PLANNING COMMISSION MEETING
AUGUST 6, 2026

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

1. ROLL CALL

2. WORK SESSION

a. CAA/ICON

b. TAX ALLOCATION DISTRICT

3. PUBLIC HEARING

a. Announcement of Public Hearing Procedure

b. MP-26-06/Z-26-05/CU-26-04/V-26-08 North Point Sports & Entertainment District
Consideration of a master plan amendment, rezoning, conditional use and variances to allow for the redevelopment of North Point Mall with a mixed-use development consisting of approximately a 20,000-seat hockey arena, 4,000-seat music hall and performing arts center, 2,000-seat team practice facility and community hockey rink, movie theater, 30,000 square foot hotel conference center, 350-room full-service hotel, 300-room hybrid hotel, 750,000 square feet of office, 565,000 square feet of retail/restaurant, 1,385 'For-Rent' dwelling units, and 26 acres of public parks, plazas and multi-use trails on 98.58 acres in the North Point Overlay. A master plan amendment is requested to the North Point Mall Master Plan to allow for the proposed mixed-use development. A rezoning is requested from PSC (Planned Shopping Center) to MU (Mixed Use) and a conditional use is requested to allow 'Dwelling, 'For-Rent' use, to increase residential density, and to increase non-residential building height. Variances are requested to Unified Development Code (UDC) Subsection 2.2.20(B)(4) to reduce the minimum percentage of office, UDC Subsection 2.5.4 to increase the distance requirement for off-site parking, UDC Subsection 2.10.3 to modify streetscape requirements, UDC Subsection 2.10.4 to modify block and access requirements, UDC Subsection 2.10.3(D) to increase residential building height, and UDC Subsection 3.2.2 to allow an encroachment into the Georgia 400 Tree Buffer. The property is located at 0 North Point Drive, 0 Rock Mill Road, 1000 North Point Parkway, and 2000, 4000, 4500, 5000 & 6000 North Point Circle and is legally described as being located in Land Lots 687, 688, 689, 700, 701, 702, 742, and 743, 1st District, 2nd Section, Fulton County, Georgia.

4. ADJOURNMENT

I. **AGENDA ITEM TITLE:** MP-26-06/Z-26-05/CU-26-04/V-26-08 NORTH POINT SPORTS & ENTERTAINMENT DISTRICT

PLANNING COMMISSION: AUGUST 6, 2026

CITY COUNCIL: AUGUST 24, 2026

II. **STAFF RECOMMENDATION:**

Approve MP-26-06/Z-26-05/CU-26-04/V-26-08 North Point Sports & Entertainment District, subject to the following conditions:

1. Approximately 98.58 acres shall be zoned to MU and developed substantially similar to the site plan prepared by Kimley-Horn, dated 7/30/26, except as modified by these conditions.
2. Exterior modifications to existing buildings and new buildings shall be consistent with the submitted renderings, with final approval by DRB. Architectural design shall use high-quality materials such as brick, stone, cementitious panels, metal accents, and glazing systems consistent with the EcoDistrict character. Buildings over 7 stories shall be stepped back a minimum 15' above the 4th story, as approved by DRB. Buildings shall incorporate façade articulation, step-backs, transparency, pedestrian-scale frontage, and architectural consistency across the district, as approved by DRB.
3. Development regulations shall be as follows:
    a. Arena & Practice/Community Ice – A minimum 17,500 seat and maximum 20,000 seat arena shall be permitted with a maximum building height of 170' (as measured from the internal street at the main entrance to the arena). Practice/community ice sheets shall be permitted with a maximum 2,000 seat capacity and maximum building height of 4 stories or 80', whichever is less.
    b. Commercial – Maximum 565,000 square feet of retail/restaurant uses (new and existing) shall be permitted in freestanding and mixed-use buildings. Non-residential uses (retail, restaurant, office, and 'For-Rent' amenities) on the ground floor of the 'For-Rent' buildings shall not count against the maximum commercial and office entitlements or require additional parking. Freestanding commercial building height shall not exceed 4 stories or 80', whichever is less. Drive-through restaurants shall not be permitted. Rooftop and outdoor dining areas shall not count against the maximum commercial entitlement or require additional parking.
    c. Office – Maximum 750,000 square feet of office shall be permitted in freestanding buildings no greater than 14 stories or 200', whichever is less. Additional office shall be permitted when exchanged for commercial, 'For-Rent' residential (1,000 SF per unit), or hotel (500 SF per hotel room) entitlements.
    d. Hotel – Maximum 650 rooms shall be permitted in two (2) freestanding or mixed-use buildings no greater than 20 stories or 300' whichever is less. Hotels shall be 4-star (AAA Diamond Program), or higher and similar in quality to a Loews, Curio, or Autograph Collection. Accessory uses shall be limited to restaurant, spa, fitness center and conference space. Minimum 10,000 square feet of conference space shall be provided with a maximum of 35,000 square feet; and shall include a minimum 7,500 square feet of outdoor pavilion space for weddings and other events. Both hotels shall include on-site full-service restaurants and banquet kitchen capable of serving full-scale events. Hotels shall provide direct pedestrian connectivity to the arena and music hall.

e. 'For-Rent' Residential – If the National Hockey League (NHL) awards a franchise team to the North Point site, up to 1,385 'For-Rent' units shall be eligible for a CO based on the available units by year as depicted in the 'For-Rent' Request - Recommended CO Year table in this staff report. Up to 2 'For-Rent' buildings may have a building height up to 20 stories or 240', whichever is less, and all other buildings shall not exceed 7 stories or 90', whichever is less. 'For-Rent' units shall be limited to studio, one (1), two (2), and three (3) bedrooms. A maximum of 65% of units shall be studio or one (1) bedroom and no more than ten percent (10%) shall be three (3) bedroom units. 'For-Rent' units shall have first-class amenities, including a pool, fitness center, secured parking, resident's lounge, business center, on-site management office and secure elevator access.
   Concurrency: 600 'For-Rent' units shall be eligible for CO after building permits are issued for a minimum of 300,000 square feet of retail (including retail anchors, new retail, restaurants, and a minimum 3,500 square foot neighborhood grocery) and the cinema. A CO shall not be issued for the remaining 'For-Rent' units until the arena super structure (foundation, all supporting steel and concrete), 350,000 square feet of office, and internal section of Alpha Loop is constructed and shall be eligible for a CO based on the available units by year as depicted in the 'For-Rent' Request – Recommended CO Year table in this staff report.
   Reversion: If construction does not commence on the 'For-Rent' units by August 24, 2031, or if the NHL does not approve a hockey team at the site before August 24, 2031, then zoning entitlements shall revert to current zoning of the property.
f. Other Uses – A performing arts or music hall with a maximum seating capacity of 4,000 seats shall be permitted in a building with a maximum height of 4 stories or 80', whichever is less. A theater or cinema with a maximum seating capacity of 1,139 seats shall be permitted in a building with a maximum height of 4 stories or 80', whichever is less.
g. Parking Decks – Maximum height shall not exceed 7 stories or 95', whichever is less. Parking decks visible from North Point Circle or Georgia 400 shall be treated with comparable materials and finishes as the building they serve and/or screened from view with evergreen landscaping, as approved by DRB. Suitability of parking deck elevation, visibility and landscape screening shall be approved by the DRB.

4. Active uses, including retail, restaurant, office and 'For-Rent' amenities, shall be required in all 'For-Rent' buildings and located on the ground-floor space along storefront streets and shall have a minimum first floor height of 14' and depth of 30', as approved by Staff. Ground-floor residential units shall have individual walkouts connecting to the sidewalk system.
5. The Master Plan area shall be limited to the following uses and further restricted by conditions of zoning:
   a. Arena and Indoor Practice/Community Ice Sheets
   b. Retail
   c. Restaurant
   d. Office (professional, medical and research and development)
   e. Hotel (boutique hotel and hotel)
   f. Residential ('For-Rent' and 'For-Sale')
   g. Performing Arts/Music Hall
6. Uses shall be customarily accessory to or amenities for residential, office, and sports and entrainment uses, limited to the following:
   a. Amphitheater
   b. Animal Hospital, Small Animal
   c. Art Gallery
   d. Athletic Facility
   e. Auditorium
   f. Automotive Sales Showroom (limited to one (1) not to exceed 5,000 SF and outside car storage display limited to no more than 5 vehicles)
   g. Bakery

h. Bank
i. Barber Shop
j. Beauty Shop
k. Book Store
l. Bowling Alley
m. Brewery or Distillery
n. Dance and Fitness Studio
o. Day Care Facility
p. Drug Store (Pharmacy)
q. Dry Cleaning, Pick-up Station
r. Florist, Retail without Greenhouse
s. Golf, Miniature and Driving Range
t. Grocery Store
u. Hardware and Garden Supply Store
v. Home Improvement Store
w. Museum and Libraries
x. Nail Salon
y. Park and Playground
z. Pet Grooming and Pet Day Care
aa. Public Building
bb. Recreational Facilities, Indoor and Outdoor
cc. Restaurant (no drive-thru)
dd. Retail Sales and Services Establishment
ee. School, Academic and Commercial
ff. Shop or Studio, Craftsman/Artist
gg. Spa Services (conditional use)
hh. Special Event Facility (conditional use)
ii. Theater, Cinema
jj. Vertiport

7. Minimum 26.86 acres of open space (21.24 acres of civic space and 5.62 acres of amenity space), consisting of squares, plazas, multi-use trails, park, yards and lawns, patios and balconies, outdoor dining, sports court, pocket parks, and pool courtyards and amenity areas shall be provided as depicted on the submitted renderings and site plan prepared by Kimley-Horn, dated 7/30/26.

Design Conditions:

8. Developer shall provide a detailed street planting plan for North Point Circle and new private streets, including landscape theme with overstory shade trees, mid-story shade trees, ornamental trees, evergreen trees and shrubs to be planted throughout the District. The theme shall include flowering trees and shrubs of similar color with varying bloom times, as approved by DRB. Landscape plan shall be approved prior to issuance of an LDP.
9. Minimum 10' landscape strip shall be required along North Point Circle adjacent to the proposed development.
10. Minimum size of tree planter pits shall be 100 SF and planted with shrubs and/or groundcover, as approved by Staff. The edge of planting pits for overstory shade trees shall be a minimum of 15' off the face of the building and or any architectural features such as balconies or overhangs. The edge of planting pits for mid-story shade trees shall be a minimum of 10' off the face of the building and or any architectural features such as balconies or overhangs. The edge of planting pits for ornamental trees shall be a minimum of 5' off the face of the building and or any architectural features such as balconies or overhangs. Tree planters shall be delineated with physical barriers. Planters located within pedestrian gathering and activation areas shall be

designed to contribute to the activation of the spaces through the incorporation of seating, standing tables, ledges, or similar amenities.

11. Developer shall provide EcoDistrict measures with each phase of development in compliance with the North Point Overlay. Detailed information shall be provided at LDP and building permit showing compliance with the requested EcoDistrict measures. Total EcoDistrict points to be confirmed by Staff.
12. Developer shall improve the stormwater park on its property, including trails, landscaping and overlook. The northern half of the stormwater park shall be improved prior to a CO for the 1st 'For-Rent' building and remaining portion of the stormwater park is improved prior to a CO for the 2nd 'For-Rent' building, as approved by Staff. Upon completion of each of the northern half and the remaining portion, the tract shall be dedicated to the City, other than the detention ponds themselves and waterways which feed it. The City shall be responsible for the structural repairs upon dedication, and the developer shall be responsible for daily maintenance. Developer and other pond owner shall remain solely and exclusively responsible for maintenance of the detention ponds and waterways which feed it. The cost of the construction of such improvements shall be eligible for park impact fee credits.
13. Minimum 8 public art installations shall be provided at prominent locations throughout the development, with unique murals and sculptures approved by Cultural Arts Commission (CAC). Public art shall include sculptures, murals, water features, EcoDistrict monuments and District Thresholds, and other similar improvements approved by Staff. Approval and construction of at least 1 public art installation shall be required concurrent with the 1st CO for a 'For-Rent' building. A minimum of 1 additional public art installation shall be required concurrent with the issuance of each CO. All sculptures shall be required prior to final CO issued for the last building constructed. Public art installations shall be privately maintained.
14. Minimum 2,500 square feet civic space shall be developed at the corner of North Point Circle and North Point Drive and North Point Circle and North Point Center East. Civic space shall include decorative hardscape, landscape, and public art. Open space, including improvements, shall be privately maintained.
15. Developer shall provide an interactive water feature in North Point Green near the intersection of North Point Center East and North Point Circle and adjacent to the practice facility, or an alternate location, as approved by Staff. This improvement shall count toward the required public art installations.
16. As agreed to by the developer, the North Point Mall carousel shall be saved and incorporated into the development.
17. Retaining walls shall receive architectural façade treatment and be heavily landscaped. Retaining walls visible from developed areas exceeding 16' in height shall be terraced with landscaping to break up large expanse of retaining wall.
18. Applicant shall provide a dedicated space within the North Point Sports & Entertainment District for a Georgia Tourism visitor kiosk to be operated in coordination with the Georgia Department of Economic Development, Explore Georgia, or their authorized partner. The visitor kiosk shall be located in a high-visibility, publicly accessible area of the development, such as the primary plaza, event promenade, or other location approved by the City and Developer and shall be integrated into the pedestrian circulation network. The kiosk easement area shall be a minimum of 150 square feet and shall include connections for electrical service, lighting, and data/communications, as well as necessary weather protection if located outdoors. Alternatively, the developer can provide Georgia Tourism space within the arena structure to be operated by Explore Georgia.
19. Developer shall provide bicycle racks, benches, trash receptacles, decorative crosswalks, planters, kiosks and other street furniture, where appropriate, throughout the development.
20. Prior to LDP, developer shall submit for DRB approval a document titled, 'North Point Sports & Entertainment District Design Standards'. This document shall include elevations or architectural themes, street amenities and furnishings consistent with the North Point Design Guidelines, streetscape and alleyway standards, entrance treatments at the intersections of North Point Circle and North Point Drive and North Point Center East, signage, storefronts, and landscaping which shall be substantially similar to the information contained in the 2026 public hearing application. This condition shall be satisfied upon approval by DRB.
21. Signage visible from the public right-of-way or from neighboring properties shall comply with a DRB-approved Master Sign Package defining sign styles, illumination, materials, and placement. Signage that is not visible

from the public right-of-way or from neighboring properties shall not be subject to the City's sign regulations but shall be contemplated in the Master Sign Package. Signs mounted or affixed to a building shall appear integral to building design. Off-premises signage shall be prohibited, except in areas of the district that are not subject to the City's sign regulations and in existing off-premises sign easements in existence at the time of this master plan amendment. Off-premises signage in an existing sign easement shall comply with the North Point Creative Placemaking Monuments and District Thresholds, as approved by Staff.

22. Awnings, or similar overhead structures, shall be provided at the ground level in commercial areas where reasonably appropriate in order to protect pedestrians from inclement weather.
23. Development shall include at least 2 rooftop amenities within the non-residential portion of the development.
24. Developer shall prioritize the orientation of 'back of house' functions, such as delivery service areas, loading areas, and refuse enclosures away from view from the right-of-way, as approved by DRB. Service areas and loading areas shall be screened from public areas and separated from the primary vehicular and pedestrian circulation areas, as approved by DRB.
25. Developer shall install all utilities and transformer systems underground, except that transformers shall be permitted at-grade if screened, as approved by Staff. To the maximum extent possible, all water/sewer utilities and grease traps shall be installed within service alleyways. All mechanical systems must be screened in a manner that is architecturally comparable to the buildings they are associated with. Any necessary above-ground utility systems shall be screened, as approved by Staff.

Transportation:

26. The arena shall be designed with a pick-up and drop-off area, with final approval by Staff.
27. New streets and alleys shall be private and shall be consistent with the streetscape exhibits prepared by Kimely-Horn, dated 7/29/26, with modifications in final design and permitting, as approved by Staff. Developer shall coordinate with the City and County on any necessary intergovernmental and development agreements for new or existing utilities within streets and alleyways.
28. Enhanced pedestrian crossings and bicycle connections shall be provided throughout the site, including between buildings and open space within the development; and across North Point Circle. Enhanced pedestrian crossings within the development and across the development shall be designed and constructed of materials, such as brick pavers, cobblestones, or architecturally treated concrete products, as approved by DRB. Off-site pedestrian and bicycle connection improvements shall be eligible for impact fee credits.
29. Pedestrian bridges, stairs, elevators and escalators within the site may encroach over and into public spaces provided that they do not impede pedestrian circulation or safety, as approved by Staff.
30. Developer shall construct the Alpha Loop through the site and located within the Loop Road substantially as depicted on the site plan prepared by Kimely Horn, dated 7/30/26, with final design, location, alignment, and materials as approved by Staff. Design shall include landscape separation from storefronts sidewalks with curb, trees, and/or landscaping. The design and construction of the portion of the Alpha Loop to provide connectivity to a pedestrian bridge/ELT stop will be conducted in coordination and after the pedestrian bridge/ELT stop are constructed. A bike share station shall be required along the Alpha Loop with final location and design approved by Staff. Alpha Loop improvements shall be eligible for impact fee credits.
31. In coordination with MARTA, developer shall upgrade 2 existing bus stops with MARTA bus shelters and will work with MARTA to explore any bus stop consolidations along property frontages. Applicant shall apply for the True North 400 CID bus shelter program. Expenditures not reimbursed by the CID shall be eligible for impact fee credits.
32. Minimum parking requirements shall be as outlined in the parking study prepared by Kimley-Horn, dated 7/21/26.
33. Prior to the issuance of an LDP, preliminary on-site and off-site Parking Agreements shall be submitted, reviewed, and approved by Staff. Final recorded Parking Agreements shall be provided prior to a CO for the arena. Developer shall coordinate to have submitted Parking Agreements incorporate off-duty officer presence during special event programs to help manage traffic demands, as approved by Staff. Parking

Agreements approved by Staff may require additional privately paid licensed security professionals or traffic control professionals, as determined by Alpharetta Police.

34. Developer shall work with the City, MARTA and GDOT to collaboratively explore, design, and create an Express Lane Transit (ELT) station and mobility hub along GA-400 and within the site, as well as pedestrian bridge accessibility options from the ELT station to the site. Factors to be explored and designed include dedicated space for future micromobility options and universal accessibility capabilities that will assist with improving future transportation mobility services for employees, citizens, and visitors alike.
35. Prior to LDP, special/major event transportation management plans shall be coordinated with City Staff and submitted for review and approval. Developer shall submit a comprehensive traffic and access management plan—coordinated with City Police, Fire, Public Works & Community Development Departments—detailing phased road closures, reroutes, and dedicated emergency lanes for events.
36. Developer shall construct an exclusive southbound right-turn lane along Mall Access B Driveway at the intersection with North Point Parkway, creating one exclusive through lane and one exclusive right-turn lane, as approved by Staff.
37. Developer shall increase the eastbound left-turn storage length at North Point Parkway and Encore Parkway/Private Driveway (intersection 8). Work with city staff to determine the length of additional storage required and at which phase of development it must be completed.
38. Developer shall channelize the southbound right-turn movement to make it free flow at Haynes Bridge Road and North Point Drive.
39. Developer shall upgrade signal heads on the northbound and southbound approaches to Flashing Yellow Arrow (FYA) to allow protected-permissive phasing by time of day at Mansell Road and North Point Parkway/Resurgens Park Place. Restripe the southbound shared through/left-turn lane to be an exclusive through lane and remove split phasing and provide dual entry for the northbound and southbound approaches.
40. Developer shall construct and/or install traffic control measures as identified in the event Traffic Management Plan. These may include dynamic lane assignment signs used to change lane rules during events, informational signage to guide motorists or pedestrians during events, or other traffic control measures, as approved by Staff.

<u>Fire & Police Departments:</u>

41. Emergency access shall be maintained at lane and including during large-scale events, temporary street closures, and traffic control operations through approved operational planning and coordination with Fire and Police Department.
42. Any proposed street closures, event operations, or traffic control measures affecting fire apparatus access shall be subject to Fire Department review and approval.
43. Evacuation & Emergency Plans: Developer/operator shall develop an event evacuation program, including interior occupant load analysis, egress signage and drills. Incorporate protocols for fire, medical emergencies, severe weather, and crowd surges. Event operations shall include provisions for fire department access, staging, and incident command. Plans shall be reviewed and approved by the Fire Department prior to occupancy and updated periodically.
44. The Fire Department may require Fire Safety Officers (FSOs) for events based upon occupancy load, event type, operational complexity, temporary structures, special effects, pyrotechnics, fire and life safety system impairments, impaired fire access, crowd characteristics, or other life safety considerations. Fire Safety Officer staffing levels shall be determined by the Fire Department and shall be funded by the developer/operator.
45. Developer shall design and dedicate emergency access easements for critical fire apparatus access routes and emergency operational areas throughout the development to preserve long-term emergency access capabilities and unobstructed routes for first responders.
46. Developer shall conduct a Standards of Coverage study that evaluates anticipated emergency response times and public safety service levels for both Fire and Police Departments. Assessment findings to be used to inform coordination between the project team and the Fire and Police Departments. Information from the findings

may also require additional dedicated fire access lanes and a minimum of 7,500 sf within a planned building for one-bay fire truck/station.

47. Removable or retractable bollards utilized within pedestrian or event-controlled areas shall be required and approved by the Fire Department and equipped with Knox locking systems or other approved emergency access controls.
48. A Public Safety Substation designed to support multi-agency emergency operations during planned events and emergency incidents shall be required within the arena structure. Minimum 650 square feet shall be provided. The Public Safety Substation can be shared with onsite property security operations center. Consideration should be given to inclusion of restroom facilities, communications infrastructure, building system interfaces, and direct access to life safety system controls necessary to support extended operational periods. Additionally, 2 holding cells shall be provided on site for Alpharetta Police access.
49. All systems identified as Special Inspections, including but not limited to smoke control, smoke evacuation, and stair pressurization systems, shall require third-party review, testing, and certification in accordance with the International Building Code and applicable NFPA standards. Documentation of certification shall be provided to the Authority Having Jurisdiction (AHJ) prior to final acceptance. Third-party inspections and texting may supplement but shall not replace Fire Department review, witness testing, operational approval authority, or final acceptance responsibilities of the AHJ.
50. A third-party fire protection and life safety engineering review shall be conducted prior to formal plan submittal to the AHJ for the arena. This review shall evaluate life safety systems, egress design, smoke control strategy, and overall code compliance, and documentation shall be provided as part of the plan review process. All other structures on the site may be handled by AHJ unless otherwise dictated.
51. Site design shall support incident command operations, staging areas, and emergency vehicle circulation.
52. Prior to issuance of a CO for the arena, Developer/Operator shall enter into a Private EMS Operations Agreement with the City, approved by the Fire and Police Departments, establishing minimum staffing levels, certification requirements, equipment standards, and coordination protocols for private EMS coverage at all arena events. The terms of such agreement shall be enforceable by the City through the development agreement and shall not be subject to automatic expiration.
53. Developer/operator shall create a Public Safety Liaison Committee comprising developer, APD, fire, EMS, and Traffic staff to meet quarterly during design/construction and continue once the arena is operational.
54. Developer/Operator shall provide quarterly incident reports summarizing public safety incidents, emergency responses, and lessons learned. Implement improvement actions required by public safety staff within 60 days; document progress for City review.
55. Developer/Operator shall implement a shared mobility strategy to reduce surface lot density and traffic congestion on adjacent arterials.
56. Developer/operator shall install a network of HD CCTV cameras covering reasonable public entry points, plazas, parking and loading zones, with at least 30-day image retention and integration into the Public Safety Services network.
57. Developer/operator shall provide a security plan specifying a minimum number of one (1) licensed security professionals per 1,250 attendees covering ingress, egress and potential crowd hot spots, subject to approval by the Police Department. Security professionals shall be paid by private developer/operator.
58. Developer/operator shall enter into a first-responder partnership agreement mandating event-level coordination with APD, including pre-event briefings, real-time radio access, and on-site staging for response teams during Arena events. A coordinated Public Safety & Emergency Operations Plan must be approved prior to opening the arena and updated annually thereafter and include:
    a. Police staffing and traffic enforcement
    b. Fire/EMS staging and medical response
    c. Crowd control and evacuation planning
    d. Monitoring protocols for pre-, during-, and post-event activity

Other Conditions:

59. Developer shall dedicate a 20' utility easement to Fulton County Government for an existing 16" water main within the North Point Circle right-of-way.
60. Developer's on-site construction trailer(s) shall provide office space for a minimum 2 City employees (1 land development inspector and 1 building inspector) for the duration of construction.
61. Developer shall be responsible for planting and maintenance of any medians within the development and for medians located on North Point Circle or the Access Roads.
62. Developer's financial responsibility for offsite improvements and stormwater park improvements shall not exceed its impact fees, nor shall credits be given for meeting minimum EcoDistrict and open space requirements.
63. It is acknowledged that the approved site plan may be subdivided into separately platted parcels with individual tax numbers, that the separate development parcels are to be developed by separate owners/developers, and that the public amenities are to be platted and owned by the Developer. Zoning compliance for conditions uniquely applicable to an individual owner's parcel will be the responsibility of that owner and that non-compliance by such an owner does not render, by itself, the remaining parcels "non-conforming" uses under the Zoning Code.

General Conditions of Approval to GTEA Development of Regional Impact Notice of Decision, dated 7/31/26:

Bicycle, Pedestrian & Transit Facilities

64. Ensure multimodal connections between all uses and work with the City of Alpharetta to determine safety mitigations for the internal road network.
65. Provide on-site pedestrian routes that are clearly delineated and appropriately marked to alert both drivers and pedestrians.
66. Provide pedestrian connections to the Alpha Loop trail system, as noted on the DRI site plan.
67. Consider best practices that allow for the prioritization of transportation alternatives; at a minimum the following should be included: pedestrian and bicycle facilities, transit accommodations, traffic calming, and green infrastructure.
68. Coordinate with MARTA, GDOT, and the City of Alpharetta to connect the GA 400 Rapid Transit to the DRI site via the proposed pedestrian bridge and ensure all stakeholders are involved in the design and implementation of the project.
69. The proposed pedestrian bridge for the GA 400 rapid transit station shall provide a direct site connection that ensures adequate and safe access to the DRI site, as noted on the site plan. Coordinate with MARTA during design and construction to identify preferred site access.
70. Evaluate the feasibility and consider implementing a bus stop that is internal to the site. Consideration shall require coordination with MARTA to identify location accessibility, design, and accommodations within the internal circulation and network.

General Georgia Department of Transportation (GDOT) Conditions

71. GDOT reserves the right to determine driveway access based on compliance with GDOT standards, safety analysis, neighboring conflicts, and any other circumstance needing consideration on all state routes based on GDOT's most up-to-date regulations.
72. Any access to GDOT right of way will be determined at the time of permitting when submitted with a design.

Encore Parkway at North Point Center/Private Driveway (Intersection 9)

73. Construct an exclusive northbound right-turn lane along Encore Parkway, creating one exclusive through lane and one exclusive right-turn lane.
74. Construct an exclusive westbound left-turn lane along North Point Center, creating one exclusive through lane and one exclusive left-turn lane.

III. REPORT IN BRIEF:

The applicant, Jamestown, is requesting a master plan amendment, rezoning, conditional use and variances to allow for the redevelopment of North Point Mall with a mixed-use sports and entertainment district consisting of a 20,000-seat NHL hockey arena, 2,000-seat practice/community ice sheets, 565,000 square feet of commercial uses (includes 342,000 square feet existing anchors), 750,000 square feet of office, 1,385 'For-Rent' dwelling units, 1,139-seat cinema, 4,000-seat music hall, 650 hotel rooms, 30,000 square foot hotel conference center, and 26.86 acres of open space on 98.58 acres in the North Point Overlay. The proposed residential density is 14.04 dwelling units per acre. A master plan amendment is requested to the North Point Mall Master Plan to modify the development mix and development regulations, and a rezoning is requested from PSC (Planned Shopping Center) to MU (Mixed Use). A conditional use is requested to allow 'Dwelling, 'For-Rent', increase allowable residential density, and increase non-residential building height. Variances are requested to allow the MARTA ELT and multi-use trail in the Georgia 400 buffer; reduce MU office percentage; modify block, access, and streetscape requirements; allow off-site parking greater than 500' from the property; and increase residential building height. The property is located at 1000 North Point Parkway, 4500 North Point Place, 0 & 5000 North Point Drive, 2000 & 6000 North Point Circle, and 0 Rock Mill Road.

DISCUSSION

The submitted request, if approved, would allow for the redevelopment of North Point Mall with a mixed-use sports and entertainment district consisting of a 20,000-seat NHL hockey arena, 2,000-seat practice/community ice sheets, 565,000 square feet of commercial uses (includes 342,000 square feet existing anchors), 750,000 square feet of office, 1,385 'For-Rent' dwelling units, 1,139-seat cinema, 4,000-seat music hall, 650 hotel rooms, 30,000 square foot hotel conference center, and 26.86 acres of open space on 98.58 acres in the North Point Overlay. The proposed residential density is 14.04 dwelling units per acre. A master plan amendment is requested to the North Point Mall Master Plan to modify the development mix and development regulations, and a rezoning is requested from PSC (Planned Shopping Center) to MU (Mixed Use). A conditional use is requested to allow 'Dwelling, 'For-Rent', increase allowable residential density, and increase non-residential building height. Variances are requested to allow the MARTA ELT and multi-use trail in the Georgia 400 buffer; reduce MU office percentage; modify block, access, and streetscape requirements; allow off-site parking greater than 500' from the property; and increase residential building height. The property is located at 1000 North Point Parkway, 4500 North Point Place, 0 & 5000 North Point Drive, 2000 & 6000 North Point Circle, and 0 Rock Mill Road.

The property is zoned PSC and MU, subject to the North Point Mall Master Plan. Surrounding properties are zoned PSC, with properties to the south and west subject to the North Point Mall Master Plan and properties to the north and east subject to the North Point Business Center Master Plan. Surrounding properties include Sonesta ES Suites to the northeast, a regional stormwater facility to the east, various commercial outparcels to the south, Encore Commons office buildings to the west and Georgia 400 to the north. The comprehensive land use plan designation of the property is 'Mixed Use', which supports the applicant's proposed mixed-use development.

The North Point Mall Master Plan (MP-90-04) was approved on March 19, 1990, allowing a 1,392,132 square foot regional shopping mall and commercial outparcels on 100 acres. As shown in the table below, the Master Plan has been amended several times including amendments to allow creative office space (SPACES) inside the Mall and redevelopment of the Sears anchor with a new mixed-use development. The later approval allowed 300 'For-Rent' units, freestanding commercial and open space, of which the units reverted to 300 'For-Sale' units in 2022. The current master plan amendment, if approved, would

significantly expand the redevelopment efforts at North Point Mall and would result in the removal of nearly all of the Mall and/or repositioning of existing retail. The Dillard's and Von Maur buildings will remain, as will the parking deck.

Table 1: North Point Mall Master Plan – Approval History

File#	Location	Request
MP-90-04/Z-90-03/V-90-01/V-90-02	Master Plan	Original Mall Master Plan to allow regional shopping mall
MP-93-03	North Point Mall and Outparcels 1A, 1B, 1C	Amendment to reflect Mall as-built condition and address specific uses for 3 outparcels on North Point Pkwy
MP-95-02	Outparcel 1A	Change of use from restaurant to retail sales
MP-08-05/CU-08-04	Outparcel	Allow Liquor Store for Total Wine
MP-12-02/CU-12-01	Mall	Add Theater use for AMC Theaters
MP-18-04	Mall	Add 30,000 SF of office for SPACES inside the Mall
MP-18-07/Z-18-10/CU-18-08/V-18-10	Mall	Remove Sears and redevelop with 300 'For-Rent' units, 30,000 SF retail/restaurant, and 14.73 acres of open space

A rezoning is requested for 98.58 acres from PSC to MU and a conditional use is requested to allow 'Dwelling, 'For-Rent' Residential' use and to increase residential density. The subject property is located within Priority Area 1 on the North Point LCI Density Priority Map, which is designated in the North Point Overlay as an appropriate area for higher densities. The North Point Overlay allows City Council to authorize residential densities over the maximum density permitted in the underlying zoning district, of which the MU district has a maximum density of eight (8) dwelling units per acre. The applicant requests a residential density of 14.04 dwelling units per acre. Criteria to be considered with the conditional use include conformance with the North Point LCI, Comprehensive Plan, and other relevant planning studies; Alpharetta rental housing study; EcoDistrict measures; impact on public health, safety, and welfare; and other considerations deemed material to the application by City Council. In addition, a conditional use is requested to increase the maximum non-residential building height from four (4) stories and 60', whichever is less, to twenty (20) stories. Adjacent properties to the east and west are subject to the North Point Business Center Master Plan, which allows building heights up to 20 and 30 stories. The applicant is requesting the following building heights:

Table 2: Proposed Building Heights

Commercial (no variance needed)	4 stories
Parking garage	7 stories
Office	14 stories
Hotel	20 stories
Residential (For Rent)	20 stories
Arena	170 feet
Music Hall and Cinema	80 feet

The applicant's requested variances to the Unified Development Code (UDC) are outlined in the table below. The applicant points to the exceptional conditions pertaining to the property due to its size, shape, and topography, as well as peculiar conditions which require redevelopment of a regional mall and shorter building heights than the building heights allowed on adjacent properties.

Table 3: Applicant's Variance Request

UDC Section	Variance Request	Notes
2.2.20(B)(4)	Reduce MU office percentage from 25% to 17.4%.	Approx. 562,000 SF of existing office in 4 buildings on the adjacent property to the west.
2.5.4	Allow off-site parking greater than 500' from the property.	Off-site parking is proposed within approximately a 15-minute walk to the property.
2.10.3	Modify streetscape (corridor) types.	Applicant submitted alternate streetscape types.
2.10.3(D)	Increase maximum building height for residential buildings from 4 to 20 stories.	Max. 2 residential bldgs. up to 20 stories. Other residential bldgs. max. 7 stories.
2.10.4(A)	Modify block and access requirements.	Block and access as proposed on the submitted site plan.
3.2	Allow future MARTA ELT and proposed multi-use trail in the Georgia 400 Tree Protection Zone.	MARTA ELT and multi-use trail as depicted on the submitted site plan.

The table below compares the applicant's proposal to the original and current development approvals in the North Point Mall Master Plan. The applicant's mixed-use sports and entertainment proposal represents a reduction in retail combined with the introduction of residential, office, hotel, sports and entertainment uses, and open space.

Table 4: North Point Mall Master Plan Comparison Table

Use	Original Master Plan & Amendments	Sears Redevelopment	Current Proposal	Net Change
Site Acreage	100 acres	83.67 acres (30 acres rezoned to MU)	98.58 acres	+14.91 acres
'For-Rent' Residential	0	300 Units*	1,385 Units	+1,385 Units
Retail & Restaurant	1,392,132 SF	30,000 SF -154,886 SF (Sears)	565,000 SF -1,050,132 SF (Mall)	-672,246 SF
Office	30,000 SF (SPACES)	N/A	750,000 SF	+720,000 SF
Hotel	0	0	650 rooms 30,000 SF conference center	+650 rooms +30,000 SF conference center
Other Uses	Cinema	Cinema	Arena, Ice Sheets, Music Hall, Cinema,	Arena, Ice Sheets, Music Hall
Open Space	N/A	14.67 acres	26.86 acres	+12.19 acres

*300 'For-Rent' units reverted to 300 'For-Sale' units in 2022.

As shown in the table below, there are many examples across the country, as well as in the Atlanta metro, of major league sports developments. The Battery, home to Truist Park and The Braves, is considered a significant financial and operational success, serving as the standard for sports-anchored, mixed-use developments. The Battery draws roughly ten (10) million visitors annually and generates near-capacity leasing. Truist Park has a seating capacity of approximately 41,500, which is considered a mid-sized stadium in Major League Baseball. For comparison, the applicant's NHL hockey arena would have a maximum seating capacity of 20,000 seats. The Battery consists of 74 acres developed with two (2) hotels with 656 hotel rooms, approximately 500,000 square feet of retail and entertainment uses, 1.6 million

square feet of office, and 1,033 'For-Rent' units. The Gathering proposal in Forsyth County was approved with 500 hotel rooms, 600,000 square feet of retail and entertainment uses, one (1) million square feet of office, and 1,800 'For-Rent' units. Every mixed-use development with a major league arena included a hotel or future hotel, and most included retail, entertainment, office, and 'For-Rent' units. The sports-anchored mixed-use developments listed below had an average of 1,822 'For-Rent' units.

Table 5: Major League Arena in Mixed-Use Developments

Major League Arenas - Mixed-Used Developments With Hotels									
Major League Tenant(s)	Arena	Tenant League(s)	Development Name	MUD Acreage	Total Hotels	Total Hotel Rooms	Entertainment and Retail (sqft)	Office Space (Sqft)	Apartments
Anaheim Ducks	Honda Center	NHL	OCVIBE	100	2	500	872,110	710,000	1,500
Atlanta Braves	Truist Park	MLB	The Battery	74	2	656	250,000-500,000	630,000 - 1,670,000	1,033
Atlanta Hawks	State Farm Arena	NBA	Centennial Yards	50	2	553	900,000	1,700,000	1,000
Calgary Flames	Scotia Place	NHL	Culture & Entertainment District	10	4	740			8,000
Carolina Hurricanes (Phase One)	PNC/Lenovo Center	NHL	Raleigh Sports & Ent. District	80	1	150 (+150)	200,000	150,000	500
Total Raliegh planned Master Plan									4,020
Chicago Bulls / Blackhawks	United Center	NBA / NHL	The 1901 Project	55	TBD	1,300			1,000
Dallas Cowboys / Texas Rangers	ATT	NFL/MLB	Texas Live / Arlington Entertainment District		1+1 future	300 + 888	200,000	200,000	280
Dallas Mavericks / Stars	American Airlines Center	NBA / NHL	Victory Park	75	1	280			
Denver Nuggets / Colorado Avalanche	Ball Arena	NBA / NHL	Ball Arena Redevelopment	65	1	250			6,000
Detroit Pistons / Red Wings	Little Caesars Arena	NBA / NHL	The District Detroit	385	2	470	146,000	1,200,000	695
Edmonton Oilers	Rogers Place	NHL	ICE District	25	1	350	305,000	1,300,000	740
Forsyth County TBD	New Arena	NHL	The Gathering			500	600,000	1,000,000	1,800
Los Angeles Clippers	Intuit Dome	NBA	IBEC Development	26	1	150	63,000	71,000	
Los Angeles Lakers / Kings	Crypto.com Arena	NBA / NHL	L.A. Live	27	4	1,400	5,600,000	332,618	
Memphis Grizzlies	FedExForum	NBA	One Beale	5.5	1	350	17,000	400,000	232
Milwaukee Bucks	Fiserv Forum	NBA	Deer District	30	1	210	150,000		269
New York Islanders	UBS Arena	NHL	Belmont Park Redevelopment	43	1	250	340,000		
North Point TBD	North Point Arena	NHL	North Point Entertainment District	98.5	2	650	587,000	750,000	1,385
Orlando Magic	Kia Center	NBA	Westcourt Orlando	8.5	1	265	125,000	300,000	270
Philadelphia 76ers / Flyers	New Arena	NHL	TBD	TBD	1	250			
Pittsburgh Penguins	PPG Paints Arena	NHL	Lower Hill District	28	TBD	TBD	20,000	400,000	
Sacramento Kings	Golden 1 Center	NBA	Downtown Commons	11.2	1	250			
San Antonio Spurs	New Arena	NBA	Project Marvel	TBD	TBD	1,000			
Utah Jazz / Mammoth	Delta Center	NBA / NHL	Entertainment District	100	TBD	TBD			
Winnipeg Jets	Canada Life Centre	NHL	True North Square	23	1	275			

Sources: Internal database, industry research.

Staff researched mall redevelopments across the country to find comparisons to the applicant's proposal, as shown in the table below. Mall redevelopments had an average size of 61.8 acres and included an average of 1,600 'For-Rent' units with an average density of 29.9 dwelling units per acre (du/ac). The nearest developments to the applicant's proposal are Gwinnett Place Mall with 3,800 'For-Rent' units, North Dekalb Mall with 1,700 'For-Rent' units, Lakeshore Mall (Gainesville, GA) with 652 'For-Rent' units, and Georgia Square Mall (Bogart, GA) with 1,138 'For-Rent' units. The applicant's 'For-Rent' request is less than the average at the mall redevelopments in the table below and the proposed residential density (14 du/ac) is significantly less than the average in the table.

Table 6: Proposed, Active & Recent Mall Redevelopments

Mall	Location	MF Units	Acres	Units/Acre	Notes
Belmar	Lakewood, CO	1,048	100	10.5	Construction completed, open air district with 80 shops, 20 restaurants, offices, residences, hotel, art venues, and theatres
Moorestown Mall	Moorestown, NJ	1,065	84	12.7	Redevelopment enabled via updated zoning ordinance in June 2026
Lakeshore Mall	Gainesville, GA	652	49	13.3	Rezoning approved in 2025, groundbreaking scheduled in late 2026 and full redevelopment expected to be completed by 2028
North Point Mall	Alpharetta, GA	1,385	100	14.0	Proposed mixed-use redevelopment including hockey arena. Rezoning and meetings in 2026.
Georgia Square Mall	Bogart, GA	1,138	75	15.2	Stalled in 2026 due to financing; partial demolition ongoing
Medley Johns Creek	Johns Creek, GA	750	43	17.4	Phase 1 Opening 10/26
Laguna Hills Mall	Laguna Hills, CA	1,500	68	22	Village at Laguna Hills breaking ground early 2027, phased rollout over the next decade
North Dekalb Mall	Decatur, GA	1,700	78	22.1	Lulah Hills redevelopment; Phase 1 construction underway with 2.5 million sq ft of mixed-use space
Monmouth Mall	Eatontown, NJ	1,000	45	22.2	Open-air mixed-use town center anticipated to be completed in 2028
Collin Creek Mall	Plano, TX	2,300	100	23	$1B mixed-use; homes occupied; MF phases starting 2026
Northgate Mall	Seattle, WA	1,000	41	24	Renamed Northgate Station; Phase II underway in 2026; future phases 2028-2029
Chesterfield Mall	Chesterfield, MO	2,363	96	24.6	$2B, walkable urban district featuring a central park, high-rise residences, and retail. Central Park construction begins in 2026
Brodie Oaks	Austin, TX	1,700	37.6	39.5	Approved mixed-use district; no timeline for construction yet
Gwinnett Place Mall	Gwinnett, GA	3,800	87.5	43.4	County-owned; redevelopment aligned with Global Villages plan; RFP in 2025–2026
Galleria Fort Lauderdale	Fort Lauderdale, FL	1,900	31.5	45.2	Design & permitting phase through mid-2026, construction to start late 2026 or 2027
Beltway Plaza Mall	Greenbelt, MD	2,500	54	46.3	5 phased mixed-use development; progress has stalled due to financial obstacles
Landmark Mall	Alexandria, VA	2,500	52	48	WestEnd Alexandria, 1B+ project broke ground on its first residential phase in mid-2026
Redlands Mall	Redlands, CA	700	12	58.3	15 years, Village with 5 buildings containing up to 700 units; demolition underway 2026
Westfield Century City	Los Angeles, CA	1,400	21	66.7	The redevelopment of the mall is complete, meanwhile the adjacent Century City Center under construction as of 2026 with office, retail, hospitality, and public infrastructure
	Average	**1600.5**	**61.82**	**29.92**	

SITE PLAN

The submitted site plan depicts redevelopment of the 98.58-acre property with a mixed-use sports and entertainment district. A 20,000-seat NHL hockey arena, 4,000-seat music hall, 350-room full-service hotel with 30,000 square foot conference center, and structured parking deck are depicted in the northeast quadrant of the site. A 2,000-seat team practice and community ice facility, 1,139-seat cinema, 300-room hybrid hotel, retail/restaurant, vertiport and structured parking decks are depicted in the northwest quadrant of the site. The existing Von Maur, Dillard's, structured parking deck and surface parking are depicted to remain in the southwest quadrant with the addition of office and retail/restaurant uses. The southeast quadrant includes five (5) 'For-Rent' residential buildings (1,385 units) with retail/restaurant uses on the ground floor, as well as an office over retail and several structured parking decks. Retail/restaurant uses amount to 565,000 square feet, of which 342,000 square feet is located in existing anchor buildings to remain. The two (2) office buildings will consist of approximately 750,000 square feet. Access to the property will continue by way of the existing street network (North Point Circle, North Point Drive, and North Point Center East) and the driveways currently serving the Mall property. North Point Circle is proposed to remain in its current configuration. A future MARTA ELT (express lane transit) stop is proposed at the Mall property with an elevated connection, or pedestrian bridge, provided from the center of Georgia 400 over to the subject property. The pedestrian bridge would double as a future alignment of the Alpha Loop, which is depicted traversing the site to the south and west connecting to North Point Parkway, as well as to Encore Parkway by way of the new center spine road and North Point Center East.

The mixed-use sports and entertainment district is situated along a primary east-west storefront street, which bisects the property from north to south and provides a direct connection between North Point Drive and North Point Center East. The tallest buildings, consisting of two (2), twenty (20) story residential towers, two (2), twenty (20) story hotels, and the 170'-arena are situated in the middle of the development along the primary storefront street. Building heights decrease with the development nearest North Point Circle. Several secondary streets are proposed throughout the development providing connections between the primary storefront street and North Point Circle. Sidewalks are depicted throughout the development along both sides of primary storefront street and along secondary streets. The Alpha Loop multi-use trail is depicted connecting to the district by way of the future MARTA ELT connection on Georgia 400 in the northeast corner of the site, as well as from North Point Center East on the west side of the site. The Alpha Loop runs along the north side of the primary storefront street providing a connection between the ELT station and Encore Parkway. Another Alpha Loop connection is depicted between the ELT station and running south through the property along a secondary street to North Point Parkway. If approved, the connection to North Point Parkway should run along the frontage of the future Stormwater Park.

The site plan depicts 26.86 acres, or 27.2% open space, of which 21.24 acres (21.55%) is civic space and 5.62 acres (5.70%) is amenity space. Civic space includes squares, plazas, pocket parks, park, and multi-use trails. Amenity space includes outdoor dining, rooftop decks, yards and lawns, enhanced hardscape, balconies, and pool areas. The North Point Overlay requires a minimum five percent (5%) of the site acreage as amenity space and a minimum ten percent (10%), plus one percent (1%) for each one (1) unit/acre over eight (8) units/acre of the site acreage as civic space. A conditional use is requested to increase density to 14.04 units/acre. Therefore, the minimum civic space requirement is 16.05%, of which the applicant's proposal exceeds the minimum requirement. Because the mixed-use sports & entertainment district is so large, it is difficult to visualize the size and functionality of the open spaces that will be open to the general public. The table below compares the most notable open spaces on the applicant's site plan to similar open spaces at local or known locations. In particular, the three (3) acre main Event Plaza is over double the size of the same open space at The Battery and approximately 25% larger than the same open space at Mercedes Benz Stadium.

Table 7: Proposed Open Space – Comparison Table

Proposed Open Space (Location)	Acreage	Comparable Open Space
North Point Green (Northwest side)	1.8 acres	City Green – Sandy Springs 1.6 acres
North Point Community Park (Southwest side)	2.0 acres	Thompson St Park – 1.8 acres, Westside Fitness park – 1.7 acres
North Point Pocket Park (Between retail anchor and Dillard's)	0.6 acres	Avalon Green - 0.7 acres, Town Green - 0.6 acres, Lakeview Park - 0.4 acres
Event Plaza (Northeast side)	3.0 acres	The Battery - 1.3 acres, Mercedes-Benz Stadium - 2.3 acres
Stormwater Park (East Side)	1.5 acres (northern parcel only)	Thompson St Park - 1.8 acres

Impacts to trees will be minimal given that the proposal represents redevelopment of an existing regional shopping mall and surface parking lot. Stormwater facilities are not depicted on the applicant's site plan; however, a regional stormwater facility exists to the east of the property and is proposed to be improved as a multipurpose stormwater park.

The MU zoning district development regulations require a minimum 25% residential use, minimum ten percent (10%) commercial use, minimum 25% office-institutional use, and a minimum open space. The applicant provided the table below, reflecting the percentage of each use in their proposal. The applicant is requesting a variance to reduce the office percentage given that the adjacent properties to the west are developed with approximately 562,000 square feet of office buildings.

Table 8: MU Use % Breakdown

Use	Density	Mix%
Retail/F&B	565,000	13.1%
Office	750,000	17.4%
Residential	1,385,000	32.2%
Hotel	550,000	12.8%
Entertainmen	245,000	5.7%
Sports	810,000	18.8%
Total	4,305,000	100.0%

PARKING

The site plan depicts approximately seven (7) parking decks, which includes the existing parking deck adjacent to Dillard's. In addition, the existing surface parking lot surrounding Von Muar and Dillard's will remain. A total of 8,752 parking spaces are proposed on-site for the development, which does not include off-site parking agreements associated with the arena. The UDC requires 14,450 parking spaces for all uses in the proposed mixed-use development, which includes the required twenty percent (20%) parking reduction in the North Point Overlay. When events are not occurring at the arena, the required parking drops to 8,850. The applicant is requesting a shared parking reduction of approximately one percent (1%) in order to comply with the minimum parking requirements during typical mixed-use operations.

Table 9: Parking Requirements

Use	Unit	Parking Ratio	Required Parking
Arena	20,000 seats	1/4 seats + 1/10 seats (employees)	7,000
Community Ice Sheets	2,000 seats	1/4 seats + 1/10 seats (employees)	700
Office	750,000 SF	1/250 SF	3,000
Commercial	565,000 SF	1/285 SF (retail/restaurant)	1,982
Hotel	650 rooms	1/room + 1/20 rooms (employees)	683
Hotel Amenities	30,000 SF	1/500 SF	60
Theater/Cinema	1,139 seats	1/4 seats + 1/10 seats (employees)	399
Music Hall	4,000 seats	1/4 seats + 1/10 seats (employees)	1,400
'For-Rent'	1,385 units	2/unit + 1/20 units (guests)	2,839
SUBTOTAL			18,063
TOTAL	20% req'd reduction NPO – Full Arena Event		14,450
	20% req'd reduction NPO – Mixed-Use (No Arena Event)		8,850

The applicant submitted a shared parking study prepared by Kimley-Horn. The study concludes that under typical mixed-use operations (no arena events), parking demand is estimated to peak at approximately 7,375 spaces during the recurring peak condition when the arena is not in use. The study appropriately assumes that residential and hotel parking will be accommodated in dedicated or nested parking areas. During arena events, total parking demand will be higher and will be managed through a combination of

on- and off-site parking agreements, employee parking management, and shuttle operations. During the regular NHL season, there are 41 home games. According to the application, additional parking needed for NHL home games and other significant events at the arena will be limited to approximately fifteen percent (15%) of the year. The study notes that there are approximately 10,000 additional parking spaces located within a fifteen (15) minute walk of the arena, which provides a substantial off-site parking resource during major events.

For a comparison, staff looked at the parking operations at Ameris Amphitheater. Ameris has a capacity of 12,000 seats, requiring a total of 4,200 parking spaces (parking ratio: 1 space/4 seats + 1 employee space/10 seats). A total of 2,674 parking spaces, or 63%, are provided on-site with the remaining parking provided at off-site locations on surrounding or nearby properties.

PHASING

The applicant provided a phasing plan, which depicts re-purposing the existing structured parking deck, Dillard's anchor, and Von Maur anchor in Phase 1. The remaining areas of the Mall will be demolished and replaced with Phase 2, which includes the buildings along the primary storefront street. Phase 2 includes two (2) 'For-Rent' buildings (600 units) over retail, office over retail, retail, 350-room full-service hotel, 300-room hybrid hotel over retail, 1,139-seat cinema, and structured parking decks. The applicants have stated that if the NHL has made an announcement and a team owner has been selected, the 20,00-seat NHL hockey arena and 2,000-seat team practice/community ice sheets could begin construction in Phase 2. Future phases would include three (3) 'For-Rent' buildings (785 units) over retail, office over retail, 4,000-seat music hall, vertiport, and structured parking decks.

'FOR-RENT' RESIDENTIAL

Careful consideration should be given to maintaining a balance between 'For-Rent' versus 'For-Sale' product in the City. The Horizon 2040 Comprehensive Plan identifies the following policy as it relates to maintaining a balance of 'Owner-Occupied' versus 'Renter-Occupied' 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 several factors that should 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. Office space already exists, or is proposed, within the LCI and 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 561,575 square feet of existing office (Encore Commons) and 750,000 square feet of new office would generate approximately 5,246 employees (1 employee per 250 square feet) to support the proposed mixed-use development.

The City's Rental Housing Study (updated May 2025) recommends an annual target entitlement of approximately 149 'For-Rent' units per year in order to achieve Housing Policy 2, as stated above. While the minimum 68% 'owner-occupied' housing policy is included in the Horizon 2040 Comprehensive Plan, the annual target recommendation is not an approved City policy. The latest US Census American Community Survey 5-year estimate (2019 – 2023) reflects that the City is at 68% owner-occupied housing

units, which complies with Housing Policy 2. As shown in the table below, 915 'For-Rent' units have been approved since 2021.

Table 10: 'For-Rent' Approvals Since 2021

Development	Number of units	Entitlement Year
North Point Mall Sears Redevelopment	300*	2021
Continuum	280	2022
Portman Brookside	335	2025

*While the 300 'For-Rent' units reverted to 'For-Sale' in 2022, the 'For-Rent' units were never removed from the development pipeline in the City's Rental Studies.

The applicant proposes 1,385 'For-Rent' units over five (5) buildings. As shown in the table below, Certificate of Occupancy's (CO's) for the applicant's 'For-Rent' units could be recommended through 2034. Two (2) 'For-Rent' buildings are proposed to be up to twenty (20) stories with the remaining 'For-Rent' buildings proposed to be up to seven (7) stories. All 'For-Rent' buildings will have attached, structured parking decks and on-site amenities. Ground-floor active uses (retail, office, and amenities) are required along storefront streets and ground-floor dwellings are limited to non-storefront streets. Residents will have access to dedicated covered parking and amenities, such as a pool and private outdoor amenity areas. The applicant proposes a mix of studio, one (1), two (2), and three (3) bedroom units. If the City decides to allow future 'For-Rent' approvals, a condition is recommended limiting CO's to be in line with the recommended CO year in the table below.

Table 11: 'For-Rent' Request – Recommended CO Year

	2022 - 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Applicant's Proposal*					300	185		300		300	1,085
Portman Brookside			335								335
Continuum		280									280
Rec'd Target	116/year	149	149	149	149	149	149	149	149	149	1,805
Cumulative Total	+464	+333	+147	+296	+145	+109	+258	+107	+256	+105	+105

*In 2021, 300 'For-Rent' units were approved with the Sears Redevelopment and were counted within the 2022 Rental Study. The 300 units that reverted were not removed from any City Rental Studies and therefore were not shown in the table above for yearly goal compliance purposes.

OFFICE

The applicant is requesting 750,000 square feet of office within the mixed-use development. Alpharetta has approximately 21 million square feet of office space across 250 buildings with a citywide vacancy rate of 22.1%. Vacancy is not evenly distributed. Lower-vacancy districts (Table 12 below) such as Downtown Alpharetta (9.2%), Avalon (10.9%), and Northwinds/Lakeview Park/GA-400 Center (14%) consistently demonstrate strong performance, reflecting modern tenant preference for walkable, mixed-use environments with dining, hospitality, and entertainment nearby. Higher vacancy is concentrated in older, auto-oriented suburban office parks, including Brookside (36%), Great Oaks Way (38.1%), and legacy North Point office inventory (25.5%). These buildings were largely constructed in the late 1980's and early 1990's and have reached ages where substantial reinvestment is needed to maintain competitiveness.

The Horizon 2045 Comprehensive Plan identifies North Point as the single-most important redevelopment opportunity in Alpharetta. Public engagement confirmed strong alignment: 77% of survey responses directed future investment toward North Point, and community input emphasized the need for entertainment, placemaking, public spaces, and mixed-use development within the district. The Plan states that North Point should be repositioned as a regional center differentiated from Avalon and Downtown, supported by walkability, connectivity, mixed-use employment, and regional-draw uses including entertainment.

The Comprehensive Plan further notes that visits to North Point have declined by 38% since 2019 and that a substantial share of the district's office buildings—many now more than 30 years old—are approaching reinvestment or repositioning thresholds. The proposed office program at North Point does not compete with these older districts. Instead, it aligns with Plan directives to support appropriately located mixed-use employment centers, retrofit suburban office areas with amenities, and designate major GA-400 entranceways—including North Point Parkway—for office growth. Mixed-use office integrated with hotel, conference, entertainment, trails, and transit responds directly to the plan's finding that tenants prefer amenity-rich environments and that new office supply in such districts attracts net-new demand.

The Plan's Economic Resilience & Office policies reinforce Alpharetta's 21-million-square-foot office inventory as a defining competitive strength. It calls for maintaining high-quality office supply, selectively reinvesting in aging properties, and enhancing the connection between office districts and walkable mixed-use amenities that attract today's workforce. It further notes that post-COVID office demand has been strongest in mixed-use areas such as Avalon and Downtown—areas that pair office with lodging, retail, restaurants, and activated public spaces.

The entertainment district should improve performance in nearby legacy office areas, including older North Point office buildings and the Great Oaks Way area. Horizon 2045 acknowledges both districts as aging environments with increasing vacancy, emphasizing that strategic redevelopment at the Mall site could serve as a catalyst across the full 670-acre North Point area to invest in older buildings. As entertainment, hospitality, public realm improvements, and walkable amenities are introduced, surrounding office buildings benefit from increased visibility, improved tenant perceptions, greater workforce presence, and new reinvestment interest. This trend mirrors national outcomes at The Battery Atlanta, ICE District, and District Detroit, where adjacent aging office assets experienced improved occupancy and modernization following activation of entertainment-anchored mixed-use districts.

In summary, staff finds that the proposed 750,000 square feet of office space is appropriate and consistent with the Horizon 2045 Comprehensive Plan. The applicant's proposal advances adopted goals for North Point and supports reinvestment in aging office submarkets and enhances regional competitiveness.

Table 12: Alpharetta Office Data

District	Inventory SF	# of Buildings	Total Vacant SF	Vacancy Rate	Market Asking Rent/SF
Downtown Area	444,371	70	41,006	9.20%	$26.46
Brookside	757,552	9	272,455	36.00%	$25.87
Avalon Area	914,312	10	99,785	10.90%	$40.73
North Point	1,193,552	56	304,215	25.50%	$28.18
Sanctuary Park	1,627,779	9	343,204	21.10%	$32.78
Great Oaks Way area	2,083,417	25	793,303	38.10%	$26.61
NorthWinds/Lakeview/ GA 400 Cente	2,184,938	17	305,596	14.00%	$31.92
Windward Tech District	6,166,495	54	1,343,091	21.80%	$27.94
Citywide	21,044,267	570	4,648,764	22.10%	$28.60

Data Source: CoStar, Property Type: Office, Construction Status: Existing, July 14, 2026

HOTELS

The applicant is requesting approval of 650 hotel rooms within the North Point Sports & Entertainment District. This includes a 350-room full-service hotel designed to serve as a primary convention-capable property, a 30,000-square-foot indoor and outdoor conference center, and a 300-room hybrid hotel modeled after the applicant's Scout Living concept at Ponce City Market. Alpharetta currently has a total of 4,105 hotel rooms, with 1,013 of those rooms located within four (4) full-service hotels. Citywide occupancy ranges from 65% to 82%, demonstrating sustained demand from corporate travel, conferences, events, and leisure visitation.

Hotel supply adjacent to North Point consists of three (3) limited-service properties built between 1997 and 1999, totaling 352 rooms, with no meeting facilities or full-service amenities and serving a different, value-oriented customer segment. These properties are not capable of accommodating corporate groups, conferences, or production-related travel associated with an arena and sports & entertainment district.

Avalon remains Alpharetta's primary full-service conference destination with a 44,000-square-foot indoor facility. That conference center regularly produces 300 to 1,200 nightly room blocks for major corporate, financial, medical, and association events. Avalon's only outdoor event space—a small terrace with a capacity for twenty (20) to 100 guests—limits the ability to host hybrid indoor-outdoor receptions, activations, trade show functions, or sports-related banquets. North Point's proposed indoor-outdoor conference center could address unmet demand for outdoor-capable and arena-adjacent events. Both districts serve different event profiles and could strengthen Alpharetta's position as a dual-anchor hospitality market.

The indoor arena will host concerts similar to State Farm Arena and drive lodging demand from touring performers, technical crews, production teams, managers, media staff, and regional overnight visitors. Concert activity generates multi-night stays and higher weekend room rates, adding year-round demand that complements the seasonal programming of Ameris Bank Amphitheatre. Promoters regularly use both indoor and outdoor venues within a single metropolitan area, increasing total visitation rather than splitting audiences.

Alpharetta's 20-million-square-foot office market requires additional full-service hotels to support corporate travel, multi-day training programs, vendor meetings, offsite planning sessions, and client events. Many large employers operate within Alpharetta's technology, finance, cybersecurity, and professional services sectors and regularly require flexible lodging options proximate to their campuses. Full-service hotels with banquet space and breakout rooms contribute to retaining and attracting corporate tenants by offering meeting facilities within close proximity to workplaces.

Peer markets with similar suburban office inventory demonstrate the importance of full-service hotel supply. Tysons Corner, VA maintains approximately 2,485 full-service rooms and Bellevue, WA maintains approximately 1,614 full-service rooms. Alpharetta currently offers 1,013 full-service rooms despite hosting a 21 million-square-foot employment base. Both peer markets accommodate high volumes of conferences, corporate travel, and entertainment programming, strengthening the case for expanded full-service supply at North Point.

Relative to peer districts, 650 full-service hotel rooms versus a split between full-service and hybrid hotel would bring Alpharetta's full-service hotel inventory closer to ratios found in markets that successfully accommodate corporate travel, arena events, conferences, and music-driven visitation. The Staff recommended 650 full-service rooms ensure the North Point district is properly scaled to the City's 21 million-square-foot employment base, reducing existing compression and positioning Alpharetta to compete with peer mixed-use entertainment and employment centers.

ECODISTRICT

The North Point Overlay requires that EcoDistrict measures be incorporated into all new developments. The applicant's proposal represents a significant redevelopment with a conditional use to increase density. Therefore, the proposed mixed-use development must achieve at least ten (10) EcoDistrict points. If approved, the developer should provide a variety of EcoDistrict measures throughout the district, as determined by Staff at LDP and building permit.

The EcoDistrict encourages incorporating water into civic and amenity areas. An eleven (11) acre regional stormwater facility with a permanent pool is located in a wooded area at the southeast corner of North Point Drive and North Point Circle. The applicant proposes to improve a portion of the stormwater pond under their control as a multipurpose stormwater and public park facility, including an overlook deck and multi-use trail, as shown in the design below. North Point Stormwater Park would be similar in concept to the Old Fourth Ward Stormwater Park in downtown Atlanta.



TRAFFIC

The proposed mixed-use development is expected to generate 1,666 new AM Peak Hour trips, 3,487 new PM Peak Hour trips, and 50,298 new daily trips. The trip generation results for the proposed development are presented in the table below.

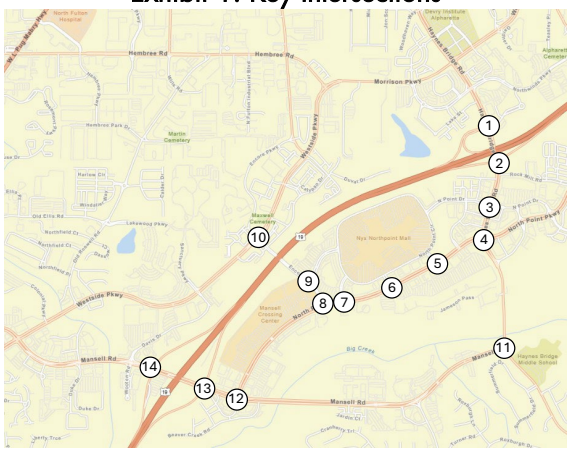
Table 13: Trip Generation Table

Table 8: Trip Generation								
Land Use	Density	Daily Traffic			AM Peak Hour		PM Peak Hour	
		Total	Enter	Exit	Enter	Exit	Enter	Exit
220 – Multi-Family Housing (Low-Rise)	1,385 units	7,918	3,959	3,959	120	378	417	255
310 – Hotel	850 rooms	4,964	2,482	2,482	150	139	204	196
465 – Ice Skating Rink	2,000 seats	2,520	1,260	1,260	7	13	84	56
710 – General Office Building	750,000 SF	4,842	2,421	2,421	757	103	124	650
820 – Shopping Center	43,000 SF*	1,564	782	782	16	10	51	54
932 – High-Turnover (Sit-Down) Restaurant	77,400 SF*	8,032	4,016	4,016	382	312	433	277
Music Hall	4,000 seats	5,440	2,720	2,720	0	0	383	7
Arena	20,000 seats	27,200	13,600	13,600	0	0	1,916	36
Gross Project Trips		**62,480**	**31,240**	**31,240**	**1,432**	**955**	**3,612**	**1,531**
Mixed-Use Reductions		*-3,440*	*-1,720*	*-1,720*	*-288*	*-288*	*-536*	*-392*
Internal Capture to Arena		*-1,612*	*-806*	*-806*	*0*	*0*	*-259*	*-144*
Alternative Mode Reductions (8%)		*-4,608*	*-2,304*	*-2,304*	*-93*	*-54*	*-225*	*-75*
Pass-By Reductions		*-2,520*	*-1,260*	*-1,260*	*0*	*0*	*-13*	*-13*
Net New Trips		**50,298**	**25,149**	**25,149**	**1,052**	**614**	**2,579**	**908**

*Note: Reductions were made to account for existing to be demolished and existing to remain developments within the existing site area.

Based on the scope of the project, the applicant was required to go through the Development of Regional Impact (DRI) process. The DRI Process solicits additional review of the project from regional partners, including the Atlanta Regional Commission (ARC), Georgia Department of Transportation (GDOT), Georgia Transportation Efficiency Agency (GTEA), as well as adjacent communities. Following the DRI requirements, a traffic study was commissioned to assess traffic impacts anticipated from the proposed project. The study reviewed existing, future no-build, and future build conditions at fourteen (14) key intersections in the area, five (5) of which provide direct site access, as shown in the below figure.

Exhibit 1: Key Intersections



The traffic impact study identified geometric improvements needed at the signalized intersection of Encore Parkway and North Point Center (Study Intersection 9 of 14) to accommodate new site trips entering and exiting this intersection that include a new right turn deceleration lane along Encore Parkway for entering

site trips, a new left turn lane along North Point Center East for exiting site trips, and signal head improvements to accompany these geometric improvements. Additional recommendations identified within the traffic study include signal timing updates at eight (8) of the fourteen (14) study intersections to improve level of service (LOS) operations that will better serve the roadway users and proposed development traffic.

These recommended conclusions were subsequently agreed to as conditions of approval by GTEA in the resultant Notice of Decision, dated July 31, 2026, to yield acceptable level of service (LOS) operations at all studied intersections in the future scenario with the development of the project. The Notice of Decision recommendations are included as conditions of zoning in this staff report and general address bicycle, pedestrian, and transit facilities, as well as intersection improvements at Encore Parkway and North Point Center East.

PUBLIC SAFETY

Facilities & Event Operations: The proposed development includes multiple large-scale assembly venues including a 20,000-seat NHL arena, 2,000-seat community/youth ice sheets, and 4,000-seat music hall. The concentration of major entertainment uses within a walkable grid will result in substantial event-related pedestrian and vehicular volumes. Staff find that comprehensive event management plans, crowd evacuation protocols, and multi-agency coordination for ingress/egress during high-attendance conditions will be required.

As part of the original regional mall approval in 1990 the developer deeded 2 acres along Westside Parkway for a fire station due to the regional impacts. However, the programing for the Sports and Entertainment District draws larger crowds for events which may require onsite substations. If approved, the Developer should also be conditioned to conduct a comprehensive Standards of Coverage Study to analyze several elements including but not limited to:

- Projected fire and police emergency response times
- Travel distance and access modeling within the new street network
- Staffing and apparatus needs under full build-out
- Special event and multi-venue concurrent-use scenarios
- Adequacy of existing City facilities to support the district

The Study would be required prior to a land disturbance permit with coordination between the Developer, the Alpharetta Fire Department, and the Alpharetta Police Department. If the Study finds deficiencies affecting response-time reliability or apparatus access the City may require one or more of the following mitigation measures:

- Additional dedicated fire access lanes, and/or
- A minimum of 7,500 square feet within a planned building or structured parking deck to accommodate a one-bay fire truck station, including apparatus space, operational clearances, utility connections, and ingress/egress routes designed for fire apparatus movement.

This facility would ensure that long-term emergency coverage remains sufficient as the district reaches full build-out and event-related demands increase.

Emergency Access, Street Grid, and Vertical Circulation: The site includes elevated pedestrian bridges, structured parking decks, private streets and Alpha Loop connections that shape the emergency circulation network. If approved, the applicant will be required to design and dedicate emergency access easements for critical fire apparatus routes and emergency operational areas, preserving long-term emergency access and ensuring that future redevelopment phases cannot obstruct fire lanes or staging areas.

Structured parking placement and block configuration reinforce the need for integrated emergency pathways between decks, loading zones, and public spaces, as well as district-wide surveillance and secure access control.

Public Safety Substation and Multi-Agency Coordination: City staff have met several times with public safety professionals at The Battery in Cobb County to discuss their operations and recommendations based on their Battery operations experience. The Battery stadium is over twice the size, 45,000 seats of the proposed 20,000 seat arena at North Point. The Cobb County staff recommended 650 sf of space be provided to accommodate a Public Safety Substation within the arena structure to support Police, Fire, EMS, and event-level emergency coordination. They also recommended 2 holding cells on site for Alpharetta Police access.

Staff also find that the district's proposed uses and event load justify continued requirements for:

- A Public Safety Liaison Committee
- Quarterly incident reporting
- A coordinated Public Safety & Emergency Operations Plan updated annually

Vertiport Emergency Planning: The site plan identifies a Vertiport within the district's land-use mix. Staff find that EVTOL aircraft operations require:

- Dedicated emergency access routes that do not conflict with arena or event ingress/egress
- EVTOL-specific fire suppression strategies, including battery fire response protocols
- Coordination with MARTA and regional aviation safety agencies due to proximity to the ELT corridor
- Integration of Vertiport monitoring into district-wide CCTV and communication systems
- Specialized procedures for airborne emergencies, hazardous materials, and landing incidents

Requirements should be incorporated into the district's Public Safety & Emergency Operations Plan.

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:

Table 14: FULTON COUNTY SCHOOLS – 1,385 'For-Rent' Units

School	Estimated # New FCS Students Generated
Northwood Elementary School	3 – 136
Haynes Bridge Middle School	1 – 19

Centennial High School	0 – 79
Total	4 – 234

Based on the total figure for all three school levels, it can be assumed that the proposed development could house approximately 4 – 234 school age children. All three (3) schools are shown to be under capacity.

STANDARDS FOR ZONING/MASTER PLAN AMENDMENT CHANGES

The Planning Commission and the City Council shall consider the following standards in considering a master plan amendment and/or 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: Adjacent and nearby properties are primarily developed with compatible uses, such as retail, office, and hotel. Some of the surrounding properties have struggled in recent years with higher vacancies. The proposal would permit a mixed-use sports and entertainment district which is consistent with the vision in the North Point LCI and Comprehensive Plan and would benefit surrounding properties.

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

Response: Adjacent and nearby properties are primarily developed with compatible uses, such as retail, office, and hotel. Some of the surrounding properties have struggled in recent years with higher vacancies. The proposal would permit a mixed-use sports and entertainment district which is consistent with the vision in the North Point LCI and Comprehensive Plan.

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

Response: The proposal represents redevelopment of most of the North Point Mall property, with the exception of two (2) anchors and relocation of other retailers. The proposal would not adversely impact the natural environment. The proposal would increase the amount of open space on the property from approximately twelve (12) acres to nearly 27 acres.

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

Response: Regional shopping malls are closing across the country. If a new vision is not implemented, the Mall and surrounding retail area could rapidly decline. The proposal would permit a mixed-use sports and entertainment district which is consistent with the vision in the North Point LCI and Comprehensive Plan.

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: Mixed-use developments reduce impacts on public facilities and services by providing a place to live, work and play. In addition, the project site was developed as a regional mall, which is supported by existing transportation infrastructure with the capacity to support the mall's peak demand during the winter holiday season. The property has multiple points of access from North Point Drive, North Point Circle, North Point Center East, and North Point Parkway. And the site is ideally located between the Haynes Bridge Road and Mansell Road interchanges on Georgia 400 with a future MARTA ELT stop planned at the subject property.

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

Response: Regional shopping malls are closing across the country. If a new vision is not implemented, the Mall and surrounding retail area could rapidly decline. The proposal would permit a mixed-use sports and entertainment district which is consistent with the vision in the North Point LCI and Comprehensive Plan.

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 proposal reflects a reasonable balance. North Point Mall is in a distressed condition and if a new vision for the property is not realized, the Mall and surrounding retail area will rapidly decline. The proposal would permit a mixed-use sports and entertainment district which is consistent with the vision in the North Point LCI and Comprehensive Plan.

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

Response: Regional shopping malls are closing across the country. If a new vision is not implemented, the Mall and surrounding retail area could rapidly decline. A mixed-use development at this location is consistent with the vision in the North Point LCI.

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

Response: The zoning proposal is consistent with the comprehensive land use plan designation of the property, which is 'Mixed Use'. The Horizon 2045 Comprehensive Plan identifies North Point as the single-most important redevelopment opportunity in Alpharetta. Public engagement confirmed strong alignment: 77% of survey responses directed future investment toward North Point, and community input emphasized the need for entertainment, placemaking, public spaces, and mixed-use development within the district.

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 project site was developed as a regional mall, which is supported by existing transportation infrastructure with the capacity to support the mall's peak demand during the winter holiday season. The property has multiple points of access from North Point Drive, North Point Circle, North Point Center East, and North Point Parkway. In addition, the site is ideally located between the Haynes Bridge Road and Mansell Road interchanges on Georgia 400 with a future MARTA ELT stop planned at the subject property. MARTA currently operates a transit bus route along North Point Parkway, Mansell and Haynes Bridge Road.

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 above-referenced site development requirements will be adequately addressed in the proposed development plans. Parking demand will be met on-site for typical mixed-use operations and residential and hotel uses will have dedicated parking. Off-site parking agreements will be utilized to meet parking demand during arena events.

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' use in association with a mixed-use development, which is consistent with the comprehensive land use plan designation of the property, which is 'Mixed Use'. The property is located within Priority Area 1 on the residential density map in the North Point overlay, which is appropriate for higher residential densities. The increased non-residential building height is compatible with surrounding properties which allow building heights up to twenty (20) and 30 stories in the North Point Business Center Master Plan.

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: The conditional use would not impact City or State expenditures related to servicing or maintaining neighboring properties. The subject property is viewed as an appropriate location for the proposed sports and entertainment district because infrastructure is already in place that can support the applicant's proposal.

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: Surrounding properties are already developed, and the conditional use would not impede the normal and orderly redevelopment of surrounding properties. As seen with Downtown and Avalon, there is a halo effect with creating mixed-use developments and environments, which positively impacts surrounding and nearby properties.

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 proposal is consistent with the vision of the Comprehensive Plan and North Point LCI, which identify the Georgia 400 corridor, and specifically the North Point area, as an appropriate location to establish mixed-use activity centers at higher densities and intensities. The increased non-residential building height is compatible with surrounding properties which allow building heights up to twenty (20) and 30 stories in the North Point Business Center Master Plan.

7. Ensuring that the conditional use is appropriately separated from similar uses and conflicting uses, such as residences, government buildings, parks, churches or schools.

Response: Adjacent and nearby properties are developed with a mix of uses, including office, retail/restaurant, hotel, and stormwater/stream. The proposed conditional uses to allow 'For-Rent' use, increased density, and increased non-residential building heights are appropriately separated from similar uses and conflicting uses.

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 property has exceptional conditions related to its size, shape, and topography. The variance to allow an encroachment into the Georgia 400 buffer is for the purpose of accommodating the future MARTA ELT stop at the property. The request to increase the maximum residential building height is supported by adjacent properties being approved for building heights up to twenty (20) and 30 stories. Two (2) 'For-Rent' buildings would be up to twenty (20) stories, and the remaining buildings would be up to six (6) stories. The MU office percentage reduction can be supported based on there being approx. 562,000 square feet of office in four (4) adjacent office buildings. Parking demand will be met on-site during typical mixed-use operations. Since major events at the arena will only impact parking needs approximately fifteen percent (15%) of the year, arena parking will be managed through a combination of on- and off-site parking agreements, employee parking management, and shuttle operations. There are approximately 10,000 parking spaces available within a fifteen (15) minute walk of the site which would support the district during arena events.

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

Response: Application of the ordinance would create an unnecessary hardship. The variance to allow an encroachment into the Georgia 400 buffer is for the purpose of accommodating the future MARTA ELT stop at the property. The request to increase the maximum residential building height is supported by adjacent properties being approved for building heights up to twenty (20) and 30 stories. Two (2) 'For-

Rent' buildings would be up to twenty (20) stories, and the remaining buildings would be up to six (6) stories. The MU office percentage reduction can be supported based on there being approx. 562,000 square feet of office in four (4) adjacent office buildings. Parking demand will be met on-site during typical mixed-use operations. Since major events at the arena will only impact parking needs approximately fifteen percent (15%) of the year, arena parking will be managed through a combination of on- and off-site parking agreements, employee parking management, and shuttle operations. There are approximately 10,000 parking spaces available within a fifteen (15) minute walk of the site which would support the district during arena events.

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

Response: There are peculiar conditions pertaining to the property currently being developed with a distressed regional mall. The variance to allow an encroachment into the Georgia 400 buffer is for the purpose of accommodating the future MARTA ELT stop at the property. The request to increase the maximum residential building height is supported by adjacent properties being approved for building heights up to twenty (20) and 30 stories. Two (2) 'For-Rent' buildings would be up to twenty (20) stories, and the remaining buildings would be up to six (6) stories. The MU office percentage reduction can be supported based on there being approx. 562,000 square feet of office in four (4) adjacent office buildings. Parking demand will be met on-site during typical mixed-use operations. Since major events at the arena will only impact parking needs approximately fifteen percent (15%) of the year, arena parking will be managed through a combination of on- and off-site parking agreements, employee parking management, and shuttle operations. There are approximately 10,000 parking spaces available within a fifteen (15) minute walk of the site which would support the district during arena events.

CONCURRENCES

Staff has reviewed the applicant's proposal against the established review criteria for a master plan amendment, rezoning, conditional use and variances. The proposed mixed-use sports and entertainment district is consistent with the vision in the North Point LCI and Comprehensive Plan and would benefit surrounding properties. The proposal specifically addresses objectives in the North Point LCI, such as 1) Create a "park once walk everywhere" walkable environment, 2) Induce redevelopment of large areas of surface parking, and 3) Improve the area's retail balance. Open space and connectivity between various modes of transportation are key components in the applicant's proposal and are supported by the LCI. The proposed mixed-use sports and entertainment district is ideally located at the North Point Mall property which is situated adjacent to and between two (2) Georgia 400 interchanges and was developed with the appropriate infrastructure to support a regional development of this magnitude. The Horizon 2045 Comprehensive Plan identifies North Point as the single-most important redevelopment opportunity in Alpharetta. Public engagement confirmed strong alignment with 77% of survey responses directing future investment toward North Point, and community input emphasized the need for entertainment, placemaking, public spaces, and mixed-use development within the district.

The conditional use to allow 'For-Rent' use, increased density, and increased non-residential building height is proposed in association with a mixed-use development, which is consistent with the comprehensive land use plan designation of the property. The property is located in the North Point Overlay Priority Area, which is appropriate for higher residential densities. The increased building height is compatible with

surrounding properties which allow building heights up to twenty (20) and 30 stories in the North Point Business Center Master Plan. Finally, the project site was developed as a regional mall, which is supported by existing transportation infrastructure with the capacity to support the mall's peak demand during the winter holiday season. The site is ideally located between the Haynes Bridge Road and Mansell Road interchanges on Georgia 400 with a future MARTA ELT stop planned at the subject property.

The property has exceptional and peculiar conditions related to its size, shape, and topography, as well as being developed with a distressed regional mall. The variance to allow an encroachment into the Georgia 400 buffer is for the purpose of accommodating the future MARTA ELT stop at the property. The request to increase the maximum residential building height is supported by adjacent properties being approved for building heights up to twenty (20) and 30 stories. Two (2) 'For-Rent' buildings would be up to twenty (20) stories and the remaining buildings would be up to seven (7) stories. The MU office percentage reduction can be supported based on there being approx. 562,000 square feet of office in four (4) adjacent office buildings. Parking demand will be met on-site during typical mixed-use operations. Since major events at the arena will only impact parking needs approximately fifteen percent (15%) of the year, arena parking will be managed through a combination of on- and off-site parking agreements, employee parking management, and shuttle operations. There are approximately 10,000 parking spaces available within a fifteen (15) minute walk of the site which would support the district during arena events.

CITIZEN PARTICIPATION PLAN

The report submitted by the applicant states that a meeting was held with Ecco Park residents in April. Questions included traffic, parking, rental rate range, concern over gameday overflow parking into neighborhood, and Alpha Loop extension. The applicant noted the following questions and concerns voiced at the CZIM meetings: traffic, parking, will mall remain or be demolished, NHL questions, need for height and density, impact to taxpayers, will office hurt other office, why not condos, greenspace, and how event parking will function. The applicant indicated that they have spoken with non-residential property owners, as well as Mall tenants and employees.

The City also received public feedback including comments of support, as well as concern over the impact of apartments on infrastructure and schools, too much office, development could bring crime, negative impact on other mixed-use developments, and impact to taxpayers.

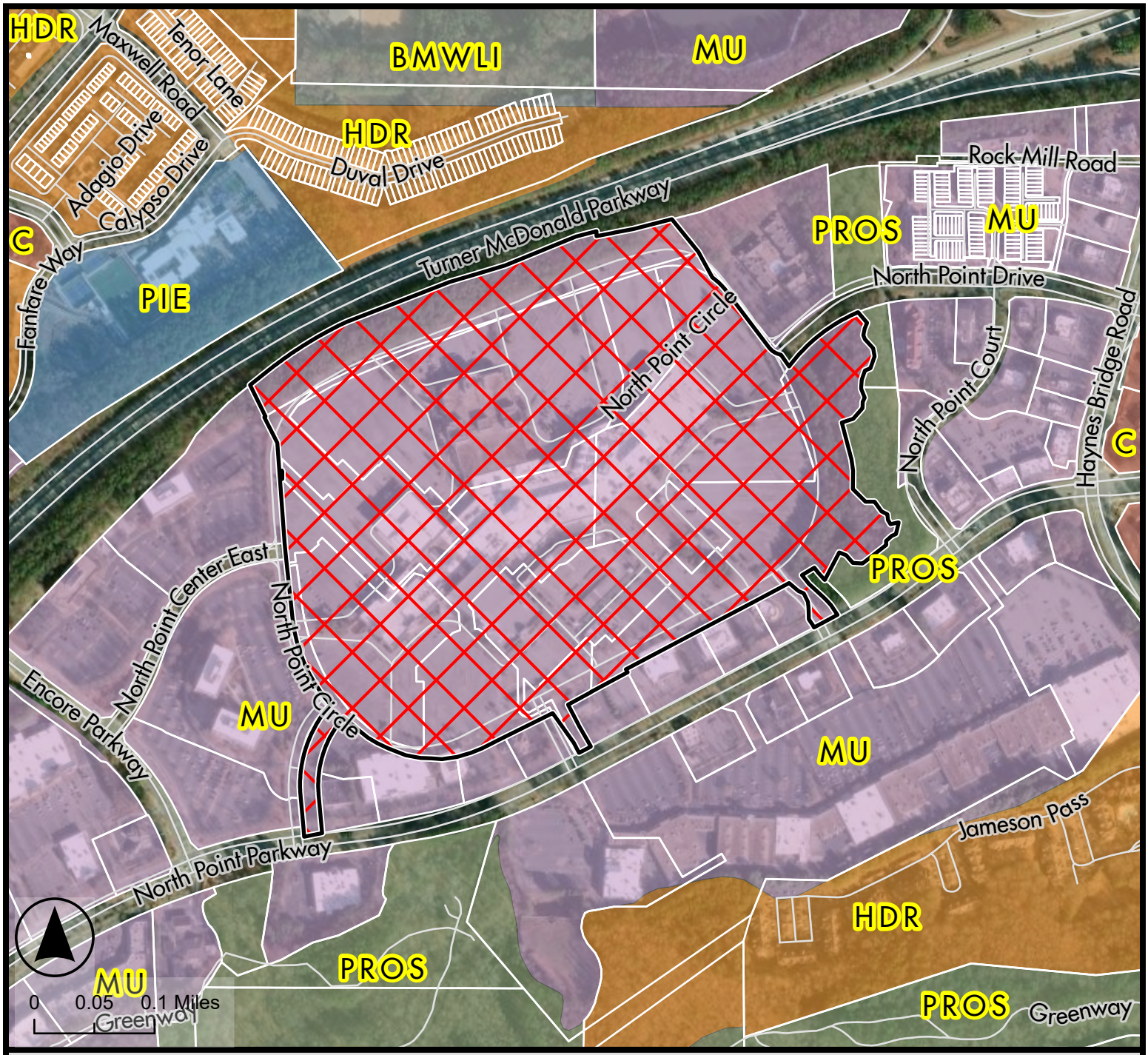
COMMUNITY ZONING INFORMATION MEETING

The CZIM was held on June 10, 2026 and July 8, 2026. There were public comments in support and in opposition to the proposal. Comments and concerns raised at the meetings included whether or not the NHL was onboard with the North Point location, a desire to bring hockey back to Georgia, need affordable housing, greenspace, keep the carousel, looking forward to the revitalization of the area, remove surface parking to avoid heat islands, whether the redevelopment will move forward with or without the NHL, property should be developed with something unique, when will development begin, bicycle facilities around loop road, limit where e-bikes are permitted, ensure sufficient parking and road capacity, keep the mall and diversify tenant mix, consider condos instead of apartments, is there a financial ask of the City, impact to taxpayers, traffic, building height, and whether there is a backup plan.

IV. ATTACHMENTS:

- Map Series
- Updated Site Plan
- DRI Traffic Study
- Notice of Decision
- Supplemental Traffic Study
- Parking Study
- Streetscape Sections
- CZIM
- Citizen Part B
- Public Comment
- Application Amendment
- Application

MP-26-06, Z-26-05, CU-26-04, V-26-08



Future Land Use Map

MP-26-06, Z-26-05, CU-26-04, V-26-08

D/LL: 1/2/0701, 0742, 0700, 0743

North Point Sports & Entertainment District

PC: 7/9/2026

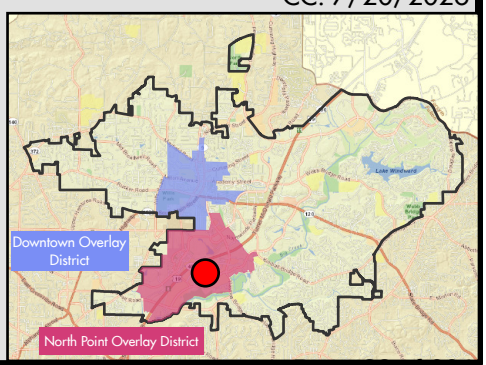
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Legend

- MP-26-06, Z-26-05, CU-26-04, V-26-08
- Tax Parcels
- Alpharetta City Limits

Future Land Use 2040

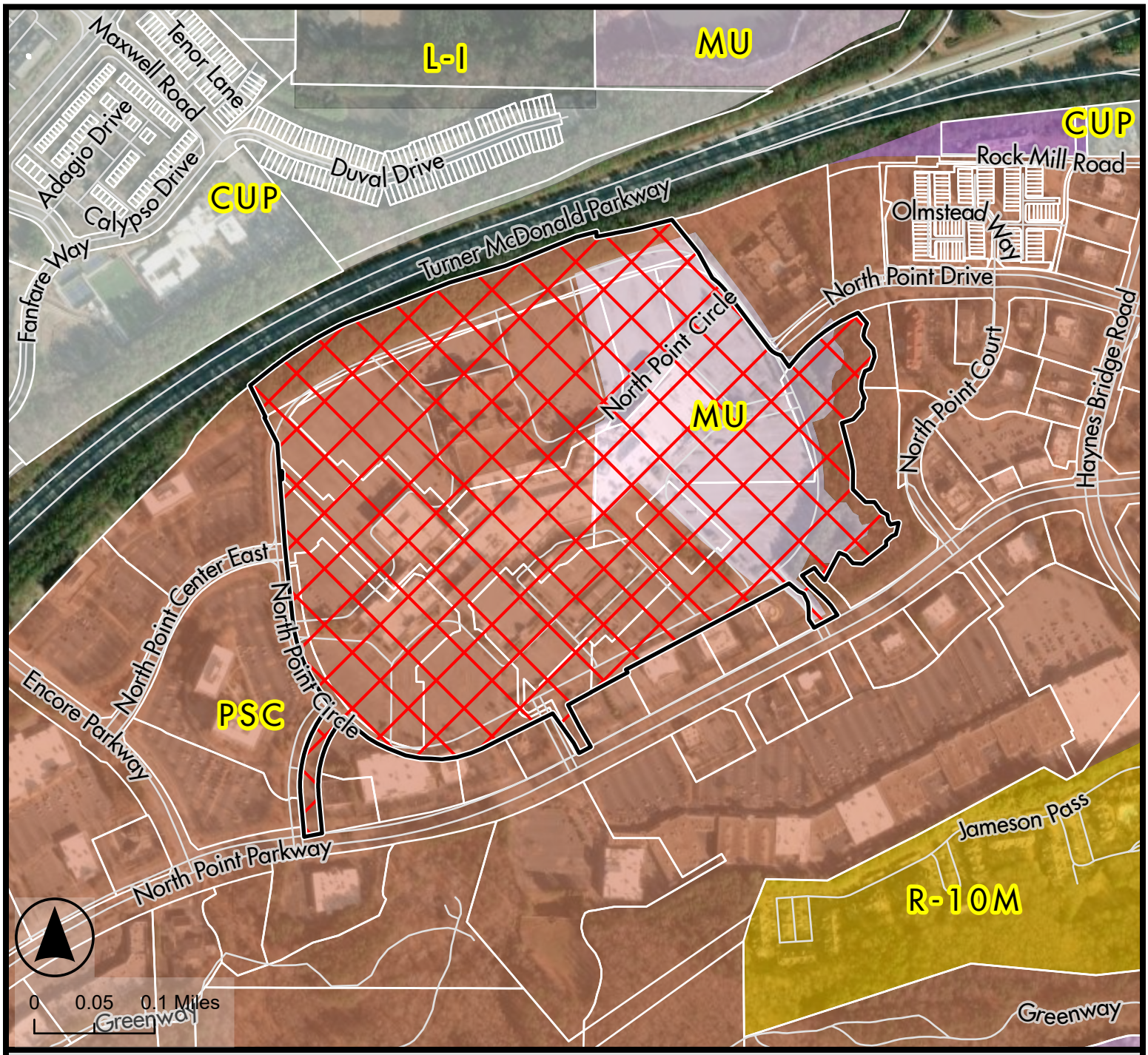
- Business, Manufacturing, Warehousing, Light Industrial
- Commercial
- High Density Residential
- Mixed Use
- Parks, Recreation, Open Space
- Public, Institutional, Education



THE CITY OF ALPHARETTA GEORGIA

Credit: Microsoft, Vantor, Vantor, City of Alpharetta.

Location Map Provided by: Community Development - GIS



Legend

- MP-26-06, Z-26-05, CU-26-04, V-26-08
- Tax Parcels
- Alpharetta City Limits

Zoning District

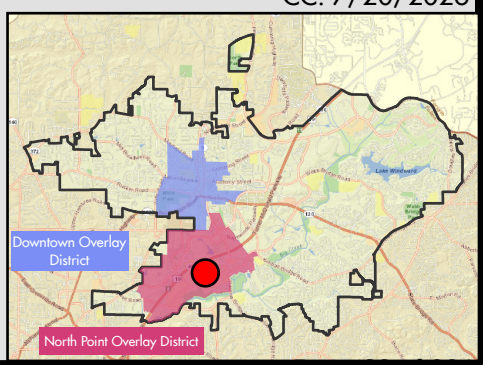
- CUP Community Unit Plan
- L-I Light Industrial
- MU Mixed Use
- O-I Office Institutional
- O-P Office Professional
- PSC Planned Shopping Center
- R-10M Multi Family Residential (HDR)

Zoning Map

North Point Sports & Entertainment District

MP-26-06, Z-26-05, CU-26-04, V-26-08
D/LL: 1/2/0701, 0742, 0700, 0743

PC: 7/9/2026
CC: 7/20/2026

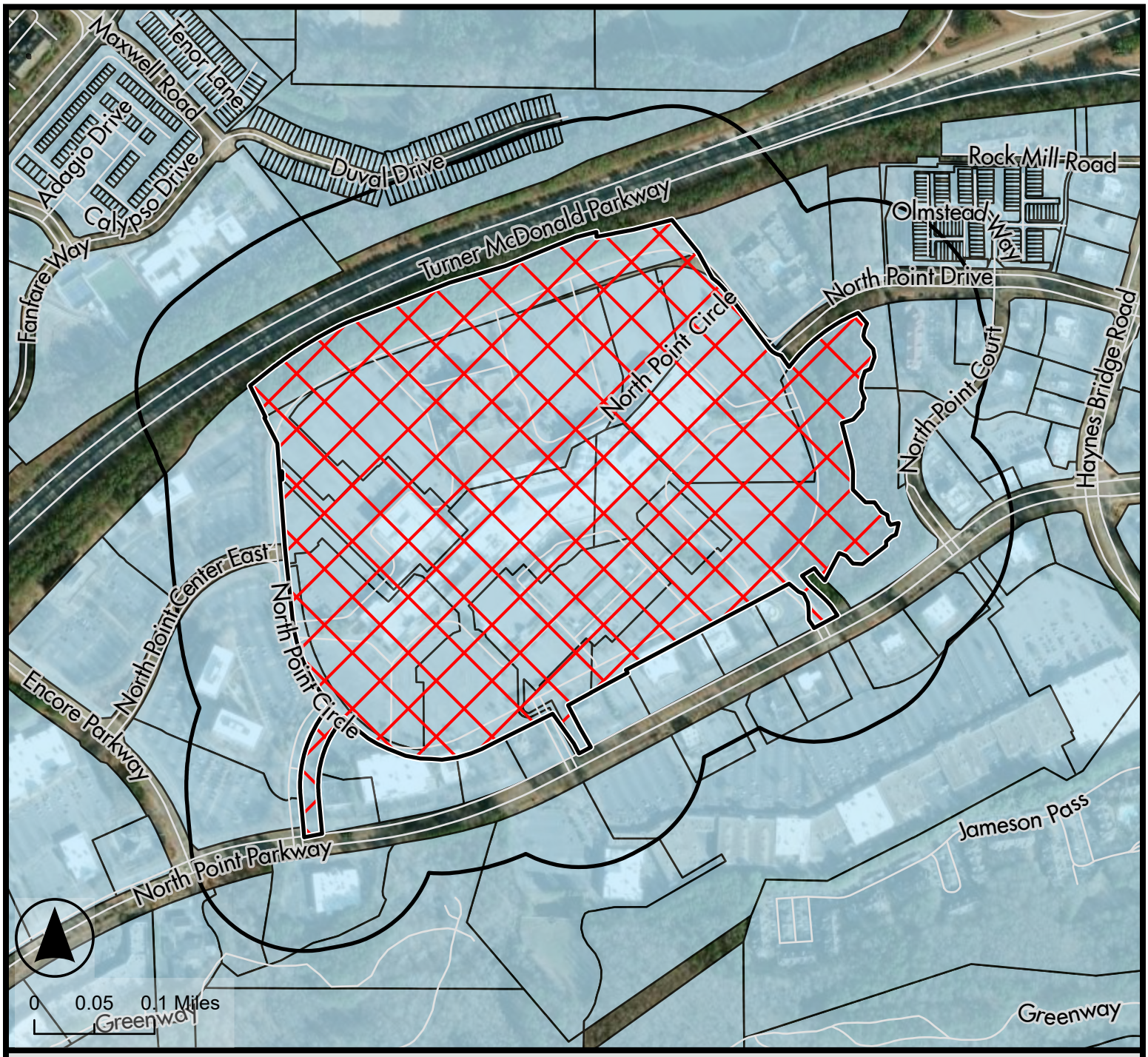


THE CITY OF ALPHARETTA GEORGIA

Credit: Microsoft, Vantor, Vantor, City of Alpharetta.

Location Map Provided by: Community Development - GIS

MP-26-06, Z-26-05, CU-26-04, V-26-08



Location Map

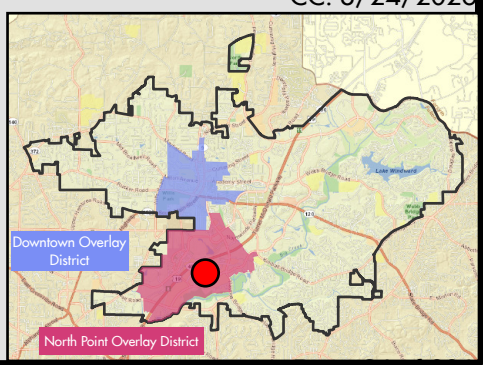
MP-26-06, Z-26-05, CU-26-04, V-26-08
D/LL: 1/2/0701, 0742, 0700, 0743

North Point Sports & Entertainment District

PC: 8/6/2026
CC: 8/24/2026

Legend

- MP-26-06, Z-26-05, CU-26-04, V-26-08
- Tax Parcels
- 500 ft Buffer
- Alpharetta City Limits

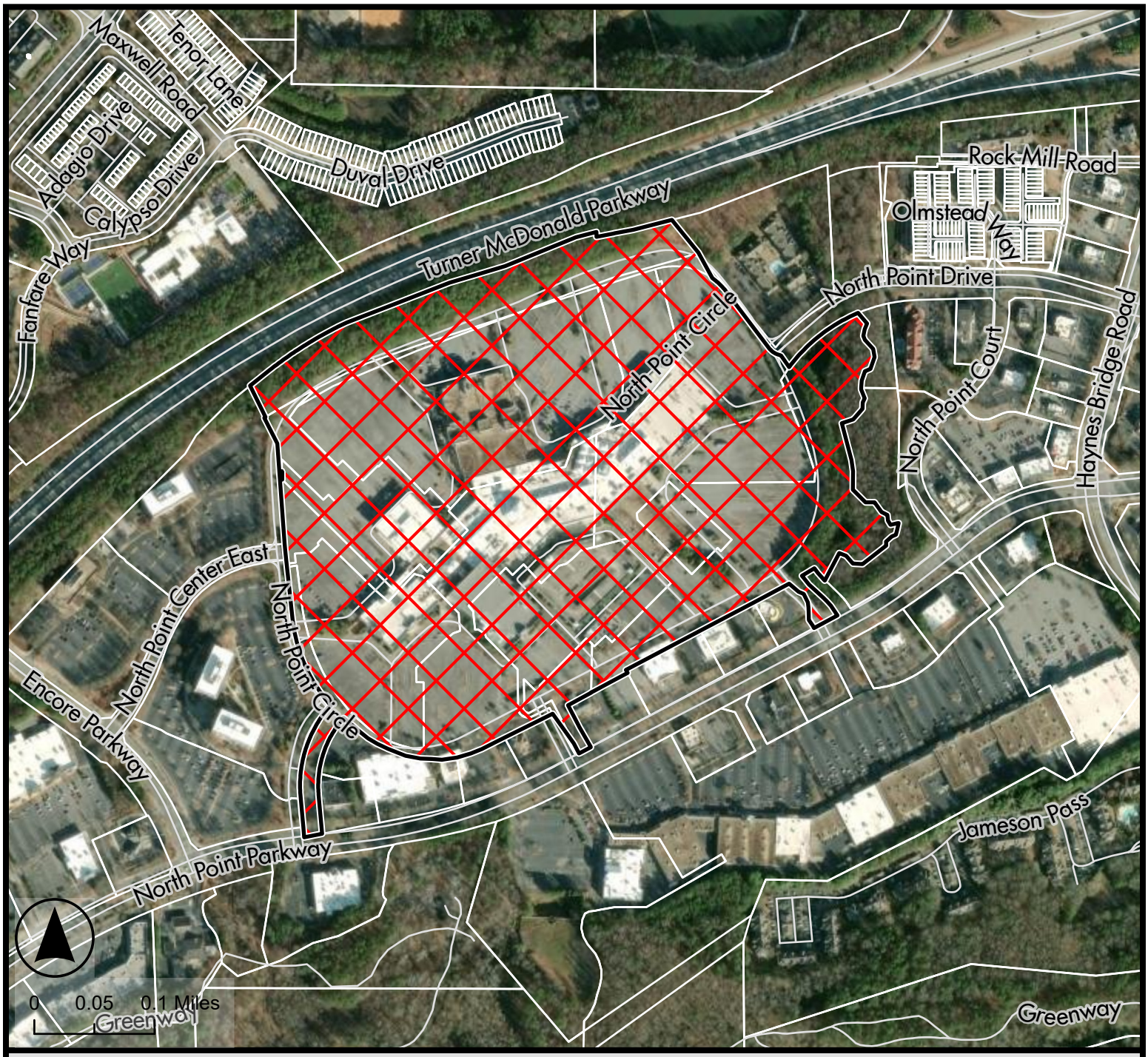


THE CITY OF ALPHARETTA GEORGIA

Credit: Microsoft, Vantor, Vantor, City of Alpharetta.

Location Map Provided by: Community Development - GIS

MP-26-06, Z-26-05, CU-26-04, V-26-08



Legend

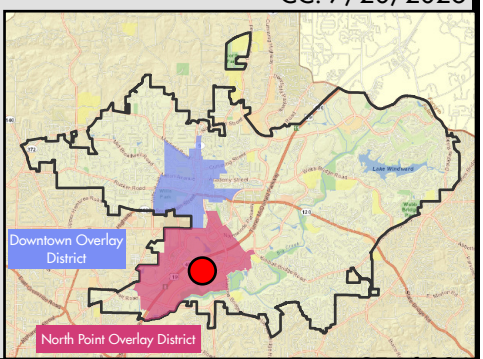
- MP-26-06, Z-26-05, CU-26-04, V-26-08
- Tax Parcels
- Alpharetta City Limits

Aerial Map

North Point Sports & Entertainment District

MP-26-06, Z-26-05, CU-26-04, V-26-08
D/LL: 1/2/0701, 0742, 0700, 0743

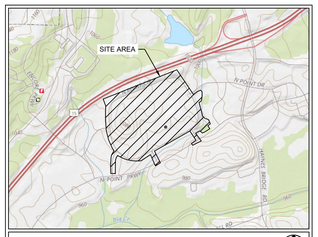
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CC: 7/20/2026



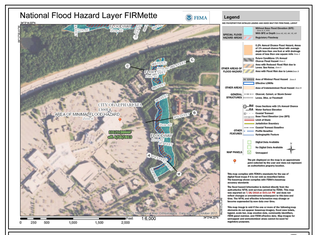
THE CITY OF ALPHARETTA GEORGIA

Credit: Microsoft, Vantor, Vantor, City of Alpharetta.

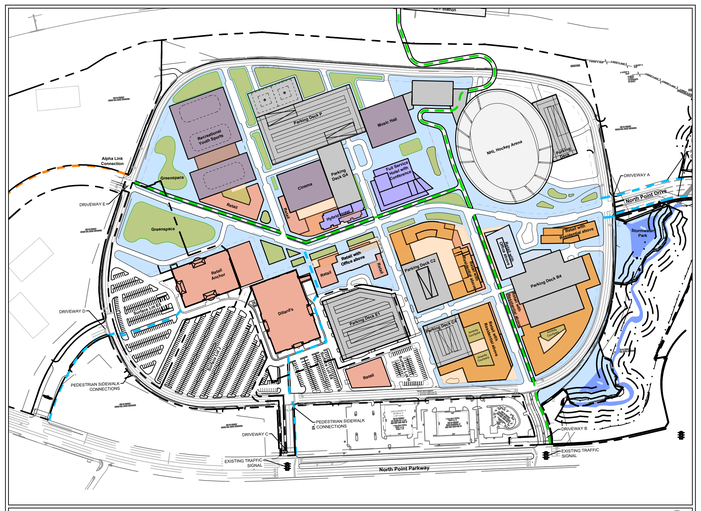
Location Map Provided by: Community Development - GIS



VICINITY MAP
N.T.S.



FEMA MAP
WITHIN ZONE AE PER FIRM PANEL 13121C0066F, 09/18/2013



OPEN SPACE MAP
SCALE: 1" = 300'

OPEN SPACE LEGEND

- CIVIC SPACE
- AMENITY SPACE
- MULTI-USE TRAIL

OPEN SPACE SUMMARY

OPEN SPACE REQUIREMENTS	**20.56 ACRES** (21.46% SITE AREA)
CIVIC SPACE:	**15.77 ACRES** (16.46% SITE AREA)
AMENITY SPACE:	**4.79 ACRES** (5% SITE AREA)
PROPOSED OPEN SPACE	**26.86 ACRES** (28.04% SITE AREA)
CIVIC SPACE:	**21.24 ACRES** (22.17% SITE AREA)
SQUARE	
PLAZA	
POCKET PARKS	
PARK	
MULTI-USE TRAIL	
AMENITY SPACE:	**5.62 ACRES** (5.87% SITE AREA)
OUTDOOR DINING	
ROOFTOP DECKS	
YARDS AND LAWNS	
ENHANCE HARDSCAPE	
BALCONIES	
POOL AREA	

SITE LEGEND

- PROPERTY LINE/ RIGHT-OF-WAY
- RETAIL
- MULTIFAMILY (FOR LEASE)
- OFFICE
- HOTEL
- SPORTS AND ENTERTAINMENT
- PARKING GARAGE

BUILDING HEIGHTS

MAXIMUM ALLOWABLE	
COMMERCIAL	4 STORIES OR 60'
OFFICE	4 STORIES OR 60'
HOTEL	4 STORIES OR 60'
MULTIFAMILY	4 STORIES OR 60'
PROPOSED MAXIMUM	
COMMERCIAL	4 STORIES OR 80'
OFFICE	14 STORIES
HOTEL	20 STORIES
MULTIFAMILY	20 STORIES
ARENA	170'
MUSIC VENUE	80'
CINEMA	80'

PARKING SUMMARY

REQUIRED PARKING:	**17,612 SPACES** (TOTAL)
PROPOSED RESTAURANT	720 SPACES (0.8 SPACES/100 SF)
PROPOSED RETAIL	532 SPACES (0.8 SPACES/200 SF)
RETAIL ANCHOR	576 SPACES (0.8 SPACES/250 SF)
DILLARD'S	519 SPACES (0.8 SPACES/250 SF)
OFFICE	2,400 SPACES (3.2 SPACES/ 1000 SF)
MULTIFAMILY	2,272 SPACES (1.64 SPACES/UNIT)
HYBRID HOTEL	252 SPACES (0.84 SPACES/KEY)
FULL SERVICE HOTEL	294 SPACES (0.84 SPACES/KEY)
HOTEL CONFERENCE CENTER	48 SPACES (0.8 SPACES/500 SF)
CINEMA	319 SPACES (1.12 SPACES/4 SEATS)
MUSIC HALL (SEATED)	1,120 SPACES (1.12 SPACES/4 SEATS)
COMMUNITY ICE SHEETS	560 SPACES (1.12 SPACES/4 SEATS)
HOCKEY ARENA	8,000 SPACES (0.8 SPACES/2 SEATS)
PROPOSED PARKING:	**8,752 SPACES** (TOTAL)
A1 PARKING DECK	610 SPACES
B4 PARKING DECK	1,316 SPACES
B5 PARKING DECK	550 SPACES
C2 PARKING DECK	967 SPACES
C4 PARKING DECK	530 SPACES
E1 PARKING DECK	1,175 SPACES
E4 SURFACE LOT	141 SPACES
E5 SURFACE LOT	284 SPACES
G4 PARKING DECK	632 SPACES
H SURFACE LOT	73 SPACES
J SURFACE LOT	542 SPACES
P PARKING DECK	1,857 SPACES
STREET	75 SPACES

SITE DEVELOPMENT SUMMARY

CURRENT ZONING	PSC/MU
OVERLAY DISTRICT	NORTH POINT OVERLAY
DRI NUMBER	4670
SITE AREA:	95.79 ACRES
MALL PROPERTY	80.91 ACRES
DILLARDS	6.65 ACRES
VON MAUR	8.23 ACRES
SETBACKS & BUFFERS:	
BUILDING SETBACKS	NONE
LANDSCAPE SETBACKS	NONE
UNDISTURBED BUFFERS	120' GA 400 BUFFER

LAND USES AND DENSITIES

EXISTING	
MALL INTERIOR AREA	1,151,800 SF
RESTAURANT (Cheesecake Factory)	12,600 SF
CINEMA (AMC)	1139 SEATS
PROPOSED MAXIMUMS	
PROPOSED RESTAURANT	90,000 SF
PROPOSED RETAIL	133,000 SF
RETAIL ANCHOR	180,000 SF
DILLARD'S	162,000 SF
OFFICE	750,000 SF
MULTIFAMILY	1,385 UNITS (14.46 DUA)
HYBRID HOTEL	300 KEYS
FULL SERVICE HOTEL	350 KEYS
HOTEL CONFERENCE CENTER	30,000 SF
CINEMA	1,139 SEATS
MUSIC HALL (SEATED)	4,000 SEATS
COMMUNITY ICE SHEETS (SEATED)	2,000 SEATS
HOCKEY ARENA	20,000 SEATS

SITE PLAN NOTE

THE BUILDING FOOTPRINTS, DRIVEWAY LOCATIONS, OPEN SPACE LOCATIONS, SIDEWALK DESIGNS AND LOCATIONS, AND PARKING LOCATIONS ON THIS SITE PLAN ARE FOR ILLUSTRATIVE PURPOSES. THEIR SHAPES, LOCATIONS, AND AMOUNTS MAY VARY AS ALLOWED FOR BY THE SITE DATA TABLE, MU REGULATIONS, AND THE NORTH POINT OVERLAY.

STORMWATER NOTE

SITE WILL CONTAIN ONSITE STORMWATER CONTROLS TO MEET ALL LOCAL AND STATE REQUIREMENTS. THIS MAY INCLUDE THE COMBINATION OF SEVERAL COMPONENTS (PERVIOUS PAVING, INFILTRATION FIELDS, BIORETENTION AREAS, OR OTHER COMPONENTS) PROVIDING RUNOFF REDUCTION (IF INFILTRATION RATES ALLOW), CHANNEL PROTECTION, AND OVERBANK FLOODING PROTECTION PER THE CODE REQUIREMENTS. DETENTION SHALL BE PROVIDED WITHIN THE EXISTING SURFACE PONDS.

VARIANCES

1. UDC SUBSECTION 2.2.20(B)(4) TO REDUCE THE MINIMUM PERCENTAGE OF OFFICE
2. UDC SUBSECTION 2.5.4 TO INCREASE THE DISTANCE REQUIREMENT FOR OFF-SITE PARKING
3. UDC SUBSECTION 2.10.3 TO MODIFY STREETSCAPE REQUIREMENTS
4. UDC SUBSECTION 2.10.4 TO MODIFY BLOCK AND ACCESS REQUIREMENTS
5. UDC SUBSECTION 2.10.3(D) TO INCREASE RESIDENTIAL BUILDING HEIGHT
6. UDC SUBSECTION 3.2.2 TO ALLOW AN ENCROACHMENT INTO THE GEORGIA 400 TREE

CONDITIONAL USE

1. TO ALLOW 'FOR-RENT' RESIDENTIAL
2. TO INCREASE 'FOR-RENT' RESIDENTIAL DENSITY
3. TO INCREASE NON-RESIDENTIAL BUILDING HEIGHTS

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3930 EAST JONES BRIDGE ROAD
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ATLANTA, GA 30305

No.	REVISION DESCRIPTIONS	DATE	BY

PROJECT

NORTH POINT MIXED-USE DISTRICT DRI # 4670

GEORGIA REGISTERED PROFESSIONAL ENGINEER PIN TYLER ROSSITER 31934 7/30/26

GSWCC CERT. (LEVEL II)	0000072899
DRAWN BY	CMC
DESIGNED BY	JTR
REVIEWED BY	JTR
DATE	07.30.2026
PROJECT NO.	017954000

TITLE

ZONING SITE PLAN

SHEET NUMBER

C0.30

GRAPHIC SCALE IN FEET
0 60 120 240

Drawing name: C:\ACCACCDocs\Kimley-Horn\119855001 - North Point MUD\Project Files\CAD\00 Overall\Plansheets\C0.00 - ZONING SITE PLAN.dwg ZP: 00 ZONING SITE PLAN Jul 30, 2026 3:40pm by: Alex Gallegos

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The Future - Illustrative Rendering



The Future - Illustrative Rendering



The Future - Illustrative Rendering



The Future - Illustrative Rendering



The Future - Illustrative Rendering

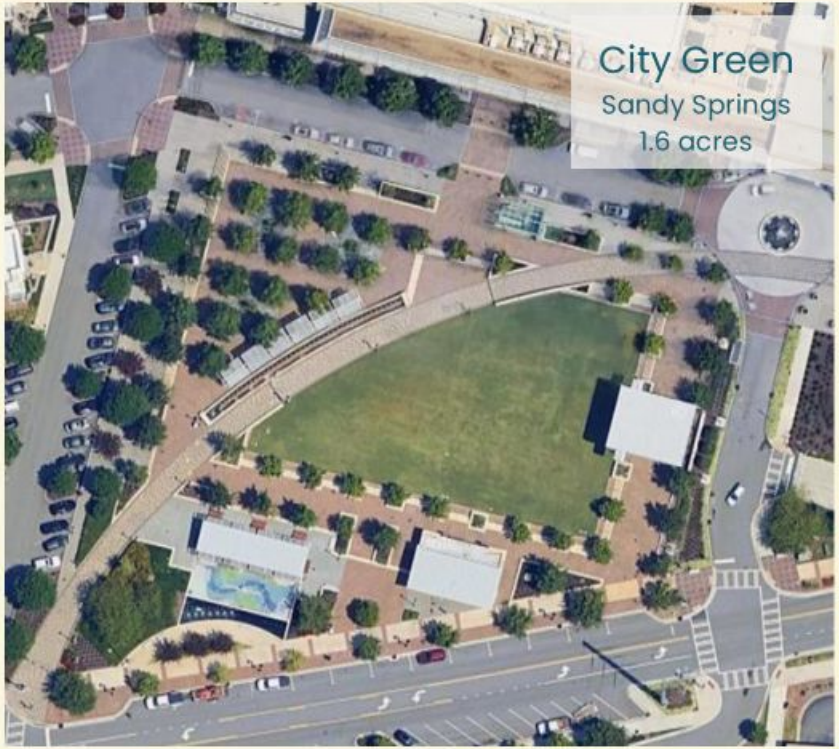


The Future - Greenspace

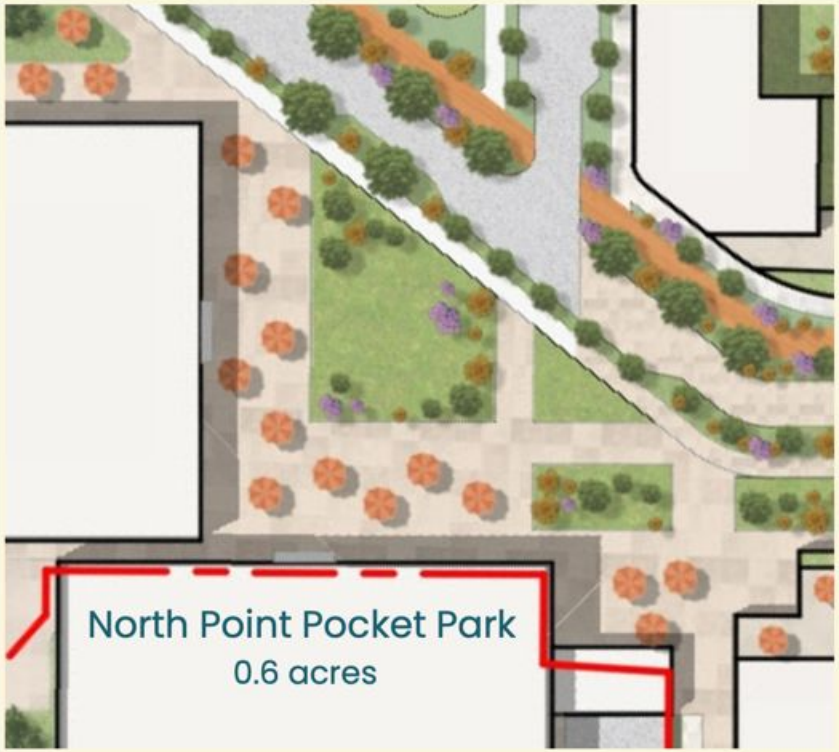


Community Park





Pocket Park



Avalon
- Alpharetta, GA
- 0.7 acres



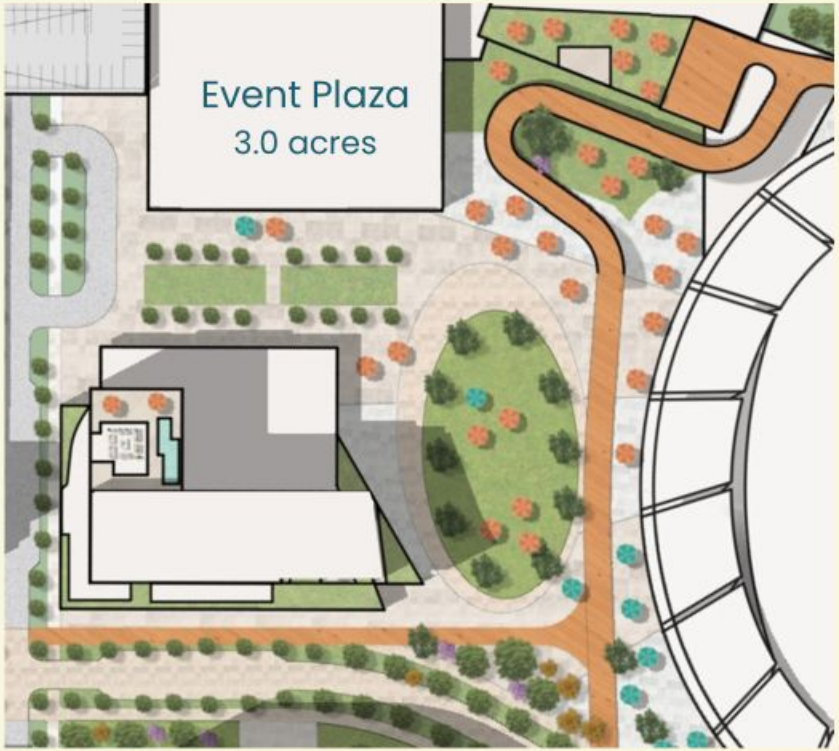
City Center
- Alpharetta, GA
- 0.9 acres



Lakeview Park
- Alpharetta, GA
- 0.4 acres



Event Plaza



The Battery Atlanta

- Cobb, GA
- 1.3 acres



Mecedes-Benz Stadium

- Atlanta, GA
- 2.3 acres



Stormwater Park



Thompson Street Park
- Alpharetta, GA
- 1.8 acres



Marsh Creek Park
- Sandy Springs, GA
- 1.8 acres



Transportation Analysis

North Point Mixed-Use District DRI #4670

City of Alpharetta, Georgia

June 2026

Prepared for:

Jamestown, L.P.

Prepared by:

Kimley-Horn and Associates, Inc.
11720 Amber Park Drive, Suite 600
Alpharetta, Georgia 30009
118655001

Kimley»Horn

Transportation Analysis

North Point Mixed-Use District
DRI #4670

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Kimley»Horn

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EXECUTIVE SUMMARY

This report presents the analysis of the anticipated traffic impacts of the proposed *North Point Mixed-Use District* located in the City of Alpharetta, Georgia. The approximate 98.58-acre site is located west of Haynes Bridge Road, east of Encore Parkway, and north of North Point Parkway at the existing North Point Mall site.

The approximate 98.58-acre development site is anticipated to be rezoned from Planned Shopping Center (PSC) and Mixed-Use (MU) zoning to Mixed-Use (MU) zoning.

The proposed development will consist of the following land uses and densities contained in the table below. The project is expected to be completed by 2036 (approximately 10 years from Existing 2026 conditions).

Proposed Land Use and Density	
Land Use	**Density**
Multifamily Residential	1,385 units
Hotel	850 rooms
Movie Theatre	1,139 seats
Movie Theatre (existing to be demolished)	*-1,139 seats*
Ice Skating Rink	2,000 seats
Office	750,000 SF
Shopping Center	313,000 SF
*Shopping Center (existing occupied to be demolished)**	*-270,000 SF*
Department Store	162,000 SF
*Department Store (existing to remain)***	*-162,000 SF*
High-Turnover (Sit-Down) Restaurant	90,000 SF
High-Turnover (Sit-Down) Restaurant (existing to remain)****	*-12,600 SF*
Music Hall	4,000 seats
Arena	20,000 seats

**512,000 SF of existing mall space (semi-vacant, 270,000 SF occupied) to be demolished*
***The Dillard's will remain as-is*
****The Cheesecake Factory will remain as-is*

The DRI analysis includes an estimation of the overall vehicle trips projected to be generated by the development, also known as gross trips. Mixed-use, alternative transportation mode, and pass-by reductions to gross trips are also included in the trip generation, as outlined in the Georgia Transportation Efficiency Authority (GTEA) Letter of Understanding (dated April 27, 2026).

Capacity analyses were performed for the study intersections under the Existing 2026 conditions, the Projected 2036 No-Build conditions, and the Projected 2036 Build conditions.

- Existing 2026 conditions represent current traffic volumes that were collected in April of 2026. (Note: Traffic count methodology was outlined in the Methodology Meeting Packet.)

- Projected 2036 No-Build conditions represent the Existing 2026 traffic volumes grown for ten (10) years at 1.0% per year throughout the study network.

- Projected 2036 Build conditions represent the Projected 2036 No-Build conditions plus the addition of the project trips that are anticipated to be generated by the *North Point Mixed-Use District*.

Programmed Roadway Improvements

No programmed intersection improvements before the build-out of the proposed *North Point Mixed-Use District* were identified in the GDOT GeoPI system and the ARC Atlanta Region's Plan.

Projected No-Build 2036 (System Improvements)

Due to the low level-of-service (LOS) at the following intersections under the Existing 2026 and Projected 2036 No-Build conditions, the following intersection improvements are recommended (needed to serve background traffic, without the development, shown in red on **Figure 8** and **Figure 9**):

- Haynes Bridge Road at SR-400 SB Ramp/Summit Place (Intersection 1)
    - For the PM peak hour, reallocate green time for the eastbound and westbound approaches.
- Haynes Bridge Road at North Point Drive (Intersection 3)
    - Add an additional double-served eastbound and westbound left-turn phase to the signal during the PM peak hour.
- Haynes Bridge Road at North Point Parkway (Intersection 4)
    - For the PM peak hour, reallocate green time for the eastbound and westbound approaches.
- North Point Parkway at Mall Access A/Driveway (Intersection 5)
    - For the PM peak hour, reallocate green time for the northbound and southbound approaches.
- North Point Parkway at Mall Access B/Driveway (Intersection 6)
    - Construct an exclusive southbound right-turn lane along Mall Access B, creating one exclusive through lane and one exclusive right-turn lane.
    - For the PM peak hour, install permissive and overlap phasing for the southbound right-turn movement concurrent with the eastbound left-turn and the southbound left-turn and through movements.
    - For the PM peak hour, lag the eastbound left-turn phase.
- North Point Parkway at Encore Parkway/Private Driveway (Intersection 8)
    - For the AM peak hour, reallocate green time for the southbound approach.
    - For the PM peak hour, install an overlap phase for the southbound right-turn movement and reallocate green time for the southbound through movement.

The analysis results for the improved conditions at the above intersections are shown in the tables on pages 6 through 9. With the improvements listed above, the study intersections are projected to operate at or above the overall and approach LOS standards.

Projected Build 2036 (Intersection/Site Access Improvements)

In order to serve the *North Point Mixed-Use District*, the following improvements are recommended (needed to serve the development, shown in blue on **Figure 9**):

- Haynes Bridge Road at SR-400 NB Ramps (Intersection 2)
    - For the PM peak hour, reallocate green time for the eastbound approach.
- Haynes Bridge Road at North Point Drive (Intersection 3)
    - For the AM peak hour, reallocate green time for the eastbound approach.
- North Point Parkway at Mall Access A/Driveway (Intersection 5)
    - For the PM peak hour, provide protected-permissive phasing for the eastbound left-turn movement following field verification of adequate sight distance.
    - For the PM peak hour, reallocate green time for the eastbound left-turn and northbound through movements.
- North Point Parkway at Mall Access B/Driveway (Intersection 6)
    - For the PM peak hour, reallocate green time for the southbound approach.
- Encore Parkway at North Point Center/Private Driveway (Intersection 9)
    - Construct an exclusive northbound right-turn lane along Encore Parkway, creating one exclusive through lane and one exclusive right-turn lane.
    - Construct an exclusive westbound left-turn lane along North Point Center, creating one exclusive through lane and one exclusive left-turn lane.
- Mansell Road at SR-400 NB Ramps (Intersection 13)
    - Reallocate green time for the northbound approach.

The analysis results for the improved conditions at the above intersections are shown in the tables on pages 6 through 10. With the improvements listed above, the study intersections are projected to operate at or above the overall and approach LOS standards.

Haynes Bridge Road at SR-400 SB Ramp/Summit Place (Intersection 1)

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road Northbound			Haynes Bridge Road Southbound			SR-400 SB Ramp Eastbound			Summit Place Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD (SIGNAL)	AM	Overall LOS	C (31.9)											
		Approach LOS	C (21.2)			C (21.4)			E (72.5)			E (68.9)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	56	234	0	2	250	0	144	0	287	6	3	
		95th Queue	86	484	0	13	361	65	190	0	356	20	19	
	PM	Overall LOS	D (41.9)											
		Approach LOS	C (31.7)			D (40.2)			E (66.6)			E (71.3)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	197	290	0	7	425	29	119	2	334	10	12	
		95th Queue	251	310	0	27	474	147	168	10	407	26	31	
BUILD (SIGNAL)	AM	Overall LOS	D (35.2)											
		Approach LOS	C (25.2)			C (25.9)			E (70.7)			E (68.9)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	127	295	0	2	332	0	144	0	321	6	3	
		95th Queue	170	563	0	13	418	68	190	0	428	20	19	
	PM	Overall LOS	D (54.2)											
		Approach LOS	D (36.8)			E (62.7)			E (67.6)			E (68.5)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	288	289	0	7	572	82	119	2	544	10	12	
		95th Queue	334	320	0	27	632	260	168	10	644	26	30	

Haynes Bridge Road at SR-400 NB Ramps (Intersection 2)

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road Northbound			Haynes Bridge Road Southbound			SR-400 NB Ramp Eastbound			SR-400 NB Ramp Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
BUILD (SIGNAL)	AM	Overall LOS	D (44.6)											
		Approach LOS	D (41.9)			D (41.1)			D (52.2)					
		Storage			250				500		550			
		50th Queue		242	369	297	452		454		202			
		95th Queue		283	478	470	657		492		243			
	PM*	Overall LOS	E (55.7)											
		Approach LOS	E (71.3)			C (30.5)			E (75.2)					
		Storage			250				500		550			
		50th Queue		570	436	519	357		423		547			
		95th Queue		628	625	754	313		502		710			

**Note: HCM 2000 methodology was used due to non-NEMA phasing during the PM peak hour.*

Haynes Bridge Road at North Point Drive (Intersection 3)

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road			Haynes Bridge Road			North Point Drive			North Point Drive		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD IMPROVED (SIGNAL)*	AM	Overall LOS	B (14.3)											
		Approach LOS	B (14.2)			A (7.6)			E (70.4)			E (74.5)		
		Storage	175		100	175			425					100
		50th Queue	6	76	0	37	102	0	41	34		16	15	0
		95th Queue	14	87	0	102	113	1	70	87		44	41	0
	PM	Overall LOS	C (32.3)											
		Approach LOS	C (32.3)			B (15.8)			E (78.3)			E (79.9)		
		Storage	175		100	175			425					100
		50th Queue	32	175	0	119	156	0	120	125		49	61	0
		95th Queue	56	200	0	204	270	1	152	203		86	110	0
BUILD IMPROVED (SIGNAL)*	AM	Overall LOS	C (23.0)											
		Approach LOS	C (20.4)			B (13.2)			E (70.4)			E (70.5)		
		Storage	175		100	175			425					100
		50th Queue	18	96	0	55	158	22	147	73		16	71	0
		95th Queue	61	353	0	91	183	29	200	142		44	123	0
	PM	Overall LOS	E (61.0)											
		Approach LOS	E (77.8)			D (48.8)			E (74.1)			E (79.5)		
		Storage	175		100	175			425					100
		50th Queue	208	389	0	215	630	478	296	208		60	120	0
		95th Queue	300	498	0	308	798	765	384	290		111	186	3

**Note: HCM 2000 methodology was used due to non-NEMA phasing.*

Haynes Bridge Road at North Point Parkway (Intersection 4)

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road			Haynes Bridge Road			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD IMPROVED (SIGNAL)	AM	Overall LOS	C (33.8)											
		Approach LOS	C (28.5)			B (10.8)			E (71.3)			E (77.3)		
		Storage	225			275			350		250	325		150
		50th Queue	82	192		107	218	13	34	84	24	47	234	0
		95th Queue	121	226		162	102	16	65	128	77	79	288	0
	PM	Overall LOS	D (43.9)											
		Approach LOS	D (43.6)			B (12.2)			E (70.8)			E (78.6)		
		Storage	225			275			350		250	325		150
		50th Queue	130	198		98	386	141	168	230	122	67	259	0
		95th Queue	194	248		155	480	321	220	289	214	103	301	15
BUILD IMPROVED (SIGNAL)	AM	Overall LOS	D (36.5)											
		Approach LOS	C (33.1)			B (10.4)			E (70.5)			E (79.9)		
		Storage	225			275			350		250	325		150
		50th Queue	112	203		107	123	15	62	87	22	47	261	0
		95th Queue	159	238		163	96	16	105	144	79	79	324	0
	PM	Overall LOS	E (57.4)											
		Approach LOS	E (59.1)			D (51.8)			D (52.4)			E (72.8)		
		Storage	225			275			350		250	325		150
		50th Queue	210	274		96	655	889	207	254	95	68	315	0
		95th Queue	276	349		135	780	1,064	264	324	229	106	352	0

North Point Parkway at Mall Access A/Driveway (Intersection 5)

Overall LOS Standard: E
Approach LOS Standard: E

			Driveway			Mall Access Driveway			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD IMPROVED (SIGNAL)	AM	Overall LOS	A (3.2)											
		Approach LOS	A (0.5)			A (3.8)			E (79.7)			E (79.8)		
		Storage			75				300			275		
		50th Queue	1	0	0	4	1		1	0		15	0	
		95th Queue	8	0	0	18	16		9	10		29	85	
	PM	Overall LOS	C (22.8)											
		Approach LOS	E (79.1)			E (72.5)			A (2.2)			B (17.6)		
		Storage			75				300			275		
		50th Queue	114	12	0	77	13		9	181		147	283	
		95th Queue	176	35	51	129	49		37	238		217	421	
BUILD IMPROVED (SIGNAL)	AM	Overall LOS	B (19.6)											
		Approach LOS	B (17.9)			B (13.8)			E (76.3)			E (65.5)		
		Storage			75				300			275		
		50th Queue	1	0	0	151	1		111	20		16	68	
		95th Queue	7	0	0	225	49		179	34		25	181	
	PM	Overall LOS	D (44.3)											
		Approach LOS	E (78.1)			E (66.7)			D (47.9)			C (33.7)		
		Storage			75				300			275		
		50th Queue	110	12	0	236	13		269	107		130	629	
		95th Queue	168	35	77	364	80		391	260		179	723	

North Point Parkway at Mall Access B/Driveway (Intersection 6)

Overall LOS Standard: E
Approach LOS Standard: E

			Driveway			Mall Access B			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD IMPROVED (SIGNAL)	AM	Overall LOS	A (5.7)											
		Approach LOS	E (78.5)			A (0.0)			B (13.8)			A (1.8)		
		Storage						50	225			200		
		50th Queue	10	0		0	0	0	6	2		23	0	
		95th Queue	31	0		0	0	0	22	5		59	50	
	PM	Overall LOS	D (48.9)											
		Approach LOS	E (78.2)			D (39.6)			C (26.8)			E (78.2)		
		Storage						50	225			200		
		50th Queue	111	2		26	11	0	46	174		69	31	
		95th Queue	165	43		52	34	0	88	230		123	111	
BUILD IMPROVED (SIGNAL)	AM	Overall LOS	C (20.7)											
		Approach LOS	E (70.9)			E (76.0)			D (49.2)			A (1.8)		
		Storage						50	225			200		
		50th Queue	10	0		14	0	0	127	6		23	87	
		95th Queue	28	0		35	0	0	224	56		0	85	
	PM	Overall LOS	D (40.1)											
		Approach LOS	E (66.3)			E (79.6)			B (16.1)			D (52.2)		
		Storage						50	225			200		
		50th Queue	109	2		65	11	0	242	92		59	505	
		95th Queue	167	43		111	32	83	375	205		95	552	

North Point Parkway at Encore Parkway/Private Driveway (Intersection 8)

Overall LOS Standard: E Approach LOS Standard: E			Private Driveway			Encore Parkway			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD IMPROVED (SIGNAL)	AM	Overall LOS	C (34.6)											
		Approach LOS	A (0.0)			E (71.6)			B (11.4)			C (29.7)		
		Storage				225			150			75		
		50th Queue		0		138	137	0	91	4		0	35	
		95th Queue		0		210	207	69	115	6		0	449	
	PM	Overall LOS	C (20.9)											
		Approach LOS	A (0.0)*			E (78.0)			A (6.5)			A (0.5)		
		Storage				225			150			75		
		50th Queue		0		191	193	0	49	34		1	290	
		95th Queue		0		277	281	63	111	89		2	363	
BUILD IMPROVED (SIGNAL)	AM	Overall LOS	D (37.6)											
		Approach LOS	A (0.0)			E (69.9)			C (22.3)			D (35.7)		
		Storage				225			150			75		
		50th Queue		0		138	137	0	212	6		0	419	
		95th Queue		0		208	205	77	362	10		0	525	
	PM	Overall LOS	D (41.0)											
		Approach LOS	A (0.0)*			E (69.0)			E (64.4)			A (0.9)		
		Storage				225			150			75		
		50th Queue		0		191	193	39	694	85		0	543	
		95th Queue		0		277	281	110	1,189	204		0	143	

**Note: Delay is considered negligible.*

Encore Parkway at North Point Center/Private Driveway (Intersection 9)

Overall LOS Standard: E Approach LOS Standard: E			Encore Parkway			Encore Parkway			Private Driveway			North Point Center		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
BUILD IMPROVED (SIGNAL)	AM	Overall LOS	B (13.2)											
		Approach LOS	B (13.3)			B (10.5)			C (28.2)			C (25.8)		
		Storage	225		100	225			25			100		
		50th Queue	0	183	7	15	42		1	3		17	0	0
		95th Queue	4	614	46	62	210		9	23		65	6	23
	PM	Overall LOS	C (24.6)											
		Approach LOS	C (30.4)			C (26.9)			C (21.1)			C (27.7)		
		Storage	225		100	225			25			100		
		50th Queue	1	219	66	59	142		12	5		57	5	0
		95th Queue	8	466	188	224	416		37	25		111	21	56

Mansell Road at SR-400 NB Ramps (Intersection 13)

Overall LOS Standard: E Approach LOS Standard: E			SR-400 NB			SR-400 NB			Mansell Road			Mansell Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD IMPROVED (SIGNAL)	**AM**	Overall LOS	E (64.5)											
		Approach LOS	E (69.9)						E (58.0)			E (64.3)		
		Storage			275				450					
		50th Queue	518	518	30				345	152			480	1
		95th Queue	755	752	77				482	200			604	18
	PM	Overall LOS	D (47.7)											
		Approach LOS	E (62.4)						D (47.7)			C (31.9)		
		Storage			275				450					
		50th Queue	340	345	77				397	476			275	4
		95th Queue	455	461	138				473	556			336	15
BUILD IMPROVED (SIGNAL)	**AM**	Overall LOS	E (69.9)											
		Approach LOS	E (75.6)						E (62.2)			E (70.8)		
		Storage			275				450					
		50th Queue	533	533	51				371	218			672	8
		95th Queue	792	789	112				509	272			784	28
	PM	Overall LOS	E (60.3)											
		Approach LOS	E (79.2)						D (43.9)			E (63.3)		
		Storage			275				450					
		50th Queue	323	327	519				350	697			688	40
		95th Queue	447	452	673				375	718			805	103

Impacted Queue Lengths Exceeding Storage

Intersection	Movement	Storage Length	Projected Build Queue Length (AM / PM)	Recommendation
1. Haynes Bridge Road at SR-400 SB Ramp/Summit Place	NBL	325	127 / 288 (50^{th}) 170 / 334 (95^{th})	Consider extending NBL turn lane.
	EBL	150	144 / 119 (50^{th}) 190 / 168 (95^{th})	Consider extending EBL turn lane.
	EBR	250	321 / 544 (50^{th}) 428 / 644 (95^{th})	Consider extending EBR turn lane.
2. Haynes Bridge Road at SR-400 NB Ramps	NBR	250	369 / 436 (50^{th}) 478 / 625 (95^{th})	Consider extending NBR turn lane.
	EBL	500	454 / 423 (50^{th}) 492 / 502 (95^{th})	Consider extending EBL turn lane.
	EBR	550	202 / 547 (50^{th}) 243 / 710 (95^{th})	Consider extending EBR turn lane.
3. Haynes Bridge Road at North Point Drive	NBL	175	18 / 208 (50^{th}) 61 / 300 (95^{th})	Consider extending NBL turn lane.
	SBL	175	55 / 215 (50^{th}) 91 / 308 (95^{th})	Consider extending SBL turn lane.
4. Haynes Bridge Road at North Point Parkway	NBL	225	112 / 210 (50^{th}) 159 / 276 (95^{th})	Consider extending NBL turn lane.
5. North Point Parkway at Mall Access A/Driveway	NBR	75	0 / 0 (50^{th}) 0 / 77 (95^{th})	Consider extending NBR turn lane.
	EBL	300	111 / 269 (50^{th}) 179 / 391 (95^{th})	Consider extending EBL turn lane.
6. North Point Parkway at Mall Access B/Driveway	SBR	50	0 / 0 (50^{th}) 0 / 83 (95^{th})	Consider extending SBR turn lane.
	EBL	225	127 / 242 (50^{th}) 224 / 375 (95^{th})	Consider extending EBL turn lane.
8. North Point Parkway at Encore Parkway/Private Driveway	SBL	225	138 / 191 (50^{th}) 208 / 277 (95^{th})	Consider extending SBL turn lane.
	EBL	150	212 / 694 (50^{th}) 362 / 1,189 (95^{th})	Consider extending EBL turn lane.
9. Encore Parkway at North Point Center/Private Driveway	NBR	100	7 / 66 (50^{th}) 46 / 188 (95^{th})	Consider signal timing adjustment to uncoordinated signal to balance queues.
	EBL	25	1 / 12 (50^{th}) 9 / 37 (95^{th})	Consider extending EBL turn lane.
	WBL	100	17 / 57 (50^{th}) 65 / 111 (95^{th})	Consider signal timing adjustment to uncoordinated signal to balance queues.
11. Haynes Bridge Road at Mansell Road	NBL	275	111 / 39 (50^{th}) 289 / 118 (95^{th})	Consider extending NBL turn lane.
12. Mansell Road at North Point Parkway/Resurgens Park Place	SBL	200	85 / 193 (50^{th}) 143 / 278 (95^{th})	Consider extending SBL turn lane.
13. Mansell Road at SR-400 NB Ramps	NBR	275	51 / 519 (50^{th}) 112 / 673 (95^{th})	Consider extending NBR turn lane.
	EBL	450	371 / 350 (50^{th}) 509 / 375 (95^{th})	Consider extending EBL turn lane.
14. Mansell Road at SR-400 SB Ramps	EBR	300	31 / 249 (50^{th}) 118 / 438 (95^{th})	Consider extending EBR turn lane to become a drop lane.
	WBL	150	197 / 228 (50^{th}) 161 / 281 (95^{th})	Consider extending WBL turn lane.

1.0 PROJECT DESCRIPTION

1.1 Introduction

This report presents the analysis of the anticipated traffic impacts of the proposed *North Point Mixed-Use District* located in the City of Alpharetta, Georgia. The approximate 98.58-acre site is located west of Haynes Bridge Road, east of Encore Parkway, and north of North Point Parkway.

The project site is currently zoned as Planned Shopping Center (PSC) and Mixed-Use (MU). The site is proposed to be rezoned to Mixed Use District (MU). **Figure 1** provides a location map of the project site. **Figure 2** provides an aerial view of the project site and surrounding area.

The proposed development will consist of the following land uses and densities contained in **Table 1**. The project is expected to be completed by 2036 (approximately 10 years from Existing 2026 conditions).

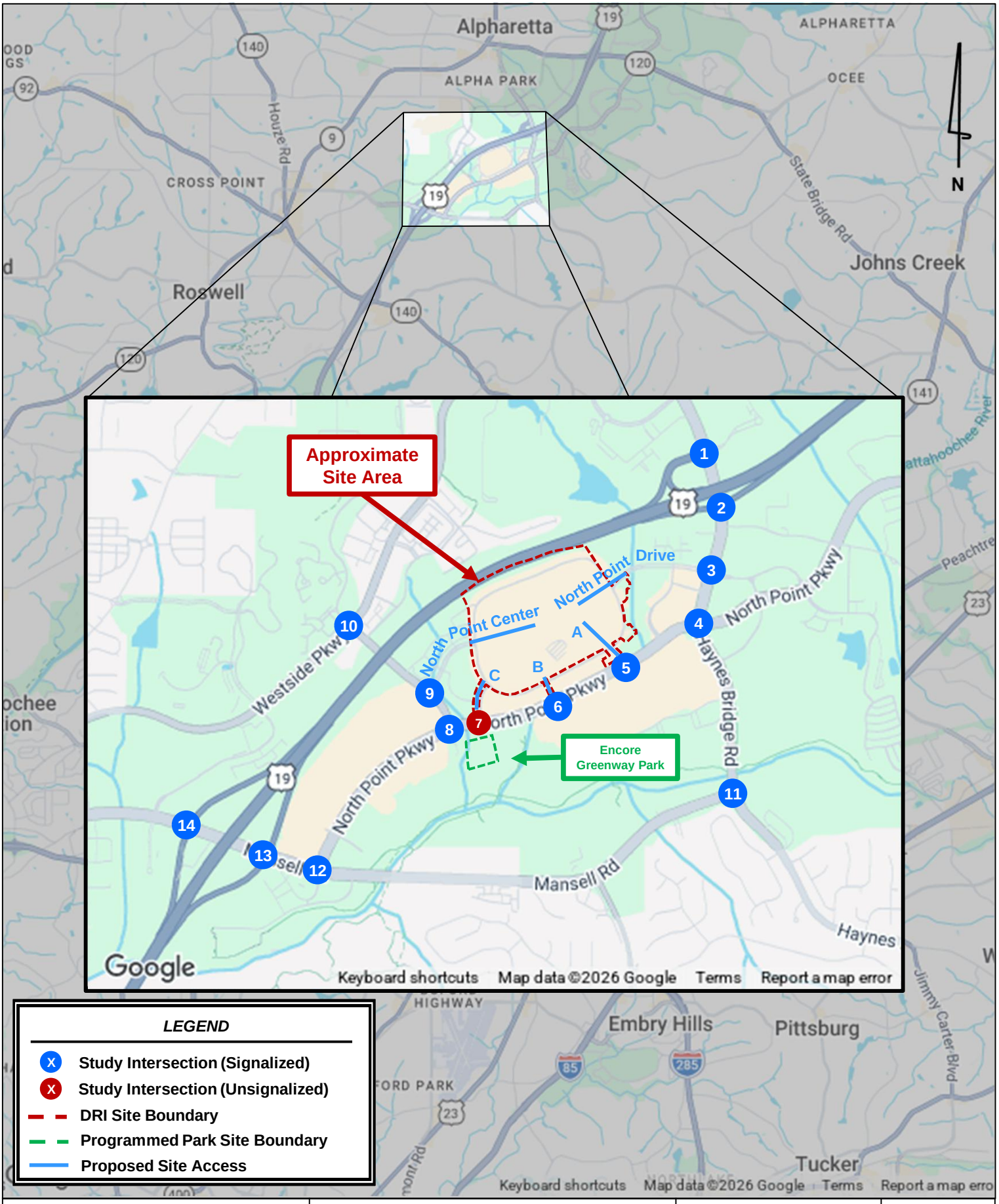
Table 1: Proposed Land Use and Density

Land Use	Density
Multifamily Residential	1,385 units
Hotel	850 rooms
Movie Theatre	1,139 seats
Movie Theatre (existing to be demolished)	*-1,139 seats*
Ice Skating Rink	2,000 seats
Office	750,000 SF
Shopping Center	313,000 SF
*Shopping Center (existing occupied to be demolished)**	*-270,000 SF*
Department Store	162,000 SF
*Department Store (existing to remain)***	*-162,000 SF*
High-Turnover (Sit-Down) Restaurant	90,000 SF
High-Turnover (Sit-Down) Restaurant (existing to remain)***	*-12,600 SF*
Music Hall	4,000 seats
Arena	20,000 seats

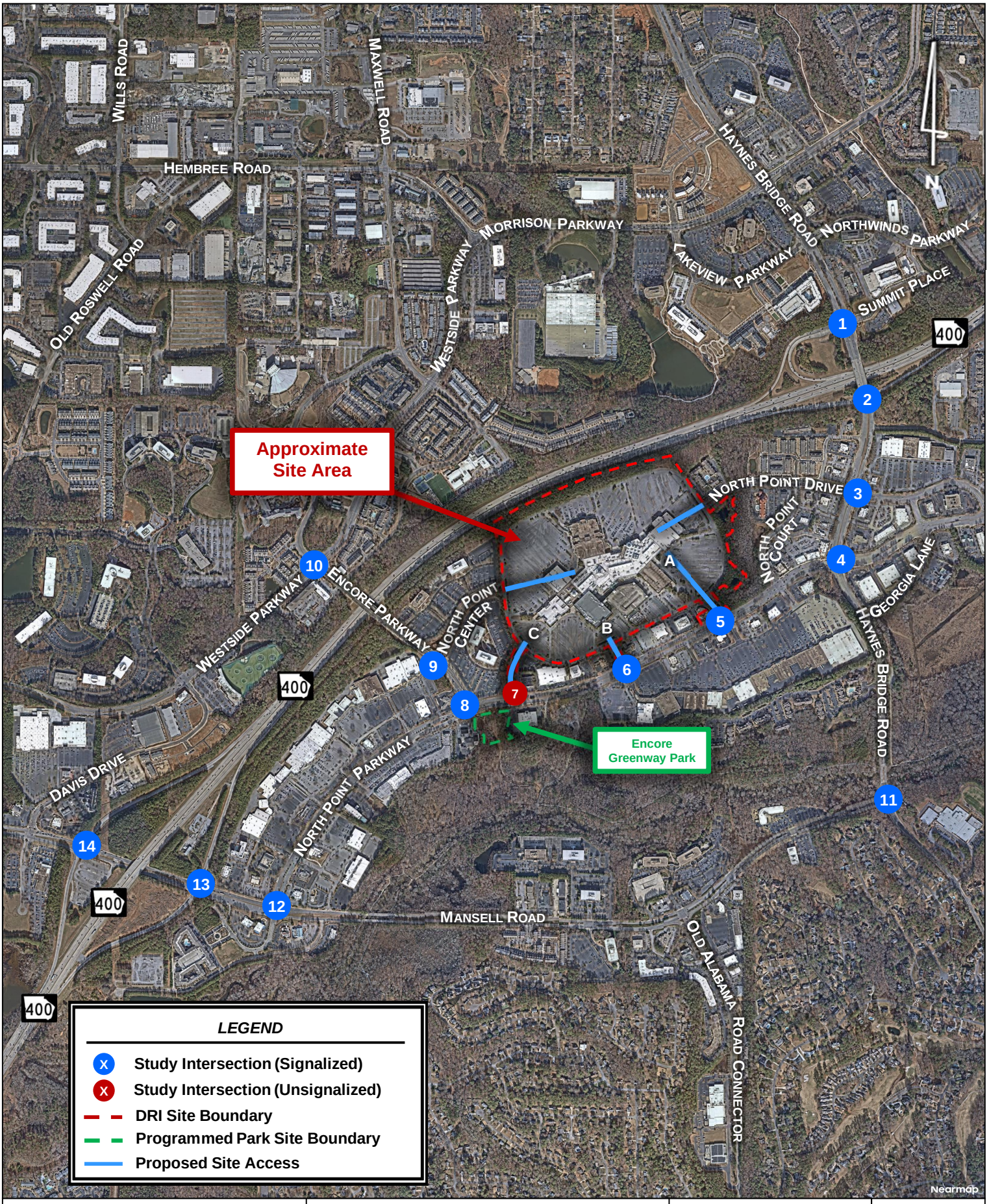
**512,000 SF of existing mall space (semi-vacant, 270,000 SF occupied) to be demolished*
***The Dillard's will remain as-is*
****The Cheesecake Factory will remain as-is*

A reference of the proposed site plan is provided in **Appendix A**. A full-sized site plan consistent with GTEA's Site Plan Guidelines is also being submitted as part of the review package.

The project is considered a DRI and is subject to Georgia Transportation Efficiency Authority (GTEA) and Atlanta Regional Commission (ARC) review due to the project size exceeding 600,000 SF of new mixed-use development in a *Regional Employment Corridor* area per the Atlanta Region's Plan *Unified Growth Policy Map*. The DRI was formally triggered and the Initial DRI Information (Form 1) was filed on March 16, 2026, by the City of Alpharetta. This transportation analysis includes all inputs and methodologies discussed at the DRI Methodology Meeting held on April 20, 2026, with GTEA, ARC, and other stakeholders. The inputs and methodologies are outlined in the GTEA Letter of Understanding (LOU), dated April 27, 2026.



Kimley»Horn	***North Point Mixed-Use District DRI #4670*** **Transportation Analysis**	**Site Location Map**	**Figure 1**
			Page 13



Kimley»Horn	*North Point Mixed-Use District* *DRI #4670* **Transportation Analysis**	**Site Aerial**	**Figure 2** **Page 14**

1.2 Site Access

As currently envisioned, the proposed development will be accessible via five (5) total vehicular access points:

1. **North Point Drive** – an existing, signalized, full-movement driveway located along the western side of Haynes Bridge Road approximately 1,000 feet south of SR-400. North Point Drive is proposed to remain signalized.
2. **Mall Access A** – an existing, signalized, full-movement driveway located along the northern side of North Point Parkway approximately 1,300 feet west of Haynes Bridge Road. Mall Access A is proposed to remain signalized.
3. **Mall Access B** – an existing, signalized, full-movement driveway located along the northern side of North Point Parkway approximately 2,600 feet west of Haynes Bridge Road. Mall Access B is proposed to remain signalized.
4. **Mall Access C** – an existing, unsignalized, full-movement driveway located along the northern side of North Point Parkway approximately 3,900 feet west of Haynes Bridge Road. Mall Access C is proposed to remain operating under side-street stop control.
5. **North Point Center** – an existing, signalized, full-movement driveway located along the eastern side of Encore Parkway approximately 1,000 feet south of SR-400. North Point Center is proposed to remain signalized.

1.3 Internal Circulation Analysis

Internal roadways throughout the site provide vehicular access to all buildings and parking on the site. See referenced site plan in **Appendix A** for a visual representation of vehicular access and circulation throughout the proposed development.

1.4 Parking

The existing site plan proposes 8,752 parking spaces in a combination of surface and structured parking facilities. Parking will be provided on-site in surface parking lots and multiple parking decks shared between the residential, retail, office, hotel, restaurant, cinema, music hall, ice rink, and arena buildings.

The required number of total site parking spaces to be provided are listed on the next page in **Table 2**. The site development is currently in progress and the number of parking provided is subject to change.

Table 2: City of Alpharetta Parking Minimums						
Land Use	**Applicable Code**	**Density**	**Unit**	**Parking Ratio**	**Total**	**With North Point Overlay**
Fine/Casual Dining	Restaurant	45,000	SF	1.00 space per 100 SF	450 Spaces	360 Spaces
Adult Active Entertainment	Restaurant	45,000	SF	1.00 space per 100 SF	450 Spaces	360 Spaces
Retail	Retail Shopping Center (50,000 – 400,000 SF)	133,000	SF	1.00 space per 250 SF	532 Spaces	426 Spaces
Dillard's	Retail Shopping Center (50,000 – 400,000 SF)	162,000	SF	1.00 space per 250 SF	648 Spaces	520 Spaces
Von Maur	Retail Shopping Center (50,000 – 400,000 SF)	180,000	SF	1.00 space per 250 SF	720 Spaces	576 Spaces
Cinema	Theater	1,139	Seats	1.00 space per 4 seats + 1.00 employee space per 10 seats	399 Spaces	319 Spaces
Live Music Venue	Public Assembly	4,000	Seats	1.00 space per 4 seats + 1.00 employee space per 10 seats	1,400 Spaces	1,120 Spaces
Community Ice Sheets	Public Assembly	2,000	Seats	1.00 space per 4 seats + 1.00 employee space per 10 seats	700 Spaces	560 Spaces
Hockey Arena	Public Assembly (Section 2.5.1D)	20,000	Seats	1.00 space per 2 seats	10,000 Spaces	8,000 Spaces
Multi-Family for Rent	Dwelling, 'For-Rent', Residential	1,385	Units	2.00 space per unit + 1 guest space per 20 units	2,840 Spaces	2,272 Spaces
Office	Office (Professional)	750,000	SF	1.00 space per 250 SF of GFA	3,000 Spaces	2,400 Spaces
Hotel	Hotel	850	Room	1.00 space per room + 1.00 employee space per 20 rooms	893 Spaces	715 Spaces
Conference Center	Hotel, Conference Room	45,000	SF	1.00 space per 500 SF	90 Spaces	72 Spaces
				Total	**22,122 Spaces**	**17,700 Spaces**

Per code, the required number of parking spaces may be reduced by 25% if shared parking is utilized. See site plan (**Appendix A**) for parking details. Parking numbers are subject to change during site design. A shared parking study is currently in process and will guide the proposed parking with the City of Alpharetta at a later time.

Per code, the following alternative parking will also be provided:

- Dedicated parking for bicycles, vanpool, carpool, and car share
    - Required 2 bicycle spaces per residential unit and 1 bicycle space per 25 vehicle spaces
- Dedicated parking for alternative charging vehicles
    - Required one (1) Level 2 electric vehicle charging station for every 25 required parking spaces (when over 100 parking spaces) or one (1) Level 3 electric vehicle charging station for every 100 required parking spaces (when over 100 parking spaces).
- Dedicated loading/unloading spaces
- Affiliated and non-affiliated off-site parking and shuttle services during events

Alternative parking will be designed in accordance with City of Alpharetta standard and will be coordinated with the City during the permitting process.

1.5 Alternative Transportation Facilities

Pedestrian facilities (sidewalks) currently exist on both sides of Haynes Bridge Road and along the northern side of North Point Parkway in the vicinity of the site. Pedestrian facilities are proposed throughout the site to connect the public roadways to the proposed development buildings.

Multi-use paths currently exist north and south of the site with plans to connect the Alpha Loop and Big Creek Greenway to the development via the future Encore Greenway Park.

On-street bicycle facilities (bike lanes) are provided along Encore Parkway. The Big Creek Greenway is located approximately 1/3 mile from the project site. Proposed bike share facilities are proposed near the future Encore Greenway Park and near The Gathering Alpharetta development.

Additionally, a pedestrian bridge is proposed to be installed across SR-400 connecting the Alpha Link Trail and the project site.

MARTA NextGen Bus Route 140 currently has stops along Haynes Bridge Road and North Point Parkway. The Mansell Road Park and Ride facility is located approximately 1 mile south of the proposed site and is serviced by MARTA Bus Routes 140 and 85. Route 140 provides service between the North Springs MARTA station and the Windward Parkway Park and Ride facility, with stops along Mansell Road, North Point Parkway, Haynes Bridge Road, Westside Parkway, and Webb Bridge Road. Route 85 provides service between the North Springs MARTA station and the Mansell Park and Ride Facility with stops along Dunwoody Place, Roswell Road, Alpharetta Highway, and Mansell Road.

The North Springs MARTA station is located approximately 8 miles south of the proposed site and provides connections to the MARTA Red rail line with service to midtown and downtown Atlanta and the Airport, as well as to MARTA Bus Routes 87 and 85, and to Xpress Bus Route 401.

Xpress Regional Service Bus Route 401 provides connection to the Medical Center and Dunwoody MARTA stations, as well as the Cumming Park and Ride Facility, with stops along Concourse Parkway and Perimeter Center Parkway.

Additionally, GDOT PI #0001757 will introduce a Bus Rapid Transit (BRT) line along SR-400, which will provide service from the North Springs MARTA station to Holcomb Bridge Road, North Point Parkway, Old Milton Parkway, and Windward Parkway. The nearest proposed BRT stop will be located along SR-400 adjacent to the proposed site, accessed via the proposed pedestrian bridge.

1.6 Enhanced Focus Area for Dense Urban Environments

Per Section 3.2.4.2 of the Georgia Regional Transit Authority (GRTA) *Development of Regional Impact Review Procedures* the *North Point Mixed-Use District* does not qualify for a "Dense Urban Environment Enhanced Focus Area" review, due to its location within the City of Alpharetta.

1.7 Heavy Vehicle Enhanced Focus Area

Per Section 3.2.4.1 of the GRTA *Development of Regional Impact Review Procedures*, the *North Point Mixed-Use District* does not qualify for a "Heavy Vehicle Enhanced Focus Area" review as none of the land uses for the development are expected to generate sufficient heavy vehicle traffic.

2.0 TRAFFIC ANALYSES, METHODOLOGY AND ASSUMPTIONS

2.1 Study Network Determination

The study area was determined at the methodology meeting with input from GTEA, ARC, and other local agency stakeholders. The study includes the following fourteen (14) existing intersections described in **Table 3**, and are shown on **Figure 1** and **Figure 2**.

Table 3: Intersection Control Summary

Intersection	Existing Control
1. Haynes Bridge Road at SR-400 SB Ramp/Summit Place	Signalized
2. Haynes Bridge Road at SR-400 NB Ramps	Signalized
3. Haynes Bridge Road at North Point Drive	Signalized
4. Haynes Bridge Road at North Point Parkway	Signalized
5. North Point Parkway at Mall Access A	Signalized
6. North Point Parkway at Mall Access B	Signalized
7. North Point Parkway at Mall Access C	Unsignalized (TWSC*)
8. North Point Parkway at Encore Parkway	Signalized
9. Encore Parkway at North Point Center	Signalized
10. Encore Parkway at Westside Parkway	Signalized
11. Haynes Bridge Road at Mansell Road	Signalized
12. North Point Parkway at Mansell Road	Signalized
13. Mansell Road at SR-400 NB Ramps	Signalized
14. Mansell Road at SR-400 SB Ramps	Signalized

*TWSC = Two-Way Stop-Control for side streets.

2.2 Existing Roadway Facilities

Roadway classification descriptions and estimated Annual Average Daily Traffic (AADT) for roadway segments within the study network are provided in **Table 4** (bolded roadways are adjacent to the site).

Table 4: Roadway Classifications

Roadway	Lanes	AADT (GDOT, 2024)	GDOT Functional Classification
Haynes Bridge Road	6	18,000 *Station 121-0823*	Minor Arterial
North Point Parkway	6	-	Major Collector
Encore Parkway	2	-	Local
Mansell Road	4	14,700 *Station 121-0935*	Minor Arterial
SR-400	8	152,000 *Station 121-0458*	Freeway
North Point Drive	4	-	Local
Mall Access A	2	-	Local
Mall Access B	2	-	Local
Mall Access C	2	-	Local
North Point Center	4	-	Local

2.3 Traffic Data Collection and Calibration

New traffic counts were collected during normal school day operations at the study intersections on Thursday, April 16 and Thursday, April 23, 2026. The traffic count methodologies used in this analysis were outlined in the Methodology Meeting Packet.

Traffic count peak hours for all the study intersections are shown in **Table 5**.

Table 5: Traffic Count Summary

Intersection	Count Date	AM Peak Hour	PM Peak Hour
1. Haynes Bridge Road at SR-400 SB Ramp/Summit Place	Thursday, April 16, 2026	7:45 – 8:45 AM	4:30 – 5:30 PM
2. Haynes Bridge Road at SR-400 NB Ramps		8:00 – 9:00 AM	4:30 – 5:30 PM
3. Haynes Bridge Road at North Point Drive		8:00 – 9:00 AM	4:45 – 5:45 PM
4. Haynes Bridge Road at North Point Parkway		8:00 – 9:00 AM	4:45 – 5:45 PM
5. North Point Parkway at Mall Access A		8:00 – 9:00 AM	4:45 – 5:45 PM
6. North Point Parkway at Mall Access B		8:00 – 9:00 AM	4:45 – 5:45 PM
7. North Point Parkway at Mall Access C		8:00 – 9:00 AM	4:45 – 5:45 PM
8. North Point Parkway at Encore Parkway		8:00 – 9:00 AM	4:45 – 5:45 PM
9. Encore Parkway at North Point Center		7:45 – 8:45 AM	4:30 – 5:30 PM
10. Encore Parkway at Westside Parkway		7:45 – 8:45 AM	4:45 – 5:45 PM
11. Haynes Bridge Road at Mansell Road	Thursday, April 23, 2026	7:30 – 8:30 AM	4:45 – 5:45 PM
12. North Point Parkway at Mansell Road	Thursday, April 16, 2026	8:00 – 9:00 AM	4:30 – 5:30 PM
13. Mansell Road at SR-400 NB Ramps		7:15 – 8:15 AM	4:00 – 5:00 PM
14. Mansell Road at SR-400 SB Ramps		7:00 – 8:00 AM	4:00 – 5:00 PM

The collected peak hour turning movement traffic counts are available upon request.

2.4 *Background Growth*

Background traffic is defined as expected traffic on the roadway network in future year(s) absent the construction and opening of the proposed *North Point Mixed-Use District*. Background traffic can include a base growth rate based on historical count data and population growth data as well as trips anticipated from nearby or adjacent other projects.

Based on methodology outlined in the GTEA Letter of Understanding (LOU), a 1.0% per year background traffic growth rate from 2026 to 2036 (10 years) was used for all roadways.

The Projected 2036 No-Build conditions represent the Existing 2026 traffic volumes grown for ten (10) years at 1.0% per year throughout the study network.

The Projected 2036 Build conditions represent the project trips generated by the *North Point Mixed-Use District* (discussed in **Section 3.0** and **4.0**) added to the Projected 2036 No-Build conditions.

