Application for
Rezoning

OFFICE USE ONLY
Date Received:

November 18, 2024

Case Number: RZ 25- 0010

Complete this application in its entirety and submit pages 4 and 5 along with the required materials (including any required supplements) as listed on page 2 to the address below:

City of Hampton
Community Development Department, Planning Division
22 Lincoln Street, 5th Floor
Hampton, Virginia 23669

1. PROPERTY INFORMATION

Address or Location 1616 and 1612 N. Armistead Avenue, Hampton, VA

LRSN 7000335, 7000336, & 7000337 Current Zoning District PO-1, R-11 Proposed Zoning District MD-4

Current Land Use One single family residence and vacant land

Proposed Land Use Apartment Community

The proposed use will be in: ☐ an existing building ☐ a new addition ☒ a new building

2. PROPERTY OWNER INFORMATION (an individual or a legal entity may be listed as owner)

Owner's Name Frances C. Klovstad, et al (see attached signature sheets)

Address 4102 Chesapeake Avenue City Hampton State VA Zip 23669

Phone 757.224.2910 Email lgcumming@kaufcan.com

3. APPLICANT INFORMATION (if different from owner)

Applicant's Name Franklin Johnston Group Management & Development, LLC

Address 300 32nd Street, Suite 310 City Virginia Beach State VA Zip 23451

Phone 757.287.2888 Email ffletcher@tfigroup.com

4. APPLICANT AGENT INFORMATION (if different from applicant)

Agent's Name Timothy O. Trant II, Esq. - Kaufman & Canoles, P.C.

Address 11815 Fountain Way, Suite 400 City Newport News State VA Zip 23606

Phone 757.259.3823 Email totrant@kaufcan.com

5. CERTIFICATION FOR LEGAL ENTITY PROPERTY OWNERS

*Complete this section only if the property owner is **not** an individual but rather a legal entity such as a corporation, trust, LLC, partnership, diocese, etc. as specified in Step 2 above.*

"I hereby submit that I am legally authorized to execute this application on behalf of the fee-simple owner of this property. I have read this application and it is submitted with my full knowledge and consent. I authorize city staff and representatives to have access to this property for inspection. The information contained in this application is accurate and correct to the best of my knowledge."

Name(s), title(s), signature(s), and date(s) of authorized representative(s) of the legal entity (attach additional page if necessary):

Name of Legal Entity _____

Signed by:

Name (printed) _____, Its (title) _____

Signature _____ Date _____

Name (printed) _____, Its (title) _____

Signature _____ Date _____

Name (printed) _____, Its (title) _____

Signature _____ Date _____

6. CERTIFICATION FOR INDIVIDUAL PROPERTY OWNERS

Complete this section only if the property owner is an individual or individuals.

"I hereby submit that I am the fee-simple owner of this property. I have read this application and it is submitted with my full knowledge and consent. I authorize city staff and representatives to have access to this property for inspection. The information contained in this application is accurate and correct to the best of my knowledge."

Name(s), signature(s), and date(s) of owner(s) (attach additional page if necessary):

Name (printed) SEE ATTACHED SHEETS

Signature _____ Date _____

Name (printed) _____

Signature _____ Date _____

OFFICE USE ONLY

❑ Application Form	❑ Narrative Statement	❑ Proffer Statement
❑ Application Fee	❑ Survey Plat	❑ Additional materials (if required)

Application for Rezoning

Signature Page

1616 & 1612 N. Armistead Ave., Hampton

I am one of the fee-simple owners of this property. I have read this application and it is submitted with my full knowledge and consent. I authorize city staff and representatives to have access to this property for inspection. The information contained in this application is accurate and correct to the best of my knowledge.

Frances C Klovstad

FRANCES C. KLOVSTAD

Date: 5/28/2024

Application for Rezoning
Signature Page
1616 & 1612 N. Armistead Ave., Hampton

I am one of the fee-simple owners of this property. I have read this application and it is submitted with my full knowledge and consent. I authorize city staff and representatives to have access to this property for inspection. The information contained in this application is accurate and correct to the best of my knowledge.

William M. Cumming

WILLIAM M. CUMMING

Date: 4-30-24

Application for Rezoning

Signature Page

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MARY A. CUMMING

Date: April 14, 2023

Application for Rezoning

Signature Page

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Catherine J. Ryan

CATHERINE J. RYAN

Date: 4/10/24

Application for Rezoning

Signature Page

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Allen S. Judkins

ALLEN S. JUDKINS

Date: 5/1/24

Application for Rezoning

Signature Page

1616 & 1612 N. Armistead Ave., Hampton

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Martha H. MacLay

MARTHA H. MACLAY

Date: 01/06/2024

Application for Rezoning

Signature Page

1616 & 1612 N. Armistead Ave., Hampton

I am one of the fee-simple owners of this property. I have read this application and it is submitted with my full knowledge and consent. I authorize city staff and representatives to have access to this property for inspection. The information contained in this application is accurate and correct to the best of my knowledge.

Beverly H. Lehman

BEVERLY H. LEHMAN

Date: 07 April 2024

Application for Rezoning

Signature Page

1616 & 1612 N. Armistead Ave., Hampton

I am one of the fee-simple owners of this property. I have read this application and it is submitted with my full knowledge and consent. I authorize city staff and representatives to have access to this property for inspection. The information contained in this application is accurate and correct to the best of my knowledge.

Barbara H. Wilde

BARBARA H. WILDE

Date: 6 April 2024

Application for Rezoning

Signature Page
1616 & 1612 N. Armistead Ave., Hampton

I am one of the fee-simple owners of this property. I have read this application and it is submitted with my full knowledge and consent. I authorize city staff and representatives to have access to this property for inspection. The information contained in this application is accurate and correct to the best of my knowledge.

FREDERICK S. HARTMAN

Date: 5/24/2024

1616 & 1612 N. ARMISTEAD AVE.

ALTA/NSPS LAND TITLE SURVEY

CITY OF HAMPTON, VIRGINIA

SCHEDULE B, PART II - EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR, LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

THE POLICY WILL NOT INSURE AGAINST LOSS OR DAMAGE RESULTING FROM THE TERMS AND CONDITIONS OF ANY LEASE OR EASEMENT IDENTIFIED IN SCHEDULE A, AND WILL INCLUDE THE FOLLOWING EXCEPTIONS UNLESS CLEARED TO THE SATISFACTION OF THE COMPANY:

1. *ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I-REQUIREMENTS ARE MET. (NOT A SURVEY MATTER)*
2. *RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT SHOWN BY THE PUBLIC RECORDS. (NOT A SURVEY MATTER)*
3. *EASEMENTS, OR CLAIMS OF EASEMENTS, NOT SHOWN BY THE PUBLIC RECORDS. (NOT A SURVEY MATTER)*
4. *ENCROACHMENTS, OVERLAPS, BOUNDARY LINE DISPUTES, OR OTHER MATTERS WHICH WOULD BE DISCLOSED BY AN ACCURATE SURVEY OR INSPECTION OF THE LAND. (MATTERS, IF ANY, ARE SHOWN HEREON. NOT ALL POTENTIAL ISSUES ARE SURVEY MATTERS.)*
5. *ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR, OR MATERIAL HERETOFORE OR HEREAFTER FURNISHED, IMPOSED BY LAW AND NOT SHOWN ON THE PUBLIC RECORDS. (NOT A SURVEY MATTER)*
6. *TAXES OR SPECIAL ASSESSMENTS WHICH ARE NOT SHOWN AS EXISTING LIENS BY THE PUBLIC RECORDS. (NOT A SURVEY MATTER)*
7. *REAL ESTATE TAXES FOR THE SECOND HALF OF THE FISCAL YEAR 2023/2024, AND SUBSEQUENT YEARS, NOT YET DUE AND PAYABLE. (NOT A SURVEY MATTER)*
8. *STORM WATER ASSESSMENTS, NOT YET DUE AND PAYABLE. (NOT A SURVEY MATTER)*
9. *EASEMENT TO VIRGINIA ELECTRIC AND POWER COMPANY RECORDED IN INSTRUMENT NO. 160000618. NOTE: EASEMENT WAS SIGNED BY MAUDE S. AGNEW, ALSO KNOWN AS MAUDE S. JUDKINS AND SHE ONLY HAD A LIFE ESTATE. (AFFECTS THE PROPERTY AS SHOWN HEREON)*
10. *EASEMENT TO VIRGINIA ELECTRIC AND POWER COMPANY RECORDED IN INSTRUMENT NO. 160007350. NOTE: EASEMENT WAS SIGNED BY MAUDE S. AGNEW, ALSO KNOWN AS MAUDE S. JUDKINS AND SHE ONLY HAD A LIFE ESTATE. (AFFECTS THE PROPERTY AS SHOWN HEREON)*
11. *SUCH STATE OF FACTS AS SHOWN ON THE PLAT RECORDED WITH DEED IN DEED BOOK 378, PAGE 60. (AFFECTS THE PROPERTY AS SHOWN HEREON)*
12. *RIGHTS OF TENANTS IN POSSESSION AND/OR UNDER UNRECORDED LEASE AGREEMENTS. (NOT A SURVEY MATTER)*
13. *ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND. THE COVERAGE AFFORDED BY COVERED RISK 2(C) OF THE FINAL TITLE POLICY IS HEREBY DELETED. (MATTERS, IF ANY, ARE SHOWN HEREON. NOT ALL POTENTIAL ISSUES ARE A SURVEY MATTER.)*

EXHIBIT A - LEGAL DESCRIPTION

LRSN# 7000335 AND LRSN# 7000336:

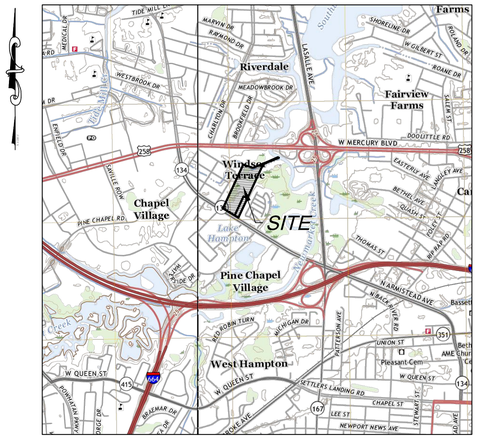
THE FOLLOWING DESCRIBED PROPERTY, TO-WIT:

ALL THAT CERTAIN TRACT OR PARCEL OF LAND, TOGETHER WITH THE BUILDINGS AND IMPROVEMENTS THEREON, SITUATE AND BEING IN THE CITY OF HAMPTON, VIRGINIA, CONTAINING 15.78 ACRES, MORE OR LESS, AND BEING CONVEYED IN GROSS AND NOT BY THE ACRE, SAID LAND BEING BOUNDED ON THE SOUTH BY ARMISTEAD AVENUE, ON THE WEST BY THE SUBDIVISION KNOWN AS WINDSOR TERRACE, ON THE NORTH BY THE PROPERTY NOW OR FORMERLY OWNED BY HORNE BROTHERS, INC. AND ON THE EAST BY THE PROPERTY OF ETTA S. ANDERSON, ET AL, AND DONALD AND MARTHA JUDKINS.

LRSN #7000337:

THE FOLLOWING DESCRIBED PROPERTY, TO-WIT:

ALL THAT CERTAIN LOT, PIECE OR PARCEL OF LAND CONTAINING 1.62 ACRES, MORE OR LESS, SITUATE, LYING AND BEING IN THE CITY OF HAMPTON, VIRGINIA, BEGINNING AT A POINT IN THE NORTHERLY LINE OF NORTH ARMISTEAD AVENUE AT AN IRON PIPE LOCATED AT THE SOUTHWEST CORNER OF THE PROPERTY OF E. P. ANDERSON, AND FROM THE POINT THUS ESTABLISHED RUNNING THENCE NORTH 51 DEGREES 45 MINUTES WEST WITH THE NORTHERLY LINE OF NORTH ARMISTEAD AVENUE A DISTANCE OF 120 FEET TO AN IRON PIPE; THENCE, NORTH 32 DEGREES 41 MINUTES 33 SECONDS EAST A DISTANCE OF 585.58 FEET TO A POINT MARKED BY A PIPE; THENCE, SOUTH 58 DEGREES 10 MINUTES 07 SECONDS EAST A DISTANCE OF 119.45 FEET TO A PIPE IN THE LINE OF E. P. ANDERSON; THENCE, SOUTH 32 DEGREES 41 MINUTES 33 SECONDS WEST WITH THE WESTERLY LINE OF ANDERSON A DISTANCE OF 599 FEET TO THE POINT OF THE BEGINNING, SAID PROPERTY BEING SHOWN ON A CERTAIN MAP ENTITLED, "PLAT SHOWING PORTION OF PROPERTY OF E. A. SINCLAIR", MADE BY S. J. GLASS & ASSOCIATES, ENGINEERING SERVICES, DATED APRIL 16, 1966, AND A COPY OF WHICH IS HERETO ATTACHED AND MADE A PART HEREOF.



VICINITY MAP

SCALE: 1" = 2,000'

SURVEYOR'S CERTIFICATE

TO FRANKLIN JOHNSTON GROUP MANAGEMENT & DEVELOPMENT, LLC, A VIRGINIA LIMITED LIABILITY COMPANY AND FIDELITY NATIONAL TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 7(A), 8, 9 AND 13 OF TABLE A THEREOF.

THE FIELDWORK WAS COMPLETED ON 03/25/2024
DATE OF PLAT OR MAP: 03/27/2024

PRESTON C. JUDSON , L.S. *REGISTRATION/LICENSE NUMBER # 003130*

SURVEY NOTES

1. *THE PLAT WAS PREPARED WITH THE BENEFIT OF TITLE REPORTS ISSUED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, AS FOLLOWS:*

   PROPERTY ADDRESS: 1616 NORTH ARMISTEAD AVENUE, HAMPTON, VA 23666
   TAX PARCEL ID NO.: 7000335
   TITLE COMMITMENT NO: 5174246-D-VA-MP-VAB
   COMMITMENT DATE: JANUARY 22, 2024 AT 8:00 AM

   PROPERTY ADDRESS: NORTH ARMISTEAD AVENUE, HAMPTON, VA 23666 (NO ADDRESS LISTED)
   TAX PARCEL ID NO.: 7000336
   TITLE COMMITMENT NO: 5174246-D-VA-MP-VAB
   COMMITMENT DATE: JANUARY 22, 2024 AT 8:00 AM

   PROPERTY ADDRESS: 6612 NORTH ARMISTEAD AVENUE, HAMPTON, VA 23666
   TAX PARCEL ID NO.: 7000337
   TITLE COMMITMENT NO: 5174246-D-VA-MP-VAB
   COMMITMENT DATE: JANUARY 22, 2024 AT 8:00 AM

2. *PROPERTY LINES SHOWN HEREON ARE BASED UPON COMPILED LAND RECORDS, A CURRENT FIELD SURVEY AND A TOPOGRAPHIC SURVEY IN MARCH OF 2024 BY TIMMONS GROUP.*
3. *THERE WAS NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR, BUILDING ADDITIONS AT THE TIME OF THE SURVEY. GEO-TECHNICAL AND/OR ENVIRONMENTAL ACTIVITIES WERE OBSERVED.*
4. *THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF PRESTON C. JUDSON L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE ORIGINAL DATA WAS OBTAINED IN MARCH OF 2024; AND THAT THIS MAP MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.*
5. *CONTOUR INTERVAL = 1 FOOT.*
6. *A CURRENT ZONING REPORT WAS NOT PROVIDED. ZONING INFORMATION SHOWN HEREON IS FROM CITY OF HAMPTON PROPERTY GIS INFORMATION.*
7. *THESE PROPERTIES LIE IN FLOOD HAZARD ZONE "AE" WITH BASE FLOOD ELEVATIONS OF 8 FEET AND 9 FEET WITH FLOODWAY AREAS IN ZONE AE AND "OTHER AREAS", AS SHOWN ON MAP NUMBER 51552700 18H FOR COMMUNITY NO. 515527, OF THE FEMA FLOOD INSURANCE RATE MAPS FOR THE COUNTY OF CITY OF HAMPTON, VIRGINIA; EFFECTIVE DATE: MAY 16, 2016.*
8. *THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THIS SURVEY ARE BASED ON FIELD SURVEY INFORMATION OF ABOVE GROUND FEATURES ONLY AND MISS UTILITY DESIGNATIONS, TICKET # A405700499, 02/26/24. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES .*
9. *MATTERS PERTAINING TO ARCHAEOLOGICAL OR HISTORICAL FEATURES (IF ANY) AND WETLANDS HAVE NOT BEEN ADDRESSED AS PART OF THIS SURVEY.*
10. *THE SUBJECT PROPERTY (1616 N. ARMISTEAD AND 1612 N. ARMISTEAD) ABUT AND HAS BOTH VEHICULAR AND PEDESTRIAN ACCESS TO AND FROM THE PUBLIC RIGHT-OF-WAY KNOWN AS N. ARMISTEAD AVENUE.*
11. *THERE WAS NO VISIBLE EVIDENCE OF ABOVE GROUND CEMETERIES OR BURIAL GROUNDS ON THE SUBJECT PROPERTY.*
12. *THE THREE PROPERTIES COMPRISING THIS SURVEY ARE CONTIGUOUS ALONG THE COMMON BOUNDARY LINES WITH ONE ANOTHER AND THERE ARE NO GAPS, GORES, OR, STROPS SEPARATING THE SUBJECT PROPERTIES.*
13. *TO THE BEST OF MY KNOWLEDGE THERE ARE NO PROPOSED CHANGES IN STREET RIGHT-OF-WAY LINES ADJOINING THE SUBJECT PROPERTY. NO INQUIRY OF THIS MATTER WAS SUBMITTED TO THE CITY OF HAMPTON.*
14. *DATUM*
    VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE
    HORIZONTAL DATUM : NAD 1983 (2011).
    UNITS: U.S. SURVEY FEET.
    HORIZONTAL POSITIONS WERE DETERMINED BY GPS METHODS USING THE LEICA VIRTUAL REFERENCE STATION (VRS) SERVICE.

LEGEND

9	*SCHEDULE B, PART II EXCEPTION REF. #*
	STORM DRAINAGE (SD) MANHOLE
	CATCH BASIN
	FLARED END SECTION
RCP	*REINFORCED CONCRETE PIPE*
	SANITARY MANHOLE
	SANITARY MARKER
	TV PEDESTAL
	SATELLITE DISH
	CONCRETE
	RIPRAP
	ROD FOUND
	PIPE FOUND
	PROPERTY MONUMENT SET, AS NOTED
	MONUMENT FOUND
	UTILITY VAULT
	UTILITY POLE
	LIGHT POLE
	GUY WIRE
	ELECTRIC BOX
	LIGHT POLE
	DECIDUOUS TREE
	CONIFEROUS TREE
x 0.00	*SPOT ELEVATION*
	SIGN
	BOLLARD
	MAILBOX

LINE TYPES

100	*CONTOUR LINE*
W	*WATER-LINE*
OHU	*OVERHEAD UTILITY LINE*
UGT	*UNDERGROUND COMMUNICATION UTILITY*
OHT	*OVERHEAD COMMUNICATION UTILITY*
OFO	*UNDERGROUND FIBER OPTIC UTILITY*
UFO	*OVERHEAD FIBER OPTIC UTILITY*
G	*UNDERGROUND NATURAL GAS UTILITY*
UGP	*UNDERGROUND POWER/ELEC UTILITY*
OHP	*OVERHEAD POWER UTILITY*
SAN	*SANITARY SEWER*
	STORM SEWER - INLET
X	*FENCE-LINE*
	CENTERLINE SWALE/DITCH
	EDGE OF PAVEMENT (EP)
	EDGE OF GRAVEL
	BUILDING
	GUARD RAIL
	PROPERTY LINE
	TREELINE

COMMONWEALTH OF VIRGINIA
PRESTON C. JUDSON
Lic. No. 003130
4/2/2024
LAND SURVEYOR

THIS DRAWING PREPARED AT THE
HAMPTON ROADS PENINSULA OFFICE
800 TECH CENTER PKWY, Suite 103 | Newport News, VA 23606
TEL 757.782.3041 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

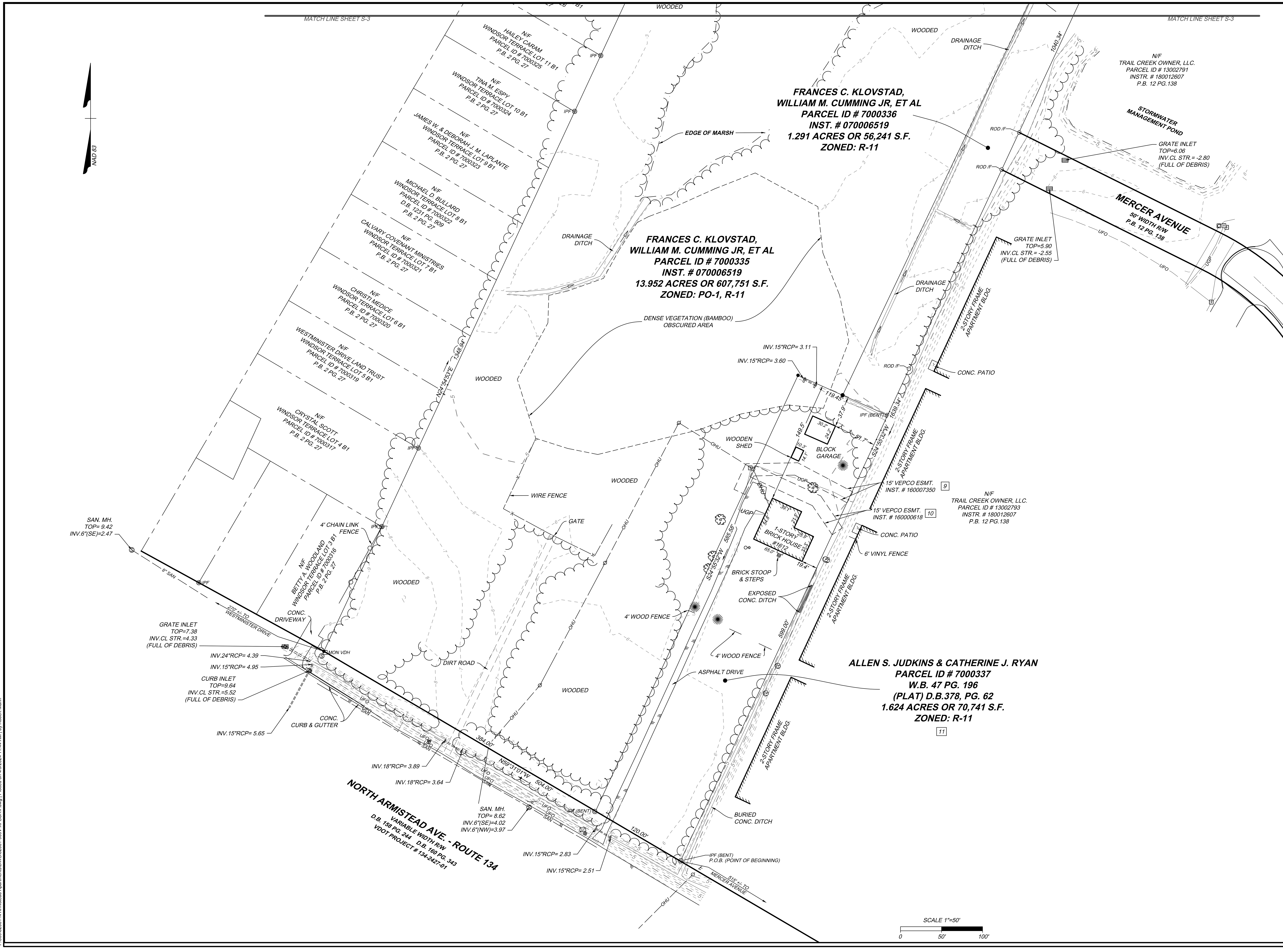
REVISION DESCRIPTION	DATE

DATE: 3/27/2024
DRAWN BY: CSM
DESIGNED BY:
CHECKED BY: PCJ
SCALE: AS SHOWN

TIMMONS GROUP

1616 & 1612 N. ARMISTEAD AVENUE
CITY OF HAMPTON, VIRGINIA
ALTA/NSPS LAND TITLE SURVEY

JOB NO. 62061
SHEET NO. S-1



COMMONWEALTH OF VIRGINIA
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TIMMONS GROUP

DATE	REVISION DESCRIPTION

DATE: 3/27/2024
DRAWN BY: CSM
DESIGNED BY:
CHECKED BY: PCJ
SCALE: 1" = 50'

1616 & 1612 N. ARMISTEAD AVENUE

CITY OF HAMPTON, VIRGINIA

ALTA/NSPS LAND TITLE SURVEY

JOB NO. 62061
SHEET NO. S-2

NAD 83

MON VDOT

MON VDOT

NEWMARKET CREEK

S64° 35' 3
28.98'

N/F
COMMONWEALTH OF VIRGINIA
PARCEL ID # 7000333
D.B. 417 PG. 439
VDOT PROJECT # 0258-114-109

N66°31'11"E 371.49'

S67°13'24"W 256.71'

63.13'

S76° 02' 39"W

N67°53'41"E 389.55'

N64° 12' 08"E 81.71'

S64°12'08"W 167.99'

S71°36'44"E 283.09'

CREEK

CREEK

N/F
TRACY E. ROOSE
WINDSOR TERRACE LOT 15B B1
PARCEL ID # 7000330
INST. #070025052

N/F
CITY OF HAMPTON
PARCEL ID # 13001302
INSTR. # 070025079
P.B. M2 PG.119

N/F
TERRENCE J. RAYMOND
WINDSOR TERRACE LOT 15A B1
PARCEL ID # 7000329
P.B. 2 PG. 27

ROD /F

IPF

EDGE OF MARSH

FRANCES C. KLOVSTAD,
WILLIAM M. CUMMING JR, ET AL
PARCEL ID # 7000335
INST. # 070006519
15.243 ACRES OR 663,991 S.F.
ZONED: PO-1, R-11

N/F
JAMES LEWIS & SARAH ANN MCKENZIE
WINDSOR TERRACE LOT 14 B1
PARCEL ID # 7000328
P.B. 2 PG. 27

N24°34'53"E 1348.94'

S24°55'12"W 1639.34'

N/F
SHARROD KELLEY & TAYLOR LONG-KELLEY
WINDSOR TERRACE LOT 13 B1
PARCEL ID # 7000327
P.B. 2 PG. 27

N/F
CATHERINE M. WILSON
WINDSOR TERRACE LOT 12 B1
PARCEL ID # 7000326
P.B. 2 PG. 27

IPF

EDGE OF MARSH

N25°24'35"E 978.03'

WOODED

MATCH LINE SHEET S-2

MATCH LINE SHEET S-2

WOODED

DRAINAGE
DITCH

1040.34'

N/F
HAILEY CARAM
WINDSOR TERRACE LOT 11 B1
PARCEL ID # 7000325
P.B. 2 PG. 27

N/F
TINA M. EBPY
WINDSOR TERRACE LOT 10 B1
PARCEL ID # 7000324
P.B. 2 PG. 27

N/F
JAMES W. & DEBORAH J. M. LAPLANTE
WINDSOR TERRACE LOT 9 B1
PARCEL ID # 7000323
P.B. 2 PG. 27

FRANCES C. KLOVSTAD,
WILLIAM M. CUMMING JR, ET AL
PARCEL ID # 7000336
INST. # 070006519
1.291 ACRES OR 56,241 S.F.
ZONED: R-11

EDGE OF MARSH

ROD /F

ROD /F

N/F
TRAIL CREEK OWNER, LLC.
PARCEL ID # 13002791
INSTR. # 180012607
P.B. 12 PG.138

STORMWATER
MANAGEMENT POND

GRATE INLET
TOP=6.06
INV.CL STR.= -2.80
(FULL OF DEBRIS)

SCALE 1"=50'
0 50' 100'

Y:\62061\62061-N Armistead Apartments\DWG\62061-REV-XPSURV.dwg | Plotted on 4/3/2024 11:45 AM | by Robert Mann

COMMONWEALTH OF VIRGINIA
PRESTON C. JUDSON
Lic. No. 003130
4/2/2024
LAND SURVEYOR

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YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION

DATE

DATE 3/27/2024

DRAWN BY CSM

DESIGNED BY

CHECKED BY PCJ

SCALE 1" = 50'

TIMMONS GROUP

1616 & 1612 N. ARMISTEAD AVENUE

CITY OF HAMPTON, VIRGINIA

ALTA/NSPS LAND TITLE SURVEY

JOB NO. 62061

SHEET NO. S-3

PROJECT NARRATIVE

Riverbend Landing

November 18, 2024

The subject property located in the City of Hampton known as 1612 and 1616 N. Armistead Avenue, Hampton, LRSN: 7000335, 7000336, and 7000337 and comprises approximately 16.9 acres consisting of approximately 6.7 acres of wetlands, approximately 2.3 acres of RPA buffer, and a net developable area of approximately 7.9 acres. The property is zoned PO-1 DISTRICT – PARKS AND OPEN SPACE GENERAL and R-11 DISTRICT—ONE FAMILY RESIDENTIAL and the applicant proposes to rezone the property to MD-4 DISTRICT— MULTIFAMILY RESIDENTIAL with proffers.

The project is proposed to consist of 215 apartment units in a mix of building configurations containing 1, 2, and 3 bedroom units. The community is anticipated to contain the following mix of unit types, sizes, and rental rates:

Unit Type	# of Units	Square Feet	Projected Rents
1 BR	69	715 SF	$1,600 - $1,750
2 BR	115	1,050 SF	$1,850 - $2,000
3 BR	32	1,245 SF	$2,300 - $2,450

Exterior building materials are intended to consist of fiber cement flat panel siding, fiber cement vertical siding and brick masonry veneer. The windows and doors are intended to be operable.

The following community amenities/recreation facilities are proposed:

- Community Bike racks
- Indoor Bike Storage
- Community Sidewalks
- Pool
- Clubhouse
- Fitness Center
- Outdoor Grilling Area
- Fire Pits
- Attractive Entrance Features
- Pedestrian Trail
- All buildings will be designed and constructed to meet the EnergyStar Multifamily New Construction requirements (a copy of which has been provided to Staff)
- Five (5) level 2 electric vehicle charging stations, each in a location convenient to one of the buildings, with 2 hookups per station
- Rear parking area will include pervious pavement or asphalt in the area of the parking stalls as shown on the conceptual site plan

Each building will have 3 outdoor bike racks, with each rack supporting 6 bikes. Additionally, the clubhouse will contain an indoor bike storage room for at least 15 bikes.

The conceptual site plan has been updated to reflect a 20-foot landscape buffer along the northwestern property line adjoining the rear of the properties along Westminster Drive. Along the front of the property (i.e., along Armistead Avenue), there will be a 4-foot black aluminum picket fence. Along the western side of the property, there will be a 6 to 8-foot privacy fence, which will be landscaped on both sides. Along the eastern side of the property, there will be a 6-foot opaque fence, which will be landscaped on both sides. Abutting the rear of the site, the plan is to install landscaping that integrates with the wetland area and install fencing only if necessary to control access and dependent upon site grading.

The entire site (parking lot and sidewalks) will be illuminated to at least 1 footcandle, and the lighting fixtures used will be energy efficient. The buildings will receive lighting externally via wall packs. All exterior lighting, site and building lighting, will be full cutoff lights which are "dark sky" compliant in order to avoid glare and prevent impacts to neighboring properties.

The buildings are not intended to contain elevators and are intended to be "walk-up" and contain internal, open-air breezeways that are designed and constructed to allow ample air flow and natural light, while also including daytime and nighttime lighting as well. The windows and doors in the stairwells are intended to be operable, and the entrances to the breezeways will have doors that are access controlled for our residents. The walls of these corridors will be of similar quality materials to the exterior of the building, while the floors will be wooden decking, treated and maintained to ensure no staining occurs. Mailboxes will be located centrally within each building.

The required number of parking spaces for the project is 346 spaces, which is the exact number of spaces shown on the conceptual site plan.

It is the Applicant's intent to use a pervious surface on the parking areas nearest the wetlands. These surfaces (and the underlying systems) provide additional stormwater quality treatment to protect this sensitive area. The intent is that the surface be comprised of pervious asphalt in the parking stalls of the area.

Stormwater within the site will most likely consist of an underground facility, however additional measures may be employed. The final design solution will be fully developed at the site plan review stage and will comply with City and State regulations The discharge point at the existing storm network will be analyzed for adequacy and the stormwater infrastructure shall be designed to meet the standards set with 9VAC25-870-66.

The community is intended to provide an exceptional quality of life for our residents with high quality design and construction in close proximity to large employment centers with convenient access to goods, services, and the interstate.

SITE DATA

Total Area = approximately 16.9 acres
Wetland = approximately 6.7 acres
100 ft RPA Buffer = approximately 2.3 acres
Net Area = approximately 7.9 acres
Proposed Zoning = MD-4 with Proffers
Total Multi-Family Units = 215
Parking Required = 346 spaces

Parking Provided = 346 Spaces (121 standard, 110 compact, 18 accessible, 92 permeable paver, and 5 electric vehicle charging stations)

Green Area Data

Parking - any parking area of 30 or more spaces, 7% of the interior parking area shall be green area:
104,345 SF Park Area (including drive aisles)
104,345 SF x 7% = 7,304 SF
Parking Green Area Required = 7,304 SF
Parking Green Area Proposed = 10,700 SF

Land Area – minimum of 10% of the land area shall be designated as green area:
Net Area = 7.9 AC
7.9 AC x 10% = 0.79 AC or 32,412 SF
Green Area Required = 34,412 SF
Green Area Proposed = 90,273 SF

Front Yard – development sites of 2 or more acres with 1 public street frontage shall have 50% of the green area within the front yard:
34,412 SF x 50% = 17,206 SF
Front Yard Green Area Required = 17,206 SF
Front Yard Green Area Proposed = 18,202 SF

Exhibit B
Landscape Buffer Exhibit

1612 - 1616 N. ARMISTEAD AVENUE

Conceptual Development Plan - August 20, 2024

SCALE 1"=50'
0 50' 100'

N

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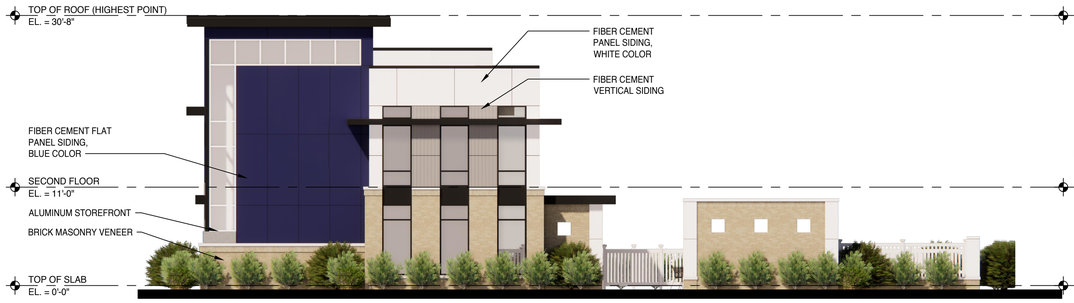
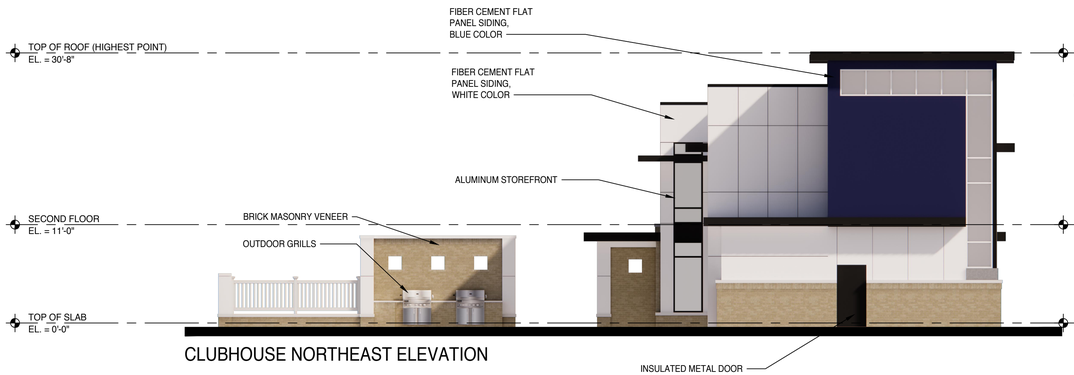


CLUBHOUSE SOUTHWEST ELEVATION

CLUBHOUSE NORTHWEST ELEVATION



CLUBHOUSE NORTHEAST ELEVATION

CLUBHOUSE SOUTHEAST ELEVATION

CLUBHOUSE ELEVATIONS

SCALE: 1/8" = 1' - 0"

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NEW MULTIFAMILY DEVELOPMENT

ARMISTEAD AVENUE APARTMENTS

THE FRANKLIN JOHNSTON GROUP

1612-1616 NORTH ARMISTEAD AVE.
HAMPTON, VIRGINIA 10.09.2024

TYPICAL FRONT ELEVATION (NORTHEAST)

TYPICAL REAR ELEVATION (SOUTHWEST)

TYPICAL SIDE ELEVATION

BUILDING 1& 2 ELEVATIONS

SCALE: 1/8" = 1' - 0"

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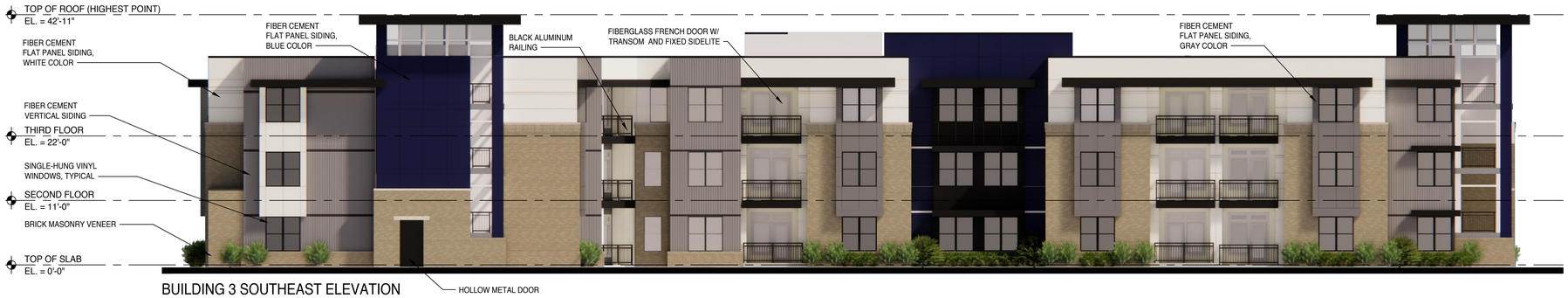
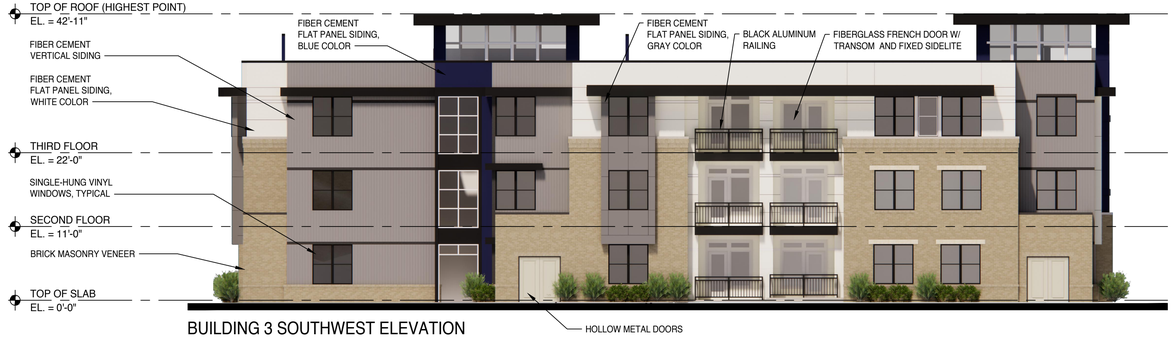


BUILDING 3 SOUTHEAST ELEVATION

BUILDING 3 NORTHEAST ELEVATION

BUILDING 3 NORTHWEST ELEVATION



BUILDING 3 SOUTHWEST ELEVATION

BUILDING 3 ELEVATIONS

SCALE: 3/32" = 1' - 0"

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HAMPTON, VIRGINIA 10.09.2024

BUILDING 4 SOUTHEAST ELEVATION

BUILDING 4 NORTHEAST ELEVATION

BUILDING 4 NORTHWEST ELEVATION

BUILDING 4 SOUTHWEST ELEVATION

BUILDING 4 ELEVATIONS

SCALE: 3/32" = 1' - 0"

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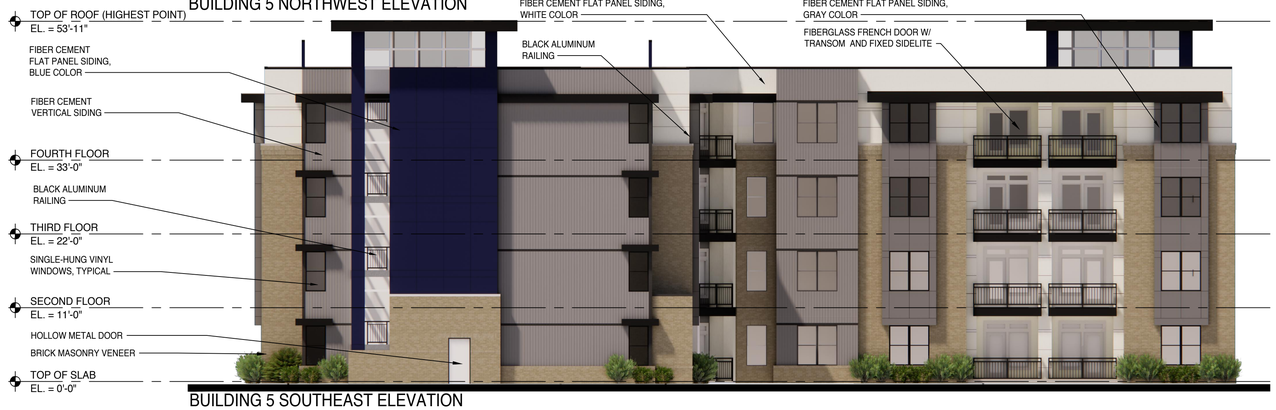
BUILDING 5 SOUTHWEST ELEVATION

BUILDING 5 NORTHEAST ELEVATION

BUILDING 5 NORTHWEST ELEVATION



BUILDING 5 SOUTHEAST ELEVATION

BUILDING 5 ELEVATIONS

SCALE: 3/32" = 1' - 0"

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1612-1616 NORTH ARMISTEAD AVE.
HAMPTON, VIRGINIA 10.09.2024

1612 Armistead Avenue

Traffic Impact Analysis

City of Hampton, Virginia

November 2024

Revised February 2025

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

Contact: Steve Schmidt, PE, PTOE

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1 EXECUTIVE SUMMARY

This report presents the findings of the traffic impact analysis (TIA) prepared for the proposed 1612 Armistead Avenue multi-family development in the City of Hampton, Virginia.

1.1 PROJECT OVERVIEW

The proposed development is located south of Westminster Drive, north of Mercer Avenue and east of N. Armistead Avenue as shown in Figure 1-1 (all figures are located at the end of their respective chapter).

The proposed development will consist of up to 215 multi-family dwelling units with access provided via one right-in/right-out only site driveway on N. Armistead Avenue located approximately 65 feet south of the existing median break. A secondary, emergency only, access point will be located near the northern property boundary on N. Armistead Avenue. A site layout is shown on Figure 1-2.

For the purposes of this analysis, the development was assumed to be complete and occupied by 2027.

When complete, the proposed development will generate a total of 83 external AM peak hour trips (19 in and 64 out), 84 external PM peak hour trips (51 in and 33 out), and 976 external average weekday daily trips.

The purpose of this analysis is to determine the impact of the proposed development on the surrounding roadway network. The scope of this study was developed in conjunction with the City of Hampton via an agreed upon scoping document. A copy of the scoping document is included in Appendix A.

1.2 STUDY LIMITS

As agreed upon in the scoping document, the study limits include the following four (4) existing intersections:

1. N. Armistead Avenue and Mercury Boulevard (Signalized);
2. N. Armistead Avenue and Convention Center Boulevard/Reese Drive (Signalized);
3. N. Armistead Avenue and Freeman Drive/Mercer Avenue (Signalized); and
4. N. Armistead Avenue and Lake Hampton Drive (Signalized).

In addition, the intersection of the proposed site entrance and N. Armistead Avenue (Unsignalized) will be analyzed under future conditions.

In accordance with the scoping agreement, analyses were completed for the following scenarios:

1. 2024 Existing Traffic Conditions;
2. 2027 Background Traffic Conditions (without development of the site); and
3. 2027 Future Traffic Conditions (with development of the site)

The following steps were taken to determine the potential traffic impacts associated with this project:

1. Data Collection – Existing AM (7-9 AM) and PM (4-6 PM) peak hour traffic counts were collected at the existing study intersections on Tuesday, April 23, 2024.

2. Traffic Growth – In order to be conservative, a 1% annual growth rate was applied to existing traffic volumes to account for development outside the study area.

3. Background Developments – There are no background developments planned in the vicinity of the site.

4. Trip Generation – Traffic generated by the proposed development was estimated using the 11th edition of the Institute of Transportation Engineers' *Trip Generation Manual*.

