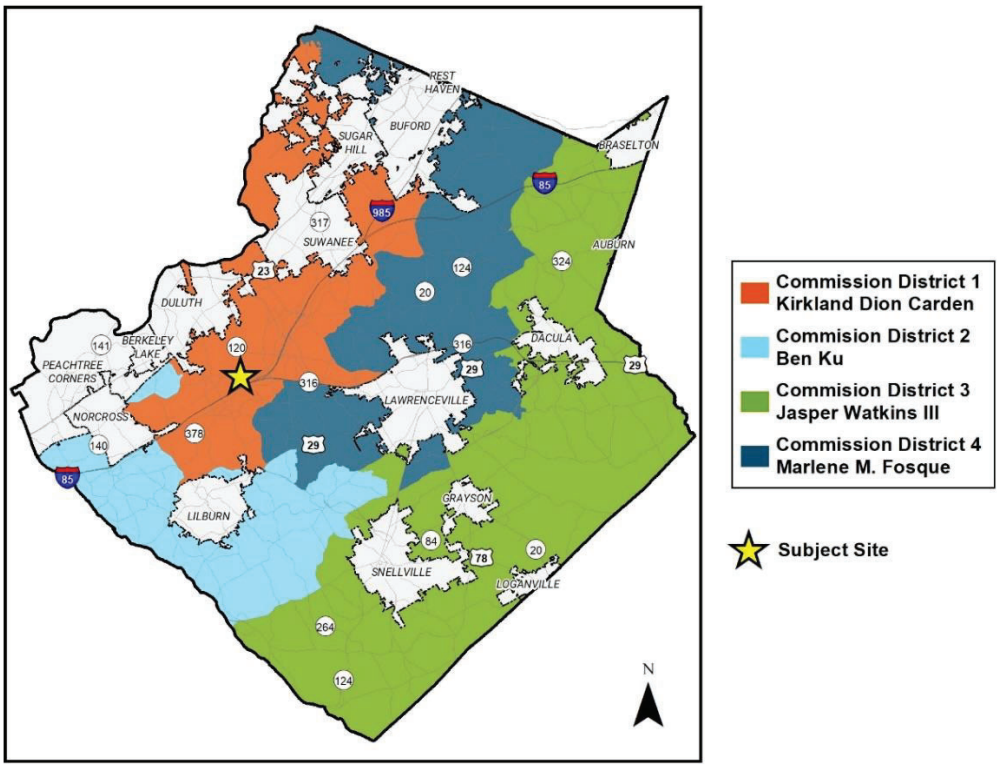
GWINNETT COUNTY
DEPARTMENT OF PLANNING AND DEVELOPMENT
446 West Crogan Street, Suite 300 | Lawrenceville, GA 30046-2440
678.518.6000
GwinnettCounty.com

PLANNING AND DEVELOPMENT DEPARTMENT
CASE REPORT

Case Number:	**CIC2022-00023**
Current Zoning:	**HRR** (High-Rise Residence District)
Request:	Change in Conditions
Additional Request:	Alternative Architectural Review
Address:	3175 Satellite Boulevard
Map Number:	R6206 033
Site Area:	4.32 acres
Units:	340
Proposed Development:	Apartments
Commission District:	District 1 – Commissioner Carden
Character Area:	Regional Activity Center
Staff Recommendation:	**APPROVAL WITH CONDITIONS**



Planning Commission Advertised Public Hearing Date: 8/3/2022
Board of Commissioners Advertised Public Hearing Date: 8/23/2022

Applicant:	Banyan Street/GAP Satellite Place 600 Owner, LLC c/o Mahaffey Pickens Tucker, LLP 1550 North Brown Road, Suite 125 Lawrenceville, GA 30043	**Owner:**	Banyan Street/GAP Satellite Place 600 Owner, LLC 80 SW 8th Street, Suite 2201 Miami, FL 33130
Contact:	Shane Lanham	**Contact:**	770.232.0000

Zoning History

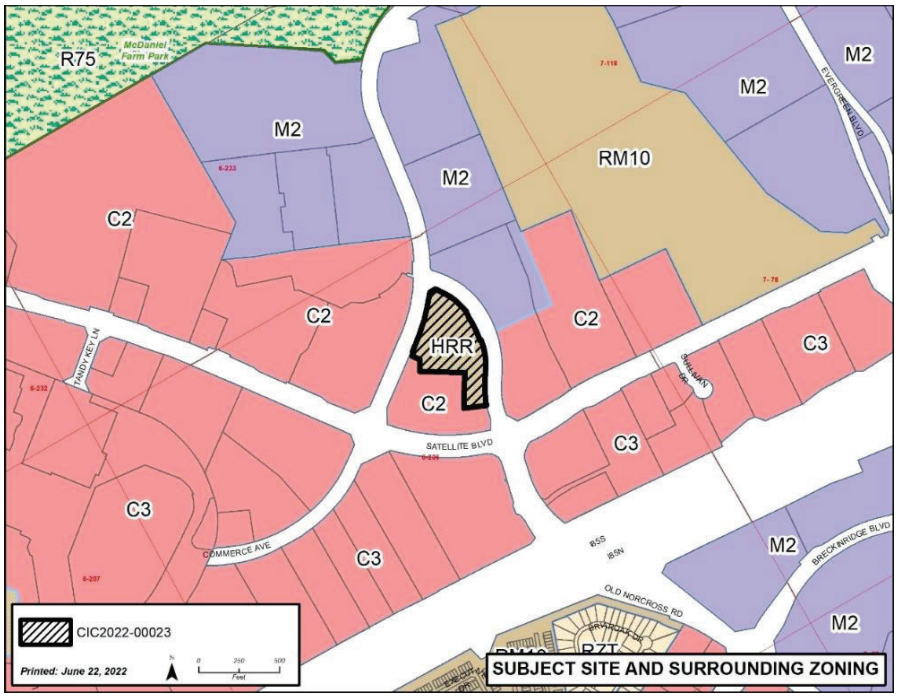
The subject property is zoned HRR (High-Rise Residence District). A rezoning approval in 1995, RZ-95-160, amended the property's zoning classification from M-2 (Heavy Industry District) to C-2 (General Business District) for commercial/retail uses. A special use permit approved in 1996, SUP-96-090, allowed for a height increase of an office building to 115 feet. A rezoning approval in 2021, RZM2021-00031, changed the rear half of the property from C-2 to HRR (High-Rise Residence District) for a high-rise residential development. The other half of the property containing the office building remains zoned C-2. The request is to amend conditions from this approval.

Existing Site Condition

The subject site is a 4.32-acre portion of a 9.0-acre triangular-shaped tract bordered by Satellite Boulevard, Old Norcross Road, and Commerce Avenue. The property contains a six-story, 154,856 square foot office building and associated parking. Sidewalk and landscape strips exist along all road frontages. The nearest Gwinnett County Transit stop is located 0.12 miles from the subject site. The subject 4.32-acre portion of the site only contains surface parking spaces for the office building.

Surrounding Use and Zoning

The surrounding uses consist of office buildings of a similar size immediately to the east and west, and office warehouses to the north. The south side of Satellite Boulevard contains automobile dealerships. Gwinnett Place Mall is located further to the west along Satellite Boulevard. The following is a summary of surrounding uses and zoning:



Location	Land Use	Zoning	Density
Proposed	High rise residential	HRR	79.07 units per acre
North	Light Industrial	M-2	N/A
East	Office	C-2	N/A
South	Commercial	C-3	N/A
West	Office	C-2	N/A

Project Summary

The applicant requests a change in conditions for a 4.32-acre portion of a 9.0-acre tract zoned HRR to modify the building materials of an approved five-story high-rise residential development, including:

- A change in conditions of zoning case RZM2021-00031. The applicant is requesting a revision to the following condition:
  - Condition 4, *"Apartment building and parking deck structure shall meet the Architectural Design Standards of Category 4 of the Unified Development Ordinance subject to review and approval by the Director of Planning and Development."* The applicant is requesting to deviate from Category 4 by utilizing façade materials other than brick and stacked stone on the first two stories, metal reveals as accents on the apartment building façade, and painted precast concrete panels on the parking deck structure façade.
- Apartment building materials to include brick cementitious panels and cementitious lap siding of various colors, including white as a main body color. Several elevations depict siding along the entire length of the building.

- No site layout changes from the site plan approved for RZM2021-00031.
- A total of 340 apartment units in a five-story building, yielding a net density of 79.07 units per acre.
- A unit mix of 60 percent studios (efficiency) and one-bedroom units, 35 percent two-bedroom units, and 5 percent three-bedroom units.
- A parking deck structure containing 578 parking spaces, which will be constructed of painted precast concrete panels and accentuated by mesh screening banners and cable railings.
- Amenities including a conference space, fitness center, and internal courtyard containing a pool, lounge space, and outdoor grilling areas.
- Access provided via driveways from Commerce Avenue, Old Norcross Road, and Satellite Boulevard from the south side of the existing office building.
- Stormwater management provided through underground detention.

Zoning and Development Standards

The applicant is requesting a change in conditions in the HRR, High-Rise Residence District. The following is a summary of applicable development standards from the Unified Development Ordinance (UDO):

Standard	Required	Proposed	Meets Standard?
Building Height	Minimum 5 stories	5 stories	YES
Front Yard Setback	Minimum 15’	15’	YES
Side Yard Setback	0’	0’	YES
Rear Yard Setback	Minimum 25’	25’	YES
Off-Street Parking	Minimum: 510 spaces Maximum: 1,020 spaces	599 spaces	YES
Landscape Strip	Minimum 10’	10’	YES
Common Area	Minimum 20 percent	29.09 percent	YES
Density	Determined by Board of Commissioners	79.07 units per acre	YES

Alternative Architectural Review Request

In addition to the change in conditions request, the applicant is seeking an alternative architectural review from the Planning Commission:

1. **Appendix Section 1.0 – Architectural Design Standards; 3.0.0 - Director’s Review:** To allow alternate building designs, architectural materials or color selections that vary from the architectural design standards of Category 4.

The applicant is requesting to condition the development to renderings and elevations submitted with this request that do not comply with Category 4, which is required for the HRR zoning district (Exhibit D).

Internal and External Agency Review

In addition to these Development Standards, the applicant must meet all other UDO requirements related to infrastructure improvements. Internal and external agency review comments are attached (Exhibit F). Standard site and infrastructure improvements will also be required related to transportation, stormwater, water, and sewer utilities. Recommended improvements not already required by the UDO have been added as staff recommended conditions.

Staff Analysis

Change in Conditions Request Analysis: According to the UDO, if a proposed amendment is for the rezoning of property and involves a change in zoning classification, or a change in conditions, the Department of Planning and Development shall evaluate the request and make a recommendation with respect to the standards governing exercise of zoning power as defined in Section 270-20.5. After this evaluation, staff makes the following findings based on the standards from the UDO:

A. Whether a proposed change in conditions will permit a use that is suitable in view of the use and development of adjacent and nearby property.

The proposed high-rise apartment building is surrounded by office buildings, office warehouses, and automobile dealerships. No other residential uses are located nearby. The surrounding buildings are not developed to Category 4 architectural standards. The proposed building materials are suitable considering the adjacent office buildings, which are primarily stucco; however, white is not appropriate as a main body color of the building.

B. Whether a proposed change in conditions will adversely affect the existing use or usability of adjacent or nearby property.

The proposed change in conditions to allow cementitious lap siding on the first two floors of the building, metal reveals, and painted precast concrete panels on the parking deck structure would not affect surrounding office uses. Surrounding buildings are non-residential and are not developed with Category 4 construction materials. Furthermore, the existing office building and a portion of the proposed apartment building would screen the parking deck structure from the right of way.

C. Whether the property to be affected by a proposed change in conditions has a reasonable economic use as currently zoned.

The property has a reasonable economic use as currently zoned.

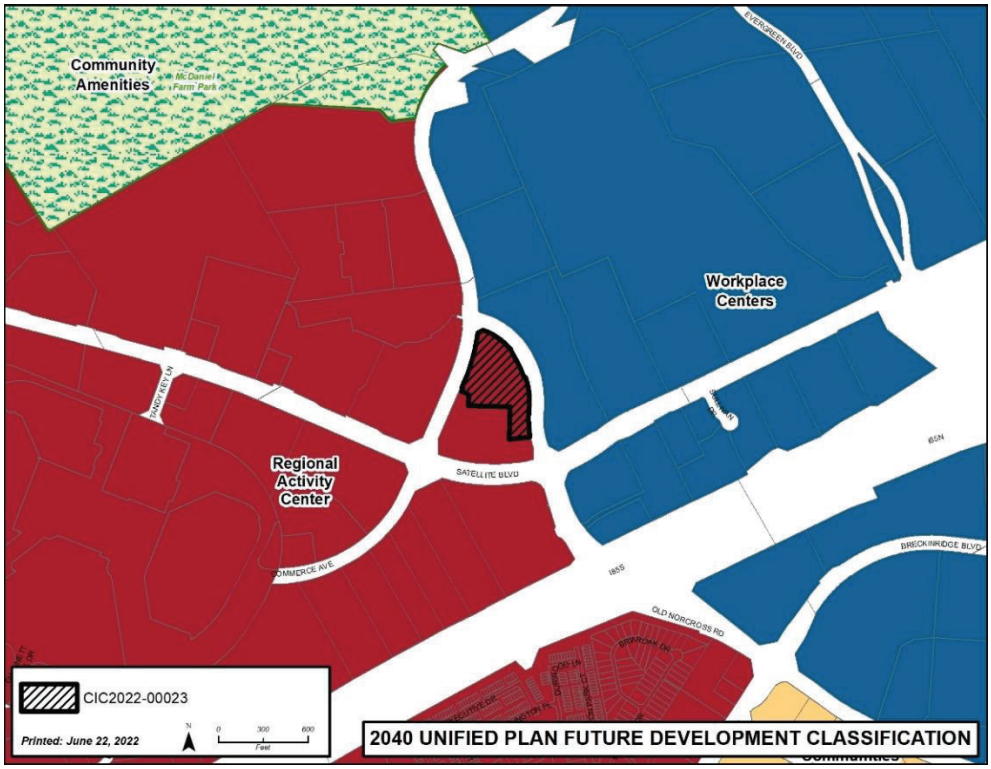
D. Whether the proposed change in conditions will result in a use which will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, or schools.

This change in conditions request would not create impacts on public facilities. No additional impact is anticipated on school enrollment. Agency review comments related

to any potential improvements concerning this change in conditions request are attached (Exhibit F).

E. Whether the proposed change in conditions is in conformity with the policy and intent of the Unified Plan and Future Development Map.

The 2040 Unified Plan and Future Development Map indicate the subject property lies within the Regional Activity Center Character Area. The intent of this character area is to provide a major activity center Gwinnett County and the broader region with intense commercial, retail, and office uses, as well as residential development that includes mid to high-rise buildings within walking distance of retail and offices. Surrounding and nearby uses are located within zoning districts that do not require Category 4 architectural requirements, and the proposed apartment building materials would not degrade the architectural appearance of this activity center area; therefore, the requested change in conditions would not violate the policy and intent of the Unified Plan and Future Development Map.



F. Whether there are other existing or changing conditions affecting the use and development of the property which give supporting grounds for either approval or disapproval of the proposed change in conditions.

A similar high-rise residential development, The Enzo at Ariston, was approved in 2019 with building elevations other than brick or stone on the first two floors and metal panel accents as a minor treatment. This development is also zoned HRR and located within the Regional Activity Center Character Area. This precedent for the approval of building

elevations with minor deviations from Category 4 requirements provides supporting grounds for approval of the change in conditions request.

Alternative Architectural Review Analysis: The standards for granting deviations from the Architectural Design Standards are outlined in Appendix Section 1.0, 3.0.0 of the UDO. Staff makes the following findings:

The alternative architectural review request is due to the submitted building elevations, which depict materials that do not conform with the architectural design standards for Category 4. The proposed elevations still provide high quality design despite not adhering to these design standards. According to the UDO Appendix Section 1.0 – Architectural Design Standards, "Alternate building designs, architectural materials or color selections that vary from the architectural design standards of Category 2, 3, or 4, herein shall be reviewed and approved by the Planning Commission. Creative, innovative and unique designs are encouraged, but care must be taken to maintain compatibility to surrounding buildings and community features." The proposed elevations are of high quality and are compatible with the existing surrounding buildings; therefore, the requested variance does not nullify the intent of the Architectural Design Standards.

Staff Recommendation

Based on the staff's evaluation of the request and the standards governing exercise of zoning power, the Department of Planning and Development recommends **APPROVAL WITH CONDITIONS** of the change in conditions request.

In addition, staff recommends **APPROVAL** of the following alternative architectural review:

1. To allow a deviation of materials required from the Architectural Design Standard: Category 4.

Staff Recommended Conditions

NOTE: The conditions below are those from RZM2021-00031 with suggested changes in bold or strikethrough.

Approval of a Change in Conditions for a high-rise residential development, subject to the following enumerated conditions:

1. The proposed development shall be constructed in ~~substantial conformity~~ **general conformance** with Exhibit ~~B~~ **C**: Site Plan received ~~June 28, 2021~~ **May 26, 2022 and Exhibit D: Building Elevations received May 26, 2022** by the Department of Planning and Development, with revisions required by conditions of approval, as reviewed and approved by the ~~Director~~ **Department** of Planning and Development.

2. The property shall be limited to a five-story multifamily residential building, not to exceed 340 units with a maximum of 60 percent efficiency and one-bedroom units, and 35 percent two-bedroom units.

3. The minimum heated floor area per dwelling unit shall be in compliance with Table 230.2 of the Unified Development Ordinance.

~~4. Apartment building and parking deck structure shall meet the Architectural Design Standards of Category 4 of the Unified Development Ordinance subject to review and approval by the Director of Planning and Development.~~

5. White shall be limited to a trim color, not a main body color, of any fiber-cement siding.

6. Architectural metal panel accents shall be allowed as a minor treatment.

7. The parking deck structure may include painted precast concrete panels as a building material, as shown in Exhibit C.

8. All grassed areas shall be sodded.

9. Underground utilities shall be provided throughout the development.

10. Prior to the issuance of a development permit, the applicant shall provide a traffic impact study.

11. Prior to the issuance of the first certificate of occupancy, the applicant shall make any improvements recommended by the traffic impact study, provided the improvements are approved by the GCDOT.

12. A Gwinnett County multi-use path, project F-1287, is proposed along the roadway of Commerce Avenue and will require coordination with GCDOT Preconstruction Division.

Exhibits:

A. Site Visit Photo
B. Previously Approved Resolution and Site Plan
C. Site Plan
D. Building Elevations
E. Letter of Intent and Applicant's Response to Standards
F. Internal and External Agency Review Comments
G. Maps

Exhibit A: Site Visit Photo

Location of Proposed High-rise Apartment Building

Exhibit B: Previously Approved Resolution and Site Plan

[attached]

CASE NUMBER RZM2021-00031
GCID 2021-1159

GWINNETT COUNTY

BOARD OF COMMISSIONERS

LAWRENCEVILLE, GEORGIA

RESOLUTION ENTITLED: AMENDMENT TO THE OFFICIAL ZONING MAP

ADOPTION DATE: SEPTEMBER 28, 2021

At the regular meeting of the Gwinnett County Board of Commissioners held in the Gwinnett Justice and Administration Center, Auditorium, 75 Langley Drive, Lawrenceville, Georgia.

	Present	Vote
Nicole L. Hendrickson, Chairwoman	Yes	Aye
Kirkland Carden, District 1	Yes	Aye
Ben Ku, District 2	Yes	Aye
Jasper Watkins, III, District 3	Yes	Nay
Marlene Fosque, District 4	Yes	Aye

On motion of Commissioner Carden, which carried a 4-1 vote, the following was adopted:

A RESOLUTION TO AMEND THE OFFICIAL ZONING MAP

WHEREAS, the Municipal-Gwinnett County Planning Commission has held a duly advertised public hearing and has filed a formal recommendation with the Gwinnett County Board of Commissioners upon an Application to Amend the Official Zoning Map from C-2 to HRR by Banyan Street/GAP Satellite Place 600 Owner, LLC for the proposed use of a High-Rise Residential Development on a tract of land described by the attached legal description, which is incorporated herein and made a part hereof by reference; and

WHEREAS, notice to the public regarding said Amendment to the Official Zoning Map has been duly published in the Gwinnett Daily Post, the Official News Organ of Gwinnett County; and

WHEREAS, a public hearing was held by the Gwinnett County Board of Commissioners on September 28, 2021, and objections were not filed.

NOW, THEREFORE, BE IT RESOLVED by the Gwinnett County Board of Commissioners, this 28th day of September 2021, that the aforesaid application to amend the Official Zoning Map from C-2 to HRR is hereby **APPROVED** with the following conditions:

1. The proposed development shall be constructed in substantial conformity with Exhibit B: Site Plan received June 28, 2021, by the Department of Planning and Development, with revisions required by conditions of approval, as reviewed and approved by the Director of Planning and Development.
2. The property shall be limited to a five-story multifamily residential building, not to exceed 340 units with a maximum of 60% efficiency and one-bedroom units, and 35% two-bedroom units.
3. The minimum heated floor area per dwelling unit shall be in compliance with Table 230.2 of the Unified Development Ordinance.
4. Apartment building and parking deck structure shall meet the Architectural Design Standards of Category 4 of the Unified Development Ordinance subject to review and approval by the Director of Planning and Development.
5. All grassed areas shall be sodded.
6. Underground utilities shall be provided throughout the development.
7. Prior to the issuance of a Development Permit, the applicant shall provide a traffic impact study.
8. Prior to the issuance of the first certificate of occupancy, the applicant shall make any improvements recommended by the traffic impact study, provided the improvements are approved by the GCDOT.

9. A Gwinnett County multi-use path, project F-1287 is proposed along the roadway of Commerce Avenue and will require coordination with GCDOT Preconstruction Division.

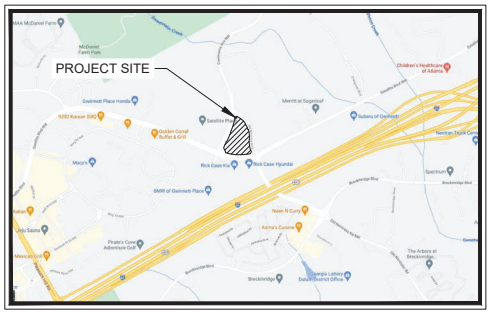
GWINNETT COUNTY BOARD OF COMMISSIONERS

By: Nicole L. Hendrickson
Nicole L. Hendrickson, Chairwoman

Date Signed: 10/19/2021

ATTEST:

By: Diane Kemp (Seal)
County Clerk/Deputy County Clerk



VICINITY MAP

GWINNETT COUNTY
PLANNING AND DEVELOPMENT
RECEIVED
6/28/2021 8:50PM

UNIT MIX SUMMARY:

	% UNIT MIX
STUDIO	15 %
1 BED	45 %
2 BED	35 %
3 BED	5 %
TOTAL	100%

DEVELOPMENT SUMMARY:

SITE SUMMARY:

SITE ADDRESS:	3175 SATELLITE BLVD. DULUTH, GA 30096
CURRENT ZONING:	C2
PROPOSED ZONING:	HRR
CURRENT SITE AREA:	9.0001 ACRES
SUBDIVIDED AREA:	
- PARCEL 1:	4.3 ACRES
- PARCEL 2*:	4.7 ACRES

* PARCEL 2 IS NOT INCLUDED IN REZONING

OPEN SPACE REQUIRED:	20%
OPEN SPACE PROVIDED:	29.09% (1.26 ACRES)

PROPOSED LAND USES & DENSITIES:

MULTIFAMILY RESIDENTIAL:	
- ALLOWED:	TBD
- PROPOSED:	340 UNITS (79.07 UNITS/ ACRE)
BUILDING HEIGHT	
- REQUIRED:	MINIMUM 5 STORIES
- PROPOSED:	5 STORIES (60')

PROPOSED ZONING DIMENSIONAL STANDARDS:

MIN. LOT WIDTH:	75'
MIN. SETBACKS:	
- FRONT:	15'
- SIDE:	0'
- REAR:	25'
MIN. LANDSCAPE STRIP:	10'

PARKING SUMMARY:

MIN. REQUIRED PARKING: MULTIFAMILY (340 UNITS) OFFICE (2,500 SF)	**515 SPACES** (TOTAL) 510 SPACES (1.5/UNIT) 5 SPACES (1/ 500 SF)
PROPOSED PARKING: MULTIFAMILY (340 UNITS) EX. OFFICE PARKING TO REMAIN	**921 SPACES** (TOTAL) 599 SPACES 322 SPACES

Multi Family Development Permit Data

Please Provide the following data on your plan in the listed format:

General

Development Type→	Apartments	Condo Apartments	Quad Apartments	Townhouses (No Lots)	Triplex Apartments
	X				
Zoning	HRR				

Project Data

Total Area (Acres)	4.33 AC
Limits of Disturbed Area (Acres)	~4.5 AC
Net Area (Acres)*	4.33 AC
Floodplain Area (Acres)	0 AC
Floodplain (% of floodplain acres vs total acres)	0 AC
Power/Gas Easement or Right of way (Acres)	
Sanitary Service→	Sewer: Public Sewer / Septic

Density (Units/Acre)

Gross	340 units/ 4.3 ac = 79.07
Net	340 units/ 4.3 ac = 79.07

SITE PLAN LEGEND

- PROPERTY LINE
- BUILDING SETBACK LINE
- (#) PARKING COUNT
- SIDEWALK

GRAPHIC SCALE IN FEET
0 25 50 100

GEORGIA811

PREPARED BY
Kimley»Horn
© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GEORGIA 30009
PHONE (770) 619-4280
WWW.KIMLEY-HORN.COM

PREPARED FOR
GREYSTAR
1545 PEACHTREE STREET, SUITE 700
ATLANTA, GA 30309
PHONE: 803.727.0479

No.	DATE	BY	ISSUANCE AND REVISION DESCRIPTIONS
			COUNTY ZONING SUBMITTAL
	06/30/2021	MAP	ADDRESSED COUNTY'S ZONING COMMENTS
	06/03/2021	MAP	

PROJECT
GREYSTAR
GWINNETT PLACE
3175 SATELLITE BLVD, DULUTH, GA 30096
LAND LOT 206, 6TH DISTRICT

GEORGIA REGISTERED No. PE044634 PROFESSIONAL ENGINEER MARK A. PUTNAM 05/21/21

GSWCC NO. (LEVEL II)	0000008170
DRAWN BY	KHP
DESIGNED BY	MAP
REVIEWED BY	JKM
DATE	05/13/2021
PROJECT NO.	013575006

TITLE
SITE PLAN

SHEET NUMBER
SHEET #1

Drawing name: K:\ALP_PRJ\013575006_Gwinnett Place\CAD\Plansheets\0221-05-21_Rezoning Site Plan.dwg Layout:1 Jun 28, 2021 9:49am by Blake Anthony

Exhibit C: Site Plan

[attached]

GWINNETT COUNTY
PLANNING AND DEVELOPMENT

RECEIVED

5.26.2022

GWINNETT COUNTY
PLANNING AND DEVELOPMENT
RECEIVED
6/28/2021 8:50PM

VICINITY MAP

UNIT MIX SUMMARY:

	% UNIT MIX
STUDIO	15 %
1 BED	45 %
2 BED	35 %
3 BED	5 %
TOTAL	100%

DEVELOPMENT SUMMARY:

SITE SUMMARY:

SITE ADDRESS:	3175 SATELLITE BLVD. DULUTH, GA 30096
CURRENT ZONING:	C2
PROPOSED ZONING:	HRR
CURRENT SITE AREA:	9.0001 ACRES
SUBDIVIDED AREA:	
- PARCEL 1:	4.3 ACRES
- PARCEL 2*:	4.7 ACRES

* PARCEL 2 IS NOT INCLUDED IN REZONING

OPEN SPACE REQUIRED:	20%
OPEN SPACE PROVIDED:	29.09% (1.26 ACRES)

PROPOSED LAND USES & DENSITIES:

MULTIFAMILY RESIDENTIAL:	
- ALLOWED:	TBD
- PROPOSED:	340 UNITS (79.07 UNITS/ ACRE)
BUILDING HEIGHT	
- REQUIRED:	MINIMUM 5 STORIES
- PROPOSED:	5 STORIES (60')

PROPOSED ZONING DIMENSIONAL STANDARDS:

MIN. LOT WIDTH:	75'
MIN. SETBACKS:	
- FRONT:	15'
- SIDE:	0'
- REAR:	25'
MIN. LANDSCAPE STRIP:	10'

PARKING SUMMARY:

MIN. REQUIRED PARKING: MULTIFAMILY (340 UNITS) OFFICE (2,500 SF)	**515 SPACES** (TOTAL) 510 SPACES (1.5/UNIT) 5 SPACES (1/ 500 SF)
PROPOSED PARKING: MULTIFAMILY (340 UNITS) EX. OFFICE PARKING TO REMAIN	**921 SPACES** (TOTAL) 599 SPACES 322 SPACES

Multi Family Development Permit Data

Please Provide the following data on your plan in the listed format:

General

Development Type→	Apartments	Condo Apartments	Quad Apartments	Townhouses (No Lots)	Triplex Apartments
	x				
Zoning	HRR				

Project Data

Total Area (Acres)	4.33 AC
Limits of Disturbed Area (Acres)	~4.5 AC
Net Area (Acres)*	4.33 AC
Floodplain Area (Acres)	0 AC
Floodplain (% of floodplain acres vs total acres)	0 AC
Power/Gas Easement or Right of way (Acres)	

Sanitary Service→	Sewer	Septic
	Public Sewer	

Density (Units/Acre)

Gross	340 units/ 4.3 ac = 79.07
Net	340 units/ 4.3 ac = 79.07

SITE PLAN LEGEND

- PROPERTY LINE
- BUILDING SETBACK LINE
- (#) PARKING COUNT
- SIDEWALK

NORTH

GRAPHIC SCALE IN FEET
0 25 50 100

GEORGIA811

PREPARED BY: Kimley»Horn
© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GEORGIA 30009
PHONE (770) 619-4280
WWW.KIMLEY-HORN.COM

PREPARED FOR: GREYSTAR
1545 PEACHTREE STREET, SUITE 700
ATLANTA, GA 30309
PHONE: 803.727.0479

No.	ISSUANCE AND REVISION DESCRIPTIONS	DATE	BY
	COUNTY ZONING SUBMITTAL	06/30/2021	MAP
	ADDRESSED COUNTY'S ZONING COMMENTS	06/30/2021	MAP

PROJECT: GREYSTAR
GWINNETT PLACE
3175 SATELLITE BLVD, DULUTH, GA 30096
LAND LOT 206, 6TH DISTRICT

GEORGIA REGISTERED PROFESSIONAL ENGINEER MARK A. PUTNAM 05/21/21

GSWCC NO. (LEVEL II)	0000008170
DRAWN BY	KHP
DESIGNED BY	MAP
REVIEWED BY	JKM
DATE	05/13/2021
PROJECT NO.	013575006

TITLE: SITE PLAN

SHEET NUMBER: SHEET #1

Drawing name: K:\ALP_PRJ\013575006_Gwinnett Place\CAD\Planesheets\2021-05-21_Rezoning Site Plan.dwg Layout: 1 Jun 28, 2021 9:49am by Blake Arnold

Exhibit D: Building Elevations

[attached]

①

②

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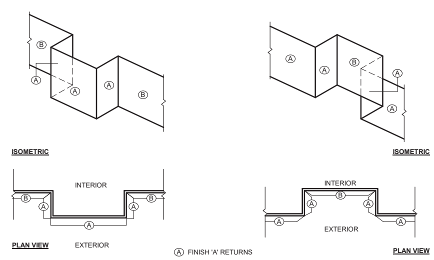
5.26.2022

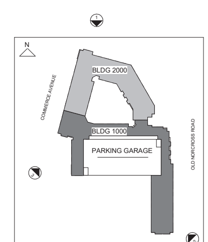
③

EXTERIOR FINISH KEY

BRK-1	BRICK BOD: TBD COLOR: GRAY	CPB-1	CEMENTITIOUS PANEL WITH METAL REVEALS BOD: TBD COLOR: WHITE	WVL	VINYL WINDOW BOD: PLYGEM COLOR: SEE SCHEDULE
CLS-1	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: WHITE	CPB-2	CEMENTITIOUS PANEL WITH METAL REVEALS BOD: TBD COLOR: DARK GRAY	MRP	BALCONY RAIL BOD: TBD COLOR: DARK GRAY
CLS-2	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: WOODTONE CHERRY	SCRNW	PARKING DECK SCREEN WALL BOD: TBD COLOR: TBD	SG	FULL HEIGHT SECURED GATE BOD: RYTEC OR EQUAL COLOR: GRAY
CLS-3	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: DARK GRAY	CAN	METAL PREFAB CANOPY BOD: MAPES COLOR: TBD		



EXTERIOR WALL RETURN FINISH DIAGRAM



dwell design studio
1280 HIGHTOWER TRAIL
ATLANTA, GA 30350
PHONE: 770.864.1035
dwelldesignstudio.com

GWINNETT PLACE
3100 COMMERCE AVE., DULUTH, GA 30096

GREYSTAR

ISSUE

REVISION

MATERIAL LEGEND

JOB NUMBER: 2106408

DRAWN BY: EC
CHECKED BY: NM

A4-00

EXTERIOR FINISH KEY

BRK-1	BRICK BOD: TBD COLOR: GRAY	CPB-1	CEMENTITIOUS PANEL WITH METAL REVEALS BOD: TBD COLOR: WHITE	WVL	VINYL WINDOW BOD: PLYGEM COLOR: SEE SCHEDULE
CLS-1	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: WHITE	CPB-2	CEMENTITIOUS PANEL WITH METAL REVEALS BOD: TBD COLOR: DARK GRAY	MRP	BALCONY RAIL BOD: TBD COLOR: DARK GRAY
CLS-2	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: WOODTONE CHERRY	SCRNW	PARKING DECK SCREEN WALL BOD: TBD COLOR: TBD	SG	FULL HEIGHT SECURED GATE BOD: RYTEC OR EQUAL COLOR: GRAY
CLS-3	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: DARK GRAY	CAN	METAL PREFAB CANOPY BOD: MAPES COLOR: TBD		

2 BUILDING ELEVATION - WEST
1/8" = 1'-0"

GWINNETT COUNTY
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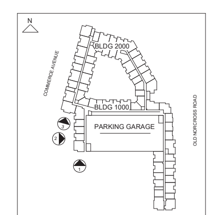
3 BUILDING ELEVATION - SOUTHWEST
1/8" = 1'-0"

1 BUILDING ELEVATION - SOUTHWEST
1/8" = 1'-0"



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1280 HIGHTOWER TRAIL
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PHONE: 770.864.1035
dwelldesignstudio.com

GWINNETT PLACE
3100 COMMERCE AVE., DULUTH, GA 30096

GREYSTAR

ENLARGED BUILDING ELEVATIONS

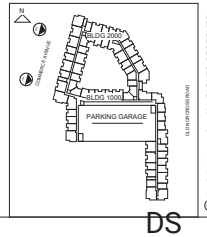
JOB NUMBER: 2106408

DRAWN BY N-M CHECKED BY NM

A4-10

2 BUILDING ELEVATION - NORTHWEST
1/8" = 1'-0"

1 BUILDING ELEVATION - NORTHWEST
1/8" = 1'-0"



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GREYSTAR

ISSUE
REVISION

ENLARGED BUILDING ELEVATIONS

JOB NUMBER: 2106408
DRAWN BY: N-M
CHECKED BY: NM

A4-11

2 BUILDING ELEVATION - NORTHEAST
1/8" = 1'-0"

1 BUILDING ELEVATION - NORTH
1/8" = 1'-0"

EXTERIOR FINISH KEY

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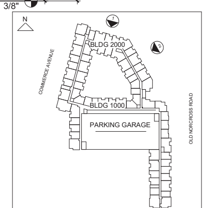

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JOB NUMBER: 2106408

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A4-12

EXTERIOR FINISH KEY

BRK-1	BRICK BOD: TBD COLOR: GRAY	CPB-1	CEMENTITIOUS PANEL WITH METAL REVEALS BOD: TBD COLOR: WHITE	WVL	VINYL WINDOW BOD: PLYGEM COLOR: SEE SCHEDULE
CLS-1	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: WHITE	CPB-2	CEMENTITIOUS PANEL WITH METAL REVEALS BOD: TBD COLOR: DARK GRAY	MRP	BALCONY RAIL BOD: TBD COLOR: DARK GRAY
CLS-2	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: WOODTONE CHERRY	SCRNW	PARKING DECK SCREEN WALL BOD: TBD COLOR: TBD	SG	FULL HEIGHT SECURED GATE BOD: RYTEC OR EQUAL COLOR: GRAY
CLS-3	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: DARK GRAY	CAN	METAL PREFAB CANOPY BOD: MAPES COLOR: TBD		

