge the potential traffic impact of likely redevelopment areas based on the Master Plan vision and the proposed zoning code.*** The traffic evaluation provides several layers of information:

- It provides a baseline assessment of daily traffic conditions on roadways in and around the Alpharetta Downtown (Existing Condition).
- It includes an evaluation of future traffic conditions given two recently approved developments and regional growth that will travel along roadways in the Downtown without additional future development in the study area (No-Build Condition).
- It documents the number of vehicular trips that could be generated within the Downtown Master Plan area over the next 15 years and the impact those trips will have on the existing and proposed roadways (Build Condition).

This report summarizes the methodology and assumptions used as well as the results of the analysis.

Link Level Capacity Analysis of Roadways

A planning-level analysis was conducted to determine the daily capacity of roadways within the Downtown Master Plan and surrounding areas using the Georgia Regional Transportation Authority's (GRTA) Level-of-Service tables for DRI analysis.

Capacity is the volume of vehicles that generally can be accommodated on a roadway based on multiple factors. Each of the roadways was inventoried based on the following characteristics:

- **State Route:** different capacities apply to State Routes and Non-State Routes
- **Number of lanes:** more lanes increase capacity
- **Signals per mile:** more signals generally reduce capacity
- **Medians:** medians increase capacity by reducing the frequency of left turns along a corridor
- **Left-turn lanes:** left-turn lanes increase capacity by removing turning vehicles from the main travel lanes

Using the factors above, a capacity was calculated for each roadway segment in the network in each direction of travel. **Figure 1** shows a map of the inventory including the number of lanes, presence of medians and left-turn lanes, and locations of traffic signals.

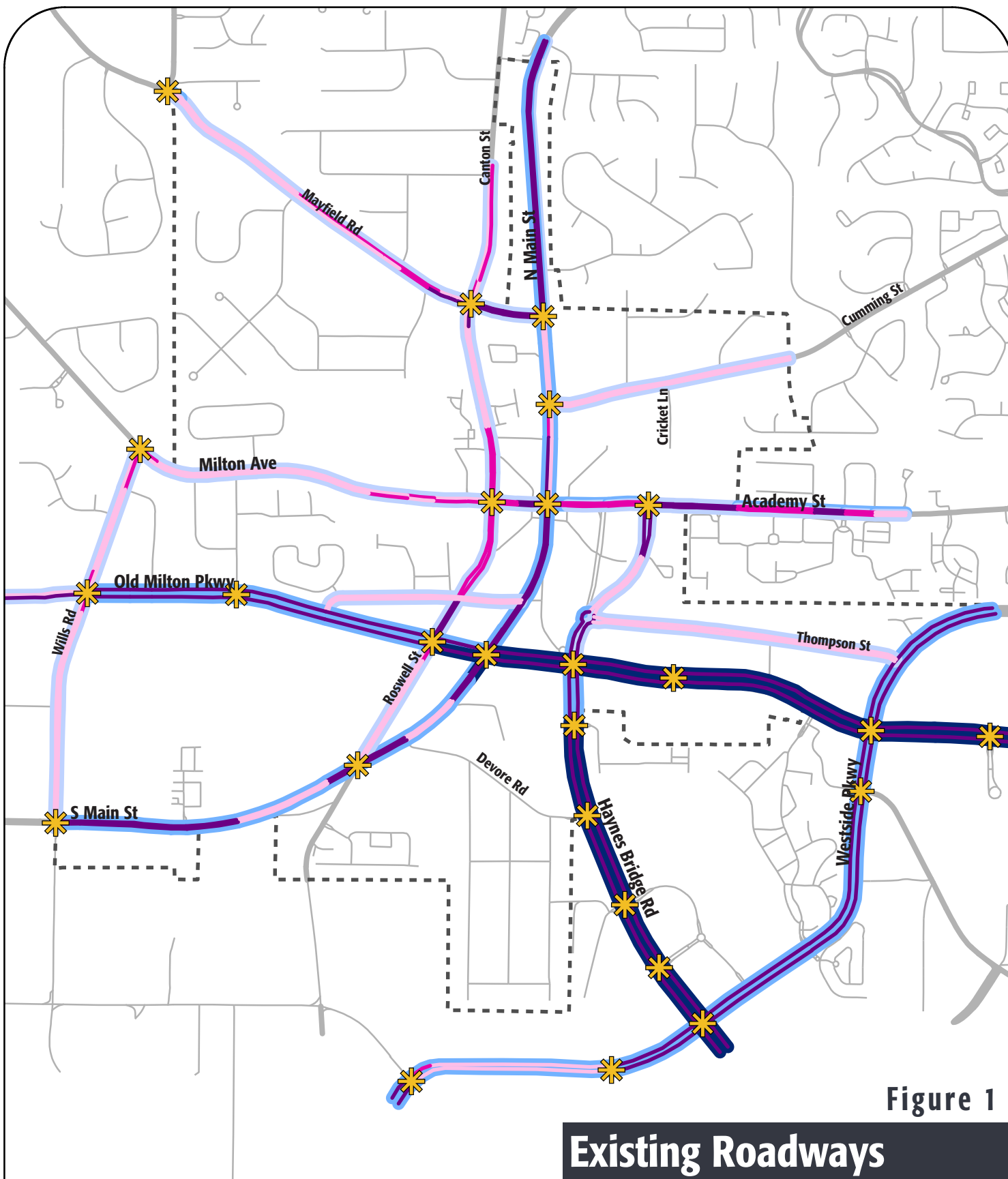


Figure 1

Existing Roadways

- 2 Lanes
 No Median/No Left-Turn Lane
- 4 Lanes
 No Median/Left-Turn Lane
- 6 Lanes
 Median/Left-Turn Lane
- Study Area
 Traffic Signals

The future No-Build and Build Conditions include current and planned improvements to SR 9 that are not reflected in this diagram.

Existing Condition

Daily traffic count data was collected along each roadway (by travel direction). Most of the counts were conducted specifically for this study in May 2015 while others were selected from recent nearby traffic studies, from counts conducted by the City of Alpharetta, and from annual counts conducted by the Georgia Department of Transportation (GDOT).

Existing volumes on the roadways were compared with the capacities discussed in the previous section to determine a segment Level-of-Service (LOS) in each direction. Levels-of-Service range from LOS A to F where LOS A represents free-flow conditions and LOS F is over-capacity. The Levels-of-Service quoted in this document pertain to the entire day and not to peak hours or peak periods. LOS D is considered by agencies within the State of Georgia as an acceptable Level-of-Service. Additionally, for the type of multi-modal downtown environment envisioned for Downtown Alpharetta, it is expected that many streets will function at Level-of-Service C and D. Level-of-Service A and B in a walkable, downtown area is neither desirable, nor likely attainable.

The majority of roadways within the study area are currently operating at LOS C or D across the day. Roadway segments that are LOS D include much of SR 9 (North and South Main Street), Milton Avenue, Canton Street, and most of Old Milton Parkway. Segments of LOS F include parts of SR 9 (North and South Main Street), Mayfield Road, Morrison Parkway between Haynes Bridge Road and Hembree Road, and the portion of Rucker Road/Old Milton Parkway to the west of Wills Road that is only one lane in each direction. **Figure 2** shows the Existing Levels-of-Service within the study area.

No-Build Condition

The No-Build Condition considers that traffic in the study area likely will increase, even without any additional trips generated from within the Downtown area. In addition to recently approved developments at City Center and Old Milton Parkway at Westside Parkway, development will occur in surrounding cities as well as other counties like Forsyth, Cherokee, Cobb, and Gwinnett that will impact roadways within Downtown Alpharetta. Additionally, other developments are both proposed and being constructed within Alpharetta and will create some additional traffic on study area network roadways.

The No-Build Condition was created by growing the volumes from the Existing Condition as follows:

- One percent (1%) per year for the first five years
- One half percent (0.5%) per year for the next 10 years

These two percentage increases equate to a growth rate of 10.5% across the 15-year-period.

One roadway improvement will be completed by the No-Build Condition. Within the 15-year timeframe improvements are planned on SR 9 from upper Hembree to north of the Downtown area. The project will add a landscaped median and left-turn lanes throughout the corridor, which will improve traffic operations by limiting turning movements and by removing left-turn traffic from the travel lanes.

With the background growth and that of the two recently approved developments applied to existing volumes, many of the roadways decline in Level-of-Service. Some segments of SR 9, Old Milton Parkway, Mayfield Road, Haynes Bridge Road, and Morrison Parkway that were previously LOS D become LOS E in the No-Build Condition. Portions of Milton Avenue, Canton Street, Wills Road, Old Milton Parkway, Westside Parkway, and Haynes Bridge Road that were previously LOS C become LOS D with 15 years of background growth. One segment of SR 9 changes from LOS D to LOS F. **Figure 3** shows the No-Build Levels-of-Service within the study area.

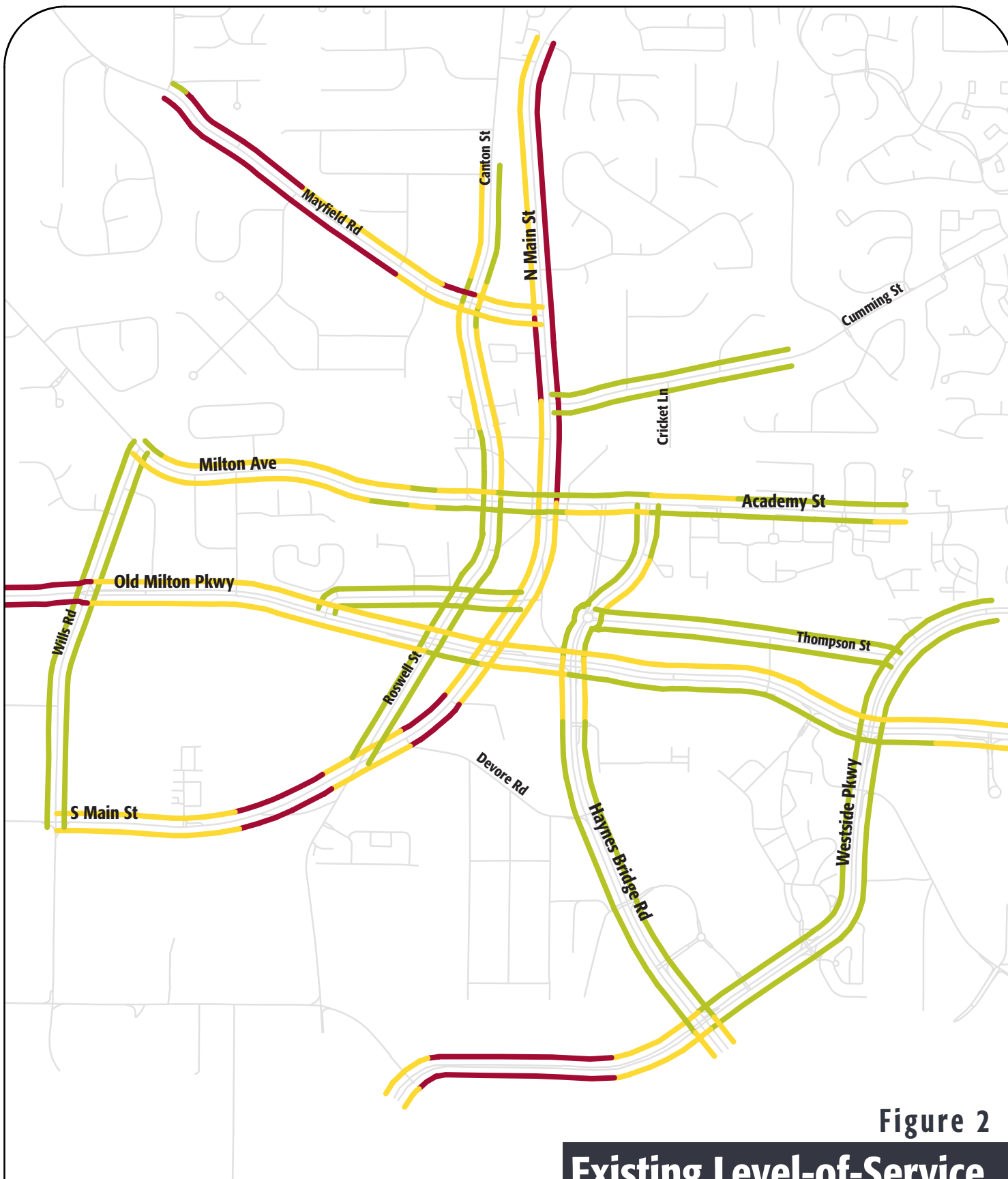


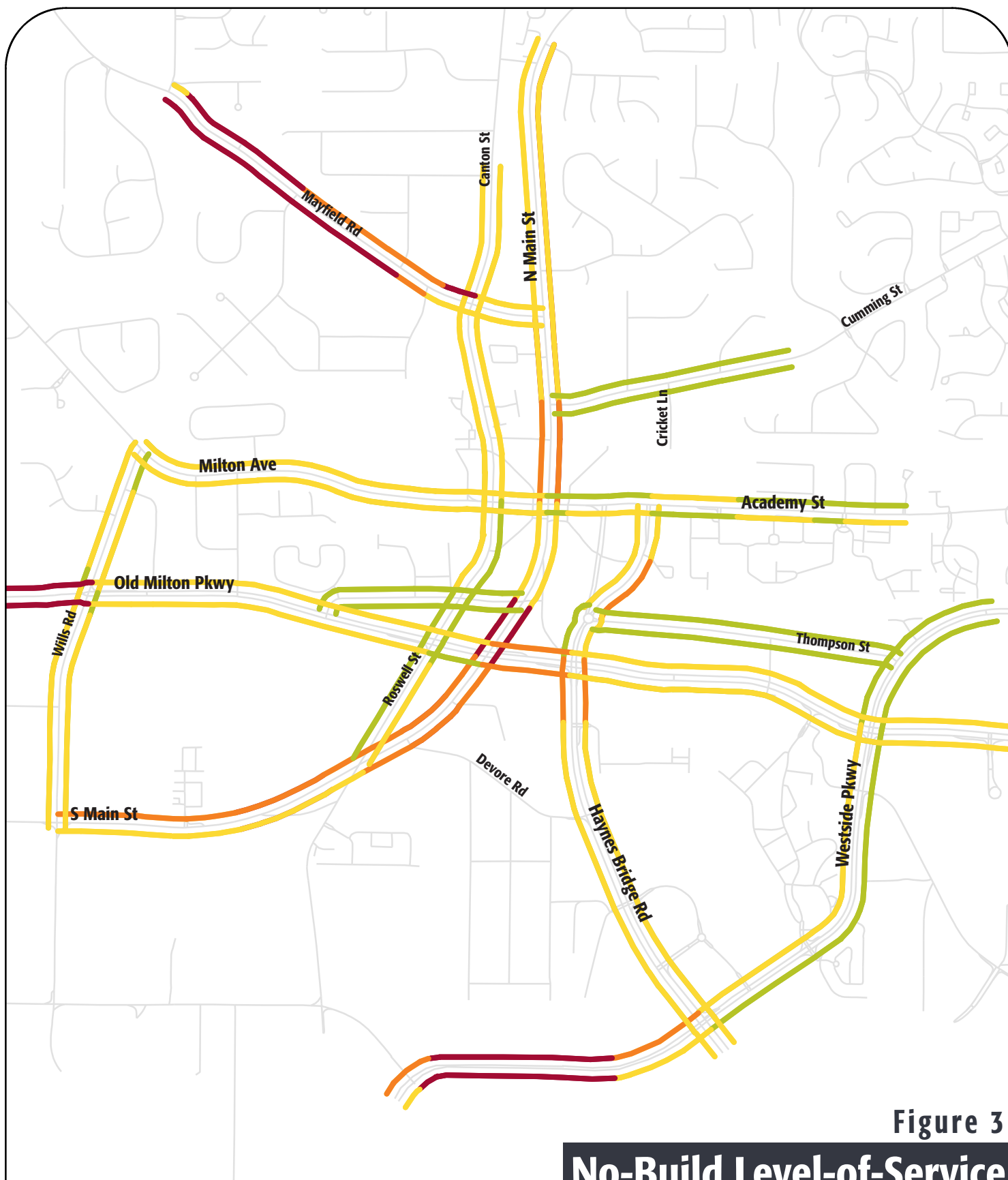
Figure 2

Existing Level-of-Service

- | | |
|---------|-----|
| — A/B** | — E |
| — C | — F |
| — D | |

**Not considered attainable

This diagram does not reflect the planned improvements to SR 9.



This diagram reflects the planned improvements to SR 9.

Downtown Master Plan Development and Trip Generation

Downtown Master Plan Land Uses and Intensities

Projected development quantities within the Downtown Master Plan area were calculated based upon the Master Plan's susceptibility to change analysis and the proposed zoning code. In each Downtown District, the Planning Team reviewed the susceptibility to change analysis from October 2014. This analysis was updated based on the best, current information available including recent development proposals.

Potential development quantities were then calculated for each district based on the proposed Downtown Zoning Code. Each proposed district in the proposed code allows a different mix of uses. The "Downtown Core" and "Downtown Mixed-Use" districts encourage a complete mix of retail, restaurant, office and residential uses, while the "Downtown Live Work" district limits development to office and residential and the "Downtown Residential" district is limited to only residential development. Within each district an average floor area ratio was developed based on the desired character as determined by the Master Plan. Additionally, maximum lot coverages and the maximum residential density listed in the proposed zoning code was utilized. In the Downtown Core, the proposed zoning code has no maximum residential density, so 30 units/acre was utilized based upon the highest intensity residential developments that have been approved within Alpharetta's Downtown Core.

The projected development mix was reviewed and compared with the Master Plan's 5-year market demand analysis. Based on this analysis, the level of projected development is likely to exceed 15-year market demand. For the purposes of evaluating traffic impact in a very aggressive scenario, the traffic evaluation assumes the full amount of projected redevelopment will occur within the next 15 years.

Over time, redevelopment of operational properties will remove some level of traffic from the system. For the purposes of this analysis only two developments were removed from current trip generation (the Amana Academy on South Main Street and the Main Street Commons office park on North Main Street). This is not to suggest that those properties will or must redevelop. However, these properties represent two significant traffic generators that would need to be discounted if those properties were redeveloped as shown in the susceptibility to change analysis. Other smaller developments were not removed from the analysis even though the trips from these areas would not be present on the future roadway network if those properties were redeveloped. Not discounting those trips builds an additional layer of conservatism into the analysis.

Finally, the downtown area was broken into 10 geographic development pods based on their location and projected development mix. **Table 1** shows the land use types and intensities broken down by pod, and **Figure 4** shows the spatial location of pods within the study area.

Table 1 – Projected Master Plan Land Uses and Intensities by Pod

LAND USE	C	MU-1	MU-2	MU-3	MU-4	LW-1	LW-2	R-1	R-2	R-3	R-4	TOTAL
Residential	277	236	13	8	29	161	19	8	58	49	94	952 Units
Office	160,838	102,980	13,231	0	12,753	36,500	4,265	0	0	0	0	330,567 SF
Retail	60,314	90,107	0	3,738	11,159	0	0	0	0	0	0	165,318 SF
Restaurant	20,105	12,872	0	0	1,594	0	0	0	0	0	0	34,571 SF
Removed		School			Office							

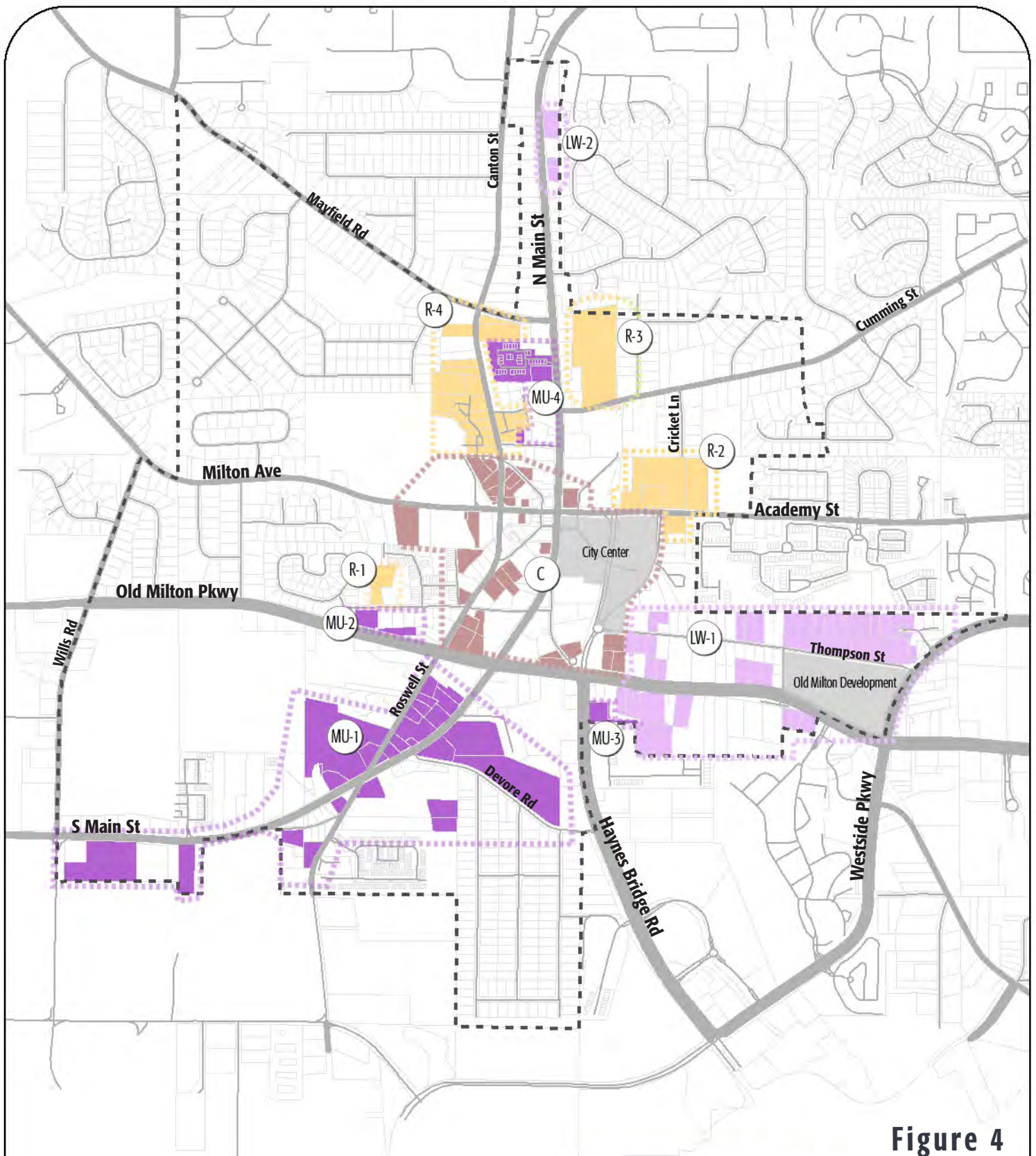


Figure 4

Land Use Pods

- | | |
|--|--|
| Downtown Core (C) | Downtown Live Work (LW) |
| Downtown Mixed Use (MU) | Downtown Residential (R) |
| Recently Approved Developments | Study Area |

CITY OF ALPHARETTA DOWNTOWN MASTER PLAN TRAFFIC EVALUATION

Downtown Master Plan Trip Generation

Trip generation was developed using equations contained in the Institute of Transportation Engineers' (ITE) Trip Generation Manual, Ninth Edition, 2012. Four primary uses were considered including residential (single family, apartment, townhouse/condo), office, retail, and restaurant along with the two land uses assumed to be redeveloped (school and office). The trip generation was conducted separately for each of the ten pods, and the gross trip generation is shown in **Table 2**.

Table 2 – Trip Generation by Land Use Type and Pod

LAND USE CODE	CATEGORY	Pods											TOTAL
		C	MU-1	MU-2	MU-3	MU-4	LW-1	LW-2	R-1	R-2	R-3	R-4	
220	Apartment		1,554										1,554
230	Residential Condominium/ Townhouse	1,561		109	71	219	973	152	71	400	346	610	4,512
710	General Office Building	1,884	1,342	282	802	274	610	119					5,313
820	Shopping Center	4,889	6,346			1,633							12,868
932	High-Turnover (Sit-Down) Restaurant	2,556	1,637			203							4,396
522	Middle School/Junior High School (Removal)		-1,134										-1,134
710	General Office Building (Removal)					-716							-716
Total Trip Generation		10,890	9,745	391	873	1,613	1,583	271	71	400	346	610	26,793

An important focus of the Master Plan was the incorporation of more residential development into the downtown area. The mix of uses created by the Master Plan provides an important synergy that reduces the need for as many vehicular trips. For example, residents and employees of the downtown area can easily frequent retail and restaurants nearby without having to get into a car. Additionally, some employees may choose to live close to their office in the downtown, thus reducing their commute times and the need to use their car. According to ITE, when considered as an entire development, the internal capture reduction for the development could be as high as 45% over the course of a day. Since not all trips would be easily walkable or bikeable, the Planning Team assumed a 25% reduction in gross trips due to internal capture.

To remain conservative, two additional types of trip reductions were not assumed in the analysis; however, it is expected that these types of trip reductions will occur in the actual development. Reductions typically are applied for those who walk, bike, or take transit from outside the development (known as mode reductions). It is likely that others who currently live or work nearby will walk to some of the new development, potentially reducing the number of daily or weekly trips by vehicle. Pass-by reductions normally are taken for retail uses where drivers who are already passing by the site stop at the development. Some of the retail uses may attract those passing by, but to remain conservative, those reductions also were not utilized in this analysis. The net trips (gross trips minus the 25% internal capture reduction) projected to be generated by downtown development over the next 15 years total 20,095 trips daily.

CITY OF ALPHARETTA DOWNTOWN MASTER PLAN TRAFFIC EVALUATION

Trip Generation in Comparison to the Previous Zoning

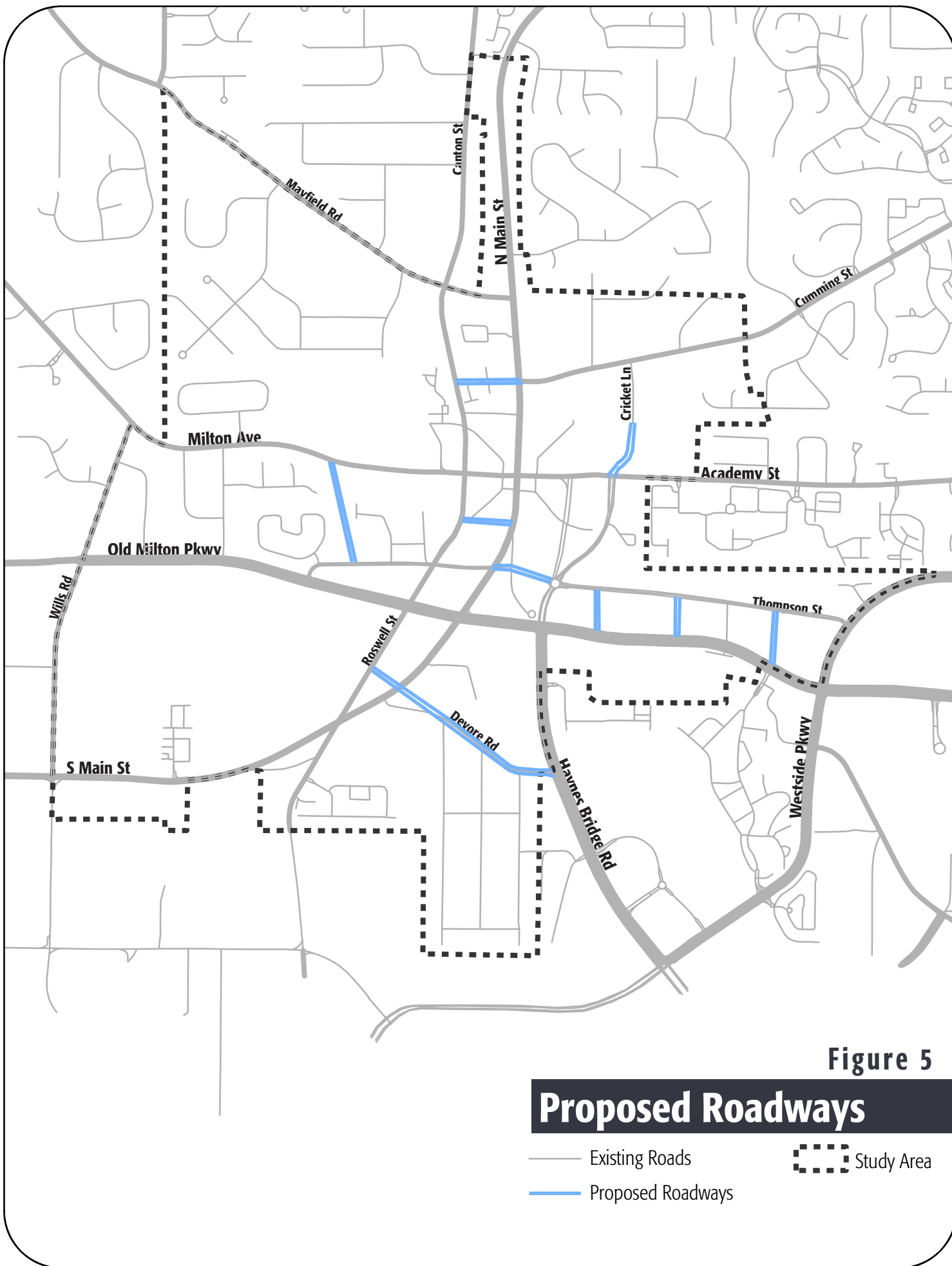
With the completion of the Master Plan and its associated zoning, one pod changed tremendously in its development potential: Downtown Mixed Use-1. Its previous zoning, C-2 (Commercial) did not permit residential uses but allowed for substantial amounts of office and retail uses. Assuming full market realization, the previous Downtown Mixed Use-1 pod could have supported more than 540,000 SF of both office and retail compared to its proposed zoning capacity of 90,000 SF of retail, 13,000 SF restaurant, 103,000 SF office, and 236 residential units.

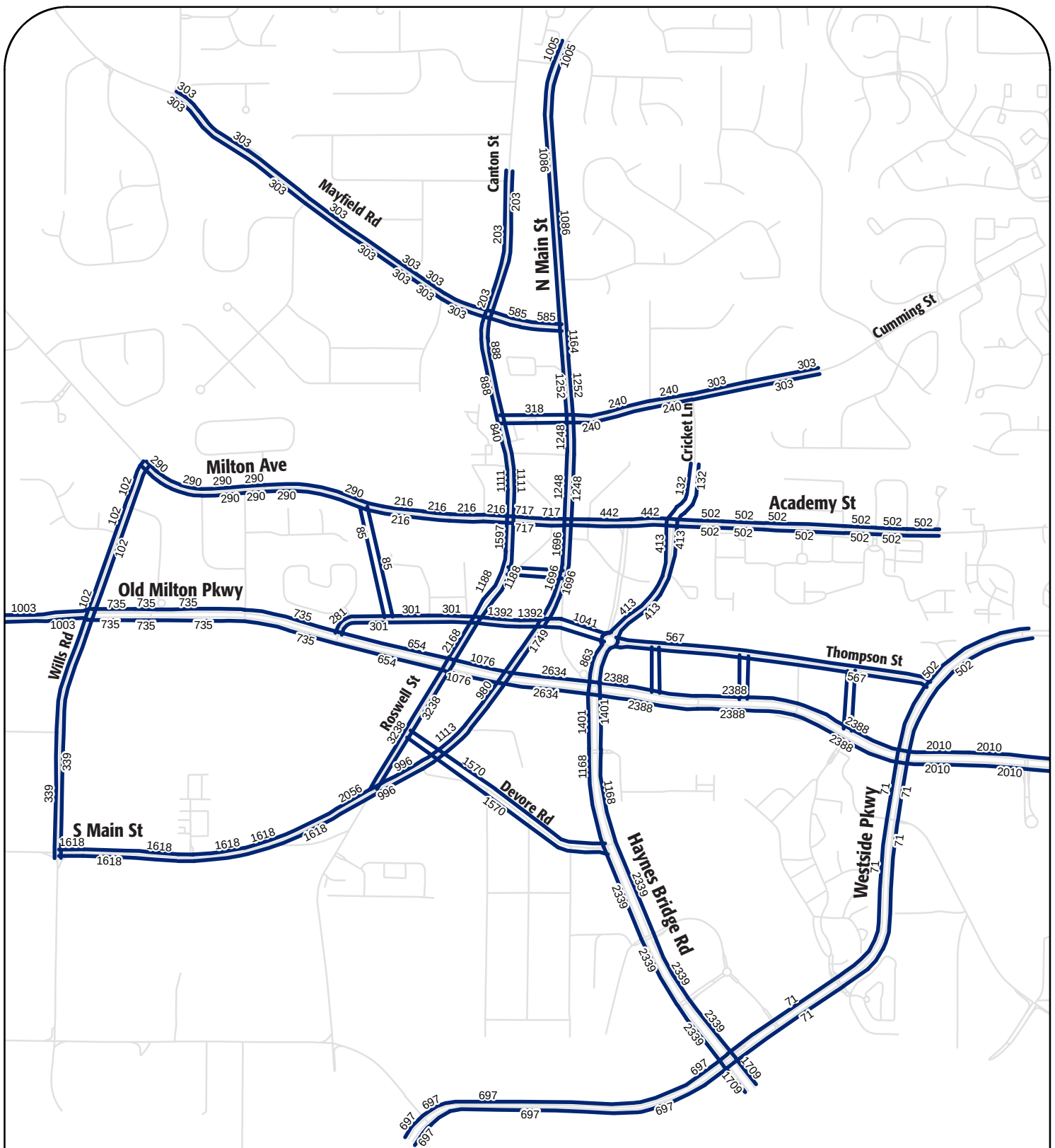
The previous zoning would be projected to generate more than 14,000 more daily trips than the zoning proposed under the master plan. Additionally, the maximum internal capture percentages are reduced by more than 10% across the entire development due to the increase in office and retail and the reduction in residential uses. While the entire square footage assumed in the previous zoning for this area may not be supported by the market in the short term, the zoning does allow for that intensity of development.

Downtown Master Plan Trip Assignment

The Downtown Master Plan includes multiple new roadway connections throughout the study area. These new connections provide alternative options for vehicles as well as shorter routes for pedestrians and cyclists. **Figure 5** shows the proposed roadway links from the Master Plan. Some of the new roadways are small and will attract primarily local traffic. Other roadway connections may divert some trips from larger roadways. Where this was expected to occur, No-Build trips were diverted from their current roadway to a new roadway and were reflected in the Build Condition.

Using the existing road network with the newly proposed roadways added, the projected trips from the new development were assigned to the study network. Because the retail, residential, and office trips in the area were assumed to be relatively similar, one distribution was used for all land use types. Distribution percentages varied for each of the ten pods (particularly near the pods themselves); however, the percentages at the external limits of the network were the same for all pods. The trip percentages by pod were multiplied by the number of project trips by pod and summed to develop the overall project trips associated with each roadway link. **Figure 6** shows a map of the Project Trips that have been assigned to the roadway network.





Project Trips

1000 Roadway Volumes

— Studied Existing Roadways

Build Condition

The Build Condition traffic was developed by adding the following:

- No-Build trips
- Diverted trips (associated with the new roadway links)
- New project trips associated with the Downtown Master Plan

Figure 7 shows the Build Levels-of-Service within the study area.

Because of the concentrated areas of development within the Downtown Master Plan area including the Downtown Core and the Downtown Mixed Use – 1 pods (both along South Main Street and Roswell Street), certain roadways are impacted more heavily than others. Portions of SR 9 (South Main Street) degrade one Level-of-Service (LOS D to LOS E or LOS E to LOS F) in the Build Condition, and Roswell Street changes by one or two LOS thresholds as well. The central section of Old Milton Parkway also degrades in the Build Condition. The Planning Team developed draft distributions of traffic based on engineering judgement, other recently completed studies, and Census information; however, it is important to remember that these are high level estimations of possible paths.

Because many of the more local facilities around the downtown are projected to be LOS C or D, individuals traveling to Downtown Alpharetta can find alternate routes due to the existing grid network and additional roadways proposed in the Master Plan. Because the trip generation was conducted in a conservative manner, it is likely that the impact of new development on the roadways within the downtown will be reduced as well.

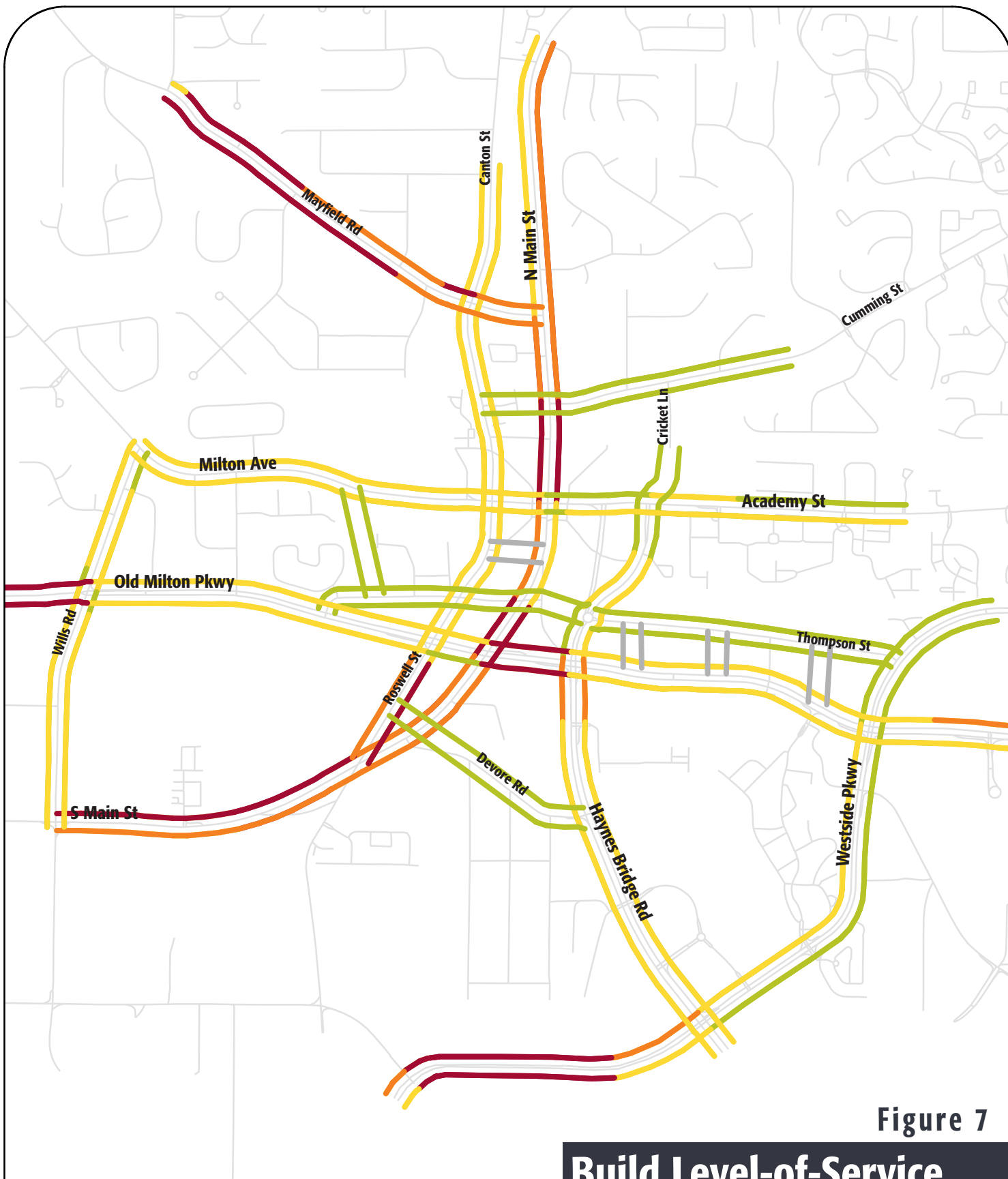


Figure 7

This diagram reflects the planned improvements to SR 9.

Conclusions

The Downtown Master Plan Traffic Evaluation was conducted to gauge the potential traffic impact of likely redevelopment areas based upon the Master Plan vision and the proposed zoning code. This is a planning-level analysis that takes into account overall link capacities and volumes but not intersection operations and therefore should not be used to make design decisions without further detailed analysis and concept development.

The Planning Team conducted a conservative analysis based on the following assumptions:

- Trips were estimated by pod instead of at a larger scale
- Internal capture within the development was assumed to be 25% (estimates were as high as 45%)
- No additional mode or pass-by reductions were taken
- Development projections utilized maximum lot coverage and maximum allowed residential densities as of right in the proposed zoning code
- All development was assumed to be built in 15 years even though full market realization may take longer
- Trips from two existing developments were removed; however, other existing sites will be redeveloped resulting in a further reduction of trips on the network

Development under the previous zoning code would have created similar or more substantial traffic impacts to that of the Master Plan. The Master Plan and the revised zoning code allow for a greater percentage of residential development thereby reducing traffic demand compared to greater retail, restaurant, or office uses. Additionally, greater residential in the downtown area is likely to have the impact of a higher degree of walkers and reduced transportation demand over a more segregated land use pattern.

It should be noted that the increase in volume required to move from LOS C to LOS D is rather large; however, the transition from LOS D to LOS E and then LOS F is rather small. Therefore, a moderate increase in daily traffic volumes on a roadway has the ability to have greater impacts the closer the roadway gets to reaching capacity. Because the traffic generated by potential development from the Master Plan is not substantial compared to the current level of traffic, **the congestion illustrated in the Build Condition is not necessarily a result of Master Plan-associated development.** In fact, the build volumes are projected as daily totals (as opposed to peak hour volumes), so the increase in traffic in the Downtown area will be dispersed throughout the day, relieving some of the strain observed by the snapshot of congestion depicted by the analysis figures. Thus, some facilities, particularly Old Milton Parkway and SR-9, may become more congested at times, but should not be considered failing throughout the day. And, if the major roadways do become congested, the enhanced connectivity realized by the Master Plan will provide options for routing around the congestion, meaning many individuals will find other nearby roadways along which to travel (including some of the new connections).

The study results presented in this document will **help to identify corridors that may become more congested in the next 15 years considering both the background development and the build out of the Alpharetta Downtown Master Plan.** If interested, the City can use this information to investigate these corridors in more detail to determine what, if any, mitigation may be valuable to increase vehicular capacity while maintaining and enhancing the experience for all transportation users of the system. In particular, as new construction occurs within the downtown, it will be important to provide adequate left-turn access into large developments to ensure that the travel lanes remain clear of turning vehicles. This will increase the capacity of the roadway without having to widen the roads to add more travel lanes.

APPENDIX

Appendix Information

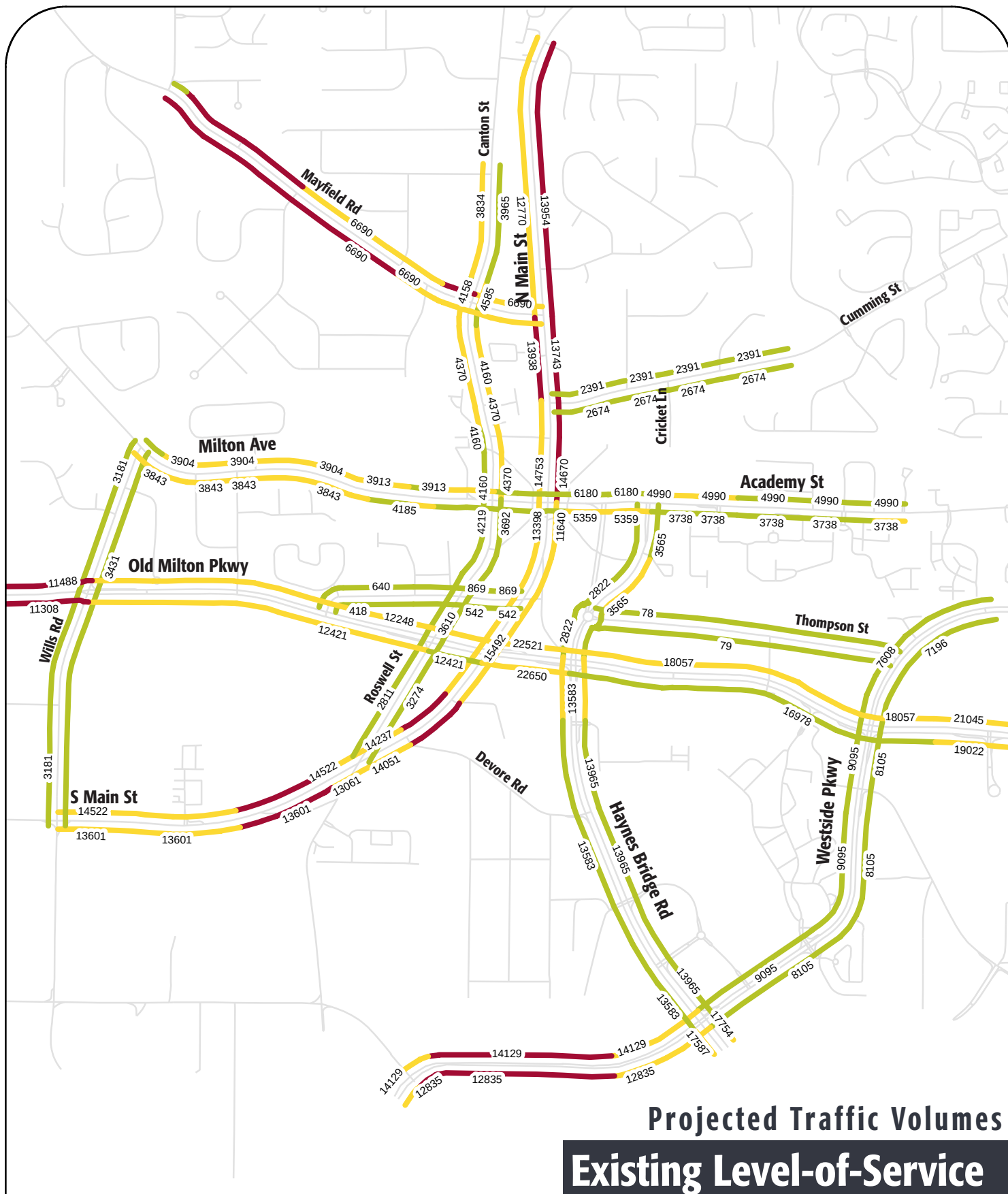
The following information is included in the Appendix for reference:

- The Project Trips diagram shows the traffic distributions at the edges of the study network. These percentages were used for all land uses (residential, retail, and office) and for all pod distributions. Pod distributions varied within the study area.
- Existing Condition, No-Build Condition, and Build Condition Level-of-Service maps are provided with Projected Daily Traffic Volumes labeled.
- Level-of-Service thresholds for volume to capacity calculations are included:
 - Table 5 from the *GRTA DRI Review – Technical Guidelines (February 13, 2013)* document was used for determining daily roadway capacity adjustments and thresholds for Levels-of-Service A through F.
- A note on project distributions:
 - Project trips were distributed to the roadway network using a combination of engineering judgement, some nearby traffic studies, and the Census *OnTheMap* tool, which provides information regarding home-to-work trips. The project trips were applied to the No-Build traffic volumes to develop the Build traffic volumes.
- Raw data used in the analysis and GIS mapping is included.

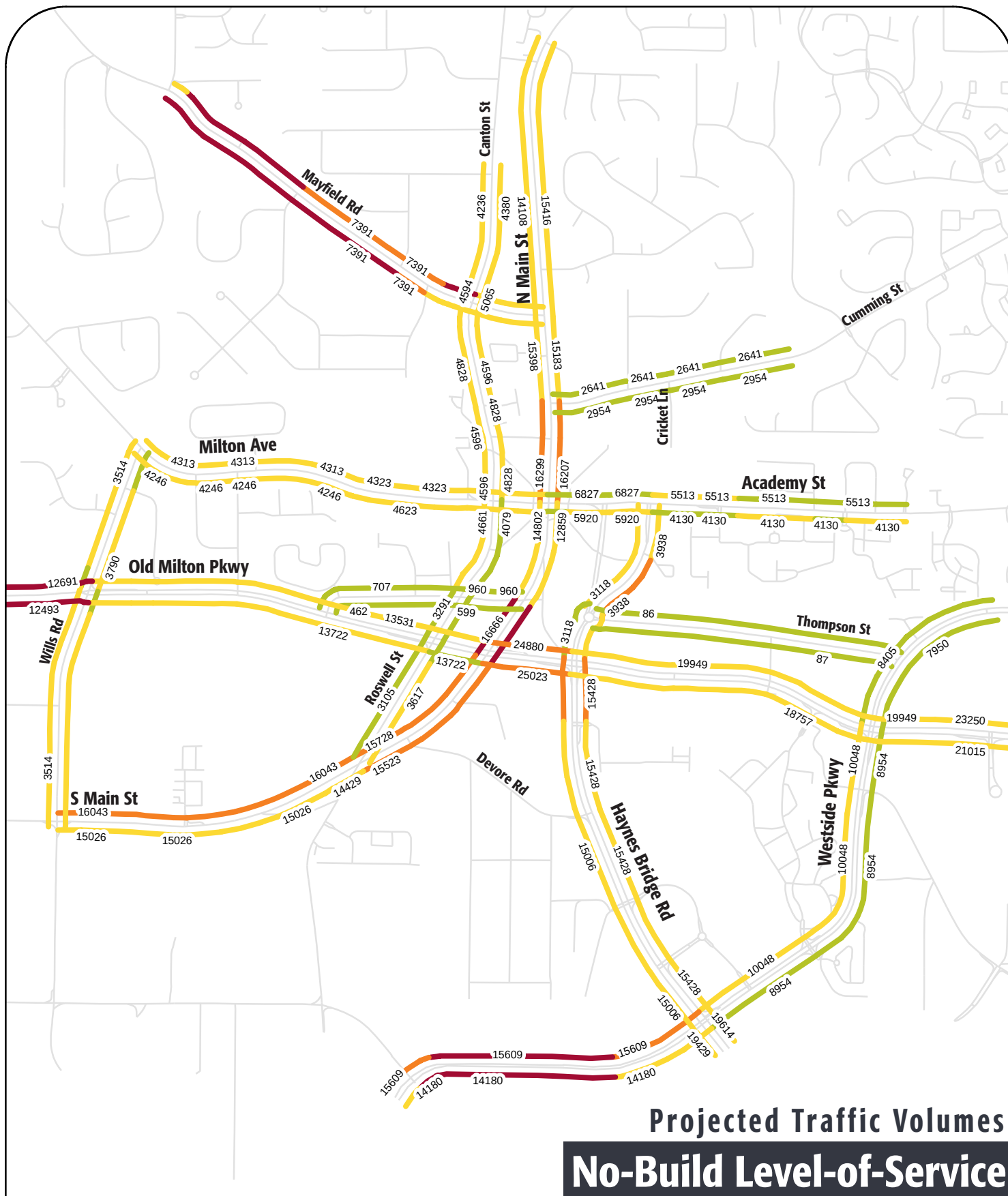


Project Trips

- 1000 Roadway Volumes
- Studied Existing Roadways



This diagram does not reflect the planned improvements to SR 9.



This diagram reflects the planned improvements to SR 9.

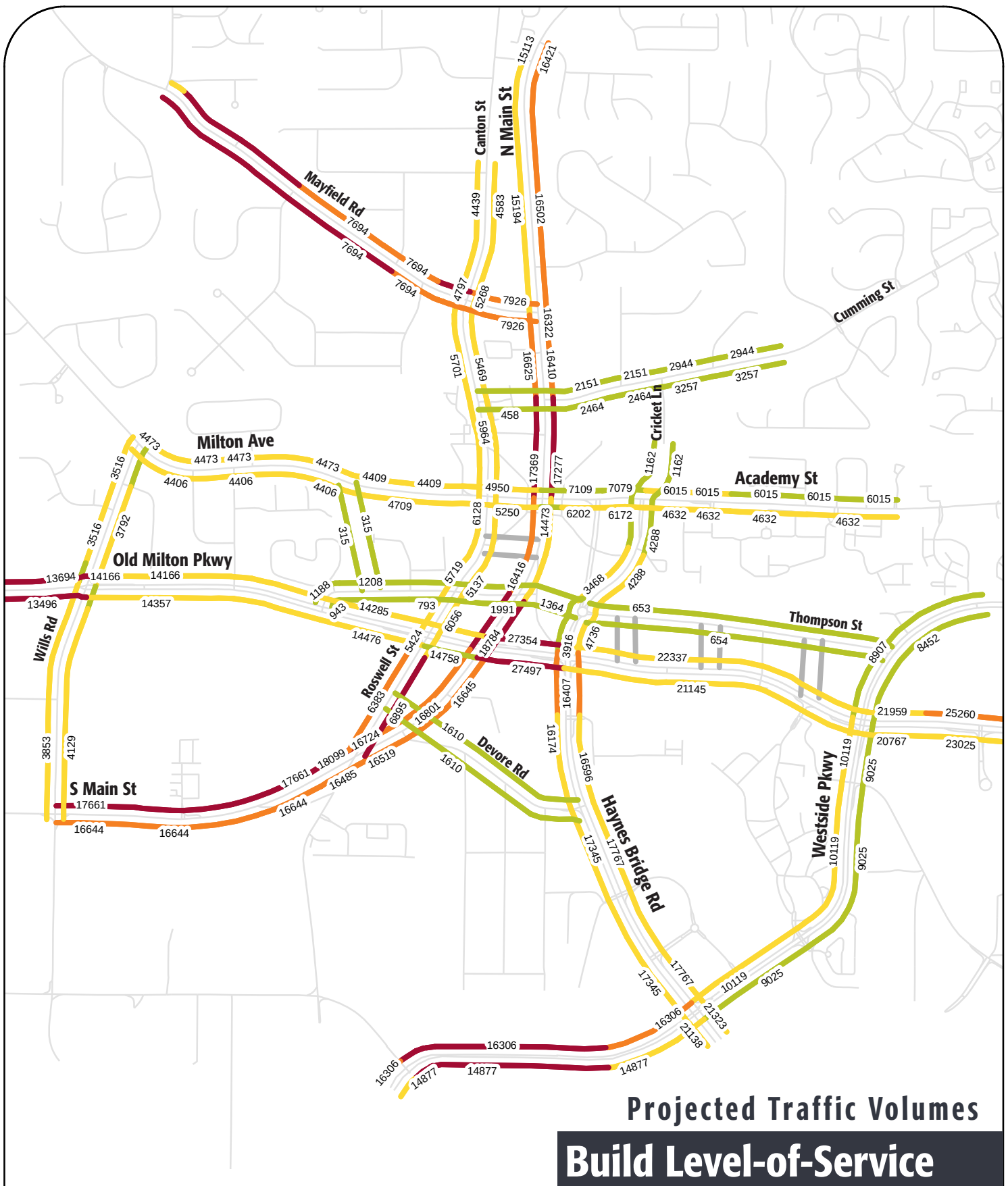


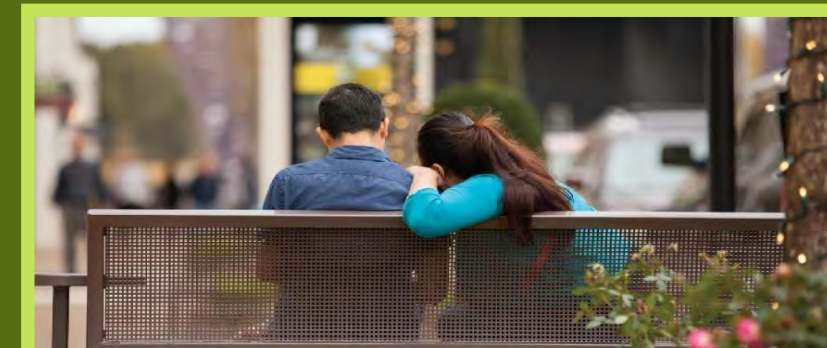
TABLE 5

Generalized Annual Average Daily Volumes for Use in GRTA's DRI Review										
State Two-Way Arterials						Freeways				
Unsignalized (Uninterrupted Flow)						Group I (w/in urban area 500,000+ w/in 5 miles of CBD)				
Lanes /Divided	Level of Service					Lanes	Level of Service			
	A	B	C	D	E		A	B	C	D E
2/undivided	8,900	13,900	18,900	24,800	33,100	4	21,200	34,300	51,500	66,200 81,700
4/divided	21,500	35,800	50,100	60,100	71,600	6	32,600	52,700	79,000	101,600 125,400
6/divided	32,200	53,700	75,200	90,200	107,400	8	44,500	71,800	107,800	138,600 171,100
						10	55,600	89,800	134,700	173,200 213,800
						12	65,200	105,400	158,100	203,200 250,900
Interrupted Flow						Group II (w/in urban area 500,000+ not included in Group I)				
Class I (> 2 signalized intersections per mile)						Level of Service				
Lanes /Divided	A**	B	C	D***	E***	Lanes	A	B	C	D E
2/undivided	N/A	10,800	15,600	16,600	16,600	4	20,900	32,800	49,200	62,600 74,500
4/divided	N/A	23,500	33,200	35,000	35,000	6	32,100	50,400	75,600	96,200 114,500
6/divided	N/A	35,800	49,900	52,500	52,500	8	43,800	68,800	103,200	131,300 156,300
8/divided	N/A	45,300	61,400	64,400	64,400	10	54,700	86,000	129,000	164,200 195,400
						12	64,100	100,800	151,200	192,400 229,100
Class II (2-4.5 signalized intersections per mile)						Non-State Roadways (Major City/County Roads)				
Lanes /Divided	A**	B**	C	D	E	Level of Service				
2/undivided	N/A	N/A	9,900	14,900	16,200	Lanes	A**	B**	C	D E
4/divided	N/A	N/A	22,900	32,500	34,300	2/undivided	N/A	N/A	8,600	14,600 16,000
6/divided	N/A	N/A	35,500	48,900	51,700	4/divided	N/A	N/A	19,800	31,700 33,900
8/divided	N/A	N/A	44,700	60,100	63,400	6/divided	N/A	N/A	30,800	47,800 51,000
Class III (> 4.5 signalized intersections per mile but not in CBD)						Other Signalized Roadways (Signalized Intersection Analysis)				
Lanes /Divided	A**	B**	C	D	E	Level of Service				
2/undivided	N/A	N/A	3,300	12,100	15,800	Lanes	A**	B**	C	D E
4/divided	N/A	N/A	7,800	27,800	33,600	2/undivided	N/A	N/A	4,800	10,900 11,900
6/divided	N/A	N/A	12,100	43,300	50,500	4/divided	N/A	N/A	11,600	23,800 25,400
8/divided	N/A	N/A	15,300	54,200	62,100					
Class IV (> 4.5 signalized intersections per mile within CBD)						Adjustments (Divided/Undivided)				
Lanes /Divided	A**	B**	C	D	E	(Alter corresponding two-way volumes by indicated percentage)				
2/undivided	N/A	N/A	3,700	13,800	15,300	Left Turn Adjustment				
4/divided	N/A	N/A	8,900	29,900	32,600	Lanes	Median	Bays	Factor	
6/divided	N/A	N/A	14,000	45,500	49,000	2	divided	Yes	+5%	
8/divided	N/A	N/A	17,500	56,200	60,100	2	undivided	No	-20%	
						Multi	undivided	Yes	-5%	
						Multi	undivided	No	-25%	
						One-Way				
						(Alter corresponding two-way volumes by indicated percentage)				
						One-Way	Equivalent	Adjustment		
						Lanes	2-Way Lanes	Factor		
						2	4	-40%		
						3	6	-40%		
						4	8	-40%		
						5	8	-25%		
* This table is based on the 1997 Highway Capacity Manual and data generated by the Florida DOT. For the purposes of GRTA review this table can be used for Level of Service Analysis in Section 2.2. ** Cannot be achieved. *** Volumes are comparable because intersection capacities have been reached.						SOURCE: The Florida Department of Transportation, Systems Planning Office, 605 Suwannee Street - Mail Station # 19, Tallahassee, Florida, 32399-0450 September 1998 - www.dot.state.fl.us/planning <<<The assumptions made in the development of this table appear in the 1998 Level of Service Handbook published by Florida DOT.>>>				

ID	RoadName	Lanes	Median	LeftTurn	SR	Signals	CBD	LengthFt	SigPerMi	SigBin	MedianUD	ID	ID2	DirCapA	DirCapB	DirCapC	DirCapD	DirCapE	Tcstation	ExistingVol	ExistingLOS	NoBuild_1_5	NBLOS_1_5	TotProj_Approved	NoBuild_Total	NoBuild_LOS	TotProj_Pod	Build_PodProj	BuildPod_LOS
0101N	N Main Street NB	1 S	Y	Y	Y	0 N		251.83	3.19	4.5 D		Y_N_4.5_2	Y_N_4.5_2_D_1	0	1	5198	7823	8505	1	13954 F	13954 F	15416 D	537	15953 D	1005	16421 E			
0101S	N Main Street SB	2 S	Y	Y	Y	0 N		251.83	3.19	4.5 D		Y_N_4.5_4	Y_N_4.5_4_D_1	0	1	11450	16250	17150	1	12770 D	12770 D	14108 D	537	14645 D	1005	15113 D			
0102N	N Main Street NB	1 T	Y	Y	Y	1 N		2410.49	3.19	4.5 D		Y_N_4.5_2	Y_N_4.5_2_D_1	0	1	5198	7823	8505	1	13954 F	13954 F	15416 D	537	15953 D	1086	16502 E			
0102S	N Main Street SB	2 T	Y	Y	Y	1 N		2410.49	3.19	4.5 D		Y_N_4.5_4	Y_N_4.5_4_D_1	0	1	11450	16250	17150	1	12770 D	12770 D	14108 D	537	14645 D	1086	15194 D			
0103N	N Main Street NB	2 N	N	Y	Y	0 N		378.56	3.19	4.5 U		Y_N_4.5_4	Y_N_4.5_4_U_1	0	1	8588	12188	12863	5	13743 F	13743 F	15183 D	589	15772 D	1164	16322 E			
0103S	N Main Street SB	2 N	N	Y	Y	0 N		378.56	3.19	4.5 U		Y_N_4.5_4	Y_N_4.5_4_U_1	0	1	8588	12188	12863	5	13938 F	13938 F	15398 D	589	15987 D	1164	16317 E			
0104N	N Main Street NB	2 N	N	Y	Y	1 N		511.86	3.19	4.5 U		Y_N_4.5_4	Y_N_4.5_4_U_1	0	1	8588	12188	12863	5	13743 F	13743 F	15183 D	589	15772 D	1252	16450 E			
0104S	N Main Street SB	2 N	N	Y	Y	1 N		511.86	3.19	4.5 U		Y_N_4.5_4	Y_N_4.5_4_U_1	0	1	8588	12188	12863	5	13938 F	13938 F	15398 D	589	15987 D	1252	16625 E			
0105N	N Main Street NB	2 N	N	Y	Y	0 N		375.03	3.19	4.5 U		Y_N_4.5_4	Y_N_4.5_4_U_1	0	1	8588	12188	12863	7	14670 F	14670 F	16207 D	643	16850 E	1248	17277 F			
0105S	N Main Street SB	2 N	Y	Y	Y	0 N		375.03	3.19	4.5 U		Y_N_4.5_4	Y_N_4.5_4_U_1	0	1	10878	15438	16293	7	14753 D	14753 D	16299 E	643	16942 E	1248	17369 F			
0106N	N Main Street NB	2 N	N	Y	Y	0 N		646.69	3.19	4.5 U		Y_N_4.5_4	Y_N_4.5_4_U_1	0	1	8588	12188	12863	7	14670 F	14670 F	16207 D	643	16850 E	1248	17277 F			
0106S	N Main Street SB	2 S	Y	Y	Y	1 N		646.69	3.19	4.5 D		Y_N_4.5_4	Y_N_4.5_4_D_1	0	1	11450	16250	17150	7	14753 D	14753 D	16299 E	643	16942 E	1248	17369 F			
0201E	2 Mayfield Road	1 S	Y	N	1 N			354	3.19	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	2	6690 D	6690 D	7391 D	52	7443 D	585	7926 E			
0201W	2 Mayfield Road	1 S	Y	N	1 N			354	3.19	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	2	6690 D	6690 D	7391 D	52	7443 D	585	7926 E			
0202E	2 Mayfield Road	1 S	Y	N	0 N			142	3.19	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	2	6690 D	6690 D	7391 D	52	7443 D	585	7926 E			
0202W	2 Mayfield Road	1 S	Y	N	0 N			142	3.19	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	2	6690 D	6690 D	7391 D	52	7443 D	585	7926 E			
0203E	2 Mayfield Road	1 S	Y	N	1 N			275	3.19	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	2	6690 D	6690 D	7391 D	52	7443 D	585	7926 E			
0203W	2 Mayfield Road	1 S	Y	N	1 N			275	3.19	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	2	6690 D	6690 D	7391 D	52	7443 D	585	7926 E			
0204E	2 Mayfield Road	1 S	Y	N	0 N			135	3.19	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	2	6690 D	6690 D	7391 D	161	7552 D	303	7694 E			
0204W	2 Mayfield Road	1 N	N	N	0 N			135	3.19	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	2	6690 F	6690 F	7391 F	161	7552 F	303	7694 F			
0205E	2 Mayfield Road	1 S	Y	N	0 N			90	3.19	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	2	6690 D	6690 D	7391 D	161	7552 D	303	7694 E			
0205W	2 Mayfield Road	1 N	N	N	0 N			90	3.19	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	2	6690 F	6690 F	7391 F	161	7552 F	303	7694 F			
0206E	2 Mayfield Road	1 S	Y	N	0 N			105	3.19	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	2	6690 D	6690 D	7391 D	161	7552 D	303	7694 E			
0206W	2 Mayfield Road	1 N	N	N	0 N			105	3.19	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	2	6690 F	6690 F	7391 F	161	7552 F	303	7694 F			
0207E	2 Mayfield Road	1 S	Y	N	0 N			108	3.19	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	2	6690 D	6690 D	7391 D	161	7552 D	303	7694 E			
0207W	2 Mayfield Road	1 N	Y	N	0 N			108	3.19	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	2	6690 D	6690 D	7391 E	161	7552 E	303	7694 E			
0208E	2 Mayfield Road	1 N	Y	N	0 N			413	3.19	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	2	6690 D	6690 D	7391 E	161	7552 E	303	7694 E			
0208W	2 Mayfield Road	1 N	Y	N	0 N			413	3.19	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	2	6690 D	6690 D	7391 E	161	7552 E	303	7694 E			
0209E	2 Mayfield Road	1 N	N	N	0 N			250	3.19	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	2	6690 F	6690 F	7391 F	161	7552 F	303	7694 F			
0209W	2 Mayfield Road	1 N	Y	N	0 N			250	3.19	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	2	6690 D	6690 D	7391 E	161	7552 E	303	7694 E			
0210E	2 Mayfield Road	1 N	N	N	0 N			1092	3.19	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	2	6690 F	6690 F	7391 F	161	7552 F	303	7694 F			
0210W	2 Mayfield Road	1 N	Y	N	0 N			1092	3.19	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	2	6690 D	6690 D	7391 E	161	7552 E	303	7694 E			
0211E	2 Mayfield Road	1 N	N	N	0 N			1526	3.19	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	2	6690 F	6690 F	7391 F	161	7552 F	303	7694 F			
0211W	2 Mayfield Road	1 N	N	N	0 N			1526	3.19	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	2	6690 F	6690 F	7391 F	161	7552 F	303	7694 F			
0212E	2 Mayfield Road	1 N	N	N	1 N			280	3.19	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	2	6690 F	6690 F	7391 F	161	7552 F	303	7694 F			
0212W	2 Mayfield Road	2 N	N	N	1 N			280	3.19	4.5 U		N_4	N_4_U_N	0	1	7425	11888	12713	2	6690 C	6690 C	7391 C	161	7552 D	303	7694 D			
0301E	Cumming Street NE	1 N	N	N	0 N			766.97	2.01	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	6	2674 C	2674 C	2954 C	88	3042 C	240	2464 C			
0301W	Cumming Street SW	1 N	N	N	0 N			766.97	2.01	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	6	2391 C	2391 C	2641 C	88	2729 C	240	2151 C			
0302E	Cumming Street NE	1 N	N	N	0 N			469.4	2.01	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	6	2674 C	2674 C	2954 C	88	3042 C	240	2464 C			
0302W	Cumming Street SW	1 N	N	N	0 N			469.4	2.01	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	6	2391 C	2391 C	2641 C	88	2729 C	240	2151 C			
0303E	Cumming Street NE	1 N	N	N	0 N			527.98	2.01	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	6	2674 C	2674 C	2954 C	161	3115 C	303	3257 C			
0303W	Cumming Street SW	1 N	N	N	0 N			527.98	2.01	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	6	2391 C	2391 C	2641 C	161	2802 C	303	2944 C			
0304E	Cumming Street NE	1 N	N	N	0 N			735.76	2.01	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	6	2674 C	2674 C	2954 C	161	3115 C	303	3257 C			
0304W	Cumming Street SW	1 N	N	N	0 N			735.76	2.01	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	6	2391 C	2391 C	2641 C	161	2802 C	303	2944 C			
0401N	Canton Street NB	1 N	Y	N	1 N			276.39	2.89	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	8	4370 D	4370 D	4828 D	199	5027 D	1111	5964 D			
0401S	Canton Street SB	1 N	Y	N	0 N			276.39	2.89	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	8	4160 C	4160 C	4596 D	199	4795 D	1111	5732 D			
0402N	Canton Street NB	1 N	Y	N	0 N			150.19	2.89	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	8	4370 D	4370 D	4828 D	199	5027 D	1111	5964 D			
0402S	Canton Street SB	1 N	Y	N	0 N			150.19	2.89	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	8	4160 C	4160 C	4596 D	199	4795 D	1111	5732 D			
0403N	Canton Street NB	1 N	Y	N	0 N			338.03	2.89	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	8	4370 D	4370 D	4828 D	199	5027 D	1111	5964 D			
0403S	Canton Street SB	1 N	Y	N	0 N			338.03	2.89	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	8	4160 C	4160 C	4596 D	199	4795 D	1111	5732 D			
0404N	Canton Street NB	1 N	N	N	0 N			203.32	2.89	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	8	4370 D	4370 D	4828 D	217	5045 D	840	5693 D			
0404S	Canton Street SB	1 N	N	N	0 N			203.32	2.89	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	8	4160 D	4160 D	4596 D	217	4813 D	840	5461 D			
0405N	Canton Street NB	1 N	N	N	0 N			784.62	2.89	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	8	4160 D	4160 D	4596 D	217	4813 D	888	5469 D			
0405S	Canton Street SB	1 N	N	N	0 N			784.62	2.89	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	8	4370 D	4370 D	4828 D	217	5045 D	888	5701 D			
0406N	Canton Street NB	1 S	Y	N	0 N			133.71	2.89	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	8	4160 C	4160 C								

ID	RoadName	Lanes	Median	LeftTurn	SR	Signals	CBD	LengthFt	SigPerMi	SigBin	MedianUD	ID	ID2	DirCapA	DirCapB	DirCapC	DirCapD	DirCapE	Tcstation	ExistingVol	ExistingLOS	NoBuild_1_5	NBLOS_1_5	TotProj_Approved	NoBuild_Total	NoBuild_LOS	TotProj_Pod	Build_PodProj	BuildPod_LOS
0602E	6 Academy Street	1 N	Y	N		1 N		340	2.71	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	9	5359 D		558	5920 D	558	6478 D	442	6202 D		
0602W	6 Academy Street	2 N	Y	N		1 N		340	2.71	4.5 U		N_4	N_4_U_Y	0	1	9405	15058	16103	9	6180 C		558	6827 C	558	7385 C	442	7109 C		
0603E	6 Academy Street	1 N	Y	N		1 N		500	2.71	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	9	5359 D		558	5920 D	558	6478 D	442	6172 D		
0603W	6 Academy Street	2 N	Y	N		1 N		500	2.71	4.5 U		N_4	N_4_U_Y	0	1	9405	15058	16103	9	6180 C		558	6827 C	558	7385 C	442	7079 C		
0604E	6 Academy Street	1 T	Y	N	0 N			300	2.71	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	19	3738 C		269	4130 C	269	4399 C	502	4632 D		
0604W	6 Academy Street	1 T	Y	N	0 N			300	2.71	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	19	4990 D		269	5513 D	269	5782 D	502	6015 D		
0605E	6 Academy Street	1 T	Y	N	0 N			235	2.71	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	19	3738 C		269	4130 C	269	4399 C	502	4632 D		
0605W	6 Academy Street	1 T	Y	N	0 N			235	2.71	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	19	4990 D		269	5513 D	269	5782 D	502	6015 D		
0606E	6 Academy Street	1 T	Y	N	0 N			215	2.71	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	19	3738 C		269	4130 C	269	4399 C	502	4632 D		
0606W	6 Academy Street	1 T	Y	N	0 N			215	2.71	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	19	4990 D		269	5513 D	269	5782 D	502	6015 D		
0607E	6 Academy Street	1 N	Y	N	0 N			803	2.71	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	19	3738 C		269	4130 C	269	4399 D	502	4632 D		
0607W	6 Academy Street	2 N	Y	N	0 N			803	2.71	4.5 U		N_4	N_4_U_Y	0	1	9405	15058	16103	19	4990 C		269	5513 C	269	5782 C	502	6015 C		
0608E	6 Academy Street	1 S	Y	N	0 N			324	2.71	4.5 D		N_2	N_2_D_Y	0	1	4515	7665	8400	19	3738 C		269	4130 C	269	4399 C	502	4632 D		
0608W	6 Academy Street	2 S	Y	N	0 N			324	2.71	4.5 D		N_4	N_4_D_Y	0	1	9900	15850	16950	19	4990 C		269	5513 C	269	5782 C	502	6015 C		
0609E	6 Academy Street	1 N	Y	N	0 N			317	2.71	4.5 U		N_2	N_2_U_Y	0	1	4300	7300	8000	19	3738 C		269	4130 C	269	4399 D	502	4632 D		
0609W	6 Academy Street	2 N	Y	N	0 N			317	2.71	4.5 U		N_4	N_4_U_Y	0	1	9405	15058	16103	19	4990 C		269	5513 C	269	5782 C	502	6015 C		
0610E	6 Academy Street	1 N	N	N	0 N			324	2.71	4.5 U		N_2	N_2_U_N	0	1	3440	5840	6400	19	3738 D		269	4130 D	269	4399 D	502	4632 D		
0610W	6 Academy Street	2 N	N	N	0 N			324	2.71	4.5 U		N_4	N_4_U_N	0	1	7425	11888	12713	19	4990 C		269	5513 C	269	5782 C	502	6015 C		
0701N	Roswell Street NB	1 N	Y	N	1 N			264.21	4.96	50 U		N_2	N_2_U_Y	0	1	4300	7300	8000	10	3692 C		17	4096 C	17	4096 C	1597	5546 D		
0701S	Roswell Street SB	1 N	Y	N	0 N			264.21	4.96	50 U		N_2	N_2_U_Y	0	1	4300	7300	8000	10	4219 C		17	4661 D	17	4678 D	1597	6128 D		
0702N	Roswell Street NB	1 N	Y	N	0 N			238.27	4.96	50 U		N_2	N_2_U_Y	0	1	4300	7300	8000	10	3692 C		17	4096 C	17	4096 C	1188	5137 D		
0702S	Roswell Street SB	1 N	Y	N	0 N			238.27	4.96	50 U		N_2	N_2_U_Y	0	1	4300	7300	8000	10	4219 C		17	4661 D	17	4678 D	1188	5719 D		
0703N	Roswell Street NB	1 T	Y	N	0 N			1106.05	4.96	50 D		N_2	N_2_D_Y	0	1	4515	7665	8400	14	3610 C		17	3988 C	17	4005 C	2168	6056 D		
0703S	Roswell Street SB	1 T	Y	N	0 N			1106.05	4.96	50 D		N_2	N_2_D_Y	0	1	4515	7665	8400	14	2979 C		17	3291 C	17	3308 C	2168	5359 D		
0704N	Roswell Street NB	1 N	Y	N	1 N			243.99	4.96	50 U		N_2	N_2_U_Y	0	1	4300	7300	8000	14	3274 C		17	3634 C	17	3617 C	2279	5936 D		
0704S	Roswell Street SB	1 N	N	N	1 N			243.99	4.96	50 U		N_2	N_2_U_N	0	1	3440	5840	6400	14	2811 C		17	3105 C	17	3122 C	2279	5424 D		
0705N	Roswell Street NB	1 N	N	N	0 N			1261.76	4.96	50 U		N_2	N_2_U_N	0	1	3440	5840	6400	14	3274 C		17	3634 D	17	3617 D	3238	6895 F		
0705S	Roswell Street SB	1 N	N	N	1 N			1261.76	4.96	50 U		N_2	N_2_U_N	0	1	3440	5840	6400	14	2811 C		17	3105 C	17	3122 C	3238	6383 E		
0801E	8 Marietta Street	1 N	N	N	0 N			260	0	2 U		N_2	N_2_U_N	0	1	3440	5840	6400	15	542 C		286	885 C	286	9122 C	1392	1991 C		
0801W	8 Marietta Street	1 N	N	N	0 N			260	0	2 U		N_2	N_2_U_N	0	1	3440	5840	6400	15	869 C		286	960 C	286	1246 C	1392	2352 C		
0802E	8 Marietta Street	1 N	N	N	0 N			675	0	2 U		N_2	N_2_U_N	0	1	3440	5840	6400	15	542 C		286	885 C	286	9122 C	1392	1991 C		
0802W	8 Marietta Street	1 N	N	N	0 N			675	0	2 U		N_2	N_2_U_N	0	1	3440	5840	6400	15	869 C		286	960 C	286	1246 C	1392	2352 C		
0803E	8 Marietta Street	1 N	N	N	0 N			450	0	2 U		N_2	N_2_U_N	0	1	3440	5840	6400	16	418 C		269	731 C	269	731 C	301	793 C		
0803W	8 Marietta Street	1 N	N	N	0 N			450	0	2 U		N_2	N_2_U_N	0	1	3440	5840	6400	16	640 C		269	707 C	269	976 C	301	1038 C		
0804E	8 Marietta Street	1 N	N	N	0 N			775	0	2 U		N_2	N_2_U_N	0	1	3440	5840	6400	16	418 C		269	731 C	269	731 C	301	963 C		
0804W	8 Marietta Street	1 N	N	N	0 N			775	0	2 U		N_2	N_2_U_N	0	1	3440	5840	6400	16	640 C		269	707 C	269	976 C	301	1208 C		
0805E	8 Marietta Street	1 N	N	N	0 N			200	0	2 U		N_2	N_2_U_N	0	1	3440	5840	6400	16	418 C		233	462 C	233	695 C	281	943 C		
0805W	8 Marietta Street	1 N	N	N	0 N			200	0	2 U		N_2	N_2_U_N	0	1	3440	5840	6400	16	640 C		233	707 C	233	940 C	281	1188 C		
0901N	S Main Street NB	2 S	Y	Y	1 N			426.1	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	11	11640 D		1232	12859 D	1232	14091 D	1696	14473 D		
0901S	S Main Street SB	2 S	Y	Y	0 N			426.1	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	11	13398 D		1232	14802 D	1232	16034 D	1696	16416 E		
0902N	S Main Street NB	2 S	Y	Y	0 N			295.91	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	11	11640 D		1232	12859 D	1232	14091 D	1696	14473 D		
0902S	S Main Street SB	2 S	Y	Y	0 N			295.91	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	11	13398 D		1232	14802 D	1232	16034 D	1696	16416 E		
0903N	S Main Street NB	2 S/L	Y	Y	0 N			314.06	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	11	11640 D		1232	12859 D	1232	14091 D	1696	14473 D		
0903S	S Main Street SB	2 S/L	Y	Y	0 N			314.06	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	11	13398 D		1232	14802 D	1232	16034 D	1696	16416 E		
0904N	S Main Street NB	2 L	Y	Y	0 N			324.42	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	13	15492 D		545	17115 E	545	17660 F	1749	18784 F		
0904S	S Main Street SB	2 L	Y	Y	0 N			324.42	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	13	15086 D		545	16666 E	545	17211 F	1749	18335 F		
0905N	S Main Street NB	2 L	Y	Y	1 N			439.05	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	13	15492 D		545	17660 F	545	17660 F	1749	18784 F		
0905S	S Main Street SB	2 L	Y	Y	0 N			439.05	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	13	15086 D		545	16666 E	545	17211 F	1749	18335 F		
0906N	S Main Street NB	2 S	Y	Y	0 N			261.39	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	24	14051 D		806	15523 D	806	16329 E	980	16463 E		
0906S	S Main Street SB	2 S	Y	Y	1 N			261.39	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	24	14237 D		806	15728 D	806	16534 E	980	16668 E		
0907N	S Main Street NB	2 S	Y	Y	0 N			348.45	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	24	14051 D		806	15523 D	806	16329 E	1162	16645 E		
0907S	S Main Street SB	2 S	Y	Y	0 N			348.45	2.99	4.5 D		Y_N_4_5_4	Y_N_4_5_4_D_	0	1	11450	16250	17150	24	14237 D		806	15728 D	806	16534 E	1162	16850 E		
0908N	S Main Street NB	2 N	N	Y	0 N			655.35	2.99	4.5 U		Y_N_4_5_4	Y_N_4_5_4_U_	0	1	8588	12188	12863	24	14051 F		806	15523 D	806	16329 E	1113	16596 E		
0908S	S Main Street SB	2 N	N	Y	0 N			655.35	2.99	4.5 U		Y_N_4_5_4	Y_N_4_5_4_U_	0	1	8588	12188	12863	24	14237 F		806	15728 D	806	16534 E	1113	16801 E		
0909N	S Main Street NB	2 S	Y	Y	1 N																								

ID	RoadName	Lanes	Median	LeftTurn	SR	Signals	CBD	LengthFt	SigPerMi	SigBin	MedianUD	ID	ID2	DirCapA	DirCapB	DirCapC	DirCapD	DirCapE	TCstation	ExistingVol	ExistingLOS	NoBuild_1_5	NBLOS_1_5	TotProj_Approved	NoBuild_Total	NoBuild_LOS	TotProj_Pod	Build_PodProj	BuildPod_LOS
1102N	Westside Parkway NB	2 C/L	Y	N	1 N	561.25	2.77	4.5 D	N_4	N_4_D_Y		N_4	N_4_D_Y	0	1	9900	15850	16950	28	8105 C		8954 C	208	9162 C	71	9025 C			
1102S	Westside Parkway SB	2 C/L	Y	N	1 N	561.25	2.77	4.5 D	N_4	N_4_D_Y		N_4	N_4_D_Y	0	1	9900	15850	16950	28	9095 C		10048 D	208	10256 D	71	10119 D			
1103N	Westside Parkway NB	2 C/L	Y	N	0 N	1754.63	2.77	4.5 D	N_4	N_4_D_Y		N_4	N_4_D_Y	0	1	9900	15850	16950	28	8105 C		8954 C	208	9162 C	71	9025 C			
1103S	Westside Parkway SB	2 C/L	Y	N	0 N	1754.63	2.77	4.5 D	N_4	N_4_D_Y		N_4	N_4_D_Y	0	1	9900	15850	16950	28	9095 C		10048 D	208	10256 D	71	10119 D			
1104N	Westside Parkway NB	2 C/L	Y	N	1 N	585.26	2.77	4.5 D	N_4	N_4_D_Y		N_4	N_4_D_Y	0	1	9900	15850	16950	28	8105 C		8954 C	208	9162 C	71	9025 C			
1104S	Westside Parkway SB	2 C/L	Y	N	1 N	585.26	2.77	4.5 D	N_4	N_4_D_Y		N_4	N_4_D_Y	0	1	9900	15850	16950	28	9095 C		10048 D	208	10256 D	71	10119 D			
1105N	Westside Parkway NB	2 S/T	Y	N	1 N	1102.16	2.77	4.5 D	N_4	N_4_D_Y		N_4	N_4_D_Y	0	1	9900	15850	16950	27	12835 D		14180 D	376	14556 D	697	14877 D			
1105S	Westside Parkway SB	2 S/T	Y	N	1 N	1102.16	2.77	4.5 D	N_4	N_4_D_Y		N_4	N_4_D_Y	0	1	9900	15850	16950	27	14129 D		15609 D	376	15985 E	697	16306 E			
1106N	Westside Parkway NB	2 N	N	N	0 N	1795.45	2.77	4.5 U	N_4	N_4_U_N		N_4	N_4_U_N	0	1	7425	11888	12713	27	12835 F		14180 F	376	14556 F	697	14877 F			
1106S	Westside Parkway SB	2 N	N	N	0 N	1795.45	2.77	4.5 U	N_4	N_4_U_N		N_4	N_4_U_N	0	1	7425	11888	12713	27	14129 F		15609 F	376	15985 F	697	16306 F			
1107N	Westside Parkway NB	2 N	N	N	0 N	295.76	2.77	4.5 U	N_4	N_4_U_N		N_4	N_4_U_N	0	1	7425	11888	12713	27	12835 F		14180 F	376	14556 F	697	14877 F			
1107S	Westside Parkway SB	2 N	Y	N	1 N	295.76	2.77	4.5 U	N_4	N_4_U_Y		N_4	N_4_U_Y	0	1	9405	15058	16103	27	14129 D		15609 E	376	15985 E	697	16306 F			
1108N	Westside Parkway NB	2 C	Y	N	1 N	297.96	2.77	4.5 D	N_4	N_4_D_Y		N_4	N_4_D_Y	0	1	9900	15850	16950	27	12835 D		14180 D	376	14556 D	697	14877 D			
1108S	Westside Parkway SB	2 C	Y	N	0 N	297.96	2.77	4.5 D	N_4	N_4_D_Y		N_4	N_4_D_Y	0	1	9900	15850	16950	27	14129 D		15609 D	376	15985 E	697	16306 E			
1200E	12 Old Milton Parkway	1 S	Y	Y	1 N	1170	3.72	4.5 D	Y_N_4_5_2	Y_N_4_5_2_D_1		Y_N_4_5_2	Y_N_4_5_2_D_1	0	1	5198	7823	8505	21	11308 F		12493 F	537	13030 F	1003	13496 F			
1200W	12 Old Milton Parkway	1 N	N	Y	1 N	1170	3.72	4.5 U	Y_N_4_5_2	Y_N_4_5_2_U_1		Y_N_4_5_2	Y_N_4_5_2_U_1	0	1	3960	5960	6480	20	11488 F		12691 F	537	13228 F	1003	13694 F			
1201E	12 Old Milton Parkway	2 L	Y	Y	1 N	385	3.72	4.5 D	Y_N_4_5_4	Y_N_4_5_4_D_1		Y_N_4_5_4	Y_N_4_5_4_D_1	0	1	11450	16250	17150	20	12421 D		13722 D	572	14294 D	735	14357 D			
1201W	12 Old Milton Parkway	2 L	Y	Y	1 N	385	3.72	4.5 D	Y_N_4_5_4	Y_N_4_5_4_D_1		Y_N_4_5_4	Y_N_4_5_4_D_1	0	1	11450	16250	17150	21	12248 D		13531 D	572	14103 D	735	14166 D			
1202E	12 Old Milton Parkway	2 L	Y	Y	0 N	275	3.72	4.5 D	Y_N_4_5_4	Y_N_4_5_4_D_1		Y_N_4_5_4	Y_N_4_5_4_D_1	0	1	11450	16250	17150	21	12421 D		13722 D	572	14294 D	735	14357 D			
1202W	12 Old Milton Parkway	2 L	Y	Y	0 N	275	3.72	4.5 D	Y_N_4_5_4	Y_N_4_5_4_D_1		Y_N_4_5_4	Y_N_4_5_4_D_1	0	1	11450	16250	17150	21	12248 D		13531 D	572	14103 D	735	14166 D			
1203E	12 Old Milton Parkway	2 L	Y	Y	0 N	954	3.72	4.5 D	Y_N_4_5_4	Y_N_4_5_4_D_1		Y_N_4_5_4	Y_N_4_5_4_D_1	0	1	11450	16250	17150	21	12421 D		13722 D	572	14294 D	735	14357 D			
1203W	12 Old Milton Parkway	2 L	Y	Y	0 N	954	3.72	4.5 D	Y_N_4_5_4	Y_N_4_5_4_D_1		Y_N_4_5_4	Y_N_4_5_4_D_1	0	1	11450	16250	17150	21	12248 D		13531 D	572	14103 D	735	14166 D			
1204E	12 Old Milton Parkway	2 L	Y	Y	0 N	961	3.72	4.5 D	Y_N_4_5_4	Y_N_4_5_4_D_1		Y_N_4_5_4	Y_N_4_5_4_D_1	0	1	11450	16250	17150	21	12421 D		13722 D	572	14294 D	735	14357 D			
1204W	12 Old Milton Parkway	2 L	Y	Y	0 N	961	3.72	4.5 D	Y_N_4_5_4	Y_N_4_5_4_D_1		Y_N_4_5_4	Y_N_4_5_4_D_1	0	1	11450	16250	17150	21	12248 D		13531 D	572	14103 D	735	14166 D			
1205E	12 Old Milton Parkway	2 L	Y	Y	1 N	1195	3.72	4.5 D	Y_N_4_5_4	Y_N_4_5_4_D_1		Y_N_4_5_4	Y_N_4_5_4_D_1	0	1	11450	16250	17150	21	12421 D		13722 D	340	14062 D	654	14476 D			
1205W	12 Old Milton Parkway	2 L	Y	Y	1 N	1195	3.72	4.5 D	Y_N_4_5_4	Y_N_4_5_4_D_1		Y_N_4_5_4	Y_N_4_5_4_D_1	0	1	11450	16250	17150	21	12248 D		13531 D	340	13871 D	654	14285 D			
1206E	12 Old Milton Parkway	3 L	Y	Y	1 N	600	3.72	4.5 D	Y_N_4_5_6	Y_N_4_5_6_D_1		Y_N_4_5_6	Y_N_4_5_6_D_1	0	1	17750	24450	25850	21	12421 C		13722 C	340	14062 C	1076	14758 C			
1206W	12 Old Milton Parkway	2 L	Y	Y	1 N	600	3.72	4.5 D	Y_N_4_5_4	Y_N_4_5_4_D_1		Y_N_4_5_4	Y_N_4_5_4_D_1	0	1	11450	16250	17150	21	12248 D		13531 D	340	13871 D	1076	14567 D			
1207E	12 Old Milton Parkway	3 C	Y	Y	1 N	920	3.72	4.5 D	Y_N_4_5_6	Y_N_4_5_6_D_1		Y_N_4_5_6	Y_N_4_5_6_D_1	0	1	17750	24450	25850	32	22650 D		25023 E	601	25624 E	2634	27497 F			
1207W	12 Old Milton Parkway	3 C	Y	Y	1 N	920	3.72	4.5 D	Y_N_4_5_6	Y_N_4_5_6_D_1		Y_N_4_5_6	Y_N_4_5_6_D_1	0	1	17750	24450	25850	32	22521 D		24880 E	601	25481 E	2634	27354 F			
1208E	12 Old Milton Parkway	3 C	Y	Y	1 N	1060	3.72	4.5 D	Y_N_4_5_6	Y_N_4_5_6_D_1		Y_N_4_5_6	Y_N_4_5_6_D_1	0	1	17750	24450	25850	29	16978 C		18757 D	1700	20457 D	2388	21145 D			
1208W	12 Old Milton Parkway	3 C	Y	Y	1 N	1060	3.72	4.5 D	Y_N_4_5_6	Y_N_4_5_6_D_1		Y_N_4_5_6	Y_N_4_5_6_D_1	0	1	17750	24450	25850	29	18057 D		19949 D	1700	21649 D	2388	22337 D			
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1209W	12 Old Milton Parkway	3 C	Y	Y	0 N	1030	3.72	4.5 D	Y_N_4_5_6	Y_N_4_5_6_D_1		Y_N_4_5_6	Y_N_4_5_6_D_1	0	1	17750	24450	25850	29	18057 D		19949 D	1700	21649 D	2388	22337 D			
1210E	12 Old Milton Parkway	3 C	Y	Y	1 N	1180	3.72	4.5 D	Y_N_4_5_6	Y_N_4_5_6_D_1		Y_N_4_5_6	Y_N_4_5_6_D_1	0	1	17750	24450	25850	29	16978 C		18757 D	1700	20457 D	2388	21145 D			
1210W	12 Old Milton Parkway	3 C	Y	Y	1 N	1180	3.72	4.5 D	Y_N_4_5_6	Y_N_4_5_6_D_1		Y_N_4_5_6	Y_N_4_5_6_D_1	0	1	17750	24450	25850	29	18057 D		19949 D	1700	21649 D	2388	22337 D			
1211E	12 Old Milton Parkway	3 C	Y	Y	1 N	646	3.72	4.5 D	Y_N_4_5_6	Y_N_4_5_6_D_1		Y_N_4_5_6	Y_N_4_5_6_D_1	0	1	17750	24450	25850	29	16978 C		18757 D	1074	19831 D	2010	20767 D			
1211W	12 Old Milton Parkway	3 C	Y	Y	1 N	646	3.72	4.5 D	Y_N_4_5_6	Y_N_4_5_6_D_1		Y_N_4_5_6	Y_N_4_5_6_D_1	0	1	17750	24450	25850	29	18057 D		19949 D	1074	21023 D	2010	21959 D			
1212E	12 Old Milton Parkway	3 L	Y	Y	0 N	1205	3.72	4.5 D	Y_N_4_5_6	Y_N_4_5_6_D_1		Y_N_4_5_6	Y_N_4_5_6_D_1	0	1	17750	24450	25850	31	19022 D		21015 D	1074	22089 D	2010	23025 D			
1212W	12 Old Milton Parkway	3 L	Y	Y	0 N	1205	3.72	4.5 D	Y_N_4_5_6	Y_N_4_5_6_D_1		Y_N_4_5_6	Y_N_4_5_6_D_1	0	1	17750	24450	25850	31	21045 D		23250 D	1074	24324 D	2010	25260 E			
1301N	Wills Road NB	1 N	Y	N	1 N	377.37	3.73	4.5 U	N_2	N_2_U_Y		N_2	N_2_U_Y	0	1	4300	7300	8000	23	3431 C		3790 C	35	3825 C	102	3792 C			
1301S	Wills Road SB	1 N	N	N	0 N	377.37	3.73	4.5 U	N_2	N_2_U_N		N_2	N_2_U_N	0	1	3440	5840	6400	23	3181 C		3514 D	35	3549 D	102	3516 D			
1302N	Wills Road NB	1 N	N	N	0 N	808.61	3.73	4.5 U	N_2	N_2_U_N		N_2	N_2_U_N	0	1	3440	5840	6400	23	3431 C		3790 D	35	3825 D	102	3792 D			
1302S	Wills Road SB	1 N	N	N	0 N	808.61	3.73	4.5 U	N_2	N_2_U_N		N_2	N_2_U_N	0	1	3440	5840	6400	23	3181 C		3514 D	35	3549 D	102	3516 D			
1303N	Wills Road NB	1 N	N	N	0 N	351.25	3.73	4.5 U	N_2	N_2_U_N		N_2	N_2_U_N	0	1	3440	5840	6400	23	3431 C		3790 D	35	3825 D	102	3792 D			
1303S	Wills Road SB	1 N	Y	N	1 N	351.25	3.73	4.5 U	N_2	N_2_U_Y		N_2	N_2_U_Y	0	1	4300	7300	8000	23	3181 C		3514 C	35	3549 C	102	3516 C			
1304N	Wills Road NB	1 N	Y	N	1 N	389.62	3.73	4.5 U	N_2	N_2_U_Y		N_2	N_2_U_Y	0	1	4300	7300	8000	23	3431 C		3790 C	35	3825 C	339	4129 C			
1304S	Wills Road SB	1 N	N	N	0 N	389.62	3.73	4.5 U	N_2	N_2_U_N		N_2	N_2_U_N	0	1	3440	5840	6400	23	3181 C		3514 D	35	3549 D	339	3853 D			
1305N	Wills Road NB	1 N	N	N	0 N	3901.82	3.73	4.5 U	N_2	N_2_U_N		N_2	N_2_U_N	0	1	3440	5840	6400	23	3431 C		3790 D	35	3825 D	339	4129 D			
1305S	Wills Road SB	1 N	N	N	1 N	3901.82	3.73	4.5 U	N_2	N_2_U_N		N_2	N_2_U_N	0	1	3440	5840	6400	23	3181 C		3514 D	35	3549 D	339	3853 D			
1401E	Thompson Street EB	1 N	N	N	0 N	3275.25	0	2 U	N_2	N_2_U_N		N_2	N_2_U_N	0	1	3440	5												



DOWNTOWN MAIN SUPPLY & DEMAND RES. MARKET ANALYSIS

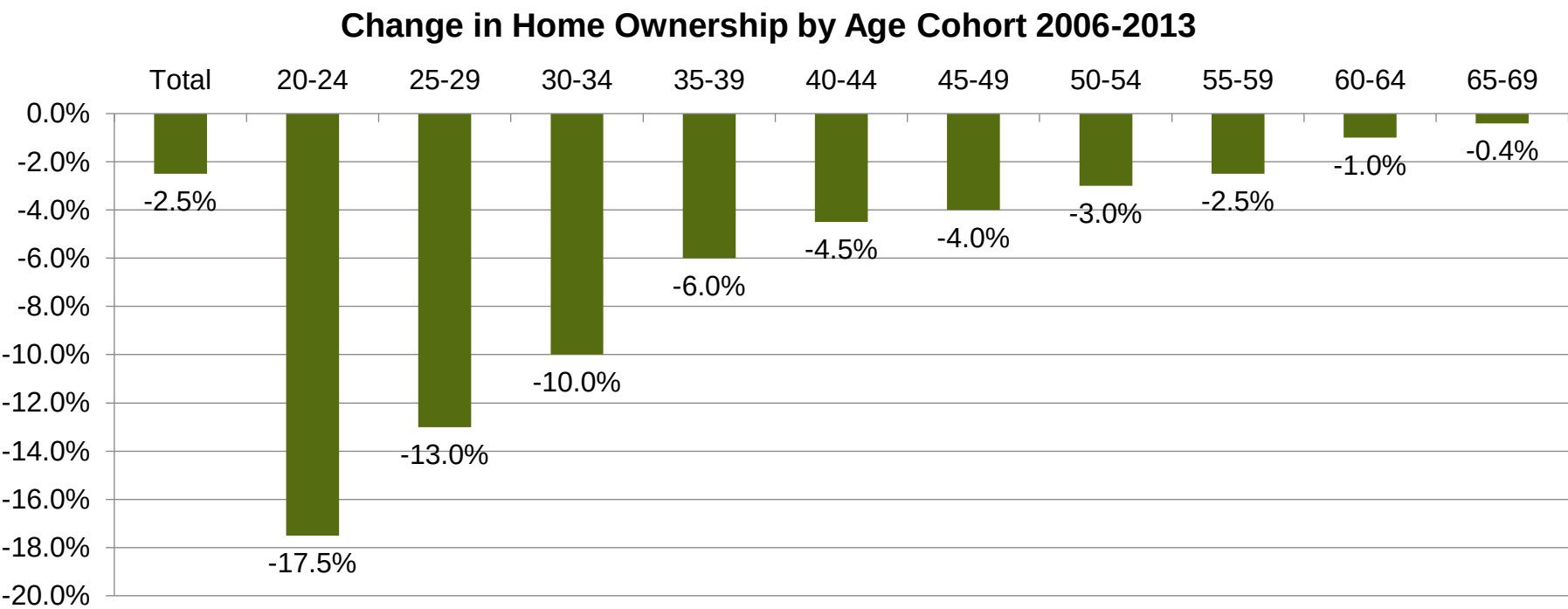
DUKE LAND GROUP
NOVEMBER 2016

FOR SALE ANALYSIS

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ALPHARETTA RESIDENTIAL SUPPLY AND DEMAND ANALYSIS

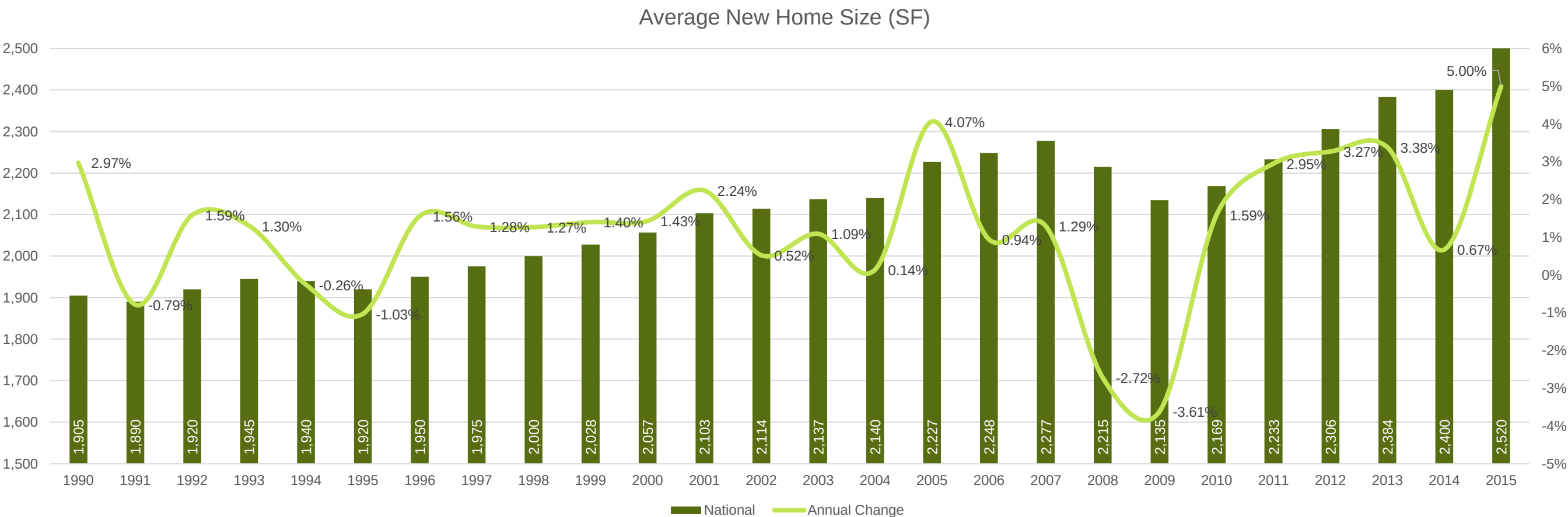
Exhibit 1
The Shifting Housing Market



Market Shifts

Following the recession, a 2.5% decrease in national home ownership was witnessed and is expected to continue going forward until more existing homes have regained their lost value. This shift is most significant in younger households, with the vast majority of Generation Y now choosing to rent.