2.5 *Programmed and Planned Projects*

Programmed and planned projects near the project site were researched to account for any improvements or modifications within the study network before or by the build-out year of development. The programmed and planned projects were discussed in the methodology meeting with GTEA, ARC, and other local stakeholders. Project information was obtained from GeoPI (GDOT), the Atlanta Region's Plan (ARC), and North Fulton Community Improvement District (CID).

The following projects in **Table 6** are programmed to occur near the development.

Table 6: Programmed Projects

Project Name	From / To Points	Sponsor	GDOT PI #	ARC ID # (TIP)	Design FY	ROW / UTL FY	CST FY
Alpha Loop	Lakeview Parkway to North Point Parkway	City of Alpharetta	N/A	N/A	Ongoing	Ongoing	Ongoing
North Point Alpha Link Trail	Haynes Bridge Road to Encore Parkway	City of Alpharetta	N/A	N/A	Ongoing	Ongoing	Ongoing
SR-400 Express lanes	North Springs MARTA to McFarland Parkway	GDOT	0001757	AR-ML-300	2005	2019	2022
Encore Greenway Park and Gateway	The Alpha Loop to the Big Creek Greenway	City of Alpharetta	N/A	N/A	2022	-	2024
MARTA Bus Shelter Program	Various Locations	TrueNorth 400	N/A	N/A	Ongoing	Ongoing	Ongoing

The following project in **Table 7** is planned to occur near the development.

Table 7: Planned Projects					
Project Name	**From / To Points:**	**Potential Sponsor**	**Project ID #**	**Project Timeline**	**Planning Document**
SR-400 High Capacity Premium Transit	North Springs MARTA to Windward Parkway	MARTA	AR-470	2050	ARC Fact Sheet

The project shown in **Table 7** is not yet funded, is programmed, or is planned to occur near the development beyond the build-out year of the proposed development or is not anticipated to affect the study network.

Available fact sheets and concept graphics for projects listed in the tables above can be found in **Appendix D**.

2.6 Level-of-Service Overview

Level-of-service (LOS) is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists' perceptions within a traffic stream. The *Highway Capacity Manual* defines six levels-of-service, LOS A through LOS F, with A being the best and F being the worst. LOS analyses were conducted at all intersections within the study network using *Synchro 12*. Existing and future traffic signal phasing and timing data were retrieved for available intersections.

LOS for signalized intersections are reported for the intersection as a whole. One or more movements at an intersection may experience a low LOS, while the intersection as a whole may operate acceptably.

LOS for unsignalized intersections, with stop control on the minor street only, is reported for the side street approaches and the major street left-turn movements. A low LOS for side street approaches is not uncommon, as vehicles may experience delays in turning onto a major roadway.

2.7 Level-of-Service Standards

For the purposes of this traffic analysis, a LOS standard of E was assumed for all study intersections, due to their location within a Regional Employment Corridor per the ARC Unified Growth Policy Map, per section 3.2.2.1 of the GRTA *Development of Regional Impact Review Procedures*.

In general, no changes to cycle lengths were considered for mitigation.

3.0 TRIP GENERATION

Gross trips associated with the proposed development were estimated using the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, 12th Edition*, *2025*, using equations where available. Reductions to gross trips are also considered in the analysis, including mixed-use reductions and alternative transportation mode reductions.

Note: Trip distributions for the proposed Music Hall and Arena were estimated using trip generation in DRI #2381 (Atlanta Braves Stadium and Mixed-Use Development), which was consistent with data in the Federal Highway Administration's (FHWA) *Managing Travel for Planned Special Events*. Additionally, 25% of the stadium attendees and 13% of the stadium employees were expected to arrive during the PM peak hour and no stadium traffic was expected during the AM peak hour. Internal capture rates from the retail, office, and hotel uses were considered.

Mixed-use reductions occur when a site has a combination of different land uses that interact with one another. For example, people living in a residential development may walk to the restaurants and retail instead of driving off-site or to the site. This reduces the number of vehicle trips that will be made on the roadway, thus reducing traffic congestion.

Alternative modes reductions are taken when a site can be accessed by modes other than vehicles (walking, bicycling, transit, etc.). Alternative mode reductions were taken at 8% per the LOU.

Pass-by reductions are taken for a site when traffic normally traveling along a roadway may choose to visit a retail or restaurant establishment that is along the vehicle's path. These trips were already on the road and would therefore only be new trips on the driveways. **Table 8** summarizes the gross trip generation, reductions, net trip generation, and driveway volumes for the proposed *North Point Mixed-Use District*.

Table 8: Trip Generation

Land Use	Density	Daily Traffic			AM Peak Hour		PM Peak Hour	
		Total	Enter	Exit	Enter	Exit	Enter	Exit
220 – Multi-Family Housing (Low-Rise)	1,385 units	7,918	3,959	3,959	120	378	417	255
310 – Hotel	850 rooms	4,964	2,482	2,482	150	139	204	196
465 – Ice Skating Rink	2,000 seats	2,520	1,260	1,260	7	13	84	56
710 – General Office Building	750,000 SF	4,842	2,421	2,421	757	103	124	650
820 – Shopping Center	43,000 SF*	1,564	782	782	16	10	51	54
932 – High-Turnover (Sit-Down) Restaurant	77,400 SF*	8,032	4,016	4,016	382	312	433	277
Music Hall	4,000 seats	5,440	2,720	2,720	0	0	383	7
Arena	20,000 seats	27,200	13,600	13,600	0	0	1,916	36
Gross Project Trips		**62,480**	**31,240**	**31,240**	**1,432**	**955**	**3,612**	**1,531**
Mixed-Use Reductions		*-3,440*	*-1,720*	*-1,720*	*-288*	*-288*	*-536*	*-392*
Internal Capture to Arena		*-1,612*	*-806*	*-806*	*0*	*0*	*-259*	*-144*
Alternative Mode Reductions (8%)		*-4,608*	*-2,304*	*-2,304*	*-93*	*-54*	*-225*	*-75*
Pass-By Reductions		*-2,520*	*-1,260*	*-1,260*	*0*	*0*	*-13*	*-13*
Net New Trips		**50,298**	**25,149**	**25,149**	**1,052**	**614**	**2,579**	**908**

**Note: Reductions were made to account for existing to be demolished and existing to remain developments within the existing site area.*

A more detailed trip generation analysis summary table is provided in **Appendix B**.

4.0 TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of new project trips was based on the project land uses, a review of land use densities and road facilities in the area, engineering judgement, and methodology discussions with GTEA, ARC, and other local stakeholders.

The anticipated distribution and assignment of the trips throughout the study roadway network is shown in **Figure 3** for residential land uses, in **Figure 4** for non-residential uses, and in **Figure 5** for arena uses. The peak hour project trips are shown by turning movement throughout the study network in **Figure 6**.

Detailed intersection volume worksheets are provided in **Appendix C**.

5.0 TRAFFIC ANALYSIS

Capacity analyses were performed using *Synchro 12* for the AM and PM peak hours under Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions. The capacity analyses were performed using methodologies from the *Highway Capacity Manual (HCM), 7th Edition,* unless otherwise noted.

Sections 5.1 – 5.14 provide the results of the capacity analyses are presented for each intersection and include projected LOS, delay, and queue lengths.

These analyses included existing roadway laneage and signal timing data for each of the scenarios. The traffic volumes and roadway laneage used for each scenario are shown visually in **Figure 7** for Existing 2026 conditions, **Figure 8** for Projected 2030 No-Build conditions, and **Figure 9** for Projected 2030 Build conditions.

LEGEND

- Turning Movement
- XX% — % Traffic Entering
- (XX%) — % Traffic Exiting
- Existing Traffic Signal
- Existing STOP Control
- (X) — Intersection Reference Number

N

NOT TO SCALE

Per the Methodology Meeting on April 20, 2026, it is assumed that 5% of the trips will originate internal to the site.

Figure 3

Residential Trip Distribution & Assignment

North Point Mixed-Use District
DRI #4670
Transportation Analysis

Kimley»Horn

LEGEND

- Turning Movement
- XX% — % Traffic Entering
- (XX%) — % Traffic Exiting
- Existing Traffic Signal
- Existing STOP Control
- (X) — Intersection Reference Number

N
NOT TO SCALE

Per the Methodology Meeting on April 20, 2026, it is assumed that 5% of the trips will originate internal to the site.

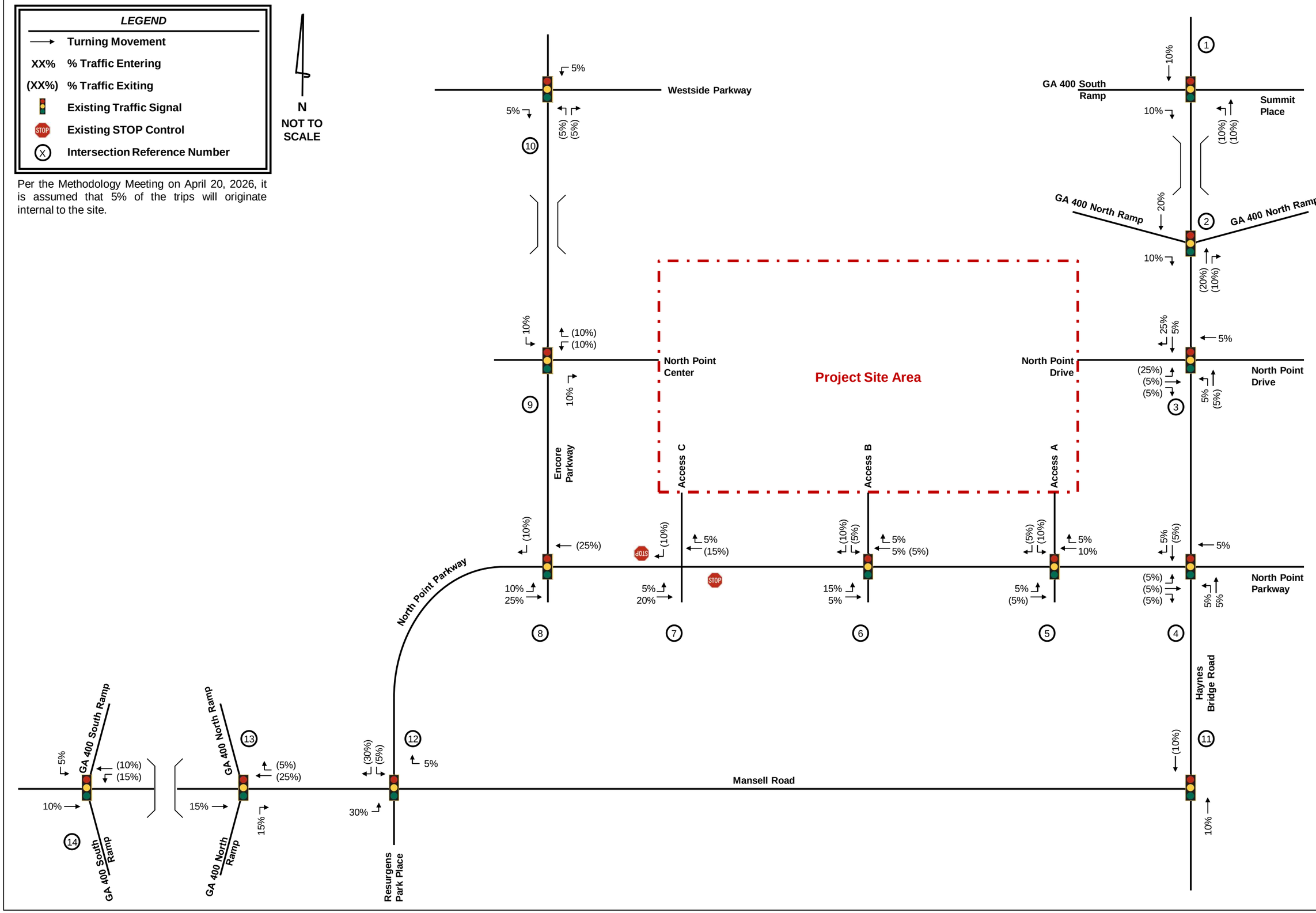


Figure 4

Non-Residential Trip Distribution & Assignment

North Point Mixed-Use District
DRI #4670
Transportation Analysis

Kimley»Horn

LEGEND

- Turning Movement
- XX% — % Traffic Entering
- (XX%) — % Traffic Exiting
- Existing Traffic Signal
- Existing STOP Control
- (X) — Intersection Reference Number

N
NOT TO SCALE

Per the Methodology Meeting on April 20, 2026, it is assumed that 5% of the trips will originate internal to the site.

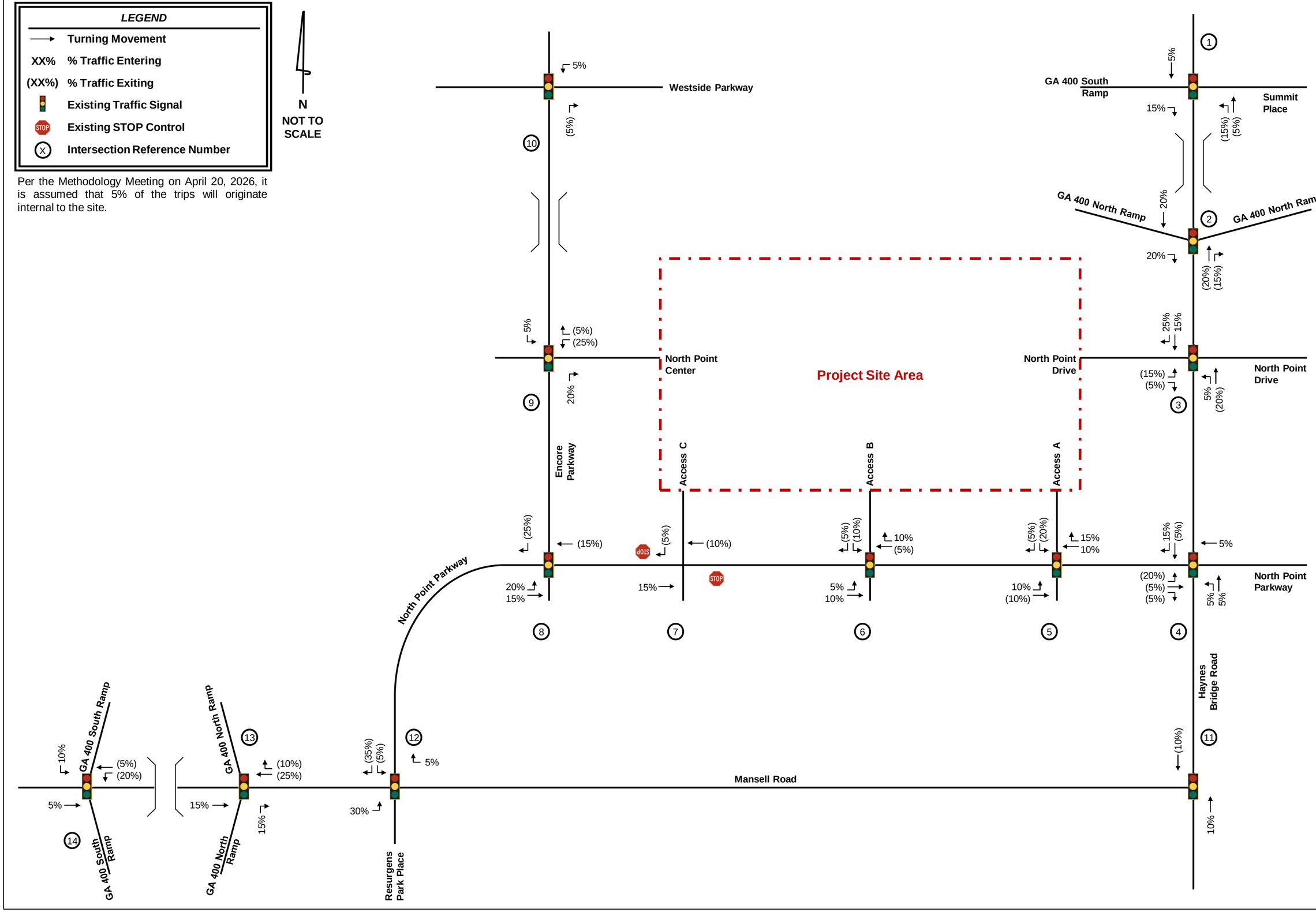


Figure 5

Arena
Trip Distribution & Assignment

North Point Mixed-Use District
DRI #4670
Transportation Analysis

Kimley»Horn

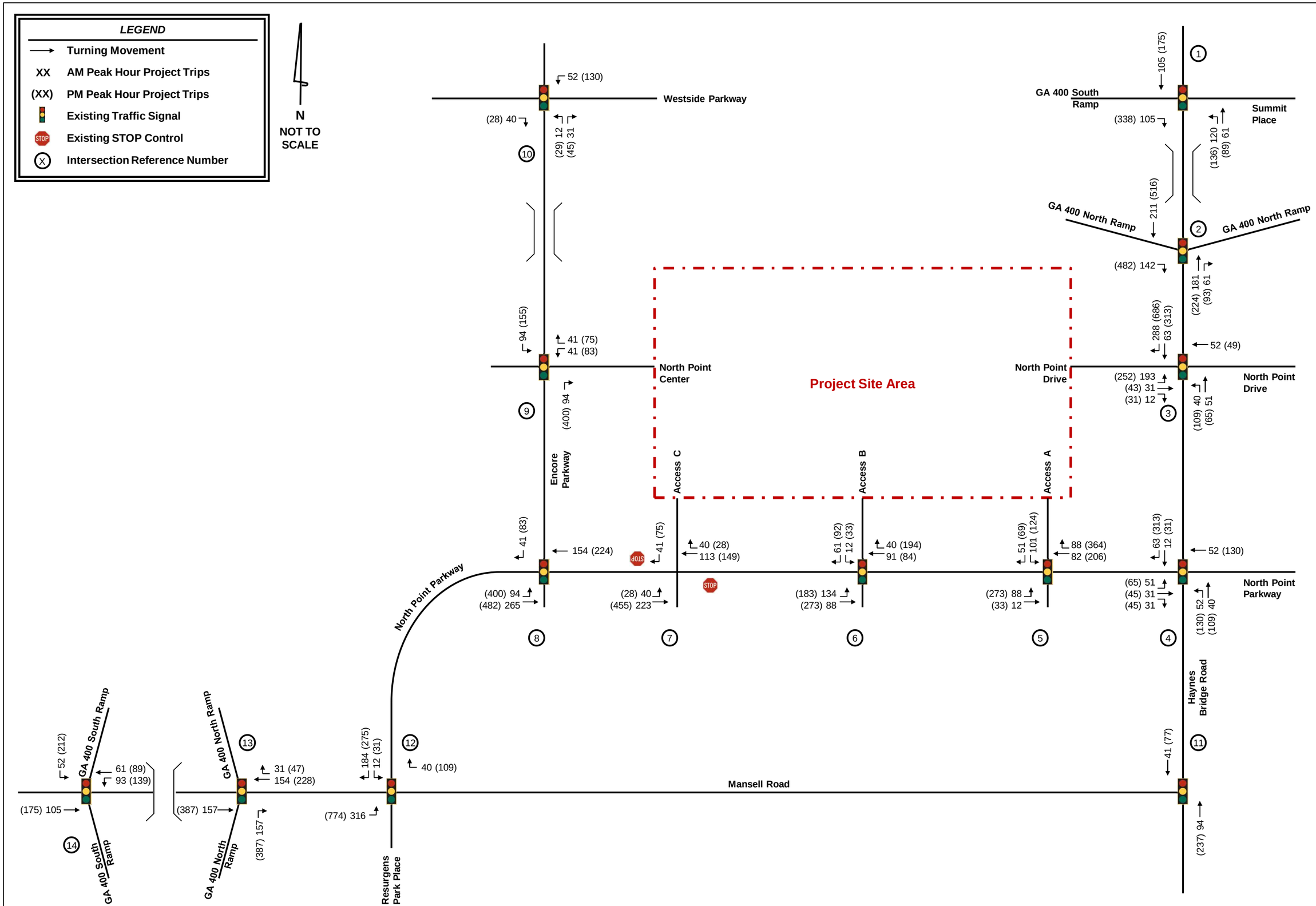


Figure 6

Project Trips

North Point Mixed-Use District
DRI #4670
Transportation Analysis

Kimley»Horn

5.1 Haynes Bridge Road at SR-400 SB Ramp/Summit Place (Intersection 1)

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road Northbound			Haynes Bridge Road Southbound			SR-400 SB Ramp Eastbound			Summit Place Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)	AM	Overall LOS	C (30.4)											
		Approach LOS	C (20.2)			B (19.7)			E (69.8)			E (68.9)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	51	206	0	2	210	0	131	0	261	6	3	
		95th Queue	85	428	0	13	311	61	176	0	325	18	17	
	PM	Overall LOS	D (35.1)											
		Approach LOS	C (24.1)			C (22.8)			F (87.1)			F (80.1)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	176	262	0	6	297	89	106	2	347	9	12	
		95th Queue	229	283	0	22	373	236	149	12	398	25	33	
NO-BUILD (SIGNAL)	AM	Overall LOS	C (31.9)											
		Approach LOS	C (21.2)			C (21.4)			E (72.5)			E (68.9)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	56	234	0	2	250	0	144	0	287	6	3	
		95th Queue	86	484	0	13	361	65	190	0	356	20	19	
	PM	Overall LOS	D (37.9)											
		Approach LOS	C (24.4)			C (26.0)			F (94.7)			F (80.5)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	193	286	0	7	354	199	118	2	384	10	13	
		95th Queue	241	310	0	26	433	388	162	12	440	26	35	
BUILD (SIGNAL)	AM	Overall LOS	D (35.2)											
		Approach LOS	C (25.2)			C (25.9)			E (70.7)			E (68.9)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	127	295	0	2	332	0	144	0	321	6	3	
		95th Queue	170	563	0	13	418	68	190	0	428	20	19	
	PM	Overall LOS	E (62.8)											
		Approach LOS	C (27.5)			C (32.3)			F (182.2)			F (80.5)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	286	265	0	7	465	272	118	2	663	10	13	
		95th Queue	328	291	0	26	513	446	162	12	835	26	35	

The intersection of Haynes Bridge Road at SR-400 SB Ramp/Summit Place (Intersection 1) currently operates and is projected to operate at an acceptable overall LOS under the Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions. The intersection currently operates and is projected to operate at an acceptable approach LOS for all approaches during the AM peak hour as well as for the northbound and southbound approaches during the PM peak hour under the Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions. The eastbound and westbound approaches currently operate and are projected to operate at LOS F during the PM peak hour under the Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions.

Per Section 3.2.3.1 of the GRTA DRI Review Procedures, “Changes to signal timing splits or cycle lengths should not be considered mitigation.” The *North Point Mixed-Use District* site is anticipated to considerably change traffic patterns when compared to the mostly vacant existing site and it is reasonable to assume signal timings will be updated.

In order to improve the approach LOS during the PM peak hour under all studied scenarios, Kimley-Horn recommends the following system improvement (shown in red on **Figure 8** and **Figure 9**):

- For the PM peak hour, reallocate green time for the eastbound and westbound approaches.

Since a change in signal timing would improve the intersection approaches to an acceptable LOS, no physical improvements are recommended to be conditioned.

The analysis results for the improved conditions at Intersection 1 are shown in the following table.

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road			Haynes Bridge Road			SR-400 SB Ramp			Summit Place		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD (SIGNAL)	AM	Overall LOS	C (31.9)											
		Approach LOS	C (21.2)			C (21.4)			E (72.5)			E (68.9)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	56	234	0	2	250	0	144	0	287	6	3	
		95th Queue	86	484	0	13	361	65	190	0	356	20	19	
	PM	Overall LOS	D (41.9)											
		Approach LOS	C (31.7)			D (40.2)			E (66.6)			E (71.3)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	197	290	0	7	425	29	119	2	334	10	12	
		95th Queue	251	310	0	27	474	147	168	10	407	26	31	
BUILD (SIGNAL)	AM	Overall LOS	D (35.2)											
		Approach LOS	C (25.2)			C (25.9)			E (70.7)			E (68.9)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	127	295	0	2	332	0	144	0	321	6	3	
		95th Queue	170	563	0	13	418	68	190	0	428	20	19	
	PM	Overall LOS	D (54.2)											
		Approach LOS	D (36.8)			E (62.7)			E (67.6)			E (68.5)		
		Storage	325		200	275		750	150		250	150		
		50th Queue	288	289	0	7	572	82	119	2	544	10	12	
		95th Queue	334	320	0	27	632	260	168	10	644	26	30	

With the signal timing improvement, the intersection of Haynes Bridge Road at SR-400 SB Ramp/Summit Place (Intersection 1) is projected to operate at or above its overall and approach LOS standards under both Projected 2036 No-Build and Projected 2036 Build conditions.

5.2 *Haynes Bridge Road at SR-400 NB Ramps (Intersection 2)*

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road Northbound			Haynes Bridge Road Southbound			SR-400 NB Ramp Eastbound			SR-400 NB Ramp Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)	AM	Overall LOS	D (41.7)											
		Approach LOS	C (35.0)			D (36.8)			D (54.9)					
		Storage			250				500		550			
		50th Queue		84	84	270	312		417		113			
		95th Queue		181	433	370	466		459		150			
	PM*	Overall LOS	D (38.5)											
		Approach LOS	C (29.5)			C (29.8)			E (67.0)					
		Storage			250				500		550			
		50th Queue		223	75	332	216		401		135			
		95th Queue		318	90	416	230		462		187			
NO-BUILD (SIGNAL)	AM	Overall LOS	D (42.7)											
		Approach LOS	D (35.2)			D (40.2)			D (53.1)					
		Storage			250				500		550			
		50th Queue		96	136	295	370		459		126			
		95th Queue		206	500	455	550		498		161			
	PM*	Overall LOS	D (42.1)											
		Approach LOS	D (37.6)			C (31.7)			E (66.9)					
		Storage			250				500		550			
		50th Queue		343	86	367	242		441		163			
		95th Queue		311	197	464	238		519		222			
BUILD (SIGNAL)	AM	Overall LOS	D (44.6)											
		Approach LOS	D (41.9)			D (41.1)			D (52.2)					
		Storage			250				500		550			
		50th Queue		242	369	297	452		454		202			
		95th Queue		283	478	470	657		492		243			
	PM*	Overall LOS	D (52.0)											
		Approach LOS	D (54.6)			C (24.4)			F (91.1)					
		Storage			250				500		550			
		50th Queue		450	194	343	330		437		597			
		95th Queue		638	320	389	357		519		751			

**Note: HCM 2000 methodology was used due to non-NEMA phasing during the PM peak hour.*

The intersection of Haynes Bridge Road at SR-400 NB Ramps (Intersection 2) currently operates and is projected to operate at an acceptable overall and approach LOS under the Existing 2026 conditions, Projected 2036 No-Build conditions, and the AM peak hour during the Projected 2036 Build conditions. In the PM peak hour during the Projected 2036 Build conditions, the intersection is projected to operate at an acceptable overall LOS, as well as an acceptable approach LOS for the northbound and southbound approaches, but at LOS F for the eastbound approach.

Per Section 3.2.3.1 of the GRTA DRI Review Procedures, "Changes to signal timing splits or cycle lengths should not be considered mitigation." The *North Point Mixed-Use District* site is anticipated to considerably change traffic patterns when compared to the mostly vacant existing site and it is reasonable to assume signal timings will be updated.

In order to improve the approach LOS during the PM peak hour under the Projected 2036 Build conditions, Kimley-Horn recommends the following build improvement (shown in blue on **Figure 9**):

- For the PM peak hour, reallocate green time for the eastbound approach.

Since a change in signal timing would improve the intersection approach to an acceptable LOS, no physical improvements are recommended to be conditioned.

The analysis results for the improved conditions at Intersection 2 are shown in the following table.

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road Northbound			Haynes Bridge Road Southbound			SR-400 NB Ramp Eastbound			SR-400 NB Ramp Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
BUILD (SIGNAL)	AM	Overall LOS	D (44.6)											
		Approach LOS	D (41.9)			D (41.1)			D (52.2)					
		Storage			250				500		550			
		50th Queue		242	369	297	452		454		202			
		95th Queue		283	478	470	657		492		243			
	PM*	Overall LOS	E (55.7)											
		Approach LOS	E (71.3)			C (30.5)			E (75.2)					
		Storage			250				500		550			
		50th Queue		570	436	519	357		423		547			
		95th Queue		628	625	754	313		502		710			

**Note: HCM 2000 methodology was used due to non-NEMA phasing during the PM peak hour.*

With the signal timing improvement, the intersection of Haynes Bridge Road at SR-400 NB Ramps (Intersection 2) is projected to operate at or above its overall and approach LOS standards under the Projected 2036 Build conditions.

5.3 Haynes Bridge Road at North Point Drive (Intersection 3)

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road			Haynes Bridge Road			North Point Drive			North Point Drive		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)*	AM	Overall LOS	B (13.8)											
		Approach LOS	B (13.8)			A (6.9)			E (70.4)			E (74.3)		
		Storage	175		100	175			425					100
		50th Queue	5	68	0	31	92	0	37	30		15	14	0
		95th Queue	13	79	0	72	103	1	65	80		41	39	0
	PM	Overall LOS	C (30.2)											
		Approach LOS	C (31.0)			B (11.1)			F (80.1)			F (87.8)		
		Storage	175		100	175			425					100
		50th Queue	29	158	0	71	110	0	129	109		55	56	0
		95th Queue	52	181	0	100	272	3	174	180		112	103	0
NO-BUILD (SIGNAL)*	AM	Overall LOS	B (14.3)											
		Approach LOS	B (14.2)			A (7.6)			E (70.4)			E (74.5)		
		Storage	175		100	175			425					100
		50th Queue	6	76	0	37	102	0	41	34		16	15	0
		95th Queue	14	87	0	102	113	1	70	87		44	41	0
	PM	Overall LOS	C (31.7)											
		Approach LOS	C (31.9)			B (13.0)			E (79.7)			F (91.1)		
		Storage	175		100	175			425					100
		50th Queue	32	175	0	96	128	0	143	127		61	61	0
		95th Queue	54	200	0	113	319	3	189	201		132	112	0
BUILD (SIGNAL)*	AM	Overall LOS	C (24.4)											
		Approach LOS	C (20.7)			B (11.8)			F (92.6)			E (70.1)		
		Storage	175		100	175			425					100
		50th Queue	18	97	0	46	181	10	152	79		16	71	0
		95th Queue	56	110	0	93	150	13	243	156		44	127	0
	PM	Overall LOS	D (49.0)											
		Approach LOS	E (63.4)			C (20.1)			F (121.6)			F (90.2)		
		Storage	175		100	175			425					100
		50th Queue	192	194	0	125	467	89	338	220		61	121	0
		95th Queue	367	217	0	153	450	111	462	325		132	193	0

**Note: HCM 2000 methodology was used due to non-NEMA phasing.*

The intersection of Haynes Bridge Road at North Point Drive (Intersection 3) currently operates and is projected to operate at acceptable overall LOS standards under Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions. The eastbound and westbound approaches currently operate at LOS F during the PM peak hour under Existing 2026 conditions. The westbound approach is projected to operate at LOS F during the PM peak hour under Projected 2036 No-Build conditions. The eastbound approach is projected to operate at LOS F under Projected 2036 Build conditions, and the westbound approach is projected to operate at LOS F during the PM peak hour under Projected 2036 Build conditions. All other approaches currently operate and are projected to operate at acceptable approach LOS standards under Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions.

In order to improve the approach LOS during the PM peak hour under the Projected 2036 No-Build and Projected 2036 Build conditions, Kimley-Horn recommends the following system improvement (shown in red on **Figure 8** and **Figure 9**):

- Add an additional double-served eastbound and westbound left-turn phase to the signal during the PM peak hour.

Per Section 3.2.3.1 of the GRTA DRI Review Procedures, "Changes to signal timing splits or cycle lengths should not be considered mitigation." The *North Point Mixed-Use District* site is anticipated to considerably change traffic patterns when compared to the mostly vacant existing site and it is reasonable to assume signal timings will be updated.

In order to improve the approach LOS during the AM peak hour under the Projected 2036 Build conditions, Kimley-Horn recommends the following build improvement (shown in blue on **Figure 9**):

- For the AM peak hour, reallocate green time for the eastbound approach.

Since a change in signal timing would improve the intersection approaches to an acceptable LOS, no physical improvements are recommended to be conditioned.

The analysis results for the improved conditions at Intersection 3 are shown in the following table.

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road			Haynes Bridge Road			North Point Drive			North Point Drive		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD IMPROVED (SIGNAL)*	**AM**	Overall LOS	B (14.3)											
		Approach LOS	B (14.2)			A (7.6)			E (70.4)			E (74.5)		
		Storage	175		100	175			425					100
		50th Queue	6	76	0	37	102	0	41	34		16	15	0
		95th Queue	14	87	0	102	113	1	70	87		44	41	0
	PM	Overall LOS	C (32.3)											
		Approach LOS	C (32.3)			B (15.8)			E (78.3)			E (79.9)		
		Storage	175		100	175			425					100
		50th Queue	32	175	0	119	156	0	120	125		49	61	0
		95th Queue	56	200	0	204	270	1	152	203		86	110	0
BUILD IMPROVED (SIGNAL)*	**AM**	Overall LOS	C (23.0)											
		Approach LOS	C (20.4)			B (13.2)			E (70.4)			E (70.5)		
		Storage	175		100	175			425					100
		50th Queue	18	96	0	55	158	22	147	73		16	71	0
		95th Queue	61	353	0	91	183	29	200	142		44	123	0
	PM	Overall LOS	E (61.0)											
		Approach LOS	E (77.8)			D (48.8)			E (74.1)			E (79.5)		
		Storage	175		100	175			425					100
		50th Queue	208	389	0	215	630	478	296	208		60	120	0
		95th Queue	300	498	0	308	798	765	384	290		111	186	3

**Note: HCM 2000 methodology was used due to non-NEMA phasing.*

With the improvements listed above, the intersection of Haynes Bridge Road at North Point Drive (Intersection 3) is projected to operate at or above its overall and approach LOS standards under the Projected 2036 No-Build and Projected 2036 Build conditions.

5.4 Haynes Bridge Road at North Point Parkway (Intersection 4)

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road			Haynes Bridge Road			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)	AM	Overall LOS	C (33.0)											
		Approach LOS	C (27.1)			B (10.4)			E (71.8)			E (75.7)		
		Storage	225			275			350		250	325		150
		50th Queue	74	170		96	111	6	30	76	19	43	212	0
		95th Queue	111	203		139	101	16	59	118	71	72	260	0
	PM	Overall LOS	D (45.2)											
		Approach LOS	D (41.0)			B (11.8)			F (80.7)			E (78.7)		
		Storage	225			275			350		250	325		150
		50th Queue	119	167		109	351	210	153	220	65	60	236	0
		95th Queue	167	219		156	408	142	205	275	204	95	275	8
NO-BUILD (SIGNAL)	AM	Overall LOS	C (33.8)											
		Approach LOS	C (28.5)			B (10.8)			E (71.3)			E (77.3)		
		Storage	225			275			350		250	325		150
		50th Queue	82	192		107	218	13	34	84	24	47	234	0
		95th Queue	121	226		162	102	16	65	128	77	79	288	0
	PM	Overall LOS	D (45.9)											
		Approach LOS	D (43.6)			B (12.2)			F (80.5)			E (78.7)		
		Storage	225			275			350		250	325		150
		50th Queue	130	198		118	398	241	168	242	82	67	259	0
		95th Queue	194	243		168	450	198	223	300	243	103	301	15
BUILD (SIGNAL)	AM	Overall LOS	D (36.5)											
		Approach LOS	C (33.1)			B (10.4)			E (70.5)			E (79.9)		
		Storage	225			275			350		250	325		150
		50th Queue	112	203		107	123	15	62	87	22	47	261	0
		95th Queue	159	238		163	96	16	105	144	79	79	324	0
	PM	Overall LOS	E (57.8)											
		Approach LOS	F (88.6)			B (17.0)			E (79.8)			F (80.2)		
		Storage	225			275			350		250	325		150
		50th Queue	273	247		122	410	766	214	275	155	67	319	0
		95th Queue	387	287		169	465	990	271	335	310	103	373	15

The intersection of Haynes Bridge Road at North Point Parkway (Intersection 4) currently operates and is projected to operate at acceptable overall LOS standards under Existing 2026, Projected 2036 No-Build, and Projected 2036 Build conditions. The intersection currently operates and is projected to operate at acceptable approach LOS standard during the AM peak hour under Existing 2026, Projected 2036 No-Build, and Projected 2036 Build conditions. The eastbound approach operates and is projected to operate at LOS F during the PM peak hour under Existing 2026 and Projected 2036 No-Build conditions. The westbound approach, as well as the northbound approach, is projected to operate at LOS F during the PM peak hour under Projected 2036 Build Conditions. All other approaches currently operate and are projected to operate at an acceptable LOS.

Per Section 3.2.3.1 of the GRTA DRI Review Procedures, “Changes to signal timing splits or cycle lengths should not be considered mitigation.” The *North Point Mixed-Use District* site is anticipated to considerably change traffic patterns when compared to the mostly vacant existing site and it is reasonable to assume signal timings will be updated.

In order to improve the approach LOS during the PM peak hour under all studied scenarios, Kimley-Horn recommends the following system improvement (shown in red on **Figure 8** and **Figure 9**):

- For the PM peak hour, reallocate green time for the eastbound and westbound approaches.

Since a change in signal timing would improve the intersection approaches to an acceptable LOS, no physical improvements are recommended to be conditioned.

The analysis results for the improved conditions at Intersection 4 are shown in the table below.

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road			Haynes Bridge Road			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD IMPROVED (SIGNAL)	AM	Overall LOS	C (33.8)											
		Approach LOS	C (28.5)			B (10.8)			E (71.3)			E (77.3)		
		Storage	225			275			350		250	325		150
		50th Queue	82	192		107	218	13	34	84	24	47	234	0
		95th Queue	121	226		162	102	16	65	128	77	79	288	0
	PM	Overall LOS	D (43.9)											
		Approach LOS	D (43.6)			B (12.2)			E (70.8)			E (78.6)		
		Storage	225			275			350		250	325		150
		50th Queue	130	198		98	386	141	168	230	122	67	259	0
		95th Queue	194	248		155	480	321	220	289	214	103	301	15
BUILD IMPROVED (SIGNAL)	AM	Overall LOS	D (36.5)											
		Approach LOS	C (33.1)			B (10.4)			E (70.5)			E (79.9)		
		Storage	225			275			350		250	325		150
		50th Queue	112	203		107	123	15	62	87	22	47	261	0
		95th Queue	159	238		163	96	16	105	144	79	79	324	0
	PM	Overall LOS	E (57.4)											
		Approach LOS	E (59.1)			D (51.8)			D (52.4)			E (72.8)		
		Storage	225			275			350		250	325		150
		50th Queue	210	274		96	655	889	207	254	95	68	315	0
		95th Queue	276	349		135	780	1,064	264	324	229	106	352	0

With the signal timing improvement, the intersection of Haynes Bridge Road at North Point Parkway (Intersection 4) is projected to operate at or above its overall and approach LOS standards under both Projected 2036 No-Build and Projected 2036 Build conditions.

5.5 North Point Parkway at Mall Access A/Driveway (Intersection 5)

Overall LOS Standard: E Approach LOS Standard: E			Driveway			Mall Access Driveway			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)	AM	Overall LOS	A (3.2)											
		Approach LOS	A (0.5)			A (3.8)			E (79.7)			E (79.8)		
		Storage			75				300			275		
		50th Queue	1	0	0	4	1		1	0		14	0	
		95th Queue	8	0	0	18	16		9	9		30	63	
	PM	Overall LOS	C (23.0)											
		Approach LOS	A (2.2)			B (17.3)			F (81.2)			E (73.9)		
		Storage			75				300			275		
		50th Queue	103	11	0	70	12		14	65		134	238	
		95th Queue	160	32	74	117	47		36	250		203	364	
NO-BUILD (SIGNAL)	AM	Overall LOS	A (3.2)											
		Approach LOS	A (0.5)			A (3.8)			E (79.7)			E (79.8)		
		Storage			75				300			275		
		50th Queue	1	0	0	4	1		1	0		15	0	
		95th Queue	8	0	0	18	16		9	10		29	85	
	PM	Overall LOS	C (25.3)											
		Approach LOS	A (7.1)			B (18.6)			F (83.5)			E (72.6)		
		Storage			75				300			275		
		50th Queue	114	12	0	77	13		15	76		147	283	
		95th Queue	173	35	77	127	50		38	279		213	410	
BUILD (SIGNAL)	AM	Overall LOS	B (19.6)											
		Approach LOS	B (17.9)			B (13.8)			E (76.3)			E (65.5)		
		Storage			75				300			275		
		50th Queue	1	0	0	151	1		111	20		16	68	
		95th Queue	7	0	0	225	49		179	34		25	181	
	PM	Overall LOS	E (76.1)											
		Approach LOS	F (82.5)			E (66.8)			F (160.0)			C (31.9)		
		Storage			75				300			275		
		50th Queue	110	12	0	236	13		372	120		140	708	
		95th Queue	168	35	77	364	80		586	292		172	689	

The intersection of North Point Parkway at Mall Access A/Driveway (Intersection 5) currently operates and is projected to operate at unacceptable approach LOS standards during the PM peak hour under Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions. Under these scenarios, the southbound approach of the intersection is projected to operate at LOS F.

Per Section 3.2.3.1 of the GRTA DRI Review Procedures, "Changes to signal timing splits or cycle lengths should not be considered mitigation. Changes to phasing, except in cases where there is a new approach to an intersection, can be considered mitigation." The *North Point Mixed-Use District* site is anticipated to considerably change traffic patterns when compared to the mostly vacant existing site and it is reasonable to assume signal timings will be updated.

In order to improve the approach LOS under all studied scenarios, Kimley-Horn recommends the following system improvement (shown in red on **Figure 8** and **Figure 9**):

- For the PM peak hour, reallocate green time for the northbound and southbound approaches.

In order to improve the approach LOS under the Projected 2036 Build scenario, Kimley-Horn recommends the following build improvements (shown in blue on **Figure 9**):

- For the PM peak hour, provide protected-permissive phasing for the eastbound left-turn movement following field verification of adequate sight distance.
- For the PM peak hour, reallocate green time for the eastbound left-turn and northbound through movements.

Since changes in signal timing and phasing would improve the intersection approaches to an acceptable LOS, no physical improvements are recommended to be conditioned.

The analysis results for the improved conditions at Intersection 5 are shown in the table below.

Overall LOS Standard: E Approach LOS Standard: E			Driveway			Mall Access Driveway			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD IMPROVED (SIGNAL)	AM	Overall LOS	A (3.2)											
		Approach LOS	A (0.5)			A (3.8)			E (79.7)			E (79.8)		
		Storage			75				300			275		
		50th Queue	1	0	0	4	1		1	0		15	0	
		95th Queue	8	0	0	18	16		9	10		29	85	
	PM	Overall LOS	C (22.8)											
		Approach LOS	E (79.1)			E (72.5)			A (2.2)			B (17.6)		
		Storage			75				300			275		
		50th Queue	114	12	0	77	13		9	181		147	283	
		95th Queue	176	35	51	129	49		37	238		217	421	
BUILD IMPROVED (SIGNAL)	AM	Overall LOS	B (19.6)											
		Approach LOS	B (17.9)			B (13.8)			E (76.3)			E (65.5)		
		Storage			75				300			275		
		50th Queue	1	0	0	151	1		111	20		16	68	
		95th Queue	7	0	0	225	49		179	34		25	181	
	PM	Overall LOS	D (44.3)											
		Approach LOS	E (78.1)			E (66.7)			D (47.9)			C (33.7)		
		Storage			75				300			275		
		50th Queue	110	12	0	236	13		269	107		130	629	
		95th Queue	168	35	77	364	80		391	260		179	723	

With the signal timing and phasing improvements, the intersection of North Point Parkway at Mall Access A/Driveway (Intersection 5) is projected to operate at or above its overall and approach LOS standards under the Projected 2036 No-Build and Projected 2036 Build conditions.

5.6 North Point Parkway at Mall Access B/Driveway (Intersection 6)

Overall LOS Standard: E Approach LOS Standard: E			Driveway			Mall Access B			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)	AM	Overall LOS	A (2.4)											
		Approach LOS	E (78.6)			A (0.0)			A (1.5)			A (1.7)		
		Storage							225			200		
		50th Queue	8	0		0	0		7	2		20	0	
		95th Queue	29	0		0	0		18	5		54	54	
	PM	Overall LOS	C (22.9)											
		Approach LOS	E (74.4)			F (87.2)			A (5.6)			C (21.7)		
		Storage							225			200		
		50th Queue	96	2		21	10		45	45		62	53	
		95th Queue	149	40		48	68		68	176		115	302	
NO-BUILD (SIGNAL)	AM	Overall LOS	A (2.4)											
		Approach LOS	E (78.5)			A (0.0)			A (1.3)			A (1.8)		
		Storage							225			200		
		50th Queue	10	0		0	0		6	2		23	0	
		95th Queue	31	0		0	0		18	5		59	50	
	PM	Overall LOS	C (23.5)											
		Approach LOS	E (73.2)			F (86.6)			A (5.5)			C (23.0)		
		Storage							225			200		
		50th Queue	106	2		23	11		49	78		69	79	
		95th Queue	160	42		51	72		70	192		122	357	
BUILD (SIGNAL)	AM	Overall LOS	B (15.0)											
		Approach LOS	E (70.9)			E (75.8)			C (31.8)			A (1.8)		
		Storage							225			200		
		50th Queue	10	0		14	0		129	6		23	87	
		95th Queue	28	0		35	0		222	56		0	86	
	PM	Overall LOS	D (50.8)											
		Approach LOS	E (66.3)			F (81.1)			D (44.5)			D (49.5)		
		Storage							225			200		
		50th Queue	106	2		63	11		237	143		58	479	
		95th Queue	156	42		103	98		401	208		88	583	

The intersection of North Point Parkway at Mall Access B/Driveway (Intersection 6) currently operates and is projected to operate at unacceptable approach LOS standards during the PM peak hour under Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions. Under these scenarios, the southbound approach of the intersection is projected to operate at LOS F.

In order to improve the approach LOS under all studied scenarios, Kimley-Horn recommends the following system improvement (shown in red on **Figure 8** and **Figure 9**):

- Construct an exclusive southbound right-turn lane along Mall Access B, creating one exclusive through lane and one exclusive right-turn lane.

Per Section 3.2.3.1 of the GRTA DRI Review Procedures, “Changes to phasing, except in cases where there is a new approach to an intersection, can be considered mitigation.”

In order to improve the approach LOS during the PM peak hour under the Projected 2036 No-Build scenario only, Kimley-Horn additionally recommends the following system improvements (shown in red on **Figure 8**):

- For the PM peak hour, install permissive and overlap phasing for the southbound right-turn movement concurrent with the eastbound left-turn and the southbound left-turn and through movements.
- For the PM peak hour, lag the eastbound left-turn phase.

Per Section 3.2.3.1 of the GRTA DRI Review Procedures, “Changes to signal timing splits or cycle lengths should not be considered mitigation.” The *North Point Mixed-Use District* site is anticipated to considerably change traffic patterns when compared to the mostly vacant existing site and it is reasonable to assume signal timings will be updated.

In order to improve the approach LOS during the PM peak hour under the Projected 2036 Build scenario, Kimley-Horn additionally recommends the following build improvements (shown in blue on **Figure 9**):

- For the PM peak hour, reallocate green time for the southbound approach.

With the improvements listed above, the intersection of North Point Parkway at Mall Access B/Driveway (Intersection 6) is projected to operate at or above its overall and approach LOS standards under the Projected 2036 No-Build and Projected 2036 Build conditions.

The analysis results for the improved conditions at Intersection 6 are shown in the table below.

Overall LOS Standard: E Approach LOS Standard: E			Driveway			Mall Access B			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD IMPROVED (SIGNAL)	AM	Overall LOS	A (5.7)											
		Approach LOS	E (78.5)			A (0.0)			B (13.8)			A (1.8)		
		Storage						50	225			200		
		50th Queue	10	0		0	0	0	6	2		23	0	
		95th Queue	31	0		0	0	0	22	5		59	50	
	PM	Overall LOS	D (48.9)											
		Approach LOS	E (78.2)			D (39.6)			C (26.8)			E (78.2)		
		Storage						50	225			200		
		50th Queue	111	2		26	11	0	46	174		69	31	
		95th Queue	165	43		52	34	0	88	230		123	111	
BUILD IMPROVED (SIGNAL)	AM	Overall LOS	C (20.7)											
		Approach LOS	E (70.9)			E (76.0)			D (49.2)			A (1.8)		
		Storage						50	225			200		
		50th Queue	10	0		14	0	0	127	6		23	87	
		95th Queue	28	0		35	0	0	224	56		0	85	
	PM	Overall LOS	D (40.1)											
		Approach LOS	E (66.3)			E (79.6)			B (16.1)			D (52.2)		
		Storage						50	225			200		
		50th Queue	109	2		65	11	0	242	92		59	505	
		95th Queue	167	43		111	32	83	375	205		95	552	

5.7 North Point Parkway at Mall Access C/Private Driveway (Intersection 7)

Overall LOS Standard: E Approach LOS Standard: E			Private Driveway			Mall Access C			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (TWSC)	AM	Overall LOS	(0.4)											
		Approach LOS	B (10.7)			A (0.0)			C (15.3)			A (0.0)		
		Storage							250					
		50th Queue												
		95th Queue			0	0		0	8					
	PM	Overall LOS	(1.4)											
		Approach LOS	A (0.0)			C (20.4)			B (14.9)			A (0.0)		
		Storage							250					
		50th Queue												
		95th Queue			0	15		10	10					
NO-BUILD (TWSC)	AM	Overall LOS	(0.4)											
		Approach LOS	B (10.9)			A (0.0)			C (16.8)			A (0.0)		
		Storage							250					
		50th Queue												
		95th Queue			0	0		0	8					
	PM	Overall LOS	(1.6)											
		Approach LOS	A (0.0)			C (24.4)			C (16.4)			A (0.0)		
		Storage							250					
		50th Queue												
		95th Queue			0	23		13	13					
BUILD (TWSC)	AM	Overall LOS	(1.2)											
		Approach LOS	B (12.2)			C (16.6)			C (22.8)			A (0.0)		
		Storage							250					
		50th Queue												
		95th Queue			0	0		10	28					
	PM	Overall LOS	(3.2)											
		Approach LOS	A (0.0)			E (39.4)			C (22.0)			A (0.0)		
		Storage							250					
		50th Queue												
		95th Queue			0	53		48	28					

The intersection of North Point Parkway at Mall Access C/Private Driveway (Intersection 7) currently operates and is projected to operate at acceptable overall and approach LOS standards under Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions. No improvements are recommended to be conditioned.

5.8 North Point Parkway at Encore Parkway/Private Driveway (Intersection 8)

Overall LOS Standard: E Approach LOS Standard: E			Private Driveway			Encore Parkway			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)	AM	Overall LOS	C (34.4)											
		Approach LOS	A (0.0)			F (82.2)			A (8.3)			C (26.5)		
		Storage				225			150			75		
		50th Queue		0		126	125	0	13	3		0	17	
		95th Queue		0		201	198	70	106	5		0	101	
	PM	Overall LOS	C (30.6)											
		Approach LOS	A (0.0)*			F (119.1)			A (5.6)			A (0.4)		
		Storage				225			150			75		
		50th Queue		0		173	174	0	42	30		1	238	
		95th Queue		0		258	260	91	94	76		1	121	
NO-BUILD (SIGNAL)	AM	Overall LOS	D (36.7)											
		Approach LOS	A (0.0)			F (84.0)			B (11.0)			C (28.9)		
		Storage				225			150			75		
		50th Queue		0		138	137	0	15	4		0	24	
		95th Queue		0		220	216	73	130	5		0	117	
	PM	Overall LOS	D (35.5)											
		Approach LOS	A (0.0)*			F (139.5)			A (5.7)			A (0.5)		
		Storage				225			150			75		
		50th Queue		0		190	192	0	51	35		1	278	
		95th Queue		0		284	287	94	103	84		1	116	
BUILD (SIGNAL)	AM	Overall LOS	D (38.1)											
		Approach LOS	A (0.0)			F (130.8)			B (14.5)			B (19.2)		
		Storage				225			150			75		
		50th Queue		0		140	138	0	154	6		0	382	
		95th Queue		0		245	241	83	328	8		0	402	
	PM	Overall LOS	E (71.0)											
		Approach LOS	A (0.0)*			F (242.4)			E (61.2)			A (0.9)		
		Storage				225			150			75		
		50th Queue		0		190	192	0	746	88		0	122	
		95th Queue		0		284	287	110	1,167	193		0	143	

**Note: Delay is considered negligible.*

The intersection of North Point Parkway at Encore Parkway/Private Driveway (Intersection 8) is projected to operate at unacceptable approach LOS standards during both the AM and PM peak hours under Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions. Under this scenario, the southbound approach of the intersection is projected to operate at LOS F.

Per Section 3.2.3.1 of the GRTA DRI Review Procedures, “Changes to signal timing splits or cycle lengths should not be considered mitigation. Changes to phasing, except in cases where there is a new approach to an intersection, can be considered mitigation.” The *North Point Mixed-Use District* site is anticipated to considerably change traffic patterns when compared to the mostly vacant existing site and it is reasonable to assume signal timings will be updated.

In order to improve the approach LOS under all studied scenarios, Kimley-Horn recommends the following system improvements (shown in red on **Figure 8** and **Figure 9**):

- For the AM peak hour, reallocate green time for the southbound approach.
- For the PM peak hour, install an overlap phase for the southbound right-turn movement and reallocate green time for the southbound through movement.

With the improvements listed above, the intersection of North Point Parkway at Encore Parkway/Private Driveway (Intersection 8) is projected to operate at or above its overall and approach LOS standards under the Projected 2036 No-Build and Projected 2036 Build conditions.

The analysis results for the improved conditions at Intersection 8 are shown in the table below.

Overall LOS Standard: E Approach LOS Standard: E			Private Driveway			Encore Parkway			North Point Parkway			North Point Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD IMPROVED (SIGNAL)	AM	Overall LOS	C (34.6)											
		Approach LOS	A (0.0)			E (71.6)			B (11.4)			C (29.7)		
		Storage				225			150			75		
		50th Queue		0		138	137	0	91	4		0	35	
		95th Queue		0		210	207	69	115	6		0	449	
	PM	Overall LOS	C (20.9)											
		Approach LOS	A (0.0)*			E (78.0)			A (6.5)			A (0.5)		
		Storage				225			150			75		
		50th Queue		0		191	193	0	49	34		1	290	
		95th Queue		0		277	281	63	111	89		2	363	
BUILD IMPROVED (SIGNAL)	AM	Overall LOS	D (37.6)											
		Approach LOS	A (0.0)			E (69.9)			C (22.3)			D (35.7)		
		Storage				225			150			75		
		50th Queue		0		138	137	0	212	6		0	419	
		95th Queue		0		208	205	77	362	10		0	525	
	PM	Overall LOS	D (41.0)											
		Approach LOS	A (0.0)*			E (69.0)			E (64.4)			A (0.9)		
		Storage				225			150			75		
		50th Queue		0		191	193	39	694	85		0	543	
		95th Queue		0		277	281	110	1,189	204		0	143	

**Note: Delay is considered negligible.*

5.9 Encore Parkway at North Point Center/Private Driveway (Intersection 9)

Overall LOS Standard: E Approach LOS Standard: E			Encore Parkway			Encore Parkway			Private Driveway			North Point Center		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)	AM	Overall LOS	B (11.8)											
		Approach LOS	B (12.9)			A (9.2)			C (24.7)			C (25.2)		
		Storage	225			225			25					
		50th Queue	0	61		0	0		1	2			1	0
		95th Queue	4	365		25	170		7	18			10	0
	PM	Overall LOS	B (17.8)											
		Approach LOS	B (18.2)			B (14.9)			C (25.0)			C (24.1)		
		Storage	225			225			25					
		50th Queue	1	192		16	107		10	4			21	0
		95th Queue	6	403		39	286		34	22			55	47
NO-BUILD (SIGNAL)	AM	Overall LOS	B (11.8)											
		Approach LOS	B (12.9)			A (9.0)			C (26.8)			C (27.4)		
		Storage	225			225			25					
		50th Queue	0	78		0	0		1	3			1	0
		95th Queue	3	420		26	188		8	20			10	0
	PM	Overall LOS	B (19.4)											
		Approach LOS	C (20.2)			B (16.1)			C (27.2)			C (25.9)		
		Storage	225			225			25					
		50th Queue	1	211		18	124		11	4			24	0
		95th Queue	6	427		43	323		34	24			59	48
BUILD (SIGNAL)	AM	Overall LOS	B (15.5)											
		Approach LOS	B (16.8)			B (10.4)			C (32.5)			C (30.8)		
		Storage	225			225			25					
		50th Queue	0	250		15	42		1	4			22	0
		95th Queue	4	765		62	210		9	23			65	23
	PM	Overall LOS	F (126.9)											
		Approach LOS	F (217.9)			E (60.3)			C (34.4)			C (32.0)		
		Storage	225			225			25					
		50th Queue	1	662		120	146		12	5			64	0
		95th Queue	8	1,019		313	416		37	25			121	56

The intersection of Encore Parkway at North Point Center/Private Driveway (Intersection 9) is projected to operate at unacceptable overall and approach LOS standards during the PM peak hour under the Projected 2036 Build conditions. Under this scenario, the overall intersection and the northbound approach of the intersection are projected to operate at LOS F.

In order to improve the overall and approach LOS under all studied scenarios, Kimley-Horn recommends the following build improvement (shown in blue on **Figure 9**):

- Construct an exclusive northbound right-turn lane along Encore Parkway, creating one exclusive through lane and one exclusive right-turn lane.

With the improvement listed above, the intersection of Encore Parkway at North Point Center/Private Driveway (Intersection 9) is projected to operate at or above its overall and approach LOS standards under the Projected 2036 Build conditions.

Additionally, Kimley-Horn recommends the following build improvement to supplement the *North Point Mixed-Use District* development (shown in blue on **Figure 9**):

- Construct an exclusive westbound left-turn lane along North Point Center, creating one exclusive through lane and one exclusive left-turn lane.

The analysis results for the improved conditions at Intersection 9 are shown in the table below.

Overall LOS Standard: E Approach LOS Standard: E			Encore Parkway			Encore Parkway			Private Driveway			North Point Center		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
BUILD IMPROVED (SIGNAL)	**AM**	Overall LOS	B (13.2)											
		Approach LOS	B (13.3)			B (10.5)			C (28.2)			C (25.8)		
		Storage	225		100	225			25			100		
		50th Queue	0	183	7	15	42		1	3		17	0	0
		95th Queue	4	614	46	62	210		9	23		65	6	23
	PM	Overall LOS	C (24.6)											
		Approach LOS	C (30.4)			C (26.9)			C (21.1)			C (27.7)		
		Storage	225		100	225			25			100		
		50th Queue	1	219	66	59	142		12	5		57	5	0
		95th Queue	8	466	188	224	419		37	25		111	21	56

5.10 Encore Parkway at Westside Parkway (Intersection 10)

Overall LOS Standard: E Approach LOS Standard: E			Encore Parkway			Encore Parkway			Westside Parkway			Westside Parkway		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)	AM	Overall LOS	B (16.8)											
		Approach LOS	B (19.1)			C (20.5)			B (16.4)			B (15.8)		
		Storage	250		350	400			250		175	175		150
		50th Queue	45	4	0	2	5	0	2	58	0	15	66	0
		95th Queue	115	22	40	10	29	0	15	146	53	67	301	0
	PM	Overall LOS	B (16.8)											
		Approach LOS	C (21.1)			C (21.2)			B (17.9)			B (11.4)		
		Storage	250		350	400			250		175	175		150
		50th Queue	44	4	0	2	5	0	1	62	0	22	33	0
		95th Queue	99	19	53	9	25	0	11	145	57	82	134	0
NO-BUILD (SIGNAL)	AM	Overall LOS	B (18.5)											
		Approach LOS	C (20.2)			C (22.0)			B (17.8)			B (18.1)		
		Storage	250		350	400			250		175	175		150
		50th Queue	57	5	0	3	6	0	2	71	0	18	80	0
		95th Queue	127	23	42	11	31	0	17	172	57	76	362	0
	PM	Overall LOS	B (18.3)											
		Approach LOS	C (22.9)			C (22.8)			C (20.2)			B (11.8)		
		Storage	250		350	400			250		175	175		150
		50th Queue	68	5	0	2	7	0	2	100	0	43	67	0
		95th Queue	109	20	55	11	27	0	11	164	61	94	154	0
BUILD (SIGNAL)	AM	Overall LOS	B (19.4)											
		Approach LOS	C (21.7)			C (23.6)			C (20.7)			B (16.9)		
		Storage	250		350	400			250		175	175		150
		50th Queue	59	5	0	3	6	0	2	71	0	26	81	0
		95th Queue	131	23	44	11	31	0	17	173	60	114	366	0
	PM	Overall LOS	C (23.3)											
		Approach LOS	C (25.7)			C (24.2)			C (27.4)			B (17.0)		
		Storage	250		350	400			250		175	175		150
		50th Queue	74	5	0	2	8	0	2	102	0	80	69	0
		95th Queue	117	20	59	11	27	0	12	167	63	237	157	0

The intersection of Haynes Bridge Road at Mansell Road (Intersection 11) currently operates and is projected to operate at acceptable overall and approach LOS under Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions. No improvements are recommended to be conditioned.

5.11 Haynes Bridge Road at Mansell Road (Intersection 11)

Overall LOS Standard: E Approach LOS Standard: E			Haynes Bridge Road			Haynes Bridge Road			Mansell Road					
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)	AM	Overall LOS	B (11.8)											
		Approach LOS	A (6.5)			B (13.3)			C (20.3)					
		Storage	275						125					
		50th Queue	48	53			253	0	60		9			
		95th Queue	178	90			498	45	97		48			
	PM	Overall LOS	B (18.1)											
		Approach LOS	A (9.0)			C (20.8)			C (24.8)					
		Storage	275						125					
		50th Queue	23	48			225	0	62		112			
		95th Queue	73	85			447	43	102		241			
NO-BUILD (SIGNAL)	AM	Overall LOS	B (14.5)											
		Approach LOS	A (9.6)			B (15.3)			C (24.2)					
		Storage	275						125					
		50th Queue	100	68			339	0	80		20			
		95th Queue	271	112			632	48	121		66			
	PM	Overall LOS	C (23.1)											
		Approach LOS	A (9.2)			C (21.8)			D (40.8)					
		Storage	275						125					
		50th Queue	34	60			287	0	79		167			
		95th Queue	113	103			550	46	120		376			
BUILD (SIGNAL)	AM	Overall LOS	B (15.9)											
		Approach LOS	B (10.6)			B (17.2)			C (26.1)					
		Storage	275						125					
		50th Queue	111	78			374	0	80		27			
		95th Queue	289	127			689	48	121		74			
	PM	Overall LOS	C (26.2)											
		Approach LOS	A (9.7)			C (26.0)			D (49.8)					
		Storage	275						125					
		50th Queue	39	87			341	0	79		180			
		95th Queue	118	145			638	46	120		394			

The intersection of Haynes Bridge Road at Mansell Road (Intersection 11) currently operates and is projected to operate at acceptable overall and approach LOS under Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions. No improvements are recommended to be conditioned.

5.12 Mansell Road at North Point Parkway/Resurgens Park Place (Intersection 12)

Overall LOS Standard: E Approach LOS Standard: E			Resurgens Park Place			North Point Parkway			Mansell Road			Mansell Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)*	AM	Overall LOS	D (44.5)											
		Approach LOS	E (74.8)			E (75.5)			C (27.1)			C (27.4)		
		Storage	125			200			675		150	250		150
		50th Queue	31	11		72	69	1	52	87	0	14	144	0
		95th Queue	69	29		130	125	70	71	180	0	41	210	18
	PM	Overall LOS	D (41.0)											
		Approach LOS	E (78.8)			E (56.1)			C (33.7)			C (32.5)		
		Storage	125			200			675		150	250		150
		50th Queue	24	3		162	161	2	71	271	0	23	171	0
		95th Queue	56	13		238	236	29	84	396	8	56	250	0
NO-BUILD (SIGNAL)*	AM	Overall LOS	D (45.1)											
		Approach LOS	E (75.0)			E (76.0)			C (27.2)			C (28.6)		
		Storage	125			200			675		150	250		150
		50th Queue	35	13		78	77	4	52	113	0	15	164	0
		95th Queue	73	30		137	137	104	83	206	0	43	240	30
	PM	Overall LOS	D (43.6)											
		Approach LOS	E (79.4)			E (56.1)			D (38.2)			C (34.5)		
		Storage	125			200			675		150	250		150
		50th Queue	26	4		178	176	34	89	320	0	25	198	0
		95th Queue	60	14		257	255	60	93	446	7	60	276	0
BUILD (SIGNAL)*	AM	Overall LOS	D (46.6)											
		Approach LOS	E (75.0)			E (68.5)			C (34.1)			C (34.4)		
		Storage	125			200			675		150	250		150
		50th Queue	35	13		85	84	161	130	132	0	15	188	5
		95th Queue	73	30		143	142	230	175	206	0	43	253	62
	PM	Overall LOS	D (44.3)											
		Approach LOS	E (79.4)			D (49.1)			D (40.0)			D (46.4)		
		Storage	125			200			675		150	250		150
		50th Queue	26	4		193	196	125	371	264	0	24	217	11
		95th Queue	60	14		278	282	178	507	322	0	58	273	79

**Note: HCM 2000 methodology was used due to non-NEMA phasing.*

The intersection of Mansell Road at North Point Parkway/Resurgens Park Place (Intersection 12) currently operates and is projected to operate at acceptable overall and approach LOS under Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions. No improvements are recommended to be conditioned.

5.13 Mansell Road at SR-400 NB Ramps (Intersection 13)

Overall LOS Standard: E Approach LOS Standard: E			SR-400 NB			SR-400 NB			Mansell Road			Mansell Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)*	AM	Overall LOS	E (63.2)											
		Approach LOS	E (77.4)						D (52.3)			E (56.4)		
		Storage			275				450					
		50th Queue	478	481	23				167	74			394	0
		95th Queue	716	718	69				356	174			596	13
	PM	Overall LOS	D (44.8)											
		Approach LOS	E (62.6)						D (44.4)			C (26.1)		
		Storage			275				450					
		50th Queue	311	314	23				297	355			220	4
		95th Queue	409	412	71				431	498			294	12
NO-BUILD (SIGNAL)*	AM	Overall LOS	E (76.3)											
		Approach LOS	F (95.8)						E (61.6)			E (66.6)		
		Storage			275				450					
		50th Queue	581	582	39				252	112			475	1
		95th Queue	828	825	90				441	214			733	16
	PM	Overall LOS	D (47.7)											
		Approach LOS	E (62.4)						D (47.7)			C (31.9)		
		Storage			275				450					
		50th Queue	340	345	77				397	476			275	3
		95th Queue	455	461	138				473	553			336	15
BUILD (SIGNAL)*	AM	Overall LOS	F (84.7)											
		Approach LOS	F (90.7)						E (64.2)			F (98.6)		
		Storage			275				450					
		50th Queue	581	582	57				310	215			684	8
		95th Queue	828	825	122				419	301			928	28
	PM	Overall LOS	E (64.1)											
		Approach LOS	F (93.3)						D (45.8)			E (58.2)		
		Storage			275				450					
		50th Queue	328	333	543				349	697			679	40
		95th Queue	455	461	696				375	717			805	103

**Note: HCM 2000 methodology was used due to non-NEMA phasing.*

Under the Projected 2036 No-Build conditions, the intersection of Mansell Road at SR-400 NB Ramps (Intersection 13) is projected to operate at an unacceptable approach LOS during the AM peak hour. Under the Projected 2036 Build conditions, the intersection of Mansell Road at SR-400 NB Ramps (Intersection 13) is projected to operate at unacceptable overall and approach LOS standards during the AM peak hour and at an unacceptable approach LOS during the PM peak hour.

In order to improve the overall and approach LOS under all studied scenarios, Kimley-Horn recommends the following system improvement (shown in red on **Figure 8** and **Figure 9**):

- Reallocate green time for the northbound approach.

The analysis results for the improved conditions at Intersection 13 are shown in the table below.

Overall LOS Standard: E Approach LOS Standard: E			SR-400 NB			SR-400 NB			Mansell Road			Mansell Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
NO-BUILD IMPROVED (SIGNAL)	AM	Overall LOS	E (64.5)											
		Approach LOS	E (69.9)						E (58.0)			E (64.3)		
		Storage			275				450					
		50th Queue	518	518	30				345	152			480	1
		95th Queue	755	752	77				482	200			604	18
	PM	Overall LOS	D (47.7)											
		Approach LOS	E (62.4)						D (47.7)			C (31.9)		
		Storage			275				450					
		50th Queue	340	345	77				397	476			275	4
		95th Queue	455	461	138				473	556			336	15
BUILD IMPROVED (SIGNAL)	AM	Overall LOS	E (69.9)											
		Approach LOS	E (75.6)						E (62.2)			E (70.8)		
		Storage			275				450					
		50th Queue	533	533	51				371	218			672	8
		95th Queue	792	789	112				509	272			784	28
	PM	Overall LOS	E (60.3)											
		Approach LOS	E (79.2)						D (43.9)			E (63.3)		
		Storage			275				450					
		50th Queue	323	327	519				350	697			688	40
		95th Queue	447	452	673				375	718			805	103

5.14 Mansell Road at SR-400 SB Ramps (Intersection 14)

Overall LOS Standard: E Approach LOS Standard: E			SR-400 SB			SR-400 SB			Mansell Road			Mansell Road		
			Northbound			Southbound			Eastbound			Westbound		
			L	T	R	L	T	R	L	T	R	L	T	R
EXISTING (SIGNAL)	AM	Overall LOS	B (14.3)											
		Approach LOS				E (76.4)			B (10.0)			B (11.9)		
		Storage									300	150		
		50th Queue				14	10	8		188	0	135	0	
		95th Queue				42	74	71		289	41	154	0	
	PM	Overall LOS	D (38.0)											
		Approach LOS				E (74.0)			C (31.8)			C (25.8)		
		Storage									300	150		
		50th Queue				70	284	280		521	76	139	22	
		95th Queue				115	408	400		721	243	172	72	
NO-BUILD (SIGNAL)	AM	Overall LOS	B (14.8)											
		Approach LOS				E (76.0)			B (11.7)			B (11.5)		
		Storage									300	150		
		50th Queue				14	39	29		241	9	148	0	
		95th Queue				41	106	95		364	60	143	1	
	PM	Overall LOS	D (44.2)											
		Approach LOS				E (77.4)			D (42.2)			C (27.6)		
		Storage									300	150		
		50th Queue				73	349	343		705	173	140	91	
		95th Queue				126	553	536		846	359	195	168	
BUILD (SIGNAL)	AM	Overall LOS	B (17.7)											
		Approach LOS				E (74.7)			B (15.0)			B (13.2)		
		Storage									300	150		
		50th Queue				71	50	30		323	31	197	0	
		95th Queue				127	118	98		467	118	161	1	
	PM	Overall LOS	D (51.5)											
		Approach LOS				E (77.4)			D (55.0)			C (31.4)		
		Storage									300	150		
		50th Queue				282	390	373		907	249	228	22	
		95th Queue				396	619	584		1,091	438	281	164	

The intersection of Mansell Road at SR-400 SB Ramps (Intersection 14) currently operates and is projected to operate at acceptable overall and approach LOS standards under Existing 2026 conditions, Projected 2036 No-Build conditions, and Projected 2036 Build conditions. No improvements are recommended to be conditioned.

LEGEND

- Existing Laneage
- XX — AM Peak Hour Traffic Volumes
- (XX) — PM Peak Hour Traffic Volumes
- Existing Traffic Signal
- Existing STOP Control
- (X) — Intersection Reference Number

N
NOT TO SCALE

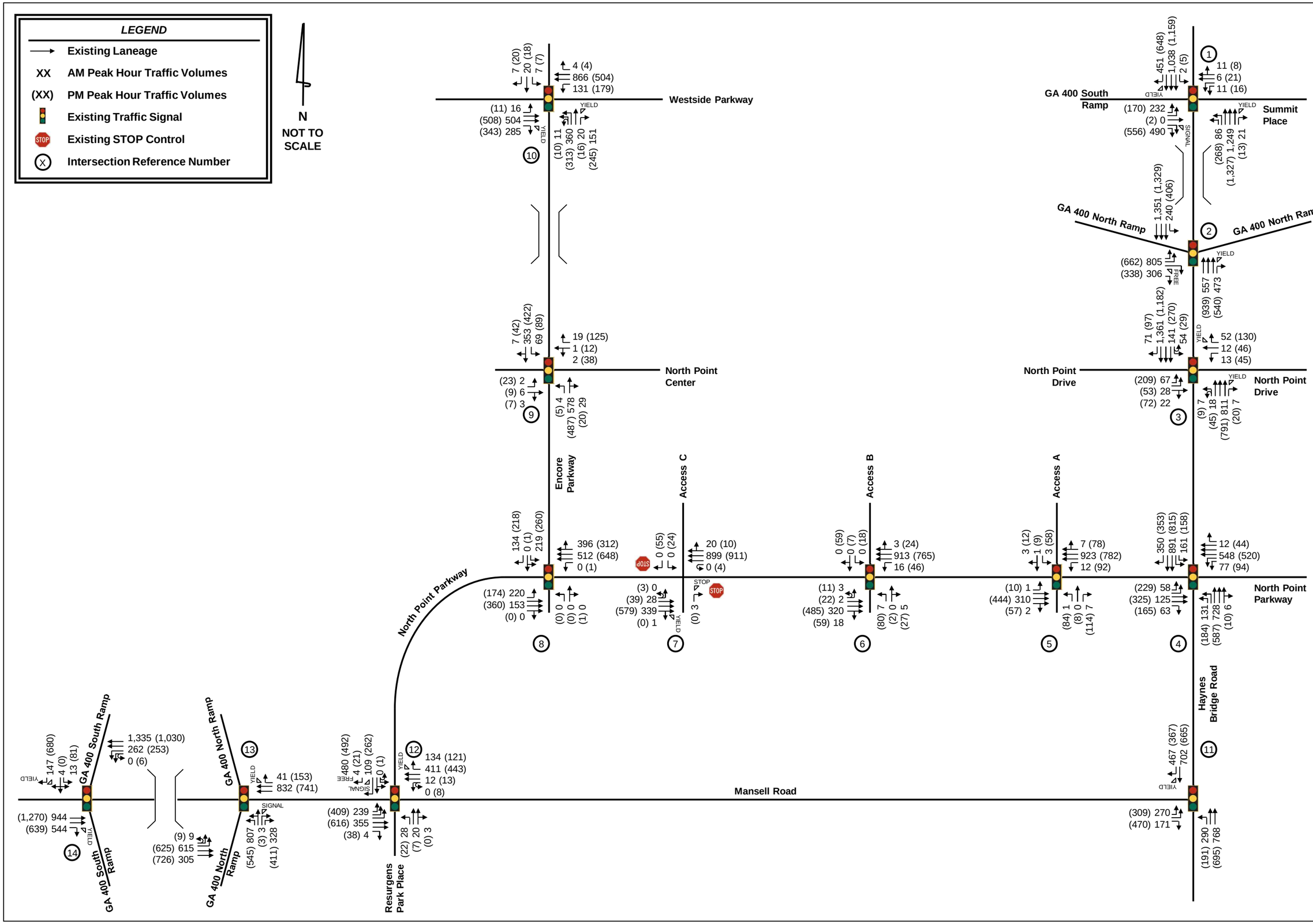


Figure 7

Existing 2026 Conditions

North Point Mixed-Use District
DRI #4670
Transportation Analysis

Kimley»Horn

LEGEND

- Existing Laneage
- No-Build Improvement Laneage
- XX — AM Peak Hour Traffic Volumes
- (XX) — PM Peak Hour Traffic Volumes
- Existing Traffic Signal
- Existing STOP Control
- (X) — Intersection Reference Number

N
NOT TO SCALE

- For the AM peak hour, reallocate green time for the southbound approach.
- For the PM peak hour, install an overlap phase for the southbound right-turn movement and reallocate green time for the southbound through movement.

For the PM peak hour, reallocate green time for the eastbound and westbound approaches.

For the PM peak hour, install permissive and overlap phasing and overlap phasing for the southbound right-turn movement concurrent with the eastbound left-turn and the southbound left-turn and through movements.

Add an additional double-served eastbound and westbound left-turn phase to the signal during the PM peak hour.

For the PM peak hour, reallocate green time for the northbound and southbound approaches.

For the PM peak hour, lag the eastbound left-turn phase.

For the PM peak hour, reallocate green time for the eastbound and westbound approaches.

Figure 8

Projected 2036
No-Build Conditions

North Point Mixed-Use District
DRI #4670
Transportation Analysis

Kimley»Horn

LEGEND

- Existing Laneage
- No-Build Improvement Laneage
- Build Laneage
- XX — AM Peak Hour Traffic Volumes
- (XX) — PM Peak Hour Traffic Volumes
- Existing Traffic Signal
- Existing STOP Control
- (X) — Intersection Reference Number

N
NOT TO SCALE

Westside Parkway
GA 400 South Ramp
Summit Place
GA 400 North Ramp
North Point Center
North Point Drive
Project Site Area
Encore Parkway
Access C
Access B
Access A
North Point Parkway
Haynes Bridge Road
Mansell Road
GA 400 South Ramp
GA 400 North Ramp

- For the AM peak hour, reallocate green time for the southbound approach.
- For the PM peak hour, install an overlap phase for the southbound right-turn movement and reallocate green time for the southbound through movement.

For the PM peak hour, reallocate green time for the eastbound and westbound approaches.

For the PM peak hour, reallocate green time for the eastbound approach.

For the AM peak hour, reallocate green time for the eastbound approach.

Add an additional double-served eastbound and westbound left-turn phase to the signal during the PM peak hour.

For the PM peak hour, reallocate green time for the southbound approach.

For the PM peak hour, reallocate green time for the northbound and southbound approaches.

Consider extending the eastbound left-turn storage length.

- For the PM peak hour, provide protected-permissive phasing for the eastbound left-turn movement following field verification of adequate sight distance.
- For the PM peak hour, reallocate green time for the eastbound left-turn and northbound through movements.

For the PM peak hour, reallocate green time for the eastbound and westbound approaches.

Reallocate green time for the northbound approach.

Figure 9

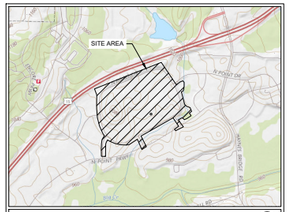
Projected 2036 Build Conditions

North Point Mixed-Use District
DRI #4670
Transportation Analysis

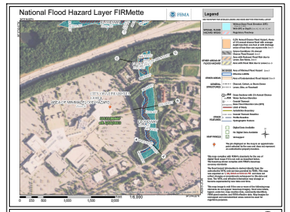
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APPENDIX A

Proposed Site Plan



VICINITY MAP
N.T.S.



FEMA MAP
WITHIN ZONE AE PER FIRM PANEL 13121C0066F, 09/18/2013

PARKING SUMMARY

REQUIRED PARKING:	**17,700 SPACES** (TOTAL)
PROPOSED RESTAURANT	720 SPACES (0.8 SPACES/100 SF)
PROPOSED RETAIL	426 SPACES (0.8 SPACES/250 SF)
RETAIL ANCHOR	576 SPACES (0.8 SPACES/250 SF)
DILLARD'S	519 SPACES (0.8 SPACES/250 SF)
OFFICE	2,400 SPACES (3.2 SPACES/ 1000 SF)
MULTIFAMILY	2,272 SPACES (1.64 SPACES/UNIT)
SELECT SERVICE HOTEL	127 SPACES (0.84 SPACES/KEY)
HYBRID HOTEL	252 SPACES (0.84 SPACES/KEY)
FULL SERVICE HOTEL	336 SPACES (0.84 SPACES/KEY)
HOTEL CONFERENCE CENTER	76 SPACES (0.84 SPACES/500 SF)
CINEMA	320 SPACES (1.12 SPACES/4 SEATS)
MUSIC HALL (SEATED)	1,120 SPACES (1.12 SPACES/4 SEATS)
COMMUNITY ICE SHEETS	560 SPACES (1.12 SPACES/4 SEATS)
HOCKEY ARENA	8,000 SPACES (0.8 SPACES/2 SEATS)
PROPOSED PARKING:	**8,752 SPACES** (TOTAL)
A1 PARKING DECK	610 SPACES
B4 PARKING DECK	846 SPACES
C2 PARKING DECK	725 SPACES
C4 PARKING DECK	636 SPACES
E1 PARKING DECK	1,763 SPACES
E4 SURFACE LOT	141 SPACES
E5 SURFACE LOT	284 SPACES
G4 PARKING DECK	430 SPACES
H SURFACE LOT	73 SPACES
J PARKING DECK	542 SPACES
P PARKING DECK	2,626 SPACES
STREET	75 SPACES

BUILDING HEIGHTS

MAXIMUM ALLOWABLE	
COMMERCIAL	4 STORIES OR 60'
OFFICE	4 STORIES OR 60'
HOTEL	4 STORIES OR 60'
MULTIFAMILY	4 STORIES OR 60'
PROPOSED MAXIMUM	
COMMERCIAL	4 STORIES OR 60'
OFFICE	15 STORIES OR 250'
HOTEL	21 STORIES OR 300'
MULTIFAMILY	21 STORIES OR 280'

CONTACTS

APPLICANT	NYL REAL ESTATE INVESTORS 51 MADISON AVENUE NEW YORK, NY 10010 CONTACT: ALAN RUBENSTEIN PHONE: (212) 576-4486
TRAFFIC CONSULTANT	KIMLEY-HORN AND ASSOCIATES, INC. 11720 AMBER PARK DRIVE, SUITE 600 ALPHARETTA, GEORGIA 30009 CONTACT: JOHN WALKER, PE, PTOE PHONE: (404) 201-6155
CIVIL ENGINEER	KIMLEY-HORN AND ASSOCIATES, INC. 11720 AMBER PARK DRIVE, SUITE 600 ALPHARETTA, GEORGIA 30009 CONTACT: TYLER ROSSER, PE PHONE: (470) 299-7057

SITE DEVELOPMENT SUMMARY

CURRENT ZONING	PSC/MU
OVERLAY DISTRICT	NORTH POINT OVERLAY
SITE AREA:	
TOTAL SITE AREA	98.58 ACRES
MALL PROPER	83.67 ACRES
DILLARDS	6.67 ACRES
VON MAUR	8.24 ACRES
SETBACKS & BUFFERS:	
BUILDING SETBACKS	NONE
LANDSCAPE SETBACKS	NONE
UNDISTURBED BUFFERS	120' GA 400 BUFFER

LAND USES AND DENSITIES

EXISTING	
MALL INTERIOR AREA	1,461,466 SF
RESTAURANT (Cheesecake Factory)	12,600 SF
CINEMA (AMC)	1,139 SEATS
PROPOSED MAXIMUMS	
PROPOSED RESTAURANT	90,000 SF
PROPOSED RETAIL	133,000 SF
RETAIL ANCHOR	180,000 SF
DILLARD'S	162,000 SF
OFFICE	750,000 SF
MULTIFAMILY	1,385 UNITS (14.05 DUA)
SELECT SERVICE HOTEL	150 KEYS
HYBRID HOTEL	300 KEYS
FULL SERVICE HOTEL	400 KEYS
HOTEL CONFERENCE CENTER	45,000 SF
CINEMA	1,139 SEATS
MUSIC HALL (SEATED)	4,000 SEATS
COMMUNITY ICE SHEETS (SEATED)	2,000 SEATS
HOCKEY ARENA	20,000 SEATS

SITE PLAN NOTE

THE BUILDING FOOTPRINTS, DRIVEWAY LOCATIONS, OPEN SPACE LOCATIONS, SIDEWALK DESIGNS AND LOCATIONS, AND PARKING LOCATIONS ON THIS SITE PLAN ARE FOR ILLUSTRATIVE PURPOSES. THEIR SHAPES, LOCATIONS, AND AMOUNTS MAY VARY AS ALLOWED FOR BY THE SITE DATA TABLE, MU REGULATIONS, AND THE NORTH POINT OVERLAY.

VARIANCES

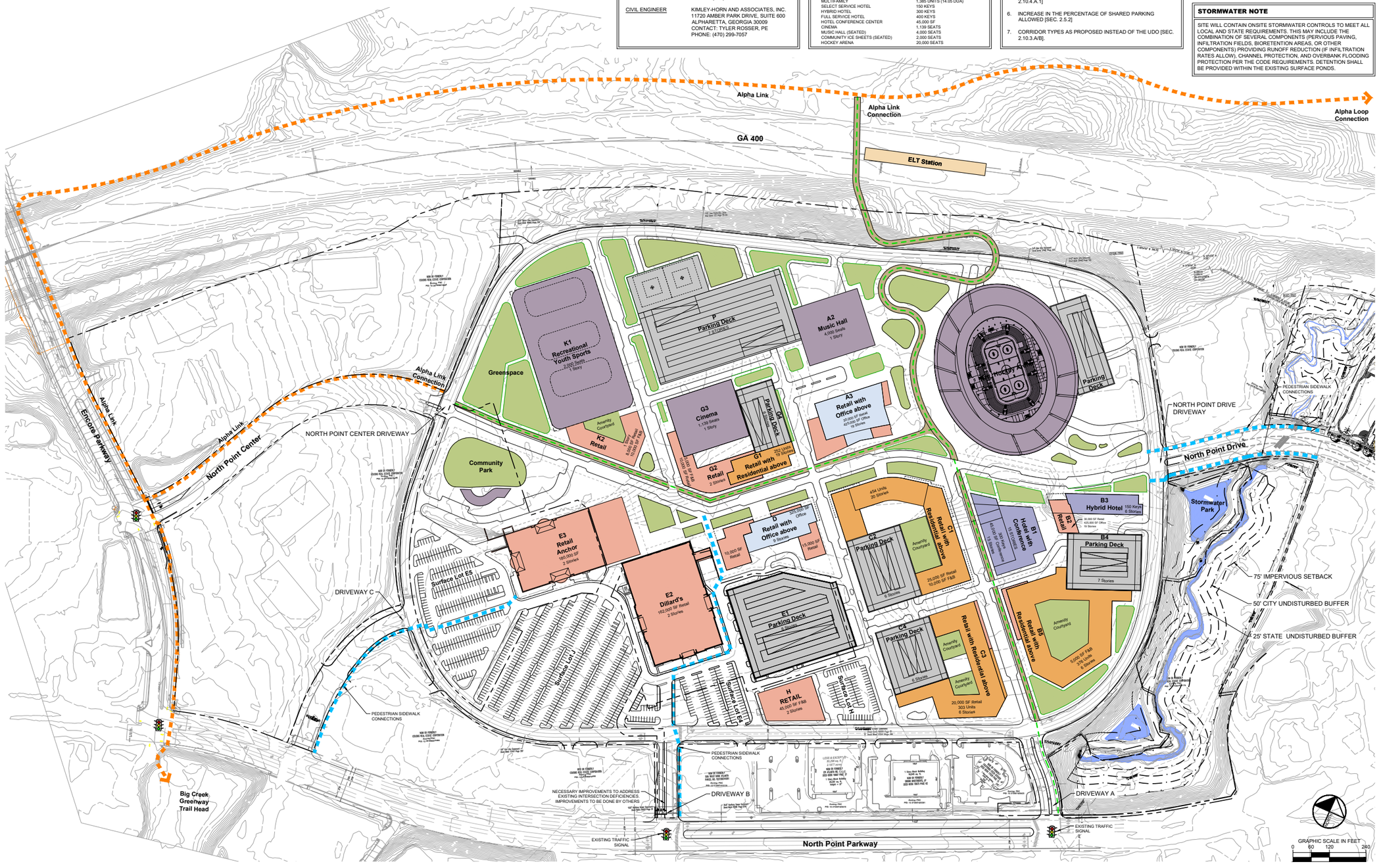
1. CONDITIONAL USE TO INCREASE MAXIMUM BUILDING HEIGHT [SEC 2.10.3(D)]
2. ENCROACHMENT INTO THE GA 400 120' BUFFER FOR THE MARTA ELT R/W ACQUISITION AND THE MULTI-USE TRAIL.
3. CONDITIONAL USE TO INCREASE MULTIFAMILY RESIDENTIAL DENSITY [SEC 2.10.2(B)(3)(C)]
4. REDUCTION IN THE MINIMUM PERCENTAGE OF MU LAND USE FOR THE OFFICE COMPONENT TO BE LESS THAN 25%, [SEC. 2.2.20(B)(4)]
5. BLOCK PERIMETER INCREASE TO EXCEED 1,600 LF [SEC. 2.10.4.A.1]
6. INCREASE IN THE PERCENTAGE OF SHARED PARKING ALLOWED [SEC. 2.5.2]
7. CORRIDOR TYPES AS PROPOSED INSTEAD OF THE UDO [SEC. 2.10.3.A/B].

SITE LEGEND

- PROPERTY LINE/ RIGHT-OF-WAY
- RETAIL
- MULTIFAMILY (FOR LEASE)
- OFFICE
- HOTEL
- SPORTS AND ENTERTAINMENT
- PARKING GARAGE
- RECREATIONAL

STORMWATER NOTE

SITE WILL CONTAIN ONSITE STORMWATER CONTROLS TO MEET ALL LOCAL AND STATE REQUIREMENTS. THIS MAY INCLUDE THE COMBINATION OF SEVERAL COMPONENTS (PERVIOUS PAVING, INFILTRATION FIELDS, BIORETENTION AREAS, OR OTHER COMPONENTS) PROVIDING RUNOFF REDUCTION (IF INFILTRATION RATES ALLOW), CHANNEL PROTECTION, AND OVERBANK FLOODING PROTECTION PER THE CODE REQUIREMENTS. DETENTION SHALL BE PROVIDED WITHIN THE EXISTING SURFACE PONDS.



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No.	REVISION DESCRIPTIONS	DATE	BY

PROJECT
NORTH POINT
MIXED-USE DISTRICT
DRI # 4670

GEORGIA
TYLER ROSSER
ONLINE
6/12/26

GSWCC CERT. (LEVEL II)	0000072899
DRAWN BY	CMC
DESIGNED BY	JTR
REVIEWED BY	JTR
DATE	06.23.2026
PROJECT NO.	017954000

TITLE
DRI SITE PLAN

SHEET NUMBER
C0.30

Drawing name: C:\ACCDOCS\Dock\Kimley-Horn\118685001 - North Point MUD\Project Files\CAD\00 Overall Plansheet\C0.30 - DRI SITE PLAN.dwg Jun 24, 2026 2:10pm by Alex.Gallegos

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APPENDIX B

Trip Generation Analysis

Trip Generation Analysis (12th Ed. with *2nd Edition Handbook* Daily IC & *3rd Edition* AM/PM IC)
North Point Mixed Use District DRI #4670
City of Alpharetta, GA

Land Use		Intensity		Daily Trips	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
Proposed Site Traffic										
220	Multi-Family Housing (Low-Rise)	1,385	d.u.	7,918	498	120	378	672	417	255
310	Hotel	850	rooms	4,964	289	150	139	400	204	196
445	Multiplex Movie Theatre	1,139	seats	456	N/A	N/A	N/A	91	34	57
445	*Multiplex Movie Theatre (exising to remain)*	*-1,139*	*seats*	*-456*	*N/A*	*N/A*	*N/A*	*-91*	*-34*	*-57*
465	Ice Skating Rink	2,000	seats	2,520	20	7	13	140	84	56
710	General Office Building	750,000	s.f.	4,842	860	757	103	774	124	650
820	Shopping Center	313,000	s.f. gross leasable area	11,390	324	201	123	1,122	539	583
820	*Shopping Center (existing occupied to be demolished)*	*-270,000*	*s.f. gross leasable area*	*-9,826*	*-298*	*-185*	*-113*	*-1,017*	*-488*	*-529*
875	Department Store	162,000	s.f.	6,250	94	60	34	316	158	158
875	*Department Store (existing to remain)*	*-162,000*	*s.f. gross leasable area*	*-6,250*	*-94*	*-60*	*-34*	*-316*	*-158*	*-158*
932	High-Turnover (Sit-Down) Restaurant	90,000	s.f.	9,338	807	444	363	826	504	322
932	*High-Turnover (Sit-Down) Restaurant (existing to remain)*	*-12,600*	*s.f.*	*-1,306*	*-113*	*-62*	*-51*	*-116*	*-71*	*-45*
	Music Hall	4,000	seats	5,440	0	0	0	390	383	7
	Arena	20,000	seats	27,200	0	0	0	1,951	1,916	36
Gross Trips (new development)				**80,318**	**2,892**	**1,739**	**1,153**	**6,683**	**4,363**	**2,320**
Gross Trips (reduced by existing-to-remain density)				**62,480**	**2,387**	**1,432**	**955**	**5,143**	**3,612**	**1,531**
Residential Trips				7,918	498	120	378	672	417	255
	Mixed-Use Reductions			*-620*	*-56*	*-8*	*-48*	*-168*	*-92*	*-76*
	Internal Capture to Arena			*-60*	*0*	*0*	*0*	*-15*	*-10*	*-5*
	Alternative Mode Reductions			*-580*	*-35*	*-9*	*-26*	*-39*	*-25*	*-14*
	Adjusted Residential Trips			6,658	407	103	304	450	290	160
Hotel Trips				4,964	289	150	139	400	204	196
	Mixed-Use Reductions			*-388*	*-47*	*-4*	*-43*	*-45*	*-29*	*-16*
	Internal Capture to Arena			*-356*	*0*	*0*	*0*	*-89*	*-44*	*-45*
	Alternative Mode Reductions			*-338*	*-19*	*-12*	*-8*	*-21*	*-10*	*-11*
	Adjusted Hotel Trips			3,882	223	134	88	245	121	124
Office Trips				4,842	860	757	103	774	124	650
	Mixed-Use Reductions			*-384*	*-176*	*-106*	*-70*	*-58*	*-20*	*-38*
	Internal Capture to Arena			*-84*	*0*	*0*	*0*	*-21*	*-3*	*-18*
	Alternative Mode Reductions			*-350*	*-55*	*-52*	*-3*	*-56*	*-8*	*-48*
	Adjusted Office Trips			4,024	629	599	30	639	93	546
Retail Trips				5,272	396	219	177	448	266	182
	Mixed-Use Reductions			*-712*	*-114*	*-59*	*-55*	*-246*	*-126*	*-120*
	Internal Capture to Arena			*-648*	*0*	*0*	*0*	*-162*	*-112*	*-50*
	Alternative Mode Reductions			*-312*	*-22*	*-13*	*-10*	*-3*	*-2*	*-1*
	Pass By Reductions (Based on ITE Rates)			*-1,224*	*0*	*0*	*0*	*-14*	*-7*	*-7*
	Adjusted Retail Trips			2,376	260	147	112	23	19	4
Restaurant Trips				4,322	324	180	146	368	218	150
	Mixed-Use Reductions			*-584*	*-183*	*-111*	*-72*	*-223*	*-106*	*-117*
	Internal Capture to Arena			*-464*	*0*	*0*	*0*	*-116*	*-90*	*-26*
	Alternative Mode Reductions			*-262*	*-11*	*-6*	*-6*	*-2*	*-2*	*-1*
	Pass By Reductions (Based on ITE Rates)			*-1,296*	*0*	*0*	*0*	*-12*	*-6*	*-6*
	Adjusted Restaurant Trips			1,716	130	63	68	16	14	0
Other Non-Residential and Music Hall Trips				7,960	20	7	13	530	467	63
	Mixed-Use Reductions			*-176*	*0*	*0*	*0*	*-44*	*-19*	*-25*
	Alternative Mode Reductions			*-636*	*-2*	*-1*	*-1*	*-39*	*-36*	*-3*
	Adjusted Other Non-Residential Trips			7,148	18	6	12	447	412	35
Arena Trips				27,200	0	0	0	1,951	1,916	36
	Mixed-Use Reductions			*-576*	*0*	*0*	*0*	*-144*	*-144*	*0*
	Alternative Mode Reductions			*-2,130*	*0*	*0*	*0*	*-139*	*-142*	*3*
	Adjusted Other Non-Residential Trips			24,494	0	0	0	1,668	1,630	39
Mixed-Use Reductions - TOTAL				*-3,440*	*-576*	*-288*	*-288*	*-928*	*-536*	*-392*
Internal Capture to Arena				*-1,612*	*0*	*0*	*0*	*-403*	*-259*	*-144*
Alternative Mode Reductions - TOTAL				*-4,608*	*-144*	*-93*	*-54*	*-299*	*-225*	*-75*
Pass-By Reductions - TOTAL				*-2,520*	*0*	*0*	*0*	*-26*	*-13*	*-13*
Existing Development Trips										
New Trips				**50,298**	**1,667**	**1,052**	**614**	**3,489**	**2,579**	**908**
Driveway Volumes				**52,818**	**1,667**	**1,052**	**614**	**3,515**	**2,592**	**921**

\\kimley-horn.com\so_alp\amt_tpto\118655001_north point mall\dri_phase ii\analysis\[north point mixed use district dri-cqi_analysis-12thedition_ic-2ndeddaily_3rdedam-pm_phase2-bns.xls]trip generation *6/23/2026 8:49*

APPENDIX C

Intersection Volume Worksheets

INTERSECTION VOLUME DEVELOPMENT

Intersection #1: Haynes Bridge Road @ GA 400 SB Ramp / Summit Place

AM PEAK HOUR

	Haynes Bridge Road Northbound				Haynes Bridge Road Southbound				GA 400 SB Ramp Eastbound				Summit Place Westbound			
Description	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	86	1,249	21	0	2	1,038	451	0	232	0	490	0	11	6	11
Pedestrians		0				0				1				0		
Conflicting Pedestrians		1		0		0		1		0		0		0		0
Heavy Vehicles	0	0	28	0	0	0	23	14	0	6	0	6	0	0	0	0
Heavy Vehicle %	0%	2%	2%	2%	0%	2%	2%	3%	0%	3%	0%	2%	0%	2%	2%	2%
Peak Hour Factor		0.95				0.95				0.95				0.95		
Adjustment																
Adjusted 2026 Volumes	0	86	1249	21	0	2	1038	451	0	232	0	490	0	11	6	11
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	95	1,380	23	0	2	1,147	498	0	256	0	541	0	12	7	12
Project Trips																
Trip Distribution IN							10%					10%				
Trip Distribution OUT		25%	10%													
Residential Trips	0	76	30	0	0	0	10	0	0	0	0	10	0	0	0	0
Trip Distribution IN							10%					10%				
Trip Distribution OUT		25%	10%													
Hotel Trips	0	22	9	0	0	0	13	0	0	0	0	13	0	0	0	0
Trip Distribution IN							10%					10%				
Trip Distribution OUT		10%	10%													
Office Trips	0	3	3	0	0	0	60	0	0	0	0	60	0	0	0	0
Trip Distribution IN							10%					10%				
Trip Distribution OUT		10%	10%													
Retail Trips	0	11	11	0	0	0	15	0	0	0	0	15	0	0	0	0
Trip Distribution IN							10%					10%				
Trip Distribution OUT		10%	10%													
Restaurant Trips	0	7	7	0	0	0	6	0	0	0	0	6	0	0	0	0
Trip Distribution IN							10%					10%				
Trip Distribution OUT		10%	10%													
Other Non-Residential Trips	0	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0
Trip Distribution IN							5%					15%				
Trip Distribution OUT		15%	5%													
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing																
Total Project Trips	0	120	61	0	0	0	105	0	0	0	0	105	0	0	0	0
2036 Buildout Total	0	215	1,441	23	0	2	1,252	498	0	256	0	646	0	12	7	12

PM PEAK HOUR

	Haynes Bridge Road Northbound				Haynes Bridge Road Southbound				GA 400 SB Ramp Eastbound				Summit Place Westbound			
Description	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	268	1,327	13	0	5	1,159	648	0	170	2	556	0	16	21	8
Pedestrians		0				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Heavy Vehicles	0	0	34	0	0	0	17	14	0	6	0	2	0	0	0	0
Heavy Vehicle %	0%	2%	3%	2%	0%	2%	2%	2%	0%	4%	2%	2%	0%	2%	2%	2%
Peak Hour Factor		0.98				0.98				0.98				0.98		
Adjustment																
Adjusted 2026 Volumes	0	268	1327	13	0	5	1159	648	0	170	2	556	0	16	21	8
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	296	1,466	14	0	6	1,280	716	0	188	2	614	0	18	23	9
Project Trips																
Trip Distribution IN							10%					10%				
Trip Distribution OUT		25%	10%													
Residential Trips	0	40	16	0	0	0	29	0	0	0	0	29	0	0	0	0
Trip Distribution IN							10%					10%				
Trip Distribution OUT		25%	10%													
Hotel Trips	0	31	12	0	0	0	12	0	0	0	0	12	0	0	0	0
Trip Distribution IN							10%					10%				
Trip Distribution OUT		10%	10%													
Office Trips	0	55	55	0	0	0	9	0	0	0	0	9	0	0	0	0
Trip Distribution IN							10%					10%				
Trip Distribution OUT		10%	10%													
Retail Trips	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0
Trip Distribution IN							10%					10%				
Trip Distribution OUT		10%	10%													
Restaurant Trips	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
Trip Distribution IN							10%					10%				
Trip Distribution OUT		10%	10%													
Other Non-Residential Trips	0	4	4	0	0	0	41	0	0	0	0	41	0	0	0	0
Trip Distribution IN							5%					15%				
Trip Distribution OUT		15%	5%													
Arena Trips	0	6	2	0	0	0	81	0	0	0	0	244	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing		-1					3									
Total Project Trips	0	135	89	0	0	0	178	0	0	0	0	338	0	0	0	0
2036 Buildout Total	0	431	1,555	14	0	6	1,458	716	0	188	2	952	0	18	23	9

INTERSECTION VOLUME DEVELOPMENT

Intersection #2: Haynes Bridge Road @ GA 400 NB Ramp
AM PEAK HOUR

Description	Haynes Bridge Road Northbound				Haynes Bridge Road Southbound				GA 400 NB Ramp Eastbound				GA 400 NB Ramp Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	0	557	473	0	240	1,351	0	0	805	0	306				
Pedestrians		0				0				0				1		
Conflicting Pedestrians		0		1		1		0		0		0		0		0
Heavy Vehicles	0	0	22	6	0	17	26	0	0	25	0	1				
Heavy Vehicle %	0%	0%	4%	2%	0%	7%	2%	0%	0%	3%	0%	2%	0%	0%	0%	0%
Peak Hour Factor		0.98				0.98				0.98				0.98		
Adjustment																
Adjusted 2026 Volumes	0	0	557	473	0	240	1351	0	0	805	0	306	0	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	0	615	522	0	265	1,492	0	0	889	0	338	0	0	0	0
Project Trips																
Trip Distribution IN							20%					25%				
Trip Distribution OUT			35%	10%												
Residential Trips	0	0	106	30	0	0	21	0	0	0	0	26	0	0	0	0
Trip Distribution IN							20%					25%				
Trip Distribution OUT			35%	10%												
Hotel Trips	0	0	31	9	0	0	27	0	0	0	0	34	0	0	0	0
Trip Distribution IN							20%					10%				
Trip Distribution OUT			20%	10%												
Office Trips	0	0	6	3	0	0	120	0	0	0	0	60	0	0	0	0
Trip Distribution IN							20%					10%				
Trip Distribution OUT			20%	10%												
Retail Trips	0	0	22	11	0	0	29	0	0	0	0	15	0	0	0	0
Trip Distribution IN							20%					10%				
Trip Distribution OUT			20%	10%												
Restaurant Trips	0	0	14	7	0	0	13	0	0	0	0	6	0	0	0	0
Trip Distribution IN							20%					10%				
Trip Distribution OUT			20%	10%												
Other Non-Residential Trips	0	0	2	1	0	0	1	0	0	0	0	1	0	0	0	0
Trip Distribution IN							20%					20%				
Trip Distribution OUT			20%	15%												
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing							-1					-1				
Total Project Trips	0	0	181	61	0	0	210	0	0	0	0	141	0	0	0	0
2036 Buildout Total	0	0	796	583	0	265	1,702	0	0	889	0	479	0	0	0	0

PM PEAK HOUR

Description	Haynes Bridge Road Northbound				Haynes Bridge Road Southbound				GA 400 NB Ramp Eastbound				GA 400 NB Ramp Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	0	939	540	0	406	1,329	0	0	662	0	338				
Pedestrians		0				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Heavy Vehicles	0	0	22	2	0	11	8	0	0	13	0	0				
Heavy Vehicle %	0%	0%	2%	2%	0%	3%	2%	0%	0%	2%	0%	2%	0%	0%	0%	0%
Peak Hour Factor		0.97				0.97				0.97				0.97		
Adjustment																
Adjusted 2026 Volumes	0	0	939	540	0	406	1329	0	0	662	0	338	0	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	0	1,037	596	0	448	1,468	0	0	731	0	373	0	0	0	0
Project Trips																
Trip Distribution IN							20%					25%				
Trip Distribution OUT			35%	10%												
Residential Trips	0	0	56	16	0	0	58	0	0	0	0	73	0	0	0	0
Trip Distribution IN							20%					25%				
Trip Distribution OUT			35%	10%												
Hotel Trips	0	0	43	12	0	0	24	0	0	0	0	30	0	0	0	0
Trip Distribution IN							20%					10%				
Trip Distribution OUT			20%	10%												
Office Trips	0	0	109	55	0	0	19	0	0	0	0	9	0	0	0	0
Trip Distribution IN							20%					10%				
Trip Distribution OUT			20%	10%												
Retail Trips	0	0	1	0	0	0	4	0	0	0	0	2	0	0	0	0
Trip Distribution IN							20%					10%				
Trip Distribution OUT			20%	10%												
Restaurant Trips	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0
Trip Distribution IN							20%					10%				
Trip Distribution OUT			20%	10%												
Other Non-Residential Trips	0	0	7	4	0	0	82	0	0	0	0	41	0	0	0	0
Trip Distribution IN							20%					20%				
Trip Distribution OUT			20%	15%												
Arena Trips	0	0	8	6	0	0	326	0	0	0	0	326	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing																
Total Project Trips	0	0	224	93	0	0	516	0	0	0	0	482	0	0	0	0
2036 Buildout Total	0	0	1,261	689	0	448	1,984	0	0	731	0	855	0	0	0	0

INTERSECTION VOLUME DEVELOPMENT

Intersection #3: Haynes Bridge Road @ North Point Drive

AM PEAK HOUR

Description	Haynes Bridge Road Northbound U-Turn	Left	Through	Right	Haynes Bridge Road Southbound U-Turn	Left	Through	Right	North Point Drive Eastbound U-Turn	Left	Through	Right	North Point Drive Westbound U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	7	18	811	7	54	141	1,361	71	0	67	28	22	0	13	12	52
Pedestrians		1				0				0				1		
Conflicting Pedestrians		0		1		1		0		0		1		1		0
Heavy Vehicles	0	0	27	0	0	1	23	0	0	0	0	0	0	0	0	0
Heavy Vehicle %	2%	2%	3%	2%	2%	2%	2%	2%	0%	2%	2%	2%	0%	2%	2%	2%
Peak Hour Factor		0.96				0.96				0.96				0.96		
Adjustment																
Adjusted 2026 Volumes	7	18	811	7	54	141	1361	71	0	67	28	22	0	13	12	52
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	8	20	896	8	60	156	1,503	78	0	74	31	24	0	14	13	57
Project Trips																
Trip Distribution IN							10%	35%							5%	
Trip Distribution OUT			10%							35%	5%					
Residential Trips	0	0	30	0	0	0	10	36	0	106	15	0	0	0	5	0
Trip Distribution IN							10%	35%							5%	
Trip Distribution OUT			10%							35%	5%					
Hotel Trips	0	0	9	0	0	0	13	47	0	31	4	0	0	0	7	0
Trip Distribution IN		5%					5%	25%							5%	
Trip Distribution OUT			5%							25%	5%	5%				
Office Trips	0	30	2	0	0	0	30	150	0	8	2	2	0	0	30	0
Trip Distribution IN		5%					5%	25%							5%	
Trip Distribution OUT			5%							25%	5%	5%				
Retail Trips	0	7	6	0	0	0	7	37	0	28	6	6	0	0	7	0
Trip Distribution IN		5%					5%	25%							5%	
Trip Distribution OUT			5%							25%	5%	5%				
Restaurant Trips	0	3	3	0	0	0	3	16	0	17	3	3	0	0	3	0
Trip Distribution IN		5%					5%	25%							5%	
Trip Distribution OUT			5%							25%	5%	5%				
Other Non-Residential Trips	0	0	1	0	0	0	0	2	0	3	1	1	0	0	0	0
Trip Distribution IN		5%					15%	25%								
Trip Distribution OUT			20%							15%		5%				
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing										-2						
Total Project Trips	0	40	51	0	0	0	63	288	0	191	31	12	0	0	52	0
2036 Buildout Total	8	60	947	8	60	156	1,566	366	0	265	62	36	0	14	65	57

PM PEAK HOUR

Description	Haynes Bridge Road Northbound U-Turn	Left	Through	Right	Haynes Bridge Road Southbound U-Turn	Left	Through	Right	North Point Drive Eastbound U-Turn	Left	Through	Right	North Point Drive Westbound U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	9	45	791	20	29	270	1,182	97	0	209	53	72	0	45	46	130
Pedestrians		3				0				0				1		
Conflicting Pedestrians		0		1		1		0		0		3		3		0
Heavy Vehicles	0	1	22	0	0	0	8	1	0	0	0	0	0	0	0	1
Heavy Vehicle %	2%	2%	3%	2%	2%	2%	2%	2%	0%	2%	2%	2%	0%	2%	2%	2%
Peak Hour Factor		0.98				0.98				0.98				0.98		
Adjustment																
Adjusted 2026 Volumes	9	45	791	20	29	270	1182	97	0	209	53	72	0	45	46	130
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	10	50	874	22	32	298	1,306	107	0	231	59	80	0	50	51	144
Project Trips																
Trip Distribution IN							10%	35%							5%	
Trip Distribution OUT			10%							35%	5%					
Residential Trips	0	0	16	0	0	0	29	102	0	56	8	0	0	0	15	0
Trip Distribution IN							10%	35%							5%	
Trip Distribution OUT			10%							35%	5%					
Hotel Trips	0	0	12	0	0	0	12	42	0	43	6	0	0	0	6	0
Trip Distribution IN		5%					5%	25%							5%	
Trip Distribution OUT			5%							25%	5%	5%				
Office Trips	0	5	27	0	0	0	5	23	0	137	27	27	0	0	5	0
Trip Distribution IN		5%					5%	25%							5%	
Trip Distribution OUT			5%							25%	5%	5%				
Retail Trips	0	1	0	0	0	0	1	5	0	1	0	0	0	0	1	0
Trip Distribution IN		5%					5%	25%							5%	
Trip Distribution OUT			5%							25%	5%	5%				
Restaurant Trips	0	1	0	0	0	0	1	4	0	0	0	0	0	0	1	0
Trip Distribution IN		5%					5%	25%							5%	
Trip Distribution OUT			5%							25%	5%	5%				
Other Non-Residential Trips	0	21	2	0	0	0	21	103	0	9	2	2	0	0	21	0
Trip Distribution IN		5%					15%	25%								
Trip Distribution OUT			20%							15%		5%				
Arena Trips	0	81	8	0	0	0	244	407	0	6	0	2	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing								-1								
Total Project Trips	0	109	65	0	0	0	313	685	0	252	43	31	0	0	49	0
2036 Buildout Total	10	159	939	22	32	298	1,619	792	0	483	102	111	0	50	100	144

INTERSECTION VOLUME DEVELOPMENT

Intersection #4: Haynes Bridge Road @ North Point Parkway

AM PEAK HOUR

Description	Haynes Bridge Road Northbound U-Turn	Left	Through	Right	Haynes Bridge Road Southbound U-Turn	Left	Through	Right	North Point Parkway Eastbound U-Turn	Left	Through	Right	North Point Parkway Westbound U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	131	728	6	0	161	891	350	0	58	125	63	0	77	548	12
Pedestrians		0				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Heavy Vehicles	0	8	22	0	0	1	17	8	0	3	6	0	0	3	6	0
Heavy Vehicle %	0%	6%	3%	2%	0%	2%	2%	2%	0%	5%	5%	2%	0%	4%	2%	2%
Peak Hour Factor		0.97				0.97				0.97				0.97		
Adjustment																
Adjusted 2026 Volumes	0	131	728	6	0	161	891	350	0	58	125	63	0	77	548	12
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	145	804	7	0	178	984	387	0	64	138	70	0	85	605	13
Project Trips																
Trip Distribution IN		5%						10%							5%	
Trip Distribution OUT										10%	5%	5%				
Residential Trips	0	5	0	0	0	0	0	10	0	30	15	15	0	0	5	0
Trip Distribution IN		5%						10%							5%	
Trip Distribution OUT										10%	5%	5%				
Hotel Trips	0	7	0	0	0	0	0	13	0	9	4	4	0	0	7	0
Trip Distribution IN		5%	5%					5%							5%	
Trip Distribution OUT							5%			5%	5%	5%				
Office Trips	0	30	30	0	0	0	2	30	0	2	2	2	0	0	30	0
Trip Distribution IN		5%	5%					5%							5%	
Trip Distribution OUT							5%			5%	5%	5%				
Retail Trips	0	7	7	0	0	0	6	7	0	6	6	6	0	0	7	0
Trip Distribution IN		5%	5%					5%							5%	
Trip Distribution OUT							5%			5%	5%	5%				
Restaurant Trips	0	3	3	0	0	0	3	3	0	3	3	3	0	0	3	0
Trip Distribution IN		5%	5%					5%							5%	
Trip Distribution OUT							5%			5%	5%	5%				
Other Non-Residential Trips	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0
Trip Distribution IN		5%	5%					15%							5%	
Trip Distribution OUT							5%			20%	5%	5%				
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing		1														
Total Project Trips	0	53	40	0	0	0	12	63	0	51	31	31	0	0	52	0
2036 Buildout Total	0	198	844	7	0	178	996	450	0	115	169	101	0	85	657	13

PM PEAK HOUR

Description	Haynes Bridge Road Northbound U-Turn	Left	Through	Right	Haynes Bridge Road Southbound U-Turn	Left	Through	Right	North Point Parkway Eastbound U-Turn	Left	Through	Right	North Point Parkway Westbound U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	184	587	10	1	158	815	353	1	229	325	165	0	94	520	44
Pedestrians		2				2				0				0		
Conflicting Pedestrians		0		0		0		0		2		2		2		2
Heavy Vehicles	0	4	22	0	0	0	6	1	0	1	1	1	0	1	6	1
Heavy Vehicle %	0%	2%	4%	2%	2%	2%	2%	2%	2%	2%	2%	2%	0%	2%	2%	2%
Peak Hour Factor		0.94				0.94				0.94				0.94		
Adjustment																
Adjusted 2026 Volumes	0	184	587	10	1	158	815	353	1	229	325	165	0	94	520	44
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	203	648	11	1	175	900	390	1	253	359	182	0	104	574	49
Project Trips																
Trip Distribution IN		5%						10%							5%	
Trip Distribution OUT										10%	5%	5%				
Residential Trips	0	15	0	0	0	0	0	29	0	16	8	8	0	0	15	0
Trip Distribution IN		5%						10%							5%	
Trip Distribution OUT										10%	5%	5%				
Hotel Trips	0	6	0	0	0	0	0	12	0	12	6	6	0	0	6	0
Trip Distribution IN		5%	5%					5%							5%	
Trip Distribution OUT							5%			5%	5%	5%				
Office Trips	0	5	5	0	0	0	27	5	0	27	27	27	0	0	5	0
Trip Distribution IN		5%	5%					5%							5%	
Trip Distribution OUT							5%			5%	5%	5%				
Retail Trips	0	1	1	0	0	0	0	1	0	0	0	0	0	0	1	0
Trip Distribution IN		5%	5%					5%							5%	
Trip Distribution OUT							5%			5%	5%	5%				
Restaurant Trips	0	1	1	0	0	0	0	1	0	0	0	0	0	0	1	0
Trip Distribution IN		5%	5%					5%							5%	
Trip Distribution OUT							5%			5%	5%	5%				
Other Non-Residential Trips	0	21	21	0	0	0	2	21	0	2	2	2	0	0	21	0
Trip Distribution IN		5%	5%					15%							5%	
Trip Distribution OUT							5%			20%	5%	5%				
Arena Trips	0	81	81	0	0	0	2	244	0	8	2	2	0	0	81	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing																
Total Project Trips	0	130	109	0	0	0	31	313	0	65	45	45	0	0	130	0
2036 Buildout Total	0	333	757	11	1	175	931	703	1	318	404	227	0	104	704	49

INTERSECTION VOLUME DEVELOPMENT

Intersection #5: North Point Parkway @ Driveway / Mall Access A
AM PEAK HOUR

Description	Driveway Northbound U-Turn	Left	Through	Right	Mall Access A Southbound U-Turn	Left	Through	Right	North Point Parkway Eastbound U-Turn	Left	Through	Right	North Point Parkway Westbound U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	1	0	7	0	3	1	3	0	1	310	2	0	12	923	7
Pedestrians		0				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Heavy Vehicles	0	0	0	0	0	1	0	0	0	0	8	0	0	0	22	0
Heavy Vehicle %	0%	2%	0%	2%	0%	33%	2%	2%	0%	2%	3%	2%	0%	2%	2%	2%
Peak Hour Factor		0.90				0.90				0.90				0.90		
Adjustment																
Adjusted 2026 Volumes	0	1	0	7	0	3	1	3	0	1	310	2	0	12	923	7
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	1	0	8	0	3	1	3	0	1	342	2	0	13	1,020	8
Project Trips																
Trip Distribution IN										20%						20%
Trip Distribution OUT						20%		10%								
Residential Trips	0	0	0	0	0	61	0	30	0	21	0	0	0	0	0	21
Trip Distribution IN										20%						20%
Trip Distribution OUT						20%		10%								
Hotel Trips	0	0	0	0	0	18	0	9	0	27	0	0	0	0	0	27
Trip Distribution IN										5%					10%	5%
Trip Distribution OUT						10%		5%			5%					
Office Trips	0	0	0	0	0	3	0	2	0	30	2	0	0	0	60	30
Trip Distribution IN										5%					10%	5%
Trip Distribution OUT						10%		5%			5%					
Retail Trips	0	0	0	0	0	11	0	6	0	7	6	0	0	0	15	7
Trip Distribution IN										5%					10%	5%
Trip Distribution OUT						10%		5%			5%					
Restaurant Trips	0	0	0	0	0	7	0	3	0	3	3	0	0	0	6	3
Trip Distribution IN										5%					10%	5%
Trip Distribution OUT						10%		5%			5%					
Other Non-Residential Trips	0	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0
Trip Distribution IN										10%					10%	15%
Trip Distribution OUT						20%		5%			10%					
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing															-2	
Total Project Trips	0	0	0	0	0	101	0	51	0	88	12	0	0	0	80	88
2036 Buildout Total	0	1	0	8	0	104	1	54	0	89	354	2	0	13	1,100	96

PM PEAK HOUR

Description	Driveway Northbound U-Turn	Left	Through	Right	Mall Access A Southbound U-Turn	Left	Through	Right	North Point Parkway Eastbound U-Turn	Left	Through	Right	North Point Parkway Westbound U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	84	8	114	0	58	9	12	0	10	444	57	3	92	782	78
Pedestrians		3				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		3		3		0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	2	0	0	0	12	0
Heavy Vehicle %	0%	2%	2%	2%	0%	2%	2%	2%	0%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor		0.90				0.90				0.90				0.90		
Adjustment																
Adjusted 2026 Volumes	0	84	8	114	0	58	9	12	0	10	444	57	3	92	782	78
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	93	9	126	0	64	10	13	0	11	490	63	3	102	864	86
Project Trips																
Trip Distribution IN										20%						20%
Trip Distribution OUT						20%		10%								
Residential Trips	0	0	0	0	0	32	0	16	0	58	0	0	0	0	0	58
Trip Distribution IN										20%						20%
Trip Distribution OUT						20%		10%								
Hotel Trips	0	0	0	0	0	25	0	12	0	24	0	0	0	0	0	24
Trip Distribution IN										5%					10%	5%
Trip Distribution OUT						10%		5%			5%					
Office Trips	0	0	0	0	0	55	0	27	0	5	27	0	0	0	9	5
Trip Distribution IN										5%					10%	5%
Trip Distribution OUT						10%		5%			5%					
Retail Trips	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	1
Trip Distribution IN										5%					10%	5%
Trip Distribution OUT						10%		5%			5%					
Restaurant Trips	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Trip Distribution IN										5%					10%	5%
Trip Distribution OUT						10%		5%			5%					
Other Non-Residential Trips	0	0	0	0	0	4	0	2	0	21	2	0	0	0	41	21
Trip Distribution IN										10%					10%	15%
Trip Distribution OUT						20%		5%			10%					
Arena Trips	0	0	0	0	0	8	0	2	0	163	4	0	0	0	163	244
Pass-By Trips	0	0	0	0	0	0	0	10	0	0	0	0	0	0	-10	10
Project Trips Balancing						-2									3	
Total Project Trips	0	0	0	0	0	122	0	69	0	273	33	0	0	0	209	364
2036 Buildout Total	0	93	9	126	0	186	10	82	0	284	523	63	3	102	1,073	450

INTERSECTION VOLUME DEVELOPMENT

Intersection #6: North Point Parkway @ Driveway / Mall Access B
AM PEAK HOUR

	Driveway				Mall Access B				North Point Parkway				North Point Parkway			
		Northbound				**Southbound**				**Eastbound**				**Westbound**		
Description	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	7	0	5	0	0	0	0	3	2	320	18	0	16	913	3
Pedestrians		0				0				0				1		
Conflicting Pedestrians		0		1		1		0		0		0		0		0
Heavy Vehicles	0	0	0	0	0	0	0	0	1	0	8	0	0	2	19	0
Heavy Vehicle %	0%	2%	0%	2%	0%	0%	0%	0%	33%	2%	3%	2%	0%	13%	2%	2%
Peak Hour Factor		0.90				0.90				0.90				0.90		
Adjustment																
Adjusted 2026 Volumes	0	7	0	5	0	0	0	0	3	2	320	18	0	16	913	3
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	8	0	6	0	0	0	0	3	2	353	20	0	18	1,009	3
Project Trips																
Trip Distribution IN										5%	20%					
Trip Distribution OUT								10%							10%	
Residential Trips	0	0	0	0	0	0	0	30	0	5	21	0	0	0	30	0
Trip Distribution IN										5%	20%					
Trip Distribution OUT								10%							10%	
Hotel Trips	0	0	0	0	0	0	0	9	0	7	27	0	0	0	9	0
Trip Distribution IN										15%	5%				5%	5%
Trip Distribution OUT						5%		10%							5%	
Office Trips	0	0	0	0	0	2	0	3	0	90	30	0	0	0	32	30
Trip Distribution IN										15%	5%				5%	5%
Trip Distribution OUT						5%		10%							5%	
Retail Trips	0	0	0	0	0	6	0	11	0	22	7	0	0	0	13	7
Trip Distribution IN										15%	5%				5%	5%
Trip Distribution OUT						5%		10%							5%	
Restaurant Trips	0	0	0	0	0	3	0	7	0	9	3	0	0	0	6	3
Trip Distribution IN										15%	5%				5%	5%
Trip Distribution OUT						5%		10%							5%	
Other Non-Residential Trips	0	0	0	0	0	1	0	1	0	1	0	0	0	0	1	0
Trip Distribution IN										5%	10%					10%
Trip Distribution OUT						10%		5%							5%	
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing										1						
Total Project Trips	0	0	0	0	0	12	0	61	0	135	88	0	0	0	91	40
2036 Buildout Total	0	8	0	6	0	12	0	61	3	137	441	20	0	18	1,100	43

PM PEAK HOUR

	Driveway				Mall Access B				North Point Parkway				North Point Parkway			
		Northbound				**Southbound**				**Eastbound**				**Westbound**		
Description	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	80	2	27	0	18	7	59	11	22	485	59	0	46	765	24
Pedestrians		0				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	1	0	0	0	12	0
Heavy Vehicle %	0%	2%	2%	2%	0%	2%	2%	2%	2%	2%	2%	2%	0%	2%	2%	2%
Peak Hour Factor		0.92				0.92				0.92				0.92		
Adjustment																
Adjusted 2026 Volumes	0	80	2	27	0	18	7	59	11	22	485	59	0	46	765	24
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	88	2	30	0	20	8	65	12	24	536	65	0	51	845	27
Project Trips																
Trip Distribution IN										5%	20%					
Trip Distribution OUT								10%							10%	
Residential Trips	0	0	0	0	0	0	0	16	0	15	58	0	0	0	16	0
Trip Distribution IN										5%	20%					
Trip Distribution OUT								10%							10%	
Hotel Trips	0	0	0	0	0	0	0	12	0	6	24	0	0	0	12	0
Trip Distribution IN										15%	5%				5%	5%
Trip Distribution OUT						5%		10%							5%	
Office Trips	0	0	0	0	0	27	0	55	0	14	5	0	0	0	32	5
Trip Distribution IN										15%	5%				5%	5%
Trip Distribution OUT						5%		10%							5%	
Retail Trips	0	0	0	0	0	0	0	0	0	3	1	0	0	0	1	1
Trip Distribution IN										15%	5%				5%	5%
Trip Distribution OUT						5%		10%							5%	
Restaurant Trips	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	1
Trip Distribution IN										15%	5%				5%	5%
Trip Distribution OUT						5%		10%							5%	
Other Non-Residential Trips	0	0	0	0	0	2	0	4	0	62	21	0	0	0	23	21
Trip Distribution IN										5%	10%					10%
Trip Distribution OUT						10%		5%							5%	
Arena Trips	0	0	0	0	0	4	0	2	0	81	163	0	0	0	2	163
Pass-By Trips	0	0	0	0	0	0	0	3	0	0	0	0	0	0	-3	3
Project Trips Balancing										-1						
Total Project Trips	0	0	0	0	0	33	0	92	0	182	273	0	0	0	84	194
2036 Buildout Total	0	88	2	30	0	53	8	157	12	206	809	65	0	51	929	221

INTERSECTION VOLUME DEVELOPMENT

Intersection #7: North Point Parkway @ Driveway / Mall Access C

AM PEAK HOUR

	Driveway				Mall Access C				North Point Parkway				North Point Parkway			
		Northbound				**Southbound**				**Eastbound**				**Westbound**		
Description	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	0	0	3	0	0	0	0	0	28	339	1	0	0	899	20
Pedestrians		0				1				0				0		
Conflicting Pedestrians		0		0		0		0		1		0		0		1
Heavy Vehicles	0	0	0	1	0	0	0	0	0	0	7	0	0	0	21	0
Heavy Vehicle %	0%	0%	0%	33%	0%	0%	0%	0%	0%	2%	2%	2%	0%	0%	2%	2%
Peak Hour Factor		0.90				0.90				0.90				0.90		
Adjustment																
Adjusted 2026 Volumes	0	0	0	3	0	0	0	0	0	28	339	1	0	0	899	20
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	0	0	3	0	0	0	0	0	31	374	1	0	0	993	22
Project Trips																
Trip Distribution IN											25%					
Trip Distribution OUT								5%							20%	
Residential Trips	0	0	0	0	0	0	0	15	0	0	26	0	0	0	61	0
Trip Distribution IN											25%					
Trip Distribution OUT								5%							20%	
Hotel Trips	0	0	0	0	0	0	0	4	0	0	34	0	0	0	18	0
Trip Distribution IN										5%	20%					5%
Trip Distribution OUT								10%							15%	
Office Trips	0	0	0	0	0	0	0	3	0	30	120	0	0	0	5	30
Trip Distribution IN										5%	20%					5%
Trip Distribution OUT								10%							15%	
Retail Trips	0	0	0	0	0	0	0	11	0	7	29	0	0	0	17	7
Trip Distribution IN										5%	20%					5%
Trip Distribution OUT								10%							15%	
Restaurant Trips	0	0	0	0	0	0	0	7	0	3	13	0	0	0	10	3
Trip Distribution IN										5%	20%					5%
Trip Distribution OUT								10%							15%	
Other Non-Residential Trips	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0
Trip Distribution IN											15%					
Trip Distribution OUT								5%							10%	
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing																-1
Total Project Trips	0	0	0	0	0	0	0	41	0	40	223	0	0	0	113	39
2036 Buildout Total	0	0	0	3	0	0	0	41	0	71	597	1	0	0	1,106	61

PM PEAK HOUR

	Driveway				Mall Access C				North Point Parkway				North Point Parkway			
		Northbound				**Southbound**				**Eastbound**				**Westbound**		
Description	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	0	0	0	0	24	0	55	3	39	579	0	4	0	911	10
Pedestrians		0				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
Heavy Vehicle %	0%	0%	0%	0%	0%	2%	0%	2%	2%	2%	2%	0%	2%	0%	2%	2%
Peak Hour Factor		0.94				0.94				0.94				0.94		
Adjustment																
Adjusted 2026 Volumes	0	0	0	0	0	24	0	55	3	39	579	0	4	0	911	10
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	0	0	0	0	27	0	61	3	43	640	0	4	0	1,006	11
Project Trips																
Trip Distribution IN											25%					
Trip Distribution OUT								5%							20%	
Residential Trips	0	0	0	0	0	0	0	8	0	0	73	0	0	0	32	0
Trip Distribution IN											25%					
Trip Distribution OUT								5%							20%	
Hotel Trips	0	0	0	0	0	0	0	6	0	0	30	0	0	0	25	0
Trip Distribution IN										5%	20%					5%
Trip Distribution OUT								10%							15%	
Office Trips	0	0	0	0	0	0	0	55	0	5	19	0	0	0	82	5
Trip Distribution IN										5%	20%					5%
Trip Distribution OUT								10%							15%	
Retail Trips	0	0	0	0	0	0	0	0	0	1	4	0	0	0	1	1
Trip Distribution IN										5%	20%					5%
Trip Distribution OUT								10%							15%	
Restaurant Trips	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	1
Trip Distribution IN										5%	20%					5%
Trip Distribution OUT								10%							15%	
Other Non-Residential Trips	0	0	0	0	0	0	0	4	0	21	82	0	0	0	5	21
Trip Distribution IN											15%					
Trip Distribution OUT								5%							10%	
Arena Trips	0	0	0	0	0	0	0	2	0	0	244	0	0	0	4	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing																-1
Total Project Trips	0	0	0	0	0	0	0	75	0	28	455	0	0	0	149	27
2036 Buildout Total	0	0	0	0	0	27	0	136	3	71	1,095	0	4	0	1,155	38

INTERSECTION VOLUME DEVELOPMENT

Intersection #8: North Point Parkway @ Driveway / Encore Parkway

AM PEAK HOUR

Description	Driveway Northbound U-Turn	Left	Through	Right	Encore Parkway Southbound U-Turn	Left	Through	Right	North Point Parkway Eastbound U-Turn	Left	Through	Right	North Point Parkway Westbound U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	0	0	0	0	219	0	134	0	220	153	0	0	0	512	396
Pedestrians		0				0				1				1		
Conflicting Pedestrians		1		1		1		1		0		0		0		0
Heavy Vehicles	0	0	0	0	0	2	0	2	0	4	5	0	0	0	14	8
Heavy Vehicle %	0%	0%	0%	0%	0%	2%	0%	2%	0%	2%	3%	0%	0%	0%	3%	2%
Peak Hour Factor		0.95				0.95				0.95				0.95		
Adjustment																
Adjusted 2026 Volumes	0	0	0	0	0	219	0	134	0	220	153	0	0	0	512	396
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	0	0	0	0	242	0	148	0	243	169	0	0	0	566	437
Project Trips																
Trip Distribution IN										5%	25%					
Trip Distribution OUT								5%							25%	
Residential Trips	0	0	0	0	0	0	0	15	0	5	26	0	0	0	76	0
Trip Distribution IN										5%	25%					
Trip Distribution OUT								5%							25%	
Hotel Trips	0	0	0	0	0	0	0	4	0	7	34	0	0	0	22	0
Trip Distribution IN										10%	25%					
Trip Distribution OUT								10%							25%	
Office Trips	0	0	0	0	0	0	0	3	0	60	150	0	0	0	8	0
Trip Distribution IN										10%	25%					
Trip Distribution OUT								10%							25%	
Retail Trips	0	0	0	0	0	0	0	11	0	15	37	0	0	0	28	0
Trip Distribution IN										10%	25%					
Trip Distribution OUT								10%							25%	
Restaurant Trips	0	0	0	0	0	0	0	7	0	6	16	0	0	0	17	0
Trip Distribution IN										10%	25%					
Trip Distribution OUT								10%							25%	
Other Non-Residential Trips	0	0	0	0	0	0	0	1	0	1	2	0	0	0	3	0
Trip Distribution IN										20%	15%					
Trip Distribution OUT								25%							15%	
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing										-2	-2					
Total Project Trips	0	0	0	0	0	0	0	41	0	92	263	0	0	0	154	0
2036 Buildout Total	0	0	0	0	0	242	0	189	0	335	432	0	0	0	720	437

PM PEAK HOUR

Description	Driveway Northbound U-Turn	Left	Through	Right	Encore Parkway Southbound U-Turn	Left	Through	Right	North Point Parkway Eastbound U-Turn	Left	Through	Right	North Point Parkway Westbound U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	0	0	1	0	260	1	218	4	174	360	0	0	1	648	312
Pedestrians		0				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	11	0	0	0	0	3	8
Heavy Vehicle %	0%	0%	0%	2%	0%	2%	2%	2%	2%	6%	2%	0%	0%	2%	2%	3%
Peak Hour Factor		0.93				0.93				0.93				0.93		
Adjustment																
Adjusted 2026 Volumes	0	0	0	1	0	260	1	218	4	174	360	0	0	1	648	312
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	0	0	1	0	287	1	241	4	192	398	0	0	1	716	345
Project Trips																
Trip Distribution IN										5%	25%					
Trip Distribution OUT								5%							25%	
Residential Trips	0	0	0	0	0	0	0	8	0	15	73	0	0	0	40	0
Trip Distribution IN										5%	25%					
Trip Distribution OUT								5%							25%	
Hotel Trips	0	0	0	0	0	0	0	6	0	6	30	0	0	0	31	0
Trip Distribution IN										10%	25%					
Trip Distribution OUT								10%							25%	
Office Trips	0	0	0	0	0	0	0	55	0	9	23	0	0	0	137	0
Trip Distribution IN										10%	25%					
Trip Distribution OUT								10%							25%	
Retail Trips	0	0	0	0	0	0	0	0	0	2	5	0	0	0	1	0
Trip Distribution IN										10%	25%					
Trip Distribution OUT								10%							25%	
Restaurant Trips	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0
Trip Distribution IN										10%	25%					
Trip Distribution OUT								10%							25%	
Other Non-Residential Trips	0	0	0	0	0	0	0	4	0	41	103	0	0	0	9	0
Trip Distribution IN										20%	15%					
Trip Distribution OUT								25%							15%	
Arena Trips	0	0	0	0	0	0	0	10	0	326	244	0	0	0	6	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing								-1			1					
Total Project Trips	0	0	0	0	0	0	0	82	0	400	483	0	0	0	224	0
2036 Buildout Total	0	0	0	1	0	287	1	323	4	592	881	0	0	1	940	345

INTERSECTION VOLUME DEVELOPMENT

Intersection #9: Encore Parkway @ Driveway / North Point Center

AM PEAK HOUR

	Encore Parkway Northbound				Encore Parkway Southbound				Driveway Eastbound				North Point Center Westbound			
Description	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	4	578	29	0	69	353	7	0	2	6	3	0	2	1	19
Pedestrians		4				1				2				1		
Conflicting Pedestrians		2		1		1		2		1		4		4		1
Heavy Vehicles	0	0	3	0	0	2	5	1	0	0	0	0	0	0	0	0
Heavy Vehicle %	0%	2%	2%	2%	0%	3%	2%	14%	0%	2%	2%	2%	0%	2%	2%	2%
Peak Hour Factor		0.92				0.92				0.92				0.92		
Adjustment																
Adjusted 2026 Volumes	0	4	578	29	0	69	353	7	0	2	6	3	0	2	1	19
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	4	638	32	0	76	390	8	0	2	7	3	0	2	1	21
Project Trips																
Trip Distribution IN				5%		5%										
Trip Distribution OUT														5%		5%
Residential Trips	0	0	0	5	0	5	0	0	0	0	0	0	0	15	0	15
Trip Distribution IN				5%		5%										
Trip Distribution OUT														5%		5%
Hotel Trips	0	0	0	7	0	7	0	0	0	0	0	0	0	4	0	4
Trip Distribution IN				10%		10%										
Trip Distribution OUT														10%		10%
Office Trips	0	0	0	60	0	60	0	0	0	0	0	0	0	3	0	3
Trip Distribution IN				10%		10%										
Trip Distribution OUT														10%		10%
Retail Trips	0	0	0	15	0	15	0	0	0	0	0	0	0	11	0	11
Trip Distribution IN				10%		10%										
Trip Distribution OUT														10%		10%
Restaurant Trips	0	0	0	6	0	6	0	0	0	0	0	0	0	7	0	7
Trip Distribution IN				10%		10%										
Trip Distribution OUT														10%		10%
Other Non-Residential Trips	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
Trip Distribution IN				20%		5%										
Trip Distribution OUT														25%		5%
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing				-2		-2										
Total Project Trips	0	0	0	92	0	92	0	0	0	0	0	0	0	41	0	41
2036 Buildout Total	0	4	638	124	0	168	390	8	0	2	7	3	0	43	1	62

PM PEAK HOUR

	Encore Parkway Northbound				Encore Parkway Southbound				Driveway Eastbound				North Point Center Westbound			
Description	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	5	487	20	0	89	422	42	0	23	9	7	0	38	12	125
Pedestrians		2				0				0				1		
Conflicting Pedestrians		0		1		1		0		0		2		2		0
Heavy Vehicles	0	0	19	0	0	1	0	0	0	0	0	0	0	0	0	1
Heavy Vehicle %	0%	2%	4%	2%	0%	2%	2%	2%	0%	2%	2%	2%	0%	2%	2%	2%
Peak Hour Factor		0.90				0.90				0.90				0.90		
Adjustment																
Adjusted 2026 Volumes	0	5	487	20	0	89	422	42	0	23	9	7	0	38	12	125
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	6	538	22	0	98	466	46	0	25	10	8	0	42	13	138
Project Trips																
Trip Distribution IN				5%		5%										
Trip Distribution OUT														5%		5%
Residential Trips	0	0	0	15	0	15	0	0	0	0	0	0	0	8	0	8
Trip Distribution IN				5%		5%										
Trip Distribution OUT														5%		5%
Hotel Trips	0	0	0	6	0	6	0	0	0	0	0	0	0	6	0	6
Trip Distribution IN				10%		10%										
Trip Distribution OUT														10%		10%
Office Trips	0	0	0	9	0	9	0	0	0	0	0	0	0	55	0	55
Trip Distribution IN				10%		10%										
Trip Distribution OUT														10%		10%
Retail Trips	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN				10%		10%										
Trip Distribution OUT														10%		10%
Restaurant Trips	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN				10%		10%										
Trip Distribution OUT														10%		10%
Other Non-Residential Trips	0	0	0	41	0	41	0	0	0	0	0	0	0	4	0	4
Trip Distribution IN				20%		5%										
Trip Distribution OUT														25%		5%
Arena Trips	0	0	0	326	0	81	0	0	0	0	0	0	0	10	0	2
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing														-1		-1
Total Project Trips	0	0	0	400	0	155	0	0	0	0	0	0	0	82	0	74
2036 Buildout Total	0	6	538	422	0	253	466	46	0	25	10	8	0	124	13	212

INTERSECTION VOLUME DEVELOPMENT

Intersection #10: Encore Parkway @ Westside Parkway
AM PEAK HOUR

Description	Westside Parkway Northbound				Westside Parkway Southbound				Encore Parkway Eastbound				Encore Parkway Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	11	360	20	151	0	7	20	7	1	16	504	285	0	131	866	4
Pedestrians		1				0				0				1		
Conflicting Pedestrians		0		1		1		0		0		1		1		0
Heavy Vehicles	0	0	0	3	0	1	1	1	0	1	11	7	0	0	9	0
Heavy Vehicle %	2%	2%	2%	2%	0%	14%	5%	14%	2%	6%	2%	2%	0%	2%	2%	2%
Peak Hour Factor		0.92				0.92				0.92				0.92		
Adjustment																
Adjusted 2026 Volumes	11	360	20	151	0	7	20	7	1	16	504	285	0	131	866	4
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	12	398	22	167	0	8	22	8	1	18	557	315	0	145	957	4
Project Trips																
Trip Distribution IN														5%		
Trip Distribution OUT				5%												
Residential Trips	0	0	0	15	0	0	0	0	0	0	0	0	0	5	0	0
Trip Distribution IN														5%		
Trip Distribution OUT				5%												
Hotel Trips	0	0	0	4	0	0	0	0	0	0	0	0	0	7	0	0
Trip Distribution IN												5%		5%		
Trip Distribution OUT		5%		5%												
Office Trips	0	2	0	2	0	0	0	0	0	0	0	30	0	30	0	0
Trip Distribution IN												5%		5%		
Trip Distribution OUT		5%		5%												
Retail Trips	0	6	0	6	0	0	0	0	0	0	0	7	0	7	0	0
Trip Distribution IN												5%		5%		
Trip Distribution OUT		5%		5%												
Restaurant Trips	0	3	0	3	0	0	0	0	0	0	0	3	0	3	0	0
Trip Distribution IN												5%		5%		
Trip Distribution OUT		5%		5%												
Other Non-Residential Trips	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN														5%		
Trip Distribution OUT				5%												
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing		-1		-1												
Total Project Trips	0	11	0	30	0	0	0	0	0	0	0	40	0	52	0	0
2036 Buildout Total	12	409	22	197	0	8	22	8	1	18	557	355	0	197	957	4

PM PEAK HOUR

Description	Westside Parkway Northbound				Westside Parkway Southbound				Encore Parkway Eastbound				Encore Parkway Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	10	313	16	245	0	7	18	20	0	11	508	343	0	179	504	4
Pedestrians		1				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		1		1		0
Heavy Vehicles	0	2	0	19	0	1	0	0	0	0	8	1	0	0	3	0
Heavy Vehicle %	2%	2%	2%	8%	0%	14%	2%	2%	0%	2%	2%	2%	0%	2%	2%	2%
Peak Hour Factor		0.94				0.94				0.94				0.94		
Adjustment																
Adjusted 2026 Volumes	10	313	16	245	0	7	18	20	0	11	508	343	0	179	504	4
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	11	346	18	271	0	8	20	22	0	12	561	379	0	198	557	4
Project Trips																
Trip Distribution IN														5%		
Trip Distribution OUT				5%												
Residential Trips	0	0	0	8	0	0	0	0	0	0	0	0	0	15	0	0
Trip Distribution IN														5%		
Trip Distribution OUT				5%												
Hotel Trips	0	0	0	6	0	0	0	0	0	0	0	0	0	6	0	0
Trip Distribution IN												5%		5%		
Trip Distribution OUT		5%		5%												
Office Trips	0	27	0	27	0	0	0	0	0	0	0	5	0	5	0	0
Trip Distribution IN												5%		5%		
Trip Distribution OUT		5%		5%												
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
Trip Distribution IN												5%		5%		
Trip Distribution OUT		5%		5%												
Restaurant Trips	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
Trip Distribution IN												5%		5%		
Trip Distribution OUT		5%		5%												
Other Non-Residential Trips	0	2	0	2	0	0	0	0	0	0	0	21	0	21	0	0
Trip Distribution IN														5%		
Trip Distribution OUT				5%												
Arena Trips	0	0	0	2	0	0	0	0	0	0	0	0	0	81	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing														-3		
Total Project Trips	0	29	0	45	0	0	0	0	0	0	0	28	0	127	0	0
2036 Buildout Total	11	375	18	316	0	8	20	22	0	12	561	407	0	325	557	4

INTERSECTION VOLUME DEVELOPMENT

Intersection #11: Haynes Bridge Road @ Mansell Road
AM PEAK HOUR

Description	Haynes Bridge Road Northbound U-Turn	Left	Through	Right	Haynes Bridge Road Southbound U-Turn	Left	Through	Right	Mansell Road Eastbound U-Turn	Left	Through	Right	Westbound U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	290	768	0	0	0	702	467	0	270	0	171				
Pedestrians		0				0				0				2		
Conflicting Pedestrians		0		2		2		0		0		0		0		0
Heavy Vehicles	0	1	5	0	0	0	33	6	0	4	0	6				
Heavy Vehicle %	0%	2%	2%	0%	0%	0%	5%	2%	0%	2%	0%	4%	0%	0%	0%	0%
Peak Hour Factor		0.97				0.97				0.97				0.97		
Adjustment																
Adjusted 2026 Volumes	0	290	768	0	0	0	702	467	0	270	0	171	0	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	320	848	0	0	0	775	516	0	298	0	189	0	0	0	0
Project Trips																
Trip Distribution IN			5%													
Trip Distribution OUT							5%									
Residential Trips	0	0	5	0	0	0	15	0	0	0	0	0	0	0	0	0
Trip Distribution IN			5%													
Trip Distribution OUT							5%									
Hotel Trips	0	0	7	0	0	0	4	0	0	0	0	0	0	0	0	0
Trip Distribution IN			10%													
Trip Distribution OUT							10%									
Office Trips	0	0	60	0	0	0	3	0	0	0	0	0	0	0	0	0
Trip Distribution IN			10%													
Trip Distribution OUT							10%									
Retail Trips	0	0	15	0	0	0	11	0	0	0	0	0	0	0	0	0
Trip Distribution IN			10%													
Trip Distribution OUT							10%									
Restaurant Trips	0	0	6	0	0	0	7	0	0	0	0	0	0	0	0	0
Trip Distribution IN			10%													
Trip Distribution OUT							10%									
Other Non-Residential Trips	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Trip Distribution IN			10%													
Trip Distribution OUT							10%									
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing			-1				2									
Total Project Trips	0	0	93	0	0	0	43	0	0	0	0	0	0	0	0	0
2036 Buildout Total	0	320	941	0	0	0	818	516	0	298	0	189	0	0	0	0

PM PEAK HOUR

Description	Haynes Bridge Road Northbound U-Turn	Left	Through	Right	Haynes Bridge Road Southbound U-Turn	Left	Through	Right	Mansell Road Eastbound U-Turn	Left	Through	Right	Westbound U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	191	695	0	0	0	665	367	0	309	0	470				
Pedestrians		1				0				0				9		
Conflicting Pedestrians		0		9		9		0		0		1		1		0
Heavy Vehicles	0	0	20	0	0	0	4	1	0	5	0	5				
Heavy Vehicle %	0%	2%	3%	0%	0%	0%	2%	2%	0%	2%	0%	2%	0%	0%	0%	0%
Peak Hour Factor		0.97				0.97				0.97				0.97		
Adjustment																
Adjusted 2026 Volumes	0	191	695	0	0	0	665	367	0	309	0	470	0	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	211	768	0	0	0	735	405	0	341	0	519	0	0	0	0
Project Trips																
Trip Distribution IN			5%													
Trip Distribution OUT							5%									
Residential Trips	0	0	15	0	0	0	8	0	0	0	0	0	0	0	0	0
Trip Distribution IN			5%													
Trip Distribution OUT							5%									
Hotel Trips	0	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0
Trip Distribution IN			10%													
Trip Distribution OUT							10%									
Office Trips	0	0	9	0	0	0	55	0	0	0	0	0	0	0	0	0
Trip Distribution IN			10%													
Trip Distribution OUT							10%									
Retail Trips	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN			10%													
Trip Distribution OUT							10%									
Restaurant Trips	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN			10%													
Trip Distribution OUT							10%									
Other Non-Residential Trips	0	0	41	0	0	0	4	0	0	0	0	0	0	0	0	0
Trip Distribution IN			10%													
Trip Distribution OUT							10%									
Arena Trips	0	0	163	0	0	0	4	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing			2				-1									
Total Project Trips	0	0	239	0	0	0	76	0	0	0	0	0	0	0	0	0
2036 Buildout Total	0	211	1,007	0	0	0	811	405	0	341	0	519	0	0	0	0

INTERSECTION VOLUME DEVELOPMENT

Intersection #12: Mansell Road @ Resurgens Park Place / North Point Parkway

AM PEAK HOUR

Description	Resurgens Park Place Northbound U-Turn	Left	Through	Right	North Point Parkway Southbound U-Turn	Left	Through	Right	Mansell Road Eastbound U-Turn	Left	Through	Right	Mansell Road Westbound U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	28	20	3	0	109	4	480	0	239	355	4	0	12	411	134
Pedestrians		0				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Heavy Vehicles	0	1	0	0	0	5	0	8	0	8	17	0	0	1	4	1
Heavy Vehicle %	0%	4%	2%	2%	0%	5%	2%	2%	0%	3%	5%	2%	0%	8%	2%	2%
Peak Hour Factor		0.93				0.93				0.93				0.93		
Adjustment																
Adjusted 2026 Volumes	0	28	20	3	0	109	4	480	0	239	355	4	0	12	411	134
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	31	22	3	0	120	4	530	0	264	392	4	0	13	454	148
Project Trips																
Trip Distribution IN										30%						
Trip Distribution OUT								30%								
Residential Trips	0	0	0	0	0	0	0	91	0	31	0	0	0	0	0	0
Trip Distribution IN										30%						
Trip Distribution OUT								30%								
Hotel Trips	0	0	0	0	0	0	0	26	0	40	0	0	0	0	0	0
Trip Distribution IN										30%						5%
Trip Distribution OUT						5%		30%								
Office Trips	0	0	0	0	0	2	0	9	0	180	0	0	0	0	0	30
Trip Distribution IN										30%						5%
Trip Distribution OUT						5%		30%								
Retail Trips	0	0	0	0	0	6	0	34	0	44	0	0	0	0	0	7
Trip Distribution IN										30%						5%
Trip Distribution OUT						5%		30%								
Restaurant Trips	0	0	0	0	0	3	0	20	0	19	0	0	0	0	0	3
Trip Distribution IN										30%						5%
Trip Distribution OUT						5%		30%								
Other Non-Residential Trips	0	0	0	0	0	1	0	4	0	2	0	0	0	0	0	0
Trip Distribution IN										30%						5%
Trip Distribution OUT						5%		35%								
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing						-1										
Total Project Trips	0	0	0	0	0	11	0	184	0	316	0	0	0	0	0	40
2036 Buildout Total	0	31	22	3	0	131	4	714	0	580	392	4	0	13	454	188

PM PEAK HOUR

Description	Resurgens Park Place Northbound U-Turn	Left	Through	Right	North Point Parkway Southbound U-Turn	Left	Through	Right	Mansell Road Eastbound U-Turn	Left	Through	Right	Mansell Road Westbound U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	22	7	0	1	262	21	492	0	409	616	38	8	13	443	121
Pedestrians		0				0				0				2		
Conflicting Pedestrians		0		2		2		0		0		0		0		0
Heavy Vehicles	0	0	0	0	0	1	0	2	0	12	6	0	0	0	2	0
Heavy Vehicle %	0%	2%	2%	0%	2%	2%	2%	2%	0%	3%	2%	2%	2%	2%	2%	2%
Peak Hour Factor		0.97				0.97				0.97				0.97		
Adjustment																
Adjusted 2026 Volumes	0	22	7	0	1	262	21	492	0	409	616	38	8	13	443	121
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	24	8	0	1	289	23	543	0	452	680	42	9	14	489	134
Project Trips																
Trip Distribution IN										30%						
Trip Distribution OUT								30%								
Residential Trips	0	0	0	0	0	0	0	48	0	87	0	0	0	0	0	0
Trip Distribution IN										30%						
Trip Distribution OUT								30%								
Hotel Trips	0	0	0	0	0	0	0	37	0	36	0	0	0	0	0	0
Trip Distribution IN										30%						5%
Trip Distribution OUT						5%		30%								
Office Trips	0	0	0	0	0	27	0	164	0	28	0	0	0	0	0	5
Trip Distribution IN										30%						5%
Trip Distribution OUT						5%		30%								
Retail Trips	0	0	0	0	0	0	0	1	0	6	0	0	0	0	0	1
Trip Distribution IN										30%						5%
Trip Distribution OUT						5%		30%								
Restaurant Trips	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1
Trip Distribution IN										30%						5%
Trip Distribution OUT						5%		30%								
Other Non-Residential Trips	0	0	0	0	0	2	0	11	0	124	0	0	0	0	0	21
Trip Distribution IN										30%						5%
Trip Distribution OUT						5%		35%								
Arena Trips	0	0	0	0	0	2	0	14	0	489	0	0	0	0	0	81
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing																
Total Project Trips	0	0	0	0	0	31	0	275	0	774	0	0	0	0	0	109
2036 Buildout Total	0	24	8	0	1	320	23	818	0	1,226	680	42	9	14	489	243

INTERSECTION VOLUME DEVELOPMENT

Intersection #13: Mansell Road @ GA 400 NB Ramp
AM PEAK HOUR

Description	GA 400 NB Ramp Northbound				GA 400 NB Ramp Southbound				Mansell Road Eastbound				Mansell Road Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	807	3	328					9	615	305	0	0	0	832	41
Pedestrians		1				0				0				1		
Conflicting Pedestrians		0		1		1		0		0		1		1		0
Heavy Vehicles	0	21	0	6					0	17	19	0	0	0	16	1
Heavy Vehicle %	0%	3%	2%	2%	0%	0%	0%	0%	2%	3%	6%	0%	0%	0%	2%	2%
Peak Hour Factor		0.94				0.94				0.94				0.94		
Adjustment																
Adjusted 2026 Volumes	0	807	3	328	0	0	0	0	9	615	305	0	0	0	832	41
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	891	3	362	0	0	0	0	10	679	337	0	0	0	919	45
Project Trips																
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	5%
Residential Trips	0	0	0	15	0	0	0	0	0	0	15	0	0	0	76	15
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	5%
Hotel Trips	0	0	0	20	0	0	0	0	0	0	20	0	0	0	22	4
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	5%
Office Trips	0	0	0	90	0	0	0	0	0	0	90	0	0	0	8	2
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	5%
Retail Trips	0	0	0	22	0	0	0	0	0	0	22	0	0	0	28	6
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	5%
Restaurant Trips	0	0	0	9	0	0	0	0	0	0	9	0	0	0	17	3
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	5%
Other Non-Residential Trips	0	0	0	1	0	0	0	0	0	0	1	0	0	0	3	1
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	10%
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing				1							1					-1
Total Project Trips	0	0	0	158	0	0	0	0	0	0	158	0	0	0	154	30
2036 Buildout Total	0	891	3	520	0	0	0	0	10	679	495	0	0	0	1,073	75

PM PEAK HOUR

Description	GA 400 NB Ramp Northbound				GA 400 NB Ramp Southbound				Mansell Road Eastbound				Mansell Road Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes	0	545	3	411					9	625	726	0	0	0	741	153
Pedestrians		2								0				1		
Conflicting Pedestrians		0		1		1		0		0		2		2		0
Heavy Vehicles	0	11	0	10					1	15	7	0	0	0	9	1
Heavy Vehicle %	0%	2%	2%	2%	0%	0%	0%	0%	11%	2%	2%	0%	0%	0%	2%	2%
Peak Hour Factor		0.93				0.93				0.93				0.93		
Adjustment																
Adjusted 2026 Volumes	0	545	3	411	0	0	0	0	9	625	726	0	0	0	741	153
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	602	3	454	0	0	0	0	10	690	802	0	0	0	819	169
Project Trips																
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	5%
Residential Trips	0	0	0	44	0	0	0	0	0	0	44	0	0	0	40	8
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	5%
Hotel Trips	0	0	0	18	0	0	0	0	0	0	18	0	0	0	31	6
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	5%
Office Trips	0	0	0	14	0	0	0	0	0	0	14	0	0	0	137	27
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	5%
Retail Trips	0	0	0	3	0	0	0	0	0	0	3	0	0	0	1	0
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	5%
Restaurant Trips	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	5%
Other Non-Residential Trips	0	0	0	62	0	0	0	0	0	0	62	0	0	0	9	2
Trip Distribution IN				15%							15%					
Trip Distribution OUT															25%	10%
Arena Trips	0	0	0	244	0	0	0	0	0	0	244	0	0	0	10	4
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing																
Total Project Trips	0	0	0	387	0	0	0	0	0	0	387	0	0	0	228	47
2036 Buildout Total	0	602	3	841	0	0	0	0	10	690	1,189	0	0	0	1,047	216

INTERSECTION VOLUME DEVELOPMENT

Intersection #14: Mansell Road @ GA 400 SB Ramp

AM PEAK HOUR

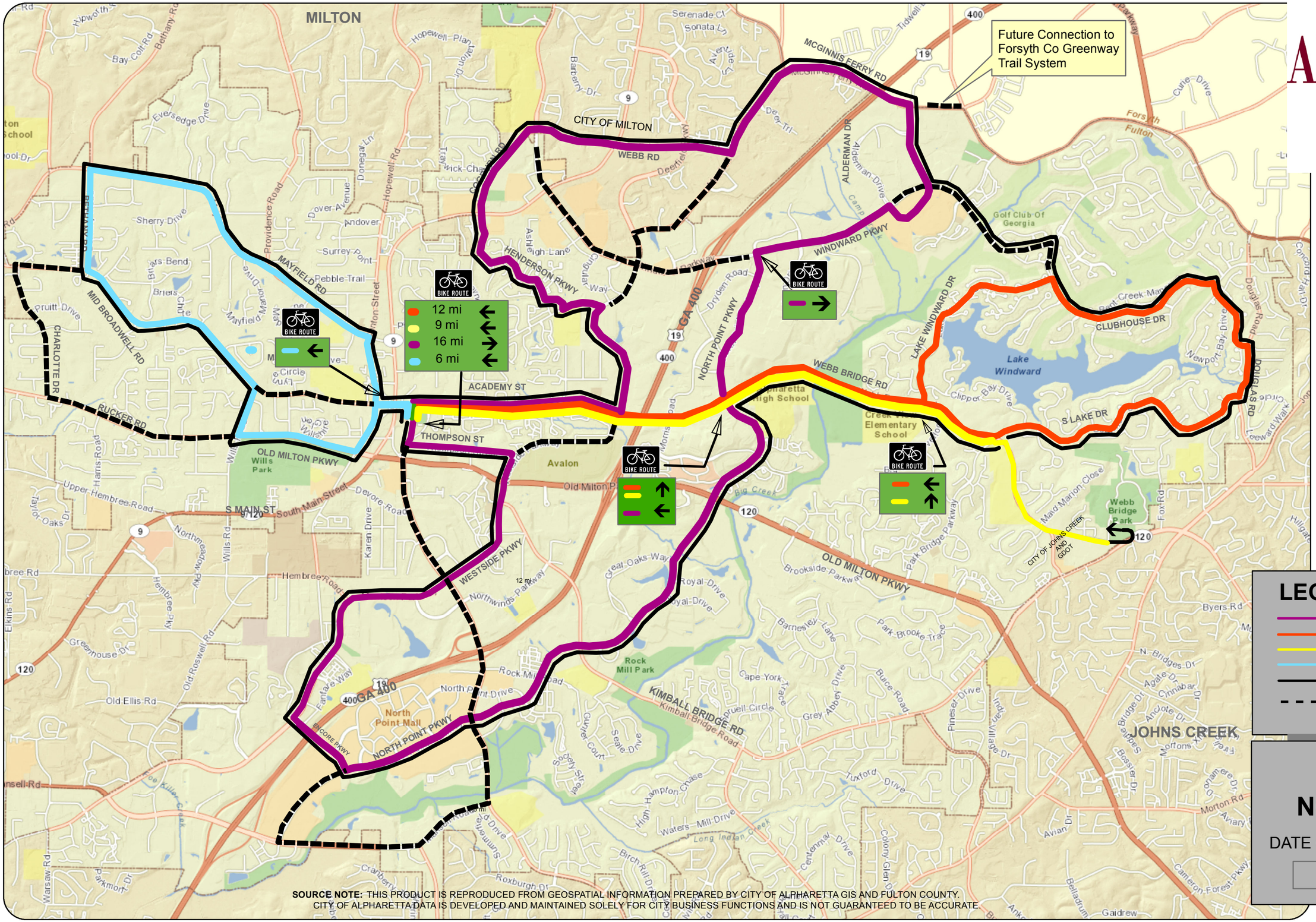
Description	GA 400 SB Ramp Northbound				GA 400 SB Ramp Southbound				Mansell Road Eastbound				Mansell Road Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes					0	13	4	147	0	0	944	544	0	262	1,335	0
Pedestrians		2				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		2		2		0
Heavy Vehicles					0	1	0	13	0	0	32	22	0	2	30	0
Heavy Vehicle %	0%	0%	0%	0%	0%	8%	2%	9%	0%	0%	3%	4%	0%	2%	2%	0%
Peak Hour Factor		0.96				0.96				0.96				0.96		
Adjustment																
Adjusted 2026 Volumes	0	0	0	0	0	13	4	147	0	0	944	544	0	262	1335	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	0	0	0	0	14	4	162	0	0	1,043	601	0	289	1,475	0
Project Trips																
Trip Distribution IN						5%					10%					
Trip Distribution OUT														15%	10%	
Residential Trips	0	0	0	0	0	5	0	0	0	0	10	0	0	46	30	0
Trip Distribution IN						5%					10%					
Trip Distribution OUT														15%	10%	
Hotel Trips	0	0	0	0	0	7	0	0	0	0	13	0	0	13	9	0
Trip Distribution IN						5%					10%					
Trip Distribution OUT														15%	10%	
Office Trips	0	0	0	0	0	30	0	0	0	0	60	0	0	5	3	0
Trip Distribution IN						5%					10%					
Trip Distribution OUT														15%	10%	
Retail Trips	0	0	0	0	0	7	0	0	0	0	15	0	0	17	11	0
Trip Distribution IN						5%					10%					
Trip Distribution OUT														15%	10%	
Restaurant Trips	0	0	0	0	0	3	0	0	0	0	6	0	0	10	7	0
Trip Distribution IN						5%					10%					
Trip Distribution OUT														15%	10%	
Other Non-Residential Trips	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0
Trip Distribution IN						10%					5%					
Trip Distribution OUT														20%	5%	
Arena Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing											1					
Total Project Trips	0	0	0	0	0	52	0	0	0	0	106	0	0	93	61	0
2036 Buildout Total	0	0	0	0	0	66	4	162	0	0	1,149	601	0	382	1,536	0

PM PEAK HOUR

Description	GA 400 SB Ramp Northbound				GA 400 SB Ramp Southbound				Mansell Road Eastbound				Mansell Road Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2026 Traffic Volumes					0	81	0	680	0	0	1,270	639	6	253	1,030	0
Pedestrians		5				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		5		5		0
Heavy Vehicles					0	2	0	12	0	0	22	11	0	2	17	0
Heavy Vehicle %	0%	0%	0%	0%	0%	2%	0%	2%	0%	0%	2%	2%	2%	2%	2%	0%
Peak Hour Factor		0.95				0.95				0.95				0.95		
Adjustment																
Adjusted 2026 Volumes	0	0	0	0	0	81	0	680	0	0	1270	639	6	253	1030	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105	1.105
New Road Adjustment																
Other Proposed Developments																
2036 Background Traffic	0	0	0	0	0	89	0	751	0	0	1,403	706	7	279	1,138	0
Project Trips																
Trip Distribution IN						5%					10%					
Trip Distribution OUT														15%	10%	
Residential Trips	0	0	0	0	0	15	0	0	0	0	29	0	0	24	16	0
Trip Distribution IN						5%					10%					
Trip Distribution OUT														15%	10%	
Hotel Trips	0	0	0	0	0	6	0	0	0	0	12	0	0	19	12	0
Trip Distribution IN						5%					10%					
Trip Distribution OUT														15%	10%	
Office Trips	0	0	0	0	0	5	0	0	0	0	9	0	0	82	55	0
Trip Distribution IN						5%					10%					
Trip Distribution OUT														15%	10%	
Retail Trips	0	0	0	0	0	1	0	0	0	0	2	0	0	1	0	0
Trip Distribution IN						5%					10%					
Trip Distribution OUT														15%	10%	
Restaurant Trips	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Trip Distribution IN						5%					10%					
Trip Distribution OUT														15%	10%	
Other Non-Residential Trips	0	0	0	0	0	21	0	0	0	0	41	0	0	5	4	0
Trip Distribution IN						10%					5%					
Trip Distribution OUT														20%	5%	
Arena Trips	0	0	0	0	0	163	0	0	0	0	81	0	0	8	2	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips Balancing																
Total Project Trips	0	0	0	0	0	212	0	0	0	0	175	0	0	139	89	0
2036 Buildout Total	0	0	0	0	0	301	0	751	0	0	1,578	706	7	418	1,227	0

APPENDIX D

Programmed Project Fact Sheets



Alpharetta
GEORGIA · USA

LEGEND

- LOOP 1 (16 MILES)
- LOOP 2 (12 mi)
- LOOP 3 (9 mi)
- LOOP 4 (6 mi)
- OUTER LOOP (28 mi)
- ALTERNATE MILEAGE or CONNECTIVITY

NOT TO SCALE

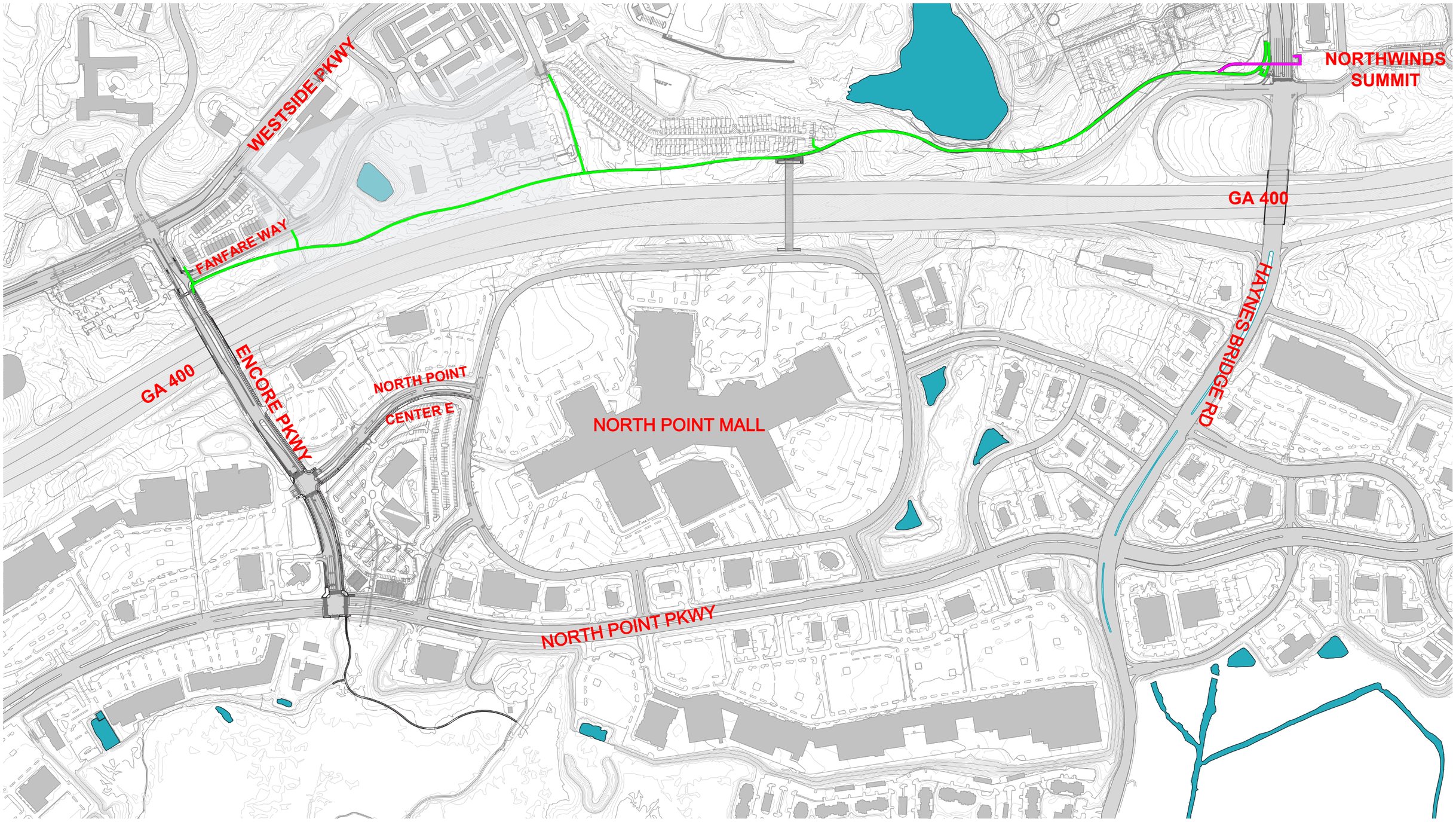
DATE OF LAST MAP REVISION

April 29, 2014

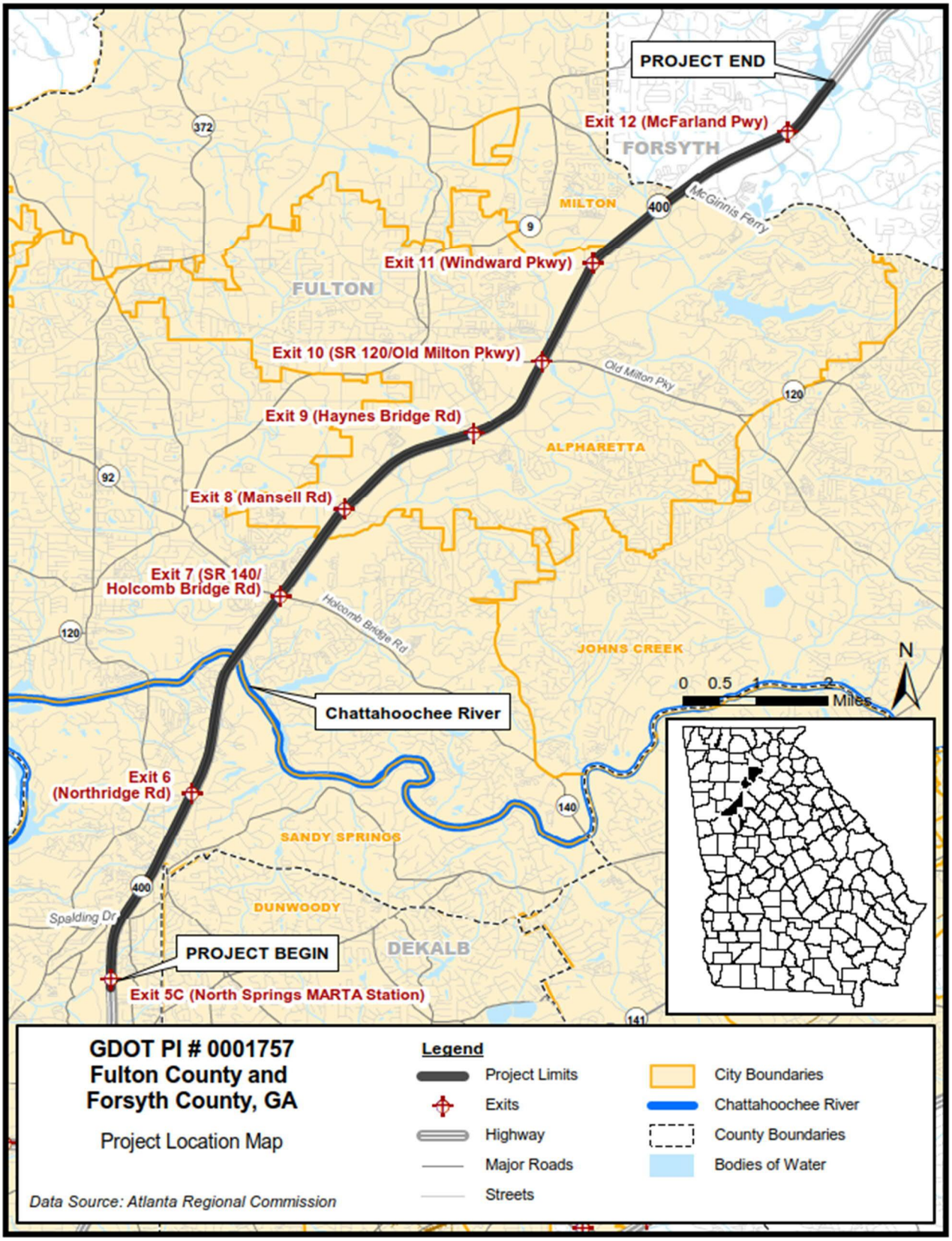
SOURCE NOTE: THIS PRODUCT IS REPRODUCED FROM GEOSPATIAL INFORMATION PREPARED BY CITY OF ALPHARETTA GIS AND FULTON COUNTY. CITY OF ALPHARETTA DATA IS DEVELOPED AND MAINTAINED SOLELY FOR CITY BUSINESS FUNCTIONS AND IS NOT GUARANTEED TO BE ACCURATE.