2 BUILDING ELEVATION - EAST
1/8" = 1'-0"

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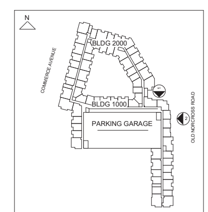
1 BUILDING ELEVATION - SOUTHEAST
1/8" = 1'-0"



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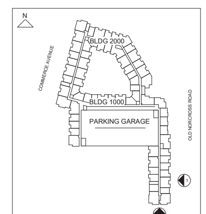
EXTERIOR FINISH KEY

2 BUILDING ELEVATION - SOUTH
1/8" = 1'-0"

1 BUILDING ELEVATION - SOUTHEAST
1/8" = 1'-0"



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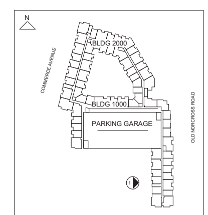
EXTERIOR FINISH KEY

BRK-1	BRICK BOD: TBD COLOR: GRAY	CPB-1	CEMENTITIOUS PANEL WITH METAL REVEALS BOD: TBD COLOR: WHITE	WVL	VINYL WINDOW BOD: PLYGEM COLOR: SEE SCHEDULE
CLS-1	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: WHITE	CPB-2	CEMENTITIOUS PANEL WITH METAL REVEALS BOD: TBD COLOR: DARK GRAY	MRP	BALCONY RAIL BOD: TBD COLOR: DARK GRAY
CLS-2	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: WOODTONE CHERRY	SCRNW	PARKING DECK SCREEN WALL BOD: TBD COLOR: TBD	SG	FULL HEIGHT SECURED GATE BOD: RYTEC OR EQUAL COLOR: GRAY
CLS-3	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: DARK GRAY	CAN	METAL PREFAB CANOPY BOD: MAPES COLOR: TBD		

1 BUILDING ELEVATION - WEST
1/8" = 1'-0"



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3100 COMMERCE AVE., DULUTH, GA 30096

GREYSTAR

ISSUE

REVISION

ENLARGED BUILDING ELEVATIONS

JOB NUMBER: 2106408

DRAWN BY Author
CHECKED BY Checker

A4-15

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PLANNING AND DEVELOPMENT

RECEIVED

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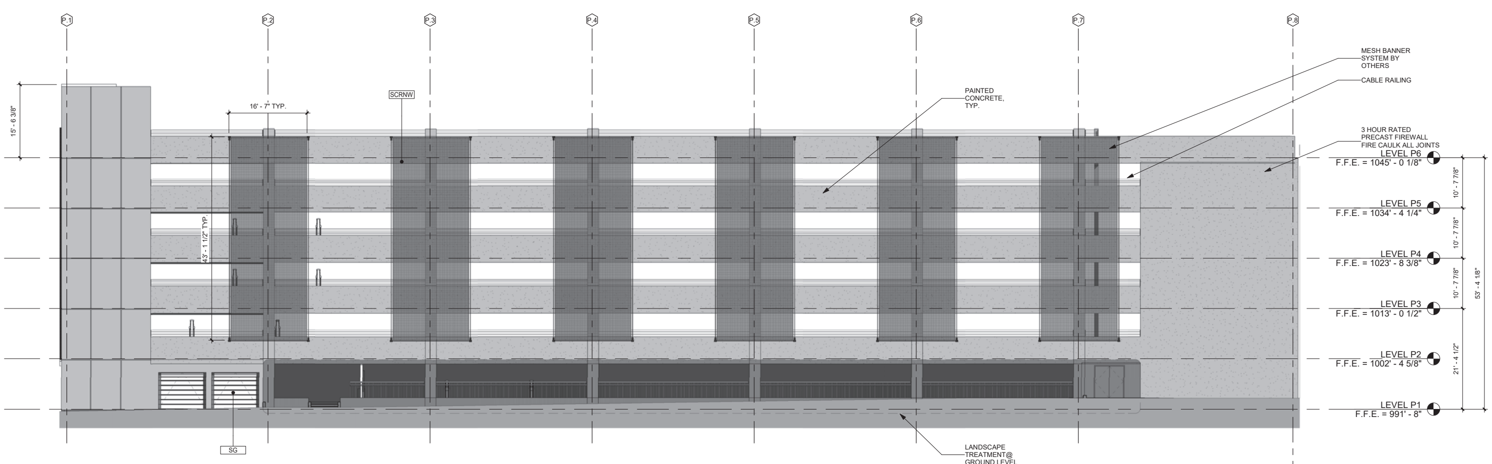
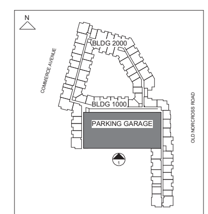
EXTERIOR FINISH KEY

BRK-1	BRICK BOD: TBD COLOR: GRAY	CPB-1	CEMENTITIOUS PANEL WITH METAL REVEALS BOD: TBD COLOR: WHITE	WVL	VINYL WINDOW BOD: PLYGEM COLOR: SEE SCHEDULE
CLS-1	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: WHITE	CPB-2	CEMENTITIOUS PANEL WITH METAL REVEALS BOD: TBD COLOR: DARK GRAY	MRP	BALCONY RAIL BOD: TBD COLOR: DARK GRAY
CLS-2	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: WOODTONE CHERRY	SCRNW	PARKING DECK SCREEN WALL BOD: TBD COLOR: TBD	SG	FULL HEIGHT SECURED GATE BOD: RYTEC OR EQUAL COLOR: GRAY
CLS-3	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: DARK GRAY	CAN	METAL PREFAB CANOPY BOD: MAPES COLOR: TBD		



1 PARKING DECK - SOUTH ELEVATION
3/32" = 1'-0"



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A DEVELOPMENT FOR:
GREYSTAR

ISSUE

DATE	DESCRIPTION	INCLUDED
02/25/2022	SCHEMATIC DESIGN SET	X
05/06/2022	DESIGN DEVELOPMENT SET	X
06/02/2022	GWINNETT COUNTY ZONING SUBMISSION	X

REVISION

DATE	DESCRIPTION	REV.

PARKING DECK ELEVATIONS

JOB NUMBER: 2106408

DRAWN BY EC | CHECKED BY NM

AP4-01

Exhibit E: Letter of Intent and Applicant's Response to Standards

[attached]

Mahaffey Pickens Tucker, LLP
ATTORNEYS AT LAW

Matthew P. Benson
Catherine W. Davidson
Gerald Davidson, Jr.*
Rebecca B. Gober
Brian T. Easley
Christopher D. Holbrook

Shane M. Lanham
Jeffrey R. Mahaffey
Jessica R. Pickens
Steven A. Pickens
Andrew D. Stancil
R. Lee Tucker, Jr.

*Of Counsel

LETTER OF INTENT FOR CHANGE IN CONDITIONS APPLICATION OF BANYAN STREET/GAP SATELLITE PLACE 600 OWNER, LLC

Mahaffey Pickens Tucker, LLP submits this Letter of Intent and attached change in conditions application (the "Application") on behalf of the property owner, Banyan Street/GAP Satellite Place 600 Owner, LLC (the "Applicant"), for the purpose of modifying existing conditions of zoning relating to an approximately 4.3-acre component (the "Property") of a 9.0-acre tract located on the northerly side of Satellite Boulevard at its intersections with Old Norcross Road and Commerce Avenue. The Property is currently zoned HRR (High-Rise Residence District) pursuant to case number RZM2021-00031.

Specifically, the Applicant is proposing to modify Condition #4, which relates to the architectural design and façade materials of the proposed multifamily building and parking deck structure. The proposed multifamily building would be constructed of brick, cementitious panels with metal reveals, and cementitious lap siding of various colors as shown on the building renderings and elevations submitted with the Application. The parking deck structure would be constructed of painted precast concrete panels and would be accentuated by mesh screening banners and cable railings as depicted on the elevations submitted with the Application. Notably, the parking deck structure is located internally to the proposed development and would be effectively screened from view of adjacent properties and rights-of-way by the multifamily building and existing office building.

Sugarloaf Office || 1550 North Brown Road, Suite 125, Lawrenceville, Georgia 30043
NorthPoint Office || 11175 Cicero Drive, Suite 100, Alpharetta, Georgia 30022
TELEPHONE 770 232 0000
FACSIMILE 678 518 6880
www.mptlawfirm.com

The proposed building design and materials are compatible with surrounding buildings, including the adjacent office building located on the same tax parcel. The proposed high-quality building materials are in line with the spirit and intent of the architectural design standards of the UDO as well as the building renderings which were presented at both the Planning Commission and Board of Commissioners public hearings during the original rezoning of the subject property in 2021. Accordingly, the Applicant respectfully requests approval of a change in conditions to modify Condition #4 of the previous rezoning to require the multifamily building and parking deck structure to be constructed in substantial conformity with the building renderings and elevations submitted with this Application.

The Applicant and its representatives welcome the opportunity to meet with staff of the Gwinnett County Department of Planning & Development to answer any questions or to address any concerns relating to the matters set forth in this letter or in the Application filed herewith. The Applicant respectfully requests your approval of this Application.

This 25th day of May, 2022.

Respectfully Submitted,

MAHAFFEY PICKENS TUCKER, LLP

Shane Lanham

Shane M. Lanham

CHANGE IN CONDITIONS APPLICANT'S RESPONSE

STANDARDS GOVERNING THE EXERCISE OF THE ZONING POWER

PURSUANT TO REQUIREMENTS OF THE UNIFIED DEVELOPMENT ORDINANCE, THE BOARD OF COMMISSIONERS FINDS THAT THE FOLLOWING STANDARDS ARE RELEVANT IN BALANCING THE INTEREST IN PROMOTING THE PUBLIC HEALTH, SAFETY, MORALITY OR GENERAL WELFARE AGAINST THE RIGHT TO THE UNRESTRICTED USE OF PROPERTY AND SHALL GOVERN THE EXERCISE OF THE ZONING POWER.

PLEASE RESPOND TO THE FOLLOWING STANDARDS IN THE SPACE PROVIDED OR USE AN ATTACHMENT AS NECESSARY:

(A) WHETHER A PROPOSED CHANGE IN CONDITIONS WILL PERMIT A USE THAT IS SUITABLE IN VIEW OF THE USE AND DEVELOPMENT OF ADJACENT AND NEARBY PROPERTY:

Please see attached

(B) WHETHER A PROPOSED CHANGE IN CONDITIONS WILL ADVERSELY AFFECT THE EXISTING USE OR USABILITY OF ADJACENT OR NEARBY PROPERTY:

Please see attached

(C) WHETHER THE PROPERTY TO BE AFFECTED BY A PROPOSED CHANGE IN CONDITIONS HAS REASONABLE ECONOMIC USE AS CURRENTLY ZONED:

Please see attached

(D) WHETHER THE PROPOSED CHANGE IN CONDITIONS WILL RESULT IN A USE WHICH WILL OR COULD CAUSE AN EXCESSIVE OR BURDENSOME USE OF EXISTING STREETS, TRANSPORTATION FACILITIES, UTILITIES, OR SCHOOLS:

Please see attached

(E) WHETHER THE PROPOSED CHANGE IN CONDITIONS IS IN CONFORMITY WITH THE POLICY AND INTENT OF THE LAND USE PLAN:

Please see attached

(F) WHETHER THERE ARE OTHER EXISTING OR CHANGING CONDITIONS AFFECTING THE USE AND DEVELOPMENT OF THE PROPERTY WHICH GIVE SUPPORTING GROUNDS FOR EITHER APPROVAL OR DISAPPROVAL OF THE PROPOSED CHANGE IN CONDITIONS:

Please see attached

APPLICANT'S RESPONSE
STANDARDS GOVERNING THE EXERCISE OF THE ZONING POWER

(A) Yes, approval of the Application will permit a use that is suitable in view of the use and development of adjacent and nearby property. The proposed development would complement existing office and commercial uses surrounding the property. The proposed Change in Conditions would not modify the land use allowed by the current zoning classification and conditions. The proposed Change in Conditions relates only to specific building materials and architecture.

(B) No, approval of the Application will not adversely affect the existing use or usability of any of the nearby properties. Rather, the proposed development will complement nearby uses and provide attractive housing options in a growing area of the County. The proposed Change in Conditions would not modify the land use allowed by the current zoning classification and conditions. The proposed Change in Conditions relates only to specific building materials and architecture.

(C) Due to the size, location, layout and dimensions of the subject property, the Applicant submits that the property does not have reasonable economic use as currently zoned.

(D) No, approval of the Application will not result in an excessive or burdensome use of the infrastructure systems. The proposed development has frontage on Satellite Boulevard, Old Norcross Road, and Commerce Avenue with access to utilities. The proposed Change in Conditions would not modify the land use allowed by the current zoning classification and conditions. The proposed Change in Conditions relates only to specific building materials and architecture.

(E) Yes, approval of the Application is in conformity with the policy and intent of the Gwinnett County 2040 Unified Plan which classifies the subject property as within the Regional Activity Center character area. Policies for this character area promote mixed-use environments. Mixed-use developments including office and multifamily residential uses are specifically identified as potential development types. The proposed Change in Conditions would not modify the land use allowed by the current zoning classification and conditions. The proposed Change in Conditions relates only to specific building materials and architecture.

(F) The Applicant submits that the high-quality of the proposed building materials and the attractive architectural design elements provide additional supporting grounds for approval of the Application.

Exhibit F: Internal and External Agency Review Comments

[attached]

TRC Meeting Date:	7.13.22
Department/Agency Name:	Transportation
Reviewer Name:	Brent Hodges
Reviewer Title:	Construction Manager 1
Reviewer Email Address:	Brent.Hodges@gwinnettcounty.com
Case Number:	CIC2022-00023
Case Address:	3175 Satellite Boulevard

	Comments:	**X**	**YES**		**NO**
1	Satellite Boulevard is a major arterial. ADT = 40,102. The frontage portions along Commerce Avenue and Old Norcross Road extension are each classified as a major collector. No ADT provided for those roadways.				
2	500-feet to nearest transit facility (#2335247) Satellite Boulevard and Commerce Avenue.				
3	Developer shall adhere to same Department of Transportation conditions applied to zoning case RZM2021-00031.				
4	Developer shall construct a 10-foot wide multi-use path along the Commerce Avenue frontage, per being classified as a Core Trail of the Gwinnett County Trails Master Plan.				
5					
6					
7					

	Recommended Zoning Conditions:		**YES**	**X**	**NO**
1					
2					
3					
4					
5					
6					
7					

Note: Attach additional pages, if needed

Revised 7/26/2021

TRC Meeting Date:	7/13/2022
Department/Agency Name:	DWR
Reviewer Name:	Mike Pappas
Reviewer Title:	GIS Planning Manager
Reviewer Email Address:	Michael.pappas@gwinnettcounty.com
Case Number:	CIC2022-00023
Case Address:	3175 Satellite Boulevard

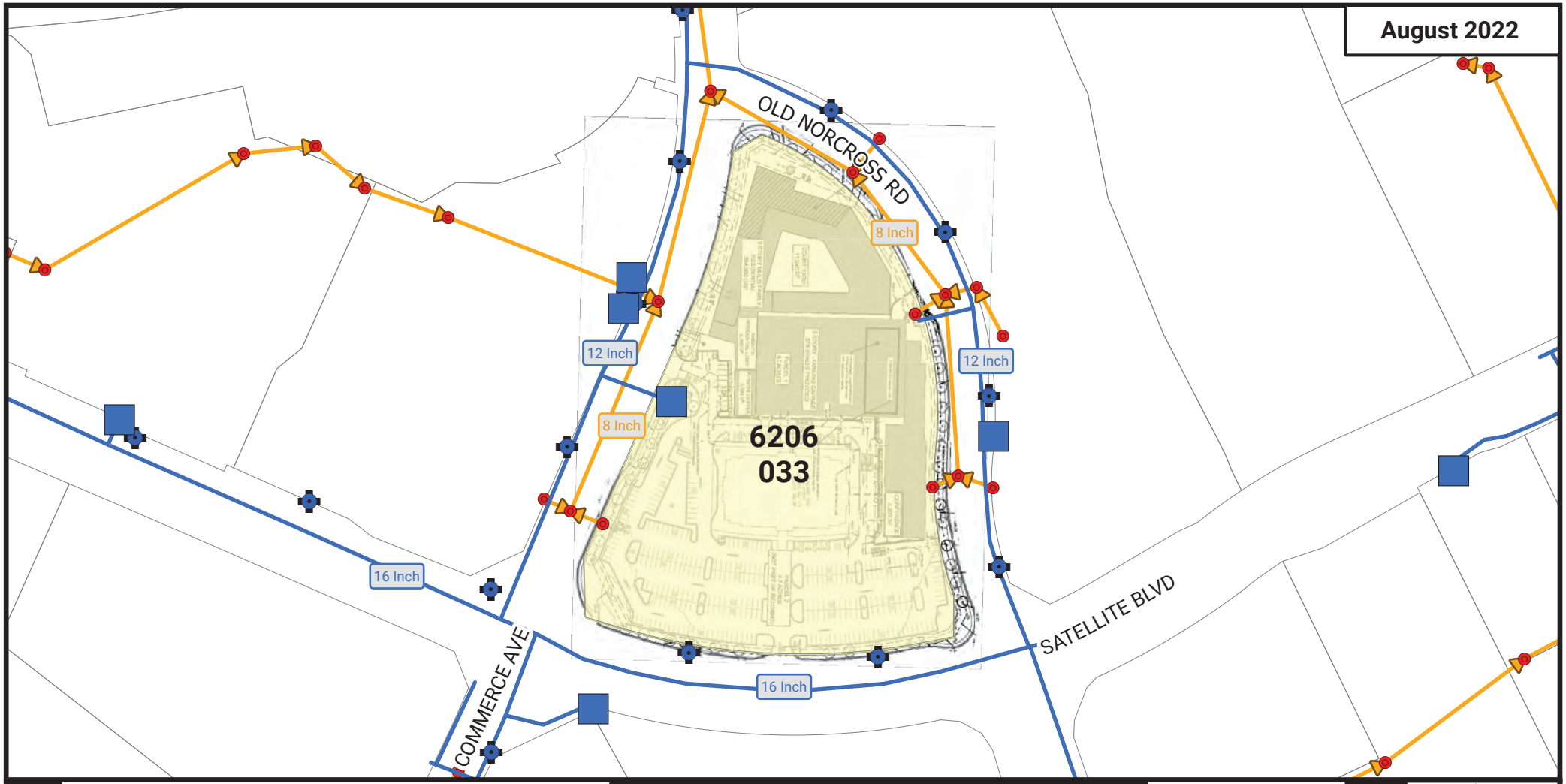
	Comments:	**X**	**YES**		**NO**
1	Water: The development may connect to an available 12-inch water main located in the west right-of-way of Commerce Avenue and a 12-inch water main in the east right-of-way of Old Norcross Road.				
2	Sewer: Sewer Capacity Certification C2021-11-319 is approved for 340 apartments (179.61 peak gpm).				
3	Sewer: The development may connect to an available 8-inch sanitary sewer main located on the proposed development site.				
4					
5					
6					
7					

	Recommended Zoning Conditions:		**YES**	**X**	**NO**
1					
2					
3					
4					
5					
6					
7					

Note: Attach additional pages, if needed

Revised 7/26/2021

August 2022



LEGEND

Flow Management
Pump Station
Regional
Manhole
Hydrant
City
Water Main
Reuse Main
Sewer Force Main
Effluent Outfall
Sewer Collector
Sewer Interceptor

CIC2022-00023
HRR

Water & Sewer Utility Map

N
W E
S
0 140 280
Feet

LOCATION

Water Comments: The development may connect to an available 12-inch water main located in the west right-of-way of Commerce Avenue and a 12-inch water main in the east right-of-way of Old Norcross Road.

Sewer Comments: Sewer Capacity Certification C2021-11-319 is approved for 340 apartments (179.61 peak gpm). The development may connect to an available 8-inch sanitary sewer main located on the proposed development site.

Water Availability: Water demands imposed by the proposed development may require upsizing or extensions of existing water mains in order to meet Gwinnett County Standards and fire flow demands. Any cost associated with such required improvements will be the responsibility of the development. Current Gwinnett County Standards require a minimum of 12" pipe size for commercial developments and a minimum of 8" pipe size for residential developments. Additionally, connection to a minimum of 12" and 8" mains are required for commercial and residential developments, respectively. It is the responsibility of the developer's engineer to confirm pressure and volumes are available for the development.

Sewer Availability: A Sewer Capacity Certification must be obtained from Gwinnett County to confirm the existing system can serve the development. Sewer demands imposed by the proposed development may require upsizing and/or extensions of existing sewer mains, and/or upsizing of an existing pump station, and/or installation of a new pump station. Any cost associated with such required improvements will be the responsibility of the development. The developer shall provide easements for future sewer connection to all locations designated by Gwinnett County during plan review.

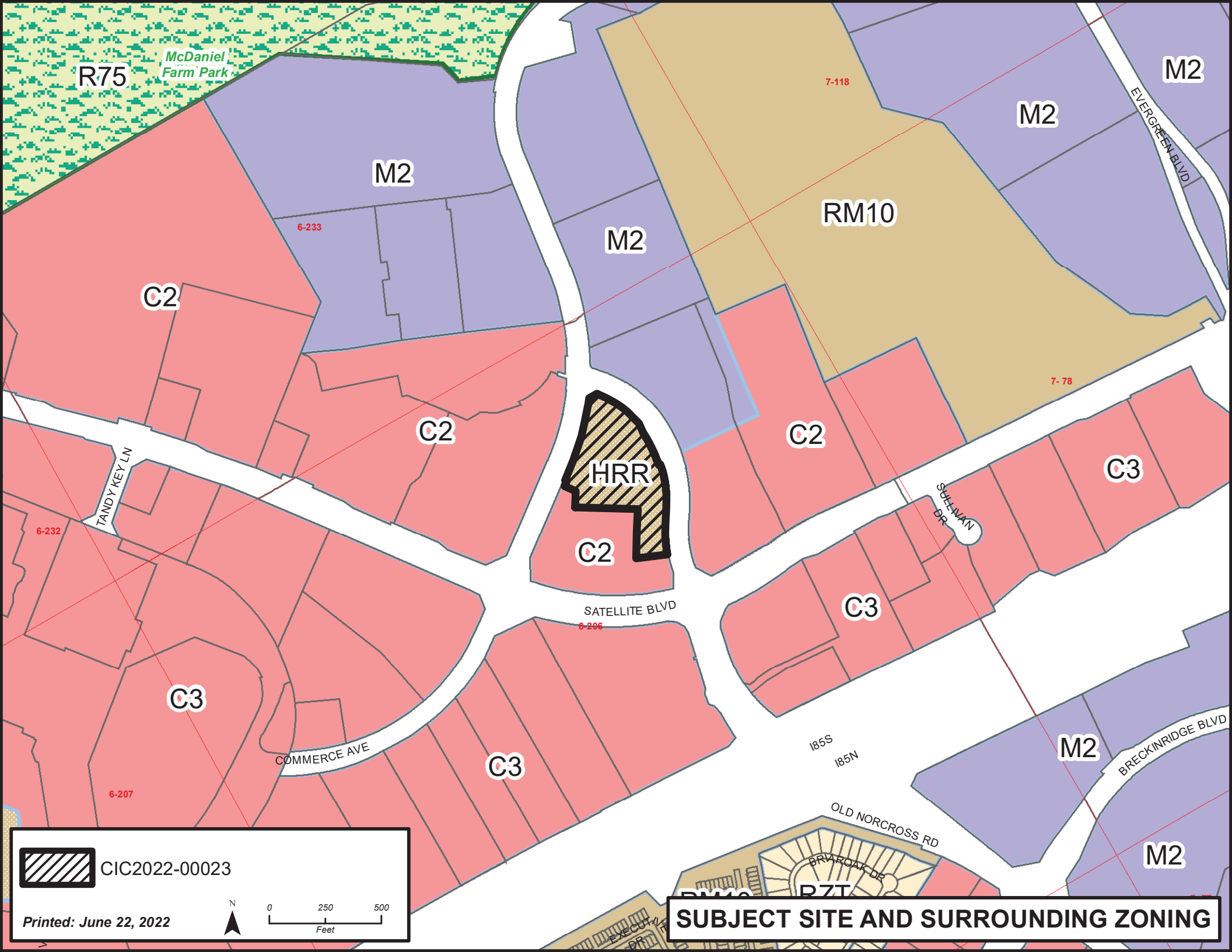
Water and Sewer Design and Construction Requirements: Extensions of the water and/or sanitary sewer systems within the subject development must conform to this department's policies, Gwinnett County's ordinances, and the Water Main and Sanitary Sewer Design and Construction Standards and Specifications, dated April 5th, 2016. Subsequent to design, construction, inspection, and final acceptance of the required utilities, service would then become available under the applicable utility permit rate schedules.

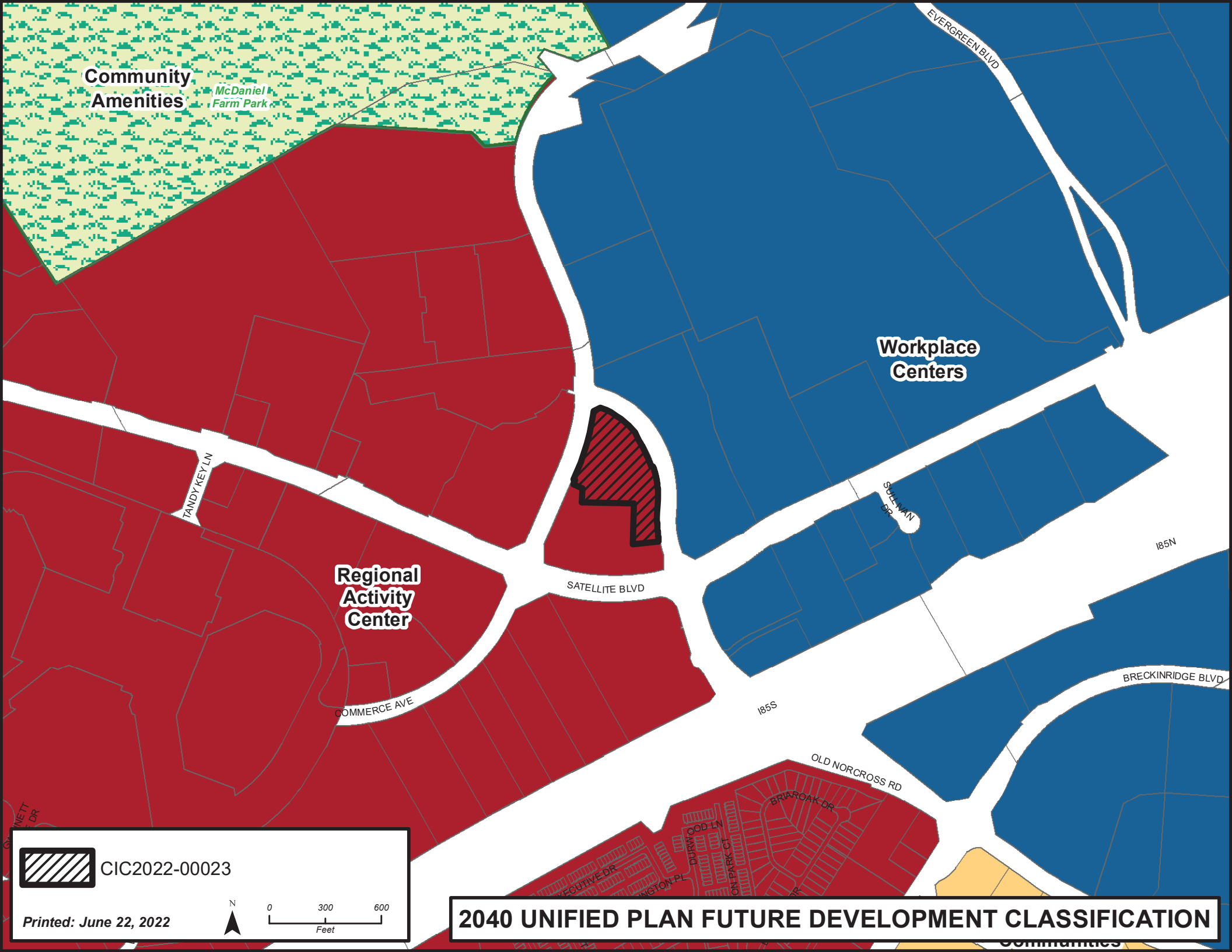
Private Road Developments: Any development with private roads must comply with the Standard Policy Requirement for the Installation of Water and Sanitary Sewer Mains within Private Developments. This policy stipulates minimum easement requirements and location of public mains and appurtenances, among other requirements.

Exhibit G: Maps

[attached]


OLD NORCROSS RD
SATELLITE BLVD
CIC2022-00023
Printed: June 22, 2022
N
0
100
200
Feet


R75
McDaniel Farm Park
M2
6-233
M2
7-118
M2
M2
EVERGREEN BLVD
RM10
7- 78
C2
C2
HRR
C2
C2
C3
TANDY KEY LN
6-232
SULLIVAN DR
C3
SATELLITE BLVD
6-206
C3
C3
COMMERCE AVE
C3
6-207
I85S
I85N
M2
BRECKINRIDGE BLVD
OLD NORCROSS RD
BRAROAK DR
M2
CIC2022-00023
Printed: June 22, 2022
N
0
250
500
Feet
SUBJECT SITE AND SURROUNDING ZONING


Community Amenities
McDaniel Farm Park
Workplace Centers
Regional Activity Center
EVERGREEN BLVD
TANDY KEY LN
SATELLITE BLVD
SULLIVAN DR
I85N
I85S
BRECKINRIDGE BLVD
COMMERCE AVE
OLD NORCROSS RD
BRIAROAK DR
DURWOOD LN
CIC2022-00023
Printed: June 22, 2022
N
0
300
600
Feet
2040 UNIFIED PLAN FUTURE DEVELOPMENT CLASSIFICATION

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CHANGE IN CONDITIONS APPLICATION

AN APPLICATION TO AMEND THE OFFICIAL ZONING MAP OF GWINNETT COUNTY, GEORGIA

APPLICANT INFORMATION	PROPERTY OWNER INFORMATION*
NAME: Owner c/o Mahaffey Pickens Tucker, LLP	NAME: Banyan Street/GAP Satellite Place 600 Owner, LLC
ADDRESS: 1550 North Brown Road, Suite 125	ADDRESS: 80 SW 8th St, Ste 2201
CITY: Lawrenceville	CITY: Miami
STATE: Georgia ZIP: 30043	STATE: Florida ZIP: 33130
PHONE: 770.232.0000	PHONE: 770 232 0000

CONTACT PERSON: Shane Lanham PHONE: 770 232 0000

CONTACT'S E-MAIL: slanham@mptlawfirm.com

APPLICANT IS THE:

☐ OWNER'S AGENT ☑ PROPERTY OWNER ☐ CONTRACT PURCHASER

ZONING DISTRICTS(S): HRR PRIOR ZONING CASE: RZM2021-00031

PARCEL NUMBER(S): 6206 033 (portion) ACREAGE: +/- 4.32

ADDRESS OF PROPERTY: 3175 Satellite Blvd

PROPOSED CHANGE IN CONDITIONS: Change in conditions to allow updated building materials

RESIDENTIAL DEVELOPMENT:	NON-RESIDENTIAL DEVELOPMENT:
NO. OF LOTS/DWELLING UNITS: 340	NO. OF BUILDINGS/LOTS: NA
DWELLING UNIT SIZE (Sq. Ft.): varies per UDO	TOTAL GROSS SQUARE FEET: NA
GROSS DENSITY: +/- 79.07 units per acre	DENSITY: NA
NET DENSITY: +/- 79.07 units per acre	

PLEASE ATTACH A LETTER OF INTENT EXPLAINING WHAT IS PROPOSED

PROPOSED PARCEL 1

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN LAND LOT 206, 6TH DISTRICT, GWINNETT COUNTY, GEORGIA AND BEING MORE PARTICULARLY DESCRIBED:

To find the Point of Beginning, Commence at the intersection of the southwesterly mitered intersection of the northerly right of way of Commerce Avenue (public 100' right of way) and the westerly right of way of Satellite Boulevard (public right of way varies) thence in the northeasterly direction along the northerly right of way of Commerce Drive the following courses and distances:
North 23 degrees 43 minutes 03 seconds East a distance of 153.57 feet to a point; thence
North 38 degrees 03 minutes 04 seconds East a distance of 40.39 feet to a point; thence
North 23 degrees 43 minutes 03 seconds East a distance of 178.12 feet to a point being the POINT OF BEGINNING; thence continuing along the northerly right of way of Commerce Drive the following courses and distances:
North 23 degrees 43 minutes 03 seconds East a distance of 25.01 feet to a point; thence
North 66 degrees 16 minutes 57 seconds West a distance of 10.00 feet to a point; thence
North 23 degrees 43 minutes 03 seconds East a distance of 51.71 feet to a point; thence
Along the arc of a curve to the left and arc distance of 330.98 feet, said curve having a radius of 1141.35 feet and being subtended by a chord bearing North 15 degrees 24 minutes 36 seconds East a chord distance of 329.82 feet to a point at the southeasterly mitered intersection of the right of way of Commerce Drive and Old Norcross Road (Public 100' right of way); thence along said mitered intersection North 60 degrees 02 minutes 35 seconds East a distance of 40.62 feet to a point; thence
Along the southerly right of way of Old Norcross Road the following courses and distances:
Along the arc of a curve to the right an arc distance of 237.80 feet, said curve having a radius of 465.24 feet and being subtended by a chord bearing South 54 degrees 15 minutes 09 seconds East a chord distance of 235.22 feet to a point; thence
South 23 degrees 49 minutes 40 seconds East a distance of 44.04 feet to a point; thence along the arc of a curve to the right an arc distance of 36.73 feet, said curve having a radius of 455.24 feet and being subtended by a chord bearing of South 31 degrees 57 minutes 23 seconds East a chord distance of 36.72 feet to a point; thence
Along the arc of a curve to the right an arc distance of 120.51 feet, said curve having a radius of 561.26 feet and being subtended by a chord bearing South 23 degrees 29 minutes 37 seconds East a chord distance of 120.28 feet to a point; thence
North 72 degrees 39 minutes 26 seconds East a distance of 10.00 feet to a point; thence along the arc of a curve to the right an arc distance of 229.07 feet, said curve having a radius of 571.26 feet and being subtended by a chord bearing South 05 degrees 51 minutes 18 seconds East a chord distance of 227.54 feet to a point; thence
Along the arc of a curve to the left an arc distance of 229.07 feet, said curve having a radius of 571.26 feet being subtended by a chord bearing South 05 degrees 51 minutes 18 seconds East a chord distance of 227.54 feet to a point; thence along the arc of a curve to the left and arc distance of 179.33 feet, said curve having a radius of 590.88 feet and being subtended by a chord bearing South 03 degrees 03 minutes 43 seconds East a chord distance 178.64 feet to a point; thence leaving said southerly right of way of Old Norcross Road the following courses and distance:
South 83 degrees 25 minutes 49 seconds West a distance of 141.30 feet to a point; thence

South 01 degrees 30 minutes 06 seconds West a distance of 221.01 feet to a point; thence
South 88 degrees 29 minutes 43 seconds East a distance of 280.56 feet to a point; thence
South 01 degrees 30 minutes 17 seconds West a distance of 74.42 feet to a point; thence
South 66 degrees 16 minutes 57 seconds East a distance of 54.42 feet to a point along the northerly right of way of Commerce Avenue and the POINT OF BEGINNING.

Said Property Parcel 1 containing 188,109 square feet or 4.3184 acres.

CHANGE IN CONDITIONS APPLICANT'S RESPONSE

STANDARDS GOVERNING THE EXERCISE OF THE ZONING POWER

PURSUANT TO REQUIREMENTS OF THE UNIFIED DEVELOPMENT ORDINANCE, THE BOARD OF COMMISSIONERS FINDS THAT THE FOLLOWING STANDARDS ARE RELEVANT IN BALANCING THE INTEREST IN PROMOTING THE PUBLIC HEALTH, SAFETY, MORALITY OR GENERAL WELFARE AGAINST THE RIGHT TO THE UNRESTRICTED USE OF PROPERTY AND SHALL GOVERN THE EXERCISE OF THE ZONING POWER.