The result of the shifting tenure preferences by age range, as well as the inability to afford larger homes, both combined to result in decrease in average home size for a period, but more recently the average has continued to increase.



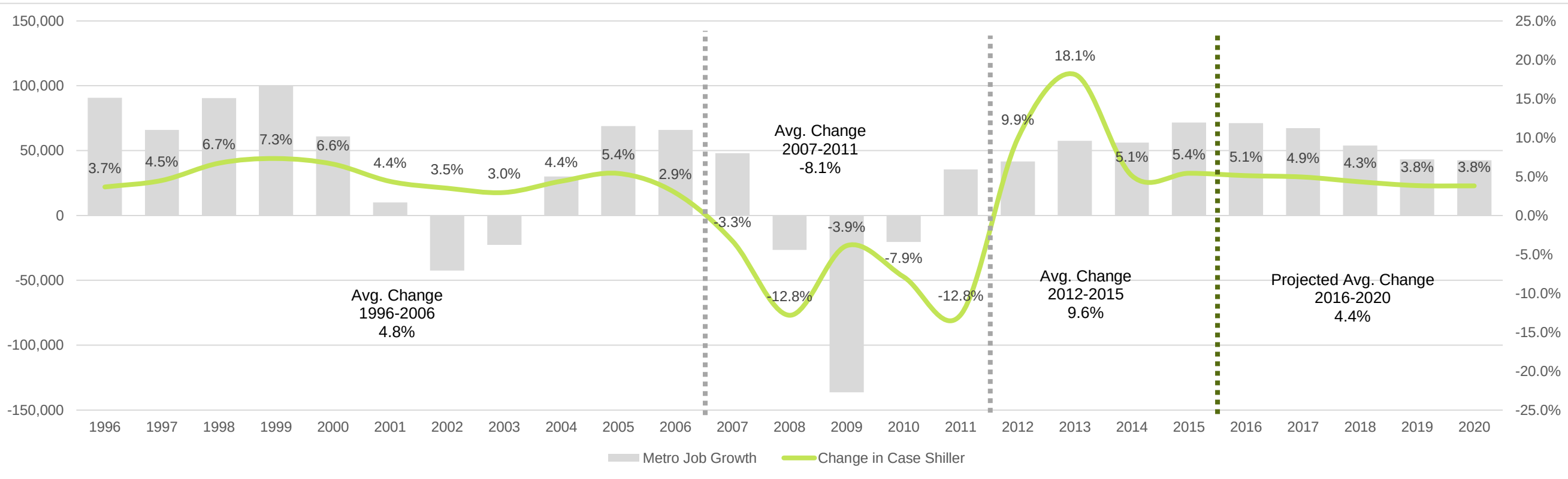
SOURCE: Noell Consulting Group, US Census American Housing Survey, National Association of Homebuilders



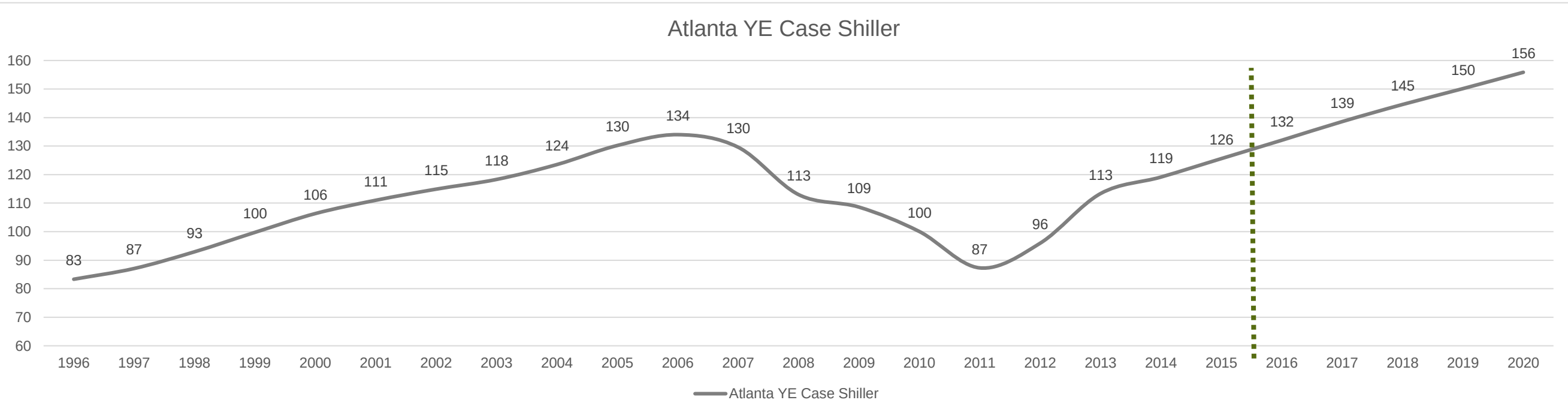
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ALPHARETTA RESIDENTIAL SUPPLY AND DEMAND ANALYSIS

Exhibit 2
Historical Home Price Trends - Case Shiller



Based on projected job growth and development patterns, we expect metro home prices to continue to see steady appreciation, although at levels considerably below the last four years as the market rebounded from the recession. We project a stabilized annual appreciation of around 4.4%/year by 2019, below the average 4.8%/year seen in metro Atlanta from 1996 to 2006, prior to the recession and housing collapse.



SOURCE: Noell Consulting Group, US Census Building Permits Survey, Moody's/Economy.com



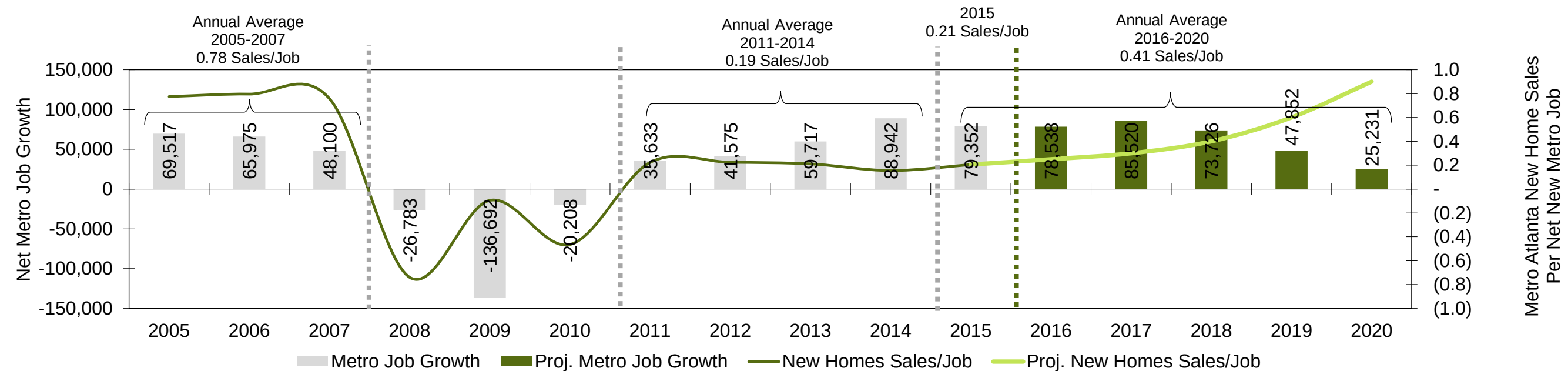
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ALPHARETTA RESIDENTIAL SUPPLY AND DEMAND ANALYSIS

Exhibit 3

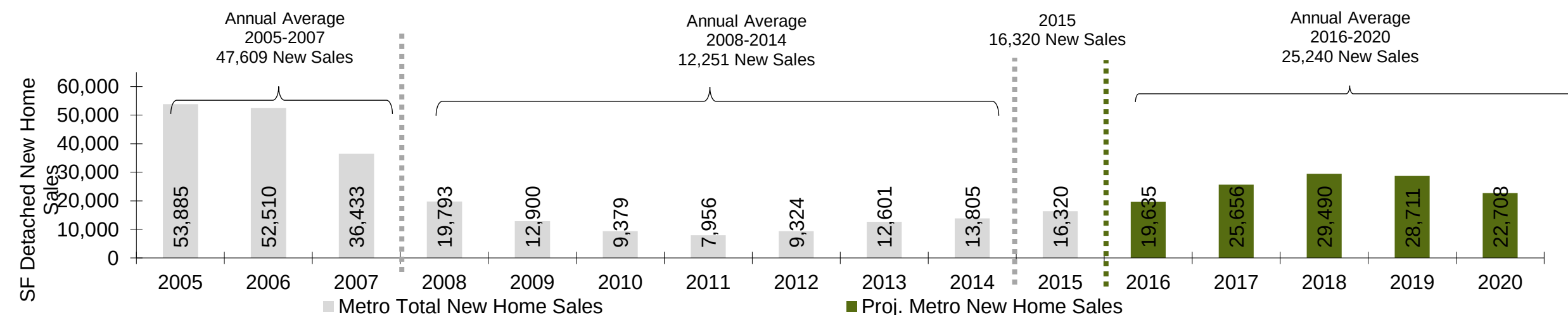
Historical and Projected Metro Atlanta Job Growth to Single Family New Home Sales

METRO ATLANTA JOB GROWTH AND NEW HOME SALES/NET NEW JOB



Like much of the country, the metro Atlanta new homes market is slowly recovering from the housing crash. Metro new home sales volume (including single family detached, townhomes, and condominium sales) in 2015 was up 22% from 2014 and have averaged 27% yearly increases in volume since bottoming out in 2011. Based on employment projections from Moody's Analytics, we expect this trend to continue over the next five years.

METRO ATLANTA NEW HOME SALES, SFD AND ATTACHED



We project an average of more than 25,000 new single family homes sold over the next five years. This is a higher volume than Atlanta has seen since 2007, although we do not think that sales will reach pre-recession levels.

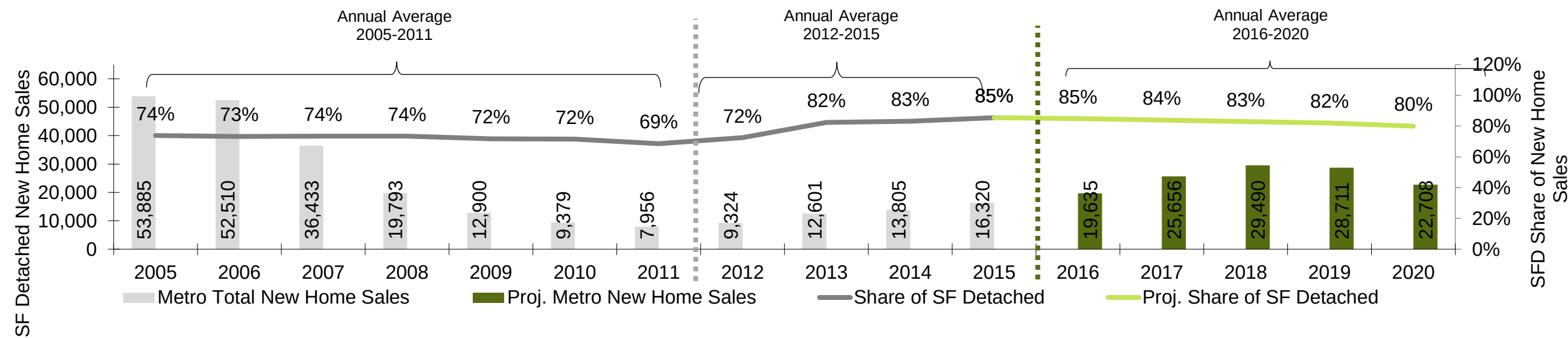
SOURCE: Noell Consulting Group, SmartNumbers, Moody's/Economy.com

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ALPHARETTA RESIDENTIAL SUPPLY AND DEMAND ANALYSIS

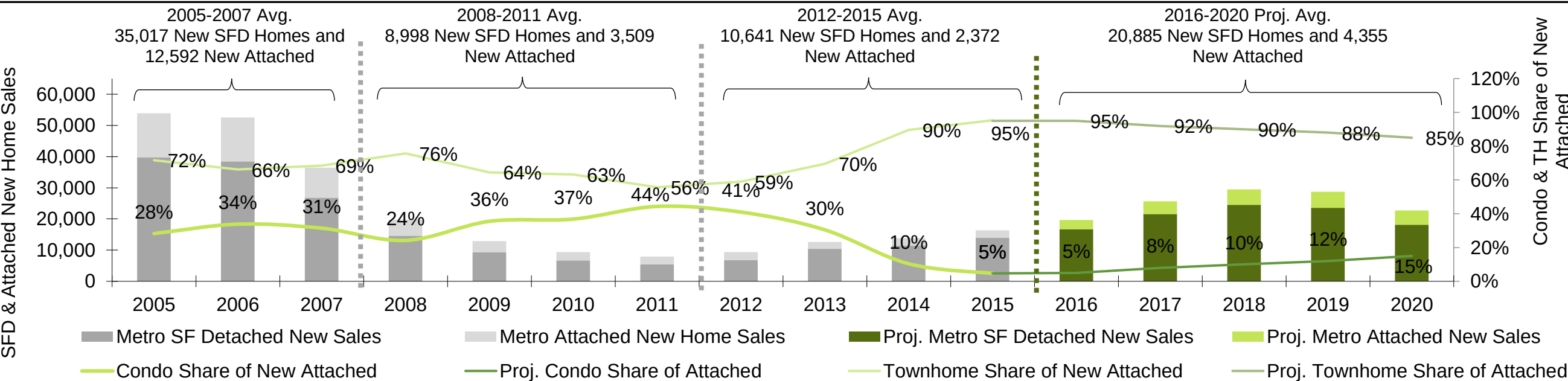
Exhibit 4
Historical and Projected Metro Atlanta Job Growth to Single Family versus Attached New Home Sales

METRO ATLANTA NEW HOME SALES



Another result of the recession was a more significant drop off in the number of new attached sales, a result of condominium and townhome builders being harder hit in the recession, and also the last to regain values. Last year 85% of all new sales were detached, the highest levels in recent history. While we expect this to come down over the next few years, we do not expect to get to the pre-recession levels of 70% during this cycle.

METRO ATLANTA SFD AND ATTACHED SALES



Given the difficulty in financing new condominium projects, the vast majority of the attached product will be townhomes during the next cycle. We forecast between 85-95% of the total attached market will be in townhome product versus only 70% during the pre-recession era.

SOURCE: Noell Consulting Group, SmartNumbers, Moody's/Economy.com

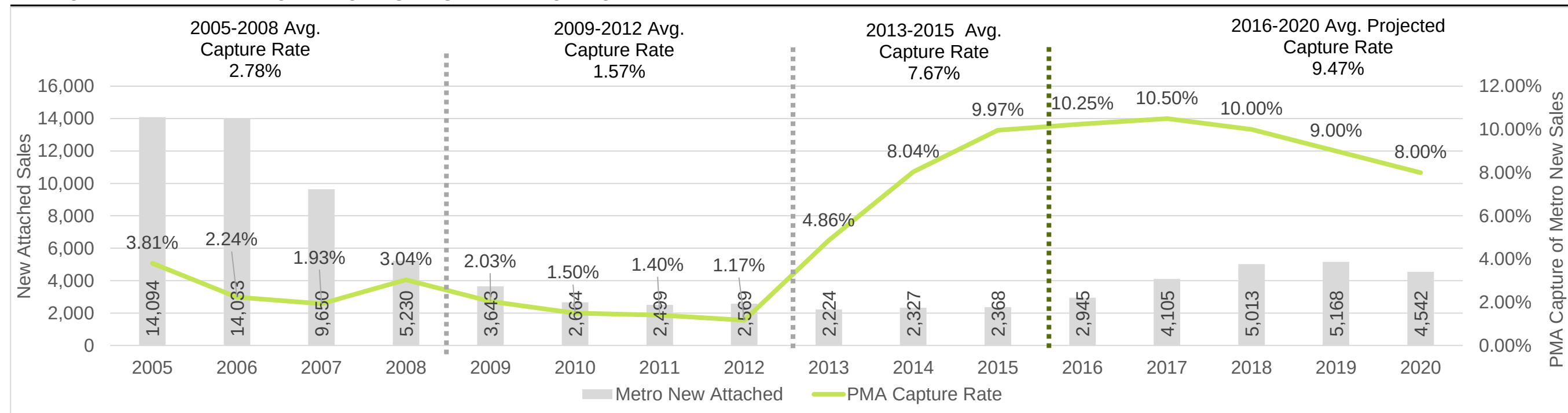


DUKE LAND GROUP

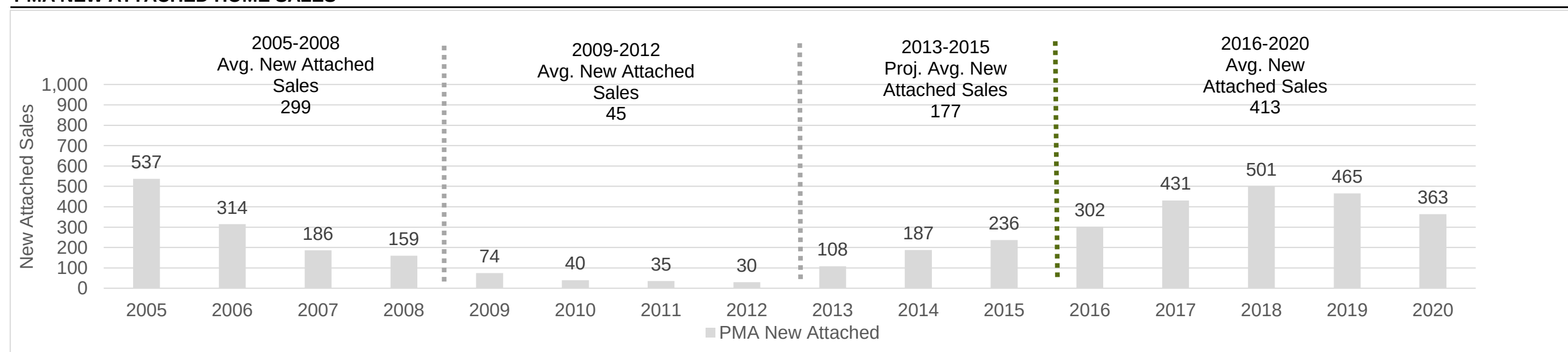
ALPHARETTA RESIDENTIAL SUPPLY AND DEMAND ANALYSIS

Exhibit 5
PMA New Attached Capture Rate and Sales

METRO ATLANTA NEW ATTACHED HOME SALES AND PMA CAPTURE



PMA NEW ATTACHED HOME SALES



The PMA (which includes zip codes 30004, 30009, and 30076) saw its largest capture of new attached sales in the metro in 2013-2015 at 7.67%, outpacing the historic average of 2.78% in 2005-2008. We project the capture rate will continue to climb and reach 10.5% before tapering off in 2019-2020. This is a result of the strong housing values in the PMA that have now surpassed historic peaks, and a desire for more maintenance free product among many of the audiences active in the market today - young couples and Empty Nesters. The result is a forecasted demand for an average of 413 new attached sales (vast majority of which will be townhome) through 2020 in the PMA.

SOURCE: Noell Consulting Group, SmartNumbers for Zip codes 30004,30009,300076

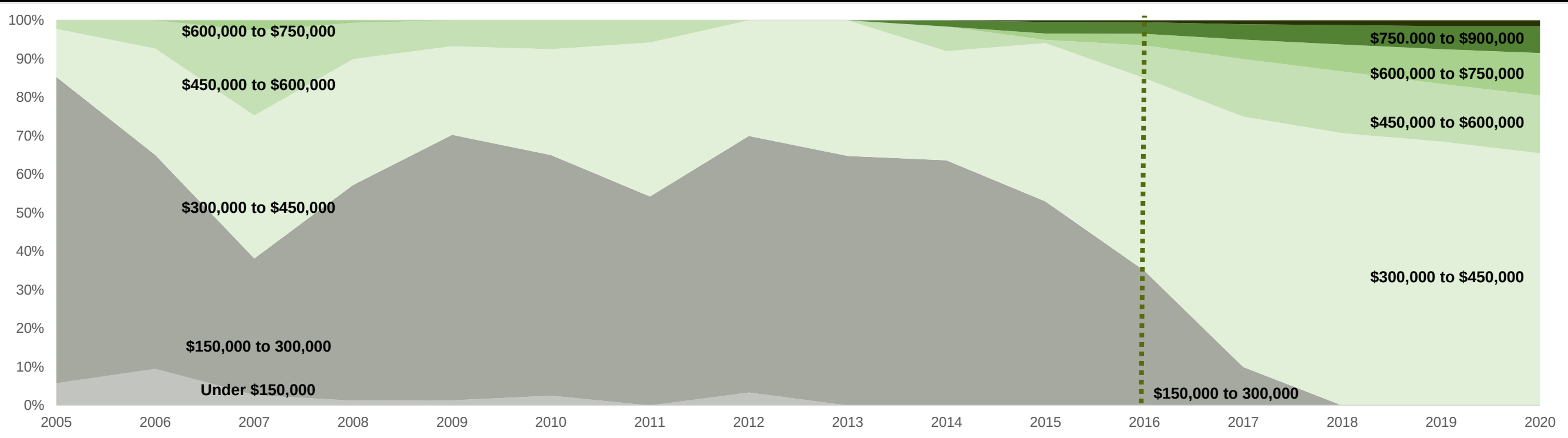


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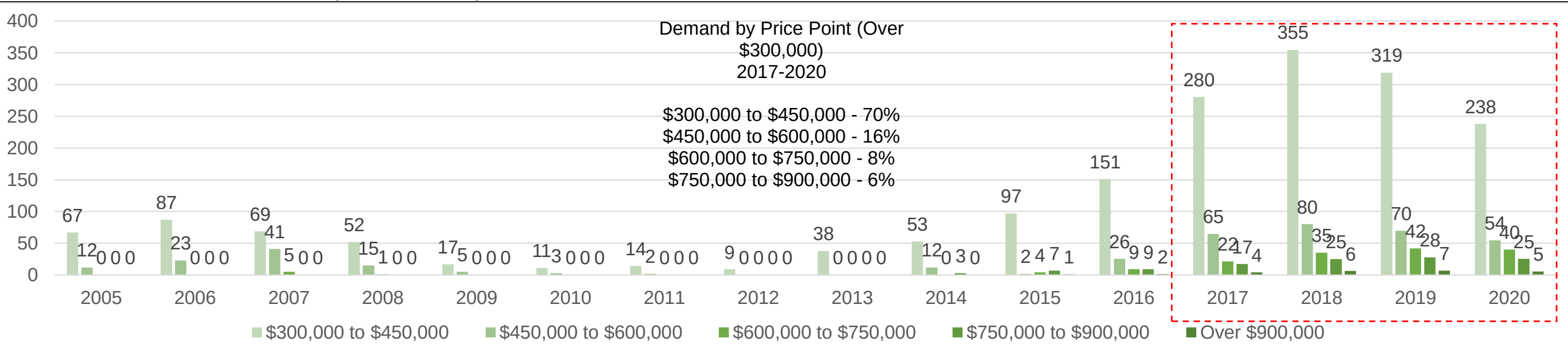
Exhibit 6
PMA New Attached Sales By Price Band

PMA ATTACHED SALES BY PRICE BAND (SHARE OF TOTAL)



As the for sale market continues to recover, we expect the PMA to see an increasing share of new attached homes selling above \$300,000. With increasing construction and land costs along with the increasing desirability of the PMA, we expect to see sales of product under \$300,000 significantly reduced. Future sales will increasingly be concentrated in the \$300,000-\$450,000 range and higher price bands, and again be primarily townhome product given the difficulty in financing speculative condominiums.

PMA ATTACHED NEW HOME SALES (OVER \$300,000)



SOURCE: Noell Consulting Group, US Census Building Permits Survey, Moody's/Economy.com



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ALPHARETTA RESIDENTIAL SUPPLY AND DEMAND ANALYSIS

Exhibit 7 Alpharetta PMA Attached New Demand and Supply Summary

Summary of Demand by Price Point	2000 - 2015 Average	2015	2016	2017	2018	2019	2020	2016 - 2020 Average	Total	Demand by Price
Under \$150,000	6	0	0	0	0	0	0	0	0	0%
\$150,000 to \$300,000	108	125	106	43	0	0	0	30	149	7%
\$300,000 to \$450,000	47	97	151	280	355	319	238	268	1,342	65%
\$450,000 to \$600,000	10	2	26	65	80	70	54	59	295	14%
\$600,000 to \$750,000	1	4	9	22	35	42	40	30	148	7%
\$750,000 to \$900,000	1	7	9	17	25	28	25	21	105	5%
Over \$900,000	0	1	2	4	6	7	5	5	25	1%
Total	173	236	302	431	501	465	363	413	2,063	100%
Total Above \$300,000	59	111	196	388	501	465	363	383	1,914	93%

Project	Developer	TH Units
Alstead	John Wieland	29
Milton Townhomes	Cowart Residential	41
Overture at Encore	John Wieland	55
Westside Pkwy	Ashton Woods Homes	33
The Walk at Braedan	Pulte	56
Old Milton	The Providence Group	49
East of Main	The Providence Group	42
Windsong	Talon Homes	32
Thompson Street	Edward Andrew Homes	40
Harlow	Edward Andrew Homes	305
Olmstead Park	-	21
Canton Street Commons	Peachtree Residential Properties	9
Sonoma	Taylor Morrison	47
Hidden Forest	Taylor Morrison	105
Encore Walk	Traton Homes	38
Avalon	Monte Hewett	50
Haynes Bridge Mixed-use	Fuqua/TPA Group	70
Westside Park	Real Estate Acquisitions LLC	53
Stonewalk Mayfield Corners	Robert Forrest	20
Appen Townhomes	-	17
Old Milton Village	Old Milton Holdings / John Wieland	111
Thompson Street	Thor Management	24
McGinnis Ferry / Union Hill	Sharp Residential	82
Foila Old Milton	The Beecham Group	15
Towns at Bridgehampton	Lennar	89
Windward Mill	Worthington Hyde Partners / Lennar	191

Based on our estimation of projected supply and demand in the market, NCG believes the market is slightly under supplied. We have forecasted a demand for 1,914 townhome units above \$300,000 from 2016-2020, leading to a remaining unmet demand of 234 townhome units even after accounting for the subject site.

Furthermore, while NCG was not engaged to study single family detached (SFD) residential, there is ample demand and the 6 SFD residential homes will quickly absorb.

Forecasted Demand 2016-2020 >\$300k	1,914
Total Proposed Townhome Units	1,624
Surplus Demand	290
Subject Site Proposed Unit Count	56
Remaining Unmet Demand	234



SOURCE: Noell Consulting Group, Atlanta Business Chronicle, MDJ, ABC, City of Alpharetta

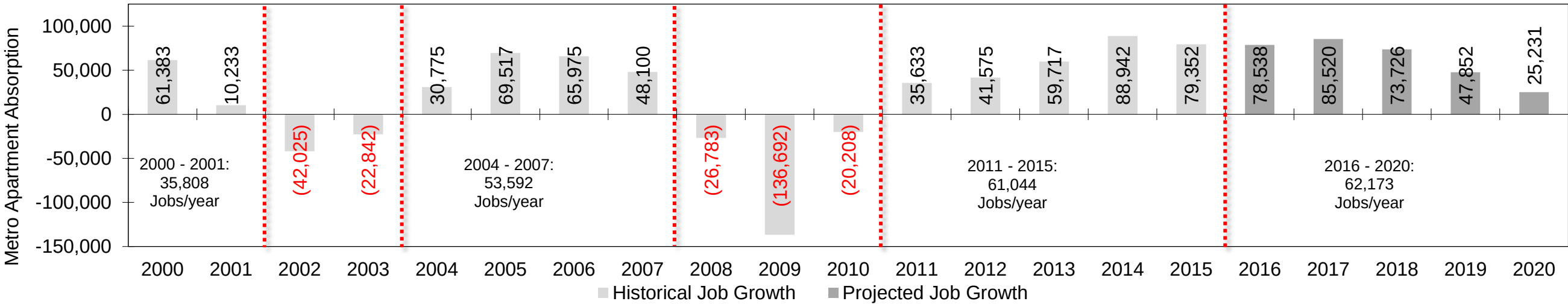
Rental Market Analysis

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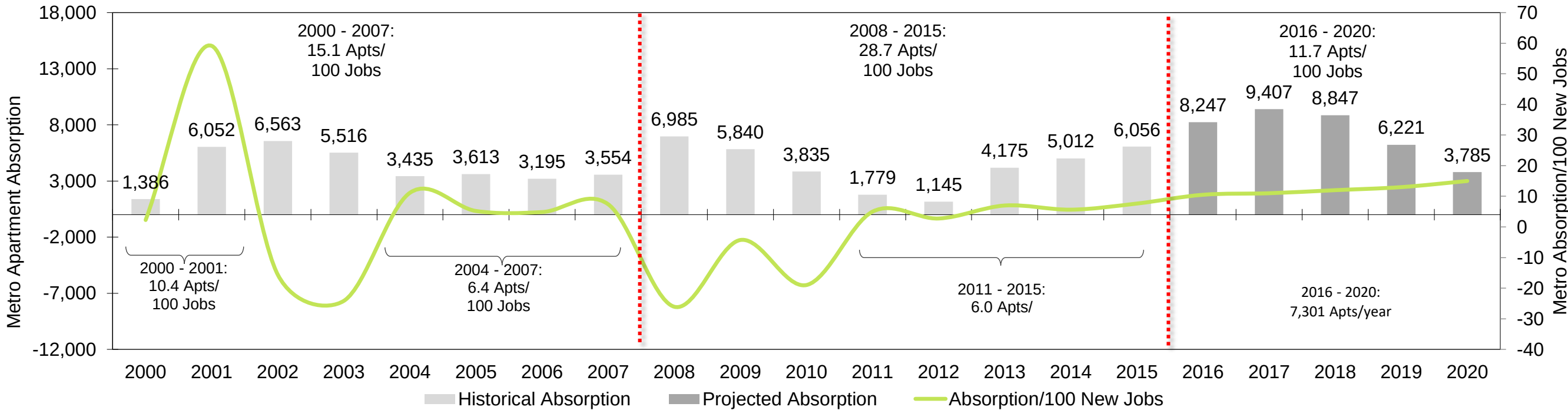
Exhibit 8
Historical and Projected Job Growth to Apartment Absorption Relationship in Atlanta

METRO JOB GROWTH



The Atlanta metro area has seen very strong job growth the last five years, with equally strong job growth projected by Economy.com the next four years. This job growth has pushed demand for Class A rental units, seen on the graph below. The metro area has absorbed an average of 5,081 units/year since 2013, although with rent growth over that same span averaging 8.0%/year the market is likely capable of supporting more supply than it has seen. The green line in the graph below tracks the relationship between Class A apartment absorption. Since 2000, the metro area has supported 19.9 units of absorption per 100 new jobs, although since 2011 the metro has only been able to absorb 6 units/100 new jobs. We expect the next five years to support apartment absorption moving back towards historical norms, averaging 11.7 units/100 new jobs.

METRO CLASS A APARTMENT ABSORPTION



SOURCE: Noell Consulting Group, CoStar and Economy.com | Moody's Analytics

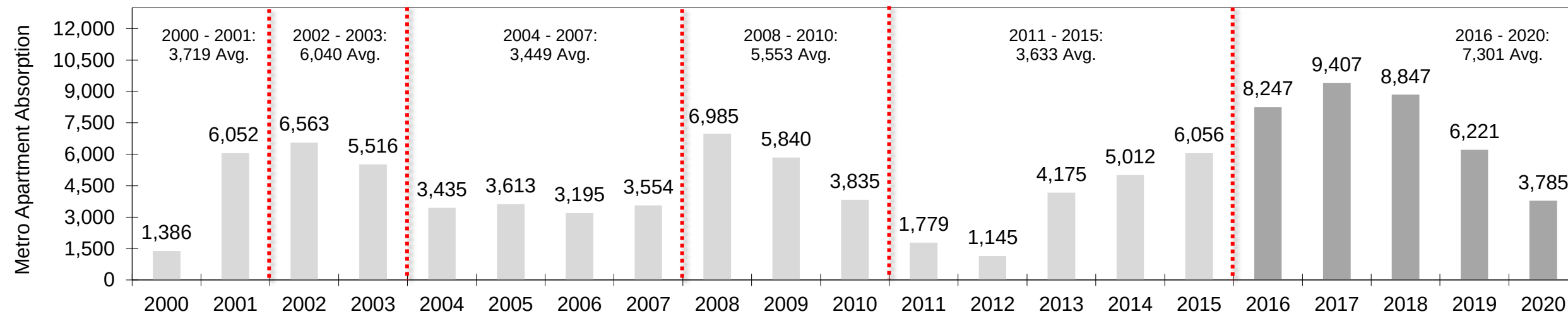


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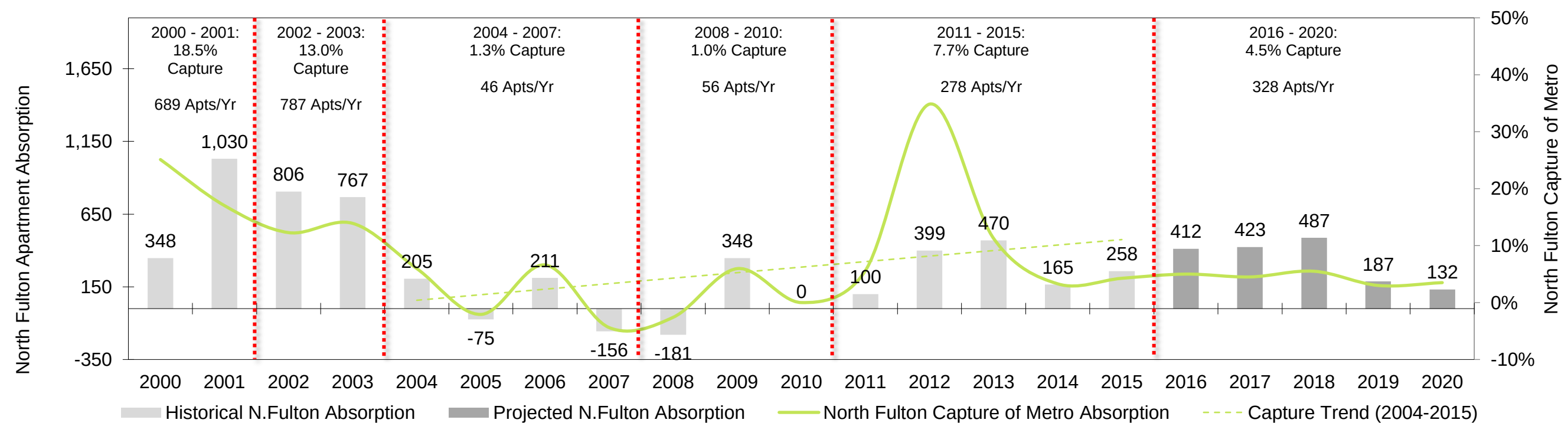
Exhibit 9
North Fulton Capture of Metro Class A Apartment Absorption

METRO CLASS A APARTMENT ABSORPTION



This exhibit shows metro Atlanta apartment absorption (top) along with absorption for North Fulton multifamily markets, including the Milton, Alpharetta, Roswell, Johns Creek and Mountain Park submarkets. As seen below, North Fulton had its highest capture rate of metro absorption over the past fifteen years from 2000-2001 (18.5%) and 2002-2003 (13%), this is most likely due to several apartment buildings being delivered in those years. From 2004-2010 the capture rate dropped to 1% but increased to 7.7% in recent years (2011-2015). We project the capture rate will drop slightly from the historical 7.7% rate from 2011 - 2015, this is mainly due to lack of deliveries - a likely result of entitlement constraints. Historically it is shown that North Fulton will have a high capture rate when there are deliveries. While the actual capture rate should vary year-to-year, we believe this trend line is a reasonable estimate to what the North Fulton market could support on average given historical performance.

NORTH FULTON CLASS A APARTMENT ABSORPTION



SOURCE: Noell Consulting Group and CoStar



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ALPHARETTA RESIDENTIAL SUPPLY AND DEMAND ANALYSIS

Exhibit 10 North Fulton Apartment Supply and Demand Analysis

	'00-'15 Average	11-'15 Average	2016	2017	2018	2019	2020	2016-2020 Average
Employment Growth in the Metro ¹	21,416	61,044	78,538	85,520	73,726	47,852	25,231	62,173
Projected Jobs to New Apt. Absorption In Metro	19.9	6.0	10.5	11.0	12.0	13.0	15.0	11.7
Est. Supportable New Apt Absorption in Metro²	4,259	3,633	8,247	9,407	8,847	6,221	3,785	7,301
North Fulton Capture of Metro	7%	8%	5.0%	4.5%	5.5%	3.0%	3.5%	4.5%
Est. Supportable New Apt Absorption North Fulton County	293	278	412	423	487	187	132	328

NOTES:

- The numbers indicate the percentage of the year that the projects are expected to be in lease-up. Unit counts are market rate only (where # of affordable units are known).
- Projects that are currently under construction are designated in **green**.
- There are 387 units currently under construction in the Competitive Market Area (CMA), and another 828 in the planning stages - not including the subject site. A total of 1,215 units are planned to be delivered from 2016 to 2020.
- After factoring in matriculation rates for those projects that may delay, drop out, or convert to condominiums in 2018-2020, we believe there will be 1,048 to reach the market through 2020 - not including the subject site.
- Our supply and demand analysis indicates 226 units of unmet demand over the next 5 year period even after including the subject site.

	2016	2017	2018	2019	2020	Total
Forecasted N. Fulton Apartment Demand:	412	423	487	187	132	1,641
North Fulton Future Pipeline						1,104
Echo at North Point Center (Pollack Shores)	0.25	0.25				111
Veranda at Avalon (North American)		0.75	0.50			276
Vickers Village (King Lowery Ventures)			0.50			80
Alpharetta City Center (Southcity)			0.50	0.50		168
Bell Road (NorSouth)			1.00			150
Haynes Bridge Mixed-use PH I (Fuqua/TPA Group)				1.00		215
Haynes Bridge Mixed-use PH II (Fuqua/TPA Group)					1.00	215
Total, Projects Known	0.3	1.0	2.5	1.5	1.0	1,215
Matriculation Factor	100%	100%	85%	75%	75%	1,048
Subject Site						200
Total, All Projects w/ Matriculation						1,248



Total Demand 2016-2020:	1,641
Total Supply 2016-2020 (does not include matriculation):	1,215
Total Supply 2016-2020 Incl. Subject Site (does not incl. matriculation):	1,415
Unmet Apartment Demand 2016-2020:	226

1/ Employment growth from Economy.com

2/ Noell Consulting Group analysis based on larger analysis and trends of the market.

3/ The Competitive Market Area (CMA) Submarket is shown above.

SOURCE: Noell Consulting Group, Costar US Census, and Claritas

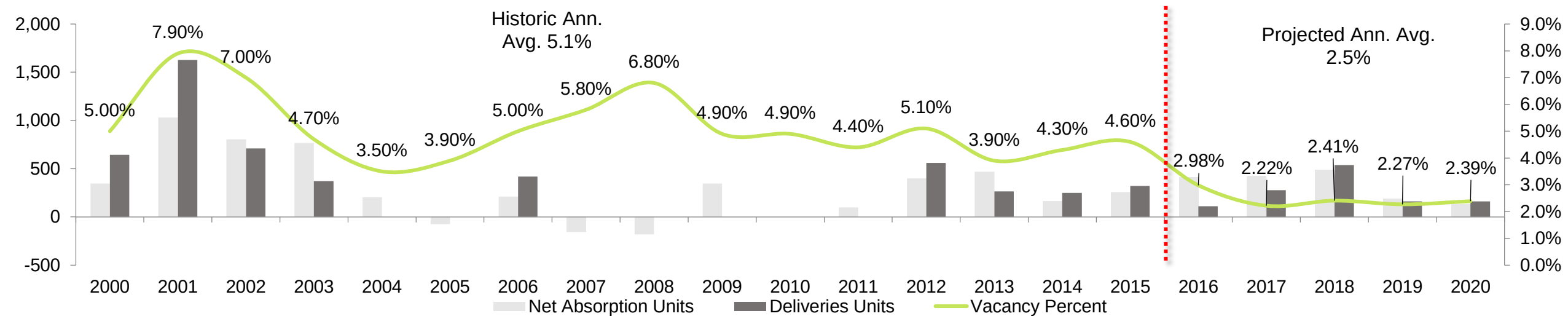
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ALPHARETTA RESIDENTIAL SUPPLY AND DEMAND ANALYSIS

Exhibit 11

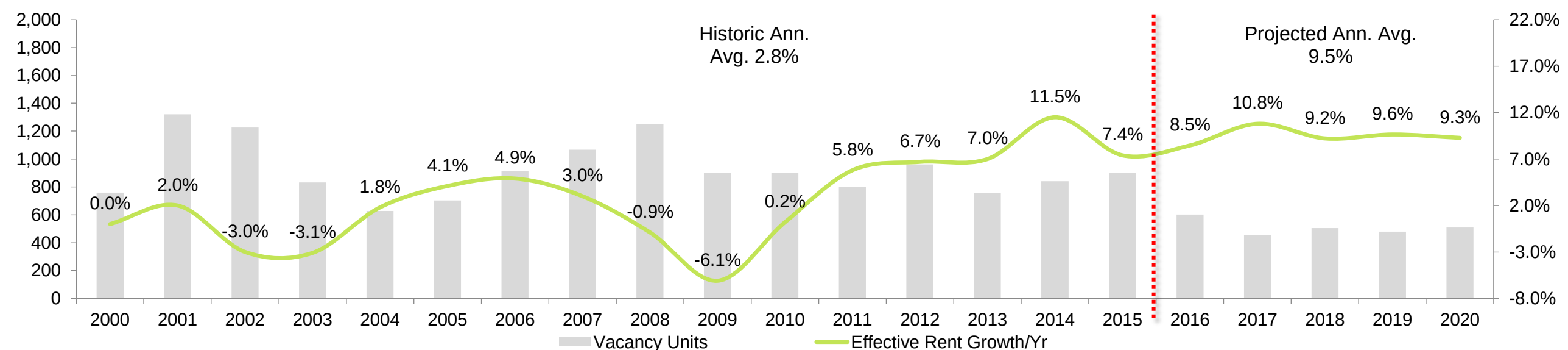
Historic and Projected Vacancy and Rent Growth of Class A Properties in the Competitive Market Area

N. FULTON CMA CLASS A ABSORPTION, DELIVERIES, AND VACANCY



The graph above shows historical absorption, deliveries and vacancy in the North Fulton CMA. Historically the CMA has averaged 5.1% vacancy, however we project that to drop to 2.5% mainly due to lack of deliveries in the market. The graph below shows historical vacant units and rent growth. We project the average rent growth will rise significantly from the historical average of 2.8% given the low vacancy. There is strong demand in the market, however supply is being artificially constrained by many municipalities within the N. Fulton CMA. As a result vacancies are among a regional low, and rental rate growth among a regional high - both strong metrics, however affordability is being limited and many multifamily developers have been pushed into Forsyth County resulting in lost economic development for N. Fulton.

NORTH FULTON COUNTY CMA CLASS A VACANCY & RENT GROWTH



SOURCE: Noell Consulting Group and CoStar

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ALPHARETTA RESIDENTIAL SUPPLY AND DEMAND ANALYSIS

Exhibit 12 Key Conclusions for City of Alpharetta

City of Alpharetta, GA	2000	2010	2014	Annual Growth Rate 2010 - 2014	Annual Growth Rate 2000 - 2014	2015 Est.	2020 Est.	City of Alpharetta Capture of Primary Market Area (Option A)	City of Alpharetta Capture of Primary Market Area (Option B)							
Population	34,854	57,551	60,903	1.5%	3.1%	62,764	72,955									
Households	13,911	21,742	22,300	0.6%	2.7%	22,899	26,146									
Total Occupied Housing Units	13,843	20,844	22,200	1.6%	2.7%	22,797	26,031									
% Owner Occupied	60.2%	65.7%	63.5%	-0.8%	0.4%	63.8%	65.0%									
% Renter Occupied	39.8%	34.3%	36.5%	1.6%	-0.7%	36.2%	35.1%									
Renter Occupied Units	5,516	7,146	8,099	3.3%	2.3%	8,262	9,127									
Owner Occupied Units	8,327	13,698	14,101	0.7%		14,535	16,913									
The above table shows the total population, households, and housing units by type from 2000-2014 and their annual growth rates. Using the growth rates from 2000-2014 (2010-2014 is shown for comparison purposes) NCG has estimated totals in 2015 & 2020. For both apartment units and for-sale product NCG has played out the total units needed, assuming historic growth rates, to fill the demand gap using multiple options. Option A uses historic growth trends (i.e. 2020 renter occupied units - 2015 renter occupied units equals 865 rental units and 2,378 for-sale units to meet demand), Option B uses the proposed policy cap for each housing type (proposed by the Bleakely Advisory Group) and applies that percentage to estimated 2020 total occupied housing units to come up with the units needed to meet demand (1,109 rental and 2,125 for-sale), and finally Option C simply uses NCG's job driven market growth to forecast what is supportable within the Alpharetta Primary Market Area (PMA) analyzed earlier in this study (1,641 rental and 4,673 for-sale). Lastly, NCG has provided the percentage of the Alpharetta PMA (which includes more than just the city of Alpharetta and differs in geography for apartment and for-sale product) that the City of Alpharetta would have to capture of the job driven market growth in order to meet the necessary units needed, assuming historic growth rates, for each both Option A & Option B.																
										New Apartment Units Needed 2016-2020						
								Option A: Historic Demographic Growth Trends						865		
								Option B: Policy Cap at 36% Rental						1,109		
								Option C: Job Driven Market Driven Growth						1,641	53%	68%
								New For-Sale Units Needed 2016-2020								
								Option A: Historic Demographic Growth Trends						2,378		
								Option B: Policy Cap at 64% Owner						2,125		
								Option C: Job Driven Market Driven Growth						4,673	51%	45%

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ALPHARETTA RESIDENTIAL SUPPLY AND DEMAND ANALYSIS

Exhibit 13
Walkability Premium

The Subject Site will be composed of multiple uses, including office, retail, and different forms of residential. This mix of uses are integral in creating walkable environments.

Why Walkable Environments?

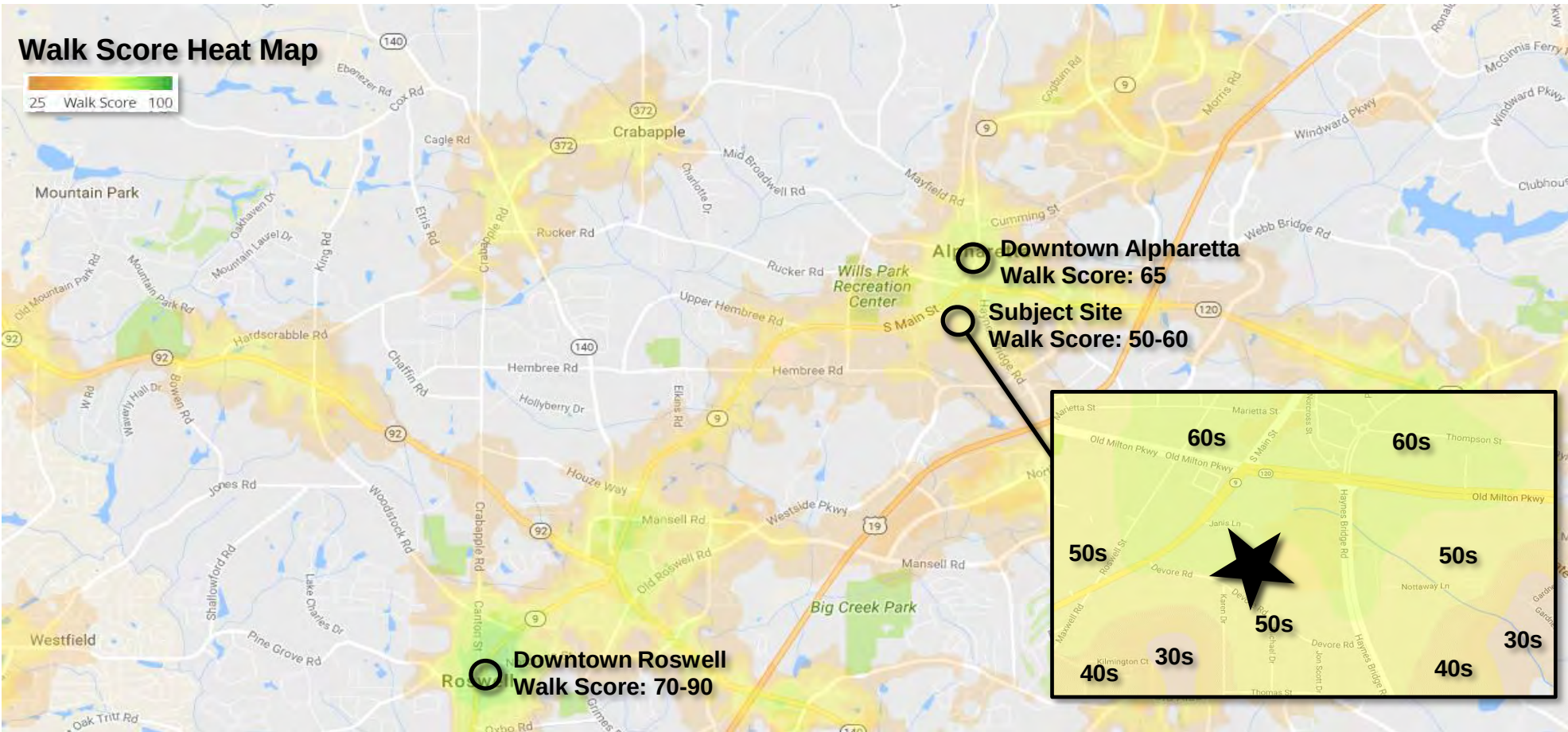
Walkable environments are key to economic competitiveness and creating healthy communities, all while increasing property tax value per acre.

Increasingly, Millennials and seniors are looking for walkable environments, with studies showing 80% of 18- to 34-year old's want to live in walkable neighborhoods and per AARP surveys roughly 60% of those over 50 want to live within one mile of daily goods and services.

The table found within this exhibit shows the walkability premium found within 14 cities, sorted by the premium percentage found in home prices for one-point increase in Walk Score. These premiums not only show the demand for walkable environments within the Atlanta metro, but show that the City of Alpharetta can increase taxable land value of new and existing communities by encouraging developments composed of a mix of uses that create walkability.

Furthermore, Christopher Leinberger of George Washington University, completed a study of WalkUPs (Walkable Urban Places) throughout the nation, including Atlanta, and discovered that office, retail, and rental housing achieved 30%, 144%, and 12% premiums respectively over their drivable suburban counterparts.

Leinberger has identified established WalkUPs throughout the metro, of which Roswell is one, as well as emerging and potential WalkUPs which include areas near Downtown Alpharetta and the subject site. NCG believes the subject site will help establish Downtown Alpharetta as a walkable community, attracting an affluent, broad demographic while maximizing taxable value per acre.



The Walkability Premium in 14 Cities: Home Price Increase For One-Point Increase in Walk Score

Metro Area	Median Sale Price	Premium (\$)	Premium (%)	Luxury Market (Top 5%)	Premium (\$)	Premium (%)
Atlanta	\$168,000	\$2,838	1.69%	\$580,000	\$5,424	0.94%
Washington DC	\$360,000	\$4,386	1.22%	\$930,000	\$7,245	0.78%
Boston	\$325,000	\$3,927	1.21%	\$985,000	\$7,385	0.75%
Chicago	\$222,000	\$2,437	1.11%	\$680,000	\$5,581	0.82%
Seattle	\$375,000	\$3,603	0.96%	\$1,000,000	\$5,119	0.51%
Denver	\$285,000	\$2,410	0.85%	\$685,000	\$5,230	0.76%
Los Angeles	\$475,000	\$3,948	0.83%	\$1,800,000	\$8,225	0.46%
San Diego	\$449,000	\$2,205	0.49%	\$1,299,000	\$6,511	0.50%
Portland	\$275,000	\$1,210	0.44%	\$630,000	\$1,944	0.31%
San Francisco	\$950,000	\$3,943	0.42%	\$3,000,000	\$8,077	0.27%
Oakland	\$523,000	\$1,735	0.33%	\$1,365,000	\$4,384	0.32%
Baltimore	\$229,900	\$652	0.28%	\$631,690	\$1,757	0.28%
Phoenix	\$204,900	\$217	0.11%	\$585,000	\$277	0.05%
Orange County	\$580,000	\$114	0.02%	\$1,728,000	(\$451)	-0.03%

SOURCE: NCG, Urban Land Institute, The WalkUP Walk-Up Call: Atlanta by Christopher B. Leinberger, Walk Score, The Wall Street Journal



Taylor, Elicia

From: Cook, Kathi
Sent: Wednesday, September 28, 2016 11:48 AM
To: Paula Milliard
Cc: Taylor, Elicia; Woodman, Michael
Subject: RE: Mixed-use development on S Main St.

Thank you for your comments, they will be included in the report to the Planning Commission and City Council.
-Kathi Cook

-----Original Message-----

From: Paula Milliard [<mailto:pmilliard@yahoo.com>]
Sent: Wednesday, September 28, 2016 10:50 AM
To: Drinkard, James
Cc: Cook, Kathi; Belle Isle, David
Subject: Mixed-use development on S Main St.

The proposed mixed-use development off S Main St and Devore Rd sends up some red flags. ▶ ▶ ▶
Yes, mixed-use is a great idea in this location, however, this developer is asking for a rezoning to make this a high density rental community in the heart of Alpharetta's downtown.
200 multi-family rentals
80 condo rentals
64 detached home rentals
5 and 6 stories high

My suggestion to the Planning Commission and City Council is to modify this project to:
Moderate density - upscale condos and townhouses that are owned, not rented.
This would be consistent with other downtown properties. Other developers have honored the city's and residents' vision. So should this developer.

There are no shortages of buyers in this area. A large rental community of this density would devalue the higher end town homes near by. It would also put a financial strain on nearby schools, police and fire department without giving back to the community in property taxes.

Thank you,
Paula Milliard
pmilliard@yahoo.com

Sent from my iPad

Nov. 22, 2016

To: Alpharetta Planning Commission
Re: Opposition to Perling/13 S Main St DT-MU rezoning

When I learned of the new downtown high density zoning and how far it extended on the comprehensive master plan, I worried that high density rezoning would get even more out of control. And when I learned of the Perling S Main St development application, my concerns reached their peak. High density has already arrived in Alpharetta in full force, and now the high-density mixed-use conglomeration is attempting to creep down Highway 9.

We have Avalon, the Old Milton Holdings development, Downtown City Center, and Peridot – all approved high-density mixed-use developments within a two-mile radius of each other. Why do we possibly need another one within a mile of these developments, especially when we can consider that:

- Just within the above mentioned high density mixed-use developments, we already have approved approximately 1,395,571 sq ft of office space and 763,335 sq ft of retail.¹
- Within the above mentioned high density mixed-use developments, we have approved about 1,479 residential units (single family housing, townhomes, condos, apartments).¹
- Our approved townhomes already exceed the 5-year estimate.¹
- Our rental units are at 36% of the housing inventory, which is already at the high end of the rental study's suggestion of 28%-36% and is higher than the city's goal of 32%.²

Below are some points from the application as to why the developer thinks this type of development is appropriate and my comments to these:

- “Neighborhood feel that the downtown core needs.”
The downtown core now has plenty of neighborhoods underway within Avalon, the Old Milton Holdings development, and Downtown City Center, along with Peridot, as mentioned above, plus several more developments that may not be included in the above: 15 townhomes along Old Milton/Beecham Group (medium density), 24 condos on Thompson St/Kairos (high density), 30 residential units at Canton St Commons (high density), 12 homes on Canton/Twelve on Canton (low density), and 28 single family homes at Wills Rd and Rucker/Enclave at Wills Park (medium density).
- The development is “within master plan downtown corridor area; in downtown area where high density belongs.”
The developer is seeking a variance to the DT-MU zoning to more than double the density – as if 10 units/acre isn't enough, he is seeking 24 units/acre! I don't agree with the master plan SUGGESTION of extending the downtown zoning to this area, let alone doubling the density. Besides, we already have enough high density in all the above mentioned approved developments within a one-mile radius of this application.
- “Property is not good for current C-2 zoning due to site shape, downtown vision, surrounding use and visibility.”
Again, we have enough already-approved developments that meet the “downtown vision” close to this area. Commercial is definitely workable along Main St where the current strip center is now. If commercial doesn't work for the area behind the current strip center and existing residential building, wouldn't a low density single family housing development work to complement the single family neighborhoods on the opposite side of Devore St.?

- “Peculiar upscale urban architecture – new precedent the area will need. A new standard and above the level of standard of the current DT-MU.”
Didn’t we recently establish the downtown standard – now there is already a need to change/“improve” that standard by doubling the density and changing the look?
- “Meets vision of redeveloping poor properties.”
Changing a “poor property” for a super high-density, multi-use monstrosity that is overkill is not the answer. This property can be improved in a less invasive manner.

City Council member Jim Gilvin conducted a survey among 1,100 residents, and of the 150+ responses, 87% of the respondents said that the level of development in Alpharetta is too much. 84% of the respondents said they envisioned the downtown area to be similar to Canton St in Roswell as opposed to Buckhead or Decatur. We are choking Alpharetta with the current level of development, and the goal of maintaining a hometown feel that residents want is disappearing in the name of high-density development.

Please do not approve the Perling/S Main St rezoning application.

Thank you for your consideration,
Christine Kujawski
Alpharetta resident

¹ Information compiled from development summary documents received from Alpharetta city staff and on city website.

² From “Alpharetta Rent Study – Updated 10-27-2016” posted on Alpharetta city website.

CITIZEN PARTICIPATION FORM - PART B

This form must be completed and submitted to the City of Alpharetta Community Development Department a minimum of twenty (20) working days prior to the scheduled Public Hearing. Failure to do so will result in cancellation of the scheduled hearing.

Public Hearing or Project Name: Downtown Main, LLC / Duke Land Group

Contact Name: Bill Probst / Don Rolader

Telephone: 770-442-0330

Please describe comments and concerns provided by any and all individuals contacted as part of the the Citizen Participation Program. If any individuals provided written correspondence, please attach copies of same to this report.

As of the date of this report, Applicant has not received any comments from notified parties. This report will be amended as

comments are received.

Method by which these individuals were contacted. Please mark all that apply. *Please provide samples of any and all written communications used to provide notification.*



Letter



Personal Visits



Telephone



Group Meeting



Email



Other (Please Specify) _____

Attach a list of people who have been notified of this application and provided information describing the subject proposal. Please note that ALL adjoining property owners MUST be notified.

See attached list

I, the undersigned, as an authorized representative of the applicant and Public Hearing item identified above, do solemnly swear and attest, subject to criminal penalties for false swearing, that the information provided in this Citizen Participation Form - Part B and in any and all documents provided in support of this report are true and accurate. I further understand that any false statements provided by representatives of the applicant as part of this report may result in penalties up to and including denial of the subject application.

Signature of Authorized Agent: Donald A. Rolader

Donald A. Rolader

Date: 10/12/2016

Print Form



September 30, 2016

Property Owner

RE: Rezoning Application, Conditional Use and Variance request Application by Duke Land Group, LLC for property located on South Main Street at Devore Road, Alpharetta, GA

Dear Property Owner:

The Duke Land Group, LLC has filed an application for rezoning from C-2 to MU, a conditional use request to permit rental housing in the multi-family parcel and a variance to permit a 5 story height limit on buildings, on 12.91± acres on South Main Street at the intersection of Devore Road for the development of a mixed use development on this property.

The Planning Commission meeting is scheduled for November 3, 2016 at 6:30 p.m. at City Hall. The City Council meeting is scheduled for November 14, 2016 at 6:30 p.m. at City Hall. If you have questions or would like additional information, please contact Don Rolader at 770-442-0330. His fax number is 770-442-0641, and his email is don@roladerandrolader.com. His address is 1865 Lockeway Drive, Suite 601, Alpharetta, GA 30004.

Sincerely,

Bill Probst, Vice President for
Duke Land Group, LLC
4828 Ashford Dunwoody Rd
Suite 400
Atlanta, Ga 30338

178 SOUTH MAIN LLC
Or Current Property Owner
178 S MAIN ST STE 300
ALPHARETTA GA 30009 7951

ALPHA DEVELOPMENT CORP
Or Current Property Owner
P O BOX 92
ALPHARETTA GA 30009

BRITENSTINE SPENCER A & SHERI L
Or Current Property Owner
203 NOTTAWAY LN # 9
ALPHARETTA GA 30009

BUTTOLPH FRANCES P
Or Current Property Owner
9007 MAPLE HILL CT
HUNTERVILLE NC 28078

CARTER MILLARD T ET AL
Or Current Property Owner
884 DOCK LATHAM TRL
BALL GROUND GA 30107

COUNTRY MANOR HOMES DEV CORP
Or Current Property Owner
284 SOUTH MAIN ST # 600
ALPHARETTA GA 30004

DAMERON JULIA
Or Current Property Owner
207 NOTTAWAY LANE
ALPHARETTA GA 30009

DAVIDSON CASEY T & BOGLE RACHEL A
Or Current Property Owner
117 NOTTAWAY LANE
ALPHARETTA GA 30009

DOVE PAUL F
Or Current Property Owner
292 S MAIN ST STE 600
ALPHARETTA GA 30009 1985

FARMER MEGHAN K
Or Current Property Owner
119 NOTTAWAY LANE
ALPHARETTA GA 30009

AARENE REAL ESTATE HOLDINGS LLC
Or Current Property Owner
296 THOMPSON ST
ALPHARETTA GA 30004

BAILEY JAMES R & BAILEY MARY M
Or Current Property Owner
115 NOTTAWAY LANE
ALPHARETTA GA 30009

BRUNA LLC
Or Current Property Owner
P O BOX 1324
ALPHARETTA GA 30009

C S H F OF GA INC
Or Current Property Owner
1800 CENTURY BLVD NE
ATLANTA GA 30345

COLLINGS MICHAEL T & COLLINGS LAURA D
Or Current Property Owner
121 NOTTAWAY LANE
ALPHARETTA GA 30009

COUNTRY MANOR HOMES DEVELOPMENT CORP
Or Current Property Owner
286 S MAIN ST
ALPHARETTA GA 30009

DANYO DAN
Or Current Property Owner
730 COOPER SANDY COVE
ALPHARETTA GA 30004 0801

DESMOND KERRY M & SHANLEY CATHERINE M
Or Current Property Owner
111 NOTTAWAY LANE
ALPHARETTA GA 30009

EARTHLY MATTERS CONTRACTING INC
Or Current Property Owner
1360 UNION HILL RD SUITE 1E
ALPHARETTA GA 30004

FORD DEMARCO D
Or Current Property Owner
201 NOTTAWAY LANE
ALPHARETTA GA 30009

ALG LIMITED PARTNERSHIP
Or Current Property Owner
P.O. BOX 450233
ATLANTA GA 31145

BRAMBHATT KANAIYALAI S & SAROJINI K
Or Current Property Owner
3771 ARC WAY
LAWRENCEVILLE GA 30044

BURGESS B GAIL
Or Current Property Owner
11715 HAYNES BRIDGE RD
ALPHARETTA GA 30009 1928

CANOPY MAIN STREET INC
Or Current Property Owner
4025 WOODLAND PARK BLVD STE 310
ARLINGTON TX 76013

COLONY PARK INC
Or Current Property Owner
284 S MAIN ST SUITE 400
ALPHARETTA GA 30009

CREME PROPERTIES L P
Or Current Property Owner
8400 E PRENTICE AVE SUITE 1320
GREENWOOD VILLAGE CO 80111 2925

DASTHAGIR GULAM & NGUYEN THAO T
Or Current Property Owner
113 NOTTAWAY LANE
ALPHARETTA GA 30009

DOVE JAMES D
Or Current Property Owner
292 S. MAIN ST SUITE 500
ALPHARETTA GA 30009

EASTMOORE RAY
Or Current Property Owner
2895 BROOKFIELD CIR
CUMMING GA 30004

FOX DIANA M
Or Current Property Owner
205 NOTTAWAY LANE
ALPHARETTA GA 30009

FULTON COUNTY BANK
Or Current Property Owner
P. O. BOX 723427
ATLANTA GA 31139

GRONHOLM SCOTT A & GINGER D
Or Current Property Owner
12200 KING CIR
ROSWELL GA 30075

HAIGLER CAPITAL LLC
Or Current Property Owner
2005 OLD MILTON PKWY
ALPHARETTA GA 30009

HENDERSON SUSAN WEBB STANLEY T
Or Current Property Owner
311 ROCK FENCE RD NW
ADAIRSVILLE GA 30103

HERRON CLAUD J & DEANNA G
Or Current Property Owner
351 JON SCOTT DR
ALPHARETTA GA 30004 2109

HFT INVESTMENT HOLDINGS LLC
Or Current Property Owner
304 KAREN DR
ALPHARETTA GA 30009

HODGSON ENTERPRISES LLC
Or Current Property Owner
294 SOUTH MAIN ST # 300
ALPHARETTA GA 30004

HOLIDAY ENTERTAINMENT LLC
Or Current Property Owner
1827 POWERS FERRY RD # 5
ATLANTA GA 30339

HOPKINS JOHNNY P & DOROTHY
Or Current Property Owner
365 MICHAEL DR
ALPHARETTA GA 30004 2119

IMRJ LLC
Or Current Property Owner
13370 PROVIDENCE PARK DR
ALPHARETTA GA 30009

J & J PROPERTIES INC
Or Current Property Owner
P.O. BOX 22147
KNOXVILLE TN 37933

JDR HOLDINGS LLLP
Or Current Property Owner
292 SOUTH MAIN ST # 200
ALPHARETTA GA 30004

JMA HOMES ONE SIXTY LLC
Or Current Property Owner
PO BOX 768731
ROSWELL GA 30076

JW HOMES LLC
Or Current Property Owner
4125 ATLANTA RD SE
SMYRNA GA 30080

KARTOS JOHN L
Or Current Property Owner
P.O. BOX 22147
KNOXVILLE TN 37933

KENT RONALD & ELIZABETH
Or Current Property Owner
294 KAREN DR
ALPHARETTA GA 30009 2114

KJM HOLDINGS LLC
Or Current Property Owner
895 MANSELL RD
ROSWELL GA 30076

KNIGHT ELSIE BURGESS
Or Current Property Owner
11725 HAYNES BRIDGE RD
ALPHARETTA GA 30201

KREIKEMEIER JOHN E & JEAN
Or Current Property Owner
292 SOUTH MAIN ST #100
ALPHARETTA GA 30004 1950

LAMBERT DANNY R
Or Current Property Owner
315 KAREN DR
ALPHARETTA GA 30009

M V P INVESTMENT CO
Or Current Property Owner
4710 LOU IVY RD
DULUTH GA 30096

MANSELL HARRY E
Or Current Property Owner
353 MICHAEL DR
ALPHARETTA GA 30009

MKB PROPERTY HOLDINGS LLC
Or Current Property Owner
200 S MAIN ST
ALPHARETTA GA 30009

MORRISON CHILDRENS TRUST
Or Current Property Owner
1632 PONCE DE LEON AVE NE
ATLANTA GA 30307

MULKEY LAWRENCE W
Or Current Property Owner
13630 BIRMINGHAM HWY
ALPHARETTA GA 30004

MULL RONALD C & MULL JACQUELINE D
Or Current Property Owner
213 NOTTAWAY LANE
ALPHARETTA GA 30009

NAHSER DONALD P
Or Current Property Owner
305 KAREN DR
ALPHARETTA GA 30004 2115

NATIONAL PROPERTIES CORP
Or Current Property Owner
P.O. BOX 3475
TULSA OK 74101 3475

NEW MAMMOTH DETAIL SALON INC
Or Current Property Owner
2145 OLD MILTON PKWY
ALPHARETTA GA 30004

NEWSOME BARBARA S & RONALD J
Or Current Property Owner
325 KAREN DR
ALPHARETTA GA 30004 2115

ORDWAY IAN C
Or Current Property Owner
14741 BIRMINGHAM HIGHWAY
MILTON GA 30004

PERLING JONATHAN & ALLYSON
Or Current Property Owner
P O BOX 92
ALPHARETTA GA 30009

PETTAS DEMETRIOS ET AL
Or Current Property Owner
2410 SPRINGMONTE PL
CUMMING GA 30041 7817

PURE TAQUERIA LLC
Or Current Property Owner
103 ROSWELL ST
ALPHARETTA GA 30009

ROACH NATALIE J
Or Current Property Owner
P.O. BOX 220849 RD
CHICAGO IL 60622 0030

SHANNI ELSIE D
Or Current Property Owner
320 KAREN DR
ALPHARETTA GA 30004

STRAY CAT LLC
Or Current Property Owner
325 MICHAEL DR
ALPHARETTA GA 30009

TAYLOR HAROLD T
Or Current Property Owner
2165 OLD MILTON PKWY
ALPHARETTA GA 30004 1910

TRIBBLE DONNA E
Or Current Property Owner
285 KAREN DR
ALPHARETTA GA 30009

WICKS RONALD S & MARY A
Or Current Property Owner
600 FLYING SCOT WAY
ALPHARETTA GA 30005 4240

OU YI-CHUNG & CHUO YUN-FANG
Or Current Property Owner
123 NOTTAWAY LANE
ALPHARETTA GA 30009

PETRAKOPOULOS ANGELOS & CHARLES G
Or Current Property Owner
371 JON SCOTT DR
ALPHARETTA GA 30009 2109

PETTAS DENNIS ET AL
Or Current Property Owner
2410 SPRINGMONTE PL
CUMMING GA 30041

QUAKER STATE MINIT LUBE INC
Or Current Property Owner
P.O. BOX 4369
HOUSTON TX 77210 4369

ROSE BASIL & WILLIAMS MARGARET
Or Current Property Owner
10815 SHAGBARK TRL
ROSWELL GA 30075

SMOTHERS ERIC W & SMOTHERS SHANNON L
Or Current Property Owner
209 NOTTAWAY LANE
ALPHARETTA GA 30009

STRICKLAND MARCUS L & EDNA B
Or Current Property Owner
2135 OLD JONES RD
ALPHARETTA GA 30004

THOMPSON RICHARD L
Or Current Property Owner
3040 MAPLE LN
ALPHARETTA GA 30004 1569

TWO TWELVE DEVORE ROAD TRUST
Or Current Property Owner
312 W MAIN ST
CUMMING GA 30040

WILSON WALTER D SR TR
Or Current Property Owner
217 S MAIN ST
ALPHARETTA GA 30004

OZER ALI
Or Current Property Owner
370 JON SCOTT DR
ALPHARETTA GA 30009

PETTAS DEMETRIOS
Or Current Property Owner
350 JON SCOTT DR
ALPHARETTA GA 30004 2110

PHASE THREE ENTERPRISES L L C
Or Current Property Owner
400 DORRIS RD
MILTON GA 30004 3495

RICHMOND INVESTMENTS INC
Or Current Property Owner
371 ARC WAY
MARIETTA GA 30064

SCHOLES EDWARD J III & SCHOLES MARIA B
Or Current Property Owner
211 NOTTAWAY LANE
ALPHARETTA GA 30009

SOURCE CAPITAL INVESTMENTS L L C
Or Current Property Owner
330 RHODES CHASE CT
ALPHARETTA GA 30004

TALLANT PROPERTIES LLC
Or Current Property Owner
206 HIDDEN RIVER DR
WOODSTOCK GA 30188

TRANOR GARY & STEPHEN GARY
Or Current Property Owner
346 KAREN DR
ALPHARETTA GA 30004 2116

VLAHIOTIS JOHN & SOFIA
Or Current Property Owner
5310 HUNTERS OAK DR
ALPHARETTA GA 30201 1463

WRIGHT DAVID & WRIGHT ASHLEY
Or Current Property Owner
93 THOMPSON PL
ROSWELL GA 30075

SPECIMEN TREE REPORT

ALPHARETTA



Tree Report for:
Duke Land Group
4828 Ashford Dunwoody Rd
Suite 400
Atlanta, GA 30338

Property Address:
South Main Street &
Devore Rd
Alpharetta
Fulton County

Project 16143.00

Survey Date 8/31/2016



TREE CONSULTANTS

350 RESEARCH CT. PEACHTREE CORNERS, GA 30092
PHONE: 770-451-3915
A PEC DIVISION

Consulting Arborist
Alex Phillips, ASLA
ISA Certified Arborist #MA-4868A
Tree Risk Assessment Qualified

South Main @ Devore

Specimen Tree Inventory

Some trees on a site warrant special consideration and encouragement for preservation. The intent of these specifications is to provide the necessary information to facilitate project design, plan review and enforcement processes. The City of Alpharetta Specimen tree specifications are organized by size:

- Deciduous Hardwood trees over 24" DBH

- Conifer Softwood trees over 30" DBH

- Flowering Understory trees over 8" DBH

Any tree that does not meet the following requirements as set forth by the International Society of Arboriculture shall be deemed poor in condition, a danger to human life and property and removed from the site.

- Life expectancy less than 15 years

- A trunk with visible decay

- More than one major and several minor dead limbs (hardwoods)

- Major insect or pathological problems

Site Location

The site is located in a developed area of the City of Alpharetta. Half the site is a large commercial building with a large parking lot and perimeter landscape trees. The other half is a dense woodland of young pine trees. The understory is predominantly invasive ground cover and shrubs. Small drainage ways are located throughout the woodland all running in a Northeastern direction. The site is also occupied by illegitimate users who have spread trash and built shelters in the interior of the woodland.

Definitions

Tree Number: Trees are tagged with an aluminum disk that shows a unique number to identify the tree.

Species: Trees are listed by a regional common name and botanical name.

Diameter at Breast Height (DBH): The diameter of a trunk at 4.5' above ground level.
Measured in inches.

Condition:

Good: A specimen tree with healthy productive tip growth. A sound trunk with no visible damage or decay. No major limb loss and healthy branch unions. No visible insect or disease



South Main @ Devore

infestations. Life expectancy of more than 15 years.

Fair: A specimen tree with healthy but not vigorous tip growth. Less than 30% of crown is dead. No major dead limbs and no major trunk cavities or damage. Branch unions show some signs of stress. Tree is expected to live longer than 10 years.

Poor: More than 30% of the crown is dead or has significant tip die back. More than one major limb is dead and are large trunk cavities with visible decay. Severe insect or disease damage leading to immediate death. Roots are visible and show signs of decay and rot. Life expectancy is less than 5 years.

Dead: Tree has no bud or leaf production. All limbs are barren and rot is visible.

Invasive: Tree species whose native range is not within the Piedmont classification.

Hazardous: Severe or uncorrectable damage that will lead to a loss of property or life if there is tree failure.



South Main @ Devore

Specimen Tree Report

Tree #	Species	DBH	Condition	Comments
91	<i>Quercus falcata</i> S Red Oak	26"	Non-Specimen	NST #1: Lean, split with included bark and dead limbs. Pic #1 & 2
92	<i>Pinus spp</i> Pine	30"	Specimen	Tree is in good health.

Specimen Tree Summary: There are two specimen sized trees on site.

Total Specimen Sized Trees: 2
Specimen Condition: 1
Non-Specimen Condition: 1



South Main @ Devore

Specimen Photo Evidence



Pic # 1: Lean, split with included bark and dead limbs. NST #1



Pic # 2: Lean, split with included bark and dead limbs. NST #1

South Main @ Devore

Landscape Tree Report

Tree #	Species	DBH	Condition	Comments
418	<i>Acer rubra</i> Red Maple	18"	Good	Tree is in good health.
419	<i>Acer rubra</i> Red Maple	11"	Poor	#2: Dead leader, total canopy die back of 50%. Pic # 2
420	<i>Acer rubra</i> Red Maple	8"	Poor	#1: Dead tips, 50% canopy die back, Gloomy scale infestation. Pic # 1
421	<i>Acer rubra</i> Red Maple	11"	Good	Tree is in good health.
422	<i>Acer rubra</i> Red Maple	5"	Good	Tree is in good health.
423	<i>Acer rubra</i> Red Maple	5"	Good	Tree is in good health.
424	<i>Ilex crenata</i> Holly	16"	Good	Tree is in good health.
425	<i>Acer rubra</i> Red Maple	17"	Poor	#3: Dead tips, 50% canopy die back, Gloomy scale infestation, dead top. Pic # 3
426	<i>Acer rubra</i> Red Maple	13"	Poor	#4: 90% canopy die back and major trunk wound. Pic # 4
427	<i>Acer rubra</i> Red Maple	6"	Good	Tree is in good health.
428	<i>Acer rubra</i> Red Maple	4"	Good	Tree is in good health.
429	<i>Acer rubra</i> Red Maple	10"	Good	Tree is in good health.
430	<i>Pyrus calleryana</i> Bradford Pear	20"	Poor	#9: Poor branch unions with previous failures, targeting parking lot and cars. Pic #9
431	<i>Pyrus calleryana</i> Bradford Pear	17"	Poor	#10: Poor branch unions with previous failures, targeting parking lot and cars. Pic #10



South Main @ Devore

Tree #	Species	DBH	Condition	Comments
432	<i>Pyrus calleryana</i> Bradford Pear	18"	Poor	#11: Poor branch unions with previous failures, targeting parking lot and cars. Pic #11
433	<i>Acer rubra</i> Red Maple	18"	Good	Tree is in good health.
434	<i>Acer rubra</i> Red Maple	18"	Good	Tree is in good health.
435	<i>Acer rubra</i> Red Maple	13"	Good	Tree is in good health.
544	<i>Acer rubra</i> Red Maple	22"	Good	Tree is in good health.
725	<i>Pinus spp</i> Pine	23"	Good	Tree is in good health.
918	<i>Pinus spp</i> Pine	20"	Good	Tree is in good health.
997	<i>Quercus falcata</i> S Red Oak	20"	Poor	#5: Lean targeting a structure with 100% of weight over lean. Pic # 5
1033	<i>Pyrus calleryana</i> Bradford Pear	20"	Poor	#8: Poor branch unions with previous failures, targeting parking lot and cars. Pic #8
1034	<i>Pyrus calleryana</i> Bradford Pear	20"	Poor	#7: Poor branch unions with previous failures, targeting parking lot and cars. Pic #7
1035	<i>Pyrus calleryana</i> Bradford Pear	20"	Poor	#6: Poor branch unions with previous failures, targeting parking lot and cars. Pic #6
1235	<i>Pinus spp</i> Pine	24"	Good	Tree is in good health.
1680	<i>Acer rubra</i> <i>Acer rubra</i> Red Maple	20"	Good	Tree is in good health.



South Main @ Devore

Photo Evidence



Pic # 1: Dead tips, 50% canopy die back, Gloomy scale infestation. Poor #1



Pic # 2: Dead leader, total canopy die back of 50%. Poor #2



Pic # 3: Dead tips, 50% canopy die back, Gloomy scale infestation, dead top. Poor #3



Pic # 4: 90% canopy die back and major trunk wound. Poor #4



South Main @ Devore



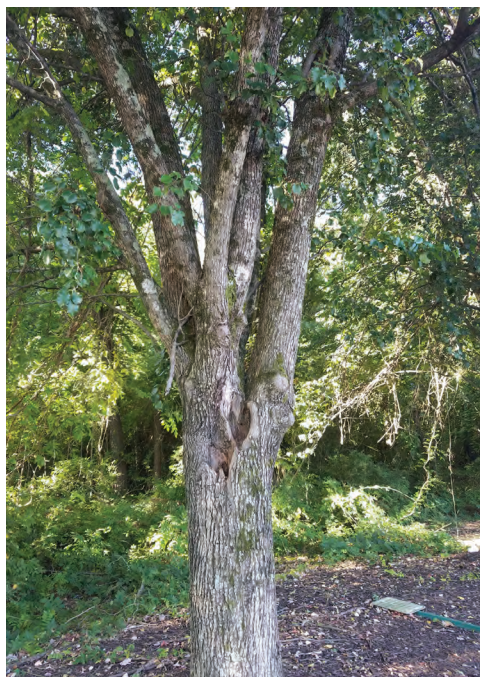
Pic # 5: Lean targeting a structure with 100% of weight over lean. Poor #5



Pic # 6: Poor branch unions with previous failures, targeting parking lot and cars. Poor #6



Pic # 7: Poor branch unions with previous failures, targeting parking lot and cars. Poor #7



Pic # 8: Poor branch unions with previous failures, targeting parking lot and cars. Poor #8

South Main @ Devore



Pic # 9: Poor branch unions with previous failures, targeting parking lot and cars.
Poor #9

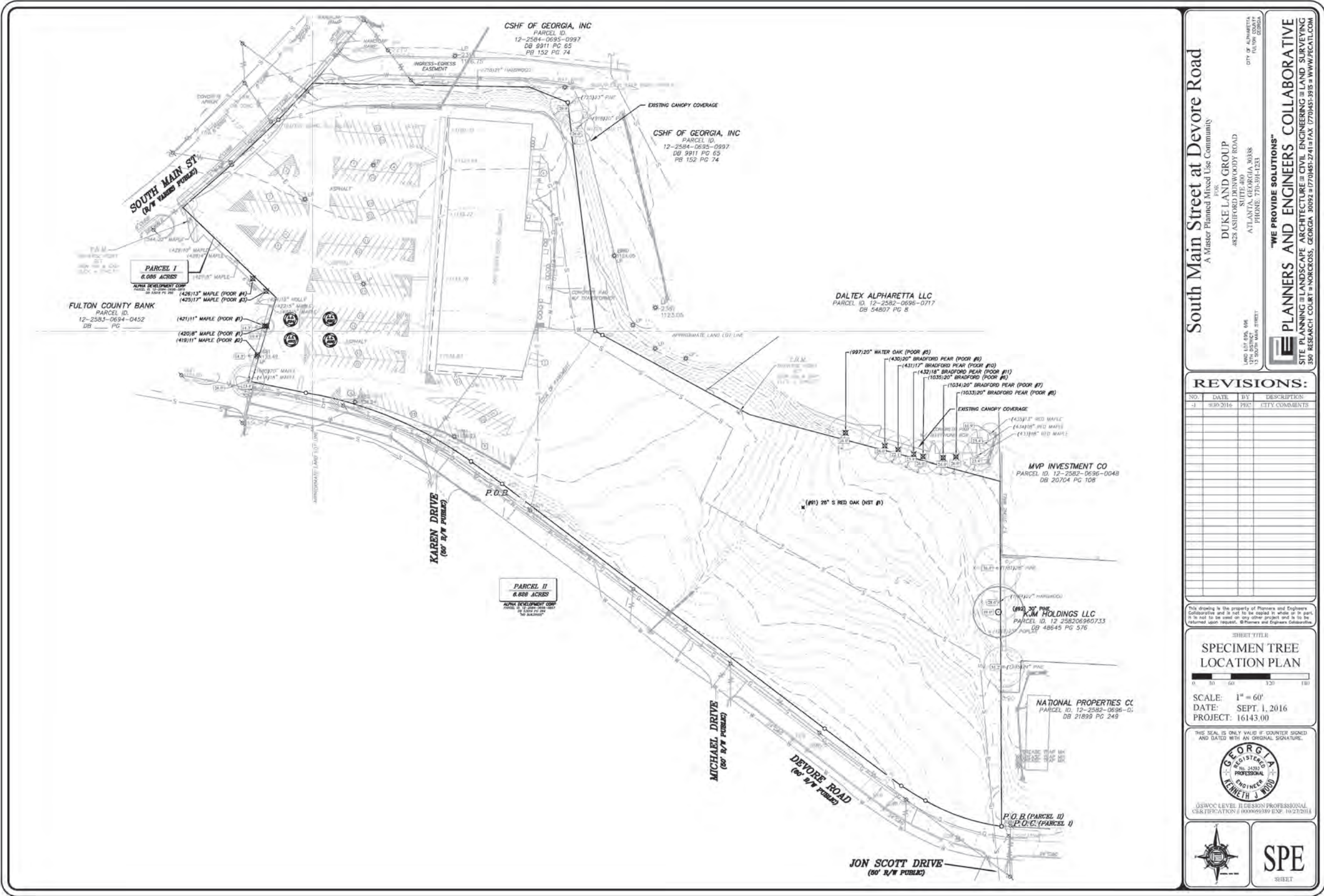


Pic # 10: Poor branch unions with previous failures, targeting parking lot and cars.
Poor #10



Pic # 11: Poor branch unions with previous failures, targeting parking lot and cars.
Poor #11

South Main @ Devore



Specimen Tree Location



Trip Generation Report Perling/South Main St 10.13.16

The table below show the trip generation including internal capture reductions for the development.

The trip generation is based on the ITE Trip Generation Manual 9th Edition rates and equations for known land use codes.

For the Brewery, we counted the existing location peak hour trips and doubled them for the new location.

The internal capture calculations use the ITE Trip Generation Handbook 3rd Edition rates, constrained between types of use.

The 3rd Edition Trip Generation Handbook does not provide daily trip reduction formulas, so none were taken.

The Brewery was assumed to generate ten (10) times the peak hour trips for the purpose of the daily total trips calculation.

No internal capture reduction was taken between the Brewery and other uses, as rates are not documented at this time.

Project Land Use		Project Density	Total	Inbound	Outbound
Apartments (220)		200 dwelling units			
	Daily		1336	668	668
	AM Peak Hour		102	20	82
	PM Peak Hour		128	83	45
Townhomes (230)		64 dwelling units			
	Daily		436	218	218
	AM Peak Hour		36	6	30
	PM Peak Hour		42	28	14
Condos (230)		50 dwelling units			
	Daily		352	176	176
	AM Peak Hour		30	5	25
	PM Peak Hour		34	23	11
Residential New Trips		314 dwelling units			
	Daily		2124	1062	1062
	AM Peak Hour		168	31	137
	PM Peak Hour		204	134	70
Residential Internal Capture	Reduction				
	AM Peak Hour		9	2	7
	PM Peak Hour		45	19	26

Trip Generation Report Perling/South Main St 10.13.16

Total New Trips						
	Daily			5188	2594	2594
	AM Peak Hour			488	233	255
	PM Peak Hour			384	179	205

9/30/16

Z-16-13/CU-16-20/V-16-27
South Main@Devore/Perling

CITY OF ALPHARETTA

PUBLIC HEARING APPLICATION

FOR OFFICE USE ONLY

Case #: _____

☐ Fee Paid Initial: _____

COMMUNITY DEVELOPMENT DEPARTMENT

•

2 PARK PLAZA

•

ALPHARETTA, GA 30009

1. This page should be the first page in each of your completed application packets.
2. It is preferred that all responses be typed. Illegible applications will not be accepted.
3. Prior to signing and submitting your application, please check all information supplied on the following pages to ensure that all responses are complete and accurate. Incomplete applications will not be accepted.
4. Payment of all applicable fees must be made at the time of application. Payment may be made via cash, credit card (American Express, Master Card or Visa), or check made payable to "City of Alpharetta."
5. Applications will be accepted only on the designated submittal dates between the hours of 8:30 AM and 3:30 PM.
6. If you have any questions regarding this form, please contact the Community Development Department by calling 678-297-6070.

Contact Information:

Contact Name: Kenneth J Wood

Telephone: 678-684-6206

Address: 350 Research Court

Suite: 200

City Norcross

State: GA

Zip: 30092

Fax: _____

Mobile Tel: 770-380-5969

Email: kwood@pecall.com, dianne@pecall.com

Subject Property Information:

Address: 13 South Main St

Current Zoning: C-2

District: 12

Section: _____

Land Lot: 695, 696

Parcel ID: 12 258406950815, 12 258206960667

Proposed Zoning: MU

Current Use: shopping center

This Application For (Check All That Apply):

☒ Conditional Use

☐ Master Plan Amendment

☒ Rezoning

☐ Master Plan Review

☒ Variance

☐ Public Hearing

☐ Comprehensive Plan Amendment

☐ Other (Specify): _____

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lots 693, 694, 695 & 696 of the 1st District, 2nd Section, Fulton County, City of Alpharetta, Georgia and being more particularly described as follows:

To find the TRUE POINT OF BEGINNING, commence from a concrete monument with metal disc, located at the intersection of the northerly right-of-way (R/W) line of Devore Road (60' R/W Public) and the northerly R/W of Jon Scott Drive (50' R/W Public); thence 124.63 feet along said northerly R/W line of Devore Road (60' R/W Public) an arc of a curve to the right, said curve having a radius of 321.56 feet and a chord bearing and distance of North 71 degrees 18 minutes 18 seconds West 123.85 feet; thence 43.66 feet along an arc of a curve to the right, said curve having a radius of 558.16 feet and a chord bearing and distance of North 58 degrees 24 minutes 04 seconds West 43.65 feet to a point; thence North 53 degrees 16 minutes 29 seconds West a distance of 147.40 feet to a point; thence North 52 degrees 48 minutes 25 seconds West a distance of 623.61 feet to a point, said point being the POINT OF BEGINNING, thence along said northerly R/W line of Devore Road (60' R/W Public) North 54 degrees 25 minutes 46 seconds West a distance of 58.85 feet to a point; thence 277.80 feet along an arc of a curve to the left, said curve having a radius of 611.65 feet and a chord bearing and distance of North 67 degrees 27 minutes 07 seconds West 275.42 feet to a point; thence North 78 degrees 34 minutes 49 seconds West a distance of 85.67 feet to a #4 rebar found; thence leaving said northerly R/W line of Devore Road (60' R/W Public) North 16 degrees 26 minutes 25 seconds East a distance of 135.16 feet to a #4 rebar found; thence North 45 degrees 57 minutes 21 seconds West a distance of 200.00 feet to a #6 rebar found located at the southeasterly R/W line of South Main Street (R/W varies); thence along said southeasterly R/W line of South Main Street (R/W varies) North 48 degrees 40 minutes 47 seconds East a distance of 99.80 feet to a point; thence North 46 degrees 13 minutes 21 seconds East a distance of 100.00 feet to a point; thence North 42 degrees 54 minutes 25 seconds East a distance of 77.05 feet to a #4 rebar found; thence leaving southeasterly R/W line of South Main Street (R/W varies) South 88 degrees 59 minutes 11 seconds East a distance of 333.85 feet to a #4 rebar found; thence South 68 degrees 15 minutes 52 seconds East a distance of 64.01 feet to a point; thence South 06 degrees 49 minutes 14 seconds East a distance of 355.00 feet to a point; thence South 61 degrees 34 minutes 01 seconds East a distance of 12.61 feet to a point; thence South 34 degrees 00 minutes 09 seconds West a distance of 276.10 feet to a point located at the northerly R/W line of Devore Road (60' R/W Public) and the TRUE POINT OF BEGINNING.

Said tract containing 6.085 acres.

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lot 696 of the 1st District, 2nd Section, Fulton County, City of Alpharetta, Georgia and being more particularly described as follows:

Beginning at a concrete monument with metal disc, located at the intersection of the northerly right-of-way (R/W) line of Devore Road (60' R/W Public) and the northerly R/W of Jon Scott Drive (50' R/W Public) said point being the POINT OF BEGINNING, thence 124.63 feet along said northerly R/W line of Devore Road (60' R/W Public) an arc of a curve to the right, said curve having a radius of 321.56 feet and a chord bearing and distance of North 71 degrees 18 minutes 18 seconds West 123.85 feet; thence 43.66 feet along an arc of a curve to the right, said curve having a radius of 558.16 feet and a chord bearing and distance of North 58 degrees 24 minutes 04 seconds West 43.65 feet to a point; thence North 53 degrees 16 minutes 29 seconds West a distance of 147.40 feet to a point; thence North 52 degrees 48 minutes 25 seconds West a distance of 623.61 feet to a point; thence leaving said northerly R/W line of Devore Road (60' R/W Public) North 34 degrees 00 minutes 09 seconds East a distance of 276.10 feet to a point; thence South 61 degrees 32 minutes 51 seconds East a distance of 180.47 feet to a #4 rebar found; thence South 61 degrees 40 minutes 46 seconds East a distance of 77.22 feet to a #6 rebar found; thence South 75 degrees 09 minutes 11 seconds East a distance of 399.16 feet to a #4 rebar found; thence South 00 degrees 16 minutes 19 seconds East a distance of 531.69 feet to a concrete monument with metal disc and the TRUE POINT OF BEGINNING.

Said tract containing 6.828 acres.

APPLICANT REQUEST AND INTENT

What is the proposed use(s) of the property?

See Attached

Applicant's Request (Please itemize the proposal):

We are requesting the following as part of a approval of a change in zoning to the parcel:

1. Rezone from C-2 Commercial to DT-MU (Downtown Mixed Use)
2. Approve as part of the zoning a Conditional Use Permit for the Multi-family Parcel that is rental.
3. Approve a variance to the zoning code to allow the following:

5 Story Height

200' facade to 305'

Architectural Style

Front yard setback

Site Density to exceed 10 units per acre in DT-MU

Applicant's Intent (Please describe what the proposal would facilitate):

The proposal would facilitate a rehabilitation of a downtown site that has been dilapidated for years and is in poor quality today and transform it into a downtown destination where people can come to enjoy the City. We are proposing to develop the 12 plus acre site into a mixed use village that will serve the downtown community with a style of development that keeps a neighborhood feel, but provides uses and a style that the downtown core needs. The site will have a central theme for its restaurant and retail courtyard. We are providing a non-vehicular courtyard with restaurants, warehouse style commercial, and retail so that people can come and enjoy the area and go to the restaurants without having to cross roads or go back to car to get to another location in development. The condominium, multi-family, and for sale high end residences will all support the development. The site transitions from the neighborhood with the for sale detached, towns, and duplexes, into the multi-family, condo, and eventually at the front on highway 9 the commercial style development.

The sites intent is to be constructed through one phase of site work, but the vertical could run at different times through the process. The office complex is to support the commercial and the downtown work force area. This office will be above the warehouse commercial building and parks underneath the building. The condominium building will be 6 stories and have the higher levels of the parking deck to support the residence parking. The lower levels of the deck would be for the restaurants and commercial. The multi-family building is proposed to be 6 stories as well and will have a portion of the bottom level as the leasing office, business center, and other commercial style uses. The end of the project will be for sale residential with detached home styles, attached and duplex style homes.

There is a major road relocation that this project has planned for as well as a planned loop trail expansion. Devore Road is slated by the GADOT to be relocated into Main Street from its current configuration to make a "T" intersection with Highway 9. In addition to this road relocation the loop trail as part of the cities downtown development plan is slated to run through this development and loop through back toward Main Street to provide a off the road trail for residence to use.

What is the proposed use(s) of the property?

The project is intended to be a true mixed use community that is targeting to be different from other developments in the region. The plan is to incorporate many different forms and architecture between residential uses, commercial uses, and warehouse style mixed use. The project is to have a prominent courtyard area with no vehicular interruption. This courtyard would be the central theme to the development where restaurants, warehouse, and commercial would all have a common area free of cars where pedestrians can eat, play, and enjoy the downtown Alpharetta area.

The mixture of uses will consist of commercial with neighborhood retail, local restaurants and destination restaurants, warehouse style restaurant development with office. The office will be in concert with the retail and commercial developments. These commercial developments will be supported by a common parking deck as well as an additional parking deck located under the office complex. There is also commercial use space in the multi-family building along Devore.

For the residential uses there is a condominium for sale midrise building that engages the courtyard area. There is a multi-family rental facility in the middle of the development that will have amenities and business center on Devore Road. The last part of the development will be an upscale for sale single family detached, duplex, and townhomes. The Greenway loop trail for the City of Alpharetta will run through the site and around.

PROPERTY OWNER AUTHORIZATION

* Property Owner Information:

Contact Name: Jonathan Perling Telephone: 404-775-1226
Address: 1048 Winding Branch CT Suite: _____
City: Atlanta GA State: GA Zip: 30338

Authorization:

I do solemnly swear and attest, subject to criminal penalties for false swearing, that I am the legal owner, as reflected in the records of Fulton County, Georgia, of the property identified below, which is the subject of the attached Application for Public Hearing before the City of Alpharetta, Georgia.

As the legal owner of record of the subject property, I hereby authorize the individual named below to act as the applicant in the pursuit of the Application for Public Hearing in request of the items indicated below.

- | | |
|---|---|
| ☐ Annexation | ☐ Special Use |
| ☒ Rezoning | ☒ Conditional Use |
| ☒ Variance | ☐ Master Plan |
| ☐ Land Use Application | ☐ Other _____ |

Identify Authorized Applicant:

Name of Authorized Applicant: Duke Land Group, LLC Telephone: AI Livnat 770-391-1233
Address: 4828 Ashford Dunwoody Road Suite: 400
City: Atlanta State: GA Zip: 30339

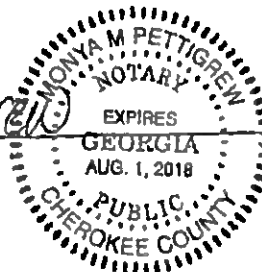
So Sworn and Attested:

Owner Signature: By: [Signature] Alpha Development Corp.
John Perling, President

Date: 7/27/16

* Notary:

Notary Signature: [Signature]



Date: 7-27-16

DISCLOSURE FORM

The Official Code of Georgia Annotated requires disclosure of campaign contributions to government officials by an applicant or opponent of a rezoning or public hearing petition (O.C.G.A. 36-67 A-1).

Applicants must file this form with the City of Alpharetta Community Development Department within ten (10) days after filing for rezoning or public hearing. Opponents to a rezoning or public hearing petition must file this form five (5) days prior to the Planning Commission meeting at which the subject rezoning or public hearing petition is scheduled to be heard.

Name of Applicant or Opponent: Downtown Main, LLC/Duke Land Group

Subject Public Hearing Case: _____

Campaign Contribution Information:

Please provide the requested information for each contribution with a dollar amount or value of \$250 or more made within the past two (2) years to an Alpharetta Official by the individual identified above. Please use a separate form for each Alpharetta Official to whom such a contribution has been made.

If the individual identified above has made no such contributions to an Alpharetta Official within the past two (2) years, please indicate this by entering "N/A" on the appropriate lines below.

Name of Official: N/A

Position: _____

Description of Contribution: _____

Value: _____

Description of Contribution: _____

Value: _____

Description of Contribution: _____

Value: _____

Description of Contribution: _____

Value: _____

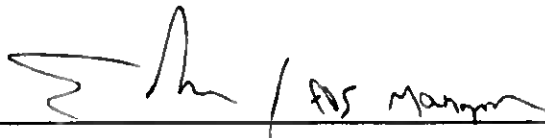
Description of Contribution: _____

Value: _____

Campaign Contribution Information:

I do solemnly swear and attest, subject to criminal penalties for false swearing, that the information provided in this Disclosure Form is true and accurate and that I have disclosed herein any and all campaign contributions made to an Official of the City of Alpharetta, Georgia in accordance with O.C.G.A. 36-67 A-1.

Signature: _____

 / AS Morgan

Date: _____

Aug-31-2016

ALPHARETTA PLANNING COMMISSION REVIEW CRITERIA

How will this proposal be compatible with surrounding properties?

See attached

How will this proposal affect the use and value of the surrounding properties?

This proposal will have a great positive affect on surrounding values. This development will bring high end residential on both for sale, mixed product for sale, and high end rental, all of which combined with the office, walkable restaurants will drive values higher.

Can the property be developed for a reasonable economic use as currently zoned? Please explain why or why not.

The property is zoned for C-2 as it currently stands. This zoning does not provide a reasonable use because of the site shape, downtown vision, the surrounding uses and its visibility from Highway 9 for commercial throughout, and the topography on the entire eastern tract. The C-2 uses would not provide a reasonable use and would not be a good transition from the neighborhood or surrounding uses. Mixing the uses in a area that has a mixture of housing choices and retail choices is the best economic use.

What would be the increase to population and traffic if the proposal were approved?

For traffic the Trip Generation is found to be approximately 4,650 vehicles per day. The site fronts on South Main Street and Devore Road. System improvements to both roads will be done to alleviate the increased traffic from the development. By totally mixing the uses on the site the traffic distribution will be different from most developments.



What would be the impact to schools and utilities if the proposal were approved?

The site is not targeting school age families by its design. We do not expect a large impact to the school system due to the size of the development and styles of homes. The condo and multi-family will be largely 1 bedroom and 1 bedroom with office as the for sale product on the east end will be designed with empty nesters and people who are looking to move from large lot homes.



How is the proposal consistent with the Alpharetta Comprehensive Plan; particularly the Future Land Use Map?

This section that the property falls within is shown to be part of the Downtown mixed use corridor and meets the intent of how a project can mix uses and bring unique features to the City. The site has been targeted by the city as a redevelopment site with the existing building and center being in bad shape. The site also meets the City loop trail plan as well having the trail go through the central part of the development.



Are there existing or changing conditions which affect the development of the property and support the proposed request?

The existing shopping center and building are in poor shape. The center is a burden on the surrounding values and the aesthetics of the community. The entire western site is mostly asphalt with no stormwater control through the site and a sewer line that needs to be upgraded for the site. The surrounding roadway on Devore is slated to be relocated through this property by GADOT. This is a much needed upgrade and will provide for better traffic flow. The surrounding area needs the site to be redeveloped with quality and a mixture of uses so that people can walk and enjoy the attractions of the retail and restaurants it will offer.

On a separate sheet or sheets, please provide any information or evidence that supports your request and the statements that you have provided in this application.

How will this proposal be compatible with surrounding properties?

From the aerial and seeing on the ground the surrounding uses it demonstrates the uses that are commercial, apartments, retail, restaurants, financial institution, office, fueling station, and detached homes match the proposed site. To the south are existing multi-family older apartments and to the direct northeast abutting the property is a tax credit multi-family development. Our condo and Multi-family is on the east and south side which matches these uses. In addition we have for sale detached, duplexes, and towns on the far east, which is where there is commercial, fueling, and across the street detached single family. This also is less intense as surrounding or equal. Finally on our frontage it's commercial, restaurants, warehouse and is surrounded by these types of uses. The uses are older in nature, but fit the model of what we are proposing.

BOARD OF ZONING APPEALS REVIEW CRITERIA

Please respond to the following ONLY if you are applying for a zoning variance.

Are there extraordinary and exceptional conditions pertaining to the subject property because of its size, shape, or topography? Please describe them.

From the survey it can be seen that the property is a odd shape with higher topography at the western end and steeper topography at the eastern end. The property is also next door to full commercial properties and taller multi-family tax credit properties. From the surrounding uses, the shape and topography of the property, the variance should be provided for the additional building height.

Would the application of the Zoning Code standards as they relate to the subject property create an unnecessary hardship? Please explain.