5. Traffic Distributions – Per the scoping document, the distribution of trips generated by the proposed developed were based on other traffic studies in the area, the existing traffic volumes, the nature of the use, and local knowledge.

6. Site Traffic Projections – Future traffic volumes were determined by combining the 2027 background traffic volumes with proposed new trips generated by the site to create the 2027 total traffic volumes used in the analysis.

7. Traffic Capacity Analysis – Level of service calculations for existing, background, and future conditions were performed using SYNCHRO Version 11 with SimTraffic for signalized and unsignalized intersections.

8. Queuing Analysis – The 95th percentile queue lengths (Synchro) and maximum queues (SimTraffic) were reviewed at the intersections listed above.

1.3 PRINCIPAL FINDINGS AND RECOMMENDATIONS

Based on the analysis results, all study intersections will operate with acceptable queueing and delay with the development of the site. No improvements are required at any of the study intersections beyond the construction of a westbound right turn lane (100 feet of storage and 100 feet of taper) along N. Armistead Avenue at the site entrance.

Figure 1-1: Surrounding Roadway Network

Figure 1-2: Site Layout

2 BACKGROUND INFORMATION

2.1 DESCRIPTION OF ON-SITE DEVELOPMENT

The proposed development is located south of Westminster Drive, north of Mercer Avenue and east of N Armistead Avenue as shown in Figure 1-1 (all figures are located at the end of their respective chapter).

The proposed development will consist of up to 215 multi-family dwelling units with access provided via one right-in/right-out only site driveway on N. Armistead Avenue located approximately 65 feet south of the existing median break. A secondary, emergency only, access point will be located near the northern property boundary on N. Armistead Avenue. A site layout is shown on Figure 1-2.

For the purposes of this analysis, the development was assumed to be complete and occupied by 2027.

When complete, the proposed development will generate a total of 83 external AM peak hour trips (19 in and 64 out), 84 external PM peak hour trips (51 in and 33 out), and 976 external average weekday daily trips.

The purpose of this analysis is to determine the impact of the proposed development on the surrounding roadway network. The scope of this study was developed in conjunction with the City of Hampton via an agreed upon scoping document. A copy of the scoping document is included in Appendix A.

2.2 STUDY LIMITS

As agreed upon in the scoping document, the study limits include the following four (4) existing intersections:

1. N. Armistead Avenue and Mercury Boulevard (Signalized);
2. N. Armistead Avenue and Convention Center Boulevard/Reese Drive (Signalized);
3. N. Armistead Avenue and Freeman Drive/Mercer Ave (Signalized); and
4. N. Armistead Avenue and Lake Hampton Drive (Signalized).

In addition, the intersection of the proposed site entrance and N Armistead Avenue (Unsignalized) will be analyzed under future conditions.

2.3 EXISTING ROADWAY NETWORK

Mercury Boulevard is an eight-lane, divided, principal arterial roadway with a posted speed limit of 45 mph. According to 2022 VDOT AADT data, the most recently available, Mercury Boulevard services approximately 54,000 vehicles per day to the west of N. Armistead Avenue and 50,000 vehicles per day to the east of N. Armistead Avenue.

N. Armistead Avenue is a four-lane, divided, principal arterial with a posted speed limit of 45 mph. According to 2022 VDOT AADT data, the most recently available, N. Armistead Avenue services approximately 17,763 vehicles per day. For the purposes of this analysis, N. Armistead Avenue was assumed to run north-south through the study area.

Convention Center Boulevard is a four-lane, undivided, major collector, with a posted speed limit of 35 mph. Based on 2024 traffic count data, the current ADT on Convention Center Boulevard is approximately 965 vehicles per day.

Reese Drive is a two-lane, undivided, non-VDOT classified roadway with no posted speed limit, assumed to be 25 mph. Based on 2024 traffic count data, the current ADT on Convention Center Boulevard is approximately 315 vehicles per day.

Mercer Avenue is a two-lane, undivided, non-VDOT classified roadway with no posted speed limit, assumed to be 25 mph. Based on 2024 traffic count data, the current ADT on Convention Center Boulevard is approximately 1,255 vehicles per day.

Freeman Drive is a two-lane, undivided, non VDOT classified roadway with a speed limit of 25 mph. Based on 2024 traffic count data, the current ADT on Convention Center Boulevard is approximately 1,175 vehicles per day.

The existing lane use and traffic control at the study intersections is shown on Figure 2-1.

2.4 FUTURE IMPROVEMENTS

There are no funded improvements in the study area that will occur within the timeframe of this analysis (2027). There are improvements along N. Armistead Avenue (fiber, road grade, trail improvements, etc.) which will occur beyond the timeframe of this analysis.

2.5 OTHER MODES OF TRANSPORTATION

There are no existing sidewalks or pedestrian facilities along N. Armistead Avenue. While a future sidewalk is planned across the site frontage, it is unlikely that a significant portion of site traffic will be made via walking.

The nearest Hampton Roads Transit Stop is located at the Lake Hampton intersection, approximately 1/3 mile east of the site. However, without sidewalks to walk to the stop, it is unlikely that a significant portion of site traffic will be made via transit.

To be conservative and represent a worst case scenario analysis from a vehicular traffic standpoint, it was assumed all site generated traffic will be vehicular based and no reductions will be applied for other modes of transportation.

2.6 CRASH HISTORY

A review of the past three years (2021-2023) of available crash data from VDOT's Virginia Crash Map indicates that one (1) crash has occurred in the westbound direction of N. Armistead Avenue in the vicinity of the site intersection. The non-visible injury crash occurred in 2021 and is classified by VDOT as a "non-collision". Several other crashes occurred in the eastbound direction of N. Armistead Avenue but since the site entrance will be right-in/right-out only, these crashes will not impact the site entrance.

The data indicates there is not a significant crash history in the vicinity of the site entrance intersection.

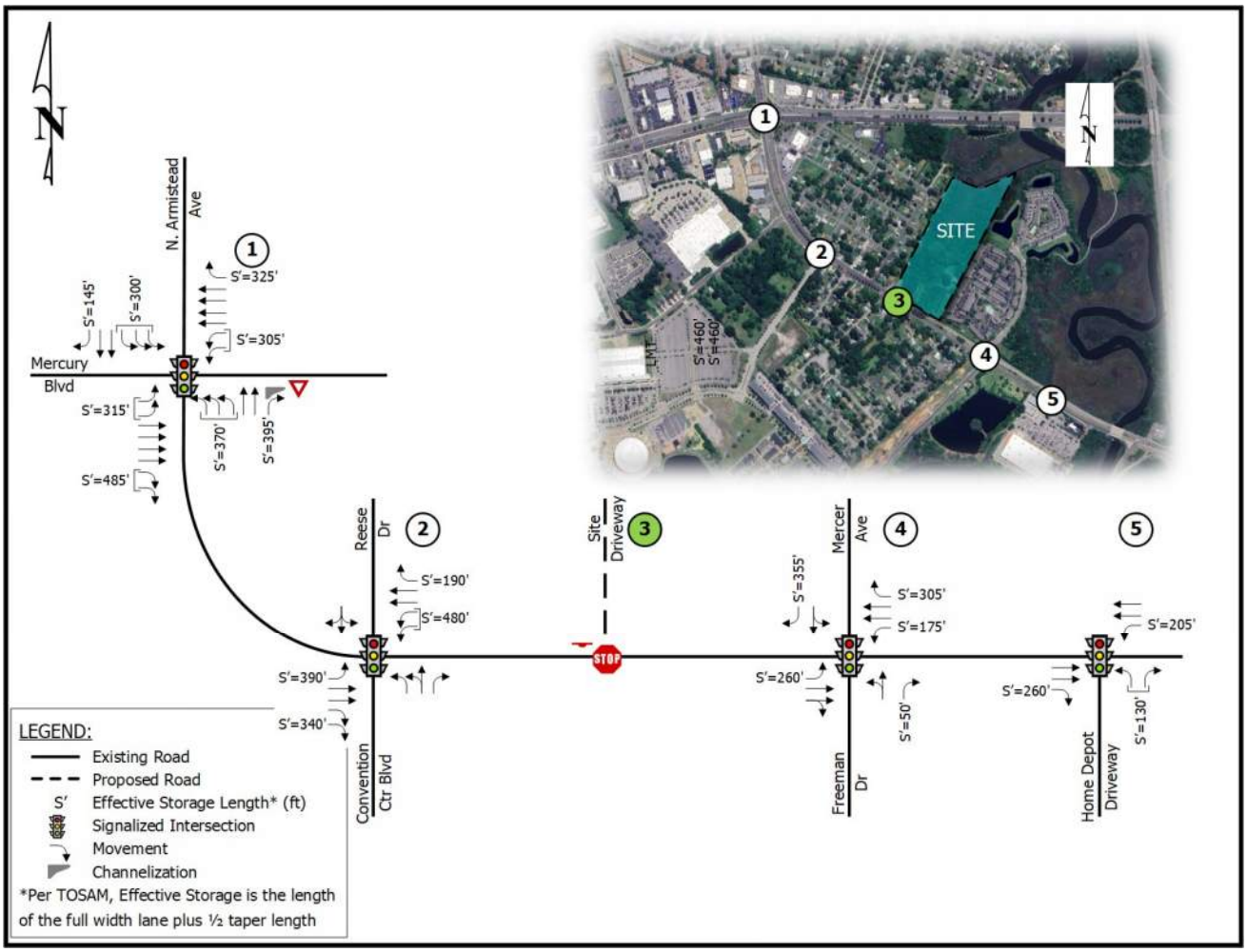


Figure 2-1: 2024 Existing Geometry and Intersection Control

3 2024 EXISTING CONDITIONS

3.1 EXISTING TRAFFIC VOLUMES

Directional turning movement counts (TMCs) were collected on April 23, 2024 during the morning (7:00 AM-9:00 AM) and evening (4:00 PM-6:00 PM) peak periods. The TMCs included heavy vehicles by movement and pedestrian/bicycles counts, where applicable. A copy of the count data is included in Appendix B.

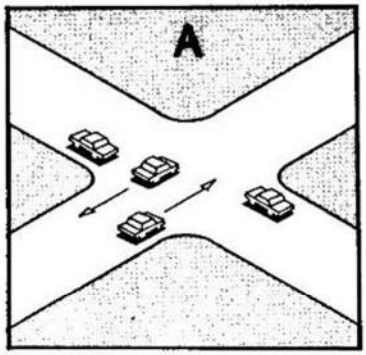
The peak hours analyzed in this report align with the highest traffic volumes of the roadway network which were 8:00 AM-9:00 AM and 4:00 PM-5:00 PM. The existing 2024 peak hour traffic volumes are shown on Figure 3-1 and the existing 2024 pedestrian volumes are shown on Figure 3-2.

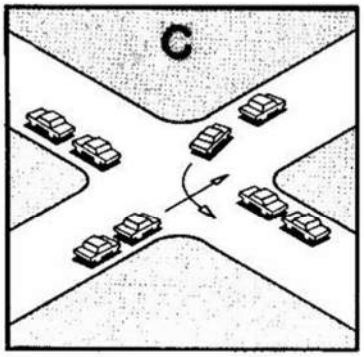
3.2 CAPACITY ANALYSIS

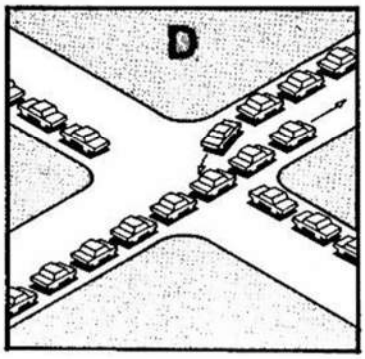
Capacity analysis allows traffic engineers to determine the impacts of traffic on the surrounding roadway network. The Transportation Research Board's (TRB) *Highway Capacity Manual* (HCM) methodologies govern how the capacity analyses are conducted and how the results are interpreted. There are six letter grades of Levels of Service (LOS) from A to F, with LOS A representing the best operating conditions and LOS F the worst operating conditions. Table 3-1 shows in detail how each of these levels of service are interpreted.

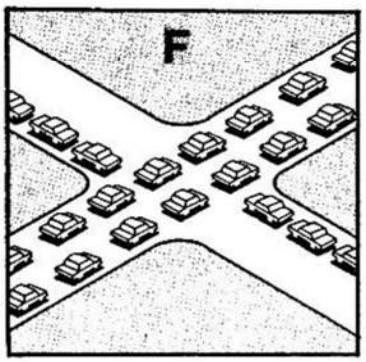
Table 3-1: Level of Service Definitions

Level of Service	Roadway Segments or Controlled Access Highways	Intersections
A	Free flow, low traffic density.	No vehicle waits longer than one signal indication.
B	Delay is not unreasonable, stable traffic flow.	On a rare occasion motorists wait through more than one signal indication.
C	Stable condition, movements somewhat restricted due to higher volumes, but not objectionable for motorists.	Intermittently drivers wait through more than one signal indication, and occasionally backups may develop behind left turning vehicles, traffic flow still stable and acceptable.
D	Movements more restricted, queues and delays may occur during short peaks, but lower demands occur often enough to permit clearing, thus preventing excessive backups.	Delays at intersections may become extensive with some, especially left-turning vehicles waiting two or more signal indications, but enough cycles with lower demand occur to permit periodic clearance, thus preventing excessive backups.
E	Actual capacity of the roadway invloves delay to all motorists due to congestion.	Very long queues may create lengthly delays, especially for left-turning vehicles.
F	Forced flow with demand volumes greater than capacity resulting in complete congestion. Volumes drop to zero in extreme cases.	Backups from locations downstream restrict or prevent movement of vehicles out of approach creating a storage ares during part or all of an hour.









SOURCE: *"A Policy on Design of Design of Urban Highways and Arterial Streets"* - AASHTO, 1973 based upon material published in *"Highway Capacity Manual"*, National Academy of Sciences, 1965.

For signalized and unsignalized intersections, level of service is defined in terms of **delay**, a measure of driver discomfort, frustration, fuel consumption and lost travel time. Table 3-2 summarizes the delay associated with each LOS category:

Table 3-2: Signalized and Unsignalized Intersection Level of Service Criteria

Signalized Intersections		Unsignalized Intersections	
Level of Service	Control Delay per Vehicle (sec/veh)	Level of Service	Average Control Delay (sec/veh)
A	≤ 10	A	0 to 10
B	> 10 to ≤ 20	B	> 10 to ≤ 15
C	> 20 to ≤ 35	C	> 15 to ≤ 25
D	> 35 to ≤ 55	D	> 25 to ≤ 35
E	> 55 to ≤ 80	E	> 35 to ≤ 50
F	> 80	F	> 50

Source: Exhibit 16-2 and Exhibit 17-2 from TRB's "Highway Capacity Manual 2000"

Capacity analyses were performed to assess existing (2024), background (2027), and future (2027) operational conditions. The signalized and unsignalized intersections were analyzed using SYNCHRO Version 11 based on HCM 2000 methodologies with the following assumptions per TOSAM (unless otherwise specified):

- Level terrain;
- 12-foot lane widths;
- Existing peak hour factor as determined by the traffic counts (by intersection) for existing scenario;
- The higher of the existing peak hour factor as determined by traffic counts (by intersection) or a peak hour factor of 0.92 for the background and total future scenarios.
- Heavy vehicle percentage as determined by the traffic counts (by movement); and
- Traffic signals timing data provided by the City of Hampton (see Appendix C).

HCM 2000 methodologies were used in the analysis (instead of HCM 6th) as HCM 6th requires strict NEMA phasing at all intersections. Some of the study intersections are utilizing non-NEMA phasing on the side streets which requires the use of HCM 2000.

Queuing analyses were conducted using both the HCM 2000 Edition methodology (as calculated by SYNCHRO) and SimTraffic simulations. The Synchro 95th percentile queue is the maximum back of queue for a particular lane within a lane group considering 95th percentile traffic volumes. The SimTraffic maximum queues are the average maximum queues after 10 runs of 60 minutes each.

Note that it is possible for the 95th percentile queue to be higher than the SimTraffic maximum queue due to the method in which each software calculates its respective value. The 95th percentile queue is based on an HCM formula while the SimTraffic maximum queue varies based on simulation results.

3.3 EXISTING CONDITIONS CAPACITY ANALYSIS RESULTS

Table 3-3 summarizes the 2024 existing intersection LOS, delay, 95th percentile queue lengths (Synchro), and maximum queue lengths (SimTraffic) based on the 2024 existing intersection geometry (Figure 2-1), the peak hour traffic volumes shown on Figure 3-1, and the existing signal timings as provided the City of Hampton.

The corresponding SYNCHRO and SimTraffic reports are included in Appendix D. Note that the intersection numbers shown on the LOS, delay, and queue length summary tables correspond with the intersection numbers used in the SYNCHRO models and report figures.

The results of the analysis are as follows:

- The signalized intersection of N Armistead Avenue and Mercury Boulevard operates at LOS C during the AM peak hour and LOS D during the PM peak hour.

- The signalized intersection of N Armistead Avenue and Convention Center Boulevard/Reese Drive operates at LOS B during the AM and PM peak hours, with all movement operating at LOS E or better.

- The signalized intersection of N Armistead Avenue and Freeman Drive/Mercer Avenue operates at LOS A during the AM and PM peak hours, with all movements operating at LOS E or better.

- The signalized intersection of N Armistead Avenue and Lake Hampton Drive operates at LOS B during the AM and PM peak hours with all movement operating at LOS E or better.

Table 3-3: 2024 Existing Traffic Analysis Summary

Intersection and Type of Control	Movement and Approach	Turn Lane Storage (ft)	AM PEAK HOUR				PM PEAK HOUR			
			Delay [1] (sec/veh)	LOS [1]	HCS 95th Percentile Queue Length (ft)	Simulated Maximum Queue Length (ft)	Delay [1] (sec/veh)	LOS [1]	HCS 95th Percentile Queue Length (ft)	Simulated Maximum Queue Length (ft)
1. N Armistead Ave (N-S)	EB Left [4]	300	54.4	D	106	203	75.5	E	187	315
Mercury Blvd (E-W)	EB Thru		26.3	C	287	312	45.4	D	729	686
Signalized	EB Right	145	14.3	B	19	92	19.7	B	81	218
	EB Approach		*27.6*	*C*	-	-	*44.7*	*D*	-	-
	WB Left [4]	370	53.6	D	86	197	80.7	F	132	304
	WB Thru		27.6	C	293	302	40.2	D	447	424
	WB Right	395	29.2	C	205	310	35.4	D	83	291
	WB Approach		*29.7*	*C*	-	-	*42.0*	*D*	-	-
	NB Left [2]		50.5	D	78	128	74.4	E	177	228
	NB Left-Thru		55.1	E	135	142	82.2	F	#230	216
	NB Right [2]		0.0	A	0	2	0.1	A	0	0
	NB Approach		*48.1*	*D*	-	-	*69.7*	*E*	-	-
	SB Left [2]	305	53.0	D	159	288	68.9	E	373	300
	SB Thru		50.8	D	150	324	56.7	E	218	1,176
	SB Right	325	45.9	D	33	145	53.3	D	104	145
	SB Approach		*51.1*	*D*	-	-	*64.0*	*E*	-	-
	Overall		**34.2**	**C**	**-**	**-**	**50.0**	**D**	**-**	**-**
2. N Armistead Ave (E-W)	EB Left	390	58.9	E	23	29	61.1	E	75	72
Convention Center Blvd (N)	EB Thru		7.9	A	166	129	10.8	B	295	235
Reeses Dr (S)	EB Right [3]	340	5.0	A	0	17	5.1	A	0	20
Signalized	*EB Approach*		*8.5*	*A*	-	-	*12.6*	*B*	-	-
	WB Left [2]	480	64.5	E	9	26	6.9	A	23	50
	WB Thru		7.8	A	94	108	8.7	A	94	228
	WB Right	190	0.0	A	0	0	8.7	A	m0	31
	WB Approach		*8.4*	*D*	-	-	*8.2*	*E*	-	-
	NB Left		51.5	D	23	34	59.1	E	44	55
	NB Left-Thru		51.5	D	23	16	59.0	E	43	27
	NB Right		51.0	D	0	48	58.3	E	0	70
	NB Approach		*51.2*	*D*	-	-	*58.5*	*E*	-	-
	SB Left-Thru-Right		52.3	D	0	57	62.1	E	45	60
	SB Approach		*52.3*	*D*	-	-	*62.1*	*E*	-	-
	Overall		**10.9**	**B**	**-**	**-**	**13.7**	**B**	**-**	**-**
4. N Armistead Ave (E-W)	EB Left	260	4.5	A	5	34	3.4	A	14	65
Freeman Dr (N)	EB Thru		6.0	A	123	153	5.9	A	143	230
Mercer Ave (S)	EB Thru-Right		-	-	-	-	-	-	-	-
Signalized	*EB Approach*		*6.0*	*A*	-	-	*5.7*	*A*	-	-
	WB Left	260	3.3	A	6	48	3.2	A	119	122
	WB Thru		4.6	A	86	108	5.2	A	0	185
	WB Right		4.4	A	0	38	0.0	A	0	38
	WB Approach		*4.5*	*A*	-	-	*4.8*	*A*	-	-
	NB Left-Thru		48.2	D	22	48	58.0	E	26	74
	NB Right		48.0	D	0	48	57.9	E	22	53
	NB Approach		*48.0*	*D*	-	-	*57.9*	*E*	-	-
	SB Left		49.1	D	53	62	59.2	E	59	67
	SB Thru-Right	355	47.9	D	0	41	57.7	E	0	48
	SB Approach		*48.6*	*D*	-	-	*58.5*	*E*	-	-
	Overall		**9.1**	**A**	**-**	**-**	**8.7**	**A**	**-**	**-**
5. N Armistead Ave (E-W)	EB Thru		8.5	A	44	194	6.6	A	153	336
Lake Hampton Dr (N)	EB Right	205	9.9	A	0	98	10.4	B	26	205
Signalized	*EB Approach*		*8.7*	*A*	-	-	*7.1*	*A*	-	-
	WB Left	205	4.3	A	47	115	6.1	A	66	154
	WB Thru		3.4	A	63	95	4.5	A	160	191
	WB Approach		*3.6*	*A*	-	-	*4.8*	*A*	-	-
	NB Left		49.6	D	81	83	61.4	E	153	124
	NB Right	130	47.5	D	46	83	56.8	E	58	144
	NB Approach		*46.4*	*D*	-	-	*52.7*	*D*	-	-
	Overall		**10.8**	**B**	**-**	**-**	**10.9**	**B**	**-**	**-**

[1] *Overall intersection LOS and delay reported for signalized intersections and roundabouts only.*

[2] *Dual turn lanes; average storage is provided.*

[3] Dual Right Turn Lanes, storage for outermost lane only

[4] Triple Turn Lanes, average storage provided

† SYNCHRO does not provide level of service or delay for unsignalized movements with no conflicting volumes.

- 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

m - Volume for 95th percentile queue is metered by upstream signal.

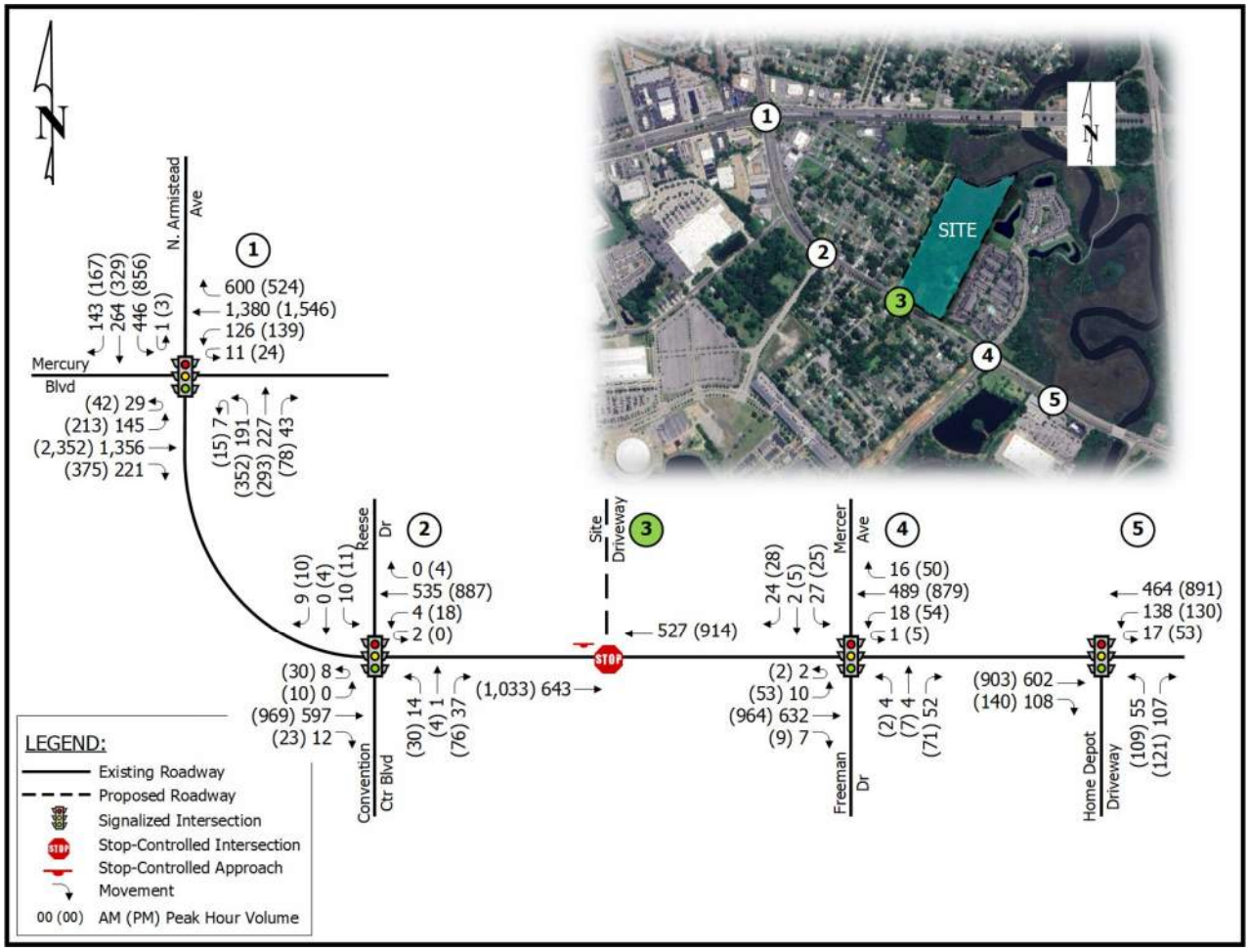


Figure 3-1: 2024 Existing Peak Hour Traffic Volumes

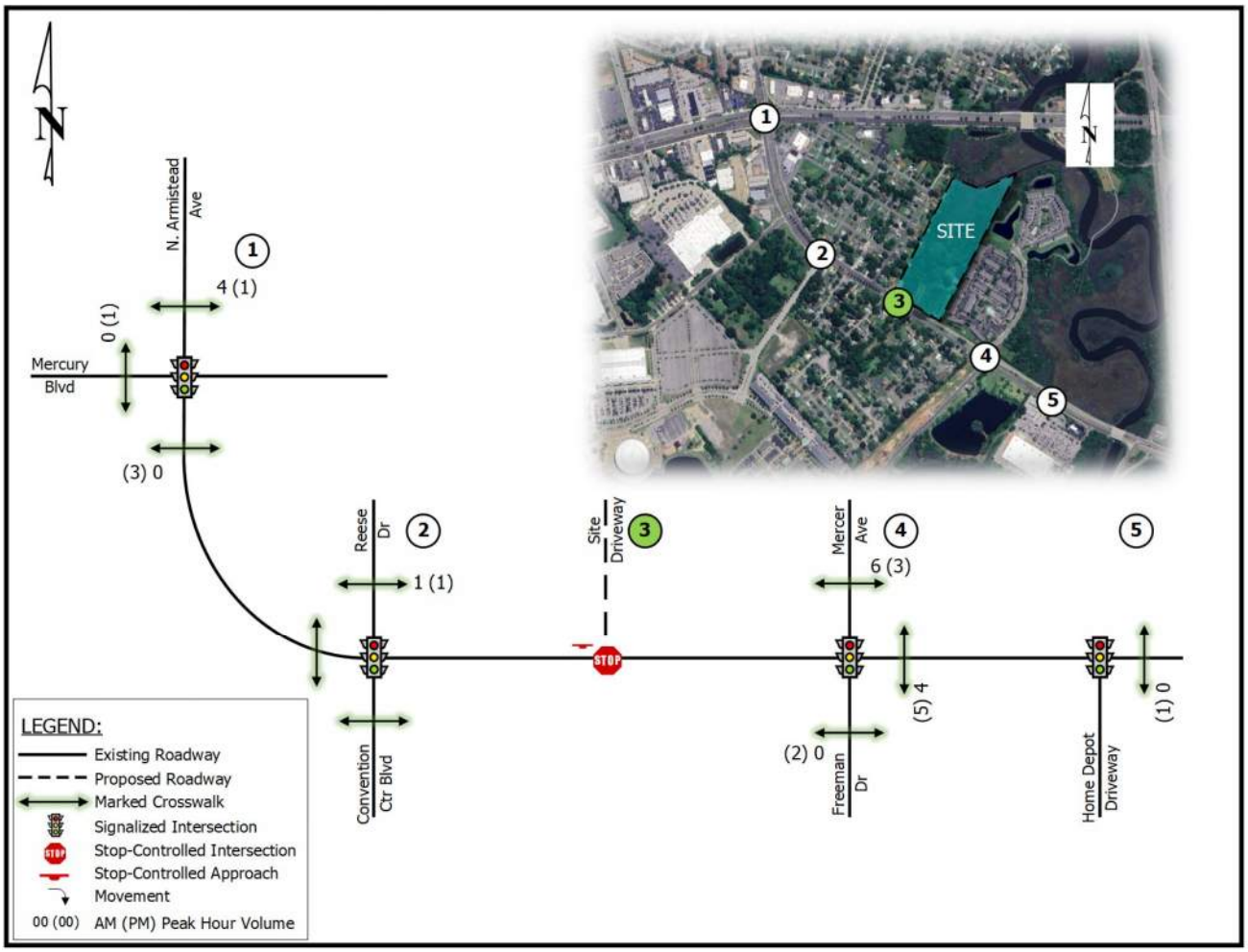


Figure 3-2: 2024 Existing Peak Hour Pedestrian Volumes

4 2027 BACKGROUND CONDITIONS

The background conditions assume existing intersection geometry in conjunction with projected background traffic, which consists of general traffic growth and growth due to approved, neighboring developments.

4.1 2027 BACKGROUND TRAFFIC VOLUMES

Approved Developments

There are no approved background developments in the vicinity of the site.

General Traffic Growth

Per the Scoping Documents, the 2027 background vehicle volumes were developed based on a 1.0% annual growth rate. The growth rate was compounded annually for the three-year period from 2024 to 2027 and was applied to all movements at the study intersections. The resulting 2027 vehicle background (existing + growth) volumes are shown on Figure 4-1.

4.2 BACKGROUND 2027 CAPACITY ANALYSIS RESULTS

Table 4-1 summarize the 2027 background intersection LOS, delay, 95th percentile queue lengths (Synchro), and maximum queue lengths (SimTraffic) based on 2027 background peak hour traffic volumes shown on Figure 4-1 and the existing signal timings as provided by the City of Hampton.

The corresponding SYNCHRO and SimTraffic reports are included in Appendix E. Note that the intersection numbers shown on the LOS, delay, and queue length summary tables correspond with the intersection numbers used in the SYNCHRO models and report figures.

As shown in Table 4-1, the results of the analysis include the following :

- The signalized intersection of N Armistead Avenue and Mercury Boulevard is expected to continue to operate at LOS C during the AM peak hour and LOS D during the PM peak hour.
- The signalized intersection of N Armistead Avenue and Convention Center Boulevard/Reese Drive is expected to continue to operate at LOS B during the AM and PM peak hours, with all movement operating at LOS E or better.
- The signalized intersection of N Armistead Avenue and Freeman Drive/Mercer Avenue is expected to continue to operate at LOS A during the AM and PM peak hours, with all movements operating at LOS E or better.
- The signalized intersection of N Armistead Avenue and Lake Hampton Drive is expected to continue to operate at LOS B during the AM and PM peak hours with all movement operating at LOS E or better.

Table 4-1: 2027 Background Conditions Analysis Summary

Intersection and Type of Control	Movement and Approach	Turn Lane Storage (ft)	AM PEAK HOUR				PM PEAK HOUR			
			Delay [1] (sec/veh)	LOS [1]	HCS 95th Percentile Queue Length (ft)	Simulated Maximum Queue Length (ft)	Delay [1] (sec/veh)	LOS [1]	HCS 95th Percentile Queue Length (ft)	Simulated Maximum Queue Length (ft)
1. N Armistead Ave (N-S)	EB Left [4]	300	54.5	D	109	224	75.9	E	191	315
Mercury Blvd (E-W)	EB Thru		27.1	C	297	340	47.7	D	763	788
Signalized	EB Right	145	14.5	B	19	107	19.9	B	89	393
	EB Approach		*28.2*	*C*	-	-	*46.6*	*D*	-	-
	WB Left [4]	370	53.6	D	88	212	82.1	F	136	305
	WB Thru		28.5	C	303	304	41.1	D	464	436
	WB Right	395	30.7	C	234	313	36.0	D	85	288
	WB Approach		*30.7*	*C*	-	-	*42.9*	*D*	-	-
	NB Left [2]		50.3	D	80		74.9	E	182	262
	NB Left-Thru		55.0	D	139	132	84.1	F	#242	319
	NB Right [2]		0.0	A	0	148	0.1	A	0	39
	NB Approach		*48.0*	*D*	-	-	*70.7*	*E*	-	-
	SB Left [2]	305	53.0	D	164	296	70.4	E	386	300
	SB Thru		50.8	D	154	343	56.7	E	225	1,142
	SB Right	325	45.7	D	38	145	53.4	D	110	145
	SB Approach		*51.1*	*D*	-	-	*65.0*	*E*	-	-
	Overall		**34.8**	**C**	**-**	**-**	**51.3**	**D**	**-**	**-**
2. N Armistead Ave (E-W)	EB Left	390	58.9	E	23	35	61.1	E	75	77
Convention Center Blvd (N)	EB Thru		8.5	A	172	123	10.9	B	307	223
Reeses Dr (S)	EB Right [3]	340	5.0	A	0	17	5.1	A	0	24
Signalized	*EB Approach*		*9.1*	*A*	-	-	*12.8*	*B*	-	-
	WB Left [2]	480	66.4	E	9	26	6.9	A	24	57
	WB Thru		9.9	A	102	104	8.7	A	96	231
	WB Right	190	0.0	A	0	40	8.7	A	m0	12
	WB Approach		*10.5*	*D*	-	-	*8.2*	*E*	-	-
	NB Left		50.0	D	23	40	59.1	E	44	59
	NB Left-Thru		50.0	D	23	18	59.1	E	44	25
	NB Right		49.7	D	0	55	58.3	E	0	56
	NB Approach		*49.8*	*D*	-	-	*58.5*	*E*	-	-
	SB Left-Thru-Right		52.3	D	0	63	62.1	E	45	64
	SB Approach		*52.3*	*D*	-	-	*62.1*	*E*	-	-
	Overall		**12.1**	**B**	**-**	**-**	**13.8**	**B**	**-**	**-**
4. N Armistead Ave (E-W)	EB Left	260	4.6	A	5	32	3.4	0	15	86
Freeman Dr (N)	EB Thru		6.0	A	125	166	6.0	0	148	231
Mercer Ave (S)	EB Thru-Right		6.0	A	-	-	5.8	A	-	-
Signalized	*EB Approach*		*6.0*	*A*	-	-	*5.8*	*A*	-	-
	WB Left	260	3.4	A	7	48	3.2	A	14	111
	WB Thru		4.6	A	87	117	5.2	A	124	212
	WB Right		4.4	A	0	35	0.0	A	0	49
	WB Approach		*4.5*	*A*	-	-	*58.0*	*E*	-	-
	NB Left-Thru		48.2	D	22	60	57.9	E	26	77
	NB Right		48.0	D	0	49	57.9	0	24	52
	NB Approach		*48.0*	*D*	-	-	*57.9*	*E*	-	-
	SB Left		49.1	D	53	54	59.2	E	61	60
	SB Thru-Right	355	47.9	D	0	46	57.7	E	0	55
	SB Approach		*48.6*	*D*	-	-	*58.5*	*E*	-	-
	Overall		**9.1**	**A**	**-**	**-**	**8.7**	**A**	**-**	**-**
5. N Armistead Ave (E-W)	EB Thru		8.9	A	45	212	6.9	A	157	300
Lake Hampton Dr (N)	EB Right	205	11.0	B	0	126	10.1	B	28	191
Signalized	*EB Approach*		*9.2*	*A*	-	-	*7.3*	*A*	-	-
	WB Left	205	4.0	A	48	104	6.6	A	68	160
	WB Thru		3.4	A	65	100	4.6	A	167	190
	WB Approach		*3.5*	*A*	-	-	*5.0*	*A*	-	-
	NB Left		49.5	D	83	93	61.3	E	156	127
	NB Right	130	47.5	D	54	86	56.7	E	58	154
	NB Approach		*46.5*	*D*	-	-	*52.5*	*D*	-	-
	Overall		**11.0**	**B**	**-**	**-**	**11.1**	**B**	**-**	**-**

[1] Overall intersection LOS and delay reported for signalized intersections and roundabouts only.

[2] Dual turn lanes; average storage is provided.

[3] Dual Right Turn Lanes, storage for outermost lane only

[4] Triple Turn Lanes, average storage provided

† SYNCHRO does not provide level of service or delay for unsignalized movements with no conflicting volumes.

- 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

m - Volume for 95th percentile queue is metered by upstream signal.

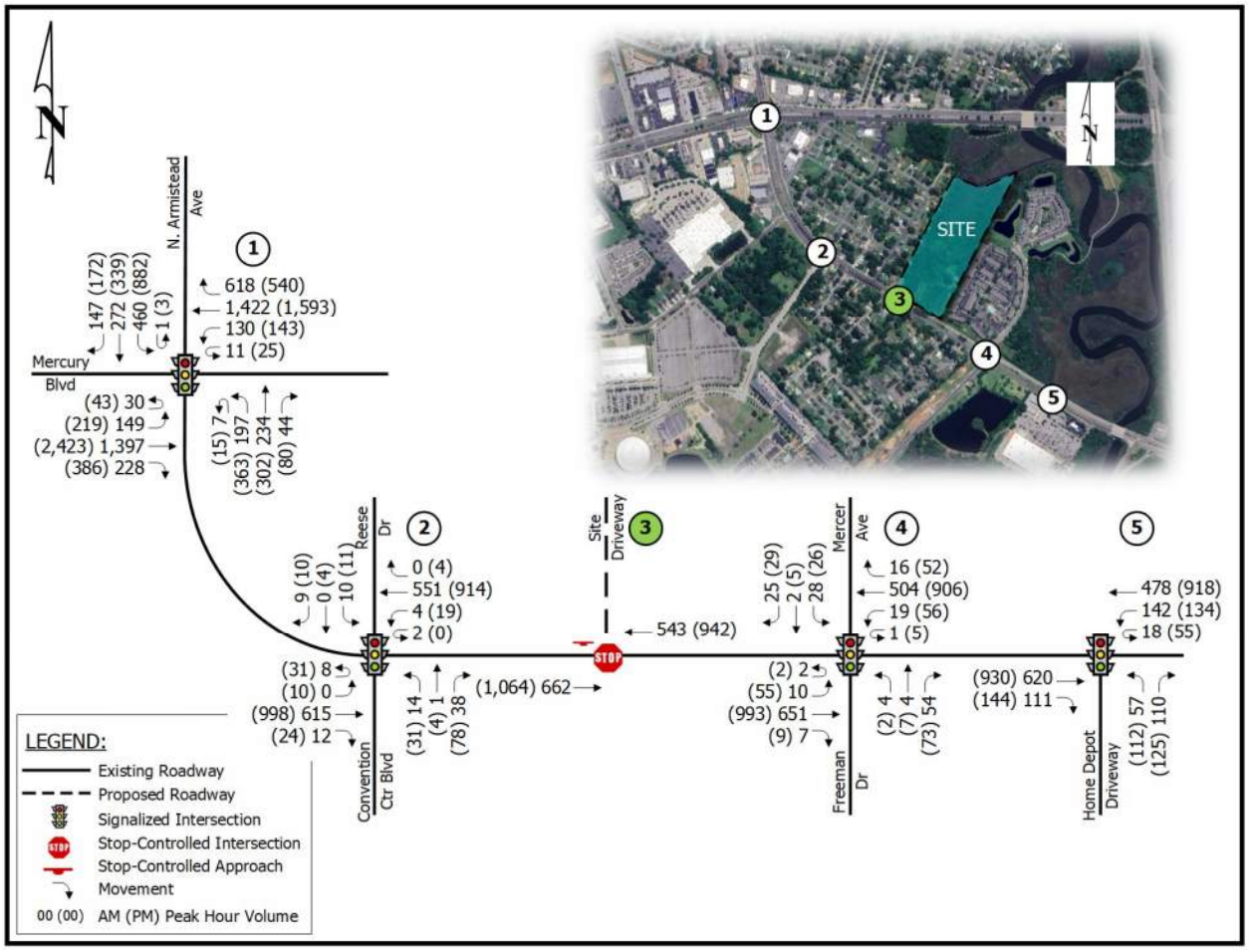


Figure 4-1: 2027 Background Peak Hour Traffic Volumes

5 TRIP GENERATION

The proposed development will consist of up to 215 multi-family dwelling units with access provided via one right-in/right-out only site driveway on N. Armistead Avenue located approximately 65 feet south of the existing median break. A secondary, emergency only, access point will be located near the northern property boundary on N. Armistead Avenue. A site layout is shown on Figure 1-2.

For the purposes of this analysis, the development was assumed to be complete and occupied by 2027.

5.1 SITE TRIP GENERATION

The site-generated traffic volumes shown in Table 5-1 were estimated using the 11th Edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* and were calculated using the number units as the independent variable. The development will consist of up to 215 units of multifamily housing.

Table 5-1: Trip Generation Summary

Buildout				Weekday						
			Land Use	AM Peak Hour			PM Peak Hour			Average
Land Use	Size	Units	Code	In	Out	Total	In	Out	Total	Daily Trips
1. ITE Trip Generation[(1)]										
Residential										
Multifamily Housing (Mid-Rise)	215	D.U.	221	19	64	83	51	33	84	976

Notes: (1) Based on the Institute of Transportation Engineers Trip Generation, 11th Edition. Assumes General Urban/Suburban land use category.

As shown in Table 5-1, the proposed development will generate a total of 83 external AM peak hour trips (19 in and 64 out), 84 external PM peak hour trips (51 in and 33 out), and 976 external average weekday daily trips.

5.2 EXTERNAL TRIP DISTRIBUTIONS

The distribution of trips generated by the proposed developed was based on other traffic studies in the area, the existing traffic volumes, the nature of the use, and local knowledge.

The following overall directional distributions were agreed upon per the scoping document for the site and are shown in Appendix A:

- 40% to/from the north on N. Armistead Avenue; and
- 60% to/from the south on N. Armistead Avenue.

5.3 TRAFFIC ASSIGNMENT

The trip distribution percentages shown on Figure 5-1 were applied to the site trips (Table 5-1) to distribute the external trips to the surrounding roadway network. The resulting site generated external trips are shown on Figure 5-2.