PLEASE RESPOND TO THE FOLLOWING STANDARDS IN THE SPACE PROVIDED OR USE AN ATTACHMENT AS NECESSARY:

(A) WHETHER A PROPOSED CHANGE IN CONDITIONS WILL PERMIT A USE THAT IS SUITABLE IN VIEW OF THE USE AND DEVELOPMENT OF ADJACENT AND NEARBY PROPERTY:

Please see attached

(B) WHETHER A PROPOSED CHANGE IN CONDITIONS WILL ADVERSELY AFFECT THE EXISTING USE OR USABILITY OF ADJACENT OR NEARBY PROPERTY:

Please see attached

(C) WHETHER THE PROPERTY TO BE AFFECTED BY A PROPOSED CHANGE IN CONDITIONS HAS REASONABLE ECONOMIC USE AS CURRENTLY ZONED:

Please see attached

(D) WHETHER THE PROPOSED CHANGE IN CONDITIONS WILL RESULT IN A USE WHICH WILL OR COULD CAUSE AN EXCESSIVE OR BURDENSOME USE OF EXISTING STREETS, TRANSPORTATION FACILITIES, UTILITIES, OR SCHOOLS:

Please see attached

(E) WHETHER THE PROPOSED CHANGE IN CONDITIONS IS IN CONFORMITY WITH THE POLICY AND INTENT OF THE LAND USE PLAN:

Please see attached

(F) WHETHER THERE ARE OTHER EXISTING OR CHANGING CONDITIONS AFFECTING THE USE AND DEVELOPMENT OF THE PROPERTY WHICH GIVE SUPPORTING GROUNDS FOR EITHER APPROVAL OR DISAPPROVAL OF THE PROPOSED CHANGE IN CONDITIONS:

Please see attached

APPLICANT'S RESPONSE
STANDARDS GOVERNING THE EXERCISE OF THE ZONING POWER

(A) Yes, approval of the Application will permit a use that is suitable in view of the use and development of adjacent and nearby property. The proposed development would complement existing office and commercial uses surrounding the property. The proposed Change in Conditions would not modify the land use allowed by the current zoning classification and conditions. The proposed Change in Conditions relates only to specific building materials and architecture.

(B) No, approval of the Application will not adversely affect the existing use or usability of any of the nearby properties. Rather, the proposed development will complement nearby uses and provide attractive housing options in a growing area of the County. The proposed Change in Conditions would not modify the land use allowed by the current zoning classification and conditions. The proposed Change in Conditions relates only to specific building materials and architecture.

(C) Due to the size, location, layout and dimensions of the subject property, the Applicant submits that the property does not have reasonable economic use as currently zoned.

(D) No, approval of the Application will not result in an excessive or burdensome use of the infrastructure systems. The proposed development has frontage on Satellite Boulevard, Old Norcross Road, and Commerce Avenue with access to utilities. The proposed Change in Conditions would not modify the land use allowed by the current zoning classification and conditions. The proposed Change in Conditions relates only to specific building materials and architecture.

(E) Yes, approval of the Application is in conformity with the policy and intent of the Gwinnett County 2040 Unified Plan which classifies the subject property as within the Regional Activity Center character area. Policies for this character area promote mixed-use environments. Mixed-use developments including office and multifamily residential uses are specifically identified as potential development types. The proposed Change in Conditions would not modify the land use allowed by the current zoning classification and conditions. The proposed Change in Conditions relates only to specific building materials and architecture.

(F) The Applicant submits that the high-quality of the proposed building materials and the attractive architectural design elements provide additional supporting grounds for approval of the Application.

Mahaffey Pickens Tucker, LLP
ATTORNEYS AT LAW

Matthew P. Benson
Catherine W. Davidson
Gerald Davidson, Jr.*
Rebecca B. Gober
Brian T. Easley
Christopher D. Holbrook

Shane M. Lanham
Jeffrey R. Mahaffey
Jessica R. Pickens
Steven A. Pickens
Andrew D. Stancil
R. Lee Tucker, Jr.

*Of Counsel

LETTER OF INTENT FOR CHANGE IN CONDITIONS APPLICATION OF BANYAN STREET/GAP SATELLITE PLACE 600 OWNER, LLC

Mahaffey Pickens Tucker, LLP submits this Letter of Intent and attached change in conditions application (the "Application") on behalf of the property owner, Banyan Street/GAP Satellite Place 600 Owner, LLC (the "Applicant"), for the purpose of modifying existing conditions of zoning relating to an approximately 4.3-acre component (the "Property") of a 9.0-acre tract located on the northerly side of Satellite Boulevard at its intersections with Old Norcross Road and Commerce Avenue. The Property is currently zoned HRR (High-Rise Residence District) pursuant to case number RZM2021-00031.

Specifically, the Applicant is proposing to modify Condition #4, which relates to the architectural design and façade materials of the proposed multifamily building and parking deck structure. The proposed multifamily building would be constructed of brick, cementitious panels with metal reveals, and cementitious lap siding of various colors as shown on the building renderings and elevations submitted with the Application. The parking deck structure would be constructed of painted precast concrete panels and would be accentuated by mesh screening banners and cable railings as depicted on the elevations submitted with the Application. Notably, the parking deck structure is located internally to the proposed development and would be effectively screened from view of adjacent properties and rights-of-way by the multifamily building and existing office building.

The proposed building design and materials are compatible with surrounding buildings, including the adjacent office building located on the same tax parcel. The proposed high-quality building materials are in line with the spirit and intent of the architectural design standards of the UDO as well as the building renderings which were presented at both the Planning Commission and Board of Commissioners public hearings during the original rezoning of the subject property in 2021. Accordingly, the Applicant respectfully requests approval of a change in conditions to modify Condition #4 of the previous rezoning to require the multifamily building and parking deck structure to be constructed in substantial conformity with the building renderings and elevations submitted with this Application.

The Applicant and its representatives welcome the opportunity to meet with staff of the Gwinnett County Department of Planning & Development to answer any questions or to address any concerns relating to the matters set forth in this letter or in the Application filed herewith. The Applicant respectfully requests your approval of this Application.

This 25th day of May, 2022.

Respectfully Submitted,

MAHAFFEY PICKENS TUCKER, LLP

Shane Lanham

Shane M. Lanham

AMENDMENT TO AN APPLICATION TO AMEND THE OFFICIAL ZONING MAP OF GWINNETT COUNTY, GEORGIA

APPLICANT:	Banyan Street/GAP Satellite Place 600 Owner, LLC c/o Mahaffey Pickens Tucker, LLP
ZONING CASE NUMBER:	CIC2022-00023
REQUESTED ZONING DISTRICT(S):	HRR w/ Change in Conditions
PROPERTY:	3175 Satellite Blvd
SIZE:	+/-4.32 Acres
PROPOSED DEVELOPMENT:	Change in conditions to allow updated building materials

The Applicant, hereby amends its application to amend the official zoning map of Gwinnett County, Georgia heretofore filed with the Planning Division of Gwinnett County, Georgia by the addition of the attached Exhibit to the original application.

This 22nd day of July, 2022.

MAHAFFEY PICKENS TUCKER, LLP

Shane M. Lanham

Attorneys for Applicant

JUSTIFICATION FOR REZONING

The portions of the Gwinnett County Unified Development Ordinance (the "UDO") which classify or may classify the property which is the subject of this Application (the "Property") into any less intensive zoning classification other than as requested by the Applicant, are or would be unconstitutional in that they would destroy the Applicant's property rights without first paying fair, adequate and just compensation for such rights, in violation of Article I, Section I, Paragraph II of the Constitution of the State of Georgia of 1983, and the Due Process Clause of the Fourteenth Amendment to the Constitution of the United States.

The application of the UDO as applied to the subject Property, which restricts its use to the present zoning classification, is unconstitutional, illegal, null and void, constituting a taking of the Applicant's and the Owner's property in violation of the Just Compensation Clause of the Fifth Amendment and the Due Process Clause of the Fourteenth Amendment to the Constitution of the United States, Article I, Section I, Paragraph I, and Article I, Section I, Paragraph II of the Constitution of the State of Georgia of 1983, and the Equal Protection Clause of the Fourteenth Amendment to the Constitution of the United States denying the Applicant an economically viable use of its land while not substantially advancing legitimate state interests.

The Property is presently suitable for development under the HRR classification with the Change in Condition as requested by the Applicant, and is not economically suitable for development under the present HRR zoning classification of Gwinnett County. A denial of this Application would constitute an arbitrary and capricious act by the Gwinnett County Board of Commissioners without any rational basis therefore, constituting an abuse of discretion in violation of Article I, Section I, Paragraph I and Article I, Section I, Paragraph II of the Constitution of the State of Georgia of 1983, and the Due Process Clause of the Fourteenth Amendment to the Constitution of the United States.

A refusal by the Gwinnett County Board of Commissioners to rezone the Property to the HRR classification with the Change in Condition as agreed to by the Applicant, so as to permit the only feasible economic use of the Property, would be unconstitutional and discriminate in an arbitrary, capricious and unreasonable manner between the Applicant and owners of similarly

situated property in violation of Article I, Section I, Paragraph II of the Constitution of the State of Georgia of 1983 and the Equal Protection Clause of the Fourteenth Amendment to the Constitution of the United States. Any rezoning of the subject Property to the HRR classification with the Change in Condition, which are different from the conditions by which the Applicant may amend its application, to the extent such different conditions would have the effect of further restricting the Applicant's and the Owner's utilization of the subject Property, would also constitute an arbitrary, capricious and discriminatory act in zoning the Property to an unconstitutional classification and would likewise violate each of the provisions of the State and Federal Constitutions set forth hereinabove.

Opponents to the request set forth in the Application, or in any amendments to the Application, have waived their rights to appeal any decision of the Gwinnett County Board of Commissioners because they lack standing, have failed to exhaust administrative remedies, and/or because they failed to assert any legal or constitutional objections.

Accordingly, the Applicant respectfully requests that the rezoning application submitted by the Applicant relative to the Property be granted and that the Property be rezoned to the zoning classification as shown on the respective application.

This 22nd day of July, 2022.

Respectfully submitted,

MAHAFFEY PICKENS TUCKER, LLP

Shane M. Lanham
Attorneys for Applicant

1550 North Brown Road
Suite 125
Lawrenceville, Georgia 30043
(770) 232-0000

AMENDMENT TO AN APPLICATION TO AMEND THE OFFICIAL ZONING MAP OF GWINNETT COUNTY, GEORGIA

APPLICANT:	Banyan Street/GAP Satellite Place 600 Owner, LLC c/o Mahaffey Pickens Tucker, LLP
ZONING CASE NUMBER:	CIC2022-00023
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SIZE:	+/-4.32 Acres
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MAHAFFEY PICKENS TUCKER, LLP

Shane M. Lanham

Attorneys for Applicant

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The application of the UDO as applied to the subject Property, which restricts its use to the present zoning classification, is unconstitutional, illegal, null and void, constituting a taking of the Applicant's and the Owner's property in violation of the Just Compensation Clause of the Fifth Amendment and the Due Process Clause of the Fourteenth Amendment to the Constitution of the United States, Article I, Section I, Paragraph I, and Article I, Section I, Paragraph II of the Constitution of the State of Georgia of 1983, and the Equal Protection Clause of the Fourteenth Amendment to the Constitution of the United States denying the Applicant an economically viable use of its land while not substantially advancing legitimate state interests.

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Opponents to the request set forth in the Application, or in any amendments to the Application, have waived their rights to appeal any decision of the Gwinnett County Board of Commissioners because they lack standing, have failed to exhaust administrative remedies, and/or because they failed to assert any legal or constitutional objections.

Accordingly, the Applicant respectfully requests that the rezoning application submitted by the Applicant relative to the Property be granted and that the Property be rezoned to the zoning classification as shown on the respective application.

This 22nd day of July, 2022.

Respectfully submitted,

MAHAFFEY PICKENS TUCKER, LLP

Shane M. Lanham
Attorneys for Applicant

1550 North Brown Road
Suite 125
Lawrenceville, Georgia 30043
(770) 232-0000

CHANGE IN CONDITIONS APPLICANT'S CERTIFICATION

THE UNDERSIGNED BELOW IS AUTHORIZED TO MAKE THIS APPLICATION. THE UNDERSIGNED IS AWARE THAT NO APPLICATION OR REAPPLICATION AFFECTING THE SAME LAND SHALL BE ACTED UPON WITHIN 12 MONTHS FROM THE DATE OF LAST ACTION BY THE BOARD OF COMMISSIONERS UNLESS WAIVED BY THE BOARD OF COMMISSIONERS. IN NO CASE SHALL AN APPLICATION OR REAPPLICATION BE ACTED UPON IN LESS THAN SIX (6) MONTHS FROM THE DATE OF LAST ACTION BY THE BOARD OF COMMISSIONERS.

Signature of Applicant — 5/24/22 Date

Shane M. Lanham, attorney for the Applicant
Type or Print Name and Title

Signature of Notary Public — 5/24/22 Date — Notary Seal

NICOLE GILMORE
NOTARY PUBLIC
GWINNETT COUNTY, GA
EXP. NOV. 8, 2024

CHANGE IN CONDITIONS APPLICANT'S CERTIFICATION

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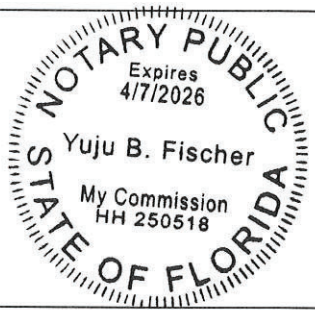
Signature of Applicant

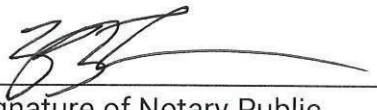
5/17/22

Date

K. Taylor White, Vice President

Type or Print Name and Title





Signature of Notary Public

5/17/2022

Date

Notary Seal

CHANGE IN CONDITIONS PROPERTY OWNER'S CERTIFICATION

THE UNDERSIGNED BELOW, OR AS ATTACHED, IS THE OWNER OF THE PROPERTY CONSIDERED IN THIS APPLICATION. THE UNDERSIGNED IS AWARE THAT NO APPLICATION OR REAPPLICATION AFFECTING THE SAME LAND SHALL BE ACTED UPON WITHIN 12 MONTHS FROM THE DATE OF LAST ACTION BY THE BOARD OF COMMISSIONERS UNLESS WAIVED BY THE BOARD OF COMMISSIONERS. IN NO CASE SHALL AN APPLICATION OR REAPPLICATION BE ACTED UPON IN LESS THAN SIX (6) MONTHS FROM THE DATE OF LAST ACTION BY THE BOARD OF COMMISSIONERS.

Signature of Property Owner — Date: 5/17/22

K. Taylor White, Vice President
Type or Print Name and Title

NOTARY PUBLIC
Expires 4/7/2026
Yuju B. Fischer
My Commission HH 250518
STATE OF FLORIDA

Signature of Notary Public — Date: 5/17/2022 — Notary Seal

CONFLICT OF INTEREST CERTIFICATION FOR CHANGE IN CONDITIONS

The undersigned below, making application for a change in conditions, has complied with the Official Code of Georgia Section 36-67A-1, et. seq, Conflict of Interest in Zoning Actions, and has submitted or attached the required information on the forms provided.

Signature of Applicant	Date	Type of Print Name and Title
	5/24/22	Shane M. Lanham, attorney for the Applicant
Signature of Applicant's Attorney or Representative	Date	Type or Print Name and Title
	5/24/22	Notary Seal
Signature of Notary Public	Date	

NICOLE GILMORE NOTARY PUBLIC GWINNETT COUNTY, GA EXPIRES: 2024

DISCLOSURE OF CAMPAIGN CONTRIBUTIONS

Have you, within the two years immediately preceding the filing of this application, made campaign contributions aggregating $250.00 or more to a member of the Board of Commissioners or a member of the Gwinnett County Planning Commission?

[XX] YES [ ] NO Mahaffey Pickens Tucker, LLP
Your Name

If the answer is yes, please complete the following section:

NAME AND OFFICAL POSITION OF GOVERNMENT OFFICIAL	CONTRIBUTIONS (List all which aggregate to $250 or More)	DATE CONTRIBUTION WAS MADE (Within last two years)
Kirkland Carden	$2,800	11/18/2021

Attach additional sheets if necessary to disclose or describe all contributions.

CONFLICT OF INTEREST CERTIFICATION FOR CHANGE IN CONDITIONS

The undersigned below, making application for a change in conditions, has complied with the Official Code of Georgia Section 36-67A-1, et. seq, Conflict of Interest in Zoning Actions, and has submitted or attached the required information on the forms provided.

Signature of Applicant	Date	Type of Print Name and Title
K. Taylor	5/17/22	K. Taylor White, Vice President

Signature of Applicant's Attorney or Representative	Date	Type or Print Name and Title

Signature of Notary Public	Date	Notary Seal
	5/17/2022	NOTARY PUBLIC Expires 4/7/2026 Yuju B. Fischer My Commission HH 250518 STATE OF FLORIDA

DISCLOSURE OF CAMPAIGN CONTRIBUTIONS

Have you, within the two years immediately preceding the filing of this application, made campaign contributions aggregating $250.00 or more to a member of the Board of Commissioners or a member of the Gwinnett County Planning Commission?

☐ YES ☒ NO K. Taylor White
Your Name

If the answer is yes, please complete the following section:

NAME AND OFFICAL POSITION OF GOVERNMENT OFFICIAL	CONTRIBUTIONS (List all which aggregate to $250 or More)	DATE CONTRIBUTION WAS MADE (Within last two years)

Attach additional sheets if necessary to disclose or describe all contributions.

VERIFICATION OF CURRENT PAID PROPERTY TAXES FOR CHANGE IN CONDITIONS

THE UNDERSIGNED CERTIFIES THAT ALL GWINNETT COUNTY PROPERTY TAXES BILLED TO DATE FOR THE PARCEL LISTED BELOW HAVE BEEN PAID IN FULL TO THE TAX COMMISSIONER OF GWINNETT COUNTY, GEORGIA. IN NO CASE SHALL AN APPLICATION OR REAPPLICATION FOR REZONING BE PROCESSED WITHOUT SUCH PROPERTY VERIFICATION.

*** NOTE: A SEPARATE VERIFICATION FORM MUST BE COMPLETED FOR EACH TAX PARCEL INCLUDED IN THE REZONING REQUEST.**

PARCEL I.D. NUMBER: 6 - 206 - 033
(Map Reference Number) District Land Lot Parcel

Signature of Applicant — 5/24/22 Date

Shane M. Lanham, attorney for the Applicant
Type or Print Name and Title

*****PLEASE TAKE THIS FORM TO THE TAX COMMISSIONERS OFFICE AT THE GWINNETT JUSTICE AND ADMINISTRATION CENTER, 75 LANGLEY DRIVE, FOR THEIR APPROVAL BELOW.*****

TAX COMMISSIONERS USE ONLY

(PAYMENT OF ALL PROPERTY TAXES BILLED TO DATE FOR THE ABOVE REFERENCED PARCEL HAVE BEEN VERIFIED AS PAID CURRENT AND CONFIRMED BY THE SIGNATURE BELOW)

Nikki Schoby — NAME
TSA II — TITLE
5/24/2022 — DATE

Gwinnett

GWINNETT COUNTY
DEPARTMENT OF PLANNING AND DEVELOPMENT
446 West Crogan Street, Suite 300 | Lawrenceville, GA 30046-2440
678.518.6000
GwinnettCounty.com

TIME LAPSE WAIVER APPLICATION

According to Section 270-70 of the Unified Development Ordinance (UDO), a request to reduce the 12-month waiting period for a Zoning Map Amendment, Variance, or Special Use Permit may be reduced to 6-months if approved by the appropriate body. For Zoning Map Amendments and Special Use permits, this reduction is considered by the Board of Commissioners. For Variances, this reduction is considered by the Zoning Board of Appeals.

NOTE: A Letter of Justification must be attached to this application.

Request Summary:

Property Address: 3175 Satellite Blvd Property Parcel ID: 6206 033

City, State, Zip Code: Duluth, GA, 30096

Previous Application Type (Rezoning, Change in Conditions, Special Use Permit or Variance):
Change in conditions relative to building design

Previous Case Number: RZM2021-00031 Previous Case Decision Date: 09/28/2021

Purpose of Current Request: Change in conditions relative to building design

Applicant Information:

Name: Banyan Street/GAP Satellite Place 600 Owner, LLC c/o Mahaffey Pickens Tucker, LLP

Mailing Address: 1550 North Brown Road, Suite 125

City, State, Zip Code: Lawrenceville, GA, 30043

Phone Number: 770 232 0000 Email Address: slanham@mptlawfirm.com

Applicant is (check, if applicable): ☑ Property Owner ☐ Owner's Agent

Property Owner Information (if property owner is not the applicant):

Name:

Telephone Number: Email Address:

Required Signatures:

Applicant Signature: K. Taylor White Property Owner Signature:

Name of Applicant: K. Taylor White, VP of Banyan Street/GAP Satellite Place 600 Owner, LLC Name of Property Owner:

Date: 5/17/22 Date:

RZM2021-00031

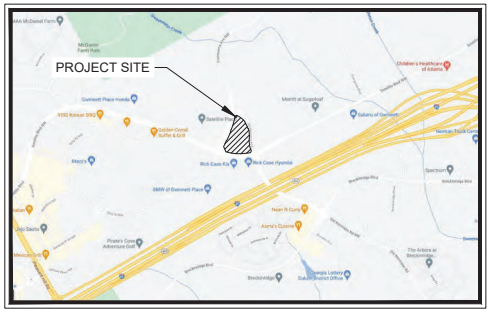
Page 10 of 53

GWINNETT COUNTY
PLANNING AND DEVELOPMENT

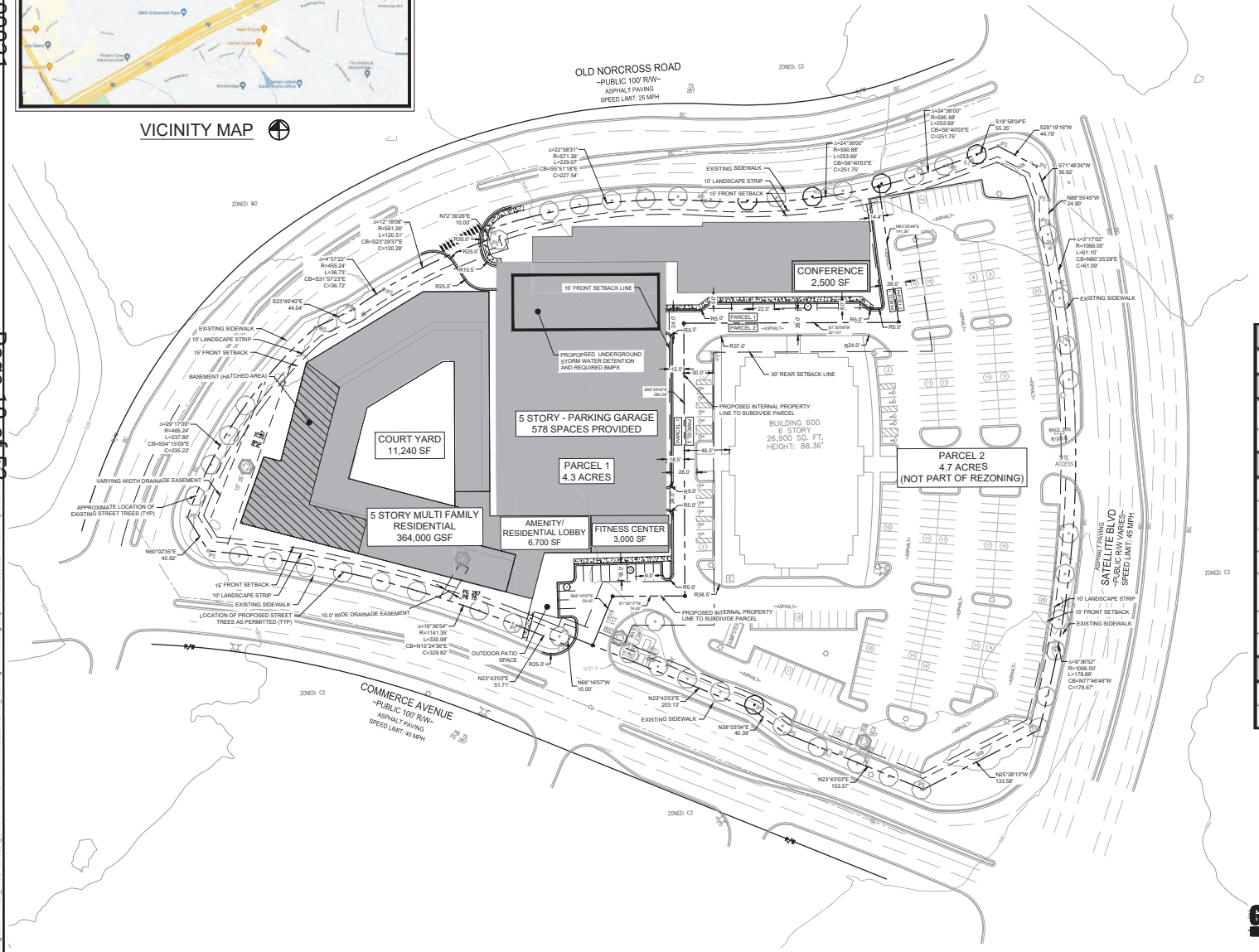
RECEIVED

5.26.2022

GWINNETT COUNTY
PLANNING AND DEVELOPMENT
RECEIVED
6/28/2021 8:50PM



VICINITY MAP



UNIT MIX SUMMARY:

	% UNIT MIX
STUDIO	15 %
1 BED	45 %
2 BED	35 %
3 BED	5 %
TOTAL	100%

DEVELOPMENT SUMMARY:

SITE SUMMARY:

SITE ADDRESS:	3175 SATELLITE BLVD. DULUTH, GA 30096
CURRENT ZONING:	C2
PROPOSED ZONING:	HRR
CURRENT SITE AREA:	9.0001 ACRES
SUBDIVIDED AREA:	
- PARCEL 1:	4.3 ACRES
- PARCEL 2*:	4.7 ACRES

* **PARCEL 2 IS NOT INCLUDED IN REZONING**

OPEN SPACE REQUIRED:	20%
OPEN SPACE PROVIDED:	29.09% (1.26 ACRES)

PROPOSED LAND USES & DENSITIES:

MULTIFAMILY RESIDENTIAL:	
- ALLOWED:	TBD
- PROPOSED:	340 UNITS (79.07 UNITS/ ACRE)
BUILDING HEIGHT	
- REQUIRED:	MINIMUM 5 STORIES
- PROPOSED:	5 STORIES (60')

PROPOSED ZONING DIMENSIONAL STANDARDS:

MIN. LOT WIDTH:	75'
MIN. SETBACKS:	
- FRONT:	15'
- SIDE:	0'
- REAR:	25'
MIN. LANDSCAPE STRIP:	10'

PARKING SUMMARY:

MIN. REQUIRED PARKING: MULTIFAMILY (340 UNITS) OFFICE (2,500 SF)	**515 SPACES** (TOTAL) 510 SPACES (1.5/UNIT) 5 SPACES (1/ 500 SF)
PROPOSED PARKING: MULTIFAMILY (340 UNITS) EX. OFFICE PARKING TO REMAIN	**921 SPACES** (TOTAL) 599 SPACES 322 SPACES

Multi Family Development Permit Data

Please Provide the following data on your plan in the listed format:

General

Development Type→	Apartments	Condo Apartments	Quad Apartments	Townhouses (No Lots)	Triplex Apartments
	x				
Zoning	HRR				

Project Data

Total Area (Acres)	4.33 AC
Limits of Disturbed Area (Acres)	~4.5 AC
Net Area (Acres)*	4.33 AC
Floodplain Area (Acres)	0 AC
Floodplain (% of floodplain acres vs total acres)	0 AC
Power/Gas Easement or Right of way (Acres)	

Sanitary Service→	Sewer	Septic
	Public Sewer	

Density (Units/Acre)

Gross	340 units/ 4.3 ac = 79.07
Net	340 units/ 4.3 ac = 79.07

SITE PLAN LEGEND

- PROPERTY LINE
- BUILDING SETBACK LINE
- (#) PARKING COUNT
- SIDEWALK

NORTH

GRAPHIC SCALE IN FEET
0 25 50 100

GEORGIA811

PREPARED BY
Kimley»Horn
© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GEORGIA 30009
PHONE (770) 619-4280
WWW.KIMLEY-HORN.COM

PREPARED FOR
GREYSTAR
1545 PEACHTREE STREET, SUITE 700
ATLANTA, GA 30309
PHONE: 803.727.0479

No.	ISSUANCE AND REVISION DESCRIPTIONS	DATE	BY
	ADDRESSED COUNTY'S ZONING COMMENTS	06/30/2021	MAP
	COUNTY ZONING SUBMITTAL	06/03/2021	MAP

PROJECT
GREYSTAR
GWINNETT PLACE
3175 SATELLITE BLVD, DULUTH, GA 30096
LAND LOT 206, 6TH DISTRICT

GEORGIA REGISTERED PROFESSIONAL ENGINEER
MARK A. PUTNAM
05/21/21

GSWCC NO. (LEVEL II)	0000008170
DRAWN BY	KHP
DESIGNED BY	MAP
REVIEWED BY	JKM
DATE	05/13/2021
PROJECT NO.	013575006

TITLE
SITE PLAN

SHEET NUMBER
SHEET #1

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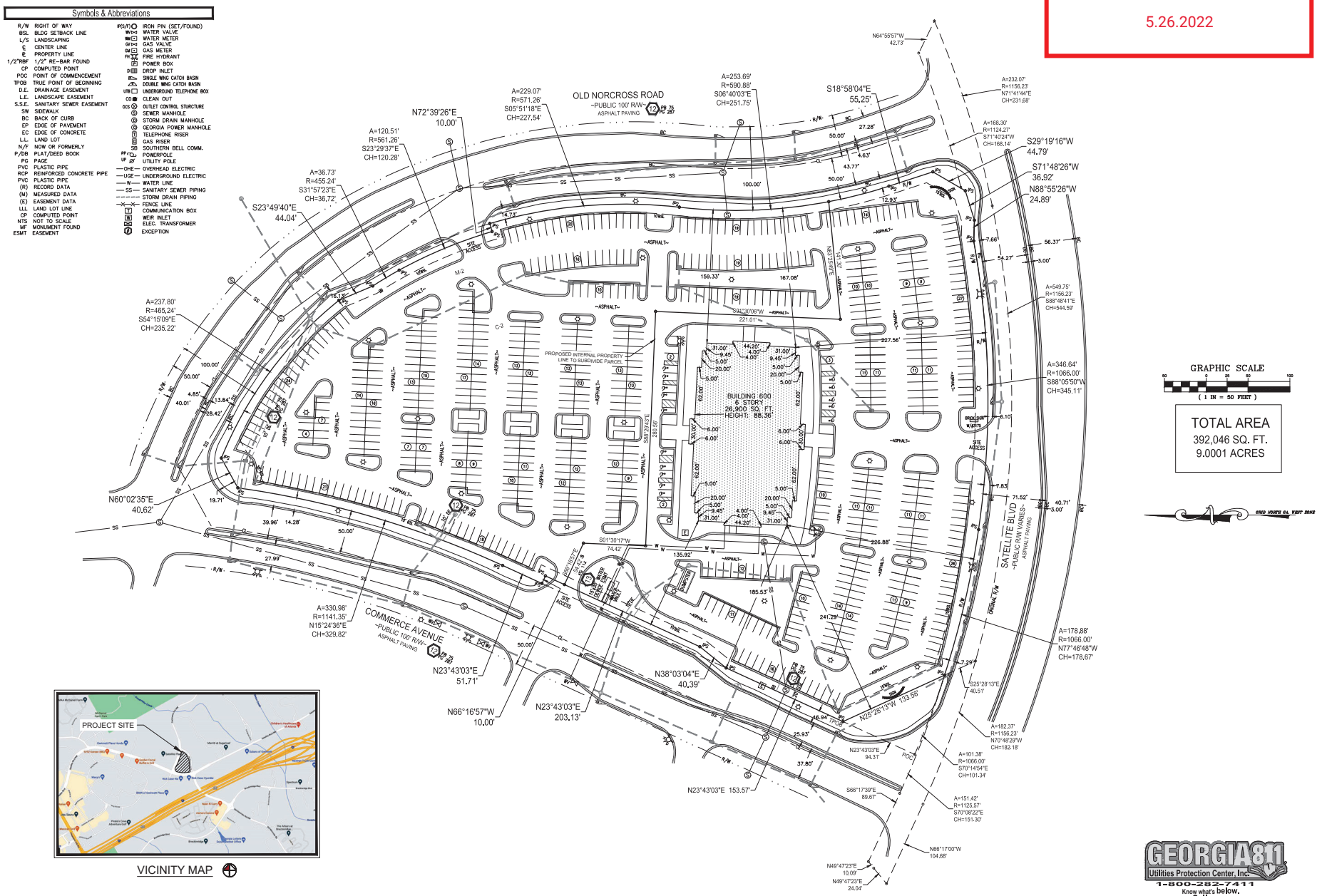

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TAX PARCEL ID# R6206 033
LAND LOT 206, 2ND DISTRICT, 2ND SECTION
GWINNETT COUNTY, GEORGIA

Sheet / Drawing Scale	1"=50' *Unless Otherwise Noted*
GSA Project No.	21-06-590
Drawn By / Field Crew	SCM
Crew No. / Date	
Sheet No.	01 OF 01

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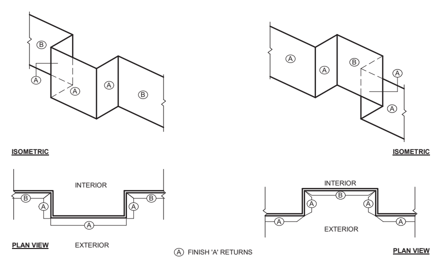
CLS-1	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: WHITE	CPB-2	CEMENTITIOUS PANEL WITH METAL REVEALS BOD: TBD COLOR: DARK GRAY	MRP	BALCONY RAIL BOD: TBD COLOR: DARK GRAY
CLS-2	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: WOODTONE CHERRY	SCRNW	PARKING DECK SCREEN WALL BOD: TBD COLOR: TBD	SG	FULL HEIGHT SECURED GATE BOD: RYTEC OR EQUAL COLOR: GRAY
CLS-3	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: DARK GRAY	CAN	METAL PREFAB CANOPY BOD: MAPES COLOR: TBD		



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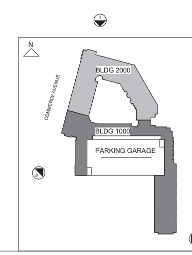

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DATE	DESCRIPTION	REV

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2 BUILDING ELEVATION - WEST
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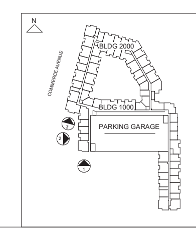
3 BUILDING ELEVATION - SOUTHWEST
1/8" = 1'-0"

1 BUILDING ELEVATION - SOUTHWEST
1/8" = 1'-0"



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CLS-3	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: DARK GRAY	CAN	METAL PREFAB CANOPY BOD: MAPES COLOR: TBD		

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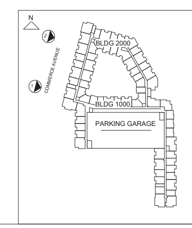
1/8" = 1'-0"



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CLS-3	CEMENTITIOUS LAP SIDING BOD: TBD COLOR: DARK GRAY	CAN	METAL PREFAB CANOPY BOD: MAPES COLOR: TBD		

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1/8" = 1'-0"

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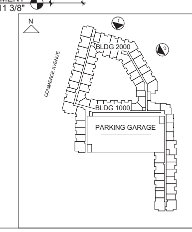
1/8" = 1'-0"



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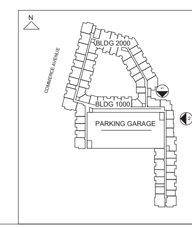

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2 BUILDING ELEVATION - SOUTH
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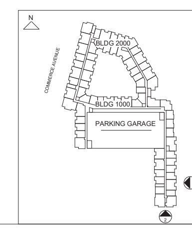
1 BUILDING ELEVATION - SOUTHEAST
1/8" = 1'-0"



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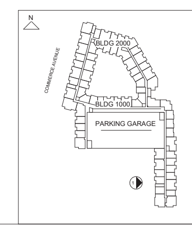

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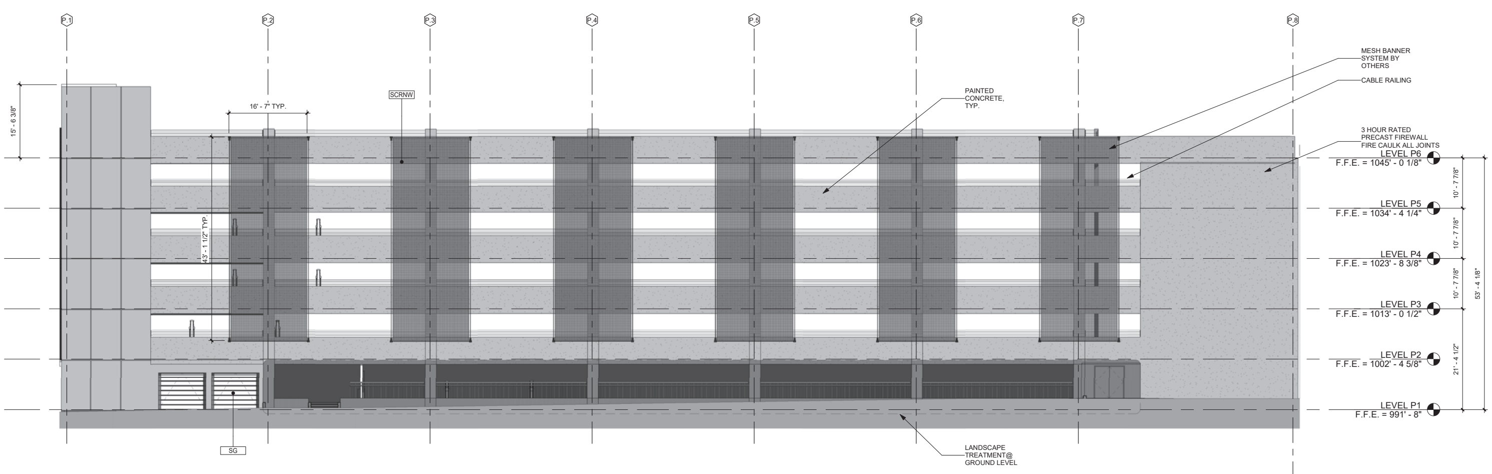

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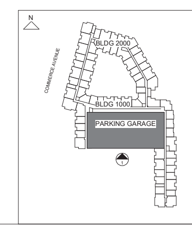

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PARKING DECK ELEVATIONS

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Traffic Impact Study

Gwinnett Village

Gwinnett County, Georgia

Report Prepared:

June 2021

Report Revised:

January 2022

Prepared for:

Greystar

Prepared by:

Kimley-Horn and Associates, Inc.
11720 Amber Park Drive, Suite 600
Alpharetta, GA 30009
012683004

Traffic Impact Study

Gwinnett Village

Gwinnett County, Georgia

Report Prepared:

June 2021

Report Revised:

January 2022

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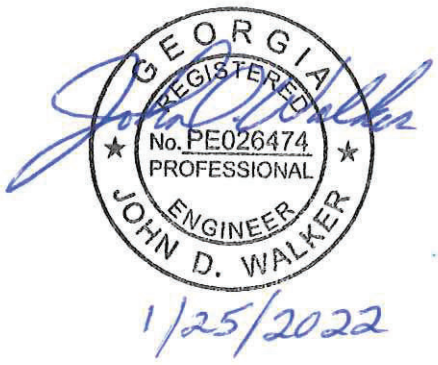


CONTENTS

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION

This report presents the analysis of the anticipated traffic impacts associated with the proposed *Gwinnett Village* development, which is expected to be completed in 2023 (referred to herein as "build-out year"). The site is located in the southeast quadrant of the intersection of Commerce Avenue NW at Old Norcross Road E in unincorporated Gwinnett County, Georgia.