Alpha Link Key Map (Green Line Along GA-400 from Haynes Bridge Rd to Encore Pkwy)

0' 200'



PROJECT LOCATION MAP



PLANNING AND BACKGROUND

Project Justification Statement: (Prepared by the Office of Innovative Delivery):

State Route (SR) 400 is a major north-south, limited-access expressway extending 37 miles from Buckhead Atlanta to SR 369 in Forsyth County. North of SR 369, SR 400 continues as a permitted-access arterial until terminating at the intersection of SR 60 in Lumpkin County. The segments of SR 400 between I-285 and SR 60 are co-designated with US 19 and are included on both the National Highway System (NHS) and Appalachian Development Highway System (ADHS). SR 400 provides the primary north-south connection for commuters between established employment centers in the Atlanta metropolitan area, the fast-growing residential areas in Forsyth County, and the established cities in northern Fulton County.

Proposed PI 0001757 was previously studied at a feasibility level in 2012. Those scoping efforts recommended the addition of tolled, express lanes to the existing SR 400 corridor to address congestion. These recommendations were incorporated into the programming of the Major Mobility Investment Program (MMIP). The project is currently included in the Atlanta Regional Transportation Plan (RTP) as AR-ML-300. Project limits are defined in the RTP from I-285 in Fulton County to McFarland Road in Forsyth County. The termini limits of the proposed project are anticipated as follows:

1. At the northern limit, the proposed project will tie into the general-purpose lanes. The general-purpose lanes include recently-constructed improvements under PI 0013367, which adds a third general purpose lane in each direction along SR 400 between McFarland Road and SR 369/Browns Bridge Road. It is anticipated that the combination of volume reduction at the northern limits and the recently-constructed additional general-purpose capacity north of McFarland Road will result in a suitable termination point for the additional tolled capacity.

2. At the southern limit, the proposed project will tie into the general-purpose lanes and collector-distributor system being currently-constructed under PI 0013546 in the general vicinity of Spalding Drive. This limit anticipates that the collector-distributor improvements will provide sufficient capacity and operational benefits to result in a suitable termination point for the additional tolled capacity.

Additionally, PI 0001758 (Revive285 Top End Express Lanes) will join to the proposed project in the future to form a connected tolled, express lane system between SR 400 and I-285.

Analysis from the 2012 feasibility study concluded that all segments of SR 400 between I-285 and Holcomb Bridge Road operated at LOS E or LOS F in the peak-period/peak-direction in Year 2010. The 2012 feasibility study showed that this trend continues, with traffic forecasts predicting that all segments of SR 400 within the project limits described above would operate at LOS E or LOS F in the peak-period/peak-direction in Year 2040.

Additionally, the analysis showed that in Year 2010 conditions, traversing the project limits in the peak-period/peak-direction requires 25 to 35 minutes of additional travel time as compared to traversing the project limits at posted speeds. Similarly, in Year 2040, the gap between posted speed travel time and actual peak-period/peak-direction travel time grows to range from 55 to 90 minutes.

These metrics briefly summarize the issues of recurring congestion and lack of reliable travel times. The proposed project will address these major issues by adding tolled capacity to the existing corridor. The proposed project will not remove any existing general-purpose capacity.

The major benefits expected from the project include:

1. Improving mobility by providing reliable trips – Under existing conditions, travel by any user (SOV, HOV, or bus transit) along the corridor is not reliable because all modes use the general-purpose lanes and those lanes are subject to intermittent congestion and recurring delay. Tolled express lanes will provide an alternative for reliable travel times during all periods.
2. Reducing congestion by adding capacity – The express lanes represent additional capacity added to the existing corridor. Additionally, as users shift modes to the express lanes and/or enhanced transit/ride-share operations, general-purpose capacity is made available. A secondary

benefit of the project is improvement to travel time and mobility characteristics in the existing general-purpose system that will be retained.

3. Providing travel mode choices - Under existing conditions, all vehicles traveling on SR 400 must utilize the general-purpose lanes. Thus, no speed or travel time advantage is gained by ridesharing or using transit. Transit and ride-sharing services operate in the express lanes, providing an alternative for reliable travel times and encouraging greater usage of existing transit and ridesharing services.

Existing conditions:

US 19/SR 400 generally consist of four (4) general purpose (GP) lanes in both the southbound and northbound direction from begin project at MARTA North Springs station to McFarland Parkway. At the McFarland Parkway interchange the outside NB lane drops into an exit only lane (3rd GP lane from McFarland Parkway to SR 369/Brown's Bridge Road was completed in 2018 under GDOT PI 0013367) and SB entrance ramp creates the fourth GP lane. In the southbound direction the fourth outside GP lane becomes an exit only lane at Holcomb Bridge Road with the entrance ramp recreating the 4th GP lane. No express lane (EL) options currently exist on the SR 400 corridor; however, portions of the outside shoulder are designated as flex shoulders and can be used by through traffic during certain signed peak travel times. The existing right-of-way varies from 300 to 500 feet. The existing typical section consists of four (4) 12 foot travel lanes in each direction with 12 foot paved (14 foot overall) outside shoulders and 6'-10" paved inside shoulders with a 2'-4" median barrier separating northbound and southbound traffic (for a total median width of 16 feet). Existing GP interchanges are located at Northridge Road, SR 140/Holcomb Bridge Road, Mansell Road, Haynes Bridge Road, SR 120/Old Milton Parkway, Windward Parkway, and McFarland Parkway. In addition, GDOT PI 0007526 proposes a new GP interchange at McGinnis Ferry Road (current schedule let date of 05-17-2019).

Other projects in the area:

GDOT P.I. No.	ARC Reference No./ Local Project No.	Project Description	Schedule	Coordination Required?
0001758	ARC ID AR-ML-200	I-285 from I-75/Cobb thru Fulton to I-85/DeKalb – Express Lanes (MMIP)	Construction 2023	Y
0013546/ 0000784/ 0721850	ARC ID AR-957A	I-285 @ SR 400; incl CD Lanes & Abernathy Road Interchange	Under Construction	Y
	ALP-099a (Alpharetta TSPLOST)	Kimball Bridge Road Bridge over SR 400	Not Available	Y
	ALP-001-A (Alpharetta TSPLOST)	Academy Street/Webb Bridge Road GA 400 Bridge Improvements	Not Available	Y
0010768	ARC ID FN-278	SR 400 @ CR 9284/Windward Parkway	Under Construction	N
0015077	ARC ID FN-301	CS 9284/Windward Parkway from SR 400 to SR 9 in Alpharetta	Construction 2020	N
	ARC ID FT-065A	McFarland Road widening from McGinnis Ferry Road to SR 400	Long Range	N
0007526	ARC ID FT-324	SR 400 @ McGinnis Ferry Road; incl widening & auxiliary lanes	Construction 2019	Y
0015078	City of Milton ARC ID FN-302	Big Creek Greenway from Bethany Bend Road to Big Creek Greenway	Construction 2021	N
0013367	Forsyth County SPLOST	SR 400 from CR 458/McFarland Road to SR 369	Under Construction	N

	PEW09 (Forsyth County SPLOST)	Union Hill Road widening and bridge replacement	Under Construction	N
	PEN12 (Forsyth County TSPLOST) ARC ID FT-077B	Ronald Reagan Boulevard Extension	Under Construction	N
	T-7104 (Sandy Springs SPLOST)	Spalding Drive and Trowbridge, Dalrymple Road Intersection Project	Construction 2019	N
	TS111	Spalding Drive at Pitts Road intersection improvement	Not Available	N
		City of Sandy Springs Roberts Drive Multi-use paths	Not Available	Y
0013339		SR 400 at Northridge Road	Under Construction	N
	City of Roswell	Old Holcomb Bridge Road extension	Not Available	N
		City of Alpharetta Davis Drive Extension	Not Available	N
0009981	ARC ID FN-267	Hammond Drive Widening from SR 9 (Roswell Road) to Glenridge Drive	Long Range	N
	ARC ID FN-176	SR 120 (Old Milton Parkway) from SR 400 to State Bridge Road	Construction 2020	N

See attachment 14 - Adjoining Project Map

MPO: ARC **TIP #:** AR-ML-300

Congressional District(s): 7 & 6

Federal Oversight: ☒ PoDI ☐ Exempt ☐ State Funded ☐ Other

Projected Traffic: AADT 24 HR T: 4.5 %
Current Year (2016): 222,375 Open Year (2026): 231,925 Design Year (2046): 254,025
Traffic Projections Performed by: *Kimley Horn*
Date approved by the GDOT Office of Planning: 4/18/18
Traffic is being updated for access revisions.

Functional Classification (Mainline):
SR 400 General Purpose and Express Lanes: Urban Principal Arterial - Freeway
Collector Distributor: Ramp
SR 120/Old Milton Parkway: Urban Principal Arterial
SR 140/Holcomb Bridge Road: Urban Principal Arterial

See attachment 13 – Design Criteria Table for additional classification information.

Complete Streets - Bicycle, Pedestrian, and/or Transit Standard Warrants:
Warrants met: ☐ None ☐ Bicycle ☐ Pedestrian ☒ Transit

SR 400 is considered to be excluded from the consideration of bicycle and pedestrian warrants as it is an access controlled highway where bicycles and pedestrians are not permitted. However, in cases of overpass replacements, the cross streets will generally meet Pedestrian Warrant #1 and accommodation will be provided in the urban border area.

SR 400 meets Transit Warrants 1 & 2. Coordination with MARTA has occurred as Bus Rapid Transit (BRT) is proposed within the corridor and will operate in the inside express lane with in-line BRT stations proposed along the corridor. In addition State Road and Toll Authority (SRTA) run GRTA Xpress services in the corridor and will also be utilizing the express lanes.

Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project? ☒ No ☐ Yes

Pavement Evaluation and Recommendations

Initial Pavement Evaluation Summary Report Required?		☐ No	☒ Yes
Feasible Pavement Alternatives:	☐ HMA	☐ PCC	☒ HMA & PCC

DESIGN AND STRUCTURAL

Description of the proposed project:

GDOT is proposing the construction of PI No. 0001757 State Route (SR) 400 Express Lanes (EL) as part of the GDOT's MMIP. The proposed project would widen and reconstruct an approximately 16-mile section of SR 400 from the Metro Atlanta Rapid Transit Authority (MARTA) North Springs Station (Exit 5C) in Fulton County to approximately 0.9 mile north of McFarland Parkway (Exit 12) in Forsyth County.

The proposed express lanes would improve mobility and travel time reliability along the SR 400 corridor for a distance of approximately 16 miles from MM 9.1 to MM 24.7. Travelling from south to north, this section of SR 400 traverses through the incorporated cities of Sandy Springs, Roswell, Alpharetta, and Milton in Fulton County, and ends in unincorporated southern Forsyth County.

The project proposes to add two (2) priced EL in each direction from MARTA North Springs Station to McGinnis Ferry Road and one (1) priced EL in each direction from McGinnis Ferry Road to north of McFarland Parkway. The EL would begin in the vicinity of the MARTA North Springs Station tying to the Transform 285/CD lanes currently under construction (GDOT P.I. No. 0013546) and eventually connect to the Top End 285 Express Lanes project (MMIP GDOT P.I. No. 0001758, currently proposed to open to traffic approximately 2 years after the SR 400 EL). The EL would begin on the outside of the existing GP lanes at this location and continue to the outside to Northridge Road where the EL will switch to the inside of the existing GP lanes northward and end north of McFarland Parkway and transition into the third GP lane (built under GDOT P.I. No. 0013367).

The proposed Express Lanes will be dynamically priced. As demand for use of the lanes increases, the toll amount will rise. The goal is to provide more reliable trip times for customers. A driver will see the toll rates prior to the point of entry, allowing a user to decide whether they want to enter the lanes. Tolls are collected electronically with no toll booths requiring you to slow down or stop.

The proposed project would continue the policy of separating GP access from EL access points. Access points are being assessed with the following criteria: travel shed, vehicles per day, and in combination with stakeholder input.

The typical section in each direction will consist of one, 12-foot EL; one, 11-foot EL; 2-foot buffer zone; one, 11-foot GP lane; three, 12-foot GP lanes; one, 6-foot, 10-inch inside shoulder; and 12-foot paved and 2-foot grassed outside shoulders. The proposed speed limit along the project limits is 65 mph. The preferred minimum ROW width to accommodate this typical section is 300 feet.

The proposed project delivery method is a Design-Build-Finance-Operate-Maintain (DBFOM) contract. Under this delivery method the State of Georgia retains ownership of the road, but the DBFOM developer is responsible for the Operations and Maintenance (O&M) of the roadway for a defined period of time. At the end of the O&M period there will be handback performance requirements on the condition of the returned assets.

PROPOSED EXPRESS LANE ACCESS

1. Direct connection from MARTA North Springs to NB express lanes
2. Full NB Direct Merge (NB on/off) south of Northridge Road
3. Braided Ramp (SB from EL to MARTA/GP)
4. Partial SB Direct Merge (SB on) south of Northridge Road
5. Partial Direct Merge (NB on/SB off) north of Northridge Road
6. Partial Express lane interchange (south facing ramps) south of Holcomb Bridge Road

7. Full Direct Merge (NB/SB on/off) south of Haynes Bridge Road
8. Full Express lane interchange at Webb+ (new location roadway north of Webb Bridge Road)
9. Partial Express lane interchange (south facing ramps) at Union Hill Road
10. Begin/end system (via merge to GP) north of McFarland Parkway

POTENTIAL BUS RAPID TRANSIT (BRT) STATION LOCATIONS

1. near Holcomb Bridge Road
2. North Point Mall
3. Near Old Milton Parkway
4. Direct access to existing Park and Ride south of Windward Parkway

*Note: Access locations are subject to change through the Public Involvement process and through coordination with stakeholders (including local governments). BRT station locations are subject to change through coordination with MARTA. Concept report revision will be required if access locations change.

Major Structures:

Structure	Existing	Proposed
SR 400 NB EL over MARTA overpass/ramps	N/A	New Length: Unknown Width: 34.5 ft Lanes: 2 on, 1 under (Coordinate with PI 0001758 on design and construction)
SR 400 SB EL Exit to Cd Lanes (Braided ramp)	N/A	New 60' bridge deck that splits into 49 ft (2 lanes) and 40 ft (1 lane) bridge
Spalding Drive over SR 400 #121-0455-0	Length:356 ft Width:63 ft (52 ft road) Lanes: 4 on, 8 under (4 additional CD lanes being added under Spalding via PI 0013546)	Replace Length: 528 ft Width: 65 ft - 5 in Lanes: 4 on, 18 under
Pitts Road over SR 400 #121-0476-0	Length:236 ft Width:39.8 ft (30.2 ft road) Lanes: 2 on, 8 under	Replace Length: 266 ft Width: 41.42 ft Lanes: 2 on, 14 under
Northridge Road over SR 400 #121-5363-0	Length:315 ft Width:90 ft (82 ft road) Lanes: 5 on, 10 under	Retain* Lanes: 5 on, 10 under, 4 over
Roberts Drive over SR 400 #121-0316-0	Length:293 ft Width:40.7 ft (30 ft road) Lanes: 2 on, 8 under	Replace Length: 257 ft Width: 41.42 ft Lanes: 2 on, 13 under
SR 400 over Roberts Drive #121-0123-0	Length:135 ft Width:134 ft (129 ft road) Lanes: 8 on, 2 under	Replace Length: 135 ft Width: 211.75 ft Lanes: 12 on, 2 under
SR 400 EL over SR 400 GP (Wishbone)	N/A	New (1 SB and 1 NB) EL cross from outside to inside Lanes: 2 on (each direction), 16 under
SR 400 over Chattahoochee River/ Riverside Road # 121-0125-0	Length:679 ft Width:134 ft (128 ft road) Lanes: 8 on, 3 under	Widen* Width: 191.25 ft Lanes: 12 on, 3 under
Holcomb Bridge Road over SR 400 #121-0086-0	Length:302 ft Width:119.2 ft (119.2 ft road) Lanes: 9 on, 9 under	Retain* Requires Design Exception for shoulder width under bridge Lanes: 9 on, 14 under
Big Creek Parkway over SR 400	N/A	New- Design being coordinated with PI 0010874

SR 400 over Big Creek #121-0127-0	Length:183 ft Width:160.4 ft (144 ft road) Lanes: 9 on	Replace Length: H&H study required Lanes: 12
SR 400 over Mansell Road #121-0732-0	Length:200 ft Width:137.7 ft (132 ft road) Lanes: 8 on, 5 under	Widen* Width: 211 ft Lanes: 12 on, 5 under Requires Design Deviation for vertical clearance (substandard existing – 15 ft -11 in exist, 15 ft - 10 in proposed). A sign showing 15 ft – 8 in vertical clearance will be posted at this location.
Encore Parkway over SR 400 #121-5364-0	Length:302 ft Width:115.9 ft (54 ft road) Lanes: 4 on, 8 under	Retain* Lanes: 4 on, 14 under
Haynes Bridge Road over SR 400 #121-0303-0	Length:296 ft Width:114.3 ft (100 ft road) Lanes: 8 on, 9 under	Retain* Requires Design Exception for shoulder width under bridge Lanes: 8 on, 12 under
Kimball Bridge Road over SR 400 #121-0475-0	Length: 324 ft Width: 40.8 ft (30 ft road) Lanes: 2 on, 8 under	Design being coordinated with ALP-009a
Old Milton Parkway over SR 400 #121-0075-0	Length:304 ft Width:108.3 ft (94.1 ft road) Lanes: 8 on, 8 under	Retain* Requires DE for shoulder width under bridge Lanes: 8 on, 12 under
SR 400 @ Trib. #15 to Big Creek #121-0235-0	Double 10x8 Bridge Culvert with 45° bend at edge of pavement	Extend Culvert on both ends
Webb Bridge Road over SR 400 #121-0299-0	Length:296 ft Width:40.8 ft (30 ft road) Lanes: 2 on, 8 under	Design being coordinated with ALP-001-A
Webb+ over SR 400	N/A	New Proposed access location. Lanes 3 on, 10-12 under (BRT being coordinated with MARTA)
SR 400 over Windward Parkway #121-5295-0	Length:342 ft Width:139.2ft (133.6 ft road) Lanes: 7 on, 8 under	Widen* Lanes: 12 on, 8 under
SR 400 @ Camp Creek #121-0131-0	Double 10x10 Bridge Culvert	Extend Culvert on both ends
McGinnis Ferry Road over SR 400 #121-0285-0	Length:304 ft Width:34.4 ft (32 ft road) Lanes: 2 on, 4 under	Being reconstructed under PI 0007526
Union Hill Road over SR 400 #117-0031-0	Length:350 ft Width:34 ft (31.8 ft road) Lanes: 2 on, 4 under	Being Reconstructed under PEW09
Union Hill Access	N/A	New Access from EL to Union Hill Lanes: 2 on, 6 under
McFarland Parkway over SR 400 #117-0042-0	Length:310 ft Width:118.1 ft (102.5 ft road) Lanes: 8 on, 5 under (2 additional GP lanes added under PI 0013367)	Retain* Lanes: 8 on, 9 under Requires Design Deviation for vertical clearance (substandard existing – 15 ft – 4 in exist and proposed)

SR 400 NB over Big Creek #117-0024-0	Length:200 ft Width:61.2 ft (58 ft road) Lanes: 2 on (3rd GP lane being added under P.I. 0013367)	Widen* Widen to inside, becomes one bridge Lanes: 8 on
SR 400 SB over Big Creek #117-0025-0	Length: 200 ft Width: 61.2 ft (58 ft road) Lanes: 2 on (3rd GP lane being added under P.I. 0013367)	
Retaining walls	Existing Retaining Walls are present throughout the corridor	Retaining walls will be proposed at numerous locations throughout corridor
Noise Walls	Existing Noise Walls are located along corridor	Noise study will determine if Noise Walls are warranted. Existing noise walls to be maintained/replaced as required.

*See attached Bridge Condition Survey for suggested bridge repairs to be included as part of SR 400 Express Lane project. Exact repairs are being coordinated with GDOT Bridge Design and the Operation and Maintenance Design Build working group.

Accelerated Bridge Construction (ABC) techniques anticipated: ☒ No ☐ Yes
Accelerated Bridge Construction is not currently being proposed. However, DBFOM developer may propose as an ATC and would have to be approved on a case by case basis.

Mainline Design Features:
SR 400 General Purpose and Express Lanes

Feature	Existing	Policy	Proposed SR 400 GP	Proposed SR 400 EL
Typical Section:				
- Number of Lanes	4		4	2
- **Lane Width(s)**	**12 ft**	**12 ft**	**11 ft inside 3x12 ft outside**	**12 ft inside 11 ft outside**
- **Median Width & Type**	**N/A**	**N/A**	**N/A**	**N/A**
- **Outside Shoulder Width**	**14 ft (12 ft paved)**	**14 ft (12 ft paved)**	**14 ft (12 ft paved)**	**14 ft (12 ft paved)**
- **Outside Shoulder Slope**	2-3%	2-3%	2-3%	2-3%
- **Inside Shoulder Width**	**6 ft -10 in**	**12 ft (10 ft paved)**	**6 ft -10 in**	**6 ft -10 in**
- **Sidewalks**	**N/A**	**N/A**	**N/A**	**N/A**
- Auxiliary Lanes				
- **Bike Accommodation**	**N/A**	**N/A**	**N/A**	**N/A**
- Posted Speed	65		65	65
Design Speed	**65**	**65**	**65**	**65**
Minimum Horizontal Curve Radius	**2300**	**1660**	**2230**	**2279**
Maximum Superelevation Rate	**5.6%**	**6%**	**5.6%**	**5.6%**
Maximum Grade	**3.8%**	**5%**	**5%**	**6.5%**
Access Control	**Limited Access**	**Limited Access**	**Limited Access**	**Limited Access**
Design Vehicle			WB-67	BUS-60
Check Vehicle	N/A		N/A	N/A
Pavement Type	PCC		Developer Decision	Developer Decision

*According to current GDOT design policy if applicable

Collector Distributor (currently under construction Transform 285/400 CD lanes – P.I. No. 0013546) (within construction limits)

Feature	Existing	Policy	Proposed
Typical Section:			
- Number of Lanes	2		2
- **Lane Width(s)**	**12 ft**	**12 ft**	**12 ft**
- **Median Width & Type**	**N/A**	**N/A**	**N/A**
- **Outside Shoulder Width**	**9 ft**	**12 ft (10 ft paved)**	**4 ft**
- **Outside Shoulder Slope**	**2:1**	**2:1**	**2:1**
- **Inside Shoulder Width**	**8'**	**8'**	**4'**
- **Sidewalks**	**N/A**	**N/A**	**N/A**
- Auxiliary Lanes			
- **Bike Accommodation**	**N/A**	**N/A**	**N/A**
Posted Speed	45		45
Design Speed	**45**	**45**	**45**
Minimum Horizontal Curve Radius	**3477**	**643**	**5812**
Maximum Superelevation Rate	**2.6%**	**6%**	**2%**
Maximum Grade	**3.6%**	**5%**	**3.6%**
Access Control	**RAMP**	**RAMP**	**RAMP**
Design Vehicle	WB-67		WB-67
Check Vehicle	N/A		N/A
Pavement Type	Asphalt		Asphalt

*According to current GDOT design policy if applicable
See attachment 13 – Design Criteria Table for additional Design Criteria

Is the project located on a NHS roadway? ☐ No ☒ Yes

Design Exceptions/Design Variances to FHWA or GDOT Controlling Criteria anticipated:

FHWA or GDOT Controlling Criteria	No	Undeter-mined	Yes	DE or DV	Approval Date (if applicable)
1. Design Speed	☒	☐	☐		
2. Design Loading Structural Capacity	☒	☐	☐		
3. Stopping Sight Distance	☒	☐	☐		
4. Horizontal Curve Radius	☒	☐	☐		
5. Maximum Grade	☐	☐	☒	DE	
6. Vertical Clearance	☒	☐	☐		
7. Superelevation Rate	☐	☐	☒	DE	
8. Lane Width	☐	☐	☒	DE	
9. Cross Slope	☐	☐	☒	DE	
10. Shoulder Width	☐	☐	☒	DE	

A design exception for maximum grade will be required for the northbound express lanes to allow direct access to the MARTA North Springs station without precluding the future expansion of the heavy rail line. The maximum proposed grade of 6.5% (downgrade) allows the express lanes to go over the existing southbound flyover to the station and be back at grade by the end of the existing MARTA tracks.

A design exception for lane width is being requested for the outside express lane and the inside general purpose lane. Allowing the use of eleven (11) foot lanes and a two (2) foot buffer maintains the existing concrete joint lines on the proposed lane line striping reducing the potential for confusion for the driver.

A design exception is being requested to maintain the existing 6'-10" inside shoulder width on SR 400. In addition all new inside shoulders would be proposed to be 6'-10" for consistency. Design exceptions for outside shoulder width will also be requested at point locations for bridge retention. In addition design exception will be required for proposed 4 foot shoulders on CD Lanes, Express Lanes, and Ramp in the area of North Springs MARTA station to prevent impacts to the existing MARTA tracks and to not preclude future expansion.

Preliminary mapping DTM analysis appears to show majority of SR 400 has existing cross slope less than the required 1.5% in tangents and less than the required superelevation in curves. A design exception will be requested to retain the substandard cross slopes.

Design Variances to GDOT Standard Criteria anticipated:

GDOT Standard Criteria	Reviewing Office	No	Undeter--mined	Yes	Approval Date (if applicable)
1. Access Control	DP&S	☒	☐	☐	
2. Shoulder Width	DP&S	☒	☐	☐	
3. Intersection Sight Distance	DP&S	☐	☒	☐	
4. Intersection Skew Angle	DP&S	☒	☐	☐	
5. Tangent Lengths on Reverse Curves	DP&S	☒	☐	☐	
6. Lateral Offset to Obstruction	DP&S	☒	☐	☐	
7. Rumble Strips	DP&S	☒	☐	☐	
8. Safety Edge	DP&S	☒	☐	☐	
9. Median Usage	DP&S	☒	☐	☐	
10. Roundabout Illumination Levels	DP&S	☒	☐	☐	
11. Complete Streets Warrants	DP&S	☒	☐	☐	
12. ADA Requirements in PROWAG	DP&S	☒	☐	☐	
13. GDOT Construction Standards	DP&S	☒	☐	☐	
14. GDOT Drainage Manual	DP&S	☒	☐	☐	

There are several intersections located in close proximity to the bridge overpasses (i.e. Pitts Road and Colquitt Road) for which the intersection sight distance from the cross street may be obstructed by the bridge parapet. This analyze will be completed once further design refinement has occurred and efforts will be taken to provide proper sight distance as feasible.

VE Study anticipated: ☒ No ☐ Yes ☐ Completed – Date:
A VE study is not required for Design-Build contracts.

Lighting Required: ☐ No ☒ Yes
A lighting study is underway to determine potential lighting locations. In addition, it is anticipated that MARTA will be responsible for lighting the BRT station locations once they are built under a separate project.

Off-site Detours Anticipated: ☐ No ☒ Undetermined ☐ Yes
If yes: Roadway type to be closed: ☐ Local Road ☐ State Route
Detour Route selected: ☐ Local Road ☐ State Route
District Concurrence w/Detour Route: ☐ No/Pending ☐ Received
No detour is currently proposed. However, DBFOM developer may propose a detour as part of the ATC process. All ATCs require approval prior to implementation and additional coordination may be required. Pre-let stakeholder coordination is proposed to discuss viability of detours of overpasses so any required detour restrictions can be written into the DBFOM contract.

Transportation Management Plan [TMP] Required: ☐ No ☒ Yes
If Yes: Project classified as: ☐ Non-Significant ☒ Significant

TMP Components Anticipated: ☒ TTC ☒ TO ☒ PI

INTERSECTIONS AND INTERCHANGES

Interchanges/Major Intersections:
Existing General Purpose Interchanges:
- Northridge Road
- SR 140/Holcomb Bridge Road
- Mansell Road
- Haynes Bridge Road
- SR 120/Old Milton Parkway
- Windward Parkway
- McGinnis Ferry Road (proposed GDOT P.I. No. 0007526)
- McFarland Parkway

Proposed Express Lane Interchanges:
- NB enter from MARTA North Springs (EL/CD option at MARTA station)
- South of Holcomb Bridge Road (south facing ramps only)
- Webb+ (new location roadway north of Webb Bridge Road)
- Union Hill Road (south facing ramps only)

Intersection Control Evaluation (ICE) Required: ☐ No ☒ Yes

Roundabout Peer Review Required: ☒ No ☐ Yes ☐ Completed – Date:

UTILITY AND PROPERTY

Railroad Involvement:
MARTA's North Springs station is located at the southern terminus of the project. Currently this is the end of the Red Line; however, there is a desire to extend the Red Line further north. The current preferred expansion is Bus Rapid Transit (BRT) due to cost concerns, but even with planned BRT in the corridor, the City of Sandy Springs has already mentioned a desire to extend the heavy rail to Northridge Road. With desired expansion, the Express Lane project needs to be designed as to not preclude the future expansion of the heavy rail. Coordination with MARTA will be required and is on-going.

Utility Involvements:
Atlanta Gas Light (AGL) gas
ATT Distribution - telecommunications
City of Alpharetta - traffic control
City of Atlanta – water/sewer
CenturyLink – telecommunications
Colonial Pipeline – gas
Crown Castle NG – telecommunications
Fiberlight – telecommunications
Forsyth County – water/sewer
Fulton County – water/sewer
GDOT – ITS/ATMS
Georgia Power Distribution – electric/telecommunications
Georgia Power Transmission – electric/telecommunications
Google Fiber – telecommunication
Level 3 Communication – telecommunication
Mansell Ridge Master – irrigation
MARTA – electric
Sawnee – electric/telecommunication
Southern Light – telecommunication
Verizon – telecommunication
ZAYO Fiber Solutions - telecommunication

SUE Required: ☐ No ☒ Yes ☐ Undetermined

Public Interest Determination Policy and Procedure recommended: ☐No ☒Yes

Right-of-Way (ROW): Existing width: 300-500 ft. Proposed width: 300-650ft.
Required Right-of-Way anticipated: ☐None ☒Yes ☐Undetermined
Easements anticipated: ☐None ☒Temporary ☒Permanent ☒Utility ☐Other
Permanent easements will be acquired with rights to place utilities.

Anticipated total number of impacted parcels: 226
Displacements anticipated: Businesses: 4
Residences: 41
Other: 0
Total Displacements: 45

Location and Design approval: ☐ Not Required ☒ Required

Impacts to USACE property anticipated: ☐ No ☐ Yes ☒ Undetermined
It is currently unclear if easements are required for new piers in the Chattahoochee River. GDOT right of way appears to extend across river, but the riverbed itself is still under Corps of Engineer purview.

CONTEXT SENSITIVE SOLUTIONS

Issues of Concern:
MARTA Bus Rapid Transit (BRT) – MARTA anticipates running a BRT route in the Express Lanes with proposed in-line stations requiring extensive agency coordination.

MARTA Heavy Rail Transit (HRT) – While the currently preferred alternative is BRT, future expansion of the HRT north of the MARTA North Springs Transit Station is still desired.

Pedestrian Trails – There are multiple existing and proposed multi-use trails either crossing SR 400 right-of-way or in the vicinity of the right of way.

Alpharetta Tree Buffer – Alpharetta desires to maintain a 100 foot vegetation buffer from SR 400 to developments.

National Park Services/Chattahoochee River – National Park Services operates the Chattahoochee River National Recreation Area adjacent to existing SR 400 right-of-way. The Chattahoochee River functions as a recreational waterway with year round river traffic.

Gateway Features/Betterments – Cities along the corridor desire the overpasses being replaced as part of the SR 400 project to incorporate City Gateway features and/or conform to specific visual design elements.

Public Involvement – The SR 400 corridor is a heavily traveled thoroughfare with varying land use and stakeholders and will require an extensive public involvement process.

Context Sensitive Solutions Proposed:
MARTA BRT – Extensive coordination with MARTA and their consultant is required to ensure design of the BRT stations serve the intended purposes without unduly impacting the design, function, and cost of the Express Lanes. This coordination begun with a series of FISH-Finder workshops where access for both the EL and the BRT stations was discussed and has continued as refinement of alternatives/access has occurred. Coordination will be required throughout the design and procurement of the two projects to ensure a seamless multi-modal corridor. Portions of the BRT stations (pavement and walls) will by necessity be built as part of the Express Lane project.

MARTA HRT – As the future expansion of MARTA heavy rail is still desired, the SR 400 Express Lanes project has been designed so as not to preclude this future expansion. This primarily affected the design of the express lanes at Spalding Drive and was a catalyst for pursuing the at-grade tie-in option of staying at-grade under the Spalding Drive overpass. This prevented the express lanes from having to be 4th level over Spalding Drive and locking MARTA's future expansion design into a 3rd level envelope both vertically and horizontally (between SR 400 bridge piers).

Pedestrian Trails – As part of the public outreach for SR 400 Express Lanes, multiple pedestrian path stakeholders have been identified and made aware of the SR 400 project. Coordination will be on-going to ensure the proposed trails are accommodated and not precluded due to the construction of SR 400 Express Lanes.

Alpharetta Tree Buffer – Design through Alpharetta will be minimized to accommodate as much of the 100 foot tree buffer as feasible. This will include the use of walls, guardrails, and steeper side slopes though the city limits.

National Park Services/Chattahoochee River – Extensive coordination with National Park Services (NPS) has occurred to date and will continue throughout the design process. As the Chattahoochee River is used for recreational boating, including several concessionaires, coordination with the recreational stakeholders is also planned. Additional construction restrictions (seasonal and/or means and methods) on the Chattahoochee River crossing bridge are likely and will be resolved through coordination with NPS. In addition to avoid impacts to the National Recreational Area, a wall is proposed from the SR 400 over Roberts Drive bridge to the Chattahoochee River bridge.

Gateway Features/Betterments – As cities express interest in additional gateway features, MOUs will be entered into between GDOT and the cities. These MOUs will dictate responsibilities of each party to include both construction elements and financial elements.

Public Involvement – An extensive public involvement process is proposed through the SR 400 Public Involvement Plan. This includes reaching out to government stakeholders, CIDs, board of commissioners, chamber of commerces, homeowner associations, apartment complexes, environmental education and advocacy groups, and emergency responders in advance of the Public Information Open House (PIOH) to introduce them to the project and make them aware of the PIOH process. In addition, translators will be provided at the PIOH for, at a minimum: Russian, Spanish, Portuguese, and Korean to serve the Limited English Proficiency communities along the corridor.

ENVIRONMENTAL & PERMITS

Anticipated Environmental Document:

NEPA:	☐ PCE	☐ CE	☒ EA-FONSI	☐ EIS	
GEPA:	☐ Type A	☐ Type B	☐ EER	☐ None	

Level of Environmental Analysis:

☐ The environmental considerations noted below are based on preliminary desktop or screening level environmental analysis and are subject to revision after the completion of resource identification, delineation, and agency concurrence.

☒ The environmental considerations noted below are based on the completion of resource identification, delineation, and agency concurrence.

Water Quality Requirements:

MS4 Permit Compliance – Is the project located in a MS4 area? ☐ No ☒ Yes

Is Non-MS4 water quality mitigation anticipated? ☒ No ☐ Yes

Environmental Permits/Variances/Commitments/Coordination anticipated:

Permit/Variance/Commitment/ Coordination Anticipated	No	Yes	Remarks
1. U.S. Coast Guard Permit	☒	☐	
2. Forest Service/NPS	☐	☒	Coordination with NPS is ongoing. Also see 11 & 12 below
3. CWA Section 404 Permit	☐	☒	Individual Permit anticipated
4. Tennessee Valley Authority Permit	☒	☐	
5. USACE Real Estate Outgrant	☒	☐	
6. Buffer Variance	☐	☒	To be confirmed as project develops
7. Coastal Zone Management Coordination	☒	☐	
8. NPDES	☐	☒	Anticipated for land disturbances over 1 acre
9. FEMA	☐	☒	
10. Cemetery Permit	☒	☐	
11. Other Permits	☐	☒	A Special Use Permit and Highway Easement Deed will be required from NPS
12. Other Commitments	☐	☒	NPS Commitment Letters
13. Other Coordination	☒	☐	

Is a PAR required? ☐ No ☒ Yes ☐ Completed – Date:
A PAR is being prepared for spring 2019.

Environmental Comments and Information:
NEPA/GEPA: The proposed project will be documented in an Environmental Assessment/Finding of No Significant Impact. The adjoining parcels in the northeast and southeast quadrants of the Chattahoochee River crossing are owned by National Park Service (NPS) Chattahoochee River National Recreational Area (CRNRA) and coordination with them was initiated in November 2017 and is ongoing. An August 2018 Agency Coordination Plan has been drafted for coordinating public and agency participation and for comment on the environmental review process for the project. It will be considered to be a living document for use throughout the project development process.

Coordination has also been initiated with local governments concerning parkland, trails and other community resources within and adjacent to the SR 400 corridor. Environmental justice (EJ), elderly and Limited English Proficiency (LEP) communities were identified in the project area through desktop analysis and field verification in May 2018. Target outreach to these communities is proposed as a part of the public outreach process.

Potential Section 4f resources are identified in the project corridor: City of Alpharetta and Roswell trails; Fulton County School playgrounds used for public recreation; and recreational areas of the Chattahoochee River crossing and adjoining NPS parcels. Section 4f *de minimis* impacts will require concurrence from the agencies with jurisdiction over these Section 4f resources. A review of the Inter-government Agreement between Fulton County Schools and Sandy Springs Parks & Recreation, determines that Section 4f would not apply.

A Section 404 mitigation site (Foe Killer Creek mitigation site) is located on the northwest and southwest quadrant of Mansell Road and SR 400. Any potential impacts to the mitigation site will require an Individual Permit, coordination with USACE, and documentation to demonstrate avoidance and minimization measures being considered for the project.

Roadways that intersect SR 400 may have some USTs. A Phase 1 Environmental Site Assessment (ESA) is anticipated to assess these areas for potential presence of USTs.

Ecology: The project corridor was surveyed for ecological resources in 2017 and 2018. A total of 46 perennial streams, 35 intermittent streams, 34 wetlands, and 7 open waters were identified within the Environmental Survey Boundary (ESB). In addition, 1 buffered state water and 93 non-buffered state waters have been identified within the project corridor.

Protected Species - Suitable habitat was identified for several state and federal-protected species that have the potential to occur within the project corridor. A protected species aquatic survey for the Chattahoochee crayfish (*Cambarus howardi*), bluestripe shiner (*Cyprinella callitaenia*), and highscale shiner (*Notropis hypsil*epis) was conducted in 2017. Individuals of the Chattahoochee crayfish were identified in two streams. A protected plant species survey was conducted for pink ladyslipper (*Cypripedium acaule*), bay star-vine (*Schisandra glabra*), and Georgia aster (*Symphyotrichum georgianum*) within the ESB in June, July and October 2017 and May 2018. Populations of pink ladyslipper were found in the ESB. No populations of bay star-vine and Georgia aster were identified.

Bats - Forsyth County is within the range for the federally protected northern long-eared (NLE) bat. Suitable roosting and foraging habitat were observed within culverts in the survey area.

History: The Area of Potential Effect (APE) was surveyed in 2017 and resources identified in the Historic Resources Survey Report (HRSR). No National Register of Historic Places (NRHP) eligible historic resources were identified. Previously unsurveyed areas were reviewed in Summer 2018 and 5 additional historic resources were identified within the project APE. An addendum HRSR is in progress. Should historic properties be affected by the project, the impacts would be documented in an Assessment of Effects Report.

Archeology: An archaeology resources survey was conducted in 2017 and 2018. Prior to fieldwork, desktop review identified 17 previously recorded archaeological sites within the ESB. Of the sites visited during the field survey, 13 were ineligible for NRHP and six (6) sites had unknown NRHP eligibility. One site was recommended eligible for NRHP, but fell within NPS property. An Archaeological Resources Protection Act (ARPA) permit was obtained on November 9, 2018 to conduct in-water work in the Chattahoochee River which is under the jurisdiction of the NPS. The draft Phase I Underwater Archaeology Survey Report is currently under review with NPS. No further archaeological work is recommended within the ESB. An Assessment of Effects Report would be prepared to document impacts to archaeological resources.

Air Quality:

Is the project located in an Ozone Non-attainment area?	☐ No	☒ Yes
Is a Carbon Monoxide hotspot analysis required?	☐ No	☒ Yes

Noise Effects: This is a Type I project. Noise analysis will be modeled using the Traffic Noise Model, version 2.5. The location and feasibility of noise barriers and other mitigation measures is unknown at this time.

Public Involvement: As noted above, stakeholder engagement with local governments and agencies is ongoing. Community stakeholder outreach occurred in January and February 2019. Five Public Information Open Houses (PIOHs) were held planned for the project as follows:

1. February 28, 2019 from 11:00 a.m. to 2:00 p.m. at the Hilton Garden Inn Atlanta North/Alpharetta, 4025 Windward Plaza, Alpharetta, GA 30005.
2. February 28, 2019 from 4:30 p.m. to 7:30 p.m. at the Hilton Garden Inn Atlanta North/Alpharetta, 4025 Windward Plaza, Alpharetta, GA 30005.
3. March 5, 2019 from 4:30 p.m. to 7:30 p.m. at the Forsyth Conference Center 3410 Ronald Reagan Blvd, Cumming, GA 30041.
4. March 7, 2019 from 4:30 p.m. to 7:30 p.m. at the Roswell DoubleTree Hotel, 1075 Holcomb Bridge Road, Roswell, GA, 30076.

5. March 12, 2019 from 4:30 p.m. to 7:30 p.m. at the City Springs, 1 Galambos Way, Sandy Springs, GA 30328.

Russian, Spanish, Portuguese, Korean and potentially other translators may be needed during public involvement efforts. A Public Hearing Open House will be held before adoption of the Final EA/FONSI.

Major stakeholders: Traveling public, MARTA, NPS, Fulton County Schools, homeowners associations, apartment complex managers/owners, residents, recreation groups, users of the Chattahoochee River and park land along the corridor, local governments, environmental education and advocacy organizations, Perimeter Community Improvement District, North Fulton Community Improvement District, emergency responders, and businesses.

CONSTRUCTION

Issues potentially affecting constructability/construction schedule:
Chattahoochee River Crossing: The Chattahoochee River serves as a major recreational resource and is under the jurisdiction of the National Park Services. Coordination with National Park Services is on-going to discuss how and when to construct the bridge widening. Seasonal restrictions and/or construction method restrictions are probable. In addition the water level in the Chattahoochee is dictated by the release of water at the upstream dam and can vary greatly depending on how much water is released.

Utility Coordination: As part of the DBFOM contract, the developer will be required to coordinate utility relocations/designs. On other Design Build projects this has caused construction delays. In order to avoid these delays, additional coordination is being done on the costing plans/pre-let side to ensure all utilities are aware of potential conflicts. Along with this coordination, design alternatives have been developed to avoid major utility conflicts with Georgia Power Transmission between Spalding Drive and Pitts Road and City of Atlanta 48" waterline from Northridge Road to Holcomb Bridge Road. Coordination with these (and other utilities) is already underway.

MARTA: MARTA North Springs is located at the southern terminus of the project. While no existing track is proposed to be relocated, construction work will be occurring next to the existing elevated track and coordination with MARTA will be required to ensure the safety and operability of the track during construction.

Step-down Culverts: The original construction of SR 400 in the late 1960s/early 1970s included the use of step down culverts designed with a variable height of fill. If additional fill is required on the existing slopes, this could present a challenge in replacing sections of existing culverts.

SR 400 traffic: SR 400 is a major north-south, limited-access expressway so any proposed temporary lane closures will need to be done during off-peak hours. This includes traffic pacing for beam setting on the new overpass bridges. In addition any long term lane closures could impact traffic on the entire north Atlanta transportation network.

Early Completion Incentives recommended for consideration: ☒ No ☐ Yes

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Federal Aviation Administration (FAA) coordination anticipated: ☒No ☐ Yes

Initial Concept Meeting: *N/A*

Concept Meeting: December 10, 2018

Other coordination to date:

Project Activity	Party Responsible for Performing Task(s)
Concept Development	AECOM (GEC)
Design	DBFOM Developer
Right-of-Way Acquisition	GDOT/DBFOM Developer
Utility Coordination (Preconstruction)	DBFOM Developer/PID
Utility Relocation (Construction)	DBFOM Developer/PID
Letting to Contract	GDOT/HNTB (PMC)
Construction Supervision	DBFOM Developer
Providing Material Pits	DBFOM Developer
Providing Detours	DBFOM Developer
Environmental Studies, Documents, & Permits	AECOM (GEC)/DBFOM Developer
Environmental Mitigation	DBFOM Developer
Construction Inspection & Materials Testing	DBFOM Developer

Project Cost Estimate Summary and Funding Responsibilities:

	PE Activities		ROW	Design-Build CST**	O&M	Total Cost
	PE Funding	Section 404 Mitigation				
$ Amount	$55.4M	$11.4M	$222.5	$772.7M	$199M	$1,261M
Date of Estimate	6/2017	10/2018	1/2019	4/2018	6/2018	

*The utility cost estimate will be finalized after SUE is completed. Utility costs totaling approximately 3% of raw construction costs have been assumed for estimating purposes.

**Design-Build CST includes Construction, Design Complete, and Utility relocation.

ALTERNATIVES DISCUSSION

Alternative selection:

Preferred Alternative: At-grade Southern Terminus			
Estimated Property Impacts:	226 Parcels	**Estimated Total Cost:**	$1,261M
Estimated ROW Cost:	$222.5M	**Estimated CST Time:**	36 months

Rationale:
The southern terminus of the express lanes is proposed to go under the Spalding Drive overpass. The construction cost is less than being aerial flying over Spalding Drive and better accommodates future expansion of the MARTA red line.
The 11 foot outside EL and inside GP and a 2 foot buffer ensures that the existing concrete joints align with proposed lane lines. This will reduce maintenance requirements and provide a cleaner striping plan.
In the southbound direction, the express lanes are proposed to provide access to MARTA or SB GP lanes via a braided ramp structure. This allows the Bus Rapid Transit (BRT) buses to go from the express lanes to the MARTA without having to merge. While this option has an added cost (over a slip ramp/weave connection), it also provides an operational advantage.
In the northbound direction, MARTA North Springs transit station will have an exit that allows direct connection to both the express lanes and the CD lanes. This connection is a desire both for MARTA BRT and the local government (City of Sandy Springs). The driver leaving MARTA will make the decision of tolled EL vs non-tolled CD lanes at the station, versus having to make the decision further downstream.

No-Build Alternative: The no-build would not construct the express lanes on SR 400.			
Estimated Property Impacts:	0	**Estimated Total Cost:**	0
Estimated ROW Cost:	0	**Estimated CST Time:**	0
Rationale: Not providing express lanes would result in increased congestion and would eliminate a travel mode choice providing a reliable trip time.			

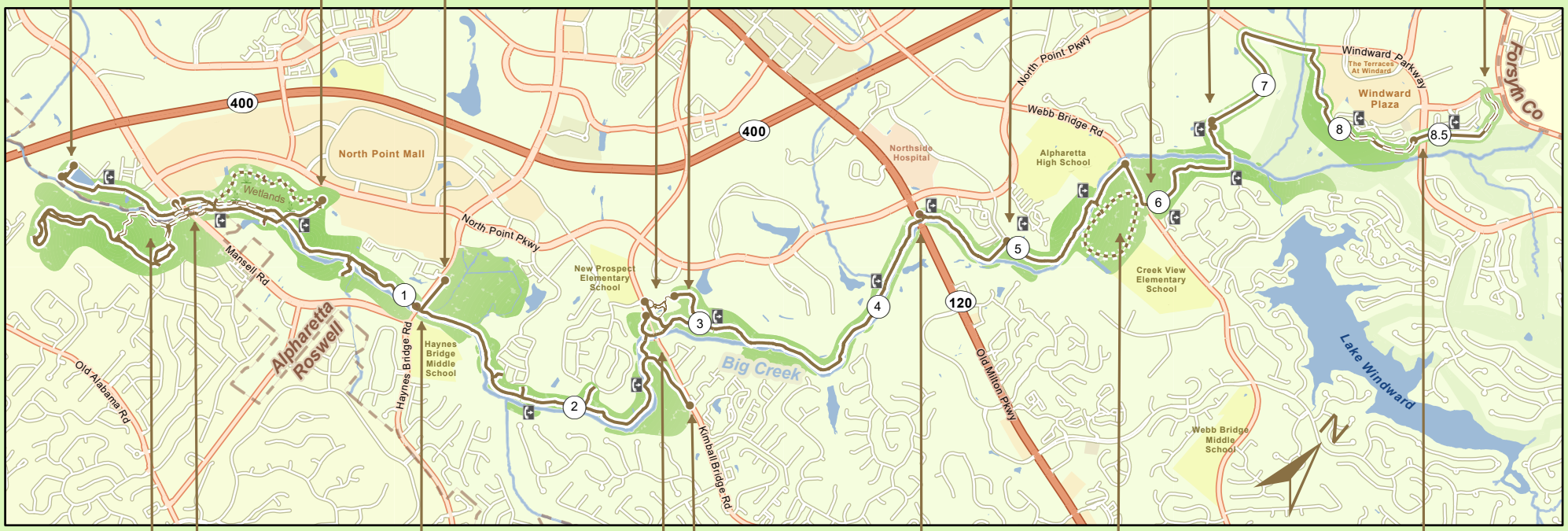
Alternative Access Points examined:

Alternative Access Point	Why Access was removed
Old Alabama – Dogwood Access including separate Chattahoochee River bridge	Impacts to National Park Service
Big Creek Parkway (City of Roswell project)	City of Roswell does not support access
Buffer Break Between Holcomb Bridge and Mansell Road	Existing Spacing between exits precludes, additional of BRT
Kimball Bridge Road	City of Alpharetta does not support access
Buffer Break Between Old Milton Parkway and Windward Parkway	Addition of Webb+ EL access and BRT access to Windward Parkway precludes
Buffer Break between Windward Parkway and McGinnis Ferry Road	Existing Spacing between exits precludes, With Webb+ access is redundant access
McGinnis Ferry Road	Project programmed as a general purpose interchange

Alternative Typical Sections considered:

Alternative Typical Section	Why Typical section is not being used
2 – Lane reversible	Existing traffic does not show a strong directional split as both directions are congested during AM and PM peak periods. This option would not address congestion on reverse commutes.
12 ft EL and GP lanes with a 4' Buffer	Widening for this typical section would place existing joint lines in the wheel path of the proposed lanes creating a safety and maintenance issue.
Completely Barrier Separated Section	To provide a completely barrier separated section would required the addition of inside and outside shoulders which represents an added project cost. This option would also require replacement of additional overpasses.

The Big Creek Greenway



Map Legend

- Parking
- Restrooms
- Emergency Call Box
- (1) Mile Markers
- Concrete Greenway
- Natural Trail
- Boardwalk

Approximate Scale:
1 inch = 0.5 miles

Greenway Mileage Chart	Roswell- Alpharetta Access Point	Beaver Creek Rd	Mansell Rd Access	North Point Pkwy Parking Lot	Haynes Bridge Rd Parking Lot	Fire Station 6	Rock Mill Park	Old Milton Pkwy Access	YMCA Parking Lot	Webb Bridge Rd Access	Marconi Dr Parking Lot	Union Hill Park
Roswell- Alpharetta Access Point	-	0.88	0.18	0.53	1.28	2.91	3.01	4.47	4.95	5.74	6.72	8.90
Beaver Creek Rd	0.88	-	0.62	1.30	2.04	3.68	3.70	5.25	5.71	6.58	7.49	9.67
Mansell Rd Access	0.18	0.62	-	0.68	1.42	3.06	3.08	4.63	5.09	5.96	6.87	9.05
North Point Pkwy Parking Lot	0.53	1.30	0.68	-	1.15	2.79	2.77	4.36	4.82	5.70	6.60	8.78
Haynes Bridge Rd Parking Lot	1.28	2.04	1.42	1.15	-	1.98	2.00	3.55	4.00	4.89	5.79	7.97
Fire Station 6	2.91	3.68	3.06	2.79	1.98	-	0.64	2.16	2.61	3.50	4.40	6.58
Rock Mill Park	3.01	3.70	3.08	2.77	2.00	0.64	-	1.79	2.26	3.14	4.05	6.23
Old Milton Pkwy Access	4.47	5.25	4.63	4.36	3.55	2.16	1.79	-	0.50	1.39	2.29	4.47
YMCA Parking Lot	4.95	5.71	5.09	4.82	4.00	2.61	2.26	0.50	-	0.88	1.78	3.96
Webb Bridge Rd Access	5.74	6.58	5.96	5.70	4.89	3.50	3.14	1.39	0.88	-	0.90	3.08
Marconi Dr Parking Lot	6.72	7.49	6.87	6.60	5.79	4.40	4.05	2.29	1.78	0.90	-	2.18
Union Hill Park	8.90	9.67	9.05	8.78	7.97	6.58	6.23	4.47	3.96	3.08	2.18	-

Framework Plan

CONCLUSION

The North Point Development Framework Plan (pictured on the right) provides a long-term vision for the future of the North Point District.

A grid of proposed streets utilizing existing signalized intersections and parking lot access roads is overlaid across the district to create a series of “superblocks” that can be subdivided into walkable sub-districts as redevelopment occurs. Three of these connections extend beyond the district boundary to integrate with the regional transportation network, thereby increasing access into and out of the district.

A network of trails and parks are layered into the district. The trails leverage and expand upon the existing Big Creek Greenway to improve access to this important regional asset while interconnecting the district with an active transportation network. A series of dynamic park spaces anchor each of the sub-districts, revealing and repairing the pre-development character of the hydrologic systems and acting as catalysts for mixed-use development.

The remaining “white space” is left to the imagination of the private landowners and development community. To aid landowners and developers as they embark on redevelopment, this study offers a series of development typologies ranging from low-mid density residential to mid-density mixed-use and office. A series of phased test fits are included to show how each of the component parts might be integrated to redefine North Point as a green, walkable, mixed-use district that sets a new standard for converting vehicular landscapes to fine-grained urban realms.



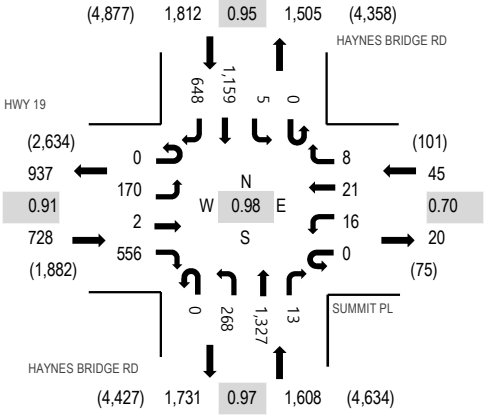
APPENDIX E

Raw Traffic Count Data

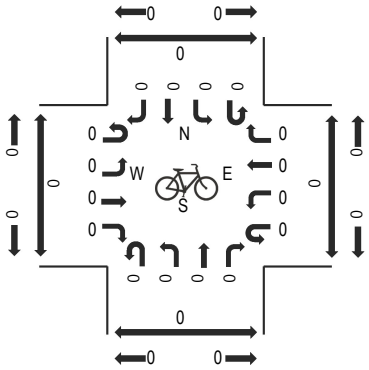
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 HAYNES BRIDGE RD & SUMMIT PL PM
Date: Thursday, April 16, 2026
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

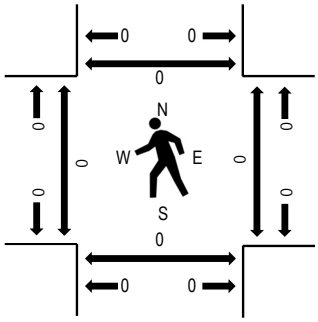
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 19 Eastbound				SUMMIT PL Westbound				HAYNES BRIDGE RD Northbound				HAYNES BRIDGE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	38	2	96	0	4	2	2	0	73	309	3	0	2	256	199	986	4,102	1	0	0	0
4:15 PM	0	37	0	102	0	3	3	2	0	66	331	2	0	3	249	205	1,003	4,189	0	0	0	0
4:30 PM	0	46	0	133	0	2	4	2	0	62	328	2	0	1	288	195	1,063	4,193	0	0	0	0
4:45 PM	0	52	2	147	0	4	6	0	0	63	331	0	0	1	285	159	1,050	4,155	0	0	0	0
5:00 PM	0	36	0	153	0	4	10	2	0	80	327	6	0	2	284	169	1,073	4,080	0	0	0	0
5:15 PM	0	36	0	123	0	6	1	4	0	63	341	5	0	1	302	125	1,007	3,906	0	0	0	0
5:30 PM	0	33	3	132	0	0	5	0	0	38	377	8	0	1	279	149	1,025	3,816	1	0	0	0
5:45 PM	0	27	1	118	0	1	3	0	0	58	340	3	0	3	250	171	975	3,584	0	0	0	0
6:00 PM	0	37	0	103	0	4	2	3	1	57	325	3	1	2	223	138	899	3,312	0	0	0	0
6:15 PM	0	59	0	132	0	4	1	2	0	55	321	4	1	1	207	130	917		0	0	0	0
6:30 PM	0	32	0	95	0	3	0	4	0	42	297	5	1	1	199	114	793		0	0	0	0
6:45 PM	0	17	1	89	0	5	2	1	0	47	256	5	0	2	141	137	703		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	6	0	0	0	3	5	14
Lights	0	164	2	554	0	16	21	8	0	268	1,293	13	0	5	1,142	634	4,120
Mediums	0	6	0	2	0	0	0	0	0	0	28	0	0	0	14	9	59
Total	0	170	2	556	0	16	21	8	0	268	1,327	13	0	5	1,159	648	4,193

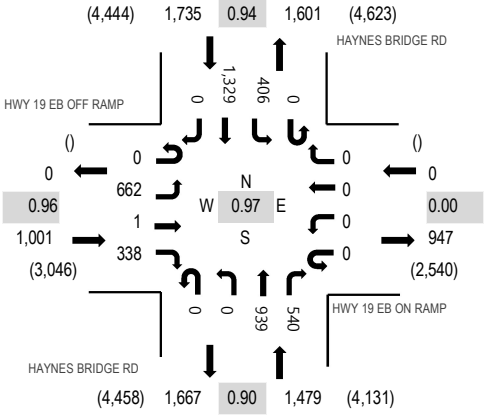
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.1%				0.0%				2.1%				1.7%			1.7%
Heavy Vehicle %	0.0%	3.5%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	1.5%	2.2%	1.7%
Peak Hour Factor		0.91				0.70				0.97				0.95			0.98
Peak Hour Factor	0.00	0.83	0.42	0.91	0.00	0.67	0.58	0.63	0.25	0.85	0.92	0.69	0.75	0.58	0.96	0.92	0.98

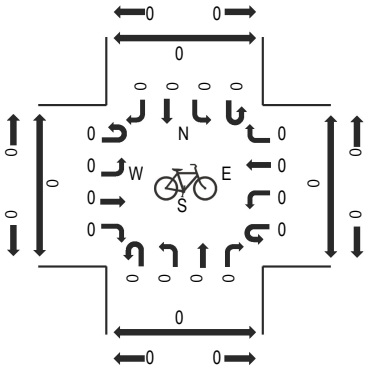
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 HAYNES BRIDGE RD & HWY 19 EB ON RAMP PM
Date: Thursday, April 16, 2026
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

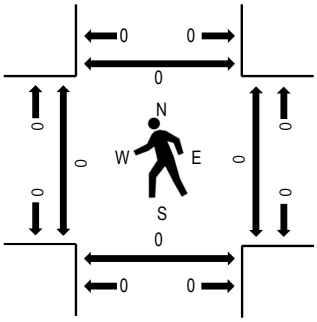
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 19 EB OFF RAMP Eastbound				HWY 19 EB ON RAMP Westbound				HAYNES BRIDGE RD Northbound				HAYNES BRIDGE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	157	0	93	0	0	0	0	0	0	217	164	0	113	261	0	1,005	4,058	0	0	0	0
4:15 PM	0	174	0	90	0	0	0	0	0	0	239	156	0	86	254	0	999	4,132	0	0	0	0
4:30 PM	0	185	0	74	0	0	0	0	0	0	204	137	0	99	312	0	1,011	4,215	0	0	0	0
4:45 PM	0	152	0	94	0	0	0	0	0	0	237	109	0	110	341	0	1,043	4,215	0	0	0	0
5:00 PM	0	162	0	89	0	0	0	0	0	0	256	158	0	88	326	0	1,079	4,095	0	0	0	0
5:15 PM	0	163	1	81	0	0	0	0	0	0	242	136	0	109	350	0	1,082	3,980	0	0	0	0
5:30 PM	0	196	0	81	0	0	0	0	0	0	222	116	0	77	319	0	1,011	3,837	1	0	0	0
5:45 PM	0	191	0	92	0	0	0	0	0	0	218	87	0	63	272	0	923	3,678	0	0	0	0
6:00 PM	0	175	0	86	0	0	0	0	0	0	205	118	0	95	285	0	964	3,468	0	0	0	0
6:15 PM	0	186	0	80	0	0	0	0	0	0	213	123	0	63	274	0	939		0	0	0	0
6:30 PM	0	150	0	84	0	0	0	0	0	0	187	121	0	50	260	0	852		0	0	0	0
6:45 PM	0	143	0	67	0	0	0	0	0	0	149	117	0	44	193	0	713		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	6	0	0	0	0	0	0	0	0	0	0	0	3	0	0	9
Lights	0	649	1	338	0	0	0	0	0	0	917	538	0	395	1,321	0	4,159
Mediums	0	7	0	0	0	0	0	0	0	0	22	2	0	8	8	0	47
Total	0	662	1	338	0	0	0	0	0	0	939	540	0	406	1,329	0	4,215

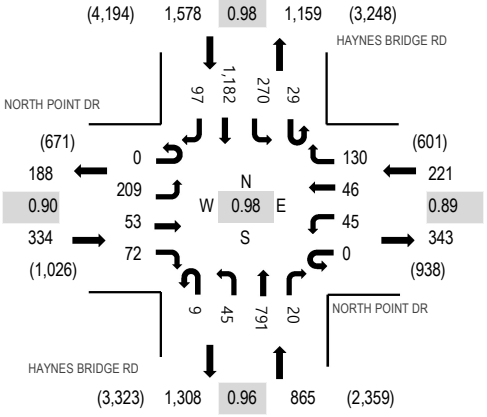
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.3%				0.0%				1.6%				1.1%			1.3%
Heavy Vehicle %	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.4%	0.0%	2.7%	0.6%	0.0%	1.3%
Peak Hour Factor		0.96				0.00				0.90				0.94			0.97
Peak Hour Factor	0.00	0.95	0.25	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.86	0.00	0.90	0.95	0.00	0.97

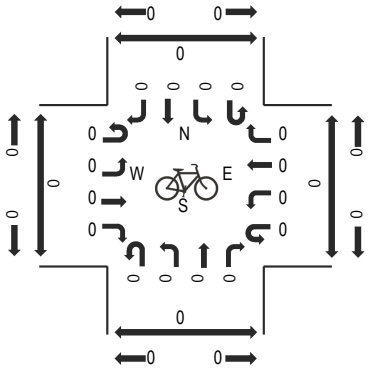
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 HAYNES BRIDGE RD & NORTH POINT DR PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

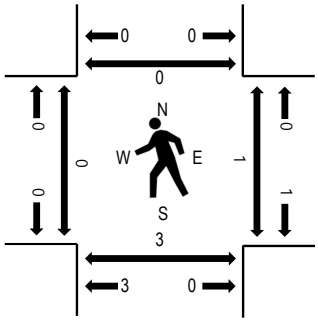
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	NORTH POINT DR Eastbound				NORTH POINT DR Westbound				HAYNES BRIDGE RD Northbound				HAYNES BRIDGE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	53	13	14	0	14	10	34	1	10	202	5	11	69	218	48	702	2,843	0	1	3	0
4:15 PM	0	50	15	8	0	7	13	24	0	16	197	6	8	55	225	39	663	2,890	0	2	0	0
4:30 PM	0	66	19	15	0	7	15	27	1	7	200	3	7	48	267	33	715	2,971	0	0	1	0
4:45 PM	0	51	15	25	0	10	7	26	2	9	212	8	7	62	295	34	763	2,998	0	0	1	0
5:00 PM	0	45	15	18	0	13	12	34	1	15	210	4	7	64	296	15	749	2,871	0	1	2	0
5:15 PM	0	59	8	12	0	7	15	40	3	12	192	0	9	77	290	20	744	2,791	0	0	0	0
5:30 PM	0	54	15	17	0	15	12	30	3	9	177	8	6	67	301	28	742	2,699	0	0	0	0
5:45 PM	0	49	13	13	0	10	10	20	5	9	145	2	5	66	256	33	636	2,582	0	0	0	0
6:00 PM	1	71	12	12	0	8	11	37	1	16	154	2	7	47	257	33	669	2,466	0	0	0	0
6:15 PM	1	43	21	12	0	9	9	28	2	12	177	5	7	57	233	36	652		0	0	0	0
6:30 PM	0	68	16	17	0	5	7	23	3	19	157	1	5	61	211	32	625		0	0	0	0
6:45 PM	1	64	10	15	0	12	13	27	2	13	118	3	5	46	155	36	520		0	1	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	209	53	72	0	45	46	129	9	44	769	20	29	270	1,174	96	2,965
Mediums	0	0	0	0	0	0	0	1	0	1	22	0	0	0	8	1	33
Total	0	209	53	72	0	45	46	130	9	45	791	20	29	270	1,182	97	2,998

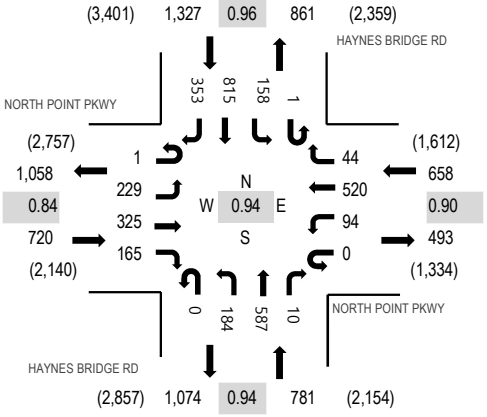
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				0.5%				2.7%				0.6%			1.1%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	2.2%	2.8%	0.0%	0.0%	0.0%	0.7%	1.0%	1.1%
Peak Hour Factor		0.90				0.89				0.96				0.98			0.98
Peak Hour Factor	0.75	0.87	0.84	0.72	0.00	0.75	0.82	0.81	0.60	0.79	0.97	0.69	0.75	0.89	0.98	0.80	0.98

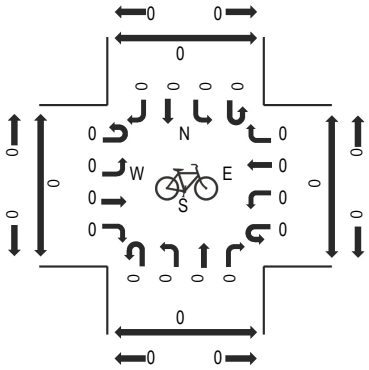
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 HAYNES BRIDGE RD & NORTH POINT PKWY PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

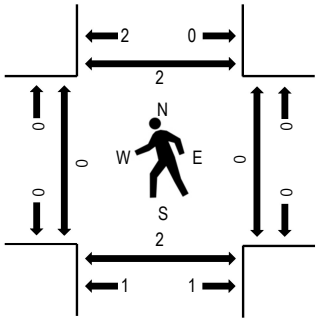
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	NORTH POINT PKWY Eastbound				NORTH POINT PKWY Westbound				HAYNES BRIDGE RD Northbound				HAYNES BRIDGE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	1	76	84	61	0	19	99	11	0	47	137	3	1	30	147	65	781	3,131	0	0	0	1
4:15 PM	0	44	77	47	0	12	91	6	0	46	162	4	0	34	158	69	750	3,279	0	0	0	0
4:30 PM	0	60	78	47	0	17	101	12	0	42	138	2	0	32	163	77	769	3,409	0	0	0	0
4:45 PM	1	52	85	29	0	15	119	11	0	43	160	2	0	39	200	75	831	3,486	0	0	1	0
5:00 PM	0	56	91	54	0	29	139	15	0	44	155	1	0	46	212	87	929	3,416	0	0	0	2
5:15 PM	0	60	69	46	0	26	139	13	0	52	146	5	1	33	204	86	880	3,262	0	0	1	0
5:30 PM	0	61	80	36	0	24	123	5	0	45	126	2	0	40	199	105	846	3,100	0	0	0	0
5:45 PM	0	49	70	50	0	21	105	5	0	46	97	4	0	41	175	98	761	2,956	0	0	0	0
6:00 PM	0	55	85	44	0	15	113	9	0	41	120	6	0	25	172	90	775	2,760	0	0	1	0
6:15 PM	0	54	70	47	0	22	102	11	0	42	124	1	0	25	160	60	718		0	0	0	0
6:30 PM	0	50	62	53	0	15	71	5	0	41	132	3	0	25	179	66	702		0	0	0	0
6:45 PM	0	49	59	48	0	16	73	3	0	43	88	4	0	17	95	70	565		0	3	3	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	1	228	324	164	0	93	514	43	0	180	565	10	1	158	809	352	3,442
Mediums	0	1	0	1	0	1	6	1	0	4	22	0	0	0	6	1	43
Total	1	229	325	165	0	94	520	44	0	184	587	10	1	158	815	353	3,486

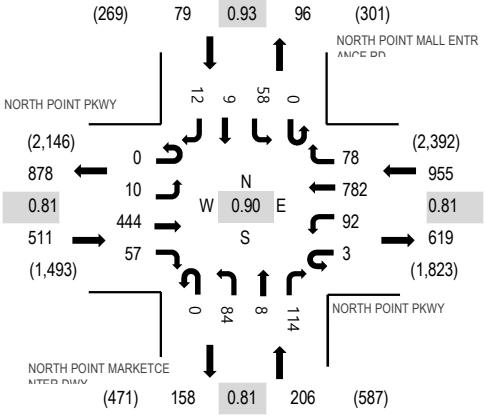
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.4%				1.2%				3.3%				0.5%			1.3%
Heavy Vehicle %	0.0%	0.4%	0.3%	0.6%	0.0%	1.1%	1.2%	2.3%	0.0%	2.2%	3.7%	0.0%	0.0%	0.0%	0.7%	0.3%	1.3%
Peak Hour Factor		0.84				0.90				0.94				0.96			0.94
Peak Hour Factor	0.50	0.76	0.91	0.92	0.00	0.86	0.94	0.85	0.00	0.90	0.95	0.71	0.25	0.87	0.96	0.90	0.94

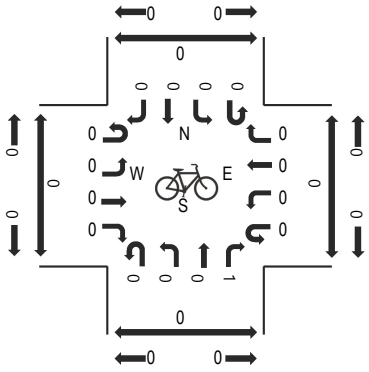
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 5 NORTH POINT MARKETCENTER DWY & NORTH POINT PKWY PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

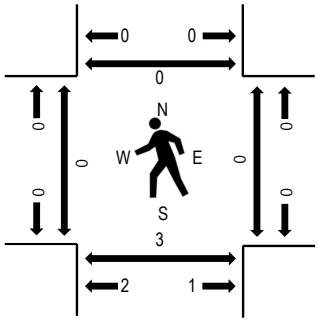
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	NORTH POINT PKWY Eastbound				NORTH POINT PKWY Westbound				NORTH POINT MARKETCENTER DWY Northbound				NORTH POINT MALL ENTRANCE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	3	127	17	2	22	130	18	0	19	1	44	0	13	3	4	403	1,551	1	0	1	0
4:15 PM	0	2	114	17	1	20	124	21	0	12	4	27	0	11	4	7	364	1,601	0	0	0	0
4:30 PM	0	3	106	13	3	25	145	26	0	17	3	26	0	15	6	7	395	1,721	0	0	0	0
4:45 PM	0	4	91	19	1	22	163	18	0	20	1	34	0	10	3	3	389	1,751	0	0	2	0
5:00 PM	0	4	148	12	2	23	172	23	0	18	2	33	0	13	1	2	453	1,748	0	0	1	0
5:15 PM	0	2	102	15	0	25	248	22	0	22	3	20	0	21	0	4	484	1,712	0	0	0	0
5:30 PM	0	0	103	11	0	22	199	15	0	24	2	27	0	14	5	3	425	1,582	0	0	0	0
5:45 PM	0	3	104	6	1	23	163	16	0	17	4	26	0	13	5	5	386	1,510	0	0	0	0
6:00 PM	3	3	109	14	0	18	183	25	0	13	2	26	0	15	1	5	417	1,442	0	0	2	0
6:15 PM	2	2	105	15	0	22	127	14	0	14	2	25	0	19	2	5	354		0	0	0	0
6:30 PM	1	5	87	19	0	27	118	21	0	20	1	29	0	17	6	2	353		0	0	1	0
6:45 PM	0	6	90	6	0	21	106	15	0	15	5	29	0	20	1	4	318		0	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	10	442	57	3	92	770	78	0	84	8	114	0	58	9	12	1,737
Mediums	0	0	1	0	0	0	12	0	0	0	0	0	0	0	0	0	13
Total	0	10	444	57	3	92	782	78	0	84	8	114	0	58	9	12	1,751

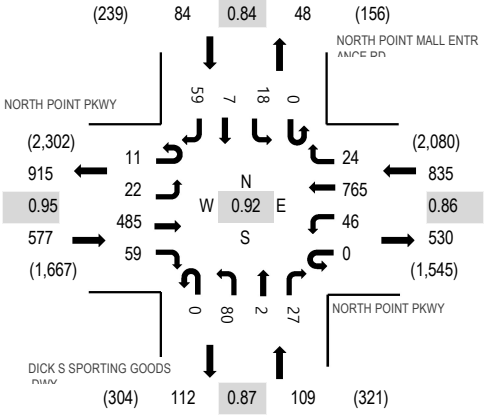
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.4%				1.3%				0.0%				0.0%			0.8%
Heavy Vehicle %	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%
Peak Hour Factor		0.81				0.81				0.81				0.93			0.90
Peak Hour Factor	0.50	0.67	0.78	0.87	0.58	0.95	0.80	0.86	0.00	0.88	0.69	0.74	0.00	0.89	0.67	0.75	0.90

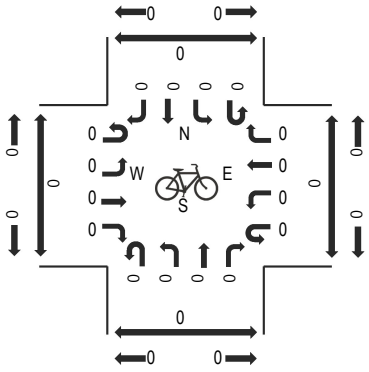
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 6 DICK S SPORTING GOODS DWY & NORTH POINT PKWY PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

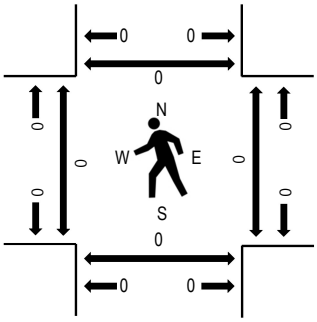
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	NORTH POINT PKWY Eastbound				NORTH POINT PKWY Westbound				DICK S SPORTING GOODS DWY Northbound				NORTH POINT MALL ENTRANCE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	2	4	128	16	0	9	144	7	0	26	0	11	0	5	4	14	370	1,443	0	0	0	0
4:15 PM	0	11	128	13	0	11	129	4	0	28	0	5	0	5	0	8	342	1,469	0	0	0	0
4:30 PM	3	10	111	18	0	5	150	10	0	25	0	7	0	3	3	15	360	1,562	0	0	0	0
4:45 PM	3	9	120	16	0	12	154	8	0	21	2	4	0	7	1	14	371	1,605	0	0	0	0
5:00 PM	3	5	132	17	0	14	169	6	0	17	0	13	0	4	1	15	396	1,588	0	0	0	0
5:15 PM	2	6	120	16	0	12	234	5	0	20	0	4	0	2	5	9	435	1,600	0	0	0	0
5:30 PM	3	2	113	10	0	8	208	5	0	22	0	6	0	5	0	21	403	1,472	0	0	0	0
5:45 PM	2	10	112	14	0	8	159	6	0	13	0	5	0	9	3	13	354	1,373	0	0	0	0
6:00 PM	2	5	125	13	1	11	201	3	0	21	2	5	0	7	0	12	408	1,276	0	0	0	0
6:15 PM	4	7	112	9	1	10	121	7	0	13	0	7	0	5	0	11	307		0	0	0	0
6:30 PM	5	6	100	11	0	12	119	3	0	15	0	9	0	13	0	11	304		0	0	0	0
6:45 PM	1	6	88	14	1	8	98	7	0	14	0	6	0	6	0	8	257		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	11	22	484	59	0	46	753	24	0	80	2	27	0	18	7	59	1,592
Mediums	0	0	1	0	0	0	12	0	0	0	0	0	0	0	0	0	13
Total	11	22	485	59	0	46	765	24	0	80	2	27	0	18	7	59	1,605

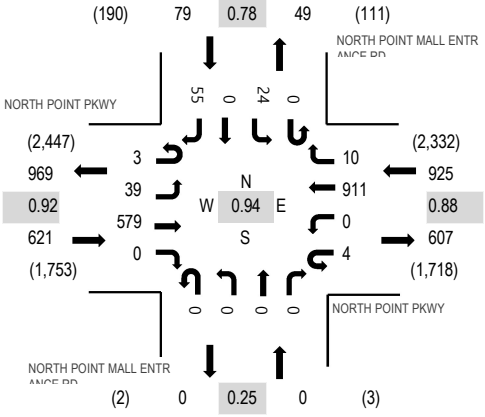
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.2%				1.4%				0.0%				0.0%			0.8%
Heavy Vehicle %	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%
Peak Hour Factor		0.95				0.86				0.87				0.84			0.92
Peak Hour Factor	0.65	0.80	0.93	0.93	0.75	0.82	0.86	0.73	0.00	0.89	0.25	0.56	0.00	0.65	0.50	0.70	0.92

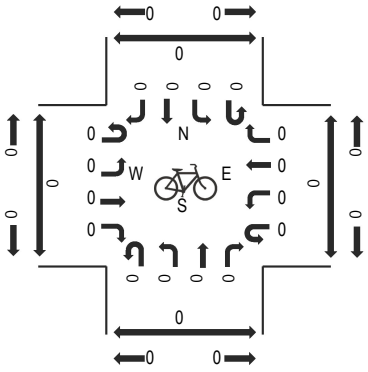
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 7 NORTH POINT MALL ENTRANCE RD & NORTH POINT PKWY PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

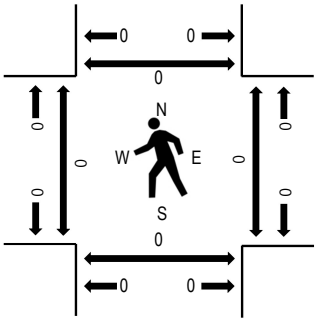
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	NORTH POINT PKWY Eastbound				NORTH POINT PKWY Westbound				NORTH POINT MALL ENTRANCE RD Northbound				NORTH POINT MALL ENTRANCE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	1	8	149	1	1	1	177	2	0	1	0	1	0	7	0	13	362	1,437	0	0	0	0
4:15 PM	0	5	149	0	1	0	171	0	0	0	0	0	0	5	0	11	342	1,483	0	0	0	0
4:30 PM	0	7	141	0	1	0	195	1	0	0	0	0	0	3	0	7	355	1,571	0	0	0	0
4:45 PM	1	8	154	0	0	0	199	1	0	0	0	0	0	4	0	11	378	1,625	0	0	0	0
5:00 PM	1	12	161	0	2	0	202	4	0	0	0	0	0	10	0	16	408	1,597	0	0	0	0
5:15 PM	1	8	132	0	2	0	260	4	0	0	0	0	0	6	0	17	430	1,591	0	0	0	0
5:30 PM	0	11	132	0	0	0	250	1	0	0	0	0	0	4	0	11	409	1,470	0	0	0	0
5:45 PM	0	5	137	0	1	0	188	1	0	1	0	0	0	2	0	15	350	1,343	0	0	0	0
6:00 PM	3	8	148	0	1	0	220	4	0	0	0	0	0	4	0	14	402	1,244	1	0	0	1
6:15 PM	0	9	133	0	0	0	155	2	0	0	0	0	0	1	0	9	309		0	0	0	0
6:30 PM	0	5	110	0	1	0	157	0	0	0	0	0	0	2	0	7	282		0	0	0	1
6:45 PM	0	3	110	0	0	0	125	2	0	0	0	0	0	3	0	8	251		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	3	39	579	0	4	0	900	10	0	0	0	0	0	24	0	55	1,614
Mediums	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	11
Total	3	39	579	0	4	0	911	10	0	0	0	0	0	24	0	55	1,625

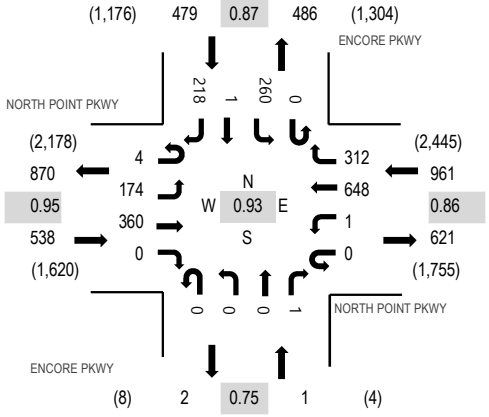
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				1.2%				0.0%				0.0%			0.7%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%
Peak Hour Factor		0.92				0.88				0.25				0.78			0.94
Peak Hour Factor	0.33	0.81	0.94	0.25	0.63	0.25	0.88	0.63	0.00	0.25	0.00	0.25	0.00	0.60	0.00	0.87	0.94

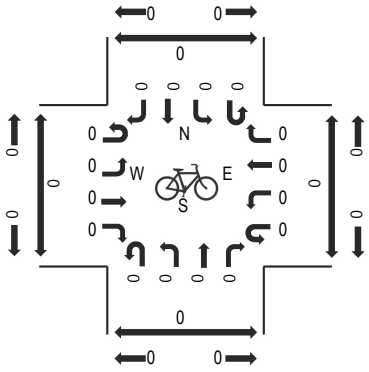
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 8 ENCORE PKWY & NORTH POINT PKWY PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

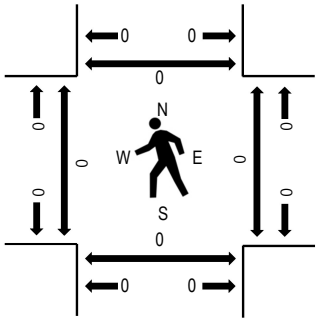
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	NORTH POINT PKWY Eastbound				NORTH POINT PKWY Westbound				ENCORE PKWY Northbound				ENCORE PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	1	38	105	0	0	1	124	70	0	0	0	1	0	52	0	45	437	1,782	0	0	1	0
4:15 PM	0	36	93	0	0	1	112	66	0	0	0	0	0	62	0	61	431	1,848	0	0	0	0
4:30 PM	0	50	100	0	0	1	120	81	0	0	0	0	0	46	1	50	449	1,948	0	0	0	0
4:45 PM	1	44	102	0	0	0	126	83	0	0	0	0	0	68	0	41	465	1,979	0	0	0	0
5:00 PM	0	49	94	0	0	0	151	72	0	0	0	0	0	75	0	62	503	1,965	0	0	0	0
5:15 PM	2	43	87	0	0	0	178	100	0	0	0	1	0	60	0	60	531	1,918	0	0	0	0
5:30 PM	1	38	77	0	0	1	193	57	0	0	0	0	0	57	1	55	480	1,791	0	0	0	0
5:45 PM	0	49	107	0	0	0	155	47	0	0	0	1	0	40	1	51	451	1,658	2	0	1	0
6:00 PM	0	40	92	0	1	1	145	80	0	0	0	1	0	59	0	37	456	1,498	0	0	0	0
6:15 PM	0	46	98	0	1	0	117	67	0	0	0	0	0	47	0	28	404		0	0	0	0
6:30 PM	0	34	88	0	1	0	114	50	0	0	0	0	0	28	0	32	347		0	1	0	0
6:45 PM	0	28	77	0	0	0	93	36	0	0	0	0	0	34	0	23	291		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	4	163	360	0	0	1	645	304	0	0	0	1	0	260	1	218	1,957
Mediums	0	11	0	0	0	0	3	8	0	0	0	0	0	0	0	0	22
Total	4	174	360	0	0	1	648	312	0	0	0	1	0	260	1	218	1,979

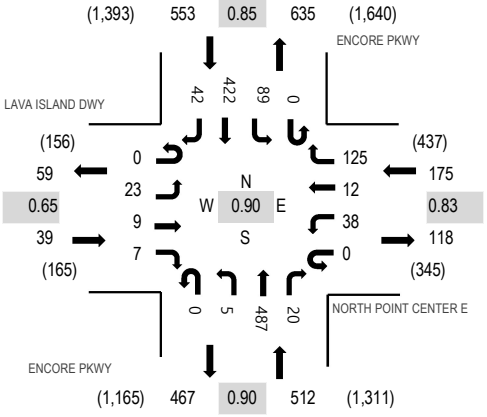
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		2.0%				1.1%				0.0%				0.0%			1.1%
Heavy Vehicle %	0.0%	6.3%	0.0%	0.0%	0.0%	0.0%	0.5%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%
Peak Hour Factor		0.95				0.86				0.75				0.87			0.93
Peak Hour Factor	0.50	0.93	0.95	0.00	0.75	0.75	0.88	0.84	0.00	0.00	0.00	0.75	0.00	0.87	0.50	0.92	0.93

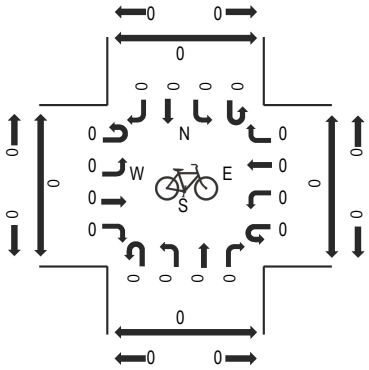
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 9 ENCORE PKWY & NORTH POINT CENTER E PM
Date: Thursday, April 16, 2026
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

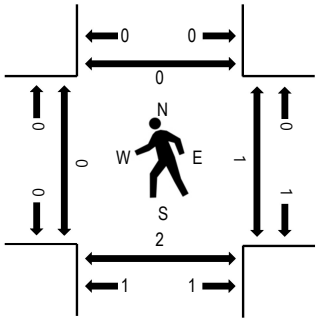
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	LAVA ISLAND DWY Eastbound				NORTH POINT CENTER E Westbound				ENCORE PKWY Northbound				ENCORE PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	10	1	4	0	11	3	28	0	0	108	4	0	16	100	9	294	1,218	0	2	0	0
4:15 PM	0	12	7	0	0	8	2	29	0	1	104	3	0	28	97	13	304	1,226	0	0	0	0
4:30 PM	0	5	1	2	0	11	2	40	0	2	115	2	0	22	84	11	297	1,279	0	0	0	0
4:45 PM	0	10	1	3	0	9	1	24	0	1	127	7	0	19	110	11	323	1,263	0	0	0	0
5:00 PM	0	5	2	1	0	11	3	35	0	1	109	6	0	14	105	10	302	1,184	0	0	0	0
5:15 PM	0	3	5	1	0	7	6	26	0	1	136	5	0	34	123	10	357	1,172	0	1	2	0
5:30 PM	0	6	1	2	0	7	3	33	0	0	92	7	0	30	91	9	281	1,049	0	0	2	0
5:45 PM	0	3	0	0	0	4	1	19	0	2	92	6	0	18	89	10	244	961	0	2	1	0
6:00 PM	0	13	3	4	0	7	6	25	0	1	112	9	1	24	80	5	290	904	0	1	0	0
6:15 PM	0	8	5	6	0	10	2	17	0	5	103	5	0	15	54	4	234		1	1	0	0
6:30 PM	0	4	4	2	0	5	1	18	0	1	76	6	0	14	54	8	193		0	0	0	0
6:45 PM	0	19	4	8	0	5	0	18	0	3	55	4	0	13	50	8	187		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	23	9	7	0	38	12	124	0	5	468	20	0	88	422	42	1,258
Mediums	0	0	0	0	0	0	0	1	0	0	19	0	0	1	0	0	21
Total	0	23	9	7	0	38	12	125	0	5	487	20	0	89	422	42	1,279

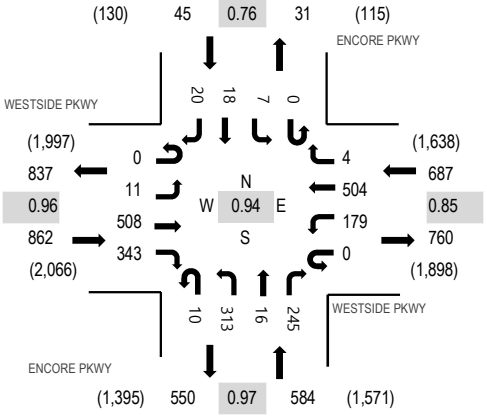
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				0.6%				3.7%				0.2%			1.6%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	3.9%	0.0%	0.0%	1.1%	0.0%	0.0%	1.6%
Peak Hour Factor		0.65				0.83				0.90				0.85			0.90
Peak Hour Factor	0.00	0.58	0.80	0.63	0.00	0.89	0.67	0.80	0.00	0.50	0.90	0.75	0.25	0.78	0.87	0.87	0.90

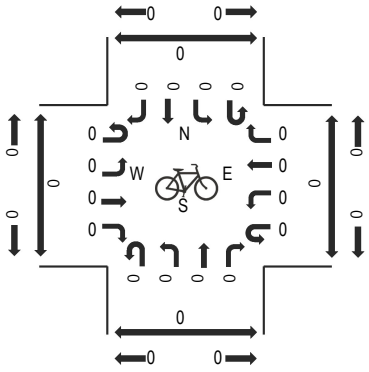
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 10 ENCORE PKWY & WESTSIDE PKWY PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

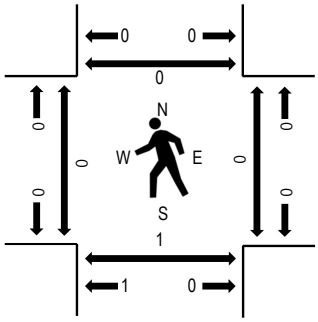
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WESTSIDE PKWY Eastbound				WESTSIDE PKWY Westbound				ENCORE PKWY Northbound				ENCORE PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	4	99	78	0	44	70	3	3	72	7	55	0	2	2	7	446	1,919	0	0	0	0
4:15 PM	0	3	107	72	0	59	76	1	1	71	4	57	0	3	7	6	467	2,015	0	0	0	0
4:30 PM	0	1	103	72	0	46	78	4	3	92	6	58	0	1	5	4	473	2,126	0	0	1	0
4:45 PM	0	4	124	87	0	35	103	1	3	93	3	62	0	3	8	7	533	2,178	0	0	0	0
5:00 PM	0	1	134	89	0	34	120	1	1	87	3	62	0	3	2	5	542	2,081	0	0	0	0
5:15 PM	0	4	120	87	0	67	139	2	2	80	4	66	0	1	5	1	578	2,026	0	0	1	0
5:30 PM	0	2	130	80	0	43	142	0	4	53	6	55	0	0	3	7	525	1,815	0	0	0	0
5:45 PM	0	6	91	73	0	41	108	1	0	37	3	63	0	3	5	5	436	1,570	0	0	0	0
6:00 PM	0	8	96	62	0	49	113	2	1	86	9	56	0	0	4	1	487	1,405	0	0	0	1
6:15 PM	0	3	66	51	0	23	94	0	1	66	4	47	0	7	1	4	367		1	0	0	1
6:30 PM	0	2	68	38	0	29	40	1	5	46	4	40	0	4	3	0	280		0	0	0	1
6:45 PM	0	3	65	33	0	28	41	0	2	39	5	44	0	3	4	4	271		2	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	11	500	342	0	179	501	4	10	311	16	226	0	6	18	20	2,144
Mediums	0	0	7	1	0	0	3	0	0	2	0	19	0	1	0	0	33
Total	0	11	508	343	0	179	504	4	10	313	16	245	0	7	18	20	2,178

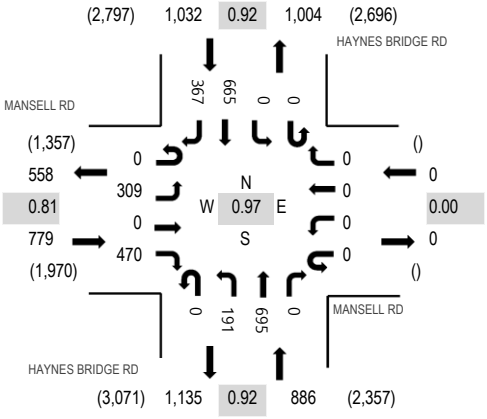
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.0%				0.4%				3.6%				2.2%			1.6%
Heavy Vehicle %	0.0%	0.0%	1.6%	0.3%	0.0%	0.0%	0.6%	0.0%	0.0%	0.6%	0.0%	7.8%	0.0%	14.3%	0.0%	0.0%	1.6%
Peak Hour Factor		0.96				0.85				0.97				0.76			0.94
Peak Hour Factor	0.00	0.63	0.95	0.96	0.00	0.75	0.90	0.56	0.63	0.95	0.61	0.94	0.00	0.50	0.69	0.86	0.94

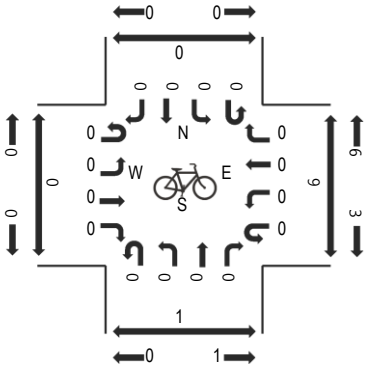
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 15 HAYNES BRIDGE RD & MANSELL RD PM
Date: Thursday, April 23, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

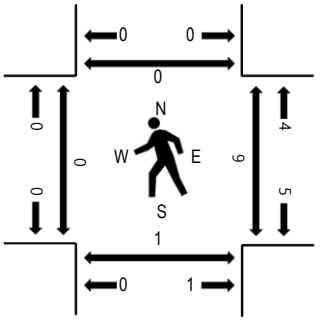
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MANSELL RD Eastbound				MANSELL RD Westbound				HAYNES BRIDGE RD Northbound				HAYNES BRIDGE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	1	83	0	87	0	0	0	0	0	45	138	0	0	0	153	51	558	2,433	0	0	0	0
4:15 PM	0	82	0	85	0	0	0	0	0	51	162	0	0	0	126	79	585	2,549	0	1	0	0
4:30 PM	1	70	0	108	0	0	0	0	0	57	175	0	0	0	133	84	628	2,660	0	1	0	0
4:45 PM	0	71	0	96	0	0	0	0	0	47	178	0	0	0	185	85	662	2,697	0	4	0	0
5:00 PM	0	107	0	132	0	0	0	0	0	34	159	0	0	0	160	82	674	2,657	0	0	1	0
5:15 PM	0	65	0	123	0	0	0	0	0	64	177	0	0	0	157	110	696	2,487	0	3	0	0
5:30 PM	0	66	0	119	0	0	0	0	0	46	181	0	0	0	163	90	665	2,339	0	2	0	0
5:45 PM	0	70	0	86	0	0	0	0	0	33	150	0	0	0	213	70	622	2,168	0	2	0	0
6:00 PM	0	53	0	56	0	0	0	0	0	33	145	0	0	0	165	52	504	2,034	0	0	0	0
6:15 PM	0	50	0	94	0	0	0	0	0	20	149	0	0	0	172	63	548		0	0	0	0
6:30 PM	0	51	0	77	0	0	0	0	0	35	114	0	0	0	164	53	494		0	0	0	0
6:45 PM	0	63	0	74	0	0	0	0	0	27	137	0	0	0	143	44	488		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	304	0	465	0	0	0	0	0	191	675	0	0	0	661	366	2,662
Mediums	0	5	0	5	0	0	0	0	0	0	20	0	0	0	4	1	35
Total	0	309	0	470	0	0	0	0	0	191	695	0	0	0	665	367	2,697

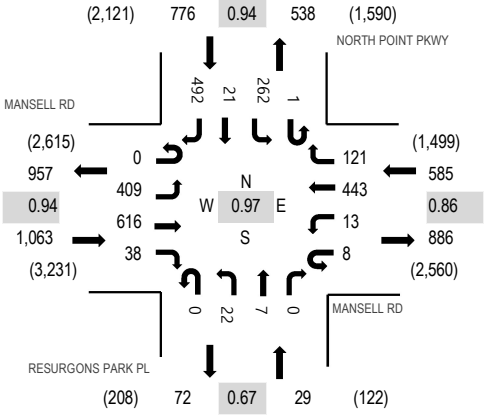
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.3%				0.0%				2.3%				0.5%			1.3%
Heavy Vehicle %	0.0%	1.6%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	0.6%	0.3%	1.3%
Peak Hour Factor		0.81				0.00				0.92				0.92			0.97
Peak Hour Factor	0.50	0.77	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.79	0.96	0.00	0.00	0.00	0.84	0.83	0.97

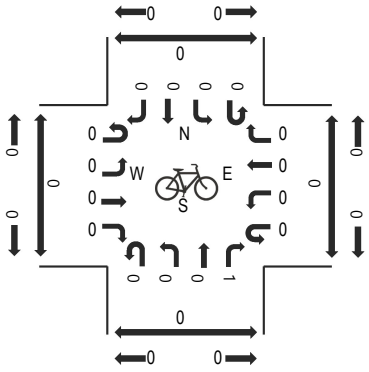
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 12 RESURGONS PARK PL & MANSELL RD PM
Date: Thursday, April 16, 2026
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

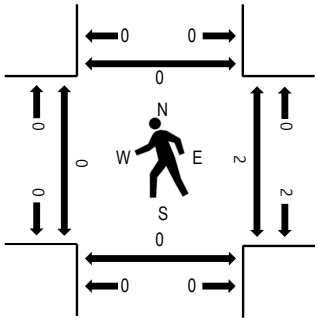
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MANSELL RD Eastbound				MANSELL RD Westbound				RESURGONS PARK PL Northbound				NORTH POINT PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	98	200	5	2	1	92	33	0	7	0	1	2	51	5	127	624	2,421	0	0	0	0
4:15 PM	0	103	162	3	4	2	76	25	0	2	1	0	0	56	6	118	558	2,423	0	0	0	0
4:30 PM	0	118	163	10	1	5	131	33	0	5	2	0	0	57	1	108	634	2,453	0	2	0	0
4:45 PM	0	101	164	11	2	3	110	35	0	3	1	0	0	59	7	109	605	2,451	0	0	0	0
5:00 PM	0	97	154	12	2	3	111	28	0	7	2	0	0	61	5	144	626	2,445	0	0	0	0
5:15 PM	0	93	135	5	3	2	91	25	0	7	2	0	1	85	8	131	588	2,432	0	0	0	0
5:30 PM	0	109	154	7	1	5	100	23	0	6	2	0	0	57	6	162	632	2,394	0	0	0	0
5:45 PM	0	106	145	11	2	1	102	30	0	11	2	2	1	64	11	111	599	2,267	0	0	0	0
6:00 PM	1	92	181	5	1	0	112	26	0	8	6	0	0	50	8	123	613	2,107	0	0	0	1
6:15 PM	0	118	174	10	3	5	69	28	0	1	7	2	0	25	6	102	550		0	0	0	0
6:30 PM	0	104	155	10	4	5	67	18	0	9	3	1	0	31	7	91	505		0	0	0	0
6:45 PM	0	95	110	10	1	5	55	16	0	16	4	2	0	33	2	90	439		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Lights	0	397	610	38	8	13	441	121	0	22	7	0	1	261	21	490	2,430
Mediums	0	12	5	0	0	0	2	0	0	0	0	0	0	1	0	1	21
Total	0	409	616	38	8	13	443	121	0	22	7	0	1	262	21	492	2,453

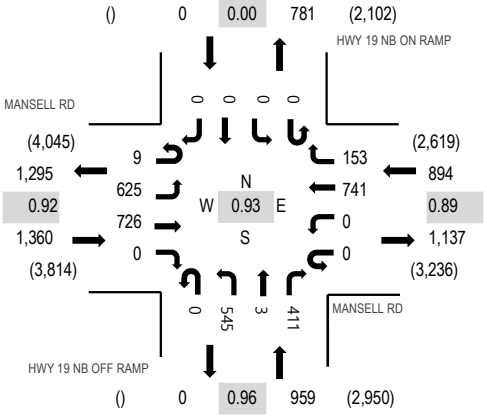
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.7%				0.3%				0.0%				0.4%			0.9%
Heavy Vehicle %	0.0%	2.9%	1.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.4%	0.9%
Peak Hour Factor		0.94				0.86				0.67				0.94			0.97
Peak Hour Factor	0.25	0.90	0.86	0.79	0.63	0.75	0.85	0.90	0.00	0.53	0.71	0.63	0.25	0.79	0.75	0.85	0.97

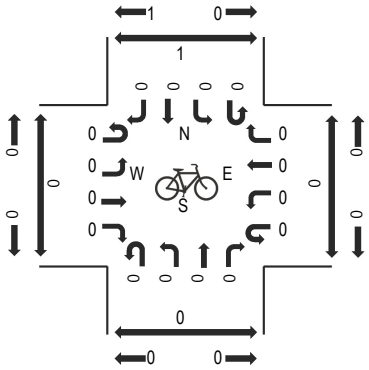
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 13 HWY 19 NB OFF RAMP & MANSELL RD PM
Date: Thursday, April 16, 2026
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - Motorized Vehicles



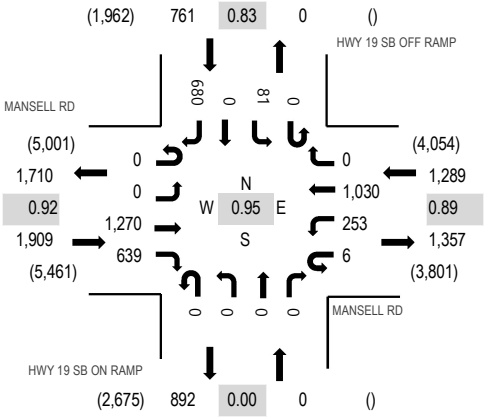
Peak Hour - Bicycles


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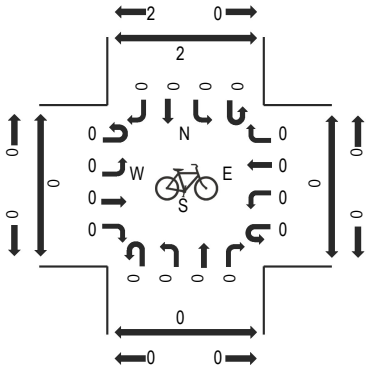
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 14 HWY 19 SB ON RAMP & MANSELL RD PM
Date: Thursday, April 16, 2026
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

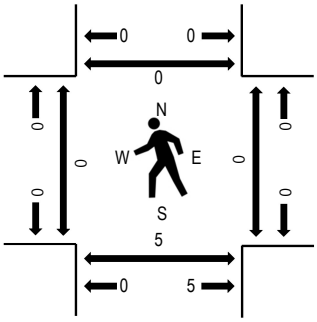
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MANSELL RD Eastbound				MANSELL RD Westbound				HWY 19 SB ON RAMP Northbound				HWY 19 SB OFF RAMP Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	352	165	1	52	268	0	0	0	0	0	0	26	0	183	1,047	3,959	0	0	1	0
4:15 PM	0	0	284	155	0	66	246	0	0	0	0	0	0	22	0	206	979	3,885	0	0	1	0
4:30 PM	0	0	304	155	3	55	258	0	0	0	0	0	0	17	0	156	948	3,845	0	0	3	0
4:45 PM	0	0	330	164	2	80	258	0	0	0	0	0	0	16	0	135	985	3,891	0	0	0	0
5:00 PM	0	0	299	171	0	76	287	0	0	0	0	0	0	18	0	122	973	3,897	0	0	2	0
5:15 PM	0	0	278	163	2	79	267	0	0	0	0	0	0	10	0	140	939	3,850	0	0	2	0
5:30 PM	0	0	310	183	0	76	276	0	0	0	0	0	0	19	0	130	994	3,939	0	0	2	0
5:45 PM	0	0	265	174	0	82	336	0	0	0	0	0	0	14	0	120	991	3,822	0	0	0	0
6:00 PM	0	0	261	170	2	67	295	0	0	0	0	0	0	19	0	112	926	3,621	2	0	3	2
6:15 PM	0	0	343	147	1	43	276	0	0	0	0	0	0	23	0	195	1,028		0	0	1	0
6:30 PM	0	0	292	132	2	52	252	0	0	0	0	0	0	21	0	126	877		0	0	0	0
6:45 PM	0	0	244	120	0	48	246	0	0	0	0	0	0	21	0	111	790		0	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	1	0	0	2	0	0	0	0	0	0	2	0	4	11
Lights	0	0	1,248	628	6	251	1,013	0	0	0	0	0	0	79	0	668	3,893
Mediums	0	0	20	10	0	2	15	0	0	0	0	0	0	0	0	8	55
Total	0	0	1,270	639	6	253	1,030	0	0	0	0	0	0	81	0	680	3,959

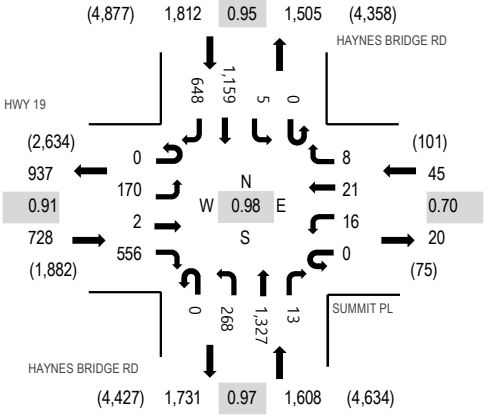
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %			1.7%				1.5%				0.0%				1.8%		1.7%
Heavy Vehicle %	0.0%	0.0%	1.7%	1.7%	0.0%	0.8%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	0.0%	1.8%	1.7%
Peak Hour Factor			0.92				0.89				0.00				0.83		0.95
Peak Hour Factor	0.00	0.00	0.90	0.94	0.58	0.95	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.91	0.00	0.83	0.95

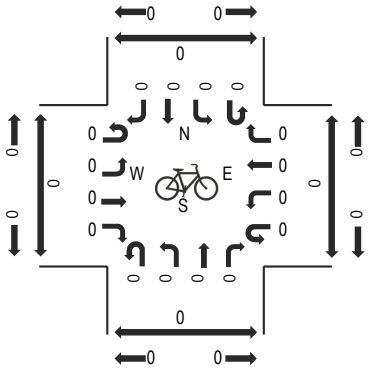
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 HAYNES BRIDGE RD & SUMMIT PL PM
Date: Thursday, April 16, 2026
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

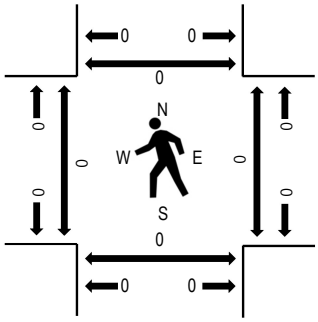
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 19 Eastbound				SUMMIT PL Westbound				HAYNES BRIDGE RD Northbound				HAYNES BRIDGE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	38	2	96	0	4	2	2	0	73	309	3	0	2	256	199	986	4,102	1	0	0	0
4:15 PM	0	37	0	102	0	3	3	2	0	66	331	2	0	3	249	205	1,003	4,189	0	0	0	0
4:30 PM	0	46	0	133	0	2	4	2	0	62	328	2	0	1	288	195	1,063	4,193	0	0	0	0
4:45 PM	0	52	2	147	0	4	6	0	0	63	331	0	0	1	285	159	1,050	4,155	0	0	0	0
5:00 PM	0	36	0	153	0	4	10	2	0	80	327	6	0	2	284	169	1,073	4,080	0	0	0	0
5:15 PM	0	36	0	123	0	6	1	4	0	63	341	5	0	1	302	125	1,007	3,906	0	0	0	0
5:30 PM	0	33	3	132	0	0	5	0	0	38	377	8	0	1	279	149	1,025	3,816	1	0	0	0
5:45 PM	0	27	1	118	0	1	3	0	0	58	340	3	0	3	250	171	975	3,584	0	0	0	0
6:00 PM	0	37	0	103	0	4	2	3	1	57	325	3	1	2	223	138	899	3,312	0	0	0	0
6:15 PM	0	59	0	132	0	4	1	2	0	55	321	4	1	1	207	130	917		0	0	0	0
6:30 PM	0	32	0	95	0	3	0	4	0	42	297	5	1	1	199	114	793		0	0	0	0
6:45 PM	0	17	1	89	0	5	2	1	0	47	256	5	0	2	141	137	703		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	6	0	0	0	3	5	14
Lights	0	164	2	554	0	16	21	8	0	268	1,293	13	0	5	1,142	634	4,120
Mediums	0	6	0	2	0	0	0	0	0	0	28	0	0	0	14	9	59
Total	0	170	2	556	0	16	21	8	0	268	1,327	13	0	5	1,159	648	4,193

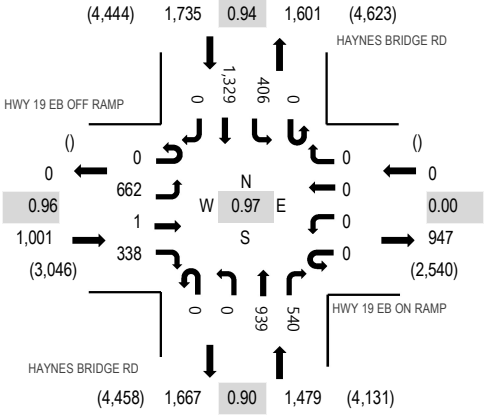
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.1%				0.0%				2.1%				1.7%			1.7%
Heavy Vehicle %	0.0%	3.5%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	1.5%	2.2%	1.7%
Peak Hour Factor		0.91				0.70				0.97				0.95			0.98
Peak Hour Factor	0.00	0.83	0.42	0.91	0.00	0.67	0.58	0.63	0.25	0.85	0.92	0.69	0.75	0.58	0.96	0.92	0.98

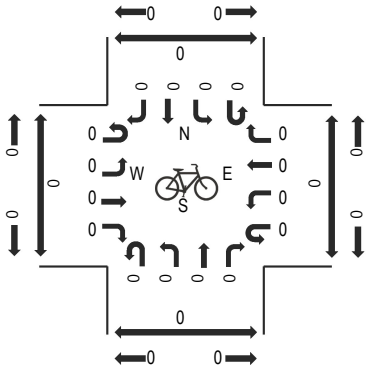
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 HAYNES BRIDGE RD & HWY 19 EB ON RAMP PM
Date: Thursday, April 16, 2026
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

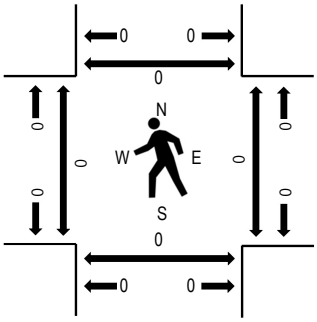
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 19 EB OFF RAMP Eastbound				HWY 19 EB ON RAMP Westbound				HAYNES BRIDGE RD Northbound				HAYNES BRIDGE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	157	0	93	0	0	0	0	0	0	217	164	0	113	261	0	1,005	4,058	0	0	0	0
4:15 PM	0	174	0	90	0	0	0	0	0	0	239	156	0	86	254	0	999	4,132	0	0	0	0
4:30 PM	0	185	0	74	0	0	0	0	0	0	204	137	0	99	312	0	1,011	4,215	0	0	0	0
4:45 PM	0	152	0	94	0	0	0	0	0	0	237	109	0	110	341	0	1,043	4,215	0	0	0	0
5:00 PM	0	162	0	89	0	0	0	0	0	0	256	158	0	88	326	0	1,079	4,095	0	0	0	0
5:15 PM	0	163	1	81	0	0	0	0	0	0	242	136	0	109	350	0	1,082	3,980	0	0	0	0
5:30 PM	0	196	0	81	0	0	0	0	0	0	222	116	0	77	319	0	1,011	3,837	1	0	0	0
5:45 PM	0	191	0	92	0	0	0	0	0	0	218	87	0	63	272	0	923	3,678	0	0	0	0
6:00 PM	0	175	0	86	0	0	0	0	0	0	205	118	0	95	285	0	964	3,468	0	0	0	0
6:15 PM	0	186	0	80	0	0	0	0	0	0	213	123	0	63	274	0	939		0	0	0	0
6:30 PM	0	150	0	84	0	0	0	0	0	0	187	121	0	50	260	0	852		0	0	0	0
6:45 PM	0	143	0	67	0	0	0	0	0	0	149	117	0	44	193	0	713		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	6	0	0	0	0	0	0	0	0	0	0	0	3	0	0	9
Lights	0	649	1	338	0	0	0	0	0	0	917	538	0	395	1,321	0	4,159
Mediums	0	7	0	0	0	0	0	0	0	0	22	2	0	8	8	0	47
Total	0	662	1	338	0	0	0	0	0	0	939	540	0	406	1,329	0	4,215

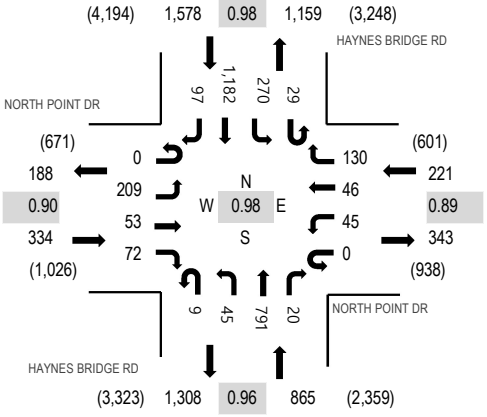
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.3%				0.0%				1.6%				1.1%			1.3%
Heavy Vehicle %	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.4%	0.0%	2.7%	0.6%	0.0%	1.3%
Peak Hour Factor		0.96				0.00				0.90				0.94			0.97
Peak Hour Factor	0.00	0.95	0.25	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.86	0.00	0.90	0.95	0.00	0.97

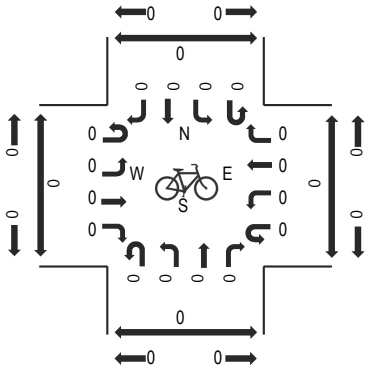
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 HAYNES BRIDGE RD & NORTH POINT DR PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

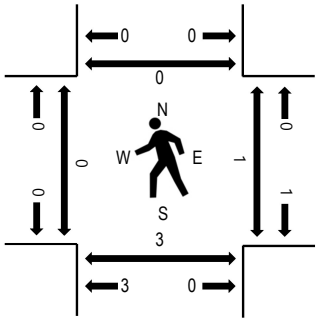
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	NORTH POINT DR Eastbound				NORTH POINT DR Westbound				HAYNES BRIDGE RD Northbound				HAYNES BRIDGE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	53	13	14	0	14	10	34	1	10	202	5	11	69	218	48	702	2,843	0	1	3	0
4:15 PM	0	50	15	8	0	7	13	24	0	16	197	6	8	55	225	39	663	2,890	0	2	0	0
4:30 PM	0	66	19	15	0	7	15	27	1	7	200	3	7	48	267	33	715	2,971	0	0	1	0
4:45 PM	0	51	15	25	0	10	7	26	2	9	212	8	7	62	295	34	763	2,998	0	0	1	0
5:00 PM	0	45	15	18	0	13	12	34	1	15	210	4	7	64	296	15	749	2,871	0	1	2	0
5:15 PM	0	59	8	12	0	7	15	40	3	12	192	0	9	77	290	20	744	2,791	0	0	0	0
5:30 PM	0	54	15	17	0	15	12	30	3	9	177	8	6	67	301	28	742	2,699	0	0	0	0
5:45 PM	0	49	13	13	0	10	10	20	5	9	145	2	5	66	256	33	636	2,582	0	0	0	0
6:00 PM	1	71	12	12	0	8	11	37	1	16	154	2	7	47	257	33	669	2,466	0	0	0	0
6:15 PM	1	43	21	12	0	9	9	28	2	12	177	5	7	57	233	36	652		0	0	0	0
6:30 PM	0	68	16	17	0	5	7	23	3	19	157	1	5	61	211	32	625		0	0	0	0
6:45 PM	1	64	10	15	0	12	13	27	2	13	118	3	5	46	155	36	520		0	1	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	209	53	72	0	45	46	129	9	44	769	20	29	270	1,174	96	2,965
Mediums	0	0	0	0	0	0	0	1	0	1	22	0	0	0	8	1	33
Total	0	209	53	72	0	45	46	130	9	45	791	20	29	270	1,182	97	2,998

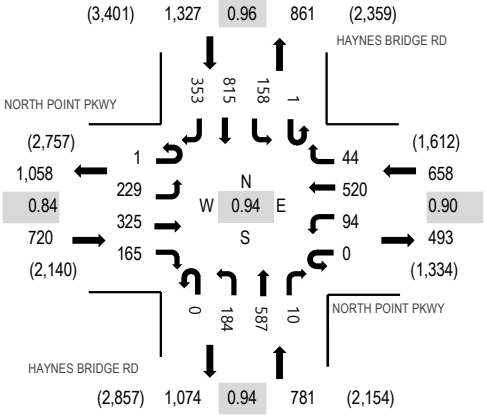
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				0.5%				2.7%				0.6%			1.1%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	2.2%	2.8%	0.0%	0.0%	0.0%	0.7%	1.0%	1.1%
Peak Hour Factor		0.90				0.89				0.96				0.98			0.98
Peak Hour Factor	0.75	0.87	0.84	0.72	0.00	0.75	0.82	0.81	0.60	0.79	0.97	0.69	0.75	0.89	0.98	0.80	0.98

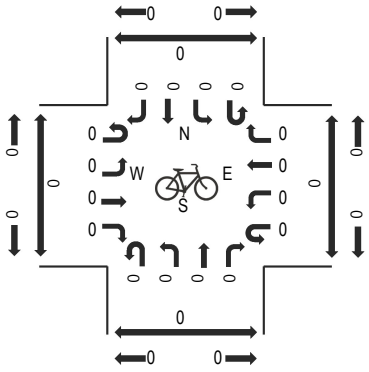
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 HAYNES BRIDGE RD & NORTH POINT PKWY PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

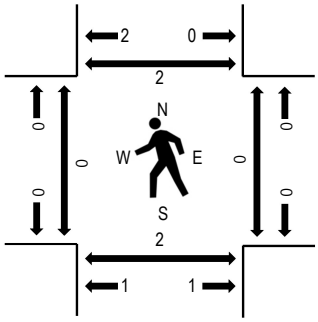
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	NORTH POINT PKWY Eastbound				NORTH POINT PKWY Westbound				HAYNES BRIDGE RD Northbound				HAYNES BRIDGE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	1	76	84	61	0	19	99	11	0	47	137	3	1	30	147	65	781	3,131	0	0	0	1
4:15 PM	0	44	77	47	0	12	91	6	0	46	162	4	0	34	158	69	750	3,279	0	0	0	0
4:30 PM	0	60	78	47	0	17	101	12	0	42	138	2	0	32	163	77	769	3,409	0	0	0	0
4:45 PM	1	52	85	29	0	15	119	11	0	43	160	2	0	39	200	75	831	3,486	0	0	1	0
5:00 PM	0	56	91	54	0	29	139	15	0	44	155	1	0	46	212	87	929	3,416	0	0	0	2
5:15 PM	0	60	69	46	0	26	139	13	0	52	146	5	1	33	204	86	880	3,262	0	0	1	0
5:30 PM	0	61	80	36	0	24	123	5	0	45	126	2	0	40	199	105	846	3,100	0	0	0	0
5:45 PM	0	49	70	50	0	21	105	5	0	46	97	4	0	41	175	98	761	2,956	0	0	0	0
6:00 PM	0	55	85	44	0	15	113	9	0	41	120	6	0	25	172	90	775	2,760	0	0	1	0
6:15 PM	0	54	70	47	0	22	102	11	0	42	124	1	0	25	160	60	718		0	0	0	0
6:30 PM	0	50	62	53	0	15	71	5	0	41	132	3	0	25	179	66	702		0	0	0	0
6:45 PM	0	49	59	48	0	16	73	3	0	43	88	4	0	17	95	70	565		0	3	3	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	1	228	324	164	0	93	514	43	0	180	565	10	1	158	809	352	3,442
Mediums	0	1	0	1	0	1	6	1	0	4	22	0	0	0	6	1	43
Total	1	229	325	165	0	94	520	44	0	184	587	10	1	158	815	353	3,486

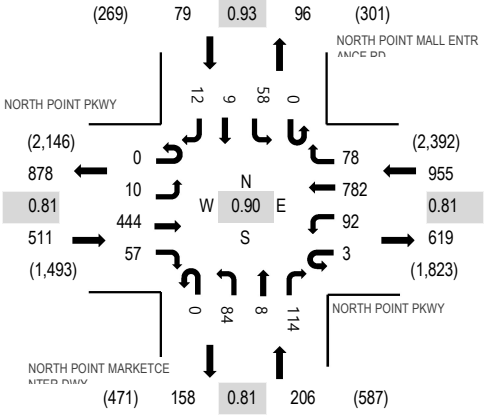
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.4%				1.2%				3.3%				0.5%			1.3%
Heavy Vehicle %	0.0%	0.4%	0.3%	0.6%	0.0%	1.1%	1.2%	2.3%	0.0%	2.2%	3.7%	0.0%	0.0%	0.0%	0.7%	0.3%	1.3%
Peak Hour Factor		0.84				0.90				0.94				0.96			0.94
Peak Hour Factor	0.50	0.76	0.91	0.92	0.00	0.86	0.94	0.85	0.00	0.90	0.95	0.71	0.25	0.87	0.96	0.90	0.94

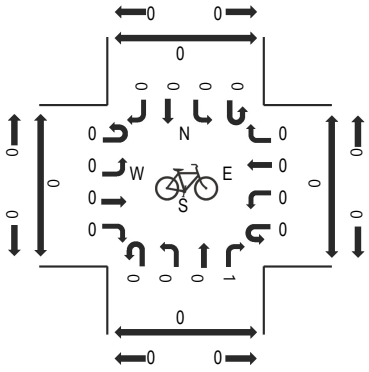
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 5 NORTH POINT MARKETCENTER DWY & NORTH POINT PKWY PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

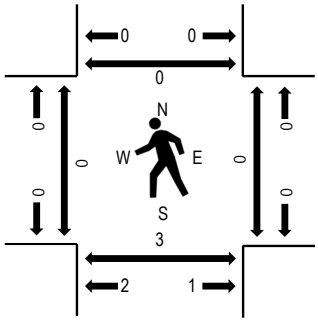
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	NORTH POINT PKWY Eastbound				NORTH POINT PKWY Westbound				NORTH POINT MARKETCENTER DWY Northbound				NORTH POINT MALL ENTRANCE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	3	127	17	2	22	130	18	0	19	1	44	0	13	3	4	403	1,551	1	0	1	0
4:15 PM	0	2	114	17	1	20	124	21	0	12	4	27	0	11	4	7	364	1,601	0	0	0	0
4:30 PM	0	3	106	13	3	25	145	26	0	17	3	26	0	15	6	7	395	1,721	0	0	0	0
4:45 PM	0	4	91	19	1	22	163	18	0	20	1	34	0	10	3	3	389	1,751	0	0	2	0
5:00 PM	0	4	148	12	2	23	172	23	0	18	2	33	0	13	1	2	453	1,748	0	0	1	0
5:15 PM	0	2	102	15	0	25	248	22	0	22	3	20	0	21	0	4	484	1,712	0	0	0	0
5:30 PM	0	0	103	11	0	22	199	15	0	24	2	27	0	14	5	3	425	1,582	0	0	0	0
5:45 PM	0	3	104	6	1	23	163	16	0	17	4	26	0	13	5	5	386	1,510	0	0	0	0
6:00 PM	3	3	109	14	0	18	183	25	0	13	2	26	0	15	1	5	417	1,442	0	0	2	0
6:15 PM	2	2	105	15	0	22	127	14	0	14	2	25	0	19	2	5	354		0	0	0	0
6:30 PM	1	5	87	19	0	27	118	21	0	20	1	29	0	17	6	2	353		0	0	1	0
6:45 PM	0	6	90	6	0	21	106	15	0	15	5	29	0	20	1	4	318		0	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	10	442	57	3	92	770	78	0	84	8	114	0	58	9	12	1,737
Mediums	0	0	1	0	0	0	12	0	0	0	0	0	0	0	0	0	13
Total	0	10	444	57	3	92	782	78	0	84	8	114	0	58	9	12	1,751

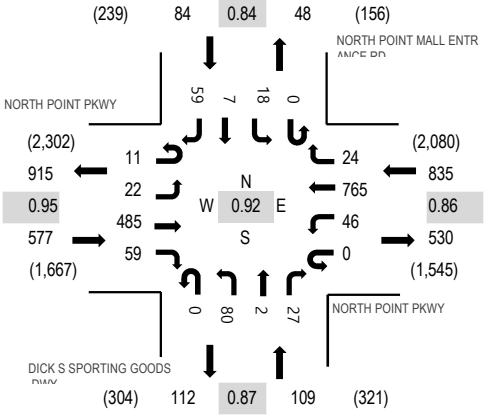
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.4%				1.3%				0.0%				0.0%			0.8%
Heavy Vehicle %	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%
Peak Hour Factor		0.81				0.81				0.81				0.93			0.90
Peak Hour Factor	0.50	0.67	0.78	0.87	0.58	0.95	0.80	0.86	0.00	0.88	0.69	0.74	0.00	0.89	0.67	0.75	0.90

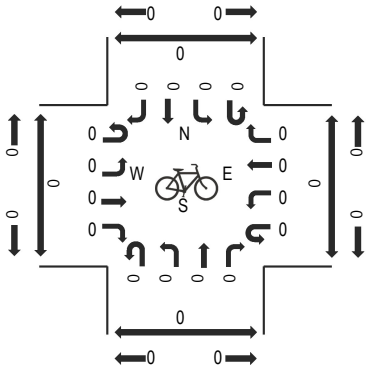
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 6 DICK S SPORTING GOODS DWY & NORTH POINT PKWY PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

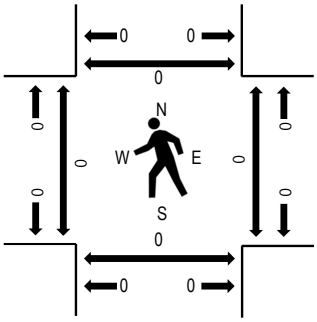
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	NORTH POINT PKWY Eastbound				NORTH POINT PKWY Westbound				DICK S SPORTING GOODS DWY Northbound				NORTH POINT MALL ENTRANCE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	2	4	128	16	0	9	144	7	0	26	0	11	0	5	4	14	370	1,443	0	0	0	0
4:15 PM	0	11	128	13	0	11	129	4	0	28	0	5	0	5	0	8	342	1,469	0	0	0	0
4:30 PM	3	10	111	18	0	5	150	10	0	25	0	7	0	3	3	15	360	1,562	0	0	0	0
4:45 PM	3	9	120	16	0	12	154	8	0	21	2	4	0	7	1	14	371	1,605	0	0	0	0
5:00 PM	3	5	132	17	0	14	169	6	0	17	0	13	0	4	1	15	396	1,588	0	0	0	0
5:15 PM	2	6	120	16	0	12	234	5	0	20	0	4	0	2	5	9	435	1,600	0	0	0	0
5:30 PM	3	2	113	10	0	8	208	5	0	22	0	6	0	5	0	21	403	1,472	0	0	0	0
5:45 PM	2	10	112	14	0	8	159	6	0	13	0	5	0	9	3	13	354	1,373	0	0	0	0
6:00 PM	2	5	125	13	1	11	201	3	0	21	2	5	0	7	0	12	408	1,276	0	0	0	0
6:15 PM	4	7	112	9	1	10	121	7	0	13	0	7	0	5	0	11	307		0	0	0	0
6:30 PM	5	6	100	11	0	12	119	3	0	15	0	9	0	13	0	11	304		0	0	0	0
6:45 PM	1	6	88	14	1	8	98	7	0	14	0	6	0	6	0	8	257		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	11	22	484	59	0	46	753	24	0	80	2	27	0	18	7	59	1,592
Mediums	0	0	1	0	0	0	12	0	0	0	0	0	0	0	0	0	13
Total	11	22	485	59	0	46	765	24	0	80	2	27	0	18	7	59	1,605

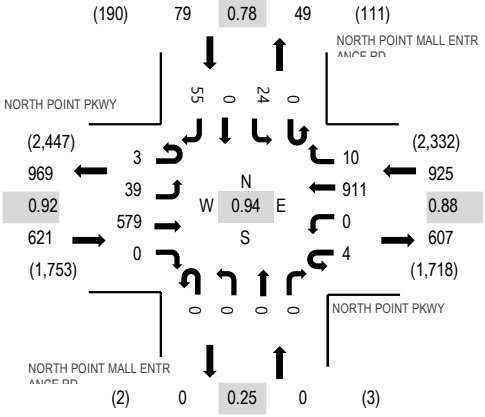
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.2%				1.4%				0.0%				0.0%			0.8%
Heavy Vehicle %	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%
Peak Hour Factor		0.95				0.86				0.87				0.84			0.92
Peak Hour Factor	0.65	0.80	0.93	0.93	0.75	0.82	0.86	0.73	0.00	0.89	0.25	0.56	0.00	0.65	0.50	0.70	0.92

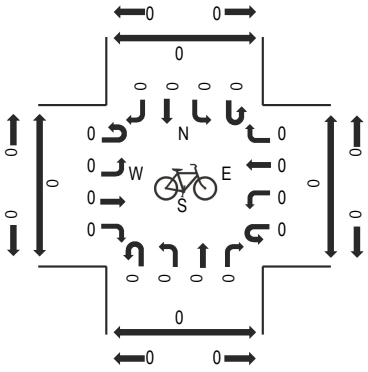
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 7 NORTH POINT MALL ENTRANCE RD & NORTH POINT PKWY PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

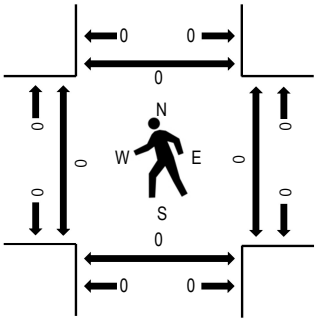
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	NORTH POINT PKWY Eastbound				NORTH POINT PKWY Westbound				NORTH POINT MALL ENTRANCE RD Northbound				NORTH POINT MALL ENTRANCE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	1	8	149	1	1	1	177	2	0	1	0	1	0	7	0	13	362	1,437	0	0	0	0
4:15 PM	0	5	149	0	1	0	171	0	0	0	0	0	0	5	0	11	342	1,483	0	0	0	0
4:30 PM	0	7	141	0	1	0	195	1	0	0	0	0	0	3	0	7	355	1,571	0	0	0	0
4:45 PM	1	8	154	0	0	0	199	1	0	0	0	0	0	4	0	11	378	1,625	0	0	0	0
5:00 PM	1	12	161	0	2	0	202	4	0	0	0	0	0	10	0	16	408	1,597	0	0	0	0
5:15 PM	1	8	132	0	2	0	260	4	0	0	0	0	0	6	0	17	430	1,591	0	0	0	0
5:30 PM	0	11	132	0	0	0	250	1	0	0	0	0	0	4	0	11	409	1,470	0	0	0	0
5:45 PM	0	5	137	0	1	0	188	1	0	1	0	0	0	2	0	15	350	1,343	0	0	0	0
6:00 PM	3	8	148	0	1	0	220	4	0	0	0	0	0	4	0	14	402	1,244	1	0	0	1
6:15 PM	0	9	133	0	0	0	155	2	0	0	0	0	0	1	0	9	309		0	0	0	0
6:30 PM	0	5	110	0	1	0	157	0	0	0	0	0	0	2	0	7	282		0	0	0	1
6:45 PM	0	3	110	0	0	0	125	2	0	0	0	0	0	3	0	8	251		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	3	39	579	0	4	0	900	10	0	0	0	0	0	24	0	55	1,614
Mediums	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	11
Total	3	39	579	0	4	0	911	10	0	0	0	0	0	24	0	55	1,625

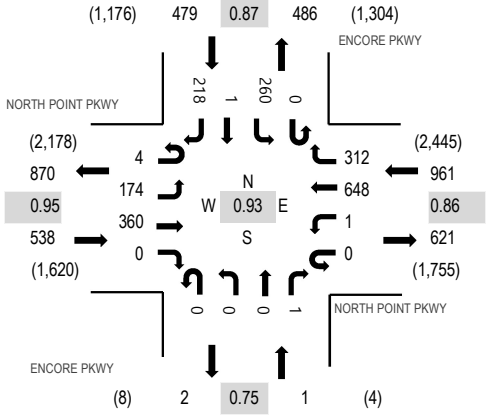
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				1.2%				0.0%				0.0%			0.7%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%
Peak Hour Factor		0.92				0.88				0.25				0.78			0.94
Peak Hour Factor	0.33	0.81	0.94	0.25	0.63	0.25	0.88	0.63	0.00	0.25	0.00	0.25	0.00	0.60	0.00	0.87	0.94

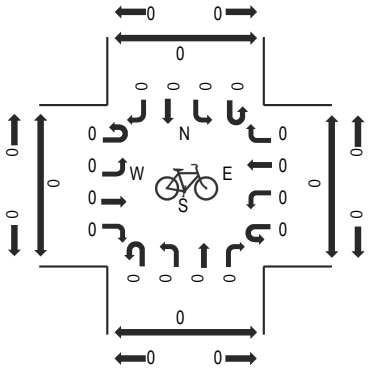
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 8 ENCORE PKWY & NORTH POINT PKWY PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

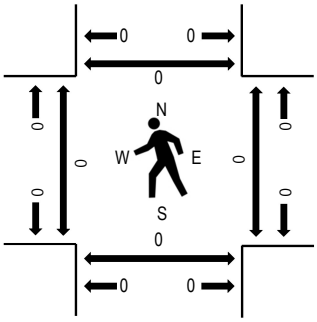
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	NORTH POINT PKWY Eastbound				NORTH POINT PKWY Westbound				ENCORE PKWY Northbound				ENCORE PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	1	38	105	0	0	1	124	70	0	0	0	1	0	52	0	45	437	1,782	0	0	1	0
4:15 PM	0	36	93	0	0	1	112	66	0	0	0	0	0	62	0	61	431	1,848	0	0	0	0
4:30 PM	0	50	100	0	0	1	120	81	0	0	0	0	0	46	1	50	449	1,948	0	0	0	0
4:45 PM	1	44	102	0	0	0	126	83	0	0	0	0	0	68	0	41	465	1,979	0	0	0	0
5:00 PM	0	49	94	0	0	0	151	72	0	0	0	0	0	75	0	62	503	1,965	0	0	0	0
5:15 PM	2	43	87	0	0	0	178	100	0	0	0	1	0	60	0	60	531	1,918	0	0	0	0
5:30 PM	1	38	77	0	0	1	193	57	0	0	0	0	0	57	1	55	480	1,791	0	0	0	0
5:45 PM	0	49	107	0	0	0	155	47	0	0	0	1	0	40	1	51	451	1,658	2	0	1	0
6:00 PM	0	40	92	0	1	1	145	80	0	0	0	1	0	59	0	37	456	1,498	0	0	0	0
6:15 PM	0	46	98	0	1	0	117	67	0	0	0	0	0	47	0	28	404		0	0	0	0
6:30 PM	0	34	88	0	1	0	114	50	0	0	0	0	0	28	0	32	347		0	1	0	0
6:45 PM	0	28	77	0	0	0	93	36	0	0	0	0	0	34	0	23	291		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	4	163	360	0	0	1	645	304	0	0	0	1	0	260	1	218	1,957
Mediums	0	11	0	0	0	0	3	8	0	0	0	0	0	0	0	0	22
Total	4	174	360	0	0	1	648	312	0	0	0	1	0	260	1	218	1,979

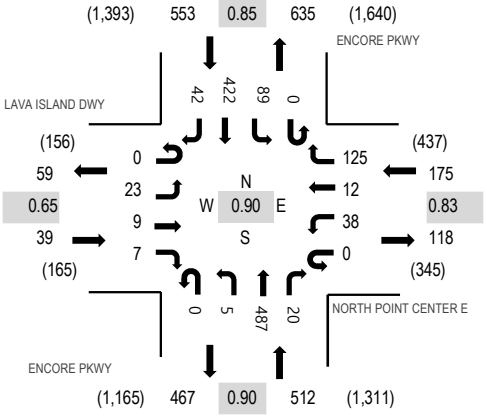
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		2.0%				1.1%				0.0%				0.0%			1.1%
Heavy Vehicle %	0.0%	6.3%	0.0%	0.0%	0.0%	0.0%	0.5%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%
Peak Hour Factor		0.95				0.86				0.75				0.87			0.93
Peak Hour Factor	0.50	0.93	0.95	0.00	0.75	0.75	0.88	0.84	0.00	0.00	0.00	0.75	0.00	0.87	0.50	0.92	0.93

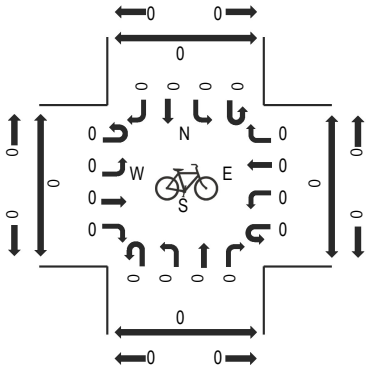
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 9 ENCORE PKWY & NORTH POINT CENTER E PM
Date: Thursday, April 16, 2026
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

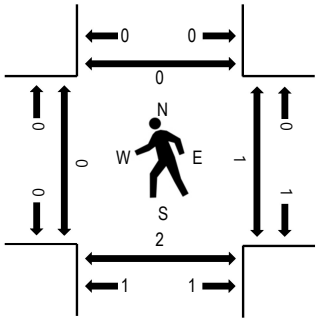
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	LAVA ISLAND DWY Eastbound				NORTH POINT CENTER E Westbound				ENCORE PKWY Northbound				ENCORE PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	10	1	4	0	11	3	28	0	0	108	4	0	16	100	9	294	1,218	0	2	0	0
4:15 PM	0	12	7	0	0	8	2	29	0	1	104	3	0	28	97	13	304	1,226	0	0	0	0
4:30 PM	0	5	1	2	0	11	2	40	0	2	115	2	0	22	84	11	297	1,279	0	0	0	0
4:45 PM	0	10	1	3	0	9	1	24	0	1	127	7	0	19	110	11	323	1,263	0	0	0	0
5:00 PM	0	5	2	1	0	11	3	35	0	1	109	6	0	14	105	10	302	1,184	0	0	0	0
5:15 PM	0	3	5	1	0	7	6	26	0	1	136	5	0	34	123	10	357	1,172	0	1	2	0
5:30 PM	0	6	1	2	0	7	3	33	0	0	92	7	0	30	91	9	281	1,049	0	0	2	0
5:45 PM	0	3	0	0	0	4	1	19	0	2	92	6	0	18	89	10	244	961	0	2	1	0
6:00 PM	0	13	3	4	0	7	6	25	0	1	112	9	1	24	80	5	290	904	0	1	0	0
6:15 PM	0	8	5	6	0	10	2	17	0	5	103	5	0	15	54	4	234		1	1	0	0
6:30 PM	0	4	4	2	0	5	1	18	0	1	76	6	0	14	54	8	193		0	0	0	0
6:45 PM	0	19	4	8	0	5	0	18	0	3	55	4	0	13	50	8	187		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	23	9	7	0	38	12	124	0	5	468	20	0	88	422	42	1,258
Mediums	0	0	0	0	0	0	0	1	0	0	19	0	0	1	0	0	21
Total	0	23	9	7	0	38	12	125	0	5	487	20	0	89	422	42	1,279

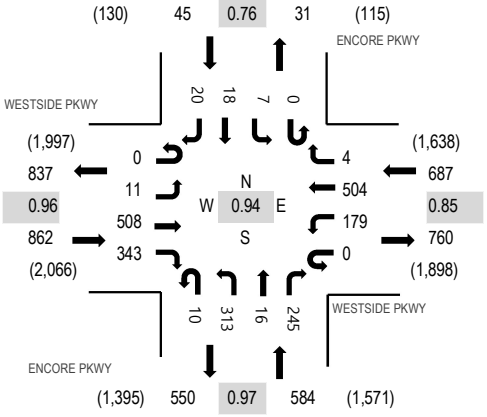
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				0.6%				3.7%				0.2%			1.6%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	3.9%	0.0%	0.0%	1.1%	0.0%	0.0%	1.6%
Peak Hour Factor		0.65				0.83				0.90				0.85			0.90
Peak Hour Factor	0.00	0.58	0.80	0.63	0.00	0.89	0.67	0.80	0.00	0.50	0.90	0.75	0.25	0.78	0.87	0.87	0.90

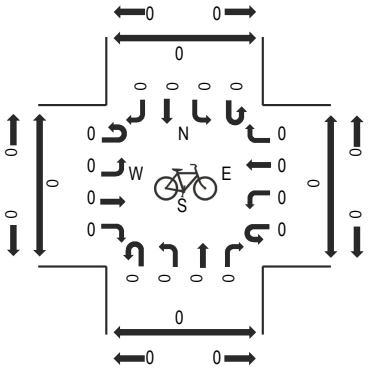
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 10 ENCORE PKWY & WESTSIDE PKWY PM
Date: Thursday, April 16, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

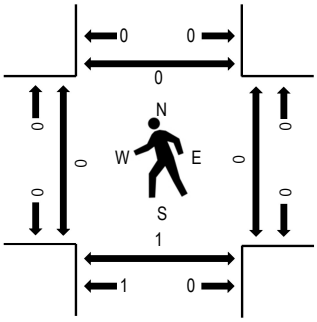
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	WESTSIDE PKWY Eastbound				WESTSIDE PKWY Westbound				ENCORE PKWY Northbound				ENCORE PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	4	99	78	0	44	70	3	3	72	7	55	0	2	2	7	446	1,919	0	0	0	0
4:15 PM	0	3	107	72	0	59	76	1	1	71	4	57	0	3	7	6	467	2,015	0	0	0	0
4:30 PM	0	1	103	72	0	46	78	4	3	92	6	58	0	1	5	4	473	2,126	0	0	1	0
4:45 PM	0	4	124	87	0	35	103	1	3	93	3	62	0	3	8	7	533	2,178	0	0	0	0
5:00 PM	0	1	134	89	0	34	120	1	1	87	3	62	0	3	2	5	542	2,081	0	0	0	0
5:15 PM	0	4	120	87	0	67	139	2	2	80	4	66	0	1	5	1	578	2,026	0	0	1	0
5:30 PM	0	2	130	80	0	43	142	0	4	53	6	55	0	0	3	7	525	1,815	0	0	0	0
5:45 PM	0	6	91	73	0	41	108	1	0	37	3	63	0	3	5	5	436	1,570	0	0	0	0
6:00 PM	0	8	96	62	0	49	113	2	1	86	9	56	0	0	4	1	487	1,405	0	0	0	1
6:15 PM	0	3	66	51	0	23	94	0	1	66	4	47	0	7	1	4	367		1	0	0	1
6:30 PM	0	2	68	38	0	29	40	1	5	46	4	40	0	4	3	0	280		0	0	0	1
6:45 PM	0	3	65	33	0	28	41	0	2	39	5	44	0	3	4	4	271		2	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	11	500	342	0	179	501	4	10	311	16	226	0	6	18	20	2,144
Mediums	0	0	7	1	0	0	3	0	0	2	0	19	0	1	0	0	33
Total	0	11	508	343	0	179	504	4	10	313	16	245	0	7	18	20	2,178

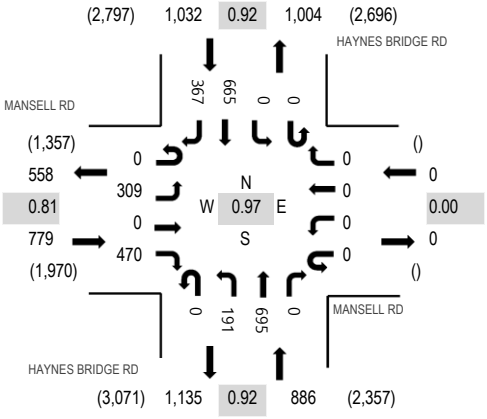
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.0%				0.4%				3.6%				2.2%			1.6%
Heavy Vehicle %	0.0%	0.0%	1.6%	0.3%	0.0%	0.0%	0.6%	0.0%	0.0%	0.6%	0.0%	7.8%	0.0%	14.3%	0.0%	0.0%	1.6%
Peak Hour Factor		0.96				0.85				0.97				0.76			0.94
Peak Hour Factor	0.00	0.63	0.95	0.96	0.00	0.75	0.90	0.56	0.63	0.95	0.61	0.94	0.00	0.50	0.69	0.86	0.94

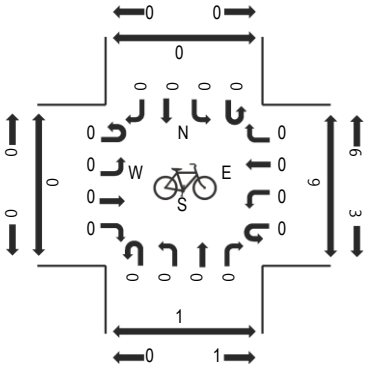
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 15 HAYNES BRIDGE RD & MANSELL RD PM
Date: Thursday, April 23, 2026
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

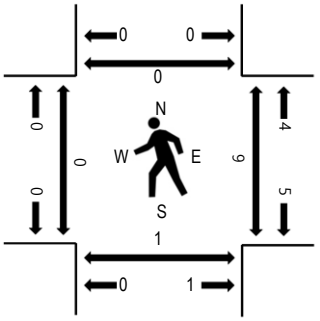
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MANSELL RD Eastbound				MANSELL RD Westbound				HAYNES BRIDGE RD Northbound				HAYNES BRIDGE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	1	83	0	87	0	0	0	0	0	45	138	0	0	0	153	51	558	2,433	0	0	0	0
4:15 PM	0	82	0	85	0	0	0	0	0	51	162	0	0	0	126	79	585	2,549	0	1	0	0
4:30 PM	1	70	0	108	0	0	0	0	0	57	175	0	0	0	133	84	628	2,660	0	1	0	0
4:45 PM	0	71	0	96	0	0	0	0	0	47	178	0	0	0	185	85	662	2,697	0	4	0	0
5:00 PM	0	107	0	132	0	0	0	0	0	34	159	0	0	0	160	82	674	2,657	0	0	1	0
5:15 PM	0	65	0	123	0	0	0	0	0	64	177	0	0	0	157	110	696	2,487	0	3	0	0
5:30 PM	0	66	0	119	0	0	0	0	0	46	181	0	0	0	163	90	665	2,339	0	2	0	0
5:45 PM	0	70	0	86	0	0	0	0	0	33	150	0	0	0	213	70	622	2,168	0	2	0	0
6:00 PM	0	53	0	56	0	0	0	0	0	33	145	0	0	0	165	52	504	2,034	0	0	0	0
6:15 PM	0	50	0	94	0	0	0	0	0	20	149	0	0	0	172	63	548		0	0	0	0
6:30 PM	0	51	0	77	0	0	0	0	0	35	114	0	0	0	164	53	494		0	0	0	0
6:45 PM	0	63	0	74	0	0	0	0	0	27	137	0	0	0	143	44	488		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	304	0	465	0	0	0	0	0	191	675	0	0	0	661	366	2,662
Mediums	0	5	0	5	0	0	0	0	0	0	20	0	0	0	4	1	35
Total	0	309	0	470	0	0	0	0	0	191	695	0	0	0	665	367	2,697

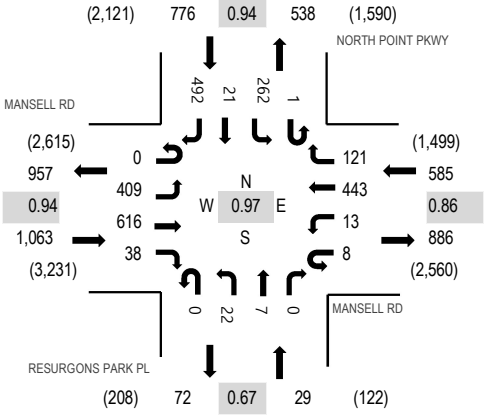
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.3%				0.0%				2.3%				0.5%			1.3%
Heavy Vehicle %	0.0%	1.6%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	0.6%	0.3%	1.3%
Peak Hour Factor		0.81				0.00				0.92				0.92			0.97
Peak Hour Factor	0.50	0.77	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.79	0.96	0.00	0.00	0.00	0.84	0.83	0.97

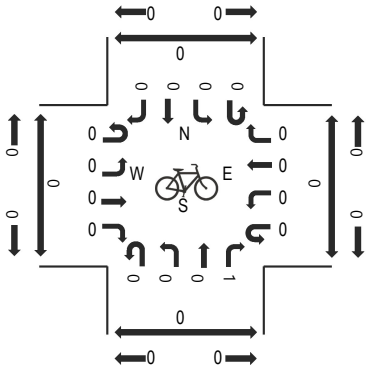
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 12 RESURGONS PARK PL & MANSELL RD PM
Date: Thursday, April 16, 2026
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

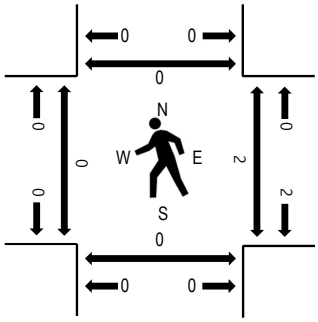
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MANSELL RD Eastbound				MANSELL RD Westbound				RESURGONS PARK PL Northbound				NORTH POINT PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	98	200	5	2	1	92	33	0	7	0	1	2	51	5	127	624	2,421	0	0	0	0
4:15 PM	0	103	162	3	4	2	76	25	0	2	1	0	0	56	6	118	558	2,423	0	0	0	0
4:30 PM	0	118	163	10	1	5	131	33	0	5	2	0	0	57	1	108	634	2,453	0	2	0	0
4:45 PM	0	101	164	11	2	3	110	35	0	3	1	0	0	59	7	109	605	2,451	0	0	0	0
5:00 PM	0	97	154	12	2	3	111	28	0	7	2	0	0	61	5	144	626	2,445	0	0	0	0
5:15 PM	0	93	135	5	3	2	91	25	0	7	2	0	1	85	8	131	588	2,432	0	0	0	0
5:30 PM	0	109	154	7	1	5	100	23	0	6	2	0	0	57	6	162	632	2,394	0	0	0	0
5:45 PM	0	106	145	11	2	1	102	30	0	11	2	2	1	64	11	111	599	2,267	0	0	0	0
6:00 PM	1	92	181	5	1	0	112	26	0	8	6	0	0	50	8	123	613	2,107	0	0	0	1
6:15 PM	0	118	174	10	3	5	69	28	0	1	7	2	0	25	6	102	550		0	0	0	0
6:30 PM	0	104	155	10	4	5	67	18	0	9	3	1	0	31	7	91	505		0	0	0	0
6:45 PM	0	95	110	10	1	5	55	16	0	16	4	2	0	33	2	90	439		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Lights	0	397	610	38	8	13	441	121	0	22	7	0	1	261	21	490	2,430
Mediums	0	12	5	0	0	0	2	0	0	0	0	0	0	1	0	1	21
Total	0	409	616	38	8	13	443	121	0	22	7	0	1	262	21	492	2,453

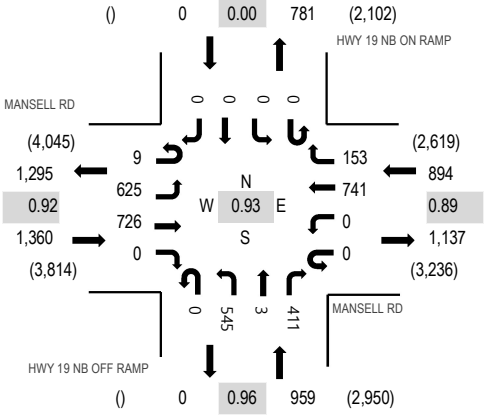
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.7%				0.3%				0.0%				0.4%			0.9%
Heavy Vehicle %	0.0%	2.9%	1.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.4%	0.9%
Peak Hour Factor		0.94				0.86				0.67				0.94			0.97
Peak Hour Factor	0.25	0.90	0.86	0.79	0.63	0.75	0.85	0.90	0.00	0.53	0.71	0.63	0.25	0.79	0.75	0.85	0.97