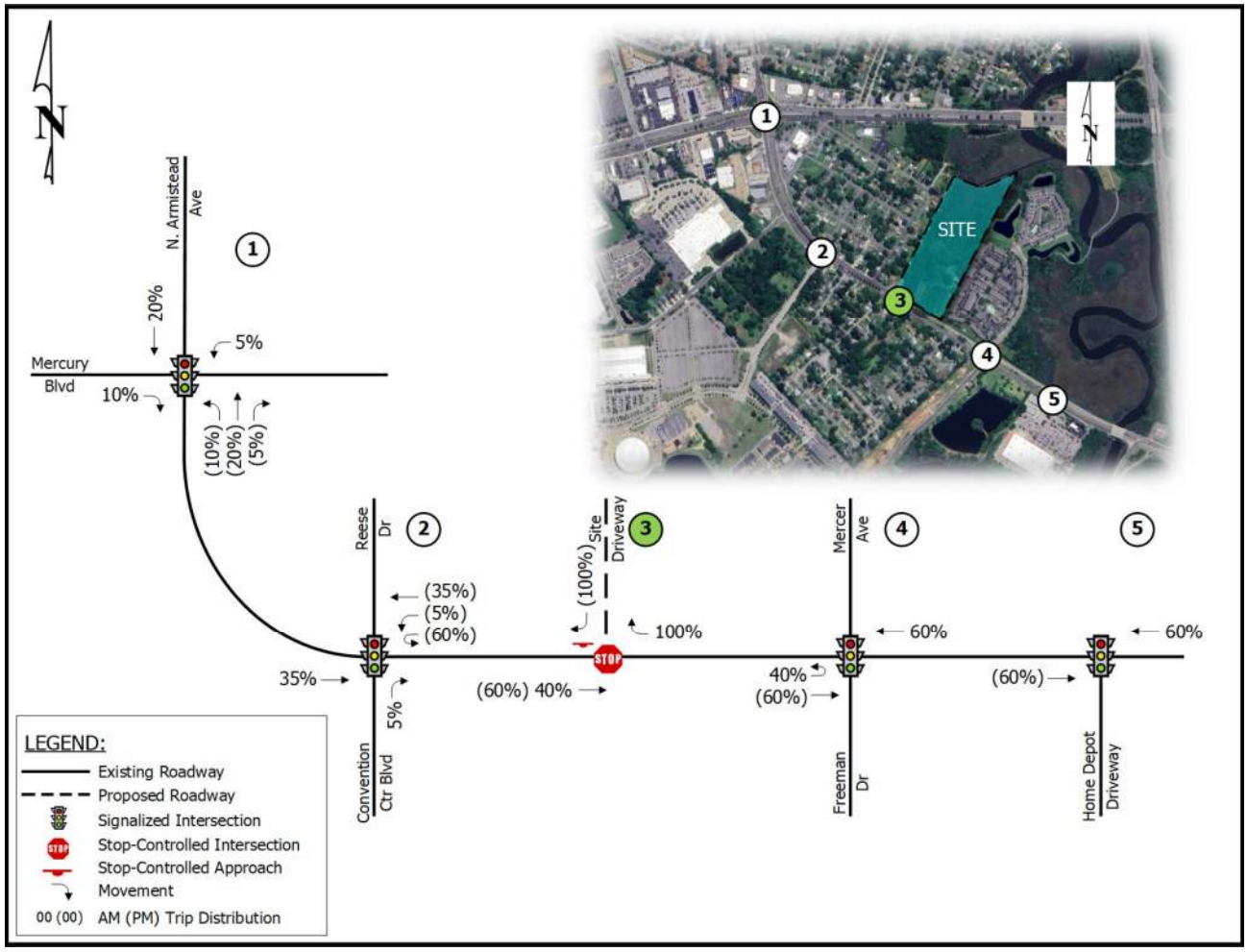


Figure 5-1: Site Trip Distribution

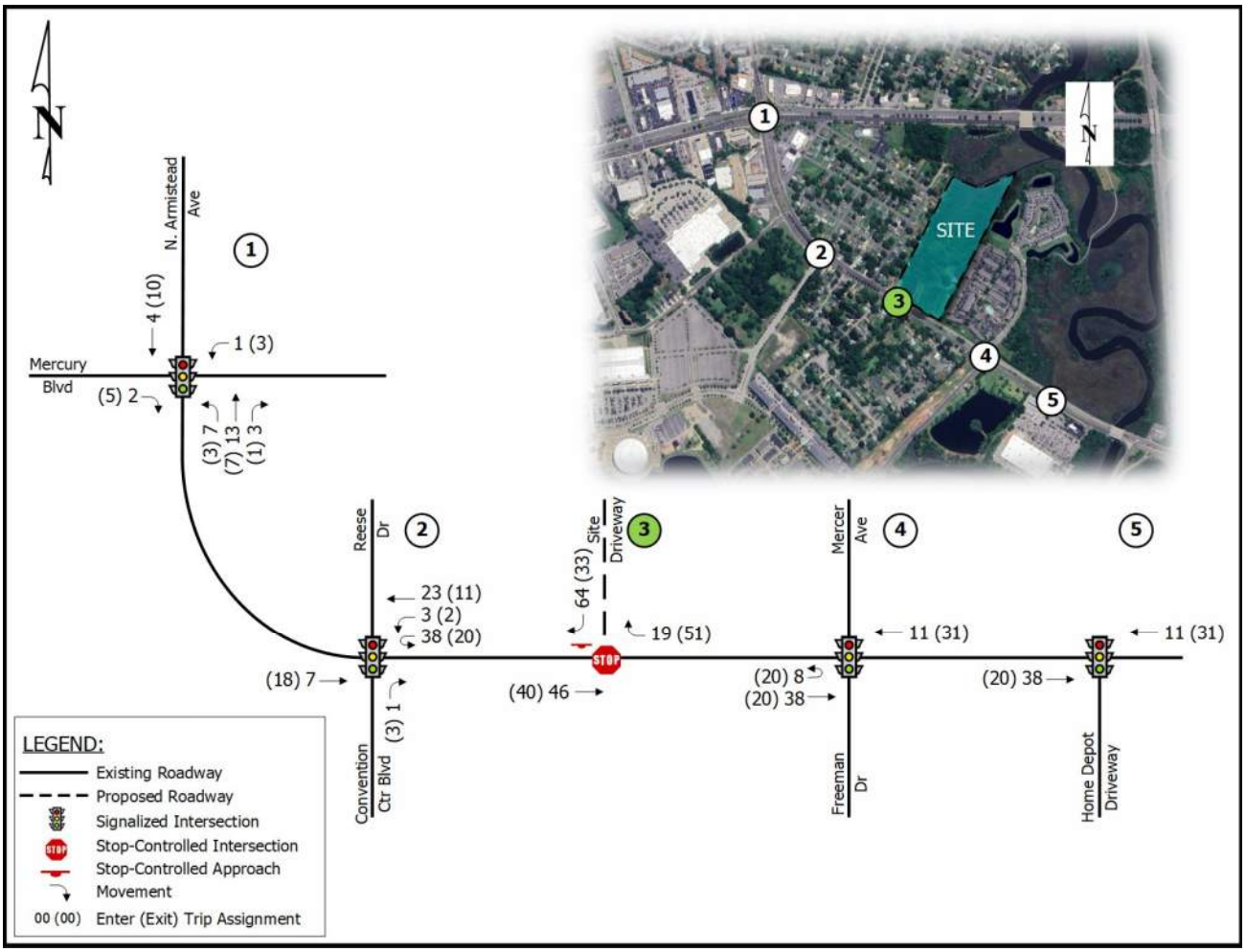


Figure 5-2: Site Generated Trips

6 2027 TOTAL FUTURE CONDITIONS

To complete the analysis of 2027 total conditions (with the proposed development), the estimated site trips were added to the background 2027 traffic volumes. The projected volumes were then used to complete the capacity analysis.

6.1 TOTAL FUTURE TRAFFIC VOLUMES

The site generated trips shown on Figure 5-2 were added to the 2027 background traffic volumes (Figure 4-3) to yield the 2027 total future traffic volumes shown in Figure 6-1.

6.2 TURN LANE WARRANT ANALYSIS

A right turn lane warrant analysis was conducted for the westbound right turn from N. Armistead Road entering the site. The analysis used the right-turn lane nomograph (Figure 3-27) from VDOT's Road Design Manual, Appendix F and the total future traffic volumes shown in Figure 6-1. The analysis is shown in Figure 6-2 and indicates a right turn lane taper only is warranted.

Per Figure 3-1 of Appendix F, with a posted speed limit of 45 mph, the taper length shall be 100 feet.

6.3 2027 FUTURE CONDITIONS ANALYSIS RESULTS

Table 6-1 summarize the 2027 total future intersection LOS, delay, 95th percentile queue lengths (Synchro), and maximum queue lengths (SimTraffic) based on the existing intersection geometry (Figure 2-1), 2027 total future peak hour traffic volumes (Figure 6-1) and the existing signal timings as provided by the City of Hampton.

The corresponding SYNCHRO and SimTraffic reports are included in Appendix F. Note that the intersection numbers shown on the LOS, delay, and queue length summary tables correspond with the intersection numbers used in the SYNCHRO models and report figures.

As shown in Table 6-1, the results of the analysis include the following:

- The signalized intersection of N. Armistead Avenue and Mercury Boulevard is expected to operate at LOS D during the AM and PM peak hours.
    - Note that the overall delay is expected to increase by 0.2 second in the AM peak hour and 0.4 second in the PM peak hour between Background and Future conditions. This increase would not be perceptible to drivers travelling through the intersection.
    - The site trips account for just 0.5% of the total vehicles in the intersection in the AM peak hour and 0.4% in the PM peak hour.

- The signalized intersection of N. Armistead Avenue and Convention Center Boulevard/Reese Drive is expected to continue to operate at LOS B during the AM and PM peak hours, with all movement operating at LOS E or better.

- The unsignalized intersection of N. Armistead Avenue and Site Driveway is expected to operate with short delays (less than 25 seconds) during the AM and PM peak hours, with queues of three vehicles or less with the following improvements:
    - Construct the site driveway with one ingress lane and one egress lane

- The signalized intersection of N Armistead Avenue and Freeman Drive/Mercer Avenue is expected to continue to operate at LOS A during the AM and PM peak hours, with all movements operating at LOS E or better.

- The signalized intersection of N Armistead Avenue and Lake Hampton Drive is expected to continue to operate at LOS B during the AM and PM peak hours with all movement operating at LOS E or better.

Table 6-1: 2027 Total Future Conditions Analysis Summary

Intersection and Type of Control	Movement and Approach	Turn Lane Storage (ft)	AM PEAK HOUR				PM PEAK HOUR			
			Delay [1] (sec/veh)	LOS [1]	HCS 95th Percentile Queue Length (ft)	Simulated Maximum Queue Length (ft)	Delay [1] (sec/veh)	LOS [1]	HCS 95th Percentile Queue Length (ft)	Simulated Maximum Queue Length (ft)
1. N Armistead Ave (N-S)	EB Left [4]	300	54.5	D	109	203	75.9	E	191	315
Mercury Blvd (E-W)	EB Thru		27.3	C	297	318	48.6	D	763	795
Signalized	EB Right	145	14.6	B	19	103	20.2	C	96	290
	EB Approach		*28.4*	*C*	-	-	*47.3*	*D*	-	-
	WB Left [4]	370	53.7	D	89	205	82.7	F	139	305
	WB Thru		28.8	C	303	315	41.5	D	464	461
	WB Right	395	31.0	C	237	322	36.2	D	85	309
	WB Approach		*31.0*	*C*	-	-	*43.3*	*D*	-	-
	NB Left [2]		50.3	D	82	141	74.4	E	183	240
	NB Left-Thru		56.1	E	146	163	84.4	F	#251	324
	NB Right [2]		0.0	A	0	0	0.1	A	0	40
	NB Approach		*48.5*	*D*	-	-	*70.6*	*E*	-	-
	SB Left [2]	305	52.5	D	164	296	70.2	E	386	300
	SB Thru		50.7	D	156	285	56.8	E	231	1,176
	SB Right	325	45.5	D	38	145	53.3	D	110	145
	SB Approach		*50.8*	*D*	-	-	*64.8*	*E*	-	-
	Overall		**35.0**	**D**	**-**	**-**	**51.7**	**D**	**-**	**-**
2. N Armistead Ave (E-W)	EB Left	390	58.9	E	23	36	61.1	E	75	76
Convention Center Blvd (N)	EB Thru		10.5	B	177	185	12.6	B	320	263
Reeses Dr (S)	EB Right [3]	340	6.4	A	0	16	5.9	A	0	23
Signalized	*EB Approach*		*11.1*	*B*	-	-	*14.3*	*B*	-	-
	WB Left [2]	480	56.8	E	40	67	67.5	E	40	58
	WB Thru		10.6	B	114	112	7.1	A	104	224
	WB Right	190	0.0	A	0	0	8.7	A	m0	10
	WB Approach		*14.1*	*B*	-	-	*9.6*	*A*	-	-
	NB Left		50.0	D	23	40	59.1	E	44	58
	NB Left-Thru		50.0	D	23	18	59.1	E	44	28
	NB Right		49.7	D	0	50	58.3	E	0	74
	NB Approach		*49.8*	*D*	-	-	*58.5*	*E*	-	-
	SB Left-Thru-Right		52.3	D	0	46	62.1	E	45	62
	SB Approach		*52.3*	*D*	-	-	*62.1*	*E*	-	-
	Overall		**14.6**	**B**	**-**	**-**	**15.1**	**B**	**-**	**-**
3. N Armistead Ave (E-W)	EB Thru		-	-	-	-	-	-	-	-
Site Driveway (S)	*EB Approach*		-	-	-	-	-	-	-	-
Unsignalized	WB Thru-Right		-	-	-	-	-	-	-	-
	WB Approach		-	-	-	-	-	-	-	-
	SB Right		10.7	B	8	56	12.7	B	5	58
	SB Approach		*10.7*	*B*	-	-	*12.7*	*B*	-	-
4. N Armistead Ave (E-W)	EB Left	260	3.9	A	7	33	3.5	0	18	101
Freeman Dr (N)	EB Thru		5.8	A	122	172	6.0	A	150	227
Mercer Ave (S)	EB Thru-Right		-	-	-	-	-	-	-	-
Signalized	*EB Approach*		*5.7*	*A*	-	-	*5.9*	*A*	-	-
	WB Left	260	3.7	A	6	44	3.3	A	14	116
	WB Thru		5.0	A	90	130	5.3	A	130	197
	WB Right		4.8	A	0	43	0.0	A	0	44
	WB Approach		*5.0*	*A*	-	-	*4.9*	*A*	-	-
	NB Left-Thru		48.2	D	22	60	58.0	E	26	73
	NB Right	50	48.0	D	0	48	57.9	E	24	54
	NB Approach		*48.0*	*D*	-	-	*57.9*	*E*	-	-
	SB Left		49.1	D	53	52	59.2	E	61	62
	SB Thru-Right	355	47.9	D	0	42	57.7	E	0	48
	SB Approach		*48.6*	*D*	-	-	*58.5*	*E*	-	-
	Overall		**9.0**	**A**	**-**	**-**	**8.7**	**A**	**-**	**-**
5. N Armistead Ave (E-W)	EB Thru		7.1	A	74	201	6.6	A	164	367
Lake Hampton Dr (N)	EB Right	205	5.7	A	0	151	9.6	A	28	205
Signalized	*EB Approach*		*6.9*	*A*	-	-	*7.0*	*A*	-	-
	WB Left	205	4.2	A	48	104	6.8	A	68	164
	WB Thru		3.4	A	66	102	4.7	A	175	185
	WB Approach		*3.6*	*A*	-	-	*5.0*	*A*	-	-
	NB Left		49.5	D	83	86	61.3	E	156	127
	NB Right	130	46.5	D	54	100	56.7	E	58	154
	NB Approach		*47.5*	*D*	-	-	*52.5*	*D*	-	-
	Overall		**9.8**	**A**	**-**	**-**	**10.9**	**B**	**-**	**-**

[1] Overall intersection LOS and delay reported for signalized intersections and roundabouts only.

[2] Dual turn lanes; average storage is provided.

[3] Dual Right Turn Lanes, storage for outermost lane only

[4] Triple Turn Lanes, average storage provided

† SYNCHRO does not provide level of service or delay for unsignalized movements with no conflicting volumes.

- 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

m - Volume for 95th percentile queue is metered by upstream signal.

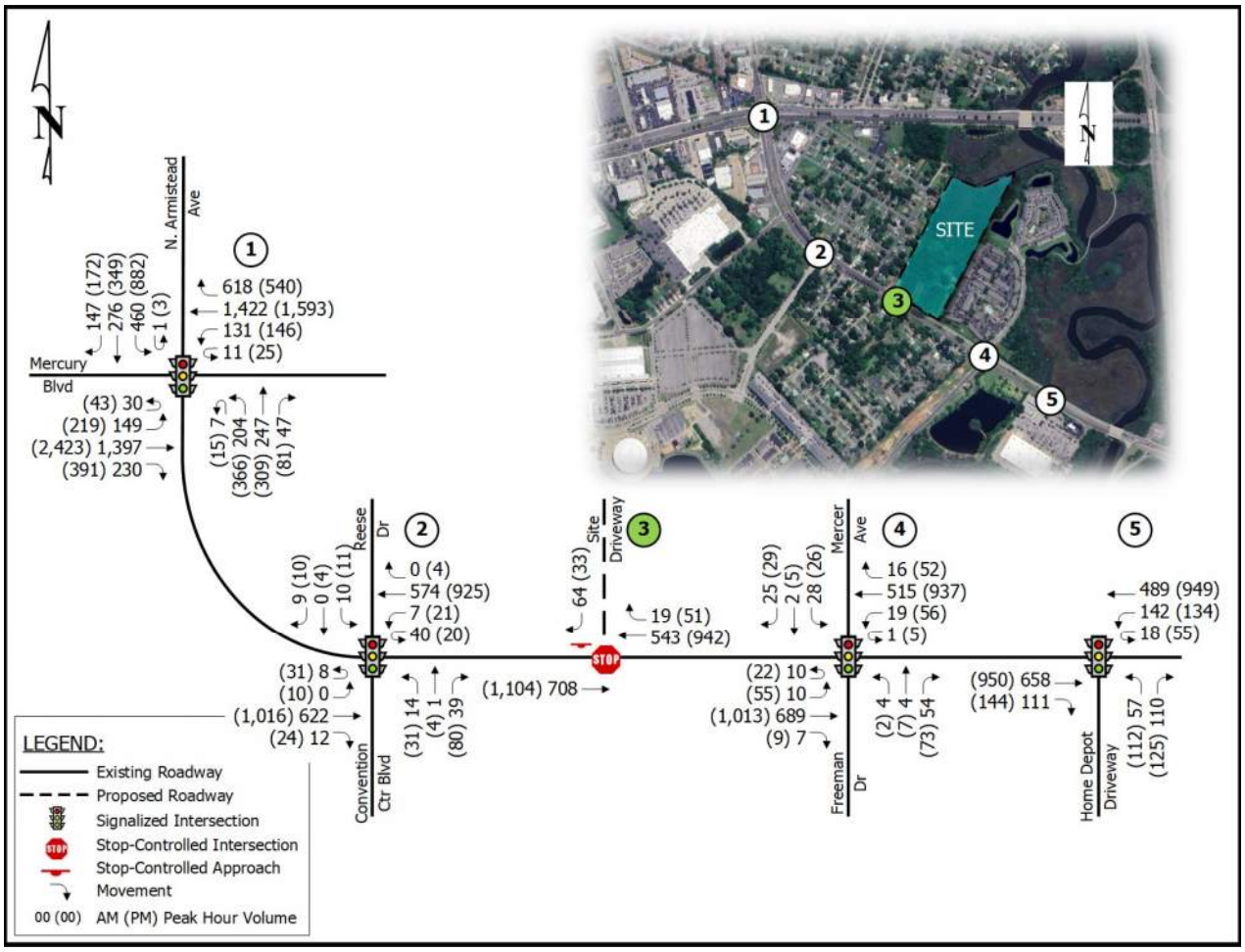


Figure 6-1: 2027 Total Future Peak Hour Traffic Volumes

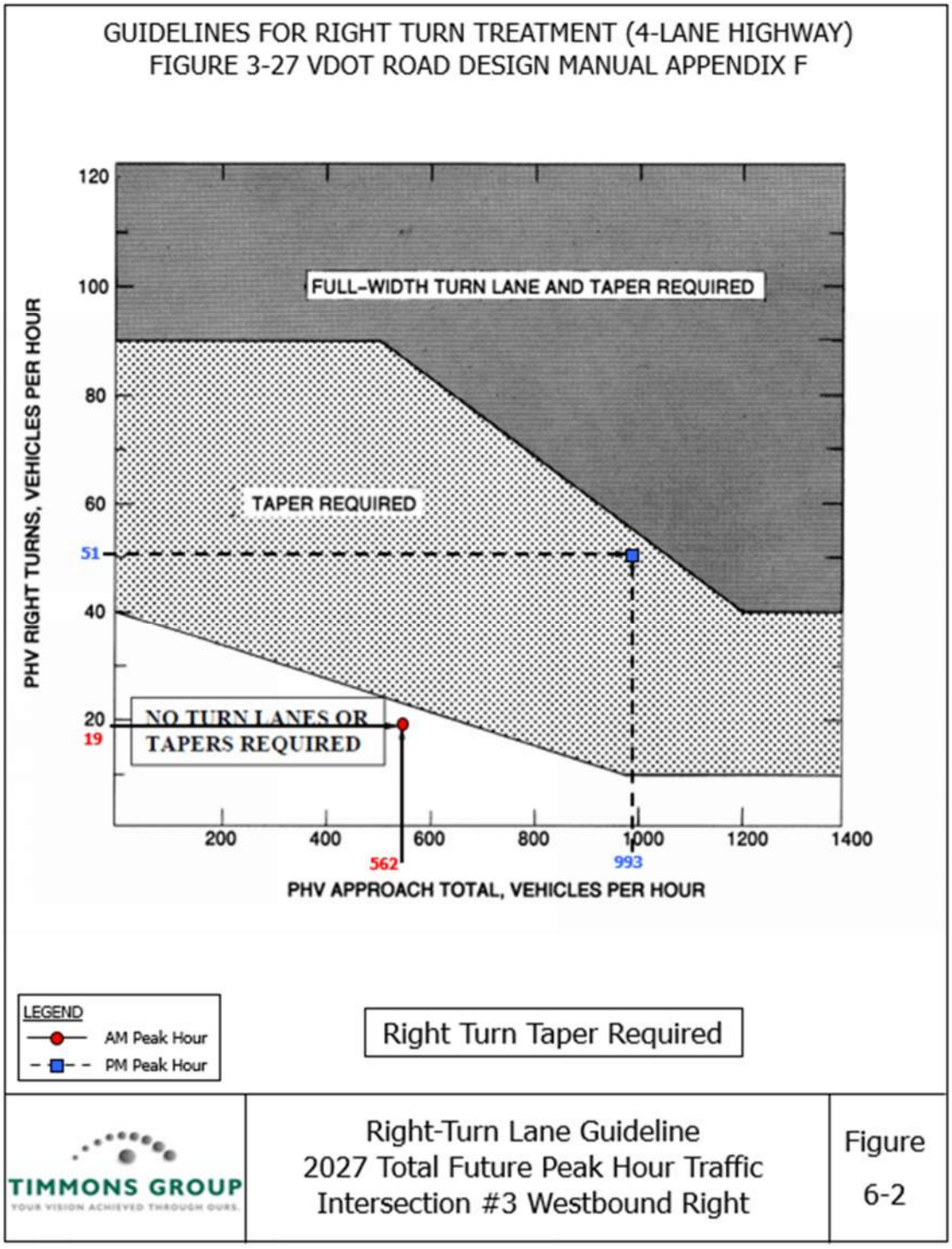


Figure 6-2: 2027 Turn Lane Warrant Analysis

7 CONCLUSIONS

Analyses were performed for the 2024 existing volumes, the 2027 background volumes (including the approved background development and growth), and the 2027 total future volumes, which includes site traffic generated by the proposed development.

7.1 PRINCIPAL FINDINGS AND RECOMMENDATIONS

Based on the analysis results, all study intersections will operate with acceptable queueing and delay with the development of the site. No improvements are required at any of the study intersections beyond the construction of a westbound right turn lane (100 feet of storage and 100 feet of taper) along N. Armistead Avenue at the site entrance.

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Appendix A – Scoping Documents

City of Hampton TIA Scoping Checklist

Project Name: Riverbend Landing **TIA Scoping Date:** 4/30/24

☐ **TIA Need Screening Forms are Attached. Project Reference #:** _____ **Decision Date**: _____

☒ **Site Plan and Access**

☒ Provide a site plan illustrating site access, internal and external roadways, buildings and land uses.

☒ Identify site access

☒ Description and map or diagram of nearby uses, including parcel zoning.

New Access	On Road	Access Type		Driveway Spacing		
	Road Name	Permitted Movements	Traffic Control	Distance (ft)	Direction	Nearest Intersection / Access
Access A	N Armistead Avenue	Full Access	Unsignalized	370'	East of	N Armistead Ave/Finley St
Access B						
Access C						
Access D						
Access E						
Access F						
Access G						
Access H						

Existing Access	Existing Intersection of		Access Modification	**Proposed Interconnectivity** (If Applicable)		
	Road A	Road B		Connector #	Road Connected	Adjacent Development
Access 1				Connector 1		
Access 2				Connector 2		
Access 3				Connector 3		
Access 4				Connector 4		

☒ Additional access clarifications and provisions (e.g., proposed control-of-access or median breaks, modifications of existing access, loading/unloading area access, bike/pedestrian accommodation).

Proposed access located 60' east of existing median break. Project will explore relocating the median break. If that cannot occur, the entrance will be right-in/right out only.

☒ Trip Generation

The TIA Consultant shall prepare trip generation estimates following the current *Virginia Department of Transportation Traffic Operations and Safety Manual (TOSAM) – Version 2.0* and *City of Hampton TIA Policy*.

ITE LUC	Proposed Land Use	Size	Unit	Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
221	Multi-family Residential (Mid Rise)	216	D.U.	981	Weekday	19	64	83	52	33	85	ITE TripGen
Unadjusted Site Trips				981	Weekday	19	64	83	52	33	85	
Internal Capture Trips (Attach Calculation Sheets)												
Internal Capture % of Unadjusted Site Trips				%		%			%			
LUC	Proposed Land Use	Any Internal Trips?		Pass-By % of External Trips								
		None		%		%			%			
				%		%			%			
				%		%			%			
				%		%			%			
				%		%			%			
Pass-By Trips (Attach Calculation Sheets)												
Adjacent Street Volumes												
Non-Pass-By Primary Trips												
Diverted Trips, if Applicable and Justifiable												

**Explain local or other data sources, if used:

☐ Existing Site Trip Information for Redevelopment Projects (Attach separate sheets as needed)

ITE LUC	Existing Land Use	Size	Unit	Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
Total Existing Site Trips												

☒ **Trip Distribution**

☒ Trip distribution diagrams are submitted concurrently with this document (attach separate sheets).

☐ Trip distribution diagrams will be submitted separately, along with supporting information, to the City Engineer or representative for review and approval prior to capacity analysis. The trip distribution shall be based on the current and anticipated traffic patterns, as well as instructions noted below.

If required by the City Engineer, the following additional diagrams shall also be submitted:

☐ Mixed-Use Developments (separate diagrams for residential, commercial, and office trips)

☐ Inter-Development Trips (if 'internal" trips cross public streets)

☐ Pass-By Trips

☐ Diverted Trips

☐ Each Analysis Period

☐ **Mode Split**

☐ Provide Data Source and Justification

Mode / Period	Auto		
AM Peak	%	%	%
PM Peak	%	%	%
Daily	%	%	%
	%	%	%

☐ Identify proper infrastructure and accommodation for other modes of travel.

☒ **Analysis Peak Periods:**

☒ Weekday AM Peak: 7AM - 9AM

☒ Weekday PM Peak: 4PM - 6PM

☐ Weekend Peak: _____

☐ Other: _____

☒ **Peak Hour Factors (PHF):**

- ☒ Future Analysis PHF of 0.92:
- ☐ Future Analysis PHF of 0.88:
- ☐ PHF Based On Future Land Use:
- ☐ PHF Existing Traffic Count Data:
- ☐ Other:

☒ **Study Area Intersections and Data Collection**

The study area shall include the site access intersections (both new and existing) identified under "Site Plan and Access" on page 1, as well as the following external and, if applicable, internal intersections.

External Intersections	Intersection of		Traffic Control	Intersection Turning Movement Counts			Notes
	Road A	Road B		New / Existing	Date of Counts	Growth Adjustment	
#1	N Armistead Ave	Mercury Blvd	Signalized	New	4/23/24	None	-
#2	N Armistead Ave	Convention Center Blvd	Signalized	New	4/23/24	None	-
#3	N Armistead Ave	Site Ent	Unsignalized	New	4/23/24	None	-
#4	N Armistead Ave	Mercer Ave/ Freeman Dr	Signalized	New	4/23/24	None	-
#5	N Armistead Ave	Home Depot	Signalized	New	4/23/24	None	-
#6							
#7							
#8							
#9							
#10							
#11							
#12							

Internal Intersection	Intersection of		Access Type		Intersection Spacing		
	Road A	Road B	Traffic Control	Permitted Movements	Distance (ft)	Direction	Nearest Intersection
#101							
#102							
#103							
#104							
#105							

The following data will be collected:

- ☒ New traffic turning movement counts in ☒ 15-min intervals ☐ 5-min intervals (near schools)
  Unless otherwise noted above, new traffic counts shall be collected at the existing study intersections during the analysis periods. Weekday counts shall avoid Mondays, Fridays, holidays, school breaks, road closures, and major weather events.
- ☒ Roadway/Intersection Configuration & Traffic Control
- ☒ Traffic Signal Phasing & Timing Data
- ☒ Crash Data & Analysis
- ☐ Speed Studies
- ☐ Sight Distances
- ☒ Pedestrian & Bicycle Facilities
- ☒ Transit Routes
- ☐ Other

☐ **Future Year Analysis**

The following data will be collected:

- ☒ Project Build-Out Year: 2027
- ☐ Future Analysis Build-Out Year(s): _____
- ☐ Identify below any funded/committed future transportation improvements, as well as any approved but incomplete developments near the site.

Funded CIP or Other Improvement Project	Project Description	Year Complete
Armistead Ave	Fiber, road grade, and trail improvements	2028

Nearby Approved Development	Location	Future Land Use (exclude any complete phases)	Committed Improvements
None			

- ☒ Annual Growth Factor: 1% %
- ☒ Justification/Data Source: Proposed - consistent with recent studies in the City

☐ **Local Comprehensive Transportation Plan Compliance**

- ☐ Identify Applicable Local Transportation Planning Documents

☒ **Identify Applicable Roadways inside the Study Area**

Road Name	Classification	Speed Limit	Proposed Cross-Section	Proposed Right-of-Way	Compliance Requirements	Affect Study Intersection #
N Armistead Avenue	Principal Arterial	45				1,2,3,4,5
Convention Center Blvd	Major Collector	35				2
Mercer Avenue	Not Classified	Not Posted				4
Freeman Drive	Not Classified	25				4
Reese Drive	Not Classified	Not Posted				2
Mercury Blvd.	Principal Arterial	45				1

☒ **Study Method**

The traffic analysis shall follow the current *Virginia Department of Transportation Traffic Operations and Safety Manual (TOSAM) – Version 2.0* and use the current approved version of analysis software (e.g. Synchro/SimTraffic, HCS, Sidra Intersection, TransModeler).

The study shall include the following analysis scenarios for each analysis period.

- ☒ Existing Conditions
- ☒ Future Background Conditions (existing + background growth + approved developments + committed or funded improvements)
- ☒ Future Build Conditions (future no-build + site trips)
- ☐ Future Build with Improvements Conditions (future build traffic with improvements to mitigate the proposed development's impacts)
- ☐ Future Build-Out Year Conditions: _____
- ☐ Pedestrian & Bicycle Facilities
- ☐ Transit Routes
- ☐ Other

The following additional analysis/outputs should be provided as warranted:

- ☐ Signal Warrant Analysis for accesses/intersections: _____
- ☐ Multi-Modal Level of Service Analysis
- ☐ School Loading Zone Traffic Simulation
- ☐ Phasing Analysis (scope separately as needed)
- ☒ Safety/Crash Analysis
- ☐ Multi-Way Stop Intersection Analysis
- ☐ Parking Analysis
- ☐ Traffic Calming Devices
- ☒ Other: Turn lane warrant analysis at site entrance

☒ **Submittals**

In addition to the hardcopies required below, the TIA Consultant shall provide the City Engineer or representative and, if required, the local government an electronic copy of the study documents, including the latest site plan, figures and appendices, in searchable PDF files and the original traffic analysis files (e.g., Synchro, HCS). To expedite review, the NCDOT electronic submittals shall also be delivered concurrently to:

☐ VDOT Div. Traffic Engr ☐ Hampton CDD ☐ Hampton PW Traffic Engineering ☐ Other _____

Submittals	NCDOT		Local Government	
	Electronic	Hardcopy	Electronic	Hardcopy
Trip Generation & Distribution	Required			
Draft TIA Report	Required			
Final Sealed TIA Report	Required			

☐ **Additional Comments**

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Agreement by All Parties

The undersigned agree to the contents and methodology described above for completing the required traffic impact analysis for the proposed development identified herein. Any changes to the above methodology contemplated by the Applicant or the TIA Consultant must be submitted to the City Engineer and VDOT in writing. If approved by the City Engineer and VDOT, then such changes may be accepted for the TIA report. Subsequent revisions to the development plan (e.g. land use, density, site access, or schedule) may require additional scoping and analysis, and may modify the TIA requirements.

This agreement shall become effective on the date approved by the City of Hampton, and shall expire _____ months after the effective date or upon significant changes to the roadway network and/or development assumptions, whichever occurs first. Once expired, renewal or re-scoping will be required for subsequent TIA submittals.

APPLICANT

_____	_____	_____
Signature	Print Name	Date

TIA CONSULTANT

	Steve Schmidt	05/06/24
Signature	Print Name	Date

CITY OF HAMPTON REPRESENTATIVE

_____	_____	_____
Signature	Print Name	Date

VDOT DISTRICT REPRESENTATIVE (If Applicable)

Reviewed and approved by the VDOT Division_____District____on_____.

_____	_____
Signature	Print Name

City of Hampton TIA Submittal

Submittal: _____ **Document Date:** _____

Project Name: _____ **Previous Name:** If Applicable _____

VDOT District:_____ **County:**_____ **Municipality:**_____

TIA Consultant:_____ **Submitted By:** _____

Phone Number:_____ **Email:**_____

TIA Scoping Checklist Approval Date:_____ **Unadjusted Daily Site Trips:** _____

**The approved TIA Scoping Checklist is included in this submittal.

- ☐ LOS C or better is expected at all study intersections after proposed mitigations.
- ☐ The study report is sealed by a VA Professional Engineer with expertise in traffic engineering.
- ☐ This study has identified all known deficiencies with and without the proposed development.
- ☐ This study has identified mitigation measures to adequately accommodate the site trips. Explain here if any of the boxes above are unchecked:

Deviations and Justifications (e.g., changes in site plan, development schedule, site trip and off-site trip estimates, study area, data collection, analysis period and method. Attached separate sheets if needed.

_____	_____	_____
TIA Consultant's Signature (Professional Engineer of TIA Record)	Print Name	Date

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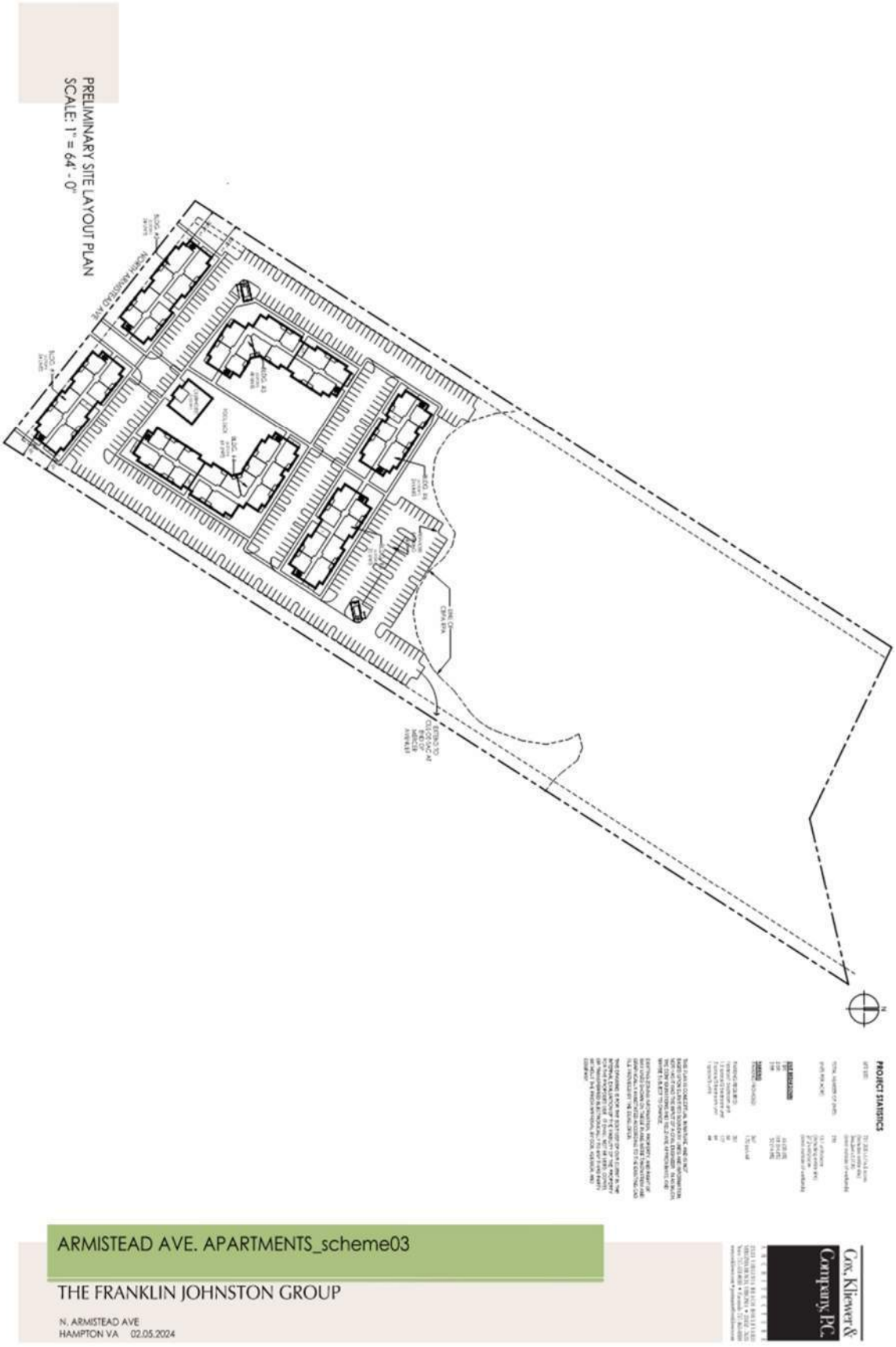
Site Location and Roadway Network
Riverbend Landing
City of Hampton, Virginia

Figure 1



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Site Layout Plan
Riverbend Landing
City of Hampton, Virginia

Figure
2

TIMMONS GROUP
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Proposed Trip Distributions
Riverbend Landing
City of Hampton, Virginia

Figure 3

Steve Schmidt

From: Moyer, Gregory <gregory.moyer@hampton.gov>
Sent: Wednesday, May 8, 2024 4:06 PM
To: Steve Schmidt; Bowen, Carol; Newsome, McCord
Subject: RE: Traffic Study Scoping - 1616 North Armistead

Steve,

I do not have any additional comments.

Gregory

Gregory Moyer, PE
Transportation Engineer
Public Works – Engineering
22 Lincoln Street 4th Floor
Hampton, VA 23669
Phone: 757-727-6197
Cell: 757-778-3827

HAMPTON VA PUBLIC WORKS

From: Steve Schmidt <Steve.Schmidt@timmons.com>
Sent: Monday, May 6, 2024 2:27 PM
To: Moyer, Gregory <gregory.moyer@hampton.gov>; Bowen, Carol <carol.bowen@hampton.gov>; Newsome, McCord <mnewsome@hampton.gov>
Subject: [EXTERNAL] RE: Traffic Study Scoping - 1616 North Armistead

All,

We have revised the scoping documents from our meeting last week and have included them for your review. Please let us know if you have any questions/comments on them.

Can you please send along the signal timings for the Armistead/Mercury, Armistead/Convention Center, Armistead/Mercer, and Armistead/Home Depot intersections?

Thank you for all your help

Steve

Steve Schmidt, PE, PTOE
Senior Project Manager – Traffic Analysis & Planning

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1001 Boulders Parkway, Suite 300 | Richmond, VA 23225
Office: 804.200.6502 | Fax: 804.560.1016

Mobile: 540.818.3356 | steve.schmidt@timmons.com
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From: Moyer, Gregory <gregory.moyer@hampton.gov>
Sent: Wednesday, May 1, 2024 12:52 PM
To: Steve Schmidt <Steve.Schmidt@timmons.com>
Subject: RE: Traffic Study Scoping - 1616 North Armistead

Steve,

I recommend removing the arrows on the trip distribution map. Let me know if you need any additional information.

Gregory

Gregory Moyer, PE
Transportation Engineer
Public Works – Engineering
22 Lincoln Street 4th Floor
Hampton, VA 23669
Phone: 757-727-6197
Cell: 757-778-3827

From: Steve Schmidt <Steve.Schmidt@timmons.com>
Sent: Tuesday, April 30, 2024 4:06 PM
To: Moyer, Gregory <gregory.moyer@hampton.gov>
Subject: [EXTERNAL] RE: Traffic Study Scoping - 1616 North Armistead

Gregory,

Thank you for your time this morning – I am updating the scoping documents and want to ensure I captured the distribution you suggested correctly. Can you please review the below and let me know if I have anything off?

Thank you,
Steve

Steve Schmidt, PE, PTOE
Senior Project Manager – Traffic Analysis & Planning

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Mobile: 540.818.3356 | steve.schmidt@timmons.com
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From: Moyer, Gregory <gregory.moyer@hampton.gov>
Sent: Thursday, April 18, 2024 8:19 AM
To: Steve Schmidt <Steve.Schmidt@timmons.com>; Newsome, McCord <mnewsome@hampton.gov>
Cc: Megan Lowther <Megan.Lowther@timmons.com>; Bowen, Carol <carol.bowen@hampton.gov>
Subject: RE: Traffic Study Scoping - 1616 North Armistead

Steve,

Please see availability for days and times below for the week of April 29:

April 30: 10 AM to 1:00 PM
May 1: 1:00 PM to 2:00 PM, 3:00 PM to 4:00 PM
May 2: 10:00 AM to 1:00 PM

Let me know if you any of the days and times work for you.

Gregory

Gregory Moyer, PE
Transportation Engineer
Public Works – Engineering
22 Lincoln Street 4th Floor
Hampton, VA 23669
Phone: 757-727-6197
Cell: 757-778-3827

From: Steve Schmidt <Steve.Schmidt@timmons.com>
Sent: Wednesday, April 17, 2024 4:41 PM
To: Moyer, Gregory <gregory.moyer@hampton.gov>; Newsome, McCord <mnewsome@hampton.gov>
Cc: Megan Lowther <Megan.Lowther@timmons.com>; Bowen, Carol <carol.bowen@hampton.gov>
Subject: [EXTERNAL] RE: Traffic Study Scoping - 1616 North Armistead

Thank you Gregory. I appreciate you getting these to us early.

I cannot do the afternoon of the 29th but the rest of the week is wide open. Is there another day/time that would work for the City?

Thank you,
Steve

Steve Schmidt, PE, PTOE
Senior Project Manager – Traffic Analysis & Planning

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Office: 804.200.6502 | Fax: 804.560.1016
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From: Moyer, Gregory <gregory.moyer@hampton.gov>
Sent: Tuesday, April 16, 2024 2:46 PM
To: Steve Schmidt <Steve.Schmidt@timmons.com>; Newsome, McCord <mnewsome@hampton.gov>

Cc: Megan Lowther <Megan.Lowther@timmons.com>; Bowen, Carol <carol.bowen@hampton.gov>
Subject: RE: Traffic Study Scoping - 1616 North Armistead

Steve,

The City is requesting the intersections of Armistead Avenue and Mercury Boulevard and Armistead Avenue and the Home Depot Driveway to be added to the previously proposed study intersections for a total of five study intersections. Let me know if you need any additional information.

Gregory

Gregory Moyer, PE
Transportation Engineer
Public Works – Engineering
22 Lincoln Street 4th Floor
Hampton, VA 23669
Phone: 757-727-6197
Cell: 757-778-3827

From: Steve Schmidt <Steve.Schmidt@timmons.com>
Sent: Tuesday, April 16, 2024 11:07 AM
To: Moyer, Gregory <gregory.moyer@hampton.gov>; Newsome, McCord <mnewsome@hampton.gov>
Cc: Megan Lowther <Megan.Lowther@timmons.com>; Bowen, Carol <carol.bowen@hampton.gov>
Subject: [EXTERNAL] RE: Traffic Study Scoping - 1616 North Armistead

Gregory,

I think that is fine to move the formal scoping meeting to the 29th but I would ask if we could come to an agreement on study intersections prior to then so we can get going on any needed data collection. With the school year winding down, the count schedule is getting tighter and tighter so I would like to get these scheduled as soon as I can. Would that be possible? We can certainly work out all the other parameters of the study at the formal meeting.

We had identified the Armistead/Convention Center/Reese intersection and the Armistead/Freeman/Mercer intersection as the likely offsite intersections to be included in the study. Does that make sense to the City?

Happy to discuss over the phone if needed.

Thank you,
Steve

Steve Schmidt, PE, PTOE
Senior Project Manager – Traffic Analysis & Planning

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Mobile: 540.818.3356 | steve.schmidt@timmons.com
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From: Moyer, Gregory <gregory.moyer@hampton.gov>
Sent: Tuesday, April 16, 2024 9:01 AM
To: Steve Schmidt <Steve.Schmidt@timmons.com>; Newsome, McCord <mnewsome@hampton.gov>
Cc: Megan Lowther <Megan.Lowther@timmons.com>; Bowen, Carol <carol.bowen@hampton.gov>
Subject: RE: Traffic Study Scoping - 1616 North Armistead

Steve,

I received a request this morning to move the meeting to the week of April 29 if possible. Most of the day April 29 is open after 11:00 AM. Let me know. Thank you.

Gregory

Gregory Moyer, PE
Transportation Engineer
Public Works – Engineering
22 Lincoln Street 4th Floor
Hampton, VA 23669
Phone: 757-727-6197
Cell: 757-778-3827

From: Steve Schmidt <Steve.Schmidt@timmons.com>
Sent: Friday, April 12, 2024 1:39 PM
To: Moyer, Gregory <gregory.moyer@hampton.gov>; Newsome, McCord <mnewsome@hampton.gov>
Cc: Megan Lowther <Megan.Lowther@timmons.com>; Bowen, Carol <carol.bowen@hampton.gov>
Subject: [EXTERNAL] RE: Traffic Study Scoping - 1616 North Armistead

Gregory,

Can we please do Monday the 22nd at 11:00? We prefer virtual but can come to you if your prefer. Please let me know and I will send out an invite

Thank you,
Steve

Steve Schmidt, PE, PTOE
Senior Project Manager – Traffic Analysis & Planning

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Office: 804.200.6502 | Fax: 804.560.1016

Mobile: 540.818.3356 | steve.schmidt@timmons.com
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To send files greater than 20MB click here [sendthisfile.com].