The site currently consists of a 6-story commercial office building of 161,400 SF and its associated surface parking. The *Gwinnett Village* development proposes removing surface parking north of the office building and constructing 350 multi-family residential units on approximately 9.22 acres. The site is proposed to be rezoned from C2 (general business district) to HRR (high-rise residence district).

This report will summarize the analyses of the following three (3) scenarios:

1. Estimated 2021 Traffic Conditions
2. Projected 2023 No-Build Traffic Conditions (Estimated 2021 Traffic Conditions, plus background traffic growth).
3. Projected 2023 Build Traffic Conditions (Projected 2023 No-Build Traffic Conditions, plus the traffic associated with the proposed *Gwinnett Village* development).

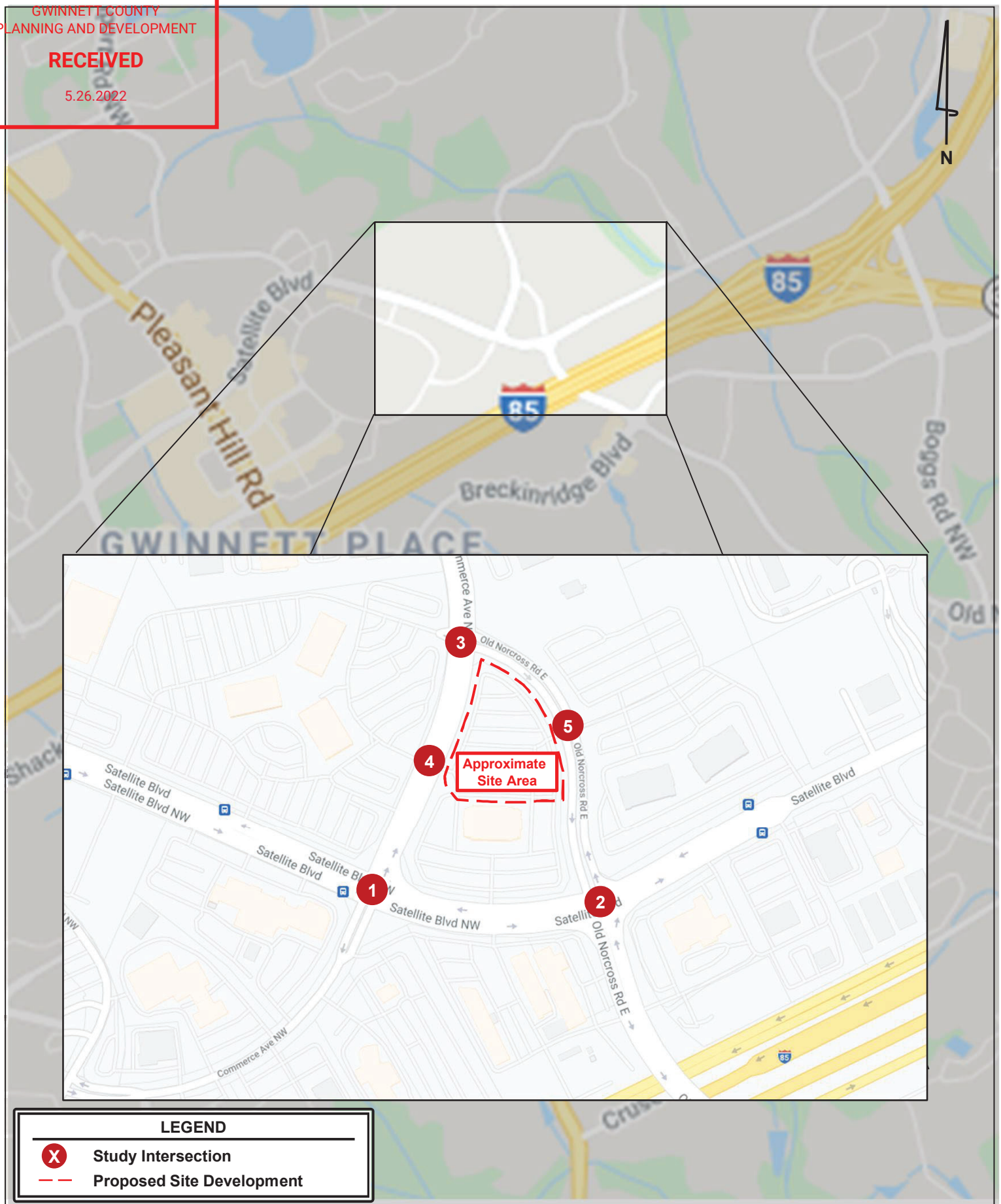
Figure 1 provides a location map of the project site. **Figure 2** provides aerial imagery of the project site. Additionally, a copy of the proposed site plan is provided in Appendix A.

2.0 STUDY AREA DETERMINATION

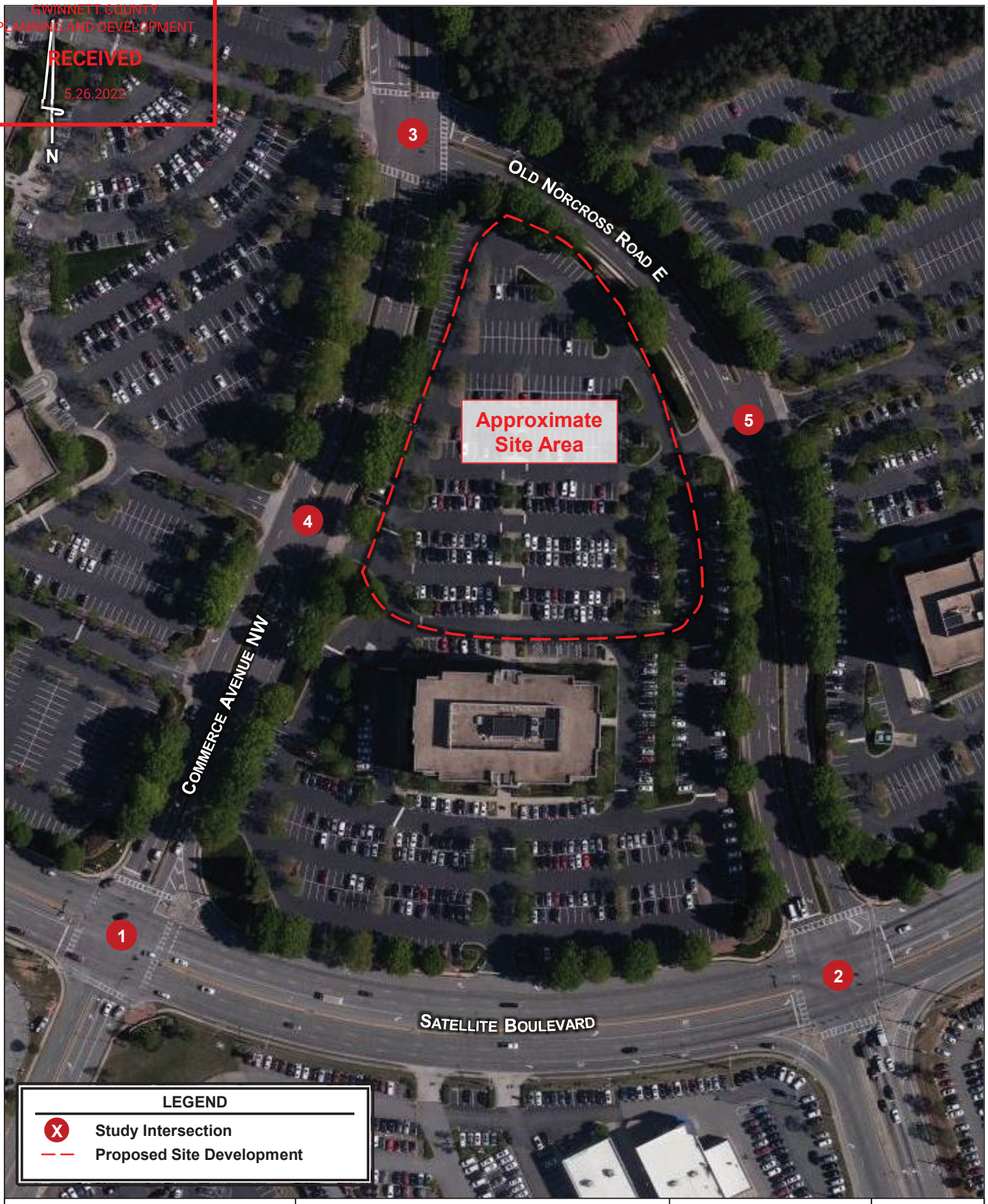
The study area consists of the following five (5) intersections:

1. Satellite Boulevard at Commerce Avenue NW (signalized)
2. Satellite Boulevard at Old Norcross Road E (signalized)
3. Commerce Avenue NW at Old Norcross Road E (signalized)
4. Commerce Avenue NW at Driveway A (unsignalized)
5. Old Norcross Road E at Driveway B (unsignalized)

This analysis considers Satellite Boulevard as having an east-west orientation. Commerce Avenue was considered to have a north-south orientation. Old Norcross Road E was considered to have an north-south orientation at Driveway A and an east-west orientation at Commerce Avenue NW.



Kimley»Horn	*Gwinnett Village Traffic Impact Study*	Site Location Map	Figure 1
			Page 2



Kimley»Horn	*Gwinnett Village Traffic Impact Study*	Site Aerial Photography	Figure 2
			Page 3

3.0 EXISTING TRAFFIC CONDITIONS

3.1 ROADWAY CHARACTERISTICS

The roadways within the study network have the following characteristics:

Satellite Boulevard is a six-lane minor arterial divided by a raised median, with a posted speed limit of 45 MPH in the vicinity of the project site. GDOT counts taken east of Old Norcross Road E indicated an AADT of 22,100 vehicles per day in 2015.

Commerce Avenue NW is a four-lane local road divided by a raised median, with a posted speed limit of 40 MPH in the vicinity of the study network. There are no GDOT count stations along Commerce Avenue NW.

Old Norcross Road E is a four-lane local road divided by a raised green median north of Satellite Boulevard and a four-lane minor arterial divided by a raised median south of Satellite Boulevard. The posted speed limited along Old Norcross Road E is 25 MPH north of Satellite Boulevard and 45 mph south of Satellite Boulevard. GDOT counts taken east of Breckinridge Boulevard indicated an AADT of 20,800 vehicles per day in 2017.

3.2 EXISTING TRAFFIC VOLUMES

Vehicle peak hour turning movement counts were performed at the following study intersections:

1. Satellite Boulevard at Commerce Avenue NW (signalized)
2. Satellite Boulevard at Old Norcross Road E (signalized)
3. Commerce Avenue NW at Old Norcross Road E (signalized)
4. Commerce Avenue NW at Driveway A (unsignalized)
5. Old Norcross Road E at Driveway B (unsignalized)

The vehicle peak hour turning movement counts for the study intersection were collected on Wednesday, May 5, 2021. The counts were performed during the AM period (7:00 AM to 9:00 AM) and the PM period (4:00 PM to 6:00 PM). The AM and PM peak hours for each intersection are shown in **Table 1**. Complete traffic count data is provided in Appendix B.

Table 1: Peak Hour Summary		
Intersection	**AM Peak Hour**	**PM Peak Hour**
1. Satellite Boulevard at Commerce Avenue NW	8:00 AM – 9:00 AM	5:00 PM – 6:00 PM
2. Satellite Boulevard at Old Norcross Road E	7:45 AM – 8:45 AM	5:00 PM – 6:00 PM
3. Commerce Avenue NW at Old Norcross Road E	7:45 AM – 8:45 AM	4:30 PM – 5:30 PM
4. Commerce Avenue NW at Driveway A	8:00 AM – 9:00 AM	4:30 PM – 5:30 PM
5. Old Norcross Road E at Driveway B	7:45 AM – 8:45 AM	4:30 PM – 5:30 PM

Due to COVID-19's impact on traffic, the existing turning movement counts were adjusted based on historical data and engineering judgement. GDOT historical count data previously collected along Satellite Boulevard in April 2015 was used to calibrate the 2021 traffic counts. Additionally, the historical counts were increased by 1.5% per year for six (6) years to account for the expected background growth in traffic from 2015 to 2021.

The volume comparison is shown in a tabular in **Table 2** and graphical format in **Figure 3** and **Figure 4**.

Table 2: Traffic Count Comparison and Adjustment Calculations								
Location	**Movement**	**Historic Data (Apr 2015)**		**Collected (May 2021)**				
		AM Peak	**PM Peak**	**AM Peak**	**PM Peak**			
Satellite Boulevard east of Old Norcross Road E	Eastbound	456	1,624	414	1,232			
	Westbound	1,953	852	944	780			
Difference Calculations	**Movement**	**AM Peak**			**PM Peak**			
		Vol Diff	**Percent**	**Factor**	**Vol Diff**	**Percent**	**Factor**	
Satellite Boulevard east of Old Norcross Road E	Eastbound	-42	-9%	1.1	-392	-24%	1.3	
	Westbound	-1,009	-52%	2.1	-72	-8%	1.1	
	Average	-1,051	-30%	1.6	-464	-16%	1.2	

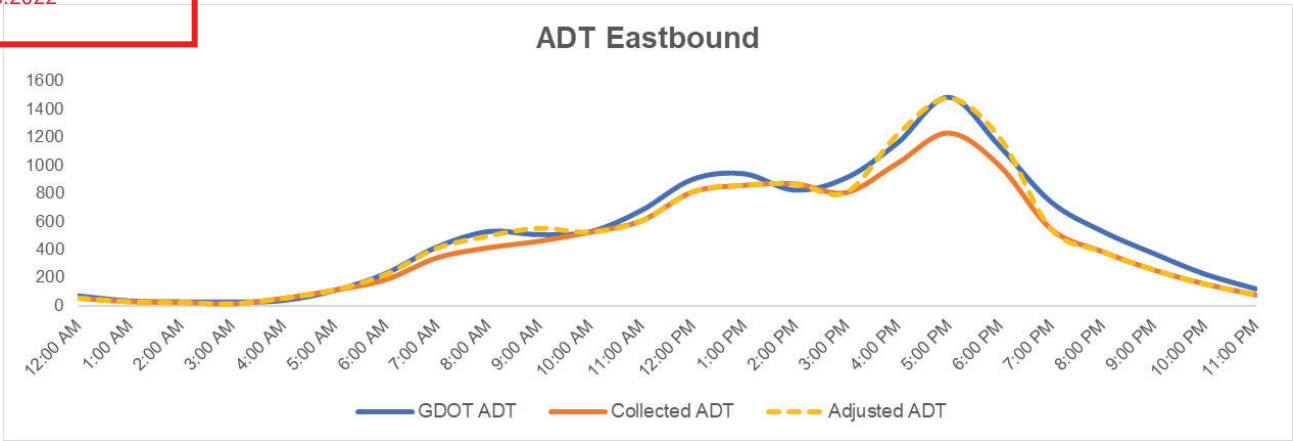


Figure 3: Traffic Count Comparison – Satellite Boulevard Eastbound

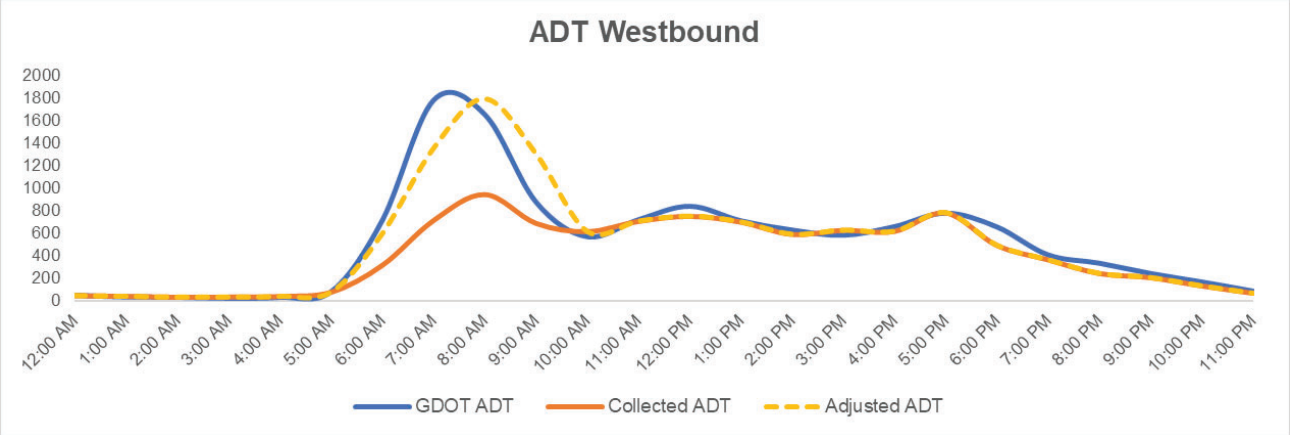
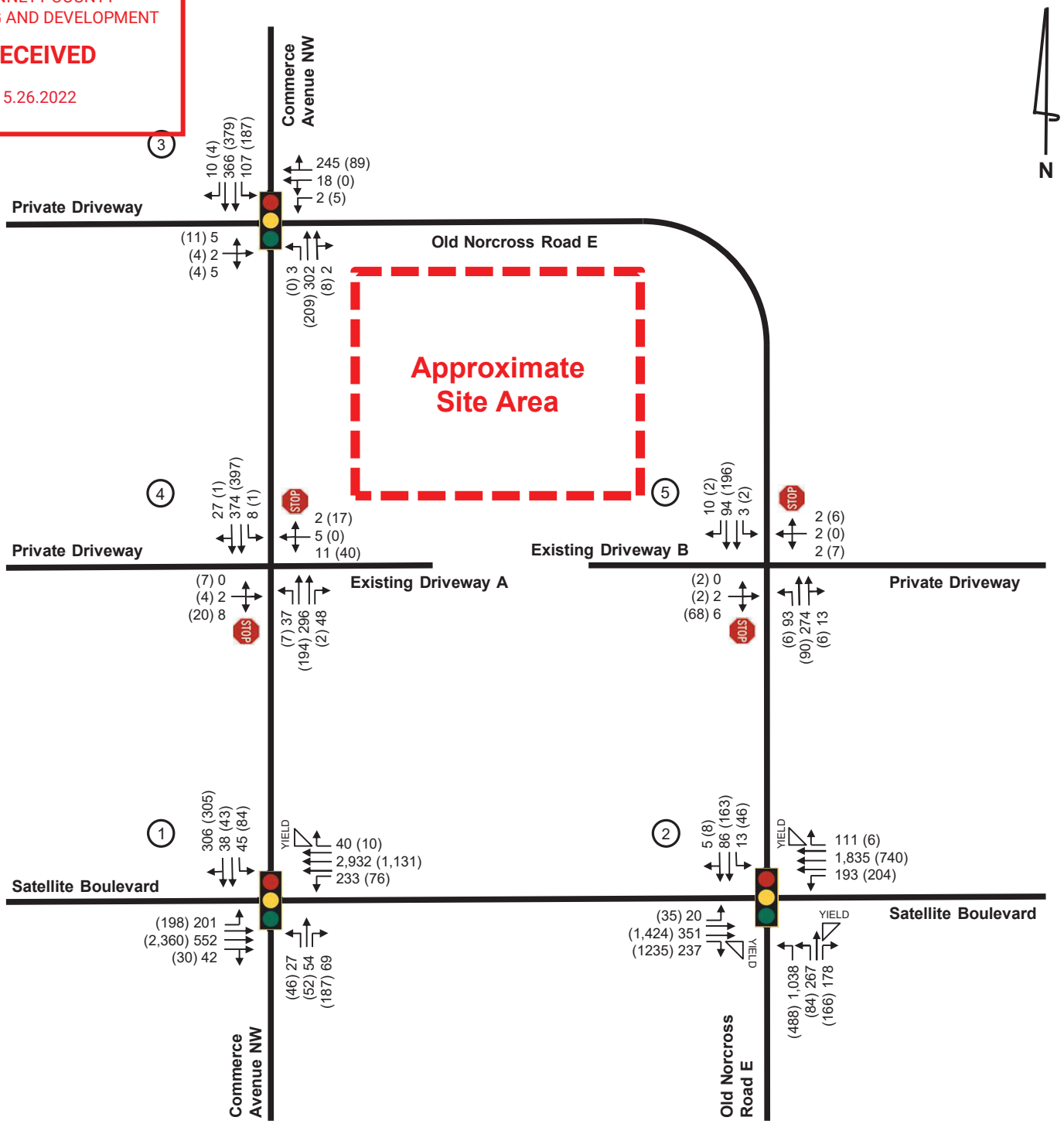


Figure 4: Traffic Count Comparison – Satellite Boulevard Westbound

As a result of the volume comparison, it was determined that adjustment factors of 1.1 and 2.1 should be used for Satellite Boulevard eastbound and westbound, respectively, during the AM peak. During the PM peak, adjustment factors of 1.3 and 1.1 should be used for Satellite Boulevard eastbound and westbound, respectively, during the PM peak. Lastly, all movements along Commerce Avenue NW and Old Norcross Road E should use adjustment factors of 1.6 and 1.2 during the AM and PM peak, respectively.

The complete traffic count data is provided in **Appendix B**.

Figure 5 illustrates the Estimated 2021 peak hour traffic volumes at the study intersections as well as the existing roadway geometry (intersection layout).



LEGEND

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

** Volumes have been adjusted to account for variations in travel patterns due to ongoing effects of the COVID-19 pandemic*

Kimley»Horn	*Gwinnett Village Traffic Impact Study*	**Estimated 2021 Traffic Conditions**	**Figure 5**
			Page 7

4.0 PROJECTED BACKGROUND (NON-PROJECT) TRAFFIC

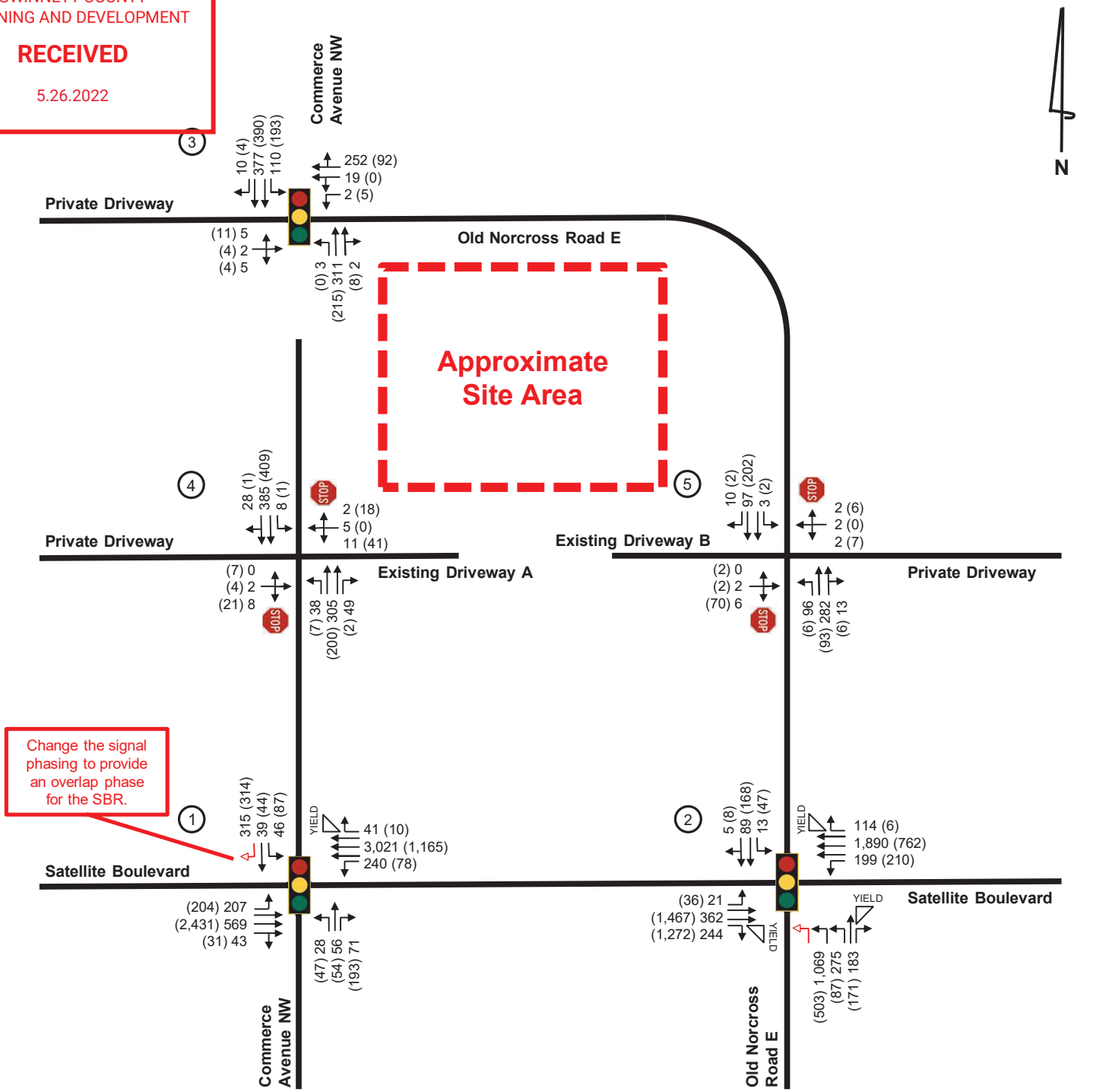
Projected background (non-project) traffic is defined as the expected traffic on the roadway network in the future year(s) absent the *Gwinnet Village* development. The Estimated 2021 peak hour traffic volumes were increased by 1.5% per year for two (2) years to account for the expected background growth in traffic through year 2023, build-out of the project. **Figure 6** illustrates the Projected 2023 No-Build traffic volumes.

4.1 FUTURE ROADWAY / INTERSECTION PROJECTS

The ARC's Atlanta Region's Plan, GDOT Statewide TIP (STIP), Regional Transportation Program (RTP), GDOT's Construction Work Program, and the Gwinnett County SPLOST project list were researched for currently programmed transportation projects within the vicinity of the proposed development:

1. **ARD-491D**: This project adds transit services along Satellite Boulevard between the MARTA station in Doraville and SugarLoaf Mills area.

This project does not affect intersection laneage or phasing, therefore they are not included in this study. Fact sheets for the programmed project is included in **Appendix F**.



LEGEND

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

5.0 PROJECT TRAFFIC

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the proposed development, and the distribution and assignment of that traffic through the study roadway network. This traffic impact study evaluated the impacts of adding the new trips generated by the proposed *Gwinnett Village* development.

5.1 PROJECT SITE ACCESS

Access to the site will be provided via two (2) existing site driveways, which are shown on the proposed site plan in **Appendix A**. A brief description of the site driveway is as follows:

- Site Driveway A – An existing full-movement driveway along Commerce Avenue NW located approximately 500 feet south of Old Norcross Road E and 550 feet north of Satellite Boulevard.
- Site Driveway B – An existing full-movement driveway along Old Norcross Road E located 550 feet east of Commerce Avenue NW and 700 feet north of Satellite Boulevard. Site Driveway B will lead directly to the proposed parking garage.

The existing site driveways provide vehicular access to the entire development Refer to the site plan in **Appendix A** for a visual representation of vehicular access and circulation throughout the proposed development.

5.2 TRIP GENERATION

Gross trips associated with the proposed development were estimated using the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Tenth Edition, 2017,* using equations where available. Trip generation for the proposed development was calculated based upon the following land uses:

- Land Use 221: Multi-Family Housing (Mid-Rise)

Table 3 summarizes the net trip generation for the proposed development upon full build-out (2023). **Appendix C** provides the detailed trip generation worksheet for the proposed development.

Table 3: Project Trip Generation Summary

Land Use (Intensity)	ITE Code	Daily Traffic		AM Peak Hour		PM Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
Multi-Family Housing (Mid-Rise) (350 units)	*221*	953	953	30	87	90	57
Total New Trips		**953**	**953**	**30**	**87**	**90**	**57**

5.3 TRIP DISTRIBUTION AND ASSIGNMENT

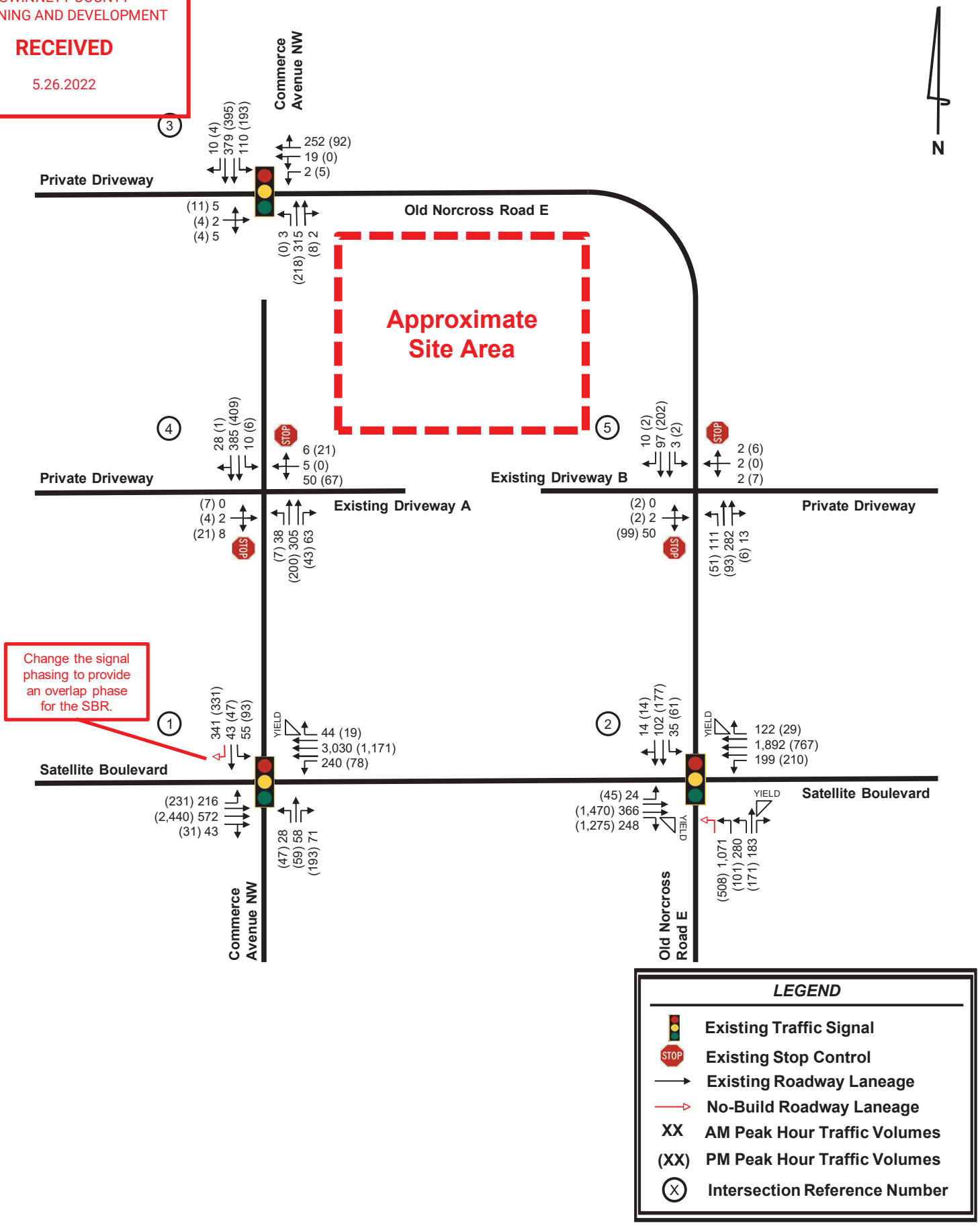
The directional distribution and assignment of adding new trips (project trips) related to the proposed development was based on a review of land uses and population densities in the area, and a review of the existing travel patterns in the area. A detailed trip distribution and assignment is shown in **Figure 7**. Based on trip generation from **Table 3** and the anticipated trip distribution, new project trips were assigned to the study roadway network. **Figure 8** illustrates the new project trips distributed throughout the study network for the Projected 2025 Build conditions. **Figure 9** illustrates the Projected 2023 Build traffic volumes for the AM and PM peak hours. **Appendix D** provides intersection volume worksheets for all study intersections.