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 13 HWY 19 NB OFF RAMP & MANSELL RD PM
Date: Thursday, April 16, 2026
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

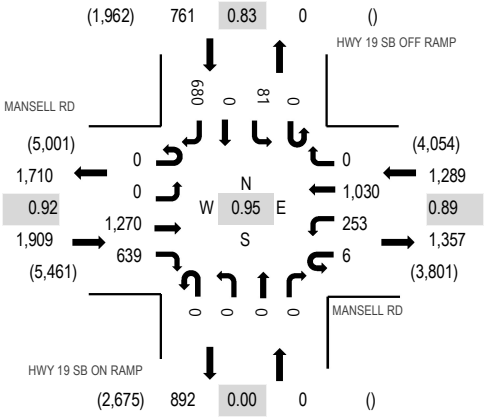
Peak Hour - Motorized Vehicles


() 0 0.00 781 (2,102)
HWY 19 NB ON RAMP
MANSELL RD
(4,045)
(2,619)
1,295
894
0.92
0.89
1,360
1,137
(3,814)
(3,236)
9
153
625
741
726
0
0
0

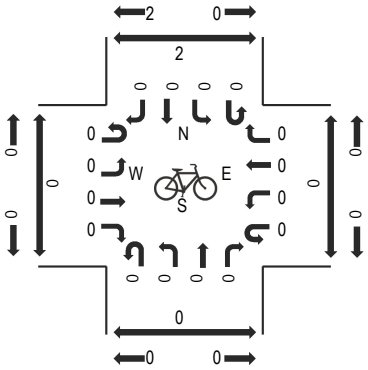
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 14 HWY 19 SB ON RAMP & MANSELL RD PM
Date: Thursday, April 16, 2026
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

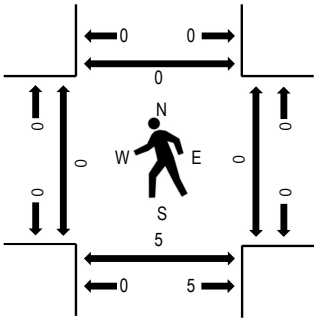
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MANSELL RD Eastbound				MANSELL RD Westbound				HWY 19 SB ON RAMP Northbound				HWY 19 SB OFF RAMP Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	352	165	1	52	268	0	0	0	0	0	0	26	0	183	1,047	3,959	0	0	1	0
4:15 PM	0	0	284	155	0	66	246	0	0	0	0	0	0	22	0	206	979	3,885	0	0	1	0
4:30 PM	0	0	304	155	3	55	258	0	0	0	0	0	0	17	0	156	948	3,845	0	0	3	0
4:45 PM	0	0	330	164	2	80	258	0	0	0	0	0	0	16	0	135	985	3,891	0	0	0	0
5:00 PM	0	0	299	171	0	76	287	0	0	0	0	0	0	18	0	122	973	3,897	0	0	2	0
5:15 PM	0	0	278	163	2	79	267	0	0	0	0	0	0	10	0	140	939	3,850	0	0	2	0
5:30 PM	0	0	310	183	0	76	276	0	0	0	0	0	0	19	0	130	994	3,939	0	0	2	0
5:45 PM	0	0	265	174	0	82	336	0	0	0	0	0	0	14	0	120	991	3,822	0	0	0	0
6:00 PM	0	0	261	170	2	67	295	0	0	0	0	0	0	19	0	112	926	3,621	2	0	3	2
6:15 PM	0	0	343	147	1	43	276	0	0	0	0	0	0	23	0	195	1,028		0	0	1	0
6:30 PM	0	0	292	132	2	52	252	0	0	0	0	0	0	21	0	126	877		0	0	0	0
6:45 PM	0	0	244	120	0	48	246	0	0	0	0	0	0	21	0	111	790		0	0	1	0

Peak Rolling Hour Flow Rates

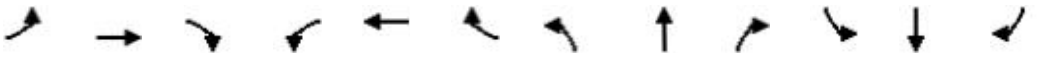
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	1	0	0	2	0	0	0	0	0	0	2	0	4	11
Lights	0	0	1,248	628	6	251	1,013	0	0	0	0	0	0	79	0	668	3,893
Mediums	0	0	20	10	0	2	15	0	0	0	0	0	0	0	0	8	55
Total	0	0	1,270	639	6	253	1,030	0	0	0	0	0	0	81	0	680	3,959

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %			1.7%				1.5%				0.0%				1.8%		1.7%
Heavy Vehicle %	0.0%	0.0%	1.7%	1.7%	0.0%	0.8%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	0.0%	1.8%	1.7%
Peak Hour Factor			0.92				0.89				0.00				0.83		0.95
Peak Hour Factor	0.00	0.00	0.90	0.94	0.58	0.95	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.91	0.00	0.83	0.95

APPENDIX F

Synchro Capacity Analyses



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	0	490	11	6	11	86	1249	21	2	1038	451
Future Volume (veh/h)	232	0	490	11	6	11	86	1249	21	2	1038	451
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856
Adj Flow Rate, veh/h	244	0	516	12	6	12	91	1315	22	2	1093	475
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	2	2	2	2	2	2	2	2	2	3
Cap, veh/h	307	360	639	71	214	191	137	3154	978	5	2959	911
Arrive On Green	0.09	0.00	0.19	0.02	0.12	0.12	0.04	0.62	0.62	0.00	0.58	0.58
Sat Flow, veh/h	3428	1900	2790	3456	1777	1585	3456	5106	1584	1781	5106	1572
Grp Volume(v), veh/h	244	0	516	12	6	12	91	1315	22	2	1093	475
Grp Sat Flow(s),veh/h/ln	1714	1900	1395	1728	1777	1585	1728	1702	1584	1781	1702	1572
Q Serve(g_s), s	11.2	0.0	28.0	0.5	0.5	1.1	4.2	21.2	0.9	0.2	18.3	29.1
Cycle Q Clear(g_c), s	11.2	0.0	28.0	0.5	0.5	1.1	4.2	21.2	0.9	0.2	18.3	29.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	360	639	71	214	191	137	3154	978	5	2959	911
V/C Ratio(X)	0.79	0.00	0.81	0.17	0.03	0.06	0.67	0.42	0.02	0.42	0.37	0.52
Avail Cap(c_a), veh/h	664	368	651	173	214	191	436	3154	978	94	2959	911
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	0.78	0.78	0.78	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.4	0.0	58.3	77.0	62.1	62.3	75.8	15.7	11.9	79.7	18.0	20.3
Incr Delay (d2), s/veh	6.5	0.0	7.7	1.6	0.1	0.2	6.1	0.3	0.0	67.9	0.4	2.1
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	5.2	0.0	10.7	0.3	0.2	0.5	1.9	8.0	0.3	0.2	7.1	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	77.9	0.0	66.1	78.6	62.2	62.5	81.9	16.1	11.9	147.6	18.3	22.4
LnGrp LOS	E		E	E	E	E	F	B	B	F	B	C
Approach Vol, veh/h		760			30			1428			1570	
Approach Delay, s/veh		69.8			68.9			20.2			19.7	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	99.2	21.3	26.3	7.0	105.3	10.3	37.3
Change Period (Y+Rc), s	6.8	6.5	7.0	7.0	6.6	6.5	7.0	7.0
Max Green Setting (Gmax), s	20.2	73.5	31.0	8.0	8.4	85.5	8.0	31.0
Max Q Clear Time (g_c+I1), s	6.2	31.1	13.2	3.1	2.2	23.2	2.5	30.0
Green Ext Time (p_c), s	0.3	24.4	1.2	0.0	0.0	26.9	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	30.4
HCM 7th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	805	0	306	0	0	0	0	557	473	240	1351	0
Future Volume (veh/h)	805	0	306	0	0	0	0	557	473	240	1351	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	0	1870				0	1841	1870	1796	1870	0
Adj Flow Rate, veh/h	821	0	312				0	568	483	245	1379	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	0	2				0	4	2	7	2	0
Cap, veh/h	974	0	793				0	2194	691	268	3230	0
Arrive On Green	0.28	0.00	0.28				0.00	0.44	0.44	0.11	0.42	0.00
Sat Flow, veh/h	3428	0	2790				0	5191	1583	1711	5274	0
Grp Volume(v), veh/h	821	0	312				0	568	483	245	1379	0
Grp Sat Flow(s),veh/h/ln	1714	0	1395				0	1675	1583	1711	1702	0
Q Serve(g_s), s	36.1	0.0	14.4				0.0	11.5	39.6	22.7	30.4	0.0
Cycle Q Clear(g_c), s	36.1	0.0	14.4				0.0	11.5	39.6	22.7	30.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	974	0	793				0	2194	691	268	3230	0
V/C Ratio(X)	0.84	0.00	0.39				0.00	0.26	0.70	0.91	0.43	0.00
Avail Cap(c_a), veh/h	1361	0	1107				0	2194	691	307	3230	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.96	0.96	0.89	0.89	0.00
Uniform Delay (d), s/veh	53.9	0.0	46.2				0.0	28.6	36.5	70.5	25.7	0.0
Incr Delay (d2), s/veh	4.2	0.0	0.5				0.0	0.3	5.6	26.9	0.4	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
%ile BackOfQ(50%),veh/ln	15.8	0.0	11.9				0.0	4.6	16.0	12.1	13.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.1	0.0	46.6				0.0	28.9	42.1	97.5	26.1	0.0
LnGrp LOS	E		D					C	D	F	C	
Approach Vol, veh/h		1133						1051			1624	
Approach Delay, s/veh		54.9						35.0			36.8	
Approach LOS		D						C			D	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		108.0		52.0	31.4	76.7						
Change Period (Y+Rc), s		6.8		6.5	6.3	6.8						
Max Green Setting (Gmax), s		83.2		63.5	28.7	48.2						
Max Q Clear Time (g_c+I1), s		32.4		38.1	24.7	41.6						
Green Ext Time (p_c), s		26.6		7.4	0.4	4.5						

Intersection Summary												
HCM 7th Control Delay, s/veh			41.7									
HCM 7th LOS			D									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	67	28	22	13	12	52	7	18	811	7	54	141
Future Volume (vph)	67	28	22	13	12	52	7	18	811	7	54	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		8.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00		1.00	0.91	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00		1.00	1.00	0.98		1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.93		1.00	1.00	0.85		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	3433	1729		1770	1863	1583		1770	5036	1548		1769
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.16	1.00	1.00		0.26
Satd. Flow (perm)	3433	1729		1770	1863	1583		296	5036	1548		486
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	70	29	23	14	12	54	7	19	845	7	56	147
RTOR Reduction (vph)	0	18	0	0	0	51	0	0	0	4	0	0
Lane Group Flow (vph)	70	34	0	14	13	3	0	26	845	3	0	203
Confl. Peds. (#/hr)			1	1						1		1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	3	8		7	4		5	5	2		1 9	1 9
Permitted Phases						4	2	2		2	6	6
Actuated Green, G (s)	9.9	16.1		2.9	9.8	9.8		80.1	75.9	75.9		117.5
Effective Green, g (s)	9.9	16.1		2.9	9.8	9.8		80.1	75.9	75.9		117.5
Actuated g/C Ratio	0.06	0.10		0.02	0.06	0.06		0.50	0.47	0.47		0.73
Clearance Time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		3.0	5.0	5.0		
Lane Grp Cap (vph)	212	173		32	114	96		186	2388	734		571
v/s Ratio Prot	c0.02	c0.02		0.01	0.01			0.00	0.17			c0.06
v/s Ratio Perm						0.00		0.07		0.00		0.20
v/c Ratio	0.33	0.20		0.44	0.11	0.03		0.14	0.35	0.00		0.36
Uniform Delay, d1	71.9	66.0		77.7	71.0	70.6		20.4	26.6	22.2		7.8
Progression Factor	1.00	1.00		1.00	1.00	1.00		0.65	0.50	1.00		1.28
Incremental Delay, d2	1.3	0.8		12.5	0.6	0.2		0.3	0.4	0.0		0.4
Delay (s)	73.1	66.8		90.2	71.6	70.8		13.7	13.8	22.2		10.3
Level of Service	E	E		F	E	E		B	B	C		B
Approach Delay (s/veh)		70.4			74.3				13.8			
Approach LOS		E			E				B			

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	38.3
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1361	71
Future Volume (vph)	1361	71
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	7.1
Lane Util. Factor	0.91	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	5085	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	5085	1583
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	1418	74
RTOR Reduction (vph)	0	25
Lane Group Flow (vph)	1418	49
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	106.8	106.8
Effective Green, g (s)	106.8	106.8
Actuated g/C Ratio	0.67	0.67
Clearance Time (s)	7.1	7.1
Vehicle Extension (s)	5.0	5.0
Lane Grp Cap (vph)	3394	1056
v/s Ratio Prot	c0.28	
v/s Ratio Perm		0.03
v/c Ratio	0.42	0.05
Uniform Delay, d1	12.3	9.1
Progression Factor	0.48	1.00
Incremental Delay, d2	0.4	0.1
Delay (s)	6.3	9.2
Level of Service	A	A
Approach Delay (s/veh)	6.9	
Approach LOS	A	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	125	63	77	548	12	131	728	6	161	891	350
Future Volume (veh/h)	58	125	63	77	548	12	131	728	6	161	891	350
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1870	1841	1870	1870	1811	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	129	65	79	565	12	135	751	6	166	919	361
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	5	5	2	4	2	2	6	3	2	2	2	2
Cap, veh/h	98	450	291	120	680	306	181	2988	24	207	2076	972
Arrive On Green	0.01	0.04	0.04	0.04	0.13	0.13	0.05	0.58	0.58	0.12	1.00	1.00
Sat Flow, veh/h	3374	3469	1585	3401	5106	1585	3346	5184	41	3456	3554	1585
Grp Volume(v), veh/h	60	129	65	79	565	12	135	489	268	166	919	361
Grp Sat Flow(s),veh/h/ln	1687	1735	1585	1700	1702	1585	1673	1689	1848	1728	1777	1585
Q Serve(g_s), s	2.8	5.8	6.0	3.7	17.3	1.0	6.4	11.5	11.5	7.5	0.0	0.0
Cycle Q Clear(g_c), s	2.8	5.8	6.0	3.7	17.3	1.0	6.4	11.5	11.5	7.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	98	450	291	120	680	306	181	1947	1065	207	2076	972
V/C Ratio(X)	0.61	0.29	0.22	0.66	0.83	0.04	0.74	0.25	0.25	0.80	0.44	0.37
Avail Cap(c_a), veh/h	245	531	329	255	782	338	349	1947	1065	246	2076	972
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	78.3	69.4	61.3	76.2	67.6	52.5	74.6	16.8	16.8	69.5	0.0	0.0
Incr Delay (d2), s/veh	8.5	0.5	0.5	8.6	7.3	0.1	8.3	0.3	0.6	15.2	0.6	1.0
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(50%),veh/ln	1.4	2.7	0.0	1.7	7.9	0.4	2.9	4.5	4.9	3.5	0.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	86.8	69.9	61.8	84.8	74.9	52.5	82.8	17.1	17.4	84.6	0.6	1.0
LnGrp LOS	F	E	E	F	E	D	F	B	B	F	A	A
Approach Vol, veh/h		254			656			892			1446	
Approach Delay, s/veh		71.8			75.7			27.1			10.4	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	99.9	13.1	28.8	17.0	101.2	13.6	28.2
Change Period (Y+Rc), s	8.6	7.7	8.4	7.5	8.3	7.7	8.0	7.5
Max Green Setting (Gmax), s	11.4	80.3	11.6	24.5	16.7	75.3	12.0	24.5
Max Q Clear Time (g_c+I1), s	9.5	13.5	4.8	19.3	8.4	2.0	5.7	8.0
Green Ext Time (p_c), s	0.1	11.6	0.1	2.1	0.3	24.2	0.1	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	33.0
HCM 7th LOS	C

Notes

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

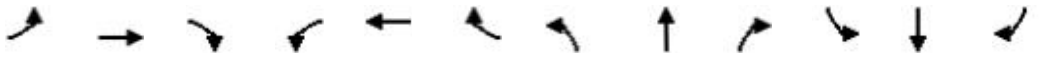
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	310	2	12	923	7	1	0	7	3	1	3
Future Volume (veh/h)	1	310	2	12	923	7	1	0	7	3	1	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1870	1870	1870	1870	1900	1870	1411	1870	1870
Adj Flow Rate, veh/h	1	344	2	13	1026	8	1	0	0	3	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	3	2	2	2	2	2	0	2	33	2	2
Cap, veh/h	2	4315	25	20	4395	34	49	2	2	53	10	0
Arrive On Green	0.00	1.00	1.00	0.01	0.84	0.84	0.00	0.00	0.00	0.00	0.01	0.00
Sat Flow, veh/h	1781	5197	30	1781	5226	41	1781	1900	1585	1344	1870	0
Grp Volume(v), veh/h	1	223	123	13	668	366	1	0	0	3	1	0
Grp Sat Flow(s),veh/h/ln	1781	1689	1850	1781	1702	1863	1781	1900	1585	1344	1870	0
Q Serve(g_s), s	0.1	0.0	0.0	1.2	6.2	6.2	0.1	0.0	0.0	0.4	0.1	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.2	6.2	6.2	0.1	0.0	0.0	0.4	0.1	0.0
Prop In Lane	1.00		0.02	1.00		0.02	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	2	2804	1536	20	2862	1567	49	2	2	53	10	0
V/C Ratio(X)	0.52	0.08	0.08	0.67	0.23	0.23	0.02	0.00	0.00	0.06	0.11	0.00
Avail Cap(c_a), veh/h	157	2804	1536	100	2862	1567	258	216	180	206	213	0
HCM Platoon Ratio	2.00	2.00	2.00	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	0.78	0.78	0.78	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	79.8	0.0	0.0	78.8	2.5	2.5	79.7	0.0	0.0	79.2	79.2	0.0
Incr Delay (d2), s/veh	62.0	0.1	0.1	10.7	0.1	0.3	0.1	0.0	0.0	0.2	1.8	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(50%),veh/ln	0.1	0.0	0.0	0.6	1.7	1.9	0.0	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	141.8	0.1	0.1	89.5	2.7	2.8	79.7	0.0	0.0	79.4	81.0	0.0
LnGrp LOS	F	A	A	F	A	A	E			E	F	
Approach Vol, veh/h		347			1047			1			4	
Approach Delay, s/veh		0.5			3.8			79.7			79.8	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	140.1	6.2	7.6	7.8	138.5	6.8	7.0
Change Period (Y+Rc), s	5.9	5.6	6.0	6.8	6.0	5.6	6.0	6.8
Max Green Setting (Gmax), s	14.1	84.4	19.0	18.2	9.0	89.4	19.0	18.2
Max Q Clear Time (g_c+I1), s	2.1	8.2	2.1	2.1	3.2	2.0	2.4	0.0
Green Ext Time (p_c), s	0.0	19.4	0.0	0.0	0.0	4.7	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	3.2
HCM 7th LOS	A

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	320	18	16	913	3	7	0	5	0	0	0
Future Volume (veh/h)	5	320	18	16	913	3	7	0	5	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.83		0.99	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1707	1870	1870	1870	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	6	356	20	18	1014	3	8	0	6	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	3	2	13	2	2	2	0	2	0	0	0
Cap, veh/h	13	4142	230	28	4489	13	58	0	37	46	1	0
Arrive On Green	0.01	1.00	1.00	0.03	1.00	1.00	0.01	0.00	0.02	0.00	0.00	0.00
Sat Flow, veh/h	1781	4910	273	1626	5256	16	1781	0	1595	1810	1900	0
Grp Volume(v), veh/h	6	244	132	18	657	360	8	0	6	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	1689	1806	1626	1702	1868	1781	0	1595	1810	1900	0
Q Serve(g_s), s	0.5	0.0	0.0	1.7	0.0	0.0	0.7	0.0	0.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.0	1.7	0.0	0.0	0.7	0.0	0.6	0.0	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.01	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	13	2849	1524	28	2907	1595	58	0	37	46	1	0
V/C Ratio(X)	0.46	0.09	0.09	0.64	0.23	0.23	0.14	0.00	0.16	0.00	0.00	0.00
Avail Cap(c_a), veh/h	157	2849	1524	142	2907	1595	198	0	332	199	395	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	78.5	0.0	0.0	76.8	0.0	0.0	79.1	0.0	76.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.1	0.1	0.1	8.7	0.2	0.3	0.4	0.0	0.8	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(50%),veh/ln	0.3	0.0	0.0	0.8	0.1	0.1	0.3	0.0	0.3	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	87.6	0.1	0.1	85.5	0.2	0.3	79.5	0.0	77.4	0.0	0.0	0.0
LnGrp LOS	F	A	A	F	A	A	E		E			
Approach Vol, veh/h		382			1035			14			0	
Approach Delay, s/veh		1.5			1.7			78.6			0.0	
Approach LOS		A			A			E				

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	142.5	7.5	2.9	8.8	140.9	0.0	10.4
Change Period (Y+Rc), s	5.9	5.9	6.3	6.7	6.0	5.9	6.4	6.7
Max Green Setting (Gmax), s	14.1	74.1	13.7	33.3	14.0	74.1	13.6	33.3
Max Q Clear Time (g_c+I1), s	2.5	2.0	2.7	0.0	3.7	2.0	0.0	2.6
Green Ext Time (p_c), s	0.0	18.7	0.0	0.0	0.0	5.1	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	2.4
HCM 7th LOS	A

Notes

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

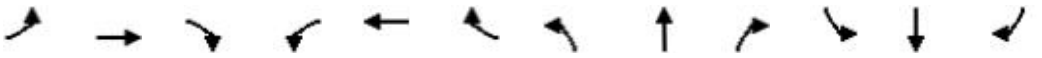
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	339	1	0	899	20	0	0	3	0	0	0
Future Vol, veh/h	28	339	1	0	899	20	0	0	3	0	0	0
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Stop	-	-	None
Storage Length	250	-	-	-	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	0	2	2	0	0	33	0	0	0
Mvmt Flow	31	377	1	0	999	22	0	0	3	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1022	0	-	-	-	0	-	-	188	1224	-	512
Stage 1	-	-	-	-	-	-	-	-	-	1011	-	-
Stage 2	-	-	-	-	-	-	-	-	-	213	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.76	6.4	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	7.3	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.7	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	4.23	3.8	-	3.9
Pot Cap-1 Maneuver	382	-	0	0	-	-	0	0	632	192	0	438
Stage 1	-	-	0	0	-	-	0	0	-	198	0	-
Stage 2	-	-	0	0	-	-	0	0	-	712	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	382	-	-	-	-	-	-	-	632	175	-	438
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	175	-	-
Stage 1	-	-	-	-	-	-	-	-	-	198	-	-
Stage 2	-	-	-	-	-	-	-	-	-	650	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.17	0	10.73	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	632	382	-	-	-	-	-
HCM Lane V/C Ratio	0.005	0.082	-	-	-	-	-
HCM Ctrl Dly (s/v)	10.7	15.3	-	-	-	0	0
HCM Lane LOS	B	C	-	-	-	A	A
HCM 95th %tile Q(veh)	0	0.3	-	-	-	-	-



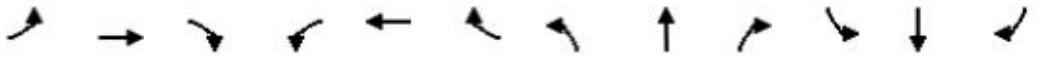
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	153	0	0	512	396	0	0	0	219	0	134
Future Volume (veh/h)	220	153	0	0	512	396	0	0	0	219	0	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1900	1900	1856	1870	1900	1900	0	1870	1900	1870
Adj Flow Rate, veh/h	232	161	0	0	539	417	0	0	0	231	0	141
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	3	0	0	3	2	0	0	0	2	0	2
Cap, veh/h	433	4151	0	964	2490	1159	1	1	0	366	0	163
Arrive On Green	0.05	0.82	0.00	0.00	0.24	0.24	0.00	0.00	0.00	0.10	0.00	0.10
Sat Flow, veh/h	1781	5233	0	1810	3377	1572	1810	1900	0	3552	0	1580
Grp Volume(v), veh/h	232	161	0	0	539	417	0	0	0	231	0	141
Grp Sat Flow(s),veh/h/ln	1781	1689	0	1810	1689	1572	1810	1900	0	1776	0	1580
Q Serve(g_s), s	4.9	0.9	0.0	0.0	20.4	35.2	0.0	0.0	0.0	10.0	0.0	14.1
Cycle Q Clear(g_c), s	4.9	0.9	0.0	0.0	20.4	35.2	0.0	0.0	0.0	10.0	0.0	14.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	433	4151	0	964	2490	1159	1	1	0	366	0	163
V/C Ratio(X)	0.54	0.04	0.00	0.00	0.22	0.36	0.00	0.00	0.00	0.63	0.00	0.87
Avail Cap(c_a), veh/h	565	4151	0	1173	2490	1159	265	278	0	417	0	186
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	10.9	2.7	0.0	0.0	23.6	29.2	0.0	0.0	0.0	68.8	0.0	70.7
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.0	0.2	0.9	0.0	0.0	0.0	2.5	0.0	29.4
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	2.9	0.3	0.0	0.0	9.4	15.2	0.0	0.0	0.0	4.7	0.0	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.2	2.7	0.0	0.0	23.8	30.1	0.0	0.0	0.0	71.3	0.0	100.0
LnGrp LOS	B	A			C	C				E		F
Approach Vol, veh/h		393			956			0			372	
Approach Delay, s/veh		8.3			26.5			0.0			82.2	
Approach LOS		A			C						F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.1	124.2		22.7	0.0	137.3		0.0				
Change Period (Y+Rc), s	5.6	6.2		6.2	6.4	6.2		6.6				
Max Green Setting (Gmax), s	19.4	73.8		18.8	18.6	73.8		23.4				
Max Q Clear Time (g_c+I1), s	6.9	37.2		16.1	0.0	2.9		0.0				
Green Ext Time (p_c), s	0.7	14.8		0.4	0.0	2.2		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	34.4	
HCM 7th LOS	C	

Notes

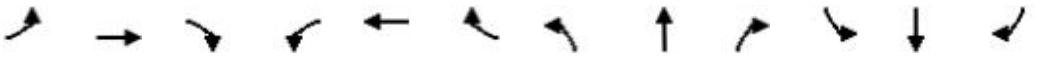
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	6	3	2	1	19	4	578	29	69	353	7
Future Volume (veh/h)	2	6	3	2	1	19	4	578	29	69	353	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870	1693
Adj Flow Rate, veh/h	2	7	3	2	1	21	4	628	32	75	384	8
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	3	2	14
Cap, veh/h	43	30	13	44	22	58	641	786	40	451	813	17
Arrive On Green	0.02	0.02	0.02	0.04	0.04	0.04	0.11	0.45	0.45	0.11	0.45	0.45
Sat Flow, veh/h	1781	1234	529	1207	603	1567	1781	1764	90	1767	1825	38
Grp Volume(v), veh/h	2	0	10	3	0	21	4	0	660	75	0	392
Grp Sat Flow(s),veh/h/ln	1781	0	1763	1810	0	1567	1781	0	1854	1767	0	1863
Q Serve(g_s), s	0.1	0.0	0.3	0.1	0.0	0.6	0.0	0.0	14.3	0.9	0.0	6.9
Cycle Q Clear(g_c), s	0.1	0.0	0.3	0.1	0.0	0.6	0.0	0.0	14.3	0.9	0.0	6.9
Prop In Lane	1.00		0.30	0.67		1.00	1.00		0.05	1.00		0.02
Lane Grp Cap(c), veh/h	43	0	42	67	0	58	641	0	826	451	0	830
V/C Ratio(X)	0.05	0.00	0.24	0.04	0.00	0.36	0.01	0.00	0.80	0.17	0.00	0.47
Avail Cap(c_a), veh/h	688	0	681	699	0	606	1138	0	1508	948	0	1520
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.2	0.0	22.3	21.6	0.0	21.9	5.2	0.0	11.1	7.3	0.0	9.1
Incr Delay (d2), s/veh	0.4	0.0	2.8	0.3	0.0	3.8	0.0	0.0	1.8	0.2	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0	4.6	0.2	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.7	0.0	25.1	21.9	0.0	25.7	5.2	0.0	12.9	7.5	0.0	9.5
LnGrp LOS	C		C	C		C	A		B	A		A
Approach Vol, veh/h		12			24			664			467	
Approach Delay, s/veh		24.7			25.2			12.9			9.2	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	25.3		5.6	9.5	25.3		6.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.1	37.9		18.0	18.0	38.0		18.0				
Max Q Clear Time (g_c+I1), s	2.9	16.3		2.3	2.0	8.9		2.6				
Green Ext Time (p_c), s	0.1	4.5		0.0	0.0	2.4		0.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		11.8	
HCM 7th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	504	285	131	866	4	371	20	151	7	20	7
Future Volume (veh/h)	17	504	285	131	866	4	371	20	151	7	20	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1870	1870	1870	1870	1870	1870	1870	1870	1693	1826	1693
Adj Flow Rate, veh/h	18	548	310	142	941	4	403	22	164	8	22	8
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, %	6	2	2	2	2	2	2	2	2	14	5	14
Cap, veh/h	246	1000	446	395	1229	547	592	486	411	269	181	142
Arrive On Green	0.02	0.28	0.28	0.09	0.35	0.35	0.17	0.26	0.26	0.01	0.10	0.10
Sat Flow, veh/h	1725	3554	1583	1781	3554	1583	3456	1870	1583	1612	1826	1430
Grp Volume(v), veh/h	18	548	310	142	941	4	403	22	164	8	22	8
Grp Sat Flow(s),veh/h/ln	1725	1777	1583	1781	1777	1583	1728	1870	1583	1612	1826	1430
Q Serve(g_s), s	0.4	6.5	8.7	2.7	11.7	0.1	5.4	0.4	4.3	0.2	0.5	0.3
Cycle Q Clear(g_c), s	0.4	6.5	8.7	2.7	11.7	0.1	5.4	0.4	4.3	0.2	0.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1000	446	395	1229	547	592	486	411	269	181	142
V/C Ratio(X)	0.07	0.55	0.70	0.36	0.77	0.01	0.68	0.05	0.40	0.03	0.12	0.06
Avail Cap(c_a), veh/h	381	1435	640	453	1500	668	1250	1165	986	414	661	517
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	15.2	16.0	11.0	14.5	10.7	19.3	13.8	15.2	19.8	20.4	20.3
Incr Delay (d2), s/veh	0.1	0.5	2.0	0.5	2.0	0.0	1.4	0.0	0.6	0.0	0.3	0.2
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	0.1	2.2	2.9	0.9	4.0	0.0	2.0	0.2	1.4	0.1	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.1	15.7	17.9	11.5	16.4	10.7	20.7	13.8	15.8	19.9	20.7	20.5
LnGrp LOS	B	B	B	B	B	B	C	B	B	B	C	C
Approach Vol, veh/h		876			1087			589			38	
Approach Delay, s/veh		16.4			15.8			19.1			20.5	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	21.7	13.0	9.4	8.8	18.5	5.0	17.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	21.0	18.0	18.0	5.9	20.1	5.0	31.0
Max Q Clear Time (g_c+I1), s	2.4	13.7	7.4	2.5	4.7	10.7	2.2	6.3
Green Ext Time (p_c), s	0.0	3.5	1.1	0.1	0.0	3.2	0.0	0.6

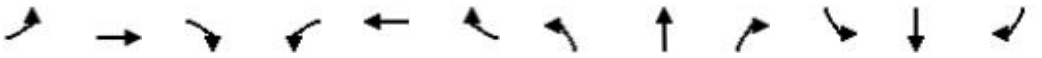
Intersection Summary	
HCM 7th Control Delay, s/veh	16.8
HCM 7th LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	270	171	290	768	702	467
Future Volume (veh/h)	270	171	290	768	702	467
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1826	1870
Adj Flow Rate, veh/h	278	176	299	792	724	481
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	4	2	2	5	2
Cap, veh/h	523	416	406	2430	888	771
Arrive On Green	0.15	0.15	0.12	0.68	0.49	0.49
Sat Flow, veh/h	3456	1560	1781	3647	1826	1585
Grp Volume(v), veh/h	278	176	299	792	724	481
Grp Sat Flow(s),veh/h/ln	1728	1560	1781	1777	1826	1585
Q Serve(g_s), s	4.1	5.1	4.0	5.0	18.4	12.2
Cycle Q Clear(g_c), s	4.1	5.1	4.0	5.0	18.4	12.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	523	416	406	2430	888	771
V/C Ratio(X)	0.53	0.42	0.74	0.33	0.82	0.62
Avail Cap(c_a), veh/h	1139	693	543	3448	1270	1103
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	21.4	16.6	10.8	3.5	11.9	10.3
Incr Delay (d2), s/veh	0.8	0.7	3.6	0.1	2.8	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.1	1.7	0.6	5.8	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	22.2	17.3	14.4	3.6	14.8	11.2
LnGrp LOS	C	B	B	A	B	B
Approach Vol, veh/h	454			1091	1205	
Approach Delay, s/veh	20.3			6.5	13.3	
Approach LOS	C			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		41.9		12.8	10.8	31.1
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		53.0		18.0	10.5	38.0
Max Q Clear Time (g_c+I1), s		7.0		7.1	6.0	20.4
Green Ext Time (p_c), s		5.8		1.2	0.4	6.1

Intersection Summary		
HCM 7th Control Delay, s/veh		11.8
HCM 7th LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	239	355	4	12	411	134	28	20	3	109	4	480
Future Volume (vph)	239	355	4	12	411	134	28	20	3	109	4	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	6.7	6.7	7.4	6.7	6.7	7.9	7.9		7.5	7.5	7.4
Lane Util. Factor	0.94	0.95	1.00	1.00	0.95	1.00	1.00	0.95		0.95	0.95	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	4942	3438	1583	1671	3539	1583	1736	3476		1633	1646	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	4942	3438	1583	1671	3539	1583	1736	3476		1633	1646	2787
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	257	382	4	13	442	144	30	22	3	117	4	516
RTOR Reduction (vph)	0	0	1	0	0	77	0	3	0	0	0	386
Lane Group Flow (vph)	257	382	3	13	442	67	30	22	0	61	60	130
Heavy Vehicles (%)	3%	5%	2%	8%	2%	2%	4%	2%	2%	5%	2%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	1 9	6		5	2		4	4		8	8	1 9
Permitted Phases			6			2						8
Actuated Green, G (s)	29.8	108.3	108.3	2.9	74.0	74.0	8.8	8.8		10.5	10.5	40.3
Effective Green, g (s)	29.8	108.3	108.3	2.9	74.0	74.0	8.8	8.8		10.5	10.5	40.3
Actuated g/C Ratio	0.19	0.68	0.68	0.02	0.46	0.46	0.06	0.06		0.07	0.07	0.25
Clearance Time (s)		6.7	6.7	7.4	6.7	6.7	7.9	7.9		7.5	7.5	
Vehicle Extension (s)		5.0	5.0	2.1	5.0	5.0	5.1	5.1		2.1	2.1	
Lane Grp Cap (vph)	920	2327	1071	30	1636	732	95	191		107	108	701
v/s Ratio Prot	c0.05	0.11		0.01	c0.12		c0.02	0.01		c0.04	0.04	0.03
v/s Ratio Perm			0.00			0.04						0.01
v/c Ratio	0.28	0.16	0.00	0.43	0.27	0.09	0.32	0.12		0.57	0.56	0.19
Uniform Delay, d1	55.9	9.4	8.4	77.7	26.4	24.1	72.7	71.9		72.6	72.5	47.0
Progression Factor	0.85	1.41	1.00	1.00	1.00	1.00	1.00	1.00		0.80	0.80	1.67
Incremental Delay, d2	0.3	0.1	0.0	4.3	0.4	0.2	4.1	0.6		4.6	3.6	0.3
Delay (s)	47.7	13.4	8.4	82.1	26.8	24.4	76.8	72.5		62.5	61.7	78.6
Level of Service	D	B	A	F	C	C	E	E		E	E	E
Approach Delay (s/veh)		27.1			27.4			74.8			75.5	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	44.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	36.9
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	9	615	305	0	0	832	41	807	3	328	0	0
Future Volume (vph)	9	615	305	0	0	832	41	807	3	328	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6	6.4			6.4	6.4	6.7	6.7	6.7		
Lane Util. Factor		0.97	0.95			0.95	1.00	0.95	0.95	0.88		
Frpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	0.98		
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Frt		1.00	1.00			1.00	0.85	1.00	1.00	0.85		
Flt Protected		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (prot)		3400	3406			3539	1583	1665	1670	2724		
Flt Permitted		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (perm)		3400	3406			3539	1583	1665	1670	2724		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	10	654	324	0	0	885	44	859	3	349	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	30	0	0	218	0	0
Lane Group Flow (vph)	0	664	324	0	0	885	14	429	433	131	0	0
Confl. Peds. (#/hr)				1	1					1	1	
Heavy Vehicles (%)	2%	3%	6%	0%	0%	2%	2%	3%	2%	2%	0%	0%
Turn Type	Prot	Prot	NA			NA	Perm	Split	NA	Perm		
Protected Phases	1 9	1 9	6			2		4	4			
Permitted Phases							2			4		
Actuated Green, G (s)		38.2	103.9			52.5	52.5	43.0	43.0	43.0		
Effective Green, g (s)		38.2	103.9			52.5	52.5	43.0	43.0	43.0		
Actuated g/C Ratio		0.24	0.65			0.33	0.33	0.27	0.27	0.27		
Clearance Time (s)			6.4			6.4	6.4	6.7	6.7	6.7		
Vehicle Extension (s)			3.0			3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		811	2211			1161	519	447	448	732		
v/s Ratio Prot		c0.20	0.10			c0.25		0.26	c0.26			
v/s Ratio Perm							0.01			0.05		
v/c Ratio		0.82	0.15			0.76	0.03	0.96	0.97	0.18		
Uniform Delay, d1		57.6	10.9			48.2	36.4	57.6	57.8	44.9		
Progression Factor		1.10	1.59			1.10	1.00	1.00	1.00	1.00		
Incremental Delay, d2		6.1	0.1			4.5	0.1	32.0	33.6	0.1		
Delay (s)		69.3	17.5			57.4	36.5	89.6	91.4	45.1		
Level of Service		E	B			E	D	F	F	D		
Approach Delay (s/veh)			52.3			56.4			77.4			0.0
Approach LOS			D			E			E			A

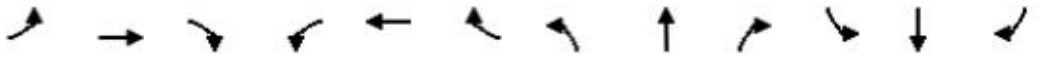
Intersection Summary			
HCM 2000 Control Delay (s/veh)	63.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.3
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s/veh)	
Approach LOS	

Intersection Summary

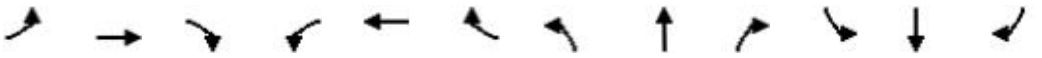


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	944	544	262	1335	0	0	0	0	13	4	147
Future Volume (veh/h)	0	944	544	262	1335	0	0	0	0	13	4	147
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1841	1870	1870	0				1781	1870	1767
Adj Flow Rate, veh/h	0	983	567	273	1391	0				11	0	159
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	3	4	2	2	0				8	2	9
Cap, veh/h	0	2538	1122	326	3031	0				114	0	201
Arrive On Green	0.00	0.72	0.72	0.13	1.00	0.00				0.07	0.00	0.07
Sat Flow, veh/h	0	3618	1559	3456	3647	0				1697	0	2994
Grp Volume(v), veh/h	0	983	567	273	1391	0				11	0	159
Grp Sat Flow(s),veh/h/ln	0	1763	1559	1728	1777	0				1697	0	1497
Q Serve(g_s), s	0.0	17.3	25.6	12.3	0.0	0.0				1.0	0.0	8.4
Cycle Q Clear(g_c), s	0.0	17.3	25.6	12.3	0.0	0.0				1.0	0.0	8.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2538	1122	326	3031	0				114	0	201
V/C Ratio(X)	0.00	0.39	0.51	0.84	0.46	0.00				0.10	0.00	0.79
Avail Cap(c_a), veh/h	0	2538	1122	622	3031	0				406	0	717
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.45	0.45	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.7	9.9	68.7	0.0	0.0				70.1	0.0	73.5
Incr Delay (d2), s/veh	0.0	0.4	1.6	2.6	0.2	0.0				0.2	0.0	3.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.4	8.6	5.4	0.1	0.0				0.4	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	9.2	11.5	71.4	0.2	0.0				70.3	0.0	76.8
LnGrp LOS		A	B	E	A					E		E
Approach Vol, veh/h		1550			1664						170	
Approach Delay, s/veh		10.0			11.9						76.4	
Approach LOS		B			B						E	

Timer - Assigned Phs	2			5	6		8					
Phs Duration (G+Y+Rc), s	142.6			21.3	121.3		17.4					
Change Period (Y+Rc), s	6.1			6.2	6.1		6.7					
Max Green Setting (Gmax), s	108.9			28.8	73.9		38.3					
Max Q Clear Time (g_c+I1), s	2.0			14.3	27.6		10.4					
Green Ext Time (p_c), s	38.7			0.8	26.0		0.3					

Intersection Summary	
HCM 7th Control Delay, s/veh	14.3
HCM 7th LOS	B

Notes
User approved volume balancing among the lanes for turning movement.



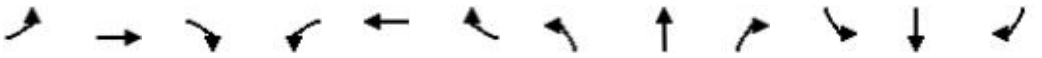
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	2	556	16	21	8	268	1327	13	5	1159	648
Future Volume (veh/h)	170	2	556	16	21	8	268	1327	13	5	1159	648
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1870	1870	1870	1870	1870	1870	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	173	2	567	16	21	8	273	1354	13	5	1183	661
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	2	2	2	2	2	2	3	2	2	2	2
Cap, veh/h	220	239	623	85	224	80	331	3501	1095	11	3066	952
Arrive On Green	0.06	0.13	0.13	0.02	0.09	0.09	0.10	0.69	0.69	0.01	0.60	0.60
Sat Flow, veh/h	3401	1870	2790	3456	2562	920	3456	5066	1585	1781	5106	1585
Grp Volume(v), veh/h	173	2	567	16	14	15	273	1354	13	5	1183	661
Grp Sat Flow(s),veh/h/ln	1700	1870	1395	1728	1777	1705	1728	1689	1585	1781	1702	1585
Q Serve(g_s), s	9.0	0.2	23.0	0.8	1.3	1.4	14.0	20.3	0.5	0.5	21.7	51.5
Cycle Q Clear(g_c), s	9.0	0.2	23.0	0.8	1.3	1.4	14.0	20.3	0.5	0.5	21.7	51.5
Prop In Lane	1.00		1.00	1.00		0.54	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	239	623	85	155	149	331	3501	1095	11	3066	952
V/C Ratio(X)	0.79	0.01	0.91	0.19	0.09	0.10	0.83	0.39	0.01	0.46	0.39	0.69
Avail Cap(c_a), veh/h	435	239	623	154	155	149	637	3501	1095	83	3066	952
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	1.00	0.68	0.68	0.68	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.9	68.5	68.1	86.0	75.5	75.6	79.9	11.7	8.7	89.1	18.7	24.7
Incr Delay (d2), s/veh	8.5	0.0	17.7	1.5	0.4	0.4	5.1	0.2	0.0	37.0	0.4	4.2
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	4.3	0.1	14.4	0.4	0.6	0.7	6.4	7.4	0.2	0.3	8.5	20.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	91.4	68.6	85.8	87.6	75.9	76.0	85.0	11.9	8.7	126.1	19.1	28.8
LnGrp LOS	F	E	F	F	E	E	F	B	A	F	B	C
Approach Vol, veh/h		742			45			1640			1849	
Approach Delay, s/veh		87.1			80.1			24.1			22.8	
Approach LOS		F			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	114.6	18.7	22.8	7.7	130.9	11.4	30.0
Change Period (Y+Rc), s	6.8	6.5	7.0	7.0	6.6	6.5	7.0	7.0
Max Green Setting (Gmax), s	33.2	88.5	23.0	8.0	8.4	113.5	8.0	23.0
Max Q Clear Time (g_c+I1), s	16.0	53.5	11.0	3.4	2.5	22.3	2.8	25.0
Green Ext Time (p_c), s	1.3	25.4	0.6	0.0	0.0	31.7	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	35.1
HCM 7th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	662	0	338	0	0	0	0	939	540	406	1329	0
Future Volume (vph)	662	0	338	0	0	0	0	939	540	406	1329	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5		6.5					6.8	6.8	6.3	6.8	
Lane Util. Factor	0.97		0.88					0.91	1.00	1.00	0.91	
Frt	1.00		0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95		1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433		2787					5085	1583	1752	5085	
Flt Permitted	0.95		1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433		2787					5085	1583	1752	5085	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	682	0	348	0	0	0	0	968	557	419	1370	0
RTOR Reduction (vph)	0	0	87	0	0	0	0	0	307	0	0	0
Lane Group Flow (vph)	682	0	261	0	0	0	0	968	250	419	1370	0
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	0%	2%	2%	3%	2%	0%
Turn Type	Prot		Perm					NA	Perm	Prot	NA	
Protected Phases	4							6		5 11	2	
Permitted Phases			4						6			
Actuated Green, G (s)	43.4		43.4					60.3	60.3	50.4	123.3	
Effective Green, g (s)	43.4		43.4					60.3	60.3	50.4	123.3	
Actuated g/C Ratio	0.24		0.24					0.34	0.34	0.28	0.69	
Clearance Time (s)	6.5		6.5					6.8	6.8		6.8	
Vehicle Extension (s)	4.0		4.0					5.1	5.1		5.1	
Lane Grp Cap (vph)	827		671					1703	530	490	3483	
v/s Ratio Prot	c0.20							c0.19		c0.24	0.27	
v/s Ratio Perm			0.09						0.16			
v/c Ratio	0.82		0.39					0.57	0.47	0.86	0.39	
Uniform Delay, d1	64.7		57.2					49.2	47.3	61.3	12.2	
Progression Factor	1.00		1.00					0.62	0.48	1.40	0.69	
Incremental Delay, d2	7.0		0.5					1.3	2.9	13.0	0.3	
Delay (s)	71.7		57.7					31.8	25.5	98.7	8.7	
Level of Service	E		E					C	C	F	A	
Approach Delay (s/veh)		67.0			0.0			29.5			29.8	
Approach LOS		E			A			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	38.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	209	53	72	45	46	130	9	45	791	20	29	270
Future Volume (vph)	209	53	72	45	46	130	9	45	791	20	29	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		8.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00		1.00	0.91	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00		1.00	1.00	0.98		1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.91		1.00	1.00	0.85		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	3433	1687		1770	1863	1583		1770	5036	1548		1769
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.21	1.00	1.00		0.25
Satd. Flow (perm)	3433	1687		1770	1863	1583		387	5036	1548		474
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	213	54	73	46	47	133	9	46	807	20	30	276
RTOR Reduction (vph)	0	29	0	0	0	124	0	0	0	12	0	0
Lane Group Flow (vph)	213	98	0	46	47	9	0	55	807	8	0	306
Confl. Peds. (#/hr)			3	3						1		1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	3	8		7	4		5	5	2		1 9	1 9
Permitted Phases						4	2	2		2	6	6
Actuated Green, G (s)	17.4	22.7		6.6	12.6	12.6		81.2	74.3	74.3		128.4
Effective Green, g (s)	17.4	22.7		6.6	12.6	12.6		81.2	74.3	74.3		128.4
Actuated g/C Ratio	0.10	0.13		0.04	0.07	0.07		0.45	0.41	0.41		0.71
Clearance Time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		3.0	5.0	5.0		
Lane Grp Cap (vph)	331	212		64	130	110		227	2078	638		612
v/s Ratio Prot	c0.06	c0.06		0.03	0.03			0.01	0.16			c0.11
v/s Ratio Perm						0.01		0.10		0.01		c0.25
v/c Ratio	0.64	0.46		0.72	0.36	0.08		0.24	0.39	0.01		0.50
Uniform Delay, d1	78.3	73.0		85.8	79.9	78.3		28.1	37.0	31.2		11.5
Progression Factor	1.00	1.00		1.00	1.00	1.00		0.93	0.83	1.00		1.24
Incremental Delay, d2	4.7	2.2		33.7	2.3	0.5		0.5	0.5	0.0		0.6
Delay (s)	83.0	75.2		119.5	82.2	78.8		26.7	31.3	31.2		14.8
Level of Service	F	E		F	F	E		C	C	C		B
Approach Delay (s/veh)		80.1			87.8				31.0			
Approach LOS		F			F				C			

Intersection Summary			
HCM 2000 Control Delay (s/veh)	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	38.3
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1182	97
Future Volume (vph)	1182	97
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	7.1
Lane Util. Factor	0.91	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	5085	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	5085	1583
Peak-hour factor, PHF	0.98	0.98
Adj. Flow (vph)	1206	99
RTOR Reduction (vph)	0	36
Lane Group Flow (vph)	1206	63
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	113.8	113.8
Effective Green, g (s)	113.8	113.8
Actuated g/C Ratio	0.63	0.63
Clearance Time (s)	7.1	7.1
Vehicle Extension (s)	5.0	5.0
Lane Grp Cap (vph)	3214	1000
v/s Ratio Prot	0.24	
v/s Ratio Perm		0.04
v/c Ratio	0.38	0.06
Uniform Delay, d1	16.0	12.7
Progression Factor	0.61	1.00
Incremental Delay, d2	0.3	0.1
Delay (s)	10.0	12.8
Level of Service	B	B
Approach Delay (s/veh)	11.1	
Approach LOS	B	

Intersection Summary

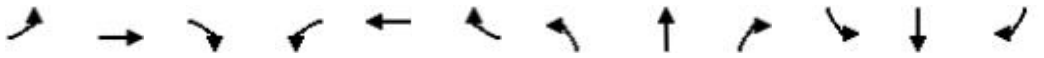
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	325	165	94	520	44	184	587	10	159	815	353
Future Volume (veh/h)	230	325	165	94	520	44	184	587	10	159	815	353
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870	1870	1870
Adj Flow Rate, veh/h	245	346	176	100	553	47	196	624	11	169	867	376
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	4	2	2	2	2
Cap, veh/h	296	672	407	141	725	319	236	2712	48	208	1872	971
Arrive On Green	0.03	0.06	0.06	0.04	0.14	0.14	0.07	0.53	0.53	0.12	1.00	1.00
Sat Flow, veh/h	3456	3554	1580	3456	5106	1578	3456	5085	89	3456	3554	1585
Grp Volume(v), veh/h	245	346	176	100	553	47	196	411	224	169	867	376
Grp Sat Flow(s),veh/h/ln	1728	1777	1580	1728	1702	1578	1728	1675	1825	1728	1777	1585
Q Serve(g_s), s	12.7	17.0	17.9	5.1	18.8	4.4	10.1	11.7	11.8	8.6	0.0	0.0
Cycle Q Clear(g_c), s	12.7	17.0	17.9	5.1	18.8	4.4	10.1	11.7	11.8	8.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	296	672	407	141	725	319	236	1786	973	208	1872	971
V/C Ratio(X)	0.83	0.51	0.43	0.71	0.76	0.15	0.83	0.23	0.23	0.81	0.46	0.39
Avail Cap(c_a), veh/h	434	800	464	307	950	389	282	1786	973	276	1872	971
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	86.1	76.4	65.0	85.3	74.3	59.1	82.8	22.3	22.4	78.2	0.0	0.0
Incr Delay (d2), s/veh	9.9	0.8	1.0	9.1	3.3	0.3	17.5	0.3	0.6	14.0	0.8	1.1
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	6.4	8.3	7.8	2.5	8.4	1.8	5.0	4.7	5.2	4.0	0.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	96.1	77.2	66.0	94.3	77.6	59.4	100.3	22.6	22.9	92.2	0.8	1.1
LnGrp LOS	F	E	E	F	E	E	F	C	C	F	A	A
Approach Vol, veh/h		767			700			831			1412	
Approach Delay, s/veh		80.7			78.7			41.0			11.8	
Approach LOS		F			E			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.4	103.7	23.8	33.1	20.6	102.5	15.3	41.6
Change Period (Y+Rc), s	8.6	7.7	8.4	7.5	8.3	7.7	8.0	7.5
Max Green Setting (Gmax), s	14.4	77.3	22.6	33.5	14.7	77.3	16.0	40.5
Max Q Clear Time (g_c+I1), s	10.6	13.8	14.7	20.8	12.1	2.0	7.1	19.9
Green Ext Time (p_c), s	0.2	9.2	0.7	3.9	0.2	22.9	0.2	3.9

Intersection Summary	
HCM 7th Control Delay, s/veh	45.2
HCM 7th LOS	D

Notes

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



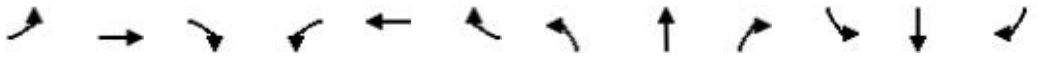
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	444	57	95	782	78	84	8	114	58	9	12
Future Volume (veh/h)	10	444	57	95	782	78	84	8	114	58	9	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	493	63	106	869	87	93	9	127	64	10	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	3027	381	125	3398	339	233	171	145	215	57	74
Arrive On Green	0.02	1.00	1.00	0.07	0.72	0.72	0.06	0.09	0.09	0.04	0.08	0.08
Sat Flow, veh/h	1781	4592	577	1781	4718	470	1781	1870	1585	1781	738	960
Grp Volume(v), veh/h	11	363	193	106	626	330	93	9	127	64	0	23
Grp Sat Flow(s),veh/h/ln	1781	1702	1765	1781	1702	1785	1781	1870	1585	1781	0	1698
Q Serve(g_s), s	1.1	0.0	0.0	10.6	11.3	11.4	8.6	0.8	14.2	5.9	0.0	2.3
Cycle Q Clear(g_c), s	1.1	0.0	0.0	10.6	11.3	11.4	8.6	0.8	14.2	5.9	0.0	2.3
Prop In Lane	1.00		0.33	1.00		0.26	1.00		1.00	1.00		0.57
Lane Grp Cap(c), veh/h	17	2244	1164	125	2452	1285	233	171	145	215	0	130
V/C Ratio(X)	0.66	0.16	0.17	0.85	0.26	0.26	0.40	0.05	0.88	0.30	0.00	0.18
Avail Cap(c_a), veh/h	189	2244	1164	188	2452	1285	317	293	248	324	0	266
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	0.77	0.77	0.77	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	88.0	0.0	0.0	82.8	8.6	8.6	71.0	74.7	80.8	72.1	0.0	77.8
Incr Delay (d2), s/veh	14.9	0.2	0.3	10.8	0.2	0.4	0.4	0.0	8.0	0.3	0.0	0.2
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	0.6	0.0	0.1	5.3	4.2	4.5	4.0	0.4	6.2	2.8	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	102.9	0.2	0.3	93.6	8.8	9.0	71.4	74.7	88.8	72.4	0.0	78.0
LnGrp LOS	F	A	A	F	A	A	E	E	F	E		E
Approach Vol, veh/h		567			1062			229			87	
Approach Delay, s/veh		2.2			17.3			81.2			73.9	
Approach LOS		A			B			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	135.3	16.5	20.6	18.6	124.3	13.9	23.2
Change Period (Y+Rc), s	5.9	5.6	6.0	6.8	6.0	5.6	6.0	6.8
Max Green Setting (Gmax), s	19.1	89.4	19.0	28.2	19.0	89.4	19.0	28.2
Max Q Clear Time (g_c+I1), s	3.1	13.4	10.6	4.3	12.6	2.0	7.9	16.2
Green Ext Time (p_c), s	0.0	17.3	0.1	0.0	0.1	8.2	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	23.0
HCM 7th LOS	C

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	485	59	46	765	24	80	2	27	18	7	59
Future Volume (veh/h)	33	485	59	46	765	24	80	2	27	18	7	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	527	64	50	832	26	87	2	29	20	8	64
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	46	3297	395	64	3683	115	156	10	146	143	10	81
Arrive On Green	0.05	1.00	1.00	0.02	0.49	0.49	0.06	0.10	0.10	0.01	0.06	0.06
Sat Flow, veh/h	1781	4621	553	1781	5087	159	1781	103	1498	1781	179	1433
Grp Volume(v), veh/h	36	386	205	50	556	302	87	0	31	20	0	72
Grp Sat Flow(s),veh/h/ln	1781	1702	1771	1781	1702	1842	1781	0	1601	1781	0	1612
Q Serve(g_s), s	3.6	0.0	0.0	5.0	17.0	17.1	8.1	0.0	3.2	1.9	0.0	7.9
Cycle Q Clear(g_c), s	3.6	0.0	0.0	5.0	17.0	17.1	8.1	0.0	3.2	1.9	0.0	7.9
Prop In Lane	1.00		0.31	1.00		0.09	1.00		0.94	1.00		0.89
Lane Grp Cap(c), veh/h	46	2429	1263	64	2464	1333	156	0	156	143	0	91
V/C Ratio(X)	0.78	0.16	0.16	0.78	0.23	0.23	0.56	0.00	0.20	0.14	0.00	0.79
Avail Cap(c_a), veh/h	189	2429	1263	188	2464	1333	242	0	341	302	0	343
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	84.8	0.0	0.0	87.1	17.2	17.2	73.0	0.0	74.7	78.6	0.0	83.9
Incr Delay (d2), s/veh	9.9	0.1	0.3	7.2	0.2	0.4	1.2	0.0	0.2	0.2	0.0	5.6
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	1.8	0.0	0.1	2.5	7.5	8.2	3.8	0.0	1.4	0.9	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	94.7	0.1	0.3	94.4	17.4	17.6	74.2	0.0	75.0	78.8	0.0	89.5
LnGrp LOS	F	A	A	F	B	B	E		E	E		F
Approach Vol, veh/h		627			908			118			92	
Approach Delay, s/veh		5.6			21.7			74.4			87.2	
Approach LOS		A			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	136.2	16.3	16.9	12.5	134.3	8.9	24.3
Change Period (Y+Rc), s	5.9	5.9	6.3	6.7	6.0	5.9	6.4	6.7
Max Green Setting (Gmax), s	19.1	79.1	18.7	38.3	19.0	79.1	18.6	38.3
Max Q Clear Time (g_c+I1), s	5.6	19.1	10.1	9.9	7.0	2.0	3.9	5.2
Green Ext Time (p_c), s	0.0	14.2	0.1	0.3	0.0	8.8	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	22.9
HCM 7th LOS	C

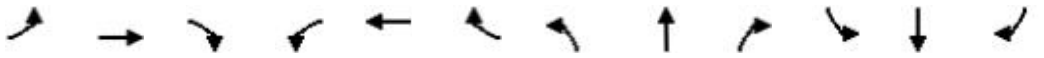
Intersection	
Int Delay, s/veh	1.4

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	3	39	579	0	4	0	911	10	0	0	0	24	0	55
Future Vol, veh/h	3	39	579	0	4	0	911	10	0	0	0	24	0	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	Free	-	-	-	None	-	-	Stop	-	-	None
Storage Length	-	250	-	-	-	-	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	0	2	0	2	2	0	0	0	2	0	2
Mvmt Flow	3	41	616	0	4	0	969	11	0	0	0	26	0	59

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	715	980	0	-	450	-	-	0	-	-	308	1319	-	490
Stage 1	-	-	-	-	-	-	-	-	-	-	-	983	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	336	-	-
Critical Hdwy	5.64	5.34	-	-	5.64	-	-	-	-	-	7.1	6.44	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	7.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	6.74	-	-
Follow-up Hdwy	2.32	3.12	-	-	2.32	-	-	-	-	-	3.9	3.82	-	3.92
Pot Cap-1 Maneuver	632	400	-	0	884	0	-	-	0	0	591	165	0	448
Stage 1	-	-	-	0	-	0	-	-	0	0	-	205	0	-
Stage 2	-	-	-	0	-	0	-	-	0	0	-	597	0	-
Platoon blocked, %			-				-	-						
Mov Cap-1 Maneuver	408	408	-	-	884	-	-	-	-	-	591	146	-	448
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	146	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	203	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	532	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.01	0.04	0	20.44
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	408	-	-	-	146	448
HCM Lane V/C Ratio	-	0.109	-	-	-	0.174	0.13
HCM Ctrl Dly (s/v)	0	14.9	-	-	-	34.7	14.2
HCM Lane LOS	A	B	-	-	-	D	B
HCM 95th %tile Q(veh)	-	0.4	-	-	-	0.6	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	360	0	1	648	312	0	0	1	260	1	218
Future Volume (veh/h)	178	360	0	1	648	312	0	0	1	260	1	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1870	1900	1870	1870	1856	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	191	387	0	1	697	335	0	0	0	281	0	234
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	2	0	2	2	3	0	0	2	2	2	2
Cap, veh/h	497	3887	0	767	2471	1150	1	1	0	471	0	210
Arrive On Green	0.04	0.76	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.13	0.00	0.13
Sat Flow, veh/h	1725	5274	0	1781	3404	1585	1810	1900	0	3563	0	1585
Grp Volume(v), veh/h	191	387	0	1	697	335	0	0	0	281	0	234
Grp Sat Flow(s),veh/h/ln	1725	1702	0	1781	1702	1585	1810	1900	0	1781	0	1585
Q Serve(g_s), s	5.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.4	0.0	23.8
Cycle Q Clear(g_c), s	5.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.4	0.0	23.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	497	3887	0	767	2471	1150	1	1	0	471	0	210
V/C Ratio(X)	0.38	0.10	0.00	0.00	0.28	0.29	0.00	0.00	0.00	0.60	0.00	1.12
Avail Cap(c_a), veh/h	658	3887	0	997	2471	1150	235	247	0	471	0	210
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.89	0.00	0.89
Uniform Delay (d), s/veh	5.0	5.6	0.0	6.7	0.0	0.0	0.0	0.0	0.0	73.6	0.0	78.1
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	1.9	0.0	93.5
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	1.8	1.2	0.0	0.0	0.1	0.2	0.0	0.0	0.0	6.3	0.0	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	5.5	5.6	0.0	6.7	0.3	0.6	0.0	0.0	0.0	75.4	0.0	171.6
LnGrp LOS	A	A		A	A	A				E		F
Approach Vol, veh/h		578			1033			0			515	
Approach Delay, s/veh		5.6			0.4			0.0			119.1	
Approach LOS		A			A						F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.2	136.8		30.0	6.8	143.2		0.0				
Change Period (Y+Rc), s	5.6	6.2		6.2	6.4	6.2		6.6				
Max Green Setting (Gmax), s	24.4	83.8		23.8	23.6	83.8		23.4				
Max Q Clear Time (g_c+I1), s	7.0	2.0		25.8	2.0	5.5		0.0				
Green Ext Time (p_c), s	0.6	20.3		0.0	0.0	5.7		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	30.6
HCM 7th LOS	C

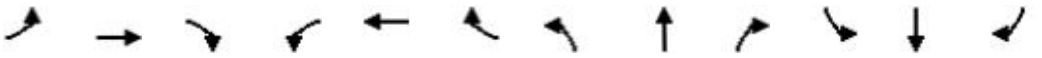
Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	9	7	38	12	125	5	487	20	89	422	42
Future Volume (veh/h)	23	9	7	38	12	125	5	487	20	89	422	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	10	8	42	13	139	6	541	22	99	469	47
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	4	2	2	2	2
Cap, veh/h	88	47	38	176	55	202	429	655	27	394	624	62
Arrive On Green	0.05	0.05	0.05	0.13	0.13	0.13	0.10	0.37	0.37	0.10	0.37	0.37
Sat Flow, veh/h	1781	957	766	1376	426	1573	1781	1756	71	1781	1672	168
Grp Volume(v), veh/h	26	0	18	55	0	139	6	0	563	99	0	516
Grp Sat Flow(s),veh/h/ln	1781	0	1723	1802	0	1573	1781	0	1828	1781	0	1840
Q Serve(g_s), s	0.7	0.0	0.5	1.4	0.0	4.3	0.1	0.0	14.3	1.6	0.0	12.5
Cycle Q Clear(g_c), s	0.7	0.0	0.5	1.4	0.0	4.3	0.1	0.0	14.3	1.6	0.0	12.5
Prop In Lane	1.00		0.44	0.76		1.00	1.00		0.04	1.00		0.09
Lane Grp Cap(c), veh/h	88	0	85	231	0	202	429	0	682	394	0	686
V/C Ratio(X)	0.30	0.00	0.21	0.24	0.00	0.69	0.01	0.00	0.83	0.25	0.00	0.75
Avail Cap(c_a), veh/h	627	0	606	634	0	553	881	0	1001	847	0	1007
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.5	0.0	23.4	20.1	0.0	21.3	8.7	0.0	14.5	9.8	0.0	14.0
Incr Delay (d2), s/veh	1.9	0.0	1.2	0.5	0.0	4.2	0.0	0.0	3.8	0.3	0.0	1.8
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	0.3	0.0	0.2	0.6	0.0	1.7	0.0	0.0	5.4	0.5	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.3	0.0	24.6	20.6	0.0	25.5	8.7	0.0	18.3	10.2	0.0	15.8
LnGrp LOS	C		C	C		C	A		B	B		B
Approach Vol, veh/h		44			194			569			615	
Approach Delay, s/veh		25.0			24.1			18.2			14.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	23.6		7.0	9.5	23.6		11.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	28.0		18.0	18.0	28.0		18.0				
Max Q Clear Time (g_c+I1), s	3.6	16.3		2.7	2.1	14.5		6.3				
Green Ext Time (p_c), s	0.2	2.8		0.1	0.0	2.7		0.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	17.8
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	508	343	179	504	4	323	16	245	7	18	20
Future Volume (veh/h)	11	508	343	179	504	4	323	16	245	7	18	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1781	1693	1870	1870
Adj Flow Rate, veh/h	12	540	365	190	536	4	344	17	261	7	19	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	8	14	2	2
Cap, veh/h	404	1052	469	427	1358	605	523	448	361	254	182	154
Arrive On Green	0.02	0.30	0.30	0.10	0.38	0.38	0.15	0.24	0.24	0.01	0.10	0.10
Sat Flow, veh/h	1781	3554	1583	1781	3554	1583	3456	1870	1510	1612	1870	1585
Grp Volume(v), veh/h	12	540	365	190	536	4	344	17	261	7	19	21
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1777	1583	1728	1870	1510	1612	1870	1585
Q Serve(g_s), s	0.2	6.4	10.7	3.4	5.6	0.1	4.8	0.4	8.1	0.2	0.5	0.6
Cycle Q Clear(g_c), s	0.2	6.4	10.7	3.4	5.6	0.1	4.8	0.4	8.1	0.2	0.5	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	404	1052	469	427	1358	605	523	448	361	254	182	154
V/C Ratio(X)	0.03	0.51	0.78	0.44	0.39	0.01	0.66	0.04	0.72	0.03	0.10	0.14
Avail Cap(c_a), veh/h	552	1279	570	516	1468	654	1223	1140	920	397	662	561
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.2	14.9	16.4	10.1	11.4	9.7	20.3	14.8	17.8	20.4	20.9	21.0
Incr Delay (d2), s/veh	0.0	0.4	5.6	0.7	0.2	0.0	1.4	0.0	2.7	0.0	0.2	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.2	4.0	1.1	1.7	0.0	1.8	0.1	2.7	0.1	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.2	15.3	22.0	10.8	11.6	9.7	21.8	14.9	20.5	20.4	21.2	21.4
LnGrp LOS	B	B	C	B	B	A	C	B	C	C	C	C
Approach Vol, veh/h		917			730			622			47	
Approach Delay, s/veh		17.9			11.4			21.1			21.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	23.9	12.2	9.4	9.7	19.5	5.0	16.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	21.0	18.0	18.0	7.7	18.3	5.0	31.0
Max Q Clear Time (g_c+I1), s	2.2	7.6	6.8	2.6	5.4	12.7	2.2	10.1
Green Ext Time (p_c), s	0.0	2.8	0.9	0.1	0.1	2.3	0.0	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	16.8
HCM 7th LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	309	470	191	695	665	367
Future Volume (veh/h)	309	470	191	695	665	367
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1870
Adj Flow Rate, veh/h	319	485	197	716	686	378
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	2	2
Cap, veh/h	962	581	317	2053	794	673
Arrive On Green	0.28	0.28	0.09	0.58	0.42	0.42
Sat Flow, veh/h	3456	1585	1781	3618	1870	1585
Grp Volume(v), veh/h	319	485	197	716	686	378
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1763	1870	1585
Q Serve(g_s), s	4.7	18.0	3.7	6.9	21.6	11.7
Cycle Q Clear(g_c), s	4.7	18.0	3.7	6.9	21.6	11.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	962	581	317	2053	794	673
V/C Ratio(X)	0.33	0.83	0.62	0.35	0.86	0.56
Avail Cap(c_a), veh/h	962	581	449	2617	955	809
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	18.5	18.7	13.5	7.1	16.9	14.1
Incr Delay (d2), s/veh	0.2	10.2	2.0	0.1	7.2	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	15.9	1.2	1.8	8.9	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	18.8	28.9	15.5	7.2	24.1	14.8
LnGrp LOS	B	C	B	A	C	B
Approach Vol, veh/h	804			913	1064	
Approach Delay, s/veh	24.8			9.0	20.8	
Approach LOS	C			A	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		42.2		22.5	10.2	32.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		48.0		18.0	10.5	33.0
Max Q Clear Time (g_c+I1), s		8.9		20.0	5.7	23.6
Green Ext Time (p_c), s		5.0		0.0	0.2	3.9

Intersection Summary	
HCM 7th Control Delay, s/veh	18.1
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	409	616	38	8	13	443	121	22	7	0	1	262
Future Volume (vph)	409	616	38	8	13	443	121	22	7	0	1	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	6.7	6.7		7.4	6.7	6.7	7.9	7.9			7.5
Lane Util. Factor	0.94	0.95	1.00		1.00	0.95	1.00	1.00	0.95			0.95
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00			1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00			0.95
Satd. Flow (prot)	4942	3539	1583		1770	3539	1583	1770	3539			1681
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00			0.95
Satd. Flow (perm)	4942	3539	1583		1770	3539	1583	1770	3539			1681
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	422	635	39	8	13	457	125	23	7	0	1	270
RTOR Reduction (vph)	0	0	14	0	0	0	73	0	0	0	0	0
Lane Group Flow (vph)	422	635	25	0	21	457	52	23	7	0	0	147
Confl. Peds. (#/hr)										2		2
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	0%	2%	2%
Turn Type	Prot	NA	Perm	Prot	Prot	NA	Perm	Split	NA		Split	Split
Protected Phases	1 9	6		5	5	2		4	4		8	8
Permitted Phases			6				2					
Actuated Green, G (s)	31.1	101.1	101.1		4.5	67.1	67.1	6.5	6.5			18.4
Effective Green, g (s)	31.1	101.1	101.1		4.5	67.1	67.1	6.5	6.5			18.4
Actuated g/C Ratio	0.19	0.63	0.63		0.03	0.42	0.42	0.04	0.04			0.12
Clearance Time (s)		6.7	6.7		7.4	6.7	6.7	7.9	7.9			7.5
Vehicle Extension (s)		5.0	5.0		2.1	5.0	5.0	5.1	5.1			2.1
Lane Grp Cap (vph)	960	2236	1000		49	1484	663	71	143			193
v/s Ratio Prot	c0.09	c0.18			0.01	0.13		c0.01	0.00			c0.09
v/s Ratio Perm			0.02				0.03					
v/c Ratio	0.44	0.28	0.02		0.43	0.31	0.08	0.32	0.05			0.76
Uniform Delay, d1	56.8	13.2	11.0		76.5	31.0	27.9	74.6	73.8			68.7
Progression Factor	1.17	0.93	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.6	0.3	0.0		2.6	0.5	0.2	5.7	0.3			14.8
Delay (s)	67.3	12.6	11.1		79.1	31.5	28.1	80.3	74.1			83.5
Level of Service	E	B	B		E	C	C	F	E			F
Approach Delay (s/veh)		33.6				32.5			78.8			
Approach LOS		C				C			E			

Intersection Summary			
HCM 2000 Control Delay (s/veh)	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	36.9
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	21	492
Future Volume (vph)	21	492
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.5	7.4
Lane Util. Factor	0.95	0.88
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	0.96	1.00
Satd. Flow (prot)	1698	2787
Flt Permitted	0.96	1.00
Satd. Flow (perm)	1698	2787
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	22	507
RTOR Reduction (vph)	0	345
Lane Group Flow (vph)	146	162
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	pm+ov
Protected Phases	8	1 9
Permitted Phases		8
Actuated Green, G (s)	18.4	49.5
Effective Green, g (s)	18.4	49.5
Actuated g/C Ratio	0.12	0.31
Clearance Time (s)	7.5	
Vehicle Extension (s)	2.1	
Lane Grp Cap (vph)	195	862
v/s Ratio Prot	0.09	0.04
v/s Ratio Perm		0.02
v/c Ratio	0.75	0.19
Uniform Delay, d1	68.6	40.5
Progression Factor	1.00	1.00
Incremental Delay, d2	13.0	0.2
Delay (s)	81.6	40.7
Level of Service	F	D
Approach Delay (s/veh)	56.1	
Approach LOS	E	

Intersection Summary



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	9	625	726	0	0	741	153	545	3	411	0	0
Future Volume (vph)	9	625	726	0	0	741	153	545	3	411	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6	6.4			6.4	6.4	6.7	6.7	6.7		
Lane Util. Factor		0.97	0.95			0.95	1.00	0.95	0.95	0.88		
Frpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	0.98		
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Frt		1.00	1.00			1.00	0.85	1.00	1.00	0.85		
Flt Protected		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (prot)		3429	3539			3539	1583	1681	1686	2724		
Flt Permitted		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (perm)		3429	3539			3539	1583	1681	1686	2724		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	10	672	781	0	0	797	165	586	3	442	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	86	0	0	308	0	0
Lane Group Flow (vph)	0	682	781	0	0	797	79	293	296	134	0	0
Confl. Peds. (#/hr)				2	2					1	1	
Heavy Vehicles (%)	11%	2%	2%	0%	0%	2%	2%	2%	2%	2%	0%	0%
Turn Type	Prot	Prot	NA			NA	Perm	Split	NA	Perm		
Protected Phases	1 9	1 9	6			2		4	4			
Permitted Phases							2			4		
Actuated Green, G (s)		36.5	111.9			62.2	62.2	35.0	35.0	35.0		
Effective Green, g (s)		36.5	111.9			62.2	62.2	35.0	35.0	35.0		
Actuated g/C Ratio		0.23	0.70			0.39	0.39	0.22	0.22	0.22		
Clearance Time (s)			6.4			6.4	6.4	6.7	6.7	6.7		
Vehicle Extension (s)			3.0			3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		782	2475			1375	615	367	368	595		
v/s Ratio Prot		c0.20	0.22			c0.23		0.17	c0.18			
v/s Ratio Perm							0.05			0.05		
v/c Ratio		0.87	0.32			0.58	0.13	0.80	0.80	0.23		
Uniform Delay, d1		59.5	9.3			38.6	31.5	59.2	59.3	51.4		
Progression Factor		1.02	2.45			0.71	0.36	1.00	1.00	1.00		
Incremental Delay, d2		8.5	0.3			1.7	0.4	11.5	12.0	0.2		
Delay (s)		69.0	23.0			29.1	11.8	70.6	71.3	51.6		
Level of Service		E	C			C	B	E	E	D		
Approach Delay (s/veh)			44.4			26.1			62.6			0.0
Approach LOS			D			C			E			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	44.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.3
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s/veh)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	0	1270	639	6	253	1030	0	0	0	0	81	0
Future Volume (veh/h)	0	1270	639	6	253	1030	0	0	0	0	81	0
Initial Q (Qb), veh	0	0	0		0	0	0				0	0
Lane Width Adj.	1.00	1.00	1.00		1.00	1.00	1.00				1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No				No						No
Adj Sat Flow, veh/h/ln	0	1870	1870		1870	1870	0				1870	1900
Adj Flow Rate, veh/h	0	1337	673		266	1084	0				57	0
Peak Hour Factor	0.95	0.95	0.95		0.95	0.95	0.95				0.95	0.95
Percent Heavy Veh, %	0	2	2		2	2	0				2	0
Cap, veh/h	0	1919	854		316	2382	0				445	0
Arrive On Green	0.00	0.54	0.54		0.09	0.67	0.00				0.25	0.00
Sat Flow, veh/h	0	3647	1581		3456	3647	0				1781	0
Grp Volume(v), veh/h	0	1337	673		266	1084	0				57	0
Grp Sat Flow(s),veh/h/ln	0	1777	1581		1728	1777	0				1781	0
Q Serve(g_s), s	0.0	44.4	54.6		12.1	23.1	0.0				4.0	0.0
Cycle Q Clear(g_c), s	0.0	44.4	54.6		12.1	23.1	0.0				4.0	0.0
Prop In Lane	0.00		1.00		1.00		0.00				1.00	
Lane Grp Cap(c), veh/h	0	1919	854		316	2382	0				445	0
V/C Ratio(X)	0.00	0.70	0.79		0.84	0.46	0.00				0.13	0.00
Avail Cap(c_a), veh/h	0	1919	854		471	2382	0				482	0
HCM Platoon Ratio	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		0.73	0.73	0.00				1.00	0.00
Uniform Delay (d), s/veh	0.0	27.1	29.5		71.5	12.5	0.0				46.5	0.0
Incr Delay (d2), s/veh	0.0	2.1	7.3		6.4	0.5	0.0				0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0				0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	18.9	21.8		5.6	9.0	0.0				1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	29.3	36.8		77.9	13.0	0.0				46.6	0.0
LnGrp LOS		C	D		E	B					D	
Approach Vol, veh/h		2010				1350						803
Approach Delay, s/veh		31.8				25.8						74.0
Approach LOS		C				C						E

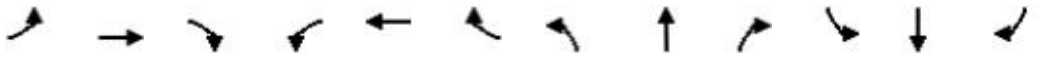
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		113.4			20.8	92.5		46.6				
Change Period (Y+Rc), s		6.1			6.2	6.1		6.7				
Max Green Setting (Gmax), s		103.9			21.8	75.9		43.3				
Max Q Clear Time (g_c+I1), s		25.1			14.1	56.6		38.9				
Green Ext Time (p_c), s		22.5			0.5	16.9		1.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	38.0
HCM 7th LOS	D

Notes
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	680
Future Volume (veh/h)	680
Initial Q (Qb), veh	0
Lane Width Adj.	1.00
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1870
Adj Flow Rate, veh/h	746
Peak Hour Factor	0.95
Percent Heavy Veh, %	2
Cap, veh/h	791
Arrive On Green	0.25
Sat Flow, veh/h	3170
Grp Volume(v), veh/h	746
Grp Sat Flow(s),veh/h/ln	1585
Q Serve(g_s), s	36.9
Cycle Q Clear(g_c), s	36.9
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	791
V/C Ratio(X)	0.94
Avail Cap(c_a), veh/h	858
HCM Platoon Ratio	1.00
Upstream Filter(I)	1.00
Uniform Delay (d), s/veh	58.9
Incr Delay (d2), s/veh	17.2
Initial Q Delay(d3), s/veh	0.0
%ile BackOfQ(50%),veh/ln	16.4
Unsig. Movement Delay, s/veh	
LnGrp Delay(d), s/veh	76.1
LnGrp LOS	E
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	



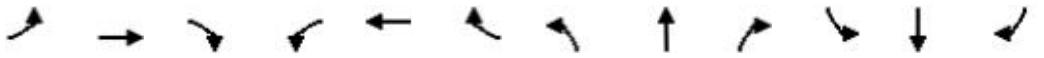
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	0	541	12	7	12	95	1380	23	2	1147	498
Future Volume (veh/h)	256	0	541	12	7	12	95	1380	23	2	1147	498
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856
Adj Flow Rate, veh/h	269	0	569	13	7	13	100	1453	24	2	1207	524
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	2	2	2	2	2	2	2	2	2	3
Cap, veh/h	334	368	659	76	210	187	147	3126	970	5	2917	898
Arrive On Green	0.10	0.00	0.19	0.02	0.12	0.12	0.04	0.61	0.61	0.00	0.57	0.57
Sat Flow, veh/h	3428	1900	2790	3456	1777	1585	3456	5106	1584	1781	5106	1572
Grp Volume(v), veh/h	269	0	569	13	7	13	100	1453	24	2	1207	524
Grp Sat Flow(s),veh/h/ln	1714	1900	1395	1728	1777	1585	1728	1702	1584	1781	1702	1572
Q Serve(g_s), s	12.3	0.0	31.0	0.6	0.6	1.2	4.6	24.7	1.0	0.2	21.2	34.3
Cycle Q Clear(g_c), s	12.3	0.0	31.0	0.6	0.6	1.2	4.6	24.7	1.0	0.2	21.2	34.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	334	368	659	76	210	187	147	3126	970	5	2917	898
V/C Ratio(X)	0.81	0.00	0.86	0.17	0.03	0.07	0.68	0.46	0.02	0.42	0.41	0.58
Avail Cap(c_a), veh/h	664	368	659	173	210	187	436	3126	970	94	2917	898
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	0.74	0.74	0.74	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.7	0.0	58.6	76.8	62.4	62.7	75.5	16.8	12.2	79.7	19.3	22.1
Incr Delay (d2), s/veh	6.4	0.0	11.8	1.5	0.1	0.2	5.7	0.4	0.0	67.9	0.4	2.8
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	5.8	0.0	12.3	0.3	0.3	0.5	2.1	9.4	0.4	0.2	8.3	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	77.1	0.0	70.4	78.3	62.5	62.9	81.3	17.2	12.2	147.6	19.7	24.8
LnGrp LOS	E		E	E	E	E	F	B	B	F	B	C
Approach Vol, veh/h		838			33			1577			1733	
Approach Delay, s/veh		72.5			68.9			21.2			21.4	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	97.9	22.6	25.9	7.0	104.5	10.5	38.0
Change Period (Y+Rc), s	6.8	6.5	7.0	7.0	6.6	6.5	7.0	7.0
Max Green Setting (Gmax), s	20.2	73.5	31.0	8.0	8.4	85.5	8.0	31.0
Max Q Clear Time (g_c+I1), s	6.6	36.3	14.3	3.2	2.2	26.7	2.6	33.0
Green Ext Time (p_c), s	0.3	25.1	1.3	0.0	0.0	30.4	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	31.9
HCM 7th LOS	C

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	889	0	338	0	0	0	0	615	522	265	1492	0
Future Volume (veh/h)	889	0	338	0	0	0	0	615	522	265	1492	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	0	1870				0	1841	1870	1796	1870	0
Adj Flow Rate, veh/h	907	0	345				0	628	533	270	1522	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	0	2				0	4	2	7	2	0
Cap, veh/h	1063	0	865				0	1996	629	291	3098	0
Arrive On Green	0.31	0.00	0.31				0.00	0.53	0.53	0.11	0.41	0.00
Sat Flow, veh/h	3428	0	2790				0	5191	1583	1711	5274	0
Grp Volume(v), veh/h	907	0	345				0	628	533	270	1522	0
Grp Sat Flow(s),veh/h/ln	1714	0	1395				0	1675	1583	1711	1702	0
Q Serve(g_s), s	39.7	0.0	15.6				0.0	11.3	46.0	25.0	35.4	0.0
Cycle Q Clear(g_c), s	39.7	0.0	15.6				0.0	11.3	46.0	25.0	35.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1063	0	865				0	1996	629	291	3098	0
V/C Ratio(X)	0.85	0.00	0.40				0.00	0.31	0.85	0.93	0.49	0.00
Avail Cap(c_a), veh/h	1361	0	1107				0	1996	629	307	3098	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.94	0.94	0.86	0.86	0.00
Uniform Delay (d), s/veh	51.8	0.0	43.4				0.0	25.4	33.6	69.9	29.2	0.0
Incr Delay (d2), s/veh	4.9	0.0	0.4				0.0	0.4	12.7	29.7	0.5	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
%ile BackOfQ(50%),veh/ln	17.4	0.0	13.0				0.0	4.3	17.9	13.6	15.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.7	0.0	43.9				0.0	25.8	46.3	99.6	29.7	0.0
LnGrp LOS	E		D					C	D	F	C	
Approach Vol, veh/h		1252						1161			1792	
Approach Delay, s/veh		53.1						35.2			40.2	
Approach LOS		D						D			D	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		103.9		56.1	33.5	70.3						
Change Period (Y+Rc), s		6.8		6.5	6.3	6.8						
Max Green Setting (Gmax), s		83.2		63.5	28.7	48.2						
Max Q Clear Time (g_c+I1), s		37.4		41.7	27.0	48.0						
Green Ext Time (p_c), s		28.4		7.9	0.2	0.1						

Intersection Summary												
HCM 7th Control Delay, s/veh			42.7									
HCM 7th LOS			D									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	74	31	24	14	13	57	8	20	896	8	60	156
Future Volume (vph)	74	31	24	14	13	57	8	20	896	8	60	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		8.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00		1.00	0.91	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00		1.00	1.00	0.98		1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.93		1.00	1.00	0.85		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	3433	1730		1770	1863	1583		1770	5036	1548		1769
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.13	1.00	1.00		0.23
Satd. Flow (perm)	3433	1730		1770	1863	1583		242	5036	1548		425
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	77	32	25	15	14	59	8	21	933	8	63	162
RTOR Reduction (vph)	0	18	0	0	0	55	0	0	0	4	0	0
Lane Group Flow (vph)	77	39	0	15	14	4	0	29	933	4	0	226
Confl. Peds. (#/hr)			1	1						1		1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	3	8		7	4		5	5	2		1 9	1 9
Permitted Phases						4	2	2		2	6	6
Actuated Green, G (s)	10.2	16.5		2.9	9.9	9.9		79.1	74.8	74.8		117.7
Effective Green, g (s)	10.2	16.5		2.9	9.9	9.9		79.1	74.8	74.8		117.7
Actuated g/C Ratio	0.06	0.10		0.02	0.06	0.06		0.49	0.47	0.47		0.74
Clearance Time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		3.0	5.0	5.0		
Lane Grp Cap (vph)	218	178		32	115	97		160	2354	723		543
v/s Ratio Prot	c0.02	c0.02		0.01	0.01			0.00	0.19			c0.07
v/s Ratio Perm						0.00		0.08		0.00		0.23
v/c Ratio	0.35	0.22		0.47	0.12	0.04		0.18	0.40	0.01		0.42
Uniform Delay, d1	71.7	65.8		77.8	70.9	70.6		21.2	27.8	22.7		8.6
Progression Factor	1.00	1.00		1.00	1.00	1.00		0.66	0.49	1.00		1.73
Incremental Delay, d2	1.3	0.9		14.1	0.6	0.2		0.5	0.5	0.0		0.5
Delay (s)	73.1	66.7		91.8	71.6	70.8		14.5	14.1	22.8		15.3
Level of Service	E	E		F	E	E		B	B	C		B
Approach Delay (s/veh)		70.4			74.5				14.2			
Approach LOS		E			E				B			

Intersection Summary			
HCM 2000 Control Delay (s/veh)	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	38.3
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1503	78
Future Volume (vph)	1503	78
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	7.1
Lane Util. Factor	0.91	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	5085	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	5085	1583
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	1566	81
RTOR Reduction (vph)	0	27
Lane Group Flow (vph)	1566	54
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	106.3	106.3
Effective Green, g (s)	106.3	106.3
Actuated g/C Ratio	0.66	0.66
Clearance Time (s)	7.1	7.1
Vehicle Extension (s)	5.0	5.0
Lane Grp Cap (vph)	3378	1051
v/s Ratio Prot	c0.31	
v/s Ratio Perm		0.03
v/c Ratio	0.46	0.05
Uniform Delay, d1	13.0	9.3
Progression Factor	0.46	1.00
Incremental Delay, d2	0.4	0.1
Delay (s)	6.3	9.4
Level of Service	A	A
Approach Delay (s/veh)	7.6	
Approach LOS	A	

Intersection Summary

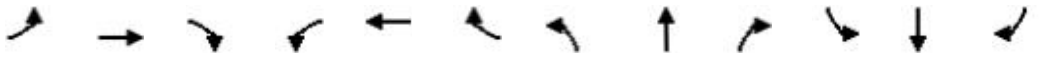
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	138	70	85	605	13	145	804	7	178	984	387
Future Volume (veh/h)	64	138	70	85	605	13	145	804	7	178	984	387
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1870	1841	1870	1870	1811	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	142	72	88	624	13	149	829	7	184	1014	399
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	5	5	2	4	2	2	6	3	2	2	2	2
Cap, veh/h	104	475	310	130	724	328	196	2908	25	224	2024	951
Arrive On Green	0.01	0.05	0.05	0.04	0.14	0.14	0.06	0.56	0.56	0.13	1.00	1.00
Sat Flow, veh/h	3374	3469	1585	3401	5106	1585	3346	5181	44	3456	3554	1585
Grp Volume(v), veh/h	66	142	72	88	624	13	149	540	296	184	1014	399
Grp Sat Flow(s),veh/h/ln	1687	1735	1585	1700	1702	1585	1673	1689	1848	1728	1777	1585
Q Serve(g_s), s	3.1	6.3	6.6	4.1	19.1	1.0	7.0	13.4	13.4	8.3	0.0	0.0
Cycle Q Clear(g_c), s	3.1	6.3	6.6	4.1	19.1	1.0	7.0	13.4	13.4	8.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	104	475	310	130	724	328	196	1895	1037	224	2024	951
V/C Ratio(X)	0.63	0.30	0.23	0.68	0.86	0.04	0.76	0.29	0.29	0.82	0.50	0.42
Avail Cap(c_a), veh/h	245	531	336	255	782	346	349	1895	1037	246	2024	951
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	78.3	68.9	60.2	76.0	67.1	50.8	74.2	18.3	18.3	68.7	0.0	0.0
Incr Delay (d2), s/veh	8.7	0.5	0.5	8.5	9.7	0.1	8.3	0.4	0.7	17.8	0.8	1.2
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	1.5	2.9	2.8	1.9	8.9	0.4	3.2	5.2	5.8	4.0	0.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	87.0	69.4	60.7	84.5	76.8	50.8	82.5	18.7	19.0	86.5	0.8	1.2
LnGrp LOS	F	E	E	F	E	D	F	B	B	F	A	A
Approach Vol, veh/h		280			725			985			1597	
Approach Delay, s/veh		71.3			77.3			28.5			10.8	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	97.5	13.3	30.2	17.7	98.8	14.1	29.4
Change Period (Y+Rc), s	8.6	7.7	8.4	7.5	8.3	7.7	8.0	7.5
Max Green Setting (Gmax), s	11.4	80.3	11.6	24.5	16.7	75.3	12.0	24.5
Max Q Clear Time (g_c+I1), s	10.3	15.4	5.1	21.1	9.0	2.0	6.1	8.6
Green Ext Time (p_c), s	0.1	13.3	0.1	1.6	0.4	28.6	0.1	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	33.8
HCM 7th LOS	C

Notes

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



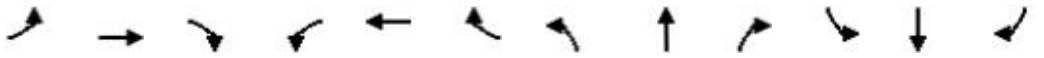
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	342	2	13	1020	8	1	0	8	3	1	3
Future Volume (veh/h)	1	342	2	13	1020	8	1	0	8	3	1	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1870	1870	1870	1870	1900	1870	1411	1870	1870
Adj Flow Rate, veh/h	1	380	2	14	1133	9	1	0	0	3	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	3	2	2	2	2	2	0	2	33	2	2
Cap, veh/h	2	4315	23	21	4394	35	49	2	2	53	10	0
Arrive On Green	0.00	1.00	1.00	0.01	0.84	0.84	0.00	0.00	0.00	0.00	0.01	0.00
Sat Flow, veh/h	1781	5200	27	1781	5225	42	1781	1900	1585	1344	1870	0
Grp Volume(v), veh/h	1	247	135	14	738	404	1	0	0	3	1	0
Grp Sat Flow(s),veh/h/ln	1781	1689	1851	1781	1702	1863	1781	1900	1585	1344	1870	0
Q Serve(g_s), s	0.1	0.0	0.0	1.3	7.0	7.1	0.1	0.0	0.0	0.4	0.1	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.3	7.0	7.1	0.1	0.0	0.0	0.4	0.1	0.0
Prop In Lane	1.00		0.01	1.00		0.02	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	2	2802	1536	21	2862	1566	49	2	2	53	10	0
V/C Ratio(X)	0.52	0.09	0.09	0.68	0.26	0.26	0.02	0.00	0.00	0.06	0.11	0.00
Avail Cap(c_a), veh/h	157	2802	1536	100	2862	1566	258	216	180	206	213	0
HCM Platoon Ratio	2.00	2.00	2.00	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	0.74	0.74	0.74	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	79.8	0.0	0.0	78.8	2.6	2.6	79.7	0.0	0.0	79.2	79.2	0.0
Incr Delay (d2), s/veh	62.0	0.1	0.1	10.2	0.2	0.3	0.1	0.0	0.0	0.2	1.8	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(50%),veh/ln	0.1	0.0	0.0	0.6	1.9	2.2	0.0	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	141.8	0.1	0.1	89.0	2.7	2.9	79.7	0.0	0.0	79.4	81.0	0.0
LnGrp LOS	F	A	A	F	A	A	E			E	F	
Approach Vol, veh/h		383			1156			1			4	
Approach Delay, s/veh		0.5			3.8			79.7			79.8	
Approach LOS		A			A			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	140.1	6.2	7.6	7.9	138.4	6.8	7.0
Change Period (Y+Rc), s	5.9	5.6	6.0	6.8	6.0	5.6	6.0	6.8
Max Green Setting (Gmax), s	14.1	84.4	19.0	18.2	9.0	89.4	19.0	18.2
Max Q Clear Time (g_c+I1), s	2.1	9.1	2.1	2.1	3.3	2.0	2.4	0.0
Green Ext Time (p_c), s	0.0	22.8	0.0	0.0	0.0	5.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	3.2
HCM 7th LOS	A

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	353	20	18	1009	3	8	0	6	0	0	0
Future Volume (veh/h)	5	353	20	18	1009	3	8	0	6	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.83		0.99	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1707	1870	1870	1870	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	6	392	22	20	1121	3	9	0	7	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	3	2	13	2	2	2	0	2	0	0	0
Cap, veh/h	13	4129	230	30	4483	12	60	0	39	46	1	0
Arrive On Green	0.01	1.00	1.00	0.04	1.00	1.00	0.01	0.00	0.02	0.00	0.00	0.00
Sat Flow, veh/h	1781	4910	273	1626	5258	14	1781	0	1595	1810	1900	0
Grp Volume(v), veh/h	6	268	146	20	726	398	9	0	7	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	1689	1806	1626	1702	1868	1781	0	1595	1810	1900	0
Q Serve(g_s), s	0.5	0.0	0.0	1.9	0.0	0.0	0.8	0.0	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.0	1.9	0.0	0.0	0.8	0.0	0.7	0.0	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.01	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	13	2840	1519	30	2902	1593	60	0	39	46	1	0
V/C Ratio(X)	0.46	0.09	0.10	0.67	0.25	0.25	0.15	0.00	0.18	0.00	0.00	0.00
Avail Cap(c_a), veh/h	157	2840	1519	142	2902	1593	198	0	332	199	395	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	78.5	0.0	0.0	76.6	0.0	0.0	79.0	0.0	76.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.1	0.1	0.1	9.0	0.2	0.4	0.4	0.0	0.8	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(50%),veh/ln	0.3	0.0	0.1	0.9	0.1	0.2	0.4	0.0	0.3	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	87.6	0.1	0.1	85.6	0.2	0.4	79.4	0.0	77.3	0.0	0.0	0.0
LnGrp LOS	F	A	A	F	A	A	E		E			
Approach Vol, veh/h		420			1144			16			0	
Approach Delay, s/veh		1.3			1.8			78.5			0.0	
Approach LOS		A			A			E				

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	142.3	7.6	3.0	8.9	140.4	0.0	10.6
Change Period (Y+Rc), s	5.9	5.9	6.3	6.7	6.0	5.9	6.4	6.7
Max Green Setting (Gmax), s	14.1	74.1	13.7	33.3	14.0	74.1	13.6	33.3
Max Q Clear Time (g_c+I1), s	2.5	2.0	2.8	0.0	3.9	2.0	0.0	2.7
Green Ext Time (p_c), s	0.0	22.0	0.0	0.0	0.0	5.7	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	2.4
HCM 7th LOS	A

Notes

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

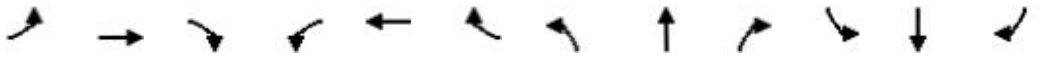
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	374	1	0	993	22	0	0	3	0	0	0
Future Vol, veh/h	31	374	1	0	993	22	0	0	3	0	0	0
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Stop	-	-	None
Storage Length	250	-	-	-	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	0	2	2	0	0	33	0	0	0
Mvmt Flow	34	416	1	0	1103	24	0	0	3	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1129	0	-	-	-	0	-	-	208	1352	-	565
Stage 1	-	-	-	-	-	-	-	-	-	1117	-	-
Stage 2	-	-	-	-	-	-	-	-	-	235	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.76	6.4	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	7.3	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.7	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	4.23	3.8	-	3.9
Pot Cap-1 Maneuver	339	-	0	0	-	-	0	0	613	161	0	405
Stage 1	-	-	0	0	-	-	0	0	-	168	0	-
Stage 2	-	-	0	0	-	-	0	0	-	691	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	339	-	-	-	-	-	-	-	613	144	-	405
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	144	-	-
Stage 1	-	-	-	-	-	-	-	-	-	167	-	-
Stage 2	-	-	-	-	-	-	-	-	-	617	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.29	0	10.91	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	613	339	-	-	-	-	-
HCM Lane V/C Ratio	0.005	0.102	-	-	-	-	-
HCM Ctrl Dly (s/v)	10.9	16.8	-	-	-	0	0
HCM Lane LOS	B	C	-	-	-	A	A
HCM 95th %tile Q(veh)	0	0.3	-	-	-	-	-



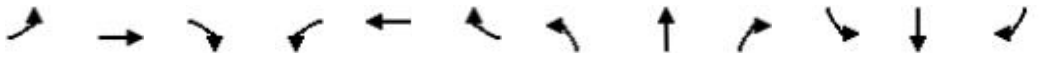
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	169	0	0	566	437	0	0	0	242	0	148
Future Volume (veh/h)	243	169	0	0	566	437	0	0	0	242	0	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1900	1900	1856	1870	1900	1900	0	1870	1900	1870
Adj Flow Rate, veh/h	256	178	0	0	596	460	0	0	0	255	0	156
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	3	0	0	3	2	0	0	0	2	0	2
Cap, veh/h	394	4109	0	933	2444	1138	1	1	0	395	0	176
Arrive On Green	0.05	0.81	0.00	0.00	0.24	0.24	0.00	0.00	0.00	0.11	0.00	0.11
Sat Flow, veh/h	1781	5233	0	1810	3377	1572	1810	1900	0	3553	0	1581
Grp Volume(v), veh/h	256	178	0	0	596	460	0	0	0	255	0	156
Grp Sat Flow(s),veh/h/ln	1781	1689	0	1810	1689	1572	1810	1900	0	1776	0	1581
Q Serve(g_s), s	5.7	1.1	0.0	0.0	22.8	39.4	0.0	0.0	0.0	11.0	0.0	15.6
Cycle Q Clear(g_c), s	5.7	1.1	0.0	0.0	22.8	39.4	0.0	0.0	0.0	11.0	0.0	15.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	394	4109	0	933	2444	1138	1	1	0	395	0	176
V/C Ratio(X)	0.65	0.04	0.00	0.00	0.24	0.40	0.00	0.00	0.00	0.64	0.00	0.89
Avail Cap(c_a), veh/h	516	4109	0	1142	2444	1138	265	278	0	417	0	186
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.97	0.00	0.97
Uniform Delay (d), s/veh	14.5	3.0	0.0	0.0	25.5	31.8	0.0	0.0	0.0	68.1	0.0	70.1
Incr Delay (d2), s/veh	2.1	0.0	0.0	0.0	0.2	1.1	0.0	0.0	0.0	3.1	0.0	34.7
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	4.4	0.3	0.0	0.0	10.5	17.1	0.0	0.0	0.0	5.2	0.0	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.6	3.0	0.0	0.0	25.7	32.9	0.0	0.0	0.0	71.2	0.0	104.8
LnGrp LOS	B	A			C	C				E		F
Approach Vol, veh/h		434			1056			0			411	
Approach Delay, s/veh		11.0			28.9			0.0			84.0	
Approach LOS		B			C						F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	122.0		24.0	0.0	136.0		0.0				
Change Period (Y+Rc), s	5.6	6.2		6.2	6.4	6.2		6.6				
Max Green Setting (Gmax), s	19.4	73.8		18.8	18.6	73.8		23.4				
Max Q Clear Time (g_c+I1), s	7.7	41.4		17.6	0.0	3.1		0.0				
Green Ext Time (p_c), s	0.7	15.7		0.2	0.0	2.5		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	36.7
HCM 7th LOS	D

Notes

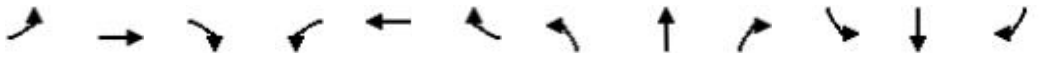
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	7	3	2	1	21	4	638	32	76	390	8
Future Volume (veh/h)	2	7	3	2	1	21	4	638	32	76	390	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870	1693
Adj Flow Rate, veh/h	2	8	3	2	1	23	4	693	35	83	424	9
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	3	2	14
Cap, veh/h	44	32	12	46	23	59	630	853	43	424	882	19
Arrive On Green	0.02	0.02	0.02	0.04	0.04	0.04	0.10	0.48	0.48	0.10	0.48	0.48
Sat Flow, veh/h	1781	1288	483	1207	603	1553	1781	1765	89	1767	1825	39
Grp Volume(v), veh/h	2	0	11	3	0	23	4	0	728	83	0	433
Grp Sat Flow(s),veh/h/ln	1781	0	1772	1810	0	1553	1781	0	1854	1767	0	1863
Q Serve(g_s), s	0.1	0.0	0.3	0.1	0.0	0.7	0.0	0.0	16.9	1.0	0.0	7.9
Cycle Q Clear(g_c), s	0.1	0.0	0.3	0.1	0.0	0.7	0.0	0.0	16.9	1.0	0.0	7.9
Prop In Lane	1.00		0.27	0.67		1.00	1.00		0.05	1.00		0.02
Lane Grp Cap(c), veh/h	44	0	44	69	0	59	630	0	896	424	0	901
V/C Ratio(X)	0.04	0.00	0.25	0.04	0.00	0.39	0.01	0.00	0.81	0.20	0.00	0.48
Avail Cap(c_a), veh/h	635	0	632	646	0	554	1090	0	1743	880	0	1752
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.1	0.0	24.3	23.5	0.0	23.8	5.1	0.0	11.1	7.8	0.0	8.8
Incr Delay (d2), s/veh	0.4	0.0	2.9	0.3	0.0	4.1	0.0	0.0	1.8	0.2	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.0	5.5	0.3	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.6	0.0	27.2	23.8	0.0	27.9	5.1	0.0	13.0	8.1	0.0	9.2
LnGrp LOS	C		C	C		C	A		B	A		A
Approach Vol, veh/h		13			26			732			516	
Approach Delay, s/veh		26.8			27.4			12.9			9.0	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	29.0		5.8	9.5	29.0		6.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.1	47.7		18.1	18.1	47.7		18.1				
Max Q Clear Time (g_c+I1), s	3.0	18.9		2.3	2.0	9.9		2.7				
Green Ext Time (p_c), s	0.1	5.6		0.0	0.0	2.9		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	11.8
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	557	315	145	957	4	410	22	167	8	22	8
Future Volume (veh/h)	19	557	315	145	957	4	410	22	167	8	22	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1870	1870	1870	1870	1870	1870	1870	1870	1693	1826	1693
Adj Flow Rate, veh/h	21	605	342	158	1040	4	446	24	182	9	24	9
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, %	6	2	2	2	2	2	2	2	2	14	5	14
Cap, veh/h	228	1046	466	382	1270	566	626	495	419	257	174	136
Arrive On Green	0.03	0.29	0.29	0.09	0.36	0.36	0.18	0.26	0.26	0.01	0.10	0.10
Sat Flow, veh/h	1725	3554	1583	1781	3554	1583	3456	1870	1583	1612	1826	1430
Grp Volume(v), veh/h	21	605	342	158	1040	4	446	24	182	9	24	9
Grp Sat Flow(s),veh/h/ln	1725	1777	1583	1781	1777	1583	1728	1870	1583	1612	1826	1430
Q Serve(g_s), s	0.4	7.6	10.3	3.1	14.0	0.1	6.4	0.5	5.0	0.3	0.6	0.3
Cycle Q Clear(g_c), s	0.4	7.6	10.3	3.1	14.0	0.1	6.4	0.5	5.0	0.3	0.6	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	228	1046	466	382	1270	566	626	495	419	257	174	136
V/C Ratio(X)	0.09	0.58	0.73	0.41	0.82	0.01	0.71	0.05	0.43	0.04	0.14	0.07
Avail Cap(c_a), veh/h	348	1286	573	458	1414	630	1178	1098	930	390	623	488
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	15.8	16.8	11.4	15.4	10.9	20.3	14.4	16.1	21.2	21.9	21.7
Incr Delay (d2), s/veh	0.2	0.5	3.8	0.7	3.6	0.0	1.5	0.0	0.7	0.1	0.4	0.2
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	0.2	2.6	3.6	1.0	5.1	0.0	2.4	0.2	1.7	0.1	0.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.7	16.3	20.6	12.1	19.0	10.9	21.8	14.5	16.8	21.2	22.2	21.9
LnGrp LOS	B	B	C	B	B	B	C	B	B	C	C	C
Approach Vol, veh/h		968			1202			652			42	
Approach Delay, s/veh		17.8			18.1			20.2			22.0	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	23.4	14.1	9.5	9.2	20.0	5.1	18.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	21.0	18.0	18.0	6.9	19.1	5.0	31.0
Max Q Clear Time (g_c+I1), s	2.4	16.0	8.4	2.6	5.1	12.3	2.3	7.0
Green Ext Time (p_c), s	0.0	2.8	1.2	0.1	0.1	2.8	0.0	0.7

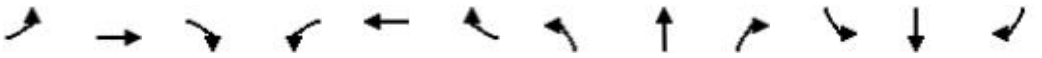
Intersection Summary	
HCM 7th Control Delay, s/veh	18.5
HCM 7th LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	298	189	320	848	775	516
Future Volume (veh/h)	298	189	320	848	775	516
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1826	1870
Adj Flow Rate, veh/h	307	195	330	874	799	532
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	4	2	2	5	2
Cap, veh/h	530	427	384	2517	947	822
Arrive On Green	0.15	0.15	0.12	0.71	0.52	0.52
Sat Flow, veh/h	3456	1560	1781	3647	1826	1585
Grp Volume(v), veh/h	307	195	330	874	799	532
Grp Sat Flow(s),veh/h/ln	1728	1560	1781	1777	1826	1585
Q Serve(g_s), s	5.4	6.7	5.4	6.2	24.4	15.8
Cycle Q Clear(g_c), s	5.4	6.7	5.4	6.2	24.4	15.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	530	427	384	2517	947	822
V/C Ratio(X)	0.58	0.46	0.86	0.35	0.84	0.65
Avail Cap(c_a), veh/h	956	619	512	3442	1291	1121
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	25.6	19.6	14.2	3.7	13.4	11.3
Incr Delay (d2), s/veh	1.0	0.8	10.7	0.1	3.9	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.1	3.2	1.0	8.3	4.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	26.6	20.4	25.0	3.8	17.3	12.2
LnGrp LOS	C	C	C	A	B	B
Approach Vol, veh/h	502			1204	1331	
Approach Delay, s/veh	24.2			9.6	15.3	
Approach LOS	C			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		50.6		14.5	12.3	38.2
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		63.0		18.0	12.5	46.0
Max Q Clear Time (g_c+I1), s		8.2		8.7	7.4	26.4
Green Ext Time (p_c), s		6.7		1.2	0.5	7.4

Intersection Summary		
HCM 7th Control Delay, s/veh		14.5
HCM 7th LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	264	392	4	13	454	148	31	22	3	120	4	530
Future Volume (vph)	264	392	4	13	454	148	31	22	3	120	4	530
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	6.7	6.7	7.4	6.7	6.7	7.9	7.9		7.5	7.5	7.4
Lane Util. Factor	0.94	0.95	1.00	1.00	0.95	1.00	1.00	0.95		0.95	0.95	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	4942	3438	1583	1671	3539	1583	1736	3480		1633	1645	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	4942	3438	1583	1671	3539	1583	1736	3480		1633	1645	2787
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	284	422	4	14	488	159	33	24	3	129	4	570
RTOR Reduction (vph)	0	0	1	0	0	87	0	3	0	0	0	407
Lane Group Flow (vph)	284	422	3	14	488	72	33	24	0	66	67	163
Heavy Vehicles (%)	3%	5%	2%	8%	2%	2%	4%	2%	2%	5%	2%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	1 9	6		5	2		4	4		8	8	1 9
Permitted Phases			6			2						8
Actuated Green, G (s)	30.5	107.6	107.6	2.9	72.6	72.6	9.0	9.0		11.0	11.0	41.5
Effective Green, g (s)	30.5	107.6	107.6	2.9	72.6	72.6	9.0	9.0		11.0	11.0	41.5
Actuated g/C Ratio	0.19	0.67	0.67	0.02	0.45	0.45	0.06	0.06		0.07	0.07	0.26
Clearance Time (s)		6.7	6.7	7.4	6.7	6.7	7.9	7.9		7.5	7.5	
Vehicle Extension (s)		5.0	5.0	2.1	5.0	5.0	5.1	5.1		2.1	2.1	
Lane Grp Cap (vph)	942	2312	1064	30	1605	718	97	195		112	113	722
v/s Ratio Prot	c0.06	0.12		0.01	c0.14		c0.02	0.01		0.04	c0.04	0.04
v/s Ratio Perm			0.00			0.05						0.02
v/c Ratio	0.30	0.18	0.00	0.47	0.30	0.10	0.34	0.12		0.59	0.59	0.23
Uniform Delay, d1	55.6	9.8	8.6	77.8	27.7	25.0	72.6	71.8		72.3	72.3	46.6
Progression Factor	0.82	1.49	1.00	1.00	1.00	1.00	1.00	1.00		0.79	0.79	1.69
Incremental Delay, d2	0.4	0.2	0.0	4.9	0.5	0.3	4.5	0.6		5.1	5.5	0.3
Delay (s)	45.9	14.8	8.6	82.7	28.2	25.3	77.1	72.4		62.0	62.4	79.3
Level of Service	D	B	A	F	C	C	E	E		E	E	E
Approach Delay (s/veh)		27.2			28.6			75.0			76.0	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	45.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	36.9
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	679	337	0	0	919	45	891	3	362	0	0
Future Volume (vph)	10	679	337	0	0	919	45	891	3	362	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6	6.4			6.4	6.4	6.7	6.7	6.7		
Lane Util. Factor		0.97	0.95			0.95	1.00	0.95	0.95	0.88		
Frpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	0.98		
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Frt		1.00	1.00			1.00	0.85	1.00	1.00	0.85		
Flt Protected		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (prot)		3400	3406			3539	1583	1665	1670	2724		
Flt Permitted		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (perm)		3400	3406			3539	1583	1665	1670	2724		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	722	359	0	0	978	48	948	3	385	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	33	0	0	218	0	0
Lane Group Flow (vph)	0	733	359	0	0	978	15	474	477	167	0	0
Confl. Peds. (#/hr)				1	1					1	1	
Heavy Vehicles (%)	2%	3%	6%	0%	0%	2%	2%	3%	2%	2%	0%	0%
Turn Type	Prot	Prot	NA			NA	Perm	Split	NA	Perm		
Protected Phases	1 9	1 9	6			2		4	4			
Permitted Phases							2			4		
Actuated Green, G (s)		40.5	103.6			49.9	49.9	43.3	43.3	43.3		
Effective Green, g (s)		40.5	103.6			49.9	49.9	43.3	43.3	43.3		
Actuated g/C Ratio		0.25	0.65			0.31	0.31	0.27	0.27	0.27		
Clearance Time (s)			6.4			6.4	6.4	6.7	6.7	6.7		
Vehicle Extension (s)			3.0			3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		860	2205			1103	493	450	451	737		
v/s Ratio Prot		c0.22	0.11			c0.28		0.28	c0.29			
v/s Ratio Perm							0.01			0.06		
v/c Ratio		0.85	0.16			0.89	0.03	1.05	1.06	0.23		
Uniform Delay, d1		56.9	11.1			52.4	38.2	58.4	58.4	45.3		
Progression Factor		1.30	1.88			1.11	1.00	1.00	1.00	1.00		
Incremental Delay, d2		7.6	0.1			10.1	0.1	57.2	58.4	0.2		
Delay (s)		81.5	21.1			68.0	38.4	115.5	116.8	45.5		
Level of Service		F	C			E	D	F	F	D		
Approach Delay (s/veh)			61.6			66.6			95.8			0.0
Approach LOS			E			E			F			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	76.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.3
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s/veh)	
Approach LOS	

Intersection Summary

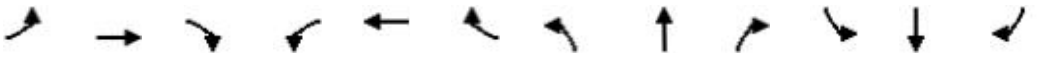
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1043	601	289	1475	0	0	0	0	14	4	162
Future Volume (veh/h)	0	1043	601	289	1475	0	0	0	0	14	4	162
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1841	1870	1870	0				1781	1870	1767
Adj Flow Rate, veh/h	0	1086	626	301	1536	0				11	0	176
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	3	4	2	2	0				8	2	9
Cap, veh/h	0	2488	1100	355	3011	0				124	0	218
Arrive On Green	0.00	0.71	0.71	0.14	1.00	0.00				0.07	0.00	0.07
Sat Flow, veh/h	0	3618	1559	3456	3647	0				1697	0	2994
Grp Volume(v), veh/h	0	1086	626	301	1536	0				11	0	176
Grp Sat Flow(s),veh/h/ln	0	1763	1559	1728	1777	0				1697	0	1497
Q Serve(g_s), s	0.0	21.0	31.6	13.6	0.0	0.0				1.0	0.0	9.3
Cycle Q Clear(g_c), s	0.0	21.0	31.6	13.6	0.0	0.0				1.0	0.0	9.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2488	1100	355	3011	0				124	0	218
V/C Ratio(X)	0.00	0.44	0.57	0.85	0.51	0.00				0.09	0.00	0.81
Avail Cap(c_a), veh/h	0	2488	1100	622	3011	0				406	0	717
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.23	0.23	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.0	11.6	67.9	0.0	0.0				69.2	0.0	73.1
Incr Delay (d2), s/veh	0.0	0.6	2.1	1.4	0.1	0.0				0.1	0.0	3.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.8	10.8	5.8	0.1	0.0				0.4	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	10.6	13.7	69.2	0.1	0.0				69.4	0.0	76.4
LnGrp LOS		B	B	E	A					E		E
Approach Vol, veh/h		1712			1837						187	
Approach Delay, s/veh		11.7			11.5						76.0	
Approach LOS		B			B						E	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		141.7			22.6	119.0		18.3				
Change Period (Y+Rc), s		6.1			6.2	6.1		6.7				
Max Green Setting (Gmax), s		108.9			28.8	73.9		38.3				
Max Q Clear Time (g_c+I1), s		2.0			15.6	33.6		11.3				
Green Ext Time (p_c), s		47.6			0.8	26.9		0.4				

Intersection Summary	
HCM 7th Control Delay, s/veh	14.8
HCM 7th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



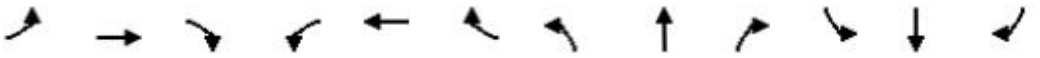
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	2	614	18	23	9	296	1466	14	6	1280	716
Future Volume (veh/h)	188	2	614	18	23	9	296	1466	14	6	1280	716
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1870	1870	1870	1870	1870	1870	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	192	2	627	18	23	9	302	1496	14	6	1306	731
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	2	2	2	2	2	2	3	2	2	2	2
Cap, veh/h	240	239	648	91	213	78	361	3486	1091	13	3011	935
Arrive On Green	0.07	0.13	0.13	0.03	0.08	0.08	0.10	0.69	0.69	0.01	0.59	0.59
Sat Flow, veh/h	3401	1870	2790	3456	2542	936	3456	5066	1585	1781	5106	1585
Grp Volume(v), veh/h	192	2	627	18	16	16	302	1496	14	6	1306	731
Grp Sat Flow(s),veh/h/ln	1700	1870	1395	1728	1777	1702	1728	1689	1585	1781	1702	1585
Q Serve(g_s), s	10.0	0.2	23.0	0.9	1.5	1.6	15.4	23.5	0.5	0.6	25.4	63.2
Cycle Q Clear(g_c), s	10.0	0.2	23.0	0.9	1.5	1.6	15.4	23.5	0.5	0.6	25.4	63.2
Prop In Lane	1.00		1.00	1.00		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	240	239	648	91	149	142	361	3486	1091	13	3011	935
V/C Ratio(X)	0.80	0.01	0.97	0.20	0.11	0.11	0.84	0.43	0.01	0.47	0.43	0.78
Avail Cap(c_a), veh/h	435	239	648	154	149	142	637	3486	1091	83	3011	935
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	1.00	0.56	0.56	0.56	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.4	68.5	68.4	85.8	76.2	76.3	79.1	12.4	8.8	89.0	20.4	28.1
Incr Delay (d2), s/veh	8.5	0.0	27.5	1.5	0.4	0.5	4.2	0.2	0.0	33.4	0.5	6.5
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	4.7	0.1	16.9	0.4	0.7	0.7	7.0	8.6	0.2	0.4	10.0	25.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	90.9	68.6	95.9	87.3	76.7	76.8	83.3	12.6	8.8	122.4	20.8	34.6
LnGrp LOS	F	E	F	F	E	E	F	B	A	F	C	C
Approach Vol, veh/h		821			50			1812			2043	
Approach Delay, s/veh		94.7			80.5			24.4			26.0	
Approach LOS		F			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.6	112.6	19.7	22.1	7.9	130.4	11.7	30.0
Change Period (Y+Rc), s	6.8	6.5	7.0	7.0	6.6	6.5	7.0	7.0
Max Green Setting (Gmax), s	33.2	88.5	23.0	8.0	8.4	113.5	8.0	23.0
Max Q Clear Time (g_c+I1), s	17.4	65.2	12.0	3.6	2.6	25.5	2.9	25.0
Green Ext Time (p_c), s	1.4	19.7	0.7	0.0	0.0	37.6	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	37.9
HCM 7th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	731	0	373	0	0	0	0	1037	596	448	1468	0
Future Volume (vph)	731	0	373	0	0	0	0	1037	596	448	1468	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5		6.5					6.8	6.8	6.3	6.8	
Lane Util. Factor	0.97		0.88					0.91	1.00	1.00	0.91	
Frt	1.00		0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95		1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433		2787					5085	1583	1752	5085	
Flt Permitted	0.95		1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433		2787					5085	1583	1752	5085	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	754	0	385	0	0	0	0	1069	614	462	1513	0
RTOR Reduction (vph)	0	0	76	0	0	0	0	0	320	0	0	0
Lane Group Flow (vph)	754	0	309	0	0	0	0	1069	294	462	1513	0
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	0%	2%	2%	3%	2%	0%
Turn Type	Prot		Perm					NA	Perm	Prot	NA	
Protected Phases	4							6		5 11	2	
Permitted Phases			4						6			
Actuated Green, G (s)	46.2		46.2					54.6	54.6	53.3	120.5	
Effective Green, g (s)	46.2		46.2					54.6	54.6	53.3	120.5	
Actuated g/C Ratio	0.26		0.26					0.30	0.30	0.30	0.67	
Clearance Time (s)	6.5		6.5					6.8	6.8		6.8	
Vehicle Extension (s)	4.0		4.0					5.1	5.1		5.1	
Lane Grp Cap (vph)	881		715					1542	480	518	3404	
v/s Ratio Prot	c0.22							c0.21		c0.26	0.30	
v/s Ratio Perm			0.11						0.19			
v/c Ratio	0.86		0.43					0.69	0.61	0.89	0.44	
Uniform Delay, d1	63.7		55.9					55.3	53.6	60.6	14.0	
Progression Factor	1.00		1.00					0.63	0.61	1.46	0.66	
Incremental Delay, d2	8.5		0.6					2.5	5.5	16.0	0.4	
Delay (s)	72.2		56.5					37.4	38.0	104.2	9.5	
Level of Service	E		E					D	D	F	A	
Approach Delay (s/veh)		66.9			0.0			37.6			31.7	
Approach LOS		E			A			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	231	59	80	50	51	144	10	50	874	22	32	298
Future Volume (vph)	231	59	80	50	51	144	10	50	874	22	32	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		8.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00		1.00	0.91	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00		1.00	1.00	0.98		1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.91		1.00	1.00	0.85		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	3433	1686		1770	1863	1583		1770	5036	1548		1769
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.17	1.00	1.00		0.22
Satd. Flow (perm)	3433	1686		1770	1863	1583		322	5036	1548		412
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	236	60	82	51	52	147	10	51	892	22	33	304
RTOR Reduction (vph)	0	29	0	0	0	136	0	0	0	13	0	0
Lane Group Flow (vph)	236	113	0	51	52	11	0	61	892	9	0	337
Confl. Peds. (#/hr)			3	3						1		1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	3	8		7	4		5	5	2		1 9	1 9
Permitted Phases						4	2	2		2	6	6
Actuated Green, G (s)	18.6	24.3		6.6	13.0	13.0		80.4	72.5	72.5		126.8
Effective Green, g (s)	18.6	24.3		6.6	13.0	13.0		80.4	72.5	72.5		126.8
Actuated g/C Ratio	0.10	0.14		0.04	0.07	0.07		0.45	0.40	0.40		0.70
Clearance Time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		3.0	5.0	5.0		
Lane Grp Cap (vph)	354	227		64	134	114		207	2028	623		578
v/s Ratio Prot	c0.07	c0.07		0.03	0.03			0.01	0.18			c0.12
v/s Ratio Perm						0.01		0.12		0.01		c0.29
v/c Ratio	0.67	0.50		0.80	0.39	0.09		0.29	0.44	0.01		0.58
Uniform Delay, d1	77.7	72.2		86.0	79.7	78.0		28.7	39.0	32.3		13.9
Progression Factor	1.00	1.00		1.00	1.00	1.00		0.93	0.81	1.00		1.48
Incremental Delay, d2	5.2	2.4		50.3	2.5	0.5		0.8	0.7	0.0		1.4
Delay (s)	82.9	74.6		136.3	82.2	78.5		27.5	32.2	32.3		21.8
Level of Service	F	E		F	F	E		C	C	C		C
Approach Delay (s/veh)		79.7			91.1				31.9			
Approach LOS		E			F				C			

Intersection Summary			
HCM 2000 Control Delay (s/veh)	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	38.3
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1306	107
Future Volume (vph)	1306	107
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	7.1
Lane Util. Factor	0.91	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	5085	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	5085	1583
Peak-hour factor, PHF	0.98	0.98
Adj. Flow (vph)	1333	109
RTOR Reduction (vph)	0	42
Lane Group Flow (vph)	1333	67
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	111.2	111.2
Effective Green, g (s)	111.2	111.2
Actuated g/C Ratio	0.62	0.62
Clearance Time (s)	7.1	7.1
Vehicle Extension (s)	5.0	5.0
Lane Grp Cap (vph)	3141	977
v/s Ratio Prot	0.26	
v/s Ratio Perm		0.04
v/c Ratio	0.42	0.07
Uniform Delay, d1	17.8	13.7
Progression Factor	0.60	0.69
Incremental Delay, d2	0.4	0.1
Delay (s)	11.0	9.7
Level of Service	B	A
Approach Delay (s/veh)	13.0	
Approach LOS	B	

Intersection Summary

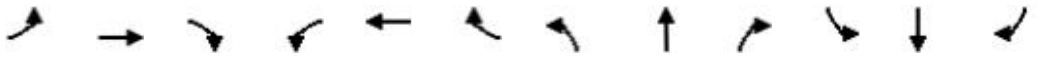
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	359	182	104	574	49	203	648	11	176	900	390
Future Volume (veh/h)	254	359	182	104	574	49	203	648	11	176	900	390
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870	1870	1870
Adj Flow Rate, veh/h	270	382	194	111	611	52	216	689	12	187	957	415
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	4	2	2	2	2
Cap, veh/h	321	721	438	152	776	343	255	2600	45	225	1792	946
Arrive On Green	0.03	0.07	0.07	0.04	0.15	0.15	0.07	0.51	0.51	0.13	1.00	1.00
Sat Flow, veh/h	3456	3554	1580	3456	5106	1579	3456	5086	88	3456	3554	1585
Grp Volume(v), veh/h	270	382	194	111	611	52	216	453	248	187	957	415
Grp Sat Flow(s),veh/h/ln	1728	1777	1580	1728	1702	1579	1728	1675	1825	1728	1777	1585
Q Serve(g_s), s	14.0	18.7	19.5	5.7	20.8	4.8	11.1	13.8	13.8	9.5	0.0	0.0
Cycle Q Clear(g_c), s	14.0	18.7	19.5	5.7	20.8	4.8	11.1	13.8	13.8	9.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	321	721	438	152	776	343	255	1712	933	225	1792	946
V/C Ratio(X)	0.84	0.53	0.44	0.73	0.79	0.15	0.85	0.26	0.27	0.83	0.53	0.44
Avail Cap(c_a), veh/h	434	800	472	307	950	397	282	1712	933	276	1792	946
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	85.9	75.7	63.4	85.0	73.5	57.1	82.4	24.9	24.9	77.3	0.0	0.0
Incr Delay (d2), s/veh	11.8	0.8	1.0	9.1	4.2	0.3	20.4	0.4	0.7	16.3	1.0	1.3
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	7.1	9.1	8.5	2.7	9.3	2.0	5.6	5.6	6.2	4.5	0.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	97.7	76.5	64.3	94.1	77.7	57.3	102.8	25.3	25.6	93.6	1.0	1.3
LnGrp LOS	F	E	E	F	E	E	F	C	C	F	A	A
Approach Vol, veh/h		846			774			917			1559	
Approach Delay, s/veh		80.5			78.7			43.6			12.2	
Approach LOS		F			E			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.3	99.7	25.1	34.8	21.6	98.5	15.9	44.0
Change Period (Y+Rc), s	8.6	7.7	8.4	7.5	8.3	7.7	8.0	7.5
Max Green Setting (Gmax), s	14.4	77.3	22.6	33.5	14.7	77.3	16.0	40.5
Max Q Clear Time (g_c+I1), s	11.5	15.8	16.0	22.8	13.1	2.0	7.7	21.5
Green Ext Time (p_c), s	0.2	10.4	0.7	3.9	0.2	27.1	0.3	4.2

Intersection Summary	
HCM 7th Control Delay, s/veh	45.9
HCM 7th LOS	D

Notes

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



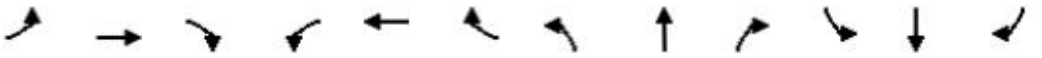
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	490	63	105	864	86	93	9	126	64	10	13
Future Volume (veh/h)	11	490	63	105	864	86	93	9	126	64	10	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	544	70	117	960	96	103	10	140	71	11	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	2942	373	136	3341	333	250	186	158	228	62	79
Arrive On Green	0.01	0.85	0.85	0.08	0.71	0.71	0.06	0.10	0.10	0.05	0.08	0.08
Sat Flow, veh/h	1781	4587	582	1781	4718	471	1781	1870	1585	1781	748	951
Grp Volume(v), veh/h	12	402	212	117	692	364	103	10	140	71	0	25
Grp Sat Flow(s),veh/h/ln	1781	1702	1765	1781	1702	1784	1781	1870	1585	1781	0	1699
Q Serve(g_s), s	1.2	3.7	3.8	11.7	13.4	13.5	9.4	0.9	15.7	6.5	0.0	2.5
Cycle Q Clear(g_c), s	1.2	3.7	3.8	11.7	13.4	13.5	9.4	0.9	15.7	6.5	0.0	2.5
Prop In Lane	1.00		0.33	1.00		0.26	1.00		1.00	1.00		0.56
Lane Grp Cap(c), veh/h	18	2184	1132	136	2411	1264	250	186	158	228	0	142
V/C Ratio(X)	0.67	0.18	0.19	0.86	0.29	0.29	0.41	0.05	0.89	0.31	0.00	0.18
Avail Cap(c_a), veh/h	189	2184	1132	188	2411	1264	325	293	248	331	0	266
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	0.74	0.74	0.74	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	88.5	5.0	5.0	82.2	9.6	9.6	69.5	73.4	80.1	70.8	0.0	76.8
Incr Delay (d2), s/veh	14.9	0.2	0.4	15.1	0.2	0.4	0.4	0.0	14.1	0.3	0.0	0.2
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	0.6	1.3	1.5	6.0	5.1	5.4	4.4	0.4	7.1	3.0	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	103.4	5.2	5.4	97.3	9.8	10.1	70.0	73.4	94.2	71.1	0.0	77.0
LnGrp LOS	F	A	A	F	A	B	E	E	F	E		E
Approach Vol, veh/h		626			1173			253			96	
Approach Delay, s/veh		7.1			18.6			83.5			72.6	
Approach LOS		A			B			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	133.1	17.4	21.8	19.7	121.1	14.5	24.7
Change Period (Y+Rc), s	5.9	5.6	6.0	6.8	6.0	5.6	6.0	6.8
Max Green Setting (Gmax), s	19.1	89.4	19.0	28.2	19.0	89.4	19.0	28.2
Max Q Clear Time (g_c+I1), s	3.2	15.5	11.4	4.5	13.7	5.8	8.5	17.7
Green Ext Time (p_c), s	0.0	20.2	0.1	0.0	0.1	9.3	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	25.3
HCM 7th LOS	C

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	536	65	51	845	27	88	2	30	20	8	65
Future Volume (veh/h)	36	536	65	51	845	27	88	2	30	20	8	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	583	71	55	918	29	96	2	33	22	9	71
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	50	3235	389	70	3621	114	164	10	160	152	11	88
Arrive On Green	0.06	1.00	1.00	0.03	0.48	0.48	0.06	0.11	0.11	0.02	0.06	0.06
Sat Flow, veh/h	1781	4619	556	1781	5085	160	1781	91	1508	1781	181	1431
Grp Volume(v), veh/h	39	428	226	55	614	333	96	0	35	22	0	80
Grp Sat Flow(s),veh/h/ln	1781	1702	1770	1781	1702	1841	1781	0	1599	1781	0	1613
Q Serve(g_s), s	3.9	0.0	0.0	5.5	19.3	19.4	8.9	0.0	3.6	2.1	0.0	8.8
Cycle Q Clear(g_c), s	3.9	0.0	0.0	5.5	19.3	19.4	8.9	0.0	3.6	2.1	0.0	8.8
Prop In Lane	1.00		0.31	1.00		0.09	1.00		0.94	1.00		0.89
Lane Grp Cap(c), veh/h	50	2384	1240	70	2424	1311	164	0	170	152	0	99
V/C Ratio(X)	0.78	0.18	0.18	0.79	0.25	0.25	0.58	0.00	0.21	0.15	0.00	0.80
Avail Cap(c_a), veh/h	189	2384	1240	188	2424	1311	242	0	340	309	0	343
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.96	0.96	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	84.4	0.0	0.0	86.9	18.6	18.6	71.8	0.0	73.5	77.7	0.0	83.4
Incr Delay (d2), s/veh	9.2	0.2	0.3	6.8	0.2	0.4	1.2	0.0	0.2	0.2	0.0	5.6
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	1.9	0.1	0.1	2.7	8.5	9.3	4.2	0.0	1.5	1.0	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	93.6	0.2	0.3	93.7	18.8	19.1	73.1	0.0	73.7	77.8	0.0	89.0
LnGrp LOS	F	A	A	F	B	B	E		E	E		F
Approach Vol, veh/h		693			1002			131			102	
Approach Delay, s/veh		5.5			23.0			73.2			86.6	
Approach LOS		A			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	134.1	17.2	17.8	13.1	132.0	9.1	25.8
Change Period (Y+Rc), s	5.9	5.9	6.3	6.7	6.0	5.9	6.4	6.7
Max Green Setting (Gmax), s	19.1	79.1	18.7	38.3	19.0	79.1	18.6	38.3
Max Q Clear Time (g_c+I1), s	5.9	21.4	10.9	10.8	7.5	2.0	4.1	5.6
Green Ext Time (p_c), s	0.0	16.2	0.1	0.3	0.0	10.1	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	23.5
HCM 7th LOS	C

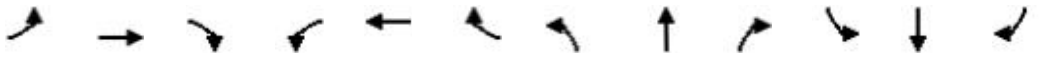
Intersection	
Int Delay, s/veh	1.6

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	3	43	640	0	4	0	1006	11	0	0	0	27	0	61
Future Vol, veh/h	3	43	640	0	4	0	1006	11	0	0	0	27	0	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	Free	-	-	-	None	-	-	Stop	-	-	None
Storage Length	-	250	-	-	-	-	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	0	2	0	2	2	0	0	0	2	0	2
Mvmt Flow	3	46	681	0	4	0	1070	12	0	0	0	29	0	65

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	790	1082	0	-	497	-	-	0	-	-	340	1455	-	541
Stage 1	-	-	-	-	-	-	-	-	-	-	-	1085	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	370	-	-
Critical Hdwy	5.64	5.34	-	-	5.64	-	-	-	-	-	7.1	6.44	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	7.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	6.74	-	-
Follow-up Hdwy	2.32	3.12	-	-	2.32	-	-	-	-	-	3.9	3.82	-	3.92
Pot Cap-1 Maneuver	574	357	-	0	832	0	-	-	0	0	564	137	0	416
Stage 1	-	-	-	0	-	0	-	-	0	0	-	174	0	-
Stage 2	-	-	-	0	-	0	-	-	0	0	-	570	0	-
Platoon blocked, %			-				-	-						
Mov Cap-1 Maneuver	364	364	-	-	832	-	-	-	-	-	564	118	-	416
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	118	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	173	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	493	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.1	0.04	0	24.42
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	364	-	-	-	-	118	416
HCM Lane V/C Ratio	-	0.135	-	-	-	-	0.244	0.156
HCM Ctrl Dly (s/v)	0	16.4	-	-	-	-	45.1	15.3
HCM Lane LOS	A	C	-	-	-	-	E	C
HCM 95th %tile Q(veh)	-	0.5	-	-	-	-	0.9	0.5



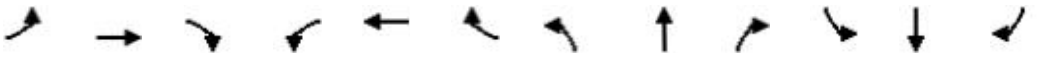
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	398	0	1	716	345	0	0	1	287	1	241
Future Volume (veh/h)	196	398	0	1	716	345	0	0	1	287	1	241
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1870	1900	1870	1870	1856	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	211	428	0	1	770	371	0	0	0	310	0	259
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	2	0	2	2	3	0	0	2	2	2	2
Cap, veh/h	464	3887	0	737	2458	1145	1	1	0	471	0	210
Arrive On Green	0.05	0.76	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.13	0.00	0.13
Sat Flow, veh/h	1725	5274	0	1781	3404	1585	1810	1900	0	3563	0	1585
Grp Volume(v), veh/h	211	428	0	1	770	371	0	0	0	310	0	259
Grp Sat Flow(s),veh/h/ln	1725	1702	0	1781	1702	1585	1810	1900	0	1781	0	1585
Q Serve(g_s), s	5.5	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.9	0.0	23.8
Cycle Q Clear(g_c), s	5.5	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.9	0.0	23.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	464	3887	0	737	2458	1145	1	1	0	471	0	210
V/C Ratio(X)	0.46	0.11	0.00	0.00	0.31	0.32	0.00	0.00	0.00	0.66	0.00	1.24
Avail Cap(c_a), veh/h	619	3887	0	967	2458	1145	235	247	0	471	0	210
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.85	0.00	0.85
Uniform Delay (d), s/veh	5.0	5.6	0.0	6.8	0.0	0.0	0.0	0.0	0.0	74.2	0.0	78.1
Incr Delay (d2), s/veh	0.8	0.1	0.0	0.0	0.3	0.8	0.0	0.0	0.0	2.9	0.0	136.0
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(50%),veh/ln	2.0	1.4	0.0	0.0	0.1	0.2	0.0	0.0	0.0	7.0	0.0	17.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	5.8	5.7	0.0	6.8	0.3	0.8	0.0	0.0	0.0	77.1	0.0	214.1
LnGrp LOS	A	A		A	A	A				E		F
Approach Vol, veh/h		639			1142			0			569	
Approach Delay, s/veh		5.7			0.5			0.0			139.5	
Approach LOS		A			A						F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.8	136.2		30.0	6.8	143.2		0.0				
Change Period (Y+Rc), s	5.6	6.2		6.2	6.4	6.2		6.6				
Max Green Setting (Gmax), s	24.4	83.8		23.8	23.6	83.8		23.4				
Max Q Clear Time (g_c+I1), s	7.5	2.0		25.8	2.0	5.9		0.0				
Green Ext Time (p_c), s	0.7	24.1		0.0	0.0	6.3		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	35.5
HCM 7th LOS	D

Notes

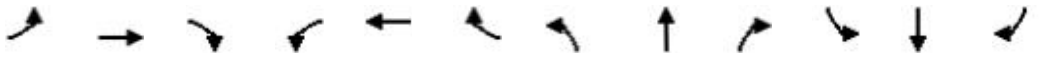
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	10	8	42	13	138	6	538	22	98	466	46
Future Volume (veh/h)	25	10	8	42	13	138	6	538	22	98	466	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	11	9	47	14	153	7	598	24	109	518	51
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	4	2	2	2	2
Cap, veh/h	90	48	39	189	56	215	400	705	28	362	672	66
Arrive On Green	0.05	0.05	0.05	0.14	0.14	0.14	0.09	0.40	0.40	0.09	0.40	0.40
Sat Flow, veh/h	1781	946	774	1388	413	1573	1781	1757	71	1781	1675	165
Grp Volume(v), veh/h	28	0	20	61	0	153	7	0	622	109	0	569
Grp Sat Flow(s),veh/h/ln	1781	0	1721	1801	0	1573	1781	0	1828	1781	0	1840
Q Serve(g_s), s	0.8	0.0	0.6	1.7	0.0	5.2	0.1	0.0	17.3	1.9	0.0	15.0
Cycle Q Clear(g_c), s	0.8	0.0	0.6	1.7	0.0	5.2	0.1	0.0	17.3	1.9	0.0	15.0
Prop In Lane	1.00		0.45	0.77		1.00	1.00		0.04	1.00		0.09
Lane Grp Cap(c), veh/h	90	0	87	246	0	215	400	0	733	362	0	738
V/C Ratio(X)	0.31	0.00	0.23	0.25	0.00	0.71	0.02	0.00	0.85	0.30	0.00	0.77
Avail Cap(c_a), veh/h	574	0	554	584	0	510	400	0	1008	365	0	1018
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.6	0.0	25.5	21.6	0.0	23.1	9.3	0.0	15.2	10.8	0.0	14.5
Incr Delay (d2), s/veh	1.9	0.0	1.3	0.5	0.0	4.3	0.0	0.0	5.1	0.5	0.0	2.5
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	0.4	0.0	0.3	0.7	0.0	2.0	0.0	0.0	6.9	0.6	0.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.5	0.0	26.8	22.1	0.0	27.4	9.3	0.0	20.3	11.3	0.0	17.0
LnGrp LOS	C		C	C		C	A		C	B		B
Approach Vol, veh/h		48			214			629			678	
Approach Delay, s/veh		27.2			25.9			20.2			16.1	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	26.9		7.3	9.5	26.9		12.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.1	30.8		18.0	5.0	30.9		18.1				
Max Q Clear Time (g_c+I1), s	3.9	19.3		2.8	2.1	17.0		7.2				
Green Ext Time (p_c), s	0.0	3.1		0.1	0.0	3.1		0.6				

Intersection Summary												
HCM 7th Control Delay, s/veh			19.4									
HCM 7th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	561	379	198	557	4	357	18	271	8	20	22
Future Volume (veh/h)	12	561	379	198	557	4	357	18	271	8	20	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1781	1693	1870	1870
Adj Flow Rate, veh/h	13	597	403	211	593	4	380	19	288	9	21	23
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	8	14	2	2
Cap, veh/h	391	1093	487	419	1417	631	551	449	362	242	172	146
Arrive On Green	0.02	0.31	0.31	0.11	0.40	0.40	0.16	0.24	0.24	0.01	0.09	0.09
Sat Flow, veh/h	1781	3554	1584	1781	3554	1583	3456	1870	1510	1612	1870	1585
Grp Volume(v), veh/h	13	597	403	211	593	4	380	19	288	9	21	23
Grp Sat Flow(s),veh/h/ln	1781	1777	1584	1781	1777	1583	1728	1870	1510	1612	1870	1585
Q Serve(g_s), s	0.3	7.6	12.8	4.0	6.5	0.1	5.6	0.4	9.7	0.3	0.6	0.7
Cycle Q Clear(g_c), s	0.3	7.6	12.8	4.0	6.5	0.1	5.6	0.4	9.7	0.3	0.6	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	391	1093	487	419	1417	631	551	449	362	242	172	146
V/C Ratio(X)	0.03	0.55	0.83	0.50	0.42	0.01	0.69	0.04	0.80	0.04	0.12	0.16
Avail Cap(c_a), veh/h	527	1217	542	475	1417	631	1152	1074	867	372	623	528
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	15.6	17.4	10.5	11.7	9.8	21.4	15.8	19.3	21.8	22.5	22.6
Incr Delay (d2), s/veh	0.0	0.4	9.4	0.9	0.2	0.0	1.6	0.0	4.0	0.1	0.3	0.5
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	0.1	2.6	5.2	1.3	2.1	0.0	2.2	0.2	3.4	0.1	0.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.5	16.0	26.8	11.5	11.9	9.8	23.0	15.8	23.3	21.9	22.8	23.1
LnGrp LOS	B	B	C	B	B	A	C	B	C	C	C	C
Approach Vol, veh/h		1013			808			687			53	
Approach Delay, s/veh		20.2			11.8			22.9			22.8	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	26.0	13.1	9.5	10.3	21.1	5.1	17.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	21.0	18.0	18.0	7.5	18.5	5.0	31.0
Max Q Clear Time (g_c+I1), s	2.3	8.5	7.6	2.7	6.0	14.8	2.3	11.7
Green Ext Time (p_c), s	0.0	3.0	1.0	0.1	0.1	1.9	0.0	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	18.3
HCM 7th LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	341	519	211	768	735	405
Future Volume (veh/h)	341	519	211	768	735	405
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1870
Adj Flow Rate, veh/h	352	535	218	792	758	418
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	2	2
Cap, veh/h	891	551	307	2163	859	728
Arrive On Green	0.26	0.26	0.09	0.61	0.46	0.46
Sat Flow, veh/h	3456	1585	1781	3618	1870	1585
Grp Volume(v), veh/h	352	535	218	792	758	418
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1763	1870	1585
Q Serve(g_s), s	5.9	18.0	4.1	7.8	25.8	13.5
Cycle Q Clear(g_c), s	5.9	18.0	4.1	7.8	25.8	13.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	891	551	307	2163	859	728
V/C Ratio(X)	0.40	0.97	0.71	0.37	0.88	0.57
Avail Cap(c_a), veh/h	891	551	439	2675	991	840
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	21.4	22.4	14.8	6.7	17.2	13.9
Incr Delay (d2), s/veh	0.3	30.9	3.1	0.1	8.6	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	21.9	1.5	2.0	10.9	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.7	53.3	17.8	6.8	25.8	14.6
LnGrp LOS	C	D	B	A	C	B
Approach Vol, veh/h	887			1010	1176	
Approach Delay, s/veh	40.8			9.2	21.8	
Approach LOS	D			A	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		47.4		22.5	10.8	36.6
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		53.0		18.0	11.5	37.0
Max Q Clear Time (g_c+I1), s		9.8		20.0	6.1	27.8
Green Ext Time (p_c), s		5.8		0.0	0.3	4.3

Intersection Summary	
HCM 7th Control Delay, s/veh	23.1
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	452	680	42	9	14	489	134	24	8	0	1	289
Future Volume (vph)	452	680	42	9	14	489	134	24	8	0	1	289
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	6.7	6.7		7.4	6.7	6.7	7.9	7.9			7.5
Lane Util. Factor	0.94	0.95	1.00		1.00	0.95	1.00	1.00	0.95			0.95
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00			1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00			0.95
Satd. Flow (prot)	4942	3539	1583		1770	3539	1583	1770	3539			1681
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00			0.95
Satd. Flow (perm)	4942	3539	1583		1770	3539	1583	1770	3539			1681
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	466	701	43	9	14	504	138	25	8	0	1	298
RTOR Reduction (vph)	0	0	16	0	0	0	82	0	0	0	0	0
Lane Group Flow (vph)	466	701	27	0	23	504	56	25	8	0	0	162
Confl. Peds. (#/hr)										2		2
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	0%	2%	2%
Turn Type	Prot	NA	Perm	Prot	Prot	NA	Perm	Split	NA		Split	Split
Protected Phases	1 9	6		5	5	2		4	4		8	8
Permitted Phases			6				2					
Actuated Green, G (s)	32.0	99.7	99.7		4.5	64.8	64.8	6.5	6.5			19.8
Effective Green, g (s)	32.0	99.7	99.7		4.5	64.8	64.8	6.5	6.5			19.8
Actuated g/C Ratio	0.20	0.62	0.62		0.03	0.41	0.41	0.04	0.04			0.12
Clearance Time (s)		6.7	6.7		7.4	6.7	6.7	7.9	7.9			7.5
Vehicle Extension (s)		5.0	5.0		2.1	5.0	5.0	5.1	5.1			2.1
Lane Grp Cap (vph)	988	2205	986		49	1433	641	71	143			208
v/s Ratio Prot	c0.09	0.20			0.01	c0.14		c0.01	0.00			c0.10
v/s Ratio Perm			0.02				0.04					
v/c Ratio	0.47	0.32	0.03		0.47	0.35	0.09	0.35	0.06			0.78
Uniform Delay, d1	56.5	14.2	11.6		76.6	33.0	29.4	74.7	73.8			68.0
Progression Factor	1.31	1.06	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.7	0.4	0.0		3.1	0.7	0.3	6.4	0.4			15.5
Delay (s)	74.9	15.3	11.6		79.7	33.7	29.6	81.1	74.2			83.4
Level of Service	E	B	B		E	C	C	F	E			F
Approach Delay (s/veh)		38.1				34.4			79.4			
Approach LOS		D				C			E			

Intersection Summary			
HCM 2000 Control Delay (s/veh)	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	36.9
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	23	543
Future Volume (vph)	23	543
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.5	7.4
Lane Util. Factor	0.95	0.88
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	0.96	1.00
Satd. Flow (prot)	1697	2787
Flt Permitted	0.96	1.00
Satd. Flow (perm)	1697	2787
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	24	560
RTOR Reduction (vph)	0	302
Lane Group Flow (vph)	161	258
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	pm+ov
Protected Phases	8	1 9
Permitted Phases		8
Actuated Green, G (s)	19.8	51.8
Effective Green, g (s)	19.8	51.8
Actuated g/C Ratio	0.12	0.32
Clearance Time (s)	7.5	
Vehicle Extension (s)	2.1	
Lane Grp Cap (vph)	210	902
v/s Ratio Prot	0.09	0.06
v/s Ratio Perm		0.04
v/c Ratio	0.77	0.29
Uniform Delay, d1	67.9	40.3
Progression Factor	1.00	1.00
Incremental Delay, d2	14.1	0.4
Delay (s)	81.9	40.7
Level of Service	F	D
Approach Delay (s/veh)	56.1	
Approach LOS	E	

Intersection Summary



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	690	802	0	0	819	169	602	3	454	0	0
Future Volume (vph)	10	690	802	0	0	819	169	602	3	454	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6	6.4			6.4	6.4	6.7	6.7	6.7		
Lane Util. Factor		0.97	0.95			0.95	1.00	0.95	0.95	0.88		
Frpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	0.98		
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Frt		1.00	1.00			1.00	0.85	1.00	1.00	0.85		
Flt Protected		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (prot)		3429	3539			3539	1583	1681	1686	2724		
Flt Permitted		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (perm)		3429	3539			3539	1583	1681	1686	2724		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	742	862	0	0	881	182	647	3	488	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	89	0	0	255	0	0
Lane Group Flow (vph)	0	753	862	0	0	881	93	323	327	233	0	0
Confl. Peds. (#/hr)				2	2					1	1	
Heavy Vehicles (%)	11%	2%	2%	0%	0%	2%	2%	2%	2%	2%	0%	0%
Turn Type	Prot	Prot	NA			NA	Perm	Split	NA	Perm		
Protected Phases	1 9	1 9	6			2		4	4			
Permitted Phases							2			4		
Actuated Green, G (s)		39.0	109.2			57.0	57.0	37.7	37.7	37.7		
Effective Green, g (s)		39.0	109.2			57.0	57.0	37.7	37.7	37.7		
Actuated g/C Ratio		0.24	0.68			0.36	0.36	0.24	0.24	0.24		
Clearance Time (s)			6.4			6.4	6.4	6.7	6.7	6.7		
Vehicle Extension (s)			3.0			3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		835	2415			1260	563	396	397	641		
v/s Ratio Prot		c0.22	0.24			c0.25		0.19	c0.19			
v/s Ratio Perm							0.06			0.09		
v/c Ratio		0.90	0.36			0.70	0.16	0.82	0.82	0.36		
Uniform Delay, d1		58.6	10.7			44.2	35.2	57.9	58.0	51.1		
Progression Factor		1.07	2.48			0.73	0.42	1.00	1.00	1.00		
Incremental Delay, d2		9.0	0.3			3.1	0.6	12.2	13.0	0.4		
Delay (s)		71.8	26.7			35.3	15.5	70.1	71.0	51.5		
Level of Service		E	C			D	B	E	E	D		
Approach Delay (s/veh)			47.7			31.9			62.4			0.0
Approach LOS			D			C			E			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	47.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.3
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s/veh)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	0	1403	706	7	279	1138	0	0	0	0	89	0
Future Volume (veh/h)	0	1403	706	7	279	1138	0	0	0	0	89	0
Initial Q (Qb), veh	0	0	0		0	0	0				0	0
Lane Width Adj.	1.00	1.00	1.00		1.00	1.00	1.00				1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No				No						No
Adj Sat Flow, veh/h/ln	0	1870	1870		1870	1870	0				1870	1900
Adj Flow Rate, veh/h	0	1477	743		294	1198	0				63	0
Peak Hour Factor	0.95	0.95	0.95		0.95	0.95	0.95				0.95	0.95
Percent Heavy Veh, %	0	2	2		2	2	0				2	0
Cap, veh/h	0	1819	809		344	2311	0				481	0
Arrive On Green	0.00	0.51	0.51		0.10	0.65	0.00				0.27	0.00
Sat Flow, veh/h	0	3647	1580		3456	3647	0				1781	0
Grp Volume(v), veh/h	0	1477	743		294	1198	0				63	0
Grp Sat Flow(s),veh/h/ln	0	1777	1580		1728	1777	0				1781	0
Q Serve(g_s), s	0.0	55.5	69.3		13.4	28.5	0.0				4.3	0.0
Cycle Q Clear(g_c), s	0.0	55.5	69.3		13.4	28.5	0.0				4.3	0.0
Prop In Lane	0.00		1.00		1.00		0.00				1.00	
Lane Grp Cap(c), veh/h	0	1819	809		344	2311	0				481	0
V/C Ratio(X)	0.00	0.81	0.92		0.85	0.52	0.00				0.13	0.00
Avail Cap(c_a), veh/h	0	1819	809		471	2311	0				482	0
HCM Platoon Ratio	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		0.61	0.61	0.00				1.00	0.00
Uniform Delay (d), s/veh	0.0	32.6	36.0		70.9	14.8	0.0				44.2	0.0
Incr Delay (d2), s/veh	0.0	4.1	17.1		7.0	0.5	0.0				0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0				0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	24.2	29.6		6.2	11.2	0.0				1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	36.7	53.1		77.9	15.3	0.0				44.3	0.0
LnGrp LOS		D	D		E	B					D	
Approach Vol, veh/h		2220				1492						888
Approach Delay, s/veh		42.2				27.6						77.4
Approach LOS		D				C						E

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		110.1			22.1	88.0		49.9				
Change Period (Y+Rc), s		6.1			6.2	6.1		6.7				
Max Green Setting (Gmax), s		103.9			21.8	75.9		43.3				
Max Q Clear Time (g_c+I1), s		30.5			15.4	71.3		43.1				
Green Ext Time (p_c), s		26.4			0.5	4.4		0.1				

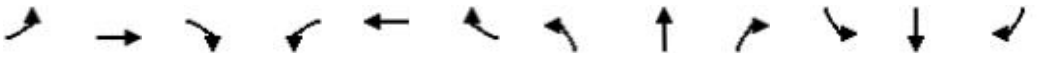
Intersection Summary	
HCM 7th Control Delay, s/veh	44.2
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	751
Future Volume (veh/h)	751
Initial Q (Qb), veh	0
Lane Width Adj.	1.00
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1870
Adj Flow Rate, veh/h	825
Peak Hour Factor	0.95
Percent Heavy Veh, %	2
Cap, veh/h	855
Arrive On Green	0.27
Sat Flow, veh/h	3170
Grp Volume(v), veh/h	825
Grp Sat Flow(s),veh/h/ln	1585
Q Serve(g_s), s	41.1
Cycle Q Clear(g_c), s	41.1
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	855
V/C Ratio(X)	0.96
Avail Cap(c_a), veh/h	858
HCM Platoon Ratio	1.00
Upstream Filter(I)	1.00
Uniform Delay (d), s/veh	57.7
Incr Delay (d2), s/veh	22.2
Initial Q Delay(d3), s/veh	0.0
%ile BackOfQ(50%),veh/ln	18.8
Unsig. Movement Delay, s/veh	
LnGrp Delay(d), s/veh	79.9
LnGrp LOS	E
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	



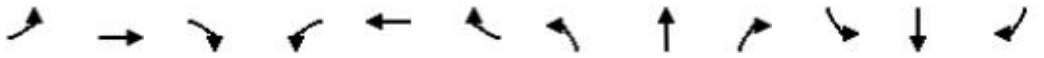
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	0	646	12	7	12	215	1441	23	2	1252	498
Future Volume (veh/h)	256	0	646	12	7	12	215	1441	23	2	1252	498
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856
Adj Flow Rate, veh/h	269	0	680	13	7	13	226	1517	24	2	1318	524
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	2	2	2	2	2	2	2	2	2	3
Cap, veh/h	334	368	766	76	210	187	279	3126	970	5	2721	837
Arrive On Green	0.10	0.00	0.19	0.02	0.12	0.12	0.08	0.61	0.61	0.00	0.53	0.53
Sat Flow, veh/h	3428	1900	2790	3456	1777	1585	3456	5106	1584	1781	5106	1572
Grp Volume(v), veh/h	269	0	680	13	7	13	226	1517	24	2	1318	524
Grp Sat Flow(s),veh/h/ln	1714	1900	1395	1728	1777	1585	1728	1702	1584	1781	1702	1572
Q Serve(g_s), s	12.3	0.0	31.0	0.6	0.6	1.2	10.3	26.2	1.0	0.2	26.0	37.4
Cycle Q Clear(g_c), s	12.3	0.0	31.0	0.6	0.6	1.2	10.3	26.2	1.0	0.2	26.0	37.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	334	368	766	76	210	187	279	3126	970	5	2721	837
V/C Ratio(X)	0.81	0.00	0.89	0.17	0.03	0.07	0.81	0.49	0.02	0.42	0.48	0.63
Avail Cap(c_a), veh/h	664	368	766	173	210	187	436	3126	970	94	2721	837
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	0.73	0.73	0.73	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.7	0.0	55.7	76.8	62.4	62.7	72.3	17.1	12.2	79.7	23.5	26.2
Incr Delay (d2), s/veh	6.4	0.0	12.6	1.5	0.1	0.2	6.2	0.4	0.0	67.9	0.6	3.5
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	5.8	0.0	14.6	0.3	0.3	0.5	4.7	9.9	0.4	0.2	10.3	15.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	77.1	0.0	68.2	78.3	62.5	62.9	78.5	17.5	12.2	147.6	24.2	29.7
LnGrp LOS	E		E	E	E	E	E	B	B	F	C	C
Approach Vol, veh/h		949			33			1767			1844	
Approach Delay, s/veh		70.7			68.9			25.2			25.9	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.7	91.8	22.6	25.9	7.0	104.5	10.5	38.0
Change Period (Y+Rc), s	6.8	6.5	7.0	7.0	6.6	6.5	7.0	7.0
Max Green Setting (Gmax), s	20.2	73.5	31.0	8.0	8.4	85.5	8.0	31.0
Max Q Clear Time (g_c+I1), s	12.3	39.4	14.3	3.2	2.2	28.2	2.6	33.0
Green Ext Time (p_c), s	0.6	25.1	1.3	0.0	0.0	31.9	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	35.2
HCM 7th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	889	0	479	0	0	0	0	796	583	265	1702	0
Future Volume (veh/h)	889	0	479	0	0	0	0	796	583	265	1702	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1856	0	1870				0	1841	1870	1796	1870	0
Adj Flow Rate, veh/h	907	0	489				0	812	595	270	1737	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	0	2				0	4	2	7	2	0
Cap, veh/h	1081	0	880				0	1970	621	291	3071	0
Arrive On Green	0.32	0.00	0.32				0.00	0.52	0.52	0.11	0.40	0.00
Sat Flow, veh/h	3428	0	2790				0	5191	1583	1711	5274	0
Grp Volume(v), veh/h	907	0	489				0	812	595	270	1737	0
Grp Sat Flow(s),veh/h/ln	1714	0	1395				0	1675	1583	1711	1702	0
Q Serve(g_s), s	39.4	0.0	23.3				0.0	15.8	57.6	25.0	42.1	0.0
Cycle Q Clear(g_c), s	39.4	0.0	23.3				0.0	15.8	57.6	25.0	42.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1081	0	880				0	1970	621	291	3071	0
V/C Ratio(X)	0.84	0.00	0.56				0.00	0.41	0.96	0.93	0.57	0.00
Avail Cap(c_a), veh/h	1361	0	1107				0	1970	621	307	3071	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.84	0.84	0.81	0.81	0.00
Uniform Delay (d), s/veh	51.0	0.0	45.5				0.0	27.1	37.1	69.9	31.6	0.0
Incr Delay (d2), s/veh	4.4	0.0	0.8				0.0	0.5	24.5	28.5	0.6	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
%ile BackOfQ(50%),veh/ln	17.2	0.0	18.4				0.0	5.8	23.9	13.5	18.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.4	0.0	46.3				0.0	27.6	61.5	98.4	32.2	0.0
LnGrp LOS	E		D					C	E	F	C	
Approach Vol, veh/h		1396						1407			2007	
Approach Delay, s/veh		52.2						41.9			41.1	
Approach LOS		D						D			D	

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		103.0		57.0	33.5	69.5						
Change Period (Y+Rc), s		6.8		6.5	6.3	6.8						
Max Green Setting (Gmax), s		83.2		63.5	28.7	48.2						
Max Q Clear Time (g_c+I1), s		44.1		41.4	27.0	59.6						
Green Ext Time (p_c), s		29.2		9.0	0.2	0.0						

Intersection Summary												
HCM 7th Control Delay, s/veh			44.6									
HCM 7th LOS			D									

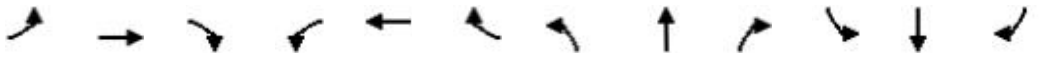
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	265	62	36	14	65	57	8	60	947	8	60	156
Future Volume (vph)	265	62	36	14	65	57	8	60	947	8	60	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		8.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00		1.00	0.91	1.00		1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.98		1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.94		1.00	1.00	0.85		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	3433	1751		1770	1863	1583		1770	5036	1548		1769
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.10	1.00	1.00		0.20
Satd. Flow (perm)	3433	1751		1770	1863	1583		181	5036	1548		380
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	276	65	38	15	68	59	8	63	986	8	63	162
RTOR Reduction (vph)	0	13	0	0	0	53	0	0	0	5	0	0
Lane Group Flow (vph)	276	90	0	15	68	6	0	71	986	3	0	226
Confl. Peds. (#/hr)			1	1						1		1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	3	8		7	4		5	5	2		1 9	1 9
Permitted Phases						4	2	2		2	6	6
Actuated Green, G (s)	14.0	26.1		2.9	15.7	15.7		74.8	67.1	67.1		105.9
Effective Green, g (s)	14.0	26.1		2.9	15.7	15.7		74.8	67.1	67.1		105.9
Actuated g/C Ratio	0.09	0.16		0.02	0.10	0.10		0.47	0.42	0.42		0.66
Clearance Time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		3.0	5.0	5.0		
Lane Grp Cap (vph)	300	285		32	182	155		161	2111	649		473
v/s Ratio Prot	c0.08	0.05		0.01	c0.04			0.02	0.20			c0.08
v/s Ratio Perm						0.00		0.18		0.00		0.24
v/c Ratio	0.92	0.32		0.47	0.37	0.04		0.44	0.47	0.01		0.48
Uniform Delay, d1	72.4	59.1		77.8	67.5	65.3		25.5	33.5	27.0		13.0
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.39	0.56	1.00		1.40
Incremental Delay, d2	32.3	0.9		14.1	1.8	0.1		1.8	0.7	0.0		0.6
Delay (s)	104.7	60.0		91.8	69.3	65.4		37.2	19.5	27.0		18.8
Level of Service	F	E		F	E	E		D	B	C		B
Approach Delay (s/veh)		92.6			70.1				20.7			
Approach LOS		F			E				C			