From: Moyer, Gregory <gregory.moyer@hampton.gov>
Sent: Thursday, April 11, 2024 11:10 AM
To: Steve Schmidt <Steve.Schmidt@timmons.com>; Newsome, McCord <mnewsome@hampton.gov>
Cc: Megan Lowther <Megan.Lowther@timmons.com>; Bowen, Carol <carol.bowen@hampton.gov>
Subject: RE: Traffic Study Scoping - 1616 North Armistead

Steve,

Please see availability below:

Wednesday, April 17: 1:00 to 2:00 PM or 3:00 PM to 4:30 PM
Thursday, April 18: 10:00 AM to 12:00 PM or 3:30 PM to 4:30 PM
Monday, April 22: 8:00 Am to 9:30 AM, 11:00 AM to 12:00 PM, 1:00 to 2:00 PM
Thursday, April 25: 8:00 AM to 9:30 AM, 1:00 PM to 4:30 PM

Also, please let me know if this will be in person meeting or zoom meeting. Let me know which dates and times work for you.

Gregory

Gregory Moyer, PE
Transportation Engineer
Public Works – Engineering
22 Lincoln Street 4th Floor
Hampton, VA 23669
Phone: 757-727-6197
Cell: 757-778-3827

HAMPTON VA
PUBLIC WORKS

From: Steve Schmidt <Steve.Schmidt@timmons.com>
Sent: Tuesday, April 9, 2024 12:19 PM
To: Newsome, McCord <mnewsome@hampton.gov>; Moyer, Gregory <gregory.moyer@hampton.gov>
Cc: Megan Lowther <Megan.Lowther@timmons.com>
Subject: [EXTERNAL] Traffic Study Scoping - 1616 North Armistead

McCord/Gregory,

We are working on a new project located at 1616 North Armistead that will require a traffic study. We have prepared a draft of our proposed scope but would like to set up a meeting with you as soon as possible to discuss. Can you please check your calendars and let us know your availability?

Thank you,
Steve

Steve Schmidt, PE, PTOE
Senior Project Manager – Traffic Analysis & Planning

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Mobile: 540.818.3356 | steve.schmidt@timmons.com
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Appendix B – Traffic Count Data

TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Convention)
Site Code :
Start Date : 4/23/2024
Page No : 1

Groups Printed- Cars + - Trucks

	Armistead Avenue Southbound						Reese Drive Westbound						Armistead Avenue Northbound						Convention Center Boulevard Eastbound						
Start Time	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Int. Total
07:00 AM	0	124	2	0	1	127	1	0	1	0	2	4	0	71	1	1	0	73	4	0	7	0	0	11	215
07:15 AM	1	137	0	3	0	141	1	0	4	0	0	5	0	82	1	1	0	84	10	0	1	0	0	11	241
07:30 AM	1	129	0	4	0	134	1	0	5	0	0	6	1	102	0	0	0	103	11	0	6	0	0	17	260
07:45 AM	3	172	0	0	1	176	1	0	2	0	1	4	0	99	4	0	0	103	13	1	4	0	0	18	301
Total	5	562	2	7	2	578	4	0	12	0	3	19	1	354	6	2	0	363	38	1	18	0	0	57	1017
08:00 AM	4	137	0	4	0	145	2	0	3	0	0	5	0	102	2	0	0	104	15	0	5	0	0	20	274
08:15 AM	2	143	0	0	0	145	4	0	4	0	0	8	0	125	2	0	0	127	6	0	1	0	0	7	287
08:30 AM	0	160	0	1	0	161	2	0	0	0	1	3	0	156	0	1	0	157	9	0	6	0	0	15	336
08:45 AM	6	157	0	3	0	166	1	0	3	0	0	4	0	152	0	1	0	153	7	1	2	0	0	10	333
Total	12	597	0	8	0	617	9	0	10	0	1	20	0	535	4	2	0	541	37	1	14	0	0	52	1230
Grand Total	17	1159	2	15	2	1195	13	0	22	0	4	39	1	889	10	4	0	904	75	2	32	0	0	109	2247
Apprch %	1.4	97	0.2	1.3	0.2		33.3	0	56.4	0	10.3		0.1	98.3	1.1	0.4	0		68.8	1.8	29.4	0	0		
Total %	0.8	51.6	0.1	0.7	0.1	53.2	0.6	0	1	0	0.2	1.7	0	39.6	0.4	0.2	0	40.2	3.3	0.1	1.4	0	0	4.9	
Cars +	17	1127	2	14	2	1162	12	0	21	0	4	37	1	862	8	4	0	875	64	2	30	0	0	96	2170
% Cars +	100	97.2	100	93.3	100	97.2	92.3	0	95.5	0	100	94.9	100	97	80	100	0	96.8	85.3	100	93.8	0	0	88.1	96.6
Trucks	0	32	0	1	0	33	1	0	1	0	0	2	0	27	2	0	0	29	11	0	2	0	0	13	77
% Trucks	0	2.8	0	6.7	0	2.8	7.7	0	4.5	0	0	5.1	0	3	20	0	0	3.2	14.7	0	6.2	0	0	11.9	3.4

TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Convention)
Site Code :
Start Date : 4/23/2024
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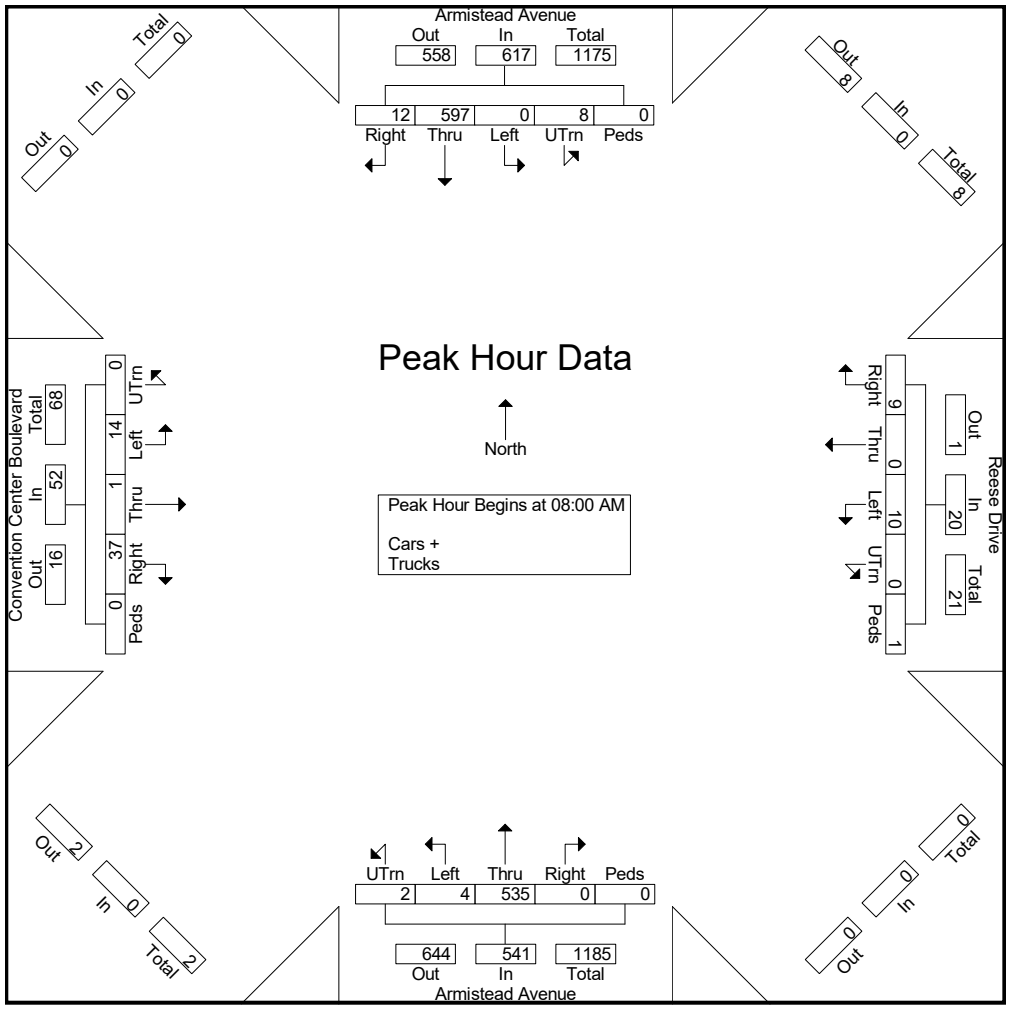
	Armistead Avenue Southbound						Reese Drive Westbound						Armistead Avenue Northbound						Convention Center Boulevard Eastbound						
Start Time	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:00 AM																									
08:00 AM	4	137	0	**4**	0	145	2	0	3	0	0	5	0	102	**2**	0	0	104	**15**	0	5	0	0	**20**	274
08:15 AM	2	143	0	0	0	145	**4**	0	**4**	0	0	**8**	0	125	2	0	0	127	6	0	1	0	0	7	287
08:30 AM	0	**160**	0	1	0	161	2	0	0	0	**1**	3	0	**156**	0	**1**	0	**157**	9	0	**6**	0	0	15	**336**
08:45 AM	**6**	157	0	3	0	**166**	1	0	3	0	0	4	0	152	0	1	0	153	7	**1**	2	0	0	10	333
Total Volume	12	597	0	8	0	617	9	0	10	0	1	20	0	535	4	2	0	541	37	1	14	0	0	52	1230
% App. Total	1.9	96.8	0	1.3	0		45	0	50	0	5		0	98.9	0.7	0.4	0		71.2	1.9	26.9	0	0		
PHF	.500	.933	.000	.500	.000	.929	.563	.000	.625	.000	.250	.625	.000	.857	.500	.500	.000	.861	.617	.250	.583	.000	.000	.650	.915



File Name : Hampton(Armistead and Convention)
Site Code :
Start Date : 4/23/2024
Page No : 1

Groups Printed- Cars + - Trucks

	Armistead Avenue Southbound						Reese Drive Westbound						Armistead Avenue Northbound						Convention Center Boulevard Eastbound						
Start Time	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Int. Total
04:00 PM	6	294	4	9	0	313	3	0	5	0	0	8	1	186	6	0	0	193	27	0	8	0	0	35	549
04:15 PM	8	239	3	6	0	256	1	0	0	0	1	2	1	210	6	0	0	217	20	1	11	0	0	32	507
04:30 PM	4	220	3	9	0	236	5	1	2	0	0	8	1	267	2	0	0	270	16	1	6	0	0	23	537
04:45 PM	5	216	0	6	0	227	1	3	4	0	0	8	1	224	4	0	0	229	13	2	5	0	0	20	484
Total	23	969	10	30	0	1032	10	4	11	0	1	26	4	887	18	0	0	909	76	4	30	0	0	110	2077
05:00 PM	7	263	1	5	1	277	2	0	4	0	0	6	1	227	2	0	0	230	22	0	5	0	2	29	542
05:15 PM	4	251	6	7	0	268	0	0	1	0	1	2	1	223	1	1	0	226	19	1	5	0	0	25	521
05:30 PM	10	202	3	6	0	221	1	0	5	0	0	6	3	194	9	0	0	206	5	0	9	0	0	14	447
05:45 PM	7	205	2	6	0	220	7	1	6	0	0	14	2	192	2	2	0	198	12	0	5	0	0	17	449
Total	28	921	12	24	1	986	10	1	16	0	1	28	7	836	14	3	0	860	58	1	24	0	2	85	1959
Grand Total	51	1890	22	54	1	2018	20	5	27	0	2	54	11	1723	32	3	0	1769	134	5	54	0	2	195	4036
Apprch %	2.5	93.7	1.1	2.7	0		37	9.3	50	0	3.7		0.6	97.4	1.8	0.2	0		68.7	2.6	27.7	0	1		
Total %	1.3	46.8	0.5	1.3	0	50	0.5	0.1	0.7	0	0	1.3	0.3	42.7	0.8	0.1	0	43.8	3.3	0.1	1.3	0	0	4.8	
Cars +	50	1861	22	54	1	1988	19	5	27	0	1	52	11	1713	29	3	0	1756	132	5	51	0	2	190	3986
% Cars +	98	98.5	100	100	100	98.5	95	100	100	0	50	96.3	100	99.4	90.6	100	0	99.3	98.5	100	94.4	0	100	97.4	98.8
Trucks	1	29	0	0	0	30	1	0	0	0	1	2	0	10	3	0	0	13	2	0	3	0	0	5	50
% Trucks	2	1.5	0	0	0	1.5	5	0	0	0	50	3.7	0	0.6	9.4	0	0	0.7	1.5	0	5.6	0	0	2.6	1.2

TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Convention)
Site Code :
Start Date : 4/23/2024
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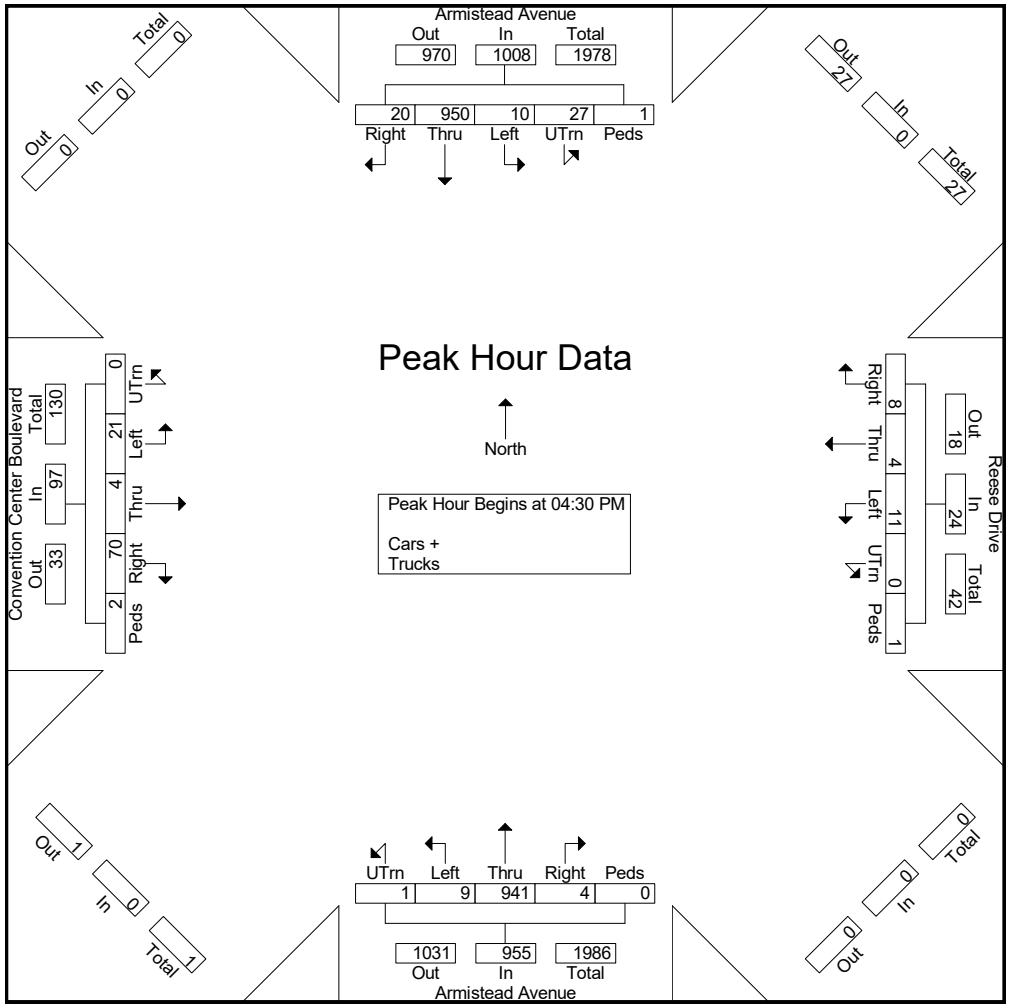
	Armistead Avenue Southbound						Reese Drive Westbound						Armistead Avenue Northbound						Convention Center Boulevard Eastbound						
Start Time	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:30 PM																									
04:30 PM	4	220	3	**9**	0	236	**5**	1	2	0	0	**8**	**1**	**267**	2	0	0	**270**	16	1	**6**	0	0	23	537
04:45 PM	5	216	0	6	0	227	1	**3**	**4**	0	0	8	1	224	**4**	0	0	229	13	**2**	5	0	0	20	484
05:00 PM	**7**	**263**	1	5	**1**	**277**	2	0	4	0	0	6	1	227	2	0	0	230	**22**	0	5	0	**2**	**29**	**542**
05:15 PM	4	251	**6**	7	0	268	0	0	1	0	**1**	2	1	223	1	**1**	0	226	19	1	5	0	0	25	521
Total Volume	20	950	10	27	1	1008	8	4	11	0	1	24	4	941	9	1	0	955	70	4	21	0	2	97	2084
% App. Total	2	94.2	1	2.7	0.1		33.3	16.7	45.8	0	4.2		0.4	98.5	0.9	0.1	0		72.2	4.1	21.6	0	2.1		
PHF	.714	.903	.417	.750	.250	.910	.400	.333	.688	.000	.250	.750	1.00	.881	.563	.250	.000	.884	.795	.500	.875	.000	.250	.836	.961



TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Driveway)
Site Code :
Start Date : 4/23/2024
Page No : 1

Groups Printed- Cars + - Trucks

	Armistead Ave Southbound			Armistead Ave Northbound			Residential Driveway Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
07:00 AM	0	131	131	71	0	71	0	0	0	202
07:15 AM	0	152	152	81	0	81	0	0	0	233
07:30 AM	0	145	145	99	0	99	0	0	0	244
07:45 AM	0	182	182	100	0	100	0	0	0	282
Total	0	610	610	351	0	351	0	0	0	961
08:00 AM	0	162	162	103	0	103	0	1	1	266
08:15 AM	0	148	148	123	0	123	0	0	0	271
08:30 AM	0	169	169	150	0	150	0	0	0	319
08:45 AM	0	164	164	151	0	151	0	0	0	315
Total	0	643	643	527	0	527	0	1	1	1171
Grand Total	0	1253	1253	878	0	878	0	1	1	2132
Apprch %	0	100		100	0		0	100		
Total %	0	58.8	58.8	41.2	0	41.2	0	0	0	
Cars +	0	1210	1210	851	0	851	0	1	1	2062
% Cars +	0	96.6	96.6	96.9	0	96.9	0	100	100	96.7
Trucks	0	43	43	27	0	27	0	0	0	70
% Trucks	0	3.4	3.4	3.1	0	3.1	0	0	0	3.3

TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Driveway)
Site Code :
Start Date : 4/23/2024
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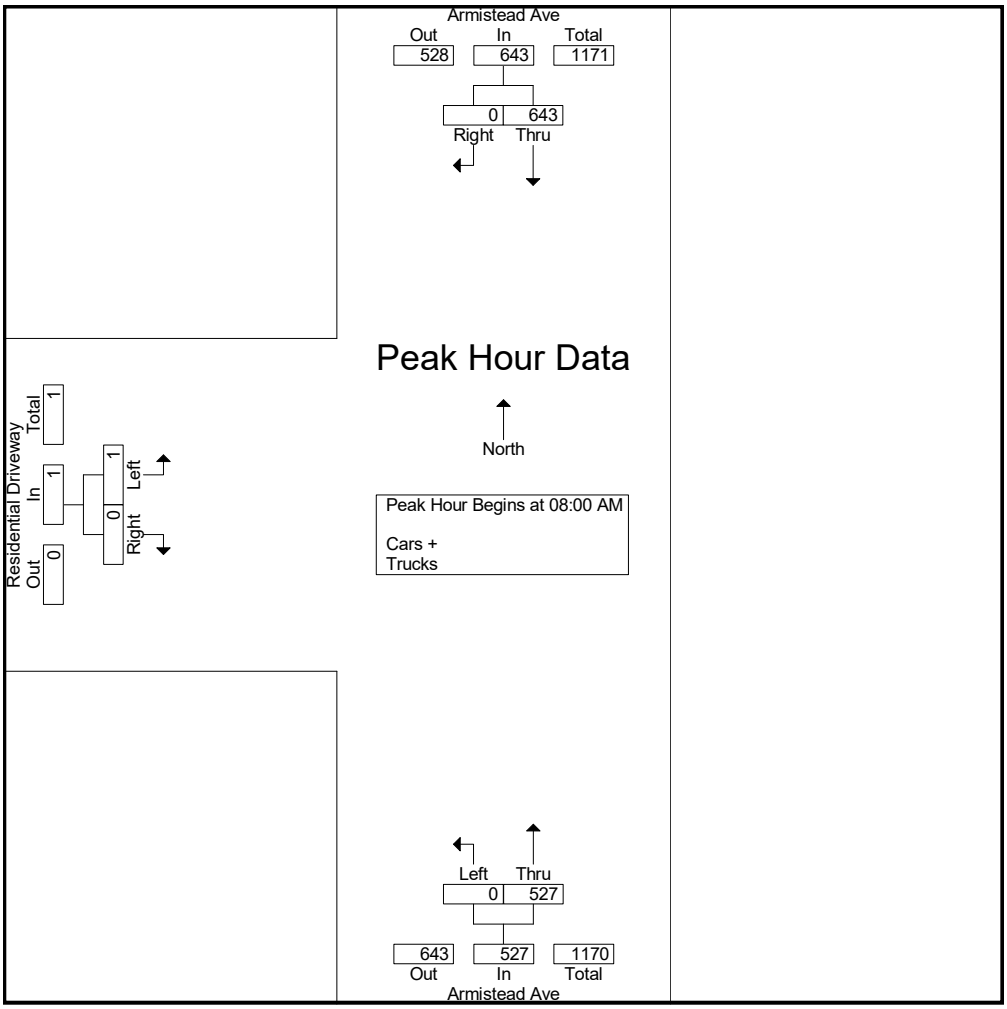
	Armistead Ave Southbound			Armistead Ave Northbound			Residential Driveway Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	162	162	103	0	103	0	**1**	**1**	266
08:15 AM	0	148	148	123	0	123	0	0	0	271
08:30 AM	0	**169**	**169**	150	0	150	0	0	0	**319**
08:45 AM	0	164	164	**151**	0	**151**	0	0	0	315
Total Volume	0	643	643	527	0	527	0	1	1	1171
% App. Total	0	100		100	0		0	100		
PHF	.000	.951	.951	.873	.000	.873	.000	.250	.250	.918



TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Driveway)
Site Code :
Start Date : 4/23/2024
Page No : 1

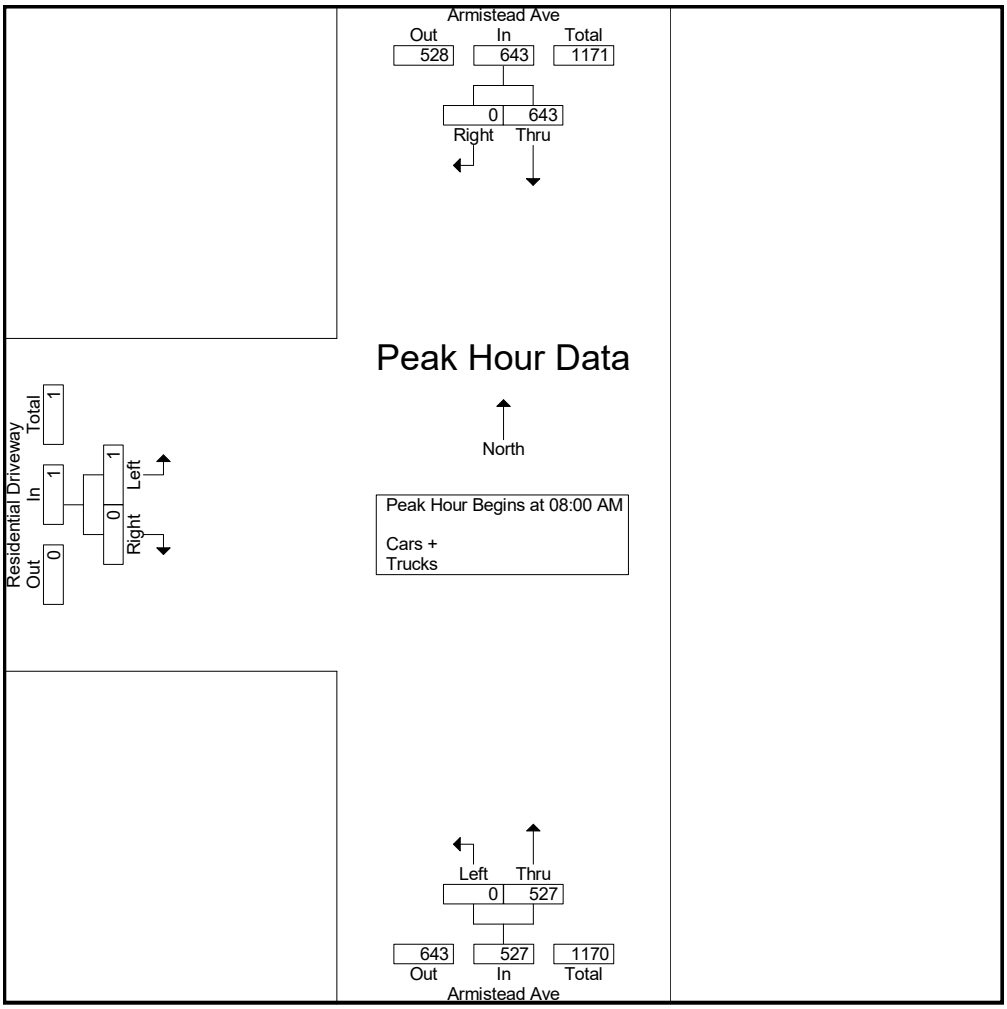
Groups Printed- Cars + - Trucks

	Armistead Ave Southbound			Armistead Ave Northbound			Residential Driveway Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
04:00 PM	0	314	314	202	0	202	0	0	0	516
04:15 PM	0	263	263	216	0	216	0	0	0	479
04:30 PM	0	227	227	260	1	261	0	0	0	488
04:45 PM	0	229	229	236	0	236	0	0	0	465
Total	0	1033	1033	914	1	915	0	0	0	1948
05:00 PM	0	293	293	225	0	225	0	0	0	518
05:15 PM	0	251	251	221	0	221	0	0	0	472
05:30 PM	0	225	225	205	0	205	0	0	0	430
05:45 PM	0	222	222	192	0	192	0	0	0	414
Total	0	991	991	843	0	843	0	0	0	1834
Grand Total	0	2024	2024	1757	1	1758	0	0	0	3782
Apprch %	0	100		99.9	0.1		0	0		
Total %	0	53.5	53.5	46.5	0	46.5	0	0	0	
Cars +	0	1992	1992	1742	1	1743	0	0	0	3735
% Cars +	0	98.4	98.4	99.1	100	99.1	0	0	0	98.8
Trucks	0	32	32	15	0	15	0	0	0	47
% Trucks	0	1.6	1.6	0.9	0	0.9	0	0	0	1.2

TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Driveway)
Site Code :
Start Date : 4/23/2024
Page No : 2

	Armistead Ave Southbound			Armistead Ave Northbound			Residential Driveway Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	162	162	103	0	103	0	**1**	**1**	266
08:15 AM	0	148	148	123	0	123	0	0	0	271
08:30 AM	0	**169**	**169**	150	0	150	0	0	0	**319**
08:45 AM	0	164	164	**151**	0	**151**	0	0	0	315
Total Volume	0	643	643	527	0	527	0	1	1	1171
% App. Total	0	100		100	0		0	100		
PHF	.000	.951	.951	.873	.000	.873	.000	.250	.250	.918



TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Freeman)
Site Code :
Start Date : 4/23/2024
Page No : 1

Groups Printed- Cars + - Trucks

	Armistead Ave Southbound						Mercer Ave Westbound						Armistead Ave Northbound						Freeman Drive Eastbound						
Start Time	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Int. Total
07:00 AM	0	134	0	0	0	134	5	0	12	0	1	18	3	62	2	0	0	67	15	0	0	0	0	15	234
07:15 AM	1	148	3	1	0	153	9	0	14	0	1	24	2	72	4	0	0	78	20	1	0	0	0	21	276
07:30 AM	0	134	4	0	1	139	5	0	9	0	0	14	2	95	4	0	0	101	35	0	3	0	1	39	293
07:45 AM	0	187	3	0	0	190	5	0	14	0	0	19	6	91	5	1	0	103	21	1	1	0	0	23	335
Total	1	603	10	1	1	616	24	0	49	0	2	75	13	320	15	1	0	349	91	2	4	0	1	98	1138
08:00 AM	2	155	5	0	0	162	2	2	7	0	2	13	4	96	2	0	2	104	13	0	1	0	0	14	293
08:15 AM	2	144	1	0	0	147	11	0	7	0	3	21	7	119	3	0	2	131	12	1	0	0	0	13	312
08:30 AM	1	161	3	1	0	166	6	0	8	0	0	14	2	133	7	0	0	142	10	2	2	0	0	14	336
08:45 AM	2	172	1	1	0	176	5	0	5	0	1	11	3	141	6	1	0	151	17	1	1	0	0	19	357
Total	7	632	10	2	0	651	24	2	27	0	6	59	16	489	18	1	4	528	52	4	4	0	0	60	1298
Grand Total	8	1235	20	3	1	1267	48	2	76	0	8	134	29	809	33	2	4	877	143	6	8	0	1	158	2436
Apprch %	0.6	97.5	1.6	0.2	0.1		35.8	1.5	56.7	0	6		3.3	92.2	3.8	0.2	0.5		90.5	3.8	5.1	0	0.6		
Total %	0.3	50.7	0.8	0.1	0	52	2	0.1	3.1	0	0.3	5.5	1.2	33.2	1.4	0.1	0.2	36	5.9	0.2	0.3	0	0	6.5	
Cars +	6	1193	20	3	1	1223	46	2	76	0	7	131	27	782	32	2	4	847	143	6	7	0	1	157	2358
% Cars +	75	96.6	100	100	100	96.5	95.8	100	100	0	87.5	97.8	93.1	96.7	97	100	100	96.6	100	100	87.5	0	100	99.4	96.8
Trucks	2	42	0	0	0	44	2	0	0	0	1	3	2	27	1	0	0	30	0	0	1	0	0	1	78
% Trucks	25	3.4	0	0	0	3.5	4.2	0	0	0	12.5	2.2	6.9	3.3	3	0	0	3.4	0	0	12.5	0	0	0.6	3.2

TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Freeman)
Site Code :
Start Date : 4/23/2024
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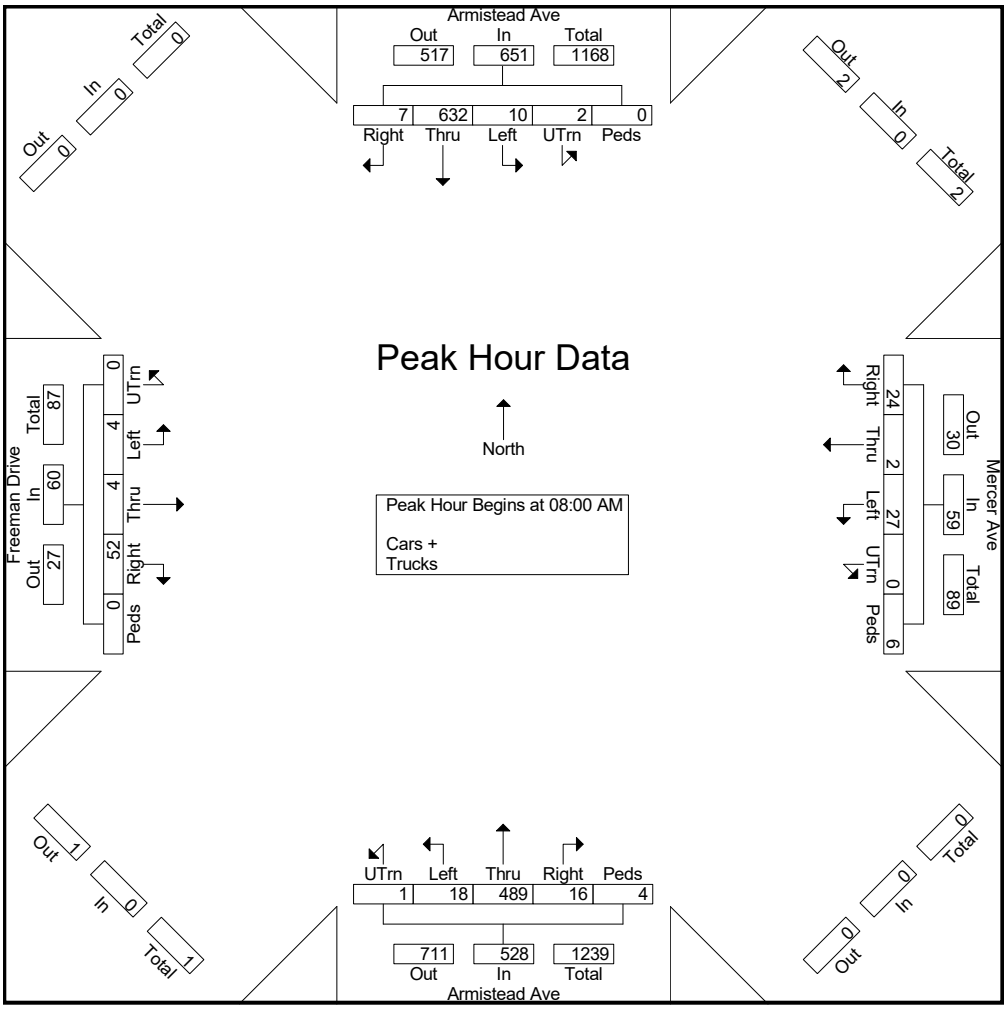
	Armistead Ave Southbound						Mercer Ave Westbound						Armistead Ave Northbound						Freeman Drive Eastbound						
Start Time	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:00 AM																									
08:00 AM	**2**	155	**5**	0	0	162	2	**2**	7	0	2	13	4	96	2	0	**2**	104	13	0	1	0	0	14	293
08:15 AM	2	144	1	0	0	147	**11**	0	7	0	**3**	**21**	**7**	119	3	0	2	131	12	1	0	0	0	13	312
08:30 AM	1	161	3	**1**	0	166	6	0	**8**	0	0	14	2	133	**7**	0	0	142	10	**2**	**2**	0	0	14	336
08:45 AM	2	**172**	1	1	0	**176**	5	0	5	0	1	11	3	**141**	6	**1**	0	**151**	**17**	1	1	0	0	**19**	**357**
Total Volume	7	632	10	2	0	651	24	2	27	0	6	59	16	489	18	1	4	528	52	4	4	0	0	60	1298
% App. Total	1.1	97.1	1.5	0.3	0		40.7	3.4	45.8	0	10.2		3	92.6	3.4	0.2	0.8		86.7	6.7	6.7	0	0		
PHF	.875	.919	.500	.500	.000	.925	.545	.250	.844	.000	.500	.702	.571	.867	.643	.250	.500	.874	.765	.500	.500	.000	.000	.789	.909



TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Freeman)
Site Code :
Start Date : 4/23/2024
Page No : 1

Groups Printed- Cars + - Trucks

	Armistead Ave Southbound						Mercer Ave Westbound						Armistead Ave Northbound						Freeman Drive Eastbound						
Start Time	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Int. Total
04:00 PM	2	299	13	1	0	315	8	0	1	0	0	9	16	189	12	1	0	218	18	1	1	0	1	21	563
04:15 PM	3	246	14	1	0	264	3	2	3	1	2	11	9	209	17	1	2	238	12	0	0	0	1	13	526
04:30 PM	1	203	19	0	0	223	10	2	8	0	0	20	18	249	13	0	1	281	21	4	0	0	0	25	549
04:45 PM	3	216	7	0	0	226	7	1	12	0	1	21	7	232	12	3	2	256	20	2	1	0	0	23	526
Total	9	964	53	2	0	1028	28	5	24	1	3	61	50	879	54	5	5	993	71	7	2	0	2	82	2164
05:00 PM	4	264	13	0	0	281	8	1	11	0	1	21	13	209	13	1	1	237	19	2	2	0	0	23	562
05:15 PM	2	233	11	0	0	246	8	1	5	0	1	15	9	210	13	0	0	232	24	5	0	0	0	29	522
05:30 PM	1	213	9	0	0	223	7	0	3	0	0	10	6	193	14	0	1	214	21	3	0	0	0	24	471
05:45 PM	1	203	9	2	0	215	6	1	10	0	0	17	6	178	11	1	0	196	14	3	2	0	0	19	447
Total	8	913	42	2	0	965	29	3	29	0	2	63	34	790	51	2	2	879	78	13	4	0	0	95	2002
Grand Total	17	1877	95	4	0	1993	57	8	53	1	5	124	84	1669	105	7	7	1872	149	20	6	0	2	177	4166
Apprch %	0.9	94.2	4.8	0.2	0		46	6.5	42.7	0.8	4		4.5	89.2	5.6	0.4	0.4		84.2	11.3	3.4	0	1.1		
Total %	0.4	45.1	2.3	0.1	0	47.8	1.4	0.2	1.3	0	0.1	3	2	40.1	2.5	0.2	0.2	44.9	3.6	0.5	0.1	0	0	4.2	
Cars +	16	1845	95	4	0	1960	56	8	53	1	3	121	83	1654	104	7	5	1853	147	20	6	0	1	174	4108
% Cars +	94.1	98.3	100	100	0	98.3	98.2	100	100	100	60	97.6	98.8	99.1	99	100	71.4	99	98.7	100	100	0	50	98.3	98.6
Trucks	1	32	0	0	0	33	1	0	0	0	2	3	1	15	1	0	2	19	2	0	0	0	1	3	58
% Trucks	5.9	1.7	0	0	0	1.7	1.8	0	0	0	40	2.4	1.2	0.9	1	0	28.6	1	1.3	0	0	0	50	1.7	1.4

TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Freeman)
Site Code :
Start Date : 4/23/2024
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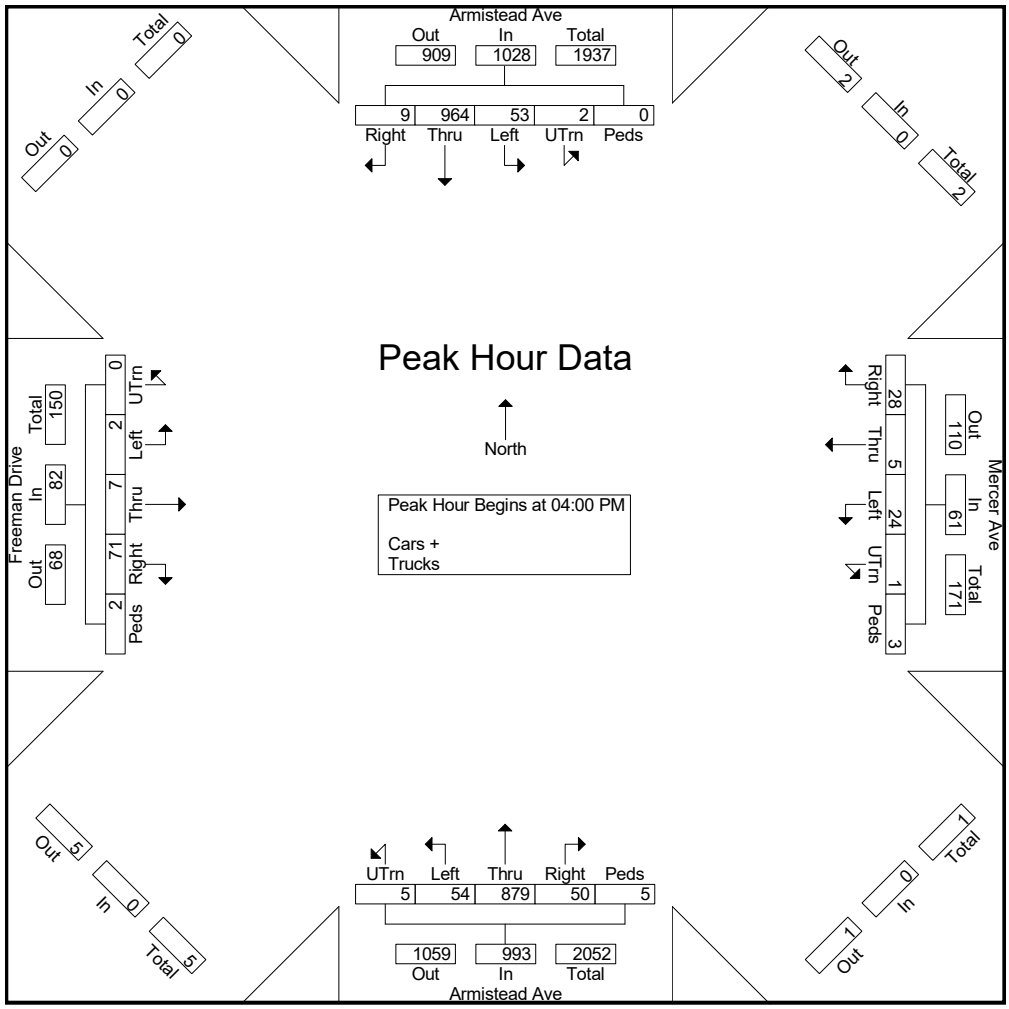
	Armistead Ave Southbound						Mercer Ave Westbound						Armistead Ave Northbound						Freeman Drive Eastbound						
Start Time	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:00 PM																									
04:00 PM	2	**299**	13	**1**	0	**315**	8	0	1	0	0	9	16	189	12	1	0	218	18	1	**1**	0	**1**	21	**563**
04:15 PM	**3**	246	14	1	0	264	3	**2**	3	**1**	**2**	11	9	209	**17**	1	**2**	238	12	0	0	0	1	13	526
04:30 PM	1	203	**19**	0	0	223	**10**	2	8	0	0	20	**18**	**249**	13	0	1	**281**	**21**	**4**	0	0	0	**25**	549
04:45 PM	3	216	7	0	0	226	7	1	**12**	0	1	**21**	7	232	12	**3**	2	256	20	2	1	0	0	23	526
Total Volume	9	964	53	2	0	1028	28	5	24	1	3	61	50	879	54	5	5	993	71	7	2	0	2	82	2164
% App. Total	0.9	93.8	5.2	0.2	0		45.9	8.2	39.3	1.6	4.9		5	88.5	5.4	0.5	0.5		86.6	8.5	2.4	0	2.4		
PHF	.750	.806	.697	.500	.000	.816	.700	.625	.500	.250	.375	.726	.694	.883	.794	.417	.625	.883	.845	.438	.500	.000	.500	.820	.961



File Name : Hampton(Armistead and Lake Hampton)
Site Code :
Start Date : 4/23/2024
Page No : 1

Groups Printed- Cars + - Trucks

	Armistead Ave Southbound					Armistead Ave Northbound					Lake Hampton Eastbound					
Start Time	Right	Thru	UTrn	Peds	App. Total	Thru	Left	UTrn	Peds	App. Total	Right	Left	UTrn	Peds	App. Total	Int. Total
07:00 AM	16	147	0	0	163	65	15	0	0	80	18	4	0	0	22	265
07:15 AM	15	163	0	0	178	68	26	3	0	97	18	8	0	0	26	301
07:30 AM	17	158	0	0	175	96	23	5	0	124	15	7	0	0	22	321
07:45 AM	26	199	0	0	225	92	21	3	0	116	20	11	0	0	31	372
Total	74	667	0	0	741	321	85	11	0	417	71	30	0	0	101	1259
08:00 AM	29	143	0	0	172	90	37	3	0	130	22	13	0	0	35	337
08:15 AM	22	144	0	0	166	108	21	5	0	134	28	14	0	0	42	342
08:30 AM	29	144	0	0	173	130	29	5	0	164	25	9	0	0	34	371
08:45 AM	28	171	0	0	199	136	51	4	0	191	32	19	0	0	51	441
Total	108	602	0	0	710	464	138	17	0	619	107	55	0	0	162	1491
Grand Total	182	1269	0	0	1451	785	223	28	0	1036	178	85	0	0	263	2750
Apprch %	12.5	87.5	0	0		75.8	21.5	2.7	0		67.7	32.3	0	0		
Total %	6.6	46.1	0	0	52.8	28.5	8.1	1	0	37.7	6.5	3.1	0	0	9.6	
Cars +	177	1232	0	0	1409	759	219	28	0	1006	174	82	0	0	256	2671
% Cars +	97.3	97.1	0	0	97.1	96.7	98.2	100	0	97.1	97.8	96.5	0	0	97.3	97.1
Trucks	5	37	0	0	42	26	4	0	0	30	4	3	0	0	7	79
% Trucks	2.7	2.9	0	0	2.9	3.3	1.8	0	0	2.9	2.2	3.5	0	0	2.7	2.9

TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Lake Hampton)
Site Code :
Start Date : 4/23/2024
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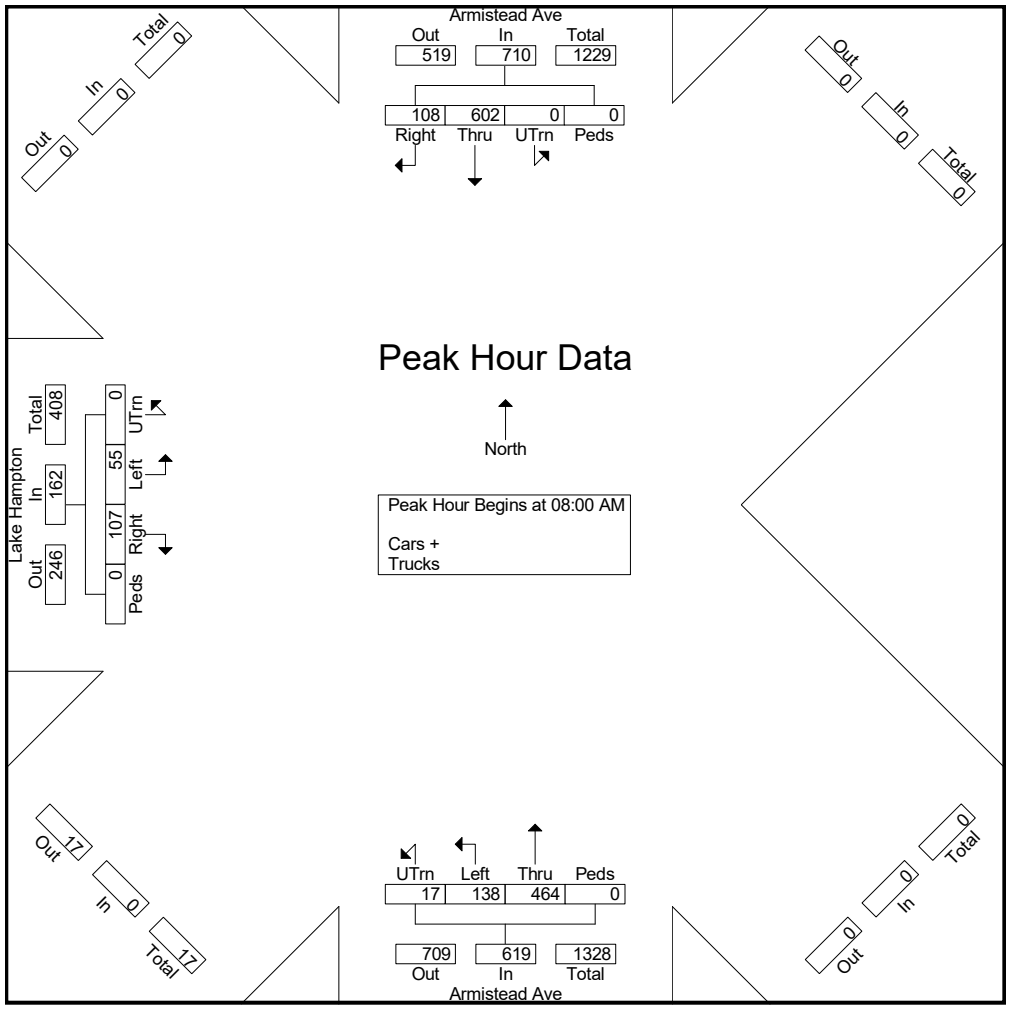
	Armistead Ave Southbound					Armistead Ave Northbound					Lake Hampton Eastbound					
Start Time	Right	Thru	UTrn	Peds	App. Total	Thru	Left	UTrn	Peds	App. Total	Right	Left	UTrn	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 08:00 AM																
08:00 AM	**29**	143	0	0	172	90	37	3	0	130	22	13	0	0	35	337
08:15 AM	22	144	0	0	166	108	21	**5**	0	134	28	14	0	0	42	342
08:30 AM	29	144	0	0	173	130	29	5	0	164	25	9	0	0	34	371
08:45 AM	28	**171**	0	0	**199**	**136**	**51**	4	0	**191**	**32**	**19**	0	0	**51**	**441**
Total Volume	108	602	0	0	710	464	138	17	0	619	107	55	0	0	162	1491
% App. Total	15.2	84.8	0	0		75	22.3	2.7	0		66	34	0	0		
PHF	.931	.880	.000	.000	.892	.853	.676	.850	.000	.810	.836	.724	.000	.000	.794	.845



File Name : Hampton(Armistead and Lake Hampton)
Site Code :
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Groups Printed- Cars + - Trucks

	Armistead Ave Southbound					Armistead Ave Northbound					Lake Hampton Eastbound					
Start Time	Right	Thru	UTrn	Peds	App. Total	Thru	Left	UTrn	Peds	App. Total	Right	Left	UTrn	Peds	App. Total	Int. Total
04:00 PM	35	280	0	0	315	202	34	2	0	238	38	26	0	0	64	617
04:15 PM	40	223	0	0	263	222	29	9	1	261	33	18	0	0	51	575
04:30 PM	30	194	0	0	224	239	36	14	0	289	26	35	0	0	61	574
04:45 PM	37	223	0	0	260	222	28	14	0	264	30	27	0	0	57	581
Total	142	920	0	0	1062	885	127	39	1	1052	127	106	0	0	233	2347
05:00 PM	33	262	1	0	296	208	37	16	0	261	32	29	0	0	61	618
05:15 PM	29	231	0	0	260	221	27	14	0	262	32	17	0	0	49	571
05:30 PM	23	201	0	0	224	188	41	6	0	235	31	18	0	0	49	508
05:45 PM	27	206	0	0	233	178	35	4	0	217	36	14	0	0	50	500
Total	112	900	1	0	1013	795	140	40	0	975	131	78	0	0	209	2197
Grand Total	254	1820	1	0	2075	1680	267	79	1	2027	258	184	0	0	442	4544
Apprch %	12.2	87.7	0	0		82.9	13.2	3.9	0		58.4	41.6	0	0		
Total %	5.6	40.1	0	0	45.7	37	5.9	1.7	0	44.6	5.7	4	0	0	9.7	
Cars +	253	1787	1	0	2041	1665	266	79	1	2011	257	182	0	0	439	4491
% Cars +	99.6	98.2	100	0	98.4	99.1	99.6	100	100	99.2	99.6	98.9	0	0	99.3	98.8
Trucks	1	33	0	0	34	15	1	0	0	16	1	2	0	0	3	53
% Trucks	0.4	1.8	0	0	1.6	0.9	0.4	0	0	0.8	0.4	1.1	0	0	0.7	1.2

TRAFFIC DATA COLLECTION

File Name : Hampton(Armistead and Lake Hampton)
Site Code :
Start Date : 4/23/2024
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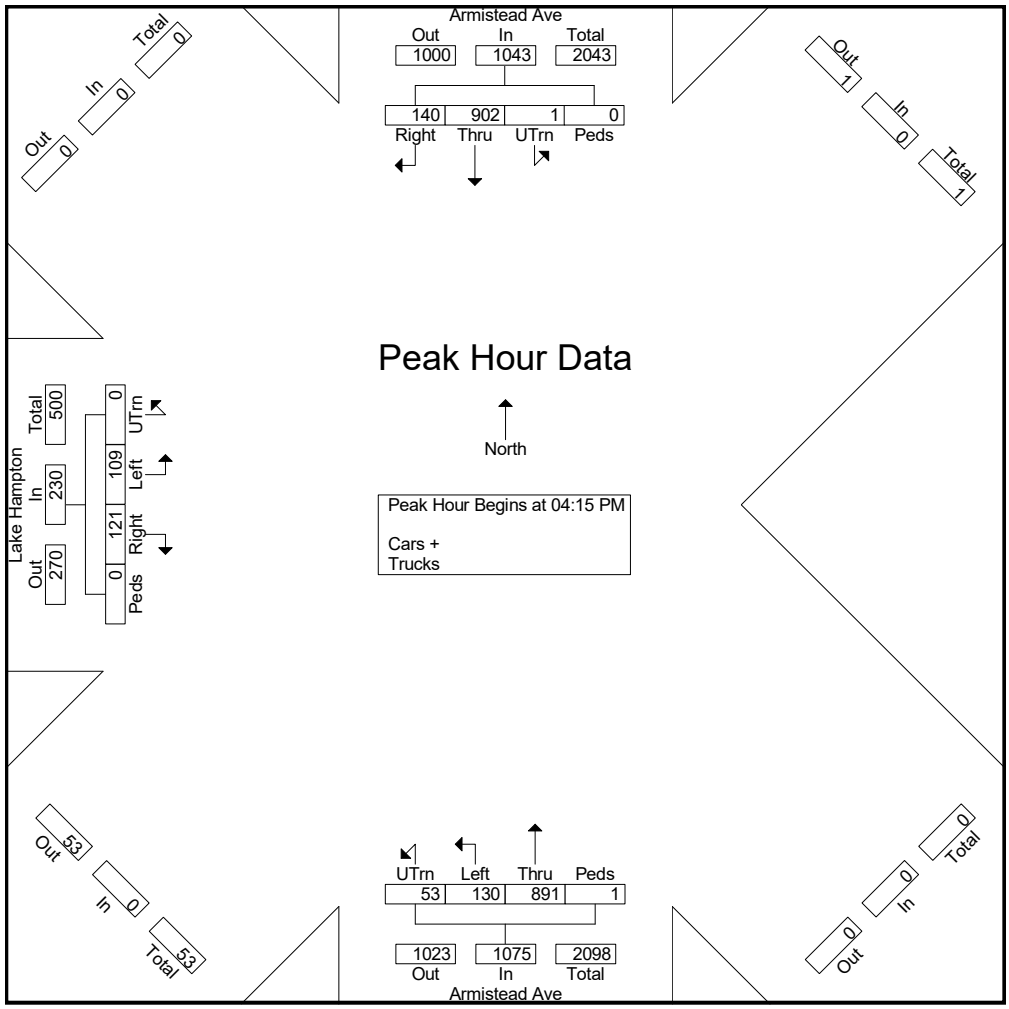
	Armistead Ave Southbound					Armistead Ave Northbound					Lake Hampton Eastbound					
Start Time	Right	Thru	UTrn	Peds	App. Total	Thru	Left	UTrn	Peds	App. Total	Right	Left	UTrn	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:15 PM																
04:15 PM	**40**	223	0	0	263	222	29	9	**1**	261	**33**	18	0	0	51	575
04:30 PM	30	194	0	0	224	**239**	36	14	0	**289**	26	**35**	0	0	**61**	574
04:45 PM	37	223	0	0	260	222	28	14	0	264	30	27	0	0	57	581
05:00 PM	33	**262**	**1**	0	**296**	208	**37**	**16**	0	261	32	29	0	0	61	**618**
Total Volume	140	902	1	0	1043	891	130	53	1	1075	121	109	0	0	230	2348
% App. Total	13.4	86.5	0.1	0		82.9	12.1	4.9	0.1		52.6	47.4	0	0		
PHF	.875	.861	.250	.000	.881	.932	.878	.828	.250	.930	.917	.779	.000	.000	.943	.950



TRAFFIC DATA COLLECTION

File Name : Hampton(Mercury and Armistead)
Site Code :
Start Date : 4/23/2024
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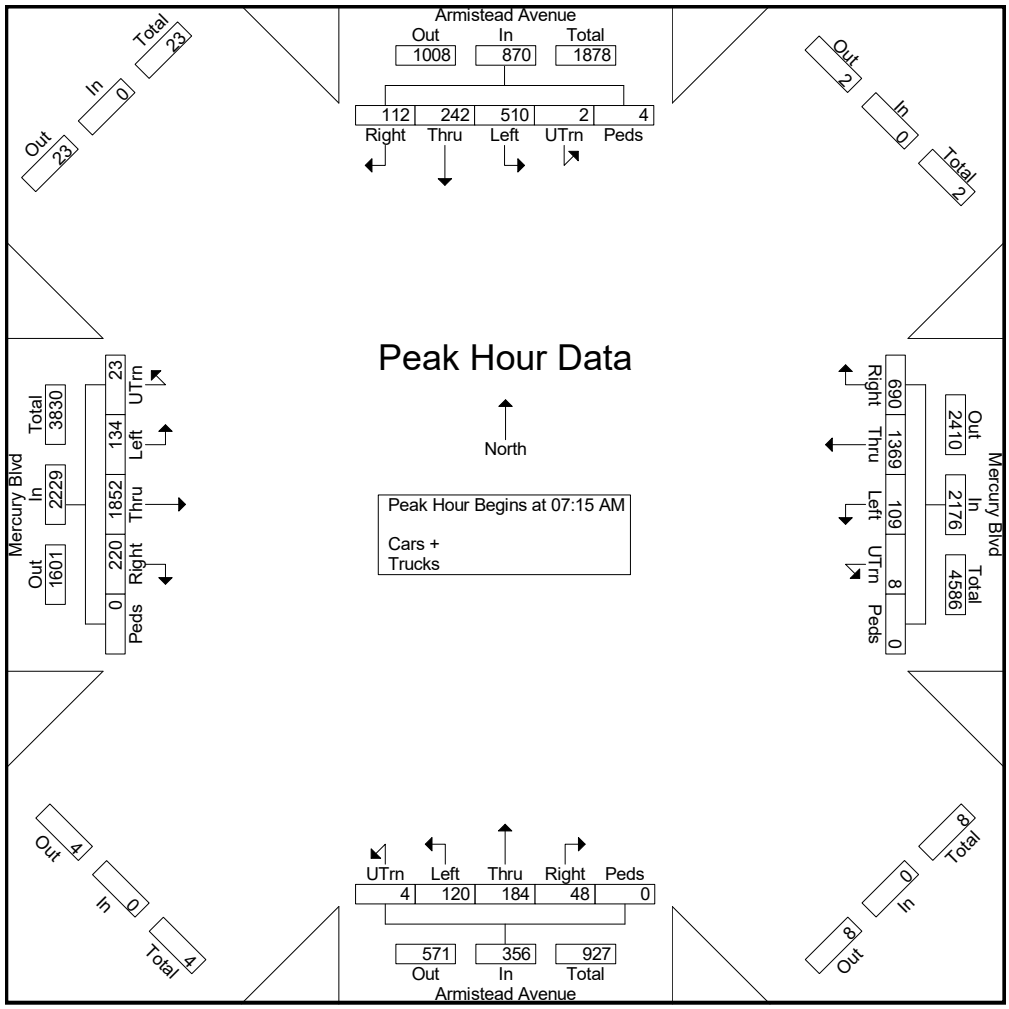
Groups Printed- Cars + - Trucks

	Armistead Avenue Southbound						Mercury Blvd Westbound						Armistead Avenue Northbound						Mercury Blvd Eastbound						
Start Time	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Int. Total
07:00 AM	20	45	100	1	0	166	148	287	12	3	0	450	9	38	20	4	0	71	55	376	35	3	0	469	1156
07:15 AM	25	65	123	1	0	214	171	329	27	1	0	528	8	38	32	2	0	80	56	437	29	8	0	530	1352
07:30 AM	24	55	110	0	0	189	167	370	22	2	0	561	18	46	28	0	0	92	53	548	37	6	0	644	1486
07:45 AM	38	66	154	0	2	260	207	348	25	3	0	583	10	60	34	1	0	105	69	427	28	1	0	525	1473
Total	107	231	487	2	2	829	693	1334	86	9	0	2122	45	182	114	7	0	348	233	1788	129	18	0	2168	5467
08:00 AM	25	56	123	1	2	207	145	322	35	2	0	504	12	40	26	1	0	79	42	440	40	8	0	530	1320
08:15 AM	34	70	122	0	2	228	134	340	34	2	0	510	11	56	46	2	0	115	57	354	32	5	0	448	1301
08:30 AM	46	64	97	0	0	207	177	377	28	3	0	585	8	55	62	2	0	127	53	319	38	10	0	420	1339
08:45 AM	38	74	104	0	0	216	144	341	29	4	0	518	12	76	57	2	0	147	69	243	35	6	0	353	1234
Total	143	264	446	1	4	858	600	1380	126	11	0	2117	43	227	191	7	0	468	221	1356	145	29	0	1751	5194
Grand Total	250	495	933	3	6	1687	1293	2714	212	20	0	4239	88	409	305	14	0	816	454	3144	274	47	0	3919	10661
Apprch %	14.8	29.3	55.3	0.2	0.4		30.5	64	5	0.5	0		10.8	50.1	37.4	1.7	0		11.6	80.2	7	1.2	0		
Total %	2.3	4.6	8.8	0	0.1	15.8	12.1	25.5	2	0.2	0	39.8	0.8	3.8	2.9	0.1	0	7.7	4.3	29.5	2.6	0.4	0	36.8	
Cars +	243	480	915	3	4	1645	1281	2678	203	20	0	4182	85	394	297	14	0	790	443	3083	265	45	0	3836	10453
% Cars +	97.2	97	98.1	100	66.7	97.5	99.1	98.7	95.8	100	0	98.7	96.6	96.3	97.4	100	0	96.8	97.6	98.1	96.7	95.7	0	97.9	98
Trucks	7	15	18	0	2	42	12	36	9	0	0	57	3	15	8	0	0	26	11	61	9	2	0	83	208
% Trucks	2.8	3	1.9	0	33.3	2.5	0.9	1.3	4.2	0	0	1.3	3.4	3.7	2.6	0	0	3.2	2.4	1.9	3.3	4.3	0	2.1	2

TRAFFIC DATA COLLECTION

File Name : Hampton(Mercury and Armistead)
Site Code :
Start Date : 4/23/2024
Page No : 2

	Armistead Avenue Southbound						Mercury Blvd Westbound						Armistead Avenue Northbound						Mercury Blvd Eastbound						
Start Time	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:15 AM																									
07:15 AM	25	65	123	**1**	0	214	171	329	27	1	0	528	8	38	32	**2**	0	80	56	437	29	**8**	0	530	1352
07:30 AM	24	55	110	0	0	189	167	**370**	22	2	0	561	**18**	46	28	0	0	92	53	**548**	37	6	0	**644**	**1486**
07:45 AM	**38**	**66**	**154**	0	**2**	**260**	**207**	348	25	**3**	0	**583**	10	**60**	**34**	1	0	**105**	**69**	427	28	1	0	525	1473
08:00 AM	25	56	123	1	2	207	145	322	**35**	2	0	504	12	40	26	1	0	79	42	440	**40**	8	0	530	1320
Total Volume	112	242	510	2	4	870	690	1369	109	8	0	2176	48	184	120	4	0	356	220	1852	134	23	0	2229	5631
% App. Total	12.9	27.8	58.6	0.2	0.5		31.7	62.9	5	0.4	0		13.5	51.7	33.7	1.1	0		9.9	83.1	6	1	0		
PHF	.737	.917	.828	.500	.500	.837	.833	.925	.779	.667	.000	.933	.667	.767	.882	.500	.000	.848	.797	.845	.838	.719	.000	.865	.947



TRAFFIC DATA COLLECTION

File Name : Hampton(Mercury and Armistead)
Site Code :
Start Date : 4/23/2024
Page No : 1

Groups Printed- Cars + - Trucks

	Armistead Avenue Southbound						Mercury Blvd Westbound						Armistead Avenue Northbound						Mercury Blvd Eastbound						
Start Time	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Int. Total
04:00 PM	57	100	221	1	0	379	113	369	36	5	0	523	11	77	85	5	1	179	143	577	57	17	2	796	1877
04:15 PM	44	92	167	1	1	305	122	509	30	5	0	666	16	90	92	4	0	202	99	622	67	11	0	799	1972
04:30 PM	47	88	209	0	0	344	133	444	42	7	0	626	25	95	98	3	0	221	81	557	53	10	0	701	1892
04:45 PM	53	96	228	0	0	377	136	409	36	7	0	588	19	101	107	6	1	234	86	564	71	7	0	728	1927
Total	201	376	825	2	1	1405	504	1731	144	24	0	2403	71	363	382	18	2	836	409	2320	248	45	2	3024	7668
05:00 PM	33	80	203	0	0	316	144	419	36	3	0	602	25	71	79	7	0	182	108	640	64	12	0	824	1924
05:15 PM	43	90	257	0	0	390	122	403	24	8	0	557	21	85	104	3	2	215	109	571	55	9	0	744	1906
05:30 PM	51	74	213	0	0	338	122	325	36	8	0	491	13	84	91	2	0	190	67	612	44	13	0	736	1755
05:45 PM	40	85	183	3	0	311	136	399	43	5	0	583	19	53	78	3	1	154	91	529	50	8	1	679	1727
Total	167	329	856	3	0	1355	524	1546	139	24	0	2233	78	293	352	15	3	741	375	2352	213	42	1	2983	7312
Grand Total	368	705	1681	5	1	2760	1028	3277	283	48	0	4636	149	656	734	33	5	1577	784	4672	461	87	3	6007	14980
Apprch %	13.3	25.5	60.9	0.2	0		22.2	70.7	6.1	1	0		9.4	41.6	46.5	2.1	0.3		13.1	77.8	7.7	1.4	0		
Total %	2.5	4.7	11.2	0	0	18.4	6.9	21.9	1.9	0.3	0	30.9	1	4.4	4.9	0.2	0	10.5	5.2	31.2	3.1	0.6	0	40.1	
Cars +	364	697	1676	5	1	2743	1026	3241	273	48	0	4588	146	655	729	33	2	1565	770	4630	458	87	1	5946	14842
% Cars +	98.9	98.9	99.7	100	100	99.4	99.8	98.9	96.5	100	0	99	98	99.8	99.3	100	40	99.2	98.2	99.1	99.3	100	33.3	99	99.1
Trucks	4	8	5	0	0	17	2	36	10	0	0	48	3	1	5	0	3	12	14	42	3	0	2	61	138
% Trucks	1.1	1.1	0.3	0	0	0.6	0.2	1.1	3.5	0	0	1	2	0.2	0.7	0	60	0.8	1.8	0.9	0.7	0	66.7	1	0.9

TRAFFIC DATA COLLECTION

File Name : Hampton(Mercury and Armistead)
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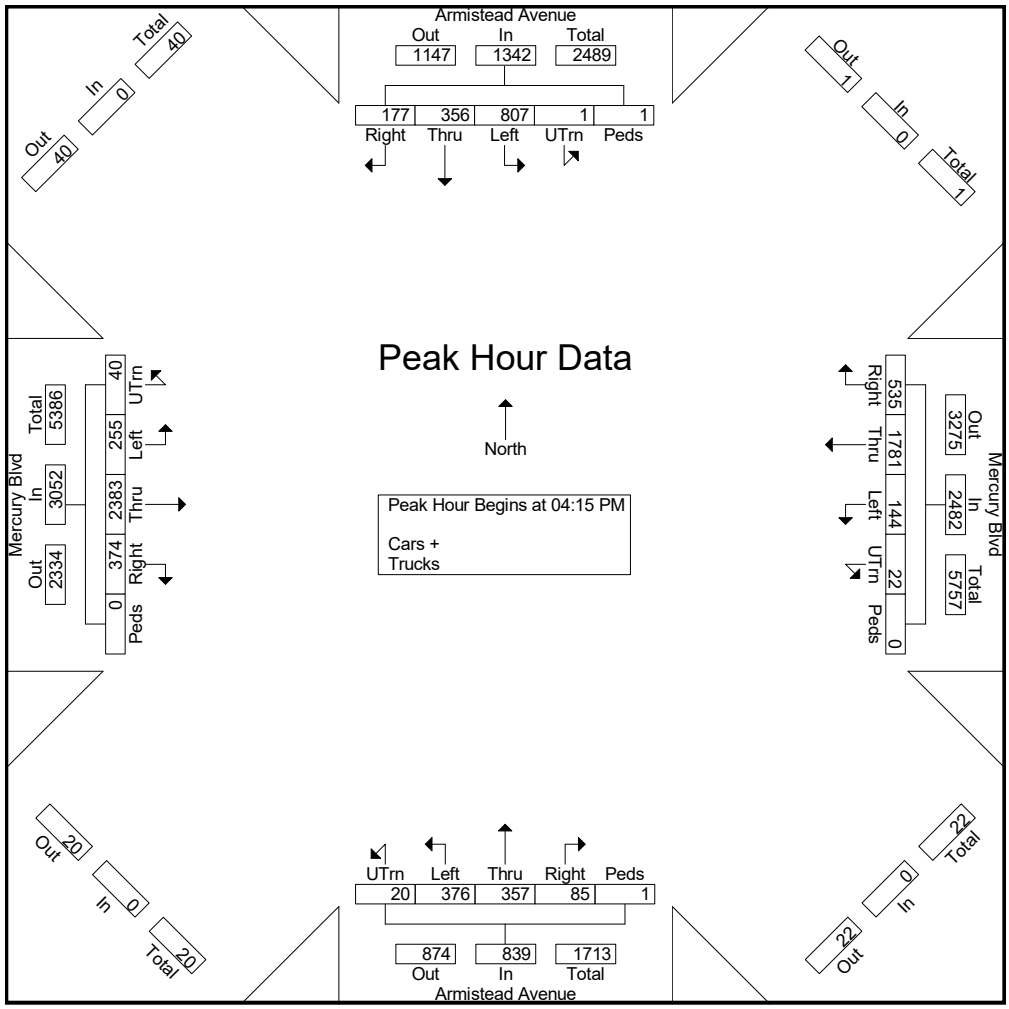
	Armistead Avenue Southbound						Mercury Blvd Westbound						Armistead Avenue Northbound						Mercury Blvd Eastbound						
Start Time	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Right	Thru	Left	UTrn	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:15 PM																									
04:15 PM	44	92	167	**1**	**1**	305	122	**509**	30	5	0	**666**	16	90	92	4	0	202	99	622	67	11	0	799	**1972**
04:30 PM	47	88	209	0	0	344	133	444	**42**	**7**	0	626	**25**	95	98	3	0	221	81	557	53	10	0	701	1892
04:45 PM	**53**	**96**	**228**	0	0	**377**	136	409	36	7	0	588	19	**101**	**107**	6	**1**	**234**	86	564	**71**	7	0	728	1927
05:00 PM	33	80	203	0	0	316	**144**	419	36	3	0	602	25	71	79	**7**	0	182	**108**	**640**	64	**12**	0	**824**	1924
Total Volume	177	356	807	1	1	1342	535	1781	144	22	0	2482	85	357	376	20	1	839	374	2383	255	40	0	3052	7715
% App. Total	13.2	26.5	60.1	0.1	0.1		21.6	71.8	5.8	0.9	0		10.1	42.6	44.8	2.4	0.1		12.3	78.1	8.4	1.3	0		
PHF	.835	.927	.885	.250	.250	.890	.929	.875	.857	.786	.000	.932	.850	.884	.879	.714	.250	.896	.866	.931	.898	.833	.000	.926	.978



Appendix C – Signal Timing Data

Station : 73 - Mercury Blvd. @ Armistead Ave. (Upload File)

Phase [1.1.1]

	1 (WL)	2 (ET)	3 (NT)	4 (ST)	5 (EL)	6 (WT)	7	8	9	10	11	12	13	14	15	16
Walk	0	7	0	5	0	7	0	0	0	0	0	0	0	0	0	0
Ped Clearance	0	38	0	47	0	34	0	0	0	0	0	0	0	0	0	0
Min Green	7	20	7	7	7	20	0	0	0	0	0	0	0	0	0	0
Passage	3	4	3	3	3	4	0	0	0	0	0	0	0	0	0	0
Max1	15	60	25	25	25	50	0	0	0	0	0	0	0	0	0	0
Max2	15	60	25	25	25	50	0	0	0	0	0	0	0	0	0	0
Yellow	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6
Red	3	2	3	3	3	2	0	0	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Exit		ON				ON										
Rest In Walk																

Phase Option [1.1.2]

	1 (WL)	2 (ET)	3 (NT)	4 (ST)	5 (EL)	6 (WT)	7	8	9	10	11	12	13	14	15	16
Enable	ON	ON	ON	ON	ON	ON										
Auto Entry				ON												
Non Act1																
Non Act2																
Lock Call		ON				ON										
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON				ON										
Sim Gap Enable		ON				ON										
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

Entry	Call Phases				From	To	From	To	From	To	From	To	Assigned Ph
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

Entry	Call Phases				From	To	From	To	From	To	From	To	Assigned Ph
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 1, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

Hampton Timing Sheet 5/16/2024 10:12:00 AM

Station : 73 - Mercury Blvd. @ Armistead Ave. (Upload File)

Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Backup Time	Red Revert	Console Timeout	Tone Disable	Feature Profile	Phase Mode	Diamond Mode	SDLC Retry Time	TS2 Det Faults	Cycle Fault Action	Max Cycle Time	Max Seek Track Time	Max Seek Dwell Time	Enable Run	Local Flash Start	Start Red Time	Disable Init Ped	Yellow 3 Second Disable	Omit Yellow Enable	Free Ring Sequence
10	OFF		3	99	OFF		STD8	4PH		OFF	ALARM				ON	ON		OFF	OFF	OFF	3

Comm, General Comm Parameters [6.1]

Station ID	Master Station ID	Fallback time	Allow Pencil	Port	System-Up	Sys-Down	PC/Print	Aux 232
73			OFF					

Port Parameters [6.2]

Comm	Mode	Baud	MsgTime	Duplex	Enable	DialTime	Modem	ModemTime	Tel#1	Tel#2
System Up(P-A)										
System Down(P-B)										
PC/Print(P-2)										

Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	OFF	ON	OFF

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases								Modifer Phases								Type	Green	Yellow	Red
Overlap 1	6	4															NORMAL		5	3
Overlap 2	2	3															NORMAL		5	3
Overlap 3	2	5	4														NORMAL		5	3
Overlap 4																	NORMAL		3.5	1.5
Overlap 5																	NORMAL		3.5	1.5
Overlap 6																	NORMAL		3.5	1.5
Overlap 7																	NORMAL		3.5	1.5
Overlap 8																	NORMAL		3.5	1.5

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases								Conflicting Overlaps								Conflicting Peds									
Overlap 1																	6								OFF	OFF
Overlap 2																	2								ON	OFF
Overlap 3	6																4								ON	OFF
Overlap 4																									ON	OFF
Overlap 5																									OFF	OFF
Overlap 6																									OFF	OFF
Overlap 7																									OFF	OFF
Overlap 8																									OFF	OFF

Detector, Vehicle Parameters 1-16 [5.1]

	1	2	3 (NT1)	4 (ST1)	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	1	2	3	4	5	6	4	3	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0

Detector, Vehicle Parameters 17-32 [5.1]

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Station : 73 - Mercury Blvd. @ Armistead Ave. (Upload File)

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

	1	2	3 (NT1)	4 (ST1)	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Channels/SDLC, Assign to Phases [1.3.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PH/OLP #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8	1	3	5	7				
Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	PED	PED	PED	PED	VEH	VEH	VEH	VEH
Flash	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz																								
Dimming Green			ON	ON			ON	ON	ON															
Dimming Yellow	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON														
Dimming Red																								
Alt Cyc	+	+	+	+	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Channel/SDLC, Parameters [1.3.3]

TOD Dim Enable	Extra Maps Enable	D Connector Enable	Single BIU Map	IO Mode	Preempt or Ext Output
ON	DEFAULT	TX2_V14	ON	AUTO	EXT

Channel/SDLC, MMU Map [1.3.5]

MMU-to-Controller Channel Map

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Channel/SDLC, Permissive [1.3.4]

Channel	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
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Channel/SDLC, Permissive [1.3.7]

SDLC Device	Term/Fac								Detector								MMU	Diag
BIU#	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**		
Present									ON									
Peer to Peer																		

Ring Sequence [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2	3	4				
Ring 2	5	6	7	8				
Ring 3								
Ring 4								

Station : 73 - Mercury Blvd. @ Armistead Ave. (Upload File)

Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	ON
4	ON
5	
6	
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	ON
18	
19	ON
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	ON
50	ON
51	ON
52	ON
53	ON
54	ON
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	ON
2	ON
3	ON
4	ON
5	
6	
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	ON
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
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37	ON
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63	
64	

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash						
Override Higher						
Flash Dwell						
Link						
Delay						
Min Duration						
Min Green	5	5	5	5	5	5
Min Walk						
Ped Clear						
Track Green						
Min Dwell	5	5	5	5	5	5
Max Presence	240	240	240	240	240	240
Track R1						
Track R2						
Track R3						
Track R4						
Dwell P1	2	1	4	3		
Dwell P2	5	6				
Dwell P3						
Dwell P4						
Dwell P5						
Dwell P6						
Dwell P7						
Dwell P8						
Dwell P9						
Dwell P10						
Dwell P11						
Dwell P12						
Dwell Ped1						
Dwell Ped2						
Dwell Ped3						
Dwell Ped4						
Dwell Ped5						
Dwell Ped6						
Dwell Ped7						
Dwell Ped8						
Exit R1	2	2	2	4		
Exit R2	6	6	6			
Exit R3						
Exit R4						

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
		VOT_MON	TEST B

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
ON	ON

Alarms, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases												
Overlaps												

Station : 73 - Mercury Blvd. @ Armistead Ave. (Upload File)

Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

Preempt	1	2	3	4	5	6
Enable	ON	ON	ON	ON		
Type	EMERG	EMERG	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt	ON	ON	ON	ON		
Max2	ON					
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell						
Pattern						
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1						
Track Over 2						
Track Over 3						
Track Over 4						
Track Over 5						
Track Over 6						
Track Over 7						
Track Over 8						
Track Over 9						
Track Over 10						
Track Over 11						
Track Over 12						
Dwell Over 1	2	1	3			
Dwell Over 2						
Dwell Over 3						
Dwell Over 4						
Dwell Over 5						
Dwell Over 6						
Dwell Over 7						
Dwell Over 8						
Dwell Over 9						
Dwell Over 10						
Dwell Over 11						
Dwell Over 12						
Ped Clear						
Yellow	5		4	4	4	4
Red	3		2	2	2	2
Return Min/Max						
Delay Inh						
Exit Time						
All Red B4						

Coordination, Modes,+ [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FLOAT

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Yield Sign	Closed Loop Active	
FRC	TIMED	TIMED	P3478_INH	ON	OFF	ON	OFF	OFF	0	+	OFF	OFF

Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	120	120	120	160	120	110	130	110	110	110						
Offset Time	45	60	60	155	56	27	128	32	32	34						
Split Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Seq Number	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time					150	150	150		150	150	150	150	150	150	150	150
Offset Time					138	136	140		137	137	137	137	137	137	137	137
Split Number	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Seq Number	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Station : 73 - Mercury Blvd. @ Armistead Ave. (Upload File)

Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	21	52	22	25	21	52	22	25								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	54	22	25	25	48	22	25								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	53	23	25	25	47	23	25								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	20	74	25	41	28	66	25	41								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	54	22	25	25	48	22	25								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	51	20	20	21	49	20	20								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	60	21	30	27	52	21	30								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	48	20	23	22	45	23	20								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	20	48	21	21	21	47	21	21								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	49	20	24	22	44	20	24								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

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Split Table 13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	53	33	47	17	53	33	47								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	53	44	36	17	53	44	36								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 23	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	53	36	44	17	53	36	44								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 25	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	21	67	26	36	26	62	26	36								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 26	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	23	65	26	36	26	62	26	36								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 27	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	21	67	26	36	26	62	26	36								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 28	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	23	65	26	36	26	62	26	36								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 29	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	21	67	26	36	26	62	26	36								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	23	65	26	36	26	62	26	36								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	21	67	26	36	26	62	26	36								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	23	65	26	36	26	62	26	36								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

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TB Coor, Advanced Scheduler [4.3]

	Month												Day of Week							Day of Month									1									2									3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1	1	1	1	1	1	1	1	1	1	1	1						1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
5																																																	1
6																																																		1
7																																																		1
8																																																		1
9																																																		1
10																																																		1
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30																																																		1
31																																																		1
32																																																		1

TB Coor, Day Plan [4.4]

Day Plan Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		1	5	6	9	11	14	18	20							
Minute				30		15	30	30	30							
Action	10	100	9	1	2	3	4	5	10							

Day Plan Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		2	5	9	18											
Minute				30	30											
Action	9	100	6	7	8											

Day Plan Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		2	6	11	18											
Minute				30	30											
Action	9	100	6	7	8											

Day Plan Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		1	5	6	9	11	18	20								
Minute				30		30	30	30								
Action	10	100	9	1	3	4	5	10								

Day Plan Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

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Station : 73 - Mercury Blvd. @ Armistead Ave. (Upload File)

Day Plan Table 7	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 8	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 9	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 10	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 11	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour		1	5	6	9	14	18	20								
Minute				30		30	30	30								
Action	9	100	9	1	3	4	5	10								

Day Plan Table 12	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour		2	5	9	18											
Minute				30	30											
Action	9	100	6	7	8											

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TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25	255											
26	1											
27	2											
28	3											
29	4											
30	5											
31	6											
32	7											
33	8											
34	9											
35	10											
36	11											
37	12											
38	13											
39	14											
40	15											
41	16											
42	17											
43	18											
44	19											
45	20											
46	21											
47	22											
48	23											
49	24											
50	48											
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
99												
100	254											

Station : 189 - Armistead Ave. @ Home Depot (Upload File)

Phase [1.1.1]

	1 (WL)	2 (ET)	3 (NT)	4	5	6 (WT)	7	8	9	10	11	12	13	14	15	16
Walk	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clearance	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Green	7	12	7	0	0	12	0	0	0	0	0	0	0	0	0	0
Passage	3	4	3	0	0	4	0	0	0	0	0	0	0	0	0	0
Max1	20	40	25	0	0	40	0	0	0	0	0	0	0	0	0	0
Max2	25	65	25	0	0	95	0	0	0	0	0	0	0	0	0	0
Yellow	4.9	4.9	4.5	6	6	4.9	6	6	6	6	6	6	6	6	6	6
Red	3	3	3	0	0	3	0	0	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Exit																
Rest In Walk																

Phase Option [1.1.2]

	1 (WL)	2 (ET)	3 (NT)	4	5	6 (WT)	7	8	9	10	11	12	13	14	15	16
Enable	ON	ON	ON			ON										
Auto Entry																
Non Act1																
Non Act2																
Lock Call																
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON				ON										
Sim Gap Enable		ON				ON										
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

Entry	Call Phases				From	To	From	To	From	To	From	To	Assigned Ph
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

Entry	Call Phases				From	To	From	To	From	To	From	To	Assigned Ph
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 1, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

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Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Backup Time	Red Revert	Console Timeout	Tone Disable	Feature Profile	Phase Mode	Diamond Mode	SDLC Retry Time	TS2 Det Faults	Cycle Fault Action	Max Cycle Time	Max Seek Track Time	Max Seek Dwell Time	Enable Run	Local Flash Start	Start Red Time	Disable Init Ped	Yellow 3 Second Disable	Omit Yellow Enable	Free Ring Sequence
10	OFF			99	OFF		STD8	4PH		ON	ALARM				ON	OFF	4	OFF	OFF	OFF	1

Comm, General Comm Parameters [6.1]

Station ID	Master Station ID	Fallback time	Allow Pencil	Port	System-Up	Sys-Down	PC/Print	Aux 232
189			OFF					

Port Parameters [6.2]

Comm	Mode	Baud	MsgTime	Duplex	Enable	DialTime	Modem	ModemTime	Tel#1	Tel#2
System Up(P-A)										
System Down(P-B)										
PC/Print(P-2)										

Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	OFF	ON	OFF

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases								Modifer Phases								Type	Green	Yellow	Red
Overlap 1	3																NORMAL		4.9	3
Overlap 2	1	3															NORMAL		4.5	3
Overlap 3																	NORMAL		3.5	1.5
Overlap 4																	NOTVAL			
Overlap 5																	NOTVAL			
Overlap 6																	NOTVAL			
Overlap 7																	NOTVAL			
Overlap 8																	NOTVAL			

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases								Conflicting Overlaps								Conflicting Peds									
Overlap 1																									OFF	OFF
Overlap 2																	3								OFF	OFF
Overlap 3																									OFF	OFF
Overlap 4																									OFF	OFF
Overlap 5																									OFF	OFF
Overlap 6																									OFF	OFF
Overlap 7																									OFF	OFF
Overlap 8																									OFF	OFF

Detector, Vehicle Parameters 1-16 [5.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	1	2	3	4	5	6	7	8	0	0	0	0	0	0	0	0
Switch Phase	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0

Detector, Vehicle Parameters 17-32 [5.1]

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Detector Alternate Program 1, Vehicle Parameters [5.5.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Channels/SDLC, Assign to Phases [1.3.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PH/OLP #	1	2	3	4	5	6	7	8	1	2	3	4			3									
Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Flash	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz																								
Dimming Green	ON	ON	ON			ON			ON	ON														
Dimming Yellow	ON	ON	ON			ON			ON	ON														
Dimming Red																								
Alt Cyc	+	+	+	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Channel/SDLC, Parameters [1.3.3]

TOD Dim Enable	Extra Maps Enable	D Connector Enable	Single BIU Map	IO Mode	Preempt or Ext Output
ON	DEFAULT	TX2_V14	ON	AUTO	EXT

Channel/SDLC, MMU Map [1.3.5]

MMU-to-Controller Channel Map

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Channel/SDLC, Permissive [1.3.4]

Channel	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
1															
2															
3															
4															
5															
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12															
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14															
15															
1															
2															
3															

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Channel/SDLC, Permissive [1.3.7]

SDLC Device	Term/Fac								Detector								MMU	Diag
BIU#	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**		
Present																		
Peer to Peer																		

Ring Sequence [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2	3	4				
Ring 2	5	6	7	8				
Ring 3								
Ring 4								

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Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	ON
4	ON
5	
6	
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	ON
18	
19	ON
20	
21	
22	
23	
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	ON
50	ON
51	ON
52	ON
53	ON
54	ON
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	ON
2	ON
3	ON
4	ON
5	
6	
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	ON
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
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61	
62	
63	
64	

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash						
Override Higher						
Flash Dwell						
Link						
Delay						
Min Duration						
Min Green	5	5	5			
Min Walk	1	1	1			
Ped Clear	7	7	7			
Track Green						
Min Dwell	20	20	20			
Max Presence						
Track R1						
Track R2						
Track R3						
Track R4						
Dwell P1	2	1	3			
Dwell P2		6				
Dwell P3						
Dwell P4						
Dwell P5						
Dwell P6						
Dwell P7						
Dwell P8						
Dwell P9						
Dwell P10						
Dwell P11						
Dwell P12						
Dwell Ped1						
Dwell Ped2						
Dwell Ped3						
Dwell Ped4						
Dwell Ped5						
Dwell Ped6						
Dwell Ped7						
Dwell Ped8						
Exit R1	2	1	3			
Exit R2		6				
Exit R3						
Exit R4						

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
		VOT_MON	D-CONN

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
ON	ON

Alarms, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases												
Overlaps												

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Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

Preempt	1	2	3	4	5	6
Enable	ON	ON	ON			
Type	EMERG	EMERG	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt	ON	ON	ON			
Max2						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell						
Pattern						
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1						
Track Over 2						
Track Over 3						
Track Over 4						
Track Over 5						
Track Over 6						
Track Over 7						
Track Over 8						
Track Over 9						
Track Over 10						
Track Over 11						
Track Over 12						
Dwell Over 1	1		2			
Dwell Over 2						
Dwell Over 3						
Dwell Over 4						
Dwell Over 5						
Dwell Over 6						
Dwell Over 7						
Dwell Over 8						
Dwell Over 9						
Dwell Over 10						
Dwell Over 11						
Dwell Over 12						
Ped Clear						
Yellow						
Red						
Return Min/Max						
Delay Inh						
Exit Time						
All Red B4						

Coordination, Modes,+ [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FLOAT

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Yield Sign	Closed Loop Active	
FRC	TIMED	TIMED	NO_RECYCLE	ON	OFF	ON	OFF	OFF	0	+	OFF	OFF

Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	110	100	120	130	110	80	110	80								
Offset Time	21	71	17	91	11	47	16	47								
Split Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time					130	130	130		110	110	130	130	130	130	130	130
Offset Time					18	36	28		20	20	11	11	11	11	11	11
Split Number	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

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Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	73	20			90		20								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	20	59	21			79		21								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	71	30			90		30								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	27	70	33			97		33								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	22	61	27			83		27								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	45	18			62		18								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	65	26			84		26								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	45	18			62		18								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

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Split Table 13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	20	90	20			110	20									
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	26	84	20			110	20									
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 23	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	24	86	20			110	20									
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 25	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	18	75	17			93		17								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 26	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	18	75	17			93		17								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 27	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	30	69	31			99		31								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 28	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	30	69	31			99		31								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 29	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	30	69	31			99		31								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	30	69	31			99		31								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	30	69	31			99		31								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	30	69	31			99		31								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

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TB Coor, Advanced Scheduler [4.3]

	Month												Day of Week							Day of Month									1									2									3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
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TB Coor, Day Plan [4.4]

Day Plan Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		6	9	11	14	18	20									
Minute					30	15	30									
Action	100	1	2	3	4	5	100									

Day Plan Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		8	10	18	20											
Minute		30	30													
Action	100	6	7	8	100											

Day Plan Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		9	11	17	19											
Minute		30	30													
Action	100	6	7	8	100											

Day Plan Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

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Day Plan Table 7	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 8	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 9	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 10	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 11	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 12	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

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TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25	255											
26	1											
27	2											
28	3											
29	4											
30	5											
31	6											
32	7											
33	8											
34	9											
35	10											
36	11											
37	12											
38	13											
39	14											
40	15											
41	16											
42	17											
43	18											
44	19											
45	20											
46	21											
47	22											
48	23											
49	24											
50	48											
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
99												
100	254											

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Phase [1.1.1]