LEGEND	
	Existing Traffic Signal
STOP	Existing Stop Control
→	Turning Movements
XX	Percent Traffic Entering
(XX)	Percent Traffic Exiting
(X)	Intersection Reference Number

LEGEND

- Existing Traffic Signal
- Existing Stop Control
- Turning Movements
- XX — Percent Traffic Entering
- (XX) — Percent Traffic Exiting
- (X) — Intersection Reference Number

Kimley»Horn	*Gwinnett Village Traffic Impact Study*	**Project Trips**	**Figure 8**
			Page 13



Kimley»Horn	*Gwinnett Village Traffic Impact Study*	**Projected 2023 Build Conditions**	**Figure 9**
			Page 14

6.0 LEVEL-OF-SERVICE ANALYSIS

Level-of-service determinations were made for the weekday AM and PM peak hours for the study network intersections using *Synchro, Version 10. Synchro* software uses methodologies contained in the 6th Edition *Highway Capacity Manual* 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.

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 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 experience a low LOS, while the intersection as a whole may operate acceptably.

Levels-of-service for unsignalized intersections, with stop control on the minor street only, are reported for the side-street approaches and major street left-turns. Low levels-of-service for side street approaches are not uncommon, as vehicles may experience significant delay turning onto a major roadway.

In addition to the Estimated 2021 conditions, an analysis was performed for the AM and PM peak hours under Projected 2023 No-Build and Build traffic conditions. The results of the LOS analysis are summarized for the AM and PM peak hours in **Table 4**. The *Synchro* analysis reports are included in **Appendix E**.

Table 4: Level-of-Service Summary
LOS (Delay in Seconds)

Intersection	Approach & Movement	Estimated 2021		Projected 2023 No-Build		Projected 2023 Build	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1. Satellite Boulevard at Commerce Avenue NW	Overall	D (45.7)	B (18.0)	E (57.8)	C (20.2)	E (70.3)	C (23.0)
2. Satellite Boulevard at Old Norcross Road E	Overall	E (71.4)	D (44.6)	E (76.1)	D (52.9)	E (77.1)	E (56.1)
3. Commerce Avenue NW at Old Norcross Road E	Overall	B (11.8)	A (8.4)	B (11.9)	A (8.5)	B (11.9)	A (8.5)
4. Commerce Avenue NW at Driveway A	NBL	A (8.3)	A (8.2)	A (8.4)	A (8.3)	A (8.4)	A (8.3)
	EB	B (11.5)	B (11.6)	B (11.6)	B (11.7)	B (11.7)	B (11.9)
	WB	C (15.9)	B (12.3)	C (16.3)	B (12.5)	C (17.6)	B (13.6)
	SBL	A (8.1)	A (7.7)	A (8.1)	A (7.7)	A (8.1)	A (7.8)
5. Old Norcross Road E at Driveway B	NBL	A (7.6)	A (7.7)	A (7.6)	A (7.7)	A (7.7)	A (7.8)
	EB	A (9.6)	A (9.4)	A (9.7)	A (9.4)	A (9.0)	A (9.6)
	WB	B (11.1)	A (9.4)	B (11.2)	A (9.4)	B (11.7)	B (10.2)
	SBL	A (7.5)	A (7.3)	A (7.5)	A (7.4)	A (7.5)	A (7.4)

**As stated above, low levels-of-service for side street approaches are typical, as vehicles may experience significant delay turning onto a major roadway.*

As shown in **Table 4**, the analysis indicates that under Estimated 2021, Projected 2023 No-Build, and Projected 2023 Build conditions, all intersections, except for two (2), are currently or expected to operate at an acceptable LOS.

The intersections of Satellite Boulevard at Commerce Avenue NW (Intersection 1) and Satellite Boulevard at Old Norcross Road E (Intersection 2) are expected to operate at LOS E during the AM peak under the Projected 2023 No-Build and Build conditions. Additionally, Satellite Boulevard at Commerce NW (Intersection 1) is expected to operate at LOS E during the PM peak under the Projected 2023 Build condition. To achieve an acceptable LOS at this intersection, the following improvements should be considered:

- Intersection 1 – Satellite Boulevard at Commerce Avenue NW
  - Restripe the shared southbound through and right-turn lane along Commerce Avenue as an exclusive right-turn lane.
  - Provide an overlap phase for the soutbound right-turn.
- Intersection 2 – Satellite Boulevard at Old Norcross Road E
  - Construct an additional northbound left-turn lane along Old Norcross Road E, creating triple lefts.

Table 5 provides results for the No-Build Improved and the Build Improved traffic conditions.

Table 5: Improved Level-of-Service Summary
LOS (Delay in Seconds)

Intersection	Approach & Movement	Projected 2023 No-Build		Projected 2023 Build	
		AM Peak	PM Peak	AM Peak	PM Peak
1. Satellite Boulevard at Commerce Avenue NW	Overall	D (42.0)	B (15.7)	D (50.5)	B (17.0)
2. Satellite Boulevard at Old Norcross Road E	Overall	D (45.0)	D (39.7)	D (46.2)	D (42.7)

As shown in **Table 5**, the intersections of Satellite Boulevard at Commerce Avenue NW (Intersection 1) and Satellite Boulevard at Old Norcross Road E (Intersection 2) are projected to operate at acceptable LOS after the system (no-build) improvements under all scenarios.

7.0 CONCLUSION

This traffic study evaluated the traffic impacts associated with the *Gwinnett Village* development located in the southeast quadrant of the intersection of Commerce Avenue NW at Old Norcross Road E in unincorporated Gwinnett County, Georgia. The development, which is approximately 9.22 acres in size, will include 350 multi-family residential units and is expected to be completed in 2023.

The study network, which consists of five (5) existing intersections, was analyzed for the weekday AM and PM peak hours under Estimated 2021 conditions, Projected 2023 No-Build conditions (two years of background traffic growth), and Projected 2023 Build conditions (Projected 2023 No-Build conditions plus traffic generated by the proposed *Gwinnett Village* development).

All intersections except for two (2) are expected to operate at an acceptable LOS during the AM and PM peak hours under Estimated 2021, Projected 2023 No-Build, and Projected 2023 Build conditions. The intersection of Satellite Boulevard and Commerce Avenue NW (Intersection 1) and Satellite Boulevard at Old Norcross Road E (Intersection 2) are expected to operate at LOS E during the AM peak under the Projected 2023 No-Build and Build conditions. Additionally, Satellite Boulevard at Commerce NW (Intersection 1) is expected to operate at LOS E during the PM peak under the Projected 2023 Build condition.

Kimley-Horn and Associates, Inc. recommends system improvements based on the results of this study. System improvements, or “No-Build” recommendations, are needed to serve the background road network traffic (existing traffic volumes plus background growth). Site access improvements, or “Build” recommendations, are needed to serve the projected development traffic.

7.1 SYSTEM (NO-BUILD) IMPROVEMENT RECOMMENDATIONS

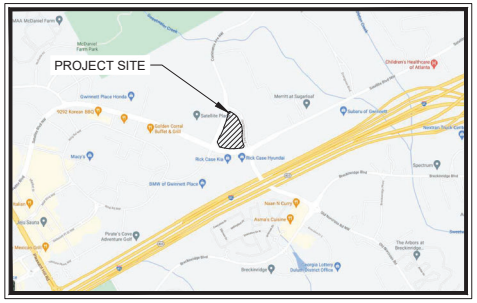
Based on the results of this traffic impact study, Kimley-Horn and Associates, Inc. recommends the following system (no-build) improvements to serve the No-Build traffic conditions (note: this would be the improvements needed to serve the traffic based on the existing conditions plus background growth and are needed WITHOUT development traffic); assumed to be performed "by others".

- Intersection 1 – Satellite Boulevard at Commerce Avenue NW
  - Restripe the shared southbound through and right-turn lane along Commerce Avenue as an exclusive right-turn lane.
  - Provide an overlap phase for the southbound right-turn.
- Intersection 2 – Satellite Boulevard at Old Norcross Road E
  - Construct an additional northbound left-turn lane along Old Norcross Road E, creating triple lefts.

7.2 SITE ACCESS (BUILD) IMPROVEMENT RECOMMENDATIONS

"Build" or site access improvements would be associated with the proposed Gwinnett Village development. This is attributable to the site driveways and turn lanes already existing. Based on the results of this traffic impact study, Kimley-Horn and Associates, Inc. does not recommend any improvements to serve the traffic generated by the development. (note: this would be the improvements needed to serve the traffic based on the existing conditions plus background growth plus proposed project traffic).

Site Plan



VICINITY MAP

GWINNETT COUNTY
PLANNING AND DEVELOPMENT
RECEIVED
5.26.2022

UNIT MIX SUMMARY:

	% UNIT MIX
STUDIO	15 %
1 BED	45 %
2 BED	35 %
3 BED	5 %
TOTAL	100%

DEVELOPMENT SUMMARY:

SITE SUMMARY:

SITE ADDRESS:	3175 SATELLITE BLVD. DULUTH, GA 30096
CURRENT ZONING:	C2
PROPOSED ZONING:	HRR
SITE AREA:	9.0001 ACRES
OPEN SPACE PROVIDED:	2.07 ACRES - 23.0%

PROPOSED LAND USES & DENSITIES:

MULTIFAMILY RESIDENTIAL:
- ALLOWED: TBD
- PROPOSED: 350 UNITS (38.89 UNITS/ ACRE)

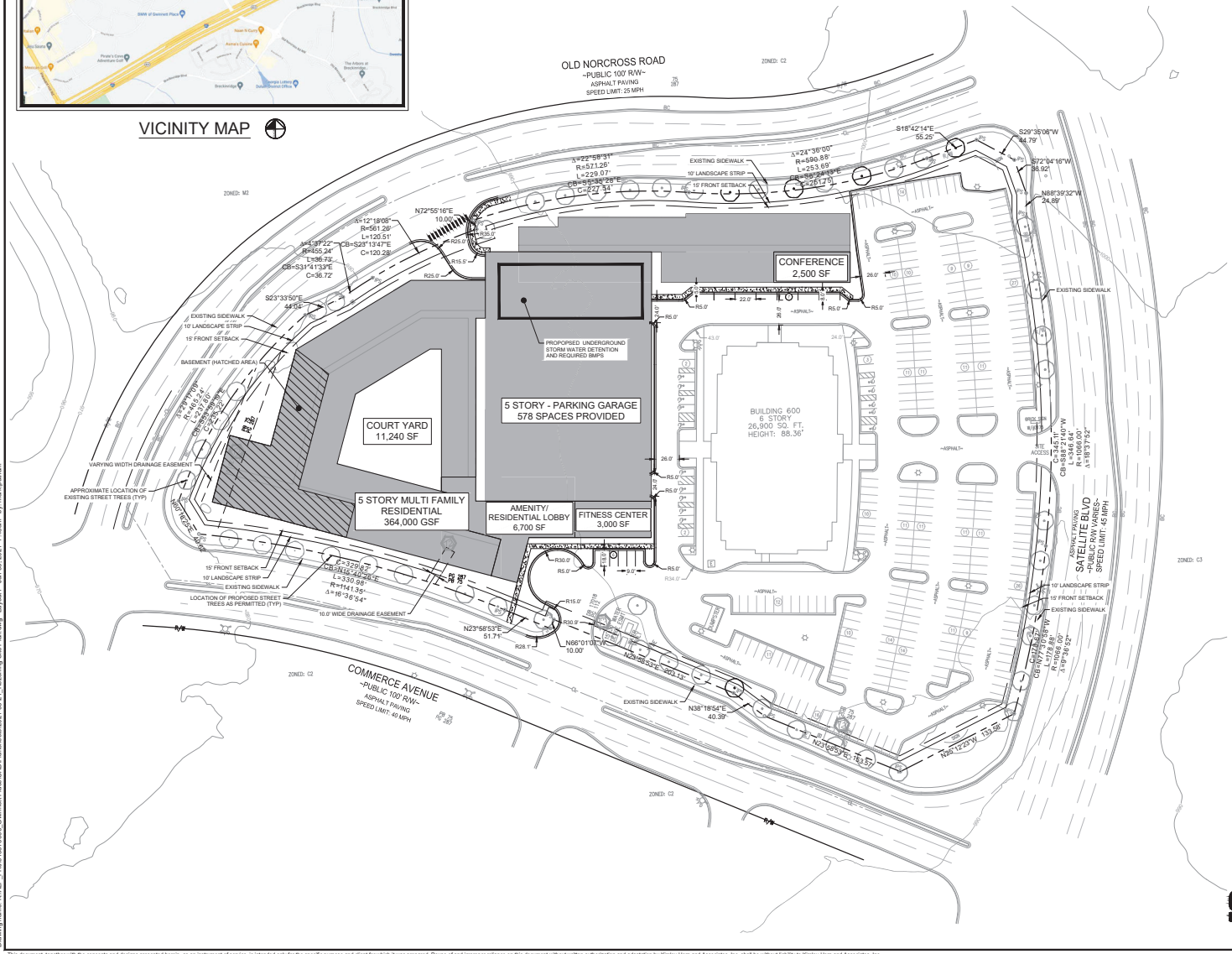
BUILDING HEIGHT
- REQUIRED: MINIMUM 5 STORIES
- PROPOSED: 5 STORIES (60')

PROPOSED ZONING DIMENSIONAL STANDARDS:

MIN. LOT WIDTH:	75'
MIN. SETBACKS:	
- FRONT:	15'
- SIDE:	0'
- REAR:	25'
MIN. LANDSCAPE STRIP:	10'

PARKING SUMMARY:

MIN. REQUIRED PARKING: MULTIFAMILY (350 UNITS) OFFICE (161,400 SF)	**848 SPACES** (TOTAL) 525 SPACES (1.5/UNIT) 323 SPACES (1/ 500 SF)
PROPOSED PARKING: MULTIFAMILY (350 UNITS) EX. OFFICE PARKING TO REMAIN	**900 SPACES** (TOTAL) 578 SPACES 322 SPACES



Multi Family Development Permit Data

Please Provide the following data on your plan in the listed format:

General

Development Type→	Apartments	Condo Apartments	Quad Apartments	Townhouses (No Lots)	Triplex Apartments
	x				
Zoning	HRR				

Project Data

Total Area (Acres)	9.0001 AC
Limits of Disturbed Area (Acres)	4.38 AC
Net Area (Acres)*	9.0001 AC
Floodplain Area (Acres)	0 AC
Floodplain (% of floodplain acres vs total acres)	0 AC
Power/Gas Easement or Right of way (Acres)	

Sanitary Service→	Sewer	Septic
	Public Sewer	

Density (Units/Acre)

Gross	350 units/ 9.0001 ac = 38.89
Net	350 units/ 9.0001 ac = 38.89

SITE PLAN LEGEND

- PROPERTY LINE
- BUILDING SETBACK LINE
- (#) PARKING COUNT
- SIDEWALK

GEORGIA811

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

PREPARED BY
Kimley»Horn
© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GEORGIA 30009
PHONE (770) 619-4280
WWW.KIMLEY-HORN.COM

PREPARED FOR
GREYSTAR
1540 PEACHTREE STREET, SUITE 700
ATLANTA, GEORGIA 30309
PHONE 803.727.0479

No	ISSUANCE AND REVISION DESCRIPTIONS	DATE	BY
	COUNTY ZONING SUBMITTAL	06/03/2021	MAP

PROJECT
GREYSTAR
GWINNETT PLACE
3175 SATELLITE BLVD, DULUTH, GA 30096
LAND LOT 5260 / 7TH DISTRICT

GEORGIA REGISTERED No. PE044634 PROFESSIONAL ENGINEER MARK A. PUTNAM 5-3-21

GSWCC NO. (LEVEL II)	0000029507
DRAWN BY	KHP
DESIGNED BY	MAP
REVIEWED BY	JKM
DATE	05/13/2021
PROJECT NO.	013575006

TITLE
SITE PLAN

SHEET NUMBER
SHEET #1

Traffic Count Data

Project ID: 21-180134-001
Location: Commerce Ave NW & Satellite Blvd
City: Duluth

Day: Wednesday
Date: 5/5/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Commerce Ave NW Northbound						Commerce Ave NW Southbound						Satellite Blvd Eastbound						Satellite Blvd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	1	4	5	1	0	11	1	1	24	0	0	26	15	63	5	0	0	83	15	201	1	1	0	218	338
7:15 AM	1	1	6	0	0	8	4	2	21	0	0	27	32	86	3	2	0	123	16	267	0	1	0	284	442
7:30 AM	3	7	7	0	0	17	7	3	31	0	1	41	39	100	1	1	1	141	27	287	5	2	0	321	520
7:45 AM	2	11	14	0	2	27	4	7	41	0	0	52	67	112	4	0	1	183	29	353	2	3	0	387	649
Total	7	23	32	1	2	63	16	13	117	0	1	146	153	361	13	3	2	530	87	1108	8	7	0	1210	1949
8:00 AM	6	11	12	0	0	29	5	3	53	0	0	61	47	127	5	0	1	179	22	325	3	1	0	351	620
8:15 AM	1	9	9	0	0	19	7	6	37	0	0	50	33	128	12	0	0	173	15	342	10	2	0	369	611
8:30 AM	5	6	17	0	0	28	9	6	42	0	0	57	58	118	11	0	0	187	29	373	3	5	0	410	682
8:45 AM	5	8	5	0	0	18	7	9	59	0	0	75	45	129	10	0	0	184	36	356	3	1	0	396	673
Total	17	34	43	0	0	94	28	24	191	0	0	243	183	502	38	0	1	723	102	1396	19	9	0	1526	2586
BREAK																									
4:00 PM	10	14	30	0	1	54	11	5	67	0	0	83	36	375	5	0	0	416	21	229	1	4	0	255	808
4:15 PM	12	9	30	0	0	51	9	14	42	0	0	65	32	397	7	1	0	437	14	233	2	1	0	250	803
4:30 PM	3	6	44	0	0	53	15	5	70	0	0	90	35	364	7	5	0	411	19	238	3	7	0	267	821
4:45 PM	6	7	31	0	1	44	14	10	60	0	0	84	31	412	8	3	0	454	16	216	1	2	0	235	817
Total	31	36	135	0	2	202	49	34	239	0	0	322	134	1548	27	9	0	1718	70	916	7	14	0	1007	3249
5:00 PM	14	14	40	0	0	68	25	15	88	0	0	128	23	410	5	3	0	441	14	246	3	2	0	265	902
5:15 PM	9	11	44	0	0	64	13	8	54	0	0	75	33	475	6	3	0	517	16	259	1	0	0	276	932
5:30 PM	3	7	36	0	0	46	18	6	58	0	0	82	30	485	8	1	0	524	14	282	3	6	0	305	957
5:45 PM	12	11	36	0	0	59	14	7	54	0	0	75	53	445	4	6	0	508	17	241	2	0	0	260	902
Total	38	43	156	0	0	237	70	36	254	0	0	360	139	1815	23	13	0	1990	61	1028	9	8	0	1106	3693
Grand Total	93	136	366	1	4	596	163	107	801	0	1	1071	609	4226	101	25	3	4961	320	4448	43	38	0	4849	11477
Apprch %	15.6	22.8	61.4	0.2	0.7		15.2	10.0	74.8	0.0	0.1		12.3	85.2	2.0	0.5	0.1		6.6	91.7	0.9	0.8	0.0		
Total %	0.8	1.2	3.2	0.0	0.0	5.2	1.4	0.9	7.0	0.0	0.0	9.3	5.3	36.8	0.9	0.2	0.0	43.2	2.8	38.8	0.4	0.3	0.0	42.2	
Cars, PU, Vans	92	133	359	1		585	159	104	767	0		1030	592	4114	95	25		4826	317	4330	43	38		4728	11169
% Cars, PU, Vans	98.9	97.8	98.1	100.0		98.2	97.5	97.2	95.8	0.0		96.2	97.2	97.3	94.1	100.0		97.3	99.1	97.3	100.0	100.0		97.5	97.3
Heavy trucks	1	3	7	0		11	4	3	34	0		41	17	112	6	0		135	3	118	0	0		121	308
%Heavy trucks	1.1	2.2	1.9	0.0		1.8	2.5	2.8	4.2	0.0		3.8	2.8	2.7	5.9	0.0		2.7	0.9	2.7	0.0	0.0		2.5	2.7

Project ID: 21-180134-001
Location: Commerce Ave NW & Satellite Blvd
City: Duluth

PEAK HOURS

Day: Wednesday
Date: 5/5/2021

AM

	Commerce Ave NW Northbound					Commerce Ave NW Southbound					Satellite Blvd Eastbound					Satellite Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
8:00 AM	6	11	12	0	29	5	3	53	0	61	47	127	5	0	179	22	325	3	1	351	620
8:15 AM	1	9	9	0	19	7	6	37	0	50	33	128	12	0	173	15	342	10	2	369	611
8:30 AM	5	6	17	0	28	9	6	42	0	57	58	118	11	0	187	29	373	3	5	410	682
8:45 AM	5	8	5	0	18	7	9	59	0	75	45	129	10	0	184	36	356	3	1	396	673
Total Volume	17	34	43	0	94	28	24	191	0	243	183	502	38	0	723	102	1396	19	9	1526	2586
% App. Total	18.1	36.2	45.7	0.0	100	11.5	9.9	78.6	0.0	100	25.3	69.4	5.3	0.0	100	6.7	91.5	1.2	0.6	100	
PHF					0.810					0.810					0.967					0.930	0.948
Cars, PU, Vans	17	34	41	0	92	28	24	179	0	231	177	477	34	0	688	102	1354	19	9	1484	2495
% Cars, PU, Vans	100.0	100.0	95.3	0.0	97.9	100.0	100.0	93.7	0.0	95.1	96.7	95.0	89.5	0.0	95.2	100.0	97.0	100.0	100.0	97.2	96.5
Heavy trucks	0	0	2	0	2	0	0	12	0	12	6	25	4	0	35	0	42	0	0	42	91
%Heavy trucks	0.0	0.0	4.7	0.0	2.1	0.0	0.0	6.3	0.0	4.9	3.3	5.0	10.5	0.0	4.8	0.0	3.0	0.0	0.0	2.8	3.5

PM

	Commerce Ave NW Northbound					Commerce Ave NW Southbound					Satellite Blvd Eastbound					Satellite Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	14	14	40	0	68	25	15	88	0	128	23	410	5	3	441	14	246	3	2	265	902
5:15 PM	9	11	44	0	64	13	8	54	0	75	33	475	6	3	517	16	259	1	0	276	932
5:30 PM	3	7	36	0	46	18	6	58	0	82	30	485	8	1	524	14	282	3	6	305	957
5:45 PM	12	11	36	0	59	14	7	54	0	75	53	445	4	6	508	17	241	2	0	260	902
Total Volume	38	43	156	0	237	70	36	254	0	360	139	1815	23	13	1990	61	1028	9	8	1106	3693
% App. Total	16.0	18.1	65.8	0.0	100	19.4	10.0	70.6	0.0	100	7.0	91.2	1.2	0.7	100	5.5	92.9	0.8	0.7	100	
PHF					0.871					0.703					0.949					0.907	0.965
Cars, PU, Vans	37	40	155	0	232	68	34	247	0	349	133	1783	23	13	1952	61	1005	9	8	1083	3616
% Cars, PU, Vans	97.4	93.0	99.4	0.0	97.9	97.1	94.4	97.2	0.0	96.9	95.7	98.2	100.0	100.0	98.1	100.0	97.8	100.0	100.0	97.9	97.9
Heavy trucks	1	3	1	0	5	2	2	7	0	11	6	32	0	0	38	0	23	0	0	23	77
%Heavy trucks	2.6	7.0	0.6	0.0	2.1	2.9	5.6	2.8	0.0	3.1	4.3	1.8	0.0	0.0	1.9	0.0	2.2	0.0	0.0	2.1	2.1

Project ID: 21-180134-002
Location: Old Norcross Rd E & Satellite Blvd
City: Duluth

Day: Wednesday
Date: 5/5/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Old Norcross Rd E Northbound						Old Norcross Rd E Southbound						Satellite Blvd Eastbound						Satellite Blvd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	104	23	22	0	0	149	0	11	1	0	0	12	2	32	34	1	0	69	12	122	3	0	0	137	367
7:15 AM	125	38	26	0	0	189	0	7	1	0	0	8	0	56	44	1	0	101	12	148	7	0	0	167	465
7:30 AM	169	38	33	0	3	240	0	12	1	0	0	13	3	68	45	0	0	116	25	180	11	0	0	216	585
7:45 AM	167	59	31	0	4	257	2	13	2	0	0	17	1	86	49	2	0	138	17	206	22	0	1	245	657
Total	565	158	112	0	7	835	2	43	5	0	0	50	6	242	172	4	0	424	66	656	43	0	1	765	2074
8:00 AM	154	33	31	0	3	218	3	20	0	0	0	23	4	75	48	2	0	129	25	212	13	0	0	250	620
8:15 AM	170	39	26	0	1	235	1	9	1	0	0	11	6	71	62	2	0	141	28	215	8	1	0	252	639
8:30 AM	158	36	23	0	0	217	2	12	0	0	0	14	0	87	56	1	0	144	21	241	10	0	0	272	647
8:45 AM	157	26	27	0	0	210	0	10	0	0	0	10	1	82	61	1	0	145	28	253	7	0	0	288	653
Total	639	134	107	0	4	880	6	51	1	0	0	58	11	315	227	6	0	559	102	921	38	1	0	1062	2559
BREAK																									
4:00 PM	104	22	26	0	1	152	13	34	0	0	0	47	2	243	168	3	0	416	24	137	4	1	0	166	781
4:15 PM	96	21	27	1	0	145	9	25	0	0	0	34	1	246	201	5	0	453	29	169	0	0	0	198	830
4:30 PM	72	23	33	0	0	128	18	58	2	0	0	78	4	226	179	2	0	411	31	146	6	0	0	183	800
4:45 PM	108	10	40	1	0	159	9	28	2	0	0	39	2	254	214	2	0	472	33	133	3	0	0	169	839
Total	380	76	126	2	1	584	49	145	4	0	0	198	9	969	762	12	0	1752	117	585	13	1	0	716	3250
5:00 PM	109	14	35	0	0	158	14	48	2	0	0	64	0	287	220	2	0	509	45	163	1	0	0	209	940
5:15 PM	87	16	42	0	0	145	8	41	0	0	0	49	2	251	252	2	0	507	54	163	1	0	0	218	919
5:30 PM	111	23	34	2	0	170	13	29	2	0	0	44	5	287	248	7	0	547	39	178	3	0	0	220	981
5:45 PM	98	17	27	0	0	142	3	18	3	0	0	24	5	270	230	4	0	509	47	169	0	0	0	216	891
Total	405	70	138	2	0	615	38	136	7	0	0	181	12	1095	950	15	0	2072	185	673	5	0	0	863	3731
Grand Total	1989	438	483	4	12	2914	95	375	17	0	0	487	38	2621	2111	37	0	4807	470	2835	99	2	1	3406	11614
Apprch %	68.3	15.0	16.6	0.1	0.4		19.5	77.0	3.5	0.0	0.0		0.8	54.5	43.9	0.8	0.0		13.8	83.2	2.9	0.1	0.0		
Total %	17.1	3.8	4.2	0.0	0.1	25.1	0.8	3.2	0.1	0.0	0.0	4.2	0.3	22.6	18.2	0.3	0.0	41.4	4.0	24.4	0.9	0.0	0.0	29.3	
Cars, PU, Vans	1942	430	474	4		2850	94	372	17	0		483	38	2556	2055	37		4686	462	2761	96	2		3321	11340
% Cars, PU, Vans	97.6	98.2	98.1	100.0		97.8	98.9	99.2	100.0	0.0		99.2	100.0	97.5	97.3	100.0		97.5	98.3	97.4	97.0	100.0		97.5	97.6
Heavy trucks	47	8	9	0		64	1	3	0	0		4	0	65	56	0		121	8	74	3	0		85	274
%Heavy trucks	2.4	1.8	1.9	0.0		2.2	1.1	0.8	0.0	0.0		0.8	0.0	2.5	2.7	0.0		2.5	1.7	2.6	3.0	0.0		2.5	2.4

Project ID: 21-180134-002
Location: Old Norcross Rd E & Satellite Blvd
City: Duluth

PEAK HOURS

Day: Wednesday
Date: 5/5/2021

AM

	Old Norcross Rd E Northbound					Old Norcross Rd E Southbound					Satellite Blvd Eastbound					Satellite Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
7:45 AM	167	59	31	0	257	2	13	2	0	17	1	86	49	2	138	17	206	22	0	245	657
8:00 AM	154	33	31	0	218	3	20	0	0	23	4	75	48	2	129	25	212	13	0	250	620
8:15 AM	170	39	26	0	235	1	9	1	0	11	6	71	62	2	141	28	215	8	1	252	639
8:30 AM	158	36	23	0	217	2	12	0	0	14	0	87	56	1	144	21	241	10	0	272	647
Total Volume	649	167	111	0	927	8	54	3	0	65	11	319	215	7	552	91	874	53	1	1019	2563
% App. Total	70.0	18.0	12.0	0.0	100	12.3	83.1	4.6	0.0	100	2.0	57.8	38.9	1.3	100	8.9	85.8	5.2	0.1	100	
PHF					0.902					0.707					0.958					0.937	0.975
Cars, PU, Vans	631	164	111	0	906	8	54	3	0	65	11	298	206	7	522	89	843	52	1	985	2478
% Cars, PU, Vans	97.2	98.2	100.0	0.0	97.7	100.0	100.0	100.0	0.0	100.0	100.0	93.4	95.8	100.0	94.6	97.8	96.5	98.1	100.0	96.7	96.7
Heavy trucks	18	3	0	0	21	0	0	0	0	0	0	21	9	0	30	2	31	1	0	34	85
%Heavy trucks	2.8	1.8	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	6.6	4.2	0.0	5.4	2.2	3.5	1.9	0.0	3.3	3.3

PM

	Old Norcross Rd E Northbound					Old Norcross Rd E Southbound					Satellite Blvd Eastbound					Satellite Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	109	14	35	0	158	14	48	2	0	64	0	287	220	2	509	45	163	1	0	209	940
5:15 PM	87	16	42	0	145	8	41	0	0	49	2	251	252	2	507	54	163	1	0	218	919
5:30 PM	111	23	34	2	170	13	29	2	0	44	5	287	248	7	547	39	178	3	0	220	981
5:45 PM	98	17	27	0	142	3	18	3	0	24	5	270	230	4	509	47	169	0	0	216	891
Total Volume	405	70	138	2	615	38	136	7	0	181	12	1095	950	15	2072	185	673	5	0	863	3731
% App. Total	65.9	11.4	22.4	0.3	100	21.0	75.1	3.9	0.0	100	0.6	52.8	45.8	0.7	100	21.4	78.0	0.6	0.0	100	
PHF					0.904					0.707					0.947					0.981	0.951
Cars, PU, Vans	400	68	137	2	607	38	136	7	0	181	12	1081	931	15	2039	183	657	5	0	845	3672
% Cars, PU, Vans	98.8	97.1	99.3	100.0	98.7	100.0	100.0	100.0	0.0	100.0	100.0	98.7	98.0	100.0	98.4	98.9	97.6	100.0	0.0	97.9	98.4
Heavy trucks	5	2	1	0	8	0	0	0	0	0	0	14	19	0	33	2	16	0	0	18	59
%Heavy trucks	1.2	2.9	0.7	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.0	0.0	1.6	1.1	2.4	0.0	0.0	2.1	1.6

Project ID: 21-180134-003
Location: Commerce Ave NW & Old Norcross Rd E
City: Duluth

Day: Wednesday
Date: 5/5/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Commerce Ave NW Northbound						Commerce Ave NW Southbound						Old Norcross Rd E Eastbound						Old Norcross Rd E Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	0	14	0	1	0	15	13	26	3	0	0	42	0	0	0	0	0	0	0	2	24	0	0	26	83
7:15 AM	0	24	0	0	0	24	6	23	1	0	0	30	1	0	0	0	0	1	0	7	26	0	0	33	88
7:30 AM	1	27	0	0	0	28	13	43	2	0	0	58	1	0	1	0	0	2	1	1	33	0	0	35	123
7:45 AM	0	51	0	0	0	51	20	52	2	0	0	74	1	0	1	0	0	2	0	2	48	0	0	50	177
Total	1	116	0	1	0	118	52	144	8	0	0	204	3	0	2	0	0	5	1	12	131	0	0	144	471
8:00 AM	1	45	0	0	0	46	19	59	1	0	0	79	0	1	1	0	1	2	0	3	31	0	0	34	161
8:15 AM	0	42	0	0	0	42	15	60	2	0	0	77	1	0	0	0	0	1	0	3	42	0	0	45	165
8:30 AM	0	51	1	1	0	53	13	58	1	0	0	72	1	0	1	0	1	2	1	3	32	0	0	36	163
8:45 AM	0	46	0	0	0	46	12	71	6	0	0	89	2	0	0	0	0	2	1	0	30	0	0	31	168
Total	1	184	1	1	0	187	59	248	10	0	0	317	4	1	2	0	2	7	2	9	135	0	0	146	657
BREAK																									
4:00 PM	0	46	1	0	0	47	34	71	2	1	0	108	1	2	1	0	0	4	1	2	21	0	0	24	183
4:15 PM	0	39	0	0	0	39	20	64	1	0	0	85	0	2	1	0	0	3	0	1	19	0	0	20	147
4:30 PM	0	46	1	0	0	47	42	59	0	0	0	101	0	0	1	0	0	1	1	0	21	0	0	22	171
4:45 PM	0	37	3	0	0	40	28	81	1	0	0	110	0	0	1	0	0	1	2	0	17	0	0	19	170
Total	0	168	5	0	0	173	124	275	4	1	0	404	1	4	4	0	0	9	4	3	78	0	0	85	671
5:00 PM	0	45	0	0	0	45	54	101	0	0	0	155	4	1	1	0	0	6	1	0	18	0	0	19	225
5:15 PM	0	46	3	0	0	49	32	75	2	0	0	109	5	2	0	0	0	7	0	0	18	0	0	18	183
5:30 PM	2	42	1	0	0	45	25	65	0	0	0	90	2	3	1	0	0	6	1	0	21	0	0	22	163
5:45 PM	0	59	1	0	0	60	18	62	0	0	0	80	2	2	0	0	0	4	0	0	27	0	0	27	171
Total	2	192	5	0	0	199	129	303	2	0	0	434	13	8	2	0	0	23	2	0	84	0	0	86	742
Grand Total	4	660	11	2	0	677	364	970	24	1	0	1359	21	13	10	0	2	44	9	24	428	0	0	461	2541
Apprch %	0.6	97.5	1.6	0.3	0.0		26.8	71.4	1.8	0.1	0.0		47.7	29.5	22.7	0.0	4.5		2.0	5.2	92.8	0.0	0.0		
Total %	0.2	26.0	0.4	0.1	0.0	26.6	14.3	38.2	0.9	0.0	0.0	53.5	0.8	0.5	0.4	0.0	0.1	1.7	0.4	0.9	16.8	0.0	0.0	18.1	
Cars, PU, Vans	3	642	11	2		658	359	930	17	1		1307	17	13	8	0		38	9	23	418	0		450	2453
% Cars, PU, Vans	75.0	97.3	100.0	100.0		97.2	98.6	95.9	70.8	100.0		96.2	81.0	100.0	80.0	0.0		86.4	100.0	95.8	97.7	0.0		97.6	96.5
Heavy trucks	1	18	0	0		19	5	40	7	0		52	4	0	2	0		6	0	1	10	0		11	88
%Heavy trucks	25.0	2.7	0.0	0.0		2.8	1.4	4.1	29.2	0.0		3.8	19.0	0.0	20.0	0.0		13.6	0.0	4.2	2.3	0.0		2.4	3.5

Project ID: 21-180134-003
Location: Commerce Ave NW & Old Norcross Rd E
City: Duluth

PEAK HOURS

Day: Wednesday
Date: 5/5/2021

AM

	Commerce Ave NW Northbound					Commerce Ave NW Southbound					Old Norcross Rd E Eastbound					Old Norcross Rd E Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
7:45 AM	0	51	0	0	51	20	52	2	0	74	1	0	1	0	2	0	2	48	0	50	177
8:00 AM	1	45	0	0	46	19	59	1	0	79	0	1	1	0	2	0	3	31	0	34	161
8:15 AM	0	42	0	0	42	15	60	2	0	77	1	0	0	0	1	0	3	42	0	45	165
8:30 AM	0	51	1	1	53	13	58	1	0	72	1	0	1	0	2	1	3	32	0	36	163
Total Volume	1	189	1	1	192	67	229	6	0	302	3	1	3	0	7	1	11	153	0	165	666
% App. Total	0.5	98.4	0.5	0.5	100	22.2	75.8	2.0	0.0	100	42.9	14.3	42.9	0.0	100	0.6	6.7	92.7	0.0	100	
PHF					0.906					0.956					0.875					0.825	0.941
Cars, PU, Vans	1	183	1	1	186	67	217	5	0	289	2	1	3	0	6	1	11	149	0	161	642
% Cars, PU, Vans	100.0	96.8	100.0	100.0	96.9	100.0	94.8	83.3	0.0	95.7	66.7	100.0	100.0	0.0	85.7	100.0	100.0	97.4	0.0	97.6	96.4
Heavy trucks	0	6	0	0	6	0	12	1	0	13	1	0	0	0	1	0	0	4	0	4	24
%Heavy trucks	0.0	3.2	0.0	0.0	3.1	0.0	5.2	16.7	0.0	4.3	33.3	0.0	0.0	0.0	14.3	0.0	0.0	2.6	0.0	2.4	3.6