Yes, the site is backs up to a taller building in the rear of the property. That same building and property is zoned and built as multi-family. In order for the project to aesthetically meet the vision shown for this development there needs to be a range of heights. Height gives variations to the architecture. By not providing the heights requested the vision can be affected. Other buildings in the downtown and Avalon area have been approved at higher stories and it was to provide a vision for the development. This site needs to keep its vision and not getting the height would hurt the intent.

Are there conditions that are peculiar to the subject property? Please describe them in detail.

The front of the site is a dilapidated building that is in the downtown corridor and abutts multi-family from behind. The site is centrally located with height, commercial, and restaurants in the area. The site also has topography that slopes down toward the commercial on Haynes Bridge Road. The width of the property is a challenge as well as Devore Road is being relocated creating a narrower parcel. In order to keep the vision of the downtown area and offer a variety of housing and commercial choices, the site needs to have the variance approved.

Would relief, if granted, cause substantial detriment to the public good or impair the purpose and intent of the Zoning Code? Please defend your response.

No, it would help with the city vision of a mixed use community with varying heights and uses. Its in the best intent to have heights to break up structures and elevations for aesthetics in the area.

On a separate sheet or sheets, please provide any information or evidence that supports your request and the statements that you have provided in this application.

BOARD OF ZONING APPEALS REVIEW CRITERIA

Are there extraordinary and exceptional conditions pertaining to the subject property because of its size, shape, and topography? Please describe them.

1. Site Density to Exceed 10 units per acre in DT-MU (Proposed = 24.317 units/acre): The site is in the downtown corridor and overlay area, the density and surrounding commercial and multi-family uses are all intense uses. It is reasonable to have density in downtown areas to exceed 10 UPA.
2. Downtown Architectural Style/Design: The site is proposing new architecture to have a variety of styles and colors for a vibrant downtown feel. The shape of the property has very limited frontage on the main road so the style and design of the architecture is very important to have more flexibility to capture people's attention and created upscale feel.
3. Multi-family building has max facade continuous of 200', increase to 305': Our frontage on Devore Road is extremely long and the nature of multi-family buildings is to create streetscape. Due to the size and length of the frontage, the 305' is necessary and creates good streetscape along the frontage of the long road. The building is broken up with architectural vertical features and will not create a large wall appearance because the road frontage is so vast.
4. Maximum Front Setback = 10': We are showing areas along the frontage that comply and a few areas that do not. We are wanting to use courtyards, open space, and hardscapes to create the frontage concept as well, not just buildings. With the long frontage on Devore it becomes monolithic and to us unappealing to have just buildings fronting the road along Devore. We want to use a few buildings pushed back with landscape and courtyard areas to break up the frontage.

Would the Application of the Zoning Code standards as they relate to the subject property create an unnecessary hardship? Please explain.

1. Site Density to Exceed 10 units per acre in DT-MU (Proposed = 24.317 units/acre): No, this site is in the downtown area with proposed trails and walkability, this is where density belongs and is supported by infrastructure.
2. Downtown Architectural Style/Design: We feel that our proposed architecture will far exceed that in the DT-MU and is essential to keep the downtown area fresh with new architectural feel. It should not cause any hardship, but more of a positive influence.
3. Multi-family building has max facade continuous of 200', increase to 305': No, our frontage is very long and vast, we need the mass of this building to help stand out along the frontage. With the frontage being well over 1000', this will not have an impact on the style of street.
4. Maximum Front Setback = 10': This will also have a positive impact and not create a unnecessary hardship. This will help break up such a long frontage and also keep the buildings a little further back on the frontage of Main Street.

Are there conditions that are peculiar to the subject property? Please describe them in detail.

1. Site Density to Exceed 10 units per acre in DT-MU (Proposed = 24.317 units/acre): This site is adjacent to multi-family high rise already and is a tear down of an old large commercial center. The density and walkability is appropriate because of its surrounding uses and location, this makes this site different.
2. Downtown Architectural Style/Design: The site sits in an area that has a need for the downtown to get redeveloped. The new upscale urban architecture is peculiar because it sets a new precedent the area will need.

BOARD OF ZONING APPEALS REVIEW CRITERIA

3. Multi-family building has max facade continuous of 200', increase to 305': The length of Devore is very peculiar and having a building that exceeds the 200' will not be affected on the frontage.

4. Maximum Front Setback = 10': There is so much road frontage on the entire site that it peculiar and would be too much to front each building at the 10' setback and not vary with some fronting and some open space and parks fronting. The restaurants are fronting and a few are not. This creates depth and perspective into the development and gains interest.

Would relief, if granted, cause substantial detriment to the public good or impair the purpose and intent of the Zoning Code? Please defend your response.

1. Site Density to Exceed 10 units per acre in DT-MU (Proposed = 24.317 units/acre): no, this is the downtown area and envisioned for redevelopment of poor properties to be developed in this fashion with higher density uses.

2. Downtown Architectural Style/Design: No, the new architecture will be a new standard and above the level of standard of the current DT-MU.

3. Multi-family building has max facade continuous of 200', increase to 305': No, with so much frontage, there will not be a visual impact. This section of code is for smaller sites.

4. Maximum Front Setback = 10': No, changing frontages and adding green space and depth perception is a positive for the development.

CITIZEN PARTICIPATION FORM - PART A

This form must be completed and submitted with the applicant's completed Public Hearing Application. Applications submitted to the City of Alpharetta without a completed Citizen Participation Form - Part A will not be accepted.

Public Hearing or Project Name: Downtown Main, LLC/Duke Land Group

Contact Name: Bill Probst/Don Rolader

Telephone: 770-442-0330

The following people will be notified of this application and provided information describing the subject proposal. Please note that ALL adjoining property owners MUST be notified. Use additional pages as needed.

Owners of properties within 500 Ft of the subject property

Affected government officials

City Officials

Interested parties noted on list provided by the City

Method by which these individuals will be contacted. Please mark all that apply. If you select "Other," please provide a description of the method of contact that will be used.

☒

Letter

☐

Personal Visits

☐

Telephone

☒

Group Meeting

☐

Email

☐

Other (Please Specify) _____

Please describe the method(s) by which these individuals will have the opportunity to respond or contact the applicant with questions or concerns about the proposal.

Interested parties may respond by phone email, fax, letter, or personal visit.

10/7/2016

City of Alpharetta
2 Park Plaza
Alpharetta, GA 30009

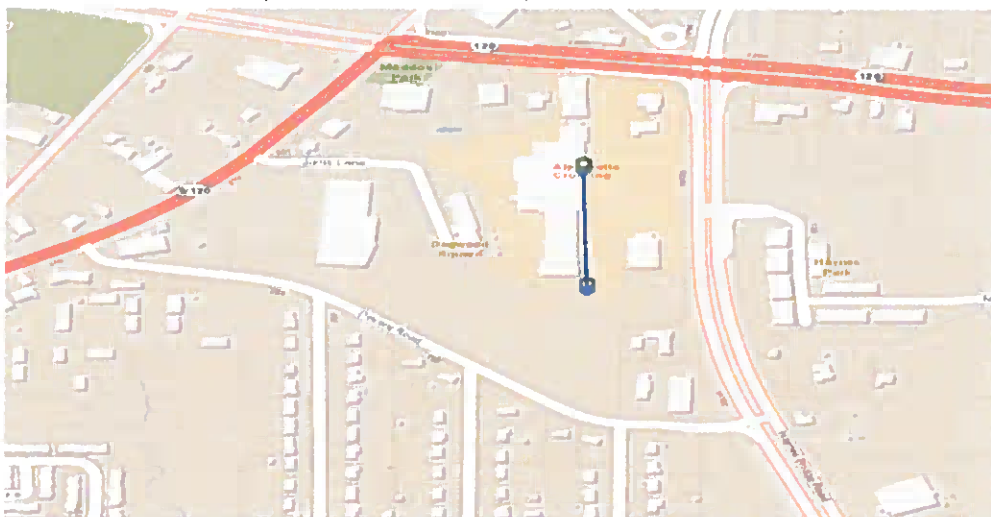
Re: **Requirement to have a Commercial Grocery Store with Multi-family Development
South Main Street (13) @ Devore Rd**
Planners and Engineers Collaborative, Inc. Project No. 16143.00

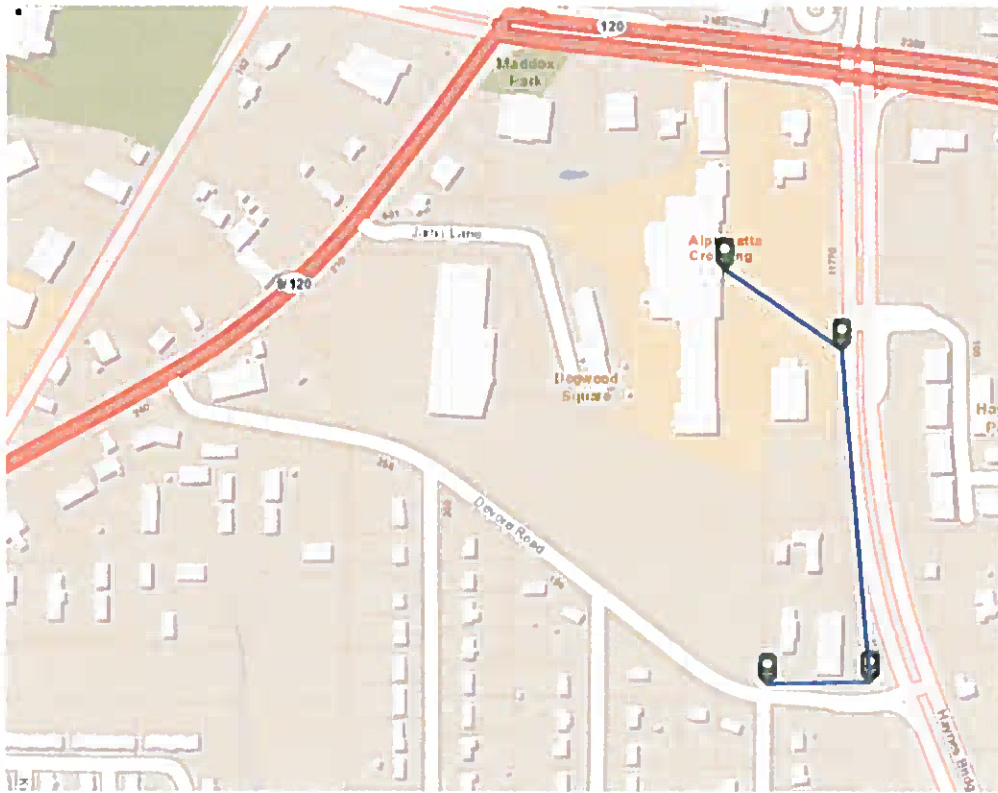
To whom it may concern,

We are submitting a variance request for the requirement to have a grocery store of 3,000 sf or more as part of the development since it has multi-family units proposed for the site. The justification for the variance is as follows:

- From the site map and aerial you can see that the location of the site and its frontage is very limited on Main Street. For a grocery store to be viable retail development it needs good frontage and visibility off a primary public roadway. This site has limited frontage on the main road that the brewery and restaurants will need in order to make a statement and vibrant downtown site. The grocery store location would be down Devore Road behind the restaurants, making a much less viable location.
- The primary reason for the variance is the location and proximity to the existing Wal-Mart Grocery store. From the following two images you can see that depending on how you walk from the residential section of our site to the front door of Wal-Mart the distances are approximately 500' and 1500' each. The Central Business District Code for the city of Alpharetta allows for this grocery requirement to be waived when you meet this 1,500 ft. rule for the distance from the door of the grocery store. From the exhibits you can see several routes that comply with that requirement. This site is a mixed use development and meets most of the intent of the CBD area, making it justified to use the same type of rule for proximity.

The models below show the two different routes. The first one is just over 500 linear feet running through the parking lot and back to the residential area of the site. The second would leave the grocery store and run down the sidewalk past QuikTrip (which has most grocery items too) and back up Devore to the site is 1,499 linear feet. Both of these routes are less or equal to the 1,500 'CBD requirement.





Sincerely,
Planners and Engineers Collaborative, Inc.

Kenneth J. Wood, P.E., LEED AP
For the Firm

Kjw/dp



CITY COUNCIL MEETING STAFF REPORT

SUBMITTING DEPARTMENT: COMMUNITY DEVELOPMENT
SUBMITTED BY: KATHI COOK
DRAFTED BY: MICHAEL WOODMAN

I. AGENDA ITEM TITLE: PH-16-17/CU-16-22/V-16-32 SABRI GUVEN

CITY COUNCIL: DECEMBER 12, 2016

This item was heard at the December 1, 2016 Planning Commission meeting. No one spoke for or against the applicant's request. After discussion, the Planning Commission recommended to approve the request subject to staff's recommended conditions. Vote (7-0)

II. RECOMMENDATION:

Approve PH-16-17/CU-16-22/V-16-32 Sabri Guven subject to the following conditions:

1. Property shall be developed substantially in accordance with the submitted plan prepare by Donald Ayers, dated 8/29/2016, except as modified by these conditions. Lot yield depicted is not guaranteed and subject to meeting all City Code requirements and conditions of zoning.
2. A wedding/formal dress shop shall be permitted within no more than 25% of the office building space. A change in the accessory retail use in the office building shall require conditional use approval.
3. Setbacks shall be:
 - Front Setback (Old Milton Parkway) – 20 feet
 - Side Setback – 10 feet
 - Rear Setback – 15 feet
4. All buildings shall be oriented to and have their front door facing Old Milton Parkway with a connection to the sidewalk on Old Milton Parkway.
5. Office building shall be aligned with the existing retail center with respect to building setback from Old Milton Parkway, with no more than one row of parking between the building and the street as approved by Staff.
6. Architecture and building design for the proposed retail addition and office building shall meet the Downtown Code requirements as approved by Staff and DRB.
7. Visible fencing shall be decorative as approved by the DRB.
8. The existing curb cut and driveway at 2255 Old Milton Parkway shall be removed.
9. There shall be no encroachment into the critical root zone (CRZ) of Trees #2 (58" Water Oak) and #69 (18" Water Oak) and retaining wall(s) shall be setback a minimum 5' from the CRZ.
10. Impacts to off-site trees shall be minimized. The owner(s) of off-site trees shall be notified of any encroachment greater than 20% or as directed by the City Arborist.
11. A combination plat for the properties located at 2225 and 2245 Old Milton Parkway shall be required prior to a Certificate of Occupancy (CO) for the 3,024 square foot building addition.
12. If the O-I parcel is sold, an inter parcel access easement and a shared parking agreement shall be required.
13. 50% of the required parking spaces for the office use shall be compact spaces.
14. 20' landscape strip along Old Milton Parkway and a 5' landscape strip along the eastern property line shall be required on the O-I parcel.
15. Pedestrian street lights shall be continued along the Old Milton Parkway streetscape, as approved by Staff.
16. Provide opportunity for inter parcel access to the property to the east.
17. The rear section of the properties located at 2225, 2245 and 2255 Old Milton Parkway shall remain undisturbed open space. An open space easement shall be required for any portion of the required minimum 3,877 square foot open space area provided on the adjacent C-2 property.

III. REPORT IN BRIEF:

The applicant, Richard Wernick, is requesting a change to previous conditions of zoning, a conditional use and variances to allow for a 3,024 square foot addition to the Sabri Guven retail center and a 9,600 square foot office building with accessory retail. A conditional use is requested to permit a dress shop within 25% of the office space and variances to

reduce the front and side setbacks in the O-I (Office-Institutional) zoning district. The subject property is located at 2225, 2245 and 2255 Old Milton Parkway at the southeast corner of Haynes Bridge Road and Old Milton Parkway.

DISCUSSION

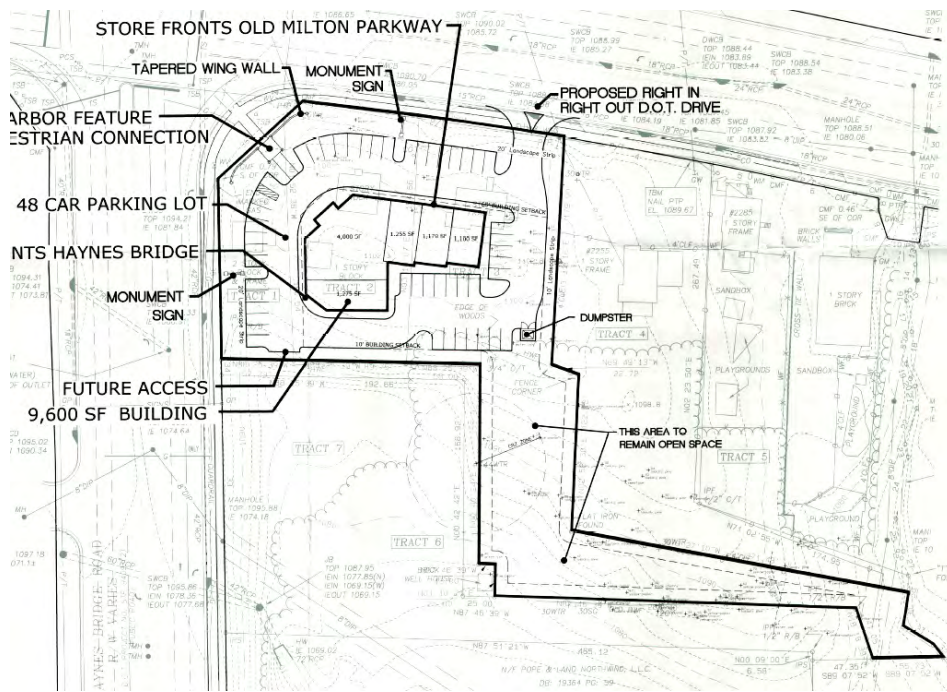
The submitted request, if approved, will allow for the construction of a 3,024 square foot addition to the Sabri Guven retail center and a 9,600 square foot office building with accessory retail use (2,400 square foot dress shop). The subject property is located at 2225, 2245 and 2255 Old Milton Parkway at the southeast corner of Haynes Bridge Road and Old Milton Parkway. The property owner recently acquired 2255 Old Milton Parkway, which is the vacant property to the east.

The subject properties are zoned C-2 Conditional (General Commercial - Conditional) and O-I (Office-Institutional). The C-2 property is the Sabri Guven retail center and the O-I property is vacant land. The properties are surrounded by vacant O-I parcels to the south and east and R-12 land to the southeast. Both properties are located within the Downtown Overlay and have a Commercial and Mixed Use Live-Work comprehensive land use plan designation.

The property located at 2225 and 2245 Old Milton Parkway is subject to conditions of zoning from the rezoning case approved on May 27, 2008 (see 2008 zoning plan below). The applicant proposes the following changes to the previous conditions of zoning:

3. Building development on site shall be limited to ~~9,600~~ 12,624 square feet.
6. Rear parking area shall meet code for dimensions and landscaping. ~~In addition, retaining walls shall be set back a minimum of 5' from the CRZ of the 44" Oak located to the east of the site.~~
7. ~~Rear section of lot shall remain as undisturbed green space as depicted on submitted plan with no buildings, detention ponds, walls or other structures.~~

2008 ZONING PLAN – GUVEN FINE JEWELRY (CASE #Z-08-01)



A conditional use permit is requested to allow for a 2,400 square foot dress shop within the proposed office building on the O-I zoned property. The O-I zoning district permits subordinate retail sales within an office building not constituting more than 25% of the overall space with approval of a conditional use.

A variance is requested from UDC Section 2.2.13 (D) to reduce the front setback along Old Milton Parkway from 65' to 20' and to reduce the side setback from 15' to ten (10) feet. Staff encouraged the applicant to pursue the front setback variance in an effort to bring the building up to the street with the parking located behind the building. This site layout is consistent with the Downtown Master Plan's vision, which promotes a walkable environment.

SITE PLAN

The submitted site plan depicts a 3,024 square foot addition to the existing retail center on the 1.71-acre C-2 property. A 2-story, 9,600 square foot office building is depicted on the 0.89-acre O-I property. All buildings are shown facing Old Milton Parkway and access is shown through the existing curb cut on Old Milton Parkway. The existing driveway at 2255 Old Milton Parkway will be removed. The proposed minimum building setbacks are as follows:

- Front Setback (Old Milton Parkway) – 20 feet
- Side Setback – 10 feet
- Rear Setback – 15 feet

42 parking spaces currently exist on the site with an additional 42 proposed parking spaces for a total of 84 spaces. The proposed parking spaces are located to the rear of the proposed addition and office building. The Alpharetta Downtown Code requires one (1) parking spaces per 500 square feet for retail/restaurant uses and one (1) parking space per 333 square feet for office use. Based on the existing and proposed uses and square footage, the site requires 52 parking spaces. However, the existing site has a history of parking shortages, as depicted in the picture below, and may warrant additional parking.



The applicant's arborist report identifies several trees on the site, including a 58" and 18" Water Oaks at the rear of the site. The 58" Water Oak was the subject of a 2008 zoning condition requiring the tree to be protected from any encroachment. The proposed site plan depicts parking areas encroaching upon the critical root zone of the 58" Water Oak.

The O-I parcel is required to provide a minimum 10% open space, which may not include buildings, parking areas, required building setbacks, buffers, and landscape strips. Therefore, 0.089 acres or 3,877 square feet of open space is required. The site plan depicts 4,944 square feet of open space in several small areas throughout the site. However, most of the depicted open space areas are unusable for outdoor enjoyment or are located within the parking area. Staff recommends that the open space requirement be met at the rear of the C-2 and O-I properties.

Although not depicted on the site plan, the applicant has indicated that detention will be provided on-site, likely through an underground vault.

BUILDING ELEVATIONS & ARCHITECTURE

The applicant submitted elevations of the proposed retail addition and the free-standing office building. The retail addition is proposed to be a continuation of the existing retail center with respect to architecture and building materials. The architectural style of the office building is unclear. Brick is shown as the primary material on all building elevations. The City's Downtown Architect provided the following comments with regard to the retail building addition and office building:

- Suggest that both the addition and the office building meet the Downtown Guidelines and not try to match the existing retail center.
- Suggest refinements to the site layout so that the office building is aligned parallel to the existing retail center.
- Roof area is too overbearing visually
- No historic details in the brick
- No base or entablature provided

TRAFFIC

The proposed project, consisting of 5,424 square feet of retail use and 7,200 square feet of office use, would generate 121 PM Peak Hour Trips.

CONDITIONAL USE REVIEW CRITERIA

City staff has reviewed the applicant's request and compared it to the conditional use standards established in UDC Sec. 4.2.3 (B) which are as follows:

A conditional use otherwise permitted within a zoning district shall be considered to be compatible with other uses permitted in the district, provided that due consideration is given to the following objective criteria at a public hearing and satisfactory provisions or arrangements are made for:

1. Access into and out of the property with regard to traffic and pedestrian safety, volume of traffic flow, and emergency vehicles, as well as the type of street providing access;

Response: Access to the site will occur through the existing curb cut on Old Milton Parkway for the Sabri Guven retail building. The existing driveway at 2255 Old Milton Parkway will be removed.

2. The extent to which refuse areas, loading and service areas, off street parking, and buffers and screening are provided on the property;

Response: The applicant's site plan accommodates the items referenced above. Staff recommends the removal of parking spaces that encroach upon the CRZ of specimen trees required to be saved.

3. Ensuring that the conditional use will not be injurious to the use and enjoyment of the environment or of other property in the immediate vicinity or diminish and impair property values within the surrounding neighborhood;

Response: The proposed dress shop represents 25% of the 9,600 square foot office building space, which meets the intent of accessory retail uses in the O-I zoning district. Staff recommends the removal of parking spaces that encroach upon the CRZ of specimen trees required to be saved.

4. Ensuring that the conditional use will not increase local or state expenditures in relation to the cost of servicing or maintaining neighboring properties;

Response: Not applicable.

5. Ensuring that the conditional use will not impede the normal and orderly development of surrounding property for uses predominant in the area; and

Response: The proposed dress shop should have little impact on the development of surrounding properties as the use is consistent with the existing retail development and is limited to no more than 25% of the office building space.

6. Ensuring that the location and character of the conditional use is considered to be consistent with a desirable pattern of development for the city, in general.

Response: The proposed dress shop is consistent with the existing retail development and is limited to no more than 25% of the office building space.

VARIANCE REVIEW CRITERIA

The City of Alpharetta Unified Development Code Article IV, Section 4.5.3 outlines the criteria set forth for granting a variance. The ordinance specifically states..."a variance may be granted in whole or in part, or with conditions, in such individual case of unnecessary hardship upon a finding that":

(1) There are extraordinary and exceptional conditions pertaining to the particular piece of property in question because of its size, shape or topography; or

Response: The subject property is within the Downtown Overlay where architecture, site layout and landscaping are key components to a successful development. The proposed setback variances are consistent with reduced front and side setback regulations in the Downtown Code.

(2) The application of the Ordinance to this particular piece of property would create an unnecessary hardship; or

Response: The applicant could develop the site in compliance with the required setbacks. However, the O-I setback moves the parking between the street and the building, which is inconsistent with a walkable environment and the Downtown Code.

(3) There are conditions that are peculiar to the property which adversely affect its reasonable use or usability as currently zoned; or

Response: The subject property is located within the Downtown Overlay, which encourages walkability by bringing the buildings up to the street. The existing O-I zoning requires a 65' front building setback, which is appropriate in other areas of the City but is contrary to the Downtown Master Plan.

(4) Relief, if granted, would not cause substantial detriment to the public good or impair the purpose and intent of the City of Alpharetta ordinances.

Response: Approval will not cause substantial detriment to the public good, since the setback variances are consistent with reduced front and side setbacks regulations in the Downtown Code. Staff also recommends conditions to protect the tree canopy and requiring building architecture of the proposed addition and office building to meet the Downtown Code.

CONCURRENCES

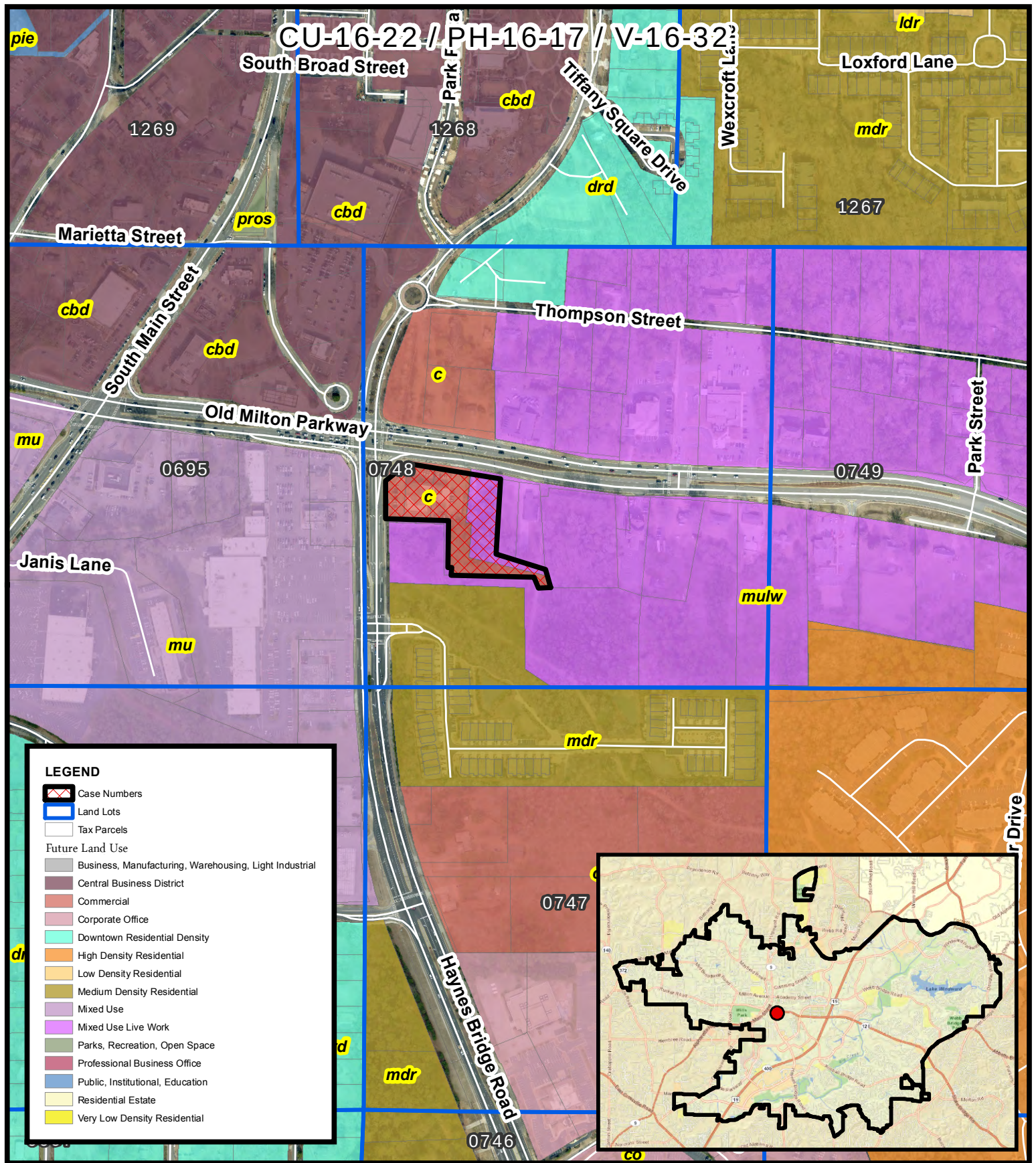
Staff has reviewed the application and is generally in agreement with the requests for conditional use and variance as the proposal is consistent with the vision in the Downtown Master Plan. The variance request to reduce the front and side setbacks is consistent with the Downtown Master Plan, which envisions a walkable area. However, the request to change previous conditions of zoning is not supported as the proposed retail addition and office building can be constructed without impacting existing specimen trees and open space. In addition, staff recommends that the proposed retail addition and office building meet the Downtown Code requirements with regard to architecture and building design.

CITIZEN PARTICIPATION PLAN

The report submitted by the applicant states that letters were mailed to each property owner within 500' of the subject property stating the applicant's intent. The report states that no comments were received.

IV. ATTACHMENTS:

- Site Plan
- Architectural Elevations

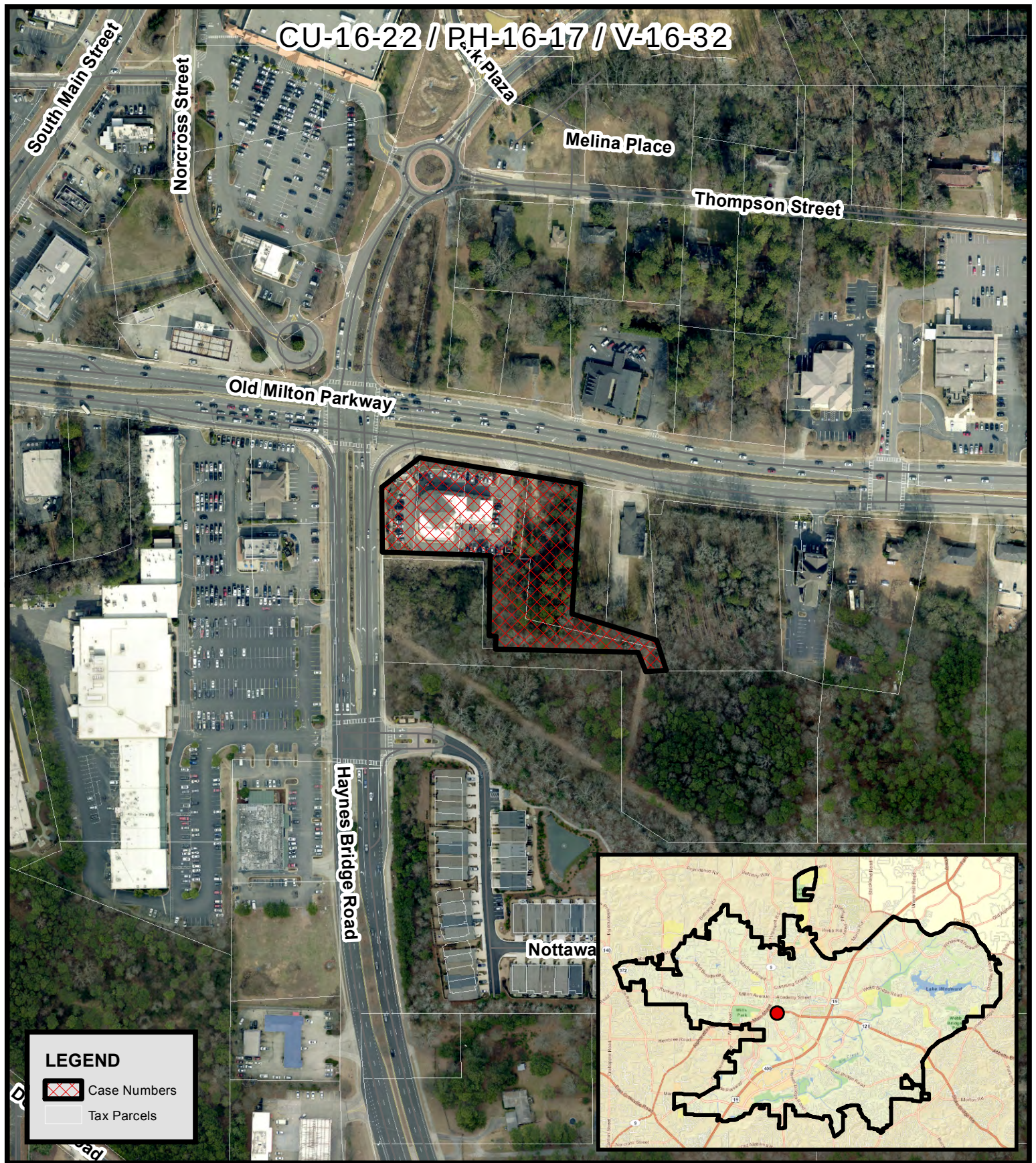


2030 Land Use
 Sabri Guven
 2255 Old Milton Parkway

CU-16-22/PH-16-17/V-16-32
 D/LL: 1/2/748
 PC: 12/01/16
 CC: 12/12/16



Location Map Provided by:
 Community Development - GIS



Aerial Map
Sabri Guven
2255 Old Milton Parkway

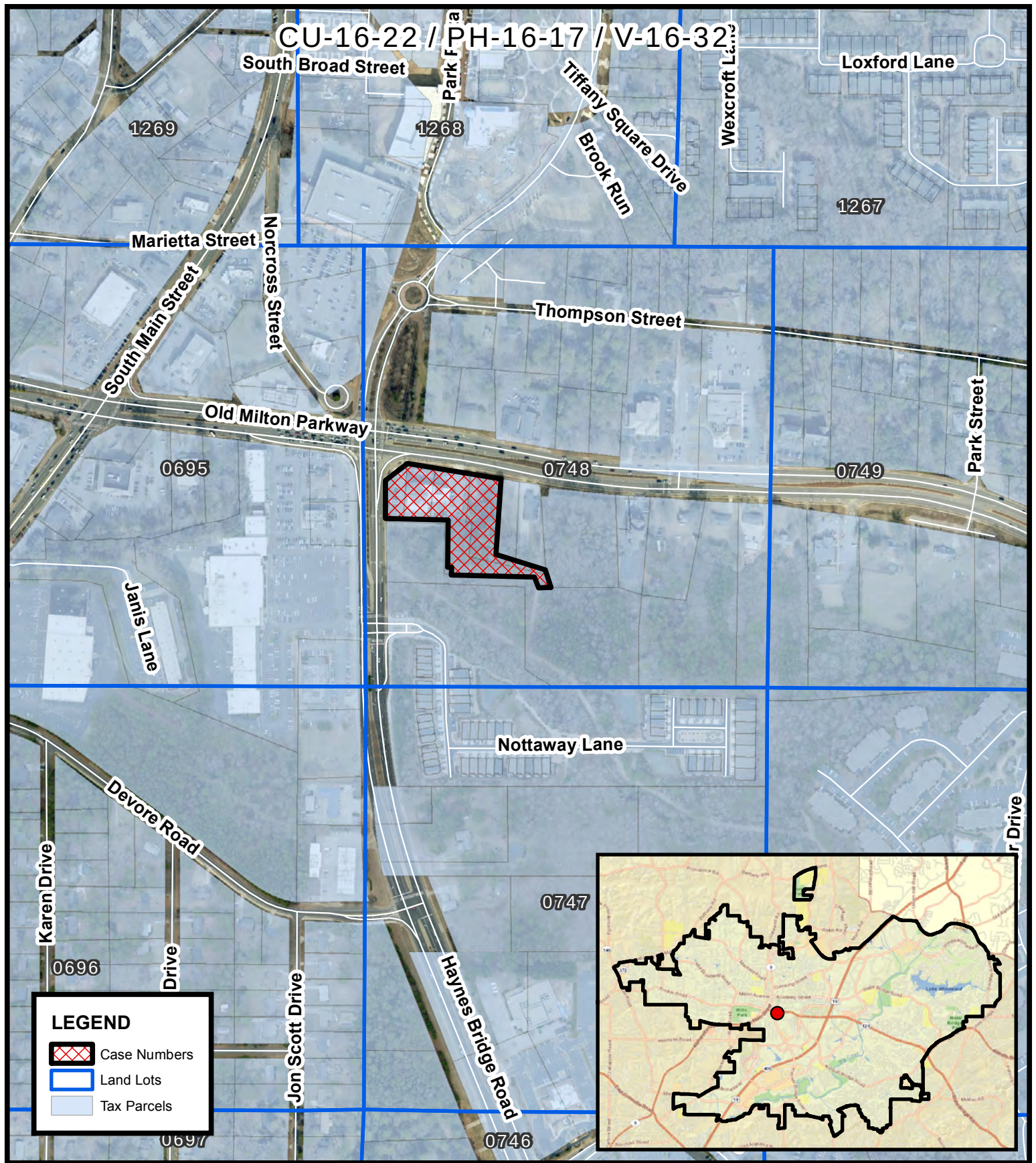
CU-16-22/PH-16-17/V-16-32

D/LL: 1/2/748

PC: 12/01/16

CC: 12/12/16

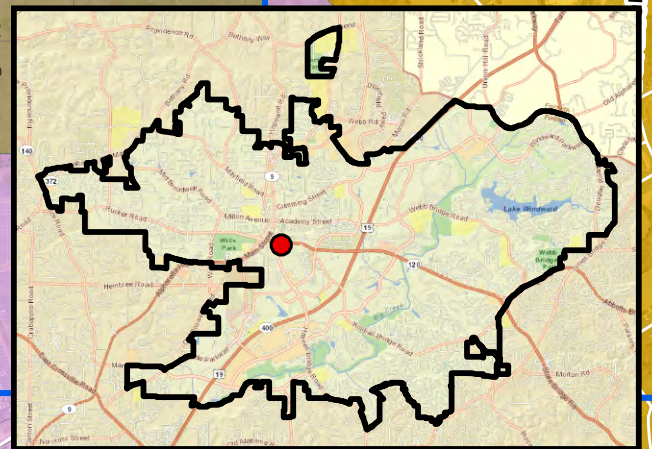
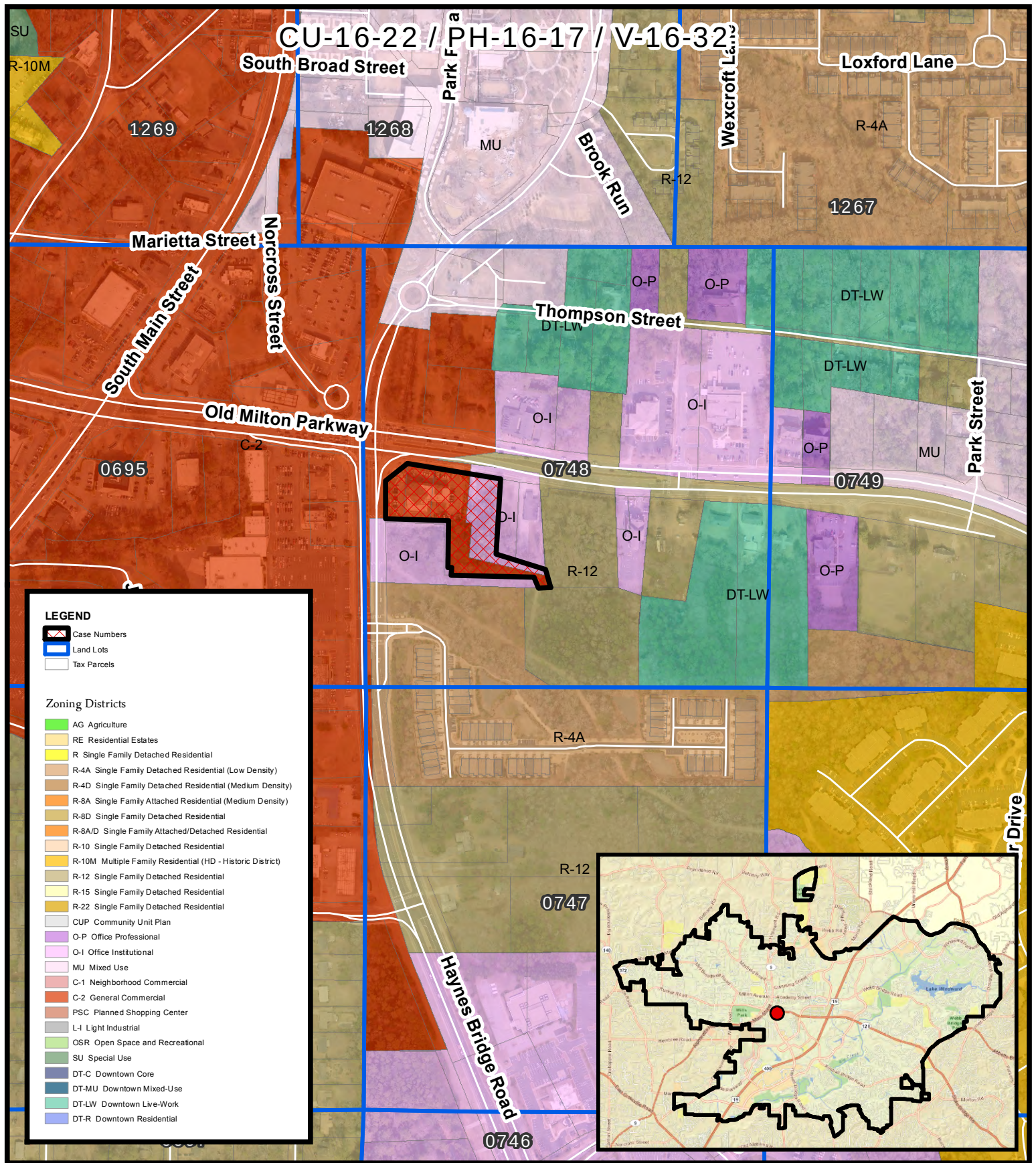
Location Map Provided by:
Community Development - GIS



Location Map
 Sabri Guven
 2255 Old Milton Parkway

CU-16-22/PH-16-17/V-16-32
 D/LL: 1/2/748
 PC: 12/01/16
 CC: 12/12/16

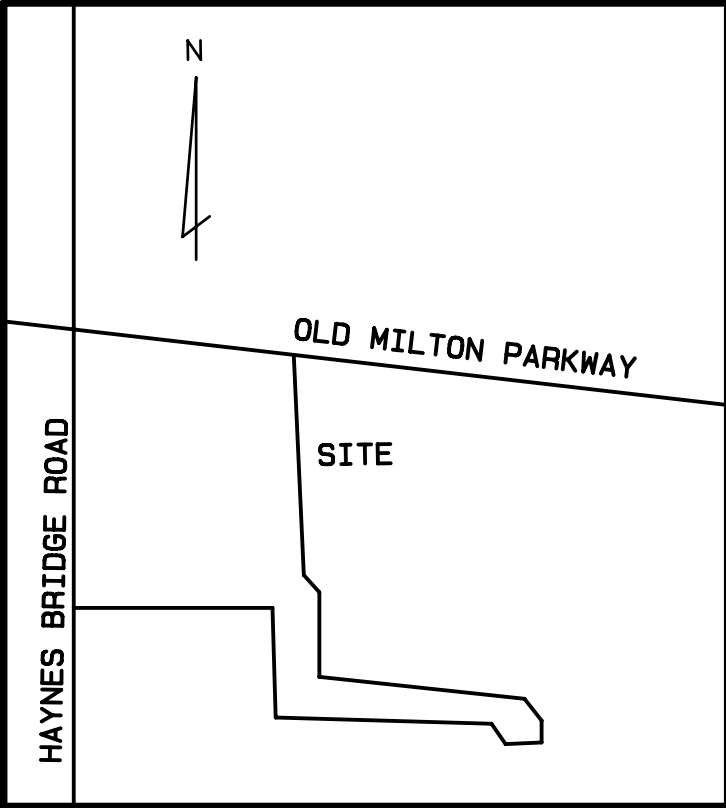
Location Map Provided by:
 Community Development - GIS



Zoning Map
Sabri Guven
 2255 Old Milton Parkway

CU-16-22/PH-16-17/V-16-32
 D/LL: 1/2/748
 PC: 12/01/16
 CC: 12/12/16

Location Map Provided by:
 Community Development - GIS



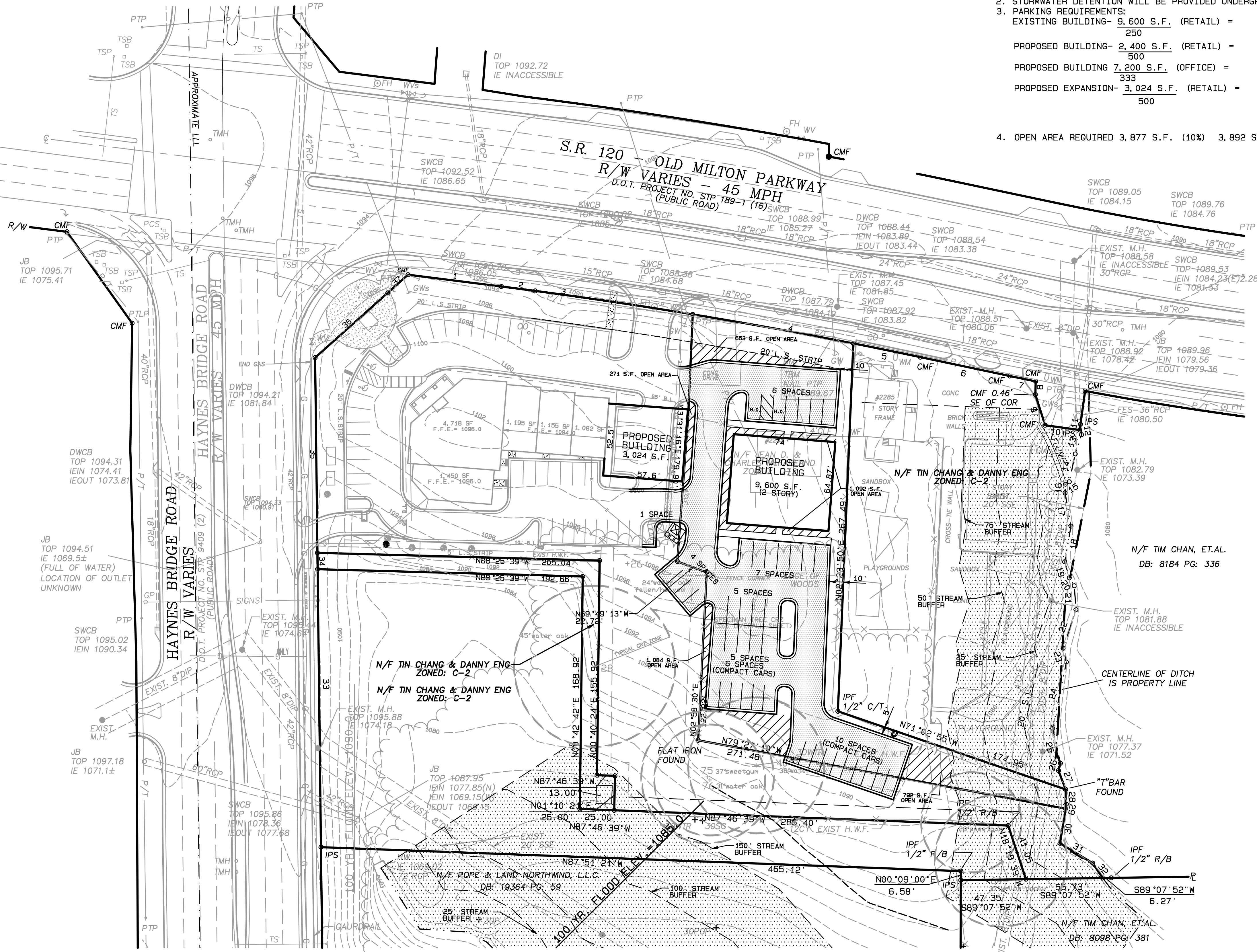
LOCATION MAP

ITE LAND USE CODE	INTENSITY	DAILY TOTAL	AM PEAK IN OUT TOTAL			PM PEAK IN OUT TOTAL		
RETAIL (826)	5,424 S.F.	270	NOT REPORTED	15	19	34		
OFFICE (710)	7,200 S.F.	178	21	3	24	15	72	87

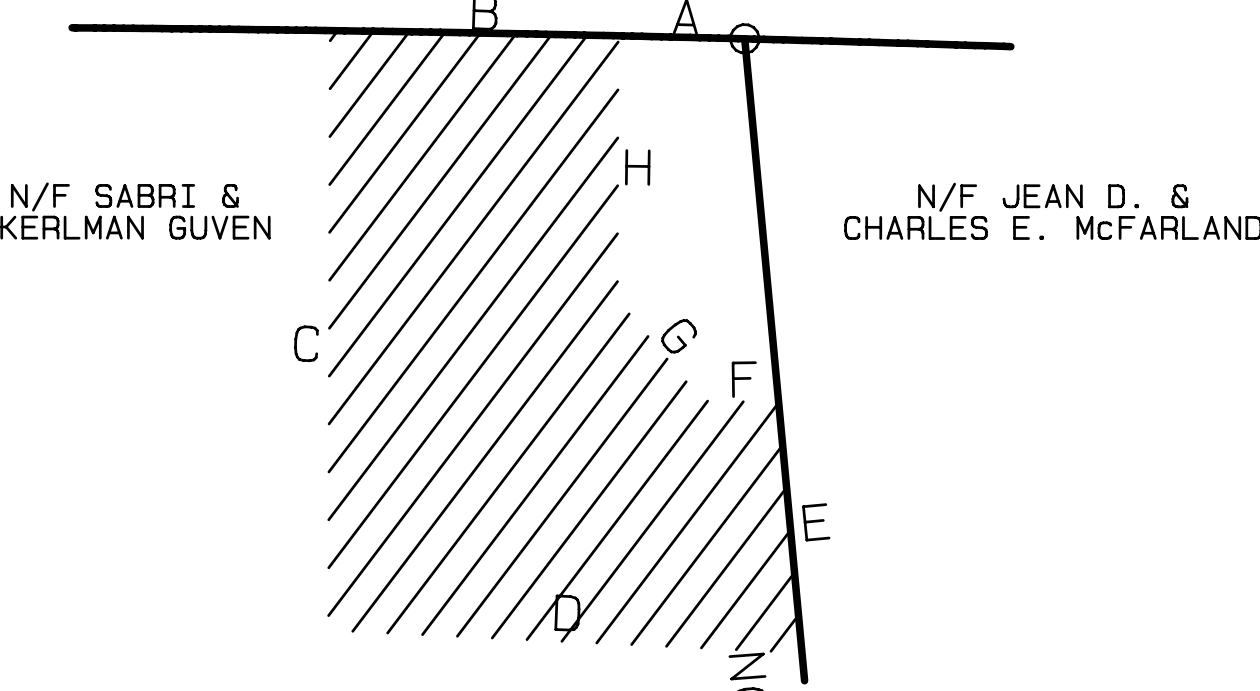
NOTES:

- EXISTING SITE CONTAINS 1.71 AC. (ZONED C-2 CONDITIONAL) LOCATED IN L.L. 748 OF THE 1ST DISTRICT 2ND SECTION CITY OF ALPHARETTA, GA. ADDITIONAL ACREAGE=.89 AC. (ZONED OS1)
- STORMWATER DETENTION WILL BE PROVIDED UNDERGROUND.
- PARKING REQUIREMENTS:
EXISTING BUILDING- 9,600 S.F. (RETAIL) = 38.4 SPACES REQUIRED
250
PROPOSED BUILDING- 2,400 S.F. (RETAIL) = 4.8 SPACES REQUIRED
500
PROPOSED BUILDING 7,200 S.F. (OFFICE) = 21.6 SPACES REQUIRED
333
PROPOSED EXPANSION- 3,024 S.F. (RETAIL) = 6.0 SPACES REQUIRED
500
70.8 SPACES REQUIRED (TOTAL)
86.0 SPACES PROVIDED (TOTAL)
- OPEN AREA REQUIRED 3,877 S.F. (10%) 3,892 S.F. PROVIDED

#	BEARING	CHORD	ARC	RADIUS
1	S82°47'24"E		68.28	
2	S82°36'02"E	24.83	24.83	3754.72'
3	S81°31'41"E	115.71	115.71	3754.72'
4	S79°44'27"E	118.53	118.54	3754.72'
5	S78°27'28"E	49.64	49.64	3754.72'
6	S78°04'44"E	66.36		
7	S78°18'49"E	19.31	19.31	2356.83'
8	S01°19'18"W	9.57		
9	S17°33'41"E	23.41		
10	S82°08'58"E	25.35		
11	N07°51'20"E	4.24		
12	S05°33'26"E	7.62		
13	S17°59'37"W	14.72		
14	S12°04'45"W	20.70		
15	S58°28'46"W	3.27		
16	S02°15'21"W	6.27		
17	S10°00'14"E	24.62		
18	S09°58'46"W	26.28		
19	S15°53'23"E	12.10		
20	S31°53'39"E	6.86		
21	S04°10'05"E	17.35		
22	S18°26'15"W	29.64		
23	S13°38'17"E	10.27		
24	S11°38'41"W	49.23		
25	S12°26'08"E	25.93		
26	S14°55'57"W	5.50		
27	S20°52'26"E	14.69		
28	S02°33'14"E	10.69		
29	S09°36'45"W	3.34		
30	S09°24'16"W	26.60		
31	S58°46'43"E	27.74		
32	S37°46'41"E	12.34		
33	N00°41'13"W	201.99		
34	N00°41'13"W	11.87		
35	N00°41'13"W	141.83		
36	N48°15'42"E	70.66		
37	N48°15'42"E	19.84		



S.R. 120 OLD - MILTON PARKWAY



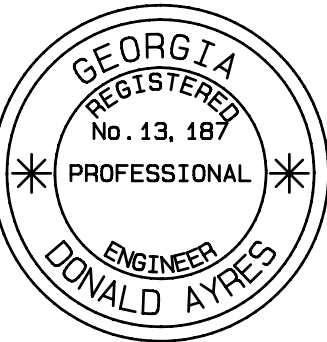
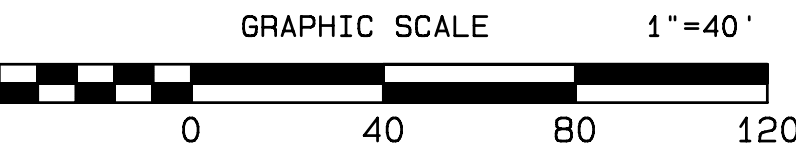
- A - N80 44'46"W 19.20'
B - N81 04'32"W 30.00'
C - S8 02'30"W 62.46'
D - S79 22'39"E 49.38'
E - N2 48'02"E 26.80'
F - N81 10'57"W SD8.05'
G - N32 08'48"W SD13.77'
H - N8 02'30"E SD27.50'

INTERPARCEL ACCESS EASEMENT

N.T.S.

24 HOUR EMERGENCY CONTACT HAMID MASHINCHI @ (404) 275-0896

TOTAL SITE AREA = 1.71 AC. LOCATED IN LAND LOT 748 OF THE 1ST DISTRICT, 2ND SECTION OF ALPHARETTA, GA.



DESIGN	D.A.
DRAWN	K.L.
CHECKED	D.A.
Q.C.	

NOT VALID FOR CONSTRUCTION
UNLESS SIGNED IN THIS BLOCK

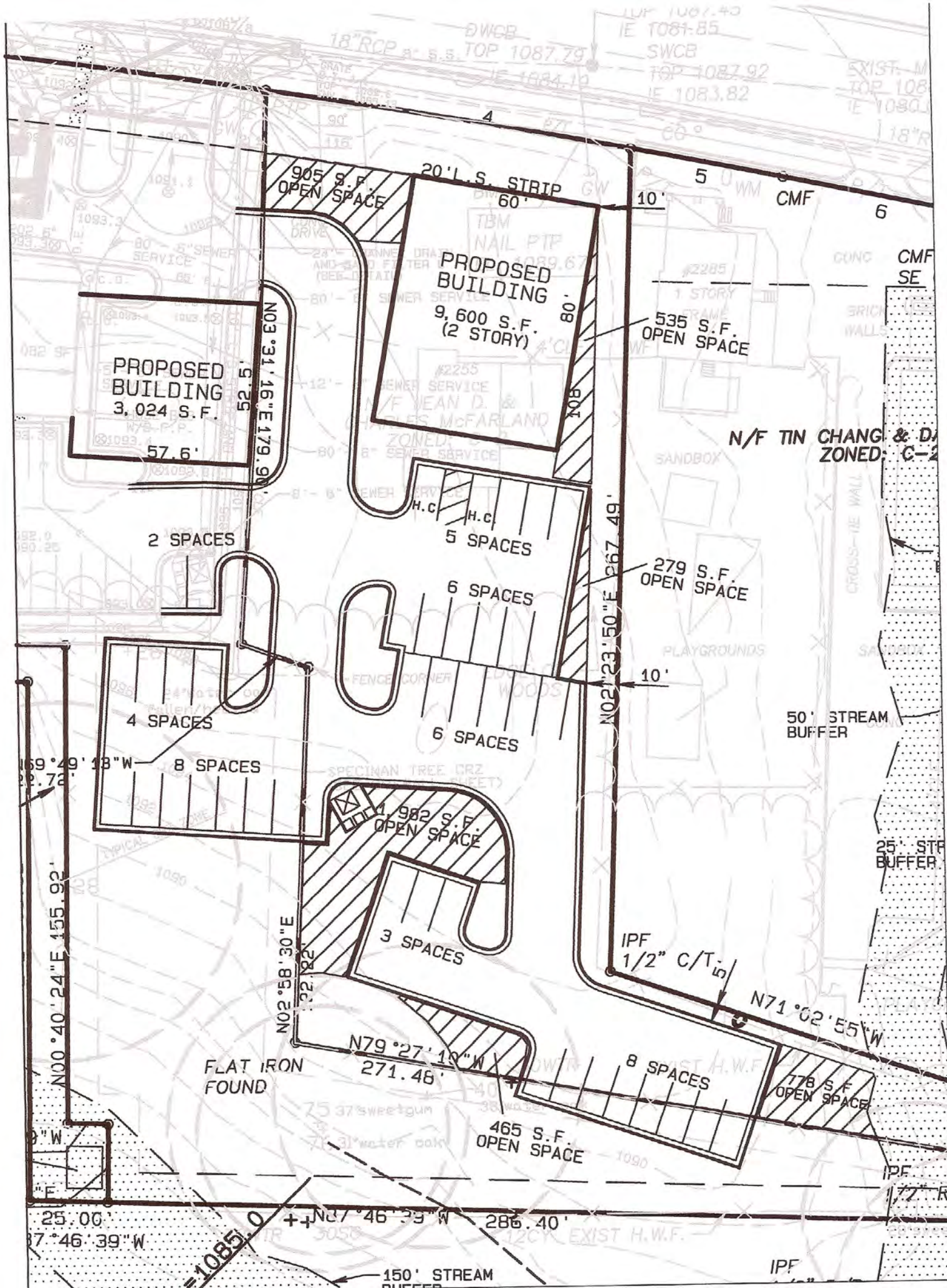
SABRI GUVEN

GUVEN PLAZA

OVERALL SITE

AYRES ENGINEERING	(770) 421-8140
850 KENNESAW AVENUE, SUITE C10, MARIETTA, GA 30060	

5				JOB NO.
4				F.B. NO.
3	12/06/16	REVISED BLDG.		
2	12/01/16	ADDED COMPACT SPACES/ MOVED BLDG.		DATE 08/29/16
1	11/15/16	ADDED OPEN AREA CALCULATIONS		
NO.	DATE	REVISION	APP'D. BY	SHT. 1 OF 1

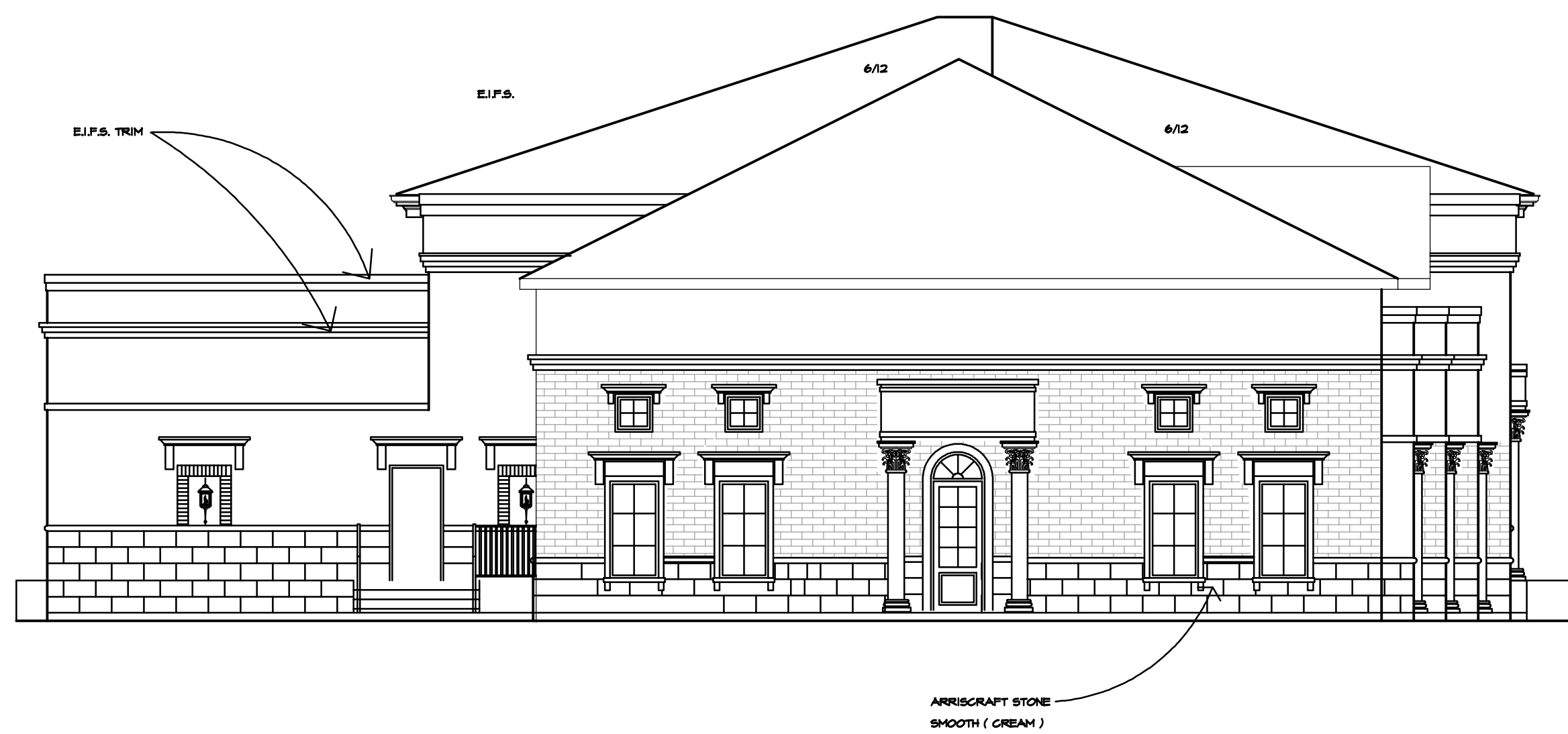




FRONT ELEVATION/OLD MILTON PARKWAY
SCALE 1/4" = 1'-0"

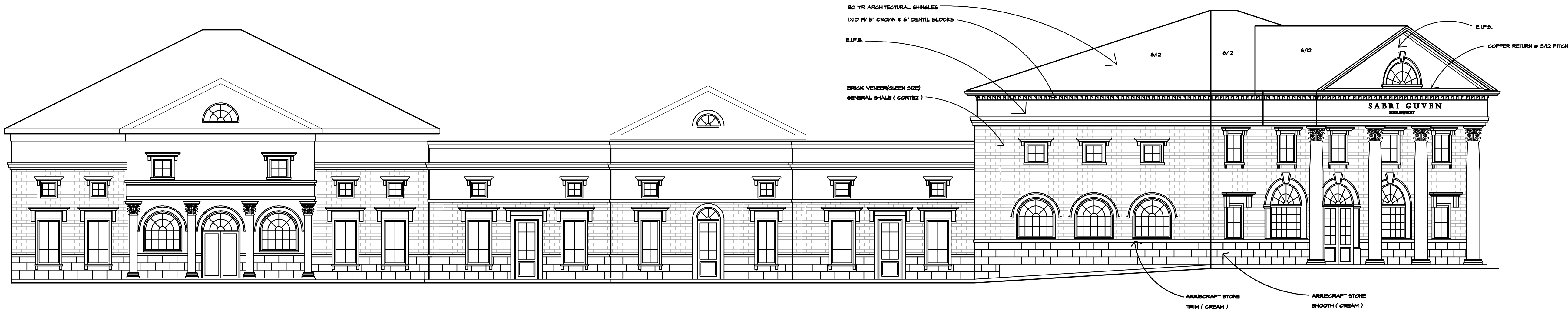


RIGHT SIDE ELEVATION
SCALE 1/4" = 1'-0"



LEFT SIDE ELEVATION

SCALE 1/8" = 1'-0"



ELEVATION A OLD MILTON PARKWAY ELEVATION

SCALE 1/8" = 1'-0"

CITY COUNCIL AGENDA ACTION SUMMARY

Public Hearing Date: May 27, 2008

Z-08-01/V-08-10 Guven Fine Jewelry

Consideration of rezoning property located at the southeast corner of Old Milton Parkway and Haynes Bridge from R-12 to C-2 in order to allow a retail center. A parking variance is also requested in order to permit an approximately 1,000 square foot mezzanine without requiring additional parking. The property is legally described as being located in Land Lot 748, 1st District, 2nd Section, Fulton County, Georgia.

MOTION: Approve, Aiken

Second: Paine

Approved 6 – 1 (Belle Isle)

Approve Z-08-01 Guven Fine Jewelry request for rezoning subject to the following conditions:

- 1. The zoning designation shall be "C-2 Conditional". Any use other than listed below shall be subject to City Council approval.**
 - Restaurant - subject to meeting parking requirements, no fast food or drive thru shall be permitted. Current parking is for retail, restaurant use will require additional parking which would reduce the building square footage.
 - Food Store (specialty or gourmet only)
 - Print shop
 - Hair salon (Nail salon not permitted)
 - Book store
 - Florist
 - Postal / Package store
 - Card / Gift shop
 - Travel Agency
 - Barber Shop
 - Electronics store
 - Phone store
 - Home Décor and Furniture store
 - Clothing Boutique/Bridal Shop/Formal Wear Store with related accessories
 - Art Gallery/Art Framing/Art store
 - Hobby Shop/Children's Toy store
 - Jewelry store
- 2. The focal point feature previously approved by City Council for this intersection (arbor detail) shall be constructed at the corner of Old Milton Parkway and Haynes Bridge Road. Heavy ornamental landscaping shall be required around focal point feature with final approval by Staff.**
- 3. Building development on site shall be limited to 9,600 square feet.**
- 4. Provide pedestrian connection to public corner sidewalk as depicted on site plan. Plan shall be developed substantially as shown on**

drawing by Langham dated 4/17/08, except as modified by these conditions.

5. Provide heavy landscaping within the landscape strips.
6. Rear parking area shall meet code for dimensions and landscaping. In addition, retaining walls shall be set back a minimum of 5' from the CRZ of the 44" Oak located to the east of the site.
7. Rear section of lot shall remain as undisturbed green space as depicted on submitted plan with no buildings, detention ponds, walls or other structures.
8. The building(s) shall be designed to be traditional and substantively similar to the original plan in character, treated with similar materials and features on all four sides, and all color palettes and signage shall be approved by the Design Review Board.
9. A 20-foot landscape strip shall be required adjacent to Haynes Bridge Road and Old Milton Parkway.
10. Incorporate opportunity for inter-parcel access with adjacent property to the east and south.
11. Parking lot layout shall comply with the Fire Department access requirements.
12. Loading/service areas and dumpsters shall be screened from view of any public street by a minimum six-foot high opaque fence or wall matching the material of the building.
13. Monument sign shall not be internally lit, shall not exceed 6 feet in height and shall meet required setbacks .

THIS PLAN IS BASED ON CURRENT DEVELOPMENT PLANS WHICH ARE SUBJECT TO CHANGE WITHOUT NOTICE. NO GUARANTEE IS MADE THAT PROPOSED FEATURES WILL BE CONSTRUCTED OR THAT, IF CONSTRUCTED, THE NUMBER, TYPE, SIZE AND LOCATION WILL BE DEPICTED ON THIS PLAN.

- LEGEND
- AC - ACRES
 - ACU - AIR CONDITIONING UNIT
 - AF - ANGLE IRON FOUND
 - AKA - ALSO KNOWN AS
 - BC - BACK OF CURB
 - BL - BUILDING SETBACK LINE
 - BWF - BARBED WIRE FENCE
 - CAG - CURB & GUTTER
 - C/T - CRIMP TOP PIPE
 - CB - CATCH BASIN
 - CBX - CABLE TELEVISION BOX
 - CI - CONCRETE INLET
 - CLF - CHAIN LINK FENCE
 - CMF - CONCRETE MONUMENT FOUND
 - CMP - CORRUGATED METAL PIPE
 - CMF - CONCRETE NAIL FOUND
 - CNC - CONCRETE NAIL SET
 - CO - CLEANOUT
 - CORPS - US ARMY CORPS OF ENGINEERS
 - CPP - CORRUGATED PLASTIC PIPE
 - CTV - CABLE TELEVISION LINE
 - DB, PG - DEED BOOK, PAGE
 - DE - DRAINAGE EASEMENT
 - DI - DUCTILE IRON PIPE
 - DIP - DUMPSTER PAD
 - DWB - DOUBLE-WING CATCH BASIN
 - EA - EDGE OF ASPHALT
 - EL - ELEVATION
 - ES - FLARED END SECTION
 - FFE - FINISHED FLOOR ELEVATION
 - FH - FIRE HYDRANT
 - FKA - FORMERLY KNOWN AS
 - G - GAS LINE
 - GM - GAS METER
 - GP - GUY POLE
 - GTMH - GREASE TRAP MANHOLE
 - GV - GAS VALVE
 - GW - GUY WIRE
 - HC - HANDICAP PARKING SPACE
 - HW - HEADWALL
 - HWF - HOC WIRE FENCE
 - IE - INVERT ELEVATION
 - IPF - IRON PIN FOUND
 - IPS - IRON PIN SET (1/2" R/B)
 - LL - LAND LOT LINE
 - LP - LAND LOT LINE
 - LP - LIGHT POLE
 - UH - MANHOLE
 - MON - MONUMENT
 - N/F - NOW OR FORMERLY
 - OCS - OUTLET CONTROL STRUCTURE
 - O/T - OPEN TOP PIPE
 - P - POWER LINE
 - P/T - POWER & TELEPHONE LINE
 - PSB - POWER BOX
 - PSB, PG - PLAT BOOK, PAGE
 - PCS - PEDESTRIAN CROSSING SIGNAL
 - PH - TELEPHONE(S)
 - PL - PROPERTY LINE
 - PLP - POWER & LIGHT POLE
 - PM - POWER METER
 - PMH - POWER MANHOLE
 - PQB - POINT OF BEGINNING
 - PP - POWER STUBOUT
 - PSO - POWER/TELEPHONE LIGHT POLE
 - PTP - POWER & TELEPHONE POLE
 - PVC - POLYVINYLCHLORIDE PIPE
 - R/B - REINFORCING IRON BAR
 - RCP - REINFORCED CONCRETE PIPE
 - R/W - RIGHT OF WAY
 - SF - SQUARE FEET
 - SPV - SPRINKLER VALVE
 - SS - SANITARY SEWER LINE
 - SSE - SANITARY SEWER EASEMENT
 - S/W - SIDEWALK
 - S/W - SINGLE-WING CATCH BASIN
 - TBM - TEMPORARY BENCHMARK
 - TDK - TELEPHONE BOX
 - TF - TRANSFORMER
 - TMH - TELEPHONE MANHOLE
 - TP - TELEPHONE POLE
 - TPB - TRUE POINT OF BEGINNING
 - TS - TELEPHONE LINE
 - TS - TRAFFIC SIGNALS
 - TSB - TRAFFIC SIGNAL BOX
 - TSP - TRAFFIC SIGNAL POLE
 - US - UNDERGROUND
 - USP - UNDERGROUND POWER
 - UST - UNDERGROUND TELEPHONE
 - VCP - VITRIFIED CLAY PIPE
 - WF - WOOD FENCE
 - WI - WEIR INLET
 - W - WATER LINE
 - WM - WATER METER
 - WSO - WATER STUBOUT
 - WV - WATER VALVE

#	BEARING	CHORD	ARC	RADIUS
1	S82°47'24"E		68.28'	
2	S82°36'02"E	24.83'	24.83'	3754.72'
3	S81°31'47"E	115.71'	115.71'	3754.72'
29	S09°36'45"W	3.34'		
30	S09°24'16"W	26.60'		
31	S58°46'43"E	27.74'		
32	S37°46'41"E	12.34'		
35	N00°41'13"W	141.83'		
36	N48°15'42"E	70.66'		
37	N48°15'42"E	19.84'		

DEVELOPMENT SUMMARY:

TOTAL SITE AREA: 1.74 ACRES

EXISTING ZONING: R-12

PROPOSED ZONING: C-2

TOTAL FOOTAGE: 9,600 SF

SITE DENSITY: 5,517 SF/ACRE

TOTAL PARKING SPACE REQUIRED: 9,600/200=48 SPACES REQUIRED

TOTAL PARKING SPACE SHOWN: 48 SPACES

REQUIRED ADA SPACES REQUIRED: 2

PROPOSED ADA SPACES: 2

OWNER/DEVELOPER:

SABRI GUVEN

4398 KIMBALL BRIDGE ROAD

ALPHARETTA, GA 30005

770-754-0881

NOTES:

SITE SHALL BE USED FOR RETAIL USE ONLY.

LANDSCAPING WILL BE PROVIDED PER THE CITY'S UDC.

SITE DETENTION SHALL BE UNDERGROUND AND DESIGNED TO CURRENT STANDARDS PER THE CITY'S UDC.

SITE IRRIGATION SYSTEM SHALL BE CONNECTED TO THE FULTON COUNTY RECLAIMED WATER SYSTEM WHEN AVAILABLE.

SURVEY NOTE:

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT OR POLICY. THEREFORE, EXCEPTION IS MADE HEREIN TO ANY EASEMENTS, RIGHTS-OF-WAY, RESERVATIONS, OR RESTRICTIONS OF RECORD WHICH MAY EXIST. THE ORIGINAL PLAT WAS INTENDED FOR THE EXCLUSIVE USE OF SLEMAN ENTERPRISES. ANY USE BY THIRD PARTIES IS AT THEIR OWN RISK.

FLOOD NOTE:

FLOOD HAZARD AREA AS PER F.E.M.A. FLOOD INSURANCE RATE MAP FOR THE CITY OF ALPHARETTA, COUNTY OF FULTON, STATE OF GEORGIA, COMMUNITY PANEL NO. 130084 0001 B, EFFECTIVE DATE: FEBRUARY 15, 1978

UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FIELD SURVEY DATA AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

WETLAND NOTE:

WETLANDS SHOWN HEREON WERE TAKEN FROM AN ALTA/ACSM SURVEY FOR POPE AND LAND NORTHWIND, L.L.C. BY POST BUCKLEY SCHULI AND JERNIGAN, INC. DATED 3/13/95. AS LAST REVISED 3/27/95. WETLANDS ARE UNDER THE JURISDICTION OF THE U.S. ARMY CORPS OF ENGINEERS. PROPERTY OWNER MAY BE SUBJECT TO PENALTY BY LAW FOR DISTURBANCE TO THE WETLAND AREAS WITHOUT PROPER AUTHORIZATION.

- SEWER: PROVIDED BY FULTON COUNTY
- BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY FOR SLEMAN ENTERPRISES PREPARED BY ROCHESTER AND ASSOCIATES, INC. DATED 7/1/02.
 - A FOCAL POINT FEATURE SUCH AS A FOUNTAIN OR SCULPTURE SHALL BE LOCATED AT THE CORNER OF OLD MILTON PARKWAY AND HAYNES BRIDGE ROAD TO BE APPROVED BY STAFF.
 - THE BUILDING(S) SHALL BE DESIGNED TO BE TRADITIONAL RESIDENTIAL IN CHARACTER AND HAVE A HISTORIC APPEARANCE INCORPORATING RICH ROOF LINES, PEDIMENTS, COLONNADS OR PORTICOS, AND DIVIDED PANE WINDOWS. BUILDINGS SHALL HAVE 80% HORIZONTAL CLAPBOARD SIDING, STONE MOLDED, OR TUMBLER BRICK ON ALL FOUR SIDES. PERMISSIBLE ROOF TYPES SHALL BE GABLE, PYRAMIDAL AND HIP. MAIN ENTRANCES SHALL INCLUDE TWO OF THE FOLLOWING DECORATIVE ELEMENTS: PEDIMENTS, ARCHES, BRACKETS, SIDELIGHTS, PORTICOS, OR TRANSOM WINDOWS.
 - PROVIDE SHARED ACCESS EASEMENT TO ADJACENT PROPERTY TO THE SOUTH.
 - BUILDING AND SIGN COLORS SHALL COMPLY WITH THE COLOR PALETTE APPROVED BY THE DESIGN REVIEW BOARD FOR THE HISTORIC BUSINESS DISTRICT.
 - PROVIDE HEAVY ORNAMENTAL LANDSCAPING IN ALL LANDSCAPE STRIPS. PLAN TO BE APPROVED BY STAFF.
 - LOADING/SERVICE AREAS AND DUMPSTERS SHALL BE SCREENED FROM VIEW OF ANY PUBLIC STREET BY A MINIMUM SIX-FOOT HIGH OPAQUE FENCE MATCHING THE MATERIAL OF THE BUILDING.
 - DECORATIVE STREET LIGHTS, DECORATIVE CROSS WALKS, BENCHES, PLANTERS AND BICYCLE RACKS SHALL BE INCORPORATED THROUGHOUT THE DEVELOPMENT.
 - MONUMENT SIGN SHALL NOT BE INTERNALLY LIT.

TREE SURVEY

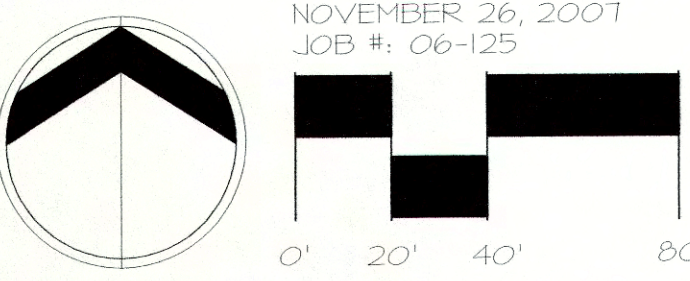
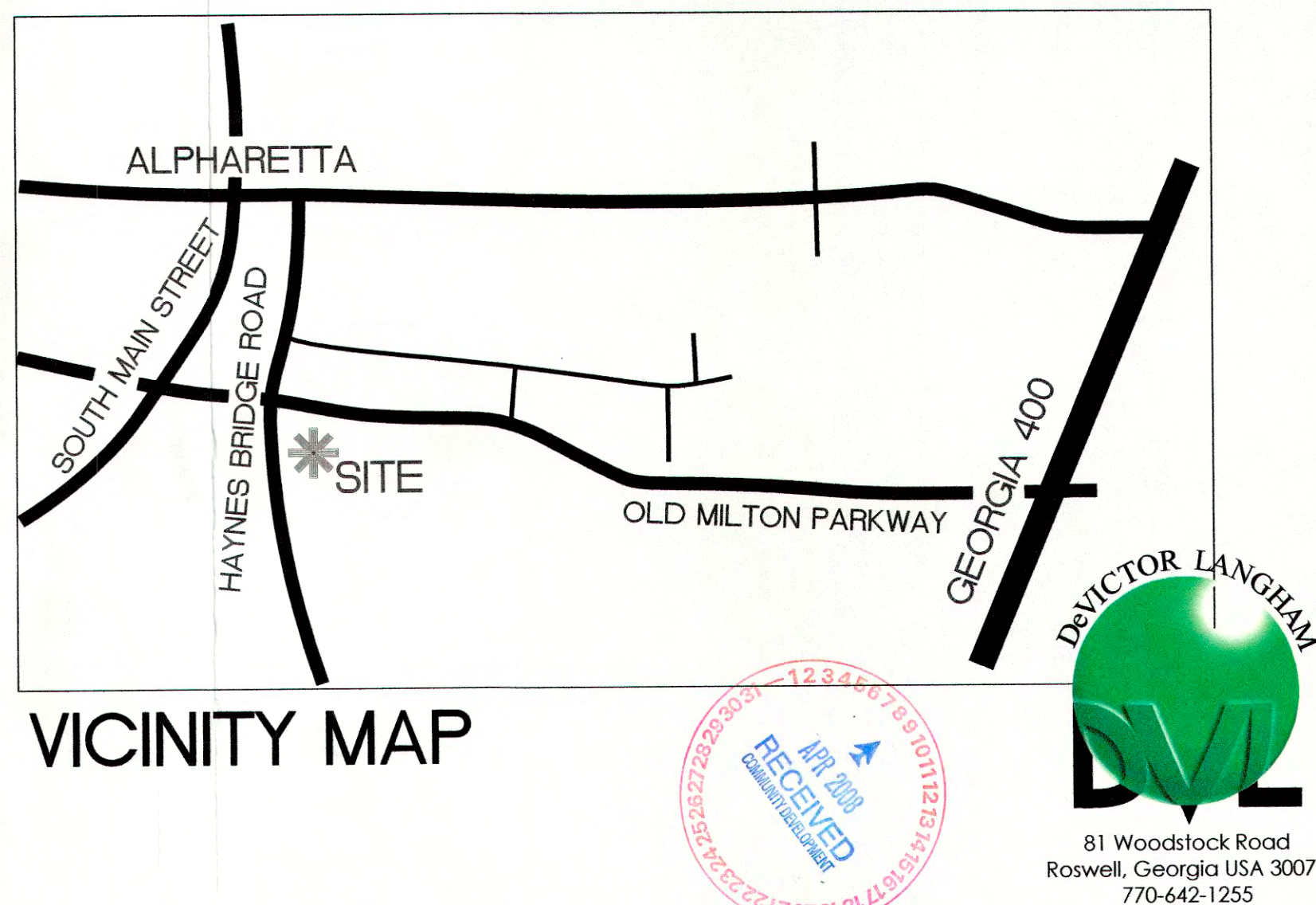
Tag #	Diameter	Genus	Species	Common	Height	X Coordinate
1	21"	Carya	illinoensis	pecan	Medium (16 to 35')	397586.5500
2	12"	Carya	tomentosa	mockernut hickory	Medium (16 to 35')	397586.8900
3	13"	Carya	illinoensis	pecan	Medium (16 to 35')	397600.1900
4	18"	Fraxinus	pernervilica	green ash	Large (>35')	397587.6000
5	14"	Quercus	nigra	water oak	Large (>35')	397612.8600
6	15"	Quercus	nigra	water oak	Large (>35')	397617.0400
7	20"	Carya	illinoensis	pecan	Large (>35')	397632.5300
8	14"	Carya	illinoensis	pecan	Large (>35')	397661.2100
9	14"	Carya	illinoensis	pecan	Large (>35')	397670.7700
10	19"	Carya	illinoensis	pecan	Large (>35')	397666.7800
11	19"	Carya	illinoensis	pecan	Large (>35')	397736.0300
12	10"	Carya	illinoensis	pecan	Large (>35')	397754.8800
13	16"	Carya	illinoensis	pecan	Large (>35')	397769.4400
14	17"	Carya	illinoensis	pecan	Large (>35')	397745.9300
15	13"	Carya	illinoensis	pecan	Large (>35')	397745.9300
16	10"	Carya	illinoensis	pecan	Medium (16 to 35')	397724.4600
17	15"	Carya	illinoensis	pecan	Large (>35')	397728.7500
18	14"	Fraxinus	pernervilica	green ash	Medium (16 to 35')	397701.3300
19	11"	Carya	illinoensis	pecan	Large (>35')	397754.7100
20	20"	Carya	illinoensis	pecan	Large (>35')	397755.0600
21	22"	Carya	illinoensis	pecan	Large (>35')	397774.1800
22	9"	Quercus	nigra	water oak	Medium (16 to 35')	397775.0600
23	8"	Quercus	nigra	water oak	Medium (16 to 35')	397775.0600
24	17"	Pinus	taeda	loblolly pine	Large (>35')	397715.9200
25	14"	Quercus	nigra	water oak	Large (>35')	397715.9200
26	24"	Quercus	nigra	water oak	Large (>35')	397740.5200
27	10"	Prunus	serotina	black cherry	Large (>35')	397775.3800
28	45"	Quercus	nigra	water oak	Large (>35')	397715.9200
29	19"	Quercus	nigra	water oak	Large (>35')	397710.6800
30	8"	Liquidambar	styraciflua	sweetgum	Large (>35')	397756.0100
31	9"	Liquidambar	styraciflua	sweetgum	Large (>35')	397752.4100
32	15"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397748.6900
33	8"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397775.5700
34	12"	Pinus	taeda	loblolly pine	Large (>35')	397778.3900
35	12"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397721.3800
36	12"	Fraxinus	pernervilica	green ash	Large (>35')	397714.9900
37	9"	Pinus	taeda	loblolly pine	Large (>35')	397773.3500
38	8"	Pinus	taeda	loblolly pine	Medium (16 to 35')	397786.1000
39	18"	Juniperus	virginiana	eastern redcedar	Large (>35')	397810.6400
40	38"	Quercus	nigra	water oak	Large (>35')	397810.6400
41	12"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397811.6700
42	14"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397812.1700
43	15"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397829.3400
44	10"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397818.0300
45	17"	Pinus	serotina	black cherry	Large (>35')	397818.4800
46	9"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397838.1700
47	18"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397853.7600
48	8"	Liquidambar	styraciflua	sweetgum	Large (>35')	397852.5900
49	12"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397859.1800
50	9"	Quercus	nigra	water oak	Large (>35')	397875.7400
51	9"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397881.0000
52	12"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397884.7700
53	9"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397891.2400
54	8"	Quercus	nigra	water oak	Medium (16 to 35')	397899.9700
55	11"	Liquidambar	styraciflua	sweetgum	Large (>35')	397907.8300
56	11"	Acer	rubrum	red maple	Large (>35')	397903.2000
57	11"	Liquidambar	styraciflua	sweetgum	Large (>35')	397916.5000
58	10"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397919.4100
59	19"	Pinus	taeda	loblolly pine	Large (>35')	397918.1800
60	21"	Quercus	nigra	water oak	Large (>35')	397945.4700
61	13"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397959.8000
62	8"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397970.9300
63	13"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397986.4900
64	37"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	398011.9500
65	28"	Liquidambar	styraciflua	sweetgum	Large (>35')	397990.4300
66	10"	Quercus	nigra	water oak	Large (>35')	397936.8200
67	10"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397932.0200
68	16"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397927.3400
69	19"	Quercus	nigra	water oak	Large (>35')	397906.9600
70	13"	Quercus	nigra	water oak	Large (>35')	397997.6800
71	16"	Quercus	nigra	water oak	Large (>35')	397965.6000
72	14"	Liquidambar	styraciflua	yellow-poplar	Large (>35')	397967.4400
73	15"	Pinus	taeda	loblolly pine	Large (>35')	397955.2300
74	20"	Liquidambar	styraciflua	sweetgum	Large (>35')	397880.5300
75	37"	Liquidambar	styraciflua	sweetgum	Large (>35')	397978.8600
76	31"	Quercus	nigra	water oak	Large (>35')	397806.5200
77	17"	Pinus	taeda	loblolly pine	Large (>35')	397838.9200
78	11"	Pinus	taeda	loblolly pine	Large (>35')	397838.1800
79	15"	Pinus	taeda	loblolly pine	Large (>35')	397842.3500
80	17"	Pinus	taeda	loblolly pine	Large (>35')	397846.9300
81	12"	Pinus	taeda	loblolly pine	Large (>35')	397828.4200
82	11"	Liquidambar	styraciflua	sweetgum	Large (>35')	397828.5200
83	18"	Pinus	taeda	loblolly pine	Large (>35')	397809.5800
84	24"	Pinus	taeda	loblolly pine	Large (>35')	397810.4500
85	18"	Pinus	taeda	loblolly pine	Large (>35')	397788.2200
86	18"	Pinus	taeda	loblolly pine	Large (>35')	397791.8200
87	12"	Ulmus	americana	American elm (resistant)	Large (>35')	397792.2500

Avg: 15.4

ZONING PLAN

SABRI GUVEN FINE JEWELRY

CITY OF ALPHARETTA, GEORGIA

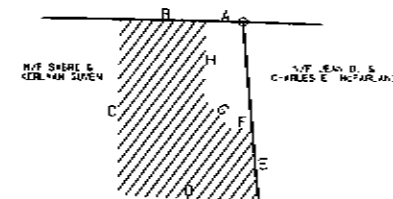


REVISED: APRIL 4, 2008
REVISED: MARCH 21, 2008
REVISED: JANUARY 10, 2007
REVISED: DECEMBER 4, 2007
NOVEMBER 26, 2007
JOB #: 06-125

81 Woodstock Road
Roswell, Georgia USA 30075
770-642-1255

NOTES:

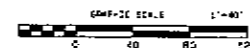
- S.P. 120 QLO - MILTON PARKWAY



A - N80 44'46"N 13.20
B - N81 04'32"N 30.00
C - S8 02'30"W 62.45'
D - S79 22'39"E 49.38
E - N2 48'02"E 26.20'
F - N81 10'57"N S05.05'
G - N32 05'48"N S013.77'
H - N5 02'30"E S027.50'

INTERPARCEL ACCESS EASEMENT
N.T.S.

*TOTAL SITE AREA = 1.1 AC. LOCATED IN LAND LOT 749 OF THE 1ST DISTRICT, 2ND SECTION OF ALPHARETTA, GA.



SABRI GUVEN

GUVEN PLAZA

OVERALL SITE

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED DATE 08-11-2009 BY 60322 UCBAW

TIME 421-88140	3				JOB NO.	
	4				PRNO	
	5				DATE	28/02/78
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Tree ID	DBH (")	Tree Species	Condition	Notes
1	25	Water Oak	DDH	Multi leader, covered In Kudzu
2	58	Water Oak	Fair	Lightning protection, bleeding canker, over-mature, epicromic growth, scars and potential cracking
3	30	Water Oak	DDH	
				Winter creeper growing up trunk, leaning, asymmetrical
4	38	Sweetgum	DDH	Co-dominated, bifurcated, cavity on south side, root zone symbiotic with tree #3
5	37	Unknown	DDH	Dead, fallen limbs throughout
6	32	Sweetgum	Fair	Decaying leader
7	37	Tulip Poplar	DDH	Leaning over embankment, failing roots, undermined, heaved
69	18	Water Oak	Fair	Opposite tree #6, Split along trunk 15' up
8	23	Sweetgum	DDH	Covered in vines
A		Mixed Pine Forest	DDH	Nothing of significance to report
10	5	Planted Maple	Good	Small 10" wound near base
11	6	Planted Maple	Good	
12	5	Planted Maple	Good	
13	5	Planted Maple	Good	
14	4	Black Gum	Good	
15	3	Planted Maple	Good	
16	3	Planted Maple	Good	
17	4	Black Gum	Fair	Main leader cracked, poor root development
18	5	Willow Oak	Good	
19	4	Black Gum	Good	
20	6	Willow Oak	Good	
21	5	Willow Oak	Good	
22	5	Willow Oak	Good	
23	6	Willow Oak	Good	
24	5	Willow Oak	Good	
25	6	Planted Elm	Good	
26	7	Planted Elm	Good	
27	5	Planted Elm	Good	
28	8	Planted Elm	Good	
29	9	Planted Elm	Good	Straps embedded near crotch

30	12	Pecan	Fair	right side of fence
31	18	Water Oak	Fair	right side of fence
32	16	Black Cherry	DDH	inside fence - neighbors
33	15	Sweetgum	Fair	20% CRZ impact











CU-16-22
Sabri Guven

CITY OF ALPHARETTA

PUBLIC HEARING APPLICATION

FOR OFFICE USE ONLY

Case #: _____

☐ Fee Paid Initial: _____

COMMUNITY DEVELOPMENT DEPARTMENT

2 PARK PLAZA

ALPHARETTA, GA 30009

1. This page should be the first page in each of your completed application packets.
2. It is preferred that all responses be typed. Illegible applications will not be accepted.
3. Prior to signing and submitting your application, please check all information supplied on the following pages to ensure that all responses are complete and accurate. Incomplete applications will not be accepted.
4. Payment of all applicable fees must be made at the time of application. Payment may be made via cash, credit card (American Express, Master Card or Visa), or check made payable to "City of Alpharetta."
5. Applications will be accepted only on the designated submittal dates between the hours of 8:30 AM and 3:30 PM.
6. If you have any questions regarding this form, please contact the Community Development Department by calling 678-297-6070.

Contact Information:

Contact Name: Richard C Wernick Telephone: 770 527 3286

Address: 3366 Carverton Lane Suite: _____

City: Alpharetta State: GA Zip: 30022 Fax: _____

Mobile Tel: 770 527 3286 Email: rcwernick@gmail.com

Subject Property Information:

Address: 2225 Old Milton Parkway 2255 Old Milton Parkway Current Zoning: C-2 Cond. Use
DTI

District: 1st Section: 2nd Land Lot: 748 Parcel ID: 12-2703-0748-016-4
12-2703-0748-014-9

Proposed Zoning: No Change Current Use: Retail Center + Vacant Parcel

This Application For (Check All That Apply):

- | | |
|---|--|
| ☒ Conditional Use | ☐ Master Plan Amendment |
| ☐ Rezoning | ☐ Master Plan Review |
| ☒ Variance | ☒ Public Hearing |
| ☐ Comprehensive Plan Amendment | ☐ Other (Specify): _____ |

APPLICANT REQUEST AND INTENT

What is the proposed use(s) of the property?

Retail and Office

Applicant's Request (Please itemize the proposal):

Additional retail of 3,024 square feet
Office of 9,000 square feet with conditional use of
25% retail for a dress shop.

Applicant's Intent (Please describe what the proposal would facilitate):

Adding retail to a successful shopping center and then
adding an office component with the addition of a
.9 acre parcel currently zoned for O+I. Twenty-five
percent of the office building would be used for retail
to add a women's dress shop featuring high end formal
dresses + wedding gowns.

ALPHARETTA PLANNING COMMISSION REVIEW CRITERIA

How will this proposal be compatible with surrounding properties?

Existing Retail on two corners at intersection of Haynes Bridge Road and Old Milton Parkway

How will this proposal affect the use and value of the surrounding properties?

NO affect

Can the property be developed for a reasonable economic use as currently zoned? Please explain why or why not.

NO change in zoning is being requested

What would be the increase to population and traffic if the proposal were approved?

NO significant change

What would be the impact to schools and utilities if the proposal were approved?

NO impact

How is the proposal consistent with the Alpharetta Comprehensive Plan; particularly the Future Land Use Map?

Consistent with Comprehensive Plan and Future Land Use.

Are there existing or changing conditions which affect the development of the property and support the proposed request?

N/A

On a separate sheet or sheets, please provide any information or evidence that supports your request and the statements that you have provided in this application.

BOARD OF ZONING APPEALS REVIEW CRITERIA

Please respond to the following ONLY if you are applying for a zoning variance.

Are there extraordinary and exceptional conditions pertaining to the subject property because of its size, shape, or topography? Please describe them.

NO

Would the application of the Zoning Code standards as they relate to the subject property create an unnecessary hardship? Please explain.

NO. Downtown zoning criteria requires buildings to be near landscape strip with no parking in front of the building. Because of the angle of the building relative to Old Milton Parkway the variance from 15' to 10' for a small portion of the building is necessary.

Are there conditions that are peculiar to the subject property? Please describe them in detail.

NO

Would relief, if granted, cause substantial detriment to the public good or impair the purpose and intent of the Zoning Code? Please defend your response.

NO, the office building is a quiet use with limited traffic.

On a separate sheet or sheets, please provide any information or evidence that supports your request and the statements that you have provided in this application.

PROPERTY OWNER AUTHORIZATION

Property Owner Information:

Contact Name: Sabri Guven Telephone: 770-777-4800
Address: 2225 Old Milton Parkway Suite: 200
City: Alpharetta State: GA Zip: 30004

Authorization:

I do solemnly swear and attest, subject to criminal penalties for false swearing, that I am the legal owner, as reflected in the records of Fulton County, Georgia, of the property identified below, which is the subject of the attached Application for Public Hearing before the City of Alpharetta, Georgia.

As the legal owner of record of the subject property, I hereby authorize the individual named below to act as the applicant in the pursuit of the Application for Public Hearing in request of the items indicated below.

- | | |
|---|---|
| ☐ Annexation | ☐ Special Use |
| ☐ Rezoning | ☒ Conditional Use |
| ☒ Variance | ☐ Master Plan |
| ☐ Land Use Application | ☒ Other <u>Public Hearing</u> |

Identify Authorized Applicant:

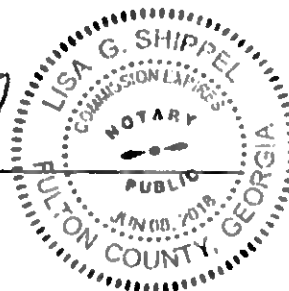
Name of Authorized Applicant: Richard C Wernick Telephone: 770 527 3286
Address: 3366 Carverton Lane Suite: _____
City: Alpharetta State: GA Zip: 30022

So Sworn and Attested:

Owner Signature: Sabri Guven Date: 9-29-2016

Notary:

Notary Signature: Lisa G Shippe



Date: 9.29.16

Letter of Intent

Sabri Guven Fine Jewelry

The subject property is approximately 2.6 acres of land located in Land Lot 748 of the 1st District, 2nd Section of Fulton County, Georgia ("Property"). This application contains two requests: (1) A request to modify zoning conditions 3 & 7 approved pursuant to Z-08-01/V-08-10 approved May 27, 2008. (2) A conditional use of 25% retail in O&I zoning for a dress shop and (3) Two variances related to the office building setbacks.

Together, the zoning requests will allow the expansion of the Sabri Guven Fine Jewelry Center. The intent is to move the highly successful Collet French Pastry Shop to the new 3024 square expansion of the retail space and add a women's dress shop in the new office building that will offer dress apparel for formal events and weddings.

This zoning application is consistent with the Downtown Alpharetta Master Plan.

DISCLOSURE FORM

The Official Code of Georgia Annotated requires disclosure of campaign contributions to government officials by an applicant or opponent of a rezoning or public hearing petition (O.C.G.A. 36-67 A-1).

Applicants must file this form with the City of Alpharetta Community Development Department within ten (10) days after filing for rezoning or public hearing. Opponents to a rezoning or public hearing petition must file this form five (5) days prior to the Planning Commission meeting at which the subject rezoning or public hearing petition is scheduled to be heard.

Name of Applicant or Opponent:

Richard C Wernick

Subject Public Hearing Case:

Campaign Contribution Information:

Please provide the requested information for each contribution with a dollar amount or value of \$250 or more made within the past two (2) years to an Alpharetta Official by the individual identified above. Please use a separate form for each Alpharetta Official to whom such a contribution as been made.

If the individual identified above has made no such contributions to an Alpharetta Official within the past two (2) years, please indicate this by entering "N/A" on the appropriate lines below.

Name of Official:

N/A

Position:

Description of Contribution:

Value:

Description of Contribution:

Value:

Description of Contribution:

Value:

Description of Contribution:

Value:

Description of Contribution:

Value:

Campaign Contribution Information:

I do solemnly swear and attest, subject to criminal penalties for false swearing, that the information provided in this Disclosure Form is true and accurate and that I have disclosed herein any and all campaign contributions made to an Official of the City of Alpharetta, Georgia in accordance with O.C.G.A. 36-67 A-1.

Signature:

Richard Wernick

Date:

9/25/16

CU-16-22
Sabri Guven

EXHIBIT A

All that tract or parcel of land lying and being in Land Lot 748 of the 1st District, 2nd Section, City of Alpharetta, Fulton County, Georgia and being more particularly described as follows:

Beginning at a concrete monument found at the Northeast end of a miter at the intersection of the Easterly right-of-way of Haynes Bridge Rd. (variable right-of-way) with the Southwesterly right-of-way of Old Milton Parkway (variable right-of-way), and running thence South 82 degrees 47 minutes 24 seconds East along the Southwesterly right-of-way of Old Milton Parkway 68.28 feet to a point; running thence Southeasterly an arc distance of 24.83 feet along the Southwesterly right-of-way of Old Milton Parkway (said arc being subtended by a chord bearing South 82 degrees 36 minutes 02 seconds East 24.83 feet and having a radius of 3,754.72 feet); running thence Southeasterly along the Southwesterly right-of-way of Old Milton Parkway an arc distance of 115.71 feet (said arc being subtended by a chord bearing South 81 degrees 31 minutes 41 seconds East 115.71 feet and having a radius of 3,754.72 feet); thence leaving said right-of-way and running thence South 03 degrees 31 minutes 16 seconds West 179.90 feet to a point; running thence South 69 degrees 49 minutes 13 seconds East 22.72 feet to a point; running thence South 02 degrees 58 minutes 30 seconds West 122.22 feet to a flat iron found; running thence South 79 degrees 27 minutes 10 seconds East 271.48 feet to a point; running thence South 09 degrees 36 minutes 45 seconds West 3.34 feet to a point; running thence South 09 degrees 24 minutes 16 seconds West 26.60 feet to a point; running thence South 58 degrees 46 minutes 43 seconds East 27.74 feet to a point; running thence South 37 degrees 46 minutes 41 seconds East 12.34 feet to a point; running thence South 89 degrees 07 minutes 52 seconds West 55.73 feet to a point; running thence North 18 degrees 18 minutes 39 seconds West 41.05 feet to a point; running thence North 87 degrees 46 minutes 39 seconds West 286.40 feet to a point; running thence North 01 degrees 10 minutes 21 seconds East 25.00 feet to a point; running thence North 87 degrees 46 minutes 39 seconds West 13.00 feet to a point; running thence North 00 degrees 40 minutes 24 seconds East 155.92 feet to a point; running thence North 88 degrees 25 minutes 39 seconds West 58.00 feet to a point; running thence North 88 degrees 25 minutes 39 seconds West 89.75 feet to a point; running thence North 88 degrees 25 minutes 39 seconds West 57.29 feet to a point on the Easterly right-of-way of Haynes Bridge Rd.; running thence North 00 degrees 41 minutes 13 seconds West along the Easterly right-of-way of Haynes Bridge Rd. 141.83 feet to a point; running thence North 48 degrees 15 minutes 42 seconds East along the miter of the Easterly right-of-way of Haynes Bridge Rd. 70.66 feet to a concrete monument found at the true point of beginning.