	1 (WL)	2 (ET)	3	4 (ST)	5 (EL)	6 (WT)	7	8 (NT)	9	10	11	12	13	14	15	16
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Ped Clearance	0	18	0	36	0	17	0	36	0	0	0	0	0	0	0	0
Min Green	5	25	0	7	5	25	0	7	0	0	0	0	0	0	0	0
Passage	2	4	0	2	2	4	0	2	0	0	0	0	0	0	0	0
Max1	10	40	0	10	10	40	0	15	0	0	0	0	0	0	0	0
Max2	15	85	0	25	15	85	0	25	0	0	0	0	0	0	0	0
Yellow	4.9	4.9	6	4.5	4.9	4.9	6	4.5	6	6	6	6	6	6	6	6
Red	2.9	2.9	0	2	2.9	2.9	0	2	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Exit																
Rest In Walk																

Phase Option [1.1.2]

	1 (WL)	2 (ET)	3	4 (ST)	5 (EL)	6 (WT)	7	8 (NT)	9	10	11	12	13	14	15	16
Enable	ON	ON		ON	ON	ON		ON							ON	
Auto Entry																
Non Act1																
Non Act2																
Lock Call																
Min Recall		ON		ON		ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable		ON		ON		ON		ON								
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

Entry	Call Phases				From	To	From	To	From	To	From	To	Assigned Ph
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

Entry	Call Phases				From	To	From	To	From	To	From	To	Assigned Ph
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 1, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

Hampton Timing Sheet 5/16/2024 10:15:38 AM

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Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Backup Time	Red Revert	Console Timeout	Tone Disable	Feature Profile	Phase Mode	Diamond Mode	SDLC Retry Time	TS2 Det Faults	Cycle Fault Action	Max Cycle Time	Max Seek Track Time	Max Seek Dwell Time	Enable Run	Local Flash Start	Start Red Time	Disable Init Ped	Yellow 3 Second Disable	Omit Yellow Enable	Free Ring Sequence
10	OFF			99	OFF		STD8	4PH		OFF	ALARM				ON	OFF		OFF	OFF	OFF	1

Comm, General Comm Parameters [6.1]

Station ID	Master Station ID	Fallback time	Allow Pencil	Port	System-Up	Sys-Down	PC/Print	Aux 232
219			OFF					

Port Parameters [6.2]

Comm	Mode	Baud	MsgTime	Duplex	Enable	DialTime	Modem	ModemTime	Tel#1	Tel#2
System Up(P-A)										
System Down(P-B)										
PC/Print(P-2)										

Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	OFF	OFF	OFF

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases								Modifer Phases								Type	Green	Yellow	Red
Overlap 1	1																NORMAL		4.5	2
Overlap 2																	NORMAL		3.5	1.5
Overlap 3																	NORMAL		3.5	1.5
Overlap 4																	NORMAL		3.5	1.5
Overlap 5																	NORMAL		3.5	1.5
Overlap 6																	NORMAL		3.5	1.5
Overlap 7																	NORMAL		3.5	1.5
Overlap 8																	NORMAL		3.5	1.5

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases								Conflicting Overlaps								Conflicting Peds									
Overlap 1																									OFF	OFF
Overlap 2																									OFF	OFF
Overlap 3																									OFF	OFF
Overlap 4																									OFF	OFF
Overlap 5																									OFF	OFF
Overlap 6																									OFF	OFF
Overlap 7																									OFF	OFF
Overlap 8																									OFF	OFF

Detector, Vehicle Parameters 1-16 [5.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	2	5	6	1	8	4	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	4	0	4	4	4	4	4	0	0	0	0	0	0	0	0

Detector, Vehicle Parameters 17-32 [5.1]

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Detector Alternate Program 1, Vehicle Parameters [5.5.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Channels/SDLC, Assign to Phases [1.3.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PH/OLP #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8	1	3	5	7				
Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	PED	PED	PED	PED	VEH	VEH	VEH	VEH
Flash	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz																								
Dimming Green																								
Dimming Yellow																								
Dimming Red																								
Alt Cyc	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Channel/SDLC, Parameters [1.3.3]

TOD Dim Enable	Extra Maps Enable	D Connector Enable	Single BIU Map	IO Mode	Preempt or Ext Output
OFF	DEFAULT	TX2_V14	ON	AUTO	EXT

Channel/SDLC, MMU Map [1.3.5]

MMU-to-Controller Channel Map

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Channel/SDLC, Permissive [1.3.4]

Channel	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
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Channel/SDLC, Permissive [1.3.7]

SDLC Device	Term/Fac								Detector								MMU	Diag
BIU#	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**		
Present	ON	ON							ON								ON	
Peer to Peer																		

Ring Sequence [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2	3	4				
Ring 2	5	6	7	8				
Ring 3								
Ring 4								

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Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	ON
4	ON
5	
6	
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	ON
18	
19	ON
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	ON
50	ON
51	ON
52	ON
53	ON
54	ON
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	ON
2	ON
3	ON
4	ON
5	
6	
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	ON
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
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37	ON
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Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash	ON	ON	ON	ON	ON	ON
Override Higher	ON	ON	ON	ON	ON	ON
Flash Dwell		ON				
Link						
Delay						
Min Duration						
Min Green						
Min Walk						
Ped Clear						
Track Green						
Min Dwell			5	5	5	5
Max Presence			120	120	240	240
Track R1						
Track R2						
Track R3						
Track R4						
Dwell P1			2	1	8	4
Dwell P2			5	6		
Dwell P3						
Dwell P4						
Dwell P5						
Dwell P6						
Dwell P7						
Dwell P8						
Dwell P9						
Dwell P10						
Dwell P11						
Dwell P12						
Dwell Ped1						
Dwell Ped2						
Dwell Ped3						
Dwell Ped4						
Dwell Ped5						
Dwell Ped6						
Dwell Ped7						
Dwell Ped8						
Exit R1			2	2	2	2
Exit R2			6	6	6	6
Exit R3						
Exit R4						

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
35	15	CHANNEL	TEST B

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
ON	ON

Alarms, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases												
Overlaps												

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Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

Preempt	1	2	3	4	5	6
Enable	ON		ON	ON	ON	ON
Type	EMERG	RAIL	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt			ON	ON	ON	ON
Max2						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell						
Pattern						
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1						
Track Over 2						
Track Over 3						
Track Over 4						
Track Over 5						
Track Over 6						
Track Over 7						
Track Over 8						
Track Over 9						
Track Over 10						
Track Over 11						
Track Over 12						
Dwell Over 1					1	
Dwell Over 2						
Dwell Over 3						
Dwell Over 4						
Dwell Over 5						
Dwell Over 6						
Dwell Over 7						
Dwell Over 8						
Dwell Over 9						
Dwell Over 10						
Dwell Over 11						
Dwell Over 12						
Ped Clear						
Yellow						
Red						
Return Min/Max						
Delay Inh						
Exit Time						
All Red B4						

Coordination, Modes,+ [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FLOAT

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Yield Sign	Closed Loop Active	
FRC	TIMED	TIMED	NO_RECYCLE	ON	OFF	ON	OFF	OFF	0	+	OFF	OFF

Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	110	100	120	130	110	80	110	80								
Offset Time	78	63	28	101	75	40	20	40								
Split Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time									110	110	130	130	130	130	130	130
Offset Time									74	74	21	21	21	21	21	21
Split Number	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

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Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	15	75		20	15	75		20								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	15	65		20	15	65		20								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	15	85		20	15	85		20								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	15	95		20	15	95		20								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	15	77		18	15	77		18								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	15	49		16	15	49		16								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	13	79		18	13	79		18								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	15	49		16	15	49		16								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

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Split Table 13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 23	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 25	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	74		20	16	74		20								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 26	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	74		20	16	74		20								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 27	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	93		21	16	93		21								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 28	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	93		21	16	93		21								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 29	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	93		21	16	93		21								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	93		21	16	93		21								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	93		21	16	93		21								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	93		21	16	93		21								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

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TB Coor, Advanced Scheduler [4.3]

	Month												Day of Week							Day of Month										1										2										3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4																																																	1
5																																																		1
6																																																		1
7																																																		1
8																																																		1
9																																																		1
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29																																																		1
30																																																		1
31																																																		1
32																																																		1

TB Coor, Day Plan [4.4]

Day Plan Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		6	9	11	14	18	20									
Minute					30	15	30									
Action	100	1	2	3	4	5	100									

Day Plan Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		8	10	18	20											
Minute		30	30													
Action	100	6	7	8	100											

Day Plan Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		9	11	17	19											
Minute		30	30													
Action	100	6	7	8	100											

Day Plan Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Station : 219 - Armistead Ave. @ Freeman Dr. (Upload File)

Day Plan Table 7	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 8	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 9	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 10	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 11	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 12	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

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TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25	255											
26	1											
27	2											
28	3											
29	4											
30	5											
31	6											
32	7											
33	8											
34	9											
35	10											
36	11											
37	12											
38	13											
39	14											
40	15											
41	16											
42	17											
43	18											
44	19											
45	20											
46	21											
47	22											
48	23											
49	24											
50	48											
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
99												
100	254											

Station : 220 - Armistead Ave. @ Convention Center Blvd. (Upload File)

Phase [1.1.1]

	1 (WL)	2 (ET)	3 (NT)	4 (ST)	5 (EL)	6 (WT)	7	8	9	10	11	12	13	14	15	16
Walk	0	7	0	7	0	7	0	0	0	0	0	0	0	0	0	0
Ped Clearance	0	29	0	33	0	16	0	0	0	0	0	0	0	0	0	0
Min Green	7	12	7	7	7	12	0	0	0	0	0	0	0	0	0	0
Passage	2	4	2	2	2	4	0	0	0	0	0	0	0	0	0	0
Max1	40	40	40	15	15	40	0	0	0	0	0	0	0	0	0	0
Max2	15	70	15	15	15	65	0	0	0	0	0	0	0	0	0	0
Yellow	4.5	4.9	4.5	4.5	4.5	4.9	6	6	6	6	6	6	6	6	6	6
Red	3	1.5	3	3	3	1.5	0	0	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Auto Exit																
Rest In Walk																

Phase Option [1.1.2]

	1 (WL)	2 (ET)	3 (NT)	4 (ST)	5 (EL)	6 (WT)	7	8	9	10	11	12	13	14	15	16
Enable	ON	ON	ON	ON	ON	ON										
Auto Entry																
Non Act1																
Non Act2																
Lock Call																
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON				ON										
Sim Gap Enable		ON				ON										
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

Entry	Call Phases				From	To	From	To	From	To	From	To	Assigned Ph
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

Entry	Call Phases				From	To	From	To	From	To	From	To	Assigned Ph
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 1, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

Hampton Timing Sheet 5/16/2024 10:16:28 AM

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Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Backup Time	Red Revert	Console Timeout	Tone Disable	Feature Profile	Phase Mode	Diamond Mode	SDLC Retry Time	TS2 Det Faults	Cycle Fault Action	Max Cycle Time	Max Seek Track Time	Max Seek Dwell Time	Enable Run	Local Flash Start	Start Red Time	Disable Init Ped	Yellow 3 Second Disable	Omit Yellow Enable	Free Ring Sequence
10	OFF			99	OFF		STD8	4PH		ON	ALARM				ON	OFF		OFF	OFF	OFF	9

Comm, General Comm Parameters [6.1]

Station ID	Master Station ID	Fallback time	Allow Pencil	Port	System-Up	Sys-Down	PC/Print	Aux 232
220			OFF					

Port Parameters [6.2]

Comm	Mode	Baud	MsgTime	Duplex	Enable	DialTime	Modem	ModemTime	Tel#1	Tel#2
System Up(P-A)										
System Down(P-B)										
PC/Print(P-2)										

Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	OFF	OFF	OFF

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases								Modifer Phases								Type	Green	Yellow	Red
Overlap 1	2	3															NORMAL		4.9	1.5
Overlap 2																	NORMAL		3.5	1.5
Overlap 3	4	6															NORMAL		4.9	1.5
Overlap 4	1	3															NORMAL		4.5	3
Overlap 5																	NORMAL		3.5	1.5
Overlap 6																	NORMAL		3.5	1.5
Overlap 7																	NORMAL		3.5	1.5
Overlap 8																	NORMAL		3.5	1.5

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases								Conflicting Overlaps								Conflicting Peds									
Overlap 1																	2								OFF	OFF
Overlap 2																									OFF	OFF
Overlap 3	5																6								OFF	OFF
Overlap 4																									OFF	OFF
Overlap 5																									OFF	OFF
Overlap 6																									OFF	OFF
Overlap 7																									OFF	OFF
Overlap 8																									OFF	OFF

Detector, Vehicle Parameters 1-16 [5.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Detector, Vehicle Parameters 17-32 [5.1]

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Detector Alternate Program 1, Vehicle Parameters [5.5.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Channels/SDLC, Assign to Phases [1.3.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PH/OLP #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8	1	3	5	7				
Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	PED	PED	PED	PED	VEH	VEH	VEH	VEH
Flash	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz																								
Dimming Green																								
Dimming Yellow																								
Dimming Red																								
Alt Cyc	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Channel/SDLC, Parameters [1.3.3]

TOD Dim Enable	Extra Maps Enable	D Connector Enable	Single BIU Map	IO Mode	Preempt or Ext Output
OFF	DEFAULT	TX2_V14	ON	AUTO	EXT

Channel/SDLC, MMU Map [1.3.5]

MMU-to-Controller Channel Map

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Channel/SDLC, Permissive [1.3.4]

Channel	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
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13															
14															
15															
1															
2															
3															
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14															
15															
1															
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8															
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10															
11															
12															
13															
14															
15															
1															
2															
3															

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14

Channel/SDLC, Permissive [1.3.7]

SDLC Device	Term/Fac								Detector								MMU	Diag
BIU#	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**		
Present									ON									
Peer to Peer																		

Ring Sequence [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2	3	4				
Ring 2	5	6	7	8				
Ring 3								
Ring 4								

Station : 220 - Armistead Ave. @ Convention Center Blvd. (Upload File)

Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	ON
4	ON
5	
6	
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	ON
18	
19	ON
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	ON
50	ON
51	ON
52	ON
53	ON
54	ON
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	ON
2	ON
3	ON
4	ON
5	
6	
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	ON
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
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62	
63	
64	

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash	ON	ON	ON	ON	ON	ON
Override Higher	ON	ON	ON	ON	ON	ON
Flash Dwell						
Link						
Delay						
Min Duration						
Min Green						
Min Walk						
Ped Clear						
Track Green						
Min Dwell			5	5	5	5
Max Presence						
Track R1						
Track R2						
Track R3						
Track R4						
Dwell P1			2	1	4	3
Dwell P2			5	6		
Dwell P3						
Dwell P4						
Dwell P5						
Dwell P6						
Dwell P7						
Dwell P8						
Dwell P9						
Dwell P10						
Dwell P11						
Dwell P12						
Dwell Ped1						
Dwell Ped2						
Dwell Ped3						
Dwell Ped4						
Dwell Ped5						
Dwell Ped6						
Dwell Ped7						
Dwell Ped8						
Exit R1			2	2	2	2
Exit R2			6	6	6	6
Exit R3						
Exit R4						

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
35	15	CHANNEL	D-CONN

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
ON	ON

Alarms, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases												
Overlaps												

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Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

Preempt	1	2	3	4	5	6
Enable	ON	ON	ON	ON	ON	ON
Type	RAIL	RAIL	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt			ON	ON	ON	ON
Max2						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell						
Pattern						
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1						
Track Over 2						
Track Over 3						
Track Over 4						
Track Over 5						
Track Over 6						
Track Over 7						
Track Over 8						
Track Over 9						
Track Over 10						
Track Over 11						
Track Over 12						
Dwell Over 1			1	3		4
Dwell Over 2						
Dwell Over 3						
Dwell Over 4						
Dwell Over 5						
Dwell Over 6						
Dwell Over 7						
Dwell Over 8						
Dwell Over 9						
Dwell Over 10						
Dwell Over 11						
Dwell Over 12						
Ped Clear						
Yellow						
Red						
Return Min/Max						
Delay Inh						
Exit Time						
All Red B4						

Coordination, Modes,+ [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FLOAT

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Yield Sign	Closed Loop Active	
FRC	TIMED	TIMED	NO_RECYCLE	ON	OFF	ON	OFF	OFF	0	+	OFF	OFF

Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	110	100	120	130	110	80	110	80								
Offset Time	66	52	73	69	56	70	54	70								
Split Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Seq Number	10	11	10	9	10	10	10	10	9	9	9	9	9	9	9	9
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time					130	130	130		110	110	130	130	130	130	130	130
Offset Time					10	60	5		87	87	96	96	96	96	96	96
Split Number	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Seq Number	9	9	9	9	9	9	9	9	11	11	10	10	10	10	10	10
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	beggrn	beggrn	endgrn	endgrn

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Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	53	19	19	19	53	19	19								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	45	19	19	19	43	19	19								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	24	53	24	19	19	58	24	19								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	21	65	25	19	21	65	25	19								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	53	19	19	19	53	19	19								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	21	27	16	16	16	32	16	16								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	23	49	19	19	21	51	19	19								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	20	24	20	16	17	27	20	16								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

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Split Table 13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	26	60	22	22	26	60	22	22								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	26	60	22	22	26	60	22	22								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 23	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	26	60	22	22	26	60	22	22								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 25	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	58	17	18	20	55	17	18								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 26	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	58	17	18	20	55	17	18								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 27	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	73	19	19	17	75	19	19								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 28	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	73	19	19	17	75	19	19								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 29	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	73	19	19	17	75	19	19								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	73	19	19	17	75	19	19								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	73	19	19	17	75	19	19								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	73	19	19	17	75	19	19								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

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TB Coor, Advanced Scheduler [4.3]

	Month												Day of Week							Day of Month									1									2									3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4																																																	1
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31																																																		1
32																																																		1

TB Coor, Day Plan [4.4]

Day Plan Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		6	9	11	14	18	20									
Minute					30	15	30									
Action	100	1	2	3	4	5	100									

Day Plan Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		8	10	18	20											
Minute		30	30													
Action	100	6	7	8	100											

Day Plan Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		9	11	17	19											
Minute		30	30													
Action	100	6	7	8	100											

Day Plan Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Hampton Timing Sheet 5/16/2024 10:16:28 AM

Station : 220 - Armistead Ave. @ Convention Center Blvd. (Upload File)

Day Plan Table 7	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 8	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 9	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 10	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 11	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Day Plan Table 12	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action																

Station : 220 - Armistead Ave. @ Convention Center Blvd. (Upload File)

TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25	255											
26	1											
27	2											
28	3											
29	4											
30	5											
31	6											
32	7											
33	8											
34	9											
35	10											
36	11											
37	12											
38	13											
39	14											
40	15											
41	16											
42	17											
43	18											
44	19											
45	20											
46	21											
47	22											
48	23											
49	24											
50	48											
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
99												
100	254											

Appendix D – 2024 Existing Synchro Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	179	1398	228	141	1423	619	204	234	44	461	272	147
v/c Ratio	0.56	0.52	0.13	0.49	0.54	0.66	0.39	0.64	0.03	0.70	0.59	0.40
Control Delay	58.9	27.6	1.8	57.7	28.4	10.0	51.9	59.5	0.0	55.7	54.3	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	27.6	1.8	57.7	28.4	10.0	51.9	59.5	0.0	55.7	54.3	6.4
Queue Length 50th (ft)	69	239	0	54	248	63	52	91	0	121	104	0
Queue Length 95th (ft)	106	287	19	86	293	205	78	135	0	159	150	33
Internal Link Dist (ft)		1584			904			1443			1167	
Turn Bay Length (ft)	315		485	305		325	370		395	300		145
Base Capacity (vph)	367	2675	1744	365	2651	937	577	404	1568	707	496	378
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.52	0.13	0.39	0.54	0.66	0.35	0.58	0.03	0.65	0.55	0.39

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	29	145	1356	221	11	126	1380	600	7	191	227	43
Future Volume (vph)	29	145	1356	221	11	126	1380	600	7	191	227	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	7.0	8.0		8.0	7.0	7.0		8.0	8.0	4.0
Lane Util. Factor		0.97	0.86	0.88		0.97	0.86	1.00		0.94	0.95	1.00
Frpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3394	6408	2787		3377	6471	1574		4947	3471	1568
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (perm)		3394	6408	2787		3377	6471	1574		4947	3471	1568
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	30	149	1398	228	11	130	1423	619	7	197	234	44
RTOR Reduction (vph)	0	0	0	109	0	0	0	292	0	0	0	0
Lane Group Flow (vph)	0	179	1398	119	0	141	1423	327	0	204	234	44
Confl. Peds. (#/hr)		4						4				
Heavy Vehicles (%)	4%	3%	2%	2%	0%	4%	1%	1%	0%	3%	4%	3%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm	Split	Split	NA	Free
Protected Phases	5	5	2	3!	1	1	6		3!	3	3	
Permitted Phases				2				6				Free
Actuated Green, G (s)		11.2	50.1	62.8		10.3	49.2	49.2		12.7	12.7	120.0
Effective Green, g (s)		11.2	50.1	62.8		10.3	49.2	49.2		12.7	12.7	120.0
Actuated g/C Ratio		0.09	0.42	0.52		0.09	0.41	0.41		0.11	0.11	1.00
Clearance Time (s)		8.0	7.0	8.0		8.0	7.0	7.0		8.0	8.0	
Vehicle Extension (s)		3.0	4.0	3.0		3.0	4.0	4.0		3.0	3.0	
Lane Grp Cap (vph)		316	2675	1458		289	2653	645		523	367	1568
v/s Ratio Prot		c0.05	0.22	0.01		0.04	c0.22			0.04	c0.07	
v/s Ratio Perm				0.03				0.21				c0.03
v/c Ratio		0.57	0.52	0.08		0.49	0.54	0.51		0.39	0.64	0.03
Uniform Delay, d1		52.1	26.0	14.2		52.3	26.8	26.4		50.0	51.4	0.0
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		2.3	0.2	0.0		1.3	0.8	2.8		0.5	3.6	0.0
Delay (s)		54.4	26.3	14.3		53.6	27.6	29.2		50.5	55.1	0.0
Level of Service		D	C	B		D	C	C		D	E	A
Approach Delay (s)			27.6				29.7				48.1	
Approach LOS			C				C				D	

Intersection Summary

HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	1	446	264	143
Future Volume (vph)	1	446	264	143
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	8.0
Lane Util. Factor		0.94	0.95	1.00
Frpb, ped/bikes		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00
Frt		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00
Satd. Flow (prot)		4991	3505	1568
Flt Permitted		0.95	1.00	1.00
Satd. Flow (perm)		4991	3505	1568
Peak-hour factor, PHF	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1	460	272	147
RTOR Reduction (vph)	0	0	0	128
Lane Group Flow (vph)	0	461	272	19
Confl. Peds. (#/hr)	4			
Heavy Vehicles (%)	0%	2%	3%	3%
Turn Type	Split	Split	NA	Perm
Protected Phases	4	4	4	
Permitted Phases				4
Actuated Green, G (s)		15.9	15.9	15.9
Effective Green, g (s)		15.9	15.9	15.9
Actuated g/C Ratio		0.13	0.13	0.13
Clearance Time (s)		8.0	8.0	8.0
Vehicle Extension (s)		3.0	3.0	3.0
Lane Grp Cap (vph)		661	464	207
v/s Ratio Prot		c0.09	0.08	
v/s Ratio Perm				0.01
v/c Ratio		0.70	0.59	0.09
Uniform Delay, d1		49.8	49.0	45.7
Progression Factor		1.00	1.00	1.00
Incremental Delay, d2		3.2	1.9	0.2
Delay (s)		53.0	50.8	45.9
Level of Service		D	D	D
Approach Delay (s)			51.1	
Approach LOS			D	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	9	649	13	6	582	8	8	40	21
v/c Ratio	0.08	0.23	0.01	0.03	0.21	0.08	0.08	0.15	0.08
Control Delay	50.4	6.1	0.0	57.8	5.9	50.4	50.3	1.2	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	6.1	0.0	57.8	5.9	50.4	50.3	1.2	0.5
Queue Length 50th (ft)	6	43	0	2	65	5	5	0	0
Queue Length 95th (ft)	23	166	0	9	94	23	23	0	0
Internal Link Dist (ft)		1443			897		1117		625
Turn Bay Length (ft)	390		340	480					
Base Capacity (vph)	170	2828	2582	323	2833	169	171	310	336
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.23	0.01	0.02	0.21	0.05	0.05	0.13	0.06

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	0	597	12	2	4	535	0	14	1	37	10
Future Volume (vph)	8	0	597	12	2	4	535	0	14	1	37	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.9	6.4	7.5		7.5	6.0		7.5	7.5	7.5	
Lane Util. Factor		1.00	0.95	0.88		0.97	0.95		0.95	0.95	1.00	
Frpb, ped/bikes		1.00	1.00	1.00		1.00	1.00		1.00	1.00	0.97	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	
Frt		1.00	1.00	0.85		1.00	1.00		1.00	1.00	0.85	
Flt Protected		0.95	1.00	1.00		0.95	1.00		0.95	0.96	1.00	
Satd. Flow (prot)		1687	3505	2842		3090	3505		1618	1643	1366	
Flt Permitted		0.95	1.00	1.00		0.95	1.00		0.95	0.96	1.00	
Satd. Flow (perm)		1687	3505	2842		3090	3505		1618	1643	1366	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	0	649	13	2	4	582	0	15	1	40	11
RTOR Reduction (vph)	0	0	0	4	0	0	0	0	0	0	38	0
Lane Group Flow (vph)	0	9	649	9	0	6	582	0	8	8	2	0
Confl. Peds. (#/hr)		1			2			1			2	2
Heavy Vehicles (%)	7%	0%	3%	0%	0%	20%	3%	0%	6%	0%	15%	5%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2	3	1	1	6		3	3		4
Permitted Phases				2				6			3	
Actuated Green, G (s)		1.4	72.7	76.9		1.4	72.7		4.2	4.2	4.2	
Effective Green, g (s)		1.4	72.7	76.9		1.4	72.7		4.2	4.2	4.2	
Actuated g/C Ratio		0.01	0.66	0.70		0.01	0.66		0.04	0.04	0.04	
Clearance Time (s)		7.9	6.4	7.5		7.5	6.0		7.5	7.5	7.5	
Vehicle Extension (s)		2.0	4.0	2.0		2.0	4.0		2.0	2.0	2.0	
Lane Grp Cap (vph)		21	2316	1986		39	2316		61	62	52	
v/s Ratio Prot		c0.01	c0.19	0.00		0.00	0.17		c0.00	0.00		
v/s Ratio Perm				0.00							0.00	
v/c Ratio		0.43	0.28	0.00		0.15	0.25		0.13	0.13	0.03	
Uniform Delay, d1		53.9	7.8	5.0		53.7	7.6		51.1	51.1	50.9	
Progression Factor		1.00	1.00	1.00		1.19	1.00		1.00	1.00	1.00	
Incremental Delay, d2		5.0	0.1	0.0		0.7	0.3		0.4	0.3	0.1	
Delay (s)		58.9	7.9	5.0		64.5	7.8		51.5	51.5	51.0	
Level of Service		E	A	A		E	A		D	D	D	
Approach Delay (s)			8.5				8.4			51.2		
Approach LOS			A				A			D		

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	9
Future Volume (vph)	0	9
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.5	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.94	
Flt Protected	0.97	
Satd. Flow (prot)	1628	
Flt Permitted	0.97	
Satd. Flow (perm)	1628	
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	0	10
RTOR Reduction (vph)	20	0
Lane Group Flow (vph)	1	0
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	0%	8%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	2.8	
Effective Green, g (s)	2.8	
Actuated g/C Ratio	0.03	
Clearance Time (s)	7.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	41	
v/s Ratio Prot	c0.00	
v/s Ratio Perm		
v/c Ratio	0.01	
Uniform Delay, d1	52.3	
Progression Factor	1.00	
Incremental Delay, d2	0.0	
Delay (s)	52.3	
Level of Service	D	
Approach Delay (s)	52.3	
Approach LOS	D	

Intersection Summary

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↱	
Traffic Vol, veh/h	0	643	527	0	0	0
Future Vol, veh/h	0	643	527	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	3	0	0	0
Mvmt Flow	0	699	573	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	923	287
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	350	-
Critical Hdwy	-	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	0	273	716
Stage 1	0	-	-	0	533	-
Stage 2	0	-	-	0	690	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	273	716
Mov Cap-2 Maneuver	-	-	-	-	273	-
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	690	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	13	703	21	537	18	8	57	32	26
v/c Ratio	0.02	0.27	0.03	0.20	0.02	0.07	0.25	0.26	0.12
Control Delay	2.7	5.3	2.3	3.6	0.0	48.9	2.7	53.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.7	5.3	2.3	3.6	0.0	48.9	2.7	53.9	1.1
Queue Length 50th (ft)	1	49	2	31	0	5	0	22	0
Queue Length 95th (ft)	5	123	6	86	0	22	0	53	0
Internal Link Dist (ft)		873		711		1172		897	
Turn Bay Length (ft)	260		175		305		50		355
Base Capacity (vph)	724	2611	614	2718	1160	213	307	222	300
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.27	0.03	0.20	0.02	0.04	0.19	0.14	0.09

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	2	10	632	7	1	18	489	16	4	4	52	27
Future Volume (vph)	2	10	632	7	1	18	489	16	4	4	52	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.8	7.8			7.8	7.8	7.8		6.5	6.5	
Lane Util. Factor		1.00	0.95			1.00	0.95	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	1.00	0.97		1.00	1.00	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.98	1.00	
Satd. Flow (prot)		1801	3489			1753	3505	1464		1741	1615	
Flt Permitted		0.45	1.00			0.37	1.00	1.00		0.98	1.00	
Satd. Flow (perm)		857	3489			692	3505	1464		1741	1615	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	2	11	695	8	1	20	537	18	4	4	57	30
RTOR Reduction (vph)	0	0	1	0	0	0	0	5	0	0	53	0
Lane Group Flow (vph)	0	13	702	0	0	21	537	13	0	8	4	0
Confl. Peds. (#/hr)		6		4		4		6				
Heavy Vehicles (%)	0%	0%	3%	25%	0%	3%	3%	7%	13%	0%	0%	0%
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		8!	8!		4!
Permitted Phases	2	2			6	6		6			8	
Actuated Green, G (s)		79.1	77.7			81.9	79.1	79.1		7.4	7.4	
Effective Green, g (s)		79.1	77.7			81.9	79.1	79.1		7.4	7.4	
Actuated g/C Ratio		0.72	0.71			0.74	0.72	0.72		0.07	0.07	
Clearance Time (s)		7.8	7.8			7.8	7.8	7.8		6.5	6.5	
Vehicle Extension (s)		2.0	4.0			2.0	4.0	4.0		2.0	2.0	
Lane Grp Cap (vph)		628	2464			542	2520	1052		117	108	
v/s Ratio Prot		0.00	c0.20			c0.00	0.15			0.00		
v/s Ratio Perm		0.01				0.03		0.01			0.00	
v/c Ratio		0.02	0.29			0.04	0.21	0.01		0.07	0.04	
Uniform Delay, d1		4.4	5.9			3.7	5.1	4.4		48.1	48.0	
Progression Factor		1.02	0.96			0.91	0.88	1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.3			0.0	0.1	0.0		0.1	0.0	
Delay (s)		4.5	6.0			3.3	4.6	4.4		48.2	48.0	
Level of Service		A	A			A	A	A		D	D	
Approach Delay (s)			6.0				4.5			48.0		
Approach LOS			A				A			D		

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	22.1
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	2	24
Future Volume (vph)	2	24
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.5	6.5
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	0.96	1.00
Satd. Flow (prot)	1815	1553
Flt Permitted	0.96	1.00
Satd. Flow (perm)	1815	1553
Peak-hour factor, PHF	0.91	0.91
Adj. Flow (vph)	2	26
RTOR Reduction (vph)	0	24
Lane Group Flow (vph)	32	2
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	0%	4%
Turn Type	NA	Perm
Protected Phases	4!	
Permitted Phases		4
Actuated Green, G (s)	7.4	7.4
Effective Green, g (s)	7.4	7.4
Actuated g/C Ratio	0.07	0.07
Clearance Time (s)	6.5	6.5
Vehicle Extension (s)	2.0	2.0
Lane Grp Cap (vph)	122	104
v/s Ratio Prot	c0.02	
v/s Ratio Perm		0.00
v/c Ratio	0.26	0.02
Uniform Delay, d1	48.7	47.9
Progression Factor	1.00	1.00
Incremental Delay, d2	0.4	0.0
Delay (s)	49.1	47.9
Level of Service	D	D
Approach Delay (s)	48.6	
Approach LOS	D	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	717	129	184	552	65	127
v/c Ratio	0.33	0.13	0.33	0.20	0.43	0.50
Control Delay	8.8	2.3	5.0	3.7	55.9	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.8	2.3	5.0	3.7	55.9	15.4
Queue Length 50th (ft)	140	0	27	45	44	0
Queue Length 95th (ft)	44	0	47	63	81	46
Internal Link Dist (ft)	711			1332	532	
Turn Bay Length (ft)		205	205		130	
Base Capacity (vph)	2196	1030	565	2709	197	292
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.13	0.33	0.20	0.33	0.43

Intersection Summary

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	602	108	17	138	464	55	107
Future Volume (vph)	602	108	17	138	464	55	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9	7.5	7.5
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568		1773	3505	1736	1583
Flt Permitted	1.00	1.00		0.33	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568		607	3505	1736	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	717	129	20	164	552	65	127
RTOR Reduction (vph)	0	48	0	0	0	0	116
Lane Group Flow (vph)	717	81	0	184	552	65	11
Heavy Vehicles (%)	3%	3%	0%	2%	3%	4%	2%
Turn Type	NA	Perm	pm+pt	pm+pt	NA	Prot	Perm
Protected Phases	2		1	1	6	3	
Permitted Phases		2	6	6			3
Actuated Green, G (s)	68.9	68.9		85.0	85.0	9.6	9.6
Effective Green, g (s)	68.9	68.9		85.0	85.0	9.6	9.6
Actuated g/C Ratio	0.63	0.63		0.77	0.77	0.09	0.09
Clearance Time (s)	7.9	7.9		7.9	7.9	7.5	7.5
Vehicle Extension (s)	4.0	4.0		3.0	4.0	3.0	3.0
Lane Grp Cap (vph)	2195	982		555	2708	151	138
v/s Ratio Prot	0.20			c0.02	0.16	c0.04	
v/s Ratio Perm		0.05		c0.23			0.01
v/c Ratio	0.33	0.08		0.33	0.20	0.43	0.08
Uniform Delay, d1	9.7	8.1		3.9	3.4	47.6	46.1
Progression Factor	0.84	1.20		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2		0.4	0.1	2.0	0.3
Delay (s)	8.5	9.9		4.3	3.4	49.6	46.4
Level of Service	A	A		A	A	D	D
Approach Delay (s)	8.7				3.6	47.5	
Approach LOS	A				A	D	

Intersection Summary

HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.3
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	EB	EB	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB
Directions Served	UL	L	T	T	T	T	R	R	UL	L	T	T
Maximum Queue (ft)	133	203	312	298	261	196	92	42	111	197	302	294
Average Queue (ft)	59	87	232	215	168	73	41	11	45	71	217	209
95th Queue (ft)	116	158	298	285	241	170	74	36	96	148	280	274
Link Distance (ft)			1589	1589	1589	1589					888	888
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	315	315					485	485	305	305		
Storage Blk Time (%)		0	0							0	0	
Queuing Penalty (veh)		0	0							0	0	

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	WB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	UL	L	L	T	T	UL	L	L	T
Maximum Queue (ft)	271	323	310	90	128	142	142	138	182	288	297	324
Average Queue (ft)	174	115	159	13	54	73	66	66	85	197	226	105
95th Queue (ft)	240	231	278	57	108	126	122	121	200	280	296	235
Link Distance (ft)	888	888					1372	1372				1161
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			325	370	370	370			300	300	300	
Storage Blk Time (%)		0	1							0	1	0
Queuing Penalty (veh)		2	2							0	1	1

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	197	145
Average Queue (ft)	93	55
95th Queue (ft)	160	123
Link Distance (ft)	1161	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		145
Storage Blk Time (%)	1	0
Queuing Penalty (veh)	2	0

Intersection: 2: Convention Center Blvd/Reese Dr & N Armistead Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	UL	T	T	R	R	UL	L	T	T	L	LT	R
Maximum Queue (ft)	29	129	136	17	2	20	26	108	100	34	16	48
Average Queue (ft)	5	30	47	1	0	2	2	33	27	8	1	11
95th Queue (ft)	23	87	109	8	0	13	15	82	73	25	9	33
Link Distance (ft)		1372	1372	1372				908	908	1118	1118	1118
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	390				340	480	480					
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Convention Center Blvd/Reese Dr & N Armistead Ave

Movement	SB
Directions Served	LTR
Maximum Queue (ft)	57
Average Queue (ft)	15
95th Queue (ft)	43
Link Distance (ft)	635
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: N Armistead Ave & Site Driveway

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 4: Freeman Dr/Mercer Ave & N Armistead Ave

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	UL	T	TR	UL	T	T	R	LT	R	LT	R
Maximum Queue (ft)	34	119	153	48	108	108	38	48	48	62	41
Average Queue (ft)	8	44	66	12	49	34	5	7	28	17	12
95th Queue (ft)	29	98	124	38	89	79	24	31	55	45	34
Link Distance (ft)		888	888		729	729		1185		905	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	260			175			305		50		355
Storage Blk Time (%)								0	1		
Queuing Penalty (veh)								0	0		

Intersection: 5: Lake Hampton Dr & N Armistead Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	UL	T	T	L	R
Maximum Queue (ft)	190	194	98	115	95	72	83	83
Average Queue (ft)	78	84	28	49	41	25	34	37
95th Queue (ft)	155	158	70	89	81	60	68	67
Link Distance (ft)	729	729			1367	1367		540
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			205	205			130	
Storage Blk Time (%)		0	0				0	
Queuing Penalty (veh)		0	0				0	

Network Summary

Network wide Queuing Penalty: 9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	263	2425	387	168	1594	540	378	302	80	885	339	172
v/c Ratio	0.71	0.88	0.25	0.69	0.63	0.57	0.72	0.81	0.05	0.86	0.47	0.40
Control Delay	80.0	46.7	8.5	87.8	40.9	5.1	77.9	86.7	0.1	71.0	58.5	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.0	46.7	8.5	87.8	40.9	5.1	77.9	86.7	0.1	71.0	58.5	16.8
Queue Length 50th (ft)	139	681	51	89	394	0	137	165	0	319	165	31
Queue Length 95th (ft)	187	729	81	132	447	83	177	#230	0	373	218	104
Internal Link Dist (ft)		1584			904			1443			1167	
Turn Bay Length (ft)	315		485	305		325	370		395	300		145
Base Capacity (vph)	434	2769	1547	253	2545	954	535	383	1583	1049	737	433
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.88	0.25	0.66	0.63	0.57	0.71	0.79	0.05	0.84	0.46	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	42	213	2352	375	24	139	1546	524	15	352	293	78
Future Volume (vph)	42	213	2352	375	24	139	1546	524	15	352	293	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	7.0	8.0		8.0	7.0	7.0		8.0	8.0	4.0
Lane Util. Factor		0.97	0.86	0.88		0.97	0.86	1.00		0.94	0.95	1.00
Frpb, ped/bikes		1.00	1.00	0.99		1.00	1.00	0.99		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3473	6471	2755		3386	6471	1594		5042	3610	1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (perm)		3473	6471	2755		3386	6471	1594		5042	3610	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	43	220	2425	387	25	143	1594	540	15	363	302	80
RTOR Reduction (vph)	0	0	0	92	0	0	0	327	0	0	0	0
Lane Group Flow (vph)	0	263	2425	295	0	168	1594	213	0	378	302	80
Confl. Peds. (#/hr)	2	1		2		2		1	2	2		
Heavy Vehicles (%)	0%	1%	1%	2%	0%	4%	1%	0%	0%	1%	0%	2%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm	Split	Split	NA	Free
Protected Phases	5	5	2	3!	1	1	6		3!	3	3	
Permitted Phases				2				6				Free
Actuated Green, G (s)		17.0	68.5	85.1		11.5	63.0	63.0		16.6	16.6	160.0
Effective Green, g (s)		17.0	68.5	85.1		11.5	63.0	63.0		16.6	16.6	160.0
Actuated g/C Ratio		0.11	0.43	0.53		0.07	0.39	0.39		0.10	0.10	1.00
Clearance Time (s)		8.0	7.0	8.0		8.0	7.0	7.0		8.0	8.0	
Vehicle Extension (s)		3.0	4.0	3.0		3.0	4.0	4.0		3.0	3.0	
Lane Grp Cap (vph)		369	2770	1465		243	2547	627		523	374	1583
v/s Ratio Prot		c0.08	c0.37	0.02		0.05	0.25			0.07	c0.08	
v/s Ratio Perm				0.09				0.13				0.05
v/c Ratio		0.71	0.88	0.20		0.69	0.63	0.34		0.72	0.81	0.05
Uniform Delay, d1		69.1	41.8	19.6		72.5	39.0	33.9		69.5	70.1	0.0
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		6.4	3.5	0.1		8.2	1.2	1.5		4.9	12.1	0.1
Delay (s)		75.5	45.4	19.7		80.7	40.2	35.4		74.4	82.2	0.1
Level of Service		E	D	B		F	D	D		E	F	A
Approach Delay (s)			44.7				42.0				69.7	
Approach LOS			D				D				E	

Intersection Summary

HCM 2000 Control Delay	50.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	3	856	329	167
Future Volume (vph)	3	856	329	167
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	8.0
Lane Util. Factor		0.94	0.95	1.00
Frpb, ped/bikes		1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00
Frt		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00
Satd. Flow (prot)		5090	3574	1577
Flt Permitted		0.95	1.00	1.00
Satd. Flow (perm)		5090	3574	1577
Peak-hour factor, PHF	0.97	0.97	0.97	0.97
Adj. Flow (vph)	3	882	339	172
RTOR Reduction (vph)	0	0	0	108
Lane Group Flow (vph)	0	885	339	64
Confl. Peds. (#/hr)	1			2
Heavy Vehicles (%)	0%	0%	1%	1%
Turn Type	Split	Split	NA	Perm
Protected Phases	4	4	4	
Permitted Phases				4
Actuated Green, G (s)		32.4	32.4	32.4
Effective Green, g (s)		32.4	32.4	32.4
Actuated g/C Ratio		0.20	0.20	0.20
Clearance Time (s)		8.0	8.0	8.0
Vehicle Extension (s)		3.0	3.0	3.0
Lane Grp Cap (vph)		1030	723	319
v/s Ratio Prot		c0.17	0.09	
v/s Ratio Perm				0.04
v/c Ratio		0.86	0.47	0.20
Uniform Delay, d1		61.6	56.2	53.0
Progression Factor		1.00	1.00	1.00
Incremental Delay, d2		7.3	0.5	0.3
Delay (s)		68.9	56.7	53.3
Level of Service		E	E	D
Approach Delay (s)			64.0	
Approach LOS			E	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	43	1020	24	19	934	4	18	18	80	27
v/c Ratio	0.38	0.40	0.01	0.11	0.39	0.00	0.20	0.20	0.34	0.25
Control Delay	67.7	9.5	0.0	67.8	7.1	0.0	63.8	63.5	3.8	46.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.7	9.5	0.0	67.8	7.1	0.0	63.8	63.5	3.8	46.4
Queue Length 50th (ft)	36	154	0	9	97	0	15	15	0	13
Queue Length 95th (ft)	75	295	0	23	94	m0	44	43	0	45
Internal Link Dist (ft)		1443			897			1117		625
Turn Bay Length (ft)	390		340	480		190				
Base Capacity (vph)	181	2561	2514	333	2397	1113	217	223	349	162
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.40	0.01	0.06	0.39	0.00	0.08	0.08	0.23	0.17

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	30	10	969	23	18	887	4	30	4	76	11	4
Future Volume (vph)	30	10	969	23	18	887	4	30	4	76	11	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.9	6.4	7.5	7.5	6.0	6.0	7.5	7.5	7.5		7.5
Lane Util. Factor		1.00	0.95	0.88	0.97	0.95	1.00	0.95	0.95	1.00		1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	1.00		1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.94
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98
Satd. Flow (prot)		1805	3539	2787	3213	3574	1578	1618	1660	1583		1721
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98
Satd. Flow (perm)		1805	3539	2787	3213	3574	1578	1618	1660	1583		1721
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	11	1020	24	19	934	4	32	4	80	12	4
RTOR Reduction (vph)	0	0	0	7	0	0	1	0	0	76	0	11
Lane Group Flow (vph)	0	43	1020	17	19	934	3	18	18	4	0	16
Confl. Peds. (#/hr)		1					1					
Heavy Vehicles (%)	0%	0%	2%	2%	9%	1%	0%	6%	0%	2%	0%	0%
Turn Type	Prot	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA
Protected Phases	5	5	2	3	1	6		3	3		4	4
Permitted Phases				2			6			3		
Actuated Green, G (s)		6.8	86.6	93.8	2.8	82.6	82.6	7.2	7.2	7.2		4.5
Effective Green, g (s)		6.8	86.6	93.8	2.8	82.6	82.6	7.2	7.2	7.2		4.5
Actuated g/C Ratio		0.05	0.67	0.72	0.02	0.64	0.64	0.06	0.06	0.06		0.03
Clearance Time (s)		7.9	6.4	7.5	7.5	6.0	6.0	7.5	7.5	7.5		7.5
Vehicle Extension (s)		2.0	4.0	2.0	2.0	4.0	4.0	2.0	2.0	2.0		2.0
Lane Grp Cap (vph)		94	2357	2010	69	2270	1002	89	91	87		59
v/s Ratio Prot		c0.02	c0.29	0.00	0.01	0.26		c0.01	0.01			c0.01
v/s Ratio Perm				0.01			0.00			0.00		
v/c Ratio		0.46	0.43	0.01	0.28	0.41	0.00	0.20	0.20	0.05		0.28
Uniform Delay, d1		59.8	10.2	5.1	62.6	11.7	8.7	58.7	58.6	58.2		61.2
Progression Factor		1.00	1.00	1.00	1.13	0.58	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		1.3	0.6	0.0	0.8	0.2	0.0	0.4	0.4	0.1		0.9
Delay (s)		61.1	10.8	5.1	71.6	6.9	8.7	59.1	59.0	58.3		62.1
Level of Service		E	B	A	E	A	A	E	E	E		E
Approach Delay (s)			12.6			8.2			58.5			62.1
Approach LOS			B			A			E			E