PM

	Commerce Ave NW Northbound					Commerce Ave NW Southbound					Old Norcross Rd E Eastbound					Old Norcross Rd E Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	0	46	1	0	47	42	59	0	0	101	0	0	1	0	1	1	0	21	0	22	171
4:45 PM	0	37	3	0	40	28	81	1	0	110	0	0	1	0	1	2	0	17	0	19	170
5:00 PM	0	45	0	0	45	54	101	0	0	155	4	1	1	0	6	1	0	18	0	19	225
5:15 PM	0	46	3	0	49	32	75	2	0	109	5	2	0	0	7	0	0	18	0	18	183
Total Volume	0	174	7	0	181	156	316	3	0	475	9	3	3	0	15	4	0	74	0	78	749
% App. Total	0.0	96.1	3.9	0.0	100	32.8	66.5	0.6	0.0	100	60.0	20.0	20.0	0.0	100	5.1	0.0	94.9	0.0	100	
PHF					0.923					0.766					0.536					0.886	0.832
Cars, PU, Vans	0	170	7	0	177	154	304	1	0	459	8	3	3	0	14	4	0	71	0	75	725
% Cars, PU, Vans	0.0	97.7	100.0	0.0	97.8	98.7	96.2	33.3	0.0	96.6	88.9	100.0	100.0	0.0	93.3	100.0	0.0	95.9	0.0	96.2	96.8
Heavy trucks	0	4	0	0	4	2	12	2	0	16	1	0	0	0	1	0	0	3	0	3	24
%Heavy trucks	0.0	2.3	0.0	0.0	2.2	1.3	3.8	66.7	0.0	3.4	11.1	0.0	0.0	0.0	6.7	0.0	0.0	4.1	0.0	3.8	3.2

Project ID: 21-180134-004
Location: Commerce Ave NW & Building 400 Dwy/Building 600 Dwy
City: Duluth

Day: Wednesday
Date: 5/5/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Commerce Ave NW Northbound						Commerce Ave NW Southbound						Building 400 Dwy/Building 600 Dwy Eastbound						Building 400 Dwy/Building 600 Dwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	2	15	5	0	0	22	0	22	0	0	0	22	1	2	1	0	0	4	1	0	0	0	0	1	49
7:15 AM	1	22	9	0	0	32	1	27	0	0	0	28	0	0	0	0	0	0	2	2	0	0	0	4	64
7:30 AM	5	32	9	0	0	46	1	44	0	0	0	45	0	1	0	0	0	1	0	0	0	0	0	0	92
7:45 AM	9	48	25	0	0	82	3	48	0	0	0	51	0	0	0	0	0	0	2	0	0	0	0	2	135
Total	17	117	48	0	0	182	5	141	0	0	0	146	1	3	1	0	0	5	5	2	0	0	0	7	340
8:00 AM	5	49	11	0	0	65	2	58	0	0	0	60	0	1	1	0	1	2	3	1	0	0	0	4	131
8:15 AM	9	37	5	0	1	51	1	49	5	0	0	55	0	0	0	0	0	0	0	1	1	0	0	2	108
8:30 AM	6	53	9	0	0	68	0	58	4	0	0	62	0	0	0	0	1	0	1	0	0	0	0	1	131
8:45 AM	3	46	5	0	0	54	1	69	8	1	0	79	0	0	4	0	0	4	3	1	0	0	0	4	141
Total	23	185	30	0	1	238	4	234	17	1	0	256	0	1	5	0	2	6	7	3	1	0	0	11	511
BREAK																									
4:00 PM	4	44	1	0	0	49	0	76	0	0	0	76	0	0	7	0	0	7	4	1	1	0	0	6	138
4:15 PM	3	37	3	0	0	43	1	54	0	0	0	55	1	0	3	0	0	4	3	1	1	0	0	5	107
4:30 PM	1	42	1	2	0	46	1	72	0	0	0	73	1	0	5	0	0	6	18	0	5	0	0	23	148
4:45 PM	1	35	1	0	0	37	0	78	0	0	0	78	3	0	3	0	0	6	2	0	3	0	0	5	126
Total	9	158	6	2	0	175	2	280	0	0	0	282	5	0	18	0	0	23	27	2	10	0	0	39	519
5:00 PM	0	42	0	0	1	42	0	110	0	0	0	110	2	2	4	0	0	8	9	0	4	0	0	13	173
5:15 PM	2	43	0	0	0	45	0	71	1	0	0	72	0	1	5	0	0	6	4	0	2	0	0	6	129
5:30 PM	1	37	2	0	1	40	0	62	0	0	0	62	8	0	7	0	0	15	9	2	0	0	0	11	128
5:45 PM	1	62	2	1	0	66	1	67	0	0	0	68	1	1	2	0	0	4	4	0	1	0	0	5	143
Total	4	184	4	1	2	193	1	310	1	0	0	312	11	4	18	0	0	33	26	2	7	0	0	35	573
Grand Total	53	644	88	3	3	788	12	965	18	1	0	996	17	8	42	0	2	67	65	9	18	0	0	92	1943
Apprch %	6.7	81.7	11.2	0.4	0.4		1.2	96.9	1.8	0.1	0.0		25.4	11.9	62.7	0.0	3.0		70.7	9.8	19.6	0.0	0.0		
Total %	2.7	33.1	4.5	0.2	0.2	40.6	0.6	49.7	0.9	0.1	0.0	51.3	0.9	0.4	2.2	0.0	0.1	3.4	3.3	0.5	0.9	0.0	0.0	4.7	
Cars, PU, Vans	52	625	88	3		768	10	924	18	1		953	17	8	42	0		67	65	9	18	0		92	1880
% Cars, PU, Vans	98.1	97.0	100.0	100.0		97.5	83.3	95.8	100.0	100.0		95.7	100.0	100.0	100.0	0.0		100.0	100.0	100.0	100.0	0.0		100.0	96.8
Heavy trucks	1	19	0	0		20	2	41	0	0		43	0	0	0	0		0	0	0	0	0		0	63
%Heavy trucks	1.9	3.0	0.0	0.0		2.5	16.7	4.2	0.0	0.0		4.3	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	3.2

Project ID: 21-180134-004
Location: Commerce Ave NW & Building 400 Dwy/Building 60
City: Duluth

PEAK HOURS

Day: Wednesday
Date: 5/5/2021

AM

	Commerce Ave NW Northbound					Commerce Ave NW Southbound					Building 400 Dwy/Building 600 Dwy Eastbound					Building 400 Dwy/Building 600 Dwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
8:00 AM	5	49	11	0	65	2	58	0	0	60	0	1	1	0	2	3	1	0	0	4	131
8:15 AM	9	37	5	0	51	1	49	5	0	55	0	0	0	0	0	0	1	1	0	2	108
8:30 AM	6	53	9	0	68	0	58	4	0	62	0	0	0	0	0	1	0	0	0	1	131
8:45 AM	3	46	5	0	54	1	69	8	1	79	0	0	4	0	4	3	1	0	0	4	141
Total Volume	23	185	30	0	238	4	234	17	1	256	0	1	5	0	6	7	3	1	0	11	511
% App. Total	9.7	77.7	12.6	0.0	100	1.6	91.4	6.6	0.4	100	0.0	16.7	83.3	0.0	100	63.6	27.3	9.1	0.0	100	
PHF					0.875					0.810					0.375					0.688	0.906
Cars, PU, Vans	23	179	30	0	232	4	222	17	1	244	0	1	5	0	6	7	3	1	0	11	493
% Cars, PU, Vans	100.0	96.8	100.0	0.0	97.5	100.0	94.9	100.0	100.0	95.3	0.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	96.5
Heavy trucks	0	6	0	0	6	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	18
%Heavy trucks	0.0	3.2	0.0	0.0	2.5	0.0	5.1	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5

PM

	Commerce Ave NW Northbound					Commerce Ave NW Southbound					Building 400 Dwy/Building 600 Dwy Eastbound					Building 400 Dwy/Building 600 Dwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	1	42	1	2	46	1	72	0	0	73	1	0	5	0	6	18	0	5	0	23	148
4:45 PM	1	35	1	0	37	0	78	0	0	78	3	0	3	0	6	2	0	3	0	5	126
5:00 PM	0	42	0	0	42	0	110	0	0	110	2	2	4	0	8	9	0	4	0	13	173
5:15 PM	2	43	0	0	45	0	71	1	0	72	0	1	5	0	6	4	0	2	0	6	129
Total Volume	4	162	2	2	170	1	331	1	0	333	6	3	17	0	26	33	0	14	0	47	576
% App. Total	2.4	95.3	1.2	1.2	100	0.3	99.4	0.3	0.0	100	23.1	11.5	65.4	0.0	100	70.2	0.0	29.8	0.0	100	
PHF					0.924					0.757					0.813					0.511	0.832
Cars, PU, Vans	3	158	2	2	165	0	320	1	0	321	6	3	17	0	26	33	0	14	0	47	559
% Cars, PU, Vans	75.0	97.5	100.0	100.0	97.1	0.0	96.7	100.0	0.0	96.4	100.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	97.0
Heavy trucks	1	4	0	0	5	1	11	0	0	12	0	0	0	0	0	0	0	0	0	0	17
%Heavy trucks	25.0	2.5	0.0	0.0	2.9	100.0	3.3	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0

Project ID: 21-180134-005
Location: Old Norcross Rd E & Building 600 Dwy/Building 700 Dwy
City: Duluth

Day: Wednesday
Date: 5/5/2021

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Old Norcross Rd E Northbound						Old Norcross Rd E Southbound						Building 600 Dwy/Building 700 Dwy Eastbound						Building 600 Dwy/Building 700 Dwy Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	5	21	0	0	0	26	0	11	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	37
7:15 AM	10	38	0	0	0	48	0	8	0	0	0	8	0	0	0	0	0	0	1	0	0	0	0	1	57
7:30 AM	17	27	1	0	0	45	0	13	0	0	0	13	0	1	1	0	0	2	0	0	0	0	0	0	60
7:45 AM	29	52	0	1	0	82	0	16	3	0	0	19	0	0	1	0	0	1	0	0	0	0	0	0	102
Total	61	138	1	1	0	201	0	48	3	0	0	51	0	1	2	0	0	3	1	0	0	0	0	1	256
8:00 AM	16	40	3	0	0	59	0	21	0	0	0	21	0	1	3	0	0	4	0	0	0	0	0	0	84
8:15 AM	3	39	4	1	0	47	1	11	2	0	0	14	0	0	0	0	0	0	1	1	0	0	0	2	63
8:30 AM	8	40	2	0	0	50	1	11	1	0	0	13	0	0	0	0	0	0	0	0	1	0	0	1	64
8:45 AM	2	29	3	0	0	34	1	12	0	0	0	13	0	0	0	0	0	0	0	1	0	0	1	1	48
Total	29	148	12	1	0	190	3	55	3	0	0	61	0	1	3	0	0	4	1	2	1	0	1	4	259
BREAK																									
4:00 PM	0	24	3	1	0	28	1	31	1	0	0	33	0	0	15	0	0	15	1	0	0	0	0	1	77
4:15 PM	1	15	2	0	0	18	0	24	0	0	0	24	1	0	11	0	0	12	1	1	0	0	0	2	56
4:30 PM	2	25	4	0	0	31	0	44	1	0	0	45	0	1	30	0	0	31	1	0	0	0	0	1	108
4:45 PM	1	16	1	2	0	20	0	30	0	1	0	31	1	1	8	0	0	10	1	0	0	0	0	1	62
Total	4	80	10	3	0	97	1	129	2	1	0	133	2	2	64	0	0	68	4	1	0	0	0	5	303
5:00 PM	0	13	0	0	0	13	0	50	0	0	0	50	1	0	13	0	0	14	2	0	4	0	0	6	83
5:15 PM	0	21	0	0	0	21	1	39	1	0	0	41	0	0	6	0	0	6	2	0	1	0	0	3	71
5:30 PM	1	20	1	2	0	24	2	29	0	0	0	31	1	0	8	0	0	9	5	0	0	0	0	5	69
5:45 PM	0	26	4	0	0	30	1	19	0	1	0	21	0	1	3	0	0	4	3	0	1	0	0	4	59
Total	1	80	5	2	0	88	4	137	1	1	0	143	2	1	30	0	0	33	12	0	6	0	0	18	282
Grand Total	95	446	28	7	0	576	8	369	9	2	0	388	4	5	99	0	0	108	18	3	7	0	1	28	1100
Apprch %	16.5	77.4	4.9	1.2	0.0		2.1	95.1	2.3	0.5	0.0		3.7	4.6	91.7	0.0	0.0		64.3	10.7	25.0	0.0	3.6		
Total %	8.6	40.5	2.5	0.6	0.0	52.4	0.7	33.5	0.8	0.2	0.0	35.3	0.4	0.5	9.0	0.0	0.0	9.8	1.6	0.3	0.6	0.0	0.1	2.5	
Cars, PU, Vans	95	435	28	7		565	8	365	9	2		384	4	3	99	0		106	17	3	7	0		27	1082
% Cars, PU, Vans	100.0	97.5	100.0	100.0		98.1	100.0	98.9	100.0	100.0		99.0	100.0	60.0	100.0	0.0		98.1	94.4	100.0	100.0	0.0		96.4	98.4
Heavy trucks	0	11	0	0		11	0	4	0	0		4	0	2	0	0		2	1	0	0	0		1	18
%Heavy trucks	0.0	2.5	0.0	0.0		1.9	0.0	1.1	0.0	0.0		1.0	0.0	40.0	0.0	0.0		1.9	5.6	0.0	0.0	0.0		3.6	1.6

Project ID: 21-180134-005
Location: Old Norcross Rd E & Building 70
City: Duluth

PEAK HOURS

Day: Wednesday
Date: 5/5/2021

AM

	Old Norcross Rd E Northbound					Old Norcross Rd E Southbound					Building 600 Dwy/Building 700 Dwy Eastbound					Building 600 Dwy/Building 700 Dwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
7:45 AM	29	52	0	1	82	0	16	3	0	19	0	0	1	0	1	0	0	0	0	0	102
8:00 AM	16	40	3	0	59	0	21	0	0	21	0	1	3	0	4	0	0	0	0	0	84
8:15 AM	3	39	4	1	47	1	11	2	0	14	0	0	0	0	0	1	1	0	0	2	63
8:30 AM	8	40	2	0	50	1	11	1	0	13	0	0	0	0	0	0	0	1	0	1	64
Total Volume	56	171	9	2	238	2	59	6	0	67	0	1	4	0	5	1	1	1	0	3	313
% App. Total	23.5	71.8	3.8	0.8	100	3.0	88.1	9.0	0.0	100	0.0	20.0	80.0	0.0	100	33.3	33.3	33.3	0.0	100	
PHF					0.726					0.798					0.313					0.375	0.767
Cars, PU, Vans	56	167	9	2	234	2	59	6	0	67	0	1	4	0	5	1	1	1	0	3	309
% Cars, PU, Vans	100.0	97.7	100.0	100.0	98.3	100.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	98.7
Heavy trucks	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
%Heavy trucks	0.0	2.3	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3

PM

	Old Norcross Rd E Northbound					Old Norcross Rd E Southbound					Building 600 Dwy/Building 700 Dwy Eastbound					Building 600 Dwy/Building 700 Dwy Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	2	25	4	0	31	0	44	1	0	45	0	1	30	0	31	1	0	0	0	1	108
4:45 PM	1	16	1	2	20	0	30	0	1	31	1	1	8	0	10	1	0	0	0	1	62
5:00 PM	0	13	0	0	13	0	50	0	0	50	1	0	13	0	14	2	0	4	0	6	83
5:15 PM	0	21	0	0	21	1	39	1	0	41	0	0	6	0	6	2	0	1	0	3	71
Total Volume	3	75	5	2	85	1	163	2	1	167	2	2	57	0	61	6	0	5	0	11	324
% App. Total	3.5	88.2	5.9	2.4	100	0.6	97.6	1.2	0.6	100	3.3	3.3	93.4	0.0	100	54.5	0.0	45.5	0.0	100	
PHF					0.685					0.835					0.492					0.458	0.750
Cars, PU, Vans	3	72	5	2	82	1	161	2	1	165	2	0	57	0	59	5	0	5	0	10	316
% Cars, PU, Vans	100.0	96.0	100.0	100.0	96.5	100.0	98.8	100.0	100.0	98.8	100.0	0.0	100.0	0.0	96.7	83.3	0.0	100.0	0.0	90.9	97.5
Heavy trucks	0	3	0	0	3	0	2	0	0	2	0	2	0	0	2	1	0	0	0	1	8
%Heavy trucks	0.0	4.0	0.0	0.0	3.5	0.0	1.2	0.0	0.0	1.2	0.0	100.0	0.0	0.0	3.3	16.7	0.0	0.0	0.0	9.1	2.5

Trip Generation Worksheet

Trip Generation Analysis (10th Ed. with *2nd Edition Handbook* Daily IC & *3rd Edition* AM/PM IC)
Gwinnett Village
City of Atlanta, GA

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Proposed Site Traffic								
221 Multi-Family Housing (Mid-Rise)	350 d.u.	1,906	117	30	87	147	90	57
Gross Trips		**1,906**	**117**	**30**	**87**	**147**	**90**	**57**
Residential Trips		1,906	117	30	87	147	90	57
Mixed-Use Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Adjusted Residential Trips		1,906	117	30	87	147	90	57
Mixed-Use Reductions - TOTAL		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions - TOTAL		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Pass-By Reductions - TOTAL		*0*	*0*	*0*	*0*	*0*	*0*	*0*
New Trips		**1,906**	**117**	**30**	**87**	**147**	**90**	**57**
Driveway Volumes		**1,906**	**117**	**30**	**87**	**147**	**90**	**57**

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Intersection Volume Worksheets

INTERSECTION VOLUME DEVELOPMENT

Intersection #1: Satellite Blvd @ Commerce Ave NW

AM PEAK HOUR

Description	Commerce Ave NW Northbound			Commerce Ave NW Southbound			Satellite Blvd Eastbound			Satellite Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2021 Traffic Volumes	17	34	43	28	24	191	183	502	38	111	1,396	19
Pedestrians		0			0			1			0	
Conflicting Pedestrians	1		0	0		1	0		0	0		0
Heavy Vehicles	0	0	2	0	0	12	6	25	4	0	42	0
Heavy Vehicle %	2%	2%	5%	2%	2%	6%	3%	5%	11%	2%	3%	2%
Peak Hour Factor		0.95			0.95			0.95			0.95	
Adjustment	1.6	1.6	1.6	1.6	1.6	1.6	1.1	1.1	1.1	2.1	2.1	2.1
Adjusted 2021 Volumes	27	54	69	45	38	306	201	552	42	233	2932	40
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030
New Road Adjustment												
Other Proposed Developments												
2023 Background Traffic	28	56	71	46	39	315	207	569	43	240	3,021	41
Project Trips												
Trip Distribution IN		5%					30%	10%				10%
Trip Distribution OUT				10%	5%	30%					10%	
Residential Trips	0	2	0	9	4	26	9	3	0	0	9	3
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	2	0	9	4	26	9	3	0	0	9	3
2023 Buildout Total	28	58	71	55	43	341	216	572	43	240	3,030	44

PM PEAK HOUR

Description	Commerce Ave NW Northbound			Commerce Ave NW Southbound			Satellite Blvd Eastbound			Satellite Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2021 Traffic Volumes	38	43	156	70	36	254	152	1,815	23	69	1,028	9
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	1	3	1	2	2	7	6	32	0	0	23	0
Heavy Vehicle %	3%	7%	2%	3%	6%	3%	4%	2%	2%	2%	2%	2%
Peak Hour Factor		0.97			0.97			0.97			0.97	
Adjustment	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.1	1.1	1.1
Adjusted 2021 Volumes	46	52	187	84	43	305	198	2360	30	76	1131	10
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030
New Road Adjustment												
Other Proposed Developments												
2023 Background Traffic	47	54	193	87	44	314	204	2,431	31	78	1,165	10
Project Trips												
Trip Distribution IN		5%					30%	10%				10%
Trip Distribution OUT				10%	5%	30%					10%	
Residential Trips	0	5	0	6	3	17	27	9	0	0	6	9
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	5	0	6	3	17	27	9	0	0	6	9
2023 Buildout Total	47	59	193	93	47	331	231	2,440	31	78	1,171	19

INTERSECTION VOLUME DEVELOPMENT

Intersection #2: Satellite Blvd @ Old Norcross Rd E

AM PEAK HOUR

Description	Old Norcross Rd E Northbound			Old Norcross Rd E Southbound			Satellite Blvd Eastbound			Satellite Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2021 Traffic Volumes	649	167	111	8	54	3	18	319	215	92	874	53
Pedestrians		8			0			0			1	
Conflicting Pedestrians	0		1	1		0	0		8	8		0
Heavy Vehicles	18	3	0	0	0	0	0	21	9	2	31	1
Heavy Vehicle %	3%	2%	2%	2%	2%	2%	2%	7%	4%	2%	4%	2%
Peak Hour Factor		0.98			0.98			0.98			0.98	
Adjustment	1.6	1.6	1.6	1.6	1.6	1.6	1.1	1.1	1.1	2.1	2.1	2.1
Adjusted 2021 Volumes	1038	267	178	13	86	5	20	351	237	193	1835	111
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030
New Road Adjustment												
Other Proposed Developments												
2023 Background Traffic	1,069	275	183	13	89	5	21	362	244	199	1,890	114
Project Trips												
Trip Distribution IN	5%	15%					10%				5%	25%
Trip Distribution OUT				25%	15%	10%		5%	5%			
Residential Trips	2	5	0	22	13	9	3	4	4	0	2	8
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	2	5	0	22	13	9	3	4	4	0	2	8
2023 Buildout Total	1,071	280	183	35	102	14	24	366	248	199	1,892	122

PM PEAK HOUR

Description	Old Norcross Rd E Northbound			Old Norcross Rd E Southbound			Satellite Blvd Eastbound			Satellite Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2021 Traffic Volumes	407	70	138	38	136	7	27	1,095	950	185	673	5
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	5	2	1	0	0	0	0	14	19	2	16	0
Heavy Vehicle %	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor		0.95			0.95			0.95			0.95	
Adjustment	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.1	1.1	1.1
Adjusted 2021 Volumes	488	84	166	46	163	8	35	1424	1235	204	740	6
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030
New Road Adjustment												
Other Proposed Developments												
2023 Background Traffic	503	87	171	47	168	8	36	1,467	1,272	210	762	6
Project Trips												
Trip Distribution IN	5%	15%					10%				5%	25%
Trip Distribution OUT				25%	15%	10%		5%	5%			
Residential Trips	5	14	0	14	9	6	9	3	3	0	5	23
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	5	14	0	14	9	6	9	3	3	0	5	23
2023 Buildout Total	508	101	171	61	177	14	45	1,470	1,275	210	767	29

INTERSECTION VOLUME DEVELOPMENT

Intersection #3: Commerce Ave NW @ Old Norcross Rd E

AM PEAK HOUR

Description	Commerce Ave NW Northbound			Commerce Ave NW Southbound			Old Norcross Rd E Eastbound			Old Norcross Rd E Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2021 Traffic Volumes	2	189	1	67	229	6	3	1	3	1	11	153
Pedestrians		0			0			2			0	
Conflicting Pedestrians	2		0	0		2	0		0	0		0
Heavy Vehicles	0	6	0	0	12	1	1	0	0	0	0	4
Heavy Vehicle %	2%	3%	2%	2%	5%	17%	33%	2%	2%	2%	2%	3%
Peak Hour Factor		0.94			0.94			0.94			0.94	
Adjustment	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Adjusted 2021 Volumes	3	302	2	107	366	10	5	2	5	2	18	245
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030
New Road Adjustment												
Other Proposed Developments												
2023 Background Traffic	3	311	2	110	377	10	5	2	5	2	19	252
Project Trips												
Trip Distribution IN					5%							
Trip Distribution OUT		5%										
Residential Trips	0	4	0	0	2	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	4	0	0	2	0	0	0	0	0	0	0
2023 Buildout Total	3	315	2	110	379	10	5	2	5	2	19	252

PM PEAK HOUR

Description	Commerce Ave NW Northbound			Commerce Ave NW Southbound			Old Norcross Rd E Eastbound			Old Norcross Rd E Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2021 Traffic Volumes	0	174	7	156	316	3	9	3	3	4	0	74
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	4	0	2	12	2	1	0	0	0	0	3
Heavy Vehicle %	2%	2%	2%	2%	4%	67%	11%	2%	2%	2%	0%	4%
Peak Hour Factor		0.83			0.83			0.83			0.83	
Adjustment	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Adjusted 2021 Volumes	0	209	8	187	379	4	11	4	4	5	0	89
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030
New Road Adjustment												
Other Proposed Developments												
2023 Background Traffic	0	215	8	193	390	4	11	4	4	5	0	92
Project Trips												
Trip Distribution IN					5%							
Trip Distribution OUT		5%										
Residential Trips	0	3	0	0	5	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	3	0	0	5	0	0	0	0	0	0	0
2023 Buildout Total	0	218	8	193	395	4	11	4	4	5	0	92

INTERSECTION VOLUME DEVELOPMENT

Intersection #4: Commerce Ave NW @ Building 400 Dwy/Building 600 Dwy

AM PEAK HOUR

Description	Commerce Ave NW Northbound			Commerce Ave NW Southbound			ding 400 Dwy/Building 600 D Eastbound			ding 400 Dwy/Building 600 D Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2021 Traffic Volumes	23	185	30	5	234	17	0	1	5	7	3	1
Pedestrians		1			0			2			0	
Conflicting Pedestrians	2		0	0		2	0		1	1		0
Heavy Vehicles	0	6	0	0	12	0	0	0	0	0	0	0
Heavy Vehicle %	2%	3%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor		0.91			0.91			0.91			0.91	
Adjustment	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Adjusted 2021 Volumes	37	296	48	8	374	27	0	2	8	11	5	2
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030
New Road Adjustment												
Other Proposed Developments												
2023 Background Traffic	38	305	49	8	385	28	0	2	8	11	5	2
Project Trips												
Trip Distribution IN			45%	5%								
Trip Distribution OUT										45%		5%
Residential Trips	0	0	14	2	0	0	0	0	0	39	0	4
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	14	2	0	0	0	0	0	39	0	4
2023 Buildout Total	38	305	63	10	385	28	0	2	8	50	5	6

PM PEAK HOUR

Description	Commerce Ave NW Northbound			Commerce Ave NW Southbound			ding 400 Dwy/Building 600 D Eastbound			ding 400 Dwy/Building 600 D Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2021 Traffic Volumes	6	162	2	1	331	1	6	3	17	33	0	14
Pedestrians		1			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		1	1		0
Heavy Vehicles	1	4	0	1	11	0	0	0	0	0	0	0
Heavy Vehicle %	2%	2%	2%	100%	3%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor		0.83			0.83			0.83			0.83	
Adjustment	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Adjusted 2021 Volumes	7	194	2	1	397	1	7	4	20	40	0	17
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030
New Road Adjustment												
Other Proposed Developments												
2023 Background Traffic	7	200	2	1	409	1	7	4	21	41	0	18
Project Trips												
Trip Distribution IN			45%	5%								
Trip Distribution OUT										45%		5%
Residential Trips	0	0	41	5	0	0	0	0	0	26	0	3
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	41	5	0	0	0	0	0	26	0	3
2023 Buildout Total	7	200	43	6	409	1	7	4	21	67	0	21

INTERSECTION VOLUME DEVELOPMENT

Intersection #5: Old Norcross Rd E @ Building 600 Dwy/Building 700 Dwy

AM PEAK HOUR

Description	Old Norcross Rd E Northbound			Old Norcross Rd E Southbound			ding 600 Dwy/Building 700 D Eastbound			ding 600 Dwy/Building 700 D Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2021 Traffic Volumes	58	171	8	2	59	6	0	1	4	1	1	1
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	4	0	0	0	0	0	0	0	0	0	0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor		0.77			0.77			0.77			0.77	
Adjustment	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Adjusted 2021 Volumes	93	274	13	3	94	10	0	2	6	2	2	2
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030
New Road Adjustment												
Other Proposed Developments												
2023 Background Traffic	96	282	13	3	97	10	0	2	6	2	2	2
Project Trips												
Trip Distribution IN	50%											
Trip Distribution OUT									50%			
Residential Trips	15	0	0	0	0	0	0	0	44	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	15	0	0	0	0	0	0	0	44	0	0	0
2023 Buildout Total	111	282	13	3	97	10	0	2	50	2	2	2

PM PEAK HOUR

Description	Old Norcross Rd E Northbound			Old Norcross Rd E Southbound			ding 600 Dwy/Building 700 D Eastbound			ding 600 Dwy/Building 700 D Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2021 Traffic Volumes	5	75	5	2	163	2	2	2	57	6	0	5
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	3	0	0	2	0	0	2	0	1	0	0
Heavy Vehicle %	2%	4%	2%	2%	2%	2%	2%	100%	2%	17%	2%	2%
Peak Hour Factor		0.75			0.75			0.75			0.75	
Adjustment	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Adjusted 2021 Volumes	6	90	6	2	196	2	2	2	68	7	0	6
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030	1.030
New Road Adjustment												
Other Proposed Developments												
2023 Background Traffic	6	93	6	2	202	2	2	2	70	7	0	6
Project Trips												
Trip Distribution IN	50%											
Trip Distribution OUT									50%			
Residential Trips	45	0	0	0	0	0	0	0	29	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	45	0	0	0	0	0	0	0	29	0	0	0
2023 Buildout Total	51	93	6	2	202	2	2	2	99	7	0	6

Kimley»Horn

APPENDIX E

Synchro Analysis Reports

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	552	42	233	2932	40	27	54	69	45	38	306
Future Volume (veh/h)	201	552	42	233	2932	40	27	54	69	45	38	306
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	218	600	39	253	3187	21	29	59	13	49	41	224
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	218	3133	202	629	3101	963	89	328	278	242	311	278
Arrive On Green	0.10	0.64	0.64	0.07	0.61	0.61	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	4901	316	1781	5106	1585	1114	1870	1585	1328	1777	1585
Grp Volume(v), veh/h	218	416	223	253	3187	21	29	59	13	49	41	224
Grp Sat Flow(s),veh/h/ln	1781	1702	1813	1781	1702	1585	1114	1870	1585	1328	1777	1585
Q Serve(g_s), s	15.5	8.0	8.1	8.6	97.2	0.8	4.1	4.3	1.1	5.2	3.1	21.7
Cycle Q Clear(g_c), s	15.5	8.0	8.1	8.6	97.2	0.8	25.8	4.3	1.1	9.5	3.1	21.7
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	2176	1159	629	3101	963	89	328	278	242	311	278
V/C Ratio(X)	1.00	0.19	0.19	0.40	1.03	0.02	0.33	0.18	0.05	0.20	0.13	0.81
Avail Cap(c_a), veh/h	218	2176	1159	641	3101	963	161	449	380	328	426	380
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.22	0.22	0.22	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	11.9	11.9	9.9	31.4	12.5	75.8	56.2	54.9	60.3	55.7	63.4
Incr Delay (d2), s/veh	61.5	0.2	0.4	0.0	16.1	0.0	1.6	0.2	0.1	0.3	0.1	7.7
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	12.5	3.0	3.3	3.2	41.2	0.3	1.2	2.1	0.4	1.8	1.4	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	122.5	12.0	12.2	10.0	47.5	12.5	77.4	56.4	54.9	60.6	55.9	71.1
LnGrp LOS	F	B	B	A	F	B	E	E	D	E	E	E
Approach Vol, veh/h		857			3461			101			314	
Approach Delay, s/veh		40.2			44.6			62.2			67.5	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.0	103.4		34.6	16.9	108.5		34.6				
Change Period (Y+Rc), s	6.5	* 6.2		6.6	* 6.2	* 6.2		6.6				
Max Green Setting (Gmax), s	15.5	* 87		38.4	* 12	* 91		38.4				
Max Q Clear Time (g_c+I1), s	17.5	99.2		23.7	10.6	10.1		27.8				
Green Ext Time (p_c), s	0.0	0.0		1.2	0.0	12.4		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			45.7									
HCM 6th LOS			D									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	351	237	193	1835	111	1038	267	178	13	86	5
Future Volume (veh/h)	20	351	237	193	1835	111	1038	267	178	13	86	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	22	382	87	210	1995	50	1128	290	54	14	93	2
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	112	1591	710	504	2589	804	924	564	478	21	144	3
Arrive On Green	0.01	0.15	0.15	0.07	0.51	0.51	0.27	0.30	0.30	0.01	0.04	0.04
Sat Flow, veh/h	1781	3554	1585	1781	5106	1585	3456	1870	1585	1781	3557	76
Grp Volume(v), veh/h	22	382	87	210	1995	50	1128	290	54	14	46	49
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1585	1728	1870	1585	1781	1777	1857
Q Serve(g_s), s	1.1	15.2	7.6	9.9	50.6	2.6	42.8	20.5	3.9	1.3	4.1	4.1
Cycle Q Clear(g_c), s	1.1	15.2	7.6	9.9	50.6	2.6	42.8	20.5	3.9	1.3	4.1	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	112	1591	710	504	2589	804	924	564	478	21	72	75
V/C Ratio(X)	0.20	0.24	0.12	0.42	0.77	0.06	1.22	0.51	0.11	0.68	0.64	0.65
Avail Cap(c_a), veh/h	237	1591	710	524	2589	804	924	652	553	151	287	299
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)	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	44.1	40.9	20.8	31.9	20.1	58.6	46.2	40.4	78.8	75.6	75.6
Incr Delay (d2), s/veh	0.3	0.4	0.4	0.2	2.3	0.1	108.9	0.5	0.1	25.2	7.0	6.8
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	0.5	7.3	3.1	4.1	20.6	1.0	32.3	9.5	1.5	0.7	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	44.5	41.3	21.0	34.2	20.2	167.5	46.8	40.5	103.9	82.6	82.4
LnGrp LOS	C	D	D	C	C	C	F	D	D	F	F	F
Approach Vol, veh/h		491			2255			1472			109	
Approach Delay, s/veh		43.3			32.6			139.1			85.3	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	87.5	50.0	13.7	18.3	78.0	8.3	55.4
Change Period (Y+Rc), s	* 6.3	* 6.4	7.2	7.2	* 6.3	* 6.4	6.4	7.2
Max Green Setting (Gmax), s	* 14	* 51	42.8	25.8	* 14	* 51	13.6	55.8
Max Q Clear Time (g_c+I1), s	3.1	52.6	44.8	6.1	11.9	17.2	3.3	22.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.1	7.1	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	71.4
HCM 6th LOS	E

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	2	5	2	18	245	3	302	2	107	366	10
Future Volume (veh/h)	5	2	5	2	18	245	3	302	2	107	366	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	5	2	0	2	20	15	3	328	1	116	398	4
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	14	6	0	89	94	79	445	1040	3	524	1256	560
Arrive On Green	0.01	0.01	0.00	0.05	0.05	0.05	0.00	0.29	0.29	0.07	0.35	0.35
Sat Flow, veh/h	1290	516	0	1781	1870	1585	1781	3634	11	1781	3554	1585
Grp Volume(v), veh/h	7	0	0	2	20	15	3	160	169	116	398	4
Grp Sat Flow(s),veh/h/ln	1806	0	0	1781	1870	1585	1781	1777	1868	1781	1777	1585
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.4	0.4	0.1	3.0	3.0	1.9	3.4	0.1
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.0	0.4	0.4	0.1	3.0	3.0	1.9	3.4	0.1
Prop In Lane	0.71		0.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	20	0	0	89	94	79	445	508	535	524	1256	560
V/C Ratio(X)	0.35	0.00	0.00	0.02	0.21	0.19	0.01	0.32	0.32	0.22	0.32	0.01
Avail Cap(c_a), veh/h	586	0	0	586	615	522	1042	2288	2406	1001	4576	2041
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	0.0	18.9	19.1	19.1	10.6	11.7	11.7	9.4	9.9	8.8
Incr Delay (d2), s/veh	9.8	0.0	0.0	0.1	1.1	1.1	0.0	1.3	1.2	0.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.2	0.1	0.0	1.1	1.1	0.5	1.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.4	0.0	0.0	19.0	20.2	20.2	10.6	13.0	13.0	9.5	10.4	8.8
LnGrp LOS	C	A	A	B	C	C	B	B	B	A	B	A
Approach Vol, veh/h		7			37			332			518	
Approach Delay, s/veh		30.4			20.2			13.0			10.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	20.8		8.3	8.8	18.0		6.9
Change Period (Y+Rc), s	5.8	* 6		* 6.2	5.8	* 6		6.4
Max Green Setting (Gmax), s	4.2	* 54		* 14	14.2	* 54		13.6
Max Q Clear Time (g_c+I1), s	2.1	5.4		2.4	3.9	5.0		2.2
Green Ext Time (p_c), s	0.0	7.1		0.1	0.1	5.2		0.0