Intersection Summary			
HCM 2000 Control Delay (s/veh)	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	38.3
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1566	366
Future Volume (vph)	1566	366
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	7.1
Lane Util. Factor	0.91	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	5085	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	5085	1583
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	1631	381
RTOR Reduction (vph)	0	159
Lane Group Flow (vph)	1631	222
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	93.3	93.3
Effective Green, g (s)	93.3	93.3
Actuated g/C Ratio	0.58	0.58
Clearance Time (s)	7.1	7.1
Vehicle Extension (s)	5.0	5.0
Lane Grp Cap (vph)	2965	923
v/s Ratio Prot	c0.32	
v/s Ratio Perm		0.14
v/c Ratio	0.55	0.24
Uniform Delay, d1	20.5	16.2
Progression Factor	0.56	0.35
Incremental Delay, d2	0.6	0.5
Delay (s)	12.1	6.1
Level of Service	B	A
Approach Delay (s/veh)	11.8	
Approach LOS	B	

Intersection Summary



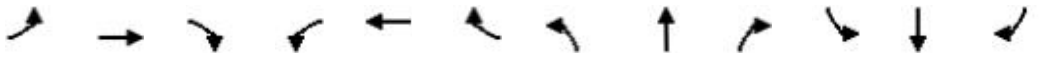
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	169	101	85	657	13	198	844	7	178	996	450
Future Volume (veh/h)	115	169	101	85	657	13	198	844	7	178	996	450
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1870	1841	1870	1870	1811	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	119	174	104	88	677	13	204	870	7	184	1027	464
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	5	5	2	4	2	2	6	3	2	2	2	2
Cap, veh/h	163	558	374	130	757	338	251	2785	22	224	1880	915
Arrive On Green	0.02	0.05	0.05	0.04	0.15	0.15	0.08	0.54	0.54	0.13	1.00	1.00
Sat Flow, veh/h	3374	3469	1585	3401	5106	1585	3346	5183	42	3456	3554	1585
Grp Volume(v), veh/h	119	174	104	88	677	13	204	567	310	184	1027	464
Grp Sat Flow(s),veh/h/ln	1687	1735	1585	1700	1702	1585	1673	1689	1848	1728	1777	1585
Q Serve(g_s), s	5.6	7.7	9.3	4.1	20.8	1.0	9.6	14.9	14.9	8.3	0.0	0.0
Cycle Q Clear(g_c), s	5.6	7.7	9.3	4.1	20.8	1.0	9.6	14.9	14.9	8.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	163	558	374	130	757	338	251	1814	993	224	1880	915
V/C Ratio(X)	0.73	0.31	0.28	0.68	0.89	0.04	0.81	0.31	0.31	0.82	0.55	0.51
Avail Cap(c_a), veh/h	245	558	374	255	782	346	349	1814	993	246	1880	915
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	0.84	0.84	0.84
Uniform Delay (d), s/veh	77.7	67.2	56.7	76.0	66.9	49.9	72.9	20.6	20.6	68.7	0.0	0.0
Incr Delay (d2), s/veh	8.4	0.4	0.6	8.5	12.9	0.1	11.6	0.4	0.8	16.6	1.0	1.7
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	2.7	3.6	4.0	1.9	9.9	0.4	4.5	5.9	6.6	3.9	0.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	86.1	67.7	57.2	84.5	79.8	50.0	84.4	21.0	21.4	85.3	1.0	1.7
LnGrp LOS	F	E	E	F	E	D	F	C	C	F	A	A
Approach Vol, veh/h		397			778			1081			1675	
Approach Delay, s/veh		70.5			79.9			33.1			10.4	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	93.7	16.1	31.2	20.3	92.3	14.1	33.2
Change Period (Y+Rc), s	8.6	7.7	8.4	7.5	8.3	7.7	8.0	7.5
Max Green Setting (Gmax), s	11.4	80.3	11.6	24.5	16.7	75.3	12.0	24.5
Max Q Clear Time (g_c+I1), s	10.3	16.9	7.6	22.8	11.6	2.0	6.1	11.3
Green Ext Time (p_c), s	0.1	14.2	0.2	0.9	0.4	31.0	0.1	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	36.5
HCM 7th LOS	D

Notes

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



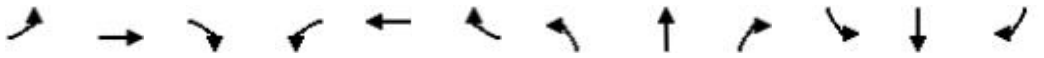
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	354	2	13	1100	96	1	0	8	104	1	54
Future Volume (veh/h)	89	354	2	13	1100	96	1	0	8	104	1	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1870	1870	1870	1870	1900	1870	1411	1870	1870
Adj Flow Rate, veh/h	99	393	2	14	1222	107	1	0	9	116	1	60
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	3	2	2	2	2	2	0	2	33	2	2
Cap, veh/h	118	3702	19	21	3144	275	87	57	47	204	3	193
Arrive On Green	0.13	1.00	1.00	0.01	0.66	0.66	0.00	0.00	0.03	0.09	0.12	0.12
Sat Flow, veh/h	1781	5201	26	1781	4781	418	1781	1900	1585	1344	26	1563
Grp Volume(v), veh/h	99	255	140	14	870	459	1	0	9	116	0	61
Grp Sat Flow(s),veh/h/ln	1781	1689	1851	1781	1702	1795	1781	1900	1585	1344	0	1589
Q Serve(g_s), s	8.7	0.0	0.0	1.3	18.8	18.8	0.1	0.0	0.9	13.0	0.0	5.6
Cycle Q Clear(g_c), s	8.7	0.0	0.0	1.3	18.8	18.8	0.1	0.0	0.9	13.0	0.0	5.6
Prop In Lane	1.00		0.01	1.00		0.23	1.00		1.00	1.00		0.98
Lane Grp Cap(c), veh/h	118	2403	1317	21	2239	1181	87	57	47	204	0	196
V/C Ratio(X)	0.84	0.11	0.11	0.68	0.39	0.39	0.01	0.00	0.19	0.57	0.00	0.31
Avail Cap(c_a), veh/h	157	2403	1317	100	2239	1181	297	216	180	236	0	196
HCM Platoon Ratio	2.00	2.00	2.00	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	0.65	0.65	0.65	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	68.6	0.0	0.0	78.8	12.6	12.6	75.2	0.0	75.7	65.3	0.0	64.0
Incr Delay (d2), s/veh	20.1	0.1	0.2	9.0	0.3	0.6	0.0	0.0	0.7	0.9	0.0	0.3
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	4.4	0.0	0.1	0.6	7.2	7.7	0.0	0.0	0.4	4.6	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	88.7	0.1	0.2	87.8	12.9	13.2	75.2	0.0	76.4	66.2	0.0	64.3
LnGrp LOS	F	A	A	F	B	B	E		E	E		E
Approach Vol, veh/h		494			1343			10			177	
Approach Delay, s/veh		17.9			13.8			76.3			65.5	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	110.8	6.2	26.5	7.9	119.5	21.1	11.6
Change Period (Y+Rc), s	5.9	5.6	6.0	6.8	6.0	5.6	6.0	6.8
Max Green Setting (Gmax), s	14.1	84.4	19.0	18.2	9.0	89.4	19.0	18.2
Max Q Clear Time (g_c+I1), s	10.7	20.8	2.1	7.6	3.3	2.0	15.0	2.9
Green Ext Time (p_c), s	0.0	28.0	0.0	0.1	0.0	5.4	0.1	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	19.6
HCM 7th LOS	B

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	441	20	18	1100	43	8	0	6	12	0	61
Future Volume (veh/h)	140	441	20	18	1100	43	8	0	6	12	0	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1707	1870	1870	1870	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	156	490	22	20	1222	48	9	0	7	13	0	68
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	3	2	13	2	2	2	0	2	0	0	0
Cap, veh/h	157	3760	168	30	3465	136	86	0	93	141	0	98
Arrive On Green	0.18	1.00	1.00	0.04	1.00	1.00	0.01	0.00	0.06	0.01	0.00	0.06
Sat Flow, veh/h	1781	4971	222	1626	5041	198	1781	0	1602	1810	0	1602
Grp Volume(v), veh/h	156	332	180	20	825	445	9	0	7	13	0	68
Grp Sat Flow(s),veh/h/ln	1781	1689	1816	1626	1702	1835	1781	0	1602	1810	0	1602
Q Serve(g_s), s	14.0	0.0	0.0	1.9	0.0	0.0	0.8	0.0	0.7	1.1	0.0	6.7
Cycle Q Clear(g_c), s	14.0	0.0	0.0	1.9	0.0	0.0	0.8	0.0	0.7	1.1	0.0	6.7
Prop In Lane	1.00		0.12	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	157	2555	1373	30	2340	1261	86	0	93	141	0	98
V/C Ratio(X)	0.99	0.13	0.13	0.67	0.35	0.35	0.10	0.00	0.08	0.09	0.00	0.69
Avail Cap(c_a), veh/h	157	2555	1373	142	2340	1261	224	0	333	275	0	333
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	65.9	0.0	0.0	76.6	0.0	0.0	70.2	0.0	71.3	69.9	0.0	73.6
Incr Delay (d2), s/veh	69.8	0.1	0.2	8.6	0.4	0.7	0.2	0.0	0.1	0.1	0.0	3.2
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	8.8	0.0	0.1	0.9	0.1	0.3	0.4	0.0	0.3	0.5	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	135.7	0.1	0.2	85.1	0.4	0.7	70.4	0.0	71.4	70.0	0.0	76.9
LnGrp LOS	F	A	A	F	A	A	E		E	E		E
Approach Vol, veh/h		668			1290			16			81	
Approach Delay, s/veh		31.8			1.8			70.9			75.8	
Approach LOS		C			A			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	115.9	7.6	16.5	8.9	126.9	8.2	16.0
Change Period (Y+Rc), s	5.9	5.9	6.3	6.7	6.0	5.9	6.4	6.7
Max Green Setting (Gmax), s	14.1	74.1	13.7	33.3	14.0	74.1	13.6	33.3
Max Q Clear Time (g_c+I1), s	16.0	2.0	2.8	8.7	3.9	2.0	3.1	2.7
Green Ext Time (p_c), s	0.0	27.0	0.0	0.2	0.0	7.3	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	15.0
HCM 7th LOS	B

Notes

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

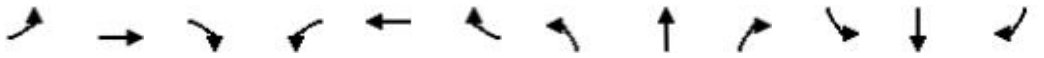
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	597	1	0	1106	61	0	0	3	0	0	41
Future Vol, veh/h	71	597	1	0	1106	61	0	0	3	0	0	41
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Stop	-	-	None
Storage Length	250	-	-	-	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	0	2	2	0	0	33	0	0	0
Mvmt Flow	79	663	1	0	1229	68	0	0	3	0	0	46

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1298	0	-	-	-	0	-	-	332	1687	-	649
Stage 1	-	-	-	-	-	-	-	-	-	1264	-	-
Stage 2	-	-	-	-	-	-	-	-	-	423	-	-
Critical Hdwy	5.34	-	-	-	-	-	-	-	7.76	6.4	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	7.3	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.7	-	-
Follow-up Hdwy	3.12	-	-	-	-	-	-	-	4.23	3.8	-	3.9
Pot Cap-1 Maneuver	280	-	0	0	-	-	0	0	503	101	0	357
Stage 1	-	-	0	0	-	-	0	0	-	132	0	-
Stage 2	-	-	0	0	-	-	0	0	-	534	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	280	-	-	-	-	-	-	-	503	72	-	357
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	72	-	-
Stage 1	-	-	-	-	-	-	-	-	-	132	-	-
Stage 2	-	-	-	-	-	-	-	-	-	381	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.42	0	12.21	16.56
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	503	280	-	-	-	-	357
HCM Lane V/C Ratio	0.007	0.282	-	-	-	-	0.128
HCM Ctrl Dly (s/v)	12.2	22.8	-	-	-	0	16.6
HCM Lane LOS	B	C	-	-	-	A	C
HCM 95th %tile Q(veh)	0	1.1	-	-	-	-	0.4



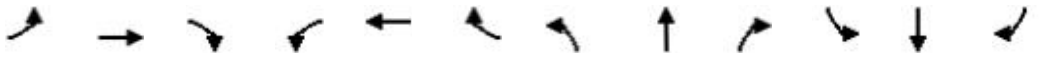
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	335	432	0	0	720	437	0	0	0	242	0	189
Future Volume (veh/h)	335	432	0	0	720	437	0	0	0	242	0	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1900	1900	1856	1870	1900	1900	0	1870	1900	1870
Adj Flow Rate, veh/h	353	455	0	0	758	460	0	0	0	255	0	199
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	3	0	0	3	2	0	0	0	2	0	2
Cap, veh/h	408	4141	0	724	2409	1122	1	1	0	373	0	166
Arrive On Green	0.07	0.82	0.00	0.00	0.48	0.48	0.00	0.00	0.00	0.10	0.00	0.10
Sat Flow, veh/h	1781	5233	0	1810	3377	1572	1810	1900	0	3552	0	1581
Grp Volume(v), veh/h	353	455	0	0	758	460	0	0	0	255	0	199
Grp Sat Flow(s),veh/h/ln	1781	1689	0	1810	1689	1572	1810	1900	0	1776	0	1581
Q Serve(g_s), s	8.1	2.9	0.0	0.0	22.1	30.4	0.0	0.0	0.0	11.1	0.0	16.8
Cycle Q Clear(g_c), s	8.1	2.9	0.0	0.0	22.1	30.4	0.0	0.0	0.0	11.1	0.0	16.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	408	4141	0	724	2409	1122	1	1	0	373	0	166
V/C Ratio(X)	0.86	0.11	0.00	0.00	0.31	0.41	0.00	0.00	0.00	0.68	0.00	1.20
Avail Cap(c_a), veh/h	501	4141	0	934	2409	1122	287	302	0	373	0	166
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.96	0.00	0.96
Uniform Delay (d), s/veh	17.9	2.9	0.0	0.0	17.7	19.9	0.0	0.0	0.0	69.0	0.0	71.6
Incr Delay (d2), s/veh	11.5	0.0	0.0	0.0	0.3	1.1	0.0	0.0	0.0	4.9	0.0	132.1
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	10.3	0.8	0.0	0.0	9.5	12.4	0.0	0.0	0.0	5.3	0.0	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.4	3.0	0.0	0.0	18.1	21.0	0.0	0.0	0.0	74.0	0.0	203.7
LnGrp LOS	C	A			B	C				E		F
Approach Vol, veh/h		808			1218			0			454	
Approach Delay, s/veh		14.5			19.2			0.0			130.8	
Approach LOS		B			B						F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.7	120.3		23.0	0.0	137.0		0.0				
Change Period (Y+Rc), s	5.6	6.2		6.2	6.4	6.2		6.6				
Max Green Setting (Gmax), s	19.4	73.8		16.8	18.6	73.8		25.4				
Max Q Clear Time (g_c+I1), s	10.1	32.4		18.8	0.0	4.9		0.0				
Green Ext Time (p_c), s	1.0	21.0		0.0	0.0	6.8		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	38.1	
HCM 7th LOS	D	

Notes

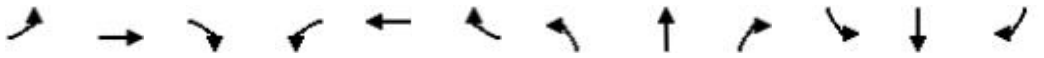
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	7	3	43	1	62	4	638	124	168	390	8
Future Volume (veh/h)	2	7	3	43	1	62	4	638	124	168	390	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870	1693
Adj Flow Rate, veh/h	2	8	3	47	1	67	4	693	135	183	424	9
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	3	2	14
Cap, veh/h	44	32	12	132	3	117	630	803	156	350	969	21
Arrive On Green	0.02	0.02	0.02	0.08	0.08	0.08	0.08	0.53	0.53	0.08	0.53	0.53
Sat Flow, veh/h	1781	1287	482	1746	37	1546	1781	1520	296	1767	1825	39
Grp Volume(v), veh/h	2	0	11	48	0	67	4	0	828	183	0	433
Grp Sat Flow(s),veh/h/ln	1781	0	1769	1783	0	1546	1781	0	1817	1767	0	1863
Q Serve(g_s), s	0.1	0.0	0.4	1.6	0.0	2.6	0.1	0.0	24.7	2.8	0.0	8.9
Cycle Q Clear(g_c), s	0.1	0.0	0.4	1.6	0.0	2.6	0.1	0.0	24.7	2.8	0.0	8.9
Prop In Lane	1.00		0.27	0.98		1.00	1.00		0.16	1.00		0.02
Lane Grp Cap(c), veh/h	44	0	43	135	0	117	630	0	959	350	0	989
V/C Ratio(X)	0.05	0.00	0.25	0.36	0.00	0.57	0.01	0.00	0.86	0.52	0.00	0.44
Avail Cap(c_a), veh/h	517	0	513	518	0	449	1004	0	1390	715	0	1425
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.7	0.0	29.9	27.4	0.0	27.8	5.4	0.0	12.8	12.0	0.0	8.9
Incr Delay (d2), s/veh	0.4	0.0	3.0	1.6	0.0	4.3	0.0	0.0	4.1	1.2	0.0	0.3
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	0.0	0.0	0.2	0.7	0.0	1.1	0.0	0.0	8.8	1.1	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.1	0.0	32.9	28.9	0.0	32.2	5.4	0.0	16.8	13.2	0.0	9.2
LnGrp LOS	C		C	C		C	A		B	B		A
Approach Vol, veh/h		13			115			832			616	
Approach Delay, s/veh		32.5			30.8			16.8			10.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	37.4		6.0	9.5	37.6		9.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.1	47.7		18.1	18.1	47.7		18.1				
Max Q Clear Time (g_c+I1), s	4.8	26.7		2.4	2.1	10.9		4.6				
Green Ext Time (p_c), s	0.4	6.3		0.0	0.0	2.9		0.3				

Intersection Summary			
HCM 7th Control Delay, s/veh		15.5	
HCM 7th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	557	355	197	957	4	421	22	197	8	22	8
Future Volume (veh/h)	19	557	355	197	957	4	421	22	197	8	22	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1870	1870	1870	1870	1870	1870	1870	1870	1693	1826	1693
Adj Flow Rate, veh/h	21	605	386	214	1040	4	458	24	214	9	24	9
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, %	6	2	2	2	2	2	2	2	2	14	5	14
Cap, veh/h	238	1063	474	409	1360	606	626	487	413	241	166	130
Arrive On Green	0.02	0.30	0.30	0.11	0.38	0.38	0.18	0.26	0.26	0.01	0.09	0.09
Sat Flow, veh/h	1725	3554	1583	1781	3554	1583	3456	1870	1583	1612	1826	1430
Grp Volume(v), veh/h	21	605	386	214	1040	4	458	24	214	9	24	9
Grp Sat Flow(s),veh/h/ln	1725	1777	1583	1781	1777	1583	1728	1870	1583	1612	1826	1430
Q Serve(g_s), s	0.5	8.1	12.7	4.3	14.4	0.1	7.0	0.5	6.5	0.3	0.7	0.3
Cycle Q Clear(g_c), s	0.5	8.1	12.7	4.3	14.4	0.1	7.0	0.5	6.5	0.3	0.7	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	1063	474	409	1360	606	626	487	413	241	166	130
V/C Ratio(X)	0.09	0.57	0.82	0.52	0.76	0.01	0.73	0.05	0.52	0.04	0.14	0.07
Avail Cap(c_a), veh/h	348	1208	538	435	1360	606	1107	1032	873	365	585	458
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	16.6	18.3	11.4	15.1	10.7	21.7	15.6	17.8	22.8	23.5	23.4
Incr Delay (d2), s/veh	0.2	0.5	8.5	1.0	2.7	0.0	1.7	0.0	1.0	0.1	0.4	0.2
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	0.2	2.8	5.1	1.4	5.1	0.0	2.7	0.2	2.2	0.1	0.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.0	17.1	26.7	12.4	17.8	10.7	23.4	15.6	18.8	22.8	23.9	23.6
LnGrp LOS	B	B	C	B	B	B	C	B	B	C	C	C
Approach Vol, veh/h		1012			1258			696			42	
Approach Delay, s/veh		20.7			16.9			21.7			23.6	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.9	26.0	14.7	9.6	10.6	21.3	5.2	19.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	21.0	18.0	18.0	6.9	19.1	5.0	31.0
Max Q Clear Time (g_c+I1), s	2.5	16.4	9.0	2.7	6.3	14.7	2.3	8.5
Green Ext Time (p_c), s	0.0	2.7	1.2	0.1	0.0	2.1	0.0	0.8

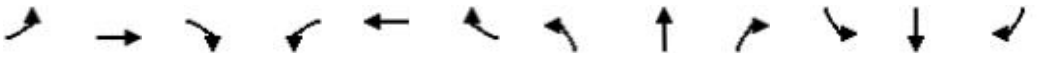
Intersection Summary	
HCM 7th Control Delay, s/veh	19.4
HCM 7th LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	298	189	320	941	818	516
Future Volume (veh/h)	298	189	320	941	818	516
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1826	1870
Adj Flow Rate, veh/h	307	195	330	970	843	532
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	4	2	2	5	2
Cap, veh/h	515	430	379	2566	970	842
Arrive On Green	0.15	0.15	0.13	0.72	0.53	0.53
Sat Flow, veh/h	3456	1560	1781	3647	1826	1585
Grp Volume(v), veh/h	307	195	330	970	843	532
Grp Sat Flow(s),veh/h/ln	1728	1560	1781	1777	1826	1585
Q Serve(g_s), s	5.8	7.2	6.5	7.3	28.1	16.6
Cycle Q Clear(g_c), s	5.8	7.2	6.5	7.3	28.1	16.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	515	430	379	2566	970	842
V/C Ratio(X)	0.60	0.45	0.87	0.38	0.87	0.63
Avail Cap(c_a), veh/h	890	599	472	3202	1201	1043
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	27.8	21.0	17.1	3.7	14.3	11.6
Incr Delay (d2), s/veh	1.1	0.7	13.6	0.1	5.9	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.1	3.8	1.3	10.3	4.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	28.9	21.7	30.7	3.8	20.2	12.4
LnGrp LOS	C	C	C	A	C	B
Approach Vol, veh/h	502			1300	1375	
Approach Delay, s/veh	26.1			10.6	17.2	
Approach LOS	C			B	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		55.0		14.9	13.3	41.6
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		63.0		18.0	12.5	46.0
Max Q Clear Time (g_c+I1), s		9.3		9.2	8.5	30.1
Green Ext Time (p_c), s		7.7		1.2	0.4	7.0

Intersection Summary	
HCM 7th Control Delay, s/veh	15.9
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	580	392	4	13	454	188	31	22	3	131	4	714
Future Volume (vph)	580	392	4	13	454	188	31	22	3	131	4	714
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	6.7	6.7	7.4	6.7	6.7	7.9	7.9		7.5	7.5	7.4
Lane Util. Factor	0.94	0.95	1.00	1.00	0.95	1.00	1.00	0.95		0.95	0.95	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00
Satd. Flow (prot)	4942	3438	1583	1671	3539	1583	1736	3480		1633	1644	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00
Satd. Flow (perm)	4942	3438	1583	1671	3539	1583	1736	3480		1633	1644	2787
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	624	422	4	14	488	202	33	24	3	141	4	768
RTOR Reduction (vph)	0	0	1	0	0	117	0	3	0	0	0	388
Lane Group Flow (vph)	624	422	3	14	488	85	33	24	0	72	73	380
Heavy Vehicles (%)	3%	5%	2%	8%	2%	2%	4%	2%	2%	5%	2%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	pm+ov
Protected Phases	1 9	6		5	2		4	4		8	8	1 9
Permitted Phases			6			2						8
Actuated Green, G (s)	38.9	107.0	107.0	2.9	63.6	63.6	9.0	9.0		11.6	11.6	50.5
Effective Green, g (s)	38.9	107.0	107.0	2.9	63.6	63.6	9.0	9.0		11.6	11.6	50.5
Actuated g/C Ratio	0.24	0.67	0.67	0.02	0.40	0.40	0.06	0.06		0.07	0.07	0.32
Clearance Time (s)		6.7	6.7	7.4	6.7	6.7	7.9	7.9		7.5	7.5	
Vehicle Extension (s)		5.0	5.0	2.1	5.0	5.0	5.1	5.1		2.1	2.1	
Lane Grp Cap (vph)	1201	2299	1058	30	1406	629	97	195		118	119	879
v/s Ratio Prot	c0.13	0.12		0.01	c0.14		c0.02	0.01		0.04	c0.04	0.11
v/s Ratio Perm			0.00			0.05						0.03
v/c Ratio	0.52	0.18	0.00	0.47	0.35	0.13	0.34	0.12		0.61	0.61	0.43
Uniform Delay, d1	52.5	10.0	8.8	77.8	33.7	30.7	72.6	71.8		72.0	72.0	43.4
Progression Factor	0.87	1.64	1.00	1.00	1.00	1.00	1.00	1.00		0.66	0.66	1.63
Incremental Delay, d2	0.7	0.2	0.0	4.9	0.7	0.4	4.5	0.6		6.1	6.1	0.6
Delay (s)	46.2	16.6	8.8	82.7	34.4	31.1	77.1	72.4		53.7	53.8	71.3
Level of Service	D	B	A	F	C	C	E	E		D	D	E
Approach Delay (s/veh)		34.1			34.4			75.0			68.5	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	46.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	36.9
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	679	495	0	0	1073	75	891	3	520	0	0
Future Volume (vph)	10	679	495	0	0	1073	75	891	3	520	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6	6.4			6.4	6.4	6.7	6.7	6.7		
Lane Util. Factor		0.97	0.95			0.95	1.00	0.95	0.95	0.88		
Frpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	0.98		
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Frt		1.00	1.00			1.00	0.85	1.00	1.00	0.85		
Flt Protected		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (prot)		3400	3406			3539	1583	1665	1670	2724		
Flt Permitted		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (perm)		3400	3406			3539	1583	1665	1670	2724		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	722	527	0	0	1141	80	948	3	553	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	55	0	0	313	0	0
Lane Group Flow (vph)	0	733	527	0	0	1141	25	474	477	240	0	0
Confl. Peds. (#/hr)				1	1					1	1	
Heavy Vehicles (%)	2%	3%	6%	0%	0%	2%	2%	3%	2%	2%	0%	0%
Turn Type	Prot	Prot	NA			NA	Perm	Split	NA	Perm		
Protected Phases	1 9	1 9	6			2		4	4			
Permitted Phases							2			4		
Actuated Green, G (s)		40.5	103.6			49.9	49.9	43.3	43.3	43.3		
Effective Green, g (s)		40.5	103.6			49.9	49.9	43.3	43.3	43.3		
Actuated g/C Ratio		0.25	0.65			0.31	0.31	0.27	0.27	0.27		
Clearance Time (s)			6.4			6.4	6.4	6.7	6.7	6.7		
Vehicle Extension (s)			3.0			3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		860	2205			1103	493	450	451	737		
v/s Ratio Prot		c0.22	0.15			c0.32		0.28	c0.29			
v/s Ratio Perm							0.02			0.09		
v/c Ratio		0.85	0.24			1.03	0.05	1.05	1.06	0.33		
Uniform Delay, d1		56.9	11.8			55.1	38.5	58.4	58.4	46.7		
Progression Factor		1.50	2.07			1.09	3.97	1.00	1.00	1.00		
Incremental Delay, d2		7.3	0.2			35.0	0.2	57.2	58.4	0.3		
Delay (s)		92.6	24.6			94.8	153.1	115.5	116.8	46.9		
Level of Service		F	C			F	F	F	F	D		
Approach Delay (s/veh)			64.2			98.6			90.7			0.0
Approach LOS			E			F			F			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	84.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.3
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s/veh)	
Approach LOS	

Intersection Summary

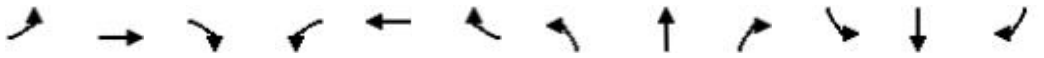
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1149	601	382	1536	0	0	0	0	66	4	162
Future Volume (veh/h)	0	1149	601	382	1536	0	0	0	0	66	4	162
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1841	1870	1870	0				1781	1870	1767
Adj Flow Rate, veh/h	0	1197	626	398	1600	0				47	0	195
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	3	4	2	2	0				8	2	9
Cap, veh/h	0	2365	1046	452	2986	0				135	0	238
Arrive On Green	0.00	0.67	0.67	0.17	1.00	0.00				0.08	0.00	0.08
Sat Flow, veh/h	0	3618	1559	3456	3647	0				1697	0	2994
Grp Volume(v), veh/h	0	1197	626	398	1600	0				47	0	195
Grp Sat Flow(s),veh/h/ln	0	1763	1559	1728	1777	0				1697	0	1497
Q Serve(g_s), s	0.0	27.1	35.4	18.0	0.0	0.0				4.2	0.0	10.3
Cycle Q Clear(g_c), s	0.0	27.1	35.4	18.0	0.0	0.0				4.2	0.0	10.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2365	1046	452	2986	0				135	0	238
V/C Ratio(X)	0.00	0.51	0.60	0.88	0.54	0.00				0.35	0.00	0.82
Avail Cap(c_a), veh/h	0	2365	1046	622	2986	0				406	0	717
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.1	14.5	64.9	0.0	0.0				69.7	0.0	72.5
Incr Delay (d2), s/veh	0.0	0.8	2.5	1.1	0.1	0.0				0.7	0.0	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.5	12.6	7.7	0.0	0.0				1.8	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	13.9	17.0	66.0	0.1	0.0				70.4	0.0	75.7
LnGrp LOS		B	B	E	A					E		E
Approach Vol, veh/h		1823			1998						242	
Approach Delay, s/veh		15.0			13.2						74.7	
Approach LOS		B			B						E	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		140.6			27.1	113.4		19.4				
Change Period (Y+Rc), s		6.1			6.2	6.1		6.7				
Max Green Setting (Gmax), s		108.9			28.8	73.9		38.3				
Max Q Clear Time (g_c+I1), s		2.0			20.0	37.4		12.3				
Green Ext Time (p_c), s		51.6			1.0	26.9		0.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	17.7
HCM 7th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



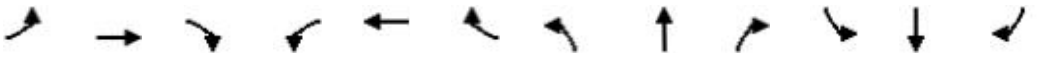
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	2	952	18	23	9	431	1555	14	6	1458	716
Future Volume (veh/h)	188	2	952	18	23	9	431	1555	14	6	1458	716
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1870	1870	1870	1870	1870	1870	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	192	2	971	18	23	9	440	1587	14	6	1488	731
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	2	2	2	2	2	2	3	2	2	2	2
Cap, veh/h	240	239	760	91	213	78	500	3486	1091	13	2806	871
Arrive On Green	0.07	0.13	0.13	0.03	0.08	0.08	0.14	0.69	0.69	0.01	0.55	0.55
Sat Flow, veh/h	3401	1870	2790	3456	2542	936	3456	5066	1585	1781	5106	1585
Grp Volume(v), veh/h	192	2	971	18	16	16	440	1587	14	6	1488	731
Grp Sat Flow(s),veh/h/ln	1700	1870	1395	1728	1777	1702	1728	1689	1585	1781	1702	1585
Q Serve(g_s), s	10.0	0.2	23.0	0.9	1.5	1.6	22.5	25.6	0.5	0.6	33.3	69.4
Cycle Q Clear(g_c), s	10.0	0.2	23.0	0.9	1.5	1.6	22.5	25.6	0.5	0.6	33.3	69.4
Prop In Lane	1.00		1.00	1.00		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	240	239	760	91	149	142	500	3486	1091	13	2806	871
V/C Ratio(X)	0.80	0.01	1.28	0.20	0.11	0.11	0.88	0.46	0.01	0.47	0.53	0.84
Avail Cap(c_a), veh/h	435	239	760	154	149	142	637	3486	1091	83	2806	871
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	1.00	0.37	0.37	0.37	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.4	68.5	65.5	85.8	76.2	76.3	75.5	12.8	8.8	89.0	25.8	33.9
Incr Delay (d2), s/veh	8.5	0.0	135.0	1.5	0.4	0.5	5.1	0.2	0.0	33.4	0.7	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(50%),veh/ln	4.7	0.1	31.9	0.4	0.7	0.7	10.2	9.3	0.2	0.4	13.5	29.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	90.9	68.6	200.5	87.3	76.7	76.8	80.6	12.9	8.8	122.4	26.5	43.4
LnGrp LOS	F	E	F	F	E	E	F	B	A	F	C	D
Approach Vol, veh/h		1165			50			2041			2225	
Approach Delay, s/veh		182.2			80.5			27.5			32.3	
Approach LOS		F			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.8	105.4	19.7	22.1	7.9	130.4	11.7	30.0
Change Period (Y+Rc), s	6.8	6.5	7.0	7.0	6.6	6.5	7.0	7.0
Max Green Setting (Gmax), s	33.2	88.5	23.0	8.0	8.4	113.5	8.0	23.0
Max Q Clear Time (g_c+I1), s	24.5	71.4	12.0	3.6	2.6	27.6	2.9	25.0
Green Ext Time (p_c), s	1.6	15.5	0.7	0.0	0.0	41.3	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	62.8
HCM 7th LOS	E

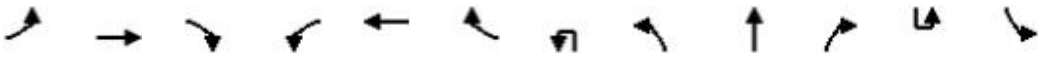
Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	731	0	855	0	0	0	0	1261	689	448	1984	0
Future Volume (vph)	731	0	855	0	0	0	0	1261	689	448	1984	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5		6.5					6.8	6.8	6.3	6.8	
Lane Util. Factor	0.97		0.88					0.91	1.00	1.00	0.91	
Frt	1.00		0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95		1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433		2787					5085	1583	1752	5085	
Flt Permitted	0.95		1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433		2787					5085	1583	1752	5085	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	754	0	881	0	0	0	0	1300	710	462	2045	0
RTOR Reduction (vph)	0	0	74	0	0	0	0	0	315	0	0	0
Lane Group Flow (vph)	754	0	807	0	0	0	0	1300	395	462	2045	0
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	0%	2%	2%	3%	2%	0%
Turn Type	Prot		Perm					NA	Perm	Prot	NA	
Protected Phases	4							6		5 11	2	
Permitted Phases			4						6			
Actuated Green, G (s)	49.5		49.5					50.4	50.4	54.2	117.2	
Effective Green, g (s)	49.5		49.5					50.4	50.4	54.2	117.2	
Actuated g/C Ratio	0.28		0.28					0.28	0.28	0.30	0.65	
Clearance Time (s)	6.5		6.5					6.8	6.8		6.8	
Vehicle Extension (s)	4.0		4.0					5.1	5.1		5.1	
Lane Grp Cap (vph)	944		766					1423	443	527	3310	
v/s Ratio Prot	0.22							c0.26		c0.26	0.40	
v/s Ratio Perm			c0.29						0.25			
v/c Ratio	0.80		1.05					0.91	0.89	0.88	0.62	
Uniform Delay, d1	60.6		65.3					62.7	62.2	59.7	18.3	
Progression Factor	1.00		1.00					0.70	0.60	1.17	0.59	
Incremental Delay, d2	5.1		47.5					9.1	19.8	11.5	0.6	
Delay (s)	65.7		112.8					53.0	57.4	81.5	11.4	
Level of Service	E		F					D	E	F	B	
Approach Delay (s/veh)		91.1			0.0			54.6			24.4	
Approach LOS		F			A			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	52.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



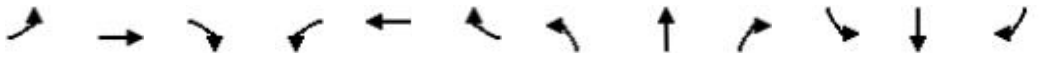
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	483	102	111	50	100	144	10	159	939	22	32	298
Future Volume (vph)	483	102	111	50	100	144	10	159	939	22	32	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		8.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00		1.00	0.91	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00		1.00	1.00	0.98		1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.92		1.00	1.00	0.85		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	3433	1703		1770	1863	1583		1770	5036	1548		1770
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.09	1.00	1.00		0.18
Satd. Flow (perm)	3433	1703		1770	1863	1583		173	5036	1548		335
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	493	104	113	51	102	147	10	162	958	22	33	304
RTOR Reduction (vph)	0	21	0	0	0	134	0	0	0	14	0	0
Lane Group Flow (vph)	493	196	0	51	102	13	0	172	958	8	0	337
Confl. Peds. (#/hr)			3	3						1		1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	3	8		7	4		5	5	2		1 9	1 9
Permitted Phases						4	2	2		2	6	6
Actuated Green, G (s)	24.0	32.4		6.6	15.7	15.7		71.3	62.7	62.7		118.7
Effective Green, g (s)	24.0	32.4		6.6	15.7	15.7		71.3	62.7	62.7		118.7
Actuated g/C Ratio	0.13	0.18		0.04	0.09	0.09		0.40	0.35	0.35		0.66
Clearance Time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		3.0	5.0	5.0		
Lane Grp Cap (vph)	457	306		64	162	138		144	1754	539		539
v/s Ratio Prot	c0.14	c0.11		0.03	0.05			c0.06	0.19			0.14
v/s Ratio Perm						0.01		c0.41		0.00		0.27
v/c Ratio	1.08	0.64		0.80	0.63	0.09		1.19	0.55	0.01		0.63
Uniform Delay, d1	78.0	68.4		86.0	79.3	75.6		41.8	47.2	38.4		19.6
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.81	0.78	1.00		1.10
Incremental Delay, d2	64.9	4.9		50.3	8.4	0.4		132.7	1.1	0.0		1.5
Delay (s)	142.9	73.3		136.3	87.8	76.0		208.5	37.9	38.5		23.0
Level of Service	F	E		F	F	E		F	D	D		C
Approach Delay (s/veh)		121.6			90.2				63.4			
Approach LOS		F			F				E			

Intersection Summary			
HCM 2000 Control Delay (s/veh)	49.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	38.3
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1619	792
Future Volume (vph)	1619	792
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	7.1
Lane Util. Factor	0.91	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	5085	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	5085	1583
Peak-hour factor, PHF	0.98	0.98
Adj. Flow (vph)	1652	808
RTOR Reduction (vph)	0	239
Lane Group Flow (vph)	1652	569
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	102.4	102.4
Effective Green, g (s)	102.4	102.4
Actuated g/C Ratio	0.57	0.57
Clearance Time (s)	7.1	7.1
Vehicle Extension (s)	5.0	5.0
Lane Grp Cap (vph)	2892	900
v/s Ratio Prot	0.32	
v/s Ratio Perm		c0.36
v/c Ratio	0.57	0.63
Uniform Delay, d1	24.8	26.1
Progression Factor	0.76	0.70
Incremental Delay, d2	0.5	2.2
Delay (s)	19.4	20.4
Level of Service	B	C
Approach Delay (s/veh)	20.1	
Approach LOS	C	

Intersection Summary



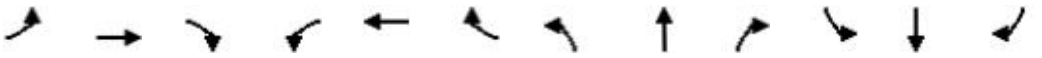
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	319	404	227	104	704	49	333	757	11	176	931	703
Future Volume (veh/h)	319	404	227	104	704	49	333	757	11	176	931	703
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870	1870	1870
Adj Flow Rate, veh/h	339	430	241	111	749	52	354	805	12	187	990	748
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	4	2	2	2	2
Cap, veh/h	386	859	511	152	877	375	282	2410	36	225	1626	902
Arrive On Green	0.04	0.08	0.08	0.04	0.17	0.17	0.08	0.47	0.47	0.13	0.92	0.92
Sat Flow, veh/h	3456	3554	1581	3456	5106	1580	3456	5101	76	3456	3554	1585
Grp Volume(v), veh/h	339	430	241	111	749	52	354	528	289	187	990	748
Grp Sat Flow(s),veh/h/ln	1728	1777	1581	1728	1702	1580	1728	1675	1827	1728	1777	1585
Q Serve(g_s), s	17.6	20.9	23.7	5.7	25.6	4.7	14.7	17.8	17.8	9.5	9.6	82.4
Cycle Q Clear(g_c), s	17.6	20.9	23.7	5.7	25.6	4.7	14.7	17.8	17.8	9.5	9.6	82.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	386	859	511	152	877	375	282	1583	863	225	1626	902
V/C Ratio(X)	0.88	0.50	0.47	0.73	0.85	0.14	1.25	0.33	0.33	0.83	0.61	0.83
Avail Cap(c_a), veh/h	434	859	511	307	950	397	282	1583	863	276	1626	902
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	85.5	72.4	59.8	85.0	72.3	54.2	82.6	29.7	29.7	77.3	4.5	5.9
Incr Delay (d2), s/veh	16.4	0.6	0.9	9.1	7.6	0.2	140.1	0.6	1.0	14.6	1.4	7.1
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	9.1	10.2	10.3	2.7	11.7	1.9	12.0	7.3	8.1	4.4	2.2	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	101.9	73.0	60.6	94.1	79.9	54.4	222.8	30.3	30.8	91.9	5.9	13.0
LnGrp LOS	F	E	E	F	E	D	F	C	C	F	A	B
Approach Vol, veh/h		1010			912			1171			1925	
Approach Delay, s/veh		79.8			80.2			88.6			17.0	
Approach LOS		E			F			F			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.3	92.8	28.5	38.4	23.0	90.1	15.9	51.0
Change Period (Y+Rc), s	8.6	7.7	8.4	7.5	8.3	7.7	8.0	7.5
Max Green Setting (Gmax), s	14.4	77.3	22.6	33.5	14.7	77.3	16.0	40.5
Max Q Clear Time (g_c+I1), s	11.5	19.8	19.6	27.6	16.7	84.4	7.7	25.7
Green Ext Time (p_c), s	0.2	12.7	0.5	3.0	0.0	0.0	0.3	4.4

Intersection Summary	
HCM 7th Control Delay, s/veh	57.8
HCM 7th LOS	E

Notes

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



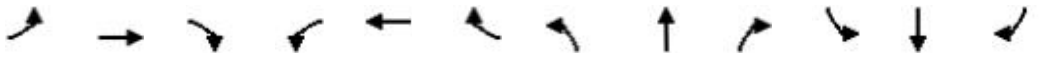
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	523	63	105	1073	450	93	9	126	186	10	82
Future Volume (veh/h)	284	523	63	105	1073	450	93	9	126	186	10	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	316	581	70	117	1192	500	103	10	140	207	11	91
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	2697	321	136	1955	817	261	186	158	345	25	205
Arrive On Green	0.04	0.19	0.19	0.08	0.55	0.55	0.06	0.10	0.10	0.11	0.14	0.14
Sat Flow, veh/h	1781	4624	550	1781	3529	1475	1781	1870	1585	1781	174	1438
Grp Volume(v), veh/h	316	426	225	117	1150	542	103	10	140	207	0	102
Grp Sat Flow(s),veh/h/ln	1781	1702	1770	1781	1702	1600	1781	1870	1585	1781	0	1612
Q Serve(g_s), s	19.1	19.0	19.3	11.7	40.9	41.2	9.3	0.9	15.7	18.6	0.0	10.4
Cycle Q Clear(g_c), s	19.1	19.0	19.3	11.7	40.9	41.2	9.3	0.9	15.7	18.6	0.0	10.4
Prop In Lane	1.00		0.31	1.00		0.92	1.00		1.00	1.00		0.89
Lane Grp Cap(c), veh/h	189	1986	1033	136	1886	886	261	186	158	345	0	229
V/C Ratio(X)	1.67	0.21	0.22	0.86	0.61	0.61	0.40	0.05	0.89	0.60	0.00	0.44
Avail Cap(c_a), veh/h	189	1986	1033	188	1886	886	337	293	248	345	0	252
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	0.39	0.39	0.39	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	86.8	37.9	38.1	82.2	27.0	27.1	67.1	73.4	80.1	62.6	0.0	70.7
Incr Delay (d2), s/veh	323.8	0.2	0.5	8.7	0.6	1.2	0.4	0.0	14.1	2.0	0.0	0.5
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	26.2	8.8	9.4	5.7	16.8	16.0	4.3	0.4	7.1	8.7	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	410.6	38.2	38.5	90.9	27.6	28.3	67.5	73.4	94.2	64.7	0.0	71.2
LnGrp LOS	F	D	D	F	C	C	E	E	F	E		E
Approach Vol, veh/h		967			1809			253			309	
Approach Delay, s/veh		160.0			31.9			82.5			66.8	
Approach LOS		F			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	105.3	17.3	32.4	19.7	110.6	25.0	24.7
Change Period (Y+Rc), s	5.9	5.6	6.0	6.8	6.0	5.6	6.0	6.8
Max Green Setting (Gmax), s	19.1	89.4	19.0	28.2	19.0	89.4	19.0	28.2
Max Q Clear Time (g_c+I1), s	21.1	43.2	11.3	12.4	13.7	21.3	20.6	17.7
Green Ext Time (p_c), s	0.0	32.7	0.1	0.3	0.1	10.0	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	76.1
HCM 7th LOS	E

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	809	65	51	929	221	88	2	30	53	8	157
Future Volume (veh/h)	218	809	65	51	929	221	88	2	30	53	8	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	237	879	71	55	1010	240	96	2	33	58	9	171
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	189	3078	248	70	2360	560	160	13	219	279	10	191
Arrive On Green	0.21	1.00	1.00	0.01	0.19	0.19	0.06	0.15	0.15	0.04	0.13	0.13
Sat Flow, veh/h	1781	4817	388	1781	4121	978	1781	91	1508	1781	80	1517
Grp Volume(v), veh/h	237	620	330	55	834	416	96	0	35	58	0	180
Grp Sat Flow(s),veh/h/ln	1781	1702	1801	1781	1702	1694	1781	0	1599	1781	0	1597
Q Serve(g_s), s	19.1	0.0	0.0	5.5	38.9	39.0	8.4	0.0	3.4	5.1	0.0	20.0
Cycle Q Clear(g_c), s	19.1	0.0	0.0	5.5	38.9	39.0	8.4	0.0	3.4	5.1	0.0	20.0
Prop In Lane	1.00		0.22	1.00		0.58	1.00		0.94	1.00		0.95
Lane Grp Cap(c), veh/h	189	2175	1150	70	1950	971	160	0	233	279	0	201
V/C Ratio(X)	1.25	0.29	0.29	0.78	0.43	0.43	0.60	0.00	0.15	0.21	0.00	0.90
Avail Cap(c_a), veh/h	189	2175	1150	188	1950	971	243	0	340	397	0	340
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.68	0.68	0.68	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.9	0.0	0.0	88.1	47.0	47.0	64.7	0.0	67.2	65.2	0.0	77.5
Incr Delay (d2), s/veh	150.0	0.3	0.6	4.8	0.5	0.9	1.3	0.0	0.1	0.1	0.0	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	15.8	0.1	0.2	2.7	18.1	18.1	3.9	0.0	1.4	2.4	0.0	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	220.9	0.3	0.6	92.9	47.4	47.9	66.0	0.0	67.3	65.3	0.0	86.3
LnGrp LOS	F	A	A	F	D	D	E		E	E		F
Approach Vol, veh/h		1187			1305			131			238	
Approach Delay, s/veh		44.5			49.5			66.3			81.1	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	109.0	16.7	29.3	13.1	120.9	13.1	32.9
Change Period (Y+Rc), s	5.9	5.9	6.3	6.7	6.0	5.9	6.4	6.7
Max Green Setting (Gmax), s	19.1	79.1	18.7	38.3	19.0	79.1	18.6	38.3
Max Q Clear Time (g_c+I1), s	21.1	41.0	10.4	22.0	7.5	2.0	7.1	5.4
Green Ext Time (p_c), s	0.0	20.4	0.1	0.7	0.0	17.1	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	50.8
HCM 7th LOS	D

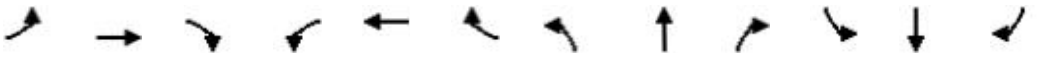
Intersection	
Int Delay, s/veh	3.2

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	3	71	1095	0	4	0	1155	38	0	0	0	27	0	136
Future Vol, veh/h	3	71	1095	0	4	0	1155	38	0	0	0	27	0	136
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	-	Free	-	-	-	None	-	-	Stop	-	-	None
Storage Length	-	250	-	-	-	-	-	-	-	-	0	0	-	0
Veh in Median Storage, #	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	0	2	0	2	2	0	0	0	2	0	2
Mvmt Flow	3	76	1165	0	4	0	1229	40	0	0	0	29	0	145

Major/Minor	Major1				Major2				Minor1			Minor2		
Conflicting Flow All	926	1269	0	-	850	-	-	0	-	-	582	1881	-	635
Stage 1	-	-	-	-	-	-	-	-	-	-	-	1257	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	623	-	-
Critical Hdwy	5.64	5.34	-	-	5.64	-	-	-	-	-	7.1	6.44	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	7.34	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	6.74	-	-
Follow-up Hdwy	2.32	3.12	-	-	2.32	-	-	-	-	-	3.9	3.82	-	3.92
Pot Cap-1 Maneuver	483	290	-	0	532	0	-	-	0	0	395	75	0	361
Stage 1	-	-	-	0	-	0	-	-	0	0	-	131	0	-
Stage 2	-	-	-	0	-	0	-	-	0	0	-	401	0	-
Platoon blocked, %			-				-	-						
Mov Cap-1 Maneuver	290	290	-	-	532	-	-	-	-	-	395	54	-	361
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	54	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	130	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	292	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.39	0.04	0	39.44
HCM LOS			A	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	290	-	-	-	-	54	361
HCM Lane V/C Ratio	-	0.272	-	-	-	-	0.53	0.4
HCM Ctrl Dly (s/v)	0	22	-	-	-	-	130	21.5
HCM Lane LOS	A	C	-	-	-	-	F	C
HCM 95th %tile Q(veh)	-	1.1	-	-	-	-	2.1	1.9



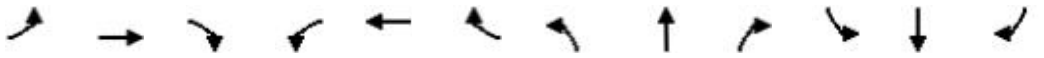
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	596	881	0	1	940	345	0	0	1	287	1	323
Future Volume (veh/h)	596	881	0	1	940	345	0	0	1	287	1	323
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1870	1900	1870	1870	1856	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	641	947	0	1	1011	371	0	0	0	310	0	347
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	2	0	2	2	3	0	0	2	2	2	2
Cap, veh/h	514	3887	0	418	2327	854	1	1	0	471	0	210
Arrive On Green	0.14	0.76	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.13	0.00	0.13
Sat Flow, veh/h	1725	5274	0	1781	3681	1350	1810	1900	0	3563	0	1585
Grp Volume(v), veh/h	641	947	0	1	935	447	0	0	0	310	0	347
Grp Sat Flow(s),veh/h/ln	1725	1702	0	1781	1702	1627	1810	1900	0	1781	0	1585
Q Serve(g_s), s	24.4	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.9	0.0	23.8
Cycle Q Clear(g_c), s	24.4	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.9	0.0	23.8
Prop In Lane	1.00		0.00	1.00		0.83	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	514	3887	0	418	2152	1029	1	1	0	471	0	210
V/C Ratio(X)	1.25	0.24	0.00	0.00	0.43	0.43	0.00	0.00	0.00	0.66	0.00	1.66
Avail Cap(c_a), veh/h	514	3887	0	648	2152	1029	235	247	0	471	0	210
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.48	0.48	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.83	0.00	0.83
Uniform Delay (d), s/veh	22.9	6.3	0.0	12.0	0.0	0.0	0.0	0.0	0.0	74.2	0.0	78.1
Incr Delay (d2), s/veh	119.4	0.1	0.0	0.0	0.6	1.3	0.0	0.0	0.0	2.8	0.0	312.1
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	28.3	3.4	0.0	0.0	0.2	0.4	0.0	0.0	0.0	7.0	0.0	28.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	142.3	6.4	0.0	12.0	0.6	1.3	0.0	0.0	0.0	77.1	0.0	390.2
LnGrp LOS	F	A		B	A	A				E		F
Approach Vol, veh/h		1588			1383			0			657	
Approach Delay, s/veh		61.2			0.9			0.0			242.4	
Approach LOS		E			A						F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	120.0		30.0	6.8	143.2		0.0				
Change Period (Y+Rc), s	5.6	6.2		6.2	6.4	6.2		6.6				
Max Green Setting (Gmax), s	24.4	83.8		23.8	23.6	83.8		23.4				
Max Q Clear Time (g_c+I1), s	26.4	2.0		25.8	2.0	11.8		0.0				
Green Ext Time (p_c), s	0.0	33.3		0.0	0.0	17.7		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	71.0	
HCM 7th LOS	E	

Notes

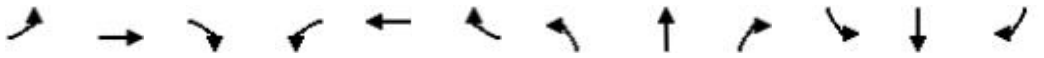
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	10	8	124	13	212	6	538	422	253	466	46
Future Volume (veh/h)	25	10	8	124	13	212	6	538	422	253	466	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	11	9	138	14	236	7	598	469	281	518	51
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	4	2	2	2	2
Cap, veh/h	84	44	36	301	31	292	389	419	329	232	737	73
Arrive On Green	0.05	0.05	0.05	0.19	0.19	0.19	0.07	0.44	0.44	0.07	0.44	0.44
Sat Flow, veh/h	1781	945	773	1624	165	1576	1781	956	750	1781	1675	165
Grp Volume(v), veh/h	28	0	20	152	0	236	7	0	1067	281	0	569
Grp Sat Flow(s),veh/h/ln	1781	0	1718	1789	0	1576	1781	0	1705	1781	0	1840
Q Serve(g_s), s	1.1	0.0	0.8	5.3	0.0	10.1	0.1	0.0	30.8	5.1	0.0	17.6
Cycle Q Clear(g_c), s	1.1	0.0	0.8	5.3	0.0	10.1	0.1	0.0	30.8	5.1	0.0	17.6
Prop In Lane	1.00		0.45	0.91		1.00	1.00		0.44	1.00		0.09
Lane Grp Cap(c), veh/h	84	0	81	332	0	292	389	0	748	232	0	810
V/C Ratio(X)	0.33	0.00	0.25	0.46	0.00	0.81	0.02	0.00	1.43	1.21	0.00	0.70
Avail Cap(c_a), veh/h	457	0	441	461	0	406	389	0	748	232	0	810
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.4	0.0	32.3	25.5	0.0	27.4	10.7	0.0	19.7	16.5	0.0	15.9
Incr Delay (d2), s/veh	2.3	0.0	1.6	1.0	0.0	8.1	0.0	0.0	199.6	128.2	0.0	2.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.4	2.2	0.0	4.3	0.0	0.0	51.9	10.0	0.0	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.7	0.0	33.8	26.4	0.0	35.5	10.7	0.0	219.3	144.7	0.0	18.7
LnGrp LOS	C		C	C		D	B		F	F		B
Approach Vol, veh/h		48			388			1074			850	
Approach Delay, s/veh		34.4			32.0			217.9			60.3	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	35.3		7.8	9.5	35.4		17.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.1	30.8		18.0	5.0	30.9		18.1				
Max Q Clear Time (g_c+I1), s	7.1	32.8		3.1	2.1	19.6		12.1				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	2.8		0.9				

Intersection Summary												
HCM 7th Control Delay, s/veh			126.9									
HCM 7th LOS			F									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	561	407	325	557	4	386	18	316	8	20	22
Future Volume (veh/h)	12	561	407	325	557	4	386	18	316	8	20	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1781	1693	1870	1870
Adj Flow Rate, veh/h	13	597	433	346	593	4	411	19	336	9	21	23
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	8	14	2	2
Cap, veh/h	388	1074	479	429	1459	650	564	492	397	242	208	177
Arrive On Green	0.02	0.30	0.30	0.12	0.41	0.41	0.16	0.26	0.26	0.01	0.11	0.11
Sat Flow, veh/h	1781	3554	1583	1781	3554	1583	3456	1870	1510	1612	1870	1585
Grp Volume(v), veh/h	13	597	433	346	593	4	411	19	336	9	21	23
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1777	1583	1728	1870	1510	1612	1870	1585
Q Serve(g_s), s	0.3	8.5	15.8	7.5	7.1	0.1	6.8	0.5	12.7	0.3	0.6	0.8
Cycle Q Clear(g_c), s	0.3	8.5	15.8	7.5	7.1	0.1	6.8	0.5	12.7	0.3	0.6	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	388	1074	479	429	1459	650	564	492	397	242	208	177
V/C Ratio(X)	0.03	0.56	0.90	0.81	0.41	0.01	0.73	0.04	0.85	0.04	0.10	0.13
Avail Cap(c_a), veh/h	507	1091	486	429	1459	650	1032	962	776	357	559	473
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	17.6	20.2	13.5	12.6	10.5	24.0	16.5	21.1	23.3	24.1	24.1
Incr Delay (d2), s/veh	0.0	0.6	20.1	10.8	0.2	0.0	1.8	0.0	5.0	0.1	0.2	0.3
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	0.1	3.1	7.8	3.7	2.4	0.0	2.7	0.2	4.5	0.1	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.1	18.2	40.3	24.3	12.8	10.5	25.8	16.6	26.1	23.4	24.3	24.5
LnGrp LOS	B	B	D	C	B	B	C	B	C	C	C	C
Approach Vol, veh/h		1043			943			766			53	
Approach Delay, s/veh		27.4			17.0			25.7			24.2	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	29.2	14.3	11.2	12.0	22.7	5.2	20.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	21.0	18.0	18.0	7.5	18.5	5.0	31.0
Max Q Clear Time (g_c+I1), s	2.3	9.1	8.8	2.8	9.5	17.8	2.3	14.7
Green Ext Time (p_c), s	0.0	2.9	1.0	0.1	0.0	0.4	0.0	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	23.3
HCM 7th LOS	C



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	341	519	211	1007	811	405
Future Volume (veh/h)	341	519	211	1007	811	405
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1870	1870
Adj Flow Rate, veh/h	352	535	218	1038	836	418
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	2	2
Cap, veh/h	852	527	281	2222	902	765
Arrive On Green	0.25	0.25	0.09	0.63	0.48	0.48
Sat Flow, veh/h	3456	1585	1781	3618	1870	1585
Grp Volume(v), veh/h	352	535	218	1038	836	418
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1763	1870	1585
Q Serve(g_s), s	6.2	18.0	4.1	11.3	30.6	13.5
Cycle Q Clear(g_c), s	6.2	18.0	4.1	11.3	30.6	13.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	852	527	281	2222	902	765
V/C Ratio(X)	0.41	1.01	0.78	0.47	0.93	0.55
Avail Cap(c_a), veh/h	852	527	407	2558	947	803
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	23.1	24.4	16.0	7.1	17.7	13.3
Incr Delay (d2), s/veh	0.3	42.8	5.7	0.2	14.3	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	6.3	1.9	2.9	14.1	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	23.4	67.2	21.7	7.2	32.0	14.0
LnGrp LOS	C	F	C	A	C	B
Approach Vol, veh/h	887			1256	1254	
Approach Delay, s/veh	49.8			9.7	26.0	
Approach LOS	D			A	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		50.5		22.5	10.8	39.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		53.0		18.0	11.5	37.0
Max Q Clear Time (g_c+I1), s		13.3		20.0	6.1	32.6
Green Ext Time (p_c), s		8.3		0.0	0.3	2.7

Intersection Summary	
HCM 7th Control Delay, s/veh	26.2
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	1226	680	42	9	14	489	243	24	8	0	1	320
Future Volume (vph)	1226	680	42	9	14	489	243	24	8	0	1	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.4	6.7	6.7		7.4	6.7	6.7	7.9	7.9			7.5
Lane Util. Factor	0.94	0.95	1.00		1.00	0.95	1.00	1.00	0.95			0.95
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00			1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00			0.95
Satd. Flow (prot)	4942	3539	1583		1770	3539	1583	1770	3539			1681
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00			0.95
Satd. Flow (perm)	4942	3539	1583		1770	3539	1583	1770	3539			1681
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1264	701	43	9	14	504	251	25	8	0	1	330
RTOR Reduction (vph)	0	0	17	0	0	0	165	0	0	0	0	0
Lane Group Flow (vph)	1264	701	26	0	23	504	86	25	8	0	0	176
Confl. Peds. (#/hr)										2		2
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	2%	2%	2%	0%	2%	2%
Turn Type	Prot	NA	Perm	Prot	Prot	NA	Perm	Split	NA		Split	Split
Protected Phases	1 9	6		5	5	2		4	4		8	8
Permitted Phases			6				2					
Actuated Green, G (s)	47.4	98.6	98.6		4.4	48.2	48.2	6.5	6.5			21.0
Effective Green, g (s)	47.4	98.6	98.6		4.4	48.2	48.2	6.5	6.5			21.0
Actuated g/C Ratio	0.30	0.62	0.62		0.03	0.30	0.30	0.04	0.04			0.13
Clearance Time (s)		6.7	6.7		7.4	6.7	6.7	7.9	7.9			7.5
Vehicle Extension (s)		5.0	5.0		2.1	5.0	5.0	5.1	5.1			2.1
Lane Grp Cap (vph)	1464	2180	975		48	1066	476	71	143			220
v/s Ratio Prot	c0.26	0.20			0.01	c0.14		c0.01	0.00			0.10
v/s Ratio Perm			0.02				0.05					
v/c Ratio	0.86	0.32	0.03		0.48	0.47	0.18	0.35	0.06			0.80
Uniform Delay, d1	53.2	14.7	12.0		76.7	45.5	41.3	74.7	73.8			67.5
Progression Factor	0.93	1.19	1.00		1.00	1.00	1.00	1.00	1.00			1.00
Incremental Delay, d2	3.8	0.2	0.0		3.3	1.5	0.8	6.4	0.4			17.6
Delay (s)	53.3	17.7	12.0		79.9	47.1	42.1	81.1	74.2			85.1
Level of Service	D	B	B		E	D	D	F	E			F
Approach Delay (s/veh)		40.0				46.4			79.4			
Approach LOS		D				D			E			

Intersection Summary			
HCM 2000 Control Delay (s/veh)	44.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	36.9
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	23	818
Future Volume (vph)	23	818
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.5	7.4
Lane Util. Factor	0.95	0.88
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	0.96	1.00
Satd. Flow (prot)	1696	2787
Flt Permitted	0.96	1.00
Satd. Flow (perm)	1696	2787
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	24	843
RTOR Reduction (vph)	0	259
Lane Group Flow (vph)	179	584
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	pm+ov
Protected Phases	8	1 9
Permitted Phases		8
Actuated Green, G (s)	21.0	68.4
Effective Green, g (s)	21.0	68.4
Actuated g/C Ratio	0.13	0.43
Clearance Time (s)	7.5	
Vehicle Extension (s)	2.1	
Lane Grp Cap (vph)	222	1191
v/s Ratio Prot	c0.11	0.15
v/s Ratio Perm		0.06
v/c Ratio	0.81	0.49
Uniform Delay, d1	67.5	33.2
Progression Factor	1.00	1.00
Incremental Delay, d2	18.0	0.7
Delay (s)	85.5	33.8
Level of Service	F	C
Approach Delay (s/veh)	49.1	
Approach LOS	D	

Intersection Summary



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	690	1189	0	0	1047	216	602	3	841	0	0
Future Volume (vph)	10	690	1189	0	0	1047	216	602	3	841	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6	6.4			6.4	6.4	6.7	6.7	6.7		
Lane Util. Factor		0.97	0.95			0.95	1.00	0.95	0.95	0.88		
Frpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	0.98		
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Frt		1.00	1.00			1.00	0.85	1.00	1.00	0.85		
Flt Protected		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (prot)		3429	3539			3539	1583	1681	1686	2724		
Flt Permitted		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (perm)		3429	3539			3539	1583	1681	1686	2724		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	742	1278	0	0	1126	232	647	3	904	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	94	0	0	101	0	0
Lane Group Flow (vph)	0	753	1278	0	0	1126	138	323	327	803	0	0
Confl. Peds. (#/hr)				2	2					1	1	
Heavy Vehicles (%)	11%	2%	2%	0%	0%	2%	2%	2%	2%	2%	0%	0%
Turn Type	Prot	Prot	NA			NA	Perm	Split	NA	Perm		
Protected Phases	1 9	1 9	6			2		4	4			
Permitted Phases							2			4		
Actuated Green, G (s)		39.0	103.6			51.4	51.4	43.3	43.3	43.3		
Effective Green, g (s)		39.0	103.6			51.4	51.4	43.3	43.3	43.3		
Actuated g/C Ratio		0.24	0.65			0.32	0.32	0.27	0.27	0.27		
Clearance Time (s)			6.4			6.4	6.4	6.7	6.7	6.7		
Vehicle Extension (s)			3.0			3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		835	2291			1136	508	454	456	737		
v/s Ratio Prot		c0.22	0.36			c0.32		0.19	0.19			
v/s Ratio Perm							0.09			c0.29		
v/c Ratio		0.90	0.56			0.99	0.27	0.71	0.72	1.09		
Uniform Delay, d1		58.6	15.6			54.1	40.4	52.7	52.8	58.4		
Progression Factor		1.04	2.11			0.77	0.61	1.00	1.00	1.00		
Incremental Delay, d2		6.2	0.4			23.1	1.2	5.2	5.3	60.4		
Delay (s)		67.2	33.2			64.9	25.6	57.9	58.1	118.7		
Level of Service		E	C			E	C	E	E	F		
Approach Delay (s/veh)			45.8			58.2			93.3			0.0
Approach LOS			D			E			F			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	64.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.3
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s/veh)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	0	1578	706	7	418	1227	0	0	0	0	301	0
Future Volume (veh/h)	0	1578	706	7	418	1227	0	0	0	0	301	0
Initial Q (Qb), veh	0	0	0		0	0	0				0	0
Lane Width Adj.	1.00	1.00	1.00		1.00	1.00	1.00				1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No				No						No
Adj Sat Flow, veh/h/ln	0	1870	1870		1870	1870	0				1870	1900
Adj Flow Rate, veh/h	0	1661	526		440	1292	0				211	0
Peak Hour Factor	0.95	0.95	0.95		0.95	0.95	0.95				0.95	0.95
Percent Heavy Veh, %	0	2	2		2	2	0				2	0
Cap, veh/h	0	1686	750		471	2308	0				482	0
Arrive On Green	0.00	0.47	0.47		0.14	0.65	0.00				0.27	0.00
Sat Flow, veh/h	0	3647	1580		3456	3647	0				1781	0
Grp Volume(v), veh/h	0	1661	526		440	1292	0				211	0
Grp Sat Flow(s),veh/h/ln	0	1777	1580		1728	1777	0				1781	0
Q Serve(g_s), s	0.0	73.8	42.0		20.2	32.0	0.0				15.7	0.0
Cycle Q Clear(g_c), s	0.0	73.8	42.0		20.2	32.0	0.0				15.7	0.0
Prop In Lane	0.00		1.00		1.00		0.00				1.00	
Lane Grp Cap(c), veh/h	0	1686	750		471	2308	0				482	0
V/C Ratio(X)	0.00	0.99	0.70		0.93	0.56	0.00				0.44	0.00
Avail Cap(c_a), veh/h	0	1686	750		471	2308	0				482	0
HCM Platoon Ratio	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		0.25	0.25	0.00				1.00	0.00
Uniform Delay (d), s/veh	0.0	41.5	33.1		68.4	15.5	0.0				48.3	0.0
Incr Delay (d2), s/veh	0.0	18.7	5.4		9.3	0.2	0.0				0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0				0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	35.6	16.9		9.4	12.5	0.0				6.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	60.2	38.6		77.7	15.7	0.0				48.6	0.0
LnGrp LOS		E	D		E	B					D	
Approach Vol, veh/h		2187				1732						1055
Approach Delay, s/veh		55.0				31.4						77.4
Approach LOS		D				C						E

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		110.0			28.0	82.0		50.0				
Change Period (Y+Rc), s		6.1			6.2	6.1		6.7				
Max Green Setting (Gmax), s		103.9			21.8	75.9		43.3				
Max Q Clear Time (g_c+I1), s		34.0			22.2	75.8		44.3				
Green Ext Time (p_c), s		29.5			0.0	0.1		0.0				

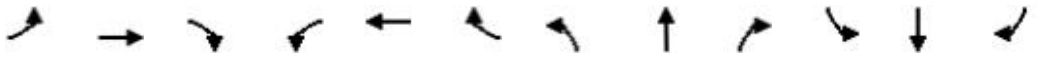
Intersection Summary	
HCM 7th Control Delay, s/veh	51.5
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	751
Future Volume (veh/h)	751
Initial Q (Qb), veh	0
Lane Width Adj.	1.00
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1870
Adj Flow Rate, veh/h	844
Peak Hour Factor	0.95
Percent Heavy Veh, %	2
Cap, veh/h	858
Arrive On Green	0.27
Sat Flow, veh/h	3170
Grp Volume(v), veh/h	844
Grp Sat Flow(s),veh/h/ln	1585
Q Serve(g_s), s	42.3
Cycle Q Clear(g_c), s	42.3
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	858
V/C Ratio(X)	0.98
Avail Cap(c_a), veh/h	858
HCM Platoon Ratio	1.00
Upstream Filter(I)	1.00
Uniform Delay (d), s/veh	58.0
Incr Delay (d2), s/veh	26.6
Initial Q Delay(d3), s/veh	0.0
%ile BackOfQ(50%),veh/ln	19.8
Unsig. Movement Delay, s/veh	
LnGrp Delay(d), s/veh	84.6
LnGrp LOS	F
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	



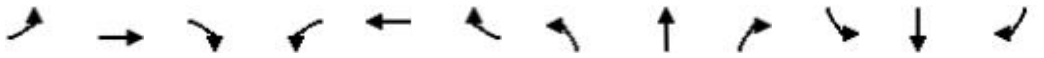
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	353	20	18	1009	3	8	0	6	0	0	0
Future Volume (veh/h)	5	353	20	18	1009	3	8	0	6	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.83		0.99	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1707	1870	1870	1870	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	6	392	22	20	1121	3	9	0	7	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	3	2	13	2	2	2	0	2	0	0	0
Cap, veh/h	13	4129	230	30	4483	12	60	0	39	46	1	1
Arrive On Green	0.00	0.28	0.28	0.04	1.00	1.00	0.01	0.00	0.02	0.00	0.00	0.00
Sat Flow, veh/h	1781	4910	273	1626	5258	14	1781	0	1595	1810	1900	1610
Grp Volume(v), veh/h	6	268	146	20	726	398	9	0	7	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	1689	1806	1626	1702	1868	1781	0	1595	1810	1900	1610
Q Serve(g_s), s	0.5	9.4	9.6	1.9	0.0	0.0	0.8	0.0	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	9.4	9.6	1.9	0.0	0.0	0.8	0.0	0.7	0.0	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	13	2840	1519	30	2902	1593	60	0	39	46	1	1
V/C Ratio(X)	0.46	0.09	0.10	0.67	0.25	0.25	0.15	0.00	0.18	0.00	0.00	0.00
Avail Cap(c_a), veh/h	157	2840	1519	142	2902	1593	198	0	332	199	395	335
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	79.5	12.6	12.7	76.6	0.0	0.0	79.0	0.0	76.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	9.1	0.1	0.1	9.0	0.2	0.4	0.4	0.0	0.8	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(50%),veh/ln	0.3	3.8	4.2	0.9	0.1	0.2	0.4	0.0	0.3	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	88.6	12.7	12.8	85.6	0.2	0.4	79.4	0.0	77.3	0.0	0.0	0.0
LnGrp LOS	F	B	B	F	A	A	E		E			
Approach Vol, veh/h		420			1144			16			0	
Approach Delay, s/veh		13.8			1.8			78.5			0.0	
Approach LOS		B			A			E				

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	142.3	7.6	3.0	8.9	140.4	0.0	10.6
Change Period (Y+Rc), s	5.9	5.9	6.3	6.7	6.0	5.9	6.4	6.7
Max Green Setting (Gmax), s	14.1	74.1	13.7	33.3	14.0	74.1	13.6	33.3
Max Q Clear Time (g_c+I1), s	2.5	2.0	2.8	0.0	3.9	11.6	0.0	2.7
Green Ext Time (p_c), s	0.0	22.0	0.0	0.0	0.0	5.7	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	5.7
HCM 7th LOS	A

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	169	0	0	566	437	0	0	0	242	0	148
Future Volume (veh/h)	243	169	0	0	566	437	0	0	0	242	0	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1900	1900	1856	1870	1900	1900	0	1870	1900	1870
Adj Flow Rate, veh/h	256	178	0	0	596	460	0	0	0	255	0	156
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	3	0	0	3	2	0	0	0	2	0	2
Cap, veh/h	391	4064	0	920	2407	1121	1	1	0	427	0	190
Arrive On Green	0.05	0.80	0.00	0.00	0.24	0.24	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1781	5233	0	1810	3377	1572	1810	1900	0	3554	0	1581
Grp Volume(v), veh/h	256	178	0	0	596	460	0	0	0	255	0	156
Grp Sat Flow(s),veh/h/ln	1781	1689	0	1810	1689	1572	1810	1900	0	1777	0	1581
Q Serve(g_s), s	5.9	1.2	0.0	0.0	22.9	39.6	0.0	0.0	0.0	10.9	0.0	15.4
Cycle Q Clear(g_c), s	5.9	1.2	0.0	0.0	22.9	39.6	0.0	0.0	0.0	10.9	0.0	15.4
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	391	4064	0	920	2407	1121	1	1	0	427	0	190
V/C Ratio(X)	0.66	0.04	0.00	0.00	0.25	0.41	0.00	0.00	0.00	0.60	0.00	0.82
Avail Cap(c_a), veh/h	543	4064	0	1009	2407	1121	441	463	0	826	0	368
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.97	0.00	0.97
Uniform Delay (d), s/veh	14.9	3.2	0.0	0.0	26.3	32.7	0.0	0.0	0.0	66.7	0.0	68.7
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.0	0.2	1.1	0.0	0.0	0.0	1.4	0.0	8.6
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	4.4	0.4	0.0	0.0	10.5	17.1	0.0	0.0	0.0	5.0	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.1	3.3	0.0	0.0	26.6	33.8	0.0	0.0	0.0	68.1	0.0	77.3
LnGrp LOS	B	A			C	C				E		E
Approach Vol, veh/h		434			1056			0			411	
Approach Delay, s/veh		11.4			29.7			0.0			71.6	
Approach LOS		B			C						E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.3	120.3		25.4	0.0	134.6		0.0				
Change Period (Y+Rc), s	5.6	6.2		6.2	6.4	6.2		6.6				
Max Green Setting (Gmax), s	22.4	36.8		37.2	8.0	50.4		39.0				
Max Q Clear Time (g_c+I1), s	7.9	41.6		17.4	0.0	3.2		0.0				
Green Ext Time (p_c), s	0.8	0.0		1.4	0.0	2.3		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	34.6	
HCM 7th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	679	337	0	0	919	45	891	3	362	0	0
Future Volume (vph)	10	679	337	0	0	919	45	891	3	362	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6	6.4			6.4	6.4	6.7	6.7	6.7		
Lane Util. Factor		0.97	0.95			0.95	1.00	0.95	0.95	0.88		
Frpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	0.98		
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Frt		1.00	1.00			1.00	0.85	1.00	1.00	0.85		
Flt Protected		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (prot)		3400	3406			3539	1583	1665	1670	2724		
Flt Permitted		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (perm)		3400	3406			3539	1583	1665	1670	2724		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	722	359	0	0	978	48	948	3	385	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	33	0	0	220	0	0
Lane Group Flow (vph)	0	733	359	0	0	978	15	474	477	165	0	0
Confl. Peds. (#/hr)				1	1					1	1	
Heavy Vehicles (%)	2%	3%	6%	0%	0%	2%	2%	3%	2%	2%	0%	0%
Turn Type	Prot	Prot	NA			NA	Perm	Split	NA	Perm		
Protected Phases	1 9	1 9	6			2		4	4			
Permitted Phases							2			4		
Actuated Green, G (s)		35.5	98.6			49.9	49.9	48.3	48.3	48.3		
Effective Green, g (s)		35.5	98.6			49.9	49.9	48.3	48.3	48.3		
Actuated g/C Ratio		0.22	0.62			0.31	0.31	0.30	0.30	0.30		
Clearance Time (s)			6.4			6.4	6.4	6.7	6.7	6.7		
Vehicle Extension (s)			3.0			3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		754	2098			1103	493	502	504	822		
v/s Ratio Prot		c0.22	0.11			c0.28		0.28	c0.29			
v/s Ratio Perm							0.01			0.06		
v/c Ratio		0.97	0.17			0.89	0.03	0.94	0.95	0.20		
Uniform Delay, d1		61.8	13.2			52.4	38.2	54.5	54.6	41.5		
Progression Factor		0.80	1.92			1.06	1.00	1.00	1.00	1.00		
Incremental Delay, d2		24.6	0.2			10.1	0.1	26.6	26.9	0.1		
Delay (s)		74.0	25.4			65.6	38.4	81.2	81.5	41.6		
Level of Service		E	C			E	D	F	F	D		
Approach Delay (s/veh)			58.0			64.3			69.9			0.0
Approach LOS			E			E			E			A

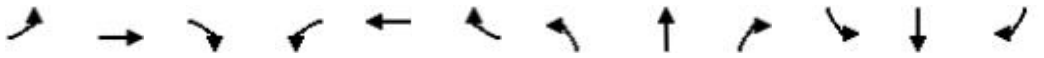
Intersection Summary			
HCM 2000 Control Delay (s/veh)	64.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.3
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s/veh)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	2	614	18	23	9	296	1466	14	6	1280	716
Future Volume (veh/h)	188	2	614	18	23	9	296	1466	14	6	1280	716
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1870	1870	1870	1870	1870	1870	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	192	2	627	18	23	9	302	1496	14	6	1306	731
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	2	2	2	2	2	2	3	2	2	2	2
Cap, veh/h	233	401	882	91	438	161	352	3046	953	13	2582	801
Arrive On Green	0.07	0.21	0.21	0.03	0.17	0.17	0.10	0.60	0.60	0.01	0.51	0.51
Sat Flow, veh/h	3401	1870	2790	3456	2542	936	3456	5066	1585	1781	5106	1585
Grp Volume(v), veh/h	192	2	627	18	16	16	302	1496	14	6	1306	731
Grp Sat Flow(s),veh/h/ln	1700	1870	1395	1728	1777	1702	1728	1689	1585	1781	1702	1585
Q Serve(g_s), s	10.0	0.2	35.7	0.9	1.3	1.4	15.5	30.1	0.6	0.6	30.6	76.2
Cycle Q Clear(g_c), s	10.0	0.2	35.7	0.9	1.3	1.4	15.5	30.1	0.6	0.6	30.6	76.2
Prop In Lane	1.00		1.00	1.00		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	401	882	91	306	293	352	3046	953	13	2582	801
V/C Ratio(X)	0.82	0.00	0.71	0.20	0.05	0.06	0.86	0.49	0.01	0.47	0.51	0.91
Avail Cap(c_a), veh/h	302	416	904	154	316	303	467	3046	953	53	2582	801
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	1.00	0.56	0.56	0.56	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.7	55.6	54.3	85.8	62.2	62.3	79.6	20.3	14.4	89.0	29.6	40.8
Incr Delay (d2), s/veh	14.9	0.0	2.8	1.5	0.1	0.1	7.9	0.3	0.0	33.4	0.7	16.5
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	5.0	0.1	13.1	0.4	0.6	0.6	7.2	11.7	0.2	0.4	12.5	33.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	97.7	55.6	57.1	87.3	62.3	62.4	87.5	20.6	14.4	122.4	30.3	57.3
LnGrp LOS	F	E	E	F	E	E	F	C	B	F	C	E
Approach Vol, veh/h		821			50			1812			2043	
Approach Delay, s/veh		66.6			71.3			31.7			40.2	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.1	97.5	19.4	38.0	7.9	114.7	11.7	45.6
Change Period (Y+Rc), s	6.8	6.5	7.0	7.0	6.6	6.5	7.0	7.0
Max Green Setting (Gmax), s	24.3	80.4	16.0	32.0	5.4	99.5	8.0	40.0
Max Q Clear Time (g_c+I1), s	17.5	78.2	12.0	3.4	2.6	32.1	2.9	37.7
Green Ext Time (p_c), s	0.8	2.1	0.3	0.2	0.0	33.7	0.0	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	41.9
HCM 7th LOS	D

Notes

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

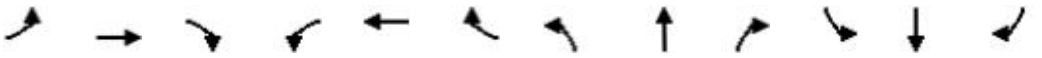
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	231	59	80	50	51	144	10	50	874	22	32	298
Future Volume (vph)	231	59	80	50	51	144	10	50	874	22	32	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		8.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00		1.00	0.91	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00		1.00	1.00	0.98		1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.91		1.00	1.00	0.85		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	3433	1686		1770	1863	1583		1770	5036	1548		1769
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.19	1.00	1.00		0.22
Satd. Flow (perm)	3433	1686		1770	1863	1583		351	5036	1548		407
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	236	60	82	51	52	147	10	51	892	22	33	304
RTOR Reduction (vph)	0	32	0	0	0	136	0	0	0	13	0	0
Lane Group Flow (vph)	236	110	0	51	52	11	0	61	892	9	0	337
Confl. Peds. (#/hr)			3	3						1		1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	3 10	8		7 14	4		5	5	2		1 9	1 9
Permitted Phases						4	2	2		2	6	6
Actuated Green, G (s)	20.7	21.9		11.8	13.7	13.7		79.3	71.1	71.1		119.5
Effective Green, g (s)	20.7	21.9		11.8	13.7	13.7		79.3	71.1	71.1		119.5
Actuated g/C Ratio	0.12	0.12		0.07	0.08	0.08		0.44	0.39	0.39		0.66
Clearance Time (s)		7.5			7.5	7.5		7.7	7.1	7.1		
Vehicle Extension (s)		4.0			4.0	4.0		3.0	5.0	5.0		
Lane Grp Cap (vph)	394	205		116	141	120		219	1989	611		515
v/s Ratio Prot	c0.07	c0.07		0.03	0.03			0.01	0.18			c0.12
v/s Ratio Perm						0.01		0.11		0.01		c0.32
v/c Ratio	0.60	0.54		0.44	0.37	0.09		0.28	0.45	0.01		0.65
Uniform Delay, d1	75.7	74.3		80.9	79.0	77.4		29.2	40.0	33.1		16.8
Progression Factor	1.00	1.00		1.00	1.00	1.00		0.84	0.80	1.00		1.41
Incremental Delay, d2	2.9	3.4		3.6	2.2	0.5		0.7	0.7	0.0		2.7
Delay (s)	78.6	77.7		84.5	81.3	77.8		25.3	32.8	33.2		26.5
Level of Service	E	E		F	F	E		C	C	C		C
Approach Delay (s/veh)		78.3			79.9				32.3			
Approach LOS		E			E				C			

Intersection Summary			
HCM 2000 Control Delay (s/veh)	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	42.8
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1306	107
Future Volume (vph)	1306	107
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	7.1
Lane Util. Factor	0.91	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	5085	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	5085	1583
Peak-hour factor, PHF	0.98	0.98
Adj. Flow (vph)	1333	109
RTOR Reduction (vph)	0	46
Lane Group Flow (vph)	1333	63
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	103.6	103.6
Effective Green, g (s)	103.6	103.6
Actuated g/C Ratio	0.58	0.58
Clearance Time (s)	7.1	7.1
Vehicle Extension (s)	5.0	5.0
Lane Grp Cap (vph)	2926	911
v/s Ratio Prot	c0.26	
v/s Ratio Perm		0.04
v/c Ratio	0.46	0.07
Uniform Delay, d1	22.0	16.9
Progression Factor	0.57	1.00
Incremental Delay, d2	0.5	0.1
Delay (s)	13.0	17.0
Level of Service	B	B
Approach Delay (s/veh)	15.8	
Approach LOS	B	

Intersection Summary



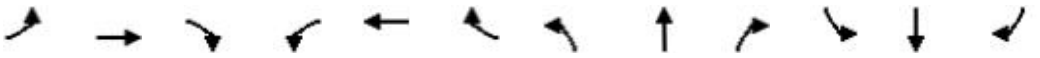
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	359	182	104	574	49	203	648	11	176	900	390
Future Volume (veh/h)	254	359	182	104	574	49	203	648	11	176	900	390
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870	1870	1870
Adj Flow Rate, veh/h	270	382	194	111	611	52	216	689	12	187	957	415
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	4	2	2	2	2
Cap, veh/h	321	720	437	153	776	343	255	2600	45	225	1792	946
Arrive On Green	0.09	0.20	0.20	0.04	0.15	0.15	0.07	0.51	0.51	0.13	1.00	1.00
Sat Flow, veh/h	3456	3554	1580	3456	5106	1579	3456	5086	88	3456	3554	1585
Grp Volume(v), veh/h	270	382	194	111	611	52	216	453	248	187	957	415
Grp Sat Flow(s),veh/h/ln	1728	1777	1580	1728	1702	1579	1728	1675	1825	1728	1777	1585
Q Serve(g_s), s	13.8	17.3	18.2	5.7	20.8	4.8	11.1	13.8	13.8	9.5	0.0	0.0
Cycle Q Clear(g_c), s	13.8	17.3	18.2	5.7	20.8	4.8	11.1	13.8	13.8	9.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	321	720	437	153	776	343	255	1712	933	225	1792	946
V/C Ratio(X)	0.84	0.53	0.44	0.72	0.79	0.15	0.85	0.26	0.27	0.83	0.53	0.44
Avail Cap(c_a), veh/h	472	800	472	346	950	397	282	1712	933	276	1792	946
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	80.3	64.1	53.7	84.9	73.5	57.1	82.4	24.9	24.9	77.3	0.0	0.0
Incr Delay (d2), s/veh	10.2	0.8	1.0	8.9	4.2	0.3	20.4	0.4	0.7	16.0	1.0	1.3
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	6.6	8.0	7.4	2.7	9.3	2.0	5.6	5.6	6.2	4.5	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	90.6	64.9	54.7	93.8	77.7	57.3	102.8	25.3	25.6	93.3	1.0	1.3
LnGrp LOS	F	E	D	F	E	E	F	C	C	F	A	A
Approach Vol, veh/h		846			774			917			1559	
Approach Delay, s/veh		70.8			78.6			43.6			12.2	
Approach LOS		E			E			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.3	99.7	25.1	34.8	21.6	98.5	16.0	44.0
Change Period (Y+Rc), s	8.6	7.7	8.4	7.5	8.3	7.7	8.0	7.5
Max Green Setting (Gmax), s	14.4	75.3	24.6	33.5	14.7	75.3	18.0	40.5
Max Q Clear Time (g_c+I1), s	11.5	15.8	15.8	22.8	13.1	2.0	7.7	20.2
Green Ext Time (p_c), s	0.2	10.4	0.9	3.9	0.2	26.9	0.3	4.3

Intersection Summary	
HCM 7th Control Delay, s/veh	43.9
HCM 7th LOS	D

Notes

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



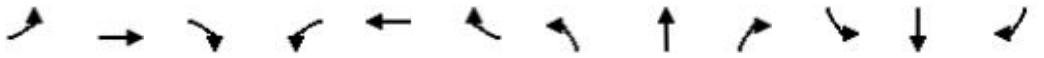
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	490	63	105	864	86	93	9	126	64	10	13
Future Volume (veh/h)	11	490	63	105	864	86	93	9	126	64	10	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	544	70	117	960	96	103	10	140	71	11	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	2939	373	136	3339	333	250	187	158	229	63	80
Arrive On Green	0.02	1.00	1.00	0.08	0.71	0.71	0.06	0.10	0.10	0.05	0.08	0.08
Sat Flow, veh/h	1781	4587	582	1781	4718	471	1781	1870	1585	1781	748	951
Grp Volume(v), veh/h	12	402	212	117	692	364	103	10	140	71	0	25
Grp Sat Flow(s),veh/h/ln	1781	1702	1765	1781	1702	1784	1781	1870	1585	1781	0	1699
Q Serve(g_s), s	1.2	0.0	0.0	11.7	13.4	13.5	9.4	0.9	15.7	6.5	0.0	2.5
Cycle Q Clear(g_c), s	1.2	0.0	0.0	11.7	13.4	13.5	9.4	0.9	15.7	6.5	0.0	2.5
Prop In Lane	1.00		0.33	1.00		0.26	1.00		1.00	1.00		0.56
Lane Grp Cap(c), veh/h	18	2181	1131	136	2409	1263	250	187	158	229	0	143
V/C Ratio(X)	0.67	0.18	0.19	0.86	0.29	0.29	0.41	0.05	0.88	0.31	0.00	0.18
Avail Cap(c_a), veh/h	110	2181	1131	317	2409	1263	276	501	424	352	0	521
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	0.74	0.74	0.74	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	87.9	0.0	0.0	82.2	9.7	9.7	69.5	73.3	80.0	70.7	0.0	76.6
Incr Delay (d2), s/veh	14.9	0.2	0.4	4.4	0.2	0.4	0.4	0.0	6.3	0.3	0.0	0.2
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	0.6	0.1	0.1	5.6	5.1	5.4	4.4	0.4	6.8	3.0	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	102.8	0.2	0.4	86.6	9.9	10.1	69.9	73.4	86.2	71.0	0.0	76.8
LnGrp LOS	F	A	A	F	A	B	E	E	F	E		E
Approach Vol, veh/h		626			1173			253			96	
Approach Delay, s/veh		2.2			17.6			79.1			72.5	
Approach LOS		A			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	133.0	17.4	21.9	19.8	120.9	14.5	24.8
Change Period (Y+Rc), s	5.9	5.6	6.0	6.8	6.0	5.6	6.0	6.8
Max Green Setting (Gmax), s	11.1	75.4	14.0	55.2	32.0	54.4	21.0	48.2
Max Q Clear Time (g_c+I1), s	3.2	15.5	11.4	4.5	13.7	2.0	8.5	17.7
Green Ext Time (p_c), s	0.0	19.3	0.0	0.1	0.1	9.0	0.1	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	22.8
HCM 7th LOS	C

Notes

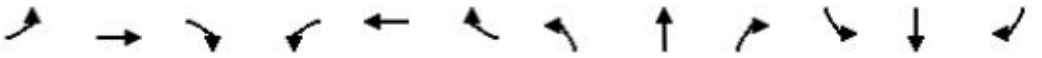
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	536	65	51	845	27	88	2	30	20	8	65
Future Volume (veh/h)	36	536	65	51	845	27	88	2	30	20	8	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	583	71	55	918	29	96	2	33	22	9	71
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	633	3383	407	70	2122	67	181	7	111	106	52	607
Arrive On Green	0.12	0.24	0.24	0.01	0.14	0.14	0.06	0.07	0.07	0.02	0.03	0.03
Sat Flow, veh/h	1781	4619	556	1781	5085	160	1781	91	1508	1781	1870	1585
Grp Volume(v), veh/h	39	428	226	55	614	333	96	0	35	22	9	71
Grp Sat Flow(s),veh/h/ln	1781	1702	1770	1781	1702	1841	1781	0	1599	1781	1870	1585
Q Serve(g_s), s	3.5	17.9	18.2	5.5	29.8	29.8	9.2	0.0	3.7	2.2	0.8	0.8
Cycle Q Clear(g_c), s	3.5	17.9	18.2	5.5	29.8	29.8	9.2	0.0	3.7	2.2	0.8	0.8
Prop In Lane	1.00		0.31	1.00		0.09	1.00		0.94	1.00		1.00
Lane Grp Cap(c), veh/h	633	2493	1297	70	1420	768	181	0	118	106	52	607
V/C Ratio(X)	0.06	0.17	0.17	0.78	0.43	0.43	0.53	0.00	0.30	0.21	0.17	0.12
Avail Cap(c_a), veh/h	633	2493	1297	218	1420	768	255	0	456	173	440	935
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.96	0.96	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	25.1	25.2	88.1	58.1	58.1	76.9	0.0	78.9	83.4	85.5	20.0
Incr Delay (d2), s/veh	0.0	0.1	0.3	6.7	0.9	1.7	0.9	0.0	0.5	0.4	0.6	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(50%),veh/ln	1.6	8.3	8.8	2.8	13.9	15.3	4.3	0.0	1.6	1.0	0.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.8	25.2	25.5	94.7	59.0	59.8	77.8	0.0	79.4	83.8	86.1	20.0
LnGrp LOS	D	C	C	F	E	E	E		E	F	F	C
Approach Vol, veh/h		693			1002			131			102	
Approach Delay, s/veh		26.8			61.2			78.2			39.6	
Approach LOS		C			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	69.8	81.0	17.5	11.7	13.1	137.7	9.2	20.0
Change Period (Y+Rc), s	5.9	5.9	6.3	6.7	6.0	5.9	6.4	6.7
Max Green Setting (Gmax), s	19.1	75.1	18.7	42.3	22.0	72.1	9.6	51.3
Max Q Clear Time (g_c+I1), s	5.5	31.8	11.2	2.8	7.5	20.2	4.2	5.7
Green Ext Time (p_c), s	0.0	15.0	0.1	0.1	0.0	9.7	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	48.9
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	398	0	1	716	345	0	0	1	287	1	241
Future Volume (veh/h)	196	398	0	1	716	345	0	0	1	287	1	241
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1870	1900	1870	1870	1856	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	211	428	0	1	770	371	0	0	0	310	0	259
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	2	0	2	2	3	0	0	2	2	2	2
Cap, veh/h	458	3801	0	719	2394	1115	1	1	0	530	0	312
Arrive On Green	0.05	0.74	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1725	5274	0	1781	3404	1585	1810	1900	0	3563	0	1585
Grp Volume(v), veh/h	211	428	0	1	770	371	0	0	0	310	0	259
Grp Sat Flow(s),veh/h/ln	1725	1702	0	1781	1702	1585	1810	1900	0	1781	0	1585
Q Serve(g_s), s	6.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.6	0.0	26.8
Cycle Q Clear(g_c), s	6.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.6	0.0	26.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	458	3801	0	719	2394	1115	1	1	0	530	0	312
V/C Ratio(X)	0.46	0.11	0.00	0.00	0.32	0.33	0.00	0.00	0.00	0.58	0.00	0.83
Avail Cap(c_a), veh/h	610	3801	0	948	2394	1115	235	247	0	530	0	312
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.85	0.00	0.85
Uniform Delay (d), s/veh	5.8	6.4	0.0	7.8	0.0	0.0	0.0	0.0	0.0	71.4	0.0	69.4
Incr Delay (d2), s/veh	0.8	0.1	0.0	0.0	0.4	0.8	0.0	0.0	0.0	1.4	0.0	14.8
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	2.2	1.5	0.0	0.0	0.1	0.2	0.0	0.0	0.0	6.8	0.0	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.6	6.5	0.0	7.8	0.4	0.8	0.0	0.0	0.0	72.8	0.0	84.2
LnGrp LOS	A	A		A	A	A				E		F
Approach Vol, veh/h		639			1142			0			569	
Approach Delay, s/veh		6.5			0.5			0.0			78.0	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.2	132.8		33.0	6.8	140.2		0.0				
Change Period (Y+Rc), s	5.6	6.2		6.2	6.4	6.2		6.6				
Max Green Setting (Gmax), s	24.4	80.8		26.8	23.6	80.8		23.4				
Max Q Clear Time (g_c+I1), s	8.0	2.0		28.8	2.0	6.2		0.0				
Green Ext Time (p_c), s	0.7	23.9		0.0	0.0	6.3		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	20.9
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	265	62	36	14	65	57	8	60	947	8	60	156
Future Volume (vph)	265	62	36	14	65	57	8	60	947	8	60	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		8.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00		1.00	0.91	1.00		1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.98		1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.94		1.00	1.00	0.85		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	3433	1751		1770	1863	1583		1770	5036	1548		1769
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.09	1.00	1.00		0.21
Satd. Flow (perm)	3433	1751		1770	1863	1583		175	5036	1548		386
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	276	65	38	15	68	59	8	63	986	8	63	162
RTOR Reduction (vph)	0	14	0	0	0	53	0	0	0	5	0	0
Lane Group Flow (vph)	276	89	0	15	68	6	0	71	986	3	0	226
Confl. Peds. (#/hr)			1	1						1		1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	3	8		7	4		5	5	2		1 9	1 9
Permitted Phases						4	2	2		2	6	6
Actuated Green, G (s)	17.7	31.3		2.5	16.8	16.8		77.7	69.4	69.4		101.4
Effective Green, g (s)	17.7	31.3		2.5	16.8	16.8		77.7	69.4	69.4		101.4
Actuated g/C Ratio	0.11	0.20		0.02	0.11	0.11		0.49	0.43	0.43		0.63
Clearance Time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		3.0	5.0	5.0		
Lane Grp Cap (vph)	379	342		27	195	166		167	2184	671		404
v/s Ratio Prot	c0.08	0.05		0.01	c0.04			0.02	0.20			c0.06
v/s Ratio Perm						0.00		0.18		0.00		0.29
v/c Ratio	0.73	0.26		0.56	0.35	0.04		0.43	0.45	0.01		0.56
Uniform Delay, d1	68.8	54.5		78.2	66.5	64.3		24.4	31.9	25.7		14.8
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.51	0.58	1.00		1.31
Incremental Delay, d2	7.3	0.6		27.1	1.5	0.1		1.7	0.6	0.0		1.4
Delay (s)	76.1	55.1		105.3	68.0	64.5		38.5	19.0	25.7		20.8
Level of Service	E	E		F	E	E		D	B	C		C
Approach Delay (s/veh)		70.4			70.5				20.4			
Approach LOS		E			E				C			

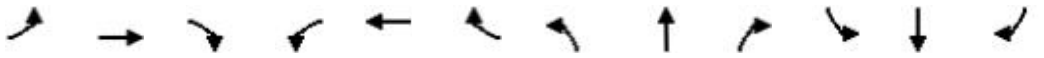
Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	38.3
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1566	366
Future Volume (vph)	1566	366
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	7.1
Lane Util. Factor	0.91	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	5085	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	5085	1583
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	1631	381
RTOR Reduction (vph)	0	126
Lane Group Flow (vph)	1631	255
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	87.9	87.9
Effective Green, g (s)	87.9	87.9
Actuated g/C Ratio	0.55	0.55
Clearance Time (s)	7.1	7.1
Vehicle Extension (s)	5.0	5.0
Lane Grp Cap (vph)	2793	869
v/s Ratio Prot	c0.32	
v/s Ratio Perm		0.16
v/c Ratio	0.58	0.29
Uniform Delay, d1	23.9	19.4
Progression Factor	0.55	0.27
Incremental Delay, d2	0.8	0.7
Delay (s)	13.9	6.0
Level of Service	B	A
Approach Delay (s/veh)	13.2	
Approach LOS	B	

Intersection Summary



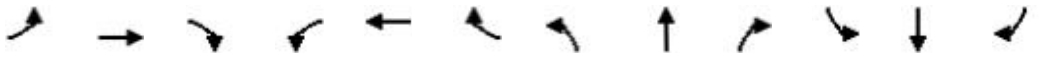
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	441	20	18	1100	43	8	0	6	12	0	61
Future Volume (veh/h)	140	441	20	18	1100	43	8	0	6	12	0	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	0.99		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1707	1870	1870	1870	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	156	490	22	20	1222	48	9	0	7	13	0	68
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	3	2	13	2	2	2	0	2	0	0	0
Cap, veh/h	157	3764	168	30	3469	136	135	0	91	140	115	97
Arrive On Green	0.03	0.25	0.25	0.04	1.00	1.00	0.01	0.00	0.06	0.01	0.00	0.06
Sat Flow, veh/h	1781	4971	222	1626	5041	198	1781	0	1602	1810	1900	1602
Grp Volume(v), veh/h	156	332	180	20	825	445	9	0	7	13	0	68
Grp Sat Flow(s),veh/h/ln	1781	1689	1816	1626	1702	1835	1781	0	1602	1810	1900	1602
Q Serve(g_s), s	14.0	12.2	12.3	1.9	0.0	0.0	0.8	0.0	0.7	1.1	0.0	6.7
Cycle Q Clear(g_c), s	14.0	12.2	12.3	1.9	0.0	0.0	0.8	0.0	0.7	1.1	0.0	6.7
Prop In Lane	1.00		0.12	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	157	2557	1375	30	2343	1263	135	0	91	140	115	97
V/C Ratio(X)	0.99	0.13	0.13	0.67	0.35	0.35	0.07	0.00	0.08	0.09	0.00	0.70
Avail Cap(c_a), veh/h	157	2557	1375	142	2343	1263	273	0	333	274	395	333
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	77.6	19.1	19.2	76.6	0.0	0.0	70.2	0.0	71.4	70.0	0.0	73.7
Incr Delay (d2), s/veh	69.8	0.1	0.2	8.6	0.4	0.7	0.1	0.0	0.1	0.1	0.0	3.4
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	9.8	5.6	6.1	0.9	0.1	0.3	0.4	0.0	0.3	0.5	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	147.4	19.2	19.4	85.1	0.4	0.7	70.3	0.0	71.6	70.1	0.0	77.2
LnGrp LOS	F	B	B	F	A	A	E		E	E		E
Approach Vol, veh/h		668			1290			16			81	
Approach Delay, s/veh		49.2			1.8			70.9			76.0	
Approach LOS		D			A			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	116.0	7.6	16.4	8.9	127.1	8.2	15.8
Change Period (Y+Rc), s	5.9	5.9	6.3	6.7	6.0	5.9	6.4	6.7
Max Green Setting (Gmax), s	14.1	74.1	13.7	33.3	14.0	74.1	13.6	33.3
Max Q Clear Time (g_c+I1), s	16.0	2.0	2.8	8.7	3.9	14.3	3.1	2.7
Green Ext Time (p_c), s	0.0	27.0	0.0	0.1	0.0	7.3	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	20.7
HCM 7th LOS	C

Notes

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



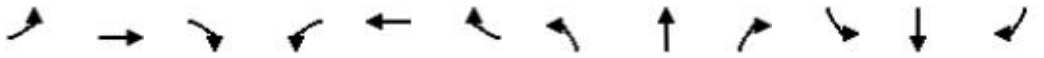
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	335	432	0	0	720	437	0	0	0	242	0	189
Future Volume (veh/h)	335	432	0	0	720	437	0	0	0	242	0	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1900	1900	1856	1870	1900	1900	0	1870	1900	1870
Adj Flow Rate, veh/h	353	455	0	0	758	460	0	0	0	255	0	199
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	3	0	0	3	2	0	0	0	2	0	2
Cap, veh/h	380	3931	0	670	2217	1032	1	1	0	521	0	232
Arrive On Green	0.08	0.78	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1781	5233	0	1810	3377	1572	1810	1900	0	3555	0	1582
Grp Volume(v), veh/h	353	455	0	0	758	460	0	0	0	255	0	199
Grp Sat Flow(s),veh/h/ln	1781	1689	0	1810	1689	1572	1810	1900	0	1778	0	1582
Q Serve(g_s), s	10.5	3.5	0.0	0.0	30.4	40.6	0.0	0.0	0.0	10.6	0.0	19.7
Cycle Q Clear(g_c), s	10.5	3.5	0.0	0.0	30.4	40.6	0.0	0.0	0.0	10.6	0.0	19.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	380	3931	0	670	2217	1032	1	1	0	521	0	232
V/C Ratio(X)	0.93	0.12	0.00	0.00	0.34	0.45	0.00	0.00	0.00	0.49	0.00	0.86
Avail Cap(c_a), veh/h	490	3931	0	760	2217	1032	441	463	0	822	0	366
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.96	0.00	0.96
Uniform Delay (d), s/veh	25.9	4.4	0.0	0.0	33.4	37.4	0.0	0.0	0.0	62.8	0.0	66.7
Incr Delay (d2), s/veh	19.3	0.1	0.0	0.0	0.4	1.4	0.0	0.0	0.0	0.7	0.0	11.3
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	11.4	1.2	0.0	0.0	14.0	17.6	0.0	0.0	0.0	4.8	0.0	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.3	4.5	0.0	0.0	33.8	38.8	0.0	0.0	0.0	63.5	0.0	78.0
LnGrp LOS	D	A			C	D				E		E
Approach Vol, veh/h		808			1218			0			454	
Approach Delay, s/veh		22.3			35.7			0.0			69.9	
Approach LOS		C			D						E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.1	111.2		29.6	0.0	130.4		0.0				
Change Period (Y+Rc), s	5.6	6.2		6.2	6.4	6.2		6.6				
Max Green Setting (Gmax), s	23.4	36.0		37.0	8.0	50.6		39.0				
Max Q Clear Time (g_c+I1), s	12.5	42.6		21.7	0.0	5.5		0.0				
Green Ext Time (p_c), s	1.1	0.0		1.5	0.0	6.5		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			37.6									
HCM 7th LOS			D									

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	7	3	43	1	62	4	638	124	168	390	8
Future Volume (veh/h)	2	7	3	43	1	62	4	638	124	168	390	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870	1693
Adj Flow Rate, veh/h	2	8	3	47	1	67	4	693	135	183	424	9
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	3	2	14
Cap, veh/h	44	32	12	148	155	129	587	861	729	397	845	18
Arrive On Green	0.02	0.02	0.02	0.08	0.08	0.08	0.09	0.46	0.46	0.10	0.46	0.46
Sat Flow, veh/h	1781	1288	483	1781	1870	1551	1781	1870	1583	1767	1825	39
Grp Volume(v), veh/h	2	0	11	47	1	67	4	693	135	183	0	433
Grp Sat Flow(s),veh/h/ln	1781	0	1771	1781	1870	1551	1781	1870	1583	1767	0	1863
Q Serve(g_s), s	0.1	0.0	0.3	1.3	0.0	2.2	0.1	17.0	2.7	2.7	0.0	8.7
Cycle Q Clear(g_c), s	0.1	0.0	0.3	1.3	0.0	2.2	0.1	17.0	2.7	2.7	0.0	8.7
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	44	0	44	148	155	129	587	861	729	397	0	863
V/C Ratio(X)	0.05	0.00	0.25	0.32	0.01	0.52	0.01	0.80	0.19	0.46	0.00	0.50
Avail Cap(c_a), veh/h	601	0	598	601	631	524	1023	1664	1408	825	0	1658
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	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	25.6	23.1	22.5	23.6	6.0	12.4	8.5	9.6	0.0	10.1
Incr Delay (d2), s/veh	0.4	0.0	2.9	1.2	0.0	3.2	0.0	1.8	0.1	0.8	0.0	0.5
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	0.0	0.0	0.2	0.6	0.0	0.9	0.0	5.9	0.8	0.8	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.9	0.0	28.6	24.4	22.6	26.8	6.0	14.2	8.7	10.5	0.0	10.5
LnGrp LOS	C		C	C	C	C	A	B	A	B		B
Approach Vol, veh/h		13			115			832			616	
Approach Delay, s/veh		28.2			25.8			13.3			10.5	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	29.2		5.8	9.5	29.3		9.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.1	47.7		18.1	18.1	47.7		18.1				
Max Q Clear Time (g_c+I1), s	4.7	19.0		2.3	2.1	10.7		4.2				
Green Ext Time (p_c), s	0.4	5.7		0.0	0.0	2.9		0.2				

Intersection Summary	
HCM 7th Control Delay, s/veh	13.2
HCM 7th LOS	B



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	10	679	495	0	0	1073	75	891	3	520	0	0
Future Volume (vph)	10	679	495	0	0	1073	75	891	3	520	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6	6.4			6.4	6.4	6.7	6.7	6.7		
Lane Util. Factor		0.97	0.95			0.95	1.00	0.95	0.95	0.88		
Frpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	0.98		
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Frt		1.00	1.00			1.00	0.85	1.00	1.00	0.85		
Flt Protected		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (prot)		3400	3406			3539	1583	1665	1670	2724		
Flt Permitted		0.95	1.00			1.00	1.00	0.95	0.95	1.00		
Satd. Flow (perm)		3400	3406			3539	1583	1665	1670	2724		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	722	527	0	0	1141	80	948	3	553	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	53	0	0	313	0	0
Lane Group Flow (vph)	0	733	527	0	0	1141	27	474	477	240	0	0
Confl. Peds. (#/hr)				1	1					1	1	
Heavy Vehicles (%)	2%	3%	6%	0%	0%	2%	2%	3%	2%	2%	0%	0%
Turn Type	Prot	Prot	NA			NA	Perm	Split	NA	Perm		
Protected Phases	1 9	1 9	6			2		4	4			
Permitted Phases							2			4		
Actuated Green, G (s)		33.4	100.6			54.0	54.0	46.3	46.3	46.3		
Effective Green, g (s)		33.4	100.6			54.0	54.0	46.3	46.3	46.3		
Actuated g/C Ratio		0.21	0.63			0.34	0.34	0.29	0.29	0.29		
Clearance Time (s)			6.4			6.4	6.4	6.7	6.7	6.7		
Vehicle Extension (s)			3.0			3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		709	2141			1194	534	481	483	788		
v/s Ratio Prot		c0.22	0.15			c0.32		0.28	c0.29			
v/s Ratio Perm							0.02			0.09		
v/c Ratio		1.03	0.25			0.96	0.05	0.99	0.99	0.30		
Uniform Delay, d1		63.3	13.0			51.8	35.7	56.5	56.6	44.3		
Progression Factor		0.78	1.74			0.97	3.76	1.00	1.00	1.00		
Incremental Delay, d2		40.8	0.2			16.1	0.2	36.9	37.3	0.2		
Delay (s)		90.3	23.0			66.3	134.5	93.5	93.9	44.5		
Level of Service		F	C			E	F	F	F	D		
Approach Delay (s/veh)			62.2			70.8			75.6			0.0
Approach LOS			E			E			E			A

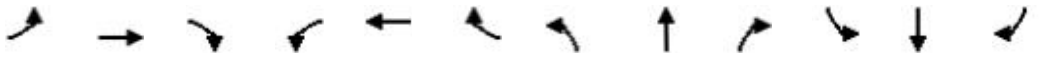
Intersection Summary			
HCM 2000 Control Delay (s/veh)	69.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.3
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.94
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s/veh)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	2	952	18	23	9	431	1555	14	6	1458	716
Future Volume (veh/h)	188	2	952	18	23	9	431	1555	14	6	1458	716
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1870	1870	1870	1870	1870	1870	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	192	2	971	18	23	9	440	1587	14	6	1488	731
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	2	2	2	2	2	2	3	2	2	2	2
Cap, veh/h	233	457	1083	91	514	189	497	2895	906	13	2214	687
Arrive On Green	0.07	0.24	0.24	0.03	0.20	0.20	0.14	0.57	0.57	0.01	0.43	0.43
Sat Flow, veh/h	3401	1870	2790	3456	2542	936	3456	5066	1585	1781	5106	1585
Grp Volume(v), veh/h	192	2	971	18	16	16	440	1587	14	6	1488	731
Grp Sat Flow(s),veh/h/ln	1700	1870	1395	1728	1777	1702	1728	1689	1585	1781	1702	1585
Q Serve(g_s), s	10.0	0.1	44.0	0.9	1.3	1.4	22.5	35.2	0.7	0.6	41.9	78.0
Cycle Q Clear(g_c), s	10.0	0.1	44.0	0.9	1.3	1.4	22.5	35.2	0.7	0.6	41.9	78.0
Prop In Lane	1.00		1.00	1.00		0.55	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	457	1083	91	359	344	497	2895	906	13	2214	687
V/C Ratio(X)	0.82	0.00	0.90	0.20	0.04	0.05	0.88	0.55	0.02	0.47	0.67	1.06
Avail Cap(c_a), veh/h	302	457	1083	154	359	344	614	2895	906	49	2214	687
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	1.00	0.45	0.45	0.45	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.7	51.4	51.6	85.8	57.8	57.8	75.6	24.1	16.7	89.0	40.8	51.0
Incr Delay (d2), s/veh	14.9	0.0	10.1	1.5	0.1	0.1	6.7	0.3	0.0	33.4	1.6	52.5
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	5.0	0.1	22.3	0.4	0.6	0.6	10.4	13.8	0.3	0.4	17.7	41.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	97.7	51.4	61.7	87.3	57.9	57.9	82.3	24.4	16.7	122.4	42.4	103.5
LnGrp LOS	F	D	E	F	E	E	F	C	B	F	D	F
Approach Vol, veh/h		1165			50			2041			2225	
Approach Delay, s/veh		67.6			68.5			36.8			62.7	
Approach LOS		E			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.7	84.5	19.4	43.4	7.9	109.4	11.7	51.0
Change Period (Y+Rc), s	6.8	6.5	7.0	7.0	6.6	6.5	7.0	7.0
Max Green Setting (Gmax), s	32.0	68.7	16.0	36.0	5.0	95.9	8.0	44.0
Max Q Clear Time (g_c+I1), s	24.5	80.0	12.0	3.4	2.6	37.2	2.9	46.0
Green Ext Time (p_c), s	1.4	0.0	0.3	0.2	0.0	34.2	0.0	0.0

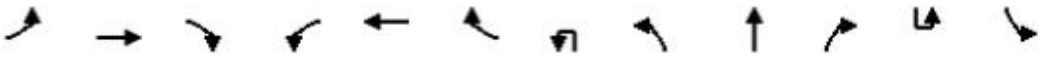
Intersection Summary	
HCM 7th Control Delay, s/veh	54.2
HCM 7th LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	731	0	855	0	0	0	0	1261	689	448	1984	0
Future Volume (vph)	731	0	855	0	0	0	0	1261	689	448	1984	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5		6.5					6.8	6.8	6.3	6.8	
Lane Util. Factor	0.97		0.88					0.91	1.00	1.00	0.91	
Frt	1.00		0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95		1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433		2787					5085	1583	1752	5085	
Flt Permitted	0.95		1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433		2787					5085	1583	1752	5085	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	754	0	881	0	0	0	0	1300	710	462	2045	0
RTOR Reduction (vph)	0	0	72	0	0	0	0	0	328	0	0	0
Lane Group Flow (vph)	754	0	809	0	0	0	0	1300	382	462	2045	0
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	0%	2%	2%	3%	2%	0%
Turn Type	Prot		Perm					NA	Perm	Prot	NA	
Protected Phases	4							6		5 11	2	
Permitted Phases			4						6			
Actuated Green, G (s)	53.5		53.5					52.0	52.0	48.6	113.2	
Effective Green, g (s)	53.5		53.5					52.0	52.0	48.6	113.2	
Actuated g/C Ratio	0.30		0.30					0.29	0.29	0.27	0.63	
Clearance Time (s)	6.5		6.5					6.8	6.8		6.8	
Vehicle Extension (s)	4.0		4.0					5.1	5.1		5.1	
Lane Grp Cap (vph)	1020		828					1469	457	473	3197	
v/s Ratio Prot	0.22							c0.26		c0.26	0.40	
v/s Ratio Perm			c0.29						0.24			
v/c Ratio	0.74		0.98					0.88	0.84	0.98	0.64	
Uniform Delay, d1	57.0		62.7					61.1	60.0	65.1	20.7	
Progression Factor	1.00		1.00					1.00	1.01	1.28	0.56	
Incremental Delay, d2	3.0		25.6					7.5	15.3	28.3	0.7	
Delay (s)	60.0		88.3					68.9	75.7	111.5	12.2	
Level of Service	E		F					E	E	F	B	
Approach Delay (s/veh)		75.2			0.0			71.3			30.5	
Approach LOS		E			A			E			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	55.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	483	102	111	50	100	144	10	159	939	22	32	298
Future Volume (vph)	483	102	111	50	100	144	10	159	939	22	32	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		8.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00		1.00	0.91	1.00		1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00		1.00	1.00	0.98		1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	0.92		1.00	1.00	0.85		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	3433	1703		1770	1863	1583		1770	5036	1548		1770
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.07	1.00	1.00		0.18
Satd. Flow (perm)	3433	1703		1770	1863	1583		122	5036	1548		329
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	493	104	113	51	102	147	10	162	958	22	33	304
RTOR Reduction (vph)	0	23	0	0	0	133	0	0	0	15	0	0
Lane Group Flow (vph)	493	194	0	51	102	14	0	172	958	7	0	337
Confl. Peds. (#/hr)			3	3						1		1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	3	8		7	4		5	5	2		1 9	1 9
Permitted Phases						4	2	2		2	6	6
Actuated Green, G (s)	32.3	39.2		10.0	17.6	17.6		78.5	61.2	61.2		108.5
Effective Green, g (s)	32.3	39.2		10.0	17.6	17.6		78.5	61.2	61.2		108.5
Actuated g/C Ratio	0.18	0.22		0.06	0.10	0.10		0.44	0.34	0.34		0.60
Clearance Time (s)	7.0	7.5		7.7	7.5	7.5		7.7	7.1	7.1		
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		3.0	5.0	5.0		
Lane Grp Cap (vph)	616	370		98	182	154		211	1712	526		448
v/s Ratio Prot	c0.14	c0.11		0.03	0.05			0.08	0.19			c0.13
v/s Ratio Perm						0.01		0.28		0.00		0.32
v/c Ratio	0.80	0.53		0.52	0.56	0.09		0.82	0.56	0.01		0.75
Uniform Delay, d1	70.8	62.2		82.7	77.5	73.9		50.0	48.4	39.4		25.1
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.16	1.60	1.00		1.35
Incremental Delay, d2	7.8	1.8		6.4	4.7	0.4		19.2	1.2	0.0		4.7
Delay (s)	78.5	63.9		89.0	82.2	74.3		77.3	78.8	39.4		38.5
Level of Service	E	E		F	F	E		E	E	D		D
Approach Delay (s/veh)		74.1			79.5				77.8			
Approach LOS		E			E				E			

Intersection Summary			
HCM 2000 Control Delay (s/veh)	61.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	38.3
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1619	792
Future Volume (vph)	1619	792
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	7.1
Lane Util. Factor	0.91	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	5085	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	5085	1583
Peak-hour factor, PHF	0.98	0.98
Adj. Flow (vph)	1652	808
RTOR Reduction (vph)	0	249
Lane Group Flow (vph)	1652	559
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	83.5	83.5
Effective Green, g (s)	83.5	83.5
Actuated g/C Ratio	0.46	0.46
Clearance Time (s)	7.1	7.1
Vehicle Extension (s)	5.0	5.0
Lane Grp Cap (vph)	2358	734
v/s Ratio Prot	0.32	
v/s Ratio Perm		c0.35
v/c Ratio	0.70	0.76
Uniform Delay, d1	38.3	40.0
Progression Factor	1.15	1.38
Incremental Delay, d2	1.2	4.9
Delay (s)	45.4	60.1
Level of Service	D	E
Approach Delay (s/veh)	48.8	
Approach LOS	D	

Intersection Summary

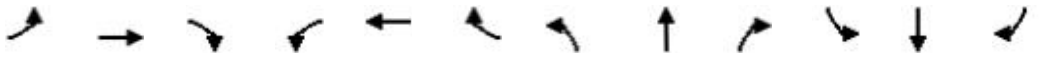
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	319	404	227	104	704	49	333	757	11	176	931	703
Future Volume (veh/h)	319	404	227	104	704	49	333	757	11	176	931	703
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870	1870	1870
Adj Flow Rate, veh/h	339	430	241	111	749	52	354	805	12	187	990	748
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	4	2	2	2	2
Cap, veh/h	392	949	591	149	993	412	367	2280	34	229	1452	828
Arrive On Green	0.19	0.45	0.45	0.04	0.19	0.19	0.11	0.45	0.45	0.07	0.41	0.41
Sat Flow, veh/h	3456	3554	1581	3456	5106	1580	3456	5101	76	3456	3554	1585
Grp Volume(v), veh/h	339	430	241	111	749	52	354	528	289	187	990	748
Grp Sat Flow(s),veh/h/ln	1728	1777	1581	1728	1702	1580	1728	1675	1827	1728	1777	1585
Q Serve(g_s), s	17.1	15.1	17.4	5.7	24.9	4.5	18.4	18.6	18.7	9.6	41.1	73.5
Cycle Q Clear(g_c), s	17.1	15.1	17.4	5.7	24.9	4.5	18.4	18.6	18.7	9.6	41.1	73.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	392	949	591	149	993	412	367	1497	816	229	1452	828
V/C Ratio(X)	0.86	0.45	0.41	0.74	0.75	0.13	0.97	0.35	0.35	0.82	0.68	0.90
Avail Cap(c_a), veh/h	570	1325	758	192	1333	517	367	1497	816	299	1452	828
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	71.6	40.7	30.9	85.1	68.4	50.9	80.1	32.7	32.7	83.0	43.6	38.9
Incr Delay (d2), s/veh	10.0	0.4	0.6	13.1	2.1	0.2	37.9	0.7	1.2	10.1	1.8	10.9
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	7.7	6.1	6.1	2.8	11.0	1.8	10.0	7.7	8.5	4.6	18.2	31.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.6	41.2	31.4	98.2	70.6	51.1	118.1	33.3	33.9	93.1	45.4	49.8
LnGrp LOS	F	D	C	F	E	D	F	C	C	F	D	D
Approach Vol, veh/h		1010			912			1171			1925	
Approach Delay, s/veh		52.4			72.8			59.1			51.8	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.5	88.1	28.8	42.5	27.4	81.2	15.8	55.6
Change Period (Y+Rc), s	8.6	7.7	8.4	7.5	8.3	7.7	8.0	7.5
Max Green Setting (Gmax), s	15.6	55.5	29.7	47.0	19.1	52.3	10.0	67.1
Max Q Clear Time (g_c+I1), s	11.6	20.7	19.1	26.9	20.4	75.5	7.7	19.4
Green Ext Time (p_c), s	0.3	11.2	1.3	6.8	0.0	0.0	0.1	6.1

Intersection Summary	
HCM 7th Control Delay, s/veh	57.4
HCM 7th LOS	E

Notes

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



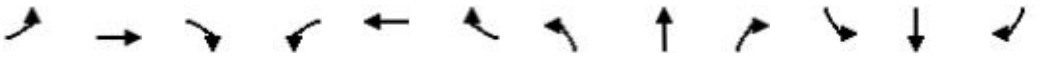
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	523	63	105	1073	450	93	9	126	186	10	82
Future Volume (veh/h)	284	523	63	105	1073	450	93	9	126	186	10	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	316	581	70	117	1192	500	103	10	140	207	11	91
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	2696	321	136	1915	800	261	187	158	345	25	205
Arrive On Green	0.04	0.19	0.19	0.08	0.54	0.54	0.06	0.10	0.10	0.11	0.14	0.14
Sat Flow, veh/h	1781	4624	550	1781	3529	1475	1781	1870	1585	1781	174	1438
Grp Volume(v), veh/h	316	426	225	117	1150	542	103	10	140	207	0	102
Grp Sat Flow(s),veh/h/ln	1781	1702	1770	1781	1702	1600	1781	1870	1585	1781	0	1612
Q Serve(g_s), s	18.7	19.0	19.3	11.7	42.0	42.2	9.3	0.9	15.7	18.5	0.0	10.4
Cycle Q Clear(g_c), s	18.7	19.0	19.3	11.7	42.0	42.2	9.3	0.9	15.7	18.5	0.0	10.4
Prop In Lane	1.00		0.31	1.00		0.92	1.00		1.00	1.00		0.89
Lane Grp Cap(c), veh/h	338	1985	1032	136	1847	868	261	187	158	345	0	230
V/C Ratio(X)	0.93	0.21	0.22	0.86	0.62	0.62	0.39	0.05	0.89	0.60	0.00	0.44
Avail Cap(c_a), veh/h	468	1985	1032	188	1847	868	397	407	345	345	0	297
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	0.52	0.52	0.52	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.4	38.0	38.1	82.2	28.4	28.5	67.0	73.3	80.0	62.6	0.0	70.6
Incr Delay (d2), s/veh	18.3	0.2	0.5	11.2	0.8	1.8	0.4	0.0	6.3	2.0	0.0	0.5
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	17.1	8.8	9.4	5.8	17.4	16.7	4.3	0.4	6.8	8.7	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	67.7	38.2	38.6	93.4	29.3	30.3	67.4	73.4	86.3	64.6	0.0	71.1
LnGrp LOS	E	D	D	F	C	C	E	E	F	E		E
Approach Vol, veh/h		967			1809			253			309	
Approach Delay, s/veh		47.9			33.7			78.1			66.7	
Approach LOS		D			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	103.3	17.3	32.5	19.7	110.5	25.0	24.7
Change Period (Y+Rc), s	5.9	5.6	6.0	6.8	6.0	5.6	6.0	6.8
Max Green Setting (Gmax), s	34.2	63.3	25.0	33.2	19.0	78.4	19.0	39.2
Max Q Clear Time (g_c+I1), s	20.7	44.2	11.3	12.4	13.7	21.3	20.5	17.7
Green Ext Time (p_c), s	0.4	16.1	0.1	0.4	0.1	9.8	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	44.3
HCM 7th LOS	D

Notes

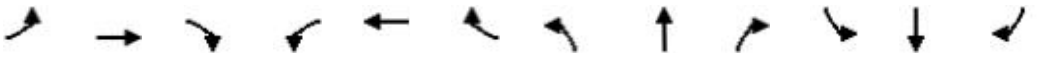
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	809	65	51	929	221	88	2	30	53	8	157
Future Volume (veh/h)	218	809	65	51	929	221	88	2	30	53	8	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	237	879	71	55	1010	240	96	2	33	58	9	171
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	254	3127	252	70	2253	534	274	12	205	265	223	189
Arrive On Green	0.28	1.00	1.00	0.01	0.18	0.18	0.05	0.14	0.14	0.04	0.12	0.12
Sat Flow, veh/h	1781	4817	388	1781	4121	978	1781	91	1508	1781	1870	1585
Grp Volume(v), veh/h	237	620	330	55	834	416	96	0	35	58	9	171
Grp Sat Flow(s),veh/h/ln	1781	1702	1801	1781	1702	1694	1781	0	1599	1781	1870	1585
Q Serve(g_s), s	23.3	0.0	0.0	5.5	39.3	39.4	8.5	0.0	3.5	5.1	0.8	19.2
Cycle Q Clear(g_c), s	23.3	0.0	0.0	5.5	39.3	39.4	8.5	0.0	3.5	5.1	0.8	19.2
Prop In Lane	1.00		0.22	1.00		0.58	1.00		0.94	1.00		1.00
Lane Grp Cap(c), veh/h	254	2210	1169	70	1861	926	274	0	217	265	223	189
V/C Ratio(X)	0.93	0.28	0.28	0.79	0.45	0.45	0.35	0.00	0.16	0.22	0.04	0.90
Avail Cap(c_a), veh/h	407	2210	1169	139	1861	926	274	0	385	265	419	355
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.74	0.74	0.74	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.6	0.0	0.0	88.1	49.6	49.6	65.0	0.0	68.7	66.3	70.2	78.3
Incr Delay (d2), s/veh	15.4	0.3	0.6	5.3	0.6	1.2	0.3	0.0	0.1	0.2	0.0	6.3
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	10.6	0.1	0.2	2.7	18.3	18.4	3.9	0.0	1.5	2.4	0.4	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	79.0	0.3	0.6	93.4	50.1	50.8	65.3	0.0	68.8	66.4	70.2	84.6
LnGrp LOS	E	A	A	F	D	D	E		E	E	E	F
Approach Vol, veh/h		1187			1305			131			238	
Approach Delay, s/veh		16.1			52.2			66.3			79.6	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.5	104.3	16.0	28.2	13.1	122.8	13.0	31.2
Change Period (Y+Rc), s	5.9	5.9	6.3	6.7	6.0	5.9	6.4	6.7
Max Green Setting (Gmax), s	41.1	64.1	9.7	40.3	14.0	91.1	6.6	43.3
Max Q Clear Time (g_c+I1), s	25.3	41.4	10.5	21.2	7.5	2.0	7.1	5.5
Green Ext Time (p_c), s	0.3	14.7	0.0	0.3	0.0	17.4	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	40.1
HCM 7th LOS	D



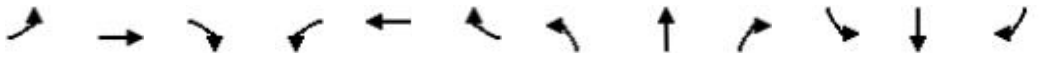
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	596	881	0	1	940	345	0	0	1	287	1	323
Future Volume (veh/h)	596	881	0	1	940	345	0	0	1	287	1	323
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1870	1900	1870	1870	1856	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	641	947	0	1	1011	371	0	0	0	310	0	347
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	2	0	2	2	3	0	0	2	2	2	2
Cap, veh/h	507	3801	0	408	2266	831	1	1	0	530	0	451
Arrive On Green	0.14	0.74	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1725	5274	0	1781	3681	1350	1810	1900	0	3563	0	1585
Grp Volume(v), veh/h	641	947	0	1	935	447	0	0	0	310	0	347
Grp Sat Flow(s),veh/h/ln	1725	1702	0	1781	1702	1627	1810	1900	0	1781	0	1585
Q Serve(g_s), s	24.4	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.6	0.0	26.8
Cycle Q Clear(g_c), s	24.4	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.6	0.0	26.8
Prop In Lane	1.00		0.00	1.00		0.83	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	507	3801	0	408	2095	1002	1	1	0	530	0	451
V/C Ratio(X)	1.26	0.25	0.00	0.00	0.45	0.45	0.00	0.00	0.00	0.58	0.00	0.77
Avail Cap(c_a), veh/h	507	3801	0	638	2095	1002	235	247	0	530	0	451
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.48	0.48	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.82	0.00	0.82
Uniform Delay (d), s/veh	22.6	7.2	0.0	13.1	0.0	0.0	0.0	0.0	0.0	71.4	0.0	59.0
Incr Delay (d2), s/veh	126.2	0.1	0.0	0.0	0.7	1.4	0.0	0.0	0.0	1.4	0.0	6.6
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	28.3	3.8	0.0	0.0	0.2	0.4	0.0	0.0	0.0	6.8	0.0	15.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	148.8	7.3	0.0	13.1	0.7	1.4	0.0	0.0	0.0	72.8	0.0	65.6
LnGrp LOS	F	A		B	A	A				E		E
Approach Vol, veh/h		1588			1383			0			657	
Approach Delay, s/veh		64.4			0.9			0.0			69.0	
Approach LOS		E			A						E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	117.0		33.0	6.8	140.2		0.0				
Change Period (Y+Rc), s	5.6	6.2		6.2	6.4	6.2		6.6				
Max Green Setting (Gmax), s	24.4	80.8		26.8	23.6	80.8		23.4				
Max Q Clear Time (g_c+I1), s	26.4	2.0		28.8	2.0	12.5		0.0				
Green Ext Time (p_c), s	0.0	32.9		0.0	0.0	17.6		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	41.0	
HCM 7th LOS	D	

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	10	8	124	13	212	6	538	422	253	466	46
Future Volume (veh/h)	25	10	8	124	13	212	6	538	422	253	466	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1841	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	11	9	138	14	236	7	598	469	281	518	51
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	4	2	2	2	2
Cap, veh/h	87	46	38	336	353	297	361	722	621	314	660	65
Arrive On Green	0.05	0.05	0.05	0.19	0.19	0.19	0.08	0.39	0.39	0.08	0.39	0.39
Sat Flow, veh/h	1781	946	774	1781	1870	1577	1781	1841	1584	1781	1675	165
Grp Volume(v), veh/h	28	0	20	138	14	236	7	598	469	281	0	569
Grp Sat Flow(s),veh/h/ln	1781	0	1720	1781	1870	1577	1781	1841	1584	1781	0	1840
Q Serve(g_s), s	0.9	0.0	0.7	4.3	0.4	8.9	0.1	18.2	16.0	5.1	0.0	16.9
Cycle Q Clear(g_c), s	0.9	0.0	0.7	4.3	0.4	8.9	0.1	18.2	16.0	5.1	0.0	16.9
Prop In Lane	1.00		0.45	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	87	0	84	336	353	297	361	722	621	314	0	725
V/C Ratio(X)	0.32	0.00	0.24	0.41	0.04	0.79	0.02	0.83	0.76	0.90	0.00	0.79
Avail Cap(c_a), veh/h	514	0	496	517	543	457	361	909	782	314	0	912
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	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	28.5	22.3	20.7	24.1	11.0	17.1	16.4	16.6	0.0	16.6
Incr Delay (d2), s/veh	2.1	0.0	1.4	0.8	0.0	5.3	0.0	5.2	3.2	26.4	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.3	1.7	0.2	3.5	0.0	7.6	5.5	4.3	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.8	0.0	30.0	23.1	20.7	29.5	11.0	22.3	19.6	43.0	0.0	20.2
LnGrp LOS	C		C	C	C	C	B	C	B	D		C
Approach Vol, veh/h		48			388			1074			850	
Approach Delay, s/veh		30.4			26.9			21.1			27.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	29.0		7.6	9.5	29.1		16.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.1	30.8		18.0	5.0	30.9		18.1				
Max Q Clear Time (g_c+I1), s	7.1	20.2		2.9	2.1	18.9		10.9				
Green Ext Time (p_c), s	0.0	4.2		0.1	0.0	2.9		0.8				

Intersection Summary			
HCM 7th Control Delay, s/veh		24.6	
HCM 7th LOS		C	



Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	244	516	12	18	91	1315	22	2	1093	475
v/c Ratio	0.51	0.62	0.07	0.07	0.37	0.38	0.02	0.03	0.37	0.43
Control Delay (s/veh)	68.2	51.3	73.5	36.8	88.4	15.3	0.0	74.0	19.9	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.2	51.3	73.5	36.8	88.4	15.3	0.0	74.0	19.9	3.0
Queue Length 50th (ft)	131	261	6	3	51	206	0	2	210	0
Queue Length 95th (ft)	176	325	18	17	85	428	m0	13	311	61
Internal Link Dist (ft)				377		803			938	
Turn Bay Length (ft)	150	250	150		325		200	275		750
Base Capacity (vph)	658	967	171	251	433	3431	1122	92	2944	1096
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.53	0.07	0.07	0.21	0.38	0.02	0.02	0.37	0.43

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	821	312	568	483	245	1379
v/c Ratio	0.80	0.35	0.29	0.54	0.80	0.44
Control Delay (s/veh)	57.1	33.5	16.4	7.2	74.2	22.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.1	33.5	16.4	7.2	74.2	22.1
Queue Length 50th (ft)	417	113	84	84	270	312
Queue Length 95th (ft)	459	150	181	433	370	466
Internal Link Dist (ft)			1028			803
Turn Bay Length (ft)	500	550		250		
Base Capacity (vph)	1349	1147	1957	901	327	3121
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.27	0.29	0.54	0.75	0.44

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	70	52	14	13	54	26	845	7	203	1418	74
v/c Ratio	0.33	0.27	0.18	0.13	0.21	0.12	0.32	0.01	0.37	0.39	0.06
Control Delay (s/veh)	75.8	48.1	79.1	75.3	1.8	9.7	12.0	0.0	9.1	5.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	75.8	48.1	79.1	75.3	1.8	9.7	12.0	0.0	9.1	5.4	0.1
Queue Length 50th (ft)	37	30	15	14	0	5	68	0	31	92	0
Queue Length 95th (ft)	65	80	41	39	0	13	79	m0	72	103	1
Internal Link Dist (ft)		564		358			731			1028	
Turn Bay Length (ft)	425				100	175		100	175		
Base Capacity (vph)	300	241	80	145	296	245	2631	899	604	3637	1170
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.22	0.18	0.09	0.18	0.11	0.32	0.01	0.34	0.39	0.06

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	60	129	65	79	565	12	135	757	166	919	361
v/c Ratio	0.31	0.26	0.13	0.38	0.76	0.02	0.51	0.29	0.65	0.50	0.35
Control Delay (s/veh)	46.4	56.0	19.0	76.8	72.5	0.1	77.0	22.5	110.4	14.8	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.4	56.0	19.0	76.8	72.5	0.1	77.0	22.5	110.4	14.8	2.6
Queue Length 50th (ft)	30	76	19	43	212	0	74	170	96	111	6
Queue Length 95th (ft)	59	118	71	72	260	0	111	203	139	101	16
Internal Link Dist (ft)		1258			1004			401		731	
Turn Bay Length (ft)	350		250	325		150	225		275		
Base Capacity (vph)	241	530	532	252	789	490	344	2612	258	1822	1038
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.24	0.12	0.31	0.72	0.02	0.39	0.29	0.64	0.50	0.35

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	1	346	13	1034	1	8	3	4
v/c Ratio	0.02	0.07	0.21	0.21	0.02	0.01	0.06	0.07
Control Delay (s/veh)	70.0	0.5	86.8	1.1	68.0	0.0	70.7	54.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	70.0	0.5	86.8	1.1	68.0	0.0	70.7	54.3
Queue Length 50th (ft)	1	0	14	0	1	0	4	1
Queue Length 95th (ft)	9	9	m30	63	8	0	18	16
Internal Link Dist (ft)		1176		1258				263
Turn Bay Length (ft)	300		275			75		
Base Capacity (vph)	155	4648	99	4824	211	747	162	190
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.07	0.13	0.21	0.00	0.01	0.02	0.02

Intersection Summary

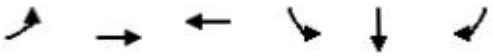
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	6	376	18	1017	8	6
v/c Ratio	0.10	0.08	0.28	0.21	0.14	0.01
Control Delay (s/veh)	80.8	0.3	78.6	0.6	79.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.8	0.3	78.6	0.6	79.6	0.0
Queue Length 50th (ft)	7	2	20	0	8	0
Queue Length 95th (ft)	m18	5	54	54	29	0
Internal Link Dist (ft)		1163		1176		277
Turn Bay Length (ft)	225		200			
Base Capacity (vph)	155	4555	139	4887	151	793
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.08	0.13	0.21	0.05	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



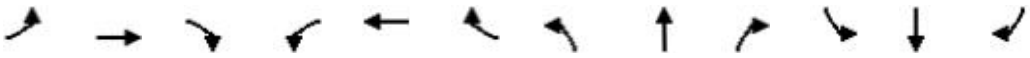
Lane Group	EBL	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	232	161	956	115	116	141
v/c Ratio	0.47	0.04	0.28	0.68	0.68	0.50
Control Delay (s/veh)	9.5	1.0	3.1	89.0	89.5	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.5	1.0	3.1	89.0	89.5	15.5
Queue Length 50th (ft)	13	3	17	126	125	0
Queue Length 95th (ft)	106	5	101	201	198	70
Internal Link Dist (ft)		3136	412		614	
Turn Bay Length (ft)	150			225		
Base Capacity (vph)	558	4136	3433	197	197	307
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.04	0.28	0.58	0.59	0.46

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	2	10	3	21	4	660	75	392
v/c Ratio	0.01	0.06	0.02	0.09	0.00	0.51	0.13	0.25
Control Delay (s/veh)	28.5	25.2	28.7	0.7	3.5	9.8	3.1	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.5	25.2	28.7	0.7	3.5	9.8	3.1	4.7
Queue Length 50th (ft)	1	2	1	0	0	61	0	0
Queue Length 95th (ft)	7	18	10	0	4	365	25	170
Internal Link Dist (ft)		94	1053			614		1570
Turn Bay Length (ft)	25				225		225	
Base Capacity (vph)	555	554	565	560	1063	1349	823	1581
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.02	0.01	0.04	0.00	0.49	0.09	0.25

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	18	548	310	142	941	4	403	22	164	8	22	8
v/c Ratio	0.06	0.44	0.42	0.32	0.55	0.00	0.51	0.04	0.30	0.03	0.10	0.02
Control Delay (s/veh)	9.9	16.9	4.7	11.1	14.5	0.0	21.2	15.5	5.2	14.3	26.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.9	16.9	4.7	11.1	14.5	0.0	21.2	15.5	5.2	14.3	26.2	0.1
Queue Length 50th (ft)	2	58	0	15	66	0	45	4	0	2	5	0
Queue Length 95th (ft)	15	146	53	67	#301	0	115	22	40	10	29	0
Internal Link Dist (ft)		757			815			1570			694	
Turn Bay Length (ft)	250		175	175		150	250		350	400		
Base Capacity (vph)	318	1490	831	446	1719	874	1289	1205	1068	238	680	660
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.37	0.37	0.32	0.55	0.00	0.31	0.02	0.15	0.03	0.03	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	278	176	299	792	724	481
v/c Ratio	0.50	0.26	0.71	0.32	0.84	0.48
Control Delay (s/veh)	30.4	5.6	20.7	4.3	25.8	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.4	5.6	20.7	4.3	25.8	2.9
Queue Length 50th (ft)	60	9	48	53	253	0
Queue Length 95th (ft)	97	48	#178	90	#498	45
Internal Link Dist (ft)	2519			696	2220	
Turn Bay Length (ft)	125		275			
Base Capacity (vph)	927	689	423	2815	1033	1109
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.26	0.71	0.28	0.70	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	257	382	4	13	442	144	30	25	61	60	516
v/c Ratio	0.33	0.16	0.00	0.21	0.25	0.16	0.27	0.11	0.58	0.56	0.45
Control Delay (s/veh)	30.0	13.5	0.0	81.9	25.3	1.7	76.5	64.0	77.1	76.3	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.0	13.5	0.0	81.9	25.3	1.7	76.5	64.0	77.1	76.3	4.3
Queue Length 50th (ft)	52	87	0	14	144	0	31	11	72	69	1
Queue Length 95th (ft)	71	180	m0	41	210	18	69	29	130	125	70
Internal Link Dist (ft)		788			4344			304		3136	
Turn Bay Length (ft)	675		150	250		150	125		200		
Base Capacity (vph)	808	2457	1170	80	1770	884	185	374	229	231	1163
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.16	0.00	0.16	0.25	0.16	0.16	0.07	0.27	0.26	0.44

Intersection Summary

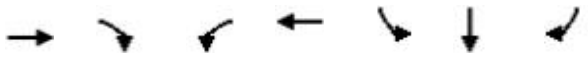
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	664	324	885	44	429	433	349
v/c Ratio	0.82	0.15	0.76	0.07	0.96	0.97	0.37
Control Delay (s/veh)	40.4	17.6	58.3	3.4	90.4	91.8	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.4	17.6	58.3	3.4	90.4	91.8	9.3
Queue Length 50th (ft)	167	74	394	0	478	481	23
Queue Length 95th (ft)	356	174	596	13	#716	#718	69
Internal Link Dist (ft)		1242	788			653	
Turn Bay Length (ft)	450						275
Base Capacity (vph)	994	2211	1161	596	450	451	954
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.15	0.76	0.07	0.95	0.96	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	983	567	273	1391	13	80	78
v/c Ratio	0.39	0.45	0.71	0.45	0.18	0.62	0.60
Control Delay (s/veh)	9.6	1.9	78.2	0.2	77.3	38.8	36.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.6	1.9	78.2	0.2	77.3	38.8	36.3
Queue Length 50th (ft)	188	0	135	0	14	10	8
Queue Length 95th (ft)	289	41	m154	m0	42	74	71
Internal Link Dist (ft)	525			1242		769	
Turn Bay Length (ft)		300	150				
Base Capacity (vph)	2535	1259	617	3094	380	380	391
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.45	0.44	0.45	0.03	0.21	0.20

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	173	2	567	16	29	273	1354	13	5	1183	661
v/c Ratio	0.48	0.01	0.64	0.11	0.12	0.62	0.38	0.01	0.07	0.42	0.59
Control Delay (s/veh)	81.2	69.0	56.5	84.2	62.0	78.4	10.2	0.0	85.0	24.3	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	81.2	69.0	56.5	84.2	62.0	78.4	10.2	0.0	85.0	24.3	7.7
Queue Length 50th (ft)	106	2	347	9	12	176	262	0	6	297	89
Queue Length 95th (ft)	149	12	398	25	33	229	283	m0	22	373	236
Internal Link Dist (ft)		418			377		803			938	
Turn Bay Length (ft)	150		250	150		325		200	275		750
Base Capacity (vph)	461	282	1042	152	249	633	3559	1162	82	2835	1113
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.01	0.54	0.11	0.12	0.43	0.38	0.01	0.06	0.42	0.59

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	682	348	968	557	419	1370
v/c Ratio	0.82	0.46	0.57	0.67	0.86	0.39
Control Delay (s/veh)	73.5	39.5	33.0	8.9	59.4	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	73.5	39.5	33.0	8.9	59.4	9.0
Queue Length 50th (ft)	401	135	223	75	332	216
Queue Length 95th (ft)	462	187	318	90	416	230
Internal Link Dist (ft)			1028			803
Turn Bay Length (ft)	500	550		250		
Base Capacity (vph)	944	849	1702	836	578	3482
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.41	0.57	0.67	0.72	0.39

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	213	127	46	47	133	55	807	20	306	1206	99
v/c Ratio	0.64	0.53	0.58	0.41	0.39	0.23	0.37	0.02	0.51	0.37	0.09
Control Delay (s/veh)	87.1	62.6	112.2	91.4	3.4	21.1	30.7	0.1	14.5	9.9	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	87.1	62.6	112.2	91.4	3.4	21.1	30.7	0.1	14.5	9.9	0.3
Queue Length 50th (ft)	129	109	55	56	0	29	158	0	71	110	0
Queue Length 95th (ft)	174	180	#112	103	0	m52	181	m0	100	272	3
Internal Link Dist (ft)		564		358			731			1028	
Turn Bay Length (ft)	425				100	175		100	175		
Base Capacity (vph)	457	313	81	160	372	247	2165	813	693	3301	1085
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.41	0.57	0.29	0.36	0.22	0.37	0.02	0.44	0.37	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	245	346	176	100	553	47	196	635	169	867	376
v/c Ratio	0.67	0.51	0.35	0.45	0.73	0.11	0.66	0.26	0.61	0.51	0.37
Control Delay (s/veh)	77.4	78.2	27.7	87.3	79.1	2.3	90.5	28.7	126.4	18.7	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	77.4	78.2	27.7	87.3	79.1	2.3	90.5	28.7	126.4	18.7	6.1
Queue Length 50th (ft)	153	220	65	60	236	0	119	167	109	351	210
Queue Length 95th (ft)	205	275	204	95	275	8	167	219	156	408	142
Internal Link Dist (ft)		1258			1004			401		731	
Turn Bay Length (ft)	350		250	325		150	225		275		
Base Capacity (vph)	431	796	510	305	946	416	306	2416	291	1702	1055
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.43	0.35	0.33	0.58	0.11	0.64	0.26	0.58	0.51	0.36

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	11	556	106	956	93	9	127	64	23
v/c Ratio	0.20	0.16	0.72	0.25	0.48	0.11	0.66	0.44	0.33
Control Delay (s/veh)	69.0	21.0	84.9	20.2	77.1	83.0	28.1	78.8	60.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.0	21.0	84.9	20.2	77.1	83.0	28.1	78.8	60.1
Queue Length 50th (ft)	14	65	134	238	103	11	0	70	12
Queue Length 95th (ft)	36	250	203	364	160	32	74	117	47
Internal Link Dist (ft)		1176		1258		246			263
Turn Bay Length (ft)	300		275				75		
Base Capacity (vph)	187	3383	190	3846	214	291	355	232	277
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.16	0.56	0.25	0.43	0.03	0.36	0.28	0.08

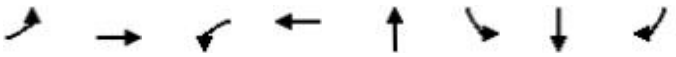
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	36	591	50	858	87	31	20	72
v/c Ratio	0.45	0.17	0.54	0.23	0.49	0.17	0.17	0.59
Control Delay (s/veh)	122.5	7.3	83.6	16.3	77.0	26.2	67.5	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	122.5	7.3	83.6	16.3	77.0	26.2	67.5	40.5
Queue Length 50th (ft)	45	45	62	53	96	2	21	10
Queue Length 95th (ft)	m68	176	115	302	149	40	48	68
Internal Link Dist (ft)		1163		1176		277		232
Turn Bay Length (ft)	225		200					
Base Capacity (vph)	187	3578	186	3652	214	363	227	394
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.17	0.27	0.23	0.41	0.09	0.09	0.18

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	191	387	1	1032	1	140	141	234
v/c Ratio	0.45	0.10	0.00	0.30	0.00	0.76	0.76	0.61
Control Delay (s/veh)	7.9	5.4	6.0	12.2	0.0	101.7	102.1	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.9	5.4	6.0	12.2	0.0	101.7	102.1	14.7
Queue Length 50th (ft)	42	30	1	238	0	173	174	0
Queue Length 95th (ft)	94	76	m1	121	0	258	260	91
Internal Link Dist (ft)		3136		412	152		614	
Turn Bay Length (ft)	150		75			225		
Base Capacity (vph)	516	4025	878	3479	593	222	222	412
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.10	0.00	0.30	0.00	0.63	0.64	0.57

Intersection Summary

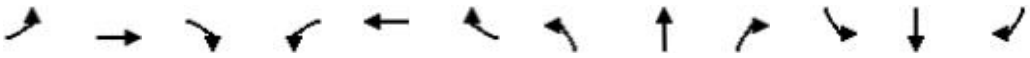
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	26	18	55	139	6	563	99	516
v/c Ratio	0.14	0.10	0.26	0.45	0.01	0.63	0.22	0.46
Control Delay (s/veh)	30.7	23.7	30.9	11.2	6.8	20.2	7.4	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.7	23.7	30.9	11.2	6.8	20.2	7.4	11.3
Queue Length 50th (ft)	10	4	21	0	1	192	16	107
Queue Length 95th (ft)	34	22	55	47	6	#403	39	286
Internal Link Dist (ft)		94	1053			614		1570
Turn Bay Length (ft)	25				225		225	
Base Capacity (vph)	503	493	509	549	790	898	679	1126
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.04	0.11	0.25	0.01	0.63	0.15	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	12	540	365	190	536	4	344	17	261	7	19	21
v/c Ratio	0.03	0.52	0.51	0.39	0.30	0.00	0.47	0.04	0.45	0.03	0.08	0.06
Control Delay (s/veh)	9.2	18.6	5.5	10.8	10.7	0.0	21.9	16.3	5.8	14.7	26.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.2	18.6	5.5	10.8	10.7	0.0	21.9	16.3	5.8	14.7	26.0	0.3
Queue Length 50th (ft)	1	62	0	22	33	0	44	4	0	2	5	0
Queue Length 95th (ft)	11	145	57	82	134	0	99	19	53	9	25	0
Internal Link Dist (ft)		757			815			1570			694	
Turn Bay Length (ft)	250		175	175		150	250		350	400		
Base Capacity (vph)	425	1304	801	489	1793	903	1244	1163	1031	231	675	705
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.41	0.46	0.39	0.30	0.00	0.28	0.01	0.25	0.03	0.03	0.03

Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	319	485	197	716	686	378
v/c Ratio	0.52	0.78	0.48	0.30	0.83	0.42
Control Delay (s/veh)	27.6	22.7	9.9	4.7	26.5	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.6	22.7	9.9	4.7	26.5	3.0
Queue Length 50th (ft)	62	112	23	48	225	0
Queue Length 95th (ft)	102	#241	73	85	#447	43
Internal Link Dist (ft)	2519			696	2220	
Turn Bay Length (ft)	125		275			
Base Capacity (vph)	1015	641	433	2734	1010	1031
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.76	0.45	0.26	0.68	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



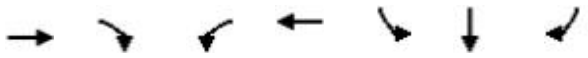
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	422	635	39	21	457	125	23	7	147	146	507
v/c Ratio	0.48	0.27	0.04	0.29	0.28	0.15	0.21	0.03	0.76	0.75	0.39
Control Delay (s/veh)	40.8	13.2	0.6	84.1	30.9	0.4	75.5	69.7	92.2	90.6	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.8	13.2	0.6	84.1	30.9	0.4	75.5	69.7	92.2	90.6	2.4
Queue Length 50th (ft)	71	271	0	22	171	0	24	3	162	161	2
Queue Length 95th (ft)	84	396	7	54	250	0	56	13	238	236	29
Internal Link Dist (ft)		788			4344			304		3136	
Turn Bay Length (ft)	675		150	250		150	125		200		
Base Capacity (vph)	949	2371	1105	87	1618	851	133	267	288	291	1351
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.27	0.04	0.24	0.28	0.15	0.17	0.03	0.51	0.50	0.38

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	682	781	797	165	293	296	442
v/c Ratio	0.87	0.32	0.58	0.24	0.80	0.80	0.49
Control Delay (s/veh)	50.0	24.8	30.8	3.9	74.7	75.2	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.0	24.8	30.8	3.9	74.7	75.2	8.7
Queue Length 50th (ft)	296	354	220	4	311	314	23
Queue Length 95th (ft)	431	498	294	12	409	412	71
Internal Link Dist (ft)		1242	788			653	
Turn Bay Length (ft)	450						275
Base Capacity (vph)	895	2474	1375	700	454	456	1024
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.32	0.58	0.24	0.65	0.65	0.43

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1337	673	272	1084	76	360	365
v/c Ratio	0.67	0.61	0.71	0.43	0.22	0.92	0.90
Control Delay (s/veh)	28.7	7.9	72.0	3.3	51.5	68.5	65.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.7	7.9	72.0	3.3	51.5	68.5	65.8
Queue Length 50th (ft)	521	76	139	22	70	284	280
Queue Length 95th (ft)	721	243	172	72	115	408	400
Internal Link Dist (ft)	525			1242		769	
Turn Bay Length (ft)		300	150				
Base Capacity (vph)	1994	1100	467	2525	454	478	494
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.61	0.58	0.43	0.17	0.75	0.74

Intersection Summary



Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	269	569	13	20	100	1453	24	2	1207	524
v/c Ratio	0.52	0.65	0.08	0.08	0.38	0.43	0.02	0.03	0.42	0.48
Control Delay (s/veh)	67.2	50.7	73.6	36.9	85.0	15.4	0.0	74.0	21.9	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.2	50.7	73.6	36.9	85.0	15.4	0.0	74.0	21.9	3.3
Queue Length 50th (ft)	144	287	6	3	56	234	0	2	250	0
Queue Length 95th (ft)	190	356	20	19	m86	484	m0	13	361	65
Internal Link Dist (ft)				377		803			938	
Turn Bay Length (ft)	150	250	150		325		200	275		750
Base Capacity (vph)	658	1000	171	246	433	3388	1110	92	2866	1101
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.57	0.08	0.08	0.23	0.43	0.02	0.02	0.42	0.48

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	907	345	628	533	270	1522
v/c Ratio	0.81	0.36	0.35	0.60	0.83	0.51
Control Delay (s/veh)	54.9	32.3	19.5	9.7	75.6	25.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	54.9	32.3	19.5	9.7	75.6	25.6
Queue Length 50th (ft)	459	126	96	136	295	370
Queue Length 95th (ft)	498	161	206	500	#455	550
Internal Link Dist (ft)			1028			803
Turn Bay Length (ft)	500	550		250		
Base Capacity (vph)	1349	1147	1772	894	333	2986
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.30	0.35	0.60	0.81	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	77	57	15	14	59	29	933	8	226	1566	81
v/c Ratio	0.35	0.29	0.19	0.14	0.23	0.15	0.36	0.01	0.43	0.43	0.07
Control Delay (s/veh)	75.9	49.3	79.6	75.4	2.0	10.5	12.3	0.0	12.6	5.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	75.9	49.3	79.6	75.4	2.0	10.5	12.3	0.0	12.6	5.4	0.1
Queue Length 50th (ft)	41	34	16	15	0	6	76	0	37	102	0
Queue Length 95th (ft)	70	87	44	41	0	14	87	m0	102	113	1
Internal Link Dist (ft)		564		358			731			1028	
Turn Bay Length (ft)	425				100	175		100	175		
Base Capacity (vph)	300	243	80	145	296	215	2596	890	567	3623	1166
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.23	0.19	0.10	0.20	0.13	0.36	0.01	0.40	0.43	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	66	142	72	88	624	13	149	836	184	1014	399
v/c Ratio	0.33	0.27	0.14	0.41	0.80	0.03	0.54	0.33	0.73	0.57	0.40
Control Delay (s/veh)	46.5	56.4	19.5	77.2	73.7	0.1	77.2	23.6	110.1	15.3	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.5	56.4	19.5	77.2	73.7	0.1	77.2	23.6	110.1	15.3	3.0
Queue Length 50th (ft)	34	84	24	47	234	0	82	192	107	218	13
Queue Length 95th (ft)	65	128	77	79	288	0	121	226	#162	102	16
Internal Link Dist (ft)		1258			1004			401		731	
Turn Bay Length (ft)	350		250	325		150	225		275		
Base Capacity (vph)	241	534	542	252	799	499	344	2571	253	1779	1020
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.27	0.13	0.35	0.78	0.03	0.43	0.33	0.73	0.57	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	1	382	14	1142	1	9	3	4
v/c Ratio	0.02	0.08	0.22	0.24	0.01	0.01	0.05	0.07
Control Delay (s/veh)	77.0	0.6	86.9	1.4	68.0	0.0	70.3	54.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	77.0	0.6	86.9	1.4	68.0	0.0	70.3	54.3
Queue Length 50th (ft)	1	0	15	0	1	0	4	1
Queue Length 95th (ft)	9	10	m29	85	8	0	18	16
Internal Link Dist (ft)		1176		1258				263
Turn Bay Length (ft)	300		275			75		
Base Capacity (vph)	155	4572	99	4713	211	720	162	190
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.08	0.14	0.24	0.00	0.01	0.02	0.02

Intersection Summary

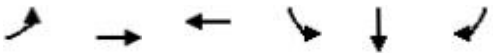
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	6	414	20	1124	9	7
v/c Ratio	0.10	0.09	0.30	0.23	0.15	0.01
Control Delay (s/veh)	80.2	0.3	81.6	0.6	80.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.2	0.3	81.6	0.6	80.0	0.0
Queue Length 50th (ft)	6	2	23	0	10	0
Queue Length 95th (ft)	m18	5	59	50	31	0
Internal Link Dist (ft)		1163		1176		277
Turn Bay Length (ft)	225		200			
Base Capacity (vph)	155	4550	139	4887	151	770
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.09	0.14	0.23	0.06	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



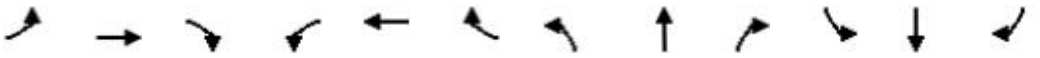
Lane Group	EBL	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	256	178	1056	127	128	156
v/c Ratio	0.54	0.04	0.32	0.73	0.74	0.52
Control Delay (s/veh)	14.1	1.0	4.0	93.0	93.6	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.1	1.0	4.0	93.0	93.6	15.2
Queue Length 50th (ft)	15	4	24	138	137	0
Queue Length 95th (ft)	130	5	117	220	216	73
Internal Link Dist (ft)		3136	412		614	
Turn Bay Length (ft)	150			225		
Base Capacity (vph)	519	4122	3343	197	197	321
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.04	0.32	0.64	0.65	0.49

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	2	11	3	23	4	728	83	433
v/c Ratio	0.01	0.06	0.02	0.10	0.00	0.54	0.16	0.27
Control Delay (s/veh)	33.5	29.8	34.0	0.9	3.3	9.6	2.9	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.5	29.8	34.0	0.9	3.3	9.6	2.9	4.3
Queue Length 50th (ft)	1	3	1	0	0	78	0	0
Queue Length 95th (ft)	8	20	10	0	3	420	26	188
Internal Link Dist (ft)		94	1053			614		1570
Turn Bay Length (ft)	25				225		225	
Base Capacity (vph)	531	533	540	530	1050	1427	787	1617
Starvation Cap Reductn	0	0	0	0	0	2	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.02	0.01	0.04	0.00	0.51	0.11	0.27

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	21	605	342	158	1040	4	446	24	182	9	24	9
v/c Ratio	0.07	0.49	0.45	0.36	0.60	0.00	0.55	0.05	0.32	0.04	0.11	0.03
Control Delay (s/veh)	10.5	18.3	4.9	11.9	16.0	0.0	22.2	15.5	5.0	14.8	27.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	10.5	18.3	4.9	11.9	16.0	0.0	22.2	15.5	5.0	14.8	27.2	0.1
Queue Length 50th (ft)	2	71	0	18	80	0	57	5	0	3	6	0
Queue Length 95th (ft)	17	172	57	76	#362	0	127	23	42	11	31	0
Internal Link Dist (ft)		757			815			1570			694	
Turn Bay Length (ft)	250		175	175		150	250		350	400		
Base Capacity (vph)	283	1367	807	438	1729	878	1217	1138	1025	228	642	635
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.44	0.42	0.36	0.60	0.00	0.37	0.02	0.18	0.04	0.04	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	307	195	330	874	799	532
v/c Ratio	0.57	0.29	0.82	0.34	0.87	0.50
Control Delay (s/veh)	36.1	7.8	35.8	4.5	29.7	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.1	7.8	35.8	4.5	29.7	2.9
Queue Length 50th (ft)	80	20	100	68	339	0
Queue Length 95th (ft)	121	66	#271	112	#632	48
Internal Link Dist (ft)	2519			696	2220	
Turn Bay Length (ft)	125		275			
Base Capacity (vph)	799	673	401	2857	1076	1157
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.29	0.82	0.31	0.74	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	284	422	4	14	488	159	33	27	66	67	570
v/c Ratio	0.35	0.17	0.00	0.22	0.28	0.18	0.29	0.12	0.59	0.59	0.48
Control Delay (s/veh)	28.8	14.9	0.0	82.4	26.7	2.6	76.9	64.2	76.2	76.5	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.8	14.9	0.0	82.4	26.7	2.6	76.9	64.2	76.2	76.5	5.1
Queue Length 50th (ft)	52	113	0	15	164	0	35	13	78	77	4
Queue Length 95th (ft)	83	206	m0	43	240	30	73	30	137	137	104
Internal Link Dist (ft)		788			4344			304		3136	
Turn Bay Length (ft)	675		150	250		150	125		200		
Base Capacity (vph)	828	2440	1162	80	1737	871	185	374	229	231	1204
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.17	0.00	0.18	0.28	0.18	0.18	0.07	0.29	0.29	0.47