LEGAL DESCRIPTION

"GUVEN ADJACENT TRACT"

ALL THAT TRACT OR PARCEL of land lying and being in Land Lot 748 of the 1st District, 2nd Section, City of Alpharetta, Fulton County, Georgia, and being more particularly described as follows:

BEGINNING at an iron pin on the southerly right of way line of State Route 120, also known as Old Milton Parkway (right of way width varies), said iron pin being located 208.82 feet easterly, as measured along the southerly right of way line of State Route 120, from the point of intersection of said southerly right of way line with the northeasterly mitered right of way line of Haynes Bridge Road (right of way width varies); thence proceed along the southerly right of way line of State Route 120 South 79 degrees 44 minutes 27 seconds East a distance of 118.53 feet to an iron pin; thence leaving said southerly right of way line of State Route 120 and proceed South 02 degrees 23 minutes 50 seconds West a distance of 267.49 feet to an iron pin; thence South 71 degrees 02 minutes 55 seconds East a distance of 174.95 feet to an iron pin; thence South 02 degrees 33 minutes 14 seconds East a distance of 10.69 feet to a point; thence South 09 degrees 36 minutes 45 seconds West a distance of 3.34 feet to a point; thence North 79 degrees 27 minutes 10 seconds West a distance of 271.48 feet to an iron pin; thence North 02 degrees 58 minutes 30 seconds East a distance of 122.22 feet to a fence post; thence North 69 degrees 49 minutes 13 seconds West a distance of 22.72 feet to a point; thence North 03 degrees 31 minutes 16 seconds East a distance of 179.90 feet to an iron pin on the southerly right of way line of State Route 120 and **THE POINT OF BEGINNING:** said property being shown as a 0.89 Acre (38,687 square feet), tract of land on a survey prepared for K&S Old Milton LLC, Old Republic National Life Insurance Company and Metro City Bank, prepared by Registered Land Surveyors, Inc., certified by Claude S. Brown, Georgia Registered Land Surveyor No. 2420, dated August 17, 2016, and last revised September 19, 2016, which certain survey is incorporated herein by this reference and made a part hereof.

CITIZEN PARTICIPATION FORM - PART A

This form must be completed and submitted with the applicant's completed Public Hearing Application. Applications submitted to the City of Alpharetta without a completed Citizen Participation Form - Part A will not be accepted.

Public Hearing or Project Name:

GUVEN FINE JEWELRY

Contact Name:

Richard C Wernick

Telephone:

770 527 3286

The following people will be notified of this application and provided information describing the subject proposal. Please note that ALL adjoining property owners MUST be notified. Use additional pages as needed.

Method by which these individuals will be contacted. Please mark all that apply. If you select "Other," please provide a description of the method of contact that will be used.

- | | |
|--|---|
| ☒ Letter | ☐ Personal Visits |
| ☐ Telephone | ☐ Group Meeting |
| ☐ Email | ☐ Other (Please Specify) _____ |

Please describe the method(s) by which these individuals will have the opportunity to respond or contact the applicant with questions or concerns about the proposal.

CU-16-22
Sabri Guven

Sabri Guven Fine Jewelry Shopping Center

Trip Generation Report

New Construction

ITE LAND USE CODE	INTENSITY	DAILY TOTAL	AM PEAK IN OUT TOTAL	PM PEAK IN OUT TOTAL
RETAIL (828)	5424 S.F.	270	NOT REPORTED	15 19 34
OFFICE (710)	7200 S.F.	178	21 3 24	15 72 87



STAFF REPORT

Submitting Department: Community Development

Submitted By:

Meeting Date: December 12, 2016

I. AGENDA ITEM TITLE: V-16-33: VEIN CLINICS OF AMERICA/SIGN VARIANCE (CITY COUNCIL ONLY)
CONSIDERATION OF A VARIANCE TO ALLOW ONE (1) ADDITIONAL WALL SIGN. THE PROPERTY IS LOCATED AT 2775 OLD MILTON PARKWAY AND IS LEGALLY DESCRIBED AS LAND LOTS 803 & 804, 1ST DISTRICT, 2ND SECTION, FULTON COUNTY, GEORGIA.

II. RECOMMENDATION:

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: NO

FISCAL IMPACT: NO

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST:

APPROPRIATIONS:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>

EXTERNAL FUNDING SOURCES:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>

IV. REPORT IN BRIEF:

V. ALTERNATIVES:

VI. ATTACHMENTS:

Council Agenda Report, Location Map, Citizen Part B Report, Application



CITY COUNCIL MEETING STAFF REPORT

SUBMITTING DEPARTMENT: COMMUNITY DEVELOPMENT
SUBMITTED BY: KATHI COOK
DRAFTED BY: MICHAEL WOODMAN

I. AGENDA ITEM TITLE: V-16-33 VEIN CLINICS OF AMERICA SIGN VARIANCE

CITY COUNCIL: December 12, 2016

II. RECOMMENDATION:

Approve V-16-33 Vein Clinics of America Sign Variance subject to the following conditions:

1. Wall sign location, size, type, and color shall be limited to submitted plans, dated 8/29/16 (Revision 3).
2. Additional wall signs shall be prohibited on the building elevation facing Old Milton Parkway, as well as the elevation facing the Amber Park Drive intersection.

III. REPORT IN BRIEF:

The applicant, Altair Signs, is requesting consideration of a sign variance to allow one (1) additional wall sign. The proposed wall sign is for Vein Clinics of America and is located on the north elevation of the existing Charles Schwab office building facing Old Milton Parkway. The subject property is located at 2775 Old Milton Parkway, Building 1, Suite 200 and at the southeast corner of Old Milton Parkway and Amber Park Drive in the Parkway 400 Master Plan.

DISCUSSION

The applicant, Altair Signs, is requesting a sign variance on behalf of Vein Clinics of America to allow one (1) additional wall sign on the north elevation of the Charles Schwab building facing Old Milton Parkway. The wall sign is in addition to the wall sign on the south elevation of the building and over the entrance to the tenant space. The property is located at 2775 Old Milton Parkway, Building 1, Suite 200 at the southeast corner of Old Milton Parkway and Amber Park Drive.

Unified Development Code (UDC) Section 2.6.12 (A)(2) Wall Signs states that, "One wall sign per road frontage for each tenant space no greater than one (1) square foot of sign area per one (1) lineal feet of tenant space frontage shall be permitted; provided, however, no more than two (2) wall signs shall be allowed for a tenant space." One (1) wall sign is approved directly above the tenant space entrance, which faces interior to the site.

The rear of the Charles Schwab building backs up to Old Milton Parkway, with tenant entrances facing interior to the site. The applicant's site plan and sign details depict a wall sign on the north elevation of the rear of the building facing Old Milton Parkway, as well as a wall sign on the south elevation at the entrance to the tenant space. As shown below, there is an existing wall sign for Charles Schwab on the building elevation facing the intersection of Old Milton Parkway and Amber Park Drive. In addition, the monument sign is being used by Emory at Avalon and does not include sign area for tenant signage.

Existing Northwest Building Elevation at 2775 Old Milton Parkway – Facing the Intersection



Existing North Building Elevation at 2775 Old Milton Parkway – Facing Old Milton Parkway



The proposed wall sign is approximately 48 square feet and is depicted as white letters with a black background. Staff recommends that the sign location, type, size, and color be limited to the applicant's submitted plans.

VARIANCE REQUIREMENTS

The City of Alpharetta Unified Development Code Article IV, Section 4.5.3 outlines the criteria set forth for granting a hardship variance. The ordinance specifically states..."a variance may be granted in whole or in part, or with conditions, in such individual case of unnecessary hardship upon a finding that":

1. There are extraordinary and exceptional conditions pertaining to the particular piece of property in question because of its size, shape or topography; or

Response: The Charles Schwab building backs up to Old Milton Parkway, with tenant entrances facing interior to the site. Therefore, the applicant's sign has no visibility from Old Milton Parkway and the monument sign does not include sign area for tenants.

2. The application of the Ordinance to this particular piece of property would create an unnecessary hardship; or

Response: The Charles Schwab building backs up to Old Milton Parkway, with tenant entrances interior to the site. Therefore, the applicant's sign has no visibility from Old Milton Parkway and the monument sign does not include sign area for tenants.

3. There are conditions that are peculiar to the property which adversely affect its reasonable use or usability as currently zoned; or

Response: The Charles Schwab building backs up to Old Milton Parkway, with tenant entrances interior to the site. Therefore, the applicant's sign has no visibility from Old Milton Parkway and the monument sign does not have sign area for tenants.

4. Relief, if granted, would not cause substantial detriment to the public good or impair the purpose and intent of the Ordinance.

Response: The applicant's requested variance will not cause a substantial detriment to the public good. If approved, staff recommends conditions to limit the size and type of sign permitted, as well as to restrict additional wall signs on the building elevation facing Old Milton Parkway.

CONCURRENCES

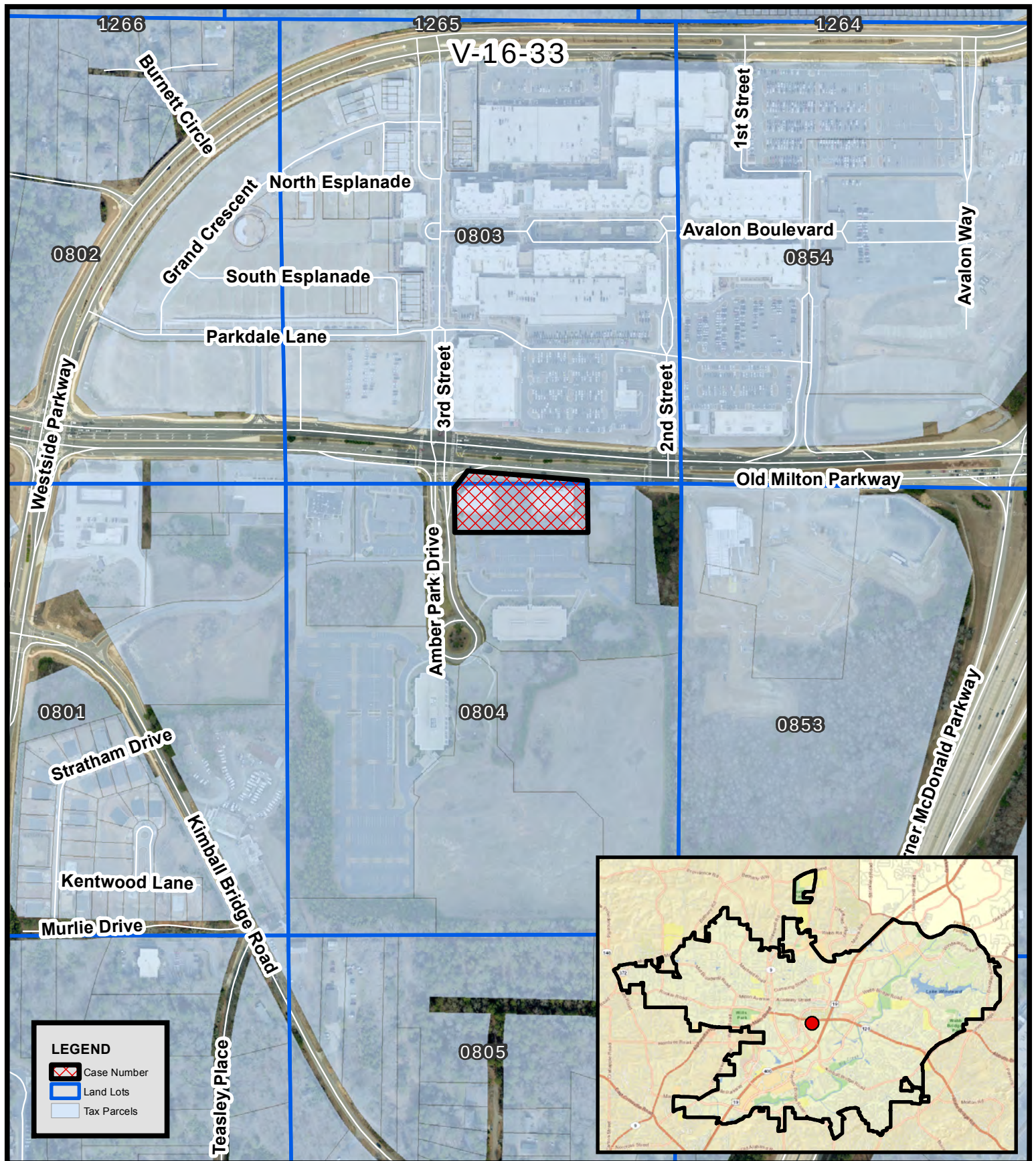
Staff has reviewed the application and is in general agreement with the requested sign variance due to the orientation of the building on the property. Conditions are recommended limiting the size and type of sign permitted, as well as restricting additional wall signs on the building elevation facing Old Milton Parkway.

CITIZEN PARTICIPATION PLAN

The applicant notified adjacent property owners of the sign variance request and intent for the property. The citizen participation report states that no comments were received.

IV. ATTACHMENTS:

- Site Plan
- Sign Rendering



Location Map
 Vein Clinics of America
 2775 Old Milton Parkway

V-16-33
 D/LL: 1/2/803, 804
 CC: 12/12/16



Location Map Provided by:
 Community Development - GIS

CITIZEN PARTICIPATION FORM - PART B

This form must be completed and submitted to the City of Alpharetta Community Development Department a minimum of twenty (20) working days prior to the scheduled Public Hearing. Failure to do so will result in cancellation of the scheduled hearing.

Public Hearing or Project Name: Vein Clinic of America

Contact Name: Clinton Moseley

Telephone: 770-889-1212

Please describe comments and concerns provided by any and all individuals contacted as part of the the Citizen Participation Program. If any individuals provided written correspondence, please attach copies of same to this report.

No Calls, letters or emails were received in regards to this application

Method by which these individuals were contacted. Please mark all that apply. Please provide samples of any and all written communications used to provide notification.

- | | |
|------------------------------------|---|
| ☐ Letter | ☐ Personal Visits |
| ☐ Telephone | ☐ Group Meeting |
| ☐ Email | ☐ Other (Please Specify) _____ |

Attach a list of people who have been notified of this application and provided information describing the subject proposal. Please note that ALL adjoining property owners MUST be notified.

I, the undersigned, as an authorized representative of the applicant and Public Hearing item identified above, do solemnly swear and attest, subject to criminal penalties for false swearing, that the information provided in this Citizen Participation Form - Part B and in any and all documents provided in support of this report are true and accurate. I further understand that any false statements provided by representatives of the applicant as part of this report may result in penalties up to and including denial of the subject application.

Signature of Authorized Agent: _____

Date: 12.5.2016

Print Form

CITY OF ALPHARETTA

PUBLIC HEARING APPLICATION

FOR OFFICE USE ONLY

Case #: _____

☐ Fee Paid Initial: _____

COMMUNITY DEVELOPMENT DEPARTMENT 2 PARK PLAZA ALPHARETTA, GA 30009

1.

This page should be the first page in each of your completed application packets.
2.

It is preferred that all responses be typed. Illegible applications will not be accepted.
3.

Prior to signing and submitting your application, please check all information supplied on the following pages to ensure that all responses are complete and accurate. Incomplete applications will not be accepted.
4.

Payment of all applicable fees must be made at the time of application. Payment may be made via cash, credit card (American Express, Master Card or Visa), or check made payable to "City of Alpharetta."
5.

Applications will be accepted only on the designated submittal dates between the hours of 8:30 AM and 3:30 PM.
6.

If you have any questions regarding this form, please contact the Community Development Department by calling 678-297-6070.

Contact Information:

Contact Name: CLINTON MOSELEY

Telephone: 770-889-1212

Address: 6802 BUFORD HWY

Suite: _____

City DORAVILLE

State: GA

Zip: 30340

Fax: _____

Mobile Tel: 404-227-7854

Email: CMOSELEY@ALTAIRSIGN.COM

Subject Property Information:

Address: 2775 OLD MILTON PKWY, STE 200, BLDG 1, ALHARETTA, GA 30004

Current Zoning: OD12C3

District: _____

Section: _____

Land Lot: _____

Parcel ID: 12 284008030244

Proposed Zoning: _____

Current Use: ~~OD12C3~~ Clinic

This Application For (Check All That Apply):

☐ Conditional Use

☐ Master Plan Amendment

☐ Rezoning

☐ Master Plan Review

☒ Variance

☐ Public Hearing

☐ Comprehensive Plan Amendment

☐ Other (Specify): _____

ALPHARETTA PLANNING COMMISSION REVIEW CRITERIA

How will this proposal be compatible with surrounding properties?

The subject building presently employs one (1) wall sign identifying Charles Schwab fronting Old Milton Parkway. Vein Clinics of America emulated the Charles Schwab design format for continuity within the development.

How will this proposal affect the use and value of the surrounding properties?

Relief, if granted will not establish a precedent as the subject building presently has one (1) wall sign with direct visibility to Old Milton Parkway.

Can the property be developed for a reasonable economic use as currently zoned? Please explain why or why not.

Yes, the property is under contract and/or lease. However, adequate signage located on the subject structure or along the roadside is necessary to ensure economic viability of the space now and in the future.

What would be the increase to population and traffic if the proposal were approved?

No tangible increase to population or traffic associated with the request. Relief if granted will ensure adequate wayfinding for the occupant.

What would be the impact to schools and utilities if the proposal were approved?

No tangible impact to schools and utilities associated with this request.

How is the proposal consistent with the Alpharetta Comprehensive Plan; particularly the Future Land Use Map?

The subject property is compliant with the comprehensive plan and future land use map.

Are there existing or changing conditions which affect the development of the property and support the proposed request?

Yes, the subject multi-tenant space does benefit from a roadside sign identifying or providing wayfinding guidance of the occupants to motorists traveling Old Milton Parkway.

On a separate sheet or sheets, please provide any information or evidence that supports your request and the statements that you have provided in this application.

SIGN VARIANCE REVIEW CRITERIA

Are there exceptional conditions pertaining to the property where the sign is to be located as a result of the property size, shape, or topography which are not applicable to other lands or structures in the area? If "yes," please explain.

- ☒ Yes
- ☐ No
- Yes, the subject site while compliant to the proposed use and activity is restricted by the sign regulation for adequate identification. To ensure viability and long-term occupancy assistance is necessary from the Board of Zoning Appeals for the subject site. The subject multi-tenant space does benefit from a roadside sign identifying or providing wayfinding guidance of the occupants to motorists traveling Old Milton Parkway.

Would the applicant be deprived of rights that are commonly enjoyed by others similarly situated? If "yes," please explain.

- ☒ Yes
- ☐ No
- Yes, other occupants and/or uses have signage facing Old Milton Parkway.

Would granting the variance confer on the applicant any significant privileges which are denied to others similarly situated? If "yes," please explain.

- ☐ Yes
- ☒ No
- The petition is purely for site identification and wayfinding.

Are the exceptional circumstances the result of actions of the applicant or the applicant's representatives? If "yes," please explain.

- ☐ Yes
- ☒ No
- Demographics by the occupant support locating within this community. The Zoning Ordinance by strict interpretation regulates signage and affords a property owner the ability to present the subject petition in this instance.

Is the requested variance the minimum necessary to allow the applicant to enjoy rights commonly enjoyed by others similarly situated? If "no," please explain.

- ☒ Yes
- ☐ No

Would granting of the variance violate more than one standard of the Unified Development Code? If "yes," please explain.

- ☐ Yes
- ☒ No

Would granting the variance result in allowing a sign that interferes with road or highway visibility or obstruct or otherwise interfere with the safe and orderly movement of traffic? On a separate sheet or sheets, please defend your response.

- ☐ Yes
- ☒ No

BOARD OF ZONING APPEALS REVIEW CRITERIA

Please respond to the following ONLY if you are applying for a zoning variance.

Are there extraordinary and exceptional conditions pertaining to the subject property because of its size, shape, or topography? Please describe them.

Vein Clinics of America identified this community based on research and demographics. The subject site while compliant to the proposed use and activity is restricted by the sign regulation for adequate identification. To ensure viability and long-term occupancy assistance is necessary from the Board of Zoning Appeals for the subject site.

Would the application of the Zoning Code standards as they relate to the subject property create an unnecessary hardship? Please explain.

Yes, the subject site while compliant to the proposed use and activity is restricted by the sign regulation for adequate identification. To ensure viability and long-term occupancy assistance is necessary from the Board of Zoning Appeals for the subject site. The subject multi-tenant space does benefit from a roadside sign identifying or providing wayfinding guidance of the occupants to motorists traveling Old Milton Parkway.

Are there conditions that are peculiar to the subject property? Please describe them in detail.

The architecture and available sign band area is limited to one elevation. The "as-built" elevation provides for the entrance at the rear of the building. The site does not have a roadside sign. We respectfully relief and assistance for the property to provide a reasonable return and long-term occupancy.

Would relief, if granted, cause substantial detriment to the public good or impair the purpose and intent of the Zoning Code? Please defend your response.

Sign design is subjective and generally based on corporate brand and marketing. Relief, if granted would be specific to this particular parcel to assist with identification and wayfinding along Old Milton Parkway. No detriment would be established to public good or impair the purpose of the Zoning Code. The requested relief meets the spirit and intent of the Zoning Code by providing identification of the occupant and wayfinding guidance to the motorist.

On a separate sheet or sheets, please provide any information or evidence that supports your request and the statements that you have provided in this application.

PROPERTY OWNER AUTHORIZATION

Property Owner Information:

Contact Name: Thomas W. Wheeler, Jr. Telephone: 770-476-4801

Address: c/o Wheeler/Brand, 1960 Satellite Boulevard, Suite: 1300

City Duluth State: GA Zip: 30097 -

Authorization:

I do solemnly swear and attest, subject to criminal penalties for false swearing, that I am the legal owner, as reflected in the records of Fulton County, Georgia, of the property identified below, which is the subject of the attached Application for Public Hearing before the City of Alpharetta, Georgia.

As the legal owner of record of the subject property, I hereby authorize the individual named below to act as the applicant in the pursuit of the Application for Public Hearing in request of the items indicated below.

- | | |
|---|--|
| ☐ Annexation | ☐ Special Use |
| ☐ Rezoning | ☐ Conditional Use |
| ☒ Variance | ☐ Master Plan |
| ☐ Land Use Application | ☐ Other <u></u> |

Identify Authorized Applicant:

Name of Authorized Applicant: CLINTON MOSELEY Telephone: 770-889-1212

Address: 6802 BUFORD HWY Suite:

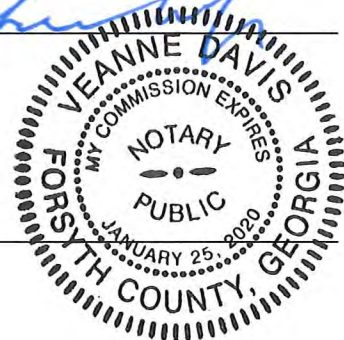
City DORAVILLE State: GA Zip: 30340 -

So Sworn and Attested:

Owner Signature: *TE W. Wheeler* Date: 10-5-16

Notary:

Notary Signature: *Veanne Davis* Date: 10-5-16



DISCLOSURE FORM

The Official Code of Georgia Annotated requires disclosure of campaign contributions to government officials by an applicant or opponent of a rezoning or public hearing petition (O.C.G.A. 36-67 A-1).

Applicants must file this form with the City of Alpharetta Community Development Department within ten (10) days after filing for rezoning or public hearing. Opponents to a rezoning or public hearing petition must file this form five (5) days prior to the Planning Commission meeting at which the subject rezoning or public hearing petition is scheduled to be heard.

X Name of Applicant or Opponent: Clinton Moseley
Subject Public Hearing Case: Vein Clinics of America

Campaign Contribution Information:

Please provide the requested information for each contribution with a dollar amount or value of \$250 or more made within the past two (2) years to an Alpharetta Official by the individual identified above. Please use a separate form for each Alpharetta Official to whom such a contribution as been made.

If the individual identified above has made no such contributions to an Alpharetta Official within the past two (2) years, please indicate this by entering "N/A" on the appropriate lines below.

Name of Official: _____ Position: _____

Description of Contribution:	Value:
Description of Contribution:	Value:
Description of Contribution:	Value:
Description of Contribution:	Value:
Description of Contribution:	Value:

Campaign Contribution Information:

I do solemnly swear and attest, subject to criminal penalties for false swearing, that the information provided in this Disclosure Form is true and accurate and that I have disclosed herein any and all campaign contributions made to an Official of the City of Alpharetta, Georgia in accordance with O.C.G.A. 36-67 A-1.

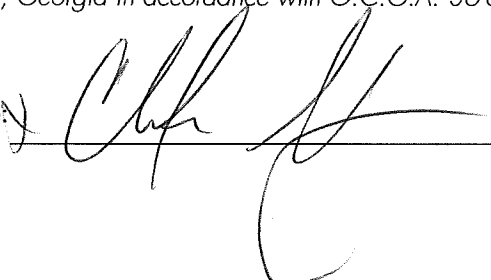
Signature:  Date: 10/6/16

EXHIBIT "A"

LEGAL DESCRIPTION

ALL THAT TRACT OR PARCEL of land lying and being in Land Lots 803 and 804 of the 1st District, 2nd Section, Fulton County, Georgia, being more particularly described as follows:

TO FIND THE POINT OF BEGINNING, commence at an iron pin at the Land Lot corner common to Land Lots 800, 801, 804, and 805 of said District and County of Georgia; thence along the Land Lot line common to Land Lots 801 and 804 the following courses and distances: North 00 degrees 08 minutes 58 seconds West a distance of 700.80 feet to an iron pin; North 00 degrees 07 minutes 23 seconds East a distance of 534.06 feet to an iron pin; North 00 degrees 02 minutes 30 seconds West a distance of 81.93 feet to an iron pin; thence along said Land Lot line common to Land Lots 801 and 804 and continuing along the Land Lot line common to Land Lots 802 and 803 North 02 degrees 29 minutes 25 seconds West a distance of 216.23 feet to a point located on the southerly right of way line of Old Milton Parkway (right of way width varies); thence proceed along said southerly right of way line of Old Milton Parkway the following courses and distances: along a curve to the right having an arc length of 209.15 feet, a radius of 5654.08 feet, a chord bearing of South 86 degrees 11 minutes 53 seconds East and a chord distance of 209.14 feet to a point; South 85 degrees 08 minutes 18 seconds East a distance of 372.97 feet to an iron pin and **THE POINT OF BEGINNING**.

FROM THE POINT OF BEGINNING THUS ESTABLISHED, thence continue along said southerly right of way line of Old Milton Parkway the following courses and distances: South 85 degrees 08 minutes 18 seconds East a distance of 323.11 feet to a point along a curve to the left having an arc length of 65.99, a radius of 7714.94, a chord bearing of South 85 degrees 23 minutes 00 seconds East and a chord distance of 65.99 feet to a point; thence leaving said southerly right of way line of Old Milton Parkway and proceed South 00 degrees 24 minutes 32 seconds West a distance of 150.71 feet to a point; thence North 89 degrees 56 minutes 40 seconds West a distance of 425.08 feet to a point located on the easterly right of way line of Amberpark Drive; thence proceed along the easterly right of way line of Amberpark Drive the following courses and distances: North 01 degree 06 minutes 04 seconds West a distance of 144.43 feet; North 46 degrees 52 minutes 49 seconds East a distance of 56.46 feet to a point located on the southerly right of way line of Old Milton Parkway and **THE POINT OF BEGINNING**: said property being shown as a 1.63 acre (71,114 square feet), tract of land on a survey for RS - Milton, LLC, and Cornerstone Commercial Mortgage, prepared by Registered Land Surveyors, Inc., certified by Claude S. Brown, Georgia Registered Land Surveyor Number 2420, dated October 6, 2003, and last revised May 13, 2004, which certain survey is incorporated herein by this reference and made a part hereof.

APPLICANT REQUEST AND INTENT

What is the proposed use(s) of the property?

The proposed use of the subject property is office, commercial and medical service offering to the general public. The proposed use and as-built structure is compliant to the municipal regulation.

Applicant's Request (Please itemize the proposal):

The property owner and Vein Clinics of America respectfully seek consideration of relief to allow one (1) wall sign parallel to Old Milton Parkway. The strict interpretation of the municipal code allows one (1) wall sign to front or face Old Milton Parkway.

Applicant's Intent (Please describe what the proposal would facilitate):

The design and facility entrance is located at the rear of the building whereas, one (1) wall sign is approved above the tenant space. However, Vein Clinics of America would like to have visibility for motorists traveling Old Milton Parkway and the ability to identify the site specific location. The rear elevation wall sign does not adequate wayfinding in the built environment and Vein Clinics of America does not have roadside sign to assist clients.

Vein Clinics of America



October 6, 2016

City of Alpharetta
Community Development Department
2 Park Plaza
Alpharetta, GA 30009

RE: Vein Clinics of America Variance Request- 2775 Old Milton Pkwy, Ste 200, Bldg 1- Additional Sign

Dear Mr. Woodman,

Vein Clinics of America, located at 2775 Old Milton Pkwy, Ste 200, Bldg1, would like to request a variance to have an additional wall sign parallel to Old Milton Pkwy.

Per the Alpharetta sign code, this location only allows for (1) one wall sign to face Old Milton Pkwy.

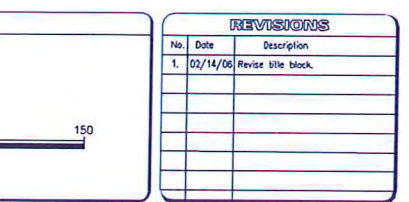
The design and facility entrance is located at the rear of the building whereas, (1) one sign is approved above the tenant space. However, Vein Clinics of America would like to have visibility for motorists traveling Old Milton Parkway and the ability to identify the site-specific location. The rear elevation wall sign is hidden and Vein Clinics of America does not have any road side signs to assist clients.

Vein Clinics of America identified this community based on research and demographics. The subject site while compliant to the proposed use and activity is restricted by the sign regulation for adequate identification. To ensure visibility and long-term occupancy, we humbly ask for consideration and approval on our request to allow an additional wall sign at the above referenced location.

Sincerely,

A handwritten signature in black ink, appearing to read "Clinton Moseley", is written over a horizontal line.

Clinton Moseley,
Altair Sign & Light, Chief of Operations



CITIZEN PARTICIPATION FORM - PART A

This form must be completed and submitted with the applicant's completed Public Hearing Application. Applications submitted to the City of Alpharetta without a completed Citizen Participation Form - Part A will not be accepted.

Public Hearing or Project Name: VEIN CLINICS OF AMERICA

Contact Name: Clinton Moseley Telephone: 770-889-1212

The following people will be notified of this application and provided information describing the subject proposal. Please note that ALL adjoining property owners MUST be notified. Use additional pages as needed.

- 2755 Old Milton Pkwy - Marietta
- Fifth Third Bank - 38 Fountain Square Plaza - Cincinnati, OH 45202
- 2795 Old Milton Pkwy - Marietta
- 2795 Old Milton Pkwy, Alpharetta 30009
- 11800 Amber Park Dr - Marietta
- WBENT 2007 C31 Amber Park Limited Partnership
1601 Washington Ave. Ste 700, Miami 33139
- 2845 Old Milton Pkwy - Marietta
- Kathryn Reeder
2845 Old Milton Pkwy, Alpharetta 30004
- 2800 Old Milton Pkwy - Marietta
- Whole Foods Market Group Inc. 85050
21001 N. Tatum Blvd. Ste 1630, Phoenix, AZ
- 2810 Old Milton Pkwy - Marietta
- PNC Bank, 300 Fifth Ave. One PNC Plaza,
Pittsburgh, PA 15222

Method by which these individuals will be contacted. Please mark all that apply. If you select "Other," please provide a description of the method of contact that will be used.

- ☒ Letter
- ☐ Personal Visits
- ☐ Telephone
- ☐ Group Meeting
- ☐ Email
- ☐ Other (Please Specify) _____

Please describe the method(s) by which these individuals will have the opportunity to respond or contact the applicant with questions or concerns about the proposal.

CITIZEN PARTICIPATION FORM - PART B

This form must be completed and submitted to the City of Alpharetta Community Development Department a minimum of twenty (20) working days prior to the scheduled Public Hearing. Failure to do so will result in cancellation of the scheduled hearing.

Public Hearing or Project Name: Vein Clinics of America

Contact Name: Clinton Moseley Telephone: 770-889-1212

Please describe comments and concerns provided by any and all individuals contacted as part of the the Citizen Participation Program. If any individuals provided written correspondence, please attach copies of same to this report.

Method by which these individuals were contacted. Please mark all that apply. *Please provide samples of any and all written communications used to provide notification.*

- ☒ Letter
- ☐ Telephone
- ☐ Email
- ☐ Personal Visits
- ☐ Group Meeting
- ☐ Other *(Please Specify)* _____

Attach a list of people who have been notified of this application and provided information describing the subject proposal. Please note that ALL adjoining property owners MUST be notified.

I, the undersigned, as an authorized representative of the applicant and Public Hearing item identified above, do solemnly swear and attest, subject to criminal penalties for false swearing, that the information provided in this Citizen Participation Form - Part B and in any and all documents provided in support of this report are true and accurate. I further understand that any false statements provided by representatives of the applicant as part of this report may result in penalties up to and including denial of the subject application.

Signature of Authorized Agent: _____ Date: _____



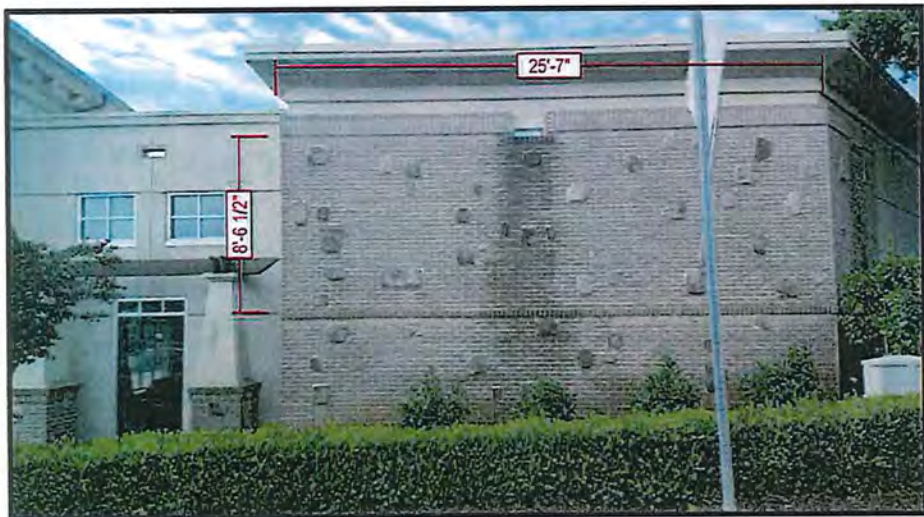
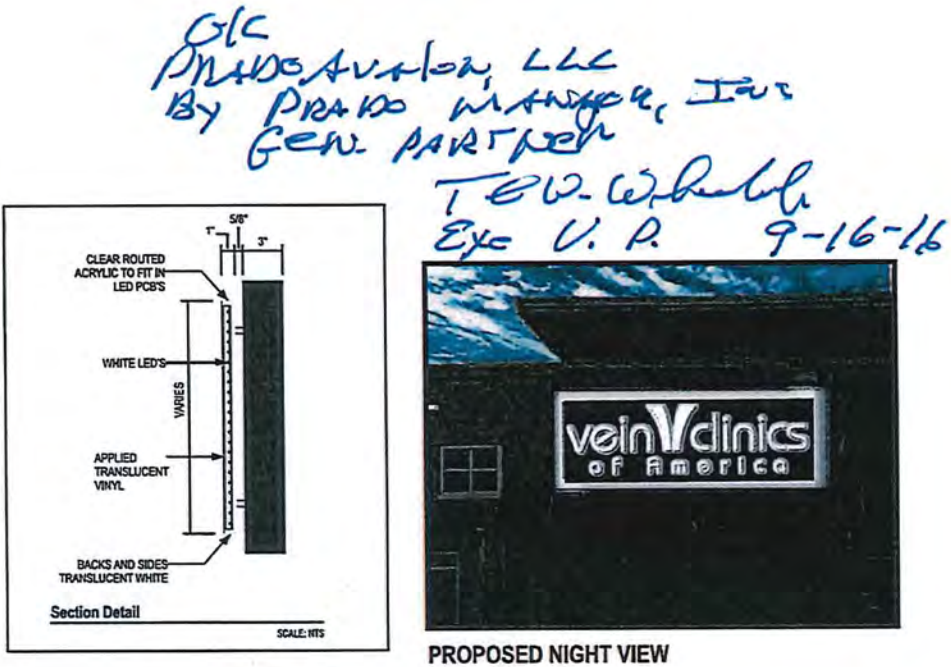
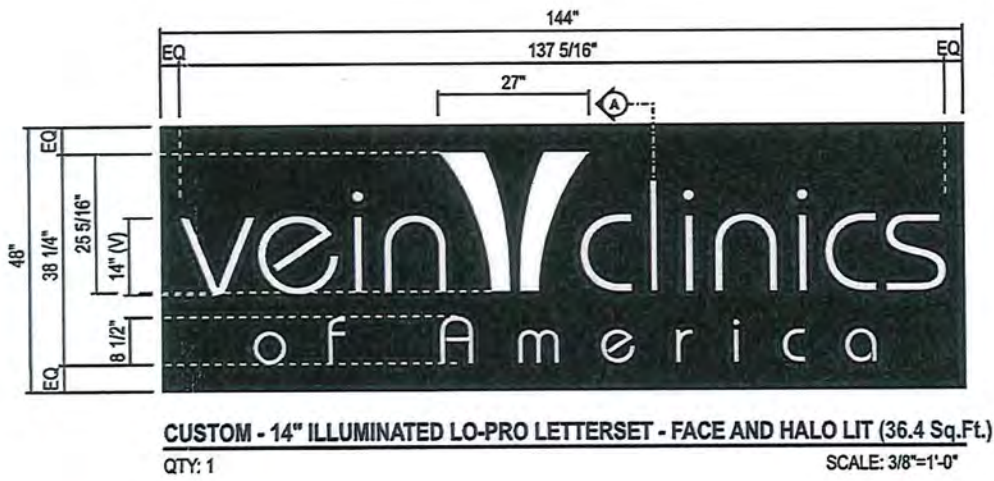
Loc#: 200

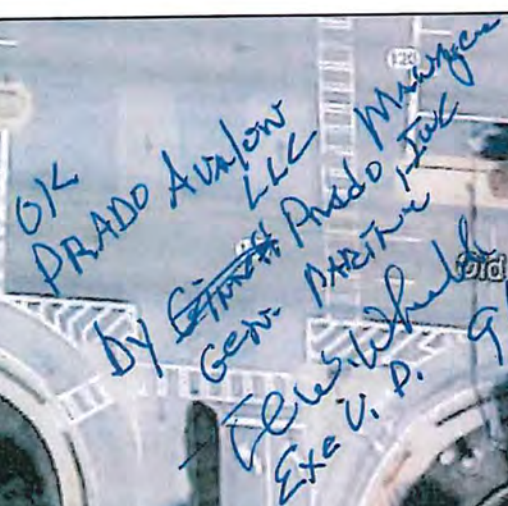
2775 Old Milton Pkwy, Ste 200, Bldg 1
Alpharetta, GA 30004

Brand Book Approved 8/31/16
TMANZO



We Brand Your
Places & Spaces







CITY COUNCIL MEETING STAFF REPORT

SUBMITTING DEPARTMENT: COMMUNITY DEVELOPMENT
SUBMITTED BY: KATHI COOK
DRAFTED BY: JILL BAZINET

I. AGENDA ITEM TITLE: PH-16-18 – UNIFIED DEVELOPMENT CODE AMENDMENTS/SMART STORMWATER CODE

CITY COUNCIL: DECEMBER 12, 2016

This item was heard at the December 1, 2016 Planning Commission meeting. There were no comments from the public for or against the request. After discussion, the Planning Commission voted unanimously to recommend approval of the amendments to the Unified Development Code.

II. RECOMMENDATION:

Adopt proposed amendments to the identified sections of the Unified Development Code, Alpharetta Stormwater Management Manual, and the Alpharetta Extent of Service Policy.

III. REPORT IN BRIEF:

Alpharetta is experiencing revitalization in the Downtown area and new development throughout the City. The City hired Tetra Tech to review the existing stormwater policies and provide recommended code and ordinance updates to modernize our approach to stormwater management and encourage the use of innovative stormwater design. The result is a set of clear and effective policies and standards that the city, residents, businesses, and the development community can use to allow variety and advancement in managing stormwater runoff.

Tetra Tech's approach included a thorough code barrier review, formation of two input groups to develop new code language and policies, and a thirty-day online public input opportunity. The input groups, including city staff from various departments and community stakeholders, met multiple times to discuss the barriers, hypothesize solutions, and vet new code language. Most ordinance updates included expressly allowing infiltration and reuse stormwater management techniques. The bulk of the updates are found in UDC Articles II and III, Appendix A Articles 2 and 3, and the Alpharetta Stormwater Design Manual. Additional updates are located in the Extent of Service Policy.

The most significant updates include:

- A revision to current standards removing the water quality requirement when less than 1,000 square feet of new impervious area is added to a parcel.
- A new gradual tiered chart of requirements for water quality and quantity treatment.
- Provisions for stormwater incentives on redevelopment.
- Adoption of runoff reduction measures with allowances to revert back to traditional water quality measures should site constraints require it. Runoff reduction measures include bioretention ponds, bio swales, pervious pavement, stormwater street tree wells, and cisterns.
- Encouragement for developers to co-locate aesthetic stormwater management treatments in landscape islands and landscape strips.
- Provisions for fee-in-lieu programs for sites meeting certain criteria.

The proposed changes would allow more flexibility for developers, encourage use of smart stormwater techniques, and protect the City's natural resources. The updated language also clarifies the allowance of green infrastructure and low impact development design measures in accordance with recommendations from EPA and EPD.

IV. ATTACHMENTS:

- UDC Amendments – Strike Through and Underline Format

AN ORDINANCE TO AMEND THE UNIFIED DEVELOPMENT CODE OF THE CITY OF ALPHARETTA, GEORGIA TO MODIFY ARTICLE II, SECTIONS 2.2.20, 2.3.1, 2.3.5, 2.5, AND 2.5.5, ARTICLE III, SECTIONS 3.1.1, 3.2.7, 3.3.1 – 3.3.9, 3.3.14, AND 3.5.2-3.5.6, AND APPENDIX A ARTICLE II AND III, IN ORDER TO UPDATE STORMWATER MANAGEMENT REGULATIONS AND TO PROTECT OUR NATURAL RESOURCES.

WHEREAS, the Mayor and City Council of the City of Alpharetta, Georgia (the “City Council” or “Council”) are charged with the protection of public health, safety, and welfare of the citizens of the City of Alpharetta; and

WHEREAS, the Unified Development Code was designed to be amended from time to time when circumstances warrant that modifications be made in order to make the Unified Development Code more responsive to community needs; and

WHEREAS, the City Council finds that ordinances and regulations governing the uses of land and development of land within the City, as well as the City’s operations, should be continually improved from time to time and modified as necessary to better protect and promote the public health, safety, and welfare of the residents and businesses of the City of Alpharetta; and

WHEREAS, prior to adoption of this Ordinance, a public hearing was advertised and held for the purpose of discussing said ordinance; and

WHEREAS, the City Council considered the recommendations of staff and the public at said public hearing; and

WHEREAS, the City Council desires to amend Article III of the Unified Development Code for the foregoing purposes;

NOW, THEREFORE, the Mayor and Council of the City of Alpharetta hereby ordain as follows:

Section 1: Article II, Section 2.2.20F table references, “MU Mixed Use District,” of the Unified Development Code is hereby amended to add reference ‘F’ to Front Yd Set Back and to add ‘F. Tree save areas may overlap the building lot and building setback area. Such tree save areas must be identified on the land disturbance permit and be dedicated on the final plat for permanent preservation.’

Section 2: Article II, Section 2.3.1D “Supplementary Regulations - General Exemptions - Setbacks – Exclusions” of the Unified Development Code is hereby amended to add the following language ‘2. Required setbacks may accommodate runoff reduction measures, provided such setbacks meet the fire code standards. The runoff reduction measures may no comprise public safety such as the sight distance triangles required by the City. Above-ground cisterns, greenwalls, or other vertical runoff reduction measures shall require approval by the Community Development Director.’

Section 3: Article II, Section 2.3.5A “Supplementary Regulations - Buffers and landscape requirements - Buffers” of the Unified Development Code is hereby amended in the third paragraph by removing the word ‘facilities’ and replacing it with ‘basins’ and adding the following sentences to the end of the paragraph. ‘The Community Development Director may approve vegetated runoff reduction

measures within the buffer. The planting requirements above may be varied to accommodate vegetated runoff reduction measures as part of an approved stormwater management plan, if properly designed to provide stormwater management and screening functions.’ This section is further amended in paragraph four by removing the word ‘detention’ and adding the word ‘City’ prior to the word arborist.

Section 4: Article II, Section 2.3.5B “Supplementary Regulations - Buffers and landscape requirements – Parking Lot Screening” of the Unified Development Code is hereby amended to add language that allows alternate landscape configurations when part of a smart stormwater design.

Section 5: Article II, Section 2.5 “Parking and Loading” of the Unified Development Code is amended to add the following sentence to allow for parking space reductions based on an approved parking study. ‘A parking study may be submitted to support a request for a proposed parking reduction. This study shall be reviewed by Community Development and must be approved prior to permitting.

Section 6: Article II, Section 2.5.5A “Parking and Loading – Design criteria” of the Unified Development Code is amended to allow alternative off street parking dimensions when runoff reduction measures are used.

Section 7: Article II, Section 2.5.5C “Parking and Loading – Design criteria” of the Unified Development Code is amended to allow minimum parking bay width standards to meet alternative dimension requirements when runoff reduction measures are used.

Section 8: Article II, Section 2.5.5I “Parking and Loading – Design criteria” of the Unified Development Code is amended by adding ‘I. Multifunctional Runoff Reduction Measures. To encourage multifunctional runoff reduction measures and provide incentives for their use, bioretention areas, vegetate swales, planter boxes, rainwater harvesting systems, and other vegetated BMPs may be used to meet the perimeter island, interior island, and median island landscaping requirements of this Chapter, and may be constructed in the designated landscape areas if part of an approved stormwater management plan for the site and if screening functions are maintained.’

Section 9: Article II, Section 2.5.5 “Parking and Loading” of the Unified Development Code is amended by adding Table 2.3a the Alternative Criteria for Off-Street Parking for when runoff reduction measures are incorporated.

Section 10: Article III, Section 3.1.1C3 “Site Grading and Land Disturbance – Soil erosion and sediment control – Minimum Requirements for Erosion and Sediment Control Using Best Management Practices” is amended by adding subsections q,r, and s that limit disturbance to twenty acres or less unless approved by the Community Development Director, that reduce compaction of highly permeable soils and that preserve natural drainage pathways and conveyances.

Section 11: Article III, Section 3.2.7C “Tree Protection – Minimum tree density requirement” of the Unified Development Code is amended by adding the following language to the end of the subsection.

‘Vegetated runoff reduction measures which include trees may count toward the tree density requirement.’

Section 12: Article III, Section 3.3.1B2 “Storm Water Management – General – Purpose and Intent” of the Unified Development Code is amended to add the following language to the last sentence in the section. ‘...; to meet this purpose, where practicable, the use of on-site runoff reduction measures is encouraged, including but not limited to preservation of existing natural areas; bioretention areas; permeable pavement for parking; vegetated swales; cisterns; greenroofs; and underground detention.’

Section 13: Article III, Section 3.3.1C1a “Storm Water Management – General – Applicability” of the Unified Development Code is amended to remove the existing language and add the following new language. ‘Runoff reduction and water quality shall be required for any new or redevelopment that includes the creation of 1,000 square feet of impervious area or more. Detention (including channel protection) shall be required for any new or redevelopment with an increase of 5,000 square feet of impervious area or more. The extent to which runoff reduction /water quality and detention must be provided (i.e. on new impervious area only, on disturbed area, or on entire site) is based on a tiered approach, and is specified in the City Stormwater Design Manual.’

Section 14: Article III, Section 3.3.1C1b “Storm Water Management – General – Applicability” of the Unified Development Code is amended to remove the existing language and add the following new language. ‘Development or redevelopment that involves land development activities of one acre or more.’

Section 15: Article III, Section 3.3.1C1d “Storm Water Management – General – Applicability” of the Unified Development Code is amended to remove the ‘and b’ language as it no longer applies.

Section 16: Article III, Section 3.3.1D “Storm Water Management – General – Stormwater Management Manual” of the Unified Development Code is amended to replace all references to ‘Engineering/Public Works Department’ with ‘Public Works Department’ to match the current department titles at the City.

Section 17: Article III, Section 3.3.2 “Storm Water Management – General – Definitions” of the Unified Development Code is amended to add the following language to the end of the Impervious Cover definition. ‘Streets, parking areas, sidewalks, and other surfaces constructed with pervious paving and green roofs shall not be considered impervious cover for the purposes of this Section if it is a stormwater management practice with a recorded long-term maintenance agreement.’ It is further amended to add the definition for Runoff Reduction Measures.

Section 18: Article III, Section 3.3.3C4 “Storm Water Management – General – Permit procedures and requirements” of the Unified Development Code is amended to allow for pervious paved surfaces and greenroofs to be included in hydrologic analysis. It is further amended to define the requirements of runoff reduction limits for redevelopment sites. Finally it is further amended to allow for consideration of current site impervious percentages in hydrologic analysis when no negative downstream impacts exist.

Section 19: Article III, Section 3.3.3D1 “Storm Water Management – General – Stormwater Management Inspection and Maintenance Agreements” of the Unified Development Code is amended to add ‘1. General’.

Section 20: Article III, Section 3.3.3D2 “Storm Water Management – General – Stormwater Management Inspection and Maintenance Agreements” of the Unified Development Code is amended to add a section to define the requirements of operations and maintenance agreements for homeowners’ associations and other associations.

Section 21: Article III, Section 3.3.3H “Storm Water Management – General – Stormwater Management Inspection and Maintenance Agreements” of the Unified Development Code is amended to add a section to require deed recordation and indications on final plat of all stormwater management measures.

Section 22: Article III, Section 3.3.3I “Storm Water Management – General – Stormwater Management Inspection and Maintenance Agreements” of the Unified Development Code is amended to add a section allowing for a fee-in-lieu program to be established by the City for a portion of runoff reduction requirements for redevelopment sites.

Section 23: Article III, Section 3.3.4 “Storm Water Management – General – Post-development stormwater management performance criteria” of the Unified Development Code is amended to add language to encourage the use of on-site runoff reduction measures.

Section 24: Article III, Section 3.3.4A3 “Storm Water Management – General – Post-development stormwater management performance criteria” of the Unified Development Code is amended to replace all references to ‘Engineering/Public Works Department’ with ‘Public Works Department’ to match the current department titles at the City.

Section 25: Article III, Section 3.3.4I “Storm Water Management – General – Post-development stormwater management performance criteria” of the Unified Development Code is amended to add a subsection to define runoff reduction requirements and provide provisions for sites that are unable to meet runoff reduction requirements.

Section 26: Article III, Section 3.3.5A and B “Storm Water Management – General – Construction inspections of post-development stormwater management systems” of the Unified Development Code is amended to clean up language to remove references to ‘Engineering / Public Works Department’ and replace with ‘City.’

Section 27: Article III, Section 3.3.6 “Storm Water Management – General – Stream buffer protection” of the Unified Development Code is amended to replace all references to ‘Engineering/Public Works Department’ with ‘Public Works Department’ to match the current department titles at the City.

Section 28: Article III, Section 3.3.8 “Storm Water Management – General – Ongoing inspection and maintenance of stormwater facilities and practices” of the Unified Development Code is amended to replace all references to ‘Engineering/Public Works Department’ with ‘Public Works Department’ to match the current department titles at the City.

Section 29: Article III, Section 3.3.9 “Storm Water Management – General – Illegal connection” of the Unified Development Code is amended to replace all references to ‘Engineering/Public Works Department’ with ‘Public Works Department’ to match the current department titles at the City.

Section 30: Article III, Section 3.3.14 “Storm Water Management – General – Violations, enforcement, and penalties” of the Unified Development Code is amended to clean up language to remove references to ‘Engineering / Public Works Department’ and replace with ‘City.’

Section 31: Article III, Section 3.5.2 H “Installation of Streets- Street improvement ordinance” of the Unified Development Code is amended to add subsection ‘H’ to allow multifunctional traffic calming measures that also provide for runoff reduction.

Section 32: Article III, Section 3.5.4A and B “Installation of Streets- Curb and gutter” of the Unified Development Code is amended to allow alternative curb design to accommodate directional runoff into stormwater runoff reduction measures. It is further amended by removing redundant design criteria and referencing the City’s Standard Details.

Section 33: Article III, Section 3.5.5D “Installation of Streets- Sidewalks” of the Unified Development Code is amended to allow permeable surfaces for sidewalks.

Section 34: Article III, Section 3.5.6A6 “Installation of Streets – Gated subdivisions / private streets” of the Unified Development Code is amended to change the administration of the standards to both Public Works and Community Development.

Section 35: Article III, Section 3.5.6C2 “Installation of Streets – Gated subdivisions / private streets” of the Unified Development Code is amended to remove the reference to the Engineering Department and replace with ‘City.’

Section 36: Article III, Section 3.5.6C3 “Installation of Streets – Gated subdivisions / private streets” of the Unified Development Code is amended to remove the reference to the Engineering Department and replace with ‘Public Works Department.’

Section 37: Appendix A, Article II, Section 2.3.2B “Alpharetta Downtown Code – Downtown Overlay- Applicability ” of the Unified Development Code is amended to allow alternative curb and gutter sections for runoff reduction measures.

Section 38: Appendix A, Article II, Section 2.3.2C “Alpharetta Downtown Code – Downtown Overlay- Applicability ” of the Unified Development Code is amended by changing the subsection to E.

Section 39: Appendix A, Article II, Section 2.3.2C "Alpharetta Downtown Code – Downtown Overlay- Applicability " of the Unified Development Code is amended to add the following subsection. 'Use of multi-functional stormwater BMPs is expressly allowed and encouraged in the ROW, including streetscape landscape bioretention areas and stormwater planters, stormwater street trees, curb bulbouts and medians with bioretention, and vegetated swales. Such stormwater BMPs may receive stormwater credit for the site if part of an approved stormwater management plan and with a long-term maintenance agreement.'

Section 40: Appendix A, Article II, Section 2.3.2D "Alpharetta Downtown Code – Downtown Overlay- Applicability " of the Unified Development Code is amended to add the following subsection. 'Traffic calming design elements, such as intersection bulbouts can help moderate vehicle speeds on Downtown Streets; multifunctional bulb-outs that include runoff reduction measures for stormwater management are encouraged. Landscaping and traffic calming techniques that are ideal on Downtown Streets include, but are not limited to, street trees with grated wells, bioretention areas/planters, curb bulbouts with bioretention.'

Section 41: Appendix A, Article II, Section 2.3.3A "Alpharetta Downtown Code – Downtown Overlay- Street Types " of the Unified Development Code is amended to add '8. To provide multi-use vegetated runoff reduction measures in street planter and as street tree areas'.

Section 42: Appendix A, Article II, Section 2.3.4C "Alpharetta Downtown Code – Downtown Overlay- Existing Streets, Streetscapes" of the Unified Development Code is amended to add '5. 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, planting type and utility placement may be varied to accommodate runoff reduction measures.'

Section 43: Appendix A, Article II, Section 2.4.1 E "Alpharetta Downtown Code – Downtown Overlay- Vehicle Parking" of the Unified Development Code is amended by adding 'E. A parking study may be submitted to support a request for a proposed parking reduction. This study shall be reviewed by Community Development and must be approved prior to permitting.'

Section 43: Appendix A, Article II, Section 2.5.2D "Alpharetta Downtown Code – Downtown Overlay- Yard Landscaping" of the Unified Development Code is amended by adding 'D. Vegetated runoff reduction measures shall be allowed in the designated yards, if properly designed to provide stormwater management and screening functions.'

Section 44: Appendix A, Article II, Section 2.6.2 C "Alpharetta Downtown Code – Downtown Overlay- Buffers" of the Unified Development Code is amended by removing the word 'facilities' and replacing it with 'basins' and adding the following sentences to the end of the paragraph. 'The Community Development Director may approve vegetated runoff reduction measures within the buffer. The planting requirements above may be varied to accommodate vegetated runoff reduction measures as

part of an approved stormwater management plan, if properly designed to provide stormwater management and screening functions.'

Section 45: Appendix A, Article II, Section 2.6.2 D "Alpharetta Downtown Code – Downtown Overlay- Buffers" of the Unified Development Code is amended by removing the word 'detention.'

Section 46: Appendix A, Article II, Section 2.8.5D3 "Alpharetta Downtown Code – Downtown Overlay- General Architectural Standards" of the Unified Development Code is amended by adding '3. The roofs of buildings may include cisterns and greenroofs if part of an approved stormwater management plan for the site and if designed in accordance with the GA Stormwater Management Design Manual (latest version). Above-ground cisterns and greenwalls shall require approval by the Community Development Director.'

Section 47: Appendix A, Article III, Section 3.2.4B "Alpharetta Downtown Code – Downtown Zoning Districts- Open Space" of the Unified Development Code is amended by adding to the civic space allowance that above-ground cisterns would require approval based on design and appearance by the Community Development Director.

Section 48: Appendix A, Article III, Section 3.2.4B1 "Alpharetta Downtown Code – Downtown Zoning Districts- Open Space" of the Unified Development Code is amended by adding runoff reduction measures such as bioretention areas, swales, and cisterns to count toward open space in parks.

Section 49: Appendix A, Article III, Section 3.2.4B2 "Alpharetta Downtown Code – Downtown Zoning Districts- Open Space" of the Unified Development Code is amended by adding runoff reduction measures such as bioretention areas and cisterns to count toward open space in squares.

Section 50: Appendix A, Article III, Section 3.2.4B3 "Alpharetta Downtown Code – Downtown Zoning Districts- Open Space" of the Unified Development Code is amended by adding runoff reduction measures such as bioretention areas and cisterns to count toward open space in plazas.

Section 51: Appendix A, Article III, Section 3.2.4B4 "Alpharetta Downtown Code – Downtown Zoning Districts- Open Space" of the Unified Development Code is amended by adding runoff reduction measures such as bioretention areas and cisterns to count toward open space in pocket parks.

Section 52: Appendix A, Article III, Section 3.2.4B5 "Alpharetta Downtown Code – Downtown Zoning Districts- Open Space" of the Unified Development Code is amended by adding runoff reduction measures such as bioretention areas and underground detention to count toward open space in playgrounds.

Section 53: Appendix A, Article III, Section 3.2.4C "Alpharetta Downtown Code – Downtown Zoning Districts- Open Space" of the Unified Development Code is amended by adding runoff reduction measures to amenity space allowance and requiring approval of the Community Development Director for cistern approval in this area.

Section 54: Appendix A, Article III, Section 3.2.4E "Alpharetta Downtown Code – Downtown Zoning Districts- Open Space" of the Unified Development Code is amended by removing restrictions if part of an approved stormwater management plan for a site that includes runoff reduction measures.

Section 55: Appendix A, Article III, Section 3.2.4G "Alpharetta Downtown Code – Downtown Zoning Districts- Open Space" of the Unified Development Code is amended by replacing current language with 'G. Stormwater management facilities for the site may be used to satisfy open space requirements if they meet this Chapter's definition of open space. Open space credit may be given at the discretion of the Director of Community Development.'

Section 56: Appendix A, Article III, Section 3.5.4 "Alpharetta Downtown Code – Downtown Zoning Districts- Building Placement" of the Unified Development Code is amended to add the following language. 'In order to optimize smart stormwater design, required setbacks may accommodate runoff reduction measures such as bioretention areas, cisterns, and greenwalls, provided such setbacks meet fire code standards. The runoff reduction measures may not compromise public safety such as the sight distance triangles required by the City and must include a long-term maintenance agreement. Above-ground cisterns or other vertical runoff reduction measures shall require approval by the Community Development Director.'

Section 57: Appendix A, Article III, Section 3.6.4 "Alpharetta Downtown Code – Downtown Zoning Districts- Building Placement" of the Unified Development Code is amended to add the following language. 'In order to optimize smart stormwater design, required setbacks may accommodate runoff reduction measures such as bioretention areas, cisterns, and greenwalls, provided such setbacks meet fire code standards. The runoff reduction measures may not compromise public safety such as the sight distance triangles required by the City and must include a long-term maintenance agreement. Above-ground cisterns or other vertical runoff reduction measures shall require approval by the Community Development Director.'

Section 58: Appendix A, Article III, Section 3.7.4 "Alpharetta Downtown Code – Downtown Zoning Districts- Building Placement" of the Unified Development Code is amended to add the following language. 'In order to optimize smart stormwater design, required setbacks may accommodate runoff reduction measures such as bioretention areas, cisterns, and greenwalls, provided such setbacks meet fire code standards. The runoff reduction measures may not compromise public safety such as the sight distance triangles required by the City and must include a long-term maintenance agreement. Above-ground cisterns or other vertical runoff reduction measures shall require approval by the Community Development Director.'

Section 59: Appendix A, Article III, Section 3.8.4 "Alpharetta Downtown Code – Downtown Zoning Districts- Building Placement" of the Unified Development Code is amended to add the following language. 'In order to optimize smart stormwater design, required setbacks may accommodate runoff reduction measures such as bioretention areas, cisterns, and greenwalls, provided such setbacks meet fire code standards. The runoff reduction measures may not compromise public safety such as the sight distance triangles required by the City and must include a long-term maintenance agreement. Above-

ground cisterns or other vertical runoff reduction measures shall require approval by the Community Development Director.'

SO ORDAINED this the _____ day of _____, 2016.

Approved:

David Belle Isle, Mayor

Attest:

COUNCILMEMBERS

Coty Thigpen, City Clerk
(Seal)

Approved as to Form:

C. Sam Thomas, City Attorney

CITY OF ALPHARETTA
STORMWATER MANAGEMENT
DESIGN MANUAL

May 5, 1995
Updated May 2008
Updated December 2016

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Stormwater Management Design Manual

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Section 1 – General

1. The purpose of this manual is to be in compliance with the amended section 402 of the Clean Water Act being section 405 of the Water Quality Act of 1987, requiring the Environmental Protection Agency to establish regulations setting forth NPDES (National Pollutant Discharge Elimination System) permit application requirements for stormwater discharges. Stormwater is defined as stormwater runoff, surface runoff, street wash waters related to street cleaning or maintenance, infiltration (other than infiltration contaminated by seepage from sanitary sewers or by other discharges), and drainage related to storm events or snow melt. Georgia has been delegated the NPDES Permit Program and is therefore responsible for implementation of a program to control stormwater discharge.
2. The State of Georgia has required all applicable municipalities to comply with permit application requirements for their municipal separate storm sewers. Municipal separate storm sewers are defined as any conveyance of system of conveyances owned or operated by a local government entity and used for collecting and conveying storm water, which is not part of a public owned treatment works. The Clean Water Act mandates that permits for discharges from municipal separate storm sewers shall require controls to reduce the maximum discharge of pollutants to the maximum extent practical (MEP). The State of Georgia will issue general permits for municipal storm water discharges. The City of Alpharetta is an NPDES Phase I city.
3. This manual as established in 3.3.1D of the Unified Development Code of Alpharetta will set forth design requirements with applications being governed by the topographic conditions on a site by site basis. The Engineering-Public Works Department will determine the proper application of design requirements and will coordinate the application with the other City departments. This manual will be periodically amended as new restrictions, technology, and experience dictates.
4. The City of Alpharetta has other standards and specifications that set forth design requirements for stormwater and this ordinance consolidates those requirements for stormwater management.
5. In conjunction with design requirements set forth in this manual for new development a comprehensive hydrological study may be performed in areas of existing development for evaluation of feasible improvements to conform to the new standards and to alleviate existing drainage problems to the maximum extent possible.
6. This manual should be used in conjunction with the latest revised Georgia Stormwater Management Manual. Where possible, this manual explains items in which City of Alpharetta requirements are more stringent or more detailed than the Georgia Stormwater Management Manual.

Section 2 – The Stormwater Problem

1. This section has been removed. Please reference the Georgia Stormwater Management Manual ~~Volume 2 Chapter 1 for a detailed explanation of stormwater runoff and the effects of development.~~

Section 3 – Objectives of Stormwater Management

1. This section has been removed. Please reference the latest revision of Georgia Stormwater Management Manual ~~Volume 2 Chapter 1 for a detailed explanation of how stormwater management can control runoff rates, provide for flood control, and reduce pollutant load.~~

Section 4 – Stormwater Pollutants and Their Removal

1. This section has been removed. Please reference the latest revision of Georgia Stormwater Management Manual ~~Volume 2 Chapter 1 for a detailed explanation of the reduction of pollutant loads in stormwater runoff.~~

Section 5 – Principles of Stormwater Management

1. This section has been removed. Please reference the latest revision of the Georgia Stormwater Management Manual.

Section 6 – Specific Stormwater Concerns for Residential Subdivision Development

- ~~1. Larger, more central detention ponds are encouraged. They are more effective than small ponds and can be constructed within a park like atmosphere thus creating an amenity. However, the City recognizes that due to topographic restrictions, there will be occasions where the larger and/or centralized ponds will not be feasible.~~
- ~~2.1.~~ Detention ponds, runoff reduction, and water quality measures must be located on a separate lot with the 10' access easement completely contained within that lot. All detention pond and water quality lots must be included in a common area deeded to the homeowners association for that subdivision development.
- ~~3.2.~~ No portion of any lot with residences shall contain any stream buffer. All stream buffers shall be included in a common area deeded to the homeowners association for that subdivision development.
- ~~4.3.~~ All stormwater management measures will require a Special Operations and Maintenance Agreement for Homeowners' Associations or Other Associations per UDC Sec. 3.3.3 D.2. ~~Underground detention systems are not encouraged within residential subdivisions as maintenance responsibilities fall to the homeowners associations.~~ Any residential subdivision proposing the use of an

underground system must receive written approval from the Department of ~~Engineering~~/Public Works.

- ~~5.4.~~ For ease of access for maintenance, residential subdivision ponds should not be constructed with walls on all sides of the pond.

Section 7 – Description of Acceptable Techniques for Obtaining, Calculating, and Presenting Information Required in Stormwater Management Plans.

1. Acceptable techniques for obtaining, calculating and presenting information required in stormwater management plans are described in detail in the latest revision of the Georgia Stormwater Management Manual and the City of Alpharetta Unified Development Code (UDC).
2. Water quality, channel protection and detention should be provided for in accordance with the latest revision of the Georgia Stormwater Management Manual in addition to the following requirements:
 - a. Modified rational method will be allowed for drainage basins under 1.0 acre. When this method is employed a pre-development c value of 0.1 must be used. Approval from the Department of Community Development is required. Additionally, sites using this method may be exempt from section 14. Contact the Department of Engineering/Public Works for further analysis.
 - b. Provide for detention of the 1, 2, 5, 10, 25, 50, and 100 year storms in pre-developed and post developed studies.
 - c. Runoff reduction and/or w~~Water~~ quality shall be required for any new or redevelopment that includes the creation of 1,000 square feet site showing an increase in impervious area or more. Detention (including channel protection) shall be required for any site-new or redevelopment with an increase of 5,000 square feet impervious area or more. The extent to which runoff reduction /water quality and detention must be provided (i.e. on new impervious area only, on disturbed area, or on entire site) is based on a tiered approach, and is specified in Table 1. or any redevelopment that disturbs more than 50% of the lots buildable area.

Not Achieving Runoff Reduction Standard. The applicant must demonstrate that one or more of the following criteria have been met to show that the entire 1.0 inch runoff reduction standard cannot be achieved on site.

1. Soils with very low infiltration rates (less than 0.05 in/hour or 0.1 ft/day)
2. High ground water
3. Shallow bedrock

4. Other hardship as approved by the Director of Community Development. A cost based hardship will be reviewed by the City if the cost of providing RRv is greater than three times the cost of providing the WQv.
- d. Redevelopment sites that include removal of an existing stormwater management facility will be required to bring the entire site up to today's standards unless the designer can show that the existing pond volume and release rate (per the approved hydrology study) does not negatively impact downstream development and can be replaced in kind on the site with all additional stormwater management requirements. See Table 1 for Summary of Stormwater Management Requirements
3. Private vendor devices not identified in the Georgia Stormwater Management Manual shall be evaluated by the City Development Services Stormwater Engineer and Senior Stormwater Engineer to determine the stormwater management credit allowed. Generally, a proprietary devices may receive up to 40 percent TSS removal credit, with each subsequent device in a series shall receive 50 percent of the TSS credit allotted to the previous device (i.e. the first device shall receive 40 percent credit, the second device 20 percent credit, and the third device 10 percent credit.) Per UDC Sec. 3.3.3.D all private vendor devices require a long-term stormwater management inspection and maintenance agreement. For higher removal rates, the City Development Services Stormwater Engineer will consider vendor provided removal rates showing testing results for product use in Georgia under similar construction, rainfall, and soils conditions, or approved for use by other states with similar construction, rainfall, and soils conditions.
4. Best management practices with a micropool or other feature that that would collect standing water that would allow mosquitoes to breed in the practice should only be used if there is no other feasible alternative. Any practice approved by the City with a design allowing standing water more than 72 hours shall require mosquito breeding prevention measures such as fountains, plants that attract dragonflies, etc. Water quality devises not specifically identified in the Georgia Stormwater Management Manual including all private vendor devices will be evaluated by the City Engineer to determine TSS removal percentage that can be used in design. Vendor provided removal rates should show testing results for product use in Georgia under similar construction, rainfall, and soils conditions.

Table 1. Summary of Stormwater Management Requirements

Redevelopment on 50% of the lot or less		
New impervious	Runoff Reduction	Channel Protection, Overbank Flood Protection, and Extreme Flood Protection (1-100 year)
1-999 sf	No	No
1000-4999 sf	Yes (on new impervious area only)	No
5000 sf or greater	Yes (on new impervious area only)	Yes (on new impervious area only)
1 acre or more of disturbance, regardless of new impervious area	Yes (on disturbed area)	Yes (for disturbed area)
Redevelopment on greater than 50% of the lot		
New impervious	Runoff Reduction	Channel Protection, Overbank Flood Protection, and Extreme Flood Protection (1-100 year)
1-999 sf	No	No
1000-4999 sf	Yes (on disturbed area)	No
5000 sf or greater	Yes (on disturbed area)	Yes (on disturbed area)
1 acre or more of disturbance, regardless of new impervious area	Yes (for entire site)	Yes (for disturbed area)
New Development		
New impervious	Runoff Reduction	Channel Protection, Overbank Flood Protection, and Extreme Flood Protection (1-100 year)
1-999 sf	No	No
1000-4999 sf	Yes	No
5000 sf or greater	Yes	Yes
1 acre or more of disturbance, regardless of impervious area	Yes	Yes
Runoff reduction standard. Runoff reduction practices shall be sized and designed to retain the first 1.0 inch of rainfall on the site to the maximum extent practicable. If the entire 1.0 inch of rainfall can be retained onsite using runoff reduction methods, the City may waive the water quality volume. If the entire 1.0 inch runoff reduction standard cannot be achieved, the remaining runoff from the 1.2-inch rainfall event must be treated by BMPs to remove at least 80% of the calculated average annual post-development TSS loading from the site per the Water Quality criteria.		
Removal of an existing stormwater management facility. Redevelopment sites that include removal of an existing stormwater management facility will be required to bring the entire site up to today's standards unless the designer can show that the existing pond volume and release rate (per the approved hydrology study) does not negatively impact downstream development and can be replaced in kind on the site with all additional requirements shown above.		
Existing conditions hydrologic analysis. The existing conditions hydrologic analysis can take into account the existing development when defining curve numbers and calculating existing run off, unless the existing development causes a negative impact on downstream property.		

Section 8 – Review of Structural Best Management Practices

1. This section has been removed. Please reference the latest revision of the Georgia Stormwater Management Manual.

Section 9 – Detail on Development and Use of Techniques Which Emphasize Use of Natural Systems

1. This section has been removed. Please reference the latest revision of the Georgia Stormwater Management Manual.

Section 10 – Development Restrictions Along Stream Corridors

1. This section has been removed. Please reference the City of Alpharetta UDC 3.3.6.

Section 11 – Wetlands

1. This section has been removed. Please reference the City of Alpharetta UDC 3.3.7.

Section 12 – Minimum Easement Requirements

1. Drainage easements shall be provided where a subdivision is traversed by a water course, drainage way, natural stream, or channel. It shall conform substantially to the limits of such water course plus any additional width as is necessary to accommodate future maintenance and/or construction as determined by the Department of ~~Engineering~~ /Public Works.
2. Drainage easements off the street right-of-way shall be clearly identified on the plat and deed of the individual property owner and said property owner will be required to keep easement free of obstructions and will maintain same in such a way as to assure free and maximum flow at all times.
3. All easements shall be cleared of debris, excess dirt, and other materials.
4. The minimum width of any drainage easement is 20' centered on the drainage structure.
5. Ponds and water quality devices will require a minimum 10' access easement around the perimeter to provide access for maintenance equipment. It shall be understood that the entire pond will be included within the easement. This access easement shall extend from the public right-of-way.
6. Drainage ways and easements on residential lots shall be centered on the property lines unless otherwise approved by the City Engineer.

Section 13 – Criteria for 100-Year Floodplain Analysis

1. This section has been removed. Please reference City of Alpharetta UDC Section 3.4 Floodplain Management

Section 14 – Methodology / Criteria for Evaluating Downstream Impacts

1. The Georgia Stormwater Management Manual provides the currently approved methodology required by the City of Alpharetta for downstream analysis.
2. The City of Alpharetta requires analysis of the 1, 2, 5, 10, 25, 50, and 100 year storms.

3. The City of Alpharetta may require additional downstream analysis on individual sites when known downstream flooding problems exist.

Section 15 – Additional Pretreatment for Intensive Land Uses

1. This section has been removed. Please reference the latest revision of the Georgia Stormwater Management Manual.

Section 16 – Minimum Specifications for Construction of Drainage Facilities

1. For general grading of residential subdivisions, lots shall be arranged and/or designed such that lots with higher elevations will not drain onto lots with lower elevations with a flow of magnitude that will create erosion, flooding, or be a nuisance. If velocity of overland flow exceeds 1.5 feet per second protective measures shall be incorporated to prevent scouring and erosion.
2. For residential and open areas, detention ponds shall have ~~minimum-maximum~~ side slope of three feet horizontal to one foot vertical, with ~~a minimum of~~ four feet horizontal to one foot vertical ~~or flatter~~ being the preferred, on the inside face of the pond and a ~~minimum-maximum~~ slope of three feet horizontal to one foot vertical on the outside face of the pond. For commercial areas slopes on detention ponds shall be approved on a case by case basis.
3. Sizing and location of drainage structures shall be the responsibility of a registered professional engineer as per accepted standard design procedures, subject to approval by the City ~~Engineer~~ of Alpharetta.
4. Storm pipe slopes shall be equal to or greater than one percent.
5. Approved formulas shall be used to calculate the runoff in determining the size of drainage structures. Use the 25 year storm frequencies for all street drainage structures such a catch basins, inlet cross drains, etc. Use the 1, 2, 5, 10, 25, 50, and 100 year storm frequencies for all main drainage structures such as retention basins, detention ponds, principal storm sewers, and all types of flood protection works. All designs are subject to the approval of the ~~Engineering / Public Works Department.~~Department of Community Development.
6. Minimum 20-foot storm drainage easement shall be given on all lines (pipes and swales) which lie outside of the normal right-of-way.
7. The drainage pipe cover shall be 12 inches or one-half the inside pipe diameter, whichever is greater.
8. Catch basins shall be located at low points of the streets.
9. All storm drain inlets and channels must be designed and located so as to prevent flooding of any buildings during the 100-year event.

10. All storm drain pipes shall be minimum 18 inches in diameter.
11. Not less than 50 percent of each proposed lot area shall be above the 100-year storm elevation.
12. Any existing channel flow shall not be constricted.
13. Sub-drainage will be installed to control surplus ground water by intercepting side hill seepage or by lowering or regulating ground water level where such conditions exist.
14. A certification of the pipe specifications for each pipe shall be required before installation.
15. Bridges and culverts shall be designed for the 100-year storm frequencies and 100-year flood.
16. Cross drain pipes:
 - a. Shall have headwalls of approved type on inlet and outlet ends of the pipe.
 - b. When the construction of a proposed public road makes it necessary to cross a storm drain, the developer shall provide and install the required size and length of an acceptable grade of pipe. The length of the pipe required shall extend to the rear building setback lines and in so case shall the extension be less than 30 feet from the rear of any proposed dwelling; provided however the drain runs through building lots proposed to be platted. These criteria will be strictly adhered to unless otherwise approved by the ~~Engineering~~ Public Works Department. This does not apply to cross drains containing live streams.
 - c. Maximum continuous length of pipe shall be 300 feet unless otherwise approved by the City Engineer.
 - d. Class of concrete pipe and gage of corrugated metal pipe shall comply with Georgia Department of Transportation specifications.
17. Materials and installation:
 - a. All concrete pipe shall be reinforced.
 - b. All pipe within public right-of-way shall be RCP. And all structures shall be installed with row-lock inverts.
 - c. Flat bottom and circular pipe sections shall be laid in a prepared trench with the socket ends pointing upstream. Sections may be joined by rubber type gasket joints, O-ring gasket joints, or pre-formed plastic gasket joints.

Rubber type, O-ring, and preformed gasket joints shall be installed in accordance with the manufacturer's recommendations.

- d. Metal pipe is not permitted under roadways. Where used the pipe shall be fully bituminous, aluminized or asphalt coated with paved invert, unless approved otherwise.
- e. HDPE is allowed on private property as long as is it installed in accordance with manufacturer's recommendations.
- f. The Department will consider stormwater pipe made of materials as introduced to the market.

18. Workmanship and Finish:

- a. Culvert pipe on which the coating has been bruised or broken either in the shop or in shipping or which shows defective workmanship shall be rejected. Among others, the following defects are specified as constituting poor workmanship and the presence of any or all of them in any culvert pipe shall constitute sufficient cause for rejection.
 - i. uneven laps
 - ii. elliptical shape (unless designed and manufactured as elliptical)
 - iii. variation from a straight center line
 - iv. ragged or diagonal sheared edges
 - v. loose, unevenly lines or spaced rivets
 - vi. poorly formed rivet heads
 - vii. unfurnished ends
 - viii. illegible brand
 - ix. lack of rigidity
 - x. bruised, slated or broken coating
 - xi. dents or bends in the metal itself
- b. Coupling bands: Field joints shall be made with bands of the same base metal as the culverts. The bands shall not be less than 7 inches wide for diameters of 8 inches to 30 inches, inclusive; not less than 13 inches wide for culverts with diameters 36 inches to 60 inches inclusive; and not less than 24 inches wide for culverts with diameters greater than 60 inches.

Such bands shall be constructed so as to lap on an equal portion of each of the culvert sections to be connected at the ends by galvanized angles having minimum dimensions of two inches by two inches by 3/16 inch. The seven inch band shall have at least two galvanized bolts not less than ½ inch diameter. The 12-inch band shall have three and the 24-inch band shall have five ½ inch bolts. Other equally effective methods of connecting the coupling bands may be used if approved by the City Engineer.

- c. Gauge determination. The gauge of the culvert metal will be determined from the thickness of the galvanized sheets. The mean thickness must meet the requirements set forth by the City of Alpharetta ~~Engineering/~~ Public Works Department.
- d. Corrugated metal pipe and pipe arches. Corrugated metal pipe shall conform to the requirements of AASHTO M36, sizes, shapes, types, base metal, and gauges.
- e. All joints and couplings shall be in accordance with the manufacturer's recommendations.
- f. Pipe sections shall be laid in a prepared trench with outside laps of circumferential joints pointing upstream and with longitudinal joints at the side. Coupling bands fastened by two or more bolts shall join the sections. The space between adjoining sections shall be not more than width of one corrugation.
- g. Before any traffic over a storm drain is allowed, the developer shall provide adequate depth and width of backfill to protect the structure from damage or displacement in accordance with the requirements of the City of Alpharetta ~~Engineering/~~ Public Works Department. All pipe structures shall be cleaned before the work is accepted. Any damage or displacement that may accrue due to traffic or erosion shall be repaired or corrected at the developer's expense.
- h. Minimum clearances are:
 - i. One foot between the bottom of the base or sub base, if used, and the exterior crown of culvert in accordance with the requirements of the City of Alpharetta ~~Engineering/~~ Public Works Department.
 - ii. A minimum of 0.5 foot between underground utilities and exterior crown of the culvert.
 - iii. Trench construction for storm drainage pipe shall be in accordance with the requirements of the City of Alpharetta ~~Engineering/~~ Public Works Department.

- iv. Bridge piling shall be driven to Georgia Department of Transportation load standards for loading. Certification of pile load shall be by a registered professional engineer.

Section 17 – Contents of Stormwater Management Plan

1. This section has been removed. Storm Water Management Plan should include the items described in detail in the City of Alpharetta UDC Section 3.3.3C.

Section 18 – Stormwater Management Plan Approval Process

1. This section has been removed. The approval process is described in detail in the City of Alpharetta UDC Section 3.3.3.

Section 19 – Surveying and Mapping

1. Surveying and mapping are described in detail in the City of Alpharetta UDC.

Section 20 – Underground Detention

1. Underground detention must meet the pre-treatment requirements. Underground detention shall receive the following water quality credit if it has an open-bottom design that allows for infiltration, the site meets minimum infiltration requirements, and any manufacturers' pretreatment requirements are met:

60% TSS

30% TN

10% TP

2. If a sand filter is used in the underground detention facility, additional water quality credits may be provided as determined by the Director of Public Works and Community Development.

Section 21 – Offsite Mitigation Program

1. The Offsite Mitigation program allows for the provision of stormwater management offsite, in a regional facility that serves multiple parcels.
2. Applicability
 - a. Available city-wide for new development and redevelopment, contingent upon approval by the City Development Services Engineer in coordination with the City Senior Stormwater Engineer
 - b. Parcels using an offsite / regional facility must drain to that facility.

3. Sizing / Volume Requirements

- a. When applied to master developments, the regional facility will be sized for the planned build out of the subdivided properties. (Except in residential subdivisions, runoff reduction or water quality measures or portions of detention may be required on individual parcels, lots or subdivided properties to meet overall requirements.) The maximum impervious area for each parcel or max impervious percentage for each parcel shall be provided. If there is not sufficient volume provided for future developments, future buildings must account for additional runoff reduction / water quality or detention on-site or by modifying the master pond.
- b. The off-site or regional facility must be designed and adequately sized to provide a level of stormwater quantity and quality control that is equal to or greater than that which would be afforded by on-site practices.

4. Operation and Maintenance

- a. Regional facilities require an operation and maintenance agreement. This may be addressed through property deeds and covenants.

5. Tracking

- a. The City will maintain a database noting what parcels are associated with a shared facility and their individual volume requirements (proportionate share of the facility).

6. City Owned Regional Stormwater Management

- a. The City reserves the right to collect the following fees on parcels serviced by an existing City-owned regional facility:
 1. A one-time payment paid by the developer during the planning / permitting process to defray the capital cost of the existing off-site treatment facility. Cost / cubic yard for each facility will be set when the facility is built and will be publically available from the Public Works Department.
 2. Operations and maintenance costs will be funded through an independent recurring O&M fee that will be assessed by the City annually to owners of properties where stormwater management is provided through the off-site mitigation option.

Section 22 – Stormwater Fee-In-Lieu Program

1. The Stormwater Fee-in-Lieu program allows parcels being redeveloped to reduce on-site stormwater management requirements by paying a fee to the

City. The fee-in-lieu is a one-time payment paid by the developer during the planning process to defray the capital cost of the off-site treatment facilities. The City then assigns the collected fees into separate accounts by watershed to fund stormwater improvement projects. Operation and maintenance (O&M) costs of these facilities will be funded through an independent recurring O&M fee that will be assessed annually to owners of properties where stormwater management is provided through the fee-in-lieu option. This gives the City the flexibility to fund projects that could have a greater regional impact than on-site facilities.

2. Applicability

- a. Available for re-development projects contingent upon approval by the Community Development Director, in coordination with the City Development Services Engineer and the City Senior Stormwater Engineer.
- b. The fee-in-lieu option is not available for parcels where a downstream property is negatively impacted by the current conditions (i.e. currently flooding from the existing runoff) or where the increased runoff rate or volume from the new development will negatively impact a downstream property (i.e. downstream infrastructure does not have capacity for the increased volume).
- c. Parcels must be located within a HUC-12 watershed in which the City has identified stormwater improvement projects to be funded by the fee-in-lieu.
- d. A parcel is eligible for the fee-in-lieu program no more than once every five years.

3. Minimum On-Site Requirement

- a. All of the required detention (including channel protection) must be met onsite. A minimum of 75% of the runoff reduction/water quality treatment must be provided on-site. The remainder of the runoff reduction/water quality treatment may be met by a fee-in-lieu payment.

4. Allowable Projects

- a. Stormwater improvement projects that can be implemented by the City with fee-in-lieu funds include those structural stormwater best management practices with quantitative and qualitative measurements

identified in the latest edition of the Georgia Stormwater Management Manual.

- b. Projects must be constructed/implemented in the same HUC-12 watershed that fee-in-lieu funds are paid into.

5. Timing

- a. Collected fees-in-lieu shall be expended by the City on stormwater improvement projects within five years of receiving a fee.
- b. The City shall identify a prospective stormwater improvement project and own the land where the improvement project is proposed prior to approving the fee-in-lieu option for a development project. The City should identify and track the available runoff reduction volume and water quality volume provided by the improvement project.

6. Administration

- a. The Public Works Department will be responsible for administering the program (construct and maintain ponds and BMPs, collect fees, track, and report).
- b. Funds will be put into separate accounts by watershed.

7. Fee Structure and Amount

- a. The fee-in-lieu shall be shown in a fee schedule to be included as an appendix to this Design Manual and may be amended by the City from time to time.

Section 23 – City Funded Linear Projects

- a. **Applicability** - Up to 100% of the stormwater management requirement for eligible transportation projects may be reviewed for feasibility. Only transportation projects funded and managed by the City, or through grants obtained by the City, are eligible. Ineligible projects include: private development of public or private roads; alleyways; highways; trails; greenways; sidewalks; intersections; roadway improvements; subdivision roads; driveways; and access roads. Common Interest Development (CID) Georgia Department of Transportation (GDOT), and non-city utility projects are also ineligible. Projects eligible for this provision shall demonstrate that it is not feasible to meet the stormwater management requirements on site. Criteria for determining that meeting the requirement is not feasible are similar to the Infeasibility Criteria set forth in the Georgia Department of Transportation Policy on Post-construction Stormwater Management BMP Design on State Routes for structural BMPs:

- The cost of construction and maintenance of the BMP equals or exceeds twenty five percent of the construction cost.
 - The project is delayed by 90 days or greater due to the implementation of post-construction BMPs. Examples of this is when a project could be built without a right of way phase, but the inclusion of post construction BMPs means that a right of way phase is necessary then the delay criteria can be used.
 - The use of BMPs will impact threatened or endangered species habitat.
 - The use of BMPs will significantly damage a community resource such as a historical area, a park, a wildlife refuge, a nature trail, or school facilities.
 - The BMP implementation would result in the violation of a Federal or State law
 - The project has shallow bedrock, contaminated soils, high groundwater, utilities, or underground facilities and avoidance or relocation cost of the utility equals the cost of the BMP.
 - The soil hydraulic conductivity (K) is less than 10-4 cm/second can be considered infeasible (while 10-5 cm/second is the absolute lower limit) when considering infiltration BMPs.
 - The BMP implementation will impact a specimen tree.
- b. Funding Requirements** - The money budgeted by council for stormwater water quality projects will be considered the City's fee toward providing stormwater management for linear projects. The volume allocation for transportation projects will be tracked by the City and assigned to specific stormwater improvement projects so there is an accounting system that identifies the remaining volume available for allocation.

Section 24 - Cisterns

- a. Cisterns may receive runoff reduction credit up to 90% if all water from storms with rainfall of 1 inch or less is used through demand, and the tank is sized such that no overflow from this size event occurs. The total credit may not exceed 90%. The actual runoff reduction rates for rainwater harvesting systems are "user defined," based on tank size, configuration, demand drawdown, and use of secondary practices. North Carolina State's Rainwater Harvesting Model, or other comparable tools may be used to calculate runoff reduction rates.

City of Alpharetta, Georgia

Comprehensive Stormwater Inspection and Maintenance Policy

1.0 Purpose

The Goal of this Comprehensive Stormwater Inspection and Maintenance Policy is to define the rights and responsibilities of the property owner(s) for maintaining the water quantity and quality functions of their Stormwater Best Management Practices (BMPs) as well as provide for City guidance to ensure their proper functioning. This policy is based upon the Stormwater Management Ordinance (Section 3.3 of the City of Alpharetta's Unified Development Code).

2.0 Definitions

Stormwater Management Facility. Any infrastructure that controls or conveys stormwater runoff, including but not limited to, pipes, swales, ditches, ponds, pond outlet structures, creeks, catch basins, and drop inlets.

Structural Stormwater Control. A structural stormwater management facility or device that controls stormwater runoff and changes the characteristics of that runoff including, but not limited to, the quantity, quality, period of release or velocity of flow of such runoff.

3.0 Inspection and Maintenance Responsibilities (Figure 1)

For all existing and new developments the following inspection and maintenance responsibilities shall apply:

Private Stormwater Management Facilities

Private stormwater management facilities shall be privately owned and it shall be the responsibility of the owner(s) to ensure proper function of the stormwater management facilities located on their property. This shall be accomplished through, periodic inspections and routine maintenance by the responsible party. The owner(s) shall maintain a perpetual, non-exclusive easement that allows access for inspection and emergency maintenance activities. Private stormwater management facilities may include ponds, creeks, pipes, ditches, and drainage swales.

Public Stormwater Facilities

The City of Alpharetta is responsible for inspecting and maintaining stormwater management facilities located on public property and within the public right-of way (ROW). This includes stormwater structural controls on properties owned by the City of Alpharetta; pipes, ditches, and drainage swales in the public ROW; and pipes draining City streets. Pipes draining City streets are maintained to the headwall. The area just downstream of the headwall, known as the public water influence zone, may be maintained as necessary to ensure the free flow of water and prevent erosion around the headwall.

The Public Works Department may expand the MS4 for a single, one-time repair or for maintenance in perpetuity, on a case-by-case basis, if certain conditions are met. These conditions are as follows:

- The structure(s) (e.g. pipe, headwalls, and junction boxes) are directly connected to the existing MS4;
- The existing conditions pose a significant and real threat to human health and safety, property (including City infrastructure), or the environment;
- Water draining from the MS4 contributes a significant amount to the total flow draining through the structure(s);
- The source of the problem is not attributable to negligence of a particular property owner; and,
- Appropriate easements for drainage and maintenance are provided by the property owners to the City.

The Public Works Department evaluates all requests for an Extent of Service expansion and prepares a corrective action plan/design for those meeting the above criteria and a cost estimate. The project is then prioritized against all other Capital Improvement and maintenance projects. Projects are implemented by the City of Alpharetta as time and resources allow.

Stormwater systems on office, institutional, commercial or industrial properties are not eligible to be included in the City's MS4.

3.1 Structural Stormwater Controls / Detention Ponds

The following statements identify who will be responsible for structural stormwater controls on private property. All correspondence and violations will be addressed to the responsible party.

In subdivisions with an established homeowners association (HOA) - The HOA shall be the responsible party.

In subdivisions without an established HOA - The owner(s) of the property that the facility is on or serviced by shall be the responsible party. The City will only issue maintenance requests and violations to the responsible party. This in no way shall hinder the rights of the property owner(s) to take civil action against or involve the other property owners that the facility serves.

In commercial and industrial developments - The property owner(s) shall be the responsible party.

In properties with a Stormwater Management Inspection and Maintenance Agreement - The responsible party as well as the responsibilities shall be described in the agreement.

3.2 Pipes

Residential - If the pipe is connected to and directly drains a City street, it shall be maintained by the City ~~Engineering~~/Public Works Department. If the pipe does not connect to a City street and is on private property it shall be maintained by the property owner(s).

Commercial - The property owner(s) shall be responsible for any pipes that are located on private property. For any pipe that crosses a property line between private and public property, the City Engineer will determine who is responsible for maintenance on a case-by-case basis.

3.3 Open Channels

Residential and commercial - The property owner(s) shall be responsible for maintaining normal unobstructed flow of any open channel(s) located on private property. This may include, but not be limited to ditches, swales, and creeks.

Rip Rap Program - The City has established a rip rap program to assist homeowners with erosion problems along open channels on their property. The City will deliver rip rap free of charge if the property owner signs a waiver of liability. Placement of the rip rap is the responsibility of the owner(s).

3.4 Records of Maintenance Activities

The responsible party shall keep documentation of all of their inspections and maintenance activities and provide this documentation to the ~~Engineering~~/Public Works Department upon request.

4.0 City Inspection Programs of Privately Owned Facilities

The ~~Engineering~~/Public Works Department has established an inspection and maintenance program for privately owned structural stormwater controls. The inspection program includes routine inspections; random inspections; requested inspections; inspections based upon complaints or other notice of possible violations; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include but are not limited to: visual inspections; review of maintenance and repair records; sampling of discharges; and evaluating the condition of structural stormwater controls and practices.

- The City will not involve itself in private property disputes or other legal actions between property owner(s).

- The City may provide technical assistance and riprap to assist with the maintenance and stabilization of stormwater management facilities.
- The City inspection program has a goal of inspecting 180 privately owned structural stormwater controls per year.

4.1 Notification to Owner(s)

In the event that the structural stormwater control is in good working order and does not need any maintenance, the City Engineer shall notify the responsible party within 10 business days of the inspection.

In the event that the stormwater management facility needs maintenance, has not been maintained, and/or becomes a danger to public safety or public health the City Engineer shall notify the responsible party by registered or certified mail within 10 business days of an inspection. The notice shall specify the measures necessary to bring the stormwater structural control into compliance.

4.2 Responsible Party Response to City

The City must receive a response within 60 days of issuing a notice of required maintenance to the responsible party. Included in the response must be the maintenance measures performed and/or a timeline for when the measures will be completed.

4.3 Violations

In the event that the responsible party does not respond to the City and/or perform the required maintenance within 60 days, a violation will be issued in accordance with Section 3.3.14 of the Unified Development Code.

4.4 Emergency Maintenance/Failure to Maintain

In accordance with Section 3.3.14 of the Unified Development Code, the ~~Engineering~~ Public Works Department may conduct emergency maintenance if the responsible party fails or refuses to maintain their stormwater management facility in proper working order. In the event the violation constitutes an immediate danger to public health or public safety, 24 hours notice shall be sufficient. The City may correct a violation by performing the necessary work to place the facility in proper working condition. The City may assess the responsible party for the cost of the repair work that shall be a lien on the property, and may be placed on the ad valorem tax bill for such property and collected in the ordinary manner for such taxes.

- a. Cemetery.
- b. Church, Synagogue, or other religious institutions.
- c. Prison.

D. *District Regulations.*

Minimum Lot Size—none.

Minimum Lot Width—none.

Minimum Setbacks.

Front yard—from all street frontages:

From right-of-way of local street—50 feet.

From right-of-way of all other streets—65 feet.

Side yard—10 feet.

Rear yard—10 feet.

Maximum Coverage By Principal Buildings—70%.

Maximum Building Height—40 feet.

Screening and buffers—Where a property in this district abuts a residential use or zoning district, a 50 foot wide buffer strip shall be provided along the abutting property lines, in addition to the minimum setback requirements.

2.2.20 MU mixed use district.

This district is intended to allow for the development of a mix of uses within the framework of a master plan. The district regulations are intended to allow greater design flexibility in order to accommodate a pedestrian focused environment that provides opportunities for living, working, shopping, recreation and entertainment.

A. *Applicability.* This zoning district is applicable to properties located within:

- 1. Areas that are primarily non-residential in character; or
- 2. Along major roadways that are primarily commercial in character; or
- 3. Historic Downtown Alpharetta; or
- 4. As noted in the Comprehensive Land Use Plan.

B. *Permitted Principal Uses.* A property in the MU district may be used only for those uses approved as part of the conditions of approval of the MU zoning on the property and as further limited below.

- 1. *Dwelling, attached or detached:* At least 25% of the MU development shall be utilized as residential dwellings. Land use calculations shall utilize gross floor area for vertical mix of uses and land area for horizontal mix of uses.

Dwelling, 'For-Rent' units shall require conditional use approval.

- 3. *Commercial:* At least 25% of the MU development shall be utilized as commercial uses (as approved in the MU master plan). Land use calculations shall utilize gross floor area for vertical mix of uses and land area for horizontal mix of uses.

4. *Public Space:* A minimum of 10% of the gross land area must be designed for public use as recreation, entertainment and/or civic space.
5. *Office/Institutional:* At least 25% of the MU development shall be utilized for office buildings. Land use calculations shall utilize gross floor area for vertical mix of uses and land area for horizontal mix of uses.
6. *Park Space:* Each MU development shall set a goal to provide a minimum of one acre of park land/100 population generated by residential uses. Household size shall be calculated using the most current US Census data for the City of Alpharetta. Required park space and public space shall be achieved on-site and exclusive from each other.

As determined by City staff, uses shall be calculated using one of the following methods:

Horizontal Mixed Use: Land Use Land Area (acres)/Total MU Land Area (acres) = % Land Use of MU Development

Example: 25 acres of Residential Land Use/100 acres of MU Land Area = 25% Residential Land Use of MU Development

Vertical Mixed Use: Land Use Gross Floor Area (square feet)/Total Gross Floor Area of All MU Development (square feet) = % Land Use of MU Development

Example: 25,000 SF of Commercial Land Use/100,000 SF for All Vertical Development = 25% Commercial Land Use of MU Development

Combination of Horizontal and Vertical Mixed Use:

Land Use Gross Floor Area (square feet)/Total Gross Floor Area of All MU Vertical and Horizontal Development (square feet) = % Land Use of MU Development

Example: [25,000 SF of Vertical Commercial Land Use + 25,000 SF of Horizontal Commercial Development]/200,000 SF for All Vertical and Horizontal Development = 25% Commercial Land Use of MU Development

- C. *Conditional Uses.* A property in the MU district may be used for those uses listed below and in Table 2.1, as well as, any additional uses included in the conditions of approval for the MU zoning on the property. Conditional uses not included in the master plan shall require a public hearing by the Planning Commission and approval by the City Council.

1. *Residential Uses:*

- a. Dwelling, Group (assisted living facility, progressive care facility).
- b. Dwelling, 'For-Rent'.
- c. Bed and Breakfast.

2. *Commercial Uses:*

- a. Bank, Savings & Loan.
- b. Contractor's Office (no on site storage).
- c. Day Care Center.
- d. Entertainment Venue (jazz club, comedy club, dinner theater, etc.).
- e. Hotel/Motel.
- f. Liquor Store.
- g. Outdoor/Indoor Recreation Facilities.

- h. Religious Institution.
 - i. School, Commercial.
 - j. Spa Services.
 - k. Theater, Cinema.
3. *Semipublic Uses, Utilities:*
- a. Athletic Facilities.
 - b. Public Building.
 - c. School, Academic.
- D. *District Regulations.*
- Minimum Lot Size: The minimum area permitted to be zoned for an MU development is 25 acres.
- Maximum Density of Dwelling Units: The MU master plan shall establish maximum density for each area within the development. Density for all residential units combined shall not exceed eight (8) dwelling units/acre. Density shall be calculated based on the gross acreage of the entire MU master plan.
- Development Standards: Regulations governing lot size, lot width, setbacks, principal building coverage, floor area of dwelling unit, and height shall be established for each area within the MU master plan and approved through the public hearing process.
- Maximum Impervious Area: 80% for the entire MU development.
- Public Space: Each MU development shall have a minimum of 10% of the gross land area designed for public use. Public space shall be used for recreation, entertainment or civic purposes and may include plazas, outdoor theaters, sculpture gardens, parks, playground, community gardens or any other spaces where people can gather. Business kiosks shall be located outside of public space. Sidewalks and residential amenities may not be included within the public space requirement.
- Park Space: Park space may include residential recreational amenities. However, at least 50% of the required park space shall be provided in passive park area(s).
- E. *Review Criteria.* The MU district is intended to promote specific objectives. Therefore, the following shall be considered when reviewing an MU master plan:
- 1. Retail at ground level.
 - 2. Pedestrian connectivity to all uses.
 - 3. Large parking areas below grade, in decks or screened. Design efforts to provide shared parking will also be considered.
 - 4. Accommodations for public transportation.
 - 5. Buildings that face or appear to face public roadways.
 - 6. Appearance standards for buildings and structured parking.
 - 7. Limitations on uninterrupted building elevations.
 - 8. Creation of vistas and view corridors within development.
 - 9. Focal point features at prominent locations and ends of vistas.
 - 10. Incorporation of natural site features
 - 11. Block lengths conducive to pedestrian traffic.

12. Detention and retention facilities designed to be aesthetically pleasing.
13. Creative methods for stormwater management to provide additional open space.
14. Attractive and usable street furniture in public spaces.
15. Emphasis on a high quality landscape plan.
16. Number of office jobs internally captured on-site.