Intersection Summary		
HCM 6th Ctrl Delay	11.8	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	8	11	5	2	37	296	48	8	374	27
Future Vol, veh/h	0	2	8	11	5	2	37	296	48	8	374	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	120	95	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	9	12	5	2	40	322	52	9	407	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	684	894	218	625	856	161	436	0	0	374	0	0
Stage 1	440	440	-	402	402	-	-	-	-	-	-	-
Stage 2	244	454	-	223	454	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	335	279	786	369	294	855	1120	-	-	1181	-	-
Stage 1	566	576	-	596	599	-	-	-	-	-	-	-
Stage 2	738	568	-	759	568	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	319	267	786	351	281	855	1120	-	-	1181	-	-
Mov Cap-2 Maneuver	319	267	-	351	281	-	-	-	-	-	-	-
Stage 1	546	571	-	575	577	-	-	-	-	-	-	-
Stage 2	703	548	-	742	563	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	15.9	0.8	0.2
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1120	-	-	566	350	1181	-	-
HCM Lane V/C Ratio	0.036	-	-	0.019	0.056	0.007	-	-
HCM Control Delay (s)	8.3	-	-	11.5	15.9	8.1	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	6	2	2	2	93	274	13	3	94	10
Future Vol, veh/h	0	2	6	2	2	2	93	274	13	3	94	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	135	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	7	2	2	2	101	298	14	3	102	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	460	622	51	565	626	156	113	0	0	312	0	0
Stage 1	108	108	-	507	507	-	-	-	-	-	-	-
Stage 2	352	514	-	58	119	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	689	510	1006	570	507	*975	1474	-	-	1442	-	-
Stage 1	886	805	-	675	640	-	-	-	-	-	-	-
Stage 2	851	636	-	947	796	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	648	474	1006	534	471	*975	1474	-	-	1442	-	-
Mov Cap-2 Maneuver	648	474	-	534	471	-	-	-	-	-	-	-
Stage 1	825	803	-	629	596	-	-	-	-	-	-	-
Stage 2	788	592	-	936	794	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.6	11.1	1.9	0.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1474	-	-	786	597	1442	-	-
HCM Lane V/C Ratio	0.069	-	-	0.011	0.011	0.002	-	-
HCM Control Delay (s)	7.6	-	-	9.6	11.1	7.5	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0	0	0	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	2360	30	76	1131	10	46	52	187	84	43	305
Future Volume (veh/h)	198	2360	30	76	1131	10	46	52	187	84	43	305
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	215	2565	32	83	1229	8	50	57	88	91	47	119
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	458	4088	51	152	3924	1218	47	147	125	104	140	125
Arrive On Green	0.04	0.79	0.79	0.05	1.00	1.00	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1781	5198	65	1781	5106	1585	1220	1870	1585	1243	1777	1585
Grp Volume(v), veh/h	215	1678	919	83	1229	8	50	57	88	91	47	119
Grp Sat Flow(s),veh/h/ln	1781	1702	1859	1781	1702	1585	1220	1870	1585	1243	1777	1585
Q Serve(g_s), s	4.5	35.3	35.6	1.8	0.0	0.0	0.7	4.9	9.2	8.5	4.3	12.7
Cycle Q Clear(g_c), s	4.5	35.3	35.6	1.8	0.0	0.0	13.4	4.9	9.2	13.4	4.3	12.7
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	458	2677	1462	152	3924	1218	47	147	125	104	140	125
V/C Ratio(X)	0.47	0.63	0.63	0.55	0.31	0.01	1.06	0.39	0.70	0.87	0.34	0.95
Avail Cap(c_a), veh/h	530	2677	1462	256	3924	1218	47	147	125	104	140	125
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)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.6	7.6	7.7	13.3	0.0	0.0	85.0	74.4	76.4	82.1	74.1	78.0
Incr Delay (d2), s/veh	0.3	1.1	2.1	1.0	0.2	0.0	148.1	1.2	15.5	49.6	1.0	65.4
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	1.4	11.2	12.7	1.4	0.1	0.0	4.0	2.4	4.3	5.4	2.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.9	8.8	9.7	14.3	0.2	0.0	233.0	75.6	91.8	131.7	75.1	143.4
LnGrp LOS	A	A	A	B	A	A	F	E	F	F	E	F
Approach Vol, veh/h		2812			1320			195			257	
Approach Delay, s/veh		8.7			1.1			123.3			126.8	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.2	136.8		20.0	10.1	139.9		20.0				
Change Period (Y+Rc), s	6.5	* 6.2		6.6	* 6.2	* 6.2		6.6				
Max Green Setting (Gmax), s	13.5	* 1.2E2		13.4	* 14	* 1.2E2		13.4				
Max Q Clear Time (g_c+I1), s	6.5	2.0		15.4	3.8	37.6		15.4				
Green Ext Time (p_c), s	0.2	39.5		0.0	0.1	82.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		18.0
HCM 6th LOS		B

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	1424	1235	204	740	6	488	84	166	46	163	8
Future Volume (veh/h)	35	1424	1235	204	740	6	488	84	166	46	163	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	38	1548	1003	222	804	4	530	91	34	50	177	6
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	448	2019	900	242	3171	984	463	315	267	64	231	8
Arrive On Green	0.04	1.00	1.00	0.07	0.62	0.62	0.13	0.17	0.17	0.04	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	5106	1585	3456	1870	1585	1781	3507	118
Grp Volume(v), veh/h	38	1548	1003	222	804	4	530	91	34	50	89	94
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1585	1728	1870	1585	1781	1777	1849
Q Serve(g_s), s	1.5	0.0	0.0	10.1	12.0	0.1	22.8	7.2	3.1	4.7	8.4	8.5
Cycle Q Clear(g_c), s	1.5	0.0	0.0	10.1	12.0	0.1	22.8	7.2	3.1	4.7	8.4	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	448	2019	900	242	3171	984	463	315	267	64	117	122
V/C Ratio(X)	0.08	0.77	1.11	0.92	0.25	0.00	1.14	0.29	0.13	0.78	0.76	0.77
Avail Cap(c_a), veh/h	536	2019	900	362	3171	984	463	315	267	247	291	302
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)	0.66	0.66	0.66	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	0.0	0.0	29.7	14.5	2.3	73.6	61.8	60.0	81.2	78.1	78.1
Incr Delay (d2), s/veh	0.0	1.9	62.0	16.4	0.2	0.0	87.4	0.4	0.2	13.7	7.4	7.3
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	0.6	0.5	15.5	5.5	4.6	0.1	15.6	3.4	1.3	2.4	4.1	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.5	1.9	62.0	46.1	14.7	2.3	161.0	62.1	60.2	94.9	85.5	85.5
LnGrp LOS	B	A	F	D	B	A	F	E	E	F	F	F
Approach Vol, veh/h		2589			1030			655			233	
Approach Delay, s/veh		25.4			21.4			142.1			87.5	
Approach LOS		C			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	112.0	30.0	18.4	18.6	103.0	12.5	35.9
Change Period (Y+Rc), s	* 6.3	* 6.4	7.2	7.2	* 6.3	* 6.4	6.4	7.2
Max Green Setting (Gmax), s	* 12	* 81	22.8	27.8	* 24	* 69	23.6	27.8
Max Q Clear Time (g_c+I1), s	3.5	14.0	24.8	10.5	12.1	2.0	6.7	9.2
Green Ext Time (p_c), s	0.0	17.5	0.0	0.7	0.2	62.7	0.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	44.6
HCM 6th LOS	D

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	4	4	5	0	89	0	209	8	187	379	4
Future Volume (veh/h)	11	4	4	5	0	89	0	209	8	187	379	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	4	0	5	0	0	0	227	6	203	412	2
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	27	9	0	29	0	13	450	1003	26	638	1892	844
Arrive On Green	0.02	0.02	0.00	0.01	0.00	0.00	0.00	0.28	0.28	0.11	0.53	0.53
Sat Flow, veh/h	1352	451	0	3563	0	1585	1781	3537	93	1781	3554	1585
Grp Volume(v), veh/h	16	0	0	5	0	0	0	114	119	203	412	2
Grp Sat Flow(s),veh/h/ln	1803	0	0	1781	0	1585	1781	1777	1854	1781	1777	1585
Q Serve(g_s), s	0.4	0.0	0.0	0.1	0.0	0.0	0.0	2.1	2.1	3.0	2.6	0.0
Cycle Q Clear(g_c), s	0.4	0.0	0.0	0.1	0.0	0.0	0.0	2.1	2.1	3.0	2.6	0.0
Prop In Lane	0.75		0.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	37	0	0	29	0	13	450	504	525	638	1892	844
V/C Ratio(X)	0.44	0.00	0.00	0.17	0.00	0.00	0.00	0.23	0.23	0.32	0.22	0.00
Avail Cap(c_a), veh/h	579	0	0	1161	0	517	1043	2266	2364	1036	4533	2022
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	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	0.0	20.9	0.0	0.0	0.0	11.6	11.6	7.7	5.2	4.6
Incr Delay (d2), s/veh	8.0	0.0	0.0	2.8	0.0	0.0	0.0	0.8	0.8	0.1	0.2	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	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.8	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.5	0.0	0.0	23.7	0.0	0.0	0.0	12.4	12.4	7.8	5.4	4.6
LnGrp LOS	C	A	A	C	A	A	A	B	B	A	A	A
Approach Vol, veh/h		16			5			233			617	
Approach Delay, s/veh		28.5			23.7			12.4			6.2	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	28.5		6.5	10.5	18.0		7.3
Change Period (Y+Rc), s	5.8	* 6		* 6.2	5.8	* 6		6.4
Max Green Setting (Gmax), s	14.2	* 54		* 14	14.2	* 54		13.6
Max Q Clear Time (g_c+I1), s	10.0	4.6		2.1	5.0	4.1		2.4
Green Ext Time (p_c), s	0.0	7.4		0.0	0.2	3.6		0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	4	20	40	0	17	7	194	2	1	397	1
Future Vol, veh/h	7	4	20	40	0	17	7	194	2	1	397	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	120	95	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	4	22	43	0	18	8	211	2	1	432	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	557	664	217	447	662	106	433	0	0	213	0	0
Stage 1	435	435	-	227	227	-	-	-	-	-	-	-
Stage 2	122	229	-	220	435	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	413	380	787	495	381	928	1123	-	-	1355	-	-
Stage 1	570	579	-	755	715	-	-	-	-	-	-	-
Stage 2	869	713	-	762	579	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	402	377	787	474	378	928	1123	-	-	1355	-	-
Mov Cap-2 Maneuver	402	377	-	474	378	-	-	-	-	-	-	-
Stage 1	566	578	-	750	710	-	-	-	-	-	-	-
Stage 2	846	708	-	735	578	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	12.3	0.3	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1123	-	-	580	555	1355	-	-
HCM Lane V/C Ratio	0.007	-	-	0.058	0.112	0.001	-	-
HCM Control Delay (s)	8.2	-	-	11.6	12.3	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	68	7	0	6	6	90	6	2	196	2
Future Vol, veh/h	2	2	68	7	0	6	6	90	6	2	196	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	135	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	74	8	0	7	7	98	7	2	213	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	280	336	107	228	335	53	215	0	0	105	0	0
Stage 1	217	217	-	116	116	-	-	-	-	-	-	-
Stage 2	63	119	-	112	219	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*706	618	926	770	619	*1058	1352	-	-	1537	-	-
Stage 1	*765	722	-	939	835	-	-	-	-	-	-	-
Stage 2	*997	833	-	881	721	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*698	614	926	703	615	*1058	1352	-	-	1537	-	-
Mov Cap-2 Maneuver	*698	614	-	703	615	-	-	-	-	-	-	-
Stage 1	*761	721	-	934	831	-	-	-	-	-	-	-
Stage 2	*986	829	-	807	720	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	9.4	0.5	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1352	-	-	905	832	1537	-	-
HCM Lane V/C Ratio	0.005	-	-	0.086	0.017	0.001	-	-
HCM Control Delay (s)	7.7	-	-	9.4	9.4	7.3	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	569	43	240	3021	41	28	56	71	46	39	315
Future Volume (veh/h)	207	569	43	240	3021	41	28	56	71	46	39	315
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	225	618	42	261	3284	22	30	61	13	50	42	233
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	218	3080	208	615	3068	953	90	340	288	249	323	288
Arrive On Green	0.10	0.63	0.63	0.07	0.60	0.60	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	4885	330	1781	5106	1585	1104	1870	1585	1326	1777	1585
Grp Volume(v), veh/h	225	429	231	261	3284	22	30	61	13	50	42	233
Grp Sat Flow(s),veh/h/ln	1781	1702	1811	1781	1702	1585	1104	1870	1585	1326	1777	1585
Q Serve(g_s), s	15.5	8.5	8.6	9.1	96.2	0.9	4.3	4.4	1.1	5.3	3.2	22.6
Cycle Q Clear(g_c), s	15.5	8.5	8.6	9.1	96.2	0.9	26.9	4.4	1.1	9.7	3.2	22.6
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	2146	1142	615	3068	953	90	340	288	249	323	288
V/C Ratio(X)	1.03	0.20	0.20	0.42	1.07	0.02	0.33	0.18	0.05	0.20	0.13	0.81
Avail Cap(c_a), veh/h	218	2146	1142	623	3068	953	154	449	380	327	426	380
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.15	0.15	0.15	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.7	12.5	12.5	10.3	31.9	12.9	75.7	55.4	54.0	59.5	54.9	62.8
Incr Delay (d2), s/veh	70.2	0.2	0.4	0.0	32.9	0.0	1.6	0.2	0.0	0.3	0.1	8.5
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	13.0	3.2	3.5	3.4	45.7	0.3	1.3	2.1	0.4	1.8	1.4	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	130.9	12.7	12.9	10.3	64.8	12.9	77.3	55.6	54.1	59.8	55.0	71.3
LnGrp LOS	F	B	B	B	F	B	E	E	D	E	E	E
Approach Vol, veh/h		885			3567			104			325	
Approach Delay, s/veh		42.8			60.5			61.7			67.4	
Approach LOS		D			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.0	102.4		35.6	17.3	107.1		35.6				
Change Period (Y+Rc), s	6.5	* 6.2		6.6	* 6.2	* 6.2		6.6				
Max Green Setting (Gmax), s	15.5	* 87		38.4	* 12	* 91		38.4				
Max Q Clear Time (g_c+I1), s	17.5	98.2		24.6	11.1	10.6		28.9				
Green Ext Time (p_c), s	0.0	0.0		1.2	0.0	13.0		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		57.8	
HCM 6th LOS		E	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	362	244	199	1890	114	1069	275	183	13	89	5
Future Volume (veh/h)	21	362	244	199	1890	114	1069	275	183	13	89	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	23	393	89	216	2054	51	1162	299	56	14	97	2
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	107	1579	704	499	2581	801	924	566	480	21	148	3
Arrive On Green	0.01	0.15	0.15	0.08	0.51	0.51	0.27	0.30	0.30	0.01	0.04	0.04
Sat Flow, veh/h	1781	3554	1585	1781	5106	1585	3456	1870	1585	1781	3561	73
Grp Volume(v), veh/h	23	393	89	216	2054	51	1162	299	56	14	48	51
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1585	1728	1870	1585	1781	1777	1857
Q Serve(g_s), s	1.1	15.7	7.8	10.3	53.2	2.6	42.8	21.2	4.1	1.3	4.3	4.3
Cycle Q Clear(g_c), s	1.1	15.7	7.8	10.3	53.2	2.6	42.8	21.2	4.1	1.3	4.3	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	107	1579	704	499	2581	801	924	566	480	21	74	77
V/C Ratio(X)	0.21	0.25	0.13	0.43	0.80	0.06	1.26	0.53	0.12	0.68	0.65	0.66
Avail Cap(c_a), veh/h	231	1579	704	514	2581	801	924	652	553	151	287	299
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)	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	44.6	41.3	21.0	32.7	20.2	58.6	46.3	40.3	78.8	75.5	75.5
Incr Delay (d2), s/veh	0.4	0.4	0.4	0.2	2.6	0.2	124.5	0.6	0.1	25.2	7.0	6.8
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	0.5	7.6	3.2	4.2	21.7	1.0	34.3	9.8	1.6	0.7	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	45.0	41.6	21.3	35.4	20.4	183.1	46.9	40.4	103.9	82.5	82.4
LnGrp LOS	C	D	D	C	D	C	F	D	D	F	F	F
Approach Vol, veh/h		505			2321			1517			113	
Approach Delay, s/veh		43.8			33.7			151.0			85.1	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	87.3	50.0	13.9	18.6	77.5	8.3	55.6
Change Period (Y+Rc), s	* 6.3	* 6.4	7.2	7.2	* 6.3	* 6.4	6.4	7.2
Max Green Setting (Gmax), s	* 14	* 51	42.8	25.8	* 14	* 51	13.6	55.8
Max Q Clear Time (g_c+I1), s	3.1	55.2	44.8	6.3	12.3	17.7	3.3	23.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	7.3	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	76.1
HCM 6th LOS	E

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	2	5	2	19	252	3	311	2	110	377	10
Future Volume (veh/h)	5	2	5	2	19	252	3	311	2	110	377	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	5	2	0	2	21	15	3	338	1	120	410	4
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	14	6	0	91	96	81	440	1037	3	521	1260	562
Arrive On Green	0.01	0.01	0.00	0.05	0.05	0.05	0.00	0.29	0.29	0.07	0.35	0.35
Sat Flow, veh/h	1290	516	0	1781	1870	1585	1781	3635	11	1781	3554	1585
Grp Volume(v), veh/h	7	0	0	2	21	15	3	165	174	120	410	4
Grp Sat Flow(s),veh/h/ln	1806	0	0	1781	1870	1585	1781	1777	1868	1781	1777	1585
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.5	0.4	0.1	3.1	3.1	2.0	3.5	0.1
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.0	0.5	0.4	0.1	3.1	3.1	2.0	3.5	0.1
Prop In Lane	0.71		0.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	20	0	0	91	96	81	440	507	533	521	1260	562
V/C Ratio(X)	0.35	0.00	0.00	0.02	0.22	0.19	0.01	0.33	0.33	0.23	0.33	0.01
Avail Cap(c_a), veh/h	584	0	0	584	613	520	1035	2281	2398	993	4561	2034
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	0.0	19.0	19.2	19.1	10.7	11.8	11.8	9.4	9.9	8.8
Incr Delay (d2), s/veh	9.8	0.0	0.0	0.1	1.1	1.1	0.0	1.3	1.3	0.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.2	0.1	0.0	1.1	1.1	0.5	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	0.0	0.0	19.1	20.3	20.2	10.7	13.2	13.1	9.5	10.5	8.8
LnGrp LOS	C	A	A	B	C	C	B	B	B	A	B	A
Approach Vol, veh/h		7			38			342			534	
Approach Delay, s/veh		30.5			20.2			13.1			10.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	20.9		8.4	8.8	18.0		6.9
Change Period (Y+Rc), s	5.8	* 6		* 6.2	5.8	* 6		6.4
Max Green Setting (Gmax), s	4.2	* 54		* 14	14.2	* 54		13.6
Max Q Clear Time (g_c+I1), s	2.1	5.5		2.5	4.0	5.1		2.2
Green Ext Time (p_c), s	0.0	7.4		0.1	0.1	5.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	8	11	5	2	38	305	49	8	385	28
Future Vol, veh/h	0	2	8	11	5	2	38	305	49	8	385	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	120	95	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	9	12	5	2	41	332	53	9	418	30

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	702	918	224	642	880	166	448	0	0	385	0	0
Stage 1	451	451	-	414	414	-	-	-	-	-	-	-
Stage 2	251	467	-	228	466	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	325	270	779	359	284	849	1109	-	-	1170	-	-
Stage 1	557	569	-	586	591	-	-	-	-	-	-	-
Stage 2	731	560	-	754	561	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	308	258	779	341	271	849	1109	-	-	1170	-	-
Mov Cap-2 Maneuver	308	258	-	341	271	-	-	-	-	-	-	-
Stage 1	536	564	-	564	569	-	-	-	-	-	-	-
Stage 2	695	539	-	737	557	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	16.3	0.8	0.2
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1109	-	-	555	339	1170	-	-
HCM Lane V/C Ratio	0.037	-	-	0.02	0.058	0.007	-	-
HCM Control Delay (s)	8.4	-	-	11.6	16.3	8.1	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	6	2	2	2	96	282	13	3	97	10
Future Vol, veh/h	0	2	6	2	2	2	96	282	13	3	97	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	135	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	7	2	2	2	104	307	14	3	105	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	474	640	53	582	644	161	116	0	0	321	0	0
Stage 1	111	111	-	522	522	-	-	-	-	-	-	-
Stage 2	363	529	-	60	122	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	672	496	1003	553	494	*975	1470	-	-	1429	-	-
Stage 1	882	803	-	660	630	-	-	-	-	-	-	-
Stage 2	837	625	-	944	794	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	631	460	1003	517	458	*975	1470	-	-	1429	-	-
Mov Cap-2 Maneuver	631	460	-	517	458	-	-	-	-	-	-	-
Stage 1	819	801	-	613	586	-	-	-	-	-	-	-
Stage 2	773	581	-	933	792	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	11.2	1.9	0.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1470	-	-	774	583	1429	-	-
HCM Lane V/C Ratio	0.071	-	-	0.011	0.011	0.002	-	-
HCM Control Delay (s)	7.6	-	-	9.7	11.2	7.5	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0	0	0	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	2431	31	78	1165	10	47	54	193	87	44	314
Future Volume (veh/h)	204	2431	31	78	1165	10	47	54	193	87	44	314
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	222	2642	33	85	1266	8	51	59	96	95	48	128
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	447	4087	51	146	3919	1217	42	147	125	102	140	125
Arrive On Green	0.04	0.79	0.79	0.05	1.00	1.00	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1781	5198	65	1781	5106	1585	1209	1870	1585	1232	1777	1585
Grp Volume(v), veh/h	222	1728	947	85	1266	8	51	59	96	95	48	128
Grp Sat Flow(s),veh/h/ln	1781	1702	1859	1781	1702	1585	1209	1870	1585	1232	1777	1585
Q Serve(g_s), s	4.7	37.4	37.8	1.8	0.0	0.0	0.0	5.1	10.1	8.3	4.3	13.4
Cycle Q Clear(g_c), s	4.7	37.4	37.8	1.8	0.0	0.0	13.4	5.1	10.1	13.4	4.3	13.4
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	447	2677	1462	146	3919	1217	42	147	125	102	140	125
V/C Ratio(X)	0.50	0.65	0.65	0.58	0.32	0.01	1.20	0.40	0.77	0.93	0.34	1.02
Avail Cap(c_a), veh/h	517	2677	1462	249	3919	1217	42	147	125	102	140	125
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)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.6	7.9	7.9	17.7	0.0	0.0	85.0	74.5	76.8	82.4	74.1	78.3
Incr Delay (d2), s/veh	0.3	1.2	2.2	1.2	0.2	0.0	204.5	1.3	23.8	65.4	1.1	87.2
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	1.4	11.9	13.6	2.1	0.1	0.0	4.3	2.5	5.0	6.0	2.0	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.9	9.1	10.2	18.9	0.2	0.0	289.5	75.8	100.6	147.8	75.2	165.5
LnGrp LOS	A	A	B	B	A	A	F	E	F	F	E	F
Approach Vol, veh/h		2897			1359			206			271	
Approach Delay, s/veh		9.0			1.4			140.2			143.3	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.3	136.7		20.0	10.1	139.9		20.0				
Change Period (Y+Rc), s	6.5	* 6.2		6.6	* 6.2	* 6.2		6.6				
Max Green Setting (Gmax), s	13.5	* 1.2E2		13.4	* 14	* 1.2E2		13.4				
Max Q Clear Time (g_c+I1), s	6.7	2.0		15.4	3.8	39.8		15.4				
Green Ext Time (p_c), s	0.2	41.8		0.0	0.1	80.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		20.2
HCM 6th LOS		C

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1467	1272	210	762	6	503	87	171	47	168	8
Future Volume (veh/h)	36	1467	1272	210	762	6	503	87	171	47	168	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1595	1046	228	828	4	547	95	36	51	183	6
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	437	1986	886	248	3161	981	463	317	269	66	238	8
Arrive On Green	0.04	1.00	1.00	0.08	0.62	0.62	0.13	0.17	0.17	0.04	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	5106	1585	3456	1870	1585	1781	3512	115
Grp Volume(v), veh/h	39	1595	1046	228	828	4	547	95	36	51	92	97
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1585	1728	1870	1585	1781	1777	1850
Q Serve(g_s), s	1.6	0.0	0.0	11.4	12.5	0.1	22.8	7.6	3.3	4.8	8.7	8.7
Cycle Q Clear(g_c), s	1.6	0.0	0.0	11.4	12.5	0.1	22.8	7.6	3.3	4.8	8.7	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	437	1986	886	248	3161	981	463	317	269	66	120	125
V/C Ratio(X)	0.09	0.80	1.18	0.92	0.26	0.00	1.18	0.30	0.13	0.78	0.77	0.77
Avail Cap(c_a), veh/h	525	1986	886	354	3161	981	463	317	269	247	291	302
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)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	0.0	33.6	14.7	2.4	73.6	61.7	60.0	81.2	77.9	78.0
Incr Delay (d2), s/veh	0.0	2.3	88.9	18.6	0.2	0.0	101.4	0.4	0.2	13.5	7.4	7.3
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	0.6	0.6	21.9	10.3	4.8	0.1	16.5	3.6	1.3	2.5	4.3	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	2.3	88.9	52.3	14.9	2.4	175.0	62.1	60.1	94.7	85.3	85.3
LnGrp LOS	B	A	F	D	B	A	F	E	E	F	F	F
Approach Vol, veh/h		2680			1060			678			240	
Approach Delay, s/veh		36.3			22.9			153.1			87.3	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	111.6	30.0	18.7	19.9	101.4	12.7	36.0
Change Period (Y+Rc), s	* 6.3	* 6.4	7.2	7.2	* 6.3	* 6.4	6.4	7.2
Max Green Setting (Gmax), s	* 12	* 81	22.8	27.8	* 24	* 69	23.6	27.8
Max Q Clear Time (g_c+I1), s	3.6	14.5	24.8	10.7	13.4	2.0	6.8	9.6
Green Ext Time (p_c), s	0.0	18.2	0.0	0.8	0.2	63.5	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	52.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	4	4	5	0	92	0	215	8	193	390	4
Future Volume (veh/h)	11	4	4	5	0	92	0	215	8	193	390	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	4	0	5	0	1	0	234	6	210	424	2
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	27	9	0	34	0	15	444	998	26	638	1895	845
Arrive On Green	0.02	0.02	0.00	0.01	0.00	0.01	0.00	0.28	0.28	0.12	0.53	0.53
Sat Flow, veh/h	1352	451	0	3563	0	1585	1781	3540	91	1781	3554	1585
Grp Volume(v), veh/h	16	0	0	5	0	1	0	117	123	210	424	2
Grp Sat Flow(s),veh/h/ln	1803	0	0	1781	0	1585	1781	1777	1854	1781	1777	1585
Q Serve(g_s), s	0.4	0.0	0.0	0.1	0.0	0.0	0.0	2.2	2.2	3.2	2.7	0.0
Cycle Q Clear(g_c), s	0.4	0.0	0.0	0.1	0.0	0.0	0.0	2.2	2.2	3.2	2.7	0.0
Prop In Lane	0.75		0.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	36	0	0	34	0	15	444	501	523	638	1895	845
V/C Ratio(X)	0.44	0.00	0.00	0.15	0.00	0.07	0.00	0.23	0.24	0.33	0.22	0.00
Avail Cap(c_a), veh/h	576	0	0	1155	0	514	1034	2254	2351	1026	4507	2010
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	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	0.0	20.9	0.0	20.9	0.0	11.8	11.8	7.7	5.3	4.6
Incr Delay (d2), s/veh	8.1	0.0	0.0	1.9	0.0	1.8	0.0	0.9	0.8	0.1	0.2	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	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	0.0	22.8	0.0	22.7	0.0	12.6	12.6	7.8	5.5	4.6
LnGrp LOS	C	A	A	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		16			6			240			636	
Approach Delay, s/veh		28.7			22.8			12.6			6.3	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	28.7		6.6	10.7	18.0		7.3
Change Period (Y+Rc), s	5.8	* 6		* 6.2	5.8	* 6		6.4
Max Green Setting (Gmax), s	4.2	* 54		* 14	14.2	* 54		13.6
Max Q Clear Time (g_c+I1), s	10.0	4.7		2.1	5.2	4.2		2.4
Green Ext Time (p_c), s	0.0	7.7		0.0	0.2	3.7		0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.5
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	4	21	41	0	18	7	200	2	1	409	1
Future Vol, veh/h	7	4	21	41	0	18	7	200	2	1	409	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	120	95	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	4	23	45	0	20	8	217	2	1	445	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	573	683	223	460	681	109	446	0	0	219	0	0
Stage 1	448	448	-	233	233	-	-	-	-	-	-	-
Stage 2	125	235	-	227	448	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	402	370	780	485	371	924	1111	-	-	1348	-	-
Stage 1	560	571	-	749	711	-	-	-	-	-	-	-
Stage 2	866	709	-	755	571	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	391	367	780	464	368	924	1111	-	-	1348	-	-
Mov Cap-2 Maneuver	391	367	-	464	368	-	-	-	-	-	-	-
Stage 1	556	570	-	744	706	-	-	-	-	-	-	-
Stage 2	842	704	-	727	570	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	12.5	0.3	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1111	-	-	574	547	1348	-	-
HCM Lane V/C Ratio	0.007	-	-	0.061	0.117	0.001	-	-
HCM Control Delay (s)	8.3	-	-	11.7	12.5	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	70	7	0	6	6	93	6	2	202	2
Future Vol, veh/h	2	2	70	7	0	6	6	93	6	2	202	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	135	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	76	8	0	7	7	101	7	2	220	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	289	346	110	234	345	54	222	0	0	108	0	0
Stage 1	224	224	-	119	119	-	-	-	-	-	-	-
Stage 2	65	122	-	115	226	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*695	610	922	762	611	*1058	1344	-	-	1533	-	-
Stage 1	*758	717	-	935	833	-	-	-	-	-	-	-
Stage 2	*997	830	-	877	716	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*688	607	922	693	608	*1058	1344	-	-	1533	-	-
Mov Cap-2 Maneuver	*688	607	-	693	608	-	-	-	-	-	-	-
Stage 1	*754	716	-	930	829	-	-	-	-	-	-	-
Stage 2	*986	826	-	801	715	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	9.4	0.4	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1344	-	-	901	824	1533	-	-
HCM Lane V/C Ratio	0.005	-	-	0.089	0.017	0.001	-	-
HCM Control Delay (s)	7.7	-	-	9.4	9.4	7.4	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	569	43	240	3021	41	28	56	71	46	39	315
Future Volume (veh/h)	207	569	43	240	3021	41	28	56	71	46	39	315
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	225	618	42	261	3284	22	30	61	13	50	42	233
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	218	3270	221	641	3243	1007	186	276	234	202	276	387
Arrive On Green	0.10	0.67	0.67	0.06	0.64	0.64	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	4885	330	1781	5106	1585	1104	1870	1585	1326	1870	1585
Grp Volume(v), veh/h	225	429	231	261	3284	22	30	61	13	50	42	233
Grp Sat Flow(s),veh/h/ln	1781	1702	1811	1781	1702	1585	1104	1870	1585	1326	1870	1585
Q Serve(g_s), s	15.5	7.6	7.7	8.3	101.6	0.8	3.9	4.6	1.1	5.5	3.1	20.8
Cycle Q Clear(g_c), s	15.5	7.6	7.7	8.3	101.6	0.8	7.0	4.6	1.1	10.1	3.1	20.8
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	2279	1212	641	3243	1007	186	276	234	202	276	387
V/C Ratio(X)	1.03	0.19	0.19	0.41	1.01	0.02	0.16	0.22	0.06	0.25	0.15	0.60
Avail Cap(c_a), veh/h	218	2279	1212	657	3243	1007	288	449	380	325	449	534
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	0.44	0.44	0.44	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.0	10.0	10.0	8.5	29.2	10.8	62.6	60.1	58.6	64.6	59.5	53.6
Incr Delay (d2), s/veh	70.2	0.2	0.3	0.1	13.8	0.0	0.3	0.3	0.1	0.5	0.2	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	13.0	2.8	3.1	3.0	41.6	0.3	1.1	2.2	0.5	1.9	1.5	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	132.2	10.2	10.4	8.5	42.9	10.8	62.9	60.4	58.7	65.1	59.7	54.7
LnGrp LOS	F	B	B	A	F	B	E	E	E	E	E	D
Approach Vol, veh/h		885			3567			104			325	
Approach Delay, s/veh		41.3			40.2			60.9			56.9	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.0	107.8		30.2	16.5	113.3		30.2				
Change Period (Y+Rc), s	6.5	* 6.2		6.6	* 6.2	* 6.2		6.6				
Max Green Setting (Gmax), s	15.5	* 87		38.4	* 12	* 91		38.4				
Max Q Clear Time (g_c+I1), s	17.5	103.6		22.8	10.3	9.7		9.0				
Green Ext Time (p_c), s	0.0	0.0		0.7	0.1	13.0		0.4				

Intersection Summary	
HCM 6th Ctrl Delay	42.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	362	244	199	1890	114	1069	275	183	13	89	5
Future Volume (veh/h)	21	362	244	199	1890	114	1069	275	183	13	89	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	23	393	89	216	2054	51	1162	299	56	14	97	2
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	113	1652	737	514	2673	830	1253	532	451	21	148	3
Arrive On Green	0.01	0.15	0.15	0.07	0.52	0.52	0.25	0.28	0.28	0.01	0.04	0.04
Sat Flow, veh/h	1781	3554	1585	1781	5106	1585	5023	1870	1585	1781	3561	73
Grp Volume(v), veh/h	23	393	89	216	2054	51	1162	299	56	14	48	51
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1585	1674	1870	1585	1781	1777	1857
Q Serve(g_s), s	1.1	15.5	7.7	9.9	51.3	2.5	36.1	21.8	4.2	1.3	4.3	4.3
Cycle Q Clear(g_c), s	1.1	15.5	7.7	9.9	51.3	2.5	36.1	21.8	4.2	1.3	4.3	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	113	1652	737	514	2673	830	1253	532	451	21	74	77
V/C Ratio(X)	0.20	0.24	0.12	0.42	0.77	0.06	0.93	0.56	0.12	0.68	0.65	0.66
Avail Cap(c_a), veh/h	237	1652	737	533	2673	830	1344	652	553	151	287	299
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)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	42.8	39.5	19.5	30.4	18.8	58.6	48.8	42.5	78.8	75.5	75.5
Incr Delay (d2), s/veh	0.3	0.3	0.3	0.2	2.2	0.1	10.7	0.7	0.1	25.2	7.0	6.8
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	0.5	7.5	3.2	4.0	20.7	1.0	16.2	10.1	1.6	0.7	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	43.2	39.8	19.7	32.6	18.9	69.3	49.4	42.5	103.9	82.5	82.4
LnGrp LOS	C	D	D	B	C	B	E	D	D	F	F	F
Approach Vol, veh/h		505			2321			1517			113	
Approach Delay, s/veh		41.9			31.1			64.4			85.1	
Approach LOS		D			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	90.2	47.1	13.9	18.2	80.8	8.3	52.7
Change Period (Y+Rc), s	* 6.3	* 6.4	7.2	7.2	* 6.3	* 6.4	6.4	7.2
Max Green Setting (Gmax), s	* 14	* 51	42.8	25.8	* 14	* 51	13.6	55.8
Max Q Clear Time (g_c+I1), s	3.1	53.3	38.1	6.3	11.9	17.5	3.3	23.8
Green Ext Time (p_c), s	0.0	0.0	1.8	0.4	0.1	7.3	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	45.0
HCM 6th LOS	D