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

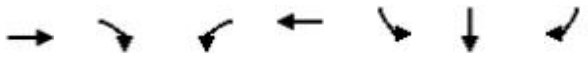


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	733	359	978	48	474	477	385
v/c Ratio	0.85	0.16	0.89	0.08	1.05	1.06	0.40
Control Delay (s/veh)	47.4	21.2	67.7	4.1	111.8	112.9	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.4	21.2	67.7	4.1	111.8	112.9	12.2
Queue Length 50th (ft)	252	112	475	1	~581	~582	39
Queue Length 95th (ft)	441	214	#733	16	#828	#825	90
Internal Link Dist (ft)		1242	788			653	
Turn Bay Length (ft)	450						275
Base Capacity (vph)	994	2205	1104	573	450	451	955
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.16	0.89	0.08	1.05	1.06	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1086	626	301	1536	13	87	88
v/c Ratio	0.44	0.50	0.73	0.50	0.14	0.67	0.62
Control Delay (s/veh)	11.8	2.6	77.0	0.2	72.1	56.2	44.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.8	2.6	77.0	0.2	72.1	56.2	44.2
Queue Length 50th (ft)	241	9	148	0	14	39	29
Queue Length 95th (ft)	364	60	m143	m1	41	106	95
Internal Link Dist (ft)	525			1242		769	
Turn Bay Length (ft)		300	150				
Base Capacity (vph)	2461	1247	617	3049	380	367	384
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.50	0.49	0.50	0.03	0.24	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	192	2	627	18	32	302	1496	14	6	1306	731
v/c Ratio	0.49	0.01	0.67	0.12	0.13	0.62	0.42	0.01	0.09	0.48	0.68
Control Delay (s/veh)	80.4	68.5	55.3	84.5	62.4	74.7	10.2	0.0	85.3	27.3	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.4	68.5	55.3	84.5	62.4	74.7	10.2	0.0	85.3	27.3	12.5
Queue Length 50th (ft)	118	2	384	10	13	193	286	0	7	354	199
Queue Length 95th (ft)	162	12	440	26	35	m241	310	m0	26	433	388
Internal Link Dist (ft)		418			377		803			938	
Turn Bay Length (ft)	150		250	150		325		200	275		750
Base Capacity (vph)	472	292	1056	152	241	633	3532	1154	82	2735	1082
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.01	0.59	0.12	0.13	0.48	0.42	0.01	0.07	0.48	0.68

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	754	385	1069	614	462	1513
v/c Ratio	0.86	0.49	0.69	0.77	0.89	0.44
Control Delay (s/veh)	74.0	42.7	38.5	15.8	63.7	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.0	42.7	38.5	15.8	63.7	9.8
Queue Length 50th (ft)	441	163	343	86	367	242
Queue Length 95th (ft)	519	222	311	197	464	238
Internal Link Dist (ft)			1028			803
Turn Bay Length (ft)	500	550		250		
Base Capacity (vph)	944	840	1541	800	578	3403
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.46	0.69	0.77	0.80	0.44

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	236	142	51	52	147	61	892	22	337	1333	109
v/c Ratio	0.67	0.56	0.64	0.44	0.43	0.29	0.43	0.03	0.58	0.42	0.10
Control Delay (s/veh)	86.9	64.3	116.9	92.0	3.9	23.6	32.6	0.0	19.4	11.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	86.9	64.3	116.9	92.0	3.9	23.6	32.6	0.0	19.4	11.0	0.3
Queue Length 50th (ft)	143	127	61	61	0	32	175	0	96	128	0
Queue Length 95th (ft)	189	201	#132	112	0	m54	200	m0	113	319	3
Internal Link Dist (ft)		564		358			731			1028	
Turn Bay Length (ft)	425				100	175		100	175		
Base Capacity (vph)	457	312	81	160	372	211	2070	789	661	3183	1052
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.46	0.63	0.33	0.40	0.29	0.43	0.03	0.51	0.42	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	270	382	194	111	611	52	216	701	187	957	415
v/c Ratio	0.70	0.52	0.38	0.48	0.75	0.12	0.72	0.30	0.67	0.59	0.41
Control Delay (s/veh)	75.9	76.5	31.2	87.5	78.0	3.3	93.5	31.0	130.8	20.3	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay (s/veh)	75.9	76.5	31.2	87.5	78.0	3.3	93.5	31.0	130.8	20.4	7.0
Queue Length 50th (ft)	168	242	82	67	259	0	130	198	118	398	241
Queue Length 95th (ft)	223	300	243	103	301	15	#194	243	168	450	198
Internal Link Dist (ft)		1258			1004			401		731	
Turn Bay Length (ft)	350		250	325		150	225		275		
Base Capacity (vph)	431	801	516	305	946	432	305	2322	288	1635	1027
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	85	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.48	0.38	0.36	0.65	0.12	0.71	0.30	0.65	0.62	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	12	614	117	1056	103	10	140	71	25
v/c Ratio	0.21	0.18	0.74	0.28	0.51	0.11	0.68	0.46	0.35
Control Delay (s/veh)	69.4	23.3	83.2	22.2	77.2	82.8	27.4	79.1	60.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.4	23.3	83.2	22.2	77.2	82.8	27.4	79.1	60.7
Queue Length 50th (ft)	15	76	147	283	114	12	0	77	13
Queue Length 95th (ft)	38	279	m213	410	173	35	77	127	50
Internal Link Dist (ft)		1176		1258		246			263
Turn Bay Length (ft)	300		275				75		
Base Capacity (vph)	187	3327	193	3819	217	291	366	232	279
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.18	0.61	0.28	0.47	0.03	0.38	0.31	0.09

Intersection Summary

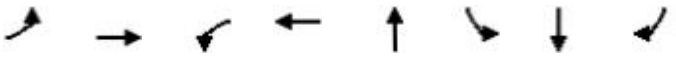
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	39	654	55	947	96	35	22	80
v/c Ratio	0.47	0.18	0.56	0.26	0.52	0.18	0.19	0.62
Control Delay (s/veh)	120.1	8.1	81.4	19.2	77.7	24.6	67.0	40.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	120.1	8.1	81.4	19.2	77.7	24.6	67.0	40.4
Queue Length 50th (ft)	49	78	69	79	106	2	23	11
Queue Length 95th (ft)	m70	192	122	357	160	42	51	72
Internal Link Dist (ft)		1163		1176		277		232
Turn Bay Length (ft)	225		200					
Base Capacity (vph)	187	3539	186	3617	215	366	230	399
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.18	0.30	0.26	0.45	0.10	0.10	0.20

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	211	428	1	1141	1	154	156	259
v/c Ratio	0.53	0.11	0.00	0.34	0.00	0.79	0.80	0.63
Control Delay (s/veh)	9.6	5.6	5.0	13.9	0.0	104.4	105.4	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.6	5.6	5.0	13.9	0.0	104.4	105.4	14.3
Queue Length 50th (ft)	51	35	1	278	0	190	192	0
Queue Length 95th (ft)	103	84	m1	116	0	284	#287	94
Internal Link Dist (ft)		3136		412	152		614	
Turn Bay Length (ft)	150		75			225		
Base Capacity (vph)	476	3998	844	3381	568	222	222	434
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.11	0.00	0.34	0.00	0.69	0.70	0.60

Intersection Summary

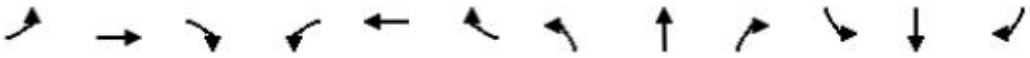
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	28	20	61	153	7	622	109	569
v/c Ratio	0.15	0.11	0.28	0.47	0.01	0.66	0.28	0.51
Control Delay (s/veh)	30.6	23.2	30.9	10.9	7.0	19.4	8.4	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.6	23.2	30.9	10.9	7.0	19.4	8.4	12.1
Queue Length 50th (ft)	11	4	24	0	1	211	18	124
Queue Length 95th (ft)	34	24	59	48	6	#427	43	323
Internal Link Dist (ft)		94	1053			614		1570
Turn Bay Length (ft)	25				225		225	
Base Capacity (vph)	512	502	521	569	481	953	391	1118
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.04	0.12	0.27	0.01	0.65	0.28	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	13	597	403	211	593	4	380	19	288	9	21	23
v/c Ratio	0.03	0.59	0.55	0.49	0.35	0.00	0.52	0.04	0.45	0.04	0.10	0.06
Control Delay (s/veh)	10.2	21.0	5.8	14.1	12.2	0.0	23.7	15.7	5.3	13.9	27.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	10.2	21.0	5.8	14.1	12.2	0.0	23.7	15.7	5.3	13.9	27.6	0.3
Queue Length 50th (ft)	2	100	0	43	67	0	68	5	0	2	7	0
Queue Length 95th (ft)	11	164	61	94	154	0	109	20	55	11	27	0
Internal Link Dist (ft)		757			815			1570			694	
Turn Bay Length (ft)	250		175	175		150	250		350	400		
Base Capacity (vph)	395	1240	804	432	1715	872	1171	1094	996	232	635	675
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.48	0.50	0.49	0.35	0.00	0.32	0.02	0.29	0.04	0.03	0.03

Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	352	535	218	792	758	418
v/c Ratio	0.57	0.88	0.57	0.33	0.87	0.43
Control Delay (s/veh)	31.1	33.9	16.7	5.0	30.0	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.1	33.9	16.7	5.0	30.0	2.9
Queue Length 50th (ft)	79	167	34	60	287	0
Queue Length 95th (ft)	120	#376	113	103	#550	46
Internal Link Dist (ft)	2519			696	2220	
Turn Bay Length (ft)	125		275			
Base Capacity (vph)	903	625	401	2713	1007	1048
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.86	0.54	0.29	0.75	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



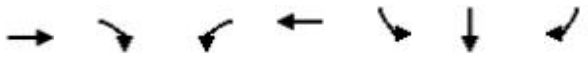
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	466	701	43	23	504	138	25	8	162	161	560
v/c Ratio	0.52	0.30	0.04	0.32	0.32	0.17	0.23	0.04	0.78	0.77	0.43
Control Delay (s/veh)	45.2	15.9	0.5	85.8	32.8	0.4	76.0	69.9	91.6	90.1	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.2	15.9	0.5	85.8	32.8	0.4	76.0	69.9	91.6	90.1	5.4
Queue Length 50th (ft)	89	316	0	24	198	0	26	4	178	176	34
Queue Length 95th (ft)	93	446	7	57	276	0	60	14	257	255	60
Internal Link Dist (ft)		788			4344			304		3136	
Turn Bay Length (ft)	675		150	250		150	125		200		
Base Capacity (vph)	953	2339	1092	85	1569	833	133	267	288	291	1340
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.30	0.04	0.27	0.32	0.17	0.19	0.03	0.56	0.55	0.42

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	753	862	881	182	323	327	488
v/c Ratio	0.90	0.36	0.70	0.28	0.82	0.83	0.55
Control Delay (s/veh)	52.1	28.3	36.8	5.8	74.4	75.1	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	52.1	28.3	36.8	5.8	74.4	75.1	17.8
Queue Length 50th (ft)	397	476	275	3	340	345	77
Queue Length 95th (ft)	473	553	336	15	455	461	138
Internal Link Dist (ft)		1242	788			653	
Turn Bay Length (ft)	450						275
Base Capacity (vph)	895	2416	1260	653	454	456	980
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.36	0.70	0.28	0.71	0.72	0.50

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1477	743	301	1198	85	397	403
v/c Ratio	0.80	0.70	0.75	0.50	0.21	0.94	0.92
Control Delay (s/veh)	37.2	12.1	72.1	5.0	48.1	75.6	72.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.2	12.1	72.1	5.0	48.1	75.6	72.0
Queue Length 50th (ft)	705	173	140	91	73	349	343
Queue Length 95th (ft)	846	359	195	168	126	#553	#536
Internal Link Dist (ft)	525			1242		769	
Turn Bay Length (ft)		300	150				
Base Capacity (vph)	1842	1056	467	2395	454	459	475
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.70	0.64	0.50	0.19	0.86	0.85

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	269	680	13	20	226	1517	24	2	1318	524
v/c Ratio	0.48	0.67	0.08	0.08	0.59	0.46	0.02	0.03	0.51	0.50
Control Delay (s/veh)	65.2	46.2	73.6	36.5	81.0	19.7	0.0	74.0	27.6	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.2	46.2	73.6	36.5	81.0	19.7	0.0	74.0	27.6	3.7
Queue Length 50th (ft)	144	321	6	3	127	295	0	2	332	0
Queue Length 95th (ft)	190	428	20	19	170	563	m0	13	418	68
Internal Link Dist (ft)				377		803			938	
Turn Bay Length (ft)	150	250	150		325		200	275		750
Base Capacity (vph)	685	1061	171	264	433	3297	1085	92	2602	1048
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.64	0.08	0.08	0.52	0.46	0.02	0.02	0.51	0.50

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	907	489	812	595	270	1737
v/c Ratio	0.80	0.50	0.46	0.64	0.84	0.59
Control Delay (s/veh)	53.6	37.1	25.6	9.8	72.5	26.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.6	37.1	25.6	9.8	72.5	26.1
Queue Length 50th (ft)	454	202	242	369	297	452
Queue Length 95th (ft)	492	243	m283	m478	#470	657
Internal Link Dist (ft)			1028			803
Turn Bay Length (ft)	500	550		250		
Base Capacity (vph)	1349	1147	1756	930	329	2959
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.43	0.46	0.64	0.82	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	276	103	15	68	59	71	986	8	226	1631	381
v/c Ratio	0.92	0.35	0.19	0.53	0.21	0.43	0.44	0.01	0.47	0.52	0.34
Control Delay (s/veh)	106.4	56.1	79.6	86.4	1.6	31.3	17.9	0.0	14.6	10.7	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	106.4	56.1	79.6	86.4	1.6	31.3	17.9	0.0	14.6	10.7	1.1
Queue Length 50th (ft)	152	79	16	71	0	18	97	0	46	181	10
Queue Length 95th (ft)	#243	156	44	127	0	56	110	m0	93	150	13
Internal Link Dist (ft)		564		358			731			1028	
Turn Bay Length (ft)	425				100	175		100	175		
Base Capacity (vph)	300	298	80	145	296	172	2258	798	518	3111	1116
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.35	0.19	0.47	0.20	0.41	0.44	0.01	0.44	0.52	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	119	174	104	88	677	13	204	877	184	1027	464
v/c Ratio	0.52	0.32	0.19	0.41	0.87	0.03	0.65	0.34	0.75	0.60	0.47
Control Delay (s/veh)	80.0	54.3	13.7	77.2	78.8	0.1	79.9	24.2	111.9	13.4	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.0	54.3	13.7	77.2	78.8	0.1	79.9	24.2	111.9	13.5	2.8
Queue Length 50th (ft)	62	87	22	47	261	0	112	203	107	123	15
Queue Length 95th (ft)	105	144	m79	79	#324	0	159	238	#163	96	16
Internal Link Dist (ft)		1258			1004			401		731	
Turn Bay Length (ft)	350		250	325		150	225		275		
Base Capacity (vph)	241	548	553	252	783	494	344	2548	244	1714	992
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	42	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.32	0.19	0.35	0.86	0.03	0.59	0.34	0.75	0.61	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	99	395	14	1329	1	9	116	61
v/c Ratio	0.67	0.10	0.22	0.39	0.01	0.02	0.74	0.26
Control Delay (s/veh)	98.8	5.0	99.9	6.6	56.0	0.0	90.3	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	98.8	5.0	99.9	6.6	56.0	0.0	90.3	16.6
Queue Length 50th (ft)	111	20	16	68	1	0	151	1
Queue Length 95th (ft)	179	34	m25	181	7	0	225	49
Internal Link Dist (ft)		1176		1258				263
Turn Bay Length (ft)	300		275			75		
Base Capacity (vph)	169	3839	99	3397	237	620	180	257
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.10	0.14	0.39	0.00	0.01	0.64	0.24

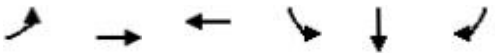
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	156	512	20	1270	9	7	13	68
v/c Ratio	0.65	0.12	0.30	0.36	0.12	0.01	0.17	0.19
Control Delay (s/veh)	67.2	1.5	80.4	6.5	72.0	0.0	74.1	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.2	1.5	80.4	6.5	72.0	0.0	74.1	1.2
Queue Length 50th (ft)	129	6	23	87	10	0	14	0
Queue Length 95th (ft)	222	56	0	86	28	0	35	0
Internal Link Dist (ft)		1163		1176		277		232
Turn Bay Length (ft)	225		200					
Base Capacity (vph)	240	4108	139	3534	165	710	162	583
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.12	0.14	0.36	0.05	0.01	0.08	0.12

Intersection Summary



Lane Group	EBL	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	353	455	1218	127	128	199
v/c Ratio	0.65	0.11	0.42	0.77	0.78	0.60
Control Delay (s/veh)	30.5	0.7	13.1	98.6	99.3	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.5	0.7	13.1	98.6	99.3	15.9
Queue Length 50th (ft)	154	6	382	140	138	0
Queue Length 95th (ft)	328	8	402	#245	#241	83
Internal Link Dist (ft)		3136	412		614	
Turn Bay Length (ft)	150			225		
Base Capacity (vph)	540	4149	2917	176	176	342
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.11	0.42	0.72	0.73	0.58

Intersection Summary

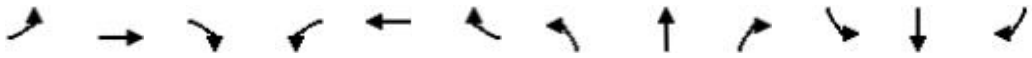
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	2	11	48	67	4	828	183	433
v/c Ratio	0.02	0.08	0.29	0.29	0.01	0.74	0.45	0.30
Control Delay (s/veh)	41.5	37.5	42.8	7.5	5.5	21.4	7.5	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.5	37.5	42.8	7.5	5.5	21.4	7.5	6.4
Queue Length 50th (ft)	1	4	22	0	0	250	15	42
Queue Length 95th (ft)	9	23	65	23	4	#765	62	210
Internal Link Dist (ft)		94	1053			614		1570
Turn Bay Length (ft)	25				225		225	
Base Capacity (vph)	384	386	385	410	913	1112	557	1424
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.03	0.12	0.16	0.00	0.74	0.33	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	21	605	386	214	1040	4	458	24	214	9	24	9
v/c Ratio	0.08	0.58	0.53	0.50	0.60	0.00	0.56	0.05	0.36	0.04	0.11	0.03
Control Delay (s/veh)	10.7	20.1	5.6	15.4	16.1	0.0	22.3	15.5	4.9	14.8	27.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	10.7	20.1	5.6	15.4	16.1	0.0	22.3	15.5	4.9	14.8	27.4	0.1
Queue Length 50th (ft)	2	71	0	26	81	0	59	5	0	3	6	0
Queue Length 95th (ft)	17	173	60	#114	#366	0	131	23	44	11	31	0
Internal Link Dist (ft)		757			815			1570			694	
Turn Bay Length (ft)	250		175	175		150	250		350	400		
Base Capacity (vph)	280	1318	818	427	1732	879	1204	1126	1028	226	635	630
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.46	0.47	0.50	0.60	0.00	0.38	0.02	0.21	0.04	0.04	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	307	195	330	970	843	532
v/c Ratio	0.58	0.30	0.87	0.37	0.89	0.49
Control Delay (s/veh)	37.1	9.2	44.4	4.7	31.7	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.1	9.2	44.4	4.7	31.7	2.8
Queue Length 50th (ft)	80	27	111	78	374	0
Queue Length 95th (ft)	121	74	#289	127	#689	48
Internal Link Dist (ft)	2519			696	2220	
Turn Bay Length (ft)	125		275			
Base Capacity (vph)	768	647	378	2771	1034	1133
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.30	0.87	0.35	0.82	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	624	422	4	14	488	202	33	27	72	73	768
v/c Ratio	0.59	0.17	0.00	0.22	0.32	0.25	0.29	0.12	0.61	0.61	0.58
Control Delay (s/veh)	30.0	16.8	0.0	82.4	32.7	5.5	76.9	64.2	66.7	66.9	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.0	16.8	0.0	82.4	32.7	5.5	76.9	64.2	66.7	66.9	12.0
Queue Length 50th (ft)	130	132	0	15	188	5	35	13	85	84	161
Queue Length 95th (ft)	175	206	m0	43	253	62	73	30	m143	m142	230
Internal Link Dist (ft)		788			4344			304		3136	
Turn Bay Length (ft)	675		150	250		150	125		200		
Base Capacity (vph)	1064	2427	1157	80	1539	798	196	396	219	220	1330
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.17	0.00	0.18	0.32	0.25	0.17	0.07	0.33	0.33	0.58

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

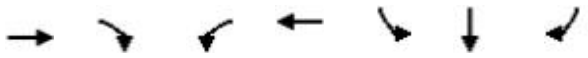


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	733	527	1141	80	474	477	553
v/c Ratio	0.85	0.24	1.03	0.14	1.05	1.06	0.53
Control Delay (s/veh)	52.9	24.8	91.2	8.5	111.8	112.9	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	52.9	24.8	91.2	8.5	111.8	112.9	12.6
Queue Length 50th (ft)	310	215	~684	8	~581	~582	57
Queue Length 95th (ft)	419	301	#928	28	#828	#825	122
Internal Link Dist (ft)		1242	788			653	
Turn Bay Length (ft)	450						275
Base Capacity (vph)	994	2205	1104	573	450	451	1050
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.24	1.03	0.14	1.05	1.06	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1197	626	398	1600	62	90	90
v/c Ratio	0.51	0.52	0.78	0.53	0.57	0.66	0.58
Control Delay (s/veh)	15.6	3.9	69.5	0.2	90.9	58.7	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.6	3.9	69.5	0.2	90.9	58.7	40.5
Queue Length 50th (ft)	323	31	197	0	71	50	30
Queue Length 95th (ft)	467	118	m161	m1	127	118	98
Internal Link Dist (ft)	525			1242		769	
Turn Bay Length (ft)		300	150				
Base Capacity (vph)	2327	1194	619	3012	380	364	384
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.52	0.64	0.53	0.16	0.25	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	192	2	971	18	32	440	1587	14	6	1488	731
v/c Ratio	0.48	0.01	0.91	0.12	0.13	0.70	0.45	0.01	0.09	0.59	0.72
Control Delay (s/veh)	79.6	68.5	66.3	84.5	62.4	79.5	8.9	0.0	85.3	33.9	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	79.6	68.5	66.3	84.5	62.4	79.5	9.1	0.0	85.3	33.9	16.7
Queue Length 50th (ft)	118	2	663	10	13	286	265	0	7	465	272
Queue Length 95th (ft)	162	12	#835	26	35	m328	291	m0	26	513	446
Internal Link Dist (ft)		418			377		803			938	
Turn Bay Length (ft)	150		250	150		325		200	275		750
Base Capacity (vph)	486	300	1068	152	241	633	3511	1148	82	2511	1012
Starvation Cap Reductn	0	0	0	0	0	0	733	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.01	0.91	0.12	0.13	0.70	0.57	0.01	0.07	0.59	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	754	881	1300	710	462	2045
v/c Ratio	0.80	1.05	0.91	0.94	0.88	0.62
Control Delay (s/veh)	68.1	98.5	53.4	33.5	49.6	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)	68.1	98.5	53.4	33.5	49.6	11.6
Queue Length 50th (ft)	437	~597	450	194	343	330
Queue Length 95th (ft)	519	#751	m#638	m#320	m389	357
Internal Link Dist (ft)			1028			803
Turn Bay Length (ft)	500	550		250		
Base Capacity (vph)	944	840	1423	758	578	3310
Starvation Cap Reductn	0	0	0	0	0	257
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	1.05	0.91	0.94	0.80	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	493	217	51	102	147	172	958	22	337	1652	808
v/c Ratio	1.08	0.66	0.64	0.70	0.41	1.19	0.53	0.03	0.63	0.56	0.70
Control Delay (s/veh)	134.8	71.9	116.9	105.0	3.4	174.6	37.7	0.1	19.5	18.8	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	134.8	71.9	116.9	105.0	3.4	174.6	37.7	0.1	19.5	18.8	7.7
Queue Length 50th (ft)	~338	220	61	121	0	~192	194	0	125	467	89
Queue Length 95th (ft)	#462	325	#132	193	0	m#367	217	m0	m153	m450	m111
Internal Link Dist (ft)		564		358			731			1028	
Turn Bay Length (ft)	425				100	175		100	175		
Base Capacity (vph)	457	331	81	160	372	145	1796	719	612	2935	1148
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	47
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	133	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.66	0.63	0.64	0.40	1.19	0.53	0.03	0.55	0.59	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	339	430	241	111	749	52	354	817	187	990	748
v/c Ratio	0.80	0.51	0.43	0.48	0.82	0.12	1.13	0.37	0.71	0.65	0.77
Control Delay (s/veh)	78.3	71.6	39.5	87.5	79.5	3.2	160.0	34.5	133.1	18.7	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
Total Delay (s/veh)	78.3	71.6	39.5	87.5	79.5	3.2	160.0	34.5	133.1	18.9	21.0
Queue Length 50th (ft)	214	275	155	67	319	0	~273	247	122	410	766
Queue Length 95th (ft)	m271	m335	m310	103	373	15	#387	287	169	465	990
Internal Link Dist (ft)		1258			1004			401		731	
Turn Bay Length (ft)	350		250	325		150	225		275		
Base Capacity (vph)	431	839	559	305	946	454	312	2198	274	1519	978
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	85	75
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.51	0.43	0.36	0.79	0.11	1.13	0.37	0.68	0.69	0.83

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	316	651	117	1692	103	10	140	207	102
v/c Ratio	0.79	0.21	0.74	0.69	0.54	0.14	0.71	0.87	0.53
Control Delay (s/veh)	72.4	26.3	79.6	59.1	74.3	85.1	30.5	100.8	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.4	26.3	79.6	59.1	74.3	85.1	30.5	100.8	28.3
Queue Length 50th (ft)	372	120	140	708	110	12	0	236	13
Queue Length 95th (ft)	#586	292	m172	m689	168	35	77	#364	80
Internal Link Dist (ft)		1176		1258		246			263
Turn Bay Length (ft)	300		275				75		
Base Capacity (vph)	398	3156	193	2456	244	291	366	241	329
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.21	0.61	0.69	0.42	0.03	0.38	0.86	0.31

Intersection Summary

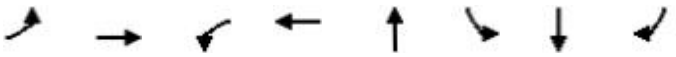
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	237	950	55	1250	96	35	58	180
v/c Ratio	0.62	0.27	0.56	0.48	0.57	0.22	0.37	0.77
Control Delay (s/veh)	75.9	9.4	104.8	40.7	79.4	26.3	70.8	33.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	75.9	9.4	104.8	40.7	79.4	26.3	70.8	33.3
Queue Length 50th (ft)	237	143	58	479	106	2	63	11
Queue Length 95th (ft)	401	208	m88	583	156	42	103	98
Internal Link Dist (ft)		1163		1176		277		232
Turn Bay Length (ft)	225		200					
Base Capacity (vph)	380	3525	186	2629	210	366	238	474
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.27	0.30	0.48	0.46	0.10	0.24	0.38

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	641	947	1	1382	1	154	156	347
v/c Ratio	1.06	0.24	0.00	0.60	0.00	0.79	0.80	0.71
Control Delay (s/veh)	96.1	6.3	4.0	12.1	0.0	103.4	104.3	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	96.1	6.3	4.0	12.1	0.0	103.4	104.3	14.7
Queue Length 50th (ft)	~746	88	0	122	0	190	192	0
Queue Length 95th (ft)	#1167	193	m0	143	0	284	#287	110
Internal Link Dist (ft)		3136		412	152		614	
Turn Bay Length (ft)	150		75			225		
Base Capacity (vph)	606	3993	482	2303	424	222	222	510
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.24	0.00	0.60	0.00	0.69	0.70	0.68

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

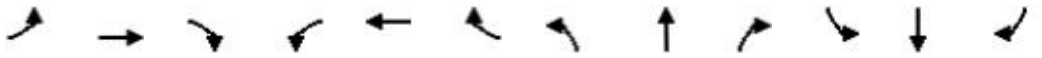


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	28	20	152	236	7	1067	281	569
v/c Ratio	0.16	0.11	0.51	0.51	0.02	1.31	1.22	0.53
Control Delay (s/veh)	33.6	25.2	33.3	8.4	9.2	171.7	151.0	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.6	25.2	33.3	8.4	9.2	171.7	151.0	15.2
Queue Length 50th (ft)	12	5	64	0	1	~662	~120	146
Queue Length 95th (ft)	37	25	121	56	8	#1019	#313	#416
Internal Link Dist (ft)		94	1053			614		1570
Turn Bay Length (ft)	25				225		225	
Base Capacity (vph)	475	467	481	599	440	812	231	1067
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.04	0.32	0.39	0.02	1.31	1.22	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	13	597	433	346	593	4	411	19	336	9	21	23
v/c Ratio	0.03	0.59	0.58	0.81	0.35	0.00	0.55	0.03	0.50	0.04	0.10	0.06
Control Delay (s/veh)	10.4	21.4	6.0	31.9	12.6	0.0	23.9	15.5	5.3	14.0	28.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	10.4	21.4	6.0	31.9	12.6	0.0	23.9	15.5	5.3	14.0	28.1	0.3
Queue Length 50th (ft)	2	102	0	80	69	0	74	5	0	2	8	0
Queue Length 95th (ft)	12	167	63	#237	157	0	117	20	59	11	27	0
Internal Link Dist (ft)		757			815			1570			694	
Turn Bay Length (ft)	250		175	175		150	250		350	400		
Base Capacity (vph)	391	1224	818	427	1701	867	1156	1080	1008	231	627	669
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.49	0.53	0.81	0.35	0.00	0.36	0.02	0.33	0.04	0.03	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	352	535	218	1038	836	418
v/c Ratio	0.59	0.94	0.60	0.42	0.91	0.42
Control Delay (s/veh)	32.5	44.6	18.6	5.5	34.5	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.5	44.6	18.6	5.5	34.5	2.8
Queue Length 50th (ft)	79	180	39	87	341	0
Queue Length 95th (ft)	120	#394	118	145	#638	46
Internal Link Dist (ft)	2519			696	2220	
Turn Bay Length (ft)	125		275			
Base Capacity (vph)	849	584	380	2554	947	1010
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.92	0.57	0.41	0.88	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	1264	701	43	23	504	251	25	8	176	179	843
v/c Ratio	0.92	0.30	0.04	0.33	0.42	0.36	0.23	0.04	0.80	0.81	0.54
Control Delay (s/veh)	45.5	18.3	0.0	86.4	42.0	6.8	76.0	69.9	92.1	92.6	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.5	18.3	0.0	86.4	42.0	6.8	76.0	69.9	92.1	92.6	12.0
Queue Length 50th (ft)	~371	264	0	24	217	11	26	4	193	196	125
Queue Length 95th (ft)	m#507	m322	m0	58	273	79	60	14	278	282	178
Internal Link Dist (ft)		788			4344			304		3136	
Turn Bay Length (ft)	675		150	250		150	125		200		
Base Capacity (vph)	1371	2315	1082	84	1201	693	133	267	288	291	1559
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.30	0.04	0.27	0.42	0.36	0.19	0.03	0.61	0.62	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



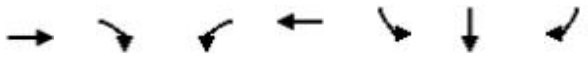
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	753	1278	1126	232	323	327	904
v/c Ratio	0.90	0.56	0.99	0.39	0.71	0.72	1.08
Control Delay (s/veh)	45.5	33.6	65.2	11.9	62.6	62.9	100.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.5	33.6	65.2	11.9	62.6	62.9	100.5
Queue Length 50th (ft)	349	697	~679	40	328	333	~543
Queue Length 95th (ft)	m375	m717	#805	103	455	461	#696
Internal Link Dist (ft)		1242	788			653	
Turn Bay Length (ft)	450						275
Base Capacity (vph)	895	2291	1136	602	454	456	837
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.56	0.99	0.39	0.71	0.72	1.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1661	743	447	1292	285	412	411
v/c Ratio	0.97	0.75	0.94	0.55	0.66	0.95	0.92
Control Delay (s/veh)	55.5	16.7	85.7	4.3	60.8	79.9	73.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.5	16.7	85.7	4.3	60.8	79.9	73.7
Queue Length 50th (ft)	907	249	228	22	282	390	373
Queue Length 95th (ft)	#1091	438	m#281	m164	396	#619	#584
Internal Link Dist (ft)	525			1242		769	
Turn Bay Length (ft)		300	150				
Base Capacity (vph)	1715	990	474	2343	454	449	463
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.75	0.94	0.55	0.63	0.92	0.89

Intersection Summary

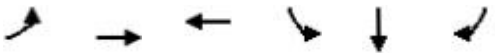
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	6	414	20	1124	9	7
v/c Ratio	0.10	0.09	0.30	0.23	0.15	0.01
Control Delay (s/veh)	80.4	0.3	81.6	0.6	80.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.4	0.3	81.6	0.6	80.0	0.0
Queue Length 50th (ft)	6	2	23	0	10	0
Queue Length 95th (ft)	m22	5	59	50	31	0
Internal Link Dist (ft)		1163		1176		277
Turn Bay Length (ft)	225		200			
Base Capacity (vph)	155	4550	139	4887	151	770
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.09	0.14	0.23	0.06	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	256	178	1056	127	128	156
v/c Ratio	0.37	0.04	0.45	0.66	0.67	0.49
Control Delay (s/veh)	7.1	1.4	28.7	83.5	83.9	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.1	1.4	28.7	83.5	83.9	13.7
Queue Length 50th (ft)	91	4	35	138	137	0
Queue Length 95th (ft)	115	6	#449	210	207	69
Internal Link Dist (ft)		3136	412		614	
Turn Bay Length (ft)	150			225		
Base Capacity (vph)	702	4067	2365	390	390	482
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.04	0.45	0.33	0.33	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	733	359	978	48	474	477	385
v/c Ratio	0.97	0.17	0.89	0.08	0.94	0.95	0.37
Control Delay (s/veh)	67.7	25.8	65.7	4.9	82.4	83.1	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.7	25.8	65.7	4.9	82.4	83.1	9.4
Queue Length 50th (ft)	345	152	480	1	518	518	30
Queue Length 95th (ft)	#482	200	#604	18	#755	#752	77
Internal Link Dist (ft)		1242	788			653	
Turn Bay Length (ft)	450						275
Base Capacity (vph)	754	2099	1104	573	513	514	1057
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.17	0.89	0.08	0.92	0.93	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	192	2	627	18	32	302	1496	14	6	1306	731
v/c Ratio	0.53	0.01	0.60	0.12	0.07	0.71	0.46	0.01	0.11	0.52	0.65
Control Delay (s/veh)	83.3	54.5	47.3	84.5	48.8	89.1	14.6	0.0	89.0	32.9	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	83.3	54.5	47.3	84.5	48.8	89.1	14.6	0.0	89.0	32.9	6.0
Queue Length 50th (ft)	119	2	334	10	12	197	290	0	7	425	29
Queue Length 95th (ft)	168	10	407	26	31	m251	310	m0	27	474	147
Internal Link Dist (ft)		418			377		803			938	
Turn Bay Length (ft)	150		250	150		325		200	275		750
Base Capacity (vph)	368	414	1057	152	610	463	3257	1076	57	2529	1133
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.00	0.59	0.12	0.05	0.65	0.46	0.01	0.11	0.52	0.65

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	236	142	51	52	147	61	892	22	337	1333	109
v/c Ratio	0.68	0.60	0.54	0.41	0.40	0.28	0.44	0.03	0.65	0.45	0.11
Control Delay (s/veh)	66.7	67.0	79.4	89.1	3.1	19.5	33.2	0.0	24.6	12.9	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.7	67.0	79.4	89.1	3.1	19.5	33.2	0.0	24.6	12.9	0.2
Queue Length 50th (ft)	120	125	49	61	0	32	175	0	119	156	0
Queue Length 95th (ft)	152	203	86	110	0	56	200	m0	204	270	1
Internal Link Dist (ft)		564		358			731			1028	
Turn Bay Length (ft)	425				100	175		100	175		
Base Capacity (vph)	543	439	195	380	550	237	2033	796	539	2971	1004
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.32	0.26	0.14	0.27	0.26	0.44	0.03	0.63	0.45	0.11

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	270	382	194	111	611	52	216	701	187	957	415
v/c Ratio	0.68	0.51	0.37	0.48	0.75	0.12	0.72	0.30	0.67	0.59	0.41
Control Delay (s/veh)	68.7	62.3	30.1	87.5	78.0	3.3	93.1	31.7	113.4	21.8	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay (s/veh)	68.7	62.3	30.1	87.5	78.0	3.3	93.1	31.7	113.4	21.9	8.2
Queue Length 50th (ft)	168	230	122	67	259	0	130	198	98	386	141
Queue Length 95th (ft)	220	289	214	103	301	15	#194	248	155	480	321
Internal Link Dist (ft)		1258			1004			401		731	
Turn Bay Length (ft)	350		250	325		150	225		275		
Base Capacity (vph)	469	815	528	343	946	433	307	2299	290	1619	1037
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	63	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.47	0.37	0.32	0.65	0.12	0.70	0.30	0.64	0.62	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	12	614	117	1056	103	10	140	71	25
v/c Ratio	0.21	0.18	0.73	0.27	0.56	0.13	0.64	0.46	0.32
Control Delay (s/veh)	115.1	17.8	81.3	22.2	81.3	85.4	19.7	79.9	57.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	115.1	17.8	81.3	22.2	81.3	85.4	19.7	79.9	57.9
Queue Length 50th (ft)	9	181	147	283	114	12	0	77	13
Queue Length 95th (ft)	37	238	m217	421	176	35	51	129	49
Internal Link Dist (ft)		1176		1258		246			263
Turn Bay Length (ft)	300		275				75		
Base Capacity (vph)	109	3348	314	3843	185	498	541	247	532
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.18	0.37	0.27	0.56	0.02	0.26	0.29	0.05

Intersection Summary

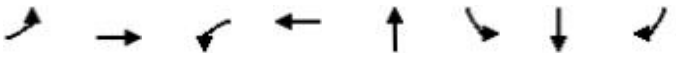
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	39	654	55	947	96	35	22	9	71
v/c Ratio	0.21	0.18	0.56	0.27	0.57	0.27	0.24	0.16	0.23
Control Delay (s/veh)	106.1	21.4	116.5	5.6	85.8	28.6	76.1	90.4	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	106.1	21.4	116.5	5.6	85.8	28.6	76.1	90.4	1.7
Queue Length 50th (ft)	46	174	69	31	111	2	26	11	0
Queue Length 95th (ft)	m88	230	123	111	165	43	52	34	0
Internal Link Dist (ft)		1163		1176		277		232	
Turn Bay Length (ft)	225		200						50
Base Capacity (vph)	187	3733	216	3454	205	479	122	437	308
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.18	0.25	0.27	0.47	0.07	0.18	0.02	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	211	428	1	1141	1	154	156	259
v/c Ratio	0.53	0.11	0.00	0.34	0.00	0.77	0.78	0.46
Control Delay (s/veh)	9.8	5.9	11.0	23.2	0.0	100.9	101.6	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.8	5.9	11.0	23.2	0.0	100.9	101.6	6.9
Queue Length 50th (ft)	49	34	1	290	0	191	193	0
Queue Length 95th (ft)	111	89	m2	363	0	277	281	63
Internal Link Dist (ft)		3136		412	152		614	
Turn Bay Length (ft)	150		75			225		
Base Capacity (vph)	473	3982	839	3343	558	250	251	633
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.11	0.00	0.34	0.00	0.62	0.62	0.41

Intersection Summary

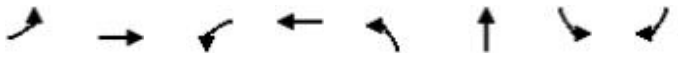
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	276	103	15	68	59	71	986	8	226	1631	381
v/c Ratio	0.73	0.29	0.22	0.48	0.15	0.42	0.42	0.01	0.55	0.55	0.37
Control Delay (s/veh)	80.4	48.1	82.1	81.3	0.8	31.9	17.8	0.0	18.3	12.6	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.4	48.1	82.1	81.3	0.8	31.9	17.8	0.0	18.3	12.6	2.3
Queue Length 50th (ft)	147	73	16	71	0	18	96	0	55	158	22
Queue Length 95th (ft)	200	142	44	123	0	61	353	m0	91	183	29
Internal Link Dist (ft)		564		358			731			1028	
Turn Bay Length (ft)	425				100	175		100	175		
Base Capacity (vph)	407	494	69	372	548	195	2328	872	466	2939	1032
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.21	0.22	0.18	0.11	0.36	0.42	0.01	0.48	0.55	0.37

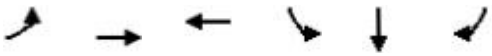
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBR
Lane Group Flow (vph)	156	512	20	1270	9	7	13	68
v/c Ratio	0.65	0.12	0.30	0.36	0.12	0.01	0.17	0.19
Control Delay (s/veh)	66.6	1.6	80.2	6.1	72.0	0.0	74.1	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.6	1.6	80.2	6.1	72.0	0.0	74.1	1.2
Queue Length 50th (ft)	127	6	23	87	10	0	14	0
Queue Length 95th (ft)	224	56	0	85	28	0	35	0
Internal Link Dist (ft)		1163		1176		277		
Turn Bay Length (ft)	225		200					50
Base Capacity (vph)	240	4108	139	3534	165	710	162	583
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.12	0.14	0.36	0.05	0.01	0.08	0.12

Intersection Summary



Lane Group	EBL	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	353	455	1218	127	128	199
v/c Ratio	0.57	0.11	0.49	0.65	0.66	0.56
Control Delay (s/veh)	34.3	1.1	24.9	82.7	83.0	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.3	1.1	24.9	82.7	83.0	13.6
Queue Length 50th (ft)	212	6	419	138	137	0
Queue Length 95th (ft)	362	10	525	208	205	77
Internal Link Dist (ft)		3136	412		614	
Turn Bay Length (ft)	150			225		
Base Capacity (vph)	616	4062	2492	388	388	514
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.11	0.49	0.33	0.33	0.39

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	2	11	47	1	67	4	693	135	183	433
v/c Ratio	0.01	0.07	0.24	0.00	0.26	0.01	0.67	0.15	0.38	0.31
Control Delay (s/veh)	41.0	36.3	39.5	38.0	6.9	5.5	19.1	5.3	6.5	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.0	36.3	39.5	38.0	6.9	5.5	19.1	5.3	6.5	6.7
Queue Length 50th (ft)	1	3	17	0	0	0	183	7	15	42
Queue Length 95th (ft)	9	23	65	6	23	4	518	46	62	210
Internal Link Dist (ft)		94		1053			614			1570
Turn Bay Length (ft)	25		100			225		100	225	
Base Capacity (vph)	477	479	477	502	486	930	1324	1137	664	1423
Starvation Cap Reductn	0	0	0	0	0	0	3	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.02	0.10	0.00	0.14	0.00	0.52	0.12	0.28	0.30

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	733	527	1141	80	474	477	553
v/c Ratio	1.03	0.25	0.96	0.13	0.99	0.99	0.50
Control Delay (s/veh)	82.5	23.1	66.1	6.7	93.2	93.6	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.5	23.1	66.1	6.7	93.2	93.6	11.1
Queue Length 50th (ft)	~371	218	672	8	533	533	51
Queue Length 95th (ft)	#509	272	#784	28	#792	#789	112
Internal Link Dist (ft)		1242	788			653	
Turn Bay Length (ft)	450						275
Base Capacity (vph)	709	2141	1194	610	481	483	1100
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.25	0.96	0.13	0.99	0.99	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	192	2	971	18	32	440	1587	14	6	1488	731
v/c Ratio	0.45	0.00	0.73	0.12	0.06	0.75	0.53	0.01	0.11	0.73	0.72
Control Delay (s/veh)	79.5	51.5	42.6	84.5	45.5	88.2	18.3	0.0	89.8	49.0	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	79.5	51.5	42.6	84.5	45.5	88.2	18.3	0.0	89.8	49.0	10.7
Queue Length 50th (ft)	119	2	544	10	12	288	289	0	7	572	82
Queue Length 95th (ft)	168	10	644	26	30	m334	320	m0	27	632	260
Internal Link Dist (ft)		418			377		803			938	
Turn Bay Length (ft)	150		250	150		325		200	275		750
Base Capacity (vph)	435	497	1344	152	685	610	2998	1002	55	2033	1014
Starvation Cap Reductn	0	0	0	0	0	0	226	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.00	0.72	0.12	0.05	0.72	0.57	0.01	0.11	0.73	0.72

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	754	881	1300	710	462	2045
v/c Ratio	0.74	0.98	0.88	0.90	0.98	0.64
Control Delay (s/veh)	62.2	79.7	69.0	36.0	100.4	12.3
Queue Delay	0.0	0.0	0.0	6.9	0.0	0.1
Total Delay (s/veh)	62.2	79.7	69.0	42.9	100.4	12.4
Queue Length 50th (ft)	423	547	570	436	519	357
Queue Length 95th (ft)	502	#710	628	#625	#754	313
Internal Link Dist (ft)			1028			803
Turn Bay Length (ft)	500	550		250		
Base Capacity (vph)	1020	900	1469	785	474	3197
Starvation Cap Reductn	0	0	0	54	0	236
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.98	0.88	0.97	0.97	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	493	217	51	102	147	172	958	22	337	1652	808
v/c Ratio	0.80	0.55	0.45	0.61	0.44	0.82	0.55	0.03	0.75	0.69	0.81
Control Delay (s/veh)	80.8	59.6	93.0	94.1	5.0	83.5	80.8	0.1	34.6	46.7	29.0
Queue Delay	0.0	0.2	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
Total Delay (s/veh)	80.8	59.8	94.3	94.1	5.0	83.5	80.8	0.1	34.6	47.0	29.3
Queue Length 50th (ft)	296	208	60	120	0	208	389	0	215	630	478
Queue Length 95th (ft)	348	290	111	186	3	300	498	m0	m308	m798	m#765
Internal Link Dist (ft)		564		358			731			1028	
Turn Bay Length (ft)	425				100	175		100	175		
Base Capacity (vph)	919	440	213	196	353	238	1753	677	467	2400	992
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	16
Spillback Cap Reductn	0	21	71	0	0	0	0	0	0	252	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.52	0.36	0.52	0.42	0.72	0.55	0.03	0.72	0.77	0.83

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	339	430	241	111	749	52	354	817	187	990	748
v/c Ratio	0.64	0.41	0.33	0.59	0.76	0.10	0.72	0.43	0.61	0.85	0.86
Control Delay (s/veh)	69.4	66.8	20.5	96.6	73.4	0.4	82.6	43.3	86.6	50.0	54.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.1
Total Delay (s/veh)	69.4	66.8	20.5	96.6	73.4	0.4	82.6	43.3	86.6	50.0	88.3
Queue Length 50th (ft)	207	254	95	68	315	0	210	274	96	655	889
Queue Length 95th (ft)	m264	m324	m229	106	352	0	276	349	135	#780	#1064
Internal Link Dist (ft)		1258			1004			401		731	
Turn Bay Length (ft)	350		250	325		150	225		275		
Base Capacity (vph)	566	1319	727	190	1327	535	492	1905	323	1167	887
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	182
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.33	0.33	0.58	0.56	0.10	0.72	0.43	0.58	0.85	1.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	316	651	117	1692	103	10	140	207	102
v/c Ratio	0.79	0.21	0.74	0.63	0.54	0.14	0.71	0.87	0.53
Control Delay (s/veh)	47.7	21.5	83.3	48.7	74.3	85.1	30.5	100.8	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.7	21.5	83.3	48.7	74.3	85.1	30.5	100.8	28.3
Queue Length 50th (ft)	269	107	130	629	110	12	0	236	13
Queue Length 95th (ft)	391	260	m179	723	168	35	77	#364	80
Internal Link Dist (ft)		1176		1258		246			263
Turn Bay Length (ft)	300		275				75		
Base Capacity (vph)	433	3155	193	2668	300	405	454	241	371
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.21	0.61	0.63	0.34	0.02	0.31	0.86	0.27

Intersection Summary

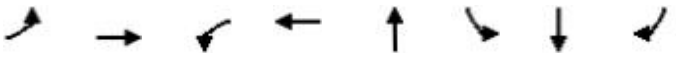
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	237	950	55	1250	96	35	58	9	171
v/c Ratio	0.85	0.26	0.56	0.41	0.62	0.24	0.48	0.12	0.74
Control Delay (s/veh)	98.9	7.4	108.4	34.8	89.4	27.7	83.2	83.6	29.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	98.9	7.4	108.4	34.8	89.4	27.7	83.2	83.6	29.7
Queue Length 50th (ft)	242	92	59	505	109	2	65	11	0
Queue Length 95th (ft)	375	205	m95	552	167	43	111	32	83
Internal Link Dist (ft)		1163		1176		277		232	
Turn Bay Length (ft)	225		200						50
Base Capacity (vph)	404	3648	138	3023	155	409	124	417	487
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.26	0.40	0.41	0.62	0.09	0.47	0.02	0.35

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	641	947	1	1382	1	154	156	347
v/c Ratio	1.03	0.24	0.00	0.62	0.00	0.77	0.78	0.39
Control Delay (s/veh)	88.2	6.6	4.0	19.3	0.0	100.9	101.6	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	88.2	6.6	4.0	19.3	0.0	100.9	101.6	6.7
Queue Length 50th (ft)	~694	85	0	543	0	191	193	39
Queue Length 95th (ft)	#1189	204	m0	143	0	277	281	110
Internal Link Dist (ft)		3136		412	152		614	
Turn Bay Length (ft)	150		75			225		
Base Capacity (vph)	623	3982	473	2222	423	250	251	890
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.24	0.00	0.62	0.00	0.62	0.62	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	28	20	138	14	236	7	598	469	281	569
v/c Ratio	0.15	0.11	0.46	0.04	0.51	0.02	0.75	0.57	0.82	0.54
Control Delay (s/veh)	33.4	25.2	31.9	25.5	8.4	9.0	25.1	11.1	35.8	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.4	25.2	31.9	25.5	8.4	9.0	25.1	11.1	35.8	15.3
Queue Length 50th (ft)	12	5	57	5	0	1	219	66	59	142
Queue Length 95th (ft)	37	25	111	21	56	8	#466	188	#224	#419
Internal Link Dist (ft)		94		1053			614			1570
Turn Bay Length (ft)	25		100			225		100	225	
Base Capacity (vph)	506	497	509	536	623	434	895	886	343	1047
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.04	0.27	0.03	0.38	0.02	0.67	0.53	0.82	0.54

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Docusign Envelope ID: 741BA4E9-52AD-8F50-8274-423A7334D7F4

GTEA
GEORGIA TRANSPORTATION EFFICIENCY AUTHORITY

Jannine Miller
Interim Executive Director

NOTICE OF DECISION

To: Anna Roach, ARC
(via electronic mail) Sonny Deriso, GTEA

To: City of Alpharetta
(via electronic mail and certified mail) Alan Rubenstein
NYL Real Estate Investors
51 Madison Avenue
New York, NY 10010

From: Jannine Miller, GTEA Interim Executive Director

Copy: Zane Gennell, DCA
(via electronic mail) Allie Velleca
Donald Shockey, ARC
Brian Bolick City of Alpharetta
Brian Borden, City of Alpharetta
Ben Song, City of Johns Creek
Jeffery Letterman, City of Roswell
Megan Wilson, GDOT D7
Linda Kay, GDOT D7
Brendan Pair, GDOT
Brendon Rush, MARTA
Zachary Kirtz, MARTA
Emma Polhemus, MARTA
Tom Caiafa, MARTA
Natavis Harris, MARTA
Olivia Cook, Kimley Horn
John Walker, Kimley Horn
Tyler Rosser, Kimley Horn
Jullie Sellers, Dillard Sellers
Tim Perry, North Fulton CID
Kristin Winzeler, North Fulton CID

Date: July 31, 2026

RE: Notice of Decision for DRI 4670 – North Point Mixed Use District

Docusign Envelope ID: 741BA4E9-52AD-8F50-8274-423A7334D7F4

Notice of Decision for
Request for Non-Expedited Review of
DRI 4670 – North Point Mixed Use District

The purpose of this notice is to inform NYL Real Estate Investors (the Applicant) and The City of Alpharetta (the Local Government), the Georgia Transportation Efficiency Authority (GTEA) Land Development Committee, the Georgia Department of Community Affairs (DCA), the Georgia Department of Transportation (GDOT), and the Atlanta Regional Commission of GTEA's decision regarding Development of Regional Impact (DRI) 4670 – Northpoint Mixed Use District (the DRI Plan of Development). GTEA has completed a Review for the DRI Plan of Development pursuant to Section 4.2.2 of the *DRI Review Procedures* and has determined that the DRI Plan of Development meets the GTEA review criteria set forth in Section 4.3. The DRI Plan of Development as proposed is **approved subject to conditions**, as provided in Attachment A and subject to the limitations placed on allowable modifications to the DRI Plan of Development, as described in Attachment B.

Subject to the conditions set forth in Attachment A and Attachment B, GTEA will approve the expenditure of state and/or federal funds for providing the Land Transportation Services and Access improvements listed in Attachment C. The need for said approval shall terminate and be of no further force and effect after ten (10) years from the date of this Notice of Decision, unless substantial construction of the proposed DRI has been commenced during this ten (year) period.

The notice of decision is based on a review of the applicant's DRI Review Package received by GTEA on on June 24, 2026. The review package includes: the site development plan (Site Plan) dated June 23, 2026 titled "North Point Mixed Use District DRI #4670" prepared by Kimley Horn, the Transportation Study dated June 2026 prepared by Kimley Horn received by GTEA on June 24, 2026, the DCA Initial and Additional forms filed on March 17, 2026 and June 18, 2026, and GDOT Clearance received on July 31, 2026.

Pursuant to Section 5 of the *DRI Review Procedures* the Applicant, the GTEA Land Development Committee and the local government have a right to appeal this decision within five (5) Business Days of the date on this letter by filing a Notice of Appeal with the GTEA Land Development Committee. A Notice of Appeal must specify the grounds for the appeal and present any argument or analysis in support of the appeal. For further information regarding the right to appeal, consult Section 5 of the *DRI Review Procedures*. If GTEA staff receives an appeal, you will receive another notice from GTEA and the Land Development Committee will schedule the appeal hearing according to the timeline established in Section 5.1.2 of the *DRI Review Procedures.*

DocuSigned by:
Jannine Miller
C2ABEB312926471...

Jannine Miller
Executive Director
Georgia Transportation Efficiency Authority

Docusign Envelope ID: 741BA4E9-52AD-8F50-8274-423A7334D7F4

Attachment A – Conditions of Approval to Serve the DRI

Conditions of Approval for Land Transportation Service or Access improvements which are necessary in order to provide a safe and efficient level of service to residents, employees and visitors of a proposed DRI.

The Conditions of Approval in the study network were identified in the Review Package as necessary to bring the level of service up to an applicable standard before the build-out of the proposed project. Attachment A contains improvements that do not require GTEA approval at this time because they are to be constructed prior to the completion of the DRI Plan of Development. However, GTEA approval shall be required in the event that state and/or federal funds are proposed at a later date to be used for any portion of the improvements described in Attachment A.

General Conditions of Approval to GTEA Notice of Decision:

Bicycle, Pedestrian & Transit Facilities

- Ensure multimodal connections between all uses and work with the City of Alpharetta to determine safety mitigations for the internal road network.
- Provide on-site pedestrian routes that are clearly delineated and appropriately marked to alert both drivers and pedestrians.
- Provide pedestrian connections to the Alpha Loop trail system, as noted on the DRI site plan.
- Consider best practices that allow for the prioritization of transportation alternatives; at a minimum the following should be included: pedestrian and bicycle facilities, transit accommodations, traffic calming, and green infrastructure.
- Coordinate with MARTA, GDOT, and the City of Alpharetta to connect the GA 400 Rapid Transit to the DRI site via the proposed pedestrian bridge and ensure all stakeholders are involved are involved in the design and implementation of the project.
- The proposed pedestrian bridge for the GA 400 rapid transit station shall provide a direct site connection that ensures adequate and safe access to the DRI site, as noted on the site plan. Coordinate with MARTA during design and construction to identify preferred site access.
- Evaluate the feasibility and consider implementing a bus stop that is internal to the site. Consideration shall require coordination with MARTA to identify location accessibility, design, and accommodations within the internal circulation and network.

General Georgia Department of Transportation (GDOT) Conditions

- GDOT reserves the right to determine driveway access based on compliance with GDOT standards, safety analysis, neighboring conflicts, and any other circumstance needing consideration on all state routes based on GDOT's most up-to-date regulations.
- Any access to GDOT right of way will be determined at the time of permitting when submitted with a design.

Roadway & Site Access Conditions to GTEA Notice of Decision:

Encore Parkway at North Point Center/Private Driveway (Intersection 9)

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- Construct an exclusive northbound right-turn lane along Encore Parkway, creating one exclusive through lane and one exclusive right-turn lane.
- Construct an exclusive westbound left-turn lane along North Point Center, creating one exclusive through lane and one exclusive left-turn lane.

Docusign Envelope ID: 741BA4E9-52AD-8F50-8274-423A7334D7F4

Attachment B – Required Elements of the DRI Plan of Development

Conditions Related to Altering Site Plan after GTEA Notice of Decision:

The on-site development will be constructed materially (substantially) in accordance with the Site Plan. Changes to the Site Plan will not be considered material or substantial so long as the following conditions are included as part of any changes:

- All “Proposed Conditions of Approval to GTEA Notice of Decision” set forth in Attachment A are provided.

Docusign Envelope ID: 741BA4E9-52AD-8F50-8274-423A7334D7F4

Attachment C – System Improvement Conditions to the GTEA Notice of Decision

Attachment C contains improvements that require GTEA approval prior to the expenditure of state and/or federal funding. Subject to the conditions set forth in Attachment A and Attachment B, GTEA approves the expenditure of state/and or federal funding for the improvements contained in Attachment C.

Roadway Improvements:

- None.

General Improvements:

- None.

MEMORANDUM

To: Brian Borden, *City of Alpharetta*

From: Olivia Cook, P.E., *Kimley-Horn and Associates, Inc.*
John D. Walker, P.E., PTOE, *Kimley-Horn and Associates, Inc.*

Date: July 17, 2026

RE: ***North Point Mixed-Use District Traffic Impact Memorandum – Additional Analysis***

Kimley-Horn is pleased to provide this memorandum regarding the proposed *North Point Mixed-Use District* development in the City of Alpharetta, Fulton County, Georgia. The purpose of this memorandum is to supplement the North Point Mixed-Use District DRI #4670 submission (June 24, 2026) by providing additional information on trip generation off-peak PM weekday and weekend analysis, and traffic signal warrant analysis. The Certificate of Completion was issued by the Georgia Transportation Efficiency Authority (GTEA) on July 7, 2026, and the Notice of Decision is anticipated on July 30, 2026. This additional traffic analysis information was requested by the City of Alpharetta and is not being submitted to GTEA/Atlanta Regional Commission (ARC).

The following list was requested by the City of Alpharetta to be included in the additional traffic analysis information:

- Trip Generation Comparison
- Weekday Event Peak Trip Generation and Capacity Analysis
- Weekend Event Peak Trip Generation and Capacity Analysis
- Traffic Signal Warrant Analyses along North Point Circle/Mall Ring Road

This memorandum does not consider specialized event management traffic plans, as these plans will be made in partnership with the City of Alpharetta and the Police and will be tailored to specific events. There is not enough information at this time to complete an event management analysis.

PROJECT OVERVIEW

The proposed 98.58-acre site is located west of Haynes Bridge Road, east of Encore Parkway, and north of North Point Parkway in the City of Alpharetta, Fulton County, Georgia. The site of the proposed *North Point Mixed-Use District* development is the site of the existing North Point Mall development.

As currently envisioned, the site will consist of a 850-room Hotel, 1,385 units of low-rise Multifamily Residential, a 1,139-seat Movie Theatre, a 2,000-seat Ice Skating Rink, 750,000 square feet (SF) of Office space, 313,000 SF of Shopping Center space, a 162,000-SF Department Store, a 90,000-SF High-Turnover (Sit-Down) Restaurant, a 4,000-seat Music Hall, and a 20,000-seat Arena. It is important to note that 512,000 SF of existing mall space is proposed to be demolished, and the High-Turnover (Sit-Down) Restaurant as well as the Department Store are already existing on the site.

Figure 1 provides a location map. **Figure 2** provides an aerial image of the site.

DATA COLLECTION

Weekday intersection turning movement volume counts were collected on Thursday, April 16, 2026, and Thursday, April 23, 2026, between the hours of 7:00 AM – 9:00 AM and 4:00 PM – 7:00 PM, at the following locations:

1. Haynes Bridge Road at SR-400 SB Ramp/Summit Place
2. Haynes Bridge Road at SR-400 NB Ramps
3. Haynes Bridge Road at North Point Drive
4. Haynes Bridge Road at North Point Parkway
5. North Point Parkway at Mall Access A
6. North Point Parkway at Mall Access B
7. North Point Parkway at Mall Access C
8. North Point Parkway at Encore Parkway
9. Encore Parkway at North Point Center
10. Encore Parkway at Westside Parkway
11. Haynes Bridge Road at Mansell Road
12. North Point Parkway at Mansell Road
13. Mansell Road at SR-400 NB Ramps
14. Mansell Road at SR-400 SB Ramps

Weekend intersection turning movement volume counts were also collected at the intersections listed above on Saturday, April 18, 2026, and Saturday, April 25, 2026, between the hours of 6:00 – 7:00 PM.

Additionally, 24-hour tube counts were collected on Thursday, April 16, 2026, and Saturday, April 18, 2026, at the following locations:

1. North Point Circle/Mall Ring Road, south of North Point Drive
2. North Point Circle/Mall Ring Road, south of North Point Center

Complete raw traffic count data is available upon request. **Figure 3** illustrates the Existing 2026 traffic conditions for the weekday and weekend 6-7 PM Event peak hour.

TRIP GENERATION

Existing Site Trip Generation Comparison

Project traffic, for the purposes of this evaluation, is defined as the vehicle trips expected to be generated by the proposed development. Trip generation data at the existing *North Point Mixed-Use District* site in the pre-COVID/eCommerce operating condition was estimated using rates and equations for Shopping Center (Land Use Code 820) from the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition, 2017*. This methodology is based on coordination with the City of Alpharetta staff. Anticipated trip generation for the proposed *North Point Mixed-Use District* development was calculated using rates and equations for Multi-Family Housing (Low-Rise) (Land Use Code 220), Hotel (Land Use Code 310), Multiplex Movie Theatre (Land Use 445), Ice Skating Rink (Land Use 465), General Office Building (Land Use 710), Shopping Center (Land Use 820), Department Store (Land Use 875), and High-Turnover (Sit-Down) Restaurant (Land Use 932) contained in the ITE *Trip Generation Manual, 12th Edition, 2025*.

Additionally, trip generation for the proposed Music Hall and Arena were estimated using trip generation methodology from DRI #2381 (Atlanta Braves Stadium and Mixed-Use Development) and DRI #3967 (The Gathering at South Forsyth), assuming a vehicle occupancy rate of 2.6 (as requested by the City of Alpharetta staff), 25% of attendees and 13% of employees arriving during the PM peak hour. North Point Mixed-Use District DRI #4670 assumed a vehicle occupancy rate of 2.8, consistent with DRI #2381 and DRI #3967.

Mixed-use reductions occur when a site has a combination of different land uses that interact with one another. For example, people living in a residential development may walk to the restaurants and retail instead of driving off-site or to the site. Conversely, people that work in the retail or restaurants have the opportunity to live in the new residential units. Both instances would reduce the number of vehicle trips that will be made on the roadway, thus reducing traffic congestion.

Alternative modes reductions are taken when a site can be accessed by modes other than vehicles (walking, bicycling, transit, etc.).

Pass-by reductions are taken for a site when traffic normally traveling along a roadway may choose to visit a retail or restaurant establishment that is along the vehicle's path. These trips were already on the road and would therefore only be new trips on the driveways.

Due to the size, nature, and location of the proposed development, an alternative mode reduction of 8%, pass-by reductions, and mixed-use reductions were applied in the proposed development trip generation. This application is consistent with the North Point Mixed-Use District DRI #4670 submission and as stated in ARC's Letter of Understanding issued April 28, 2026. Mixed-use reductions were not applied in the existing site pre-COVID/eCommerce trip generation.

The density and the trip generation for both the existing site pre-COVID/eCommerce and the proposed *North Point Mixed-Use District* development, with and without the Arena/Music Hall traffic, based on ITE Trip Generation and Arena/Music Hall estimation are summarized in **Table 1** on the next page.

Note: Due to existing to be demolished and existing to remain developments within the existing site area, net density for the Multiplex Movie Theatre and the Department Store is 0 SF and therefore not shown in **Table 1**. A detailed set of trip generation analysis sheets is available in **Appendix A**.

Table 1: Trip Generation Comparison										
Land Use	**Density**	**Daily Traffic**			**AM Peak Hour**			**PM Peak Hour**		
		Total	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**Enter**	**Exit**
Existing Site (Pre-COVID/eCommerce Operating Condition)										
820 – Shopping Center	*1,392,132 SF*	36,034	18,017	18,017	848	526	322	3,814	1,831	1,983
Gross Trips		36,034	18,017	18,017	848	526	322	3,814	1,831	1,983
Mixed-Use Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions		*-2,882*	*-1,441*	*-1,441*	*-67*	*-42*	*-26*	*-305*	*-147*	*-159*
Pass-By Reductions		*-4,800*	*-2,400*	*-2,400*	*0*	*0*	*0*	*-510*	*-255*	*-255*
Total Net Trips		**28,352**	**14,176**	**14,176**	**781**	**484**	**296**	**2,999**	**1,430**	**1,570**
Proposed Development DRI #4670 (Submitted June 24, 2026)										
220 – Multi-Family Housing	*1,385 Units*	7,918	3,959	3,959	498	120	378	672	417	255
310 – Hotel	*850 Rooms*	4,964	2,482	2,482	289	150	139	400	204	196
465 – Ice Skating Rink	*2,000 Seats*	2,520	1,260	1,260	20	7	13	140	84	56
710 – General Office Building	*750,000 SF*	4,842	2,421	2,421	860	757	103	774	124	650
820 – Shopping Center	*43,000 SF**	1,564	782	782	26	16	10	105	51	54
932 – High-Turnover Restaurant	*77,400 SF**	8,032	4,016	4,016	694	382	312	710	433	277
Music Hall	*4,000 seats*	5,440	2,720	2,720	0	0	0	419	411	8
Arena	*20,000 seats*	27,200	13,600	13,600	0	0	0	2,091	2,053	38
Gross Trips (With Arena/Music Hall Traffic)		**62,480**	**31,240**	**31,240**	**2,387**	**1,432**	**955**	**5,311**	**3,777**	**1,534**
Mixed-Use Reductions		*-3,440*	*-1,720*	*-1,720*	*-576*	*-288*	*-288*	*-928*	*-536*	*-392*
Internal Capture to Arena		*-1,612*	*-806*	*-806*	*0*	*0*	*0*	*-403*	*-259*	*-144*
Alternative Mode Reductions (8%)		*-4,608*	*-2,304*	*-2,304*	*-144*	*-93*	*-54*	*-312*	*-238*	*-75*
Pass-By Reductions		*-2,520*	*-1,260*	*-1,260*	*0*	*0*	*0*	*-26*	*-13*	*-13*
Total Net Trips (With Arena/Music Hall Traffic)		**50,298**	**25,149**	**25,149**	**1,667**	**1,052**	**614**	**3,644**	**2,731**	**911**
Proposed Development (With Arena/Music Hall Traffic) – Existing Site (Pre-COVID/eCommerce)										
Difference in Net Project Trips		*+21,946*	*+10,973*	*+10,973*	*+886*	*+586*	*+318*	*+645*	*+1,301*	*-659*
% Change in Net Project Trips		*+77%*	*+77%*	*+77%*	*+113%*	*+121%*	*+107%*	*+21%*	*+91%*	*-42%*
Gross Trips (Without Arena/Music Hall Traffic)		**35,280**	**17,640**	**17,640**	**2,387**	**1,432**	**955**	**3,220**	**1,724**	**1,496**
Mixed-Use Reductions		*-2,864*	*-1,432*	*-1,432*	*-576*	*-288*	*-288*	*-784*	*-392*	*-392*
Internal Capture to Arena		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions (8%)		*-2,606*	*-1,303*	*-1,303*	*-144*	*-93*	*-54*	*-194*	*-106*	*-88*
Pass-By Reductions		*-2,904*	*-1,452*	*-1,452*	*0*	*0*	*0*	*-122*	*-61*	*-61*
Total Net Trips (Without Arena/Music Hall Traffic)		**26,904**	**13,452**	**13,452**	**1,667**	**1,052**	**614**	**2,122**	**1,165**	**956**
Proposed Development (Without Arena/Music Hall Traffic) – Existing Site (Pre-COVID/eCommerce)										
Difference in Net Project Trips		*-1,448*	*-724*	*-724*	*+886*	*+586*	*+318*	*-877*	*-265*	*-614*
% Change in Net Project Trips		*-5%*	*-5%*	*-5%*	*+113%*	*+121%*	*+107%*	*-29%*	*-19%*	*-39%*

** Reductions were made to account for existing to be demolished and existing to remain developments within the existing site area.*

Based on **Table 1**, the proposed development (with arena traffic) is projected to generate approximately 50,298 total net daily trips (25,149 in; 25,149 out), 1,667 AM peak hour trips, and 3,644 PM peak hour trips. The proposed development (with arena traffic) is anticipated to generate approximately 77.4% more net daily trips, 113.4% more AM peak hour trips, and 21.5% more PM peak hour trips than the existing site in its pre-COVID/eCommerce operating condition. Without the proposed arena traffic, the proposed development is anticipated to generate approximately 5.1% less net daily trips, 113.4% more AM peak hour trips, and 29.2% less PM peak hour trips than the existing site in its pre-COVID/eCommerce operating condition.

Event Weekday Trip Generation

Per request from the City of Alpharetta, trip generation for the proposed site was developed for the expected PM peak hour of the proposed Arena/Music Hall, which is assumed to be 6-7 PM. Hourly variation formulas from the ITE Trip Generation Manual, when available, were used to estimate the off-peak generation for the land uses mentioned in the previous section. When not available, the hourly variation of similar land uses were utilized in order to estimate the PM Event peak hour (6-7 PM).

The DRIs for the North Point Mixed-Use District (DRI #4670), Atlanta Braves Stadium (DRI #2381), and The Gathering (DRI #3967), used arena arrival information based on the ITE Traffic Operations Planning for Stadia and Arenas Informational Report. Therefore, this was referenced when projecting trips for a later PM peak hour. For the 6-7 PM Event peak hour traffic associated with the Arena/Music Hall, it was assumed that 50% of attendees and 6% of employees arrive during the 6-7 PM Event peak hour. **Table 2** below shows the anticipated trip generation during the Weekday 6-7 PM Event peak hour. Methodology for mixed-use reductions, internal capture, alternative modes reductions (8%), and pass-by reductions remained the same.

Table 2: Weekday Event Peak Hour (6-7 PM) Trip Generation

Land Use	Density	Daily Traffic			6-7 PM Event Peak Hour		
		Total	Enter	Exit	Total	Enter	Exit
220 – Multi-Family Housing	*1,385 units*	7,918	3,959	3,959	649	392	257
310 – Hotel	*850 rooms*	4,964	2,482	2,482	253	134	119
465† – Ice Skating Rink	*2,000 seats*	2,520	1,260	1,260	207	120	87
710 – General Office Building	*750,000 SF*	4,842	2,421	2,421	107	44	63
820 – Shopping Center	*43,000 SF**	1,564	782	782	114	57	57
932 – High-Turnover Restaurant	*77,400 SF**	8,032	4,016	4,016	755	406	349
Music Hall	*4,000 seats*	5,440	2,720	2,720	789	781	8
Arena	*20,000 seats*	27,200	13,600	13,600	3,944	3,906	38
Gross Project Trips		**62,480**	**31,240**	**31,240**	**8,433**	**6,656**	**1,777**
Mixed-Use Reductions		*-3,440*	*-1,720*	*-1,720*	*-950*	*-558*	*-392*
Internal Capture to Arena		*-1,612*	*-806*	*-806*	*-387*	*-221*	*-166*
Alternative Mode Reductions (8%)		*-4,608*	*-2,304*	*-2,304*	*-432*	*-405*	*-28*
Pass-By Reductions		*-2,520*	*-1,260*	*-1,260*	*-30*	*-15*	*-15*
Net New Trips		**50,298**	**25,149**	**25,149**	**5,021**	**4,640**	**376**

** Reductions were made to account for existing to be demolished and existing to remain developments within the existing site area.*
† Equations from Land Use 489 (Pickleball Courts) was used to estimate the 6-7 PM Event Peak Hour Trips since Land Use 465 (Ice Skating Rink) does not have an hourly variation.

Event Weekend Trip Generation

Trip generation was also developed for the proposed site during the PM Event Peak hour (6-7 PM) on a typical weekend day. Weekend trip generation formulas from the ITE Trip Generation Manual, when available, were used to estimate the weekend trip generation for the land uses mentioned in the previous section. When not available, similar land uses were utilized in order to estimate the daily trips and PM Event peak hour (6-7 PM) trips, as well as engineering judgment and estimation. The trip generation for the Music Hall/Arena remained the same as it was assumed 100% attendance for the 6-7 PM Event Peak Hour. **Table 3** below shows the anticipated trip generation on a typical weekend day during the 6-7 PM Event Peak hour. Methodology for mixed-use reductions, internal capture, alternative modes reductions (8%), and pass-by reductions remained the same.

Table 3: Weekend Event Peak Hour (6-7 PM) Trip Generation

Land Use	Density	Daily Traffic			6-7 PM Event Peak Hour		
		Total	Enter	Exit	Total	Enter	Exit
220 – Multi-Family Housing	*1,385 units*	6,302	3,151	3,151	429	199	230
310 – Hotel	*850 rooms*	5,882	2,941	2,941	182	132	50
465† – Ice Skating Rink	*2,000 seats*	3,158	1,579	1,579	218	43	175
710 – General Office Building	*750,000 SF*	3,292	1,646	1,646	72	30	42
820 – Shopping Center	*43,000 SF**	1,476	738	738	116	51	65
932 – High-Turnover Restaurant	*77,400 SF**	8,092	4,046	4,046	793	498	295
Music Hall	*4,000 seats*	5,440	2,720	2,720	789	781	8
Arena	*20,000 seats*	27,200	13,600	13,600	3,944	3,906	38
Gross Project Trips		**60,842**	**30,421**	**30,421**	**6,543**	**5,640**	**903**
Mixed-Use Reductions		*-3,316*	*-1,658*	*-1,658*	*-897*	*-505*	*-392*
Internal Capture to Arena		*-1,584*	*-792*	*-792*	*-396*	*-283*	*-113*
Alternative Mode Reductions (8%)		*-4,486*	*-2,243*	*-2,243*	*-412*	*-387*	*-25*
Pass-By Reductions		*-2,386*	*-1,193*	*-1,193*	*-32*	*-16*	*-16*
Net New Trips		**51,456**	**25,728**	**25,728**	**4,838**	**4,466**	**373**

** Reductions were made to account for existing to be demolished and existing to remain developments within the existing site area.*
† Equations from Land Use 489 (Pickleball Courts) were used to estimate the 6-7 PM Event Peak Hour Trips since Land Use 465 (Ice Skating Rink) does not have an hourly variation.

LEVEL-OF-SERVICE ANALYSIS

Level-of-service (LOS) determinations were made for the weekday AM and PM peak hours for the existing study network intersections and proposed access intersections using *Synchro Professional, Version 12.0*. Both programs use methodologies contained in the *Highway Capacity Manual 7th Edition* and *Highway Capacity Manual 2000 Edition* to determine the operating characteristics of an intersection. Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a specified period under prevailing roadway, traffic, and control conditions.

LOS is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists' perceptions of a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through LOS F, with A being the best and F the worst.

LOS for signalized intersections are reported for the intersection as a whole. One or more movements at an intersection may experience a LOS, while the intersection as a whole may operate acceptably.

LOS for unsignalized intersections, with stop control on the minor street(s) only, are reported for the side street and mainline left-turn approaches. Low LOS for the side street approaches are not uncommon, as vehicles may experience a delay turning onto a major roadway.

Overall Intersection Delay

The Existing 2026 traffic conditions, Projected 2036 No-Build traffic conditions and Projected 2036 Build traffic conditions were analyzed under the PM Event Peak Hour (6-7 PM) for both a typical weekday and a typical weekend day. The results of the LOS analysis for the Existing 2026 and the Projected 2036 traffic conditions are summarized in **Table 4**. A detailed set of analyses from Synchro are available upon request.

Consistent with North Point Mixed-Use District DRI #4670, the overall LOS standard is LOS E for all study intersections.

Table 4: Level-of-Service Summary
LOS (Delay, in seconds)

Intersection	Approach / Movement	Existing 2026		Projected 2036 No-Build		Projected 2036 Build	
		Weekday 6-7 PM	Weekend 6-7 PM	Weekday 6-7 PM	Weekend 6-7 PM	Weekday 6-7 PM	Weekend 6-7 PM
1. Haynes Bridge Road at SR-400 SB Ramp/Summit Place (signalized)	Overall	C (31.9)	C (33.9)	C (33.4)	D (36.3)	F (125.6)	F (153.2)
2. Haynes Bridge Road at SR-400 NB Ramps (signalized)*	Overall	D (41.0)	D (48.8)	D (41.4)	D (53.5)	F (104.3)	F (102.1)
3. Haynes Bridge Road at North Point Drive (signalized)*	Overall	C (31.5)	D (38.5)	C (33.1)	D (40.3)	F (126.9)	F (127.3)
4. Haynes Bridge Road at North Point Parkway (signalized)	Overall	D (45.4)	D (50.0)	D (45.8)	D (50.3)	F (91.8)	F (88.5)
5. North Point Parkway at Mall Access A/Driveway (signalized)	Overall	C (26.3)	D (35.2)	C (28.9)	D (39.3)	F (131.4)	F (138.2)
6. North Point Parkway at Mall Access B/Driveway (signalized)	Overall	B (16.7)	C (29.3)	B (19.9)	C (33.6)	F (121.9)	F (100.8)
7. North Point Parkway at Mall Access C/Private Driveway (unsignalized - TWSC)	NB	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	SB	C (16.1)	C (15.6)	C (17.7)	C (17.2)	D (29.2)	D (25.4)
	EBL	B (13.3)	B (12.9)	B (14.4)	B (13.9)	C (19.1)	C (16.9)
8. North Point Parkway at Encore Parkway/Private Driveway (signalized)	Overall	B (18.7)	B (16.9)	B (19.2)	B (17.3)	F (128.7)	E (79.6)
9. Encore Parkway at North Point Center/Private Driveway (signalized)	Overall	B (16.3)	B (15.9)	B (16.9)	B (16.4)	F (338.8)	F (203.4)
10. Encore Parkway at Westside Parkway (signalized)	Overall	B (15.9)	B (13.4)	B (16.8)	B (13.7)	C (31.9)	B (15.2)
11. Haynes Bridge Road at Mansell Road (signalized)	Overall	B (13.2)	A (9.0)	B (16.2)	A (9.6)	B (16.3)	A (9.7)
12. Mansell Road at North Point Parkway/Resurgens Park Place (signalized)*	Overall	D (35.0)	D (37.7)	D (35.5)	D (38.4)	F (170.8)	F (185.6)
13. Mansell Road at SR-400 NB Ramps (signalized)*	Overall	D (50.0)	D (45.2)	D (53.2)	D (47.7)	F (104.1)	F (100.3)
14. Mansell Road at SR-400 SB Ramps (signalized)	Overall	C (32.9)	D (43.9)	D (37.2)	D (50.2)	D (48.3)	D (52.2)

**HCM 2000 methodology was used for these intersections due to non-NEMA phasing.*

DRI Improvements

The following base intersection improvements were applied from the DRI #4670 Transportation Analysis:

- Intersection 1: Haynes Bridge Road at SR-400 SB Ramp/Summit Place (signalized)
  - For the PM peak hour, reallocate green time for the eastbound and westbound approaches.
- Intersection 2: Haynes Bridge Road at SR-400 NB Ramps (signalized)
  - For the PM peak hour, reallocate green time for the eastbound approach.
- Intersection 4: Haynes Bridge Road at North Point Parkway (signalized)
  - For the PM peak hour, reallocate green time for the eastbound and westbound approaches.
- Intersection 5: North Point Parkway at Mall Access A/Driveway (signalized)
  - For the PM peak hour, provide protected-permissive phasing for the eastbound left-turn movement following field verification of adequate sight distance.
  - For the PM peak hour, reallocate green time for the eastbound left-turn and northbound through movements.
- Intersection 6: North Point Parkway at Mall Access B/Driveway (signalized)
  - Construct an exclusive southbound right-turn lane along Mall Access B, creating one exclusive through lane and one exclusive right-turn lane.
  - For the PM peak hour, install permissive and overlap phasing for the southbound right-turn movement concurrent with the eastbound left-turn and the southbound left-turn and through movements.
  - For the PM peak hour, lag the eastbound left-turn phase.
- Intersection 8: North Point Parkway at Encore Parkway/Private Driveway (signalized)
  - For the PM peak hour, install an overlap phase for the southbound right-turn movement and reallocate green time for the southbound through movement.
- Intersection 9: Encore Parkway at North Point Center/Private Driveway (signalized)
  - Construct an exclusive northbound right-turn lane along Encore Parkway, creating one (1) exclusive through lane and one (1) exclusive right-turn lane.
  - Construct an exclusive westbound left-turn lane along North Point Center, creating one (1) exclusive through lane and one (1) exclusive left-turn lane.
- Intersection 13: Mansell Road at North Point Parkway/Resurgens Park Place (signalized)
  - Reallocate green time for the northbound approach.

Table 5 provides results for the Projected 2036 Build Base Improved conditions at the failing intersections from the DRI #4670 Transportation Analysis.

Table 5: Level-of-Service Summary (Base Improvements) LOS (Delay in Seconds)			
Intersection	**Approach**	**Projected 2036 Build Base Improved**	
		Weekday 6-7 PM	**Weekend 6-7 PM**
1. Haynes Bridge Road at SR-400 SB Ramp/Summit Place (signalized)	Overall	E (63.6)	E (58.0)
2. Haynes Bridge Road at SR-400 NB Ramps (signalized)*	Overall	E (59.8)	E (58.5)
4. Haynes Bridge Road at North Point Parkway (signalized)	Overall	E (75.7)	E (69.5)
5. North Point Parkway at Mall Access A/Driveway (signalized)	Overall	E (56.5)	D (46.5)
6. North Point Parkway at Mall Access B/Driveway (signalized)	Overall	D (36.4)	D (36.4)
8. North Point Parkway at Encore Parkway/Private Driveway (signalized)	Overall	F (124.0)	E (74.4)
9. Encore Parkway at North Point Center/Private Driveway (signalized)	Overall	E (74.2)	D (36.8)
13. Mansell Road at SR-400 NB Ramps (signalized)*	Overall	E (64.3)	E (74.0)

**HCM 2000 methodology was used for these intersections due to non-NEMA phasing.*

As shown in **Table 5**, with the improvements applied from the DRI #4670 Transportation Analysis, all study intersections, except for North Point Parkway at Encore Parkway/Private Driveway (Intersection 8), are projected to operate at LOS E or better for the Weekday and Weekend 6-7 PM Event Peak Hour under Projected 2036 Build conditions.

With the southbound right-turn overlap phase and green time reallocation improvements, North Point Parkway at Encore Parkway/Private Driveway (Intersection 8) is projected to operate at LOS F for the Weekday 6-7 PM hour and at LOS E for the Weekend 6-7 PM hour under Projected 2036 Build conditions. Additionally, as shown in **Table 4**, the intersections of Haynes Bridge Road at North Point Drive (Intersection 3) and Mansell Road at North Point Parkway/Resurgens Park Place (Intersection 12) are projected to operate at LOS F during the Weekday 6-7 PM hour and Weekend 6-7 PM hour without any improvements under the Projected 2036 Build conditions.

Additional Improvements

In order for the remaining failing intersections to operate at LOS E or better, the following additional intersection improvements should be considered:

- Intersection 3: Haynes Bridge Road at North Point Drive (signalized)
  - Channelize the southbound right-turn lane to be a free-flow/"Keep Moving" movement.
  - For the Event PM Peak Hour, reallocate green time to the northbound and eastbound approaches.
- Intersection 8: North Point Parkway at Encore Parkway/Private Driveway (signalized)
  - For the Event PM Peak Hour, reallocate green time to the eastbound left-turn and southbound right-turn movements.
- Intersection 12: Mansell Road at North Point Parkway/Resurgens Park Place (signalized)
  - Upgrade signal heads on the northbound and southbound approaches to Flashing Yellow Arrow (FYA) to allow protected-permissive phasing, by time of day.
  - Restripe the southbound shared through/left-turn lane to be an exclusive through lane.
  - For the Event PM Peak Hour, remove split phasing at this intersection and provide dual entry for the northbound and southbound phases.

Table 6 below provides the LOS results for the Projected 2036 Build Additionally Improved conditions.

Table 6: Level-of-Service Summary (Additional Improvements)
LOS (Delay in Seconds)

Intersection	Approach	Projected 2036 Build Additionally Improved	
		Weekday 6-7 PM	Weekend 6-7 PM
3. Haynes Bridge Road at North Point Drive (signalized)*	Overall	D (39.1)	D (38.0)
8. North Point Parkway at Encore Parkway/Private Driveway (signalized)	Overall	E (75.9)	D (40.6)
12. Mansell Road at North Point Parkway/Resurgens Park Place (signalized)*	Overall	D (47.1)	D (40.7)

**HCM 2000 methodology was used for these intersections due to non-NEMA phasing.*

Based on these additional improvements, the intersections of Haynes Bridge Road at North Point Drive (Intersection 3), North Point Parkway at Encore Parkway/Private Driveway (Intersection 8), and Mansell Road at North Point Parkway/Resurgens Park Place (Intersection 12), are projected to operate acceptably.

Extra Operational Considerations

With the base improvements from the DRI #4670 Transportation Analysis and the additional improvements recommended for the Event PM Peak Hour study, all study intersections are expected to operate acceptably under the Projected 2036 Build conditions.

While this memorandum does not/did not analyze special event traffic management, the following considerations are provided for informational purposes:

- Intersection 3: Haynes Bridge Road at North Point Drive (signalized)
    - During major events, consider converting one (1) southbound through lane to a shared through/right-turn lane such that there are two (2) right-turn permitted movement lanes.
- Intersection 8: North Point Parkway at Encore Parkway/Private Driveway (signalized)
    - Consider increasing the eastbound left-turn lane storage length.
- Intersection 9: Encore Parkway at North Point Center/Private Driveway (signalized)
    - During major events, consider converting the northbound through lane to a shared through/right-turn lane such that there are two (2) right-turn permitted movement lanes.
- North Point Circle/Mall Ring Road at North Point Center & North Point Circle/Mall Ring Road at North Point Drive
    - During major events, consider police monitoring at these internal site intersections.

Traffic Signal Warrant Analysis

A traffic signal warrant analysis was performed for the internal site intersections of North Point Circle/Mall Ring Road at North Point Center and North Point Circle/Mall Ring Road at North Point Drive based on the criteria contained in the *Manual on Uniform Traffic Control Devices* (MUTCD), 2023 Edition published by the Federal Highway Administration (FHWA).

According to the MUTCD, the investigation of the need for a traffic control signal shall include an analysis of the applicable factors contained in the following traffic signal warrants and other factors related to existing operation and safety at the study location:

- **Warrant 1, Eight-Hour Vehicular Volume**
- **Warrant 2, Four-Hour Vehicular Volume**
- **Warrant 3, Peak Hour**
- Warrant 4, Pedestrian Volume
- Warrant 5, School Crossing
- Warrant 6, Coordinated Signal System
- Warrant 7, Crash Experience
- Warrant 8, Roadway Network
- Warrant 9, Intersection Near a Grade Crossing

A traffic control signal should not be installed unless one or more the above warrants are met. However, the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

The MUTCD states engineering judgment and rationale should be applied to a minor street approach with one lane plus a right-turn lane. The right-turn traffic may be excluded from the minor-street volume if the movement enters the major street with minimal conflict.

This traffic signal warrant analysis evaluated projected traffic conditions associated with the proposed *North Point Mixed-Use District* development to determine if they satisfy the vehicular volume warrants established by the MUTCD. Warrants 1, 2, and 3 are the vehicular volume warrants and are based on mainline traffic volumes, side street traffic volumes, and number of travel lanes.

Warrant 1 (Eight-Hour Vehicular Volume) Condition 1A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic signal. Warrant 1 Condition 1B is intended for application where Condition 1A is not satisfied and where the traffic volume on a major street is so heavy that traffic on the intersecting minor street suffers excessive delay or conflict in entering or crossing the major street.

Warrant 2 (Four-Hour Vehicular Volume) is intended at locations where the volume of intersecting traffic is the principal reason to consider installing a traffic signal.

Warrant 3 (Peak Hour) is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

24-hour volumes for the two intersections were developed using the tube counts collected south of the intersections and hourly variation formulas from the ITE Trip Generation Manual for the land uses that were available. Hourly variation for the traffic associated with the proposed Arena and Music Hall were approximated based on the methodology in DRI #4670, DRI #2381 and DRI #3967.

It should also be noted that considerable pedestrian activity is expected at both intersections due to their proximity to potential nearby off-site parking and passenger pick-up and drop-off locations as envisioned to be of higher use during Music Hall and Arena major events. The exact location of off-site parking and passenger pick-up and drop-off locations is not known at this time.

The results of the traffic signal warrant analysis (Warrants 1-3) under Projected 2036 Build Weekday conditions for the intersections of North Point Circle/Mall Ring Road at North Point Center and North Point Circle/Mall Ring Road at North Point Drive, with both the major and minor street right-turn volumes included, are shown in **Table** 7. Right-turns were included in the traffic signal warrant analysis as none of the intersections studied include GDOT state routes.

Note: Warrant threshold volume reduction volumes were not applied for this traffic signal warrant analysis, per GDOT standard practice. (100% volume thresholds were maintained/used.)

Table 7: Traffic Signal Volume Warrant Analysis Summary (100% Threshold)

Warrant	Projected 2036 Build *North Point Circle at North Point Center*		Projected 2036 Build *North Point Circle at North Point Drive*	
	Hrs Met/Needed	Met?	Hrs Met/Needed	Met?
1A	0/8	×	0/8	×
1B	0/8	×	1/8	×
1C	0/8	×	1/8	×
2	3/4	×	5/4	✓
3	3/1	✓	3/1	✓

Based on the results in **Table 7**, the intersection of North Point Circle at North Point Center satisfies Warrant 3 under Projected 2036 Build conditions. The intersection of North Point Circle/Mall Ring Road at North Point Drive satisfies Warrant 2 and Warrant 3 under Projected 2036 Build Conditions.

Detailed traffic signal vehicular volume analyses (Warrants 1-3) are available upon request**.**

SUMMARY

The redeveloped 98.58-acre site is located west of Haynes Bridge Road, east of Encore Parkway, and north of North Point Parkway at the existing North Point Mall site in the City of Alpharetta, Fulton County, Georgia. The site of the proposed *North Point Mixed-Use District* development is the site of the existing North Point Mall development.

As currently envisioned, the site will consist of a 850-room Hotel, 1,385 units of low-rise Multifamily Residential, a 1,139-seat Movie Theatre, a 2,000-seat Ice Skating Rink, 750,000 square feet (SF) of Office space, 313,000 SF of Shopping Center space, a 162,000-SF Department Store, a 90,000-SF High-Turnover (Sit-Down) Restaurant, a 4,000-seat Music Hall, and a 20,000-seat Arena. It is important to note that 512,000 SF of existing mall space is proposed to be demolished, and the High-Turnover (Sit-Down) Restaurant as well as the Department Store are already existing on the site.

The additional traffic analysis information provided in this memorandum, as requested by the City of Alpharetta, includes the following:

- Trip Generation Comparison
- Weekday Event Peak Trip Generation and Capacity Analysis
- Weekend Event Peak Trip Generation and Capacity Analysis
- Traffic Signal Warrant Analyses along North Point Circle/Mall Ring Road

The proposed development (with arena traffic) is projected to generate approximately 77.4% more net daily trips, 113.4% more AM peak hour trips, and 21.5% more PM peak hour trips than the existing site in its pre-COVID/eCommerce operating condition. Without the proposed arena traffic, the proposed development is anticipated to generate approximately 5.1% less net daily trips, 113.4% more AM peak hour trips, and 29.2% less PM peak hour trips than the existing site in its pre-COVID/eCommerce operating condition.

With the improvements identified within the DRI #4670, the following additional improvements were identified:

- Intersection 3: Haynes Bridge Road at North Point Drive (signalized)
  - Channelize the southbound right-turn lane to be a free-flow/“Keep Moving” movement.
  - For the Event PM Peak Hour, reallocate green time to the northbound and eastbound approaches.
- Intersection 8: North Point Parkway at Encore Parkway/Private Driveway (signalized)
  - For the Event PM Peak Hour, reallocate green time to the eastbound left-turn and southbound right-turn movements.
- Intersection 12: Mansell Road at North Point Parkway/Resurgens Park Place (signalized)
  - Upgrade signal heads on the northbound and southbound approaches to Flashing Yellow Arrow (FYA) to allow protected-permissive phasing, by time of day.
  - For the Event PM Peak Hour, remove split phasing at this intersection and provide dual entry for the northbound and southbound phases.

Based on the MUTCD, the intersection of North Point Circle/Mall Ring Road at North Point Center meets traffic signal Warrant 3 (Peak Hour) and the intersection of North Point Circle/Mall Ring Road at North Point Drive meets traffic signal Warrant 2 (Four-Hour Vehicular Volume) and Warrant 3 under Projected 2036 Build conditions. Although the two internal site intersections along North Point Circle/Mall Ring Road that were studied met the described signal warrants, the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. The analysis contemplated event traffic, and during typical daily operations a traffic signal is likely not warranted. During event times, a police officer is likely to control the intersection. If/when the off-site parking and rideshare passenger pick-up/drop-off locations are identified, a pedestrian hybrid beacon could be considered for installation, as a considerable amount of pedestrians are anticipated.

We hope this information is helpful. If you have any questions concerning this letter or need additional information, please do not hesitate to contact me.

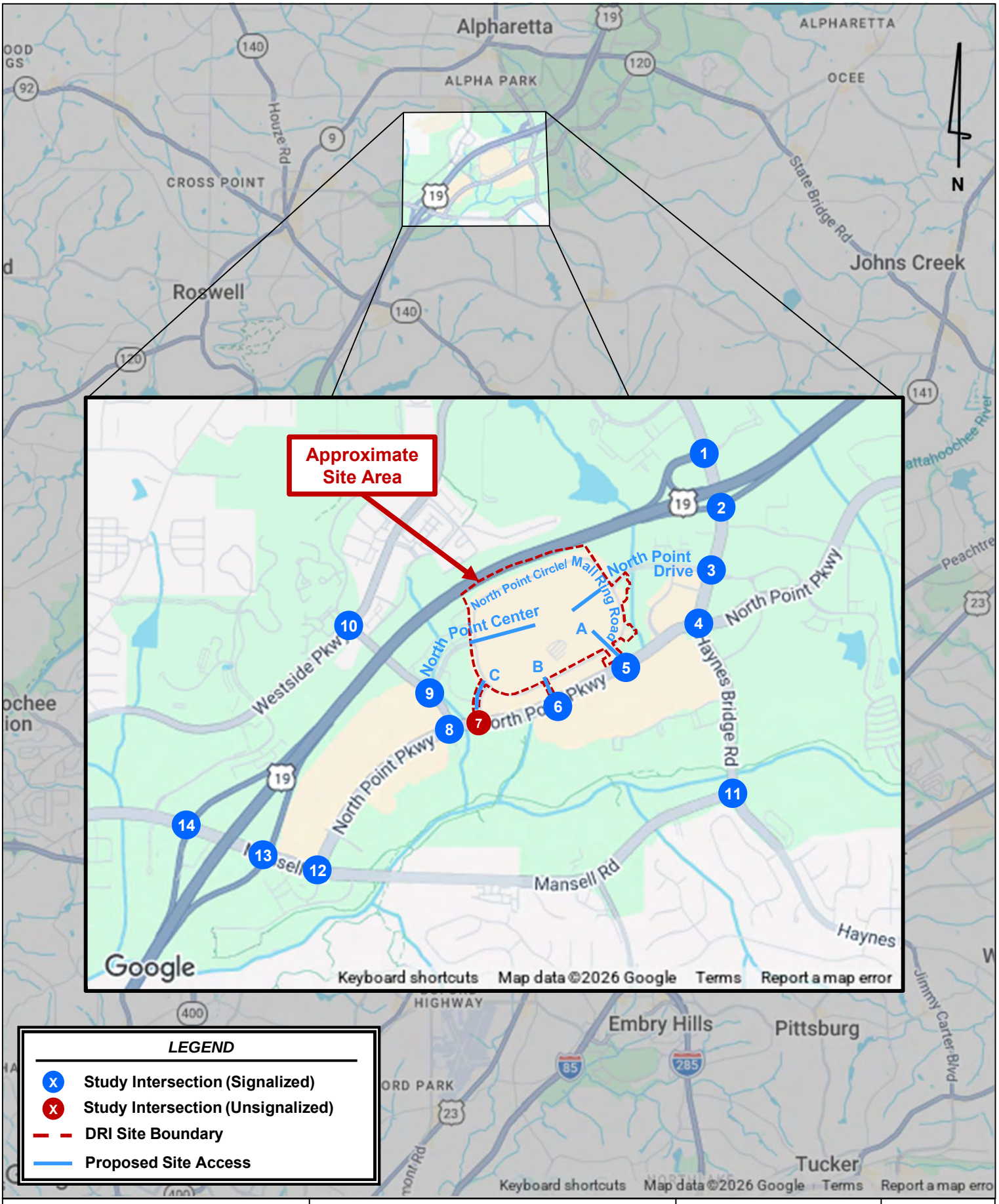
Sincerely,
KIMLEY-HORN AND ASSOCIATES, INC.

Olivia Cook, P.E.
Project Engineer

John D. Walker, P.E., PTOE
Senior Vice President/Senior Vice President

Attachments:

- Figure 1: Site Location Map
- Figure 2: Site Aerial
- Figure 3: Existing 2026 Conditions (Event 6-7 PM)
- Figure 4: Residential Trip Distribution & Assignment
- Figure 5: Non-Residential Trip Distribution & Assignment
- Figure 6: Arena Trip Distribution & Assignment
- Figure 7: Project Trips
- Figure 8: Projected 2036 No-Build Conditions (Event 6-7 PM)
- Figure 9: Projected 2036 Build Conditions (Event 6-7 PM)
- Appendix A: Trip Generation Worksheets
- Appendix B: Proposed Site Plan



Kimley»Horn	*North Point Mixed-Use District* **Traffic Impact Memorandum**	**Site Location Map**	**Figure 1**



Kimley»Horn	*North Point Mixed-Use District* **Traffic Impact Memorandum**	**Site Aerial**	**Figure 2**

LEGEND

- Existing Laneage
- (XX) Weekday 6-7 PM Traffic Volumes
- {XX} Weekend 6-7 PM Traffic Volumes
- Existing Traffic Signal
- Existing STOP Control
- (X) Intersection Reference Number

N
NOT TO SCALE

Westside Parkway
GA 400 South Ramp
Summit Place
GA 400 North Ramp
GA 400 North Ramp
North Point
Circle/Mall Ring Road
North Point Center
North Point Drive
Encore Parkway
Access C
Access B
North Point Circle/Mall Ring Road
Access A
North Point Parkway
North Point Parkway
Haynes Bridge Road
GA 400 South Ramp
GA 400 North Ramp
GA 400 North Ramp
GA 400 South Ramp
Resurgens Park Place
Mansell Road

Figure 3

Existing 2026 Conditions (Event 6-7 PM)

North Point Mixed-Use District
Traffic Impact Memorandum

Kimley»Horn

LEGEND

- Turning Movement
- XX% % Traffic Entering
- (XX%) % Traffic Exiting
- Existing Traffic Signal
- Existing STOP Control
- (X) Intersection Reference Number
- Proposed Site Driveway

N
NOT TO SCALE

Per the Methodology Meeting on April 20, 2026, it is assumed that 5% of the trips will originate internal to the site.

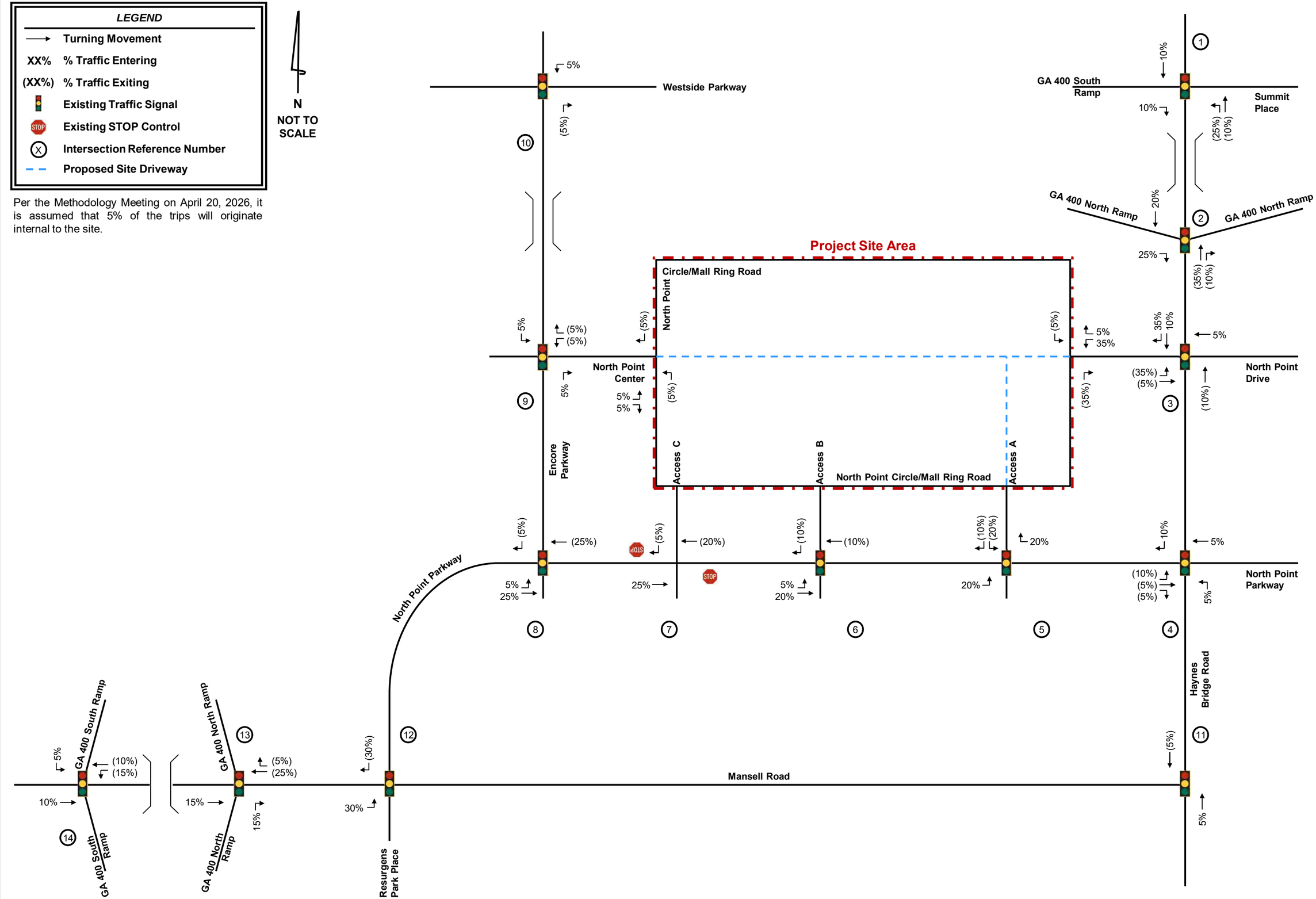


Figure 4

Residential Trip Distribution & Assignment

North Point Mixed-Use District
Traffic Impact Memorandum

Kimley»Horn

LEGEND

- Turning Movement
- XX% % Traffic Entering
- (XX%) % Traffic Exiting
- Existing Traffic Signal
- Existing STOP Control
- (X) Intersection Reference Number
- Proposed Site Driveway

N
NOT TO SCALE

Per the Methodology Meeting on April 20, 2026, it is assumed that 5% of the trips will originate internal to the site.

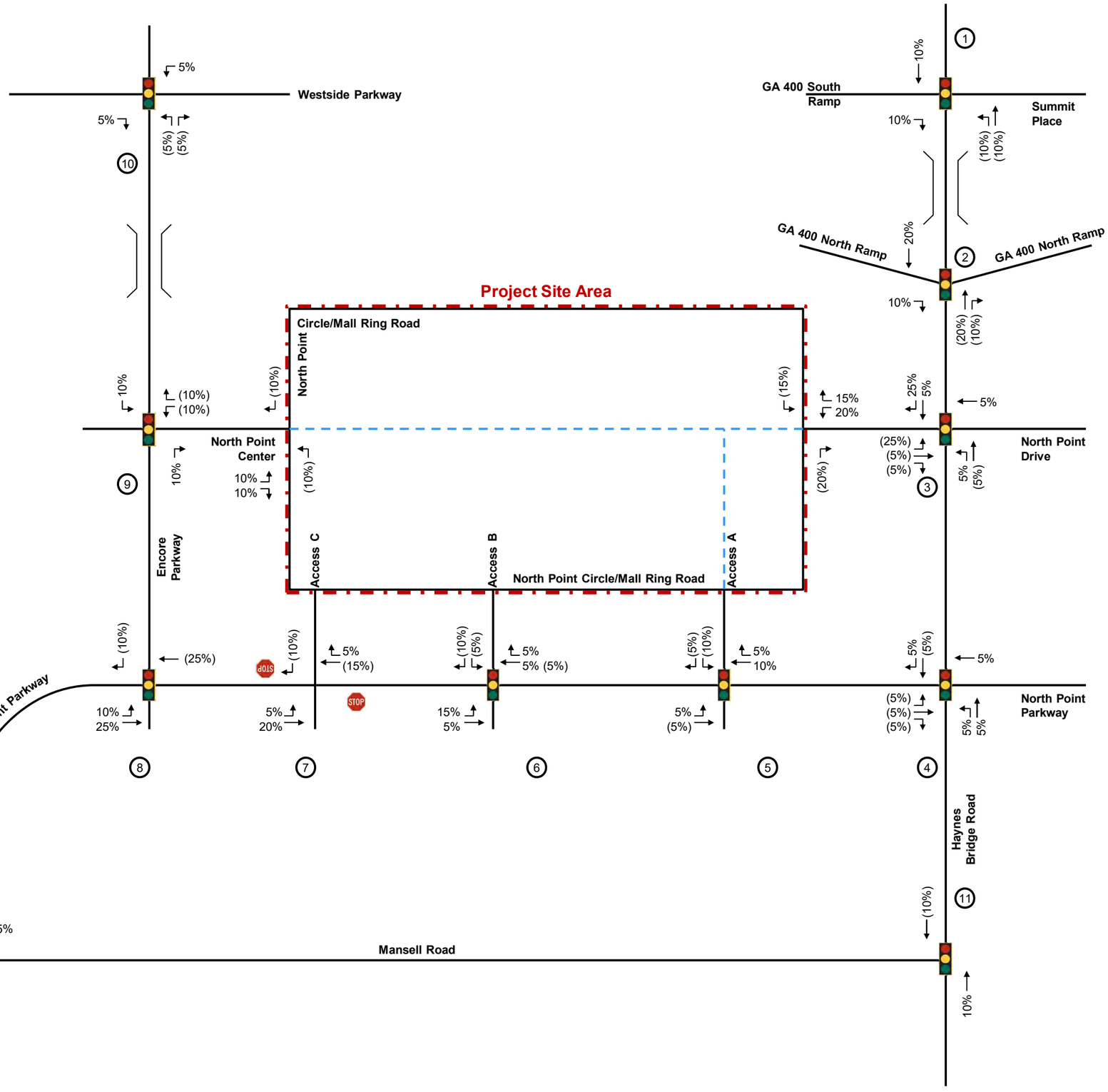


Figure 5

Non-Residential Trip Distribution & Assignment

North Point Mixed-Use District
Traffic Impact Memorandum

Kimley»Horn

LEGEND

- Turning Movement
- XX% % Traffic Entering
- (XX%) % Traffic Exiting
- Existing Traffic Signal
- Existing STOP Control
- (X) Intersection Reference Number
- Proposed Site Driveway

N
NOT TO SCALE

Per the Methodology Meeting on April 20, 2026, it is assumed that 5% of the trips will originate internal to the site.

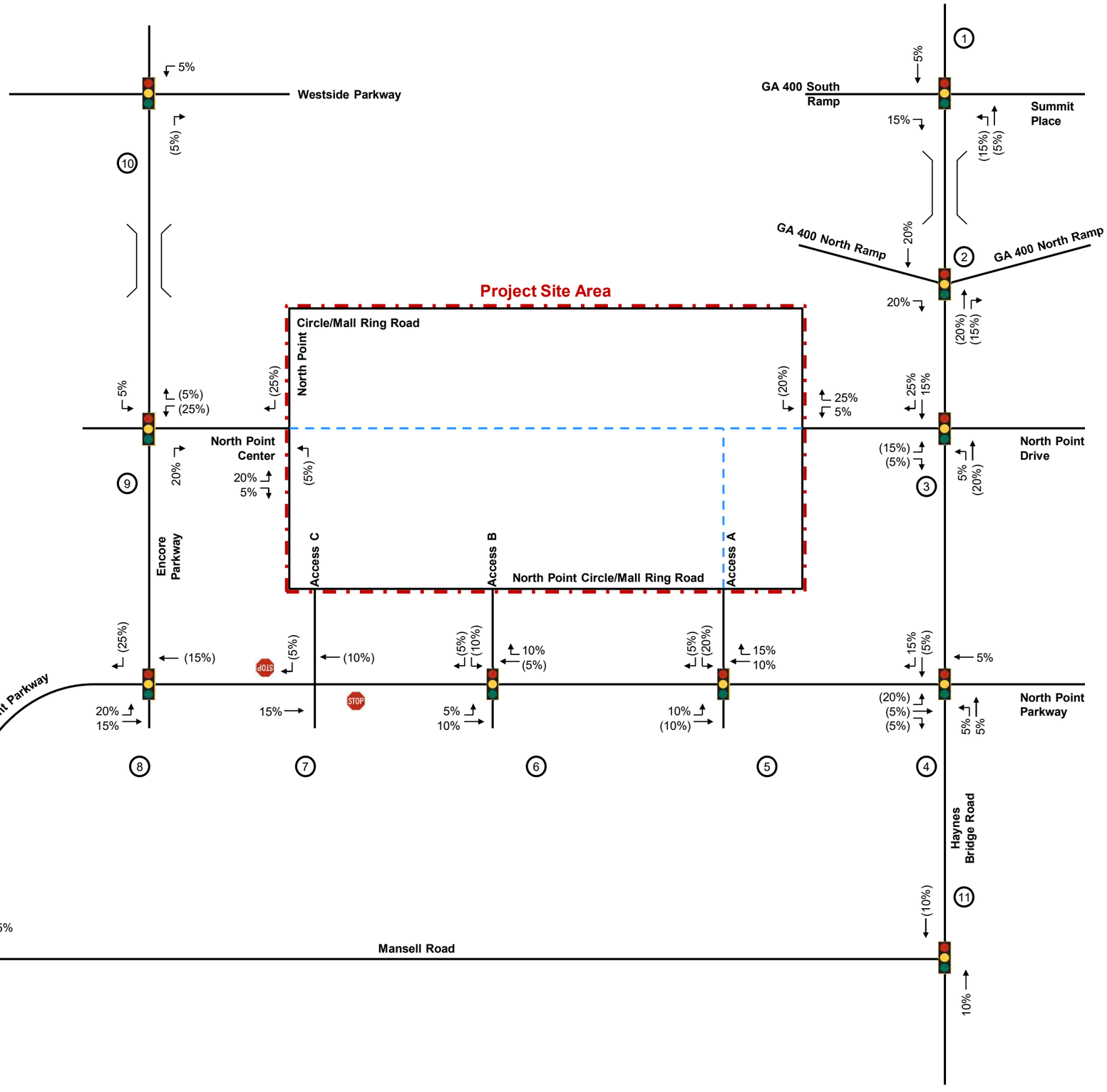


Figure 6

Arena
Trip Distribution & Assignment

North Point Mixed-Use District
Traffic Impact Memorandum

Kimley»Horn

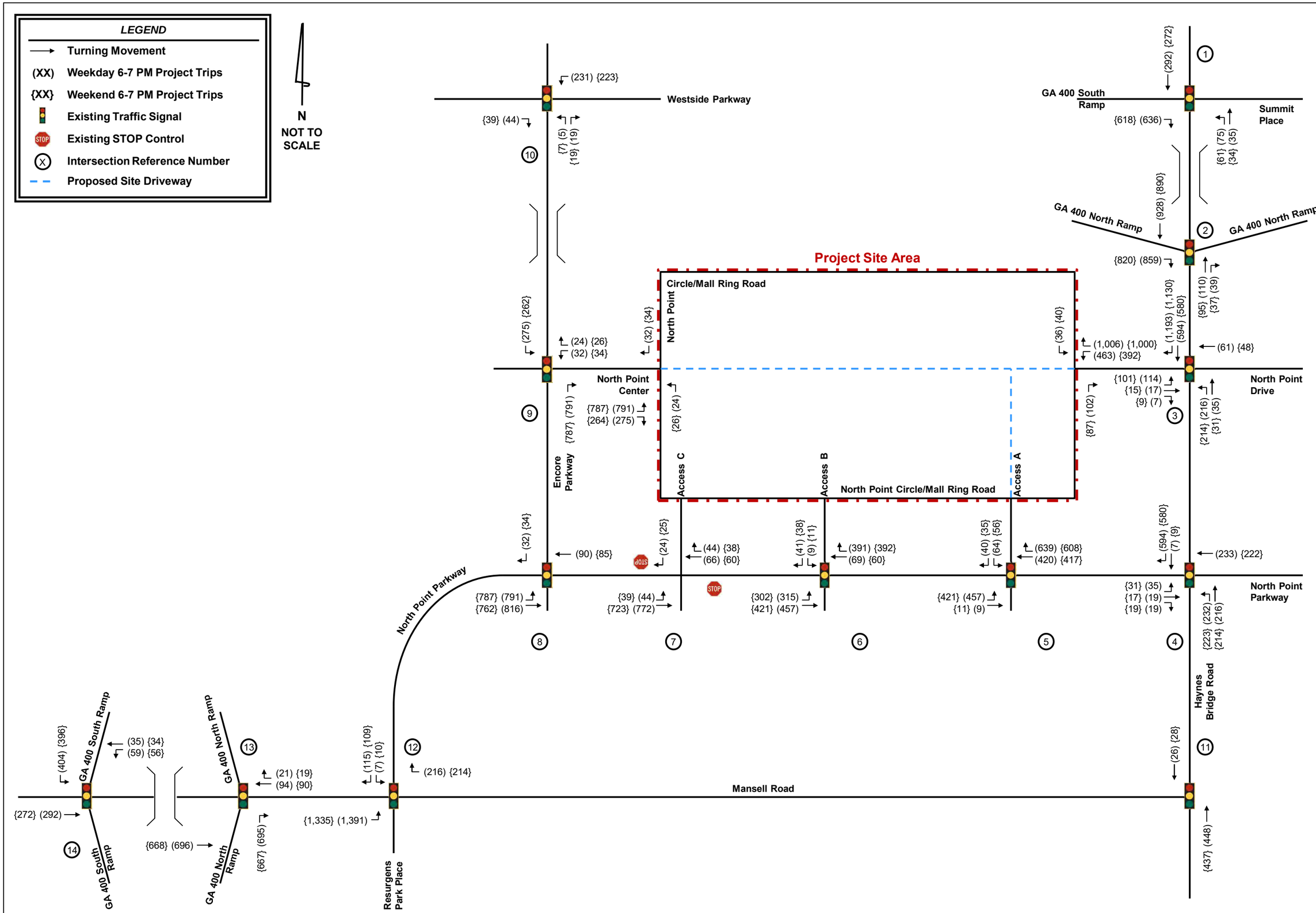


Figure 7

Project Trips

North Point Mixed-Use District
Traffic Impact Memorandum

Kimley»Horn

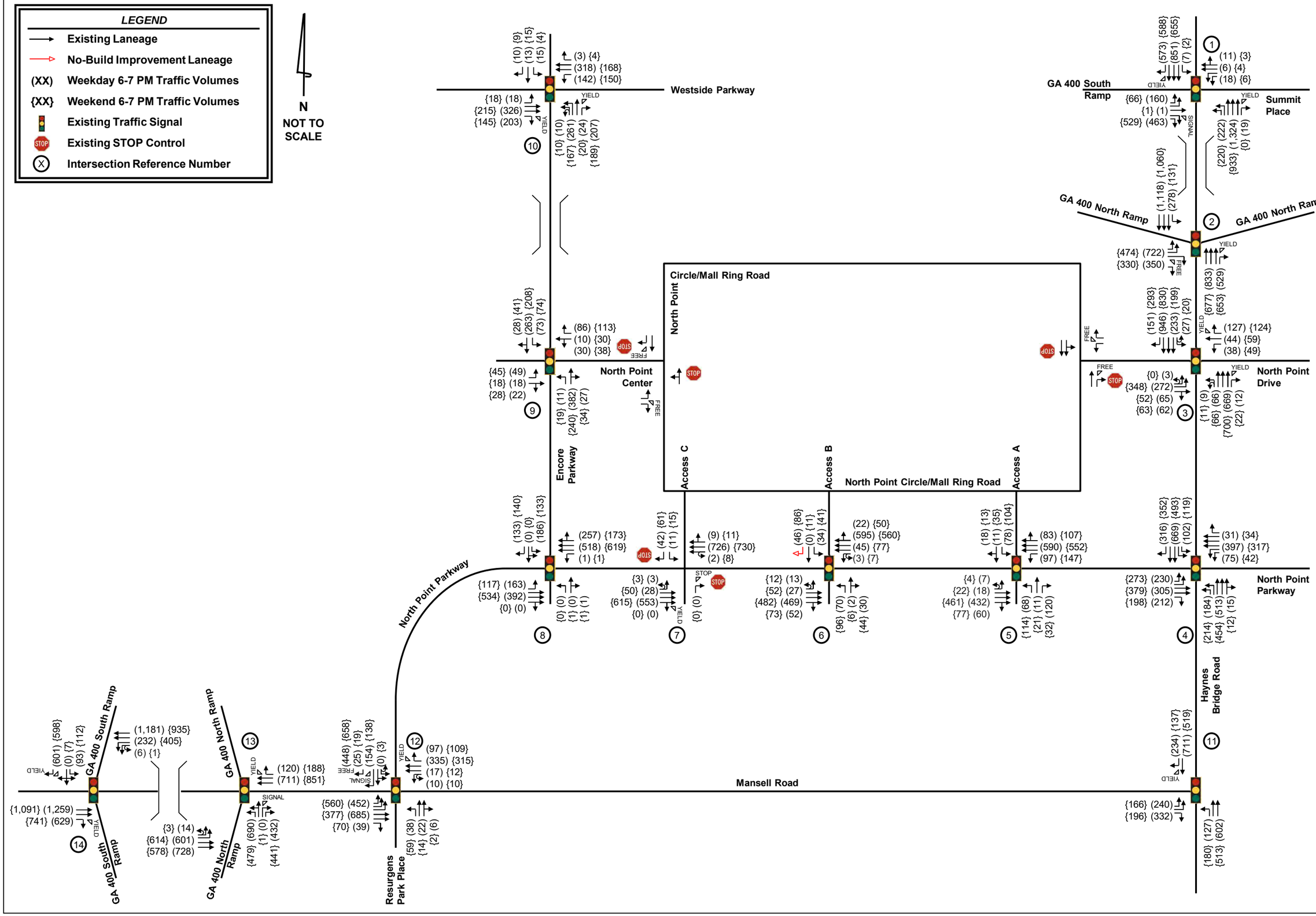


Figure 8

Projected 2036
No-Build Conditions
(Event 6-7 PM)

North Point Mixed-Use District
Traffic Impact Memorandum

Kimley»Horn

LEGEND

- Existing Laneage
- No-Build Improvement Laneage
- Build Laneage
- Removed Laneage
- (XX) Weekday 6-7 PM Traffic Volumes
- {XX} Weekend 6-7 PM Traffic Volumes
- Existing Traffic Signal
- Existing STOP Control
- (X) Intersection Reference Number
- Proposed Site Driveway

N
NOT TO SCALE

Project Site Area

Circle/Mall Ring Road

North Point Circle/Mall Ring Road

Westside Parkway

GA 400 South Ramp

GA 400 North Ramp

Summit Place

North Point Center

North Point Drive

Encore Parkway

Access C

Access B

Access A

North Point Parkway

North Point Parkway

Haynes Bridge Road

Mansell Road

Resurgens Park Place

During major events, consider converting one (1) southbound through lane to a shared through/right-turn lane.

During major events, consider police monitoring at the internal site intersections of North Point Circle/Mall Ring Road at North Point Center and at North Point Drive.

During major events, consider converting northbound through lane to a shared through/right-turn lane.

ADDITIONAL IMPROVEMENT: Make the southbound right-turn movement free-flow.

ADDITIONAL IMPROVEMENT: Reallocate green time to the eastbound left-turn and southbound right-turn movements.

Consider increasing eastbound left-turn lane storage length.

ADDITIONAL IMPROVEMENT: Reallocate green time to the northbound and eastbound approaches.

ADDITIONAL IMPROVEMENTS: Upgrade signal heads on the northbound and southbound approaches to Flashing Yellow Arrow (FYA) to allow protected-permissive phasing by time of day, restripe southbound shared through/left-turn lane to be an exclusive through lane, and remove split phasing and provide dual entry for the northbound and southbound approaches during the Event PM Peak Hour.

Figure 9

Projected 2036 Build Conditions (Event 6-7 PM)

North Point Mixed-Use District Traffic Impact Memorandum

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Appendix A: Trip Generation Worksheets

Trip Generation Analysis (10th Ed. with *2nd Edition Handbook* Daily IC & *3rd Edition* AM/PM IC)
North Point Mall (Pre-COVID/eCommerce)
City of Alpharetta, GA

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Previous Site Traffic								
820 Shopping Center	1,392,132 s.f. gross leasable area	36,034	848	526	322	3,814	1,831	1,983
Gross Trips		**36,034**	**848**	**526**	**322**	**3,814**	**1,831**	**1,983**
Residential Trips		0	0	0	0	0	0	0
Mixed-Use Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Adjusted Residential Trips		0	0	0	0	0	0	0
Hotel Trips		0	0	0	0	0	0	0
Mixed-Use Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Adjusted Hotel Trips		0	0	0	0	0	0	0
Office Trips		0	0	0	0	0	0	0
Mixed-Use Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Adjusted Office Trips		0	0	0	0	0	0	0
Retail Trips		36,034	848	526	322	3,814	1,832	1,984
Mixed-Use Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions		*-2,882*	*-67*	*-42*	*-26*	*-305*	*-147*	*-159*
Pass By Reductions (Limited by GRTA 15% Rule)		*-4,800*	*0*	*0*	*0*	*-510*	*-255*	*-255*
Adjusted Retail Trips		28,352	781	484	296	2,999	1,430	1,570
Restaurant Trips		0	0	0	0	0	0	0
Mixed-Use Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Pass By Reductions (Limited by GRTA 15% Rule)		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Adjusted Restaurant Trips		0	0	0	0	0	0	0
Other Non-Residential Trips		0	0	0	0	0	0	0
Mixed-Use Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Adjusted Other Non-Residential Trips		0	0	0	0	0	0	0
Mixed-Use Reductions - TOTAL		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions - TOTAL		*-2,882*	*-67*	*-42*	*-26*	*-305*	*-147*	*-159*
Pass-By Reductions - TOTAL		*-4,800*	*0*	*0*	*0*	*-510*	*-255*	*-255*
Existing Development Trips								
New Trips		**28,352**	**781**	**484**	**296**	**2,999**	**1,430**	**1,570**
Driveway Volumes		**33,152**	**781**	**484**	**296**	**3,509**	**1,685**	**1,825**

\\kimley-horn.com\so_alp\amt_tpto\118655001_north point mall\city of alpharetta tis\analysis\[north point mixed use district tis_weekday am peak 6-7pm.xls]mall trip generation - wkdy

Trip Generation Analysis (12th Ed. with *2nd Edition Handbook* Daily IC & *3rd Edition* AM/PM IC)
North Point Mixed Use District (consistent with DRI #4670)
City of Alpharetta, GA

Land Use		Intensity		Daily Trips	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out
Proposed Site Traffic										
220	Multi-Family Housing (Low-Rise)	1,385	d.u.	7,918	498	120	378	672	417	255
310	Hotel	850	rooms	4,964	289	150	139	400	204	196
445	Multiplex Movie Theatre	1,139	seats	456	N/A	N/A	N/A	91	34	57
445	*Multiplex Movie Theatre (exising to remain)*	*-1,139*	*seats*	*-456*	*N/A*	*N/A*	*N/A*	*-91*	*-34*	*-57*
465	Ice Skating Rink	2,000	seats	2,520	20	7	13	140	84	56
710	General Office Building	750,000	s.f.	4,842	860	757	103	774	124	650
820	Shopping Center	313,000	s.f. gross leasable area	11,390	324	201	123	1,122	539	583
820	*Shopping Center (existing occupied to be demolished)*	*-270,000*	*s.f. gross leasable area*	*-9,826*	*-298*	*-185*	*-113*	*-1,017*	*-488*	*-529*
875	Department Store	162,000	s.f.	6,250	94	60	34	316	158	158
875	*Department Store (existing to remain)*	*-162,000*	*s.f. gross leasable area*	*-6,250*	*-94*	*-60*	*-34*	*-316*	*-158*	*-158*
932	High-Turnover (Sit-Down) Restaurant	90,000	s.f.	9,338	807	444	363	826	504	322
932	*High-Turnover (Sit-Down) Restaurant (existing to remain)*	*-12,600*	*s.f.*	*-1,306*	*-113*	*-62*	*-51*	*-116*	*-71*	*-45*
	Music Hall	4,000	seats	5,440	0	0	0	419	411	8
	Arena	20,000	seats	27,200	0	0	0	2,091	2,053	38
Gross Trips (new development)				**80,318**	**2,892**	**1,739**	**1,153**	**6,851**	**4,528**	**2,323**
Gross Trips (reduced by existing-to-remain density)				**62,480**	**2,387**	**1,432**	**955**	**5,311**	**3,777**	**1,534**
Residential Trips				7,918	498	120	378	672	417	255
	Mixed-Use Reductions			*-620*	*-56*	*-8*	*-48*	*-168*	*-92*	*-76*
	Internal Capture to Arena			*-60*	*0*	*0*	*0*	*-15*	*-10*	*-5*
	Alternative Mode Reductions			*-580*	*-35*	*-9*	*-26*	*-39*	*-25*	*-14*
	Adjusted Residential Trips			6,658	407	103	304	450	290	160
Hotel Trips				4,964	289	150	139	400	204	196
	Mixed-Use Reductions			*-388*	*-47*	*-4*	*-43*	*-45*	*-29*	*-16*
	Internal Capture to Arena			*-356*	*0*	*0*	*0*	*-89*	*-44*	*-45*
	Alternative Mode Reductions			*-338*	*-19*	*-12*	*-8*	*-21*	*-10*	*-11*
	Adjusted Hotel Trips			3,882	223	134	88	245	121	124
Office Trips				4,842	860	757	103	774	124	650
	Mixed-Use Reductions			*-384*	*-176*	*-106*	*-70*	*-58*	*-20*	*-38*
	Internal Capture to Arena			*-84*	*0*	*0*	*0*	*-21*	*-3*	*-18*
	Alternative Mode Reductions			*-350*	*-55*	*-52*	*-3*	*-56*	*-8*	*-48*
	Adjusted Office Trips			4,024	629	599	30	639	93	546
Retail Trips				5,272	396	219	177	448	266	182
	Mixed-Use Reductions			*-712*	*-114*	*-59*	*-55*	*-246*	*-126*	*-120*
	Internal Capture to Arena			*-648*	*0*	*0*	*0*	*-162*	*-112*	*-50*
	Alternative Mode Reductions			*-312*	*-22*	*-13*	*-10*	*-3*	*-2*	*-1*
	Pass By Reductions (Based on ITE Rates)			*-1,224*	*0*	*0*	*0*	*-14*	*-7*	*-7*
	Adjusted Retail Trips			2,376	260	147	112	23	19	4
Restaurant Trips				4,322	324	180	146	368	218	150
	Mixed-Use Reductions			*-584*	*-183*	*-111*	*-72*	*-223*	*-106*	*-117*
	Internal Capture to Arena			*-464*	*0*	*0*	*0*	*-116*	*-90*	*-26*
	Alternative Mode Reductions			*-262*	*-11*	*-6*	*-6*	*-2*	*-2*	*-1*
	Pass By Reductions (Based on ITE Rates)			*-1,296*	*0*	*0*	*0*	*-12*	*-6*	*-6*
	Adjusted Restaurant Trips			1,716	130	63	68	16	14	0
Other Non-Residential and Music Hall Trips				7,960	20	7	13	559	495	64
	Mixed-Use Reductions			*-176*	*0*	*0*	*0*	*-44*	*-19*	*-25*
	Alternative Mode Reductions			*-636*	*-2*	*-1*	*-1*	*-41*	*-38*	*-3*
	Adjusted Other Non-Residential Trips			7,148	18	6	12	474	438	36
Arena Trips				27,200	0	0	0	2,091	2,053	38
	Mixed-Use Reductions			*-576*	*0*	*0*	*0*	*-144*	*-144*	*0*
	Alternative Mode Reductions			*-2,130*	*0*	*0*	*0*	*-150*	*-153*	*3*
	Adjusted Other Non-Residential Trips			24,494	0	0	0	1,797	1,756	41
Mixed-Use Reductions - TOTAL				*-3,440*	*-576*	*-288*	*-288*	*-928*	*-536*	*-392*
Internal Capture to Arena				*-1,612*	*0*	*0*	*0*	*-403*	*-259*	*-144*
Alternative Mode Reductions - TOTAL				*-4,608*	*-144*	*-93*	*-54*	*-312*	*-238*	*-75*
Pass-By Reductions - TOTAL				*-2,520*	*0*	*0*	*0*	*-26*	*-13*	*-13*
Existing Development Trips										
New Trips				**50,298**	**1,667**	**1,052**	**614**	**3,644**	**2,731**	**911**
Driveway Volumes				**52,818**	**1,667**	**1,052**	**614**	**3,670**	**2,744**	**924**

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Trip Generation Analysis (12th Ed. with *2nd Edition Handbook* Daily IC & *3rd Edition* AM/PM IC)
North Point Mixed Use District Weekday 6-7 PM Peak
City of Alpharetta, GA

Land Use		Intensity		Daily Trips	6-7 PM Hour Total	In	Out
Proposed Site Traffic							
220	Multi-Family Housing (Low-Rise)	1,385	d.u.	7,918	649	392	257
310	Hotel	850	rooms	4,964	253	134	119
445	Multiplex Movie Theatre	1,139	seats	456	319	163	156
445	*Multiplex Movie Theatre (exising to remain)*	*-1,139*	*seats*	*-456*	*-319*	*-163*	*-156*
465	Ice Skating Rink	2,000	seats	2,520	207	120	87
710	General Office Building	750,000	s.f.	4,842	107	44	63
820	Shopping Center	313,000	s.f. gross leasable area	11,390	831	416	415
820	*Shopping Center (existing occupied to be demolished)*	*-270,000*	*s.f. gross leasable area*	*-9,826*	*-717*	*-359*	*-358*
875	Department Store	162,000	s.f.	6,250	456	228	228
875	*Department Store (existing to remain)*	*-162,000*	*s.f. gross leasable area*	*-6,250*	*-456*	*-228*	*-228*
932	High-Turnover (Sit-Down) Restaurant	90,000	s.f.	9,338	878	472	406
932	*High-Turnover (Sit-Down) Restaurant (existing to remain)*	*-12,600*	*s.f.*	*-1,306*	*-123*	*-66*	*-57*
	Music Hall	4,000	seats	5,440	789	781	8
	Arena	20,000	seats	27,200	3,944	3,906	38
Gross Trips (new development)				**80,318**	**8,433**	**6,656**	**1,777**
Gross Trips (reduced by existing-to-remain density)				**62,480**	**6,818**	**5,840**	**978**
Residential Trips				7,918	649	392	257
Mixed-Use Reductions				*-620*	*-168*	*-92*	*-76*
Internal Capture to Arena				*-56*	*-14*	*-9*	*-5*
Alternative Mode Reductions				*-580*	*-37*	*-23*	*-14*
Adjusted Residential Trips				6,662	430	268	162
Hotel Trips				4,964	253	134	119
Mixed-Use Reductions				*-388*	*-45*	*-29*	*-16*
Internal Capture to Arena				*-208*	*-52*	*-26*	*-26*
Alternative Mode Reductions				*-350*	*-12*	*-6*	*-6*
Adjusted Hotel Trips				4,018	144	73	71
Office Trips				4,842	107	44	63
Mixed-Use Reductions				*-384*	*-58*	*-20*	*-38*
Internal Capture to Arena				*-8*	*-2*	*-1*	*-1*
Alternative Mode Reductions				*-356*	*-4*	*-2*	*-2*
Adjusted Office Trips				4,094	43	21	22
Retail Trips				5,272	478	254	223
Mixed-Use Reductions				*-712*	*-246*	*-126*	*-120*
Internal Capture to Arena				*-740*	*-185*	*-103*	*-82*
Alternative Mode Reductions				*-306*	*-3*	*-2*	*-2*
Pass By Reductions (Based on ITE Rates)				*-1,194*	*-16*	*-8*	*-8*
Adjusted Retail Trips				2,320	28	15	11
Restaurant Trips				4,322	392	208	182
Mixed-Use Reductions				*-584*	*-223*	*-106*	*-117*
Internal Capture to Arena				*-536*	*-134*	*-82*	*-52*
Alternative Mode Reductions				*-256*	*-3*	*-2*	*-1*
Pass By Reductions (Based on ITE Rates)				*-1,266*	*-14*	*-7*	*-7*
Adjusted Restaurant Trips				1,680	19	11	5
Other Non-Residential and Music Hall Trips				7,960	996	901	95
Mixed-Use Reductions				*-176*	*-44*	*-19*	*-25*
Alternative Mode Reductions				*-636*	*-77*	*-71*	*-6*
Adjusted Other Non-Residential Trips				7,148	875	811	64
Arena Trips				27,200	3,944	3,906	38
Mixed-Use Reductions				*-664*	*-166*	*-166*	*0*
Alternative Mode Reductions				*-2,123*	*-296*	*-299*	*3*
Adjusted Other Non-Residential Trips				24,413	3,482	3,441	41
Mixed-Use Reductions - TOTAL				*-3,528*	*-950*	*-558*	*-392*
Internal Capture to Arena				*-1,548*	*-387*	*-221*	*-166*
Alternative Mode Reductions - TOTAL				*-4,607*	*-432*	*-405*	*-28*
Pass-By Reductions - TOTAL				*-2,460*	*-30*	*-15*	*-15*
Existing Development Trips							
New Trips				**50,335**	**5,021**	**4,640**	**376**
Driveway Volumes				**52,795**	**5,051**	**4,655**	**391**

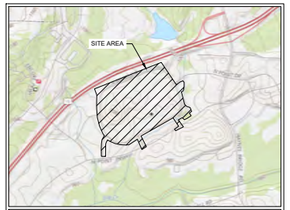
\\kimley-horn.com\so_alp\amt_tpto\118655001_north point mall\city of alpharetta tis\analysis\[north point mixed use district tis_weekday am peak 6-7pm.xls]trip generation - wkdy event

Trip Generation Analysis (12th Ed. with *2nd Edition Handbook* Daily IC & *3rd Edition* AM/PM IC)
North Point Mixed Use District Weekend 6-7 PM Peak
City of Alpharetta, GA

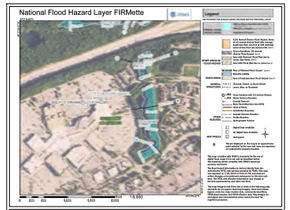
Land Use		Intensity		Daily Trips	6-7 PM Hour Total	In	Out
Proposed Site Traffic							
220	Multi-Family Housing (Low-Rise)	1,385	d.u.	6,302	429	199	230
310	Hotel	850	rooms	5,882	182	132	50
445	Multiplex Movie Theatre	1,139	seats	1,556	311	162	149
445	*Multiplex Movie Theatre (exising to remain)*	*-1,139*	*seats*	*-1,556*	*-311*	*-162*	*-149*
465	Ice Skating Rink	2,000	seats	3,158	218	43	175
710	General Office Building	750,000	s.f.	3,292	72	30	42
820	Shopping Center	313,000	s.f. gross leasable area	13,534	1,069	467	602
820	*Shopping Center (existing occupied to be demolished)*	*-270,000*	*s.f. gross leasable area*	*-12,058*	*-953*	*-416*	*-537*
875	Department Store	162,000	s.f.	8,354	660	288	372
875	*Department Store (existing to remain)*	*-162,000*	*s.f. gross leasable area*	*-8,354*	*-660*	*-288*	*-372*
932	High-Turnover (Sit-Down) Restaurant	90,000	s.f.	9,410	922	579	343
932	*High-Turnover (Sit-Down) Restaurant (existing to remain)*	*-12,600*	*s.f.*	*-1,318*	*-129*	*-81*	*-48*
	Music Hall	4,000	seats	5,440	789	781	8
	Arena	20,000	seats	27,200	3,944	3,906	38
Gross Trips (new development)				**84,128**	**8,596**	**6,587**	**2,009**
Gross Trips (reduced by existing-to-remain density)				**60,842**	**6,543**	**5,640**	**903**
Residential Trips				6,302	429	199	230
	Mixed-Use Reductions			*-522*	*-168*	*-92*	*-76*
	Internal Capture to Arena			*-32*	*-8*	*-3*	*-5*
	Alternative Mode Reductions			*-460*	*-20*	*-8*	*-12*
	Adjusted Residential Trips			5,288	233	96	137
Hotel Trips				5,882	182	132	50
	Mixed-Use Reductions			*-486*	*-45*	*-29*	*-16*
	Internal Capture to Arena			*-140*	*-35*	*-26*	*-9*
	Alternative Mode Reductions			*-420*	*-8*	*-6*	*-2*
	Adjusted Hotel Trips			4,836	94	71	23
Office Trips				3,292	72	30	42
	Mixed-Use Reductions			*-384*	*-58*	*-20*	*-38*
	Internal Capture to Arena			*0*	*0*	*0*	*0*
	Alternative Mode Reductions			*-232*	*-1*	*-1*	*0*
	Adjusted Office Trips			2,676	13	9	4
Retail Trips				5,644	536	324	212
	Mixed-Use Reductions			*-764*	*-246*	*-126*	*-120*
	Internal Capture to Arena			*-928*	*-232*	*-158*	*-74*
	Alternative Mode Reductions			*-316*	*-4*	*-3*	*-1*
	Pass By Reductions (Based on ITE Rates)			*-1,236*	*-20*	*-10*	*-10*
	Adjusted Retail Trips			2,400	34	27	7
Restaurant Trips				3,924	372	226	148
	Mixed-Use Reductions			*-532*	*-223*	*-106*	*-117*
	Internal Capture to Arena			*-484*	*-121*	*-96*	*-25*
	Alternative Mode Reductions			*-232*	*-2*	*-2*	*0*
	Pass By Reductions (Based on ITE Rates)			*-1,150*	*-12*	*-6*	*-6*
	Adjusted Restaurant Trips			1,526	15	16	0
Other Non-Residential and Music Hall Trips				8,598	1,007	824	183
	Mixed-Use Reductions			*-176*	*-44*	*-19*	*-25*
	Alternative Mode Reductions			*-687*	*-77*	*-64*	*-13*
	Adjusted Other Non-Residential Trips			7,735	886	741	145
Arena Trips				27,200	3,944	3,906	38
	Mixed-Use Reductions			*-452*	*-113*	*-113*	*0*
	Alternative Mode Reductions			*-2,140*	*-300*	*-303*	*3*
	Adjusted Other Non-Residential Trips			24,608	3,531	3,490	41
Mixed-Use Reductions - TOTAL				*-3,316*	*-897*	*-505*	*-392*
Internal Capture to Arena				*-1,584*	*-396*	*-283*	*-113*
Alternative Mode Reductions - TOTAL				*-4,487*	*-412*	*-387*	*-25*
Pass-By Reductions - TOTAL				*-2,386*	*-32*	*-16*	*-16*
Existing Development Trips							
New Trips				**49,069**	**4,806**	**4,450**	**357**
Driveway Volumes				**51,455**	**4,838**	**4,466**	**373**

\\kimley-horn.com\so_alp\amt_tpto\118655001_north point mall\city of alpharetta tis\analysis\[north point mixed use district tis_weekday am peak 6-7pm.xls]trip generation - wknd event

Appendix B: Proposed Site Plan



VICINITY MAP
N.T.S.



FEMA MAP
WITHIN ZONE AE PER FIRM PANEL 13121C0066F, 09/18/2013

PARKING SUMMARY

REQUIRED PARKING:	**17,700 SPACES** (TOTAL)
PROPOSED RESTAURANT	720 SPACES (0.8 SPACES/100 SF)
PROPOSED RETAIL	426 SPACES (0.8 SPACES/250 SF)
RETAIL ANCHOR	576 SPACES (0.8 SPACES/250 SF)
DILLARD'S	519 SPACES (0.8 SPACES/250 SF)
OFFICE	2,400 SPACES (3.2 SPACES/ 1000 SF)
MULTIFAMILY	2,272 SPACES (1.64 SPACES/UNIT)
SELECT SERVICE HOTEL	127 SPACES (0.84 SPACES/KEY)
HYBRID HOTEL	252 SPACES (0.84 SPACES/KEY)
FULL SERVICE HOTEL	336 SPACES (0.84 SPACES/KEY)
HOTEL CONFERENCE CENTER	76 SPACES (0.84 SPACES/500 SF)
CINEMA	320 SPACES (1.12 SPACES/4 SEATS)
MUSIC HALL (SEATED)	1,120 SPACES (1.12 SPACES/4 SEATS)
COMMUNITY ICE SHEETS	560 SPACES (1.12 SPACES/4 SEATS)
HOCKEY ARENA	8,000 SPACES (0.8 SPACES/2 SEATS)
PROPOSED PARKING:	**8,752 SPACES** (TOTAL)
A1 PARKING DECK	610 SPACES
B4 PARKING DECK	846 SPACES
C2 PARKING DECK	725 SPACES
C4 PARKING DECK	636 SPACES
E1 PARKING DECK	1,763 SPACES
E4 SURFACE LOT	141 SPACES
E5 SURFACE LOT	284 SPACES
G4 PARKING DECK	430 SPACES
H SURFACE LOT	73 SPACES
J PARKING DECK	542 SPACES
P PARKING DECK	2,626 SPACES
STREET	75 SPACES

BUILDING HEIGHTS

MAXIMUM ALLOWABLE	
COMMERCIAL	4 STORIES OR 60'
OFFICE	4 STORIES OR 60'
HOTEL	4 STORIES OR 60'
MULTIFAMILY	4 STORIES OR 60'
PROPOSED MAXIMUM	
COMMERCIAL	4 STORIES OR 60'
OFFICE	15 STORIES OR 250'
HOTEL	21 STORIES OR 300'
MULTIFAMILY	21 STORIES OR 280'

CONTACTS

APPLICANT	NYL REAL ESTATE INVESTORS 51 MADISON AVENUE NEW YORK, NY 10010 CONTACT: ALAN RUBENSTEIN PHONE: (212) 576-4486
TRAFFIC CONSULTANT	KIMLEY-HORN AND ASSOCIATES, INC. 11720 AMBER PARK DRIVE, SUITE 600 ALPHARETTA, GEORGIA 30009 CONTACT: JOHN WALKER, PE, PTOE PHONE: (404) 201-6155
CIVIL ENGINEER	KIMLEY-HORN AND ASSOCIATES, INC. 11720 AMBER PARK DRIVE, SUITE 600 ALPHARETTA, GEORGIA 30009 CONTACT: TYLER ROSSER, PE PHONE: (470) 299-7057

SITE DEVELOPMENT SUMMARY

CURRENT ZONING	PSC/MU
OVERLAY DISTRICT	NORTH POINT OVERLAY
SITE AREA:	
TOTAL SITE AREA	98.58 ACRES
MALL PROPER	83.67 ACRES
DILLARDS	6.67 ACRES
VON MAUR	8.24 ACRES
SETBACKS & BUFFERS:	
BUILDING SETBACKS	NONE
LANDSCAPE SETBACKS	NONE
UNDISTURBED BUFFERS	120' GA 400 BUFFER

LAND USES AND DENSITIES

EXISTING	
MALL INTERIOR AREA	1,461,466 SF
RESTAURANT (Cheesecake Factory)	12,600 SF
CINEMA (AMC)	1,139 SEATS
PROPOSED MAXIMUMS	
PROPOSED RESTAURANT	90,000 SF
PROPOSED RETAIL	133,000 SF
RETAIL ANCHOR	180,000 SF
DILLARD'S	162,000 SF
OFFICE	750,000 SF
MULTIFAMILY	1,385 UNITS (14.05 DUA)
SELECT SERVICE HOTEL	150 KEYS
HYBRID HOTEL	300 KEYS
FULL SERVICE HOTEL	400 KEYS
HOTEL CONFERENCE CENTER	45,000 SF
CINEMA	1,139 SEATS
MUSIC HALL (SEATED)	4,000 SEATS
COMMUNITY ICE SHEETS (SEATED)	2,000 SEATS
HOCKEY ARENA	20,000 SEATS

SITE PLAN NOTE

THE BUILDING FOOTPRINTS, DRIVEWAY LOCATIONS, OPEN SPACE LOCATIONS, SIDEWALK DESIGNS AND LOCATIONS, AND PARKING LOCATIONS ON THIS SITE PLAN ARE FOR ILLUSTRATIVE PURPOSES. THEIR SHAPES, LOCATIONS, AND AMOUNTS MAY VARY AS ALLOWED FOR BY THE SITE DATA TABLE, MU REGULATIONS, AND THE NORTH POINT OVERLAY.

VARIANCES

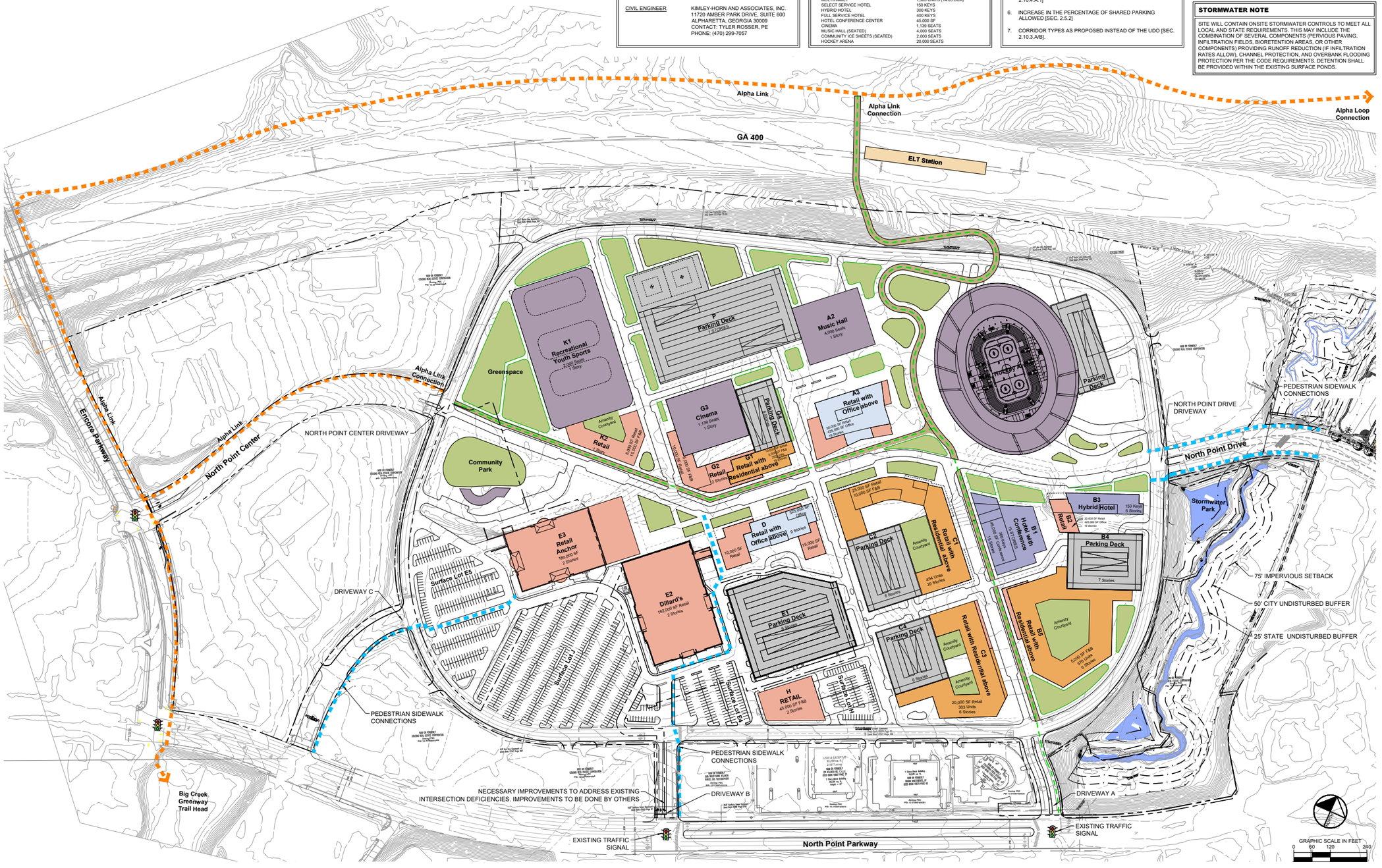
1. CONDITIONAL USE TO INCREASE MAXIMUM BUILDING HEIGHT [SEC 2.10.3(D)]
2. ENCROACHMENT INTO THE GA 400 120' BUFFER FOR THE MARTA ELT R/W ACQUISITION AND THE MULTI-USE TRAIL.
3. CONDITIONAL USE TO INCREASE MULTIFAMILY RESIDENTIAL DENSITY [SEC 2.10.2(B)(3)(C)]
4. REDUCTION IN THE MINIMUM PERCENTAGE OF MU LAND USE FOR THE OFFICE COMPONENT TO BE LESS THAN 25%, [SEC. 2.2.2(D)(B)(4)]
5. BLOCK PERIMETER INCREASE TO EXCEED 1,600 LF [SEC. 2.10.4.A.1]
6. INCREASE IN THE PERCENTAGE OF SHARED PARKING ALLOWED [SEC. 2.5.2]
7. CORRIDOR TYPES AS PROPOSED INSTEAD OF THE UDO [SEC. 2.10.3.A/B].

SITE LEGEND

- PROPERTY LINE/ RIGHT-OF-WAY
- RETAIL
- MULTIFAMILY (FOR LEASE)
- OFFICE
- HOTEL
- SPORTS AND ENTERTAINMENT
- PARKING GARAGE
- RECREATIONAL

STORMWATER NOTE

SITE WILL CONTAIN ONSITE STORMWATER CONTROLS TO MEET ALL LOCAL AND STATE REQUIREMENTS. THIS MAY INCLUDE THE COMBINATION OF SEVERAL COMPONENTS (PERVIOUS PAVING, INFILTRATION FIELDS, BIORETENTION AREAS, OR OTHER COMPONENTS) PROVIDING RUNOFF REDUCTION (IF INFILTRATION RATES ALLOW), CHANNEL PROTECTION, AND OVERBANK FLOODING PROTECTION PER THE CODE REQUIREMENTS. DETENTION SHALL BE PROVIDED WITHIN THE EXISTING SURFACE PONDS.



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No.	REVISION DESCRIPTIONS	DATE	BY

PROJECT
NORTH POINT
MIXED-USE DISTRICT
DRI # 4670

GEORGIA
TYLER ROSSER
06/25/26

GSWCC CERT. (LEVEL II)	0000072899
DRAWN BY	CMC
DESIGNED BY	JTR
REVIEWED BY	JTR
DATE	06.23.2026
PROJECT NO.	017954000

TITLE
DRI SITE PLAN

SHEET NUMBER
C0.30

Drawing name: C:\ACCDACC\Dock\Kimley-Horn\118685001 - North Point MUD\Project Files\CAD\00 Overall Plansheet\C0.30 - DRI SITE PLAN.dwg 2/7/00 ZONING SITE PLAN Jun 23, 2026 4:03pm by Alex.Gallegos

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Kimley»Horn

MEMORANDUM

To:	Brian Bolick P.E., City of Alpharetta
From:	Ethan Hageman, AICP, *Kimley-Horn and Associates, Inc.* Vincent Pagano, *Kimley-Horn and Associates, Inc.*
Date:	July 21, 2026
Subject:	***North Point Mixed-Use District – Shared Parking Study***

Kimley-Horn and Associates, Inc., is pleased to present this memorandum, which summarizes the projected parking demand for the proposed North Point Mixed-Use District in Alpharetta, Georgia.

PROJECT OVERVIEW

The purpose of this analysis is to project peak parking demand for the completed site based on industry standards and the City of Alpharetta Unified Development Code (UDC). The information presented in this analysis is intended to evaluate the impact of Jamestown's application to the City of Alpharetta's Planning Commission for a rezoning request.

The North Point Mixed-Use District was evaluated under typical mixed-use operations, including activation of the live music venue, and under arena event operations. The purpose of this memorandum is to identify the peak parking demand generated by the proposed development.

Under typical mixed-use operations, parking demand is projected to peak at approximately 7,375 spaces at 2:00 PM on a weekday. This condition includes the residential and hotel parking demand that is expected to be accommodated in dedicated or nested parking areas, as well as the shared parking demand generated by the remaining land uses.

During major arena events, total parking demand is higher and is expected to be managed through a combination of on- and off-site parking. As with other large arena and stadium districts, the site is not intended to provide all arena-related parking on site during the largest events. Instead, the recommended on-site supply is intended to accommodate the recurring non-arena-event peak demand, with off-site parking resources used during major-event conditions to avoid overbuilding parking and to create a vibrant mixed-use atmosphere not dominated by parking.

SUMMARY OF CONCLUSIONS

Parking demand projections were generated using industry's best practices, Urban Land Institute (ULI) parking ratios, the City of Alpharetta UDC parking requirements, and alignment with the Development of Regional Impact (DRI) methodology for the North Point Mixed-Use District, as accepted by the City of Alpharetta and the Atlanta Regional Commission (ARC). The project site was evaluated for typical mixed-use operations with the live music venue in operation, as well as when the arena is operating at full capacity, resulting in different parking demands and peak times for each scenario.

When the arena is operating at full capacity, parking demand is projected to exceed the recommended on-site supply. However, this condition represents a major event scenario and is not expected to reflect the site's typical peak parking condition. During these events, employee parking and a portion of arena visitor parking can be accommodated off-site, consistent with typical operating practices for large arena and stadiums throughout the country.

Table 1 summarizes the City's code-required parking for the North Point Overlay District, the projected parking demand under the two primary operating conditions evaluated in this study, and the recommended on-site parking supply. The comparison is intended to distinguish between the site's recurring typical peak conditions, which will be accommodated on-site, and the major arena event condition, which is expected to be managed through a combination of on-site parking, off-site parking, and event operations.

Table 1: Projected Parking Demand and Recommended Supply

Land Use	Required Parking per Code*	Projected Parking Demand	Recommended On-Site Supply	Parking Management Approach
Mixed-Use & Live Music Venue	10,242	7,375	7,375	Accommodated on-site
Full Arena Event Condition	17,611	12,302	7,375	On-site + off-site/event operations management

*Includes the North Point Overlay 20% Reduction

Based on this study, which accounts for parking demand by hour throughout the day for each land use, the recommended 7,375-space on-site parking supply is anticipated to accommodate the recurring peak demand during mixed-use operations with the live music venue activated. When the arena is in use, total parking demand is projected to increase to 12,302 spaces and would be managed through a combination of the remaining shared on-site parking and off-site parking.

SITE CONTEXT

The proposed development is located at the current location of the North Point Mall. The site is bound on all sides by North Point Circle. **Figure 1** displays the general location of the site, while **Figure 2** displays the conceptual site plan.

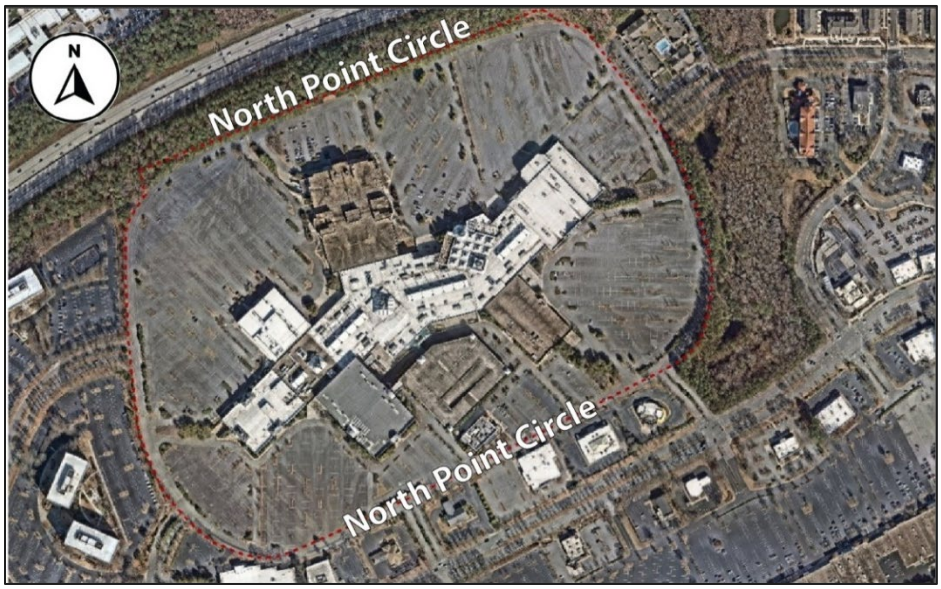


Figure 1. Existing Site Area



Figure 2. Conceptual Site Plan

The North Point Mixed-Use District is planned to be a multi-use entertainment district, anchored by a 20,000-seat arena and supported by various professional, recreational, residential, and retail uses. The parking for this development is planned to be a mix of surface lots and parking structures around the site. The proposed land-use densities are outlined in **Table 2** below.

Table 2: Proposed Densities

Land Use	Density	Unit
Fine/Casual Dining	45,000	Square Feet
Adult Active Entertainment	45,000	Square Feet
Retail	133,000	Square Feet
Existing Dillard's	162,000	Square Feet
Existing Von Maur	180,000	Square Feet
Cinema	1,139	Seats
Live Music Venue	4,000	Seats
Community Ice Sheets	2,000	Seats
Hockey Arena	20,000	Seats
Multi-Family for Rent	1,385	Units
Office	750,000	Square Feet
Hotel	650	Keys
Hotel Conference Center	30,000	Square Feet

Based on the proposed densities, the City of Alpharetta parking minimum requires 17,611 parking spaces to be provided to serve the needs of the development. **Table 3** outlines the code-required parking minimums for each land use.

Table 3: City of Alpharetta Parking Minimums						
Land Use	**Applicable Code**	**Density**	**Unit**	**Parking Ratio**	**Total**	**With North Point Overlay**
Fine/Casual Dining	Restaurant	45,000	SF	1.00 space per 100 SF	450 Spaces	360 Spaces
Adult Active Entertainment	Restaurant	45,000	SF	1.00 space per 100 SF	450 Spaces	360 Spaces
Retail	Retail Shopping Center (Less than 50,000 SF)	133,000	SF	1.00 space per 200 SF	665 Spaces	532 Spaces
Dillard's	Retail Shopping Center (50,000 – 400,000 SF)	162,000	SF	1.00 space per 250 SF	648 Spaces	518 Spaces
Von Maur	Retail Shopping Center (50,000 – 400,000 SF)	180,000	SF	1.00 space per 250 SF	720 Spaces	576 Spaces
Cinema	Theater	1,139	Seats	1.00 space per 4 seats + 1.00 employee space per 10 seats	399 Spaces	319 Spaces
Live Music Venue	Public Assembly	4,000	Seats	1.00 space per 4 seats + 1.00 employee space per 10 seats	1,400 Spaces	1,120 Spaces
Community Ice Sheets	Public Assembly	2,000	Seats	1.00 space per 4 seats + 1.00 employee space per 10 seats	700 Spaces	560 Spaces
Hockey Arena	Public Assembly (Section 2.5.1D)	20,000	Seats	1.00 space per 2 seats	10,000 Spaces	8,000 Spaces
Multi-Family for Rent	Dwelling, 'For-Rent', Residential	1,385	Units	2.00 space per unit + 1 guest space per 20 units	2,840 Spaces	2,272 Spaces
Office	Office (Professional)	750,000	SF	1.00 space per 250 SF of GFA	3,000 Spaces	2,400 Spaces
Hotel	Hotel	650	Room	1.00 space per room + 1.00 employee space per 20 rooms	683 Spaces	546 Spaces
Hotel Conference Center	Hotel, Conference Room	30,000	SF	1.00 space per 500 SF	60 Spaces	48 Spaces
				Total	**22,015 Spaces**	**17,611 Spaces**

METHODOLOGY

This analysis uses industry-supported methods applied to the City of Alpharetta's UDC parking requirements to project the peak parking demand expected to be generated by the proposed land uses and densities. Factors evaluated in the analysis include data collected from a similar mixed-use sports entertainment site, the use of ULI industry parking ratios, the methodology used for the DRI for the North Point Mixed-Use District, and ULI's Shared Parking Model.

Data Collection – Battery Entertainment District

During large events at mixed-use entertainment districts, a substantial portion of event goers patronize restaurants, bars, and retail before and after an event. Conversely, during events, restaurants, bars, and retail land uses typically see a decrease in non-event-related patrons. To better understand this dynamic, local businesses within the Battery Entertainment District were surveyed to understand user demand during event days. Survey respondents were asked to scale the demand of business from 1-10, with 10 being at capacity with every table full. Survey data was collected for retail, fine/casual dining, and adult active entertainment, and adjusted to percentages to refine parking demand for the model when an event is taking place in the arena, as shown in **Table 4**, and in detail in **Appendix A.**

Table 4: Battery Entertainment District Survey Results

Land Use	One Hour Before the Game	During the Game	One Hour After the Game	No Event During Typical Gametime
Retail	90%	28%	70%	47%
Fine/Casual Dining	89%	36%	86%	70%
Adult Active Entertainment	90%	33%	70%	70%

Adjusted Parking Ratios

The ULI Shared Parking Model estimates cumulative parking demand for mixed-use developments by accounting for how parking demand varies by land use, hour, day, and month. Because individual uses often peak at different times, the model allows parking to be shared across uses, reducing the total amount of parking needed compared to providing each use independently.