F. *Time Linkage.* In order to ensure that the objectives of MU district are met and development occurs which incorporates a mix of uses, a development phasing strategy or time line shall be established for each MU project. When reviewing the phasing strategy or timeline, the City Council may link the issuance of permits and/or certificates of occupancy for a portion of the development with the completion of other portions of the development.

([Ord. No. 702, § 1\(Exh. A\), 3-2-2015](#))

District	Lot Area	Lot ^B Width	Front Yd. Set Back (ft.) ^E	Side Yards (ft.)	Corner Side Yards (ft.)	Rear Yards (ft.)	Total Bldg. Coverage	Max. Ht. In (ft.)	Min. Flr. Area in Sq. Ft.	Max. Impervious Area ^A
AG	5 acres	200	50' local street 65' all other streets	25	35	50	25%	35	1,800	40%
RE	3 acres	100	50'/65'	25	35	50	25%	35	1,800	40%
R ^E	One acre	100	50'/65'	25	35	50	25%	35	1,800	50%
R-22 ^E	22,000 sq. ft.	100	35' local street 65' all other streets	25	35	30	25%	35	1,500	50%
R-15 ^E	15,000 sq. ft.	100	35' local street	10	20	25	25%	35	1,500	50%

			65' all other streets							
R-12 ^E	12,000 sq. ft.	80	30' local street 65' all other streets	10	20	30	25%	35	1,500	50%
R-10 ^E	10,000 sq. ft.	75	30' local street 65' all other streets	10	20	25	25%	35	1,500	50%
R-4A ^E	One acre	30	35' local street 65' all other streets	20 ^C	20	30	40%	35	1,200	60%
R-4D	5,000 sq. ft.	50	35'/65'	5	10	w/alley 0' no alley 20'	40%	35	1,500	60%
R-8A/D ^E	One acre (At-tached) 4,500 sq. ft. (De-tached)	50	35' local street 65' all other streets	5 adjacent property 10 between buildings	10	w/alley 0' no alley 20'	40%	35	1,200	60%

R-10M ^E	One acre	75	35' local street 65' all other streets	25 adjacent property 20 between buildings	35	50	None	35	None	60%
CUP ^D	100 acres	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.		70%
O-P	30,000 sq. ft.	NONE	50' local street 65' all other streets	15	50' local street 65' all other streets	15	40%	40		70%
O-I ^D	25 acres	None	50/65	15	50/65	15	40%	40		70%
C-1	30,000 sq. ft.	NONE	50' local street 65' all other streets	15	50' local street 65' all other streets	15	45%	35		80%
C-2	NONE	NONE	Cond.	Cond.	Cond.	10	70% 90% CBD	40		90% (95% CBD)
PSC ^D	10 acres	NONE	50/65	15	50/65	15	40	40		80%
L-I	One acre	NONE	50' local street 65' all other streets	15	50' local street 65' all other streets	15	35%	35		80%

OS & R	NONE	NONE	50/60	15	50/65	30	20	75	NONE	NONE
SU	NONE	NONE	50/65	10	50/65	10	70%	40		80%
MU	25 acres	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.		80%

A - Includes surface or deck parking.

B - Minimum lot width at setback line per unit.

C - Side yard set back from project boundaries and building groupings.

D - Area regulations conditional and are subject to a master plan.

E - All minimum lot sizes as noted are allowable if served by sanitary sewer. If sanitary sewer is not available to the property, then Fulton County Health Department (lot size) regulation shall apply for septic tank approval.

F - Tree save areas may overlap the building lot and building setback area. Such tree save areas must be identified on the land disturbance permit and dedicated on the final plat for permanent preservation.

([Ord. No. 718](#), § 13(Exh. A), 12-14-2015)

TABLE 2.2 LIST OF PERMISSIBLE AND CONDITIONAL USES

On the following table, an open circle "O" means that the use will be permitted in that district only if a Conditional Use Permit is granted by the City Council. An "X" means that the use is permitted in the zone district subject to the general provisions of the Unified Development Code. For uses not included in this list or when the Director of Community Development is unable to determine placement, application shall be made to the Board of Appeals for interpretation.

USES	A G	R E	R	R- 2 2	R- 1 5	R- 1 2	R- 1 0	R- 4 A	R- 4 D	R- 8A/ D	R- 10 M	CUP *	OI *	O P	C - 1	C - 2	PS C	L I	OS -R	S U	M U
Adult Entertainment Establishment																		O			
Airport, Public/Private	O											O						O		X	

Utility Substation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	
Welding Shop																		X			
Wholesale (storage and distribution)											O						O	X			

([Ord. No. 671, § 1, 2-4-2013](#); [Ord. No. 675, § 1, 6-3-2013](#); [Ord. No. 692, § 1\(Exh. 1\), 7-21-2014](#); [Ord. No. 703, § 1, 6-1-2015](#); [Ord. No. 704, § 2, 6-1-2015](#); [Ord. No. 708, § 1, 8-10-2015](#); [Ord. No. 715, § 4, 9-28-2015](#); [Ord. No. 718, § 14\(Exh. B\), 12-14-2015](#))

SECTION 2.2 a. CONDITIONAL USE REVIEW CRITERIA	
When reviewing a conditional use, consideration shall be given to factors associated with the use including, but not limited to, the following:	
1. Site design	4. Vehicular trips generated by the use
2. Property access	5. Impact of the use on surrounding properties
3. Hours of operation of the business	6. Impact of the use on the natural features of the site

SECTION 2.3 - SUPPLEMENTARY REGULATIONS

2.3.1 General exemptions.

- A. *Heights—Exclusions.* The following structures are exempt from the height limitations imposed within each zoning district:
1. Church spires, cupolas, and chimneys.
 2. Agricultural accessory structures, such as barns, silos, windmills, and the like.
 3. Parapets and structures used for ornamental or aesthetic purposes not to exceed twelve (12) feet.
 4. Elevator penthouses not to exceed fifteen (15) feet.
 5. Mechanical equipment on building roofs or rooftop antennas provided any such equipment exceeding 12 feet in height shall be contained within a structure or otherwise screened from ground view from adjoining streets and properties.

- B. *Front Yard Requirements—Existing Residential Areas.* The setback requirements of this Ordinance shall not apply to any residential lot where the average setback on developed lots located adjacent to and on each side of such lot and within the same zoning district and fronting on the same street as such lot is less than the minimum required setback. In such cases, the setback of such a lot may be less than the required setback but not less than the average of the existing setbacks on the developed lots. In no case, however, shall setbacks be less than 15 feet.

If the adjacent developed lots on both sides of a vacant residential lot, within the same zoning district and fronting on the same street as such lot, have front yard setbacks greater than the minimum required by the zoning district, then the minimum setback on the vacant lot shall be the average of the 2 adjacent developed lots.

C. *Double Frontage Lots.*

1. Double frontage lots should be avoided except where essential to provide separation of residential development from traffic arteries or to overcome specific disadvantages of topography and orientation. A landscaped or natural buffer of at least twenty feet (20'), across which shall be the right of access, shall be provided along the line of lots abutting such a traffic artery.
2. On lots having frontage on two (2) streets, but not located on a corner, the minimum front yard setback requirement shall be provided along each street frontage.

D. *Setbacks—Exclusions.*

1. No building or structure or projection thereof, including porch, deck, terrace or chimney, shall be erected closer to a property line than the applicable setback regulation prescribed herein allows. However, uncovered steps, patio slabs, driveways, walkways and roof overhangs of up to 18" may be located within setback areas.
2. Required setbacks may accommodate runoff reduction measures, provided such setbacks meet fire code standards. The runoff reduction measures may not compromise public safety such as the sight distance triangles required by the City. Above-ground cisterns, greenwalls, or other vertical runoff reduction measures shall require approval by the Community Development Director.

E. *Flag Lots.*

1. Flag lots are prohibited for residential development. Residential building sites must meet minimum lot width requirements at the front setback line or at twice the required front setback for cul-de-sac lots.

2.3.2 Temporary uses.

The Director may authorize a temporary use, as follows:

- A. Carnival, circus or fair, for a period not to exceed 4 days. A period not to exceed 30 days may be granted by the Director if the event is held within a designated amphitheater facility as defined by Code and confirmed by the Director. Site shall meet adequate parking and safety concerns and limit impacts to surrounding properties.
- B. Outdoor tent sales for a period not to exceed forty-five (45) days. Authorization may not be granted more than two (2) times per year, per property.
- C. Reserved.
- D. Religious meeting in a tent or other temporary structure in the AG, R-10M, CUP, O-I, C-1, and C-2 Districts, for a period not to exceed sixty (60) days.
- E. Open lot sale of Christmas trees, fruit and vegetables, and other harvested products in the AG, O-I, C-1, C-2 and L-I Districts, for a period not to exceed forty-five (45) days.

- F. Real estate sales office, related to an active development, in any district, for a period not to exceed one (1) year, provided no sleeping accommodations are maintained in the structure.
- G. Contractor's office, construction trailer and equipment shed, in any district, related to an active development, for a period of one (1) year provided that such office be placed on the property to which it is appurtenant.
- H. Commercial television or motion picture filming activities not to exceed seven (7) calendar days at any residential location, or a period not to exceed twenty-one (21) days if approved by the Mayor and Council. The director or the Mayor and Council may impose conditions to the issuance of the permit to minimize the disturbance to the residential neighborhood. These conditions may include neighborhood notification requirements, parking and traffic control, and limitations on the hours of operation. In no event shall filming activities commence prior to 7:00 a.m. or continue after 10:00 p.m.
- I. All temporary certificates of zoning compliance may be renewed provided that it is determined that said use is clearly of a temporary nature, will cause no increased traffic congestion and will not create a nuisance to surrounding uses.
- J. The director may require City Council review and approval of any temporary uses.
- K. Fireworks sales in a tent or other temporary structure in the L-1 District, for a period not to exceed ninety (90) days.

([Ord. No. 688, § 1, 4-28-2014](#); [Ord. No. 708](#), § 1, 8-10-2015; [Ord. No. 718](#), § 15, 12-14-2015)

2.3.3 Accessory uses and structures.

- A. *Home Occupations.* An occupation, profession or trade customarily carried on by an occupant in a dwelling unit as a secondary use which is clearly incidental to the dwelling unit for residential purposes and which meets all of the following conditions:
 - 1. The use shall be carried on wholly within the dwelling unit principal building. The attachment of an accessory building by a breezeway, roof or similar structure shall not be deemed as sufficient for the accessory building to be considered as a portion of the primary building.
 - 2. Not more than 25% of the floor area, not to exceed 500 square feet, of the dwelling unit building shall be used for the conduct of the home occupation.
 - 3. No merchandise or articles shall be displayed for advertising purposes, nor be displayed in such a way as to be visible from outside the dwelling unit. Garage doors shall not be left in the open position when the garage is used for the storage of business related materials.
 - 4. No merchandise or articles shall be stored other than inside the dwelling unit.
 - 5. No equipment or business vehicles may be stored or parked on the premises except that 1 business vehicle (the carrying capacity of which shall not exceed 1andhalf; tons and shall not exceed six (6) tires and/or two (2) axles) used exclusively by the resident may be parked in a carport, garage or an approved parking space in the rear or side yard and not within the public street or right-of-way.
 - 6. A home occupation may not generate more than six non-residential trips per day to the home, excluding occupant trips.
 - 7. There shall be no alteration of the residential character of the dwelling unit or premises or structures on the premises.
 - 8. No person not a resident of the dwelling unit shall work in the dwelling unit in connection with the home occupation. This prohibition shall also apply to independent contractors and employees who serve the resident of the dwelling unit.

7. Private swimming pool and bathhouse or cabana. Swimming pool shall maintain a 20 foot setback from side and rear lot lines, or the same setback as the principle structure whichever is less. All other structures shall maintain a 10 foot setback from side and rear lot lines or the same setbacks as the principal building, whichever is less.
8. Structures designed and used for purposes of shelter in the event of man-made or natural catastrophes. Same setbacks shall apply as for the principal building.

2.3.4 Standards for dwelling, 'for-sale', detached houses.

- A. All detached 'For-Sale' dwellings shall meet or exceed the following requirements in addition to the requirements of all applicable Building Codes:
1. Each dwelling shall be connected to a potable water supply and sanitary sewage disposal system approved by the Fulton County Development Services Department.
 2. Foundation: The structure shall be attached to a permanent foundation constructed in accordance with the Building Code.
 3. Exterior siding: Exterior siding materials shall consist of wood, brick, stone, concrete, stucco, EIFS or similar materials, or lap siding of masonite, vinyl or similar materials, or any combination of the above.

The exterior siding shall extend the full height of the exterior walls, from the surrounding grade to the bottom of the eaves or other juncture with the roof.
 4. Roofs: All roof surfaces shall have a minimum pitch of 2.25:12 (2¼ inches of rise for every 12 inches of run), except that mansard and gambrel roofs must meet this requirement only for those surfaces that rise from the eaves. All roof surfaces exposed to view shall be covered with asphalt or fiberglass shingles, wood shakes or shingles, clay tiles, slate, standing seam metal or similar materials.
 5. Houses shall be at least 20 ft. in width.
 6. A porch or hard surfaced landing shall be provided at each exterior door and stairway top and bottom, which shall be at least as wide as the door it serves, but no less than 36 inches in width and 36 inches in depth.

2.3.5 Buffers and landscape requirements.

- A. *Buffers.* A lot zoned or used for a rental dwelling, office, institutional, commercial, industrial uses or occupied by a non 'For-Sale' residential use shall provide a fifty foot wide undisturbed buffer along all property lines adjoining property zoned for or used by 'For-Sale' residential purposes. Where commercial or industrial districts or developments abut R-10M zoning districts, the same buffer requirements apply. The undisturbed buffer shall be in addition to the required building setback line.

Except as otherwise provided, herein, buffer strips shall be preserved in their natural undisturbed state, except that sparsely planted buffers shall be enhanced with additional plant material. Enhancement plants must provide an opaque screen within two (2) years of planting and must meet the following standards: Plants must be a minimum of five (5) feet in height at time of installation; plant selection will consist of eighty (80) percent evergreen species and twenty (20) percent deciduous species; and plants will be spaced a maximum of eight (8) feet on center.

Undisturbed buffers shall not contain any surface parking or storm water detention facilities, basins, or any structures except that the Director may approve underground facilities within the buffer or the crossing of the buffer for the purpose of extending utilities. The Community Development Director may approve vegetated runoff reduction measures within the buffer. The planting requirements above may be varied to accommodate vegetated runoff reduction measures as part of an approved stormwater management plan, if properly designed to provide stormwater management and screening functions.

Stream buffers must be replanted where disturbed for approved access, ~~detention~~ and utility crossing. Replacement plants must be approved by the City arborist.

All buffer plantings are subject to the approval of the Director.

- B. *Parking Lot Screening.* Surface parking lots shall provide a minimum 200 square foot wide landscape island at the end of each parking bay, and a 200 square foot island located each 72 feet of single parking length. Each landscape island shall be planted with one shade tree. Alternate landscape configurations may be approved if the Community Development Director determines that the alternate design exceeds the standards above and/or is part of a smart stormwater design for the site that includes multi-functional, vegetated runoff reduction measures. An alternate configuration could also include the preservation and enhancement of existing trees which are provided above and beyond other tree preservation requirements which are deemed of community value by the Director; and which would result in a minimum of 50% parking lot coverage within 15 years.

The required tree area shall be protected against compaction and shall provide sufficient area for tree growth. Utilities are not allowed within the minimum area. The trees shall be maintained in accordance with best management practices as defined by the International Society of Arboriculture guidelines, and shall not be removed or pruned without permission from the city arborists.

C. *Landscape Strips.*

1. The City wants to promote tree lined streets therefore, a minimum of ten (10) feet wide landscape strip shall be provided along all public right-of-ways. Main streets which are listed below shall have twenty (20) foot landscape strips, except those located within the Historic Business District which shall have ten (10) feet wide landscape strips or landscaping as approved by the Director.

MAIN STREETS:

Highway 9

Mansell Road

Windward Parkway

Northpoint Parkway

Westside Parkway

Old Milton Parkway

Haynes Bridge Road

Kimball Bridge Road

2. No permanent structures other than signage are permitted within the landscape strip. This includes pavement, retaining walls, drainage structures, detention ponds, flumes, curbing, etc. Except that retaining walls built with decorative masonry and designed as a landscape feature may be located within the landscape strip subject to approval by the Director. All required plantings must be installed so as not to interfere with the structural integrity of the wall.
3. One (1) shade tree with a minimum 4 inch caliper shall be provided for every twenty-five (25) linear feet of landscape strip.

Shrubs shall be provided to screen paved areas and parking lots from the right-of-way. Shrubs shall be two (2) foot high at planting, two (2) rows deep and shall provide a screen within three (3) years of planting. Alternate screening methods such as fencing may be approved by the Director.

Shrubs and trees in quantities as specified above, shall be provided to screen all parking lots, utility areas, dumpsters and detention ponds.

1. Light industrial uses with an LI zoning district;
 2. Car lots;
 3. Automotive service stations;
 4. Commercial landscape nurseries;
 5. Outdoor temporary uses such as Christmas tree lots;
 6. Restaurant drive thru or walk up service;
 7. Outdoor café seating in conjunction with a dining establishment.
- B. Mobile homes as defined in this Ordinance (i.e. manufactured prior to 1976) are not allowed in any zoning district in accordance with State law.

SECTION 2.5 - PARKING AND LOADING^[1]

Areas suitable for parking vehicles in off-street locations shall be required in all districts at the time of the initial construction of any principal building or when a structural alteration or change in a principal building produces an increase in dwelling units, guest rooms, floor area, seating or bed capacity, or when a conversion in use occurs.

Off-street parking shall be provided and maintained in accordance with the following requirements. ~~A~~ parking study may be submitted to support a request for a proposed parking reduction. This study shall be reviewed by Community Development and must be approved prior to permitting.

([Ord. No. 718](#), § 17(Exh. C), 12-14-2015)

2.5.1 Number of vehicle parking spaces required.

The following number of off-street vehicle parking spaces shall be required for the respective use:

A. *Residential Uses.*

Dwelling, 'For-Sale', detached:

Two (2) spaces on the same lot for each dwelling unit, plus 1 additional space where a home occupation is permitted

Dwelling, 'For-Sale', attached; efficiency or one-bedroom units:

One and one-half (1½) spaces for each dwelling unit.

Two or more bedroom units:

One (1) space for each bedroom.

Bed and Breakfast:

One (1) space for each bedroom.

Dwelling, 'For-Rent', residential:

Two (2) spaces for each unit, plus one (1) guest space per 20 units.

Group Home/Congregate Housing:

2.5.5 Design criteria.

A. Parking Space Area Requirements. Including aisles, entrances and exits, each required off-street parking area, lot or other facility shall contain a minimum of 300 square feet of space for each vehicle to be accommodated. Not less than 80% of the parking spaces required by this Ordinance shall be standard parking spaces (9 feet by 19 feet). The dimensions of parking spaces and aisles shall be in accordance with the Parking Standards Illustration (Table 2.3). ~~)-In order to reduce impervious area, projects using runoff reduction measures may use alternative off street parking dimensions as specified in Table 2.3.a.~~

Accessible parking shall be designed and provided in accordance with the requirements of the Georgia Accessibility Code for Buildings and Facilities.

B. Permitted Percentage of Compact Car Parking Spaces. Up to 20% of the parking spaces required by this Ordinance may be compact car parking spaces (8 feet by 16 feet). Compact spaces shall be located on the periphery of the parking lot wherever possible.

C. Minimum Parking Bay Width. The minimum width for 90 degree parking bays shall be 60 feet for standard spaces and 54 feet for compact spaces- ~~, except for projects using runoff reduction measures, as noted in 2.5.5.A above.~~

D. Off-street parking lots, whether public or private, shall be graded to insure proper drainage, surfaced with concrete or asphalt on an approved base and maintained in good condition free of weeds, dust, trash and debris. A gravel surface may be used for parking when such parking is in excess of code requirements and located within 700' of a waterway.

E. Tree Preservation. To allow an existing or new development to preserve healthy existing trees within or adjacent to a parking lot, the number of required off-street parking spaces may be reduced by up to twenty percent (20%).

~~EF.~~ Within residential districts, gravel parking in existence as of 01/01/01 may remain. Such gravel parking areas shall accommodate a maximum of two vehicles and shall be contained on three sides by landscape timbers.

~~FG.~~ Pervious paving materials for parking areas are allowed as part of an approved stormwater management plan for the site with a long-term maintenance agreement.

~~FH.~~ Parking Lot Landscaping. See, Sec. 2.3.5.

~~I. -Multifunctional Functional Runoff Reduction Measures. To encourage multifunctional runoff reduction measures and provide incentives for their use, bioretention areas, vegetated swales, planter boxes, rainwater harvesting systems, and other vegetated BMPs may be used to meet the perimeter island, interior island, and median island landscaping requirements of this Chapter, and may be constructed in the designated landscape areas if part of an approved storm water management plan for the site and if screening functions are maintained.~~

([Ord. No. 718](#), § 17(Exh. C), 12-14-2015)

2.5.6 Public street access.

A. *Access to Parking Lots.* A plan of entrances, exits and storm water drainage shall be submitted to the Department of Community Development and approved prior to the issuance of a development permit for off-street parking lots, whether public or private. Installation of entrances, exits and drainage

systems shall have been completed prior to the issuance of a certificate of occupancy. All curb cut locations as well as widths shall comply with the Alpharetta Standard Drawings.

- B. *Driveways and Curb Cuts.* Local structures may have access points to parking lots as needed to fit the development, in accordance with professional traffic engineering practice. In general, curb cuts shall be spaced 300 feet apart and be located at least 300 feet away from a street intersection.
- C. *Vision Clearance.* In all districts no fence, wall, shrubbery or other obstruction to vision between the heights of 2½ feet and 10 feet above the finished grade of streets shall be erected, permitted or maintained within 20 feet of the intersection of the right-of-way lines of streets.

([Ord. No. 718](#), § 17(Exh. C), 12-14-2015)

2.5.7 Electric Vehicle Charging Stations.

All developments requiring 100 or more vehicle parking spaces shall provide electric vehicle charging stations. One (1) electric vehicle charging station for every 25 required vehicle parking spaces shall be required.

([Ord. No. 718](#), § 17(Exh. C), 12-14-2015)

2.5.8 Number of bicycle parking spaces required.

A. Residential Uses.

Dwelling, 'For-Rent':

One (1) bicycle space for every two (2) units.

B. Business Uses.

Retail, Office, Hotel, Place of Assembly, Entertainment:

One (1) bicycle space for every 25 required vehicle parking spaces.

C. Public and Semipublic Uses.

Schools (public/private):

One (1) bicycle space for every ten (10) employees, plus one (1) space for every four (4) students.

D. Miscellaneous/Other.

To be determined by the Transportation Engineer and/or Zoning Administrator.

([Ord. No. 718](#), § 17(Exh. C), 12-14-2015)

2.5.9 Prohibited parking.

- A. Except when necessary to avoid conflict with other traffic or in compliance with the directions of a police officer, no person shall:
 - 1. Park a vehicle, except temporarily for the purpose of and while actually engaged in loading or unloading of property or passengers, in acceleration or deceleration lane; or
 - 2. Park a vehicle overnight in a cul-de-sac located in a residential district.
 - 3. Park a vehicle on an unpaved surface in any commercial district, the front yard of a residence or the side yard if the side yard faces the street, except as provided for in Subsection 2.5.5(E).

- B. The City may, but is not required to, post no parking signs in areas where parking is prohibited in Paragraph 'A' above, and the failure to post signs shall not excuse any person from compliance with Paragraph 'A'.
- C. Paragraph 'A' of this section shall not apply to the driver of any vehicle which is disabled while on the roadway in such a manner and to such extent that is impossible to avoid stopping and temporarily leaving such disabled vehicle in such position.
- D. No inoperable vehicle shall be parked or stored on a street within a residential district. An automobile or other vehicle shall be deemed inoperable if it meets any one of the following criteria:
 - 1. It does not meet the Official Code of Georgia requirements for operating on a public street;
 - 2. It is extensively damaged, such damage including but not limited to any of the following: missing wheels, tires, motor or transmission;
 - 3. It is not operable on the public streets because it is not currently registered with the Georgia Department of Motor Vehicles;
 - 4. It is not capable of being operated on a public street due to missing or inoperable mechanical or electronic parts; or
 - 5. It has been continuously parked in the same location for a period of thirty (30) consecutive days.

([Ord. No. 718](#), § 17(Exh. C), 12-14-2015)

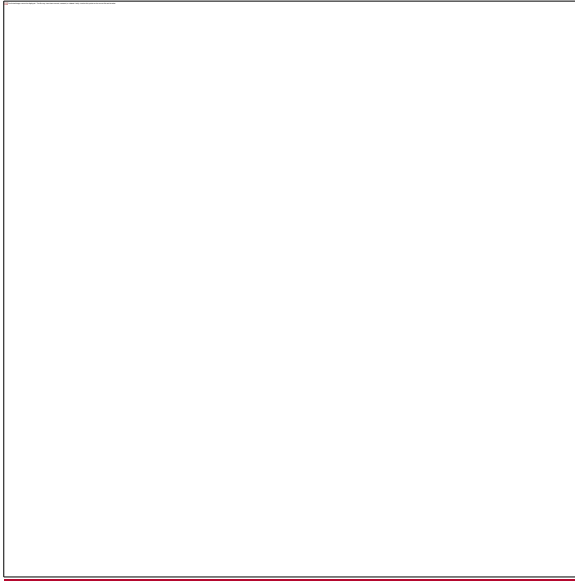
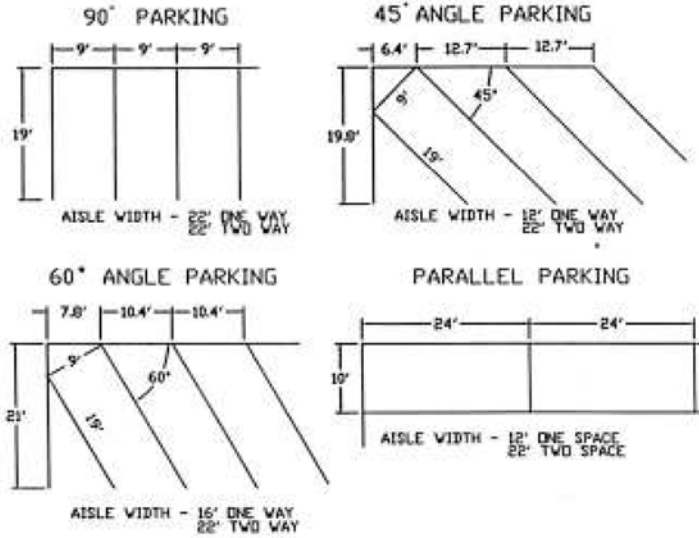
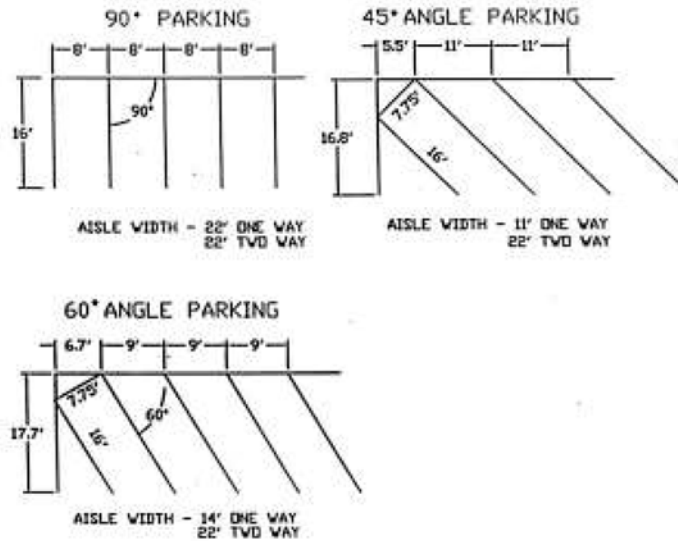


TABLE 2.3 - PARKING LOT STANDARDS

STANDARD STALL DIMENSIONS



COMPACT CAR STALL DIMENSIONS



NOTES:

1. FIRE LANES SHALL BE A MINIMUM OF TWENTY-FOUR (24) FEET.
2. DIMENSIONS SHOWN FOR PARKING STALLS ARE MINIMUM COLUMNS & OTHER OBSTRUCTIONS WILL BE ALLOWED IN THE FRONT TWO (2) FEET AND REAR FIVE (5) FEET OF THE LENGTH OF THE STALL, AND SHALL NOT INTRUDE MORE THAN SIX (6) INCHES INTO THE WIDTH OF THE STALL.
3. REFERENCE CITY OF ALPHARETTA STANDARD PLANS FOR CONSTRUCTION DETAILS.

Footnotes:

--- (1) ---

Editor's note— [Ord. No. 718](#), § 17(Exh. C), adopted Dec. 14, 2015, repealed the former § 2.5 (2.5.1—2.5.9), and enacted a new 2.5 (2.5.1—2.5.9) as set out herein. The former § 2.5 pertained to similar subject matter and derived from the original codification and Ord. No. 675, § 1, adopted June 3, 2013.

Table 2.3.a Alternative Criteria for Off-Street Parking

The following are recommended alternative criteria for offstreet parking design to reduce impervious area of the site.

<u>Angle</u>	<u>Base Module</u>	<u>Vehicle Projection</u>	<u>Aisle Width</u>	<u>Single Loaded Module</u>	<u>Wall to Interlock</u>	<u>Interlock to Interlock</u>	<u>Curb to Curb</u>	<u>Overhang</u>
<u>Θ</u>	<u>M₁</u>	<u>VP</u>	<u>A</u>	<u>M₂</u>	<u>M₃</u>	<u>M₄</u>	<u>M₅</u>	<u>Overhang</u>
<u>30</u>	<u>41'-2"</u>	<u>15'-1"</u>	<u>11'-0"</u>	<u>26'-1"</u>	<u>37'-6"</u>	<u>33'-10"</u>	<u>38'-8"</u>	<u>1'-3"</u>
<u>45</u>	<u>47'-0"</u>	<u>17'-7"</u>	<u>11'-10"</u>	<u>29'-5"</u>	<u>44'-0"</u>	<u>41'-0"</u>	<u>43'-6"</u>	<u>1'-9"</u>
<u>60</u>	<u>51'-6"</u>	<u>19'-0"</u>	<u>13'-6"</u>	<u>32'-6"</u>	<u>49'-4"</u>	<u>47'-2"</u>	<u>47'-2"</u>	<u>2'-2"</u>
<u>90</u>	<u>59'-0"</u>	<u>18'-0"</u>	<u>23'-0"</u>	<u>41'-0"</u>	<u>59'-0"</u>	<u>59'-0"</u>	<u>54'-0"</u>	<u>2'-6"</u>

<u>Low Turnover</u>			<u>Medium Turnover</u>			<u>High Turnover</u>		
<u>Angle</u>	<u>Width Projection</u>	<u>Interlock</u>	<u>Width Projection</u>	<u>Interlock</u>	<u>Width Projection</u>	<u>Interlock</u>	<u>Width Projection</u>	<u>Interlock</u>
<u>Θ</u>	<u>WP</u>	<u>I</u>	<u>WP</u>	<u>I</u>	<u>WP</u>	<u>I</u>	<u>WP</u>	<u>I</u>
<u>30</u>	<u>16'-6"</u>	<u>3'-7"</u>	<u>17'-0"</u>	<u>3'-8"</u>	<u>16'-6"</u>	<u>3'-9"</u>	<u>18'-0"</u>	<u>3'-11"</u>
<u>45</u>	<u>11'-8"</u>	<u>2'-11"</u>	<u>12'-0"</u>	<u>3'-0"</u>	<u>12'-4"</u>	<u>3'-1"</u>	<u>12'-9"</u>	<u>3'-2"</u>
<u>60</u>	<u>9'-6"</u>	<u>2'-1"</u>	<u>9'-10"</u>	<u>2'-2"</u>	<u>10'-1"</u>	<u>2'-2"</u>	<u>10'-5"</u>	<u>2'-3"</u>
<u>90</u>	<u>8'-3"</u>	<u>0'-0"</u>	<u>8'-6"</u>	<u>0'-0"</u>	<u>8'-9"</u>	<u>0'-0"</u>	<u>9'-0"</u>	<u>0'-0"</u>

Source: Urban Land Institute. (2010). The Dimensions of Parking, Fifth Edition. National Parking Association.

Notes: Recommendations assume (1)on-way traffic for Ailes less than 90 degrees, and two-way traffic for 90 degree parking; (2)double loaded aisles; and (3)a design vehicle that is 6'7" by 17'3".

This publication was under the direct supervision of Dennis Sinnett, Vice President, and Rachael Calloway, Editor, of the Municipal Code Corporation, Tallahassee, Florida. Credit is gratefully given to the other members of the publisher's staff for their sincere interest and able assistance throughout the project.

The publisher is most grateful to Coty Thigpen, City Clerk, and Elicia Taylor, Boards Assistant, for their cooperation and assistance during the progress of the work on this publication. It is hoped that their efforts and those of the publisher have resulted in a Unified Development Code of Ordinances which will make the active law of the city readily accessible to all citizens and which will be a valuable tool in the day-to-day administration of the city's affairs.

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ARTICLE III. - LAND DEVELOPMENT ACTIVITIES

SECTION 3.1 - SITE GRADING AND LAND DISTURBANCE

3.1.1 Soil erosion and sedimentation control.

This Ordinance will be known as the "Alpharetta Soil Erosion and Sedimentation Control Ordinance".

- A. *Definitions.* The following definitions shall apply in the interpretation and enforcement of this Ordinance, unless otherwise specifically stated:

Best Management Practices (BMPS). A collection of structural practices and vegetative measures which, when properly designed, installed and maintained, will provide effective erosion and sedimentation control. The term "properly designed" means designed in accordance with the hydraulic design specifications contained in the "Manual for Erosion and Sediment Control in Georgia" specified in O.C.G.A. § 12-7-6 subsection (b).

Board. The Board of Natural Resources.

Buffer. The area of land immediately adjacent to the banks of State Waters in its natural state of vegetation, which facilitates the protection of water quality and aquatic habitat.

Certified Personnel. A person who has successfully completed the appropriate certification course approved by the Georgia Soil and Water Conservation Commission.

Commission. The Georgia Soil and Water Conservation Commission (GSWCC).

CPESC. Certified Professional in Erosion and Sediment control with current certification by Certified Professional in Erosion and Sediment Control Inc., a corporation registered in North Carolina, which is also referred to as CPESC or CPESC, Inc.

Cut. A portion of land surface or area from which earth has been removed or will be removed by excavation; the depth below original ground surface or excavated surface. Also known as excavation.

Department. The Georgia Department of Natural Resources (DNR).

Design Professional. A professional licensed by the State of Georgia in the field of: engineering, architecture, landscape architecture, forestry, geology, or land surveying; or a person that is a Certified Professional in Erosion and Sediment Control (CPESC) with a current certification by Certified Professional in Erosion and Sediment Control.

Director. The Director of the Environmental Protection Division of the Georgia Department of Natural Resources or an authorized representative.

District. The Fulton County Soil and Water Conservation District.

Division. The Environmental Protection Division (EPD) of the Georgia Department of Natural Resources.

Drainage Structure. A device composed of a virtually nonerodible material such as concrete, steel, plastic or other such material that conveys water from one place to another by intercepting the flow and carrying it to a release point for stormwater management, drainage control, or flood control purposes.

Erosion. The process by which land surface is worn away by the action of the wind, water, ice, or gravity.

Erosion, Sedimentation and Pollution Control Plan. A plan required by the Erosion and Sedimentation Act O.C.G.A. Chapter 12-7, that includes, as a minimum protection, at least as stringent as the State General Permit, best management practices, and requirements in Subsection 3.1.1.C. of this ordinance. A plan for the control of soil erosion and sedimentation resulting from a land-disturbing activity. Also known as the "plan".

Fill. A portion of land surface to which soil or other solid material has been added; the depth above the original ground.

Final Stabilization. All soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or equivalent permanent stabilization measures (such as the use of rip rap, gabions, permanent mulches or geotextiles) have been used. Permanent vegetation shall consist of: planted trees, shrubs, perennial vines; a crop of perennial vegetation appropriate for the time of year and region; or a crop of annual vegetation and a seeding of target crop perennials appropriate for the region. Final stabilization applies to each phase of construction.

Finished Grade. The final elevation and contour of the ground after cutting or filling and conforming to the proposed design.

Grading. Altering the shape of ground surfaces to a predetermined condition; this includes stripping, cutting, filling, stockpiling and shaping or any combination thereof and shall include the land in its cut or filled condition.

Ground Elevation. The original elevation of the ground surface prior to cutting or filling.

Land-Disturbing Activity. Any activity which may result in soil erosion from water or wind and the movement of sediments into State Waters or onto lands within the state, including, but not limited to, clearing, dredging, grading, excavating, transporting, and filling of land but not including agricultural practices as described in Subsection 3.1.1.B.5.

Larger Common Plan of Development or Sale. A contiguous area where multiple separate and distinct construction activities are occurring under one plan of development or sale. For the purposes of this Paragraph, "plan" means an announcement; piece of documentation such as a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, or computer design; or physical demarcation such as boundary signs, lot stakes, or surveyor markings, indicating that construction activities may occur on a specific plot.

Local Issuing Authority. The governing authority of any county or municipality which is certified pursuant to subsection (a) O.C.G.A. § 12-7-8.

Metropolitan River Protection Act (MRPA). A state law referenced as O.C.G.A. § 12-5-440 et seq., which addresses environmental and developmental matters in certain metropolitan river corridors and their drainage basins.

Natural Ground Surface. The ground surface in its original state before any grading, excavation, or filling.

Nephelometric Turbidity Units (NTU). Numerical units of measure based upon photometric analytical techniques for measuring the light scattered by finely divided particles of a substance in suspension. This technique is used to estimate the extent of turbidity in water in which colloiddally dispersed particles are present.

NOI. A Notice of Intent form provided by EPD for coverage under the State General Permit.

NOT. A Notice of Termination form provided by EPD to terminate coverage under the State General Permit.

Operator. The party or parties that have: (A) operational control of construction project plans and specifications, including the ability to make modifications to those plans and specifications; or (B) day-to-day operational control of those activities that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other permit conditions, such as a person authorized to direct workers at a site to carry out activities required by the stormwater pollution prevention plan or to comply with other permit conditions.

Outfall. The location where stormwater in a discernible, confined and discrete conveyance, leaves a facility or site or, if there is a receiving water on site, becomes a point source discharging into that receiving water.

Permit. The authorization necessary to conduct a land-disturbing activity under the provisions of this Ordinance.

Person. Any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, state agency, municipality or other political subdivision of this State of Georgia, any interstate body or other legal entity.

Phase or Phased. Sub-parts or segments of construction projects where the sub-part or segment is constructed and stabilized prior to completing construction activities on the entire construction site.

Project. The entire proposed development project regardless of the size of the area of land to be disturbed.

Properly Designed. Designed in accordance with the design requirements and specifications contained in the Manual for Erosion and Sediment Control in Georgia (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the Manual as approved by the Commission up until the date of NOI submittal.

Qualified Personnel. Any person who meets or exceeds the education and training requirements of O.C.G.A. § 12-7-19.

Roadway Drainage Structure. A device such as a bridge, culvert, or ditch, composed of a virtually nonerodible material such as concrete, plastic, steel, or other such material that conveys water under a roadway by intercepting the flow on one side of a traveled way consisting of one or more defined lanes, with or without shoulder areas, and carrying water to a release point on the other side.

Sediment. Solid material, both organic and inorganic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, ice, or gravity as a product of erosion.

Sedimentation. The process by which eroded material is transported and deposited by the action of water, wind, ice, or gravity.

Soil and Water Conservation District Approved Plan. An erosion and sedimentation control plan approved in writing by the Fulton County Soil and Water Conservation District.

Stabilization. The process of establishing an enduring soil cover of vegetation by the installation of temporary or permanent structures for the purpose of reducing to a minimum the erosion process and the resultant transport of sediment by wind, water, ice or gravity.

State General Permit. The National Pollution Discharge Elimination System general permit or permits for stormwater runoff from construction activities as is now in effect or as may be amended or reissued in the future pursuant to the state's authority to implement the same through federal delegation under the Federal Water Pollution Control Act, as amended, 33 U.S.C. Section 1251, et seq., and subsection (f) of Code Section 12-5-30.

State Waters. Any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the state which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.

Structural Erosion and Sedimentation Control Practices. Practices for the stabilization of erodible or sediment producing areas by utilizing the mechanical properties of matter for the purpose of either changing the surface of the land or storing, regulating or disposing of runoff to prevent excessive sediment loss. Examples of structural erosion and sediment control practices are riprap, sediment basins, dikes, level spreaders, waterways or outlets, diversions, grade stabilization structures, sediment traps and land grading, etc. Such measures can be found in the publication *Manual for Erosion and Sediment Control in Georgia*.

Trout Streams. All streams or portions of streams within the watershed as designated by the Game and Fish Division of the Georgia Department of Natural Resources under the provisions of the Georgia Water Quality Control Act, O.C.G.A. § 12-5-20 et seq. Streams designated as primary trout waters are defined as water supporting a self-sustaining population of rainbow, brown or brook trout. Streams designated as secondary trout waters are those in which there is no evidence of natural trout reproduction, but are capable of supporting trout throughout the year. First order trout waters are streams into which no other streams flow except springs.

Vegetative Erosion and Sedimentation Control Measures. Measures for the stabilization of erodible or sediment-producing areas by covering the soil with:

1. Permanent seeding, sprigging or planting, producing long-term vegetative cover; or
2. Temporary seeding, producing short-term vegetative cover; or
3. Sodding, covering areas with a turf of perennial sod-forming grass.

Such measures can be found in the publication *Manual for Erosion and Sediment Control in Georgia*.

Watercourse. Any natural or artificial watercourse, stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, or wash in which water flows either continuously or intermittently and which has a definite channel, bed and banks, and including any area adjacent thereto subject to inundation by reason of overflow or floodwater.

Wetlands. Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

B. *Exemptions.* This Ordinance shall apply to any land-disturbing activity undertaken by any person on any land except for the following:

1. Surface mining, as the same is defined in O.C.G.A. § 12-4-72, "Mineral Resources and Caves Act";
2. Granite quarrying and land clearing for such quarrying;
3. Such minor land-disturbing activities as home gardens and individual home landscaping, repairs, maintenance work, fences and other related activities which result in minor soil erosion;

4. The construction of 'For-Sale' dwellings when such construction disturbs less than one acre and is not a part of a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre and not otherwise exempted under this Subsection; provided, however, that construction of any such residence shall conform to the minimum requirements as set forth in Subsection 3.1.1.C. of this Ordinance and this Subsection. For residential construction covered by the provisions of this Subsection, there shall be a buffer zone between the residence and any State Waters classified as trout streams pursuant to Article 2 of Chapter 5 of the Georgia Water Quality Control Act. In any such buffer zone, no land-disturbing activity shall be constructed between the residence and the point where vegetation has been wrested by normal stream flow or wave action from the banks of the trout waters. For primary trout waters, the buffer zone shall be at least fifty (50) horizontal feet and no variance to a smaller buffer shall be granted. For secondary trout waters, the buffer zone shall be at least fifty (50) horizontal feet but the Director may grant variances to no less than twenty-five (25) feet. Regardless of whether a trout stream is primary or secondary, for first order trout waters, which are streams into which no other streams flow except for springs, the buffer shall be at least twenty-five (25) horizontal feet and no variance to a smaller buffer shall be granted. The minimum requirements of Subsection 3.1.1.C. of this Ordinance and the buffer zones provided by this Section shall be enforced by the Local Issuing Authority;
5. Agricultural operations as defined in O.C.G.A. § 1-3-3, "definitions", to include raising, harvesting or storing of products of the field or orchard; feeding, breeding or managing livestock or poultry; producing or storing feed for use in the production of livestock, including but not limited to cattle, calves, swine, hogs, goats, sheep, and rabbits or for use in the production of poultry, including but not limited to chickens, hens and turkeys; producing plants, trees, fowl, or animals; the production of aqua culture, horticultural, dairy, livestock, poultry, eggs and apiarian products; farm buildings and farm ponds;
6. Forestry land management practices, including harvesting; provided, however, that when such exempt forestry practices cause or result in land-disturbing or other activities otherwise prohibited in a buffer, as established in Paragraphs o. and p. of Subsection 3.1.1.C.3. of this Ordinance, no other land-disturbing activities, except for normal forest management practices, shall be allowed on the entire property upon which the forestry practices were conducted for a period of three (3) years after completion of such forestry practices;
7. Any project carried out under the technical supervision of the Natural Resources Conservation Service of the United States Department of Agriculture;
8. Any project involving one-tenth (1/10) acre or less; provided, however, that this exemption shall not apply to any land-disturbing activity within a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre or within two hundred feet (200') of the bank of any State Waters, and for purposes of this Subsection, "State Waters" excludes channels and drainageways which have water in them only during and immediately after rainfall events and intermittent streams which do not have water in them year-round; provided, however, that any person responsible for a project which involves less than one-tenth (1/10) acre, which involves land-disturbing activity, and which is within two hundred feet (200') of any such excluded channel or drainageway, must prevent sediment from moving beyond the boundaries of the property on which such project is located and provided, further, that nothing contained herein shall prevent the City from regulating any such project which is not specifically exempted by Subsections 1, 2, 3, 4, 5, 6, 7, 9, or 10 of this Section.
9. Construction or maintenance projects, or both, undertaken and/or financed in whole or in part by the Department of Transportation, the Georgia Highway Authority, or the State Tollway Authority; or any road construction or maintenance project, or both, undertaken by any county or municipality; provided, however, that construction or maintenance projects of the Department of Transportation or State Tollway Authority which disturb one or more contiguous acres of land shall be subject to provisions of O.C.G.A. § 12-7-7.1; except where the Department of Transportation, the Georgia Highway Authority, or the State Road and Tollway Authority is a secondary permittee for a project located within a larger common plan of development or sale

under the state general permit, in which case a copy of a notice of intent under the state general permit shall be submitted to the City, the City shall enforce compliance with the minimum requirements set forth in O.C.G.A. § 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders;

10. Any land-disturbing activities conducted by any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in O.C.G.A. § 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission, or distribution of power; except where an electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in O.C.G.A. § 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission, or distribution of power is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case a copy of a notice of intent under the state general permit shall be submitted to the City, the City shall enforce compliance with the minimum requirements set forth in O.C.G.A. § 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders; and

11. Any public water system reservoir.

C. *Minimum Requirements For Erosion And Sedimentation Control Using Best Management Practices.*

1. General Provisions. Excessive soil erosion and resulting sedimentation can take place during land-disturbing activities. Therefore, plans for those land-disturbing activities which are not exempted by this Ordinance shall contain provisions for application of soil erosion and sedimentation control measures and practices. The provisions shall be incorporated into the erosion and sedimentation control plans. Soil erosion and sedimentation control measures and practices shall conform to the requirements of Subsections 3.1.1.C.2. and 3. of this Ordinance. The application of measures and practices shall apply to all features of the site, including street and utility installations, drainage facilities and other temporary and permanent improvements. Measures shall be installed to prevent or control erosion and sedimentation pollution during all stages of any land-disturbing activity.
2. Minimum Requirements/BMPs.
 - a. Best management practices, as set forth in Subsections 3.1.1.C.2. and 3. of this Ordinance, shall be required for all land-disturbing activities. Proper design, installation, and maintenance of best management practices shall constitute a complete defense to any action by the Director or to any other allegation of noncompliance with Paragraph b of Subsection 3.1.1.C.2. or any substantially similar terms contained in a permit for the discharge of stormwater issued pursuant to subsection (f) of O.C.G.A. § 12-5-30, the "Georgia Water Quality Control Act". As used in this Subsection, the terms "proper design" and "properly designed" means designed in accordance with the hydraulic design specifications contained in the Manual for Erosion and Sediment Control in Georgia specified in O.C.G.A. § 12-7-6 subsection (b).
 - b. A discharge of stormwater runoff from disturbed areas where best management practices have not been properly designed, installed and maintained shall constitute a separate violation of any land-disturbing permit issued by the City or of any state general permit issued by the Division pursuant to subsection (f) of O.C.G.A. § 12-5-30, the "Georgia Water Quality Control Act", for each day on which such discharge results in the turbidity of the receiving waters being increased by more than twenty-five (25) nephelometric turbidity units for waters supporting warm water fisheries or by more than ten (10) nephelometric turbidity units for waters classified as trout waters. The turbidity of the receiving waters shall be measured in accordance with guidelines to be issued by the Director. This Subsection shall not apply to any land disturbance associated with the construction of 'For-

Sale' dwellings which are not part of a larger common plan of development or sale unless the planned disturbance for such construction is equal to or greater than five acres.

- c. Failure to properly design, install, or maintain best management practices shall constitute a violation of any land-disturbing permit issued by the City or of any state general permit issued by the Division pursuant to subsection (f) of O.C.G.A. § 12-5-30, the "Georgia Water Quality Control Act", for each day on which such failure occurs.
 - d. The Director may require, in accordance with regulations adopted by the Board, reasonable and prudent monitoring of the turbidity level of receiving waters into which discharges from land-disturbing activities occur.
 - e. The LIA may set more stringent buffer requirements than stated in Subsections 3.1.1.C.3.o. and p. in light of O.C.G.A. § 12-7-6(c).
3. The rules and regulations, ordinances, or resolutions adopted pursuant to this Section for the purpose of governing land-disturbing activities shall require, as a minimum, protections at least as stringent as the state general permit; and best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the *Manual for Erosion and Sediment Control in Georgia* published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, as well as the following:
- a. Stripping of vegetation, regrading and other development activities shall be conducted in a manner so as to minimize erosion;
 - b. Cut-fill operations must be kept to a minimum;
 - c. Development plans must conform to topography and soil type so as to create the lowest practical erosion potential;
 - d. Whenever feasible, natural vegetation shall be retained, protected and supplemented;
 - e. The disturbed area and the duration of exposure to erosive elements shall be kept to a practicable minimum;
 - f. Disturbed soil shall be stabilized as quickly as practicable;
 - g. Temporary vegetation or mulching shall be employed to protect exposed critical areas during development;
 - h. Permanent vegetation and structural erosion control measures shall be installed as soon as practicable;
 - i. To the extent necessary, sediment in runoff water must be trapped by the use of debris basins, sediment basins, silt traps, or similar measures until the disturbed area is stabilized. As used in this Subsection, a disturbed area is stabilized when it is brought to a condition of continuous compliance with the requirements of O.C.G.A. § 12-7-1 et seq.;
 - j. Adequate provisions must be provided to minimize damage from surface water to the cut face of excavations or the sloping surface of fills;
 - k. Cuts and fills may not endanger adjoining property;
 - l. Fills may not encroach upon natural watercourses or constructed channels in a manner so as to adversely affect other property owners;
 - m. Grading equipment must cross flowing streams by means of bridges or culverts except when such methods are not feasible, provided, in any case, that such crossings are kept to a minimum;
 - n. Land-disturbing activity plans for erosion and sedimentation control shall include provisions for treatment or control of any source of sediments and adequate sedimentation control

facilities to retain sediments on-site or preclude sedimentation of adjacent waters beyond the levels specified in Paragraph b. of Subsection 3.1.1.C.2. of this Ordinance.

- o. Except as provided in Paragraph p of this Subsection, there is established a twenty-five (25) foot buffer along the banks of all State Waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the Director determines to allow a variance that is at least as protective of natural resources and the environment, where otherwise allowed by the Director pursuant to O.C.G.A. § 12-2-8, or where a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications, and are implemented; provided, however, the buffers of at least twenty-five (25) feet established pursuant to part 6 of Article 5, Chapter 5 of Title 12, the "Georgia Water Quality Control Act", shall remain in force unless a variance is granted by the Director as provided in this Paragraph. The following requirements shall apply to any such buffer:
 - (1) No land-disturbing activities shall be conducted within a buffer and a buffer shall remain in its natural, undisturbed state of vegetation until all land-disturbing activities on the construction site are completed. Once the final stabilization of the site is achieved, a buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; provided, however, that any person constructing a 'For-Sale' dwelling when such residence is constructed by or under contract with the owner for his or her own occupancy, may thin or trim vegetation in a buffer at any time as long as protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; and
 - (2) The buffer shall not apply to the following land-disturbing activities, provided that they occur at an angle, as measured from the point of crossing, within twenty-five (25) degrees of perpendicular to the stream; cause a width of disturbance of not more than fifty (50) feet within the buffer; and adequate erosion control measures are incorporated into the project plans and specifications and are implemented: (i) Stream crossings for water lines; or (ii) Stream crossings for sewer lines.
- p. There is established a fifty (50) foot buffer as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, along the banks of any State Waters classified as "trout streams" pursuant to Article 2 of Chapter 5 of Title 12, the "Georgia Water Quality Control Act", except where a roadway drainage structure must be constructed; provided, however, that small springs and streams classified as trout streams which discharge an average annual flow of twenty-five (25) gallons per minute or less shall have a twenty-five (25) foot buffer or they may be piped, at the discretion of the landowner, pursuant to the terms of a rule providing for a general variance promulgated by the Board, so long as any such pipe stops short of the downstream landowner's property and the landowner complies with the buffer requirement for any adjacent trout streams. The Director may grant a variance from such buffer to allow land-disturbing activity, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented. The following requirements shall apply to such buffer:
 - (1) No land-disturbing activities shall be conducted within a buffer and a buffer shall remain in its natural, undisturbed state of vegetation until all land-disturbing activities on the construction site are completed. Once the final stabilization of the site is achieved, a buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; provided, however, that any person constructing a 'For-Sale' dwelling when such residence is constructed by vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed, and

- (2) The buffer shall not apply to the following land-disturbing activities, provided that they occur at an angle, as measured from the point of crossing, within twenty-five (25) degrees of perpendicular to the stream; cause a width of disturbance of not more than fifty (50) feet within the buffer; and adequate erosion control measures are incorporated into the project plans and specifications and are implemented: (i) Stream crossings for water lines; or (ii) Stream crossings for sewer lines.

q. Disturbed areas of any permitted land development project should be limited at any time to a maximum of twenty (20) acres. Larger areas of disturbance may be permitted with the written approval of the Community Development Director.

r. Where possible, heavy equipment operation, storage of bulk materials, heavy trafficking, and planned building area should avoid soils with high permeability. Soil permeability shall be based on the most recent soil survey or the best information available.

s. Where possible, natural drainage pathways and conveyances, should be preserved and/or enhanced.

4. Nothing contained in this Section shall prevent the City from adopting rules and regulations, ordinances or resolutions that contain stream buffer requirements that exceed the minimum requirements in Subsections 3.1.1.C.2 and 3 of this Ordinance.
5. The fact that a land-disturbing activity for which a permit has been issued results in injury to the property of another shall neither constitute proof of nor create a presumption of a violation of the standards provided for in this Ordinance or the terms of the permit.

D. Application/Permit Process.

1. *General.* The property owner, developer and designated planners and engineers shall review the general development plans and detailed plans of the City that affect the tract to be developed and the area surrounding it. They shall review local ordinances including but not limited to: zoning, stormwater management, subdivision, flood damage prevention, wetland protection, this ordinance, and others, which regulate the development of land within the jurisdictional boundaries of the City. However, the owner and/or operator is the only party that can obtain a permit.
2. *Application requirements.*
 - a. No person shall conduct any land-disturbing activity within the jurisdictional boundaries of the City without first obtaining a permit from the City Engineer to perform such activity and providing a copy of the Notice of Intent submitted to EPD if applicable.
 - b. The application for a permit shall be submitted to the City Engineer and must include the applicant's erosion and sedimentation control plan with supporting data, as necessary. Said plans shall include, as a minimum, the data specified in Subsection 3.1.1.D.3. of this Ordinance. Erosion, sedimentation, and pollution control plans, together with supporting data, must demonstrate affirmatively that the land-disturbing activity proposed will be carried out in such a manner that the provisions of Subsections 3.1.1.C.2. and 3. of this Ordinance will be met. Applications for a permit will not be accepted unless accompanied by six (6) copies of the applicant's soil erosion and sedimentation control plans. All applications shall contain a certification stating that the plan preparer or the designee thereof visited the site prior to creation of the plan in accordance with EPD Rule 391-3-7-10.
 - c. A fee payable to the City shall be paid with each application. The amount of the fee shall be established from time to time by the City Council.
 - d. In addition to the local permitting fees, fees will also be assessed pursuant to paragraph (5) subsection (a) of O.C.G.A. § 12-5-23, provided that such fees shall not exceed \$80.00 per acre of land-disturbing activity, and these fees shall be calculated and paid by the primary permittee as defined in the state general permit for each acre of land-disturbing activity

- k. A delineation of tree save areas in which trees have been inventoried for density calculations;
- l. If applicable, locations and details of all permanent tree protection measures (tree wells, aeration systems, permeable paving, retaining walls, bollards, etc.); and
- m. Additional information as required on a case-by-case basis.

The above items may be integrated into the normal application requirements and submittals.

- B. Minor additions to existing development require only a sketch showing changes to be submitted to the Director for review and approval.

3.2.7 Minimum tree density requirement.

- A. All sites within the City other than 'For-Sale' residential lots shall maintain a Minimum Tree Density of twenty (20) units per acre. All sites within the City other than 'For-Sale' residential lots shall maintain a minimum tree density of 20 units per acre. The term "unit" is an expression of basal area as defined herein, and is not synonymous with "tree". The density requirement must be met whether or not a site had trees prior to development. The density may be achieved by counting existing trees to be preserved, planting new trees in accordance with the minimum standards of this Ordinance, or some combination of the two. Minimum tree density shall be calculated and established pursuant to the formula and analysis set forth in Appendix A to this Ordinance. The developer shall be subject to the minimum tree density requirement set forth in this paragraph, but the developer shall base its density calculations on the net site area excluding the acreage required for Buffers and infrastructure improvements (roads, utility lines, detention ponds, etc.). In no event shall a parking lot be considered an infrastructure improvement.
- B. All newly constructed 'For-Sale' residential lots in the City shall maintain a minimum tree density based upon the maximum number of trees that can be maintained within thirty percent (30%) of the lot's plantable area, taking into consideration the standards established in this Ordinance for tree size and separation. The density requirement must be met whether or not the individual lot had trees prior to development. The density requirement is calculated by determining lot size and deducting the impervious area, assigning the necessary root zone for trees (400 sq. ft. for Overstory trees and 200 sq. ft. for Understory trees). All 'For-Sale' residential lots constructed prior to the effective date of this Ordinance are required to maintain the requirements of this Section at a twenty percent (20%) level, rather than the thirty percent (30%) requirement used for new construction.
- C. The density may be achieved by counting existing trees to be preserved, planting new trees according to the minimum standards of this Ordinance, or some combination of the two. In addition, replanting on such lots shall be at a ratio of not less than one (1) Overstory tree (minimum two-inch (2") caliper) for every three (3) Understory trees (minimum one-inch (1") caliper). No more than thirty percent (30%) of any one genus may be included in any replanting plan. Vegetated runoff reduction measures which include trees may count toward the tree density requirement.
- D. Notwithstanding the foregoing, it is required that all reasonable efforts be made to save Specimen trees. (Reasonable efforts shall include, but not be limited to, alternate building design, building location, parking area layout, parking area location, water retention location and the like). Developers shall receive a density credit of two (2) times the assigned unit value for each Specimen Tree saved by utilizing an alternate design. Specimen trees that cannot be saved must be replaced with trees having a total density equal three (3) times the unit value of the tree removed with a minimum four-inch (4") tree caliper. Specimen Trees removed without prior approval shall be replaced with trees equal to eight (8) times the unit value with a minimum four-inch (4") tree caliper and subject to the applicable penalties as described in Section 3.2.19.
- E. The intent of these Regulations is to insure that a minimum density of trees is maintained on all developed sites. Occasionally, this intent cannot be met because a project site will not bear the required density of trees. To provide some alternatives in such cases, two alternative methods of

- Expected time frame in which the operation will occur.
- Additional information as may be required by City of Alpharetta staff to perform a proper review of the project and assure that the intent of the Soil and Erosion and Sediment Control Ordinance is met.

The Following Notes:

- The City of Alpharetta Engineering/Public Works Department reserves the right to require additional erosion and sedimentation control measures deemed necessary.
- The contractor shall implement all Best Management Practices for forestry as prescribed by the Georgia Forestry Commission and the U.S. Environment Protection Agency.
- No trees may be cut in buffer zones marked "undisturbed." Tree cutting shall be limited to the non-mechanical removal of pine (*Pinus* spp.) or yellow-poplar (*Liriodendron tulipifera*) trees with stump diameters greater than fifteen (15) inches; provided that a minimum of fifty (50) square feet of basal area remains in good condition in the buffer area at completion of the project. The non-mechanical removal of dead, diseased or insect infested trees is also allowed in this buffer (subject to verification by the City of Alpharetta Arborist).
- All buffers of state waters shall remain undisturbed except for haul road crossing points.
- Projects, which are restricted to a "Residential Thinning", must leave a minimum density of thirty (30) square feet of basal area throughout all areas not designated as buffers or logging decks. Trees to be preserved to meet this requirement must be identifiable both before and after the harvest either by species or by a continuous marking around the trunk at 4.5 feet and at .5 feet above the ground. These trees must be left in good condition with no injuries to the trunk, crown or root system, which would predispose them to disease or pest infestation.

All pine logging slash with stems larger than five (5) inches in diameter shall be chipped and returned to the site or removed from the site to reduce the possibility of insect infestation.

- Logging decks, temporary haul roads, skid trails and any other disturbed areas left idle for two to four weeks will be restored to their contours and established to temporary vegetation (DsD). These disturbed areas left idle for four weeks or more will be established to permanent vegetation (Ds3). All areas remaining at the end of the project will be established to permanent vegetation within two weeks.
- When hand planting, mulch (hay or straw) should be uniformly spread over seeded area within 24 hours of seeding.
- During unstable growing seasons, mulch will be used as a temporary cover (Ds1). On slopes that are 4:1 or steeper, mulch will be anchored.
- The City of Alpharetta Land Disturbance Permit must be displayed on site at all times during the project operation and in plain view from an adjacent county road or street.

Before any activity can begin an inspection must be performed for basal area confirmation, erosion control devices and buffer area delineation. At this time, the contractor must show a current City of Alpharetta business license or registration certificate. At completion of the project, a final inspection must be performed.

SECTION 3.3 - STORM WATER MANAGEMENT—GENERAL

3.3.1 General.

A. Introduction.

It is hereby determined that:

Land development projects and other land use conversions, and their associated changes to land cover, permanently alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, which in turn increase flooding, stream channel erosion, and sediment transport and deposition;

Land development projects and other land use conversions also contribute to increased nonpoint source pollution and degradation of receiving waters;

The impacts of post-development stormwater runoff quantity and quality can adversely affect public safety, public and private property, drinking water supplies, recreation, fish and other aquatic life, property values and other uses of lands and waters;

These adverse impacts can be controlled and minimized through the regulation of stormwater runoff quantity and quality from new development and redevelopment, by the use of both structural facilities as well as nonstructural measures, such as the conservation of open space and greenspace areas. The preservation and protection of natural area and greenspace for stormwater management benefits is encouraged through the use of incentives or "credits." The Georgia Greenspace Program provides a mechanism for the preservation and coordination of those greenspace areas which provide stormwater management quality and quantity benefits;

Localities in the State of Georgia are required to comply with a number of both State and Federal laws, regulations and permits which require a locality to address the impacts of post-development stormwater runoff quality and nonpoint source pollution;

Therefore, the City of Alpharetta has established this set of stormwater management policies to provide reasonable guidance for the regulation of post-development stormwater runoff for the purpose of protecting local water resources from degradation. It has determined that it is in the public interest to regulate post-development stormwater runoff discharges in order to control and minimize increases in stormwater runoff rates and volumes, post-construction soil erosion and sedimentation, stream channel erosion, and nonpoint source pollution associated with post-development stormwater runoff.

B. *Purpose and Intent.* The purpose of this ordinance is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased post-development stormwater runoff and nonpoint source pollution associated with new development and redevelopment. It has been determined that proper management of post-development stormwater runoff will minimize damage to public and private property and infrastructure, safeguard the public health, safety, environment and general welfare of the public, and protect water and aquatic resources. This ordinance seeks to meet that purpose through the following objectives:

1. Establish decision-making processes surrounding land development activities that protect the integrity of the watershed and preserve the health of water resources;
2. Require that new development and redevelopment maintain the pre-development hydrologic response in their post-development state as nearly as practicable in order to reduce flooding, streambank erosion, nonpoint source pollution and increases in stream temperature, and maintain the integrity of stream channels and aquatic habitats; to meet this purpose, where practicable, the use of on-site runoff reduction measures is encouraged, including but not limited to preservation of existing natural areas; bioretention areas; permeable pavement for parking; vegetated swales; cisterns; greenroofs; and underground detention.
3. Establish minimum post-development stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality;
4. Establish design and application criteria for the construction and use of structural stormwater control facilities that can be used to meet the minimum post-development stormwater management standards;

5. Encourage the use of nonstructural stormwater management and stormwater better site design practices, such as the preservation of greenspace and other conservation areas, to the maximum extent practicable. Coordinate site design plans, which include greenspace, with the City's greenspace protection plan;
6. Establish provisions for the long-term responsibility for and maintenance of structural stormwater control facilities and nonstructural stormwater management practices to ensure that they continue to function as designed, are maintained, and pose no threat to public safety; and,
7. Establish administrative procedures for the submission, review, approval and disapproval of stormwater management plans, and for the inspection of approved active projects, and long-term follow up.

C. *Applicability.*

1. This ordinance shall be applicable to all land development, including, but not limited to, site plan applications, subdivision applications, and grading applications, unless exempt pursuant to Subsection b below. These standards apply to any new development or redevelopment site that meets one or more of the following criteria:
 - a. ~~New development that involves the creation of 5,000 square feet or more of impervious cover, or that involves other land development activities of one (1) acre or more;~~Runoff reduction and water quality shall be required for any new or redevelopment that includes the creation of 1,000 square feet of impervious area or more. Detention (including channel protection) shall be required for any new or redevelopment with an increase of 5,000 square feet of impervious area or more. The extent to which runoff reduction /water quality and detention must be provided (i.e. on new impervious area only, on disturbed area, or on entire site) is based on a tiered approach, and is specified in the City Stormwater Design Manual;
 - b. ~~Development or redevelopment that involves land development activities of one acre or more~~Redevelopment that includes the creation or addition of 5,000 square feet or more of impervious cover, or that involves other land development activity of one (1) acre or more;
 - c. Any new development or redevelopment, regardless of size, that is defined by the City Engineer or designee to be a hotspot land use; or,
 - d. Land development activities that are smaller than the minimum applicability criteria set forth in items ~~a-and-b~~ above if such activities are part of a larger common plan of development, even though multiple, separate and distinct land development activities may take place at different times on different schedules.
2. The following activities are exempt from this ordinance:
 - a. Individual 'For-Sale' dwelling or duplex residential lots that are not part of a subdivision or phased development project;
 - b. Additions or modifications to existing 'For-Sale' dwelling or duplex residential structures;
 - c. Agricultural or silvicultural land management activities within areas zoned for these activities; and,
 - d. Repairs to any stormwater management facility or practice deemed necessary by the City Engineer.

- D. *Stormwater Management Manual.* The City of Alpharetta will utilize the policy, criteria and information including technical specifications and standards in the latest edition of the Georgia Stormwater Management Manual and the City of Alpharetta Stormwater Management Design Manual, for the proper implementation of the requirements of this ordinance. The ~~Engineering~~Public Works Department has developed a City Stormwater Management Design Manual to assist in the design and evaluation of stormwater management facilities and practices. The manual may be updated and expanded periodically, based on improvements in science, engineering, monitoring and

local maintenance experience. However, the failure to update the manual shall not relieve any applicant from the obligation to comply with the requirements of this ordinance, and shall not prevent the City Engineer from imposing the most current and effective practices. The manual may establish design standards for new development and redevelopment that includes the creation of less than 5,000 square feet of impervious cover or involves land development activity of less than one (1) acre.

E. *Effective Date.* This Ordinance shall become effective immediately upon adoption.

3.3.2 Definitions.

Accidental Discharge. A discharge prohibited by this ordinance which occurs by chance and without planning or thought prior to occurrence.

Agriculture Use. The establishment, cultivation, or harvesting of products of the field or orchard; the preparation and planting of pasture land; farm ponds; and the construction of farm buildings.

Applicant. A person submitting a post-development stormwater management application and plan for approval.

Best Management Practices or "BMPs". A wide range of management procedures, activities, and prohibitions on practices which control the quality and/or quantity of stormwater runoff and which are compatible with the planned land use.

Buffer. With respect to a stream, a natural or enhanced vegetated area, lying adjacent to the stream.

Channel. A natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.

City of Alpharetta Separate Storm Sewer System. Any facility designed or used for collecting and/or conveying stormwater, including but not limited to any roads with drainage systems, highways, City streets, curbs, gutters, inlets, catch basins, piped storm drains, pumping facilities, structural stormwater controls, ditches, swales, natural and man-made or altered drainage channels, reservoirs, and other drainage structures, and which is State Waters or is: Owned or maintained by the City of Alpharetta; Not a combined sewer; and Not part of a publicly-owned treatment works.

Clean Water Act. The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), and any subsequent amendments thereto.

Conservation Easement. An agreement between a land owner and the City of Alpharetta or other government agency or land trust that permanently protects open space or greenspace on the owner's land by limiting the amount and type of development that can take place, but continues to leave the remainder of the fee interest in private ownership.

Construction Activity. Activities subject to the Georgia Erosion and Sedimentation Control Act or NPDES General Construction Permits. These include construction projects resulting in land disturbance. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

Detention. The temporary storage of stormwater runoff in a stormwater management facility for the purpose of controlling the peak discharge.

Detention Facility. A detention basin or structure designed for the detention of stormwater runoff and gradual release of stored water at controlled rates.

Developer. A person who undertakes land development activities.

Development. A land development or land development project.

Discharge. The release of treated or untreated water to the stormwater system.

Drainage Easement. An easement appurtenant or attached to a tract or parcel of land allowing the owner of adjacent tracts or other persons to discharge stormwater runoff onto the tract or parcel of land subject to the drainage easement.

Easement. An acquired legal right for a specific use of land owned by others.

Erosion and Sedimentation Control Plan. A plan that is designed to minimize the accelerated erosion and sediment runoff at a site during land disturbance activities.

Extended Detention. The detention of stormwater runoff for an extended period, typically 24 hours or greater.

Extreme Flood Protection. Measures taken to prevent adverse impacts from large low-frequency storm events with a return frequency of 100 years or more.

Flood or Flooding. A volume of surface water that is too great to be confined within the banks or walls of a conveyance or stream channel and that overflows onto adjacent lands; or a general and temporary condition of partial or complete inundation of normally dry land areas from: the overflow of inland or tidal waters; or the unusual and rapid accumulation or runoff of surface waters from any source.

Floodplain. Any land area susceptible to flooding, which would have at least a one percent probability of flooding occurrence in any calendar year based on the basin being fully developed as shown on the current land use plan; i.e., the regulatory flood.

Greenspace or Open Space. Permanently protected areas of the site that are preserved in a natural state.

Hotspot. An area where the use of the land has the potential to generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

Hydrologic Soil Group (HSG). A Natural Resource Conservation Service classification system in which soils are categorized into four runoff potential groups. The groups range from group A soils, with high permeability and little runoff produced, to group D soils, which have low permeability rates and produce much more runoff.

Illegal Connection. Either of the following:

Any pipe, open channel, drain or conveyance, whether on the surface or subsurface, which allows an illicit discharge to enter the storm drain system including but not limited to any conveyances which allow any non-stormwater discharge including sewage, process wastewater, and wash water to enter the storm drain system, regardless of whether such pipe, open channel, drain or conveyance has been previously allowed, permitted, or approved by an authorized enforcement agency; or

Any pipe, open channel, drain or conveyance connected to the City of Alpharetta separate storm sewer system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

Illicit Discharge. Any direct or indirect non-stormwater discharge to the City of Alpharetta separate storm sewer system, except as exempted in Section 3.3.9.C. of this ordinance.

Impervious Cover. A surface composed of any material that significantly impedes or prevents the natural infiltration of water into soil. Impervious surfaces include, but are not limited to, rooftops, buildings, streets and roads, and any concrete or asphalt surface. Streets, parking areas, sidewalks, and other surfaces constructed with pervious paving and green roofs shall not be considered impervious cover for the purposes of this Section if it is a stormwater management practice with a recorded long-term maintenance agreement.

Industrial Activity. Activities subject to NPDES Industrial Permits as defined in 40 CFR, Section 122.26 (b)(14).

Industrial Stormwater Permit. A National Pollutant Discharge Elimination System (NPDES) permit issued to an industry or group of industries which regulates the pollutant levels associated with industrial stormwater discharges or specifies on-site pollution control strategies.

Infiltration. The process of percolating stormwater runoff into the subsoil.

Inspection and Maintenance Agreement. A written agreement providing for the long-term inspection and maintenance of stormwater management facilities and practices on a site or with respect to a land development project, which when properly recorded in the deed records constitutes a restriction on the title to a site or other land involved in a land development project.

Jurisdictional Wetland. An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

Land Development. Any land change, including, but not limited to, clearing, digging, grubbing, stripping, removal of vegetation, dredging, grading, excavating, transporting and filling of land, construction, paving, and any other installation of impervious cover.

Land Development Activities. Those actions or activities which comprise, facilitate or result in land development.

Land Development Project. A discrete land development undertaking.

Land Disturbance. Any land or vegetation change, including, but not limited to, clearing, grubbing, stripping, removal of vegetation, dredging, grading, excavating, transporting and filling of land, that do not involve construction, paving or any other installation of impervious cover.

Land Disturbance Activity. Those actions or activities which comprise, facilitate or result in land disturbance.

Maintenance. Any action necessary to preserve stormwater management facilities in proper working condition, in order to serve the intended purposes set forth in this Ordinance and to prevent structural failure of such facilities.

National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit. A permit issued by the Georgia EPD under authority delegated pursuant to 33 USC § 1342(b) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

New Development. A land development activity on a previously undeveloped site.

Non-perennial Stream. Any stream that is not classified as a perennial stream or that the City Engineer determines to be falsely classified as a perennial stream, beginning at: The location of a spring, seep, or groundwater outflow that sustains streamflow; or a point in the stream channel with a drainage area of 25 acres or more; or where evidence indicates the presence of a stream in a drainage area of other than 25 acres, the City of Alpharetta may require field studies to verify the existence of a stream.

Nonpoint Source Pollution. A form of water pollution that does not originate from a discrete point such as a sewage treatment plant or industrial discharge, but involves the transport of pollutants such as sediment, fertilizers, pesticides, heavy metals, oil, grease, bacteria, organic materials and other contaminants from land to surface water and groundwater via mechanisms such as precipitation, stormwater runoff, and leaching. Nonpoint source pollution is a by-product of land use practices such as agricultural, silvicultural, mining, construction, subsurface disposal and urban runoff sources.

Non-Stormwater Discharge. Any discharge to the storm drain system that is not composed entirely of stormwater.

Nonstructural Stormwater Management Practice or Nonstructural Practice. Any natural or planted vegetation or other nonstructural component of the stormwater management plan that provides for or enhances stormwater quantity and/or quality control or other stormwater management benefits, and includes, but is not limited to, riparian buffers, open and greenspace areas, overland flow filtration areas, natural depressions, and vegetated channels.

Off-Site Facility. A stormwater management facility located outside the boundaries of the site.

On-Site Facility. A stormwater management facility located within the boundaries of the site.

Overbank Flood Protection. Measures taken to prevent an increase in the frequency and magnitude of out-of-bank flooding (i.e. flow events that exceed the capacity of the channel and enter the floodplain), and that are intended to protect downstream properties from flooding for the 2-year through 25-year frequency storm events.

Owner. The legal or beneficial owner of a site, including but not limited to, a mortgagee or vendee in possession, receiver, executor, trustee, lessee or other person, firm or corporation in control of the site.

Parcel. Any plot, lot or acreage shown as a unit on the latest county tax assessment records.

Perennial Stream. Means any stream which is designated and shown as a permanent stream on the 7.5-minute quadrangle maps of the U.S. Geological Survey, plus any stream which the Mayor and City Council may determine to be, and designate as, a flowing stream.

Permit. The permit issued by the City of Alpharetta to the applicant which is required for undertaking any land development activity.

Person. Except to the extent exempted from this ordinance, any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, city, county or other political subdivision of the State, any interstate body or any other legal entity.

Pollutant. Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; petroleum hydrocarbons; automotive fluids; cooking grease; detergents (biodegradable or otherwise); degreasers; chemicals; steam cleaning or laundry wastes; heated water; chlorinated water or chlorine (except as exempted above); non-hazardous liquid and solid wastes and yard wastes; bark and other fibrous material; refuse, rubbish, garbage, litter, or other discarded or abandoned objects and accumulations, so that same may cause or contribute to pollution; animal carcasses; silt; acids or alkalis; recreational vehicle wastes; dyes (without prior permission of the Department); floatables; pesticides, herbicides, and fertilizers; liquid and solid wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; concrete and cement; washing of fresh concrete for cleaning and/or finishing purposes or to expose aggregates; and noxious or offensive matter of any kind.

Pollution. The contamination or other alteration of any water's physical, chemical or biological properties by the addition of any constituent and includes but is not limited to, a change in temperature, taste, color, turbidity, or odor of such waters, or the discharge of any liquid, gaseous, solid, radioactive, or other substance into any such waters as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety, welfare, or environment, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

Post-development. The time period, or the conditions that may reasonably be expected or anticipated to exist, after completion of the land development activity on a site as the context may require.

Pre-development. The time period, or the conditions that exist, on a site prior to the commencement of a land development project and at the time that plans for the land development of a site are approved by the plan approving authority. Where phased development or plan approval occurs (preliminary grading, roads and utilities, etc.), the existing conditions at the time prior to the first item being approved or permitted shall establish pre-development conditions.

Premises. Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

Private. Property or facilities owned by individuals, corporations, and other organizations and not by city, state, or federal government.

Project. A land development project.

Protection Area, or Stream Protection Area. With respect to a stream, the combined areas of all required buffers and setbacks applicable to such stream.

Redevelopment. A land development project on a previously developed site, but excludes ordinary maintenance activities, remodeling of existing buildings, resurfacing of paved areas, and exterior changes or improvements which do not materially increase or concentrate stormwater runoff, or cause additional nonpoint source pollution.

Regional Stormwater Management Facility or Regional Facility. Stormwater management facilities designed to control stormwater runoff from multiple properties, where the owners or developers of the individual properties may assist in the financing of the facility, and the requirement for on-site controls is either eliminated or reduced.

Riparian. Belonging or related to the bank of a river, stream, lake, pond or impoundment.

Runoff. Stormwater runoff.

Runoff Reduction Measures. Preservation of an area's landscape features (vegetation, soils, and natural processes) that help manage and reduce stormwater runoff from a development or redevelopment site. Runoff reduction measures also include structurally engineered practices (such as bioretention areas, bioswales, pervious paving, greenroofs, greenwalls, stormwater street trees, and cisterns) that mimic natural processes to manage stormwater as close to its source as possible and reduce stormwater runoff from the site. In addition to stormwater management, runoff reduction measures can enhance site aesthetics, improve air quality, reduce urban heat island impacts, provide shading, create wildlife habitat, reduce energy consumption, reduce infrastructure costs, and increase property values.

Setback. With respect to a stream, the area extending beyond any buffer applicable to the stream.

Site. The parcel of land being developed, or the portion thereof on which the land development project is located.

State Waters. Any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, and other bodies of surface and subsurface water, natural or artificial, lying within or forming a part of the boundaries of the State of Georgia which are not entirely confined and retained completely upon the property of a single person.

Stormwater Better Site Design. Nonstructural site design approaches and techniques that can reduce a site's impact on the watershed and can provide for nonstructural stormwater management. Stormwater better site design includes conserving and protecting natural areas and greenspace, reducing impervious cover and using natural features for stormwater management.

Stormwater Management. The collection, conveyance, storage, treatment and disposal of stormwater runoff in a manner intended to prevent increased flood damage, streambank channel erosion, habitat degradation and water quality degradation, and to enhance and promote the public health, safety and general welfare.

Stormwater Management Facility. Any infrastructure that controls or conveys stormwater runoff.

Stormwater Management Manual. The most recent update of the City of Alpharetta Stormwater Management Design Manual, combined with the latest edition of the Georgia Stormwater Management Manual.

Stormwater Management Measure. Any stormwater management facility or nonstructural stormwater practice.

Stormwater Management Plan. A document describing how existing runoff characteristics will be affected by a land development project and containing measures for complying with the provisions of this ordinance.

Stormwater Management System. The entire set of structural and nonstructural stormwater management facilities and practices that are used to capture, convey and control the quantity and quality of the stormwater runoff from a site.

Stormwater Retrofit. A stormwater management practice designed for a currently developed site that previously had either no stormwater management practice in place or a practice inadequate to meet the stormwater management requirements of the site.

Stormwater Runoff or Stormwater. Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Stream Bank. The sloping land that contains the stream channel and the normal flows of the stream.

Stream Channel. The portion of a watercourse that contains the base flow of the stream.

Structural Stormwater Control. A structural stormwater management facility or device that controls stormwater runoff and changes the characteristics of that runoff including, but not limited to, the quantity and quality, the period of release or the velocity of flow of such runoff.

Subdivision. The division of a tract or parcel of land resulting in one or more new lots or building sites for the purpose, whether immediately or in the future, of sale, other transfer of ownership or land development, and includes divisions of land resulting from or made in connection with the layout or development of a new street or roadway or a change in an existing street or roadway.

Variance. The modification of the minimum stormwater management requirements for specific circumstances where strict adherence of the requirements would result in unnecessary hardship and not fulfill the intent of this Ordinance.

Watershed. The land area that drains into a particular stream.

3.3.3 Permit procedures and requirements.

- A. *Permit Application Requirements.* No owner or developer shall perform any land development activities without first meeting the requirements of this ordinance prior to commencing the proposed activity.

Unless specifically exempted by this ordinance, any owner or developer proposing a land development activity shall submit to the City of Alpharetta a permit application on a form provided by the Community Development Department for that purpose.

Unless otherwise exempted by this ordinance, a permit application shall be accompanied by the following items in order to be considered:

1. Stormwater preliminary plan and consultation meeting certification in accordance with Section 3.3.3.B.;
 2. Stormwater management plan in accordance with Section 3.3.3.C.;
 3. Inspection and maintenance agreement in accordance with Section 3.3.3.D., if applicable;
 4. Performance bond in accordance with Section 3.3.3.E., if applicable; and,
 5. Permit application and plan review fees in accordance with Section 3.3.3.F.
- B. *Stormwater Preliminary Plan and Consultation Meeting.* Before any stormwater management permit application is submitted, the land owner or developer shall meet with the City Engineer for a consultation meeting on a preliminary plan for the post-development stormwater management system to be utilized in the proposed land development project. This consultation meeting shall take place at the time of the preliminary plat of subdivision or other early step in the development process. The purpose of this meeting is to discuss the post-development stormwater management measures necessary for the proposed project, as well as to discuss and assess constraints, opportunities and potential ideas for stormwater management designs before the formal site design engineering is commenced.

To accomplish this goal the following information shall be included in the preliminary plan:

Existing conditions and proposed site layout sketch plans, which illustrate at a minimum: existing topography; location of floodplain/floodway boundaries; wetland delineations; lakes and ponds; perennial and non-perennial streams; stream buffers and setbacks; mapping of predominant soils from soil surveys (when available); boundaries of existing predominant vegetation; forest cover; locations of specimen trees; zoning buffers; location of existing and proposed roads and other impervious surfaces; preliminary

selection and location of proposed structural stormwater controls; location of existing and proposed conveyance systems such as grass channels, swales, and storm drains; flow paths; relationship of site to upstream and downstream properties and drainages; and preliminary location of proposed stream channel modifications, such as bridge or culvert crossings. Particular attention should be paid to environmentally sensitive features that provide particular opportunities or constraints for development.

Local watershed plans, the City greenspace protection plan (if applicable), and any relevant resource protection plans will be consulted in the discussion of the preliminary plan.

- C. *Stormwater Management Plan Requirements.* The stormwater management plan shall detail how post-development stormwater runoff will be controlled or managed and how the proposed project will meet the requirements of this ordinance, including the performance criteria set forth in Section 3.3.4 below.

This plan shall be in accordance with the criteria established in this Section and must be submitted with the stamp and signature of a Professional Engineer (PE) licensed in the state of Georgia, who must verify that the design of all stormwater management facilities and practices meet the submittal requirements outlined in the submittal checklist(s) found in the Stormwater Management Manual.

The stormwater management plan must ensure that the requirements and criteria in this ordinance are being complied with and that opportunities are being taken to minimize adverse post-development stormwater runoff impacts from the development. The plan shall consist of maps, narrative, and supporting design calculations (hydrologic and hydraulic) for the proposed stormwater management system. The plan shall include all of the information required in the Stormwater Management Site Plan checklist found in the Stormwater Management Manual. This includes:

1. Common address and legal description of site.
2. Vicinity Map.
3. Existing Conditions Hydrologic Analysis. The existing conditions hydrologic analysis for stormwater runoff rates, volumes, and velocities, which shall include: a topographic map of existing site conditions with the drainage basin boundaries indicated; acreage, soil types and land cover of areas for each subbasin affected by the project; all perennial and intermittent streams and other surface water features; all existing stormwater conveyances and structural control facilities; direction of flow and exits from the site; analysis of runoff provided by off-site areas upstream of the project site; and methodologies, assumptions, site parameters and supporting design calculations used in analyzing the existing conditions site hydrology. For redevelopment sites, predevelopment conditions shall be modeled using the established guidelines for the portion of the site undergoing land development activities. The redevelopment guidelines, including how the predevelopment conditions will be modeled for redevelopment sites, will be established in the stormwater management manual.
4. Post-Development Hydrologic Analysis. The post-development hydrologic analysis for stormwater runoff rates, volumes, and velocities, which shall include: a topographic map of developed site conditions with the post-development drainage basin boundaries indicated; total area of post-development impervious surfaces and other land cover areas for each subbasin affected by the project; pervious paved surfaces such as parking areas, sidewalks, and streets, and green roof areas shall be noted and included in #5. below, Stormwater Management System; calculations for determining the runoff volumes that need to be addressed for each subbasin for the development project to meet the post-development stormwater management performance criteria in Section 3.3.4; location and boundaries of proposed natural feature protection and conservation areas; documentation and calculations for any applicable site design credits that are being utilized; methodologies, assumptions, site parameters and supporting design calculations used in analyzing the existing conditions site hydrology. If the land development activity on a redevelopment site of 1-acre or more of disturbance constitutes more than 50 percent of the site area for the entire site, then the runoff reduction performance criteria-standard in Section 3.3.4 must be met for the stormwater runoff from the entire site, at today's standard. The existing conditions hydrologic analysis can take into account the existing

development when defining curve numbers and calculating existing runoff, except where a downstream property is negatively impacted by the current conditions (i.e. currently flooding from the existing runoff). In that instance, a forested condition must be used when defining curve numbers and calculating pre-development runoff.-

5. Stormwater Management System. The description, scaled drawings and design calculations for the proposed post-development stormwater management system, which shall include: A map and/or drawing or sketch of the stormwater management facilities, including the location of nonstructural site design features and the placement of existing and proposed structural stormwater controls, including design water surface elevations, storage volumes available from zero to maximum head, location of inlet and outlets, location of bypass and discharge systems, and all orifice/restrictor sizes; a narrative describing how the selected structural stormwater controls will be appropriate and effective; cross-section and profile drawings and design details for each of the structural stormwater controls in the system, including supporting calculations to show that the facility is designed according to the applicable design criteria; a hydrologic and hydraulic analysis of the stormwater management system for all applicable design storms (including stage-storage or outlet rating curves, and inflow and outflow hydrographs); documentation and supporting calculations to show that the stormwater management system adequately meets the post-development stormwater management performance criteria in Section 3.3.4; drawings, design calculations, elevations and hydraulic grade lines for all existing and proposed stormwater conveyance elements including stormwater drains, pipes, culverts, catch basins, channels, swales and areas of overland flow; and where applicable, a narrative describing how the stormwater management system corresponds with any watershed protection plans and/or local greenspace protection plan.
6. Post-Development Downstream Analysis. A downstream peak flow analysis which includes the assumptions, results and supporting calculations to show safe passage of post-development design flows downstream. The analysis of downstream conditions in the report shall address each and every point or area along the project site's boundaries at which runoff will exit the property. The analysis shall focus on the portion of the drainage channel or watercourse immediately downstream from the project. This area shall extend downstream from the project to a point in the drainage basin where the project area is 10 percent of the total basin area. In calculating runoff volumes and discharge rates, consideration may need to be given to any planned future upstream land use changes. The analysis shall be in accordance with the Stormwater Management Manual.
7. Construction-Phase Erosion and Sedimentation Control Plan. An erosion and sedimentation control plan in accordance with Section 3.1.1 *Soil Erosion and Sedimentation Control* or the NPDES Permit for Construction Activities. The plan shall also include information on the sequence/phasing of construction and temporary stabilization measures and temporary structures that will be converted into permanent stormwater controls.
8. Landscaping and Open Space Plan. A detailed landscaping and vegetation plan describing the woody and herbaceous vegetation that will be used within and adjacent to stormwater management facilities and practices. The landscaping plan must also include: the arrangement of planted areas, natural and greenspace areas and other landscaped features on the site plan; information necessary to construct the landscaping elements shown on the plan drawings; descriptions and standards for the methods, materials and vegetation that are to be used in the construction; density of plantings; descriptions of the stabilization and management techniques used to establish vegetation; and a description of who will be responsible for ongoing maintenance of vegetation for the stormwater management facility and what practices will be employed to ensure that adequate vegetative cover is preserved.
9. Operations and Maintenance Plan. Detailed description of ongoing operations and maintenance procedures for stormwater management facilities and practices to ensure their continued function as designed and constructed or preserved. These plans will identify the parts or components of a stormwater management facility or practice that need to be regularly or periodically inspected and maintained, and the equipment and skills or training necessary. The

plan shall include an inspection and maintenance schedule, maintenance tasks, responsible parties for maintenance, funding, access and safety issues. Provisions for the periodic review and evaluation of the effectiveness of the maintenance program and the need for revisions or additional maintenance procedures shall be included in the plan.

10. **Maintenance Access Easements.** The applicant must ensure access from public right-of-way to stormwater management facilities and practices requiring regular maintenance at the site for the purpose of inspection and repair by securing all the maintenance access easements needed on a permanent basis. Such access shall be sufficient for all necessary equipment for maintenance activities. Upon final inspection and approval, a plat or document indicating that such easements exist shall be recorded and shall remain in effect even with the transfer of title of the property. The stormwater management manual establishes guidelines for easements and maintenance.
11. **Inspection and Maintenance Agreements.** Unless an on-site stormwater management facility or practice is dedicated to and accepted by the City of Alpharetta as provided in Section 3.3.3.D. below, the applicant must execute an easement and an inspection and maintenance agreement binding on all subsequent owners of land served by an on-site stormwater management facility or practice in accordance Section 3.3.3.D.
12. **Evidence of Acquisition of Applicable Local and Non-local Permits.** The applicant shall certify and provide documentation to the City Engineer that all other applicable environmental permits have been acquired for the site prior to approval of the stormwater management plan.

D. *Stormwater Management Inspection and Maintenance Agreements.*

1. General. Prior to the issuance of any permit for a land development activity requiring a stormwater management facility or practice hereunder and for which the City requires ongoing maintenance (as defined in the stormwater management manual), the applicant or owner of the site must, unless an on-site stormwater management facility or practice is dedicated to and accepted by the City, execute an inspection and maintenance agreement, and/or a conservation easement, if applicable, that shall be binding on all subsequent owners of the site.

The inspection and maintenance agreement, if applicable, must be approved by the City Engineer prior to plan approval, and recorded in the deed records upon final plat approval.

The inspection and maintenance agreement shall identify by name or official title the person(s) responsible for carrying out the inspection and maintenance. Responsibility for the operation and maintenance of the stormwater management facility or practice, unless assumed by a governmental agency, shall remain with the property owner and shall pass to any successor owner. If portions of the land are sold or otherwise transferred, legally binding arrangements shall be made to pass the inspection and maintenance responsibility to the appropriate successors in title. These arrangements shall designate for each portion of the site, the person to be permanently responsible for its inspection and maintenance.

As part of the inspection and maintenance agreement, a schedule shall be developed for when and how often routine inspection and maintenance will occur to ensure proper function of the stormwater management facility or practice. The agreement shall also include plans for annual inspections to ensure proper performance of the facility between scheduled maintenance and shall also include remedies for the default thereof.

In addition to enforcing the terms of the inspection and maintenance agreement, the City may also enforce all of the provisions for ongoing inspection and maintenance in Section 3.3.8 of this ordinance.

The City, in lieu of an inspection and maintenance agreement, may accept dedication of any existing or future stormwater management facility for maintenance, provided such facility meets all the requirements of this ordinance and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance. The City may refuse to accept dedication of any existing or future stormwater management facility if the

City Engineer determines that accepting the facility is not in the best interest of the City due to maintenance costs or other factors.

2. Special Operations and Maintenance Agreement for Homeowners' Associations or Other Associations

For all stormwater management practices required pursuant to this ordinance that are to be owned and maintained by a homeowners' association, property association, or similar entity, the required operations and maintenance agreement shall include all of the following provisions:

- a. Acknowledgement that operations and maintenance agreements run with the land and impose pro rata liability upon individual lot owners. The developer and association agree that the operations and maintenance agreement run with the land and shall be binding upon themselves, their respective successors and assigns, including individual lot owners within the Subdivision. Any liability imposed against an individual landowner shall be prorated in a per lot basis as determined by the fraction of lot(s) owned by the individual lot owner.
- b. The Developer, Association, their respective successors and assigns, including individual lot owners within the subdivision agree to regularly and routinely inspect, clean, and maintain the LID BMP, and otherwise keep in good repair, at their own cost and expense.
- c. The Developer, Association, their respective successors and assigns, including individual lot owners within the subdivision agree that they will reimburse the city for its cost and expenses incurred in the process of cleaning, maintaining, and/or repairing the BMPs pursuant to this agreement in the event the BMPs are failing and the city chooses to intervene.
- d. The Covenant of the Subdivision establishing the Association establishes that the Association is obligated to inspect, clean, maintain, and repair the BMPs; the Association has adopted the Operation and Maintenance Agreement as an obligation of the Association; and that a funding mechanism, such as an escrow account, is in place whereby individual lot owners within the subdivision pay a regular fee to the Association for the inspection, cleaning, maintenance, and repair of the stormwater management practice(s).
- e. Upon the initial sale of any lot within the Subdivision and prior to closing on such sale, the Developer shall give a copy of the Operation and Maintenance agreement to the potential buyer.

Both developer contribution and annual sinking funds shall fund the operations and maintenance escrow account. Prior to plat recordation, the developer shall pay into the escrow account an amount equal to 15 percent of the initial construction costs of the BMPs. A portion of the annual assessments of the association shall include an allocation into the escrow account. In the event the escrow account is not sufficient to fund ongoing maintenance or repayment of the City for emergency maintenance, the City may place a lien on the property.

- E. *Performance and Maintenance Bonds.* The Stormwater Management Manual may require performance and/or maintenance bonds for stormwater management facilities or practices and define the bond amounts.
- F. *Application Procedure.*
 1. Applications for land development permits shall be filed with the Community Development Department in accordance with Section 4.4.3 *Land Disturbance Permits*.
 2. Permit applications shall include the items set forth in Section 3.3.3.A. above (two copies of the stormwater management plan and the inspection maintenance agreement, if applicable, shall be included).

3. Upon a finding by the City Engineer that the permit application, stormwater management plan and inspection and maintenance agreement, if applicable, meet the requirements of this ordinance, the City Engineer will approve the plans. The land disturbance permit may then be issued by the Community Development Department, provided all other legal requirements for the issuance of such permit have been met.
4. Notwithstanding the issuance of the permit, in conducting the land development project, the applicant or other responsible person shall be subject to the following requirements:
 - a. The applicant shall comply with all applicable requirements of the approved plan and this ordinance and shall certify that all land clearing, construction, land development and drainage will be done according to the approved plan;
 - b. The land development project shall be conducted only within the area specified in the approved plan;
 - c. The City shall be allowed to conduct periodic inspections of the project;
 - d. No changes may be made to an approved plan without review and written approval by the City; and,
 - e. Upon completion of the project, the applicant or other responsible person shall submit the engineer's report and certificate and as-built plans required by Section 3.3.5.B.
- G. *Modifications for Off-Site Facilities.* The stormwater management plan for each land development project shall provide for stormwater management measures located on the site of the project, unless provisions are made to manage stormwater by an off-site or regional facility. The off-site or regional facility must be located on property legally dedicated for the purpose, must be designed and adequately sized to provide a level of stormwater quantity and quality control that is equal to or greater than that which would be afforded by on-site practices and there must be a legally-obligated entity responsible for long-term operation and maintenance of the off-site or regional stormwater facility. In addition, on-site measures shall be implemented, where necessary, to protect upstream and downstream properties and drainage channels from the site to the off-site facility.

A stormwater management plan must be submitted to the City Engineer which shows the adequacy of the off-site or regional facility.

To be eligible for a modification, the applicant must demonstrate to the satisfaction of the City Engineer that the use of an off-site or regional facility will not result in the following impacts to upstream or downstream areas:

1. Increased threat of flood damage to public health, life, and property;
2. Deterioration of existing culverts, bridges, dams, and other structures;
3. Accelerated streambank or streambed erosion or siltation;
4. Degradation of in-stream biological functions or habitat; or
5. Water quality impairment in violation of State water quality standards, and/or violation of any state or federal regulations.

H. *Deed Recordation and Indications on Plat.* The approval of the permit shall require an enforceable restriction on property usage that runs with the land, such as plat, easements, recorded deed restrictions or protective covenants, to ensure that future development and redevelopment maintains the site consistent with the approved project plans. The location of all designated natural area for a site shall be recorded at the County Register of Deeds Office as "undisturbed natural area". Designated protected stream buffer boundaries must be specified on all surveys and recorded plats. The applicable maintenance agreement pertaining to every structural BMP shall be referenced on the final plat and shall be recorded with the County Register of Deeds Office upon final plat approval, and shall be provided to the Directors of Public Works and Community Development within 14 days following receipt of the recorded document.

I. *Fee-In-Lieu.* The purpose of the fee-in-lieu program is to allow parcels being redeveloped to reduce on-site stormwater management requirements by paying a fee to the City. For re-development projects, the owner or designee of the proposed development site shall have the option of paying an in-lieu fee to the City which will be used by the City to construct stormwater improvement measures off-site. All of the required detention (including channel protection) must be met onsite. A minimum of 75% of the runoff reduction/water quality treatment must be provided on-site. The remainder of the runoff reduction/water quality treatment may be met by a fee-in-lieu payment. The owner must demonstrate no increased downstream negative impacts where there are incised streambank conditions. Fee-in-Lieu funds will be applied to the construction of stormwater improvement projects in the same HUC-12 watershed. Program qualifications and details are provided in the Stormwater Management Manual.

3.3.4 Post-development stormwater management performance criteria.

The following performance criteria shall be applicable to all stormwater management plans, unless otherwise provided for in this ordinance: Where practicable, the use of on-site runoff reduction measures is encouraged in meeting these criteria in conjunction with traditional stormwater management measures and/or off-site mitigation.

- A. *Water Quality.* All stormwater runoff generated from a site shall be adequately treated before discharge. It will be presumed that a stormwater management system complies with this requirement if:
 - 1. It is sized to treat the prescribed water quality treatment volume from the site, as defined in the Georgia Stormwater Management Manual;
 - 2. Appropriate structural stormwater controls or nonstructural practices are selected, designed, constructed or preserved, and maintained according to the specific criteria in the Georgia Stormwater Management Manual; and,
 - 3. Runoff from hotspot land uses and activities identified by the ~~Engineering~~/Public Works Department are adequately treated and addressed through the use of appropriate structural stormwater controls, nonstructural practices and pollution prevention practices.
- B. *Stream Channel Protection.* Protection of stream channels from bank and bed erosion and degradation shall be provided by using all of the following three approaches:
 - 1. Preservation, restoration and/or reforestation (with native vegetation) of the applicable stream buffer;
 - 2. 24-hour extended detention storage of the 1-year, 24-hour return frequency storm event, this requirement may be adjusted or waived by the City Engineer for sites that discharge directly into larger streams, rivers, wetlands, or lakes, or to a man-made channel or conveyance system where the reduction in these flows will not have an impact on upstream or downstream streambank or channel integrity;
 - 3. Erosion prevention measures such as energy dissipation and velocity control.
- C. *Overbank Flooding Protection.* Downstream overbank flood and property protection shall be provided by controlling (attenuating) the post-development peak discharge rate to the pre-development rate for the 25-year, 24-hour return frequency storm event. If control of the 1-year, 24-hour storm under Section 3.3.4.B. is exempted, then peak discharge rate attenuation of the 2-year through the 25-year return frequency storm event must be provided. This requirement may be adjusted or waived by the City Engineer for sites where the post-development downstream analysis shows that uncontrolled post-development conditions will not increase downstream peak flows, or that meeting the requirement will cause greater peak flow downstream impacts than the uncontrolled post-development conditions.
- D. *Extreme Flooding Protection.* Extreme flood and public safety protection shall be provided by controlling and safely conveying the 100-year, 24-hour return frequency storm event such that

flooding is not exacerbated. This requirement may be adjusted or waived by the City Engineer for sites where the post-development downstream analysis shows that uncontrolled post-development conditions will not increase downstream peak flows, or that meeting the requirement will cause greater peak flow downstream impacts than the uncontrolled post-development conditions.

- E. *Structural Stormwater Controls.* All structural stormwater management facilities shall be selected and designed using the appropriate criteria from the Georgia Stormwater Management Manual. All structural stormwater controls must be designed appropriately to meet their intended function. For other structural stormwater controls not included in the Georgia Stormwater Management Manual, or for which pollutant removal rates have not been provided, the effectiveness and pollutant removal of the structural control must be documented through prior studies, literature reviews, or other means and receive approval from City Engineer before being included in the design of a stormwater management system. In addition, if hydrologic or topographic conditions, or land use activities warrant greater control than that provided by the minimum control requirements, the City Engineer may impose additional requirements deemed necessary to protect upstream and downstream properties and aquatic resources from damage due to increased volume, frequency, and rate of stormwater runoff or increased nonpoint source pollution loads created on the site in question.

Applicants shall consult the Georgia Stormwater Management Manual for guidance on the factors that determine site design feasibility when selecting and locating a structural stormwater control.