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	2431	31	78	1165	10	47	54	193	87	44	314
Future Volume (veh/h)	204	2431	31	78	1165	10	47	54	193	87	44	314
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	222	2642	33	85	1266	8	51	59	96	95	48	128
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	447	4087	51	146	3919	1217	108	147	125	102	147	189
Arrive On Green	0.04	0.79	0.79	0.05	1.00	1.00	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1781	5198	65	1781	5106	1585	1209	1870	1585	1232	1870	1585
Grp Volume(v), veh/h	222	1728	947	85	1266	8	51	59	96	95	48	128
Grp Sat Flow(s),veh/h/ln	1781	1702	1859	1781	1702	1585	1209	1870	1585	1232	1870	1585
Q Serve(g_s), s	4.7	37.4	37.8	1.8	0.0	0.0	7.1	5.1	10.1	8.3	4.1	13.2
Cycle Q Clear(g_c), s	4.7	37.4	37.8	1.8	0.0	0.0	11.2	5.1	10.1	13.4	4.1	13.2
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	447	2677	1462	146	3919	1217	108	147	125	102	147	189
V/C Ratio(X)	0.50	0.65	0.65	0.58	0.32	0.01	0.47	0.40	0.77	0.93	0.33	0.68
Avail Cap(c_a), veh/h	517	2677	1462	249	3919	1217	108	147	125	102	147	189
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)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.6	7.9	7.9	17.7	0.0	0.0	79.3	74.5	76.8	82.4	74.0	71.8
Incr Delay (d2), s/veh	0.3	1.2	2.2	1.2	0.2	0.0	2.3	1.3	23.8	65.4	0.9	8.8
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	1.4	11.9	13.6	2.1	0.1	0.0	2.3	2.5	5.0	6.0	2.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.9	9.1	10.2	18.9	0.2	0.0	81.7	75.8	100.6	147.8	75.0	80.5
LnGrp LOS	A	A	B	B	A	A	F	E	F	F	E	F
Approach Vol, veh/h		2897			1359			206			271	
Approach Delay, s/veh		9.0			1.4			88.8			103.1	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.3	136.7		20.0	10.1	139.9		20.0				
Change Period (Y+Rc), s	6.5	* 6.2		6.6	* 6.2	* 6.2		6.6				
Max Green Setting (Gmax), s	13.5	* 1.2E2		13.4	* 14	* 1.2E2		13.4				
Max Q Clear Time (g_c+I1), s	6.7	2.0		15.4	3.8	39.8		13.2				
Green Ext Time (p_c), s	0.2	41.8		0.0	0.1	80.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		15.7	
HCM 6th LOS		B	

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1467	1272	210	762	6	503	87	171	47	168	8
Future Volume (veh/h)	36	1467	1272	210	762	6	503	87	171	47	168	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1595	1046	228	828	4	547	95	36	51	183	6
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	447	2033	907	248	3223	1001	612	294	250	66	238	8
Arrive On Green	0.04	1.00	1.00	0.08	0.63	0.63	0.12	0.16	0.16	0.04	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	5106	1585	5023	1870	1585	1781	3512	115
Grp Volume(v), veh/h	39	1595	1046	228	828	4	547	95	36	51	92	97
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1585	1674	1870	1585	1781	1777	1850
Q Serve(g_s), s	1.6	0.0	97.2	11.2	12.1	0.1	18.2	7.7	3.3	4.8	8.7	8.7
Cycle Q Clear(g_c), s	1.6	0.0	97.2	11.2	12.1	0.1	18.2	7.7	3.3	4.8	8.7	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	447	2033	907	248	3223	1001	612	294	250	66	120	125
V/C Ratio(X)	0.09	0.78	1.15	0.92	0.26	0.00	0.89	0.32	0.14	0.78	0.77	0.77
Avail Cap(c_a), veh/h	534	2033	907	356	3223	1001	674	306	259	247	291	302
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)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	0.0	0.0	33.7	13.8	2.4	73.5	63.6	61.7	81.2	77.9	78.0
Incr Delay (d2), s/veh	0.0	2.0	77.5	18.4	0.2	0.0	13.2	0.5	0.2	13.5	7.4	7.3
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	0.6	0.6	19.5	10.3	4.6	0.1	8.5	3.7	1.3	2.5	4.3	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	2.0	77.5	52.1	14.0	2.4	86.8	64.0	61.9	94.7	85.3	85.3
LnGrp LOS	B	A	F	D	B	A	F	E	E	F	F	F
Approach Vol, veh/h		2680			1060			678			240	
Approach Delay, s/veh		31.6			22.1			82.3			87.3	
Approach LOS		C			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	113.7	27.9	18.7	19.7	103.6	12.7	34.0
Change Period (Y+Rc), s	* 6.3	* 6.4	7.2	7.2	* 6.3	* 6.4	6.4	7.2
Max Green Setting (Gmax), s	* 12	* 81	22.8	27.8	* 24	* 69	23.6	27.8
Max Q Clear Time (g_c+I1), s	3.6	14.1	20.2	10.7	13.2	99.2	6.8	9.7
Green Ext Time (p_c), s	0.0	18.2	0.5	0.8	0.2	0.0	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	39.7
HCM 6th LOS	D

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	572	43	240	3030	44	28	58	71	55	43	341
Future Volume (veh/h)	216	572	43	240	3030	44	28	58	71	55	43	341
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	235	622	42	261	3293	24	30	63	13	60	47	262
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	218	2980	200	599	2976	924	89	373	316	272	355	316
Arrive On Green	0.10	0.61	0.61	0.07	0.58	0.58	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1781	4888	328	1781	5106	1585	1070	1870	1585	1323	1777	1585
Grp Volume(v), veh/h	235	432	232	261	3293	24	30	63	13	60	47	262
Grp Sat Flow(s),veh/h/ln	1781	1702	1811	1781	1702	1585	1070	1870	1585	1323	1777	1585
Q Serve(g_s), s	15.5	9.1	9.2	9.5	93.3	1.0	4.4	4.5	1.1	6.3	3.5	25.4
Cycle Q Clear(g_c), s	15.5	9.1	9.2	9.5	93.3	1.0	29.8	4.5	1.1	10.8	3.5	25.4
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	2076	1105	599	2976	924	89	373	316	272	355	316
V/C Ratio(X)	1.08	0.21	0.21	0.44	1.11	0.03	0.34	0.17	0.04	0.22	0.13	0.83
Avail Cap(c_a), veh/h	218	2076	1105	603	2976	924	132	449	380	326	426	380
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.13	0.13	0.13	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.0	14.0	14.0	11.3	33.4	14.1	75.7	53.0	51.7	57.5	52.6	61.4
Incr Delay (d2), s/veh	84.0	0.2	0.4	0.0	48.7	0.0	1.6	0.2	0.0	0.3	0.1	11.4
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	13.9	3.5	3.8	3.6	49.1	0.4	1.3	2.1	0.4	2.1	1.6	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	144.0	14.2	14.4	11.3	82.1	14.1	77.3	53.2	51.7	57.8	52.8	72.8
LnGrp LOS	F	B	B	B	F	B	E	D	D	E	D	E
Approach Vol, veh/h		899			3578			106			369	
Approach Delay, s/veh		48.2			76.4			59.8			67.8	
Approach LOS		D			E			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.0	99.5		38.5	17.7	103.8		38.5				
Change Period (Y+Rc), s	6.5	* 6.2		6.6	* 6.2	* 6.2		6.6				
Max Green Setting (Gmax), s	15.5	* 87		38.4	* 12	* 91		38.4				
Max Q Clear Time (g_c+I1), s	17.5	95.3		27.4	11.5	11.2		31.8				
Green Ext Time (p_c), s	0.0	0.0		1.2	0.0	13.1		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	70.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	366	248	199	1892	122	1071	280	183	35	102	14
Future Volume (veh/h)	24	366	248	199	1892	122	1071	280	183	35	102	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	26	398	93	216	2057	56	1164	304	48	38	111	7
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	106	1555	694	490	2544	790	924	547	464	49	162	10
Arrive On Green	0.01	0.14	0.14	0.08	0.50	0.50	0.27	0.29	0.29	0.03	0.05	0.05
Sat Flow, veh/h	1781	3554	1585	1781	5106	1585	3456	1870	1585	1781	3397	212
Grp Volume(v), veh/h	26	398	93	216	2057	56	1164	304	48	38	58	60
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1585	1728	1870	1585	1781	1777	1832
Q Serve(g_s), s	1.3	15.9	8.2	10.4	54.2	2.9	42.8	22.0	3.5	3.4	5.1	5.2
Cycle Q Clear(g_c), s	1.3	15.9	8.2	10.4	54.2	2.9	42.8	22.0	3.5	3.4	5.1	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	106	1555	694	490	2544	790	924	547	464	49	85	87
V/C Ratio(X)	0.24	0.26	0.13	0.44	0.81	0.07	1.26	0.56	0.10	0.77	0.68	0.69
Avail Cap(c_a), veh/h	228	1555	694	504	2544	790	924	652	553	151	287	295
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)	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	45.3	42.0	21.6	33.7	20.9	58.6	47.8	41.3	77.3	75.0	75.0
Incr Delay (d2), s/veh	0.4	0.4	0.4	0.2	2.9	0.2	125.4	0.7	0.1	17.2	6.9	7.0
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	0.6	7.7	3.4	4.3	22.2	1.1	34.4	10.2	1.4	1.8	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	45.7	42.4	21.8	36.6	21.0	184.0	48.5	41.4	94.5	81.9	82.1
LnGrp LOS	C	D	D	C	D	C	F	D	D	F	F	F
Approach Vol, veh/h		517			2329			1516			156	
Approach Delay, s/veh		44.4			34.9			152.3			85.0	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	86.1	50.0	14.8	18.8	76.4	10.8	54.0
Change Period (Y+Rc), s	* 6.3	* 6.4	7.2	7.2	* 6.3	* 6.4	6.4	7.2
Max Green Setting (Gmax), s	* 14	* 51	42.8	25.8	* 14	* 51	13.6	55.8
Max Q Clear Time (g_c+I1), s	3.3	56.2	44.8	7.2	12.4	17.9	5.4	24.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	7.4	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	77.1
HCM 6th LOS	E

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	2	5	2	19	252	3	315	2	110	379	10
Future Volume (veh/h)	5	2	5	2	19	252	3	315	2	110	379	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	5	2	0	2	21	15	3	342	1	120	412	4
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	14	6	0	91	96	81	439	1037	3	519	1260	562
Arrive On Green	0.01	0.01	0.00	0.05	0.05	0.05	0.00	0.29	0.29	0.07	0.35	0.35
Sat Flow, veh/h	1290	516	0	1781	1870	1585	1781	3635	11	1781	3554	1585
Grp Volume(v), veh/h	7	0	0	2	21	15	3	167	176	120	412	4
Grp Sat Flow(s),veh/h/ln	1806	0	0	1781	1870	1585	1781	1777	1868	1781	1777	1585
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.5	0.4	0.1	3.1	3.1	2.0	3.6	0.1
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.0	0.5	0.4	0.1	3.1	3.1	2.0	3.6	0.1
Prop In Lane	0.71		0.00	1.00		1.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	20	0	0	91	96	81	439	507	533	519	1260	562
V/C Ratio(X)	0.35	0.00	0.00	0.02	0.22	0.19	0.01	0.33	0.33	0.23	0.33	0.01
Avail Cap(c_a), veh/h	584	0	0	584	613	520	1034	2281	2398	991	4561	2034
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	0.0	19.0	19.2	19.1	10.7	11.9	11.9	9.4	9.9	8.8
Incr Delay (d2), s/veh	9.8	0.0	0.0	0.1	1.1	1.1	0.0	1.4	1.3	0.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.2	0.1	0.0	1.1	1.2	0.5	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	0.0	0.0	19.1	20.3	20.2	10.7	13.2	13.2	9.5	10.5	8.8
LnGrp LOS	C	A	A	B	C	C	B	B	B	A	B	A
Approach Vol, veh/h		7			38			346			536	
Approach Delay, s/veh		30.5			20.2			13.2			10.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	20.9		8.4	8.8	18.0		6.9
Change Period (Y+Rc), s	5.8	* 6		* 6.2	5.8	* 6		6.4
Max Green Setting (Gmax), s	4.2	* 54		* 14	14.2	* 54		13.6
Max Q Clear Time (g_c+I1), s	2.1	5.6		2.5	4.0	5.1		2.2
Green Ext Time (p_c), s	0.0	7.4		0.1	0.1	5.5		0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	8	50	5	6	38	305	63	10	385	28
Future Vol, veh/h	0	2	8	50	5	6	38	305	63	10	385	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	120	95	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	9	54	5	7	41	332	68	11	418	30

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	706	937	224	646	884	166	448	0	0	400	0	0
Stage 1	455	455	-	414	414	-	-	-	-	-	-	-
Stage 2	251	482	-	232	470	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	323	263	779	357	283	849	1109	-	-	1155	-	-
Stage 1	554	567	-	586	591	-	-	-	-	-	-	-
Stage 2	731	552	-	750	558	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	305	251	779	338	270	849	1109	-	-	1155	-	-
Mov Cap-2 Maneuver	305	251	-	338	270	-	-	-	-	-	-	-
Stage 1	534	561	-	564	569	-	-	-	-	-	-	-
Stage 2	692	532	-	732	552	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	17.6	0.8	0.2
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1109	-	-	548	352	1155	-	-
HCM Lane V/C Ratio	0.037	-	-	0.02	0.188	0.009	-	-
HCM Control Delay (s)	8.4	-	-	11.7	17.6	8.1	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.7	0	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	50	2	2	2	111	282	13	3	97	10
Future Vol, veh/h	0	2	50	2	2	2	111	282	13	3	97	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	135	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	54	2	2	2	121	307	14	3	105	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	508	674	53	616	678	161	116	0	0	321	0	0
Stage 1	111	111	-	556	556	-	-	-	-	-	-	-
Stage 2	397	563	-	60	122	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	632	473	1003	520	470	*975	1470	-	-	1429	-	-
Stage 1	882	803	-	628	606	-	-	-	-	-	-	-
Stage 2	796	602	-	944	794	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	588	433	1003	458	431	*975	1470	-	-	1429	-	-
Mov Cap-2 Maneuver	588	433	-	458	431	-	-	-	-	-	-	-
Stage 1	810	801	-	576	556	-	-	-	-	-	-	-
Stage 2	726	552	-	889	792	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	11.7	2.1	0.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1470	-	-	955	543	1429	-	-
HCM Lane V/C Ratio	0.082	-	-	0.059	0.012	0.002	-	-
HCM Control Delay (s)	7.7	-	-	9	11.7	7.5	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	0	0	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	2440	31	78	1171	19	47	59	193	93	47	331
Future Volume (veh/h)	231	2440	31	78	1171	19	47	59	193	93	47	331
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	251	2652	33	85	1273	16	51	64	96	101	51	147
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	448	4087	51	145	3897	1210	42	147	125	99	140	125
Arrive On Green	0.04	0.79	0.79	0.05	1.00	1.00	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1781	5198	64	1781	5106	1585	1185	1870	1585	1226	1777	1585
Grp Volume(v), veh/h	251	1734	951	85	1273	16	51	64	96	101	51	147
Grp Sat Flow(s),veh/h/ln	1781	1702	1859	1781	1702	1585	1185	1870	1585	1226	1777	1585
Q Serve(g_s), s	5.4	37.7	38.1	1.9	0.0	0.0	0.0	5.5	10.1	7.9	4.6	13.4
Cycle Q Clear(g_c), s	5.4	37.7	38.1	1.9	0.0	0.0	13.4	5.5	10.1	13.4	4.6	13.4
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	448	2677	1462	145	3897	1210	42	147	125	99	140	125
V/C Ratio(X)	0.56	0.65	0.65	0.59	0.33	0.01	1.20	0.43	0.77	1.02	0.36	1.18
Avail Cap(c_a), veh/h	511	2677	1462	248	3897	1210	42	147	125	99	140	125
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)	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.7	7.9	7.9	17.8	0.0	0.0	85.0	74.7	76.8	82.8	74.3	78.3
Incr Delay (d2), s/veh	0.4	1.2	2.3	1.2	0.2	0.0	204.5	1.5	23.8	96.1	1.2	135.7
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	1.7	12.0	13.7	2.1	0.1	0.0	4.3	2.8	5.0	7.0	2.2	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.1	9.1	10.2	19.0	0.2	0.0	289.5	76.2	100.6	178.8	75.4	214.0
LnGrp LOS	A	A	B	B	A	A	F	E	F	F	E	F
Approach Vol, veh/h		2936			1374			211			299	
Approach Delay, s/veh		9.1			1.4			138.8			178.5	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	136.0		20.0	10.1	139.9		20.0				
Change Period (Y+Rc), s	6.5	* 6.2		6.6	* 6.2	* 6.2		6.6				
Max Green Setting (Gmax), s	13.5	* 1.2E2		13.4	* 14	* 1.2E2		13.4				
Max Q Clear Time (g_c+I1), s	7.4	2.0		15.4	3.9	40.1		15.4				
Green Ext Time (p_c), s	0.2	42.6		0.0	0.1	80.6		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		23.0
HCM 6th LOS		C

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1470	1275	210	767	29	508	101	171	61	177	14
Future Volume (veh/h)	45	1470	1275	210	767	29	508	101	171	61	177	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	49	1598	1058	228	834	15	552	110	32	66	192	12
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	429	1966	877	248	3127	971	463	308	261	83	246	15
Arrive On Green	0.04	1.00	1.00	0.08	0.61	0.61	0.13	0.16	0.16	0.05	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	5106	1585	3456	1870	1585	1781	3398	211
Grp Volume(v), veh/h	49	1598	1058	228	834	15	552	110	32	66	100	104
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1585	1728	1870	1585	1781	1777	1832
Q Serve(g_s), s	2.1	0.0	94.1	11.5	12.9	0.3	22.8	8.9	2.9	6.2	9.4	9.5
Cycle Q Clear(g_c), s	2.1	0.0	94.1	11.5	12.9	0.3	22.8	8.9	2.9	6.2	9.4	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	429	1966	877	248	3127	971	463	308	261	83	129	133
V/C Ratio(X)	0.11	0.81	1.21	0.92	0.27	0.02	1.19	0.36	0.12	0.79	0.77	0.78
Avail Cap(c_a), veh/h	513	1966	877	353	3127	971	463	308	261	247	291	300
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)	0.62	0.62	0.62	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	0.0	0.0	34.1	15.3	2.6	73.6	63.0	60.5	80.2	77.5	77.5
Incr Delay (d2), s/veh	0.0	2.4	99.8	18.8	0.2	0.0	105.7	0.5	0.2	11.8	7.2	7.3
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	0.8	0.7	24.3	10.3	4.9	0.2	16.8	4.2	1.2	3.2	4.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	2.4	99.8	52.9	15.5	2.6	179.3	63.6	60.7	92.0	84.7	84.9
LnGrp LOS	B	A	F	D	B	A	F	E	E	F	F	F
Approach Vol, veh/h		2705			1077			694			270	
Approach Delay, s/veh		40.7			23.2			155.4			86.5	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	110.5	30.0	19.5	20.0	100.5	14.3	35.2
Change Period (Y+Rc), s	* 6.3	* 6.4	7.2	7.2	* 6.3	* 6.4	6.4	7.2
Max Green Setting (Gmax), s	* 12	* 81	22.8	27.8	* 24	* 69	23.6	27.8
Max Q Clear Time (g_c+I1), s	4.1	14.9	24.8	11.5	13.5	96.1	8.2	10.9
Green Ext Time (p_c), s	0.0	18.6	0.0	0.8	0.2	0.0	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	56.1
HCM 6th LOS	E

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	4	4	5	0	92	0	218	8	193	395	4
Future Volume (veh/h)	11	4	4	5	0	92	0	218	8	193	395	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	4	0	5	0	1	0	237	6	210	429	2
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	27	9	0	34	0	15	443	998	25	636	1895	845
Arrive On Green	0.02	0.02	0.00	0.01	0.00	0.01	0.00	0.28	0.28	0.12	0.53	0.53
Sat Flow, veh/h	1352	451	0	3563	0	1585	1781	3542	89	1781	3554	1585
Grp Volume(v), veh/h	16	0	0	5	0	1	0	119	124	210	429	2
Grp Sat Flow(s),veh/h/ln	1803	0	0	1781	0	1585	1781	1777	1854	1781	1777	1585
Q Serve(g_s), s	0.4	0.0	0.0	0.1	0.0	0.0	0.0	2.2	2.2	3.2	2.7	0.0
Cycle Q Clear(g_c), s	0.4	0.0	0.0	0.1	0.0	0.0	0.0	2.2	2.2	3.2	2.7	0.0
Prop In Lane	0.75		0.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	36	0	0	34	0	15	443	501	523	636	1895	845
V/C Ratio(X)	0.44	0.00	0.00	0.15	0.00	0.07	0.00	0.24	0.24	0.33	0.23	0.00
Avail Cap(c_a), veh/h	576	0	0	1155	0	514	1033	2254	2352	1025	4507	2010
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	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	0.0	20.9	0.0	20.9	0.0	11.8	11.8	7.7	5.3	4.6
Incr Delay (d2), s/veh	8.1	0.0	0.0	1.9	0.0	1.8	0.0	0.9	0.8	0.1	0.2	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	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	0.0	22.8	0.0	22.7	0.0	12.6	12.6	7.8	5.5	4.6
LnGrp LOS	C	A	A	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		16			6			243			641	
Approach Delay, s/veh		28.7			22.8			12.6			6.3	
Approach LOS		C			C			B			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	28.7		6.6	10.7	18.0		7.3
Change Period (Y+Rc), s	5.8	* 6		* 6.2	5.8	* 6		6.4
Max Green Setting (Gmax), s	14.2	* 54		* 14	14.2	* 54		13.6
Max Q Clear Time (g_c+I1), s	10.0	4.7		2.1	5.2	4.2		2.4
Green Ext Time (p_c), s	0.0	7.8		0.0	0.2	3.8		0.0

Intersection Summary		
HCM 6th Ctrl Delay	8.5	
HCM 6th LOS	A	

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	4	21	67	0	21	7	200	43	6	409	1
Future Vol, veh/h	7	4	21	67	0	21	7	200	43	6	409	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	120	95	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	4	23	73	0	23	8	217	47	7	445	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	585	740	223	472	693	109	446	0	0	264	0	0
Stage 1	460	460	-	233	233	-	-	-	-	-	-	-
Stage 2	125	280	-	239	460	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	394	343	780	475	365	924	1111	-	-	1297	-	-
Stage 1	551	564	-	749	711	-	-	-	-	-	-	-
Stage 2	866	678	-	743	564	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	381	339	780	452	361	924	1111	-	-	1297	-	-
Mov Cap-2 Maneuver	381	339	-	452	361	-	-	-	-	-	-	-
Stage 1	547	561	-	744	706	-	-	-	-	-	-	-
Stage 2	839	673	-	712	561	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.9	13.6	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1111	-	-	560	515	1297	-	-
HCM Lane V/C Ratio	0.007	-	-	0.062	0.186	0.005	-	-
HCM Control Delay (s)	8.3	-	-	11.9	13.6	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.7	0	-	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	99	7	0	6	51	93	6	2	202	2
Future Vol, veh/h	2	2	99	7	0	6	51	93	6	2	202	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	135	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	108	8	0	7	55	101	7	2	220	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	385	442	110	330	441	54	222	0	0	108	0	0
Stage 1	224	224	-	215	215	-	-	-	-	-	-	-
Stage 2	161	218	-	115	226	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	593	538	922	649	538	*1058	1344	-	-	1533	-	-
Stage 1	758	717	-	819	755	-	-	-	-	-	-	-
Stage 2	883	753	-	877	716	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	570	515	922	553	515	*1058	1344	-	-	1533	-	-
Mov Cap-2 Maneuver	570	515	-	553	515	-	-	-	-	-	-	-
Stage 1	727	716	-	786	724	-	-	-	-	-	-	-
Stage 2	841	722	-	771	715	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.6	10.2	2.6	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1344	-	-	897	709	1533	-	-
HCM Lane V/C Ratio	0.041	-	-	0.125	0.02	0.001	-	-
HCM Control Delay (s)	7.8	-	-	9.6	10.2	7.4	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.1	0	-	-

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	572	43	240	3030	44	28	58	71	55	43	341
Future Volume (veh/h)	216	572	43	240	3030	44	28	58	71	55	43	341
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	235	622	42	261	3293	24	30	63	13	60	47	262
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	218	3179	213	626	3159	981	197	307	260	223	307	413
Arrive On Green	0.10	0.65	0.65	0.07	0.62	0.62	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	4888	328	1781	5106	1585	1070	1870	1585	1323	1870	1585
Grp Volume(v), veh/h	235	432	232	261	3293	24	30	63	13	60	47	262
Grp Sat Flow(s),veh/h/ln	1781	1702	1811	1781	1702	1585	1070	1870	1585	1323	1870	1585
Q Serve(g_s), s	15.5	8.1	8.2	8.6	99.0	0.9	4.0	4.7	1.1	6.6	3.4	23.4
Cycle Q Clear(g_c), s	15.5	8.1	8.2	8.6	99.0	0.9	7.4	4.7	1.1	11.2	3.4	23.4
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	2214	1178	626	3159	981	197	307	260	223	307	413
V/C Ratio(X)	1.08	0.20	0.20	0.42	1.04	0.02	0.15	0.21	0.05	0.27	0.15	0.63
Avail Cap(c_a), veh/h	218	2214	1178	639	3159	981	279	449	380	324	449	534
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	0.42	0.42	0.42	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	11.2	11.2	9.3	30.5	11.8	60.5	57.9	56.4	62.7	57.4	52.4
Incr Delay (d2), s/veh	84.0	0.2	0.4	0.1	23.9	0.0	0.3	0.2	0.1	0.5	0.2	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	13.9	3.0	3.3	3.2	44.0	0.3	1.1	2.3	0.5	2.2	1.6	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	145.3	11.4	11.6	9.4	54.4	11.8	60.8	58.1	56.4	63.2	57.5	53.6
LnGrp LOS	F	B	B	A	F	B	E	E	E	E	E	D
Approach Vol, veh/h		899			3578			106			369	
Approach Delay, s/veh		46.4			50.8			58.7			55.6	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.0	105.2		32.8	16.9	110.3		32.8				
Change Period (Y+Rc), s	6.5	* 6.2		6.6	* 6.2	* 6.2		6.6				
Max Green Setting (Gmax), s	15.5	* 87		38.4	* 12	* 91		38.4				
Max Q Clear Time (g_c+I1), s	17.5	101.0		25.4	10.6	10.2		9.4				
Green Ext Time (p_c), s	0.0	0.0		0.8	0.1	13.1		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		50.5	
HCM 6th LOS		D	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	366	248	199	1892	122	1071	280	183	35	102	14
Future Volume (veh/h)	24	366	248	199	1892	122	1071	280	183	35	102	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	26	398	93	216	2057	56	1164	304	48	38	111	7
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	112	1626	725	505	2635	818	1255	514	436	49	162	10
Arrive On Green	0.01	0.15	0.15	0.08	0.52	0.52	0.25	0.27	0.27	0.03	0.05	0.05
Sat Flow, veh/h	1781	3554	1585	1781	5106	1585	5023	1870	1585	1781	3397	212
Grp Volume(v), veh/h	26	398	93	216	2057	56	1164	304	48	38	58	60
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1585	1674	1870	1585	1781	1777	1832
Q Serve(g_s), s	1.2	15.8	8.1	10.0	52.2	2.8	36.2	22.5	3.6	3.4	5.1	5.2
Cycle Q Clear(g_c), s	1.2	15.8	8.1	10.0	52.2	2.8	36.2	22.5	3.6	3.4	5.1	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	112	1626	725	505	2635	818	1255	514	436	49	85	87
V/C Ratio(X)	0.23	0.24	0.13	0.43	0.78	0.07	0.93	0.59	0.11	0.77	0.68	0.69
Avail Cap(c_a), veh/h	234	1626	725	523	2635	818	1344	652	553	151	287	295
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)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	43.5	40.3	20.1	31.4	19.4	58.6	50.2	43.4	77.3	75.0	75.0
Incr Delay (d2), s/veh	0.4	0.4	0.4	0.2	2.4	0.2	10.7	0.8	0.1	17.2	6.9	7.0
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	0.5	7.6	3.4	4.1	21.2	1.1	16.3	10.5	1.4	1.8	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	43.9	40.6	20.3	33.7	19.6	69.4	51.0	43.5	94.5	81.9	82.1
LnGrp LOS	C	D	D	C	C	B	E	D	D	F	F	F
Approach Vol, veh/h		517			2329			1516			156	
Approach Delay, s/veh		42.6			32.2			64.9			85.0	
Approach LOS		D			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	89.0	47.2	14.8	18.4	79.6	10.8	51.2
Change Period (Y+Rc), s	* 6.3	* 6.4	7.2	7.2	* 6.3	* 6.4	6.4	7.2
Max Green Setting (Gmax), s	* 14	* 51	42.8	25.8	* 14	* 51	13.6	55.8
Max Q Clear Time (g_c+I1), s	3.2	54.2	38.2	7.2	12.0	17.8	5.4	24.5
Green Ext Time (p_c), s	0.0	0.0	1.8	0.4	0.1	7.4	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	46.2
HCM 6th LOS	D

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	2440	31	78	1171	19	47	59	193	93	47	331
Future Volume (veh/h)	231	2440	31	78	1171	19	47	59	193	93	47	331
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	251	2652	33	85	1273	16	51	64	96	101	51	147
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	448	4087	51	145	3897	1210	105	147	125	99	147	195
Arrive On Green	0.04	0.79	0.79	0.05	1.00	1.00	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1781	5198	64	1781	5106	1585	1185	1870	1585	1226	1870	1585
Grp Volume(v), veh/h	251	1734	951	85	1273	16	51	64	96	101	51	147
Grp Sat Flow(s),veh/h/ln	1781	1702	1859	1781	1702	1585	1185	1870	1585	1226	1870	1585
Q Serve(g_s), s	5.4	37.7	38.1	1.9	0.0	0.0	7.2	5.5	10.1	7.9	4.4	13.4
Cycle Q Clear(g_c), s	5.4	37.7	38.1	1.9	0.0	0.0	11.6	5.5	10.1	13.4	4.4	13.4
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	448	2677	1462	145	3897	1210	105	147	125	99	147	195
V/C Ratio(X)	0.56	0.65	0.65	0.59	0.33	0.01	0.49	0.43	0.77	1.02	0.35	0.75
Avail Cap(c_a), veh/h	511	2677	1462	248	3897	1210	105	147	125	99	147	195
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)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.7	7.9	7.9	17.8	0.0	0.0	79.7	74.7	76.8	82.8	74.2	72.0
Incr Delay (d2), s/veh	0.4	1.2	2.3	1.2	0.2	0.0	2.6	1.5	23.8	96.1	1.0	14.5
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	1.7	12.0	13.7	2.1	0.1	0.0	2.3	2.8	5.0	7.0	2.1	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.1	9.1	10.2	19.1	0.2	0.0	82.2	76.2	100.6	178.8	75.2	86.5
LnGrp LOS	A	A	B	B	A	A	F	E	F	F	E	F
Approach Vol, veh/h		2936			1374			211			299	
Approach Delay, s/veh		9.1			1.4			88.7			115.8	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	136.0		20.0	10.1	139.9		20.0				
Change Period (Y+Rc), s	6.5	* 6.2		6.6	* 6.2	* 6.2		6.6				
Max Green Setting (Gmax), s	13.5	* 1.2E2		13.4	* 14	* 1.2E2		13.4				
Max Q Clear Time (g_c+I1), s	7.4	2.0		15.4	3.9	40.1		13.6				
Green Ext Time (p_c), s	0.2	42.6		0.0	0.1	80.6		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		17.0
HCM 6th LOS		B

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1470	1275	210	767	29	508	101	171	61	177	14
Future Volume (veh/h)	45	1470	1275	210	767	29	508	101	171	61	177	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	49	1598	1058	228	834	15	552	110	32	66	192	12
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	438	2009	896	248	3186	989	617	287	243	83	246	15
Arrive On Green	0.04	1.00	1.00	0.08	0.62	0.62	0.12	0.15	0.15	0.05	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	5106	1585	5023	1870	1585	1781	3398	211
Grp Volume(v), veh/h	49	1598	1058	228	834	15	552	110	32	66	100	104
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1585	1674	1870	1585	1781	1777	1832
Q Serve(g_s), s	2.0	0.0	0.0	11.4	12.5	0.3	18.4	9.0	3.0	6.2	9.4	9.5
Cycle Q Clear(g_c), s	2.0	0.0	0.0	11.4	12.5	0.3	18.4	9.0	3.0	6.2	9.4	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	438	2009	896	248	3186	989	617	287	243	83	129	133
V/C Ratio(X)	0.11	0.80	1.18	0.92	0.26	0.02	0.90	0.38	0.13	0.79	0.77	0.78
Avail Cap(c_a), veh/h	522	2009	896	354	3186	989	674	306	259	247	291	300
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)	0.62	0.62	0.62	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.6	0.0	0.0	34.1	14.4	2.6	73.5	64.8	62.2	80.2	77.5	77.5
Incr Delay (d2), s/veh	0.0	2.1	88.7	18.7	0.2	0.0	13.5	0.6	0.2	11.8	7.2	7.3
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	0.8	0.6	22.1	10.3	4.8	0.2	8.6	4.3	1.2	3.2	4.6	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.7	2.1	88.7	52.8	14.6	2.6	87.0	65.4	62.4	92.0	84.7	84.9
LnGrp LOS	B	A	F	D	B	A	F	E	E	F	F	F
Approach Vol, veh/h		2705			1077			694			270	
Approach Delay, s/veh		36.2			22.5			82.4			86.5	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	112.5	28.1	19.5	19.9	102.5	14.3	33.2
Change Period (Y+Rc), s	* 6.3	* 6.4	7.2	7.2	* 6.3	* 6.4	6.4	7.2
Max Green Setting (Gmax), s	* 12	* 81	22.8	27.8	* 24	* 69	23.6	27.8
Max Q Clear Time (g_c+I1), s	4.0	14.5	20.4	11.5	13.4	2.0	8.2	11.0
Green Ext Time (p_c), s	0.0	18.6	0.5	0.8	0.2	63.7	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	42.7
HCM 6th LOS	D

Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Programmed Project Fact Sheet

AR-491D

Atlanta Region's Plan RTP (2020) PROJECT FACT SHEET

Short Title	I-85 NORTH / SATELLITE BOULEVARD CORRIDOR HIGH CAPACITY PREMIUM TRANSIT SERVICE FROM MARTA DORAVILLE RAIL STATION TO SUGARLOAF MILLS
GDOT Project No.	N/A
Federal ID No.	N/A
Status	Long Range
Service Type	Transit / Bus Capital
Sponsor	Gwinnett County
Jurisdiction	Gwinnett County
Analysis Level	In the Region's Air Quality Conformity Analysis

Existing Thru Lane	N/A	**LCI**		**Network Year**	2050
Planned Thru Lane	N/A	**Flex**		**Corridor Length**	TBD miles

Detailed Description and Justification

This project will provide a high capacity premium transit service along the I-85 / Satellite Boulevard corridor in Gwinnet County between the Doraville MARTA heavy rail station and the Sugarloaf Mills area.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
ALL	New Starts		LR 2041-2050	**$309,000,000**	$108,150,000	$0,000	$0,000	$200,850,000
				$309,000,000	**$108,150,000**	**$0,000**	**$0,000**	**$200,850,000**

SCP: Scoping PE: Preliminary engineering / engineering / design / planning PE-OV: GDOT oversight services for engineering ROW: Right-of-way Acquistion
UTL: Utility relocation CST: Construction / Implementation ALL: Total estimated cost, inclusive of all phases

GWINNETT COUNTY
PLANNING AND DEVELOPMENT
RECEIVED
5.26.2022

? For additional information about this project, please call (404) 463-3100 or email transportation@atlantaregional.com.

Report Generated: 4/29/2021