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	10
Future Volume (vph)	10
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	11
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Heavy Vehicles (%)	5%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↾	
Traffic Vol, veh/h	0	1033	914	0	0	0
Future Vol, veh/h	0	1033	914	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	0	1099	972	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	1522	486
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	550	-
Critical Hdwy	-	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	0	111	533
Stage 1	0	-	-	0	332	-
Stage 2	0	-	-	0	547	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	111	533
Mov Cap-2 Maneuver	-	-	-	-	111	-
Stage 1	-	-	-	-	332	-
Stage 2	-	-	-	-	547	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	57	1013	61	916	52	9	74	31	29
v/c Ratio	0.11	0.39	0.13	0.35	0.04	0.08	0.39	0.29	0.15
Control Delay	2.5	5.9	2.5	5.4	0.1	59.0	9.9	65.5	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.5	5.9	2.5	5.4	0.1	59.0	9.9	65.5	1.7
Queue Length 50th (ft)	6	104	6	87	0	7	0	26	0
Queue Length 95th (ft)	14	143	13	119	0	26	22	59	0
Internal Link Dist (ft)		873		711		1172		897	
Turn Bay Length (ft)	260		175		305		50		355
Base Capacity (vph)	508	2616	457	2646	1177	195	256	189	259
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.39	0.13	0.35	0.04	0.05	0.29	0.16	0.11

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	2	53	964	9	5	54	879	50	2	7	71	25
Future Volume (vph)	2	53	964	9	5	54	879	50	2	7	71	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.8	7.8			7.8	7.8	7.8		6.5	6.5	
Lane Util. Factor		1.00	0.95			1.00	0.95	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	1.00	0.97		1.00	0.97	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1804	3532			1787	3574	1557		1879	1558	
Flt Permitted		0.29	1.00			0.26	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		560	3532			493	3574	1557		1879	1558	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	2	55	1004	9	5	56	916	52	2	7	74	26
RTOR Reduction (vph)	0	0	0	0	0	0	0	14	0	0	70	0
Lane Group Flow (vph)	0	57	1013	0	0	61	916	38	0	9	4	0
Confl. Peds. (#/hr)		3		2	5	2		3			5	5
Heavy Vehicles (%)	0%	0%	2%	6%	0%	1%	1%	1%	0%	0%	1%	0%
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		8!	8!		4!
Permitted Phases	2	2			6	6		6			8	
Actuated Green, G (s)		100.3	94.7			100.3	94.7	94.7		7.6	7.6	
Effective Green, g (s)		100.3	94.7			100.3	94.7	94.7		7.6	7.6	
Actuated g/C Ratio		0.77	0.73			0.77	0.73	0.73		0.06	0.06	
Clearance Time (s)		7.8	7.8			7.8	7.8	7.8		6.5	6.5	
Vehicle Extension (s)		2.0	4.0			2.0	4.0	4.0		2.0	2.0	
Lane Grp Cap (vph)		485	2572			436	2603	1134		109	91	
v/s Ratio Prot		0.01	c0.29			c0.01	0.26			0.00		
v/s Ratio Perm		0.09				0.10		0.02			0.00	
v/c Ratio		0.12	0.39			0.14	0.35	0.03		0.08	0.05	
Uniform Delay, d1		3.6	6.7			3.7	6.4	4.9		57.9	57.8	
Progression Factor		0.93	0.81			0.83	0.79	0.00		1.00	1.00	
Incremental Delay, d2		0.0	0.4			0.1	0.1	0.0		0.1	0.1	
Delay (s)		3.4	5.9			3.2	5.2	0.0		58.0	57.9	
Level of Service		A	A			A	A	A		E	E	
Approach Delay (s)			5.7				4.8			57.9		
Approach LOS			A				A			E		

Intersection Summary

HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	22.1
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	5	28
Future Volume (vph)	5	28
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.5	6.5
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	0.96	1.00
Satd. Flow (prot)	1824	1583
Flt Permitted	0.96	1.00
Satd. Flow (perm)	1824	1583
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	5	29
RTOR Reduction (vph)	0	27
Lane Group Flow (vph)	31	2
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	0%	2%
Turn Type	NA	Perm
Protected Phases	4!	
Permitted Phases		4
Actuated Green, G (s)	7.6	7.6
Effective Green, g (s)	7.6	7.6
Actuated g/C Ratio	0.06	0.06
Clearance Time (s)	6.5	6.5
Vehicle Extension (s)	2.0	2.0
Lane Grp Cap (vph)	106	92
v/s Ratio Prot	c0.02	
v/s Ratio Perm		0.00
v/c Ratio	0.29	0.02
Uniform Delay, d1	58.6	57.7
Progression Factor	1.00	1.00
Incremental Delay, d2	0.6	0.0
Delay (s)	59.2	57.7
Level of Service	E	E
Approach Delay (s)	58.5	
Approach LOS	E	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	951	147	193	938	115	127
v/c Ratio	0.42	0.13	0.43	0.34	0.61	0.45
Control Delay	7.0	2.5	7.0	5.1	69.0	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.0	2.5	7.0	5.1	69.0	13.7
Queue Length 50th (ft)	117	7	35	107	94	0
Queue Length 95th (ft)	153	26	66	160	153	58
Internal Link Dist (ft)	711			1332	532	
Turn Bay Length (ft)		205	205		130	
Base Capacity (vph)	2282	1092	553	2774	350	414
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.13	0.35	0.34	0.33	0.31

Intersection Summary

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	903	140	53	130	891	109	121
Future Volume (vph)	903	140	53	130	891	109	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9	7.5	7.5
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00
Frt	1.00	0.85		1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1615		1800	3574	1787	1594
Flt Permitted	1.00	1.00		0.24	1.00	0.95	1.00
Satd. Flow (perm)	3539	1615		459	3574	1787	1594
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	951	147	56	137	938	115	127
RTOR Reduction (vph)	0	51	0	0	0	0	114
Lane Group Flow (vph)	951	96	0	193	938	115	13
Confl. Peds. (#/hr)							1
Heavy Vehicles (%)	2%	0%	1%	0%	1%	1%	0%
Turn Type	NA	Perm	pm+pt	pm+pt	NA	Prot	Perm
Protected Phases	2		1	1	6	3	
Permitted Phases		2	6	6			3
Actuated Green, G (s)	83.8	83.8		100.9	100.9	13.7	13.7
Effective Green, g (s)	83.8	83.8		100.9	100.9	13.7	13.7
Actuated g/C Ratio	0.64	0.64		0.78	0.78	0.11	0.11
Clearance Time (s)	7.9	7.9		7.9	7.9	7.5	7.5
Vehicle Extension (s)	4.0	4.0		3.0	4.0	3.0	3.0
Lane Grp Cap (vph)	2281	1041		451	2773	188	167
v/s Ratio Prot	0.27			0.03	c0.26	c0.06	
v/s Ratio Perm		0.06		c0.30			0.01
v/c Ratio	0.42	0.09		0.43	0.34	0.61	0.08
Uniform Delay, d1	11.2	8.7		5.5	4.4	55.6	52.5
Progression Factor	0.54	1.17		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.2		0.7	0.1	5.8	0.2
Delay (s)	6.6	10.4		6.1	4.5	61.4	52.7
Level of Service	A	B		A	A	E	D
Approach Delay (s)	7.1				4.8	56.8	
Approach LOS	A				A	E	

Intersection Summary

HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	23.3
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	EB	EB	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB
Directions Served	UL	L	T	T	T	T	R	R	UL	L	T	T
Maximum Queue (ft)	208	315	686	646	578	496	218	116	160	304	424	414
Average Queue (ft)	128	254	485	459	399	319	82	28	81	139	295	285
95th Queue (ft)	196	397	653	620	554	457	195	76	144	302	394	381
Link Distance (ft)			1589	1589	1589	1589					888	888
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	315	315					485	485	305	305		
Storage Blk Time (%)		1	26			0	0			0	6	
Queuing Penalty (veh)		4	66			1	0			1	9	

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	WB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	UL	L	L	T	T	UL	L	L	T
Maximum Queue (ft)	382	308	291	179	227	228	200	216	276	295	300	1176
Average Queue (ft)	247	175	141	94	140	153	112	120	233	291	299	871
95th Queue (ft)	346	276	244	176	213	221	179	191	279	298	302	1378
Link Distance (ft)	888	888					1372	1372				1161
Upstream Blk Time (%)												22
Queuing Penalty (veh)												0
Storage Bay Dist (ft)			325	370	370	370			300	300	300	
Storage Blk Time (%)		0	0							6	34	40
Queuing Penalty (veh)		0	0							10	56	344

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	1145	145
Average Queue (ft)	609	103
95th Queue (ft)	1257	186
Link Distance (ft)	1161	
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		145
Storage Blk Time (%)	11	1
Queuing Penalty (veh)	18	2

Intersection: 2: Convention Center Blvd/Reese Dr & N Armistead Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	UL	T	T	R	R	UL	L	T	T	R	L	LT
Maximum Queue (ft)	72	200	235	20	9	23	50	228	183	31	55	27
Average Queue (ft)	26	68	85	2	0	1	12	77	63	1	15	3
95th Queue (ft)	58	157	178	13	4	12	36	174	148	6	42	16
Link Distance (ft)		1372	1372	1372				908	908		1118	1118
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	390				340	480	480			190		
Storage Blk Time (%)									0			
Queuing Penalty (veh)									0			

Intersection: 2: Convention Center Blvd/Reese Dr & N Armistead Ave

Movement	NB	SB
Directions Served	R	LTR
Maximum Queue (ft)	70	60
Average Queue (ft)	20	19
95th Queue (ft)	49	48
Link Distance (ft)	1118	635
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: N Armistead Ave & Site Driveway

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 4: Freeman Dr/Mercer Ave & N Armistead Ave

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	UL	T	TR	UL	T	T	R	LT	R	LT	R
Maximum Queue (ft)	65	200	230	122	185	173	38	74	53	67	48
Average Queue (ft)	28	69	89	34	82	69	11	9	33	19	15
95th Queue (ft)	58	157	182	75	148	138	34	38	57	49	38
Link Distance (ft)		888	888		729	729		1185		905	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	260			175			305		50		355
Storage Blk Time (%)		0		0	0			1	3		
Queuing Penalty (veh)		0		0	0			0	0		

Intersection: 5: Lake Hampton Dr & N Armistead Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	UL	T	T	L	R
Maximum Queue (ft)	307	336	205	154	191	169	124	144
Average Queue (ft)	139	145	53	69	80	58	64	50
95th Queue (ft)	264	277	157	121	148	121	112	98
Link Distance (ft)	729	729			1367	1367		540
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			205	205			130	
Storage Blk Time (%)		2	0	0	0		1	0
Queuing Penalty (veh)		3	1	0	0		1	0

Intersection: 16: Bend

Movement	EB	EB	EB	EB
Directions Served	T	T	T	T
Maximum Queue (ft)	89	256	301	11
Average Queue (ft)	9	15	13	0
95th Queue (ft)	153	200	178	8
Link Distance (ft)	888	888	888	888
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 519

Appendix E – 2027 Background Synchro Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	185	1440	235	145	1466	637	210	241	45	475	280	152
v/c Ratio	0.58	0.55	0.14	0.50	0.56	0.69	0.39	0.64	0.03	0.70	0.59	0.41
Control Delay	59.2	28.4	1.8	57.8	29.2	11.4	51.8	59.5	0.0	55.7	54.2	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	28.4	1.8	57.8	29.2	11.4	51.8	59.5	0.0	55.7	54.2	7.1
Queue Length 50th (ft)	71	249	0	56	259	83	53	94	0	125	107	0
Queue Length 95th (ft)	109	297	19	88	303	234	80	139	0	164	154	38
Internal Link Dist (ft)		1584			904			1443			1167	
Turn Bay Length (ft)	315		485	305		325	370		395	300		145
Base Capacity (vph)	367	2639	1732	365	2613	926	577	404	1568	707	496	378
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.55	0.14	0.40	0.56	0.69	0.36	0.60	0.03	0.67	0.56	0.40

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	30	149	1397	228	11	130	1422	618	7	197	234	44
Future Volume (vph)	30	149	1397	228	11	130	1422	618	7	197	234	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	7.0	8.0		8.0	7.0	7.0		8.0	8.0	4.0
Lane Util. Factor		0.97	0.86	0.88		0.97	0.86	1.00		0.94	0.95	1.00
Frpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3394	6408	2787		3377	6471	1574		4947	3471	1568
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (perm)		3394	6408	2787		3377	6471	1574		4947	3471	1568
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	154	1440	235	11	134	1466	637	7	203	241	45
RTOR Reduction (vph)	0	0	0	113	0	0	0	292	0	0	0	0
Lane Group Flow (vph)	0	185	1440	122	0	145	1466	345	0	210	241	45
Confl. Peds. (#/hr)		4						4				
Heavy Vehicles (%)	4%	3%	2%	2%	0%	4%	1%	1%	0%	3%	4%	3%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm	Split	Split	NA	Free
Protected Phases	5	5	2	3!	1	1	6		3!	3	3	
Permitted Phases				2				6				Free
Actuated Green, G (s)		11.4	49.4	62.4		10.4	48.4	48.4		13.0	13.0	120.0
Effective Green, g (s)		11.4	49.4	62.4		10.4	48.4	48.4		13.0	13.0	120.0
Actuated g/C Ratio		0.10	0.41	0.52		0.09	0.40	0.40		0.11	0.11	1.00
Clearance Time (s)		8.0	7.0	8.0		8.0	7.0	7.0		8.0	8.0	
Vehicle Extension (s)		3.0	4.0	3.0		3.0	4.0	4.0		3.0	3.0	
Lane Grp Cap (vph)		322	2637	1449		292	2609	634		535	376	1568
v/s Ratio Prot		c0.05	0.22	0.01		0.04	c0.23			0.04	c0.07	
v/s Ratio Perm				0.03				0.22				c0.03
v/c Ratio		0.57	0.55	0.08		0.50	0.56	0.54		0.39	0.64	0.03
Uniform Delay, d1		52.0	26.8	14.5		52.3	27.6	27.4		49.8	51.3	0.0
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		2.5	0.3	0.0		1.3	0.9	3.3		0.5	3.7	0.0
Delay (s)		54.5	27.1	14.5		53.6	28.5	30.7		50.3	55.0	0.0
Level of Service		D	C	B		D	C	C		D	D	A
Approach Delay (s)			28.2				30.7				48.0	
Approach LOS			C				C				D	

Intersection Summary

HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	1	460	272	147
Future Volume (vph)	1	460	272	147
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	8.0
Lane Util. Factor		0.94	0.95	1.00
Frpb, ped/bikes		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00
Frt		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00
Satd. Flow (prot)		4991	3505	1568
Flt Permitted		0.95	1.00	1.00
Satd. Flow (perm)		4991	3505	1568
Peak-hour factor, PHF	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1	474	280	152
RTOR Reduction (vph)	0	0	0	131
Lane Group Flow (vph)	0	475	280	21
Confl. Peds. (#/hr)	4			
Heavy Vehicles (%)	0%	2%	3%	3%
Turn Type	Split	Split	NA	Perm
Protected Phases	4	4	4	
Permitted Phases				4
Actuated Green, G (s)		16.2	16.2	16.2
Effective Green, g (s)		16.2	16.2	16.2
Actuated g/C Ratio		0.13	0.13	0.13
Clearance Time (s)		8.0	8.0	8.0
Vehicle Extension (s)		3.0	3.0	3.0
Lane Grp Cap (vph)		673	473	211
v/s Ratio Prot		c0.10	0.08	
v/s Ratio Perm				0.01
v/c Ratio		0.71	0.59	0.10
Uniform Delay, d1		49.6	48.8	45.5
Progression Factor		1.00	1.00	1.00
Incremental Delay, d2		3.4	2.0	0.2
Delay (s)		53.0	50.8	45.7
Level of Service		D	D	D
Approach Delay (s)			51.1	
Approach LOS			D	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	9	668	13	6	599	8	8	41	21
v/c Ratio	0.08	0.25	0.01	0.03	0.22	0.08	0.08	0.16	0.08
Control Delay	50.4	6.6	0.0	59.7	7.4	50.4	50.3	1.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	6.6	0.0	59.7	7.4	50.4	50.3	1.3	0.5
Queue Length 50th (ft)	6	45	0	2	69	5	5	0	0
Queue Length 95th (ft)	23	172	0	9	102	23	23	0	0
Internal Link Dist (ft)		1443			897		1117		625
Turn Bay Length (ft)	390		340	480					
Base Capacity (vph)	170	2695	2567	323	2702	169	171	310	336
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.25	0.01	0.02	0.22	0.05	0.05	0.13	0.06

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	0	615	12	2	4	551	0	14	1	38	10
Future Volume (vph)	8	0	615	12	2	4	551	0	14	1	38	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.9	6.4	7.5		7.5	6.0		7.5	7.5	7.5	
Lane Util. Factor		1.00	0.95	0.88		0.97	0.95		0.95	0.95	1.00	
Frpb, ped/bikes		1.00	1.00	1.00		1.00	1.00		1.00	1.00	0.98	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	
Frt		1.00	1.00	0.85		1.00	1.00		1.00	1.00	0.85	
Flt Protected		0.95	1.00	1.00		0.95	1.00		0.95	0.96	1.00	
Satd. Flow (prot)		1687	3505	2842		3090	3505		1618	1643	1371	
Flt Permitted		0.95	1.00	1.00		0.95	1.00		0.95	0.96	1.00	
Satd. Flow (perm)		1687	3505	2842		3090	3505		1618	1643	1371	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	0	668	13	2	4	599	0	15	1	41	11
RTOR Reduction (vph)	0	0	0	4	0	0	0	0	0	0	39	0
Lane Group Flow (vph)	0	9	668	9	0	6	599	0	8	8	2	0
Confl. Peds. (#/hr)		1			2			1			2	2
Heavy Vehicles (%)	7%	0%	3%	0%	0%	20%	3%	0%	6%	0%	15%	5%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2	3	1	1	6		3	3		4
Permitted Phases				2				6			3	
Actuated Green, G (s)		1.4	71.3	76.9		1.4	71.3		5.6	5.6	5.6	
Effective Green, g (s)		1.4	71.3	76.9		1.4	71.3		5.6	5.6	5.6	
Actuated g/C Ratio		0.01	0.65	0.70		0.01	0.65		0.05	0.05	0.05	
Clearance Time (s)		7.9	6.4	7.5		7.5	6.0		7.5	7.5	7.5	
Vehicle Extension (s)		2.0	4.0	2.0		2.0	4.0		2.0	2.0	2.0	
Lane Grp Cap (vph)		21	2271	1986		39	2271		82	83	69	
v/s Ratio Prot		c0.01	c0.19	0.00		0.00	0.17		c0.00	0.00		
v/s Ratio Perm				0.00							0.00	
v/c Ratio		0.43	0.29	0.00		0.15	0.26		0.10	0.10	0.03	
Uniform Delay, d1		53.9	8.4	5.0		53.7	8.2		49.8	49.8	49.6	
Progression Factor		1.00	1.00	1.00		1.22	1.17		1.00	1.00	1.00	
Incremental Delay, d2		5.0	0.1	0.0		0.7	0.3		0.2	0.2	0.1	
Delay (s)		58.9	8.5	5.0		66.4	9.9		50.0	50.0	49.7	
Level of Service		E	A	A		E	A		D	D	D	
Approach Delay (s)			9.1				10.5			49.8		
Approach LOS			A				B			D		

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	9
Future Volume (vph)	0	9
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.5	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.94	
Flt Protected	0.97	
Satd. Flow (prot)	1628	
Flt Permitted	0.97	
Satd. Flow (perm)	1628	
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	0	10
RTOR Reduction (vph)	20	0
Lane Group Flow (vph)	1	0
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	0%	8%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	2.8	
Effective Green, g (s)	2.8	
Actuated g/C Ratio	0.03	
Clearance Time (s)	7.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	41	
v/s Ratio Prot	c0.00	
v/s Ratio Perm		
v/c Ratio	0.01	
Uniform Delay, d1	52.3	
Progression Factor	1.00	
Incremental Delay, d2	0.0	
Delay (s)	52.3	
Level of Service	D	
Approach Delay (s)	52.3	
Approach LOS	D	

Intersection Summary

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↾	
Traffic Vol, veh/h	0	662	543	0	0	0
Future Vol, veh/h	0	662	543	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	3	0	0	0
Mvmt Flow	0	720	590	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	950	295
Stage 1	-	-	-	-	590	-
Stage 2	-	-	-	-	360	-
Critical Hdwy	-	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	0	262	707
Stage 1	0	-	-	0	522	-
Stage 2	0	-	-	0	683	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	262	707
Mov Cap-2 Maneuver	-	-	-	-	262	-
Stage 1	-	-	-	-	522	-
Stage 2	-	-	-	-	683	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	13	716	22	548	17	8	59	32	27
v/c Ratio	0.02	0.27	0.04	0.20	0.01	0.07	0.26	0.26	0.12
Control Delay	2.8	5.4	2.4	3.6	0.0	48.9	2.8	53.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.8	5.4	2.4	3.6	0.0	48.9	2.8	53.9	1.1
Queue Length 50th (ft)	1	50	2	32	0	5	0	22	0
Queue Length 95th (ft)	5	125	7	87	0	22	0	53	0
Internal Link Dist (ft)		873		711		1172		897	
Turn Bay Length (ft)	260		175		305		50		355
Base Capacity (vph)	717	2611	606	2718	1160	213	307	222	300
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.27	0.04	0.20	0.01	0.04	0.19	0.14	0.09

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	2	10	651	7	1	19	504	16	4	4	54	28
Future Volume (vph)	2	10	651	7	1	19	504	16	4	4	54	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.8	7.8			7.8	7.8	7.8		6.5	6.5	
Lane Util. Factor		1.00	0.95			1.00	0.95	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	1.00	0.97		1.00	1.00	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.98	1.00	
Satd. Flow (prot)		1801	3490			1753	3505	1464		1741	1615	
Flt Permitted		0.45	1.00			0.37	1.00	1.00		0.98	1.00	
Satd. Flow (perm)		848	3490			681	3505	1464		1741	1615	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	11	708	8	1	21	548	17	4	4	59	30
RTOR Reduction (vph)	0	0	1	0	0	0	0	5	0	0	55	0
Lane Group Flow (vph)	0	13	715	0	0	22	548	12	0	8	4	0
Confl. Peds. (#/hr)		6		4		4		6				
Heavy Vehicles (%)	0%	0%	3%	25%	0%	3%	3%	7%	13%	0%	0%	0%
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		8!	8!		4!
Permitted Phases	2	2			6	6		6			8	
Actuated Green, G (s)		79.1	77.7			81.9	79.1	79.1		7.4	7.4	
Effective Green, g (s)		79.1	77.7			81.9	79.1	79.1		7.4	7.4	
Actuated g/C Ratio		0.72	0.71			0.74	0.72	0.72		0.07	0.07	
Clearance Time (s)		7.8	7.8			7.8	7.8	7.8		6.5	6.5	
Vehicle Extension (s)		2.0	4.0			2.0	4.0	4.0		2.0	2.0	
Lane Grp Cap (vph)		621	2465			534	2520	1052		117	108	
v/s Ratio Prot		0.00	c0.21			c0.00	0.16			0.00		
v/s Ratio Perm		0.01				0.03		0.01			0.00	
v/c Ratio		0.02	0.29			0.04	0.22	0.01		0.07	0.04	
Uniform Delay, d1		4.4	6.0			3.7	5.1	4.4		48.1	48.0	
Progression Factor		1.05	0.96			0.91	0.88	1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.3			0.0	0.1	0.0		0.1	0.1	
Delay (s)		4.6	6.0			3.4	4.6	4.4		48.2	48.0	
Level of Service		A	A			A	A	A		D	D	
Approach Delay (s)			6.0				4.5			48.0		
Approach LOS			A				A			D		

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	22.1
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	2	25
Future Volume (vph)	2	25
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.5	6.5
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	0.96	1.00
Satd. Flow (prot)	1815	1553
Flt Permitted	0.96	1.00
Satd. Flow (perm)	1815	1553
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	2	27
RTOR Reduction (vph)	0	25
Lane Group Flow (vph)	32	2
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	0%	4%
Turn Type	NA	Perm
Protected Phases	4!	
Permitted Phases		4
Actuated Green, G (s)	7.4	7.4
Effective Green, g (s)	7.4	7.4
Actuated g/C Ratio	0.07	0.07
Clearance Time (s)	6.5	6.5
Vehicle Extension (s)	2.0	2.0
Lane Grp Cap (vph)	122	104
v/s Ratio Prot	c0.02	
v/s Ratio Perm		0.00
v/c Ratio	0.26	0.02
Uniform Delay, d1	48.7	47.9
Progression Factor	1.00	1.00
Incremental Delay, d2	0.4	0.0
Delay (s)	49.1	47.9
Level of Service	D	D
Approach Delay (s)	48.6	
Approach LOS	D	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	674	121	174	520	62	120
v/c Ratio	0.31	0.12	0.30	0.19	0.42	0.49
Control Delay	9.3	2.6	4.7	3.6	55.5	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	2.6	4.7	3.6	55.5	15.4
Queue Length 50th (ft)	128	0	25	42	42	0
Queue Length 95th (ft)	45	0	48	65	83	54
Internal Link Dist (ft)	711			1332	532	
Turn Bay Length (ft)		205	205		130	
Base Capacity (vph)	2202	1030	590	2712	197	286
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.12	0.29	0.19	0.31	0.42

Intersection Summary

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	620	111	18	142	478	57	110
Future Volume (vph)	620	111	18	142	478	57	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9	7.5	7.5
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568		1774	3505	1736	1583
Flt Permitted	1.00	1.00		0.34	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568		642	3505	1736	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	674	121	20	154	520	62	120
RTOR Reduction (vph)	0	45	0	0	0	0	110
Lane Group Flow (vph)	674	76	0	174	520	62	10
Heavy Vehicles (%)	3%	3%	0%	2%	3%	4%	2%
Turn Type	NA	Perm	pm+pt	pm+pt	NA	Prot	Perm
Protected Phases	2		1	1	6	3	
Permitted Phases		2	6	6			3
Actuated Green, G (s)	69.1	69.1		85.1	85.1	9.5	9.5
Effective Green, g (s)	69.1	69.1		85.1	85.1	9.5	9.5
Actuated g/C Ratio	0.63	0.63		0.77	0.77	0.09	0.09
Clearance Time (s)	7.9	7.9		7.9	7.9	7.5	7.5
Vehicle Extension (s)	4.0	4.0		3.0	4.0	3.0	3.0
Lane Grp Cap (vph)	2201	984		580	2711	149	136
v/s Ratio Prot	0.19			c0.02	0.15	c0.04	
v/s Ratio Perm		0.05		c0.21			0.01
v/c Ratio	0.31	0.08		0.30	0.19	0.42	0.08
Uniform Delay, d1	9.4	8.0		3.7	3.3	47.6	46.2
Progression Factor	0.90	1.36		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1		0.3	0.0	1.9	0.2
Delay (s)	8.9	11.0		4.0	3.4	49.5	46.5
Level of Service	A	B		A	A	D	D
Approach Delay (s)	9.2				3.5	47.5	
Approach LOS	A				A	D	

Intersection Summary

HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.3
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	EB	EB	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB
Directions Served	UL	L	T	T	T	T	R	R	UL	L	T	T
Maximum Queue (ft)	136	224	340	323	283	203	107	47	119	212	304	297
Average Queue (ft)	62	93	239	222	175	88	45	13	49	73	217	206
95th Queue (ft)	114	177	310	299	259	187	87	39	100	141	278	269
Link Distance (ft)			1589	1589	1589	1589					888	888
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	315	315					485	485	305	305		
Storage Blk Time (%)		0	1							0	0	
Queuing Penalty (veh)		0	1							0	0	

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	WB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	UL	L	L	T	T	UL	L	L	T
Maximum Queue (ft)	258	288	313	84	122	132	134	148	193	288	296	343
Average Queue (ft)	171	118	164	11	51	69	64	65	98	207	232	113
95th Queue (ft)	236	225	290	49	101	116	116	124	215	285	301	242
Link Distance (ft)	888	888					1372	1372				1161
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			325	370	370	370			300	300	300	
Storage Blk Time (%)		0	0							0	1	0
Queuing Penalty (veh)		1	2							0	1	2

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	224	145
Average Queue (ft)	98	53
95th Queue (ft)	175	119
Link Distance (ft)	1161	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		145
Storage Blk Time (%)	1	0
Queuing Penalty (veh)	2	0

Intersection: 2: Convention Center Blvd/Reese Dr & N Armistead Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	UL	T	T	R	UL	L	T	T	L	LT	R	LTR
Maximum Queue (ft)	35	107	123	17	13	26	104	85	40	18	55	63
Average Queue (ft)	5	29	47	1	1	3	34	26	7	1	14	14
95th Queue (ft)	23	80	105	10	7	15	82	68	24	9	38	43
Link Distance (ft)		1372	1372	1372			908	908	1118	1118	1118	635
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	390				480	480						
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: N Armistead Ave & Site Driveway

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 4: Freeman Dr/Mercer Ave & N Armistead Ave

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	UL	T	TR	UL	T	T	R	LT	R	LT	R
Maximum Queue (ft)	32	139	166	48	117	100	35	60	49	54	46
Average Queue (ft)	7	48	70	13	51	35	6	9	27	17	12
95th Queue (ft)	26	107	133	39	94	79	25	38	55	44	34
Link Distance (ft)		888	888		729	729		1185		905	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	260			175			305		50		355
Storage Blk Time (%)								1	1		
Queuing Penalty (veh)								0	0		

Intersection: 5: Lake Hampton Dr & N Armistead Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	UL	T	T	L	R
Maximum Queue (ft)	208	212	126	104	100	82	93	86
Average Queue (ft)	86	90	32	48	44	24	34	39
95th Queue (ft)	170	173	84	85	87	63	72	71
Link Distance (ft)	729	729			1367	1367		540
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			205	205			130	
Storage Blk Time (%)		0	0				0	0
Queuing Penalty (veh)		0	0				0	0

Intersection: 16: Bend

Movement	EB	EB
Directions Served	T	T
Maximum Queue (ft)	83	83
Average Queue (ft)	3	3
95th Queue (ft)	85	85
Link Distance (ft)	888	888
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 11

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	270	2498	398	173	1642	557	389	311	82	912	349	177
v/c Ratio	0.72	0.91	0.26	0.71	0.65	0.58	0.74	0.82	0.05	0.88	0.48	0.41
Control Delay	80.3	48.9	9.3	88.8	41.8	5.2	78.6	88.2	0.1	72.5	58.7	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.3	48.9	9.3	88.8	41.8	5.2	78.6	88.2	0.1	72.5	58.7	17.8
Queue Length 50th (ft)	142	714	57	92	411	0	142	170	0	331	171	35
Queue Length 95th (ft)	191	763	89	136	464	85	182	#242	0	386	225	110
Internal Link Dist (ft)		1584			904			1443			1167	
Turn Bay Length (ft)	315		485	305		325	370		395	300		145
Base Capacity (vph)	434	2755	1535	254	2525	961	535	383	1583	1049	737	433
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.91	0.26	0.68	0.65	0.58	0.73	0.81	0.05	0.87	0.47	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	43	219	2423	386	25	143	1593	540	15	363	302	80
Future Volume (vph)	43	219	2423	386	25	143	1593	540	15	363	302	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	7.0	8.0		8.0	7.0	7.0		8.0	8.0	4.0
Lane Util. Factor		0.97	0.86	0.88		0.97	0.86	1.00		0.94	0.95	1.00
Frpb, ped/bikes		1.00	1.00	0.99		1.00	1.00	0.99		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3473	6471	2755		3387	6471	1594		5042	3610	1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (perm)		3473	6471	2755		3387	6471	1594		5042	3610	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	44	226	2498	398	26	147	1642	557	15	374	311	82
RTOR Reduction (vph)	0	0	0	86	0	0	0	339	0	0	0	0
Lane Group Flow (vph)	0	270	2498	312	0	173	1642	218	0	389	311	82
Confl. Peds. (#/hr)	2	1		2		2		1	2	2		
Heavy Vehicles (%)	0%	1%	1%	2%	0%	4%	1%	0%	0%	1%	0%	2%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm	Split	Split	NA	Free
Protected Phases	5	5	2	3!	1	1	6		3!	3	3	
Permitted Phases				2				6				Free
Actuated Green, G (s)		17.2	68.2	84.9		11.5	62.5	62.5		16.7	16.7	160.0
Effective Green, g (s)		17.2	68.2	84.9		11.5	62.5	62.5		16.7	16.7	160.0
Actuated g/C Ratio		0.11	0.43	0.53		0.07	0.39	0.39		0.10	0.10	1.00
Clearance Time (s)		8.0	7.0	8.0		8.0	7.0	7.0		8.0	8.0	
Vehicle Extension (s)		3.0	4.0	3.0		3.0	4.0	4.0		3.0	3.0	
Lane Grp Cap (vph)		373	2758	1461		243	2527	622		526	376	1583
v/s Ratio Prot		c0.08	c0.39	0.02		0.05	0.25			0.08	c0.09	
v/s Ratio Perm				0.09				0.14				0.05
v/c Ratio		0.72	0.91	0.21		0.71	0.65	0.35		0.74	0.83	0.05
Uniform Delay, d1		69.1	42.9	19.9		72.6	39.8	34.4		69.5	70.2	0.0
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		6.8	4.8	0.1		9.5	1.3	1.5		5.4	13.8	0.1
Delay (s)		75.9	47.7	19.9		82.1	41.1	36.0		74.9	84.1	0.1
Level of Service		E	D	B		F	D	D		E	F	A
Approach Delay (s)			46.6				42.9				70.7	
Approach LOS			D				D				E	

Intersection Summary			
HCM 2000 Control Delay	51.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	3	882	339	172
Future Volume (vph)	3	882	339	172
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	8.0
Lane Util. Factor		0.94	0.95	1.00
Frpb, ped/bikes		1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00
Frt		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00
Satd. Flow (prot)		5090	3574	1577
Flt Permitted		0.95	1.00	1.00
Satd. Flow (perm)		5090	3574	1577
Peak-hour factor, PHF	0.97	0.97	0.97	0.97
Adj. Flow (vph)	3	909	349	177
RTOR Reduction (vph)	0	0	0	108
Lane Group Flow (vph)	0	912	349	69
Confl. Peds. (#/hr)	1			2
Heavy Vehicles (%)	0%	0%	1%	1%
Turn Type	Split	Split	NA	Perm
Protected Phases	4	4	4	
Permitted Phases				4
Actuated Green, G (s)		32.6	32.6	32.6
Effective Green, g (s)		32.6	32.6	32.6
Actuated g/C Ratio		0.20	0.20	0.20
Clearance Time (s)		8.0	8.0	8.0
Vehicle Extension (s)		3.0	3.0	3.0
Lane Grp Cap (vph)		1037	728	321
v/s Ratio Prot		c0.18	0.10	
v/s Ratio Perm				0.04
v/c Ratio		0.88	0.48	0.21
Uniform Delay, d1		61.8	56.2	53.0
Progression Factor		1.00	1.00	1.00
Incremental Delay, d2		8.7	0.5	0.3
Delay (s)		70.4	56.7	53.4
Level of Service		E	E	D
Approach Delay (s)			65.0	
Approach LOS			E	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	44	1051	25	20	962	4	18	19	82	27
v/c Ratio	0.39	0.41	0.01	0.12	0.40	0.00	0.20	0.21	0.35	0.25
Control Delay	67.8	9.7	0.0	67.7	7.2	0.0	63.8	63.9	4.0	46.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	9.7	0.0	67.7	7.2	0.0	63.8	63.9	4.0	46.4
Queue Length 50th (ft)	37	160	0	9	97	0	15	16	0	13
Queue Length 95th (ft)	75	307	0	24	96	m0	44	44	0	45
Internal Link Dist (ft)		1443			897			1117		625
Turn Bay Length (ft)	390		340	480		190				
Base Capacity (vph)	181	2561	2514	333	2394	1112	217	223	349	162
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.41	0.01	0.06	0.40	0.00	0.08	0.09	0.23	0.17

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	31	10	998	24	19	914	4	31	4	78	11	4
Future Volume (vph)	31	10	998	24	19	914	4	31	4	78	11	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.9	6.4	7.5	7.5	6.0	6.0	7.5	7.5	7.5		7.5
Lane Util. Factor		1.00	0.95	0.88	0.97	0.95	1.00	0.95	0.95	1.00		1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	1.00		1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		0.94
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98
Satd. Flow (prot)		1805	3539	2787	3213	3574	1578	1618	1658	1583		1721
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00		0.98
Satd. Flow (perm)		1805	3539	2787	3213	3574	1578	1618	1658	1583		1721
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	33	11	1051	25	20	962	4	33	4	82	12	4
RTOR Reduction (vph)	0	0	0	7	0	0	1	0	0	77	0	11
Lane Group Flow (vph)	0	44	1051	18	20	962	3	18	19	5	0	16
Confl. Peds. (#/hr)		1					1					
Heavy Vehicles (%)	0%	0%	2%	2%	9%	1%	0%	6%	0%	2%	0%	0%
Turn Type	Prot	Prot	NA	pm+ov	Prot	NA	Perm	Split	NA	Perm	Split	NA
Protected Phases	5	5	2	3	1	6		3	3		4	4
Permitted Phases				2			6			3		
Actuated Green, G (s)		6.9	86.6	93.8	2.8	82.5	82.5	7.2	7.2	7.2		4.5
Effective Green, g (s)		6.9	86.6	93.8	2.8	82.5	82.5	7.2	7.2	7.2		4.5
Actuated g/C Ratio		0.05	0.67	0.72	0.02	0.63	0.63	0.06	0.06	0.06		0.03
Clearance Time (s)		7.9	6.4	7.5	7.5	6.0	6.0	7.5	7.5	7.5		7.5
Vehicle Extension (s)		2.0	4.0	2.0	2.0	4.0	4.0	2.0	2.0	2.0		2.0
Lane Grp Cap (vph)		95	2357	2010	69	2268	1001	89	91	87		59
v/s Ratio Prot		c0.02	c0.30	0.00	0.01	0.27		0.01	c0.01			c0.01
v/s Ratio Perm				0.01			0.00			0.00		
v/c Ratio		0.46	0.45	0.01	0.29	0.42	0.00	0.20	0.21	0.05		0.28
Uniform Delay, d1		59.8	10.3	5.1	62.6	11.9	8.7	58.7	58.7	58.2		61.2
Progression Factor		1.00	1.00	1.00	1.13	0.57	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		1.3	0.6	0.0	0.8	0.2	0.0	0.4	0.4	0.1		0.9
Delay (s)		61.1	10.9	5.1	71.5	6.9	8.7	59.1	59.1	58.3		62.1
Level of Service		E	B	A	E	A	A	E	E	E		E
Approach Delay (s)			12.8			8.2			58.5			62.1
Approach LOS			B			A			E			E

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	10
Future Volume (vph)	10
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	11
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Heavy Vehicles (%)	5%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		Y	
Traffic Vol, veh/h	0	1064	942	0	0	0
Future Vol, veh/h	0	1064	942	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	0	1132	1002	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	1568	501
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	566	-
Critical Hdwy	-	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	0	-	-	0	104	521
Stage 1	0	-	-	0	320	-
Stage 2	0	-	-	0	537	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	104	521
Mov Cap-2 Maneuver	-	-	-	-	104	-
Stage 1	-	-	-	-	320	-
Stage 2	-	-	-	-	537	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	59	1043	63	944	54	9	76	32	30
v/c Ratio	0.12	0.40	0.14	0.36	0.05	0.08	0.40	0.30	0.16
Control Delay	2.6	6.0	2.6	5.5	0.1	58.9	10.5	65.7	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.6	6.0	2.6	5.5	0.1	58.9	10.5	65.7	1.7
Queue Length 50th (ft)	6	111	6	94	0	7	0	26	0
Queue Length 95th (ft)	15	148	14	124	0	26	24	61	0
Internal Link Dist (ft)		873		711		1172		897	
Turn Bay Length (ft)	260		175		305		50		355
Base Capacity (vph)	494	2615	443	2645	1177	195	256	189	259
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.40	0.14	0.36	0.05	0.05	0.30	0.17	0.12

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	2	55	993	9	5	56	906	52	2	7	73	26
Future Volume (vph)	2	55	993	9	5	56	906	52	2	7	73	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.8	7.8			7.8	7.8	7.8		6.5	6.5	
Lane Util. Factor		1.00	0.95			1.00	0.95	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	1.00	0.97		1.00	0.97	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1804	3533			1787	3574	1557		1879	1558	
Flt Permitted		0.28	1.00			0.25	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		541	3533			475	3574	1557		1879	1558	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	2	57	1034	9	5	58	944	54	2	7	76	27
RTOR Reduction (vph)	0	0	0	0	0	0	0	15	0	0	72	0
Lane Group Flow (vph)	0	59	1043	0	0	63	944	39	0	9	4	0
Confl. Peds. (#/hr)		3		2	5	2		3			5	5
Heavy Vehicles (%)	0%	0%	2%	6%	0%	1%	1%	1%	0%	0%	1%	0%
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		8!	8!		4!
Permitted Phases	2	2			6	6		6			8	
Actuated Green, G (s)		100.3	94.7			100.3	94.7	94.7		7.6	7.6	
Effective Green, g (s)		100.3	94.7			100.3	94.7	94.7		7.6	7.6	
Actuated g/C Ratio		0.77	0.73			0.77	0.73	0.73		0.06	0.06	
Clearance Time (s)		7.8	7.8			7.8	7.8	7.8		6.5	6.5	
Vehicle Extension (s)		2.0	4.0			2.0	4.0	4.0		2.0	2.0	
Lane Grp Cap (vph)		471	2573			422	2603	1134		109	91	
v/s Ratio Prot		0.01	c0.30			c0.01	0.26			0.00		
v/s Ratio Perm		0.09				0.11		0.03			0.00	
v/c Ratio		0.13	0.41			0.15	0.36	0.03		0.08	0.05	
Uniform Delay, d1		3.6	6.8			3.8	6.5	4.9		57.9	57.8	
Progression Factor		0.93	0.81			0.83	0.79	0.00		1.00	1.00	
Incremental Delay, d2		0.0	0.4			0.1	0.1	0.0		0.1	0.1	
Delay (s)		3.4	6.0			3.2	5.2	0.0		58.0	57.9	
Level of Service		A	A			A	A	A		E	E	
Approach Delay (s)			5.8				4.8			57.9		
Approach LOS			A				A			E		

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	22.1
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	5	29
Future Volume (vph)	5	29
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.5	6.5
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	0.96	1.00
Satd. Flow (prot)	1823	1583
Flt Permitted	0.96	1.00
Satd. Flow (perm)	1823	1583
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	5	30
RTOR Reduction (vph)	0	28
Lane Group Flow (vph)	32	2
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	0%	2%
Turn Type	NA	Perm
Protected Phases	4!	
Permitted Phases		4
Actuated Green, G (s)	7.6	7.6
Effective Green, g (s)	7.6	7.6
Actuated g/C Ratio	0.06	0.06
Clearance Time (s)	6.5	6.5
Vehicle Extension (s)	2.0	2.0
Lane Grp Cap (vph)	106	92
v/s Ratio Prot	c0.02	
v/s Ratio Perm		0.00
v/c Ratio	0.30	0.02
Uniform Delay, d1	58.7	57.7
Progression Factor	1.00	1.00
Incremental Delay, d2	0.6	0.0
Delay (s)	59.2	57.7
Level of Service	E	E
Approach Delay (s)	58.5	
Approach LOS	E	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	979	152	199	966	118	132
v/c Ratio	0.43	0.14	0.45	0.35	0.62	0.46
Control Delay	7.3	2.6	7.5	5.2	68.9	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	2.6	7.5	5.2	68.9	13.6
Queue Length 50th (ft)	125	8	36	112	97	0
Queue Length 95th (ft)	157	28	68	167	156	58
Internal Link Dist (ft)	711			1332	532	
Turn Bay Length (ft)		205	205		130	
Base Capacity (vph)	2264	1085	540	2768	350	418
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.14	0.37	0.35	0.34	0.32