- F. *Stormwater Credits for Nonstructural Measures.* The use of one or more site design measures by the applicant may allow for a reduction in the water quality treatment volume required under Section 3.3.4.A. The applicant may, if approved by the City Engineer, take credit for the use of stormwater better site design practices and reduce the water quality volume requirement. For each potential credit, there is a minimum set of criteria and requirements which identify the conditions or circumstances under which the credit may be applied. The site design practices that qualify for this credit and the criteria and procedures for applying and calculating the credits are included in the Georgia Stormwater Management Manual.
- G. *Drainage System Guidelines.* Stormwater conveyance facilities, which may include but are not limited to culverts, stormwater drainage pipes, catch basins, drop inlets, junction boxes, headwalls, gutters, swales, channels, ditches, and energy dissipaters shall be provided when necessary for the protection of public right-of-way and private properties adjoining project sites and/or public rights-of-way. Stormwater conveyance facilities that are designed to carry runoff from more than one parcel, existing or proposed, shall meet the following requirements:
1. Methods to calculate stormwater flows shall be in accordance with the Stormwater Management Manual;
 2. All culverts, pipe systems and open channel flow systems shall be sized in accordance with the stormwater management plan using the methods included in the Stormwater Management Manual; and,
 3. Design and construction of stormwater conveyance facilities shall be in accordance with the criteria and specifications found in the Stormwater Management Manual.
- H. *Dam Design Guidelines.* Any land-disturbing activity that involves a site which proposes a dam shall comply with the Georgia Safe Dams Act and Rules for Dam Safety as applicable.
- I. *Runoff Reduction.* Runoff reduction practices shall be sized and designed to retain the first 1.0 inch of rainfall on the site to the maximum extent practicable. If the entire 1.0 inch of rainfall can be retained onsite using runoff reduction methods, the City may waive the water quality volume. If the entire 1.0 inch runoff reduction standard cannot be achieved, the remaining runoff from the 1.2-inch rainfall event must be treated by BMPs to remove at least 80% of the calculated average annual post-development TSS loading from the site per the Water Quality criteria.

3.3.5 Construction inspections of post-development stormwater management system.

- A. *Inspections to Ensure Plan Compliance During Construction.* Periodic inspections of the stormwater management system construction shall be conducted by ~~the City staff of the Engineering/Public Works Department~~ or conducted and certified by a professional engineer who has been approved by the ~~Engineering/Public Works Department~~City. Construction inspections shall utilize the approved stormwater management plan for establishing compliance.

All inspections shall be documented with written reports that contain the following information:

1. The date and location of the inspection;
2. Whether construction is in compliance with the approved stormwater management plan;
3. Variations from the approved construction specifications; and,
4. Any other variations or violations of the conditions of the approved stormwater management plan.

If any violations are found, the applicant shall be notified in writing of the nature of the violation and the required corrective actions.

- B. *Final Inspection and As Built Plans.* Upon completion of a project, and before a certificate of occupancy shall be granted, the applicant is responsible for certifying that the completed project is in accordance with the approved stormwater management plan. All applicants are required to submit actual "as built" plans for any stormwater management facilities or practices after final construction is completed. The plan must show the final design specifications for all stormwater management facilities and practices and must be certified by a Professional Engineer. A final inspection by the ~~Engineering/Public Works Department~~City is required before the release of any performance securities can occur.

3.3.6 Stream buffer protection.

- A. *Findings and Purposes.*

1. *Findings.* Whereas, the ~~Engineering~~/Public Works Department of City of Alpharetta finds that buffers adjacent to streams provide numerous benefits including:
 - a. Protecting, restoring and maintaining the chemical, physical and biological integrity of streams and their water resources.
 - b. Removing pollutants delivered in urban stormwater.
 - c. Reducing erosion and controlling sedimentation.
 - d. Protecting and stabilizing stream banks.
 - e. Providing for infiltration of stormwater runoff.
 - f. Maintaining base flow of streams.
 - g. Contributing organic matter that is a source of food and energy for the aquatic ecosystem.
 - h. Providing tree canopy to shade streams and promote desirable aquatic habitat.
 - i. Providing riparian wildlife habitat.
 - j. Furnishing scenic value and recreational opportunity.
 - k. Providing opportunities for the protection and restoration of greenspace.
2. *Purposes.* The purpose of this Ordinance is to protect the public health, safety, environment and general welfare; to minimize public and private losses due to erosion, siltation and water pollution; and to maintain stream water quality by provisions designed to:

- a. Create buffer zones along the streams of the City for the protection of water resources; and,
 - b. Minimize land development within such buffers by establishing buffer zone requirements and by requiring authorization for any such activities.
- B. *Applicability.* This ordinance shall apply to all land development activity on property containing a stream protection area. These requirements are in addition to, and do not replace or supersede, any other applicable buffer requirements established under state law and approval or exemption from these requirements do not constitute approval or exemption from buffer requirements established under state law or from other applicable local, state or federal regulations.
 - 1. *Grandfather Provisions.* This ordinance shall not apply to the following activities:
 - a. Work consisting of the repair or maintenance of any lawful use of land that is zoned and approved for such use on or before the effective date of this ordinance.
 - b. Existing development and on-going land disturbance activities including but not limited to existing agriculture, silviculture, landscaping, gardening and lawn maintenance, except that new development or land disturbance activities on such properties will be subject to all applicable buffer requirements.
 - c. Any land development activity that is under construction, fully approved for development, scheduled for permit approval or has been submitted for approval as of the effective date of this ordinance.
 - d. Land development activity that has not been submitted for approval, but that is part of a larger master development plan, such as for an office park or other phased development that has been previously approved within two years of the effective date of this ordinance.
 - e. Grandfathering provisions only apply to Section 3.3.6 Stream Buffer Protection.
 - 2. *Exemptions.* The following specific activities are exempt from this ordinance. After the effective date of this ordinance, it shall apply to new subdividing and platting activities. Any land development activity within a buffer established hereunder or any impervious cover within a setback established hereunder is prohibited unless a variance is granted pursuant to Section C below. Exemption of these activities does not constitute an exemption for any other activity proposed on a property.
 - a. Activities for the purpose of building one of the following:
 - (1) A stream crossing by a driveway, transportation route or utility line;
 - (2) Public water supply intake or public wastewater outfall structures;
 - (3) Intrusions necessary to provide access to a property;
 - (4) Public access facilities that must be on the water including boat ramps, docks, foot trails leading directly to the river, fishing platforms and overlooks;
 - (5) Unpaved foot trails and paths;
 - (6) Activities to restore and enhance stream bank stability, vegetation, water quality and/or aquatic habitat, so long as native vegetation and bioengineering techniques are used;
 - (7) The City of Alpharetta Greenway system.
 - b. Public sewer line easements paralleling the creek, except that all easements (permanent and construction) and land disturbance should be at least 25 feet from the top of the bank. This includes such impervious cover as is necessary for the operation and maintenance of the utility, including but not limited to manholes, vents and valve structures. This exemption shall not be construed as allowing the construction of roads, bike paths or other

transportation routes in such easements, regardless of paving material, except for access for the uses specifically cited in Item a., above.

- c. Land development activities within a right-of-way existing at the time this ordinance takes effect or approved under the terms of this ordinance.
- d. Within an easement of any utility existing at the time this ordinance takes effect or approved under the terms of this ordinance, land disturbance activities and such impervious cover as is necessary for the operation and maintenance of the utility, including but not limited to manholes, vents and valve structures.
- e. Emergency work necessary to preserve life or property. However, when emergency work is performed under this Section, the person performing it shall report such work to the ~~Engineering~~ Public Works Department on the next business day after commencement of the work. Within ten (10) days thereafter, the person shall apply for a permit and perform such work within such time period as may be determined by the City Engineer to be reasonably necessary to correct any impairment such emergency work may have caused to the water conveyance capacity, stability or water quality of the protection area.
- f. Forestry and silviculture activities on land that is zoned for forestry, silvicultural or agricultural uses and are not incidental to other land development activity. If such activity results in land disturbance in the buffer that would otherwise be prohibited, then no other land-disturbing activity other than normal forest management practices will be allowed on the entire property for three years after the end of the activities that intruded on the buffer.

C. *Land Development Requirements.*

1. *Buffer and Setback Requirements.* All land development activity subject to this ordinance shall meet the following requirements:
 - a. An undisturbed natural vegetative buffer shall be maintained for 50 feet, measured horizontally, on both banks (as applicable) of a non-perennial stream as measured from the top of the stream bank. An additional setback shall be maintained for 25 feet, measured horizontally, beyond the undisturbed natural vegetative buffer, in which all impervious cover shall be prohibited. Grading, filling and earthmoving shall be minimized within the setback.
 - b. An undisturbed natural vegetative buffer shall be maintained for 100 feet, measured horizontally, on both banks (as applicable) of a perennial stream as measured from the top of the stream bank. An additional setback shall be maintained for 50 feet, measured horizontally, beyond the undisturbed natural vegetative buffer, in which all impervious cover shall be prohibited. Grading, filling and earthmoving shall be minimized within the setback. If approved by the City Engineer, the buffer requirement may be achieved by maintaining an average of width of 100 feet and a minimum distance of 50 feet from each side of the stream as measured horizontally from the top of the stream bank. If approved by the City Engineer, the setback may be achieved by restricting the construction of any impervious surface within an average setback of 150 feet on each side of the stream and a minimum distance of 75 feet as measured horizontally from the top of the stream bank. No averaging shall be allowed on the following:
 - (1) Big Creek.
 - (2) Foe Killer Creek.
 - (3) Any perennial stream within a seven (7) mile radius upstream of the Roswell water supply intake protected pursuant to Section 3.3.12.
 - c. No septic tanks or septic tank drain fields shall be permitted within the buffer or the setback.

3.3.8 Ongoing inspection and maintenance of stormwater facilities and practices.

- A. *Long-Term Maintenance Inspection of Stormwater Facilities and Practices.* Stormwater management facilities and practices included in a stormwater management plan which are subject to an inspection and maintenance agreement must undergo ongoing inspections to document maintenance and repair needs and ensure compliance with the requirements of the agreement, the plan and this ordinance.

A stormwater management facility or practice shall be inspected on a periodic basis by the responsible person in accordance with the approved inspection and maintenance agreement. In the event that the stormwater management facility has not been maintained and/or becomes a danger to public safety or public health, the City Engineer shall notify the person responsible for carrying out the maintenance plan by registered or certified mail to the person specified in the inspection and maintenance agreement. The notice shall specify the measures needed to comply with the agreement and the plan and shall specify the time within which such measures shall be completed. If the responsible person fails or refuses to meet the requirements of the inspection and maintenance agreement, the ~~Engineering~~Public Works Department may correct the violation as provided in Subsection D hereof.

Inspection programs by the ~~Engineering~~Public Works Department may be established on any reasonable basis, including but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in stormwater management facilities; and evaluating the condition of stormwater management facilities and practices.

- B. *Right-of-Entry for Inspection.* The terms of the inspection and maintenance agreement shall provide for representatives of the City to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. This includes the right to enter a property when it has a reasonable basis to believe that a violation of this ordinance is occurring or has occurred and to enter when necessary for abatement of a public nuisance or correction of a violation of this ordinance.
- C. *Records of Maintenance Activities.* Parties responsible for the operation and maintenance of a stormwater management facility shall provide records of all maintenance and repairs to the ~~Engineering~~Public Works Department.
- D. *Failure to Maintain.* If a responsible person fails or refuses to meet the requirements of the inspection and maintenance agreement, the ~~Engineering~~Public Works Department, after thirty (30) days written notice (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24 hours' notice shall be sufficient), may correct a violation of the design standards or maintenance requirements by performing the necessary work to place the facility or practice in proper working condition. The City may assess the owner(s) of the facility for the cost of repair work which shall be a lien on the property, and may be placed on the ad valorem tax bill for such property and collected in the ordinary manner for such taxes.
- E. *Maintenance Responsibility.* For all existing and new development the following maintenance responsibilities shall apply:
1. Any stormwater management facility which services individual subdivisions shall be privately owned with routine maintenance provided for by the owner(s). In subdivisions with an established homeowners association, the homeowners association shall be responsible for routine maintenance. The owner shall maintain a perpetual, non-exclusive easement which allows for access for inspection and other maintenance.
 2. Any stormwater management facility which services an individual subdivision in which the facility is within designated open areas or an amenity with an established homeowners association shall be privately owned and maintained. The owner shall maintain a perpetual, non-exclusive easement which allows for access for inspection and emergency maintenance.

3. Any stormwater management facility which services commercial and industrial development shall be privately owned and maintained. The City shall reserve the right, but not the duty to enter the premises for emergency repairs.
4. All other stormwater management facilities, including regional stormwater detention, shall be publicly owned and/or maintained only if accepted for maintenance by the City.
5. The director may require dedication of privately owned stormwater facilities, which discharge to the City's stormwater system, to the City.
6. Drainage easements where a subdivision is traversed by a water course, drainage way, natural stream or channel off the street right-of-way shall be clearly defined on the plat and deed of the individual property owner for the purpose of maintaining the free flow of water. The owner shall be required to keep the easement free of obstructions and will maintain same in such a way as to assure free and maximum flow at all times.

3.3.9 Illegal connection.

A. Findings. It is hereby determined that:

Discharges to the City of Alpharetta's separate storm sewer system that are not composed entirely of stormwater runoff contribute to increased nonpoint source pollution and degradation of receiving waters;

These non-stormwater discharges occur due to spills, dumping and improper connections to the City's separate storm sewer system from residential, industrial, commercial or institutional establishments.

These non-stormwater discharges not only impact waterways individually, but geographically dispersed, small volume non-stormwater discharges can have cumulative impacts on receiving waters.

The impacts of these discharges adversely affect public health and safety, drinking water supplies, recreation, fish and other aquatic life, property values and other uses of lands and waters;

These impacts can be minimized through the regulation of spills, dumping and discharges into the City's separate storm sewer system;

Localities in the State of Georgia are required to comply with a number of State and Federal laws, regulations and permits which require a locality to address the impacts of stormwater runoff quality and nonpoint source pollution due to improper non-stormwater discharges to the City's separate storm sewer system;

Therefore, the City of Alpharetta adopts this ordinance to prohibit such non-stormwater discharges to the City's separate storm sewer system. It is determined that the regulation of spills, improper dumping and discharges to the City's separate storm sewer system is in the public interest and will prevent threats to public health and safety, and the environment.

B. Purpose and Intent. The purpose of this ordinance is to protect the public health, safety, environment and general welfare through the regulation of non-stormwater discharges to the City's separate storm sewer system to the maximum extent practicable as required by Federal law. This ordinance establishes methods for controlling the introduction of pollutants into the City's separate storm sewer system in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this ordinance are to:

1. Regulate the contribution of pollutants to the City's separate storm sewer system by any person;
2. Prohibit illicit discharges and illegal connections to the City's separate storm sewer system;
3. Prevent non-stormwater discharges, generated as a result of spills, inappropriate dumping or disposal, to the City's separate storm sewer system; and,
4. To establish legal authority to carry out all inspection, surveillance, monitoring and enforcement procedures necessary to ensure compliance with this ordinance;
5. No variances shall be granted to illicit discharge or illegal connection.

- C. *Prohibition of Illicit Discharges.* No person shall throw, drain, run, or otherwise discharge, cause, or allow others under its control to throw, drain, or otherwise discharge into any component of the City of Alpharetta separate storm sewer system, or to cause permit or suffer to be thrown, drained, run, or allow to seep or otherwise discharge, into such system, any pollutants or waters containing any pollutants, other than stormwater.
1. The following discharges are exempt from the prohibition provision above:
 - a. Water line flushing performed by a government agency, other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, natural riparian habitat or wetland flows, and any other water source not containing pollutants;
 - b. Discharges or flows from firefighting, and other discharges specified in writing by the City of Alpharetta as being necessary to protect public health and safety;
 - c. The prohibition provision above shall not apply to any non-stormwater discharge permitted under an NPDES permit or order issued to the discharger and administered under the authority of the State and the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval from the City Engineer has been granted for any discharge to the City's separate storm sewer system.
- D. *Prohibition of Illegal Connections.* The construction, connection, use, maintenance or continued existence of any illegal connection to the City's separate storm sewer system is prohibited.
1. This prohibition expressly includes, without limitation, illegal connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.
 2. A person violates this ordinance if the person connects a line conveying sewage to the City's separate storm sewer system, or allows such a connection to continue.
 3. The person responsible for any connection in violation of this Ordinance shall immediately cause the illegal connection to be disconnected and redirected, if necessary to Fulton County's sanitary sewer system upon approval by the Director of Fulton County' sanitary sewer department or an approved onsite wastewater management system. Such person shall provide the City Engineer with written confirmation that the connection has been disconnected, and, if necessary, redirected to Fulton County sanitary sewer.
 4. Any drain or conveyance that has not been documented in plans, maps or equivalent, and which may be connected to the storm sewer system, shall be located by the owner or occupant of that property upon receipt of written notice of violation from the City Engineer requiring that such locating be completed. Such notice will specify a reasonable time period within which the location of the drain or conveyance is to be completed, that the drain or conveyance be identified as storm sewer, sanitary sewer or other, and that the outfall location or point of connection to the storm sewer system, sanitary sewer system or other discharge point be identified. Results of these investigations are to be documented and provided to the City Engineer.
- E. *Industrial or Construction Activity Discharges.* Any person subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the City Engineer prior to allowing discharges to the City's separate storm sewer system.
- F. *Access and Inspection of Properties and Facilities.* Representatives of the City shall be permitted to enter and inspect properties and facilities at reasonable times as often as may be necessary to determine compliance with this ordinance.

1. If a property or facility has security measures in force which require proper identification and clearance before entry into its premises, the owner or operator shall make the necessary arrangements to allow access to representatives of the City.
 2. The owner or operator shall allow representatives of the City ready access to all parts of the premises for the purposes of inspection, sampling, photography, videotaping, examination and copying of any records that are required under the conditions of an NPDES permit to discharge stormwater.
 3. The City shall have the right to set up on any property or facility such devices as are necessary in the opinion of representatives of the City to conduct monitoring and/or sampling of flow discharges.
 4. The City may require the owner or operator to install monitoring equipment and perform monitoring as necessary, and make the monitoring data available to the ~~Engineering~~/Public Works Department. This sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the owner or operator at his/her own expense. All devices used to measure flow and quality shall be calibrated to ensure their accuracy.
 5. Any temporary or permanent obstruction to safe and easy access to the property or facility to be inspected and/or sampled shall be promptly removed by the owner or operator at the written or oral request of the City Engineer and shall not be replaced. The costs of clearing such access shall be borne by the owner or operator.
 6. Unreasonable delays in allowing representatives of the City access to a facility is a violation of this ordinance.
 7. If a representative of the City has been refused access to any part of the premises from which stormwater is discharged, and the representative of the City is able to demonstrate probable cause to believe that there may be a violation of this ordinance, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this ordinance or any order issued hereunder, or to protect the overall public health, safety, environment and welfare of the community, then the representative of the City may seek issuance of a search warrant from any court of competent jurisdiction.
- G. *Notification of Accidental Discharges and Spills.* Notwithstanding other requirements of law, as soon as any person responsible for a facility, activity or operation, or responsible for emergency response for a facility, activity or operation has information of any known or suspected release of pollutants or non-stormwater discharges from that facility or operation which are resulting or may result in illicit discharges or pollutants discharging into stormwater, the City's separate storm sewer system, State Waters, or Waters of the U.S., said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release so as to minimize the effects of the discharge.

Said person shall notify the ~~Engineering~~/Public Works Department by phone, facsimile, or in person within 24 hours of the nature, quantity and time of occurrence of the discharge. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the ~~Engineering~~/Public Works Department within three business days of the phone or in person notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years. Said person shall also take immediate steps to ensure no recurrence of the discharge or spill.

In the event of such a release of hazardous materials, emergency response agencies and/or other appropriate agencies shall be immediately notified.

Failure to provide notification of a release as provided above is a violation of this ordinance.

6. Permanent storm water infiltration basins shall not be constructed in areas having high pollution susceptibility.
- C. Exemptions.
 1. Any lot of record approved prior to the adoption of this ordinance is exempt from the minimum lot size requirements contained in [Article IV] Sections IV.B. and C. of this ordinance.
- D. Administration, plan review and permitting procedures are provided for in Section 4.4 of this Code.
 1. The following activities and developments are exempt from the requirement for detailed site plans:
 - a. Detached 'For-Sale' dwellings constructed within a subdivision of fewer than five parcels.
 - b. Repairs to a facility that is part of a previously approved and permitted development.
 - c. Construction of minor structures, such as sheds or additions to residences.

3.3.14 Violations, enforcement and penalties.

Any action or inaction which violates the provisions of this ordinance or the requirements of an approved stormwater management plan or permit, may be subject to the enforcement actions outlined in this Section. Any such action or inaction which is continuous with respect to time is deemed to be a public nuisance and may be abated by injunctive or other equitable relief.

It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this Ordinance. Any person who has violated or continues to violate the provisions of this ordinance, may be subject to the enforcement actions outlined in this Section or may be restrained by injunction or otherwise abated in a manner provided by law. The imposition of any of the penalties described below shall not prevent such equitable relief.

In the event the violation constitutes an immediate danger to public health or public safety, representatives of the City are authorized to enter upon the subject private property, without giving prior notice, to take any and all measures necessary to abate the violation and/or restore the property. The City is authorized to seek costs of the abatement as outlined in this Section.

- A. *Notice of Violation.* If the ~~Engineering/Public Works Department~~City determines that an applicant or other responsible person has failed to comply with the terms and conditions of a permit, an approved stormwater management plan or the provisions of this ordinance, it shall issue a written notice of violation to such applicant or other responsible person. Where a person is engaged in activity covered by this ordinance without having first secured a permit therefor, the notice of violation shall be served on the owner or the responsible person in charge of the activity being conducted on the site.
 1. The notice of violation shall contain:
 - a. The name and address of the owner or the applicant or the responsible person;
 - b. The address or other description of the site upon which the violation is occurring;
 - c. A statement specifying the nature of the violation;
 - d. A description of the remedial measures necessary to bring the action or inaction into compliance with the permit, the stormwater management plan or this ordinance and the date for the completion of such remedial action [the City Engineer shall provide a reasonable opportunity, of not less than ten days (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24 hours' notice shall be sufficient) to cure the violation];
 - e. A statement of the penalty or penalties that may be assessed against the person to whom the notice of violation is directed and the City's intended action; and

classifications as shown in the Comprehensive Land Use Plan, or Standard Drawings and Design Standards, as applicable, or as otherwise required by the City Council.

3.5.2 Street improvements ordinance.

- A. Minimum widths for new construction and the minimum standards for new or improved streets shall be in accordance with City Design Standards. In the absence of City Standards, all materials and methods of construction shall be in accordance with the current GDOT standard specifications.
- B. The minimum width of street right-of-way shall be dedicated based upon the street categories as shown in the Comprehensive Land Use Plan or Standard Drawings and as contained in this Ordinance.
- C. Additional street right-of-way width shall be required to be dedicated at intersections or other locations which the development activity abuts upon where deceleration lanes, turning lanes, storage lanes, medians, or realignments are required for traffic safety and minimum right-of-way standards would be inadequate to accommodate the improvements as determined by the City Engineer.
- D. All new streets proposed to be constructed in a subdivision or other property shall be designed and constructed to the standards contained in this Ordinance in accordance with the category of the said streets.
- E. Local streets shall be so designed that their use by through traffic will be discouraged. Collectors shall be to channel through traffic movements from local streets to arterial streets. Dead end streets designed to have one end permanently closed shall provide a cul-de-sac turnaround with a 50-foot minimum pavement radius and 60-foot right-of-way street be no more than 1,000 feet in length. Additional length necessitated by topography or property configuration may be approved by the Director.
- F. Street jogs shall either directly align or have offsets of a minimum of 125 feet for residential subdivision streets, a minimum of 200 feet for non-residential streets, and 600 ft. for major thoroughfares as measured between centerlines of said streets.
- G. Driveway curb cut locations shall be no closer than 300 feet on arterial and collector streets.
- H. Traffic calming design elements, such as intersection bulbouts can help moderate vehicle speeds on Local Roads. Multifunctional bulb-outs that include runoff reduction measures for stormwater management are encouraged if a minimum of 20 feet clear curb to curb and unimpacted drive lanes are provided. Narrower dimensions may be approved on a case-by-case basis. Designs for multifunctional bulbouts can be viewed in the City's Standard Details.

3.5.3 Traffic control devices and street lights.

- A. Street signs and traffic control devices for public streets shall be provided through payment of fees to the City Engineer for the installation thereof. Traffic control devices may also be installed by subcontractors after receiving written approval from the City Engineer.
- B. The installation of all street lighting fixtures within the City right-of-way must be approved by the City Engineer prior to such installation.

3.5.4 Curb and gutter.

- A. All new streets and project access improvements shall be provided with curb and gutter or an alternative curb system to accommodate runoff reduction measures. Alternative curb systems include flat curb, standard curb with openings, or other curb systems as approved by the Community Development Director. Details for standard curb and gutter and alternative curb systems can be viewed in the City of Alpharetta's Standard Details.
- B. Curbing and Gutter shall meet the requirements of the City of Alpharetta Standard Details. following specifications:

~~1. Residential:~~

~~a. Typical Section 6 × 24 × 12 (inches).~~

~~b. Concrete Class "B" with a minimum strength of 2,000 PSI @ 28 days.~~

~~2. Commercial/Industrial:~~

~~a. Typical Section 8 × 24 × 14 (inches).~~

~~b. Concrete Class "B" with a minimum strength of 2,000 PSI @ 28 days~~

~~3. Arterial/State Highways:~~

~~a. Typical Section 8 × 30 × 14 (inches).~~

~~b. Concrete Class "B" with a minimum strength of 2,000 PSI @ 28 days.~~

3.5.5 Sidewalks.

- A. Sidewalks shall be provided adjacent to all roadways unless waived as a condition of zoning and shall meet the design and location standards required in this Ordinance and Standard Drawings.
- B. Sidewalks shall be located 2 feet from the back of curb or as may be required by the Director or City Council.
- C. All new sidewalks shall match and provide a smooth transition to any existing sidewalks with no steps.
- D. Sidewalks shall be constructed of concrete and shall be a minimum of 5 feet in width and 4 inches thick. Control joints shall be provided every 10 feet. The use of permeable surfaces shall be permitted if designed in accordance with the most recent version of the GA Stormwater Management Design Manual. Permeable sidewalks shall require inspections and maintenance agreements per Sec. 3.3.3.D.
- E. Sidewalks which are provided as part of Georgia Department of Transportation (DOT) may be required to be built according to DOT standards.
- F. Outdoor dining furniture located on public sidewalks within the historic downtown shall be of quality design and workmanship and made of metal in black or a color approved by the Design Review Board. Decorative items placed on public sidewalks such as planters or sculpture shall be made of metal, concrete, terra cotta or other material approved by the Design Review Board. Menu boards may be made of wood; however, all plastic, fiberglass or resin-type products are prohibited on public sidewalks within the historic downtown.

3.5.6 Gated subdivisions/private streets.

- A. Whenever all of the ownership of all the land within a residential subdivision (dwelling, 'For- Sale', or dwelling, 'For-Rent') or along a street request that a street or streets be closed to through traffic, the City Council, in its discretion may declare the street(s) private and thereby restrict access on that street(s) subject to the following requirements:
 - 1. That a gate or guardhouse be established at the entrance to the private street.
 - 2. That a sign no greater than three square feet in size be posted at the entrance to identify the roadway as a private street.
 - 3. That provisions be made to ensure that access at the entrance to the private street is not restricted to law enforcement vehicles, emergency response vehicles, postal delivery vehicles, school buses and City personnel vehicles while conducting City business.
 - 4. That pedestrian access not be restricted.

5. That a private street agreement is executed and recorded which addresses provisions for a homeowners association, maintenance, utilities, easements, emergency access, liability and other issues associated with the long-term use and requirements of a private right-of-way.
 6. That plans and specifications for the proposed private street and gate or guardhouse meet all design and construction standards adopted by the City and administered through the Public Works and Community Development Engineering Departments.
 7. That the determination is made by the City that the proposed private street(s) is not a critical link in the roadway system which maintains traffic flow from one destination point to another.
 8. That the determination is made by the City that the subject subdivision or proposed private street do not include access to amenities or features which by design or agreement are intended for use by the general public.
- B. In reviewing a request for a gated subdivision or private street, the City Council may consider, but shall not be limited to, the following items:
1. Whether the proposed private street would create an undue burden on traffic, adjacent roadways, or substantially impair access rights of an adjacent property owner.
 2. The importance of the proposed private street relative to the area roadway network.
 3. Whether creating a private street would enhance the residential quality of the neighborhood.
 4. Whether a private street would adequately address "cut-through" traffic if the purpose of creating a private street is to prevent vehicles from traveling through the neighborhood to destinations outside the neighborhood.
- C. Requests for gated subdivisions and private streets shall be considered in accordance with the following procedures:
1. Twenty copies of an application in the form of a letter signed by all the property owners shall be submitted to the Community Development Department. The application shall identify a representative who shall act as applicant and the application shall also include twenty copies of all the necessary drawings, specifications and boundary surveys to describe the request.
 2. One copy of the application and accompanying material shall be submitted to the Engineering Department~~City~~ for review regarding compliance with adopted design and construction standards.
 3. Copies of the application materials and Engineering-Public Works Department comments will then be forwarded by the Community Development Department to the City Council for consideration at a public hearing.
 4. Prior to the public hearing, notice will be sent to the property owners within 500 feet of the proposed private street if the subject right-of-way is currently in use as a public street.
 5. If, after public hearing, the City Council approves the application for gated subdivision or private street, all recordable documents shall be amended to identify the gated subdivision or private street accordingly and a private street agreement (as indicated in subsection A.5., herein) shall be executed and recorded.
- D. Private streets shall be designed and built to City Standard for public streets.

SECTION 3.6 - INSTALLATION OF UTILITIES

- A. All improvements shall be located within the right-of-way of a public street or within an easement designated for such use. Within street rights-of-way, placement of the utilities shall conform to the specific locations designated for such use by Standard Drawings. New utilities shall be located underground.

Sec. 2.1. - Applicability.

2.1.1. Applicability.

- A. The requirements of this Article apply to all parcels within the Downtown Overlay unless expressly stated otherwise in this Article.
- B. The requirements of the Unified Development Code also apply in all Downtown Districts unless expressly stated otherwise in this Article.
- C. This Article does not change the permitted use or density of a property within the Downtown Overlay. Land and structures must be used in accordance with the standards of the underlying zoning district.
- D. This Article does change the permitted form and design of a property subject to the Downtown Overlay. When requirements of this Article conflict with any other requirement of the Unified Development Code or the Alpharetta Downtown Design Guidelines, the requirements of this Article shall prevail.
- E. When the word "street" is used in this Article it means both public and private streets unless stated otherwise.

Sec. 2.2. - Block and Access.

2.2.1. Intent.

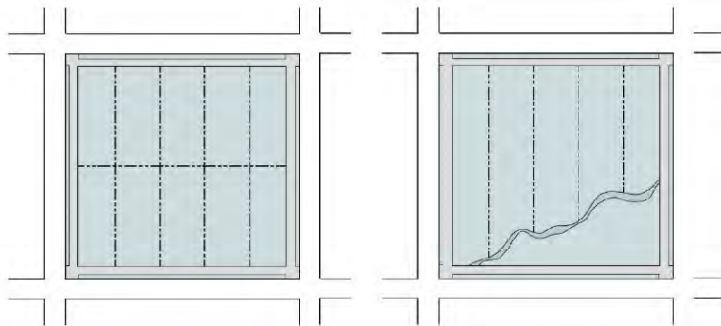
- A. The intent of the block and access standards is to provide a well-connected street network. Large blocks with limited connectivity discourage walking, contribute to street congestion, and add driving distance that can negatively impact emergency services. New streets should also be designed to consider the future development identified in the Alpharetta Downtown Master Plan.
- B. The intent of the access standards is to provide safe and convenient vehicular and pedestrian access within developments and between adjacent developments and to lessen traffic congestion and increase connectivity. Pedestrian, bike, and vehicular access should be safe, direct and convenient.

2.2.2. Blocks.

- A. Sites greater than 4 acres in size must incorporate existing or new streets that terminate at other existing or new streets to form an interconnected network with the maximum block perimeter lengths that follow:

	Block Perimeter (Max.)
Downtown Zoning Districts	
DT-C	1,600 feet
DT-MU	2,000 feet
DT-LW, DT-R	2,400 feet
Other Zoning Districts	

C-1, C-2, O-I, O-P	2,400 feet
CUP, R-8A, R-10A	2,400 feet
AG, R-12, R-15, SU, I-1	n/a
—	



- B. In addition to the block standards above, blocks containing exclusively 'For Sale' detached dwellings must be wide enough to provide two tiers of lots, except where fronting on arterial streets prevented by topographical conditions or size of the property, in which case the City Transportation Engineer may require and/or approve a single tier of lots.
- C. Other than stub-out streets, dead-end streets are not allowed unless a variance is granted for topographic hardship.
- D. Block Measurement.
1. A block is bounded by a public or private right-of-way (not including an alley). All public or private rights-of-way proposed as part of a development must be improved with a street.
 2. Block perimeter is measured along the edge of the property abutting the public or private right-of-way, except for the measurement of dead-end streets, which are measured from intersecting centerlines.
 3. The City Transportation Engineer may modify the block perimeter requirements when steep slopes in excess of 25%, preexisting development, tree protection areas, stream buffers, cemeteries, open space, or easements would make the provision of a complete block infeasible.
 4. Where the block pattern is interrupted by public parkland, including greenways, that is open and accessible to the public, pedestrian access points must be provided with a minimum spacing equal to half of the maximum block perimeter.
- E. No public or private street within the Downtown Overlay, including alleys, may be gated.
- Sec. 2.3. - Streets.

2.3.1. Intent.

- A. The intent of this Section is to provide a palette of street types and design elements that reflect the character of different areas within the Downtown Overlay as established in the Alpharetta Downtown Master Plan.
- B. The regulations provide adequate accommodations for vehicles, cyclists, and pedestrians.
- C. The street types defined in this Section provide a guide to balancing the needs of all modes of travel. Modifications to these types may be made by the City Transportation Engineer.
- D. The appropriate street type will be selected by the City Transportation Engineer based on the Roadway Plan in the Alpharetta Master Plan and engineering and land use context factors, including anticipated vehicle volumes.

2.3.2. Applicability.

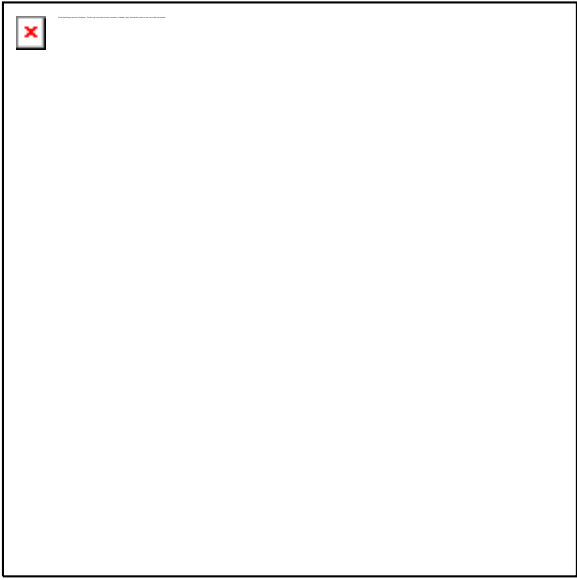
- A. When a development proposes the construction of a new public or private street, the requirements of this Section apply.
- B. When constructing a new street or reconstructing an existing street, sidewalks, bike lanes, curb and gutter or an alternative curb and gutter to accommodate GI/LID, and street trees must be installed and constructed in accordance with this Section and the City of Alpharetta Department of Engineering/Public Works Design Standards.
- C. Use of multi-functional stormwater BMPs is expressly allowed and encouraged in the ROW, including streetscape landscape bioretention areas and stormwater planters, stormwater street trees, curb bulbouts and medians with bioretention, and vegetated swales. Such stormwater BMPs may receive stormwater credit for the site if part of an approved stormwater management plan and with a long-term maintenance agreement.
- D. Traffic calming design elements, such as intersection bulbouts can help moderate vehicle speeds on Downtown Streets; multifunctional bulb-outs that include runoff reduction measures for stormwater management are encouraged. Landscaping and traffic calming techniques that are ideal on Downtown Streets include, but are not limited to, street trees with grated wells, bioretention areas/planters, curb bulbouts with bioretention.
- ~~GE~~. Existing streets may continue serving existing development in their current configuration; however, they must not be extended or substantially rebuilt except in conformance with this Section.

2.3.3. Street Types.

- A. All new or extended public or private streets must meet the following standards unless modified by the City Transportation Engineer for the following public purposes:
 - 1. To provide on- or off-street bicycle facilities;
 - 2. To provide wider sidewalks or planters;
 - 3. To provide a median, left turn lane, or combination therefore;
 - 4. To provide bulb-outs;
 - 5. To provide hardscape surface in otherwise landscaped planters in order to provide pedestrian access to adjacent on-street parking;
 - 6. To increase or decrease the travel lane width; and
 - 7. To provide traffic calming or pedestrian safety measures.

8.9 :To provide multi-use vegetated runoff reduction measures in street planter and as street tree areas.

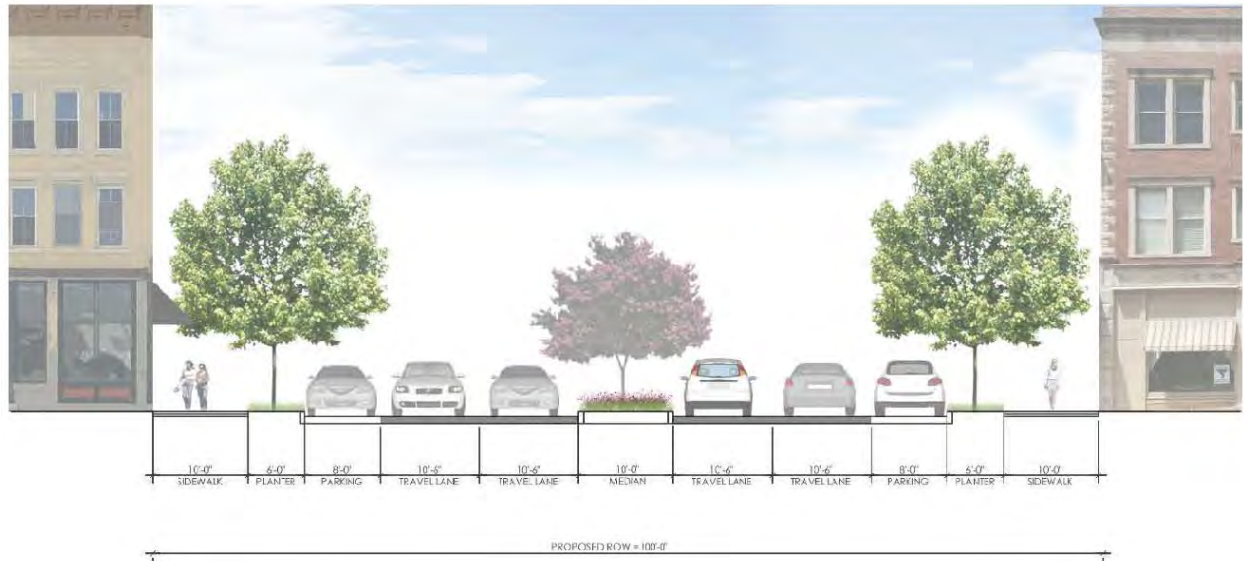
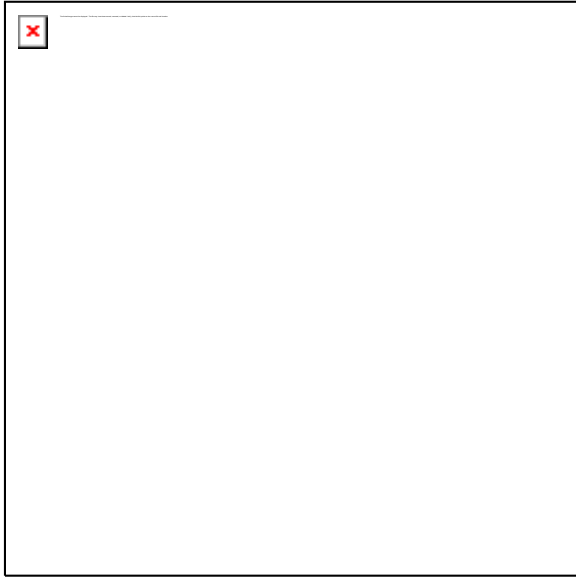
B. Arterial Street Residential.



Width

Right-of-way Width	60 feet
Face of curb to face of curb width	36 feet
Streetscape	
Sidewalk	6 feet
Planter	6 feet
Planter Tree Spacing (max.)	40 feet on-center
Planter Type	Landscaped
Travelway	
Parallel Parking	8 feet
Travel Lane	10 feet

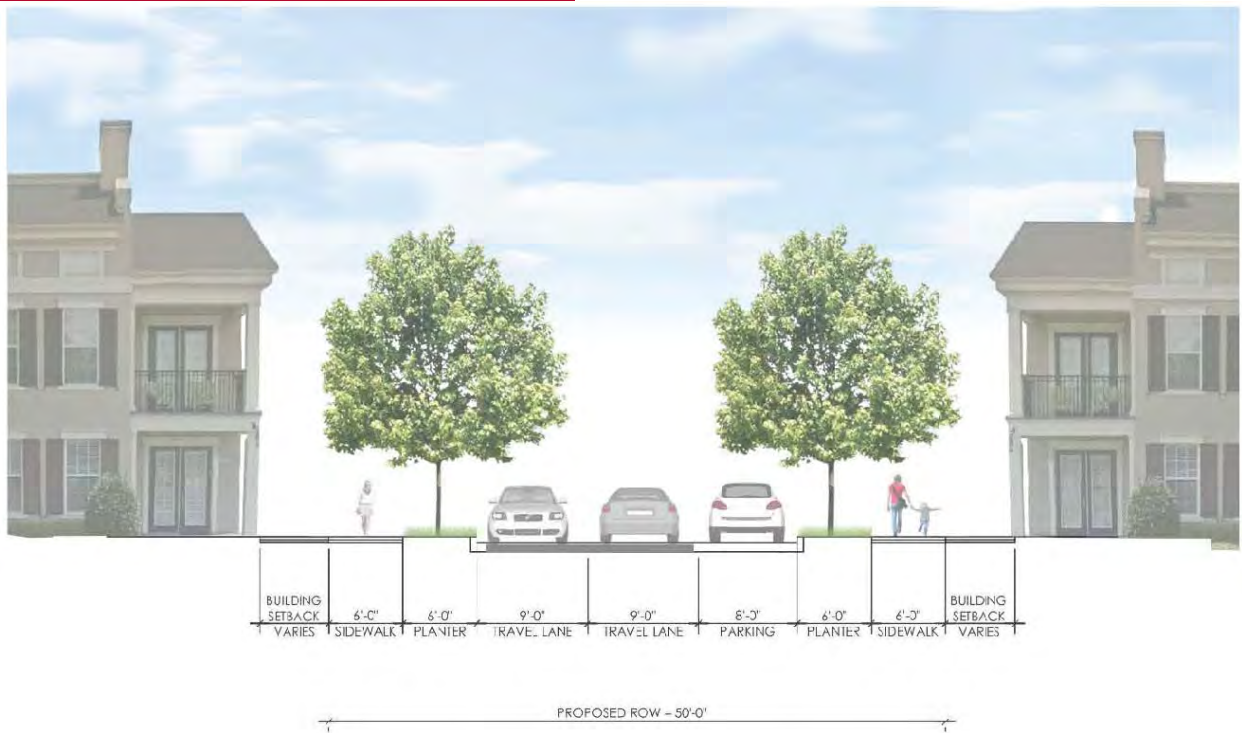
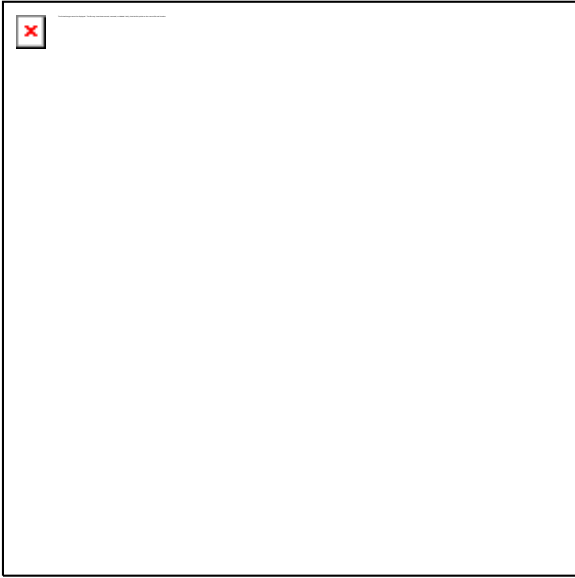
C. Arterial Street Commercial/Mixed-Use.



Width	
Right-of-way Width	100 feet
Face of curb to face of curb width	68 feet
>Streetscape	
Sidewalk	10 feet
Planter	6 feet

Planter Tree Spacing (max.)	40 feet on-center
Planter Type	Landscaped/Hardscaped*
Travelway	
Parallel Parking	8 feet
Travel Lane	10.5 feet
*Planter may be landscaped or hardscaped, but all trees shall be planted in a landscape area with a minimum size of 6 feet by 10 feet.	

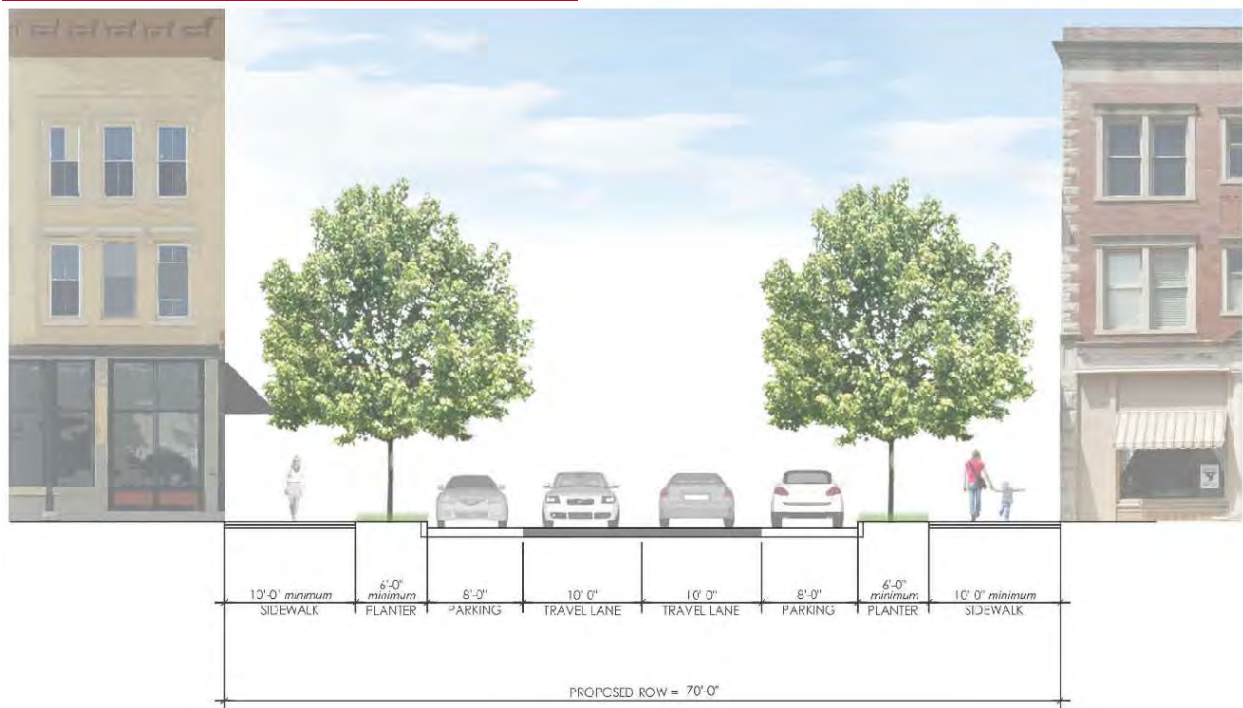
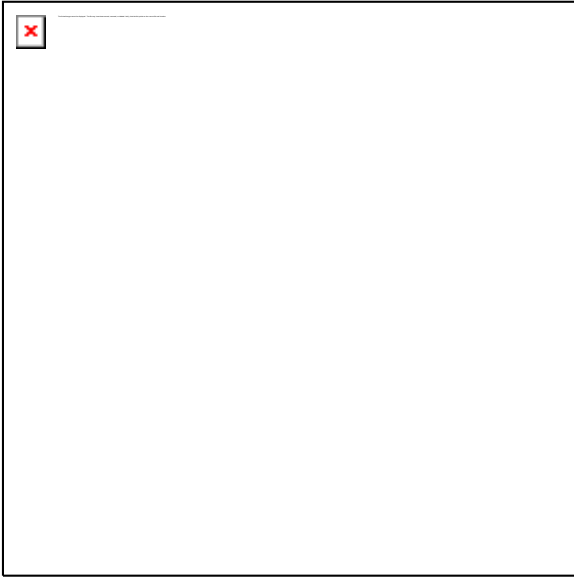
D. Collector Street Residential.



Width	
Right-of-way Width	50 feet
Face of curb to face of curb width	26 feet
Streetscape	

Sidewalk	6 feet
Planter	6 feet
Planter Tree Spacing (max.)	40 feet on-center
Planter Type	Landscaped
Travelway	
Parallel Parking	8 feet
Travel Lane	9 feet

E. Collector Street Commercial/Mixed-Use.



Width	
Right-of-way Width	70 feet
Face of curb to face of curb width	36 feet
Streetscape	

Sidewalk	Min. 10 feet
Planter	6 feet
Planter Tree Spacing (max.)	40 feet on-center
Planter Type	Landscaped/Hardscaped*
Travelway	
Parallel Parking	8 feet
Travel Lane	10 feet
*Planter may be landscaped or hardscaped, but all trees shall be planted in a landscape area with a minimum size of 6 feet by 10 feet.	

F. Green Street.



Width

Right-of-way Width	70 feet
Face of curb to face of curb width	36 feet
Streetscape	
Sidewalk	6 feet (one side) (see note 1)
Multi-use trail	12 feet (one side) (see note 1)
Planter	8 feet
Planter Tree Spacing (max.)	40 feet on-center
Planter Type	Bio-swale
Travelway	
Parallel Parking	8 feet
Travel Lane	10 feet
Note 1: The side of the street containing sidewalks and multi-use trails shall be as established by the City Transportation Engineer.	

G. Local Street Residential.



Width	
Right-of-way Width	60 feet
Face of curb to face of curb width	32 feet
Streetscape	
Sidewalk	8 feet
Planter	6 feet
Planter Tree Spacing (max.)	40 feet on-center
Planter Type	Landscaped
Travelway	
Parallel Parking	7 feet
Travel Lane	9 feet

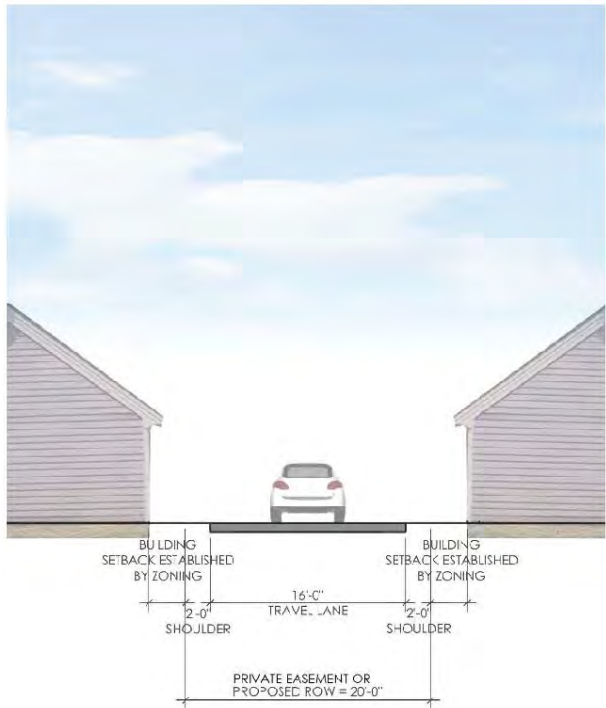
H. Local Street Commercial/Mixed-Use.



Width	
Right-of-way Width	70 feet
Face of curb to face of curb width	34 feet
Streetscape	
Sidewalk	Min. 10 feet
Planter	7 feet
Planter Tree Spacing (max.)	40 feet on-center
Planter Type	Landscaped/Hardscaped*
Travelway	
Parallel Parking	7 feet

Travel Lane	10 feet
*Planter may be landscaped or hardscaped, but all trees shall be planted in a landscape area with a minimum size of 6 feet by 10 feet.	

I. Residential Alley.



Width	
Right-of-way or Easement Width	20 feet
Paved Width	16 feet
Shoulder	2 feet
Travelway	
Parallel Parking	Not allowed

Travel Lane	16 feet
-------------	---------

J. Commercial/Mixed-Use Alley.



Width	
Right-of-way or Easement Width	20 feet
Paved Width	20 feet
Shoulder	0 feet
Travelway	
Parallel Parking	Not allowed
Travel Lane	10 feet

2.3.4. Existing Streets, Streetscapes.

- A. Applicability. A building or site may be renovated or repaired without meeting the requirements of this Section, provided any increase in gross floor area or improved site area does not exceed 25%.
- B. Exceptions. This does not apply as follows:
1. On a parcel zoned R-12 or R-15 when such parcel is located within a recorded subdivision that existed on the date of adoption of this ordinance and when no sidewalks currently exist adjacent to the parcel.
 2. 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.
- C. Streetscapes Required.
1. Existing streets, planters, and sidewalk that do not meet the width and planting standards of the Downtown Alpharetta Streetscape Table must be brought into compliance with the current standards prior to the issuance of Certificate of Occupancy.
 2. 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.
 3. Where an easement is provided to the City and a parcel is zoned a Downtown Zoning District, the back of the minimum required sidewalk (adjacent to the lot) may be considered the lot line for the purpose of establishing yards, may not be included in lot coverage calculations, and may not be counted in minimum lot size requirements for new lots.

Downtown Alpharetta Streetscape Table

Street Type and Parcel Zoning District (both must be met)		Planter	Sidewalk (see note 1)
Arterial (existing)	DT-C, DT-MU, C-1, C-2, O-I, OP, MU	6 feet	10 feet
Arterial (existing)	All other Zoning Districts	6 feet	6 feet
Collector (existing or proposed)	DT-C, DT-MU, C-1, C-2, O-I, OP, MU	6 feet	10 feet
Collector (existing or proposed)	All other Districts	6 feet	6 feet
Green (existing or proposed, includes Thompson Street)	DT-C, DT-MU, C-1, C-2, O-I, OP, MU	8 feet	10 feet

Green (existing or proposed)	All other Districts	8 feet	8 feet
Local (existing or proposed)	DT-C, DT-MU, C-1, C-2, O-I, OP, MU	6 feet	10 feet
Local (existing or proposed)	All other Districts	6 feet	8 feet

Note 1: Along at least one side of Thompson Street a 12-foot wide multi-use trail must be provided in lieu of the required sidewalk in accordance with the Downtown Master Plan. Such trail may be on the north or south side of the street, as determined by the City Transportation Engineer. The planter width may also be increased to allow the trail to run through existing or new open spaces.

4. Where a publically funded streetscape project using alternative planter standards was installed adjacent to a parcel after January 1, 2005, the planter standards of Downtown Alpharetta Streetscape Table do not apply.
5. -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, planting type and utility placement may be varied to accommodate runoff reduction measures.

2.3.5. Multi-Use Trails.

- A. Multi-use trails shall have an average width of 12 feet, but their width may be periodically reduced to 8 feet where topography, wetlands, stream buffers, existing buildings, existing trees, or other existing conditions render this requirement infeasible. The maximum length of this reduced width is 400 feet.
- B. A multi-use trail may be required instead of a sidewalk along any new or existing street when the location is identified for a multi-use trail in the Downtown Master Plan or other plan that has been adopted by the City of Alpharetta.



- C. Where a City of Alpharetta park or access easement held by the City of Alpharetta abuts a street subject to Section 2.3.5.A above, the multi-use trail may also be located in such park or easement.
- D. In approving a multi-use trail in lieu of a sidewalk, the City Transportation Engineer may reduce the planter width to a minimum width of 5 feet.

2.3.6. Improvements along State Highways.

- A. For any development that abuts a State highway or other right-of-way controlled by the State of Georgia, improvements to the roadway and the location and design of any street or driveway providing access from the State highway must comply with the standards and requirements of the Georgia Department of Transportation.
- B. An approved permit for proposed access or improvements is required by Georgia Department of Transportation and must be incorporated into the construction drawings for the project prior to the issuance of a Land Disturbance Permit.

2.3.7. Planter.

- A. Defined. A zone adjacent to the curb intended for planting street trees and the placement of street furniture including light poles, litter receptacles and similar items.
- B. Street trees shall be planted in the planter as follows:
 1. Where no overhead utilities exist, shade trees must be planted a maximum of 40 feet on center in the planter. Newly planted trees shall be a minimum of 3½ inches in caliper, and shall be limbed up to a minimum of 7 feet.

2. Where overhead utilities exist, one understory tree must be planted a maximum of 25 feet on center in the planter, subject to approval of the overhead utility provider and the City Arborist.
3. Trees shall have a minimum 6 feet by 10 feet pervious landscape planting area. Tree grates are not allowed unless the City Arborist determines that they will not negatively impact tree health.

Sec. 2.4. - Parking and Loading.

2.4.1. Vehicle Parking.

A. Every use must provide and maintain vehicular parking in accordance with the Vehicular Parking Requirements Table.

B. Vehicular Parking Requirements Table.

Use	Parking Space Ratio
Residential Activities	
Dwelling, 'For-Sale,' Attached	Min. 1 per bedroom (up to 2 bedrooms), plus 0.15 visitor space per unit
Dwelling, 'For-Sale,' Detached	Min. 1 per bedroom (up to 2 bedrooms), plus 0.15 visitor space per unit
Dwelling, 'For-Rent'	Min. 1 per bedroom (up to 2 bedrooms), plus 0.15 visitor space per unit
Bed & Breakfast	Min. 1 per guest bedroom
Hotel	Min. 1 space per guest room, plus 1 employee space per 20 guest rooms, plus 1 per 500 sf of convention rooms, conference rooms, ballrooms, restaurant and retail shops
Congregate Housing, Assisted Living Facility	Min. 1 per 2 sleeping rooms
Home-Elderly, Children, Nursing	Min. 1 per 2 sleeping rooms
Business Uses	
Bank, Savings & Loan, Mortgage Company	Min. 3 per 1,000 sf
Day Care Center	Min. 1 per 400 sf, plus stacking for 6 cars on the lot
Funeral Home (with no cemetery or	Min. 1 per 4 seats in chapel or parlor, plus sufficient space

mausoleum)	to park or store all company vehicles
Medical, dental and optical offices	Min. 3 per 1,000 sf
Professional and business offices not otherwise specifically enumerated	Min. 3 per 1,000 sf
Auto, truck and mobile home sales, outdoor equipment and machinery sales, commercial nurseries	Min. 3 per 1,000 sf of showroom, sales office or other conditioned space
Restaurant	Min. 1 per 500 sf
Retail businesses, not otherwise specifically enumerated	Min. 1 per 500 sf
Theaters, night clubs and other such places of public assembly	Min. 1 per 4 seats, plus 1 (employee space) per 10 seats
Service and repair establishments not otherwise specifically enumerated	Min. 3 per 1,000 sf, excluding storage
Service Station, Automotive	Min. 2 per fueling station, plus 1 per 250 sf of retail
Technology Centers/Data Processing Centers	Min. 1 per 500 sf of unmanned areas and min. 1 per 300 sf of manned areas
Wholesale/Industrial Uses	
Wholesaling and industrial uses including lumber, brick, coal, junk and supply yards	Min. 1 per 1,000 sf
Public and Semipublic Uses	
Hospital	Min. 1 per bed, plus 1 per 200 sf for outpatient treatment areas
Church, Synagogue, Other Place of Worship	Min. 1 per 2 seats in the principal assembly room
Places of assembly or indoor recreation	Min. 1 per 500 sf playing court, rink, playing field and

without fixed seats	spectator area, plus 1 per 200 sf of patron use areas
Schools, elementary and middle schools	Min. 1 per classroom and administrative office, plus 5 visitor spaces
Schools, senior high	Min. 1 per classroom and administrative office, plus 1 per 4 students (based on the design capacity of the school)
Other public building	Min. 1 per 300 sf

- C. Parking in the following locations may be used to satisfy the minimum requirements of the Vehicular Parking Requirements Table:
1. Off-street parking located on the same site or lot as the use it serves;
 2. On-street parking located adjacent to and on the same side of the street as the site or lot containing the use it serves; and
 3. Off-site parking within 500 feet of the use it serves (as measured along a pedestrian walkway from the door of the use the parking serves).
- D. Pervious paving materials are allowed as part of an approved stormwater management plan for the site. When a use provides more than 120% of the minimum number of spaces required by the Vehicular Parking Requirements Table, any additional spaces in a surface parking lot must be constructed of pervious paving materials. For the purpose of conforming to this requirement, any on-street spaces or off-street spaces in parking structures must be counted towards satisfying the minimum requirement.

E.—A parking study may be submitted to support a request for a proposed parking reduction. This study shall be reviewed by Community Development and must be approved prior to permitting.

2.4.2. Bicycle Parking.

- A. Facilities that provide or require 25 or more vehicle parking spaces must provide a minimum of 1 bicycle parking space, plus 1 space for each additional 25 provided vehicle parking spaces, provided that no site may have fewer than 3 spaces nor be required to exceed 30 bicycle spaces.
- B. Bicycle parking facilities must comply with the following provisions.
1. Each required bicycle parking space must be at least 2 feet by 6 feet. Where a bike can be locked on both sides of a bicycle rack without conflict, each side can be counted as a required space.
 2. Bicycle racks must be securely anchored, be easily usable with both U-locks and cable locks, and support a bicycle at 2 points of contact to prevent damage to the bicycle wheels and frame.
 3. Bicycle parking must be provided in a well-lit area.
 4. Spacing of the bicycle racks must provide clear and maneuverable access.

5. Bicycle parking may be placed within the public right-of-way, provided the encroachment is approved by the City Transportation Engineer.
6. Bicycle parking spaces must be as close as or closer than the nearest vehicle parking space (as measured along a pedestrian walkway from the door of the use the parking serves).

2.4.3. Driveways.

- A. Applicability. The following applies to driveways, including those serving alleys, but not to new streets in conformance with Section 2.3.3.
- B. Width. Unless approved by the City Transportation Engineer or required by the Georgia Department of Transportation along a State highway, the maximum width of curb cuts, not including flares or returns at the throat of the facility, for entrances, exits, service drives and similar facilities shall be 24 feet for two-way entrances and 12 feet for one-way entrances.
- C. Number. The maximum number of driveways allowed on a site shall not exceed an amount equal to one driveway for every 300 feet of total street frontage or fraction thereof. All parcels are permitted at least one driveway.
- D. Location. Driveways may not be located on an arterial street when access is available from a collector or local street.

2.4.4. Design of Parking Structures.

- A. When a parking structure fronts an arterial or collector street its ground story must have active uses (such as, but not limited to, residential, commercial, office or civic space) located between the parking structure and the closest adjacent street (not including an alley). Such active use shall have a minimum depth of 20 feet.
- B. Where upper stories of structured parking are adjacent to or visible from any street, they must be screened so that cars and ramps are not clearly visible from ground level view from the adjacent parcel or the adjacent street (not including an alley).
- C. Structured parking facades adjacent to or visible from any street must have the appearance of a horizontal storied building.

2.4.5. Loading.

- A. On-site loading space is not required.
- B. Loading areas must be located to the rear of buildings. Loading areas must not be placed between a building and the closest adjacent street.
- C. Screening. If a loading area is provided, it must meet the following.
 1. Where a loading dock designed for tractor-trailers is placed between a shared lot line or building and the closest adjacent street (not including an alley), the entire length of the loading area must be screened.
 2. Screening must consist of either:
 - a. An 8-foot high wall compatible with the principal building in terms of texture, quality, material and color; or
 - b. 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.

2.4.6. Vehicle Access and Parking Locations.

- A. No driveway or off-street parking lots may be located between a building and the closest street unless an intervening approved building type exists.
- B. Off-street parking for the following must be accessed from alleys:
 - 1. Townhouses on lots of any width.
 - 2. All other building types on lots less than 50 feet in width.
- C. Where a garage faces a street the garage must be recessed a minimum distance of 20 feet behind the front building façade.

Sec. 2.5. - Landscaping and Screening.

2.5.1. Applicability.

- A. New Construction. Any new building or site improvement must comply with the landscaping and screening requirements of this Section.
- B. Maintenance and Repair. An existing building or site may be repaired, maintained or modernized without providing additional landscaping or screening, provided there is no increase in gross floor area or improved site area.
- C. Additions.
 - 1. When an existing building, use or site is increased in gross floor area or improved site area by up to 25% cumulatively, landscaping and screening is required for the additional floor or site area only.
 - 2. When an existing building, use or site is increased in gross floor area or improved site area by more than 25% cumulatively, both the existing building, use or site and the additional floor or site area must conform to the landscaping and screening requirements of this Section.
- D. Change in Use. A change in use does not trigger the application of these requirements except when there is a specific use standard requiring landscaping or screening for the new use.

2.5.2. Yard Landscaping.

- A. Yards between a parking lot and a street must comply with Section 2.5.3.
- B. Yards greater than 5 feet in depth and located between a building and the closest adjacent sidewalk along a street must be landscaped with grass, trees, shrubs, hedges and other landscaping materials for their entire width, with the exception of areas used for:
 - 1. Front porches and stoops;
 - 2. Outdoor dining or display;
 - 3. Pedestrian walkways used to access a street-facing pedestrian entrance;
 - 4. Driveways used to access off-street parking; and
 - 5. Amenity space, where required by Article 3.
- C. Yards greater than 10 feet in depth must be planted with one tree for each 30 feet of street frontage or portion thereof.

D. -Vegetated runoff reduction measures shall be allowed in the designated yards, if properly designed to provide stormwater management and screening functions.

2.5.3. Parking Lot Landscape Strips.

- A. Applicability. All surface parking areas (of any size) abutting a street (not including an alley) must be screened using one of the following options.
- B. Landscape Strip with Shrubs. A minimum 10 feet wide landscape strip planted with a minimum of 10 shrubs per 35 linear feet of street frontage, excluding driveway openings. Shrubs shall be provided to screen paved areas and parking lots from the right-of-way. Shrubs shall be at least 2 feet tall at time of planting. They must be planted 2 rows deep, and provide a screen within 3 years of planting.
- C. Landscape Strip with Wall.
 - 1. A 2.5 feet high wall in a minimum 4-foot planting strip.
 - 2. Walls must be close to the parking lot in order to provide a minimum 2-foot landscaped area facing the street.
 - 3. Walls must be closed and be constructed of one or a combination of the following: decorative blocks; brick; stone; cast-stone; split-faced block; or stucco over standard concrete masonry blocks.
- D. Landscape Strip with Berm.
 - 1. An earth berm a minimum of 2.5 feet higher than the finished elevation of the parking area, planted with 5 shrubs for every 35 linear feet of street frontage, excluding driveway openings.
 - 2. The berm must contain a rounded crown suitable for planting, and a stabilized side slope of no greater than 3:1.
- E. Landscape Strip with Grade Change. A 6-foot landscaped strip with a minimum 3-foot grade drop from the street to the parking area, planted with a minimum of 5 shrubs for every 35 linear feet of street frontage, excluding driveway openings.
- F. Location. A required landscape strip must be located at the outer perimeter of the parking area and must be provided along the entire parking area abutting the street, excluding breaks for pedestrians, bicycles and driveways.
- G. Plant Material. Required shrubs must be a minimum of 2.5 feet in height at time of planting. 70% of the required amount of shrubs must be evergreen.

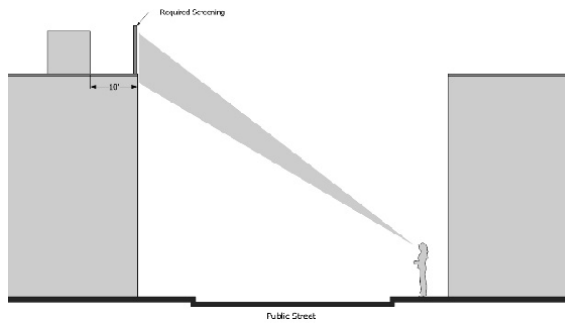
2.5.4. Screening.

- A. 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 by a wall a minimum 6 feet in height and on the 4th side by a solid gate at a minimum of 6 feet in height.
 - 3. The wall must be opaque and be constructed of one or a combination of the following: decorative blocks; brick; stone; cast-stone; split-faced block; or stucco over standard concrete masonry blocks.

4. The gate must be self-locking and maintained in good working order.

B. Roof-Mounted Equipment.

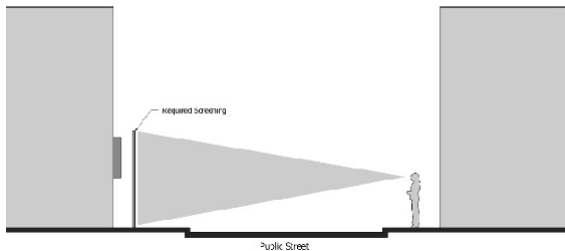
1. Roof-mounted equipment must be set back at least 10 feet from the edge of the roof and screened from ground level view from abutting parcel or abutting street (not including an alley).
2. New buildings must provide a parapet wall or other architectural element that is compatible with the principal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

C. Wall-Mounted Equipment.

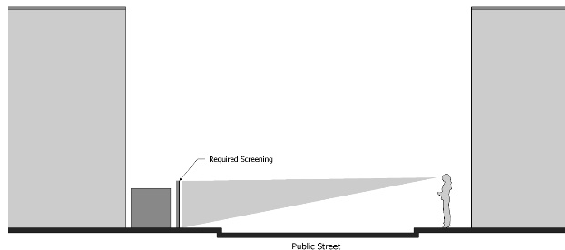
1. Wall-mounted equipment located on any surface that is visible from a street (not including an alley) must be fully screened by landscaping or an opaque wall or fence that is compatible with the principal building in terms of texture, quality, material, and color.



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

D. 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.

2.5.5. Design and Installation.

A. Plant Material.

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.
3. Tree height is measured from the top of the root ball to the tip of the main stem.
4. No artificial plants, trees, or other vegetation may be installed as required landscaping and screening.

2.5.6. Maintenance of Landscaping.

A. Responsibility. 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.

B. Soil Erosion.

1. All planting areas must be stabilized from soil erosion immediately upon planting and must be maintained for the duration of the use.
2. Grass areas must be sodded prior to the issuance of a Certificate of Occupancy. If grass seed must be used, it must be a variety that may be reasonably expected to produce full coverage of the area.

C. Pruning and Trimming.

1. All required landscaping must be allowed to reach its required size and must be maintained at no less than required size.
2. To prevent long-term harm to the health of required landscaping, all pruning of shrubs and trees must be done in accordance with the International Society of Arboriculture Standards entitled "ANSI A300 Standards."
3. "Topping," defined as removal of more than one-third of the leaves and branches of a tree, as measured from the lowest branch on the trunk of the tree to the top of the tree, is prohibited, except where necessary to maintain public overhead utilities.

Sec. 2.6. - Neighborhood Compatibility.

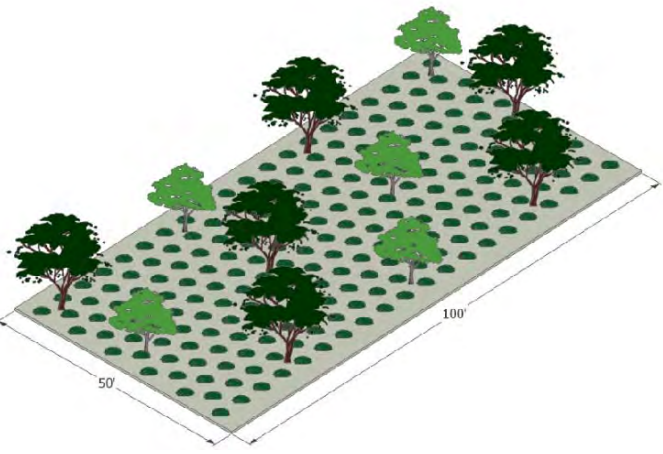
2.6.1. Applicability.

- A. Neighborhood compatibility measures are required when a lot zoned or used for a rental dwelling, office, institutional, commercial, industrial uses, or occupied by a non 'For-Sale' residential use adjoins a protected district.
- B. Protected district as used in this Section means any property zoned for or used by 'For-Sale' residential purposes. Where commercial or industrial districts or developments abut R-10M zoning

districts, the R-10M zoning district is considered a protected district and neighborhood compatibility measures also apply.

2.6.2. Buffers.

A. A 50 feet wide undisturbed buffer is required as shown in the Downtown Buffer Table.

Downtown Buffer Table		
Depth (min.)	50 ft.	
Fence/wall height (min.)	Not required	
Shade trees (min. per 100 feet and evenly spaced)	6	
Understory trees (min. per 100 feet in length and evenly spaced)	5	
Shrubs (min. per 100 feet in length and evenly spaced)	60	

B. Except as otherwise provided, herein, the buffer shall be preserved in its natural undisturbed state, except that sparsely planted buffers shall be enhanced with additional plant material. Enhancement plants must provide an opaque screen within two years of planting and must meet the following standards:

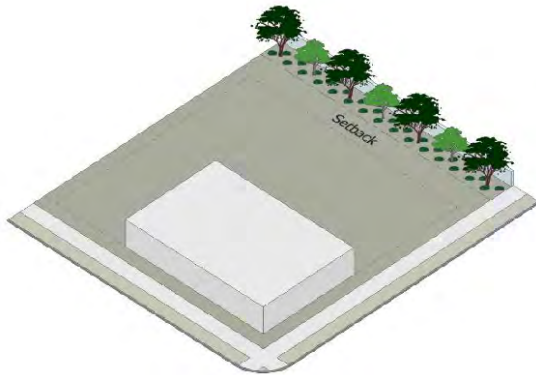
1. Plants must be a minimum of 5 feet in height at time of installation;
2. At least 75% of the total number of plants installed must be evergreen species; and
3. Plants will be planted and spaced as shown in the Downtown Buffer Table.

C. Buffers may not contain any surface parking or storm water detention ~~facilities-basins,~~ or any structures except that the Director of Community Development may approve underground facilities within the buffer or the crossing of the buffer for the purpose of extending utilities. -The Community Development Director may approve vegetated runoff reduction measures within the buffer. The planting requirements in A. and B. above may be varied to accommodate vegetated runoff reduction measures as part of an approved stormwater management plan, if properly designed to provide stormwater management and screening functions.

- D. Stream buffers must be replanted where disturbed for approved access, ~~detention~~ and utility crossings. Replacement plants must be approved by the City Arborist.
- E. All buffer plantings are subject to the approval of the Director of Community Development.

2.6.3. Building Setbacks.

All building setbacks are measured from the inside edge of the required buffer.



2.6.4. Transitional Height Plane.

- A. A building must not extend into a 45-degree angular plane projecting over the subject property measured from a height of 35 feet at the side interior or rear setback line.
- B. The transitional height plane ends at any public street (not including an alley) or 60 feet from the protected district lot line, whichever is less.

Sec. 2.8. - Building Design.

2.8.1. Applicable.

This Section applies to the Building Types identified in Section 2.7.

2.8.2. Fenestration.

- A. Fenestration is the minimum percentage of window and door glass that must cover a facade.
- B. Glass used to satisfy fenestration requirements must be unpainted, must have a transparency (visible light transmission) higher than 70%, and must have an external reflectance of less than 15%. Transparency and external light reflectance must be established using the manufacturer's specifications.
- C. Fenestration is measured from the top of the finished floor to the top of the finished floor above.
- D. When there is no floor above, fenestration is measured from the top of the finished floor to the top of the wall plate.

2.8.3. Pedestrian Access.

- A. A pedestrian entrance and walkway providing both ingress and egress, operable to residents at all times and operable to customers, visitors, and employees during business hours, is required to meet the street-facing pedestrian entrance requirements. Additional entrances off another street,

pedestrian area or internal parking area are permitted, but must have the same or shorter hours of operability as the street-facing entrance.

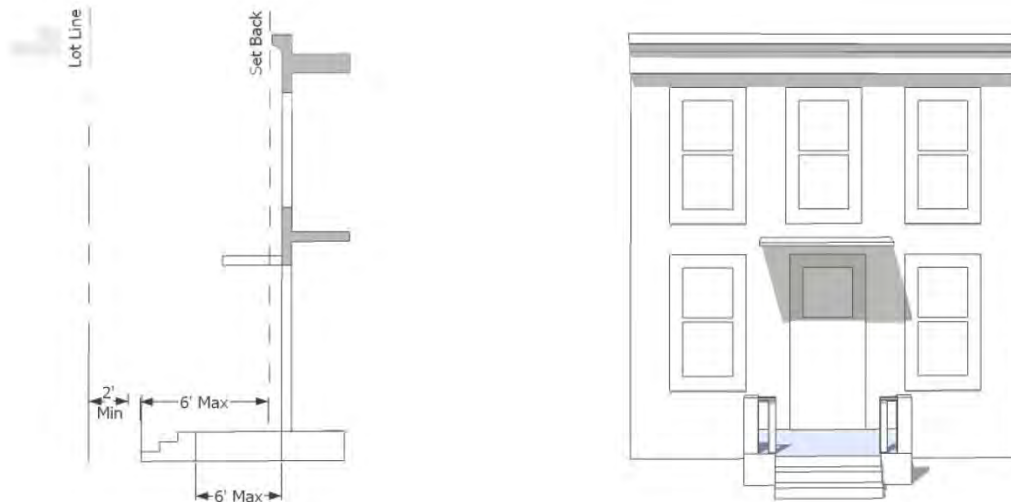
- B. An angled pedestrian entrance may be provided at either corner of a building along the street to meet the street-facing pedestrian entrance requirements.
- C. Where a lot has frontage on a civic space instead of a street, these requirement apply to and from the civic space.

2.8.4. Building Elements.

- A. **Intent.** The following standards are intended to ensure that certain building elements that when added to a street-facing facade are of sufficient size to be both usable and functional and be architecturally compatible with the building they are attached to.



- B. **Front Porch.** A raised structure attached to a building, forming a covered pedestrian entrance to a doorway.
 - 1. A front porch must be at least 6 feet deep (not including the steps).
 - 2. A front porch must be contiguous, with a width not less than 33% of the building facade from which it projects.
 - 3. A front porch must be roofed and may be screened, but cannot be fully enclosed.
 - 4. A front porch may extend up to 9 feet, including the steps, into a required front setback, provided that such extension is at least 2 feet from the vertical plane of any lot line.
 - 5. A front porch must not encroach into the public right-of-way or required sidewalk.
 - 6. Steps leading to front porches must have enclosed risers.
 - 7. Front porch columns must be a minimum width of 8 inches.



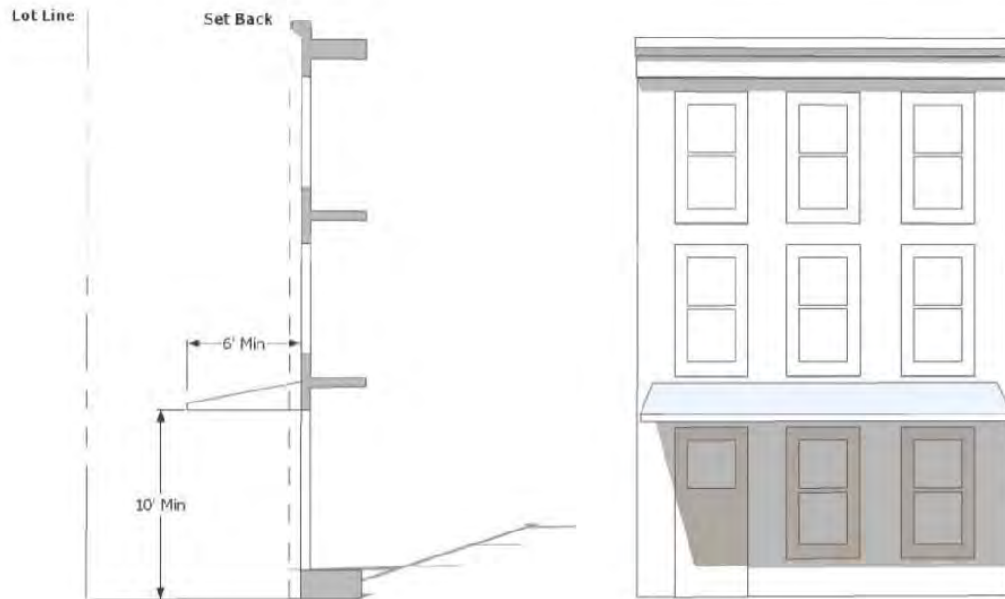
C. **Stoop.** A small raised platform that serves as a pedestrian entrance to a building.

1. A stoop must be no more than 6 feet deep (not including the steps).
2. A stoop may be covered but cannot be fully enclosed.
3. A stoop may extend up to 6 feet, including the steps, into a required setback, provided that such extension is at least 2 feet from the vertical plane of any lot line.
4. A stoop must not encroach into the public right-of-way or required sidewalk.
5. Steps leading to stoops must have enclosed risers.
6. Stoop columns, where provided, must be a minimum width of 8 inches.

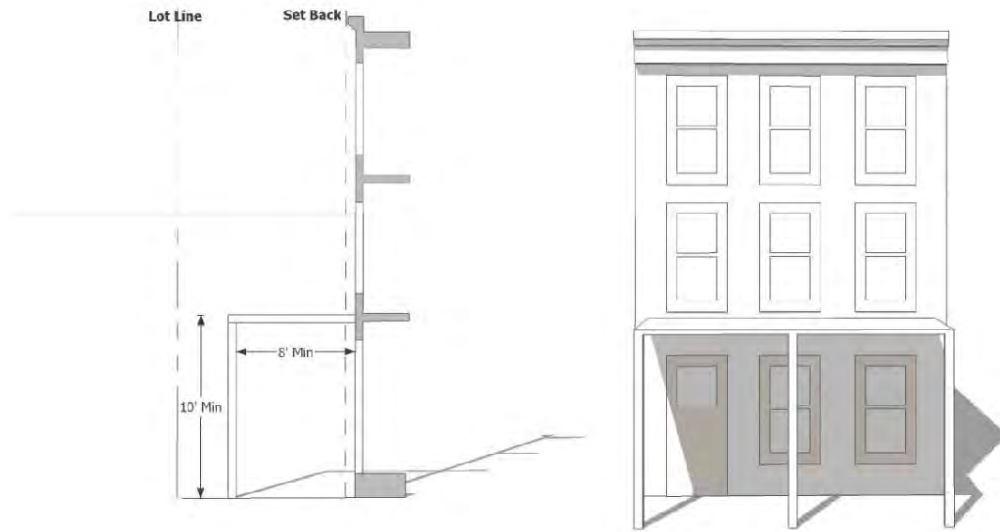


D. **Balcony.** A platform projecting from the wall of an upper-story of a building with a railing along its outer edge, often with access from a door or window.

1. A balcony must be at least 4 feet deep and may extend up to 6 feet into a required setback, provided that such extension is at least 2 feet from the vertical plane of any lot line.
2. A balcony must have a clear height above the sidewalk of at least 10 feet.
3. A balcony may be covered and screened, but cannot be fully enclosed.
4. A balcony may encroach up to 6 feet into the public right-of-way or required sidewalk but must be at least 2 feet inside the curb line or edge of pavement, whichever is greater.



- E. **Awning/Canopy.** A wall-mounted, cantilevered structure providing shade and cover from the weather for a sidewalk.
1. An awning must be a minimum of 10 feet clear height above the sidewalk and must have a minimum depth of 6 feet.
 2. An awning may extend into a required setback.
 3. An awning may encroach up to 9 feet into the public right-of-way or required sidewalk but must be at least 2 feet inside the curb line or edge of pavement, whichever is greater.
 4. Awning must be made of canvas and may not be reflective or shiny.
 5. Awnings must have open ends called "shed awnings" to allow views into buildings.
 6. Awnings may not be internally lit.
 7. Awnings may not be narrower than nor two feet wider than the door or window opening that they serve. Where multiple doors and windows are less than two feet apart, multiple awnings may be combined into a single awning.



F. **Gallery.** A covered passage extending along the outside wall of a building supported by arches or columns that is open on 3 sides.

1. A gallery must have a clear depth from the support columns to the building's facade of at least 8 feet and a clear height above the sidewalk of at least 10 feet.
2. A gallery must be contiguous and extend over at least 75% of the width of the building facade from which it projects.
3. A gallery may extend into a required setback.
4. A gallery may encroach up [to] 9 feet into the public right-of-way or required sidewalk but must be at least 2 feet inside the curb line or edge of pavement, whichever is greater.

2.8.5. General Architectural Standards.

A. Applicability.

1. The following applies to all buildings, except as specifically stated otherwise.
2. Detached houses, carriage houses, cottage courts, semi-detached houses, townhouses, walk-up flats, and stacked flats must comply with either the following or Section 2.8.6, at the discretion of the applicant.
3. Commercial houses must comply with Section 2.9.6 [2.8.6].

B. Building Materials.

1. Exterior finish materials on walls visible from a street or civic space must be limited to brick, manufactured stone, architectural block, natural stone, wood siding, cement-based siding, cement-based panels, and/or hard coat stucco.
2. Hard coat stucco, when used as an exterior wall finish material on any individual building, is subject to the following additional standards:
 - a. Hard coat stucco may not exceed 30% of the total wall area (excluding foundations) visible from a street or civic space. For the purpose of calculating conformance with this requirement, windows and doors are not included in the total wall area.
 - b. The maximum wall length (excluding foundations) visible from a street or civic space that is finished in any continuous or discontinuous hard coat stucco is 60 feet. Authorized wall

lengths finished in hard coat stucco must be separated by a minimum wall length of 60 feet that contains no hard coat stucco.



General Visual Weight Table

This table shows the visual weight of permitted materials. Those at the top are lighter than those at the bottom and must be combined accordingly.

Visually Lighter ↑ ↓ Visually Heavier	Hard Coat Stucco
	Wood/Cement-Based Siding or Panels
	Brick
	Architectural Block
	Natural /Manufactured Stone

3. Exterior finish materials must be combined only horizontally, with the visually heavier below the lighter as shown in the General Visual Weight Table. This does not apply to architectural details such as cornices, window sills, and beltlines.
 4. No more than three different exterior finish materials, textures, colors, or combinations thereof may be used on a single building, excluding materials used on windows, doors, front porches, balconies, foundations, awnings, or architectural details.
 5. Foundations must be constructed as a distinct building element that is finished in a different material or color than the exterior wall. Exposed above-ground foundations must be coated or faced in cement, hard coat stucco, brick, manufactured stone, or natural stone to contrast with façade materials.
- C. Building Facade.
1. The following applies to all street-facing facades.
 2. Where used, shutters must match one half the width and shape of the window opening to which they are adjacent.
 3. Facades must provide visual divisions between the ground story and second story through architectural means such as courses, awnings, or a change in materials.

4. Facades must delineate all stories above the ground story with windows, belt courses, balconies, cornice lines or similar architectural detailing.
5. Windows above the ground story must be equally sized, vertically oriented, equally spaced and arranged in a grid pattern.
6. Windows must be recessed a minimum of 3 inches and a maximum of 8 inches from the adjacent façade.

D. Building Massing.

1. Facades over 50 feet in length must incorporate wall projections or recesses a minimum of 12 inches in depth. The combined length of said recesses and projections must constitute at least 20% of the total facade length.
2. Variation in the roofline of buildings and offsets in pitched roofs and gables are required. Parapets in individual building facades exceeding 100 continuous linear feet must be varied in height and projection and must use decorative elements such as crown moldings, dentals, brick soldier courses, or similar details.
3. The roofs of buildings may include cisterns and greenroofs if part of an approved stormwater management plan for the site and if designed in accordance with the GA Stormwater Management Design Manual (latest version). Above-ground cisterns and greenwalls shall require approval by the Community Development Director.

2.8.6. Small Residential Building Standards.

- A. Applicability. The following applies to detached houses, carriages houses, cottage courts, semi-detached houses, townhouses, walk-up flats, stacked flats, and commercial houses.
- B. Building Materials.
 1. The exterior finish material on all walls is limited to brick, manufactured stone, natural stone, wood siding, cement-based siding and/or hard coat stucco.

Small Residential Building Visual Weight Table

This table shows the visual weight of permitted materials. Those at the top are lighter than those at the bottom and must be combined accordingly.

Visually Lighter ↑ ↓ Visually Heavier	Hard Coat Stucco
	Wood/Cement-Based Siding or Panels
	Brick
	Architectural Block
	Natural /Manufactured Stone

2. Exterior finish materials must be combined only horizontally, with the visually heavier below the lighter as shown in the Small Residential Building Visual Weight Table. This does not apply to architectural details such as cornices, window sills, and beltlines.
3. No more than three different exterior finish materials, textures, colors, or combinations thereof may be used on a single building, excluding materials used on windows, doors, porches, balconies, foundations, or architectural details.

4. Foundations must be constructed as a distinct building element that is finished in a different material or color than the exterior wall. Exposed above-ground foundations must be coated or faced in cement, hard coat stucco, brick, manufactured stone, or natural stone to contrast with façade materials.

C. Building Facades.

1. The following apply to all street-facing facades.
2. Windows and Doors
 - a. Where used, shutters must match one half the width and shape of the window opening to which they are adjacent.
 - b. Doors and windows that operate as sliders are prohibited.
 - c. All windows must be vertically shaped with a height greater than width, except for windows that are part of a door or otherwise appropriate for a required architectural style. The top of said windows must generally be in alignment with the top of the adjacent door frame.
 - d. Windows must have true or simulated divided lights or be one-over-one lights.
 - e. Windows must include sills of wood, masonry, stone, cast stone, or terra cotta.
 - f. Window frames must be recessed a minimum of 1.5 inches from the exterior façade.
3. A stoop or front porch is required.
4. Awnings are not allowed.

D. Building Massing.

1. Pitched roofs, if provided, must be symmetrically sloped no less than 5:12, except that roofs for front porches and attached sheds may be no less than 2:12.
2. Flat roofs must be enclosed by parapets a minimum of 42 inches high, or as required to conceal mechanical equipment by Section 2.5.4.
3. All roofs must have a minimum 25-year roof life and no visible roll roofing.
4. Chimneys, where provided, must extend to the ground and must be faced in brick or stacked stone.

2.8.7. Architectural Style Requirements.

A. Applicability.

1. This section only applies to detached houses, cottage courts, and carriage houses that are accessory to a detached house or cottage court. All other building types must comply with the requirements and procedures found in the Downtown Alpharetta Design Guidelines amendment to the Alpharetta Design Review Ordinance and Design Guidelines.
2. This section is further limited to not apply to parcels zoned R-12 or R-15 when such parcels are located within a recorded subdivision that existed on the date of adoption of this ordinance.
3. This section is further limited to only apply to new construction, modification, addition, alteration, moving, destruction or demolition which would affect the exterior appearance of any structure, building, land, site or other object, as follows:
 - a. The demolition of any building, structure or object.
 - b. The moving or relocation of any building, structure or object.
 - c. Except housecleaning, any material work on the exterior appearance of existing buildings by additions, reconstruction, rehabilitation, alteration or any maintenance (including exterior color), or any exterior material changes.

- d. Any new construction of a principal building or accessory building or structure subject to view from a street or public way.

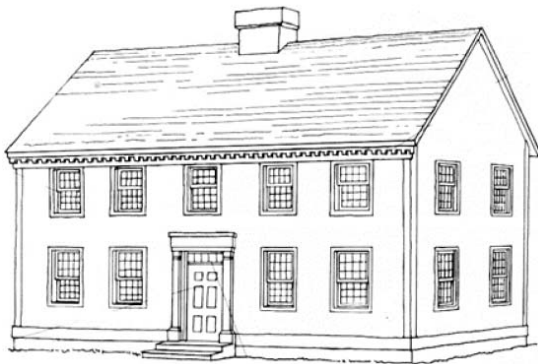
B. Administration.

1. Conformance with this section is determined by the Director of Community Development. The Director of Community Development may grant relief from one or more requirement when:
 - a. The requirement is unique to this section and is not otherwise required by the Unified Development Ordinance, another section of the Downtown Overlay, a Downtown District, or any other applicable local, State, or Federal regulation; and
 - b. The relief does not cause substantial detriment to the public good or impair the purpose and intent of this Overlay.
2. Appeals of a decision by the Director of Community Development shall be made to the Board of Appeals for interpretation.

C. General Requirements.

1. All buildings must be designed in one of the following architectural styles:
 - a. Georgian
 - b. Federal/Adam
 - c. Greek Revival
 - d. Neoclassical
 - e. Stick
 - f. Queen Anne
 - g. Shingle
 - h. Folk Victorian
 - i. Romanesque
 - j. Italianate
2. Specific elements of the required styles are identified in Section 2.8.7.D through M. More information on each style 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.

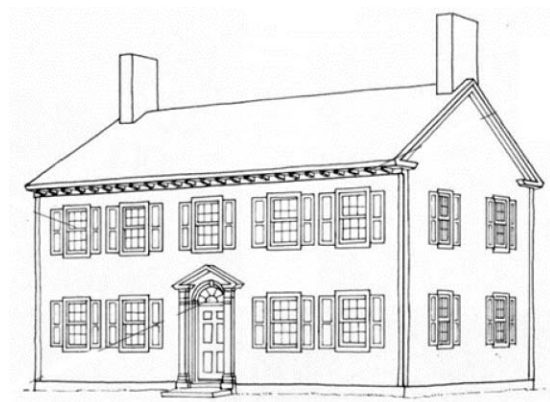
D. Georgian. Elements of the Georgian style are as follows:



Source: A Field Guide to American Houses by Virginia Savage McAlester

Façade Composition
Front facades are always symmetrical and usually five windows wide. Narrower houses are sometimes three windows wide and larger houses are sometimes seven windows wide. There is never an even number of windows across the front façade.
Front Doors
Front doors are paneled, centered, and topped with a decorative crown support by decorative pilasters. There is also usually a row of small rectangular glass panes beneath the crown, either within the door or in a transom.
Windows (visible from a street or civic space only)
Windows have double-hung sashes, typically with nine or twelve small panes per sash.
Windows are never in adjacent pairs.
Cornices
The cornice is usually emphasized with tooth-like dentils or other decorative molding.

E. **Federal/Adam.** Elements of the Federal/Adam style are as follows:



Source: A Field Guide to American Houses by Virginia Savage McAlester

Façade Composition
Front facades are always symmetrical and usually five windows wide. Narrower houses are sometimes

three windows wide and larger houses are sometimes seven windows wide. There is never an even number of windows across the front façade.

Front Doors

Front doors are paneled, centered, and topped with a semi-circular or elliptical fanlight. There are also usually sidelights, an elaborate crown and surround, and/or an extended small entry porch.

Windows (visible from a street or civic space only)

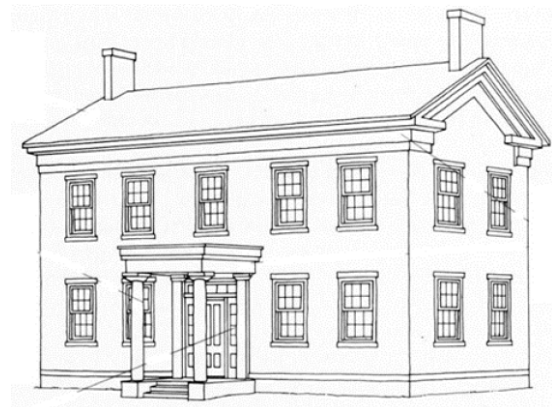
Windows have double-hung sashes, typically with six panes per sash.

Windows are never in adjacent pairs.

Cornices

The cornice is usually emphasized with tooth-like dentils or other decorative molding.

F. **Greek Revival.** Elements of the Greek Revival style are as follows:



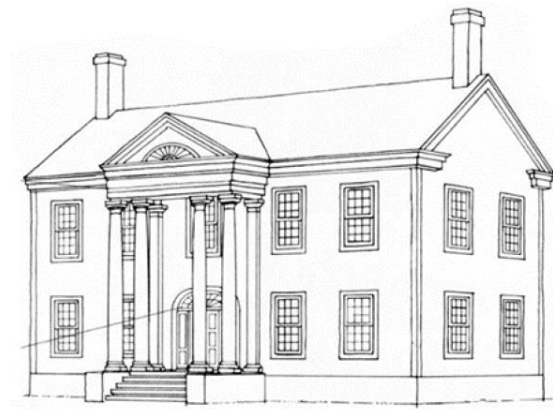
Source: A Field Guide to American Houses by Virginia Savage McAlester

Façade Composition

Front facades of the principal building mass are usually symmetrical. Exceptions to this are limited to off-centered doors, which may be located at one side of the structure, especially in narrower detached houses.

Front Doors
Front doors include a narrow line of transom and sidelight windows, usually incorporated into an elaborate door surround.
Front entry porches or full-width porches are usually provided. Porch roofs are always supported by square or rounded columns of one of the Classical Orders.
Cornices
The cornice is emphasized with a wide, divided band of trim.
Roof
The roof is usually gabled or hipped with a low pitch.

G. **Neoclassical.** Elements of the Neoclassical style are as follows:

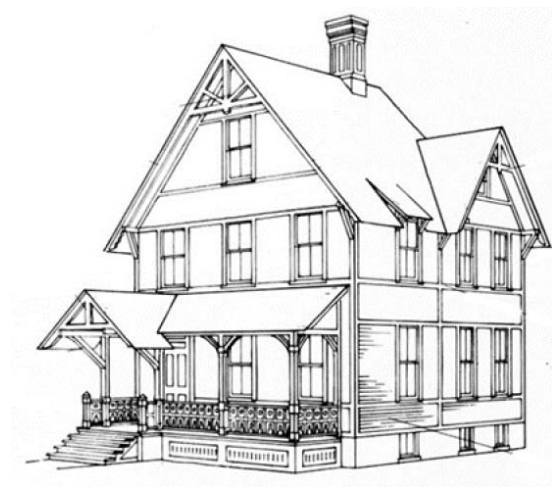


Source: A Field Guide to American Houses by Virginia Savage McAlester

Façade Composition
Front facades are always symmetrical and usually five windows wide. Narrower houses are sometimes three windows wide and larger houses are sometimes seven windows wide. There is never an even number of windows across the front façade.
Front facades are usually dominated by a full-height entry porch with a triangular gable above supported by four columns with shallow square bases.

Front Doors
Front doors are paneled, centered, and topped with a semi-circular or elliptical fanlight.
Windows
Windows have double-hung sashes.

;l0; H.\Stick. Elements of the Stick style are as follows, although it's rare for one building to have all elements:



Source: A Field Guide to American Houses by Virginia Savage McAlester

Façade Composition
Front facades are usually asymmetrical and include horizontal and vertical bands raised from the wall surface for emphasis.
Front porches or stoops are always provided and include diagonal or curving support braces.
Roofs
Roofs are steeply pitched.
When roof gables are provided they include decorative trusses. Cross gables are common.

I. **Queen Anne.** Elements of the Queen Anne style are as follows:



Source: A Field Guide to American Houses by Virginia Savage McAlester

Façade Composition
Front facades of the principal building mass are usually asymmetrical.
Front facades include a partial- or full-width porch and extend along one or both side walls.
All facades often include textured shingles or other devices to avoid a smooth-walled appearance.
Roofs
Roofs are steeply pitched.

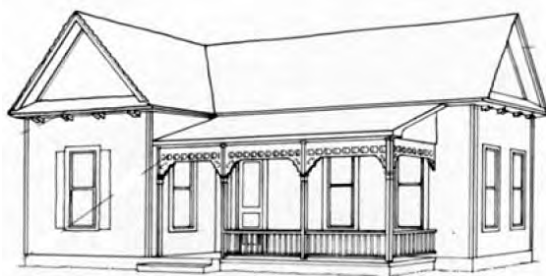
J. **Shingle.** Elements of the Shingle style are as follows:



Source: A Field Guide to American Houses by Virginia Savage McAlester

Façade Composition
Front facades are always asymmetrical.
Front porches are almost always present.
Wall cladding and roofs are of continuous wood shingles.
Shingled walls turn corners without interruption.
Roofs
Roofs have irregular, steeply pitched roof lines, usually with cross gables and multi-level eaves.

K. **Folk Victorian.** Elements of the Folk Victorian style are as follows:



Source: A Field Guide to American Houses by Virginia Savage McAlester

Façade Composition
Front facades are always symmetrical, except when a front gable or wing is provided.
Front porches are provided and have spindlework detailing.
Roofs
Roofs are usually gabled and with very simple massing.
Roofs include brackets under eaves.

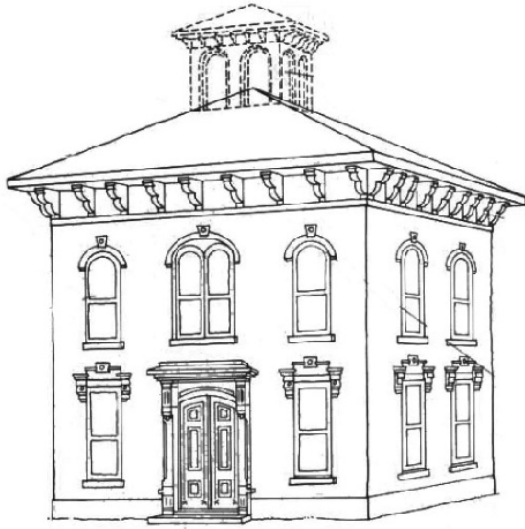
L. **Romanesque.** Elements of the Romanesque style are as follows:



Source: A Field Guide to American Houses by Virginia Savage McAlester

Façade Composition
Front facades of the principal building mass are usually asymmetrical.
Walls are of masonry.
Round top arches are provided over windows or entrances.
Roofs
Roofs shapes vary, but there are conical roofs on towers, when such are provided.

M. **Italianate.** Elements of the Italianate style are as follows:



Source: A Field Guide to American Houses by Virginia Savage McAlester

Façade Composition
Facades are usually two or three stories.
Windows
Windows often have elaborate crowns, usually of an inverted U-shape.
Windows are tall, narrow, and often arched above.
Roofs
Roofs are low pitched with widely overhanging eaves supported by decorative brackets.
Roofs often include a square cupola or tower.