For the North Point Mall Mixed-Use District, the model was used to reflect the interaction between land uses on-site, including the fact that some visitors to retail, restaurant, entertainment, and other uses may already be parked on-site as office tenants, residents, or hotel guests. Non-single-occupancy vehicle and captive trip adjustments, including trips made by walking, biking, transit, carpool, ride-share, telework, or between uses within the site, were applied only to the arena land use to remain closely aligned with the North Point Mixed-Use District DRI methodology.

City of Alpharetta UDC Parking Requirements

This model used City of Alpharetta parking ratios, adjusted by the North Point Overlay District, which reduces minimum parking requirements by 20% compared to those otherwise required by the UDC as outlined in *Article II. Section 2.10.6.A, Vehicular Parking:*

> *"Minimum parking requirements are 20% less than otherwise required by the UDC. Parking requirements may be further reduced based upon an Urban Land Institute shared parking analysis or other parking analyses acceptable to the City, subject to approval of the Director of Community Development."*

The City of Alpharetta parking ratios, outlined in **Table 3**, were adjusted by 20% and used as the base ratio for all land uses except arena, retail, and weekend office, which are explained below.

Retail Ratio Adjustment

The retail parking ratio was adjusted to reflect current retail parking trends and industry's best practices.

- The City's standard retail parking ratio is 5.0 spaces per 1,000 square feet (KSF).
- After applying the North Point Overlay District's 20% reduction, the required retail ratio is reduced to 4.0 spaces per KSF.
- For this analysis, retail parking demand was evaluated using an adjusted ratio of 3.5 spaces per KSF to bring the ratio further in line with similar developments:
    - The Avalon in Alpharetta, GA, which has a weekday retail ratio of 3.6 spaces per KSF
    - The Perimeter Mall data collection in 2022 displayed a ratio of 3.0 spaces per KSF

This adjustment reflects broader changes in retail activity and parking demand, including increased online shopping, changes in customer trip patterns, shorter dwelling times for certain retail formats, and a general trend toward lower observed parking demand for contemporary retail uses. The adjusted ratio provides a practical estimate of retail demand while remaining generally consistent with the City's reduced overlay requirement.

Weekend Office Demand Adjustment

Weekend parking demand for the proposed office use was adjusted to a more conservative ratio then the ULI shared parking standard ratio of 0.28 spaces per KSF to reflect the reduced level of office activity expected outside of typical weekday operations seen in **Appendix A.**

- The overall peak parking demand for the site is expected to occur on a weekday, when office activity is highest.
- However, weekend office demand was adjusted to better evaluate shared parking availability during arena events and other non-office peak periods.
- The office employee ratio was adjusted from 3.12 spaces per KSF to 0.31 spaces per KSF.
- The office visitor ratio was adjusted from 0.08 spaces per KSF to 0.02 spaces per KSF

These adjusted ratios reflect the limited number of office employees and visitors expected to be present on weekends, allowing the analysis to more accurately account for the shared office parking supply that may be available to support other site uses during non-office peak periods.

Arena Ratio Adjustments

Parking demand for the proposed arena was estimated using the City's required DRI methodology, which assumes an average vehicle occupancy of 2.6 passengers per vehicle trip.

- This assumption was converted to a parking demand ratio by dividing one parking space by 2.6 passengers.
- This results in a parking demand ratio of approximately 0.39 spaces per seat.
- The calculated ratio is generally consistent with the City's standard arena parking ratio of 0.40 spaces per seat.

Additional arena adjustments were also applied to account for patrons who may not require a parking space; these adjustments to the ratio align with the ULI ratio of 0.33 spaces per seat as the industry standard:

- A 15% non-single-occupancy vehicle adjustment was applied to account for arena patrons who may arrive by walking, biking, transit, carpool, ride-share, or another non-parking mode.
- A 2% captive-use adjustment was applied to account for arena patrons who may already be parked on site for another use, such as hotel visitors, residents, or other mixed-use district patrons.

Table 5 displays the City of Alpharetta parking ratios and project ratios.

Table 5: Parking Ratios (Maximum Parking Demand by Land Use)

Land Use	City of Alpharetta Parking Minimum	North Point Overlay Ratio	Weekday Project Adjusted Ratio	Weekend Project Adjusted Ratio
Fine/Casual Dining	10.00/KSF*	8.00/KSF	8.00/KSF	8.00/KSF
Adult Active Entertainment	10.00/KSF	8.00/KSF	8.00/KSF	8.00/KSF
Retail	5.00/KSF	4.00/KSF	3.50/KSF	3.50/KSF
Dillard's	4.00/KSF	3.20/KSF	3.20/KSF	3.20/KSF
Von Maur	4.00/KSF	3.20/KSF	3.20/KSF	3.20/KSF
Cinema	0.35/Seat	0.28/Seat	0.28/Seat	0.28/Seat
Live Music Venue	0.35/Seat	0.28/Seat	0.28/Seat	0.28/Seat
Community Ice Sheets	0.35/Seat	0.28/Seat	0.28/Seat	0.28/Seat
Hockey Arena	0.50/Seat	0.40/Seat	0.33/Seat	0.33/Seat
Multi-Family for Rent	2.05/Unit	1.64/Unit	1.64/Unit	1.64/Unit
Office	4.00/KSF	3.20/KSF	3.20/KSF	0.33/KSF
Hotel	1.05/Key	0.84/Key	0.84/Key	0.84/Key
Conference Center	2.00/KSF	1.60/KSF	1.60/KSF	1.60/KSF

*KSF = 1,000 Square Feet
Indicates a change from City of Alpharetta Code

For purposes of this analysis, parking for residents and hotel visitors were treated as dedicated/nested parking demand and were not assumed to be shared with other land uses. Hotel employee parking and residential visitor parking were evaluated separately and are not included in the nested parking supply. This approach provides a conservative estimate of the parking supply that should remain available for residents and hotel visitors while allowing other user groups to share the remaining on-site parking supply.

Table 6 summarizes the estimated peak parking demand without the arena in use for a weekday and weekend during the peak months and times for the development.

The nested area demand will not change during gamedays as the parking facilities are expected to be built to accommodate this demand and will not be shared with other land uses. Peak demand for all scenarios is anticipated to be on a weekday.

Table 6: Typical Day Shared Parking Demand Summary

		Peak Month: December					
		Weekday (2:00 PM)			Weekend (8:00 PM)		
Land Use	Quantity	Project Ratio	Peak Hour Adj.	Est. Parking Demand	Project Ratio	Peak Hour Adj.	Est. Parking Demand
Fine/Casual Dining							
Visitors	45,000 SF	7.20	65%	211	7.20	100%	324
Employees		0.80	90%	32	0.80	100%	36
Adult Active Entertainment							
Visitors	45,000 SF	7.20	10%	0	7.20	75%	243
Employees		0.80	10%	4	0.80	100%	36
Retail							
Visitors	133,000 SF	2.80	100%	373	2.80	55%	205
Employees		0.70	100%	94	0.70	75%	71
Dillards/Von Maur							
Visitors	342,000 SF	2.60	100%	890	2.60	55%	490
Employees		.60	100%	206	0.60	75%	155
Cinema							
Visitors	1,139 Seats	0.20	55%	69	0.20	100%	205
Employees		0.08	60%	36	0.08	100%	92
Live Music Venue							
Visitors	4,000 Seats	0.20	1%	8	0.20	100%	800
Employees		0.08	30%	82	0.08	100%	272
Community Ice Sheets							
Visitors	2,000 Seats	0.27	48%	261	0.27	77%	419
Employees		0.01	48%	8	0.01	77%	12

Office							
Visitors	750,000 SF	0.08	95%	57	0.02	0%	0
Employees		3.12	95%	2,223	0.31	0%	0
Conference Center							
Visitors	30,000 SF	1.40	100%	42	1.40	30%	13
Employees		0.20	100%	6	0.20	20%	1
Hotel							
Visitors*	650 Keys	0.80	100%	520	0.80	100%	520
Employees		0.04	100%	26	0.04	20%	5
Residential, Suburban							
Residents*	1,385 Units	1.60	100%	2,216	1.60	100%	2,216
Visitors		0.04	20%	11	0.04	100%	56
			Visitor	1,922		Visitor	2,755
			Employee	2,717		Employee	680
			Nested	2,736		Nested	2,736
			Total	**7,375**		**Total**	**6,171**

*Parking for Residents and Hotel Visitors is anticipated to be nested/dedicated and not shared.

Table 7 summarizes the estimated peak parking demand with the arena in use on weekdays and weekends during the peak months and times for the development.

Table 7: Arena Use Shared Parking Demand Summary

		Peak Month: December					
		Weekday (7:00 PM)			Weekend (8:00 PM)		
Land Use	**Quantity**	**Project Ratio**	**Peak Hour Adj.**	**Est. Parking Demand**	**Project Ratio**	**Peak Hour Adj.**	**Est. Parking Demand**
Arena							
Visitors	20,000 Seats	0.29	100%	5,831	0.29	100%	5,831
Employees		0.04	100%	800	0.04	100%	800
Fine/Casual Dining							
Visitors	45,000 SF	7.20	36%	115	7.20	36%	115
Employees		0.80	100%	36	0.80	100%	36
Adult Active Entertainment							
Visitors	45,000 SF	7.20	33%	108	7.20	33%	108
Employees		0.80	100%	36	0.80	100%	36
Retail							
Visitors	133,000 SF	2.80	28%	103	2.80	28%	103
Employees		0.70	100%	94	0.70	100%	94

Dillards/Von Maur							
Visitors	342,000 SF	2.60	28%	245	2.60	28%	245
Employees		.60	100%	206	.60	100%	206
Cinema							
Visitors	1,139 Seats	0.20	80%	100	0.20	100%	205
Employees		0.08	100%	60	0.08	100%	92
Live Music Venue							
Visitors	4,000 Seats	0.20	75%	600	0.20	100%	800
Employees		0.08	100%	272	0.08	100%	272
Community Ice Sheets							
Visitors	2,000 Seats	0.27	95%	517	0.27	77%	419
Employees		0.01	95%	15	0.01	77%	12
Office							
Visitors	750,000 SF	0.08	2%	1	0.02	0%	0
Employees		3.12	15%	351	0.31	0%	0
Conference Center							
Visitors	30,000 SF	1.40	30%	13	1.40	30%	13
Employees		0.20	25%	2	0.20	20%	1
Hotel							
Visitors*	650 Keys	0.80	100%	520	0.80	100%	520
Employees		0.04	100%	5	0.04	100%	5
Residential, Suburban							
Residents*	1,385 Units	1.60	100%	2,216	1.60	100%	2,216
Visitors		0.04	100%	56	0.04	100%	56

*Parking for Residents and Hotel Visitors is anticipated to be nested/dedicated and not shared.

Visitor	7,689	Visitor	7,895
Employee	1,877	Employee	1,554
Nested	2,736	Nested	2,736
Total	**12,302**	**Total**	**12,185**

To accurately assess the overall parking demand for the site and determine how many spaces are needed to meet that demand, **Figures 3** and **4** illustrate the parking demand throughout peak conditions during typical operations and when the arena is in use.

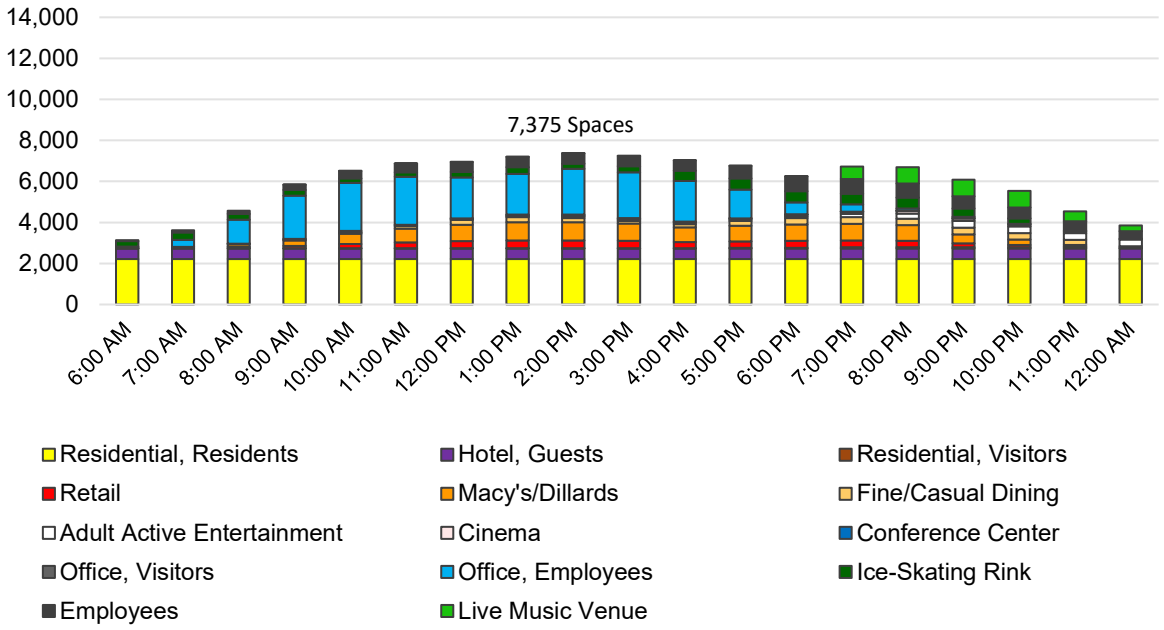


Figure 3. Projected Weekday Peak Parking Demand without Arena Use

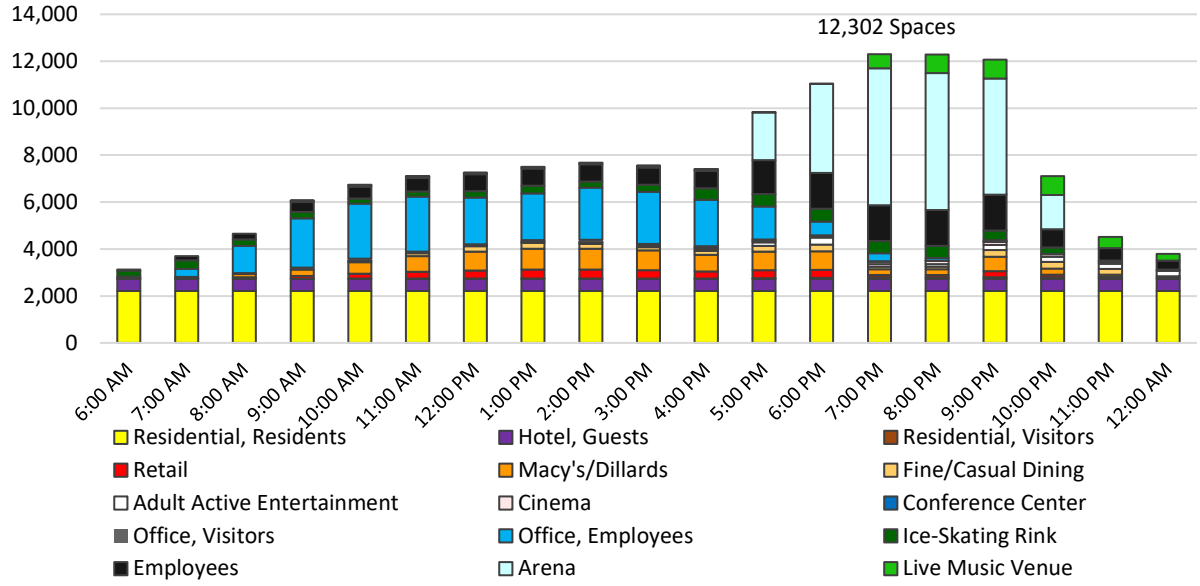


Figure 4. Projected Weekday Peak Parking Demand with Arena Use

CONCLUSION AND RECOMMENDATIONS

Based on the analysis summarized in this memorandum, the North Point Mixed-Use District is projected to have a parking demand of approximately 7,375 parking spaces during the recurring peak condition when the arena is not in use. This peak occurs during typical mixed-use operations, including the live music venue, and includes the dedicated/nested parking demand associated with the residential and hotel uses, as well as the shared parking demand generated by the remaining mixed-use development.

Kimley-Horn recommends an on-site parking supply of approximately 7,375 spaces is therefore sufficient to accommodate the site's anticipated typical peak parking demand. Requiring the site to provide parking for the maximum arena event condition entirely on site would result in a parking supply designed around limited major events rather than the site's typical peak parking needs.

During major arena events, including sold-out NHL games, parking demand will be managed through a combination of available on-site parking, off-site parking resources, employee parking management, and shuttle operations. Approximately 10,000 additional parking spaces are located within a 15-minute walk of the arena, providing a substantial off-site parking resource during major events.

We hope you find this information helpful. If any further questions arise, please do not hesitate to contact Kimley-Horn.

Sincerely,



Ethan Hageman, AICP
Kimley-Horn



Vincent Pagano
Kimley-Horn

Kimley»Horn

Appendix A

1. Typical Time of Day Parking Demand Adjustments

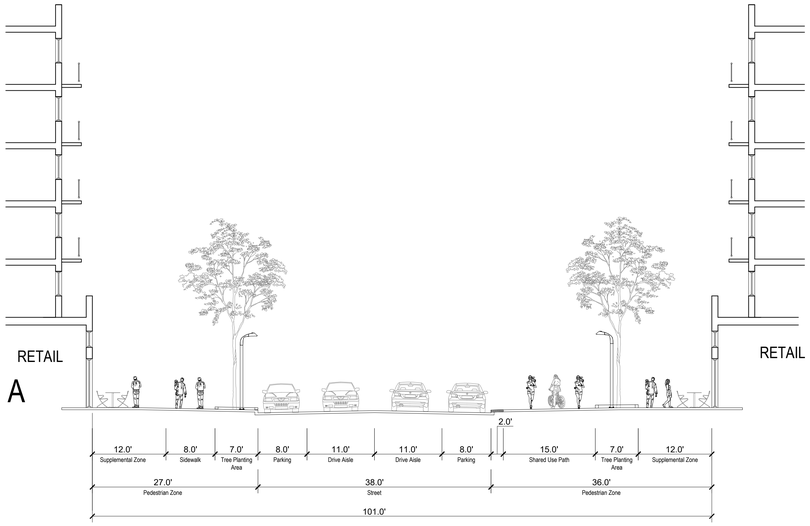
Time-of-Day Factors for Weekday Demand																			
Land Use		6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Retail Typical	Visitors	1%	5%	15%	35%	60%	75%	100%	100%	95%	85%	85%	85%	90%	80%	65%	45%	15%	5%	0%
December	Visitors	1%	5%	15%	30%	55%	75%	90%	100%	100%	95%	80%	85%	90%	90%	85%	50%	30%	10%	0%
Late December	Visitors	1%	5%	10%	20%	40%	65%	90%	100%	100%	100%	95%	85%	70%	55%	40%	25%	15%	5%	0%
All	Employees	10%	15%	25%	45%	75%	95%	100%	100%	100%	100%	100%	100%	100%	100%	90%	60%	40%	20%	0%
Fine/Casual Dining	Visitors	0%	0%	0%	0%	15%	40%	75%	75%	65%	40%	50%	75%	95%	100%	100%	100%	95%	75%	25%
	Employees	0%	20%	50%	75%	90%	90%	90%	90%	90%	75%	75%	100%	100%	100%	100%	100%	100%	85%	35%
Adult Active Entertainme	Visitors	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	50%	75%	100%	100%	100%	100%
	Employees	0%	0%	0%	5%	5%	5%	5%	10%	10%	10%	20%	45%	70%	100%	100%	100%	100%	100%	100%

2. Modified Time of Day Parking Adjustments

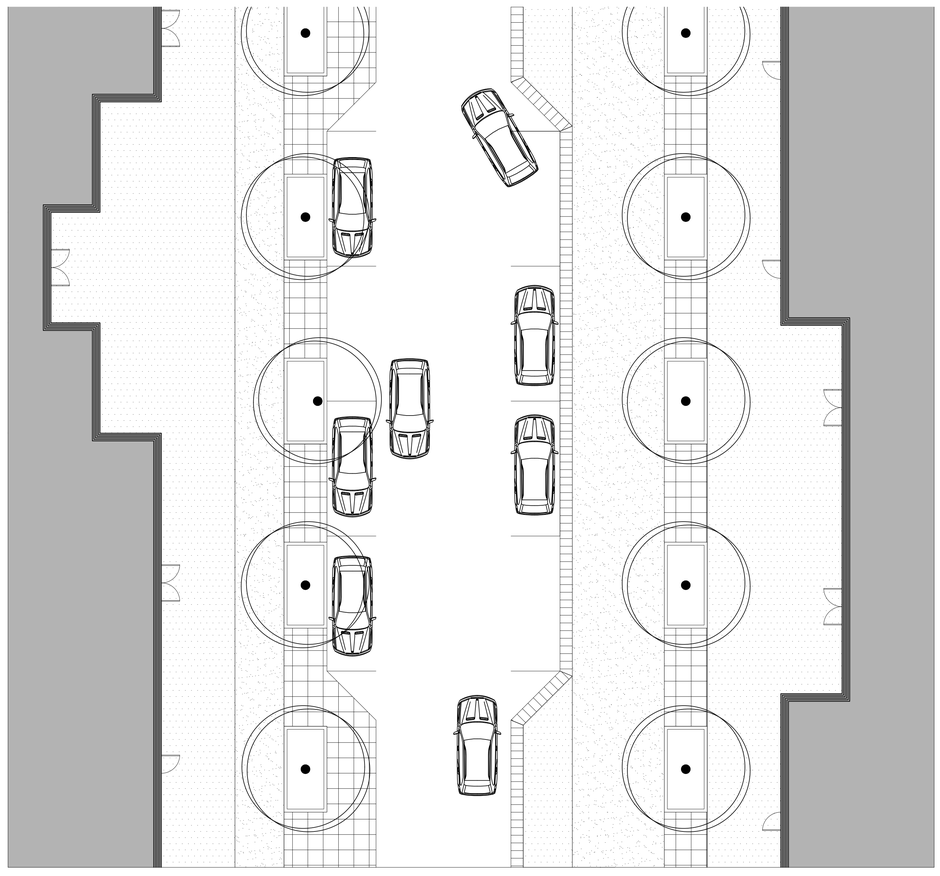
Time-of-Day Factors for Weekday Demand																			
Land Use		6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Retail Typical	Visitors	1%	5%	15%	35%	60%	75%	100%	100%	95%	85%	85%	90%	90%	28%	28%	70%	15%	5%	0%
December	Visitors	1%	5%	15%	30%	55%	75%	90%	100%	100%	95%	80%	90%	90%	28%	28%	70%	30%	10%	0%
Late December	Visitors	1%	5%	10%	20%	40%	65%	90%	100%	100%	100%	95%	90%	90%	28%	28%	70%	15%	5%	0%
All	Employees	10%	15%	25%	45%	75%	95%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	40%	20%	0%
Fine/Casual Dining	Visitors	0%	0%	0%	0%	15%	40%	75%	75%	65%	40%	50%	75%	89%	36%	36%	86%	86%	75%	25%
	Employees	0%	20%	50%	75%	90%	90%	90%	90%	90%	75%	75%	100%	100%	100%	100%	100%	100%	85%	35%
Adult Active Entertainme	Visitors	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	23%	45%	90%	33%	33%	70%	70%	70%	70%
	Employees	0%	0%	0%	5%	5%	5%	5%	10%	10%	10%	20%	100%	100%	100%	100%	100%	100%	100%	100%

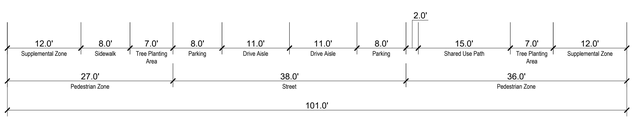
3. Office Land Use Base Ratios

Land Use	Weekday			Weekend			Unit
	Visitor	Employee	Total	Visitor	Employee	Total	
Office >500 ksf	0.20	2.60	2.80	0.02	0.26	0.28	ksf

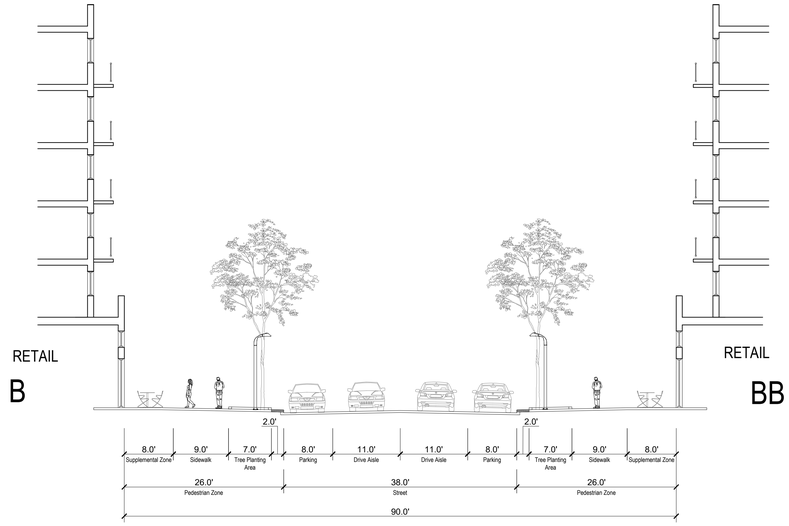


1 Section A - AA: Primary Street
Scale 1" = 10'

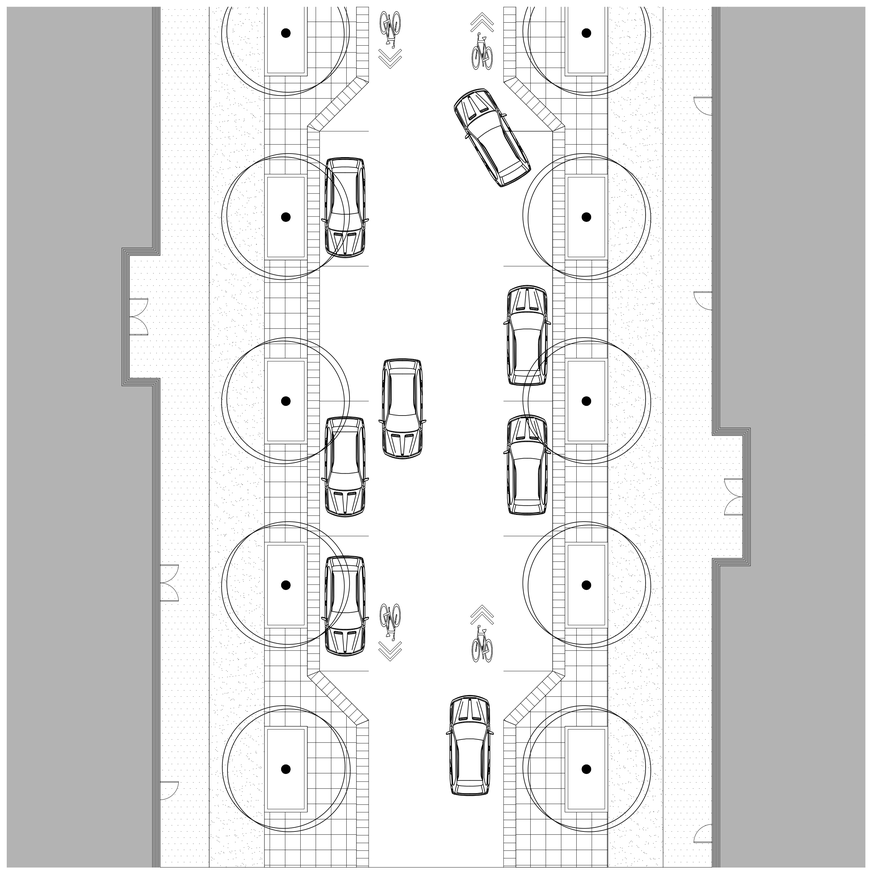


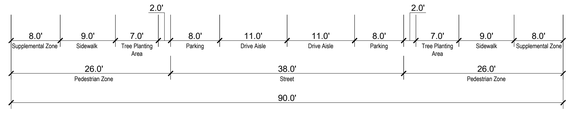


1 Section A - AA: Primary Street
Scale 1" = 10'



2 Section B - BB: Secondary Street
Scale 1" = 10'





2 Section B - BB: Secondary Street
Scale 1" = 10'

Typical Street Sections: The street section layouts and dimensions shown herein are intended to illustrate the general design character and organization of the streets. Minor modifications to the widths, alignments, and configuration of individual section components may occur during final design to accommodate site-specific conditions, engineering requirements, operational needs, and desired placemaking objectives. Alternative section configurations that maintain the overall intent of the approved plan may be implemented, subject to review and approval by City staff.

Supplemental Zone: The supplemental zone between the building frontage and sidewalk is intended to accommodate a variety of active and passive streetscape elements. Potential features may include, but are not limited to, tree planting areas, green space, standing tables, seating areas, outdoor service kiosks, public art, pedestrian amenities, and similar placemaking elements. Elements depicted within the supplemental zone in these sections are conceptual in nature and are provided for illustrative purposes only. Final design, arrangement, and programming of the supplemental zone may vary.

C:\ACC\ACCDocs\Kimley-Horn\118655001 - North Point MUD\Project Files\CAD\00 Overall\Exhibits\00 - Prelim Eng\04_Streets\2026-07-29 Street Sections\2026-07-29 Street Sections.dwg Primary P&S Jul 29, 2026 3:40pm by: Alex.Gallegos

Community Zoning Information Meeting (CZIM) June 10, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Tom Miller	4025 Walnut Creek Trl Alpharetta 30005	
Robert Singleton	11910 Morning Mist Alpharetta 30005	PS. Love this idea of bringing NHL here, but we have been waiting for a redo of North Point for a Long Time. I don't get the feeling that NHL is fully on board. Leaving us back to square 1! Again!
DEBRA DENT	329 CONCORD ST Alpharetta 30009	
Amy Jarrow		No
Nancy J. Emmons	348 Meadow Dr. Alpha, GA 30009	

Community Zoning Information Meeting (CZIM) June 10, 2026

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MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Adam Waid	310 Hepplewhite Dr. Alpharetta, GA 30022	
JUDY LYON	620 Flying Scot Way Alpharetta, GA. 30005	
NICHELLE FRAZIER	ENCORE COMMONS 100 N. POINT CENTER E. Ste. 120 ALPHA., GA 30022	
KATE + DAVID ADAMS	421 Olmstead way Alph 30022	
Martha Pedrick	135 Shadow Springs Alph 30022	
CERESA LEE	405 Eagles Pass Alpharetta, GA 30004	

Community Zoning Information Meeting (CZIM) June 10, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
NADIA GARNER	302 OLMSTEAD WAY	NORTH POINT MALL REDEVELOPMENT NEEDS TO GO THRU.
Dawn Hodges	1910 Forte Ln.	
Paul + Georgeit Barr	1550 Spinnaker Dr 30005	Do it!
Stella Majewsky	9209 Cypress Court	PLEASE CAN THE PARKING SPACES be ROTATED SO THAT THEY DONT CREATE A HEAT ISLAND
[signature]	9204 Cypress Court	
Chris DeCarlo	510 Chronicle Cir.	

Community Zoning Information Meeting (CZIM) June 10, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
MARY KEEFE GROVE	1938 FORTE LN ALPHA 30009	IF NHL FRANCISE NOT AWARDED, WILL NP STILL BE REVITALIZED?
FRANCENE + TRACE TAYLOR	2017 HIDDEN ALY ALPHARETTA GA	Hockey? Been tried + failed - twice. 3rd time not a charm. We have the oppty to do something truly unique + build community. Don't waste it.
NANCY ANN AND DAVID OBCINGER	500 Pitchon Pl Alpharetta GA	
Carol Graf	325 Lilac Garden Cir	Will it be developed w/o a hockey team commitment? When will development start?
Karen Richard	11680 Dancliff Trace	
PAYAL SHARMA		

Community Zoning Information Meeting (CZIM) June 10, 2026

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MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Janice Leach	6521 Maid Marion Close Alpharetta 30005	Agree w/ suggestion to keep bicycle paths around perimeter. may want to also limit ~~include~~ where electric scooters, + electric bikes are allowed

Community Zoning Information Meeting (CZIM) June 10, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Julia Johnson	290 Burrow Downs	Hope it happens soon!
Tracy Guilbault	8020 Oakland Ln.	Hope it happens & provided parking and surface streets can accomodate
Ron Carter	lois Compass Pt	keep as much of the mall and diversify tenant mix (not more luxury)

Community Zoning Information Meeting (CZIM) July 8, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Matthew Rauch	[redacted]	BRING Back the NHL!
Gail LaFleche	395 Banburg Xing	Costs, lack of a backup plan.
Deborah Eves	115 Pebble Trail Alpharetta,	Need affordable housing, to be environmentally friendly & more green space w/ specific purposes
Lia Giglio	1318 Bluefield Dr SW	Provide green areas!! Less expensive housing more room for casual play areas, food trucks, & festivals.
Michael Buchanan	135 Pebble Dr Apt GA	Why so much?! Add water features We don't want to be Buckhead.

Community Zoning Information Meeting (CZIM) July 8, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Amy Herington	420 Ridgewood Way Alpharetta GA 30005	Traffic concerns • Housing –
Andrea DeLuca	406 Barberry Crossing Alpharetta	-Heavy Traffic -Multiple Developments slated for Haynes Bridge one Multiple -What happens when those events at once! 2022 was voted dark due to density!
Rhonda Regan	120 Greenmont Downs Trace Alpharetta	More heavy traffic / why is the density so high? unaffordable housing continues What happens if hockey goes to Cumming Why are we just building to tourists?
Tammy Lucas	435 Fieldstone Lndg Alpharetta 30005	Please keep the Malls Carousel How much will the for rent residences be? Traffic + Long-term "Look/Feel of Community"
Karen Reid	11680 Arnold Trace	

Community Zoning Information Meeting (CZIM) July 8, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
JC & Carmen Sessoms	805 Westwind Lane	Looking fwd to revitalization of this area!
ERIC REGAN	120 GDT 30009	Do it right!
Matt+Martha Kasper	456 Summerfield Dr.	Traffic concerns.
Duane DeBruler	2856 Webb Bridgeld Alph. 30009	Northpoint Mall became worthless in 20 years. How do you know this will remain viable?
Hunter Joyce	3080 Glen Knolls Ct	

Community Zoning Information Meeting (CZIM) July 8, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Kathy + Jim Cash	665 Society St. 30022	Very opposed!
Priscilla Caren	1955 Nocturne Dr Alph 30009	Don't understand why previous owner was turned down For 900 rentals and this is OK for 1200+!! Not feeling it!
M. Smith	165 Shadow Springs Dr 30022	Nope!!
John Carter	235 Providence Place way Alpharetta, 30009	Not Yet
Camille Ball	10420 Ash Rill DR Alpharetta GA 30022	Yes please!
Richard Ball;	10420 Ash Rill Drive Alpharetta, GA 30022	YES!!!

Community Zoning Information Meeting (CZIM) July 8, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Danene Wolff	520 Makin Ct. Alpharetta -	Very opposed

Name	Address	Comments	Zip Code
Paul Hunter	450 Duval Drive	Love the proposal. 2 questions: Will the NHL ultimately decide which of the 2 proposed sites is approved? How large is proposed Alpha loop bridge across 400? Concerned that it will not be large enough to accommodate	30009
William Walton	245 Summerfield Dr.	Thanks for sharing. My community is on the east side of North Point Mall and most of the traffic consideration is only focused on the west side. The Alpharetta 2025 North Point Development Framework was looking to address traffic flow from east to west with a new cut through to Hwy 9 through North Point Mall to help alleviate traffic on Haynes Bridge Rd and Mansell Rd. Traffic will be bad on surface streets coming from Johns Creek, Duluth, Hwy 141, and INT 85 to hockey games/concerts. How will the development consider traffic flow from the east without widening roads? Especially Haynes Bridge Rd as widening would require a piece of my backyard which is a no go. Thank you!	30022
Ron Carter	[redacted]	I support the redevelopment of North Point and agree the area needs a stronger long-term vision. However, I left the meeting concerned that the current proposal is not ready as presented. My biggest concern is that the plan appears highly dependent on securing a professional sports team/arena, but there was not a clear answer on what happens if that does not materialize. Before moving forward, residents should understand the fallback plan (if any). I am also concerned that the traffic study has not been completed yet, given the proposed density of apartments, hotels, office, restaurants, entertainment venues, and a 20,000-seat arena. I will await the results. Finally, I would like to see more indoor, family-friendly, climate-controlled space. Alpharetta already has several outdoor shopping/dining districts, and North Point has an opportunity to offer something different with a tenant-mix that is more affordable than Avalon.	30005

Name	Address	Comments	Zip Code
Pete Rosskamm	13456 Gardiner Ln	As a concept, I think the plan is good. As others expressed, I'm a bit concerned about what happens if the NHL chooses not to expand to Alpharetta. I personally believe the space would still do well without an arena and hockey team, but the lack of a formal plan B is a bit concerning. In this hypothetical in which the NHL says no to Alpharetta, no plan B would mean going back to the drawing board and going through all the processes again, further delaying and keeping that area underutilized. I think there's a significant benefit to having plan B formalized as part of the project before a council vote. For the plan itself, I'm personally in support of the taller structures being built. That area right along 400 is the right place for taller structures. Avalon's hotel and office tower are excellent examples of what can be done. It's a great look getting off the freeway and I think replicating it at North Point would be fantastic. I love the Alpha Loop connectivity.	30004
Julie McKinnon	5055 Walnut Creek Trail Alpharetta Ga	I'm in support of this fabulous project. Although we have other areas like downtown and Avalon this project is a piece to the puzzle to secure Alpharetta as the place to be. As a Californian, I miss convenient sporting events especially hockey! Fingers crossed!	30005
Joshua Mountz	1060 Chasewood Trail	Creation of additional traffic without sufficiently addressing our streets will only create more problems and lose councilmembers votes in the next election. Half of the current road projects arent doing anything to relieve traffic and this will make it significantly worse and the taxpayer money could be spent on better projects to help our community.	30005
Patricia DeMark	1565 Spinnaker Drive, Alpharetta	Should an arena indeed be built, it could benefit the community greatly by making it multi-purpose; such as able to host mid-sized to large conventions. The infrastructure in ATL proper is very aged. Alpharetta could be pulling in food/feed//tech-clean industry conventions, with a good venue for hosting. It may require a circulation of busses or shuttle vehicles to/from hotels; the venue should be built to accommodate bus station drop zones. Anaheim has a good example of such a venue.	30005

Name	Address	Comments	Zip Code
Renee Light	2265 Bent Creek Manor Alpharetta	Too big too much traffic and congestion. Agree the site needs some rehab but turning it into a venue that belongs downtown is not the answer! Alpharetta has worked hard to achieve a balance of strong residential, string business, and entertainment/retail. This is next level and is NOT what our community needs! Our traffic is already too congested, our residential density too high. This gigantic entertainment district does not belong here! The residents near that area will be faced with nightmare noise pollution and traffic. No thank you.	30005
		I am opposed to the for rent homes that are proposed. Our schools are already very transient and we do not need to add more students to these schools.	30005
Neda Schwanenfel		I do not believe the hockey stadium is a worthy investment. For starters, there is construction on multiple roads in Alpharetta (McGinnis Ferry, Webb Bridge, etc.) which has lead to more traffic than needed. With the sports district, there will be an increase in people which will make driving around even more unbearable and may even lead to more crime, as our town can only handle so many people. I also do not believe there is a demand for professional hockey in Georgia. To my knowledge, there was a professional hockey team and/or stadium but they failed to be popular so the team was moved. Even if not, I have never heard it mentioned in this state. Finally, we need a close and convenient mall in this town that's indoors because the Georgia heat is no joke and people in Alpharetta don't want to drive all the way to Dunwoody or Atlanta. If anything, the money should go to modernizing the mall and adding more popular stores.	30005
		This proposal has far too many hotel rooms and multi-family rental units. This will be far too dense and put a burden on our schools. It will be a loss if von maur is no longer an anchor store. We love the idea of bringing a youth hockey facility back to Alpharetta.	30005

Name	Address	Comments	Zip Code
Sarika B		1. Need more green and walkable spaces. In the current plan there were only small green patches and that too only on the periphery. 2. Would like to see indoor mall design rather than the Avalon style. It will provide a variation from Avalon avoiding people to think of NP as Avalon 2.0. Also, an indoor mall is a great place for residents to walk during cold and rainy weather while indirectly increasing sales for shops. 3. We should promote the preservation and addition of mid range shopping stores such as Dillards, Macy's, JC Penny, Von Maur etc for shopping needs of growing families (majority of Alpharetta's population and new residents are growing families). Avalon already has the higher end stores that don't lend themselves to the shopping needs of school going families. We need to address those needs in the NP plan. 4. Proposed tall buildings are not in line with this beautiful city's character. Would like not see that character and charm being lost. 5. Awaiting traffic study	30,022
Cimarron Carter	1015 Compass Pt	Oh one more thing...KEEP THE MACYS PLEASE! I BEG YOU.	30,005

Name	Address	Zip Code	Comments
		30022	Too much traffic and no space to expand. We also don't have clarity on the tax payer burden
Hunter Joyce	3080 Glen Knolls Court	30022	A question was asked regarding the number of residential units for lease versus those available for sale. The answer given was there are no condominiums in Alpharetta. My response to that answer would be there are no condominiums in Alpharetta... yet. If y'all want the community to buy into this concept, sell it to them. Allowing the public to generate equity North Point's redevelopment will generate a richer community of individuals with vested interests working towards a common future. Leasers are transient and lack ties that build strong communities. Leasing units in perpetuity will generate y'all more money so it's pretty easy to assume which direction you'll go in.
Zapora Johnson	2264 Tenor lane	30009	I'm totally opposed to the apartment aspect. Apartments are for transient residents, transient residents do not hav any investment in the community. Alpharetta is a community where people care and try to maintain their neighborhoods and home values. Alpharetta residents value their community. Apartment residents usually did not have the same connection to a neighborhood or community and they are not paying property taxes to support the community and the services that benefit them. A proposal of 1300 apartments is unacceptable and it is not what Alpharetta needs. There is already plenty of residents of residential construction and growth we don't need 1300 apartments. Going with the theme of community we are not a big downtown metropolitan area so a major sports team does fit what is really needed. I believe North Point needs to be redeveloped but these two things miss the mark and don't take into consideration the community pride that we have in Alpharetta.
Joe Richards	12670 Hearthstone Way	30009	I am really excited about the opportunity of having this development in our area. Thanks for all the hard work and making this happen.
John Carter	235 Providence Place Way	30009	Looking forward to learning about it. Wondering if it's contingent upon winning an NHL team or not.
Shawn		30009	This project does not align with the 2045 Horizon and does not primarily benefit the city nor the citizens of Alpharetta. The project will primarily be used by commuters outside of Alpharetta. A NHL stadium would draw attendees from the entire Atlanta MSA, around 6.5 million people, with only ~64,000 residing within Alpharetta, or 1%. Assuming equal interest in Hockey across the metro area, only 1% of Alpharetta will attend games while 99% of visitors will be from outside Alpharetta. From the 2045 Horizon report we know 100,000+ people commute into Alpharetta, average age of a citizen is 41+ years of age, and increased "walkability" is one goal of the city. Citizens are always complaining about traffic. Build a compact mini-city on the 100 acres, work with Alpharetta employers to encourage staff to live and work in Alpharetta. Connect NP with Avalon, DTA, and the office complexes with alternative transportation. This increases walkability and decreases traffic.
Marty Miller	3570 Grey Abbey Drive	30022	At a cursory level I believe the planned parking is going to fall short of actual needs. Some of the math around projected parking space needs seems low balled, such as 1 space per 4 arena attendants, not likely. Peak usage will occur when there's a hockey game and a concert in the hall, i.e. potentially 20k plus another 4k visitors on top of the residential, retail and other needs. I can easily see that a year into this, the crisis at hand will be "what do we do about our inadequate parking situation", and this will negatively impact every use of this mixed use project.
Katherine Bogart	360 Banbury Xing, Alpharetta GA	30009	Unconvinced that this plan is wise/viable. Too much density (especially "for rent housing,") traffic, eyesore of radically tall buildings, taxing questions too. A hockey stadium is ludicrous given that 2 teams left town & the Cooler demolished. Get a hint! This could stall like the plan before Avalon. A huge red clay hole in the ground for years. We need a refurbished thriving AIR CONDITIONED place to shop like Phipps, Perimeter, Lenox, Cumberland. With surrounding greenspace & amenities that real folks would enjoy. Not focused on the whims of developers & other "interested partie$." Over development will crush Alpharetta's vibe!

stephen bogart	360 Banbury Xing	30009	The proposed hockey project should be rejected outright by city council. Replace it with hotels, conference center and a variety of restaurants and specialty retail, along with a wide array of entertainment venues to attract tourism and generate revenue for the city. This would not strain our transportation infrastructure nor our safety and fire services to the brink. It is far less risk and burdensome long term. RESIDENTS DO NOT WANT AN ARENA NOR HIGH DENSITY RENTAL APARTMENTS HERE.
Zane Bundy	720 Sheridan Ridge Court	30022	I support the proposed Sports and Entertainment District because it will create jobs, attract new businesses and visitors, and strengthen Alpharetta's local economy. It will also provide more opportunities for recreation, entertainment, and community events for residents and families. With thoughtful planning and traffic management, I believe this project will be a positive addition to our community.
		30022	This will increase traffic in the area like crazy without any proper public transportation in place 😩
Donald Mitchell	182 Pinetree Circle	30009	Yes we need hockey and the revitalization of the Northpoint District. This venue does not need to go to Forsyth to rob us of our hotel occupancy rates and to build a newer shinier mixed use development further north. It will only degrade our existing properties if allowed to succeed elsewhere. The mall isn't coming back and we need to invest in our future as a city! Yes for the sports and entertainment district!
Kedar Deo	340 Tividale Ct	30022	Would like to see mixed use development just like the Avalaon with good restaurants options. But would not like to see NHL arena which will cause use traffic issues in the area, moreover these arenas are dead on non game days and they are better off far away from residential areas. Definitely appose to the idea of having an arena there. Hopefully Alpharetta city makes more money from this new establishment and invests in the beautification and maintenance of the city, of which they have done an absolutely great job recently. I personally would like to see web bridge park more invested in by making the trails soft like they have in Cauley park in Johns creek.
Christy L.		30022	I do not want a huge arena that houses hockey or some other huge music/entertainment venue. I also do not want huge skyscraper buildings. My concern is the traffic and the noise. I live only a few miles from this location and we drive around here regularly. I want Alpharetta to keep a small town, quiet vibe. I love what they have done with the number of parks, Alpha Loop, Avalon, and downtown Alpharetta! Please help us to preserve the small town charm. We have lived in Alpharetta since 2010 and watched it change as we have raised our children. I have been 100 percent on board with the Developments until this. I know something has to be done with the mall, but please keep it walkable, scenic (with lots of green space), and family oriented. I would love to see shops there and restaurants (that are not towering buildings)! I don't want thousands of people packing in on a regular basis for performances and such. Keep with the charming vibe of downtown Alpharetta please!
John Lamb	1415 Shade Tree Way	30009	As a 20 year resident and local business owner I've seen the growth have a positive effect on Alpharetta. This would just take our city to another level.
Charles Remaley	7456 Avalon Blvd	30009	All for it
Zachary Hansen		30009	Literally who would be against this.
Matt M		30092	
Michele Houston	514 Clover Lane	30009	This would be an amazing add for Alpharetta!
Clay Kirkley	12000 Campion Path	30009	Growing up in Dunwoody and now living in Alpharetta, I am so excited about Alpharetta adding this property. A sports and entertainment district would add great value to the community and further enhance Alpharetta as one of the top places to live and work in the South. It is such a great compliment to Avalon and the downtown green.

Meredith Brand	476 Altissimo Drive	30009	I'm excited about the redevelopment of North Point Mall because it has the potential to create a vibrant destination that's more accessible and family-friendly than many of the existing options in North Fulton. While Avalon is a great amenity, it has become extremely busy, especially on weekends, making it difficult for families with young children to enjoy. A thoughtfully redeveloped North Point could offer more space, better parking, and a wider variety of activities for kids alongside shopping, dining, and entertainment. Its location is also a major advantage, with convenient access from GA-400 and several major highways, making it easy for residents across the region to visit. Revitalizing this area would not only provide much-needed options for local families but also strengthen the community by transforming an underutilized property into a destination people can enjoy year-round.
Daniel Brand	476 Altissimo Dr, Alpharetta, GA 30009	30009	I am a HUGE supporter of this transformation!!! I live around the corner from the mall along Encore Parkway. This location has enormous potential, but it's a real shame to see it in its current state - an asphalt wasteland with empty stores, "for-lease" signs everywhere, and practically zero pedestrian connectivity to anything. The new vision will bring life and opportunity to our community, and I think it will also help solve the severe traffic/over-crowding issues we have at the Avalon and Downtown by providing another large-scale venue for live/work/play. If you visit the Avalon or downtown on a weekend you will see the demand for those types of spaces greatly exceeds the supply! As a father to a baby girl I can't wait to have a transformed space like this to take my girl on walks or bicycle rides as she grows up. I won't be able to do that with the mall in its current state. I strongly support this proposal!
Meredith Brand	476 Altissimo Dr, Alpharetta, GA 30009	30009	I'm excited about the redevelopment of North Point Mall because it has the potential to create a vibrant destination that's more accessible and family-friendly than many of the existing options in North Fulton. While Avalon is a great amenity, it has become extremely busy, especially on weekends, making it difficult for families with young children to enjoy. A thoughtfully redeveloped North Point could offer more space, better parking, and a wider variety of activities for kids alongside shopping, dining, and entertainment. Its location is also a major advantage, with convenient access from GA-400 and several major highways, making it easy for residents across the region to visit. Revitalizing this area would not only provide much-needed options for local families but also strengthen the community by transforming an underutilized property into a destination people can enjoy year-round.
Michael Bell	12725 Lecoma Trace	30004	
Ned Wiggins	2433 Loxford Lane	30009	
Jim McKillop	835 Saddle Ridge Trce, Roswell GA	30076	I would enjoy watching hockey this close to home. I would buy season tickets.
Mark Elrod	6851 Roswell Rd NE	30328	Bring hockey to area.
Michele Houston	514 Clover Lane	30,009	This would be an amazing add for Alpharetta!
Lisa lamb	1415 Shade Tree Way	30,009	Would love to have it!
Stephen G		30,005	Please make it hockey facility
Olivia Waghorn	1710 Broadwell Oaks Dr	30,004	I don't think the mall should change into a hockey rink. Most people I know still go there often and it's one of the only mall's in this area left. I have had many years of memories made there and I still really enjoy going there with my friends so it would be very unfortunate if it were to close. Please consider this is your planing to change it.
Gunner Filipowicz	260 Canton Street	30,009	This would be one of the best things for Alpharetta. I have lived here for 18 years and I am a Tampa bay lightning fan but if this happened I would switch to Alpharettas hockey team
Jeff Baumblatt	245 Cotton Field Ct	30,022	Let's do it. That Northpoint Mall area has been dying for years. It's about time to redevelop and what better way to attract businesses and consumers than to build out this mixed use, especially with a hockey arena/indoor concert venue.

Michael LeTour	253 Providence Oaks Circle	30,009	All I want is hockey back in ATL I'm originally from Chicago area. Blackhawks fan, hockey coach, my son played NCAA Hockey. Northpoint is a great location, Marta, 400, employee access, the right developer, Jamestown has the strength to deliver. I'm half way between both potential locations but I do think with all things considered and even with access to thousands of fans that can literally walk to the. Arena , Northpoint location is a great destination for a team!
Mary Kate Roesch	535 Opera Lane	30,009	Like the idea hopefully similar to the battery with restaurants and shops. Assuming will be improvements to handle extra traffic and policing to manage issues. Trust city of Alpharetta to do it right
Tim Foltz	15370 Laurel Grove Dr.	30,004	Would be hugely supportive of a NHL hockey team in the Alpharetta area
Megan Nott	2687 Bonaire Terrace	30,066	
Abby Williamson		30,022	I love hockey please build this at north point!!!
McKenna Blaine	400 Brook Circle	30,075	WE NEED a hockey team here. It will bring so much to the area and provide more sports to introduce the kids to. Overall it will be a great addition to Alpharetta.
Malika Garrett	264 Water Oak Pl	30,009	i want the stadium it's great for our city
Paul Gibbs	92 Thompson St. Alpharetta	30,009	This would be a fantastic project for the City and would be a great compliment to downtown and Avalon!
Cara Becker	194 Kenneth Dr	30,009	Please no! The traffic and congestion in this area is bad enough with the amphitheater.... The tax base must be high enough already - we've certainly seen the increases on our city property taxes over the past several years- we don't need more of this stuff.
Laura McLaughlin	1670 Briers Chute	30,004	Let's Go!! Would love having a professional hockey team for Atlanta. You could also bring up LOVB Atlanta volleyball to the same arena. Anchored to A5 Volleyball Club (Nationally Ranked #1 club, currently in Roswell).
Katie	219 Dennis Dr	30,009	
Liz O'Connor	120 Myers Dr.	30,009	I've heard that the bars are proposing to stay open until 4 am, which is a major concern. We have enough issues with the handful of bars in DT Alpharetta that stay open until 2 am. Bars staying open until 4 am will attract the wrong crowds and people to our area. I don't want to watch Alpharetta turn into Buckhead. Unfortunately, that's where we are headed with this development if bar/restaurant owners are permitted to stay open until 4 am.

CITIZEN PARTICIPATION FORM - PART B

This form must be completed and submitted to the City's Community Development Department a minimum of twenty (20) business days prior to the first scheduled Public Hearing.

Public Hearing or Project Name: North Point Sports and Entertainment District

Contact Name: Julie Sellers Telephone: 404-665-1242

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.

April meeting with Ecco Park residents:
Questions about traffic and parking, rental rate range, concern about people parking in neighborhood for games, Alpha Loop extension.

CZIM meetings:
Questions regarding traffic and parking, will the mall remain or be demolished, NHL questions and whether it is likely to come to Georgia, need for height and density, any impact to taxpayers, will office hurt other office and is it needed, why not condos, how much greenspace, how will event traffic flow.

Please see attached sign in sheets with additional comments from CZIM meetings

Additional conversations have taken place with non-residential property owners and managers in the area as well as with mall employees and tenants

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.*

- [x] Letter
- [ ] Personal Visits
- [x] Telephone
- [x] Group Meeting
- [ ] Email
- [x] Other *(Please Specify)* social media and development website

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: 7/15/20

Print Form

DILLARD Sellers
ATTORNEYS AT LAW

Julie L. Sellers
404.665.1242

Email:
jsellers@dillardsellers.com

May 21, 2026

Notice of Public Hearing Application
for
North Point Sports and Entertainment District
MP-26-06/Z-26-05/CU-26-04/V-26-08

Dear Property Owner:

Please allow this letter to serve as public notice for a Master Plan Amendment, Rezoning, Conditional Use, and Variance request for the property known as the North Point Mall, located at 1000 North Point Parkway, 4000 and 4500 North Point Place, 0 and 5000 North Point Drive, 2000 and 6000 North Point Circle, 0 Rock Mill Rd., Alpharetta, GA 30022. Specifically, the Applicant is requesting approval to redevelop the mall property into a mixed-use district with shops, restaurants, movie and music venues, offices, residential units, hotels, and a hockey arena and practice facilities.

You are receiving this notice as a property owner within 500 feet of the property and we welcome you to contact us with any questions. Application materials can be found on the City's website under Public Hearings.

Two Community Zoning Information Meetings will take place at 6:00 PM on June 10, 2026, and July 8, 2026. The applications will be considered by Planning Commission on Thursday, August 6, 2026, at 6:30 PM and City Council on Monday, August 24, 2026, at 6:30 PM. The meetings will be held in the Council Chambers at City Hall, 2 Park Plaza, Alpharetta, GA 30009.

If you have any questions regarding the redevelopment application, please feel free to contact me at jsellers@dillardsellers.com or 404-665-1242.

Sincerely,

Dillard Sellers, LLC

Julie L. Sellers

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2.	ADEYINKA ODUTAYO REVOCABLE LIVING TRUST THE 120 DOWNING DR ALPHARETTA, GA 30022				
3.	AGUIAR LUCIANA SACRAMENTO & AGUIAR ODMIR ANDRADE 437 OLMSTEAD WAY ALPHARETTA, GA 30022				
4.	AKERS LAUREN 470 DUVAL DR ALPHARETTA, GA 30009				
5.	ALPHA Z-BOY PARTNERS, LLC 940 EMMETT AVE STE 200 BELMONT, CA 94002-3881				
6.	ANSLEY INVESTMENT PARTNERS L P P.O. BOX 460169 HOUSTON, TX 77056				

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2.	ASLAM RACHEL 235 DOWNING DR ALPHARETTA, GA 30022				
3.	BEATRIZ GARCIA TRUST THE 213 DOWNING DR ALPHARETTA, GA 30022				
4.	BENIWAL RAJENDER SINGH 495 DUVAL DR ALPHARETTA, GA 30009				
5.	ADATRAO LAKSHMI KANTHI 275 DUVAL DR ALPHARETTA, GA 30009				
6.	AGASAR PRATISHTHA 449 OLMSTEAD WAY ALPHARETTA, GA 30022				

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1.	AITHA BALAKRISHNA 375 DUVAL DR ALPHARETTA, GA 30009				
2.	ALPHA LAND PARTNERS LLC 289 S CULVER ST LAWRENCEVILLE, GA 30046-4805				
3.	AMERICAN PRIDE BANK 4511 FORSYTH RD MACON, GA 31210				
4.	ARTISAN TOWNHOME ASSOCIATION INC 900 NORTH POINT PKWY #325 ALPHARETTA, GA 30005				
5.	ASILOKUN ARIT 485 DUVAL DR ROSWELL, GA 30076				
6.	BASSETT ZACHIA THOMAS BURTON & FAN CHENYIN 124 DOWNING DR ALPHARETTA, GA 30022				

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1.	BENDIKS ANYELINA & BENDIKS ALYSSA 217 DOWNING DR ALPHARETTA, GA 30022				
2.	BENSON ROBERT & MICHELE 385 DUVAL DR ALPHARETTA, GA 30009				
3.	BLUE VENTURES LLC 12274 CRABAPPLE RD ALPHARETTA, GA 30004				
4.	BP NORTHPOINT LLC 5200 BUFFINGTON RD ATLANTA, GA 30349				
5.	BRI 1870 NORTH POINT LLC 100 N FEDERAL HWY #400 HALLANDALE, FL 33009				
6.	BROCK HAILEY 205 DUVAL DR ALPHARETTA, GA 30009				

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1.	BURNS JENNY LYNN & FARRIS JACOB BLAYNE 600 DUVAL DR ALPHARETTA, GA 30009				
2.	BUTLER SHERRY MARSHALL 411 OLMSTEAD WAY ALPHARETTA, GA 30022				
3.	CARMAN ROBERT ALAN 1400 RIVERY BLVD APT 4212 GEORGETOWN, TX 78628				
4.	CHOI AREUM SOL & YIM SEUNG B 220 DUVAL DR ALPHARETTA, GA 30009				
5.	CHOUDHARY JAYA & GOYAL PUJA 595 BARNESLEY LN ALPHARETTA, GA 30022				
6.	CHUN HAE 2289 TENOR LANE ALPHARETTA, GA 30009				

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1.	BOTEZAT OLGA 429 OLMSTEAD WAY ALPHARETTA, GA 30022				
2.	BRE LQ PROPERTIES LLC 909 HIDDEN RIDGE # 600 IRVING, TX 75038				
3.	BRI 1870 NORTH POINT LLC P O BOX 1368 CARLSBAD, CA 92018				
4.	BROOM MEGAN E 104 DOWNING DR ALPHARETTA, GA 30022				
5.	BURTON JOE ALAN ET AL 475 DUVAL DR ALPHARETTA, GA 30009				
6.	CAIN BRENDA & NALL NICOLE 207 DOWNING DR ALPHARETTA, GA 30022				

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1.	CHEN TSUNG WEI 433 OLMSTEAD WAY ALPHARETTA, GA 30022				
2.	CHONG ANDREW & CHONG HYUNA 229 DOWNING DR ALPHARETTA, GA 30022				
3.	CHOUDHARY MILAN 118 DOWNING DR ALPHARETTA, GA 30022				
4.	CITY OF ALPHARETTA THE 2 S MAIN ST ALPHARETTA, GA 30009				
5.	COLAIZZO STACY DOWNS 260 DUVAL DR ALPHARETTA, GA 30009				
6.	CORNELY LILY 314 OLMSTEAD WAY ALPHARETTA, GA 30022				

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2.	CURRENT OCCUPANT 237 DOWNING DR ALPHARETTA, GA 30022				
3.	CURRENT OCCUPANT 318 OLMSTEAD WAY ALPHARETTA, GA 30022				
4.	CURRENT OCCUPANT 322 OLMSTEAD WAY ALPHARETTA, GA 30022				
5.	CURRENT OCCUPANT 326 OLMSTEAD WAY ALPHARETTA, GA 30022				
6.	CURRENT OCCUPANT 334 OLMSTEAD WAY ALPHARETTA, GA 30022				

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1.	CURRENT OCCUPANT 338 OLMSTEAD WAY ALPHARETTA, GA 30022				
2.	CURRENT OCCUPANT 342 OLMSTEAD WAY ALPHARETTA, GA 30022				
3.	COLE CP ALPHARETTA GA LLC 12181 BLUFF CREEK DR 5TH FL PLAYA VISTA, CA 90094				
4.	CRANSTON MICHAEL ROBERT & MIRANDA WALTERS 580 DUVAL DR ALPHARETTA, GA 30009				
5.	CURRENT OCCUPANT 203 DOWNING DR ALPHARETTA, GA 30022				
6.	CURRENT OCCUPANT 241 DOWNING DR ALPHARETTA, GA 30022				

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2.	CURRENT OCCUPANT 324 OLMSTEAD WAY ALPHARETTA, GA 30022				
3.	CURRENT OCCUPANT 332 OLMSTEAD WAY ALPHARETTA, GA 30022				
4.	CURRENT OCCUPANT 336 OLMSTEAD WAY ALPHARETTA, GA 30022				
5.	CURRENT OCCUPANT 340 OLMSTEAD WAY ALPHARETTA, GA 30022				
6.	CURRENT OCCUPANT 344 OLMSTEAD WAY ALPHARETTA, GA 30022				

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1.	CURRENT OCCUPANT 346 OLMSTEAD WAY ALPHARETTA, GA 30022				
2.	CURRENT OCCUPANT 350 OLMSTEAD WAY ALPHARETTA, GA 30022				
3.	CURRENT OCCUPANT 354 OLMSTEAD WAY ALPHARETTA, GA 30022				
4.	CURRENT OCCUPANT 358 OLMSTEAD WAY ALPHARETTA, GA 30022				
5.	CURRENT OCCUPANT 362 OLMSTEAD WAY ALPHARETTA, GA 30022				
6.	DASS GNANAH PRAKASH 243 DOWNING DR ALPHARETTA, GA 30022				

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UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 30327 USPS
	Postmaster, per *(name of receiving employee)*	6	

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	DE SAN LUIS JIMENEZ MENDEZ JOSE MARIA 116 DOWNING DR ALPHARETTA, GA 30022				
2.	DILLARD DEPARTMENT STORES INC 4501 NORTH BEACH ST FORT WORTH, TX 76137				
3.	DUDIPALA UHASRI 435 DUVAL DR ALPHARETTA, GA 30009				
4.	EKLER REUVEN 145 DUVAL DR ALPHARETTA, GA 30009				
5.	CURRENT OCCUPANT 348 OLMSTEAD WAY ALPHARETTA, GA 30022				
6.	CURRENT OCCUPANT 352 OLMSTEAD WAY ALPHARETTA, GA 30022				

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UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 30327 USPS
	Postmaster, per *(name of receiving employee)* 6		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	CURRENT OCCUPANT 356 OLMSTEAD WAY ALPHARETTA, GA 30022				
2.	CURRENT OCCUPANT 360 OLMSTEAD WAY ALPHARETTA, GA 30022				
3.	DARBY ANDREW JOSEPH & SURAVITCH LAUREN 455 DUVAL DR ALPHARETTA, GA 30009				
4.	DAYTON HUDSON CORP P.O. BOX 9456 MINNEAPOLIS, MN 55440-9456				
5.	DEEM DONNA 407 OLMSTEAD WAY ALPHARETTA, GA 30022				
6.	DUBE JEFFREY JOHN JR 413 OLMSTEAD WAY ALPHARETTA, GA 30022				

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Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 30327 USPS
	Postmaster, per *(name of receiving employee)* 6		

USPS® Tracking Number / Firm-specific Identifier	Address (Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	EASLEY CHRISTIAN DAVID 102 DOWNING DR ALPHARETTA, GA 30022				
2.	ENDER LAUREN ASHLEY & WILSON JACK 431 OLMSTEAD WAY ALPHARETTA, GA 30022				
3.	EWOOL MABEL & DEWORNU JUSTICE FIAMOR 409 OLMSTEAD WAY ALPHARETTA, GA 30022				
4.	GADAMSETTY JUGAL ANVESH 235 DUVAL DR ALPHARETTA, GA 30009				
5.	GHADGE FAMILY REVOCABLE LIVING TRUST THE 130 DUVAL DR ALPHARETTA, GA 30009				
6.	GONG YIXUAN 447 OLMSTEAD WAY ALPHARETTA, GA 30022				

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UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 30327 USPS
	Postmaster, per *(name of receiving employee)*		
	6		

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	GOSWAMI SHIV RAJIV 227 DOWNING DR ALPHARETTA, GA 30022				
2.	GRIFFIN ANJA KLOKOCKA & GRIFFIN RASHAWN MARKIE 365 DUVAL DR ALPHARETTA, GA 30009				
3.	GUPTA ABHAYA & MANJU 141 WESTCHESTER WAY ALPHARETTA, GA 30005				
4.	HEBERT KELLY 540 DUVAL DR ALPHARETTA, GA 30009				
5.	FIGUEROA SERGIO REAL & CAMACHO ADRIANA I 205 DOWNING DR ALPHARETTA, GA 30022				
6.	FLORALINDA LA FRATTA REVOCABLE LIVING TRUST THE 405 DUVAL DR ALPHARETTA, GA 30009				

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Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 30327 USPS
	Postmaster, per *(name of receiving employee)* 6		

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	FULTON SCIENCE ACADEMY SCHOOL INC 3035 FANFARE WAY ALPHARETTA, GA 30009				
2.	GARNER NADIA N 302 OLMSTEAD WAY ALPHARETTA, GA 30022				
3.	GIRALDO JULIANA & GAVIRIA MARIA L 515 DUVAL DR ALPHARETTA, GA 30009				
4.	GOPAL SREEJI & SHARMA SWEETY 225 DOWNING DR ALPHARETTA, GA 30022				
5.	GRBK NORTH POINT LLC 2805 N DALLAS PKWY STE 400 PLANO, TX 75093				
6.	GUESS LAUREN RENE 455 OLMSTEAD WAY ALPHARETTA, GA 30022				

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Certificate of Mailing — Firm

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Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 30327 USPS
	Postmaster, per *(name of receiving employee)*		
	6		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	HALTHORE GAYATRI S & SRINIVAS N 445 OLMSTEAD WAY ALPHARETTA, GA 30022				
2.	HEDGE HAMSANATH & JAIN SUPRIYA 295 DUVAL DR ALPHARETTA, GA 30009				
3.	HENDERSON ALEXANDER WAYNE JR 560 DUVAL DR ALPHARETTA, GA 30009				
4.	HPTMI II PROPERTIES TRUST P.O. BOX 579 LOUISVILLE, TN 37777-0579				
5.	HUNTER JAMES PAUL WALMER 450 DUVAL DR ALPHARETTA, GA 30009				
6.	JASTI SAI VIGNESH 439 OLMSTEAD WAY ALPHARETTA, GA 30022				

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Certificate of Mailing — Firm

Name and Address of Sender

Dillard Sellers
1776 Peachtree Street, NW
Suite 415-South
Atlanta, Georgia 30309

TOTAL NO. of Pieces Listed by Sender: 6

TOTAL NO. of Pieces Received at Post Office™: 6

Postmaster, per (name of receiving employee): 6

Affix Stamp Here
Postmark with Date of Receipt.

HOWELL MILL STATION
MAY 21 2026
ATLANTA GA 30327 USPS

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	JIWANI AMBREEN S 8530 PRAIRIE DUNES WAY DULUTH, GA 30097				
2.	KATTUKURI MANISHA & TADIPARTHI RAJESH 415 DUVAL DR ALPHARETTA, GA 30009				
3.	KHAN ADNAN & HASHMI ZAINA FATIMAH 108 DOWNING DR ALPHARETTA, GA 30022				
4.	KIM CHANG LIVING TRUST THE 605 DUVAL DR ALPHARETTA, GA 30009				
5.	LEE ALBERT YOUNG HOON ET AL 290 DUVAL DR ALPHARETTA, GA 30009				
6.	LI GAIJUAN & ZHENG ZIHAO 155 DUVAL DR ALPHARETTA, GA 30009				

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Certificate of Mailing — Firm

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Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 30327 USPS
	Postmaster, per *(name of receiving employee)*		
	6		

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	HUBERT PROP LLLP 850 KENNESAW AVE NW STE 2 MARIETTA, GA 30060-1095				
2.	JAIN MUKUL & GUPTA ISHA 316 OLMSTEAD WAY ALPHARETTA, GA 30022				
3.	JAVERI VIPUL S 225 DUVAL DR ALPHARETTA, GA 30009				
4.	KATTA KRISHNA VENI 908 CATAMARAN CT ALPHARETTA, GA 30005				
5.	KENLEY AZADE K 304 OLMSTEAD WAY ALPHARETTA, GA 30022				
6.	KHAN FIONA SOFANA ARMIN & EAD WESAM ADAM 305 DUVAL DR ALPHARETTA, GA 30009				

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Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 30327 USPS
	Postmaster, per *(name of receiving employee)* 6		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	LEFKOVITS ADRIANA RAQUEL BUSTILLOS 370 DUVAL DR ALPHARETTA, GA 30009				
2.	LIAO DEXIONG 427 OLMSTEAD WAY ALPHARETTA, GA 30022				
3.	LIM YOUNG AH 453 OLMSTEAD WAY ALPHARETTA, GA 30022				
4.	MALYALA DIVYA & ANNACHEDU RAJENDAR REDDY 315 DUVAL DR ALPHARETTA, GA 30009				
5.	MARCH JAMES & GILLIAN 401 OLMSTEAD WAY ALPHARETTA, GA 30022				
6.	MARTINEZ LINA MARIA VERGARA 211 DOWNING DR ALPHARETTA, GA 30022				

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Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 30327 USPS
	Postmaster, per *(name of receiving employee)*	6	

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	MC ALISTER DONNA ANN 545 DUVAL DR ALPHARETTA, GA 30009				
2.	MIESCH MICHAEL 423 OLMSTEAD WAY ALPHARETTA, GA 30022				
3.	MOHANDAS RAHUL A 100 DOWNING DR ALPHARETTA, GA 30022				
4.	MONGELL MARK ANTHONY JR & KUREN DAULTON MARTINE LEE VAN 480 DUVAL DR ALPHARETTA, GA 30009				
5.	MORALES DARWING ALBERTO HIDALGO & ROMERO PAOLA C SANCHEZ 425 DUVAL DR ALPHARETTA, GA 30009				
6.	NAVA CESAR JOSE ROMERO & MARIN BIANCA ANDREA SALAZAR 166 DUVAL DR ALPHARETTA, GA 30009				

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Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	MAY 21 2026 ATLANTA GA MILL STATION
	Postmaster, per *(name of receiving employee)*	6	

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	MAKI REBECCA LYN 435 OLMSTEAD WAY ALPHARETTA, GA 30022				
2.	MANDADI NEHA & MANDADI MOUNIKA & SAXENA AKSHAY PRAKASH 4820 CEDAR FOREST PL LOUISVILLE, KY 40245				
3.	MARCH JAMES & GILLIAN 421 OLMSTEAD WAY ALPHARETTA, GA 30022				
4.	MASHALY AHMED ELMETWALLY & MOHAMED AZZA MOUSTAFA 255 DUVAL DR ALPHARETTA, GA 30009				
5.	MELENDEZ ELIJAH JOEL & EVE LUTRELL 250 DUVAL DR ALPHARETTA, GA 30009				
6.	MILLER TY & BONNIE 209 DOWING DR ALPHARETTA, GA 30022				

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Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 30327 USPS
	Postmaster, per *(name of receiving employee)*		
	6		

USPS® Tracking Number Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	MOHAPATRA SURJYAKANTA & SRILEKHA KUMARI 3755 KENNENT SQ SUWANEE, GA 30024				
2.	MOODY AMI 505 DUVALL DR ALPHARETTA, GA 30009				
3.	MORRISON TERRY A & MORRISON MILTON JR 410 DUVAL DR ALPHARETTA, GA 30009				
4.	NAVARRA ROLAND DECLINES & POLESTICO NINA LOU CASERES 395 DUVAL DR ALPHARETTA, GA 30009				
5.	NELLURI NEHA 535 DUVAL DR ALPHARETTA, GA 30009				
6.	NEWTON TREVOR ROBERT 590 DUVAL DR ALPHARETTA, GA 30009				

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	Postmaster, per *(name of receiving employee)* 6		

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	NIRESHWALYA SHIPALI SHREYUS & NIRESHWALYA SHREYUS 465 DUVAL DR ALPHARETTA, GA 30009				
2.	NRP ALPHARETTA SC LLC 3565 PIEDMONT RD NE BLDG/STE 4 250 ATLANTA, GA 30305				
3.	OKORO EBIMOBOERE 180 DUVAL DR ALPHARETTA, GA 30009				
4.	PARK MIREA 300 DUVAL DR ALPHARETTA, GA 30009				
5.	PEREZ CESAR CARLOS PRADO & PUCCI PAOLA ANDREA ARELLANO 420 DUVAL DR ALPHARETTA, GA 30009				
6.	POSKE NICOLE JASMINE 430 DUVAL DR ALPHARETTA, GA 30009				

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	Postmaster, per *(name of receiving employee)* 6		

	USPS® Tracking Number / Firm-specific Identifier	Address (Street and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.		RANJAN CHITTA 525 DUVAL DR ALPHARETTA, GA 30009				
2.		REBALA SREEHARSHA REDDY 355 DUVAL DR ALPHARETTA, GA 30009				
3.		NELLURI VARUN 114 DOWNING DR ALPHARETTA, GA 30022				
4.		NGUYEN NHU-TRAM THI & HAMMANG RYAN KEITH 312 OLMSTEAD WAY ALPHARETTA, GA 30022				
5.		NPMC RETAIL LC 2100 MC KINNEY AVE STE 700 DALLAS, TX 75201				
6.		OBIJIOFOR EBELE IFUNANYA 52 DUVAL DR ALPHARETTA, GA 30009				

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Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 30327 USPS
	Postmaster, per *(name of receiving employee)*		
	6		

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	PAREEK MUKUND & PAREEK KRISHNA 400 DUVAL DR ALPHARETTA, GA 30009				
2.	PATEL PRERAK 110 DOWNING DR ALPHARETTA, GA 30022				
3.	PERKINS SHARI TOSHEA & KELLY JESSE LEE II 160 DUVAL DR ALPHARETTA, GA 30009				
4.	PRASAD SAPNA 215 DUVAL DR ALPHARETTA, GA 30009				
5.	RANSOM NICHOLAS 585 DUVAL DR ALPHARETTA, GA 30009				
6.	REDDY RUSHY PUTTA & GADDAM SHRIYA 110 DUVAL DR ALPHARETTA, GA 30009				

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	Postmaster, per *(name of receiving employee)* 6		

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	REDDY SUNIL KARANAM & ARUNA SREENIVASA 457 OLMSTEAD WAY ALPHARETTA, GA 30022				
2.	REES ALBERT LEWIS 6092 CARLISLE LN ALPHARETTA, GA 30022				
3.	RISHWAIN STEPHEN BUFFINGTON 221 DOWNING DR ALPHARETTA, GA 30022				
4.	RUDD COURTNEY LYDIA 140 DUVAL DR ALPHARETTA, GA 30009				
5.	SANCHEZ FABIANA CRISTINA 459 OLMSTEAD WAY ALPHARETTA, GA 30022				
6.	SANTOS MARIA BENITEZ 219 DOWNING DR ALPHARETTA, GA 30022				

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	Postmaster, per *(name of receiving employee)*		
	6		

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	SAWJA RIZWAN AHMED ALI & NESHMA SADRUDDIN 8285 SAINT MARLO FAIRWAY DR DULUTH, GA 30097				
2.	SINGH NISHANT 555 DUVAL DR ALPHARETTA, GA 30009				
3.	SOMANI VINEET & SARDA ANKITA 345 DUVAL DR ALPHARETTA, GA 30009				
4.	SOUSA BARBARA DE 223 DOWNING DR ALPHARETTA, GA 30022				
5.	REEP RTL NPM GA LLC 51 MADISON AVE NEW YORK, NY 10010				
6.	REYES CAMILO 390 DUVAL DR ALPHARETTA, GA 30009				

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	Postmaster, per *(name of receiving employee)* 6		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	RUBIO ANDRES E 230 DUVAL DR ALPHARETTA, GA 30009				
2.	SAMUDIO XIOMARA 565 DUVAL DR ALPHARETTA, GA 30009				
3.	SANFORD ROBERT H II & JACQUELYN M PO BOX 1228 ALPHARETTA, GA 30009				
4.	SAUNDERS KASE AUSTIN & ROBERTS EMILY CATHERINE 270 DUVAL DR ALPHARETTA, GA 30009				
5.	SHOKOOHI CHEYENNE ET AL 106 DOWNING DR ALPHARETTA, GA 30022				
6.	SOLANKI ATUL PRAKASH 445 DUVAL DR ALPHARETTA, GA 30009				

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	Postmaster, per *(name of receiving employee)* 6		

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	SONTENAM SAI SIVA SUNDAR S 112 DOWNING DR ALPHARETTA, GA 30022				
2.	SRIVASTAVA SHOBHIT 611 HANLON WAY ALPHARETTA, GA 30009				
3.	STRANGE WILLIAM & HOGAN CHELSEA 405 OLMSTEAD WAY ALPHARETTA, GA 30022				
4.	SUMANTH SUKHAVASI & MALLIMOGGALA PADMINI 325 DUVAL DR ALPHARETTA, GA 30009				
5.	SUN TRUST BANK ATL PO BOX 26665, VA-RIC-8614 RICHMOND, VA 23261-6665				
6.	SWANN INVESTMENTS L P 850 KENNESAW AVE NW STE C2 MARIETTA, GA 30060-1095				

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	Postmaster, per *(name of receiving employee)* 6		

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	THOGARU PRASHANTH 175 DUVAL DR ALPHARETTA, GA 30009				
2.	THOMPSON ROBYN YVETTE 490 DUVAL DR ALPHARETTA, GA 30009				
3.	TPG ECCO PARK L L C 11340 LAKEFIELD DR STE 140 DULUTH, GA 30097				
4.	VIHAN LLC 12647 WATERSIDE DR ALPHARETTA, GA 30004				
5.	VYAS HEMALI J & MISTRY CHINTU V 417 OLMSTEAD WAY ALPHARETTA, GA 30022				
6.	WALKER AARON JAMES & LORRANA ARAUJO 425 OLMSTEAD WAY ALPHARETTA, GA 30022				

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	Postmaster, per *(name of receiving employee)* 6		

	USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Parcel Airlift
1.		STRUNK CHAD ALAN & VONWAHLDE GAIL CLARA 419 OLMSTEAD WAY ALPHARETTA, GA 30022			
2.		SUN CHRISTINE & MARTIN CALEB JAMES 335 DUVAL DR ALPHARETTA, GA 30009			
3.		SUNDARAM BALAJI HARI & HARI MEENAKSHI 441 OLMSTEAD WAY ALPHARETTA, GA 30022			
4.		TAO SIJIA & ZHANG XING 4735 WEATHERVANE DR ALPHARETTA, GA 30022			
5.		THOMAS DON VALENCIA 210 DUVAL DR ALPHARETTA, GA 30009			
6.		TOUART KRISTIN BROOKE 190 DUVAL DR ALPHARETTA, GA 30009			

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Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 30327 USPS
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USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	TRINCADO MARINA SCALZARETTO & ANTA ROBERTO CUESTA 451 OLMSTEAD WAY ALPHARETTA, GA 30022				
2.	VON MAUR INC 6565 N BRADY ST DAVENPORT, IA 52806-2054				
3.	WALES GEORGIA REAL ESTATE LLC 5134 OLD NATIONAL HWY STE B ATLANTA, GA 30349				
4.	WALLIS WILLIAM MICHAEL LEE & WALLIS TIFFANI 200 DUVAL DR ALPHARETTA, GA 30009				
5.	WANG GANG 245 DOWNING DR ALPHARETTA, GA 30022				
6.	WILKINS MARY KATHLEEN & DICIOCCIO AJ 280 DUVAL DR ALPHARETTA, GA 30009				

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	Postmaster, per *(name of receiving employee)* 6		

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	YALAMATI MANASA SREE 285 DUVAL DR ALPHARETTA, GA 30009				
2.	YANG LIMIN 185 DUVAL DR ALPHARETTA, GA 30009				
3.	YOLANDA THERESE HEAD LIVING TRUST THE 570 DUAL DR ALPHARETTA, GA 30009				
4.	YUAN TINGTING 231 DOWNING DR ALPHARETTA, GA 30022				
5.	ZAMBRANO JOSE RICARDO 122 DOWNING DR ALPHARETTA, GA 30022				
6.	ZHOU JENNY GONG & JOE FU 10974 TACONIC WAY JOHNS CREEK, GA 30097				

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Dillard Sellers 1776 Peachtree Street, NW Suite 415-South Atlanta, Georgia 30309	6	6	HOWELL MILL STATION MAY 21 2026 ATLANTA GA 37227 USPS
	Postmaster, per *(name of receiving employee)* 6		

USPS® Tracking Number / Firm-specific Identifier	Address	Postage	Fee	Special Handling	Parcel Airlift
1.	WHITENER TIFFANY LASHA & MICHAEL LEE JR 245 DUVAL DR ALPHARETTA, GA 30009				
2.	WILLIAM LIU & LEI SHEN REVOCABLE TRUST THE 350 DUVAL DR ALPHARETTA, GA 30009				
3.	WILLIAM LIU & LEI SHEN REVOCABLE TRUST THE 350 DUVAL DR ALPHARETTA, GA 30009				
4.	YAN YIYANG 247 DOWNING DR ALPHARETTA, GA 30022				
5.	YIFAT MAYA & CTIBOR FREDERICK JOSEPH 460 DUVAL DR ALPHARETTA, GA 30009				
6.	YOUNG HUNTER & TURPIN ELIZABETH 215 DOWNING DR ALPHARETTA, GA 30022				

PS Form **3665**, January 2017 (Page ___ of ___) PSN 7530-17-000-

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USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	YUN YOUNGHO & YUN HYEUN SUK 380 DUVAL DR ALPHARETTA, GA 30009				
2.	ZHANG SHAOBO & HE WENFENG 403 OLMSTEAD WAY ALPHARETTA, GA 30022				
3.	ZHOU ZHI & ZENG LIN 239 DOWNING DR ALPHARETTA, GA 30022				
4.	FILOS JOSEPH ANTHONY JR & NANCY 550 DUVAL DR ALPHARETTA, GA 30009				
5.	FUESTING BRENT & MULLINS DANA 300 OLMSTEAD WAY ALPHARETTA, GA 30022				
6.	HOLLYWOOD CAMARILLO PARTNERS L P P.O. BOX 250509 ATLANTA, GA 30305				

PS Form **3665**, January 2017 (Page ___ of ___) PSN 7530-17-000-5548

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	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	LEAL CARLOS ANTONIO PORRAS & LEAL CLARET MARYNELLY PORRAS 360 DUVAL DR ALPHARETTA, GA 30009	0000		U.S. POSTAGE PAID ATLANTA, GA 30327 MAY 21, 26 AMOUNT **$33.60** S2323A500889-11	
2.					
3.		0000		U.S. POSTAGE PAID ATLANTA, GA 30327 MAY 21, 26 AMOUNT **$33.60** S2323A500889-11	
4.					
5.		0000		U.S. POSTAGE PAID ATLANTA, GA 30327 MAY 21, 26 AMOUNT **$33.60** S2323A500889-11	
6.					

PS Form **3665**, January 2017 (Page ___ of ___) PSN 7530-17-000-5549

tions

Sign-in Sheet

Community Meeting with Ecco Park Residents

North Point Mall

Wednesday, April 15th, 2026

6:00 PM

Name	Mailing Address	E-mail Address	Phone Number
Robert Sanford Jacquelyn Sanford	PO Box 1228 Alpharetta GA 30009	robjacsanford@outlook.com	720.436.3536
Gillian Marcil	401 Olmstead Way.	gillymarch@gmail.com	770 634 0175
WADIM GARNER	302 OLMSTEAD WAY	garngigi@gmail.com	770-235-3277
Sherry Butler	411 olmstead way		678 491 4441
Mukul Jain	316 Olmsteadway	mukulsharp28@gmail.com	617.504.9003
MARINA TRUNCALI	451 olmstead way	mahtruncali@gmail.com	470 262 2937
Yixuan Gong Eason	447 Olmstead Way	ygong1203@gmail.com	3144896677
Anthony LuckINO	354 Olmstead way	aluckino@gmail	678-472-0453
Sirishasurpani Giridhar Alapati	439 Olmstead Way	surpanisirisha@gmail.com	404-472-6570
Cathy Broom	9720 Summer Oaks Dr Roswell	cabroom@gmail.com	7-329-1060
Megan Broom	104 Downing Dr. Alpharetta GA 30022	megan.broom@gmail.com	305-495 4329

Sign-in Sheet

Community Meeting with Ecco Park Residents North Point Mall Wednesday, April 15th, 2026 6:00 PM			
Name	**Mailing Address**	**E-mail Address**	**Phone Number**
DANA TUESTING	300 Olmstead WAY	danatuesting@gmail.com 2542476114	
LINDA VERGARA	lindavergara02@gmail.com	211 DOWLING DRIVE	954 P493143

Name	Address	Zip Code	Comments	Edit Date
		30022	Too much traffic and no space to expand. We also don't have clarity on the tax payer burden	7/9/26, 10:32 AM
Hunter Joyce	3080 Glen Knolls Court	30022	A question was asked regarding the number of residential units for lease versus those available for sale. The answer given was there are no condominiums in Alpharetta. My response to that answer would be there are no condominiums in Alpharetta… yet. If y'all want the community to buy into this concept, sell it to them. Allowing the public to generate equity North Point's redevelopment will generate a richer community of individuals with vested interests working towards a common future. Leasers are transient and lack ties that build strong communities. Leasing units in perpetuity will generate y'all more money so it's pretty easy to assume which direction you'll go in.	7/8/26, 10:44 PM
Zapora Johnson	2264 Tenor lane	30009	I'm totally opposed to the apartment aspect. Apartments are for transient residents, transient residents do not hav any investment in the community. Alpharetta is a community where people care and try to maintain their neighborhoods and home values. Alpharetta residents value their community. Apartment residents usually did not have the same connection to a neighborhood or community and they are not paying property taxes to support the community and the services that benefit them. A proposal of 1300 apartments is unacceptable and it is not what Alpharetta needs. There is already plenty of residents of residential construction and growth we don't need 1300 apartments. Going with the theme of community we are not a big downtown metropolitan area so a major sports team does fit what is really needed. I believe North Point needs to be redeveloped but these two things miss the mark and don't take into consideration the community pride that we have in Alpharetta.	7/8/26, 7:30 PM
Joe Richards	12670 Hearthstone Way	30009	I am really excited about the opportunity of having this development in our area. Thanks for all the hard work and making this happen.	7/8/26, 7:07 PM
John Carter	235 Providence Place Way	30009	Looking forward to learning about it. Wondering if it's contingent upon winning an NHL team or not.	7/8/26, 5:44 PM
Shawn		30009	This project does not align with the 2045 Horizon and does not primarily benefit the city nor the citizens of Alpharetta. The project will primarily be used by commuters outside of Alpharetta. A NHL stadium would draw attendees from the entire Atlanta MSA, around 6.5 million people, with only ~64,000 residing within Alpharetta, or 1%. Assuming equal interest in Hockey across the metro area, only 1% of Alpharetta will attend games while 99% of visitors will be from outside Alpharetta. From the 2045 Horizon report we know 100,000+ people commute into Alpharetta, average age of a citizen is 41+ years of age, and increased "walkability" is one goal of the city. Citizens are always complaining about traffic. Build a compact mini-city on the 100 acres, work with Alpharetta employers to encourage staff to live and work in Alpharetta. Connect NP with Avalon, DTA, and the office complexes with alternative transportation. This increases walkability and decreases traffic.	7/9/26, 10:38 PM
Marty Miller	3570 Grey Abbey Drive	30022	At a cursory level I believe the planned parking is going to fall short of actual needs. Some of the math around projected parking space needs seems low balled, such as 1 space per 4 arena attendants, not likely. Peak usage will occur when there's a hockey game and a concert in the hall, i.e. potentially 20k plus another 4k visitors on top of the residential, retail and other needs. I can easily see that a year into this, the crisis at hand will be "what do we do about our inadequate parking situation", and this will negatively impact every use of this mixed use project.	7/9/26, 8:54 PM

Name	Address	Zip Code	Comments	Edit Date
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John Carter	235 Providence Place Way	30009	Looking forward to learning about it. Wondering if it's contingent upon winning an NHL team or not.	7/8/26, 5:44 PM

Name	Address	Comments	CreationDate	Zip Code
Paul Hunter	450 Duval Drive	Love the proposal. 2 questions: Will the NHL ultimately decide which of the 2 proposed sites is approved? How large is proposed Alpha loop bridge across 400? Concerned that it will not be large enough to accommodate	06/10/2026 23:20:26.029	30009
William Walton	245 Summerfield Dr.	Thanks for sharing. My community is on the east side of North Point Mall and most of the traffic consideration is only focused on the west side. The Alpharetta 2025 North Point Development Framework was looking to address traffic flow from east to west with a new cut through to Hwy 9 through North Point Mall to help alleviate traffic on Haynes Bridge Rd and Mansell Rd. Traffic will be bad on surface streets coming from Johns Creek, Duluth, Hwy 141, and INT 85 to hockey games/concerts. How will the development consider traffic flow from the east without widening roads? Especially Haynes Bridge Rd as widening would require a piece of my backyard which is a no go. Thank you!	06/10/2026 23:28:23.483	30022

Ron Carter	cjcarter561@gmail.com	Point and agree the area needs a stronger long-term vision. However, I left the meeting concerned that the current proposal is not ready as presented. My biggest concern is that the plan appears highly dependent on securing a professional sports team/arena, but there was not a clear answer on what happens if that does not materialize. Before moving forward, residents should understand the fallback plan (if any). I am also concerned that the traffic study has not been completed yet, given the proposed density of apartments, hotels, office, restaurants, entertainment venues, and a 20,000-seat arena. I will await the results. Finally, I would like to see more indoor, family-friendly, climate-controlled space. Alpharetta already has several outdoor shopping/dining districts, and North Point has an opportunity to offer	06/11/2026 03:08:43.761	30005

Pete Rosskamm	13456 Gardiner Ln	As a concept, I think the plan is good. As others expressed, I'm a bit concerned about what happens if the NHL chooses not to expand to Alpharetta. I personally believe the space would still do well without an arena and hockey team, but the lack of a formal plan B is a bit concerning. In this hypothetical in which the NHL says no to Alpharetta, no plan B would mean going back to the drawing board and going through all the processes again, further delaying and keeping that area underutilized. I think there's a significant benefit to having plan B formalized as part of the project before a council vote. For the plan itself, I'm personally in support of the taller structures being built. That area right along 400 is the right place for taller structures. Avalon's hotel and office tower are excellent examples of what can be done. It's a great look getting off the freeway and I think replicating it at North Point would be fantastic. I love the Alpha Loop connectivity.	06/11/2026 04:36:59.743	30004

Julie McKinnon	5055 Walnut Creek Trail Alpharetta Ga	I'm in support of this fabulous project. Although we have other areas like downtown and Avalon this project is a piece to the puzzle to secure Alpharetta as the place to be. As a Californian, I miss convenient sporting events especially hockey! Fingers crossed!	06/11/2026 12:39:34.463	30005

Community Zoning Information Meeting (CZIM) June 10, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Tom Miller	4025 Walnut Creek Trl. Alpharetta 30005	
Robert Singleton	11910 Morning Mist Dr. Alpharetta 30005	Love this idea of bringing NHL here, but we have been waiting for a redo of North Point for a Long Time! I don't get the feeling that NHL is fully on board. Leaving us back to square 1! Again!
DEBRA DENT	329 CONCORD ST Alpharetta 30009	
Amy Jarrow		No
Nancy J. Emmons	348 Meadow Dr. Alpha, GA. 30009	

Community Zoning Information Meeting (CZIM) June 10, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Adam Waid	310 Hopplewhite Dr. Alpharetta, GA 30022	
JUDY LYON	620 Flying Scot Way Alpharetta, GA. 30005	
NICHELLE FRAZIER	ENCORE COMMONS 100 N. POINT CENTER E. Ste. 120 ALPHA., GA 30022	
KATE + DAVID ADAMS	421 Olmstead way Alph 30022	
Martha Pedrick	135 Shadow Spruce Alph 30022	
CERESA LEE	405 Eagles Pass Alpharetta, GA 30004	

Community Zoning Information Meeting (CZIM) June 10, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
NADIA GARNER	302 OLMSTEAD WAY	NORTH POINT MALL REDEVELOPMENT NEEDS TO GO THRU.
Dawn Hodges	1910 Forte Ln.	
Paul + Georgia Barrow	1550 Spinnaker Dr 30005	Do it!
Stella Majewsky	9209 Cypress Court	PLEASE CAN THE PARKING SPACES BE ROTATED SO THAT THEY DONT CREATE A HEAT ISLAND
[signature]	9204 Cypress Court	
Chris DeCarlo	510 Chiswick Cir.	

Community Zoning Information Meeting (CZIM) June 10, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
MARY KEEFE GROVE	1938 FORTE LN ALPHA 30009	IF NHL FRANCISE NOT AWARDED. WILL NP STILL BE REVITALIZED?
FRANCENE + TRACE TAYLOR	2017 HIDDEN ALY ALPHARETTA GA	Hockey? Been tried + failed - twice. 3rd time not a charm. We have the oppty to do something truly unique + build community. Don't nost it
MARYANN AND DAVID OBCINGER	500 Pilchon Pl Alpharetta Ga	
Carol Graf	325 Lilac Garden Cir	Will it be developed w/o a hockey team commitment? When will development start?
Karen Richard	11680 Deerclift Trace	
PAYAL SHARMA		

Community Zoning Information Meeting (CZIM) June 10, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Janice Leach	6521 Maid Marion Close Alpharetta 30005	Agree w/ suggestion to keep bicycle paths around perimeter. may want to also limit ~~include~~ where electric scooters, + electric bikes are allowed

Community Zoning Information Meeting (CZIM) June 10, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Julia Johnson	290 Burrow Downs	Hope it happens soon!
Tracy Guilbault	8020 Oakland Ln.	Hope it happens & provided parking and surface streets can accomodate
Ron Carter	1015 Compass Pt	keep as much of the mall and diversify tenant mix (not more luxury)

Community Zoning Information Meeting (CZIM) July 8, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Mathew Frauch	mspp_99@Yahoo	BRING Back the NHL!
Gail LaFleche	395 Bamburg Xing	Cost, lack of a backup plan.
Deborah Eves	115 Pebble Trail Alpharetta,	Need affordable housing, to be environmentally friendly & more green space w/ specific purposes
Lia Giglio	1318 Bluefield Dr SW	Provide green areas!! Less expensive housing, more room for casual play areas, food trucks, & festivals.
Michael Buchanan	135 Pebble Dr Apt GA	Why so much?! Add water features We don't want to be Buckhead.

Community Zoning Information Meeting (CZIM) July 8, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Amy Herington	420 Ridgewood Way Alpharetta GA 30005	TRAFFIC concerns * Housing -
Andrea DeLuca	400 Barbarry Crossing Alpharetta	-Heavy Traffic -Multiple Developments slated for Haynes Bridge where there are Multiple events at once! -Again what happens when 2022 was voted down due to density!
Rhonda Regan	120 Greenmont Downs Trace Alpharetta	More heavy traffic / why is the density so high? unaffordable housing continues What happens if hockey goes to Cumming Why are we just building to tourists?
Tammy Lucas	435 Fieldstone Lndg Alpharetta 30005	Please keep the Malls Carousel How much will the for rent residences be? Traffic + Long-term "Look/Feel of Community"
Karen Reid	11680 Dandy Trace	

Community Zoning Information Meeting (CZIM) July 8, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
JC & Carmen Sessoms	805 Westwind Lane	Looking fwd to revitalization of this area!
ERIC REGAN	120 GDT 30009	Do it right!
Matt + Martha Kasper	456 Summerfield Dr.	Traffic concerns.
Duane DeBruler	2856 Webb Bridgeld Alph. 30009	Northpoint Mall became worthless in 20 years. How do you know this will remain viable?
Hunter Joyce	3080 Glen Knoll Ct	

Community Zoning Information Meeting (CZIM) July 8, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Kathy + Jim Cash	655 Society St. 30022	Very opposed!
Priscilla Caren	1955 Nocturne Dr Alph 30009	Don't understand why previous owner was turned down for 900 rentals and this is OK for 1200+!! Not feeling it!
M. Smith	165 Shadow Springs Dr. 30022	Nope!!
John Carter	235 Providence Place way Alpharetta, 30009	Not Yet
Camille Ball	10420 Ash Rill DR Alpharetta GA 30022	Yes please!
Richard Ball;	10420 Ash Rill Drive Alpharetta, GA 30022	YES!!!

Community Zoning Information Meeting (CZIM) July 8, 2026

Please sign-in and leave your comments and/or concerns.

MP-26-06/Z-26-05/CU-26-04/V-26-08 / North Point Sports & Entertainment District

NAME	ADDRESS	COMMENTS
Darene Wolff	520 Makin Ct. Alpharetta -	Very opposed

From: Cook, Kathi
To: Woodman, Michael; Taylor, Elicia
Subject: Fw: North Point Redevelopment - for today's meeting
Date: Thursday, August 6, 2026 10:51:23 AM

From: Genet, Sabine [redacted]
Sent: Thursday, August 6, 2026 10:39 AM
To: Hipes, John <jhipes@alpharetta.ga.us>; Reeves, Katie <kreeves@alpharetta.ga.us>; Gilvin, Jim <jgilvin@alpharetta.ga.us>; DeRito, Doug <dderito@alpharetta.ga.us>; Driskell, T. Kirk <kdriskell@alpharetta.ga.us>; Merkel, Dan <dmerkel@alpharetta.ga.us>; Brady, Fergal <fbrady@alpharetta.ga.us>; Cook, Kathi <Kcook@alpharetta.ga.us>
Subject: North Point Redevelopment - for today's meeting

Dear City Council,
Dear Community Development,

I had the opportunity to attend more than 1 community information session about the North Point Redevelopment including the presentation and Q&A with Jamestown and would like to submit my thoughts, concerns, suggestions with this email:

Coming from the understanding that we cannot stop growth but we can guide the expression of it, I am concerned and hopeful for the North Point area.
Jamestown is an excellent partner with its expertise in large successful developments, sustainable construction, and engaging the community beyond the building phase to ensure businesses' success.
However, knowing what the company is capable of, the plans leave me underwhelmed. I am getting a sad sense of lots of transactional spaces (retail, commercial, etc) and am missing the spaces and flair that have shaped Alpharetta into the tight, neighborly live-work-play community we are today. For example, common (green) spaces where people gather as a community to create and nurture that community. The presented plans are missing an identity, the soul of Alpharetta.

To bring the plans from concrete structures to livable places, I would like to request more from Jamestown in design, architecture, engineering, and construction. Add Alpharetta personality. Add the lives of residents between the transactions. Make us unique and extraordinary.

The large area to be redeveloped will set the tone for the region and a generation.

With the knowledge that we need to expect a large influx of people at a time when we will face higher temperatures and a strain on freshwater, a development of this size has the potential to drain resources or set a new standard for efficiency as well as environmental stewardship. As far as I know, Jamestown is a leader in sustainable construction. I would love for Alpharetta to push Jamestown to the limits of its knowledge and expertise in this matter to deliver the highest level of sustainability planning: from resource management during and after construction, to climate resilience through landscaping and grey water use etc., to waste management of the sort that the Mercedes Benz Stadium is world renowned for. The knowhow is here. Let's use it to our advantage.

Additionally, I would like to see more people-centered planning: open spaces, ideally with hardscaping and landscaping, to encourage mingling, places to just go and linger. For people to pull out a chess board and challenge each other in an impromptu match. For a child to watch someone crochet and become curious. For people to sing Christmas carols together.

As a member of the Alpharetta Cultural Arts Commission I am missing in that plan what we know works well to create a thriving district: no-pressure high energy music and arts in an - often - free space for residents of all ages to mingle and create community. So tight we don't want to go home until the chairs are put up and the lights are turning off. Over the past few years I have become more and more familiar with the artists communities, and I have supported Alpharetta becoming a recognized destination for music, from wire & wood to symphony, public art sculptures, history museums, mural art, theater, ballet, and more.
We organize large-scale art fairs and culinary festivals. We pay for musicians and artists to come to Alpharetta - and likely even more so with the new development. How do we ensure these successful programs that are a part of Alpharetta's identity are incorporated into the NP redevelopment?
We are aware of enormous talent in the creative industries right here in Alpharetta. We are known as Music City Alpharetta but we currently don't support home-grown talent in a way we grow, for example, tech startups. What kinds of spaces would our up-and-coming artists need in Alpharetta to develop their craft and careers ... and stay right here? How can we serve our local artists? Which opportunities can we realize with the North Point Mall redevelopment? Recording studios? Makers spaces? What else?

Here are some specific ideas to improve the plan:

- dedicated spaces for local art to be seen and flourish: space for public art similar

to our successful large scale public art displays throughout downtown, the AlphaLoop, and now spreading into other areas, murals by local artists, etc.
- dedicated spaces for street performances, small and mid size, to activate the space in between events at the planned venues. Potentially revisit the Alpharetta Street Performance proposal to streamline the process in collaboration with Jamestown.
- More green spaces and landscaping that provide shade for residents and visitors and cool the whole area.
- space for art on wheels to engage residents regularly to truly set a tone for the arts and entertainment district
- open and inviting spaces where people mingle that prevent the sort of transactions we know happen in dark or deserted spaces.
- a bike (repair) shop
- a large, very casual, family and pet friendly “Biergarten”-style bistro/restaurant with lots of outdoor seating to encourage people to meet before and after bike rides or walks on the Greenway

I hope these ideas help establish a vision for a more people-focused development and some talking points for Jamestown to add personality to the currently bland plan.

Thank you to all of you for your dedication to our city!
I look forward to the revised plan that better suits Alpharetta’s residents.

Kind regards,

Sabine Genet

Get Outlook for iOS

From:	Cook, Kathi
To:	Taylor, Elicia
Cc:	Woodman, Michael
Subject:	Fwd: Public comment about North Point development ahead of Aug 6 Planning Commission mtg
Date:	Wednesday, August 5, 2026 8:25:13 PM

[redacted]

[redacted]:

From: Sarika Bokil [redacted]
Date: August 5, 2026 at 8:20:19 PM EDT
To: "Woodman, Michael" <mwoodman@alpharetta.ga.us>, "Borden, Brian" <bborden@alpharetta.ga.us>, allcouncil@alpharetta.ga.us
Cc: "Cook, Kathi" <Kcook@alpharetta.ga.us>
Subject: Public comment about North Point development ahead of Aug 6 Planning Commission mtg

Dear Mr. Woodman,

At the outset, I would like to thank you for your time and contribution in serving our Alpharetta community!

I am writing to you regarding the North Point development project.

I had submitted my comments on the North Point development project via digital link provided at the CZIM meeting in June. For some reason my comments have not made it to "public comments" section for tomorrow's, Aug 6, 2026, planning commission meeting on the city of Alpharetta's website. No problem about that.

However, I will appreciate it if you could please include/submit my comments below to be considered by the Planning Commission at their meeting tomorrow., Thusday, Aug 6.

I have been an Alpharetta resident for over 20 years. I love our city and care deeply about it. Hence, would like to not miss on presenting my thoughts on our city's plans for development and growth plans.

My comments are as below -

1. Not in favor of NHL or any big arena. I would not like to have a glitzy and big city feel to our cozy Alpharetta.

2. Our city has a small-town vibe with all the amenities of a well-developed

city. Bringing in a sports arena will take away from this small-town feel. The city has been a safe and homely place to bring up kids - bringing a sports arena will definitely affect this adversely.

3. **Would like to see a lot of green shaded spaces and trails** keeping in line with our beautiful surroundings. The current plan has green spaces only on the periphery and this is not at all sufficient.

4. Not in favor of residential units due to traffic congestion and over population issues.
With our current population itself, finding a parking spot at Avalon or downtown Alpharetta to enjoy a nice dinner on a Friday or a weekend, is almost impossible. A few weeks ago I had to circle around Avalon for 45mins to look for a parking spot and even then, I did not find one!
Having all these wonderful restaurants and retail is great, but if we cannot enjoy them then it defeats the purpose of having these facilities.
Adding more residential units at the North Point site will exacerbate this over crowding problem.

5. I would like to see a Learning and Development center or a community center at the North Point location. This center would offer training and learning opportunities for our adults (and youth) where they could get certifications to change or advance their careers.
This center could also become a central location to provide information about opportunities to serve our city and community through various vehicles that exist within our city such as volunteer organizations, many departments within the city of Alpharetta, and the umpteen companies that have offices in Alpharetta.

We have a great opportunity to add something very unique to our city that other cities do not offer.

6. We already have many empty office buildings that are being repurposed, I would like to use those instead of creating more office space in the North Point development.

7. Lastly, I am definitely very much concerned about the traffic burden it will add to our already crowded streets.

I look forward to an acknowledgement of this email.

Thank you in advance for putting these comments in front of the Planning Commission ahead of tomorrow's meeting.

Best,
Sarika Bokil
735 Barnesley lane,
Alpharetta 30022

From: Woodman, Michael
To: Taylor, Elicia
Subject: Fwd: MP-26-06/Z-26-05/CU-26-04/V-26-08 North Point Sports and Entertainment District
Date: Wednesday, August 5, 2026 5:19:00 PM

[redacted]

[redacted]

[redacted]

From: Francene Taylor [redacted]
Date: August 5, 2026 at 5:12:08 PM EDT
To: "Woodman, Michael" <mwoodman@alpharetta.ga.us>
Subject: MP-26-06/Z-26-05/CU-26-04/V-26-08 North Point Sports and Entertainment District

Michael
Good afternoon - reaching out to see if there are any Staff Recommendations available for this project. I've reviewed all the documents I can find online and it all appears to be from the applicant side. I can find nothing with Staff recommendations - can you point me in the right direction?

I am extremely concerned with the number of rental units, the size/height of the proposed buildings, the fact that we're still assuming we'll get a hockey team in spite of two already failing in the Atlanta area and no owner even yet identified for this third bid. I'm also extremely concerned with the traffic that will be generated, especially considering all the other on-going developments that will add additional traffic to our streets (Alpharetta District Places, for example).

Appreciate any direction you can give me to find any Staff recommendations on the North Point redevelopment.

Many thanks
Francene Taylor
2017 Hidden Alley

[redacted]

From: Mandy Schulz [redacted]
Sent: Wednesday, August 5, 2026 1:05 PM
To: Woodman, Michael <mwoodman@alpharetta.ga.us>
Cc: Cook, Kathi <kcook@alpharetta.ga.us>; allcouncil@alpharetta.ga.us
Subject: Public Comment for MP-26-06/Z-26-05/CU-26-04/V-26-08 *Please share with Planning Commission ahead of Aug 6th hearing

Dear Mr. Woodman,

Thank you for your service to the community.

I'm writing regarding the North Point Sports & Entertainment District application (MP-26-06/Z-26-05/CU-26-04/V-26-08), ahead of Thursday's Planning Commission hearing. I'm unable to attend in person, however I'd like my comments taken into consideration.

Could you please include this email in the public record for this case and share it with the Planning Commission ahead of Thursday's hearing? I'd also appreciate a brief confirmation that it was received.

I read **through the full staff report** and the supporting traffic and parking studies, and I have **two specific concerns** I'd like the Commission and Council to consider before any vote.

1. The parking numbers changed significantly with no public explanation

Kimley-Horn's shared parking study dated May 29, 2026, projected peak weekday parking demand at **8,283 spaces**.

A revised memo dated July 17, 2026 (issued nine days after the second community meeting) lowered that figure to **7,375 spaces**. That's a **drop of over 900 spaces**.

I haven't found any record of this change being presented to residents or explained anywhere in the public record. Staff's Condition 32 simply adopts the later, lower number as the governing parking requirement without requiring the applicant to account for the discrepancy.

Given that the plan already relies on roughly 10,000 spaces of off-site parking within a 15-minute walk during arena events (spaces the developer doesn't control), I think the **Commission should ask Kimley-Horn to explain what changed between May and July before this number becomes a binding condition of zoning.**

2. The NHL reversion clause protects the arena, not the density that comes with it

At the June 10th community meeting, developer David Carlock told residents, "We don't have a Plan B option in our back pocket" regarding the arena.

Staff's proposed Condition 3(e) reflects that: if the NHL doesn't approve a team by August 24, 2031, the zoning entitlements revert, but only for the additional 1,085 "For-Rent" units tied to the arena. The base mixed-use rezoning, including the office, retail, and the 300 units already entitled, stays in place regardless of whether hockey ever comes to Alpharetta.

In other words, **the density increase is the part that's contingent on hockey, but the underlying rezoning of the whole 98-acre site is not**. If the Commission is comfortable recommending that structure, I'd like to understand the reasoning, since it means the city is taking on the full rezoning risk permanently, while only a portion of the residential upside is tied to landing a team.

I'd like these two items specifically raised and discussed at Thursday's hearing, given that the Commission's recommendation will shape the record going into the August 24th vote.

If the Commission cannot address them Thursday, please let me know how and when they will be taken up before Council votes, so I can follow up directly with Council in the meantime.

Thank you for your time, and for including resident feedback in the record on a project this size.

Sincerely,

Mandy Schulz

10375 Rillridge Court

Alpharetta, GA 30022

[redacted]

[redacted]

From: Cook, Kathi <Kcook@alpharetta.ga.us>
Sent: Wednesday, August 5, 2026 12:24 PM
To: Andrea DeLuca [redacted]; Reeves, Katie <kreeves@alpharetta.ga.us>; DeRito, Doug <dderito@alpharetta.ga.us>; Hipes, John <jhipes@alpharetta.ga.us>; Brady, Fergal <fbrady@alpharetta.ga.us>; tkdriskell@alpharetta.ga.us <tkdriskell@alpharetta.ga.us>; Merkel, Dan <dmerkel@alpharetta.ga.us>; Mitchell, Donald <dmitchell@alpharetta.ga.us>
Subject: Re: Official Opposition to the North Point Sports and Entertainment District Rezoning Application

Andrea,
Thank you for your email. We will check the public packet today that was sent to the Planning Commission and add your comments if they have not been included. We agree, it is important to include all public comments, and we will review the file to make sure all have been included.

Kathi Cook
Director of Community Development
City of Alpharetta, Georgia
2 Park Plaza
Alpharetta, GA 30009
P: 678.297.6073
E: kcook@alpharetta.ga.us

ALPHARETTA
GEORGIA, USA

From: Andrea DeLuca [redacted]
Sent: Wednesday, August 5, 2026 12:16 PM
To: Reeves, Katie <kreeves@alpharetta.ga.us>; DeRito, Doug <dderito@alpharetta.ga.us>; Hipes, John <jhipes@alpharetta.ga.us>; Brady, Fergal <fbrady@alpharetta.ga.us>; tkdriskell@alpharetta.ga.us <tkdriskell@alpharetta.ga.us>; Merkel, Dan <dmerkel@alpharetta.ga.us>; Mitchell, Donald <dmitchell@alpharetta.ga.us>

Cc: Cook, Kathi <kcook@alpharetta.ga.us>
Subject: Re: Official Opposition to the North Point Sports and Entertainment District Rezoning Application

To all

Please see my below email that was sent on July 9th. At that time I received only one reply back from K. Cook, and assumed the others just didn't find the time to reply.

I have corresponded with Katy Reeves this morning and admittedly it was unfortunately missed. Thank you Katie for your reply.

My concern is, that looking over the proposal that will be presented on August 6th, it is not under Public Comments. How many others have been missed?
How do we assure that all residents are heard? This is of great concern to me.

Please reply acknowledging receipt of this email, and confirm that all emails over the last 6 to 8 weeks will be screened for public's comments.
This matter should not be taken lightly…..

Thank you
Andrea DeLuca

Sent from Gmail Mobile

On Thu, Jul 9, 2026 at 10:46 AM Andrea DeLuca [redacted] wrote:

> Dear Councilmember,
> As a resident and taxpayer of Alpharetta, I am writing to formally log my opposition to the current 2026 mixed-use rezoning application for the North Point Sports and Entertainment District. While I support the general revitalization of the North Point corridor, the sheer scale of the current proposal introduces severe logistical threats to our community's infrastructure, traffic management, and public safety.
> I urge you to look past the short-term promises of tax revenue and critically evaluate the long-term quality-of-life impacts on the residents who will live with this gridlock long after current terms of office conclude. Specifically, I request that the Council address the following three fatal flaws in the current plan:
>
> 1. **Unmanageable Traffic Bottlenecks:** Haynes Bridge Road and North Point Parkway are already failing to handle current daily commuter volumes. Adding a 20,000-seat arena, a 4,000-seat music venue, and a 45,000-square-foot convention center into a singular 100-acre footprint will create unprecedented gridlock, particularly during concurrent "Super-Event" scheduling. The proposed "traffic diversion" simulations are highly speculative and do not guarantee the protection of our local road networks.
> 2. **Excessive and Precedent-Setting Residential Density:** In 2022, this Council rightfully rejected a 960-unit plan due to excessive rental apartment density. The 2026 proposal nearly doubles that figure to 1,385 high-density, multi-family rental units. This level of density fundamentally alters the suburban character of Alpharetta and strains our local resources, regardless of whether it is packaged next to a sports venue.
> 3. **Unaddressed Public Safety and Crime Strain:** Concentrating tens of thousands of transient event-goers weekly into a centralized entertainment and parking deck

footprint introduces a significant localized increase in opportunistic property crime, vehicle break-ins, and traffic infractions. Our municipal resources and public safety departments should not be structurally strained to support a private developer's high-risk layout.

Furthermore, the lack of a secured, billion-dollar NHL franchise owner leaves the city at immense risk. If an NHL team is not awarded, Alpharetta will be left with a fractured master plan and an oversized zoning entitlement that does not fit the needs of our community.
As a representative who must continue to answer directly to the citizens of Alpharetta in future election cycles, I expect you to prioritize the structural health of our city over developer hype. I ask that you vote **NO** on this rezoning application at the upcoming August 24, 2026 hearing.
Thank you for your time, your consideration, and your service to our community.
Sincerely,
Andrea Crescenzi DeLuca
400 Banbury crossing



From: Woodman, Michael
To: [redacted]
Cc: Taylor, Elicia
Subject: North Point Sports & Entertainment District
Date: Monday, July 27, 2026 9:25:00 AM
Attachments: image001.png

Good morning, Michael.

To find more information regarding the NHL hockey arena proposed at North Point Mall, please see the link below.

https://www.alpharetta.ga.us/public-hearings

In the list to the right, search for: MP-26-06/Z-26-05/CU-26-04/V-26-08 North Point Sports and Entertainment District. It's currently the 5th item from the top. Click on the title. You will find a description of the proposal, upcoming public hearing dates, and link to application documents. In the document you will find site plans and renderings which depict the mall being redeveloped with a sports & entertainment district including a 20,000-seat NHL hockey arena. Please let me know if you have any questions.

Best regards,

Michael Woodman, AICP
Planning + Development Services Manager
Community Development
City of Alpharetta, Georgia
2 Park Plaza
Alpharetta, GA 30009
P: 678.297.6072
E: mwoodman@alpharetta.ga.us

ALPHARETTA
GEORGIA, USA

[redacted]

[redacted]

ALPHARETTA
GEORGIA, USA

From: Cook, Kathi <Kcook@alpharetta.ga.us>
Sent: Thursday, July 16, 2026 2:10 PM
To: Gail Lafleche [redacted]
Cc: Gilvin, Jim <jgilvin@alpharetta.ga.us>
Subject: Re: Feedback Regarding North Point Mall Proposal

Gail,

Thanks for sending link, Colliers looks at all Alpharetta addresses vs city limits. It's similar to looking up Alpharetta homes for sale and it shows all properties with Alpharetta addresses although they are in Forsyth or other surrounding cities. Also, the Colliers data provides North Fulton data, not just City of Alpharetta. Our Economic Development Director, Charlie Jewell provides our data based on actual office space in the city. Feel free to reach out to him if you need more information cjewell@alpharetta.ga.us.

Regarding your question about who makes a decision on what to do on private property the owner makes the decision on what they submit for land use consideration. They can

build uses already allowed on their property or request a use not currently permitted through a public hearing process. If a private property owner wants to construct a use not currently allowed on the parcel, they submit an application for consideration with final decision by City Council.

Let me know if you have more questions.

Kathi Cook
Director of Community Development
City of Alpharetta, Georgia
2 Park Plaza
Alpharetta, GA 30009
P: 678.297.6073
E: kcook@alpharetta.ga.us

ALPHARETTA
GEORGIA, USA

From: Gail Lafleche [redacted]
Sent: Thursday, July 16, 2026 12:51 PM
To: Cook, Kathi <Kcook@alpharetta.ga.us>
Cc: Gilvin, Jim <jgilvin@alpharetta.ga.us>; allcouncil@alpharetta.ga.us <allcouncil@alpharetta.ga.us>
Subject: Re: Feedback Regarding North Point Mall Proposal

Hi Kathi

Thanks for responding. Here is a link that shows the office vacancy rate to be around 25%.
https://www.colliers.com/download-article?itemId=5c810e7a-67ed-4868-a934-08fc6356182f

I don't understand your comment about the mall's owner. Are you saying the only proposal that can be considered has to be from New York Life? If that's correct, who's ultimately going to make the decision about what to do with this property?

On Wed, Jul 15, 2026 at 5:23 PM Cook, Kathi <Kcook@alpharetta.ga.us> wrote:

> Gail,
>
> Thank you for sending comments which will be considered by staff as we prepare our recommendations. We will also forward your comments to the Planning Commission and City Council.
>
> I did one to correct the statement about office vacancy, city wide we are at 22%. Also,

the mall is privately owned by New York Life and not the city. We consider and process the request submitted by the private property owner.

If you would like to meet to discuss previous applications submitted by the mall that were considered or to discuss any other concerns let me know a day/time that works for you.

Best-
Kathi

Kathi Cook
Director of Community Development
City of Alpharetta, Georgia
2 Park Plaza
Alpharetta, GA 30009
P: 678.297.6073
E: kcook@alpharetta.ga.us

ALPHARETTA
GEORGIA, USA

From: Gail Lafleche [redacted]
Sent: Wednesday, July 15, 2026 4:33 PM
To: Gilvin, Jim <jgilvin@alpharetta.ga.us>; Cook, Kathi <kcook@alpharetta.ga.us>; allcouncil@alpharetta.ga.us <allcouncil@alpharetta.ga.us>
Subject: Feedback Regarding North Point Mall Proposal

I attended the meeting last week about the proposal to redevelop the North Point Mall. This proposal concerns me for several reasons:

- It includes adding significant office space, while there is currently a 26% vacancy rate in the city.
- 1385 apartments is more than was proposed (and rejected) a few years ago. What's the effect on infrastructure, schools, etc?
- It resembles the Battery, which could bring in additional crime to Alpharetta.
- There are already several other mixed use developments being built in the aree, including the Gathering and Medley. This development is likely to bring business away from current mixed use developments, including the Avalon.
- No one could answer questions on how the costs would be paid, plus the impact to our taxes.

Why is there only one proposal being considered? Shouldn't there be two or three

competing with each other? Have you considered something besides another mixed use development with more office space and apartments? What is the plan if there is no new NHL team? What about a college campus, medical center, or something else we don't currently have?

--
Best,

Gail LaFleche

--
Best,

Gail LaFleche

From: [redacted]
Subject: Re: North Point Sports and Entertainment District Item
Date: Friday, July 10, 2026 8:52:16 AM
Attachments: image001.png

Thank you very much Mrs. Taylor.

William Rawson
WMVA LLC
[redacted]

From: Taylor, Elicia <etaylor@alpharetta.ga.us>
Sent: Friday, July 10, 2026 8:42 AM
To: [redacted]
Cc: Woodman, Michael <mwoodman@alpharetta.ga.us>
Subject: North Point Sports and Entertainment District Item

Wiiliam,

As we discussed on the phone, there are not any recordings for Community Zoning Information Meetings. Here is the link to the item on our website: https://www.alpharetta.ga.us/public-hearings. The Item name is MP-26-06/Z-26-05/CU-26-04/V-26-08 North Point Sports and Entertainment District.
It is the 4th item on the Alpharetta City Council Page. The public hearings will be livestreamed and recorded.

Thank you for your interest in this project.

Elle
Elicia Taylor
Planning & Zoning Coordinator
City of Alpharetta, Georgia
2 Park Plaza
Alpharetta, GA 30009
P: 678.297.6074
E: etaylor@alpharetta.ga.us

ALPHARETTA
GEORGIA, USA

From: Woodman, Michael
To: [redacted]
Cc: Taylor, Elicia
Subject: RE: Link
Date: Thursday, July 9, 2026 12:58:10 PM
Attachments: image001.png

Good afternoon, Shawn.

Please see link below to leave a comment regarding the North Point Mall redevelopment proposal.

https://arcg.is/0WWDCf0

Please let me know if you have any trouble.

Best regards,

Michael Woodman, AICP
Planning + Development Services Manager
Community Development
City of Alpharetta, Georgia
2 Park Plaza
Alpharetta, GA 30009
P: 678.297.6072
E: mwoodman@alpharetta.ga.us

ALPHARETTA
GEORGIA, USA

From: Shawn Solinko [redacted]
Sent: Thursday, July 9, 2026 11:05 AM
To: Woodman, Michael <mwoodman@alpharetta.ga.us>
Subject: Link

What's the link for public comments on the North Point project?

From: [redacted]
To: Taylor, Elicia
Subject: RE: Jamestown Project – July 8 Meeting
Date: Thursday, July 9, 2026 11:06:18 AM

Ashlee Kinback reacted to your message:

From: Taylor, Elicia <etaylor@alpharetta.ga.us>
Sent: Thursday, 09 July 2026 15:02:15
To: Ashlee Kinback [redacted]
Cc: 'Frances.Bohn@JamestownLP.com' <frances.bohn@jamestownlp.com>
Subject: RE: Jamestown Project – July 8 Meeting

Ashlee,

The correct Council date is Monday, August 24, 2026. I apologize for the typo.

Thank you,

Elle

From: Taylor, Elicia <etaylor@alpharetta.ga.us>
Sent: Thursday, July 9, 2026 10:27 AM
To: Ashlee Kinback [redacted]
Cc: Frances.Bohn@JamestownLP.com
Subject: RE: Jamestown Project – July 8 Meeting

Good Morning Ashlee,

Last night's meeting was not a public hearing, so it was not recorded. I am including the Applicant in this response. They may be able to send you their presentation from the Community Zoning Information Meeting last night. You will also find information on our website at: https://www.alpharetta.ga.us/public-hearings. Once you are on that page, it is the MP-26-06/Z-26-05/CU-26-04/V-26-08 North Point Sports and Entertainment District item.

The public hearings will be :

Planning Commission Thursday, August 6, 2026

City Council Monday, August 10, 2026

Both Meetings begin at 6:30 p.m.

Thank you for your interest.

Elle

From: Ashlee Kinback [redacted]
Sent: Thursday, July 9, 2026 9:59 AM
To: Taylor, Elicia <etaylor@alpharetta.ga.us>
Subject: Jamestown Project – July 8 Meeting

Good morning,

I hope you're doing well! I'm reaching out regarding last night's public hearing, specifically as it relates to the Jamestown project. Unfortunately, I was unable to attend and wanted to see if there are any meeting notes, presentation materials, or other information available regarding the discussion.

I'd greatly appreciate any insight you're able to provide.

Thank you so much for your help!

All the best,

Ashlee

ASHLEE KINBACK
[redacted]
5100 Old Ellis Point | Suite 200 | Roswell, GA 30076
DERUCKI CONSTRUCTION COMPANY

DILLARD Sellers
ATTORNEYS AT LAW

Julie L. Sellers
404.665.1242

Email:
jsellers@dillardsellers.com

July 2, 2026

City of Alpharetta
c/o Kathi Cook, Community Development Director
2 Park Plaza
Alpharetta, GA 30009

Re: MP-26-06/Z-26-05/CU-26-04/V-26-08
First Amendment to Public Hearing Application

Dear Mayor Gilvin and City Councilmembers:

Applicant, Jamestown, L.P. submits this First Amended Letter of Intent and supporting documents to supplement previously submitted materials in the above-reference application. Approval of this application will create the path to transform the existing North Point Mall into a vibrant mixed-use destination providing additional retail, restaurants, entertainment and sports venues, office, hotel and residential options in Alpharetta.

With all mixed-use developments, parking is planned and calculated with knowledge that parking will be shared among different uses. For example, one guest may park to shop in the stores and also enjoy a meal or see a movie. Frequently, residents or employees working at the mixed-use property will eat at the restaurants or shop. As such, parking studies are used to evaluate the parking needs and to plan appropriately.

The attached parking study[1] provides the basis for the planned on-site parking and evaluates off-site parking needs. The residential and hotel uses are treated as dedicated/nested parking and not shared with other uses. The study is submitted in support of the parking reduction and shared parking allocation as provided in UDC Section 2.5 and 2.10.6.

As shown in the parking study, the proposed on-site parking satisfies the typical weekday peak demand and exceeds typical weekend demand. While additional parking will be needed for hockey games, arena event parking is unnecessary for approximately 85% of the year. During the regular NHL season, there are 41 home games, compared with 81 home games in Major League Baseball. Event parking will be accommodated through a combination of on-site parking, off-site parking, employee parking management, and shuttle or other transportation options.

Variance to Section 2.5.4 – locational criteria for parking

The City anticipates and permits parking to be located off-site in UDC Section 2.5.4. Due to the size of the mall property and the location of the various uses, the anticipated off-site parking

[1] North Point Mall – Shared Parking Study dated May 29, 2026, prepared by Kimley-Horn and Associates.

is not all located within "500 feet of the main entrance to the principal use." Based on the size and location of the Property, Applicant requests a variance to the distance requirement set forth in Section 2.5.4. There are approximately 8,500 additional parking spaces located within a 15-minute walk of the arena. For comparison purposes, the Alpharetta City Center Parking Deck is more than 500 feet from Academy Street. A request to locate off-site parking more than 500 feet from the main entrance of the buildings (arena, music hall, etc.) is justified and supported by the facts related to the Property and development.

1) **Are there extraordinary and exceptional conditions pertaining to the subject property because of its size, shape, or topography?**

   Yes, extraordinary and exceptional conditions apply to the Property because of its size and shape. The 500-foot restriction may be practical for smaller parcels, but here, most property within 500 feet of the arena is either on-site or even within GA 400 right of way.

2) **Would the application of the Zoning Code standards as they relate to the subject property create an unnecessary hardship?**

   Yes, the strict application of the City's parking requirements and location within 500-feet of the building would result in excessive parking designed around a major sporting event instead of typical parking needs. Given the limited number of days with off-site parking demands and the size of the property, applying the 500-foot requirement for off-site parking location is an unnecessary hardship.

3) **Are there conditions that are peculiar to the subject property?**

   Yes, the size of the property and the intended uses are peculiar to the property and supports approval of the variances.

Conditional Use Permit/Variance – Increase in Building Height

As requested in the original application submittal, Applicant seeks approval of a conditional use permit/variance to increase the height of buildings to exceed 4 stories or 60 feet (Sec. 2.10.3 D). The North Point Buisness Master Plan approved 30 and 20 story buildings adjacent to the mall property. Based on the regional shopping mall use, additional height was not necessary for the Property at the time. However, to create an attractive mixed-use district buildings exceeding 4 stories is required.

To be clear, the building heights requested by this Application are not as tall as many buildings in the northern metro-Atlanta area. For example, in Buckhead the Sovereign is a 50-floor condominium tower and multiple other buildings in the area are 40 stories or more. In Dunwoody and Sandy Springs, buildings exceed 30 stories. This request seeks approval of

buildings with fewer stories than located in these surrounding cities and within the heights approved for the North Point Business Master Plan.

The following maximum heights are requested:

Commercial (no variance needed)	4 stories
Parking garage	7 stories
Office	14 stories
Hotel	20 stories
Residential (For Rent)	20 stories
Arena	170 feet
Music Hall and Cinema	80 feet

CONCLUSION

The scale of redevelopment aligns with the original plans for North Point to be an area with 20-30 story buildings and the location of off-site parking more than 500-feet from the buildings is both reasonable and consistent with.

Sincerely,

Dillard Sellers



Julie L. Sellers

Enclosure

MEMORANDUM

To:	George Doyle, City of Alpharetta
From:	Ethan Hageman, AICP, *Kimley-Horn and Associates, Inc.* Vincent Pagano, *Kimley-Horn and Associates, Inc.*
Date:	May 29, 2026
Subject:	***North Point Mall – Shared Parking Study***

Kimley-Horn and Associates, Inc., is pleased to present this memorandum, which summarizes the projected parking demand for the proposed North Point Mixed-Use District in Alpharetta, Georgia.

PROJECT OVERVIEW

The purpose of this analysis is to project peak parking demand for the completed site based on industry standards and the City of Alpharetta Unified Development Code (UDC). The information presented in this analysis is intended to evaluate the impact of Jamestown's application to the City of Alpharetta's Planning Commission for a rezoning request.

The North Point Mixed-Use District was evaluated under typical mixed-use operations, including activation of the live music venue, and under arena event operations. The purpose of this memorandum is to identify the appropriate on-site parking supply for the development based on the recurring peak condition, while also documenting how parking demand can be managed during larger arena events.

Under typical mixed-use operations, parking demand is projected to peak at approximately 8,283 spaces at 2:00 PM on a weekday. This condition includes the residential and hotel parking demand that is expected to be accommodated in dedicated or nested parking areas, as well as the shared parking demand generated by the remaining land uses.

During major arena events, total parking demand is higher and is expected to be managed through a combination of on- and off-site parking. As with other large arena and stadium districts, the site is not intended to provide all arena-related parking on site during the largest events. Instead, the recommended on-site supply is intended to accommodate the recurring non-arena-event peak demand, with off-site parking resources used during major-event conditions to avoid overbuilding parking and to create a vibrant mixed-use atmosphere not dominated by parking.

SUMMARY OF CONCLUSIONS

Parking demand projections were generated using industry best practices, Urban Land Institute (ULI) parking ratios, the City of Alpharetta UDC parking requirements, and alignment with the Development of Regional Impact (DRI) methodology for the North Point Mixed-Use District, as accepted by the City of Alpharetta and the Atlanta Regional Commission (ARC). The project site was evaluated for typical mixed-use operations with the live music venue in operation, as well as when the arena is operating at full capacity, resulting in different parking demands and peak times for each scenario.

Based on this analysis, the recommended on-site parking supply of approximately 8,283 spaces is sufficient to accommodate the projected peak parking demand during typical mixed-use operations. This recurring peak condition is projected to occur at 2:00 PM on a weekday.

When the arena is operating at full capacity, parking demand is projected to exceed the recommended on-site supply. However, this condition represents a major event scenario and is not expected to reflect the site's typical peak parking condition. During these events, employee parking and a portion of arena visitor parking can be accommodated off-site, consistent with typical operating practices for large arena and stadiums throughout the country.

Table 1 summarizes the City's code-required parking for the North Point Overlay District, the projected parking demand under the two primary operating conditions evaluated in this study, and the recommended on-site parking supply. The comparison is intended to distinguish between the site's recurring typical peak condition, which are recommended to be accommodated on-site, and the major arena event condition, which is expected to be managed through a combination of on-site parking, off-site parking, and event operations.

Table 1: Projected Parking Demand and Recommended Supply

Land Use	Required Parking per Code	Projected Parking Demand	Recommended On-Site Supply	Parking Management Approach
Mixed-Use & Live Music Venue	10,421	8,283	8,283	Accommodated on-site
Full Arena Event Condition	18,421	13,137	8,283	On-site + off-site/event operations management

Based on this study, which accounts for parking demand by hour throughout the day for each land use, the recommended 8,283-space on-site parking supply is anticipated to accommodate the recurring peak demand during mixed-use operations with the live music venue activated. When the arena is in use, total parking demand is projected to increase to 13,137 spaces and would be managed through a combination of the remaining shared on-site parking and off-site parking.

SITE CONTEXT

The proposed development is located at the current location of the North Point Mall. The site is bound on all sides by North Point Circle. **Figure 1** displays the general location of the site, while **Figure 2** displays the conceptual site plan.

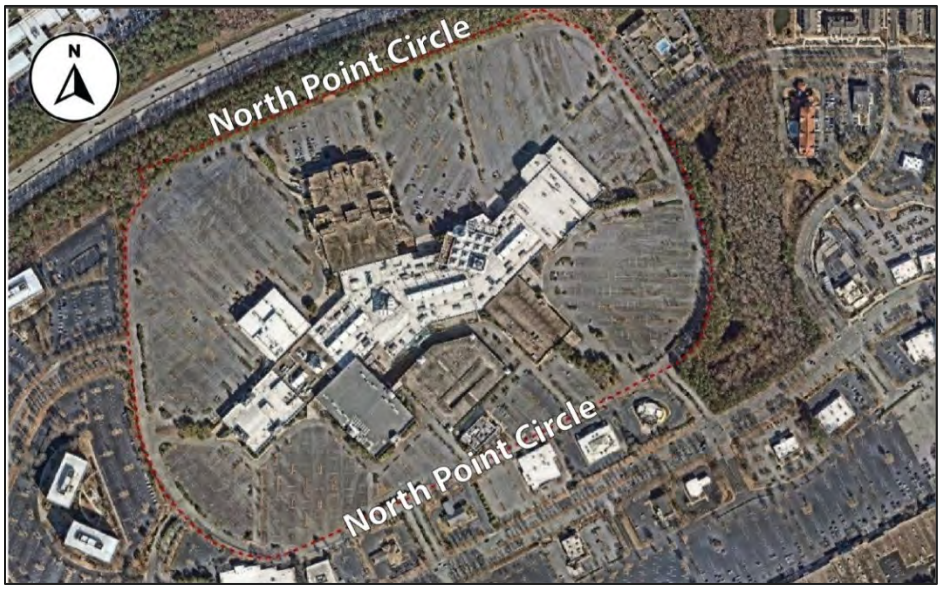


Figure 1. Existing Site Area



Figure 2. Conceptual Site Plan

The North Point Mixed-Use District is planned to be a multi-use entertainment district, anchored by a 20,000-seat arena and supported by various professional, recreational, residential, and retail uses. The parking for this development is planned to be a mix of surface lots and parking structures around the site. The proposed land-use densities are outlined in **Table 2** below.

Table 2: Proposed Densities

Land Use	Density	Unit
Fine/Casual Dining	45,000	Square Feet
Adult Active Entertainment	45,000	Square Feet
Retail	145,000	Square Feet
Existing Dillard's	162,000	Square Feet
Existing Von Maur	180,000	Square Feet
Cinema	500	Seats
Live Music Venue	4,000	Seats
Community Ice Sheets	2,000	Seats
Hockey Arena	20,000	Seats
Multi-Family for Rent	1,385	Units
Office	750,000	Square Feet
Hotel	850	Keys
Conference Center	45,000	Square Feet

Based on the proposed densities, the City of Alpharetta parking minimum requires 18,421 parking spaces to be provided to serve the needs of the development. **Table 3** outlines the code-required parking minimums by each land use

Table 3: City of Alpharetta Parking Minimums

Land Use	Applicable Code	Density	Unit	Parking Ratio	Total	With North Point Overlay
Fine/Casual Dining	Restaurant	45,000	SF	1.00 space per 100 SF	450 Spaces	360 Spaces
Adult Active Entertainment	Restaurant	45,000	SF	1.00 space per 100 SF	450 Spaces	360 Spaces
Retail	Retail Shopping Center (Less than 50,000 SF)	145,000	SF	1.00 space per 200 SF	725 Spaces	580 Spaces
Dillard's	Retail Shopping Center (50,000 – 400,000 SF)	162,000	SF	1.00 space per 250 SF	720 Spaces	520 Spaces
Von Maur	Retail Shopping Center (50,000 – 400,000 SF)	180,000	SF	1.00 space per 250 SF	648 Spaces	576 Spaces
Cinema	Theater	500	Seats	1.00 space per 4 seats + 1.00	175 Spaces	140 Spaces

				employee space per 10 seats		
Live Music Venue	Public Assembly	4,000	Seats	1.00 space per 4 seats + 1.00 employee space per 10 seats	1,400 Spaces	1,120 Spaces
Community Ice Sheets	Public Assembly	2,000	Seats	1.00 space per 4 seats + 1.00 employee space per 10 seats	700 Spaces	560 Spaces
Hockey Arena	Public Assembly (Section 2.5.1D)	20,000	Seats	1.00 space per 2 seats	10,000 Spaces	8,000 Spaces
Multi-Family for Rent	Dwelling, 'For-Rent', Residential	1,385	Units	2.00 space per unit + 1 guest space per 20 units	2,840 Spaces	2,840 Spaces
Office	Office (Professional)	750,000	SF	1.00 space per 250 SF of GFA	3,000 Spaces	2,400 Spaces
Hotel	Hotel	850	Room	1.00 space per room + 1.00 employee space per 20 rooms	893 Spaces	893 Spaces
Conference Center	Hotel, Conference Room	45,000	SF	1.00 space per 500 SF	90 Spaces	72 Spaces
				Total	**22,091 Spaces**	**18,421 Spaces**

METHODOLOGY

This analysis uses industry-supported methods applied to the City of Alpharetta's UDC parking requirements to project the peak parking demand expected to be generated by the proposed land uses and densities. Factors evaluated in the analysis include data collected from a similar mixed-use sports entertainment site, the use of ULI industry parking ratios, the methodology used for the DRI for the North Point Mixed-Use District, and ULI's Shared Parking Model.

Data Collection – Battery Entertainment District

During large events at mixed-use entertainment districts, a substantial portion of event goers patronize restaurants, bars, and retail before and after an event. Conversely, during events, restaurants, bars, and retail land uses typically see a decrease in non-event-related patrons. To better understand this dynamic, local businesses within the Battery Entertainment District were surveyed to understand user demand during event days. Survey respondents were asked to scale the demand of business from 1-10, with 10 being at capacity with every table full. Survey data was collected for retail, fine/casual dining, and adult active entertainment, and adjusted to percentages to refine parking demand for the model when an event is taking place in the arena, as shown in **Table 4**.

Table 4: Battery Entertainment District Survey Results

Land Use	One Hour Before the Game	During the Game	One Hour After the Game	No Event During Typical Gametime
Retail	90%	28%	70%	47%
Fine/Casual Dining	89%	36%	85%	70%
Adult Active Entertainment	90%	33%	70%	70%

Adjusted Parking Ratios

The ULI Shared Parking Model estimates cumulative parking demand for mixed-use developments by accounting for how parking demand varies by land use, hour, day, and month. Because individual uses often peak at different times, the model allows parking to be shared across uses, reducing the total amount of parking needed compared to providing each use independently.

For the North Point Mall Mixed-Use District, the model was used to reflect the interaction between land uses on-site, including the fact that some visitors to retail, restaurant, entertainment, and other uses may already be parked on-site as office tenants, residents, or hotel guests. Non-single-occupancy vehicle and captive trip adjustments, including trips made by walking, biking, transit, carpool, ride-share, telework, or between uses within the site, were applied only to the arena land use to remain closely aligned with the North Point Mixed-Use District DRI methodology.

City of Alpharetta UDC Parking Requirements

This model used City of Alpharetta parking ratios, adjusted by the North Point Overlay District where applicable, which reduces minimum parking requirements by 20% compared to those otherwise required by the UD as outlined in *Article II. Section 2.10.6.A, Vehicular Parking:*

> *"Minimum parking requirements are 20% less than otherwise required by the UDC. Parking requirements may be further reduced based upon an Urban Land Institute shared parking analysis or other parking analyses acceptable to the City, subject to approval of the Director of Community Development."*

Alpharetta parking ratios, outlined in **Table 3**, were adjusted by 20% and used as the base ratio for all land uses except arena, retail, and weekend office.

Retail Ratio Adjustment

The retail parking ratio was adjusted to reflect current retail parking trends and industry best practices.

- The City's standard retail parking ratio is 5.0 spaces per 1,000 square feet.
- After applying the North Point Overlay District's 20% reduction, the required retail ratio is reduced to 4.0 spaces per 1,000 square feet.
- For this analysis, retail parking demand was evaluated using an adjusted rate of 3.5 spaces per 1,000 square feet.

This adjustment reflects broader changes in retail activity and parking demand, including increased online shopping, changes in customer trip-making patterns, shorter dwell times for certain retail formats, and a general trend toward lower observed parking demand for contemporary retail uses. The adjusted rate provides a practical estimate of retail demand while remaining generally consistent with the City's reduced overlay requirement.

Weekend Office Demand Adjustment

Weekend parking demand for the proposed office use was adjusted using ULI shared parking standards to reflect the reduced level of office activity expected outside of typical weekday operations.

- The overall peak parking demand for the site is expected to occur on a weekday, when office activity is highest.
- However, weekend office demand was adjusted to better evaluate shared parking availability during arena events and other non-office peak periods.
- The office employee ratio was adjusted from 3.12 spaces per 1,000 square feet to 0.31 spaces per 1,000 square feet.
- The office visitor ratio was adjusted from 0.08 spaces per 1,000 square feet to 0.02 spaces per 1,000 square feet.

These adjusted ratios reflect the limited number of office employees and visitors expected to be present on weekends, allowing the analysis to more accurately account for office parking supply that may be available to support other site uses during non-office peak periods.

Arena Ratio Adjustments

Parking demand for the proposed arena was estimated using the City's required DRI methodology, which assumes an average vehicle occupancy of 2.6 passengers per vehicle trip.

- This assumption was converted to a parking demand ratio by dividing one parking space by 2.6 passengers.
- This results in a parking demand rate of approximately 0.39 spaces per seat.
- The calculated rate is generally consistent with the City's standard arena parking ratio of 0.40 spaces per seat.

Additional arena adjustments were also applied to account for patrons who may not require a parking space; these adjustments to the ratio align with the ULI ratio of 0.33 spaces per seat as the industry standard:

- A 15% non-single-occupancy vehicle adjustment was applied to account for arena patrons who may arrive by walking, biking, transit, carpool, ride-share, or another non-parking mode.
- A 2% captive-use adjustment was applied to account for arena patrons who may already be parked on site for another use, such as hotel visitors, residents, or other mixed-use district patrons.

Table 5 displays the City of Alpharetta parking ratios and project ratios.

Table 5: Parking Ratios (Maximum Parking Demand by Land Use)

Land Use	City of Alpharetta Parking Minimum	North Point Overlay Ratio	Weekday Project Adjusted Ratio	Weekend Project Adjusted Ratio
Fine/Casual Dining	10.00/KSF*	8.00/KSF	8.00/KSF	8.00/KSF
Adult Active Entertainment	10.00/KSF	8.00/KSF	8.00/KSF	8.00/KSF
Retail	5.00/KSF	4.00/KSF	3.50/KSF	3.50/KSF
Dillard's	4.00/KSF	3.20/KSF	3.20/KSF	3.20/KSF
Von Maur	4.00/KSF	3.20/KSF	3.20/KSF	3.20/KSF
Cinema	0.35/Seat	0.28/Seat	0.28/Seat	0.28/Seat
Live Music Venue	0.35/Seat	0.28/Seat	0.28/Seat	0.28/Seat
Community Ice Sheets	0.35/Seat	0.28/Seat	0.28/Seat	0.28/Seat
Hockey Arena	0.50/Seat	0.40/Seat	0.33/Seat	0.33/Seat
Multi-Family for Rent	2.05/Unit	N/A	2.05/Unit	2.05/Unit
Office	4.00/KSF	3.20/KSF	3.20/KSF	0.33/KSF
Hotel	1.05/Key	N/A	1.05/Key	1.05/Key
Conference Center	2.00/KSF	1.60/KSF	1.60/KSF	1.60/KSF

*KSF = 1,000 Square Feet

Indicates a change from City of Alpharetta Code

For purposes of this analysis, parking for residents and hotel visitors was treated as dedicated/nested parking demand and was not assumed to be shared with other land uses. Hotel employee parking and

residential visitor parking were evaluated separately and are not included in the nested parking supply. This approach provides a conservative estimate of the parking supply that should remain available for residents and hotel visitors while allowing other user groups to share the remaining on-site parking supply.

Table 6 summarizes the estimated peak parking demand without the arena in use for a weekday and weekend during the peak months and times for the development.

The nested area demand will not change during gamedays as the parking facilities are anticipated to be built to accommodate this demand and will not be shared with other land uses. Peak demand for all scenarios is anticipated to be on a weekday.

Table 6: Typical Day Shared Parking Demand Summary

		Peak Month: December					
		Weekday (2:00 PM)			Weekend (8:00 PM)		
Land Use	Quantity	Project Ratio	Peak Hour Adj.	Est. Parking Demand	Project Ratio	Peak Hour Adj.	Est. Parking Demand
Fine/Casual Dining							
Visitors	45,000 SF	7.20	65%	211	7.20	100%	324
Employees		0.80	90%	32	0.80	100%	36
Adult Active Entertainment							
Visitors	45,000 SF	7.20	10%	0	7.20	75%	243
Employees		0.80	10%	4	0.80	100%	36
Retail							
Visitors	145,000 SF	7.20	100%	406	7.20	55%	223
Employees		0.80	100%	102	0.80	75%	77
Dillards/Von Maur							
Visitors	342,000 SF	2.60	100%	889	2.60	55%	490
Employees		.60	100%	206	0.60	75%	155
Cinema							
Visitors	500 Seats	0.20	55%	30	0.20	100%	90
Employees		0.08	60%	16	0.08	100%	40
Live Music Venue							
Visitors	4,000 Seats	0.20	1%	8	0.20	100%	800
Employees		0.08	30%	82	0.08	100%	272
Community Ice Sheets							
Visitors	2,000 Seats	0.27	48%	261	0.27	77%	419
Employees		0.01	48%	8	0.01	77%	12
Office							
Visitors	750,000 SF	0.08	95%	57	0.02	0%	0

Employees		3.12	95%	2,222	0.31	0%	0
Conference Center							
Visitors	45,000 SF	1.40	100%	63	1.40	30%	19
Employees		0.20	100%	9	0.20	20%	2
Hotel							
Visitors*	850 Keys	1.00	100%	850	1.00	100%	850
Employees		0.05	100%	43	0.05	20%	9
Residential, Suburban							
Residents*	1,385 Units	2.00	100%	2,770	2.00	100%	2,770
Visitors		0.05	20%	14	0.05	100%	70
			Visitor	1,939		Visitor	2,678
			Employee	2,724		Employee	639
			Nested	3,620		Nested	3,620
			Total	**8,283**		**Total**	**6,937**

*Parking for Residents and Hotel Visitors is anticipated to be nested/dedicated and not shared.

Table 7 summarizes the estimated peak parking demand with the arena in use on a weekday and weekend during the peak months and times for the development.

Table 7: Arena Use Shared Parking Demand Summary

		Peak Month: December					
		Weekday (7:00 PM)			Weekend (8:00 PM)		
Land Use	**Quantity**	**Project Ratio**	**Peak Hour Adj.**	**Est. Parking Demand**	**Project Ratio**	**Peak Hour Adj.**	**Est. Parking Demand**
Arena							
Visitors	20,000 Seats	0.29	100%	5,831	0.29	100%	5,831
Employees		0.04	100%	800	0.04	100%	800
Fine/Casual Dining							
Visitors	45,000 SF	7.20	36%	115	7.20	36%	115
Employees		0.80	100%	36	0.80	100%	36
Adult Active Entertainment							
Visitors	45,000 SF	7.20	33%	108	7.20	33%	108
Employees		0.80	100%	36	0.80	100%	36
Retail							
Visitors	145,000 SF	2.80	28%	112	2.80	28%	112
Employees		0.70	100%	102	0.70	100%	102
Dillards/Von Maur							
Visitors	342,000 SF	2.60	28%	245	2.60	28%	245
Employees		.60	100%	206	.60	100%	206
Cinema							

Visitors	500 Seats	0.20	80%	44	0.20	100%	90
Employees		0.08	100%	26	0.08	100%	40
Live Music Venue							
Visitors	4,000 Seats	0.20	75%	600	0.20	100%	800
Employees		0.08	100%	272	0.08	100%	272
Community Ice Sheets							
Visitors	2,000 Seats	0.27	95%	517	0.27	77%	419
Employees		0.01	95%	15	0.01	77%	12
Office							
Visitors	750,000 SF	0.08	2%	1	0.02	0%	0
Employees		3.12	15%	351	0.31	0%	0
Conference Center							
Visitors	45,000 SF	1.40	30%	19	1.40	30%	19
Employees		0.20	25%	2	0.20	20%	2
Hotel							
Visitors*	850 Keys	1.00	100%	850	1.00	100%	850
Employees		0.05	100%	43	0.05	20%	9
Residential, Suburban							
Residents*	1,385 Units	2.00	100%	2,770	2.00	100%	2,770
Visitors		0.05	20%	14	0.05	100%	70

*Parking for Residents and Hotel Visitors is anticipated to be nested/dedicated and not shared.

Visitor	7,662	Visitor	7,809
Employee	1,855	Employee	1,515
Nested	3,620	Nested	3,620
Total	**13,137**	**Total**	**12,944**

To accurately assess the overall parking demand for the site and determine how many spaces are needed to meet that demand, **Figures 3** and **4** illustrate the parking demand throughout peak conditions during typical operations and when the arena is in use.

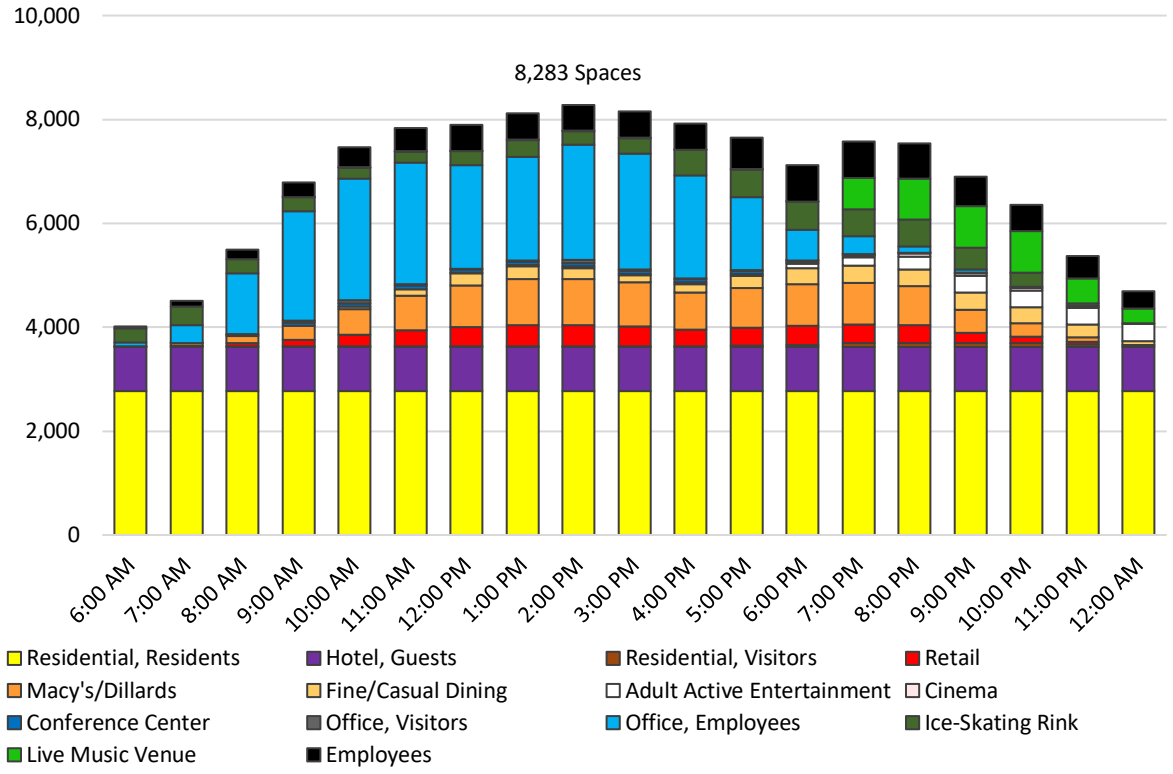


Figure 3. Projected Weekday Peak Parking Demand without Arena Use

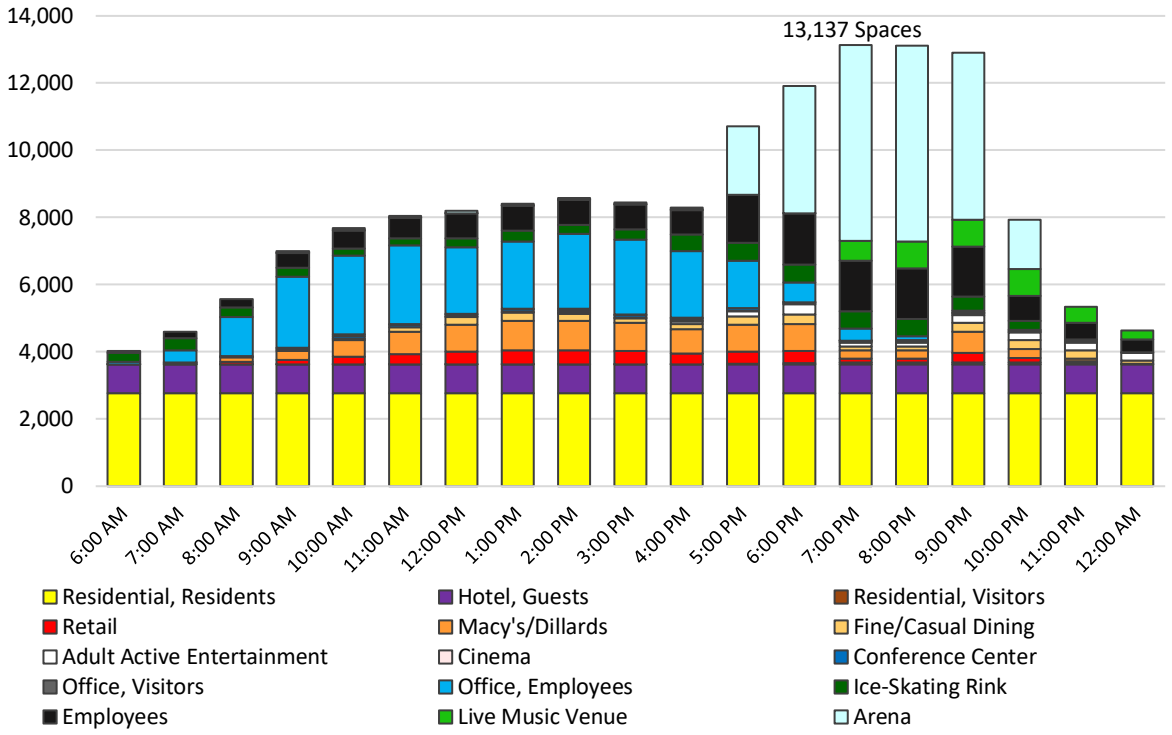


Figure 3. Projected Weekday Peak Parking Demand with Arena Use

CONCLUSION AND RECOMMENDATIONS

Based on the analysis summarized in this memorandum, the North Point Mixed-Use District is projected to require approximately 8,283 parking spaces during the recurring peak condition when the arena is not in use. This peak occurs during typical mixed-use operations, including the live music venue, and includes the dedicated/nested parking demand associated with the residential and hotel uses, as well as the shared parking demand generated by the remaining mixed-use development.

The recommended on-site parking supply of approximately 8,283 spaces is therefore sufficient to accommodate the site's anticipated typical peak parking demand. Requiring the site to provide parking for the maximum arena event condition entirely on site would result in a parking supply designed around limited major events rather than the site's typical peak parking needs.

During major arena events, including sold-out NHL games, parking demand will be managed through a combination of available on-site parking, off-site parking resources, employee parking management, and shuttle or transportation operations. Approximately 8,500 additional parking spaces are located within a 15-minute walk of the arena, providing a substantial off-site parking resource during major events.

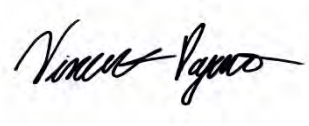
Therefore, this study supports approval of a minimum on-site parking supply of approximately 8,283 spaces for the North Point Mixed-Use District, with major arena event demand accommodated through off-site parking and event parking operations management.

We hope you find this information helpful. If any further questions arise, please do not hesitate to contact *Kimley-Horn.*

Sincerely,



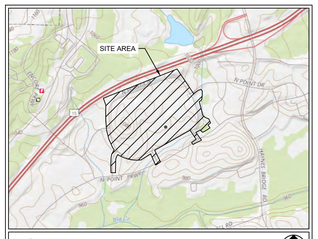
Ethan Hageman, AICP
Kimley-Horn



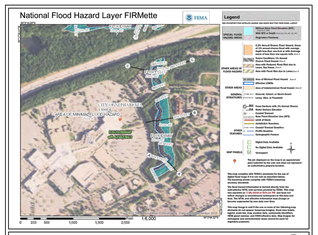
Vincent Pagano
Kimley-Horn

Illustrative Site Plan

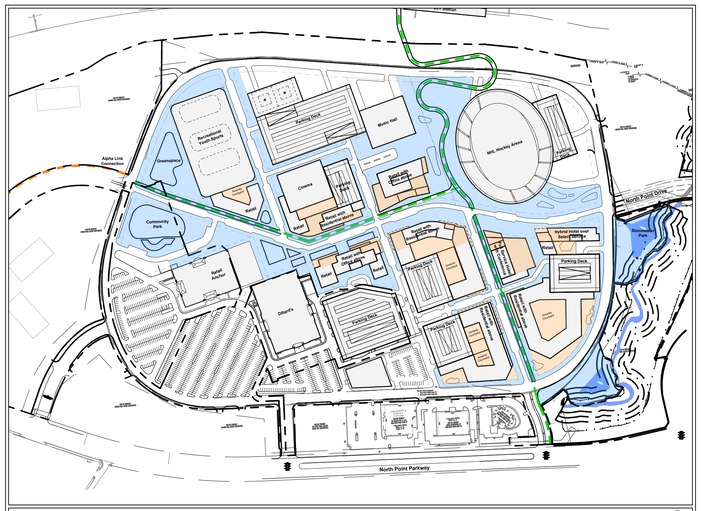




VICINITY MAP
N.T.S.



FEMA MAP
WITHIN ZONE AE PER FIRM PANEL 13121C0066F, 09/18/2013



OPEN SPACE MAP
SCALE: 1" = 300'

OPEN SPACE LEGEND

- CIVIC SPACE
- AMENITY SPACE
- MULTI-USE TRAIL

OPEN SPACE SUMMARY

OPEN SPACE REQUIREMENTS	**20.76 ACRES** (TOTAL)
CIVIC SPACE:	**15.83 ACRES** (16.05% SITE AREA)
AMENITY SPACE:	**4.93 ACRES** (5% SITE AREA)
PROPOSED OPEN SPACE	**26.86 ACRES** (TOTAL)
CIVIC SPACE:	**21.24 ACRES** (21.55% SITE AREA)
SQUARE	
PLAZA	
POCKET PARKS	
PARK	
MULTI-USE TRAIL	
AMENITY SPACE:	**5.62 ACRES** (5.70% SITE AREA)
OUTDOOR DINING	
ROOFTOP DECKS	
YARDS AND LAWNS	
ENHANCE HARDSCAPE	
BALCONIES	
POOL AREA	

SITE DEVELOPMENT SUMMARY

CURRENT ZONING	PSC/MU
OVERLAY DISTRICT	NORTH POINT OVERLAY
SITE AREA:	
TOTAL SITE AREA	98.58 ACRES
MALL PROPER	83.67 ACRES
DILLARDS	6.67 ACRES
VON MAUR	8.24 ACRES
SETBACKS & BUFFERS:	
BUILDING SETBACKS	NONE
LANDSCAPE SETBACKS	NONE
UNDISTURBED BUFFERS	120' GA 400 BUFFER

LAND USES AND DENSITIES

EXISTING	
MALL INTERIOR AREA	1,151,800 SF
RESTAURANT (Cheesecake Factory)	10,300 SF
PROPOSED MAXIMUMS	
PROPOSED RESTAURANT	90,000 SF
PROPOSED RETAIL	475,000 SF
RETAIL ANCHOR	180,000 SF
DILLARD'S	162,000 SF
OFFICE	750,000 SF
MULTIFAMILY	1,385 UNITS (14.05 DUA)
SELECT SERVICE HOTEL	150 KEYS
HYBRID HOTEL	300 KEYS
FULL SERVICE HOTEL	400 KEYS
HOTEL CONFERENCE CENTER	45,000 SF
CINEMA	500 SEATS
MUSIC HALL (SEATED)	4,000 SEATS
COMMUNITY ICE SHEETS (SEATED)	2,000 SEATS
HOCKEY ARENA	20,000 SEATS

SITE PLAN NOTE

THE BUILDING FOOTPRINTS, DRIVEWAY LOCATIONS, OPEN SPACE LOCATIONS, SIDEWALK DESIGNS AND LOCATIONS, AND PARKING LOCATIONS ON THIS SITE PLAN ARE FOR ILLUSTRATIVE PURPOSES. THEIR SHAPES, LOCATIONS, AND AMOUNTS MAY VARY AS ALLOWED FOR BY THE SITE DATA TABLE, MU REGULATIONS, AND THE NORTH POINT OVERLAY.