Intersection Summary

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	930	144	55	134	918	112	125
Future Volume (vph)	930	144	55	134	918	112	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9	7.5	7.5
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00
Frt	1.00	0.85		1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1615		1800	3574	1787	1594
Flt Permitted	1.00	1.00		0.23	1.00	0.95	1.00
Satd. Flow (perm)	3539	1615		440	3574	1787	1594
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	979	152	58	141	966	118	132
RTOR Reduction (vph)	0	52	0	0	0	0	118
Lane Group Flow (vph)	979	100	0	199	966	118	14
Confl. Peds. (#/hr)							1
Heavy Vehicles (%)	2%	0%	1%	0%	1%	1%	0%
Turn Type	NA	Perm	pm+pt	pm+pt	NA	Prot	Perm
Protected Phases	2		1	1	6	3	
Permitted Phases		2	6	6			3
Actuated Green, G (s)	83.2	83.2		100.7	100.7	13.9	13.9
Effective Green, g (s)	83.2	83.2		100.7	100.7	13.9	13.9
Actuated g/C Ratio	0.64	0.64		0.77	0.77	0.11	0.11
Clearance Time (s)	7.9	7.9		7.9	7.9	7.5	7.5
Vehicle Extension (s)	4.0	4.0		3.0	4.0	3.0	3.0
Lane Grp Cap (vph)	2264	1033		441	2768	191	170
v/s Ratio Prot	0.28			0.03	c0.27	c0.07	
v/s Ratio Perm		0.06		c0.32			0.01
v/c Ratio	0.43	0.10		0.45	0.35	0.62	0.08
Uniform Delay, d1	11.6	9.0		5.8	4.5	55.5	52.3
Progression Factor	0.54	1.10		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.2		0.7	0.1	5.8	0.2
Delay (s)	6.9	10.1		6.6	4.6	61.3	52.5
Level of Service	A	B		A	A	E	D
Approach Delay (s)	7.3				5.0	56.7	
Approach LOS	A				A	E	

Intersection Summary

HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	23.3
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	EB	EB	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB
Directions Served	UL	L	T	T	T	T	R	R	UL	L	T	T
Maximum Queue (ft)	224	315	788	747	693	604	393	108	162	305	436	423
Average Queue (ft)	136	256	540	507	447	361	100	24	84	164	317	306
95th Queue (ft)	209	394	761	726	660	565	278	68	146	335	411	401
Link Distance (ft)			1589	1589	1589	1589					888	888
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	315	315					485	485	305	305		
Storage Blk Time (%)	0	1	29			1	0			0	8	
Queuing Penalty (veh)	1	5	76			5	1			1	13	

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	WB	WB	WB	NB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	T	T	R	UL	L	L	T	T	R	UL	L	L
Maximum Queue (ft)	381	310	288	192	262	279	319	267	39	280	295	300
Average Queue (ft)	266	194	146	100	147	159	135	139	1	235	291	299
95th Queue (ft)	356	286	248	178	226	233	245	248	40	283	300	304
Link Distance (ft)	888	888					1372	1372				
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			325	370	370	370			395	300	300	300
Storage Blk Time (%)		0	0			0	0		0	0	7	36
Queuing Penalty (veh)		0	0			0	1		0	0	12	61

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	1142	1134	145
Average Queue (ft)	945	704	104
95th Queue (ft)	1433	1352	185
Link Distance (ft)	1161	1161	
Upstream Blk Time (%)	32	2	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			145
Storage Blk Time (%)	43	15	1
Queuing Penalty (veh)	385	26	2

Intersection: 2: Convention Center Blvd/Reese Dr & N Armistead Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	UL	T	T	R	R	UL	L	T	T	R	L	LT
Maximum Queue (ft)	77	212	223	24	12	14	57	231	228	12	59	25
Average Queue (ft)	26	70	84	3	1	1	13	91	80	1	16	4
95th Queue (ft)	62	160	172	15	6	10	40	187	177	7	45	16
Link Distance (ft)		1372	1372	1372				908	908		1118	1118
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	390				340	480	480			190		
Storage Blk Time (%)									1			
Queuing Penalty (veh)									0			

Intersection: 2: Convention Center Blvd/Reese Dr & N Armistead Ave

Movement	NB	SB
Directions Served	R	LTR
Maximum Queue (ft)	56	64
Average Queue (ft)	17	19
95th Queue (ft)	42	49
Link Distance (ft)	1118	635
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: N Armistead Ave & Site Driveway

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 4: Freeman Dr/Mercer Ave & N Armistead Ave

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	UL	T	TR	UL	T	T	R	LT	R	LT	R
Maximum Queue (ft)	86	202	231	111	212	187	49	77	52	60	55
Average Queue (ft)	30	69	90	33	86	75	11	13	36	20	15
95th Queue (ft)	68	151	181	75	160	145	36	49	55	50	39
Link Distance (ft)		888	888		729	729		1185		905	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	260			175			305		50		355
Storage Blk Time (%)	0	0		0	0			1	4		
Queuing Penalty (veh)	0	0		0	0			1	0		

Intersection: 5: Lake Hampton Dr & N Armistead Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	UL	T	T	L	R
Maximum Queue (ft)	300	299	191	160	190	178	127	154
Average Queue (ft)	133	135	48	69	83	63	67	52
95th Queue (ft)	250	253	146	120	147	130	119	108
Link Distance (ft)	729	729			1367	1367		540
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			205	205			130	
Storage Blk Time (%)		2	0	0	0		1	0
Queuing Penalty (veh)		2	1	0	0		1	0

Intersection: 16: Bend

Movement	EB	EB	EB	EB
Directions Served	T	T	T	T
Maximum Queue (ft)	83	254	412	39
Average Queue (ft)	3	12	18	1
95th Queue (ft)	85	176	214	14
Link Distance (ft)	888	888	888	888
Upstream Blk Time (%)		0	0	
Queuing Penalty (veh)		0	0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 595

Appendix F – 2027 Total Future Synchro Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	185	1440	237	146	1466	637	217	255	48	475	285	152
v/c Ratio	0.58	0.55	0.14	0.50	0.57	0.69	0.40	0.67	0.03	0.70	0.60	0.41
Control Delay	59.2	28.6	1.8	57.9	29.4	11.6	51.8	60.6	0.0	55.3	54.2	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	28.6	1.8	57.9	29.4	11.6	51.8	60.6	0.0	55.3	54.2	7.1
Queue Length 50th (ft)	71	249	0	56	259	86	56	100	0	125	110	0
Queue Length 95th (ft)	109	297	19	89	303	237	82	146	0	164	156	38
Internal Link Dist (ft)		1584			904			1443			1167	
Turn Bay Length (ft)	315		485	305		325	370		395	300		145
Base Capacity (vph)	367	2618	1725	365	2593	922	577	404	1568	707	496	378
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.55	0.14	0.40	0.57	0.69	0.38	0.63	0.03	0.67	0.57	0.40

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	30	149	1397	230	11	131	1422	618	7	204	247	47
Future Volume (vph)	30	149	1397	230	11	131	1422	618	7	204	247	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	7.0	8.0		8.0	7.0	7.0		8.0	8.0	4.0
Lane Util. Factor		0.97	0.86	0.88		0.97	0.86	1.00		0.94	0.95	1.00
Frpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	0.98		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3394	6408	2787		3377	6471	1574		4946	3471	1568
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (perm)		3394	6408	2787		3377	6471	1574		4946	3471	1568
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	154	1440	237	11	135	1466	637	7	210	255	48
RTOR Reduction (vph)	0	0	0	114	0	0	0	291	0	0	0	0
Lane Group Flow (vph)	0	185	1440	123	0	146	1466	346	0	217	255	48
Confl. Peds. (#/hr)		4						4				
Heavy Vehicles (%)	4%	3%	2%	2%	0%	4%	1%	1%	0%	3%	4%	3%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm	Split	Split	NA	Free
Protected Phases	5	5	2	3!	1	1	6		3!	3	3	
Permitted Phases				2				6				Free
Actuated Green, G (s)		11.4	49.1	62.2		10.4	48.1	48.1		13.1	13.1	120.0
Effective Green, g (s)		11.4	49.1	62.2		10.4	48.1	48.1		13.1	13.1	120.0
Actuated g/C Ratio		0.10	0.41	0.52		0.09	0.40	0.40		0.11	0.11	1.00
Clearance Time (s)		8.0	7.0	8.0		8.0	7.0	7.0		8.0	8.0	
Vehicle Extension (s)		3.0	4.0	3.0		3.0	4.0	4.0		3.0	3.0	
Lane Grp Cap (vph)		322	2621	1444		292	2593	630		539	378	1568
v/s Ratio Prot		c0.05	0.22	0.01		0.04	c0.23			0.04	c0.07	
v/s Ratio Perm				0.03				0.22				c0.03
v/c Ratio		0.57	0.55	0.09		0.50	0.57	0.55		0.40	0.67	0.03
Uniform Delay, d1		52.0	27.0	14.6		52.3	27.9	27.6		49.8	51.4	0.0
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		2.5	0.3	0.0		1.3	0.9	3.4		0.5	4.7	0.0
Delay (s)		54.5	27.3	14.6		53.7	28.8	31.0		50.3	56.1	0.0
Level of Service		D	C	B		D	C	C		D	E	A
Approach Delay (s)			28.4				31.0				48.5	
Approach LOS			C				C				D	

Intersection Summary

HCM 2000 Control Delay	35.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	1	460	276	147
Future Volume (vph)	1	460	276	147
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	8.0
Lane Util. Factor		0.94	0.95	1.00
Frpb, ped/bikes		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00
Frt		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00
Satd. Flow (prot)		4991	3505	1568
Flt Permitted		0.95	1.00	1.00
Satd. Flow (perm)		4991	3505	1568
Peak-hour factor, PHF	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1	474	285	152
RTOR Reduction (vph)	0	0	0	131
Lane Group Flow (vph)	0	475	285	21
Confl. Peds. (#/hr)	4			
Heavy Vehicles (%)	0%	2%	3%	3%
Turn Type	Split	Split	NA	Perm
Protected Phases	4	4	4	
Permitted Phases				4
Actuated Green, G (s)		16.4	16.4	16.4
Effective Green, g (s)		16.4	16.4	16.4
Actuated g/C Ratio		0.14	0.14	0.14
Clearance Time (s)		8.0	8.0	8.0
Vehicle Extension (s)		3.0	3.0	3.0
Lane Grp Cap (vph)		682	479	214
v/s Ratio Prot		c0.10	0.08	
v/s Ratio Perm				0.01
v/c Ratio		0.70	0.59	0.10
Uniform Delay, d1		49.4	48.7	45.3
Progression Factor		1.00	1.00	1.00
Incremental Delay, d2		3.1	2.0	0.2
Delay (s)		52.5	50.7	45.5
Level of Service		D	D	D
Approach Delay (s)			50.8	
Approach LOS			D	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	9	676	13	51	624	8	8	42	21
v/c Ratio	0.08	0.28	0.01	0.23	0.23	0.08	0.08	0.16	0.08
Control Delay	50.4	10.1	0.0	57.6	8.0	50.4	50.3	1.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	10.1	0.0	57.6	8.0	50.4	50.3	1.3	0.5
Queue Length 50th (ft)	6	90	0	19	72	5	5	0	0
Queue Length 95th (ft)	23	177	0	40	114	23	23	0	0
Internal Link Dist (ft)		1443			896		1117		625
Turn Bay Length (ft)	390		340	480					
Base Capacity (vph)	170	2413	2349	354	2702	169	171	310	336
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.28	0.01	0.14	0.23	0.05	0.05	0.14	0.06

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	0	622	12	40	7	574	0	14	1	39	10
Future Volume (vph)	8	0	622	12	40	7	574	0	14	1	39	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.9	6.4	7.5		7.5	6.0		7.5	7.5	7.5	
Lane Util. Factor		1.00	0.95	0.88		0.97	0.95		0.95	0.95	1.00	
Frpb, ped/bikes		1.00	1.00	1.00		1.00	1.00		1.00	1.00	0.98	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	
Frt		1.00	1.00	0.85		1.00	1.00		1.00	1.00	0.85	
Flt Protected		0.95	1.00	1.00		0.95	1.00		0.95	0.96	1.00	
Satd. Flow (prot)		1687	3505	2842		3395	3505		1618	1643	1371	
Flt Permitted		0.95	1.00	1.00		0.95	1.00		0.95	0.96	1.00	
Satd. Flow (perm)		1687	3505	2842		3395	3505		1618	1643	1371	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	0	676	13	43	8	624	0	15	1	42	11
RTOR Reduction (vph)	0	0	0	4	0	0	0	0	0	0	40	0
Lane Group Flow (vph)	0	9	676	9	0	51	624	0	8	8	2	0
Confl. Peds. (#/hr)		1			2			1			2	2
Heavy Vehicles (%)	7%	0%	3%	0%	0%	20%	3%	0%	6%	0%	15%	5%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2	3	1	1	6		3	3		4
Permitted Phases				2				6			3	
Actuated Green, G (s)		1.4	67.0	72.6		5.7	71.3		5.6	5.6	5.6	
Effective Green, g (s)		1.4	67.0	72.6		5.7	71.3		5.6	5.6	5.6	
Actuated g/C Ratio		0.01	0.61	0.66		0.05	0.65		0.05	0.05	0.05	
Clearance Time (s)		7.9	6.4	7.5		7.5	6.0		7.5	7.5	7.5	
Vehicle Extension (s)		2.0	4.0	2.0		2.0	4.0		2.0	2.0	2.0	
Lane Grp Cap (vph)		21	2134	1875		175	2271		82	83	69	
v/s Ratio Prot		0.01	c0.19	0.00		c0.02	c0.18		c0.00	0.00		
v/s Ratio Perm				0.00							0.00	
v/c Ratio		0.43	0.32	0.00		0.29	0.27		0.10	0.10	0.03	
Uniform Delay, d1		53.9	10.4	6.4		50.2	8.3		49.8	49.8	49.6	
Progression Factor		1.00	1.00	1.00		1.13	1.25		1.00	1.00	1.00	
Incremental Delay, d2		5.0	0.1	0.0		0.3	0.3		0.2	0.2	0.1	
Delay (s)		58.9	10.5	6.4		56.8	10.6		50.0	50.0	49.7	
Level of Service		E	B	A		E	B		D	D	D	
Approach Delay (s)			11.1				14.1			49.8		
Approach LOS			B				B			D		

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	9
Future Volume (vph)	0	9
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.5	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.94	
Flt Protected	0.97	
Satd. Flow (prot)	1628	
Flt Permitted	0.97	
Satd. Flow (perm)	1628	
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	0	10
RTOR Reduction (vph)	20	0
Lane Group Flow (vph)	1	0
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	0%	8%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	2.8	
Effective Green, g (s)	2.8	
Actuated g/C Ratio	0.03	
Clearance Time (s)	7.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	41	
v/s Ratio Prot	c0.00	
v/s Ratio Perm		
v/c Ratio	0.01	
Uniform Delay, d1	52.3	
Progression Factor	1.00	
Incremental Delay, d2	0.0	
Delay (s)	52.3	
Level of Service	D	
Approach Delay (s)	52.3	
Approach LOS	D	

Intersection Summary

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	708	543	19	0	64
Future Vol, veh/h	0	708	543	19	0	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	3	0	0	0
Mvmt Flow	0	770	590	21	0	70

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	306
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	696
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	696
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	696
HCM Lane V/C Ratio	-	-	-	0.1
HCM Control Delay (s)	-	-	-	10.7
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.3

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	22	757	22	560	17	8	59	32	27
v/c Ratio	0.03	0.29	0.04	0.21	0.02	0.07	0.26	0.26	0.12
Control Delay	2.5	5.1	2.4	4.6	0.0	48.9	2.8	53.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.5	5.1	2.4	4.6	0.0	48.9	2.8	53.9	1.1
Queue Length 50th (ft)	2	50	2	32	0	5	0	22	0
Queue Length 95th (ft)	7	122	6	90	0	22	0	53	0
Internal Link Dist (ft)		873		711		1172		897	
Turn Bay Length (ft)	260		175		305		50		355
Base Capacity (vph)	711	2611	582	2623	1124	213	307	222	300
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.29	0.04	0.21	0.02	0.04	0.19	0.14	0.09

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	10	10	689	7	1	19	515	16	4	4	54	28
Future Volume (vph)	10	10	689	7	1	19	515	16	4	4	54	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.8	7.8			7.8	7.8	7.8		6.5	6.5	
Lane Util. Factor		1.00	0.95			1.00	0.95	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	1.00	0.97		1.00	1.00	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.98	1.00	
Satd. Flow (prot)		1801	3490			1753	3505	1464		1741	1615	
Flt Permitted		0.44	1.00			0.36	1.00	1.00		0.98	1.00	
Satd. Flow (perm)		838	3490			661	3505	1464		1741	1615	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	11	749	8	1	21	560	17	4	4	59	30
RTOR Reduction (vph)	0	0	1	0	0	0	0	5	0	0	55	0
Lane Group Flow (vph)	0	22	756	0	0	22	560	12	0	8	4	0
Confl. Peds. (#/hr)		6		4		4		6				
Heavy Vehicles (%)	0%	0%	3%	25%	0%	3%	3%	7%	13%	0%	0%	0%
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		8!	8!		4!
Permitted Phases	2	2			6	6		6			8	
Actuated Green, G (s)		80.5	77.7			80.5	77.7	77.7		7.4	7.4	
Effective Green, g (s)		80.5	77.7			80.5	77.7	77.7		7.4	7.4	
Actuated g/C Ratio		0.73	0.71			0.73	0.71	0.71		0.07	0.07	
Clearance Time (s)		7.8	7.8			7.8	7.8	7.8		6.5	6.5	
Vehicle Extension (s)		2.0	4.0			2.0	4.0	4.0		2.0	2.0	
Lane Grp Cap (vph)		637	2465			511	2475	1034		117	108	
v/s Ratio Prot		0.00	c0.22			c0.00	0.16			0.00		
v/s Ratio Perm		0.02				0.03		0.01			0.00	
v/c Ratio		0.03	0.31			0.04	0.23	0.01		0.07	0.04	
Uniform Delay, d1		4.0	6.1			4.0	5.6	4.8		48.1	48.0	
Progression Factor		0.96	0.91			0.91	0.88	1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.3			0.0	0.1	0.0		0.1	0.1	
Delay (s)		3.9	5.8			3.7	5.0	4.8		48.2	48.0	
Level of Service		A	A			A	A	A		D	D	
Approach Delay (s)			5.7				5.0			48.0		
Approach LOS			A				A			D		

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	22.1
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	2	25
Future Volume (vph)	2	25
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.5	6.5
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	0.96	1.00
Satd. Flow (prot)	1815	1553
Flt Permitted	0.96	1.00
Satd. Flow (perm)	1815	1553
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	2	27
RTOR Reduction (vph)	0	25
Lane Group Flow (vph)	32	2
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	0%	4%
Turn Type	NA	Perm
Protected Phases	4!	
Permitted Phases		4
Actuated Green, G (s)	7.4	7.4
Effective Green, g (s)	7.4	7.4
Actuated g/C Ratio	0.07	0.07
Clearance Time (s)	6.5	6.5
Vehicle Extension (s)	2.0	2.0
Lane Grp Cap (vph)	122	104
v/s Ratio Prot	c0.02	
v/s Ratio Perm		0.00
v/c Ratio	0.26	0.02
Uniform Delay, d1	48.7	47.9
Progression Factor	1.00	1.00
Incremental Delay, d2	0.4	0.0
Delay (s)	49.1	47.9
Level of Service	D	D
Approach Delay (s)	48.6	
Approach LOS	D	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	715	121	174	532	62	120
v/c Ratio	0.32	0.12	0.31	0.20	0.42	0.49
Control Delay	7.5	1.5	4.9	3.7	55.5	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.5	1.5	4.9	3.7	55.5	15.4
Queue Length 50th (ft)	140	9	25	42	42	0
Queue Length 95th (ft)	74	0	48	66	83	54
Internal Link Dist (ft)	711			1332	532	
Turn Bay Length (ft)		205	205		130	
Base Capacity (vph)	2202	1030	568	2712	197	286
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.12	0.31	0.20	0.31	0.42

Intersection Summary

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	658	111	18	142	489	57	110
Future Volume (vph)	658	111	18	142	489	57	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9	7.5	7.5
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568		1774	3505	1736	1583
Flt Permitted	1.00	1.00		0.33	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568		610	3505	1736	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	715	121	20	154	532	62	120
RTOR Reduction (vph)	0	45	0	0	0	0	110
Lane Group Flow (vph)	715	76	0	174	532	62	10
Heavy Vehicles (%)	3%	3%	0%	2%	3%	4%	2%
Turn Type	NA	Perm	pm+pt	pm+pt	NA	Prot	Perm
Protected Phases	2		1	1	6	3	
Permitted Phases		2	6	6			3
Actuated Green, G (s)	69.1	69.1		85.1	85.1	9.5	9.5
Effective Green, g (s)	69.1	69.1		85.1	85.1	9.5	9.5
Actuated g/C Ratio	0.63	0.63		0.77	0.77	0.09	0.09
Clearance Time (s)	7.9	7.9		7.9	7.9	7.5	7.5
Vehicle Extension (s)	4.0	4.0		3.0	4.0	3.0	3.0
Lane Grp Cap (vph)	2201	984		557	2711	149	136
v/s Ratio Prot	c0.20			c0.02	0.15	c0.04	
v/s Ratio Perm		0.05		0.22			0.01
v/c Ratio	0.32	0.08		0.31	0.20	0.42	0.08
Uniform Delay, d1	9.6	8.0		3.8	3.3	47.6	46.2
Progression Factor	0.71	0.70		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1		0.3	0.0	1.9	0.2
Delay (s)	7.1	5.7		4.2	3.4	49.5	46.5
Level of Service	A	A		A	A	D	D
Approach Delay (s)	6.9				3.6	47.5	
Approach LOS	A				A	D	

Intersection Summary

HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	23.3
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	EB	EB	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB
Directions Served	UL	L	T	T	T	T	R	R	UL	L	T	T
Maximum Queue (ft)	143	203	318	307	269	194	103	46	130	205	292	284
Average Queue (ft)	67	90	233	220	176	84	44	12	48	71	221	211
95th Queue (ft)	125	164	298	289	253	183	81	38	101	132	277	271
Link Distance (ft)			1589	1589	1589	1589					888	888
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	315	315					485	485	305	305		
Storage Blk Time (%)		0	0							0	0	
Queuing Penalty (veh)		0	0							0	0	

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	WB	WB	WB	B16	B16	B16	NB	NB	NB	NB	NB	SB
Directions Served	T	T	R	T	T	T	UL	L	L	T	T	UL
Maximum Queue (ft)	241	315	322	6	13	13	87	120	141	148	163	189
Average Queue (ft)	173	114	169	0	0	0	13	54	74	74	74	97
95th Queue (ft)	233	224	289	6	13	13	53	103	123	132	138	211
Link Distance (ft)	888	888		1058	1058	1058				1372	1372	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			325				370	370	370			300
Storage Blk Time (%)		0	1									
Queuing Penalty (veh)		1	2									

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	R
Maximum Queue (ft)	288	296	285	206	145
Average Queue (ft)	211	238	112	101	57
95th Queue (ft)	296	308	225	173	128
Link Distance (ft)			1161	1161	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	300	300			145
Storage Blk Time (%)	0	1	0	2	0
Queuing Penalty (veh)	0	1	2	3	0

Intersection: 2: Convention Center Blvd/Reese Dr & N Armistead Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	UL	T	T	R	R	UL	L	T	T	L	LT	R
Maximum Queue (ft)	36	156	185	16	2	67	49	103	112	40	18	50
Average Queue (ft)	6	47	63	2	0	22	6	30	26	8	1	12
95th Queue (ft)	24	116	135	10	2	51	25	82	76	26	9	33
Link Distance (ft)		1372	1372	1372				900	900	1118	1118	1118
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	390				340	480	480					
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Convention Center Blvd/Reese Dr & N Armistead Ave

Movement	SB
Directions Served	LTR
Maximum Queue (ft)	46
Average Queue (ft)	15
95th Queue (ft)	41
Link Distance (ft)	635
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: N Armistead Ave & Site Driveway

Movement	SB
Directions Served	R
Maximum Queue (ft)	56
Average Queue (ft)	30
95th Queue (ft)	52
Link Distance (ft)	561
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Freeman Dr/Mercer Ave & N Armistead Ave

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	UL	T	TR	UL	T	T	R	LT	R	LT	R
Maximum Queue (ft)	33	142	172	44	130	103	43	60	48	52	42
Average Queue (ft)	10	48	67	12	53	38	6	7	29	18	11
95th Queue (ft)	31	108	134	37	100	83	26	34	54	45	32
Link Distance (ft)		882	882		729	729		1185		905	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	260			175			305		50		355
Storage Blk Time (%)					0			1	1		
Queuing Penalty (veh)					0			0	0		

Intersection: 5: Lake Hampton Dr & N Armistead Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	UL	T	T	L	R
Maximum Queue (ft)	194	201	151	104	102	79	86	100
Average Queue (ft)	88	93	33	52	43	29	34	41
95th Queue (ft)	165	167	87	89	85	68	71	77
Link Distance (ft)	729	729			1367	1367		540
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			205	205			130	
Storage Blk Time (%)		0	0				0	0
Queuing Penalty (veh)		0	0				0	0

Network Summary

Network wide Queuing Penalty: 11

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	270	2498	403	177	1642	557	392	319	84	912	360	177
v/c Ratio	0.72	0.91	0.26	0.72	0.65	0.58	0.73	0.83	0.05	0.88	0.49	0.41
Control Delay	80.3	49.6	10.1	89.7	42.1	5.2	78.2	88.6	0.1	72.0	58.9	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.3	49.6	10.1	89.7	42.1	5.2	78.2	88.6	0.1	72.0	58.9	17.8
Queue Length 50th (ft)	142	714	63	94	411	0	143	175	0	331	176	35
Queue Length 95th (ft)	191	763	96	139	464	85	183	#251	0	386	231	110
Internal Link Dist (ft)		1584			904			1443			1167	
Turn Bay Length (ft)	315		485	305		325	370		395	300		145
Base Capacity (vph)	434	2736	1522	253	2508	958	535	383	1583	1049	737	433
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.91	0.26	0.70	0.65	0.58	0.73	0.83	0.05	0.87	0.49	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	43	219	2423	391	25	146	1593	540	15	366	309	81
Future Volume (vph)	43	219	2423	391	25	146	1593	540	15	366	309	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.0	7.0	8.0		8.0	7.0	7.0		8.0	8.0	4.0
Lane Util. Factor		0.97	0.86	0.88		0.97	0.86	1.00		0.94	0.95	1.00
Frpb, ped/bikes		1.00	1.00	0.99		1.00	1.00	0.99		1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3473	6471	2755		3386	6471	1594		5042	3610	1583
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00
Satd. Flow (perm)		3473	6471	2755		3386	6471	1594		5042	3610	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	44	226	2498	403	26	151	1642	557	15	377	319	84
RTOR Reduction (vph)	0	0	0	80	0	0	0	341	0	0	0	0
Lane Group Flow (vph)	0	270	2498	323	0	177	1642	216	0	392	319	84
Confl. Peds. (#/hr)	2	1		2		2		1	2	2		
Heavy Vehicles (%)	0%	1%	1%	2%	0%	4%	1%	0%	0%	1%	0%	2%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm	Split	Split	NA	Free
Protected Phases	5	5	2	3!	1	1	6		3!	3	3	
Permitted Phases				2				6				Free
Actuated Green, G (s)		17.2	67.7	84.7		11.6	62.1	62.1		17.0	17.0	160.0
Effective Green, g (s)		17.2	67.7	84.7		11.6	62.1	62.1		17.0	17.0	160.0
Actuated g/C Ratio		0.11	0.42	0.53		0.07	0.39	0.39		0.11	0.11	1.00
Clearance Time (s)		8.0	7.0	8.0		8.0	7.0	7.0		8.0	8.0	
Vehicle Extension (s)		3.0	4.0	3.0		3.0	4.0	4.0		3.0	3.0	
Lane Grp Cap (vph)		373	2738	1458		245	2511	618		535	383	1583
v/s Ratio Prot		c0.08	c0.39	0.02		0.05	0.25			0.08	c0.09	
v/s Ratio Perm				0.09				0.14				0.05
v/c Ratio		0.72	0.91	0.22		0.72	0.65	0.35		0.73	0.83	0.05
Uniform Delay, d1		69.1	43.4	20.1		72.6	40.1	34.7		69.3	70.1	0.0
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		6.8	5.3	0.1		10.1	1.3	1.6		5.1	14.3	0.1
Delay (s)		75.9	48.6	20.2		82.7	41.5	36.2		74.4	84.4	0.1
Level of Service		E	D	C		F	D	D		E	F	A
Approach Delay (s)			47.3				43.3				70.6	
Approach LOS			D				D				E	

Intersection Summary

HCM 2000 Control Delay	51.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	3	882	349	172
Future Volume (vph)	3	882	349	172
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		8.0	8.0	8.0
Lane Util. Factor		0.94	0.95	1.00
Frpb, ped/bikes		1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00
Frt		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00
Satd. Flow (prot)		5090	3574	1577
Flt Permitted		0.95	1.00	1.00
Satd. Flow (perm)		5090	3574	1577
Peak-hour factor, PHF	0.97	0.97	0.97	0.97
Adj. Flow (vph)	3	909	360	177
RTOR Reduction (vph)	0	0	0	108
Lane Group Flow (vph)	0	912	360	69
Confl. Peds. (#/hr)	1			2
Heavy Vehicles (%)	0%	0%	1%	1%
Turn Type	Split	Split	NA	Perm
Protected Phases	4	4	4	
Permitted Phases				4
Actuated Green, G (s)		32.7	32.7	32.7
Effective Green, g (s)		32.7	32.7	32.7
Actuated g/C Ratio		0.20	0.20	0.20
Clearance Time (s)		8.0	8.0	8.0
Vehicle Extension (s)		3.0	3.0	3.0
Lane Grp Cap (vph)		1040	730	322
v/s Ratio Prot		c0.18	0.10	
v/s Ratio Perm				0.04
v/c Ratio		0.88	0.49	0.21
Uniform Delay, d1		61.7	56.3	53.0
Progression Factor		1.00	1.00	1.00
Incremental Delay, d2		8.5	0.5	0.3
Delay (s)		70.2	56.8	53.3
Level of Service		E	E	D
Approach Delay (s)			64.8	
Approach LOS			E	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	44	1069	25	43	974	4	18	19	84	27
v/c Ratio	0.39	0.45	0.01	0.23	0.41	0.00	0.20	0.21	0.35	0.25
Control Delay	67.8	12.1	0.0	68.7	7.3	0.0	63.8	63.9	4.1	46.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	12.1	0.0	68.7	7.3	0.0	63.8	63.9	4.1	46.4
Queue Length 50th (ft)	37	245	0	20	94	0	15	16	0	13
Queue Length 95th (ft)	75	320	0	40	104	m0	44	44	0	45
Internal Link Dist (ft)		1443			896			1117		625
Turn Bay Length (ft)	390		340	480		190				
Base Capacity (vph)	181	2399	2404	347	2394	1112	217	223	349	162
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.45	0.01	0.12	0.41	0.00	0.08	0.09	0.24	0.17

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	31	10	1016	24	20	21	925	4	31	4	80	11
Future Volume (vph)	31	10	1016	24	20	21	925	4	31	4	80	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.9	6.4	7.5		7.5	6.0	6.0	7.5	7.5	7.5	
Lane Util. Factor		1.00	0.95	0.88		0.97	0.95	1.00	0.95	0.95	1.00	
Frpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	0.98	1.00	1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	0.96	1.00	
Satd. Flow (prot)		1805	3539	2787		3348	3574	1578	1618	1658	1583	
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	0.96	1.00	
Satd. Flow (perm)		1805	3539	2787		3348	3574	1578	1618	1658	1583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	33	11	1069	25	21	22	974	4	33	4	84	12
RTOR Reduction (vph)	0	0	0	8	0	0	0	1	0	0	79	0
Lane Group Flow (vph)	0	44	1069	17	0	43	974	3	18	19	5	0
Confl. Peds. (#/hr)		1						1				
Heavy Vehicles (%)	0%	0%	2%	2%	0%	9%	1%	0%	6%	0%	2%	0%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2	3	1	1	6		3	3		4
Permitted Phases				2				6			3	
Actuated Green, G (s)		6.9	83.6	90.8		5.8	82.5	82.5	7.2	7.2	7.2	
Effective Green, g (s)		6.9	83.6	90.8		5.8	82.5	82.5	7.2	7.2	7.2	
Actuated g/C Ratio		0.05	0.64	0.70		0.04	0.63	0.63	0.06	0.06	0.06	
Clearance Time (s)		7.9	6.4	7.5		7.5	6.0	6.0	7.5	7.5	7.5	
Vehicle Extension (s)		2.0	4.0	2.0		2.0	4.0	4.0	2.0	2.0	2.0	
Lane Grp Cap (vph)		95	2275	1946		149	2268	1001	89	91	87	
v/s Ratio Prot		c0.02	c0.30	0.00		0.01	0.27		0.01	c0.01		
v/s Ratio Perm				0.01				0.00			0.00	
v/c Ratio		0.46	0.47	0.01		0.29	0.43	0.00	0.20	0.21	0.05	
Uniform Delay, d1		59.8	11.9	5.9		60.1	11.9	8.7	58.7	58.7	58.2	
Progression Factor		1.00	1.00	1.00		1.12	0.58	1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.3	0.7	0.0		0.4	0.2	0.0	0.4	0.4	0.1	
Delay (s)		61.1	12.6	5.9		67.5	7.1	8.7	59.1	59.1	58.3	
Level of Service		E	B	A		E	A	A	E	E	E	
Approach Delay (s)			14.3				9.6			58.5		
Approach LOS			B				A			E		

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	28.9
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	4	10
Future Volume (vph)	4	10
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.5	
Lane Util. Factor	1.00	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.94	
Flt Protected	0.98	
Satd. Flow (prot)	1721	
Flt Permitted	0.98	
Satd. Flow (perm)	1721	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	4	11
RTOR Reduction (vph)	11	0
Lane Group Flow (vph)	16	0
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	0%	5%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	4.5	
Effective Green, g (s)	4.5	
Actuated g/C Ratio	0.03	
Clearance Time (s)	7.5	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	59	
v/s Ratio Prot	c0.01	
v/s Ratio Perm		
v/c Ratio	0.28	
Uniform Delay, d1	61.2	
Progression Factor	1.00	
Incremental Delay, d2	0.9	
Delay (s)	62.1	
Level of Service	E	
Approach Delay (s)	62.1	
Approach LOS	E	

Intersection Summary

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1104	942	51	0	33
Future Vol, veh/h	0	1104	942	51	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	2	1	0	0	0
Mvmt Flow	0	1174	1002	54	0	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	528
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	500
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	500
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	500
HCM Lane V/C Ratio	-	-	-	0.07
HCM Control Delay (s)	-	-	-	12.7
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	80	1064	63	976	54	9	76	32	30
v/c Ratio	0.17	0.41	0.15	0.37	0.05	0.08	0.40	0.30	0.16
Control Delay	2.9	6.0	2.6	5.6	0.1	58.9	10.5	65.7	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.9	6.0	2.6	5.6	0.1	58.9	10.5	65.7	1.7
Queue Length 50th (ft)	9	123	6	94	0	7	0	26	0
Queue Length 95th (ft)	18	150	14	130	0	26	24	61	0
Internal Link Dist (ft)		873		711		1172		897	
Turn Bay Length (ft)	260		175		305		50		355
Base Capacity (vph)	478	2615	435	2645	1177	195	256	189	259
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.41	0.14	0.37	0.05	0.05	0.30	0.17	0.12

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	22	55	1013	9	5	56	937	52	2	7	73	26
Future Volume (vph)	22	55	1013	9	5	56	937	52	2	7	73	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.8	7.8			7.8	7.8	7.8		6.5	6.5	
Lane Util. Factor		1.00	0.95			1.00	0.95	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	1.00			1.00	1.00	0.97		1.00	0.97	
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	1.00	0.85		1.00	0.85	
Flt Protected		0.95	1.00			0.95	1.00	1.00		0.99	1.00	
Satd. Flow (prot)		1804	3533			1787	3574	1557		1879	1558	
Flt Permitted		0.27	1.00			0.25	1.00	1.00		0.99	1.00	
Satd. Flow (perm)		520	3533			462	3574	1557		1879	1558	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	23	57	1055	9	5	58	976	54	2	7	76	27
RTOR Reduction (vph)	0	0	0	0	0	0	0	15	0	0	72	0
Lane Group Flow (vph)	0	80	1064	0	0	63	976	39	0	9	4	0
Confl. Peds. (#/hr)		3		2	5	2		3			5	5
Heavy Vehicles (%)	0%	0%	2%	6%	0%	1%	1%	1%	0%	0%	1%	0%
Turn Type	pm+pt	pm+pt	NA		pm+pt	pm+pt	NA	Perm	Split	NA	Perm	Split
Protected Phases	5	5	2		1	1	6		8!	8!		4!
Permitted Phases	2	2			6	6		6			8	
Actuated Green, G (s)		100.3	94.7			100.3	94.7	94.7		7.6	7.6	
Effective Green, g (s)		100.3	94.7			100.3	94.7	94.7		7.6	7.6	
Actuated g/C Ratio		0.77	0.73			0.77	0.73	0.73		0.06	0.06	
Clearance Time (s)		7.8	7.8			7.8	7.8	7.8		6.5	6.5	
Vehicle Extension (s)		2.0	4.0			2.0	4.0	4.0		2.0	2.0	
Lane Grp Cap (vph)		456	2573			413	2603	1134		109	91	
v/s Ratio Prot		c0.01	c0.30			0.01	0.27			0.00		
v/s Ratio Perm		0.13				0.11		0.03			0.00	
v/c Ratio		0.18	0.41			0.15	0.37	0.03		0.08	0.05	
Uniform Delay, d1		3.7	6.9			3.8	6.6	4.9		57.9	57.8	
Progression Factor		0.93	0.81			0.84	0.79	0.00		1.00	1.00	
Incremental Delay, d2		0.1	0.5			0.1	0.1	0.0		0.1	0.1	
Delay (s)		3.5	6.0			3.3	5.3	0.0		58.0	57.9	
Level of Service		A	A			A	A	A		E	E	
Approach Delay (s)			5.9				4.9			57.9		
Approach LOS			A				A			E		

Intersection Summary

HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	22.1
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	5	29
Future Volume (vph)	5	29
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.5	6.5
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	0.96	1.00
Satd. Flow (prot)	1823	1583
Flt Permitted	0.96	1.00
Satd. Flow (perm)	1823	1583
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	5	30
RTOR Reduction (vph)	0	28
Lane Group Flow (vph)	32	2
Confl. Peds. (#/hr)		
Heavy Vehicles (%)	0%	2%
Turn Type	NA	Perm
Protected Phases	4!	
Permitted Phases		4
Actuated Green, G (s)	7.6	7.6
Effective Green, g (s)	7.6	7.6
Actuated g/C Ratio	0.06	0.06
Clearance Time (s)	6.5	6.5
Vehicle Extension (s)	2.0	2.0
Lane Grp Cap (vph)	106	92
v/s Ratio Prot	c0.02	
v/s Ratio Perm		0.00
v/c Ratio	0.30	0.02
Uniform Delay, d1	58.7	57.7
Progression Factor	1.00	1.00
Incremental Delay, d2	0.6	0.0
Delay (s)	59.2	57.7
Level of Service	E	E
Approach Delay (s)	58.5	
Approach LOS	E	

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1000	152	199	999	118	132
v/c Ratio	0.44	0.14	0.46	0.36	0.62	0.46
Control Delay	7.1	2.6	7.6	5.3	68.9	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.1	2.6	7.6	5.3	68.9	13.6
Queue Length 50th (ft)	135	10	36	117	97	0
Queue Length 95th (ft)	164	28	68	175	156	58
Internal Link Dist (ft)	711			1332	532	
Turn Bay Length (ft)		205	205		130	
Base Capacity (vph)	2262	1083	533	2768	350	418
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.14	0.37	0.36	0.34	0.32

Intersection Summary

Movement	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	950	144	55	134	949	112	125
Future Volume (vph)	950	144	55	134	949	112	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9	7.5	7.5
Lane Util. Factor	0.95	1.00		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00
Frt	1.00	0.85		1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1615		1800	3574	1787	1594
Flt Permitted	1.00	1.00		0.23	1.00	0.95	1.00
Satd. Flow (perm)	3539	1615		427	3574	1787	1594
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1000	152	58	141	999	118	132
RTOR Reduction (vph)	0	51	0	0	0	0	118
Lane Group Flow (vph)	1000	101	0	199	999	118	14
Confl. Peds. (#/hr)							1
Heavy Vehicles (%)	2%	0%	1%	0%	1%	1%	0%
Turn Type	NA	Perm	pm+pt	pm+pt	NA	Prot	Perm
Protected Phases	2		1	1	6	3	
Permitted Phases		2	6	6			3
Actuated Green, G (s)	83.1	83.1		100.7	100.7	13.9	13.9
Effective Green, g (s)	83.1	83.1		100.7	100.7	13.9	13.9
Actuated g/C Ratio	0.64	0.64		0.77	0.77	0.11	0.11
Clearance Time (s)	7.9	7.9		7.9	7.9	7.5	7.5
Vehicle Extension (s)	4.0	4.0		3.0	4.0	3.0	3.0
Lane Grp Cap (vph)	2262	1032		433	2768	191	170
v/s Ratio Prot	0.28			0.03	c0.28	c0.07	
v/s Ratio Perm		0.06		c0.32			0.01
v/c Ratio	0.44	0.10		0.46	0.36	0.62	0.08
Uniform Delay, d1	11.8	9.0		6.0	4.6	55.5	52.3
Progression Factor	0.51	1.05		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.2		0.8	0.1	5.8	0.2
Delay (s)	6.6	9.6		6.8	4.7	61.3	52.5
Level of Service	A	A		A	A	E	D
Approach Delay (s)	7.0				5.0	56.7	
Approach LOS	A				A	E	

Intersection Summary

HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	23.3
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	EB	EB	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB
Directions Served	UL	L	T	T	T	T	R	R	UL	L	T	T
Maximum Queue (ft)	225	315	795	778	743	600	290	122	170	305	461	443
Average Queue (ft)	124	249	560	529	468	378	103	28	93	157	302	289
95th Queue (ft)	198	399	927	885	809	712	276	74	157	321	414	397
Link Distance (ft)			1589	1589	1589	1589					888	888
Upstream Blk Time (%)			0	0								
Queuing Penalty (veh)			0	0								
Storage Bay Dist (ft)	315	315					485	485	305	305		
Storage Blk Time (%)		1	30			3	0			0	6	
Queuing Penalty (veh)		4	79			12	1			1	10	

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	WB	WB	WB	NB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	T	T	R	UL	L	L	T	T	R	UL	L	L
Maximum Queue (ft)	359	376	309	185	230	242	324	320	40	277	295	300
Average Queue (ft)	248	193	146	110	155	166	163	145	3	237	292	299
95th Queue (ft)	347	333	263	223	266	274	431	281	57	281	298	302
Link Distance (ft)	888	888					1372	1372				
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			325	370	370	370			395	300	300	300
Storage Blk Time (%)		1	1	0	0	3	2	0	0	0	7	36
Queuing Penalty (veh)		3	4	0	0	5	8	0	0	0	12	63

Intersection: 1: N Armistead Ave & Mercury Blvd

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	1176	1172	145
Average Queue (ft)	972	686	106
95th Queue (ft)	1428	1331	186
Link Distance (ft)	1161	1161	
Upstream Blk Time (%)	34	1	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			145
Storage Blk Time (%)	42	16	1
Queuing Penalty (veh)	375	28	2

Intersection: 2: Convention Center Blvd/Reese Dr & N Armistead Ave

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	UL	T	T	R	R	UL	L	T	T	R	L	LT
Maximum Queue (ft)	76	256	263	23	8	54	58	224	204	10	58	28
Average Queue (ft)	30	92	103	3	0	15	14	89	79	0	15	4
95th Queue (ft)	66	195	205	15	4	40	42	189	171	5	41	17
Link Distance (ft)		1372	1372	1372				900	900		1118	1118
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	390				340	480	480			190		
Storage Blk Time (%)									1			
Queuing Penalty (veh)									0			

Intersection: 2: Convention Center Blvd/Reese Dr & N Armistead Ave

Movement	NB	SB
Directions Served	R	LTR
Maximum Queue (ft)	74	62
Average Queue (ft)	21	20
95th Queue (ft)	52	49
Link Distance (ft)	1118	635
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: N Armistead Ave & Site Driveway

Movement	WB	WB	SB
Directions Served	T	TR	R
Maximum Queue (ft)	2	2	58
Average Queue (ft)	0	0	22
95th Queue (ft)	2	2	49
Link Distance (ft)	882	882	561
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Freeman Dr/Mercer Ave & N Armistead Ave

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	UL	T	TR	UL	T	T	R	LT	R	LT	R
Maximum Queue (ft)	101	219	227	116	197	193	44	73	54	62	48
Average Queue (ft)	35	72	91	34	95	84	13	11	35	19	14
95th Queue (ft)	75	160	180	77	170	159	38	48	57	47	37
Link Distance (ft)		882	882		729	729		1185		905	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	260			175			305		50		355
Storage Blk Time (%)		0		0	1			2	3		
Queuing Penalty (veh)		0		0	0			1	0		

Intersection: 5: Lake Hampton Dr & N Armistead Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	UL	T	T	L	R
Maximum Queue (ft)	348	367	205	164	185	159	127	154
Average Queue (ft)	148	155	60	75	88	67	68	51
95th Queue (ft)	283	296	170	132	152	130	117	103
Link Distance (ft)	729	729			1367	1367		540
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			205	205			130	
Storage Blk Time (%)		3	0	0	0		1	0
Queuing Penalty (veh)		5	1	0	0		1	0

Intersection: 16: Bend

Movement	EB	EB	EB	EB
Directions Served	T	T	T	T
Maximum Queue (ft)	86	92	177	18
Average Queue (ft)	3	3	7	1
95th Queue (ft)	88	88	130	12
Link Distance (ft)	888	888	888	888
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 617