2.8.8. Storefront Street Requirements.

- A. **Applicability.** These regulations apply to the portions of sites abutting the street segments designated in the Downtown Alpharetta Storefront Street Table.

Downtown Alpharetta Storefront Street Table

Street	Street Segment	Side of
--------	----------------	---------

	From:	To:	Street
Milton Avenue	A point 400 feet west of the intersection with Canton Street (centerline)	State Route 9/Main Street	Both sides
Academy Street	State Route 9/Main Street	Manning Street	Both sides
State Route 9/Main Street	A point 200 feet north of the intersection with Milton Avenue/Academy Street	Marietta Street	Both sides

- B. **Building Type Restrictions.** Buildings abutting a street segment identified in the Downtown Alpharetta Shopfront Table are limited to Mixed-Use Buildings or Shopfronts. Additional building types may be provided to the rear of a conforming Mixed-Use Building or Shopfront.

ARTICLE 3. - DOWNTOWN ZONING DISTRICTS

Sec. 3.1. - Applicability.

- A. The requirements of this Article apply to all Downtown Zoning Districts.
- B. The requirements of the Unified Development Code also apply in all Downtown Districts unless expressly stated otherwise in this Article.

Sec. 3.2. - Rules of Interpretation.

3.2.1. Site.

Defined. A site is any lot or group of contiguous lots owned or functionally controlled by the same person or entity, assembled for the purpose of development. Lots within a site may be separated by an existing public right-of-way.

3.2.2. Lot.

A. Lot Frontage.

1. Every lot (except cottage court lots) and every cottage court site must have frontage upon:
 - a. An existing public street, or
 - b. A new public street or private street built to standards of Section 2.3.3, or
 - c. A civic space meeting the standards of Section 3.2.4.B or an existing City of Alpharetta park. No more than 20% of the total lots in a site (except cottage court lots) may front on a civic space or existing City park.
2. Alleys may not be used to satisfy the lot frontage requirements of Section 3.2.2.A.1 above.
3. The minimum lot frontage is 20 feet or the minimum lot width identified in district regulations, whichever is greater.
4. Lots having frontage on a civic space or existing City park must still comply with fire lane access requirements, as applicable.

3.2.3. Residential Density.

- A. **Defined.** The dwelling units per acre of land.
- B. The residential density of a site is expressed in dwelling units per acre of land and is calculated by dividing the total dwelling units on a site by the site's acreage. Residential density includes both a base and maximum density.
- C. The ability to achieve the permitted density may be further restricted by site conditions, district regulations, or conditions or rezoning.

3.2.4. Open Space.

- A. **Defined.** Open space is the horizontal outdoor area of a site reserved to provide separation, resource protection, scenic enjoyment, recreation, or amenity. It includes two types: civic space and amenity space.
- B. **Civic space.** Civic space is the portion of open space for public use defined by the combination of certain physical constants including the relationships among their intended use, their size, their

landscaping, and their adjacent buildings. Civic spaces are limited to the following types. Each civic space approved must be usable for civic purposes. Above-ground cistern design and appearance shall require approval by the Community Development Director.:

1. **Park.** An open space available for structured or unstructured recreation. A park may be independent of surrounding buildings at its edges. Its landscape may consist of paths and trails, meadows and lawns, water bodies, runoff reduction measures such as bioretention areas, swales, cisterns, and woodlands. Recreation fields and courts may also be included. The minimum size for a park is one acre.
 2. **Square.** An open space available for unstructured recreation and civic purposes. A square is spatially defined by building or streets at its edges. Its landscape must consist of paths and trees, and may also include runoff reduction measures such as bioretention areas and cisterns, lawns and non-asphalt paved surfaces. The minimum size for a square is one-half acre.
 3. **Plaza.** An open space, available for civic purposes and commercial activities. A plaza must be spatially defined by building or streets at its edges. Its landscape must consist primarily of non-asphalt paved surfaces and trees, and may include runoff reduction measures such as bioretention areas and cisterns. The minimum size for a plaza is one-quarter acre.
 4. **Pocket Park.** An open space, available for unstructured recreation. A pocket park may be spatially defined by buildings or streets at its edges. Its landscape must consist of lawn and trees, and may include runoff reduction measures such as bioretention areas and cisterns. There is no minimum size for pockets parks.
 5. **Playground.** An open space designed and equipped for the recreation of children. A playground must be fenced and may include an open shelter. Playgrounds must be interspersed within residential areas, may be placed within a block, and may be included in parks and greens. There is no minimum size for playgrounds. Playgrounds may include runoff reduction measures such as bioretention and underground detention.
- C. **Amenity space.** Amenity space is the covered or uncovered, but unenclosed, outdoor areas of at least 100 square feet each for use by the occupants, invitees and guests of the development and specifically excluding Civic Spaces and required sidewalks. Amenity spaces may include, but are not limited to:
1. Rooftop decks;
 2. Balconies;
 3. Patios and porches;
 4. Outdoor dining areas;
 5. Pool areas;
 6. Tennis courts, basketball courts, and similar uses;
 7. Yards, lawns, and gardens;
 8. Hardscape areas improved for pedestrian enjoyment; and
 9. Wooded areas.
 10. Runoff reduction measures such as bioretention areas and cisterns.
- Each amenity area approved must function as an amenity area. Above-ground cistern design and appearance shall require approval by the Community Development Director.
- D. Open space may be privately or publically owned. Private open space is open space that is owned by a corporation, individual, or homeowners association. Public open space is open space owned by a governmental agency.
- E. Wetlands, lakes, ponds, streams, rivers, flood zones, and stream buffers may only be considered open space when located within one of the five types of civic spaces identified in Section 3.2.4.B, unless part of approved stormwater management plan for the site that includes runoff reduction measures.

- F. No required buffer, except for stream buffers, may be used to satisfy open space requirements.
- G. Stormwater management facilities for the site may be used to satisfy open space requirements if they meet this Chapter's definition of open space. Open space credit may be given at the discretion of the Director of Community Development~~Stormwater management facilities may not be used to satisfy open space requirements.~~
- H. No areas used for vehicles, except for incidental service, maintenance, or emergency actions, may be used to satisfy open space requirements.
- I. A site's Open space requirements shall be considered completely satisfied when a development incorporates a historic building that complies with all of the following:
1. The building is at least 75 years old and is listed on the following table:
 - 2.

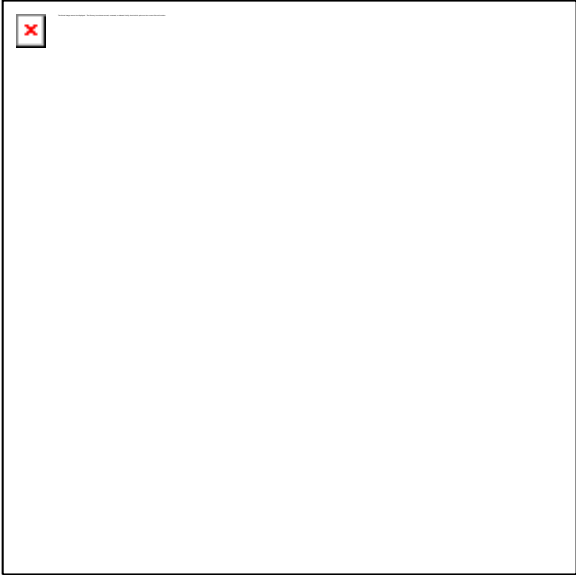
Original Building Address		
94 Academy Street	30 Milton Avenue	48 Old Roswell Street
375 Brady Place	35 Milton Avenue	37 Roswell Street
133 Canton Street	90 Milton Avenue	54 Roswell Street
193 Canton Street	242 Milton Avenue	61 Roswell Street
212 Canton Street	333 Milton Avenue	88 Roswell Street
36 Church Street	20 North Main Street	103 Roswell Street
37 Church Street	31 North Main Street	119 Roswell Street
10 Cumming Street	38 North Main Street	164 Roswell Street
18 Cumming Street	69 North Main Street	3 South Main Street
40 Cumming Street	101 North Main Street	9 South Main Street
112 Cumming Street	116 North Main Street	21 South Main Street
130 Cumming Street	126 North Main Street	23 South Main Street
122 Marietta Street	134 North Main Street	50 South Main Street
171 Marietta Street	1720 Old Milton Pkwy	531 South Main Street

24 Milton Avenue	1815 Old Milton Pkwy	86 School Drive
25 Milton Avenue	1835 Old Milton Pkwy	

3. The building is deemed fit for human habitation in accordance with Article III of Chapter 5 of The Code of the City of Alpharetta, Georgia; and
 4. A binding legal agreement that established a program for guaranteeing maintenance of said building through a condominium association, a homeowner association, bonding, or other protective maintenance guarantees is signed by all property owners and/or their prospective successors in title and is submitted to the City of Alpharetta.
- J. When a historic building used to satisfy open space requirements in accordance with Section 3.2.4.I. is subsequently completely destroyed, the applicable open space requirements of the zoning district must be satisfied within one year unless a variance is granted by the Board of Appeals.

Sec. 3.3. - Building Types Allowed.

Building types are allowed by Downtown Zoning District as shown below.

Building Type		DT-C	DT-MU	DT-LW	DT-R
 	Detached House	■	■	■	■

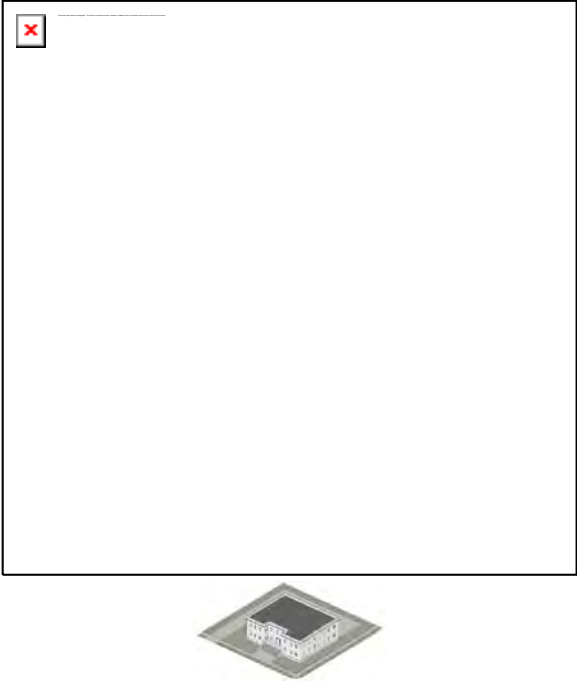
 	Carriage House	■	■	■	■
 	Cottage Court	■	■	■	■

 	Semi-Detached House				
 	Townhouse				

 	Walk-Up Flat				
 	Stacked Flat				

 	Commercial House				
 	Shopfront				

 	Mixed-Use Building				
 	General Building				

	Civic Building	■	■	■	■
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Sec. 3.4. - Uses Allowed by District.

3.4.1. Allowed Use Table.

- A. In order to regulate a variety of similar uses, use categories have been established for principal uses. Use standards for both principal and accessory uses are specified in Section 2.3 and Section 2.7 of the Unified Development Code. Uses not listed may be interpreted by the Director of Community Development. When the Director of Community Development cannot determine placement, an application shall be made to the Board of Appeals for interpretation.
- B. Principal and accessory uses allowed by district are shown in the table below.

3.4.2. Use Table Key.

- A. Permitted Use (X). Indicates a use is permitted in the respective district. The use is also subject to all other applicable requirements of the Unified Development Code.
- B. Conditional Use (O). Indicates a use may be permitted in the respective district only where approved by the City Council in accordance with Section 4.2 of the Unified Development Code. Conditional uses are subject to all other applicable requirements of the Unified Development Code, including any applicable use standards, except where the use standards are expressly modified by the City Council as part of the conditional use permit approval.
- C. Use Not Permitted. An empty cell indicates that a use is not permitted in the respective district.

Key: X = Permitted Use O = Conditional Use Empty Cell = Use Not Permitted

Use Category	Downtown Zoning Districts			
Specific Use	DT-C	DT-MU	DT-LW	DT-R
Open Uses				
Community Garden	X	X	X	X
Equestrian Center				
Farmlands (including Livestock, poultry)				
Greenhouse, Nursery				
Residential Uses				
Household living (see district regulations for additional density and Conditional Use Permit requirements):				
Dwelling, 'For-Sale,' Attached	X	X	X	X
Dwelling, 'For-Sale,' Detached	X	X	X	X
Dwelling, 'For-Rent'	O	O		
Group living:				
Congregate Housing, Assisted Living Facility	O	O		
Home-Elderly, Children, Nursing	X	X		
Public/Institutional Uses				
Associations, (Clubs & Lodges)	X	X	O	O
Cemetery				

Church, Synagogue, Other Place of Worship	O	O	O	O
Country Club				
Fire Station	X	X		
Golf Course, Driving Range				
Museums & Libraries	X	X	O	
Park and Playground	X	X	X	X
Power Station				
Prison				
Public Building	X	X	O	
Sewage, Disposal Plant				
School, Academic	O	X	O	
School, Commercial (Beauty, Business)	X	X	O	
Utility Substation	O	O	O	O
Telecommunications				
Antenna Tower				
Broadcasting Studio (Radio & TV)	O	O	O	
Switching Station (Telecom)				
Commercial Uses				
Adult Entertainment Establishment				
Amphitheater	O	O	O	

Animal Hospital, Small Animal (Veterinarian)	O	O		
Animal Hospital, Large Animal		O		
Art Galleries	X	X	O	
Athletic Facilities/Fitness Studio	X	X	O	
Auditorium	O	O	O	
Auto Sales and Leasing (Trucks, Vans, Cars & Accessories)		O		
Automotive Parts	X	X		
Automotive Service		X		
Bakery (under 8,000 square feet in floor area)	X	X	O	
Bakery (8,000 square feet or more in floor area)		X		
Bank, Savings & Loan, Mortgage Company	X	X	O	
Barber Shop	X	X	O	
Beauty Shop	X	X	O	
Bed & Breakfast	X	X	O	O
Book Store or Stationery	X	X	O	
Car Wash				
Carpet and Rug Sales	O	O		
Check Cashing		O		
Clinic, Public/Private	X	X	O	
Contractor's Office (with no outside storage)	O	X	O	

Contractor's Office (with outside storage)		O		
Convenience Center (with gas pumps)		X	O	
Dance Studio	X	X	O	
Day Care Center	O	X	O	
Drug Store, Pharmacy	X	X	O	
Dry Cleaning, Pick-Up Station	X	X		
Florist, Retail (with no greenhouse)	X	X	O	
Florist, Retail (with greenhouse)		O		
Funeral Home (with no cemetery or mausoleum)	O	O	O	
Golf, Miniature		O		
Grocery Store (under 2,000 square feet in floor area, located at a street corner, and limited to one per block)	X	X	O	
Grocery Store (2,000 square feet or more in floor area)	X	X		
Hardware & Garden Supply Store (under 8,000 square feet in floor area)	X	X		
Hardware & Garden Supply Store (8,000 square feet or more in floor area)		X		
Home Improvement Store		X		
Hospital		O		
Hotel	O	O		
Indoor Shooting Range				
Kennel				

Laundry, Self-Serve, Pick-Up		X		
Liquor Store	O	O		
Massage Therapy		O		
Nail Salon	X	X	O	
Office	X	X	X	
Outdoor Recreational Facilities (Commercial) (Playfields, etc.)	O	O	O	
Parking Lot, Commercial (under 30 spaces)	O	O	O	
Parking Lot, Commercial (30 spaces or more)	O	O		
Pawn Shop				
Pet Day Care (with no overnight boarding)	X	X	O	
Pet Grooming	X	X		
Print Shop	X	X	O	
Recreation Facilities, Indoor (Health Clubs, Bowling Alley, Skating Rink, Billiards, Children's event facilities, etc.)	O	O	O	
Rental Services Establishment with no outside storage	O	X		
Restaurant (see Accessory Uses for additional drive-through requirements)	X	X	O	
Retail Establishment (with no mixed-sales)	X	X	O	
Retail Establishment (with mixed-sales)	O	O		
Service Station, Automotive		X		
Shop or Studio, Craftsman/Artist	X	X	O	

Small Appliance Repair Shop	O	O		
Spa Services	O	O	O	
Tattoo Parlor & Body Piercing				
Theater, Cinema	O	O	O	
Industrial Uses				
Asphalt Plant				
Bottle Gas Storage & Distribution				
Builder's Equipment/Material				
Carpenter Shop, Woodworking (under 8,000 square feet in floor area)	O	O		
Carpenter Shop, Woodworking (8,000 square feet or more in floor area)				
Concrete Plant				
Dry Cleaning, Plant				
Glass Fabrication (under 8,000 square feet in floor area)				
Glass Fabrication (8,000 square feet or more in floor area)	O	O		
Junk Yard				
Laboratory, Research Commercial				
Laundry, Industrial				
Locker, Frozen Food or Cold Storage				
Machine Shop				
Manufacturing, Heavy, General				

Manufacturing, Light, Limited (under 8,000 square feet in floor area)	O	O	O	
Manufacturing, Light, Limited (8,000 square feet or more in floor area)				
Mini-warehouse Storage, Conditioned or Unconditioned Space				
Pest Control Business (with or without onsite chemical storage)		O		
Recycling Center				
Rental Services Establishment with outside storage (other than auto related)				
Salvage Yards				
Sawmill				
Septic Tank, Sales, Construction				
Storage, Inside				
Storage, Outside				
Taxidermist				
Tire Retreading				
Transfer Station				
Welding Shop				
Wholesale Storage and Distribution				
Transportation Uses				
Airport, Public/Private				
Heliport, Public/Private				
Limousine Service & Taxi (with or without outside vehicle storage)		O		

Accessory Uses				
Clubhouse, swimming pool, or community recreation facilities serving a development	X	X	X	X
Drive-Through Window		O	O	
Dwelling, 'For-Sale', Accessory	X	X	X	X
Family Day Care Home	X	X	X	X
Group Home				
Home Occupation	X	X	X	X
Live-Work	X	X	X	
Parking Garage	X	X	O	
Privacy and decorative fences and walls	X	X	X	X
Retail service uses up to 25% of the floor area of an office building for services incidental to the associated office use.	X	X	O	
Retaining walls and other site improvement structures approved as part of the development permit.	X	X	X	X
Signs, subject to all of the requirements regulating signage of the district.	X	X	X	X
Special Care Home	X	X	X	X
Swimming pool, tennis court, detached garage, play house, green house, storage shed, patio, gazebo and other private recreation facilities	X	X	X	X
Vehicle access, parking and loading areas	X	X	X	X

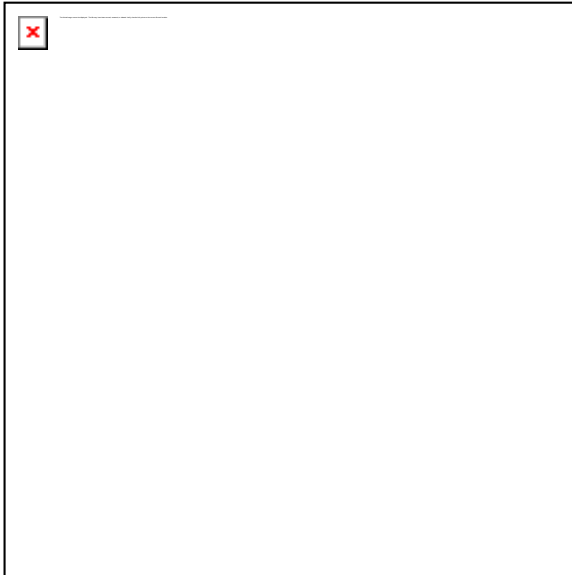
3.4.3. Specific Use Standards.

The following principal and accessory uses must conform with the indicated use standards.

- A. **Dwelling, 'For-Sale' Accessory.** Where a Dwelling, 'For-Sale' Accessory is allowed, it is subject to the following:
1. The dwelling shall be accessory to a permitted commercial use and shall be located above or to the rear of such use to which it is accessory.
 2. The dwelling shall be attached by a common wall with the commercial or office structure to which it is accessory.
 3. The dwelling shall be occupied by a single family, a member of whom is the owner or tenant of the commercial structure to which it is accessory.
 4. The square footage of the dwelling shall not exceed 40% of the combined square footage of the commercial structure and the dwelling.
 5. The dwelling and the commercial structure to which it is accessory shall be in compliance with all applicable provisions of the life safety code, the building code, and other codes of the City.
- B. **Live-Work.** Where Live-Work is allowed, it is subject to the following:
1. Live-work is only permitted on the first floor of a dwelling unit.
 2. A minimum of one person must occupy the dwelling containing the live-work use as their primary place of residence.
 3. The live-work use may employ no more than two persons not living on the premises at any one time.
 4. No business storage or warehousing of material, supplies or equipment is permitted outside of the dwelling containing the live-work use.
 5. The nonresidential use of the live-work use is limited to a permitted or conditional use in the zoning district.
 6. No equipment or process may be used in connection with the live-work use that creates noise, vibration, glare, fumes, odors, or electrical interference detectable to the normal senses, off the premises.
 7. No more than 5 customers are permitted on the premises at any one time.

Sec. 3.5. - DT-C: Downtown Core.

3.5.1. Purpose.



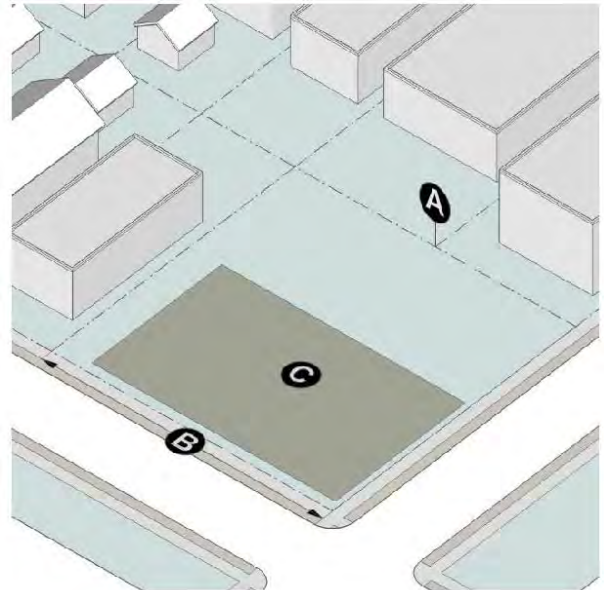
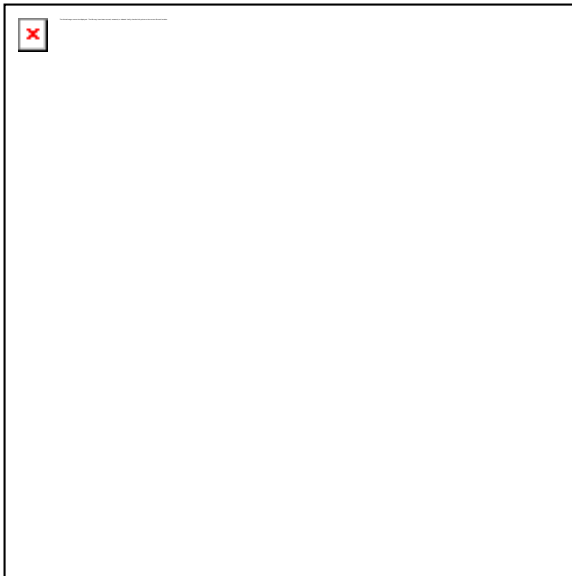
The purpose of this district is to provide for compact development in Alpharetta's core that is compatible with the area's historic character and includes a variety of commercial uses serving the entire city, civic uses, and residential uses.

3.5.2. Building Types Allowed.

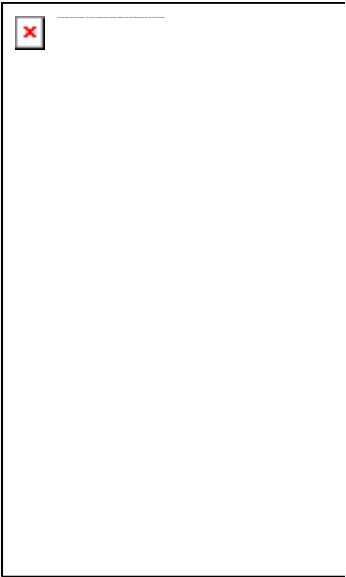
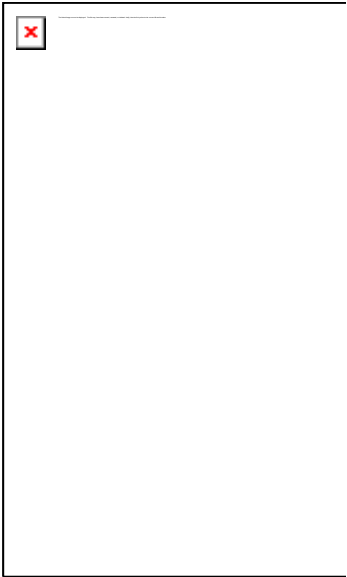
The following building types are allowed:

- A. Detached House
- B. Carriage House
- C. Semi-Detached House
- D. Townhouse
- E. Cottage Court
- F. Walk-Up Flat
- G. Stacked Flat
- H. Commercial House
- I. Shopfront
- J. Flex Building
- K. Mixed-Use Building
- L. General Building
- M. Civic Building

3.5.3. Dimensional Standards.



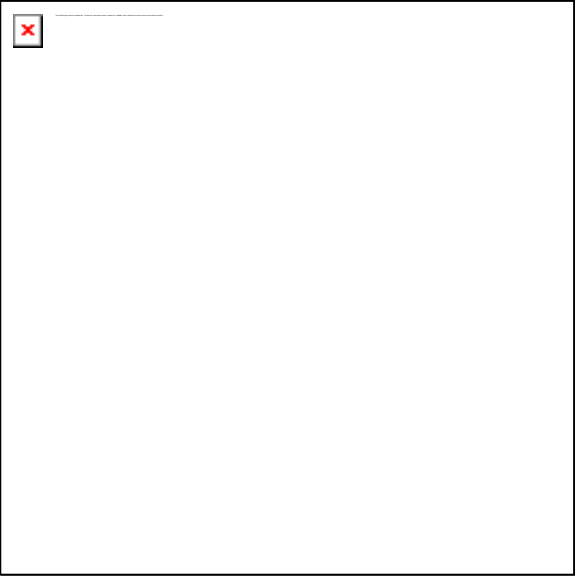
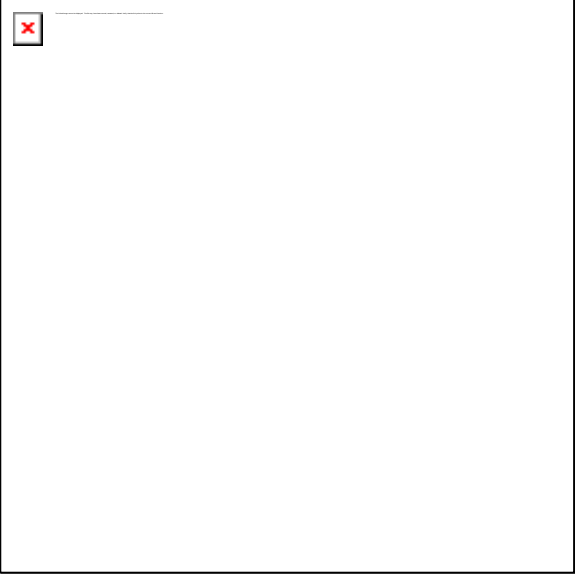
Site Standards	
Residential Density:	No Limit
Min. Amenity Space Requirement:	5% of site (all sites)
Min. Civic Space Requirements:	10% of site (only sites over 5 acres)

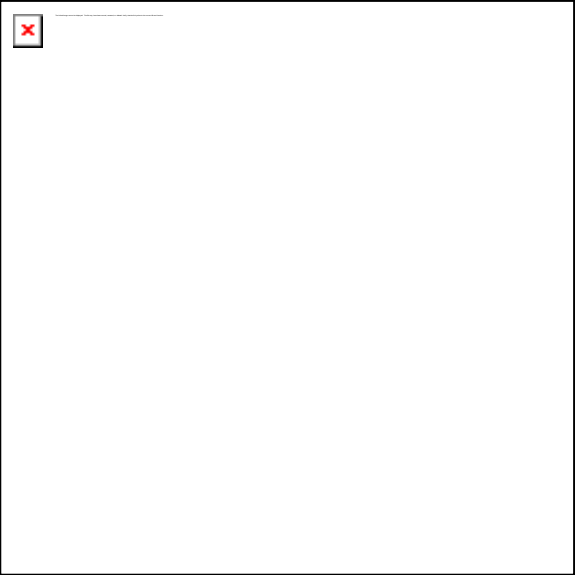
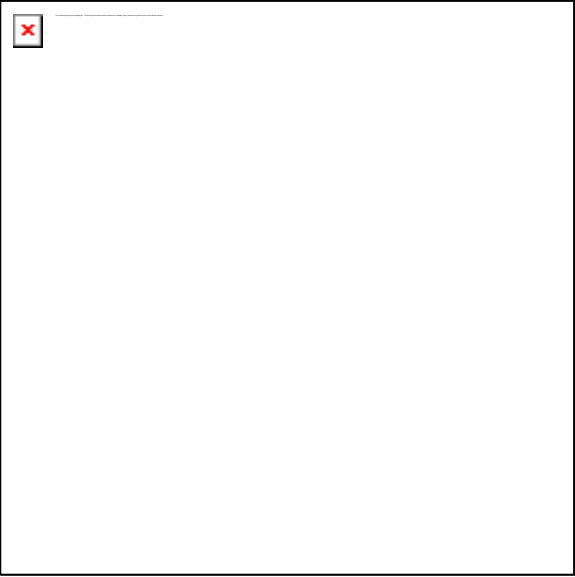
Lot Standards	 	
	Ar ea	Wi dth
Detached House:	2,500 sf min.	25 ft min.
Carriage House:	Same as principal structure	
Semi-Detached House:	2,500 sf min.	25 ft min.
Townhouse:	900 sf min.	20 ft min.
Cottage Court:	1,200 sf min.	20 ft min.
All other Building Types:	No min.	20 ft min.
Lot Coverage		

	All Buil ding Typ es:	90% max.
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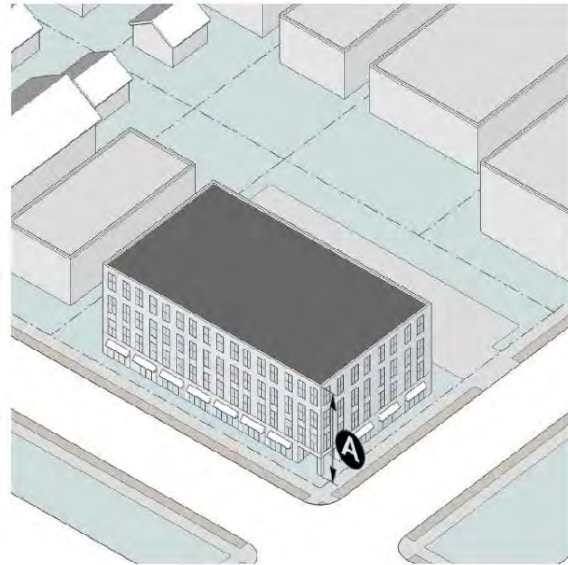
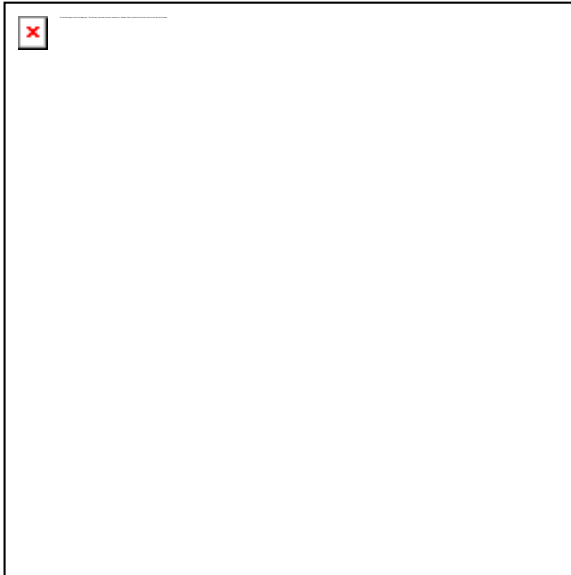
3.5.4. Building Placement.

Principal and Accessory Structure Setbacks	

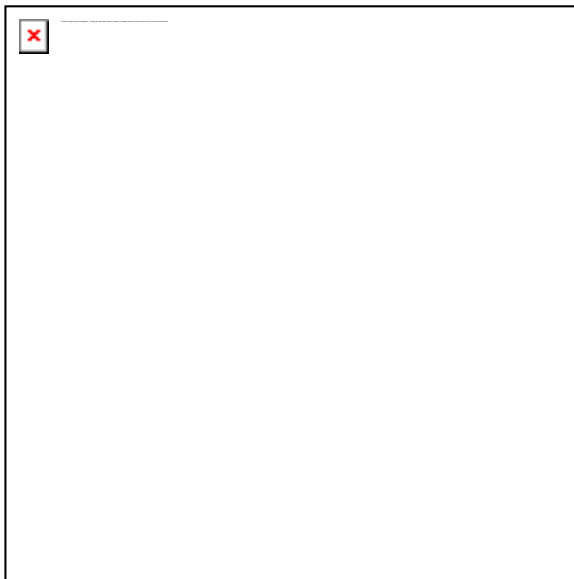
	Front Yard:	0 ft. min., 10 ft max.
	Side Yard:	0 ft. min.

	Rear Yard (no alley):	6 ft. min.
	Rear Yard (alley):	3 ft. min.
Greater side setbacks, greater rear setbacks, and greater building separation may be required as established by the applicable building or fire codes. <u>In order to optimize smart stormwater design, required setbacks may accommodate runoff reduction measures such as bioretention areas, cisterns, and greenwalls, provided such setbacks meet fire code standards. The runoff reduction measures may not compromise public safety such as the sight distance triangles required by the City and must include a long-term maintenance agreement. Above-ground cisterns or other vertical runoff reduction measures shall require approval by the Community Development Director.</u>		

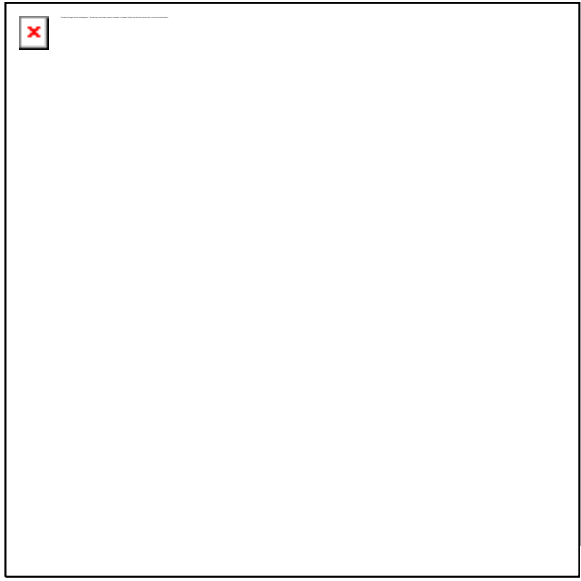
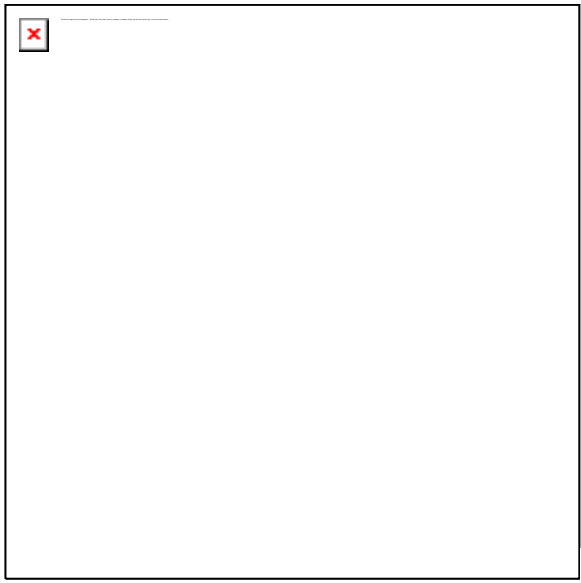
3.5.5. Bulk and Mass.



Building Height

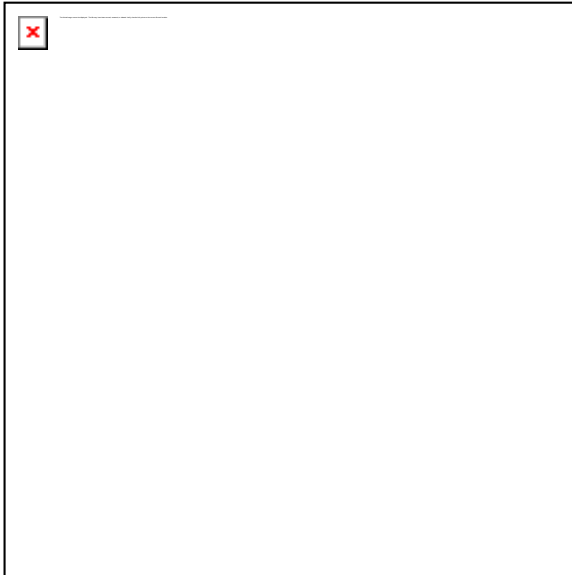


Min. Street-Facing Façade Height in Feet: 18 ft

	Max. Height in Stories:	4 stories
	Max. Height in Feet:	60 ft
The minimum permitted building height is wherever is more.		
The maximum permitted building height is whichever is less.		

Sec. 3.6. - DT-MU: Downtown Mixed-Use.

3.6.1. Purpose.



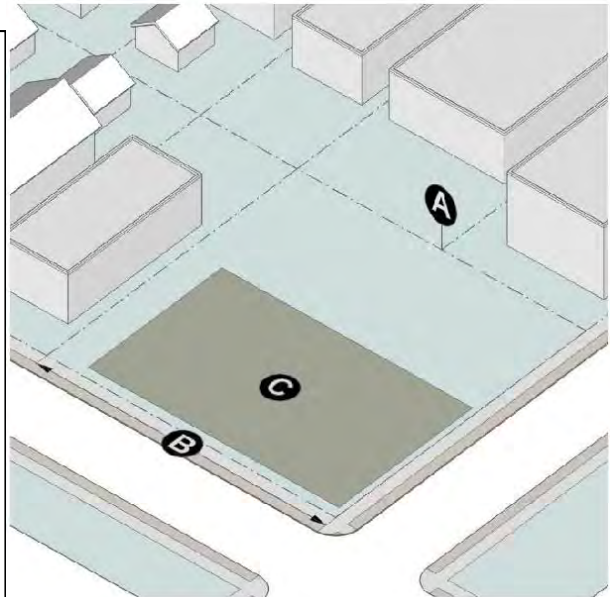
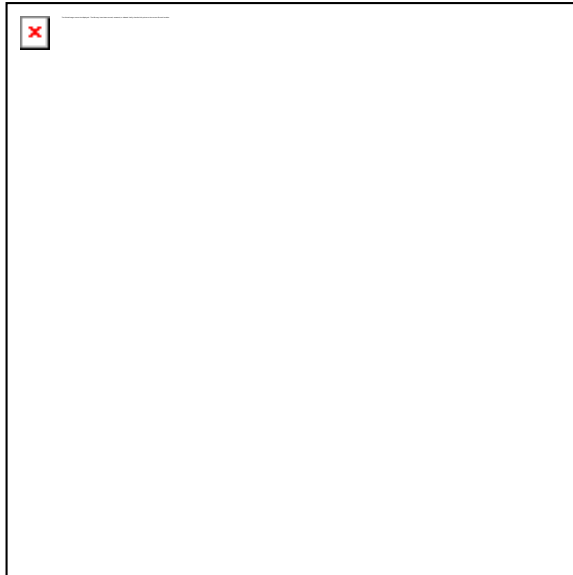
The purpose of this district is to provide for a variety of residential housing, commercial, and civic options along major corridors leading to the Downtown Core.

3.6.2. Building Types Allowed.

The following building types are allowed:

- A. Detached House
- B. Carriage House
- C. Semi-Detached House
- D. Townhouse
- E. Cottage Court
- F. Walk-Up Flat
- G. Stacked Flat
- H. Commercial House
- I. Shopfront
- J. Flex Building
- K. Mixed-Use Building
- L. General Building
- M. Civic Building

3.6.3. Dimensional Standards.

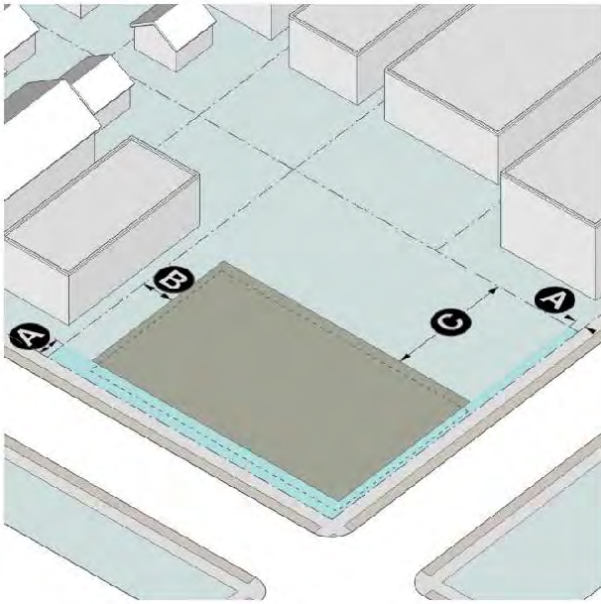


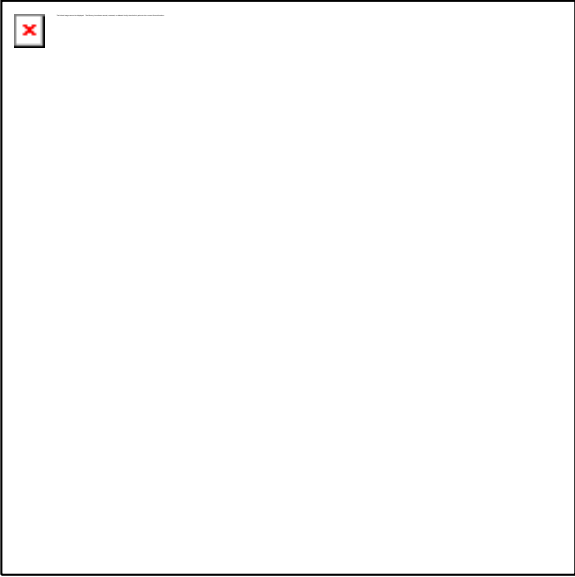
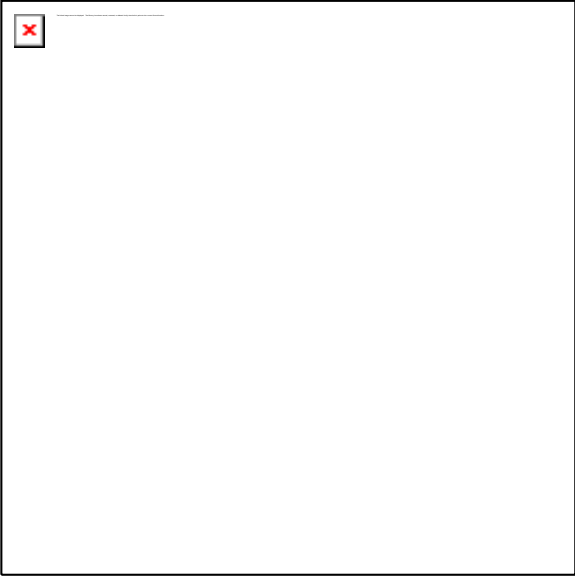
Site Standards for All Sites	
Residential Density (no Conditional Use Permit):	10 u/a
Residential Density (with Conditional Use Permit):	As approved by City Council
Min. Amenity Space Requirement:	10% of site
Additional Standards for Sites Over 5 Acres	
Min. Civic Space Requirements:	10% of site

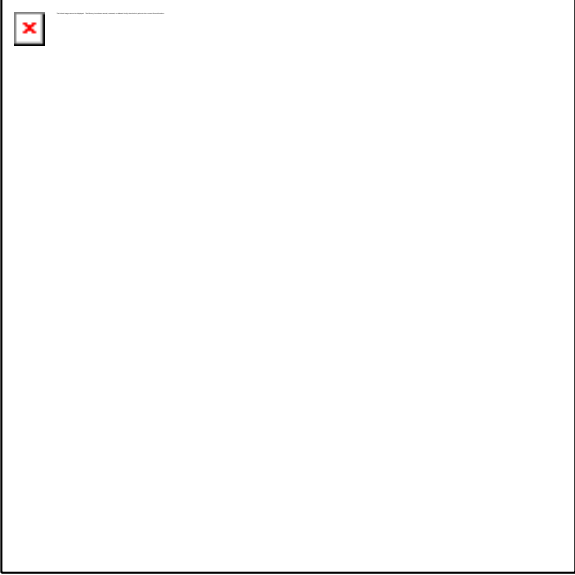
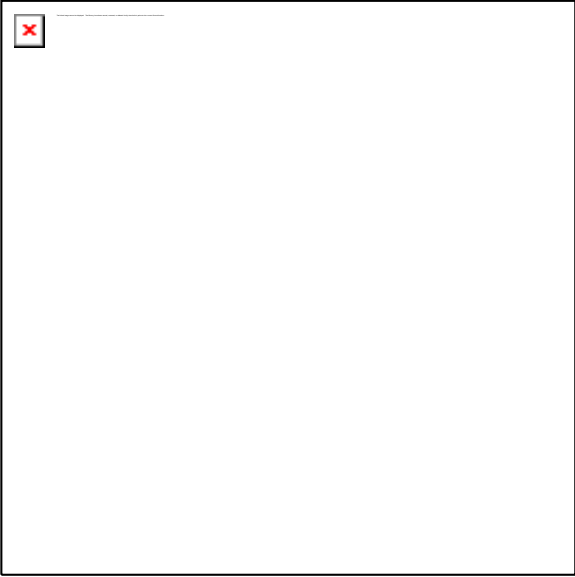
Lot Standards	 	
	Area	Width
Detached House:	2,500 sf min.	25 ft min.
Carriage House:	Same as principal structure	
Semi-Detached House:	2,500 sf min.	25 ft min.
Townhouse:	900 sf min.	20 ft min.
Cottage Court:	1,200 sf min.	20 ft min.
All other Building Types:	No min.	20 ft min.
Lot Coverage		

	All Building Types:	80% max.
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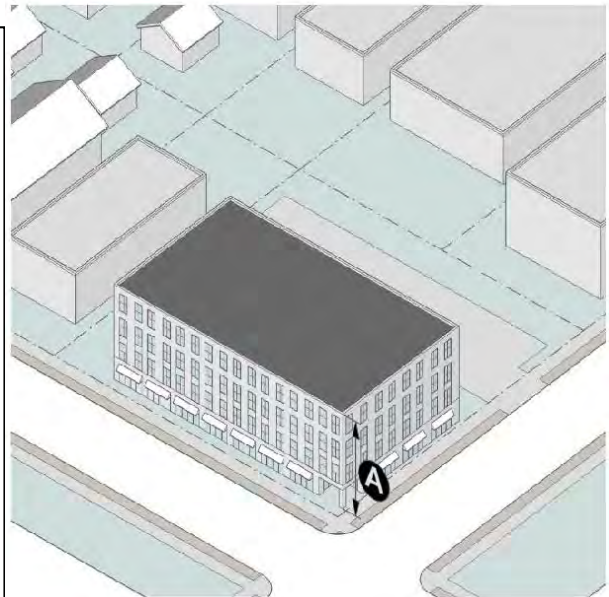
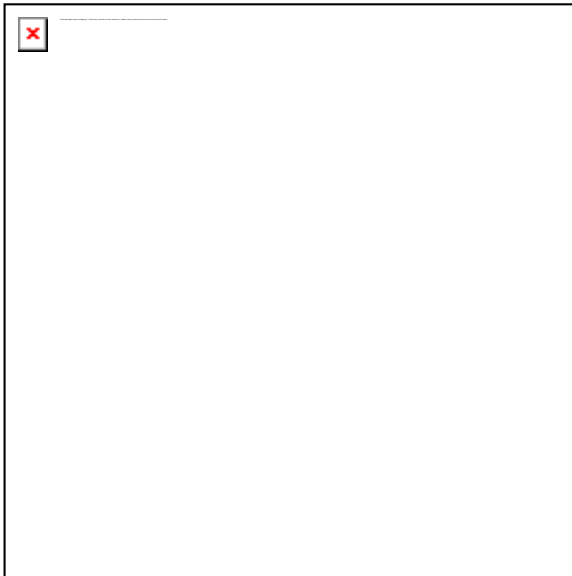
3.6.4. Building Placement.

	
Principal and Accessory Structure Setbacks	

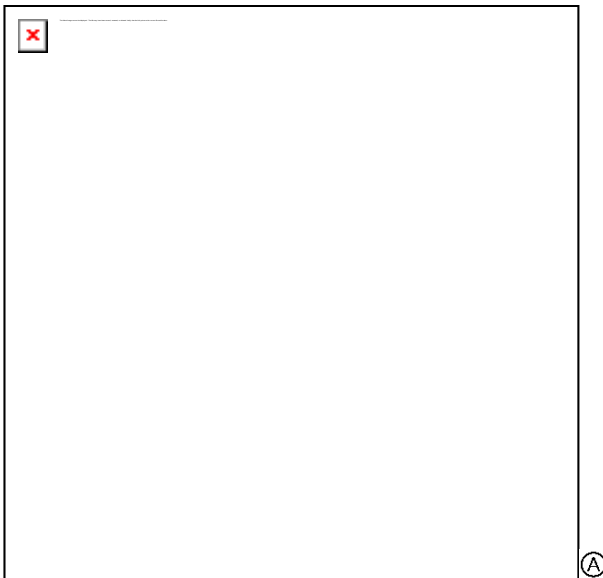
	Front Yard:	5 ft. min., 10 ft max.
	Side Yard:	0 ft. min.

	Rear Yard (no alley)	6 ft. min.
	Rear Yard (alley):	3 ft. min.
Greater side setbacks, greater rear setbacks, and greater building separation may be required as established by the applicable building or fire codes. <u>In order to optimize smart stormwater design, required setbacks may accommodate runoff reduction measures such as bioretention areas, cisterns, and greenwalls, provided such setbacks meet fire code standards. The runoff reduction measures may not compromise public safety such as the sight distance triangles required by the City and must include a long-term maintenance agreement. Above-ground cisterns or other vertical runoff reduction measures shall require approval by the Community Development Director.</u>		

3.6.5. Bulk and Mass.



Building Height



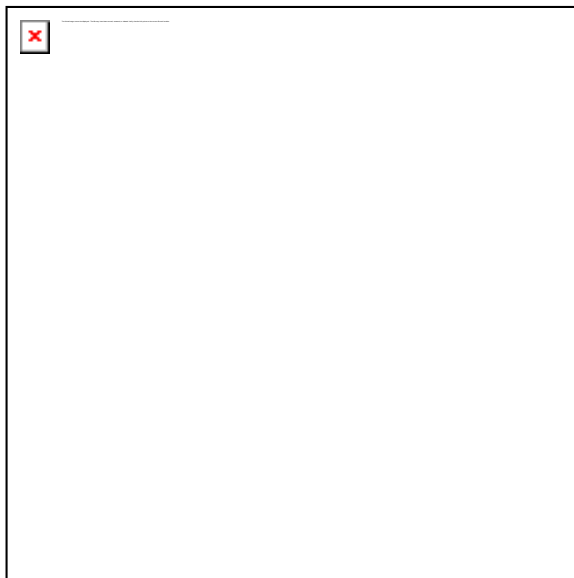
Max. Height in Stories:

4 stories

	Max. Height in Feet:	60 ft
The maximum permitted building height is whichever is less.		

Sec. 3.7. - DT-LW: Downtown Live-Work.

3.7.1. Purpose.



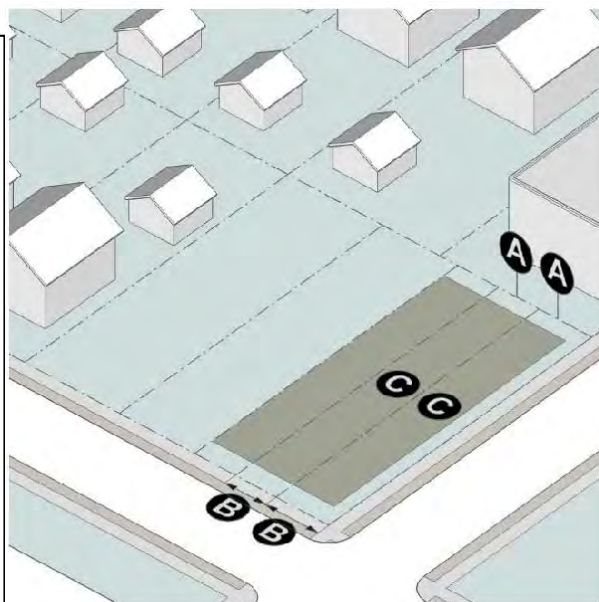
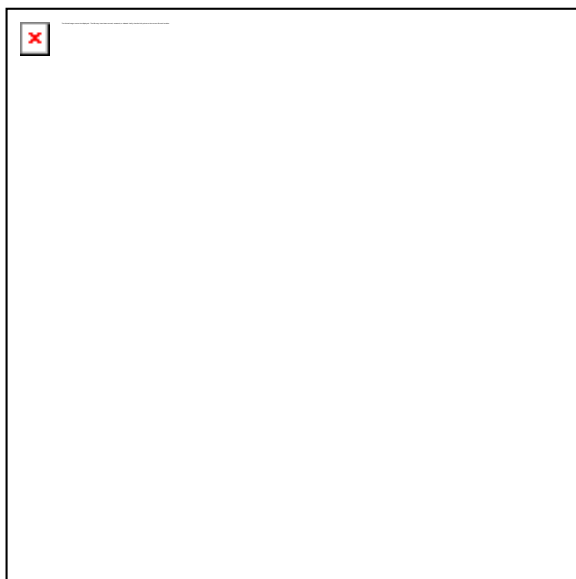
The purpose of this district is to provide for a variety of residential housing options, civic uses, and limited commercial uses and developments that are compatible with residential surroundings.

3.7.2. Building Types Allowed.

The following building types are allowed:

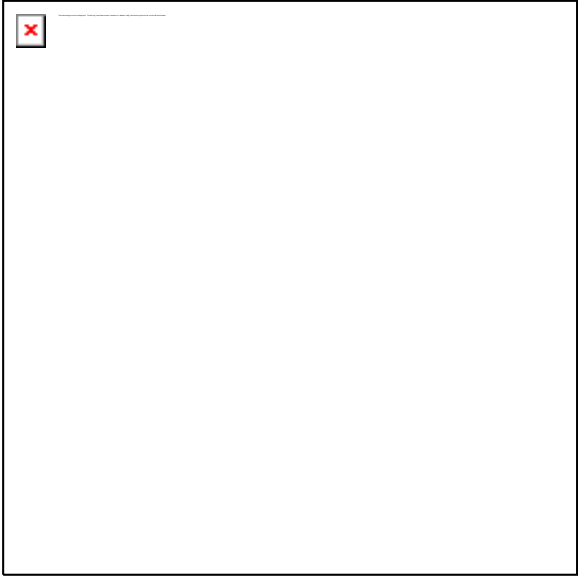
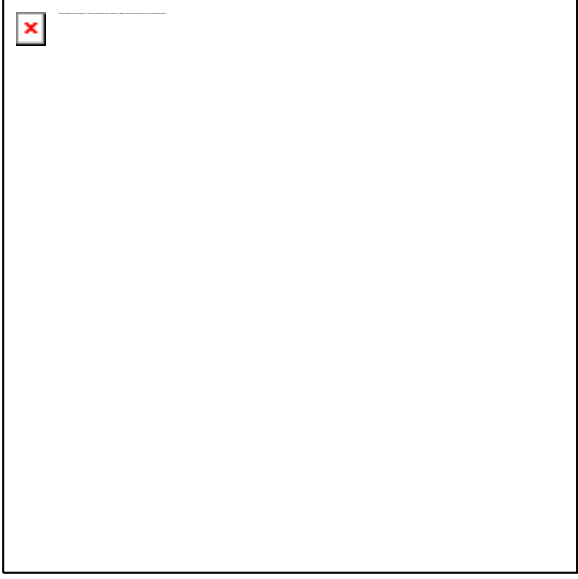
- A. Detached House
- B. Carriage House
- C. Semi-Detached House
- D. Townhouse
- E. Cottage Court
- F. Walk-Up Flat
- G. Commercial House
- H. Shopfront
- I. Flex Building
- J. Mixed-Use Building
- K. General Building
- L. Civic Building

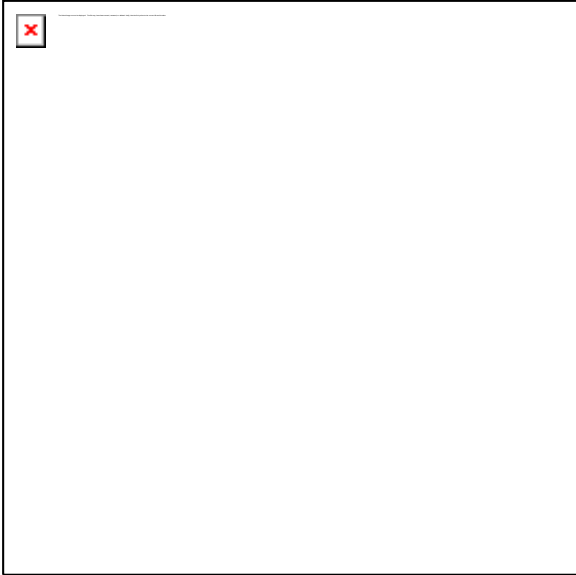
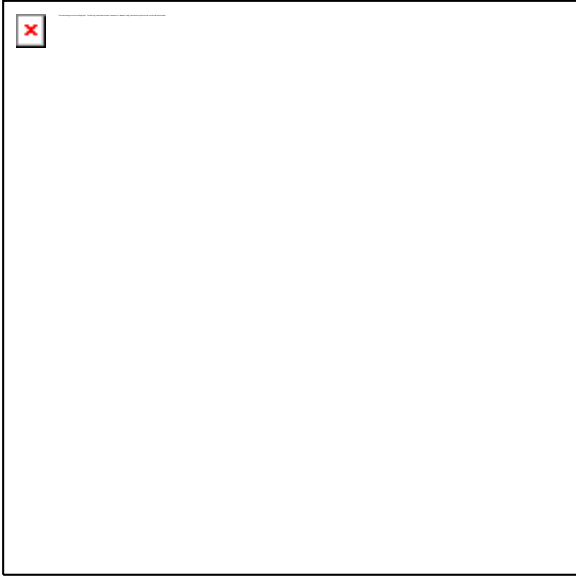
3.7.3. Dimensional Standards.



Site Standards	
Residential Density (without Conditional Use Permit):	8 u/a

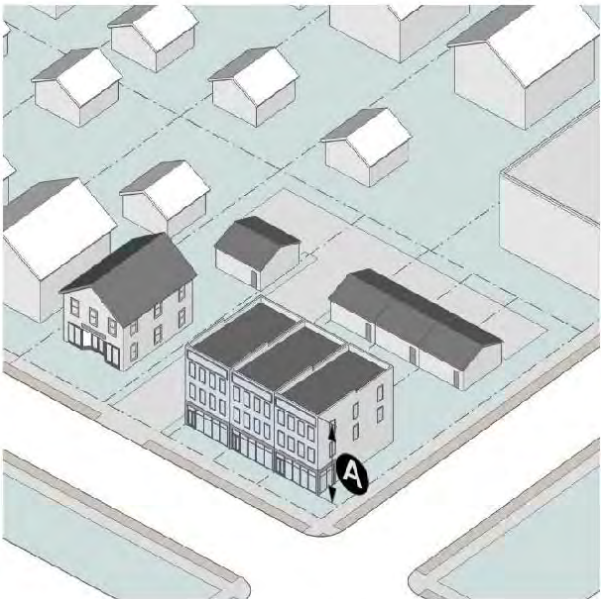
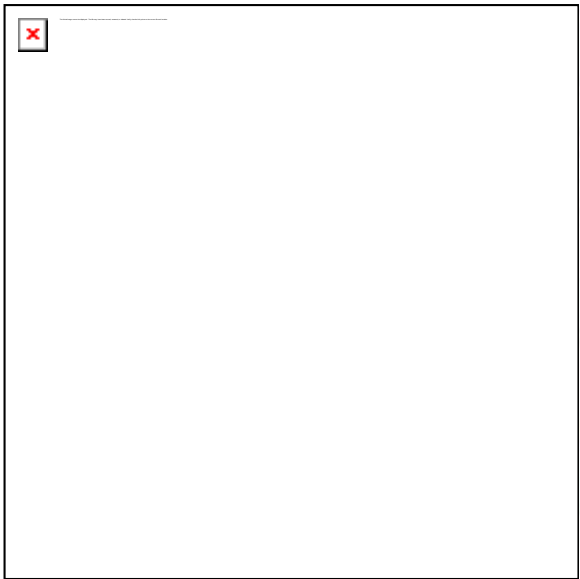
Residential Density (with Conditional Use Permit):	As approved by City Council	
Min. Amenity Space Requirement:	10% of site (all sites)	
Min. Civic Space Requirements:	10% of site (only sites over 5 acres)	
Lot Standards		
Detached House:	2,500 sf	25 ft
Carriage House:	Same as principal structure	
Semi-Detached House:	2,500 sf	25 ft
Townhouse:	900 sf	20 ft
Cottage Court:	1,200 sf	20 ft
All other Building Types:	2,500 sf	20 ft
Lot Coverage		

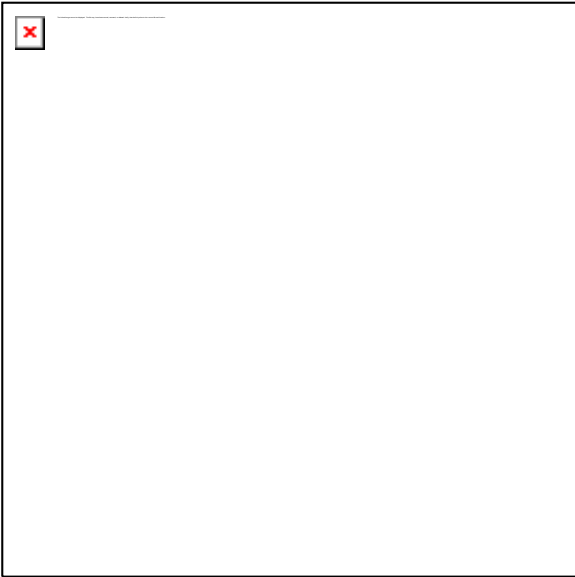
	Front Yard:	10 ft. min.
	Side Yard:	0 ft. min.

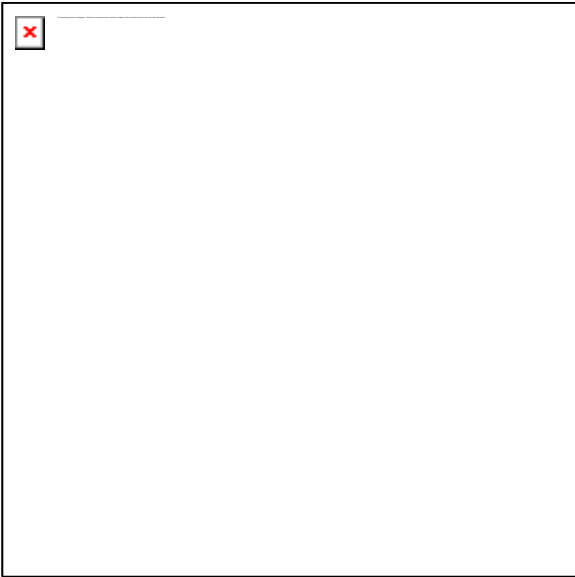
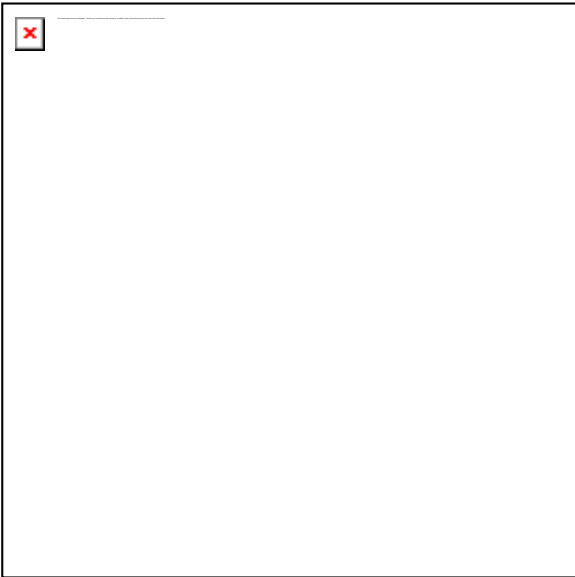
	Rear Yard (no alley)	3 ft. min.
	Rear Yard (alley):	10 ft. min.

Greater side setbacks, greater rear setbacks, and greater building separation may be required as established by the applicable building or fire codes. In order to optimize smart stormwater design, required setbacks may accommodate runoff reduction measures such as bioretention areas, cisterns, and greenwalls, provided such setbacks meet fire code standards. The runoff reduction measures may not compromise public safety such as the sight distance triangles required by the City and must include a long-term maintenance agreement. Above-ground cisterns or other vertical runoff reduction measures shall require approval by the Community Development Director.

3.7.5. Bulk and Mass.



Building Height		
	Max. Height in Stories:	3 stories

	Max. Height in Feet:	40 ft
The maximum permitted building height is whichever is less.		
Building Size		
	Max. Building Footprint:	10,000 sf

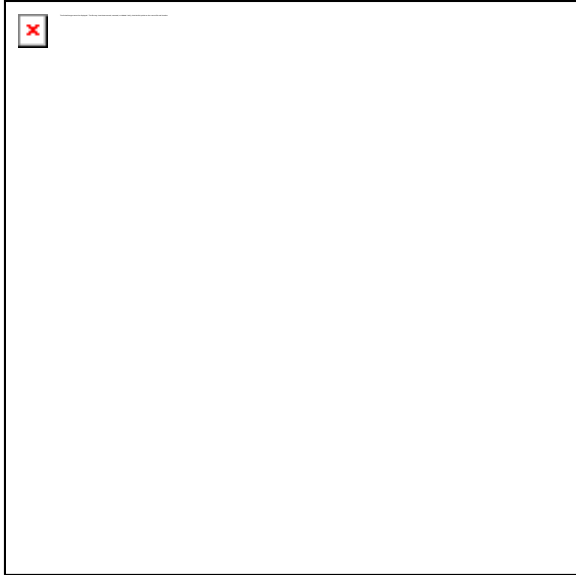
3.7.6. Commercial Parking Lot Requirements.

- A. Commercial parking lots must provide a minimum 10 feet wide landscape strip between parking bays. Such strip shall be provided in addition to the requirements of Section 2.3.5 of the Unified Development Code.

- B. The required landscape strip must be planted with a minimum of one shade tree for each 30 feet of landscape strip length or portion thereof.

Sec. 3.8. - DT-R: Downtown Residential.

3.8.1. Purpose.



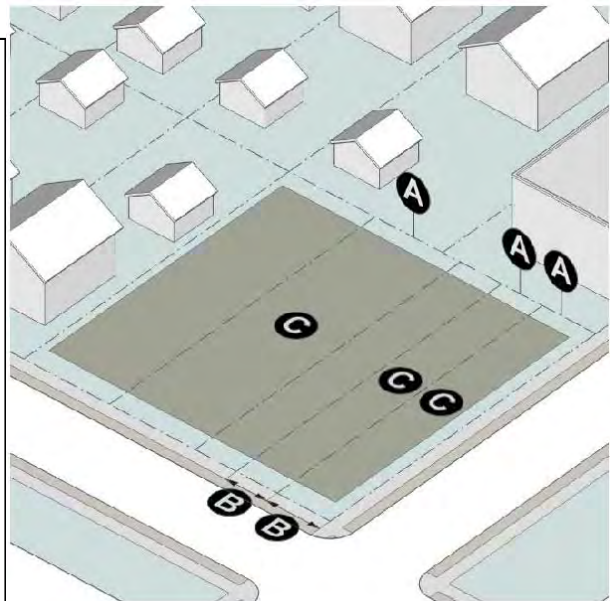
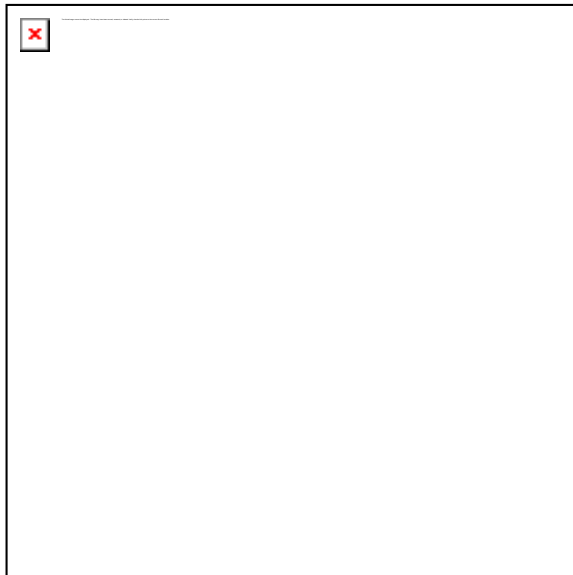
The purpose of this district is to provide for a variety of housing options in a residential setting.

3.8.2. Building Types Allowed.

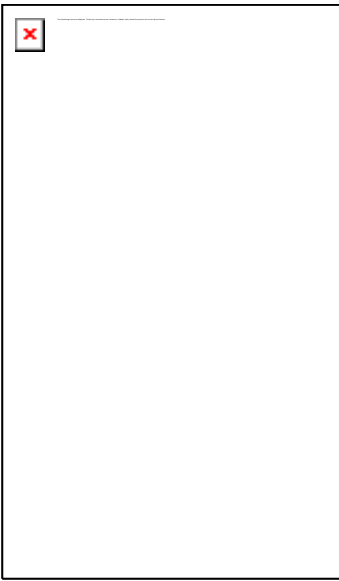
The following building types are allowed:

- A. Detached House
- B. Carriage House
- C. Semi-Detached House
- D. Townhouse
- E. Cottage Court
- F. Civic Building

3.8.3. Dimensional Standards.

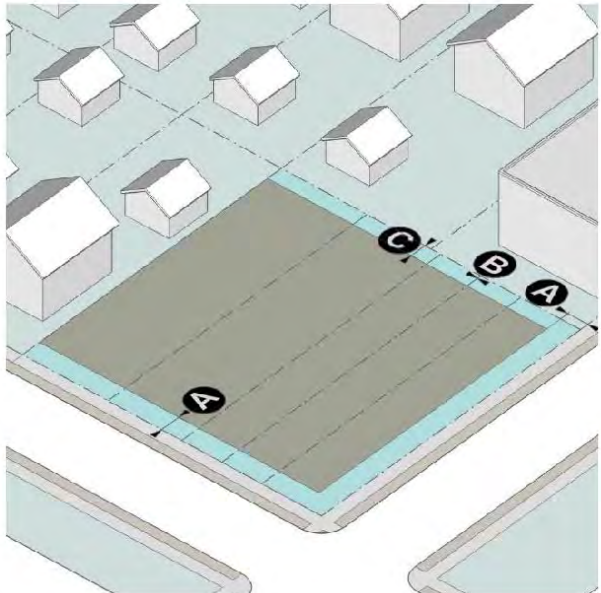


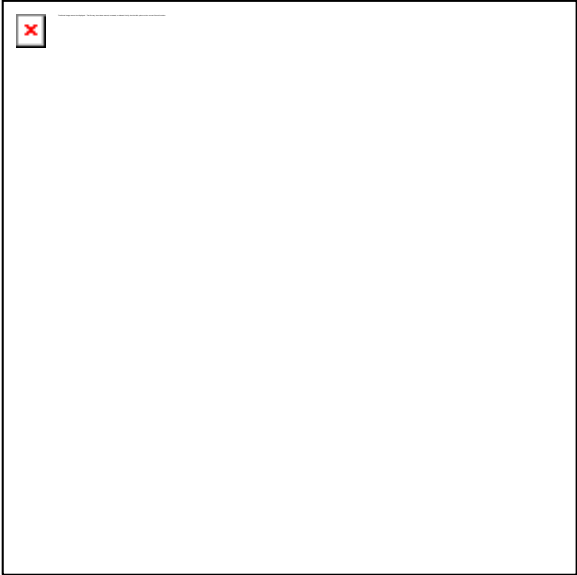
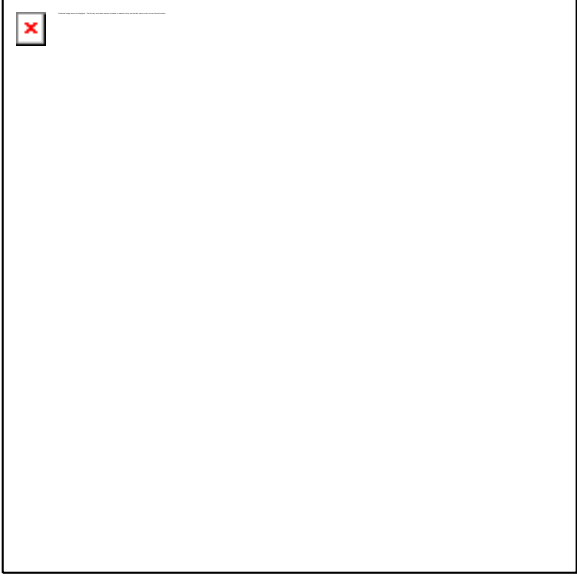
Site Standards	
Residential Density (without Conditional Use Permit):	8 u/a
Residential Density (with Conditional Use Permit):	As approved by City Council
Min. Amenity Space Requirement:	10% of site (all sites)
Min. Civic Space Requirements:	10% of site (only sites over 5 acres)

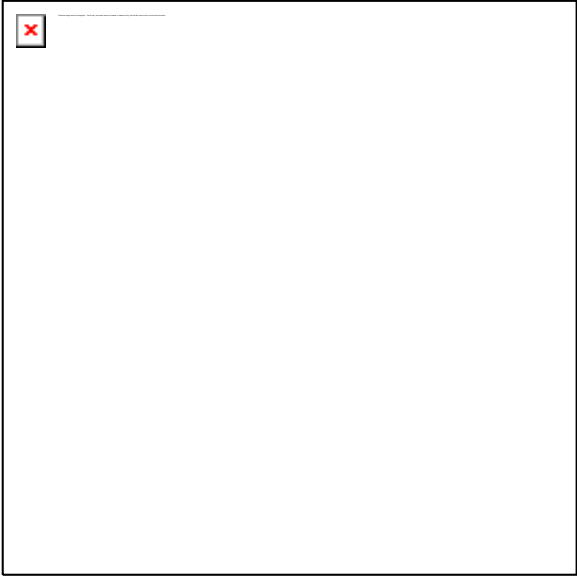
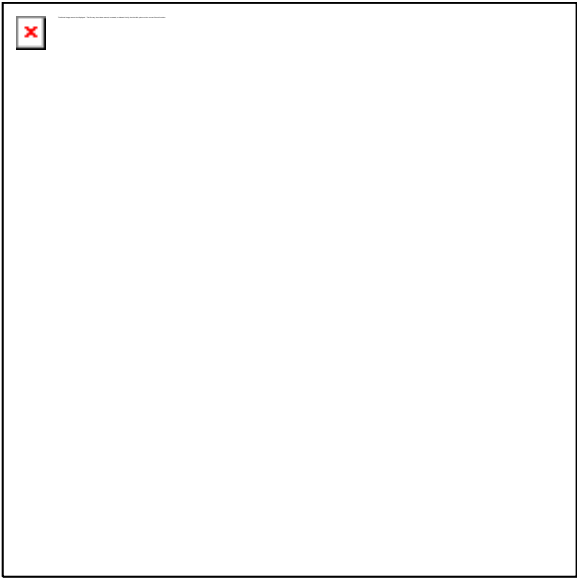
Lot Standards	 A	 B	Width
	Area		
Detached House:	2,500 sf	25 ft	
Carriage House:	Same as principal structure		
Semi-Detached House:	2,500 sf	25 ft	
Townhouse:	900 sf	20 ft	
Cottage Court:	1,200 sf	20 ft	
Civic Building:	5,000 sf	50 ft	
Lot Coverage			

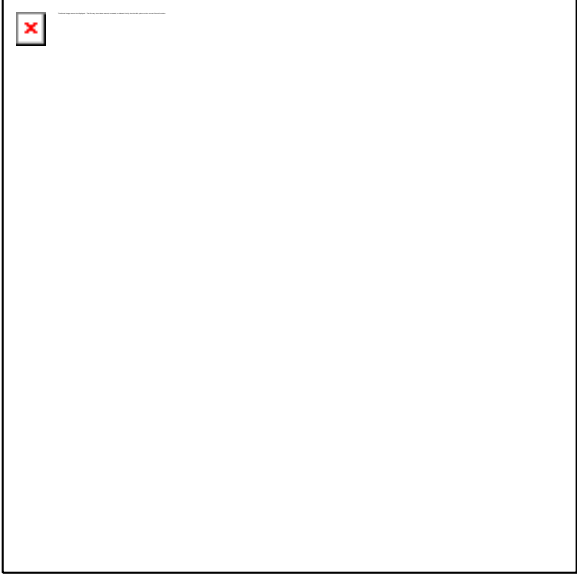
	All Building Types:	70% max.
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3.8.4. Building Placement.

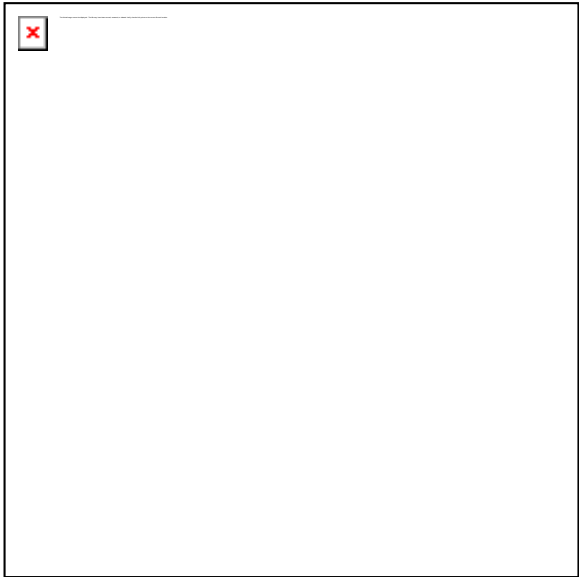
	
Principal and Accessory Structure Setbacks	

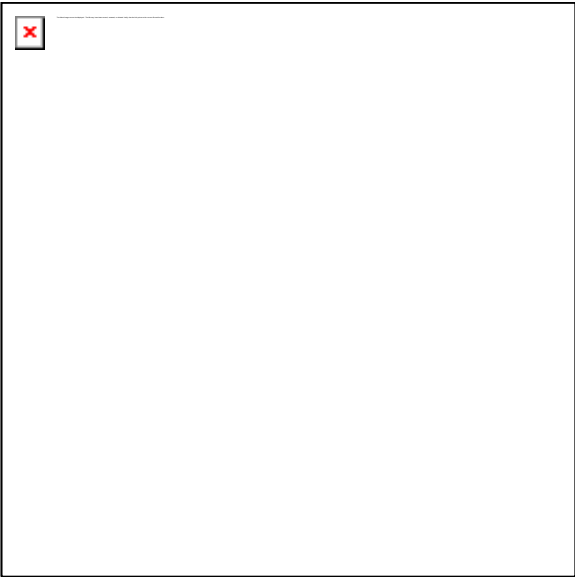
	Front Yard:	10 ft. min.
	Side Yard:	0 ft. min.

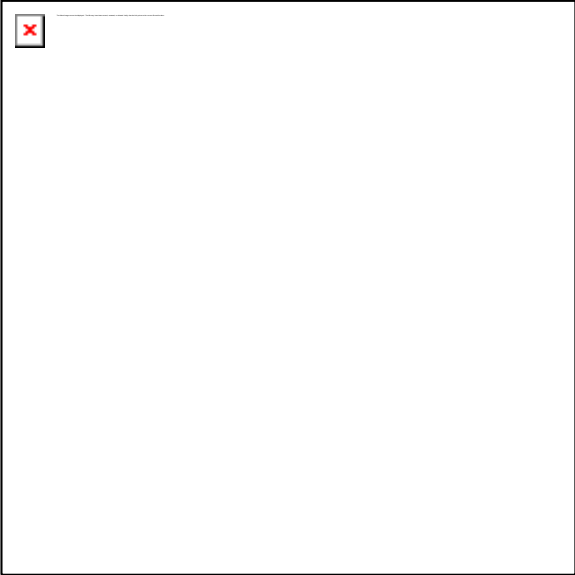
	Rear Yard (no alley):	3 ft. min.
	Rear Yard (alley):	10 ft. min.

	Front Yard:	3 ft. min.
Greater side setbacks, greater rear setbacks, and greater building separation may be required as established by the applicable building or fire codes. <u>In order to optimize smart stormwater design, required setbacks may accommodate runoff reduction measures such as bioretention areas, cisterns, and greenwalls, provided such setbacks meet fire code standards. The runoff reduction measures may not compromise public safety such as the sight distance triangles required by the City and must include a long-term maintenance agreement. Above-ground cisterns or other vertical runoff reduction measures shall require approval by the Community Development Director</u>		

3.8.5. Bulk and Mass.



Building Height		
	Max. Height in Stories:	3 stories

	Max. Height in Feet:	35 ft
The maximum permitted building height is whichever is less.		



STAFF REPORT

Submitting Department: Finance

Submitted By:

Meeting Date: December 12, 2016

I. AGENDA ITEM TITLE: FISCAL YEAR 2017 T-SPLOST BUDGET AMENDMENT (2ND READING)

II. RECOMMENDATION:

The purpose of this meeting is to discuss the initiatives contained within the T-SPLOST budget amendment and adopt the Fiscal Year 2017 T-SPLOST Budget Ordinance (2nd reading).

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: NO

FISCAL IMPACT: YES

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY
OPRT. BUDGET: NO

TOTAL PROJECT COST: \$3,000,000 (PLEASE REFER TO EXHIBIT A
FOR INFORMATION ON THE T-SPLOST PROJECTS BEING FUNDED
THROUGH THIS PHASE).

APPROPRIATIONS:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
T-SPLOST Collections (3 months; 33590200-313400)	\$3,000,000.00

EXTERNAL FUNDING SOURCES:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
Project Design/Project Management Services (33541100-541410)	\$3,000,000.00

IV. REPORT IN BRIEF:

The purpose of the Fiscal Year (FY) 2017 Metropolitan County Transportation Special Purpose Local Option Sales Tax ("T-SPLOST") Budget Amendment is to amend the base budget as adopted by City Council for the T-SPLOST activity forecasted to occur during fiscal year 2017.

Initiatives are discussed in detail within the attached Fiscal Year 2017 T-SPLOST Budget Amendment.

V. ALTERNATIVES:

VI. ATTACHMENTS:

T-SPLOST Budget Ordinance, T-SPLOST Budget (Exhibit A)



AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE CITY OF ALPHARETTA, GEORGIA, TO ADOPT THE FISCAL 2017 T-SPLOST BUDGET FOR THE CITY OF ALPHARETTA, GEORGIA APPROPRIATING THE AMOUNT SHOWN IN THE BUDGET AS EXPENDITURES, ADOPTING THE ITEM OF REVENUE ANTICIPATION, PROHIBITING EXPENDITURES TO EXCEED APPROPRIATIONS, AND PROHIBITING EXPENDITURES TO EXCEED ACTUAL FUNDING AVAILABLE.

WHEREAS, on November 8, 2016, the voters approved an additional 0.75% sales tax (Metropolitan County Transportation Special Purpose Local Option Sales Tax or "T-SPLOST") be collected in part of Fulton County (outside of the City of Atlanta) for five (5) years for the purposes of transportation improvements and congestion mitigation;

WHEREAS, T-SPLOST collections will begin on April 1, 2017 and continue to, through and including March 31, 2022;

WHEREAS, Fiscal Year 2017 will include three (3) months of collections (April 1, 2017 - June 30, 2017);

WHEREAS, the Director of Finance has presented a proposed fiscal year 2017 T-SPLOST budget that appropriates the three (3) months of collections in fiscal year 2017 towards transportation improvements and congestion mitigation; and

WHEREAS, these proposed amendments represent a balanced budget, so that anticipated revenues for the T-SPLOST Fund equals or exceed proposed expenditures;

NOW, THEREFORE BE IT ORDAINED that this T-SPLOST budget, "Exhibit A" attached hereto and by this reference made a part hereof this ordinance shall be the City of Alpharetta's fiscal year 2017 T-SPLOST budget; and

BE IT FURTHER ORDAINED that this T-SPLOST project-length budget be and is hereby approved and the revenue item shown in the budget for the T-SPLOST Fund in the amount anticipated is adopted and that the amount shown in the budget for the T-SPLOST Fund as a proposed expenditure is hereby appropriated to the departments named in the T-SPLOST Fund; and

BE IT FURTHER ORDAINED that the expenditures shall not exceed the appropriations authorized by this T-SPL0ST budget or amendments thereto provided; and that expenditures shall not exceed actual funding available.

ADOPTED this _____ day of _____, 2016.

CITY OF ALPHARETTA, GEORGIA

By: _____
David Belle Isle, Mayor

COUNCILMEMBERS

(SEAL)

Attest:

City Clerk

First Reading: _____

Second Reading: _____



City of Alpharetta, Georgia
Fiscal Year 2017
T-SPLOST Budget Amendment

The purpose of the Fiscal Year (FY) 2017 Metropolitan County Transportation Special Purpose Local Option Sales Tax ("T-SPLOST") Budget Amendment is to amend the base budget as adopted by City Council for the T-SPLOST activity forecasted to occur during fiscal year 2017.

T-SPLOST

On November 8, 2016, the voters approved an additional 0.75% sales tax (T-SPLOST) be collected in part of Fulton County (outside of the City of Atlanta) for five (5) years for the purposes of transportation improvements and congestion mitigation.

Alpharetta will receive 11.02% of the net proceeds¹ which is estimated at approximately \$60 million over the five year collection period (or an average of \$1 million monthly).

T-SPLOST collections will begin on April 1, 2017 and continue to, through and including March 31, 2022. Fiscal Year 2017 will include three (3) months of collections (April 1, 2017 – June 30,

¹ 1.0% of T-SPLOST collections will be paid to the State to defray the costs of administration of the Georgia Department of Revenue. An additional 0.5% of T-SPLOST collections will be allocated to Fulton County to cover costs associated with administering the T-SPLOST program. The remaining 98.5% represents the net proceeds distributed to the cities/ Fulton County.

2017). All T-SPLOST collections will be accounted for in a T-SPLOST Fund (Fund 335) in accordance with State Law and governmental accounting principles. The T-SPLOST Fund is a capital project fund that utilizes project-length budgeting (appropriations do not lapse at the end of the fiscal year but continue until project completion or reallocation). The budgetary legal level of control resides at the project level.

T-SPLOST FUND

The T-SPLOST Fund accounts for the collection of T-SPLOST revenues and the expenditure on eligible transportation improvements and congestion mitigation initiatives.

The FY 2017 T-SPLOST Budget Amendment appropriates the three (3) months of collections (April 1, 2017 – June 30, 2017) in fiscal year 2017 to fund design and project management services as follows:

- Full Design (design, surveying, geotechnical, traffic modeling, etc.)
 - Kimball Bridge Road Bicycle/Pedestrian/Operational Improvements
 - Bethany Road at Mid-Broadwell Road Intersection Improvements
 - Bethany Road at Mayfield Road Intersection Improvements
 - Morris Road Operational Improvements
- Conceptual Design
 - Old Milton Parkway Capacity Improvements
 - Windward Parkway Business District/Union Hill Road Capacity Improvements
- Project Management services will be provided through the City's on-call project management vendor (Atkins North America, Inc.).

LEGAL LEVEL OF CONTROL				
<u>T-SPLOST Fund</u>		Fiscal Year 2017		
		Current Budget Dec. 2016	Budget Amendment	Revised Budget Dec. 2016
	Account #			
Revenues by Source:				
T-SPLOST (3 months of collections)	33590200-313400	\$ -	\$ 3,000,000	\$ 3,000,000
		\$ -	\$ 3,000,000	\$ 3,000,000
Expenditures by Project:				
(1) Design/Project Management Services	33541100-541410	\$ -	\$ 3,000,000	\$ 3,000,000
		\$ -	\$ 3,000,000	\$ 3,000,000
<u>Notes:</u>				
(1) Funding will be allocated to specific project accounts upon approval by City Council.				



STAFF REPORT

Submitting Department: Public Works

Submitted By:

Meeting Date: December 12, 2016

I. AGENDA ITEM TITLE: TETRA TECH - DESIGN SERVICES FOR BETHANY ROAD AND WINDWARD PARKWAY

II. RECOMMENDATION:

Please award the following scopes of work to Tetra Tech in an amount totaling \$431,815: (A) full design of the Bethany Road at Mid-Broadwell Road Intersection Improvements (\$131,170); (B) full design of the Bethany Road at Mayfield Road Intersection Improvements (\$127,670); and (C) conceptual design of the Windward Parkway Business District/Union Hill Road Capacity Improvements (\$172,975). Authorize the Mayor to execute all necessary documents.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: YES

FISCAL IMPACT: YES

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST: \$431,815.00

APPROPRIATIONS:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
Bethany Rd at Mid-Broadwell Rd Intersection Imp. (Full Design; 33541100-541410-C1714)	\$131,170.00
Bethany Rd at Mayfield Rd Intersection Imp. (Full Design; 33541100-541410-C1715)	\$127,670.00
Windward Pkwy Business Dist./Union Hill Rd Capacity Imp. (Conceptual Design; 33541100-541410-C1718)	\$172,975.00
T-SPLOST Roadway Improvements (Reserve; 33541100-541410)	(\$431,815.00)

EXTERNAL FUNDING SOURCES:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
-	\$0.00
-	\$0.00
-	\$0.00
-	\$0.00

IV. REPORT IN BRIEF:

On November 8, 2016, the voters of Fulton County approved an additional 0.75% sales tax (T-SPLOST) be collected in part of Fulton County (outside of the City of Atlanta) for five (5) years for the purposes of transportation improvements and congestion mitigation. The City is utilizing T-SPLOST collections in FY 2017 to provide full-design/conceptual design services for T-SPLOST projects.

Staff is requesting that the following T-SPLOST scopes of work be awarded to Tetra Tech in an amount totaling \$431,815: (A) full design of the Bethany Road at Mid-Broadwell Road Intersection Improvements (\$131,170); (B) full design of the Bethany Road at Mayfield Road Intersection Improvements (\$127,670); and (C) conceptual design of the Windward Parkway Business District/Union Hill Road Capacity Improvements (\$172,975). Tetra-Tech is one of the City's on-call providers of Engineering Services. The cost proposals from Tetra Tech are in line with staff estimates and have been reviewed by Atkins (City's on-call provider of project management services) and found to be reasonable given the scope of work.

Bethany Road Intersection Improvements

Though a formal concept has not been developed, City planners recommend constructing a

roundabout at these two intersections to assist in improving traffic flow. Roundabouts will improve the flow of traffic compared to the current 4-way stop sign at the intersection of Bethany Road and Mayfield Road. Additionally, a roundabout at Bethany Road and Mid-Broadwell Road will assist drivers attempting to make a left hand turn from Bethany Road onto Mid-Broadwell Road.

Windward Parkway Business District/Union Hill Road Capacity Improvements

Windward Parkway will be examined from State Route 9 to Union Hill Road. Improvements consist of adding an additional lane in each direction. Due to the complexity of the project, the Public Works Department is requesting only to have Tetra Tech perform conceptual design work. Once a concept has been approved, we can move forward with obtaining a detailed design proposal. Windward Parkway was also part of the City of Milton's TSPLOST list. Department of Public Works will work with the City of Milton in developing the concept plans. The engineering firm Rochester and Associates originally designed Windward Parkway. They are also part of Tetra Tech's design services team.

Once contracts have been executed it should take approximately 5-6 months to complete the necessary design work associated with the roundabouts and 6-7 months to develop a concept plan for Windward Parkway.

V. ALTERNATIVES:

VI. ATTACHMENTS:

Project Overview - Bethany at Mid-Broadwell, Project Overview-Bethany at Mayfield, Project Overview-Windward Parkway, Cost Proposal -Mid-Broadwell, Cost Proposal - Mayfield, Cost Proposal - Windward Parkway

Bethany Road at MidBroadwell Road Intersection

ALP-008

Project Description

Intersection operational improvements potentially incorporating a roundabout.

Project Details

TYPE	Roadway Intersection (any mode)
MAIN ROUTE	MidBroadwell Road
EXTENTS	Bethany Road at MidBroadwell Road Intersection
LOCATION	Western Alpharetta
LENGTH (miles)	0.10
GDOT/ ARC ID	

Project Cost Estimate

ENGINEERING COST	\$75,000
RIGHT-OF-WAY COST	\$200,000
CONSTRUCTION COST	\$1,000,000
OTHER COSTS	
TOTAL CAPITAL COST	\$1,275,000
CITY TSPLOST FUNDS	Alpharetta \$1,275,000

Project Implementation

LOCAL LEAD	Alpharetta
------------	------------

Funding Partners

DESIGN	
RIGHT-OF-WAY	
CONSTRUCTION	

Project Status

DESIGN	
ROW	
CONSTRUCTION	
ENVIRONMENTAL	Not started

Project Timeline

READY FOR CONSTRUCTION	6 mo.
ANTICIPATED LENGTH OF CONSTRUCTION	6 mo.

Notes:



Bethany Road at Mayfield Road Intersection

ALP-007

Project Description

Intersection improvement changing this all way stop to roundabout intersection control.

Project Details

TYPE	Roadway Intersection (any mode)
MAIN ROUTE	Mayfield Road
EXTENTS	Bethany Road at Mayfield Road Intersection
LOCATION	Western Alpharetta
LENGTH (miles)	0.10
GDOT/ ARC ID	

Project Cost Estimate

ENGINEERING COST	\$75,000
RIGHT-OF-WAY COST	\$200,000
CONSTRUCTION COST	\$1,000,000
OTHER COSTS	
TOTAL CAPITAL COST	\$1,275,000
CITY TSPLOST FUNDS	Alpharetta \$1,275,000

Project Implementation

LOCAL LEAD	Alpharetta
------------	------------

Funding Partners

DESIGN	
RIGHT-OF-WAY	
CONSTRUCTION	

Project Status

DESIGN	
ROW	
CONSTRUCTION	
ENVIRONMENTAL	Not started

Project Timeline

READY FOR CONSTRUCTION	6 mo.
ANTICIPATED LENGTH OF CONSTRUCTION	6 mo.

Notes:

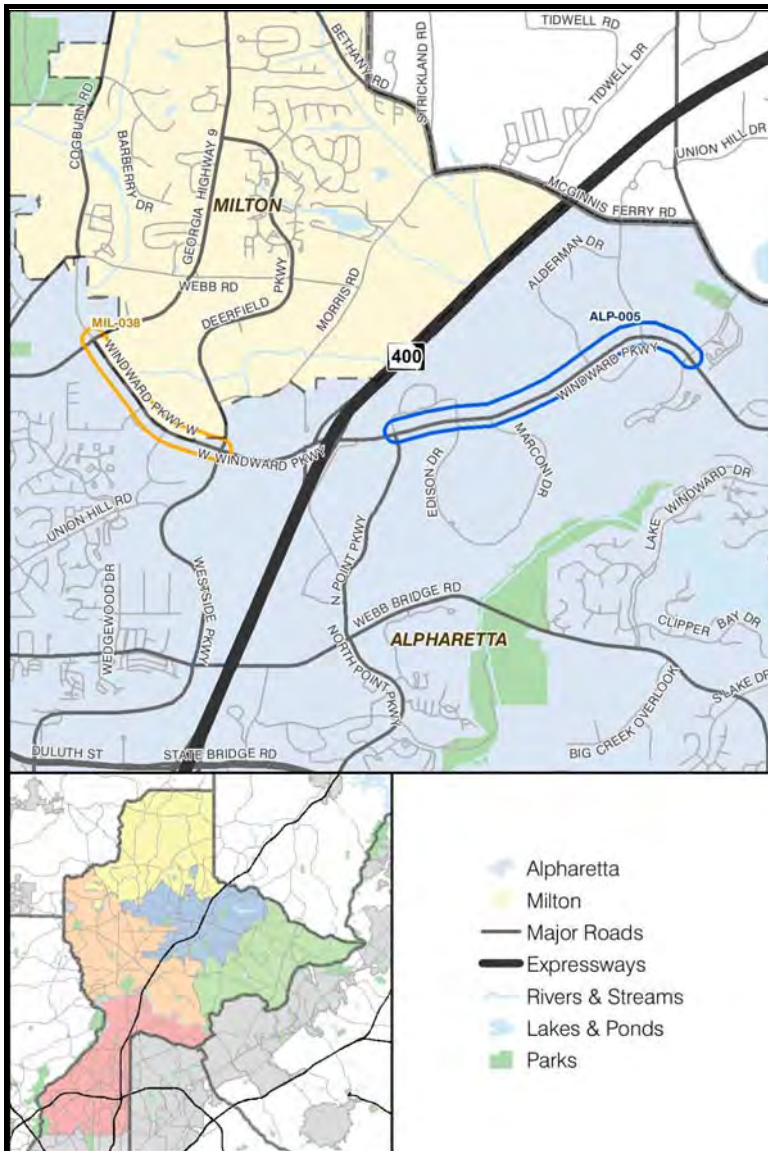


Windward Parkway Business District/Union Hill Road Capacity Improvements

ALP-005, MIL-038

Project Description

This capacity improvement is intended to relieve congestion through Windward's business district east of Union Hill Road, complementing the concurrent Alpharetta bond project and interchange enhancement efforts west of GA 400. Project will add a travel lane in each direction and enhance the bicycle and pedestrian accommodations.



Project Details

TYPE	Roadway Corridor (Multimodal)
MAIN ROUTE	Windward Parkway
EXTENTS	From North Point Parkway to Union Hill Road and from Deerfield Pkwy to SR 9
LOCATION	East/West corridor in northeast Alpharetta
LENGTH (miles)	2.10
GDOT/ ARC ID	

Project Cost Estimate

ENGINEERING COST		\$500,000
RIGHT-OF-WAY COST		
CONSTRUCTION COST		\$15,000,000
OTHER COSTS		
TOTAL CAPITAL COST		\$15,500,000
CITY TSPLOST FUNDS	Alpharetta	\$15,500,000
	Milton	\$500,000

Project Implementation

LOCAL LEAD	Alpharetta
------------	------------

Funding Partners

DESIGN	Other
RIGHT-OF-WAY	Other
CONSTRUCTION	Other
Alpharetta	

Project Status

DESIGN	
ROW	
CONSTRUCTION	
ENVIRONMENTAL	Not started

Project Timeline

READY FOR CONSTRUCTION	9 mo.
ANTICIPATED LENGTH OF CONSTRUCTION	18 mo.

Notes:

Scope of Work submitted to City of Alpharetta Department of Public Works for Task Order #6: Bethany & Mid Broadwell Intersection Improvements Project

Submitted to:

**Pete Sewczwicz
Director of Public Works
City of Alpharetta Department of Public Works
1790 Hembree Road
Alpharetta, Georgia 30009**

**Email: psewczwicz@alpharetta.ga.us
Phone: (678) 297-6219**

Submitted by:

**Tetra Tech, Inc.
1899 Powers Ferry Road
Suite 400
Atlanta, Georgia 30339**

**Email: brian.watson@tetrattech.com
Phone: (770) 738-6030**

December 5, 2016

A. Introduction

The City of Alpharetta (City) has requested the design of a roundabout at the intersection of Bethany Road and Mid Broadwell Road. The current configuration of this intersection has a stop condition on the minor street approaches (Bethany Rd & Pindell Cir) and no stop control on Mid Broadwell, which is the major roadway. This intersection experiences significant vehicle back-ups along Mid Broadwell Road and Bethany Road during peak traffic times. The intent of this project is to improve traffic flow through this intersection and reduce the vehicle back-ups experienced.

The proposed improvements will consist of a single lane roundabout to accommodate a tractor trailer (AASHTO WB-67) as the design vehicle. The design will incorporate modifications to the drainage system as well as identifying utility conflicts. The posted speed limit on Mid Broadwell Road and Bethany Road is 40 MPH and 35 MPH respectively.

Some of the known existing site conditions to be considered during the design are listed below.

- Existing lake and associated buffers to the NE of the intersection.
- Possible state waters exiting the lake and flowing south under Mid Broadwell Road.
- Overhead and underground utilities.
- Pedestrian crossings at the intersection and connection to existing sidewalk.
- Entrance monument for subdivision in SW corner of intersection.
- Superelevated roadway section of Mid Broadwell Road at intersection.

This project is being performed in accordance with the City of Alpharetta/Tetra Tech On-Call Engineering Contract (16-1009) executed August 19, 2016.

B. Scope of Work

This project includes the survey, design, plans and specifications for the construction of single lane roundabout as described above. Below is a description for each task including in this work.

Task 1. Pre-Design Survey:

- A. JURISDICTIONAL WATERS/STREAM DELINEATION & MAPPING – Tt will conduct a field investigation, marking of jurisdictional wetlands, Federal Waters, State Waters and required buffers for use in determining project constraints. Services include an exhibit that delineates site findings to be used during the concept and design.
- B. UNDERGROUND UTILITY MAPPING – Provide underground power, water, gas, and communications utility location within the project limits. Underground utilities shall be researched and marked by a third-party consultant utilizing Radio Frequency technique with field location and measurement of the markings provided by RAI personnel. This

scope of work includes performing hydro vacuum excavation bores (SUE Level “A”) in six locations. It is assumed that traffic control necessary to perform the hydro vacuum bores will be provided by the City and is therefore not included in this scope of work. The marked locations provided by said third-party consultant shall be field located and measured within reasonable survey tolerances.