VARIANCES

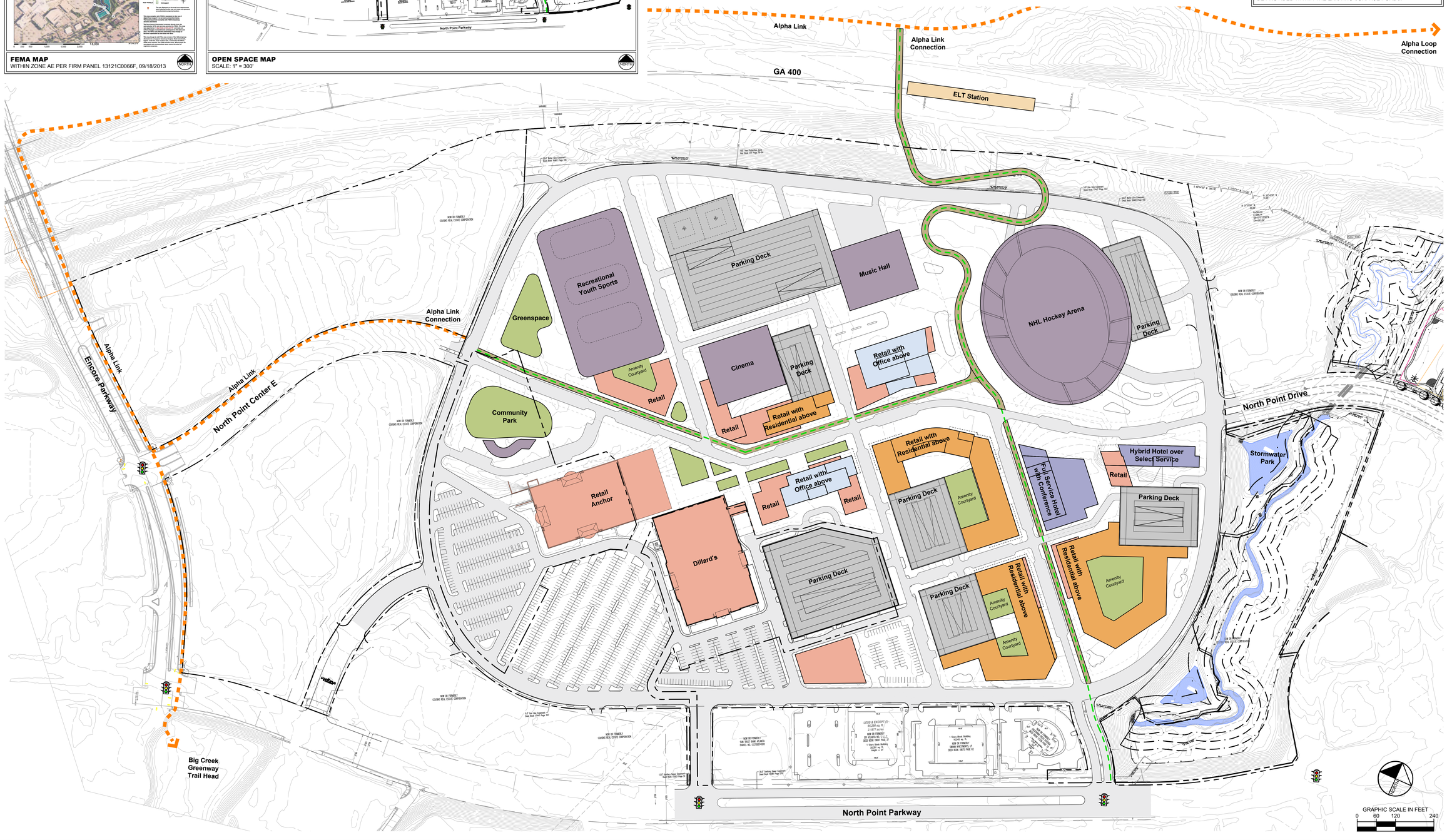
1. CONDITIONAL USE TO INCREASE MAXIMUM BUILDING HEIGHT [SEC 2.10.3(D)]
2. ENCROACHMENT INTO THE GA 400 120' BUFFER FOR THE MARTA ELT R/W ACQUISITION AND THE MULTI-USE TRAIL.
3. CONDITIONAL USE TO INCREASE MULTIFAMILY RESIDENTIAL DENSITY [SEC 2.10.2(B)(3)(C)]
4. REDUCTION IN THE MINIMUM PERCENTAGE OF MU LAND USE FOR THE OFFICE COMPONENT TO BE LESS THAN 25%, [SEC. 2.2.20(B)(4)]
5. BLOCK PERIMETER INCREASE TO EXCEED 1,600 LF [SEC. 2.10.4.A.1]
6. INCREASE IN THE PERCENTAGE OF SHARED PARKING ALLOWED [SEC. 2.5.2]
7. CORRIDOR TYPES AS PROPOSED INSTEAD OF THE UDO [SEC. 2.10.3.A/B].

SITE LEGEND

- PROPERTY LINE/ RIGHT-OF-WAY
- RETAIL
- MULTIFAMILY (FOR LEASE)
- OFFICE
- HOTEL
- SPORTS AND ENTERTAINMENT
- PARKING GARAGE
- RECREATIONAL

STORMWATER NOTE

SITE WILL CONTAIN ONSITE STORMWATER CONTROLS TO MEET ALL LOCAL AND STATE REQUIREMENTS. THIS MAY INCLUDE THE COMBINATION OF SEVERAL COMPONENTS (PERVIOUS PAVING, INFILTRATION FIELDS, BIORETENTION AREAS, OR OTHER COMPONENTS) PROVIDING RUNOFF REDUCTION (IF INFILTRATION RATES ALLOW), CHANNEL PROTECTION, AND OVERBANK FLOODING PROTECTION PER THE CODE REQUIREMENTS. DETENTION SHALL BE PROVIDED WITHIN THE EXISTING SURFACE PONDS.



Kimley»Horn
PHONE 770.825.0744
WWW.KIMLEY-HORN.COM
3930 EAST JONES BRIDGE ROAD
THE FORUM, SUITE 350
NORCROSS, GEORGIA 30092
© 2022 KIMLEY-HORN AND ASSOCIATES, INC.

NEW YORK LIFE
PHONE 770.395.2327
WWW.NYLIFE.COM
3475 PIEDMONT RD, SUITE 575
ATLANTA, GA 30305

No.	REVISION DESCRIPTIONS	DATE	BY

PROJECT
NORTH POINT
MIXED-USE DISTRICT
PIN: ____ LAND LOT ____
DISTRICT, SECTION ____
3475 PIEDMONT RD, SUITE 575
ATLANTA, GA 30305

GSWCC CERT. (LEVEL II)	0000072899
DRAWN BY	CMC
DESIGNED BY	JTR
REVIEWED BY	JTR
DATE	03.13.2026
PROJECT NO.	017954000

TITLE
ZONING SITE PLAN

SHEET NUMBER
ZP.00

Drawing name: C:\ACCACCDocs\Kimley-Horn\North Point Mixed-Use District\Project Files\CAD\00 Overall\Plansheets\ZP.00 - ZONING SITE PLAN.dwg ZP.00 ZONING SITE PLAN Mar 16, 2026 1:14pm by tyler.rosser

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

CITY OF ALPHARETTA

PUBLIC HEARING APPLICATION

FOR OFFICE USE ONLY

Case #: _____

PH #: _____

☐ Property Taxes & Code Violations Verified

☐ 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." Please note that a 3% convenience fee will be added to all credit card transactions.
5. Applications will be accepted 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: Jamestown, L.P. c/o Dillard Sellers Telephone: 404-665-1242

Address: 1776 Peachtree Street NW Suite: 415- South

City Atlanta State: GA Zip: 30309 Fax:

Mobile Tel: Email: jsellers@dillardsellers.com

Subject Property Information:

Address: See attached Current Zoning: PSC/MU

District: Section: Land Lot: Parcel ID: See attached

Proposed Zoning: MU Current Use: Shopping Center/ Mall

This Application For *(Check All That Apply)*:

☒ Conditional Use

☒ Rezoning

☒ Variance

☐ Exception

☒ Master Plan Amendment

☐ Master Plan Review

☒ Public Hearing

☐ Other *(Specify)*: _____

☐ Comprehensive Plan Amendment

Subject Property and Owner Information

1) 1000 North Point Parkway (12-2610-0688-044-0)
2) 4500 North Point Place (12-2610-0688-035-8)
3) 5000 North Point Drive (12-2600-0700-012-3)
4) 0 North Point Drive (12-2720-0743-043-2)
5) 6000 North Point Circle (12-2720-0743-041-6)
6) 1000 North Point Parkway (12-2730-0742-043-1)
7) 2000 North Point Circle (12-2730-0742-039-9)
8) 0 Rock Mill Rd (12-2601-0700-001-5)

Owner:
REEP RTL NPM GA, LLC
51 Madison Avenue
New York, NY 100100

9) 1000 North Point Parkway (12-2610-0701-043-5)

Owner:
DILLARD'S INC
1600 Cantrell Road
Little Rock, AR 72201

10) 4000 North Point Pl (12-2610-0688-034-1)

Owner:
VON MAUR INC
6565 N Brady St
Davenport, IA 52806

Applicant Request And Intent

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

To create North Point Mixed Use District - a unique and distinct mixed use destination. Please see letter of intent for additional details

Applicant's Request (Please itemize the proposal):

Amendment to North Point Mall Master Plan
Rezoning from PSC to MU
Conditional Use Permits
Variances

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

Please see letter of intent for additional details. The approval of the application will allow for the renewal of North Point as a premier destination in the City.

REZONING & MASTER PLAN AMENDMENT REVIEW CRITERIA

How will this proposal be compatible with surrounding properties?

See attached Letter of Intent.

How will this proposal affect the use and value of the surrounding properties?

See attached Letter of Intent.

Can the property be developed for a reasonable economic use as currently zoned? Please explain why or why not.

See attached Letter of Intent.

What would be the increase to population and traffic if the proposal were approved?

See attached Letter of Intent.

What would be the impact to schools and utilities if the proposal were approved?

See attached Letter of Intent.

How is the proposal consistent with the Alpharetta Comprehensive Plan; particularly the Future Land Use Map?

See attached Letter of Intent.

Are there existing or changing conditions which affect the development of the property and support the proposed request?

See attached Letter of Intent.

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.

VARIANCE & EXCEPTION REVIEW CRITERIA

Please respond to the following ONLY if you are applying for a variance or exception.
Respond to 1-3 for a variance and 1-4 for an exception.

1. Are there extraordinary and exceptional conditions pertaining to the subject property because of its size, shape, or topography? Please describe them.

See attached Letter of Intent.

2. Would the application of the Zoning Code standards as they relate to the subject property create an unnecessary hardship? Please explain.

See attached Letter of Intent.

3. Are there conditions that are peculiar to the subject property? Please describe them in detail.

See attached Letter of Intent.

4. 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.

See attached Letter of Intent.

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: REEP-RTL NPM GA LLC Telephone:

Address: 51 Madison Ave Suite:

City New York State: NY Zip: 10010 -

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
- ☒ Rezoning
- ☒ Variance/Exception
- ☐ Comprehensive Land Use Plan Amendment
- ☐ Special Use
- ☒ Conditional Use
- ☒ Master Plan
- ☐ Other

Property Owner's Authorized Applicant (if applicable):

Name of Authorized Applicant: Jamestown, L.P. c/o Dillard Sellers Telephone: 404.665.1242

Address: 1776 Peachtree Street NW Suite: 415-South

City Atlanta State: GA Zip: 30309 -

So Sworn and Attested:

Owner Signature: [signature] Date: 3/2/26

Vice President

Notary:

Notary Signature: Carmen Velasquez Date: 3/2/26

CARMEN VELASQUEZ
Notary Public - State of New York
No. 01VE0012669
Qualified in Queens County
My Commission Expires 08/25/2027

12

PROPERTY OWNER AUTHORIZATION

Property Owner Information:

Contact Name: Dillard's Inc. Telephone:

Address: 1600 Cantrell Road Suite:

City Little Rock State: AR Zip: 72201 -

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/Exception
- ☒ Master Plan
- ☐ Comprehensive Land Use Plan Amendment
- ☐ Other

Property Owner's Authorized Applicant (if applicable):

Name of Authorized Applicant: Jamestown, L.P. c/o Dillard Sellers Telephone: 404.665.1242

Address: 1776 Peachtree Street NW Suite: 415-South

City Atlanta State: GA Zip: 30309 -

So Sworn and Attested:

Owner Signature: Date: 3.13.26

Chris B. Johnson
Senior Vice President, Dillard's, Inc.

Notary:

Notary Signature: KRKelley Date: 3.13.26

KATHRYN R. KELLEY
COMM. EXP.
9-12-2032
No. 12390384
PULASKI
COUNTY
NOTARY PUBLIC - ARKANSAS

12

PROPERTY OWNER AUTHORIZATION

Property Owner Information:

Contact Name: Von Maur Inc Telephone: 563-388-2200

Address: 6565 N Brady St Suite:

City Davenport State: IA Zip: 52806 -

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
- ☒ Rezoning
- ☒ Variance/Exception
- ☐ Comprehensive Land Use Plan Amendment
- ☐ Special Use
- ☒ Conditional Use
- ☒ Master Plan
- ☐ Other

Property Owner's Authorized Applicant (if applicable):

Name of Authorized Applicant: Jamestown, L.P. c/o Dillard Sellers Telephone: 404.665.1242

Address: 1776 Peachtree Street NW Suite: 415- South

City Atlanta State: GA Zip: 30309 -

So Sworn and Attested:

Owner Signature: Date: March 13, 2026

Notary:

JOSHUA P. BARNES
Commission Number 757697
My Commission Expires
April 1, 2027

Notary Signature: Date: March 13, 2026

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: REEP-RTL NPM GA LLC

Subject Public Hearing Case: North Point Mixed Use District

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: None 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: 3/11/26

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).

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Name of Applicant or Opponent: Von Maur Inc

Subject Public Hearing Case: North Point Mixed Use District

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: N/A

Description of Contribution: N/A Value: N/A

Description of Contribution: N/A Value: N/A

Description of Contribution: N/A Value: N/A

Description of Contribution: N/A Value: N/A

Description of Contribution: N/A Value: N/A

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: March 13, 2026

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: Jamestown, L.P.

Subject Public Hearing Case: North Point Mixed Use District

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: 3.15.26

DISCLOSURE FORM

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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: Dillard's Inc.

Subject Public Hearing Case: North Point Mixed Use District

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: N/A

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: 3-13-26

DISCLOSURE FORM

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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: Dillard Sellers/ Julie Sellers, Esq.

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: _____ Date: 3.16.26

Legal Description – North Point Mall (NYL)

All that tract or parcel of land lying and being in parts of Land Lots 688, 689, 700, 701, 702, 742 and 743, 1st District, 2nd Section, Fulton County, Georgia and being more particularly described as follows:

To find the True Point of Beginning, commence at the point of the westerly right—of- way of Haynes Bridge Road (60—foot right-of-way) and the southerly right-of-way of Rock Mill Road (30-foot right-of-way); thence with the southerly right-of-way of Rock Mill Road, the following four courses and distances: (1) South 88 degrees 59 minutes 00 seconds West, a distance of 617.06 feet; (2) North 90 degrees 00 minutes 00 seconds West, a distance of 499.00 feet; (3) South 88 degrees 01 minutes 25 seconds West, a distance of 149.32 feet to a point of curvature with a curve, concave southerly, having a radius of 560.00 feet and a central angle of 29 degrees 16 minutes 33 seconds and (4) westerly along the arc of said curve to the left a distance of 286.14 feet, said arc subtended by a chord bearing South 73 degrees 23 minutes 08 seconds West 283.04 feet, to the point of intersection with a non-tangent line and the point of westerly terminus of the right-of-way of Rock Mill Road; thence with said terminus, North 31 degrees 15 minutes 09 seconds West, a distance of 30.00 feet to a point on the northerly right-of-way of Rock Mill Road; thence leaving the northerly right- of- way of Rock Mill Road, North 20 degrees 14 minutes 30 seconds West, a distance of 11.20 feet to a point on the southerly right-of-way of North Fulton Expressway-Ga. Hwy. 400 (variable right-of-way Limited Access Highway); thence with said right-of-way, the following two courses and distances: (1) South 75 degrees 17 minutes 31 seconds West, a distance of 177.85 feet; and (2) South 69 degrees 54 minutes 02 seconds West, a distance of 399.76 feet, to a concrete right-of-way monument and the True Point of Beginning;

thence from the True Point of Beginning as thus established, South 38 degrees 29 minutes 35 seconds East, a distance of 453.07 feet to a 1 /2" rebar found at a point of curvature with a curve, concave southwesterly, having a radius of 2000.00 feet and a central angle of 09 degrees 32 minutes 21 seconds; thence southeasterly dong the arc of said curve to the right a distance of 332.99 feet, said are subtended by a chord bearing South 33 degrees 43 minutes 25 seconds East 332.60 feet, to a 1/2’ rebar found at the point of intersection with a non-tangent line; thence North 81 degrees 11 minutes 58 seconds East a distance of 50.63 feet to a 1/2“ rebar found; thence North 42 degrees 50 minutes 15 seconds East, a distance of 227.28 feet to a 1/2’ rebar found; thence South 41 degrees 26 minutes 10 seconds East, a distance of 42.65 feet to a 1/2’ rebar found; thence South 24 degrees 17 minutes 14 seconds West, a distance of 25.12 feet to a point; thence South 12 degrees 49

minutes 20 seconds West, a distance of 27.94 feet to a point; thence South 24 degrees 36 minutes 04 seconds East, a distance of 20.19 feet to a 1/2" rebar found; thence South 41 degrees 39 minutes 00 seconds East, a distance of 56.16 feet to a point; thence South 10 degrees 26 minutes 11 seconds East, a distance of 30.27 feet to a point, thence South 10 degrees 58 minutes 48 seconds West, a distance of 27.61 feet to a point; thence South 20 degrees 23 minutes 29 seconds West, a distance of 26.30 feet to a point thence South 57 degrees 12 minutes 08 seconds West, a distance of 25.16 feet to a point; thence South 22 degrees 59 minutes 54 seconds West a distance of 43.64 feet to a 1/2’ rebar found; thence South 01 degrees 40 minutes 47 seconds West a distance of 39.54 feet to a point; thence South 25 degrees 09 minutes 14 seconds East a distance of 36.61 feet to a point; thence South 19 degrees 12 minutes 57 seconds West a distance of 19.31 feet to a point; thence South 03 degrees 17 minutes 22 seconds West a distance of 33.59 feet to a point; thence South 43 degrees 16 minutes 32 seconds West a distance of 57.52 feet to a 1/2" rebar found; thence South 70 degrees 07 minutes 02 seconds West, a distance of 53.99 feet to the point of intersection with a non-tangent curve, concave westerly, having a radius of 2000.00 feet and a central angle of 01 degrees 38 minutes 15 seconds; thence southerly along the arc of said curve to the right a distance of 57.16 feet, said are being subtended by a chord bearing South 19 degrees 03 minutes 49 seconds East 57.16 feet, to a 1/2" rebar found at a point of compound curvature with a curve, concave westerly, having a radius of 750.00 feet and a central angle of 18 degrees 30 minutes 52 seconds; thence southerly along the arc of said curve to the right a distance of 242.36 feet, said arc subtended by a chord bearing South 08 degrees 59 minutes 17 seconds East 241.30 feet, to a 1/2" rebar found at the point of intersection with a non-tangent line; thence South 44 degrees 26 minutes 45 seconds East, a distance of 79.62 feet to a 1/2" rebar found; thence North 87 degrees 55 minutes 39 seconds East, a distance of 41.48 feet to a point; thence South 34 degrees 31 minutes 27 seconds East, c distance of 55.92 feet to a point; thence South 65 degrees 42 minutes 01 seconds East, a distance of 27.69 feet to a point; thence South 07 degrees 09 minutes 42 seconds East a distance of 22.81 feet to a 1 /2" rebar found; thence South 32 degrees 22 minutes 05 seconds East a distance of 22.67 feet to a point; thence North 75 degrees 24 minutes 25 seconds East a distance of 34.74 feet to a point thence South 09 degrees 50 minutes 24 seconds West, a distance of 53.87 feet to a point; thence South 60 degrees 03 minutes 01 seconds West a distance of 16.18 feet to a 1/2" rebar found; thence South 52 degrees 55 minutes 04 seconds West a distance of 18.96 feet to a 1/2’ rebar found; thence South 45 degrees 44 minutes 23 seconds West, a distance of 17.60 feet to a 1/2" rebar found; thence South 01 degrees 29 minutes 02 seconds West a distance of 13.75 feet to a point; thence South 52 degrees 47 minutes 35 seconds West, a distance of 42.55 feet to a 1/2’ rebar found; thence South 49 degrees 35 minutes 38 seconds West a distance of 43.33 feet to a point thence South 55 degrees 45 minutes 31

seconds West a distance of 47.68 feet to a point thence South 88 degrees 18 minutes 42 seconds West, a distance of 40.85 feet to a point; thence North 44 degrees 39 minutes 44 seconds West a distance of 46.65 feet to a 1 /2’ rebar found; thence North 67 degrees 38 minutes 59 seconds West a distance of 30.10 feet to a 1/2’ rebar found at the point of intersection with a non-tangent curve, concave northwesterly, having a radius of 750.00 feet and a central angle of 10 degrees 07 minutes 02 seconds; thence southerly along the arc of said curve to the right a distance of 132.43 feet, said are subtended by a chord bearing South 27 degrees 24 minutes 34 seconds West 132.26 feet, to a 1/2° rebar found at the point of intersection with a non-tangent curve, concave southwesterly, having a radius of 440.00 feet and a central angle of 26 degrees 23 minutes 59 seconds; thence southeasterly along the arc of said curve to the right a distance of 202.73 feet, said arc subtended by a chord bearing South 41 degrees 24 minutes 53 seconds East 200.95 feet, to 1/2’ rebar found at the point of intersection with a non-tangent line on the North right-of-way of North Point Parkway (formerly Eastside Drive) (120-fat right-of-way); thence with said right-of-way, South 61 degrees 43 minutes 34 seconds West, a distance of 201.34 feet to a point; thence leaving said right-of-way, North 28 degrees 16 minutes 26 seconds West, a distance of 40.99 feet to a point; thence North 61 degrees 43 minutes 34 seconds East, a distance of 126.09 feet to a 1/2" rebar found at a point of intersection with a non-tangent curve, concave southwesterly, having a radius of 367.00 feet and a central angle of 17 degrees 42 minutes 14 seconds; thence northwesterly along the arc of said curve to the left a distance of 113.40 feet, said arc begin subtended by a chord bearing North 43 degrees 28 minutes 07 seconds West 112.95 feet, to a 1/2’ rebar found at a point of reverse curvature with a curve, concave northeasterly, having a radius of 333.00 feet and a central angle of 12 degrees 51 minutes 40 seconds; thence northwesterly along the arc of said curve to the right a distance of 74.75 feet, said arc subtended by a chord bearing North 45 degrees 53 minutes 24 seconds West 74.59 feet, to a 1/2’ rebar found at the point of tangency, thence North 39 degrees 27 minutes 36 seconds West, a distance of 8.09 feet to at a point of curvature with a curve, concave southerly, having a radius of 28.50 feet and a central angle of 82 degrees 18 minutes 50 seconds; thence northwesterly along the arc of said curve to the left a distance of 40.94 feet, said arc subtended by a chord bearing North 80 degrees 37 minutes 00 seconds West 37.51 feet, to a 1 /2" rebar found at a point of reverse curvature with a curve, concave northwesterly, having a radius of 509.00 feet and a central angle of 03 degrees 30 minutes 00 seconds; thence southwesterly along the arc of said curve to the right a distance of 31.09 feet, said arc subtended by a chord bearing South 59 degrees 58 minutes 34 seconds West 31.09 feet, to the point of tangency; thence South 61 degrees 43 minutes 34 seconds West, a distance of 438.12 feet to a point; thence South 61 degrees 43 minutes 34 seconds West, a distance of 379.69 feet to a point thence South 28 degrees 16 minutes 26 seconds East a distance of 8.99 feet to a 1 /2“ rebar found; thence South 61

degrees 43 minutes 34 seconds West a distance of 246.60 feet to a point; thence South 28 degrees 16 minutes 26 seconds East, a distance of 242.00 feet to a point on the North right-of-way of North Point Parkway thence with said right-of-way. South 61 degrees 43 minutes 34 seconds West, a distance of 46.00 feet to a point; thence North 28 degrees 16

minutes 16 seconds West, a distance of 299.49 feet; thence South 61 degrees 43 minutes 34 seconds West a distance of 111.66 feet to a point of curvature with a curve, concave northeasterly, having a radius of 20.00 feet and a central angle of 117 degrees 46 minutes 49 seconds; thence northerly along the arc of said curve to the right, a distance of 41.11 feet, said arc subtended by a chord which bears North 59 degrees 23 minutes 00 seconds West, a distance of 34.25 feet to the point of tangency thence North 00 degrees 29 minutes 34 seconds West, a distance of 120.85 feet; thence South 45 degrees 29 minutes 33 seconds East, a distance of 73.54 feet; thence North 44 degrees 30 minutes 27 seconds East, a distance of 30.00 feet thence North 45 degrees 29 minutes 33 seconds West, a distance of 9.00 feet; thence North 44 degrees 30 minutes 27 seconds East, a distance of 240.00 feet; thence South 45 degrees 29 minutes 33 seconds East, a distance of 2.00 feet; thence North 44 degrees 30 minutes 27 seconds East, a distance of 56.00 feet; thence South 45 degrees 29 minutes 33 seconds East, a distance of 51.76 feet; thence North 44 degrees 30 minutes 27 seconds East, a distance of 374.58 feet; thence North 45 degrees 29 minutes 33 seconds West, a distance of 277.01 feet thence South 74 degrees 30 minutes 27 seconds West, a distance of 127.05 feet to a point of curvature with a curve, concave southeasterly, having a radius of 85.00 feet and a central angle of 29 degrees 59 minutes 59 seconds; thence southwesterly along the arc of said curve to the left, a distance of 44.51 feet, said are subtended by a chord which bears South 59 degrees 30 minutes 27 seconds West, a distance of 44.00 feet to the point of tangency thence South 44 degrees 30 minutes 27 seconds West, a distance of 41.61 feet to a point of curvature with a curve, concave northwesterly, having a radius of 65.00 feet and a central angle of 24 degrees 41 minutes 44 seconds; thence westerly along the arc of said curve to the right, a distance of 28.02 feet, said are subtended by a chord which bears South 56 degrees 51 minutes 20 seconds West, a distance of 27.80 feet to the point of tangency thence South 69 degrees 12 minutes 06 seconds West, a distance of 2.36 feet to a point of curvature with a curve, concave southeasterly, having a radius of 65.00 feet and a central angle of 24 degrees 41 minutes 45 seconds; thence southwesterly along the arc of said curve to the left, a distance of 28.02 feet, said arc subtended by a chord which bears South 56 degrees 51 minutes 20 seconds West, distance of 27.80 feet to the point of tangency thence South 44 degrees 30 minutes 27 seconds West a distance of 99.50 feet; thence North 45 degrees 29 minutes 33 seconds West, a distance of 117.04 feet; thence South 44 degrees 30 minutes 27 seconds West, a distance of 59.41 feet; thence North 45 degrees 29 minutes 33

seconds West, a distance of 39.58 feet; thence South 44 degrees 30 minutes 27 seconds West, a distance of 235.17 feet thence South 45 degrees 29 minutes 33 seconds East, a distance of 35.90 feet; thence South 44 degrees 30 minutes 29 seconds West, a distance of 1.70 feet to a point of curvature with a curve, concave easterly, having a radius of 5.50 feet and a central angle of 49 degrees 59 minutes 57 seconds; thence southerly along the arc of said curve to the left, distance of 4.80 feet, said arc subtended by a chord which bears South 19 degrees 30 minutes 31 seconds West, a distance of 4.65 feet to the point of tangency thence South 05 degrees 29 minutes 33 seconds East, a distance of 75.54 feet to a point of intersection with a non-tangent curve, concave southerly, having a radius of 35.00 feet and a central angle of 55 degrees 05 minutes 00 seconds; thence southeasterly along the arc of said curve to the right, a distance of 33.65 feet, said arc subtended by a chord which bears South 73 degrees 02 minutes 03 seconds East, a distance of 32.37 feet to the point of tangency thence South 45 degrees 29 minutes 33 seconds East, a distance of 228.33 feet; thence South 00 degrees 29 minutes 34 seconds East, a distance of 168.06 feet to a point of curvature with a curve, concave northeasterly, having a radius of 44.00 feet and a central angle of 117 degrees 46 minutes 52 seconds; thence northeasterly along the arc of said curve to the left, a distance of 90.45 feet, said arc subtended by a chord which bears South 59 degrees 23 minutes 00 seconds East, a distance of 75.34 feet to the point of tangency thence North 61 degrees 43 minutes 34 seconds East, a distance of 87.66 feet; thence South 28 degrees 16 minutes 16 seconds East, a distance of 275.49 feet to a point on the South right-of-way of North Point Parkway thence along and with the northwesterly right-of-way of South Point Parkway South 61 degrees 43 minutes 34 seconds West, a distance of 10.00 feet; thence leaving said right-of-way. North 28 degrees 16 minutes 26 seconds West, a distance of 242.00 feet to a 1/2“ rebar found; thence South 61 degrees 43 minutes 34 seconds West, a distance of 319.56 feet to a point of curvature with a curve, concave northerly, having a radius of 500.00 feet and a central angle of 64 degrees 24 minutes 19 seconds; thence westerly along the arc of said curve to the right a distance of 562.04 feet, said are subtended by a chord bearing North 86 degrees 04 minutes 16 seconds West 532.92 feet, to a point of compound curvature with a curve, concave northeasterly, having a radius of 750.00 feet and a central angle of 07 degrees 55 minutes 06 seconds; thence northeasterly along the arc of said curve to the right a distance of 103.65 feet, said are subtended by a chord bearing North 49 degrees 54 minutes 31 seconds West 103.57 feet to a 1/2“ rebar found at a point of intersection with a non-tangent curve, concave southeasterly, having a radius of 260.00 feet and a central angle of 30 degrees 39 minutes 36 seconds; thence southwesterly along the arc of said curve to the left a distance of 139.13 feet, said arc subtended by a chord bearing South 32 degrees 59 minutes 35 seconds West 137.48 feet, to a point of compound curvature with a curve, concave easterly, having a radius of 655.00 feet and a central angle of 25 degrees 02

minutes 55 seconds; thence southerly along the arc of said curve to the left a distance of 286.35 feet, said arc subtended by a chord bearing South 05 degrees 08 minutes 20 seconds West 284.08 feet, to the point of tangency thence South 07 degrees 23 minutes 07 seconds East, a distance of 101.95 feet to a point on the North right-of-way of North Point Parkway thence with said right-of-way, South 82 degrees 36 minutes 53 seconds West, a distance of 80.00 feet to a point; thence leaving said right-of-way, North 07 degrees 23 minutes 07 seconds West, a distance of 101.95 feet to a point at the beginning of a curve, concave easterly, having a radius of 735.00 feet and a central angle of 25 degrees 02 minutes 55 seconds; thence northerly along the arc of said curve to the right a distance of 321.33 feet, said are subtended by a chord bearing North 05 degrees 08 minutes 20 seconds East 318.77 feet, to a point of compound curvature with a curve, concave southeasterly, having a radius of 340.00 feet and a central angle of 30 degrees 22 minutes 26 seconds; thence northerly along the orc of said curve to the right a distance of 180.24 feet, said arc subtended by a chord bearing North 32 degrees 51 minutes 00 seconds East 178.14 feet, to a 1/2’ rebar found at a point of intersection with a non-tangent curve, concave northeasterly, having a radius of 750.00 feet and a central angle of 32 degrees 22 minutes 32 seconds; thence northwesterly along the arc of said curve to the right a distance of 423.79 feet, said are subtended by a chord bearing North 23 degrees 38 minutes 49 seconds West 418.18 feet, to the point of tangency thence North 07 degrees 27 minutes 34 seconds West, a distance of 205.17 feet to a point of curvature with a curve, concave easterly, having a radius of 5575.00 feet and a central angle of 00 degrees 19 minutes 32 seconds; thence northerly along the arc of said curve to the right a distance of 31.68 feet, said are subtended by a chord bearing North 07 degrees 17 minutes 48 seconds West 31.68 feet, to a point of intersection with a non-tangent line; thence North 82 degrees 59 minutes 22 seconds East, a distance of 36.01 feet to a point of Intersection with a non-tangent curve, concave easterly, having a radius of 5539.00 feet and a central angle of 00 degrees 19 minutes 29 seconds; thence southerly along the arc of said curve to the left a distance of 31.39 feet, said are subtended by a chord bearing South 07 degrees 17 minutes 49 seconds East 31.39 feet, to the point of tangency thence South 07 degrees 27 minutes 34 seconds East, a distance of 229.79 feet to a point; thence South 18 degrees 47 minutes 26 seconds East, a distance of 105.39 feet to a point of intersection with a non-tangent curve, concave northeasterly, having a radius of 705.00 feet and a central angle of 33 degrees 57 minutes 09 seconds; thence southerly along the arc of said curve to the left a distance of 44Z38 feet, said are subtended by a chord bearing South 35 degrees 53 minutes 31 seconds East 435.16 feet, to a point of compound curvature with a curve, concave northerly, having a radius of 455.00 feet and central angle of 31 degrees 26 minutes 51 seconds; thence southeasterly along the arc of said curve to the left a distance of 249.73 feet, said are subtended by a chord bearing South 69 degrees 35 minutes 31 seconds East

246.61 feet, to a point of intersection with a non-tangent line; thence North 00 degrees 29 minutes 33 seconds West, a distance of 295.76 feet to a point; thence South 89 degrees 30 minutes 27 seconds West, a distance of 30.00 feet to a point; thence North 00 degrees 29 minutes 33 seconds West, a distance of 58.62 feet to a point; thence North 44 degrees 30 minutes 27 seconds East, a distance of 183.38 feet to a point of curvature with a curve, concave southeasterly, having a radius of 120.00 feet and a central angle of 33 degrees 30 minutes 03 seconds; thence northeasterly along the arc of said curve to the right a distance of 70.16 feet, said are subtended by a chord bearing North 61 degrees 15 minutes 29 seconds East, 69.17 feet, to the point of intersection with a non-tangent line; thence North 03 degrees 51 minutes 36 seconds West, a distance of 82.95 feet to a point; thence North 45 degrees 29 minutes 33 seconds West, a distance of 214.30 feet to a point; thence North 75 degrees 29 minutes 31 seconds West, a distance of 42.30 feet to a point; thence South 44 degrees 30 minutes 27 seconds West, a distance of 163.75 feet to a point; thence North 45 degrees 29 minutes 33 seconds West, a distance of 66.50 feet to a point; thence South 44 degrees 30 minutes 27 seconds West, a distance of 5.00 feet to a point; thence North 45 degrees 29 minutes 33 seconds West, a distance of 324.00 feet to a point; thence South 44 degrees 30 minutes 27 seconds West, a distance of 30.00 feet to a point; thence South 45 degrees 29 minutes 33 seconds East, a distance of 4.67 feet to a point; thence South 44 degrees 30 minutes 27 seconds West, a distance of 49.77 feet to a point; thence South 83 degrees 23 minutes 06 seconds West, a distance of 67.90 feet to a point of intersection with a non-tangent curve, concave easterly, having a radius of 5,539.00 feet and a central angle of 00 degrees 23 minutes 43 seconds; thence southerly along the arc of said curve to the left a distance of 38.23 feet, said arc subtended by a chord bearing South 06 degrees 48 minutes 46 seconds East 38.23 feet, to the point of intersection with a non-tangent line; thence South 82 degrees 59 minutes 22 seconds West, a distance of 36.01 feet to a point of intersection with a non-tangent curve, concave easterly, having a radius of 5,575.00 feet and a central angle of 00 degrees 24 minutes 00 seconds; thence northerly along the orc of said curve to the right a distance of 38.93 feet, said are subtended by a chord bearing North 06 degrees 48 minutes 38 seconds West 38.93 feet, to a point; thence North 06 degrees 32 minutes 16 seconds West, a distance of 14.12 feet to a point of curvature with a curve, concave easterly, having a radius of 5,575.00 feet and a central angle of 04 degrees 40 minutes 27 seconds; thence northerly along the arc of said curve to the right a distance of 454.81 feet, said arc subtended by a chord bearing North 04 degrees 07 minutes 42 seconds West 454.69 feet, to a 1/2" rebar found at a point of intersection with a non-tangent line; thence North 25 degrees 14 minutes 06 seconds West, a distance of 242.94 feet to a right-of-way monument on the southerly right-of-way of North Fulton Expressway-Ga. Hwy. 400 and the point of intersection with a non-tangent curve, concave southeasterly, having a radius of 5,579.58 feet and a central angle of 05 degrees 03 minutes

56 seconds; thence with the southerly right-of-way of North Fulton Expressway-Ga. Hwy. 400, the following six courses and distances: (1) northeasterly along the arc of said curve to the right a distance of 493.29 feet, said are subtended by a chord bearing North 59 degrees 39 minutes 31 seconds East 493.13 feet, to a right-of-way monument at the point of intersection with a non-tangent line; (2) North 68 degrees 23 minutes 02 seconds East, a distance of 485.85 feet to aright-of-way monument; (3) North 68 degrees 29 minutes 17 seconds East, a distance of 258.33 feet to a right-of-way monument; (4) North 64 degrees 55 minutes 26 seconds East, a distance of 345.27 feet to a right-of-way monument; (5) North 69 degrees 49 minutes 33 seconds East, a distance of 199.68 feet to a right-of-way monument; and (6) North 75 degrees 23 minutes 24 seconds East, a distance of 301.31 feet to a concrete right-of-way monument and the True Point of Beginning; containing 3,626,228 square feet (83.2467 acres) of land, more or less and containing all the land described In Schedule A of First American Title Company Title Commitment No. NCS-614549-CHI2 with an effective date of May 26, 2013.

Legal Description – Dillards

Being all that tract or parcel of land lying and being in parts of Lard Lot 701, 702 and 742 of the 1st District, 2nd Section of Fulton County, Georgia and being more particularly described as follows:

Commencing at the point of intersection formed by the West right-of-way of Haynes Bridge Road, having a 60 foot right-of-way, and the South right-of-way of Rock Mill Road, having a 30 foot right-of-way, thence along and with the southerly right-of-way of Rode Mill Road the following courses and distances; South 88 degrees 59 minutes 00 seconds West, a distance of 617.06 feet thence West a distance of 499.00 feet; thence South 88 degrees 01 minutes 25 seconds West a distance of 149.32 feet; to a point of curvature with a curve, concave southerly, having a radius of 560.00 feet and a central angle of 29 degrees 16 minutes 33 seconds; thence westerly along the arc of said curve to the left, a distance of 286.14 feet, said arc subtended by a chord which bears South 73 degrees 23 minutes 08 seconds West a distance of 283.04 feet to the point of intersection with a non-tangent line; thence crossing the right-of way of a Rock Mill Road North 31 degrees 15 minutes 09 seconds west, a distance of 30.00 feet to a point on the northerly right-of-way of Rock Mill Road; thence North 20 degrees 14 minutes 30 seconds West a distance of 11.20 feet to a point on the southerly right-of-way of Georgia Highway No. 400; thence along and with the southerly right-of-way of Georgia Highway No. 400, South 75 degrees 17 minutes 31 seconds West, a distance of 177.85 feet and; thence South 69 degrees 54 minutes 02 seconds West, a distance of 399.76 feet to a concrete right-of-way monument; thence leaving the right of-way of Georgia Highway No. 400 at South 38 degrees 29 minutes 35 seconds East a distance of 453.07 feet; to a point of curvature with a curve, concave southwesterly, having a radius of 2000.00 feet and a central angle of 20 degrees 14 minutes 52 seconds; thence southeasterly along the arc of said curve to the right, a distance of 706.78 feet, said arc subtended by a chord which bears South 28 degrees 22 minutes 09 seconds East, a distance of 703.11 feet; to a point of intersection with a compound curve, concave westerly, having a radius of 750.00 feet and a central angle of 40 degrees 35 minutes 43 seconds; thence southerly along the arc of said curve to the right, from which the local tangent at the beginning point bears South 18 degrees 14 minutes 43 seconds East, a distance of 531.40 feet, said arc subtended by a chord which bears South 02 degrees 03 minutes 09 seconds West, a distance of 520.35 feet; to a point on the curve; thence continuing with the curve, concave northwesterly, having a radius of 750.00 feet and a central angle of 10 degrees 07 minutes 03 seconds; thence southerly along the orc of said curve to the right, a distance of 132.43 feet, said arc subtended by a chord which bears South 27 degrees 24 minutes 34 seconds West, a distance of 132.26 feet; to a point

of intersection with a non-tangent curve, concave southwesterly; having a radius of 444.00 feet and a central angle of 26 degrees 23 minutes 59 seaside; thence southeasterly along the arc of said curve to the right, from which the local tangent at the beginning point bears South 54 degrees 36 minutes 52 seconds East, a distance of 202.73 feet, said arc subtended by a chord which bears South 41 degrees 24 minutes 53 seconds East, a distance of 200.95 feet to the point of intersection with a non-tangent line, the northwesterly right-of-way of North Point Parkway; thence along and with the northwesterly right-of way of North Point Parkway South 61 degrees 43 minutes 34 seconds West, a distance of 1007.57 feet; thence 28 degrees 16 minutes 26 seconds West, a distance of 242.00 feet; thence South 61 degrees 43 minutes 34 seconds West, a distance of 246.60 feet; thence South 28 degrees 16 minutes 26 seconds East, a distance of 242.00 feet, again to the northwesterly right-of-way of North Point Parkway thence dong and with the northwesterly right-of-way of North Point Parkway, South 61 degrees 43 minutes 34 seconds a distance of 46.00 feet, to the Point of Beginning; thence along and with the northwesterly right-of-way of North Point Parkway South 61 degrees 43 minutes 34 seconds West, a distance of 24.00 feet; thence North 28 degrees 16 minutes 16 seconds West, a distance of 275.49 feet; thence South 61 degrees 43 minutes 34 seconds West, a distance of 87.66 feet; to a point of curvature with a curve, concave northeasterly, having a radius of 44.00 feet and a central angle of 117 degrees 46 minutes 52 seconds; thence southwesterly along the arc of said curve to the right, a distance of 90.45 feet, said arc subtended by a chord which bears North 59 degrees 23 minutes 00 seconds West, a distance of 75.34 feet to the point of tangency thence North 00 degrees 29 minutes 34 seconds West, a distance of 168.06 feet; thence North 45 degrees 29 minutes 33 seconds West, a distance of 228.33 feet to a point of curvature with a curve, concave southerly, having a radius of 35.00 feet and a central angle of 55 degrees 05 minutes 00 seconds; thence northwesterly along the arc of said curve to the left, a distance of 33.65 feet, said arc subtended by a chord which bears North 73 degrees 02 minutes 03 seconds West a distance of 32.37 feet to the point of intersection with a non-tangent line; thence North 05 degrees 29 minute 33 seconds West a distance of 75.54 feet; to a point of curvature with a curve, concave easterly, having a radius of 5.50 feet and a central angle of 49 degrees 59 minutes 57 seconds; thence northerly along the arc of said curve to the right, distance of 4.80 feet, said arc subtended by a chord which bears North 19 degrees 30 minutes 31 seconds East, a distance of 4.65 feet to the point of intersection with a non-tangent line; thence North 44 degrees 30 minutes 29 seconds East, a distance of 1.70 feet; thence North 45 degrees 29 minutes 33 seconds West, a distance of 35.90 feet; thence North 44 degrees 30 minutes 27 seconds East, a distance of 235.17 feet; thence South 45 degrees 29 minutes 33 seconds East, a distance of 39.58 feet; thence North 44 degrees 30 minutes 27 seconds East, a distance of 59.41 feet; thence South 45 degrees 29 minutes 33 seconds

East, a distance of 117.04 feet; thence North 44 degrees 30 minutes 27 seconds East, a distance of 99.50 feet to a point of curvature with a curve, concave southeasterly, having a radius of 65.00 feet and a central angle of 24 degrees 41 minutes 45 seconds; thence northeasterly along the arc of said curve to the right, a distance of 28.02 feet, said arc subtended by a chord which bears North 56 degrees 51 minutes 20 seconds East, distance of 27.80 feet to the point of tangency thence North 69 degrees 12 minutes 06 seconds East, a distance of 2.36 feet; to a point of curvature with a curve, concave northwesterly, having a radius of 65.00 feet and a central angle of 24 degrees 41 minutes 44 seconds; thence easterly along the arc of said curve to the left, a distance of 28.02 feet, said are subtended by a chord which bears North 56 degrees 51 minutes 20 seconds East, a distance of 27.80 feet to the point of tangency thence North 44 degrees 30 minutes 27 seconds East, a distance of 41.61 feet; to a point of curvature with a curve, concave southeasterly, having a radius of 85.00 feet and a central angle of 29 degrees 59 minutes 59 seconds; thence northeasterly along the arc of said curve to the right, a distance of 44.51 feet, said arc subtended by a chord which bears North 59 degrees 30 minutes 27 seconds East, a distance of 44.00 feet to the point of tangency thence North 74 degrees 30 minutes 27 seconds East, a distance of 127.05 feet thence South 45 degrees 29 minutes 33 seconds East, a distance of 277.01 feet; thence South 44 degrees 30 minutes 27 seconds West, a distance of 374.58 feet; thence North 45 degrees 29 minutes 33 seconds West, a distance of 51.76 feet; thence South 44 degrees 30 minutes 27 seconds West, a distance of 56.00 feet; thence North 45 degrees 29 minutes 33 seconds West, a distance of 2.00 feet; thence South 44 degrees 30 minutes 27 seconds West, a distance of 240.00 feet; thence South 45 degrees 29 minutes 33 seconds East, a distance of 9.00 feet; thence South 44 degrees 30 minutes 27 seconds West, a distance of 30.00 feet; thence North 45 degrees 29 minutes 33 seconds West, a distance of 73.54 feet; thence South 00 degrees 29 minutes 34 seconds East, a distance of 120.85 feet; to a point of curvature with a curve, concave northeasterly, having a radius of 20.00 feet and a central angle of 117 degrees 46 minutes 49 seconds; thence southerly along the arc of said curve to the left, a distance of 41.11 feet, say etc subtended by a chord which bears South 59 degrees 23 minutes 00 seconds East, a distance of 34.25 feet to the point of tangency thence North 61 degrees 43 minutes 34 seconds East, a distance of 111.66 feet; thence South 28 degrees 16 minutes 16 seconds East, a distance of 299.49 feet, to the Point of Beginning; containing 6.6435 acres of land, more or less, as shown on ALTA/ACSM Land Title Survey of North Point Mail prepared for Homart Development Co. by Post, Buckley, Schuh & Jernigan, Inc., dated March 31, 1995, last revised December 11, 1995.

Legal Description – Von Maur

Being all that tract or parcel of land lying and being in parts of Land Lots 688, 701 and 702 of the 1st District, 2nd Section of Fulton County, Georgia and more particularly described as follows:

Commencing at the point of intersection of the West right of way of Haynes Bridge Road, having a 60 foot right of way, and the South right of way of Rock Mill Road, having a 30 foot right of way thence South 88 degrees, 59 minutes, 00 seconds West, a distance of 617.06 feet; thence West, a distance of 499.00 feet; thence South 88 degrees, 01 minute, 25 seconds West, a distance of 149.32 feet, to a point of curvature with a curve, concave southerly, having a radius of 560.00 feet and a central angle of 29 degrees, 16 minutes, 32 seconds; thence Westerly along the arc of said curve to the left, a distance of 286.14 feet, said are subtended by a chord which bears South 73 degrees, 23 minutes, 06 seconds West, a distance of 283.04 feet to the point of intersection with a non-tangent line; thence North 31 degrees, 15 minutes, 09 seconds Wiest, a distance of 30.00 feet; thence North 20 degrees, 14 minutes, 30 seconds West, a distance of 11.20 feet; thence South 75 degrees, 17 minutes, 31 seconds West, a distance of 177.85 feet; thence South 69 degrees, 54 minutes, 02 seconds West, a distance of 399.76 feet; thence South 75 degrees, 23 minutes, 24 seconds West, a distance of 301.31 feet; thence South 69 degrees, 49 minutes, 33 seconds West, a distance of 199.68 feet; thence South 64 degrees, 65 minutes, 26 seconds West, a distance of 345.27 feet thence South 68 degrees, 29 minutes, 17 seconds West, a distance of 258.33 feet; thence South 68 degrees, 23 minutes, 02 seconds West, a distance of 465.85 feet, to a point of intersection with a non-tangent curve, concave Southeasterly, having a radius of 5579.58 feet and a central angle of 05 degrees, 03 minutes, 56 seconds; thence Southwesterly along the arc of said curve to the left, from which the local tangent at the beginning point bears South 62 degrees 11 minutes 29 seconds West, a distance of 493.29 feet, said are subtended by a chord which bears South 59 degrees, 39 minutes, 31 seconds West, a distance of 493.13 feet in the point of intersection with a non-tangent line; thence South 25 degrees 14 minutes 06 seconds East, a distance of 242.94 feet, to a point of intersection with a non-tangent curve, concave Easterly, having a radius of 5576.00 feet and a central angle of 05 degrees 13 minutes 10 seconds; thence Southerly along the arc of said curve to the left, from which the local tangent at the beginning point bears South 01 degree 47 minutes 28 seconds East, a distance of 507.86 feet, said are subtended by a chord which bears South 04 degrees 24 minutes 03 seconds East, a distance of 507.69 feet to the curve's end, and the Point of Beginning; thence (*4 'North 82 degrees 59 minutes 22 seconds East*) North 62 degrees 69 minutes 22 seconds East, a distance of 36.01 feet, to a point of intersection with a non-

tangent curve, concave easterly, having a radius of 5539.0 feet and a central angle of 00 degrees 23 minutes 43 seconds; thence northerly along the arc of said curve to the right, from which the food tangent at the beginning point bears North 07 degrees 00 minutes 38 seconds West, a distance of 38.23 feet, said are subtended by a chord which bears North 06 degrees 48 minutes 46 seconds West, a distance of (*5 *38.23 feet*) 36.23 feet to the point of intersection with a non-tangent line; thence North 63 degrees 23 minutes 06 seconds East, a distance of 67.90 feet; thence North 44 degrees 30 minutes 27 seconds East, a distance of 49.77 feet thence North 45 degrees 29 minutes 33 seconds West, a distance of 4.67 feet; thence North 44 degrees 30 minutes 27 seconds East, a distance of 30.00 feet; thence South 45 degrees 29 minutes 33 seconds East, a distance of 324.00 feet; thence North 44 degrees 30 minutes 27 seconds East, a distance of 5.00 feet; thence South 45 degrees 29 minutes 33 seconds East, a distance of 66.50 feet; thence North 44 degrees 30 minutes 27 seconds East, a distance of 163.75 feet; thence South 75 degrees 29 minutes 31 seconds East, a distance of 42.30 feet; thence South 45 degrees 29 minutes 33 seconds East, a distance of 214.30 feet; thence South 03 degrees 51 minutes 36 seconds East, a distance of 82.95 feet, to a point of intersection with a non-tangent curve, concave Southeasterly having a radius of 120.00 feet and a central angle of 33 degrees 30 minutes 04 seconds; thence Westerly along the arc of said curve to the left, from which the local tangent at the beginning point bears South 78 degrees 00 minutes 31 seconds West, a distance of 70.16 feet, said are subtended by a chord which bears 61 degrees 15 minutes 29 seconds West, a distance of 69.17 feet to the point of tangency thence South 44 degrees 30 minutes 27 seconds West, a distance or 183.38 feet; thence South 00 degrees 29 minutes 33 seconds East, a distance of 58.62 feet; thence North 89 degrees 30 minutes 27 seconds East, a distance of 30.00 feet; thence South 00 degrees 29 minutes 33 seconds East, a distance of 295.76 feet, to a point of intersection with a non-tangent curve, concave Northerly, having a radius of 455.00 feet and a central angle of (*6 ‘31 degrees 26 minutes 51 seconds*) 31 degrees 28 minutes 51 seconds; thence Westerly along the arc of said curve to the right, from which the local tangent at the beginning point bears North 85 degrees 19 minutes 01 seconds West, a distance of 249.73 feet, said are subtended by a chord which bears North 69 degrees 35 minutes 31 seconds West, a distance of 246.61 feet, to a point of intersection with a compound curve, concave Northeasterly, having a radius of 705.00 feet and a central angle of (*7 '35 degrees 57 minutes 09 seconds') 35 degrees 57 minutes 11 seconds; thence northwesterly along the arc of said curve to the right from which the local tangent at the beginning point bears North 53 degrees 52 minutes 08 seconds West. a distance of 442.38 feet, said arc subtended by a chord which bears North 35 degrees 53 minutes 31 seconds West, a distance of 435.16 feet to the point of intersection with a non-tangent line; thence North 18 degrees 47 minutes 26 seconds West, a distance of 105.39 feet; thence North 07 degrees 27 minutes 34 seconds West, a

distance of 229.79 feet, to a point of curvature with a curve, concave Easterly, having a radius of 5539.00 feet and a central angle of 00 degrees 19 minutes 29 seconds; thence Northerly dong the arc of said curve to the right, a distance of 31.39 feet, said arc subtended by a chord which bears North 07 degrees 17 minutes 49 seconds West, a distance of 31.39 feet to the point of intersection with a non-tangent line; thence South 82 degrees 59 minutes 22 seconds West a distance of 38.01 feet, to a point of intersection with a non-tangent curve, concave Easterly, having a radius of 5575.00 feet and a central angle of 00 degrees 07 minutes 24 seconds; thence Northerly dong the arc of said curve to the right, from which the local tangent at the beginning point bears North 07 degrees 08 minutes 02 seconds West, a distance of 12.00 feet, said arc subtended by a chord which bears North 07 degrees 04 minutes 19 seconds West, a distance of 12.00 feet to the curve's end, and the Point of Beginning; containing 8.23092 acres of land, more or less.

DILLARD Sellers
ATTORNEYS AT LAW

Julie L. Sellers
404.665.1242

Email:
jsellers@dillardsellers.com

March 16, 2026

City of Alpharetta
c/o Kathi Cook, Community Development Director
2 Park Plaza
Alpharetta, GA 30009

Re: Letter of Intent for North Point Mixed Use District

Master Plan Amendment, Rezoning, Conditional Use Permit and Variance Application for 1000 North Point Parkway, 4000 and 4500 North Point Place, 0 and 5000 North Point Drive, 2000 and 6000 North Point Circle, 0 Rock Mill Rd., Alpharetta, GA 30022

Dear Mayor Gilvin and Alpharetta City Councilmembers:

Applicant, Jamestown, L.P. submits this request to redevelop the North Point Mall property into a unique, sports anchored, mixed-use destination. The approval of this application fulfills the stated goal in Horizon 2040, Alpharetta's Comprehensive Plan:

> Preserve the North Point area as a regional destination for shopping, jobs, and entertainment, and enhance the area with improvements, redevelopment and new development that supports a walkable and vibrant mixed-use community destination with places to shop, work, entertain and live. (p. 59)

North Point is the ideal location for a renewed retail led, residential and entertainment destination that will both anchor the commercial node for Alpharetta and attract a National Hockey League team. The decline of traditional retail and increased desire for entertainment districts with options for shopping, dining, living, and working aligned to create this opportunity for a professional sports team in Alpharetta. Rather than relying upon a single anchor, the district is designed to support activity throughout the day and week. Retail, recreation and offices bring employment and consumer experience activity during the days with the restaurant, housing and hospitality uses supporting evening and weekend activity across the district. The large surface parking lots and mall will be transformed into a dynamic, Arena-anchored destination featuring a walkable, connected and engaging public realm. The Alpha Loop extension, new street grid, and stormwater park are City goals that will come to life with the North Point Mixed-Use District.

The subject property is approximately 98 acres of land adjacent to Georgia 400 located between Mansell Road and Haynes Bridge Road along North Point Pkwy. The properties

referenced above include ten parcels that comprise the area known as North Point Mall as identified in the attached list of tax parcels (the "Property"). A portion of the Property is already zoned Mixed Use (MU) with the remainder zoned Planned Shopping Center (PSC). By this application, Jamestown requests the City to rezone the entire Property to the MU zoning district.

In addition to the rezoning, this application also seeks approval of (1) an amendment to the Master Plan to reflect the proposed mix of uses and development changes; (2) Conditional Use Permits for "For Rent" residential dwellings, to increase the residential density and to increase the building height, and (3) Variances required to achieve the North Point Mixed-Use District.

PROPERTY BACKGROUND

In the last 50 years, Alpharetta has seen significant changes in population and land use in the City. From 1980-1990, the City's population grew from less than 5,000 to more than 13,000. Today, more than 60,000 people call Alpharetta home and the City has evaluated and adopted plans to support quality growth to serve its residents, visitors and business community.

In 1990, the City approved the North Point Mall Master Plan ("Master Plan") creating a regional shopping mall and commercial outparcels on 100 acres. The following year, the North Point Business Center Master Plan was approved for the remaining parcels between Mansell and Haynes Bridge Roads surrounding the mall. The vision at the time was for North Point to be a regional activity center with density and building heights that were greater than other areas of the City. In many ways, the master plans reflect an early version of the mixed-use communities that are thriving today.

Beginning with the North Point Activity Center Livable Centers Initiative in 2008, the City envisioned a "Multi-story, mixed-use, walkable environment as a model for future redevelopment in the North Point Activity Center." LCI p. 3. Ten years later, the North Point Overlay District was adopted with certain design standards and flexibility for building heights and density. The City Council is authorized to approve conditional use permits to increase residential density in Priority Areas (including the Property) and building heights in the North Point Overlay.

Over the years, the Master Plan has been amended to modify the development of the Property. Some changes include modifying outparcel uses and adding a movie theater. However, the retail markets have shifted dramatically in the last 35 years. For example, Sears, once the nation's largest retailer with more than 2,000 locations, closed its North Point Mall store in 2018 during bankruptcy proceedings. Regional malls have increasingly faced challenges in creating a tenant and amenity mix to maintain standing as high quality destinations.

In 2019, the prior mall owner, Brookfield Properties sought to redevelop a corner of the mall and Property by replacing the former Sears anchor tenant space (154,886 sq ft) with a mixed-use area of 300 For Rent residential units and 30,000 sq ft of retail and restaurant. This was a

specific plan to utilize the area vacated by Sears as shown below and not a holistic approach to the entire Property.



Although the plan was approved in 2019, the redevelopment did not occur. Instead, in 2021, Brookfield transferred ownership of the mall to its lender and current owner, New York Life Insurance Company. In the last five years, the need to approach the redevelopment of the entire Property for a sustainable and thriving future has become apparent. Approval of this application will create a unique destination that is consistent with the vision of the North Point Activity Center.

DEVELOPMENT INFORMATION

Given the size, location, and infrastructure to support the 1.3 million sq ft mall that anchored over 4 million sq ft of surrounding retail , the Applicant and Owners intentionally focused efforts on creating a vision and development plan that will holistically reimagine the Property. Over the last few years, stakeholders have explored opportunities to attract a new National Hockey League team to Alpharetta. The Property provides the space to create a walkable, mixed-use destination anchored by a hockey arena and supported with retail (small and large), restaurants, housing, and other entertainment uses such as a music venue, theater, youth sports center, and parks. The mixture of uses allows for the implementation of a new street grid to create a pedestrian experience and connectivity for the future MARTA rapid transit connection along GA 400. The entertainment focus differentiates the redevelopment of North Point from other Alpharetta areas such as Avalon and the Downtown core.

Jamestown has the vision and execution skills to transform properties. Jamestown is a design-focused real estate company with over 40 years of experience and a mission of creating places that inspire. A local example is Ponce City Market which serves as the energetic core of a now thriving area in Atlanta. Taking a challenging development site and implementing a creative placemaking plan is at the heart of Jamestown developments. North Point offers an ideal setting for Jamestown's thoughtful, discerning approach to finally bring the area's long-envisioned mixed-use destination to life. While Jamestown principals were also part of the team that brought Avalon, there was never a true replacement for the merchandising mix for North Point, which

offers a re-imagination of the retail experience without the cannibalism of other properties within the City.

The Battery, home of the Atlanta Braves stadium, is an example of how a sports and entertainment district can create a vibrant and unique location for shopping, living, and working that thrives year-round. North Point is the premier location to develop a sports and entertainment district and create a home for another professional sports team to locate in Georgia.

North Point Mixed Use District brings a new focus and life into the Property by maintaining the retail roots and layering on the hockey and entertainment emphasis. The design is organized around a defining placemaking feature: a new connection from North Point Drive to North Point Center East. This allows integration of the Alpha Loop and links the arena, music hall, hospitality and public gathering spaces while creating a pedestrian driven environment.

New development and activation will provide the catalyst for the storm water park and public gathering space to serve the City as an attractive outdoor recreation area similar to Historic Fourth Ward Park adjacent to Ponce City Market. The details are being finalized for the EcoDistrict measures incorporated into the district and a minimum of ten points will be included with final designs.

New priority on sports and entertainment creates a vibrant district for professional and youth hockey, a music venue, and theater. At the core of successful mixed-use districts is the balance of complementary uses. North Point Mixed Use District integrates a deliberate curation of uses to support the overall district with NHL arena (20,000 seats), Youth Sports/Community Ice Sheets (2,000 seats), Retail/Restaurant (907,000 sf), Music hall (4,000 seats), Cinema (500 seats), Office (750,000 sf), Residential (1,385units), Conference Center (45,000 sf), and hotels (850 rooms). Together, these elements create a district where sports, entertainment, and everyday life intersect.

North Point Mixed Use District is a year-round destination offering a robust lifestyle everyday and a game day experience with uses to create a place that is consistently active and economically resilient. It aligns with Alpharetta's vision of creating the highest quality environment, fostering a strong sense of community, and attracting top-echelon companies.

Redevelopment Plan Aligns with Horizon 2040 Comprehensive Plan

The City uses its Comprehensive Plan as a guiding tool when making land use decisions. The North Point Mixed Use District set forth in this application fulfills many of the needs and opportunities identified by the City including:

- Prioritize high density development to locate in the North Point area (p. 40)
- Promote infill of vacant office and retail space with compatible uses and amenities that enhance synergy within the development (p. 44)

- Explore and implement economic development incentives to attract new businesses, especially in the North Point area (p. 45)
- Promote redevelopment of highway corridors with an emphasis on North Point . . .(p. 46)
- Develop street grid in North Point area and redevelop large surface parking lots in North Point area with residential uses (p. 34)
- Redevelopment plan for North Point Mall and improve walkability and encourage a mix of uses to revitalize the North Point area (p. 35)
- Create a mixed-use environment in the North Point area and provide more open space (p. 36)

IMPACT ANALYSIS

The North Point Mixed Use District satisfies the criteria set forth in the City's Code and is supported by the plans adopted by the City. As more fully set forth below, the Rezoning, amendment to the North Point Mall Master Plan, Conditional Uses and Variances are necessary components to distinctive district and future home of the NHL in metro-Atlanta. For these reasons, the Applicant respectfully requests its application be granted as submitted.

A. <u>Rezoning Request from PSC to MU and Master Plan Amendment</u>

The current PSC zoning and the current North Point Mall Master Plan are not consistent with the Future Land Use designation of the Property for Mixed-Use. Neither the zoning nor the limited uses in the master plan allow for the creation of a vibrant mixed-use district as featured in the North Point LCI and related plans adopted by the City. Amending the zoning from PSC to MU and amending the master plan to reflect the North Point Mixed Use District as shown in this application will allow Jamestown to curate the use components essential when developing unique activity centers such as Ponce City Market or The Battery.

The North Point Mall Master Plan is currently limited to retail, restaurant, office, and residential uses as set forth in the approval of MP-18-07 in 2019. In addition to the uses approved in 2019, this application requests a modification to the Master Plan to add the commercial and semipublic uses as identified in UDO Section 2.2.20(C)(2) and (3). Specifically, the district is intended to include the Arena and Youth Sports (Indoor Recreational facilities), Hotels, Music Hall and Movies (theater, cinema), and a Vertiport for EVTOL aircraft to access the GA 400 corridor, in addition to the restaurant, retail, office and residential uses.

The Rezoning and Master Plan Amendment Review criteria (application p. 14) are satisfied as stated below:

1) How will this proposal be compatible with surrounding properties?

The Zoning and Master Plan amendment requested will create a mixed-use development which is consistent with the North Point LCI, North Point Overlay, and the Comprehensive Plan visions for the Property to be mixed-use. The location along GA 400 with convenient access to Mansell Road and Haynes Bridge Road make the Property an ideal location for a sports-anchored mixed-use district. The nearby properties are developed as office, retail, restaurants, and limited residential and the development presented is compatible.

2) How will this proposal affect the use and value of the surrounding properties?

The approval of the redevelopment will not have an adverse impact on the use and value of surrounding properties. The revitalization of the Property and creation of pedestrian connectivity will enhance the surrounding properties.

3) Can the property be developed for a reasonable economic use as currently zoned?

No, the majority of the Property is currently zoned PSC (Planned Shopping Center) and subject to the North Point Mall Master Plan. Because retail demands have changed over the years, there is no reasonable economic use for the Property as currently zoned with retail as the primary use.

4) What would be the increase to population and traffic if the proposal were approved?

As with any new development that adds residential and new uses, there will be an increase in population and traffic. However, the redevelopment will also enhance the transportation systems with new roads and support for MARTA's GA 400 Express Lanes Transit ("ELT") plans. The addition of pedestrian focused streetscaping and the mixture of uses in a walkable area will also encourage less vehicular traffic around the area. Event traffic would cause spikes in the normal daily use; however, the surrounding infrastructure was designed for over 4 million square feet of commercial in the near vicinity anchored by a Class A mall that today only draws a fraction of the designed capacity.

5) What would be the impact to schools and utilities if the proposal were approved?

While the redevelopment of the Property into a mixed-use development will have the potential to increase the number of children and utilities, the impact will not be significant. The utilities infrastructure is sufficient. Although some children may reside in the new housing, Applicant anticipates the majority of residents will be professionals who work in the Alpharetta area or retired individuals enjoying the robust amenities in North Point and

Alpharetta, or residents affiliated with the sports, conference, hospitality and retail aspect of the district.

6) How is the proposal consistent with the Alpharetta Comprehensive Plan; particularly the Future Land Use Map?

The request aligns with the Future Land Use designation of the Property as Mixed Use. More specifically, this development plan also addresses many of the needs and opportunities identified in the Horizon 2040 Comprehensive Plan – North Point is identified as a priority area for redevelopment.

7) Are there existing or changing conditions which affect the development of the property and support the proposed request?

Regional shopping malls have been in decline and there is a need to expand the mixture of uses at North Point. The e-commerce impact has taken a toll on traditional retail focused developments. The bankruptcy and closure of the Sears store and challenges with obtaining tenants to fully lease the mall demonstrate the existing difficulties and support the approval of this application. A sports anchored district provides the opportunity to create a unique place to attract office, retail, restaurants and residents into North Point.

B. Conditional Use Requests

To create the North Point Mixed Use District, Conditional Use Permits must be approved. As set forth in the UDC, a conditional use permit is required for "For-Rent" housing. In addition, the North Point Overlay allows the City to approve increases in building height and density through a Conditional Use Permit.

For-Rent residential is essential to curate the balanced mix of uses and density increase is supported by City adopted plans

Residential density is a crucial element within a mixed-use district. The For-Rent units should be evaluated as part of the district, which is unique and distinct from the City at large. The Horizons 2040 Comprehensive Plan, North Point Overlay and other related documents recognize the need to have higher density in North Point than other parts of the City. The MU zoning district allows density of 8 units per acre of the gross acreage of the master plan area. In 2019, 300 For-Rent units were approved for the Sears redevelopment area.

This application seeks to redevelop the entire mall site (98 acres). As such, the density allowed with MU zoning is 784 residential units (or only 484 units more than 300 already approved). However, the North Point Overlay identified priority areas to allow residential density to be increased, including the Property. This is consistent with the City's recognition that North Point is the appropriate area in the City to develop a denser residential community. To provide context

for the numbers, The Battery area has 1,471 rental units and the area around Ponce City Market includes 2,078 rental units developed after Ponce City Market opened. Here, North Point Mixed Use District is designed with 1,385 For-Rent units. The design team and stakeholders prioritized the layered mix of uses required to transform the Property and deliver the vision of North Point as the premier destination for NHL and residents to thrive. While the number of residential units may not be appropriate in other areas of the City, North Point Mixed Use District is a distinct and unique opportunity.

As further support for the number of residential units, the addition of 750,000 sq ft of office will create a significant number of new jobs, in addition to the adjacent Encore offices (561,575 sq ft) Based on the calculation of 1 employee per 250 square feet of office, we can anticipate 5,000 – 6,500 employees. Further employment opportunities are associated with the future NHL team, Arena facilities, the Conference Center and hospitality, as well as the retail uses. A unique destination demands a unique approach and evaluation. Here, the development plans provide the basis to approve this request.

Height Increase Supported by North Point Business Master Plan

When the North Point activity center began in the early 1990s, the mall was the hub and tall office towers were approved for the surrounding properties. In the North Point Business Master Plan, the parcel adjacent to the Property along GA 400 allow 30 story buildings and other parcels allow 20 stories.



The North Point Overlay provides for an increase in height through a conditional use permit. To develop a walkable, active, entertainment focused, mixed-use district, building heights greater than 4 stories are required to achieve the appropriate scale.

Conditional Use Standards Are Satisfied (Sec 4.2.3(B))

The requested development plan and associated conditional use approvals will allow for the redevelopment and transformation of the current mall and surface parking lots into an NHL anchored destination for entertainment, play, work, shopping and living. The criteria for a conditional use permit are satisfied as set forth below.

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;**

   There is sufficient vehicular access from North Point Parkway, North Point Drive, and North Point Circle. The development will also create pedestrian connectivity that does not currently exist.

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

   The development plans reflect sufficient and appropriate areas for the site development aspects addressed 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;**

   The conditional uses will not diminish or impair property values or be injurious to the use and enjoyment of the environment or other properties. To the contrary, the connection to the Alpha Loop and establishment of a mixed use district activity center will enhance the enjoyment of properties.

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

   This criteria does not apply to the application and redevelopment.

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

The requested conditional uses will not impede orderly development of surrounding property.

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; and

The North Point area is the designated area in the City for a mixed-use development as proposed. The uses, density and height requested are consistent with the vision of the North Point LCI, North Point Overlay, and North Point Development Framework.

7) Ensuring that the conditional use is appropriately separated from similar uses and conflicting uses, such as residences, government buildings, parks, churches or schools.

The uses, density and heights requested do not conflict with surrounding uses and the mixed-use activity center is aligned with the vision with the plans adopted by the City.

C. <u>Variance requests</u>

In light of the unique redevelopment opportunity to create a walkable, sports-anchored district, certain regulations in the UDO cannot be met. The Applicant is requesting the following variances: (1) GA 400 Tree Protection Zone buffer width decrease due to the potential right of way expansion and pedestrian trail planned [Sec. 3.2.2]; (2) reduction in the minimum percentage of MU land use for the office component to be less than 25%, [Sec. 2.2.20(B)(4)]; (3) a block perimeter increase to exceed 1,600 LF [Sec. 2.10.4.A.1] (4) increase in the percentage of shared parking allowed [Sec. 2.5.2], and (5) corridor types as proposed instead of the UDO [Sec. 2.10.3.A/B].

1) Are there extraordinary and exceptional conditions pertaining to the subject property because of its size, shape, or topography?

Yes, extraordinary and exceptional conditions pertain to the Property due to its size and shape. The redevelopment of the Property is a unique situation supported by the City's planning documents.

2) Would the application of the Zoning Code standards as they relate to the subject property create an unnecessary hardship?

Yes, the strict application of the City's zoning code creates a barrier to redevelopment and a significant hardship. When the City adopted the corridor and block sizing types for the Overlay, the design was not focused on a sports-anchored district. The site plan reflects corridor types and block sizing are intentionally designed to create a walkable sense of

place and achieves the goals of the North Point Overlay. The MU zoning district requires a minimum of 25% office use. To require 25% of the Property to be developed as office would over-saturate the office market and is a barrier to redevelopment. As further support, there are offices adjacent to the Property (Encore Commons) and the decrease in overall office demand. The mixed-use nature of the North Point Mixed-Use District supports shared parking and a reduction in parking. Applicant is working on shared parking details and will finalize through the DRI process. The parking reduction will allow for an emphasis on green space and connectivity instead of unnecessary paving for excess parking. Finally, the reduction of the GA 400 buffer is to accommodate the future MARTA rapid transit (ELT) along GA 400 and pedestrian connectivity (not to increase size of development). The existing "ring road" around the mall remains as the outer drive location. Each of these variances are essential to the redevelopment plan and pose an unnecessary and significant hardship.

3) Are there conditions that are peculiar to the subject property?

Yes, there are multiple conditions that are peculiar to the Property and support approval of the variances. The current development as a regional mall with expansive surface parking lots is a unique aspect. Because regional malls across the country are in decline and the size of the property creates a condition that is a unique redevelopment opportunity. The location on GA 400 with a planned future MARTA ELT stop and the access into and out of the Property are unique and support a distinctive approach to redevelopment of the Property.

CONCLUSION

The development opportunity at North Point is unique and distinct. Approval of North Point Mixed Use District is the opportunity to unlock the full potential of the Property, to create a future home for the NHL and a year-round entertainment district for the City. The design driven approach to North Point Mixed Use District reflects Alpharetta's high standards, curates a dynamic and balanced mix of uses, and preserves the North Point area as a regional destination for future generations. We look forward to working with the City and the community during this application process.

Sincerely,

Dillard Sellers



Julie L. Sellers

Property List

Properties:

1000 North Point Parkway
4000 and 4500 North Point Place
0 and 5000 North Point Drive
2000 and 6000 North Point Circle
0 Rock Mill Rd
Alpharetta, GA 30022

Parcel ID Numbers:

12 261006880440
12-261006880358
12-260007000123
12-272007430432
12-272007430416
12-273007420431
12-273007420399
12-260107000015
12-261007010435
12-261006880341

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: North Point Mixed Use District

Contact Name: Julie Sellers Telephone: 404-665-1242

The following people will be notified of this application and provided information describing the subject proposal. All properties within 500' or adjoining properties and the HOA MUST be notified. Notification requirements to be established by the City. Attach mailing list, as needed.

Surrounding Property Owners within 500 feet will be contacted by letter

Mall tenants will be contacted

Applicant will work with City to identify and meet with other stakeholders in North Point

Applicant will participate in two CZIM meetings and host additional meetings 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.*

- [X] Letter
- [X] Personal Visits
- [X] Telephone
- [X] Group Meeting
- [X] 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.

In addition to meetings, individuals will be able to call or email with questions.

ABBATE JENNIFER LORI
240 DUVAL DR
ALPHARETTA GA 30009

ADATRAO LAKSHMI KANTHI
275 DUVAL DR
ALPHARETTA GA 30009

ADEYINKA ODUTAYO
REVOCABLE LIVING TRUST THE
120 DOWNING DR
ALPHARETTA GA 30022

AGASAR PRATISHTHA
449 OLMSTEAD WAY
ALPHARETTA GA 30022

AGUIAR LUCIANA SACRAMENTO
& AGUIAR ODMIR ANDRADE
437 OLMSTEAD WAY
ALPHARETTA GA 30022

AITHA BALAKRISHNA
375 DUVAL DR
ALPHARETTA GA 30009

AKERS LAUREN
470 DUVAL DR
ALPHARETTA GA 30009

ALPHA LAND PARTNERS LLC
289 S CULVER ST
LAWRENCEVILLE GA 30046-4805

ALPHA Z-BOY PARTNERS, LLC
940 EMMETT AVE STE 200
BELMONT CA 94002-3881

AMERICAN PRIDE BANK
4511 FORSYTH RD
MACON GA 31210

ANSLEY INVESTMENT PARTNERS L P
P.O. BOX 460169
HOUSTON TX 77056

ARTISAN TOWNHOME ASSOCIATION INC
900 NORTH POINT PKWY #325
ALPHARETTA GA 30005

ASHTAROLNAKHAI SHADI
8230 HABERSHAM WATERS RD
SANDY SPRINGS GA 30350

ASILOKUN ARIT
485 DUVAL DR
ROSWELL GA 30076

ASLAM RACHEL
235 DOWNING DR
ALPHARETTA GA 30022

BASSETT ZACHIA THOMAS BURTON
& FAN CHENYIN
124 DOWNING DR
ALPHARETTA GA 30022

BEATRIZ GARCIA TRUST THE
213 DOWNING DR
ALPHARETTA GA 30022

BENDIKS ANYELINA
& BENDIKS ALYSSA
217 DOWNING DR
ALPHARETTA GA 30022

BENIWAL RAJENDER SINGH
495 DUVAL DR
ALPHARETTA GA 30009

BENSON ROBERT & MICHELE
385 DUVAL DR
ALPHARETTA GA 30009

NELLURI NEHA
535 DUVAL DR
ALPHARETTA GA 30009

NELLURI VARUN
114 DOWNING DR
ALPHARETTA GA 30022

NEWTON TREVOR ROBERT
590 DUVAL DR
ALPHARETTA GA 30009

NGUYEN NHU-TRAM THI
& HAMMANG RYAN KEITH
312 OLMSTEAD WAY
ALPHARETTA GA 30022

NIRESHWALYA SHIPALI SHREYUS
& NIRESHWALYA SHREYUS
465 DUVAL DR
ALPHARETTA GA 30009

NPMC RETAIL LC
2100 MC KINNEY AVE STE 700
DALLAS TX 75201

NRP ALPHARETTA SC LLC
3565 PIEDMONT RD NE BLDG/STE 4 250
ATLANTA GA 30305

OBIJIOFOR EBELE IFUNANYA
52 DUVAL DR
ALPHARETTA GA 30009

OKORO EBIMOBOERE
180 DUVAL DR
ALPHARETTA GA 30009

PAREEK MUKUND & PAREEK KRISHNA
400 DUVAL DR
ALPHARETTA GA 30009

PARK MIREA
300 DUVAL DR
ALPHARETTA GA 30009

PATEL PRERAK
110 DOWNING DR
ALPHARETTA GA 30022

PEREZ CESAR CARLOS PRADO
& PUCCI PAOLA ANDREA ARELLANO
420 DUVAL DR
ALPHARETTA GA 30009

PERKINS SHARI TOSHEA
& KELLY JESSE LEE II
160 DUVAL DR
ALPHARETTA GA 30009

POSKE NICOLE JASMINE
430 DUVAL DR
ALPHARETTA GA 30009

PRASAD SAPNA
215 DUVAL DR
ALPHARETTA GA 30009

RANJAN CHITTA
525 DUVAL DR
ALPHARETTA GA 30009

RANSOM NICHOLAS
585 DUVAL DR
ALPHARETTA GA 30009

REBALA SREEHARSHA REDDY
355 DUVAL DR
ALPHARETTA GA 30009

REDDY RUSHY PUTTA
& GADDAM SHRIYA
110 DUVAL DR
ALPHARETTA GA 30009

BLUE VENTURES LLC
12274 CRABAPPLE RD
ALPHARETTA GA 30004

BOTEZAT OLGA
429 OLMSTEAD WAY
ALPHARETTA GA 30022

BP NORTHPOINT LLC
5200 BUFFINGTON RD
ATLANTA GA 30349

BRE LQ PROPERTIES LLC
909 HIDDEN RIDGE # 600
IRVING TX 75038

BRI 1870 NORTH POINT LLC
100 N FEDERAL HWY #400
HALLANDALE FL 33009

BRI 1870 NORTH POINT LLC
P O BOX 1368
CARLSBAD CA 92018

BROCK HAILEY
205 DUVAL DR
ALPHARETTA GA 30009

BROOM MEGAN E
104 DOWNING DR
ALPHARETTA GA 30022

BURNS JENNY LYNN
& FARRIS JACOB BLAYNE
600 DUVAL DR
ALPHARETTA GA 30009

BURTON JOE ALAN ET AL
475 DUVAL DR
ALPHARETTA GA 30009

BUTLER SHERRY MARSHALL
411 OLMSTEAD WAY
ALPHARETTA GA 30022

CAIN BRENDA & NALL NICOLE
207 DOWNING DR
ALPHARETTA GA 30022

CARMAN ROBERT ALAN
1400 RIVERY BLVD APT 4212
GEORGETOWN TX 78628

CHEN TSUNG WEI
433 OLMSTEAD WAY
ALPHARETTA GA 30022

CHOI AREUM SOL & YIM SEUNG B
220 DUVAL DR
ALPHARETTA GA 30009

CHONG ANDREW
& CHONG HYUNA
229 DOWNING DR
ALPHARETTA GA 30022

CHOUDHARY JAYA & GOYAL PUJA
595 BARNESLEY LN
ALPHARETTA GA 30022

CHOUDHARY MILAN
118 DOWNING DR
ALPHARETTA GA 30022

CHUN HAE
2289 TENOR LANE
ALPHARETTA GA 30009

CITY OF ALPHARETTA THE
2 S MAIN ST
ALPHARETTA GA 30009

COLAIZZO STACY DOWNS
260 DUVAL DR
ALPHARETTA GA 30009

COLE CP ALPHARETTA GA LLC
12181 BLUFF CREEK DR 5TH FL
PLAYA VISTA CA 90094

CORNELY LILY
314 OLMSTEAD WAY
ALPHARETTA GA 30022

CRANSTON MICHAEL ROBERT
& MIRANDA WALTERS
580 DUVAL DR
ALPHARETTA GA 30009

CURRENT OCCUPANT
201 DOWNING DR
ALPHARETTA GA 30022

CURRENT OCCUPANT
203 DOWNING DR
ALPHARETTA GA 30022

CURRENT OCCUPANT
237 DOWNING DR
ALPHARETTA GA 30022

CURRENT OCCUPANT
241 DOWNING DR
ALPHARETTA GA 30022

CURRENT OCCUPANT
318 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
320 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
322 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
324 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
326 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
332 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
334 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
336 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
338 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
340 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
342 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
344 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
346 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
348 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
350 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
352 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
354 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
356 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
358 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
360 OLMSTEAD WAY
ALPHARETTA GA 30022

CURRENT OCCUPANT
362 OLMSTEAD WAY
ALPHARETTA GA 30022

DARBY ANDREW JOSEPH
& SURAVITCH LAUREN
455 DUVAL DR
ALPHARETTA GA 30009

DASS GNANAH PRAKASH
243 DOWNING DR
ALPHARETTA GA 30022

DAYTON HUDSON CORP
P.O. BOX 9456
MINNEAPOLIS MN 55440-9456

DE SAN LUIS JIMENEZ MENDEZ JOSE MARIA
116 DOWNING DR
ALPHARETTA GA 30022

DEEM DONNA
407 OLMSTEAD WAY
ALPHARETTA GA 30022

DILLARD DEPARTMENT STORES INC
4501 NORTH BEACH ST
FORT WORTH TX 76137

DUBE JEFFREY JOHN JR
413 OLMSTEAD WAY
ALPHARETTA GA 30022

DUDIPALA UHASRI
435 DUVAL DR
ALPHARETTA GA 30009

EASLEY CHRISTIAN DAVID
102 DOWNING DR
ALPHARETTA GA 30022

EKLER REUVEN
145 DUVAL DR
ALPHARETTA GA 30009

ENDER LAUREN ASHLEY
& WILSON JACK
431 OLMSTEAD WAY
ALPHARETTA GA 30022

EWOOL MABEL &
DEWORNU JUSTICE FIAMOR
409 OLMSTEAD WAY
ALPHARETTA GA 30022

FIGUEROA SERGIO REAL
& CAMACHO ADRIANA I
205 DOWNING DR
ALPHARETTA GA 30022

FILOS JOSEPH ANTHONY JR & NANCY
550 DUVAL DR
ALPHARETTA GA 30009

FLORALINDA LA FRATTA
REVOCABLE LIVING TRUST THE
405 DUVAL DR
ALPHARETTA GA 30009

FUESTING BRENT & MULLINS DANA
300 OLMSTEAD WAY
ALPHARETTA GA 30022

FULTON SCIENCE ACADEMY
SCHOOL INC
3035 FANFARE WAY
ALPHARETTA GA 30009

GADAMSETTY JUGAL ANVESH
235 DUVAL DR
ALPHARETTA GA 30009

GARNER NADIA N
302 OLMSTEAD WAY
ALPHARETTA GA 30022

GHADGE FAMILY
REVOCABLE LIVING TRUST THE
130 DUVAL DR
ALPHARETTA GA 30009

GIRALDO JULIANA
& GAVIRIA MARIA L
515 DUVAL DR
ALPHARETTA GA 30009

GONG YIXUAN
447 OLMSTEAD WAY
ALPHARETTA GA 30022

GOPAL SREEJI & SHARMA SWEETY
225 DOWNING DR
ALPHARETTA GA 30022

GOSWAMI SHIV RAJIV
227 DOWNING DR
ALPHARETTA GA 30022

GRBK NORTH POINT LLC
2805 N DALLAS PKWY STE 400
PLANO TX 75093

GRIFFIN ANJA KLOKOCKA &
GRIFFIN RASHAWN MARKIE
365 DUVAL DR
ALPHARETTA GA 30009

GUESS LAUREN RENE
455 OLMSTEAD WAY
ALPHARETTA GA 30022

GUPTA ABHAYA & MANJU
141 WESTCHESTER WAY
ALPHARETTA GA 30005

HALTHORE GAYATRI S & SRINIVAS N
445 OLMSTEAD WAY
ALPHARETTA GA 30022

HEBERT KELLY
540 DUVAL DR
ALPHARETTA GA 30009

HEDGE HAMSANATH & JAIN SUPRIYA
295 DUVAL DR
ALPHARETTA GA 30009

HENDERSON ALEXANDER WAYNE JR
560 DUVAL DR
ALPHARETTA GA 30009

HOLLYWOOD CAMARILLO PARTNERS L P
P.O. BOX 250509
ATLANTA GA 30305

HPTMI II PROPERTIES TRUST
P.O. BOX 579
LOUISVILLE TN 37777-0579

HUBERT PROP LLLP
850 KENNESAW AVE NW STE 2
MARIETTA GA 30060-1095

HUNTER JAMES PAUL WALMER
450 DUVAL DR
ALPHARETTA GA 30009

JAIN MUKUL & GUPTA ISHA
316 OLMSTEAD WAY
ALPHARETTA GA 30022

JASTI SAI VIGNESH
439 OLMSTEAD WAY
ALPHARETTA GA 30022

JAVERI VIPUL S
225 DUVAL DR
ALPHARETTA GA 30009

JIWANI AMBREEN S
8530 PRAIRIE DUNES WAY
DULUTH GA 30097

KATTA KRISHNA VENI
908 CATAMARAN CT
ALPHARETTA GA 30005

KATTUKURI MANISHA
& TADIPARTHI RAJESH
415 DUVAL DR
ALPHARETTA GA 30009

KENLEY AZADE K
304 OLMSTEAD WAY
ALPHARETTA GA 30022

KHAN ADNAN & HASHMI ZAINA FATIMAH
108 DOWNING DR
ALPHARETTA GA 30022

KHAN FIONA SOFANA ARMIN
& EAD WESAM ADAM
305 DUVAL DR
ALPHARETTA GA 30009

KIM CHANG LIVING TRUST THE
605 DUVAL DR
ALPHARETTA GA 30009

LEAL CARLOS ANTONIO PORRAS
& LEAL CLARET MARYNELLY PORRAS
360 DUVAL DR
ALPHARETTA GA 30009

LEE ALBERT YOUNG HOON ET AL
290 DUVAL DR
ALPHARETTA GA 30009

LEFKOVITS ADRIANA RAQUEL BUSTILLOS
370 DUVAL DR
ALPHARETTA GA 30009

LI GAIJUAN & ZHENG ZIHAO
155 DUVAL DR
ALPHARETTA GA 30009

LIAO DEXIONG
427 OLMSTEAD WAY
ALPHARETTA GA 30022

LIM YOUNG AH
453 OLMSTEAD WAY
ALPHARETTA GA 30022

MAKI REBECCA LYN
435 OLMSTEAD WAY
ALPHARETTA GA 30022

MALYALA DIVYA &
ANNACHEDU RAJENDAR REDDY
315 DUVAL DR
ALPHARETTA GA 30009

MANDADI NEHA & MANDADI
MOUNIKA & SAXENA AKSHAY PRAKASH
4820 CEDAR FOREST PL
LOUISVILLE KY 40245

MARCH JAMES & GILLIAN
401 OLMSTEAD WAY
ALPHARETTA GA 30022

MARCH JAMES & GILLIAN
421 OLMSTEAD WAY
ALPHARETTA GA 30022

MARTINEZ LINA MARIA VERGARA
211 DOWNING DR
ALPHARETTA GA 30022

MASHALY AHMED ELMETWALLY
& MOHAMED AZZA MOUSTAFA
255 DUVAL DR
ALPHARETTA GA 30009

MC ALISTER DONNA ANN
545 DUVAL DR
ALPHARETTA GA 30009

MELENDEZ ELIJAH JOEL & EVE LUTRELL
250 DUVAL DR
ALPHARETTA GA 30009

MIESCH MICHAEL
423 OLMSTEAD WAY
ALPHARETTA GA 30022

MILLER TY & BONNIE
209 DOWING DR
ALPHARETTA GA 30022

MOHANDAS RAHUL A
100 DOWNING DR
ALPHARETTA GA 30022

MOHAPATRA SURJYAKANTA
& SRILEKHA KUMARI
3755 KENNENT SQ
SUWANEE GA 30024

MONGELL MARK ANTHONY JR
& KUREN DAULTON MARTINE LEE VAN
480 DUVAL DR
ALPHARETTA GA 30009

MOODY AMI
505 DUVALL DR
ALPHARETTA GA 30009

MORALES DARWING ALBERTO HIDALGO
& ROMERO PAOLA C SANCHEZ
425 DUVAL DR
ALPHARETTA GA 30009

MORRISON TERRY A
& MORRISON MILTON JR
410 DUVAL DR
ALPHARETTA GA 30009

NAVA CESAR JOSE ROMERO
& MARIN BIANCA ANDREA SALAZAR
166 DUVAL DR
ALPHARETTA GA 30009

NAVARRA ROLAND DECLINES
& POLESTICO NINA LOU CASERES
395 DUVAL DR
ALPHARETTA GA 30009

REDDY SUNIL KARANAM
& ARUNA SREENIVASA
457 OLMSTEAD WAY
ALPHARETTA GA 30022

REEP RTL NPM GA LLC
51 MADISON AVE
NEW YORK NY 10010

REES ALBERT LEWIS
6092 CARLISLE LN
ALPHARETTA GA 30022

REYES CAMILO
390 DUVAL DR
ALPHARETTA GA 30009

RISHWAIN STEPHEN BUFFINGTON
221 DOWNING DR
ALPHARETTA GA 30022

RUBIO ANDRES E
230 DUVAL DR
ALPHARETTA GA 30009

RUDD COURTNEY LYDIA
140 DUVAL DR
ALPHARETTA GA 30009

SAMUDIO XIOMARA
565 DUVAL DR
ALPHARETTA GA 30009

SANCHEZ FABIANA CRISTINA
459 OLMSTEAD WAY
ALPHARETTA GA 30022

SANFORD ROBERT H II & JACQUELYN M
PO BOX 1228
ALPHARETTA GA 30009

SANTOS MARIA BENITEZ
219 DOWNING DR
ALPHARETTA GA 30022

SAUNDERS KASE AUSTIN
& ROBERTS EMILY CATHERINE
270 DUVAL DR
ALPHARETTA GA 30009

SAWJA RIZWAN AHMED ALI
& NESHMA SADRUDDIN
8285 SAINT MARLO FAIRWAY DR
DULUTH GA 30097

SHOKOOHI CHEYENNE ET AL
106 DOWNING DR
ALPHARETTA GA 30022

SINGH NISHANT
555 DUVAL DR
ALPHARETTA GA 30009

SOLANKI ATUL PRAKASH
445 DUVAL DR
ALPHARETTA GA 30009

SOMANI VINEET & SARDA ANKITA
345 DUVAL DR
ALPHARETTA GA 30009

SONTENAM SAI SIVA SUNDAR S
112 DOWNING DR
ALPHARETTA GA 30022

SOUSA BARBARA DE
223 DOWNING DR
ALPHARETTA GA 30022

SRIVASTAVA SHOBHIT
611 HANLON WAY
ALPHARETTA GA 30009

STRANGE WILLIAM & HOGAN CHELSEA
405 OLMSTEAD WAY
ALPHARETTA GA 30022

STRUNK CHAD ALAN
& VONWAHLDE GAIL CLARA
419 OLMSTEAD WAY
ALPHARETTA GA 30022

SUMANTH SUKHAVASI
& MALLIMOGGALA PADMINI
325 DUVAL DR
ALPHARETTA GA 30009

SUN CHRISTINE
& MARTIN CALEB JAMES
335 DUVAL DR
ALPHARETTA GA 30009

SUN TRUST BANK ATL
PO BOX 26665, VA-RIC-8614
RICHMOND VA 23261-6665

SUNDARAM BALAJI HARI
& HARI MEENAKSHI
441 OLMSTEAD WAY
ALPHARETTA GA 30022

SWANN INVESTMENTS L P
850 KENNESAW AVE NW STE C2
MARIETTA GA 30060-1095

TAO SIJIA & ZHANG XING
4735 WEATHERVANE DR
ALPHARETTA GA 30022

THOGARU PRASHANTH
175 DUVAL DR
ALPHARETTA GA 30009

THOMAS DON VALENCIA
210 DUVAL DR
ALPHARETTA GA 30009

THOMPSON ROBYN YVETTE
490 DUVAL DR
ALPHARETTA GA 30009

TOUART KRISTIN BROOKE
190 DUVAL DR
ALPHARETTA GA 30009

TPG ECCO PARK L L C
11340 LAKEFIELD DR STE 140
DULUTH GA 30097

TRINCADO MARINA SCALZARETTO
& ANTA ROBERTO CUESTA
451 OLMSTEAD WAY
ALPHARETTA GA 30022

VIHAN LLC
12647 WATERSIDE DR
ALPHARETTA GA 30004

VON MAUR INC
6565 N BRADY ST
DAVENPORT IA 52806-2054

VYAS HEMALI J & MISTRY CHINTU V
417 OLMSTEAD WAY
ALPHARETTA GA 30022

WALES GEORGIA REAL ESTATE LLC
5134 OLD NATIONAL HWY STE B
ATLANTA GA 30349

WALKER AARON JAMES
& LORRANA ARAUJO
425 OLMSTEAD WAY
ALPHARETTA GA 30022

WALLIS WILLIAM MICHAEL LEE
& WALLIS TIFFANI
200 DUVAL DR
ALPHARETTA GA 30009

WANG GANG
245 DOWNING DR
ALPHARETTA GA 30022

WHITENER TIFFANY LASHA & MICHAEL LEE JR
245 DUVAL DR
ALPHARETTA GA 30009

WILKINS MARY KATHLEEN
& DICIOCCIO AJ
280 DUVAL DR
ALPHARETTA GA 30009

WILLIAM LIU &
LEI SHEN REVOCABLE TRUST THE
350 DUVAL DR
ALPHARETTA GA 30009

YALAMATI MANASA SREE
285 DUVAL DR
ALPHARETTA GA 30009

YAN YIYANG
247 DOWNING DR
ALPHARETTA GA 30022

YANG LIMIN
185 DUVAL DR
ALPHARETTA GA 30009

YIFAT MAYA &
CTIBOR FREDERICK JOSEPH
460 DUVAL DR
ALPHARETTA GA 30009

YOLANDA THERESE HEAD
LIVING TRUST THE
570 DUAL DR
ALPHARETTA GA 30009

YOUNG HUNTER &
TURPIN ELIZABETH
215 DOWNING DR
ALPHARETTA GA 30022

YUAN TINGTING
231 DOWNING DR
ALPHARETTA GA 30022

YUN YOUNGHO & YUN HYEUN SUK
380 DUVAL DR
ALPHARETTA GA 30009

ZAMBRANO JOSE RICARDO
122 DOWNING DR
ALPHARETTA GA 30022

ZHANG SHAOBO & HE WENFENG
403 OLMSTEAD WAY
ALPHARETTA GA 30022

ZHOU JENNY GONG & JOE FU
10974 TACONIC WAY
JOHNS CREEK GA 30097

ZHOU ZHI & ZENG LIN
239 DOWNING DR
ALPHARETTA GA 30022

Real Estate

View Bill

As of	3/4/2026
Bill Year	2025
Bill	2507126
Owner	REEP RTL NPM GA LLC
Parcel ID	12 -2610-0688-044-0

Installment	Pay By	Amount	Payments/Credits	Balance	Interest	Due
1	12/1/2025	$154,780.57	$154,780.57	$0.00	$0.00	$0.00
TOTAL		$154,780.57	$154,780.57	$0.00	$0.00	$0.00

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Real Estate

View Bill

As of	3/4/2026
Bill Year	2025
Bill	2507125
Owner	REEP RTL NPM GA LLC
Parcel ID	12 -2610-0688-035-8

Installment	Pay By	Amount	Payments/Credits	Balance	Interest	Due
1	12/1/2025	$14,260.00	$14,260.00	$0.00	$0.00	$0.00
TOTAL		$14,260.00	$14,260.00	$0.00	$0.00	$0.00

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Real Estate

View Bill

As of	3/4/2026
Bill Year	2025
Bill	2507031
Owner	REEP RTL NPM GA LLC
Parcel ID	12 -2600-0700-012-3

Installment	Pay By	Amount	Payments/Credits	Balance	Interest	Due
1	12/1/2025	$18,860.00	$18,865.06	($5.06)	$0.00	($5.06)
Interest			$0.14			$0.00
TOTAL		$18,860.00	$18,865.06	($5.06)	$0.00	($5.06)

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Real Estate

View Bill

As of	3/4/2026
Bill Year	2025
Bill	2507783
Owner	REEP RTL NPM GA LLC
Parcel ID	12 -2720-0743-043-2

Installment	Pay By	Amount	Payments/Credits	Balance	Interest	Due
1	12/1/2025	$6,555.00	$6,555.00	$0.00	$0.00	$0.00
TOTAL		$6,555.00	$6,555.00	$0.00	$0.00	$0.00

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Real Estate

View Bill

As of	3/4/2026
Bill Year	2025
Bill	2507782
Owner	REEP RTL NPM GA LLC
Parcel ID	12 -2720-0743-041-6

Installment	Pay By	Amount	Payments/Credits	Balance	Interest	Due
1	12/1/2025	$17,314.63	$17,314.63	$0.00	$0.00	$0.00
TOTAL		$17,314.63	$17,314.63	$0.00	$0.00	$0.00

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Real Estate

View Bill

As of	3/4/2026
Bill Year	2025
Bill	2507923
Owner	REEP RTL NPM GA LLC
Parcel ID	12 -2730-0742-043-1

Installment	Pay By	Amount	Payments/Credits	Balance	Interest	Due
1	12/1/2025	$9,803.06	$9,803.06	$0.00	$0.00	$0.00
TOTAL		$9,803.06	$9,803.06	$0.00	$0.00	$0.00

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Real Estate

View Bill

As of	3/4/2026
Bill Year	2025
Bill	2507920
Owner	REEP RTL NPM GA LLC
Parcel ID	12 -2730-0742-039-9

Installment	Pay By	Amount	Payments/Credits	Balance	Interest	Due
1	12/1/2025	$12,420.00	$12,420.00	$0.00	$0.00	$0.00
TOTAL		$12,420.00	$12,420.00	$0.00	$0.00	$0.00

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Real Estate

View Bill

As of	3/4/2026
Bill Year	2025
Bill	2507113
Owner	REEP RTL NPM GA LLC
Parcel ID	12 -2601-0700-001-5

Installment	Pay By	Amount	Payments/Credits	Balance	Interest	Due
1	12/1/2025	$178.25	$178.25	$0.00	$0.00	$0.00
TOTAL		$178.25	$178.25	$0.00	$0.00	$0.00

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Real Estate

View Bill

As of	3/4/2026
Bill Year	2025
Bill	2507127
Owner	DILLARD DEPARTMENT STORES INC
Parcel ID	12 -2610-0701-043-5

Installment	Pay By	Amount	Payments/Credits	Balance	Interest	Due
1	12/1/2025	$20,700.00	$20,700.00	$0.00	$0.00	$0.00
TOTAL		$20,700.00	$20,700.00	$0.00	$0.00	$0.00

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Real Estate

View Bill

As of	3/4/2026
Bill Year	2025
Bill	2507124
Owner	VON MAUR INC
Parcel ID	12 -2610-0688-034-1

Installment	Pay By	Amount	Payments/Credits	Balance	Interest	Due
1	12/1/2025	$8,740.00	$8,740.00	$0.00	$0.00	$0.00
TOTAL		$8,740.00	$8,740.00	$0.00	$0.00	$0.00

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Filters

Code Enforcement **No code violations associated with subject properties**

Filters | Styling

Filter as map moves

Select attribute filters (13)

- Type Description — Values: 4
- Number — Values: 119
- Tag — Values: 88
- Status Code — Values: 1
- Assigned To — Values: 3
- Initiated Date — 9/15/2022 to 1/21/2026
- Z — 0 to 0
- Location — Values: 116
- Reference ID — Values: 119
- created_user — Values: 1

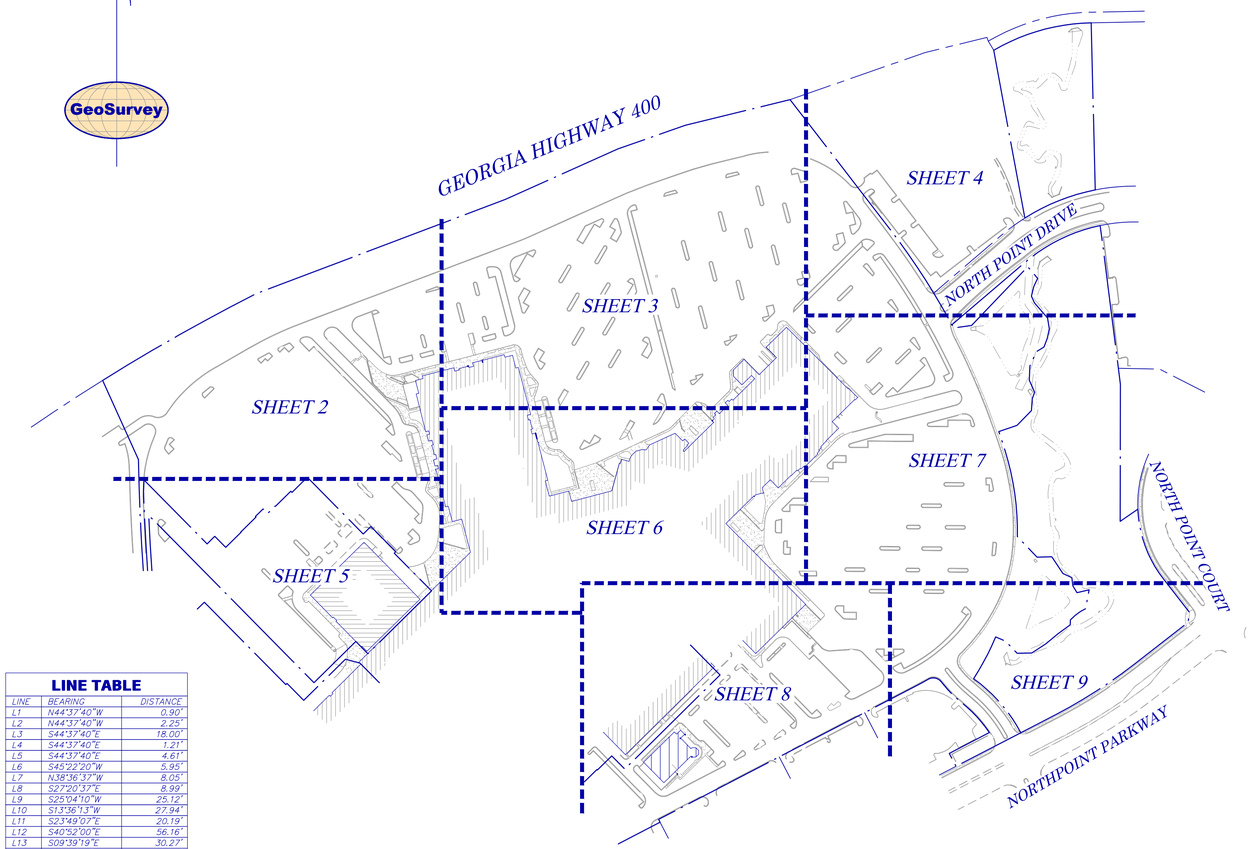


GRID NORTH – GA. WEST ZONE

GeoSurvey

SHEET INDEX

NOT TO SCALE



LINE TABLE

LINE	BEARING	DISTANCE
L1	N44°37'40"W	0.90'
L2	N44°37'40"W	2.25'
L3	S44°37'40"E	18.00'
L4	S44°37'40"E	1.21'
L5	S44°37'40"E	4.61'
L6	S45°22'20"W	5.95'
L7	N38°36'37"W	8.05'
L8	S27°20'37"E	8.99'
L9	S25°04'10"W	25.12'
L10	S13°36'13"W	27.94'
L11	S23°49'07"E	20.19'
L12	S40°52'00"E	56.16'
L13	S09°39'19"E	30.27'
L14	S11°45'42"W	27.61'
L15	S21°24'57"W	26.36'
L16	S58°13'37"W	25.21'
L17	S24°01'18"W	43.73'
L18	S02°33'44"W	39.53'
L19	S24°16'17"E	36.60'
L20	S20°06'00"W	19.30'
L21	S04°10'17"W	33.58'
L22	N88°45'15"E	41.47'
L23	S33°41'51"E	55.91'
L24	S64°52'31"E	27.69'
L25	S06°20'09"E	22.81'
L26	S31°23'27"E	22.70'
L27	N76°22'56"E	34.79'
L28	S10°48'55"W	53.95'
L29	S61°01'39"W	16.20'
L30	S53°35'43"W	18.97'
L31	S46°27'08"W	17.58'
L32	S02°37'37"W	13.75'
L33	S53°33'30"W	42.55'
L34	S50°32'16"W	43.31'
L35	S56°42'14"W	47.66'
L36	S89°15'20"W	40.84'
L37	N43°43'03"W	46.63'
L38	N66°34'10"W	30.18'

CLOSURE STATEMENT

THE FIELD CLOSURE UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 41,014', AND WAS ADJUSTED USING THE LEAST SQUARES METHOD. A TRIMBLE S-6 TOTAL STATION AND TRIMBLE TSC-3 DATA COLLECTOR WERE USED TO COLLECT THIS FIELD DATA.

IF YOU DIG

811

Know what's **below.**
Call before you dig.
Dial 811
Or Call 800-282-7411

UTILITY NOTE

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SUBSURFACE UTILITY INVESTIGATIONS, LLC
898 SWEET BRIAR TRAIL
CONYERS, GEORGIA 30094
(770) 557-4142

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AERIAL PHOTOGRAPHS

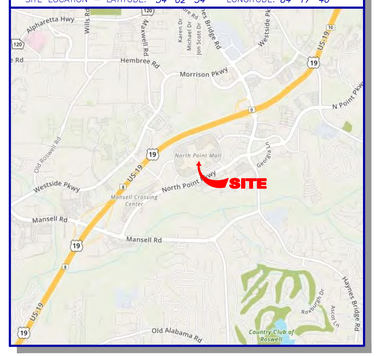






VICINITY MAP

SITE LOCATION – LATITUDE: 34° 02' 54" LONGITUDE: 84° 17' 40"



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A PORTION OF THIS PROPERTY IS LOCATED IN FLOOD ZONE "AE" BASED ON THE FLOOD INSURANCE RATE MAP FOR THIS AREA. THE MAP NUMBER FOR THIS AREA IS 13121C0066F, AND THE DATE OF SAID MAP IS SEPTEMBER 18, 2013. THIS DETERMINATION WAS MADE BY GRAPHICALLY DETERMINING THE POSITION OF THIS SITE ON SAID FIRM MAPS UNLESS OTHERWISE NOTED.

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SHEET 1 OF 9

COVER SHEET

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John T. Newman
Georgia Professional
Land Surveyor # 3324

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EMAIL: info@geosurvey.com
Certificate of Authorization #LSF-000621

PARTIAL TOPOGRAPHIC SURVEY OF

North Point Mall

FOR

GGP North Point, Inc.

GS JOB NO:	20124284	DRAWING SCALE:	1"= 40'
FIELD WORK:	CB/EP	CITY: ALPHARETTA	STATE: GA
PROJ MGR:	JTN	COUNTY: FULTON	
REVIEWED:	JRC	LAND LOT: 688,689,700,701	
DWG FILE:	20124284-6.dwg	DISTRICT: 1ST	SECTION: 2ND

SURVEY DATE: 04-12-2019

REVISIONS

No.	Date	Description
1.	6-20-19	Add easements per surv. ref. 2
2.	8-13-19	Add 6" trees along Northpoint Dr (sheets 4 & 7)
3.	9-26-19	Add numbered trees per arborist

SITE PHOTOGRAPHS



1



2

3

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LEGEND

STANDARD ABBREVIATIONS

AC	AIR CONDITIONER
BH	BORE HOLE
BSL	BUILDING SETBACK LINE
CI	CURB INLET
CMP	CORRUGATED METAL PIPE
CMF	CONCRETE MONUMENT FND
CO	SANITARY CLEANOUT
CPED	COMMUNICATION PEDESTAL
CTP	CRIMPED TOP PIPE
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RCP	REINFORCED CONCRETE PIPE
RBR	IRON REINFORCING BAR
RBS	5/8"RBR SET CAPPED LSF 621
SS	SANITARY SEWER
SWCB	SINGLE WING CATCH BASIN
TRANS	ELECTRIC TRANSFORMER

STANDARD SYMBOLS

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	POWER POLE
	GUY WIRE
LP	POWER LINE / LIGHT POLE
	ELECTRIC TRANSFORMER
	WATER VAULT
GM	GAS METER
	GAS VALVE
WV	WATER VALVE
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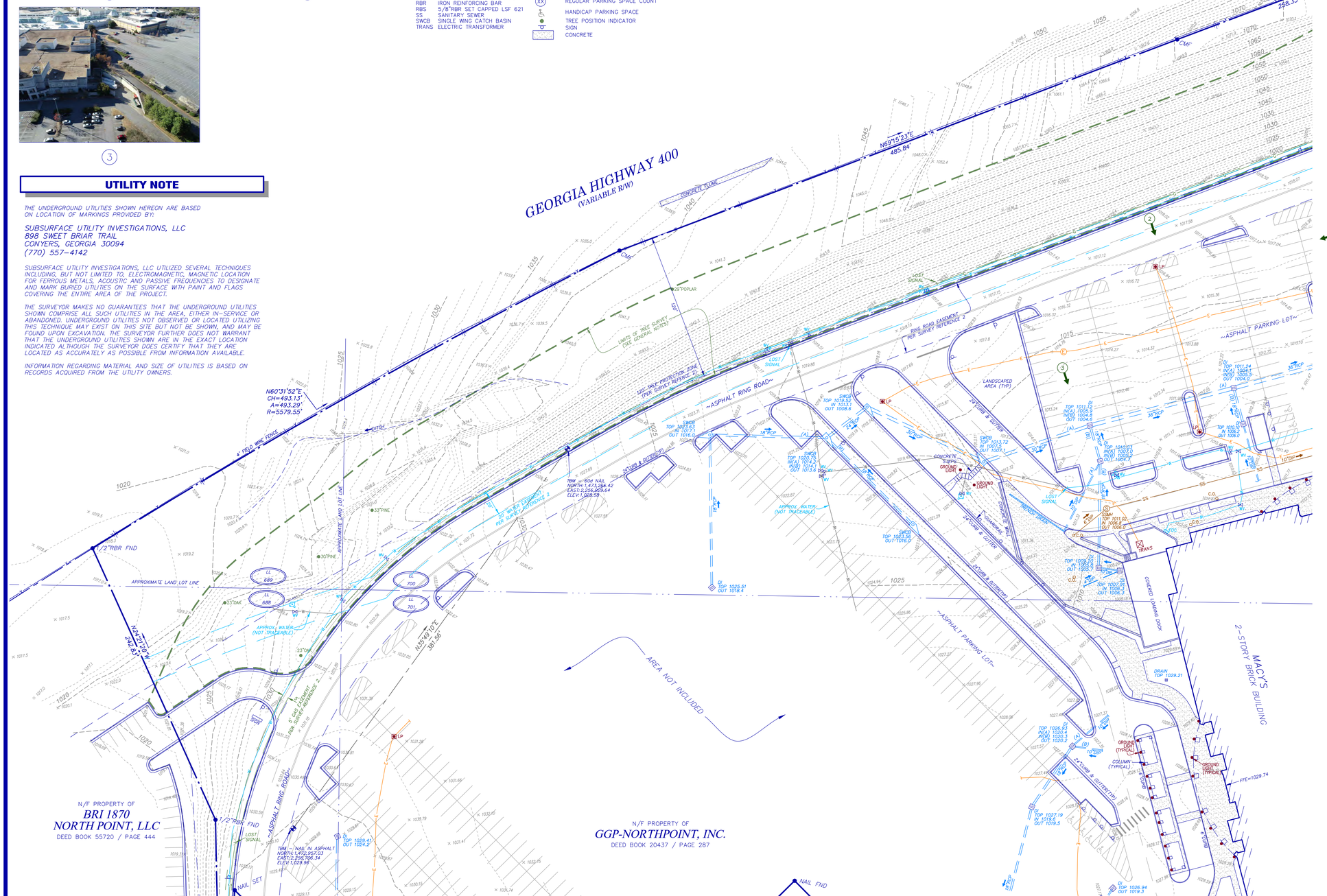
811

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GRAPHIC SCALE

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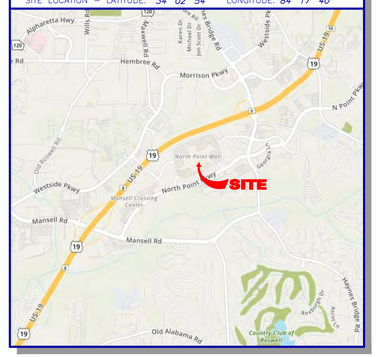
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GeoSurvey

VICINITY MAP

SITE LOCATION – LATITUDE: 34° 02' 54" LONGITUDE: 84° 17' 40"



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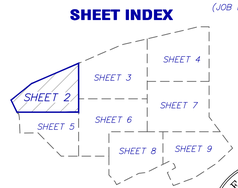
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SHEET 2 OF 9

SHEET INDEX



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PARTIAL TOPOGRAPHIC SURVEY OF

North Point Mall

FOR

GGP North Point, Inc.

GS JOB NO: 20124284	DRAWING SCALE: 1"= 40'	SURVEY DATE: 04-12-2019	
FIELD WORK: CB/EP	CITY: ALPHARETTA STATE: GA	REVISIONS	
PROJ MGR: JTN	COUNTY: FULTON	No.	Date / Description
REVIEWED: JRC	LAND LOT: 688,689,700,701 742,743,754,755	1.	6-20-19 Add easements per surv. ref. 2
DWG FILE: 20124284-6.dwg	DISTRICT: 1ST SECTION: 2ND	2.	8-13-19 Add 6" trees along Northpoint Dr (sheets 4 & 7)
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SITE PHOTOGRAPHS

4

5

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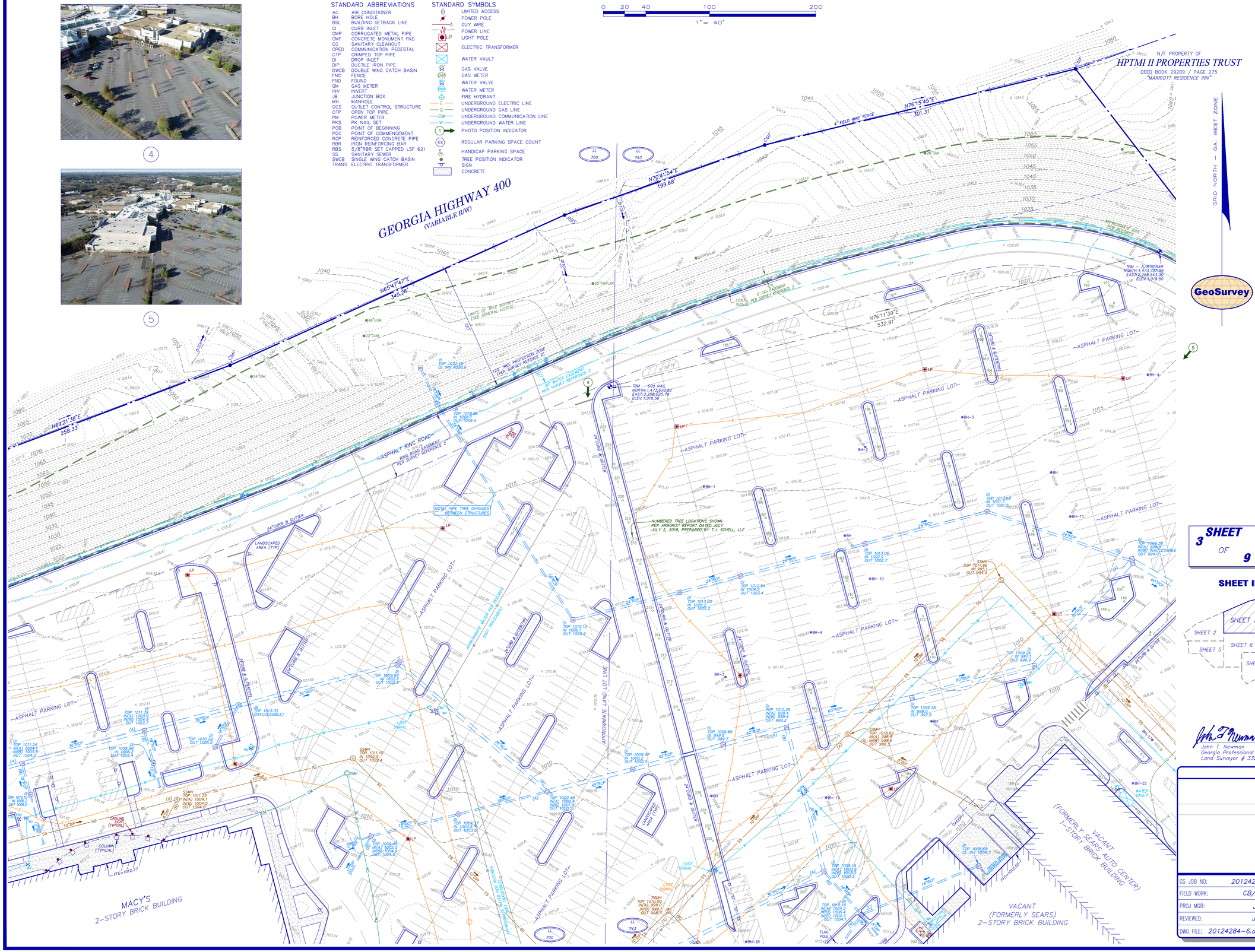
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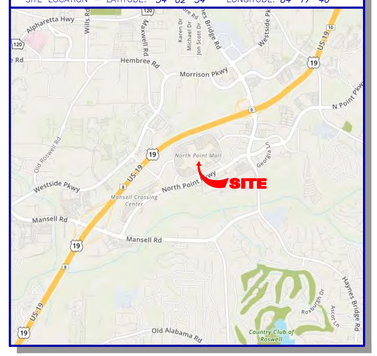
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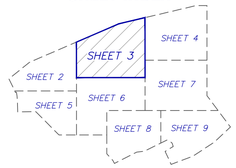
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SHEET 3 OF 9

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GGP North Point, Inc.

GS JOB NO:	20124284	DRAWING SCALE:	1"= 40'
FIELD WORK:	CB/EP	CITY:	ALPHARETTA
PROJ MGR:	JTN	STATE:	GA
REVIEWED:	JRC	COUNTY:	FULTON
DWG FILE:	20124284-6.dwg	LAND LOT:	688,689,700,701 742,743,754,755
		DISTRICT:	1ST
		SECTION:	2ND

SURVEY DATE: 04-12-2019

REVISIONS

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2.	8-13-19	Add 6" trees along Northpoint Dr (sheets 4 & 7)
3.	9-26-19	Add numbered trees per arborist

SITE PHOTOGRAPHS



6



7

GRAPHIC SCALE

0 20 40 100 200

1" = 40'

LEGEND

STANDARD ABBREVIATIONS

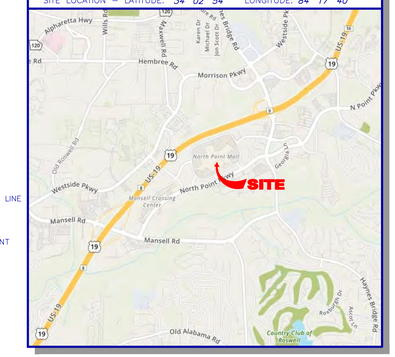
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STANDARD SYMBOLS

- LIMITED ACCESS
- POWER POLE
- GUY WIRE
- POWER LINE
- LIGHT POLE
- ELECTRIC TRANSFORMER
- WATER VAULT
- GAS VALVE
- GAS METER
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- UNDERGROUND ELECTRIC LINE
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- PHOTO POSITION INDICATOR
- REGULAR PARKING SPACE COUNT
- HANDICAP PARKING SPACE
- TREE POSITION INDICATOR
- SIGN
- CONCRETE

VICINITY MAP

SITE LOCATION – LATITUDE: 34° 02' 54" LONGITUDE: 84° 17' 40"



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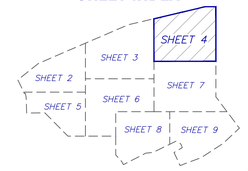
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SHEET 4 OF 9

SHEET INDEX



GRID NORTH – GA. WEST ZONE

GeoSurvey

John T. Newman
Georgia Professional
Land Surveyor # 3324

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Marietta, Georgia 30062
Phone: (770) 795-9900
Fax: (770) 795-8880
www.geosurvey.com
EMAIL: info@geosurvey.com
Certificate of Authorization #LSF-000621

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North Point Mall

FOR

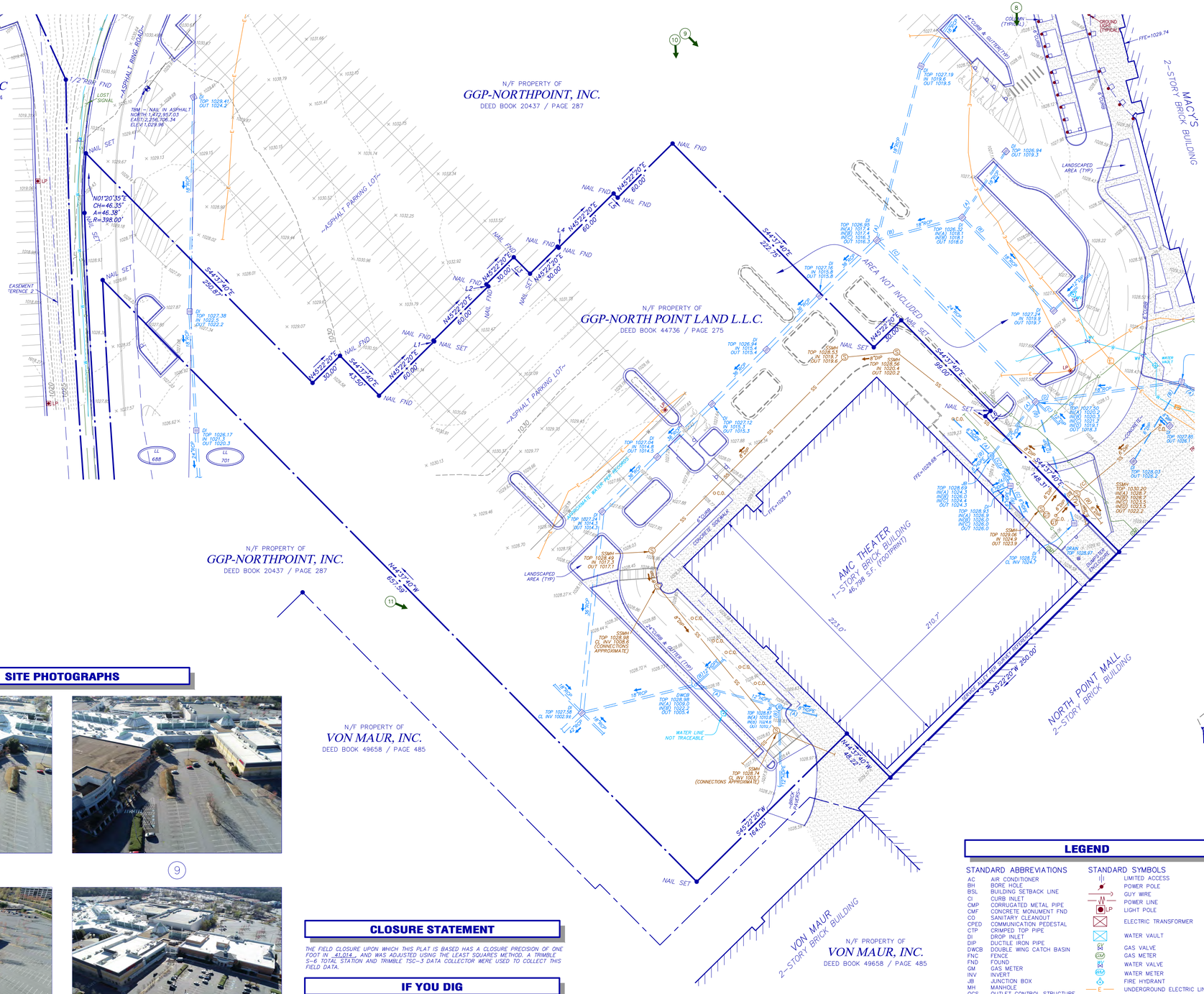
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9


10


11

CLOSURE STATEMENT

THE FIELD CLOSURE UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 41,014', AND WAS ADJUSTED USING THE LEAST SQUARES METHOD. A TRIMBLE S-6 TOTAL STATION AND TRIMBLE TSC-3 DATA COLLECTOR WERE USED TO COLLECT THIS FIELD DATA.

IF YOU DIG

811 Know what's **below.** **Call** before you dig. Dial 811 Or Call 800-282-7411

GRAPHIC SCALE

0 20 40 100 200

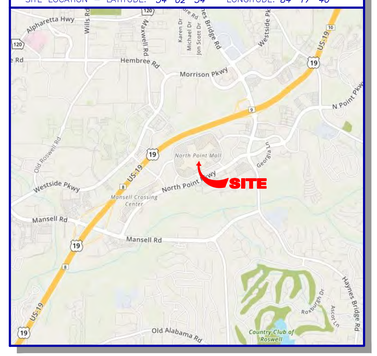
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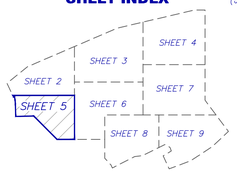
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SHEET 5 OF 9

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EMAIL: info@geosurvey.com
Certificate of Authorization #LSF-000621

GEORGIA REGISTERED PROFESSIONAL NO. 3324 LAND SURVEYOR JOHN T. NEWMAN

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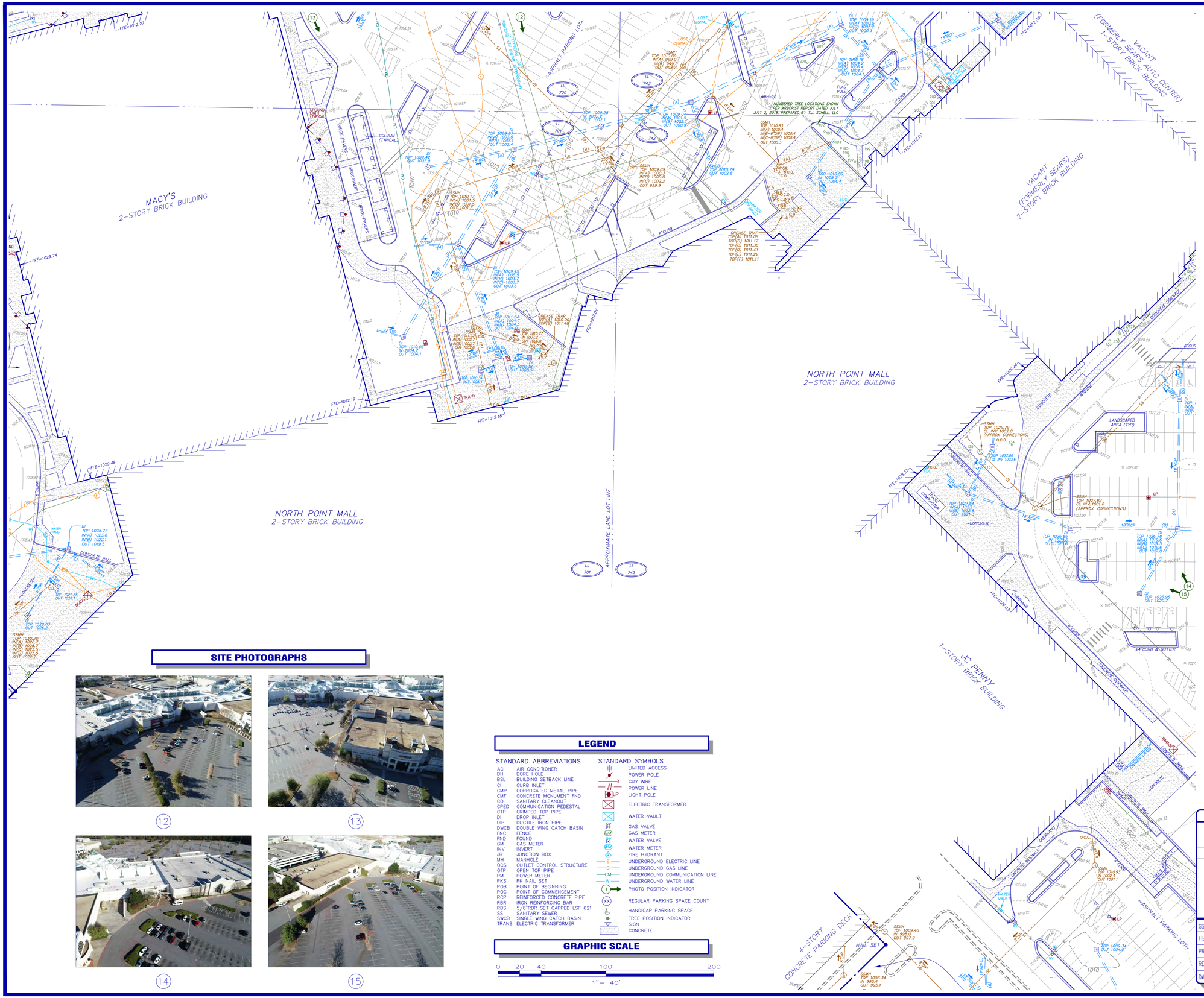
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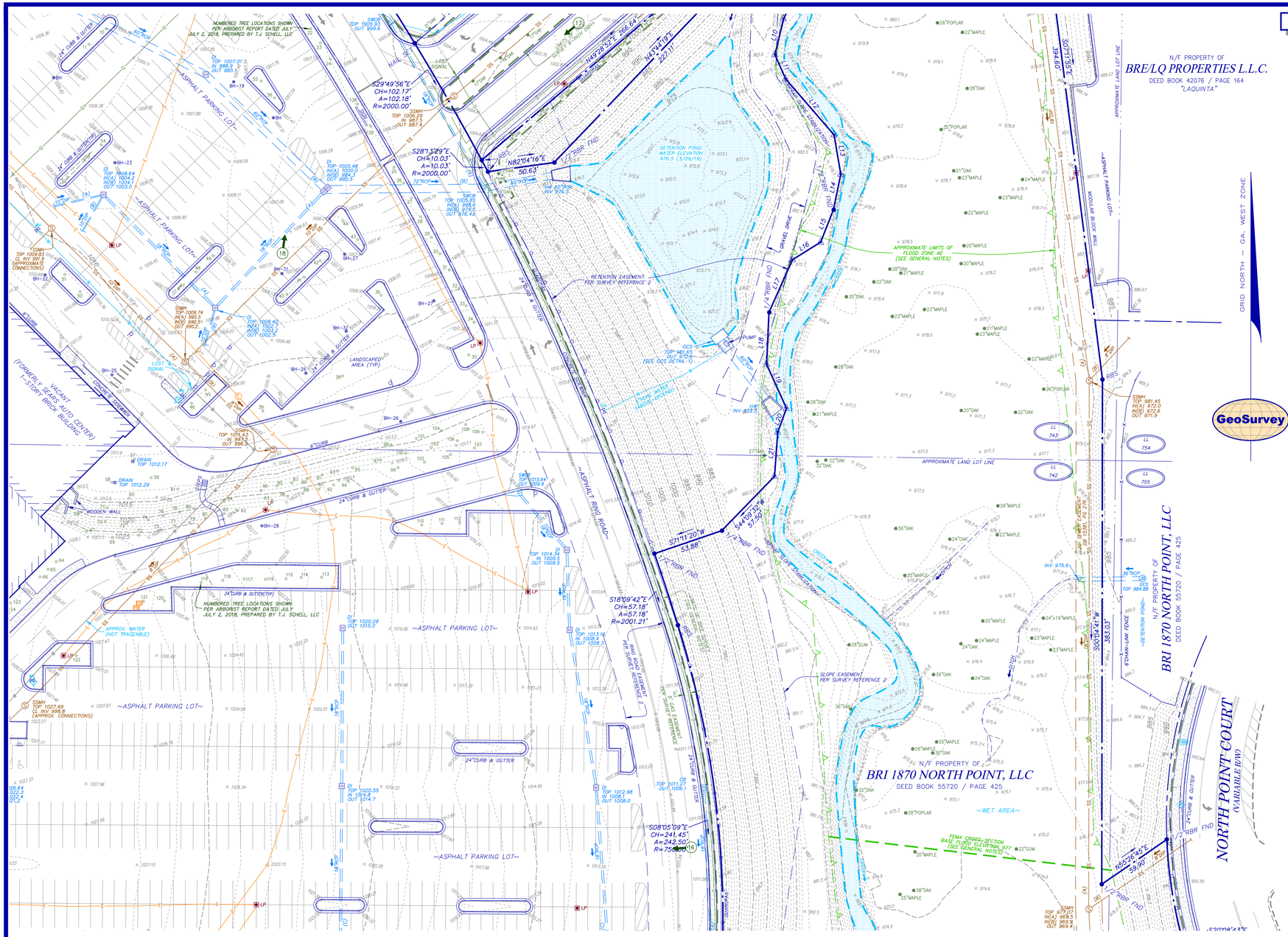
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MACY'S
2-STORY BRICK BUILDING
NORTH POINT MALL
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NORTH POINT MALL
2-STORY BRICK BUILDING
VACANT
(FORMERLY SEARS)
2-STORY BRICK BUILDING
(FORMERLY SEARS AUTO CENTER)
1-STORY BRICK BUILDING
JC PENNY
1-STORY BRICK BUILDING
4-STORY
CONCRETE PARKING DECK
~ASPHALT PARKING LOT~
APPROXIMATE LAND LOT LINE
LL 701
LL 742
NUMBERED TREE LOCATIONS SHOWN PER ARBORIST REPORT DATED JULY JULY 2, 2018, PREPARED BY T.J. SCHELL, LLC
GREASE TRAP TOP(A) 1011.08 TOP(B) 1011.17 TOP(C) 1011.36 TOP(D) 1011.43 TOP(E) 1011.22 TOP(F) 1011.11
GREASE TRAP TOP(A) 1010.26 TOP(B) 1011.48
BH-20
FLAG POLE
GROUND SIGN (TYPICAL)
COLUMN (TYPICAL)
BRICK PAVERS
~CONCRETE~
~CONCRETE WALK~
~CONCRETE SIDEWALK~
LANDSCAPED AREA (TYP)
CONCRETE WALL
ROCK CONSTRUCTION
OVERHANG
24"CURB & GUTTER
TRANS
LP
WV
WATER VAULT
FFE=1012.27
FFE=1029.74
FFE=1029.48
FFE=1012.19
FFE=1012.18
FFE=1012.00
FFE=1029.26
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16



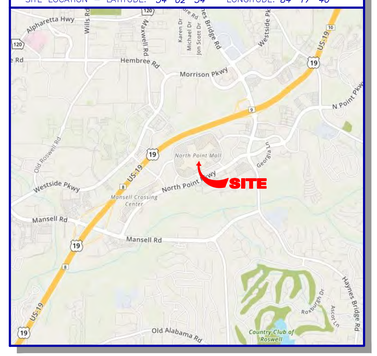
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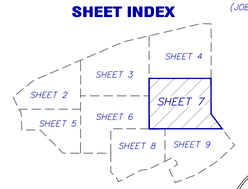
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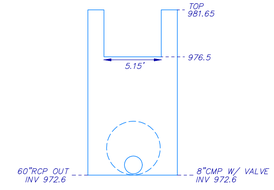
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- LIMITED ACCESS
- POWER POLE
- GUY WIRE
- POWER LINE
- LIGHT POLE
- ELECTRIC TRANSFORMER
- WATER VAULT
- GAS VALVE
- GAS METER
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND GAS LINE
- UNDERGROUND COMMUNICATION LINE
- UNDERGROUND WATER LINE
- PHOTO POSITION INDICATOR
- REGULAR PARKING SPACE COUNT
- HANDICAP PARKING SPACE
- TREE POSITION INDICATOR
- SIGN
- CONCRETE

OCS DETAIL 1



GRAPHIC SCALE

0 20 40 100 200

1" = 40'

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Certificate of Authorization #LSF-000621

GEORGIA REGISTERED PROFESSIONAL NO. 3324 LAND SURVEYOR JOHN T. NEWMAN

John T. Newman
Georgia Professional
Land Surveyor # 3324

PARTIAL TOPOGRAPHIC SURVEY OF

North Point Mall

FOR

GGP North Point, Inc.

GS JOB NO:	20124284	DRAWING SCALE:	1"= 40'
FIELD WORK:	CB/EP	CITY:	ALPHARETTA
PROJ MGR:	JTN	STATE:	GA
REVIEWED:	JRC	COUNTY:	FULTON
DWG FILE:	20124284-6.dwg	LAND LOT:	688,689,700,701 742,743,754,755
		DISTRICT:	1ST
		SECTION:	2ND

SURVEY DATE: 04-12-2019

REVISIONS

No.	Date	Description
1.	6-20-19	Add easements per surv. ref. 2
2.	8-13-19	Add 6" trees along Northpoint Dr (sheets 4 & 7)
3.	9-26-19	Add numbered trees per arborist

SITE PHOTOGRAPHS



19



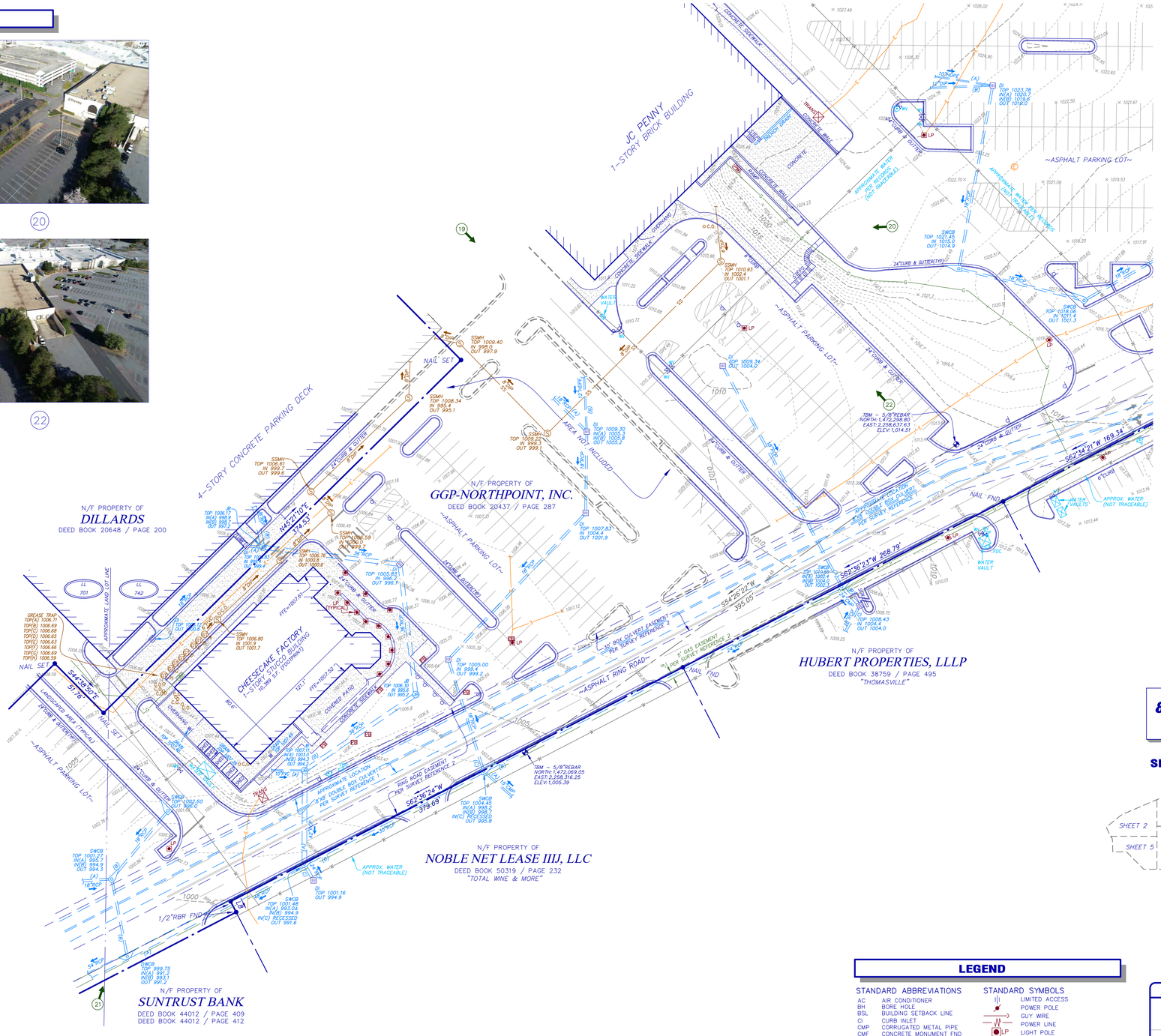
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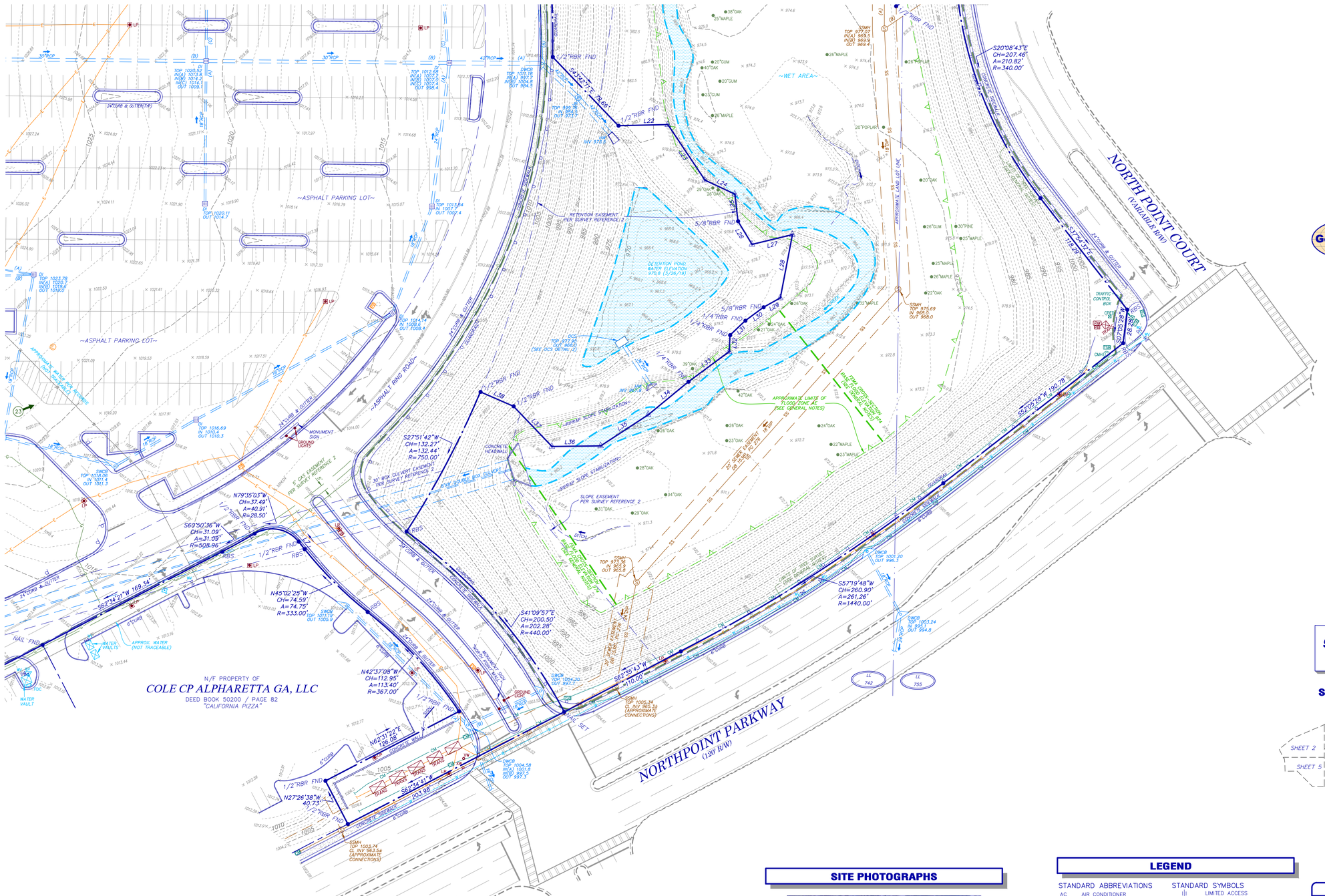


21



22


JC PENNY
1-STORY BRICK BUILDING
4-STORY CONCRETE PARKING DECK
~ASPHALT PARKING LOT~
~ASPHALT RING ROAD~
CHEESECAKE FACTORY
1-STORY STUCCO BUILDING
10,169 S.F. (FOOTPRINT)
N/F PROPERTY OF
GGP-NORTHPOINT, INC.
DEED BOOK 20437 / PAGE 287
N/F PROPERTY OF
DILLARDS
DEED BOOK 20648 / PAGE 200
N/F PROPERTY OF
HUBERT PROPERTIES, LLLP
DEED BOOK 38759 / PAGE 495
"THOMASVILLE"
N/F PROPERTY OF
NOBLE NET LEASE IIIJ, LLC
DEED BOOK 50319 / PAGE 232
"TOTAL WINE & MORE"
N/F PROPERTY OF
SUNTRUST BANK
DEED BOOK 44012 / PAGE 409
DEED BOOK 44012 / PAGE 412
NAIL SET
NAIL FND
1/2"RBR FND
S44°35'50"E 317.76'
S62°36'24"W 379.69'
S62°36'23"W 268.79'
S54°36'22"W 395.05'
S62°34'21"W 169.34'
TBM – 5/8"REBAR
NORTH:1,472,088.05
EAST:2,258,837.63
ELEV:1,014.51
TBM – 5/8"REBAR
NORTH:1,472,088.05
EAST:2,258,316.25
ELEV:1,005.39
APPROX. WATER (NOT TRACEABLE)
APPROX. WATER (NOT TRACEABLE)
APPROXIMATE LOCATION OF 8" DOUBLE SSL PER SURVEY REFERENCE 1
APPROXIMATE LOCATION OF 8" DOUBLE SSL PER SURVEY REFERENCE 1
RING ROAD EASEMENT PER SURVEY REFERENCE 2
5' GAS EASEMENT PER SURVEY REFERENCE 2
10' BOX GAS/WEST EASEMENT PER SURVEY REFERENCE 2
AREA NOT INCLUDED
APPROXIMATE LAND LOT LINE
LL 701
LL 742
GREASE TRAP
TOP(A) 1006.71
TOP(B) 1006.69
TOP(C) 1006.68
TOP(D) 1006.65
TOP(E) 1006.63
TOP(F) 1006.66
TOP(G) 1006.69
TOP(H) 1006.59
FFE=1007.67
FFE=1007.52
CONCRETE PAD
TRANS
TRANS
TRANS

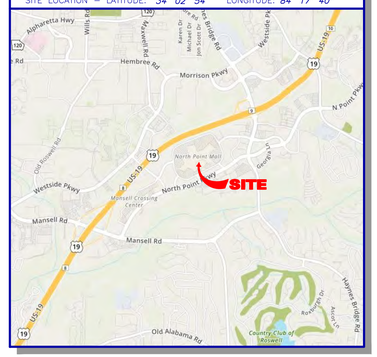


GRID NORTH – GA. WEST ZONE

GeoSurvey

VICINITY MAP

SITE LOCATION – LATITUDE: 34° 02' 54" LONGITUDE: 84° 17' 40"



GENERAL NOTES

THIS SURVEY HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE PERSON OR ENTITIES NAMED HEREON. NO EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE INFORMATION SHOWN HEREON IS TO BE EXTENDED TO ANY PERSONS OR ENTITIES OTHER THAN THOSE SHOWN HEREON.

THIS SURVEY HAS BEEN PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE INSPECTION REPORT. EASEMENTS OR OTHER ENCUMBRANCES MAY EXIST ON PUBLIC RECORD BUT NOT BE SHOWN HEREON.

PLEASE NOTE: GEOSURVEY, LTD., LOCATED THE PROPERTY BOUNDARY LINES WITHIN THE AREA OF TOPOGRAPHIC SURVEY. A FULL PERIMETER BOUNDARY SURVEY OF NORTH POINT MALL WAS NOT COMPLETED

A PORTION OF THIS PROPERTY IS LOCATED IN FLOOD ZONE "AE" BASED ON THE FLOOD INSURANCE RATE MAP FOR THIS AREA. THE MAP NUMBER FOR THIS AREA IS 13121C0066F, AND THE DATE OF SAID MAP IS SEPTEMBER 18, 2013. THIS DETERMINATION WAS MADE BY GRAPHICALLY DETERMINING THE POSITION OF THIS SITE ON SAID FIRM MAPS UNLESS OTHERWISE NOTED.

PLEASE NOTE: HARDWOOD TREES 20–INCH DBH (DIAMETER AT BREAST HEIGHT) AND LARGER, PINE TREES 30–INCH DBH AND LARGER, & UNDERSTORY TREES 8–INCH DBH AND LARGER WITHIN CERTAIN AREAS AS SPECIFIED BY CLIENT WERE LOCATED FOR THIS SURVEY.

THE INTERIOR BUILDING LINES DIVIDING THE INDIVIDUAL SUITES ARE APPROXIMATE, BASED UPON OBSERVATIONS AND DIMENSIONS MADE FROM THE EXTERIOR OF THE BUILDING AND ARE NOT TO BE USED FOR REMODELING, CONSTRUCTION OR CALCULATIONS OF LEASE AREAS.

THE DATUM FOR THIS SITE WAS ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEMS, AND BASED ON POSITIONAL VALUES FOR THE VIRTUAL REFERENCE STATION NETWORK DEVELOPED BY eGPS SOLUTIONS. THE HORIZONTAL REFERENCE FRAME IS NORTH AMERICAN DATUM OF 1983(2011)–STATE PLANE COORDINATE SYSTEM OF GEORGIA–WEST ZONE. THE VERTICAL REFERENCE FRAME IS NORTH AMERICAN VERTICAL DATUM OF 1988. ANY DIRECTIONS OR DIMENSIONS SHOWN ARE A RECTANGULAR, GROUND LEVEL PROJECTION OF THE STATE PLANE COORDINATE SYSTEM.

NO ZONING REPORT OR ZONING LETTER WAS PROVIDED TO THE SURVEYOR. THE SITE IS ZONED "PSC" (PLANNED SHOPPING CENTER DISTRICT) AS SHOWN ON THE ZONING MAP OF THE CITY OF ALPHARETTA. PLEASE NOTE: ZONING AND SETBACKS SHOULD BE CONFIRMED AND VERIFIED BY PLANNING AND ZONING PRIOR TO DESIGN OR CONSTRUCTION ACTIVITIES.

SURVEY REFERENCES

1> ALTA/ACSM LAND TITLE SURVEY OF NORTH POINT MALL, PREPARED BY PBS&J, INC., DATED MARCH 31, 1995, LAST REVISED APRIL 25, 1995 (JOB NO. 06–116.00).

2> ALTA/ACSM LAND TITLE SURVEY FOR GENERAL GROWTH PROPERTIES, INC., PREPARED BY MILLMAN NATIONAL LAND SERVICES, DATED AUGUST 14, 2013, LAST REVISED SEPTEMBER 4, 2013 (PROJECT NO. 29548).

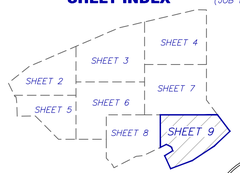
3> PROPERTY PLAT FOR COUSINS PROPERTIES, INC., PREPARE BY ENGINEERING & INSPECTION SYSTEMS, INC., DATED JUNE 16, 2014 (JOB NO. 14–1–007).

4> ALTA/ACSM LAND TITLE SURVEY FOR GGP NORTH POINT LAND LLC, PREPARED BY GEOSURVEY, LTD., DATED MARCH 9, 2012 (JOB NO. 20124284–02).

5> BUILDING FOOTPRINT AREA CERTIFICATION FOR GGP NORTH POINT LAND LLC, PREPARED BY GEOSURVEY, LTD., DATED DECEMBER 10, 2013 (JOB NO. 20124284–05).

SHEET 9 OF 9

SHEET INDEX



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LEGEND

STANDARD ABBREVIATIONS

AC	AIR CONDITIONER
BH	BORE HOLE
BSL	BUILDING SETBACK LINE
CI	CURB INLET
CMP	CORRUGATED METAL PIPE
CMF	CONCRETE MONUMENT FND
CO	SANITARY CLEANOUT
CPED	COMMUNICATION PEDESTAL
CTP	CRIMPED TOP PIPE
DI	DROP INLET
DIP	DUCTILE IRON PIPE
DWCB	DOUBLE WING CATCH BASIN
FNC	FENCE
FND	FOUND
GM	GAS METER
INV	INVERT
JB	JUNCTION BOX
MH	MANHOLE
OCS	OUTLET CONTROL STRUCTURE
OTP	OPEN TOP PIPE
PM	POWER METER
PKS	PK NAIL SET
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
RCP	REINFORCED CONCRETE PIPE
RBR	IRON REINFORCING BAR
RBS	5/8"RBR SET CAPPED LSF 621
SS	SANITARY SEWER
SWCB	SINGLE WING CATCH BASIN
TRANS	ELECTRIC TRANSFORMER

STANDARD SYMBOLS

	LIMITED ACCESS
	POWER POLE
	GUY WIRE
	POWER LINE
LP	LIGHT POLE
	ELECTRIC TRANSFORMER
	WATER VAULT
GM	GAS VALVE
GM	GAS METER
WV	WATER VALVE
WM	WATER METER
	FIRE HYDRANT
E	UNDERGROUND ELECTRIC LINE
G	UNDERGROUND GAS LINE
CM	UNDERGROUND COMMUNICATION LINE
W	UNDERGROUND WATER LINE
1	PHOTO POSITION INDICATOR
XX	REGULAR PARKING SPACE COUNT
	HANDICAP PARKING SPACE
	TREE POSITION INDICATOR
	SIGN
	CONCRETE

PARTIAL TOPOGRAPHIC SURVEY OF

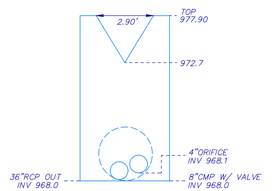
North Point Mall

FOR

GGP North Point, Inc.

GS JOB NO: 20124284	DRAWING SCALE: 1"= 40'	SURVEY DATE: 04–12–2019	
FIELD WORK: CB/EP	CITY: ALPHARETTA STATE: GA	REVISIONS	
PROJ MGR: JTN	COUNTY: FULTON	No.	Date	Description
REVIEWED: JRC	LAND LOT: 688,689,700,701 742,743,754,755	1.	6–20–19	Add easements per surv. ref. 2
DWG FILE: 20124284–6.dwg	DISTRICT: 1ST SECTION: 2ND	2.	8–13–19	Add 6" trees along Northpoint Dr (sheets 4 & 7)
		3.	9–26–19	Add numbered trees per arborist

OCS DETAIL 2



MODIFIED ARBORIST REPORT FOR:

Sears Frontage and Associated Parking areas - Northpoint Mall

Alpharetta, Georgia

Prepared for:

Kimley Horn
Visual Inspection only



Prepared by:
T.J. Schell, LLC
Landscape Architects
And Certified Arborists
2985 Gordy Parkway, Suite 422
Marietta, GA 30066
teresa@tjschell.com
Cell 770-361-2319

Teresa H. Eldredge, RLA, ISA
Certified Arborist
ISA SO-5442A

July 2, 2018

City of Alpharetta:

8" dbh Understory Trees
10" dbh Sourwood
20" dbh Southern Magnolia, Deodar Cedar, Arborvitae, Beech, Blackgum, Persimmon, Sassafras, or similar
24" dbh Overstory- all others not mentioned;
30" dbh Genus pine, sweetgum, and poplar

Boundary Tree – Per City of Alpharetta Tree Ordinance:
Any tree located on adjacent property with a critical root zone that will be impacted by proposed land disturbance activity.
Condition Criteria – Per City of Alpharetta Tree Ordinance: Per Arborist Report submitted with the approval of Director

The trees in this report consist mainly of existing parking lot trees planted anytime within the last 20-30 years. While some of the trees have sufficient root area (large sloped landscape area), most of the trees have limited root space in islands and/or long linear islands. In addition, many of the islands have excessive amounts of mulch. The existing crape myrtles and a variety of tree form hollies have been routinely pruned (topped and/or limbed up excessively), often contrary to ANSI standards and (in my opinion) should not be considered specimen. Most of the cherry trees have heavily girdled roots. The existing trees in poor condition are shown below.

1. **Maple – 8” DBH** – (Tree #11 on Plan) Radial dieback, stressed canopy and included bark at crotch. Poor Condition



2. **Maple – 8” DBH** – (Tree #37 on Plan) 95% Canopy dieback – tree is dying. Poor Condition



3. **Maple – 6” DBH** – (Tree **#38** on Plan) +50% Canopy dieback shown in July – tree is in decline. Poor Condition



4. **Maple – 7” DBH** – (Tree **#41** on Plan) Main/Central leader dead – tree is in decline with sunscald on trunk - Poor Condition



5. **Maple – 7” DBH** – (Tree **#42** on Plan) Cracked bark/sunscald in multiple areas along trunk – stressed canopy - Poor Condition



6. **Maple – 7” DBH** – (Tree **#48** on Plan) Cracked bark/sunscald in multiple areas along trunk – stressed canopy - Poor Condition



7. **Maple – 7” DBH** – (Tree **#49** on Plan) Cracked bark/sunscald in multiple areas along trunk – Main leader dead/dying - Poor Condition



8. **Maple – 7” DBH** – (Tree **#52** on Plan) Cracked bark/sunscald over 50% of trunk –- Poor Condition



9. **Maple – 7” DBH** – (Tree **#53** on Plan) Cracked bark/sunscald in multiple areas along trunk – Stressed Canopy - Poor Condition



10. **Maple – 7” DBH** – (Tree **#54** on Plan) One main leader dead/ +2% - Remaining canopy stressed - Poor Condition



11. **Cherry – 8” DBH** – (Tree **#101** on Plan) Trunk has pass through at +/-1’ above grade with obvious structural defect - Poor Condition



12. **Maple – 9” DBH** – (Tree **#162** on Plan) Cracked bark/sunscald over 50% of trunk –- Poor Condition



13. **Maple – 9” DBH** – (Tree **#163** on Plan) Cracked bark/sunscald and obvious decay on much of trunk –- Poor Condition



14. **Maple – 9” DBH** – (Tree **#164** on Plan) Cracked bark/sunscald and main leader dead –- Poor Condition



15. **Maple – 10” DBH** – (Tree **#171** on Plan) Cracked bark/sunscald over 50% of trunk –- Poor Condition



16. **Maple – 9” DBH** – (Tree **#172** on Plan) Cracked bark/sunscald and main leader dead –- Poor Condition



17. **Maple – 9” DBH** – (Tree **#174** on Plan) Cracked bark/sunscald and large wound at base –- Poor Condition



18. **Maple – 9” DBH** – (Tree **#178** on Plan) Cracked bark/sunscald & +50% canopy dieback - Poor Condition



19. **Maple – 9” DBH** – (Tree **#179** on Plan) Cracked bark/sunscald and 50% canopy dieback - Poor Condition



20. **Maple – 9” DBH** – (Tree **#180** on Plan) Cracked bark/sunscald – mulch is +/- 4’ deep - Poor Condition



21. **Maple – 2” DBH** – (Tree **#183** on Plan) Dead/Dying - Poor Condition



22. **Maple – 9” DBH** – (Tree **#186** on Plan) Cracked bark/sunscald and + 30% canopy dieback - Poor Condition



23. **Maple – 9” DBH** – (Tree **#187** on Plan) Cracked bark/sunscald and 30% canopy dieback - Poor Condition



24. **Maple – 9” DBH** – (Tree **#188** on Plan) Cracked bark/sunscald with dead main leader - Poor Condition



25. **Maple – 9” DBH** – (Tree **#189** on Plan) Cracked bark/sunscald with +30% canopy dieback - Poor Condition



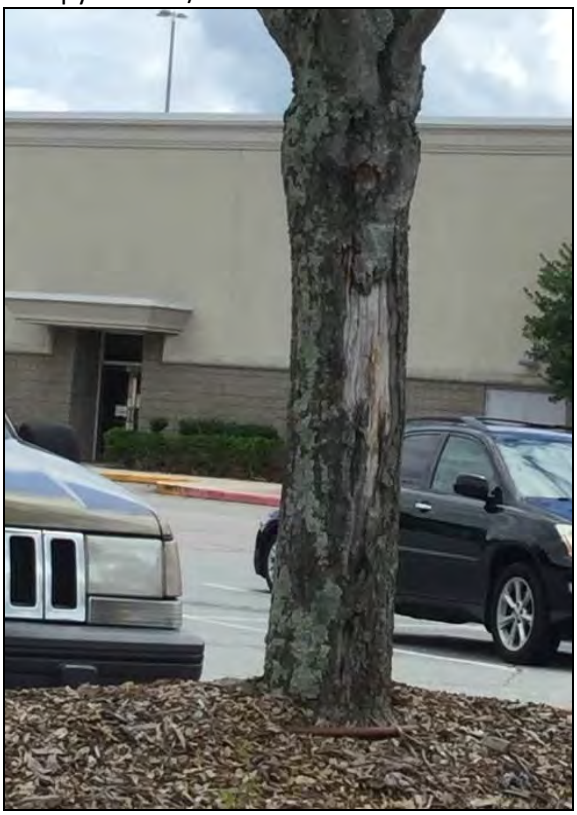
26. **Maple – 8” DBH** – (Tree **#189** on Plan) Cracked bark/sunscald with +30% canopy dieback - Poor Condition



27. **Maple – 9” DBH** – (Tree **#190** on Plan) Cracked bark/sunscald with +30% canopy dieback – all these islands have too much mulch - Poor Condition



28. **Maple – 9” DBH** – (Tree **#191** on Plan) Cracked bark/sunscald with 25% radial dieback and canopy dieback/included bark - Poor Condition



29. **Maple – 10” DBH** – (Tree **#209** on Plan) Cracked bark/sunscald with 25% radial dieback and canopy dieback/included bark - Poor Condition



30. **Maple – 9” DBH** – (Tree **#210** on Plan) Cracked bark with large hollow area and +30% canopy dieback - Poor Condition



31. **Chinese Elm – 8” DBH** – (Tree **#212** on Plan) 30% canopy dieback - Poor Condition



32. **Chinese Elm – 8” DBH** – (Tree **#214** on Plan) 40% canopy dieback - Poor Condition



33. **Chinese Elm – 12” DBH** – (Tree **#217** on Plan) 30% canopy dieback - Poor Condition



Placemaking Rendering



New York Life // Jamestown LP // Machete // HKS // Kimley Horn

Aerial Rendering