C. **GROUND RUN TOPOGRAPHIC SURVEY** – Prepare a field run topographic survey of the intersection and its approaches up to 1,000 linear feet in each direction from the center of the intersection. The data will be collected at appropriate intervals to produce two-foot contours. Topographic mapping and survey will show and include ground identifiable planimetric features. The survey for will extend from Right-of-Way to Right-of-Way plus an additional 25’-50’. The survey data will be placed on the Georgia State Plane Coordinate System (NAD 83) and the Vertical Datum for the topographic survey will be NAVD 88. The database of survey will provide the following information:

- Jurisdictional waters as determined and marked under Item A above.
- Utility locations as marked under Item B above.
- Trees 8” and larger.
- Property parcels abutting corridor right-of-way, as needed.
- Location and sizes of storm sewer systems, manhole, catch basin, drop inlet, curb inlet with rim and invert elevations, if accessible; pipe size; inverts and material, if accessible; headwalls, flared end sections; other drainage structures, if accessible and as needed.
- Sanitary sewer systems; manhole rims and inverts, pipe sizes and materials, if accessible and as needed.
- Location of valves, meters and other gas main appurtenances, if accessible and surface evident.
- Location of overhead electric lines, telephone lines and appurtenances.
- Location of other underground utilities on or adjacent to the project site, if surface evident in the field.
- Rock outcrops or other outstanding site features, if evident in the field.
- Location of fences and walls, and materials of which they are constructed.
- Location of existing signs

Task 2. Design and Construction Documents:

The proposed roundabout intersection design will be performed in accordance with the City of Alpharetta requirements and GDOT Design Policy Manual along with the National Cooperative Highway Research Program (NCHRP) Report 672, Roundabouts: An Informational Guide, 2nd Edition, which GDOT has adopted as the guidance for roundabout design.

A. **CONCEPT PLAN** – A conceptual horizontal road alignment based on input from the City and results of the field survey performed under Task 1 will be prepared. This conceptual layout will include the proposed horizontal layout of the roundabout. This concept will also serve as a 30% design for review and comment from the City.

B. CONSTRUCTION DRAWINGS – Based on the conceptual layout prepared as described above and comments received from the City, construction drawings will be developed. Construction Drawings will be submitted for City review and comment at 60%, 90% and 100% design stages. The drawings listed below are anticipated to be included in the Construction Drawings as part of this project. Additional plans to be included with these Construction Drawings are further described below.

- Cover Sheet
- General Notes
- Existing Conditions/Demolition Plans
- Layout Plans
- Roadway Plan and Profiles
- Grading and Drainage Plans
- Utility Plans (Water, Sanitary & Storm Sewer only; others by utility owner)
- Storm Sewer Plan & Profiles
- Sanitary Sewer Plan & Profiles
- Signage and Striping Plans
- Construction Details

C. EROSION AND SEDIMENT POLLUTION CONTROL PLAN (ESPC Plan) – Prepare ESPC Plans for the site development in conformance with NPDES, Georgia EPD and City of Alpharetta Erosion Control Ordinances. Work shall include a narrative description summarizing existing conditions, proposed uses, maintenance issues and activity schedules. Work shall also include the preparation of the Notice of Intent (NOI) applications to be signed by the Client and any contractor involved in a land disturbance activity.

D. OPINION OF PROBABLE CONSTRUCTION COST – RAI will develop an opinion of probable construction cost and estimate construction duration for the work based at the 60%, 90% and 100% design submittals for the above mentioned scope of service.

E. SPECIFICATIONS – RAI will prepare technical specifications for the project based upon the design drawings and other input provided by the City. RAI will provide the technical specifications to the Client to combine with the City's contract and bidding documents and compilation of a bid manual.

Task 3. Bidding and Construction Assistance:

A. EROSION CONTROL SITE VISIT – As the design professional for the ESPC Plan, RAI will perform one site visit after the Phase I erosion control measures have been installed in accordance with NPDES permit requirements to monitor the effectiveness of the silt & erosion control measures provided in the construction plans. RAI will provide a report of any deficiencies in the siltation and erosion control measures within 7 days of the site

visit. The Client must notify RAI within 7 days of the installation of Phase I erosion control measures.

- B. It is our understanding that the City of Alpharetta and its project manager will be responsible for bidding the project. The Tetra Tech team will be available to answer any questions from bidders as requested by the City.
- C. It is our understanding that the City of Alpharetta and its project manager will be responsible for construction administration and oversight. The Tetra Tech team will be available to answer any questions from the contractor as requested by the City.

Task 4. Landscape Design:

- A. LANDSCAPE PLANS – If requested by the City, landscaping plans for the islands and approaches will be prepared in accordance with the City of Alpharetta’s requirements. It is our understanding that the City may elect to do this work with its own staff.

Task 5. Rendered/Animated Exhibits:

- A. Tetra Tech will prepare a traffic simulation model of the existing and proposed traffic conditions during the PM peak hour. Tetra Tech will utilize VISSIM and GEOPAK or similar software to generate the model. In addition to the existing and proposed roadway, roundabout and approaches, 3-4 different view perspectives and the major roadside topography will be included in the simulation. The visualization will assist the City in presenting the intent and design of the project to the project stake holders.

C. Project Cost

The costs are based on our current understanding of the project requirements and best estimates of level of effort required to perform the basic services and may be subject to change upon agreement between City of Alpharetta and Tetra Tech. This project will be billed on a Lump Sum basis at a Firm Fixed Price of \$131,170.

Task #	Description	Fee
Task 1	Pre Design Survey	\$32,700
Task 2	Design and Construction Documents	\$74,380
Task 3	Bidding and Construction Assistance	Hourly
Task 4	Landscape Design	\$6,050
Task 5	Rendered/Animated Exhibits	\$18,040
TOTAL		\$131,170

D. Project Schedule

The approximate duration noted for each task is based on our current understanding and best estimates of time required to perform the basic services and may be subject to change upon agreement between City of Alpharetta and Tetra Tech.

Task #	Description	Estimated Duration
Task 1	Pre Design Survey	2 weeks
Task 2	Design and Construction Documents	12 weeks
Task 3	Bidding and Construction Assistance	As Requested
Task 4	Landscape Design	3 weeks
Task 5	Rendered/Animated Exhibits	5 weeks

E. Assumptions

The scope of services and project costs shown above were developed with the following assumptions and exclusions:

- City of Alpharetta will provide existing survey and GIS information available.
- City of Alpharetta will provide AutoCAD files of standard details, city standard specifications, and city notes.
- City of Alpharetta will organize and perform stakeholder meetings as needed.
- Schedule includes 1-week review times for the 30%, 60% and 90% submittals.
- City of Alpharetta will provide traffic control if needed for survey work, including hydro vacuum bores.
- City of Alpharetta will prepare any necessary exhibits and documents needed for any proposed easement or Right-Of-Way acquisition.

Scope of Work submitted to City of Alpharetta Department of Public Works for Task Order #7: Bethany & Mayfield Intersection Improvements Project

Submitted to:

**Pete Sewczwicz
Director of Public Works
City of Alpharetta Department of Public Works
1790 Hembree Road
Alpharetta, Georgia 30009**

**Email: psewczwicz@alpharetta.ga.us
Phone: (678) 297-6219**

Submitted by:

**Tetra Tech, Inc.
1899 Powers Ferry Road
Suite 400
Atlanta, Georgia 30339**

**Email: brian.watson@tetrattech.com
Phone: (770) 738-6030**

December 5, 2016

A. Introduction

The City of Alpharetta (City) has requested the design of a roundabout at the intersection of Bethany Road and Mayfield Road. The current configuration of this intersection has a stop condition on all approaches (4-way stop). This intersection experiences significant vehicle back-ups along Mayfield Road and Bethany Road during peak traffic times. The intent of this project is to improve traffic flow through this intersection and reduce the vehicle back-ups experienced.

The proposed improvements will consist of a single lane roundabout to accommodate a tractor trailer (AASHTO WB-67) as the design vehicle. The design will incorporate modifications to the drainage system as well as identifying utility conflicts. A sidewalk connection, with detailed grading, will be included in the proposed work from the improved intersection to Chantilly Drive along both Bethany Road and Mayfield Road. A 4' bicycle lane will also be incorporated in the improvements along Mayfield Road. The posted speed limit on Mayfield Road is 35 MPH. The posted speed limit on the south approach of Bethany Road is 35 MPH and the posted speed limit on the north approach of Bethany Road is 40 MPH. Some of the known existing site conditions to be considered during the design are listed below.

- Numerous utility cabinets located in the NE corner of the intersection.
- Gas vaults to the SE of intersection as well as other overhead and underground utilities.
- Existing driveway connecting in NE corner of the intersection.

This project is being performed in accordance with the City of Alpharetta/Tetra Tech On-Call Engineering Contract (16-1009) executed August 19, 2016.

B. Scope of Work

This project includes the survey, design, plans and specifications for the construction of single lane roundabout as described above. Below is a description for each task including in this work.

Task 1. Pre-Design Survey:

- UNDERGROUND UTILITY MAPPING** – Provide underground power, water, gas, and communications utility location within the project limits. Underground utilities shall be researched and marked by a third-party consultant utilizing Radio Frequency technique with field location and measurement of the markings provided by RAI personnel. This scope of work includes performing hydro vacuum excavation bores (SUE Level “A”) in six locations. It is assumed that traffic control necessary to perform the hydro vacuum bores will be provided by the City and is therefore not included in this scope of work. The marked locations provided by said third-party consultant shall be field located and measured within reasonable survey tolerances.

B. GROUND RUN TOPOGRAPHIC SURVEY – Prepare a field run topographic survey of the intersection and its approaches up to 1,000 linear feet in each direction from the center of the intersection. The data will be collected at appropriate intervals to produce two-foot contours. Topographic mapping and survey will show and include ground identifiable planimetric features. The survey will extend from Right-of-Way to Right-of-Way plus an additional 25'-50'. The survey data will be placed on the Georgia State Plane Coordinate System (NAD 83) and the Vertical Datum for the topographic survey will be NAVD 88. The database of survey will provide the following information:

- Utility locations as marked under Item B above.
- Trees 8" and larger.
- Property parcels abutting corridor right-of-way, as needed.
- Location and sizes of storm sewer systems, manhole, catch basin, drop inlet, curb inlet with rim and invert elevations, if accessible; pipe size; inverts and material, if accessible; headwalls, flared end sections; other drainage structures, if accessible and as needed.
- Sanitary sewer systems; manhole rims and inverts, pipe sizes and materials, if accessible and as needed.
- Location of valves, meters and other gas main appurtenances, if accessible and surface evident.
- Location of overhead electric lines, telephone lines and appurtenances.
- Location of other underground utilities on or adjacent to the project site, if surface evident in the field.
- Rock outcrops or other outstanding site features, if evident in the field.
- Location of fences and walls, and materials of which they are constructed.
- Location of existing signs

Task 2. Design and Construction Documents:

The proposed roundabout intersection design will be performed in accordance with the City of Alpharetta requirements and GDOT Design Policy Manual along with the National Cooperative Highway Research Program (NCHRP) Report 672, Roundabouts: An Informational Guide, 2nd Edition, which GDOT has adopted as the guidance for roundabout design.

- A. CONCEPT PLAN – A conceptual horizontal road alignment based on input from the City and results of the field survey performed under Task 1 will be prepared. This conceptual layout will include the proposed horizontal layout of the roundabout. This concept will also serve as a 30% design for review and comment from the City.
- B. CONSTRUCTION DRAWINGS – Based on the conceptual layout prepared as described above and comments received from the City, construction drawings will be developed. Construction Drawings will be submitted for City review and comment at 60%, 90% and 100% design stages. The drawings listed below are anticipated to be included in the Construction Drawings as part of this project. Additional plans to be included with these Construction Drawings are further described below.

- Cover Sheet
 - General Notes
 - Existing Conditions/Demolition Plans
 - Layout Plans
 - Roadway Plan and Profiles
 - Grading and Drainage Plans
 - Utility Plans (Water, Sanitary & Storm Sewer only; others by utility owner)
 - Storm Sewer Plan & Profiles
 - Sanitary Sewer Plan & Profiles
 - Signage and Striping Plans
 - Construction Details
- C. **EROSION AND SEDIMENT POLLUTION CONTROL PLAN (ESPC Plan)** – Prepare ESPC Plans for the site development in conformance with NPDES, Georgia EPD and City of Alpharetta Erosion Control Ordinances. Work shall include a narrative description summarizing existing conditions, proposed uses, maintenance issues and activity schedules. Work shall also include the preparation of the Notice of Intent (NOI) applications to be signed by the Client and any contractor involved in a land disturbance activity.
- D. **OPINION OF PROBABLE CONSTRUCTION COST** – RAI will develop an opinion of probable construction cost and estimate construction duration for the work based at the 60%, 90% and 100% design submittals for the above mentioned scope of service.
- E. **SPECIFICATIONS** – RAI will prepare technical specifications for the project based upon the design drawings and other input provided by the City. RAI will provide the technical specifications to the Client to combine with the City’s contract and bidding documents and compilation of a bid manual.

Task 3. Bidding and Construction Assistance:

- A. **EROSION CONTROL SITE VISIT** – As the design professional for the ESPC Plan, RAI will perform one site visit after the Phase I erosion control measures have been installed in accordance with NPDES permit requirements to monitor the effectiveness of the silt & erosion control measures provided in the construction plans. RAI will provide a report of any deficiencies in the siltation and erosion control measures within 7 days of the site visit. The Client must notify RAI within 7 days of the installation of Phase I erosion control measures.
- B. It is our understanding that the City of Alpharetta and its project manager will be responsible for bidding the project. The Tetra Tech team will be available to answer any questions from bidders as requested by the City.

- C. It is our understanding that the City of Alpharetta and its project manager will be responsible for construction administration and oversight. The Tetra Tech team will be available to answer any questions from the contractor as requested by the City.

Task 4. Landscape Design:

- A. LANDSCAPE PLANS – If requested by the City, landscaping plans for the islands and approaches will be prepared in accordance with the City of Alpharetta's requirements. It is our understanding that the City may elect to do this work with its own staff.

Task 5. Rendered/Animated Exhibits:

- A. Tetra Tech will prepare a traffic simulation model of the existing and proposed traffic conditions during the PM peak hour. Tetra Tech will utilize VISSIM and GEOPAK or similar software to generate the model. In addition to the existing and proposed roadway, roundabout and approaches, 3-4 different view perspectives and the major roadside topography will be included in the simulation. The visualization will assist the City in presenting the intent and design of the project to the project stake holders.

C. Project Cost

The costs are based on our current understanding of the project requirements and best estimates of level of effort required to perform the basic services and may be subject to change upon agreement between City of Alpharetta and Tetra Tech. This project will be billed on a Lump Sum basis at a Firm Fixed Price of \$127,670.

Task #	Description	Fee
Task 1	Pre Design Survey	\$29,200
Task 2	Design and Construction Documents	\$74,380
Task 3	Bidding and Construction Assistance	Hourly
Task 4	Landscape Design	\$6,500
Task 5	Rendered/Animated Exhibits	\$18,040
TOTAL		\$127,670

D. Project Schedule

The approximate duration noted for each task is based on our current understanding and best estimates of time required to perform the basic services and may be subject to change upon agreement between City of Alpharetta and Tetra Tech.

Task #	Description	Estimated Duration
Task 1	Pre Design Survey	2 weeks
Task 2	Design and Construction Documents	12 weeks
Task 3	Bidding and Construction Assistance	As Requested
Task 4	Landscape Design	3 weeks
Task 5	Rendered/Animated Exhibits	5 weeks

E. Assumptions

The scope of services and project costs shown above were developed with the following assumptions and exclusions:

- City of Alpharetta will provide existing survey and GIS information available.
- City of Alpharetta will provide AutoCAD files of standard details, city standard specifications, and city notes.
- City of Alpharetta will organize and perform stakeholder meetings as needed.
- Schedule includes 1-week review times for the 30%, 60% and 90% submittals.
- City of Alpharetta will provide traffic control if needed for survey work, including hydro vacuum bores.
- City of Alpharetta will prepare any necessary exhibits and documents needed for any proposed easement or Right-Of-Way acquisition.

Scope of Work submitted to City of Alpharetta Department of Public Works for Task Order #8: Windward Parkway Concept Design SR 9 to Union Hill Road

Submitted to:

**Pete Sewczwicz
Director of Public Works
City of Alpharetta Department of Public Works
1790 Hembree Road
Alpharetta, Georgia 30009**

**Email: psewczwicz@alpharetta.ga.us
Phone: (678) 297-6219**

Submitted by:

**Tetra Tech, Inc.
1899 Powers Ferry Road
Suite 400
Atlanta, Georgia 30339**

**Email: brian.watson@tetrattech.com
Phone: (770) 738-6030**

December 5, 2016

A. Introduction

The City of Alpharetta (City) has requested conceptual design for the widening of Windward Parkway from 4 lanes to 6 lanes from the intersection of SR 9 to Union Hill Road. The conceptual design will also include the widening of Union Hill Road to 4 lanes from Windward Parkway to McGinnis Ferry Road. The current road layout has 2 lanes in each direction with multiple right turn lanes. The proposed layout will eliminate the right turn lanes to create an additional lane in each direction. A 4' bicycle lane will also be included in both directions along Windward Parkway.

The conceptual layout will not include the section of Windward Parkway in the area of SR 400. It is our understanding that this area is being design under a separate contract. Coordination with the design consultant to connect to this work will be included in this work.

The future greenway crossing of Union Hill Road will be considered as part of the conceptual design. A tunnel crossing will be evaluated near Union Hill Park where the future path will connect.

This project is being performed in accordance with the City of Alpharetta/Tetra Tech On-Call Engineering Contract (16-1009) executed August 19, 2016.

B. Scope of Work

This project includes the conceptual design of the proposed road widening as described above. Below is a description for each task including in this work.

Task 1. Underground Utility Locates (Optional):

Provide underground power, water, gas, and communications utility location within the project limits. Underground utilities shall be researched and marked by a third-party consultant utilizing Radio Frequency technique with field location and measurement of the markings provided by RAI personnel. The marked locations provided by said third-party consultant shall be field located and measured within reasonable survey tolerances under Task 2. A description of work performed under this task is listed below.

- A. Physical Markings - Paint and/or flags will be placed on the ground directly above all traceable underground utilities within the specified area. Each utility will be marked with a specific color. Underground utilities will be located utilizing radio frequency techniques. This technique is capable of locating metallic utilities and other utilities with tracer wires. Non-metallic utilities and utilities without tracer wires will not be physically marked on the ground. Utilities not located utilizing this technique may exist, but not be marked, and may be disturbed upon excavation. Also, we will not locate underground storage tanks, irrigation systems, traffic control wires and cables as well as sewer and storm drain lines.

- B. Site Sketch - A detailed sketch of the subject site will be provided in electronic format. Said sketch will detail the approximate locations of all underground utilities. This sketch may be added to an existing drawing of the site, or to an aerial photograph of the site. Notes will be placed on the sketch indicating possible existence of underground utilities and improvements that were not marked on the ground. This sketch will be used in conjunction with the field surveyed locations from Task 2 to prepare an accurate database.
- C. Utility Owner Information -The owner of each respective utility affecting the subject site will be determined and documented, including names, addresses and phone numbers. The sources of this information will be from a "one call" Ticket and other sources as may be required.
- D. Limitations - UtiliSurvey, LLC, will expend reasonable efforts to determine the actual location of all existing underground utilities within the project area. It is expressly understood by both parties that utilities may exist within the subject area, but not be marked or located, especially if no above ground evidence of the utility exists. We locate underground utilities solely as an accommodation and our markings/locates shall not be used for excavation. We accept no liability for ANY underground utilities that are not locate or marked by us.

Task 2. Utility Mapping Survey (Optional):

- A. Field survey the underground utility locations marked under Task 1 above. In addition, gravity storm and sanitary sewer systems will be surveyed with pipe invert, size and material information. The survey data will be placed on the Georgia State Plane Coordinate System (NAD 83) and the Vertical Datum for the topographic survey will be NAVD 88. The survey will collect the following information:
 - Utility locations as marked under Item B above.
 - Location and sizes of storm sewer systems, manhole, catch basin, drop inlet, curb inlet with rim and invert elevations, if accessible; pipe size; inverts and material, if accessible as needed.
 - Sanitary sewer systems; manhole rims and inverts, pipe sizes and materials, if accessible and as needed.
 - Location of valves, meters and other gas main appurtenances, if accessible and surface evident.
 - Location of overhead electric lines, telephone lines and appurtenances.

Task 3. Aerial LiDAR and Imagery (Optional):

In order to provide an accurate survey database to build the concept upon that can also be used to progress the design once approved, we recommend that aerial LiDAR data be collected and utilized given the length of the project corridor. This task would include the acquisition of LiDAR data at approximately 20 points per meter and imagery to support 1"= 50' mapping and 3" pixel resolution orthophotography. The project also includes the extraction of planimetric and DTM features in order to supply final deliverables meeting GDOT CADD Standards. The full scope of the project is outlined below.

- A. Acquisition of simultaneous helicopter LiDAR and digital imagery dataset resulting in point density of approximately 20 points per meter and 0.25' pixel imagery.
- B. The LiDAR and imagery will be post processed base station recording at 1 sec epochs during aerial data acquisition.
- C. Control to be utilized in calibration consisting of 8 XYZ points.
- D. Classification of data within the corridor.
- E. Compilation of Linear Road Features from LiDAR data within the project area to include:
 - a. Lane Lines
 - b. Edge of Pavement (Shoulder)
 - c. Curbs
 - d. Sidewalks
- F. Compilation of non-Road planimetric and DTM features within the corridor from aerial imagery and supplemented with LiDAR derivatives. Compilation of planimetrics will follow Georgia DOT CADD standards.
- G. Generation of 1' contour data utilizing classified bare earth LiDAR and compiled breakline data.
- H. Project Deliverables
 - a. Georgia DOT-formatted CADD files, including:
 - i. Planimetrics
 - ii. DTM
 - iii. 1' Contours
 - b. Color orthophotography with 3" pixel resolution delivered in TIFF/TFW format
 - c. Calibrated, bare earth classified LIDAR in LAS format. Classifications will include
 - i. Class 1-Default
 - ii. Class 2-Ground
 - d. LiDAR Accuracy report

Task 4. Conceptual Design:

A conceptual horizontal road widening layout will be prepared based on input from the City as well as evaluations from the available topographic data, aerial imagery, available utility mapping and site visits. The road corridor is heavily developed and has several utilities, trees, parking areas and topographical components that will need to be considered. This section also has several traffic signals and a bridge that will need to be addressed. For this reason, it is our recommendation to complete the survey database as described in Tasks 1-3 above to be used for the conceptual layout. The horizontal layout will have significant conflicts with utilities and other features, some of which could have an impact on the layout. This approach provides a better opportunity to identify these conflicts and design constraints at the concept stage so that a better understanding of the impacts from the proposed widening can be conveyed to all the stakeholders.

Site visits will be performed to review the proposed layout against on site conditions and document areas containing constraints or special consideration. Information gathered will be used in the layout of the proposed improvements. The horizontal layout prepared will be evaluated against available topographic data (GIS or LiDAR, if performed) to identify walls and significant slopes they may have an impact on properties or project costs. Intersections will be reviewed for proposed signal modifications required to accommodate the improvements.

The proposed deliverable will be aerial imagery overlaid with the proposed roadway widening limits shown. The corridor will be studied in detail to identify significant conflicts and areas that may have design and/or permitting challenges. The proposed improvements along Windward Parkway from Westside Parkway to SR 400 performed by another consultant will be incorporated into the conceptual plan as well. The proposed conceptual layout will be designed to connect to these improvements. A memo style report containing a summary of proposed improvements and any design constraints identified will also be provided.

If the City chooses to have the survey database prepared as outlined in Tasks 1-3, it is anticipated that the conceptual plan produced under this task would be close to a 30% design which could be built upon for final design and construction drawings when appropriate.

C. Project Cost

The costs are based on our current understanding of the project requirements and best estimates of level of effort required to perform the basic services and may be subject to change upon agreement between City of Alpharetta and Tetra Tech. This project will be billed on a Lump Sum basis at a Firm Fixed Price of \$172,975.

Task #	Description	Fee
Task 1	Underground Utility Locates (Optional)	\$17,970
Task 2	Utility Mapping Survey (Optional)	\$29,040
Task 3	Aerial LiDAR and Imagery (Optional)	\$34,485
Task 4	Conceptual Design	\$91,480
TOTAL		\$172,975

D. Project Schedule

The approximate duration noted for each task is based on our current understanding and best estimates of time required to perform the basic services and may be subject to change upon agreement between City of Alpharetta and Tetra Tech.

Task #	Description	Estimated Duration
Task 1	Underground Utility Locates (Optional)	3 weeks
Task 2	Utility Mapping Survey (Optional)	4 weeks
Task 3	Aerial LiDAR and Imagery (Optional)	4 weeks
Task 4	Conceptual Design	15 weeks

E. Assumptions

The scope of services and project costs shown above were developed with the following assumptions and exclusions:

- City of Alpharetta will provide GIS parcel and Right-Of-Way information available to be used for project corridor.
- If the optional survey work is not performed, the City will provide GIS topographic data for use.
- GIS stream data will be utilized for the database.
- City of Alpharetta will provide proposed improvements at SR 400 performed by others.
- City of Alpharetta will organize and perform stakeholder meetings as needed.



STAFF REPORT

Submitting Department: Public Works

Submitted By:

Meeting Date: December 12, 2016

I. AGENDA ITEM TITLE: POND AND COMPANY - DESIGN SERVICES FOR MORRIS ROAD (WEBB BRIDGE ROAD TO OLD MILTON)

II. RECOMMENDATION:

Please award design services associated with Morris Road Operational Improvements to POND in the amount of \$143,565.00 and authorize the Mayor to execute all necessary documents.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: YES

FISCAL IMPACT: YES

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST: \$143,565.00

APPROPRIATIONS:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
Morris Road Operational Improvements (Full Design; 33541100-541410-C1716)	\$143,565.00
T-SPLOST Roadway Improvements (Reserve; 33541100-541410)	(\$143,565.00)

EXTERNAL FUNDING SOURCES:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
-	\$0.00
-	\$0.00

IV. REPORT IN BRIEF:

On November 8, 2016, the voters of Fulton County approved an additional 0.75% sales tax (T-SPLOST) be collected in part of Fulton County (outside of the City of Atlanta) for five (5) years for the purposes of transportation improvements and congestion mitigation. The City is utilizing T-SPLOST collections in FY 2017 to provide full-design/conceptual design services for T-SPLOST projects.

Staff is requesting that full-design services for the Morris Road Operational Improvements (T-SPLOST project) be awarded to POND in an amount totaling \$143,565. POND is one of the City's on-call providers of Engineering Services. The cost proposal from POND is in line with staff estimates and has been reviewed by Atkins (City's on-call provider of project management services) and found to be reasonable given the scope of work.

Morris Road Operational Improvements

The volume of traffic along Morris Road between Old Milton Parkway and Webb Bridge Road has made turning movements difficult and backed up traffic during peak times. Providing new turning lanes and potentially additional travel lanes will improve traffic flow along Morris Road.

Once contracts have been executed it should take 12 months to complete the necessary design work associated with the improvements to Morris Road.

V. ALTERNATIVES:

VI. ATTACHMENTS:

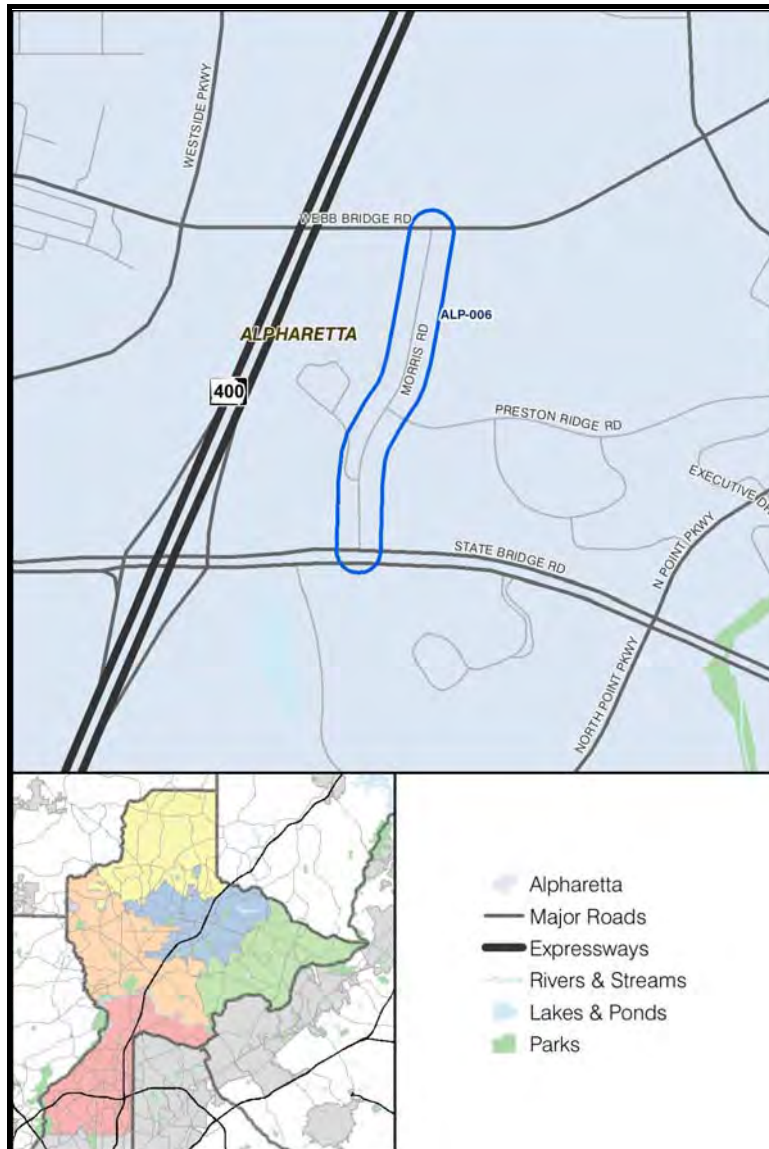
Project Overview-Morris Road, Cost Proposal - Morris Road

Morris Road Operational Improvements

ALP-006

Project Description

This operational project along Morris Road will provide the appropriate auxiliary lanes to accommodate the heavy traffic flow from both Old Milton Parkway and Webb Bridge Road. Project will also provide pedestrian and bicycle accommodations



Project Details

TYPE	Roadway Corridor (Multimodal)
MAIN ROUTE	Morris Road
EXTENTS	From Old Milton Parkway (SR 120) to Webb Bridge Road
LOCATION	North/South corridor west of GA 400
LENGTH (miles)	0.41
GDOT/ ARC ID	

Project Cost Estimate

ENGINEERING COST	\$100,000
RIGHT-OF-WAY COST	\$100,000
CONSTRUCTION COST	\$2,500,000
OTHER COSTS	
TOTAL CAPITAL COST	\$2,700,000
CITY TSPLOST FUNDS	Alpharetta \$2,700,000

Project Implementation

LOCAL LEAD	Alpharetta
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Funding Partners

DESIGN	
RIGHT-OF-WAY	
CONSTRUCTION	

Project Status

DESIGN	
ROW	
CONSTRUCTION	
ENVIRONMENTAL	Not started

Project Timeline

READY FOR CONSTRUCTION	9 mo.
ANTICIPATED LENGTH OF CONSTRUCTION	9 mo.

Notes:

*Architects
Engineers
Planners*

3500 Parkway Lane
Suite 600
Norcross, GA 30092

P 678.336.7740
F 678.336.7744
www.pondco.com

December 5, 2016

Mr. Peter Sewczwicz, PE
Director of Public Works
City of Alpharetta
1790 Hembree Road
Alpharetta, GA 30009

Re: **Morris Road Operational Improvement Project
Professional Design Services Fee Proposal**

Pond & Company (Pond) is pleased to submit this proposal for transportation and engineering design services for the above project. The paragraphs below describes the professional services and fees to accomplish this work.

PROJECT UNDERSTANDING:

The existing primarily two lane undivided roadway extends from SR 120/Old Milton Parkway to Webb Bridge Road. This is a heavily travelled roadway in need of operational improvements. The project will add travel lanes, turn lanes, and pedestrian and bicycle accommodations to improve the operations and safety of Morris Road.

Our understanding is the City of Alpharetta will locally fund the design and construction of the roadway improvement. Morris Road intersects with SR 120 at the south. It is assumed that no improvements will be proposed at this intersection and therefore no GDOT permit will be obtained.

POND will coordinate the initial concept efforts through the design process with the City of Alpharetta, adjacent property owners, and stakeholders, as appropriate.

PROFESSIONAL SERVICES:

The work will consist of analyzing roadway improvement options and developing construction plans. Pond will provide all labor, materials and equipment necessary to assist the City of Alpharetta Public Works in completing the tasks as described herein.

Scope of Work

Phase 1: Data Gathering

Task 1A: Project Management and Coordination Plan - Pond will prepare a project management and coordination plan to indicate the lines of communication and work schedule.
Task 1B: Traffic Data Collection – Traffic data to be collected includes AM, mid-day, and PM peak period turning movement counts at the intersections of Morris Road at SR 120/Old Milton Parkway, Morris Road at the North Crescent Medical Center/Country Place Ct, Morris Road at Preston Ridge Road, and Morris Road at Webb Bridge Road, supplemented with daily volume counts. Pond will examine traffic conditions in the field. We will obtain accident records.

Task 1C: Utility Coordination – Utility coordination will begin at the start of the project to facilitate understanding of potential impacts.

Task 1D: Prepare Topographic and Utility Database – The project database will be prepared to capture topographic and utility data for use in the project. Trees 8" or larger within the survey limits will be added to the database.

Phase 2: Concept Design

Task 2A: Traffic Analysis – Pond will perform an analysis of existing traffic conditions and develop improvement options. The project consists of adding an additional through lane in both directions along Morris Road. The traffic analysis will utilize Synchro or the appropriate analysis software. Future year traffic volumes will be developed based on historical traffic count data and expected area growth. Operations analysis will review the need for turn lanes and appropriate traffic control at the mid-block intersections. Recommendations will incorporate adjacent/future planned roadway projects along Webb Bridge Road and SR 120/Old Milton Parkway. POND will document the traffic analysis in a brief report suitable for City of Alpharetta review.

Task 2B: Concept Layout – POND will prepare a concept layout to show the general improvement geometrics on available GIS data and or survey. The concept layout will indicate the proposed improvements and potential impacts.

Task 2C: Cost Estimate – POND will prepare a probable opinion of cost estimate.

Task 2D: City of Alpharetta – We will meet with the City to refine the conceptual layout.

Phase 3: Preliminary Design

Task 3A: Preliminary Design Plans and Cost Estimate – The preliminary design will address comments received on the concept design plans and will establish a draft final version of the plans.

Task 3B: Utility Plans and Coordination – Early coordination with the utility owners is critical to the success of any project. Once the conceptual layout has been approved, we will have defined the impacted area. We will prepare utility plans and submit to all utility owners for markups. We will incorporate the markups into the utility adjustment plans.

Task 3E: City of Alpharetta– We will submit for comment/approval preliminary plans to the City. We will respond to any questions and incorporate appropriate comments into the plans.

Phase 4: Right of Way and Final Design

Task 4A: Right of Way Plans – After preliminary plan approval, we will prepare Right of Way plans per GDOT design guidelines. The Right of Way plans will include all required permanent Right of Way takings and all temporary construction easements.

Task 4B: City of Alpharetta – We will submit Right of Way plans to the City for comments. If there are any comments, we will incorporate into the plans as necessary.

Task 4C: Final Design Plans and Cost Estimate – After preliminary plans approval, we will develop final plans that will be suitable for construction. We will also update the construction cost estimate.

Task 4D: City of Alpharetta - We will submit for comment/approval final plans to the City. We will respond to any questions and incorporate appropriate comments into the plans. We will also meet with the City as requested. We will submit all electronic document files.

Phase 5: Preconstruction and Construction Phase Services

Task 5A: Respond to RFIs – During the bidding and construction process, we will respond in writing to the contractors request for information.

Task 5B: Pre-Construction Meeting – we will prepare for and attend the pre-construction meeting to answer any questions and to make sure that the contractor fully understands the scope and nature of this project.

Task 5C: Construction Observation/Punch List – We will provide personnel to periodically visit the site during construction to make sure that the construction is moving along as planned. We will review all punch lists or payment request and approve if the items have been properly completed.

Schedule

Pond has estimated that all tasks above will be completed within 12 months. A schedule will be prepared and submitted for approval once under contract with the City.

ASSUMPTIONS

Services or tasks not specifically outlined above are excluded. Environmental services, right-of-way acquisition, right-of-way staking, MS4 design, SUE services, geotechnical services and construction administration are not included in the scope of services. Depending on the final limits of the project, additional survey may be required.

PROFESSIONAL FEES:

Pond proposes to accomplish Tasks 1 through 5 for a proposed total fee of \$143,565.

If this fee and scope is acceptable, Pond & Company is available to begin work immediately. If you would like us to discuss or modify the scope please contact us. Additionally, please let us know what contract agreement documentation the city would like to use. POND can provide a standard agreement for review by the city. If you need any additional information, please feel free to contact me at (678)336-7740.

Sincerely,

POND & COMPANY



Peter Hortman
Transportation Program Manager

Cc: Richard Fangmann, P.E.
Mark Edwards, P.E.
Andrew Antweiler, P.E.
Arwin Lopez, P.E.

Attachments:
Schedule of Fees

City of Alpharetta

Morris Road Operational Improvements Approximately 2,500 LF

SUMMARY BY Segment

COST AMOUNT OF CONTRACT PROPOSAL

12/5/2016

	PHASE AMOUNTS
Phase 1 - Data Gathering	\$25,350
Phase 2 - Concept Design	\$31,030
Phase 3 - Preliminary	\$52,080
Phase 4 - ROW & Final	\$27,105
Phase 5 - Preconstruction and Construction Phase Services	\$8,000
TOTAL DESIGN COST FOR ALL SEGMENTS	\$143,565



STAFF REPORT

Submitting Department: Public Works

Submitted By:

Meeting Date: December 12, 2016

I. AGENDA ITEM TITLE: AECOM - DESIGN SERVICES KIMBALL BRIDGE ROAD AND OLD MILTON PARKWAY

II. RECOMMENDATION:

Please award the following scopes of work to AECOM in an amount totaling \$446,710: (A) full design of the Kimball Bridge Road Bicycle/Pedestrian/Operational Improvements (\$393,570); and (B) conceptual design of the Old Milton Parkway Capacity Improvements (\$53,140). Authorize the Mayor to execute all necessary documents.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: YES

FISCAL IMPACT: YES

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST: \$446,710.00

APPROPRIATIONS:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
Kimball Br Rd Bicycle/Pedestrian/Op Imp (Full Design; 33541100-541410-C1713)	\$393,570.00
Old Milton Parkway Capacity Imp. (Conceptual Design; 33541100-541410-C1717)	\$53,140.00
T-SPLOST Roadway Imp. (Reserve; 33541100-541410)	(\$446,710.00)

EXTERNAL FUNDING SOURCES:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
-	\$0.00
-	\$0.00
-	\$0.00

IV. REPORT IN BRIEF:

On November 8, 2016, the voters of Fulton County approved an additional 0.75% sales tax (T-SPLOST) be collected in part of Fulton County (outside of the City of Atlanta) for five (5) years for the purposes of transportation improvements and congestion mitigation. The City is utilizing T-SPLOST collections in FY 2017 to provide full-design/conceptual design services for T-SPLOST projects.

Staff is requesting that following T-SPLOST scopes of work be awarded to AECOM in an amount totaling \$446,710: (A) full design of the Kimball Bridge Road Bicycle/Pedestrian/Operational Improvements (\$393,570); and (B) conceptual design of the Old Milton Parkway Capacity Improvements (\$53,140). AECOM is one of the City's on-call providers of Engineering Services. The cost proposals from AECOM are in line with staff estimates and have been reviewed by Atkins (City's on-call provider of project management services) and found to be reasonable given the scope of work.

Kimball Bridge Road Bicycle/Pedestrian/Operational Improvements

Kimball Bridge Road from North Point Parkway to Waters Road was funded through the City's 2016 GO Bond and is currently under design by AECOM. The T-SPLOST section, North Point Parkway to Westside Parkway will be a continuation of the Bond project. AECOM will examine the need of additional lanes and design sidewalk and bicycle accommodations. The project scope at this time does not include any design work associated with the bridge over GA 400.

Old Milton Parkway Capacity Improvements

AECOM will develop design concepts plans associated with widening Old Milton Parkway from GA 400 to State Bridge/Kimball Bridge Road. The goal is to convert existing right turn lanes into a third travel lane. Utilizing the existing lanes will reduce construction cost, save time, and preserve the median and enable the City to add landscaping.

Once contracts have been executed it should take 12 months to complete the necessary design work associated with the improvements to Kimball Bridge Road and approximately 4 months to prepare the concept designs for the widening of Old Milton Parkway.

V. ALTERNATIVES:

VI. ATTACHMENTS:

Project Overview - Kimball Bridge Road, Project Overview-Old Milton Parkway, Cost Proposal - Kimball Bridge Road, Cost Proposal - Old Milton Parkway

Kimball Bridge Road:Bike/Ped/Operational Improvements

ALP-009

Project Description

Pedestrian, bike and operational improvements to Kimball Bridge Road, connecting residential neighborhoods to Downtown Alpharetta, Avalon, schools, and parks.

Project Details

TYPE	Roadway Corridor (Multimodal)
MAIN ROUTE	Kimball Bridge Road
EXTENTS	From Westside Parkway to North Point Parkway
LOCATION	
LENGTH (miles)	1.10
GDOT/ ARC ID	

Project Cost Estimate

ENGINEERING COST	\$100,000
RIGHT-OF-WAY COST	\$500,000
CONSTRUCTION COST	\$5,400,000
OTHER COSTS	
TOTAL CAPITAL COST	\$6,000,000
CITY TSPLOST FUNDS	Alpharetta \$6,000,000

Project Implementation

LOCAL LEAD	Alpharetta
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Funding Partners

DESIGN	
RIGHT-OF-WAY	
CONSTRUCTION	

Project Status

DESIGN	
ROW	
CONSTRUCTION	
ENVIRONMENTAL	Not started

Project Timeline

READY FOR CONSTRUCTION	24 mo.
ANTICIPATED LENGTH OF CONSTRUCTION	12 mo.

Notes:



Old Milton Parkway Capacity Improvements

ALP-003

Project Description

This regional capacity enhancement project includes widening of SR 120(Old Milton Parkway) from 4 lanes to 6 lanes. The City will be working with GDOT to expedite the project using mostly state and local funds.

Project Details

TYPE	Roadway Corridor (Multimodal)
MAIN ROUTE	Old Milton Parkway
EXTENTS	From GA 400 to State Bridge Road
LOCATION	East/West corridor bisecting Alpharetta
LENGTH (miles)	2.53
GDOT/ ARC ID	

Project Cost Estimate

ENGINEERING COST	\$2,000,000
RIGHT-OF-WAY COST	\$1,000,000
CONSTRUCTION COST	\$20,000,000
OTHER COSTS	\$5,000,000
TOTAL CAPITAL COST	\$28,000,000
CITY TSPLOST FUNDS	Alpharetta \$6,000,000

Project Implementation

LOCAL LEAD	Alpharetta
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Funding Partners

DESIGN	State
RIGHT-OF-WAY	State
CONSTRUCTION	State
Johns Creek	

Project Status

DESIGN	Aspirations
ROW	Aspirations
CONSTRUCTION	Aspirations
ENVIRONMENTAL	Not started

Project Timeline

READY FOR CONSTRUCTION	12 mo.
ANTICIPATED LENGTH OF CONSTRUCTION	

Notes:





December 5, 2016

Mr. Peter Sewczwicz, PE
Director of Public Works
City of Alpharetta
1790 Hembree Road
Alpharetta, GA 30009

Re: Request for Proposal
Kimball Bridge Road West - Concept & Design
Westside Parkway to North Point Parkway

Dear Peter,

The following technical proposal and fee estimate is based on our meeting on November 17, 2016 at the City of Alpharetta. Based on our discussion, AECOM will perform the necessary activities to develop a concept and advance it through the final construction documents phase for the 1.1 mile section of Kimball Bridge Road from Westside Parkway to North Point Parkway. Both operational and capacity improvements will be evaluated. The concept and design phases needed for this project are further described later in this document. The bridge over GA-400 will be evaluated at a concept level; however, it will be excluded from the "design" phase for the time being until the Georgia Department of Transportation (GDOT) solidifies plans for future improvements to GA-400. The City will provide the plans from the Encore Bridge or will otherwise dictate the needed openings beneath the bridge that should be used for the concept evaluation.

Task 1 - Topographic & Property Survey

Landair will perform topographic and property survey for the corridor based on current industry standards. A control package will be provided based on City of Alpharetta standards. The survey will extend 50 feet outside the right of way along Kimball Bridge Road from Westside Parkway to North Point Parkway and include 300-feet along Westside Parkway in all directions and 100-feet down other side roads located in the project limits. The location of all trees within the established corridor and having a diameter greater than eight inches will be collected. The bridge over GA-400 will be surveyed in sufficient detail to allow for appropriate vertical clearance determinations. This data will be collected utilizing 3D terrestrial scanning methods. Properties will be resolved based on most recent deeds and tax maps. Approximately thirty-three (33) properties will be researched. Time estimated to complete the above survey activities is 10-12 weeks from notice-to-proceed.

Task 2 - Pavement Evaluation

United Consulting will perform a limited pavement evaluation for the project. A total of twelve (12) pavement cores will be taken along the project length. At each location, the existing asphalt pavement will be cored and the base material will be sampled. The results will be documented in a brief report. The report and field work will not be done to a GDOT-level of detail. Core holes will be backfilled with sackrete up to bottom of pavement; this will be compacted and the remainder filled with cold patch or quick-set concrete. The coring operation will likely require lane closures and two (2) days of maintenance of traffic at a total cost of \$2,000 have been included in the fee. If the City elects to provide traffic control through their Public Works Department, the total fee for the Pavement Evaluation can be reduced that amount. PACES survey and rutting test are excluded from the scope and fee.

Task 3 - Environmental Screening

Based on discussions with the City, this section of Kimball Bridge Road is on a ridge line and no stream or wetland impacts are anticipated; however, the City would like AECOM to conduct a stream and wetland screening to confirm this. Screening for other resources such as archaeology or history is excluded. If streams and/or wetlands are identified and impacted by the design such that permits are needed, the fee for the permitting efforts will be negotiated at that time.

Task 4 - Traffic Study & Design

Additional traffic counts will be collected along this section of Kimball Bridge Road and the data will be used to update the Kimball Bridge Road Corridor Study that was previously completed by AECOM in February 2016. A sim traffic model will be prepared on the final concept layout to relay the benefits of proposed improvements and to evaluate the final recommended geometry. The preparation of traffic signal plans needed for any modifications to existing signals will be included in this task as well. There are two existing signals within the project limits – at Westside Parkway and North Point Parkway. If the traffic study reveals the need for any new traffic signals, additional fee negotiations will be undertaken.

Task 5 – Utility Coordination

AECOM will coordinate with all utility owners within the project limits to identify and resolve potential conflicts between the proposed roadway improvements and any existing utility facilities. This process will begin early during the Preliminary Design Phase when plan sheets showing the project area will be submitted to each utility owner; this is commonly referred to as “first submission”. The owners will provide the locations of any facilities within the project limits for incorporation into the roadway construction plans. It generally takes 30-60 days to receive responses from all owners. Utility coordination will start back up again early in the Permitting Phase when the completed Preliminary Plans will be submitted to each utility owner again; this is commonly referred to as “second submission”. The utility owners will provide either “no conflict” statements or relocation plans resolving any conflicts. These relocations will be incorporated into the roadway construction plans. The second submission process typically takes 60-90 days to complete.

Task 6 – Lighting Design and Plans

Atlanta Consulting Engineers (ACE) will perform the lighting design for this project. Pedestrian lighting will be provided along Kimball Bridge Road from Westside Parkway to North Point Parkway. ACE will provide all lighting layout, electrical single line, and schematic drawings including all necessary lighting details with properly sized cables, conduits, and electrical equipment. The lighting standards will be type Granville Warm 2700 LED lights. ACE will also coordinate with the local utility owner(s) to provide power service for the lighting. A summary of lighting quantities will be provided as well. The lighting scope and fee assumes the City will provide the lighting placement in either AutoCad or Microstation format. ACE's scope does not include performing a photometric analysis, any light placement or location adjustments, receptacles in the light poles, or construction phase services such as shop drawing review.

CONSTRUCTION DOCUMENTS

AECOM transportation design staff will prepare construction documents (CD's) for the project which will include; cover, index, typical sections, quantities, construction layout, signing and marking plans, signal plans, staging plans, landscape plans, utility plans, cross sections, grading plans, drainage plans, standards and details and other plans generally required by GDOT's PPG.

Task 7 - Concept Development Phase

AECOM will prepare and evaluate up to three different concept alternatives based on the results of the traffic analysis. Both operational and capacity improvements will be considered. In terms of capacity, the City anticipates a likely configuration of maintaining the two-lane section between Westside and Northwinds and potentially a widened four-lane section between Northwinds and North Point which is the primary movement; this will all need to be validated through the traffic analysis and concept evaluation. Reconstruction of the existing bridge over GA-400 to accommodate any additional lanes will be evaluated at the concept level; however, it will be excluded from the construction document/plans preparation phases as the City waits for GDOT to solidify plans for future improvements to GA-400. The City will provide their required opening widths which will be based on what was done for the Encore Bridge. No additional design work will be completed on the bridge beyond this phase. The final deliverable for the concept development phase will be a roll plot similar to what was done on the previous Kimball Bridge Project from North Point to Waters. The Concept Development phase will utilize GIS data provided by the City.

Task 8 - Concept Design Phase (30% Plans)

AECOM will use the survey provided by Landair to prepare 30% documents for review, comment, and council approval (if required). The Concept will be based on the selected concept alternative. Documents will include typical sections, plan sheets, profile sheets, and preliminary signing and marking sheets. If necessary, the bridge concept work completed in the previous phase will be validated during this phase based on the more accurate survey data, but otherwise the bridge work will be excluded from the 30% plans. An interim condition will be developed at each end of the bridge to tie the proposed widening into the existing bridge. AECOM will attend up to two (2) meetings with the City to review comments from the concept submittal.

Task 9 - Preliminary Engineering Phase (70% Plans)

AECOM will develop 70% construction documents for review by the City based on feedback from the concept submittal and meeting. The 70% plan submittal will include a complete set of documents and a preliminary cost estimate. AECOM will attend one meeting with the City to review comments from the 70% submittal. This submittal will also be used to provide value engineering prior to final document preparations. We will attend up to three (3) meetings with the City to review comments and discuss value engineering alternatives.

Task 10 – Right of Way Design & Plans

AECOM will develop a set of Right of Way Plans detailing all required right of way and easement data for the City's use during acquisition activities. At the City's discretion, the plans can be a stand-alone set or the information can be incorporated into the construction plan sheets. Approximately thirty-three parcels would be impacted by the proposed project. We are assuming revisions will be required for up to sixteen parcels. AECOM will attend one (1) meeting with the City to review comments on the Right of Way Plans.

Task 11 - Permitting Phase (90% Plans)

AECOM will incorporate City staff comments and approved value engineering alternatives into a 90% complete set of documents to submit to the City of Alpharetta and EPD for approval. AECOM will work closely with City staff to meet the City's permitting requirements to obtain a LDP Permit. Close coordination with City staff is included in order to assist in permitting the project. We will attend up to two (2) meeting with the City to review comments.

Coordination with GDOT for an encroachment permit is included in this phase as it may be necessary for the work in the vicinity of the GA-400 Bridge; this will depend on the width of the existing right of way along GA-400. The coordination efforts will follow the process spelled out in the GDOT Driveway and Encroachment Manual. The current version is dated March 15, 2015. Any substantial changes to the GDOT process that occur

before the coordination begins may require additional scope and fee negotiations. We are allowing for a seventy-five (75) day duration for the completion of this coordination which should accommodate the GDOT review periods. The timeline breaks down as follows:

30 days for initial GDOT review + 15 day comment turnaround + 15 day GDOT backcheck + 15 day contingency
= 75 day total

Task 12 - Final Construction Documents (100%)

AECOM will incorporate any remaining City comments into a final set of Construction Documents with associated specifications. The submittal will be prepared for construction bidding and implementation with an updated opinion of construction costs.

Excluded from the scope of services

The following items are excluded from the scope and fee.

- Design work on the bridge over GA-400 beyond the Concept Phase.
- Geotechnical Services (outside the paving cores)
- Pavement rehabilitation plan
- Structural Design for any needed walls or other structures
- GDOT/Federal Highway Approval (None Anticipated)
- NEPA services/documentation (None Anticipated)
- Architectural/building design (None Anticipated)
- Irrigation design
- Public meetings and council presentations (outside those scope above)
- Right-of-way acquisitions services
- Subsurface Utility Exploration (SUE) services are excluded, although conventional coordination with the utility owners has been included in the scope & fee.
- Construction Administration
- Advertisement of stakeholder meetings
- Facility rental costs
- Public surveys
- 3D animation or videos
- Entrance monument or fountain design
- Park design

Project Management

Will Sheehan, P.E. will be the project manager and point of contact for this project. Final Construction Documents are expected to be delivered approximately twelve (12) months after receipt of Notice to Proceed (NTP). This schedule assumes a four (4) month duration for the City-led right-of-way acquisition activities. A full project schedule including all tasks is appended to the end of this proposal. Project invoices will be submitted to the City on a monthly basis.

Project Fees

AECOM will provide the services outlined above for the lump sum fee shown below and itemized by task.

Task 1: Topographic & Property Survey	\$ 91,250
Task 2: Pavement Evaluation	\$ 12,000
Task 3: Environmental Screening	\$ 5,160
Task 4: Traffic Study & Design	\$ 44,095
Task 5: Utility Coordination	\$ 4,575
Task 6: Lighting Design & Plans	\$ 9,800
Task 7: Concept Development Phase	\$ 15,310
Task 8: Concept Design Phase	\$ 25,605
Task 9: Preliminary Engineering Phase (70% Plans)	\$ 97,560
Task 10: Right of Way Design & Plans Phase	\$ 16,165
Task 11: Permitting Phase (90% Plans)	\$ 69,580
Task 12: Final Construction Documents (100% Plans)	\$ 2,470

TOTAL LUMP SUM FEE \$ 393,570

We look forward to continuing quality work with the City of Alpharetta. Please feel free to contact Will Sheehan at 678.808.8962 or by email to william.sheehan@aecom.com should you have any questions.

Thank you.

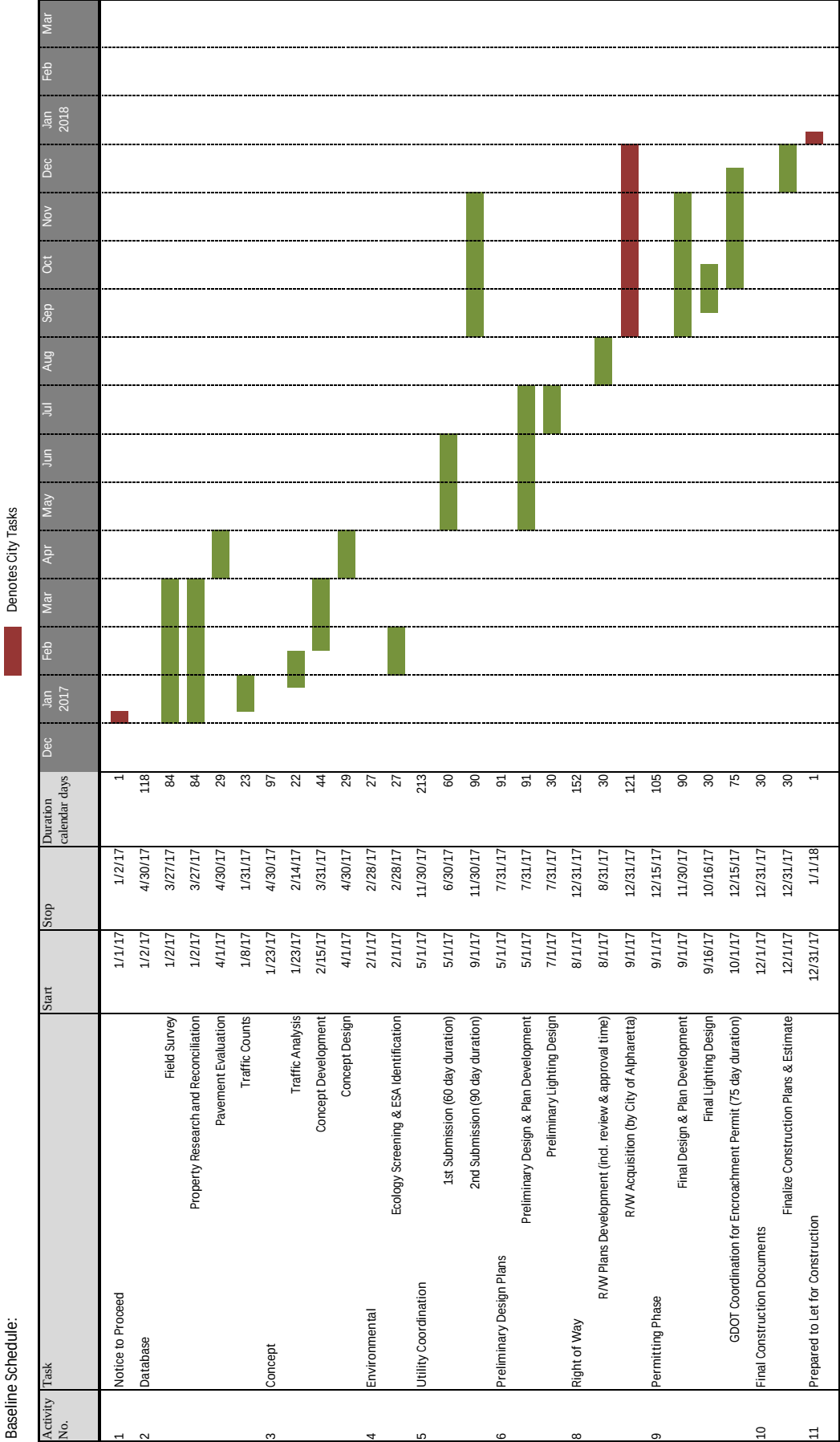


Garrick Edwards, P.E.
Structural Engineer



Will Sheehan, P.E.
Roadway Engineer

Baseline Schedule:





December 5, 2016

Mr. Peter Sewczwicz, PE
Director of Public Works
City of Alpharetta
1790 Hembree Road
Alpharetta, GA 30009

Re: Request for Proposal
Old Milton Parkway / SR 120 Widening - Concept
GA-400 to Kimball Bridge Road

Dear Peter,

The following technical proposal and fee estimate is based on our meeting on November 17, 2016 at the City of Alpharetta. Based on our discussion, AECOM will evaluate a concept to widen Old Milton Parkway from four lanes to six lanes for a distance of 2.5 miles between GA-400 and the City Limit at Kimball Bridge Road. At the City's request, the widening will be evaluated on the outside by connecting up the existing right turn lanes; this will leave the existing median space available for landscaping. Along this stretch of Old Milton Parkway is the busiest intersection in the City of Alpharetta – North Point Parkway. Two alternatives will be evaluated at this intersection – a grade separation and a conventional intersection similar to what is currently out there. The concept tasks needed for this project are further described later in this document and the final deliverable will be an architecturally rendered concept display on aerial. We understand that the City may pursue state funding for the future “design” phases of this project, but the current concept/scoping phase is locally funded.

Task 1 – Traffic Analysis

AECOM will conduct sufficient existing traffic counts along the corridor to validate the proposed improvements, but will not conduct the counts to Georgia Department of Transportation (GDOT) specifications. There was some discussion with the City to perform traffic counts to a GDOT level of quality; however, there is significant risk that GDOT will require additional counts since they are not involved at this time to review the work. We recommend starting off with a lower level of traffic counting and analysis that can be built upon as the project progresses as this is likely a better use of the City's funds. To validate the proposed six-lane section, we would suggest tube counts be conducted once on each side of the North Point Parkway intersection, which is the busiest cross street. And we would suggest full turning movement counts at the intersection with North Point Parkway to allow for proper determination of ramp widths during the analysis of the grade separation. In addition to the traffic counts, AECOM proposes to perform a crash analysis to further validate the need and location for dedicated right turn lanes. The crash analysis will utilize detailed crash reports and will end with the development of crash diagrams for each critical intersection. The final deliverable for the traffic analysis task will be a memo-style report briefly summarizing the methodology and key findings.

Task 2 – Environmental Screening

An environmental screening will be conducted during this concept phase. This screening would consist of field surveys for history and ecology (jurisdictional waters and protected species habitats) as well as an evaluation of the local community, potential need for relocations, and potential for construction impacts on the local roadway/greenway users. A desktop screening for archaeological sites will also be conducted. Based on current knowledge, the crossing at Big Creek and the Big Creek greenway are resources identified along the corridor. Knowing the locations of resource boundaries will assist in developing a concept that demonstrates

avoidance and minimization of potential impacts. A brief memo will be prepared summarizing the methodology and key findings of this environmental screening.

Task 3 – Roadway Concept Design

AECOM's roadway design group will develop a concept to widen Old Milton Parkway from four to six lanes between GA-400 and the City Limit at Kimball Bridge Road. The widening will be evaluated on the outside by connecting up the existing right turn lanes in order to preserve the existing grassed median width for landscaping. The City has requested that curb and gutter be proposed along the inside edge in lieu of the existing flush shoulder. The need for any new right turn lanes will be validated through the traffic analysis. AECOM will work closely with the City on any preferential shoulder elements such as a multi-use trail or enhanced sidewalk. The concept will be developed on GIS data provided by the City. The concept development will evaluate the horizontal design components, but will not evaluate vertical changes in the profile, except for the grade separation at North Point Parkway. Cross sections will not be developed for the entire corridor. They will only be utilized in critical situations to identify the location and rough dimensions (height & length) of any proposed walls. The concept will determine width requirements for the bridge over Big Creek to accommodate the proposed widening, but will not evaluate the hydraulic opening or any other elements such as bent spacing, bridge length, etc.

Two alternatives will be evaluated at the North Point Parkway intersection. The first alternative will consider a conventional intersection similar to what is currently out there. The second alternative will consider a grade separated interchange with full access ramps. For the grade separated option, concept-level profiles will be developed for the roadways to verify vertical clearances and ramp lengths/tie-ins. Full cross sections will not be developed, but critical cross sections may be used to identify wall locations.

The City of Johns Creek has a design project underway for improvements along Old Milton Parkway to the east of Kimball Bridge Road that will need to be coordinated with our concept. T.Y. Lin is performing the design on the adjacent section. Our fee includes scope for coordination efforts.

The final deliverable will be an architectural-style rendering prepared by our Landscape Architecture group as noted below. A concept-level opinion on probable cost estimate will also be developed and provided to the City for their use moving forward.

Task 4 – Landscape Architecture Concept Design

AECOM will prepare one hand-colored rendering at 1"= 40' scale along with a typical section to depict the proposed concept along the corridor study limits. The rendering will be based on the roadway design efforts and will not proceed until a final concept has been accepted by the City. AECOM will provide one roll plot of the colored rendering as well as a pdf file. Our fee includes addressing one round of comments as needed.

Excluded from the scope of services

The following items are excluded from the scope and fee.

- Field survey and property resolution
- Hydraulic and/or hydrologic services
- Drainage design
- Any activities typically associated with preliminary or final design and not listed above
- Geotechnical services
- Pavement rehabilitation plan

- Structural design for any needed walls or other structures
- GDOT/Federal Highway approval (None Anticipated)
- NEPA services/documentation (None Anticipated)
- Architectural/building design (None Anticipated)
- Irrigation design
- Public meetings and council presentations
- Right-of-way acquisitions services
- Subsurface Utility Exploration (SUE) services are excluded
- Construction administration
- Advertisement of stakeholder meetings
- Facility rental costs
- Public surveys
- 3D animation or videos
- Entrance monument or fountain design
- Park design

Project Management

Will Sheehan, P.E. will be the project manager and point of contact for this project. The final deliverable concept display is expected to be delivered approximately four (4) months after receipt of Notice to Proceed (NTP). Project invoices will be submitted to the City on a monthly basis. Our fee includes attendance at up to two (2) meetings.

Project Fees

AECOM will provide the services outlined above for the lump sum fee shown below and itemized by task.

Task 1: Traffic Analysis	\$ 7,920
Task 2: Environmental Screening	\$ 11,690
Task 3: Roadway Concept Design	\$ 21,220
Task 4: Landscape Architecture Concept Design	\$ 12,310

TOTAL LUMP SUM FEE \$ 53,140

We look forward to continuing quality work with the City of Alpharetta. Please feel free to contact Will Sheehan at 678.808.8962 or by email to william.sheehan@aecom.com should you have any questions.

Thank you.



Garrick Edwards, P.E.
Principal



Will Sheehan, P.E.
Project Manager



STAFF REPORT

Submitting Department: Public Works

Submitted By:

Meeting Date: December 12, 2016

I. AGENDA ITEM TITLE: ATKINS - PROJECT MANAGEMENT OF BOND AND TSPLOST PROJECTS

II. RECOMMENDATION:

Please award the following scopes of work to Atkins for project management services in an amount totaling \$302,529: (A) Morris Road Operational Improvements (\$63,669; full design phase); (B) Bethany Road at Mayfield Road Intersection Improvements (\$31,835; full design phase); (C) Bethany Road at Mid-Broadwell Road Intersection Improvements (\$31,834; full design phase); (D) Kimball Bridge Road Bicycle/Pedestrian/Operational Improvements (\$69,359; full design phase); (E) Old Milton Parkway Capacity Improvements (\$30,416; conceptual design phase); (F) Windward Parkway Business District/Union Hill Road Capacity Improvements (\$30,416; conceptual design phase); and (G) Rucker Road Corridor Improvements (\$45,000; ROW acquisition/utility relocation/bidding documents phases). Authorize the Mayor to execute all necessary documents.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: YES

FISCAL IMPACT: YES

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST: \$302,529.00

APPROPRIATIONS:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
Morris Road Operational Improvements (33541100-541410-C1716)	\$63,669.00
Bethany Rd at Mayfield Rd Intersection Imp. (33541100-541410-C1715)	\$31,835.00
Bethany Rd at Mid-Broadwell Rd Intersection Imp. (33541100-541410-C1714)	\$31,834.00
Kimball Br Rd Bicycle/Pedestrian/Op Imp (33541100-541410-C1713)	\$69,359.00
Old Milton Parkway Capacity Imp. (33541100-541410-C1717)	\$30,416.00
Windward Pkwy Business Dist./Union Hill Rd Capacity Imp. (33541100-541410-C1718)	\$30,416.00
T-SPLOST Roadway Improvements (33541100-541410)	(\$257,529.00)
Rucker Road Corridor Imp. (31741100-541410-C1410)	\$45,000.00

EXTERNAL FUNDING SOURCES:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
-	\$0.00
-	\$0.00
-	\$0.00
-	\$0.00
-	\$0.00
-	\$0.00
-	\$0.00
-	\$0.00

IV. REPORT IN BRIEF:

On November 12, 2016, ATKINS was awarded to manage design and construction of larger scale projects associated with the City's BOND and the T-SPLOST projects. The City has elected to start the design process of the following projects:

- Morris Road Operational Improvements - Old Milton Parkway to Webb Bridge Road (T-SPLOST)
- Bethany Road at Mayfield Road Intersection Improvements (T-SPLOST)
- Bethany Road at Mid-Broadwell Road Intersection Improvements (T-SPLOST)

- Kimball Bridge Road Bicycle/Pedestrian/Operational Improvements (T-SPLOST)

The City is also looking to start conceptual design associated with two larger corridor projects:

- Old Milton Parkway Capacity Improvements - GA 400 to State Bridge/Kimball Bridge Road (T-SPLOST)
- Windward Parkway Business District/Union Hill Road Capacity Improvement - SR 9 to Union Hill Road (Bond and T-SPLOST)

ATKINS will be leading the design phases associated with the above projects. ATKINS role is an extension of Public Works staff. ATKINS will be the direct contact for the design firms and assist in making sound engineering and constructability decisions. ATKINS will also work with the design firms in preparing project specific specifications and necessary information to go in the bid packages for construction.

Additionally, The Department of Public Works is in the right-of-way acquisition phase of the Rucker Road Corridor project. Though ATKINS is not directly involved with the right-of-way acquisition, the team needs to start preparing the specifications associated with the request-for/qualifications/proposal (RFQ/RFP) for construction. In addition, work needs to start with coordinating all of the utility relocation work.

The project management service quotes set forth herein are estimates based on forecasted labor hours. Pursuant to ATKINS on-call contract with the City, actual charges will be based on actual hours worked. Staff believes that actual costs will be at or below the estimates set forth herein for the respective phases.

V. ALTERNATIVES:

VI. ATTACHMENTS:

Cost Proposal -ATKINS

Memo

To:	Pete Sewcicz, Director of Public Works, City of Alpharetta		
From:	Aaron Wadley, Atkins	Email:	Aaron.wadley@atkinsglobal.com
Phone:	678-247-2492	Date:	December 5, 2016
Subject:	Project Management Services		

Scope of Services

Based on conversations and information provided, the City of Alpharetta has requested Atkins, its project management consultant, provide task order estimates on the following projects:

- Roundabout at Bethany and Mid-Broadwell
- Roundabout at Bethany and Mayfield
- Morris Road
- Kimball Bridge Road
- Windward (concept only)
- Old Milton (concept only)
- Rucker Road Pre-Construction Services

The project management scope includes, but is not limited to, the following activities on an as-directed basis:

- Schedule monitoring – with concentration on critical path resolution
- Budget tracking – checking accuracy and for adherence to CID budgets
- Attend stakeholder meetings on an as-directed basis (assumed 4 per month)
- Review of Consultant submittals – including reports, construction plans, etc.
- Review consultant invoices and provide recommendations to City staff
- Provide status updates for projects on a monthly basis
- Procurement assistance, including review of consultant scope and fee proposals
- Assistance with NPDES/erosion control issues as necessary during design
- Utility coordination
- Conducting a constructability review
- Pre-construction planning
- Technical Reviews

Additional items that are not included in this scope, but are available as needed include:

- Land Acquisition services
- Construction Management, Engineering and Inspection services
- Transportation planning studies or other in-house design services

Memo

Based on the scope above, we estimate the fee for each project to be as shown in the table below. Please note that the fee is based on services through December 2017. It is understood that engineering for some projects will extend into 2018.

Project	Labor	Directs	Total	Schedule (Months)
Kimball Bridge Road	\$68,839	\$520	\$69,359	12
OMP	\$30,106	\$310	\$30,416	8
Windward	\$30,106	\$310	\$30,416	8
Bethany Roundabouts	\$63,149	\$520	\$63,669	8
Morris Road	\$63,149	\$520	\$63,669	8
Subtotal Design PM			\$257,528	
Rucker Road			\$45,000	
Total			\$302,528	

Atkins will not bill beyond the approved budget without prior approval by the City. The estimated hours and budget have been based on a preliminary understanding of the projects and level of effort desired by the City of Alpharetta. It has been assumed the two roundabouts will take place simultaneously, offering economies of scale of our time and effort. Additionally, it may be possible to see further economies of scale as projects overlap. Atkins will only bill the City for actual hours worked and expenses incurred on the program, and we will make every effort to complete the desired project management services below the approved not-to-exceed amount. If the amount of effort that is necessary, as directed by the City, will exceed the approved budget, Atkins will notify the City staff immediately and receive approval to either reduce the scope such that the number of hours necessary fits within the approved budget or increase the budget to accommodate the additional effort required.

Project Billing Rates:

Atkins will invoice the City based on actual raw salary rates with a multiplier of 2.7 for field related services and 2.9 for office related services. Certified payrolls for Atkins staff will be provided upon request by the City. Please note that Atkins' fiscal year begins on April 1st, and any salary increases typically take place at that time.

For this program, field work is expected to include construction management and construction inspection services. For this task order, all billing is expected to be based on the 2.9 office multiplier.

Manhour Estimates



City of Alpharetta

Project Management Service - Kimball Bridge (AECOM)

Task	Principal In Charge	QAQC & Program Advisor	Project Manager/Liason	Landscape Arch I	Civil Engineer	Design Engineer	ROW Agent	NPDES Specialist	Clerical	TOTAL
Consultant Oversight										
Schedule Monitoring	1	2	48	0	0	0	0	0	0	51
Budget Tracking	1	2	48	0	0	0	0	0	0	51
Internal Coordination Meetings	4	8	24	0	0	0	0	0	0	36
Invoice Review/ Recommendations	0	0	18	0	0	0	0	0	6	24
Program Management for project										
Plan Review (concept, preliminary, constructability and final)	2	4	36	12	8	40	0	16	6	124
Meetings with City and consultant during life of project	4	8	24	0	0	0	0	0	6	42
Utility Coordination	0	0	10	0	0	30	0	0	6	46
Attend Stakeholder Meetings (such as public meetings)	8	16	32	0	0	0	0	0	0	56
Bid Assistance (assistance with bid documents, attend pre-bid, etc.)	4	8	24	0	0	8	0	0	0	44
TOTALS	24	48	264	12	8	78	0	16	24	474

Assumptions

- Based on scoping meetings, the design fees for AECOM will be around \$500K
- AECOM scope will only include conceptual designs of bridge over GA400
- Assumes 12 months for design work

Estimated Project Costs



City of Alpharetta

Project Management Service - Kimball Bridge (AECOM)

<i>Direct Labor (Specify)</i>				
	Est. Hours	Rate/hours	Est. Cost (\$)	
Principal In Charge (Taylor Wright)	24	246.50	5,916.00	
QA/QC & Program Advisor (Kevin Martin)	48	202.86	9,737.04	
Project Manager/Liason (Aaron Wadley)	264	145.00	38,280.00	
Landscape Architect (John Bourdeau)	12	175.68	2,108.18	
Civil Engineer (Personnel will vary)	8	135.00	1,080.00	
Design Engineer (Personnel will vary)	78	100.00	7,800.00	
ROW Agent (Chad Freeman)	0	103.18	0.00	
NPDES Specialist (Don Johnson)	16	109.85	1,757.63	
Clerical (Personnel will vary)	24	90.00	2,160.00	
1. Total Direct Labor				\$68,838.86
<i>Other Direct Costs</i>			Est. Cost(s)	
Roadway Directs:				
Mail / FedEx/ Courier			\$50.00	
Reproduction			\$50.00	
Mileage			\$420.00	
2. Total Other Direct Cost				\$520.00
3. Maximum Amount of Contract Proposal (1)+(2)				\$69,358.86

Manhour Estimates



City of Alpharetta

Project Management Service - Old Milton Parkway (AECOM)

Task	Program Manager	QAQC & Program Advisor	Project Manager/Liason	Landscape Arch I	Civil Engineer	Design Engineer	ROW Agent	NPDES Specialist	Clerical	TOTAL
Consultant Oversight										
Schedule Monitoring	1	2	32	0	0	0	0	0	0	35
Budget Tracking	4	8	32	0	0	0	0	0	0	44
Internal Coordination Meetings	4	8	16	0	0	0	0	0	0	28
Invoice Review/ Recommendations	0	0	12	0	0	0	0	0	4	16
Program Management for project										
Plan Review (concept and environmental screening)	2	4	6	4	4	4	0	0	1	25
Meetings with City and consultant during life of project	2	4	16	0	0	0	0	0	6	28
Utility Coordination	0	0	0	0	0	0	0	0	0	0
Attend Stakeholder Meetings (such as public meetings)	2	4	8	0	0	0	0	0	0	14
Bid Assistance (assistance with bid documents, attend pre-bid, etc.)	0	0	0	0	0	0	0	0	0	0
TOTALS	15	30	122	4	4	4	0	0	11	190

Assumptions

- Assumes 4 months for concept development

Estimated Project Costs



City of Alpharetta

Project Management Service - Old Milton Parkway (AECOM)

<i>Direct Labor (Specify)</i>				
	Est. Hours	Rate/hours	Est. Cost (\$)	
Principal In Charge (Taylor Wright)	15	246.50	3,697.50	
QA/QC & Program Advisor (Kevin Martin)	30	202.86	6,085.65	
Project Manager/Liason (Aaron Wadley)	122	145.00	17,690.00	
Landscape Architect (John Bourdeau)	4	175.68	702.73	
Civil Engineer (Personnel will vary)	4	135.00	540.00	
Design Engineer (Personnel will vary)	4	100.00	400.00	
ROW Agent (Chad Freeman)	0	103.18	0.00	
NPDES Specialist (Don Johnson)	0	109.85	0.00	
Clerical (Personnel will vary)	11	90.00	990.00	
1. Total Direct Labor				\$30,105.88
<i>Other Direct Costs</i>			Est. Cost(s)	
Roadway Directs:				
Mail / FedEx/ Courier			\$50.00	
Reproduction			\$50.00	
Mileage			\$210.00	
2. Total Other Direct Cost				\$310.00
3. Maximum Amount of Contract Proposal (1)+(2)				\$30,415.88

Manhour Estimates



City of Alpharetta

Project Management Service - Windward Parkway (Tetra Tech/Rochester)

Task	Program Manager	QAQC & Program Advisor	Project Manager/Liason	Landscape Arch I	Civil Engineer	Design Engineer	ROW Agent	NPDES Specialist	Clerical	TOTAL
Consultant Oversight										
Schedule Monitoring	1	2	32	0	0	0	0	0	0	35
Budget Tracking	4	8	32	0	0	0	0	0	0	44
Internal Coordination Meetings	4	8	16	0	0	0	0	0	0	28
Invoice Review/ Recommendations	0	0	12	0	0	0	0	0	4	16
Program Management for project										
Plan Review (concept and environmental screening)	2	4	6	4	4	4	0	0	1	25
Meetings with City and consultant during life of project	2	4	16	0	0	0	0	0	6	28
Utility Coordination	0	0	0	0	0	0	0	0	0	0
Attend Stakeholder Meetings (such as public meetings)	2	4	8	0	0	0	0	0	0	14
Bid Assistance (assistance with bid documents, attend pre-bid, etc.)	0	0	0	0	0	0	0	0	0	0
TOTALS	15	30	122	4	4	4	0	0	11	190

Assumptions

- Assumes 4 months for design work

Estimated Project Costs



City of Alpharetta

Project Management Service - Windward Parkway (Tetra Tech/Rochester)

<i>Direct Labor (Specify)</i>				
	Est. Hours	Rate/hours	Est. Cost (\$)	
Principal In Charge (Taylor Wright)	15	246.50	3,697.50	
QA/QC & Program Advisor (Kevin Martin)	30	202.86	6,085.65	
Project Manager/Liason (Aaron Wadley)	122	145.00	17,690.00	
Landscape Architect (John Bourdeau)	4	175.68	702.73	
Civil Engineer (Personnel will vary)	4	135.00	540.00	
Design Engineer (Personnel will vary)	4	100.00	400.00	
ROW Agent (Chad Freeman)	0	103.18	0.00	
NPDES Specialist (Don Johnson)	0	109.85	0.00	
Clerical (Personnel will vary)	11	90.00	990.00	
1. Total Direct Labor				\$30,105.88
<i>Other Direct Costs</i>			Est. Cost(s)	
Roadway Directs:				
Mail / FedEx/ Courier			\$50.00	
Reproduction			\$50.00	
Mileage			\$210.00	
2. Total Other Direct Cost				\$310.00
3. Maximum Amount of Contract Proposal (1)+(2)				\$30,415.88

Manhour Estimates



City of Alpharetta

Project Management Service - Bethany Roundabouts (Tetra Tech/Rochester)

Task	Program Manager	QAQC & Program Advisor	Project Manager/Liason	Landscape Arch I	Civil Engineer	Design Engineer	ROW Agent	NPDES Specialist	Clerical	TOTAL
Consultant Oversight										
Schedule Monitoring	1	2	32	0	0	0	0	0	0	35
Budget Tracking	1	2	32	0	0	0	0	0	0	35
Internal Coordination Meetings	4	8	24	0	0	0	0	0	0	36
Invoice Review/ Recommendations	0	0	12	0	0	0	0	0	4	16
Program Management for project										
Plan Review (concept, preliminary, constructability and final)	2	4	36	12	8	40	0	16	6	124
Meetings with City and consultant during life of project	4	8	24	0	0	0	0	0	6	42
Utility Coordination	0	0	10	0	0	30	0	0	6	46
Attend Stakeholder Meetings (such as public meetings)	8	16	32	0	0	0	0	0	0	56
Bid Assistance (assistance with bid documents, attend pre-bid, etc.)	4	8	24	0	0	8	0	0	0	44
	0		0	0	0	0	0	0	0	0
TOTALS	24	48	226	12	8	78	0	16	22	434

Assumptions

- Based on scoping meetings, the design fees for Tetra Tech/Rochester will be around \$500K
- Assumes working on two projects simultaneously and will be bid together
- Assumes 12 month schedule

Estimated Project Costs



City of Alpharetta

Project Management Service - Bethany Roundabouts (Tetra Tech/Rochester)

<i>Direct Labor (Specify)</i>				
	Est. Hours	Rate/hours	Est. Cost (\$)	
Principal In Charge (Taylor Wright)	24	246.50	5,916.00	
QA/QC & Program Advisor (Kevin Martin)	48	202.86	9,737.04	
Project Manager/Liason (Aaron Wadley)	226	145.00	32,770.00	
Landscape Architect (John Bourdeau)	12	175.68	2,108.18	
Civil Engineer (Personnel will vary)	8	135.00	1,080.00	
Design Engineer (Personnel will vary)	78	100.00	7,800.00	
ROW Agent (Chad Freeman)	0	103.18	0.00	
NPDES Specialist (Don Johnson)	16	109.85	1,757.63	
Clerical (Personnel will vary)	22	90.00	1,980.00	
1. Total Direct Labor				\$63,148.86
<i>Other Direct Costs</i>			Est. Cost(s)	
Roadway Directs:				
Mail / FedEx/ Courier			\$50.00	
Reproduction			\$50.00	
Mileage			\$420.00	
2. Total Other Direct Cost				\$520.00
3. Maximum Amount of Contract Proposal (1)+(2)				\$63,668.86

Manhour Estimates



City of Alpharetta

Project Management Service - Morris Road (Pond)

Task	Program Manager	QAQC & Program Advisor	Project Manager/Liason	Landscape Arch I	Civil Engineer	Design Engineer	ROW Agent	NPDES Specialist	Clerical	TOTAL
Consultant Oversight										
Schedule Monitoring	1	2	32	0	0	0	0	0	0	35
Budget Tracking	1	2	32	0	0	0	0	0	0	35
Internal Coordination Meetings	4	8	24	0	0	0	0	0	0	36
Invoice Review/ Recommendations	0	0	12	0	0	0	0	0	4	16
Program Management for project										
Plan Review (concept, preliminary, constructability and final)	2	4	36	12	8	40	0	16	6	124
Meetings with City and consultant during life of project	4	8	24	0	0	0	0	0	6	42
Utility Coordination	0	0	10	0	0	30	0	0	6	46
Attend Stakeholder Meetings (such as public meetings)	8	16	32	0	0	0	0	0	0	56
Bid Assistance (assistance with bid documents, attend pre-bid, etc.)	4	8	24	0	0	8	0	0	0	44
	0		0	0	0	0	0	0	0	0
TOTALS	24	48	226	12	8	78	0	16	22	434

Assumptions

- Based on scoping meetings, the design fees for Pond will be around \$350K
- Assumes 12 months for design work

Estimated Project Costs



City of Alpharetta

Project Management Service - Morris Road (Pond)

<i>Direct Labor (Specify)</i>				
	Est. Hours	Rate/hours	Est. Cost (\$)	
Principal In Charge (Taylor Wright)	24	246.50	5,916.00	
QA/QC & Program Advisor (Kevin Martin)	48	202.86	9,737.04	
Project Manager/Liason (Aaron Wadley)	226	145.00	32,770.00	
Landscape Architect (John Bourdeau)	12	175.68	2,108.18	
Civil Engineer (Personnel will vary)	8	135.00	1,080.00	
Design Engineer (Personnel will vary)	78	100.00	7,800.00	
ROW Agent (Chad Freeman)	0	103.18	0.00	
NPDES Specialist (Don Johnson)	16	109.85	1,757.63	
Clerical (Personnel will vary)	22	90.00	1,980.00	
1. Total Direct Labor				\$63,148.86
<i>Other Direct Costs</i>			Est. Cost(s)	
Roadway Directs:				
Mail / FedEx/ Courier			\$50.00	
Reproduction			\$50.00	
Mileage			\$420.00	
2. Total Other Direct Cost				\$520.00
3. Maximum Amount of Contract Proposal (1)+(2)				\$63,668.86



STAFF REPORT

Submitting Department: Public Works

Submitted By: Geoffrey Sarra

Meeting Date: December 12, 2016

I. AGENDA ITEM TITLE: NORTHWINDS STREET LIGHTING, ITB 17-003

II. RECOMMENDATION:

Please award ITB 17-003 to Brooks Berry Haynie & Associates Inc. in the amount of \$193,787.00 for installation of the Northwinds Street/Pedestrian Lighting and authorize the Mayor to execute all necessary documents.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: YES

FISCAL IMPACT: YES

INCLUDED IN CURRENT FY CPTL BUDGET: YES INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST: \$193,787.00

APPROPRIATIONS:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
Northwinds Pkwy Street/Pedestrian Lighting (30141100-541410-C1700)	\$127,178.00
Northwinds Pkwy Improvements (34041100-541410-C1620)	\$66,609.00

EXTERNAL FUNDING SOURCES:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
-	\$0.00
-	\$0.00

IV. REPORT IN BRIEF:

The award of this bid is for the installation of the Northwinds Street Lighting. The project consists of the installation of 18 street lights and 16 pedestrian lights along the recently completed portion of Northwinds Parkway. Both street lights and pedestrian lights will be LED fixtures matching what has been installed along Westside Parkway between Old Milton Parkway and Webb Bridge Road.

The project advertised for competitive bids during October and November 2016. A total of four bids were received on November 3, 2016 from the following:

- Brooks Berry Haynie & Associates, Inc. \$193,787.00
- Sunbelt Traffic LLC \$224,022.50
- American Lighting and Signalization, Inc. \$254,048.34
- JHC Corporation \$307,250.00

The apparent low bidder, Brooks Berry Haynie & Associates, Inc. , is an experienced contractor and has provided services of a similar nature on multiple projects in Georgia including Roswell Street Improvements (Marietta), Grayson Streetscape (Grayson), and Simpson Road Streetscape (Atlanta). Additionally, Brooks Berry Haynie & Associates, Inc. has worked on several traffic signal projects with the City including the intersection of Northwinds and Old Milton Parkway and signal work associated with the Encore Bridge replacement. Thus, Staff determined Brooks Berry Haynie & Associates, Inc. to be the lowest responsive and responsible bidder.

Installation of the lighting will not begin until delivery of the fixtures and poles required for this project. Once the fixtures and poles have been delivered to the site, the project is to be completed in no more than 60 days.

V. ALTERNATIVES:

None.

VI. ATTACHMENTS:

ITB 17-003 Bid Tab, ITB 17-003 (Brooks Berry Haynie & Associates)



CITY OF ALPHARETTA

PRELIMINARY INVITATION TO BID (ITB) TABULATION

This Preliminary Bid Tabulation serves as a record of the bid opening. In no way does the recording and posting of this document assume the information in the bids received and recorded herein to be correct. Nor is it assumed that the bids conform to the specifications of the ITB request. This document does not constitute an award or contract with any bidder.

ITB #: **17-003**

Due Date

11/3/2016

ITB NAME: **Northwinds Street Lighting**

Due Time

10:00 AM

	BIDDER NAME (noted on bid package)	DATE RECEIVED	TIME RECEIVED	SIGNED BID PROPOSAL FORM	LOCAL VENDOR PREFERENCE - NOTED ONLY FOR INCLUSION	BID BOND	ADDENDA ACKNOWLEDGEMENT	GRAND TOTAL
1	Sunbelt Traffic LLC	11/2/2016	3:04 PM	✓		✓	✓	\$ 224,022.50
2	Brooks Berry Haynie Assoc.	11/3/2016	9:27 AM	✓		✓	✓	\$ 193,787.00
3	JHC Corp	11/3/2016	9:33 AM	✓		✓	✓	\$ 307,250.00
4	American Lighting and Signalization	11/3/2016	9:33 AM	✓		✓	✓	\$ 254,048.34
5								
6								
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19								
20								

**CITY OF ALPHARETTA
INVITATION TO BID (ITB)
(THIS IS NOT AN ORDER)**



original

Finance Department
2 Park Plaza
Alpharetta, GA 30009
P: (678) 297-6052
F: (678) 297-6093
purchasing@alpharetta.ga.us

ITB TITLE: NORTHWINDS STREET LIGHTING
ITB #: 17-003
ITB RESPONSE DUE DATE/TIME: THURSDAY, NOVEMBER 3, 2016 10:00 AM
ITB ISSUE DATE: THURSDAY, OCTOBER 6, 2016
NUMBER OF PAGES: 72

CONTACT INFORMATION

PROCUREMENT AGENT AND ITB CONTACT:

City of Alpharetta
Finance Department
Budget & Procurement Team
2 Park Plaza
Alpharetta, GA 30009

Stephanie Cochran

Phone: 678-297-6052
FAX: 678-297-6093
Email: purchasing@alpharetta.ga.us
Website: <https://www.ebidexchange.com/alpharetta>

INSTRUCTIONS TO BIDDERS CITY HALL HOURS OF OPERATION FOR RECEIPT OF DELIVERIES: MON – THURS 8:30 AM – 5:00 PM
FRI 8:30 AM – 4:30 PM

RETURN SEALED BID TO:

CITY OF ALPHARETTA
FINANCE DEPARTMENT
CITY HALL 1ST FLOOR GREETER STATION
2 PARK PLAZA
ALPHARETTA, GA 30009
ATTN: STEPHANIE COCHRAN

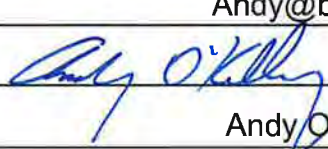
EXTERIOR OF SEALED ENVELOPE/PACKAGE MUST NOTE:

Bidder's Name and Address
ITB Title & Number as noted on top of this page
ITB Due Date & Time as noted on top of this page
(or as may be changed by Official Written Addendum)

SPECIAL INSTRUCTIONS: N/A

BIDDER MUST COMPLETE THE FOLLOWING, SIGN, AND RETURN THIS PAGE WITH EACH BID

By signing and returning this form with a Bid, the authorized signer and represented firm have read, understand, and agree to information within this ITB:

Firm/Bidder Name: Brooks Berry Haynie & Associates Inc
Firm/Bidder Mailing Address: 600 Discovery Place, Mableton, GA 30126
Firm/Bidder Phone Number(s): 770-874-1162
Firm/Bidder FAX Number(s): 770-874-1171
Email Address for Bidder's Contact: Andy@bbhelectric.com
Authorized Bidder Signature: 
Printed Name of Signer: Andy O'Kelley - COO
Bidder Federal I.D. Number: 58-0649047
Bidder DUNS Number: 005808811

**CITY OF ALPHARETTA
ADDENDUM #1**



Finance Department
2 Park Plaza
Alpharetta, GA 30009
P: (678) 297-6052
F: (678) 297-6093
purchasing@alpharetta.ga.us

ADDENDUM POSTING DATE: OCTOBER 21, 2016

PROJECT: NORTHWINDS STREET LIGHTING

ITB #: 17-003

ITB ISSUE DATE: THURSDAY, OCTOBER 6, 2016

ITB DUE DATE: THURSDAY, NOVEMBER 3, 2016 AT 10:00 AM

TO ALL BIDDERS:

The attached information is made part of the ITB. The purpose of this addendum is to provide answers to questions posed by potential bidders, additional information, and/or revised information or documents. In the event of a conflict between previously released information and the information contained herein, the latter shall control.

A signed acknowledgment of this addendum (this page) must be attached to your Bid response.
Please see Addendum information beginning on the next page.

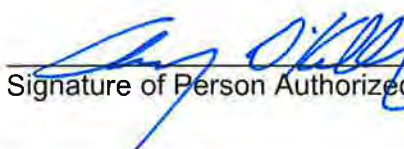
A signature on this addendum does not constitute your signature on the original Bid document.
A signature on this page acknowledges receipt of this addendum. The original Bid response must also be signed in the proper places.

Brooks Berry Haynie & Associates, Inc

Firm Name

600 Discovery Place, Mableton, GA 30126

Firm Address


Signature of Person Authorized to Bind this Firm

11-2-2016

Date

Andy O'Kelley

Typed or Printed Name and Title

770-874-1162 Andy@bbhelectric.com

Phone Number and E-mail Address



BROOKS - BERRY - HAYNIE & ASSOCIATES, INC.

4.1.1 References:

1.

Company - Vertical Earth / Johnson Landscapes

Location - Roswell Street Improvements – Marietta, GA

Contact Person – Russell Swafford

Telephone Number – (770) 888-2224

Email – rswafford@vertical-earth.com

Description – Streetscape lighting and traffic signal installation including all conduit, wiring, service points and foundations to complete (07/2013 – 08/2014)

2.

Company – Tri Scapes

Location – Grayson Streetscape – Grayson, GA

Contact Person – Ryan Hogan

Telephone Number – (770) 751-4698

Email – ryan@triscapes.com

Description – Streetscape lighting installation including all conduit, wiring, service points and foundations to complete (07/2014 – 05/2015)

3.

Company – Tople Construction and Engineering

Location – Simpson Rd. Streetscape – Atlanta, GA

Contact Person – Charmaine Lawrence

Telephone Number – (404) 874-1090

Email – clawrence@topleconstruction.com

Description – Streetscape lighting installation including all conduit, wiring, service points and foundations to complete (07/2013 – 06/2014)

SCHEDULE OF ITEMS
NORTHWINDS STREET LIGHTING
ITB #17-003

Line Item	Description	Quantity	Unit	Unit Cost	Extension
1	Main Service Pick Up Point	1	LS	\$ 8,585.00	\$ 8,585.00
2	Pedestrian Lighting, Pole and Base	16	EA	\$ 3,410.00	\$ 54,560.00
3	Pedestrian Lighting, Fixture	16	EA	\$ 1,311.00	\$ 20,976.00
4	Pedestrian Lighting, Spare Pole	2	EA	\$ 1,821.00	\$ 3,642.00
5	Street Lighting, Pole	18	EA	\$ 3,875.00	\$ 69,750.00
6	Street Lighting, Fixture	18	EA	\$ 1,058.00	\$ 19,044.00
7	Street Lighting, Spare Pole	2	EA	\$ 2,270.00	\$ 4,540.00
8	Cable, TP XHHW, AWG No 10	6,550	LF	\$ 0.60	\$ 3,930.00
9	Cable, TP XHHW, AWG No 8	10,950	LF	\$ 0.80	\$ 8,760.00

Grand Total: \$ 193,787.00

Bid Price Certification for ITB #17-003

In compliance with Section 3 Scope of Project/Specifications, the undersigned offers and agrees that if this Bid is accepted by the City Council within one hundred twenty (120) days of the date of ITB Response Due Date and Bid opening, that the undersigned will furnish any or all of the deliverables upon which prices are quoted, at the price set opposite each, to the designated point(s) within the time specified.

Company Name: Brooks Berry Haynie & Associates, Inc

Company Address: 600 Discovery Place, Mableton, GA 30126

Authorized Signature(s):



Andy O'Kelley - COO

Print/Type Name(s) and Title(s):

Date Signed: 2-Nov

Contact Info - Phone Number: 770-874-1162

Contact Info - E-mail Address: andy@bbhelectric.com



STAFF REPORT

Submitting Department: Administration

Submitted By: Bob Regus

Meeting Date: December 12, 2016

I. AGENDA ITEM TITLE: PROPERTY ACQUISITION: 850 AND 860 OLD RUCKER ROAD

II. RECOMMENDATION:

Approve the purchase of 10 acres of property located at 850 and 860 Old Rucker Road at a price of \$855,000; approve the use of park bond proceeds for such purchase, and authorize the Mayor to execute all necessary documents.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: NO

FISCAL IMPACT: YES

INCLUDED IN CURRENT FY CPTL BUDGET: YES

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST: \$855,000

APPROPRIATIONS:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
31761150-541000-C1100 - Park Land Acquisition	\$855,000.00

EXTERNAL FUNDING SOURCES:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
N/A	\$0.00

IV. REPORT IN BRIEF:

Consideration of the purchase of 10 acres located at 850 and 860 Old Rucker Road for a total cost of \$855,000. The property would be acquired using bond proceeds designated for park land acquisition.

It would be the City's intent for the land to be used as passive park space; meaning that it would not be developed to include ball fields, etc.

V. ALTERNATIVES:

VI. ATTACHMENTS:



STAFF REPORT

Submitting Department: Public Works

Submitted By: John Maloney

Meeting Date: December 12, 2016

I. AGENDA ITEM TITLE: MARIETTA STREET PEDESTRIAN IMPROVEMENT

II. RECOMMENDATION:

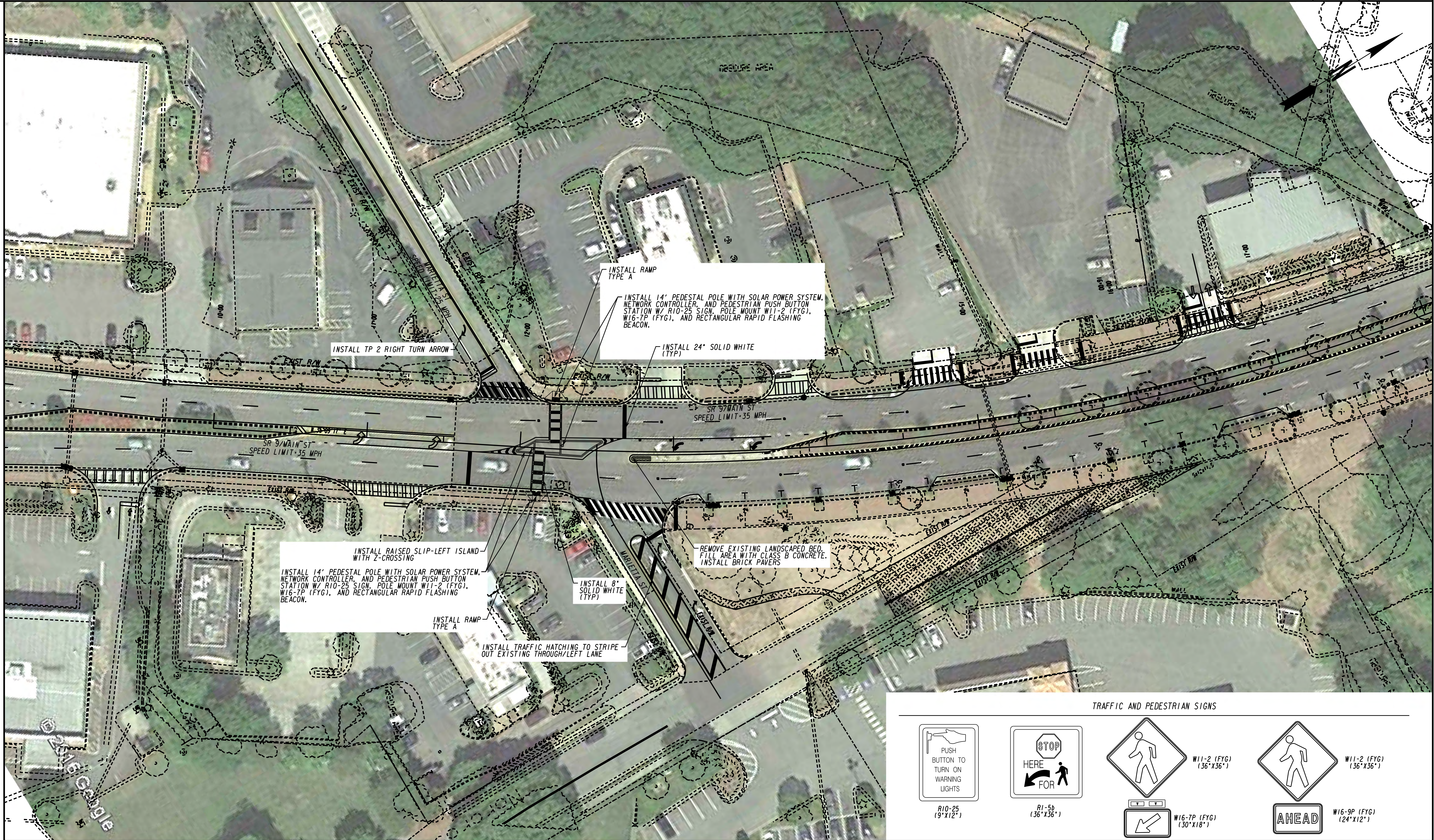
III. REPORT IN BRIEF:

Public Works Department will be presenting a concept design for a pedestrian refuge island and crossing at Marietta Street and SR 9. The crossing will provide an additional pedestrian crossing between SR 120 and the crosswalk in front of City Hall. Estimated cost for the construction is \$140,000.00. If approved the crossing will be included in the FY2018 Budget.

IV. ALTERNATIVES:

V. ATTACHMENTS:

Proposed Marietta Street Pedestrian Crossing



+

PROPOSED
SIGNAL HEAD

+

PROPOSED 4-SECTION
SIGNAL HEAD

-

EXISTING
SIGNAL HEAD

+

RELOCATED
SIGNAL HEAD

+

PROPOSED 5-SECTION OR
4-SECTION SIGNAL HEAD

⊙

PEDESTRIAN
SIGNAL HEAD

PROPOSED VIRTUAL DETECTION ZONE

PROPOSED INDUCTIVE LOOP

PROPOSED VIDEO DETECTION CAMERA

⊙

PROPOSED MAGNETOMETER

PROPOSED RADAR

Architects-Engineers-Planners
3500 Parkway Lane
Suite 600
Norcross, Ga. 30092
Phone 678-336-7740
Fax 678-336-7744
Web www.pondco.com

SCALE IN FEET

0

30

60

120

REVISION DATES

WINNETT COUNTY
DEPARTMENT OF TRANSPORTATION

OFFICE:

SIGNAL PLANS

RRFB INSTALLATION NO. 1

SR 9/MAIN ST AT MARIETTA STREET
MIDBLOCK CROSSING

DRAWING NO.
27-004



CITY COUNCIL EXECUTIVE SESSION

DECEMBER 12, 2016

IMMEDIATELY FOLLOWING COUNCIL MEETING
ALPHARETTA CITY HALL
FIRST FLOOR CONFERENCE ROOM
2 PARK PLAZA

- I. CALL TO ORDER
- II. REAL ESTATE
- III. PERSONNEL
- IV. LITIGATION
- V. ADJOURNMENT